



# Renew Harbor Island

A stylized lighthouse icon with a red base, a white lantern room, and a yellow sun or moon behind it.

Work today, protect tomorrow.

## **3<sup>rd</sup> Quarter 2024 Groundwater Monitoring and Corrective Action Report**

For Michigan Part 115 CCR Solid Waste  
Regulations

Former J.B. Sims Generating Station

October 30, 2024

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## 1.0 Introduction

The U.S. Environmental Protection Agency's (EPA) final Coal Combustion Residuals (CCR) Rule 40 CFR §257 and Michigan's Part 115 Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451 (Part 115), establish a comprehensive set of requirements for the management and disposal of CCR (or coal ash) in surface impoundments by electric utilities. The facility is located at 1231 North 3rd Street, on Harbor Island, in Grand Haven, Michigan (**Figure 1**). The former J.B. Sims Generating Station was operated by the Grand Haven Board of Light and Power (GHBLP) and ceased operations in February 2020. The former plant was a coal-fired steam-generating power facility with a net capacity of approximately 70.5 megawatts. The CCR generated at the former Site was stored in two CCR units: (1) the inactive Units 1/2 Impoundment and (2) the former Unit 3A/B Impoundments (**Figure 2**). Operations at the Site ceased in February 2020 and the plant subsequently was decommissioned. During deconstruction, wastewater used to cleanout boilers and infrastructure was sent to Unit 3A/B. The waste disposal into Unit 3A/B ceased in July 2020.

The current groundwater monitoring network was established in 2022 for the CCR units. Background data collection occurred between November 2022 and August 2023 (HDR, 2024) for the updated monitoring network and new background wells. The first sample event after the background monitoring period using the updated monitoring network occurred in October 2023. The October 2023 sampling event was considered both a detection and assessment monitoring event based on the prior status of the Site in assessment monitoring before the well network was updated. Both statistically significant increases (SSI) of constituents in groundwater above the background values and statistically significant levels (SSLs) of constituents over groundwater protection standards (GPS) were identified from the October 2023 sample event. Therefore, the status of the groundwater monitoring program for both CCR units is assessment monitoring and evaluation of potential remedies. The Site initiated assessment of corrective measures, pursuant to Part 115 R299.4443, on May 1, 2024, following the identification of SSIs at one or more monitoring wells. The assessment of corrective measures report was published August 5, 2024, and additional data collection will continue into 2025 to further assess the remedy selection process. This Quarterly Groundwater Monitoring Report presents the monitoring activities completed during the third quarter of 2024.



Figure 1 | Site Vicinity Map





Figure 2 | Former J.B. Sims CCR Units and Monitoring Wells

## 2.0 Facility Description

### 2.0.1 Units 1/2 Impoundment

The inactive CCR Units 1/2 Impoundment was a depression in the ground where sluiced ash was disposed. The inactive Units 1/2 Impoundment ceased receiving CCR materials in 2012. Due to the abstract size and lack of defined boundaries, Units 1/2 Impoundment was delineated by Golder in the 2019 report *CCR Impoundment Ash Delineation at the J.B. Sims Generating Station* (Golder, 2019). Following the submission of the delineation report, a boundary of the inactive Units 1/2 Impoundment was agreed upon by GHBLP, EPA, and EGLE, which includes an area of sluiced ash disposal to the east of MW-30 into the internal wetland (**Figure 2**). The parties also agreed that the North Channel from the Units 1/2 Impoundment would be evaluated for potential inclusion of the revised boundary. After field investigation of the North Channel area to delineate ash and submittal of the investigation data and proposed additional data collection, EGLE and EPA made a determination that the ash associated with the North Channel will not be associated with Units 1/2 impoundment. The EGLE and EPA indicated that the North Channel ash will be documented as a potential CCR Management Unit under the new EPA Legacy Rule (**Figure 2**).

### 2.0.2 Unit 3A/B Impoundments

The former CCR Unit 3A/B Impoundments were constructed as two above-ground surface impoundments underlain by a clay liner; however, the engineered clay liner did not meet Part 115 CCR surface impoundment liner criteria. Golder (2020) stated that the former 3A/B Impoundments were built over a “field of ash” that was generated from Boiler Units 1 & 2; however, existing soil borings do not support that a “field of ash” is present under the impoundments. Although the former coal-fired power generation facility ceased operations in February 2020, the Site continued to use the Unit 3A/B Impoundments to store cleanout materials from the hoppers, vessels, etc. prior to demolition of the buildings. The impoundments ceased receiving waste on July 30, 2020. Removal of CCR from the impoundments was completed on November 6, 2020 and the liner remained in place. Following the CCR removal, Golder conducted ash removal verification that was ultimately denied by EGLE (HDR, 2024). Further ash delineation will be conducted to define the extent of any remaining minor amount of CCR adjacent to the Unit 3A/B Impoundments.

## 2.1 Hydrogeology

The regional direction of groundwater flow is west to southwest towards Lake Michigan (Western Michigan University, 1981). The Grand River is located on the northern and western sides of the Site, and the South Channel is located on the south side of Harbor Island. Internal to the Island there are several influences on groundwater flow and direction, specifically:

- Various fill materials
- Surface water features, such as the inactive Units 1/2 Impoundment and wetlands
- Former coal yard area, which may have lower infiltration rates due to compaction from heavy equipment and stockpiling.

During the water level monitoring events conducted between September 2022 and October 2023, it was determined that the groundwater elevation is highest around monitoring well MW-01R, consistent with observations made by Golder between October and December 2021 (HDR, 2024). Groundwater flow beneath Units 1/2 Impoundment is seasonably and spatially variable; flow is generally northward toward the north wetland shown on **Figure 2**, eastward from the ponds of Units 1/2 Impoundment toward the wetland, and potentially southward near MW-05. The wetland east of the Units 1/2 Impoundment appears to be a hydraulic sink between the CCR impoundments and the wells situated to the east (PZ-23 through PZ-26, MW-27, MW-33, and MW-34). Groundwater flow in the area east of the internal wetland is consistent with regional groundwater flow and the flow of the Grand River toward the west (HDR, 2024). Further hydrogeological information related to the Site is provided in the Hydrogeologic Monitoring Plan (HDR, 2024).

## 2.2 Monitoring Well Network

The monitoring well network consists of the monitoring wells (MW-#) and piezometers (PX-#) listed in **Table 1** and shown in **Figure 2**. The monitoring wells are sampled for water quality and water levels are monitored. The piezometers are monitored only for water levels. As of November 2022, the monitoring network is composed of the following:

### *Units 1/2 Impoundment*

Due to the extent of Units 1/2 Impoundment compared to the limits of Harbor Island, and variable groundwater flow direction, a traditional upgradient/downgradient groundwater monitoring system is not possible. Further detail explaining the locations and justification of each well location is provided in the Hydrogeologic Monitoring Plan (HDR, 2024). The following wells are utilized as the groundwater monitoring network:

- Background Wells: MW-27, MW-33, and MW-34
- Point of Compliance Wells (i.e. waste boundary wells): MW-06, MW-08, MW-18, MW-19, MW-20, MW-30, and MW-31
- Nature and Extent Wells: MW-07, MW-10, MW-16, MW-17, MW-28, MW-32, MW-36, and MW-37

### *Unit 3A/B Impoundments*

The monitoring well network justification for the Unit 3A/B Impoundments is provided in the Hydrogeologic Monitoring Plan (HDR, 2024). The well network utilized is as follows:

- Background Wells: MW-27, MW-33, and MW-34
- Point of Compliance Wells (i.e. waste boundary wells): MW-02, MW-03, MW-04, MW-11, and MW-12
- Nature and Extent Wells: MW-01R, MW-09, MW-10, and MW-38

### *Water Level Wells*

The following piezometers are monitored for water level only and are not sampled: MW-05, PZ-13, PZ-14, PZ-21, PZ-22, PZ-23, PZ-24, PZ-25, PZ-26, PZ-29, MW-35, MW-39, and MW-40,



shown on **Figure 2**. Piezometers PZ-21, PZ-22, and PZ-29 were installed within the wetland and are inaccessible at times and therefore are monitored less frequently.

Transducers are installed in the wells, stilling wells, and staff gauges above marked on **Figure 2** with (T) next to the location ID. The transducers collect groundwater elevation data on a continuous one-hour frequency.

### 3.0 Monitoring

#### 3.1 Groundwater Monitoring

**Table 1** provides well identification numbers, well locations, and the dates samples were collected. Any deviation in sample collection from the Hydrogeologic Monitoring Plan (HDR, 2024) are outlined in **Section 3.3**.

Table 1. Assessment Monitoring in the Third Quarter 2024		
Monitoring Well I.D.	Date Monitored	Well Designation
Background Monitoring Wells (Unit 1/2 Impoundments and Units 3A/B Impoundment)		
MW-27	7/18/2024	Background
MW-33	7/18/2024	Background
MW-34	7/18/2024	Background
Unit 1/2 Impoundments		
MW-06	7/18/2024	Point of Compliance
MW-08	7/18/2024	Point of Compliance
MW-18	7/17/2024	Point of Compliance
MW-19	7/18/2024	Point of Compliance
MW-20	7/17/2024	Point of Compliance
MW-30	7/18/2024	Point of Compliance
MW-31	7/17/2024 – 7/18/2024 <sup>2</sup>	Point of Compliance
MW-07	7/17/2024	Nature and Extent
MW-10	7/17/2024	Nature and Extent
MW-16	7/18/2024	Nature and Extent
MW-17	7/17/2024	Nature and Extent
MW-28	7/18/2024	Nature and Extent
MW-32	7/17/2024	Nature and Extent
MW-36	7/17/2024	Nature and Extent
MW-37	7/17/2024	Nature and Extent
Units 3A/B Impoundment		
MW-02	7/17/2024	Point of Compliance
MW-03	7/18/2024	Point of Compliance
MW-04	7/18/2024	Point of Compliance
MW-11	7/18/2024	Point of Compliance

Table 1. Assessment Monitoring in the Third Quarter 2024

Monitoring Well I.D.	Date Monitored	Well Designation
MW-12	7/17/2024	Point of Compliance
MW-01R	7/18/2024	Nature and Extent
MW-09	7/17/2024	Nature and Extent
MW-10	7/17/2024	Nature and Extent
MW-38	7/17/2024	Nature and Extent
Water Level Only		
MW-05	7/17/2024	Water Level Only
PZ-13	7/17/2024	Water Level Only
PZ-14	7/17/2024	Water Level Only
PZ-15	7/17/2024	Water Level Only
PZ-16	7/17/2024	Water Level Only
PZ-17	7/17/2024	Water Level Only
PZ-21	7/17/2024	Water Level Only
PZ-22	7/17/2024	Water Level Only
PZ-23	7/17/2024	Water Level Only
PZ-24	7/17/2024	Water Level Only
PZ-25	7/17/2024	Water Level Only
PZ-26	7/17/2024	Water Level Only
PZ-28	7/17/2024	Water Level Only
PZ-29	7/17/2024	Water Level Only
MW-35	7/17/2024	Water Level Only
MW-37	7/17/2024	Water Level Only
MW-38	7/17/2024	Water Level Only
MW-39	7/17/2024	Water Level Only
MW-40	7/17/2024	Water Level Only

1 – Deep water prevented access to well

2 – Additional sample volume collected due to lab error, further discussed in Section 3.3

### 3.2 Surface Water Monitoring

Surface water monitoring coincides with the groundwater sampling. The stilling wells (STW-1, STW-2, STW-3), as well as staff gauges SG-01, SG-03, and SG-07, are monitored for water levels only. Staff gauges SG-02, SG-04R, SG-05, SG-06 are monitored for water levels and surface water quality (**Figure 2**). Surface water elevations are mapped with the groundwater elevations to evaluate the flow of groundwater under the island and in connection with the Grand River and wetland surface waters. Surface water monitoring dates are shown in **Table 2**. Deviations from the work plan are outlined in **Section 3.3**.

Table 2. Dates of Surface Water Monitoring in Third Quarter 2024

Well ID	Water Level Date	Sample Date
SG-01 <sup>1</sup>	7/17/2024	Water Level Only

Well ID	Water Level Date	Sample Date
SG-02	7/17/2024	7/17/2024
SG-03	7/17/2024	-- <sup>3</sup>
SG-04R	7/17/2024	7/17/2024
SG-05	7/17/2024	7/17/2024 <sup>2</sup>
SG-06	7/17/2024 <sup>3</sup>	-- <sup>3</sup>
SG-07 <sup>1</sup>	7/17/2024	Water Level Only
STW-1 <sup>1</sup>	7/17/2024	Water Level Only
STW-2 <sup>1</sup>	7/17/2024	Water Level Only
STW-3 <sup>1</sup>	7/17/2024	Water Level Only

1 – Location is not sampled under the Hydrogeologic Monitoring Plan.

2 – Physical gauge location was dry, surface water sample collected at alternate location.

3 – Physical gauge location was dry, no surface water sample or water level was collected.

### 3.3 Water Level and Sample Collection

Water elevations are provided in **Table 4** pursuant to the Hydrologic Monitoring Plan (HDR, 2024). Transducer data collection is conducted during the quarterly groundwater sampling events. Monitoring wells were purged with a peristaltic pump until field parameters (pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential) stabilized. The results of field measurements were recorded on a field data form, which is maintained as part of the field records and provided in **Appendix A**. After water quality parameters stabilized, samples were collected and tested for the parameters listed in **Table 3**. For quality control, one field duplicate sample was collected for each CCR unit per sampling event (two duplicate samples total per event). The following deviations from the Hydrogeologic Monitoring Plan for CCR Compliance were noted during the second quarter 2024 sampling event:

#### July 2024

- Water levels were not collected from PZ-21, PZ-22, or PZ-29 due to deep water limiting access.
- Water levels were not collected from SG-01, SG-03, SG-04R, SG-06 due to low surface water conditions leaving the staff gauges dry.
- Due to the physical location of SG-03 being dry at the time of sample collection and the close proximity of SG-02, no surface water sample was collected at SG-03.
- Due to the physical gauge location at SG-04R being dry, the surface water sample was collected approximately 40 feet southeast along the shoreline.
- Due to the physical gauge location at SG-05 being dry, the surface water sample was collected approximately 15 feet east along the shoreline.
- Due to the physical gauge location at SG-06 being dry, the surface water sample was collected approximately 340 feet east along the shoreline at a dock.
- On 7/18/2024 Trace Analytical Laboratories notified HDR that one bottle from the six collected from MW-31 was mistakenly spiked with nitric acid and rendered the sample volume unusable for analysis. Due to the low purge rate (approximately 50 ml/min) and the



other five bottles were unaffected, the well was purged until stabilization was reached and the sample volume for the single bottle was collected and submitted.

Surface water samples were collected using a clean container affixed to a pole. Before samples were collected, the following water quality parameters were measured: pH, turbidity, conductivity, dissolved oxygen, temperature, and oxidation reduction potential. The results of field measurements were recorded on a field data form, which is maintained as part of the field records. Surface water samples were delivered under Chain of Custody to Trace Analytical Laboratories in Muskegon, Michigan.

### 3.4 Analytical Testing

Samples from the wells listed in **Table 1** were analyzed for the constituents listed in **Table 3**.

Table 3. Constituents of Interest for Assessment Monitoring	
Metals are Total Metals	
Antimony	Lithium
Arsenic	Mercury
Barium	Molybdenum
Beryllium	Nickel
Boron	Radium-226/228
Cadmium	Selenium
Calcium	Silver
Chloride	Sulfate
Chromium	Thallium
Cobalt	Total Dissolved Solids (TDS)
Copper	Vanadium
Fluoride	Zinc
Iron	<b>Additional Parameters</b>
Lead	Total Suspended Solids (TSS)

### 3.5 Data Validation and Management

Data validation and data management tasks were performed per the Hydrogeologic Monitoring Plan (HDR, 2024). Data validation was performed for sampling dates provided in **Table 1**. Data validation was conducted to eliminate any data that did not meet validation criteria and a data qualifier was designated for any data quality limitation discovered.

All samples and quality control (QC) data for the reporting period were reviewed and evaluated, and no samples were rejected. Most QC analyses were within reportable limits; however, when QC was outside control limits, samples were reported as estimated. Data analyses required minimal qualifications, and all data were usable, even when qualified. Data validation reports are contained in **Appendix B**.

## 4.0 Monitoring Results

### 4.1 Water Levels and Groundwater Flow Direction

A potentiometric contour map was developed for the third quarter 2024 sampling event using the data provided in **Table 4**. The map displays the groundwater elevations as well as the potentiometric contours and is provided in **Appendix C**. A hydrograph for wells near the Units 1/2 Impoundment is shown in **Figure 3**. Groundwater beneath the impoundment ranged from 581.43 to 578.90 feet above mean sea level (ft. AMSL). The hydrograph for perimeter wells surrounding the Units 3A/B Impoundments, shown in **Figure 4**, indicates groundwater elevation beneath the impoundment ranged from 582.11 to 579.58 ft ASML.

Utilizing groundwater elevations provided in **Table 4**, the groundwater flow velocity for six pairs of monitoring wells was calculated and is provided in **Table 5**.

Potentiometric contours created from the groundwater elevations in **Table 4** show north and northwestern flow beneath Unit 3A/B Impoundments toward the Grand River, consistent with previous observations. Flow beneath Units 1/2 Impoundment is generally eastward toward the internal wetland, with the exception of flow near the North Channel outlet where groundwater flow is north from SG-02 toward MW-31. The internal wetland has consistently shown to be a sink for Harbor Island.

Groundwater flow observed at background wells MW-27, MW-33, and MW-34 was consistent with previous observations. Flow is southward from MW-35 toward MW-33 and MW-34. The potentiometric contours confirm that groundwater under the CCR impoundments does not flow toward background monitoring wells and confirms they are appropriate background monitoring locations.

Well ID	7/17/2024
MW-01R	581.22
MW-02	580.63
MW-03	580.60
MW-04	580.67
MW-05	580.33
MW-06	580.37
MW-07	580.56
MW-08	580.39
MW-09	580.30
MW-10	580.54
MW-11	580.71
MW-12	581.05
PZ-13	580.40
PZ-14	580.47

Table 4. Groundwater and Surface Water Elevations in the Third Quarter 2024	
Well ID	7/17/2024
PZ-15	580.77
MW-16	580.29
MW-17	580.66
MW-18	580.60
MW-19	580.42
MW-20	580.54
PZ-21 <sup>1</sup>	-- <sup>1</sup>
PZ-22 <sup>1</sup>	-- <sup>1</sup>
PZ-23	580.41
PZ-24	579.96
PZ-25	580.65
PZ-26	580.35
MW-27	580.61
MW-28	580.83
PZ-29	-- <sup>1</sup>
MW-30	580.54
MW-31	580.16
MW-32	580.56
MW-33	580.67
MW-34	580.34
MW-35	581.41
MW-36	581.19
MW-37	580.7
MW-38	580.78
MW-39	580.64
MW-40	580.84
SG-01	580.30
SG-02	580.08
SG-03	DRY
SG-04R	DRY
SG-05	580.50
SG-06	DRY
SG-07	580.35
STW-1	581.83
STW-2	580.35
STW-3	580.44

Note: "--" denotes no measurement was taken.  
<sup>1</sup>Deep water prevented access to well to collect measurement.

Table 5. Groundwater Velocity Calculations

Well Pair	Area of Harbor Island	Distance (ft)	Porosity <sup>1</sup>	Hydraulic Conductivity (ft/day)	Groundwater Elevation (ft/ASML)	Hydraulic Gradient	Groundwater Velocity (ft/day)
PZ-25	Eastern	413	0.3	8.342 <sup>2</sup>	580.65	0.0005	0.014
PZ-26					580.35		
PZ-25		400	0.3	8.342 <sup>2</sup>	580.65	0.0004	0.012
PZ-23					580.41		
MW-01R	Western	247	0.3	6.233 <sup>3</sup>	581.22	0.0011	0.022
MW-03					580.60		
MW-01R		274	0.3	6.233 <sup>3</sup>	581.22	0.0009	0.020
MW-04					580.67		
MW-01R		226	0.3	6.233 <sup>3</sup>	581.22	0.0015	0.032
MW-05					580.33		
MW-01R		262	0.3	6.233 <sup>3</sup>	581.22	0.0012	0.024
MW-10					580.54		

1. Porosity value estimated using reference values for poorly sorted fine to medium sand (Freeze-Cherry, 1979).

2. Average hydraulic conductivity value from Golder (2022) on PZ-26.

3. Calculated by averaging hydraulic conductivity values from wells MW-01R, MW-02, MW-04, and MW-05 (Golder, 2022).

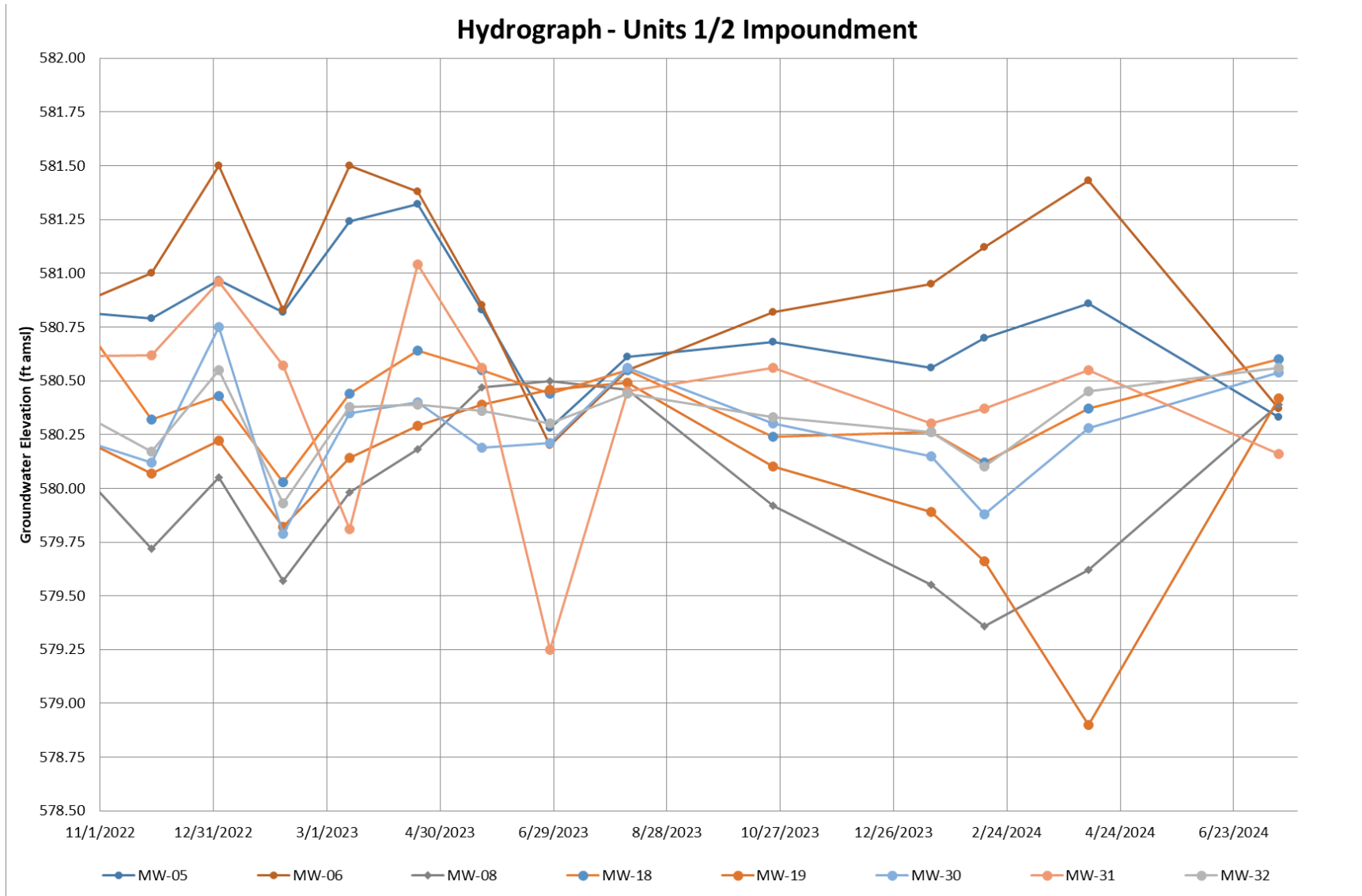


Figure 3. Hydrograph of Wells and Piezometers Near Units 1/2 Impoundment

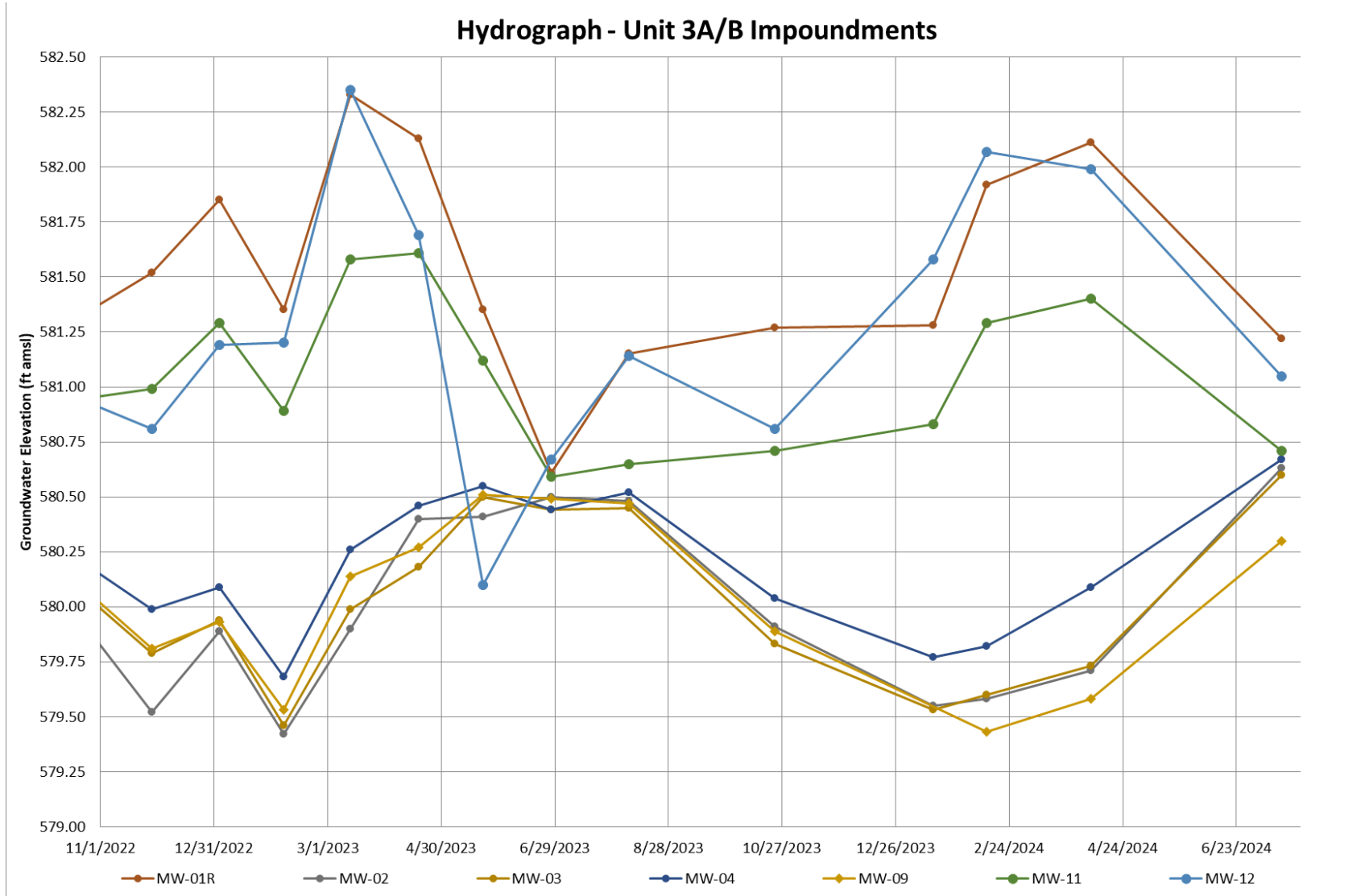


Figure 4. Hydrograph of Wells and Piezometers Near Unit 3A/B Impoundments

Pressure transducers were installed at the locations shown in **Figure 5**. The transducer data collected spans 208 days between December 21, 2023 through July 16, 2024. Trends observed from the limited dataset are as follows:

- SG-02 is generally higher in surface water elevation than MW-31, with the exception of four instances between March 5 and April 3. Precipitation events producing 0.5 inches or greater coincide with all four events. Of the 2,642 available measurements collected, surface water from the northern pond of Units 1/2 Impoundment was contributing to groundwater near MW-31 96% of the data collection period. A graph of the measurements is shown on **Figure 6**.
- Between February 5 and March 4, 2024, SG-04R was higher in elevation than MW-05, which coincide with low precipitation values. From March 5 through March 20, 2024, groundwater elevations at MW-05 exceeded those at SG-04R. The spikes in groundwater elevation at MW-05 coincide with heavy precipitation in the month of March. Surface water is contributing to groundwater 57% of the time, and groundwater is contributing to surface water at the southern pond of the Units 1/2 Impoundment 43% of the recording period. A graph of the measurements is shown on **Figure 7**.
- STW-2 was at a lower surface water elevation than MW-16 for the duration of the period (99% of measurements). This indicates groundwater from the southern end of the Island is discharging to the South Channel on the south side of the Island. A graph of the measurements is shown on **Figure 8**.
- Additionally, a comparison between SG-07 and STW-2 reveals that surface water elevations at SG-07 were higher for approximately 71% of the reporting period. This indicates the water from the internal wetland is discharging to the South Channel during a majority of the reporting period. A graph of the measurements is shown on **Figure 9**.
- SG-07 was at a lower surface water elevation than PZ-24 for the duration of the period (99.98% of the measurements). This indicates groundwater from the eastern side of the Island is discharging into the internal wetland. A graph of the measurements is shown on **Figure 10**.
- On the western side of the Island, a comparison of STW-3, PZ-13, and PZ-13 indicates that groundwater is consistently discharging to the Grand River. STW-3 was only higher than either piezometer in 3% of the measurements. A graph of the measurements is shown on **Figure 11**.
- A comparison of MW-08 and SG-07 represents the flow between the internal wetland and the groundwater between the internal wetland and the northern wetland. Well MW-08 was higher in elevation than SG-07 96% of the reporting period. This indicates generally groundwater on the north side of the Island is discharging to the internal wetland a majority of the reporting period. A graph of the measurements is shown on **Figure 12**.





Figure 5. Transducer Deployment Map



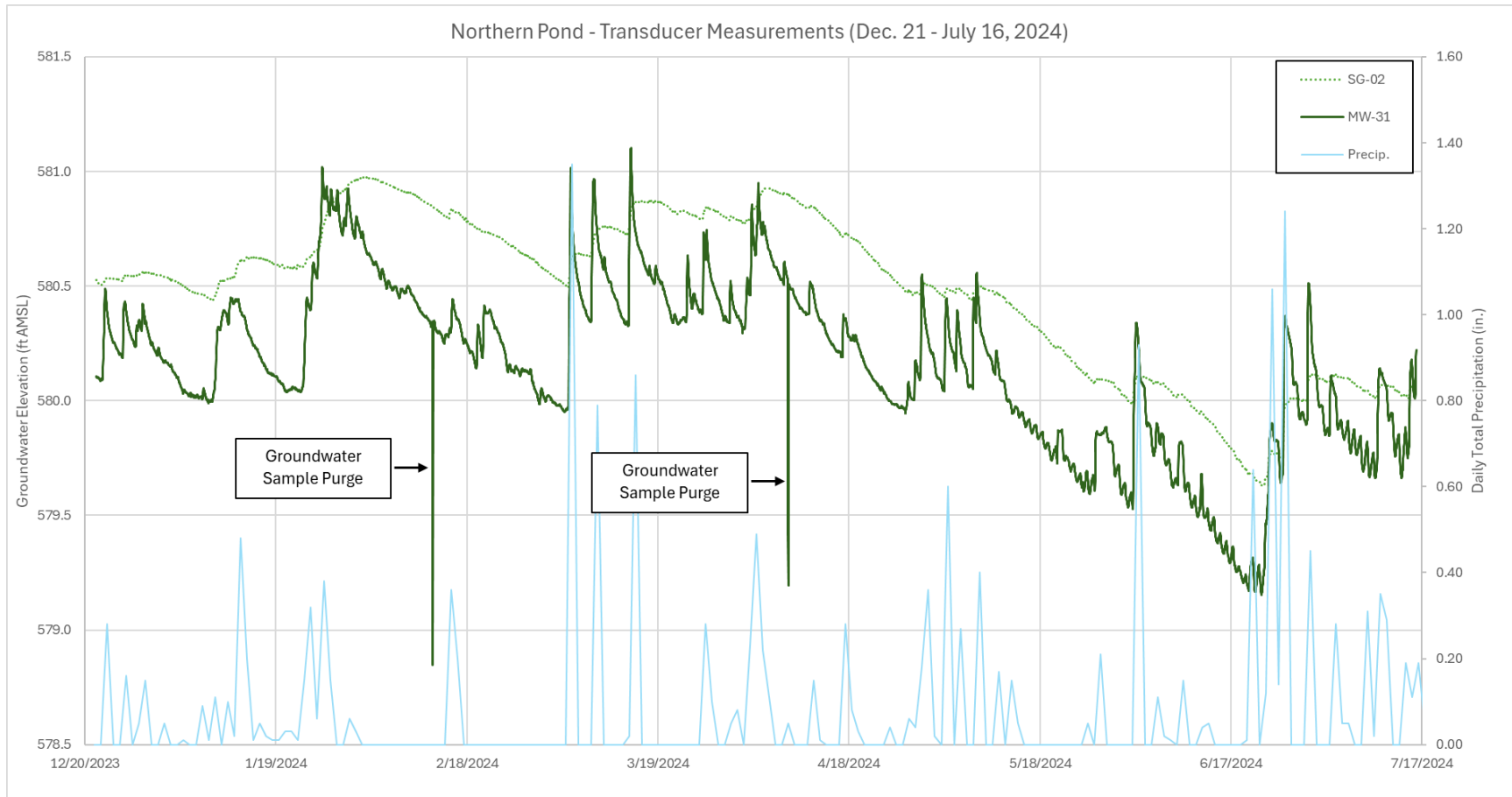


Figure 6 | Transducer Measurement Graph SG-02 and MW-31

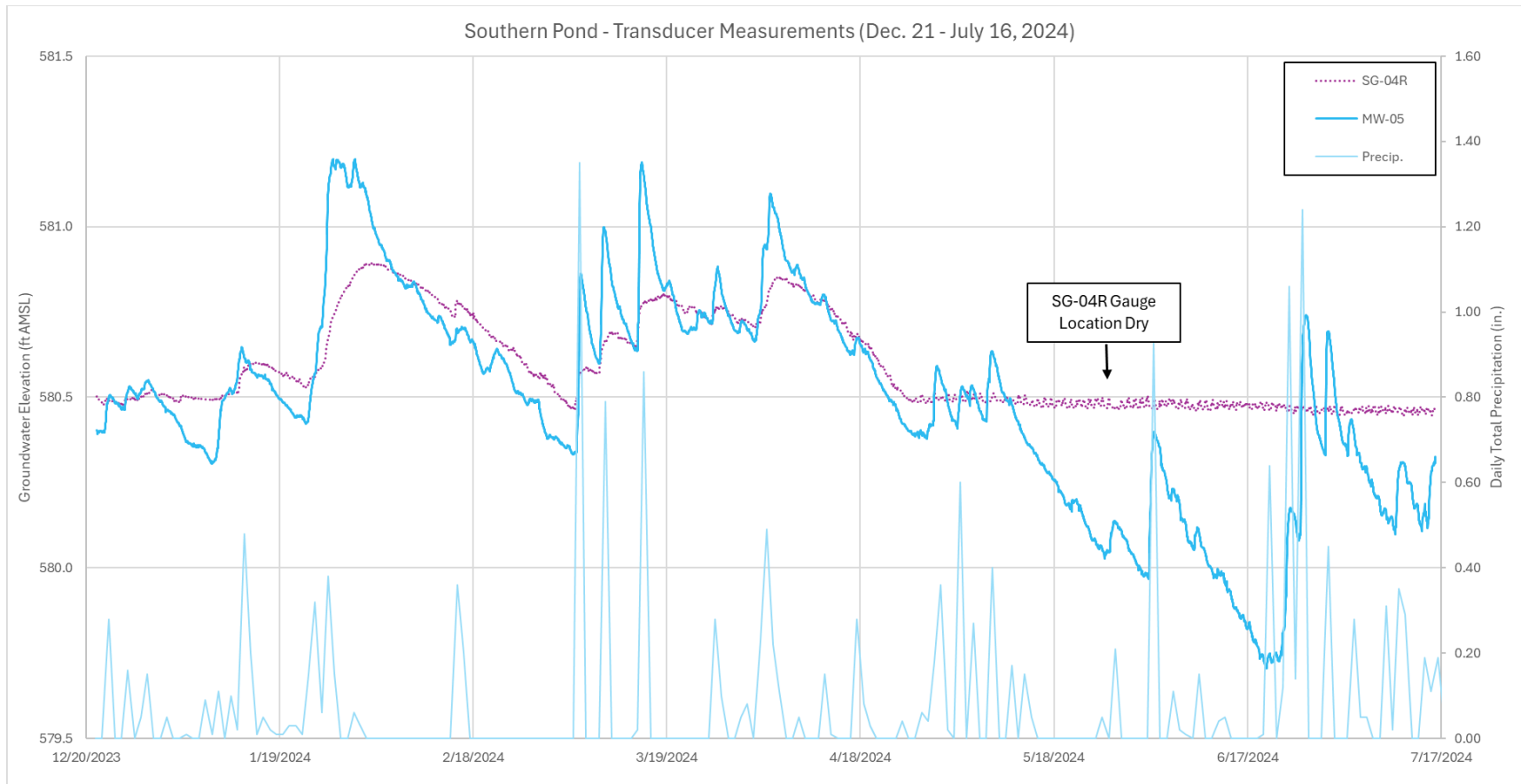


Figure 7 | Transducer Measurement Graph SG-04R and MW-05

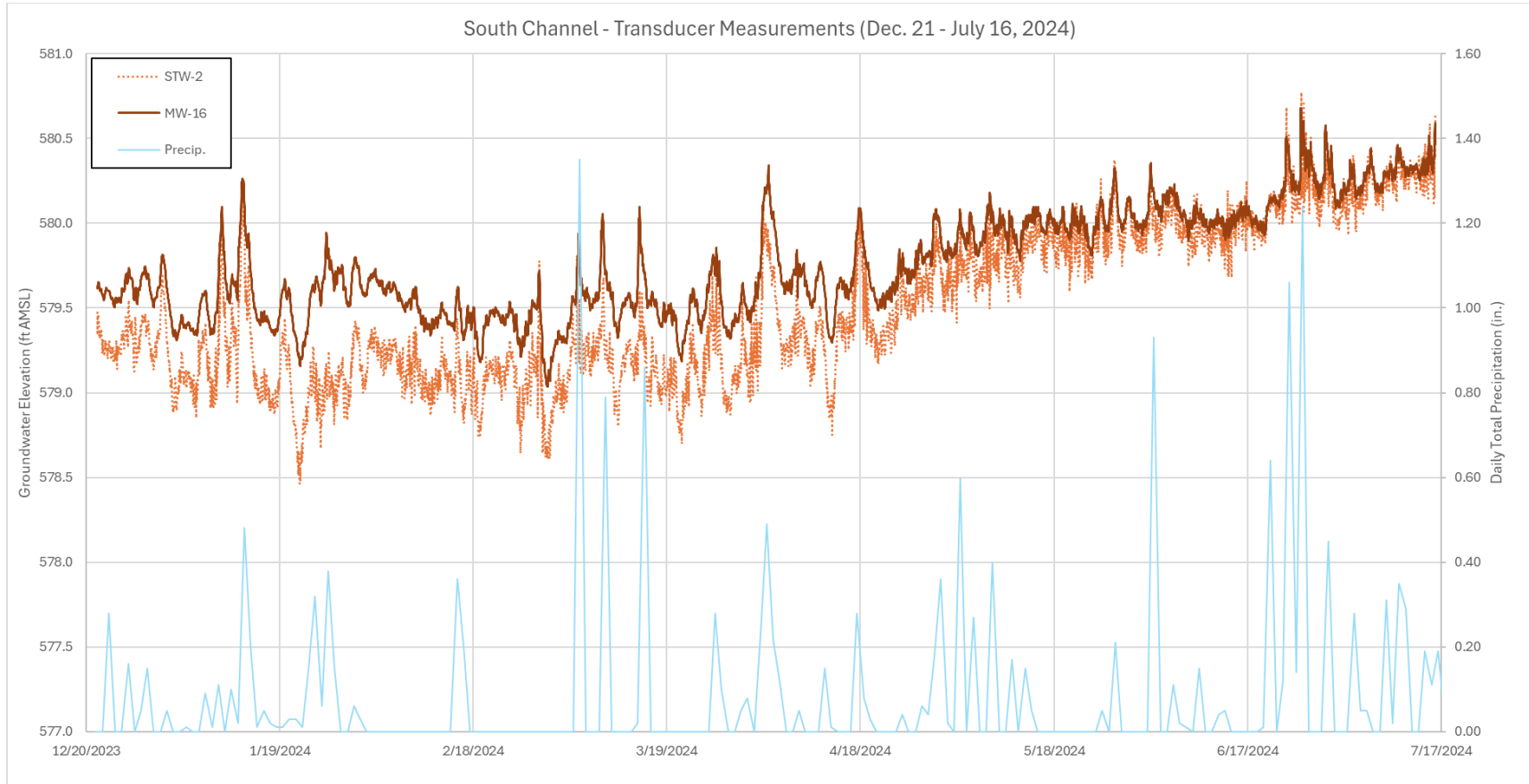


Figure 8 | Transducer Measurement Graph STW-2 and MW-16

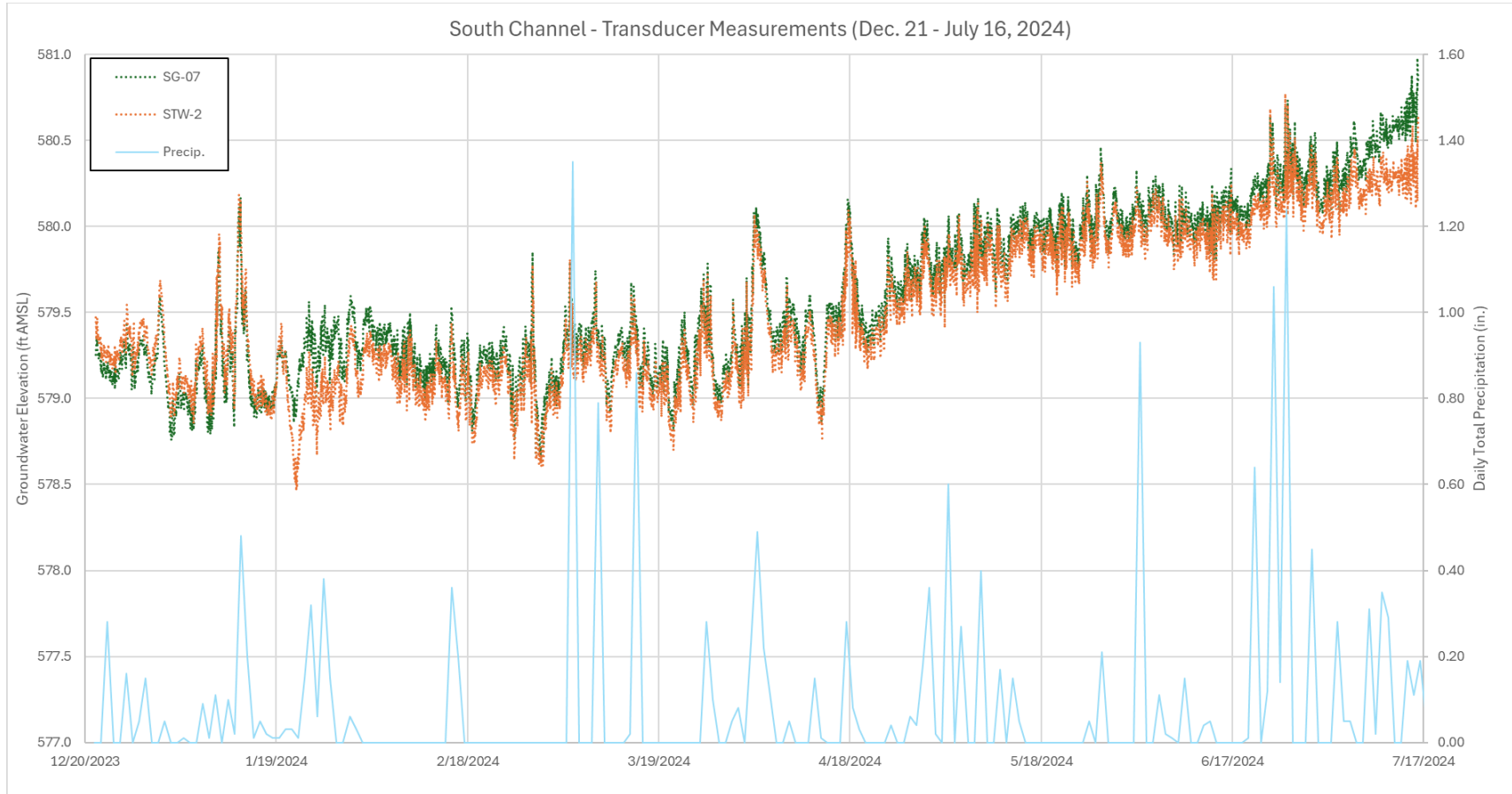


Figure 9 | Transducer Measurement Graph STW-2 and SG-07

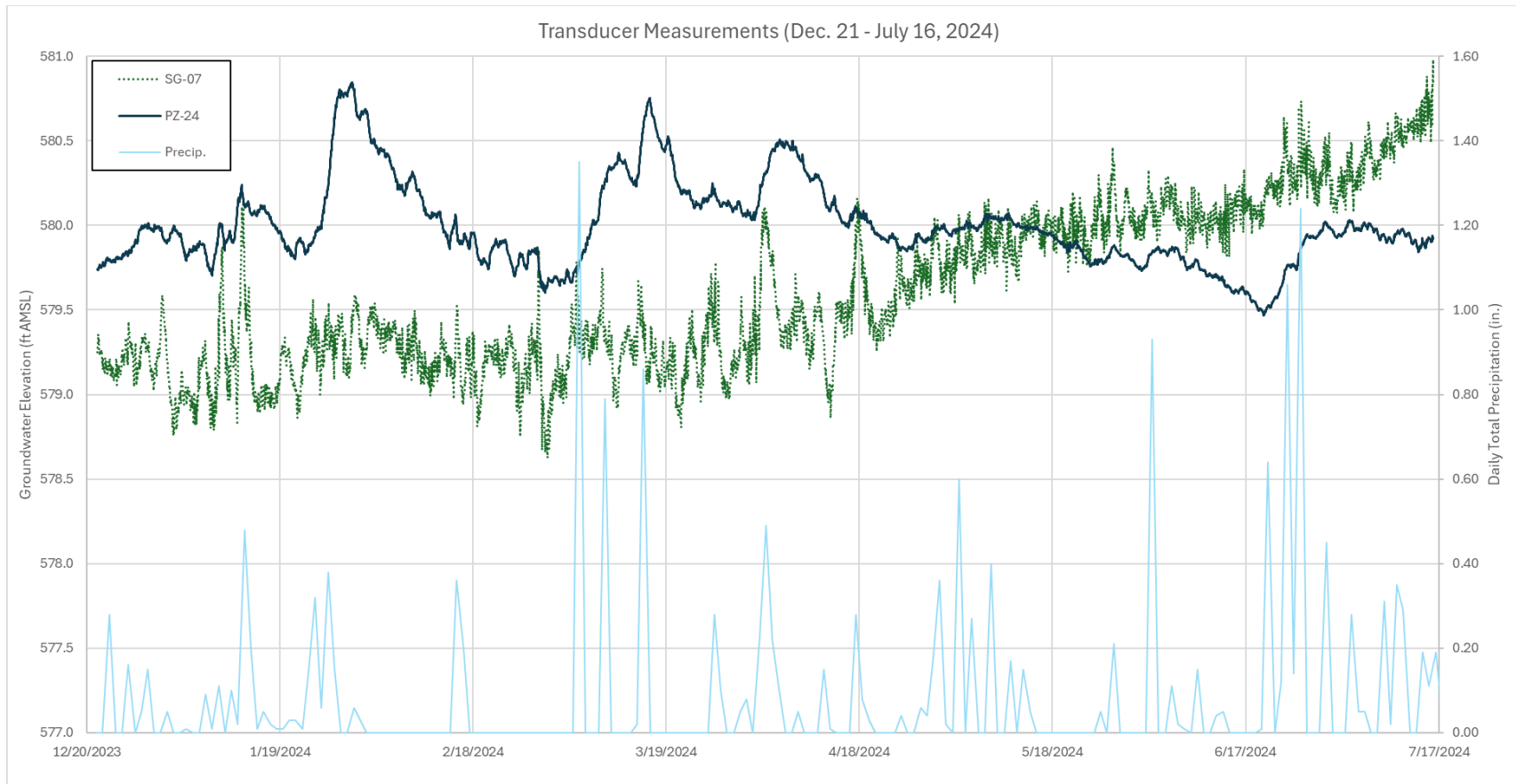


Figure 10 | Transducer Measurement Graph SG-07 and PZ-24

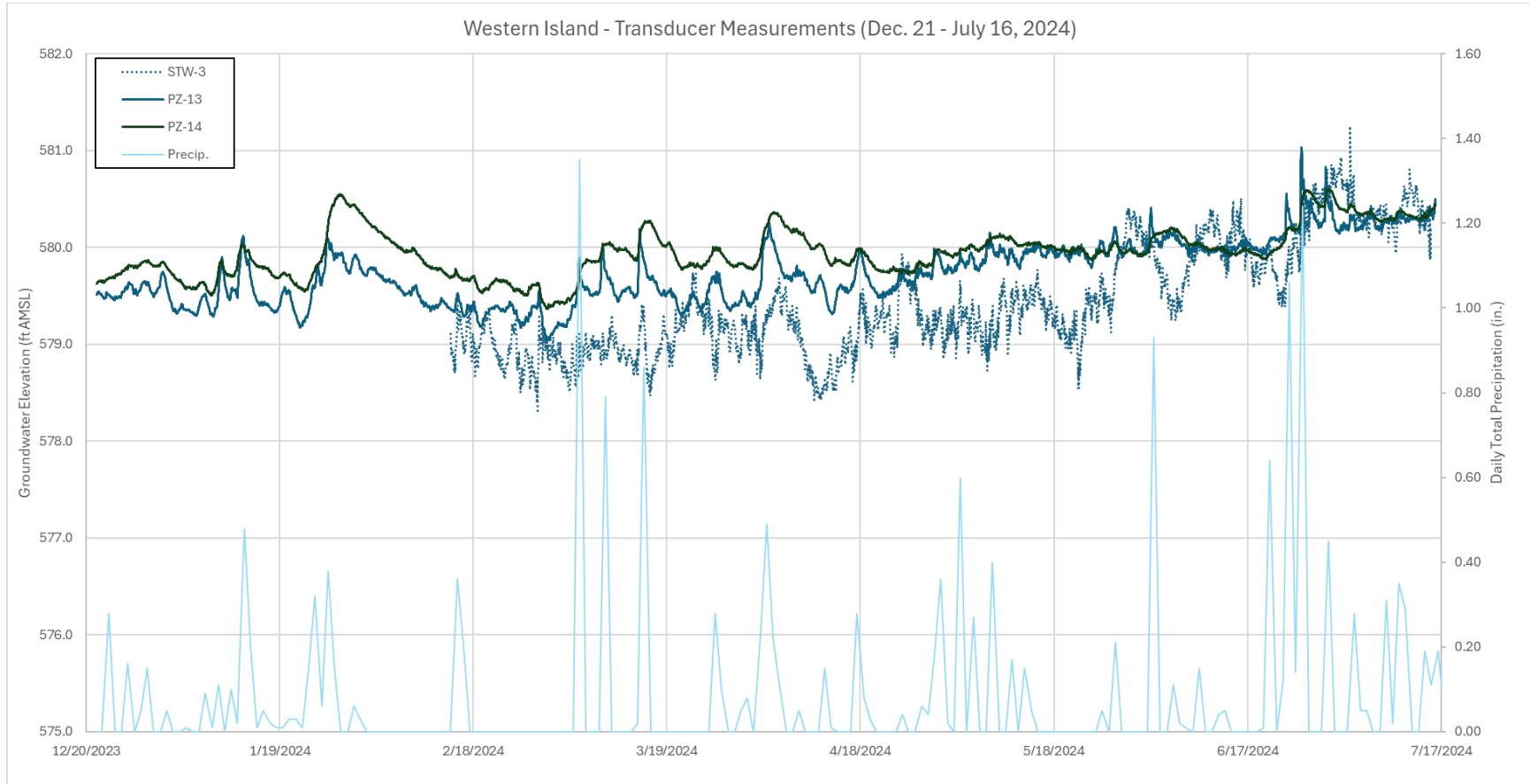


Figure 11 | Transducer Measurement Graph STW-3, PZ-13, and PZ-14

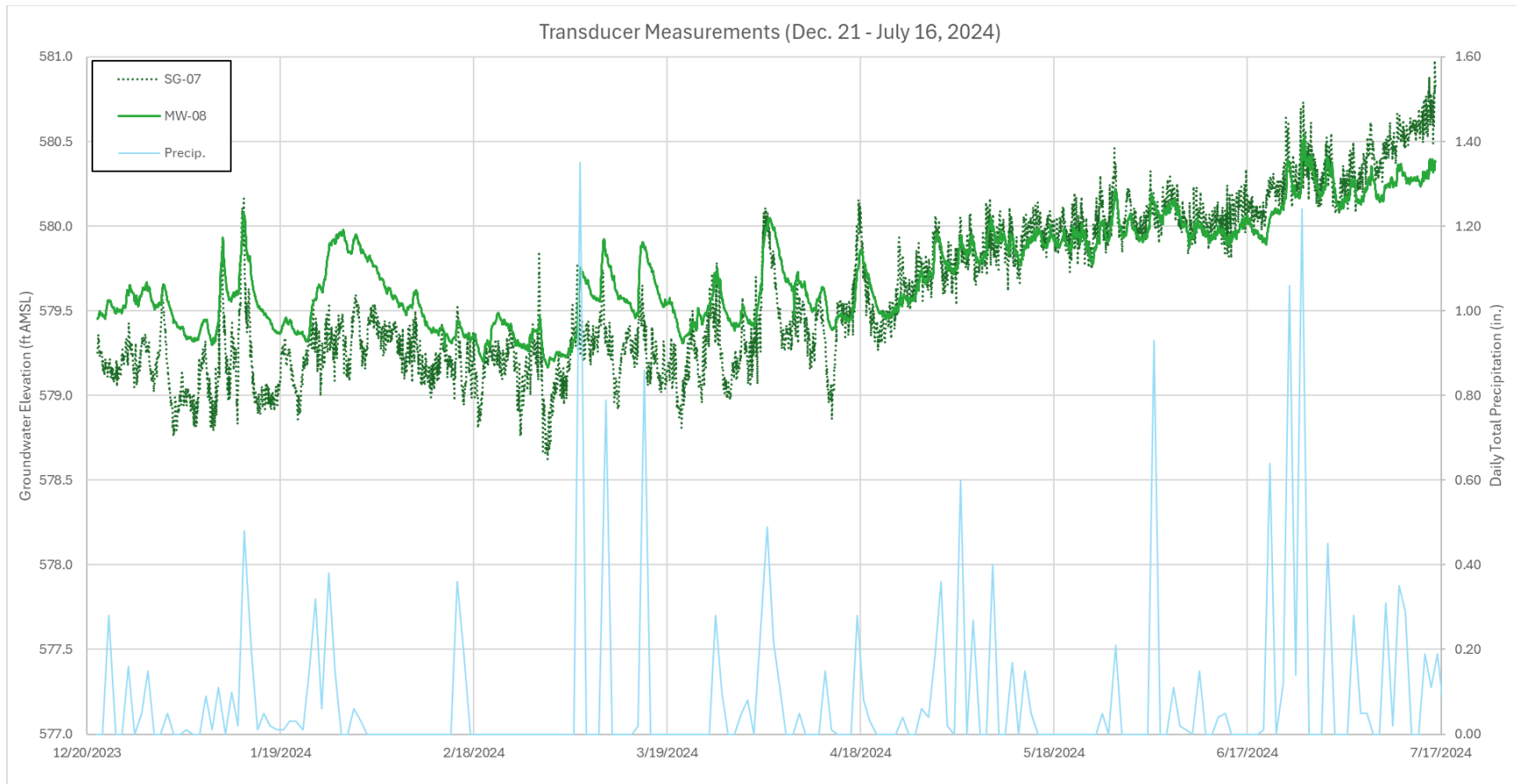


Figure 12 | Transducer Measurement Graph SG-07 and MW-08

## 4.2 Water Quality

In July 2024, the fourth assessment monitoring event was conducted and the monitoring well network provided in **Table 1** was sampled for the COIs contained in **Table 3**. The water quality data collected to date is presented in **Appendix D**, and laboratory reports are provided in **Appendix E**.

### 4.2.1 Calculation of Groundwater Protection Standards

As required in Michigan Rule R 299.4441(9), the owner must establish GPS for each constituent detected in the groundwater when in assessment monitoring. The background value (UTL), maximum contaminant level (MCLs), applicable state cleanup criteria, and site groundwater protections standards (GPS) for both CCR units are provided in **Table 6**.

Table 6. Background Values and State Groundwater Protection Standards for both Units 1/2 Impoundment and Unit 3A/B Impoundments					
Parameter**	Site-Specific Background Level (UTL)	MCL	State Non-Res. Drinking Water Cleanup Criteria for Groundwater*	GSI*	GPS
Unit	mg/L	mg/L	mg/L	mg/L	mg/L
Antimony	0.0012	0.0060	0.0060	0.13	0.0060
Arsenic	0.0040	0.010	0.010	0.010	0.010
Barium	0.58	2.0	2.0	1.3 <sup>1</sup>	1.3
Beryllium	0.000059	0.0040	0.0040	0.036 <sup>1</sup>	0.0040
Boron	4.0	NV	0.50	7.20	4.0
Cadmium	0.00015	0.0050	0.0050	0.0025 <sup>1</sup>	0.0025 <sup>1</sup>
Calcium	250	NV	N/A	N/A	250
Chloride	120	NV	250	50	120
Chromium	0.042	0.10	0.10	0.12 <sup>1</sup>	0.10
Cobalt	0.0021	0.0060	0.10	0.10	0.0060
Copper	0.020	1.30	1.0	0.021 <sup>1</sup>	0.021 <sup>1</sup>
Fluoride	0.45	4.0	2.0	NV	2.0
Iron	83	0.30	0.30	NV	83
Lead	0.0016	0.015	0.0040	0.014 <sup>1</sup>	0.0040
Lithium	0.10	0.040	0.35	0.44	0.10
Mercury	0.00016	0.0020	0.0020	0.0000013	0.00016
Molybdenum	0.0093	0.10	0.210	3.2	0.10
Nickel	0.023	NV	0.10	0.12 <sup>1</sup>	0.10
Radium 226 and 228	2.6	5.0	NV	NV	5.0
Selenium	0.00089	0.050	0.050	0.0050	0.0050
Silver	0.00011	0.10	0.098	0.00020	0.00020
Sulfate	100	250	250	NV	250
Thallium	0.000075	0.0020	0.0020	0.0037	0.0020
Total Dissolved Solids	950	500	500	500	950



**Table 6. Background Values and State Groundwater Protection Standards for both Units 1/2 Impoundment and Unit 3A/B Impoundments**

Parameter**	Site-Specific Background Level (UTL)	MCL	State Non-Res. Drinking Water Cleanup Criteria for Groundwater*	GSI*	GPS
Unit	mg/L	mg/L	mg/L	mg/L	mg/L
Vanadium	0.00093	NV	0.0062	0.027	0.0062
Zinc	0.038	5.00	5.00	0.27 <sup>1</sup>	0.27 <sup>1</sup>

\*Cleanup Criteria Requirements for Response Activity (Formerly the Part 201 Generic Cleanup Criteria and Screening Levels) found in R 299.44 Generic groundwater cleanup criteria.

\*\*Metals data is analyzed and reported as total metals.

NV=no value

<sup>1</sup>Per Footnote G of Table 1 Cleanup Criteria Requirements for Response Activity (Formerly the Part 201 Generic Cleanup Criteria and Screening Levels) of the Groundwater Surface Water (GSI) criteria list, values noted are calculated based on the hardness (expressed as CaCO<sub>3</sub>) of the receiving waters. Surface water sample from the Grand River (SG-01) had a hardness of 270 mg/L was used in the calculation of specific GSI values. The Grand River discharges into Lake Michigan, thus the GSI Criteria for Surface Water Protected for Drinking Water Use, is provided above.

#### 4.2.2 Identification of Groundwater Protection Standard (GPS) Exceedances

The July 2024 sampling data from downgradient wells was compared to the GPS values provided in **Table 6**, and several COIs were found to exceed GPS at both CCR units. To determine if an exceedance of a GPS value was statistically significant, the 95% lower confidence limit (95LCL) was calculated for each COI at each of the downgradient wells. The statistical output files are in **Appendix F**.

#### Units 1/2 Impoundment

Constituents that exceeded GPS at statistically significant levels (SSLs) are provided in **Table 7** for the Units 1/2 Impoundment. The SSLs are consistent with the second quarter 2024 sample event. In the second Quarter 2024 Groundwater Monitoring Report, well MW-20 was listed as having an SSL of lead over GPS; however, the listed GPS was incorrect. The MCL listed for lead was 0.0015 mg/L, and the actual MCL is 0.015 mg/L, which makes the GPS for lead 0.0040 mg/L, and therefore there was not an SSL for lead in any well at the Site.

**Table 7. July 2024 LCLs that Exceed GPS for the Units 1/2 Impoundment**

Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Arsenic	0.010	MW-08	0.027
		MW-18	0.022
Boron	4.0	MW-06	8.3
		MW-07	11
		MW-08	5.5
		MW-31	4.2
		MW-10	11
Calcium	250	MW-18	310
		MW-19	450
		MW-30	430

**Table 7. July 2024 LCLs that Exceed GPS for the Units 1/2 Impoundment**

Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Chloride	120	MW-10	170
Fluoride	2.0	MW-18	3.5
		MW-31	4.7
		MW-10	4.2
Lithium	0.10	MW-06	0.16
		MW-30	0.11
		MW-10	0.79
		MW-32	0.11
Sulfate	250	MW-18	700
		MW-19	920
		MW-30	820
		MW-10	430
Total Dissolved Solids	950	MW-06	1,200
		MW-18	1,300
		MW-19	1,800
		MW-30	2,100
		MW-10	1,700

*Unit 3A/B Impoundments*

Concentrations that exceeded GPS at SSLs are provided in **Table 8** for Unit 3A/B Impoundments. In comparison to the second quarter 2024 sample event, the July 2024 resulting SSLs are generally consistent with the exception of lead at MW-02. This is the first statistical exceedance of lead at the Unit 3A/B Impoundments but not the first at Harbor Island (observed at MW-20).

**Table 8. July 2024 LCLs that Exceed GPS for Unit 3A/B Impoundments**

Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Boron	4.0	MW-01R	83
		MW-02	92
		MW-09	5.5
		MW-10	11
Calcium	250	MW-03	350
		MW-04	350
		MW-09	330
Chloride	120	MW-02	140
		MW-03	150
		MW-04	150
		MW-10	170
Fluoride	2.0	MW-01R	9.3
		MW-02	9.2
		MW-09	2.4

Table 8. July 2024 LCLs that Exceed GPS for Unit 3A/B Impoundments			
Constituent	GPS (mg/L)	Well	95LCL (mg/L)
Lithium	0.10	MW-10	4.2
		MW-01R	1.8
		MW-02	1.2
		MW-09	0.29
		MW-10	0.79
Sulfate	250	MW-01R	300
		MW-03	320
		MW-04	470
		MW-09	320
		MW-10	430
Total Dissolved Solids	950	MW-01R	2,300
		MW-02	1,800
		MW-03	1,900
		MW-04	1,800
		MW-09	1,200
		MW-10	1,700

*Surface Water Monitoring*

The surface water samples collected during the July 2024 sampling event were analyzed for the same list of analytes as the groundwater monitoring locations. As a point of reference, the surface water sample results were compared to the groundwater protection standards and the list of constituents with exceedances are provided in **Table 9**.

Table 9. Surface Water Sample Summary		
Surface Water Sample Location	Waterbody Monitored	Constituents that Exceeded GPS*
SG-02	Units 1/2 Impoundment	Boron, Chloride, Fluoride, Sulfate, TDS, Vanadium.
SG-03	Units 1/2 Impoundment	Not Sampled <sup>1</sup>
SG-04R	Units 1/2 Impoundment	Boron, Calcium, Fluoride, Sulfate, TDS, Vanadium
SG-05	Internal Wetland South	No GPS exceedances observed
SG-06	Internal Wetland North	No GPS exceedances observed

\*GPS criteria not for regulatory compliance, only used as a reference value for comparison to groundwater concentrations.

<sup>1</sup>Gauge location was dry during the time of sampling, and SG-02 located within same waterbody.

Based on the sampling results, surface water samples collected at the ponds within the boundary of the Units 1/2 Impoundment had concentrations exceeding GPS values. Samples collected within the internal wetland show no GPS exceedances.

## 5.0 Summary

The following observations are based on CCR Rule compliance groundwater monitoring during the third quarter 2024:

- One groundwater sampling event was conducted in the second quarter 2024 between July 17 and July 18, 2024.
- Groundwater flow measured in the third quarter beneath Units 1/2 Impoundment flowed generally eastward toward the wetland and north near MW-31 toward SG-02.
- Groundwater flow measured in the third quarter beneath Unit 3A/B Impoundments is primarily west northwest toward the Grand River.
- No monitoring locations were installed or abandoned or repaired in second quarter 2024.
- Transducer data collected indicates surface water from the ponds within Unit 1/2 Impoundments contributes to groundwater. Groundwater on the south and eastern sides of the Island appear to be discharging to surface water.
- The Assessment of Corrective Measures report was published August 5, 2024.
- Surface water sampling locations SG-02 and SG-04R collected within the ponds of the Units 1/2 Impoundment had exceedances of boron, calcium, chloride, fluoride, TDS, and vanadium. Surface water samples from the internal wetland had no GPS exceedances for the July 2024 sampling event.
- The LCLs were calculated after the July 2024 assessment monitoring event and were compared to GPS values. The following SSLs were identified for Units 1/2 Impoundment:
  - Arsenic – MW-08, MW-18
  - Boron – MW-06, MW-07, MW-08, MW-10, MW-31
  - Calcium – MW-18, MW-19, MW-30
  - Chloride – MW-10
  - Fluoride – MW-10, MW-18, MW-31
  - Lithium – MW-06, MW-10, MW-30, MW-32
  - Sulfate – MW-10, MW-18, MW-19, MW-30
  - TDS – MW-06, MW-10, MW-18, MW-19, MW-30

LCLs that exceeded GPS at SSLs in July 2024 are consistent with those observed in October 2023.

- The LCLs were calculated after the July 2024 assessment monitoring event and were compared to GPS values. The following SSLs were identified for the Unit 3A/B Impoundments:
  - Boron – MW-01R, MW-02, MW-09, MW-10
  - Calcium – MW-03, MW-04, MW-09
  - Chloride – MW-02, MW-03, MW-04, MW-10
  - Fluoride – MW-01R, MW-02, MW-09, MW-10
  - Lithium – MW-01R, MW-02, MW-09, MW-10
  - Sulfate – MW-01R, MW-03, MW-04, MW-09, MW-10
  - TDS – MW-01R, MW-02, MW-03, MW-04, MW-09, MW-10

The LCLs for Unit 3A/B Impoundments are consistent with those observed in April 2024.

- A Data Collection work plan is being drafted to assist in the remediation alternatives feasibility assessment and remedy selection process. The list of data collection activities include:
  - Aquifer Test (Pump Test) - The test is conducted to provide aquifer characterization data, determine capture zones for potential extraction wells, and determining sustainable yield from the surficial aquifer.
  - Unit 3A/B Ash Delineation - The objective of the ash delineation is to determine the lateral and vertical extent of CCR present on the roads adjacent to Unit 3A/B Impoundments. Results of the investigation will determine the method selected to remove any potential remaining CCR in the target area.
  - Exploratory Borings – During the boring process, sediment samples will be collected to confirm the suspected clay unit beneath the surficial aquifer, as well as to provide data for potential slurry wall construction. Following drilling, monitoring wells will be installed to investigate potential groundwater flow beneath the Island and to determine the vertical extent of any contamination.
  - Ash Characterization – Bottom ash samples from the Units 1/2 Impoundment will be collected to determine the feasibility of different remedial alternatives such as In-Situ Stabilization.

The data collection process is anticipated to continue in 2025.

## 6.0 References

Golder Associates, Inc., 2019. CCR Impoundment Ash Delineation at the J.B. Sims Generating Station. October 14, 2019.

Golder Associates, Inc., 2020. Unit 3 Impoundments – CCR Removal Documentation Report. December 11, 2020.

Golder Associates, Inc., 2022. Field Summary Report of Results from Approved Work Plan -Piezometer Installation and Additional Data Collection. February 15, 2022.HDR Inc, 2022. 2022 Harbor Island Work Plan for CCR Compliance. April 8, 2022. Amended June 23, 2022.

HDR, 2024., Hydrogeologic Monitoring Plan for Compliance with Michigan Part 115 Solid Waste Management Regulation – Former J.B. Sims Generating Station., June 18, 2024.

Western Michigan University, Department of Geology. “Hydrogeologic Atlas of Michigan, Volume 1”. The Department of Geology, Kalamazoo, Michigan. 1981.

## Appendix A

### Field Data Sheets

### Water Sample Collection Field Data Sheet

Site Name: GHHI Well ID.: MW-01R  
 Sample I.D.(match bottle and COC form exactly): MW-01R  
 Personnel: AB  
 Date: 7/18/24 Static Depth to Water (ft, btoc) 7.43  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24; 1338  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1400 Total Purge 16 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1258	1	7.53	2.45	2.69	0.05	17.6	-175.1	7.59
1302	2	7.60	2.75	<del>2.63</del> 3.53	0.00	17.0	-219.5	7.60
1306	3	7.65	3.04	2.07	0.00	16.7	-254.5	7.61
1310	4	7.67	3.14	1.00	0.00	16.5	-263.8	7.62
1314	5	7.70	3.17	0.80	0.01	16.4	-271.0	7.62
1318	6	7.71	3.17	1.63	0.01	16.4	-276.4	7.63
1322	7	7.72	3.15	0.84	0.01	16.2	-293.5	7.63
1326	8	7.71	3.13	0.02	0.01	16.1	-301.1	7.63
1330	9	7.71	3.12	0.02	0.00	16.3	-308.5	7.63
1334	10	7.72	3.13	0.02	0.00	16.3	-312.8	7.63
1338	11	7.73	3.13	0.02	0.01	16.3	-316.1	7.63

Flow Rate ~250 mL/min  
 Pump controller setting 95 on  
 General Comments: \_\_\_\_\_

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-02

Sample I.D. (match bottle and COC form exactly): MW-02

Personnel: TTB

Date: 7-17-24 Static Depth to Water (ft, btoc) 15.08

Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 1820

Sample Method: CF Per.

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate  Yes  No Duplicate Sample ID: -

Sample QC: Equipment Blank  Yes  No Equip Blank Sample ID: -

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 2' w/ 1/2" hoist

Time Completed: \_\_\_\_\_ Total Purge - Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
16:46		7.13	4.16	50.6	0.41	14.8	-79.6	16.11
16:50		7.14	4.18	47.3	0.46	14.9	-87.6	16.15
16:54		7.14	4.16	47.4	0.42	15.5	-92.3	16.13
16:58		7.13	4.21	38.2	0.44	15.1	-97.3	16.12
17:02		7.13	4.25	37.1	0.45	15.7	-105.9	16.11
17:06		7.14	4.27	34.2	0.42	15.8	-112.2	16.12
17:30		7.12	4.34	31.6	0.70	15.5	-125.5	16.09
17:34		7.12	4.39	18.7	0.55	15.4	-128.0	16.09
17:38		7.12	4.40	15.7	0.50	15.3	-129.7	16.09
17:42		7.13	4.40	13.9	0.46	15.3	-130.9	16.09
17:46		7.13	4.39	11.6	0.44	15.5	-132.4	16.09
17:50		7.13	4.39	10.4	0.46	15.3	-132.9	16.09
17:54		7.13	4.40	6.92	0.45	15.5	-133.8	16.09
17:58		7.13	4.39	4.02	0.43	15.5	-134.7	16.09
18:02		7.14	4.41	1.69	0.44	15.3	-134.5	16.09
18:06		7.13	4.40	0.02	0.42	15.2	-135.4	16.09
18:10		7.13	4.42	0.02	0.45	15.0	-135.6	16.09

Flow Rate 150 mL/min

Pump controller setting 30%

General Comments:

16:28 Start Purge - yellow tint + bubbles  
Start fill 18:12



## Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-03

Sample I.D. (match bottle and COC form exactly): MW-03

Personnel: RB

Date: 7-18-24 Static Depth to Water (ft, btoc) 17.54

Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 12:30

Sample Method: LF Desi

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 2' below

Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units 6

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
11:20		7.29	2.84	0.02	0.28	15.1	49.2	12.90
11:24		7.30	2.84	0.02	0.14	15.4	33.4	12.90
11:28		7.31	2.87	0.02	0.08	14.8	22.2	12.90
11:32		7.31	2.86	0.02	0.13	14.8	11.0	12.90
11:36		7.31	2.85	0.02	0.06	14.8	4.8	12.90
11:40		7.32	2.85	0.02	0.07	14.7	-1.7	12.90
11:44		7.31	2.84	0.02	0.05	14.9	-7.3	12.90
11:48		7.32	2.86	0.02	0.02	14.6	-13.3	12.90
11:52		7.31	2.85	0.02	0.03	14.8	-17.0	12.90
11:56		7.31	2.87	0.02	0.02	15.0	-22.3	12.90
12:00		7.31	2.81	0.02	0.03	15.0	-25.6	12.90
12:04		7.30	2.87	0.02	0.02	14.9	-28.4	12.90
12:08		7.30	2.87	0.02	0.02	15.0	-30.3	12.90

Flow Rate 125 ml/min

Pump controller setting 40%

General Comments:

Start Pump 11:05 - Orange tint + red and black particulate + sulfur odor  
Start fill 12:10 - Stop fill 12:58

### Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-04

Sample I.D. (match bottle and COC form exactly): MW-04

Personnel: KB

Date: 7-18-24 Static Depth to Water (ft, btoc) 10.42

Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 10:30

Sample Method: LF Per.

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: -

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: -

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) 22' at bott

Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units 2

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10% TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
9:26		7.23	2.79	0.02	0.11	15.9	2.6	11.20
9:30		7.24	2.79	0.02	0.10	15.9	-8.4	11.20
9:34		7.24	2.79	0.02	0.07	15.9	-22.8	11.21
9:38		7.24	2.80	0.02	0.07	16.0	-33.6	11.21
9:42		7.25	2.80	0.02	0.05	15.9	-43.7	11.21
9:46		7.25	2.79	0.02	0.07	15.8	-54.4	11.21
9:50		7.25	2.79	0.02	0.05	15.9	-61.9	11.20
9:54		7.25	2.79	0.02	0.02	15.9	-67.8	11.20
9:58		7.24	2.79	0.02	0.07	16.0	-72.2	11.20
10:02		7.25	2.79	0.02	0.04	16.0	-75.9	11.20
10:06		7.25	2.79	0.02	0.05	16.1	-78.3	11.20
10:10		7.25	2.79	0.02	0.04	16.1	-81.3	11.20
10:14		7.25	2.79	0.02	0.05	16.1	-82.9	11.20

Flow Rate 125 ml/min  
 Pump controller setting 35%

General Comments:  
Purge Start 9:10 - Red + Black particulate sulfur odor  
Start Fill 10:15 Stop Fill 10:55

Water Sample Collection Field Data Sheet

Site Name: G.H.H.I Well ID.: MW-06

Sample I.D.(match bottle and COC form exactly): MW-06

Personnel: AB

Date: 7/18/24 Static Depth to Water (ft, btoc) 10.03

Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24 1550

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No Duplicate Sample ID:           

Sample QC: Equipment Blank Yes  No Equip Blank Sample ID:           

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1620 Total Purge 14 Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
1518	1	7.32	2.06	4.58	0.44	15.4	-172.3	10.18
1522	2	7.35	2.01	3.01	0.11	15.7	-188.5	10.20
1526	3	7.37	1.97	4.29	0.08	15.9	-200.5	10.21
1530	4	7.39	1.95	6.28	0.03	16.0	-213.4	10.22
1534	5	7.40	1.94	6.37	0.01	16.0	-224.5	10.22
1538	6	7.39	1.94	5.87	0.02	16.0	-228.2	10.22
1542	7	7.40	1.92	2.87	0.02	16.0	-225.7	10.22
1546	8	7.39	1.91	1.36	0.01	16.0	-231.1	10.22
1550	9	7.39	1.91	0.07	0.01	16.0	-234.1	10.22

Flow Rate ~250 mL/min  
 Pump controller setting ~45%  
 General Comments:

### Water Sample Collection Field Data Sheet

Site Name: GHHI Well ID.: MW-07

Sample I.D.(match bottle and COC form exactly): MW-07

Personnel: AB

Date: 7/17/24 Static Depth to Water (ft, btoc) 5.92

Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24; 1622

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No Duplicate Sample ID:         

Sample QC: Equipment Blank Yes  No Equip Blank Sample ID:         

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1646 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1558	1	6.92	1.32	9.79	0.13	15.0	-153.5	6.03
1602	2	6.94	1.32	0.55	0.08	14.6	-159.3	6.03
1606	3	6.95	1.31	0.05	0.08	14.5	-166.9	6.03
1610	4	6.96	1.31	0.02	0.07	14.6	-169.4	6.04
1614	5	6.96	1.30	0.02	0.07	14.6	-172.6	6.04
1618	6	6.95	1.30	0.02	0.05	14.3	-174.8	6.05
1622	7	6.95	1.29	0.02	0.04	14.8	-176.7	6.05

Flow Rate ~250 mL/min  
 Pump controller setting 45%

General Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: GHHI Well ID: MW-08  
 Sample I.D. (match bottle and COC form exactly): MW-08  
 Personnel: AB  
 Date: 7-18-24 Static Depth to Water (ft, bloc) 5.03  
 Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 17:40  
 Sample Method: LF Pw.  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: —  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: —  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, bloc) ~2' off bott  
 Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, bloc)
16:08		7.03	0.48	3.24	0.20	16.6	38.5	5.22
16:10		7.03	0.48	0.13	0.13	16.3	14.0	5.22
16:14		7.04	0.48	0.02	0.08	16.2	-13.5	5.22
16:18		7.04	0.99	0.02	0.07	16.2	-29.4	5.22
16:22		7.04	0.99	0.02	0.02	16.1	-47.4	5.22
16:26		7.04	0.99	0.02	0.05	16.0	-61.2	5.22
17:00		6.51	1.05	0.02	0.94	16.1	+102.1	5.22
17:04		6.80	0.99	0.02	0.13	15.8	-5.9	5.22
17:08		6.80	0.99	0.02	0.09	15.9	-60.1	5.22
17:12		6.93	0.99	0.02	0.09	15.8	-74.8	5.22
17:16		6.98	0.99	0.02	0.04	15.9	-84.7	5.22
17:20		6.99	0.99	0.02	0.05	15.8	-123.2	5.22
17:24		6.99	0.99	0.02	0.04	15.8	-128.0	5.22
17:28		7.00	0.99	0.02	0.05	15.8	-151.3	5.22
17:32		7.00	0.99	0.02	0.05	15.8	-133.5	5.22

Flow Rate 200 ml/min  
 Pump controller setting 40%  
 General Comments:

15:44 Start Purge - Red + Black particulate and sulfenic odor  
18:33 start fill - 18:57 stop fill

### Water Sample Collection Field Data Sheet

Site Name: GHH1 Well ID.: MW-09  
 Sample I.D. (match bottle and COC form exactly): MW-09  
 Personnel: AB  
 Date: 7/17/24 Static Depth to Water (ft, btoc) 9.31  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24 1824  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1900 Total Purge 11 Units L

#### Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1804	1	7.19	2.15	13.7	0.20	15.6	-142.5	9.57
1808	2	7.21	2.16	9.13	0.02	15.2	-149.5	9.62
1812	3	7.21	2.16	5.84	0.01	15.2	-151.1	9.64
1816	4	7.21	2.16	5.39	0.02	15.0	-153.4	9.67
1820	5	7.26	2.15	9.14	0.02	15.1	-154.5	9.68
1824	6	7.20	2.16	4.56	0.01	15.2	-155.1	9.96

Flow Rate ~250 ml/min  
 Pump controller setting 45%  
 General Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: GHH1 Well ID: MW-10  
 Sample I.D.(match bottle and COC form exactly): MW-10  
 Personnel: AB  
 Date: 7/17/24 Static Depth to Water (ft, btoc) 6.19  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24; 1728  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1758 Total Purge 12 Units \_\_\_\_\_

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
<del>1700</del> 1704	1	7.18	4.31	0.02	0.17	16.4	-139.9	6.28
1708	2	7.14	3.84	0.02	0.02	16.9	-149.1	6.28
1712	3	7.24	3.70	0.02	0.03	17.0	-164.8	6.28
1716	4	7.33	3.58	0.02	0.03	17.0	-176.1	6.28
1720	5	7.36	3.58	0.02	0.03	16.8	-184.0	6.28
1724	6	7.40	3.60	0.02	0.03	17.0	-189.0	6.28
1728	7	7.42	3.62	0.02	0.03	16.9	-193.2	6.28

Flow Rate ~250ml/min  
 Pump controller setting 45%  
 General Comments: \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-11  
 Sample I.D. (match bottle and COC form exactly): MW-11  
 Personnel: ITB  
 Date: 7-18-24 Static Depth to Water (ft, btoc) 14.68  
 Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 15:00  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: -  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: -  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) ~2' above bott  
 Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
13:32		7.05	1.82	0.02	0.41	14.8	63.4	14.84
13:36		7.08	1.82	0.02	0.20	15.0	50.7	14.84
13:40		7.10	1.81	0.02	0.17	14.8	59.2	14.84
13:44		7.11	1.80	0.02	0.15	14.8	51.4	14.84
13:48		7.11	1.74	0.02	0.13	14.7	21.1	14.84
13:52		7.12	1.78	0.02	0.12	14.6	9.8	14.84
14:08		7.13	1.76	0.02	0.10	15.2	-29.5	14.84
14:12		7.14	1.75	0.02	0.07	15.4	-41.3	14.84
14:16		7.14	1.75	0.02	0.10	15.3	-47.8	14.84
14:20		7.13	1.74	0.02	0.08	15.4	-54.7	14.84
14:24		7.14	1.74	0.02	0.09	15.3	-60.9	14.84
14:28		7.14	1.74	0.02	0.09	15.3	-65.2	14.84
14:32		7.14	1.73	0.02	0.08	15.3	-71.2	14.84
14:36		7.13	1.72	0.02	0.08	15.3	-75.6	14.84
14:40		7.13	1.71	0.02	0.09	15.4	-77.8	14.84
14:44		7.13	1.72	0.02	0.09	15.4	-78.0	14.84

Flow Rate 125 ml/min

Pump controller setting 65%

**General Comments:**

Purge start 13:11 + Black particulate + sulfuric acid + Bubbles in Conc  
 Start Pll 14:45 Stop Pll 15:30



### Water Sample Collection Field Data Sheet

Site Name: UHHI Well ID.: MW-12  
 Sample I.D.(match bottle and COC form exactly): MW-12, MWT-12  
 Personnel: A. Byks  
 Date: 7/17/24 Static Depth to Water (ft, btoc) 6.99  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24; 832  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate  Yes  No Duplicate Sample ID: MWT-12  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID:         
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 930 Total Purge 19 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
0800	1	7.33	0.61	19.5	0.54	18.9	137.6	7.14
0804	2	7.32	0.60	11.0	0.37	19.0	130.2	7.13
0808	3	7.36	0.59	6.62	0.30	19.3	98.0	7.14
0812	4	7.40	0.59	4.44	0.27	19.3	60.4	7.14
0816	5	7.42	0.58	2.56	0.22	19.4	44.2	7.14
0820	6	7.43	0.58	0.66	0.16	19.4	26.0	7.14
0824	7	7.44	0.58	0.02	0.18	19.5	14.3	7.14
0828	8	7.45	0.57	0.02	0.17	19.5	4.8	7.14
0832	9	7.46	0.57	0.02	0.17	19.5	-2.2	7.14

Flow Rate ~250 ml/min  
 Pump controller setting 45%  
 General Comments:

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-16

Sample I.D. (match bottle and COC form exactly): MW-16

Personnel: ITB

Date: 7-18-24 Static Depth to Water (ft, btoc) 4.62

Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 8:30

Sample Method: CF Pci

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 2' above bott

Time Completed \_\_\_\_\_ Total Purge \_\_\_\_\_ Units L

Field Measurements

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10% TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
6:54		6.35	1.35	0.02	2.65	17.7	89.4	4.75
6:58		6.42	1.35	0.02	2.31	17.7	79.6	4.75
7:02		6.46	1.36	0.02	0.21	17.7	71.7	4.75
7:06		6.48	1.35	0.02	0.11	17.6	65.6	4.75
7:10		6.49	1.35	0.02	0.08	17.6	59.5	4.75
7:14		6.50	1.35	0.02	0.08	17.6	53.0	4.75
7:18		6.51	1.35	0.02	0.06	17.6	47.0	4.75
7:22		6.51	1.35	0.02	0.07	17.6	40.5	4.75
7:26		6.51	1.35	0.02	0.08	17.6	35.0	4.75
7:30		6.51	1.35	0.02	0.08	17.6	30.0	4.75
7:34		6.51	1.35	0.02	0.05	17.6	22.7	4.75
7:38		6.51	1.35	0.02	0.07	17.6	18.9	4.75
7:42		6.52	1.35	0.02	0.08	17.6	10.0	4.75
8:02		6.53	1.36	0.02	0.18	17.6	-20.9	4.75
8:06		6.53	1.36	0.02	0.20	17.6	-21.0	4.75
8:10		6.53	1.36	0.02	0.18	17.6	-23.9	4.75
8:14		6.53	1.36	0.02	0.18	17.6	-25.2	4.75

Flow Rate: 200 ml/min

Pump controller setting: 40%

General Comments:  
Purge Start 6:28 - Surfbank odor + black particulate  
Start Fill 8:15 8:45

**Water Sample Collection Field Data Sheet**

Site Name: GHH1 Well ID.: MW-17

Sample I.D.(match bottle and COC form exactly): MW-17

Personnel: AB

Date: 7/17/24 Static Depth to Water (ft, btoc) 6.40

Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24, 1358

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No Duplicate Sample ID:       

Sample QC: Equipment Blank Yes  No Equip Blank Sample ID:       

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1424 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1334	1	7.11	0.93	8.86	0.40	19.8	-121.1	6.40
1338	2	7.15	0.92	3.41	0.17	20.1	-144.6	6.40
1342	3	7.17	0.93	4.00	0.02	20.1	-155.9	6.40
1346	4	7.24	0.93	0.68	0.02	20.2	-176.0	6.40
1350	5	7.24	0.94	0.47	0.02	20.1	-182.9	6.40
1354	6	7.29	0.94	0.30	0.02	20.1	-191.6	6.40
1358	7	7.31	0.95	0.21	0.02	20.3	-197.6	6.40

Flow Rate ~250 ml/min  
 Pump controller setting ~40%

General Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: CHH1 Well ID.: MW-18  
 Sample I.D.(match bottle and COC form exactly): MW-18  
 Personnel: AB  
 Date: 7/17/24 Static Depth to Water (ft, btoc) 6.66  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24, 1254  
 Sample Method: LF Per  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1320 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1230	1	7.58	1.75	43.2	0.36	16.8	-150.0	6.68
1234	2	7.56	1.72	12.0	0.14	17.0	-171.3	6.68
1238	3	7.45	1.68	10.3	0.05	17.2	-164.4	6.68
1242	4	7.37	1.65	10.3	0.05	17.3	-155.8	6.68
1246	5	7.36	1.64	9.25	0.05	17.4	-148.3	6.68
1250	6	7.33	1.64	5.20	0.04	17.3	-147.4	6.68
1254	7	7.31	1.64	4.07	0.04	17.3	-143.3	6.68

Flow Rate ~250 ml/min  
 Pump controller setting 35%  
 General Comments:

### Water Sample Collection Field Data Sheet

Site Name: GHH1 Well ID.: MW-19

Sample I.D. (match bottle and COC form exactly): MW-19

Personnel: AB

Date: 7/18/24 Static Depth to Water (ft, btoc) 5.58

Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24, 1440

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate: Yes  No Duplicate Sample ID:           

Sample QC: Equipment Blank: Yes  No Equip Blank Sample ID:           

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1500 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
1416	1	6.89	2.17	4.66	0.04	15.9	-133.3	5.60
1420	2	6.87	2.15	2.61	0.01	16.4	-139.6	5.60
1424	3	6.85	2.12	1.00	0.02	16.5	-145.6	5.60
1428	4	6.85	2.08	0.02	0.02	14.6	-148.0	5.60
1432	5	6.84	2.06	0.02	0.02	16.6	-150.5	5.60
1436	6	6.85	2.05	0.02	0.01	16.6	-151.2	5.60
1440	7	6.85	2.04	0.02	0.02	16.6	-152.0	5.60

Flow Rate ~ 250 mL/min  
 Pump controller setting 452  
 General Comments: \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: GHH1 Well ID: MW-20

Sample I.D. (match bottle and COC form exactly): MW-20

Personnel: AB

Date: 7/17/24 Static Depth to Water (ft, btoc) 5.18

Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24, 1500

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID:       

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID:       

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1530 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1436	1	7.28	1.16	13.5	0.07	17.2	-167.1	5.18
1440	2	7.30	1.14	3.92	0.01	17.2	-170.4	5.18
1444	3	7.31	1.14	3.65	0.01	17.0	-173.5	5.19
1448	4	7.34	1.13	2.73	0.01	17.0	-176.6	5.19
1452	5	7.34	1.13	3.46	0.01	17.0	-177.4	5.19
1456	6	7.34	1.13	1.99	0.01	17.0	-178.0	5.19
1500	7	7.34	1.12	0.02	0.01	17.0	-178.3	5.20

Flow Rate ~250 mL/min  
 Pump controller setting 45v

General Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Water Sample Collection Field Data Sheet**

Site Name: C1HH1 Well ID.: MW-27  
 Sample I.D.(match bottle and COC form exactly): MW-27  
 Personnel: AB  
 Date: 7/18/24 Static Depth to Water (ft, btoc) 4.82  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24; 1054  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No  Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1118 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1030	1	6.86	2.82	9.51	0.05	19.5	-105.8	5.17
1034	2	6.87	2.82	36.9	0.28	19.7	-105.5	5.16
1038	3	6.86	2.81	30.2	0.02	19.7	-111.2	5.17
1042	4	6.88	2.80	25.8	0.03	19.8	-117.9	5.17
1046	5	6.86	2.79	15.2	0.03	19.4	-125.5	5.17
1050	6	6.87	2.79	9.10	0.04	19.7	-129.9	5.17
1054	7	6.87	2.79	7.90	0.03	19.6	-129.9	5.17

Flow Rate ~250 mL/min  
 Pump controller setting 50%  
 General Comments:

### Water Sample Collection Field Data Sheet

Site Name: CHH1 Well ID.: MN-28

Sample I.D.(match bottle and COC form exactly): MN-28

Personnel: AB

Date: 7/18/24 Static Depth to Water (ft, btoc) 7.50

Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24 ; 1154

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate  Yes  No Duplicate Sample ID:       

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID:       

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tube

Time Completed: 1230 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1130	1	6.94	1.48	9.18	0.11	17.2	-140.7	7.65
1134	2	6.90	1.48	3.64	0.12	17.2	-144.2	7.66
1138	3	6.91	1.48	4.21	0.01	17.2	-152.0	7.67
1142	4	6.93	1.48	4.07	0.01	17.2	-157.0	7.67
1146	5	7.00	1.47	4.19	0.01	17.2	-159.1	7.67
<del>1148</del> 1150	6	6.91	1.48	9.10	0.01	16.7	-158.1	7.67
<del>1152</del> 1154	7	6.94	1.46	9.11	0.01	16.8	-158.8	

Flow Rate ~250 mL/min  
 Pump controller setting 45%  
 General Comments:



Water Sample Collection Field Data Sheet

Site Name: GHH1 Well ID.: MW-30

Sample I.D. (match bottle and COC form exactly): MW-30

Personnel: AB

Date: 7/18/24 Static Depth to Water (ft, btoc) 5.58 - checked @ 1725  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24; 1800 *before 2nd purge, same value*

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate  No  Duplicate Sample ID:       

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID:       

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1822 Total Purge 16 Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
1630	1	6.92	3.02	8.20	0.15	17.0	-135.8	5.63
1634	2	6.92	3.05	6.33	0.02	17.0	-142.8	5.64
1638	3	6.94	3.05	6.23	0.01	17.0	-147.0	5.64
<del>1642</del>	<del>4</del>							
<del>1646</del>	<del>5</del>	6.99			0.01	17.1	-167.3	5.64
<del>1650</del>	<del>6</del>							
restart	purge	- had to mob offsite for bottles						
1732	4	6.96	2.97	6.19	0.09	16.8	-129.9	5.64
1736	5	7.01	2.98	6.14	0.02	16.9	-149.0	5.64
1740	6	7.03	2.96	6.30	0.03	16.9	-156.0	5.64
1744	7	7.04	2.96	6.51	0.03	16.9	-165.2	5.64
1748	8	7.05	2.93	4.90	0.00	16.9	-182.8	5.64
1752	9	7.06	2.93	3.11	0.00	16.9	-189.7	5.64
1756	10	7.06	2.93	4.01	0.00	16.8	-195.7	5.64
1800	11	7.06	2.93	0.97	0.00	16.9	-198.6	5.64

Flow Rate ~250 ml/min  
 Pump controller setting 452  
 General Comments:

**Water Sample Collection Field Data Sheet**

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-3C

Sample I.D. (match bottle and COC form exactly): MW-3C 14:30

Personnel: ITB

Date: 7-17-24 Static Depth to Water (ft, btoc) ~~5.57~~ 5.57

Date/Time Sample Collected (match bottle and COC form exactly): 5-17-24 14:30

Sample Method: LF Pci

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~2' of bott

Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units 2

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
13:08		7.72	1.35	22.6	0.41	19.2	-22.4	6.44
13:12		7.75	1.34	9.85	0.30	19.2	-44.9	6.52
13:16		7.83	1.33	7.41	0.15	19.4	-75.3	6.47
13:20		7.77	1.31	4.83	0.20	19.2	-90.0	6.53
13:24		7.77	1.30	3.76	0.20	19.2	-99.9	6.56
13:28		7.77	1.30	2.89	0.14	18.9	-107.1	6.60
13:32		7.75	1.30	1.42	0.21	19.0	-111.0	6.64
13:36		7.75	1.30	0.48	0.21	18.9	-114.6	6.68
13:40		7.75	1.31	0.02	0.24	19.0	-116.9	6.73
13:44		7.74	1.31	0.02	0.26	19.0	-117.4	6.77
13:48		7.74	1.32	0.02	0.23	19.0	-117.3	6.82

Flow Rate 60 ml/min \* lowest possible

Pump controller setting 20%

General Comments:

Purge start 12:55 initial purge has black particulate + sulfuric odor  
Start Fill 13:56 14:45 stop fill

### Water Sample Collection Field Data Sheet

Site Name: GHHT Well ID.: MW-31  
 Sample I.D.(match bottle and COC form exactly): MW-31  
 Personnel: TBS  
 Date: 7-18-24 Static Depth to Water (ft, btoc) 5.92  
 Date/Time Sample Collected (match bottle and COC form exactly): 7-18-24 19:03  
 Sample Method: CF Per  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: —  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: —  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) ~ 2' aft bott  
 Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units 6

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
18:24		7.62	1.39	0.02	0.27	17.9	-28.4	6.40
18:28		7.63	1.40	0.02	0.21	17.7	-45.5	6.52
18:32		7.71	1.35	0.02	0.10	17.7	-70.9	6.62
18:36		7.73	1.34	0.02	0.10	17.7	-82.7	6.84
18:40		7.72	1.34	0.02	0.06	17.6	-89.9	7.24
18:44		7.72	1.33	0.02	0.05	17.4	-98.7	7.29
18:48		7.73	1.32	0.02	0.07	17.6	-110.7	7.32
18:52		7.73	1.32	0.02	0.02	17.5	-107.5	7.43
18:56		7.73	1.32	0.02	0.05	17.6	-108.2	7.47
19:00		7.98	1.32	0.02	0.05	17.5	-108.7	7.52

Flow Rate 80 ml/min  
 Pump controller setting 30%

**General Comments:**

\*Purged to replace bottle damaged by lab.  
Start Fill 19:01 - Stop Fill 19:09

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW-32

Sample I.D.(match bottle and COC form exactly): MW-32

Personnel: MB

Date: 7.17.24 Static Depth to Water (ft, btoc) 5.78

Date/Time Sample Collected (match bottle and COC form exactly): 7.17.24 16:00

Sample Method: CF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  Duplicate Sample ID: -

Sample QC: Equipment Blank Yes  Equip Blank Sample ID: -

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) 22' with both

Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
15:08		7.50	0.98	0.02	0.27	15.4	-130.9	5.79
15:12		7.50	0.98	0.02	0.22	15.4	-150.3	5.79
15:16		7.52	0.98	0.02	0.24	15.5	-162.8	5.79
15:20		7.54	0.98	0.02	0.23	15.6	-170.8	5.79
15:24		7.55	0.98	0.02	0.21	15.5	-176.8	5.79
15:28		7.57	0.98	0.02	0.19	15.5	-181.8	5.79
15:32		7.57	0.98	0.02	0.20	15.7	-187.4	5.79
15:36		7.57	0.99	0.02	0.19	15.4	-190.5	5.79
15:40		7.58	0.98	0.02	0.18	15.6	-193.8	5.79
15:44		7.58	0.99	0.02	0.18	15.6	-196.0	5.79

Flow Rate 200 ml/min  
 Pump controller setting 40%

General Comments:

14:54 Start Purge - Red tint, red particulate  
15:45 - Start F-11 16:15

**Water Sample Collection Field Data Sheet**

Site Name: MW-33 / UHH Well ID.: MW-33

Sample I.D. (match bottle and COC form exactly): MW-33

Personnel: AB

Date: 7/18/24 Static Depth to Water (ft, btoc) 2.41

Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24 ; 948

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID:           

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID:           

**Well Purging Data (Fill In All Blanks)**

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1015 Total Purge 11 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
928	1	6.87	1.33	11.2	0.01	16.3	-168.1	2.63
932	2	6.94	1.26	7.09	0.00	16.4	-183.3	2.63
936	3	6.95	1.23	4.67	0.01	16.4	-186.0	2.63
940	4	6.95	1.22	1.99	0.01	16.3	-186.4	2.63
944	5	6.95	1.21	3.94	0.01	16.4	-186.3	2.64
948	6	6.95	1.21	1.49	0.01	16.4	-185.9	2.64

Flow Rate ~ 250 ml/min  
 Pump controller setting ~ 45%  
 General Comments: \_\_\_\_\_

### Water Sample Collection Field Data Sheet

Site Name: CHHI Well ID.: MW-34  
 Sample I.D. (match bottle and COC form exactly): MW-34  
 Personnel: AB  
 Date: 7/18/24 Static Depth to Water (ft, btoc) 4.23  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/18/24, 9:00  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No  Duplicate Sample ID: \_\_\_\_\_  
 Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: \_\_\_\_\_  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 9:22 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
836	1	6.68	2.12	11.9	0.29	13.9	-126.0	4.32
840	2	6.69	2.07	10.66	0.34	14.1	-128.7	4.33
844	3	6.70	2.04	5.76	0.33	14.1	-130.2	4.33
848	4	6.69	2.00	6.13	0.33	14.1	-132.6	4.34
852	5	6.70	2.00	8.02	0.31	14.3	-134.9	4.34
856	6	6.69	2.00	5.35	0.32	14.1	-136.6	4.34
900	7	6.70	2.00	1.60	0.33	14.2	-139.0	4.35

Flow Rate ~250 mL/min  
 Pump controller setting 450w  
 General Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**Water Sample Collection Field Data Sheet**

Site Name: GHH1 Well ID.: MW-36  
 Sample I.D.(match bottle and COC form exactly): MW-36, MWT-36  
 Personnel: AB  
 Date: 7/17/24 Static Depth to Water (ft, btoc) 8.47  
 Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24; 1102  
 Sample Method: LF Peri  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate  Yes  No Duplicate Sample ID: MWT-36  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID:         
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing  
 Time Completed: 1140 Total Purge 12 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
1038	1	11.24	0.80	9.36	0.09	18.7	-344.5	8.60
1042	2	10.71	0.74	3.35	0.28	19.1	-338.2	8.60
1046	3	10.38	0.68	3.80	0.03	19.2	-338.0	8.60
1050	4	10.04	0.67	2.32	0.03	19.4	-331.5	8.61
1054	5	9.93	0.67	2.03	0.03	19.1	-330.8	8.61
1058	6	9.90	0.67	2.12	0.02	19.1	-332.7	8.62
1102	7	9.89	0.66	2.01	0.02	19.1	-331.7	8.62

Flow Rate ~250 mL/min  
 Pump controller setting ~35%  
 General Comments:

**Water Sample Collection Field Data Sheet**

Site Name: C4H4 Well ID.: MW-37

Sample I.D.(match bottle and COC form exactly): MW-37

Personnel: AB

Date: 7/17/24 Static Depth to Water (ft, btoc) 8.95

Date/Time Sample Collected (match bottle and COC form exactly): 7/17/24, 1004

Sample Method: LF Peri

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: \_\_\_\_\_

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: \_\_\_\_\_

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) dedicated tubing

Time Completed: 1028 Total Purge 11 Units L

**Field Measurements:**

Time (24 hour)	Amount purged (ml)	pH	COND (mS/cm)	TURB (NTU)	DO (mg/L)	TEMP (C°)	ORP (mV)	Water Depth (ft, btoc)
944	1	7.09	1.27	8.98	0.10	17.9	67.7	9.02
948	2	7.10	1.27	3.21	0.09	18.0	74.1	9.02
952	3	7.11	1.26	2.74	0.03	17.9	72.5	9.02
956	4	7.13	1.25	0.02	0.05	17.9	68.5	9.02
1000	5	7.14	1.24	0.02	0.06	17.9	66.4	9.02
1004	6	7.15	1.24	0.02	0.04	17.8	65.0	9.02

Flow Rate ~250 mL/min  
 Pump controller setting 30'

General Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID: MW-38

Sample I.D. (match bottle and COC form exactly): MW-38

Personnel: MB

Date: 7-17-24 Static Depth to Water (ft, btoc) 9.73

Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 12:00

Sample Method: CF Pen

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) 22' off bott

Time Completed: \_\_\_\_\_ Total Purge 156 Units L

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10% TUB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
9:30		11.57	2.13	40.6	0.11	19.8	181.6	11.67
9:34		11.49	2.03	22.5	0.13	19.9	170.8	11.45
9:38		11.43	1.89	16.5	0.15	19.7	161.5	11.46
9:42		11.37	1.70	10.3	0.11	19.4	155.6	11.52
9:46		11.22	1.53	9.36	0.15	19.5	150.1	11.55
9:50		11.08	1.43	6.48	0.17	19.7	146.5	11.52
9:54		10.83	1.21	3.35	0.17	19.5	142.8	11.85
9:58		10.47	1.11	2.24	0.17	19.6	137.8	11.90
10:02		10.26	1.05	3.66	0.20	19.7	133.7	11.92
10:06		10.11	1.04	2.00	0.18	19.8	127.9	11.94
10:10		10.04	1.04	3.20	0.20	19.9	122.4	11.96
10:14		9.96	1.05	2.03	0.21	20.0	114.4	11.97
10:18		9.93	1.06	0.02	0.22	19.9	107.4	11.98
10:22		9.88	1.07	0.02	0.24	19.9	101.6	12.01
10:24		9.82	1.07	0.02	0.22	19.9	95.3	12.00
10:28		9.73	1.07	0.02	0.16	20.0	90.4	12.00
10:32		9.70	1.09	0.02	0.15	19.8	84.6	12.00

Flow Rate 60 ml/min - lowest possible

Pump controller setting 20%

General Comments:

Purge start 9:16 - Purge water has brown tint + Red particulate  
Start Fill 11:40 - 12:39 Stop Fill

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: MW - 38

Sample I.D.(match bottle and COC form exactly): \_\_\_\_\_

Personnel: \_\_\_\_\_

Date: \_\_\_\_\_ Static Depth to Water (ft, btoc) \_\_\_\_\_

Date/Time Sample Collected (match bottle and COC form exactly): \_\_\_\_\_

Sample Method: \_\_\_\_\_

Water level meter, pump, and tubing decontaminated prior: Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: \_\_\_\_\_

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: \_\_\_\_\_

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) \_\_\_\_\_

Time Completed: \_\_\_\_\_ Total Purge \_\_\_\_\_ Units \_\_\_\_\_

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
10:36		9.68	1.09	0.02	0.19	20.0	77.7	12.00
10:40		9.64	1.10	0.02	0.17	19.8	72.5	12.00
10:44		9.69	1.09	0.02	0.19	19.9	66.2	12.04
10:48		9.62	1.10	0.02	0.20	19.9	61.3	12.07
10:52		9.63	1.10	0.02	0.21	19.9	57.2	12.08
10:56		9.60	1.10	0.02	0.23	19.9	56.7	12.09
11:00		9.50	1.12	0.02	0.21	19.9	42.4	12.05
11:04		9.50	1.13	0.02	0.21	19.9	36.8	12.03
11:08		9.50	1.13	0.02	0.20	20.0	30.1	12.01
11:12		9.48	1.13	0.02	0.20	20.4	22.1	11.96
11:16		9.40	1.14	0.02	0.17	20.5	12.8	11.92
11:20		9.39	1.15	0.02	0.15	20.6	4.8	11.88
11:24		9.35	1.16	0.02	0.18	20.6	-12.3	11.80
11:28		9.32	1.16	0.02	0.20	20.6	-22.3	11.78
11:32		9.29	1.14	0.02	0.19	20.5	-24.6	11.80
11:36		9.25	1.15	0.02	0.18	20.9	-24.2	11.77
11:40		9.23	1.18	0.02	0.17	20.6	-25.1	11.77

Flow Rate \_\_\_\_\_

Pump controller setting \_\_\_\_\_

General Comments:

\_\_\_\_\_

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: SG-02

Sample I.D.(match bottle and COC form exactly): SG-02

Personnel: TJB

Date: 7-17-24 Static Depth to Water (ft, btoc) N/A - surface water

Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 @ 18:20

Sample Method: Grab

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 8" below surface

Time Completed: — Total Purge — Units —

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
18:20		7.86	1.57	1.34	7.69	28.2	-39.7	—
<i>Surface Water Sample</i>								

Flow Rate —

Pump controller setting —

General Comments:  
—

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: SG-04R  
 Sample I.D. (match bottle and COC form exactly): SG-04R  
 Personnel: RB  
 Date: 7-17-24 Static Depth to Water (ft, btoc) NA - surface water

Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 - 18:45

Sample Method: Grab

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 6" below surface

Time Completed: — Total Purge — Units —

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) TURB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
18:45		8.74	2.39	4.11	6.23	27.5	-6.5	—
<div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em;">                     Surface Water Sample                 </div>								

Flow Rate —

Pump controller setting —

General Comments:

→ Change location by, collected 40' SE



Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: SG-05

Sample I.D.(match bottle and COC form exactly): SG-05

Personnel: DOB

Date: 7-17-24 Static Depth to Water (ft, btoc) NA - surface water

Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 19:00

Sample Method: Grab

Water level meter, pump, and tubing decontaminated prior:  Yes  No

Sample QC: Duplicate Yes  No  Duplicate Sample ID: —

Sample QC: Equipment Blank Yes  No  Equip Blank Sample ID: —

Well Purging Data (Fill In All Blanks)

Depth of Sample Collection (pump depth) (ft, btoc) ~ 6" below surface

Time Completed: — Total Purge — Units —

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10% T)URB (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, btoc)
19:00		9.54	0.465	2.68	7.51	26.7	-29.0	—
<div style="position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%); font-size: 2em; opacity: 0.5;">                     Surface Water Sample                 </div>								

Flow Rate —

Pump controller setting —

General Comments:

- Collected 15' E of gauge

Water Sample Collection Field Data Sheet

Site Name: City of Grand Haven - Harbor Island Well ID.: SG-06  
 Sample I.D.(match bottle and COC form exactly): SG-06  
 Personnel: AB  
 Date: 7-17-24 Static Depth to Water (ft, bloc) N/A - surface water  
 Date/Time Sample Collected (match bottle and COC form exactly): 7-17-24 19:20  
 Sample Method: Grab  
 Water level meter, pump, and tubing decontaminated prior:  Yes  No  
 Sample QC: Duplicate Yes  No Duplicate Sample ID: -  
 Sample QC: Equipment Blank Yes  No Equip Blank Sample ID: -  
 Well Purging Data (Fill In All Blanks)  
 Depth of Sample Collection (pump depth) (ft, bloc) ~6" below surface  
 Time Completed: - Total Purge - Units -

Field Measurements:

Time (24 hour)	Amount purged (ml)	(+/-0.1) pH	(+/-3%) COND (mS/m)	(+/-10%) T <sub>URB</sub> (NTU)	(+/-0.3) DO (mg/L)	TEMP (C°)	(+/-10 mV) ORP (mV)	Water Depth (ft, bloc)
19:20		7.94	0.55	6.72	4.85	26.2	9.8	-
<p style="font-size: 2em; opacity: 0.5; position: absolute; top: 50%; left: 50%; transform: translate(-50%, -50%);">Surface Water Sample</p>								

Flow Rate -  
 Pump controller setting -  
 General Comments:  
- Alt location @ dock

## Appendix B

### Data Validation Reports

## Data Verification & Validation Report

### Grand Haven-Harbor Island

**Sampling Event (dates and purpose):** Quarterly Assessment Monitoring

Data Package Number: 24G0879, 24G0880

Lab Report Date: 8/23/2024

Data Validator: Andrew Byks

Data Validation Completion Date: 9/4/2024

General Overall Assessment:

Data are usable without qualification.

Data are usable with qualification (as noted below).

Some or all data are unusable (as noted below).

Wells planned for sampling:

Unit 3A/B	Unit 1/2	Well Designation	Well ID	Planned for Sampling
✓	✓	Nature & Extent	MW-01R	X
✓		Point of Compliance	MW-02	X
✓		Point of Compliance	MW-03	X
✓		Point of Compliance	MW-04	X
	✓	Point of Compliance	MW-06	X
✓	✓	Nature & Extent	MW-07	X
	✓	Point of Compliance	MW-08	X
✓	✓	Nature & Extent	MW-09	X
✓	✓	Nature & Extent	MW-10	X
✓		Point of Compliance	MW-11	X
✓		Point of Compliance	MW-12	X
	✓	Nature & Extent	MW-16	X
	✓	Nature & Extent	MW-17	X
	✓	Point of Compliance	MW-18	X
	✓	Point of Compliance	MW-19	X
	✓	Point of Compliance	MW-20	X
✓	✓	Background	MW-27	X
	✓	Nature & Extent	MW-28	X
	✓	Point of Compliance	MW-30	X
	✓	Point of Compliance	MW-31	X
✓	✓	Nature & Extent	MW-32	X
✓	✓	Background	MW-33	X
✓	✓	Background	MW-34	X
	✓	Nature & Extent	MW-36	X
	✓	Nature & Extent	MW-37	X
✓		Nature & Extent	MW-38	X
✓	✓	Surface Water	SG-02	X
✓	✓	Surface Water	SG-03	X
✓	✓	Surface Water	SG-04R	X
✓	✓	Surface Water	SG-05	X
✓	✓	Surface Water	SG-06	X

**Data Summary**

Sample ID	Matrix	Lab ID	Date Collected	App III Metals	App IV Metals	Part 115 Metals	Alkalinity/ Anions	TDS TSS	Rad-226 Rad-228	Diss. Metals
MW-02	GW	24G0879-01	07/17/2024	X	X	X	X	X	X	
MW-07	GW	24G0879-02	07/17/2024	X	X	X	X	X	X	
MW-09	GW	24G0879-03	07/17/2024	X	X	X	X	X	X	
MW-10	GW	24G0879-04	07/17/2024	X	X	X	X	X	X	
MW-12	GW	24G0879-05	07/17/2024	X	X	X	X	X	X	
MW-17	GW	24G0879-06	07/17/2024	X	X	X	X	X	X	
MW-18	GW	24G0879-07	07/17/2024	X	X	X	X	X	X	
MW-20	GW	24G0879-08	07/17/2024	X	X	X	X	X	X	
MW-31*	GW	24G0879-09	07/17/2024	X	X	X			X	
MW-32	GW	24G0879-10	07/17/2024	X	X	X	X	X	X	
MW-36	GW	24G0879-11	07/17/2024	X	X	X	X	X	X	
MW-37	GW	24G0879-12	07/17/2024	X	X	X	X	X	X	
MW-38	GW	24G0879-13	07/17/2024	X	X	X	X	X	X	
MWT-12	GW	24G0879-14	07/17/2024	X	X	X	X	X	X	
MWT-36	GW	24G0879-15	07/17/2024	X	X	X	X	X	X	
SG-02	SW	24G0879-16	07/17/2024	X	X	X	X	X	X	
SG-04R	SW	24G0879-17	07/17/2024	X	X	X	X	X	X	
SG-05	SW	24G0879-18	07/17/2024	X	X	X	X	X	X	
SG-06	SW	24G0879-19	07/17/2024	X	X	X	X	X	X	
MW-01R	GW	24G0879-20	07/18/2024	X	X	X	X	X	X	
MW-03	GW	24G0879-21	07/18/2024	X	X	X	X	X	X	
MW-04	GW	24G0879-22	07/18/2024	X	X	X	X	X	X	
MW-06	GW	24G0879-23	07/18/2024	X	X	X	X	X	X	
MW-08	GW	24G0879-24	07/18/2024	X	X	X	X	X	X	
MW-11	GW	24G0879-25	07/18/2024	X	X	X	X	X	X	
MW-16	GW	24G0879-26	07/18/2024	X	X	X	X	X	X	
MW-19	GW	24G0879-27	07/18/2024	X	X	X	X	X	X	
MW-27	GW	24G0879-28	07/18/2024	X	X	X	X	X	X	
MW-28	GW	24G0879-29	07/18/2024	X	X	X	X	X	X	
MW-30	GW	24G0879-30	07/18/2024	X	X	X	X	X	X	
MW-31*	GW	24G0879-31	07/18/2024				X	X		
MW-33	GW	24G0879-32	07/18/2024	X	X	X	X	X	X	
MW-34	GW	24G0879-33	07/18/2024	X	X	X	X	X	X	

\*The sampling container used for the analysis of TDS, TSS, and anions associated with the original MW-31 sample collected on 7/17/2024 was incorrectly preserved by the laboratory with nitric acid. The original sample was disposed of by the laboratory at the request of the project manager. MW-31 was restabilized and resampled the following day 07/18/2024 for the incorrectly preserved analytes.

**Other analytes requested for analysis:** Na, Mg, K, HCO<sub>3</sub>, CO<sub>3</sub>, hardness

**Any planned sampling or analysis NOT completed? If yes, explain:** N/A

### Data Verification & Validation Checklist

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
<b>Field Data</b>							
Sample Collection Field Forms	X		Purging performed as required in the Groundwater Monitoring Plan	X			
Field Calibration Records	X		Field instruments calibrated daily according to manufacturer specifications	X			
Chain of Custody	X		Accurately reflect samples, collection dates/times, analyses, bottles, etc.	X			
Field decontamination documentation	N/A		Record of decontamination for non-dedicated sampling equipment			X	
Drilling logs	X		N/A	-	-	-	
Well construction logs	X		N/A	-	-	-	
Well development field forms	X		N/A	-	-	-	
<b>Analytical Data Package</b>							
Cover Sheet	X		N/A	-	-	-	
Case Narrative	X		Summarizes sample receipt and any exceptions to QC acceptance criteria	X			
Internal Laboratory Chain of Custody forms	X		Analyses as requested; accurate transcription of field COC	X			
Sample Chronology and Consistency	X		Accurate representation of dates, times of receipt, preparation, and analysis	X			
Communication Records with Lab	X		E-mail records saved with final report	X			
EDD Format Consistency	X		EDD format and content as requested	X			
Sample Identification, Results Nomenclature, and Data Qualifier Consistency	X		All included in final report	X			
Method Detection Limit Consistency	X		MDLs consistent between samples		X		Dilution varies between samples
Instrument Calibration Records	X		Present and no nonconformance noted	X			
Laboratory Report Complete	X		Includes QC component	X			
Holding Times	X		Analyses performed within allowed holding time		X		pH required qualification in 6 samples

Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method	X		Method as requested	X			
Reporting Limits			RLs as requested				RLs for the following were not met B – 3 samples (results > RL) Ca – 25 samples (results > RL) Chloride – 1 sample (results > RL) Fe – 1 sample (results > RL) Mg – 6 samples (results > RL) K – 3 samples (results > RL) Na – 6 samples (results > RL) SO4 – 10 samples (results > RL, or ND < RL) TDS – all samples (results > RL)
	X				X		
			MDLs < RLs	X			
			MDLs < GPS	X			
<b>QC Validation</b>							
<b>Evaluate Accuracy</b>							
Matrix Spike (Recovery)	X		See “Minimum QC Procedures for Project Parameters” table		X		T154040 – V recovery at 130%
Laboratory Control Sample (Recovery)	X		See “Minimum QC Procedures for Project Parameters” table	X			
<b>Evaluate Precision</b>							
Matrix Spike Duplicate (RPD)	X		See “Minimum QC Procedures for Project Parameters” table	X			
Field Duplicate (RPD)	X		RPD ≤ 20%		X		See below.
<b>Evaluate Representativeness</b>							
Equipment Blanks (if applicable)	N/A		Non-detect (<RL)			X	
<b>QC Verification</b>							
<b>Verify Instrument Calibration &amp; Analytical Process</b>							
Initial Calibration Verification	X		Laboratory-determined	-	-	-	
Continuing Calibration Verification	X		Laboratory-determined	-	-	-	
Initial Calibration Blank	X		Laboratory-determined	-	-	-	
Continuing Calibration Blank	X		Laboratory-determined	-	-	-	
Serial Dilutions	X		Laboratory-determined	-	-	-	
Post-Digestion Spikes	X		Laboratory-determined	-	-	-	
Internal Standards	X		Laboratory-determined	-	-	-	
Laboratory Duplicate (RPD)	X		Laboratory-determined	-	-	-	



Review Category	Verify Complete		Validation Criteria	Criteria Met?			Description of Nonconformance and Qualification (if applicable)
	Yes	No		Yes	No	N/A	
Method Blanks	X		Laboratory-determined	-	-	-	
<b>Evaluate Completeness (# usable measurements/ # unusable measurements)</b>							
Completeness	X		100%	X			

Other instances of nonconformance to QC control limits noted on case narrative:

Calcium matrix spikes were outside of control limits in T149799-MS1 and T149799-MS2, respectively. Because the background concentration of these analytes is greater than 4x the spike amount, no qualification was needed.

Comments:

pH in 6 samples required qualification as estimated (J) due to analysis outside the EPA-established 24-hour hold time.

Vanadium in sample MW-30 required qualification as estimated but not detected (UJ) due to high recovery in an associated laboratory prepared matrix spike sample.

Chromium was not detected in parent sample MW-12 but was detected in field duplicate MWT-12. Chromium in parent sample MW-12 required qualification as estimated but not detected (UJ) and in field duplicate MWT-12 as estimated with high bias (J+).

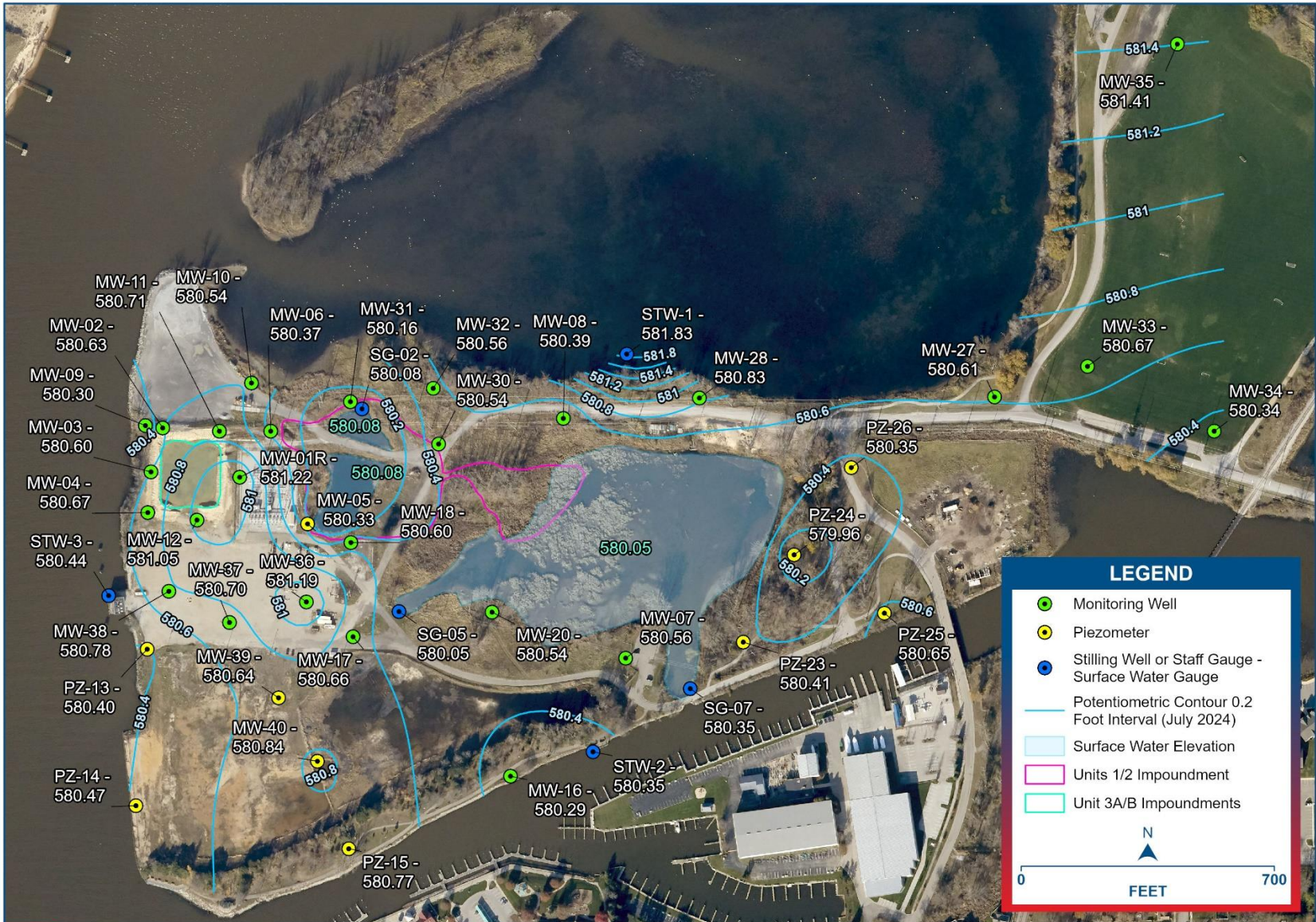
Rad-228 and Rad-226+228 had RPDs >20% in the MW-12/MWT-12 parent/field duplicate pair. Rad-228 and Rad-226+228 required qualification in parent sample MW-12 required qualification as estimated with low bias (J-) and in field duplicate MWT-12 as estimated with high bias (J+).

TSS was detected in parent sample MW-36 but was not detected in field duplicate MWT-36. TSS in parent sample MW-36 required qualification as estimated with high bias (J+) and in field duplicate MWT-36 as estimated but not detected (UJ).

Rad-226, Rad-228, and Rad-226+228 had RPDs >20% in the MW-36/MWT-36 parent/field duplicate pair. Rad-226, Rad-228, and Rad-226+228 required qualification as estimated with low bias (J-) in parent sample MW-36 and as estimated with high bias (J+) in field duplicate MWT-36.

## Appendix C

### Potentiometric Surface Map



## Appendix D

### Analytical Data Tables

Sample Location:				MW-01R											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/13/2024	4/7/2024	7/18/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	2.39	3.06	2.731	2.595	3	3.1	3.23	3.22	3.13	2.51	2.87	3.13
Dissolved Oxygen	mg/L	N	--	0.08	0.05	0.07	0.28	0.11	0.03	0.01	0.01	0.03	0.22	1.35	0.01
Oxidation Reduction Potential	mV	N	--	42.3	3.6	-155.6	-185.5	-202.3	-210.1	-163.8	-165.1	-126.2	-57.3	-197.9	-316.1
pH	su	N	--	7.74	6.02	7.75	7.76	7.75	7.8	7.81	7.68	7.71	7.52	7.58	7.73
Temperature	deg c	N	--	12.5	9	6.9	5.9	7.2	10.7	13.5	17.2	16.1	6.1	7.5	16.3
Turbidity	NTU	N	--	0.02	0.26	0.17	0.02	0.02	0.02	0.02	1.33	0.95	1.79	0.02	0.02
<b>Appendix III</b>															
Boron	mg/L	T	4.0	<b>100</b>	<b>110</b>	<b>73</b>	<b>70</b>	<b>78</b>	<b>110</b>	<b>150 J+</b>	<b>140 D</b>	<b>160 D</b>	<b>38 D</b>	<b>64 D</b>	<b>150 D</b>
Calcium	mg/L	T	250	240	200	<b>290</b>	<b>310</b>	<b>280</b>	240	210 D	160 D	130 D	<b>400 D</b>	<b>350 D</b>	160 D
Chloride	mg/L	T	120	<b>150</b>	<b>160</b>	52	<b>120</b>	<b>130</b>	<b>150</b>	<b>170 D</b>	<b>180 D</b>	<b>210 D</b>	49 D	<b>170 D</b>	<b>170 D</b>
Fluoride	mg/L	T	2.0	<b>14</b>	<b>14</b>	<b>9.5</b>	<b>8.1</b>	<b>8.8</b>	<b>10</b>	<b>15 D</b>	<b>14 D</b>	<b>14 D</b>	<b>4.8 D</b>	<b>6.7 D</b>	<b>15 D</b>
Sulfate (as SO4)	mg/L	T	250	<b>590</b>	<b>400</b>	<b>350</b>	<b>780</b>	<b>780</b>	<b>540</b>	<b>290 D</b>	110 D	8.8 D	<b>980 D</b>	<b>810 D</b>	<b>100 D</b>
Total Dissolved Solids	mg/L	T	950	<b>2400 J-</b>	<b>2300</b>	<b>2200</b>	<b>2100</b>	<b>2400</b>	<b>2400</b>	<b>2400 D</b>	<b>2400 D</b>	<b>2600 D</b>	<b>2200 D</b>	<b>2300</b>	<b>2500 D</b>
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00033	0.00023 J	< 0.00025 U	0.00034	0.0012	< 0.00050 U	0.00071 JD	0.00025	0.00022 J	< 0.00050 UD	0.00017 J	0.00018 J
Arsenic	mg/L	T	0.010	0.0020	0.0015	0.0013	0.0013	0.00077	0.00073	0.0019 J+	0.0017	0.0013	0.0041	0.0013	0.0014
Barium	mg/L	T	1.3	0.30	0.30	0.25	0.22	0.21	0.29	0.29 D	0.38	0.56	0.54 D	0.2	0.33
Beryllium	mg/L	T	0.0040	0.00021 J	0.00032	0.00020 J	0.00020 J	0.00012 J	0.00020 J	0.00036 J+	0.00035	0.00026	0.00015 J	< 0.00052 U	0.00013 J
Cadmium	mg/L	T	0.0025	0.00011 J	0.000062 J	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	0.00034 J+	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0013	0.0024	0.0016	0.0016	0.0013	0.0019	0.0043	0.0037	0.0022	0.022	0.0013	0.0033
Cobalt	mg/L	T	0.0060	0.0011	0.0012	0.0011	0.0023	0.0017	0.00081	0.0045 J+	0.0016	0.0010	0.0040	0.0064	0.0011
Fluoride	mg/L	T	2.0	<b>14</b>	<b>14</b>	<b>9.5</b>	<b>8.1</b>	<b>8.8</b>	<b>10</b>	<b>15 D</b>	<b>14 D</b>	<b>14 D</b>	<b>4.8 D</b>	<b>6.7 D</b>	<b>15 D</b>
Lead	mg/L	T	0.0040	0.0014	0.00082	< 0.0011 U	0.00044 J	< 0.0011 U	0.00080 J	<b>0.0053 J+</b>	0.0010 JD	0.00074	0.0017 JD	0.00035 J	0.00062 JD
Lithium	mg/L	T	0.10	<b>2.2</b>	<b>2.8</b>	<b>1.6</b>	<b>1.7</b>	<b>1.5</b>	<b>2.3</b>	<b>3.2 D</b>	<b>3.3</b>	<b>3.4 D</b>	<b>0.77 D</b>	<b>1.5</b>	<b>2.9 D</b>
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0011 J	0.00062 J	0.00076 J	0.0020	< 0.0031 U	0.00033 J	0.00077 J+	0.00082 J	0.00074 J	0.0056	0.0016	0.00037 J
Radium 226 and 228	pCi/L	T	5.0	< 0.656 UJ	< 0.828 UJ	1.06	1.28	< 0.737 UJ	< 1.1 UJ	0.601	1.26	< 0.674 UJ	1.09	< 0.682 UJ	< 1.23 UJ
Radium-226	pCi/L	T	--	< 0.176 UJ	< 0.125 UJ	< 0.139 UJ	< 0.212 UJ	< 0.233 UJ	< 0.322 UJ	< 0.164 UJ	0.152	< 0.182 UJ	< 0.137 UJ	< 0.21 UJ	0.218
Radium-228	pCi/L	T	--	< 0.656 UJ	< 0.828 UJ	0.982	1.23	< 0.737 UJ	< 1.1 UJ	< 0.534 UJ	1.11	< 0.674 UJ	1.05	< 0.682 UJ	< 1.23 UJ
Selenium	mg/L	T	0.0050	0.00060	0.00059	0.00058	0.00097	0.00056	0.00030 J	0.00076 J+	0.00066	0.00073	0.0018	0.0005	0.00079
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UJ	< 0.00038 UD	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	3.0 J	2.0 J	5.0	2.0 J	< 4.0 U	2.0 J	3.0 J	< 4.0 UD	< 4.0 UD	< 4.0 UD	< 4.0 UD	4 U
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.00027	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.0013 B	0.00045	0.00029	0.001	0.00029	0.00029
Iron	mg/L	T	83	0.75	1.1	0.55	0.50	0.59	0.79	0.48	0.16	0.22	0.85 D	1	0.088
Nickel	mg/L	T	0.10	0.0015	0.0025	0.0016	0.0026	0.0018	0.0013	0.0053	0.0027	0.0021	0.022	0.0012	0.002
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< <b>0.00025 U</b>	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.000050 U	< <b>0.00025 UD</b>	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.0062	0.00069 J	0.00067 J	< 0.00062 U	< 0.00062 U	0.0013	0.0016	0.0046	0.0035	0.0018	0.0018	0.0014	<b>0.0041</b>
Zinc	mg/L	T	0.27	0.014	0.0012	0.0012	0.0018	0.013	< 0.0012 U	0.0085	0.0012	0.0013	0.0016	< 0.0012 U	< 0.0012 U
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	1100	1200	870	830	920	1100	1300 D	1400	1700 D	560 D	820 D	1500
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	92	110	110	110	120	110	100 D	96 D	100 D	110 D	120 D	100 D
Potassium	mg/L	T	--	69	66	50	43	60 J	65	89 D	90 D	98 D	34 D	50	86 D
Sodium	mg/L	T	--	330	370	250	240	280	380	430 D	430 D	500 D	140 D	220 D	430 D
Total Alkalinity	mg/L	T	--	1100	1200	870	830	920	1100	1300 D	1400	1700 D	560 D	820 D	1500

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-02										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								10/24/2023	2/13/2024	4/7/2024	7/17/2024		
Sample Date:				11/28/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024	4/7/2024	7/17/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	3.36	4.1	3.07	2.616	3.66	3.524	4.17	4.07	4.21	3.40	3.89	4.42		
Dissolved Oxygen	mg/L	N	--	0.28	0.49	0.2	0.41	0.08	0.06	0.07	0.1	0.03	0.26	0.15	0.45		
Oxidation Reduction Potential	mV	N	--	89.4	-215.7	-185.2	-169.9	-135.7	-138.9	-137.4	-133.8	-166.8	-146.1	-140.3	-135.6		
pH	su	N	--	7.11	7.06	7.33	7.35	7.13	7.45	7.29	7.21	7.11	7.25	7.26	7.13		
Temperature	deg c	N	--	12.8	12	11.2	9.6	10.2	11.7	12.1	14	15	10.3	11.4	15		
Turbidity	NTU	N	--	0.02	0.02	0.02	0.49	3.66	5.05	6.89	3.3	8.78	5.11	9.03	0.02		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	<b>88</b>	<b>86</b>	<b>100</b>	<b>98</b>	<b>73</b>	<b>95</b>	<b>110 J+</b>	<b>99 D</b>	<b>110 D</b>	<b>100 D</b>	<b>110 D</b>	<b>110 D</b>		
Calcium	mg/L	T	250	210	180	210	240	190	210	210 D	180 D	190 D	220 D	210 D	200 D		
Chloride	mg/L	T	120	<b>150</b>	<b>140</b>	67	<b>140</b>	<b>150</b>	<b>140</b>	<b>140 D</b>	<b>130 D</b>	<b>140 D</b>	<b>140 D</b>	<b>140 D</b>	<b>160 D</b>		
Fluoride	mg/L	T	2.0	<b>9.2</b>	<b>10</b>	<b>4.5</b>	<b>9.4</b>	<b>8.7</b>	<b>9.2</b>	<b>10 D</b>	<b>9.7 D</b>	<b>9.7 D</b>	<b>9.5 D</b>	<b>10 D</b>	<b>10 D</b>		
Sulfate (as SO4)	mg/L	T	250	0.86 J	2.2 J	< 0.41 U	1.1 J	< 0.41 U	< 0.41 U	< 0.41 UD	0.93 JD	< 0.41 UD	0.41 UD	< 5.5 UD	< 2.2 UD		
Total Dissolved Solids	mg/L	T	950	<b>1700</b>	<b>1800</b>	<b>1900</b>	<b>1700</b>	<b>1700</b>	<b>1800</b>	<b>2100 J</b>	<b>1900 D</b>	<b>1600 D</b>	<b>1800 D</b>	<b>2000</b>	<b>2100 D</b>		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.00015 J	0.00016 J	< 0.00025 U	0.00019 J	0.00063 J	< 0.00050 U	0.00024 J	0.00018 J	0.00029	< 0.00010 U	0.00024 J	0.00015 J		
Arsenic	mg/L	T	0.010	0.0082	0.0076	0.0086	0.0078	0.0083	<b>0.012</b>	0.0096 J+	0.0086	0.0074	0.00044 J	0.0075	0.0061		
Barium	mg/L	T	1.3	0.51	0.53	0.55	0.51	0.38	0.48	0.47	0.45	0.42	0.73	0.46	0.33		
Beryllium	mg/L	T	0.0040	0.00028	0.00034	0.00042	0.00029	0.00015 J	0.00021 J	0.00032 J+	0.00043	0.00052	< 0.000052 U	0.00012 J	0.00019 J		
Cadmium	mg/L	T	0.0025	< 0.000032 U	0.000046 J	< 0.00016 U	0.000041 J	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00049	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.022	<b>0.054</b>	<b>0.057</b>	<b>0.046</b>	0.019	0.030	<b>0.068</b>	<b>0.054</b>	0.032	0.00038	0.039	0.047		
Cobalt	mg/L	T	0.0060	0.0038	<b>0.0060</b>	<b>0.0080</b>	<b>0.0066</b>	0.0031	0.0039	<b>0.0089 J+</b>	<b>0.0076</b>	<b>0.0063</b>	0.00024 J	0.0061	<b>0.0063</b>		
Fluoride	mg/L	T	2.0	<b>9.2</b>	<b>10</b>	<b>4.5</b>	<b>9.4</b>	<b>8.7</b>	<b>9.2</b>	<b>10 D</b>	<b>9.7 D</b>	<b>9.7 D</b>	<b>9.5 D</b>	<b>10 D</b>	<b>10 D</b>		
Lead	mg/L	T	0.0040	0.0010	0.0024	0.0030	0.0027	0.0018 J	<b>0.0041</b>	0.0039 J+	0.0017	0.0020	< 0.00010 U	<b>0.0056</b>	0.0023 JD		
Lithium	mg/L	T	0.10	<b>1.2</b>	<b>1.5</b>	<b>1.5</b>	<b>1.6</b>	<b>0.87</b>	<b>1.2</b>	<b>1.7</b>	<b>1.4</b>	<b>1.2 D</b>	<b>1.4 D</b>	<b>1.5</b>	<b>1.3 D</b>		
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0052	0.0062	0.011	0.011	0.0088	0.0064	0.0062 J+	0.0052	0.0051	0.0038	0.0052	0.0045		
Radium 226 and 228	pCi/L	T	5.0	< 2.18 U	< 2.8 U	3.35	1.56	< 0.686 U	1.67	1.67	2.45	1.16	1.95	2.24	< 1.21 U		
Radium-226	pCi/L	T	--	< 0.547 U	0.781	0.642	0.398	< 0.302 U	0.58	0.714	0.743	< 0.354 U	1.07	< 0.432 U	0.488		
Radium-228	pCi/L	T	--	< 2.18 UJ	< 2.8 UG	< 3.21 UG	< 1.24 UG	< 0.686 U	< 1.2 UJ	0.957	1.71 G	< 0.897 U	0.882	1.83	< 1.21 UG		
Selenium	mg/L	T	0.0050	0.0010	0.0012	0.0012	0.00095	0.00050	0.0010	0.0014 J+	0.0012	0.0018	0.00056	0.0014	0.0014		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00062	< 0.000075 U	< 0.000075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	67	58	58	56	100	90	20 D	16 D	6.1 D	59	40	53		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	0.00081	0.0018	0.0025	0.0020	0.0011	0.0014	0.0026 B	0.0018	0.0025	0.00023 J	0.0028	0.002		
Iron	mg/L	T	83	23	22	24	30	27	27	24	20	18 D	31 D	25	22 D		
Nickel	mg/L	T	0.10	0.015	0.023	0.042	0.035	0.017	0.014	0.025	0.022	0.018	0.00093 J	0.025	0.018		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< <b>0.00025 U</b>	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.0062	0.0014	0.0036	0.0035	0.0032	0.0013	0.0026	<b>0.0067</b>	0.0049	0.0044	< 0.00062 U	<b>0.0062</b>	<b>0.0057</b>		
Zinc	mg/L	T	0.27	0.023	0.0030	0.0033	0.0022	0.025	0.0019	0.0027	0.0041	0.0036	0.0020	0.0033	0.0024		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	1900	2000	1900	1800	1800	1900	460	2100	2300	1800 D	2000	2200		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	63	59	70	78	68	71	62	58 D	77 D	68	63 D			
Potassium	mg/L	T	--	50	44	53	45	41	44	56 J	46 D	47 D	50 D	53	48 D		
Sodium	mg/L	T	--	250	250	260	260	220	280	320 D	310 D	310 D	280 D	300 D	320 D		
Total Alkalinity	mg/L	T	--	1900	2000	1900	1800	1800	1900	460	2100	2300	1800 D	2000	2200		

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

- Qualifiers:**
- J The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
  - U The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
  - J+ Same as J, and the reported concentration is potentially biased high.
  - J- Same as J, and the reported concentration is potentially biased low.
  - UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
  - R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
  - D Dilution greater than 1, flagged by Trace.
  - G The sample MDC is greater than the requested RL.
  - B Constituent detected in blank and sample.

Sample Location:				MW-03											Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring									Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/14/2024	4/7/2024	7/18/2024			
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample				
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B				
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater				
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																		
Conductivity	mS/cm	N	--	0.344	3.52	3.43	2.459	3.15	3.08	3.19	3.19	3.03	2.98	2.81	2.87			
Dissolved Oxygen	mg/L	N	--	0.16	0.26	0.2	0.21	0.03	0.01	0.05	0.09	0.06	0.2	0.02	0.02			
Oxidation Reduction Potential	mV	N	--	-180	-139.7	-212.9	-184.2	-92.8	-194.3	-129.6	-110.7	-116.1	-194.1	-220.8	-30.3			
pH	su	N	--	7.31	7.32	7.2	7.45	7.26	7.59	7.44	7.31	7.28	7.44	7.46	7.3			
Temperature	deg c	N	--	13.3	11.4	9.2	7.3	9.3	11.8	12.5	14.9	14.9	9.6	10.1	15			
Turbidity	NTU	N	--	0.02	0.68	2.4	0.02	1.4	0.02	0.02	0.21	0.26	2.12	0.02	0.02			
<b>Appendix III</b>																		
Boron	mg/L	T	4.0	<b>4.4</b>	3.3	<b>4.2</b>	<b>4.3</b>	3.9	<b>4.1</b>	<b>4.3 J+</b>	<b>4.1</b>	<b>4.3 D</b>	<b>4.5 D</b>	<b>3.9</b>	<b>3.9</b>			
Calcium	mg/L	T	250	<b>390</b>	<b>290</b>	<b>400</b>	<b>410</b>	<b>360</b>	<b>400</b>	<b>430 D</b>	<b>350 D</b>	<b>380 D</b>	<b>360 D</b>	<b>350 D</b>	<b>340 D</b>			
Chloride	mg/L	T	120	<b>300</b>	<b>190</b>	<b>240</b>	<b>190</b>	<b>150</b>	<b>140</b>	<b>160 D</b>	<b>170 D</b>	<b>180 D</b>	<b>140 D</b>	<b>99 D</b>	<b>120 D</b>			
Fluoride	mg/L	T	2.0	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.60 D	0.61 D	0.6 D	0.62 D			
Sulfate (as SO4)	mg/L	T	250	42	<b>460</b>	230	<b>550</b>	<b>760</b>	<b>690</b>	<b>510 D</b>	<b>480 D</b>	<b>380 D</b>	<b>310 D</b>	<b>360 D</b>	<b>310 D</b>			
Total Dissolved Solids	mg/L	T	950	<b>2200 J-</b>	<b>1700</b>	<b>2300</b>	<b>2300</b>	<b>2300</b>	<b>2300</b>	<b>2300 D</b>	<b>2300 D</b>	<b>2200 D</b>	<b>2000 D</b>	<b>1900 D</b>	<b>1900 D</b>			
<b>Appendix IV</b>																		
Antimony	mg/L	T	0.0060	0.000087 J	0.000092 J	< 0.00025 U	0.00011 J	0.00045 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.00010 U	< 0.00050 UD	0.00016 J	< 0.0001 U			
Arsenic	mg/L	T	0.010	0.00084	0.0011	0.0012 J	0.0011	0.00050 J	0.00049 J	0.00091 J+	0.00076	0.0011	0.00097	0.0014	0.00077			
Barium	mg/L	T	1.3	0.43	0.13	0.50	0.30	0.34	0.43	0.38 D	0.38	0.41	0.42 D	0.36	0.27			
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.00026 U	0.000053 J	< 0.000052 U	< 0.000052 U	< 0.000052 UJ	< 0.000052 U	0.00015 J	5.7E-05 J	0.00018 J	5.4E-05 J			
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	0.00011 J	< 0.000038 UD	< 0.000075 U	< 0.000075 U			
Chromium, Total	mg/L	T	0.10	0.0046	0.0061	0.0049	0.0073	0.0033	0.0037	0.0060	0.0053	0.0030	0.0037	0.0052	0.0045			
Cobalt	mg/L	T	0.0060	0.00088	0.00044 J	0.00081 J	0.00097	0.00044 J	0.00050 J	0.0012 J+	0.0011	0.0013	0.00037 J	0.0013	0.00059			
Fluoride	mg/L	T	2.0	0.65	1.6	0.62	0.52	0.60	0.54	0.54 D	0.61 D	0.6 D	0.61 D	0.6 D	0.62 D			
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00050 UD	0.00022 J	< 0.00050 UD	< 0.00010 U	< 0.00050 UD			
Lithium	mg/L	T	0.10	0.044	0.065	0.039	0.045	0.037	0.035	0.050	0.041	0.035	0.033 D	0.029	0.031			
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00024	< 0.00016 U	< 0.00016 U	< 0.00016 U			
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.00072 J	< 0.0031 U	< 0.00062 U	< 0.0031 U	< 0.00025 U	< 0.00025 UJ	< 0.00025 U	0.00085 J	< 0.00025 U	0.0011 J	< 0.00025 U			
Radium 226 and 228	pCi/L	T	5.0	1.92	< 1.32 UG	0.75	1.76	0.81	1.38	1.26	0.996	1.34	1.48	1.5	0.79			
Radium-226	pCi/L	T	--	0.583	0.526	0.242	< 0.217 U	0.268	0.574	< 0.209 U	0.417	< 0.312 U	0.466	< 0.288 U	0.22			
Radium-228	pCi/L	T	--	1.34	< 1.32 UG	< 0.67 U	1.55	< 0.767 U	< 1.15 UJ	1.18	< 0.763 U	1.08	1.02	1.42	< 0.609 U			
Selenium	mg/L	T	0.0050	0.00042 J	< 0.00022 U	< 0.0011 U	0.00040 J	< 0.00022 U	0.00017 J	0.00042 J+	0.00034 J	0.00053	0.00062	0.00049 J	0.00038 J			
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UJ	< 0.00038 UD	0.00018 J	0.00038 UD	< 0.000075 U	< 0.00038 UD			
Total Suspended Solids	mg/L	T	--	4.0	15	4.0	1.0 J	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U			
<b>Michigan CCR Part 115</b>																		
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.0010 U	< 0.00020 U	< 0.00020 U	0.00025	0.00030 B	0.00024 J	0.00091	0.00025	0.001	0.0003			
Iron	mg/L	T	83	3.7	5.9	2.5	1.6	2.0	0.78	0.31	0.28	0.43	1.4 D	0.48	0.27			
Nickel	mg/L	T	0.10	0.0016	0.015	< 0.0032 U	0.0018	0.00085 J	0.00087 J	0.0016	0.0015	0.0017	0.00094 J	0.0022	0.0011 J			
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00025 UD	< 0.00005 U	< 0.00005 U			
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0012	< 0.00062 U	0.0022	0.0018			
Zinc	mg/L	T	0.27	0.019	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.018	< 0.0012 U	0.0019	< 0.0012 U	0.002	< 0.0012 U	0.0013	< 0.0012 U			
<b>Additional Parameters</b>																		
Bicarbonate Alkalinity	mg/L	T	--	1800	690	1600	1200	1100	1100	1300 D	1300	1400 D	1300	1200	1300			
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	70	< 0.16 U	< 0.16 U			
Magnesium	mg/L	T	--	210	91	220	220	210	220	210 D	200 D	200 D	210 D	200 D	190 D			
Potassium	mg/L	T	--	20	18	20	15	20	17	20	18 D	18 D	19 D	16	17			
Sodium	mg/L	T	--	130	74	120	110	100	110	100 D	110 D	100 D	110 D	90	89 D			
Total Alkalinity	mg/L	T	--	1800	690	1600	1200	1100	1100	1300 D	1300	1400 D	1300	1200	1300			

**Notes:**  
 ug/l - micrograms per liter.  
 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
 pCi/L = picocuries per liter.  
 All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**  
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.  
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)  
 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.



Sample Location:				MW-04										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				11/28/2022	1/4/2023	2/7/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/14/2024	4/7/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	0.237	2.47	2.56	2.044	2.81	2.82	2.81	2.74	2.52	2.55	2.78	2.79		
Dissolved Oxygen	mg/L	N	--	0.15	0.1	0.07	0.79	0.15	0.06	0.05	0.16	0.14	0.30	0.06	0.05		
Oxidation Reduction Potential	mV	N	--	-137.4	-113.2	-175.9	-126.6	43.2	-91.9	-113.3	-130.1	-133.3	-96.7	-170.1	-82.9		
pH	su	N	--	7.34	7.39	7.23	7.45	7.35	7.66	7.43	7.34	7.26	7.4	7.43	7.25		
Temperature	deg c	N	--	13.1	10.5	8.7	6.5	7.2	10.5	13.1	16.4	16.1	8.0	8.8	16.1		
Turbidity	NTU	N	--	1.95	0.02	0.02	0.02	0.02	0.02	0.28	2.98	1.42	1.83	0.38	0.02		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	4.0	3.9	3.8	3.8	3.5	4.3	4.1 J+	4.0	4.7 DJ	4.1 D	4.2	4.4		
Calcium	mg/L	T	250	310	360	350	390	340	400	410 D	330 D	360 D	350 D	430 D	380 D		
Chloride	mg/L	T	120	180	300	200	220	220	200	190 D	160 D	150 D	130 D	120 D	120 D		
Fluoride	mg/L	T	2.0	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D	1.4 D	1.3 D	1.4 D		
Sulfate (as SO4)	mg/L	T	250	410	1.8 J	530	580	700	690	610 D	610 D	630 D	640 D	810 D	810 D		
Total Dissolved Solids	mg/L	T	950	1700	2100	1700	1800	1900	2100	2000 D	1900 D	1800 D	1800 D	2100 D	2100 D		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.000071 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00041 J	< 0.00050 U	< 0.00050 UD	0.00012 J+	< 0.0001 U	< 0.0005 UD	< 0.0001 U	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.0012	0.00078	0.0012	0.0012	0.00060	0.00047 J	0.00092 J+	0.00088	0.001	0.00058	0.0012	0.00086		
Barium	mg/L	T	1.3	0.11	0.46	0.12	0.12	0.10	0.12	0.15 D	0.12	0.12	0.11 D	0.12	0.084		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	6.6E-05 J		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.0027	0.0060	0.0047	0.0049	0.0026	0.0031	0.0046	0.0044	0.0027	0.0026	0.0041	0.0047		
Cobalt	mg/L	T	0.0060	0.00035 J	0.00093	0.00062	0.00065	0.00031 J	0.00036 J	0.00074 J+	0.00062	0.00045 J	0.00018 J	0.00034 J	0.00024 J		
Fluoride	mg/L	T	2.0	1.2	0.76	1.3	1.4	1.3	1.3	1.2 D	1.4 D	1.9 D	1.4 D	1.3 D	1.4 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00050 U	< 0.00010 U	< 0.00010 U	0.00050 UD	< 0.00010 U	< 0.00050 UD		
Lithium	mg/L	T	0.10	0.067	0.047	0.061	0.074	0.054	0.061	0.074	0.074	0.066 D	0.048 D	0.062	0.068		
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0013	< 0.00062 U	0.00074 J	0.00086 J	< 0.00031 U	0.00041 J	0.00044 J+	0.0012	0.0015	0.00037 J	0.00097 J	0.0014		
Radium 226 and 228	pCi/L	T	5.0	1.43	1.08	1.55	1.23	< 0.752 U	1.49	1.2	1.29	1.2	0.868 U	1.11 J-	< 0.691 U		
Radium-226	pCi/L	T	--	< 0.206 U	0.159	0.175	< 0.198 U	< 0.189 U	< 0.214 U	0.232	0.152 J-	0.275	0.155 U	0.176 J-	0.243		
Radium-228	pCi/L	T	--	1.28	0.916	1.38	1.16	< 0.752 U	1.33 J	0.963	1.14	0.924	0.868 U	0.936 J-	< 0.691 U		
Selenium	mg/L	T	0.0050	< 0.00022 U	0.00041 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00017 J+	0.00021 J+	0.00024 J	0.00043 J	0.00021 J	0.00023 J		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	10	8.0	11	10	11	12	8.1 D	< 4.0 UJ	8.0	4.0 U	15	5.0		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U	0.00032	< 0.0002 U		
Iron	mg/L	T	83	4.7	6.3	5.6	6.3	6.1	6.8	6.8	5.0	5.6 D	5.5 D	6.8	5.7		
Nickel	mg/L	T	0.10	0.012	0.0019	0.018	0.019	0.011	0.013	0.022	0.019	0.013	0.010	0.016	0.018		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00097 J	0.0011 J		
Zinc	mg/L	T	0.27	< 0.0044	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0059	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0015	< 0.0012 U	< 0.0012 U	< 0.0012 U		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	800	1800	720	690	720	740	730	750	780	680 D	700	710		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	96	200	110	120	120	140	130 D	120 D	120 D	120 D	140 D	130 D		
Potassium	mg/L	T	--	21	20	20	18	21	24	26	23 D	24 D	21 D	23	24		
Sodium	mg/L	T	--	83	110	84	83	89	100	93 D	87 D	83 D	80 D	90	84		
Total Alkalinity	mg/L	T	--	800	1800	720	690	720	740	730	750	780	680 D	700	710		

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-06										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				11/29/2022	1/3/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/13/2024	4/7/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	1.78	2.13	2.16	1.973	2	2.05	2.04	2	2.02	1.63	1.92	1.91		
Dissolved Oxygen	mg/L	N	--	0.1	0.6	0.07	0.14	0.35	0.08	0.24	0.38	0.24	0.15	0.07	0.01		
Oxidation Reduction Potential	mV	N	--	38.1	-139	-193.2	-148.9	-173.5	-184.3	-182.7	-80.3	-176.8	145.9	-139.9	-234.1		
pH	su	N	--	7.33	7.26	6.42	7.21	7.28	7.36	7.27	7.17	7.26	7.2	7.18	7.39		
Temperature	deg c	N	--	13.9	10.9	7.6	8.1	8.4	11.2	13.4	16.8	16.6	8.8	9.5	16		
Turbidity	NTU	N	--	0.02	1.13	2.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.07		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	<b>12</b>	<b>9.5</b>	<b>10</b>	<b>9.5</b>	<b>7.5</b>	<b>8.6</b>	<b>9.7 J+</b>	<b>9.9</b>	<b>11 D</b>	<b>7.3 D</b>	<b>6.4</b>	<b>8.3</b>		
Calcium	mg/L	T	250	220	230	<b>250</b>	<b>310</b>	<b>250</b>	<b>270</b>	<b>290 D</b>	230 D	240 D	<b>280 D</b>	<b>310 D</b>	<b>250 D</b>		
Chloride	mg/L	T	120	<b>160</b>	<b>120</b>	110	82	57	73	71 D	76 D	79 D	18 D	13 D	31 D		
Fluoride	mg/L	T	2.0	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D	0.98 D	1.1 D	0.99 D		
Sulfate (as SO4)	mg/L	T	250	16	9.6	20	7.3	9.4	20	16 D	0.98 JD	< 0.41 UD	1.5 JD	9.2 D	< 2.2 UD		
Total Dissolved Solids	mg/L	T	950	<b>1300</b>	<b>1200</b>	<b>1300</b>	<b>1200</b>	<b>1200</b>	<b>1200</b>	<b>1300 D</b>	<b>1200 D</b>	<b>1100 D</b>	<b>1100 D</b>	<b>1200 D</b>	<b>1200 D</b>		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.00075 J	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00036 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.0001 U	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.0080	0.0065	0.0058	0.0054 J	0.0047 J	0.0065	0.0062 J+	0.0082	0.001	0.0057	0.0068	0.0098		
Barium	mg/L	T	1.3	<b>1.5</b>	<b>1.5</b>	<b>1.4</b>	<b>1.4</b>	0.99	<b>1.3</b>	<b>1.4 D</b>	<b>1.5 D</b>	<b>1.4 D</b>	<b>1.3 D</b>	<b>1.3 D</b>	<b>1.7 D</b>		
Beryllium	mg/L	T	0.0040	< 0.000054 U	< 0.000052 U	0.000052 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.0015	0.0021	0.0021	0.0030	0.0014	0.0012	0.0020	0.0023	0.0015	0.0012	0.0011	0.0014		
Cobalt	mg/L	T	0.0060	0.0048 J	0.0057	0.0067	0.0073	0.0050 J	0.0046 J	0.0080 J+	0.0067	0.0047 J	0.0035 J	0.0042 J	0.0037 J		
Fluoride	mg/L	T	2.0	1.3	1.4	1.1	1.0	1.1	1.0	1.1 D	1.4 D	1.2 D	0.98 D	1.1 D	0.99 D		
Lead	mg/L	T	0.0040	0.0035 J	0.0025 J	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	0.00027 J+	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.00010 U	< 0.00010 U		
Lithium	mg/L	T	0.10	<b>0.23</b>	<b>0.22</b>	<b>0.20</b>	<b>0.23</b>	<b>0.15</b>	<b>0.15</b>	<b>0.19</b>	<b>0.22</b>	<b>0.19 D</b>	<b>0.13 D</b>	<b>0.11</b>	<b>0.14</b>		
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	0.00026 J	0.00027 J+	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	0.00028 J		
Radium 226 and 228	pCi/L	T	5.0	0.864	0.637	< 0.715 U	1.91	< 0.646 U	0.92	0.824	0.938	1.58	0.965	2.23	< 0.619 U		
Radium-226	pCi/L	T	--	0.419	0.238	0.24	< 0.212 U	0.402	0.259	0.331	0.465	0.432	0.358	0.383	0.288		
Radium-228	pCi/L	T	--	< 0.449 U	< 0.631 U	< 0.715 U	1.7	< 0.646 U	< 0.772 U	< 0.606 U	< 0.735 U	1.15	< 0.85 U	1.85	< 0.619 U		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00020 J	0.00022 J+	0.00019 J	0.0002 J	0.00047 J	0.00023 J	0.0002 J		
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	36	45	42	65	53	43	41 D	37 D	48	73	54 D	27		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00028	< 0.0002 U	0.00038		
Iron	mg/L	T	83	15	17	16	26	19	18	18	14	19 D	31 D	26	17		
Nickel	mg/L	T	0.10	0.0011 J	0.0011 J	0.0012	0.00092 J	< 0.00065 U	< 0.00065 U	0.0010 J	0.00090 J	0.00079 J	0.00065 U	< 0.00065 U	< 0.00065 U		
Silver	mg/L	T	0.00020	< 0.000051 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< <b>0.00025 U</b>	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.000050 U	< <b>0.00025 UD</b>	< 0.00005 U	< 0.00005 U		
Vanadium	mg/L	T	0.0062	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00064 J		
Zinc	mg/L	T	0.27	0.060	0.0019	0.0018	0.0012	0.094	< 0.0012 U	0.0018	0.0013	0.0018	< 0.0012 U	0.0012	0.0013		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	1100	1100	1000	1100	1100	990	1100 D	1100	1000 D	980 D	1100	1100		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	110	95	100	96	90	100	100 D	90 D	89 D	81 D	78	81		
Potassium	mg/L	T	--	32	24	23	20	20	23	26	24 D	26 D	20 D	18	22		
Sodium	mg/L	T	--	110	78	84	69	63	82	87	77 D	71 D	49 D	64	64		
Total Alkalinity	mg/L	T	--	1100	1100	1000	1100	1100	990	1100 D	1100	1000 D	980 D	1100	1100		

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-07											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/27/2023	8/7/2023	10/24/2023	2/13/2024	4/7/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	0.46	1.21	1.206	1.209	1.25	1.24	1.25	1.25	1.23	1.25	1.27	1.29
Dissolved Oxygen	mg/L	N	--	0.12	0.3	0.08	0.21	0.03	0.23	0.43	0.72	0.22	0.2	0.26	0.04
Oxidation Reduction Potential	mV	N	--	57.2	-88	-103.1	-143.9	-68	-109.4	-140.5	-15.7	-141	-74.7	-60.1	-176.7
pH	su	N	--	6.88	7.04	6.93	6.58	6.86	6.93	6.88	6.65	6.88	7.02	7.05	6.95
Temperature	deg c	N	--	12.2	11	10	8.6	9.6	11.3	13	14.8	14.6	9.7	10.2	14.8
Turbidity	NTU	N	--	5.89	4.2	4.07	0.02	2.94	1.5	0.02	0.72	0.74	9.13	0.74	0.02
<b>Appendix III</b>															
Boron	mg/L	T	4.0	13	11	12	11	10	12	11 J+	11	12 D	11 D	13 D	10
Calcium	mg/L	T	250	140	140	140	150	130	150	160 D	120 D	150 D	140 D	160 D	150 D
Chloride	mg/L	T	120	15	15	14	14	14	13	13 D	13 D	14 D	14 D	14 D	14 D
Fluoride	mg/L	T	2.0	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D	0.068 JD	0.08 JD	0.19 JD
Sulfate (as SO4)	mg/L	T	250	29	30	33	20	17	15	18 D	19 D	26 D	32 D	36 D	15 D
Total Dissolved Solids	mg/L	T	950	660	470	650	500	620	660	720 D	620 D	620 D	680 D	710 D	720 D
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.000071 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U
Arsenic	mg/L	T	0.010	0.00023 J	0.00021 J	0.00023 J	0.00018 J	0.00013 J	0.00023 J	0.00020 J+	0.00020 J	0.00029 J	0.00021 J	0.00024 J	0.00023 J
Barium	mg/L	T	1.3	0.33	0.34	0.36	0.30	0.25	0.34	0.35	0.34	0.38	0.35	0.34	0.36
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	0.000062 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000066 J	0.000055 J	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U
Chromium, Total	mg/L	T	0.10	0.00038	0.00030	0.00037	0.00042	0.00028	0.00029	0.00033	0.00032	0.00036	0.00032	0.00034	0.00074
Cobalt	mg/L	T	0.0060	0.00071	0.00088	0.00099	0.00099	0.00087	0.00095	0.0011 J+	0.00098	0.00098	0.00074	0.00083	0.0008
Fluoride	mg/L	T	2.0	0.14	0.070 J	0.12	< 0.055 U	0.14	0.11	0.080 JD	0.083 JD	0.14 D	0.068 JD	0.08 JD	0.19 JD
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U
Lithium	mg/L	T	0.10	0.0054	0.0070	0.0052	0.0067	0.0083	0.0055	0.010	0.0042	0.0062	0.0031	0.0057	0.0057
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	1.12	1.26 J+	1.03	1.12	0.674	< 0.928 U	< 0.697 U	2.36	1.76	0.937	2.75	1.46
Radium-226	pCi/L	T	--	0.444	0.53	0.333	0.38	0.475	0.309	0.341	0.665	0.341	0.495	0.508	0.551
Radium-228	pCi/L	T	--	0.676	0.729 J+	0.693	< 0.835 U	< 0.559 U	< 0.928 U	< 0.697 U	1.7	1.28	0.789 U	2.25	< 0.965 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00010 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00023 J	< 0.00010 U	0.00011 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	44	36	35	33	33	39	39	41 D	38	29	32 D	46
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U	0.00024 J	0.00021 J
Iron	mg/L	T	83	16	13	13	15	14	19	17	14	18 D	15 D	15	17
Nickel	mg/L	T	0.10	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00079 J
Zinc	mg/L	T	0.27	0.016	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.025	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0035	< 0.0012 U	< 0.0012 U	< 0.0012 U
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	660	580	630	610	640	630	620	620	600 D	610 D	630	640
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	37	37	37	38	38	40	36	35 D	38 D	38 D	40	36
Potassium	mg/L	T	--	5.4	5.4	5.2	5.7	4.8	4.4	4.7	5.1	4.9	4.7 D	4.7	4.5
Sodium	mg/L	T	--	53	47	47	47	59	57	56	48 D	51 D	52 D	57	55
Total Alkalinity	mg/L	T	--	660	580	630	610	640	630	620	620	600 D	610 D	630	640

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

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- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-08										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				12/1/2022	1/5/2023	2/7/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024	4/7/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Sample Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	1.06	1.13	1.133	0.787	1.03	0.99	1.03	1.02	0.87	0.89	0.9	0.99		
Dissolved Oxygen	mg/L	N	--	0.2	0.09	0.05	0.55	0.06	0.09	0.04	0.09	1.53	0.30	0.1	0.05		
Oxidation Reduction Potential	mV	N	--	-159.3	-119.3	-133.9	-149.9	-121.2	-145.3	-103.6	-127.6	-180.6	-141.1	-164.6	-133.3		
pH	su	N	--	7.17	6.21	7.16	7.51	7.25	7.33	7.24	7.26	7.27	7.34	7.41	7		
Temperature	deg c	N	--	9.6	6.9	6.2	5.2	7.3	11.6	14	16.7	14.7	6.2	7.4	15.8		
Turbidity	NTU	N	--	0.02	0.02	0.66	0.02	1.04	0.02	2.11	5.63	0.02	2.79	1.03	0.02		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	2.5	<b>4.4</b>	<b>9.3</b>	<b>7.1</b>	<b>6.6</b>	<b>7.0</b>	<b>7.8 J+</b>	<b>7.1</b>	<b>4.1 D</b>	<b>7.0 D</b>	<b>6.5</b>	<b>7.9</b>		
Calcium	mg/L	T	250	150	160	150	150	130	140	150 D	120 D	120 D	120 D	130 D	120 D		
Chloride	mg/L	T	120	17	23	35	30	28	25	29 D	30 D	17 D	25 D	24 D	30 D		
Fluoride	mg/L	T	2.0	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D	1.0 D	1.2 D	1.1 D		
Sulfate (as SO4)	mg/L	T	250	13	25	5.3	26	2.0 J	< 0.41 U	< 0.41 UD	< 0.41 UD	1.7 JD	5.6 D	7 D	< 2.2 UD		
Total Dissolved Solids	mg/L	T	950	560	480	630	490	560	550	610 D	530 D	440 D	530 D	510 D	550 D		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.00095 J	0.00054 J	0.00020 J	0.00016 J	0.00028	< 0.00010 U	0.00011 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.0069	<b>0.021</b>	<b>0.049</b>	<b>0.045</b>	<b>0.050</b>	<b>0.041</b>	<b>0.038 J+</b>	<b>0.029</b>	<b>0.011</b>	<b>0.03</b>	<b>0.047</b>	<b>0.044</b>		
Barium	mg/L	T	1.3	1.2	<b>1.3</b>	<b>1.5</b>	<b>1.4</b>	1.1	1.2	<b>1.4 D</b>	1.2 D	0.98	1.0 D	1.1 D	<b>1.3 D</b>		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.00067	0.00093	0.0015	0.0011	0.00084	0.0011	0.00094	0.00087	0.00061	0.00070	0.00075	0.00071		
Cobalt	mg/L	T	0.0060	0.00034 J	0.00045 J	0.00070	0.00060	0.00051 J	0.00059	0.00062 J+	0.00058	0.00034 J	0.00034 J	0.00037 J	0.00037 J		
Fluoride	mg/L	T	2.0	0.40	0.56	1.1	1.3	1.1	0.92	1.0 D	1.0 D	0.55 D	1.0 D	1.2 D	1.1 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	0.00086	< 0.00022 U	0.00022 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00011 J	< 0.00010 U	< 0.00010 U		
Lithium	mg/L	T	0.10	0.063	<b>0.11</b>	<b>0.14</b>	<b>0.11</b>	<b>0.11</b>	<b>0.13</b>	<b>0.12</b>	0.076 D	0.097 D	0.098	<b>0.11</b>			
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0024	0.0018	0.0015	0.0028	0.00095 J	0.00068 J	0.00039 J+	0.00036 J	0.0016	0.0017	0.002	0.00031 J		
Radium 226 and 228	pCi/L	T	5.0	1.43	1.62 J+	< 0.836 U	1.13	1.18	1.14	< 0.606 U	2.1	0.891	< 0.848 U	1.86 J-	0.879		
Radium-226	pCi/L	T	--	0.277	0.31	0.286	< 0.255 U	0.32	0.396	0.19	0.358	< 0.234 U	< 0.126 U	0.177 J-	0.232		
Radium-228	pCi/L	T	--	1.16	1.31 J+	< 0.836 U	< 1 UG	0.858	< 0.835 U	< 0.606 U	1.74 G	< 0.744 U	< 0.848 U	1.68 J+	0.646		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00014 J+	0.00014 J	0.00015 J	0.00034 J	0.00012 J	0.00012 J		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	62	55	49	42	36	31	30	20	43	46	36 D	18		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	0.00043	< 0.00020 U	0.00045	0.00034	< 0.00020 U	< 0.00020 U	0.00021 J	0.00035	0.00025	0.00047		
Iron	mg/L	T	83	32	30	21	22	18	18	15	13	22 D	22 D	19	14		
Nickel	mg/L	T	0.10	0.00093 J	0.0013	0.0015	0.0013	0.0011 J	0.0011 J	0.0011 J	0.0010 J	0.00085 J	0.0026	0.0032	0.0013		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U		
Zinc	mg/L	T	0.27	0.054	< 0.0012 U	0.0040	0.0013	0.12	0.0014	0.0018	< 0.0012 U	0.0025	< 0.0012 U	0.0017	0.0015		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	540	510	560	470	510	490	480	480	460 D	440 D	440	460		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	27	30	33	27	29	28	26	26 D	22 D	23 D	24	25		
Potassium	mg/L	T	--	8.8	12	14	7.6 J	12	11	12	12	8.6 D	8.6 D	9	11		
Sodium	mg/L	T	--	21	27	38	33	35	35	40	36 D	23 D	32 D	32	36		
Total Alkalinity	mg/L	T	--	540	510	560	470	510	490	480	480	460 D	440 D	440	460		

**Notes:**  
 ug/l - micrograms per liter.  
 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
 pCi/L = picocuries per liter.  
 All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**  
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.  
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)  
 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.

Sample Location:				MW-09											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024	4/7/2024	7/18/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	1.33	1.49	1.593	1.472	2.02	1.95	1.95	1.92	1.63	2.03	2.2	2.16
Dissolved Oxygen	mg/L	N	--	0.19	0.2	1.89	0.35	0.08	0.07	0.05	0.17	0.07	0.34	0.27	0.01
Oxidation Reduction Potential	mV	N	--	42	-183.9	-138.4	-131.5	-112.3	-107.1	-117	-114.7	-69.3	-106.1	-160.4	-155.1
pH	su	N	--	7.2	7.22	7.22	7.4	7.22	7.52	7.28	7.21	7.16	7.14	7.25	7.2
Temperature	deg c	N	--	12.7	10.5	8.5	6.8	7.7	10.6	12.1	15	15.7	7.7	8.8	15.2
Turbidity	NTU	N	--	0.02	0.02	1.04	0.02	0.55	0.66	0.71	2.01	0.49	1.89	2.01	4.56
<b>Appendix III</b>															
Boron	mg/L	T	4.0	<b>6.0</b>	<b>5.8</b>	<b>6.1</b>	<b>5.1</b>	<b>4.9</b>	<b>5.9</b>	<b>6.3 J+</b>	<b>5.7</b>	<b>6.9 D</b>	<b>5.3 D</b>	<b>5.5</b>	<b>5.9</b>
Calcium	mg/L	T	250	<b>270</b>	230	<b>300</b>	<b>400</b>	<b>390</b>	<b>410</b>	<b>430 D</b>	<b>330 D</b>	<b>310 D</b>	<b>420 D</b>	<b>500 D</b>	<b>430 D</b>
Chloride	mg/L	T	120	15	17	18	16	12	11	11 D	12 D	12 D	18 D	25 D	25 D
Fluoride	mg/L	T	2.0	<b>2.1</b>	<b>2.4</b>	<b>2.6</b>	<b>2.5</b>	<b>2.5</b>	<b>2.7</b>	<b>2.9 D</b>	<b>2.9 D</b>	<b>2.8 D</b>	<b>2.2 D</b>	<b>2.3 D</b>	<b>2.6 D</b>
Sulfate (as SO4)	mg/L	T	250	110	83	210	<b>480</b>	<b>580</b>	<b>580</b>	<b>500 D</b>	<b>450 D</b>	210 D	<b>610 D</b>	<b>720 D</b>	<b>630 D</b>
Total Dissolved Solids	mg/L	T	950	<b>960</b>	740	<b>1100</b>	<b>1400</b>	<b>1600</b>	<b>1600</b>	<b>1500 D</b>	<b>1400 D</b>	<b>1100 D</b>	<b>1600 D</b>	<b>1700 D</b>	<b>1700 D</b>
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00073 J	< 0.00050 U	0.00023 J	0.00092 J	0.00037 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.0001 U	0.00012 J
Arsenic	mg/L	T	0.010	0.0025	0.0023	0.0023	0.0023	0.0013	0.0013	0.0027 J+	0.0024	0.0023	0.0015	0.003	0.0025
Barium	mg/L	T	1.3	0.59	<b>2.4</b>	0.36	0.38	0.18	0.20	0.17	0.20	0.28	0.31 D	0.2	0.2
Beryllium	mg/L	T	0.0040	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	0.00058 J	< 0.00052 UJ	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	5.7E-05 J
Cadmium	mg/L	T	0.0025	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00032 U	< 0.00016 U	< 0.00038 U	< 0.00075 UJ	< 0.00075 U	< 0.00038 UD	< 0.00075 U	< 0.00075 U
Chromium, Total	mg/L	T	0.10	0.0022	0.0028	0.0032	0.0030	0.0018	0.0019	0.0031	0.0027	0.0018	0.0016	0.0026	0.0021
Cobalt	mg/L	T	0.0060	0.00035 J	0.00046 J	0.00058	0.00099	0.00053	0.00037 J	0.00069 J+	0.00075	0.00024 J	0.00058	0.00076	0.00024 J
Fluoride	mg/L	T	2.0	<b>2.1</b>	<b>2.4</b>	<b>2.6</b>	<b>2.5</b>	<b>2.5</b>	<b>2.7</b>	<b>2.9 D</b>	<b>2.9 D</b>	<b>2.8 D</b>	<b>2.2 D</b>	<b>2.3 D</b>	<b>2.6 D</b>
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.00010 U	< 0.00050 UD
Lithium	mg/L	T	0.10	<b>0.29</b>	<b>0.34</b>	<b>0.33</b>	<b>0.31</b>	<b>0.26</b>	<b>0.29</b>	<b>0.34</b>	<b>0.33</b>	<b>0.29 D</b>	<b>0.26 D</b>	<b>0.29</b>	<b>0.3</b>
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	<b>0.0024</b>	< 0.00016 U	<b>0.0021</b>	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.028	0.028	0.029	0.029	0.021	0.020	0.019 J+	0.021	0.0097	0.021	0.021	0.016
Radium-226 and 228	pCi/L	T	5.0	0.789	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U	< 0.98 U	< 0.743 U	< 0.771 U
Radium-226	pCi/L	T	--	< 0.16 U	< 0.0959 U	< 0.125 UJ	< 0.223 U	< 0.184 U	< 0.22 U	< 0.186 U	< 0.163 U	< 0.237 U	< 0.12 U	< 0.17 U	< 0.135 U
Radium-228	pCi/L	T	--	0.69	< 0.678 U	< 0.642 UJ	< 0.796 U	< 0.688 U	< 0.912 U	< 0.742 U	< 0.821 U	< 0.688 U	< 0.98 U	< 0.743 U	< 0.771 U
Selenium	mg/L	T	0.0050	0.00026 J	< 0.00022 U	0.00028 J	0.00024 J	< 0.00022 U	0.00012 J	0.00027 J+	0.00026 J	0.00023 J	0.00024 J	0.00033 J	0.00029 J
Thallium	mg/L	T	0.0020	< 0.00075 U	< 0.00075 U	< 0.00038 U	< 0.00075 U	< 0.00038 U	< 0.00038 U	< 0.00075 UJ	< 0.00075 U	< 0.00075 U	< 0.00038 UD	< 0.00075 U	< 0.00038 UD
Total Suspended Solids	mg/L	T	--	45	51	52	50	56	52	46	48	39	47	50 D	57 D
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	< 0.0020 U	0.00043	< 0.0020 U	< 0.0020 U	0.00029	0.0013
Iron	mg/L	T	83	17	19	19	24	25	25	19	16	15 D	22 D	26	20
Nickel	mg/L	T	0.10	0.00088 J	0.0020	0.0020	0.0033	0.0018	0.0010 J	0.0012	0.0012	0.00072 J	0.006	0.0072	0.0099
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< <b>0.00025 U</b>	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.00005 U	< <b>0.00025 UD</b>	< <b>0.00005 U</b>	< <b>0.00005 U</b>
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.025	0.015	< 0.0012 UJ	< 0.0012 U	0.018	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0017
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	750	710	750	620	610	400	720	660	780 D	610 D	600	630
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 1.6 U	< 0.31 UD	< 0.31 UD	< 1.6 U	< 1.6 U
Magnesium	mg/L	T	--	38	36	44	50	53	47	46 D	41 D	55 D	64	53	
Potassium	mg/L	T	--	13	16	16	10 J	15	14	16	17	15 D	13 D	14	15
Sodium	mg/L	T	--	29	28	26	26	26	29	30	27 D	27 D	26 D	31	28
Total Alkalinity	mg/L	T	--	750	710	750	620	610	400	720	660	780 D	610 D	600	630

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

- Qualifiers:**
- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
  - J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)

- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.

UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-10											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/29/2022	1/4/2023	2/6/2023	3/14/2023	4/18/2023	5/23/2023	6/27/2023	8/8/2023	10/23/2023	2/13/2024	4/7/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	1.96	2.48	2.34	2.16	2.51	2.18	2.83	3.19	2.68	2.37	3.62	
Dissolved Oxygen	mg/L	N	--	0.08	0.04	0.07	0.05	0.02	0.03	0.11	0.02	0.07	0.18	0.03	
Oxidation Reduction Potential	mV	N	--	-20.3	-245.6	-222.9	-200.2	-189.2	-197.6	-216.2	-168	-149.1	-116.1	-162.4	
pH	su	N	--	7.85	7.79	7.05	8.19	7.96	8.81	7.85	7.74	7.47	7.8	7.8	
Temperature	deg c	N	--	11.1	7.7	5.9	4.6	6.5	10.3	13.4	17	14.8	5.3	7.1	
Turbidity	NTU	N	--	0.02	0.02	0.65	0.02	0.29	2.21	0.02	1.01	0.02	3.61	0.02	
<b>Appendix III</b>															
Boron	mg/L	T	4.0	<b>25</b>	<b>14</b>	<b>9.7</b>	<b>4.5</b>	<b>9.2</b>	<b>17</b>	<b>26 J+</b>	<b>28 D</b>	<b>23 D</b>	<b>8.7 D</b>	<b>6.4</b>	
Calcium	mg/L	T	250	220	220	<b>280</b>	<b>460</b>	<b>280</b>	210	210 D	160 D	190 D	<b>310 D</b>	<b>590 D</b>	
Chloride	mg/L	T	120	<b>220</b>	<b>170</b>	<b>130</b>	92	<b>140</b>	<b>320 D</b>	<b>430 D</b>	<b>310 D</b>	<b>140 D</b>	<b>240 D</b>	<b>420 D</b>	
Fluoride	mg/L	T	2.0	<b>7.1</b>	<b>5.7</b>	<b>4.0</b>	<b>2.7</b>	<b>4.6</b>	<b>6.5</b>	<b>7.3 D</b>	<b>7.7 D</b>	<b>6 D</b>	<b>3.3 D</b>	<b>2.7 D</b>	
Sulfate (as SO4)	mg/L	T	250	<b>490</b>	<b>620</b>	<b>880</b>	<b>360</b>	<b>950</b>	<b>410</b>	200 D	140 D	<b>330 D</b>	<b>840 D</b>	<b>1700 D</b>	
Total Dissolved Solids	mg/L	T	950	<b>1700</b>	<b>1800</b>	<b>1800</b>	<b>2400</b>	<b>1900</b>	<b>1500</b>	<b>1700 D</b>	<b>1900 D</b>	<b>1600 D</b>	<b>1800 D</b>	<b>3200 D</b>	
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00013 J	< 0.00050 U	< 0.00025 U	< 0.00050 U	0.00034 J	< 0.00050 U	0.00011 J	0.00011 J	< 0.00010 UJ	< 0.00050 UD	< 0.0001 U	
Arsenic	mg/L	T	0.010	0.00049 J	0.00034 J	0.00038 J	0.00037 J	0.00020 J	0.00055	0.00073 J+	0.0011	0.00094	0.00025 J	0.00085	
Barium	mg/L	T	1.3	0.32	0.57	0.28	0.23	0.14	0.16	0.23	0.28	0.32 D	0.27	0.19	
Beryllium	mg/L	T	0.0040	< 0.000054 U	0.000071 J	< 0.000052 U	0.000054 J	< 0.000052 U	0.00022 J	0.000092 J+	0.00015 J	0.000052 J-	< 0.000052 U	< 0.000052 U	
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	
Chromium, Total	mg/L	T	0.10	0.0040	0.0050	0.0026	0.0018	0.0019	0.0042	0.0070	0.0085	0.0042	0.0013	0.0016	
Cobalt	mg/L	T	0.0060	0.00038 J	0.00040 J	0.00041 J	0.00053	0.00030 J	0.0018	0.00068 J+	0.00090	0.00038 J-	0.00010 U	0.0001 J	
Fluoride	mg/L	T	2.0	<b>7.1</b>	<b>5.7</b>	<b>4.0</b>	<b>2.7</b>	<b>4.6</b>	<b>6.5</b>	<b>7.3 D</b>	<b>7.7 D</b>	<b>6 D</b>	<b>3.3 D</b>	<b>2.7 D</b>	
Lead	mg/L	T	0.0040	< 0.00023 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	0.00012 J	0.00017 J	0.00050 UD	< 0.00010 U	
Lithium	mg/L	T	0.10	<b>0.92</b>	<b>0.83</b>	<b>0.54</b>	<b>1.6</b>	<b>0.99</b>	<b>0.83</b>	<b>1.1</b>	<b>1.2</b>	<b>0.94 D</b>	<b>0.56 D</b>	<b>0.76</b>	
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	<b>0.0019</b>	< 0.00016 U	
Molybdenum	mg/L	T	0.10	0.0072	0.0033	0.0048	0.0036	0.0035 J	0.0056	0.0019 J+	0.0028	0.0027	0.00080 J	0.0015	
Radium 226 and 228	pCi/L	T	5.0	< 0.775 U	< 0.645 U	1.36	< 1.09 U	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ	1.22	< 0.59 U	
Radium-226	pCi/L	T	--	< 0.171 U	< 0.119 U	< 0.121 U	< 0.231 U	< 0.155 UJ	< 0.248 U	< 0.179 U	< 0.142 U	< 0.229 UJ	0.206	< 0.149 U	
Radium-228	pCi/L	T	--	< 1 U	< 0.645 U	1.31	< 1.09 UG	< 0.605 UJ	< 0.801 U	< 0.752 U	< 0.736 U	< 0.897 UJ	1.01	< 0.59 U	
Selenium	mg/L	T	0.0050	0.00031 J	0.00028 J	0.00031 J	0.00046 J	< 0.00022 U	0.00039 J	0.00036 J+	0.00041 J	0.00036 J	0.00083	0.0003 J	
Thallium	mg/L	T	0.0020	< 0.000076 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	
Total Suspended Solids	mg/L	T	--	4.0	4.0	1.0 J	9.0	8.0 J+	2.0 J	< 4.0 U	2.0 J	< 4.0 U	< 4.0 U	6	
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.00049	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.0013	< 0.00020 U	< 0.00020 U	0.00038 J-	< 0.00020 U	< 0.0002 U	
Iron	mg/L	T	83	3.7	3.7	3.9	7.2	7.3	6.2	4.5	3.2	2.4 D	3.7 D	6	
Nickel	mg/L	T	0.10	0.00089 J	0.00087 J	< 0.00065 U	< 0.00065 U	< 0.00065 U	0.0018	0.00088 J	0.0012	0.00076 J-	< 0.00065 U	< 0.00065 U	
Silver	mg/L	T	0.00020	< 0.000051 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< <b>0.00025 U</b>	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.00005 U	< <b>0.00025 UD</b>	< <b>0.00005 U</b>	
Vanadium	mg/L	T	0.0062	< 0.00064 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0013	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00089 J	
Zinc	mg/L	T	0.27	0.014	0.012	< 0.0012 U	< 0.0012 U	0.013	0.0018	0.0012	0.0014	0.0025 J-	< 0.0012 U	< 0.0012 U	
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	680	580	320	140	340	540	720	770	700 D	240 D	220	
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	
Magnesium	mg/L	T	--	85	86	91	95	76	63	59	58 D	61 D	86 D	100 D	
Potassium	mg/L	T	--	44	33	31	40	42	36	46	48 D	45 D	41 D	60	
Sodium	mg/L	T	--	220	160	120	140	160	190	310 D	390 D	300 D	120 D	130 D	
Total Alkalinity	mg/L	T	--	680	580	320	140	340	540	720	770	700 D	240 D	220	

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-11										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								10/24/2023	2/13/2024	4/7/2024	7/18/2024		
Sample Date:				11/29/2022	1/3/2023	2/8/2023	3/14/2023	4/18/2023	5/23/2023	6/28/2023	8/8/2023	Field Sample	Field Sample	Field Sample	Field Sample		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	1.38	1.4	1.9	1.413	1.77	1.76	1.85	1.68	1.4	1.38	1.63	1.72		
Dissolved Oxygen	mg/L	N	--	0.1	0.31	0.25	0.19	0.23	0.09	0.13	0.22	0.31	0.07	0.25	0.09		
Oxidation Reduction Potential	mV	N	--	76.8	-142.4	-161.7	-121	-157.9	-136.5	-64.7	-27.6	-179.4	140.9	-148.2	-78		
pH	su	N	--	7.28	7.32	7.4	7.47	7.33	7.34	7.31	7.22	7.44	7.33	7.38	7.13		
Temperature	deg c	N	--	13.6	11.7	9.9	7.5	7.8	10.6	13.2	15.3	15.9	9.2	9.4	15.4		
Turbidity	NTU	N	--	0.02	1.53	0.02	0.02	0.02	1.25	5.01	0.02	0.02	0.02	1.6	0.02		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	<b>8.5</b>	<b>13</b>	<b>4.8 B</b>	2.8	1.5	2.0	3.0 J+	<b>7.2</b>	<b>12 D</b>	<b>8.1 D</b>	<b>3.2</b>	<b>4.8</b>		
Calcium	mg/L	T	250	240	130	<b>300</b>	<b>380</b>	<b>320</b>	<b>320</b>	<b>350 D</b>	240 D	150 D	230 D	290 D	<b>270 D</b>		
Chloride	mg/L	T	120	95	84	78	62	52	53	72 D	73 D	88 D	62 D	38 D	59 D		
Fluoride	mg/L	T	2.0	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D	0.75 D	0.61 D	0.47 D		
Sulfate (as SO4)	mg/L	T	250	13 J	10	42	180	210	87	17 D	1.8 JD	< 0.41 UD	< 0.41 UD	14 D	< 2.2 UD		
Total Dissolved Solids	mg/L	T	950	<b>970 J-</b>	680	<b>1200</b>	<b>1100</b>	<b>1200</b>	<b>1200</b>	<b>1100 D</b>	930 D	<b>1800 D</b>	880 D	960 D	<b>1000 D</b>		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.00082 J	0.00069	< 0.00050 U	< 0.00050 U	0.00028 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	0.00028	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.0017	0.0041	0.0016	0.0011	0.00061	0.0010	0.0012 J+	0.0019	0.0023	0.0012	0.0013	0.0015		
Barium	mg/L	T	1.3	0.74	1.2	0.59	0.60	0.36	0.41	0.50	0.57	0.87	0.83	0.53	0.56		
Beryllium	mg/L	T	0.0040	< 0.00052 U	0.000091 J	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	0.00044	< 0.00052 U		
Cadmium	mg/L	T	0.0025	< 0.00032 U	0.00073	< 0.00032 U	< 0.00032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.00016 J	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.00080	0.0086	0.0010	0.00087	0.00045	0.00052	0.0012	0.0018	0.00063	0.00062	0.00078	0.001		
Cobalt	mg/L	T	0.0060	0.00036 J	0.0012	0.00061	0.00072	0.00040 J	0.00040 J	0.00066 J+	0.00061	0.00023 J	0.00026 J	0.0024	0.00028 J		
Fluoride	mg/L	T	2.0	0.81	1.4	0.37	0.32	0.21	0.22	0.25 D	0.69 D	1.2 D	0.75 D	0.61 D	0.47 D		
Lead	mg/L	T	0.0040	0.0025	<b>0.068</b>	0.0018 J	< 0.00022 U	< 0.0011 U	< 0.00050 U	0.0038 J+	0.00017 J	0.00036 J	0.00031 J	0.00043 J	0.00018 J		
Lithium	mg/L	T	0.10	<b>0.10</b>	<b>0.22</b>	0.052	0.028	0.0059	0.0084	0.022	0.095	<b>0.15 D</b>	0.077 D	0.028	0.042		
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	<b>0.0011</b>	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0017	0.0029	0.0015	< 0.00062 U	< 0.00062 U	0.00043 J	0.00066 J+	0.0013	0.00015	0.00066 J	0.003	0.001 J		
Radium 226 and 228	pCi/L	T	5.0	1.19	1.32	< 0.91 U	1.07	1.67	0.812	< 1.0 U	1.76	0.764	1.13	< 0.775 U	< 0.575 U		
Radium-226	pCi/L	T	--	0.445	0.422	0.352	0.304	0.406	0.228	0.243	0.409	0.469	0.514	0.205	0.275		
Radium-228	pCi/L	T	--	0.75	0.903	< 0.91 U	< 0.84 U	1.26	< 0.721 U	< 1.0 U	1.35	< 0.624 U	< 0.765 U	< 0.775 U	< 0.575 U		
Selenium	mg/L	T	0.0050	0.00022 J	0.00031 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00014 J	0.00016 J+	0.00021 J	0.00020 J	0.00071	0.00041 J	0.00017 J		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.00021 J	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	21	35	10	11	4.0	< 4.0 U	4.0	6.0	19	9.0	4.0	4		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	0.00043	0.019	0.00047	< 0.00020 U	< 0.00020 U	0.00024 J	0.00056 B	0.0016	< 0.00020 U	< 0.00020 J	0.0021	0.00031		
Iron	mg/L	T	83	8.7	10	4.9	6.1	3.6	3.8	4.2	6.7	11 D	8.5 D	5.6	7.1		
Nickel	mg/L	T	0.10	0.0013	0.0094	0.0015	0.0012	0.00065 J	0.00068 J	0.0013	0.0018	0.0015	0.0011 J	0.0028	0.00098 J		
Silver	mg/L	T	0.00020	< 0.000050 U	0.00014	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.00017	< 0.000050 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	0.00062 J	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0030	< 0.00062 U		
Zinc	mg/L	T	0.27	0.032	0.10	0.0085	< 0.0012 U	0.033	< 0.0012 U	0.0049	0.0031	0.0018	0.0012 U	0.0035	< 0.0012 U		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	840	600	860	810	800	840	890	800	660 D	760 D	840	820		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	60	55	63	67	60	55	55	56 D	52 D	61 D	55	49		
Potassium	mg/L	T	--	15	19	11	8.5	5.7	5.5	8.1	14	18 D	14 D	7.2	9.2		
Sodium	mg/L	T	--	57	70	37	25	21	26	38	50 D	67 D	51 D	28	36		
Total Alkalinity	mg/L	T	--	840	600	860	810	800	840	890	800	660 D	760 D	840	820		

**Notes:**

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

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- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-12											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/28/2022	1/3/2023	2/7/2023	3/13/2023	4/19/2023	5/23/2023	6/27/2023	8/7/2023	10/23/2023	2/14/2024	4/7/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	Unit 3A/B	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	0.459	0.387	0.542	0.311	0.52	0.44	0.55	0.67	0.64	0.33	0.345	0.57
Dissolved Oxygen	mg/L	N	--	1.62	8.72	8.46	10.31	1.03	2.93	0.12	0.08	0.16	11.12	8.25	0.17
Oxidation Reduction Potential	mV	N	--	93.4	47.4	-14.8	87.6	26.2	131	54.9	-30.1	-118.7	36.8	125.4	-2.2
pH	su	N	--	7.67	7	7.8	8.16	7.92	7.77	7.52	7.47	7.46	8.32	7.91	7.46
Temperature	deg c	N	--	8.8	3.3	1.3	3	9.7	13.9	17.5	20.9	15.9	3.5	6.5	19.5
Turbidity	NTU	N	--	0.02	0.02	0.02	0.02	0.02	1.92	0.02	0.02	0.31	0.02	0.02	0.02
<b>Appendix III</b>															
Boron	mg/L	T	4.0	0.39	0.24	0.26	0.19	0.20	0.27	0.33 J+	0.36	0.42 D	0.22 D	0.25	0.41
Calcium	mg/L	T	250	77	46	78	77	55	63	64	95 D	95 D	40 D	40	74
Chloride	mg/L	T	120	24	16	27	18	16	15	17 D	22 D	26 D	17 D	12 D	18 D
Fluoride	mg/L	T	2.0	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D	0.46 D	0.41 D	0.29 D
Sulfate (as SO4)	mg/L	T	250	180	130	180	120	110	99	110 D	130 D	130 D	84 D	68 D	62 D
Total Dissolved Solids	mg/L	T	950	360	210	340	200	260	270	330 D	420	200	100 D	210	380 D
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00071	0.0011	0.00076	0.00053	0.00094	0.00092	0.00064	0.00040	0.00041	0.00035	0.00053	0.0004
Arsenic	mg/L	T	0.010	0.0028	0.0019	0.0018	0.0014	0.0019	0.0024	0.0029 J+	0.0034	0.0031	0.0016	0.0017	0.0032
Barium	mg/L	T	1.3	0.030	0.017	0.024	0.025	0.022	0.032	0.043	0.053	0.060	0.022	0.025	0.071
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.00067	0.00078	0.0014	0.00062	0.0012	0.0016	0.0024 J+	0.0022	0.0011	0.00054	0.00082	<b>0.0032</b>
Chromium, Total	mg/L	T	0.10	0.00034	0.00048	0.00046	0.00067	0.00054	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00099	0.00095	< 0.0002 U
Cobalt	mg/L	T	0.0060	0.00019 J	< 0.00010 U	0.00014 J	< 0.00010 U	< 0.00010 U	0.00026 J	0.00050 J+	0.00053	0.00038 J	< 0.00010 U	< 0.0001 U	0.00056
Fluoride	mg/L	T	2.0	0.54	0.43	0.23	0.48	0.23	0.22	0.26 D	0.28 D	0.26 D	0.46 D	0.41 D	0.29 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00015 J	0.00014 J+	0.00021 J	0.00021 J	< 0.00010 U	0.00039 J	0.00038 J
Lithium	mg/L	T	0.10	0.0037	0.0033	0.0022 J	0.0025 J+	0.0037	0.0043	0.0064	0.0042	0.0048	0.0023 J	0.0019 J	0.0047
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00016 U	< 0.00016 U	<b>0.00023</b>	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0087	0.0072	0.0067	0.0056	0.0057	0.0069	0.0082 J+	0.0088	0.0096	0.0051	0.0046	0.0064
Radium 226 and 228	pCi/L	T	5.0	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.809	1.09	< 0.59 UJ	< 0.578 UJ	< 0.517 U	< 0.749 U	0.769	< 0.602 UJ
Radium-226	pCi/L	T	--	< 0.13 U	< 0.0702 U	< 0.0727 U	< 0.126 U	< 0.129 U	< 0.136 U	< 0.124 U	< 0.106 UJ	< 0.212 U	< 0.116 U	< 0.146 U	0.119
Radium-228	pCi/L	T	--	< 0.543 U	< 0.459 U	< 0.685 U	< 0.619 U	0.793	1.07	< 0.59 UJ	< 0.578 UJ	< 0.517 U	< 0.749 U	0.729	< 0.602 UJ
Selenium	mg/L	T	0.0050	0.0015	0.0022	0.0023	0.00093	0.0017	0.00076	0.00021 J+	0.00013 J	0.00029 J	0.00089	0.0012	0.00014 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 7.5E-05 U
Total Suspended Solids	mg/L	T	--	< 4.0 U	< 4.0 U	2.0 J	< 4.0 U	1.0 J	< 4.0 U	< 4.0 UJ	0.98 J+	< 4.0 U	< 4.0 U	< 4 UD	< 3.9 UD
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.00055	0.00092	0.0010	0.0010	0.0015	0.0016	0.0012 B	0.00094	0.00071	0.0012	0.0013	0.0014
Iron	mg/L	T	83	< 0.26 U	< 0.026 U	0.033 J	0.027 J	< 0.026 U	< 0.026 U	0.051	0.064	0.037 J	0.026 UJ	< 0.026 UJ	0.068
Nickel	mg/L	T	0.10	0.0025	0.0023	0.0035	0.0016	0.0021	0.0025	0.0031	0.0035	0.0026	0.0014	0.0014	0.0029
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00085 J	0.0013	0.0012	0.00095 J	< 0.00062 U	< 0.00062 U	0.00087 J	0.0016
Zinc	mg/L	T	0.27	0.0068	0.0080	0.0095	0.0037	0.0090	0.0074	0.0085	0.010	0.0080	0.0027	0.005	0.011
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	86	55	52	46	85	95	140	140	190 D	47	86	200
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	17	12	2.4	12	13	15	14	19	22 D	11 D	13	21
Potassium	mg/L	T	--	1.3	0.70	0.74	0.82	1.0	1.3	1.3	1.8	1.7	0.62	0.6	1.3
Sodium	mg/L	T	--	13	11	14	9.9	9.4	11	11	14	16 D	9.8 D	8.8	12
Total Alkalinity	mg/L	T	--	86	55	52	46	85	95	140	140	190 D	47	86	200

**Notes:**  
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 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
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 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.



Sample Location:				MW-16	
Compliance Phase:				Assessment Monitoring	Assessment Monitoring
Sample Date:				4/8/2024	7/18/2024
Sample Type:				Field Sample	Field Sample
Unit:				Nature and Extent	Nature and Extent
Sample Matrix:				Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	1.1	1.36
Dissolved Oxygen	mg/L	N	--	0.04	0.18
Oxidation Reduction Potential	mV	N	--	-90.4	-15.6
pH	su	N	--	7.29	6.53
Temperature	deg c	N	--	7.1	17.6
Turbidity	NTU	N	--	0.02	0.02
<b>Appendix III</b>					
Boron	mg/L	T	4.0	0.22	0.43
Calcium	mg/L	T	250	190 D	<b>250 D</b>
Chloride	mg/L	T	120	14 D	21 D
Fluoride	mg/L	T	2.0	0.14 D	0.19 JD
Sulfate (as SO4)	mg/L	T	250	60 D	< 2.2 UD
Total Dissolved Solids	mg/L	T	950	680 D	830 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	< 0.0001 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0052	0.0034
Barium	mg/L	T	1.3	0.18	0.28
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00064	0.00085
Cobalt	mg/L	T	0.0060	0.00021 J	0.00017 J
Fluoride	mg/L	T	2.0	0.14 D	0.19 JD
Lead	mg/L	T	0.0040	< 0.00010 U	< 0.00010 U
Lithium	mg/L	T	0.10	0.016	0.025
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	1.01	< 0.623 U
Radium-226	pCi/L	T	--	< 0.199 U	0.296
Radium-228	pCi/L	T	--	0.902	< 0.623 U
Selenium	mg/L	T	0.0050	0.00012 J	0.00011 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	16 D	11
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.00025	< 0.0002 U
Iron	mg/L	T	83	7.1	6.7
Nickel	mg/L	T	0.10	0.00065 J	< 0.00065 U
Silver	mg/L	T	0.00020	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	0.00066 J
Zinc	mg/L	T	0.27	< 0.0012 U	< 0.0012 U
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	550	710
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	23	27
Potassium	mg/L	T	--	3.9	5.1
Sodium	mg/L	T	--	17	23
Total Alkalinity	mg/L	T	--	550	710

**Notes:**

ug/l - micrograms per liter.  
mg/l = milligrams per liter.  
su - standard pH units (pH is a field parameter)  
pCi/L = picocuries per liter.  
All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-17	MW-17
Compliance Phase:				Assessment Monitoring	Assessment Monitoring
Sample Date:				4/8/2024	7/17/2024
Sample Type:				Field Sample	Field Sample
Unit:				Nature and Extent	Nature and Extent
Sample Matrix:				Groundwater	Groundwater
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	1.12	0.95
Dissolved Oxygen	mg/L	N	--	0.06	0.02
Oxidation Reduction Potential	mV	N	--	-157.2	-197.6
pH	su	N	--	7.88	7.31
Temperature	deg c	N	--	9.1	20.3
Turbidity	NTU	N	--	0.02	0.21
<b>Appendix III</b>					
Boron	mg/L	T	4.0	0.79	0.75
Calcium	mg/L	T	250	160 D	140 D
Chloride	mg/L	T	120	43 D	33 D
Fluoride	mg/L	T	2.0	0.48 D	0.56 D
Sulfate (as SO4)	mg/L	T	250	4.8 JD	33 D
Total Dissolved Solids	mg/L	T	950	620 D	620 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	< 0.0001 U	0.00016 J
Arsenic	mg/L	T	0.010	0.0018	0.0026
Barium	mg/L	T	1.3	0.70	0.53
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00076	0.0011
Cobalt	mg/L	T	0.0060	0.00033 J	0.00044 J
Fluoride	mg/L	T	2.0	0.48 D	0.56 D
Lead	mg/L	T	0.0040	0.00019 J	0.00042 J
Lithium	mg/L	T	0.10	0.035	0.033
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.00079 J	0.0031
Radium 226 and 228	pCi/L	T	5.0	0.656	< 0.918 U
Radium-226	pCi/L	T	--	< 0.185 U	0.315
Radium-228	pCi/L	T	--	< 0.571 U	< 0.918 U
Selenium	mg/L	T	0.0050	0.00014 J	0.00021 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	9.0	9
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.00088	0.0016
Iron	mg/L	T	83	6.6	3.5
Nickel	mg/L	T	0.10	0.0011 J	0.002
Silver	mg/L	T	0.00020	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	0.00084 J	0.0013
Zinc	mg/L	T	0.27	0.0026	0.0059
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	530	460
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	30	24
Potassium	mg/L	T	--	15	16
Sodium	mg/L	T	--	59	39
Total Alkalinity	mg/L	T	--	530	460

**Notes:**

ug/l - micrograms per liter.  
mg/l = milligrams per liter.  
su - standard pH units (pH is a field parameter)  
pCi/L = picocuries per liter.  
All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-18											
Compliance Phase:				Background Monitoring						Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				11/30/2022	1/5/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/24/2023	2/13/2024	4/10/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	1.54	2.06	1.788	1.554	1.4	1.52	1.62	1.46	1.6	1.51	1.69	1.64
Dissolved Oxygen	mg/L	N	--	0.09	0.19	0.72	0.22	0.34	0.15	0.29	0.05	0.3	0.05	0.4	0.04
Oxidation Reduction Potential	mV	N	--	66.8	-126.8	-70.8	-69.8	-31.3	-22.1	-88.4	-92.8	-80	132.6	-114.3	-143.3
pH	su	N	--	7.05	7.02	7.2	7.12	7.19	7.16	7.16	7.25	7.16	7.27	7.18	7.31
Temperature	deg c	N	--	9.9	6.5	5.2	3.8	6.3	11.3	17.2	17.8	15.3	5.5	7	17.3
Turbidity	NTU	N	--	0.02	0.02	0.09	0.02	0.52	0.02	0.02	7.06	0.59	0.02	0.02	4.07
<b>Appendix III</b>															
Boron	mg/L	T	4.0	2.2	2.0	2.3	1.9	1.8	2.6	2.7 J+	2.3	3.0 D	3.5 D	4 D	3.9
Calcium	mg/L	T	250	<b>450</b>	<b>410</b>	<b>380</b>	<b>330</b>	<b>270</b>	<b>340</b>	240 D	<b>250 D</b>	<b>360 D</b>	<b>370 D</b>	<b>350 D</b>	<b>330 D</b>
Chloride	mg/L	T	120	28	26	22	19	16	19	24 D	27 D	22 D	24 D	16 D	27 D
Fluoride	mg/L	T	2.0	<b>3.5</b>	<b>3.3</b>	<b>3.5</b>	<b>3.8</b>	<b>3.8</b>	<b>3.9</b>	<b>4.4 D</b>	<b>5.1 D</b>	<b>4.5 D</b>	<b>3.4 D</b>	<b>2.7 D</b>	<b>4.5 D</b>
Sulfate (as SO4)	mg/L	T	250	<b>1200</b>	<b>1200</b>	<b>480</b>	<b>740</b>	<b>660</b>	<b>780</b>	<b>760 D</b>	<b>620 D</b>	<b>800 D</b>	<b>980 D</b>	<b>790 D</b>	<b>750 D</b>
Total Dissolved Solids	mg/L	T	950	<b>1800</b>	<b>1700</b>	<b>1600</b>	<b>1200</b>	<b>1200</b>	<b>1400</b>	<b>1400 D</b>	<b>1100 D</b>	<b>1400 D</b>	<b>1400 D</b>	<b>1400</b>	<b>1300 D</b>
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.0012 J	0.0013 J	0.0032 J	0.0014 J	0.0030	< 0.00050 U	0.0012 J	< 0.00010 U	0.0013 J	< 0.00050 UD	0.0018 J	0.0011 J
Arsenic	mg/L	T	0.010	<b>0.029</b>	<b>0.020</b>	<b>0.023</b>	<b>0.019</b>	<b>0.021</b>	<b>0.015</b>	<b>0.029 J+</b>	<b>0.030</b>	<b>0.041</b>	<b>0.024</b>	<b>0.029</b>	<b>0.031</b>
Barium	mg/L	T	1.3	0.021	0.018	0.015	0.012	0.013	0.023	0.024	0.023	0.025	0.015 D	0.014	0.022
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000059 J	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.00022 J	0.00030	< 0.00016 U	0.00018 J	0.00018 J	0.00044 J	0.00030 J+	0.000089 J	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	< 0.00018 U	0.00025 J+	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.0002 U	< 0.0002 U
Cobalt	mg/L	T	0.0060	<b>0.060</b>	0.0054	0.0048	0.0032	0.0020	0.0019	0.0032 J+	0.0023	0.0017	0.0023	0.002	0.0014
Fluoride	mg/L	T	2.0	<b>3.5</b>	<b>3.3</b>	<b>3.5</b>	<b>3.8</b>	<b>3.8</b>	<b>3.9</b>	<b>4.4 D</b>	<b>5.1 D</b>	<b>4.5 D</b>	<b>3.4 D</b>	<b>2.7 D</b>	<b>4.5 D</b>
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00050 U	0.00016 J+	0.00032 J	0.00014 J	< 0.00050 UD	< 0.00010 U	0.00015 J
Lithium	mg/L	T	0.10	0.044	0.042	0.029	0.027	0.026	0.029	0.041	0.045	0.039 D	0.020 D	0.03	0.041
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.013	0.012	0.011	0.013	0.014	0.0090	0.011 J+	0.021	0.02	0.011	0.013	0.018
Radium 226 and 228	pCi/L	T	5.0	0.618	< 0.478 U	< 0.501 U	< 0.592 U	1.27	< 0.701 UJ	< 0.872 U	0.73	< 0.625 U	< 0.578 U	0.927	< 0.621 U
Radium-226	pCi/L	T	--	< 0.131 U	< 0.0981 U	< 0.083 U	< 0.202 U	< 0.137 U	< 0.122 UJ	< 0.114 U	< 0.105 U	< 0.209 U	< 0.114 U	< 0.191 U	< 0.1 U
Radium-228	pCi/L	T	--	0.584	< 0.478 U	< 0.501 U	< 0.592 U	1.24	< 0.701 UJ	< 0.872 U	0.713	< 0.625 U	< 0.578 U	0.906	< 0.621 U
Selenium	mg/L	T	0.0050	0.00031 J	0.00041 J	0.00034 J	0.00086	0.00079	0.00016 J	0.00018 J+	0.00016 J	0.00082	0.0012	0.002	0.00016 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	12	4.0	13	2.0 J	6.0	6.0	11	7.9 D	11 D	4.0 U	100	15
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.00043	0.00043	0.00043	0.00043	0.00062	0.00055	0.00088 B	0.0015	0.00047	0.00033	0.00048	0.00062
Iron	mg/L	T	83	10	8.6	6.8	5.4	4.3	5.3	5.8	4.9	7.0 D	7.7 D	7	6.2
Nickel	mg/L	T	0.10	0.011	0.011	0.0094	0.0074	0.0051	0.0050	0.0075	0.0049	0.0047	0.0056	0.0053	0.0037
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< <b>0.00025 U</b>	< 0.000050 U	< 0.000050 U	< 0.000050 U	< <b>0.00025 UD</b>	< <b>0.00005 U</b>	< <b>0.00005 U</b>
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.074	0.088	0.060	0.068	0.043	0.038	0.061	0.028	0.054	0.042	0.038	0.017
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	160	110	100	130	140	130	150	200	200 D	120	120	180
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	37	36	33	26	22	29	28	21	30 D	42 D	39	33
Potassium	mg/L	T	--	11	12	11	9.4	8.7	10	11	11	11 D	8.9 D	9.1	10
Sodium	mg/L	T	--	21	20	21	17	15	18	20	20	20 D	24 D	23	23
Total Alkalinity	mg/L	T	--	160	110	100	130	140	130	150	200	200 D	120	120	180

**Notes:**

- ug/l = micrograms per liter.
- mg/l = milligrams per liter.
- su = standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-19										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				11/30/2022	1/3/2023	2/8/2023	3/13/2023	4/18/2023	5/22/2023	6/28/2023	8/7/2023	10/24/2023	2/13/2024	4/8/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	1.91	2.56	2.493	2.196	2.31	2.29	1.98	20.4	2.2	1.77	2.11	2.04		
Dissolved Oxygen	mg/L	N	--	0.12	0.41	1.03	0.13	0.02	0.09	0.32	0.4	0.26	0.05	0.06	0.02		
Oxidation Reduction Potential	mV	N	--	68.7	-134.8	-70.2	-77.1	-7.9	-118.4	-112.9	-36.8	-109.1	141.9	19.4	-152		
pH	su	N	--	7	6.39	6.98	6.9	6.92	7.07	6.9	6.82	6.88	6.73	6.85	6.85		
Temperature	deg c	N	--	9.2	7.3	6.3	5.7	8	11.4	13.9	16.7	15.8	5.9	8.5	16.6		
Turbidity	NTU	N	--	0.02	1.6	2.27	0.02	2.59	0.02	0.02	0.02	0.02	2.48	0.02	0.02		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	2.6	2.0	2.2	1.5	1.6	1.8	2.3 J+	1.9	2.6 D	1.8 D	1.5	2		
Calcium	mg/L	T	250	530	510	550	510	450 E	480	460 D	360 D	470 D	490 D	480 D	440 D		
Chloride	mg/L	T	120	75	64	66	46	42	40	37 D	38 D	50 D	39 D	23 D	34 D		
Fluoride	mg/L	T	2.0	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2.0 D	1.6 D	1.5 D	1.7 D		
Sulfate (as SO4)	mg/L	T	250	1300	1300	600	1100	1200	1100	800 D	830 D	1100 D	1000 D	1000 D	940 D		
Total Dissolved Solids	mg/L	T	950	2200 J-	2200	2200	2100	2000	2000	1600 D	1600 D	1900 D	1800 D	1700 D	1700 D		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	0.00072 J	< 0.00050 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.0001 U	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.0061	0.0055	0.0055	0.0043	0.0032	0.0031	0.0069 J+	0.0073	0.0067	0.0026	0.0044	0.0065		
Barium	mg/L	T	1.3	0.046	0.050	0.047	0.036	0.030	0.040	0.040	0.037	0.044	0.037 D	0.034	0.036		
Beryllium	mg/L	T	0.0040	< 0.000052 U	0.000063 J	< 0.00026 U	0.000061 J	0.000057 J	0.000071 J	0.000077 J+	0.000072 J	< 0.000052 U	0.000086 J	0.000085 J	0.000085 J		
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.00016 U	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 UJ	< 0.000075 UJ	< 0.00038 UD	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.0027	0.00053	< 0.00088 U	0.00037	< 0.00018 U	< 0.00020 U	0.00031	0.00029	< 0.00020 U	< 0.00020 U	0.00025	0.00027		
Cobalt	mg/L	T	0.0060	0.00046 J	0.00069	0.00078 J	0.00096	0.00069	0.00042 J	0.00050 J+	0.00044 J	0.00013 J	0.00023 J	0.00046 J	< 0.0001 U		
Fluoride	mg/L	T	2.0	2.2	2.3	1.9	1.7	1.8	1.9	1.9 D	2.2 D	2.0 D	1.6 D	1.5 D	1.7 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00010 UJ	< 0.00010 UJ	< 0.00010 U	< 0.00050 UD	< 0.0001 U	< 0.0005 UD		
Lithium	mg/L	T	0.10	0.099	0.11	0.099	0.090	0.11	0.085	0.090	0.098	0.089 D	0.073 D	0.074	0.09		
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.013	0.011	0.0095	0.011	0.0090	0.0051	0.012 J+	0.013	0.010	0.0039	0.0099	0.0081		
Radium 226 and 228	pCi/L	T	5.0	< 0.589 U	0.626	1.03	1.08	0.933	0.904	< 0.561 U	1.17	< 1.13 UJ	0.779	1.32	< 0.528 U		
Radium-226	pCi/L	T	--	< 0.235	0.222	0.266	0.171	< 0.183 U	0.216	< 0.129 U	0.179	< 0.156 U	0.219	< 0.184 U	0.157		
Radium-228	pCi/L	T	--	< 0.589 U	< 0.503 U	0.761	0.911	0.818	0.688	< 0.561 U	0.993	< 1.13 UG	0.561	1.15	< 0.528 U		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 UJ	< 0.00010 UJ	< 0.00010 UJ	< 0.00010 U	0.00012 J	< 0.0001 U	0.00012 J		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	< 0.000075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	27	25	16	6.0	23	19	29	33	26	17	6	34		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.0010 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00022 J	0.00035		
Iron	mg/L	T	83	15	18	16	13	12	13	16	15	24 D	20 D	17	21		
Nickel	mg/L	T	0.10	0.0024	0.0028	< 0.0032 U	0.0024	0.0017	0.0011 J	0.0015	0.0015	0.0012	0.0012	0.0025	0.017		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.00025 UD	< 0.00005 U	< 0.00005 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U		
Zinc	mg/L	T	0.27	0.0023	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.0042	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	330	340	310	280	240	260	340	330	270 D	290	270	300		
Carbonate Alkalinity	mg/L	T	--	< 1.6 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	49	42	45	38	43	45	32	30 D	39 D	39 D	35	33		
Potassium	mg/L	T	--	18	22	16	20	16	15	17	16 D	15 D	15 D	14	14		
Sodium	mg/L	T	--	48	40	44	37	38	38	36	31 D	37 D	33 D	30	29		
Total Alkalinity	mg/L	T	--	330	340	310	280	240	260	340	330	270 D	290	270	300		

**Notes:**

- ug/l - micrograms per liter.
- mg/l - milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-20											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/4/2023	2/7/2023	3/13/2023	4/18/2023	5/23/2023	6/28/2023	8/7/2023	10/24/2023	2/13/2024	4/8/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	1.2	1.24	1.232	1.218	1.37	1.41	1.17	1.18	1.26	1.17	1.45	1.12
Dissolved Oxygen	mg/L	N	--	0.24	0.1	0.02	0.12	0.16	0.05	0.32	0.26	0.72	0.21	0.03	0.01
Oxidation Reduction Potential	mV	N	--	-142	-148.2	-153.3	-153	-162.4	-159.7	-174.4	-105.9	-179.7	-128.7	-117.8	-178.3
pH	su	N	--	7.23	7.5	7.29	7.2	7.44	7.45	7.3	7.14	7.33	7.45	7.45	7.34
Temperature	deg c	N	--	9.7	7.2	6.7	5.7	7.2	10.8	13.1	19.6	14.8	6.5	8.3	17
Turbidity	NTU	N	--	0.02	0.02	1.91	0.02	0.02	0.02	0.02	0.02	0.02	1.14	0.02	0.02
<b>Appendix III</b>															
Boron	mg/L	T	4.0	1.1	0.83	0.87	0.82	0.80	0.92	1.1 J+	1.1	1.1 D	0.72 D	0.76	1.1
Calcium	mg/L	T	250	130	120	140	170	130	130	58	110 D	120 D	140 D	120 D	120 D
Chloride	mg/L	T	120	70	66	62	60	88	92	71 D	70 D	70 D	41 D	77 D	62 D
Fluoride	mg/L	T	2.0	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D	0.25 D	0.27 D	0.29 D
Sulfate (as SO4)	mg/L	T	250	42	78	120	110	85	76	30 D	19 D	33 D	78 D	62 D	18 D
Total Dissolved Solids	mg/L	T	950	660	660	690	680	760	770	650 D	570 D	650 D	640 D	840 D	640 D
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00096 J	0.00054 J	0.00066 J	0.00062 J	0.00016 J	< 0.00010 U	0.00011 J	0.00014 J	< 0.00010 U	< 0.00010 U	< 0.0001 U	0.0001 J
Arsenic	mg/L	T	0.010	0.0015	0.0012	0.0012	0.0012	0.0013	0.0015	0.0016 J+	0.0017	0.0017	0.0011	0.0013	0.0018
Barium	mg/L	T	1.3	0.94	0.61	0.47	0.37	0.31	0.42	0.43	0.49	0.53	0.42	0.45	0.46
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.00019 J	< 0.00018 U	0.00025	0.00029	0.00021 J	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00022 J	0.00026	0.00021 J
Cobalt	mg/L	T	0.0060	0.0013	0.0013	0.0016	0.0016	0.0014	0.0013	0.0014 J+	0.0011	0.00095	0.0011	0.0011	0.00089
Fluoride	mg/L	T	2.0	0.55	0.26	0.24	0.26	0.21	0.21	0.22 D	0.23 D	0.23 D	0.25 D	0.27 D	0.29 D
Lead	mg/L	T	0.0040	0.0023	0.0016	0.0016	0.0016	0.0028	0.0023	0.0028 J+	0.0023	0.0018	0.0013	0.0014	0.0020
Lithium	mg/L	T	0.10	0.074	0.065	0.049	0.055	0.060	0.062	0.083	0.079	0.071 D	0.029 D	0.053	0.064
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0041	0.0039	0.0041	0.0038	0.0041	0.0048	0.0048 J+	0.0051	0.0047	0.0045	0.0033	0.0048
Radium 226 and 228	pCi/L	T	5.0	1.47	0.822 J+	< 0.499 U	< 0.536 U	0.591	< 0.59 U	< 0.467 U	1.08	< 0.581 U	< 0.894 U	1.31	< 0.58 U
Radium-226	pCi/L	T	--	< 0.153 U	0.198	0.134	0.161	< 0.166 U	0.193	< 0.122 U	0.118	< 0.19 U	< 0.195	< 0.141 U	0.152
Radium-228	pCi/L	T	--	1.32	0.624 J+	< 0.499 U	< 0.536 U	0.541	< 0.59 U	< 0.467 U	0.958	< 0.581 U	< 0.894 U	1.18	< 0.58 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00013 J	0.00011 J+	0.00010 J	0.00011 J	0.00026 J	0.00013 J	< 0.0001 U
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.00011 J	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	40	42	33	37	44	42	37 D	37	38 D	33	43	34 D
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.0034	0.00023 J	0.00023 J	< 0.00020 U	0.00024 J	0.00029	0.00036 B	0.00053	0.00025	0.00040	0.00034	0.00053
Iron	mg/L	T	83	21	19	18	19	21	22	18	16	20 D	18 D	22	16
Nickel	mg/L	T	0.10	0.0091	0.0091	0.0095	0.0099	0.0092	0.0094	0.0098	0.0078	0.0066	0.0061	0.0077	0.008
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.071	0.024	0.028	0.029	0.060	0.028	0.030	0.025	0.024	0.016	0.024	0.02
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	540	470	470	460	520	540	470	460	560 D	460	570	470
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	57	53	57	56	57	62	47	48 D	53 D	45 D	55	41
Potassium	mg/L	T	--	13	13	11	12	13	12	13	13	12 D	8.5 D	11	10
Sodium	mg/L	T	--	65	59	57	56	63	79	67	57 D	61 D	48 D	80	57
Total Alkalinity	mg/L	T	--	540	470	470	460	520	540	470	460	560 D	460	570	470

**Notes:**  
 ug/l - micrograms per liter.  
 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
 pCi/L = picocuries per liter.  
 All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**  
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.  
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)  
 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.

Sample Location:				MW-27											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/5/2023	2/7/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/13/2024	4/8/2024	7/18/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	2.46	2.01	1.651	1.047	1.04	1.65	2.5	2.57	2.99	1.65	1.06	2.79
Dissolved Oxygen	mg/L	N	--	1.35	0.17	0.24	0.93	0.07	0.19	0.04	0.23	0.05	1.64	0.12	0.03
Oxidation Reduction Potential	mV	N	--	-87.3	-137.6	-79.1	-134.3	-52.1	-80.9	-89	-104.5	-191.3	-62.8	-140.2	-129.9
pH	su	N	--	6.86	6.92	6.81	6.95	6.81	6.77	6.86	6.78	6.77	6.93	6.99	6.87
Temperature	deg c	N	--	8.7	6.7	5	4.5	7.2	11.7	16.5	20.8	15.2	5.6	7.5	19.6
Turbidity	NTU	N	--	0.02	0.73	1.33	0.02	4.08	3.32	3.55	8.15	9.71	3.01	2.31	7.9
<b>Appendix III</b>															
Boron	mg/L	T	4.0	0.31	0.17	0.16	0.14	0.14	0.20	0.45 J+	0.44	0.32 D	0.16 D	0.18	0.44
Calcium	mg/L	T	250	200	180	180	180	100	130	180 D	150 D	190 D	160 D	130 D	170 D
Chloride	mg/L	T	120	120	84	69	60	38	52	110 D	100 D	110 D	44 D	17 D	89 D
Fluoride	mg/L	T	2.0	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D	0.4 D	0.71 D	0.48 D
Sulfate (as SO4)	mg/L	T	250	6.8	41	58	47	14	1.8 J	0.56 JD	3.0 D	2.4 JD	72 D	41 D	2.3 JD
Total Dissolved Solids	mg/L	T	950	920	710	790	620	460	590	790 D	690 D	870 D	1300 D	560 D	890 D
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00013 J	0.000075 J	0.000099 J	0.000060 J	0.00028	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.00086	0.00070	0.00069	0.00069	0.00095	0.00096	0.0010 J+	0.0012	0.0011	0.00082	0.0012	0.0011
Barium	mg/L	T	1.3	0.21	0.17	0.16	0.12	0.074	0.15	0.25	0.25	0.31	0.16	0.1	0.28
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.018	0.016	0.0097	0.0099	0.0083	0.025	0.027	0.034	0.028	0.0090	0.0073	0.033
Cobalt	mg/L	T	0.0060	0.00063	0.00056	0.00052	0.00043 J	0.00024 J	0.00063	0.00092 J+	0.00083	0.00075	0.00037 J	0.00016 J	0.00074
Fluoride	mg/L	T	2.0	0.37	0.29	0.31	0.41	0.42	0.35	0.36 D	0.41 D	0.43 D	0.40 D	0.71 D	0.48 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U	< 0.0001 U
Lithium	mg/L	T	0.10	0.0086	0.0088	0.0067	0.0073	0.0075	0.0073	0.017 D	0.0093	0.0099	0.0050	0.0058	0.0099
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00041 J	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U
Radium 226 and 228	pCi/L	T	5.0	0.823	< 0.639 UJ	< 0.729 U	< 0.889 U	1.15	1.61	0.84	1.76	< 0.857 U	< 0.774 U	1.25	0.876
Radium-226	pCi/L	T	--	0.367	0.23	< 0.127 U	< 0.197 U	< 0.171 U	< 0.325 U	0.458	0.477	0.464	0.22	0.549	0.429
Radium-228	pCi/L	T	--	< 0.679 U	< 0.639 UJ	< 0.729 U	< 0.889 U	1.03	1.47 J	< 0.578 U	1.28	< 0.857 U	< 0.774 U	< 0.85 U	< 0.709 U
Selenium	mg/L	T	0.0050	0.00023 J	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00016 J	0.00021 J+	0.00022 J	0.0002 J	0.00053	0.00014 J	0.00027 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	34	27	22	14	5.0	11	19 D	11	22	23	9	6
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.00030	< 0.00020 U	0.0016	< 0.00020 U	0.00022 J	0.00032	< 0.00020 U	0.00023 J	0.00024 J	< 0.00020 U	0.00039	< 0.0002 U
Iron	mg/L	T	83	13	11	11	8.3	5.5	7.6	9.4	8.0	11 D	9.9 D	7.7	8.4
Nickel	mg/L	T	0.10	0.00077 J	0.0010 J	0.0010 J	0.00077 J	< 0.00065 U	0.00087 J	0.00067 J	0.00075 J	< 0.00065 U	0.00076 J	0.00073 J	< 0.00065 U
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00082 J	0.00093 J	< 0.00062 U	< 0.00062 U	0.00071 J	0.0018
Zinc	mg/L	T	0.27	0.0096	< 0.0012 U	0.0016	< 0.0012 U	0.0079	0.0013	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	1200	880	800	590	480	770	1100 D	1100	1400 D	790 D	520	1300
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	45	45	47	44	26	31	33	35 D	40 D	39	45	
Potassium	mg/L	T	--	7.6	7.3	6.2	5.8	4.1	6.5	11	12	11 D	4.9 D	3.5	9.8
Sodium	mg/L	T	--	92	68	59	61	41	52	75	80 D	82 D	59 D	41	72
Total Alkalinity	mg/L	T	--	1200	880	800	590	480	770	1100 D	1100	1400 D	790 D	520	1300

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:		MW-28	MW-28		
Compliance Phase:		Assessment Monitoring	Assessment Monitoring		
Sample Date:		4/7/2024	7/18/2024		
Sample Type:		Field Sample	Field Sample		
Unit:		Nature and Extent	Nature and Extent		
Sample Matrix:		Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	1.18	1.46
Dissolved Oxygen	mg/L	N	--	0.08	0.01
Oxidation Reduction Potential	mV	N	--	-118.7	-158.8
pH	su	N	--	7.02	6.94
Temperature	deg c	N	--	8.1	16.8
Turbidity	NTU	N	--	3.17	4.11
<b>Appendix III</b>					
Boron	mg/L	T	4.0	2.2	<b>6.1</b>
Calcium	mg/L	T	250	170 D	160 D
Chloride	mg/L	T	120	18 D	67 D
Fluoride	mg/L	T	2.0	0.9 D	1.5 D
Sulfate (as SO4)	mg/L	T	250	11 D	< 2.2 UD
Total Dissolved Solids	mg/L	T	950	610 D	690 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	0.00028	0.00016 J
Arsenic	mg/L	T	0.010	0.0011	0.0014
Barium	mg/L	T	1.3	0.34	0.7
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.017	0.0092
Cobalt	mg/L	T	0.0060	0.00064	0.00046 J
Fluoride	mg/L	T	2.0	0.9 D	1.5 D
Lead	mg/L	T	0.0040	0.0011	0.0013
Lithium	mg/L	T	0.10	0.05	<b>0.15</b>
Mercury	mg/L	T	0.00016	<b>0.00024</b>	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.00087 J	0.00054 J
Radium 226 and 228	pCi/L	T	5.0	0.909	1.29
Radium-226	pCi/L	T	--	0.282	0.273
Radium-228	pCi/L	T	--	< 0.842 U	1.02
Selenium	mg/L	T	0.0050	0.00032 J	0.00024 J
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	44 D	86
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.00052	0.0009
Iron	mg/L	T	83	30	37
Nickel	mg/L	T	0.10	0.0036	0.00072 J
Silver	mg/L	T	0.00020	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	0.00063 J	0.00074 J
Zinc	mg/L	T	0.27	0.009	0.0067
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	560	600
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	27	27
Potassium	mg/L	T	--	12	13
Sodium	mg/L	T	--	29	66
Total Alkalinity	mg/L	T	--	560	600

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-30										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring							Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring			
Sample Date:				11/30/2022	1/3/2023	2/6/2023	3/13/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024	4/7/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	2.26	3.18	3.025	2.273	2.73	2.66	2.85	2.67	2.21	2.68	2.61	2.93		
Dissolved Oxygen	mg/L	N	--	0.12	0.39	0.04	0.35	0.29	0.05	0.01	0.12	0.41	0.14	0.03	0		
Oxidation Reduction Potential	mV	N	--	-55.7	-281.2	-134.9	-148.7	-151.8	-86.8	-105.6	-92.7	-301.7	-73.8	-71.3	-198.6		
pH	su	N	--	7.07	6.48	7.16	7.25	7.17	7.16	7.21	6.94	7.05	7.18	7.15	7.06		
Temperature	deg c	N	--	10.1	7.2	6.4	4.8	6.6	10.7	13.6	17	15	6.2	7.3	16.9		
Turbidity	NTU	N	--	0.02	0.02	1.21	0.02	0.02	0.5	0.02	0.02	0.02	0.02	0.02	0.92		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	2.2	1.7	2.1	3.5	1.7	1.9	1.9 J+	1.8	2.1 D	1.9 D	1.6	1.9		
Calcium	mg/L	T	250	470	460 E	480	960	430	430	460 D	400 D	390 D	440 D	470 D	500 D		
Chloride	mg/L	T	120	190	190	190	140	120	98	110 D	98 D	97 D	110 DJ+	82 D	190 D		
Fluoride	mg/L	T	2.0	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D	1.1 D	1.2 D	1.1 D		
Sulfate (as SO4)	mg/L	T	250	780	1000	830	940	970	850	940 D	860 D	610 D	820 D	980 D	960 D		
Total Dissolved Solids	mg/L	T	950	2200 J	2400	2000	2300	2200	2100	2800 J	2300 D	1800	2100 D	2200 D	2300 D		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	< 0.00050 U	< 0.00050 U	< 0.00025 U	< 0.00050 U	0.00040 J	< 0.00050 U	< 0.00050 UD	< 0.00010 U	< 0.00010 U	< 0.00050 UD	< 0.0001 U	< 0.0001 U		
Arsenic	mg/L	T	0.010	0.00046 J	0.00070	< 0.00032 U	0.00039 J	< 0.00010 U	0.00012 J	0.00027 J+	0.00043 J	0.00063	0.00021 J-	0.00044 J	0.00058		
Barium	mg/L	T	1.3	0.10	0.089	0.10	0.045	0.047	0.058	0.066 D	0.048	0.058	0.067 J-	0.051	0.041		
Beryllium	mg/L	T	0.0040	< 0.00052 U	0.00053 J	< 0.00026 U	< 0.00052 U	< 0.00052 U	< 0.00052 U	< 0.00052 UJ	< 0.00052 U	< 0.00052 U	0.00011 J+	< 0.00052 U	< 0.00052 U		
Cadmium	mg/L	T	0.0025	< 0.00032 U	< 0.00032 U	< 0.00016 U	< 0.00032 U	< 0.00016 U	< 0.00038 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.014	0.012	0.0087	0.010	0.0058	0.0052	0.012	0.013	0.0081	0.0049 J-	0.0075	0.01		
Cobalt	mg/L	T	0.0060	0.00091	0.0044	0.00096 J	0.0028	0.0011	0.00054	0.0013 J+	0.0011	0.00053	0.0011	0.0015	0.00077		
Fluoride	mg/L	T	2.0	1.0	1.4	1.0	1.2	1.1	1.1	0.91 D	1.1 D	1.2 D	1.1 D	1.2 D	1.1 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.0011 U	< 0.0011 U	< 0.00050 U	< 0.00050 UJ	< 0.00050 UD	< 0.0001 U	< 0.0005 UJ	< 0.0001 U	< 0.0005 UD		
Lithium	mg/L	T	0.10	0.13	0.15	0.12	0.27	0.11	0.11	0.12 D	0.14	0.12 D	0.10 D	0.11	0.13		
Mercury	mg/L	T	0.0016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00039	< 0.00016 U		
Molybdenum	mg/L	T	0.10	< 0.00062 U	0.0036	< 0.0031 U	0.0017	< 0.0031 U	0.00032 J	0.00082 J+	0.0011 J	0.00061 J	0.00073 J+	0.0013	0.00089 J		
Radium 226 and 228	pCi/L	T	5.0	< 0.873 UJ	0.445 J	< 0.624 UJ	< 0.659 UJ	0.875	< 0.783 UJ	0.586 J+	0.911	< 0.526 UJ	0.793 J+	< 0.559 UJ	0.68		
Radium-226	pCi/L	T	--	< 0.238 UJ	0.139 J	< 0.0915 UJ	< 0.2 UJ	< 0.141 UJ	< 0.194 UJ	0.0986 J+	< 0.163 UJ	< 0.228 UJ	< 0.117 UJ	0.133	0.199		
Radium-228	pCi/L	T	--	< 0.873 UJ	< 0.443 UJ	< 0.624 UJ	< 0.659 UJ	0.844	< 0.783 UJ	< 0.566 UJ	0.82	< 0.526 UJ	0.721 J+	< 0.559 UJ	< 0.537 UJ		
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.0011 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	0.00011 J+	0.00012 J	0.00013 J	0.00039 J-	0.0001 J	0.00017 J		
Thallium	mg/L	T	0.0020	< 0.00075 U	< 0.00075 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	< 0.00038 UD	< 0.00075 U	0.00038 UD	< 0.00075 U	< 0.00038 UD		
Total Suspended Solids	mg/L	T	--	4.0	11	< 4.0 UJ	5.0	6.0	4.0	< 4.0 UD	5.0	4.0 D	< 4.0 U	5.1 D	18		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	< 0.0020 U	0.00037 J+	< 0.0010 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00054	0.00024 J-	0.00028	0.0002 U		
Iron	mg/L	T	83	0.87	3.6	0.99	8.8	4.1	2.4	2.9	2.9	1.4 D	2.0 D	4.9	5.9		
Nickel	mg/L	T	0.10	0.00080 J	0.0045	< 0.0032 U	0.0041	0.0018	0.00070 J	0.0021	0.0011 J	< 0.00065 U	0.0018 J-	0.0019	0.0017		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.00025 U	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 UJ		
Zinc	mg/L	T	0.27	0.0053	< 0.0012 U	< 0.0059 U	< 0.0012 U	0.0049	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	930	760	880	660	630	640	< 0.16 U	690	780 D	690 D	570	630		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U		
Magnesium	mg/L	T	--	110	120	120	250	120	110	120 D	100 D	95 D	110 D	120 D	110 D		
Potassium	mg/L	T	--	12	15	16	17	12	9.6	11	13	10 D	10 D	8.9	11		
Sodium	mg/L	T	--	120	110	120	220	98	95	95 D	88 D	82 D	89 D	73	82		
Total Alkalinity	mg/L	T	--	930	760	880	660	630	640	< 0.16 U	690	780 D	690 D	570	630		

**Notes:**

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

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- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UJ The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.



Sample Location:				MW-31												
Compliance Phase:				Background Monitoring							Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	
Sample Date:				12/1/2022	1/4/2023	2/7/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024	4/8/2024	7/17/2024	7/18/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	Unit 1/2	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>																
Conductivity	mS/cm	N	--	1.35	1.4	1.327	1.23	1.28	1.21	1.24	1.41	1.23	1.10	1.26	1.32	1.32
Dissolved Oxygen	mg/L	N	--	1.65	0.09	0.21	0.11	0.11	0.09	1.39	0.05	0.15	0.05	0.04	0.23	0.02
Oxidation Reduction Potential	mV	N	--	-150	-262.2	-129.3	-214.9	-274.4	-220	-113.9	-55.8	-82.4	149.7	-130.1	-117.3	-108.7
pH	su	N	--	7.84	7.7	7.85	7.76	7.87	7.85	8	7.78	7.67	7.8	8.01	7.74	7.73
Temperature	deg c	N	--	8.7	7.6	6.3	4	6.5	13.2	14.4	17.8	14.9	7.0	10.2	19	17.5
Turbidity	NTU	N	--	2.61	0.02	1.27	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
<b>Appendix III</b>																
Boron	mg/L	T	4.0	<b>4.8</b>	3.8	<b>4.2</b>	<b>4.0</b>	3.6	<b>4.5</b>	<b>5.4 J+</b>	<b>4.8</b>	<b>5.1 D</b>	<b>4.4 D</b>	<b>4.5</b>	<b>5.4</b>	--
Calcium	mg/L	T	250	<b>180</b>	190	170	200	170	160	130 D	150 D	170 D	200 D	170 D	--	--
Chloride	mg/L	T	120	<b>120</b>	100	110	97	94	92	110 D	110 D	100 D	99 DJ+	87 D	--	100 D
Fluoride	mg/L	T	2.0	<b>4.6</b>	<b>4.9</b>	<b>4.7</b>	<b>4.6</b>	<b>5.1</b>	<b>5.2</b>	<b>4.7 D</b>	<b>5.1 D</b>	<b>4.6 D</b>	<b>4.5 D</b>	<b>4.7 D</b>	--	<b>4.7 D</b>
Sulfate (as SO4)	mg/L	T	250	<b>180</b>	<b>250</b>	200	<b>250</b>	<b>250</b>	160	120 D	100 D	72 D	150 D	170 D	--	120 D
Total Dissolved Solids	mg/L	T	950	<b>850</b>	<b>940 J</b>	780	860	810	760	760 D	860 D	730 D	810 D	810 D	--	780 D
<b>Appendix IV</b>																
Antimony	mg/L	T	0.0060	0.000069 J	< 0.000050 U	0.000080 J	0.00012 J	0.00013 J	< 0.00010 U	< 0.00010 U	0.00012 J	< 0.00010 U	< 0.00010 U	< 0.0001 U	0.00038	--
Arsenic	mg/L	T	0.010	0.0018	0.0013	0.0012	0.0010	0.0011	0.0014	0.0016 J+	0.0016	0.0012	0.0010	0.0012	0.0012	--
Barium	mg/L	T	1.3	0.21	0.14	0.19	0.15	0.12	0.13	0.23	0.16	0.16	0.13	0.13	0.18	--
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000054 J	< 0.000052 U	< 0.000052 U	--
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.000084 J	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0021	0.0018	0.0024	0.0019	0.0019	0.0029	0.0023	0.0023	0.0025	0.0022	0.0017	0.0029	--
Cobalt	mg/L	T	0.0060	0.00015 J	0.00015 J	0.00020 J	0.00018 J	0.00016 J	0.00021 J	0.00018 J+	0.00018 J	0.00013 J	0.00028 J	< 0.0001 U	0.0001 J	--
Fluoride	mg/L	T	2.0	<b>4.6</b>	<b>4.9</b>	<b>4.7</b>	<b>4.6</b>	<b>5.1</b>	<b>5.2</b>	<b>4.7 D</b>	<b>5.1 D</b>	<b>4.6 D</b>	<b>4.5 D</b>	<b>4.7 D</b>	--	<b>4.7 D</b>
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00031 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.0001 U	0.00025 J	--
Lithium	mg/L	T	0.10	0.052	0.048	0.052	0.054	0.046	0.053	0.056 D	0.054	0.049	0.039 D	0.039	0.052	--
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	--
Molybdenum	mg/L	T	0.10	0.0021	0.0013	0.0013	0.0011 J	0.0011 J	0.0012	0.0018 J+	0.0011 J	0.0013	0.0011 J	0.00052 J	0.00083 J	--
Radium 226 and 228	pCi/L	T	5.0	0.753	< 0.641 U	0.717	< 0.725 U	0.592	1.14	0.58	1.23	< 0.497 U	1.01	0.754	0.991	--
Radium-226	pCi/L	T	--	0.187	0.203	0.187	< 0.189 U	0.254	0.184	0.27	0.262 J+	< 0.208 U	0.171	0.345	0.274	--
Radium-228	pCi/L	T	--	0.566	< 0.641 U	0.53	< 0.725 U	< 0.527 U	0.959	< 0.489 U	0.97	< 0.497 U	0.842	< 0.502 U	0.717	--
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.00011 J	0.00012 J+	0.00015 J	0.00014 J	0.00074	0.00013 J	0.00016 J	--
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.000088 J	< 0.000075 U	< 0.000075 U	--
Total Suspended Solids	mg/L	T	--	2.0 J	4.0	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	1.0 J	< 4.0 U	< 4.0 UD	< 3.9 UD	--	< 4 U
<b>Michigan CCR Part 115</b>																
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00027	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00023 J	0.00044	0.00029	--
Iron	mg/L	T	83	2.5	1.4	1.5	1.1	0.77	1.2	0.92	0.21	0.19	0.12	0.14	--	--
Nickel	mg/L	T	0.10	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	< 0.00065 U	0.0023	< 0.00065 U	0.0021	--
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	--
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.00064 J	--
Zinc	mg/L	T	0.27	0.0082	< 0.0012 U	< 0.0012 U	< 0.0012 U	0.0010	0.0014	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	< 0.0012 U	--
<b>Additional Parameters</b>																
Bicarbonate Alkalinity	mg/L	T	--	410	340	350	320	290	320	340	410	440 D	340 D	350	--	410
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	--	< 0.16 U
Magnesium	mg/L	T	--	37	36	38	42	36	33	34	38 D	35 D	36 D	38	38	--
Potassium	mg/L	T	--	9.9	11	11	11	10	9.9	12	12	11 D	9.6 D	10	12	--
Sodium	mg/L	T	--	60	46	51	48	50	53	64	56 D	56 D	54 D	53	54	--
Total Alkalinity	mg/L	T	--	410	340	350	320	290	320	340	410	440 D	340 D	350	--	410

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L - picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-32											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				11/30/2022	1/4/2023	2/8/2023	3/14/2023	4/18/2023	5/22/2023	6/27/2023	8/8/2023	10/23/2023	2/12/2024	4/7/2024	7/17/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	Nature and Extent	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	1.29	1.29	1.258	1.175	1.29	1.2	1.05	0.99	1.14	0.96	1.21	0.99
Dissolved Oxygen	mg/L	N	--	0.07	0.08	0.08	0.1	0.1	0.33	0.12	0.13	0.29	0.09	0.04	0.18
Oxidation Reduction Potential	mV	N	--	-184.5	-222.8	-184.7	-188.5	-199.5	-221.7	-209.8	-141.4	-186.3	138.7	-178.6	-196
pH	su	N	--	7.69	7.5	7.57	7.53	7.67	7.75	7.65	7.52	7.53	7.64	7.63	7.58
Temperature	deg c	N	--	10.2	8.3	6.6	6.3	7.4	11.1	13	15.9	14.9	7.0	8.1	15.6
Turbidity	NTU	N	--	0.02	0.02	2.17	0.02	0.02	0.02	0.02	0.02	0.02	4.52	0.02	0.02
<b>Appendix III</b>															
Boron	mg/L	T	4.0	3.8	3.0	3.0	2.9	2.6	3.1	3.9 J+	3.7	<b>5.0 D</b>	3.0 D	3.1	<b>4</b>
Calcium	mg/L	T	250	200	180	190	220	190	190	150 D	130 D	150 D	180 D	190 D	140 D
Chloride	mg/L	T	120	47	50	50	50	45	42	41 D	44 D	47 D	39 D1+	38 D	42 D
Fluoride	mg/L	T	2.0	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D	1.5 D	1.6 D	1.5 D
Sulfate (as SO4)	mg/L	T	250	100	110	54	170	190	140	48 D	17 D	17 D	83 D	130 D	9.5 D
Total Dissolved Solids	mg/L	T	950	790	700	730	770	800	790	600 D	550 D	640 D	680 D	770 D	560 D
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.00067 J	< 0.000050 U	< 0.000050 U	0.000072 J	0.00014 J	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	0.00070	< 0.0001 U	< 0.0001 U
Arsenic	mg/L	T	0.010	0.0061	0.0045 J	0.0052 J	0.0047 J	0.0044 J	0.0055	0.0058 J+	0.0062	0.0058	0.0024	0.0046 J	0.0059
Barium	mg/L	T	1.3	0.62	0.60	0.57	0.41	0.29	0.34	0.37	0.41	0.85	0.059	0.57	0.63
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	0.000070 J	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	0.00019 J	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.10	0.0046	0.0065	0.0057	0.0055	0.0039	0.0038	0.0032	0.0031	0.0031	0.0030	0.0038	0.0036
Cobalt	mg/L	T	0.0060	0.00034 J	0.00036 J	0.00039 J	0.00041 J	0.00031 J	0.00037 J	0.00068 J+	0.0058	0.0038 J	0.0019	0.0021 J	0.0046 J
Fluoride	mg/L	T	2.0	1.5	1.5	1.4	1.6	1.4	1.5	1.4 D	1.6 D	1.8 D	1.5 D	1.6 D	1.5 D
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	0.0012 J	0.00014 J+	< 0.00010 U	< 0.0001 U	0.00038 J	< 0.0001 U	< 0.0001 U
Lithium	mg/L	T	0.10	<b>0.15</b>	<b>0.14</b>	<b>0.12</b>	<b>0.11</b>	0.094	<b>0.10</b>	<b>0.13 D</b>	<b>0.14</b>	<b>0.19 D</b>	<b>0.10 D</b>	<b>0.098</b>	<b>0.13</b>
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	<b>0.0019</b>	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0051	0.0043	0.0038	0.0032	0.0034	0.0045	0.0047 J+	0.0046	0.0045	0.0073	0.0034	0.0038
Radium 226 and 228	pCi/L	T	5.0	0.614	< 0.497 U	< 0.601 U	< 0.732 U	0.877	0.847	< 0.607 U	0.985	< 0.589 U	< 0.53 U	< 0.545 U	< 0.57 U
Radium-226	pCi/L	T	--	< 0.184 U	0.219	0.152	< 0.195 U	< 0.164 U	0.206	< 0.0916 U	0.403 J+	< 0.18 U	< 0.156 U	< 0.137 U	0.172
Radium-228	pCi/L	T	--	0.492	< 0.497 U	< 0.601 U	< 0.732 U	0.773	0.641	< 0.607 U	< 0.848 U	< 0.589 U	< 0.53 U	< 0.545 U	< 0.57 U
Selenium	mg/L	T	0.0050	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	< 0.00010 U	0.0010	0.00013 J	< 0.00010 U
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	42	43	39	40	39	31	29 D	11	23	32 D	34 D	23 D
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	< 0.00020 U	0.00020 J	< 0.00020 U	< 0.00020 U	0.00041	0.016	< 0.0002 U	0.00031
Iron	mg/L	T	83	20	18	18	19	18	17	15	11 D	17 D	16	12	
Nickel	mg/L	T	0.10	0.0013	0.0016	0.0012	0.0012	0.00096 J	0.00088 J	0.0012	0.00086 J	0.00077 J	0.023	0.00095 J	0.00082 J
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.0031	0.0022	0.0026	0.0025	0.0030	0.0037	0.0026	0.0030	0.0035	0.0049	0.0024	0.0024
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	560	490	500	450	440	430	440	440	520 D	440 D	470	440
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	38	34	35	37	34	34	28	28 D	30 D	33	26	
Potassium	mg/L	T	--	13	13	12	11	9.8	9.7	12	13	13 D	9.1 D	9.2	11
Sodium	mg/L	T	--	36	29	29	30	27	30	33	32 D	35 D	30 D	28	30
Total Alkalinity	mg/L	T	--	560	490	500	450	440	430	440	440	520 D	440 D	470	440

**Notes:**  
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 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
 pCi/L - picocuries per liter.  
 All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**  
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.  
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)  
 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.

Sample Location:				MW-33										Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring		
Sample Date:				12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/12/2024	4/9/2024	7/18/2024		
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample			
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well			
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater			
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result			
<b>Field Parameters</b>																	
Conductivity	mS/cm	N	--	1.1	0.99	0.949	0.859	0.91	0.92	0.901	0.98	1.0	0.78	0.85	1.21		
Dissolved Oxygen	mg/L	N	--	0.81	1.02	0.75	0.2	0.23	0.06	0.05	0.01	0.02	0.4	0.23	0.01		
Oxidation Reduction Potential	mV	N	--	-28.5	-72.8	-61.2	-37.4	-63.6	-86.2	-106.6	-121.9	-107.1	-11.1	-43	-185.9		
pH	su	N	--	7.12	6.49	7.14	6.96	7.04	7.02	7.03	6.98	6.86	7.27	7.16	6.95		
Temperature	deg c	N	--	8.3	4.8	2.4	3.6	8.8	10.7	13.7	17.2	15.8	7.1	7.5	16.4		
Turbidity	NTU	N	--	0.02	0.02	1.17	0.02	3.44	0.55	0.02	1.07	3.25	3.07	4.13	1.49		
<b>Appendix III</b>																	
Boron	mg/L	T	4.0	0.18	0.091	0.086	0.067	0.082	0.085	0.11 J+	0.12	0.16 D	0.078 D	0.065	0.1		
Calcium	mg/L	T	250	200	170	170	190	150	160	150 D	150 D	180 D	150 D	170 D	200 D		
Chloride	mg/L	T	120	58	51	50	39	27	17	20 D	23 D	45 D	35 DJ+	20 D	36 D		
Fluoride	mg/L	T	2.0	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D	0.27 D	< 0.28 UD	0.28 D		
Sulfate (as SO4)	mg/L	T	250	100	58	65	42	23	1.9 J	4.3 D	1.6 JD	69 D	20 D	17 D	3.7 JD		
Total Dissolved Solids	mg/L	T	950	750 J	630	680	590	580	600	600 D	570 D	690 D	550 D	600	740 D		
<b>Appendix IV</b>																	
Antimony	mg/L	T	0.0060	0.00098	0.00088	0.00079	0.00059	0.0012	0.00017 J	0.00020 J	0.00015 J	0.00048	< 0.00050 UD	0.00068	0.00035		
Arsenic	mg/L	T	0.010	0.0031	0.0014	0.0016	0.0017	0.0040	0.0038	0.0032 J+	0.0027	0.0027	0.0012	0.003	0.021		
Barium	mg/L	T	1.3	0.084	0.086	0.092	0.076	0.073	0.095	0.088	0.098	0.090	0.44 D	0.063	0.16		
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.00026 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U		
Cadmium	mg/L	T	0.0025	0.000049 J	0.00010 J	0.00014 J	0.00015 J	< 0.00016 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U		
Chromium, Total	mg/L	T	0.10	0.0021	0.0028	0.0029	0.0027	0.0029	0.0039	0.0050	0.0059	0.0029	0.019	0.0032	0.011		
Cobalt	mg/L	T	0.0060	0.00075	0.00049 J	0.00082	0.0017	0.0020 J	0.00083	0.00039 J+	0.00041 J	0.00053	0.0012	0.0022	0.00058		
Fluoride	mg/L	T	2.0	0.29	0.24	0.21 J	0.23	0.28	0.25	0.26 D	0.27 D	0.24 D	0.27 D	< 0.28 UD	0.28 D		
Lead	mg/L	T	0.0040	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.00022 U	< 0.0011 U	0.00026 J	0.00015 J+	0.00015 J	0.00037 J	0.0014 JD	0.00043 J	0.00013 J		
Lithium	mg/L	T	0.10	0.0051	0.0069	0.0043	0.0047	0.0061	0.0052	< 0.0094 UD	0.0041	0.0054	0.0028	0.0046	0.0069		
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U		
Molybdenum	mg/L	T	0.10	0.0047	0.0037	0.0031	0.0031	0.0031	0.0026	0.00068 J+	0.00052 J	0.0032	0.00027 J	0.003	0.0014		
Radium 226 and 228	pCi/L	T	5.0	0.825	< 0.587 U	0.949	< 0.852 U	< 0.815 U	1.61	0.828	1.15	< 0.621 U	< 0.892 U	< 0.846 U	0.915		
Radium-226	pCi/L	T	--	< 0.267 U	< 0.14 U	< 0.125 U	< 0.204 U	< 0.232 U	< 0.256 U	0.154	0.276 J+	< 0.282 U	< 0.162 U	< 0.328 U	< 0.144 U		
Radium-228	pCi/L	T	--	0.794	< 0.587 U	0.833	< 0.852 U	< 0.815 U	1.48 J	< 0.768 U	0.875	< 0.621 U	< 0.892 U	< 0.846 U	0.773		
Selenium	mg/L	T	0.0050	0.00089	0.00076	0.00055	0.00038 J	< 0.0011 U	0.00033 J	0.00033 J+	0.00029 J	0.00059	0.00054	0.00053	0.00058		
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	< 0.000075 U		
Total Suspended Solids	mg/L	T	--	2.0 J	5.0	10	1.0 J	9.0	17	21	22	10	6.0	5	80		
<b>Michigan CCR Part 115</b>																	
Copper	mg/L	T	0.021	0.0079	0.016	0.016	0.020	0.0067	0.0017	0.0011 B	0.00079	0.0032	0.00099	0.013	0.00085		
Iron	mg/L	T	83	1.2	2.5	2.8	2.5	4.6	7.4	7.7	4.4 D	1.1 D	1.2	29			
Nickel	mg/L	T	0.10	0.020	0.016	0.017	0.019	0.023	0.014	0.0081	0.0049	0.0077	0.0036	0.026	0.014		
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	0.00011	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD	< 0.000050 U	< 0.000050 U		
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	< 0.00062 U	0.00065 J	0.00079 J	< 0.00062 U	< 0.00062 U	0.00097 J	0.0033		
Zinc	mg/L	T	0.27	0.0071	0.0036	0.0050	0.0053	0.012	0.0014	< 0.0012 U	< 0.0012 U	0.018	0.0035	0.0072	0.0017		
<b>Additional Parameters</b>																	
Bicarbonate Alkalinity	mg/L	T	--	460	430	400	390	440	480	440	480	420 D	330 D	430 D	550		
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	< 0.16 U		
Magnesium	mg/L	T	--	22	19	18	17	16	18	16	16	19 D	16 D	19	21		
Potassium	mg/L	T	--	3.8	5.4	4.6	4.1	4.0	4.1	4.4	5.1	4.9	3.4 D	3.1	5.7		
Sodium	mg/L	T	--	38	25	24	26	22	22	23	22	30 D	25 D	17	21		
Total Alkalinity	mg/L	T	--	460	430	400	390	440	480	440	480	420 D	330 D	430 D	550		

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:				MW-34											
Compliance Phase:				Background Monitoring								Initial Assessment Monitoring	Assessment Monitoring	Assessment Monitoring	Assessment Monitoring
Sample Date:				12/1/2022	1/5/2023	2/8/2023	3/15/2023	4/18/2023	5/22/2023	6/27/2023	8/7/2023	10/23/2023	2/12/2024	4/9/2024	7/18/2024
Sample Type:				Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:				Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	Background Well	
Sample Matrix:				Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	--	2.14	1.07	1.96	1.49	1.86	1.89	2.05	2.05	1.93	1.82	1.8	
Dissolved Oxygen	mg/L	N	--	0.87	1.19	0.29	0.45	1.05	2.73	0.09	0.97	0.7	1.92	0.05	
Oxidation Reduction Potential	mV	N	--	-120.5	-104.4	-119.7	-95	-63.4	-100.5	-113.8	-124.6	-163.1	-98.9	-72.8	
pH	su	N	--	6.65	7.66	6.78	6.68	6.53	6.6	6.75	6.69	6.62	6.63	6.61	
Temperature	deg c	N	--	12.9	4.9	9.4	7.8	8	10.3	12.4	14.6	14.8	9.8	8.9	
Turbidity	NTU	N	--	4.96	0.02	5.58	2.11	5.87	0.02	0.02	3.15	1.77	4.76	1.39	
<b>Appendix III</b>															
Boron	mg/L	T	4.0	3.2	2.7	1.9 B	1.8	1.6	2.5	4.0 J+	3.6	4.1 D	1.9 D	1.8 D	
Calcium	mg/L	T	250	220	190	220	210	210	220	220 D	190 D	220 D	210 D	230 D	
Chloride	mg/L	T	120	33	27	24	23	23	22	23 D	24 D	25 D	20 DJ+	16 D	
Fluoride	mg/L	T	2.0	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D	0.21 D	0.22 D	
Sulfate (as SO4)	mg/L	T	250	2.5 J	1.9 J	< 0.41 U	0.87 J	0.56 J	< 0.41 U	< 0.41 UD	< 0.41 UD	< 0.41 UD	< 0.41 UD	< 2.2 UD	
Total Dissolved Solids	mg/L	T	950	820	750	800	790	700	760	820 D	770 D	800 D	730 D	760 D	
<b>Appendix IV</b>															
Antimony	mg/L	T	0.0060	0.0023 J	0.0011 J	0.00095 J	0.00013 J	0.00091 J	0.00010 J	0.00016 J	0.00015 J	0.00014 J	< 0.00050 UD	0.00013 J	
Arsenic	mg/L	T	0.010	0.0016	0.0010	0.00088	0.00090	0.00089 J	0.0010	0.0013 J+	0.0012	0.0013	0.00017 J-	0.00085	
Barium	mg/L	T	1.3	0.54	0.54	<b>0.58</b>	0.50	0.17	0.49	0.53	0.49	0.52	0.066 DJ-	0.46	
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000026 U	0.000059 J	< 0.000052 UJ	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	
Cadmium	mg/L	T	0.0025	0.000036 J	< 0.000032 U	< 0.000032 U	< 0.000032 U	< 0.000016 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	
Chromium, Total	mg/L	T	0.10	0.024	0.022	0.025	0.029	< 0.00088 U	0.027	0.034	0.028	0.019	0.0050 J+	0.026	
Cobalt	mg/L	T	0.0060	0.0015	0.0013	0.0013	0.0013	< 0.00050 U	0.0014	0.0018 J+	0.0016	0.0013	0.00061	0.0011	
Fluoride	mg/L	T	2.0	0.35	0.20	0.23	0.24	0.21	0.23	0.26 D	0.29 D	0.28 D	0.21 D	0.22 D	
Lead	mg/L	T	0.0040	<b>0.0069</b>	0.0016	0.00059	0.00094	< 0.0011 U	0.00074	0.00087 J+	0.00091	0.00063	0.00050 UJ	0.00038 J	
Lithium	mg/L	T	0.10	0.077	0.086	0.053	0.012	0.046	0.065	0.088 D	0.10	0.099 D	0.043 D	0.057	
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	
Molybdenum	mg/L	T	0.10	0.018	0.0081 J	< 0.00062 U	< 0.00062 U	0.0079	0.0018	0.00030 J+	< 0.00025 U	< 0.00025 U	< 0.00025 U	< 0.00025 U	
Radium 226 and 228	pCi/L	T	5.0	2.02	1.15	1.28	1.34	1.99	1.81	2.79	1.24	2.4	1.86 J+	2.2	
Radium-226	pCi/L	T	--	0.57	0.534	0.654	0.558	0.396	0.561	0.357	0.637 J+	0.699	0.527	0.602	
Radium-228	pCi/L	T	--	1.45	< 0.849 U	< 0.918 U	0.78	1.59	1.25 J	2.44	< 0.862 U	1.7	1.33 J+	1.59	
Selenium	mg/L	T	0.0050	0.00034 J	0.00025 J	0.00027 J	0.00023 J	< 0.0011 U	0.00029 J	0.00030 J+	0.00027 J	0.00031 J	0.00039 J-	0.00028 J	
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.00038 U	< 0.000075 U	< 0.000075 UJ	< 0.000075 U	< 0.000075 U	< 0.00038 UD	< 0.000075 U	
Total Suspended Solids	mg/L	T	--	110	52	83	44	160	160	170 D	130	150	120	160	
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.021	0.0034	0.00075	0.00033	0.0085	< 0.0010 U	0.00069	0.00045 B	0.00043	0.00045	0.00024 J	0.0004	
Iron	mg/L	T	83	73	70	83	78	75	77	77	64 D	70 D	72 D	76	
Nickel	mg/L	T	0.10	0.0016	0.0013	0.0012	0.0013	< 0.0032 U	0.0016	0.0020	0.0018	0.0015	0.00089 J	0.011	
Silver	mg/L	T	0.00020	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD	< 0.00005 U	
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.00062 U	< 0.0031 U	0.00065 J	0.00069 J	< 0.00062 U	< 0.00062 U	< 0.00062 U	0.0009 J	
Zinc	mg/L	T	0.27	0.031	0.0019	0.0023	0.0023	0.020	0.0015	0.0018	0.0017	0.0021	0.0012 UJ	0.0014	
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	--	1100	950	920	890	880	950	970 D	970	1000 D	830 D	950 D	
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	< 0.31 UD	< 0.16 U	< 0.31 UD	< 0.31 UD	< 0.16 U	
Magnesium	mg/L	T	--	30	23	22	21	20	24	27	26 D	29 D	23 D	25	
Potassium	mg/L	T	--	11	13	9.5	8.5	8.4	8.9	12	13	13 D	8.8 D	8	
Sodium	mg/L	T	--	34	30	28	22	23	30	38	33 D	38 D	26 D	25	
Total Alkalinity	mg/L	T	--	1100	950	920	890	880	950	970 D	970	1000 D	830 D	950 D	

**Notes:**

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:		MW-36	MW-36		
Compliance Phase:		Assessment Monitoring	Assessment Monitoring		
Sample Date:		4/8/2024	7/17/2024		
Sample Type:		Field Sample	Field Sample		
Unit:		Nature and Extent	Nature and Extent		
Sample Matrix:		Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	0.658	0.66
Dissolved Oxygen	mg/L	N	--	0.08	0.02
Oxidation Reduction Potential	mV	N	--	-207.1	-331.7
pH	su	N	--	10.42	9.89
Temperature	deg c	N	--	8.4	19.1
Turbidity	NTU	N	--	5.41	2.01
<b>Appendix III</b>					
Boron	mg/L	T	4.0	0.28	0.41
Calcium	mg/L	T	250	67	61
Chloride	mg/L	T	120	34 D	39 D
Fluoride	mg/L	T	2.0	0.61 D	0.65 D
Sulfate (as SO4)	mg/L	T	250	5.7 JD	21 D
Total Dissolved Solids	mg/L	T	950	330 D	460 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	0.00076	0.0015
Arsenic	mg/L	T	0.010	0.029	<b>0.029</b>
Barium	mg/L	T	1.3	0.15	0.17
Beryllium	mg/L	T	0.0040	5.9E-05 J	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.00032	0.00082
Chromium, Total	mg/L	T	0.10	0.0013	0.0031
Cobalt	mg/L	T	0.0060	0.00027 J	0.00027 J
Fluoride	mg/L	T	2.0	0.61 D	0.65 D
Lead	mg/L	T	0.0040	<b>0.025</b>	<b>0.051</b>
Lithium	mg/L	T	0.10	0.0057	0.0089
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.019	0.042
Radium 226 and 228	pCi/L	T	5.0	< 0.861 U	< 1.4 UJ
Radium-226	pCi/L	T	--	0.467	< 0.207 UJ
Radium-228	pCi/L	T	--	< 0.861 U	< 1.4 UJ
Selenium	mg/L	T	0.0050	0.0006	0.00072
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	38	4 J+
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.0077	0.019
Iron	mg/L	T	83	0.4	0.35
Nickel	mg/L	T	0.10	0.011	0.0084
Silver	mg/L	T	0.00020	0.00021	<b>0.00057</b>
Vanadium	mg/L	T	0.0062	0.0024	<b>0.0052</b>
Zinc	mg/L	T	0.27	0.0088	0.02
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	78	160
Carbonate Alkalinity	mg/L	T	--	120	110
Magnesium	mg/L	T	--	6.9	7.5
Potassium	mg/L	T	--	52	45
Sodium	mg/L	T	--	61	65
Total Alkalinity	mg/L	T	--	200	260

**Notes:**

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:			MW-37	MW-37	
Compliance Phase:			Assessment Monitoring	Assessment Monitoring	
Sample Date:			4/8/2024	7/17/2024	
Sample Type:			Field Sample	Field Sample	
Unit:			Nature and Extent	Nature and Extent	
Sample Matrix:			Groundwater	Groundwater	
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	1.16	1.24
Dissolved Oxygen	mg/L	N	--	1.04	0.04
Oxidation Reduction Potential	mV	N	--	-19	65
pH	su	N	--	7.47	7.15
Temperature	deg c	N	--	9	17.8
Turbidity	NTU	N	--	0.02	0.02
<b>Appendix III</b>					
Boron	mg/L	T	4.0	5.2	3.9
Calcium	mg/L	T	250	160 D	160 D
Chloride	mg/L	T	120	22 D	29 D
Fluoride	mg/L	T	2.0	0.63 D	0.39 D
Sulfate (as SO4)	mg/L	T	250	210 D	<b>260 D</b>
Total Dissolved Solids	mg/L	T	950	790 D	840 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	0.00064	0.0004
Arsenic	mg/L	T	0.010	0.00055	0.00046 J
Barium	mg/L	T	1.3	0.04	0.046
Beryllium	mg/L	T	0.0040	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	0.0025	0.00012 J	0.00013 J
Chromium, Total	mg/L	T	0.10	0.00039	0.00054
Cobalt	mg/L	T	0.0060	0.00075	0.00053
Fluoride	mg/L	T	2.0	0.63 D	0.39 D
Lead	mg/L	T	0.0040	0.00017 J	0.00013 J
Lithium	mg/L	T	0.10	0.02	0.022
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.015	0.0075
Radium 226 and 228	pCi/L	T	5.0	< 0.569 U	< 0.764 U
Radium-226	pCi/L	T	--	< 0.142 U	0.104
Radium-228	pCi/L	T	--	< 0.569 U	< 0.764 U
Selenium	mg/L	T	0.0050	0.0046	0.003
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	< 4 UD	3.9 JD
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.013	0.014
Iron	mg/L	T	83	0.16	< 0.026 U
Nickel	mg/L	T	0.10	0.0046	0.0052
Silver	mg/L	T	0.00020	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	0.0062	< 0.00062 U	< 0.00062 U
Zinc	mg/L	T	0.27	0.017	0.017
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	310	340
Carbonate Alkalinity	mg/L	T	--	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	--	13	12
Potassium	mg/L	T	--	18	20
Sodium	mg/L	T	--	100 D	98 D
Total Alkalinity	mg/L	T	--	310	340

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:		MW-38	MW-38		
Compliance Phase:		Assessment Monitoring	Assessment Monitoring		
Sample Date:		4/8/2024	7/17/2024		
Sample Type:		Field Sample	Field Sample		
Unit:		Nature and Extent	Nature and Extent		
Sample Matrix:		Groundwater	Groundwater		
Constituent	Unit	Fraction	Groundwater Protection Standard	Result	Result
<b>Field Parameters</b>					
Conductivity	mS/cm	N	--	1.27	1.18
Dissolved Oxygen	mg/L	N	--	0.4	0.17
Oxidation Reduction Potential	mV	N	--	-207.4	-25.1
pH	su	N	--	10	9.23
Temperature	deg c	N	--	11.7	20.6
Turbidity	NTU	N	--	7.83	0.02
<b>Appendix III</b>					
Boron	mg/L	T	4.0	1.6 D	2.4
Calcium	mg/L	T	250	150 D	96 D
Chloride	mg/L	T	120	51 D	57 D
Fluoride	mg/L	T	2.0	0.79 D	1 D
Sulfate (as SO4)	mg/L	T	250	280 D	170 D
Total Dissolved Solids	mg/L	T	950	840 D	850 D
<b>Appendix IV</b>					
Antimony	mg/L	T	0.0060	0.00068	0.0017
Arsenic	mg/L	T	0.010	0.005	0.0071
Barium	mg/L	T	1.3	0.16	0.12
Beryllium	mg/L	T	0.0040	< 0.000052 U	6.7E-05 J
Cadmium	mg/L	T	0.0025	9.6E-05 J	0.00037
Chromium, Total	mg/L	T	0.10	0.004	0.016
Cobalt	mg/L	T	0.0060	0.00053	0.00071
Fluoride	mg/L	T	2.0	0.79 D	1 D
Lead	mg/L	T	0.0040	0.015	<b>0.086</b>
Lithium	mg/L	T	0.10	0.12	0.098
Mercury	mg/L	T	0.00016	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.10	0.0097	0.014
Radium 226 and 228	pCi/L	T	5.0	1.21	< 1.72 U
Radium-226	pCi/L	T	--	0.492	< 0.314 U
Radium-228	pCi/L	T	--	< 1.08 U	< 1.72 UG
Selenium	mg/L	T	0.0050	0.00073	0.00095
Thallium	mg/L	T	0.0020	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	--	160 D	53
<b>Michigan CCR Part 115</b>					
Copper	mg/L	T	0.021	0.0031	0.02
Iron	mg/L	T	83	0.39	1
Nickel	mg/L	T	0.10	0.0053	0.0096
Silver	mg/L	T	0.00020	< 0.00005 U	0.00019
Vanadium	mg/L	T	0.0062	<b>0.0066</b>	<b>0.01</b>
Zinc	mg/L	T	0.27	0.0066	0.02
<b>Additional Parameters</b>					
Bicarbonate Alkalinity	mg/L	T	--	270	300
Carbonate Alkalinity	mg/L	T	--	12	50
Magnesium	mg/L	T	--	18	13
Potassium	mg/L	T	--	91 D	86 D
Sodium	mg/L	T	--	97 D	100 D
Total Alkalinity	mg/L	T	--	280	350

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

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- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:			SG-02											
Sample Date:			12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024	4/10/2024	7/17/2024
Sample Type:			Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sample Matrix:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
<b>Field Parameters</b>														
Conductivity	mS/cm	N	1.42	1.0	--	0.898	0.93	1.03	1.56	1.66	1.47	0.84	0.99	1.57
Dissolved Oxygen	mg/L	N	5.28	9.57	--	4.27	10.32	7.83	8.9	9.54	8.29	14.38	9.31	7.69
Oxidation Reduction Potential	mV	N	147.3	-25.2	--	131.1	13.3	16.1	25.6	69.3	-44.9	135.6	-32.5	-39.7
pH	su	N	8.02	8.38	--	8	8.23	9.14	8.52	8.7	8.15	8.01	8.38	7.86
Temperature	deg c	N	2.8	3.5	--	2.7	8.9	26.6	26.2	29.6	17.5	3.6	14.8	28.2
Turbidity	NTU	N	1.62	0.02	--	1.2	2.41	6.62	4.2	3.26	6.09	0.46	3.59	1.34
<b>Appendix III</b>														
Boron	mg/L	T	4.0	2.2	--	2.1	2.0	2.8	5.6 J+	6.9	7.0 D	3.5 D	3.1 D	8.1
Calcium	mg/L	T	210	140	--	140	130	150	210 D	170 D	180 D	140 D	140 D	170 D
Chloride	mg/L	T	75	46	--	41	37	40	86 D	120 D	99 D	52 D	36 D	120 D
Fluoride	mg/L	T	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D	2.2 D	2.1 D	4.5 D
Sulfate (as SO4)	mg/L	T	620	360	--	350	400	430	620 D	640 D	530 D	380 D	340 D	540 D
Total Dissolved Solids	mg/L	T	1100	660	--	580	680	740	1200 D	1400 D	1100	690 D	690	1100 D
<b>Appendix IV</b>														
Antimony	mg/L	T	0.00051	0.00043	--	0.00066	0.00058 J	0.0012	0.00085	0.0011	0.00061	0.00038	0.00088	0.0011
Arsenic	mg/L	T	0.0019	0.0012	--	0.0018	0.0017 J	0.0032	0.0037	0.0091	0.0023	0.0012	0.0017	0.0086
Barium	mg/L	T	0.049	0.033	--	0.034	0.22	0.080	0.13	0.11	0.060	0.037	0.045	0.12
Beryllium	mg/L	T	0.000060 J	< 0.000052 U	--	< 0.000052 U	< 0.00027 U	< 0.000052 U	0.00029	0.00014 J	< 0.000052 U	< 0.000052 U	< 0.000052 U	5.7E-05 J
Cadmium	mg/L	T	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00017 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.00038	0.00024 J	--	0.00057	< 0.00091 U	0.00046	0.00091	0.00080	0.00036	0.00025	0.00045	0.00064
Cobalt	mg/L	T	0.00021 J	0.00022 J	--	0.00028 J	< 0.00052 U	0.00035 J	0.00040 J	0.00057	0.00015 J	0.00012 J	0.00017 J	0.00034 J
Fluoride	mg/L	T	2.6	1.9	--	2.3	2.6	3.3	4.6 D	5.1 D	3.6 D	2.2 D	2.1 D	4.5 D
Lead	mg/L	T	0.0013	0.00081	--	0.0012	0.0020 J	0.0011	0.00050 J	0.0012	0.00064	0.00061	0.0011	0.00083
Lithium	mg/L	T	0.046	0.032	--	0.035	0.038	0.053	0.067	0.085	0.058	0.042 D	0.043	0.086
Mercury	mg/L	T	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00022	0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.0069	0.0060	--	0.011	0.0062 J	0.016	0.0072	0.012	0.0081	0.0069	0.013	0.011
Radium 226 and 228	pCi/L	T	< 0.342 U	0.712 J+	--	< 0.551 U	1.42	1.49	1.44	1.28	< 0.532 U	< 1.0 U	0.722	< 0.916 U
Radium-226	pCi/L	T	0.151	< 0.121 U	--	< 0.177 U	0.266	0.229	0.456	0.329	< 0.265 U	< 0.18 U	0.206	0.466
Radium-228	pCi/L	T	< 0.342 U	0.627 J+	--	< 0.551 U	1.15	1.26	0.981	0.954	< 0.532 U	< 1.0 U	< 0.601 U	< 0.916 U
Selenium	mg/L	T	0.00073	0.00059	--	0.0010	< 0.0011 U	0.0013	0.0013	0.0014	0.0008	0.0018	0.0014	0.0015
Thallium	mg/L	T	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00039 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	< 4.0 U	3.0 J	--	1.0 J	0.99 J	1.0 J	30	14	< 3.9 UD	< 4.0 U	< 4 U	17
<b>Michigan CCR Part 115</b>														
Copper	mg/L	T	0.0010	0.00085	--	0.011	0.0011 J	0.0014	0.0012	0.0010	0.00047	0.00089	0.0016	0.00083
Iron	mg/L	T	0.20	0.15	--	0.20	0.23	0.16	0.27	0.48	0.28	0.14	0.16	0.48
Nickel	mg/L	T	0.0023	0.0020	--	0.0023	< 0.0034 U	0.0027	0.0036	0.0040	0.0034	0.0020	0.0024	0.0037
Silver	mg/L	T	< 0.000050 U	< 0.000050 U	--	< 0.000050 U	< 0.00026 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U
Vanadium	mg/L	T	< 0.00062 U	< 0.00062 U	--	< 0.00062 U	< 0.0032 U	0.0019	0.0014	0.0052	0.00072 J	< 0.00062 U	0.0014	0.0055
Zinc	mg/L	T	0.0041	0.0031	--	0.0029	0.029	0.0014	0.0024	0.0028	0.0050	0.0013	0.002	0.0024
<b>Additional Parameters</b>														
Bicarbonate Alkalinity	mg/L	T	96	76	--	62	71	35	73	65	130 D	93	79	94
Carbonate Alkalinity	mg/L	T	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	19	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U
Magnesium	mg/L	T	48	31	--	28	28	33	53	63 D	57 D	37 D	34	61
Potassium	mg/L	T	13	9.1	--	8.0	7.3	6.8	18	21 D	16 D	9.1 D	8.2	20
Sodium	mg/L	T	40	24	--	22	21	27	52	62 D	58 D	31 D	28	66
Total Alkalinity	mg/L	T	96	76	--	62	71	35	73	83	130 D	93	79	94

**Notes:**

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- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

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- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.

- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.



Sample Location:			SG-03									
Sample Date:			12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024
Sample Type:			Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample
Unit:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Sample Matrix:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water
Constituent	Unit	Fraction	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
<b>Field Parameters</b>												
Conductivity	mS/cm	N	1.45	1.0	--	0.896	1.15	1.05	1.53	1.66	1.49	0.84
Dissolved Oxygen	mg/L	N	5.23	9.58	--	3.98	9.77	7.37	8.71	9.56	8.26	14.36
Oxidation Reduction Potential	mV	N	138.3	-32.4	--	-50.1	17	10	71.4	-42.1	135.5	135.5
pH	su	N	8	8.42	--	7.82	6.24	8.91	8.63	8.67	8.14	8.03
Temperature	deg c	N	2	3.3	--	0.9	8.3	28.6	25.9	29.5	17.7	3.6
Turbidity	NTU	N	1.2	0.36	--	0.02	4.45	38.1	5.36	4.27	5.56	0.44
<b>Appendix III</b>												
Boron	mg/L	T	3.9	2.0	--	2.1	2.0	2.9	5.8 J+	7.5	6.9 D	3.4 D
Calcium	mg/L	T	200	120	--	150	140	160	220 D	180 D	180 D	140 D
Chloride	mg/L	T	72	42	--	43	37	41	86 D	120 D	100 D	53 D
Fluoride	mg/L	T	2.5	1.8	--	2.5	2.7	3.6	4.6 D	5.0 D	3.8 D	2.2 D
Sulfate (as SO4)	mg/L	T	600	350	--	350	400	450	620 D	640 D	550 D	370 D
Total Dissolved Solids	mg/L	T	1100	480	--	630	660	740	1200 D	1400 D	1100	1400 D
Boron	mg/L	D	--	--	--	--	--	2.7	--	--	--	--
Calcium	mg/L	D	--	--	--	--	--	150	--	--	--	--
<b>Appendix IV</b>												
Antimony	mg/L	T	0.00049	0.00038	--	0.00067	0.0010 J	0.0013	0.00088	0.0012	0.00063	0.00050
Arsenic	mg/L	T	0.0018	0.0011	--	0.0020	0.0016 J	0.0041	0.0040	0.0094	0.0024	0.0012
Barium	mg/L	T	0.049	0.031	--	0.036	0.027	0.097	0.13	0.13	0.061	0.036
Beryllium	mg/L	T	< 0.000052 U	< 0.000052 U	--	0.000078 J	< 0.00026 U	0.00056	0.00040	0.000091 J	< 0.000052 U	< 0.000052 U
Cadmium	mg/L	T	< 0.000032 U	< 0.000032 U	--	0.000038 J	< 0.00016 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Chromium, Total	mg/L	T	0.00043	0.00025	--	0.00092	< 0.00088 U	0.0025	0.0012	0.00069	0.00049	0.00032
Cobalt	mg/L	T	0.00017 J	0.00017 J	--	0.00033 J	0.00050 J	0.00058	0.00043 J	0.00055	0.0003 J	0.00011 J
Fluoride	mg/L	T	2.5	1.8	--	2.5	2.7	3.6	4.6 D	5.0 D	3.8 D	2.2 D
Lead	mg/L	T	0.0042	0.00040	--	0.0010	< 0.0011 U	0.0033	0.0076	0.0091	0.0066	0.0059
Lithium	mg/L	T	0.046	0.028	--	0.0056	0.037	0.051	0.067	0.090	0.059	0.031 D
Mercury	mg/L	T	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U
Molybdenum	mg/L	T	0.0066	0.0052	--	0.010	0.0097	0.020	0.0069	0.013	0.0083	0.0066
Radium 226 and 228	pCi/L	T	< 0.443 U	< 0.506 U	--	< 0.531 U	1.21	< 0.658 U	< 0.653 U	0.969	0.594	< 0.661 U
Radium-226	pCi/L	T	0.14	0.129	--	< 0.193 U	0.199	0.363	0.353	0.253	< 0.236 U	< 0.139 U
Radium-228	pCi/L	T	< 0.443 U	< 0.506 U	--	< 0.531 U	1.01	< 0.658 U	< 0.653 U	< 0.842 U	< 0.58 U	< 0.661 U
Selenium	mg/L	T	0.00070	0.00056	--	0.0010	0.0021 J	0.0016	0.0012	0.0016	0.0081	0.0018
Thallium	mg/L	T	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U
Total Suspended Solids	mg/L	T	9.0	1.0 J	--	6.0	3.0 J	33	34	16	< 4.0 U	< 4.0 U
Antimony	mg/L	D	--	--	--	--	--	< 0.000038 U	--	--	--	--
Arsenic	mg/L	D	--	--	--	--	--	0.0035	--	--	--	--
Barium	mg/L	D	--	--	--	--	--	0.073	--	--	--	--
Beryllium	mg/L	D	--	--	--	--	--	< 0.000078 U	--	--	--	--
Cadmium	mg/L	D	--	--	--	--	--	< 0.000018 U	--	--	--	--
Chromium, Total	mg/L	D	--	--	--	--	--	< 0.000012 U	--	--	--	--
Cobalt	mg/L	D	--	--	--	--	--	< 0.000028 U	--	--	--	--
Lead	mg/L	D	--	--	--	--	--	< 0.00012 U	--	--	--	--
Lithium	mg/L	D	--	--	--	--	--	0.039	--	--	--	--
Molybdenum	mg/L	D	--	--	--	--	--	0.018	--	--	--	--
Selenium	mg/L	D	--	--	--	--	--	0.0020	--	--	--	--
Thallium	mg/L	D	--	--	--	--	--	< 0.000015 U	--	--	--	--
<b>Michigan CCR Part 115</b>												
Copper	mg/L	T	0.00093	0.00067	--	0.016	< 0.0010 U	0.0030	0.0013	0.0010	0.00051	0.00083
Iron	mg/L	T	0.18	0.15	--	0.35	0.20	0.66	0.31	0.48	0.29	0.13
Nickel	mg/L	T	0.0022	0.0017	--	0.0026	0.0032 J	0.0039	0.0036	0.0039	0.0035	0.0019
Silver	mg/L	T	< 0.000050 U	< 0.000050 U	--	< 0.000050 U	< 0.000025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U
Vanadium	mg/L	T	< 0.00062 U	< 0.00062 U	--	0.00092 J	< 0.0031 U	0.0049	0.0020	0.0053	0.00070 J	< 0.00062 U
Zinc	mg/L	T	0.0042	0.0037	--	0.0047	< 0.0059 U	0.0060	0.0029	0.0024	0.0069	0.0012
Copper	mg/L	D	--	--	--	--	--	< 0.00012 U	--	--	--	--
Iron	mg/L	D	--	--	--	--	--	0.10	--	--	--	--
Nickel	mg/L	D	--	--	--	--	--	< 0.00018 U	--	--	--	--
Silver	mg/L	D	--	--	--	--	--	< 0.000038 U	--	--	--	--
Vanadium	mg/L	D	--	--	--	--	--	< 0.00024 U	--	--	--	--
Zinc	mg/L	D	--	--	--	--	--	< 0.00017 U	--	--	--	--
<b>Additional Parameters</b>												
Bicarbonate Alkalinity	mg/L	T	110	71	--	73	71	41	73	69	120 D	92
Carbonate Alkalinity	mg/L	T	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	16	< 0.31 UD	< 0.16 U
Magnesium	mg/L	T	47	26	--	30	29	37	56	67 D	57 D	35 D
Potassium	mg/L	T	13	8.1	--	8.3	7.2	7.1	19	22 D	17 D	8.7 D
Sodium	mg/L	T	38	20	--	23	21	28	57	66 D	58 D	30 D
Total Alkalinity	mg/L	T	110	71	--	73	71	41	73	85	120 D	92
Magnesium	mg/L	D	--	--	--	--	--	34	--	--	--	--
Potassium	mg/L	D	--	--	--	--	--	6.7	--	--	--	--
Sodium	mg/L	D	--	--	--	--	--	25	--	--	--	--

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- J The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- U The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:		SG-04R													
Sample Date:		12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024	4/8/2024	7/17/2024		
Sample Type:		Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample		
Unit:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Sample Matrix:		Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water		
Constituent	Unit	Fraction	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result		
<b>Field Parameters</b>															
Conductivity	mS/cm	N	1.0	1.64	--	1.404	1.96	1.79	2.56	2.56	2.12	1.41	1.64	2.39	
Dissolved Oxygen	mg/L	N	6.42	9.64	--	10.26	10.46	7.17	6.62	8.21	8.36	11.92	9.24	6.23	
Oxidation Reduction Potential	mV	N	125.3	-34.8	--	-34	91.5	29.9	368	58.7	-33.8	155.6	20.8	-6.5	
pH	su	N	8.03	8.44	--	8.05	8.21	8.3	8.24	8.68	8.36	7.2	8.46	8.74	
Temperature	deg c	N	3.3	4	--	5.9	8.2	25.6	25.9	23.8	17.1	2.7	14.7	27.5	
Turbidity	NTU	N	7.25	1.1	--	3.22	1.04	5.27	10.6	2.28	5.92	8.1	3.75	4.11	
<b>Appendix III</b>															
Boron	mg/L	T	3.0	2.1	--	2.6	2.4	3.2	5.0 J+	5.4	5.4 D	4.5 D	4.4 D	6.8	
Calcium	mg/L	T	430	300	--	370	310	390	600 D	580 DE	500 D	340 D	370 D	510 D	
Chloride	mg/L	T	27	22	--	21	20	22	33 D	38 D	35 D	23 D	20 D	38 D	
Fluoride	mg/L	T	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D	2.3 D	2.7 D	4.2 D	
Sulfate (as SO4)	mg/L	T	1200	890	--	750	880	1000	1600 D	1800 D	820 D	890 D	890 D	1500 D	
Total Dissolved Solids	mg/L	T	1800	1200	--	1200	1400	1600	2500 D	2700 D	2200	1400 D	1400 D	2200 D	
<b>Appendix IV</b>															
Antimony	mg/L	T	0.00059	0.00052	--	0.00069	0.0011 J	0.00064 J	0.0013 D	0.0011	0.00089	< 0.00050 UD	0.001	0.00046	
Arsenic	mg/L	T	0.00099	0.00091	--	0.0016	0.0026 J	0.0012	0.0043	0.0058	0.0017	0.0019	0.0016	0.0028	
Barium	mg/L	T	0.022	0.019	--	0.023	0.040	0.039	0.040 D	0.029	0.029	0.027 D	0.025	0.024	
Beryllium	mg/L	T	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.00026 U	< 0.000052 U	0.00012 J	0.000066 J	< 0.000052 U	0.000057 J	< 0.000052 U	< 0.000052 U	
Cadmium	mg/L	T	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.00016 U	< 0.00038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000038 UD	< 0.000075 U	< 0.000075 U	
Chromium, Total	mg/L	T	0.00019 J	0.00028	--	0.00035	< 0.00088 U	0.00040	0.0010	0.00028	0.00063	0.00060	0.00028	0.00026	
Cobalt	mg/L	T	0.00024 J	0.00028 J	--	0.00037 J	< 0.00050 U	0.00032 J	0.0011	0.00083	0.00063	0.00029 J	0.00012 J	0.0002 J	
Fluoride	mg/L	T	2.6	2.0	--	2.3	2.7	3.5	5.0 D	5.3 D	3.7 D	2.3 D	2.7 D	4.2 D	
Lead	mg/L	T	0.00033 J	0.00027 J	--	0.00047 J	0.0011 J	0.0013 J	0.0025 JD	0.00054 JD	0.00022 J	0.0015 JD	0.00071	< 0.0005 UD	
Lithium	mg/L	T	0.044	0.039	--	0.0089	0.043	0.056	0.072	0.084	0.064	0.049 D	0.059	0.091	
Mercury	mg/L	T	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	
Molybdenum	mg/L	T	0.0078	0.0066	--	0.0073	0.010	0.0072	0.013	0.016	0.016	0.0091	0.015	0.013	
Radium 226 and 228	pCi/L	T	< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.82	< 0.788 U	< 0.641 U	0.651	< 0.564 U	< 0.892 U	
Radium-226	pCi/L	T	< 0.11 U	< 0.109 U	--	< 0.167 U	< 0.213 U	0.264	0.233	< 0.133 U	< 0.2 U	0.186	< 0.213 U	0.25	
Radium-228	pCi/L	T	< 0.408 U	< 0.497 U	--	< 0.672 U	< 0.809 U	< 0.803 U	1.59	< 0.788 U	< 0.641 U	< 0.639 U	< 0.564 U	< 0.892 U	
Selenium	mg/L	T	0.0015	0.0014	--	0.0016	0.0013 J	0.0012	0.0023	0.0028	0.0024	0.0023	0.0024	0.0022	
Thallium	mg/L	T	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.00038 U	< 0.00038 U	< 0.00038 UD	< 0.00038 UD	< 0.000075 U	< 0.00038 UD	7.5E-05 J	< 0.00038 UD	
Total Suspended Solids	mg/L	T	5.0	< 4.0 U	--	3.0 J	1.0 J	5.0	23	9.0	< 4.0 U	14	< 4 U	15	
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.00047	0.00048	--	0.012	0.0012	0.00056	0.0018	0.00071	0.00086	0.0013	0.0011	0.00082	
Iron	mg/L	T	0.055	0.11	--	0.11	0.13	0.19	0.31	0.089	0.05	0.36 D	0.1	0.045 J	
Nickel	mg/L	T	0.0025	0.0028	--	0.0027	< 0.0032 U	0.0022	0.0055	0.0041	0.0035	0.0037	0.0038	0.003	
Silver	mg/L	T	< 0.000050 U	< 0.000050 U	--	< 0.000050 U	< 0.00025 U	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00025 UD	< 0.000050 U	< 0.000050 U	
Vanadium	mg/L	T	< 0.00062 U	< 0.00062 U	--	< 0.00062 U	< 0.0031 U	0.00094 J	0.0041	0.0065	< 0.00062 U	0.00097 J	0.0013	0.0038	
Zinc	mg/L	T	0.0037	0.0023	--	0.0033	0.0061 J	0.0012	0.0070	0.0019	0.0086	0.0062	0.002	0.0023	
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	110	87	--	98	100	62	50	30	61 D	100	93	42	
Carbonate Alkalinity	mg/L	T	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	< 0.16 U	13	< 0.31 UD	< 0.16 U	< 0.16 U	< 0.16 U	
Magnesium	mg/L	T	41	30	--	33	29	35	53	62 D	57 D	44 D	43	61	
Potassium	mg/L	T	15	10	--	9.8	9.1	10	17	21	12 D	9.1 D	8.9	8.4	
Sodium	mg/L	T	24	20	--	21	19	22	39	40 D	34 D	26 D	26	39	
Total Alkalinity	mg/L	T	110	87	--	98	100	62	50	43	61 D	100	93	43	

**Notes:**

- ug/l - micrograms per liter.
- mg/l = milligrams per liter.
- su - standard pH units (pH is a field parameter)
- pCi/L = picocuries per liter.
- All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- + Same as J, and the reported concentration is potentially biased high.
- Same as J, and the reported concentration is potentially biased low.
- UR The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

Sample Location:			SG-05												
Sample Date:			12/2/2022	1/5/2023	2/6/2023	3/14/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024	4/8/2024	7/17/2024	
Sample Type:			Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Sample Matrix:			Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Constituent	Unit	Fraction	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>															
Conductivity	mS/cm	N	0.731	0.98	--	0.742	1.11	0.75	0.61	0.359	0.91	0.75	0.8	0.465	
Dissolved Oxygen	mg/L	N	6.85	13.1	--	15.74	6.77	7.83	11.25	11.39	11.73	0.59	8.37	7.51	
Oxidation Reduction Potential	mV	N	142	-44.6	--	6.4	18.3	16.3	153.3	39.2	-28.7	134.6	34.6	-29	
pH	su	N	7.44	8.02	--	8.28	7.88	8.31	6.73	9.19	7.87	7.67	8.4	9.4	
Temperature	deg c	N	4.1	4	--	9.8	7.6	27.8	23.4	28.9	19.5	5.2	17.3	26.7	
Turbidity	NTU	N	9.38	8.02	--	9.83	26.6	6.8	7.84	4.36	29.3	41.6	14.9	2.68	
<b>Appendix III</b>															
Boron	mg/L	T	0.59	0.60	--	0.48	0.57	0.36	0.46 J+	0.39	0.72 D	0.45 D	0.53	0.34	
Calcium	mg/L	T	140	120	--	120	120	81	34	34	120 D	130 D	99 D	22	
Chloride	mg/L	T	79	51	--	61	50	54	64 D	29 D	54 D	54 D	37 D	52 D	
Fluoride	mg/L	T	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.79 D	0.68 D	0.83 D	0.32 D	
Sulfate (as SO4)	mg/L	T	8.4	150	--	38 J	110	43	38 D	11 D	12 D	7.2 D	83 D	13 D	
Total Dissolved Solids	mg/L	T	620	630	--	460	570	400	320 D	210 D	510 D	520 D	440 D	240 D	
Boron	mg/L	D	--	--	--	--	0.68	--	--	--	--	--	--	--	
Calcium	mg/L	D	--	--	--	--	120	--	--	--	--	--	--	--	
<b>Appendix IV</b>															
Antimony	mg/L	T	0.00018 J	0.000093 J	--	0.00030	0.0010 J	0.00029	0.0010	0.00044	0.00016 J	0.00011 J	0.00024 J	0.0003	
Arsenic	mg/L	T	0.00084	0.00056	--	0.00071	0.0026 J	0.0017	0.0024	0.0013	0.00088	0.0010	0.00094	0.0017	
Barium	mg/L	T	0.58	0.23	--	0.35	0.039	0.20	0.11	0.16	0.51	0.50	0.26	0.1	
Beryllium	mg/L	T	< 0.000052 U	< 0.000052 U	--	< 0.000052 U	< 0.000026 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	< 0.000052 U	
Cadmium	mg/L	T	< 0.000032 U	< 0.000032 U	--	< 0.000032 U	< 0.000016 U	< 0.000075 U	0.00011 J	0.00075	0.000094 J	0.00041	0.00013 J	< 0.000075 U	
Chromium, Total	mg/L	T	0.00036	0.00024 J	--	0.00048	< 0.00088 U	0.00035	0.00049	0.0017	0.00039	0.0020	0.00056	0.00043	
Cobalt	mg/L	T	0.00037 J	0.00025 J	--	0.00029 J	< 0.00050 U	0.00025 J	0.00032 J	0.00033 J	0.00027 J	0.00046 J	0.00024 J	0.00013 J	
Fluoride	mg/L	T	0.73	0.98	--	0.94	0.69	0.30	0.42 D	0.45 D	0.79 D	0.68 D	0.83 D	0.32 D	
Lead	mg/L	T	0.00023 J	0.00038 J	--	0.00045 J	0.0012 J	0.0022	0.0040	0.0095	0.0031	0.011	0.0031	0.0019	
Lithium	mg/L	T	0.39	0.23	--	0.33	0.033	0.0045	0.027	0.029	0.016 D	0.025	0.025	0.014	
Mercury	mg/L	T	< 0.00016 U	< 0.00016 U	--	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	< 0.00016 U	0.00017 J	< 0.00016 U	< 0.00016 U	< 0.00016 U	
Molybdenum	mg/L	T	0.00077 J	0.00029	--	0.0013	0.0090	0.0083	0.0087	0.0015	0.00085 J	0.00058 J	0.0024	0.0039	
Radium 226 and 228	pCi/L	T	0.851	< 0.537 U	--	< 0.776 U	0.858	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U	< 0.889 U	0.971	< 1.12 U	
Radium-226	pCi/L	T	0.308	< 0.122 U	--	< 0.188 U	0.306	< 0.219 U	< 0.154 U	< 0.147 U	< 0.286 U	0.216	< 0.204 U	< 0.17 U	
Radium-228	pCi/L	T	0.543	< 0.537 U	--	< 0.776 U	< 0.798 U	< 0.758 U	< 0.818 U	< 0.82 U	< 0.771 U	< 0.889 U	0.845	< 1.12 UG	
Selenium	mg/L	T	< 0.00022 U	< 0.00022 U	--	< 0.00022 U	0.0013 J	0.00022 J	0.00038 J	0.00027 J	0.00017 J	0.00054	0.00014 J	0.00027 J	
Thallium	mg/L	T	< 0.000075 U	< 0.000075 U	--	< 0.000075 U	< 0.000038 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	< 0.000075 U	
Total Suspended Solids	mg/L	T	5.0	7.9	--	8.0	17	6.0	14	73	12	120	8	4	
Antimony	mg/L	D	--	--	--	--	0.00047 J	--	--	--	--	--	--	--	
Arsenic	mg/L	D	--	--	--	--	0.00063 J	--	--	--	--	--	--	--	
Barium	mg/L	D	--	--	--	--	0.37	--	--	--	--	--	--	--	
Beryllium	mg/L	D	--	--	--	--	< 0.00026 U	--	--	--	--	--	--	--	
Cadmium	mg/L	D	--	--	--	--	< 0.00016 U	--	--	--	--	--	--	--	
Chromium, Total	mg/L	D	--	--	--	--	0.025	--	--	--	--	--	--	--	
Cobalt	mg/L	D	--	--	--	--	0.0012 J	--	--	--	--	--	--	--	
Lead	mg/L	D	--	--	--	--	< 0.0011 U	--	--	--	--	--	--	--	
Lithium	mg/L	D	--	--	--	--	0.032	--	--	--	--	--	--	--	
Mercury	mg/L	D	--	--	--	--	< 0.00016 U	--	--	--	--	--	--	--	
Molybdenum	mg/L	D	--	--	--	--	< 0.0031 U	--	--	--	--	--	--	--	
Selenium	mg/L	D	--	--	--	--	< 0.0011 U	--	--	--	--	--	--	--	
Thallium	mg/L	D	--	--	--	--	< 0.00038 U	--	--	--	--	--	--	--	
<b>Michigan CCR Part 115</b>															
Copper	mg/L	T	0.00029	0.00036	--	0.0089	0.0011 J	0.00084	0.0028	0.0066	0.0012	0.0063	0.0021	0.0015	
Iron	mg/L	T	3.0	1.5	--	2.7	3.2	1.1	0.74	1.1	2.9 D	7.2 D	1.9	1.0	
Nickel	mg/L	T	0.0013	0.0015	--	0.0012	< 0.0032 U	0.0026	0.0034	0.0026	0.0012	0.0024	0.0017	0.002	
Silver	mg/L	T	< 0.000050 U	< 0.000050 U	--	0.000053	< 0.00025 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.000050 U	< 0.00005 U	< 0.00005 U	
Vanadium	mg/L	T	< 0.00062 U	< 0.00062 U	--	< 0.00062 U	< 0.00031 U	< 0.00062 U	0.0012	0.00069 J	< 0.00062 U	< 0.00062 U	0.00071 J	0.0009 J	
Zinc	mg/L	T	0.030	0.0018	--	0.0022	0.0060 J	0.0024	0.0090	0.019	0.043	0.019	0.0065	0.0033	
Copper	mg/L	D	--	--	--	--	< 0.0010 U	--	--	--	--	--	--	--	
Iron	mg/L	D	--	--	--	--	0.12	--	--	--	--	--	--	--	
Nickel	mg/L	D	--	--	--	--	< 0.0032 U	--	--	--	--	--	--	--	
Silver	mg/L	D	--	--	--	--	< 0.00025 U	--	--	--	--	--	--	--	
Vanadium	mg/L	D	--	--	--	--	< 0.0031 U	--	--	--	--	--	--	--	
Zinc	mg/L	D	--	--	--	--	0.043	--	--	--	--	--	--	--	
<b>Additional Parameters</b>															
Bicarbonate Alkalinity	mg/L	T	490	270	--	290	290	240	65	96	400 D	400	240	63	
Carbonate Alkalinity	mg/L	T	< 0.16 U	< 0.16 U	--	< 0.16 U	< 0.16 U	< 0.16 U	46	16	< 0.31 UD	< 0.16 U	< 0.16 U	42	
Magnesium	mg/L	T	27	23	--	26	26	25	21	12	24 D	26 D	23	19	
Potassium	mg/L	T	8.1	6.5	--	7.9	6.8	4.3	0.31	0.79	8.5 D	7.9 D	5.1	0.32	
Sodium	mg/L	T	43	30	--	38	34	37	44	21	40 D	43 D	30	30	
Total Alkalinity	mg/L	T	490	270	--	290	290	240	110	110	400 D	400	240	100	
Magnesium	mg/L	D	--	--	--	--	26	--	--	--	--	--	--	--	
Potassium	mg/L	D	--	--	--	--	7.4	--	--	--	--	--	--	--	
Sodium	mg/L	D	--	--	--	--	34	--	--	--	--	--	--	--	

**Notes:**  
 ugi - micrograms per liter.  
 mg/l = milligrams per liter.  
 su - standard pH units (pH is a field parameter)  
 pCi/L = picocuries per liter.  
 All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**  
 U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.  
 J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)  
 J+ Same as J, and the reported concentration is potentially biased high.  
 J- Same as J, and the reported concentration is potentially biased low.  
 UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.  
 R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.  
 D Dilution greater than 1, flagged by Trace.  
 G The sample MDC is greater than the requested RL.  
 B Constituent detected in blank and sample.

Sample Location:			SG-06										
Sample Date:	12/2/2022	1/5/2023	2/6/2023	3/13/2023	4/19/2023	5/23/2023	6/28/2023	8/8/2023	10/24/2023	2/14/2024	4/8/2024	7/17/2024	
Sample Type:	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	Field Sample	
Unit:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Sample Matrix:	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	
Constituent	Unit	Fraction	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	
<b>Field Parameters</b>													
Conductivity	mS/cm	N	--	--	--	--	--	--	0.69	0.74	--	--	0.55
Dissolved Oxygen	mg/L	N	--	--	--	--	--	--	4.93	6.01	--	--	4.85
Oxidation Reduction Potential	mV	N	--	--	--	--	--	--	60.2	-40.4	--	--	9.8
pH	su	N	--	--	--	--	--	--	7.37	7.98	--	--	7.94
Temperature	deg c	N	--	--	--	--	--	--	24.3	19.1	--	--	26.2
Turbidity	NTU	N	--	--	--	--	--	--	7.35	4.89	--	--	6.72
<b>Appendix III</b>													
Boron	mg/L	T	--	--	--	--	--	--	0.21	0.24 D	--	--	0.22
Calcium	mg/L	T	--	--	--	--	--	--	69 D	82 D	--	--	52
Chloride	mg/L	T	--	--	--	--	--	--	53 D	56 D	--	--	52 D
Fluoride	mg/L	T	--	--	--	--	--	--	0.18 D	0.18 D	--	--	0.23 D
Sulfate (as SO4)	mg/L	T	--	--	--	--	--	--	15 D	30 D	--	--	12 D
Total Dissolved Solids	mg/L	T	--	--	--	--	--	--	380 D	410 D	--	--	340 D
<b>Appendix IV</b>													
Antimony	mg/L	T	--	--	--	--	--	--	< 0.00010 U	0.00014 J	--	--	< 0.0001 U
Arsenic	mg/L	T	--	--	--	--	--	--	0.0016	0.0016	--	--	0.0038
Barium	mg/L	T	--	--	--	--	--	--	0.10	0.092	--	--	0.076
Beryllium	mg/L	T	--	--	--	--	--	--	< 0.000052 U	< 0.000052 U	--	--	< 0.000052 U
Cadmium	mg/L	T	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U	--	--	< 0.000075 U
Chromium, Total	mg/L	T	--	--	--	--	--	--	0.00088	0.00044	--	--	0.00061
Cobalt	mg/L	T	--	--	--	--	--	--	0.00019 J	0.00018 J	--	--	0.0001 J
Fluoride	mg/L	T	--	--	--	--	--	--	0.18 D	0.18 D	--	--	0.23 D
Lead	mg/L	T	--	--	--	--	--	--	0.00071	0.00053 J	--	--	0.00038 J
Lithium	mg/L	T	--	--	--	--	--	--	0.0061	0.0087	--	--	0.0074
Mercury	mg/L	T	--	--	--	--	--	--	< 0.00016 U	0.0002	--	--	< 0.00016 U
Molybdenum	mg/L	T	--	--	--	--	--	--	0.00039 J	0.0034	--	--	0.00077 J
Radium 226 and 228	pCi/L	T	--	--	--	--	--	--	< 0.926 U	< 0.838 U	--	--	< 1.88 U
Radium-226	pCi/L	T	--	--	--	--	--	--	< 0.16 U	< 0.288 U	--	--	0.296
Radium-228	pCi/L	T	--	--	--	--	--	--	< 0.926 U	< 0.838 U	--	--	< 1.88 UG
Selenium	mg/L	T	--	--	--	--	--	--	0.00015 J	0.00012 J	--	--	0.00017 J
Thallium	mg/L	T	--	--	--	--	--	--	< 0.000075 U	< 0.000075 U	--	--	< 0.000075 U
Total Suspended Solids	mg/L	T	--	--	--	--	--	--	120	< 4.0 UD	--	--	36
<b>Michigan CCR Part 115</b>													
Copper	mg/L	T	--	--	--	--	--	--	0.00089	0.00054	--	--	0.00078
Iron	mg/L	T	--	--	--	--	--	--	0.55	0.23	--	--	0.67
Nickel	mg/L	T	--	--	--	--	--	--	0.00084 J	0.0011 J	--	--	0.00082 J
Silver	mg/L	T	--	--	--	--	--	--	< 0.000050 U	< 0.00005 U	--	--	< 0.000050 U
Vanadium	mg/L	T	--	--	--	--	--	--	< 0.00062 U	< 0.00062 U	--	--	< 0.00062 U
Zinc	mg/L	T	--	--	--	--	--	--	0.0045	0.0080	--	--	0.0026
<b>Additional Parameters</b>													
Bicarbonate Alkalinity	mg/L	T	--	--	--	--	--	--	230	270 D	--	--	180
Carbonate Alkalinity	mg/L	T	--	--	--	--	--	--	< 0.16 U	< 0.31 UD	--	--	< 0.16 U
Magnesium	mg/L	T	--	--	--	--	--	--	21	25 D	--	--	21
Potassium	mg/L	T	--	--	--	--	--	--	0.78	5 D	--	--	0.7
Sodium	mg/L	T	--	--	--	--	--	--	29 D	35 D	--	--	30
Total Alkalinity	mg/L	T	--	--	--	--	--	--	230	270 D	--	--	180

**Notes:**

ug/l - micrograms per liter.  
mg/l = milligrams per liter.  
su - standard pH units (pH is a field parameter)  
pCi/L = picocuries per liter.

All metals were analyzed as total unless otherwise indicated.

**Qualifiers:**

- U The analyte was analyzed for, but was not detected at, a level greater than or equal to the level of the adjusted reporting limit (RL) for the sample and method.
- J The analyte was positively identified, and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain QC criteria were not met)
- J+ Same as J, and the reported concentration is potentially biased high.
- J- Same as J, and the reported concentration is potentially biased low.
- UU The analyte was not detected at a level greater than or equal to the adjusted method detection limit (MDL). However, the reported adjusted MDL is approximate and might be inaccurate or imprecise.
- R The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte might or might not be present in the sample.
- D Dilution greater than 1, flagged by Trace.
- G The sample MDC is greater than the requested RL.
- B Constituent detected in blank and sample.

## Appendix E

### Laboratory Reports

Trace Analytical Laboratories, Inc.  
2241 Black Creek Road  
Muskegon, MI 49444-2673



231-773-5998 Phone  
888-979-4469 Fax  
www.trace-labs.com

August 01, 2024

Ms. Molly Reeves  
HDR Michigan Inc.  
1000 Oakbrook Dr., Suite 200  
Ann Arbor, MI 48104

Phone: (734) 263-7138

RE: Trace Project 24G0879  
Client Project City of Grand Haven - Harbor Island

Dear Ms. Reeves:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at [jmink@trace-labs.com](mailto:jmink@trace-labs.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Mink".

Jon Mink  
Senior Project Manager  
Enclosures



Wisconsin Accreditation No. FID: 998044080 / TNI EL V1:2016

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**SAMPLE SUMMARY**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
24G0879-01	MW-02	Ground Water	AB/TB	07/17/24 18:20	07/18/24 08:04
24G0879-02	MW-07	Ground Water	AB/TB	07/17/24 16:22	07/18/24 08:04
24G0879-03	MW-09	Ground Water	AB/TB	07/17/24 18:24	07/18/24 08:04
24G0879-04	MW-10	Ground Water	AB/TB	07/17/24 17:28	07/18/24 08:04
24G0879-05	MW-12	Ground Water	AB/TB	07/17/24 08:32	07/18/24 08:04
24G0879-06	MW-17	Ground Water	AB/TB	07/17/24 13:58	07/18/24 08:04
24G0879-07	MW-18	Ground Water	AB/TB	07/17/24 12:54	07/18/24 08:04
24G0879-08	MW-20	Ground Water	AB/TB	07/17/24 15:00	07/18/24 08:04
24G0879-09	MW-31	Ground Water	AB/TB	07/17/24 14:30	07/18/24 08:04
24G0879-10	MW-32	Ground Water	AB/TB	07/17/24 16:00	07/18/24 08:04
24G0879-11	MW-36	Ground Water	AB/TB	07/17/24 11:02	07/18/24 08:04
24G0879-12	MW-37	Ground Water	AB/TB	07/17/24 10:04	07/18/24 08:04
24G0879-13	MW-38	Ground Water	AB/TB	07/17/24 12:00	07/18/24 08:04
24G0879-14	MWT-12	Ground Water	AB/TB	07/17/24 08:32	07/18/24 08:04
24G0879-15	MWT-36	Ground Water	AB/TB	07/17/24 11:02	07/18/24 08:04
24G0879-16	SG-02	Ground Water	AB/TB	07/17/24 18:20	07/18/24 08:04
24G0879-17	SG-04R	Ground Water	AB/TB	07/17/24 18:45	07/18/24 08:04
24G0879-18	SG-05	Ground Water	AB/TB	07/17/24 19:00	07/18/24 08:04
24G0879-19	SG-06	Ground Water	AB/TB	07/17/24 19:20	07/18/24 08:04
24G0879-20	MW-01R	Ground Water	AB/TB	07/18/24 13:38	07/19/24 08:05
24G0879-21	MW-03	Ground Water	AB/TB	07/18/24 12:30	07/19/24 08:05
24G0879-22	MW-04	Ground Water	AB/TB	07/18/24 10:30	07/19/24 08:05
24G0879-23	MW-06	Ground Water	AB/TB	07/18/24 15:50	07/19/24 08:05
24G0879-24	MW-08	Ground Water	AB/TB	07/18/24 17:40	07/19/24 08:05
24G0879-25	MW-11	Ground Water	AB/TB	07/18/24 15:00	07/19/24 08:05
24G0879-26	MW-16	Ground Water	AB/TB	07/18/24 08:30	07/19/24 08:05
24G0879-27	MW-19	Ground Water	AB/TB	07/18/24 14:40	07/19/24 08:05
24G0879-28	MW-27	Ground Water	AB/TB	07/18/24 10:54	07/19/24 08:05
24G0879-29	MW-28	Ground Water	AB/TB	07/18/24 11:54	07/19/24 08:05
24G0879-30	MW-30	Ground Water	AB/TB	07/18/24 18:00	07/19/24 08:05
24G0879-31	MW-31	Ground Water	AB/TB	07/18/24 19:05	07/19/24 08:05
24G0879-32	MW-33	Ground Water	AB/TB	07/18/24 09:48	07/19/24 08:05
24G0879-33	MW-34	Ground Water	AB/TB	07/18/24 09:00	07/19/24 08:05

**CERTIFICATE OF ANALYSIS**

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**AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT**

**DEFINITIONS**

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
LOQ	Limit of Quantitation
LOD	Limit of Detection
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.  
 Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

**DATA QUALIFIERS**

Trace ID: 24G0879-01

***Analysis: EPA 200.8 Rev. 5.4***

**Lead** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

**Thallium** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

**pH** Note PH01d : The pH was analyzed at 10:11

Trace ID: 24G0879-02

***Analysis: SM 4500-H+ B-11***

**pH** Note PH01n : The pH was analyzed at 10:21

Trace ID: 24G0879-03

***Analysis: EPA 200.8 Rev. 5.4***

**Lead** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

**Thallium** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

**pH** Note PH01o : The pH was analyzed at 10:22

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---

Trace ID: 24G0879-04

***Analysis: EPA 200.8 Rev. 5.4***

---

**Lead** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

---

**Thallium** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01p : The pH was analyzed at 10:23

---

Trace ID: 24G0879-05

***Analysis: SM 4500-H+ B-11***

---

**pH** Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .

---

**pH** Note PH01q : The pH was analyzed at 10:24

---

Trace ID: 24G0879-06

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01r : The pH was analyzed at 10:26

---

Trace ID: 24G0879-07

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01s : The pH was analyzed at 10:27

---

Trace ID: 24G0879-08

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01t : The pH was analyzed at 10:28

---

Trace ID: 24G0879-10

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01u : The pH was analyzed at 10:30

---

Trace ID: 24G0879-11

***Analysis: SM 4500-H+ B-11***

---

**pH** Note PH01v : The pH was analyzed at 10:31

---

Trace ID: 24G0879-12

***Analysis: SM 4500-H+ B-11***

---

**pH** Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .

---

**pH** Note PH01w : The pH was analyzed at 10:32

---

Trace ID: 24G0879-13

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**Analysis: SM 4500-H+ B-11**

pH Note PH01x : The pH was analyzed at 10:33

Trace ID: 24G0879-14

**Analysis: SM 4500-H+ B-11**

pH Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time.

pH Note PH01y : The pH was analyzed at 10:34

Trace ID: 24G0879-15

**Analysis: SM 4500-H+ B-11**

pH Note PH01z : The pH was analyzed at 10:35

Trace ID: 24G0879-16

**Analysis: SM 4500-H+ B-11**

pH Note PH01aa : The pH was analyzed at 10:36

Trace ID: 24G0879-17

**Analysis: EPA 200.8 Rev. 5.4**

Lead Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Thallium Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

**Analysis: SM 4500-H+ B-11**

pH Note PH01ab : The pH was analyzed at 10:38

Trace ID: 24G0879-18

**Analysis: SM 4500-H+ B-11**

pH Note PH01ac : The pH was analyzed at 10:39

Trace ID: 24G0879-19

**Analysis: SM 4500-H+ B-11**

pH Note PH01ad : The pH was analyzed at 10:40

Trace ID: 24G0879-20

**Analysis: EPA 200.8 Rev. 5.4**

Lead Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

Thallium Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

**Analysis: SM 4500-H+ B-11**

pH Note PH01 : The pH was analyzed at 10:05

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Trace ID: 24G0879-21

***Analysis: EPA 200.8 Rev. 5.4***

<b>Lead</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
<b>Thallium</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note PH01b : The pH was analyzed at 10:08
-----------	---

Trace ID: 24G0879-22

***Analysis: EPA 200.8 Rev. 5.4***

<b>Lead</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
<b>Thallium</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note PH01c : The pH was analyzed at 10:09
-----------	---

Trace ID: 24G0879-23

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note PH01c : The pH was analyzed at 10:09
-----------	---

Trace ID: 24G0879-24

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note PH01d : The pH was analyzed at 10:11
-----------	---

Trace ID: 24G0879-25

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note PH01e : The pH was analyzed at 10:12
-----------	---

Trace ID: 24G0879-26

***Analysis: SM 4500-H+ B-11***

<b>pH</b>	Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .
<b>pH</b>	Note PH01f : The pH was analyzed at 10:13

Trace ID: 24G0879-27

***Analysis: EPA 200.8 Rev. 5.4***

<b>Lead</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.
<b>Thallium</b>	Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

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---

pH Note PH01g : The pH was analyzed at 10:14

---

Trace ID: 24G0879-28

***Analysis: SM 4500-H+ B-11***

---

pH Note PH01h : The pH was analyzed at 10:15

---

Trace ID: 24G0879-29

***Analysis: SM 4500-H+ B-11***

---

pH Note PH01i : The pH was analyzed at 10:16

---

Trace ID: 24G0879-30

***Analysis: EPA 200.8 Rev. 5.4***

---

**Lead** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

---

**Thallium** Note DL02 : The reporting limit was raised due to a dilution required because of chromatographic/matrix interference with the internal standards.

***Analysis: SM 4500-H+ B-11***

---

pH Note PH01j : The pH was analyzed at 10:17

---

Trace ID: 24G0879-31

***Analysis: SM 4500-H+ B-11***

---

pH Note PH01k : The pH was analyzed at 10:18

---

Trace ID: 24G0879-32

***Analysis: SM 4500-H+ B-11***

---

pH Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .

---

pH Note PH01l : The pH was analyzed at 10:19

---

Trace ID: 24G0879-33

***Analysis: SM 4500-H+ B-11***

---

pH Note H02 : The sample result and reporting limit must be considered estimated. The analysis was performed beyond the analyte EPA established hold time .

---

pH Note PH01m : The pH was analyzed at 10:20

---

Trace ID: T153774-DUP1

***Analysis: SM 2540 C-20***

---

**Total Dissolved Solids** Note RPD : The relative percent difference between the sample and sample duplicate is out of control. The sample result should be considered estimated.

---

Trace ID: T153805-DUP1

***Analysis: SM 4500-H+ B-11***

---

pH Note PH01m : The pH was analyzed at 10:20

---

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---

Trace ID: T153836-DUP1

***Analysis: SM 4500-H+ B-11***

**pH**

Note PH01a : The pH was analyzed at 10:06

---

Trace ID: T154039-MS1

***Analysis: EPA 200.7 Rev. 4.4***

**Calcium**

Note MS09 : The MS recovery was out of control. Because the background concentration of this analyte is greater than 4X the spike amount, no data require qualification.

---

Trace ID: T154040-MS1

***Analysis: EPA 200.7 Rev. 4.4***

**Calcium**

Note MS09 : The MS recovery was out of control. Because the background concentration of this analyte is greater than 4X the spike amount, no data require qualification.

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 Muskegon, MI 49444-2673



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 888-979-4469 Fax  
 www.trace-labs.com

**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-01 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: MW-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
------------	---------------	-----	----------	----------	----	----------	----	-------	-----

**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	110 mg/L	0.18	20	07/25/24	dea	07/26/24	jlh		0.033
Calcium	200 mg/L	1.3	5	07/25/24	dea	07/26/24	jlh		0.38
Lithium	1.3 mg/L	0.012	5	07/25/24	dea	07/26/24	jlh	N	0.0094
Magnesium	63 mg/L	0.25	5	07/25/24	dea	07/26/24	jlh		0.050
Potassium	48 mg/L	1.2	5	07/25/24	dea	07/26/24	jlh		0.18
Sodium	320 mg/L	0.62	5	07/25/24	dea	07/26/24	jlh		0.44

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00015 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0061 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.33 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.00019 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.047 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.0063 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.0023 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02, J	0.00050
Molybdenum	0.0045 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.0014 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-01 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: MW-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	10 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	160 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	2200 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	2200 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	2100 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	53 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.28 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01d	

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### ANALYTICAL RESULTS

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-02 Date Collected: 07/17/24 16:22 Matrix: Ground Water  
 Sample ID: MW-07 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
Analysis Method: EPA 7470A									
Batch: T153900									
Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
<b>METALS, TOTAL</b>									
Analysis Method: EPA 200.7 Rev. 4.4									
Batch: T154039									
Boron	10 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	150 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.0057 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	36 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	4.5 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	55 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088
Analysis Method: EPA 200.8 Rev. 5.4									
Batch: T154039									
Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00023 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Barium	0.36 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00074 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00080 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00011 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-02 Date Collected: 07/17/24 16:22 Matrix: Ground Water  
 Sample ID: MW-07 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.19 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	J, N	0.11
Chloride	14 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	15 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	640 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	640 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	720 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	46 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	6.85 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01n	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-03 Date Collected: 07/17/24 18:24 Matrix: Ground Water  
 Sample ID: MW-09 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	5.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	430 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.30 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	53 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	15 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	28 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00012 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0025 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.20 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000057 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0021 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00024 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00050 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.016 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00029 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-03 Date Collected: 07/17/24 18:24 Matrix: Ground Water  
 Sample ID: MW-09 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	2.6 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	25 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	630 mg/L	30	50	07/18/24	aeo	07/19/24	aeo		11
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	630 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	630 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	1700 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	57 mg/L	4.0	0.9803922	07/18/24	cdj	07/18/24	cdj		3.9
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	6.98 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01o	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-04 Date Collected: 07/17/24 17:28 Matrix: Ground Water  
 Sample ID: MW-10 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	15 mg/L	0.088	10	07/25/24	dea	07/26/24	jlh		0.016
Calcium	430 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.94 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	100 mg/L	0.50	10	07/25/24	dea	07/26/24	jlh		0.10
Potassium	63 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	250 mg/L	1.2	10	07/25/24	dea	07/26/24	jlh		0.88

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0012 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.19 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0028 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00025 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00050 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.0037 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00034 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-04 Date Collected: 07/17/24 17:28 Matrix: Ground Water  
 Sample ID: MW-10 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	4.2 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	420 mg/L	15	100	07/18/24	aeo	07/19/24	aeo		12
Sulfate as SO4	1000 mg/L	60	100	07/18/24	aeo	07/19/24	aeo		22
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	410 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	410 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	2700 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	20 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.43 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01p	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-05 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MW-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.41 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	74 mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.0047 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	21 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	1.3 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	12 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00040 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0032 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.071 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	0.0032 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00056 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00038 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0064 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00014 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-05 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MW-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.29 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	18 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	62 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	200 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	200 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	380 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	<3.9 mg/L	4.0	0.9803922	07/18/24	cdj	07/18/24	cdj		3.9
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.38 pH Units		1	07/17/24	bsv	07/18/24	bsv	H02, PH01q	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-06 Date Collected: 07/17/24 13:58 Matrix: Ground Water  
 Sample ID: MW-17 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.75 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	140 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.033 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	24 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	16 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	39 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00016 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0026 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.53 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0011 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00044 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.00042 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0031 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00021 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-06 Date Collected: 07/17/24 13:58 Matrix: Ground Water  
 Sample ID: MW-17 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.56 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	33 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	33 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	620 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	9.0 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.47 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01r	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-07 Date Collected: 07/17/24 12:54 Matrix: Ground Water  
 Sample ID: MW-18 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	3.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	330 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.041 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	33 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	10 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	23 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00011 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.031 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.022 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.0014 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00015 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.018 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00016 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-07 Date Collected: 07/17/24 12:54 Matrix: Ground Water  
 Sample ID: MW-18 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	4.5 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	27 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	750 mg/L	60	100	07/18/24	aeo	07/19/24	aeo		22
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	180 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	180 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	1300 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	15 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.10 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01s	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-08 Date Collected: 07/17/24 15:00 Matrix: Ground Water  
 Sample ID: MW-20 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	1.1 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	120 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.064 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	41 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	10 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	57 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0018 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.46 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00021 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00020
Cobalt	0.00089 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.0020 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.0048 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	<0.00010 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-08 Date Collected: 07/17/24 15:00 Matrix: Ground Water  
 Sample ID: MW-20 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.29 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	62 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	18 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	470 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	470 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	640 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	34 mg/L	4.0	1.010101	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.12 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01t	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-09 Date Collected: 07/17/24 14:30 Matrix: Ground Water  
 Sample ID: MW-31 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	5.4 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	170 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.052 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	38 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	12 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	54 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00038 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0012 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.18 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0029 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00010 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.00025 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.00083 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00016 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-10 Date Collected: 07/17/24 16:00 Matrix: Ground Water  
 Sample ID: MW-32 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	4.0 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	140 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.13 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	26 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	11 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	30 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00059 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.63 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00036 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00046 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.0038 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	<0.00010 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-10 Date Collected: 07/17/24 16:00 Matrix: Ground Water  
 Sample ID: MW-32 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	1.5 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	42 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	9.5 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	440 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	440 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	560 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	23 mg/L	4.0	0.9803922	07/18/24	cdj	07/18/24	cdj		3.9
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.44 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01u	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-11 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MW-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.41 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	61 mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.0089 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	7.5 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	45 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	65 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.0015 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.029 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.17 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	0.00082 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0031 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00027 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.051 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.042 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00072 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-11 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MW-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.65 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	39 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	21 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	160 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	110 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	260 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	460 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	4.0 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	9.60 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01v	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-12 Date Collected: 07/17/24 10:04 Matrix: Ground Water  
 Sample ID: MW-37 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	3.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	160 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.022 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	12 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	20 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	98 mg/L	1.2	10	07/25/24	dea	07/26/24	jlh		0.88

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00040 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00046 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Barium	0.046 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	0.00013 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000075
Chromium	0.00054 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00053 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00013 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0075 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.0030 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-12 Date Collected: 07/17/24 10:04 Matrix: Ground Water  
 Sample ID: MW-37 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.39 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	29 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	260 mg/L	15	25	07/18/24	aeo	07/19/24	aeo		5.5
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T153860</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	340 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	340 mg/L	5.0	1	07/22/24	ljs	07/22/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	840 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	3.9 mg/L	4.0	0.9803922	07/18/24	cdj	07/18/24	cdj	J	3.9
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.29 pH Units		1	07/17/24	bsv	07/18/24	bsv	H02, PH01w	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-13 Date Collected: 07/17/24 12:00 Matrix: Ground Water  
 Sample ID: MW-38 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	2.4 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	96 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.098 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	13 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	86 mg/L	2.5	10	07/25/24	dea	07/26/24	jlh		0.36
Sodium	100 mg/L	1.2	10	07/25/24	dea	07/26/24	jlh		0.88

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.0017 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0071 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.12 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000067 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	0.00037 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.016 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00071 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.086 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.014 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00095 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-13 Date Collected: 07/17/24 12:00 Matrix: Ground Water  
 Sample ID: MW-38 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	1.0 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	57 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	170 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	300 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	50 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	350 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	850 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	53 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	8.90 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01x	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-14 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MWT-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.39 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	74 mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.0045 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	21 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	1.3 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	12 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00039 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0032 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.069 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	0.0031 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00020
Cobalt	0.00053 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00031 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00018 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-14 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MWT-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.29 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	18 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	63 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	200 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	200 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	340 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.50 pH Units		1	07/17/24	bsv	07/18/24	bsv	H02, PH01y	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-15 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MWT-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.39 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	60 mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.0087 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	7.2 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	46 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	66 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.0017 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.030 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.16 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	0.00090 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0034 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00028 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.057 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.044 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00081 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-15 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MWT-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.65 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	39 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	22 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	150 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	97 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	250 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	460 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	<4.0 mg/L	4.0	0.990099	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	9.66 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01z	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-16 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: SG-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	8.1 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	170 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.086 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	61 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	20 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	66 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.0011 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0086 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.12 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000057 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00064 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00034 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.00083 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.011 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.0015 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-16 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: SG-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	4.5 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	120 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	540 mg/L	30	50	07/18/24	aeo	07/19/24	aeo		11
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	94 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	94 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	1100 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	17 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	8.41 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01aa	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-17 Date Collected: 07/17/24 18:45 Matrix: Ground Water  
 Sample ID: SG-04R Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	6.8 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	510 mg/L	5.1	20	07/25/24	dea	07/26/24	jlh		1.5
Lithium	0.091 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	61 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	8.4 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	39 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00046 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0028 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.024 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00026 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00020 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00050 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.013 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.0022 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-17 Date Collected: 07/17/24 18:45 Matrix: Ground Water  
 Sample ID: SG-04R Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**WET CHEMISTRY**

Analysis Method: EPA 300.0 Rev. 2.1  
 Batch: T153776

Fluoride	4.2 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	38 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	1500 mg/L	60	100	07/18/24	aeo	07/19/24	aeo		22

Analysis Method: SM 2320 B-21  
 Batch: T154075

Bicarbonate Alkalinity as CaCO3 at pH 4.5	42 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	0.80 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	J, N	0.16
Total Alkalinity as CaCO3 at pH 4.5	43 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16

Analysis Method: SM 2540 C-20  
 Batch: T153774

Total Dissolved Solids	2200 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
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Analysis Method: SM 2540 D-20  
 Batch: T153775

Total Suspended Solids	15 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
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Analysis Method: SM 4500-H+ B-11  
 Batch: T153805

pH	8.91 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01ab	
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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-18 Date Collected: 07/17/24 19:00 Matrix: Ground Water  
 Sample ID: SG-05 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016	mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.34	mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	22	mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.014	mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	19	mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	0.32	mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	30	mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00030	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0017	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.10	mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00043	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00013	mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.0019	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.0039	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00027	mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075	mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-18 Date Collected: 07/17/24 19:00 Matrix: Ground Water  
 Sample ID: SG-05 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**WET CHEMISTRY**

Analysis Method: EPA 300.0 Rev. 2.1  
 Batch: T153776

Fluoride	0.32 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	52 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	13 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2

Analysis Method: SM 2320 B-21  
 Batch: T154075

Bicarbonate Alkalinity as CaCO3 at pH 4.5	63 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	42 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	100 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16

Analysis Method: SM 2540 C-20  
 Batch: T153774

Total Dissolved Solids	240 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
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Analysis Method: SM 2540 D-20  
 Batch: T153775

Total Suspended Solids	4.0 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
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Analysis Method: SM 4500-H+ B-11  
 Batch: T153805

pH	9.70 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01ac	
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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-19 Date Collected: 07/17/24 19:20 Matrix: Ground Water  
 Sample ID: SG-06 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	0.22 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	52 mg/L	0.26	1	07/25/24	dea	07/26/24	jlh		0.076
Lithium	0.0074 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	21 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	0.70 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	30 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0038 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.076 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00061 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00010 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.00038 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.00077 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00017 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-19 Date Collected: 07/17/24 19:20 Matrix: Ground Water  
 Sample ID: SG-06 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153776</i>									
Fluoride	0.23 mg/L	0.20	10	07/18/24	aeo	07/18/24	aeo	N	0.11
Chloride	52 mg/L	1.5	10	07/18/24	aeo	07/18/24	aeo		1.2
Sulfate as SO4	12 mg/L	6.0	10	07/18/24	aeo	07/18/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	180 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	180 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153774</i>									
Total Dissolved Solids	340 mg/L	50	5	07/18/24	cdj	07/19/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153775</i>									
Total Suspended Solids	36 mg/L	4.0	1	07/18/24	cdj	07/18/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153805</i>									
pH	7.75 pH Units		1	07/17/24	bsv	07/18/24	bsv	PH01ad	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-20 Date Collected: 07/18/24 13:38 Matrix: Ground Water  
 Sample ID: MW-01R Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153900

Mercury	<0.00016 mg/L	0.00020	1	07/30/24	dea	07/30/24	acs		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Boron	150 mg/L	0.18	20	07/25/24	dea	07/26/24	jlh		0.033
Calcium	160 mg/L	5.1	20	07/25/24	dea	07/26/24	jlh		1.5
Lithium	2.9 mg/L	0.050	20	07/25/24	dea	07/26/24	jlh	N	0.038
Magnesium	100 mg/L	1.0	20	07/25/24	dea	07/26/24	jlh		0.20
Potassium	86 mg/L	5.0	20	07/25/24	dea	07/26/24	jlh		0.71
Sodium	430 mg/L	2.5	20	07/25/24	dea	07/26/24	jlh		1.8

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Antimony	0.00018 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0014 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.33 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.00013 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0033 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.0011 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00062 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02, J	0.00050
Molybdenum	0.00037 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00079 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-20 Date Collected: 07/18/24 13:38 Matrix: Ground Water  
 Sample ID: MW-01R Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	15 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	170 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	100 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1500 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	1500 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	2500 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.73 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01	

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### ANALYTICAL RESULTS

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-21 Date Collected: 07/18/24 12:30 Matrix: Ground Water  
 Sample ID: MW-03 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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#### METALS, TOTAL

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016	mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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#### METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	3.9	mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	340	mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.031	mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	190	mg/L	0.50	10	07/25/24	dea	07/26/24	jlh		0.10
Potassium	17	mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	89	mg/L	1.2	10	07/25/24	dea	07/26/24	jlh		0.88

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00077	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.27	mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000054	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0045	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00059	mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	<0.00050	mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	<0.00025	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00038	mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038	mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-21 Date Collected: 07/18/24 12:30 Matrix: Ground Water  
 Sample ID: MW-03 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	0.62 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	120 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	310 mg/L	15	25	07/19/24	aeo	07/20/24	aeo		5.5
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	1900 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.43 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01b	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-22 Date Collected: 07/18/24 10:30 Matrix: Ground Water  
 Sample ID: MW-04 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	4.4 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	380 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.068 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	130 mg/L	0.50	10	07/25/24	dea	07/26/24	jlh		0.10
Potassium	24 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	84 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00086 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.084 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000066 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0047 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00024 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00050 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.0014 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00023 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-22 Date Collected: 07/18/24 10:30 Matrix: Ground Water  
 Sample ID: MW-04 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	1.4 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	120 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	810 mg/L	60	100	07/22/24	bm	07/22/24	bm		22
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	710 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	710 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	2100 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	5.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.36 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01c	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-23 Date Collected: 07/18/24 15:50 Matrix: Ground Water  
 Sample ID: MW-06 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	8.3 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	250 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.14 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	81 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	22 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	64 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00098 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	1.7 mg/L	0.025	10	07/25/24	dea	07/31/24	acs		0.0068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0014 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00037 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.00028 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00020 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-23 Date Collected: 07/18/24 15:50 Matrix: Ground Water  
 Sample ID: MW-06 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	0.99 mg/L	0.20	10	07/19/24	aeo	07/20/24	aeo	N	0.11
Chloride	31 mg/L	1.5	10	07/19/24	aeo	07/20/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/20/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1100 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	1100 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	1200 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	27 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.20 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01c	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-24 Date Collected: 07/18/24 17:40 Matrix: Ground Water  
 Sample ID: MW-08 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	7.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	120 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.11 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	25 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	11 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	36 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.044 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	1.3 mg/L	0.025	10	07/25/24	dea	07/31/24	acs		0.0068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00071 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00037 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.00031 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00012 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-24 Date Collected: 07/18/24 17:40 Matrix: Ground Water  
 Sample ID: MW-08 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	1.1 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	30 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	460 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	550 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	18 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.12 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01d	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-25 Date Collected: 07/18/24 15:00 Matrix: Ground Water  
 Sample ID: MW-11 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	4.8 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	270 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.042 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	49 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	9.2 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	36 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0015 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.56 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00028 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.00018 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0010 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00017 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-25 Date Collected: 07/18/24 15:00 Matrix: Ground Water  
 Sample ID: MW-11 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**WET CHEMISTRY**

**Analysis Method: EPA 300.0 Rev. 2.1**  
*Batch: T153815*

Fluoride	0.47 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	59 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2

**Analysis Method: SM 2320 B-21**  
*Batch: T154075*

Bicarbonate Alkalinity as CaCO3 at pH 4.5	820 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	820 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16

**Analysis Method: SM 2540 C-20**  
*Batch: T153931*

Total Dissolved Solids	1000 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
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**Analysis Method: SM 2540 D-20**  
*Batch: T153940*

Total Suspended Solids	4.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
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**Analysis Method: SM 4500-H+ B-11**  
*Batch: T153836*

pH	7.31 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01e	
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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-26 Date Collected: 07/18/24 08:30 Matrix: Ground Water  
 Sample ID: MW-16 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	0.43 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	250 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.025 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	27 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	5.1 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	23 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0034 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.28 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00085 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00017 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00011 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-26 Date Collected: 07/18/24 08:30 Matrix: Ground Water  
 Sample ID: MW-16 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	0.19 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	J, N	0.11
Chloride	21 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	710 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	710 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	830 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	11 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	6.81 pH Units		1	07/18/24	bsv	07/19/24	bsv	H02, PH01f	

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### ANALYTICAL RESULTS

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-27 Date Collected: 07/18/24 14:40 Matrix: Ground Water  
 Sample ID: MW-19 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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#### METALS, TOTAL

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016	mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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#### METALS, TOTAL

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	2.0	mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	440	mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.090	mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	33	mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	14	mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	29	mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0065	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.036	mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	0.000085	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.000052
Cadmium	<0.000075	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.00027	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	<0.00010	mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	<0.00050	mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.0081	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00012	mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038	mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-27 Date Collected: 07/18/24 14:40 Matrix: Ground Water  
 Sample ID: MW-19 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	1.7 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	34 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	940 mg/L	60	100	07/19/24	aeo	07/20/24	aeo		22
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	300 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	300 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	1700 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	34 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	6.76 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01g	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-28 Date Collected: 07/18/24 10:54 Matrix: Ground Water  
 Sample ID: MW-27 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	0.44 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	170 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.0099 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	45 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	9.8 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	72 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0011 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.28 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.033 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00074 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	<0.00010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00027 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-28 Date Collected: 07/18/24 10:54 Matrix: Ground Water  
 Sample ID: MW-27 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	0.48 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	89 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	2.3 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo	J	2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	1300 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	890 mg/L	38	3.846154	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	6.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	6.88 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01h	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-29 Date Collected: 07/18/24 11:54 Matrix: Ground Water  
 Sample ID: MW-28 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016	mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	6.1	mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	160	mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.15	mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	27	mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	13	mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	66	mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	0.00016	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00010
Arsenic	0.0014	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.70	mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.0092	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00046	mg/L	0.00052	1	07/25/24	dea	07/30/24	jma	J	0.00010
Lead	0.0013	mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Molybdenum	0.00054	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00024	mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075	mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-29 Date Collected: 07/18/24 11:54 Matrix: Ground Water  
 Sample ID: MW-28 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	1.5 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	67 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	600 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	600 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	690 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	86 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	6.82 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01i	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-30 Date Collected: 07/18/24 18:00 Matrix: Ground Water  
 Sample ID: MW-30 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	1.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	500 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.13 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	110 mg/L	0.50	10	07/25/24	dea	07/26/24	jlh		0.10
Potassium	11 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	82 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	<0.00010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.00058 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.041 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.010 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00077 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	<0.00050 mg/L	0.0028	5	07/25/24	dea	07/30/24	jma	DL02	0.00050
Molybdenum	0.00089 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00025
Selenium	0.00017 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.00038 mg/L	0.0019	5	07/25/24	dea	07/30/24	jma	DL02	0.00038

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-30 Date Collected: 07/18/24 18:00 Matrix: Ground Water  
 Sample ID: MW-30 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	1.1 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	190 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	960 mg/L	60	100	07/19/24	aeo	07/20/24	aeo		22
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	630 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	630 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	2300 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153917</i>									
Total Suspended Solids	18 mg/L	4.0	1	07/22/24	cdj	07/22/24	cdj		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.06 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01j	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-31 Date Collected: 07/18/24 19:05 Matrix: Ground Water  
 Sample ID: MW-31 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	4.7 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	100 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	120 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154075</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	410 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	410 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	780 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	<4.0 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	7.91 pH Units		1	07/18/24	bsv	07/19/24	bsv	PH01k	

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-32 Date Collected: 07/18/24 09:48 Matrix: Ground Water  
 Sample ID: MW-33 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	0.10 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	200 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.0069 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	21 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	5.7 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	21 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	0.00035 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.021 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.16 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.011 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.00058 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00013 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	0.0014 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00058 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma		0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-32 Date Collected: 07/18/24 09:48 Matrix: Ground Water  
 Sample ID: MW-33 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**WET CHEMISTRY**

Analysis Method: EPA 300.0 Rev. 2.1  
 Batch: T153815

Fluoride	0.28 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	36 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	3.7 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo	J	2.2

Analysis Method: SM 2320 B-21  
 Batch: T154075

Bicarbonate Alkalinity as CaCO3 at pH 4.5	550 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	550 mg/L	5.0	1	07/25/24	ljs	07/25/24	ljs		0.16

Analysis Method: SM 2540 C-20  
 Batch: T153931

Total Dissolved Solids	740 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
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Analysis Method: SM 2540 D-20  
 Batch: T153940

Total Suspended Solids	80 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
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Analysis Method: SM 4500-H+ B-11  
 Batch: T153836

pH	6.86 pH Units		1	07/18/24	bsv	07/19/24	bsv	H02, PH01I	
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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-33 Date Collected: 07/18/24 09:00 Matrix: Ground Water  
 Sample ID: MW-34 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 7470A  
 Batch: T153901

Mercury	<0.00016 mg/L	0.00020	1	07/26/24	dea	07/26/24	jlh		0.00016
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Boron	2.9 mg/L	0.0088	1	07/25/24	dea	07/26/24	jlh		0.0016
Calcium	220 mg/L	2.6	10	07/25/24	dea	07/26/24	jlh		0.76
Lithium	0.079 mg/L	0.0025	1	07/25/24	dea	07/26/24	jlh	N	0.0019
Magnesium	25 mg/L	0.10	1	07/25/24	dea	07/26/24	jlh		0.010
Potassium	10 mg/L	0.25	1	07/25/24	dea	07/26/24	jlh		0.036
Sodium	29 mg/L	0.12	1	07/25/24	dea	07/26/24	jlh		0.088

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Antimony	0.00029 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00010
Arsenic	0.0010 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma		0.00010
Barium	0.52 mg/L	0.0025	1	07/25/24	dea	07/30/24	jma		0.00068
Beryllium	<0.000052 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000052
Cadmium	<0.000075 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.000075
Chromium	0.023 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Cobalt	0.0010 mg/L	0.00052	1	07/25/24	dea	07/30/24	jma		0.00010
Lead	0.00047 mg/L	0.00055	1	07/25/24	dea	07/30/24	jma	J	0.00010
Molybdenum	<0.00025 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00025
Selenium	0.00028 mg/L	0.00050	1	07/25/24	dea	07/30/24	jma	J	0.00010
Thallium	<0.000075 mg/L	0.00038	1	07/25/24	dea	07/30/24	jma		0.000075

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-33 Date Collected: 07/18/24 09:00 Matrix: Ground Water  
 Sample ID: MW-34 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>WET CHEMISTRY</b>									
<b>Analysis Method: EPA 300.0 Rev. 2.1</b>									
<i>Batch: T153815</i>									
Fluoride	0.31 mg/L	0.20	10	07/19/24	aeo	07/19/24	aeo	N	0.11
Chloride	22 mg/L	1.5	10	07/19/24	aeo	07/19/24	aeo		1.2
Sulfate as SO4	<2.2 mg/L	6.0	10	07/19/24	aeo	07/19/24	aeo		2.2
<b>Analysis Method: SM 2320 B-21</b>									
<i>Batch: T154137</i>									
Bicarbonate Alkalinity as CaCO3 at pH 4.5	960 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Carbonate Alkalinity as CaCO3 at pH 8.2	<0.16 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs	N	0.16
Total Alkalinity as CaCO3 at pH 4.5	960 mg/L	5.0	1	07/26/24	ljs	07/26/24	ljs		0.16
<b>Analysis Method: SM 2540 C-20</b>									
<i>Batch: T153931</i>									
Total Dissolved Solids	760 mg/L	40	4	07/23/24	cdj	07/23/24	cdj		
<b>Analysis Method: SM 2540 D-20</b>									
<i>Batch: T153940</i>									
Total Suspended Solids	150 mg/L	4.0	1	07/23/24	gmr	07/23/24	gmr		4.0
<b>Analysis Method: SM 4500-H+ B-11</b>									
<i>Batch: T153836</i>									
pH	6.62 pH Units		1	07/18/24	bsv	07/19/24	bsv	H02, PH01m	

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**QUALITY CONTROL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153900	Analysis Description: Mercury, Total, EPA 7470/7471
QC Batch Method: EPA 7470A Prep	Analysis Method: EPA 7470A

**METHOD BLANK: T153900-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

**LABORATORY CONTROL SAMPLE: T153900-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00195	97	77-122	

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T153900-MSD1** Original: 24G0879-08

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00198	0.00197	99	99	76-123	0.3	20	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153901	Analysis Description: Mercury, Total, EPA 7470/7471
QC Batch Method: EPA 7470A Prep	Analysis Method: EPA 7470A

**METHOD BLANK: T153901-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

**LABORATORY CONTROL SAMPLE: T153901-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00214	107	77-122	

**MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T153901-MSD1** Original: 24G0879-33

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0	0.00200	0.00214	0.00214	107	107	76-123	0	20	

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Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154039	Analysis Description: Calcium, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

**METHOD BLANK: T154039-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Boron	mg/L	<0.0088	0.0088	
Calcium	mg/L	<0.26	0.26	
Potassium	mg/L	<0.25	0.25	
Lithium	mg/L	<0.0025	0.0025	
Magnesium	mg/L	<0.10	0.10	
Sodium	mg/L	<0.12	0.12	

**LABORATORY CONTROL SAMPLE: T154039-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	1.60	1.59	99	85-115	
Calcium	mg/L	16.0	15.9	99	85-115	
Potassium	mg/L	16.0	16.0	100	85-115	
Lithium	mg/L	1.60	1.61	101	85-115	
Magnesium	mg/L	16.0	16.0	100	85-115	
Sodium	mg/L	16.0	15.8	99	85-115	

**MATRIX SPIKE: T154039-MS1** Original: 24G0879-02

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	10.4	1.60	11.8	88	70-130	
<b>Calcium</b>	<b>mg/L</b>	<b>147</b>	<b>16.0</b>	<b>156</b>	<b>55</b>	<b>70-130</b>	<b>MS09</b>
Potassium	mg/L	4.46	16.0	20.3	99	70-130	
Lithium	mg/L	0	1.60	1.63	102	70-130	
Magnesium	mg/L	36.2	16.0	51.6	96	70-130	
Sodium	mg/L	54.8	16.0	68.4	85	70-130	

**MATRIX SPIKE: T154039-MS2** Original: 24G0879-16

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	8.10	1.60	9.69	99	70-130	
Calcium	mg/L	165	16.0	177	71	70-130	
Potassium	mg/L	19.6	16.0	35.5	100	70-130	
Lithium	mg/L	0.0859	1.60	1.74	103	70-130	

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**MATRIX SPIKE: T154039-MS2** Original: **24G0879-16**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Magnesium	mg/L	60.6	16.0	78.1	109	70-130	
Sodium	mg/L	65.8	16.0	80.9	94	70-130	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154040

Analysis Description: Calcium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.7 Rev. 4.4

**METHOD BLANK: T154040-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
<b>Boron</b>	<b>mg/L</b>	<b>0.00805</b>	<b>0.0088</b>	<b>J</b>
Calcium	mg/L	<0.26	0.26	
Potassium	mg/L	<0.25	0.25	
Lithium	mg/L	<0.0025	0.0025	
Magnesium	mg/L	<0.10	0.10	
Sodium	mg/L	<0.12	0.12	

**LABORATORY CONTROL SAMPLE: T154040-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Boron	mg/L	1.60	1.66	104	85-115	
Calcium	mg/L	16.0	16.3	102	85-115	
Potassium	mg/L	16.0	16.1	101	85-115	
Lithium	mg/L	1.60	1.63	102	85-115	
Magnesium	mg/L	16.0	16.4	103	85-115	
Sodium	mg/L	16.0	16.0	100	85-115	

**MATRIX SPIKE: T154040-MS1** Original: **24G0879-22**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	4.36	1.60	6.28	120	70-130	
<b>Calcium</b>	<b>mg/L</b>	<b>376</b>	<b>16.0</b>	<b>397</b>	<b>133</b>	<b>70-130</b>	<b>MS09</b>
Potassium	mg/L	23.7	16.0	39.7	100	70-130	
Lithium	mg/L	0.0682	1.60	1.75	105	70-130	
Magnesium	mg/L	129	16.0	142	85	70-130	
Sodium	mg/L	83.9	16.0	98.9	94	70-130	

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**MATRIX SPIKE: T154040-MS2** Original: **24G0879-30**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Boron	mg/L	1.90	1.60	3.65	109	70-130	
Calcium	mg/L	501	16.0	520	121	70-130	
Potassium	mg/L	10.6	16.0	27.3	104	70-130	
Lithium	mg/L	0.135	1.60	1.85	107	70-130	
Magnesium	mg/L	113	16.0	127	83	70-130	
Sodium	mg/L	82.2	16.0	96.7	91	70-130	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154039

Analysis Description: Cadmium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

**METHOD BLANK: T154039-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.00055	0.00055	
Barium	mg/L	<0.0025	0.0025	
Beryllium	mg/L	<0.00025	0.00025	
Cadmium	mg/L	<0.00025	0.00025	
Cobalt	mg/L	<0.00052	0.00052	
Chromium	mg/L	<0.00025	0.00025	
Molybdenum	mg/L	<0.0012	0.0012	
Lead	mg/L	<0.00055	0.00055	
Antimony	mg/L	<0.00025	0.00025	
Selenium	mg/L	<0.00050	0.00050	
Thallium	mg/L	<0.00038	0.00038	

**LABORATORY CONTROL SAMPLE: T154039-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.100	0.100	100	85-115	
Barium	mg/L	1.60	1.65	103	85-115	
Beryllium	mg/L	0.200	0.204	102	85-115	
Cadmium	mg/L	0.0500	0.0473	95	85-115	
Cobalt	mg/L	1.60	1.50	94	85-115	
Chromium	mg/L	0.0500	0.0490	98	85-115	
Molybdenum	mg/L	1.60	1.60	100	85-115	
Lead	mg/L	0.100	0.0950	95	85-115	
Antimony	mg/L	0.100	0.104	104	85-115	

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**LABORATORY CONTROL SAMPLE: T154039-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Selenium	mg/L	0.100	0.0988	99	85-115	
Thallium	mg/L	0.100	0.0960	96	85-115	

**MATRIX SPIKE: T154039-MS1** Original: **24G0879-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0	0.100	0.100	100	70-130	
Barium	mg/L	0.364	1.60	2.16	112	70-130	
Beryllium	mg/L	0	0.200	0.178	89	70-130	
Cadmium	mg/L	0	0.0500	0.0453	91	70-130	
Cobalt	mg/L	0.000802	1.60	1.42	89	70-130	
Chromium	mg/L	0	0.0500	0.0493	99	70-130	
Molybdenum	mg/L	0	1.60	1.62	101	70-130	
Lead	mg/L	0	0.100	0.0883	88	70-130	
Antimony	mg/L	0	0.100	0.122	122	70-130	
Selenium	mg/L	0	0.100	0.0970	97	70-130	
Thallium	mg/L	0	0.100	0.0886	89	70-130	

**MATRIX SPIKE: T154039-MS2** Original: **24G0879-16**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.00856	0.100	0.111	102	70-130	
Barium	mg/L	0.117	1.60	1.89	111	70-130	
Beryllium	mg/L	0	0.200	0.181	91	70-130	
Cadmium	mg/L	0	0.0500	0.0450	90	70-130	
Cobalt	mg/L	0	1.60	1.47	92	70-130	
Chromium	mg/L	0	0.0500	0.0502	100	70-130	
Molybdenum	mg/L	0.0106	1.60	1.65	102	70-130	
Lead	mg/L	0.000831	0.100	0.0899	89	70-130	
Antimony	mg/L	0.00114	0.100	0.122	121	70-130	
Selenium	mg/L	0.00151	0.100	0.0990	98	70-130	
Thallium	mg/L	0	0.100	0.0901	90	70-130	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154040  
 QC Batch Method: EPA 200.2

Analysis Description: Molybdenum, Total  
 Analysis Method: EPA 200.8 Rev. 5.4

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**METHOD BLANK: T154040-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Arsenic	mg/L	<0.00055	0.00055	
Barium	mg/L	<0.0025	0.0025	
Beryllium	mg/L	<0.00025	0.00025	
Cadmium	mg/L	<0.00025	0.00025	
Cobalt	mg/L	<0.00052	0.00052	
Chromium	mg/L	<0.00025	0.00025	
Molybdenum	mg/L	<0.0012	0.0012	
Lead	mg/L	<0.00055	0.00055	
Antimony	mg/L	<0.00025	0.00025	
Selenium	mg/L	<0.00050	0.00050	
Thallium	mg/L	<0.00038	0.00038	

**LABORATORY CONTROL SAMPLE: T154040-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Arsenic	mg/L	0.100	0.100	100	85-115	
Barium	mg/L	1.60	1.68	105	85-115	
Beryllium	mg/L	0.200	0.192	96	85-115	
Cadmium	mg/L	0.0500	0.0460	92	85-115	
Cobalt	mg/L	1.60	1.49	93	85-115	
Chromium	mg/L	0.0500	0.0500	100	85-115	
Molybdenum	mg/L	1.60	1.58	99	85-115	
Lead	mg/L	0.100	0.0919	92	85-115	
Antimony	mg/L	0.100	0.115	115	85-115	
Selenium	mg/L	0.100	0.0992	99	85-115	
Thallium	mg/L	0.100	0.0911	91	85-115	

**MATRIX SPIKE: T154040-MS1**

Original: 24G0879-22

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.000857	0.100	0.104	103	70-130	
Barium	mg/L	0.0839	1.60	1.86	111	70-130	
Beryllium	mg/L	0	0.200	0.199	100	70-130	
Cadmium	mg/L	0	0.0500	0.0444	89	70-130	
Cobalt	mg/L	0	1.60	1.54	96	70-130	
Chromium	mg/L	0.00468	0.0500	0.0591	109	70-130	
Molybdenum	mg/L	0.00140	1.60	1.66	104	70-130	
Lead	mg/L	0	0.100	0.0820	82	70-130	
Antimony	mg/L	0	0.100	0.117	117	70-130	

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**MATRIX SPIKE: T154040-MS1** Original: **24G0879-22**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Selenium	mg/L	0	0.100	0.0984	98	70-130	
Thallium	mg/L	0	0.100	0.0835	84	70-130	

**MATRIX SPIKE: T154040-MS2** Original: **24G0879-30**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Arsenic	mg/L	0.000583	0.100	0.106	106	70-130	
Barium	mg/L	0.0409	1.60	1.88	115	70-130	
Beryllium	mg/L	0	0.200	0.214	107	70-130	
Cadmium	mg/L	0	0.0500	0.0435	87	70-130	
Cobalt	mg/L	0.000774	1.60	1.60	100	70-130	
Chromium	mg/L	0.00999	0.0500	0.0666	113	70-130	
Molybdenum	mg/L	0	1.60	1.68	105	70-130	
Lead	mg/L	0	0.100	0.0819	82	70-130	
Antimony	mg/L	0	0.100	0.117	117	70-130	
Selenium	mg/L	0	0.100	0.0891	89	70-130	
Thallium	mg/L	0	0.100	0.0833	83	70-130	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153776

Analysis Description: Chloride

QC Batch Method: IC Prep W

Analysis Method: EPA 300.0 Rev. 2.1

**METHOD BLANK: T153776-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

**LABORATORY CONTROL SAMPLE: T153776-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
<b>Chloride</b>	<b>mg/L</b>	<b>5.00</b>	<b>&lt;10</b>	<b>98</b>	<b>90-110</b>	<b>J</b>
Fluoride	mg/L	1.00	1.07	107	90-110	
Sulfate as SO4	mg/L	5.00	5.21	104	90-110	

**MATRIX SPIKE: T153776-MS1** Original: **24G0879-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
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**MATRIX SPIKE: T153776-MS1** Original: **24G0879-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	14.4	50.0	62.4	96	80-120	
Fluoride	mg/L	0.190	10.0	9.80	96	80-120	
Sulfate as SO4	mg/L	15.0	50.0	65.4	101	80-120	

**MATRIX SPIKE: T153776-MS2** Original: **24G0879-05**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	18.1	50.0	66.4	97	80-120	
Fluoride	mg/L	0.288	10.0	10.2	99	80-120	
Sulfate as SO4	mg/L	62.0	50.0	111	99	80-120	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153815	Analysis Description: Chloride
QC Batch Method: IC Prep W	Analysis Method: EPA 300.0 Rev. 2.1

**METHOD BLANK: T153815-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Chloride	mg/L	<0.15	0.15	
Fluoride	mg/L	<0.020	0.020	
Sulfate as SO4	mg/L	<1.0	1.0	

**LABORATORY CONTROL SAMPLE: T153815-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
<b>Chloride</b>	<b>mg/L</b>	<b>5.00</b>	<b>&lt;10</b>	<b>97</b>	<b>90-110</b>	<b>J</b>
Fluoride	mg/L	1.00	1.06	106	90-110	
Sulfate as SO4	mg/L	5.00	5.12	102	90-110	

**MATRIX SPIKE: T153815-MS1** Original: **24G0879-24**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	30.2	50.0	82.0	104	80-120	
Fluoride	mg/L	1.06	10.0	10.7	97	80-120	
Sulfate as SO4	mg/L	0	50.0	51.1	102	80-120	

**MATRIX SPIKE: T153815-MS2** Original: **24G0879-25**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Chloride	mg/L	59.3	50.0	105	91	80-120	

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**MATRIX SPIKE: T153815-MS2** Original: **24G0879-25**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Fluoride	mg/L	0.466	10.0	9.53	91	80-120	
Sulfate as SO4	mg/L	0	50.0	48.2	96	80-120	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153890	Analysis Description: Sulfate
QC Batch Method: IC Prep W	Analysis Method: EPA 300.0 Rev. 2.1

**METHOD BLANK: T153890-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Sulfate as SO4	mg/L	<1.0	1.0	

**LABORATORY CONTROL SAMPLE: T153890-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Sulfate as SO4	mg/L	5.00	5.42	108	90-110	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153860	Analysis Description: Alkalinity, Bicarbonate
QC Batch Method: SM 2320 B-21	Analysis Method: SM 2320 B-21

**LABORATORY CONTROL SAMPLE: T153860-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	96.1	96	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	96.1	96	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	96.1	96	88-112	

**SAMPLE DUPLICATE: T153860-DUP1** Original: **24G0879-07**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	184	174	6	20	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	0	<10		20	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	184	174	6	20	

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Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154075	Analysis Description: Alkalinity, Bicarbonate
QC Batch Method: SM 2320 B-21	Analysis Method: SM 2320 B-21

**LABORATORY CONTROL SAMPLE: T154075-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	98.2	98	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	98.2	98	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	98.2	98	88-112	

**SAMPLE DUPLICATE: T154075-DUP1** Original: 24G0879-16

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	93.8	91.9	2	20	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	0	<10		20	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	93.8	91.9	2	20	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154137	Analysis Description: Alkalinity, Bicarbonate
QC Batch Method: SM 2320 B-21	Analysis Method: SM 2320 B-21

**LABORATORY CONTROL SAMPLE: T154137-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	100	95.7	96	88-112	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	100	95.7	96	88-112	
Total Alkalinity as CaCO3 at pH 4.5	mg/L	100	95.7	96	88-112	

**SAMPLE DUPLICATE: T154137-DUP1** Original: 24G0879-23RE1

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Bicarbonate Alkalinity as CaCO3 at pH 4.5	mg/L	1070	1060	0.09	20	
Carbonate Alkalinity as CaCO3 at pH 8.2	mg/L	0	<10		20	

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**SAMPLE DUPLICATE: T154137-DUP1**

Original: 24G0879-23RE1

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Total Alkalinity as CaCO3 at pH 4.5	mg/L	1070	1060	0.09	20	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153774	Analysis Description: Total Dissolved Solids
QC Batch Method: SM 2540 C-20	Analysis Method: SM 2540 C-20

**METHOD BLANK: T153774-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	5.00	50	J

**LABORATORY CONTROL SAMPLE: T153774-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	505	101	80-120	

**SAMPLE DUPLICATE: T153774-DUP1**

Original: 24G0879-19

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Total Dissolved Solids	mg/L	335	295	13	10	RPD

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153931	Analysis Description: Total Dissolved Solids
QC Batch Method: SM 2540 C-20	Analysis Method: SM 2540 C-20

**METHOD BLANK: T153931-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Dissolved Solids	mg/L	2.00	10	J

**LABORATORY CONTROL SAMPLE: T153931-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Dissolved Solids	mg/L	500	522	104	80-120	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

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QC Batch: T153775

Analysis Description: Total Suspended Solids

QC Batch Method: SM 2540 D-20

Analysis Method: SM 2540 D-20

**METHOD BLANK: T153775-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<4.0	4.0	

**LABORATORY CONTROL SAMPLE: T153775-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	86.0	86	85-115	

**SAMPLE DUPLICATE: T153775-DUP1**

Original: 24G0879-19

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Total Suspended Solids	mg/L	36.0	34.3	5	10	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153917

Analysis Description: Total Suspended Solids

QC Batch Method: SM 2540 D-20

Analysis Method: SM 2540 D-20

**METHOD BLANK: T153917-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<4.0	4.0	

**LABORATORY CONTROL SAMPLE: T153917-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	85.0	85	85-115	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153940

Analysis Description: Total Suspended Solids

QC Batch Method: SM 2540 D-20

Analysis Method: SM 2540 D-20

**METHOD BLANK: T153940-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Suspended Solids	mg/L	<4.0	4.0	

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**LABORATORY CONTROL SAMPLE: T153940-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Suspended Solids	mg/L	100	89.0	89	85-115	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153805	Analysis Description: pH, SM 4500
QC Batch Method: *** DEFAULT PREP ***	Analysis Method: SM 4500-H+ B-11

**SAMPLE DUPLICATE: T153805-DUP1** Original: 24G0879-01

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	pH Units	7.28	7.19	1	20	PH01m

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T153836	Analysis Description: pH, SM 4500
QC Batch Method: *** DEFAULT PREP ***	Analysis Method: SM 4500-H+ B-11

**SAMPLE DUPLICATE: T153836-DUP1** Original: 24G0879-20

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
pH	pH Units	7.73	7.73	0	20	PH01a

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CHAIN-OF-CUSTODY RECORD

Page 1 of 4

Trace ID No.  
2460879

Report Results To:

PO #: 10337505

Trace Use:

Logged By: *AM*

Checked By: *AM*

Soil Volatiles Preserved (circle if applicable):  
MeOH Low Level Lab

Sample Collection Time (Hrs):

Company Name: HDR Inc. Contact Name: Lara Zawaden  
 Report To: Molly Reeves  
 Mailing Address: 1000 Oakbrook Drive, Suite 200 Billing Address (if different): 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104 City, State, Zip Code: Ann Arbor, MI 48104  
 Office Phone: Cell Phone: 734.253.7138 Phone Number: 734.223.9074  
 Email Address: molly.reeves@hdrinc.com Billing Email Address: larazawaden@hdrinc.com

Requested Turnaround Times (TAT)

- Standard: 5-10 Business days
  - 3 Business Days\*
  - 1 Business Day\*
- \* Rush TAT Requires Prior Approval

Matrix Key:

- WW = Wastewater O = Oil A = Air
- DW = Drinking Water WI = Wipes U = Unknown
- GW = Groundwater S = Solid
- LW = Liquid Waste SL = Sludge

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filterd (Y or N)	Matrix - see above →	Number of Containers	Preservation										Analysis Requested				Remarks/Notes	Possible Health Hazards?						
							Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)									
1	7/1/24	1820	MW-02	N	GW	6	5																					
2	7/1/24	1402	<del>MW-06</del> MW-01	N	GW	6	5																					
3	7/1/24	1824	MW-09	N	GW	6	5																					
4	7/1/24	1728	MW-10	N	GW	6	5																					
5	7/1/24	832	MW-12	N	GW	6	5																					
6	7/1/24	1358	MW-17	N	GW	6	5																					
7	7/1/24	1254	MW-18	N	GW	6	5																					
8	7/1/24	1500	MW-20	N	GW	6	5																					
9	7/1/24	1430	MW-31	N	GW	6	5																					
10	7/1/24	1600	MW-32	N	GW	6	5																					

Please Sign

Released By: <i>[Signature]</i>	Received By: <i>[Signature]</i>	Date: 7/18/24	Time: 8:04
Released By:	Received By:	Date:	Time:

In executing this Chain of Custody, the client acknowledges the terms as set forth at www.trace-labs.com/terms-of-agreement.

Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at www.trace-labs.com/downloads.

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**CHAIN-OF-CUSTODY RECORD**

Page 2 of 4

Trace ID No.  
2460879

**Report Results To:**

Bill To:

**Trace Use:**

Company Name: HDR Inc. PO #: 10337505  
 Report To: Molly Reeves Contact Name: Lara Zawalden

Logged By: *BLM*  
 Checked By: *GM*

Mailing Address: 1000 Oakbrook Drive, Suite 200  
 Billing Address (if different): 1000 Oakbrook Drive, Suite 200

City, State, Zip Code: Ann Arbor, MI 48104  
 City, State, Zip Code: Ann Arbor, MI 48104

Office Phone: Cell Phone: 734.283.7138  
 Phone Number: 734.223.9074

Email Address: molly.reeves@hdrinc.com  
 Billing Email Address: lara.zawalden@hdrinc.com

**Requested Turnaround Times (TAT)**

- Standard: 5-10 Business days  
 3 Business Days\*  
 1 Business Day\*  
 \* Rush TAT Requires Prior Approval

**Matrix Key:**

- WW = Wastewater O = Oil A = Air  
 DW = Drinking Water WI = Wipes U = Unknown  
 GW = Groundwater S = Solid  
 LW = Liquid Waste SL = Sludge

**Analysis Requested**

<input checked="" type="checkbox"/>	40 CFR Part 257 Appendix III
<input checked="" type="checkbox"/>	40 CFR Part 257 Appendix IV
<input checked="" type="checkbox"/>	Additional Part 115 Metals
<input checked="" type="checkbox"/>	Total Suspended Solids (TSS)

Sampled By (print):		Project Name:		Grand Haven Harbor Island																		
Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals	Field Filtered (Y or N)	Matrix	Number of Containers	Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)	Remarks/Notes	Possible Health Hazards?
11	7/17/24	1102	MW-36	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
12	7/17/24	1604	MW-37	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
13	7/17/24	1200	MW-38	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
14	7/17/24	832	MW-T-12	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
15	7/17/24	1102	MW-T-36	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
16	7/17/24	1820	SG-02	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
17	7/17/24	1845	SG-04R	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
18	7/17/24	1900	SG-05	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
19	7/17/24	1920	SG-06	N	GW	6	6	5									<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Please Sign				Released By	Received By	Date	Time	Released By	Received By	Date	Time											
				<i>Molly Reeves</i>	<i>Lara Zawalden</i>	7/18/24	8:07															

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 Muskegon, MI 49444-2673

Phone 231.773.5998  
 Fax 888.979.4469  
 www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

Report Results To:

Company Name: HDR Inc.  
 Report To: Molly Reeves  
 Mailing Address: 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104  
 Office Phone: Call Phone: 734.263.7138  
 Email Address: molly.reeves@hdrinc.com

PO #: 10337505  
 Contact Name: Lara Zawalden  
 Billing Address (if different): 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104  
 Phone Number: 734.223.9074  
 Billing Email Address: lara.zawalden@hdrinc.com

Trace Use:

Logged By: *SL*  
 Checked By: *SL*  
 Soil Vials: Preserved (circle if applicable):  
 MeOH Low Level Lab  
 Sample Collection Time (hrs):

Trace ID No.  
 24G0879

Page 3 of 4  
*SL*

Requested Turnaround Times (TAT)

- Standard: 5-10 Business days  
 3 Business Days\*  
 1 Business Day\*  
 \* Rush TAT Requires Prior Approval

Matrix Key:

- WW = Wastewater  
 DW = Drinking Water  
 GW = Groundwater  
 LW = Liquid Waste  
 O = Oil  
 WI = Wipes  
 S = Solid  
 SL = Sludge  
 A = Air  
 U = Unknown

Project Name: Grand Haven Harbor Island

Sampled By (print): AB/TR

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filter (Y or N)	Matrix - see above →	Number of Containers	Preservation											40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)	Remarks/Notes	Possible Health Hazards?								
							Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other																
20	7/18/24	1338	MW-01R	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
21	7/18/24	1230	MW-03	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
22	7/18/24	1030	MW-04	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
23	7/18/24	1550	MW-06	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
24	7/18/24	1740	MW-08	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
25	7/18/24	1500	MW-11	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
26	7/18/24	830	MW-16	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
27	7/18/24	1440	MW-19	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
28	7/18/24	1054	MW-27	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									
29	7/18/24	1154	MW-28	N	GW	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6									

Please Sign

Released By: <i>AMS</i>	Received By: <i>SL</i>	Date: 7/19/24	Time: 8:05
Released By:	Received By:	Date:	Time:

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CHAIN-OF-CUSTODY RECORD



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Phone 231.773.5998  
 Fax 888.979.4469  
 www.trace-labs.com

Trace ID No. **24G0879**

Page **4** of **4**

**Report Results To:**

Company Name: HDR Inc.	PO #: 10337505
Report To: Molly Reeves	Contact Name: Lara Zawaidh
Mailing Address: 1000 Oakbrook Drive, Suite 200	Billing Address (if different): 1000 Oakbrook Drive, Suite 200
City, State, Zip Code: Ann Arbor, MI 48104	City, State, Zip Code: Ann Arbor, MI 48104
Office Phone:	Call Phone: 734.233.7138
Email Address: molly.reeves@hdrinc.com	Phone Number: 734.223.9074
	Billing Email Address: lara.zawaidh@hdrinc.com

**Requested Turnaround Times (TAT)**

- Standard: 5-10 Business days
  - 3 Business Days\*
  - 1 Business Day\*
- \* Rush TAT Requires Prior Approval

**Matrix Key:**

- WW = Wastewater
- DW = Drinking Water
- GW = Groundwater
- LW = Liquid Waste
- O = Oil
- WI = Wipes
- S = Solid
- SL = Sludge
- A = Air
- U = Unknown

**Analysis Requested**

Logged By:	Checked By:
Soil Volatiles Preserved (circle if applicable):	MeOH
	Low Level
Sample Collection Time (hrs):	

Project Name: **Grand Haven Harbor Island**

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals	Field Filterd (Y or N)	Matrix - see above	Number of Containers	Cool ≤ 4°C	Preservation										Released By	Date	Time										
									Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV				Additional Part 115 Metals	Total Suspended Solids (TSS)								
30	7/18/24	1800	MW-30	N		GW	6																								
31	7/18/24	1905	MW-31	N		GW	6																								
32	7/18/24	1948	MW-33	N		GW	6																								
33	7/18/24	1900	MW-34	N		GW	6																								

Please Sign

In executing this Chain of Custody, the client acknowledges the terms as set forth at [www.trace-labs.com/terms-of-agreement](http://www.trace-labs.com/terms-of-agreement).

Released By: *[Signature]* Date: **7/19/24** Time: **8:05**

Check this box if you would not like your samples analyzed if received outside of the conditions outlined in the Trace Sample Acceptance Policy at [www.trace-labs.com/downloads](http://www.trace-labs.com/downloads).

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07.18.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 857									
Initials: cm									
Package Description: cooler									
Package Temp °C	0.8	0.8							
Representative Sample Temp °C	13.6	13.4							

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 @ 915 on 07.18.24

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

points 4, 2, 8, and 6

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07.18.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 902									
Initials: CM									
Package Description: Cooler									
Package Temp °C	2.8	2.8							
Representative Sample Temp °C	17.7	17.5							

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace \_\_\_\_\_

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs \_\_\_\_\_

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

points 17, 9, 18, and 19, 16

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/18/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:56									
Initials: MJ									
Package Description: Cooler									
Package Temp °C	2.7	2.7							
Representative Sample Temp °C	12.0	12.0							

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 added @ 9:15 7/18/24

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-02

MW-31

MW-38

MW-32

SG-06

MW-36

MW-18

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07/10/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:57									
Initials: SB									
Package Description: cooler									
Package Temp °C	4.5	4.5	X						
Representative Sample Temp °C	14.7	14.5				X	X		

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present  Yes  No Custody seals intact (if applicable)

Trace Courier  Client Drop-off  UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace

Chemical preservation verified, check EMD pH test strip used (if applicable)  
 pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-12  
 MW-09  
 MWT-12  
 MWF-12

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 853									
Initials: SB									
Package Description: COOLER									
Package Temp °C	0.9	0.9			x				
Representative Sample Temp °C	12.6	12.6			x			x	

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 added 7/19/24 at 9:15

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-010  
 MW-30  
 MW-26  
 MW-27

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: MJ									
Package Description: Cooler									
Package Temp °C	2.0	2.0							
Representative Sample Temp °C	9.0	8.8							

**Sample Receipt**

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)
- UPS  Fed Ex  US Mail  Other

**Sample Condition**

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace HNO3 added @ 9am 7/19/24
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other
- Air bubbles absent from VOAs

**Chain of Custody (COC)**

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

**Notes:**

MW - 04

MW - D8

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: MJ									
Package Description: Cooler									
Package Temp °C	2.9	2.9							
Representative Sample Temp °C	8.4	8.2							

**Sample Receipt**

Yes No

- Received on ice or other coolant  
  Ice still present upon receipt  
  Custody seals present  
 Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)  
 UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

- All sample containers arrived unbroken and labeled  
   Sufficient sample to run requested analyses  
   Correct chemical preservative added to samples  
   Samples preserved at Trace HNO3 added @ 9am 7/19/24  
   Chemical preservation verified, check EMD pH test strip used (if applicable)  
 pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other  
   Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

- All bottle labels agree with COC  
  COC filled out properly  
  COC signed by client

**Notes:**

MW-19  
 MW-33  
 MW-34  
 MW-01R

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: NJ									
Package Description:									
Package Temp °C	0.7	0.7							
Representative Sample Temp °C	8.7	8.5							

**Sample Receipt**

Yes No

- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)
- UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace HNO3 added @ 9am 7/19/24
- Chemical preservation verified, check EMD pH test strip used (if applicable)
  - pH 0-2.5 (Lot: HC311850)
  - pH 11.0-13.0 (Lot: HC022540)
  - Other
- Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

**Notes:**

MW-03  
 MW-11  
 MW-16  
 MW-31

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2241 Black Creek Road  
Muskegon, MI 49444-2673



231-773-5998 Phone  
888-979-4469 Fax  
www.trace-labs.com

August 01, 2024

Ms. Molly Reeves  
HDR Michigan Inc.  
1000 Oakbrook Dr., Suite 200  
Ann Arbor, MI 48104

Phone: (734) 263-7138

RE: Trace Project 24G0879  
Client Project City of Grand Haven - Harbor Island

Dear Ms. Reeves:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report.

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at [jmink@trace-labs.com](mailto:jmink@trace-labs.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Jon Mink".

Jon Mink  
Senior Project Manager  
Enclosures



Wisconsin Accreditation No. FID: 998044080 / TNI EL V1:2016

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Muskegon, MI 49444-2673



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888-979-4469 Fax  
www.trace-labs.com

### SAMPLE SUMMARY

Trace Project ID: 24G0879  
Client Project ID: City of Grand Haven - Harbor Island

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
24G0879-01	MW-02	Ground Water	AB/TB	07/17/24 18:20	07/18/24 08:04
24G0879-02	MW-07	Ground Water	AB/TB	07/17/24 16:22	07/18/24 08:04
24G0879-03	MW-09	Ground Water	AB/TB	07/17/24 18:24	07/18/24 08:04
24G0879-04	MW-10	Ground Water	AB/TB	07/17/24 17:28	07/18/24 08:04
24G0879-05	MW-12	Ground Water	AB/TB	07/17/24 08:32	07/18/24 08:04
24G0879-06	MW-17	Ground Water	AB/TB	07/17/24 13:58	07/18/24 08:04
24G0879-07	MW-18	Ground Water	AB/TB	07/17/24 12:54	07/18/24 08:04
24G0879-08	MW-20	Ground Water	AB/TB	07/17/24 15:00	07/18/24 08:04
24G0879-09	MW-31	Ground Water	AB/TB	07/17/24 14:30	07/18/24 08:04
24G0879-10	MW-32	Ground Water	AB/TB	07/17/24 16:00	07/18/24 08:04
24G0879-11	MW-36	Ground Water	AB/TB	07/17/24 11:02	07/18/24 08:04
24G0879-12	MW-37	Ground Water	AB/TB	07/17/24 10:04	07/18/24 08:04
24G0879-13	MW-38	Ground Water	AB/TB	07/17/24 12:00	07/18/24 08:04
24G0879-14	MWT-12	Ground Water	AB/TB	07/17/24 08:32	07/18/24 08:04
24G0879-15	MWT-36	Ground Water	AB/TB	07/17/24 11:02	07/18/24 08:04
24G0879-16	SG-02	Ground Water	AB/TB	07/17/24 18:20	07/18/24 08:04
24G0879-17	SG-04R	Ground Water	AB/TB	07/17/24 18:45	07/18/24 08:04
24G0879-18	SG-05	Ground Water	AB/TB	07/17/24 19:00	07/18/24 08:04
24G0879-19	SG-06	Ground Water	AB/TB	07/17/24 19:20	07/18/24 08:04
24G0879-20	MW-01R	Ground Water	AB/TB	07/18/24 13:38	07/19/24 08:05
24G0879-21	MW-03	Ground Water	AB/TB	07/18/24 12:30	07/19/24 08:05
24G0879-22	MW-04	Ground Water	AB/TB	07/18/24 10:30	07/19/24 08:05
24G0879-23	MW-06	Ground Water	AB/TB	07/18/24 15:50	07/19/24 08:05
24G0879-24	MW-08	Ground Water	AB/TB	07/18/24 17:40	07/19/24 08:05
24G0879-25	MW-11	Ground Water	AB/TB	07/18/24 15:00	07/19/24 08:05
24G0879-26	MW-16	Ground Water	AB/TB	07/18/24 08:30	07/19/24 08:05
24G0879-27	MW-19	Ground Water	AB/TB	07/18/24 14:40	07/19/24 08:05
24G0879-28	MW-27	Ground Water	AB/TB	07/18/24 10:54	07/19/24 08:05
24G0879-29	MW-28	Ground Water	AB/TB	07/18/24 11:54	07/19/24 08:05
24G0879-30	MW-30	Ground Water	AB/TB	07/18/24 18:00	07/19/24 08:05
24G0879-32	MW-33	Ground Water	AB/TB	07/18/24 09:48	07/19/24 08:05
24G0879-33	MW-34	Ground Water	AB/TB	07/18/24 09:00	07/19/24 08:05

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## AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

### DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
LOQ	Limit of Quantitation
LOD	Limit of Detection
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

NOTE: Samples for volatiles that have been extracted with a water miscible solvent were corrected for the total volume of the solvent/water mixture.  
Solid matrices Method Blanks are at 100% solids as such results are the same wet or dry.

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-01 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: MW-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Iron	22 mg/L	0.25	5	07/25/24	dea	07/26/24	jlh		0.13
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Copper	0.0020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.018 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0057 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0024 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-02 Date Collected: 07/17/24 16:22 Matrix: Ground Water  
 Sample ID: MW-07 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	17 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00021 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma	J	0.00020
Nickel	<0.00065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00079 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-03 Date Collected: 07/17/24 18:24 Matrix: Ground Water  
 Sample ID: MW-09 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Iron	20	mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Copper	0.0013	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0099	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050	mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0017	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-04 Date Collected: 07/17/24 17:28 Matrix: Ground Water  
 Sample ID: MW-10 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Iron	5.9 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Copper	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	<0.00065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00089 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-05 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MW-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.068 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.0014 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0029 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0016 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.011 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-06 Date Collected: 07/17/24 13:58 Matrix: Ground Water  
 Sample ID: MW-17 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	3.5 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.0016 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0013 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0059 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-07 Date Collected: 07/17/24 12:54 Matrix: Ground Water  
 Sample ID: MW-18 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	6.2 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00062 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0037 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.017 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-08 Date Collected: 07/17/24 15:00 Matrix: Ground Water  
 Sample ID: MW-20 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	16 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00053 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0080 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-09 Date Collected: 07/17/24 14:30 Matrix: Ground Water  
 Sample ID: MW-31 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
Analysis Method: EPA 200.7 Rev. 4.4									
Batch: T154039									
Iron	0.14 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
Analysis Method: EPA 200.8 Rev. 5.4									
Batch: T154039									
Copper	0.00029 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0021 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00064 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-10 Date Collected: 07/17/24 16:00 Matrix: Ground Water  
 Sample ID: MW-32 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	12 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00031 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.00082 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0024 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-11 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MW-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
Analysis Method: EPA 200.7 Rev. 4.4									
Batch: T154039									
Iron	0.35 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
Analysis Method: EPA 200.8 Rev. 5.4									
Batch: T154039									
Copper	0.019 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0084 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	0.00057 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0052 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-12 Date Collected: 07/17/24 10:04 Matrix: Ground Water  
 Sample ID: MW-37 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Iron	<0.026	mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Copper	0.014	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0052	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050	mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.017	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-13 Date Collected: 07/17/24 12:00 Matrix: Ground Water  
 Sample ID: MW-38 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	1.0 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0096 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	0.00019 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.010 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-14 Date Collected: 07/17/24 08:32 Matrix: Ground Water  
 Sample ID: MWT-12 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154039

Iron	0.056	mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154039

Copper	0.0015	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0031	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050	mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0017	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.011	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-15 Date Collected: 07/17/24 11:02 Matrix: Ground Water  
 Sample ID: MWT-36 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.36 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.022 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0087 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	0.00066 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0055 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.022 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-16 Date Collected: 07/17/24 18:20 Matrix: Ground Water  
 Sample ID: SG-02 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.48 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00083 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0037 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0055 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0024 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-17 Date Collected: 07/17/24 18:45 Matrix: Ground Water  
 Sample ID: SG-04R Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.045 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh	J	0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00082 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0030 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0038 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0023 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-18 Date Collected: 07/17/24 19:00 Matrix: Ground Water  
 Sample ID: SG-05 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	1.0 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.0015 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00090 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	0.0033 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-19 Date Collected: 07/17/24 19:20 Matrix: Ground Water  
 Sample ID: SG-06 Date Received: 07/18/24 08:04

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.67 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00078 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.00082 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0026 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-20 Date Collected: 07/18/24 13:38 Matrix: Ground Water  
 Sample ID: MW-01R Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154039</i>									
Iron	0.088 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154039</i>									
Copper	0.00029 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0020 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0041 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-21 Date Collected: 07/18/24 12:30 Matrix: Ground Water  
 Sample ID: MW-03 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	0.27 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	0.00030 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0011 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0018 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-22 Date Collected: 07/18/24 10:30 Matrix: Ground Water  
 Sample ID: MW-04 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Iron	5.7 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Copper	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.018 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0011 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-23 Date Collected: 07/18/24 15:50 Matrix: Ground Water  
 Sample ID: MW-06 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	17 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	0.00038 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	<0.00065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00064 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	0.0013 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-24 Date Collected: 07/18/24 17:40 Matrix: Ground Water  
 Sample ID: MW-08 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	14 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	0.00047 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0013 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0015 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-25 Date Collected: 07/18/24 15:00 Matrix: Ground Water  
 Sample ID: MW-11 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	7.1 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	0.00031 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.00098 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-26 Date Collected: 07/18/24 08:30 Matrix: Ground Water  
 Sample ID: MW-16 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	6.7 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	<0.00065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00066 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-27 Date Collected: 07/18/24 14:40 Matrix: Ground Water  
 Sample ID: MW-19 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
Iron	21 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	0.00035 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.017 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-28 Date Collected: 07/18/24 10:54 Matrix: Ground Water  
 Sample ID: MW-27 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
<b>Analysis Method: EPA 200.7 Rev. 4.4</b>									
<i>Batch: T154040</i>									
<b>Iron</b>	<b>8.4 mg/L</b>	<b>0.050</b>	<b>1</b>	<b>07/25/24</b>	<b>dea</b>	<b>07/26/24</b>	<b>jlh</b>		<b>0.026</b>
<b>Analysis Method: EPA 200.8 Rev. 5.4</b>									
<i>Batch: T154040</i>									
Copper	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	<0.00065 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
<b>Vanadium</b>	<b>0.0018 mg/L</b>	<b>0.0012</b>	<b>1</b>	<b>07/25/24</b>	<b>dea</b>	<b>07/30/24</b>	<b>jma</b>		<b>0.00062</b>
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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 2241 Black Creek Road  
 Muskegon, MI 49444-2673



231-773-5998 Phone  
 888-979-4469 Fax  
 www.trace-labs.com

**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-29 Date Collected: 07/18/24 11:54 Matrix: Ground Water  
 Sample ID: MW-28 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
------------	---------	-------	-----	----------	----------	----	----------	----	-------	-----

**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Iron	37	mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
------	----	------	-------	---	----------	-----	----------	-----	--	-------

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Copper	0.00090	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.00072	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00065
Silver	<0.000050	mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.00074	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	0.0067	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-30 Date Collected: 07/18/24 18:00 Matrix: Ground Water  
 Sample ID: MW-30 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Iron	5.9 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
------	----------	-------	---	----------	-----	----------	-----	--	-------

Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Copper	<0.00020 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.0017 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	<0.00062 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	<0.0012 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-32 Date Collected: 07/18/24 09:48 Matrix: Ground Water  
 Sample ID: MW-33 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
<b>METALS, TOTAL</b>									
Analysis Method: EPA 200.7 Rev. 4.4									
Batch: T154040									
Iron	29 mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
Analysis Method: EPA 200.8 Rev. 5.4									
Batch: T154040									
Copper	0.00085 mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.014 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050 mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0033 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00062
Zinc	0.0017 mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**ANALYTICAL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

Trace ID: 24G0879-33 Date Collected: 07/18/24 09:00 Matrix: Ground Water  
 Sample ID: MW-34 Date Received: 07/19/24 08:05

PARAMETERS	RESULTS	UNITS	LOQ	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	LOD
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**METALS, TOTAL**

Analysis Method: EPA 200.7 Rev. 4.4  
 Batch: T154040

Iron	65	mg/L	0.050	1	07/25/24	dea	07/26/24	jlh		0.026
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Analysis Method: EPA 200.8 Rev. 5.4  
 Batch: T154040

Copper	0.00058	mg/L	0.00025	1	07/25/24	dea	07/30/24	jma		0.00020
Nickel	0.019	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.00065
Silver	<0.000050	mg/L	0.000050	1	07/25/24	dea	07/30/24	jma		0.000050
Vanadium	0.0011	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma	J	0.00062
Zinc	0.0033	mg/L	0.0012	1	07/25/24	dea	07/30/24	jma		0.0012

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**QUALITY CONTROL RESULTS**

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154039	Analysis Description: Iron, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

**METHOD BLANK: T154039-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.050	0.050	

**LABORATORY CONTROL SAMPLE: T154039-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	16.0	16.1	100	85-115	

**MATRIX SPIKE: T154039-MS1** Original: **24G0879-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	16.9	16.0	32.7	99	70-130	

**MATRIX SPIKE: T154039-MS2** Original: **24G0879-16**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	0.480	16.0	16.4	100	70-130	

Trace Project ID: 24G0879  
 Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154040	Analysis Description: Iron, Total
QC Batch Method: EPA 200.2	Analysis Method: EPA 200.7 Rev. 4.4

**METHOD BLANK: T154040-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.050	0.050	

**LABORATORY CONTROL SAMPLE: T154040-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	16.0	16.3	102	85-115	

**MATRIX SPIKE: T154040-MS1** Original: **24G0879-22**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
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**MATRIX SPIKE: T154040-MS1** Original: **24G0879-22**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	5.68	16.0	21.9	102	70-130	

**MATRIX SPIKE: T154040-MS2** Original: **24G0879-30**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Iron	mg/L	5.91	16.0	22.3	102	70-130	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154039

Analysis Description: Vanadium, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

**METHOD BLANK: T154039-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.000050	0.000050	
Copper	mg/L	<0.00025	0.00025	
Nickel	mg/L	<0.0012	0.0012	
Vanadium	mg/L	<0.0012	0.0012	
Zinc	mg/L	<0.0012	0.0012	

**LABORATORY CONTROL SAMPLE: T154039-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0500	0.0523	105	85-115	
Copper	mg/L	1.60	1.48	93	85-115	
Nickel	mg/L	1.60	1.49	93	85-115	
Vanadium	mg/L	1.60	1.59	99	85-115	
Zinc	mg/L	1.60	1.48	93	85-115	

**MATRIX SPIKE: T154039-MS1** Original: **24G0879-02**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.0500	0.0492	98	70-130	
Copper	mg/L	0	1.60	1.32	82	70-130	
Nickel	mg/L	0	1.60	1.38	87	70-130	
Vanadium	mg/L	0	1.60	1.72	107	70-130	
Zinc	mg/L	0	1.60	1.32	82	70-130	

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**MATRIX SPIKE: T154039-MS2** Original: **24G0879-16**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.0500	0.0484	97	70-130	
Copper	mg/L	0.000834	1.60	1.33	83	70-130	
Nickel	mg/L	0.00372	1.60	1.42	89	70-130	
Vanadium	mg/L	0.00548	1.60	1.76	109	70-130	
Zinc	mg/L	0	1.60	1.33	83	70-130	

Trace Project ID: 24G0879

Client Project ID: City of Grand Haven - Harbor Island

QC Batch: T154040

Analysis Description: Zinc, Total

QC Batch Method: EPA 200.2

Analysis Method: EPA 200.8 Rev. 5.4

**METHOD BLANK: T154040-BLK1**

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.000050	0.000050	
Copper	mg/L	<0.00025	0.00025	
Nickel	mg/L	<0.0012	0.0012	
Vanadium	mg/L	<0.0012	0.0012	
Zinc	mg/L	<0.0012	0.0012	

**LABORATORY CONTROL SAMPLE: T154040-BS1**

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0500	0.0507	101	85-115	
Copper	mg/L	1.60	1.45	91	85-115	
Nickel	mg/L	1.60	1.50	94	85-115	
Vanadium	mg/L	1.60	1.69	105	85-115	
Zinc	mg/L	1.60	1.44	90	85-115	

**MATRIX SPIKE: T154040-MS1** Original: **24G0879-22**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.0500	0.0480	96	70-130	
Copper	mg/L	0	1.60	1.36	85	70-130	
Nickel	mg/L	0.0176	1.60	1.50	93	70-130	
Vanadium	mg/L	0	1.60	1.98	124	70-130	
Zinc	mg/L	0	1.60	1.29	81	70-130	

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**MATRIX SPIKE: T154040-MS2** Original: **24G0879-30**

Parameter	Units	Original Result	Spike Conc.	MS Result	MS % Rec	% Rec Unit	Notes
Silver	mg/L	0	0.0500	0.0486	97	70-130	
Copper	mg/L	0	1.60	1.40	87	70-130	
Nickel	mg/L	0	1.60	1.54	96	70-130	
Vanadium	mg/L	0	1.60	2.08	130	70-130	
Zinc	mg/L	0	1.60	1.31	82	70-130	

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**CHAIN-OF-CUSTODY RECORD**

Page 1 of 4

Trace ID No.  
**2460879**

**Report Results To:**

Company Name: HDR Inc. PO #: 10337505  
 Report To: Molly Reeves Contact Name: Lara Zawalden  
 Mailing Address: 1000 Oakbrook Drive, Suite 200 Billing Address (if different): 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104 City, State, Zip Code: Ann Arbor, MI 48104  
 Office Phone: Cell Phone: 734.283.7138 Phone Number: 734.223.9074  
 Email Address: molly.reeves@hdrinc.com Billing Email Address: larazawalden@hdrinc.com

**Trace Use:**

Logged By: *BR*  
 Checked By: *CM*  
 Soil Volatiles Preserved (circle if applicable):  
 MeOH Low Level Lab  
 Sample Collection Time (Hrs):

**Requested Turnaround Times (TAT)**

Standard: 5-10 Business days  
 3 Business Days\*  
 1 Business Day\*  
 \* Rush TAT Requires Prior Approval

**Matrix Key:**

WW = Wastewater O = Oil A = Air  
 DW = Drinking Water WI = Wipes U = Unknown  
 GW = Groundwater S = Solid  
 LW = Liquid Waste SL = Sludge

Sampled By (print):		Sample ID/Name		Metals	Field Filterd (Y or N)	Matrix	Number of Containers	Preservation							Analysis Requested				Remarks/Notes						
Trace No.	Sample Collection Date	Sample Collection Time						Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other	40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)					
1	7/1/24	1820	MW-02	N	GW	6	6	5									X	X	X	X					
2	7/1/24	1402	<del>MW-08</del> AB MW-01	N	GW	6	6	5									X	X	X	X					
3	7/1/24	1824	MW-09	N	GW	6	6	5									X	X	X	X					
4	7/1/24	1728	MW-10	N	GW	6	6	5									X	X	X	X					
5	7/1/24	832	MW-12	N	GW	6	6	5									X	X	X	X					
6	7/1/24	1358	MW-17	N	GW	6	6	5									X	X	X	X					
7	7/1/24	1254	MW-18	N	GW	6	6	5									X	X	X	X					
8	7/1/24	1500	MW-20	N	GW	6	6	5									X	X	X	X					
9	7/1/24	1430	MW-31	N	GW	6	6	5									X	X	X	X					
10	7/1/24	1600	MW-32	N	GW	6	6	5									X	X	X	X					

**Please Sign**

Released By: <i>[Signature]</i> Date: 7/18/24 Time: 8:04 Released By: <i>[Signature]</i>	Received By: <i>[Signature]</i> Date: 7/18/24 Time: 8:04 Received By: <i>[Signature]</i>
---	---

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Form 70-Z-2

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**CHAIN-OF-CUSTODY RECORD**

Page 2 of 4

Trace ID No.  
2460879

**Report Results To:**

Bill To:

**Trace Use:**

Company Name: HDR Inc. PO #: 10337505  
 Report To: Molly Reeves Contact Name: Lara Zawalden  
 Mailing Address: 1000 Oakbrook Drive, Suite 200 Billing Address (if different): 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104 City, State, Zip Code: Ann Arbor, MI 48104  
 Office Phone: Cell Phone: 734.283.7138 Phone Number: 734.223.9074  
 Email Address: molly.reeves@hdrinc.com Billing Email Address: lara.zawalden@hdrinc.com

Logged By: BM  
 Checked By: GM  
 Soil Volatiles Preserved (circle if applicable):  
 MeOH Low Level Lab  
 Sample Collection Time (Hrs):

**Requested Turnaround Times (TAT)**

- Standard: 5-10 Business days  
 3 Business Days\*  
 1 Business Day\*  
 \* Rush TAT Requires Prior Approval

**Matrix Key:**

- WW = Wastewater O = Oil A = Air  
 DW = Drinking Water WI = Wipes U = Unknown  
 GW = Groundwater S = Solid  
 LW = Liquid Waste SL = Sludge

**Analysis Requested**

<input checked="" type="checkbox"/>	40 CFR Part 257 Appendix III
<input checked="" type="checkbox"/>	40 CFR Part 257 Appendix IV
<input checked="" type="checkbox"/>	Additional Part 115 Metals
<input checked="" type="checkbox"/>	Total Suspended Solids (TSS)

Sampled By (print):		Project Name: Grand Haven Harbor Island	
Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name
11	7/17/24	1102	MW-36
12	7/17/24	1604	MW-37
13	7/17/24	1200	MW-38
14	7/17/24	832	MW-T-12
15	7/17/24	1102	MW-T-36
16	7/17/24	1820	SG-02
17	7/17/24	1845	SG-04R
18	7/17/24	1900	SG-05
19	7/17/24	1920	SG-06

Metals	Field Filtered (Y or N)	Matrix - see above →	Number of Containers	Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							
N		GW	6	6	5							

Released By	Date	Time	Received By	Date	Time
<u>DM</u>	<u>7/18/24</u>	<u>8:07</u>	<u>BM</u>		

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 Muskegon, MI 49444-2673

Phone 231.773.5998  
 Fax 888.979.4469  
 www.trace-labs.com

CHAIN-OF-CUSTODY RECORD

**Report Results To:**

Company Name: HDR Inc.  
 Report To: Molly Reeves  
 Mailing Address: 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104  
 Office Phone: Call Phone: 734.263.7138  
 Email Address: molly.reeves@hdrinc.com

PO #: 10337505  
 Contact Name: Lara Zawaiden  
 Billing Address (if different): 1000 Oakbrook Drive, Suite 200  
 City, State, Zip Code: Ann Arbor, MI 48104  
 Phone Number: 734.223.9074  
 Billing Email Address: lara.zawaiden@hdrinc.com

**Trace Use:**

Logged By: *SR*  
 Checked By: *SR*  
 Soil Vials Preserved (circle if applicable):  
 MeOH Low Level Lab  
 Sample Collection Time (hrs):

Trace ID No. 24G0879

Page 3 of 4

**Requested Turnaround Times (TAT)**

- Standard: 5-10 Business days  
 3 Business Days\*  
 1 Business Day\*  
 \* Rush TAT Requires Prior Approval

**Matrix Key:**

- WW = Wastewater O = Oil A = Air  
 DW = Drinking Water WI = Wipes U = Unknown  
 GW = Groundwater S = Solid  
 LW = Liquid Waste SL = Sludge

Project Name: Grand Haven Harbor Island

Sampled By (print): AB/TR

Trace No.	Sample Collection Date	Sample Collection Time	Sample ID/Name	Metals Field Filter (Y or N)	Matrix - see above →	Number of Containers	Preservation										40 CFR Part 257 Appendix III	40 CFR Part 257 Appendix IV	Additional Part 115 Metals	Total Suspended Solids (TSS)	Remarks/Notes	Possible Health Hazards?										
							Cool ≤ 4°C	Hydrochloric Acid (HCl)	Nitric Acid (HNO3)	Sulfuric Acid (H2SO4)	Sodium Thiosulfate	Sodium Hydroxide (NaOH)	Ascorbic Acid	Trizma	Other																	
20	7/18/24	1338	MW-01R	N	GW	6	6	5																								
21	7/18/24	1230	MW-03	N	GW	6	6	5																								
22	7/18/24	1030	MW-04	N	GW	6	6	5																								
23	7/18/24	1550	MW-06	N	GW	6	6	5																								
24	7/18/24	1740	MW-08	N	GW	6	6	5																								
25	7/18/24	1500	MW-11	N	GW	6	6	5																								
26	7/18/24	830	MW-16	N	GW	6	6	5																								
27	7/18/24	1440	MW-19	N	GW	6	6	5																								
28	7/18/24	1054	MW-27	N	GW	6	6	5																								
29	7/18/24	1154	MW-28	N	GW	6	6	5																								

Please Sign

Released By: <i>Ans J bwr</i>	Received By: <i>SR</i>	Date: 7/19/24	Time: 8:05
Released By:	Received By:	Date:	Time:

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07.18.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 857									
Initials: cm									
Package Description: cooler									
Package Temp °C	0.8	0.8							
Representative Sample Temp °C	13.6	13.4							

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 @ 915 on 07.18.24

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

points 4, 2, 8, and 6

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07.18.24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 902									
Initials: CM									
Package Description: Cooler									
Package Temp °C	2.8	2.8							
Representative Sample Temp °C	17.7	17.5							

**Sample Receipt**

Yes No  
  Received on ice or other coolant  
  Ice still present upon receipt  
  Custody seals present  
 Trace Courier  Client Drop-off  
 Yes  No Custody seals intact (if applicable)  
 UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A  
   All sample containers arrived unbroken and labeled  
   Sufficient sample to run requested analyses  
   Correct chemical preservative added to samples  
   Samples preserved at Trace  
   Chemical preservation verified, check EMD pH test strip used (if applicable)  
   pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other  
   Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No  
  All bottle labels agree with COC  
  COC filled out properly  
  COC signed by client

**Notes:**

points 17, 9, 18, and 19, 16

**CERTIFICATE OF ANALYSIS**

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/18/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:56									
Initials: MJ									
Package Description: Cooler									
Package Temp °C	2.7	2.7							
Representative Sample Temp °C	12.0	12.0							

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present

Trace Courier  Client Drop-off

Yes  No Custody seals intact (if applicable)

UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 added @ 9:15 7/18/24

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-02

MW-31

MW-38

MW-32

SG-06

MW-36

MW-18

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07/10/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:57									
Initials: SB									
Package Description: cooler									
Package Temp °C	4.5	4.5	X						
Representative Sample Temp °C	14.7	14.5				X	X		

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present  Yes  No Custody seals intact (if applicable)

Trace Courier  Client Drop-off  UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace \_\_\_\_\_

Chemical preservation verified, check EMD pH test strip used (if applicable)  
 pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs \_\_\_\_\_

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-12  
 MW-09  
 MWT-12  
 MWF-12

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 07/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 853									
Initials: SB									
Package Description: COOLER									
Package Temp °C	0.9	0.9			X				
Representative Sample Temp °C	12.6	12.6			X			X	

**Sample Receipt**

Yes No

Received on ice or other coolant

Ice still present upon receipt

Custody seals present  Yes  No Custody seals intact (if applicable)

Trace Courier  Client Drop-off  UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

All sample containers arrived unbroken and labeled

Sufficient sample to run requested analyses

Correct chemical preservative added to samples

Samples preserved at Trace HNO3 added 7/19/24 at 9:15

Chemical preservation verified, check EMD pH test strip used (if applicable)

pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other

Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

All bottle labels agree with COC

COC filled out properly

COC signed by client

**Notes:**

MW-010  
 MW-30  
 MW-25  
 MW-27

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: MJ									
Package Description: Cooler									
Package Temp °C	2.0	2.0							
Representative Sample Temp °C	9.0	8.8							

**Sample Receipt**

- Yes No
- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)
- UPS  Fed Ex  US Mail  Other

**Sample Condition**

- Yes No N/A
- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace HNO3 added @ 9am 7/19/24
- Chemical preservation verified, check EMD pH test strip used (if applicable)
- pH 0-2.5 (Lot: HC311850)  pH 11.0-13.0 (Lot: HC022540)  Other
- Air bubbles absent from VOAs

**Chain of Custody (COC)**

- Yes No
- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

**Notes:**

MW - 04  
 MW - D8

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**24G0879**  
 HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: mJ									
Package Description: Cooler									
Package Temp °C	2.9	2.9							
Representative Sample Temp °C	8.4	8.2							

**Sample Receipt**

Yes No

- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)
- UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace HNO3 added @ 9am 7/19/24
- Chemical preservation verified, check EMD pH test strip used (if applicable)
  - pH 0-2.5 (Lot: HC311850)
  - pH 11.0-13.0 (Lot: HC022540)
  - Other
- Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

**Notes:**

MW-19  
 MW-33  
 MW-34  
 MW-01R

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**24G0879**

HDR Michigan Inc.  
 Project Manager: Jon Mink

**Sample Log In Checklist**

Date: 7/19/24	Original Observation	Corrected Temperature	IR-9 (CF: 0.0°C)	IR-10 (CF: -0.2°C)	IR-12 (CF: 0.0°C)	SR1 (CF: -0.2°C)	SR2 (CF: -0.1°C)	Temp Blank	Client Sample
Time: 8:34									
Initials: MJ									
Package Description:									
Package Temp °C	0.7	0.7							
Representative Sample Temp °C	8.7	8.5							

**Sample Receipt**

Yes No

- Received on ice or other coolant
- Ice still present upon receipt
- Custody seals present
- Trace Courier  Client Drop-off
- Yes  No Custody seals intact (if applicable)
- UPS  Fed Ex  US Mail  Other

**Sample Condition**

Yes No N/A

- All sample containers arrived unbroken and labeled
- Sufficient sample to run requested analyses
- Correct chemical preservative added to samples
- Samples preserved at Trace HNO3 added @ 9am 7/19/24
- Chemical preservation verified, check EMD pH test strip used (if applicable)
  - pH 0-2.5 (Lot: HC311850)
  - pH 11.0-13.0 (Lot: HC022540)
  - Other
- Air bubbles absent from VOAs

**Chain of Custody (COC)**

Yes No

- All bottle labels agree with COC
- COC filled out properly
- COC signed by client

**Notes:**

MW-03  
 MW-11  
 MW-16  
 MW-31

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# ANALYTICAL REPORT

## PREPARED FOR

Attn: Jon Mink  
Trace Analytical Laboratories  
2241 Black Creek Road  
Muskegon, Michigan 49444

Generated 8/23/2024 5:01:24 PM Revision 1

## JOB DESCRIPTION

24G0880

## JOB NUMBER

810-112893-1

# Eurofins Eaton Analytical South Bend

## Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

## Authorization



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Revision 1

Authorized for release by  
Karen Fullmer, Project Manager  
[Karen.Fullmer@et.eurofinsus.com](mailto:Karen.Fullmer@et.eurofinsus.com)  
(574)233-4777



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# Definitions/Glossary

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Qualifiers

### Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Case Narrative

Client: Trace Analytical Laboratories  
Project: 24G0880

Job ID: 810-112893-1

**Job ID: 810-112893-1**

**Eurofins Eaton Analytical South Bend**

**Job Narrative  
810-112893-1**

## REVISION

The report being provided is a revision of the original report sent on 8/22/2024. The report (revision 1) is being revised due to original report and EDD didn't include the combined radium results..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

## **Receipt**

The samples were received on 7/23/2024 9:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

## **Receipt Exceptions**

The reference method requires samples to have a pH of less than 2. The following sample was received with a pH of 7: MW-02 (810-112893-1). The samples were adjusted to the appropriate pH in the laboratory.

Affected containers:

A-1  
B-1  
D-1

## **Gas Flow Proportional Counter**

Method 904.0: Radium-228 batch 672788

The detection goal was not met for the following samples due to the reduced sample volume used in prep attributed to the presence of matrix interferences: MW-02 (810-112893-1), MW-36 (810-112893-11), MW-38 (810-112893-13), MWT-36 (810-112893-15), SG-05 (810-112893-18), SG-06 (810-112893-19) and MW-01R (810-112893-20). Analytical results are reported with the detection limit achieved.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

## **Rad**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-02**  
Date Collected: 07/17/24 18:20  
Date Received: 07/23/24 09:15

**Lab Sample ID: 810-112893-1**  
Matrix: Ground Water

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.488		0.210	0.214	1.00	0.247	pCi/L	07/29/24 08:33	08/20/24 07:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		30 - 110					07/29/24 08:33	08/20/24 07:32	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.101	U G	0.621	0.621	1.00	1.21	pCi/L	07/29/24 08:36	08/07/24 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.9		30 - 110					07/29/24 08:36	08/07/24 11:52	1
Y Carrier	74.0		30 - 110					07/29/24 08:36	08/07/24 11:52	1

**Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.488	U	0.656	0.657	5.00	1.21	pCi/L		08/22/24 16:47	1

**Client Sample ID: MW-07**  
Date Collected: 07/17/24 16:22  
Date Received: 07/23/24 09:15

**Lab Sample ID: 810-112893-2**  
Matrix: Ground Water

**Method: EPA 903.0 - Radium-226 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.551		0.161	0.169	1.00	0.134	pCi/L	07/29/24 08:33	08/20/24 07:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		30 - 110					07/29/24 08:33	08/20/24 07:32	1

**Method: EPA 904.0 - Radium-228 (GFPC)**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.907	U	0.632	0.638	1.00	0.965	pCi/L	07/29/24 08:36	08/07/24 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.1		30 - 110					07/29/24 08:36	08/07/24 11:52	1
Y Carrier	78.1		30 - 110					07/29/24 08:36	08/07/24 11:52	1

**Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228**

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.46		0.652	0.660	5.00	0.965	pCi/L		08/22/24 16:47	1

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-09

Date Collected: 07/17/24 18:24

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-3

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0870	U	0.0870	0.0873	1.00	0.135	pCi/L	07/29/24 08:33	08/20/24 07:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		30 - 110					07/29/24 08:33	08/20/24 07:32	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.198	U	0.377	0.377	1.00	0.771	pCi/L	07/29/24 08:36	08/07/24 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	84.4		30 - 110					07/29/24 08:36	08/07/24 11:52	1
Y Carrier	81.5		30 - 110					07/29/24 08:36	08/07/24 11:52	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.0870	U	0.387	0.387	5.00	0.771	pCi/L		08/22/24 16:47	1

## Client Sample ID: MW-10

Date Collected: 07/17/24 17:28

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-4

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.185		0.104	0.105	1.00	0.126	pCi/L	07/29/24 08:33	08/20/24 07:32	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		30 - 110					07/29/24 08:33	08/20/24 07:32	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.176	U	0.395	0.395	1.00	0.698	pCi/L	07/29/24 08:36	08/07/24 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		30 - 110					07/29/24 08:36	08/07/24 11:52	1
Y Carrier	81.5		30 - 110					07/29/24 08:36	08/07/24 11:52	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.360	U	0.408	0.409	5.00	0.698	pCi/L		08/22/24 16:47	1

Eurofins Eaton Analytical South Bend



# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-12

Date Collected: 07/17/24 08:32

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-5

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.119		0.0783	0.0791	1.00	0.104	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00805	U	0.318	0.318	1.00	0.602	pCi/L	07/29/24 08:36	08/07/24 11:52	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	79.2		30 - 110					07/29/24 08:36	08/07/24 11:52	1
Y Carrier	80.0		30 - 110					07/29/24 08:36	08/07/24 11:52	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.127	U	0.327	0.328	5.00	0.602	pCi/L		08/22/24 16:47	1

## Client Sample ID: MW-17

Date Collected: 07/17/24 13:58

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-6

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.315		0.156	0.159	1.00	0.197	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0192	U	0.485	0.485	1.00	0.918	pCi/L	07/29/24 08:36	08/07/24 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	76.4		30 - 110					07/29/24 08:36	08/07/24 11:53	1
Y Carrier	77.0		30 - 110					07/29/24 08:36	08/07/24 11:53	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.315	U	0.509	0.510	5.00	0.918	pCi/L		08/22/24 16:47	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-18

Date Collected: 07/17/24 12:54

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-7

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0103	U	0.0506	0.0507	1.00	0.100	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.4		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.256	U	0.368	0.369	1.00	0.621	pCi/L	07/29/24 08:36	08/07/24 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.4		30 - 110					07/29/24 08:36	08/07/24 11:53	1
Y Carrier	77.0		30 - 110					07/29/24 08:36	08/07/24 11:53	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.267	U	0.371	0.372	5.00	0.621	pCi/L		08/22/24 16:47	1

## Client Sample ID: MW-20

Date Collected: 07/17/24 15:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-8

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.152		0.0861	0.0872	1.00	0.111	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.223	U	0.341	0.341	1.00	0.580	pCi/L	07/29/24 08:36	08/07/24 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.6		30 - 110					07/29/24 08:36	08/07/24 11:53	1
Y Carrier	77.4		30 - 110					07/29/24 08:36	08/07/24 11:53	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.375	U	0.352	0.352	5.00	0.580	pCi/L		08/22/24 16:47	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-31

Date Collected: 07/17/24 14:30

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-9

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.274		0.121	0.123	1.00	0.149	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.9		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.717		0.457	0.462	1.00	0.673	pCi/L	07/29/24 08:36	08/07/24 11:53	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	75.9		30 - 110					07/29/24 08:36	08/07/24 11:53	1
Y Carrier	77.0		30 - 110					07/29/24 08:36	08/07/24 11:53	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.991		0.473	0.478	5.00	0.673	pCi/L		08/22/24 16:47	1

## Client Sample ID: MW-32

Date Collected: 07/17/24 16:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-10

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172		0.103	0.104	1.00	0.141	pCi/L	07/29/24 08:33	08/20/24 07:33	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		30 - 110					07/29/24 08:33	08/20/24 07:33	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0531	U	0.291	0.291	1.00	0.570	pCi/L	07/29/24 08:36	08/07/24 11:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	82.9		30 - 110					07/29/24 08:36	08/07/24 11:54	1
Y Carrier	80.0		30 - 110					07/29/24 08:36	08/07/24 11:54	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.172	U	0.309	0.309	5.00	0.570	pCi/L		08/22/24 16:47	1

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# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-36

Date Collected: 07/17/24 11:02

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-11

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.0811	U	0.121	0.121	1.00	0.207	pCi/L	07/29/24 08:33	08/20/24 09:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	43.9		30 - 110					07/29/24 08:33	08/20/24 09:35	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.708	U G	0.848	0.850	1.00	1.40	pCi/L	07/29/24 08:36	08/07/24 11:54	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	43.9		30 - 110					07/29/24 08:36	08/07/24 11:54	1
Y Carrier	78.1		30 - 110					07/29/24 08:36	08/07/24 11:54	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.789	U	0.857	0.859	5.00	1.40	pCi/L		08/22/24 16:47	1

## Client Sample ID: MW-37

Date Collected: 07/17/24 10:04

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-12

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.104		0.0750	0.0756	1.00	0.101	pCi/L	07/29/24 08:33	08/20/24 09:35	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.0		30 - 110					07/29/24 08:33	08/20/24 09:35	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.340	U	0.456	0.457	1.00	0.764	pCi/L	07/29/24 08:36	08/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	70.0		30 - 110					07/29/24 08:36	08/07/24 11:47	1
Y Carrier	69.9		30 - 110					07/29/24 08:36	08/07/24 11:47	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.444	U	0.462	0.463	5.00	0.764	pCi/L		08/22/24 16:47	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-38

Date Collected: 07/17/24 12:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-13

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.172	U	0.193	0.194	1.00	0.314	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.7		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.846	U G	1.04	1.04	1.00	1.72	pCi/L	07/29/24 08:36	08/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	66.7		30 - 110					07/29/24 08:36	08/07/24 11:47	1
Y Carrier	72.5		30 - 110					07/29/24 08:36	08/07/24 11:47	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.02	U	1.06	1.06	5.00	1.72	pCi/L		08/22/24 16:47	1

## Client Sample ID: MWT-12

Date Collected: 07/17/24 08:32

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-14

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.145		0.0976	0.0984	1.00	0.135	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	64.3		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.269	U	0.465	0.466	1.00	0.800	pCi/L	07/29/24 08:36	08/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	64.3		30 - 110					07/29/24 08:36	08/07/24 11:46	1
Y Carrier	75.1		30 - 110					07/29/24 08:36	08/07/24 11:46	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.414	U	0.475	0.476	5.00	0.800	pCi/L		08/22/24 16:47	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MWT-36

Date Collected: 07/17/24 11:02

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-15

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.232		0.134	0.136	1.00	0.165	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.6		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.09	U G	0.823	0.829	1.00	1.26	pCi/L	07/29/24 08:36	08/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	56.6		30 - 110					07/29/24 08:36	08/07/24 11:46	1
Y Carrier	76.3		30 - 110					07/29/24 08:36	08/07/24 11:46	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.32		0.834	0.840	5.00	1.26	pCi/L		08/22/24 17:53	1

## Client Sample ID: SG-02

Date Collected: 07/17/24 18:20

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-16

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.466		0.139	0.146	1.00	0.102	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.3		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	-0.0645	U	0.482	0.482	1.00	0.916	pCi/L	07/29/24 08:36	08/07/24 11:46	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.3		30 - 110					07/29/24 08:36	08/07/24 11:46	1
Y Carrier	77.0		30 - 110					07/29/24 08:36	08/07/24 11:46	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.466	U	0.502	0.504	5.00	0.916	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: SG-04R

Date Collected: 07/17/24 18:45

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-17

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.250		0.114	0.117	1.00	0.129	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.8		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.395	U	0.533	0.534	1.00	0.892	pCi/L	07/29/24 08:36	08/07/24 11:47	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	62.8		30 - 110					07/29/24 08:36	08/07/24 11:47	1
Y Carrier	75.1		30 - 110					07/29/24 08:36	08/07/24 11:47	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.646	U	0.545	0.547	5.00	0.892	pCi/L		08/22/24 17:53	1

## Client Sample ID: SG-05

Date Collected: 07/17/24 19:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-18

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.143	U	0.118	0.118	1.00	0.170	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.6		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.128	U G	0.611	0.611	1.00	1.12	pCi/L	07/29/24 08:36	08/07/24 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	58.6		30 - 110					07/29/24 08:36	08/07/24 11:48	1
Y Carrier	77.0		30 - 110					07/29/24 08:36	08/07/24 11:48	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.271	U	0.622	0.622	5.00	1.12	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend



# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: SG-06

Date Collected: 07/17/24 19:20

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-19

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.296		0.203	0.205	1.00	0.273	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.6		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.13	U G	1.16	1.17	1.00	1.88	pCi/L	07/29/24 08:36	08/07/24 11:48	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	53.6		30 - 110					07/29/24 08:36	08/07/24 11:48	1
Y Carrier	78.9		30 - 110					07/29/24 08:36	08/07/24 11:48	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.43	U	1.18	1.19	5.00	1.88	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-01R

Date Collected: 07/18/24 13:38

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-20

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.218		0.122	0.124	1.00	0.139	pCi/L	07/29/24 08:33	08/20/24 09:36	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		30 - 110					07/29/24 08:33	08/20/24 09:36	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.529	U G	0.733	0.735	1.00	1.23	pCi/L	07/29/24 08:36	08/07/24 12:03	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.5		30 - 110					07/29/24 08:36	08/07/24 12:03	1
Y Carrier	74.4		30 - 110					07/29/24 08:36	08/07/24 12:03	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.747	U	0.743	0.745	5.00	1.23	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend



# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-03

Date Collected: 07/18/24 12:30

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-21

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.220		0.104	0.106	1.00	0.119	pCi/L	07/29/24 08:15	08/20/24 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		30 - 110					07/29/24 08:15	08/20/24 09:38	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.566	U	0.406	0.410	1.00	0.609	pCi/L	07/29/24 08:23	08/08/24 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	96.8		30 - 110					07/29/24 08:23	08/08/24 11:57	1
Y Carrier	84.1		30 - 110					07/29/24 08:23	08/08/24 11:57	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.786		0.419	0.423	5.00	0.609	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-04

Date Collected: 07/18/24 10:30

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-22

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.243		0.111	0.113	1.00	0.123	pCi/L	07/29/24 08:15	08/20/24 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:15	08/20/24 09:38	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.210	U	0.399	0.400	1.00	0.691	pCi/L	07/29/24 08:23	08/08/24 11:57	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:23	08/08/24 11:57	1
Y Carrier	83.0		30 - 110					07/29/24 08:23	08/08/24 11:57	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.454	U	0.414	0.416	5.00	0.691	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-06

Date Collected: 07/18/24 15:50

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-23

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.288		0.120	0.122	1.00	0.132	pCi/L	07/29/24 08:15	08/20/24 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		30 - 110					07/29/24 08:15	08/20/24 09:38	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.162	U	0.352	0.353	1.00	0.619	pCi/L	07/29/24 08:23	08/08/24 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.0		30 - 110					07/29/24 08:23	08/08/24 11:58	1
Y Carrier	84.5		30 - 110					07/29/24 08:23	08/08/24 11:58	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.450	U	0.372	0.373	5.00	0.619	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-08

Date Collected: 07/18/24 17:40

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-24

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.232		0.124	0.126	1.00	0.166	pCi/L	07/29/24 08:15	08/20/24 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		30 - 110					07/29/24 08:15	08/20/24 09:38	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.646		0.416	0.420	1.00	0.604	pCi/L	07/29/24 08:23	08/08/24 11:58	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	97.3		30 - 110					07/29/24 08:23	08/08/24 11:58	1
Y Carrier	81.9		30 - 110					07/29/24 08:23	08/08/24 11:58	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.879		0.434	0.438	5.00	0.604	pCi/L		08/22/24 17:53	1

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# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-11

Date Collected: 07/18/24 15:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-25

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.275		0.113	0.116	1.00	0.134	pCi/L	07/29/24 08:15	08/20/24 09:38	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:15	08/20/24 09:38	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.155	U	0.330	0.330	1.00	0.575	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	81.1		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.429	U	0.349	0.350	5.00	0.575	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-16

Date Collected: 07/18/24 08:30

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-26

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.296		0.104	0.108	1.00	0.106	pCi/L	07/29/24 08:15	08/20/24 09:22	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		30 - 110					07/29/24 08:15	08/20/24 09:22	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.0266	U	0.342	0.342	1.00	0.623	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.1		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	84.1		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.323	U	0.357	0.359	5.00	0.623	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-19

Date Collected: 07/18/24 14:40

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-27

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.157		0.0800	0.0813	1.00	0.0938	pCi/L	07/29/24 08:15	08/20/24 12:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					07/29/24 08:15	08/20/24 12:24	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.165	U	0.305	0.306	1.00	0.528	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	89.8		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	84.9		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.322	U	0.315	0.317	5.00	0.528	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-27

Date Collected: 07/18/24 10:54

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-28

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.429		0.143	0.148	1.00	0.137	pCi/L	07/29/24 08:15	08/20/24 12:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:15	08/20/24 12:24	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.447	U	0.442	0.444	1.00	0.709	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.8		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	82.6		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.876		0.465	0.468	5.00	0.709	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-28

Date Collected: 07/18/24 11:54

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-29

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.273		0.135	0.137	1.00	0.175	pCi/L	07/29/24 08:15	08/20/24 12:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		30 - 110					07/29/24 08:15	08/20/24 12:24	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.02		0.547	0.555	1.00	0.780	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	90.6		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	84.5		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.29		0.563	0.572	5.00	0.780	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-30

Date Collected: 07/18/24 18:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-30

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.199		0.102	0.104	1.00	0.133	pCi/L	07/29/24 08:15	08/20/24 12:24	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		30 - 110					07/29/24 08:15	08/20/24 12:24	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.482	U	0.353	0.356	1.00	0.537	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.6		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	83.4		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.680		0.367	0.371	5.00	0.537	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Client Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: MW-33

Date Collected: 07/18/24 09:48

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-31

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.142	U	0.100	0.101	1.00	0.144	pCi/L	07/29/24 08:15	08/20/24 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		30 - 110					07/29/24 08:15	08/20/24 12:21	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.773		0.478	0.483	1.00	0.698	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	94.8		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	82.6		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	0.915		0.488	0.493	5.00	0.698	pCi/L		08/22/24 17:53	1

## Client Sample ID: MW-34

Date Collected: 07/18/24 09:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-32

Matrix: Ground Water

### Method: EPA 903.0 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.427		0.143	0.148	1.00	0.143	pCi/L	07/29/24 08:15	08/20/24 12:21	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		30 - 110					07/29/24 08:15	08/20/24 12:21	1

### Method: EPA 904.0 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.33		0.536	0.550	1.00	0.682	pCi/L	07/29/24 08:23	08/08/24 12:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.8		30 - 110					07/29/24 08:23	08/08/24 12:09	1
Y Carrier	83.4		30 - 110					07/29/24 08:23	08/08/24 12:09	1

### Method: TAL-STL Ra226\_Ra228 Pos - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium 226 and 228	1.76		0.555	0.570	5.00	0.682	pCi/L		08/22/24 17:53	1

Eurofins Eaton Analytical South Bend

# Tracer/Carrier Summary

Client: Trace Analytical Laboratories  
 Project/Site: 24G0880

Job ID: 810-112893-1

## Method: 903.0 - Radium-226 (GFPC)

Matrix: Ground Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	
810-112893-1	MW-02	84.9	
810-112893-2	MW-07	83.1	
810-112893-3	MW-09	84.4	
810-112893-4	MW-10	83.9	
810-112893-5	MW-12	79.2	
810-112893-6	MW-17	76.4	
810-112893-7	MW-18	82.4	
810-112893-7 DU	MW-18	87.1	
810-112893-8	MW-20	82.6	
810-112893-9	MW-31	75.9	
810-112893-10	MW-32	82.9	
810-112893-11	MW-36	43.9	
810-112893-12	MW-37	70.0	
810-112893-13	MW-38	66.7	
810-112893-14	MWT-12	64.3	
810-112893-15	MWT-36	56.6	
810-112893-16	SG-02	61.3	
810-112893-17	SG-04R	62.8	
810-112893-18	SG-05	58.6	
810-112893-19	SG-06	53.6	
810-112893-20	MW-01R	61.5	
810-112893-21	MW-03	96.8	
810-112893-22	MW-04	91.8	
810-112893-23	MW-06	97.0	
810-112893-24	MW-08	97.3	
810-112893-25	MW-11	91.8	
810-112893-26	MW-16	92.1	
810-112893-27	MW-19	89.8	
810-112893-28	MW-27	91.8	
810-112893-29	MW-28	90.6	
810-112893-30	MW-30	91.6	
810-112893-31	MW-33	94.8	
810-112893-32	MW-34	92.8	

**Tracer/Carrier Legend**  
 Ba = Ba Carrier

## Method: 903.0 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	
LCS 160-672729/2-A	Lab Control Sample	93.3	
LCS 160-672754/2-A	Lab Control Sample	93.1	
MB 160-672729/1-A	Method Blank	93.3	
MB 160-672754/1-A	Method Blank	99.5	

**Tracer/Carrier Legend**  
 Ba = Ba Carrier

# Tracer/Carrier Summary

Client: Trace Analytical Laboratories  
 Project/Site: 24G0880

Job ID: 810-112893-1

**Method: 904.0 - Radium-228 (GFPC)**

**Matrix: Ground Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	Y (30-110)
810-112893-1	MW-02	84.9	74.0
810-112893-2	MW-07	83.1	78.1
810-112893-3	MW-09	84.4	81.5
810-112893-4	MW-10	83.9	81.5
810-112893-5	MW-12	79.2	80.0
810-112893-6	MW-17	76.4	77.0
810-112893-7	MW-18	82.4	77.0
810-112893-7 DU	MW-18	87.1	77.8
810-112893-8	MW-20	82.6	77.4
810-112893-9	MW-31	75.9	77.0
810-112893-10	MW-32	82.9	80.0
810-112893-11	MW-36	43.9	78.1
810-112893-12	MW-37	70.0	69.9
810-112893-13	MW-38	66.7	72.5
810-112893-14	MWT-12	64.3	75.1
810-112893-15	MWT-36	56.6	76.3
810-112893-16	SG-02	61.3	77.0
810-112893-17	SG-04R	62.8	75.1
810-112893-18	SG-05	58.6	77.0
810-112893-19	SG-06	53.6	78.9
810-112893-20	MW-01R	61.5	74.4
810-112893-21	MW-03	96.8	84.1
810-112893-22	MW-04	91.8	83.0
810-112893-23	MW-06	97.0	84.5
810-112893-24	MW-08	97.3	81.9
810-112893-25	MW-11	91.8	81.1
810-112893-26	MW-16	92.1	84.1
810-112893-27	MW-19	89.8	84.9
810-112893-28	MW-27	91.8	82.6
810-112893-29	MW-28	90.6	84.5
810-112893-30	MW-30	91.6	83.4
810-112893-31	MW-33	94.8	82.6
810-112893-32	MW-34	92.8	83.4

**Tracer/Carrier Legend**

Ba = Ba Carrier

Y = Y Carrier

**Method: 904.0 - Radium-228 (GFPC)**

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Yield (Acceptance Limits)	
		Ba (30-110)	Y (30-110)
LCS 160-672730/2-A	Lab Control Sample	93.3	82.6
LCS 160-672788/2-A	Lab Control Sample	93.1	84.5
MB 160-672730/1-A	Method Blank	93.3	82.2
MB 160-672788/1-A	Method Blank	99.5	84.1

**Tracer/Carrier Legend**

Ba = Ba Carrier



# Tracer/Carrier Summary

Client: Trace Analytical Laboratories

Project/Site: 24G0880

Y = Y Carrier

Job ID: 810-112893-1

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# QC Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Method: 903.0 - Radium-226 (GFPC)

**Lab Sample ID: MB 160-672729/1-A**  
**Matrix: Water**  
**Analysis Batch: 675774**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 672729**

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.02104	U	0.0420	0.0421	1.00	0.0773	pCi/L	07/29/24 08:15	08/20/24 09:37	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	93.3		30 - 110			07/29/24 08:15	08/20/24 09:37	1		

**Lab Sample ID: LCS 160-672729/2-A**  
**Matrix: Water**  
**Analysis Batch: 675776**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 672729**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	9.58	9.613		1.02	1.00	0.128	pCi/L	100	75 - 125
Carrier	LCS	LCS	Limits			Prepared	Analyzed	Dil Fac	
	%Yield	Qualifier							
Ba Carrier	93.3		30 - 110						

**Lab Sample ID: MB 160-672754/1-A**  
**Matrix: Water**  
**Analysis Batch: 675776**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 672754**

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	-0.0006483	U	0.0509	0.0509	1.00	0.103	pCi/L	07/29/24 08:33	08/20/24 07:32	1
Carrier	MB	MB	Limits			Prepared	Analyzed	Dil Fac		
	%Yield	Qualifier								
Ba Carrier	99.5		30 - 110			07/29/24 08:33	08/20/24 07:32	1		

**Lab Sample ID: LCS 160-672754/2-A**  
**Matrix: Water**  
**Analysis Batch: 675776**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 672754**

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	9.58	9.504		1.00	1.00	0.117	pCi/L	99	75 - 125
Carrier	LCS	LCS	Limits			Prepared	Analyzed	Dil Fac	
	%Yield	Qualifier							
Ba Carrier	93.1		30 - 110						

**Lab Sample ID: 810-112893-7 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 675776**

**Client Sample ID: MW-18**  
**Prep Type: Total/NA**  
**Prep Batch: 672754**

Analyte	Sample	Sample	DU	DU	Total	RL	MDC	Unit	RER	RER Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-226	0.0103	U	0.03727	U	0.0554	1.00	0.0949	pCi/L	0.25	1

# QC Sample Results

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Method: 903.0 - Radium-226 (GFPC) (Continued)

Lab Sample ID: 810-112893-7 DU  
Matrix: Ground Water  
Analysis Batch: 675776

Client Sample ID: MW-18  
Prep Type: Total/NA  
Prep Batch: 672754

Carrier	<i>DU</i> %Yield	<i>DU</i> Qualifier	Limits
Ba Carrier	87.1		30 - 110

## Method: 904.0 - Radium-228 (GFPC)

Lab Sample ID: MB 160-672730/1-A  
Matrix: Water  
Analysis Batch: 674258

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 672730

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.01754	U	0.256	0.256	1.00	0.482	pCi/L	07/29/24 08:23	08/08/24 11:56	1
Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.3		30 - 110					07/29/24 08:23	08/08/24 11:56	1
Y Carrier	82.2		30 - 110					07/29/24 08:23	08/08/24 11:56	1

Lab Sample ID: LCS 160-672730/2-A  
Matrix: Water  
Analysis Batch: 674258

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 672730

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec
	Result	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					Limits
Radium-228			8.69	9.699		1.31	1.00	0.502	pCi/L	112	75 - 125
Carrier	<i>LCS</i> %Yield	<i>LCS</i> Qualifier	Limits								
Ba Carrier	93.3		30 - 110								
Y Carrier	82.6		30 - 110								

Lab Sample ID: MB 160-672788/1-A  
Matrix: Water  
Analysis Batch: 674082

Client Sample ID: Method Blank  
Prep Type: Total/NA  
Prep Batch: 672788

Analyte	MB MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	-0.1044	U	0.213	0.213	1.00	0.441	pCi/L	07/29/24 08:36	08/07/24 11:51	1
Carrier	<i>MB</i> %Yield	<i>MB</i> Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	99.5		30 - 110					07/29/24 08:36	08/07/24 11:51	1
Y Carrier	84.1		30 - 110					07/29/24 08:36	08/07/24 11:51	1

Lab Sample ID: LCS 160-672788/2-A  
Matrix: Water  
Analysis Batch: 674082

Client Sample ID: Lab Control Sample  
Prep Type: Total/NA  
Prep Batch: 672788

Analyte	LCS LCS		Spike	LCS	LCS	Total	RL	MDC	Unit	%Rec	%Rec
	Result	Qualifier	Added	Result	Qual	Uncert. (2σ+/-)					Limits
Radium-228			8.70	8.452		1.18	1.00	0.492	pCi/L	97	75 - 125

# QC Sample Results

Client: Trace Analytical Laboratories  
 Project/Site: 24G0880

Job ID: 810-112893-1

## Method: 904.0 - Radium-228 (GFPC) (Continued)

**Lab Sample ID: LCS 160-672788/2-A**  
**Matrix: Water**  
**Analysis Batch: 674082**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 672788**

Carrier	LCS	LCS	Limits
	%Yield	Qualifier	
Ba Carrier	93.1		30 - 110
Y Carrier	84.5		30 - 110

**Lab Sample ID: 810-112893-7 DU**  
**Matrix: Ground Water**  
**Analysis Batch: 674082**

**Client Sample ID: MW-18**  
**Prep Type: Total/NA**  
**Prep Batch: 672788**

Analyte	Sample		DU		Total	RL	MDC	Unit	RER	Limit
	Result	Qual	Result	Qual	Uncert. (2σ+/-)					
Radium-228	0.256	U	-0.09970	U	0.283	1.00	0.569	pCi/L	0.55	1

Carrier	DU	DU	Limits
	%Yield	Qualifier	
Ba Carrier	87.1		30 - 110
Y Carrier	77.8		30 - 110

# QC Association Summary

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Rad

### Prep Batch: 672729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-112893-21	MW-03	Total/NA	Ground Water	PrecSep-21	
810-112893-22	MW-04	Total/NA	Ground Water	PrecSep-21	
810-112893-23	MW-06	Total/NA	Ground Water	PrecSep-21	
810-112893-24	MW-08	Total/NA	Ground Water	PrecSep-21	
810-112893-25	MW-11	Total/NA	Ground Water	PrecSep-21	
810-112893-26	MW-16	Total/NA	Ground Water	PrecSep-21	
810-112893-27	MW-19	Total/NA	Ground Water	PrecSep-21	
810-112893-28	MW-27	Total/NA	Ground Water	PrecSep-21	
810-112893-29	MW-28	Total/NA	Ground Water	PrecSep-21	
810-112893-30	MW-30	Total/NA	Ground Water	PrecSep-21	
810-112893-31	MW-33	Total/NA	Ground Water	PrecSep-21	
810-112893-32	MW-34	Total/NA	Ground Water	PrecSep-21	
MB 160-672729/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-672729/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

### Prep Batch: 672730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-112893-21	MW-03	Total/NA	Ground Water	PrecSep_0	
810-112893-22	MW-04	Total/NA	Ground Water	PrecSep_0	
810-112893-23	MW-06	Total/NA	Ground Water	PrecSep_0	
810-112893-24	MW-08	Total/NA	Ground Water	PrecSep_0	
810-112893-25	MW-11	Total/NA	Ground Water	PrecSep_0	
810-112893-26	MW-16	Total/NA	Ground Water	PrecSep_0	
810-112893-27	MW-19	Total/NA	Ground Water	PrecSep_0	
810-112893-28	MW-27	Total/NA	Ground Water	PrecSep_0	
810-112893-29	MW-28	Total/NA	Ground Water	PrecSep_0	
810-112893-30	MW-30	Total/NA	Ground Water	PrecSep_0	
810-112893-31	MW-33	Total/NA	Ground Water	PrecSep_0	
810-112893-32	MW-34	Total/NA	Ground Water	PrecSep_0	
MB 160-672730/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-672730/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

### Prep Batch: 672754

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-112893-1	MW-02	Total/NA	Ground Water	PrecSep-21	
810-112893-2	MW-07	Total/NA	Ground Water	PrecSep-21	
810-112893-3	MW-09	Total/NA	Ground Water	PrecSep-21	
810-112893-4	MW-10	Total/NA	Ground Water	PrecSep-21	
810-112893-5	MW-12	Total/NA	Ground Water	PrecSep-21	
810-112893-6	MW-17	Total/NA	Ground Water	PrecSep-21	
810-112893-7	MW-18	Total/NA	Ground Water	PrecSep-21	
810-112893-8	MW-20	Total/NA	Ground Water	PrecSep-21	
810-112893-9	MW-31	Total/NA	Ground Water	PrecSep-21	
810-112893-10	MW-32	Total/NA	Ground Water	PrecSep-21	
810-112893-11	MW-36	Total/NA	Ground Water	PrecSep-21	
810-112893-12	MW-37	Total/NA	Ground Water	PrecSep-21	
810-112893-13	MW-38	Total/NA	Ground Water	PrecSep-21	
810-112893-14	MWT-12	Total/NA	Ground Water	PrecSep-21	
810-112893-15	MWT-36	Total/NA	Ground Water	PrecSep-21	
810-112893-16	SG-02	Total/NA	Ground Water	PrecSep-21	
810-112893-17	SG-04R	Total/NA	Ground Water	PrecSep-21	

Eurofins Eaton Analytical South Bend

# QC Association Summary

Client: Trace Analytical Laboratories  
 Project/Site: 24G0880

Job ID: 810-112893-1

## Rad (Continued)

### Prep Batch: 672754 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-112893-18	SG-05	Total/NA	Ground Water	PrecSep-21	
810-112893-19	SG-06	Total/NA	Ground Water	PrecSep-21	
810-112893-20	MW-01R	Total/NA	Ground Water	PrecSep-21	
MB 160-672754/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-672754/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
810-112893-7 DU	MW-18	Total/NA	Ground Water	PrecSep-21	

### Prep Batch: 672788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
810-112893-1	MW-02	Total/NA	Ground Water	PrecSep_0	
810-112893-2	MW-07	Total/NA	Ground Water	PrecSep_0	
810-112893-3	MW-09	Total/NA	Ground Water	PrecSep_0	
810-112893-4	MW-10	Total/NA	Ground Water	PrecSep_0	
810-112893-5	MW-12	Total/NA	Ground Water	PrecSep_0	
810-112893-6	MW-17	Total/NA	Ground Water	PrecSep_0	
810-112893-7	MW-18	Total/NA	Ground Water	PrecSep_0	
810-112893-8	MW-20	Total/NA	Ground Water	PrecSep_0	
810-112893-9	MW-31	Total/NA	Ground Water	PrecSep_0	
810-112893-10	MW-32	Total/NA	Ground Water	PrecSep_0	
810-112893-11	MW-36	Total/NA	Ground Water	PrecSep_0	
810-112893-12	MW-37	Total/NA	Ground Water	PrecSep_0	
810-112893-13	MW-38	Total/NA	Ground Water	PrecSep_0	
810-112893-14	MWT-12	Total/NA	Ground Water	PrecSep_0	
810-112893-15	MWT-36	Total/NA	Ground Water	PrecSep_0	
810-112893-16	SG-02	Total/NA	Ground Water	PrecSep_0	
810-112893-17	SG-04R	Total/NA	Ground Water	PrecSep_0	
810-112893-18	SG-05	Total/NA	Ground Water	PrecSep_0	
810-112893-19	SG-06	Total/NA	Ground Water	PrecSep_0	
810-112893-20	MW-01R	Total/NA	Ground Water	PrecSep_0	
MB 160-672788/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-672788/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
810-112893-7 DU	MW-18	Total/NA	Ground Water	PrecSep_0	

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-02**  
**Date Collected: 07/17/24 18:20**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-1**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:32
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:52
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-07**  
**Date Collected: 07/17/24 16:22**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-2**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:32
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:52
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-09**  
**Date Collected: 07/17/24 18:24**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-3**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:32
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:52
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-10**  
**Date Collected: 07/17/24 17:28**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-4**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:32
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:52
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-12**  
**Date Collected: 07/17/24 08:32**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-5**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:52
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-17**  
**Date Collected: 07/17/24 13:58**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-6**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:53
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-18**  
**Date Collected: 07/17/24 12:54**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-7**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:53
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-20**  
**Date Collected: 07/17/24 15:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-8**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:53
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47



# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-31**  
**Date Collected: 07/17/24 14:30**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-9**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:53
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-32**  
**Date Collected: 07/17/24 16:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-10**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 07:33
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:54
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-36**  
**Date Collected: 07/17/24 11:02**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-11**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:35
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674082	FLC	EET SL	08/07/24 11:54
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MW-37**  
**Date Collected: 07/17/24 10:04**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-12**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:35
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-38**  
**Date Collected: 07/17/24 12:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-13**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MWT-12**  
**Date Collected: 07/17/24 08:32**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-14**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 16:47

**Client Sample ID: MWT-36**  
**Date Collected: 07/17/24 11:02**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-15**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: SG-02**  
**Date Collected: 07/17/24 18:20**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-16**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:46
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

## Client Sample ID: SG-04R

Date Collected: 07/17/24 18:45

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-17

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:47
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

## Client Sample ID: SG-05

Date Collected: 07/17/24 19:00

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-18

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:48
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

## Client Sample ID: SG-06

Date Collected: 07/17/24 19:20

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-19

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674083	FLC	EET SL	08/07/24 11:48
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

## Client Sample ID: MW-01R

Date Collected: 07/18/24 13:38

Date Received: 07/23/24 09:15

## Lab Sample ID: 810-112893-20

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672754	MLT	EET SL	07/29/24 08:33
Total/NA	Analysis	903.0		1	675774	SWS	EET SL	08/20/24 09:36
Total/NA	Prep	PrecSep_0			672788	MLT	EET SL	07/29/24 08:36
Total/NA	Analysis	904.0		1	674087	FLC	EET SL	08/07/24 12:03
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-03**  
**Date Collected: 07/18/24 12:30**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-21**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 09:38
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674258	SCB	EET SL	08/08/24 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-04**  
**Date Collected: 07/18/24 10:30**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-22**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 09:38
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674258	SCB	EET SL	08/08/24 11:57
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-06**  
**Date Collected: 07/18/24 15:50**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-23**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 09:38
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674258	SCB	EET SL	08/08/24 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-08**  
**Date Collected: 07/18/24 17:40**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-24**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 09:38
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674258	SCB	EET SL	08/08/24 11:58
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-11**  
**Date Collected: 07/18/24 15:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-25**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 09:38
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-16**  
**Date Collected: 07/18/24 08:30**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-26**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675778	FLC	EET SL	08/20/24 09:22
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-19**  
**Date Collected: 07/18/24 14:40**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-27**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 12:24
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-27**  
**Date Collected: 07/18/24 10:54**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-28**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 12:24
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

# Lab Chronicle

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

**Client Sample ID: MW-28**  
**Date Collected: 07/18/24 11:54**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-29**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 12:24
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-30**  
**Date Collected: 07/18/24 18:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-30**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675776	SWS	EET SL	08/20/24 12:24
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-33**  
**Date Collected: 07/18/24 09:48**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-31**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675778	FLC	EET SL	08/20/24 12:21
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Client Sample ID: MW-34**  
**Date Collected: 07/18/24 09:00**  
**Date Received: 07/23/24 09:15**

**Lab Sample ID: 810-112893-32**  
**Matrix: Ground Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			672729	MLT	EET SL	07/29/24 08:15
Total/NA	Analysis	903.0		1	675778	FLC	EET SL	08/20/24 12:21
Total/NA	Prep	PrecSep_0			672730	MLT	EET SL	07/29/24 08:23
Total/NA	Analysis	904.0		1	674257	SCB	EET SL	08/08/24 12:09
Total/NA	Analysis	Ra226_Ra228 Pos		1	676330	FLC	EET SL	08/22/24 17:53

**Laboratory References:**

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

# Accreditation/Certification Summary

Client: Trace Analytical Laboratories  
 Project/Site: 24G0880

Job ID: 810-112893-1

## Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-08-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-24
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24 *
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-25
HI - RadChem Recognition	State	n/a	06-30-25
Illinois	NELAP	200023	11-30-24
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-24
Kentucky (DW)	State	KY90125	12-31-24
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-24
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-25
Louisiana (DW)	State	LA011	12-31-24
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-25
Missouri	State	780	06-30-25
Nevada	State	MO00054	07-31-25
New Jersey	NELAP	MO002	06-30-25
New Mexico	State	MO00054	10-01-24
New York	NELAP	11616	03-31-25
North Carolina (DW)	State	29700	07-31-25
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-25
South Carolina	State	85002001	06-30-24 *
Texas	NELAP	T104704193	07-31-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO00054	07-31-25
Virginia	NELAP	460230	06-14-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	10-31-24

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

# Method Summary

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

Method	Method Description	Protocol	Laboratory
903.0	Radium-226 (GFPC)	EPA	EET SL
904.0	Radium-228 (GFPC)	EPA	EET SL
Ra226_Ra228 Pos	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

#### Protocol References:

EPA = US Environmental Protection Agency

None = None

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

#### Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



# Sample Summary

Client: Trace Analytical Laboratories  
Project/Site: 24G0880

Job ID: 810-112893-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-112893-1	MW-02	Ground Water	07/17/24 18:20	07/23/24 09:15
810-112893-2	MW-07	Ground Water	07/17/24 16:22	07/23/24 09:15
810-112893-3	MW-09	Ground Water	07/17/24 18:24	07/23/24 09:15
810-112893-4	MW-10	Ground Water	07/17/24 17:28	07/23/24 09:15
810-112893-5	MW-12	Ground Water	07/17/24 08:32	07/23/24 09:15
810-112893-6	MW-17	Ground Water	07/17/24 13:58	07/23/24 09:15
810-112893-7	MW-18	Ground Water	07/17/24 12:54	07/23/24 09:15
810-112893-8	MW-20	Ground Water	07/17/24 15:00	07/23/24 09:15
810-112893-9	MW-31	Ground Water	07/17/24 14:30	07/23/24 09:15
810-112893-10	MW-32	Ground Water	07/17/24 16:00	07/23/24 09:15
810-112893-11	MW-36	Ground Water	07/17/24 11:02	07/23/24 09:15
810-112893-12	MW-37	Ground Water	07/17/24 10:04	07/23/24 09:15
810-112893-13	MW-38	Ground Water	07/17/24 12:00	07/23/24 09:15
810-112893-14	MWT-12	Ground Water	07/17/24 08:32	07/23/24 09:15
810-112893-15	MWT-36	Ground Water	07/17/24 11:02	07/23/24 09:15
810-112893-16	SG-02	Ground Water	07/17/24 18:20	07/23/24 09:15
810-112893-17	SG-04R	Ground Water	07/17/24 18:45	07/23/24 09:15
810-112893-18	SG-05	Ground Water	07/17/24 19:00	07/23/24 09:15
810-112893-19	SG-06	Ground Water	07/17/24 19:20	07/23/24 09:15
810-112893-20	MW-01R	Ground Water	07/18/24 13:38	07/23/24 09:15
810-112893-21	MW-03	Ground Water	07/18/24 12:30	07/23/24 09:15
810-112893-22	MW-04	Ground Water	07/18/24 10:30	07/23/24 09:15
810-112893-23	MW-06	Ground Water	07/18/24 15:50	07/23/24 09:15
810-112893-24	MW-08	Ground Water	07/18/24 17:40	07/23/24 09:15
810-112893-25	MW-11	Ground Water	07/18/24 15:00	07/23/24 09:15
810-112893-26	MW-16	Ground Water	07/18/24 08:30	07/23/24 09:15
810-112893-27	MW-19	Ground Water	07/18/24 14:40	07/23/24 09:15
810-112893-28	MW-27	Ground Water	07/18/24 10:54	07/23/24 09:15
810-112893-29	MW-28	Ground Water	07/18/24 11:54	07/23/24 09:15
810-112893-30	MW-30	Ground Water	07/18/24 18:00	07/23/24 09:15
810-112893-31	MW-33	Ground Water	07/18/24 09:48	07/23/24 09:15
810-112893-32	MW-34	Ground Water	07/18/24 09:00	07/23/24 09:15



Eaton Analytical



810-112893 Chain of Custody

110 S. Hill Street  
South Bend, IN 46617  
T: 1.800.332.4345  
F: 1.574.233.8207

Order #

Batch #

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CHAIN OF CUSTODY RECORD

Page \_\_\_\_\_ of \_\_\_\_\_

LAB Number	COLLECTION		COMPLIANCE MONITORING	Yes	No	POPULATION SERVED	STATE (sample origin)	PROJECT NAME	PO#	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
	DATE	TIME										
							MI	24G0880	24G0880			
1	07/17/24	18:20				Radium 226/228				4	GW	SW
2	07/17/24	16:22				Radium 226/228				4	GW	SW
3	07/17/24	18:24				Radium 226/228				4	GW	SW
4	07/17/24	17:28				Radium 226/228				4	GW	SW
5	07/17/24	8:32				Radium 226/228				4	GW	SW
6	07/17/24	13:58				Radium 226/228				4	GW	SW
7	07/17/24	12:54				Radium 226/228				4	GW	SW
8	07/17/24	15:00				Radium 226/228				4	GW	SW
9	07/17/24	14:30				Radium 226/228				4	GW	SW
10	07/17/24	16:00				Radium 226/228				4	GW	SW
11	07/17/24	11:02				Radium 226/228				4	GW	SW
12	07/17/24	10:04				Radium 226/228				4	GW	SW
13	07/17/24	12:00				Radium 226/228				4	GW	SW
14	07/17/24	8:32				Radium 226/228				4	GW	SW

LAB PRESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT

LAB COMMENTS: Level IV with EDD from St. Louis  
**pH verified <2**  
*226/228 \* kw 7/23/24*

CONDITIONS UPON RECEIPT (check one):  
 Iced: Wet/Blue  Ambient  °C Upon Receipt: N/A

RECEIVED BY: (Signature) *Kameron Williams*  
 RECEIVED FOR LABORATORY BY:

RECEIVED BY: (Signature) *Fedex*  
 RECEIVED BY: (Signature)

RECEIVED BY: (Signature) *Fedex*

DATE: 07/22/24  
 DATE: 7/23/24  
 DATE: 7/23/24

TIME: AM PM  
 TIME: AM PM  
 TIME: AM PM

TURN-AROUND TIME (TAT) - SURCHARGES

MATRIX CODES:  
 DW-DRINKING WATER  
 RW-REAGENT WATER  
 GW-GROUND WATER  
 SW-SURFACE WATER  
 PW-POOL WATER  
 WW-WASTE WATER

SW = Standard Written: (15 working days) 0%  
 RV\* = Rush Verbal: (5 working days) 50%  
 RW\* = Rush Written: (5 working days) 75%  
 \* Please call, expedited service not available for all testing

IV\* = Immediate Verbal: (3 working days) 100%  
 IW\* = Immediate Written: (3 working days) 125%  
 SP\* = Weekend, Holiday CALL  
 STAT\* = Less than 48 hours CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 6.0 Effective Date: 2016-09-20







Eaton Analytical

110 S. Hill Street  
South Bend, IN 46617  
T: 1.800.332.4345  
F: 1.574.233.8207

Order #

Batch #

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### CHAIN OF CUSTODY RECORD

Page \_\_\_\_ of \_\_\_\_

**REPORT TO:** Shaded area for EEA use only

**BILL TO:** Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd., Muskegon, MI 49444

**SAMPLER (Signature):** \_\_\_\_\_

**COMPLIANCE MONITORING:** Yes  No  X

**STATE (sample origin):** MI

**POPULATION SERVED:** SOURCE WATER

**PROJECT NAME:** 24G0880

**PO#:** 24G0880

**CHLORINATED:** YES  NO

**SAMPLE REMARKS:** \_\_\_\_\_

**LAB NUMBER:** \_\_\_\_\_

**TEST NAME:** \_\_\_\_\_

**TURNAROUND TIME:** \_\_\_\_\_

**MATRIX CODE:** \_\_\_\_\_

**# OF CONTAINERS:** \_\_\_\_\_

LAB Number	COLLECTION		SAMPLING SITE	PWS ID #	TEST NAME	SAMPLE REMARKS	CHLORINATED	# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
	DATE	TIME								
1	07/17/24	11:02	MWT-36		Radium 226/228			4	GW	SW
2	07/17/24	18:20	SG-02		Radium 226/228			4	GW	SW
3	07/17/24	18:45	SG-04R		Radium 226/228			4	GW	SW
4	07/17/24	19:00	SG-05		Radium 226/228			4	GW	SW
5	07/17/24	19:20	SG-06		Radium 226/228			4	GW	SW
6	07/18/24	13:38	MW-01R		Radium 226/228			4	GW	SW
7	07/18/24	12:30	MW-03		Radium 226/228			4	GW	SW
8	07/18/24	10:30	MW-04		Radium 226/228			4	GW	SW
9	07/18/24	15:50	MW-06		Radium 226/228			4	GW	SW
10	07/18/24	17:40	MW-08		Radium 226/228			4	GW	SW
11	07/18/24	15:00	MW-11		Radium 226/228			4	GW	SW
12	07/18/24	8:30	MW-16		Radium 226/228			4	GW	SW
13	07/18/24	14:40	MW-19		Radium 226/228			4	GW	SW
14	07/18/24	10:54	MW-27		Radium 226/228			4	GW	SW

**RELINQUISHED BY: (Signature)** Beverly Vaughn

**RECEIVED BY: (Signature)** Fedex

**DATE:** 07/22/24

**TIME:** AM PM

**LAB COMMENTS:** Level IV with EDD from St. Louis

**LAB RESERVES THE RIGHT TO RETURN UNUSED PORTIONS OF NON-AQUEOUS SAMPLES TO CLIENT**

**RELINQUISHED BY: (Signature)** Fedex

**RECEIVED BY: (Signature)** *Kameron Williams*

**DATE:** 7/23/24

**TIME:** AM PM

**RECEIVED FOR LABORATORY BY:** \_\_\_\_\_

**CONDITIONS UPON RECEIPT (check one):**  Wet/Blue  Ambient  °C Upon Receipt  N/A

**RELINQUISHED BY: (Signature)** \_\_\_\_\_

**RECEIVED BY: (Signature)** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**TIME:** AM PM

**RECEIVED FOR LABORATORY BY:** \_\_\_\_\_

**CONDITIONS UPON RECEIPT (check one):**  Wet/Blue  Ambient  °C Upon Receipt  N/A

**MATRIX CODES:**  
 DW-DRINKING WATER  
 RW-REAGENT WATER  
 GW-GROUND WATER  
 EW-EXPOSURE WATER  
 SW-SURFACE WATER  
 PW-POOL WATER  
 WW-WASTE WATER

**TURN-AROUND TIME (TAT) - SURCHARGES**  
 SW = Standard Written: (15 working days) 0%  
 RW = Rush Written: (5 working days) 50%  
 RW\* = Rush Written: (5 working days) 75%  
 SW = Standard Verbal: (3 working days) 100%  
 RW = Immediate Written: (3 working days) 125%  
 SP\* = Weekend, Holiday CALL  
 STAT\* = Less than 48 hours CALL

**\* Please call, expedited service not available for all testing**

Sample analysis will be provided according to the standard EEA/Trace Analytical Laboratories Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.

06-LO-F0435 Issue 6.0 Effective Date: 2016-09-20







Eaton Analytical

110 S. Hill Street  
South Bend, IN 46617  
T: 1.800.332.4345  
F: 1.574.233.8207

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### CHAIN OF CUSTODY RECORD

Page \_\_\_\_\_ of \_\_\_\_\_

REPORT TO: **Shaded area for EEA use only**

SAMPLER (Signature)  
COMPLIANCE MONITORING  
Yes No  
X

STATE (sample origin) MI  
POPULATION SERVED SOURCE WATER

PROJECT NAME 24G0880  
PO# 24G0880

# OF CONTAINERS  
MATRIX CODE

BILL TO:  
Accounts Payable, Trace Analytical Laboratories, Inc., 2241 Black Creek Rd.,  
Muskegon, MI 49444

TEST NAME  
SAMPLE REMARKS

CHLORINATED  
YES NO

TURNAROUND TIME

#### LAB Number

#### COLLECTION

LAB Number	DATE	TIME	AM		PM		SAMPLING SITE	PWS ID #	TEST NAME	SAMPLE REMARKS	CHLORINATED		# OF CONTAINERS	MATRIX CODE	TURNAROUND TIME
			DATE	TIME	DATE	TIME					YES	NO			
1	07/18/24	11:54					MW-28	Radium 226/228				4	GW	SW	
2	07/18/24	18:00					MW-30	Radium 226/228				4	GW	SW	
3	07/18/24	9:48					MW-33	Radium 226/228				4	GW	SW	
4	07/18/24	9:00					MW-34	Radium 226/228				4	GW	SW	
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															

RELINQUISHED BY: (Signature) Beverly Vaughn  
 RECEIVED BY: (Signature) Fedex  
 DATE 07/22/24  
 TIME AM PM

RELINQUISHED BY: (Signature)  
 RECEIVED BY: (Signature) *Kameron Williams*  
 DATE 7/23/24 0915  
 TIME AM PM

RELINQUISHED BY: (Signature)  
 RECEIVED FOR LABORATORY BY:  
 DATE  
 TIME AM PM

LAB COMMENTS: Level IV with EDD from St. Louis

CONDITIONS UPON RECEIPT (check one):  
 Iced:  Wet/Blue  Ambient  °C Upon Receipt: \_\_\_\_\_ N/A

**MATRIX CODES:**  
 DW-DRINKING WATER  
 RW-REAGENT WATER  
 GW-GROUND WATER  
 EW-EXPOSURE WATER  
 SW-SURFACE WATER  
 PW-POOL WATER  
 WW-WASTE WATER

**TURN-AROUND TIME (TAT) - SURCHARGES**  
 SW = Standard Written: (15 working days) 0%  
 RW\* = Rush Verbal: (5 working days) 50%  
 RW\*\* = Rush Written: (5 working days) 75%  
 \* Please call, expedited service not available for all testing

**IV\*** = Immediate Verbal: (3 working days) 100%  
**IW\*** = Immediate Written: (3 working days) 125%  
**SP\*** = Weekend, Holiday CALL  
**STAT\*** = Less than 48 hours CALL

Samples received unannounced with less than 48 hours holding time remaining may be subject to additional charges.

06-LO-F0435 Issue 6.0 Effective Date: 2016-09-20

Sample analysis will be provided according to the standard EEA Water Services Terms, which are available upon request. Any other terms proposed by Customer are deemed material alterations and are rejected unless expressly agreed to in writing by EEA.







**Chain of Custody Record**

<b>Client Information (Sub Contract Lab)</b>			Lab PM: Fullimer, Karen			Camer Tracking No(s): 810-43396.2		
Client Contact: Tes/America Laboratories, Inc.			E-Mail: Karen.Fullimer@et.eurofins.com			Page: Page 2 of 4		
Shipping/Receiving			Accreditations Required (See note): State - Michigan			Job #: 810-112893-1		
Address: 13715 Rider Trail North,			Due Date Requested: 8/22/2024			Preservation Codes:		
City: Earth City			TAT Requested (days):			<b>Analysis Requested</b>		
State, Zip: MO, 63045			PO #:					
Phone: 314-298-8566(Tel) 314-298-8757(Fax)			WO #:			Total Number of Containers		
Email:			Project #: 81000263			<b>Special Instructions/Note:</b>		
Site: 24G0880			SOW#:					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil/sediment, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		903.0/PresSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PresSep_0 EPA 904.0 - Radium 228 (St. Louis)	Ra226, 228GFP_PC_P/ Combined Radium 226 and Radium-228
					Preservation Code:	Preservation Code:					
MW-32 (810-112893-10)	7/17/24	16:00 Eastern	Water	Water	X	X	X	X	X	X	X
MW-36 (810-112893-11)	7/17/24	11:02 Eastern	Water	Water	X	X	X	X	X	X	X
MW-37 (810-112893-12)	7/17/24	10:04 Eastern	Water	Water	X	X	X	X	X	X	X
MW-38 (810-112893-13)	7/17/24	12:00 Eastern	Water	Water	X	X	X	X	X	X	X
MWT-12 (810-112893-14)	7/17/24	08:32 Eastern	Water	Water	X	X	X	X	X	X	X
MWT-36 (810-112893-15)	7/17/24	11:02 Eastern	Water	Water	X	X	X	X	X	X	X
SG-02 (810-112893-16)	7/17/24	18:20 Eastern	Water	Water	X	X	X	X	X	X	X
SG-04R (810-112893-17)	7/17/24	18:45 Eastern	Water	Water	X	X	X	X	X	X	X
SG-05 (810-112893-18)	7/17/24	19:00 Eastern	Water	Water	X	X	X	X	X	X	X

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_  
 Primary Deliverable Rank: 2  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_

Special Instructions/QC Requirements:  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

**Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)**  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Empty Kit Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:			





# Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Lab PM: Fuller, Karen		Camer Tracking No(s): 810-43396.3																																																																			
Shipping/Receiving		E-Mail: Karen.Fullmer@et.eurofins.com		Page: Page 3 of 4																																																																			
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State - Michigan		Job #: 810-112893-1																																																																			
Address: 13715 Rider Trail North,		<b>Analysis Requested</b>																																																																					
City: Earth City																																																																							
State, Zip: MO, 63045		<b>Preservation Codes:</b>																																																																					
Phone: 314-298-8566(Tel) 314-298-8757(Fax)																																																																							
Email:		<table border="1"> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)</th> <th>904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)</th> <th>RA226_228GFP_C/P Combined Radium 226 and Radium-228</th> <th>Total Number of Containers</th> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> <tr> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>4</td> </tr> </table>				Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)	RA226_228GFP_C/P Combined Radium 226 and Radium-228	Total Number of Containers	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4	X	X	X	X	X	4
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)					903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 228 (St. Louis)	RA226_228GFP_C/P Combined Radium 226 and Radium-228	Total Number of Containers																																																														
X	X	X	X	X	4																																																																		
X	X	X	X	X	4																																																																		
X	X	X	X	X	4																																																																		
X	X	X	X	X	4																																																																		
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X	X	X	X	X	4																																																																		
Due Date Requested: 8/22/2024		<table border="1"> <tr> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=waterfall, BT=TISSUE, AA=Air)</th> <th>Preservation Code:</th> </tr> <tr> <td>7/17/24</td> <td>19:20 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>13:38 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>12:30 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>10:30 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>15:50 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>17:40 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>15:00 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>08:30 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> <tr> <td>7/18/24</td> <td>14:40 Eastern</td> <td></td> <td>Water</td> <td></td> </tr> </table>				Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waterfall, BT=TISSUE, AA=Air)	Preservation Code:	7/17/24	19:20 Eastern		Water		7/18/24	13:38 Eastern		Water		7/18/24	12:30 Eastern		Water		7/18/24	10:30 Eastern		Water		7/18/24	15:50 Eastern		Water		7/18/24	17:40 Eastern		Water		7/18/24	15:00 Eastern		Water		7/18/24	08:30 Eastern		Water		7/18/24	14:40 Eastern		Water																	
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TAT Requested (days):		<p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyze &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.</p>																																																																					
PO #:																																																																							
WO #:		<p><b>Possible Hazard Identification</b></p> <p>Unconfirmed</p> <p>Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2</p> <p>Empty Kit Relinquished by: _____ Date: _____</p> <p>Relinquished by: <i>Kameron Williams</i> Date/Time: <i>7/24/24 1600</i> Company: <i>EEA-SB</i></p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: _____ Custody Seal No.: _____</p> <p>Δ Yes Δ No</p> <p>Cooler Temperature(s) °C and Other Remarks:</p>																																																																					
Project Name: 24G0880																																																																							
Site:		<p>Sample Identification - Client ID (Lab ID)</p> <p>SG-06 (810-112893-19)</p> <p>MW-01R (810-112893-20)</p> <p>MW-03 (810-112893-21)</p> <p>MW-04 (810-112893-22)</p> <p>MW-06 (810-112893-23)</p> <p>MW-08 (810-112893-24)</p> <p>MW-11 (810-112893-25)</p> <p>MW-16 (810-112893-26)</p> <p>MW-19 (810-112893-27)</p>																																																																					



**Chain of Custody Record**

<b>Client Information (Sub Contract Lab)</b>			Lab PM: Fullimer, Karen		Camer Tracking No(s): 810-43396.4											
Client Contact: Shipping/Receiving			E-Mail: Karen.Fullimer@et.eurofins.com		Page: Page 4 of 4											
Company: TestAmerica Laboratories, Inc.			Accreditations Required (See note): State - Michigan		Job #: 810-112893-1											
Address: 13715 Rider Trail North,			Due Date Requested: 8/22/2024		Preservation Codes:											
City: Earth City			TAT Requested (days):													
State, Zip: MO, 63045			PO #:													
Phone: 314-298-8566(Tel) 314-298-8757(Fax)			WO #:													
Email:			Project #: 81000263													
Site: 24G0880			SSOW#:													
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soil/sediment, BT=Blood, A=Air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		903.0/PresSep_21 EPA 903.0 - Radium 226 (St. Louis)		904.0/PresSep_0 EPA 904.0 - Radium 228 (St. Louis)		Ra226_228GFP_C/P Combined Radium-226 and Radium-228		Total Number of Containers	Special Instructions/Note:
					Preservation Code:											
MW-27 (810-112893-28)	7/18/24	10:54 Eastern		Water	X	X	X	X	X	X	X	X	X	4		
MW-28 (810-112893-29)	7/18/24	11:54 Eastern		Water	X	X	X	X	X	X	X	X	X	4		
MW-30 (810-112893-30)	7/18/24	18:00 Eastern		Water	X	X	X	X	X	X	X	X	X	4		
MW-33 (810-112893-31)	7/18/24	09:48 Eastern		Water	X	X	X	X	X	X	X	X	X	4		
MW-34 (810-112893-32)	7/18/24	09:00 Eastern		Water	X	X	X	X	X	X	X	X	X	4		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.</p>																
<p><b>Possible Hazard Identification</b>          Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months</p>																
<p>Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2          Special Instructions/QC Requirements: _____</p>																
<p>Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____</p>																
<p>Relinquished by: <i>Kameron Williams</i> Date/Time: <i>7/24/24 1600</i> Company: <i>EEA-SB</i> Received by: _____ Date/Time: _____ Company: _____</p>																
<p>Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____</p>																
<p>Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____</p>																





**Chain of Custody Record**



<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact:		Fullmer, Karen	Fullmer, Karen		810-43396.1						
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page						
Company:			Karen.Fullmer@et.eurofins.com	Michigan	Page 1 of 4						
Test/America Laboratories, Inc.		Accreditations Required (See note):		Job #:	Preservation Codes:						
Address:		State - Michigan		810-112893-1							
13715 Rider Trail North,		<b>Analysis Requested</b>									
City:											
Earth City											
State, Zip											
MO, 63045											
Phone:											
314-298-8566(Tel) 314-298-8757(Fax)											
Email:											
Project Name:											
24G0880											
Site:											
SSOW#											
<b>Sample Identification - Client ID (Lab ID)</b>											
MW-02 (810-112893-1)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/PreSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PreSep_0 EPA 904.0 - Radium 226 (St. Louis)	R226_Z28GFP_C/P Combined Radium 226 and Radium-Z28	Total Number of containers	Special Instructions/Note:
	7/17/24	18:20 Eastern	Water	Water	X	X	X	X		4	
MW-07 (810-112893-2)	7/17/24	16:22 Eastern	Water	Water	X	X	X	X		4	
MW-09 (810-112893-3)	7/17/24	18:24 Eastern	Water	Water	X	X	X	X		4	
MW-10 (810-112893-4)	7/17/24	17:28 Eastern	Water	Water	X	X	X	X		4	
MW-12 (810-112893-5)	7/17/24	08:32 Eastern	Water	Water	X	X	X	X		4	
MW-17 (810-112893-6)	7/17/24	13:58 Eastern	Water	Water	X	X	X	X		4	
MW-18 (810-112893-7)	7/17/24	12:54 Eastern	Water	Water	X	X	X	X		4	
MW-20 (810-112893-8)	7/17/24	15:00 Eastern	Water	Water	X	X	X	X		4	
MW-31 (810-112893-9)	7/17/24	14:30 Eastern	Water	Water	X	X	X	X		4	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/rests/main being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.</p>											
<b>Possible Hazard Identification</b>											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Date:											
Empty Kit Relinquished by:											
Relinquished by: <i>Katherine Williams</i>											
Date/Time: 7/24/24 1600											
Relinquished by: <i>M. Pinette</i>											
Date/Time: JUL 26 2024 0925											
Relinquished by:											
Date/Time:											
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No											
Custody Seal No.:											
Cooler Temperature(s) °C and Other Remarks:											
Special Instructions/QC Requirements:											
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)											
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months											
Method of Shipment:											
Received by: <i>CEA-SB</i>											
Date/Time: 7/24/24 1600											
Company: <i>CEA-SB</i>											
Received by: <i>M. Pinette</i>											
Date/Time: JUL 26 2024 0925											
Company:											
Received by:											
Date/Time:											
Company:											



**Chain of Custody Record**

<b>Client Information (Sub Contract Lab)</b>		Lab PM: Fullimer, Karen	Carrier Tracking No(s): COC No: 810-43396.2
Shipping/Receiving		E-Mail: Karen.Fullimer@et.eurofins.com	Page: Page 2 of 4
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note) State - Michigan	Job #: 810-112893-1
Address: 13715 Rider Trail North.		Preservation Codes:	
City: Earth City	Due Date Requested: 8/22/2024	<b>Analysis Requested</b>	
State, Zip: MO, 63045	TAT Requested (days):		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	903.0/PresSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PresSep_0 EPA 904.0 - Radium 226 (St. Louis)
Email:	WO #:	Perform MS/MSD (Yes or No)	Radium-226
Project Name: 24G0880	Project #: 81000263	Field Filled Sample (Yes or No)	Total Number of Containers
Site:	SSOW#:	Preservation Code:	Other:
<b>Sample Identification - Client ID (Lab ID)</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>
MW-32 (810-112893-10)	7/17/24	16:00 Eastern	Water
MW-36 (810-112893-11)	7/17/24	11:02 Eastern	Water
MW-37 (810-112893-12)	7/17/24	10:04 Eastern	Water
MW-38 (810-112893-13)	7/17/24	12:00 Eastern	Water
MWT-12 (810-112893-14)	7/17/24	08:32 Eastern	Water
MWT-36 (810-112893-15)	7/17/24	11:02 Eastern	Water
SG-02 (810-112893-16)	7/17/24	18:20 Eastern	Water
SG-04R (810-112893-17)	7/17/24	18:45 Eastern	Water
SG-05 (810-112893-18)	7/17/24	19:00 Eastern	Water

**Special Instructions/Note:**

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis of matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

**Possible Hazard Identification**  
 Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_ Primary Deliverable Rank: 2

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: *Kamerson Williams* Date/Time: *7/24/24 16:00* Company: *EEA-SB*

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No

Received by: *M. Pimette* Date/Time: *JUL 26 2024 09:25* Company: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Received by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements: \_\_\_\_\_

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PMI:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Fullmer, Karen	Fullmer, Karen		810-43396.3
Company: TestAmerica Laboratories, Inc.		E-Mail: Karen.Fullmer@et.eurofins.com	State of Origin: Michigan	Page: Page 3 of 4	Job #: 810-112893-1
Address: 13715 Rider Trail North,		Accreditations Required (See note): State - Michigan		Preservation Codes:	
City: Earth City	Due Date Requested: 8/22/2024	<b>Analysis Requested</b>			
State, Zip: MO, 63045	TAT Requested (days):				
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	Total Number of containers			
Email:	WO #:				
Project Name: 24G0880	Project #: 81000263	903.0/PrecSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/PrecSep_0 EPA 904.0 - Radium 226 (St. Louis)	R226_228GFP_C/P Combined Radium 226 and Radium-228	Other:
Site:	SSOW#:	Form MS/MSD (Yes or No)	Field Filtered Sample (Yes or No)	Preservation Code:	Special Instructions/Note:
<b>Sample Identification - Client ID (Lab ID)</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=water, S=soil, O=wastewater, BT=TISSUE, A=Air)</b>	
SG-06 (810-112893-19)	7/17/24	19:20 Eastern	Water	Water	X
MW-01R (810-112893-20)	7/18/24	13:38 Eastern	Water	Water	X
MW-03 (810-112893-21)	7/18/24	12:30 Eastern	Water	Water	X
MW-04 (810-112893-22)	7/18/24	10:30 Eastern	Water	Water	X
MW-06 (810-112893-23)	7/18/24	15:50 Eastern	Water	Water	X
MW-08 (810-112893-24)	7/18/24	17:40 Eastern	Water	Water	X
MW-11 (810-112893-25)	7/18/24	15:00 Eastern	Water	Water	X
MW-16 (810-112893-26)	7/18/24	08:30 Eastern	Water	Water	X
MW-19 (810-112893-27)	7/18/24	14:40 Eastern	Water	Water	X

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis of the matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

**Possible Hazard Identification**  
 Unconfirmed  
 Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_ Primary Deliverable Rank: 2  
 Special Instructions/QC Requirements: \_\_\_\_\_

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_  
 Relinquished by: *Kameron Williams* Date/Time: 7/24/24 1600 Company: *SEA-SB*  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Custody Seals Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks: \_\_\_\_\_

Received by: *M. Pinette* Date: *JUL 26 2024 09:25* Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months



# Chain of Custody Record

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Client Contact: Shipping/Receiving		Phone:	Fullimer, Karen	State of Origin: Michigan	810-43396.4					
Company: TestAmerica Laboratories, Inc.		E-Mail: Karen.Fullimer@et.eurofins.com		Page: Page 4 of 4	Job #: 810-112893-1					
Address: 13715 Rider Trail North,		Accreditations Required (See note): Slate - Michigan		Preservation Codes:						
City: Earth City	State, Zip MO, 63045	Due Date Requested: 8/22/2024	Analysis Requested							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	IAT Requested (days):	Total Number of containers							
Email:	WO #:		Other:							
Project Name: 24G0880	Project #: 81000263		Special Instructions/Note:							
Site:	SSOW#:									
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	903.0/precSep_21 EPA 903.0 - Radium 226 (St. Louis)	904.0/precSep_0 EPA 904.0 - Radium 228 (St. Louis)	R226, 228GFP_C/P Combined Radium-226 and Radium-228
MW-27 (810-112893-28)	7/18/24	10:54 Eastern		Water		X	X	X	X	
MW-28 (810-112893-29)	7/18/24	11:54 Eastern		Water		X	X	X	X	
MW-30 (810-112893-30)	7/18/24	18:00 Eastern		Water		X	X	X	X	
MW-33 (810-112893-31)	7/18/24	09:48 Eastern		Water		X	X	X	X	
MW-34 (810-112893-32)	7/18/24	09:00 Eastern		Water		X	X	X	X	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.</p>										
<p><b>Possible Hazard Identification</b>          Unconfirmed          Deliverable Requested: I, II, III, IV, Other (specify) <span style="float: right;">Primary Deliverable Rank: 2</span></p>										
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months</p>										
<p>Special Instructions/QC Requirements:</p>										
<p>Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____</p>										
<p>Relinquished by: <i>Kameron Williams</i> Date/Time: <i>7/24/24 1600</i> Company: <i>EEA-SB</i> Received by: <i>M. Pinette</i> Date/Time: <i>JUL 26 2024 125</i> Company: _____</p>										
<p>Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____</p>										
<p>Relinquished by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____</p>										
<p>Custody Seals Intact: _____ Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____</p>										



## Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-112893-1

**Login Number: 112893**

**List Number: 1**

**Creator: Williams, Kameron**

**List Source: Eurofins Eaton Analytical South Bend**

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	False	Thermal preservation not required.
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



# Login Sample Receipt Checklist

Client: Trace Analytical Laboratories

Job Number: 810-112893-1

**Login Number: 112893**

**List Number: 2**

**Creator: Pinette, Meadow L**

**List Source: Eurofins St. Louis**

**List Creation: 07/26/24 12:59 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Appendix F

### LCL Statistical Tables, Plots, and LCL Values



**Table 1: Summary Statistics, Non-Detects Included**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	2022-11-29 to 2024-07-18		Nonparametric	3.18	3.00	2.00	5.00	1.08	0.339	0.155	-1.39
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	104	105	38.0	160	39.9	0.385	0.00175	-1.25
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	248	240	130	400	81.7	0.330	0.371	-0.547
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Normal	Normal	134	150	49.0	210	52.5	0.392	-0.613	-0.728
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Normal	Normal	11.2	12.0	4.80	15.0	3.58	0.321	-0.447	-1.30
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	7.57	7.74	6.02	7.81	0.496	0.0655	-3.29	11.1
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	478	470	8.80	980	319	0.666	0.00907	-1.27
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2350	2400	2100	2600	138	0.0588	-0.124	0.0200
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.000407	0.000290	0.000170	0.00120	0.000297	0.731	2.01	4.33
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00161	0.00135	0.000730	0.00410	0.000872	0.542	2.33	6.79
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.323	0.295	0.200	0.560	0.118	0.366	1.26	0.779
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000213	0.000200	0.0000520	0.000360	0.0000953	0.448	0.173	-0.663
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	2022-11-29 to 2024-07-18		Nonparametric	0.000160	0.0000925	0.0000320	0.000380	0.000130	0.812	1.05	-0.593
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.00391	0.00205	0.00130	0.0220	0.00579	1.48	3.28	11.1
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00175	0.00115	0.000640	0.00450	0.00125	0.713	1.59	1.49
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Normal	Normal	11.2	12.0	4.80	15.0	3.58	0.321	-0.447	-1.30
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00128	0.000910	0.000350	0.00530	0.00132	1.03	2.97	9.50
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2.26	2.25	0.770	3.40	0.858	0.379	-0.154	-1.18
11_2_5_117	MW-01R	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00148	0.000795	0.000330	0.00560	0.00152	1.02	2.15	4.85
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.905	0.790	0.601	1.28	0.261	0.288	0.412	-1.73
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000737	0.000630	0.000300	0.00180	0.000374	0.507	2.30	6.65
11_2_5_125	MW-01R	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000253	0.000380	0.0000750	0.000380	0.000157	0.621	-0.388	-2.26
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.000407	0.000280	0.000200	0.00130	0.000360	0.883	2.03	3.18
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.590	0.570	0.0880	1.10	0.324	0.550	-0.0862	-0.909
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00388	0.00205	0.00120	0.0220	0.00581	1.50	3.26	10.9
11_2_6_123	MW-01R	Part 115	Silver	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000985	0.844	0.812	-1.65
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00189	0.00150	0.000620	0.00460	0.00140	0.742	1.06	-0.214
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00395	0.00125	0.00120	0.0140	0.00492	1.25	1.54	0.753
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	51.9	57.0	6.10	100	28.1	0.541	-0.0306	-0.331
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	98.2	99.5	73.0	110	11.5	0.117	-0.893	0.572
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	204	210	180	240	17.3	0.0847	0.358	0.331
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	136	140	67.0	160	23.1	0.169	-2.80	9.00
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	9.16	9.60	4.50	10.0	1.52	0.166	-3.04	9.83
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.22	7.23	7.06	7.45	0.119	0.0164	0.414	-0.678
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	2022-11-28 to 2024-07-17		Nonparametric	1.27	0.635	0.410	5.50	1.49	1.17	2.42	6.39
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1842	1800	1600	2100	162	0.0880	0.409	-0.798
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.000257	0.000215	0.000100	0.000630	0.000156	0.607	1.69	2.36
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00768	0.00800	0.000440	0.0120	0.00269	0.351	-1.64	5.31
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.485	0.475	0.330	0.730	0.0995	0.205	1.09	2.95
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000277	0.000285	0.0000520	0.000520	0.000139	0.502	0.123	-0.659
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.000140	0.0000750	0.0000320	0.000490	0.000145	1.04	1.85	2.56

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.





**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Gamma	0.0390	0.0425	0.000380	0.0680	0.0192	0.491	-0.530	-0.0569
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	0.00557	0.00620	0.000240	0.00890	0.00241	0.434	-0.891	0.780
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	9.16	9.60	4.50	10.0	1.52	0.166	-3.04	9.83
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00255	0.00235	0.000100	0.00560	0.00147	0.577	0.513	0.614
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1.36	1.40	0.870	1.70	0.225	0.165	-0.727	0.828
12_2_5_117	MW-02	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.00655	0.00570	0.00380	0.0110	0.00242	0.369	1.14	0.117
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1.69	1.61	0.686	3.35	0.854	0.506	0.654	-0.465
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00113	0.00120	0.000500	0.00180	0.000366	0.322	-0.230	0.235
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-28 to 2024-07-17		Nonparametric	0.000222	0.0000750	0.0000750	0.000620	0.000193	0.869	0.858	-0.528
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	0.00179	0.00190	0.000230	0.00280	0.000786	0.438	-0.659	-0.261
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	24.4	24.0	18.0	31.0	3.85	0.158	0.215	-0.379
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	0.0212	0.0200	0.000930	0.0420	0.0104	0.491	0.241	1.27
12_2_6_123	MW-02	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000100	0.0000500	0.0000500	0.000250	0.0000905	0.905	1.33	-0.326
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00368	0.00355	0.000620	0.00670	0.00198	0.539	-0.0133	-1.06
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00637	0.00315	0.00190	0.0250	0.00827	1.30	2.04	2.66
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Gamma	4.78	4.00	1.00	15.0	3.96	0.829	2.60	7.54
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	4.10	4.15	3.30	4.50	0.322	0.0785	-1.37	2.61
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	372	370	290	430	37.9	0.102	-0.589	0.654
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	173	165	99.0	300	54.3	0.313	1.16	1.76
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.676	0.605	0.520	1.60	0.294	0.434	3.36	11.5
13_2_4_120	MW-03	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.36	7.32	7.20	7.59	0.111	0.0151	0.590	-0.147
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Normal	Normal	424	420	42.0	760	197	0.465	-0.0871	0.269
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	2142	2250	1700	2300	211	0.0985	-1.08	-0.123
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Nonparametric	0.000246	0.000135	0.0000870	0.000500	0.000184	0.750	0.657	-1.69
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000928	0.000940	0.000490	0.00140	0.000274	0.295	-0.170	-0.390
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.362	0.380	0.130	0.500	0.0959	0.265	-1.25	2.34
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Lognormal	Nonparametric	0.0000888	0.0000525	0.0000520	0.000260	0.0000694	0.781	1.82	2.46
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000132	0.0000750	0.0000320	0.000380	0.000124	0.935	1.54	1.29
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00480	0.00475	0.00300	0.00730	0.00127	0.265	0.414	-0.284
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000825	0.000845	0.000370	0.00130	0.000351	0.426	0.0893	-1.66
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.676	0.605	0.520	1.60	0.294	0.434	3.36	11.5
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000547	0.000500	0.000100	0.00110	0.000363	0.664	0.717	-0.808
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0403	0.0380	0.0290	0.0650	0.00989	0.245	1.47	2.68
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000167	0.000160	0.000160	0.000240	0.0000231	0.139	3.46	12.0
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.000947	0.000620	0.000250	0.00310	0.00104	1.10	1.74	1.82
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.15	1.06	0.609	1.92	0.398	0.346	0.714	-0.127
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000443	0.000410	0.000170	0.00110	0.000246	0.555	1.82	4.54
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000287	0.000380	0.0000750	0.000380	0.000140	0.488	-0.932	-1.24
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.000421	0.000250	0.000200	0.00100	0.000334	0.793	1.30	-0.288
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	1.64	1.09	0.270	5.90	1.72	1.05	1.63	2.58
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.00270	0.00160	0.000850	0.0150	0.00393	1.46	3.30	11.1

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
13_2_6_123	MW-03	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000985	0.844	0.812	-1.65
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.00111	0.000620	0.000620	0.00310	0.000829	0.750	1.66	1.97
13_2_6_130	MW-03	Part 115	Zinc	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Lognormal	Nonparametric	0.00461	0.00125	0.00120	0.0190	0.00663	1.44	1.90	2.19
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	9.28	10.0	4.00	15.0	3.13	0.337	-0.0549	0.160
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	4.07	4.05	3.50	4.70	0.314	0.0773	0.285	0.658
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	368	360	310	430	35.2	0.0958	0.234	-0.583
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	182	185	120	300	51.7	0.283	0.836	1.13
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	1.32	1.30	0.760	1.90	0.253	0.192	0.0975	4.08
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.38	7.37	7.23	7.66	0.115	0.0156	1.15	2.48
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Normal	Normal	585	620	1.80	810	214	0.366	-1.97	5.08
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1917	1900	1700	2100	159	0.0827	0.00304	-1.66
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.000229	0.000110	0.0000500	0.000500	0.000192	0.836	0.653	-1.60
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000907	0.000900	0.000470	0.00120	0.000263	0.290	-0.294	-1.20
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.145	0.120	0.0840	0.460	0.100	0.691	3.31	11.2
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.0000532	0.0000520	0.0000520	0.0000660	0.00000404	0.0760	3.46	12.0
14_2_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000129	0.0000750	0.0000320	0.000380	0.000125	0.964	1.58	1.34
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00392	0.00425	0.00260	0.00600	0.00114	0.291	0.170	-1.12
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000483	0.000405	0.000180	0.000930	0.000227	0.470	0.583	-0.488
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	1.32	1.30	0.760	1.90	0.253	0.192	0.0975	4.08
14_2_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000430	0.000360	0.000100	0.00110	0.000354	0.823	1.15	0.441
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0630	0.0640	0.0470	0.0740	0.00946	0.150	-0.517	-0.732
14_2_5_117	MW-04	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00108	0.000915	0.000370	0.00310	0.000749	0.696	1.91	4.73
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.08	1.14	0.664	1.55	0.328	0.303	0.0245	-1.66
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Gamma	0.000240	0.000220	0.000100	0.000430	0.0000919	0.383	1.21	1.59
14_2_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000228	0.000228	0.0000750	0.000380	0.000159	0.700	0	-2.44
14_2_6_111	MW-04	Part 115	Copper	mg/L	12	10	83%	2022-11-28 to 2024-07-18		Nonparametric	0.000216	0.000200	0.000200	0.000320	0.0000385	0.178	2.39	5.09
14_2_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	5.93	5.90	4.70	6.80	0.701	0.118	-0.254	-0.860
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Normal	Normal	0.0144	0.0145	0.00190	0.0220	0.00544	0.377	-0.932	1.29
14_2_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000985	0.844	0.812	-1.65
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	2022-11-28 to 2024-07-18		Nonparametric	0.000689	0.000620	0.000620	0.00110	0.000164	0.238	2.18	3.60
14_2_6_130	MW-04	Part 115	Zinc	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.00188	0.00120	0.00120	0.00590	0.00156	0.829	2.23	3.98
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	47.0	44.0	27.0	73.0	12.7	0.271	0.696	0.455
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	9.14	9.50	6.40	12.0	1.60	0.175	-0.0248	-0.280
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	261	250	220	310	30.9	0.118	0.484	-1.02
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	74.2	74.5	13.0	160	42.5	0.574	0.402	0.194
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1.14	1.10	0.980	1.40	0.153	0.134	0.816	-0.645
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	7.19	7.26	6.42	7.39	0.253	0.0352	-3.00	9.79
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Normal	Gamma	9.38	9.30	0.410	20.0	7.28	0.775	0.223	-1.38
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18		Nonparametric	1208	1200	1100	1300	66.9	0.0553	-0.0862	-0.190
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000190	0.000100	0.0000500	0.000500	0.000170	0.892	1.19	-0.159
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000697	0.000650	0.000470	0.00100	0.000169	0.243	0.765	-0.368

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.42	1.40	0.990	1.70	0.177	0.125	-0.969	2.54
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.0000522	0.0000520	0.0000520	0.0000540	0.00000577	0.0111	3.46	12.0
16_1_5_106	MW-06	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000129	0.0000750	0.0000320	0.000380	0.000125	0.964	1.58	1.34
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00173	0.00150	0.00110	0.00300	0.000569	0.329	0.990	0.571
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000541	0.000490	0.000350	0.000800	0.000146	0.270	0.479	-0.968
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1.14	1.10	0.980	1.40	0.153	0.134	0.816	-0.645
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	2022-11-29 to 2024-07-18		Nonparametric	0.000391	0.000260	0.000100	0.00110	0.000361	0.924	1.41	0.943
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.180	0.190	0.110	0.230	0.0422	0.235	-0.287	-1.44
16_1_5_117	MW-06	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	2022-11-29 to 2024-07-18		Nonparametric	0.000617	0.000275	0.000250	0.00310	0.000801	1.30	3.17	10.5
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.852	0.769	0.619	1.91	0.354	0.416	2.79	8.67
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.000234	0.000220	0.000190	0.000470	0.0000753	0.321	3.30	11.2
16_1_5_125	MW-06	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000177	0.0000750	0.0000750	0.000380	0.000150	0.849	0.812	-1.65
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000222	0.000200	0.000200	0.000380	0.0000549	0.248	2.68	7.10
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	19.7	18.0	14.0	31.0	5.19	0.264	1.23	0.629
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000855	0.000845	0.000650	0.00120	0.000209	0.244	0.365	-1.50
16_1_6_123	MW-06	Part 115	Silver	mg/L	12	12	100%	2022-11-29 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000984	0.843	0.812	-1.65
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.000623	0.000620	0.000620	0.000640	0.00000778	0.0125	2.06	2.64
16_1_6_130	MW-06	Part 115	Zinc	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.0141	0.00155	0.00120	0.0940	0.0303	2.15	2.31	4.50
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	37.1	37.0	29.0	46.0	5.05	0.136	0.261	-0.557
17_1_4_105	MW-07	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	11.4	11.0	10.0	13.0	0.996	0.0873	0.274	-0.654
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	144	145	120	160	11.6	0.0808	-0.588	0.362
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17		Nonparametric	13.9	14.0	13.0	15.0	0.669	0.0480	0.0862	-0.190
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.106	0.0965	0.0550	0.190	0.0404	0.380	0.685	-0.190
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Normal	Normal	6.89	6.91	6.58	7.05	0.144	0.0208	-1.18	1.05
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	24.2	23.0	15.0	36.0	7.64	0.316	0.194	-1.70
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	636	655	470	720	79.6	0.125	-1.16	0.803
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000809	0.000100	0.0000500	0.000100	0.0000243	0.300	-0.539	-1.94
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000215	0.000220	0.000130	0.000290	0.0000383	0.178	-0.415	2.30
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.337	0.340	0.250	0.380	0.0334	0.0992	-1.73	3.87
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.0000542	0.0000520	0.0000520	0.0000660	0.00000471	0.0869	2.07	3.29
17_1_5_106	MW-07	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000571	0.0000750	0.0000320	0.0000750	0.0000221	0.388	-0.388	-2.26
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000371	0.000335	0.000280	0.000740	0.000123	0.332	2.84	8.85
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000902	0.000915	0.000710	0.00110	0.000117	0.129	-0.170	-0.686
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.106	0.0965	0.0550	0.190	0.0404	0.380	0.685	-0.190
17_1_5_115	MW-07	Appendix IV	Lead	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000150	0.000100	0.000100	0.000220	0.0000618	0.412	0.388	-2.26
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00608	0.00570	0.00310	0.0100	0.00180	0.297	0.695	1.21
17_1_5_117	MW-07	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
17_1_5_118	MW-07	Appendix IV	Molybdenum	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000404	0.000250	0.000250	0.000620	0.000191	0.471	0.388	-2.26
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.03	0.947	0.670	2.36	0.463	0.449	2.42	6.91
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000162	0.000165	0.000100	0.000230	0.0000628	0.388	0.000490	-2.42
17_1_5_125	MW-07	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000210	0.000200	0.000200	0.000270	0.0000222	0.106	2.35	5.03
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	15.5	15.0	13.0	19.0	1.93	0.125	0.409	-0.770
17_1_6_119	MW-07	Part 115	Nickel	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000650	0.000650	0.000650	0.000650	0	0	NA	NA
17_1_6_123	MW-07	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000634	0.000620	0.000620	0.000790	0.0000491	0.0774	3.46	12.0
17_1_6_130	MW-07	Part 115	Zinc	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.00461	0.00120	0.00120	0.0250	0.00770	1.67	2.30	4.55
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	39.0	39.0	18.0	62.0	13.2	0.339	0.0133	-0.460
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	6.44	7.00	2.50	9.30	1.88	0.292	-0.866	0.566
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	138	135	120	160	14.2	0.103	0.0711	-1.55
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	26.1	26.5	17.0	35.0	5.38	0.206	-0.432	-0.127
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	0.936	1.00	0.400	1.30	0.282	0.301	-0.896	-0.301
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	7.18	7.25	6.21	7.51	0.331	0.0461	-2.58	7.74
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	7.42	3.75	0.410	26.0	9.20	1.24	1.47	0.939
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	536	540	440	630	54.0	0.101	0.0215	-0.0736
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.000125	0.000100	0.0000540	0.000280	0.0000609	0.487	1.80	3.30
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0343	0.0395	0.00690	0.0500	0.0148	0.431	-0.822	-0.578
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.22	1.20	0.980	1.50	0.163	0.133	0.0951	-0.825
18_1_5_104	MW-08	Appendix IV	Beryllium	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	0	0	NA	NA
18_1_5_106	MW-08	Appendix IV	Cadmium	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.0000571	0.0000750	0.0000320	0.0000750	0.0000221	0.388	-0.388	-2.26
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000893	0.000855	0.000610	0.00150	0.000249	0.279	1.35	2.16
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000484	0.000480	0.000340	0.000700	0.000131	0.271	0.203	-1.61
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	0.936	1.00	0.400	1.30	0.282	0.301	-0.896	-0.301
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	2022-12-01 to 2024-07-18		Nonparametric	0.000204	0.000105	0.000100	0.000860	0.000214	1.05	3.04	9.85
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.109	0.110	0.0630	0.140	0.0233	0.214	-0.521	0.0886
18_1_5_117	MW-08	Appendix IV	Mercury	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00137	0.00155	0.000310	0.00280	0.000832	0.606	0.139	-1.09
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.10	1.06	0.604	2.10	0.442	0.401	1.06	1.01
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.000189	0.000190	0.000120	0.000340	0.0000635	0.335	1.11	1.63
18_1_5_125	MW-08	Appendix IV	Thallium	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000292	0.000230	0.000200	0.000470	0.000110	0.376	0.674	-1.39
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	20.5	20.0	13.0	32.0	5.82	0.284	0.824	0.297
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.00144	0.00120	0.000850	0.00320	0.000717	0.498	1.91	2.93
18_1_6_123	MW-08	Part 115	Silver	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
18_1_6_129	MW-08	Part 115	Vanadium	mg/L	12	12	100%	2022-12-01 to 2024-07-18		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
18_1_6_130	MW-08	Part 115	Zinc	mg/L	12	3	25%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.0160	0.00160	0.00120	0.120	0.0360	2.25	2.68	7.13
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	49.4	50.0	39.0	57.0	4.91	0.0993	-0.474	0.751
19_2_4_105	MW-09	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.78	5.85	4.90	6.90	0.544	0.0941	0.292	0.509
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	368	395	230	500	79.3	0.215	-0.256	-0.701
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	16.0	15.5	11.0	25.0	4.95	0.310	0.926	-0.0646
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.54	2.55	2.10	2.90	0.261	0.103	-0.181	-0.854
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	7.25	7.22	7.14	7.52	0.107	0.0147	1.78	3.10
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	436	490	83.0	720	224	0.515	-0.513	-1.34

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.





**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	1367	1450	740	1700	317	0.232	-0.810	-0.516
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000195	0.000100	0.0000500	0.000500	0.000167	0.857	1.24	-0.0728
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00220	0.00230	0.00130	0.00300	0.000544	0.247	-0.742	-0.369
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Lognormal	Lognormal	0.456	0.240	0.170	2.40	0.624	1.37	3.24	10.8
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.0000529	0.0000520	0.0000520	0.0000580	0.0000215	0.0407	2.10	2.97
19_2_5_106	MW-09	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000119	0.0000750	0.0000320	0.000380	0.000127	1.07	1.74	1.74
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00240	0.00240	0.00160	0.00320	0.000566	0.236	0.0398	-1.64
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000545	0.000555	0.000240	0.000990	0.000228	0.418	0.365	-0.343
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.54	2.55	2.10	2.90	0.261	0.103	-0.181	-0.854
19_2_5_115	MW-09	Appendix IV	Lead	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000397	0.000220	0.000100	0.00110	0.000365	0.921	1.29	0.606
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.302	0.295	0.260	0.340	0.0280	0.0926	-0.0689	-1.03
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.000508	0.000160	0.000160	0.00240	0.000816	1.61	2.08	2.85
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0207	0.0205	0.00970	0.0330	0.00673	0.325	0.243	-0.103
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	2022-11-28 to 2024-07-17		Nonparametric	0.771	0.757	0.642	0.980	0.0990	0.128	0.900	0.509
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	2022-11-28 to 2024-07-17	Normal	Normal	0.000247	0.000250	0.000120	0.000330	0.0000510	0.207	-1.12	3.20
19_2_5_125	MW-09	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000202	0.0000750	0.0000750	0.000380	0.000157	0.777	0.388	-2.26
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.000318	0.000200	0.000200	0.00130	0.000317	0.995	3.20	10.6
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	20.6	19.5	15.0	26.0	3.75	0.182	0.0939	-1.36
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.00310	0.00190	0.000720	0.00990	0.00298	0.962	1.46	1.14
19_2_6_123	MW-09	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000100	0.0000500	0.0000500	0.000250	0.0000905	0.905	1.33	-0.326
19_2_6_129	MW-09	Part 115	Vanadium	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
19_2_6_130	MW-09	Part 115	Zinc	mg/L	12	8	67%	2022-11-28 to 2024-07-17		Nonparametric	0.00465	0.00120	0.00120	0.0250	0.00801	1.72	2.21	3.79
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.82	4.00	1.00	20.0	5.31	0.912	2.17	5.44
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	15.5	14.5	4.50	28.0	8.21	0.528	0.287	-1.47
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	297	250	160	590	131	0.441	1.27	0.868
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	231	195	92.0	430	115	0.496	0.726	-0.748
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.15	5.15	2.70	7.70	1.80	0.350	-0.0207	-1.52
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.81	7.80	7.05	8.81	0.429	0.0549	0.714	2.46
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	660	555	140	1700	441	0.668	1.13	1.55
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Nonparametric	Nonparametric	2000	1800	1500	3200	506	0.253	1.57	1.84
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-29 to 2024-07-17		Nonparametric	0.000195	0.000110	0.0000500	0.000500	0.000165	0.844	1.22	0.0508
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000617	0.000520	0.000200	0.00120	0.000339	0.550	0.519	-1.12
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.287	0.275	0.140	0.570	0.123	0.428	1.24	1.56
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.0000794	0.0000530	0.0000520	0.000220	0.0000529	0.666	2.19	4.41
20_3_5_106	MW-10	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-29 to 2024-07-17		Nonparametric	0.000129	0.0000750	0.0000320	0.000380	0.000125	0.964	1.58	1.34
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00374	0.00340	0.00130	0.00850	0.00224	0.599	1.01	0.422
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Gamma	0.000519	0.000390	0.000100	0.00180	0.000462	0.890	2.18	5.59
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.15	5.15	2.70	7.70	1.80	0.350	-0.0207	-1.52
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	0.000478	0.000365	0.000100	0.00110	0.000404	0.845	0.832	-0.953
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.934	0.930	0.540	1.60	0.285	0.305	0.933	1.89
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-29 to 2024-07-17		Nonparametric	0.000305	0.000160	0.000160	0.00190	0.000502	1.65	3.46	12.0
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00345	0.00340	0.000800	0.00720	0.00178	0.516	0.672	0.564

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	0.827	0.763	0.590	1.36	0.224	0.271	1.35	1.78
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Gamma	0.000381	0.000350	0.000220	0.000830	0.000155	0.407	2.48	7.34
20_3_5_125	MW-10	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-29 to 2024-07-17		Nonparametric	0.000228	0.000228	0.0000750	0.000380	0.000159	0.699	-0.0000103	-2.44
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	2022-11-29 to 2024-07-17		Nonparametric	0.000331	0.000200	0.000200	0.00130	0.000319	0.965	3.0	9.40
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	4.81	4.20	2.40	7.30	1.64	0.340	0.295	-1.31
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Nonparametric	0.000858	0.000705	0.000650	0.00180	0.000340	0.397	2.27	5.48
20_3_6_123	MW-10	Part 115	Silver	mg/L	12	12	100%	2022-11-29 to 2024-07-17		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000984	0.843	0.812	-1.65
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	0.000701	0.000620	0.000620	0.00130	0.000204	0.291	2.79	7.87
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	2022-11-29 to 2024-07-17	Lognormal	Nonparametric	0.00343	0.00120	0.00120	0.0140	0.00473	1.38	2.03	2.63
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	11.5	9.00	4.00	35.0	9.81	0.850	1.59	2.31
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	5.91	4.80	1.50	13.0	3.85	0.652	0.745	-0.590
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	268	280	130	380	75.2	0.280	-0.552	-0.179
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	68.0	67.0	38.0	95.0	16.7	0.245	-0.0626	-0.565
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.608	0.540	0.210	1.40	0.386	0.635	0.960	0.160
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.33	7.33	7.13	7.47	0.0926	0.0126	-0.644	0.894
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	48.2	13.5	0.410	210	73.1	1.52	1.68	1.58
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1085	1050	680	1800	273	0.251	1.55	4.29
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-29 to 2024-07-18		Nonparametric	0.000203	0.000100	0.0000500	0.000690	0.000203	1.00	1.69	2.15
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00163	0.00140	0.000610	0.00410	0.000897	0.551	2.10	5.49
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.647	0.580	0.360	1.20	0.232	0.358	1.27	1.88
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.0000876	0.0000520	0.0000520	0.000440	0.000112	1.27	3.40	11.7
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000158	0.0000750	0.0000320	0.000730	0.000204	1.29	2.42	5.96
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00152	0.000835	0.000450	0.00860	0.00226	1.48	3.31	11.2
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000678	0.000505	0.000230	0.00240	0.000606	0.894	2.43	6.48
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.608	0.540	0.210	1.40	0.386	0.635	0.960	0.160
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Nonparametric	0.00661	0.000465	0.000170	0.0680	0.0194	2.93	3.44	11.9
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	0.0690	0.0470	0.00590	0.220	0.0642	0.930	1.35	1.58
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.000238	0.000160	0.000160	0.00110	0.000271	1.14	3.46	12.0
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00132	0.00115	0.000430	0.00300	0.000867	0.655	1.11	0.313
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.04	0.955	0.575	1.76	0.384	0.370	0.821	-0.235
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000266	0.000220	0.000140	0.000710	0.000157	0.592	2.41	6.23
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.000162	0.0000750	0.0000750	0.000380	0.000137	0.841	1.09	-0.786
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Nonparametric	0.00213	0.000370	0.000200	0.0190	0.00535	2.52	3.39	11.6
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	6.68	6.40	3.60	11.0	2.45	0.366	0.413	-0.935
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.00202	0.00130	0.000650	0.00940	0.00239	1.19	3.14	10.3
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000101	0.0000500	0.0000500	0.000250	0.0000806	0.800	1.24	-0.0460
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000818	0.000620	0.000620	0.00300	0.000687	0.840	3.46	12.0
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.0160	0.00330	0.00120	0.100	0.0289	1.81	2.63	7.35
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	2023-02-07 to 2024-07-17		Nonparametric	2.84	3.90	0.980	4.00	1.46	0.513	-0.559	-2.22
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.295	0.265	0.190	0.420	0.0831	0.282	0.361	-1.49
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	67.0	69.0	40.0	95.0	19.1	0.285	-0.0450	-1.01
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	19.0	17.5	12.0	27.0	4.67	0.246	0.565	-0.705

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.341	0.285	0.220	0.540	0.115	0.336	0.538	-1.42
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.71	7.72	7.00	8.32	0.356	0.0462	-0.127	0.363
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	117	115	62.0	180	37.4	0.320	0.384	-0.181
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	273	265	100	420	93.9	0.344	-0.133	-0.651
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000641	0.000585	0.000350	0.00110	0.000248	0.387	0.572	-0.869
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00234	0.00215	0.00140	0.00340	0.000706	0.302	0.212	-1.70
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.0353	0.0275	0.0170	0.0710	0.0174	0.492	1.07	-0.0560
22_2_5_104	MW-12	Appendix IV	Beryllium	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	0	0	NA	NA
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00138	0.00115	0.000540	0.00320	0.000834	0.605	1.11	0.497
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000452	0.000400	0.000200	0.000990	0.000290	0.640	0.930	-0.289
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000255	0.000165	0.000100	0.000560	0.000186	0.731	0.766	-1.25
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.341	0.285	0.220	0.540	0.115	0.336	0.538	-1.42
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000223	0.000220	0.000100	0.000390	0.0000854	0.382	0.984	0.946
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00367	0.00370	0.00190	0.00640	0.00132	0.360	0.500	0.0535
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.000166	0.000160	0.000160	0.000230	0.0000202	0.122	3.46	12.0
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00696	0.00680	0.00460	0.00960	0.00159	0.229	0.208	-1.06
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.647	0.596	0.459	1.09	0.172	0.265	1.72	3.47
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	0.00102	0.000910	0.000130	0.00230	0.000775	0.759	0.428	-1.05
22_2_5_125	MW-12	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00111	0.00110	0.000550	0.00160	0.000315	0.284	-0.155	-0.581
22_2_6_114	MW-12	Part 115	Iron	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.0558	0.0300	0.0260	0.260	0.0661	1.18	3.15	10.3
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00245	0.00250	0.00140	0.00350	0.000734	0.300	-0.0802	-0.986
22_2_6_123	MW-12	Part 115	Silver	mg/L	12	12	100%	2022-11-28 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000874	0.000735	0.000620	0.00160	0.000331	0.379	1.19	0.495
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00747	0.00800	0.00270	0.0110	0.00253	0.339	-0.695	-0.287
26_1_3_127	MW-16	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	13.5	13.5	11.0	16.0	3.54	0.262	NA	NA
26_1_4_105	MW-16	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.325	0.325	0.220	0.430	0.148	0.457	NA	NA
26_1_4_107	MW-16	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	220	220	190	250	42.4	0.193	NA	NA
26_1_4_108	MW-16	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	17.5	17.5	14.0	21.0	4.95	0.283	NA	NA
26_1_4_112	MW-16	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.165	0.165	0.140	0.190	0.0354	0.214	NA	NA
26_1_4_120	MW-16	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	6.91	6.91	6.53	7.29	0.537	0.0778	NA	NA
26_1_4_124	MW-16	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	31.1	31.1	2.20	60.0	40.9	1.31	NA	NA
26_1_4_126	MW-16	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	755	755	680	830	106	0.140	NA	NA
26_1_5_101	MW-16	Appendix IV	Antimony	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.000100	0.000100	0.000100	0.000100	0	0	NA	NA
26_1_5_102	MW-16	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.00430	0.00430	0.00340	0.00520	0.00127	0.296	NA	NA
26_1_5_103	MW-16	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.230	0.230	0.180	0.280	0.0707	0.307	NA	NA
26_1_5_104	MW-16	Appendix IV	Beryllium	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	0	0	NA	NA
26_1_5_106	MW-16	Appendix IV	Cadmium	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
26_1_5_109	MW-16	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000745	0.000745	0.000640	0.000850	0.000148	0.199	NA	NA
26_1_5_110	MW-16	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000190	0.000190	0.000170	0.000210	0.0000283	0.149	NA	NA
26_1_5_113	MW-16	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.165	0.165	0.140	0.190	0.0354	0.214	NA	NA
26_1_5_115	MW-16	Appendix IV	Lead	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.000100	0.000100	0.000100	0.000100	0	0	NA	NA

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
26_1_5_116	MW-16	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.0205	0.0205	0.0160	0.0250	0.00636	0.310	NA	NA
26_1_5_117	MW-16	Appendix IV	Mercury	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
26_1_5_118	MW-16	Appendix IV	Molybdenum	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.000250	0.000250	0.000250	0.000250	0	0	NA	NA
26_1_5_121	MW-16	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.633	0.633	0.623	0.644	0.0148	0.0234	NA	NA
26_1_5_122	MW-16	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000115	0.000115	0.000110	0.000120	0.00000707	0.0615	NA	NA
26_1_5_125	MW-16	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
26_1_6_111	MW-16	Part 115	Copper	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000225	0.000225	0.000200	0.000250	0.0000354	0.157	NA	NA
26_1_6_114	MW-16	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	6.90	6.90	6.70	7.10	0.283	0.0410	NA	NA
26_1_6_119	MW-16	Part 115	Nickel	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000650	0.000650	0.000650	0.000650	0	0	NA	NA
26_1_6_123	MW-16	Part 115	Silver	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
26_1_6_129	MW-16	Part 115	Vanadium	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000640	0.000640	0.000620	0.000660	0.0000283	0.0442	NA	NA
26_1_6_130	MW-16	Part 115	Zinc	mg/L	2	2	100%	2024-04-08 to 2024-07-18		Nonparametric	0.00120	0.00120	0.00120	0.00120	0	0	NA	NA
27_1_3_127	MW-17	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	9.00	9.00	9.00	9.00	0	0	NA	NA
27_1_4_105	MW-17	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.770	0.770	0.750	0.790	0.0283	0.0367	NA	NA
27_1_4_107	MW-17	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	150	150	140	160	14.1	0.0943	NA	NA
27_1_4_108	MW-17	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	38.0	38.0	33.0	43.0	7.07	0.186	NA	NA
27_1_4_112	MW-17	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.520	0.520	0.480	0.560	0.0566	0.109	NA	NA
27_1_4_120	MW-17	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	7.59	7.59	7.31	7.88	0.403	0.0531	NA	NA
27_1_4_124	MW-17	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	18.9	18.9	4.80	33.0	19.9	1.06	NA	NA
27_1_4_126	MW-17	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	620	620	620	620	0	0	NA	NA
27_1_5_101	MW-17	Appendix IV	Antimony	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.000130	0.000130	0.000100	0.000160	0.0000424	0.326	NA	NA
27_1_5_102	MW-17	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00220	0.00220	0.00180	0.00260	0.000566	0.257	NA	NA
27_1_5_103	MW-17	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.615	0.615	0.530	0.700	0.120	0.195	NA	NA
27_1_5_104	MW-17	Appendix IV	Beryllium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	0	0	NA	NA
27_1_5_106	MW-17	Appendix IV	Cadmium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
27_1_5_109	MW-17	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000930	0.000930	0.000760	0.00110	0.000240	0.259	NA	NA
27_1_5_110	MW-17	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000385	0.000385	0.000330	0.000440	0.0000778	0.202	NA	NA
27_1_5_113	MW-17	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.520	0.520	0.480	0.560	0.0566	0.109	NA	NA
27_1_5_115	MW-17	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000305	0.000305	0.000190	0.000420	0.000163	0.533	NA	NA
27_1_5_116	MW-17	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0340	0.0340	0.0330	0.0350	0.00141	0.0416	NA	NA
27_1_5_117	MW-17	Appendix IV	Mercury	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
27_1_5_118	MW-17	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00194	0.00194	0.000790	0.00310	0.00163	0.840	NA	NA
27_1_5_121	MW-17	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.745	0.745	0.571	0.918	0.245	0.330	NA	NA
27_1_5_122	MW-17	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000175	0.000175	0.000140	0.000210	0.0000495	0.283	NA	NA
27_1_5_125	MW-17	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
27_1_6_111	MW-17	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00124	0.00124	0.000880	0.00160	0.000509	0.411	NA	NA
27_1_6_114	MW-17	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	5.05	5.05	3.50	6.60	2.19	0.434	NA	NA
27_1_6_119	MW-17	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00155	0.00155	0.00110	0.00200	0.000636	0.411	NA	NA
27_1_6_123	MW-17	Part 115	Silver	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
27_1_6_129	MW-17	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00107	0.00107	0.000840	0.00130	0.000325	0.304	NA	NA
27_1_6_130	MW-17	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00425	0.00425	0.00260	0.00590	0.00233	0.549	NA	NA
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	16	9.45	2.00	100	26.8	1.67	3.32	11.3

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.





**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.68	2.45	1.80	4.00	0.761	0.284	0.728	-0.773
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	340	345	240	450	62.7	0.184	-0.133	-0.319
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	22.5	23.0	16.0	28.0	4.23	0.188	-0.341	-1.20
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.87	3.80	2.70	5.10	0.660	0.171	0.215	-0.0757
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.17	7.17	7.02	7.31	0.0837	0.0117	-0.282	0.0104
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	813	770	480	1200	216	0.265	0.775	0.304
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1408	1400	1100	1800	207	0.147	0.536	-0.130
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000221	0.000135	0.000100	0.000500	0.000149	0.674	1.25	0.145
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0259	0.0265	0.0150	0.0410	0.00699	0.270	0.553	0.687
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0187	0.0195	0.0120	0.0250	0.00475	0.253	-0.125	-1.82
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000526	0.0000520	0.0000520	0.0000590	0.0000202	0.0384	3.46	12.0
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000206	0.000180	0.0000750	0.000440	0.000125	0.606	0.626	-0.703
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000196	0.000200	0.000180	0.000250	0.0000198	0.101	1.97	5.21
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.00302	0.00230	0.00140	0.00600	0.00155	0.515	1.02	-0.355
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.87	3.80	2.70	5.10	0.660	0.171	0.215	-0.0757
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.000321	0.000220	0.000100	0.00110	0.000278	0.866	2.31	5.92
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0344	0.0345	0.0200	0.0450	0.00843	0.245	-0.225	-1.47
28_1_5_117	MW-18	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0145	0.0130	0.00900	0.0210	0.00397	0.274	0.519	-1.15
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.671	0.620	0.462	1.27	0.221	0.329	2.04	4.93
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000616	0.000375	0.000160	0.00200	0.000557	0.905	1.55	2.47
28_1_5_125	MW-18	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000151	0.0000750	0.0000750	0.000380	0.000138	0.912	1.33	-0.326
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.000598	0.000475	0.000330	0.00150	0.000318	0.532	2.43	6.44
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	6.58	6.50	4.30	10.0	1.63	0.248	0.721	0.310
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.00672	0.00545	0.00370	0.0110	0.00253	0.376	0.825	-0.723
28_1_6_123	MW-18	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000100	0.0000500	0.0000500	0.000250	0.0000905	0.905	1.33	-0.326
28_1_6_129	MW-18	Part 115	Vanadium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0509	0.0485	0.0170	0.0880	0.0203	0.399	0.176	-0.394
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	21.8	24.0	6.00	34.0	9.27	0.426	-0.579	-0.472
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.98	1.95	1.50	2.60	0.381	0.192	0.426	-0.783
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	478	480	360	550	49.2	0.103	-1.01	2.17
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	46.2	41.0	23.0	75.0	15.1	0.327	0.678	-0.148
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.89	1.90	1.50	2.30	0.250	0.132	0.196	-0.840
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-18	Gamma	Gamma	6.86	6.89	6.39	7.07	0.172	0.0251	-1.93	5.13
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1022	1050	600	1300	208	0.204	-0.538	0.0572
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1917	1950	1600	2200	233	0.122	-0.0854	-1.61
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000218	0.000100	0.0000500	0.000720	0.000227	1.04	1.39	0.681
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00517	0.00550	0.00260	0.00730	0.00162	0.313	-0.344	-1.35
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0398	0.0385	0.0300	0.0500	0.00593	0.149	0.270	-0.673
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0000851	0.0000715	0.0000520	0.000260	0.0000565	0.664	3.17	10.5
29_1_5_106	MW-19	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000129	0.0000750	0.0000320	0.000380	0.000125	0.964	1.58	1.34
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000329	0.000270	0.000180	0.000880	0.000198	0.603	2.30	5.64

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000488	0.000460	0.000100	0.000960	0.000260	0.532	0.148	-0.456
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.89	1.90	1.50	2.30	0.250	0.132	0.196	-0.840
29_1_5_115	MW-19	Appendix IV	Lead	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000470	0.000360	0.000100	0.00110	0.000412	0.876	0.806	-0.992
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0922	0.0900	0.0730	0.110	0.0118	0.128	-0.110	-0.358
29_1_5_117	MW-19	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00962	0.00995	0.00390	0.0130	0.00283	0.295	-0.903	0.352
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.801	0.765	0.514	1.17	0.262	0.327	0.205	-1.96
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.000227	0.000120	0.000100	0.00110	0.000281	1.24	3.23	10.8
29_1_5_125	MW-19	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000228	0.000228	0.0000750	0.000380	0.000159	0.700	0	-2.44
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.000281	0.000200	0.000200	0.00100	0.000231	0.821	3.27	10.9
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	16.7	16.0	12.0	24.0	3.58	0.215	0.728	0.0358
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	0.00321	0.00205	0.00110	0.0170	0.00440	1.37	3.31	11.2
29_1_6_123	MW-19	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000985	0.844	0.812	-1.65
29_1_6_129	MW-19	Part 115	Vanadium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000827	0.000620	0.000620	0.00310	0.000716	0.866	3.46	12.0
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.00193	0.00120	0.00120	0.00590	0.00153	0.793	2.14	3.86
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	38.3	37.5	33.0	44.0	3.87	0.101	-0.00963	-1.32
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.935	0.895	0.720	1.10	0.154	0.164	0.0524	-1.94
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	125	130	58.0	170	25.9	0.207	-1.28	4.50
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	69.1	70.0	41.0	92.0	13.3	0.192	-0.203	1.28
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.268	0.245	0.210	0.550	0.0920	0.343	3.04	9.87
30_1_4_120	MW-20	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.34	7.33	7.14	7.50	0.116	0.0158	-0.326	-1.07
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	62.6	69.0	18.0	120	34.3	0.548	0.206	-1.08
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	684	660	570	840	72.5	0.106	0.881	0.848
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0000990	0.000100	0.0000540	0.000160	0.0000302	0.305	0.474	0.495
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00142	0.00140	0.00110	0.00180	0.000238	0.167	0.228	-1.50
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.492	0.455	0.310	0.940	0.160	0.325	2.21	6.06
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000526	0.0000520	0.0000520	0.0000590	0.0000202	0.0384	3.46	12.0
30_1_5_106	MW-20	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000571	0.0000750	0.0000320	0.0000750	0.0000221	0.388	-0.388	-2.26
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000218	0.000205	0.000180	0.000290	0.0000325	0.149	1.26	0.896
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00125	0.00130	0.000890	0.00160	0.000231	0.184	0.0289	-0.831
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.268	0.245	0.210	0.550	0.0920	0.343	3.04	9.87
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00198	0.00190	0.00130	0.00280	0.000515	0.260	0.393	-1.08
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0620	0.0630	0.0290	0.0830	0.0146	0.236	-0.783	1.20
30_1_5_117	MW-20	Appendix IV	Mercury	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00429	0.00430	0.00330	0.00510	0.000570	0.133	-0.295	-1.13
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.728	0.591	0.467	1.47	0.295	0.406	1.73	2.79
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000170	0.000175	0.000100	0.000260	0.0000609	0.358	0.0522	-2.02
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000779	0.0000750	0.0000750	0.000110	0.0000101	0.130	3.46	12.0
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000328	0.000315	0.000200	0.000530	0.000112	0.342	0.888	-0.188
30_1_6_114	MW-20	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	19.2	19.0	16.0	22.0	2.08	0.109	-0.120	-1.02
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00852	0.00910	0.00610	0.00990	0.00126	0.148	-0.826	-0.466
30_1_6_123	MW-20	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
30_1_6_129	MW-20	Part 115	Vanadium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.0316	0.0265	0.0160	0.0710	0.0165	0.522	1.88	2.70
38_1_3_127	MW-28	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	65.0	65.0	44.0	86.0	29.7	0.457	NA	NA
38_1_4_105	MW-28	Appendix III	Boron	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	4.15	4.15	2.20	6.10	2.76	0.665	NA	NA
38_1_4_107	MW-28	Appendix III	Calcium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	165	165	160	170	7.07	0.0429	NA	NA
38_1_4_108	MW-28	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	42.5	42.5	18.0	67.0	34.6	0.815	NA	NA
38_1_4_112	MW-28	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	1.20	1.20	0.900	1.50	0.424	0.354	NA	NA
38_1_4_120	MW-28	Appendix III	pH (field)	su	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	6.98	6.98	6.94	7.02	0.0566	0.00810	NA	NA
38_1_4_124	MW-28	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	2024-04-07 to 2024-07-18		Nonparametric	6.60	6.60	2.20	11.0	6.22	0.943	NA	NA
38_1_4_126	MW-28	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	650	650	610	690	56.6	0.0870	NA	NA
38_1_5_101	MW-28	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000220	0.000220	0.000160	0.000280	0.0000849	0.386	NA	NA
38_1_5_102	MW-28	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00125	0.00125	0.00110	0.00140	0.000212	0.170	NA	NA
38_1_5_103	MW-28	Appendix IV	Barium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.520	0.520	0.340	0.700	0.255	0.490	NA	NA
38_1_5_104	MW-28	Appendix IV	Beryllium	mg/L	2	2	100%	2024-04-07 to 2024-07-18		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	0	0	NA	NA
38_1_5_106	MW-28	Appendix IV	Cadmium	mg/L	2	2	100%	2024-04-07 to 2024-07-18		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
38_1_5_109	MW-28	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.0131	0.0131	0.00920	0.0170	0.00552	0.421	NA	NA
38_1_5_110	MW-28	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000550	0.000550	0.000460	0.000640	0.000127	0.231	NA	NA
38_1_5_113	MW-28	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	1.20	1.20	0.900	1.50	0.424	0.354	NA	NA
38_1_5_115	MW-28	Appendix IV	Lead	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00120	0.00120	0.00110	0.00130	0.000141	0.118	NA	NA
38_1_5_116	MW-28	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.100	0.100	0.0500	0.150	0.0707	0.707	NA	NA
38_1_5_117	MW-28	Appendix IV	Mercury	mg/L	2	1	50%	2024-04-07 to 2024-07-18		Nonparametric	0.000200	0.000200	0.000160	0.000240	0.0000566	0.283	NA	NA
38_1_5_118	MW-28	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000705	0.000705	0.000540	0.000870	0.000233	0.331	NA	NA
38_1_5_121	MW-28	Appendix IV	Radium 226 and 228	pCi/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.811	0.811	0.780	0.842	0.0438	0.0541	NA	NA
38_1_5_122	MW-28	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000280	0.000280	0.000240	0.000320	0.0000566	0.202	NA	NA
38_1_5_125	MW-28	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-07 to 2024-07-18		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
38_1_6_111	MW-28	Part 115	Copper	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000710	0.000710	0.000520	0.000900	0.000269	0.378	NA	NA
38_1_6_114	MW-28	Part 115	Iron	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	33.5	33.5	30.0	37.0	4.95	0.148	NA	NA
38_1_6_119	MW-28	Part 115	Nickel	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00216	0.00216	0.000720	0.00360	0.00204	0.943	NA	NA
38_1_6_123	MW-28	Part 115	Silver	mg/L	2	2	100%	2024-04-07 to 2024-07-18		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
38_1_6_129	MW-28	Part 115	Vanadium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000685	0.000685	0.000630	0.000740	0.0000778	0.114	NA	NA
38_1_6_130	MW-28	Part 115	Zinc	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00785	0.00785	0.00670	0.00900	0.00163	0.207	NA	NA
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	6.61	5.00	4.00	18.0	4.52	0.684	2.22	4.74
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	2.02	1.90	1.60	3.50	0.497	0.246	2.70	8.30
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	491	460	390	960	151	0.308	3.18	10.6
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	135	115	82.0	190	43.3	0.321	0.474	-1.71
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.12	1.10	0.910	1.40	0.125	0.112	0.668	1.57
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	7.07	7.16	6.48	7.25	0.205	0.0290	-2.53	7.21
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	878	900	610	1000	111	0.127	-1.26	1.88
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2225	2200	1800	2800	242	0.109	0.809	2.71
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000225	0.000100	0.0000500	0.000500	0.000194	0.861	0.659	-1.58
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000403	0.000435	0.000100	0.000700	0.000194	0.481	-0.222	-0.897
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0642	0.0580	0.0410	0.100	0.0211	0.329	0.879	-0.635

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.0000743	0.0000520	0.0000520	0.000260	0.0000608	0.819	3.08	9.72
40_1_5_106	MW-30	Appendix IV	Cadmium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000129	0.0000750	0.0000320	0.000380	0.000125	0.964	1.58	1.34
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00927	0.00935	0.00490	0.0140	0.00309	0.333	0.000932	-1.25
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Gamma	0.00142	0.00110	0.000530	0.00440	0.00111	0.784	2.17	4.69
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.12	1.10	0.910	1.40	0.125	0.112	0.668	1.57
40_1_5_115	MW-30	Appendix IV	Lead	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000537	0.000500	0.000100	0.00110	0.000374	0.697	0.637	-0.861
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	0.134	0.120	0.100	0.270	0.0450	0.336	2.89	9.13
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000179	0.000160	0.000160	0.000390	0.0000664	0.371	3.46	12.0
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00149	0.000995	0.000320	0.00360	0.00113	0.761	1.03	-0.517
40_1_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	12	6	50%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.665	0.614	0.445	0.911	0.156	0.235	0.492	-1.18
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Nonparametric	0.000258	0.000195	0.000100	0.00110	0.000278	1.07	2.97	9.37
40_1_5_125	MW-30	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000278	0.000380	0.0000750	0.000380	0.000150	0.540	-0.812	-1.65
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	2022-11-30 to 2024-07-18		Nonparametric	0.000319	0.000200	0.000200	0.00100	0.000238	0.745	2.55	6.74
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	3.40	2.90	0.870	8.80	2.29	0.675	1.22	1.62
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Gamma	0.00203	0.00180	0.000650	0.00450	0.00128	0.631	0.928	-0.0900
40_1_6_123	MW-30	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000117	0.0000500	0.0000500	0.000250	0.0000985	0.844	0.812	-1.65
40_1_6_129	MW-30	Part 115	Vanadium	mg/L	12	12	100%	2022-11-30 to 2024-07-18		Nonparametric	0.000827	0.000620	0.000620	0.00310	0.000716	0.866	3.46	12.0
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.00224	0.00120	0.00120	0.00590	0.00190	0.846	1.38	-0.0496
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	2022-12-01 to 2024-07-18		Nonparametric	3.27	4.00	1.00	4.00	1.24	0.380	-1.45	0.535
41_1_4_105	MW-31	Appendix III	Boron	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	4.54	4.50	3.60	5.40	0.587	0.129	0.0154	-0.872
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	172	170	130	200	19.9	0.116	-0.440	0.626
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	102	100	87.0	120	9.29	0.0914	0.475	-0.0616
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Lognormal	Lognormal	4.78	4.70	4.50	5.20	0.233	0.0487	0.811	-0.795
41_1_4_120	MW-31	Appendix III	pH (field)	su	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.82	7.82	7.67	8.01	0.105	0.0135	0.566	-0.107
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	168	165	72.0	250	60.4	0.359	0.0997	-1.04
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	812	810	730	940	57.7	0.0710	0.806	0.802
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	2022-12-01 to 2024-07-17	Gamma; Lognormal	Nonparametric	0.000121	0.000100	0.0000500	0.000380	0.0000846	0.701	3.03	9.95
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00130	0.00120	0.00100	0.00180	0.000252	0.194	0.775	-0.259
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.161	0.155	0.120	0.230	0.0350	0.218	0.801	-0.338
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000522	0.0000520	0.0000520	0.0000540	0.000000577	0.0111	3.46	12.0
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000578	0.0000750	0.0000320	0.0000840	0.0000229	0.397	-0.343	-2.20
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00224	0.00225	0.00170	0.00290	0.000394	0.176	0.471	-0.557
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000168	0.000170	0.000100	0.000280	0.0000497	0.295	0.706	1.28
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Lognormal	Lognormal	4.78	4.70	4.50	5.20	0.233	0.0487	0.811	-0.795
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	2022-12-01 to 2024-07-17		Nonparametric	0.000180	0.000220	0.000100	0.000310	0.0000750	0.416	0.0777	-1.40
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Nonparametric	Nonparametric	0.0495	0.0520	0.0390	0.0560	0.00563	0.114	-1.11	0.246
41_1_5_117	MW-31	Appendix IV	Mercury	mg/L	12	12	100%	2022-12-01 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00123	0.00115	0.000520	0.00210	0.000408	0.332	0.673	1.44
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-12-01 to 2024-07-17	Gamma; Lognormal	Gamma	0.718	0.657	0.497	1.23	0.234	0.326	1.53	1.54
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	2022-12-01 to 2024-07-17	Nonparametric	Nonparametric	0.000221	0.000190	0.000110	0.000740	0.000169	0.767	3.05	9.96
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000761	0.0000750	0.0000750	0.0000880	0.00000375	0.0493	3.46	12.0
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	2022-12-01 to 2024-07-17		Nonparametric	0.000236	0.000200	0.000200	0.000440	0.0000714	0.303	2.50	6.64

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.





**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	0.848	0.845	0.120	2.50	0.741	0.874	0.898	0.605
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	2022-12-01 to 2024-07-17		Nonparametric	0.000908	0.000650	0.000650	0.00230	0.000605	0.666	2.08	2.81
41_1_6_123	MW-31	Part 115	Silver	mg/L	12	12	100%	2022-12-01 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.000622	0.000620	0.000620	0.000640	0.0000577	0.00929	3.46	12.0
41_1_6_130	MW-31	Part 115	Zinc	mg/L	12	9	75%	2022-12-01 to 2024-07-17		Nonparametric	0.00253	0.00120	0.00120	0.0100	0.00309	1.22	2.12	3.16
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	32.2	33.0	11.0	43.0	9.53	0.296	-0.971	0.664
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.42	3.10	2.60	5.00	0.672	0.196	1.18	1.39
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	176	185	130	220	27.1	0.154	-0.355	-0.754
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	44.6	44.5	38.0	50.0	4.27	0.0959	-0.0489	-1.32
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.52	1.50	1.40	1.80	0.114	0.0746	1.19	2.12
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.61	7.61	7.50	7.75	0.0785	0.0103	0.319	-0.884
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	89.0	91.5	9.50	190	61.2	0.688	0.194	-1.18
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	698	715	550	800	91.9	0.132	-0.521	-1.26
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.000140	0.000100	0.0000500	0.000700	0.000178	1.27	3.34	11.4
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000689	0.000565	0.000440	0.00240	0.000543	0.787	3.37	11.6
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.477	0.490	0.0590	0.850	0.205	0.431	-0.271	0.649
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000535	0.0000520	0.0000520	0.0000700	0.0000520	0.0971	3.46	12.0
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000667	0.0000750	0.0000320	0.000190	0.0000444	0.665	2.09	5.69
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000640	0.000385	0.000310	0.00300	0.000751	1.17	3.33	11.3
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000532	0.000385	0.000210	0.00190	0.000448	0.841	3.03	9.76
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.52	1.50	1.40	1.80	0.114	0.0746	1.19	2.12
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000178	0.000180	0.000100	0.000380	0.0000846	0.475	1.15	1.60
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.125	0.125	0.0940	0.190	0.0279	0.223	1.05	1.32
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000305	0.000160	0.000160	0.00190	0.000502	1.65	3.46	12.0
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00438	0.00440	0.00320	0.00730	0.00110	0.250	1.76	4.34
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.666	0.604	0.497	0.985	0.157	0.235	1.04	-0.146
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	2022-11-30 to 2024-07-17		Nonparametric	0.000228	0.000175	0.000100	0.00100	0.000250	1.10	3.14	10.4
42_1_5_125	MW-32	Appendix IV	Thallium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.00154	0.000200	0.000200	0.0160	0.00455	2.95	3.46	12
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	16.0	17.0	11.0	20.0	3.10	0.194	-0.722	-0.819
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.00290	0.00108	0.000770	0.0230	0.00634	2.19	3.46	12
42_1_6_123	MW-32	Part 115	Silver	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
42_1_6_129	MW-32	Part 115	Vanadium	mg/L	12	12	100%	2022-11-30 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.00757	0.00280	0.00220	0.0310	0.0107	1.42	2.03	2.60
46_1_3_127	MW-36	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	21.0	21.0	4.00	38.0	24.0	1.14	NA	NA
46_1_4_105	MW-36	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.345	0.345	0.280	0.410	0.0919	0.266	NA	NA
46_1_4_107	MW-36	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	64.0	64.0	61.0	67.0	4.24	0.0663	NA	NA
46_1_4_108	MW-36	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	36.5	36.5	34.0	39.0	3.54	0.0969	NA	NA
46_1_4_112	MW-36	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.630	0.630	0.610	0.650	0.0283	0.0449	NA	NA
46_1_4_120	MW-36	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	10.2	10.2	9.89	10.4	0.375	0.0369	NA	NA
46_1_4_124	MW-36	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	13.3	13.3	5.70	21.0	10.8	0.810	NA	NA
46_1_4_126	MW-36	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	395	395	330	460	91.9	0.233	NA	NA

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
46_1_5_101	MW-36	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00113	0.00113	0.000760	0.00150	0.000523	0.463	NA	NA
46_1_5_102	MW-36	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0290	0.0290	0.0290	0.0290	0	0	NA	NA
46_1_5_103	MW-36	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.160	0.160	0.150	0.170	0.0141	0.0884	NA	NA
46_1_5_104	MW-36	Appendix IV	Beryllium	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.000555	0.000555	0.000520	0.000590	0.0000495	0.0892	NA	NA
46_1_5_106	MW-36	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000570	0.000570	0.000320	0.000820	0.000354	0.620	NA	NA
46_1_5_109	MW-36	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00220	0.00220	0.00130	0.00310	0.00127	0.579	NA	NA
46_1_5_110	MW-36	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000270	0.000270	0.000270	0.000270	0	0	NA	NA
46_1_5_113	MW-36	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.630	0.630	0.610	0.650	0.0283	0.0449	NA	NA
46_1_5_115	MW-36	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0380	0.0380	0.0250	0.0510	0.0184	0.484	NA	NA
46_1_5_116	MW-36	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00730	0.00730	0.00570	0.00890	0.00226	0.310	NA	NA
46_1_5_117	MW-36	Appendix IV	Mercury	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
46_1_5_118	MW-36	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0305	0.0305	0.0190	0.0420	0.0163	0.533	NA	NA
46_1_5_121	MW-36	Appendix IV	Radium 226 and 228	pCi/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	1.13	1.13	0.861	1.40	0.381	0.337	NA	NA
46_1_5_122	MW-36	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000660	0.000660	0.000600	0.000720	0.0000849	0.129	NA	NA
46_1_5_125	MW-36	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
46_1_6_111	MW-36	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0134	0.0134	0.00770	0.0190	0.00799	0.599	NA	NA
46_1_6_114	MW-36	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.375	0.375	0.350	0.400	0.0354	0.0943	NA	NA
46_1_6_119	MW-36	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00970	0.00970	0.00840	0.0110	0.00184	0.190	NA	NA
46_1_6_123	MW-36	Part 115	Silver	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000390	0.000390	0.000210	0.000570	0.000255	0.653	NA	NA
46_1_6_129	MW-36	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00380	0.00380	0.00240	0.00520	0.00198	0.521	NA	NA
46_1_6_130	MW-36	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0144	0.0144	0.00880	0.0200	0.00792	0.550	NA	NA
47_1_3_127	MW-37	Additional Parameters	Total Suspended Solids	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	3.95	3.95	3.90	4.00	0.0707	0.0179	NA	NA
47_1_4_105	MW-37	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	4.55	4.55	3.90	5.20	0.919	0.202	NA	NA
47_1_4_107	MW-37	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	160	160	160	160	0	0	NA	NA
47_1_4_108	MW-37	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	25.5	25.5	22.0	29.0	4.95	0.194	NA	NA
47_1_4_112	MW-37	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.510	0.510	0.390	0.630	0.170	0.333	NA	NA
47_1_4_120	MW-37	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	7.31	7.31	7.15	7.47	0.226	0.0310	NA	NA
47_1_4_124	MW-37	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	235	235	210	260	35.4	0.150	NA	NA
47_1_4_126	MW-37	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	815	815	790	840	35.4	0.0434	NA	NA
47_1_5_101	MW-37	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000520	0.000520	0.000400	0.000640	0.000170	0.326	NA	NA
47_1_5_102	MW-37	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000505	0.000505	0.000460	0.000550	0.0000636	0.126	NA	NA
47_1_5_103	MW-37	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0430	0.0430	0.0400	0.0460	0.00424	0.0987	NA	NA
47_1_5_104	MW-37	Appendix IV	Beryllium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000520	0.000520	0.000520	0.000520	0	0	NA	NA
47_1_5_106	MW-37	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000125	0.000125	0.000120	0.000130	0.0000707	0.0566	NA	NA
47_1_5_109	MW-37	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000465	0.000465	0.000390	0.000540	0.000106	0.228	NA	NA
47_1_5_110	MW-37	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000640	0.000640	0.000530	0.000750	0.000156	0.243	NA	NA
47_1_5_113	MW-37	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.510	0.510	0.390	0.630	0.170	0.333	NA	NA
47_1_5_115	MW-37	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000150	0.000150	0.000130	0.000170	0.0000283	0.189	NA	NA
47_1_5_116	MW-37	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0210	0.0210	0.0200	0.0220	0.00141	0.0673	NA	NA
47_1_5_117	MW-37	Appendix IV	Mercury	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
47_1_5_118	MW-37	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0112	0.0112	0.00750	0.0150	0.00530	0.471	NA	NA
47_1_5_121	MW-37	Appendix IV	Radium 226 and 228	pCi/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.666	0.666	0.569	0.764	0.138	0.207	NA	NA

(Table continues on next page)

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 1: Summary Statistics, Non-Detects Included (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit <sup>a</sup>	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
47_1_5_122	MW-37	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00380	0.00380	0.00300	0.00460	0.00113	0.298	NA	NA
47_1_5_125	MW-37	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
47_1_6_111	MW-37	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0135	0.0135	0.0130	0.0140	0.000707	0.0524	NA	NA
47_1_6_114	MW-37	Part 115	Iron	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.0930	0.0930	0.0260	0.160	0.0948	1.02	NA	NA
47_1_6_119	MW-37	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00490	0.00490	0.00460	0.00520	0.000424	0.0866	NA	NA
47_1_6_123	MW-37	Part 115	Silver	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000500	0.0000500	0.0000500	0.0000500	0	0	NA	NA
47_1_6_129	MW-37	Part 115	Vanadium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	0	0	NA	NA
47_1_6_130	MW-37	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0170	0.0170	0.0170	0.0170	0	0	NA	NA
48_2_3_127	MW-38	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	106	106	53.0	160	75.7	0.710	NA	NA
48_2_4_105	MW-38	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	2.00	2.00	1.60	2.40	0.566	0.283	NA	NA
48_2_4_107	MW-38	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	123	123	96.0	150	38.2	0.310	NA	NA
48_2_4_108	MW-38	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	54.0	54.0	51.0	57.0	4.24	0.0786	NA	NA
48_2_4_112	MW-38	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.895	0.895	0.790	1.00	0.148	0.166	NA	NA
48_2_4_120	MW-38	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	9.62	9.62	9.23	10.0	0.544	0.0566	NA	NA
48_2_4_124	MW-38	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	225	225	170	280	77.8	0.346	NA	NA
48_2_4_126	MW-38	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	845	845	840	850	7.07	0.00837	NA	NA
48_2_5_101	MW-38	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00119	0.00119	0.000680	0.00170	0.000721	0.606	NA	NA
48_2_5_102	MW-38	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00605	0.00605	0.00500	0.00710	0.00148	0.245	NA	NA
48_2_5_103	MW-38	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.140	0.140	0.120	0.160	0.0283	0.202	NA	NA
48_2_5_104	MW-38	Appendix IV	Beryllium	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.0000595	0.0000595	0.0000520	0.0000670	0.0000106	0.178	NA	NA
48_2_5_106	MW-38	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000233	0.000233	0.0000960	0.000370	0.000194	0.832	NA	NA
48_2_5_109	MW-38	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0100	0.0100	0.00400	0.0160	0.00849	0.849	NA	NA
48_2_5_110	MW-38	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000530	0.000710	0.000127	0.205	NA	NA
48_2_5_113	MW-38	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.895	0.895	0.790	1.00	0.148	0.166	NA	NA
48_2_5_115	MW-38	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0505	0.0505	0.0150	0.0860	0.0502	0.994	NA	NA
48_2_5_116	MW-38	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.109	0.109	0.0980	0.120	0.0156	0.143	NA	NA
48_2_5_117	MW-38	Appendix IV	Mercury	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	0	0	NA	NA
48_2_5_118	MW-38	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0118	0.0118	0.00970	0.0140	0.00304	0.257	NA	NA
48_2_5_121	MW-38	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	1.40	1.40	1.08	1.72	0.453	0.323	NA	NA
48_2_5_122	MW-38	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000840	0.000840	0.000730	0.000950	0.000156	0.185	NA	NA
48_2_5_125	MW-38	Appendix IV	Thallium	mg/L	2	2	100%	2024-04-08 to 2024-07-17		Nonparametric	0.0000750	0.0000750	0.0000750	0.0000750	0	0	NA	NA
48_2_6_111	MW-38	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0115	0.0115	0.00310	0.0200	0.0120	1.03	NA	NA
48_2_6_114	MW-38	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.695	0.695	0.390	1.00	0.431	0.621	NA	NA
48_2_6_119	MW-38	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00745	0.00745	0.00530	0.00960	0.00304	0.408	NA	NA
48_2_6_123	MW-38	Part 115	Silver	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.000120	0.000120	0.0000500	0.000190	0.0000990	0.825	NA	NA
48_2_6_129	MW-38	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00830	0.00830	0.00660	0.0100	0.00240	0.290	NA	NA
48_2_6_130	MW-38	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0133	0.0133	0.00660	0.0200	0.00948	0.712	NA	NA

<sup>a</sup> Non-detects are excluded from goodness-of-fit tests.



**Table 2: Summary Statistics, Non-Detects Excluded**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	2022-11-29 to 2024-07-18		Nonparametric	2.71	2.00	2.00	5.00	1.11	0.410	0	1.78	3.23
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	104	105	38.0	160	39.9	0.385	51.9	0.00175	-1.25
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	248	240	130	400	81.7	0.330	88.9	0.371	-0.547
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Normal	Normal	134	150	49.0	210	52.5	0.392	37.0	-0.613	-0.728
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Normal	Normal	11.2	12.0	4.80	15.0	3.58	0.321	4.07	-0.447	-1.30
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	7.57	7.74	6.02	7.81	0.496	0.0655	0.0593	-3.29	11.1
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	478	470	8.80	980	319	0.666	459	0.00907	-1.27
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2350	2400	2100	2600	138	0.0588	148	-0.124	0.0200
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.000403	0.000250	0.000170	0.00120	0.000341	0.845	0.000119	2.01	3.76
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00161	0.00135	0.000730	0.00410	0.000872	0.542	0.000370	2.33	6.79
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.323	0.295	0.200	0.560	0.118	0.366	0.0889	1.26	0.779
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000227	0.000200	0.000120	0.000360	0.0000847	0.373	0.0000889	0.469	-1.07
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	2022-11-29 to 2024-07-18		Nonparametric	0.000171	0.000110	0.0000620	0.000340	0.000149	0.871	0.0000711	1.53	NA
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.00391	0.00205	0.00130	0.0220	0.00579	1.48	0.00111	3.28	11.1
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00175	0.00115	0.000640	0.00450	0.00125	0.713	0.000585	1.59	1.49
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Normal	Normal	11.2	12.0	4.80	15.0	3.58	0.321	4.07	-0.447	-1.30
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00132	0.000810	0.000350	0.00530	0.00146	1.11	0.000415	2.72	7.88
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2.26	2.25	0.770	3.40	0.858	0.379	1.04	-0.154	-1.18
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.00134	0.000770	0.000330	0.00560	0.00150	1.12	0.000489	2.71	7.91
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.991	1.06	0.601	1.28	0.304	0.307	0.326	-0.425	-2.35
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000737	0.000630	0.000300	0.00180	0.000374	0.507	0.000170	2.30	6.65
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.000556	0.000290	0.000270	0.00130	0.000420	0.755	0.0000296	1.32	0.138
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.590	0.570	0.0880	1.10	0.324	0.550	0.370	-0.0862	-0.909
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00388	0.00205	0.00120	0.0220	0.00581	1.50	0.000815	3.26	10.9
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00215	0.00170	0.000670	0.00460	0.00141	0.655	0.00104	0.858	-0.739
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00487	0.00160	0.00120	0.0140	0.00543	1.12	0.000593	1.09	-0.747
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	51.9	57.0	6.10	100	28.1	0.541	20.0	-0.0306	-0.331
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	98.2	99.5	73.0	110	11.5	0.117	15.6	-0.893	0.572
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	204	210	180	240	17.3	0.0847	14.8	0.358	0.331
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	136	140	67.0	160	23.1	0.169	0	-2.80	9.00
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	9.16	9.60	4.50	10.0	1.52	0.166	0.593	-3.04	9.83
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.22	7.23	7.06	7.45	0.119	0.0164	0.148	0.414	-0.678
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	2022-11-28 to 2024-07-17		Nonparametric	1.27	1.01	0.860	2.20	0.626	0.492	0.178	1.85	3.46
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1842	1800	1600	2100	162	0.0880	148	0.409	-0.798
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.000248	0.000190	0.000150	0.000630	0.000151	0.610	0.0000593	2.46	6.53
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00768	0.00800	0.000440	0.0120	0.00269	0.351	0.000889	-1.64	5.31
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.485	0.475	0.330	0.730	0.0995	0.205	0.0667	1.09	2.95
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000297	0.000290	0.000120	0.000520	0.000125	0.422	0.000148	0.289	-0.718
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.000192	0.0000460	0.0000410	0.000490	0.000258	1.34	0.00000741	1.73	NA
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Gamma	0.0390	0.0425	0.000380	0.0680	0.0192	0.491	0.0178	-0.530	-0.0569
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	0.00557	0.00620	0.000240	0.00890	0.00241	0.434	0.00237	-0.891	0.780
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	9.16	9.60	4.50	10.0	1.52	0.166	0.593	-3.04	9.83
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00277	0.00240	0.00100	0.00560	0.00131	0.474	0.000889	0.970	0.814

(Table continues on next page)





**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1.36	1.40	0.870	1.70	0.225	0.165	0.222	-0.727	0.828
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.00655	0.00570	0.00380	0.0110	0.00242	0.369	0.000963	1.14	0.117
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1.67	1.61	0.708	3.35	0.871	0.521	0.928	1.04	0.827
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00113	0.00120	0.000500	0.00180	0.000366	0.322	0.000296	-0.230	0.235
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-28 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000620	0.000620	NA	NA	0	NA	NA
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	0.00179	0.00190	0.000230	0.00280	0.000786	0.438	0.000889	-0.659	-0.261
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	24.4	24.0	18.0	31.0	3.85	0.158	3.70	0.215	-0.379
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	0.0212	0.0200	0.000930	0.0420	0.0104	0.491	0.00741	0.241	1.27
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	12	1	8%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00395	0.00360	0.00130	0.00670	0.00182	0.460	0.00193	-0.00330	-1.00
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00637	0.00315	0.00190	0.0250	0.00827	1.30	0.00126	2.04	2.66
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Gamma	5.40	4.00	1.00	15.0	5.50	1.02	1.48	1.95	4.13
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	4.10	4.15	3.30	4.50	0.322	0.0785	0.296	-1.37	2.61
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	372	370	290	430	37.9	0.102	37.0	-0.589	0.654
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	173	165	99.0	300	54.3	0.313	37.0	1.16	1.76
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.676	0.605	0.520	1.60	0.294	0.434	0.0222	3.36	11.5
13_2_4_120	MW-03	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.36	7.32	7.20	7.59	0.111	0.0151	0.126	0.590	-0.147
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Normal	Normal	424	420	42.0	760	197	0.465	163	-0.0871	0.269
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	2142	2250	1700	2300	211	0.0985	74.1	-1.08	-0.123
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Nonparametric	0.000180	0.000110	0.0000870	0.000450	0.000154	0.855	0.0000341	2.05	4.27
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000928	0.000940	0.000490	0.00140	0.000274	0.295	0.000244	-0.170	-0.390
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.362	0.380	0.130	0.500	0.0959	0.265	0.0667	-1.25	2.34
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Lognormal	Nonparametric	0.0000988	0.0000570	0.0000530	0.000180	0.0000614	0.621	0.0000593	0.740	-2.55
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000110	0.000110	0.000110	0.000110	NA	NA	0	NA	NA
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00480	0.00475	0.00300	0.00730	0.00127	0.265	0.00156	0.414	-0.284
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000825	0.000845	0.000370	0.00130	0.000351	0.426	0.000519	0.0893	-1.66
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.676	0.605	0.520	1.60	0.294	0.434	0.0222	3.36	11.5
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000220	0.000220	0.000220	0.000220	NA	NA	0	NA	NA
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0403	0.0380	0.0290	0.0650	0.00989	0.245	0.00815	1.47	2.68
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000240	0.000240	0.000240	0.000240	NA	NA	0	NA	NA
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.000890	0.000850	0.000720	0.00110	0.000193	0.217	0.000193	0.892	NA
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.14	0.996	0.609	1.92	0.414	0.364	0.364	0.840	-0.106
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000419	0.000420	0.000170	0.000620	0.000126	0.302	0.000104	-0.486	1.39
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.000180	0.000180	0.000180	0.000180	NA	NA	0	NA	NA
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.000464	0.000300	0.000240	0.00100	0.000337	0.726	0.0000741	1.23	-0.700
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	1.64	1.09	0.270	5.90	1.72	1.05	1.18	1.63	2.58
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.00265	0.00160	0.000850	0.0150	0.00412	1.55	0.000741	3.25	10.7
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.00173	0.00180	0.00120	0.00220	0.000503	0.290	0.000593	-0.586	NA
13_2_6_130	MW-03	Part 115	Zinc	mg/L	12	7	58%	2022-11-28 to 2024-07-18	Lognormal	Nonparametric	0.00844	0.00200	0.00130	0.0190	0.00919	1.09	0.00104	0.611	-3.29
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	9.81	10.0	5.00	15.0	2.73	0.279	2.89	0.174	0.812
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	4.07	4.05	3.50	4.70	0.314	0.0773	0.296	0.285	0.658
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	368	360	310	430	35.2	0.0958	37.0	0.234	-0.583
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	182	185	120	300	51.7	0.283	51.9	0.836	1.13
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	1.32	1.30	0.760	1.90	0.253	0.192	0.148	0.0975	4.08

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.38	7.37	7.23	7.66	0.115	0.0156	0.0889	1.15	2.48
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Normal	Normal	585	620	1.80	810	214	0.366	111	-1.97	5.08
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1917	1900	1700	2100	159	0.0827	222	0.00304	-1.66
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.000200	0.000120	0.0000710	0.000410	0.000183	0.915	0.0000726	1.59	NA
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000907	0.000900	0.000470	0.00120	0.000263	0.290	0.000444	-0.294	-1.20
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	0.145	0.120	0.0840	0.460	0.100	0.691	0.0148	3.31	11.2
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-28 to 2024-07-18		Nonparametric	0.0000660	0.0000660	0.0000660	0.0000660	NA	NA	0	NA	NA
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00392	0.00425	0.00260	0.00600	0.00114	0.291	0.00133	0.170	-1.12
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000483	0.000405	0.000180	0.000930	0.000227	0.470	0.000281	0.583	-0.488
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Nonparametric	Nonparametric	1.32	1.30	0.760	1.90	0.253	0.192	0.148	0.0975	4.08
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0630	0.0640	0.0470	0.0740	0.00946	0.150	0.0104	-0.517	-0.732
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000919	0.000915	0.000370	0.00150	0.000424	0.462	0.000637	-0.0511	-1.61
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.19	1.23	0.664	1.55	0.311	0.262	0.296	-0.736	-0.516
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	2022-11-28 to 2024-07-18	Gamma; Lognormal	Gamma	0.000271	0.000230	0.000170	0.000430	0.000104	0.383	0.0000296	1.05	-0.854
14_2_6_111	MW-04	Part 115	Copper	mg/L	12	10	83%	2022-11-28 to 2024-07-18		Nonparametric	0.000295	0.000295	0.000270	0.000320	0.0000354	0.120	0.0000370	NA	NA
14_2_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Lognormal; Normal	Normal	5.93	5.90	4.70	6.80	0.701	0.118	0.593	-0.254	-0.860
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-18	Gamma; Normal	Normal	0.0144	0.0145	0.00190	0.0220	0.00544	0.377	0.00519	-0.932	1.29
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	2022-11-28 to 2024-07-18		Nonparametric	0.00103	0.00103	0.000970	0.00110	0.0000919	0.0888	0.0000963	NA	NA
14_2_6_130	MW-04	Part 115	Zinc	mg/L	12	9	75%	2022-11-28 to 2024-07-18		Nonparametric	0.00393	0.00440	0.00150	0.00590	0.00224	0.569	0.00222	-0.898	NA
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	47.0	44.0	27.0	73.0	12.7	0.271	11.1	0.696	0.455
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	9.14	9.50	6.40	12.0	1.60	0.175	1.56	-0.0248	-0.280
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	261	250	220	310	30.9	0.118	29.6	0.484	-1.02
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	74.2	74.5	13.0	160	42.5	0.574	39.3	0.402	0.194
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1.14	1.10	0.980	1.40	0.153	0.134	0.148	0.816	-0.645
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	7.19	7.26	6.42	7.39	0.253	0.0352	0.0963	-3.00	9.79
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Normal	Gamma	11	9.50	0.980	20.0	6.86	0.624	9.63	-0.0928	-1.11
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18		Nonparametric	1208	1200	1100	1300	66.9	0.0553	0	-0.0862	-0.190
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000218	0.000218	0.0000750	0.000360	0.000202	0.927	0.000211	NA	NA
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000697	0.000650	0.000470	0.00100	0.000169	0.243	0.000141	0.765	-0.368
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.42	1.40	0.990	1.70	0.177	0.125	0.148	-0.969	2.54
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.0000520	0.0000520	0.0000520	0.0000520	NA	NA	0	NA	NA
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00173	0.00150	0.00110	0.00300	0.000569	0.329	0.000519	0.990	0.571
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000541	0.000490	0.000350	0.000800	0.000146	0.270	0.000148	0.479	-0.968
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1.14	1.10	0.980	1.40	0.153	0.134	0.148	0.816	-0.645
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	2022-11-29 to 2024-07-18		Nonparametric	0.000290	0.000270	0.000250	0.000350	0.0000529	0.182	0.0000296	1.46	NA
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.180	0.190	0.110	0.230	0.0422	0.235	0.0593	-0.287	-1.44
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	2022-11-29 to 2024-07-18		Nonparametric	0.000265	0.000265	0.000250	0.000280	0.0000129	0.0487	0.0000148	0	-1.20
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.915	0.850	0.625	1.91	0.392	0.428	0.130	2.47	6.76
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.000244	0.000200	0.000190	0.000470	0.000100	0.411	0.0000148	2.54	6.58
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000330	0.000330	0.000280	0.000380	0.0000707	0.214	0.0000741	NA	NA
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	19.7	18.0	14.0	31.0	5.19	0.264	2.22	1.23	0.629
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00100	0.00100	0.000790	0.00120	0.000142	0.142	0.000148	-0.106	-0.896
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.000640	0.000640	0.000640	0.000640	NA	NA	0	NA	NA

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
16_1_6_130	MW-06	Part 115	Zinc	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.0166	0.00180	0.00120	0.0940	0.0328	1.97	0.000741	2.03	3.15
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	37.1	37.0	29.0	46.0	5.05	0.136	5.93	0.261	-0.557
17_1_4_105	MW-07	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	11.4	11.0	10.0	13.0	0.996	0.0873	1.48	0.274	-0.654
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	144	145	120	160	11.6	0.0808	7.41	-0.588	0.362
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17		Nonparametric	13.9	14.0	13.0	15.0	0.669	0.0480	0	0.0862	-0.190
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.111	0.110	0.0680	0.190	0.0388	0.350	0.0444	0.703	-0.154
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Normal	Normal	6.89	6.91	6.58	7.05	0.144	0.0208	0.0667	-1.18	1.05
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	24.2	23.0	15.0	36.0	7.64	0.316	9.63	0.194	-1.70
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	636	655	470	720	79.6	0.125	51.9	-1.16	0.803
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000710	0.0000710	0.0000710	0.0000710	NA	NA	0	NA	NA
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000215	0.000220	0.000130	0.000290	0.0000383	0.178	0.0000222	-0.415	2.30
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.337	0.340	0.250	0.380	0.0334	0.0992	0.0148	-1.73	3.87
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.0000610	0.0000620	0.0000550	0.0000660	0.00000557	0.0913	0.00000593	-0.782	NA
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000371	0.000335	0.000280	0.000740	0.000123	0.332	0.0000519	2.84	8.85
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000902	0.000915	0.000710	0.00110	0.000117	0.129	0.000111	-0.170	-0.686
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.111	0.110	0.0680	0.190	0.0388	0.350	0.0444	0.703	-0.154
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00608	0.00570	0.00310	0.0100	0.00180	0.297	0.00111	0.695	1.21
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.07	0.998	0.670	2.36	0.496	0.462	0.334	2.22	5.78
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000147	0.000110	0.000100	0.000230	0.0000723	0.493	0.0000148	1.69	NA
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000240	0.000240	0.000210	0.000270	0.0000300	0.125	0.0000444	0	NA
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	15.5	15.0	13.0	19.0	1.93	0.125	2.22	0.409	-0.770
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000790	0.000790	0.000790	0.000790	NA	NA	0	NA	NA
17_1_6_130	MW-07	Part 115	Zinc	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.0148	0.0160	0.00350	0.0250	0.0108	0.728	0.0133	-0.481	NA
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	39.0	39.0	18.0	62.0	13.2	0.339	12.6	0.0133	-0.460
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	6.44	7.00	2.50	9.30	1.88	0.292	0.963	-0.866	0.566
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	138	135	120	160	14.2	0.103	22.2	0.0711	-1.55
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	26.1	26.5	17.0	35.0	5.38	0.206	5.19	-0.432	-0.127
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	0.936	1.00	0.400	1.30	0.282	0.301	0.148	-0.896	-0.301
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	7.18	7.25	6.21	7.51	0.331	0.0461	0.126	-2.58	7.74
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	10.7	6.30	1.70	26.0	9.78	0.914	6.59	0.976	-0.752
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	536	540	440	630	54.0	0.101	37.0	0.0215	-0.0736
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.000150	0.000135	0.0000540	0.000280	0.0000817	0.545	0.0000778	0.675	-0.121
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0343	0.0395	0.00690	0.0500	0.0148	0.431	0.0141	-0.822	-0.578
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.22	1.20	0.980	1.50	0.163	0.133	0.148	0.0951	-0.825
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000893	0.000855	0.000610	0.00150	0.000249	0.279	0.000222	1.35	2.16
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000484	0.000480	0.000340	0.000700	0.000131	0.271	0.000170	0.203	-1.61
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Normal	Normal	0.936	1.00	0.400	1.30	0.282	0.301	0.148	-0.896	-0.301
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	2022-12-01 to 2024-07-18		Nonparametric	0.000397	0.000220	0.000110	0.000860	0.000405	1.02	0.000163	1.59	NA
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.109	0.110	0.0630	0.140	0.0233	0.214	0.0185	-0.521	0.0886
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00137	0.00155	0.000310	0.00280	0.000832	0.606	0.00107	0.139	-1.09
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.21	1.14	0.604	2.10	0.455	0.375	0.430	0.726	0.645
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.000167	0.000140	0.000120	0.000340	0.0000776	0.464	0.0000296	2.45	6.22
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000357	0.000350	0.000210	0.000470	0.000100	0.280	0.000148	-0.418	-1.38

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	20.5	20.0	13.0	32.0	5.82	0.284	2.96	0.824	0.297
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.00144	0.00120	0.000850	0.00320	0.000717	0.498	0.000222	1.91	2.93
18_1_6_130	MW-08	Part 115	Zinc	mg/L	12	3	25%	2022-12-01 to 2024-07-18	Nonparametric	Nonparametric	0.0209	0.00180	0.00130	0.120	0.0409	1.96	0.000741	2.25	4.81
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	49.4	50.0	39.0	57.0	4.91	0.0993	3.70	-0.474	0.751
19_2_4_105	MW-09	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.78	5.85	4.90	6.90	0.544	0.0941	0.444	0.292	0.509
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	368	395	230	500	79.3	0.215	74.1	-0.256	-0.701
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	16.0	15.5	11.0	25.0	4.95	0.310	5.19	0.926	-0.0646
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.54	2.55	2.10	2.90	0.261	0.103	0.296	-0.181	-0.854
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	7.25	7.22	7.14	7.52	0.107	0.0147	0.0370	1.78	3.10
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Normal	Normal	436	490	83.0	720	224	0.515	222	-0.513	-1.34
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Normal	Normal	1367	1450	740	1700	317	0.232	296	-0.810	-0.516
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000177	0.000120	0.0000730	0.000370	0.000124	0.700	0.0000696	1.19	0.370
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Nonparametric	Nonparametric	0.00220	0.00230	0.00130	0.00300	0.000544	0.247	0.000296	-0.742	-0.369
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Lognormal	Lognormal	0.456	0.240	0.170	2.40	0.624	1.37	0.0963	3.24	10.8
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.0000575	0.0000575	0.0000570	0.0000580	0.00000707	0.0123	0.00000741	NA	NA
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00240	0.00240	0.00160	0.00320	0.000566	0.236	0.000815	0.0398	-1.64
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000545	0.000555	0.000240	0.000990	0.000228	0.418	0.000281	0.365	-0.343
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.54	2.55	2.10	2.90	0.261	0.103	0.296	-0.181	-0.854
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.302	0.295	0.260	0.340	0.0280	0.0926	0.0370	-0.0689	-1.03
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.00225	0.00225	0.00210	0.00240	0.000212	0.0943	0.000222	NA	NA
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0207	0.0205	0.00970	0.0330	0.00673	0.325	0.00444	0.243	-0.103
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	2022-11-28 to 2024-07-17		Nonparametric	0.789	0.789	0.789	0.789	NA	NA	0	NA	NA
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	2022-11-28 to 2024-07-17	Normal	Normal	0.000252	0.000260	0.000120	0.000330	0.0000547	0.217	0.0000296	-1.49	4.02
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.000673	0.000430	0.000290	0.00130	0.000547	0.813	0.000207	1.61	NA
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	20.6	19.5	15.0	26.0	3.75	0.182	4.44	0.0939	-1.36
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.00310	0.00190	0.000720	0.00990	0.00298	0.962	0.00142	1.46	1.14
19_2_6_130	MW-09	Part 115	Zinc	mg/L	12	8	67%	2022-11-28 to 2024-07-17		Nonparametric	0.0115	0.00985	0.00150	0.0250	0.0118	1.03	0.0122	0.294	-4.33
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	6.22	4.00	1.00	20.0	5.85	0.940	2.96	1.87	4.03
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	15.5	14.5	4.50	28.0	8.21	0.528	10.3	0.287	-1.47
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	297	250	160	590	131	0.441	74.1	1.27	0.868
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	231	195	92.0	430	115	0.496	88.9	0.726	-0.748
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.15	5.15	2.70	7.70	1.80	0.350	2.37	-0.0207	-1.52
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.81	7.80	7.05	8.81	0.429	0.0549	0.163	0.714	2.46
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	660	555	140	1700	441	0.668	452	1.13	1.55
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Nonparametric	Nonparametric	2000	1800	1500	3200	506	0.253	148	1.57	1.84
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-29 to 2024-07-17		Nonparametric	0.000172	0.000120	0.000110	0.000340	0.000112	0.650	0.0000148	1.96	3.85
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000617	0.000520	0.000200	0.00120	0.000339	0.550	0.000356	0.519	-1.12
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.287	0.275	0.140	0.570	0.123	0.428	0.0667	1.24	1.56
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000106	0.0000815	0.0000520	0.000220	0.0000663	0.622	0.0000422	1.23	0.550
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00374	0.00340	0.00130	0.00850	0.00224	0.599	0.00230	1.01	0.422
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Gamma	0.000557	0.000400	0.000100	0.00180	0.000464	0.833	0.000193	2.20	5.53
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	5.15	5.15	2.70	7.70	1.80	0.350	2.37	-0.0207	-1.52
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	0.000145	0.000145	0.000120	0.000170	0.0000354	0.244	0.0000370	NA	NA

(Table continues on next page)





**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.934	0.930	0.540	1.60	0.285	0.305	0.200	0.933	1.89
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-29 to 2024-07-17		Nonparametric	0.00190	0.00190	0.00190	0.00190	NA	NA	0	NA	NA
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00345	0.00340	0.000800	0.00720	0.00178	0.516	0.00156	0.672	0.564
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	1.17	1.17	0.975	1.36	0.272	0.233	0.285	NA	NA
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Gamma	0.000395	0.000360	0.000280	0.000830	0.000154	0.388	0.0000741	2.65	7.71
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	2022-11-29 to 2024-07-17		Nonparametric	0.000723	0.000490	0.000380	0.00130	0.000502	0.695	0.000163	1.64	NA
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-17	Gamma; Lognormal; Normal	Normal	4.81	4.20	2.40	7.30	1.64	0.340	2.00	0.295	-1.31
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	2022-11-29 to 2024-07-17	Gamma; Lognormal	Nonparametric	0.00107	0.000885	0.000760	0.00180	0.000388	0.364	0.000104	1.78	3.04
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	2022-11-29 to 2024-07-17		Nonparametric	0.00110	0.00110	0.000890	0.00130	0.000290	0.265	0.000304	NA	NA
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	2022-11-29 to 2024-07-17	Lognormal	Nonparametric	0.00501	0.00180	0.00120	0.0140	0.00582	1.16	0.000889	1.22	-0.797
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	11.5	9.00	4.00	35.0	9.81	0.850	7.41	1.59	2.31
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	5.91	4.80	1.50	13.0	3.85	0.652	3.85	0.745	-0.590
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	268	280	130	380	75.2	0.280	59.3	-0.552	-0.179
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	68.0	67.0	38.0	95.0	16.7	0.245	18.5	-0.0626	-0.565
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.608	0.540	0.210	1.40	0.386	0.635	0.363	0.960	0.160
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	7.33	7.33	7.13	7.47	0.0926	0.0126	0.0741	-0.644	0.894
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	63.9	17.0	1.80	210	79	1.24	22.5	1.28	0.110
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	1085	1050	680	1800	273	0.251	200	1.55	4.29
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-29 to 2024-07-18		Nonparametric	0.000333	0.000280	0.0000820	0.000690	0.000256	0.768	0.000147	1.17	2.29
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00163	0.00140	0.000610	0.00410	0.000897	0.551	0.000444	2.10	5.49
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.647	0.580	0.360	1.20	0.232	0.358	0.178	1.27	1.88
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000266	0.000266	0.0000910	0.000440	0.000247	0.929	0.000259	NA	NA
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000445	0.000445	0.000160	0.000730	0.000403	0.906	0.000422	NA	NA
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Nonparametric	Nonparametric	0.00152	0.000835	0.000450	0.00860	0.00226	1.48	0.000311	3.31	11.2
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000678	0.000505	0.000230	0.00240	0.000606	0.894	0.000274	2.43	6.48
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.608	0.540	0.210	1.40	0.386	0.635	0.363	0.960	0.160
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Nonparametric	0.00862	0.000430	0.000170	0.0680	0.0223	2.59	0.000385	2.98	8.92
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Gamma	0.0690	0.0470	0.00590	0.220	0.0642	0.930	0.0508	1.35	1.58
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.00110	0.00110	0.00110	0.00110	NA	NA	0	NA	NA
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00146	0.00140	0.000430	0.00300	0.000887	0.606	0.000844	0.861	-0.172
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.15	1.13	0.624	1.76	0.417	0.362	0.506	0.330	-1.24
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.000281	0.000210	0.000140	0.000710	0.000182	0.646	0.0000741	1.99	4.05
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-29 to 2024-07-18		Nonparametric	0.000210	0.000210	0.000210	0.000210	NA	NA	0	NA	NA
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	2022-11-29 to 2024-07-18	Lognormal	Nonparametric	0.00277	0.000470	0.000200	0.0190	0.00612	2.21	0.000341	2.93	8.70
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Gamma; Lognormal; Normal	Normal	6.68	6.40	3.60	11.0	2.45	0.366	3.19	0.413	-0.935
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	2022-11-29 to 2024-07-18	Lognormal	Lognormal	0.00202	0.00130	0.000650	0.00940	0.00239	1.19	0.000385	3.14	10.3
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.000155	0.000155	0.000140	0.000170	0.0000212	0.137	0.0000222	NA	NA
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	12	10	83%	2022-11-29 to 2024-07-18		Nonparametric	0.00181	0.00181	0.000620	0.00300	0.00168	0.930	0.00176	NA	NA
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	2022-11-29 to 2024-07-18	Gamma; Lognormal	Gamma	0.0233	0.00670	0.00180	0.100	0.0335	1.44	0.00630	2.10	4.65
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	2023-02-07 to 2024-07-17		Nonparametric	1.33	1.00	0.980	2.00	0.583	0.440	0.0296	1.73	NA
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.295	0.265	0.190	0.420	0.0831	0.282	0.0963	0.361	-1.49
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	67.0	69.0	40.0	95.0	19.1	0.285	17.0	-0.0450	-1.01
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	19.0	17.5	12.0	27.0	4.67	0.246	2.96	0.565	-0.705

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.341	0.285	0.220	0.540	0.115	0.336	0.0889	0.538	-1.42
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.71	7.72	7.00	8.32	0.356	0.0462	0.333	-0.127	0.363
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	117	115	62.0	180	37.4	0.320	23	0.384	-0.181
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	273	265	100	420	93.9	0.344	96.3	-0.133	-0.651
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000641	0.000585	0.000350	0.00110	0.000248	0.387	0.000267	0.572	-0.869
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00234	0.00215	0.00140	0.00340	0.000706	0.302	0.000889	0.212	-1.70
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal	Gamma	0.0353	0.0275	0.0170	0.0710	0.0174	0.492	0.00815	1.07	-0.0560
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00138	0.00115	0.000540	0.00320	0.000834	0.605	0.000689	1.11	0.497
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000633	0.000540	0.000340	0.000990	0.000251	0.396	0.000193	0.634	-1.24
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000366	0.000380	0.000140	0.000560	0.000171	0.468	0.000222	-0.182	-2.06
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.341	0.285	0.220	0.540	0.115	0.336	0.0889	0.538	-1.42
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.000247	0.000210	0.000140	0.000390	0.000111	0.450	0.0000963	0.678	-1.85
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00367	0.00370	0.00190	0.00640	0.00132	0.360	0.00156	0.500	0.0535
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	2022-11-28 to 2024-07-17		Nonparametric	0.000195	0.000195	0.000160	0.000230	0.0000495	0.254	0.0000519	NA	NA
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00696	0.00680	0.00460	0.00960	0.00159	0.229	0.00193	0.208	-1.06
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	2022-11-28 to 2024-07-17		Nonparametric	0.807	0.809	0.522	1.09	0.284	0.352	0.416	-0.0317	NA
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	0.00102	0.000910	0.000130	0.00230	0.000775	0.759	0.000978	0.428	-1.05
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00111	0.00110	0.000550	0.00160	0.000315	0.284	0.000281	-0.155	-0.581
22_2_6_114	MW-12	Part 115	Iron	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.0467	0.0440	0.0270	0.0680	0.0170	0.364	0.0207	0.241	-2.11
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00245	0.00250	0.00140	0.00350	0.000734	0.300	0.000741	-0.0802	-0.986
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.00113	0.00108	0.000850	0.00160	0.000294	0.261	0.000319	0.775	-0.479
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	2022-11-28 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00747	0.00800	0.00270	0.0110	0.00253	0.339	0.00200	-0.695	-0.287
26_1_3_127	MW-16	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	13.5	13.5	11.0	16.0	3.54	0.262	3.70	NA	NA
26_1_4_105	MW-16	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.325	0.325	0.220	0.430	0.148	0.457	0.156	NA	NA
26_1_4_107	MW-16	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	220	220	190	250	42.4	0.193	44.4	NA	NA
26_1_4_108	MW-16	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	17.5	17.5	14.0	21.0	4.95	0.283	5.19	NA	NA
26_1_4_112	MW-16	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.165	0.165	0.140	0.190	0.0354	0.214	0.0370	NA	NA
26_1_4_120	MW-16	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	6.91	6.91	6.53	7.29	0.537	0.0778	0.563	NA	NA
26_1_4_124	MW-16	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	60.0	60.0	60.0	60.0	NA	NA	0	NA	NA
26_1_4_126	MW-16	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	755	755	680	830	106	0.140	111	NA	NA
26_1_5_102	MW-16	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.00430	0.00430	0.00340	0.00520	0.00127	0.296	0.00133	NA	NA
26_1_5_103	MW-16	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.230	0.230	0.180	0.280	0.0707	0.307	0.0741	NA	NA
26_1_5_109	MW-16	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000745	0.000745	0.000640	0.000850	0.000148	0.199	0.000156	NA	NA
26_1_5_110	MW-16	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000190	0.000190	0.000170	0.000210	0.0000283	0.149	0.0000296	NA	NA
26_1_5_113	MW-16	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.165	0.165	0.140	0.190	0.0354	0.214	0.0370	NA	NA
26_1_5_116	MW-16	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.0205	0.0205	0.0160	0.0250	0.00636	0.310	0.00667	NA	NA
26_1_5_121	MW-16	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.644	0.644	0.644	0.644	NA	NA	0	NA	NA
26_1_5_122	MW-16	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	0.000115	0.000115	0.000110	0.000120	0.00000707	0.0615	0.00000741	NA	NA
26_1_6_111	MW-16	Part 115	Copper	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000250	0.000250	0.000250	0.000250	NA	NA	0	NA	NA
26_1_6_114	MW-16	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-18		Nonparametric	6.90	6.90	6.70	7.10	0.283	0.0410	0.296	NA	NA
26_1_6_119	MW-16	Part 115	Nickel	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000650	0.000650	0.000650	0.000650	NA	NA	0	NA	NA
26_1_6_129	MW-16	Part 115	Vanadium	mg/L	2	1	50%	2024-04-08 to 2024-07-18		Nonparametric	0.000660	0.000660	0.000660	0.000660	NA	NA	0	NA	NA
27_1_3_127	MW-17	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	9.00	9.00	9.00	9.00	0	0	0	NA	NA

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
27_1_4_105	MW-17	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.770	0.770	0.750	0.790	0.0283	0.0367	0.0296	NA	NA
27_1_4_107	MW-17	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	150	150	140	160	14.1	0.0943	14.8	NA	NA
27_1_4_108	MW-17	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	38.0	38.0	33.0	43.0	7.07	0.186	7.41	NA	NA
27_1_4_112	MW-17	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.520	0.520	0.480	0.560	0.0566	0.109	0.0593	NA	NA
27_1_4_120	MW-17	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	7.59	7.59	7.31	7.88	0.403	0.0531	0.422	NA	NA
27_1_4_124	MW-17	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	18.9	18.9	4.80	33.0	19.9	1.06	20.9	NA	NA
27_1_4_126	MW-17	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	620	620	620	620	0	0	0	NA	NA
27_1_5_101	MW-17	Appendix IV	Antimony	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.000160	0.000160	0.000160	0.000160	NA	NA	0	NA	NA
27_1_5_102	MW-17	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00220	0.00220	0.00180	0.00260	0.000566	0.257	0.000593	NA	NA
27_1_5_103	MW-17	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.615	0.615	0.530	0.700	0.120	0.195	0.126	NA	NA
27_1_5_109	MW-17	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000930	0.000930	0.000760	0.00110	0.000240	0.259	0.000252	NA	NA
27_1_5_110	MW-17	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000385	0.000385	0.000330	0.000440	0.0000778	0.202	0.0000815	NA	NA
27_1_5_113	MW-17	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.520	0.520	0.480	0.560	0.0566	0.109	0.0593	NA	NA
27_1_5_115	MW-17	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000305	0.000305	0.000190	0.000420	0.000163	0.533	0.000170	NA	NA
27_1_5_116	MW-17	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0340	0.0340	0.0330	0.0350	0.00141	0.0416	0.00148	NA	NA
27_1_5_118	MW-17	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00194	0.00194	0.000790	0.00310	0.00163	0.840	0.00171	NA	NA
27_1_5_121	MW-17	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.571	0.571	0.571	0.571	NA	NA	0	NA	NA
27_1_5_122	MW-17	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000175	0.000175	0.000140	0.000210	0.0000495	0.283	0.0000519	NA	NA
27_1_6_111	MW-17	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00124	0.00124	0.000880	0.00160	0.000509	0.411	0.000533	NA	NA
27_1_6_114	MW-17	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	5.05	5.05	3.50	6.60	2.19	0.434	2.30	NA	NA
27_1_6_119	MW-17	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00155	0.00155	0.00110	0.00200	0.000636	0.411	0.000667	NA	NA
27_1_6_129	MW-17	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00107	0.00107	0.000840	0.00130	0.000325	0.304	0.000341	NA	NA
27_1_6_130	MW-17	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00425	0.00425	0.00260	0.00590	0.00233	0.549	0.00244	NA	NA
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	17.1	11.0	2.00	100	27.8	1.63	5.93	3.19	10.4
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	2.68	2.45	1.80	4.00	0.761	0.284	0.741	0.728	-0.773
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	340	345	240	450	62.7	0.184	44.4	-0.133	-0.319
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	22.5	23.0	16.0	28.0	4.23	0.188	5.93	-0.341	-1.20
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.87	3.80	2.70	5.10	0.660	0.171	0.667	0.215	-0.0757
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.17	7.17	7.02	7.31	0.0837	0.0117	0.0593	-0.282	0.0104
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	813	770	480	1200	216	0.265	104	0.775	0.304
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	1408	1400	1100	1800	207	0.147	222	0.536	-0.130
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000172	0.000130	0.000110	0.000320	0.0000807	0.469	0.0000148	1.41	0.349
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0259	0.0265	0.0150	0.0410	0.00699	0.270	0.00593	0.553	0.687
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0187	0.0195	0.0120	0.0250	0.00475	0.253	0.00667	-0.125	-1.82
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000590	0.0000590	0.0000590	0.0000590	NA	NA	0	NA	NA
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000244	0.000220	0.0000890	0.000440	0.000114	0.465	0.000119	0.570	0.489
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000250	0.000250	0.000250	0.000250	NA	NA	0	NA	NA
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.00302	0.00230	0.00140	0.00600	0.00155	0.515	0.00111	1.02	-0.355
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.87	3.80	2.70	5.10	0.660	0.171	0.667	0.215	-0.0757
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.000192	0.000155	0.000140	0.000320	0.0000854	0.444	0.0000148	1.95	3.82
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0344	0.0345	0.0200	0.0450	0.00843	0.245	0.0104	-0.225	-1.47
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0145	0.0130	0.00900	0.0210	0.00397	0.274	0.00296	0.519	-1.15
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.770	0.674	0.462	1.27	0.351	0.456	0.199	1.42	2.32

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000616	0.000375	0.000160	0.00200	0.000557	0.905	0.000319	1.55	2.47
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.000598	0.000475	0.000330	0.00150	0.000318	0.532	0.0000889	2.43	6.44
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	6.58	6.50	4.30	10.0	1.63	0.248	1.70	0.721	0.310
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.00672	0.00545	0.00370	0.0110	0.00253	0.376	0.00185	0.825	-0.723
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0509	0.0485	0.0170	0.0880	0.0203	0.399	0.0178	0.176	-0.394
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	21.8	24.0	6.00	34.0	9.27	0.426	8.89	-0.579	-0.472
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.98	1.95	1.50	2.60	0.381	0.192	0.444	0.426	-0.783
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	478	480	360	550	49.2	0.103	44.4	-1.01	2.17
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	46.2	41.0	23.0	75.0	15.1	0.327	8.89	0.678	-0.148
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.89	1.90	1.50	2.30	0.250	0.132	0.296	0.196	-0.840
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-18	Gamma	Gamma	6.86	6.89	6.39	7.07	0.172	0.0251	0.0815	-1.93	5.13
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1022	1050	600	1300	208	0.204	193	-0.538	0.0572
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1917	1950	1600	2200	233	0.122	370	-0.0854	-1.61
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000720	0.000720	0.000720	0.000720	NA	NA	0	NA	NA
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00517	0.00550	0.00260	0.00730	0.00162	0.313	0.00178	-0.344	-1.35
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0398	0.0385	0.0300	0.0500	0.00593	0.149	0.00519	0.270	-0.673
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0000730	0.0000720	0.0000570	0.0000860	0.0000111	0.151	0.0000163	-0.133	-1.59
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000327	0.000290	0.000250	0.000530	0.0000976	0.298	0.0000296	1.89	3.63
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000524	0.000460	0.000130	0.000960	0.000241	0.460	0.000341	0.181	-0.134
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.89	1.90	1.50	2.30	0.250	0.132	0.296	0.196	-0.840
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0922	0.0900	0.0730	0.110	0.0118	0.128	0.0126	-0.110	-0.358
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00962	0.00995	0.00390	0.0130	0.00283	0.295	0.00215	-0.903	0.352
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.851	0.918	0.514	1.17	0.254	0.298	0.306	-0.302	-1.77
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.000120	0.000120	0.000120	0.000120	0	0	0	NA	NA
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.000285	0.000285	0.000220	0.000350	0.0000919	0.323	0.0000963	NA	NA
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	16.7	16.0	12.0	24.0	3.58	0.215	3.70	0.728	0.0358
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	0.00321	0.00170	0.00110	0.0170	0.00461	1.44	0.000889	3.22	10.5
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.00325	0.00325	0.00230	0.00420	0.00134	0.413	0.00141	NA	NA
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	38.3	37.5	33.0	44.0	3.87	0.101	5.93	-0.00963	-1.32
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.935	0.895	0.720	1.10	0.154	0.164	0.230	0.0524	-1.94
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	125	130	58.0	170	25.9	0.207	14.8	-1.28	4.50
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	69.1	70.0	41.0	92.0	13.3	0.192	11.1	-0.203	1.28
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.268	0.245	0.210	0.550	0.0920	0.343	0.0296	3.04	9.87
30_1_4_120	MW-20	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.34	7.33	7.14	7.50	0.116	0.0158	0.163	-0.326	-1.07
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	62.6	69.0	18.0	120	34.3	0.548	46.7	0.206	-1.08
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	684	660	570	840	72.5	0.106	29.6	0.881	0.848
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0000985	0.0000980	0.0000540	0.000160	0.0000378	0.384	0.0000504	0.474	-0.862
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00142	0.00140	0.00110	0.00180	0.000238	0.167	0.000296	0.228	-1.50
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	0.492	0.455	0.310	0.940	0.160	0.325	0.0519	2.21	6.06
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000590	0.0000590	0.0000590	0.0000590	NA	NA	0	NA	NA
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000233	0.000220	0.000190	0.000290	0.0000350	0.150	0.0000444	0.583	-0.652
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00125	0.00130	0.000890	0.00160	0.000231	0.184	0.000296	0.0289	-0.831
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.268	0.245	0.210	0.550	0.0920	0.343	0.0296	3.04	9.87

(Table continues on next page)





**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00198	0.00190	0.00130	0.00280	0.000515	0.260	0.000593	0.393	-1.08
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.0620	0.0630	0.0290	0.0830	0.0146	0.236	0.0133	-0.783	1.20
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00429	0.00430	0.00330	0.00510	0.000570	0.133	0.000741	-0.295	-1.13
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Nonparametric	0.918	0.822	0.591	1.47	0.364	0.397	0.342	0.963	-0.0589
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000140	0.000120	0.000100	0.000260	0.0000600	0.429	0.0000148	2.23	5.18
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000110	0.000110	0.000110	0.000110	NA	NA	0	NA	NA
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000340	0.000340	0.000230	0.000530	0.000110	0.324	0.000133	0.866	-0.305
30_1_6_114	MW-20	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	19.2	19.0	16.0	22.0	2.08	0.109	2.22	-0.120	-1.02
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00852	0.00910	0.00610	0.00990	0.00126	0.148	0.00111	-0.826	-0.466
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.0316	0.0265	0.0160	0.0710	0.0165	0.522	0.00370	1.88	2.70
38_1_3_127	MW-28	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	65.0	65.0	44.0	86.0	29.7	0.457	31.1	NA	NA
38_1_4_105	MW-28	Appendix III	Boron	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	4.15	4.15	2.20	6.10	2.76	0.665	2.89	NA	NA
38_1_4_107	MW-28	Appendix III	Calcium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	165	165	160	170	7.07	0.0429	7.41	NA	NA
38_1_4_108	MW-28	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	42.5	42.5	18.0	67.0	34.6	0.815	36.3	NA	NA
38_1_4_112	MW-28	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	1.20	1.20	0.900	1.50	0.424	0.354	0.444	NA	NA
38_1_4_120	MW-28	Appendix III	pH (field)	su	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	6.98	6.98	6.94	7.02	0.0566	0.00810	0.0593	NA	NA
38_1_4_124	MW-28	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	2024-04-07 to 2024-07-18		Nonparametric	11.0	11.0	11.0	11.0	NA	NA	0	NA	NA
38_1_4_126	MW-28	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	650	650	610	690	56.6	0.0870	59.3	NA	NA
38_1_5_101	MW-28	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000220	0.000220	0.000160	0.000280	0.0000849	0.386	0.0000889	NA	NA
38_1_5_102	MW-28	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00125	0.00125	0.00110	0.00140	0.000212	0.170	0.000222	NA	NA
38_1_5_103	MW-28	Appendix IV	Barium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.520	0.520	0.340	0.700	0.255	0.490	0.267	NA	NA
38_1_5_109	MW-28	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.0131	0.0131	0.00920	0.0170	0.00552	0.421	0.00578	NA	NA
38_1_5_110	MW-28	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000550	0.000550	0.000460	0.000640	0.000127	0.231	0.000133	NA	NA
38_1_5_113	MW-28	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	1.20	1.20	0.900	1.50	0.424	0.354	0.444	NA	NA
38_1_5_115	MW-28	Appendix IV	Lead	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00120	0.00120	0.00110	0.00130	0.000141	0.118	0.000148	NA	NA
38_1_5_116	MW-28	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.100	0.100	0.0500	0.150	0.0707	0.707	0.0741	NA	NA
38_1_5_117	MW-28	Appendix IV	Mercury	mg/L	2	1	50%	2024-04-07 to 2024-07-18		Nonparametric	0.000240	0.000240	0.000240	0.000240	NA	NA	0	NA	NA
38_1_5_118	MW-28	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000705	0.000705	0.000540	0.000870	0.000233	0.331	0.000244	NA	NA
38_1_5_121	MW-28	Appendix IV	Radium 226 and 228	pCi/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.811	0.811	0.780	0.842	0.0438	0.0541	0.0459	NA	NA
38_1_5_122	MW-28	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000280	0.000280	0.000240	0.000320	0.0000566	0.202	0.0000593	NA	NA
38_1_6_111	MW-28	Part 115	Copper	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000710	0.000710	0.000520	0.000900	0.000269	0.378	0.000281	NA	NA
38_1_6_114	MW-28	Part 115	Iron	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	33.5	33.5	30.0	37.0	4.95	0.148	5.19	NA	NA
38_1_6_119	MW-28	Part 115	Nickel	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00216	0.00216	0.000720	0.00360	0.00204	0.943	0.00213	NA	NA
38_1_6_129	MW-28	Part 115	Vanadium	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.000685	0.000685	0.000630	0.000740	0.0000778	0.114	0.0000815	NA	NA
38_1_6_130	MW-28	Part 115	Zinc	mg/L	2	0	0%	2024-04-07 to 2024-07-18		Nonparametric	0.00785	0.00785	0.00670	0.00900	0.00163	0.207	0.00170	NA	NA
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	6.90	5.00	4.00	18.0	4.70	0.681	1.48	2.08	4.07
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	2.02	1.90	1.60	3.50	0.497	0.246	0.296	2.70	8.30
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	491	460	390	960	151	0.308	37.0	3.18	10.6
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	135	115	82.0	190	43.3	0.321	31.9	0.474	-1.71
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.12	1.10	0.910	1.40	0.125	0.112	0.148	0.668	1.57
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	7.07	7.16	6.48	7.25	0.205	0.0290	0.104	-2.53	7.21
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	878	900	610	1000	111	0.127	104	-1.26	1.88
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	2225	2200	1800	2800	242	0.109	148	0.809	2.71

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000400	0.000400	0.000400	0.000400	NA	NA	0	NA	NA
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.000423	0.000435	0.000120	0.000700	0.000185	0.437	0.000230	-0.155	-0.721
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.0642	0.0580	0.0410	0.100	0.0211	0.329	0.0156	0.879	-0.635
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.0000815	0.0000815	0.0000530	0.000110	0.0000403	0.495	0.0000422	NA	NA
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00927	0.00935	0.00490	0.0140	0.00309	0.333	0.00393	0.000932	-1.25
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Gamma	0.00142	0.00110	0.000530	0.00440	0.00111	0.784	0.000393	2.17	4.69
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	1.12	1.10	0.910	1.40	0.125	0.112	0.148	0.668	1.57
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Nonparametric	Nonparametric	0.134	0.120	0.100	0.270	0.0450	0.336	0.0148	2.89	9.13
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-30 to 2024-07-18		Nonparametric	0.000390	0.000390	0.000390	0.000390	NA	NA	0	NA	NA
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	0.00123	0.000890	0.000320	0.00360	0.000975	0.793	0.000415	2.11	5.07
40_1_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	12	6	50%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Nonparametric	0.660	0.595	0.445	0.911	0.189	0.287	0.154	0.599	-1.60
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Nonparametric	0.000170	0.000125	0.000100	0.000390	0.000110	0.650	0.0000296	2.20	4.98
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	2022-11-30 to 2024-07-18		Nonparametric	0.000358	0.000325	0.000240	0.000540	0.000133	0.373	0.0000963	1.12	0.622
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-18	Gamma; Lognormal; Normal	Normal	3.40	2.90	0.870	8.80	2.29	0.675	2.00	1.22	1.62
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	2022-11-30 to 2024-07-18	Gamma; Lognormal	Gamma	0.00205	0.00180	0.000700	0.00450	0.00128	0.625	0.000741	1.19	0.550
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	2022-11-30 to 2024-07-18		Nonparametric	0.00510	0.00510	0.00490	0.00530	0.000283	0.0555	0.000296	NA	NA
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	2022-12-01 to 2024-07-18		Nonparametric	2.33	2.00	1.00	4.00	1.53	0.655	1.48	0.935	NA
41_1_4_105	MW-31	Appendix III	Boron	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	4.54	4.50	3.60	5.40	0.587	0.129	0.593	0.0154	-0.872
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	172	170	130	200	19.9	0.116	14.8	-0.440	0.626
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	102	100	87.0	120	9.29	0.0914	10.4	0.475	-0.0616
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Lognormal	Lognormal	4.78	4.70	4.50	5.20	0.233	0.0487	0.148	0.811	-0.795
41_1_4_120	MW-31	Appendix III	pH (field)	su	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.82	7.82	7.67	8.01	0.105	0.0135	0.0815	0.566	-0.107
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	168	165	72.0	250	60.4	0.359	66.7	0.0997	-1.04
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Gamma; Lognormal; Normal	Normal	812	810	730	940	57.7	0.0710	66.7	0.806	0.802
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	2022-12-01 to 2024-07-17	Gamma; Lognormal	Nonparametric	0.000150	0.000120	0.0000690	0.000380	0.000115	0.770	0.0000370	2.20	5.11
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00130	0.00120	0.00100	0.00180	0.000252	0.194	0.000222	0.775	-0.259
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.161	0.155	0.120	0.230	0.0350	0.218	0.0370	0.801	-0.338
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000540	0.0000540	0.0000540	0.0000540	NA	NA	0	NA	NA
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000840	0.0000840	0.0000840	0.0000840	NA	NA	0	NA	NA
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00224	0.00225	0.00170	0.00290	0.000394	0.176	0.000444	0.471	-0.557
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.000175	0.000180	0.000100	0.000280	0.0000470	0.269	0.0000444	0.824	1.90
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-12-01 to 2024-07-18	Lognormal	Lognormal	4.78	4.70	4.50	5.20	0.233	0.0487	0.148	0.811	-0.795
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	2022-12-01 to 2024-07-17		Nonparametric	0.000280	0.000280	0.000250	0.000310	0.0000424	0.152	0.0000444	NA	NA
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Nonparametric	Nonparametric	0.0495	0.0520	0.0390	0.0560	0.00563	0.114	0.00370	-1.11	0.246
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00123	0.00115	0.000520	0.00210	0.000408	0.332	0.000222	0.673	1.44
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	2022-12-01 to 2024-07-17	Gamma; Lognormal	Gamma	0.751	0.673	0.502	1.23	0.259	0.345	0.138	1.28	0.303
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	2022-12-01 to 2024-07-17	Nonparametric	Nonparametric	0.000221	0.000140	0.000110	0.000740	0.000229	1.04	0.0000296	2.61	6.88
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.0000880	0.0000880	0.0000880	0.0000880	NA	NA	0	NA	NA
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	2022-12-01 to 2024-07-17		Nonparametric	0.000307	0.000280	0.000230	0.000440	0.0000918	0.298	0.0000444	1.55	2.77
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	2022-12-01 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	0.848	0.845	0.120	2.50	0.741	0.874	0.956	0.898	0.605
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	2022-12-01 to 2024-07-17		Nonparametric	0.00220	0.00220	0.00210	0.00230	0.000141	0.0643	0.000148	NA	NA
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	12	11	92%	2022-12-01 to 2024-07-17		Nonparametric	0.000640	0.000640	0.000640	0.000640	NA	NA	0	NA	NA
41_1_6_130	MW-31	Part 115	Zinc	mg/L	12	9	75%	2022-12-01 to 2024-07-17		Nonparametric	0.00653	0.00820	0.00140	0.0100	0.00454	0.694	0.00267	-1.43	NA

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	32.2	33.0	11.0	43.0	9.53	0.296	9.63	-0.971	0.664
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	3.42	3.10	2.60	5.00	0.672	0.196	0.519	1.18	1.39
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	176	185	130	220	27.1	0.154	14.8	-0.355	-0.754
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	44.6	44.5	38.0	50.0	4.27	0.0959	4.44	-0.0489	-1.32
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.52	1.50	1.40	1.80	0.114	0.0746	0.148	1.19	2.12
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	7.61	7.61	7.50	7.75	0.0785	0.0103	0.104	0.319	-0.884
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Gamma	89.0	91.5	9.50	190	61.2	0.688	68.1	0.194	-1.18
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	698	715	550	800	91.9	0.132	111	-0.521	-1.26
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.000245	0.000106	0.0000670	0.000700	0.000305	1.25	0.0000541	1.93	3.75
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.000689	0.000565	0.000440	0.00240	0.000543	0.787	0.0000741	3.37	11.6
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.477	0.490	0.0590	0.850	0.205	0.431	0.185	-0.271	0.649
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.0000700	0.0000700	0.0000700	0.0000700	NA	NA	0	NA	NA
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.000190	0.000190	0.000190	0.000190	NA	NA	0	NA	NA
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000640	0.000385	0.000310	0.00300	0.000751	1.17	0.000111	3.33	11.3
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Lognormal	Lognormal	0.000532	0.000385	0.000210	0.00190	0.000448	0.841	0.0000889	3.03	9.76
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal	Gamma	1.52	1.50	1.40	1.80	0.114	0.0746	0.148	1.19	2.12
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	2022-11-30 to 2024-07-17		Nonparametric	0.000213	0.000140	0.000120	0.000380	0.000145	0.678	0.0000296	1.69	NA
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.125	0.125	0.0940	0.190	0.0279	0.223	0.0296	1.05	1.32
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	12	11	92%	2022-11-30 to 2024-07-17		Nonparametric	0.00190	0.00190	0.00190	0.00190	NA	NA	0	NA	NA
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	0.00438	0.00440	0.00320	0.00730	0.00110	0.250	0.000889	1.76	4.34
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.831	0.862	0.614	0.985	0.156	0.188	0.102	-1.12	2.06
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	2022-11-30 to 2024-07-17		Nonparametric	0.000565	0.000565	0.000130	0.00100	0.000615	1.09	0.000644	NA	NA
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	2022-11-30 to 2024-07-17		Nonparametric	0.00423	0.000360	0.000200	0.0160	0.00785	1.86	0.000156	2.0	4.0
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Gamma; Lognormal; Normal	Normal	16.0	17.0	11.0	20.0	3.10	0.194	2.22	-0.722	-0.819
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.00290	0.00108	0.000770	0.0230	0.00634	2.19	0.000311	3.46	12
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	2022-11-30 to 2024-07-17	Nonparametric	Nonparametric	0.00757	0.00280	0.00220	0.0310	0.0107	1.42	0.000741	2.03	2.60
46_1_3_127	MW-36	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	21.0	21.0	4.00	38.0	24.0	1.14	25.2	NA	NA
46_1_4_105	MW-36	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.345	0.345	0.280	0.410	0.0919	0.266	0.0963	NA	NA
46_1_4_107	MW-36	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	64.0	64.0	61.0	67.0	4.24	0.0663	4.44	NA	NA
46_1_4_108	MW-36	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	36.5	36.5	34.0	39.0	3.54	0.0969	3.70	NA	NA
46_1_4_112	MW-36	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.630	0.630	0.610	0.650	0.0283	0.0449	0.0296	NA	NA
46_1_4_120	MW-36	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	10.2	10.2	9.89	10.4	0.375	0.0369	0.393	NA	NA
46_1_4_124	MW-36	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	13.3	13.3	5.70	21.0	10.8	0.810	11.3	NA	NA
46_1_4_126	MW-36	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	395	395	330	460	91.9	0.233	96.3	NA	NA
46_1_5_101	MW-36	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00113	0.00113	0.000760	0.00150	0.000523	0.463	0.000548	NA	NA
46_1_5_102	MW-36	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0290	0.0290	0.0290	0.0290	0	0	0	NA	NA
46_1_5_103	MW-36	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.160	0.160	0.150	0.170	0.0141	0.0884	0.0148	NA	NA
46_1_5_104	MW-36	Appendix IV	Beryllium	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.0000590	0.0000590	0.0000590	0.0000590	NA	NA	0	NA	NA
46_1_5_106	MW-36	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000570	0.000570	0.000320	0.000820	0.000354	0.620	0.000370	NA	NA
46_1_5_109	MW-36	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00220	0.00220	0.00130	0.00310	0.00127	0.579	0.00133	NA	NA
46_1_5_110	MW-36	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000270	0.000270	0.000270	0.000270	0	0	0	NA	NA
46_1_5_113	MW-36	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.630	0.630	0.610	0.650	0.0283	0.0449	0.0296	NA	NA
46_1_5_115	MW-36	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0380	0.0380	0.0250	0.0510	0.0184	0.484	0.0193	NA	NA

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
46_1_5_116	MW-36	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00730	0.00730	0.00570	0.00890	0.00226	0.310	0.00237	NA	NA
46_1_5_118	MW-36	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0305	0.0305	0.0190	0.0420	0.0163	0.533	0.0170	NA	NA
46_1_5_122	MW-36	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000660	0.000660	0.000600	0.000720	0.0000849	0.129	0.0000889	NA	NA
46_1_6_111	MW-36	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0134	0.0134	0.00770	0.0190	0.00799	0.599	0.00837	NA	NA
46_1_6_114	MW-36	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.375	0.375	0.350	0.400	0.0354	0.0943	0.0370	NA	NA
46_1_6_119	MW-36	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00970	0.00970	0.00840	0.0110	0.00184	0.190	0.00193	NA	NA
46_1_6_123	MW-36	Part 115	Silver	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000390	0.000390	0.000210	0.000570	0.000255	0.653	0.000267	NA	NA
46_1_6_129	MW-36	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00380	0.00380	0.00240	0.00520	0.00198	0.521	0.00207	NA	NA
46_1_6_130	MW-36	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0144	0.0144	0.00880	0.0200	0.00792	0.550	0.00830	NA	NA
47_1_3_127	MW-37	Additional Parameters	Total Suspended Solids	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	3.90	3.90	3.90	3.90	NA	NA	0	NA	NA
47_1_4_105	MW-37	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	4.55	4.55	3.90	5.20	0.919	0.202	0.963	NA	NA
47_1_4_107	MW-37	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	160	160	160	160	0	0	0	NA	NA
47_1_4_108	MW-37	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	25.5	25.5	22.0	29.0	4.95	0.194	5.19	NA	NA
47_1_4_112	MW-37	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.510	0.510	0.390	0.630	0.170	0.333	0.178	NA	NA
47_1_4_120	MW-37	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	7.31	7.31	7.15	7.47	0.226	0.0310	0.237	NA	NA
47_1_4_124	MW-37	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	235	235	210	260	35.4	0.150	37.0	NA	NA
47_1_4_126	MW-37	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	815	815	790	840	35.4	0.0434	37.0	NA	NA
47_1_5_101	MW-37	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000520	0.000520	0.000400	0.000640	0.000170	0.326	0.000178	NA	NA
47_1_5_102	MW-37	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000505	0.000505	0.000460	0.000550	0.0000636	0.126	0.0000667	NA	NA
47_1_5_103	MW-37	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0430	0.0430	0.0400	0.0460	0.00424	0.0987	0.00444	NA	NA
47_1_5_106	MW-37	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000125	0.000125	0.000120	0.000130	0.00000707	0.0566	0.00000741	NA	NA
47_1_5_109	MW-37	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000465	0.000465	0.000390	0.000540	0.000106	0.228	0.000111	NA	NA
47_1_5_110	MW-37	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000640	0.000640	0.000530	0.000750	0.000156	0.243	0.000163	NA	NA
47_1_5_113	MW-37	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.510	0.510	0.390	0.630	0.170	0.333	0.178	NA	NA
47_1_5_115	MW-37	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000150	0.000150	0.000130	0.000170	0.0000283	0.189	0.0000296	NA	NA
47_1_5_116	MW-37	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0210	0.0210	0.0200	0.0220	0.00141	0.0673	0.00148	NA	NA
47_1_5_118	MW-37	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0112	0.0112	0.00750	0.0150	0.00530	0.471	0.00556	NA	NA
47_1_5_122	MW-37	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00380	0.00380	0.00300	0.00460	0.00113	0.298	0.00119	NA	NA
47_1_6_111	MW-37	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0135	0.0135	0.0130	0.0140	0.000707	0.0524	0.000741	NA	NA
47_1_6_114	MW-37	Part 115	Iron	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.160	0.160	0.160	0.160	NA	NA	0	NA	NA
47_1_6_119	MW-37	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00490	0.00490	0.00460	0.00520	0.000424	0.0866	0.000444	NA	NA
47_1_6_130	MW-37	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0170	0.0170	0.0170	0.0170	0	0	0	NA	NA
48_2_3_127	MW-38	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	106	106	53.0	160	75.7	0.710	79.3	NA	NA
48_2_4_105	MW-38	Appendix III	Boron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	2.00	2.00	1.60	2.40	0.566	0.283	0.593	NA	NA
48_2_4_107	MW-38	Appendix III	Calcium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	123	123	96.0	150	38.2	0.310	40.0	NA	NA
48_2_4_108	MW-38	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	54.0	54.0	51.0	57.0	4.24	0.0786	4.44	NA	NA
48_2_4_112	MW-38	Appendix III	Fluoride	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.895	0.895	0.790	1.00	0.148	0.166	0.156	NA	NA
48_2_4_120	MW-38	Appendix III	pH (field)	su	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	9.62	9.62	9.23	10.0	0.544	0.0566	0.570	NA	NA
48_2_4_124	MW-38	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	225	225	170	280	77.8	0.346	81.5	NA	NA
48_2_4_126	MW-38	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	845	845	840	850	7.07	0.00837	7.41	NA	NA
48_2_5_101	MW-38	Appendix IV	Antimony	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00119	0.00119	0.000680	0.00170	0.000721	0.606	0.000756	NA	NA
48_2_5_102	MW-38	Appendix IV	Arsenic	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00605	0.00605	0.00500	0.00710	0.00148	0.245	0.00156	NA	NA
48_2_5_103	MW-38	Appendix IV	Barium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.140	0.140	0.120	0.160	0.0283	0.202	0.0296	NA	NA

(Table continues on next page)



**Table 2: Summary Statistics, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
48_2_5_104	MW-38	Appendix IV	Beryllium	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.0000670	0.0000670	0.0000670	0.0000670	NA	NA	0	NA	NA
48_2_5_106	MW-38	Appendix IV	Cadmium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000233	0.000233	0.0000960	0.000370	0.000194	0.832	0.000203	NA	NA
48_2_5_109	MW-38	Appendix IV	Chromium, Total	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0100	0.0100	0.00400	0.0160	0.00849	0.849	0.00889	NA	NA
48_2_5_110	MW-38	Appendix IV	Cobalt	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000620	0.000620	0.000530	0.000710	0.000127	0.205	0.000133	NA	NA
48_2_5_113	MW-38	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.895	0.895	0.790	1.00	0.148	0.166	0.156	NA	NA
48_2_5_115	MW-38	Appendix IV	Lead	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0505	0.0505	0.0150	0.0860	0.0502	0.994	0.0526	NA	NA
48_2_5_116	MW-38	Appendix IV	Lithium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.109	0.109	0.0980	0.120	0.0156	0.143	0.0163	NA	NA
48_2_5_118	MW-38	Appendix IV	Molybdenum	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0118	0.0118	0.00970	0.0140	0.00304	0.257	0.00319	NA	NA
48_2_5_121	MW-38	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	1.08	1.08	1.08	1.08	NA	NA	0	NA	NA
48_2_5_122	MW-38	Appendix IV	Selenium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.000840	0.000840	0.000730	0.000950	0.000156	0.185	0.000163	NA	NA
48_2_6_111	MW-38	Part 115	Copper	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0115	0.0115	0.00310	0.0200	0.0120	1.03	0.0125	NA	NA
48_2_6_114	MW-38	Part 115	Iron	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.695	0.695	0.390	1.00	0.431	0.621	0.452	NA	NA
48_2_6_119	MW-38	Part 115	Nickel	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00745	0.00745	0.00530	0.00960	0.00304	0.408	0.00319	NA	NA
48_2_6_123	MW-38	Part 115	Silver	mg/L	2	1	50%	2024-04-08 to 2024-07-17		Nonparametric	0.000190	0.000190	0.000190	0.000190	NA	NA	0	NA	NA
48_2_6_129	MW-38	Part 115	Vanadium	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.00830	0.00830	0.00660	0.0100	0.00240	0.290	0.00252	NA	NA
48_2_6_130	MW-38	Part 115	Zinc	mg/L	2	0	0%	2024-04-08 to 2024-07-17		Nonparametric	0.0133	0.0133	0.00660	0.0200	0.00948	0.712	0.00993	NA	NA



**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.352		Nonparametric		
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	12	0	0%	0.937	0.462	0.156	0.580	0.924	0.325	0.142	0.720	0.159	>= 0.10	0.347	>= 0.10	0.435	Gamma; Lognormal; Normal	Normal
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	12	0	0%	0.971	0.916	0.120	0.905	0.974	0.952	0.120	0.903	0.128	>= 0.10	0.170	>= 0.10	0.341	Gamma; Lognormal; Normal	Normal
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.904	0.180	0.203	0.187	0.822	0.017	0.246	0.043	0.242	0.05 <= p < 0.10	0.872	0.01 <= p < 0.05	0.500	Gamma; Normal	Normal
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	12	0	0%	0.872	0.069	0.286	0.007	0.860	0.049	0.278	0.011	0.292	< 0.01	0.732	0.01 <= p < 0.05	0.371	Normal	Normal
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	0.473	0.000	0.376	0.000	0.457	0.000	0.392	0.000	0.382	< 0.01	2.896	< 0.01	0.072	Nonparametric	Nonparametric
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.948	0.609	0.161	0.524	0.788	0.007	0.237	0.062	0.170	>= 0.10	0.566	>= 0.10	1.341	Gamma; Lognormal; Normal	Gamma
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.945	0.568	0.225	0.096	0.943	0.533	0.232	0.073	0.237	0.05 <= p < 0.10	0.470	>= 0.10	0.059	Gamma; Lognormal; Normal	Normal
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	0.708	0.002	0.351	0.002	0.859	0.094	0.244	0.126	0.291	0.01 <= p < 0.05	0.808	0.01 <= p < 0.05	0.655	Lognormal	Lognormal
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	0.735	0.002	0.243	0.048	0.901	0.164	0.235	0.067	0.210	>= 0.10	0.707	0.05 <= p < 0.10	0.448	Gamma; Lognormal	Gamma
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	0.836	0.025	0.242	0.050	0.911	0.223	0.189	0.280	0.211	>= 0.10	0.567	>= 0.10	0.333	Gamma; Lognormal; Normal	Normal
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	0.906	0.217	0.217	0.156	0.931	0.416	0.161	0.594	0.176	>= 0.10	0.384	>= 0.10	0.379	Gamma; Lognormal; Normal	Normal
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.866		Nonparametric
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.477	0.000	0.390	0.000	0.785	0.006	0.204	0.182	0.259	0.01 <= p < 0.05	1.519	< 0.01	0.799	Lognormal	Lognormal
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	0.763	0.004	0.267	0.018	0.910	0.212	0.211	0.148	0.239	0.05 <= p < 0.10	0.765	0.01 <= p < 0.05	0.601	Gamma; Lognormal	Gamma
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.872	0.069	0.286	0.007	0.860	0.049	0.278	0.011	0.292	< 0.01	0.732	0.01 <= p < 0.05	0.371	Normal	Normal
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	0.623	0.000	0.296	0.013	0.921	0.368	0.175	0.524	0.229	>= 0.10	0.716	0.05 <= p < 0.10	0.770	Gamma; Lognormal	Gamma
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	0.933	0.413	0.161	0.526	0.900	0.157	0.162	0.520	0.171	>= 0.10	0.408	>= 0.10	0.443	Gamma; Lognormal; Normal	Normal
11_2_5_117	MW-01R	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	0.632	0.000	0.290	0.010	0.922	0.333	0.206	0.212	0.251	0.05 <= p < 0.10	0.746	0.01 <= p < 0.05	0.798	Gamma; Lognormal	Gamma
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	0.891	0.362	0.212	0.648	0.884	0.328	0.229	0.527	0.232	>= 0.10	0.394	>= 0.10	0.333	Gamma; Lognormal; Normal	Nonparametric
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	0.752	0.003	0.277	0.012	0.919	0.275	0.187	0.295	0.212	>= 0.10	0.662	0.05 <= p < 0.10	0.424	Gamma; Lognormal	Gamma
11_2_5_125	MW-01R	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	0.733	0.008	0.314	0.036	0.771	0.021	0.321	0.028	0.337	0.01 <= p < 0.05	0.917	0.01 <= p < 0.05	0.659	Nonparametric	Nonparametric
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	0.961	0.804	0.123	0.885	0.873	0.070	0.255	0.030	0.212	>= 0.10	0.471	>= 0.10	0.784	Gamma; Lognormal; Normal	Normal
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	0.471	0.000	0.414	0.000	0.769	0.004	0.293	0.005	0.365	< 0.01	1.724	< 0.01	0.793	Nonparametric	Nonparametric
11_2_6_123	MW-01R	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	0.858	0.072	0.297	0.013	0.923	0.384	0.187	0.410	0.229	>= 0.10	0.436	>= 0.10	0.673	Gamma; Lognormal; Normal	Normal
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	0.701	0.001	0.381	0.000	0.738	0.004	0.323	0.008	0.364	< 0.01	1.256	< 0.01	1.086	Nonparametric	Nonparametric
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.945	0.566	0.182	0.333	0.839	0.027	0.283	0.009	0.264	0.01 <= p < 0.05	0.669	0.05 <= p < 0.10	0.810	Gamma; Normal	Normal
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	0.886	0.105	0.179	0.356	0.866	0.058	0.180	0.347	0.189	>= 0.10	0.608	>= 0.10	0.124	Gamma; Lognormal; Normal	Normal
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	0.917	0.262	0.215	0.129	0.921	0.291	0.229	0.083	0.230	0.05 <= p < 0.10	0.525	>= 0.10	0.084	Gamma; Lognormal; Normal	Normal
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.611	0.000	0.395	0.000	0.529	0.000	0.413	0.000	0.412	< 0.01	2.353	< 0.01	0.224	Nonparametric	Nonparametric
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	0.564	0.000	0.344	0.000	0.498	0.000	0.375	0.000	0.368	< 0.01	2.391	< 0.01	0.222	Nonparametric	Nonparametric
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	0.948	0.601	0.201	0.201	0.948	0.614	0.201	0.201	0.210	>= 0.10	0.333	>= 0.10	0.016	Gamma; Lognormal; Normal	Normal
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.428		Nonparametric
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.928	0.363	0.185	0.310	0.937	0.458	0.171	0.428	0.179	>= 0.10	0.379	>= 0.10	0.087	Gamma; Lognormal; Normal	Normal
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	0.668	0.001	0.298	0.020	0.822	0.036	0.209	0.311	0.243	>= 0.10	0.828	0.01 <= p < 0.05	0.455	Gamma; Lognormal	Gamma
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	0.808	0.011	0.292	0.006	0.504	0.000	0.397	0.000	0.385	< 0.01	2.161	< 0.01	0.861	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	0.916	0.252	0.173	0.408	0.959	0.773	0.150	0.643	0.147	>= 0.10	0.323	>= 0.10	0.198	Gamma; Lognormal; Normal	Normal
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	0.969	0.872	0.120	0.927	0.962	0.799	0.162	0.576	0.136	>= 0.10	0.192	>= 0.10	0.460	Gamma; Lognormal; Normal	Normal
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.400		Nonparametric	
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.969	0.905	0.142	0.724	0.587	0.000	0.318	0.001	0.239	0.05 <= p < 0.10	1.233	< 0.01	1.397	Gamma; Normal	Gamma
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	0.930	0.383	0.237	0.060	0.623	0.000	0.289	0.007	0.297	< 0.01	1.234	< 0.01	0.972	Normal	Normal
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.564	0.000	0.344	0.000	0.498	0.000	0.375	0.000	0.368	< 0.01	2.391	< 0.01	0.222	Nonparametric	Nonparametric
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	0.934	0.452	0.159	0.613	0.985	0.987	0.118	0.941	0.112	>= 0.10	0.178	>= 0.10	0.478	Gamma; Lognormal; Normal	Normal
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	0.943	0.543	0.149	0.651	0.897	0.145	0.179	0.362	0.169	>= 0.10	0.450	>= 0.10	0.179	Gamma; Lognormal; Normal	Normal
12_2_5_117	MW-02	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	0.826	0.019	0.275	0.013	0.899	0.152	0.212	0.143	0.234	0.05 <= p < 0.10	0.731	0.01 <= p < 0.05	0.338	Gamma; Lognormal	Gamma
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.910	0.356	0.251	0.143	0.970	0.899	0.163	0.769	0.189	>= 0.10	0.242	>= 0.10	0.514	Gamma; Lognormal; Normal	Normal
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	0.945	0.564	0.155	0.593	0.880	0.088	0.208	0.160	0.194	>= 0.10	0.562	>= 0.10	0.375	Gamma; Lognormal; Normal	Normal
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	0.942	0.524	0.169	0.448	0.776	0.005	0.257	0.028	0.242	0.05 <= p < 0.10	0.698	0.05 <= p < 0.10	0.703	Gamma; Normal	Normal
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	0.974	0.945	0.126	0.860	0.978	0.974	0.113	0.942	0.109	>= 0.10	0.177	>= 0.10	0.159	Gamma; Lognormal; Normal	Normal
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	0.948	0.614	0.193	0.252	0.657	0.000	0.342	0.000	0.277	0.01 <= p < 0.05	0.987	0.01 <= p < 0.05	0.967	Normal	Normal
12_2_6_123	MW-02	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	12	1	8%	0.957	0.735	0.123	0.914	0.904	0.208	0.162	0.576	0.133	>= 0.10	0.314	>= 0.10	0.554	Gamma; Lognormal; Normal	Normal
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	0.549	0.000	0.442	0.000	0.718	0.001	0.318	0.001	0.385	< 0.01	2.038	< 0.01	0.873	Nonparametric	Nonparametric
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	0.752	0.031	0.400	0.009	0.938	0.649	0.271	0.264	0.327	>= 0.10	0.426	>= 0.10	0.965	Gamma; Lognormal	Gamma
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	0.881	0.090	0.184	0.317	0.850	0.037	0.202	0.193	0.180	>= 0.10	0.619	0.05 <= p < 0.10	0.083	Gamma; Lognormal; Normal	Normal
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	0.959	0.771	0.121	0.898	0.937	0.465	0.135	0.794	0.120	>= 0.10	0.309	>= 0.10	0.106	Gamma; Lognormal; Normal	Normal
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.920	0.286	0.212	0.142	0.981	0.986	0.160	0.543	0.170	>= 0.10	0.238	>= 0.10	0.297	Gamma; Lognormal; Normal	Normal
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	0.447	0.000	0.452	0.000	0.535	0.000	0.399	0.000	0.422	< 0.01	2.617	< 0.01	0.295	Nonparametric	Nonparametric
13_2_4_120	MW-03	Appendix III	pH (field)	su	12	0	0%	0.925	0.327	0.235	0.066	0.927	0.345	0.233	0.070	0.240	0.05 <= p < 0.10	0.533	>= 0.10	0.015	Gamma; Lognormal; Normal	Normal
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.982	0.991	0.116	0.929	0.767	0.004	0.261	0.023	0.208	>= 0.10	0.560	>= 0.10	0.756	Gamma; Normal	Normal
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.774	0.005	0.276	0.012	0.768	0.004	0.286	0.007	0.291	< 0.01	1.342	< 0.01	0.104	Nonparametric	Nonparametric
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	0.702	0.010	0.351	0.043	0.818	0.113	0.257	0.340	0.288	>= 0.10	0.648	0.05 <= p < 0.10	0.678	Gamma; Lognormal	Nonparametric
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	0.960	0.778	0.151	0.627	0.914	0.238	0.161	0.525	0.169	>= 0.10	0.380	>= 0.10	0.327	Gamma; Lognormal; Normal	Normal
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	0.910	0.216	0.157	0.565	0.771	0.004	0.230	0.081	0.206	>= 0.10	0.812	0.01 <= p < 0.05	0.351	Gamma; Lognormal; Normal	Normal
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	0.768	0.043	0.352	0.042	0.761	0.038	0.344	0.053	0.373	0.01 <= p < 0.05	0.737	0.01 <= p < 0.05	0.607	Lognormal	Nonparametric
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.967	0.872	0.139	0.748	0.974	0.945	0.136	0.784	0.148	>= 0.10	0.193	>= 0.10	0.268	Gamma; Lognormal; Normal	Normal
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	0.902	0.168	0.165	0.489	0.900	0.157	0.147	0.670	0.160	>= 0.10	0.492	>= 0.10	0.463	Gamma; Lognormal; Normal	Normal
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.447	0.000	0.452	0.000	0.535	0.000	0.399	0.000	0.422	< 0.01	2.617	< 0.01	0.295	Nonparametric	Nonparametric
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	0.886	0.105	0.152	0.623	0.952	0.669	0.116	0.925	0.128	>= 0.10	0.311	>= 0.10	0.224	Gamma; Lognormal; Normal	Normal
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.214		Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal				Lognormal				Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value			
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	0.926	0.375	0.178	0.431	0.977	0.945	0.128	0.882	0.151	>= 0.10	0.221	>= 0.10	0.353	Gamma; Lognormal; Normal	Normal
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	0.959	0.788	0.163	0.700	0.856	0.087	0.228	0.194	0.201	>= 0.10	0.451	>= 0.10	0.367	Gamma; Lognormal; Normal	Normal
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	0.679	0.002	0.401	0.001	0.720	0.006	0.367	0.005	0.396	< 0.01	1.132	< 0.01	0.629	Nonparametric	Nonparametric
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	0.805	0.011	0.213	0.140	0.928	0.354	0.169	0.452	0.191	>= 0.10	0.407	>= 0.10	1.067	Gamma; Lognormal; Normal	Gamma
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	0.441	0.000	0.453	0.000	0.719	0.001	0.283	0.014	0.367	< 0.01	1.868	< 0.01	0.794	Nonparametric	Nonparametric
13_2_6_123	MW-03	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.309	Nonparametric	Nonparametric
13_2_6_130	MW-03	Part 115	Zinc	mg/L	12	7	58%	0.724	0.017	0.358	0.035	0.779	0.054	0.327	0.087	0.367	0.01 <= p < 0.05	0.747	0.01 <= p < 0.05	1.317	Lognormal	Nonparametric
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	0.964	0.832	0.154	0.720	0.936	0.512	0.190	0.389	0.165	>= 0.10	0.316	>= 0.10	0.300	Gamma; Lognormal; Normal	Normal
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	0.983	0.993	0.124	0.875	0.986	0.998	0.116	0.928	0.113	>= 0.10	0.164	>= 0.10	0.077	Gamma; Lognormal; Normal	Normal
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	0.979	0.980	0.168	0.462	0.983	0.993	0.152	0.626	0.160	>= 0.10	0.180	>= 0.10	0.096	Gamma; Lognormal; Normal	Normal
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.924	0.317	0.151	0.633	0.949	0.629	0.128	0.851	0.124	>= 0.10	0.281	>= 0.10	0.277	Gamma; Lognormal; Normal	Normal
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	0.824	0.018	0.295	0.005	0.791	0.007	0.273	0.014	0.273	0.01 <= p < 0.05	1.132	< 0.01	0.206	Nonparametric	Nonparametric
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.898	0.149	0.182	0.335	0.903	0.171	0.179	0.359	0.172	>= 0.10	0.438	>= 0.10	0.016	Gamma; Lognormal; Normal	Normal
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.801	0.009	0.240	0.054	0.423	0.000	0.431	0.000	0.405	< 0.01	2.756	< 0.01	1.700	Normal	Normal
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.863	0.053	0.209	0.154	0.866	0.059	0.206	0.172	0.217	>= 0.10	0.681	0.05 <= p < 0.10	0.083	Gamma; Lognormal; Normal	Normal
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.900	Nonparametric	Nonparametric
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	0.897	0.144	0.200	0.205	0.887	0.108	0.177	0.378	0.196	>= 0.10	0.522	>= 0.10	0.321	Gamma; Lognormal; Normal	Normal
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	0.472	0.000	0.398	0.000	0.637	0.000	0.331	0.001	0.363	< 0.01	2.223	< 0.01	0.423	Nonparametric	Nonparametric
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.883	0.095	0.191	0.260	0.865	0.056	0.200	0.202	0.208	>= 0.10	0.767	0.01 <= p < 0.05	0.300	Gamma; Lognormal; Normal	Normal
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	0.938	0.468	0.205	0.175	0.964	0.834	0.183	0.327	0.183	>= 0.10	0.298	>= 0.10	0.492	Gamma; Lognormal; Normal	Normal
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.824	0.018	0.295	0.005	0.791	0.007	0.273	0.014	0.273	0.01 <= p < 0.05	1.132	< 0.01	0.206	Nonparametric	Nonparametric
14_2_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0.909	0.207	0.166	0.476	0.892	0.123	0.196	0.226	0.180	>= 0.10	0.512	>= 0.10	0.158	Gamma; Lognormal; Normal	Normal
14_2_5_117	MW-04	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.917	0.332	0.170	0.563	0.886	0.154	0.178	0.491	0.189	>= 0.10	0.451	>= 0.10	0.532	Gamma; Lognormal; Normal	Normal
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.912	0.333	0.184	0.513	0.863	0.103	0.230	0.186	0.219	>= 0.10	0.522	>= 0.10	0.299	Gamma; Lognormal; Normal	Normal
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	0.793	0.035	0.333	0.018	0.850	0.123	0.289	0.080	0.312	0.01 <= p < 0.05	0.697	0.05 <= p < 0.10	0.354	Gamma; Lognormal	Gamma
14_2_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_6_111	MW-04	Part 115	Copper	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.120	Nonparametric	Nonparametric
14_2_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	0.929	0.370	0.142	0.725	0.926	0.338	0.131	0.821	0.148	>= 0.10	0.380	>= 0.10	0.121	Gamma; Lognormal; Normal	Normal
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.928	0.361	0.162	0.517	0.689	0.001	0.273	0.014	0.216	>= 0.10	0.941	0.01 <= p < 0.05	0.648	Gamma; Normal	Normal
14_2_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.089	Nonparametric	Nonparametric
14_2_6_130	MW-04	Part 115	Zinc	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.721	Nonparametric	Nonparametric
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.956	0.720	0.146	0.687	0.981	0.988	0.109	0.957	0.116	>= 0.10	0.204	>= 0.10	0.269	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	0.976	0.964	0.172	0.421	0.967	0.872	0.199	0.210	0.195	>= 0.10	0.255	>= 0.10	0.180	Gamma; Lognormal; Normal	Normal
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	0.918	0.271	0.220	0.110	0.930	0.380	0.205	0.177	0.216	>= 0.10	0.398	>= 0.10	0.117	Gamma; Lognormal; Normal	Normal
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.953	0.680	0.177	0.376	0.888	0.110	0.253	0.032	0.223	>= 0.10	0.466	>= 0.10	0.759	Gamma; Lognormal; Normal	Normal
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	0.850	0.037	0.268	0.018	0.866	0.059	0.249	0.038	0.260	0.01 <= p < 0.05	0.720	0.05 <= p < 0.10	0.130	Gamma; Lognormal	Gamma
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	0.594	0.000	0.379	0.000	0.578	0.000	0.387	0.000	0.381	< 0.01	1.999	< 0.01	0.037	Nonparametric	Nonparametric
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	0.916	0.322	0.181	0.468	0.800	0.015	0.271	0.035	0.218	>= 0.10	0.658	0.05 <= p < 0.10	1.051	Gamma; Normal	Gamma
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.056		Nonparametric
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.109		Nonparametric
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	0.913	0.232	0.206	0.172	0.950	0.637	0.164	0.497	0.179	>= 0.10	0.370	>= 0.10	0.234	Gamma; Lognormal; Normal	Normal
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	0.910	0.215	0.214	0.133	0.862	0.052	0.240	0.054	0.229	0.05 <= p < 0.10	0.610	>= 0.10	0.135	Gamma; Lognormal; Normal	Normal
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_5_106	MW-06	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.892	0.125	0.242	0.050	0.932	0.405	0.208	0.160	0.227	>= 0.10	0.467	>= 0.10	0.310	Gamma; Lognormal; Normal	Normal
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	0.935	0.430	0.194	0.246	0.953	0.684	0.155	0.587	0.169	>= 0.10	0.322	>= 0.10	0.268	Gamma; Lognormal; Normal	Normal
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.850	0.037	0.268	0.018	0.866	0.059	0.249	0.038	0.260	0.01 <= p < 0.05	0.720	0.05 <= p < 0.10	0.130	Gamma; Lognormal	Gamma
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.176		Nonparametric
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	0.909	0.205	0.178	0.366	0.902	0.168	0.211	0.147	0.206	>= 0.10	0.522	>= 0.10	0.250	Gamma; Lognormal; Normal	Normal
16_1_5_117	MW-06	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.049		Nonparametric
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.671	0.001	0.366	0.001	0.799	0.020	0.291	0.027	0.315	0.01 <= p < 0.05	0.912	0.01 <= p < 0.05	0.336	Nonparametric	Nonparametric
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	0.574	0.000	0.414	0.001	0.633	0.001	0.368	0.005	0.389	< 0.01	1.371	< 0.01	0.318	Nonparametric	Nonparametric
16_1_5_125	MW-06	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.216		Nonparametric
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	0.843	0.030	0.301	0.004	0.895	0.137	0.260	0.024	0.276	0.01 <= p < 0.05	0.741	0.01 <= p < 0.05	0.242	Lognormal	Lognormal
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	0.968	0.882	0.185	0.662	0.963	0.846	0.190	0.619	0.208	>= 0.10	0.245	>= 0.10	0.144	Gamma; Lognormal; Normal	Normal
16_1_6_123	MW-06	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
16_1_6_130	MW-06	Part 115	Zinc	mg/L	12	2	17%	0.547	0.000	0.473	0.000	0.616	0.000	0.430	0.000	0.480	< 0.01	2.195	< 0.01	1.661	Nonparametric	Nonparametric
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.976	0.962	0.124	0.879	0.981	0.987	0.120	0.906	0.131	>= 0.10	0.170	>= 0.10	0.136	Gamma; Lognormal; Normal	Normal
17_1_4_105	MW-07	Appendix III	Boron	mg/L	12	0	0%	0.895	0.137	0.245	0.044	0.898	0.151	0.234	0.068	0.244	0.05 <= p < 0.10	0.614	>= 0.10	0.087	Gamma; Lognormal; Normal	Normal
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	0.920	0.282	0.194	0.245	0.908	0.200	0.209	0.156	0.206	>= 0.10	0.531	>= 0.10	0.083	Gamma; Lognormal; Normal	Normal
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.048		Nonparametric
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	12	1	8%	0.896	0.167	0.219	0.148	0.915	0.281	0.209	0.194	0.225	>= 0.10	0.492	>= 0.10	0.343	Gamma; Lognormal; Normal	Normal
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	0.861	0.051	0.257	0.027	0.856	0.043	0.262	0.023	0.257	0.01 <= p < 0.05	0.753	0.01 <= p < 0.05	0.021	Normal	Normal
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.899	0.152	0.207	0.165	0.899	0.156	0.178	0.370	0.191	>= 0.10	0.553	>= 0.10	0.324	Gamma; Lognormal; Normal	Normal
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.859	0.047	0.254	0.031	0.826	0.019	0.283	0.009	0.266	0.01 <= p < 0.05	0.854	0.01 <= p < 0.05	0.135	Nonparametric	Nonparametric
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	0.921	0.298	0.181	0.342	0.875	0.075	0.219	0.115	0.201	>= 0.10	0.622	0.05 <= p < 0.10	0.194	Gamma; Lognormal; Normal	Normal
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	0.826	0.019	0.290	0.006	0.782	0.006	0.305	0.003	0.302	< 0.01	1.044	< 0.01	0.108	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.093	Nonparametric			
17_1_5_106	MW-07	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.637	0.000	0.304	0.003	0.764	0.004	0.241	0.053	0.262	0.01 <= p < 0.05	1.203	< 0.01	0.257	Lognormal	Lognormal
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	0.953	0.684	0.166	0.480	0.946	0.574	0.175	0.390	0.179	>= 0.10	0.360	>= 0.10	0.132	Gamma; Lognormal; Normal	Normal
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	1	8%	0.896	0.167	0.219	0.148	0.915	0.281	0.209	0.194	0.225	>= 0.10	0.492	>= 0.10	0.343	Gamma; Lognormal; Normal	Normal
17_1_5_115	MW-07	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	0.950	0.642	0.167	0.465	0.964	0.833	0.183	0.321	0.162	>= 0.10	0.286	>= 0.10	0.302	Gamma; Lognormal; Normal	Normal
17_1_5_117	MW-07	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_5_118	MW-07	Appendix IV	Molybdenum	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	0.745	0.003	0.263	0.048	0.882	0.138	0.181	0.464	0.206	>= 0.10	0.590	>= 0.10	0.376	Gamma; Lognormal	Gamma
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.456	Nonparametric		
17_1_5_125	MW-07	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.126	Nonparametric		
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	0.944	0.547	0.186	0.304	0.949	0.628	0.166	0.477	0.176	>= 0.10	0.292	>= 0.10	0.123	Gamma; Lognormal; Normal	Normal
17_1_6_119	MW-07	Part 115	Nickel	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_6_123	MW-07	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
17_1_6_130	MW-07	Part 115	Zinc	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.031	Nonparametric		
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.979	0.978	0.091	0.996	0.941	0.508	0.146	0.688	0.130	>= 0.10	0.242	>= 0.10	0.377	Gamma; Lognormal; Normal	Normal
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	0.904	0.177	0.262	0.022	0.818	0.015	0.316	0.002	0.304	< 0.01	0.910	0.01 <= p < 0.05	0.364	Normal	Normal
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	0.880	0.087	0.227	0.088	0.878	0.082	0.229	0.082	0.239	0.05 <= p < 0.10	0.705	0.05 <= p < 0.10	0.104	Gamma; Lognormal; Normal	Normal
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.931	0.393	0.150	0.641	0.891	0.121	0.161	0.533	0.161	>= 0.10	0.530	>= 0.10	0.223	Gamma; Lognormal; Normal	Normal
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	0.874	0.073	0.257	0.028	0.810	0.012	0.295	0.005	0.290	< 0.01	1.032	< 0.01	0.369	Normal	Normal
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	0.699	0.001	0.310	0.002	0.676	0.000	0.320	0.001	0.315	< 0.01	1.476	< 0.01	0.049	Nonparametric	Nonparametric
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	0.818	0.045	0.272	0.082	0.924	0.461	0.142	0.906	0.187	>= 0.10	0.365	>= 0.10	1.030	Gamma; Lognormal; Normal	Gamma
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.970	0.908	0.161	0.533	0.968	0.887	0.149	0.654	0.145	>= 0.10	0.255	>= 0.10	0.102	Gamma; Lognormal; Normal	Normal
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	0.963	0.844	0.187	0.734	0.986	0.976	0.134	0.983	0.157	>= 0.10	0.160	>= 0.10	0.586	Gamma; Lognormal; Normal	Nonparametric
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	0.889	0.113	0.181	0.338	0.790	0.007	0.233	0.072	0.228	>= 0.10	0.877	0.01 <= p < 0.05	0.637	Gamma; Lognormal; Normal	Normal
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	0.959	0.770	0.140	0.740	0.957	0.744	0.134	0.800	0.126	>= 0.10	0.268	>= 0.10	0.134	Gamma; Lognormal; Normal	Normal
18_1_5_104	MW-08	Appendix IV	Beryllium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
18_1_5_106	MW-08	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.888	0.110	0.176	0.387	0.950	0.644	0.128	0.845	0.140	>= 0.10	0.330	>= 0.10	0.256	Gamma; Lognormal; Normal	Normal
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	0.878	0.082	0.225	0.096	0.868	0.061	0.220	0.110	0.233	0.05 <= p < 0.10	0.712	0.05 <= p < 0.10	0.274	Gamma; Lognormal; Normal	Normal
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.874	0.073	0.257	0.028	0.810	0.012	0.295	0.005	0.290	< 0.01	1.032	< 0.01	0.369	Normal	Normal
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.046	Nonparametric		
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	0.936	0.449	0.190	0.274	0.896	0.143	0.227	0.087	0.218	>= 0.10	0.473	>= 0.10	0.236	Gamma; Lognormal; Normal	Normal
18_1_5_117	MW-08	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	0.935	0.434	0.143	0.709	0.883	0.095	0.243	0.049	0.222	>= 0.10	0.517	>= 0.10	0.780	Gamma; Lognormal; Normal	Normal
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.955	0.749	0.197	0.400	0.979	0.959	0.157	0.756	0.153	>= 0.10	0.188	>= 0.10	0.380	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution					
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D		
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value	
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	0.628	0.001	0.394	0.002	0.722	0.006	0.333	0.018	0.357	0.01 <= p < 0.05	1.060	< 0.01	0.358	Nonparametric	Nonparametric	
18_1_5_125	MW-08	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	0.921	0.475	0.195	0.580	0.900	0.331	0.200	0.543	0.214	>= 0.10	0.373	>= 0.10	0.307	Gamma; Lognormal; Normal	Normal	
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	0.911	0.217	0.232	0.075	0.950	0.630	0.184	0.319	0.193	>= 0.10	0.347	>= 0.10	0.275	Gamma; Lognormal; Normal	Normal	
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	0.718	0.001	0.327	0.001	0.835	0.024	0.268	0.017	0.294	< 0.01	1.112	< 0.01	0.399	Nonparametric	Nonparametric	
18_1_6_123	MW-08	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
18_1_6_129	MW-08	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
18_1_6_130	MW-08	Part 115	Zinc	mg/L	12	3	25%	0.571	0.000	0.438	0.000	0.717	0.002	0.297	0.022	0.393	< 0.01	1.553	< 0.01	1.703	Nonparametric	Nonparametric	
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.965	0.855	0.133	0.810	0.948	0.605	0.147	0.672	0.144	>= 0.10	0.254	>= 0.10	0.102	Gamma; Lognormal; Normal	Normal	
19_2_4_105	MW-09	Appendix III	Boron	mg/L	12	0	0%	0.976	0.960	0.114	0.939	0.980	0.983	0.122	0.890	0.115	>= 0.10	0.194	>= 0.10	0.094	Gamma; Lognormal; Normal	Normal	
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	0.953	0.675	0.191	0.263	0.934	0.423	0.220	0.111	0.217	>= 0.10	0.424	>= 0.10	0.229	Gamma; Lognormal; Normal	Normal	
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.853	0.040	0.207	0.167	0.890	0.117	0.217	0.122	0.225	>= 0.10	0.578	>= 0.10	0.293	Gamma; Lognormal; Normal	Normal	
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	0.960	0.781	0.103	0.977	0.956	0.728	0.122	0.889	0.113	>= 0.10	0.221	>= 0.10	0.104	Gamma; Lognormal; Normal	Normal	
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	0.791	0.007	0.283	0.009	0.796	0.008	0.282	0.009	0.287	0.01 <= p < 0.05	1.105	< 0.01	0.015	Nonparametric	Nonparametric	
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.891	0.123	0.191	0.260	0.821	0.017	0.287	0.007	0.267	0.01 <= p < 0.05	0.863	0.01 <= p < 0.05	0.740	Normal	Normal	
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.886	0.105	0.209	0.159	0.852	0.039	0.247	0.042	0.238	0.05 <= p < 0.10	0.717	0.05 <= p < 0.10	0.264	Gamma; Normal	Normal	
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	0.868	0.257	0.277	0.233	0.937	0.645	0.219	0.600	0.260	>= 0.10	0.332	>= 0.10	0.671	Gamma; Lognormal; Normal	Nonparametric	
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	0.857	0.045	0.323	0.001	0.804	0.010	0.359	0.000	0.353	< 0.01	1.118	< 0.01	0.282	Nonparametric	Nonparametric	
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	0.482	0.000	0.382	0.000	0.750	0.003	0.228	0.087	0.305	< 0.01	1.685	< 0.01	0.745	Lognormal	Lognormal	
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	NA	Nonparametric	Nonparametric
19_2_5_106	MW-09	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.921	0.292	0.145	0.694	0.921	0.294	0.170	0.440	0.167	>= 0.10	0.438	>= 0.10	0.242	Gamma; Lognormal; Normal	Normal	
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	0.960	0.777	0.112	0.947	0.945	0.560	0.136	0.779	0.114	>= 0.10	0.243	>= 0.10	0.453	Gamma; Lognormal; Normal	Normal	
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.960	0.781	0.103	0.977	0.956	0.728	0.122	0.889	0.113	>= 0.10	0.221	>= 0.10	0.104	Gamma; Lognormal; Normal	Normal	
19_2_5_115	MW-09	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	0.904	0.177	0.172	0.418	0.902	0.168	0.174	0.399	0.181	>= 0.10	0.522	>= 0.10	0.093	Gamma; Lognormal; Normal	Normal	
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.094	NA	Nonparametric	Nonparametric
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	0.949	0.622	0.234	0.069	0.935	0.438	0.211	0.147	0.191	>= 0.10	0.385	>= 0.10	0.350	Gamma; Lognormal; Normal	Normal	
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	0.862	0.081	0.244	0.094	0.745	0.003	0.308	0.008	0.282	0.01 <= p < 0.05	0.909	0.01 <= p < 0.05	0.272	Normal	Normal	
19_2_5_125	MW-09	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.778	NA	Nonparametric	Nonparametric
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	0.928	0.364	0.163	0.504	0.934	0.424	0.153	0.609	0.165	>= 0.10	0.390	>= 0.10	0.185	Gamma; Lognormal; Normal	Normal	
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	0.776	0.005	0.311	0.002	0.918	0.268	0.198	0.218	0.252	0.05 <= p < 0.10	0.676	0.05 <= p < 0.10	0.870	Gamma; Lognormal	Gamma	
19_2_6_123	MW-09	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_6_129	MW-09	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
19_2_6_130	MW-09	Part 115	Zinc	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.500	NA	Nonparametric	Nonparametric
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	0.804	0.023	0.206	0.328	0.980	0.962	0.135	0.908	0.148	>= 0.10	0.242	>= 0.10	0.916	Gamma; Lognormal; Normal	Normal	
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	0.919	0.281	0.178	0.364	0.939	0.479	0.151	0.630	0.165	>= 0.10	0.326	>= 0.10	0.596	Gamma; Lognormal; Normal	Normal	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	0.851	0.038	0.221	0.108	0.926	0.335	0.212	0.145	0.226	>= 0.10	0.576	>= 0.10	0.397	Gamma; Lognormal; Normal	Normal
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.895	0.136	0.203	0.189	0.948	0.612	0.153	0.612	0.180	>= 0.10	0.373	>= 0.10	0.495	Gamma; Lognormal; Normal	Normal
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	0.927	0.350	0.120	0.905	0.914	0.237	0.167	0.467	0.160	>= 0.10	0.379	>= 0.10	0.379	Gamma; Lognormal; Normal	Normal
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	0.912	0.226	0.214	0.136	0.922	0.303	0.203	0.186	0.205	>= 0.10	0.563	>= 0.10	0.054	Gamma; Lognormal; Normal	Normal
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.907	0.194	0.150	0.641	0.971	0.919	0.154	0.600	0.143	>= 0.10	0.199	>= 0.10	0.724	Gamma; Lognormal; Normal	Normal
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.800	0.009	0.328	0.001	0.855	0.043	0.296	0.005	0.311	< 0.01	0.947	0.01 <= p < 0.05	0.226	Nonparametric	Nonparametric
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.542		Nonparametric
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	0.922	0.305	0.174	0.404	0.955	0.706	0.131	0.823	0.159	>= 0.10	0.277	>= 0.10	0.589	Gamma; Lognormal; Normal	Normal
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	0.891	0.122	0.229	0.082	0.969	0.905	0.158	0.562	0.174	>= 0.10	0.296	>= 0.10	0.402	Gamma; Lognormal; Normal	Normal
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	0.852	0.163	0.253	0.265	0.913	0.458	0.173	0.832	0.204	>= 0.10	0.374	>= 0.10	0.579	Gamma; Lognormal; Normal	Nonparametric
20_3_5_106	MW-10	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.897	0.144	0.169	0.450	0.960	0.782	0.149	0.655	0.151	>= 0.10	0.286	>= 0.10	0.597	Gamma; Lognormal; Normal	Normal
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	0.756	0.002	0.261	0.035	0.957	0.735	0.167	0.526	0.214	>= 0.10	0.453	>= 0.10	0.737	Gamma; Lognormal	Gamma
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.927	0.350	0.120	0.905	0.914	0.237	0.167	0.467	0.160	>= 0.10	0.379	>= 0.10	0.379	Gamma; Lognormal; Normal	Normal
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.246		Nonparametric
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	0.926	0.341	0.172	0.419	0.955	0.716	0.149	0.652	0.132	>= 0.10	0.304	>= 0.10	0.301	Gamma; Lognormal; Normal	Normal
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	0.961	0.801	0.194	0.242	0.949	0.622	0.182	0.332	0.143	>= 0.10	0.207	>= 0.10	0.598	Gamma; Lognormal; Normal	Normal
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.235		Nonparametric
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	0.667	0.000	0.280	0.016	0.801	0.010	0.207	0.206	0.231	>= 0.10	0.998	< 0.01	0.300	Gamma; Lognormal	Gamma
20_3_5_125	MW-10	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.649		Nonparametric
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	0.913	0.231	0.211	0.150	0.930	0.375	0.187	0.295	0.192	>= 0.10	0.476	>= 0.10	0.352	Gamma; Lognormal; Normal	Normal
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	0.770	0.031	0.342	0.027	0.832	0.111	0.332	0.038	0.352	0.01 <= p < 0.05	0.662	0.05 <= p < 0.10	0.317	Gamma; Lognormal	Nonparametric
20_3_6_123	MW-10	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.268		Nonparametric
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	0.674	0.002	0.381	0.003	0.771	0.021	0.266	0.139	0.329	0.01 <= p < 0.05	0.975	0.01 <= p < 0.05	1.085	Lognormal	Nonparametric
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	0.795	0.008	0.249	0.054	0.886	0.125	0.206	0.213	0.202	>= 0.10	0.588	>= 0.10	0.772	Gamma; Lognormal; Normal	Normal
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	0.903	0.172	0.197	0.226	0.957	0.736	0.137	0.772	0.163	>= 0.10	0.285	>= 0.10	0.700	Gamma; Lognormal; Normal	Normal
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	0.953	0.674	0.138	0.759	0.887	0.107	0.200	0.204	0.173	>= 0.10	0.474	>= 0.10	0.325	Gamma; Lognormal; Normal	Normal
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.981	0.987	0.140	0.738	0.961	0.797	0.130	0.829	0.125	>= 0.10	0.192	>= 0.10	0.261	Gamma; Lognormal; Normal	Normal
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	0.893	0.130	0.151	0.630	0.947	0.591	0.115	0.931	0.132	>= 0.10	0.282	>= 0.10	0.644	Gamma; Lognormal; Normal	Normal
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	0.957	0.742	0.168	0.459	0.955	0.707	0.170	0.436	0.166	>= 0.10	0.292	>= 0.10	0.013	Gamma; Lognormal; Normal	Normal
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	0.762	0.008	0.279	0.042	0.944	0.622	0.174	0.600	0.241	>= 0.10	0.425	>= 0.10	1.536	Gamma; Lognormal	Gamma
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.855	0.042	0.253	0.032	0.928	0.363	0.210	0.151	0.216	>= 0.10	0.495	>= 0.10	0.233	Gamma; Lognormal	Gamma
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.875		Nonparametric
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	0.796	0.008	0.217	0.123	0.961	0.800	0.129	0.840	0.151	>= 0.10	0.418	>= 0.10	0.472	Gamma; Lognormal; Normal	Normal
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	0.897	0.146	0.246	0.042	0.968	0.889	0.193	0.250	0.215	>= 0.10	0.327	>= 0.10	0.334	Gamma; Lognormal; Normal	Normal
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.114		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.073		Nonparametric		
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.465	0.000	0.390	0.000	0.783	0.006	0.247	0.042	0.319	< 0.01	1.676	< 0.01	0.777	Nonparametric	Nonparametric
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	0.697	0.001	0.305	0.003	0.926	0.337	0.161	0.529	0.209	>= 0.10	0.629	0.05 <= p < 0.10	0.678	Gamma; Lognormal	Gamma
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.893	0.130	0.151	0.630	0.947	0.591	0.115	0.931	0.132	>= 0.10	0.282	>= 0.10	0.644	Gamma; Lognormal; Normal	Normal
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	0.436	0.000	0.474	0.000	0.863	0.102	0.235	0.161	0.314	0.01 <= p < 0.05	1.228	< 0.01	1.935	Lognormal	Nonparametric
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	0.866	0.058	0.188	0.286	0.963	0.829	0.115	0.933	0.124	>= 0.10	0.163	>= 0.10	1.102	Gamma; Lognormal; Normal	Gamma
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	0.885	0.148	0.196	0.342	0.950	0.672	0.137	0.858	0.148	>= 0.10	0.293	>= 0.10	0.636	Gamma; Lognormal; Normal	Normal
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.938	0.596	0.167	0.735	0.952	0.729	0.156	0.823	0.176	>= 0.10	0.242	>= 0.10	0.374	Gamma; Lognormal; Normal	Normal
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	0.755	0.006	0.298	0.020	0.894	0.221	0.249	0.112	0.278	0.05 <= p < 0.10	0.617	0.05 <= p < 0.10	0.519	Gamma; Lognormal	Gamma
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	0.475	0.000	0.432	0.000	0.845	0.065	0.258	0.086	0.320	0.01 <= p < 0.05	1.225	< 0.01	1.436	Lognormal	Nonparametric
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	0.947	0.593	0.104	0.974	0.956	0.730	0.124	0.876	0.129	>= 0.10	0.217	>= 0.10	0.375	Gamma; Lognormal; Normal	Normal
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	0.530	0.000	0.370	0.000	0.840	0.028	0.239	0.057	0.294	< 0.01	1.288	< 0.01	0.706	Lognormal	Lognormal
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.137	Nonparametric	
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.115	Nonparametric	
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	0.697	0.002	0.296	0.038	0.923	0.452	0.188	0.554	0.243	>= 0.10	0.535	>= 0.10	1.416	Gamma; Lognormal	Gamma
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.406	Nonparametric	
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	0.907	0.196	0.202	0.195	0.926	0.338	0.157	0.571	0.176	>= 0.10	0.421	>= 0.10	0.282	Gamma; Lognormal; Normal	Normal
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	0.929	0.368	0.143	0.712	0.911	0.222	0.177	0.373	0.174	>= 0.10	0.406	>= 0.10	0.304	Gamma; Lognormal; Normal	Normal
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.915	0.250	0.251	0.035	0.941	0.511	0.211	0.147	0.228	>= 0.10	0.459	>= 0.10	0.242	Gamma; Lognormal; Normal	Normal
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	0.865	0.056	0.255	0.031	0.878	0.083	0.216	0.128	0.236	0.05 <= p < 0.10	0.731	0.01 <= p < 0.05	0.329	Gamma; Lognormal; Normal	Normal
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	0.968	0.894	0.162	0.515	0.965	0.856	0.167	0.473	0.155	>= 0.10	0.253	>= 0.10	0.046	Gamma; Lognormal; Normal	Normal
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.931	0.392	0.197	0.225	0.941	0.516	0.154	0.601	0.159	>= 0.10	0.318	>= 0.10	0.333	Gamma; Lognormal; Normal	Normal
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.956	0.725	0.167	0.473	0.902	0.170	0.184	0.316	0.163	>= 0.10	0.378	>= 0.10	0.399	Gamma; Lognormal; Normal	Normal
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	0.918	0.272	0.173	0.415	0.936	0.450	0.170	0.438	0.178	>= 0.10	0.368	>= 0.10	0.386	Gamma; Lognormal; Normal	Normal
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	0.905	0.182	0.234	0.068	0.915	0.250	0.206	0.174	0.225	>= 0.10	0.528	>= 0.10	0.308	Gamma; Lognormal; Normal	Normal
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	12	0	0%	0.854	0.041	0.243	0.049	0.921	0.296	0.207	0.168	0.224	>= 0.10	0.603	>= 0.10	0.453	Gamma; Lognormal	Gamma
22_2_5_104	MW-12	Appendix IV	Beryllium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	0.880	0.088	0.168	0.463	0.954	0.691	0.152	0.624	0.170	>= 0.10	0.329	>= 0.10	0.577	Gamma; Lognormal; Normal	Normal
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.893	0.290	0.216	0.416	0.939	0.626	0.171	0.774	0.193	>= 0.10	0.337	>= 0.10	0.393	Gamma; Lognormal; Normal	Normal
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	0.903	0.349	0.212	0.445	0.896	0.305	0.212	0.446	0.232	>= 0.10	0.393	>= 0.10	0.547	Gamma; Lognormal; Normal	Nonparametric
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.865	0.056	0.255	0.031	0.878	0.083	0.216	0.128	0.236	0.05 <= p < 0.10	0.731	0.01 <= p < 0.05	0.329	Gamma; Lognormal; Normal	Normal
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	0.822	0.092	0.296	0.102	0.867	0.214	0.237	0.362	0.267	>= 0.10	0.516	>= 0.10	0.442	Gamma; Lognormal; Normal	Nonparametric
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	0.948	0.606	0.145	0.693	0.953	0.682	0.159	0.554	0.154	>= 0.10	0.298	>= 0.10	0.371	Gamma; Lognormal; Normal	Normal
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.257	Nonparametric	
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	0.961	0.801	0.119	0.911	0.967	0.873	0.125	0.870	0.134	>= 0.10	0.220	>= 0.10	0.232	Gamma; Lognormal; Normal	Normal
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.370	Nonparametric	
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	0.914	0.239	0.161	0.534	0.886	0.104	0.206	0.173	0.157	>= 0.10	0.426	>= 0.10	1.052	Gamma; Lognormal; Normal	Gamma

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
22_2_5_125	MW-12	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric		
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	0.976	0.960	0.137	0.776	0.943	0.544	0.153	0.610	0.145	>= 0.10	0.244	>= 0.10	0.312	Gamma; Lognormal; Normal	Normal
22_2_6_114	MW-12	Part 115	Iron	mg/L	12	6	50%	0.914	0.465	0.215	0.516	0.929	0.573	0.179	0.789	0.209	>= 0.10	0.317	>= 0.10	0.375	Gamma; Lognormal; Normal	Nonparametric
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	0.935	0.436	0.127	0.860	0.909	0.209	0.164	0.502	0.150	>= 0.10	0.375	>= 0.10	0.324	Gamma; Lognormal; Normal	Normal
22_2_6_123	MW-12	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	0.902	0.386	0.228	0.426	0.915	0.468	0.217	0.505	0.240	>= 0.10	0.347	>= 0.10	0.253	Gamma; Lognormal; Normal	Nonparametric
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	0.942	0.519	0.167	0.471	0.858	0.046	0.229	0.083	0.207	>= 0.10	0.617	>= 0.10	0.426	Gamma; Lognormal; Normal	Normal
26_1_3_127	MW-16	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.265	Nonparametric	
26_1_4_105	MW-16	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.474	Nonparametric	
26_1_4_107	MW-16	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.194	Nonparametric	
26_1_4_108	MW-16	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.287	Nonparametric	
26_1_4_112	MW-16	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.216	Nonparametric	
26_1_4_120	MW-16	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.078	Nonparametric	
26_1_4_124	MW-16	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_4_126	MW-16	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.141	Nonparametric	
26_1_5_101	MW-16	Appendix IV	Antimony	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_102	MW-16	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.300	Nonparametric	
26_1_5_103	MW-16	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.312	Nonparametric	
26_1_5_104	MW-16	Appendix IV	Beryllium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_106	MW-16	Appendix IV	Cadmium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_109	MW-16	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.201	Nonparametric	
26_1_5_110	MW-16	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.149	Nonparametric	
26_1_5_113	MW-16	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.216	Nonparametric	
26_1_5_115	MW-16	Appendix IV	Lead	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_116	MW-16	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.316	Nonparametric	
26_1_5_117	MW-16	Appendix IV	Mercury	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_118	MW-16	Appendix IV	Molybdenum	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_121	MW-16	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_5_122	MW-16	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.062	Nonparametric	
26_1_5_125	MW-16	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_6_111	MW-16	Part 115	Copper	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_6_114	MW-16	Part 115	Iron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.041	Nonparametric	
26_1_6_119	MW-16	Part 115	Nickel	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_6_123	MW-16	Part 115	Silver	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_6_129	MW-16	Part 115	Vanadium	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
26_1_6_130	MW-16	Part 115	Zinc	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
27_1_3_127	MW-17	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric	
27_1_4_105	MW-17	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.037	Nonparametric	
27_1_4_107	MW-17	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.094	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
27_1_4_108	MW-17	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.187	Nonparametric				
27_1_4_112	MW-17	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.109	Nonparametric				
27_1_4_120	MW-17	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.053	Nonparametric				
27_1_4_124	MW-17	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.363	Nonparametric				
27_1_4_126	MW-17	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric				
27_1_5_101	MW-17	Appendix IV	Antimony	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_5_102	MW-17	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.260	Nonparametric				
27_1_5_103	MW-17	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.197	Nonparametric				
27_1_5_104	MW-17	Appendix IV	Beryllium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_5_106	MW-17	Appendix IV	Cadmium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_5_109	MW-17	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.261	Nonparametric				
27_1_5_110	MW-17	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.203	Nonparametric				
27_1_5_113	MW-17	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.109	Nonparametric				
27_1_5_115	MW-17	Appendix IV	Lead	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.561	Nonparametric				
27_1_5_116	MW-17	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.042	Nonparametric				
27_1_5_117	MW-17	Appendix IV	Mercury	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_5_118	MW-17	Appendix IV	Molybdenum	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.967	Nonparametric				
27_1_5_121	MW-17	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_5_122	MW-17	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.287	Nonparametric				
27_1_5_125	MW-17	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_6_111	MW-17	Part 115	Copper	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.423	Nonparametric				
27_1_6_114	MW-17	Part 115	Iron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.449	Nonparametric				
27_1_6_119	MW-17	Part 115	Nickel	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.423	Nonparametric				
27_1_6_123	MW-17	Part 115	Silver	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
27_1_6_129	MW-17	Part 115	Vanadium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.309	Nonparametric				
27_1_6_130	MW-17	Part 115	Zinc	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.579	Nonparametric				
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	0.485	0.000	0.439	0.000	0.894	0.157	0.234	0.095	0.325	< 0.01	1.165	< 0.01	0.979	Lognormal	Lognormal
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	0.899	0.155	0.193	0.251	0.934	0.423	0.169	0.453	0.185	>= 0.10	0.389	>= 0.10	0.273	Gamma; Lognormal; Normal	Normal
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	0.958	0.751	0.187	0.296	0.937	0.461	0.222	0.105	0.206	>= 0.10	0.384	>= 0.10	0.192	Gamma; Lognormal; Normal	Normal
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.920	0.285	0.138	0.758	0.902	0.170	0.160	0.534	0.160	>= 0.10	0.448	>= 0.10	0.198	Gamma; Lognormal; Normal	Normal
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	0.966	0.871	0.147	0.678	0.967	0.875	0.129	0.841	0.139	>= 0.10	0.273	>= 0.10	0.173	Gamma; Lognormal; Normal	Normal
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	0.962	0.806	0.191	0.266	0.961	0.791	0.193	0.251	0.189	>= 0.10	0.292	>= 0.10	0.012	Gamma; Lognormal; Normal	Normal
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.891	0.121	0.275	0.013	0.930	0.383	0.228	0.087	0.243	0.05 <= p < 0.10	0.527	>= 0.10	0.260	Gamma; Lognormal; Normal	Normal
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.926	0.341	0.266	0.019	0.940	0.499	0.240	0.055	0.248	0.01 <= p < 0.05	0.463	>= 0.10	0.145	Gamma; Lognormal; Normal	Normal
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	0.728	0.003	0.322	0.008	0.790	0.016	0.290	0.028	0.312	0.01 <= p < 0.05	1.039	< 0.01	0.403	Nonparametric	Nonparametric
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	0.947	0.591	0.171	0.435	0.965	0.847	0.204	0.182	0.202	>= 0.10	0.313	>= 0.10	0.272	Gamma; Lognormal; Normal	Normal
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	0.894	0.131	0.202	0.195	0.891	0.120	0.207	0.165	0.208	>= 0.10	0.623	0.05 <= p < 0.10	0.265	Gamma; Lognormal; Normal	Normal
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	0.955	0.774	0.169	0.791	0.951	0.737	0.204	0.509	0.167	>= 0.10	0.245	>= 0.10	0.512	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric			
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	0.844	0.031	0.261	0.023	0.917	0.264	0.216	0.127	0.241	0.05 <= p < 0.10	0.615	>= 0.10	0.477	Gamma; Lognormal	Gamma
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.966	0.871	0.147	0.678	0.967	0.875	0.129	0.841	0.139	>= 0.10	0.273	>= 0.10	0.173	Gamma; Lognormal; Normal	Normal
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.383		Nonparametric	
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	0.898	0.149	0.207	0.168	0.894	0.131	0.224	0.099	0.228	>= 0.10	0.635	0.05 <= p < 0.10	0.261	Gamma; Lognormal; Normal	Normal
28_1_5_117	MW-18	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	0.901	0.163	0.231	0.077	0.929	0.373	0.194	0.244	0.212	>= 0.10	0.516	>= 0.10	0.270	Gamma; Lognormal; Normal	Normal
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.425		Nonparametric	
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	0.812	0.013	0.227	0.087	0.905	0.186	0.173	0.409	0.172	>= 0.10	0.518	>= 0.10	0.881	Gamma; Lognormal; Normal	Normal
28_1_5_125	MW-18	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	0.691	0.001	0.305	0.003	0.845	0.032	0.211	0.147	0.243	0.05 <= p < 0.10	1.022	< 0.01	0.405	Gamma; Lognormal	Gamma
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	0.960	0.780	0.149	0.651	0.988	0.999	0.107	0.965	0.115	>= 0.10	0.160	>= 0.10	0.242	Gamma; Lognormal; Normal	Normal
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	0.858	0.047	0.254	0.031	0.909	0.205	0.216	0.128	0.237	0.05 <= p < 0.10	0.634	0.05 <= p < 0.10	0.358	Gamma; Lognormal	Gamma
28_1_6_123	MW-18	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
28_1_6_129	MW-18	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	0.983	0.994	0.152	0.626	0.947	0.600	0.159	0.554	0.127	>= 0.10	0.206	>= 0.10	0.457	Gamma; Lognormal; Normal	Normal
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.929	0.372	0.137	0.772	0.805	0.011	0.214	0.135	0.193	>= 0.10	0.729	0.05 <= p < 0.10	0.592	Gamma; Lognormal; Normal	Normal
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	0.928	0.359	0.149	0.650	0.940	0.498	0.114	0.935	0.124	>= 0.10	0.274	>= 0.10	0.190	Gamma; Lognormal; Normal	Normal
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	0.935	0.440	0.140	0.747	0.897	0.145	0.159	0.553	0.133	>= 0.10	0.390	>= 0.10	0.109	Gamma; Lognormal; Normal	Normal
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.924	0.320	0.192	0.255	0.952	0.671	0.140	0.746	0.162	>= 0.10	0.387	>= 0.10	0.326	Gamma; Lognormal; Normal	Normal
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	0.956	0.725	0.153	0.607	0.962	0.807	0.135	0.791	0.147	>= 0.10	0.264	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	0.819	0.016	0.247	0.042	0.807	0.011	0.253	0.033	0.246	0.05 <= p < 0.10	0.853	0.01 <= p < 0.05	0.026	Gamma	Gamma
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.953	0.687	0.145	0.691	0.915	0.250	0.165	0.488	0.165	>= 0.10	0.341	>= 0.10	0.223	Gamma; Lognormal; Normal	Normal
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.894	0.133	0.157	0.568	0.893	0.130	0.156	0.579	0.168	>= 0.10	0.508	>= 0.10	0.123	Gamma; Lognormal; Normal	Normal
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	0.925	0.327	0.163	0.510	0.897	0.145	0.210	0.153	0.201	>= 0.10	0.501	>= 0.10	0.350	Gamma; Lognormal; Normal	Normal
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	0.960	0.785	0.179	0.361	0.966	0.869	0.160	0.539	0.173	>= 0.10	0.283	>= 0.10	0.149	Gamma; Lognormal; Normal	Normal
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	0.907	0.296	0.194	0.421	0.909	0.306	0.187	0.484	0.206	>= 0.10	0.411	>= 0.10	0.155	Gamma; Lognormal; Normal	Normal
29_1_5_106	MW-19	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.775	0.023	0.284	0.092	0.841	0.102	0.248	0.214	0.266	>= 0.10	0.634	0.05 <= p < 0.10	0.260	Gamma; Lognormal; Normal	Normal
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	0.963	0.810	0.175	0.450	0.899	0.177	0.251	0.052	0.212	>= 0.10	0.387	>= 0.10	0.569	Gamma; Lognormal; Normal	Normal
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.956	0.725	0.153	0.607	0.962	0.807	0.135	0.791	0.147	>= 0.10	0.264	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
29_1_5_115	MW-19	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	12	0	0%	0.932	0.402	0.159	0.551	0.924	0.322	0.165	0.491	0.153	>= 0.10	0.403	>= 0.10	0.131	Gamma; Lognormal; Normal	Normal
29_1_5_117	MW-19	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	0.913	0.232	0.163	0.511	0.826	0.019	0.235	0.067	0.211	>= 0.10	0.713	0.05 <= p < 0.10	0.368	Gamma; Lognormal; Normal	Normal
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.900	0.291	0.208	0.391	0.876	0.173	0.251	0.144	0.245	>= 0.10	0.509	>= 0.10	0.323	Gamma; Lognormal; Normal	Normal
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000		Nonparametric	
29_1_5_125	MW-19	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.





**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.328	Nonparametric			
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	0.946	0.573	0.157	0.567	0.969	0.900	0.123	0.887	0.137	>= 0.10	0.234	>= 0.10	0.208	Gamma; Lognormal; Normal	Normal
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	0.462	0.000	0.444	0.000	0.742	0.002	0.270	0.024	0.355	< 0.01	1.682	< 0.01	0.764	Nonparametric	Nonparametric
29_1_6_123	MW-19	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
29_1_6_129	MW-19	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.426	Nonparametric	Nonparametric
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.923	0.308	0.162	0.522	0.920	0.286	0.161	0.528	0.173	>= 0.10	0.416	>= 0.10	0.102	Gamma; Lognormal; Normal	Normal
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	0.823	0.017	0.275	0.013	0.840	0.027	0.271	0.015	0.284	0.01 <= p < 0.05	0.939	0.01 <= p < 0.05	0.166	Nonparametric	Nonparametric
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	0.837	0.025	0.259	0.025	0.722	0.001	0.312	0.002	0.295	< 0.01	1.207	< 0.01	0.257	Nonparametric	Nonparametric
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.937	0.456	0.193	0.253	0.898	0.148	0.193	0.251	0.173	>= 0.10	0.480	>= 0.10	0.206	Gamma; Lognormal; Normal	Normal
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	0.579	0.000	0.326	0.001	0.698	0.001	0.267	0.018	0.288	< 0.01	1.523	< 0.01	0.258	Nonparametric	Nonparametric
30_1_4_120	MW-20	Appendix III	pH (field)	su	12	0	0%	0.929	0.375	0.215	0.132	0.929	0.370	0.215	0.132	0.225	>= 0.10	0.439	>= 0.10	0.016	Gamma; Lognormal; Normal	Normal
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.933	0.409	0.152	0.621	0.909	0.209	0.212	0.141	0.205	>= 0.10	0.419	>= 0.10	0.654	Gamma; Lognormal; Normal	Normal
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.900	0.161	0.218	0.119	0.918	0.270	0.201	0.196	0.208	>= 0.10	0.618	0.05 <= p < 0.10	0.103	Gamma; Lognormal; Normal	Normal
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	0.935	0.558	0.180	0.625	0.944	0.653	0.178	0.637	0.196	>= 0.10	0.279	>= 0.10	0.392	Gamma; Lognormal; Normal	Normal
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	0.915	0.250	0.200	0.202	0.919	0.280	0.182	0.331	0.196	>= 0.10	0.493	>= 0.10	0.167	Gamma; Lognormal; Normal	Normal
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	0.770	0.004	0.254	0.031	0.894	0.133	0.199	0.208	0.218	>= 0.10	0.721	0.05 <= p < 0.10	0.275	Gamma; Lognormal	Gamma
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_5_106	MW-20	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.941	0.644	0.215	0.424	0.952	0.752	0.197	0.563	0.211	>= 0.10	0.289	>= 0.10	0.148	Gamma; Lognormal; Normal	Normal
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	0.940	0.503	0.164	0.502	0.938	0.477	0.193	0.248	0.189	>= 0.10	0.371	>= 0.10	0.188	Gamma; Lognormal; Normal	Normal
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.579	0.000	0.326	0.001	0.698	0.001	0.267	0.018	0.288	< 0.01	1.523	< 0.01	0.258	Nonparametric	Nonparametric
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	0.914	0.241	0.188	0.282	0.931	0.393	0.178	0.370	0.192	>= 0.10	0.416	>= 0.10	0.259	Gamma; Lognormal; Normal	Normal
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	0.957	0.743	0.112	0.945	0.866	0.058	0.165	0.489	0.148	>= 0.10	0.405	>= 0.10	0.279	Gamma; Lognormal; Normal	Normal
30_1_5_117	MW-20	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	0.938	0.471	0.180	0.350	0.932	0.402	0.183	0.324	0.196	>= 0.10	0.438	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	0.905	0.438	0.204	0.706	0.934	0.624	0.200	0.737	0.223	>= 0.10	0.296	>= 0.10	0.381	Gamma; Lognormal; Normal	Nonparametric
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	0.675	0.003	0.400	0.003	0.757	0.023	0.352	0.019	0.375	0.01 <= p < 0.05	0.870	0.01 <= p < 0.05	0.347	Nonparametric	Nonparametric
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	0.862	0.060	0.159	0.613	0.898	0.175	0.167	0.530	0.176	>= 0.10	0.481	>= 0.10	0.308	Gamma; Lognormal; Normal	Normal
30_1_6_114	MW-20	Part 115	Iron	mg/L	12	0	0%	0.926	0.343	0.144	0.703	0.922	0.302	0.144	0.705	0.156	>= 0.10	0.383	>= 0.10	0.110	Gamma; Lognormal; Normal	Normal
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	0.888	0.110	0.262	0.023	0.866	0.058	0.271	0.015	0.276	0.01 <= p < 0.05	0.683	0.05 <= p < 0.10	0.158	Gamma; Lognormal; Normal	Normal
30_1_6_123	MW-20	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_6_129	MW-20	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	0.710	0.001	0.372	0.000	0.840	0.028	0.294	0.005	0.324	< 0.01	1.208	< 0.01	0.422	Nonparametric	Nonparametric
38_1_3_127	MW-28	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.474	Nonparametric	Nonparametric
38_1_4_105	MW-28	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.721	Nonparametric	Nonparametric
38_1_4_107	MW-28	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.043	Nonparametric	Nonparametric
38_1_4_108	MW-28	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.929	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
38_1_4_112	MW-28	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.361	Nonparametric				
38_1_4_120	MW-28	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.008	Nonparametric				
38_1_4_124	MW-28	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_4_126	MW-28	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.087	Nonparametric				
38_1_5_101	MW-28	Appendix IV	Antimony	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.396	Nonparametric				
38_1_5_102	MW-28	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.171	Nonparametric				
38_1_5_103	MW-28	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.511	Nonparametric				
38_1_5_104	MW-28	Appendix IV	Beryllium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_5_106	MW-28	Appendix IV	Cadmium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_5_109	MW-28	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.434	Nonparametric				
38_1_5_110	MW-28	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.234	Nonparametric				
38_1_5_113	MW-28	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.361	Nonparametric				
38_1_5_115	MW-28	Appendix IV	Lead	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.118	Nonparametric				
38_1_5_116	MW-28	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.777	Nonparametric				
38_1_5_117	MW-28	Appendix IV	Mercury	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_5_118	MW-28	Appendix IV	Molybdenum	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.337	Nonparametric				
38_1_5_121	MW-28	Appendix IV	Radium 226 and 228	pCi/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.054	Nonparametric				
38_1_5_122	MW-28	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.203	Nonparametric				
38_1_5_125	MW-28	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_6_111	MW-28	Part 115	Copper	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.388	Nonparametric				
38_1_6_114	MW-28	Part 115	Iron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.148	Nonparametric				
38_1_6_119	MW-28	Part 115	Nickel	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.138	Nonparametric				
38_1_6_123	MW-28	Part 115	Silver	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
38_1_6_129	MW-28	Part 115	Vanadium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.114	Nonparametric				
38_1_6_130	MW-28	Part 115	Zinc	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.209	Nonparametric				
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	0.675	0.001	0.354	0.002	0.777	0.011	0.286	0.032	0.311	0.01 <= p < 0.05	1.090	< 0.01	0.520	Nonparametric	Nonparametric
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	0.667	0.000	0.279	0.010	0.769	0.004	0.250	0.037	0.261	0.01 <= p < 0.05	1.173	< 0.01	0.202	Nonparametric	Nonparametric
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	0.533	0.000	0.392	0.000	0.633	0.000	0.334	0.001	0.354	< 0.01	1.939	< 0.01	0.232	Nonparametric	Nonparametric
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.812	0.013	0.233	0.070	0.854	0.041	0.225	0.094	0.238	0.05 <= p < 0.10	0.895	0.01 <= p < 0.05	0.316	Gamma; Lognormal; Normal	Normal
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	0.917	0.259	0.222	0.104	0.932	0.400	0.213	0.138	0.211	>= 0.10	0.520	>= 0.10	0.110	Gamma; Lognormal; Normal	Normal
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	0.698	0.001	0.288	0.007	0.685	0.001	0.295	0.005	0.290	< 0.01	1.420	< 0.01	0.030	Nonparametric	Nonparametric
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.881	0.090	0.210	0.151	0.838	0.026	0.209	0.159	0.228	>= 0.10	0.644	0.05 <= p < 0.10	0.139	Gamma; Lognormal; Normal	Normal
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.919	0.277	0.211	0.145	0.939	0.481	0.193	0.252	0.193	>= 0.10	0.438	>= 0.10	0.107	Gamma; Lognormal; Normal	Normal
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	0.970	0.895	0.129	0.907	0.907	0.259	0.223	0.168	0.195	>= 0.10	0.324	>= 0.10	0.546	Gamma; Lognormal; Normal	Normal
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	0.857	0.045	0.198	0.215	0.907	0.197	0.154	0.602	0.174	>= 0.10	0.558	>= 0.10	0.310	Gamma; Lognormal; Normal	Normal
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.516	Nonparametric	
40_1_5_106	MW-30	Appendix IV	Cadmium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.947	0.589	0.145	0.689	0.930	0.375	0.144	0.708	0.155	>= 0.10	0.317	>= 0.10	0.359	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	0.715	0.001	0.304	0.003	0.910	0.211	0.203	0.186	0.242	0.05 <= p < 0.10	0.773	0.01 <= p < 0.05	0.611	Gamma; Lognormal	Gamma
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.917	0.259	0.222	0.104	0.932	0.400	0.213	0.138	0.211	>= 0.10	0.520	>= 0.10	0.110	Gamma; Lognormal; Normal	Normal
40_1_5_115	MW-30	Appendix IV	Lead	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	0.619	0.000	0.287	0.007	0.743	0.002	0.243	0.049	0.261	0.01 <= p < 0.05	1.344	< 0.01	0.258	Nonparametric	Nonparametric
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	0.772	0.010	0.249	0.110	0.977	0.945	0.127	0.944	0.159	>= 0.10	0.343	>= 0.10	0.680	Gamma; Lognormal; Normal	Normal
40_1_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	12	6	50%	0.876	0.249	0.282	0.140	0.909	0.432	0.244	0.320	0.266	>= 0.10	0.423	>= 0.10	0.282	Gamma; Lognormal; Normal	Nonparametric
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	0.683	0.004	0.333	0.036	0.801	0.060	0.279	0.152	0.305	>= 0.10	0.763	0.01 <= p < 0.05	0.502	Gamma; Lognormal	Nonparametric
40_1_5_125	MW-30	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.356		Nonparametric
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	0.906	0.189	0.169	0.449	0.975	0.958	0.114	0.935	0.095	>= 0.10	0.140	>= 0.10	0.704	Gamma; Lognormal; Normal	Normal
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	0.832	0.035	0.284	0.021	0.928	0.432	0.186	0.422	0.209	>= 0.10	0.470	>= 0.10	0.608	Gamma; Lognormal	Gamma
40_1_6_123	MW-30	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
40_1_6_129	MW-30	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.055		Nonparametric
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.693		Nonparametric
41_1_4_105	MW-31	Appendix III	Boron	mg/L	12	0	0%	0.961	0.791	0.112	0.948	0.961	0.801	0.102	0.980	0.105	>= 0.10	0.206	>= 0.10	0.131	Gamma; Lognormal; Normal	Normal
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	0.926	0.336	0.217	0.124	0.909	0.206	0.239	0.056	0.230	0.05 <= p < 0.10	0.512	>= 0.10	0.120	Gamma; Lognormal; Normal	Normal
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.946	0.580	0.234	0.068	0.956	0.720	0.219	0.115	0.226	>= 0.10	0.378	>= 0.10	0.090	Gamma; Lognormal; Normal	Normal
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	0.855	0.043	0.306	0.003	0.862	0.052	0.301	0.004	0.307	< 0.01	0.857	0.01 <= p < 0.05	0.048	Lognormal	Lognormal
41_1_4_120	MW-31	Appendix III	pH (field)	su	12	0	0%	0.938	0.476	0.159	0.546	0.941	0.505	0.157	0.569	0.151	>= 0.10	0.327	>= 0.10	0.013	Gamma; Lognormal; Normal	Normal
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.933	0.412	0.161	0.526	0.936	0.451	0.130	0.834	0.152	>= 0.10	0.282	>= 0.10	0.392	Gamma; Lognormal; Normal	Normal
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.940	0.501	0.184	0.317	0.953	0.682	0.171	0.427	0.176	>= 0.10	0.314	>= 0.10	0.070	Gamma; Lognormal; Normal	Normal
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	0.688	0.005	0.402	0.003	0.848	0.152	0.310	0.073	0.351	0.01 <= p < 0.05	0.689	0.05 <= p < 0.10	0.599	Gamma; Lognormal	Nonparametric
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	0.905	0.182	0.237	0.060	0.927	0.349	0.216	0.125	0.230	0.05 <= p < 0.10	0.476	>= 0.10	0.187	Gamma; Lognormal; Normal	Normal
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	0.913	0.234	0.176	0.383	0.936	0.453	0.155	0.595	0.162	>= 0.10	0.388	>= 0.10	0.209	Gamma; Lognormal; Normal	Normal
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.935	0.441	0.140	0.740	0.952	0.663	0.142	0.727	0.149	>= 0.10	0.263	>= 0.10	0.174	Gamma; Lognormal; Normal	Normal
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	0.944	0.564	0.181	0.399	0.971	0.896	0.146	0.733	0.145	>= 0.10	0.255	>= 0.10	0.268	Gamma; Lognormal; Normal	Normal
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.855	0.043	0.306	0.003	0.862	0.052	0.301	0.004	0.307	< 0.01	0.857	0.01 <= p < 0.05	0.048	Lognormal	Lognormal
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.152		Nonparametric
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	0.852	0.039	0.255	0.030	0.823	0.017	0.260	0.024	0.266	0.01 <= p < 0.05	0.878	0.01 <= p < 0.05	0.121	Nonparametric	Nonparametric
41_1_5_117	MW-31	Appendix IV	Mercury	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	0.907	0.193	0.264	0.020	0.904	0.177	0.268	0.018	0.243	0.05 <= p < 0.10	0.587	>= 0.10	0.351	Gamma; Lognormal; Normal	Normal
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.810	0.026	0.274	0.050	0.874	0.135	0.215	0.269	0.234	>= 0.10	0.665	0.05 <= p < 0.10	0.311	Gamma; Lognormal	Gamma
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	0.526	0.000	0.463	0.000	0.644	0.001	0.397	0.001	0.439	< 0.01	1.461	< 0.01	0.659	Nonparametric	Nonparametric
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric	Nonparametric
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.277		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	0.876	0.078	0.222	0.105	0.862	0.052	0.217	0.122	0.232	>= 0.10	0.668	0.05 <= p < 0.10	1.126	Gamma; Lognormal; Normal	Gamma
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.064		Nonparametric
41_1_6_123	MW-31	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
41_1_6_130	MW-31	Part 115	Zinc	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.082		Nonparametric
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.913	0.234	0.180	0.350	0.806	0.011	0.201	0.199	0.177	>= 0.10	0.652	0.05 <= p < 0.10	0.385	Gamma; Lognormal; Normal	Normal
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	0.874	0.073	0.269	0.016	0.910	0.215	0.258	0.027	0.270	0.01 <= p < 0.05	0.628	0.05 <= p < 0.10	0.184	Gamma; Lognormal; Normal	Normal
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	0.918	0.270	0.228	0.086	0.903	0.171	0.253	0.033	0.248	0.01 <= p < 0.05	0.665	0.05 <= p < 0.10	0.161	Gamma; Lognormal; Normal	Normal
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.924	0.321	0.147	0.668	0.926	0.344	0.141	0.735	0.154	>= 0.10	0.364	>= 0.10	0.097	Gamma; Lognormal; Normal	Normal
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	0.851	0.038	0.254	0.032	0.867	0.060	0.244	0.047	0.251	0.01 <= p < 0.05	0.707	0.05 <= p < 0.10	0.072	Gamma; Lognormal	Gamma
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	0.948	0.602	0.164	0.501	0.948	0.607	0.164	0.498	0.174	>= 0.10	0.321	>= 0.10	0.010	Gamma; Lognormal; Normal	Normal
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.944	0.547	0.133	0.806	0.885	0.100	0.192	0.254	0.161	>= 0.10	0.428	>= 0.10	1.003	Gamma; Lognormal; Normal	Gamma
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.891	0.121	0.199	0.211	0.881	0.090	0.197	0.220	0.208	>= 0.10	0.569	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.090		Nonparametric
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	0.437	0.000	0.467	0.000	0.584	0.000	0.389	0.000	0.428	< 0.01	2.397	< 0.01	0.454	Nonparametric	Nonparametric
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	0.961	0.797	0.175	0.390	0.755	0.003	0.224	0.098	0.199	>= 0.10	0.707	0.05 <= p < 0.10	0.686	Gamma; Lognormal; Normal	Normal
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.456	0.000	0.411	0.000	0.683	0.001	0.238	0.060	0.314	< 0.01	1.965	< 0.01	0.624	Lognormal	Lognormal
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	0.573	0.000	0.314	0.002	0.828	0.020	0.228	0.085	0.270	0.01 <= p < 0.05	1.279	< 0.01	0.544	Lognormal	Lognormal
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.851	0.038	0.254	0.032	0.867	0.060	0.244	0.047	0.251	0.01 <= p < 0.05	0.707	0.05 <= p < 0.10	0.072	Gamma; Lognormal	Gamma
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.626		Nonparametric
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	0.901	0.165	0.150	0.641	0.934	0.427	0.166	0.483	0.172	>= 0.10	0.368	>= 0.10	0.211	Gamma; Lognormal; Normal	Normal
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	0.830	0.021	0.220	0.113	0.910	0.211	0.170	0.437	0.181	>= 0.10	0.495	>= 0.10	0.224	Gamma; Lognormal; Normal	Normal
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.202		Nonparametric
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.443		Nonparametric
42_1_5_125	MW-32	Appendix IV	Thallium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.020		Nonparametric
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	0.880	0.087	0.210	0.154	0.844	0.031	0.231	0.077	0.230	0.05 <= p < 0.10	0.809	0.01 <= p < 0.05	0.211	Gamma; Lognormal; Normal	Normal
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	0.360	0.000	0.498	0.000	0.547	0.000	0.349	0.000	0.449	< 0.01	3.076	< 0.01	0.920	Nonparametric	Nonparametric
42_1_6_123	MW-32	Part 115	Silver	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_6_129	MW-32	Part 115	Vanadium	mg/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		Nonparametric
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	0.525	0.000	0.431	0.000	0.662	0.000	0.311	0.002	0.366	< 0.01	2.322	< 0.01	0.945	Nonparametric	Nonparametric
46_1_3_127	MW-36	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.592		Nonparametric
46_1_4_105	MW-36	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.270		Nonparametric
46_1_4_107	MW-36	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.066		Nonparametric
46_1_4_108	MW-36	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.097		Nonparametric
46_1_4_112	MW-36	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.045		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
46_1_4_120	MW-36	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.037	Nonparametric				
46_1_4_124	MW-36	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.922	Nonparametric				
46_1_4_126	MW-36	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.235	Nonparametric				
46_1_5_101	MW-36	Appendix IV	Antimony	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.481	Nonparametric				
46_1_5_102	MW-36	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric				
46_1_5_103	MW-36	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.089	Nonparametric				
46_1_5_104	MW-36	Appendix IV	Beryllium	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
46_1_5_106	MW-36	Appendix IV	Cadmium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.665	Nonparametric				
46_1_5_109	MW-36	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.615	Nonparametric				
46_1_5_110	MW-36	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric				
46_1_5_113	MW-36	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.045	Nonparametric				
46_1_5_115	MW-36	Appendix IV	Lead	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.504	Nonparametric				
46_1_5_116	MW-36	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.315	Nonparametric				
46_1_5_117	MW-36	Appendix IV	Mercury	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
46_1_5_118	MW-36	Appendix IV	Molybdenum	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.561	Nonparametric				
46_1_5_121	MW-36	Appendix IV	Radium 226 and 228	pCi/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
46_1_5_122	MW-36	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.129	Nonparametric				
46_1_5_125	MW-36	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
46_1_6_111	MW-36	Part 115	Copper	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.639	Nonparametric				
46_1_6_114	MW-36	Part 115	Iron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.094	Nonparametric				
46_1_6_119	MW-36	Part 115	Nickel	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.191	Nonparametric				
46_1_6_123	MW-36	Part 115	Silver	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.706	Nonparametric				
46_1_6_129	MW-36	Part 115	Vanadium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.547	Nonparametric				
46_1_6_130	MW-36	Part 115	Zinc	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.581	Nonparametric				
47_1_3_127	MW-37	Additional Parameters	Total Suspended Solids	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_4_105	MW-37	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.203	Nonparametric				
47_1_4_107	MW-37	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric				
47_1_4_108	MW-37	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.195	Nonparametric				
47_1_4_112	MW-37	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.339	Nonparametric				
47_1_4_120	MW-37	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.031	Nonparametric				
47_1_4_124	MW-37	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.151	Nonparametric				
47_1_4_126	MW-37	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.043	Nonparametric				
47_1_5_101	MW-37	Appendix IV	Antimony	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.332	Nonparametric				
47_1_5_102	MW-37	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.126	Nonparametric				
47_1_5_103	MW-37	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.099	Nonparametric				
47_1_5_104	MW-37	Appendix IV	Beryllium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_5_106	MW-37	Appendix IV	Cadmium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.057	Nonparametric				
47_1_5_109	MW-37	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.230	Nonparametric				
47_1_5_110	MW-37	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.246	Nonparametric				

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



**Table 3: Goodness-of-Fit Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma				Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution				
								S-W		Lilliefors		S-W		Lilliefors					K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value
47_1_5_113	MW-37	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.339	Nonparametric				
47_1_5_115	MW-37	Appendix IV	Lead	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.190	Nonparametric				
47_1_5_116	MW-37	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.067	Nonparametric				
47_1_5_117	MW-37	Appendix IV	Mercury	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_5_118	MW-37	Appendix IV	Molybdenum	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.490	Nonparametric				
47_1_5_121	MW-37	Appendix IV	Radium 226 and 228	pCi/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_5_122	MW-37	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.302	Nonparametric				
47_1_5_125	MW-37	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_6_111	MW-37	Part 115	Copper	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.052	Nonparametric				
47_1_6_114	MW-37	Part 115	Iron	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_6_119	MW-37	Part 115	Nickel	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.087	Nonparametric				
47_1_6_123	MW-37	Part 115	Silver	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_6_129	MW-37	Part 115	Vanadium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
47_1_6_130	MW-37	Part 115	Zinc	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	Nonparametric				
48_2_3_127	MW-38	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.781	Nonparametric				
48_2_4_105	MW-38	Appendix III	Boron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.287	Nonparametric				
48_2_4_107	MW-38	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.316	Nonparametric				
48_2_4_108	MW-38	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.079	Nonparametric				
48_2_4_112	MW-38	Appendix III	Fluoride	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.167	Nonparametric				
48_2_4_120	MW-38	Appendix III	pH (field)	su	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.057	Nonparametric				
48_2_4_124	MW-38	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.353	Nonparametric				
48_2_4_126	MW-38	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.008	Nonparametric				
48_2_5_101	MW-38	Appendix IV	Antimony	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.648	Nonparametric				
48_2_5_102	MW-38	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.248	Nonparametric				
48_2_5_103	MW-38	Appendix IV	Barium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.203	Nonparametric				
48_2_5_104	MW-38	Appendix IV	Beryllium	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
48_2_5_106	MW-38	Appendix IV	Cadmium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.954	Nonparametric				
48_2_5_109	MW-38	Appendix IV	Chromium, Total	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.980	Nonparametric				
48_2_5_110	MW-38	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.207	Nonparametric				
48_2_5_113	MW-38	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.167	Nonparametric				
48_2_5_115	MW-38	Appendix IV	Lead	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.235	Nonparametric				
48_2_5_116	MW-38	Appendix IV	Lithium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.143	Nonparametric				
48_2_5_117	MW-38	Appendix IV	Mercury	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
48_2_5_118	MW-38	Appendix IV	Molybdenum	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.259	Nonparametric				
48_2_5_121	MW-38	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
48_2_5_122	MW-38	Appendix IV	Selenium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.186	Nonparametric				
48_2_5_125	MW-38	Appendix IV	Thallium	mg/L	2	2	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric				
48_2_6_111	MW-38	Part 115	Copper	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.318	Nonparametric				
48_2_6_114	MW-38	Part 115	Iron	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.666	Nonparametric				

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

**Table 3:** Goodness-of-Fit Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Normal		Lognormal		Gamma		Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution						
								S-W		Lilliefors		S-W					Lilliefors		K-S		A-D	
								Stat.	p-Value	Stat.	p-Value	Stat.	p-Value				Stat.	p-Value	Stat.	p-Value	Stat.	p-Value
48_2_6_119	MW-38	Part 115	Nickel	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	0.420	Nonparametric					
48_2_6_123	MW-38	Part 115	Silver	mg/L	2	1	50%	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nonparametric					
48_2_6_129	MW-38	Part 115	Vanadium	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	0.294	Nonparametric					
48_2_6_130	MW-38	Part 115	Zinc	mg/L	2	0	0%	NA	NA	NA	NA	NA	NA	NA	NA	0.784	Nonparametric					

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.



**Table 4: Autocorrelation Tests, Non-Detects Excluded**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	-0.357	0.247	
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	12	0	0%	0.149	0.561	
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	12	0	0%	0.073	0.775	
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.065	0.799	
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	12	0	0%	0.185	0.470	
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	-0.126	0.622	
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.097	0.705	
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.060	0.816	
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	0.316	0.267	
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	-0.078	0.762	
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	0.402	0.117	
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	0.336	0.204	
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	-0.267	0.464	
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.144	0.574	
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	-0.347	0.174	
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.185	0.470	
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	-0.115	0.674	
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	0.189	0.461	
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	-0.043	0.870	
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	-0.708	0.036	*
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	-0.156	0.541	
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	-0.406	0.188	
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	0.047	0.856	
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	-0.166	0.516	
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	0.241	0.378	
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	0.031	0.914	
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.384	0.133	
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	0.240	0.349	
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	-0.177	0.488	
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.047	0.855	
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	-0.125	0.627	
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	-0.052	0.838	
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	-0.411	0.245	
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.193	0.451	
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	-0.073	0.798	
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	0.203	0.428	
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	-0.108	0.674	
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	0.176	0.506	
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	-0.172	0.637	
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.129	0.615	
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	0.011	0.965	
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.125	0.627	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	-0.177	0.502	
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	-0.119	0.643	
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	0.643	0.012	*
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.099	0.738	
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	-0.172	0.501	
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	-0.369	0.150	
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	0.077	0.764	
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	0.196	0.444	
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	12	1	8%	0.340	0.199	
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	-0.166	0.516	
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	-0.084	0.804	
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	-0.263	0.304	
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	-0.156	0.543	
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.352	0.169	
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	0.002	0.994	
13_2_4_120	MW-03	Appendix III	pH (field)	su	12	0	0%	-0.180	0.481	
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.308	0.228	
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.252	0.325	
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	-0.105	0.756	
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	0.154	0.548	
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	-0.506	0.048	*
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	-0.764	0.024	*
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.122	0.633	
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	-0.280	0.273	
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.002	0.994	
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	NA	NA	
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	0.216	0.398	
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	12	9	75%	-0.021	0.953	
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	-0.433	0.102	
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	0.230	0.418	
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	-0.479	0.121	
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	0.582	0.023	*
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	-0.068	0.798	
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	-0.430	0.239	
13_2_6_130	MW-03	Part 115	Zinc	mg/L	12	7	58%	0.374	0.268	
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	-0.512	0.061	
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	0.165	0.520	
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	-0.107	0.676	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.478	0.062	
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	0.224	0.382	
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	-0.093	0.716	
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.427	0.095	
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.049	0.848	
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	-0.655	0.073	
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	-0.122	0.635	
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	-0.086	0.737	
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.023	0.928	
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	0.184	0.471	
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.224	0.382	
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	-0.039	0.880	
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	-0.048	0.861	
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.188	0.508	
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	-0.279	0.367	
14_2_6_111	MW-04	Part 115	Copper	mg/L	12	10	83%	-0.500	0.157	
14_2_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	-0.124	0.628	
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.041	0.872	
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	-0.500	0.157	
14_2_6_130	MW-04	Part 115	Zinc	mg/L	12	9	75%	-0.387	0.290	
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.094	0.713	
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	0.263	0.303	
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	0.043	0.867	
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.580	0.023	*
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	0.239	0.351	
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	-0.045	0.859	
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	0.108	0.693	
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.202	0.430	
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	-0.500	0.157	
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	0.177	0.490	
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	0.128	0.618	
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.230	0.370	
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	0.353	0.168	
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.239	0.351	
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	-0.286	0.434	
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	0.485	0.058	
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	-0.650	0.066	
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.189	0.506	
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	-0.129	0.677	
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	-0.500	0.157	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	0.200	0.435	
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	0.289	0.349	
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	
16_1_6_130	MW-06	Part 115	Zinc	mg/L	12	2	17%	-0.166	0.543	
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.054	0.832	
17_1_4_105	MW-07	Appendix III	Boron	mg/L	12	0	0%	-0.443	0.083	
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	-0.392	0.126	
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.575	0.025	*
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	12	1	8%	-0.239	0.366	
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	0.148	0.564	
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.337	0.188	
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.047	0.855	
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	-0.014	0.956	
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	0.246	0.336	
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	-0.403	0.269	
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.007	0.980	
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	0.289	0.259	
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	1	8%	-0.239	0.366	
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	-0.303	0.237	
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	-0.368	0.180	
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	-0.663	0.069	
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	0.000	1.000	
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	-0.018	0.943	
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	
17_1_6_130	MW-07	Part 115	Zinc	mg/L	12	9	75%	-0.443	0.225	
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.421	0.100	
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	0.083	0.747	
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	0.424	0.097	
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.055	0.830	
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	0.310	0.226	
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	0.072	0.778	
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	-0.175	0.555	
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.354	0.167	
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	-0.087	0.787	
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	0.372	0.146	
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	0.409	0.110	
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.354	0.167	
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	0.487	0.057	
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.310	0.226	
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	-0.095	0.794	
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	0.235	0.359	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	0.187	0.466	
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.106	0.710	
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	-0.207	0.502	
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	-0.043	0.889	
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	0.458	0.074	
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	0.328	0.200	
18_1_6_130	MW-08	Part 115	Zinc	mg/L	12	3	25%	-0.198	0.487	
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.220	0.389	
19_2_4_105	MW-09	Appendix III	Boron	mg/L	12	0	0%	-0.067	0.793	
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	0.532	0.037	*
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.641	0.012	*
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	0.407	0.112	
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	0.044	0.864	
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.536	0.036	*
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.568	0.026	*
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	-0.610	0.071	
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	0.015	0.952	
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	0.115	0.653	
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	-0.500	0.157	
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.170	0.505	
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	-0.178	0.487	
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.407	0.112	
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	0.266	0.299	
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	12	10	83%	-0.500	0.157	
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	0.420	0.101	
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	NA	NA	
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	0.050	0.854	
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	-0.245	0.502	
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	0.386	0.131	
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	0.520	0.042	*
19_2_6_130	MW-09	Part 115	Zinc	mg/L	12	8	67%	-0.627	0.076	
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	0.055	0.845	
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	0.506	0.048	*
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	0.418	0.102	
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.421	0.100	
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	0.551	0.031	*
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	0.000	0.999	
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.365	0.154	
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.330	0.197	
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	-0.363	0.304	
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	0.335	0.190	
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	0.289	0.259	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	-0.398	0.218	
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.528	0.039	*
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	0.045	0.864	
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.551	0.031	*
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	-0.500	0.157	
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	-0.110	0.667	
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	0.126	0.623	
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	10	83%	-0.500	0.157	
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	-0.164	0.536	
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	-0.659	0.071	
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	0.546	0.033	*
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	-0.414	0.200	
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	-0.500	0.157	
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	-0.272	0.378	
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	0.317	0.231	
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	0.434	0.090	
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	0.330	0.197	
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.411	0.108	
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	0.336	0.189	
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	-0.109	0.669	
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	0.534	0.060	
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.251	0.327	
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	-0.539	0.127	
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	0.173	0.499	
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	0.275	0.282	
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	12	10	83%	-0.500	0.157	
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	-0.500	0.157	
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.086	0.736	
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	-0.327	0.202	
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.336	0.189	
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	-0.105	0.711	
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	0.317	0.215	
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	-0.094	0.731	
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	-0.451	0.128	
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	0.121	0.671	
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	-0.183	0.519	
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	0.381	0.136	
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	-0.089	0.729	
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	-0.500	0.157	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	12	10	83%	-0.500	0.157	
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	0.056	0.850	
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	-0.157	0.667	
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	0.146	0.569	
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	0.023	0.928	
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.008	0.974	
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	0.035	0.890	
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	0.091	0.722	
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.391	0.126	
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.007	0.977	
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	0.452	0.077	
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	0.314	0.219	
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	12	0	0%	0.178	0.487	
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	0.132	0.605	
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.375	0.224	
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	0.435	0.159	
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.035	0.890	
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	0.477	0.140	
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	0.264	0.302	
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	-0.500	0.157	
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	0.372	0.146	
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	-0.496	0.174	
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	0.487	0.057	
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	0.385	0.132	
22_2_6_114	MW-12	Part 115	Iron	mg/L	12	6	50%	-0.080	0.805	
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	0.096	0.708	
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	-0.286	0.375	
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	-0.119	0.641	
26_1_3_127	MW-16	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	-0.500	0.157	
26_1_4_105	MW-16	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
26_1_4_107	MW-16	Appendix III	Calcium	mg/L	2	0	0%	-0.500	0.157	
26_1_4_108	MW-16	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
26_1_4_112	MW-16	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	
26_1_4_120	MW-16	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
26_1_4_124	MW-16	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	NA	NA	
26_1_4_126	MW-16	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	-0.500	0.157	
26_1_5_102	MW-16	Appendix IV	Arsenic	mg/L	2	0	0%	-0.500	0.157	
26_1_5_103	MW-16	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
26_1_5_109	MW-16	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
26_1_5_110	MW-16	Appendix IV	Cobalt	mg/L	2	0	0%	-0.500	0.157	
26_1_5_113	MW-16	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
26_1_5_116	MW-16	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
26_1_5_121	MW-16	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	
26_1_5_122	MW-16	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
26_1_6_111	MW-16	Part 115	Copper	mg/L	2	1	50%	NA	NA	
26_1_6_114	MW-16	Part 115	Iron	mg/L	2	0	0%	-0.500	0.157	
26_1_6_119	MW-16	Part 115	Nickel	mg/L	2	1	50%	NA	NA	
26_1_6_129	MW-16	Part 115	Vanadium	mg/L	2	1	50%	NA	NA	
27_1_3_127	MW-17	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	NA	NA	
27_1_4_105	MW-17	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
27_1_4_107	MW-17	Appendix III	Calcium	mg/L	2	0	0%	-0.500	0.157	
27_1_4_108	MW-17	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
27_1_4_112	MW-17	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	
27_1_4_120	MW-17	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
27_1_4_124	MW-17	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	-0.500	0.157	
27_1_4_126	MW-17	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	NA	NA	
27_1_5_101	MW-17	Appendix IV	Antimony	mg/L	2	1	50%	NA	NA	
27_1_5_102	MW-17	Appendix IV	Arsenic	mg/L	2	0	0%	-0.500	0.157	
27_1_5_103	MW-17	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
27_1_5_109	MW-17	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
27_1_5_110	MW-17	Appendix IV	Cobalt	mg/L	2	0	0%	-0.500	0.157	
27_1_5_113	MW-17	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
27_1_5_115	MW-17	Appendix IV	Lead	mg/L	2	0	0%	-0.500	0.157	
27_1_5_116	MW-17	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	
27_1_5_118	MW-17	Appendix IV	Molybdenum	mg/L	2	0	0%	-0.500	0.157	
27_1_5_121	MW-17	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	
27_1_5_122	MW-17	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
27_1_6_111	MW-17	Part 115	Copper	mg/L	2	0	0%	-0.500	0.157	
27_1_6_114	MW-17	Part 115	Iron	mg/L	2	0	0%	-0.500	0.157	
27_1_6_119	MW-17	Part 115	Nickel	mg/L	2	0	0%	-0.500	0.157	
27_1_6_129	MW-17	Part 115	Vanadium	mg/L	2	0	0%	-0.500	0.157	
27_1_6_130	MW-17	Part 115	Zinc	mg/L	2	0	0%	-0.500	0.157	
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	-0.003	0.990	
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	0.700	0.006	**
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	0.435	0.089	
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.123	0.630	
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	0.294	0.250	
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	0.139	0.588	
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.139	0.586	
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.387	0.130	
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	-0.349	0.220	
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	0.239	0.351	
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	0.366	0.152	
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	-0.143	0.642	
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	NA	NA	
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	0.625	0.015	*
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.294	0.250	
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	-0.393	0.266	
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	0.296	0.248	
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	0.244	0.340	
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	-0.226	0.522	
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	0.181	0.480	
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	0.242	0.345	
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	0.516	0.044	*
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	0.603	0.018	*
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	0.310	0.226	
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.039	0.879	
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	-0.002	0.993	
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	0.308	0.229	
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.565	0.027	*
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	0.491	0.055	
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	-0.302	0.238	
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.072	0.779	
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.650	0.011	*
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	0.219	0.392	
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	0.411	0.108	
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	0.633	0.026	*
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.075	0.808	
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	0.641	0.015	*
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.491	0.055	
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	12	0	0%	0.322	0.208	
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	0.007	0.977	
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.103	0.729	
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	NA	NA	
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	-0.500	0.157	
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	0.369	0.149	
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	0.050	0.849	
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	-0.500	0.157	
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.238	0.353	
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	0.153	0.550	
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	0.169	0.509	
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.045	0.860	
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	0.095	0.710	
30_1_4_120	MW-20	Appendix III	pH (field)	su	12	0	0%	-0.037	0.884	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.501	0.050	
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.013	0.958	
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	0.174	0.556	
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	0.232	0.365	
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	0.335	0.191	
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	-0.237	0.443	
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	0.604	0.018	*
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.095	0.710	
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	0.374	0.144	
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	0.252	0.325	
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	0.170	0.507	
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	-0.229	0.499	
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	-0.117	0.718	
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	0.069	0.793	
30_1_6_114	MW-20	Part 115	Iron	mg/L	12	0	0%	-0.221	0.388	
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	0.714	0.005	**
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	-0.016	0.950	
38_1_3_127	MW-28	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	-0.500	0.157	
38_1_4_105	MW-28	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
38_1_4_107	MW-28	Appendix III	Calcium	mg/L	2	0	0%	-0.500	0.157	
38_1_4_108	MW-28	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
38_1_4_112	MW-28	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	
38_1_4_120	MW-28	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
38_1_4_124	MW-28	Appendix III	Sulfate (as SO4)	mg/L	2	1	50%	NA	NA	
38_1_4_126	MW-28	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	-0.500	0.157	
38_1_5_101	MW-28	Appendix IV	Antimony	mg/L	2	0	0%	-0.500	0.157	
38_1_5_102	MW-28	Appendix IV	Arsenic	mg/L	2	0	0%	-0.500	0.157	
38_1_5_103	MW-28	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
38_1_5_109	MW-28	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
38_1_5_110	MW-28	Appendix IV	Cobalt	mg/L	2	0	0%	-0.500	0.157	
38_1_5_113	MW-28	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
38_1_5_115	MW-28	Appendix IV	Lead	mg/L	2	0	0%	-0.500	0.157	
38_1_5_116	MW-28	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	
38_1_5_117	MW-28	Appendix IV	Mercury	mg/L	2	1	50%	NA	NA	
38_1_5_118	MW-28	Appendix IV	Molybdenum	mg/L	2	0	0%	-0.500	0.157	
38_1_5_121	MW-28	Appendix IV	Radium 226 and 228	pCi/L	2	0	0%	-0.500	0.157	
38_1_5_122	MW-28	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
38_1_6_111	MW-28	Part 115	Copper	mg/L	2	0	0%	-0.500	0.157	
38_1_6_114	MW-28	Part 115	Iron	mg/L	2	0	0%	-0.500	0.157	
38_1_6_119	MW-28	Part 115	Nickel	mg/L	2	0	0%	-0.500	0.157	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
38_1_6_129	MW-28	Part 115	Vanadium	mg/L	2	0	0%	-0.500	0.157	
38_1_6_130	MW-28	Part 115	Zinc	mg/L	2	0	0%	-0.500	0.157	
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	-0.108	0.703	
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	-0.105	0.682	
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	-0.036	0.887	
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.455	0.075	
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	-0.439	0.086	
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	-0.016	0.951	
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.017	0.948	
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.102	0.690	
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	NA	NA	
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	0.042	0.879	
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	0.374	0.143	
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	-0.500	0.157	
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.275	0.283	
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	-0.224	0.380	
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.439	0.086	
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	-0.149	0.560	
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	0.190	0.504	
40_1_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	12	6	50%	-0.490	0.129	
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	-0.315	0.329	
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	-0.189	0.593	
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	-0.082	0.750	
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	0.135	0.621	
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	-0.500	0.157	
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	-0.595	0.103	
41_1_4_105	MW-31	Appendix III	Boron	mg/L	12	0	0%	0.269	0.294	
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	0.316	0.217	
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.072	0.779	
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	0.036	0.889	
41_1_4_120	MW-31	Appendix III	pH (field)	su	12	0	0%	-0.175	0.495	
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.599	0.019	*
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.116	0.650	
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	0.031	0.924	
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	0.329	0.199	
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	-0.152	0.553	
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.268	0.295	
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	-0.592	0.025	*
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.036	0.889	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	-0.500	0.157	
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	0.329	0.199	
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	0.188	0.462	
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.423	0.137	
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	-0.189	0.540	
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	NA	NA	
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	-0.383	0.279	
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	0.545	0.033	*
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	-0.500	0.157	
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	12	11	92%	NA	NA	
41_1_6_130	MW-31	Part 115	Zinc	mg/L	12	9	75%	-0.292	0.424	
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.529	0.039	*
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	0.128	0.616	
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	0.378	0.140	
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.613	0.017	*
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	-0.057	0.824	
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	0.127	0.619	
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.314	0.219	
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.249	0.331	
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	0.004	0.991	
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	-0.105	0.682	
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	-0.265	0.301	
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	NA	NA	
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	NA	NA	
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.150	0.558	
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	-0.232	0.364	
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.057	0.824	
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	-0.128	0.725	
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	0.171	0.504	
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	12	11	92%	NA	NA	
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.007	0.978	
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	-0.092	0.794	
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	-0.500	0.157	
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	-0.410	0.246	
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	0.472	0.065	
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	-0.118	0.644	
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	-0.128	0.617	
46_1_3_127	MW-36	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	-0.500	0.157	
46_1_4_105	MW-36	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
46_1_4_107	MW-36	Appendix III	Calcium	mg/L	2	0	0%	-0.500	0.157	
46_1_4_108	MW-36	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
46_1_4_112	MW-36	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4: Autocorrelation Tests, Non-Detects Excluded (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
46_1_4_120	MW-36	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
46_1_4_124	MW-36	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	-0.500	0.157	
46_1_4_126	MW-36	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	-0.500	0.157	
46_1_5_101	MW-36	Appendix IV	Antimony	mg/L	2	0	0%	-0.500	0.157	
46_1_5_102	MW-36	Appendix IV	Arsenic	mg/L	2	0	0%	NA	NA	
46_1_5_103	MW-36	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
46_1_5_104	MW-36	Appendix IV	Beryllium	mg/L	2	1	50%	NA	NA	
46_1_5_106	MW-36	Appendix IV	Cadmium	mg/L	2	0	0%	-0.500	0.157	
46_1_5_109	MW-36	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
46_1_5_110	MW-36	Appendix IV	Cobalt	mg/L	2	0	0%	NA	NA	
46_1_5_113	MW-36	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
46_1_5_115	MW-36	Appendix IV	Lead	mg/L	2	0	0%	-0.500	0.157	
46_1_5_116	MW-36	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	
46_1_5_118	MW-36	Appendix IV	Molybdenum	mg/L	2	0	0%	-0.500	0.157	
46_1_5_122	MW-36	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
46_1_6_111	MW-36	Part 115	Copper	mg/L	2	0	0%	-0.500	0.157	
46_1_6_114	MW-36	Part 115	Iron	mg/L	2	0	0%	-0.500	0.157	
46_1_6_119	MW-36	Part 115	Nickel	mg/L	2	0	0%	-0.500	0.157	
46_1_6_123	MW-36	Part 115	Silver	mg/L	2	0	0%	-0.500	0.157	
46_1_6_129	MW-36	Part 115	Vanadium	mg/L	2	0	0%	-0.500	0.157	
46_1_6_130	MW-36	Part 115	Zinc	mg/L	2	0	0%	-0.500	0.157	
47_1_3_127	MW-37	Additional Parameters	Total Suspended Solids	mg/L	2	1	50%	NA	NA	
47_1_4_105	MW-37	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
47_1_4_107	MW-37	Appendix III	Calcium	mg/L	2	0	0%	NA	NA	
47_1_4_108	MW-37	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
47_1_4_112	MW-37	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	
47_1_4_120	MW-37	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
47_1_4_124	MW-37	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	-0.500	0.157	
47_1_4_126	MW-37	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	-0.500	0.157	
47_1_5_101	MW-37	Appendix IV	Antimony	mg/L	2	0	0%	-0.500	0.157	
47_1_5_102	MW-37	Appendix IV	Arsenic	mg/L	2	0	0%	-0.500	0.157	
47_1_5_103	MW-37	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
47_1_5_106	MW-37	Appendix IV	Cadmium	mg/L	2	0	0%	-0.500	0.157	
47_1_5_109	MW-37	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
47_1_5_110	MW-37	Appendix IV	Cobalt	mg/L	2	0	0%	-0.500	0.157	
47_1_5_113	MW-37	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
47_1_5_115	MW-37	Appendix IV	Lead	mg/L	2	0	0%	-0.500	0.157	
47_1_5_116	MW-37	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	
47_1_5_118	MW-37	Appendix IV	Molybdenum	mg/L	2	0	0%	-0.500	0.157	
47_1_5_122	MW-37	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
47_1_6_111	MW-37	Part 115	Copper	mg/L	2	0	0%	-0.500	0.157	
47_1_6_114	MW-37	Part 115	Iron	mg/L	2	1	50%	NA	NA	

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 4:** Autocorrelation Tests, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
47_1_6_119	MW-37	Part 115	Nickel	mg/L	2	0	0%	-0.500	0.157	
47_1_6_130	MW-37	Part 115	Zinc	mg/L	2	0	0%	NA	NA	
48_2_3_127	MW-38	Additional Parameters	Total Suspended Solids	mg/L	2	0	0%	-0.500	0.157	
48_2_4_105	MW-38	Appendix III	Boron	mg/L	2	0	0%	-0.500	0.157	
48_2_4_107	MW-38	Appendix III	Calcium	mg/L	2	0	0%	-0.500	0.157	
48_2_4_108	MW-38	Appendix III	Chloride (as Cl)	mg/L	2	0	0%	-0.500	0.157	
48_2_4_112	MW-38	Appendix III	Fluoride	mg/L	2	0	0%	-0.500	0.157	
48_2_4_120	MW-38	Appendix III	pH (field)	su	2	0	0%	-0.500	0.157	
48_2_4_124	MW-38	Appendix III	Sulfate (as SO4)	mg/L	2	0	0%	-0.500	0.157	
48_2_4_126	MW-38	Appendix III	Total Dissolved Solids	mg/L	2	0	0%	-0.500	0.157	
48_2_5_101	MW-38	Appendix IV	Antimony	mg/L	2	0	0%	-0.500	0.157	
48_2_5_102	MW-38	Appendix IV	Arsenic	mg/L	2	0	0%	-0.500	0.157	
48_2_5_103	MW-38	Appendix IV	Barium	mg/L	2	0	0%	-0.500	0.157	
48_2_5_104	MW-38	Appendix IV	Beryllium	mg/L	2	1	50%	NA	NA	
48_2_5_106	MW-38	Appendix IV	Cadmium	mg/L	2	0	0%	-0.500	0.157	
48_2_5_109	MW-38	Appendix IV	Chromium, Total	mg/L	2	0	0%	-0.500	0.157	
48_2_5_110	MW-38	Appendix IV	Cobalt	mg/L	2	0	0%	-0.500	0.157	
48_2_5_113	MW-38	Appendix IV	Fluoride (App IV)	mg/L	2	0	0%	-0.500	0.157	
48_2_5_115	MW-38	Appendix IV	Lead	mg/L	2	0	0%	-0.500	0.157	
48_2_5_116	MW-38	Appendix IV	Lithium	mg/L	2	0	0%	-0.500	0.157	
48_2_5_118	MW-38	Appendix IV	Molybdenum	mg/L	2	0	0%	-0.500	0.157	
48_2_5_121	MW-38	Appendix IV	Radium 226 and 228	pCi/L	2	1	50%	NA	NA	
48_2_5_122	MW-38	Appendix IV	Selenium	mg/L	2	0	0%	-0.500	0.157	
48_2_6_111	MW-38	Part 115	Copper	mg/L	2	0	0%	-0.500	0.157	
48_2_6_114	MW-38	Part 115	Iron	mg/L	2	0	0%	-0.500	0.157	
48_2_6_119	MW-38	Part 115	Nickel	mg/L	2	0	0%	-0.500	0.157	
48_2_6_123	MW-38	Part 115	Silver	mg/L	2	1	50%	NA	NA	
48_2_6_129	MW-38	Part 115	Vanadium	mg/L	2	0	0%	-0.500	0.157	
48_2_6_130	MW-38	Part 115	Zinc	mg/L	2	0	0%	-0.500	0.157	

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05

**Table 5: Outlier Counts by Date**

Date	Count
2022-11-30	5
2023-01-03	11
2023-01-04	7
2023-01-05	1
2023-02-06	1
2023-02-08	4
2023-03-13	3
2023-03-14	1
2023-04-18	5
2023-05-23	3
2023-06-28	2
2023-08-07	1
2023-08-08	1
2023-10-24	4
2024-02-12	8
2024-02-13	10
2024-04-07	2
2024-04-10	1
2024-07-17	2
2024-07-18	1

**Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	7	2023-02-08	1	5.00
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	12	2023-01-03	NA	6.02
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	12	2024-02-13	1	0.00410
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	12	2024-02-13	1	0.0220
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	10	2023-06-28	5	0.00530
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	11	2024-02-13	1	0.00560
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	12	2024-02-13	1	0.00180
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	12	2024-02-13	1	0.0220
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	12	2023-02-08	50	67.0
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	12	2023-02-08	50	4.50
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	9	2023-04-18	5	0.000630
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	12	2024-02-13	1	0.000440
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	3	2023-10-24	1	0.000490
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	12	2023-02-08	50	4.50
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	12	2023-04-18	1	0.0250
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	5	2023-01-04	1	15.0
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	12	2023-01-04	5	1.60

(Table continues on next page)



**Table 6:** Outliers Identified at the 1% Significance Level, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	5	2023-04-18	5	0.000450
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	12	2023-01-04	5	1.60
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	11	2023-01-04	1	0.0150
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	12	2023-10-24	5	1.90
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	12	2023-01-04	5	1.80
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	12	2023-01-04	1	0.460
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	12	2023-10-24	5	1.90
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	12	2023-02-06	NA	6.42
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	9	2023-03-14	NA	1.91
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	7	2024-02-13	1	0.000470
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	12	2023-04-18	10	0.250
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	12	2024-07-17	1	0.000740
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	10	2023-08-07	1	2.36
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	12	2023-01-05	NA	6.21
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	7	2024-02-13	1	0.000340
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	12	2024-04-07	1	0.00320
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	12	2023-05-23	NA	7.52
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	12	2023-01-04	5	2.40
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	10	2023-05-23	1	0.000120
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	4	2023-04-18	5	0.000340
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	11	2023-05-23	1	0.00180
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	11	2024-02-13	1	0.000830
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	12	2023-10-24	4	1800
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	12	2023-01-03	1	0.00410
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	12	2023-01-03	1	0.00860
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	12	2024-04-07	1	0.00240
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	9	2023-01-03	1	0.0680
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	9	2023-01-03	1	0.0190
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	12	2023-01-03	1	0.00940
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	8	2023-01-03	1	0.100
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	11	2024-04-10	1	100
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	12	2023-08-08	1	0.00150
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	12	2023-01-03	NA	6.39
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	11	2024-07-18	1	0.0170
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	12	2023-06-28	1	58.0
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	12	2022-11-30	25	0.550
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	12	2022-11-30	1	0.940
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	12	2022-11-30	25	0.550
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	6	2024-02-13	1	0.000260
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	12	2022-11-30	1	0.0710
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	12	2023-03-13	50	3.50
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	12	2023-03-13	50	960
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	12	2023-01-03	NA	6.48

(Table continues on next page)



**Table 6:** Outliers Identified at the 1% Significance Level, Non-Detects Excluded (*continued*)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	12	2023-01-03	1	0.00440
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	12	2023-03-13	50	0.270
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	9	2023-01-03	1	0.00360
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	6	2024-02-12	1	0.000390
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	6	2024-07-17	1	0.000380
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	7	2024-02-12	1	0.000740
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	12	2024-02-12	1	0.00240
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	12	2024-02-12	1	0.00300
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	12	2024-02-12	1	0.00190
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	12	2024-02-12	1	0.00730
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	4	2024-02-12	1	0.0160
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	12	2024-02-12	1	0.0230
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	12	2022-11-30	1	0.0310





**Table 7: Seasonality Tests**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full						Without Non-Detects									
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	36%	3	3	3	2	11	0.684	0.739	0.748	2	2	2	1	7	0.552	0.716	0.720
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.090	0.024 *	0.058	3	4	3	2	12	0.090	0.024 *	0.058
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.110	0.092	0.070	3	4	3	2	12	0.110	0.092	0.070
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.073	0.080	0.104	3	4	3	2	12	0.073	0.080	0.104
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.056	0.030 *	0.079	3	4	3	2	12	0.056	0.030 *	0.079
11_2_4_120	MW-01R	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.447	0.331	0.340	3	4	3	2	12	0.447	0.331	0.340
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.107	0.070	0.136	3	4	3	2	12	0.107	0.070	0.136
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.078	0.077	0.084	3	4	3	2	12	0.078	0.077	0.084
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	25%	3	4	3	2	12	0.856	0.722	0.829	1	3	3	2	9	0.945	0.814	0.897
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.114	0.326	0.176	3	4	3	2	12	0.114	0.326	0.176
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.086	0.218	0.141	3	4	3	2	12	0.086	0.218	0.141
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	8%	3	4	3	2	12	0.252	0.313	0.345	3	3	3	2	11	0.435	0.563	0.665
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	75%	3	4	3	2	12	0.966	0.881	0.921	1	0	1	1	3	0.368	NA	NA
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.081	0.443	0.236	3	4	3	2	12	0.081	0.443	0.236
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.495	0.625	0.612	3	4	3	2	12	0.495	0.625	0.612
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.056	0.030 *	0.079	3	4	3	2	12	0.056	0.030 *	0.079
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	17%	3	4	3	2	12	0.413	0.494	0.420	2	3	3	2	10	0.261	0.589	0.398
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.092	0.057	0.112	3	4	3	2	12	0.092	0.057	0.112
11_2_5_117	MW-01R	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	8%	3	4	3	2	12	0.790	0.589	0.644	3	3	3	2	11	0.935	0.627	0.733
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	58%	3	4	3	2	12	0.394	0.530	0.553	2	1	2	0	5	0.368	0.715	0.748
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	0%	3	4	3	2	12	0.434	0.610	0.589	3	4	3	2	12	0.434	0.610	0.589
11_2_5_125	MW-01R	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.194	0.193	0.193	NA	NA	NA	NA	NA	NA	NA	NA
11_2_6_111	MW-01R	Part 115	Copper	mg/L	42%	3	4	3	2	12	0.172	0.422	0.328	1	1	3	2	7	0.297	0.574	0.447
11_2_6_114	MW-01R	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.082	0.085	0.056	3	4	3	2	12	0.082	0.085	0.056
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.276	0.459	0.394	3	4	3	2	12	0.276	0.459	0.394
11_2_6_123	MW-01R	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.248	0.264	0.264	NA	NA	NA	NA	NA	NA	NA	NA
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	17%	3	4	3	2	12	0.085	0.001 ***	0.017 *	2	3	3	2	10	0.122	0.003 **	0.030 *
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	25%	3	4	3	2	12	0.499	0.634	0.703	3	2	2	2	9	0.328	0.619	0.610
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.268	0.208	0.210	3	4	3	2	12	0.268	0.208	0.210
12_2_4_105	MW-02	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.516	0.592	0.611	3	4	3	2	12	0.516	0.592	0.611
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.695	0.719	0.732	3	4	3	2	12	0.695	0.719	0.732
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.552	0.399	0.402	3	4	3	2	12	0.552	0.399	0.402
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.401	0.522	0.504	3	4	3	2	12	0.401	0.522	0.504
12_2_4_120	MW-02	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.232	0.366	0.367	3	4	3	2	12	0.232	0.366	0.367
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	67%	3	4	3	2	12	0.882	0.830	0.921	1	1	1	1	4	0.392	NA	NA
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.060	0.028 *	0.027 *	3	4	3	2	12	0.060	0.028 *	0.027 *
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	25%	3	4	3	2	12	0.327	0.215	0.211	1	3	3	2	9	0.506	0.603	0.564
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.729	0.481	0.438	3	4	3	2	12	0.729	0.481	0.438

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.076	0.081	0.096	3	4	3	2	12	0.076	0.081	0.096
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	8%	3	4	3	2	12	0.417	0.396	0.560	2	4	3	2	11	0.192	0.155	0.135
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	75%	3	4	3	2	12	0.974	0.555	0.892	1	1	0	1	3	0.368	NA	NA
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.205	0.341	0.592	3	4	3	2	12	0.205	0.341	0.592
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.326	0.469	0.562	3	4	3	2	12	0.326	0.469	0.562
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.401	0.522	0.504	3	4	3	2	12	0.401	0.522	0.504
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	8%	3	4	3	2	12	0.375	0.343	0.439	2	4	3	2	11	0.303	0.392	0.271
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.375	0.492	0.506	3	4	3	2	12	0.375	0.492	0.506
12_2_5_117	MW-02	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.332	0.490	0.501	3	4	3	2	12	0.332	0.490	0.501
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	33%	3	4	3	2	12	0.545	0.512	0.720	2	3	2	1	8	0.543	0.736	0.739
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	0%	3	4	3	2	12	0.332	0.386	0.447	3	4	3	2	12	0.332	0.386	0.447
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	92%	3	4	3	2	12	0.863	0.811	0.931	0	0	0	1	1	NA	NA	NA
12_2_6_111	MW-02	Part 115	Copper	mg/L	0%	3	4	3	2	12	0.817	0.844	0.682	3	4	3	2	12	0.817	0.844	0.682
12_2_6_114	MW-02	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.097	0.101	0.086	3	4	3	2	12	0.097	0.101	0.086
12_2_6_119	MW-02	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.799	0.939	0.759	3	4	3	2	12	0.799	0.939	0.759
12_2_6_123	MW-02	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.415	0.468	0.468	NA	NA	NA	NA	NA	NA	NA	NA
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	8%	3	4	3	2	12	0.201	0.194	0.359	2	4	3	2	11	0.231	0.250	0.335
12_2_6_130	MW-02	Part 115	Zinc	mg/L	0%	3	4	3	2	12	0.488	0.511	0.490	3	4	3	2	12	0.488	0.511	0.490
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	44%	3	2	2	2	9	0.333	0.556	0.397	2	1	1	1	5	0.317	0.818	0.591
13_2_4_105	MW-03	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.447	0.723	0.725	3	4	3	2	12	0.447	0.723	0.725
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.846	0.758	0.720	3	4	3	2	12	0.846	0.758	0.720
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.273	0.167	0.203	3	4	3	2	12	0.273	0.167	0.203
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.121	0.376	0.331	3	4	3	2	12	0.121	0.376	0.331
13_2_4_120	MW-03	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.450	0.413	0.416	3	4	3	2	12	0.450	0.413	0.416
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.141	0.095	0.119	3	4	3	2	12	0.141	0.095	0.119
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.663	0.668	0.649	3	4	3	2	12	0.663	0.668	0.649
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	58%	3	4	3	2	12	0.312	0.659	0.534	1	3	0	1	5	0.202	0.713	0.580
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.444	0.681	0.622	3	4	3	2	12	0.444	0.681	0.622
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.553	0.868	0.826	3	4	3	2	12	0.553	0.868	0.826
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	58%	3	4	3	2	12	0.716	0.717	0.731	1	2	1	1	5	0.849	0.840	0.823
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	92%	3	4	3	2	12	0.784	0.630	0.800	0	0	0	1	1	NA	NA	NA
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.569	0.707	0.632	3	4	3	2	12	0.569	0.707	0.632
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.233	0.341	0.298	3	4	3	2	12	0.233	0.341	0.298
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.121	0.376	0.331	3	4	3	2	12	0.121	0.376	0.331
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	92%	3	4	3	2	12	0.465	0.542	0.647	0	0	0	1	1	NA	NA	NA
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.892	0.745	0.789	3	4	3	2	12	0.892	0.745	0.789
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	92%	3	4	3	2	12	0.172	0.163	0.163	0	0	0	1	1	NA	NA	NA
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	75%	3	4	3	2	12	0.252	0.584	0.345	1	1	0	1	3	0.368	NA	NA

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	8%	3	4	3	2	12	0.646	0.562	0.602	2	4	3	2	11	0.496	0.474	0.491
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	25%	3	4	3	2	12	0.386	0.390	0.495	1	3	3	2	9	0.232	0.286	0.475
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	92%	3	4	3	2	12	0.248	0.283	0.399	0	0	0	1	1	NA	NA	NA
13_2_6_111	MW-03	Part 115	Copper	mg/L	42%	3	4	3	2	12	0.943	0.855	0.924	1	2	3	1	7	0.586	0.394	0.398
13_2_6_114	MW-03	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.065	0.170	0.040 *	3	4	3	2	12	0.065	0.170	0.040 *
13_2_6_119	MW-03	Part 115	Nickel	mg/L	8%	3	4	3	2	12	0.595	0.353	0.384	2	4	3	2	11	0.861	0.271	0.517
13_2_6_123	MW-03	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.248	0.264	0.264	NA	NA	NA	NA	NA	NA	NA	NA
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	75%	3	4	3	2	12	0.983	0.905	0.977	0	1	1	1	3	0.368	NA	NA
13_2_6_130	MW-03	Part 115	Zinc	mg/L	58%	3	4	3	2	12	0.308	0.523	0.554	0	2	1	2	5	0.497	0.840	0.863
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	9%	3	4	2	2	11	0.143	0.127	0.180	2	4	2	2	10	0.149	0.099	0.080
14_2_4_105	MW-04	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.506	0.438	0.453	3	4	3	2	12	0.506	0.438	0.453
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.410	0.294	0.297	3	4	3	2	12	0.410	0.294	0.297
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.535	0.656	0.742	3	4	3	2	12	0.535	0.656	0.742
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.909	0.449	0.477	3	4	3	2	12	0.909	0.449	0.477
14_2_4_120	MW-04	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.185	0.249	0.248	3	4	3	2	12	0.185	0.249	0.248
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.295	0.248	0.403	3	4	3	2	12	0.295	0.248	0.403
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.255	0.299	0.279	3	4	3	2	12	0.255	0.299	0.279
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	75%	3	4	3	2	12	0.718	0.767	0.809	0	1	1	1	3	0.368	NA	NA
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.677	0.784	0.753	3	4	3	2	12	0.677	0.784	0.753
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.694	0.427	0.436	3	4	3	2	12	0.694	0.427	0.436
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	92%	3	4	3	2	12	0.392	0.441	0.441	0	0	1	0	1	NA	NA	NA
14_2_5_106	MW-04	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.647	0.573	0.685	NA	NA	NA	NA	NA	NA	NA	NA
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.478	0.277	0.255	3	4	3	2	12	0.478	0.277	0.255
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.936	0.789	0.957	3	4	3	2	12	0.936	0.789	0.957
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.909	0.449	0.477	3	4	3	2	12	0.909	0.449	0.477
14_2_5_115	MW-04	Appendix IV	Lead	mg/L	100%	3	4	3	2	12	0.505	0.618	0.567	NA	NA	NA	NA	NA	NA	NA	NA
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.060	0.034 *	0.033 *	3	4	3	2	12	0.060	0.034 *	0.033 *
14_2_5_117	MW-04	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	17%	3	4	3	2	12	0.233	0.594	0.452	2	3	3	2	10	0.151	0.193	0.317
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	25%	3	4	3	2	12	0.913	0.977	0.965	2	3	2	2	9	0.912	0.895	0.847
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	42%	3	4	3	2	12	0.153	0.063	0.128	2	1	3	1	7	0.179	0.010 **	0.028 *
14_2_5_125	MW-04	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.485	0.546	0.546	NA	NA	NA	NA	NA	NA	NA	NA
14_2_6_111	MW-04	Part 115	Copper	mg/L	83%	3	4	3	2	12	0.477	0.626	0.608	0	1	0	1	2	0.317	NA	NA
14_2_6_114	MW-04	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.162	0.137	0.133	3	4	3	2	12	0.162	0.137	0.133
14_2_6_119	MW-04	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.135	0.157	0.274	3	4	3	2	12	0.135	0.157	0.274
14_2_6_123	MW-04	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.248	0.264	0.264	NA	NA	NA	NA	NA	NA	NA	NA
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	83%	3	4	3	2	12	0.625	0.666	0.677	0	1	1	0	2	0.317	NA	NA
14_2_6_130	MW-04	Part 115	Zinc	mg/L	75%	3	4	3	2	12	0.109	0.539	0.419	0	1	0	2	3	0.221	0.449	0.536
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.103	0.181	0.124	3	4	3	2	12	0.103	0.181	0.124

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
16_1_4_105	MW-06	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.108	0.058	0.095	3	4	3	2	12	0.108	0.058	0.095
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.170	0.197	0.189	3	4	3	2	12	0.170	0.197	0.189
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.333	0.362	0.656	3	4	3	2	12	0.333	0.362	0.656
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.536	0.529	0.515	3	4	3	2	12	0.536	0.529	0.515
16_1_4_120	MW-06	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.502	0.365	0.367	3	4	3	2	12	0.502	0.365	0.367
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	17%	3	4	3	2	12	0.771	0.859	0.589	3	4	2	1	10	0.842	0.888	0.713
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.910	0.931	0.927	3	4	3	2	12	0.910	0.931	0.927
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	83%	3	4	3	2	12	0.779	0.493	0.689	0	1	0	1	2	0.317	NA	NA
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.118	0.040 *	0.043 *	3	4	3	2	12	0.118	0.040 *	0.043 *
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.086	0.125	0.135	3	4	3	2	12	0.086	0.125	0.135
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	92%	3	4	3	2	12	0.172	0.163	0.163	1	0	0	0	1	NA	NA	NA
16_1_5_106	MW-06	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.647	0.573	0.685	NA	NA	NA	NA	NA	NA	NA	NA
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.748	0.911	0.858	3	4	3	2	12	0.748	0.911	0.858
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.894	0.807	0.889	3	4	3	2	12	0.894	0.807	0.889
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.536	0.529	0.515	3	4	3	2	12	0.536	0.529	0.515
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	75%	3	4	3	2	12	0.336	0.423	0.313	1	0	1	1	3	0.368	NA	NA
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.711	0.649	0.622	3	4	3	2	12	0.711	0.649	0.622
16_1_5_117	MW-06	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	67%	3	4	3	2	12	0.898	0.649	0.642	0	1	2	1	4	0.259	0.316	0.304
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	25%	3	4	3	2	12	0.849	0.704	0.766	2	3	2	2	9	0.536	0.663	0.668
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	42%	3	4	3	2	12	0.256	0.366	0.330	1	2	3	1	7	0.374	0.003 **	0.011 *
16_1_5_125	MW-06	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.368	0.265	0.266	NA	NA	NA	NA	NA	NA	NA	NA
16_1_6_111	MW-06	Part 115	Copper	mg/L	83%	3	4	3	2	12	0.530	0.551	0.565	1	0	1	0	2	0.317	NA	NA
16_1_6_114	MW-06	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.301	0.430	0.377	3	4	3	2	12	0.301	0.430	0.377
16_1_6_119	MW-06	Part 115	Nickel	mg/L	42%	3	4	3	2	12	0.363	0.400	0.427	2	1	2	2	7	0.375	0.477	0.518
16_1_6_123	MW-06	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.368	0.265	0.267	NA	NA	NA	NA	NA	NA	NA	NA
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	92%	3	4	3	2	12	0.348	0.389	0.389	0	0	1	0	1	NA	NA	NA
16_1_6_130	MW-06	Part 115	Zinc	mg/L	17%	3	4	3	2	12	0.503	0.614	0.545	2	3	3	2	10	0.505	0.635	0.624
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.074	0.038 *	0.041 *	3	4	3	2	12	0.074	0.038 *	0.041 *
17_1_4_105	MW-07	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.239	0.266	0.276	3	4	3	2	12	0.239	0.266	0.276
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.687	0.899	0.911	3	4	3	2	12	0.687	0.899	0.911
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.156	0.142	0.142	3	4	3	2	12	0.156	0.142	0.142
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	8%	3	4	3	2	12	0.321	0.509	0.492	3	3	3	2	11	0.291	0.553	0.474
17_1_4_120	MW-07	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.406	0.538	0.544	3	4	3	2	12	0.406	0.538	0.544
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.150	0.084	0.066	3	4	3	2	12	0.150	0.084	0.066
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.571	0.648	0.660	3	4	3	2	12	0.571	0.648	0.660
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	92%	3	4	3	2	12	0.391	0.438	0.434	0	1	0	0	1	NA	NA	NA
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.402	0.293	0.364	3	4	3	2	12	0.402	0.293	0.364
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.222	0.204	0.221	3	4	3	2	12	0.222	0.204	0.221

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	75%	3	4	3	2	12	0.608	0.656	0.662	1	0	1	1	3	0.368	NA	NA
17_1_5_106	MW-07	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.419	0.472	0.472	NA	NA	NA	NA	NA	NA	NA	NA
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.591	0.552	0.586	3	4	3	2	12	0.591	0.552	0.586
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.821	0.750	0.747	3	4	3	2	12	0.821	0.750	0.747
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	8%	3	4	3	2	12	0.321	0.509	0.492	3	3	3	2	11	0.291	0.553	0.474
17_1_5_115	MW-07	Appendix IV	Lead	mg/L	100%	3	4	3	2	12	0.419	0.472	0.472	NA	NA	NA	NA	NA	NA	NA	NA
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.699	0.746	0.689	3	4	3	2	12	0.699	0.746	0.689
17_1_5_117	MW-07	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
17_1_5_118	MW-07	Appendix IV	Molybdenum	mg/L	100%	3	4	3	2	12	0.419	0.472	0.472	NA	NA	NA	NA	NA	NA	NA	NA
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	17%	3	4	3	2	12	0.726	0.636	0.729	3	3	2	2	10	0.565	0.329	0.375
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	75%	3	4	3	2	12	0.165	0.120	0.130	1	1	1	0	3	0.368	NA	NA
17_1_5_125	MW-07	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
17_1_6_111	MW-07	Part 115	Copper	mg/L	75%	3	4	3	2	12	0.580	0.368	0.389	0	1	1	1	3	0.368	NA	NA
17_1_6_114	MW-07	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.204	0.257	0.222	3	4	3	2	12	0.204	0.257	0.222
17_1_6_119	MW-07	Part 115	Nickel	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
17_1_6_123	MW-07	Part 115	Silver	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	92%	3	4	3	2	12	0.392	0.441	0.441	0	0	1	0	1	NA	NA	NA
17_1_6_130	MW-07	Part 115	Zinc	mg/L	75%	3	4	3	2	12	0.109	0.534	0.236	0	1	0	2	3	0.221	0.393	0.528
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	0%	4	4	3	1	12	0.018 *	0.001 **	0.001 **	4	4	3	1	12	0.018 *	0.001 **	0.001 **
18_1_4_105	MW-08	Appendix III	Boron	mg/L	0%	4	4	3	1	12	0.215	0.388	0.366	4	4	3	1	12	0.215	0.388	0.366
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	0%	4	4	3	1	12	0.536	0.591	0.603	4	4	3	1	12	0.536	0.591	0.603
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	0%	4	4	3	1	12	0.243	0.229	0.158	4	4	3	1	12	0.243	0.229	0.158
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	0%	4	4	3	1	12	0.203	0.111	0.130	4	4	3	1	12	0.203	0.111	0.130
18_1_4_120	MW-08	Appendix III	pH (field)	su	0%	4	4	3	1	12	0.176	0.428	0.445	4	4	3	1	12	0.176	0.428	0.445
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	33%	4	4	3	1	12	0.182	0.435	0.131	4	3	0	1	8	0.311	0.688	0.361
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	0%	4	4	3	1	12	0.355	0.234	0.186	4	4	3	1	12	0.355	0.234	0.186
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	50%	4	4	3	1	12	0.553	0.628	0.643	3	2	1	0	6	0.377	0.415	0.458
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	0%	4	4	3	1	12	0.166	0.082	0.111	4	4	3	1	12	0.166	0.082	0.111
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	0%	4	4	3	1	12	0.330	0.426	0.369	4	4	3	1	12	0.330	0.426	0.369
18_1_5_104	MW-08	Appendix IV	Beryllium	mg/L	100%	4	4	3	1	12	NA	0.637	NA	NA	NA	NA	NA	NA	NA	NA	NA
18_1_5_106	MW-08	Appendix IV	Cadmium	mg/L	100%	4	4	3	1	12	0.221	0.229	0.229	NA	NA	NA	NA	NA	NA	NA	NA
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	0%	4	4	3	1	12	0.383	0.673	0.561	4	4	3	1	12	0.383	0.673	0.561
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	0%	4	4	3	1	12	0.438	0.658	0.581	4	4	3	1	12	0.438	0.658	0.581
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	0%	4	4	3	1	12	0.203	0.111	0.130	4	4	3	1	12	0.203	0.111	0.130
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	75%	4	4	3	1	12	0.087	0.435	0.238	2	1	0	0	3	1.000	0.753	0.882
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	0%	4	4	3	1	12	0.388	0.403	0.355	4	4	3	1	12	0.388	0.403	0.355
18_1_5_117	MW-08	Appendix IV	Mercury	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	0%	4	4	3	1	12	0.094	0.072	0.005 **	4	4	3	1	12	0.094	0.072	0.005 **
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	25%	4	4	3	1	12	0.557	0.889	0.768	2	4	2	1	9	0.392	0.584	0.576

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full										Without Non-Detects							
						Sample Size					p-Value					Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA		
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	42%	4	4	3	1	12	0.070	0.058	0.040 *	1	2	3	1	7	0.368	0.009 **	0.034 *		
18_1_5_125	MW-08	Appendix IV	Thallium	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA		
18_1_6_111	MW-08	Part 115	Copper	mg/L	42%	4	4	3	1	12	0.962	0.911	0.895	2	3	1	1	7	0.258	0.357	0.304		
18_1_6_114	MW-08	Part 115	Iron	mg/L	0%	4	4	3	1	12	0.035 *	0.014 *	0.004 **	4	4	3	1	12	0.035 *	0.014 *	0.004 **		
18_1_6_119	MW-08	Part 115	Nickel	mg/L	0%	4	4	3	1	12	0.317	0.676	0.557	4	4	3	1	12	0.317	0.676	0.557		
18_1_6_123	MW-08	Part 115	Silver	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA		
18_1_6_129	MW-08	Part 115	Vanadium	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA		
18_1_6_130	MW-08	Part 115	Zinc	mg/L	25%	4	4	3	1	12	0.825	0.779	0.840	2	4	2	1	9	0.457	0.872	0.712		
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.167	0.095	0.071	3	4	3	2	12	0.167	0.095	0.071		
19_2_4_105	MW-09	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.142	0.090	0.094	3	4	3	2	12	0.142	0.090	0.094		
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.171	0.107	0.103	3	4	3	2	12	0.171	0.107	0.103		
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.557	0.878	0.817	3	4	3	2	12	0.557	0.878	0.817		
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.222	0.258	0.282	3	4	3	2	12	0.222	0.258	0.282		
19_2_4_120	MW-09	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.109	0.151	0.149	3	4	3	2	12	0.109	0.151	0.149		
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.133	0.039 *	0.047 *	3	4	3	2	12	0.133	0.039 *	0.047 *		
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.152	0.069	0.082	3	4	3	2	12	0.152	0.069	0.082		
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	58%	3	4	3	2	12	0.650	0.467	0.553	1	2	1	1	5	0.532	0.891	0.841		
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.290	0.563	0.505	3	4	3	2	12	0.290	0.563	0.505		
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.098	0.355	0.150	3	4	3	2	12	0.098	0.355	0.150		
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	83%	3	4	3	2	12	0.666	0.729	0.728	0	1	1	0	2	0.317	NA	NA		
19_2_5_106	MW-09	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.708	0.744	0.815	NA	NA	NA	NA	NA	NA	NA	NA		
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.663	0.690	0.722	3	4	3	2	12	0.663	0.690	0.722		
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.286	0.359	0.300	3	4	3	2	12	0.286	0.359	0.300		
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.222	0.258	0.282	3	4	3	2	12	0.222	0.258	0.282		
19_2_5_115	MW-09	Appendix IV	Lead	mg/L	100%	3	4	3	2	12	0.362	0.508	0.417	NA	NA	NA	NA	NA	NA	NA	NA		
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.266	0.369	0.400	3	4	3	2	12	0.266	0.369	0.400		
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	83%	3	4	3	2	12	0.386	0.442	0.471	0	1	0	1	2	0.317	NA	NA		
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.383	0.591	0.790	3	4	3	2	12	0.383	0.591	0.790		
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	92%	3	4	3	2	12	0.800	0.970	0.959	0	0	0	1	1	NA	NA	NA		
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	17%	3	4	3	2	12	0.514	0.768	0.702	2	3	3	2	10	0.624	0.856	0.774		
19_2_5_125	MW-09	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.532	0.596	0.596	NA	NA	NA	NA	NA	NA	NA	NA		
19_2_6_111	MW-09	Part 115	Copper	mg/L	75%	3	4	3	2	12	0.194	0.251	0.157	0	1	2	0	3	0.221	0.585	0.504		
19_2_6_114	MW-09	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.029 *	0.000 ***	0.001 ***	3	4	3	2	12	0.029 *	0.000 ***	0.001 ***		
19_2_6_119	MW-09	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.180	0.729	0.412	3	4	3	2	12	0.180	0.729	0.412		
19_2_6_123	MW-09	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.415	0.468	0.468	NA	NA	NA	NA	NA	NA	NA	NA		
19_2_6_129	MW-09	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA		
19_2_6_130	MW-09	Part 115	Zinc	mg/L	67%	3	4	3	2	12	0.845	0.391	0.514	1	1	1	1	4	0.392	NA	NA		
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	18%	3	4	2	2	11	0.567	0.445	0.634	2	4	2	1	9	0.578	0.607	0.664		
20_3_4_105	MW-10	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.063	0.013 *	0.028 *	3	4	3	2	12	0.063	0.013 *	0.028 *		

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05





**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full										Without Non-Detects							
						Sample Size					p-Value					Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA		
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.358	0.425	0.428	3	4	3	2	12	0.358	0.425	0.428		
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.044 *	0.002 **	0.006 **	3	4	3	2	12	0.044 *	0.002 **	0.006 **		
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.184	0.210	0.232	3	4	3	2	12	0.184	0.210	0.232		
20_3_4_120	MW-10	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.137	0.179	0.182	3	4	3	2	12	0.137	0.179	0.182		
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.495	0.565	0.363	3	4	3	2	12	0.495	0.565	0.363		
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.364	0.532	0.537	3	4	3	2	12	0.364	0.532	0.537		
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	67%	3	4	3	2	12	0.943	0.573	0.832	0	1	2	1	4	0.223	0.000 ***	0.000 ***		
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.088	0.037 *	0.059	3	4	3	2	12	0.088	0.037 *	0.059		
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.044 *	0.078	0.051	3	4	3	2	12	0.044 *	0.078	0.051		
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	50%	3	4	3	2	12	0.735	0.707	0.645	1	2	2	1	6	0.463	0.839	0.802		
20_3_5_106	MW-10	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.647	0.573	0.685	NA	NA	NA	NA	NA	NA	NA	NA		
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.233	0.142	0.179	3	4	3	2	12	0.233	0.142	0.179		
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	8%	3	4	3	2	12	0.822	0.753	0.790	2	4	3	2	11	0.861	0.884	0.967		
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.184	0.210	0.232	3	4	3	2	12	0.184	0.210	0.232		
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	83%	3	4	3	2	12	0.425	0.357	0.408	0	0	1	1	2	0.317	NA	NA		
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.115	0.215	0.101	3	4	3	2	12	0.115	0.215	0.101		
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	92%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	0	1	NA	NA	NA		
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.863	0.626	0.742	3	4	3	2	12	0.863	0.626	0.742		
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	83%	3	4	3	2	12	0.583	0.540	0.593	2	0	0	0	2	NA	NA	NA		
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	8%	3	4	3	2	12	0.907	0.742	0.847	3	3	3	2	11	0.876	0.816	0.916		
20_3_5_125	MW-10	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.534	0.380	0.382	NA	NA	NA	NA	NA	NA	NA	NA		
20_3_6_111	MW-10	Part 115	Copper	mg/L	75%	3	4	3	2	12	0.109	0.630	0.406	0	1	0	2	3	0.221	0.070	0.125		
20_3_6_114	MW-10	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.038 *	0.004 **	0.006 **	3	4	3	2	12	0.038 *	0.004 **	0.006 **		
20_3_6_119	MW-10	Part 115	Nickel	mg/L	50%	3	4	3	2	12	0.566	0.892	0.903	1	1	2	2	6	0.370	0.116	0.176		
20_3_6_123	MW-10	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.368	0.265	0.267	NA	NA	NA	NA	NA	NA	NA	NA		
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	83%	3	4	3	2	12	0.731	0.746	0.760	0	1	1	0	2	0.317	NA	NA		
20_3_6_130	MW-10	Part 115	Zinc	mg/L	42%	3	4	3	2	12	0.104	0.354	0.203	1	2	2	2	7	0.181	0.668	0.485		
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	0%	3	3	3	2	11	0.098	0.150	0.040 *	3	3	3	2	11	0.098	0.150	0.040 *		
21_2_4_105	MW-11	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.037 *	0.020 *	0.007 **	3	4	3	2	12	0.037 *	0.020 *	0.007 **		
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.113	0.097	0.124	3	4	3	2	12	0.113	0.097	0.124		
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.036 *	0.006 **	0.013 *	3	4	3	2	12	0.036 *	0.006 **	0.013 *		
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.091	0.119	0.107	3	4	3	2	12	0.091	0.119	0.107		
21_2_4_120	MW-11	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.116	0.100	0.099	3	4	3	2	12	0.116	0.100	0.099		
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	25%	3	4	3	2	12	0.117	0.067	0.114	2	4	2	1	9	0.261	0.280	0.209		
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.465	0.310	0.333	3	4	3	2	12	0.465	0.310	0.333		
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	67%	3	4	3	2	12	0.715	0.563	0.658	1	2	0	1	4	0.223	0.000 ***	0.000 ***		
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.093	0.280	0.146	3	4	3	2	12	0.093	0.280	0.146		
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.063	0.052	0.034 *	3	4	3	2	12	0.063	0.052	0.034 *		
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	83%	3	4	3	2	12	0.666	0.670	0.712	1	1	0	0	2	0.317	NA	NA		

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	83%	3	4	3	2	12	0.597	0.609	0.690	1	1	0	0	2	0.317	NA	NA
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.129	0.449	0.331	3	4	3	2	12	0.129	0.449	0.331
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.327	0.636	0.519	3	4	3	2	12	0.327	0.636	0.519
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.091	0.119	0.107	3	4	3	2	12	0.091	0.119	0.107
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	25%	3	4	3	2	12	0.619	0.441	0.500	3	1	3	2	9	0.758	0.673	0.714
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.051	0.089	0.021 *	3	4	3	2	12	0.051	0.089	0.021 *
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	92%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	0	1	NA	NA	NA
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	17%	3	4	3	2	12	0.384	0.783	0.623	3	2	3	2	10	0.642	0.806	0.855
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	33%	3	4	3	2	12	0.970	0.953	0.965	2	3	1	2	8	0.409	0.485	0.570
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	25%	3	4	3	2	12	0.160	0.304	0.258	2	2	3	2	9	0.311	0.225	0.225
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	92%	3	4	3	2	12	0.192	0.258	0.203	0	1	0	0	1	NA	NA	NA
21_2_6_111	MW-11	Part 115	Copper	mg/L	25%	3	4	3	2	12	0.566	0.486	0.686	3	2	3	1	9	0.981	0.722	0.948
21_2_6_114	MW-11	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.091	0.050	0.077	3	4	3	2	12	0.091	0.050	0.077
21_2_6_119	MW-11	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.626	0.488	0.551	3	4	3	2	12	0.626	0.488	0.551
21_2_6_123	MW-11	Part 115	Silver	mg/L	83%	3	4	3	2	12	0.117	0.081	0.093	1	1	0	0	2	0.317	NA	NA
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	83%	3	4	3	2	12	0.572	0.637	0.637	1	1	0	0	2	0.317	NA	NA
21_2_6_130	MW-11	Part 115	Zinc	mg/L	33%	3	4	3	2	12	0.801	0.573	0.746	2	2	2	2	8	0.475	0.584	0.661
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	57%	2	2	2	1	7	0.557	0.903	0.880	1	1	1	0	3	0.368	NA	NA
22_2_4_105	MW-12	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.039 *	0.000 ***	0.001 **	3	4	3	2	12	0.039 *	0.000 ***	0.001 **
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.245	0.171	0.190	3	4	3	2	12	0.245	0.171	0.190
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.138	0.083	0.081	3	4	3	2	12	0.138	0.083	0.081
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.821	0.695	0.769	3	4	3	2	12	0.821	0.695	0.769
22_2_4_120	MW-12	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.185	0.403	0.413	3	4	3	2	12	0.185	0.403	0.413
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.245	0.284	0.362	3	4	3	2	12	0.245	0.284	0.362
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.190	0.127	0.214	3	4	3	2	12	0.190	0.127	0.214
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	0%	3	4	3	2	12	0.503	0.547	0.581	3	4	3	2	12	0.503	0.547	0.581
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.039 *	0.001 ***	0.002 **	3	4	3	2	12	0.039 *	0.001 ***	0.002 **
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.037 *	0.013 *	0.006 **	3	4	3	2	12	0.037 *	0.013 *	0.006 **
22_2_5_104	MW-12	Appendix IV	Beryllium	mg/L	100%	3	4	3	2	12	NA	0.163	NA	NA	NA	NA	NA	NA	NA	NA	NA
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	0%	3	4	3	2	12	0.088	0.004 **	0.023 *	3	4	3	2	12	0.088	0.004 **	0.023 *
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	42%	3	4	3	2	12	0.099	0.138	0.065	3	3	0	1	7	0.276	0.506	0.331
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	42%	3	4	3	2	12	0.035 *	0.000 ***	0.002 **	1	1	3	2	7	0.162	0.062	0.083
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.821	0.695	0.769	3	4	3	2	12	0.821	0.695	0.769
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	50%	3	4	3	2	12	0.846	0.804	0.782	0	2	3	1	6	0.885	0.941	0.977
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.089	0.051	0.065	3	4	3	2	12	0.089	0.051	0.065
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	83%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	1	2	0.317	NA	NA
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.088	0.019 *	0.032 *	3	4	3	2	12	0.088	0.019 *	0.032 *
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	75%	3	4	3	2	12	0.365	0.437	0.456	0	3	0	0	3	NA	NA	NA
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	0%	3	4	3	2	12	0.063	0.041 *	0.004 **	3	4	3	2	12	0.063	0.041 *	0.004 **

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05





**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full										Without Non-Detects							
						Sample Size					p-Value					Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA		
22_2_5_125	MW-12	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
22_2_6_111	MW-12	Part 115	Copper	mg/L	0%	3	4	3	2	12	0.077	0.028 *	0.010 *	3	4	3	2	12	0.077	0.028 *	0.010 *		
22_2_6_114	MW-12	Part 115	Iron	mg/L	50%	3	4	3	2	12	0.033 *	0.138	0.044 *	1	1	3	1	6	0.219	0.160	0.097		
22_2_6_119	MW-12	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.131	0.148	0.179	3	4	3	2	12	0.131	0.148	0.179		
22_2_6_123	MW-12	Part 115	Silver	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA	NA	
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	50%	3	4	3	2	12	0.044 *	0.042 *	0.022 *	0	3	3	0	6	0.275	0.367	0.355		
22_2_6_130	MW-12	Part 115	Zinc	mg/L	0%	3	4	3	2	12	0.196	0.315	0.445	3	4	3	2	12	0.196	0.315	0.445		
26_1_3_127	MW-16	Additional Parameters	Total Suspended Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_105	MW-16	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_107	MW-16	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_108	MW-16	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_112	MW-16	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_120	MW-16	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_4_124	MW-16	Appendix III	Sulfate (as SO4)	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA		
26_1_4_126	MW-16	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_101	MW-16	Appendix IV	Antimony	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_102	MW-16	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_103	MW-16	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_104	MW-16	Appendix IV	Beryllium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_106	MW-16	Appendix IV	Cadmium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_109	MW-16	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_110	MW-16	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_113	MW-16	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_115	MW-16	Appendix IV	Lead	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_116	MW-16	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_117	MW-16	Appendix IV	Mercury	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_118	MW-16	Appendix IV	Molybdenum	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_5_121	MW-16	Appendix IV	Radium 226 and 228	pCi/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA		
26_1_5_122	MW-16	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_5_125	MW-16	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_6_111	MW-16	Part 115	Copper	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA		
26_1_6_114	MW-16	Part 115	Iron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
26_1_6_119	MW-16	Part 115	Nickel	mg/L	50%	0	1	1	0	2	NA	NA	NA	0	1	0	0	1	NA	NA	NA		
26_1_6_123	MW-16	Part 115	Silver	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
26_1_6_129	MW-16	Part 115	Vanadium	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	0	1	0	1	NA	NA	NA		
26_1_6_130	MW-16	Part 115	Zinc	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
27_1_3_127	MW-17	Additional Parameters	Total Suspended Solids	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA		
27_1_4_105	MW-17	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		
27_1_4_107	MW-17	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA		

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
27_1_4_108	MW-17	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_4_112	MW-17	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_4_120	MW-17	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_4_124	MW-17	Appendix III	Sulfate (as SO4)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_4_126	MW-17	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA
27_1_5_101	MW-17	Appendix IV	Antimony	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	0	1	0	1	NA	NA	NA
27_1_5_102	MW-17	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_103	MW-17	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_104	MW-17	Appendix IV	Beryllium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27_1_5_106	MW-17	Appendix IV	Cadmium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27_1_5_109	MW-17	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_110	MW-17	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_113	MW-17	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_115	MW-17	Appendix IV	Lead	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_116	MW-17	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_117	MW-17	Appendix IV	Mercury	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27_1_5_118	MW-17	Appendix IV	Molybdenum	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_121	MW-17	Appendix IV	Radium 226 and 228	pCi/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
27_1_5_122	MW-17	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_5_125	MW-17	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27_1_6_111	MW-17	Part 115	Copper	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_6_114	MW-17	Part 115	Iron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_6_119	MW-17	Part 115	Nickel	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_6_123	MW-17	Part 115	Silver	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
27_1_6_129	MW-17	Part 115	Vanadium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
27_1_6_130	MW-17	Part 115	Zinc	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	8%	3	4	3	2	12	0.581	0.773	0.885	2	4	3	2	11	0.734	0.837	0.973
28_1_4_105	MW-18	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.807	0.932	0.905	3	4	3	2	12	0.807	0.932	0.905
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.029 *	0.021 *	0.024 *	3	4	3	2	12	0.029 *	0.021 *	0.024 *
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.044 *	0.004 **	0.003 **	3	4	3	2	12	0.044 *	0.004 **	0.003 **
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.079	0.039 *	0.063	3	4	3	2	12	0.079	0.039 *	0.063
28_1_4_120	MW-18	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.376	0.381	0.384	3	4	3	2	12	0.376	0.381	0.384
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.284	0.449	0.585	3	4	3	2	12	0.284	0.449	0.585
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.108	0.084	0.087	3	4	3	2	12	0.108	0.084	0.087
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	25%	3	4	3	2	12	0.042 *	0.233	0.116	2	3	2	2	9	0.115	0.448	0.354
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.060	0.031 *	0.040 *	3	4	3	2	12	0.060	0.031 *	0.040 *
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.105	0.041 *	0.045 *	3	4	3	2	12	0.105	0.041 *	0.045 *
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	92%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	0	1	NA	NA	NA
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	42%	3	4	3	2	12	0.629	0.629	0.561	1	3	2	1	7	0.861	0.923	0.866

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	92%	3	4	3	2	12	0.562	0.762	0.758	0	1	0	0	1	NA	NA	NA
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.457	0.314	0.385	3	4	3	2	12	0.457	0.314	0.385
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.079	0.039 *	0.063	3	4	3	2	12	0.079	0.039 *	0.063
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	67%	3	4	3	2	12	0.309	0.234	0.256	0	0	3	1	4	0.180	0.590	0.553
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.119	0.033 *	0.053	3	4	3	2	12	0.119	0.033 *	0.053
28_1_5_117	MW-18	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.059	0.010 **	0.015 *	3	4	3	2	12	0.059	0.010 **	0.015 *
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	67%	3	4	3	2	12	0.192	0.551	0.457	0	2	1	1	4	0.861	0.940	0.971
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	0%	3	4	3	2	12	0.195	0.366	0.174	3	4	3	2	12	0.195	0.366	0.174
28_1_5_125	MW-18	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.254	0.271	0.271	NA	NA	NA	NA	NA	NA	NA	NA
28_1_6_111	MW-18	Part 115	Copper	mg/L	0%	3	4	3	2	12	0.035 *	0.049 *	0.015 *	3	4	3	2	12	0.035 *	0.049 *	0.015 *
28_1_6_114	MW-18	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.077	0.038 *	0.040 *	3	4	3	2	12	0.077	0.038 *	0.040 *
28_1_6_119	MW-18	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.340	0.326	0.361	3	4	3	2	12	0.340	0.326	0.361
28_1_6_123	MW-18	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.254	0.271	0.271	NA	NA	NA	NA	NA	NA	NA	NA
28_1_6_129	MW-18	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
28_1_6_130	MW-18	Part 115	Zinc	mg/L	0%	3	4	3	2	12	0.339	0.298	0.232	3	4	3	2	12	0.339	0.298	0.232
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.031 *	0.020 *	0.076	3	4	3	2	12	0.031 *	0.020 *	0.076
29_1_4_105	MW-19	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.028 *	0.001 ***	0.001 **	3	4	3	2	12	0.028 *	0.001 ***	0.001 **
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.073	0.060	0.066	3	4	3	2	12	0.073	0.060	0.066
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.083	0.070	0.099	3	4	3	2	12	0.083	0.070	0.099
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.314	0.385	0.383	3	4	3	2	12	0.314	0.385	0.383
29_1_4_120	MW-19	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.364	0.311	0.309	3	4	3	2	12	0.364	0.311	0.309
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.158	0.264	0.298	3	4	3	2	12	0.158	0.264	0.298
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.086	0.060	0.049 *	3	4	3	2	12	0.086	0.060	0.049 *
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	92%	3	4	3	2	12	0.647	0.451	0.575	0	1	0	0	1	NA	NA	NA
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.036 *	0.010 *	0.036 *	3	4	3	2	12	0.036 *	0.010 *	0.036 *
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.088	0.053	0.058	3	4	3	2	12	0.088	0.053	0.058
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	25%	3	4	3	2	12	0.085	0.348	0.235	2	4	3	0	9	0.400	0.584	0.553
29_1_5_106	MW-19	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.647	0.573	0.685	NA	NA	NA	NA	NA	NA	NA	NA
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	42%	3	4	3	2	12	0.398	0.219	0.288	1	2	3	1	7	0.461	0.085	0.156
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	8%	3	4	3	2	12	0.444	0.356	0.377	3	4	2	2	11	0.574	0.481	0.381
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.314	0.385	0.383	3	4	3	2	12	0.314	0.385	0.383
29_1_5_115	MW-19	Appendix IV	Lead	mg/L	100%	3	4	3	2	12	0.290	0.325	0.319	NA	NA	NA	NA	NA	NA	NA	NA
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.936	0.973	0.967	3	4	3	2	12	0.936	0.973	0.967
29_1_5_117	MW-19	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.384	0.473	0.530	3	4	3	2	12	0.384	0.473	0.530
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	33%	3	4	3	2	12	0.927	0.929	0.914	3	4	1	0	8	0.297	0.388	0.468
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	83%	3	4	3	2	12	0.318	0.383	0.326	1	0	1	0	2	NA	NA	NA
29_1_5_125	MW-19	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.339	0.379	0.379	NA	NA	NA	NA	NA	NA	NA	NA

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



Table 7: Seasonality Tests (continued)

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects														
						Sample Size					p-Value		Sample Size					p-Value									
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA						
29_1_6_111	MW-19	Part 115	Copper	mg/L	83%	3	4	3	2	12	0.800	0.500	0.555	0	1	1	0	2	0.317	NA	NA						
29_1_6_114	MW-19	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.224	0.224	0.182	3	4	3	2	12	0.224	0.224	0.182						
29_1_6_119	MW-19	Part 115	Nickel	mg/L	8%	3	4	3	2	12	0.815	0.535	0.743	2	4	3	2	11	0.955	0.579	0.751						
29_1_6_123	MW-19	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.248	0.264	0.264	NA	NA	NA	NA	NA	NA	NA	NA						
29_1_6_129	MW-19	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	0.392	0.441	0.441	NA	NA	NA	NA	NA	NA	NA	NA						
29_1_6_130	MW-19	Part 115	Zinc	mg/L	83%	3	4	3	2	12	0.697	0.721	0.775	0	1	0	1	2	0.317	NA	NA						
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.161	0.171	0.172	3	4	3	2	12	0.161	0.171	0.172						
30_1_4_105	MW-20	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.034	*	0.000	***	0.001	***	3	4	3	2	12	0.034	*	0.000	***	0.001	***
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.069	0.105	0.138	3	4	3	2	12	0.069	0.105	0.138						
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.237	0.147	0.165	3	4	3	2	12	0.237	0.147	0.165						
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.801	0.250	0.317	3	4	3	2	12	0.801	0.250	0.317						
30_1_4_120	MW-20	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.371	0.316	0.319	3	4	3	2	12	0.371	0.316	0.319						
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.031	*	0.003	**	0.000	***	3	4	3	2	12	0.031	*	0.003	**	0.000	***
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.046	*	0.020	*	0.019	*	3	4	3	2	12	0.046	*	0.020	*	0.019	*
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	33%	3	4	3	2	12	0.237	0.375	0.301	2	2	3	1	8	0.343	0.482	0.373						
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.026	*	0.001	**	0.001	**	3	4	3	2	12	0.026	*	0.001	**	0.001	**
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.074	0.059	0.049	*	3	4	3	2	12	0.074	0.059	0.049	*				
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	92%	3	4	3	2	12	0.392	0.441	0.441	1	0	0	0	1	NA	NA	NA						
30_1_5_106	MW-20	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.419	0.472	0.472	NA	NA	NA	NA	NA	NA	NA	NA						
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	42%	3	4	3	2	12	0.313	0.365	0.373	2	3	1	1	7	0.327	0.508	0.468						
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.521	0.527	0.505	3	4	3	2	12	0.521	0.527	0.505						
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.801	0.250	0.317	3	4	3	2	12	0.801	0.250	0.317						
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	0%	3	4	3	2	12	0.189	0.233	0.193	3	4	3	2	12	0.189	0.233	0.193						
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.063	0.045	*	0.084	3	4	3	2	12	0.063	0.045	*	0.084				
30_1_5_117	MW-20	Appendix IV	Mercury	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.099	0.098	0.106	3	4	3	2	12	0.099	0.098	0.106						
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	58%	3	4	3	2	12	0.786	0.447	0.553	1	2	1	1	5	0.284	0.046	*	0.072					
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	50%	3	4	3	2	12	0.046	*	0.041	*	0.031	*	1	2	2	1	6	0.199	0.004	**	0.011	*	
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	92%	3	4	3	2	12	0.392	0.441	0.441	1	0	0	0	1	NA	NA	NA						
30_1_6_111	MW-20	Part 115	Copper	mg/L	8%	3	4	3	2	12	0.128	0.045	*	0.073	3	3	3	2	11	0.151	0.074	0.102					
30_1_6_114	MW-20	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.030	*	0.004	**	0.004	**	3	4	3	2	12	0.030	*	0.004	**	0.004	**
30_1_6_119	MW-20	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.663	0.757	0.744	3	4	3	2	12	0.663	0.757	0.744						
30_1_6_123	MW-20	Part 115	Silver	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
30_1_6_129	MW-20	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
30_1_6_130	MW-20	Part 115	Zinc	mg/L	0%	3	4	3	2	12	0.516	0.369	0.363	3	4	3	2	12	0.516	0.369	0.363						
38_1_3_127	MW-28	Additional Parameters	Total Suspended Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
38_1_4_105	MW-28	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
38_1_4_107	MW-28	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
38_1_4_108	MW-28	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects								
						Sample Size					p-Value		Sample Size					p-Value			
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
38_1_4_112	MW-28	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_4_120	MW-28	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_4_124	MW-28	Appendix III	Sulfate (as SO4)	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
38_1_4_126	MW-28	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_101	MW-28	Appendix IV	Antimony	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_102	MW-28	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_103	MW-28	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_104	MW-28	Appendix IV	Beryllium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38_1_5_106	MW-28	Appendix IV	Cadmium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38_1_5_109	MW-28	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_110	MW-28	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_113	MW-28	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_115	MW-28	Appendix IV	Lead	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_116	MW-28	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_117	MW-28	Appendix IV	Mercury	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
38_1_5_118	MW-28	Appendix IV	Molybdenum	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_121	MW-28	Appendix IV	Radium 226 and 228	pCi/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_122	MW-28	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_5_125	MW-28	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38_1_6_111	MW-28	Part 115	Copper	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_6_114	MW-28	Part 115	Iron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_6_119	MW-28	Part 115	Nickel	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_6_123	MW-28	Part 115	Silver	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
38_1_6_129	MW-28	Part 115	Vanadium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
38_1_6_130	MW-28	Part 115	Zinc	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10%	2	4	2	2	10	0.343	0.353	0.370	1	4	2	2	9	0.202	0.275	0.193
40_1_4_105	MW-30	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.428	0.851	0.868	3	4	3	2	12	0.428	0.851	0.868
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.891	0.679	0.694	3	4	3	2	12	0.891	0.679	0.694
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.538	0.495	0.514	3	4	3	2	12	0.538	0.495	0.514
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.576	0.633	0.618	3	4	3	2	12	0.576	0.633	0.618
40_1_4_120	MW-30	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.467	0.552	0.552	3	4	3	2	12	0.467	0.552	0.552
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.159	0.040 *	0.032 *	3	4	3	2	12	0.159	0.040 *	0.032 *
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.201	0.168	0.161	3	4	3	2	12	0.201	0.168	0.161
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	92%	3	4	3	2	12	0.678	0.744	0.724	0	1	0	0	1	NA	NA	NA
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	17%	3	4	3	2	12	0.237	0.343	0.314	2	3	3	2	10	0.470	0.670	0.667
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.074	0.044 *	0.037 *	3	4	3	2	12	0.074	0.044 *	0.037 *
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	83%	3	4	3	2	12	0.013 *	0.182	0.097	2	0	0	0	2	NA	NA	NA
40_1_5_106	MW-30	Appendix IV	Cadmium	mg/L	100%	3	4	3	2	12	0.647	0.573	0.685	NA	NA	NA	NA	NA	NA	NA	NA
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.215	0.208	0.230	3	4	3	2	12	0.215	0.208	0.230

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects												
						Sample Size					p-Value		Sample Size					p-Value							
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA				
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.342	0.548	0.506	3	4	3	2	12	0.342	0.548	0.506				
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.576	0.633	0.618	3	4	3	2	12	0.576	0.633	0.618				
40_1_5_115	MW-30	Appendix IV	Lead	mg/L	100%	3	4	3	2	12	0.346	0.455	0.372	NA	NA	NA	NA	NA	NA	NA	NA				
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.727	0.892	0.951	3	4	3	2	12	0.727	0.892	0.951				
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	92%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	0	1	NA	NA	NA				
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	25%	3	4	3	2	12	0.271	0.252	0.390	2	3	3	1	9	0.680	0.551	0.737				
40_1_5_121	MW-30	Appendix IV	Radium 226 and 228	pCi/L	50%	3	4	3	2	12	0.679	0.635	0.606	2	1	3	0	6	0.538	0.388	0.378				
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	50%	3	4	3	2	12	0.127	0.156	0.065	1	1	3	1	6	0.300	0.050	0.124				
40_1_5_125	MW-30	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	0.161	0.148	0.148	NA	NA	NA	NA	NA	NA	NA	NA				
40_1_6_111	MW-30	Part 115	Copper	mg/L	67%	3	4	3	2	12	0.107	0.274	0.181	2	1	0	1	4	0.407	0.398	0.496				
40_1_6_114	MW-30	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.096	0.164	0.049	*	3	4	3	2	12	0.096	0.164	0.049	*		
40_1_6_119	MW-30	Part 115	Nickel	mg/L	17%	3	4	3	2	12	0.150	0.189	0.103	2	4	3	1	10	0.467	0.501	0.450				
40_1_6_123	MW-30	Part 115	Silver	mg/L	100%	3	4	3	2	12	0.248	0.264	0.264	NA	NA	NA	NA	NA	NA	NA	NA				
40_1_6_129	MW-30	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	0.392	0.441	0.441	NA	NA	NA	NA	NA	NA	NA	NA				
40_1_6_130	MW-30	Part 115	Zinc	mg/L	83%	3	4	3	2	12	0.615	0.697	0.706	0	1	0	1	2	0.317	NA	NA				
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	57%	3	1	2	1	7	0.746	0.827	0.775	2	0	1	0	3	0.221	0.454	0.333				
41_1_4_105	MW-31	Appendix III	Boron	mg/L	0%	4	4	3	1	12	0.069	0.032	*	0.045	*	4	4	3	1	12	0.069	0.032	*	0.045	*
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	0%	4	4	3	1	12	0.227	0.155	0.141	4	4	3	1	12	0.227	0.155	0.141				
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	0%	4	4	3	1	12	0.050	*	0.070	0.057	4	4	3	1	12	0.050	*	0.070	0.057		
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	0%	4	4	3	1	12	0.389	0.511	0.510	4	4	3	1	12	0.389	0.511	0.510				
41_1_4_120	MW-31	Appendix III	pH (field)	su	0%	4	4	3	1	12	0.277	0.388	0.382	4	4	3	1	12	0.277	0.388	0.382				
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	0%	4	4	3	1	12	0.051	0.022	*	0.003	**	4	4	3	1	12	0.051	0.022	*	0.003	**
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	0%	4	4	3	1	12	0.342	0.362	0.333	4	4	3	1	12	0.342	0.362	0.333				
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	50%	4	4	3	1	12	0.081	0.294	0.149	2	2	2	0	6	0.165	0.364	0.233				
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	0%	4	4	3	1	12	0.494	0.538	0.533	4	4	3	1	12	0.494	0.538	0.533				
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	0%	4	4	3	1	12	0.128	0.179	0.150	4	4	3	1	12	0.128	0.179	0.150				
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	92%	4	4	3	1	12	0.572	0.637	0.637	1	0	0	0	1	NA	NA	NA				
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	92%	4	4	3	1	12	0.506	0.335	0.295	1	0	0	0	1	NA	NA	NA				
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	0%	4	4	3	1	12	0.340	0.519	0.470	4	4	3	1	12	0.340	0.519	0.470				
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	8%	4	4	3	1	12	0.668	0.621	0.656	4	3	3	1	11	0.480	0.568	0.525				
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	0%	4	4	3	1	12	0.389	0.511	0.510	4	4	3	1	12	0.389	0.511	0.510				
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	83%	4	4	3	1	12	0.601	0.547	0.522	0	1	1	0	2	0.317	NA	NA				
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	0%	4	4	3	1	12	0.295	0.517	0.553	4	4	3	1	12	0.295	0.517	0.553				
41_1_5_117	MW-31	Appendix IV	Mercury	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA				
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	0%	4	4	3	1	12	0.294	0.497	0.465	4	4	3	1	12	0.294	0.497	0.465				
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	25%	4	4	3	1	12	0.444	0.689	0.642	3	3	3	0	9	0.837	0.827	0.864				
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	42%	4	4	3	1	12	0.138	0.349	0.168	1	2	3	1	7	0.294	0.000	***	0.006	**		
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	92%	4	4	3	1	12	0.572	0.637	0.637	1	0	0	0	1	NA	NA	NA				
41_1_6_111	MW-31	Part 115	Copper	mg/L	67%	4	4	3	1	12	0.692	0.583	0.587	1	2	1	0	4	0.407	0.756	0.721				

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05





**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full							Without Non-Detects														
						Sample Size					p-Value		Sample Size					p-Value									
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA						
41_1_6_114	MW-31	Part 115	Iron	mg/L	0%	4	4	3	1	12	0.214	0.262	0.336	4	4	3	1	12	0.214	0.262	0.336						
41_1_6_119	MW-31	Part 115	Nickel	mg/L	83%	4	4	3	1	12	0.666	0.724	0.719	1	0	1	0	2	0.317	NA	NA						
41_1_6_123	MW-31	Part 115	Silver	mg/L	100%	4	4	3	1	12	NA	0.637	0.637	NA	NA	NA	NA	NA	NA	NA	NA						
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	92%	4	4	3	1	12	0.392	0.441	0.441	0	0	1	0	1	NA	NA	NA						
41_1_6_130	MW-31	Part 115	Zinc	mg/L	75%	4	4	3	1	12	0.496	0.813	0.802	1	2	0	0	3	1.000	0.794	0.725						
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	0%	3	4	3	2	12	0.146	0.091	0.102	3	4	3	2	12	0.146	0.091	0.102						
42_1_4_105	MW-32	Appendix III	Boron	mg/L	0%	3	4	3	2	12	0.040	*	0.003	**	0.002	**	3	4	3	2	12	0.040	*	0.003	**	0.002	**
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	0%	3	4	3	2	12	0.064		0.012	*	0.008	**	3	4	3	2	12	0.064		0.012	*	0.008	**
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	0%	3	4	3	2	12	0.527	0.611	0.633	3	4	3	2	12	0.527	0.611	0.633						
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	0%	3	4	3	2	12	0.557	0.381	0.407	3	4	3	2	12	0.557	0.381	0.407						
42_1_4_120	MW-32	Appendix III	pH (field)	su	0%	3	4	3	2	12	0.606	0.664	0.665	3	4	3	2	12	0.606	0.664	0.665						
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	0%	3	4	3	2	12	0.028	*	0.003	**	0.016	*	3	4	3	2	12	0.028	*	0.003	**	0.016	*
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	0%	3	4	3	2	12	0.039	*	0.001	**	0.001	**	3	4	3	2	12	0.039	*	0.001	**	0.001	**
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	67%	3	4	3	2	12	0.686	0.629	0.959	1	2	0	1	4	0.259	0.091	0.249						
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	0%	3	4	3	2	12	0.157	0.504	0.539	3	4	3	2	12	0.157	0.504	0.539						
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	0%	3	4	3	2	12	0.212	0.281	0.525	3	4	3	2	12	0.212	0.281	0.525						
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	92%	3	4	3	2	12	0.392	0.441	0.441	1	0	0	0	1	NA	NA	NA						
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	92%	3	4	3	2	12	0.674	0.821	0.822	1	0	0	0	1	NA	NA	NA						
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	0%	3	4	3	2	12	0.040	*	0.255	0.076	3	4	3	2	12	0.040	*	0.255	0.076				
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	0%	3	4	3	2	12	0.128	0.437	0.297	3	4	3	2	12	0.128	0.437	0.297						
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	0%	3	4	3	2	12	0.557	0.381	0.407	3	4	3	2	12	0.557	0.381	0.407						
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	75%	3	4	3	2	12	0.149	0.101	0.107	1	1	1	0	3	0.368	NA	NA						
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	0%	3	4	3	2	12	0.035	*	0.004	**	0.004	**	3	4	3	2	12	0.035	*	0.004	**	0.004	**
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	92%	3	4	3	2	12	0.572	0.637	0.637	0	1	0	0	1	NA	NA	NA						
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	0%	3	4	3	2	12	0.182	0.339	0.264	3	4	3	2	12	0.182	0.339	0.264						
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	67%	3	4	3	2	12	0.253	0.323	0.283	0	2	1	1	4	0.259	0.078	0.070						
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	83%	3	4	3	2	12	0.084	0.252	0.092	1	1	0	0	2	0.317	NA	NA						
42_1_5_125	MW-32	Appendix IV	Thallium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
42_1_6_111	MW-32	Part 115	Copper	mg/L	67%	3	4	3	2	12	0.557	0.446	0.508	1	1	1	1	4	0.392	NA	NA						
42_1_6_114	MW-32	Part 115	Iron	mg/L	0%	3	4	3	2	12	0.219	0.135	0.124	3	4	3	2	12	0.219	0.135	0.124						
42_1_6_119	MW-32	Part 115	Nickel	mg/L	0%	3	4	3	2	12	0.182	0.399	0.229	3	4	3	2	12	0.182	0.399	0.229						
42_1_6_123	MW-32	Part 115	Silver	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
42_1_6_129	MW-32	Part 115	Vanadium	mg/L	100%	3	4	3	2	12	NA	0.163	0.163	NA	NA	NA	NA	NA	NA	NA	NA						
42_1_6_130	MW-32	Part 115	Zinc	mg/L	0%	3	4	3	2	12	0.447	0.461	0.429	3	4	3	2	12	0.447	0.461	0.429						
46_1_3_127	MW-36	Additional Parameters	Total Suspended Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
46_1_4_105	MW-36	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
46_1_4_107	MW-36	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
46_1_4_108	MW-36	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						
46_1_4_112	MW-36	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA						

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full						Without Non-Detects									
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
46_1_4_120	MW-36	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_4_124	MW-36	Appendix III	Sulfate (as SO4)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_4_126	MW-36	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_101	MW-36	Appendix IV	Antimony	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_102	MW-36	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA
46_1_5_103	MW-36	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_104	MW-36	Appendix IV	Beryllium	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
46_1_5_106	MW-36	Appendix IV	Cadmium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_109	MW-36	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_110	MW-36	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA
46_1_5_113	MW-36	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_115	MW-36	Appendix IV	Lead	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_116	MW-36	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_117	MW-36	Appendix IV	Mercury	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46_1_5_118	MW-36	Appendix IV	Molybdenum	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_121	MW-36	Appendix IV	Radium 226 and 228	pCi/L	100%	0	1	1	0	2	0.317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46_1_5_122	MW-36	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_5_125	MW-36	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
46_1_6_111	MW-36	Part 115	Copper	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_6_114	MW-36	Part 115	Iron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_6_119	MW-36	Part 115	Nickel	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_6_123	MW-36	Part 115	Silver	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_6_129	MW-36	Part 115	Vanadium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
46_1_6_130	MW-36	Part 115	Zinc	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_3_127	MW-37	Additional Parameters	Total Suspended Solids	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	0	1	0	1	NA	NA	NA
47_1_4_105	MW-37	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_4_107	MW-37	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA
47_1_4_108	MW-37	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_4_112	MW-37	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_4_120	MW-37	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_4_124	MW-37	Appendix III	Sulfate (as SO4)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_4_126	MW-37	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_101	MW-37	Appendix IV	Antimony	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_102	MW-37	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_103	MW-37	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_104	MW-37	Appendix IV	Beryllium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_5_106	MW-37	Appendix IV	Cadmium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_109	MW-37	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_110	MW-37	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05





**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full						Without Non-Detects									
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
47_1_5_113	MW-37	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_115	MW-37	Appendix IV	Lead	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_116	MW-37	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_117	MW-37	Appendix IV	Mercury	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_5_118	MW-37	Appendix IV	Molybdenum	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_121	MW-37	Appendix IV	Radium 226 and 228	pCi/L	100%	0	1	1	0	2	0.317	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_5_122	MW-37	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_5_125	MW-37	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_6_111	MW-37	Part 115	Copper	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_6_114	MW-37	Part 115	Iron	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
47_1_6_119	MW-37	Part 115	Nickel	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
47_1_6_123	MW-37	Part 115	Silver	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_6_129	MW-37	Part 115	Vanadium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
47_1_6_130	MW-37	Part 115	Zinc	mg/L	0%	0	1	1	0	2	NA	NA	NA	0	1	1	0	2	NA	NA	NA
48_2_3_127	MW-38	Additional Parameters	Total Suspended Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_105	MW-38	Appendix III	Boron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_107	MW-38	Appendix III	Calcium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_108	MW-38	Appendix III	Chloride (as Cl)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_112	MW-38	Appendix III	Fluoride	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_120	MW-38	Appendix III	pH (field)	su	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_124	MW-38	Appendix III	Sulfate (as SO4)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_4_126	MW-38	Appendix III	Total Dissolved Solids	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_101	MW-38	Appendix IV	Antimony	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_102	MW-38	Appendix IV	Arsenic	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_103	MW-38	Appendix IV	Barium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_104	MW-38	Appendix IV	Beryllium	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	0	1	0	1	NA	NA	NA
48_2_5_106	MW-38	Appendix IV	Cadmium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_109	MW-38	Appendix IV	Chromium, Total	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_110	MW-38	Appendix IV	Cobalt	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_113	MW-38	Appendix IV	Fluoride (App IV)	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_115	MW-38	Appendix IV	Lead	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_116	MW-38	Appendix IV	Lithium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_117	MW-38	Appendix IV	Mercury	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
48_2_5_118	MW-38	Appendix IV	Molybdenum	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_121	MW-38	Appendix IV	Radium 226 and 228	pCi/L	50%	0	1	1	0	2	0.317	NA	NA	0	1	0	0	1	NA	NA	NA
48_2_5_122	MW-38	Appendix IV	Selenium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_5_125	MW-38	Appendix IV	Thallium	mg/L	100%	0	1	1	0	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
48_2_6_111	MW-38	Part 115	Copper	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_6_114	MW-38	Part 115	Iron	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA

(Table continues on next page)

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 7: Seasonality Tests (continued)**

ID	Well	Constituent Type	Constituent	Unit	% NDs	Full						Without Non-Detects									
						Sample Size					p-Value			Sample Size					p-Value		
						Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
48_2_6_119	MW-38	Part 115	Nickel	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_6_123	MW-38	Part 115	Silver	mg/L	50%	0	1	1	0	2	0.317	NA	NA	0	0	1	0	1	NA	NA	NA
48_2_6_129	MW-38	Part 115	Vanadium	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA
48_2_6_130	MW-38	Part 115	Zinc	mg/L	0%	0	1	1	0	2	0.317	NA	NA	0	1	1	0	2	0.317	NA	NA

\*\*\* p < 0.001, \*\* p < 0.01, \* p < 0.05



**Table 8: Trend Tests: Lognormal MLE and MK**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	Nonparametric	MK	0.00227	0.160	↔
11_2_4_105	MW-01R	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000779	0.905	↔
11_2_4_107	MW-01R	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000112	0.826	↔
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000383	0.607	↔
11_2_4_112	MW-01R	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000451	0.406	↔
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	Nonparametric	MK	-0.0000524	0.680	↔
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00181	0.352	↔
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000844	0.325	↔
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	Parametric	Lognormal MLE	-0.00120	0.201	↔
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000519	0.430	↔
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000540	0.258	↔
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.00162	0.034	↔
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00181	0.096	↔
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000146	0.872	↔
11_2_5_113	MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000451	0.406	↔
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	Parametric	Lognormal MLE	-0.000456	0.691	↔
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000260	0.695	↔
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	Parametric	Lognormal MLE	0.000517	0.664	↔
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000701	0.247	↔
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	Nonparametric	MK	0.000000177	0.113	↔
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00184	0.081	↔
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	Nonparametric	MK	0.000000880	0.631	↔
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	Parametric	Lognormal MLE	0.00276	0.005	↑
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	Nonparametric	MK	-0.000000187	0.302	↔
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00107	0.366	↔
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000403	0.006	↑
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00000935	0.941	↔
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Nonparametric	MK	0	0.817	↔
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	Nonparametric	MK	0.00143	0.079	↔
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.00000334	0.893	↔
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000214	0.066	↔
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	Parametric	Lognormal MLE	-0.000415	0.609	↔
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	Nonparametric	MK	-0.00000307	0.216	↔
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000285	0.320	↔
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.00179	0.054	↔
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00206	0.308	↔
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00123	0.387	↔
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Nonparametric	MK	0.00143	0.079	↔
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.000977	0.562	↔
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000539	0.842	↔
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00111	0.005	↓
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	Parametric	Lognormal MLE	-0.00153	0.095	↔
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000359	0.519	↔

(Table continues on next page)



**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000149	0.888	↔
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000451	0.850	↔
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00183	0.179	↔
12_2_6_129	MW-02	Part 115	Vanadium	mg/L	12	1	8%	Parametric	Lognormal MLE	0.000666	0.570	↔
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	Nonparametric	MK	-0.0000212	0.409	↔
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	Parametric	Lognormal MLE	-0.00470	0.137	↔
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000315	0.800	↔
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000111	0.475	↔
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00125	0.000	↓
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	Nonparametric	MK	-0.0000134	0.728	↔
13_2_4_120	MW-03	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.0000138	0.536	↔
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000704	0.531	↔
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Nonparametric	MK	-0.193	0.236	↔
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000212	0.665	↔
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000163	0.757	↔
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000366	0.347	↔
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000133	0.849	↔
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Nonparametric	MK	-0.0000134	0.728	↔
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000862	0.000	↓
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	Parametric	Lognormal MLE	-0.000892	0.050	↔
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	Parametric	Lognormal MLE	0.00126	0.060	↔
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00395	0.001	↓
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	Nonparametric	MK	-0.00000146	0.409	↔
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	Parametric	Lognormal MLE	-0.000922	0.105	↔
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000235	0.013	↔
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000207	0.114	↔
14_2_4_108	MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00126	0.000	↓
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	Nonparametric	MK	0.000343	0.062	↔
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.0000113	0.625	↔
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00364	0.120	↔
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000174	0.128	↔
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000173	0.719	↔
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	Nonparametric	MK	-0.0000380	0.197	↔
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000115	0.798	↔
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00157	0.007	↓
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Nonparametric	MK	0.000343	0.062	↔
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000378	0.874	↔
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	Parametric	Lognormal MLE	0.000592	0.478	↔
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	Parametric	Lognormal MLE	-0.00157	0.001	↓
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	Parametric	Lognormal MLE	0.00113	0.212	↔
14_2_6_114	MW-04	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000695	0.701	↔
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00106	0.255	↔
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000742	0.855	↔

(Table continues on next page)



**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000559	0.010	↔
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000207	0.210	↔
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00341	0.000	↓
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000297	0.091	↔
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	Nonparametric	MK	-0.0000533	0.891	↔
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	Parametric	Lognormal MLE	-0.00515	0.014	↔
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Nonparametric	MK	0	0.085	↔
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000503	0.118	↔
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000106	0.600	↔
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000862	0.030	↔
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000870	0.006	↓
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000297	0.091	↔
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000985	0.000	↓
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	Nonparametric	MK	0	0.710	↔
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000513	0.124	↔
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	Parametric	Lognormal MLE	-0.00163	0.004	↓
16_1_6_130	MW-06	Part 115	Zinc	mg/L	12	2	17%	Nonparametric	MK	-0.0000147	0.077	↔
17_1_3_127	MW-07	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000241	0.907	↔
17_1_4_105	MW-07	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000827	0.522	↔
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000133	0.264	↔
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Nonparametric	MK	0	0.211	↔
17_1_4_112	MW-07	Appendix III	Fluoride	mg/L	12	1	8%	Parametric	Lognormal MLE	0.000385	0.526	↔
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.0000336	0.267	↔
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000121	0.803	↔
17_1_4_126	MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Nonparametric	MK	0.209	0.052	↔
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000304	0.276	↔
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	Nonparametric	MK	0.0000465	0.140	↔
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000640	0.061	↔
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000169	0.384	↔
17_1_5_113	MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	1	8%	Parametric	Lognormal MLE	0.000385	0.526	↔
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000510	0.237	↔
17_1_5_121	MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	2	17%	Parametric	Lognormal MLE	-0.000436	0.458	↔
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000216	0.219	↔
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00115	0.013	↔
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000661	0.201	↔
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000432	0.000	↓
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000853	0.800	↔
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000758	0.139	↔
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	Nonparametric	MK	0.000374	0.193	↔
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	Parametric	Lognormal MLE	-0.00370	0.275	↔
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000851	0.575	↔
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000915	0.323	↔
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000297	0.107	↔

(Table continues on next page)



**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000687	0.039	↔
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000708	0.050	↔
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000758	0.139	↔
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000835	0.815	↔
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00145	0.189	↔
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	Parametric	Lognormal MLE	-0.00110	0.082	↔
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	Nonparametric	MK	-0.00000180	0.026	↔
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	Parametric	Lognormal MLE	0.00124	0.160	↔
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000767	0.030	↔
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	Nonparametric	MK	0.000000140	0.727	↔
18_1_6_130	MW-08	Part 115	Zinc	mg/L	12	3	25%	Nonparametric	MK	-0.000000764	0.489	↔
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000356	0.818	↔
19_2_4_105	MW-09	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00000815	0.954	↔
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000794	0.002	↑
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000779	0.041	↔
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000334	0.832	↔
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	Nonparametric	MK	-0.0000451	0.446	↔
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00242	0.005	↑
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000896	0.003	↑
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	Nonparametric	MK	0.000000145	0.622	↔
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00200	0.037	↔
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000465	0.171	↔
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000486	0.467	↔
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000334	0.832	↔
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000160	0.229	↔
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00106	0.013	↔
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	Parametric	Lognormal MLE	0.000578	0.156	↔
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000141	0.609	↔
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00304	0.002	↑
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	Parametric	Lognormal MLE	0.00152	0.234	↔
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000330	0.712	↔
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000969	0.068	↔
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00128	0.050	↔
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000727	0.172	↔
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.0000557	0.488	↔
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00124	0.230	↔
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Nonparametric	MK	0.724	0.266	↔
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00154	0.045	↔
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000292	0.627	↔
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000971	0.257	↔
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.00245	0.033	↔
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000727	0.172	↔
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000262	0.559	↔

(Table continues on next page)





**Table 8:** Trend Tests: Lognormal MLE and MK (continued)

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00188	0.009	↓
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	Parametric	Lognormal MLE	0.000599	0.232	↔
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000125	0.814	↔
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	Nonparametric	MK	0	0.355	↔
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	Parametric	Lognormal MLE	-0.00215	0.027	↔
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000157	0.988	↔
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000234	0.962	↔
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000715	0.033	↔
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000340	0.725	↔
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.0000230	0.200	↔
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	Parametric	Lognormal MLE	-0.00984	0.012	↔
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000666	0.850	↔
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000307	0.664	↔
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000165	0.742	↔
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	Nonparametric	MK	-0.00000160	0.783	↔
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000393	0.699	↔
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000340	0.725	↔
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000166	0.920	↔
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	Parametric	Lognormal MLE	0.000248	0.824	↔
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	Parametric	Lognormal MLE	-0.00166	0.009	↓
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	Parametric	Lognormal MLE	0.00110	0.157	↔
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	Nonparametric	MK	0	0.944	↔
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000244	0.664	↔
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000562	0.594	↔
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	Parametric	Lognormal MLE	-0.00718	0.011	↔
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000360	0.382	↔
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000356	0.425	↔
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000419	0.225	↔
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000100	0.840	↔
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.0000392	0.571	↔
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00150	0.000	↓
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000457	0.436	↔
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00145	0.000	↓
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000266	0.561	↔
22_2_5_103	MW-12	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00115	0.055	↔
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000850	0.309	↔
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	Parametric	Lognormal MLE	-0.000596	0.717	↔
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	Nonparametric	MK	0.000000488	0.284	↔
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000100	0.840	↔
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000500	0.929	↔
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000441	0.177	↔
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00298	0.026	↔
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000695	0.103	↔

(Table continues on next page)



**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000436	0.355	↔
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000301	0.636	↔
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	Parametric	Lognormal MLE	0.00217	0.121	↔
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00129	0.000	↑
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000178	0.533	↔
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000544	0.855	↔
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000607	0.816	↔
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.0000459	0.000	↑
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000121	0.757	↔
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000286	0.157	↔
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000648	0.076	↔
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000147	0.711	↔
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	Parametric	Lognormal MLE	-0.00413	0.007	↓
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00196	0.000	↓
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000607	0.816	↔
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000178	0.648	↔
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000443	0.251	↔
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000896	0.492	↔
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000150	0.805	↔
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000111	0.760	↔
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00147	0.000	↓
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00185	0.000	↓
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000152	0.865	↔
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000217	0.440	↔
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000228	0.131	↔
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00133	0.000	↓
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000453	0.003	↓
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.00000396	0.918	↔
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000191	0.566	↔
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000467	0.000	↓
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000910	0.863	↔
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000375	0.057	↔
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	Parametric	Lognormal MLE	0.000772	0.002	↑
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	Parametric	Lognormal MLE	-0.000705	0.306	↔
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.00301	0.000	↓
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000453	0.003	↓
29_1_5_116	MW-19	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000467	0.001	↓
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000754	0.139	↔
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	Parametric	Lognormal MLE	-0.000992	0.095	↔
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000634	0.013	↔
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	Nonparametric	MK	-0.00000165	0.490	↔
30_1_3_127	MW-20	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000154	0.294	↔
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	Nonparametric	MK	0	1.000	↔

(Table continues on next page)





**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	Nonparametric	MK	-0.00840	0.524	↔
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000286	0.341	↔
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	Nonparametric	MK	0.0000236	0.782	↔
30_1_4_120	MW-20	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.0000179	0.441	↔
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00158	0.071	↔
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000181	0.908	↔
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	Parametric	Lognormal MLE	0.000149	0.807	↔
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000256	0.288	↔
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000410	0.302	↔
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	Parametric	Lognormal MLE	0.000178	0.581	↔
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000786	0.000	↓
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Nonparametric	MK	0.0000236	0.782	↔
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000396	0.291	↔
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000420	0.299	↔
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000134	0.510	↔
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	Parametric	Lognormal MLE	0.00111	0.007	↑
30_1_6_114	MW-20	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000160	0.315	↔
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000562	0.001	↓
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	Nonparametric	MK	-0.0000204	0.022	↔
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	Nonparametric	MK	0	0.780	↔
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	Nonparametric	MK	-0.000342	0.360	↔
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	Nonparametric	MK	-0.0486	0.679	↔
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000638	0.147	↔
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000340	0.838	↔
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	Nonparametric	MK	-0.0000839	1.000	↔
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000143	0.946	↔
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000549	0.732	↔
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	Parametric	Lognormal MLE	0.000676	0.529	↔
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000963	0.011	↔
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000591	0.251	↔
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00102	0.242	↔
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000340	0.838	↔
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	Nonparametric	MK	-0.0000353	0.263	↔
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	Parametric	Lognormal MLE	-0.000240	0.830	↔
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.00125	0.213	↔
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	Parametric	Lognormal MLE	-0.000335	0.753	↔
41_1_4_105	MW-31	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000339	0.048	↔
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000149	0.935	↔
41_1_4_108	MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000206	0.094	↔
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000609	0.387	↔
41_1_4_120	MW-31	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	0.00000394	0.846	↔
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00107	0.034	↔
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000148	0.125	↔

(Table continues on next page)



**Table 8: Trend Tests: Lognormal MLE and MK (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000323	0.227	↔
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000199	0.523	↔
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000241	0.343	↔
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	Parametric	Lognormal MLE	-0.000691	0.128	↔
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.0000609	0.387	↔
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	Nonparametric	MK	-0.00000494	0.578	↔
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00128	0.001	↓
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	Parametric	Lognormal MLE	-0.000288	0.579	↔
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	Nonparametric	MK	-0.000000915	0.353	↔
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00535	0.000	↓
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000872	0.097	↔
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000286	0.284	↔
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000404	0.058	↔
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000374	0.000	↓
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000114	0.275	↔
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	Parametric	Lognormal MLE	-0.00000101	0.949	↔
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00263	0.046	↔
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000344	0.059	↔
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	Nonparametric	MK	0.000000239	0.216	↔
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000671	0.510	↔
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000276	0.769	↔
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000691	0.387	↔
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000114	0.275	↔
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000139	0.661	↔
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	Parametric	Lognormal MLE	0.000111	0.743	↔
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000656	0.011	↔
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	Nonparametric	MK	-0.000000885	0.038	↔
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	Nonparametric	MK	-0.000000426	0.630	↔

**Table 9: Trend Tests: Piecewise Linear-Linear**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
11_2_3_127	MW-01R	Additional Parameters	Total Suspended Solids	mg/L	11	4	36%	-0.00553	0.579	↔	0.00438	0.207	↔	2023-04-18	0.331	↔
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.181	0.492	↔	-0.172	0.581	↔	2023-08-08	0.111	↔
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	0.00506	0.310	↔	-0.000380	0.782	↔	2023-04-20	0.212	↔
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-1.06	0.516	↔	0.549	0.776	↔	2023-08-08	0.065	↔
11_2_4_126	MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.525	0.442	↔	-0.279	0.727	↔	2023-10-23	0.145	↔
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	0.00000362	0.326	↔	-0.00000121	0.087	↔	2023-04-17	0.392	↔
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	0.00000323	0.171	↔	-0.00000850	0.520	↔	2024-02-13	0.254	↔
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	0.000690	0.088	↔	-0.00105	0.306	↔	2023-12-27	0.401	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	0.00000343	0.373	↔	-0.00000634	0.181	↔	2023-08-08	0.438	↔
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	0.00000113	0.256	↔	-0.00000328	0.439	↔	2023-05-23	0.223	↔
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000276	0.061	↔	-0.0000649	0.410	↔	2024-02-13	0.407	↔
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000336	0.464	↔	-0.0000136	0.282	↔	2024-02-12	0.194	↔
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	0.00000779	0.325	↔	-0.00000491	0.360	↔	2023-06-28	0.209	↔
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	0.00350	0.418	↔	-0.00263	0.605	↔	2023-08-08	0.117	↔
11_2_5_118	MW-01R	Appendix IV	Molybdenum	mg/L	12	1	8%	0.00000590	0.139	↔	-0.0000187	0.401	↔	2024-02-13	0.312	↔
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	0.00000150	0.259	↔	-0.00000318	0.368	↔	2024-02-12	0.282	↔
11_2_5_125	MW-01R	Appendix IV	Thallium	mg/L	12	12	100%	0.00000176	0.252	↔	-0.00000226	0.593	↔	2023-04-29	0.267	↔
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	0.00000134	0.298	↔	-0.00000370	0.288	↔	2024-02-12	0.261	↔
11_2_6_114	MW-01R	Part 115	Iron	mg/L	12	0	0%	-0.00185	0.243	↔	0.000528	0.771	↔	2023-08-08	0.203	↔
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	0.0000269	0.070	↔	-0.0000719	0.369	↔	2024-02-13	0.398	↔
11_2_6_123	MW-01R	Part 115	Silver	mg/L	12	12	100%	0.00000200	0.362	↔	-0.00000193	0.392	↔	2023-02-08	0.192	↔
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	0.0000129	0.078	↔	-0.00000488	0.913	↔	2023-06-28	0.480	↔
12_2_3_127	MW-02	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.166	0.102	↔	0.132	0.604	↔	2023-10-24	0.323	↔
12_2_4_105	MW-02	Appendix III	Boron	mg/L	12	0	0%	0.0575	0.122	↔	0.0115	0.902	↔	2023-10-24	0.450	↔
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	-0.0398	0.657	↔	0.0319	0.765	↔	2023-08-14	0.038	↔
12_2_4_108	MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.444	0.626	↔	0.0701	0.140	↔	2023-02-07	0.285	↔
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	0.00553	0.457	↔	0.00124	0.887	↔	2023-08-08	0.165	↔
12_2_4_120	MW-02	Appendix III	pH (field)	su	12	0	0%	0.00301	0.210	↔	-0.000271	0.275	↔	2023-02-17	0.346	↔
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	-0.00298	0.632	↔	0.0106	0.177	↔	2023-09-20	0.373	↔
12_2_4_126	MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.0562	0.914	↔	1.84	0.217	↔	2024-02-01	0.360	↔
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	0.00000216	0.236	↔	-0.00000667	0.060	↔	2023-04-17	0.467	↔
12_2_5_102	MW-02	Appendix IV	Arsenic	mg/L	12	0	0%	0.0000115	0.514	↔	-0.0000129	0.120	↔	2023-05-23	0.383	↔
12_2_5_103	MW-02	Appendix IV	Barium	mg/L	12	0	0%	0.000204	0.408	↔	-0.00149	0.313	↔	2024-02-13	0.326	↔
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	0.00000220	0.715	↔	-0.00000105	0.170	↔	2023-10-23	0.325	↔
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	0.00000847	0.196	↔	-0.00000104	0.185	↔	2023-10-13	0.340	↔
12_2_5_109	MW-02	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000533	0.321	↔	0.000159	0.610	↔	2024-02-13	0.152	↔
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	0.0000595	0.578	↔	-0.00000327	0.533	↔	2023-01-12	0.102	↔
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00553	0.457	↔	0.00124	0.887	↔	2023-08-08	0.165	↔
12_2_5_115	MW-02	Appendix IV	Lead	mg/L	12	1	8%	0.0000308	0.634	↔	-0.00000403	0.898	↔	2023-01-24	0.113	↔
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	0.0000600	0.376	↔	-0.0000116	0.006	↓	2023-02-07	0.651	↔
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	-0.00413	0.135	↔	0.00303	0.665	↔	2024-02-01	0.443	↔
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	0.00000187	0.855	↔	0.00000202	0.740	↔	2024-02-13	0.096	↔
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	0.00000301	0.722	↔	-0.000000359	0.930	↔	2023-02-07	0.112	↔
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	0.0000268	0.432	↔	-0.000000126	0.938	↔	2023-01-08	0.158	↔
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	0.0370	0.515	↔	-0.00540	0.597	↔	2023-03-14	0.095	↔
12_2_6_119	MW-02	Part 115	Nickel	mg/L	12	0	0%	0.000216	0.598	↔	-0.0000325	0.129	↔	2023-01-30	0.291	↔
12_2_6_123	MW-02	Part 115	Silver	mg/L	12	12	100%	0.00000202	0.261	↔	-0.000000302	0.122	↔	2023-02-08	0.357	↔
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	-0.0547	0.371	↔	0.00231	0.891	↔	2023-03-15	0.237	↔
13_2_4_105	MW-03	Appendix III	Boron	mg/L	12	0	0%	0.000869	0.465	↔	-0.00335	0.306	↔	2024-02-08	0.182	↔
13_2_4_107	MW-03	Appendix III	Calcium	mg/L	12	0	0%	0.215	0.438	↔	-0.156	0.214	↔	2023-06-12	0.244	↔

(Table continues on next page)

**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.808	0.067	↔	-0.0981	0.190	↔	2023-04-12	0.778	↔
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	-0.00372	0.346	↔	0.000115	0.867	↔	2023-04-06	0.279	↔
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	3.73	0.044	↔	-0.905	0.012	↔	2023-04-17	0.718	↔
13_2_4_126	MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2.23	0.177	↔	-1.16	0.028	↔	2023-05-06	0.542	↔
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	0.0000211	0.218	↔	-0.00000593	0.227	↔	2023-05-11	0.341	↔
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000191	0.484	↔	0.00000839	0.293	↔	2023-05-17	0.187	↔
13_2_5_103	MW-03	Appendix IV	Barium	mg/L	12	0	0%	0.000237	0.506	↔	-0.000956	0.329	↔	2024-01-27	0.169	↔
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	0.00000836	0.789	↔	-0.000000295	0.847	↔	2023-02-06	0.058	↔
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	0.00000429	0.197	↔	-0.0000136	0.455	↔	2024-02-14	0.251	↔
13_2_5_109	MW-03	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000491	0.312	↔	0.00000355	0.781	↔	2023-11-15	0.156	↔
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	0.0000151	0.375	↔	-0.0000171	0.401	↔	2023-10-23	0.182	↔
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00372	0.346	↔	0.000115	0.867	↔	2023-04-06	0.279	↔
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	0.0000112	0.347	↔	-0.0000135	0.040	↔	2023-02-06	0.524	↔
13_2_5_116	MW-03	Appendix IV	Lithium	mg/L	12	0	0%	-0.0000742	0.502	↔	-0.0000266	0.199	↔	2023-04-17	0.487	↔
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	0.00000139	0.089	↔	-0.00000161	0.431	↔	2023-10-24	0.360	↔
13_2_5_118	MW-03	Appendix IV	Molybdenum	mg/L	12	9	75%	0.0000160	0.710	↔	-0.0000288	0.192	↔	2023-02-06	0.220	↔
13_2_5_121	MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	1	8%	-0.00324	0.509	↔	-0.000748	0.401	↔	2023-04-17	0.376	↔
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	-0.0000102	0.695	↔	0.00000398	0.596	↔	2023-05-22	0.061	↔
13_2_5_125	MW-03	Appendix IV	Thallium	mg/L	12	11	92%	0.0000423	0.100	↔	-0.00000265	0.293	↔	2023-02-20	0.513	↔
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	0.0000352	0.810	↔	0.00000248	0.730	↔	2023-02-06	0.098	↔
13_2_6_114	MW-03	Part 115	Iron	mg/L	12	0	0%	-0.0220	0.009	↓	0.000595	0.839	↔	2023-06-10	0.780	↔
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	-0.0000407	0.281	↔	0.00000316	0.976	↔	2023-04-25	0.282	↔
13_2_6_123	MW-03	Part 115	Silver	mg/L	12	12	100%	0.0000199	0.365	↔	-0.00000190	0.401	↔	2023-02-07	0.187	↔
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	-0.0000252	0.606	↔	0.00000357	0.297	↔	2023-07-26	0.193	↔
14_2_3_127	MW-04	Additional Parameters	Total Suspended Solids	mg/L	11	1	9%	0.00845	0.855	↔	-0.00744	0.392	↔	2023-04-18	0.123	↔
14_2_4_105	MW-04	Appendix III	Boron	mg/L	12	0	0%	-0.00270	0.814	↔	0.00114	0.068	↔	2023-01-27	0.379	↔
14_2_4_107	MW-04	Appendix III	Calcium	mg/L	12	0	0%	1.35	0.330	↔	0.0433	0.516	↔	2023-01-06	0.317	↔
14_2_4_112	MW-04	Appendix III	Fluoride	mg/L	12	0	0%	0.00183	0.031	↔	-0.00127	0.521	↔	2023-10-24	0.494	↔
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.000860	0.442	↔	-0.000396	0.232	↔	2023-05-22	0.230	↔
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2.87	0.175	↔	0.315	0.390	↔	2023-04-16	0.635	↔
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.0967	0.813	↔	1.45	0.539	↔	2024-02-14	0.233	↔
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	0.0000208	0.128	↔	-0.00000639	0.269	↔	2023-05-23	0.360	↔
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000232	0.368	↔	0.00000518	0.481	↔	2023-05-22	0.226	↔
14_2_5_103	MW-04	Appendix IV	Barium	mg/L	12	0	0%	-0.000862	0.529	↔	-0.0000599	0.806	↔	2023-04-18	0.233	↔
14_2_5_104	MW-04	Appendix IV	Beryllium	mg/L	12	11	92%	-0.0000000000000000000115	0.116	↔	0.00000137	0.000	↑	2024-04-06	1.000	↔
14_2_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	0.00000404	0.373	↔	-0.0000129	0.299	↔	2024-02-13	0.219	↔
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000338	0.277	↔	0.0000123	0.479	↔	2024-02-14	0.206	↔
14_2_5_110	MW-04	Appendix IV	Cobalt	mg/L	12	0	0%	-0.00000200	0.866	↔	-0.0000103	0.227	↔	2023-08-06	0.357	↔
14_2_5_113	MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00183	0.031	↔	-0.00127	0.521	↔	2023-10-24	0.494	↔
14_2_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	0.00000705	0.630	↔	-0.00000820	0.268	↔	2023-02-06	0.211	↔
14_2_5_116	MW-04	Appendix IV	Lithium	mg/L	12	0	0%	0.0000419	0.479	↔	-0.0000224	0.578	↔	2023-07-18	0.103	↔
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.00000295	0.713	↔	-0.00000725	0.753	↔	2023-04-19	0.032	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
14_2_5_121	MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.000836	0.664	↔	-0.00138	0.129	↔	2023-06-27	0.498	↔
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	-0.00000725	0.294	↔	0.00000293	0.332	↔	2023-05-23	0.225	↔
14_2_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	0.00000313	0.642	↔	-0.000000270	0.934	↔	2023-02-06	0.175	↔
14_2_6_111	MW-04	Part 115	Copper	mg/L	12	10	83%	0.00000147	0.152	↔	-0.00000183	0.738	↔	2024-02-19	0.283	↔
14_2_6_119	MW-04	Part 115	Nickel	mg/L	12	0	0%	0.0000793	0.498	↔	-0.0000180	0.880	↔	2023-03-12	0.226	↔
14_2_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	0.0000199	0.365	↔	-0.00000189	0.402	↔	2023-02-07	0.187	↔
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	0.00000000000000132	1.000	↔	0.00000285	0.000	↑	2024-01-17	0.925	↔
16_1_3_127	MW-06	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.0434	0.150	↔	-0.265	0.127	↔	2024-03-11	0.439	↔
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	0.521	0.416	↔	-0.00624	0.921	↔	2023-03-13	0.331	↔
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.727	0.072	↔	-0.128	0.007	↓	2023-03-10	0.883	↔
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	-0.00287	0.365	↔	-0.000123	0.694	↔	2023-02-21	0.342	↔
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	-0.00463	0.676	↔	0.000641	0.231	↔	2023-02-05	0.210	↔
16_1_4_124	MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	2	17%	-0.0380	0.118	↔	0.0000336	1.000	↔	2023-10-24	0.411	↔
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.375	0.080	↔	0.558	0.301	↔	2024-01-26	0.481	↔
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	0.00000435	0.491	↔	-0.00000166	0.336	↔	2024-02-12	0.165	↔
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000429	0.520	↔	0.000000598	0.077	↔	2023-01-24	0.368	↔
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	-0.00241	0.270	↔	0.000695	0.091	↔	2023-04-17	0.418	↔
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	-0.0000000323	0.012	↔	0.00000000297	0.539	↔	2023-01-25	0.867	↔
16_1_5_106	MW-06	Appendix IV	Cadmium	mg/L	12	12	100%	0.00000404	0.234	↔	-0.00000128	0.495	↔	2024-02-13	0.219	↔
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000171	0.446	↔	-0.00000199	0.079	↔	2023-01-08	0.371	↔
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000275	0.293	↔	-0.00000645	0.030	↔	2023-02-10	0.514	↔
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00287	0.365	↔	-0.000123	0.694	↔	2023-02-21	0.342	↔
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	0.00000586	0.692	↔	-0.00000120	0.106	↔	2023-02-05	0.305	↔
16_1_5_116	MW-06	Appendix IV	Lithium	mg/L	12	0	0%	-0.000319	0.300	↔	-0.000132	0.147	↔	2023-04-18	0.585	↔
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	0.00000407	0.609	↔	-0.00000252	0.282	↔	2023-04-18	0.191	↔
16_1_5_121	MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.00391	0.614	↔	-0.00108	0.186	↔	2023-03-13	0.232	↔
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	0.00000316	0.108	↔	-0.00000859	0.415	↔	2024-02-13	0.335	↔
16_1_5_125	MW-06	Appendix IV	Thallium	mg/L	12	12	100%	0.00000313	0.364	↔	-0.00000292	0.396	↔	2023-02-06	0.189	↔
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	-0.00000000000000547	1.000	↔	0.000000787	0.027	↔	2024-01-03	0.744	↔
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	0.0211	0.098	↔	-0.0882	0.208	↔	2024-04-06	0.418	↔
16_1_6_119	MW-06	Part 115	Nickel	mg/L	12	5	42%	-0.00000258	0.080	↔	-0.00000410	0.297	↔	2023-04-18	0.663	↔
16_1_6_123	MW-06	Part 115	Silver	mg/L	12	12	100%	0.00000205	0.639	↔	-0.000000192	0.353	↔	2023-02-05	0.188	↔
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	-0.000000208	0.192	↔	0.000000196	0.046	↔	2024-03-16	0.569	↔
17_1_4_107	MW-07	Appendix III	Calcium	mg/L	12	0	0%	0.00276	0.982	↔	0.0231	0.506	↔	2023-04-18	0.107	↔
17_1_4_108	MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0107	0.002	↓	0.00281	0.022	↔	2023-06-04	0.822	↔
17_1_4_120	MW-07	Appendix III	pH (field)	su	12	0	0%	-0.00209	0.277	↔	0.000514	0.140	↔	2023-03-13	0.337	↔
17_1_4_124	MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.0983	0.183	↔	0.0212	0.298	↔	2023-04-22	0.321	↔
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	0.000000279	0.001	↑	0.0000000000000406	1.000	↔	2023-07-09	0.890	↔
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	-0.000000379	0.477	↔	0.000000127	0.191	↔	2023-03-23	0.247	↔
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	-0.000202	0.662	↔	0.000116	0.174	↔	2023-04-12	0.240	↔
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	0.0000000201	0.384	↔	-0.000000198	0.468	↔	2023-08-07	0.178	↔
17_1_5_106	MW-07	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000221	0.006	↑	0.00000000000000396	1.000	↔	2023-07-30	0.818	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
17_1_5_109	MW-07	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.000000726	0.535	↔	0.00000400	0.000	↑	2024-04-01	0.898	↔
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000290	0.143	↔	-0.00000484	0.027	↔	2023-03-05	0.593	↔
17_1_5_115	MW-07	Appendix IV	Lead	mg/L	12	12	100%	-0.000000618	0.006	↓	-0.00000000000110	1.000	↔	2023-07-30	0.818	↔
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	0.0000111	0.667	↔	-0.00000568	0.228	↔	2023-04-17	0.193	↔
17_1_5_118	MW-07	Appendix IV	Molybdenum	mg/L	12	12	100%	-0.00000190	0.006	↓	-0.000000000000340	1.000	↔	2023-07-30	0.818	↔
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	-0.000000617	0.055	↔	0.0000000558	0.772	↔	2023-07-04	0.528	↔
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	0.000000130	0.100	↔	-0.0000000671	0.731	↔	2023-10-24	0.347	↔
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	0.0147	0.321	↔	-0.000625	0.920	↔	2023-05-23	0.209	↔
17_1_6_129	MW-07	Part 115	Vanadium	mg/L	12	11	92%	-0.00000000000000000144	0.111	↔	0.00000170	0.000	↑	2024-04-07	1.000	↔
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.189	0.056	↔	-0.00136	0.956	↔	2023-05-06	0.648	↔
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	0.0743	0.217	↔	-0.00146	0.586	↔	2023-02-06	0.612	↔
18_1_4_107	MW-08	Appendix III	Calcium	mg/L	12	0	0%	-0.105	0.031	↔	-0.0258	0.600	↔	2023-08-08	0.699	↔
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.184	0.369	↔	-0.00992	0.300	↔	2023-02-06	0.425	↔
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	0.0102	0.055	↔	-0.0000433	0.926	↔	2023-02-07	0.562	↔
18_1_4_120	MW-08	Appendix III	pH (field)	su	12	0	0%	0.00567	0.218	↔	-0.000221	0.773	↔	2023-03-15	0.302	↔
18_1_4_124	MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	4	33%	-0.0919	0.129	↔	0.0115	0.636	↔	2023-06-26	0.471	↔
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.172	0.417	↔	0.163	0.770	↔	2023-11-11	0.097	↔
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	0.00000152	0.249	↔	-0.000000180	0.173	↔	2023-02-08	0.326	↔
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	0.000522	0.334	↔	-0.0000131	0.592	↔	2023-02-06	0.475	↔
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	-0.000812	0.047	↔	0.00196	0.347	↔	2024-02-19	0.452	↔
18_1_5_106	MW-08	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000222	0.006	↑	0.000000000000133	1.000	↔	2023-07-30	0.819	↔
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.00000743	0.356	↔	-0.00000110	0.014	↔	2023-02-03	0.588	↔
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000455	0.181	↔	-0.00000630	0.002	↓	2023-02-06	0.750	↔
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.0102	0.055	↔	-0.0000433	0.926	↔	2023-02-07	0.562	↔
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	-0.00000130	0.294	↔	0.00000000246	0.998	↔	2023-07-27	0.289	↔
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	0.00134	0.087	↔	-0.0000686	0.064	↔	2023-01-19	0.609	↔
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.00000818	0.166	↔	0.00000144	0.553	↔	2023-06-15	0.369	↔
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.00523	0.783	↔	-0.000787	0.381	↔	2023-02-06	0.233	↔
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	-0.000000326	0.513	↔	0.0000000133	0.950	↔	2023-06-26	0.145	↔
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	-0.000000150	0.700	↔	0.000000950	0.373	↔	2023-12-16	0.229	↔
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	-0.113	0.039	↔	0.00150	0.857	↔	2023-04-10	0.735	↔
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	-0.000000311	0.935	↔	0.00000344	0.208	↔	2023-07-23	0.341	↔
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.0218	0.172	↔	0.0651	0.138	↔	2023-12-23	0.417	↔
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	1.30	0.114	↔	0.152	0.281	↔	2023-03-14	0.619	↔
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0252	0.029	↔	0.0523	0.002	↑	2023-09-01	0.857	↔
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	0.00295	0.024	↔	-0.00135	0.102	↔	2023-06-28	0.583	↔
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	0.00148	0.300	↔	-0.000357	0.175	↔	2023-03-14	0.301	↔
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	3.51	0.111	↔	0.243	0.508	↔	2023-04-08	0.659	↔
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	4.73	0.110	↔	0.372	0.453	↔	2023-04-15	0.692	↔
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	0.00000168	0.323	↔	-0.000000260	0.585	↔	2023-04-18	0.182	↔
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000518	0.488	↔	0.00000169	0.223	↔	2023-04-17	0.233	↔
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	-0.00789	0.164	↔	0.0000763	0.960	↔	2023-04-20	0.392	↔

(Table continues on next page)





**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	0.0000000844	0.703	↔	0.0000000190	0.765	↔	2023-05-22	0.115	↔
19_2_5_106	MW-09	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000482	0.157	↔	-0.00000135	0.471	↔	2024-02-13	0.274	↔
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000328	0.507	↔	-0.00000589	0.256	↔	2023-03-12	0.236	↔
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00295	0.024	↔	-0.00135	0.102	↔	2023-06-28	0.583	↔
19_2_5_115	MW-09	Appendix IV	Lead	mg/L	12	12	100%	0.00000618	0.692	↔	-0.00000734	0.349	↔	2023-02-05	0.153	↔
19_2_5_117	MW-09	Appendix IV	Mercury	mg/L	12	10	83%	0.00000450	0.126	↔	-0.00000245	0.740	↔	2023-10-26	0.311	↔
19_2_5_118	MW-09	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000854	0.070	↔	-0.00000899	0.941	↔	2023-05-22	0.669	↔
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	0.000338	0.216	↔	-0.000733	0.626	↔	2024-02-13	0.207	↔
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	-0.00000325	0.469	↔	0.00000246	0.080	↔	2023-05-22	0.373	↔
19_2_5_125	MW-09	Appendix IV	Thallium	mg/L	12	12	100%	0.00000242	0.506	↔	0.000000399	0.913	↔	2023-02-06	0.125	↔
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	0.000000104	0.588	↔	0.0000100	0.000	↑	2024-04-03	0.958	↔
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	0.0457	0.592	↔	-0.00236	0.784	↔	2023-03-13	0.151	↔
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	-0.00000210	0.578	↔	0.0000341	0.000	↑	2023-10-21	0.943	↔
19_2_6_123	MW-09	Part 115	Silver	mg/L	12	12	100%	0.000000953	0.296	↔	-0.000000178	0.488	↔	2023-04-18	0.203	↔
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	-0.00191	0.792	↔	0.139	0.010	↔	2024-03-20	0.798	↔
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	0.0353	0.472	↔	-0.0361	0.291	↔	2023-08-07	0.191	↔
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	-0.297	0.553	↔	1.08	0.094	↔	2023-09-26	0.480	↔
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	0.00605	0.446	↔	-0.0104	0.280	↔	2023-08-08	0.323	↔
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	0.00303	0.465	↔	-0.00161	0.191	↔	2023-05-22	0.248	↔
20_3_4_124	MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-1.78	0.285	↔	3.21	0.121	↔	2023-08-08	0.518	↔
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.542	0.693	↔	4.64	0.230	↔	2023-10-23	0.552	↔
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	0.000000395	0.522	↔	-0.00000164	0.334	↔	2024-02-12	0.158	↔
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	0.000000659	0.397	↔	0.00000347	0.437	↔	2024-02-29	0.422	↔
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	-0.00157	0.354	↔	0.000155	0.600	↔	2023-04-09	0.258	↔
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	0.000000539	0.143	↔	-0.000000227	0.157	↔	2023-05-23	0.389	↔
20_3_5_106	MW-10	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000406	0.371	↔	-0.00000129	0.297	↔	2024-02-12	0.220	↔
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000122	0.217	↔	-0.0000137	0.245	↔	2023-08-08	0.357	↔
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	0.00000433	0.151	↔	-0.00000238	0.081	↔	2023-05-23	0.460	↔
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00605	0.446	↔	-0.0104	0.280	↔	2023-08-08	0.323	↔
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	0.00000961	0.263	↔	-0.00000123	0.163	↔	2023-02-06	0.323	↔
20_3_5_116	MW-10	Appendix IV	Lithium	mg/L	12	0	0%	0.00349	0.582	↔	-0.000763	0.248	↔	2023-03-13	0.208	↔
20_3_5_117	MW-10	Appendix IV	Mercury	mg/L	12	11	92%	-0.00000000000255	1.000	↔	0.00000171	0.401	↔	2023-07-06	0.205	↔
20_3_5_118	MW-10	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000102	0.012	↔	0.0000218	0.261	↔	2024-03-02	0.620	↔
20_3_5_121	MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	10	83%	0.00397	0.678	↔	-0.000564	0.234	↔	2023-02-05	0.204	↔
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	0.000000724	0.159	↔	-0.00000190	0.171	↔	2024-02-12	0.404	↔
20_3_5_125	MW-10	Appendix IV	Thallium	mg/L	12	12	100%	0.00000361	0.599	↔	-0.000000137	0.674	↔	2023-02-05	0.193	↔
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	0.00000155	0.635	↔	-0.000000916	0.338	↔	2023-05-22	0.138	↔
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	0.0217	0.563	↔	-0.00207	0.582	↔	2023-03-13	0.165	↔
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	0.00000257	0.297	↔	-0.00000138	0.208	↔	2023-05-23	0.289	↔
20_3_6_123	MW-10	Part 115	Silver	mg/L	12	12	100%	0.00000204	0.631	↔	-0.000000190	0.358	↔	2023-02-05	0.186	↔
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	0.00000115	0.593	↔	-0.000000216	0.723	↔	2023-05-22	0.093	↔
20_3_6_130	MW-10	Part 115	Zinc	mg/L	12	5	42%	-0.0000260	0.354	↔	-0.00000213	0.909	↔	2023-07-02	0.225	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
21_2_3_127	MW-11	Additional Parameters	Total Suspended Solids	mg/L	11	0	0%	-0.158	0.161	↔	-0.000630	0.975	↔	2023-04-06	0.547	↔
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	-0.0697	0.379	↔	0.00655	0.421	↔	2023-03-13	0.310	↔
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	1.30	0.402	↔	-0.187	0.253	↔	2023-03-13	0.302	↔
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.282	0.349	↔	-0.0162	0.596	↔	2023-03-13	0.470	↔
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	-0.00699	0.182	↔	0.000811	0.372	↔	2023-03-14	0.314	↔
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	1.22	0.349	↔	-0.315	0.038	↔	2023-03-13	0.482	↔
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	2.53	0.361	↔	-0.545	0.486	↔	2023-04-29	0.182	↔
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	-0.00000472	0.648	↔	0.00000104	0.932	↔	2023-10-23	0.067	↔
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000123	0.306	↔	0.000000962	0.646	↔	2023-04-07	0.295	↔
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	-0.00325	0.276	↔	0.000462	0.382	↔	2023-04-17	0.353	↔
21_2_5_104	MW-11	Appendix IV	Beryllium	mg/L	12	10	83%	-0.000000960	0.908	↔	0.000000375	0.319	↔	2023-06-19	0.190	↔
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	-0.00000130	0.782	↔	-0.00000159	0.742	↔	2023-03-13	0.096	↔
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000221	0.324	↔	0.0000000212	0.997	↔	2023-04-18	0.229	↔
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	-0.00000153	0.813	↔	0.00000115	0.538	↔	2023-05-22	0.058	↔
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00699	0.182	↔	0.000811	0.372	↔	2023-03-14	0.314	↔
21_2_5_115	MW-11	Appendix IV	Lead	mg/L	12	3	25%	-0.000210	0.423	↔	-0.00000313	0.946	↔	2023-04-10	0.259	↔
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	-0.00110	0.206	↔	0.0000616	0.678	↔	2023-03-16	0.307	↔
21_2_5_117	MW-11	Appendix IV	Mercury	mg/L	12	11	92%	0.00000000000586	1.000	↔	0.000000919	0.405	↔	2023-07-05	0.204	↔
21_2_5_118	MW-11	Appendix IV	Molybdenum	mg/L	12	2	17%	-0.0000132	0.238	↔	0.00000245	0.223	↔	2023-04-08	0.361	↔
21_2_5_121	MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.000159	0.921	↔	-0.00201	0.308	↔	2023-08-08	0.369	↔
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	-0.000000391	0.801	↔	0.000000516	0.264	↔	2023-05-22	0.184	↔
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	0.00000301	0.302	↔	-0.000000364	0.233	↔	2023-02-08	0.269	↔
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	-0.0000553	0.455	↔	0.000000966	0.941	↔	2023-04-12	0.221	↔
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	-0.0371	0.245	↔	0.00762	0.189	↔	2023-04-02	0.347	↔
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	-0.0000256	0.437	↔	0.00000153	0.792	↔	2023-04-17	0.232	↔
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	0.000000638	0.441	↔	-0.000000194	0.413	↔	2023-04-18	0.149	↔
21_2_6_129	MW-11	Part 115	Vanadium	mg/L	12	10	83%	-0.00000000000278	1.000	↔	0.00000233	0.405	↔	2023-07-05	0.204	↔
21_2_6_130	MW-11	Part 115	Zinc	mg/L	12	4	33%	-0.000482	0.169	↔	-0.0000265	0.656	↔	2023-03-14	0.453	↔
22_2_4_107	MW-12	Appendix III	Calcium	mg/L	12	0	0%	0.0513	0.586	↔	-0.0828	0.464	↔	2023-09-06	0.133	↔
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0288	0.669	↔	-0.00310	0.797	↔	2023-04-18	0.139	↔
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	-0.00163	0.106	↔	0.000333	0.233	↔	2023-05-02	0.446	↔
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	0.000929	0.342	↔	-0.00450	0.425	↔	2024-03-21	0.178	↔
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.371	0.246	↔	-0.118	0.056	↔	2023-04-11	0.721	↔
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.307	0.200	↔	1.70	0.221	↔	2024-03-19	0.325	↔
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	-0.00000139	0.068	↔	0.000000126	0.946	↔	2023-11-28	0.532	↔
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	0.00000334	0.347	↔	-0.00000117	0.776	↔	2023-08-07	0.132	↔
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	-0.000000913	0.607	↔	0.000000942	0.441	↔	2023-07-01	0.131	↔
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	0.00000124	0.247	↔	-0.000000268	0.702	↔	2023-08-06	0.290	↔
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00163	0.106	↔	0.000333	0.233	↔	2023-05-02	0.446	↔
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	-0.000000237	0.460	↔	0.000000797	0.060	↔	2023-10-12	0.503	↔
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	0.00000965	0.219	↔	-0.00000435	0.404	↔	2023-06-27	0.243	↔
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	-0.000000000000325	1.000	↔	0.0000000694	0.396	↔	2023-07-07	0.207	↔

(Table continues on next page)





**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	0.00000326	0.649	↔	-0.0000114	0.203	↔	2023-10-22	0.273	↔
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	0.00197	0.230	↔	-0.000537	0.252	↔	2023-04-25	0.298	↔
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	-0.00000742	0.040	↔	0.00000107	0.619	↔	2023-07-31	0.614	↔
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	0.00000431	0.264	↔	-0.00000130	0.845	↔	2023-04-18	0.422	↔
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	0.00000150	0.740	↔	-0.00000250	0.426	↔	2023-08-06	0.113	↔
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	0.00000240	0.430	↔	0.000000328	0.704	↔	2023-05-22	0.309	↔
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	-0.0404	0.875	↔	0.0937	0.217	↔	2023-05-08	0.251	↔
28_1_4_105	MW-18	Appendix III	Boron	mg/L	12	0	0%	-0.00173	0.644	↔	0.00439	0.000	↑	2023-03-17	0.904	↔
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	-1.25	0.044	↔	0.172	0.097	↔	2023-04-17	0.700	↔
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0854	0.322	↔	0.00884	0.314	↔	2023-03-10	0.348	↔
28_1_4_112	MW-18	Appendix III	Fluoride	mg/L	12	0	0%	0.00514	0.166	↔	-0.00304	0.217	↔	2023-08-07	0.362	↔
28_1_4_120	MW-18	Appendix III	pH (field)	su	12	0	0%	0.00114	0.165	↔	0.000222	0.126	↔	2023-03-17	0.661	↔
28_1_4_124	MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-8.98	0.152	↔	0.333	0.252	↔	2023-02-07	0.676	↔
28_1_4_126	MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-5.50	0.008	↓	0.181	0.532	↔	2023-03-15	0.748	↔
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	0.000000356	0.522	↔	-0.00000154	0.316	↔	2024-02-12	0.166	↔
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	0.0000236	0.325	↔	-0.0000132	0.634	↔	2023-08-12	0.145	↔
28_1_5_104	MW-18	Appendix IV	Beryllium	mg/L	12	11	92%	0.0000000000000000333	1.000	↔	0.00000000708	0.387	↔	2023-07-12	0.210	↔
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	-0.0000000112	0.973	↔	-0.00000116	0.559	↔	2024-02-13	0.192	↔
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	0.000000227	0.106	↔	-0.000000289	0.605	↔	2023-05-22	0.397	↔
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	-0.0000278	0.003	↓	-0.00000156	0.205	↔	2023-04-17	0.926	↔
28_1_5_113	MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00514	0.166	↔	-0.00304	0.217	↔	2023-08-07	0.362	↔
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	0.00000461	0.695	↔	-0.000000729	0.214	↔	2023-02-07	0.210	↔
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	-0.000206	0.272	↔	0.00000727	0.693	↔	2023-02-08	0.234	↔
28_1_5_118	MW-18	Appendix IV	Molybdenum	mg/L	12	0	0%	0.0000286	0.129	↔	-0.00000938	0.652	↔	2023-08-08	0.309	↔
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	0.00305	0.270	↔	-0.000854	0.095	↔	2023-04-17	0.416	↔
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	0.000000406	0.990	↔	0.00000174	0.444	↔	2023-06-27	0.187	↔
28_1_5_125	MW-18	Appendix IV	Thallium	mg/L	12	12	100%	0.00000207	0.742	↔	-0.00000150	0.618	↔	2023-02-07	0.090	↔
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	0.00000255	0.143	↔	-0.00000168	0.150	↔	2023-08-07	0.404	↔
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	-0.0455	0.002	↓	0.00495	0.024	↔	2023-03-22	0.833	↔
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	-0.0000425	0.012	↔	-0.00000325	0.195	↔	2023-04-17	0.884	↔
28_1_6_123	MW-18	Part 115	Silver	mg/L	12	12	100%	0.00000136	0.742	↔	-0.000000981	0.618	↔	2023-02-07	0.090	↔
28_1_6_130	MW-18	Part 115	Zinc	mg/L	12	0	0%	-0.000236	0.087	↔	-0.0000490	0.188	↔	2023-04-18	0.693	↔
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	-0.0176	0.301	↔	-0.0000142	0.985	↔	2023-01-07	0.264	↔
29_1_4_107	MW-19	Appendix III	Calcium	mg/L	12	0	0%	-0.471	0.023	↔	0.149	0.479	↔	2023-08-07	0.550	↔
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.244	0.027	↔	-0.0230	0.188	↔	2023-04-14	0.843	↔
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	-0.00435	0.323	↔	-0.000560	0.219	↔	2023-02-17	0.514	↔
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	0.00104	0.565	↔	-0.000367	0.475	↔	2023-05-16	0.112	↔
29_1_4_124	MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-1.27	0.321	↔	0.200	0.812	↔	2023-06-28	0.174	↔
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-2.47	0.006	↓	0.00323	0.994	↔	2023-07-15	0.796	↔
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	0.00000267	0.237	↔	-0.000000568	0.364	↔	2023-04-18	0.258	↔
29_1_5_102	MW-19	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000138	0.579	↔	0.00000162	0.709	↔	2023-03-13	0.067	↔
29_1_5_103	MW-19	Appendix IV	Barium	mg/L	12	0	0%	-0.0000950	0.163	↔	-0.00000139	0.902	↔	2023-04-06	0.528	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	0.00000915	0.732	↔	-0.00000914	0.453	↔	2023-02-07	0.123	↔
29_1_5_106	MW-19	Appendix IV	Cadmium	mg/L	12	12	100%	0.00000407	0.371	↔	-0.00000129	0.297	↔	2024-02-12	0.221	↔
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	-0.00000154	0.290	↔	-0.000000940	0.877	↔	2023-05-22	0.281	↔
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	0.00000676	0.398	↔	-0.00000123	0.007	↓	2023-01-13	0.643	↔
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00435	0.323	↔	-0.000560	0.219	↔	2023-02-17	0.514	↔
29_1_5_115	MW-19	Appendix IV	Lead	mg/L	12	12	100%	0.00000948	0.272	↔	-0.00000126	0.162	↔	2023-02-08	0.321	↔
29_1_5_118	MW-19	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000588	0.640	↔	-0.00000430	0.452	↔	2023-01-17	0.236	↔
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.00635	0.189	↔	-0.00105	0.048	↔	2023-02-20	0.492	↔
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	-0.00000150	0.367	↔	0.000000518	0.962	↔	2023-08-03	0.228	↔
29_1_5_125	MW-19	Appendix IV	Thallium	mg/L	12	12	100%	0.00000358	0.320	↔	-0.000000143	0.687	↔	2023-02-08	0.200	↔
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	-0.00000666	0.459	↔	0.00000100	0.675	↔	2023-12-18	0.094	↔
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	-0.0231	0.575	↔	0.0169	0.041	↔	2023-04-04	0.471	↔
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	-0.00000424	0.008	↓	0.000144	0.000	↑	2024-03-25	0.991	↔
29_1_6_123	MW-19	Part 115	Silver	mg/L	12	12	100%	0.00000203	0.652	↔	-0.000000193	0.349	↔	2023-02-07	0.192	↔
29_1_6_129	MW-19	Part 115	Vanadium	mg/L	12	12	100%	-0.00000248	0.580	↔	-0.0000000000223	1.000	↔	2023-08-03	0.102	↔
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	-0.00000628	0.395	↔	0.0000000000186	1.000	↔	2023-09-23	0.205	↔
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	-0.178	0.259	↔	0.0636	0.542	↔	2023-06-28	0.200	↔
30_1_4_108	MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.0883	0.495	↔	-0.0502	0.189	↔	2023-05-20	0.244	↔
30_1_4_112	MW-20	Appendix III	Fluoride	mg/L	12	0	0%	-0.00829	0.000	↓	0.000101	0.030	↔	2023-01-09	0.964	↔
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	1.03	0.447	↔	-0.121	0.076	↔	2023-01-16	0.375	↔
30_1_4_126	MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.131	0.729	↔	0.134	0.765	↔	2023-08-07	0.034	↔
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	0.000000234	0.177	↔	-0.000000928	0.413	↔	2023-07-29	0.319	↔
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	0.00000124	0.388	↔	-0.000000200	0.834	↔	2023-08-06	0.190	↔
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	-0.00682	0.001	↓	0.000184	0.186	↔	2023-02-14	0.891	↔
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	-0.0000000000000204	1.000	↔	0.0000000407	0.448	↔	2023-03-23	0.116	↔
30_1_5_106	MW-20	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000221	0.006	↑	-0.00000000000102	1.000	↔	2023-07-31	0.819	↔
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.000000709	0.345	↔	-0.0000000217	0.767	↔	2023-02-07	0.184	↔
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000338	0.563	↔	-0.00000120	0.002	↓	2023-02-06	0.737	↔
30_1_5_113	MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00829	0.000	↓	0.000101	0.030	↔	2023-01-09	0.964	↔
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	0.00000299	0.412	↔	-0.00000245	0.143	↔	2023-06-21	0.305	↔
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	-0.0000352	0.395	↔	0.000110	0.641	↔	2024-03-28	0.126	↔
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	0.00000406	0.219	↔	-0.00000183	0.403	↔	2023-08-06	0.290	↔
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	-0.0185	0.049	↔	0.000264	0.494	↔	2023-01-16	0.676	↔
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	-0.000000524	0.111	↔	0.000000569	0.782	↔	2023-07-11	0.425	↔
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	-0.0000000000000102	1.000	↔	0.0000000203	0.448	↔	2023-03-23	0.116	↔
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	-0.00000287	0.480	↔	0.000000445	0.038	↔	2023-01-07	0.471	↔
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	-0.00000755	0.028	↔	0.00000964	0.241	↔	2024-02-12	0.672	↔
40_1_3_127	MW-30	Additional Parameters	Total Suspended Solids	mg/L	10	1	10%	-0.00739	0.250	↔	0.126	0.007	↑	2024-03-22	0.829	↔
40_1_4_105	MW-30	Appendix III	Boron	mg/L	12	0	0%	0.00320	0.782	↔	-0.00128	0.279	↔	2023-03-12	0.153	↔
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	-0.484	0.413	↔	0.371	0.810	↔	2023-10-31	0.098	↔
40_1_4_108	MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.594	0.013	↔	0.145	0.114	↔	2023-06-17	0.710	↔
40_1_4_112	MW-30	Appendix III	Fluoride	mg/L	12	0	0%	-0.000484	0.632	↔	0.000259	0.557	↔	2023-06-26	0.075	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
40_1_4_120	MW-30	Appendix III	pH (field)	su	12	0	0%	0.00325	0.265	↔	-0.000131	0.790	↔	2023-03-13	0.252	↔
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.506	0.208	↔	0.801	0.440	↔	2023-10-23	0.278	↔
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.416	0.661	↔	1.24	0.626	↔	2024-02-11	0.058	↔
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	0.00000214	0.231	↔	-0.00000637	0.210	↔	2023-05-21	0.363	↔
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	-0.00000284	0.111	↔	0.00000659	0.179	↔	2023-04-18	0.416	↔
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	-0.000452	0.032	↔	-0.0000147	0.643	↔	2023-03-18	0.710	↔
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	0.000000875	0.761	↔	-0.000000114	0.386	↔	2023-02-05	0.120	↔
40_1_5_106	MW-30	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000406	0.233	↔	-0.00000127	0.496	↔	2024-02-12	0.220	↔
40_1_5_109	MW-30	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000779	0.239	↔	-0.00000102	0.870	↔	2023-02-08	0.338	↔
40_1_5_110	MW-30	Appendix IV	Cobalt	mg/L	12	0	0%	-0.00000810	0.335	↔	-0.000000195	0.956	↔	2023-05-22	0.225	↔
40_1_5_113	MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.000484	0.632	↔	0.000259	0.557	↔	2023-06-26	0.075	↔
40_1_5_115	MW-30	Appendix IV	Lead	mg/L	12	12	100%	0.0000116	0.109	↔	-0.00000138	0.063	↔	2023-02-06	0.501	↔
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	0.000261	0.803	↔	-0.000115	0.286	↔	2023-03-12	0.149	↔
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	-0.00000000000117	1.000	↔	0.000000226	0.402	↔	2023-07-05	0.205	↔
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	-0.00000151	0.380	↔	0.000000150	0.895	↔	2023-06-29	0.152	↔
40_1_5_125	MW-30	Appendix IV	Thallium	mg/L	12	12	100%	0.00000449	0.144	↔	-0.000000276	0.344	↔	2023-02-16	0.427	↔
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	-0.00000100	0.602	↔	-0.000000327	0.968	↔	2023-05-22	0.077	↔
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	-0.00197	0.815	↔	0.0229	0.321	↔	2024-02-07	0.174	↔
40_1_6_123	MW-30	Part 115	Silver	mg/L	12	12	100%	0.00000209	0.642	↔	-0.000000192	0.351	↔	2023-02-05	0.191	↔
40_1_6_129	MW-30	Part 115	Vanadium	mg/L	12	12	100%	-0.00000260	0.562	↔	-0.0000000000103	1.000	↔	2023-07-27	0.106	↔
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	-0.0000136	0.186	↔	-0.000000000000726	1.000	↔	2023-07-23	0.394	↔
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	-0.00932	0.890	↔	0.00514	0.417	↔	2023-03-25	0.283	↔
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	-0.200	0.067	↔	0.0922	0.185	↔	2023-06-27	0.452	↔
41_1_4_112	MW-31	Appendix III	Fluoride	mg/L	12	0	0%	0.00204	0.351	↔	-0.000975	0.130	↔	2023-05-13	0.323	↔
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.454	0.060	↔	0.195	0.448	↔	2023-10-14	0.550	↔
41_1_4_126	MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.585	0.156	↔	0.0248	0.882	↔	2023-05-22	0.364	↔
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	-0.00000000125	0.989	↔	0.00000191	0.006	↑	2024-02-27	0.862	↔
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000147	0.161	↔	-0.000000154	0.728	↔	2023-01-04	0.403	↔
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	0.0000000000000330	1.000	↔	0.00000000116	0.450	↔	2023-03-22	0.115	↔
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	0.000000217	0.002	↑	-0.0000000600	0.922	↔	2023-08-19	0.819	↔
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.00000237	0.446	↔	0.000000327	0.980	↔	2023-05-22	0.147	↔
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	0.000000246	0.627	↔	-0.000000159	0.281	↔	2023-05-21	0.167	↔
41_1_5_113	MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00204	0.351	↔	-0.000975	0.130	↔	2023-05-13	0.323	↔
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	-0.000000442	0.054	↔	0.00000102	0.087	↔	2024-01-31	0.554	↔
41_1_5_116	MW-31	Appendix IV	Lithium	mg/L	12	0	0%	0.00000893	0.779	↔	-0.0000239	0.283	↔	2023-06-27	0.271	↔
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000164	0.220	↔	-0.000000934	0.131	↔	2023-01-13	0.615	↔
41_1_5_121	MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	0.000738	0.513	↔	-0.00105	0.432	↔	2023-08-08	0.191	↔
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	-0.000000430	0.755	↔	0.000000344	0.566	↔	2023-05-22	0.067	↔
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	0.0000000173	0.075	↔	-0.0000000437	0.397	↔	2024-02-12	0.384	↔
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	0.0000000672	0.805	↔	0.000000493	0.153	↔	2023-10-22	0.480	↔
41_1_6_114	MW-31	Part 115	Iron	mg/L	12	0	0%	-0.00664	0.001	↓	-0.0000133	0.994	↔	2023-09-07	0.874	↔
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	0.00000000000841	1.000	↔	0.000000396	0.147	↔	2023-08-25	0.544	↔

(Table continues on next page)



**Table 9: Trend Tests: Piecewise Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Break 1	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend			
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.0977	0.022	↔	0.0233	0.349	↔	2023-08-07	0.676	↔
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	-0.206	0.159	↔	0.0314	0.736	↔	2023-08-07	0.410	↔
42_1_4_112	MW-32	Appendix III	Fluoride	mg/L	12	0	0%	0.000645	0.124	↔	-0.000516	0.621	↔	2023-10-23	0.293	↔
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.320	0.811	↔	-0.181	0.207	↔	2023-03-13	0.205	↔
42_1_4_126	MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.580	0.263	↔	0.0264	0.937	↔	2023-08-07	0.326	↔
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	0.00000897	0.045	↔	-0.00000212	0.357	↔	2024-02-12	0.452	↔
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	0.00000252	0.073	↔	-0.00000613	0.405	↔	2024-02-12	0.387	↔
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	-0.00213	0.467	↔	0.000424	0.416	↔	2023-04-17	0.195	↔
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	0.000000238	0.076	↔	-0.000000602	0.395	↔	2024-02-12	0.382	↔
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	0.000000280	0.004	↑	-0.000000476	0.263	↔	2024-02-12	0.705	↔
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.000000762	0.900	↔	0.00000154	0.561	↔	2023-05-22	0.077	↔
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000202	0.183	↔	-0.00000520	0.199	↔	2024-02-11	0.373	↔
42_1_5_113	MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.000645	0.124	↔	-0.000516	0.621	↔	2023-10-23	0.293	↔
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	0.000000174	0.940	↔	-0.000000733	0.583	↔	2024-02-12	0.147	↔
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	-0.000429	0.507	↔	0.0000193	0.767	↔	2023-02-18	0.125	↔
42_1_5_117	MW-32	Appendix IV	Mercury	mg/L	12	11	92%	-0.00000000000693	1.000	↔	0.00000172	0.400	↔	2023-07-06	0.206	↔
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	0.00000391	0.310	↔	-0.0000138	0.191	↔	2024-02-11	0.290	↔
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	0.00219	0.104	↔	-0.000711	0.069	↔	2023-04-19	0.493	↔
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	-0.000000494	0.808	↔	0.000000460	0.606	↔	2023-05-22	0.055	↔
42_1_6_111	MW-32	Part 115	Copper	mg/L	12	8	67%	-0.00000000000693	1.000	↔	0.00000930	0.440	↔	2023-03-21	0.120	↔
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	-0.0280	0.021	↔	0.00358	0.766	↔	2023-08-13	0.620	↔
42_1_6_119	MW-32	Part 115	Nickel	mg/L	12	0	0%	-0.00000201	0.983	↔	0.0000125	0.460	↔	2023-04-07	0.101	↔
42_1_6_130	MW-32	Part 115	Zinc	mg/L	12	0	0%	-0.0000565	0.380	↔	-0.00000219	0.959	↔	2023-07-16	0.212	↔

**Table 10: Trend Tests: Piecewise Linear-Linear-Linear**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
11_2_4_108	MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-1.21	0.626	↔	0.668	0.252	↔	-0.203	0.380	↔	2023-02-07	2023-07-01	0.327	↔
11_2_4_120	MW-01R	Appendix III	pH (field)	su	12	0	0%	0.00506	0.379	↔	-0.00103	0.725	↔	0.00152	0.863	↔	2023-05-03	2024-03-02	0.227	↔
11_2_4_124	MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	2.15	0.553	↔	-6.94	0.658	↔	1.01	0.494	↔	2023-04-23	2023-07-11	0.227	↔
11_2_5_101	MW-01R	Appendix IV	Antimony	mg/L	12	3	25%	0.00000308	0.184	↔	-0.0000105	0.350	↔	-0.00000117	0.942	↔	2023-06-18	2023-08-09	0.445	↔
11_2_5_102	MW-01R	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000733	0.335	↔	0.00000791	0.074	↔	-0.0000131	0.282	↔	2023-04-29	2024-02-13	0.570	↔
11_2_5_103	MW-01R	Appendix IV	Barium	mg/L	12	0	0%	-0.000743	0.396	↔	0.00187	0.055	↔	-0.00105	0.240	↔	2023-04-23	2023-10-26	0.684	↔
11_2_5_104	MW-01R	Appendix IV	Beryllium	mg/L	12	1	8%	-0.00000125	0.742	↔	0.000000817	0.353	↔	-0.000000689	0.081	↔	2023-02-07	2023-07-25	0.517	↔
11_2_5_106	MW-01R	Appendix IV	Cadmium	mg/L	12	9	75%	-0.00000112	0.860	↔	0.00000182	0.577	↔	-0.000000387	0.357	↔	2023-01-23	2023-05-22	0.270	↔
11_2_5_109	MW-01R	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.00000137	0.953	↔	0.0000723	0.307	↔	-0.0000944	0.246	↔	2023-08-18	2024-02-13	0.570	↔
11_2_5_110	MW-01R	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000849	0.787	↔	0.00000238	0.668	↔	-0.0000125	0.582	↔	2023-03-07	2024-02-13	0.207	↔
11_2_5_115	MW-01R	Appendix IV	Lead	mg/L	12	2	17%	-0.0000108	0.720	↔	0.0000220	0.271	↔	-0.00000656	0.259	↔	2023-03-12	2023-06-28	0.358	↔
11_2_5_116	MW-01R	Appendix IV	Lithium	mg/L	12	0	0%	-0.00777	0.536	↔	0.0233	0.558	↔	-0.00360	0.242	↔	2023-04-14	2023-06-27	0.361	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
11_2_5_121	MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	0.00569	0.319	↔	-0.00103	0.305	↔	0.00554	0.191	↔	2023-02-13	2024-04-04	0.447	↔
11_2_5_122	MW-01R	Appendix IV	Selenium	mg/L	12	0	0%	-0.0000105	0.773	↔	0.0000297	0.154	↔	-0.0000468	0.429	↔	2023-05-22	2024-02-16	0.418	↔
11_2_5_125	MW-01R	Appendix IV	Thallium	mg/L	12	12	100%	0.0000183	0.139	↔	-0.0000288	0.615	↔	0.00000706	0.419	↔	2023-06-18	2023-10-05	0.451	↔
11_2_6_111	MW-01R	Part 115	Copper	mg/L	12	5	42%	-0.0000200	0.690	↔	0.0000786	0.333	↔	-0.0000116	0.430	↔	2023-03-27	2023-06-28	0.407	↔
11_2_6_119	MW-01R	Part 115	Nickel	mg/L	12	0	0%	-0.00000598	0.980	↔	0.0000700	0.324	↔	-0.000102	0.217	↔	2023-08-11	2024-02-13	0.569	↔
11_2_6_123	MW-01R	Part 115	Silver	mg/L	12	12	100%	0.0000119	0.281	↔	-0.0000174	0.427	↔	0.00000139	0.816	↔	2023-05-02	2023-08-10	0.301	↔
11_2_6_129	MW-01R	Part 115	Vanadium	mg/L	12	2	17%	0.0000146	0.034	↔	-0.00000812	0.313	↔	0.0000276	0.099	↔	2023-07-17	2024-04-02	0.728	↔
11_2_6_130	MW-01R	Part 115	Zinc	mg/L	12	3	25%	-0.000350	0.077	↔	0.0000941	0.598	↔	-0.0000154	0.148	↔	2023-01-14	2023-04-17	0.627	↔
12_2_4_107	MW-02	Appendix III	Calcium	mg/L	12	0	0%	0.0587	0.704	↔	-0.318	0.676	↔	0.0739	0.532	↔	2023-05-31	2023-08-17	0.155	↔
12_2_4_112	MW-02	Appendix III	Fluoride	mg/L	12	0	0%	-0.0465	0.421	↔	0.0272	0.185	↔	-0.000292	0.947	↔	2023-02-07	2023-06-07	0.533	↔
12_2_4_124	MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	8	67%	-0.00563	0.706	↔	0.00198	0.948	↔	0.0101	0.262	↔	2023-05-14	2023-10-23	0.385	↔
12_2_5_101	MW-02	Appendix IV	Antimony	mg/L	12	3	25%	0.0000301	0.033	↔	-0.0000564	0.293	↔	-0.00000148	0.752	↔	2023-05-07	2023-07-04	0.669	↔
12_2_5_104	MW-02	Appendix IV	Beryllium	mg/L	12	1	8%	-0.00000849	0.508	↔	0.0000256	0.338	↔	-0.0000126	0.119	↔	2023-05-19	2023-08-28	0.493	↔
12_2_5_106	MW-02	Appendix IV	Cadmium	mg/L	12	9	75%	0.00000813	0.588	↔	0.00000833	0.783	↔	-0.0000112	0.218	↔	2023-04-20	2023-10-23	0.360	↔
12_2_5_110	MW-02	Appendix IV	Cobalt	mg/L	12	0	0%	0.0000189	0.629	↔	-0.0000108	0.396	↔	0.0000223	0.617	↔	2023-03-20	2024-02-13	0.193	↔
12_2_5_113	MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.0465	0.421	↔	0.0272	0.185	↔	-0.000292	0.947	↔	2023-02-07	2023-06-07	0.533	↔
12_2_5_116	MW-02	Appendix IV	Lithium	mg/L	12	0	0%	0.00843	0.438	↔	-0.00464	0.689	↔	0.000361	0.574	↔	2023-01-21	2023-04-17	0.239	↔
12_2_5_118	MW-02	Appendix IV	Molybdenum	mg/L	12	0	0%	0.0000800	0.003	↑	-0.0000657	0.009	↓	-0.0000351	0.223	↔	2023-02-28	2023-06-03	0.931	↔
12_2_5_121	MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	-0.0110	0.186	↔	0.00392	0.803	↔	-0.00292	0.516	↔	2023-04-20	2023-08-08	0.501	↔
12_2_5_122	MW-02	Appendix IV	Selenium	mg/L	12	0	0%	-0.0000285	0.612	↔	0.0000503	0.359	↔	-0.00000950	0.678	↔	2023-04-17	2023-08-31	0.279	↔
12_2_5_125	MW-02	Appendix IV	Thallium	mg/L	12	11	92%	0.0000155	0.489	↔	-0.00000506	0.662	↔	0.00000255	0.479	↔	2023-04-24	2024-04-09	0.198	↔
12_2_6_111	MW-02	Part 115	Copper	mg/L	12	0	0%	0.0000302	0.428	↔	-0.0000125	0.757	↔	0.000000747	0.737	↔	2023-01-26	2023-04-10	0.236	↔
12_2_6_114	MW-02	Part 115	Iron	mg/L	12	0	0%	0.0630	0.273	↔	-0.0632	0.477	↔	0.0136	0.404	↔	2023-03-31	2023-08-07	0.373	↔
12_2_6_123	MW-02	Part 115	Silver	mg/L	12	12	100%	0.0000118	0.130	↔	-0.0000455	0.181	↔	0.000000627	0.826	↔	2023-05-20	2023-07-07	0.631	↔
12_2_6_130	MW-02	Part 115	Zinc	mg/L	12	0	0%	-0.000501	0.139	↔	0.000128	0.704	↔	-0.0000212	0.272	↔	2023-01-16	2023-04-17	0.529	↔
13_2_3_127	MW-03	Additional Parameters	Total Suspended Solids	mg/L	9	4	44%	-0.0547	0.501	↔	0.0128	0.908	↔	-0.0000000138	1.000	↔	2023-04-12	2023-10-24	0.240	↔
13_2_4_108	MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.861	0.019	↔	0.392	0.511	↔	-0.249	0.162	↔	2023-05-08	2023-09-01	0.831	↔
13_2_4_112	MW-03	Appendix III	Fluoride	mg/L	12	0	0%	-0.00327	0.324	↔	0.000923	0.947	↔	0.0000486	0.970	↔	2023-05-05	2023-08-06	0.281	↔
13_2_4_124	MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	4.37	0.006	↑	-2.73	0.261	↔	-0.217	0.734	↔	2023-04-24	2023-09-03	0.804	↔
13_2_5_101	MW-03	Appendix IV	Antimony	mg/L	12	7	58%	0.00000393	0.961	↔	0.0000299	0.490	↔	-0.00000592	0.297	↔	2023-01-18	2023-04-27	0.352	↔
13_2_5_102	MW-03	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000259	0.363	↔	0.0000251	0.363	↔	-0.00000217	0.439	↔	2023-05-22	2024-01-18	0.380	↔
13_2_5_104	MW-03	Appendix IV	Beryllium	mg/L	12	7	58%	0.0000193	0.543	↔	-0.0000105	0.334	↔	0.00000173	0.489	↔	2023-02-06	2023-05-31	0.303	↔
13_2_5_106	MW-03	Appendix IV	Cadmium	mg/L	12	11	92%	0.0000110	0.712	↔	0.00000328	0.536	↔	-0.0000125	0.551	↔	2023-02-22	2024-02-14	0.268	↔
13_2_5_110	MW-03	Appendix IV	Cobalt	mg/L	12	0	0%	-0.00000963	0.794	↔	0.0000694	0.378	↔	-0.0000214	0.333	↔	2023-05-16	2023-08-26	0.321	↔
13_2_5_113	MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00327	0.324	↔	0.000923	0.947	↔	0.0000486	0.970	↔	2023-05-05	2023-08-06	0.281	↔
13_2_5_115	MW-03	Appendix IV	Lead	mg/L	12	11	92%	0.00000994	0.014	↔	-0.0000171	0.114	↔	-0.00000238	0.741	↔	2023-04-02	2023-05-26	0.781	↔
13_2_5_117	MW-03	Appendix IV	Mercury	mg/L	12	11	92%	-0.00000129	0.656	↔	0.00000277	0.110	↔	-0.00000220	0.300	↔	2023-04-01	2023-10-24	0.524	↔
13_2_5_122	MW-03	Appendix IV	Selenium	mg/L	12	3	25%	0.0000289	0.670	↔	-0.00000639	0.828	↔	0.00000466	0.790	↔	2023-02-07	2023-10-11	0.055	↔
13_2_6_111	MW-03	Part 115	Copper	mg/L	12	5	42%	0.0000708	0.661	↔	-0.0000310	0.569	↔	0.00000890	0.488	↔	2023-02-06	2023-05-29	0.208	↔
13_2_6_119	MW-03	Part 115	Nickel	mg/L	12	1	8%	-0.000407	0.355	↔	0.0000809	0.926	↔	-0.0000123	0.959	↔	2023-05-06	2023-08-19	0.284	↔
13_2_6_123	MW-03	Part 115	Silver	mg/L	12	12	100%	0.0000229	0.367	↔	-0.00000692	0.659	↔	-0.000000120	0.979	↔	2023-02-15	2023-07-22	0.220	↔
13_2_6_129	MW-03	Part 115	Vanadium	mg/L	12	9	75%	0.0000224	0.212	↔	-0.0000124	0.475	↔	0.00000425	0.128	↔	2023-02-07	2023-06-18	0.485	↔

(Table continues on next page)





**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
14_2_4_120	MW-04	Appendix III	pH (field)	su	12	0	0%	0.00135	0.266	↔	-0.00226	0.361	↔	0.0000672	0.919	↔	2023-05-22	2023-08-20	0.382	↔
14_2_4_124	MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	3.24	0.073	↔	-1.03	0.751	↔	0.767	0.409	↔	2023-04-27	2023-08-28	0.669	↔
14_2_4_126	MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	1.23	0.311	↔	-1.64	0.429	↔	1.68	0.298	↔	2023-06-10	2023-11-22	0.417	↔
14_2_5_101	MW-04	Appendix IV	Antimony	mg/L	12	9	75%	0.00000271	0.948	↔	0.00000593	0.480	↔	-0.00000663	0.247	↔	2023-03-03	2023-04-24	0.405	↔
14_2_5_102	MW-04	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000312	0.287	↔	0.00000365	0.535	↔	-0.00000175	0.914	↔	2023-05-22	2023-08-13	0.301	↔
14_2_5_106	MW-04	Appendix IV	Cadmium	mg/L	12	12	100%	0.00000829	0.551	↔	0.00000211	0.770	↔	-0.00000110	0.608	↔	2023-05-02	2024-02-14	0.246	↔
14_2_5_109	MW-04	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000842	0.074	↔	-0.0000269	0.537	↔	0.00000160	0.517	↔	2023-01-06	2023-04-18	0.567	↔
14_2_5_115	MW-04	Appendix IV	Lead	mg/L	12	12	100%	0.00000465	0.197	↔	-0.00000716	0.323	↔	0.00000101	0.606	↔	2023-04-19	2023-08-08	0.443	↔
14_2_5_118	MW-04	Appendix IV	Molybdenum	mg/L	12	2	17%	0.00000777	0.525	↔	-0.0000140	0.474	↔	0.00000150	0.669	↔	2023-04-18	2023-07-07	0.198	↔
14_2_5_122	MW-04	Appendix IV	Selenium	mg/L	12	5	42%	-0.000000957	0.160	↔	0.000000813	0.462	↔	-0.00000102	0.242	↔	2023-05-27	2024-02-13	0.502	↔
14_2_5_125	MW-04	Appendix IV	Thallium	mg/L	12	12	100%	0.00000163	0.169	↔	-0.00000739	0.221	↔	0.000000992	0.257	↔	2023-06-24	2023-08-17	0.497	↔
14_2_6_123	MW-04	Part 115	Silver	mg/L	12	12	100%	0.00000229	0.367	↔	-0.000000688	0.662	↔	-0.000000129	0.977	↔	2023-02-15	2023-07-22	0.219	↔
14_2_6_129	MW-04	Part 115	Vanadium	mg/L	12	10	83%	-0.0000000000911	1.000	↔	0.0000000000112	1.000	↔	0.00000285	0.002	↑	2023-03-12	2024-01-17	0.925	↔
16_1_4_105	MW-06	Appendix III	Boron	mg/L	12	0	0%	-0.0249	0.077	↔	0.0185	0.464	↔	-0.0111	0.147	↔	2023-04-18	2023-08-27	0.644	↔
16_1_4_107	MW-06	Appendix III	Calcium	mg/L	12	0	0%	0.722	0.298	↔	-0.256	0.536	↔	0.0901	0.458	↔	2023-03-13	2023-08-07	0.455	↔
16_1_4_108	MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.700	0.018	↔	0.196	0.581	↔	-0.186	0.024	↔	2023-04-14	2023-07-20	0.914	↔
16_1_4_112	MW-06	Appendix III	Fluoride	mg/L	12	0	0%	-0.00251	0.051	↔	0.00382	0.117	↔	-0.00104	0.128	↔	2023-05-06	2023-08-08	0.698	↔
16_1_4_120	MW-06	Appendix III	pH (field)	su	12	0	0%	-0.0106	0.253	↔	0.00701	0.142	↔	-0.000196	0.728	↔	2023-02-05	2023-05-06	0.632	↔
16_1_4_126	MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.194	0.671	↔	-0.528	0.508	↔	0.677	0.278	↔	2023-05-31	2024-01-24	0.508	↔
16_1_5_101	MW-06	Appendix IV	Antimony	mg/L	12	10	83%	0.00000121	0.537	↔	0.0000000747	0.941	↔	-0.00000131	0.659	↔	2023-05-04	2024-02-13	0.212	↔
16_1_5_102	MW-06	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000243	0.278	↔	0.00000276	0.200	↔	-0.0000000411	0.962	↔	2023-04-06	2023-08-14	0.517	↔
16_1_5_103	MW-06	Appendix IV	Barium	mg/L	12	0	0%	-0.00288	0.121	↔	0.00167	0.625	↔	0.000328	0.732	↔	2023-04-18	2023-08-25	0.457	↔
16_1_5_104	MW-06	Appendix IV	Beryllium	mg/L	12	11	92%	-0.0000000571	0.000	↓	0.000000000000248	0.254	↔	-0.000000000000337	0.692	↔	2023-01-03	2023-07-05	1.000	↔
16_1_5_106	MW-06	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000826	0.556	↔	0.000000207	0.775	↔	-0.00000109	0.611	↔	2023-05-04	2024-02-13	0.245	↔
16_1_5_109	MW-06	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000182	0.464	↔	-0.00000942	0.444	↔	-0.00000138	0.390	↔	2023-01-27	2023-04-18	0.439	↔
16_1_5_110	MW-06	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000247	0.664	↔	-0.000000659	0.958	↔	-0.000000797	0.157	↔	2023-01-30	2023-06-28	0.540	↔
16_1_5_113	MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00251	0.051	↔	0.00382	0.117	↔	-0.00104	0.128	↔	2023-05-06	2023-08-08	0.698	↔
16_1_5_115	MW-06	Appendix IV	Lead	mg/L	12	9	75%	0.00000392	0.266	↔	-0.00000853	0.562	↔	0.000000167	0.902	↔	2023-04-18	2023-07-12	0.476	↔
16_1_5_118	MW-06	Appendix IV	Molybdenum	mg/L	12	8	67%	0.00000950	0.242	↔	-0.0000137	0.393	↔	0.00000174	0.692	↔	2023-04-18	2023-08-26	0.443	↔
16_1_5_122	MW-06	Appendix IV	Selenium	mg/L	12	5	42%	-0.000000388	0.691	↔	0.000000576	0.289	↔	-0.00000112	0.134	↔	2023-04-17	2024-02-12	0.493	↔
16_1_5_125	MW-06	Appendix IV	Thallium	mg/L	12	12	100%	0.00000361	0.364	↔	-0.00000107	0.655	↔	-0.000000275	0.968	↔	2023-02-13	2023-07-19	0.221	↔
16_1_6_111	MW-06	Part 115	Copper	mg/L	12	10	83%	-0.0000000000744	1.000	↔	0.000000000000351	1.000	↔	0.000000787	0.057	↔	2023-01-19	2024-01-03	0.744	↔
16_1_6_114	MW-06	Part 115	Iron	mg/L	12	0	0%	0.0164	0.819	↔	0.0239	0.312	↔	-0.0806	0.321	↔	2023-03-25	2024-03-23	0.416	↔
16_1_6_123	MW-06	Part 115	Silver	mg/L	12	12	100%	0.00000236	0.365	↔	-0.000000699	0.656	↔	-0.000000179	0.968	↔	2023-02-13	2023-07-19	0.221	↔
16_1_6_129	MW-06	Part 115	Vanadium	mg/L	12	11	92%	-0.000000571	0.000	↓	0.000000000000442	0.713	↔	0.000000196	0.000	↑	2023-01-03	2024-04-06	1.000	↔
17_1_5_101	MW-07	Appendix IV	Antimony	mg/L	12	11	92%	-0.0000000900	0.311	↔	0.000000560	0.000	↑	-0.0000000483	0.698	↔	2023-02-22	2023-06-05	0.985	↔
17_1_5_102	MW-07	Appendix IV	Arsenic	mg/L	12	0	0%	-0.000000533	0.277	↔	0.000000519	0.068	↔	-0.000000174	0.593	↔	2023-04-15	2023-10-24	0.564	↔
17_1_5_103	MW-07	Appendix IV	Barium	mg/L	12	0	0%	-0.000434	0.321	↔	0.000615	0.151	↔	-0.0000834	0.620	↔	2023-04-17	2023-08-30	0.537	↔
17_1_5_104	MW-07	Appendix IV	Beryllium	mg/L	12	9	75%	0.0000000773	0.950	↔	0.0000000247	0.747	↔	-0.0000000208	0.366	↔	2023-02-22	2023-08-06	0.181	↔
17_1_5_106	MW-07	Appendix IV	Cadmium	mg/L	12	12	100%	-0.000000659	0.432	↔	0.000000700	0.028	↔	-0.0000000413	0.826	↔	2023-03-24	2023-06-04	0.960	↔
17_1_5_110	MW-07	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000495	0.197	↔	0.000000459	0.568	↔	-0.000000664	0.076	↔	2023-01-14	2023-06-27	0.714	↔
17_1_5_115	MW-07	Appendix IV	Lead	mg/L	12	12	100%	0.0000000000863	0.322	↔	-0.00000343	0.000	↓	0.00000000000179	0.366	↔	2023-04-17	2023-05-23	1.000	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
17_1_5_116	MW-07	Appendix IV	Lithium	mg/L	12	0	0%	0.00000980	0.399	↔	-0.0000257	0.503	↔	0.00000740	0.694	↔	2023-06-27	2023-11-21	0.336	↔
17_1_5_118	MW-07	Appendix IV	Molybdenum	mg/L	12	12	100%	0.000000000266	0.322	↔	-0.0000106	0.000	↓	0.0000000000553	0.366	↔	2023-04-17	2023-05-23	1.000	↔
17_1_5_122	MW-07	Appendix IV	Selenium	mg/L	12	9	75%	-0.000000649	0.046	↔	0.000000498	0.586	↔	-0.000000600	0.211	↔	2023-08-06	2024-02-12	0.685	↔
17_1_6_111	MW-07	Part 115	Copper	mg/L	12	9	75%	-0.000000107	0.709	↔	0.000000271	0.108	↔	-0.000000126	0.529	↔	2023-04-10	2023-10-24	0.512	↔
17_1_6_114	MW-07	Part 115	Iron	mg/L	12	0	0%	-0.0690	0.400	↔	0.0384	0.352	↔	-0.00268	0.602	↔	2023-01-22	2023-05-22	0.480	↔
18_1_3_127	MW-08	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.162	0.000	↓	0.299	0.000	↑	-0.179	0.000	↓	2023-08-07	2023-12-10	0.988	↔
18_1_4_105	MW-08	Appendix III	Boron	mg/L	12	0	0%	0.0915	0.008	↑	-0.0118	0.103	↔	0.0100	0.354	↔	2023-02-07	2023-10-24	0.808	↔
18_1_4_108	MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.247	0.017	↔	-0.0471	0.057	↔	0.0372	0.295	↔	2023-02-07	2023-11-07	0.752	↔
18_1_4_112	MW-08	Appendix III	Fluoride	mg/L	12	0	0%	0.00970	0.024	↔	-0.00240	0.125	↔	0.00203	0.045	↔	2023-03-04	2023-10-23	0.834	↔
18_1_4_126	MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.276	0.651	↔	-0.594	0.625	↔	0.295	0.401	↔	2023-05-07	2023-10-23	0.258	↔
18_1_5_101	MW-08	Appendix IV	Antimony	mg/L	12	6	50%	0.00000108	0.066	↔	-0.00000177	0.435	↔	0.0000000753	0.710	↔	2023-04-22	2023-07-15	0.596	↔
18_1_5_102	MW-08	Appendix IV	Arsenic	mg/L	12	0	0%	0.000645	0.004	↑	-0.000147	0.008	↓	0.000121	0.090	↔	2023-02-16	2023-10-24	0.888	↔
18_1_5_103	MW-08	Appendix IV	Barium	mg/L	12	0	0%	0.00337	0.541	↔	-0.00150	0.044	↔	0.00192	0.146	↔	2023-02-06	2024-01-04	0.660	↔
18_1_5_106	MW-08	Appendix IV	Cadmium	mg/L	12	12	100%	-0.0000000000281	0.370	↔	0.00000123	0.000	↑	-0.00000000000685	0.342	↔	2023-04-17	2023-05-23	1.000	↔
18_1_5_109	MW-08	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.00000944	0.182	↔	-0.00000268	0.040	↔	0.000000332	0.692	↔	2023-02-06	2023-10-05	0.790	↔
18_1_5_110	MW-08	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000506	0.024	↔	-0.00000100	0.206	↔	-0.000000279	0.533	↔	2023-02-08	2023-10-11	0.789	↔
18_1_5_113	MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00970	0.024	↔	-0.00240	0.125	↔	0.00203	0.045	↔	2023-03-04	2023-10-23	0.834	↔
18_1_5_115	MW-08	Appendix IV	Lead	mg/L	12	9	75%	0.00000679	0.332	↔	-0.00000476	0.058	↔	0.000000184	0.712	↔	2023-02-06	2023-06-03	0.698	↔
18_1_5_116	MW-08	Appendix IV	Lithium	mg/L	12	0	0%	0.00124	0.067	↔	-0.000201	0.019	↔	0.0000937	0.475	↔	2023-02-01	2023-11-08	0.808	↔
18_1_5_118	MW-08	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.00000911	0.036	↔	0.00000664	0.201	↔	-0.0000166	0.103	↔	2023-07-09	2024-03-27	0.695	↔
18_1_5_121	MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	3	25%	-0.00875	0.430	↔	0.00180	0.786	↔	-0.00177	0.372	↔	2023-02-07	2023-07-17	0.311	↔
18_1_5_122	MW-08	Appendix IV	Selenium	mg/L	12	5	42%	-0.000000547	0.570	↔	0.000000227	0.450	↔	-0.000000865	0.405	↔	2023-04-17	2024-02-13	0.344	↔
18_1_6_111	MW-08	Part 115	Copper	mg/L	12	5	42%	0.00000145	0.164	↔	-0.00000400	0.358	↔	0.000000710	0.100	↔	2023-05-03	2023-07-08	0.552	↔
18_1_6_114	MW-08	Part 115	Iron	mg/L	12	0	0%	-0.104	0.009	↓	0.0297	0.294	↔	-0.0510	0.103	↔	2023-05-13	2024-01-31	0.858	↔
18_1_6_119	MW-08	Part 115	Nickel	mg/L	12	0	0%	0.0000106	0.745	↔	-0.00000400	0.697	↔	0.00000338	0.192	↔	2023-01-25	2023-06-03	0.376	↔
19_2_3_127	MW-09	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	0.0558	0.114	↔	-0.0798	0.003	↓	0.0673	0.020	↔	2023-04-17	2023-10-26	0.873	↔
19_2_4_107	MW-09	Appendix III	Calcium	mg/L	12	0	0%	1.04	0.023	↔	-2.38	0.209	↔	0.503	0.102	↔	2023-06-17	2023-08-15	0.781	↔
19_2_4_108	MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.0541	0.511	↔	-0.0708	0.033	↔	0.0415	0.000	↑	2023-01-30	2023-06-11	0.909	↔
19_2_4_112	MW-09	Appendix III	Fluoride	mg/L	12	0	0%	0.00811	0.370	↔	0.00226	0.293	↔	-0.00135	0.146	↔	2023-01-04	2023-07-10	0.617	↔
19_2_4_120	MW-09	Appendix III	pH (field)	su	12	0	0%	0.00131	0.162	↔	-0.00240	0.203	↔	0.000321	0.525	↔	2023-05-22	2023-09-16	0.600	↔
19_2_4_124	MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	4.20	0.008	↑	-1.67	0.473	↔	1.63	0.039	↔	2023-04-23	2023-10-22	0.847	↔
19_2_4_126	MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	5.50	0.009	↑	-2.59	0.414	↔	2.27	0.035	↔	2023-05-05	2023-10-20	0.859	↔
19_2_5_101	MW-09	Appendix IV	Antimony	mg/L	12	7	58%	0.00000116	0.546	↔	0.000000281	0.988	↔	-0.00000118	0.537	↔	2023-05-15	2024-02-12	0.207	↔
19_2_5_102	MW-09	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000871	0.298	↔	0.00000999	0.694	↔	0.000000462	0.806	↔	2023-04-12	2023-06-26	0.339	↔
19_2_5_103	MW-09	Appendix IV	Barium	mg/L	12	0	0%	-0.00789	0.232	↔	0.000603	0.920	↔	-0.000619	0.920	↔	2023-04-27	2023-12-31	0.394	↔
19_2_5_104	MW-09	Appendix IV	Beryllium	mg/L	12	10	83%	0.000000165	0.277	↔	-0.000000153	0.544	↔	0.0000000371	0.088	↔	2023-05-23	2024-01-26	0.515	↔
19_2_5_106	MW-09	Appendix IV	Cadmium	mg/L	12	12	100%	-0.000000540	0.927	↔	0.00000174	0.574	↔	-0.000000195	0.627	↔	2023-01-29	2023-05-20	0.269	↔
19_2_5_109	MW-09	Appendix IV	Chromium, Total	mg/L	12	0	0%	0.0000193	0.421	↔	-0.0000137	0.286	↔	-0.000000391	0.805	↔	2023-01-29	2023-04-18	0.416	↔
19_2_5_110	MW-09	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000393	0.493	↔	-0.00000129	0.718	↔	-0.000000332	0.747	↔	2023-03-11	2023-08-01	0.252	↔
19_2_5_113	MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	0.00811	0.370	↔	0.00226	0.293	↔	-0.00135	0.146	↔	2023-01-04	2023-07-10	0.617	↔
19_2_5_115	MW-09	Appendix IV	Lead	mg/L	12	12	100%	0.00000427	0.244	↔	-0.00000785	0.615	↔	0.00000140	0.341	↔	2023-04-18	2023-08-05	0.451	↔
19_2_5_116	MW-09	Appendix IV	Lithium	mg/L	12	0	0%	0.00135	0.296	↔	-0.000556	0.663	↔	-0.0000214	0.772	↔	2023-01-08	2023-04-02	0.338	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
19_2_5_121	MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	11	92%	-0.00319	0.490	↔	0.00131	0.584	↔	-0.0000380	0.901	↔	2023-01-13	2023-05-22	0.283	↔
19_2_5_122	MW-09	Appendix IV	Selenium	mg/L	12	2	17%	-0.000000777	0.972	↔	-0.00000364	0.749	↔	0.00000250	0.127	↔	2023-01-06	2023-05-22	0.375	↔
19_2_5_125	MW-09	Appendix IV	Thallium	mg/L	12	12	100%	0.00000178	0.249	↔	-0.00000654	0.337	↔	0.000000886	0.173	↔	2023-05-19	2023-07-13	0.468	↔
19_2_6_111	MW-09	Part 115	Copper	mg/L	12	9	75%	0.00000485	0.179	↔	-0.00000532	0.589	↔	0.0000101	0.000	↑	2023-08-08	2024-03-26	0.970	↔
19_2_6_114	MW-09	Part 115	Iron	mg/L	12	0	0%	0.0600	0.060	↔	-0.171	0.190	↔	0.0221	0.083	↔	2023-05-13	2023-07-17	0.680	↔
19_2_6_119	MW-09	Part 115	Nickel	mg/L	12	0	0%	0.0000163	0.294	↔	-0.0000129	0.078	↔	0.0000341	0.000	↑	2023-03-08	2023-09-20	0.970	↔
19_2_6_123	MW-09	Part 115	Silver	mg/L	12	12	100%	0.00000112	0.254	↔	-0.00000204	0.626	↔	0.000000146	0.701	↔	2023-05-22	2023-08-04	0.355	↔
19_2_6_130	MW-09	Part 115	Zinc	mg/L	12	8	67%	-0.000554	0.063	↔	-0.00000711	0.729	↔	0.00000405	0.965	↔	2023-01-04	2024-03-07	0.654	↔
20_3_3_127	MW-10	Additional Parameters	Total Suspended Solids	mg/L	11	2	18%	0.0238	0.730	↔	-0.00642	0.591	↔	0.146	0.022	↔	2023-03-13	2024-03-22	0.820	↔
20_3_4_105	MW-10	Appendix III	Boron	mg/L	12	0	0%	-0.189	0.030	↔	0.240	0.063	↔	-0.0504	0.039	↔	2023-03-20	2023-06-30	0.780	↔
20_3_4_107	MW-10	Appendix III	Calcium	mg/L	12	0	0%	1.83	0.196	↔	-1.75	0.410	↔	1.11	0.022	↔	2023-03-14	2023-07-31	0.694	↔
20_3_4_108	MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-1.22	0.388	↔	2.57	0.258	↔	-0.130	0.741	↔	2023-03-30	2023-07-11	0.569	↔
20_3_4_112	MW-10	Appendix III	Fluoride	mg/L	12	0	0%	-0.0448	0.073	↔	0.0543	0.037	↔	-0.0120	0.007	↓	2023-03-11	2023-06-10	0.829	↔
20_3_4_120	MW-10	Appendix III	pH (field)	su	12	0	0%	0.00487	0.164	↔	-0.00872	0.586	↔	0.0000118	0.996	↔	2023-05-23	2023-08-15	0.399	↔
20_3_4_126	MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	3.92	0.504	↔	-2.97	0.587	↔	4.88	0.071	↔	2023-03-14	2023-09-20	0.607	↔
20_3_5_101	MW-10	Appendix IV	Antimony	mg/L	12	8	67%	-0.00000114	0.893	↔	0.00000202	0.641	↔	-0.000000272	0.628	↔	2023-01-09	2023-04-18	0.141	↔
20_3_5_102	MW-10	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000146	0.725	↔	0.00000705	0.299	↔	-0.000000203	0.986	↔	2023-04-17	2023-07-13	0.553	↔
20_3_5_103	MW-10	Appendix IV	Barium	mg/L	12	0	0%	-0.00199	0.065	↔	0.00187	0.336	↔	-0.000978	0.100	↔	2023-05-08	2023-10-22	0.658	↔
20_3_5_104	MW-10	Appendix IV	Beryllium	mg/L	12	6	50%	-0.000000385	0.714	↔	0.00000133	0.227	↔	-0.000000281	0.104	↔	2023-02-28	2023-05-23	0.533	↔
20_3_5_106	MW-10	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000825	0.557	↔	0.000000212	0.769	↔	-0.00000110	0.610	↔	2023-05-03	2024-02-13	0.246	↔
20_3_5_109	MW-10	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000256	0.272	↔	0.0000729	0.071	↔	-0.0000165	0.035	↔	2023-04-10	2023-06-30	0.705	↔
20_3_5_110	MW-10	Appendix IV	Cobalt	mg/L	12	1	8%	0.00000521	0.220	↔	-0.00000432	0.286	↔	0.00000108	0.785	↔	2023-05-22	2024-01-16	0.549	↔
20_3_5_113	MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.0448	0.073	↔	0.0543	0.037	↔	-0.0120	0.007	↓	2023-03-11	2023-06-10	0.829	↔
20_3_5_115	MW-10	Appendix IV	Lead	mg/L	12	10	83%	0.0000124	0.040	↔	-0.0000103	0.013	↔	0.000000907	0.328	↔	2023-03-07	2023-07-03	0.821	↔
20_3_5_122	MW-10	Appendix IV	Selenium	mg/L	12	1	8%	0.000000192	0.769	↔	0.00000218	0.273	↔	-0.00000264	0.238	↔	2023-09-28	2024-02-13	0.529	↔
20_3_5_125	MW-10	Appendix IV	Thallium	mg/L	12	12	100%	0.00000347	0.082	↔	-0.00000436	0.147	↔	0.000000795	0.146	↔	2023-04-05	2023-07-15	0.640	↔
20_3_6_111	MW-10	Part 115	Copper	mg/L	12	9	75%	-0.00000782	0.605	↔	0.00000456	0.553	↔	-0.00000117	0.259	↔	2023-01-25	2023-05-22	0.288	↔
20_3_6_114	MW-10	Part 115	Iron	mg/L	12	0	0%	0.0307	0.009	↑	-0.0387	0.056	↔	0.0143	0.021	↔	2023-04-19	2023-09-08	0.838	↔
20_3_6_119	MW-10	Part 115	Nickel	mg/L	12	6	50%	-0.00000575	0.410	↔	0.00000862	0.526	↔	-0.00000181	0.069	↔	2023-02-22	2023-05-22	0.528	↔
20_3_6_123	MW-10	Part 115	Silver	mg/L	12	12	100%	0.00000233	0.371	↔	-0.000000694	0.661	↔	-0.0000000172	0.970	↔	2023-02-14	2023-07-19	0.217	↔
20_3_6_129	MW-10	Part 115	Vanadium	mg/L	12	10	83%	0.00000226	0.293	↔	-0.00000391	0.362	↔	0.00000116	0.339	↔	2023-05-22	2023-09-13	0.387	↔
21_2_4_105	MW-11	Appendix III	Boron	mg/L	12	0	0%	-0.0692	0.028	↔	0.0683	0.210	↔	-0.0297	0.074	↔	2023-05-03	2023-10-14	0.741	↔
21_2_4_107	MW-11	Appendix III	Calcium	mg/L	12	0	0%	1.67	0.084	↔	-0.913	0.079	↔	0.423	0.481	↔	2023-03-28	2023-10-24	0.615	↔
21_2_4_108	MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.308	0.023	↔	0.254	0.266	↔	-0.124	0.077	↔	2023-04-27	2023-09-09	0.750	↔
21_2_4_112	MW-11	Appendix III	Fluoride	mg/L	12	0	0%	-0.00658	0.043	↔	0.00633	0.271	↔	-0.00272	0.115	↔	2023-05-05	2023-10-23	0.704	↔
21_2_4_120	MW-11	Appendix III	pH (field)	su	12	0	0%	0.00169	0.644	↔	-0.0000512	0.853	↔	-0.00207	0.134	↔	2023-01-22	2024-04-05	0.528	↔
21_2_4_124	MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	3	25%	1.56	0.008	↑	-2.66	0.006	↓	0.0168	0.890	↔	2023-04-17	2023-07-01	0.897	↔
21_2_4_126	MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	1.00	0.640	↔	2.24	0.834	↔	-2.29	0.187	↔	2023-06-06	2023-10-23	0.352	↔
21_2_5_101	MW-11	Appendix IV	Antimony	mg/L	12	8	67%	0.000000393	0.870	↔	-0.00000241	0.626	↔	0.000000393	0.776	↔	2023-05-22	2023-08-30	0.130	↔
21_2_5_102	MW-11	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000148	0.123	↔	0.0000118	0.508	↔	-0.00000288	0.565	↔	2023-04-28	2023-09-01	0.432	↔
21_2_5_103	MW-11	Appendix IV	Barium	mg/L	12	0	0%	-0.00389	0.072	↔	0.00297	0.136	↔	-0.00147	0.437	↔	2023-05-08	2023-11-06	0.603	↔
21_2_5_106	MW-11	Appendix IV	Cadmium	mg/L	12	10	83%	-0.00000131	0.708	↔	-0.000000146	0.895	↔	-0.000000252	0.947	↔	2023-03-14	2024-04-06	0.096	↔

(Table continues on next page)





**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
21_2_5_109	MW-11	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.0000242	0.354	↔	0.0000189	0.863	↔	-0.00000169	0.869	↔	2023-05-06	2023-07-04	0.239	↔
21_2_5_110	MW-11	Appendix IV	Cobalt	mg/L	12	0	0%	-0.00000375	0.694	↔	0.00000241	0.435	↔	-0.00000968	0.366	↔	2023-03-26	2024-04-06	0.242	↔
21_2_5_113	MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00658	0.043	↔	0.00633	0.271	↔	-0.00272	0.115	↔	2023-05-05	2023-10-23	0.704	↔
21_2_5_116	MW-11	Appendix IV	Lithium	mg/L	12	0	0%	-0.00109	0.064	↔	0.00114	0.288	↔	-0.000428	0.171	↔	2023-05-08	2023-09-27	0.625	↔
21_2_5_122	MW-11	Appendix IV	Selenium	mg/L	12	3	25%	-0.00000798	0.260	↔	0.00000207	0.111	↔	-0.00000283	0.015	↔	2023-06-25	2024-02-12	0.805	↔
21_2_5_125	MW-11	Appendix IV	Thallium	mg/L	12	11	92%	0.00000180	0.154	↔	-0.00000682	0.206	↔	0.000000225	0.636	↔	2023-05-20	2023-07-08	0.561	↔
21_2_6_111	MW-11	Part 115	Copper	mg/L	12	3	25%	-0.0000551	0.376	↔	0.0000116	0.965	↔	-0.00000111	0.964	↔	2023-04-24	2023-08-07	0.222	↔
21_2_6_114	MW-11	Part 115	Iron	mg/L	12	0	0%	-0.0393	0.032	↔	0.0455	0.165	↔	-0.0159	0.098	↔	2023-05-15	2023-10-23	0.777	↔
21_2_6_119	MW-11	Part 115	Nickel	mg/L	12	0	0%	-0.0000274	0.324	↔	0.0000154	0.894	↔	-0.000000776	0.943	↔	2023-05-04	2023-07-31	0.243	↔
21_2_6_123	MW-11	Part 115	Silver	mg/L	12	10	83%	0.000000965	0.244	↔	-0.00000210	0.215	↔	0.000000209	0.642	↔	2023-05-19	2023-08-11	0.425	↔
22_2_3_127	MW-12	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	-0.0141	0.026	↔	0.0392	0.009	↑	-0.000688	0.228	↔	2023-07-09	2023-10-25	1.000	↔
22_2_4_105	MW-12	Appendix III	Boron	mg/L	12	0	0%	-0.00166	0.153	↔	0.00188	0.292	↔	-0.000104	0.735	↔	2023-03-27	2023-07-08	0.500	↔
22_2_4_108	MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0439	0.229	↔	0.122	0.492	↔	-0.0336	0.227	↔	2023-06-08	2023-08-29	0.416	↔
22_2_4_112	MW-12	Appendix III	Fluoride	mg/L	12	0	0%	-0.00159	0.053	↔	0.000826	0.187	↔	-0.00120	0.418	↔	2023-05-27	2024-03-09	0.605	↔
22_2_4_120	MW-12	Appendix III	pH (field)	su	12	0	0%	0.00627	0.279	↔	-0.00560	0.755	↔	0.000741	0.570	↔	2023-03-27	2023-06-26	0.268	↔
22_2_4_124	MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	-0.426	0.024	↔	0.488	0.523	↔	-0.258	0.053	↔	2023-05-29	2023-08-22	0.831	↔
22_2_4_126	MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.0793	0.971	↔	-0.344	0.382	↔	1.77	0.276	↔	2023-03-06	2024-03-20	0.329	↔
22_2_5_101	MW-12	Appendix IV	Antimony	mg/L	12	0	0%	0.000000290	0.830	↔	-0.00000594	0.400	↔	0.000000113	0.913	↔	2023-05-23	2023-08-07	0.678	↔
22_2_5_102	MW-12	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000141	0.339	↔	0.0000142	0.153	↔	-0.00000222	0.409	↔	2023-03-05	2023-07-07	0.491	↔
22_2_5_106	MW-12	Appendix IV	Cadmium	mg/L	12	0	0%	0.00000680	0.024	↔	-0.00000684	0.071	↔	0.0000261	0.005	↑	2023-07-16	2024-03-28	0.860	↔
22_2_5_109	MW-12	Appendix IV	Chromium, Total	mg/L	12	5	42%	-0.00000136	0.842	↔	0.00000122	0.330	↔	-0.00000520	0.305	↔	2023-03-03	2024-03-30	0.303	↔
22_2_5_110	MW-12	Appendix IV	Cobalt	mg/L	12	5	42%	-0.000000523	0.832	↔	0.00000510	0.532	↔	-0.000000442	0.454	↔	2023-04-18	2023-06-26	0.463	↔
22_2_5_113	MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00159	0.053	↔	0.000826	0.187	↔	-0.00120	0.418	↔	2023-05-27	2024-03-09	0.605	↔
22_2_5_115	MW-12	Appendix IV	Lead	mg/L	12	6	50%	-0.000000276	0.772	↔	-0.000000472	0.927	↔	0.00000156	0.050	↔	2023-03-18	2024-02-12	0.621	↔
22_2_5_116	MW-12	Appendix IV	Lithium	mg/L	12	0	0%	-0.0000211	0.450	↔	0.0000255	0.367	↔	-0.00000603	0.175	↔	2023-02-19	2023-06-21	0.463	↔
22_2_5_117	MW-12	Appendix IV	Mercury	mg/L	12	10	83%	-0.0000000000000144	1.000	↔	0.0000000000000500	1.000	↔	0.0000000694	0.467	↔	2023-03-16	2023-07-07	0.207	↔
22_2_5_118	MW-12	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000280	0.134	↔	0.0000362	0.212	↔	-0.0000117	0.045	↔	2023-04-01	2023-07-22	0.654	↔
22_2_5_121	MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	9	75%	0.00264	0.035	↔	-0.00475	0.376	↔	0.000399	0.611	↔	2023-05-23	2023-08-17	0.617	↔
22_2_5_122	MW-12	Appendix IV	Selenium	mg/L	12	0	0%	0.0000194	0.389	↔	-0.0000123	0.043	↔	0.00000107	0.604	↔	2023-01-11	2023-06-28	0.742	↔
22_2_6_111	MW-12	Part 115	Copper	mg/L	12	0	0%	0.00000559	0.003	↑	-0.00000820	0.015	↔	0.00000267	0.008	↑	2023-05-21	2023-09-09	0.906	↔
22_2_6_114	MW-12	Part 115	Iron	mg/L	12	6	50%	-0.00648	0.000	↓	0.0000949	0.470	↔	-0.000000628	0.995	↔	2023-01-03	2023-08-18	0.957	↔
22_2_6_119	MW-12	Part 115	Nickel	mg/L	12	0	0%	-0.00000502	0.671	↔	0.0000126	0.742	↔	-0.00000301	0.296	↔	2023-04-11	2023-06-26	0.217	↔
22_2_6_129	MW-12	Part 115	Vanadium	mg/L	12	6	50%	0.00000332	0.020	↔	-0.00000483	0.040	↔	0.00000644	0.004	↑	2023-06-26	2023-12-29	0.879	↔
22_2_6_130	MW-12	Part 115	Zinc	mg/L	12	0	0%	0.0000306	0.783	↔	-0.00000998	0.274	↔	0.0000534	0.211	↔	2023-01-31	2024-03-21	0.381	↔
28_1_3_127	MW-18	Additional Parameters	Total Suspended Solids	mg/L	12	1	8%	-0.0547	0.898	↔	0.0441	0.947	↔	0.102	0.411	↔	2023-03-25	2023-08-07	0.253	↔
28_1_4_107	MW-18	Appendix III	Calcium	mg/L	12	0	0%	-1.27	0.016	↔	0.338	0.137	↔	-0.248	0.695	↔	2023-04-28	2024-02-16	0.757	↔
28_1_4_108	MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.0898	0.038	↔	0.139	0.374	↔	-0.00548	0.700	↔	2023-04-25	2023-06-29	0.586	↔
28_1_5_101	MW-18	Appendix IV	Antimony	mg/L	12	3	25%	0.000000853	0.732	↔	0.000000212	0.783	↔	-0.00000139	0.617	↔	2023-04-02	2024-02-13	0.181	↔
28_1_5_102	MW-18	Appendix IV	Arsenic	mg/L	12	0	0%	-0.0000495	0.359	↔	0.000188	0.106	↔	-0.0000337	0.276	↔	2023-05-20	2023-09-05	0.669	↔
28_1_5_103	MW-18	Appendix IV	Barium	mg/L	12	0	0%	-0.0000874	0.117	↔	0.000294	0.102	↔	-0.0000172	0.167	↔	2023-04-07	2023-05-25	0.676	↔
28_1_5_106	MW-18	Appendix IV	Cadmium	mg/L	12	5	42%	0.000000604	0.572	↔	-0.00000273	0.598	↔	0.0000000919	0.907	↔	2023-06-15	2023-08-25	0.255	↔
28_1_5_109	MW-18	Appendix IV	Chromium, Total	mg/L	12	11	92%	-0.000000129	0.737	↔	0.000000509	0.502	↔	-0.0000000483	0.341	↔	2023-02-25	2023-05-21	0.540	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
28_1_5_110	MW-18	Appendix IV	Cobalt	mg/L	12	0	0%	-0.0000286	0.001	↓	-0.00000576	0.830	↔	-0.00000606	0.470	↔	2023-04-18	2024-03-17	0.933	↔
28_1_5_115	MW-18	Appendix IV	Lead	mg/L	12	8	67%	0.00000811	0.227	↔	-0.00000387	0.544	↔	-0.000000378	0.968	↔	2023-02-08	2023-06-07	0.370	↔
28_1_5_116	MW-18	Appendix IV	Lithium	mg/L	12	0	0%	-0.000186	0.131	↔	0.000215	0.239	↔	-0.0000229	0.475	↔	2023-04-05	2023-06-28	0.488	↔
28_1_5_121	MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	-0.00622	0.453	↔	0.00545	0.226	↔	-0.000986	0.100	↔	2023-01-09	2023-04-18	0.564	↔
28_1_5_122	MW-18	Appendix IV	Selenium	mg/L	12	0	0%	-0.0000163	0.874	↔	0.00000299	0.130	↔	-0.0000134	0.107	↔	2023-02-22	2024-04-09	0.579	↔
28_1_5_125	MW-18	Appendix IV	Thallium	mg/L	12	12	100%	0.00000196	0.784	↔	0.000000732	0.896	↔	-0.000000945	0.720	↔	2023-01-26	2024-02-13	0.130	↔
28_1_6_111	MW-18	Part 115	Copper	mg/L	12	0	0%	0.00000656	0.828	↔	0.00000624	0.633	↔	-0.00000202	0.132	↔	2023-04-30	2023-07-26	0.464	↔
28_1_6_114	MW-18	Part 115	Iron	mg/L	12	0	0%	-0.0455	0.000	↓	0.0115	0.013	↔	-0.00951	0.072	↔	2023-04-04	2024-01-27	0.952	↔
28_1_6_119	MW-18	Part 115	Nickel	mg/L	12	0	0%	-0.0000437	0.006	↓	-0.00000802	0.971	↔	-0.00000406	0.524	↔	2023-04-18	2023-08-15	0.885	↔
28_1_6_123	MW-18	Part 115	Silver	mg/L	12	12	100%	0.00000128	0.784	↔	0.000000480	0.896	↔	-0.00000620	0.720	↔	2023-01-26	2024-02-13	0.130	↔
29_1_3_127	MW-19	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.181	0.407	↔	0.179	0.413	↔	-0.0219	0.495	↔	2023-03-12	2023-06-22	0.356	↔
29_1_4_105	MW-19	Appendix III	Boron	mg/L	12	0	0%	-0.00903	0.094	↔	0.00913	0.554	↔	-0.00118	0.303	↔	2023-04-02	2023-06-27	0.538	↔
29_1_4_108	MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	-0.214	0.005	↓	0.0827	0.752	↔	-0.0689	0.108	↔	2023-06-04	2023-10-23	0.880	↔
29_1_4_112	MW-19	Appendix III	Fluoride	mg/L	12	0	0%	-0.00520	0.052	↔	0.00289	0.416	↔	-0.00169	0.032	↔	2023-03-25	2023-08-06	0.760	↔
29_1_4_120	MW-19	Appendix III	pH (field)	su	12	0	0%	0.00148	0.471	↔	-0.00213	0.603	↔	0.0000962	0.933	↔	2023-05-21	2023-08-23	0.178	↔
29_1_4_126	MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	-0.742	0.645	↔	-4.87	0.084	↔	0.132	0.771	↔	2023-04-02	2023-06-28	0.860	↔
29_1_5_101	MW-19	Appendix IV	Antimony	mg/L	12	11	92%	0.00000353	0.149	↔	-0.00000447	0.339	↔	0.000000353	0.781	↔	2023-05-06	2023-08-10	0.418	↔
29_1_5_104	MW-19	Appendix IV	Beryllium	mg/L	12	3	25%	0.00000271	0.223	↔	-0.00000195	0.094	↔	0.000000836	0.524	↔	2023-02-03	2023-04-20	0.606	↔
29_1_5_106	MW-19	Appendix IV	Cadmium	mg/L	12	12	100%	0.00000168	0.799	↔	0.00000107	0.582	↔	-0.00000162	0.456	↔	2023-09-29	2024-02-13	0.259	↔
29_1_5_109	MW-19	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.00000872	0.062	↔	-0.00000822	0.005	↓	0.000000137	0.581	↔	2023-02-03	2023-04-20	0.884	↔
29_1_5_110	MW-19	Appendix IV	Cobalt	mg/L	12	1	8%	0.00000478	0.139	↔	-0.00000734	0.227	↔	-0.00000617	0.135	↔	2023-03-11	2023-05-21	0.845	↔
29_1_5_113	MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0	0%	-0.00520	0.052	↔	0.00289	0.416	↔	-0.00169	0.032	↔	2023-03-25	2023-08-06	0.760	↔
29_1_5_115	MW-19	Appendix IV	Lead	mg/L	12	12	100%	0.0000127	0.032	↔	-0.0000101	0.012	↔	0.00000104	0.259	↔	2023-03-06	2023-07-08	0.835	↔
29_1_5_121	MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	4	33%	0.00585	0.267	↔	0.000101	0.962	↔	-0.00182	0.187	↔	2023-02-08	2023-09-21	0.555	↔
29_1_5_122	MW-19	Appendix IV	Selenium	mg/L	12	10	83%	0.00000897	0.093	↔	-0.00000632	0.208	↔	0.000000297	0.670	↔	2023-02-08	2023-06-01	0.659	↔
29_1_5_125	MW-19	Appendix IV	Thallium	mg/L	12	12	100%	0.00000356	0.074	↔	-0.00000435	0.136	↔	0.000000789	0.142	↔	2023-04-04	2023-07-15	0.652	↔
29_1_6_111	MW-19	Part 115	Copper	mg/L	12	10	83%	0.00000784	0.414	↔	-0.00000487	0.131	↔	0.000000521	0.449	↔	2023-02-07	2023-06-02	0.526	↔
29_1_6_114	MW-19	Part 115	Iron	mg/L	12	0	0%	-0.0375	0.148	↔	0.0516	0.054	↔	-0.00905	0.697	↔	2023-04-21	2023-10-24	0.737	↔
29_1_6_119	MW-19	Part 115	Nickel	mg/L	12	1	8%	-0.00000801	0.053	↔	-0.00000201	0.492	↔	0.000141	0.000	↑	2023-06-02	2024-03-26	0.993	↔
29_1_6_123	MW-19	Part 115	Silver	mg/L	12	12	100%	0.00000121	0.275	↔	-0.00000176	0.422	↔	0.000000144	0.811	↔	2023-05-01	2023-08-09	0.306	↔
29_1_6_129	MW-19	Part 115	Vanadium	mg/L	12	12	100%	0.0000171	0.320	↔	-0.00000627	0.390	↔	0.00000190	0.655	↔	2023-02-08	2023-09-23	0.350	↔
29_1_6_130	MW-19	Part 115	Zinc	mg/L	12	10	83%	0.0000354	0.604	↔	-0.0000184	0.239	↔	0.00000118	0.843	↔	2023-02-07	2023-07-24	0.437	↔
30_1_4_105	MW-20	Appendix III	Boron	mg/L	12	0	0%	-0.00247	0.296	↔	0.00366	0.309	↔	-0.000499	0.443	↔	2023-03-29	2023-06-28	0.368	↔
30_1_4_107	MW-20	Appendix III	Calcium	mg/L	12	0	0%	0.393	0.234	↔	-0.637	0.515	↔	0.115	0.143	↔	2023-03-14	2023-06-27	0.576	↔
30_1_4_124	MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	1.13	0.050	↔	-0.700	0.048	↔	0.0373	0.668	↔	2023-02-16	2023-07-02	0.766	↔
30_1_5_101	MW-20	Appendix IV	Antimony	mg/L	12	4	33%	0.000000278	0.177	↔	-0.000000146	0.819	↔	0.0000000102	0.997	↔	2023-06-29	2023-12-13	0.323	↔
30_1_5_102	MW-20	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000836	0.437	↔	0.00000313	0.209	↔	-0.000000320	0.739	↔	2023-01-19	2023-06-30	0.403	↔
30_1_5_103	MW-20	Appendix IV	Barium	mg/L	12	0	0%	-0.00540	0.000	↓	0.00148	0.078	↔	-0.000239	0.455	↔	2023-03-19	2023-08-18	0.929	↔
30_1_5_104	MW-20	Appendix IV	Beryllium	mg/L	12	11	92%	-0.0000000742	0.682	↔	0.000000165	0.113	↔	-0.000000307	0.293	↔	2023-04-29	2024-02-13	0.526	↔
30_1_5_106	MW-20	Appendix IV	Cadmium	mg/L	12	12	100%	-0.000000659	0.432	↔	0.000000700	0.028	↔	-0.0000000414	0.826	↔	2023-03-24	2023-06-04	0.960	↔
30_1_5_109	MW-20	Appendix IV	Chromium, Total	mg/L	12	5	42%	0.000000956	0.122	↔	-0.00000104	0.091	↔	0.000000107	0.217	↔	2023-03-12	2023-05-30	0.653	↔
30_1_5_110	MW-20	Appendix IV	Cobalt	mg/L	12	0	0%	0.00000466	0.096	↔	-0.00000265	0.038	↔	-0.000000196	0.754	↔	2023-02-16	2023-09-19	0.864	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
30_1_5_115	MW-20	Appendix IV	Lead	mg/L	12	0	0%	-0.0000169	0.383	↔	0.0000164	0.117	↔	-0.00000243	0.079	↔	2023-01-29	2023-04-18	0.593	↔
30_1_5_116	MW-20	Appendix IV	Lithium	mg/L	12	0	0%	-0.000368	0.273	↔	0.000208	0.307	↔	-0.0000731	0.229	↔	2023-02-13	2023-06-28	0.439	↔
30_1_5_118	MW-20	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.00000328	0.652	↔	0.0000279	0.241	↔	-0.00000208	0.239	↔	2023-04-16	2023-06-02	0.528	↔
30_1_5_121	MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	7	58%	-0.0142	0.013	↔	0.00229	0.390	↔	-0.000574	0.459	↔	2023-02-09	2023-08-06	0.757	↔
30_1_5_122	MW-20	Appendix IV	Selenium	mg/L	12	6	50%	-0.00000000000363	1.000	↔	-0.00000257	0.296	↔	0.000000853	0.627	↔	2023-04-17	2023-05-27	0.546	↔
30_1_5_125	MW-20	Appendix IV	Thallium	mg/L	12	11	92%	-0.000000269	0.684	↔	0.000000921	0.426	↔	-0.000000160	0.100	↔	2023-05-26	2024-02-12	0.553	↔
30_1_6_111	MW-20	Part 115	Copper	mg/L	12	1	8%	-0.00000123	0.385	↔	0.00000169	0.431	↔	0.000000133	0.731	↔	2023-03-16	2023-07-13	0.564	↔
30_1_6_119	MW-20	Part 115	Nickel	mg/L	12	0	0%	0.00000329	0.409	↔	-0.00000213	0.015	↔	0.0000113	0.058	↔	2023-05-28	2023-12-04	0.900	↔
30_1_6_130	MW-20	Part 115	Zinc	mg/L	12	0	0%	-0.00125	0.033	↔	0.000209	0.393	↔	-0.0000533	0.116	↔	2023-01-10	2023-04-18	0.746	↔
40_1_4_107	MW-30	Appendix III	Calcium	mg/L	12	0	0%	2.63	0.237	↔	-2.06	0.305	↔	0.679	0.423	↔	2023-03-13	2023-09-06	0.438	↔
40_1_4_124	MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.407	0.551	↔	-2.34	0.079	↔	1.35	0.156	↔	2023-06-22	2023-10-23	0.615	↔
40_1_4_126	MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0	0%	0.974	0.555	↔	-1.85	0.742	↔	2.36	0.391	↔	2023-06-27	2024-02-04	0.226	↔
40_1_5_101	MW-30	Appendix IV	Antimony	mg/L	12	11	92%	0.000000655	0.883	↔	0.00000465	0.585	↔	-0.000000657	0.261	↔	2023-02-26	2023-04-28	0.386	↔
40_1_5_102	MW-30	Appendix IV	Arsenic	mg/L	12	2	17%	-0.00000307	0.105	↔	0.00000370	0.292	↔	-0.000000857	0.928	↔	2023-05-18	2023-08-24	0.545	↔
40_1_5_103	MW-30	Appendix IV	Barium	mg/L	12	0	0%	-0.000459	0.043	↔	0.0000334	0.735	↔	-0.000150	0.266	↔	2023-03-28	2024-02-11	0.769	↔
40_1_5_104	MW-30	Appendix IV	Beryllium	mg/L	12	10	83%	0.00000208	0.435	↔	-0.00000118	0.174	↔	0.000000100	0.596	↔	2023-02-05	2023-06-01	0.471	↔
40_1_5_106	MW-30	Appendix IV	Cadmium	mg/L	12	12	100%	0.000000831	0.556	↔	0.000000203	0.779	↔	-0.00000108	0.613	↔	2023-05-05	2024-02-12	0.247	↔
40_1_5_115	MW-30	Appendix IV	Lead	mg/L	12	12	100%	0.0000137	0.036	↔	-0.00000473	0.067	↔	0.00000106	0.435	↔	2023-02-19	2023-09-27	0.765	↔
40_1_5_116	MW-30	Appendix IV	Lithium	mg/L	12	0	0%	0.000610	0.583	↔	-0.000545	0.428	↔	0.0000457	0.814	↔	2023-03-12	2023-08-04	0.314	↔
40_1_5_117	MW-30	Appendix IV	Mercury	mg/L	12	11	92%	0.00000000000946	1.000	↔	-0.0000000000350	1.000	↔	0.000000226	0.473	↔	2023-03-20	2023-07-05	0.205	↔
40_1_5_118	MW-30	Appendix IV	Molybdenum	mg/L	12	3	25%	0.0000876	0.029	↔	-0.0000195	0.083	↔	0.000000326	0.888	↔	2023-01-04	2023-05-31	0.769	↔
40_1_5_122	MW-30	Appendix IV	Selenium	mg/L	12	6	50%	0.00000921	0.399	↔	-0.00000603	0.100	↔	0.000000501	0.519	↔	2023-02-05	2023-06-01	0.578	↔
40_1_5_125	MW-30	Appendix IV	Thallium	mg/L	12	12	100%	0.00000577	0.096	↔	-0.000000827	0.329	↔	0.000000514	0.695	↔	2023-02-10	2023-11-16	0.522	↔
40_1_6_111	MW-30	Part 115	Copper	mg/L	12	8	67%	0.00000814	0.141	↔	-0.00000547	0.568	↔	0.000000295	0.637	↔	2023-02-06	2023-05-15	0.487	↔
40_1_6_114	MW-30	Part 115	Iron	mg/L	12	0	0%	0.0491	0.300	↔	-0.0251	0.212	↔	0.0187	0.132	↔	2023-03-12	2023-10-03	0.551	↔
40_1_6_119	MW-30	Part 115	Nickel	mg/L	12	2	17%	0.000106	0.016	↔	-0.0000264	0.035	↔	0.00000149	0.539	↔	2023-01-06	2023-05-22	0.805	↔
40_1_6_123	MW-30	Part 115	Silver	mg/L	12	12	100%	0.00000242	0.360	↔	-0.000000698	0.657	↔	-0.000000239	0.958	↔	2023-02-13	2023-07-16	0.222	↔
40_1_6_129	MW-30	Part 115	Vanadium	mg/L	12	12	100%	0.0000263	0.360	↔	-0.0000166	0.239	↔	0.000000656	0.704	↔	2023-02-05	2023-05-18	0.565	↔
40_1_6_130	MW-30	Part 115	Zinc	mg/L	12	10	83%	-0.0000136	0.256	↔	0.00000000000751	1.000	↔	-0.00000000000205	1.000	↔	2023-07-23	2024-01-19	0.394	↔
41_1_3_127	MW-31	Additional Parameters	Total Suspended Solids	mg/L	7	4	57%	-0.0135	0.886	↔	0.0326	0.507	↔	-0.00114	0.955	↔	2023-07-04	2023-11-04	0.654	↔
41_1_4_107	MW-31	Appendix III	Calcium	mg/L	12	0	0%	0.102	0.778	↔	-0.460	0.226	↔	0.117	0.057	↔	2023-03-13	2023-06-22	0.620	↔
41_1_4_124	MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.467	0.337	↔	-1.85	0.037	↔	0.164	0.242	↔	2023-04-09	2023-07-08	0.824	↔
41_1_5_101	MW-31	Appendix IV	Antimony	mg/L	12	6	50%	0.000000623	0.128	↔	-0.000000487	0.445	↔	0.00000276	0.000	↑	2023-03-12	2024-04-04	0.978	↔
41_1_5_102	MW-31	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000908	0.041	↔	0.00000556	0.157	↔	-0.00000122	0.052	↔	2023-03-02	2023-06-20	0.758	↔
41_1_5_103	MW-31	Appendix IV	Barium	mg/L	12	0	0%	-0.000562	0.297	↔	0.000845	0.310	↔	-0.000101	0.495	↔	2023-04-17	2023-06-27	0.365	↔
41_1_5_104	MW-31	Appendix IV	Beryllium	mg/L	12	11	92%	-0.00000000157	0.680	↔	0.00000000521	0.433	↔	-0.00000000908	0.101	↔	2023-05-23	2024-02-11	0.551	↔
41_1_5_106	MW-31	Appendix IV	Cadmium	mg/L	12	11	92%	-0.0000000655	0.492	↔	0.000000718	0.046	↔	0.0000000000940	0.997	↔	2023-03-25	2023-06-03	0.951	↔
41_1_5_109	MW-31	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.000000660	0.950	↔	0.00000428	0.683	↔	-0.000000105	0.945	↔	2023-02-17	2023-05-22	0.167	↔
41_1_5_110	MW-31	Appendix IV	Cobalt	mg/L	12	1	8%	0.000000210	0.768	↔	0.0000000758	0.731	↔	-0.000000781	0.330	↔	2023-03-16	2024-02-12	0.401	↔
41_1_5_115	MW-31	Appendix IV	Lead	mg/L	12	10	83%	0.000000186	0.717	↔	-0.00000199	0.086	↔	0.000000598	0.073	↔	2023-05-21	2023-09-08	0.724	↔
41_1_5_118	MW-31	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.00000827	0.072	↔	0.00000693	0.587	↔	-0.00000226	0.041	↔	2023-03-30	2023-06-26	0.723	↔
41_1_5_122	MW-31	Appendix IV	Selenium	mg/L	12	5	42%	-0.00000124	0.617	↔	0.00000113	0.171	↔	-0.00000229	0.404	↔	2023-04-09	2024-02-12	0.379	↔

(Table continues on next page)



**Table 10: Trend Tests: Piecewise Linear-Linear-Linear (continued)**

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Line 1			Line 2			Line 3			Break 1	Break 2	R-Squared	Overall Trend
								Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend				
41_1_5_125	MW-31	Appendix IV	Thallium	mg/L	12	11	92%	-0.000000137	0.683	↔	0.000000308	0.351	↔	-0.000000569	0.118	↔	2023-04-29	2024-02-11	0.528	↔
41_1_6_111	MW-31	Part 115	Copper	mg/L	12	8	67%	0.00000257	0.605	↔	-0.00000500	0.834	↔	0.00000494	0.209	↔	2023-05-22	2023-08-16	0.506	↔
41_1_6_119	MW-31	Part 115	Nickel	mg/L	12	10	83%	-0.000000000374	1.000	↔	0.000000000609	1.000	↔	0.00000396	0.214	↔	2023-03-03	2023-08-25	0.544	↔
41_1_6_129	MW-31	Part 115	Vanadium	mg/L	12	11	92%	0.000000000138	0.759	↔	-0.000000000427	0.228	↔	0.00000200	0.000	↑	2023-01-04	2024-04-07	1.000	↔
42_1_3_127	MW-32	Additional Parameters	Total Suspended Solids	mg/L	12	0	0%	-0.106	0.005	↓	0.0804	0.310	↔	-0.109	0.224	↔	2023-08-27	2024-03-25	0.803	↔
42_1_4_105	MW-32	Appendix III	Boron	mg/L	12	0	0%	-0.00780	0.384	↔	0.0108	0.214	↔	-0.00372	0.307	↔	2023-04-04	2023-09-19	0.497	↔
42_1_4_107	MW-32	Appendix III	Calcium	mg/L	12	0	0%	-0.229	0.054	↔	0.268	0.373	↔	-0.495	0.160	↔	2023-09-21	2024-03-31	0.639	↔
42_1_4_108	MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0	0%	0.0861	0.497	↔	-0.0754	0.258	↔	-0.00685	0.403	↔	2023-01-25	2023-05-21	0.741	↔
42_1_4_120	MW-32	Appendix III	pH (field)	su	12	0	0%	-0.00543	0.151	↔	0.00146	0.416	↔	-0.000144	0.519	↔	2023-01-05	2023-04-21	0.410	↔
42_1_4_124	MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0	0%	0.688	0.204	↔	-2.56	0.266	↔	0.110	0.594	↔	2023-05-04	2023-07-04	0.592	↔
42_1_5_101	MW-32	Appendix IV	Antimony	mg/L	12	8	67%	-0.000000487	0.955	↔	0.00000195	0.515	↔	-0.00000293	0.073	↔	2023-07-13	2024-02-11	0.607	↔
42_1_5_102	MW-32	Appendix IV	Arsenic	mg/L	12	0	0%	-0.00000283	0.683	↔	0.00000409	0.288	↔	-0.00000775	0.141	↔	2023-04-02	2024-02-11	0.514	↔
42_1_5_103	MW-32	Appendix IV	Barium	mg/L	12	0	0%	-0.00262	0.273	↔	0.00152	0.737	↔	-0.000360	0.780	↔	2023-04-24	2023-10-22	0.267	↔
42_1_5_104	MW-32	Appendix IV	Beryllium	mg/L	12	11	92%	-0.000000158	0.729	↔	0.000000452	0.320	↔	-0.000000803	0.109	↔	2023-05-15	2024-02-11	0.540	↔
42_1_5_106	MW-32	Appendix IV	Cadmium	mg/L	12	11	92%	0.000000101	0.731	↔	0.000000358	0.049	↔	-0.000000552	0.246	↔	2023-04-28	2024-02-12	0.739	↔
42_1_5_109	MW-32	Appendix IV	Chromium, Total	mg/L	12	0	0%	-0.00000211	0.562	↔	0.00000104	0.071	↔	-0.00000134	0.181	↔	2023-08-06	2024-02-12	0.614	↔
42_1_5_110	MW-32	Appendix IV	Cobalt	mg/L	12	0	0%	0.000000224	0.945	↔	0.00000353	0.535	↔	-0.00000647	0.161	↔	2023-06-18	2024-02-11	0.442	↔
42_1_5_115	MW-32	Appendix IV	Lead	mg/L	12	9	75%	0.000000160	0.908	↔	-0.00000179	0.690	↔	0.000000813	0.801	↔	2023-03-27	2023-05-22	0.195	↔
42_1_5_116	MW-32	Appendix IV	Lithium	mg/L	12	0	0%	-0.000409	0.122	↔	0.000505	0.306	↔	-0.000225	0.131	↔	2023-04-26	2023-09-23	0.563	↔
42_1_5_118	MW-32	Appendix IV	Molybdenum	mg/L	12	0	0%	-0.0000173	0.415	↔	0.00000780	0.200	↔	-0.0000180	0.084	↔	2023-03-06	2024-02-11	0.566	↔
42_1_5_121	MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	8	67%	-0.00335	0.568	↔	0.00385	0.525	↔	-0.000766	0.050	↔	2023-01-08	2023-04-11	0.584	↔
42_1_5_122	MW-32	Appendix IV	Selenium	mg/L	12	10	83%	-0.00000164	0.641	↔	0.00000174	0.148	↔	-0.00000364	0.355	↔	2023-04-14	2024-02-12	0.413	↔
42_1_6_114	MW-32	Part 115	Iron	mg/L	12	0	0%	-0.00549	0.799	↔	-0.0550	0.228	↔	0.00766	0.536	↔	2023-04-18	2023-08-08	0.710	↔

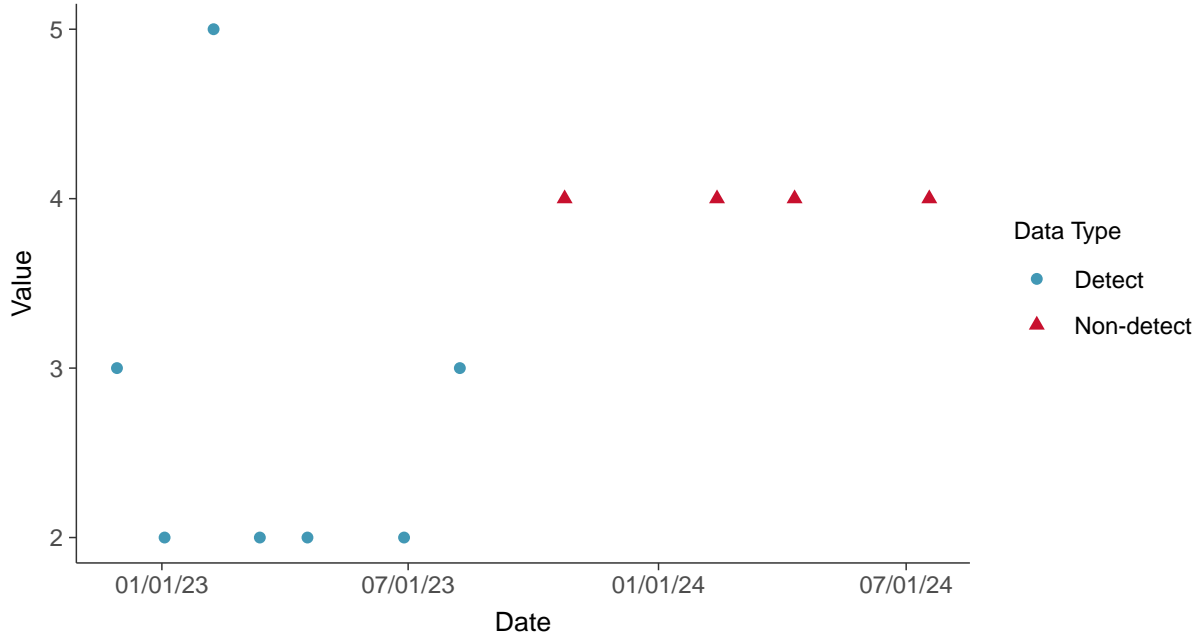


## Additional Parameters: Total Suspended Solids, MW-01R

ID: 11\_2\_3\_127

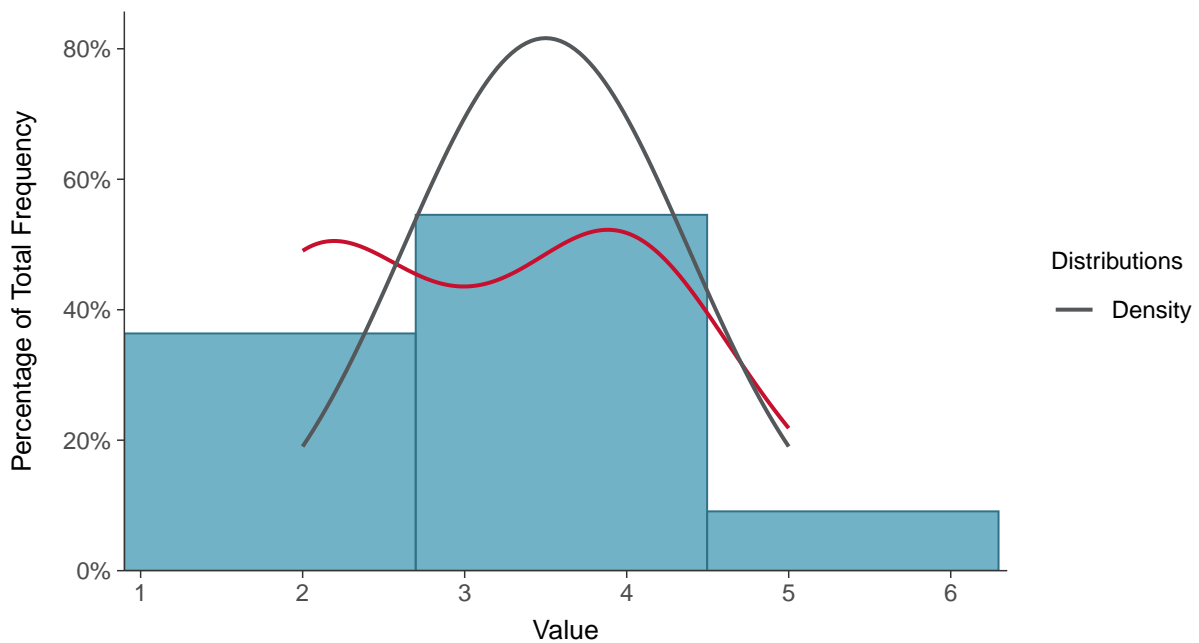
### Scatter Plot

Total Suspended Solids, MW-01R (mg/L)



### Histogram

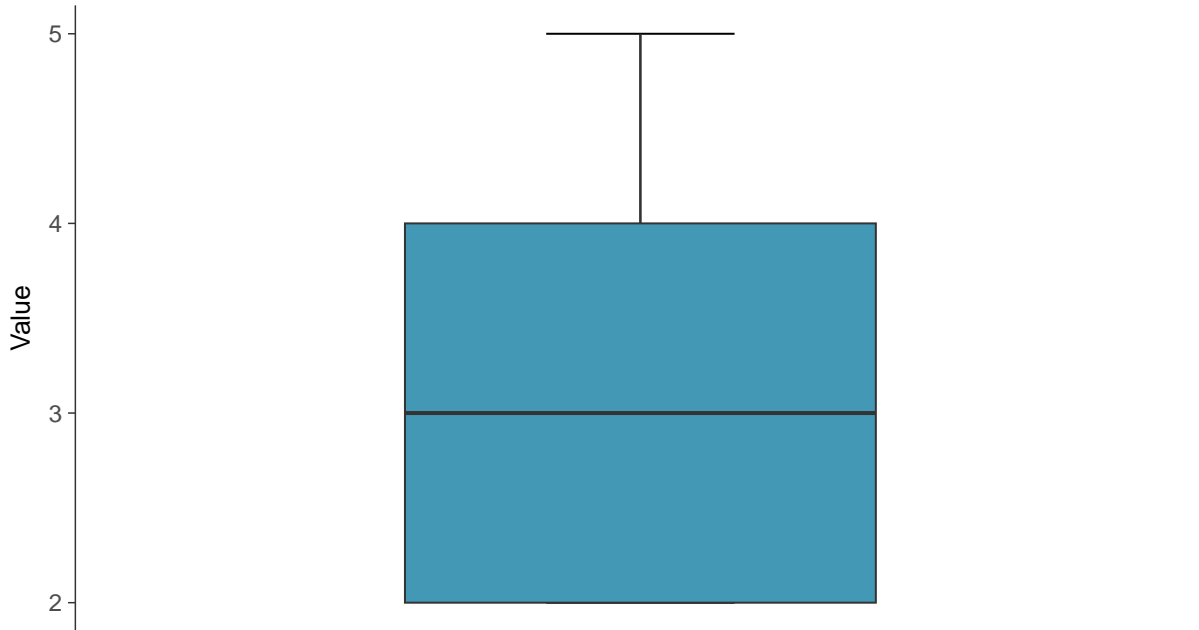
Total Suspended Solids, MW-01R (mg/L)





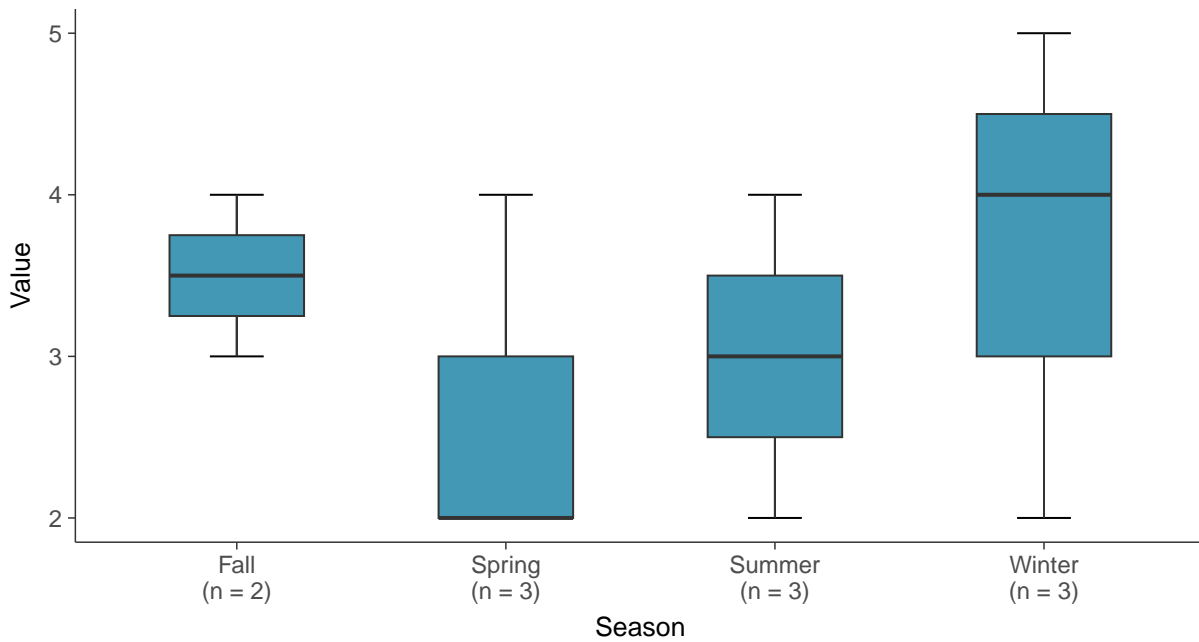
### Boxplot

Total Suspended Solids, MW-01R (mg/L)



### Boxplot by Season

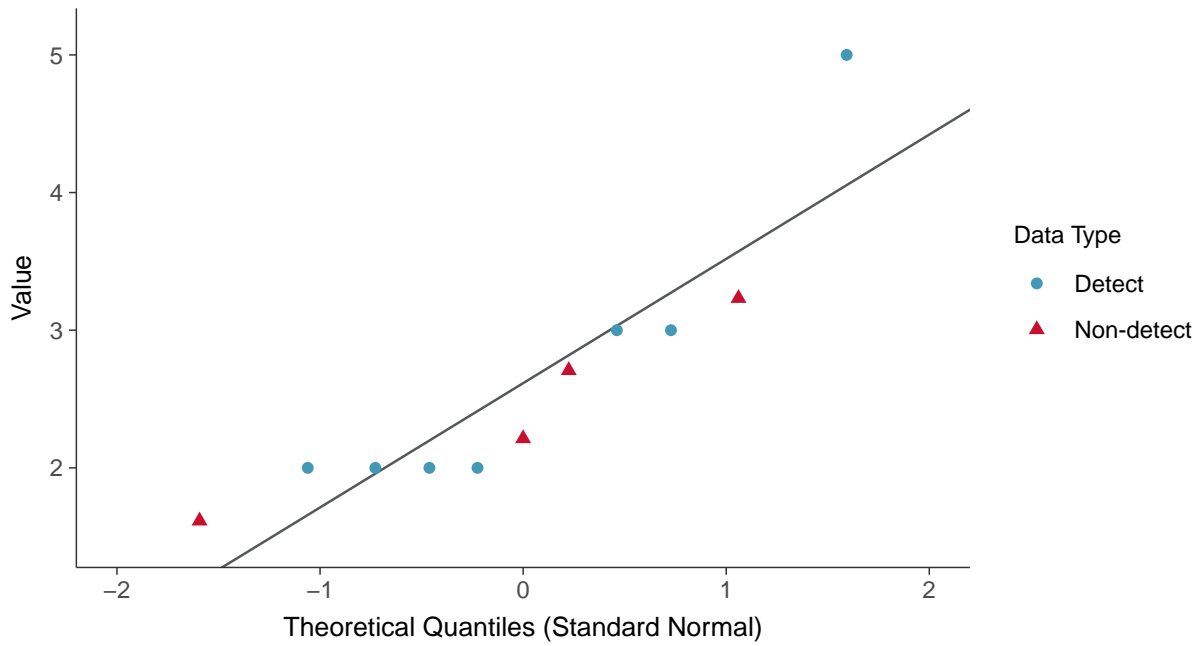
Total Suspended Solids, MW-01R (mg/L)





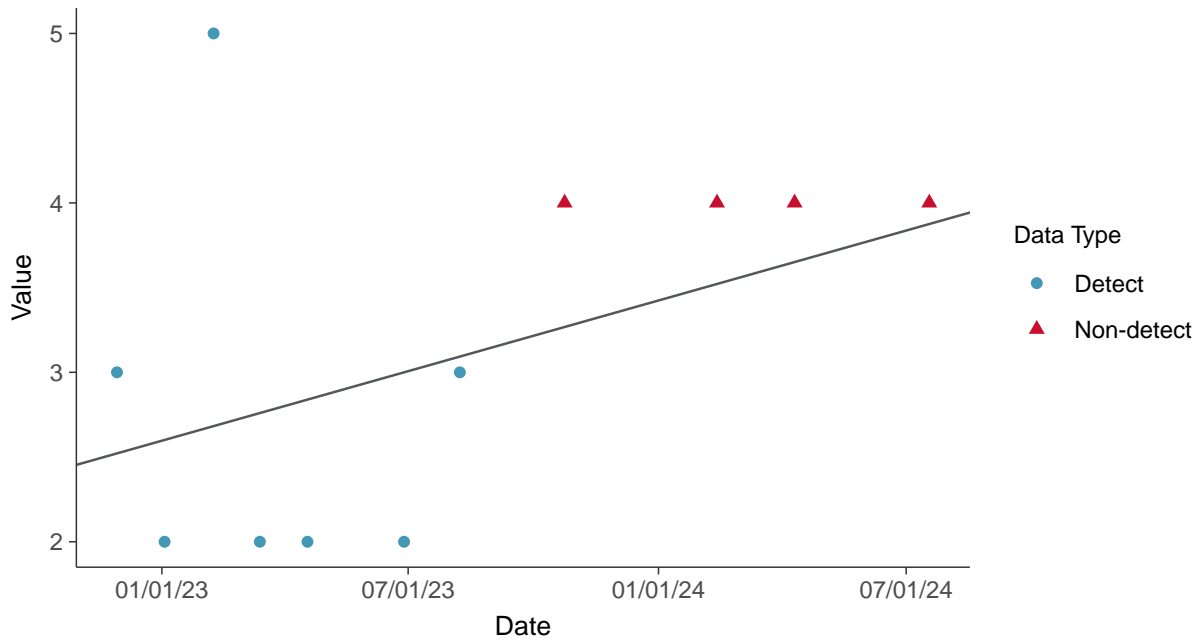
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-01R (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

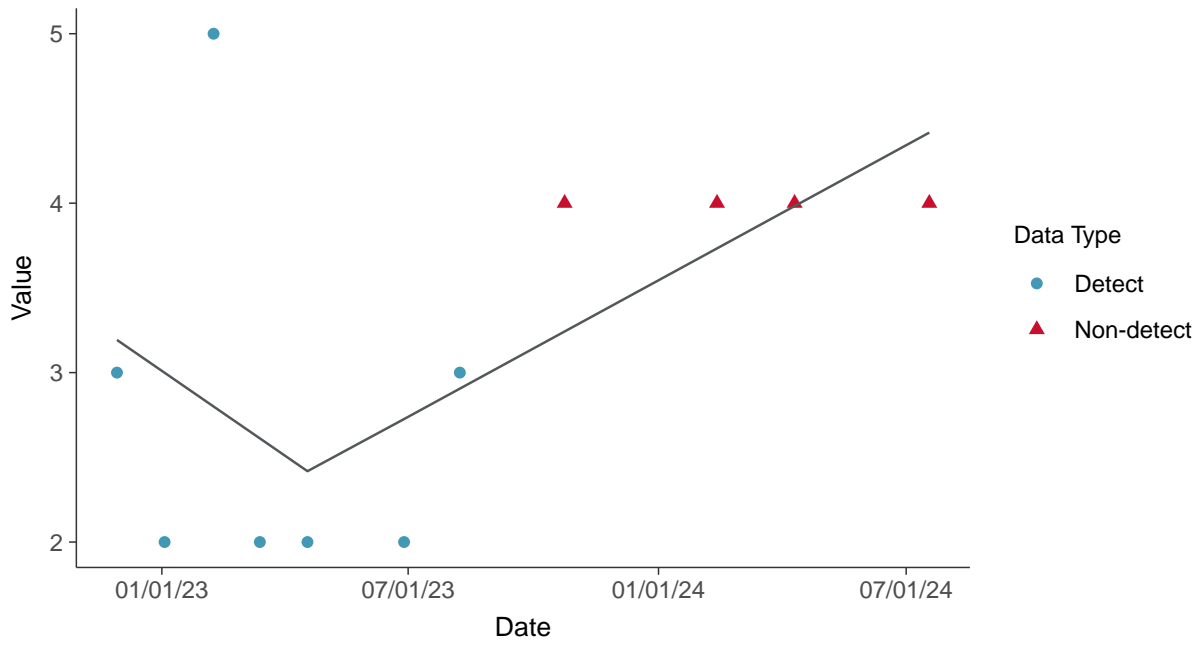
Total Suspended Solids, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-01R (mg/L)





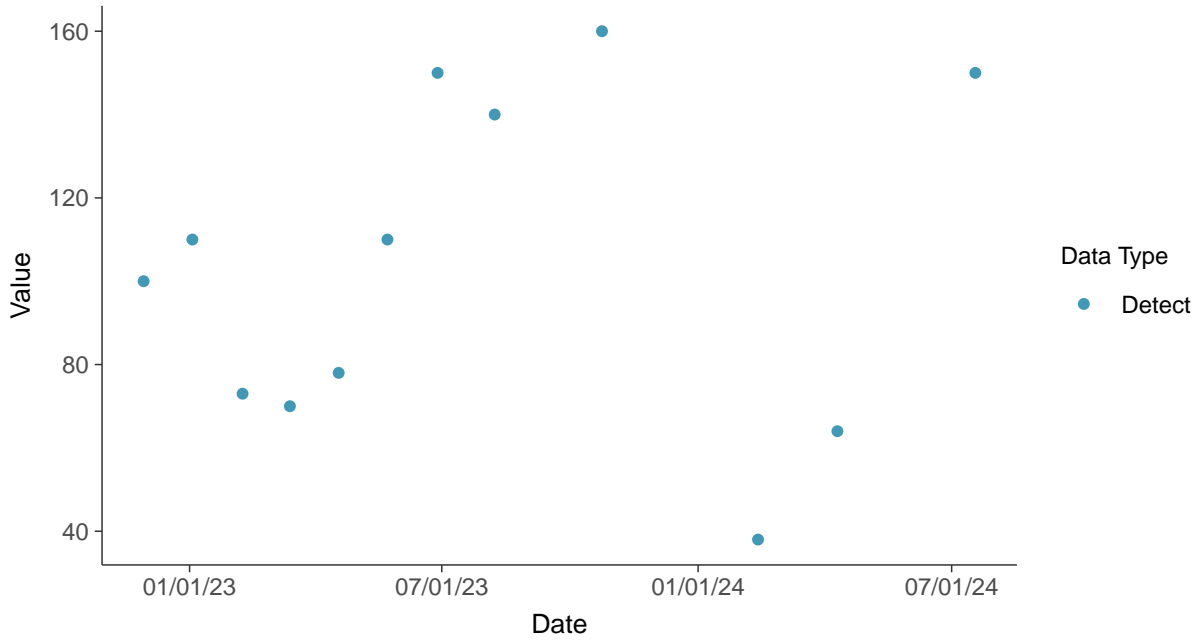


### Appendix III: Boron, MW-01R

ID: 11\_2\_4\_105

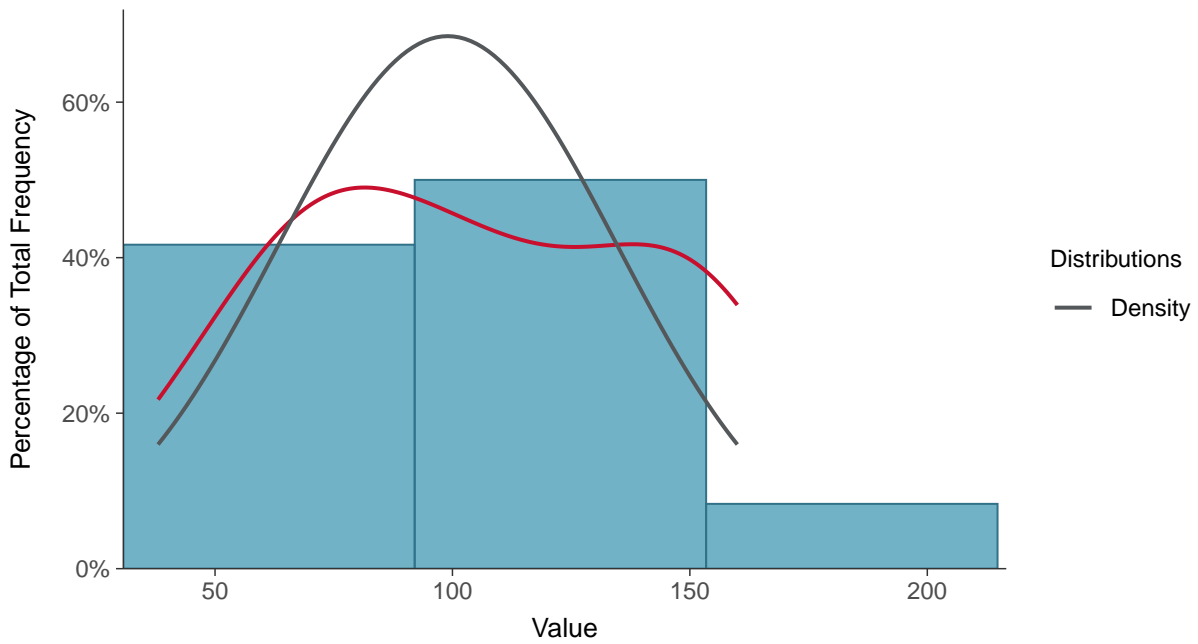
#### Scatter Plot

Boron, MW-01R (mg/L)



#### Histogram

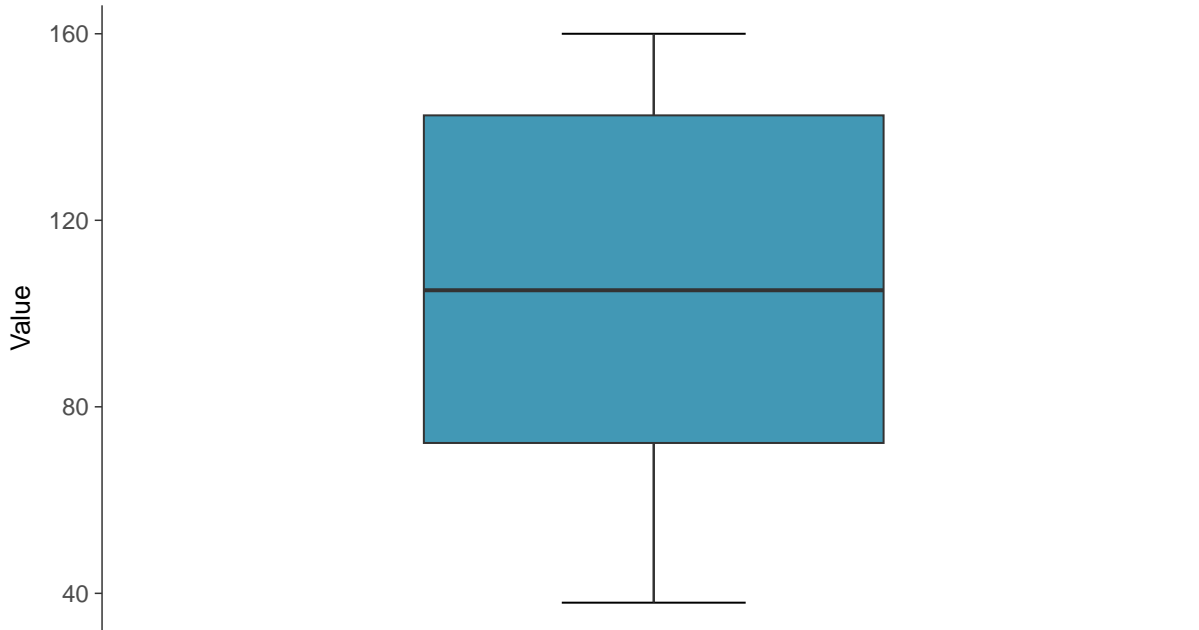
Boron, MW-01R (mg/L)





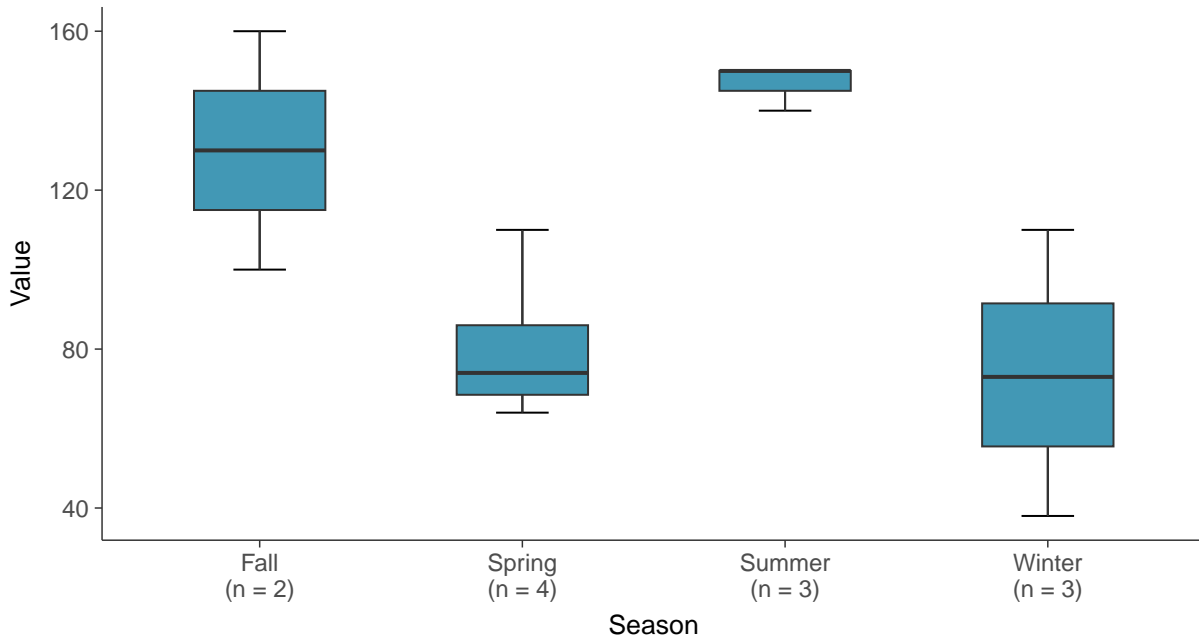
### Boxplot

Boron, MW-01R (mg/L)



### Boxplot by Season

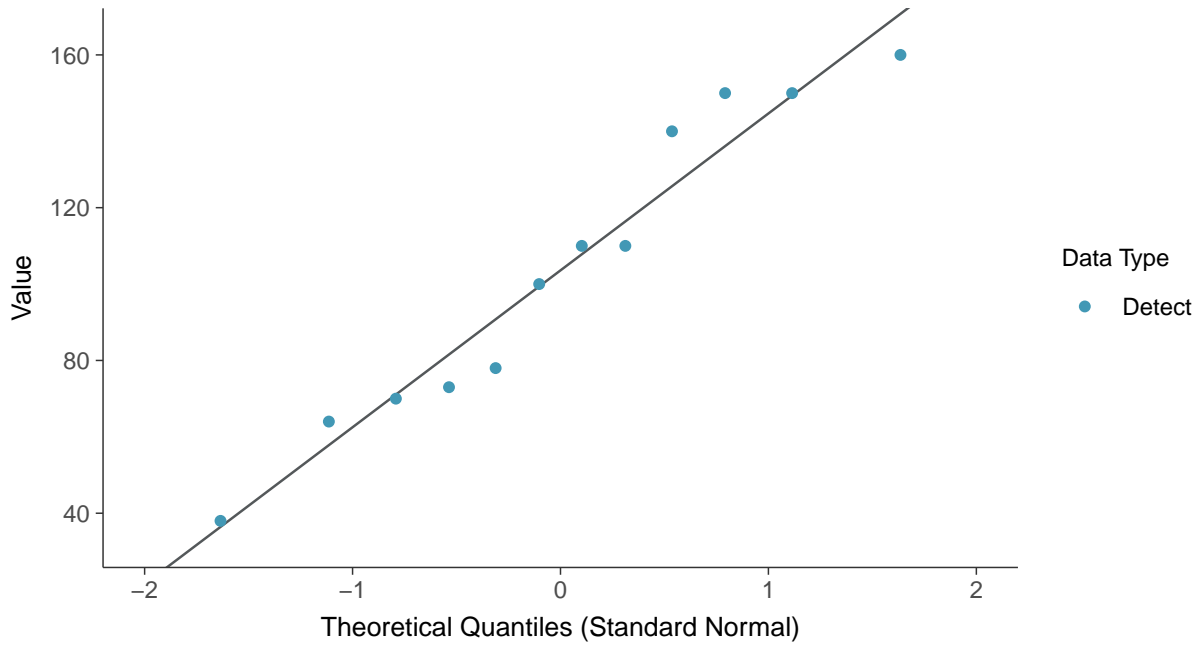
Boron, MW-01R (mg/L)





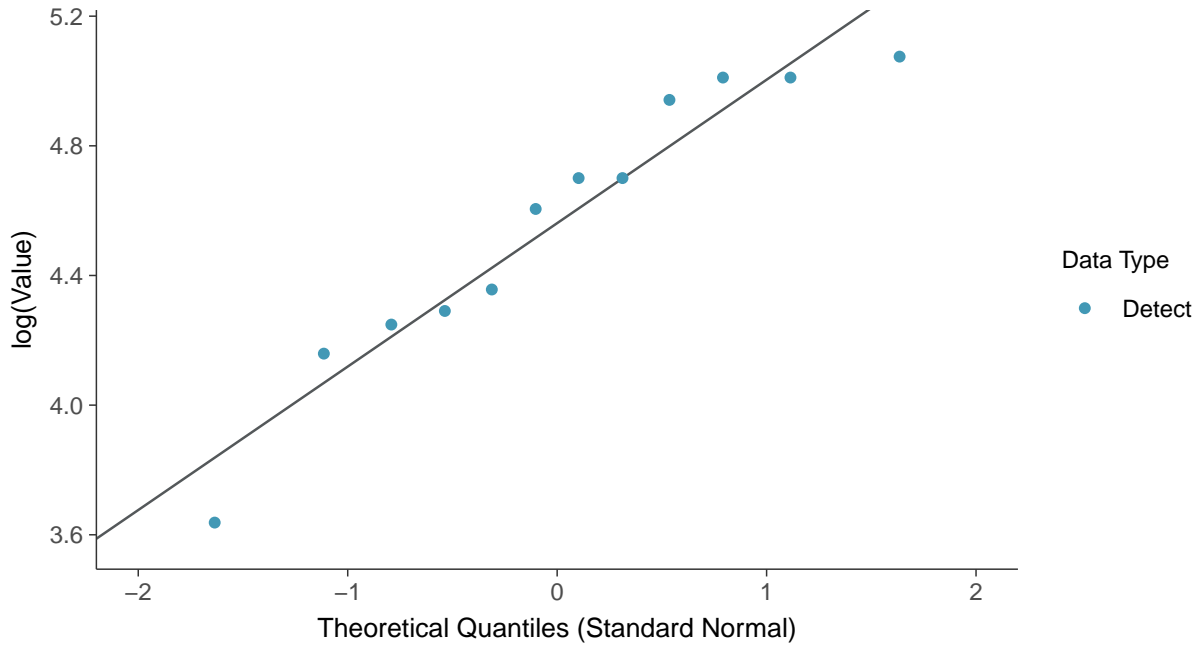
### Normal Q-Q plot

Boron, MW-01R (mg/L)



### Lognormal Q-Q plot

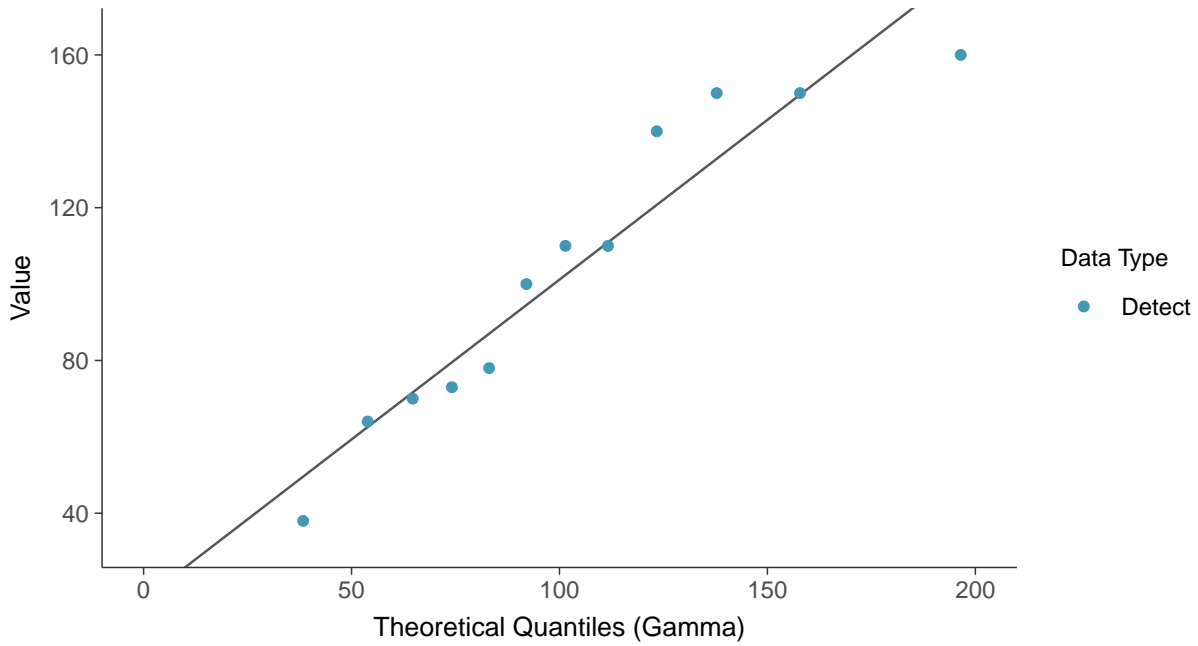
Boron, MW-01R (mg/L)





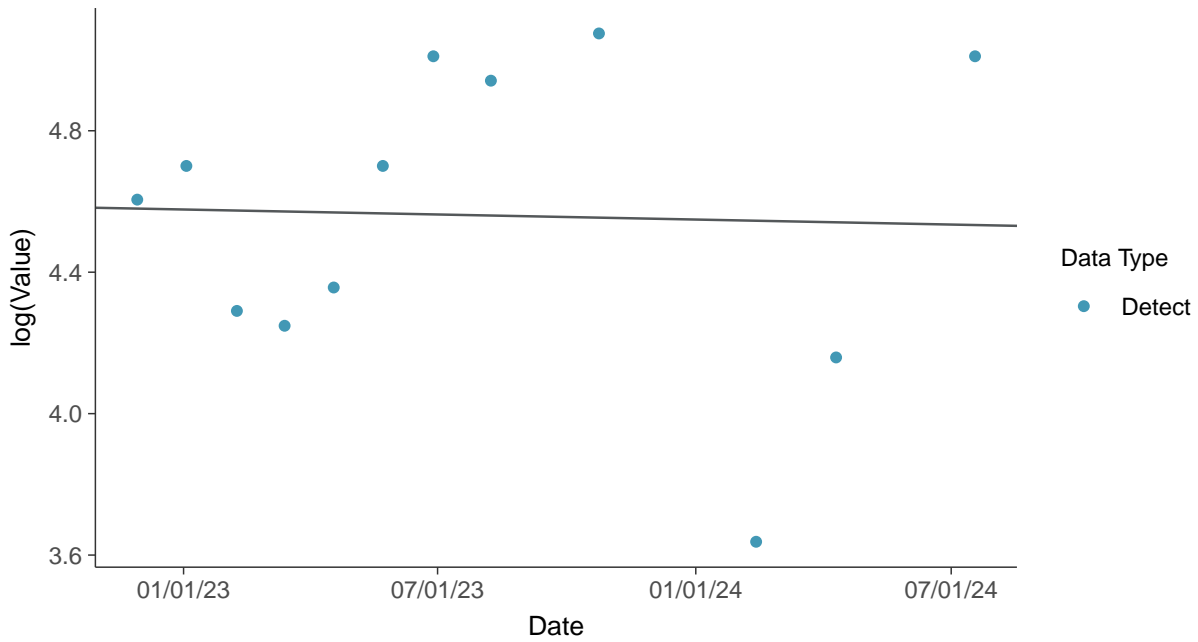
### Gamma Q-Q plot

Boron, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

Boron, MW-01R (mg/L)



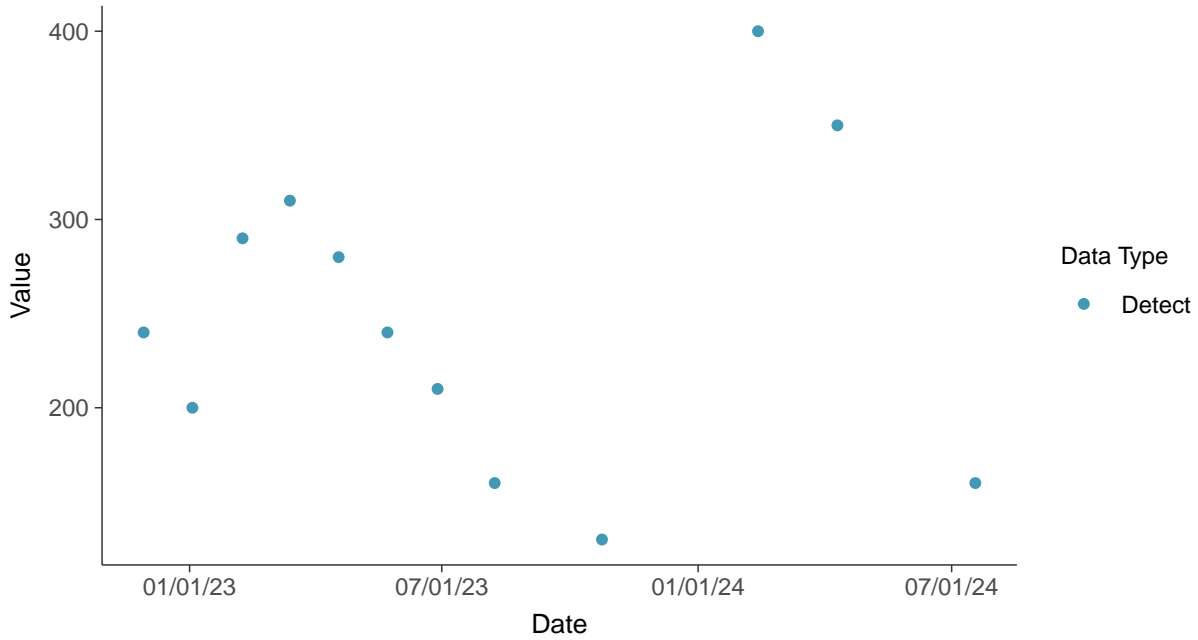


### Appendix III: Calcium, MW-01R

ID: 11\_2\_4\_107

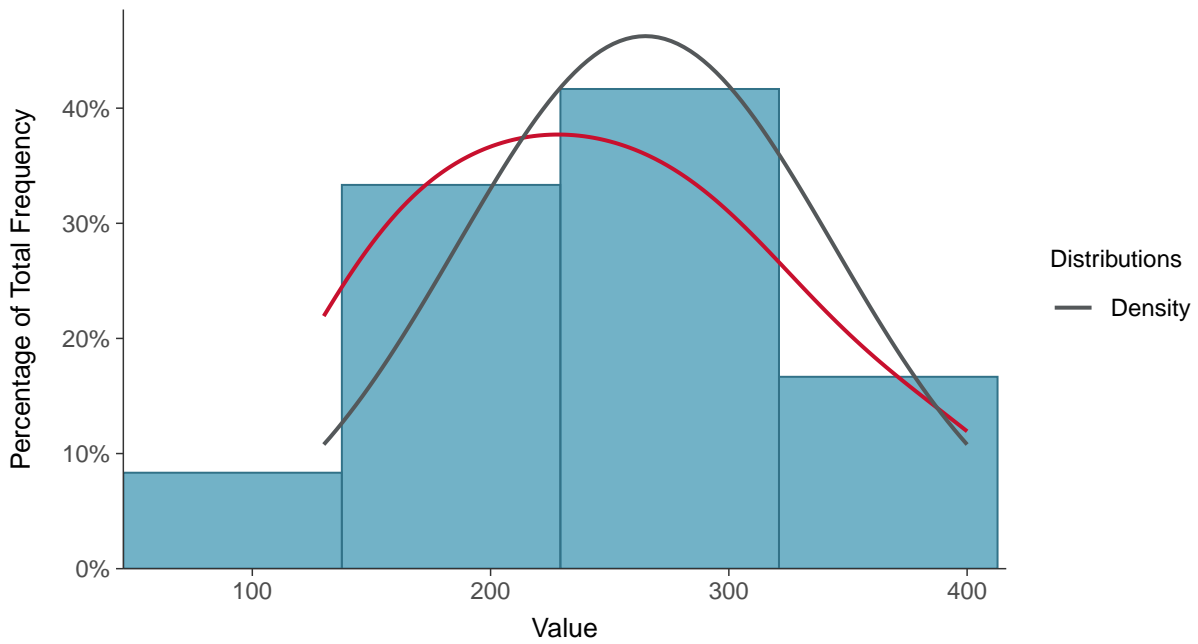
#### Scatter Plot

Calcium, MW-01R (mg/L)



#### Histogram

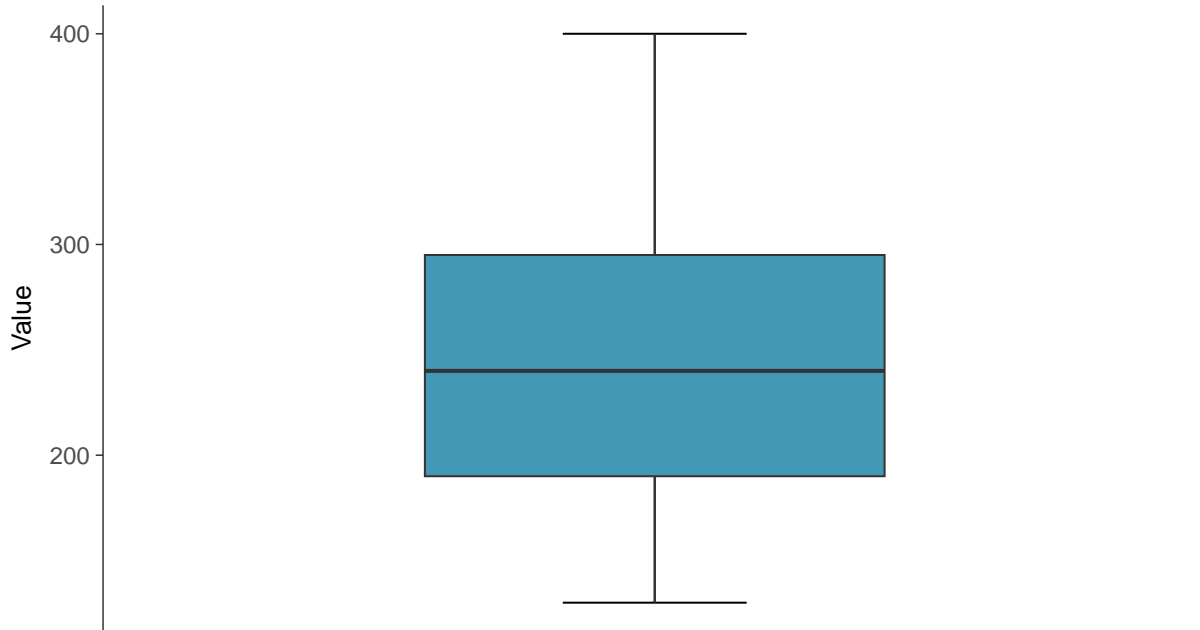
Calcium, MW-01R (mg/L)





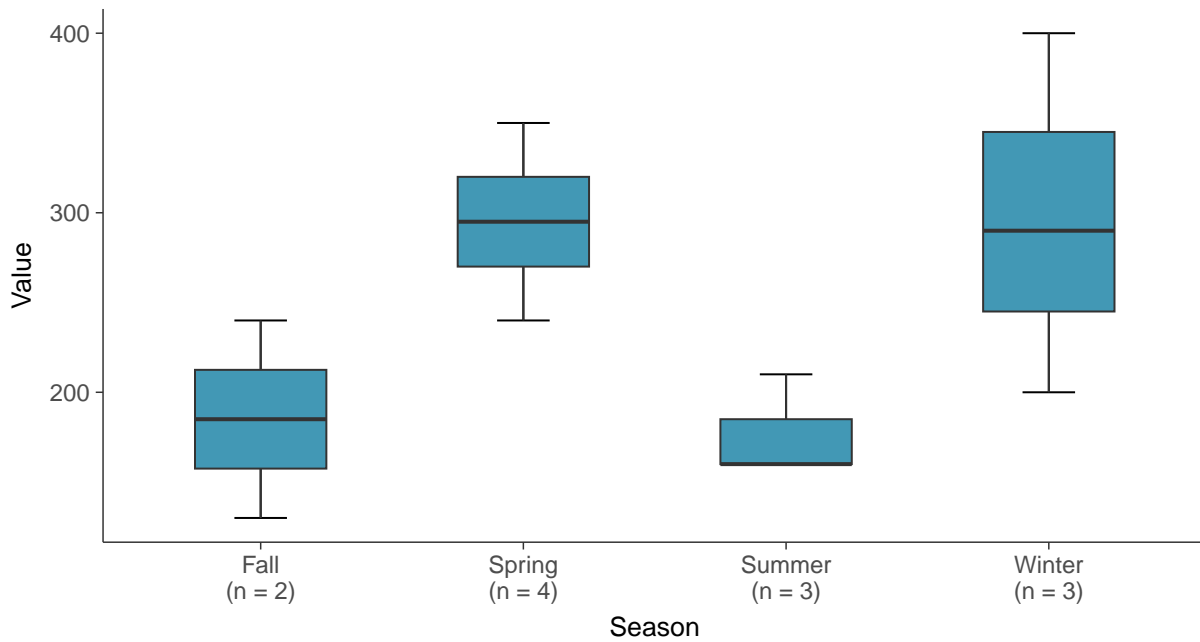
### Boxplot

Calcium, MW-01R (mg/L)



### Boxplot by Season

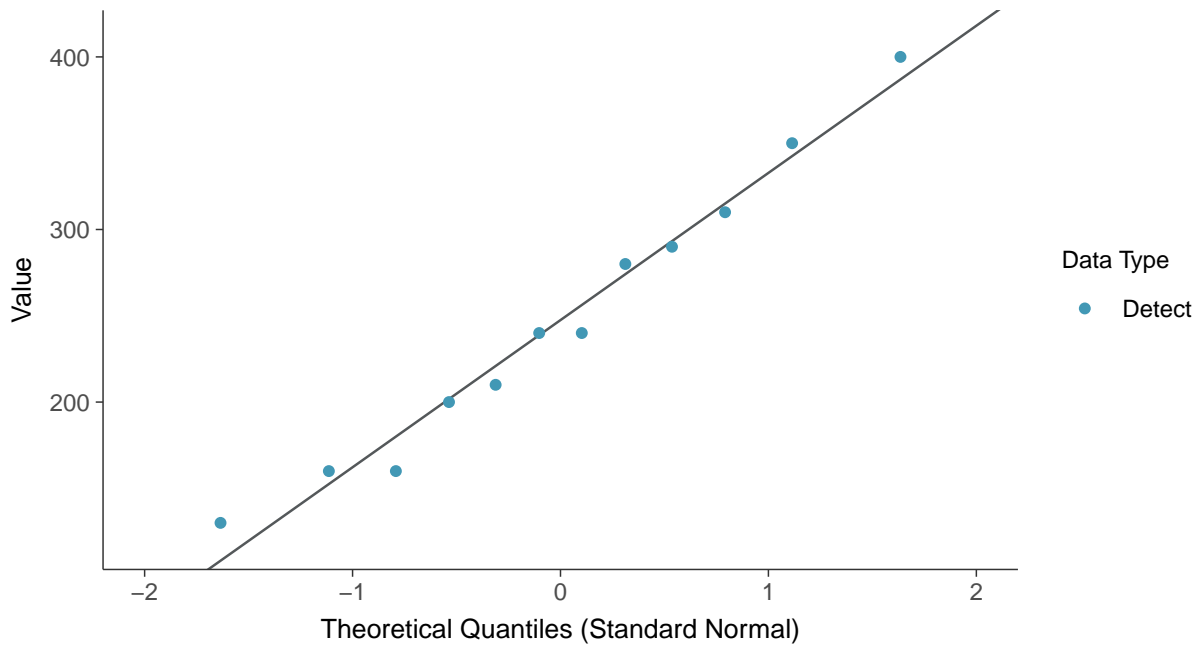
Calcium, MW-01R (mg/L)





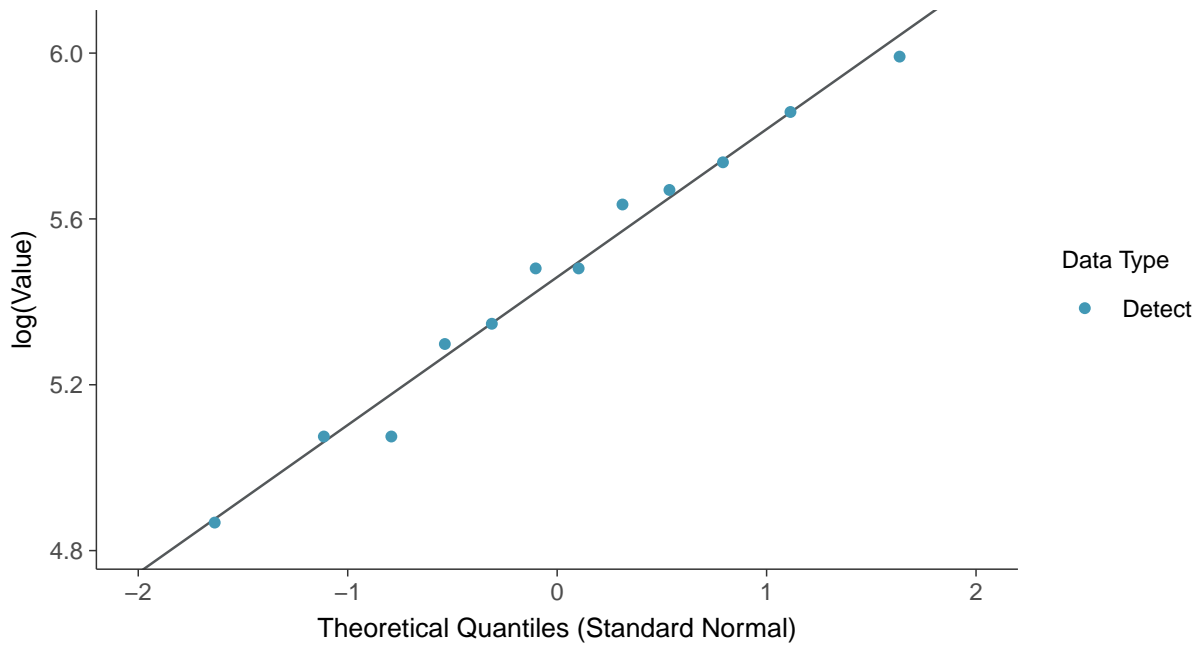
### Normal Q-Q plot

Calcium, MW-01R (mg/L)



### Lognormal Q-Q plot

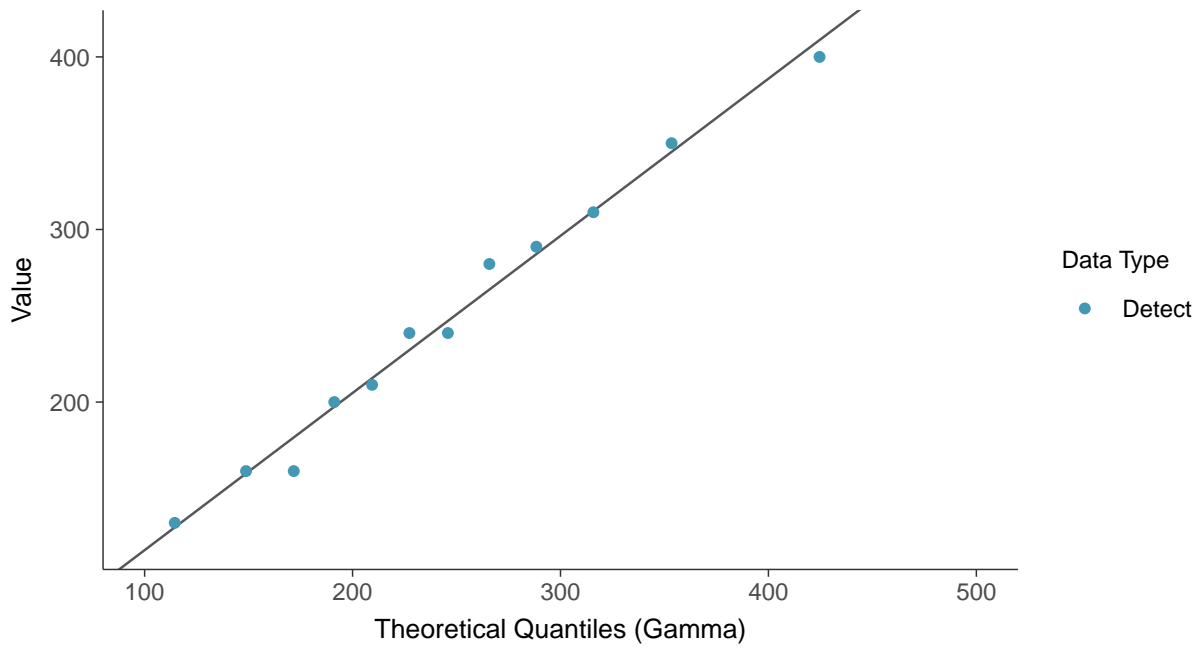
Calcium, MW-01R (mg/L)





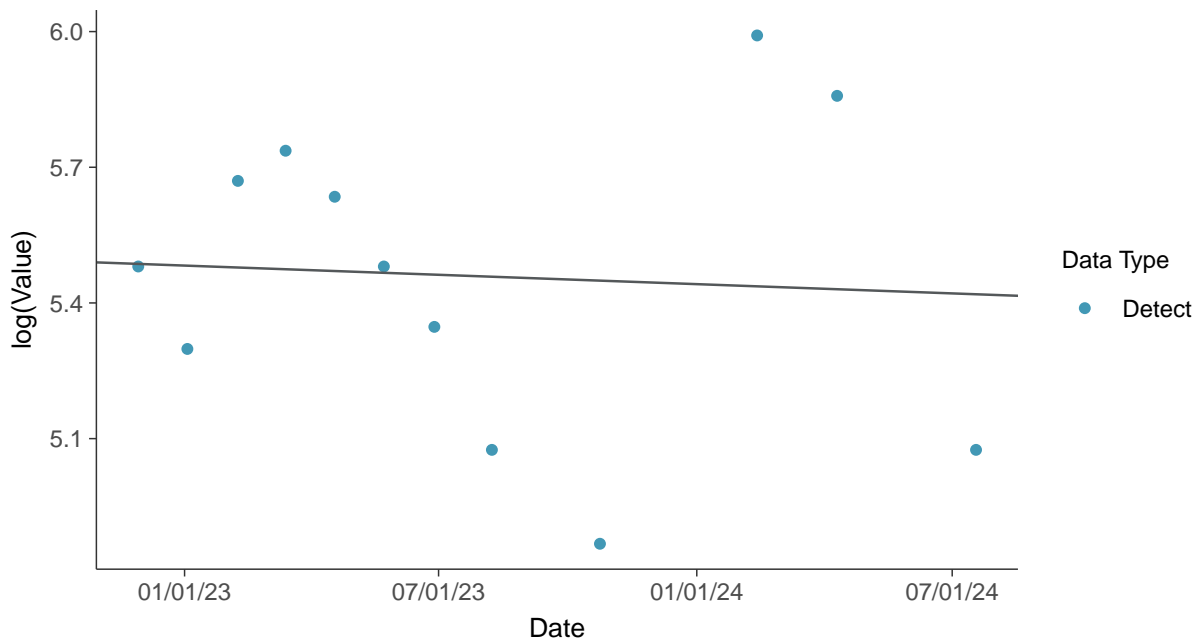
### Gamma Q-Q plot

Calcium, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

Calcium, MW-01R (mg/L)





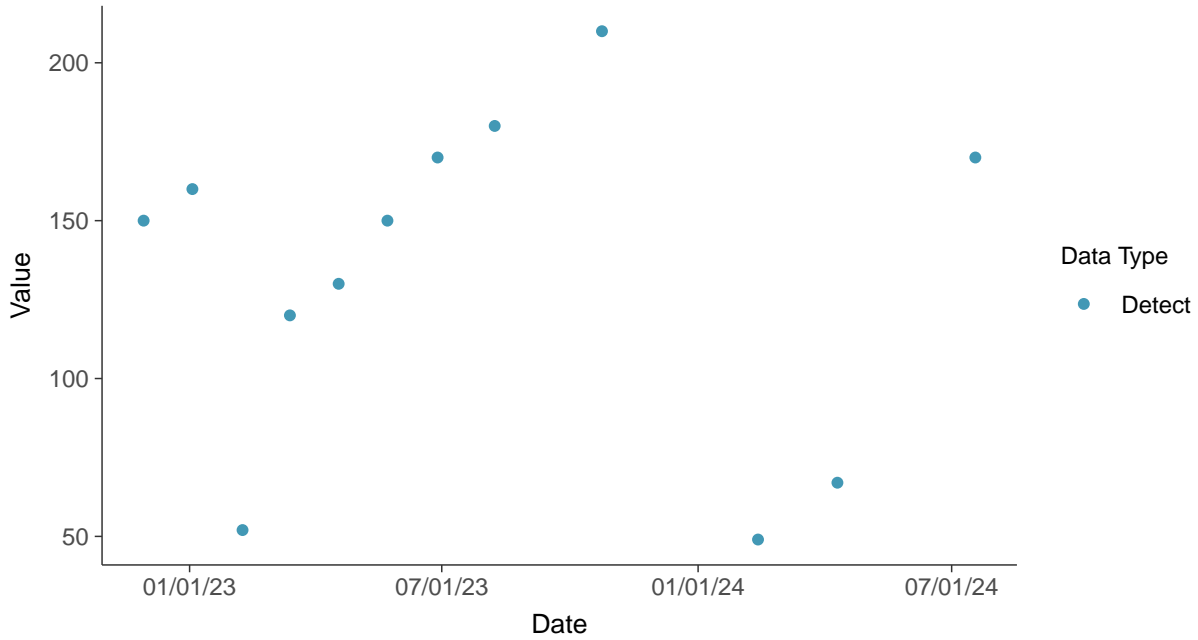


### Appendix III: Chloride (as Cl), MW-01R

ID: 11\_2\_4\_108

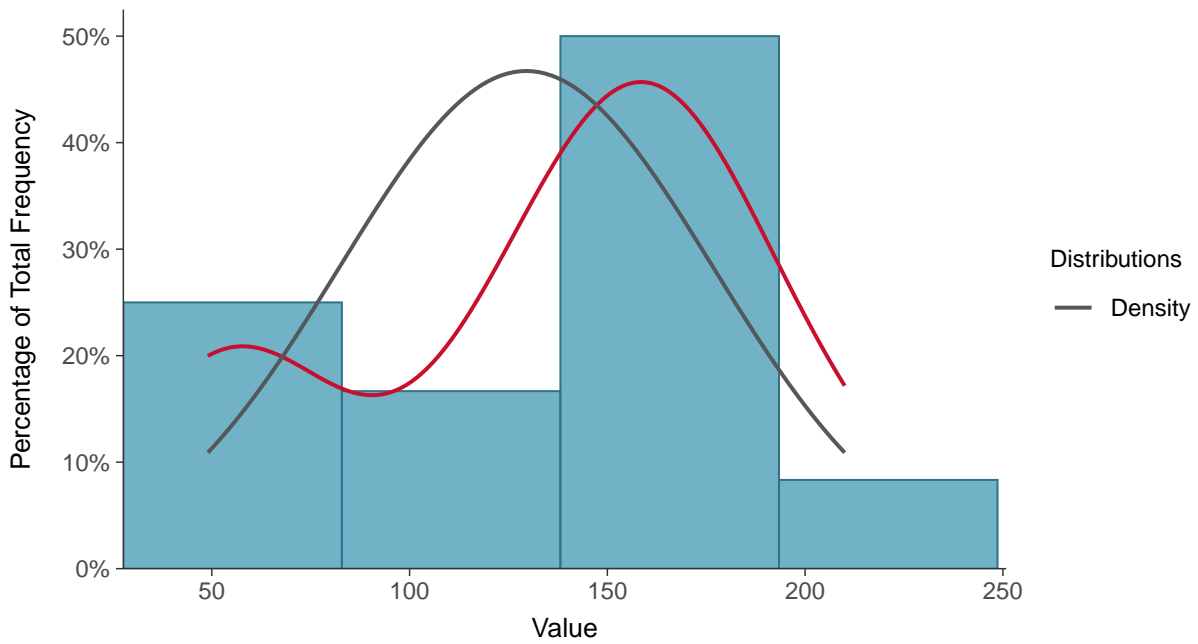
#### Scatter Plot

Chloride (as Cl), MW-01R (mg/L)



#### Histogram

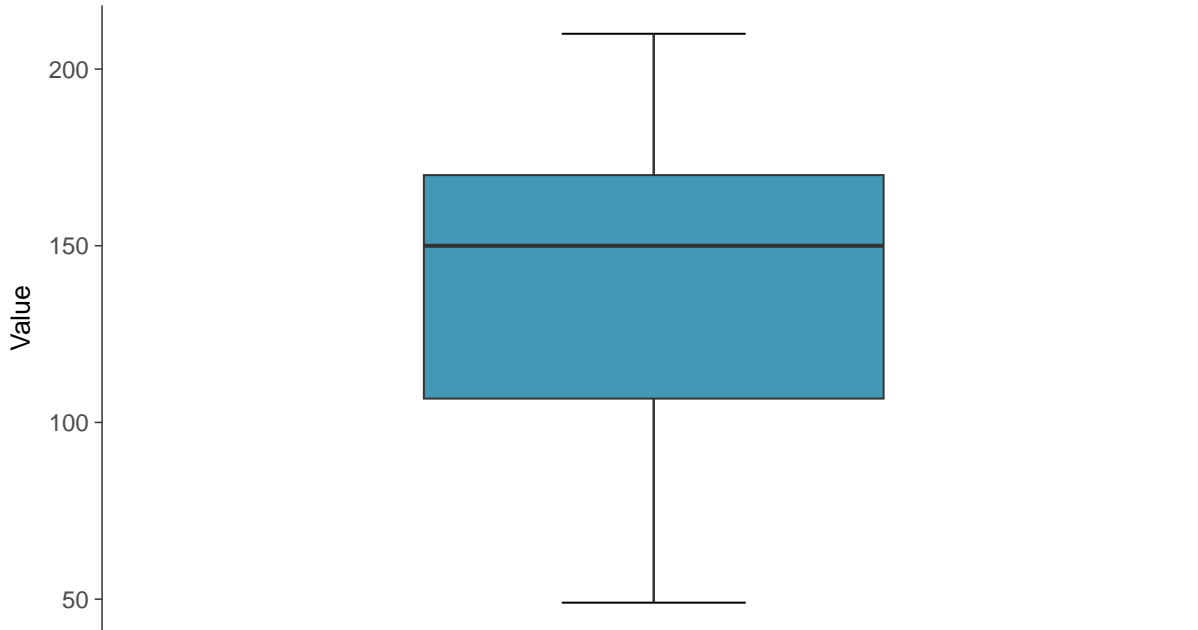
Chloride (as Cl), MW-01R (mg/L)





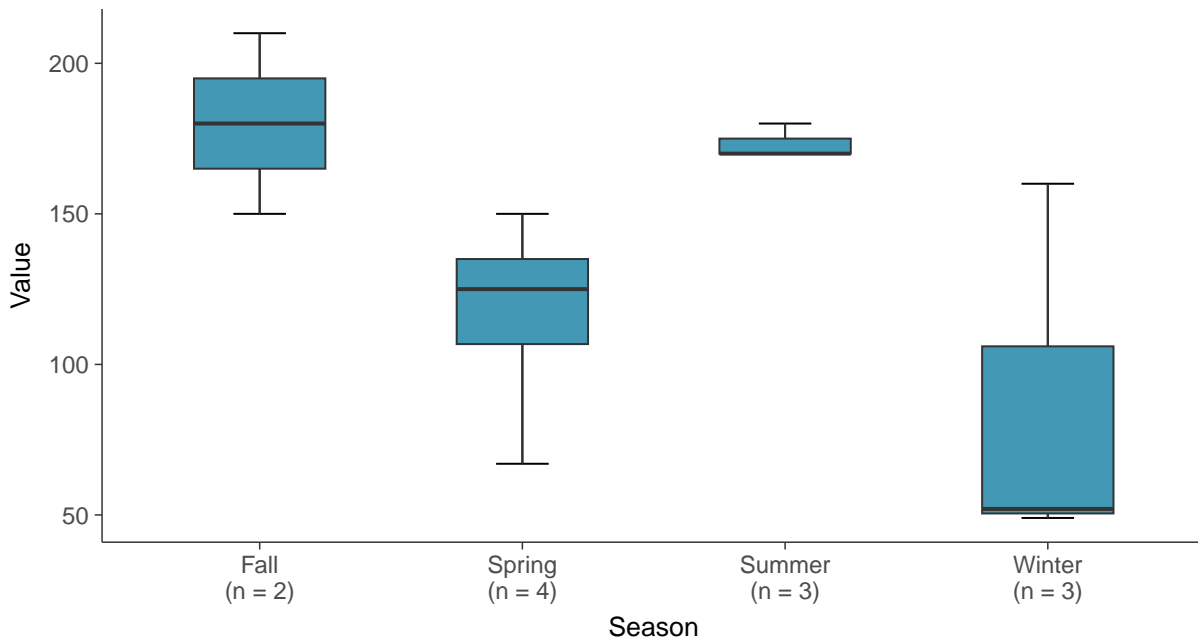
### Boxplot

Chloride (as Cl), MW-01R (mg/L)



### Boxplot by Season

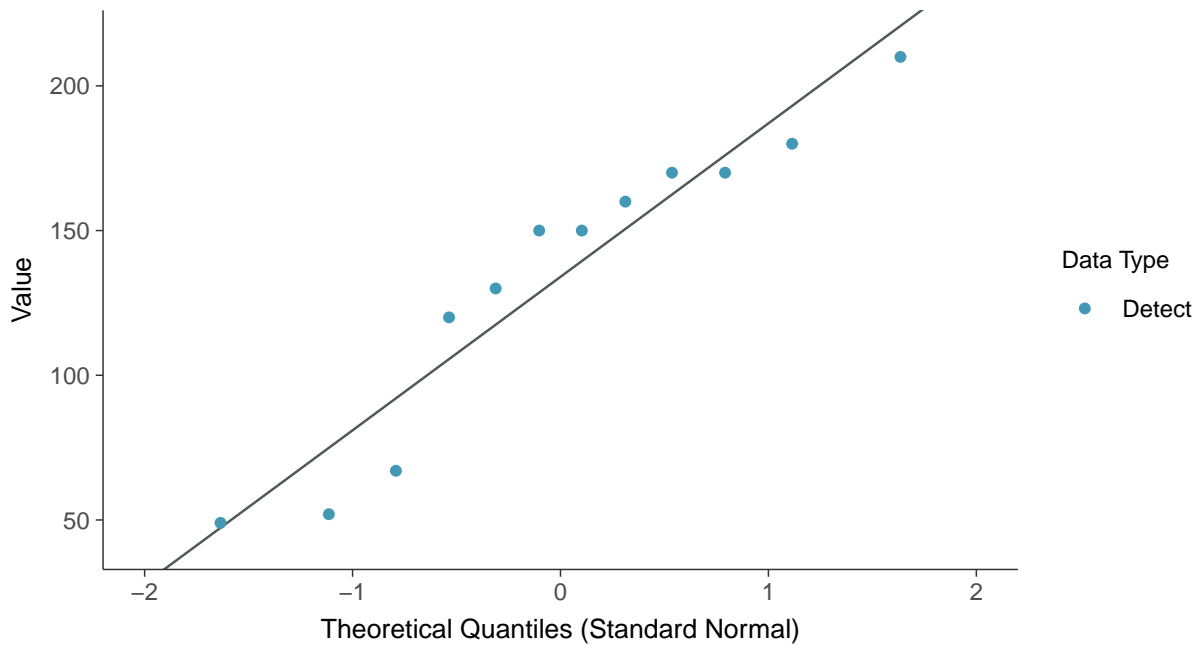
Chloride (as Cl), MW-01R (mg/L)





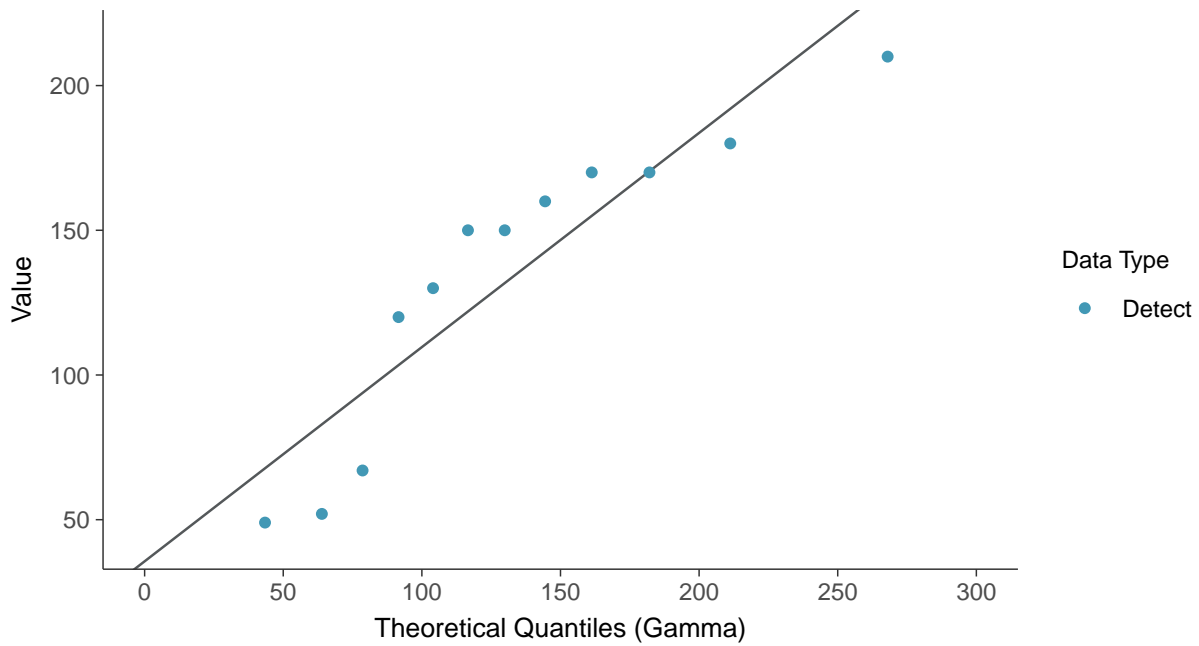
### Normal Q-Q plot

Chloride (as Cl), MW-01R (mg/L)



### Gamma Q-Q plot

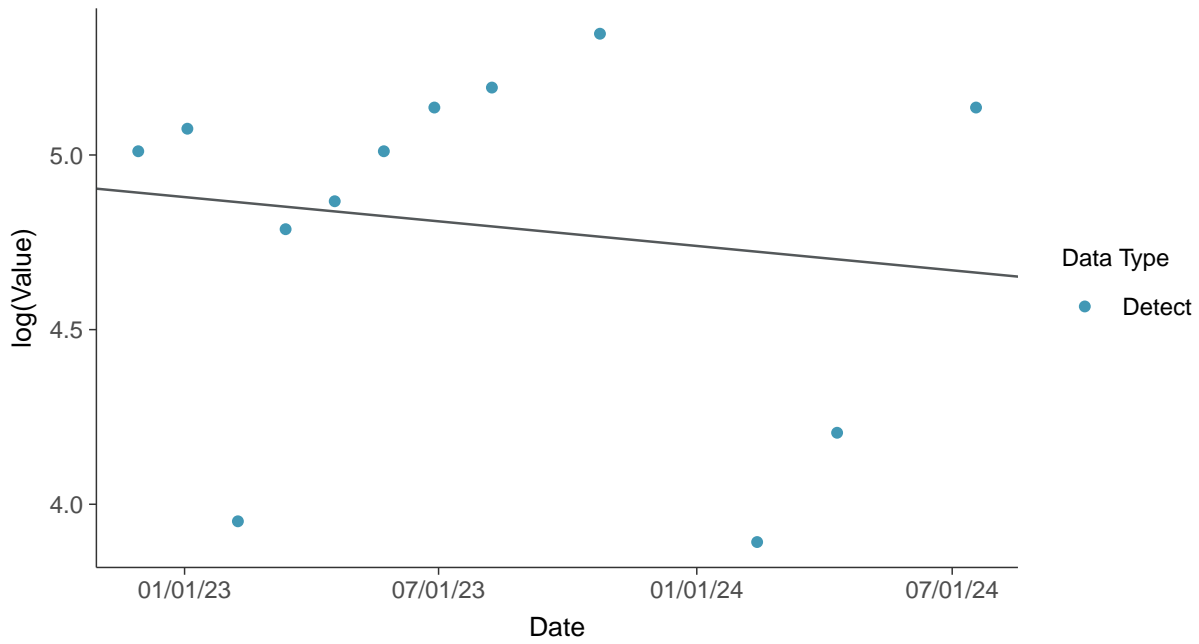
Chloride (as Cl), MW-01R (mg/L)





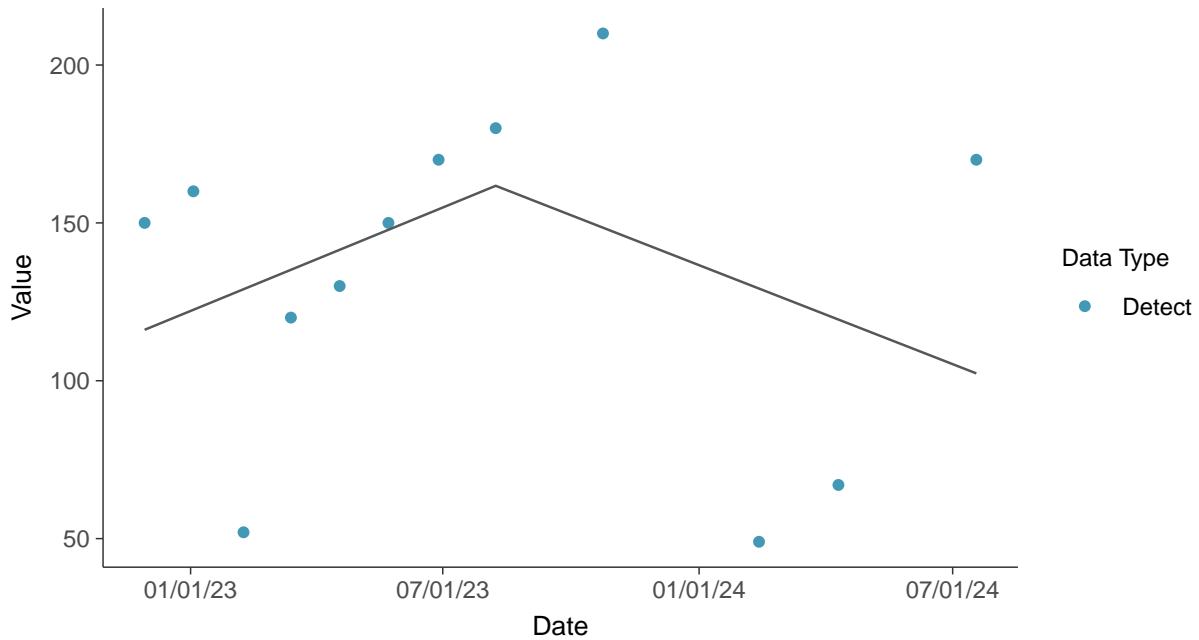
### Trend Regression: Lognormal MLE

Chloride (as Cl), MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear

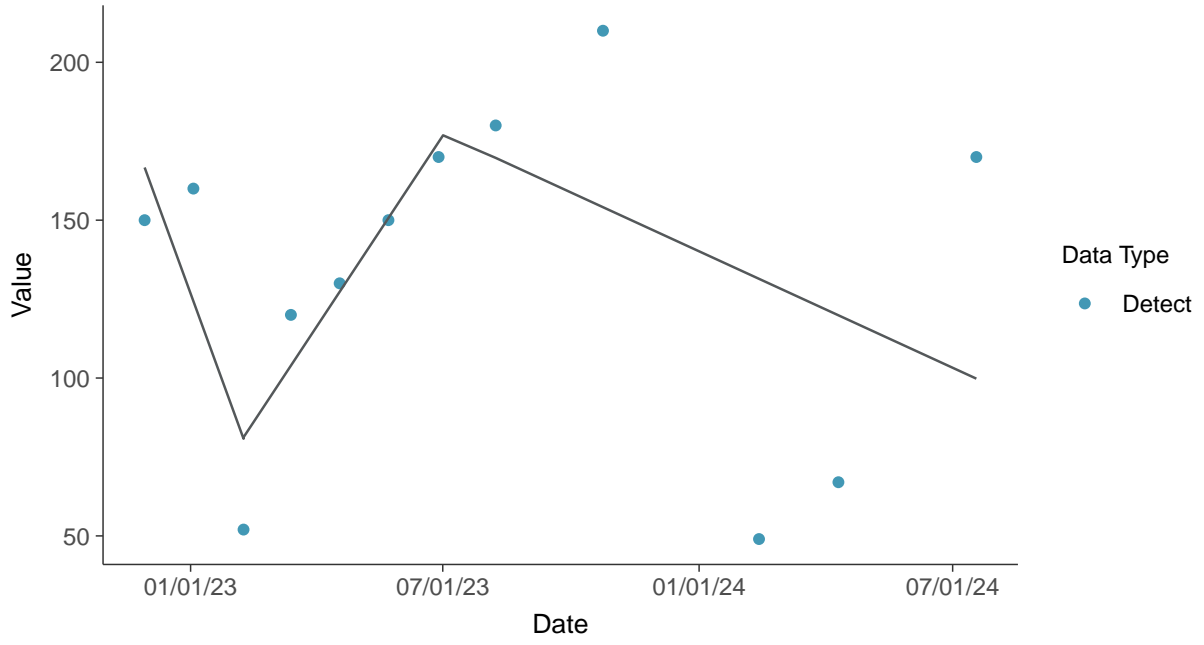
Chloride (as Cl), MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

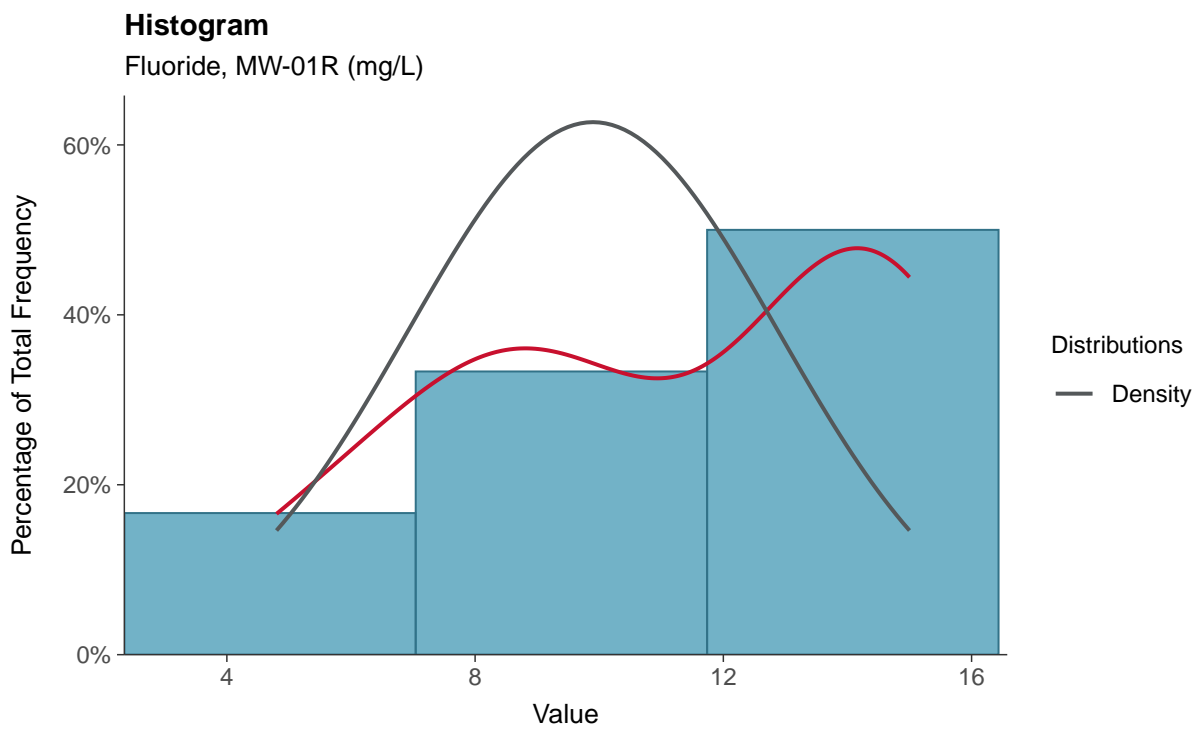
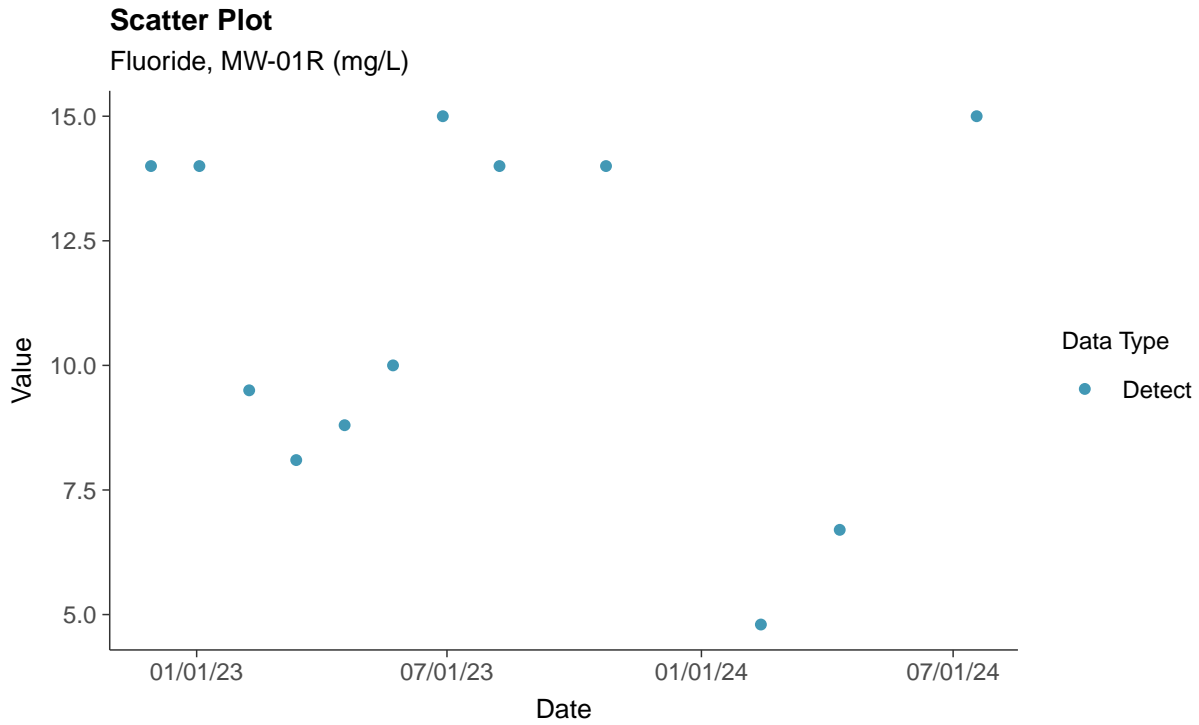
Chloride (as Cl), MW-01R (mg/L)





### Appendix III: Fluoride, MW-01R

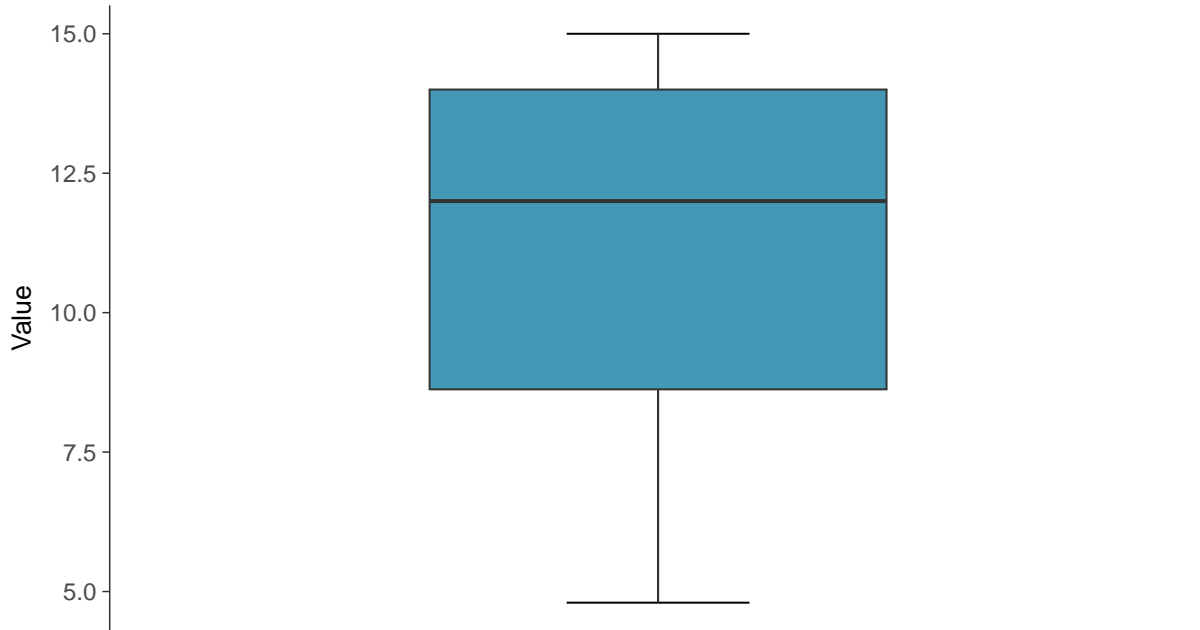
ID: 11\_2\_4\_112





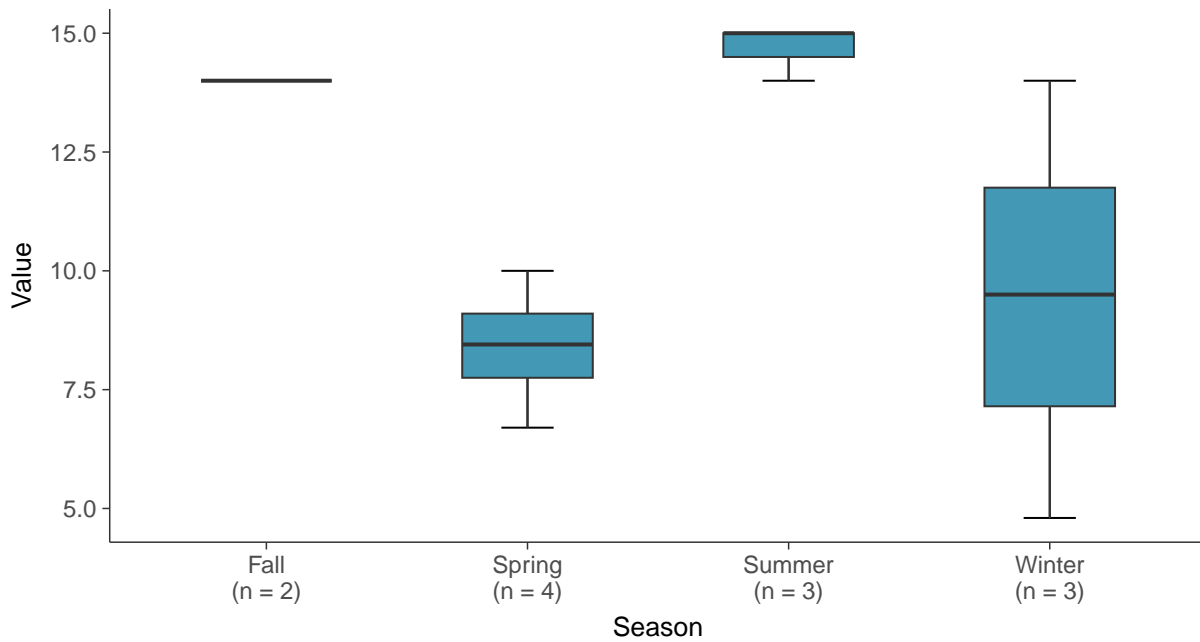
### Boxplot

Fluoride, MW-01R (mg/L)



### Boxplot by Season

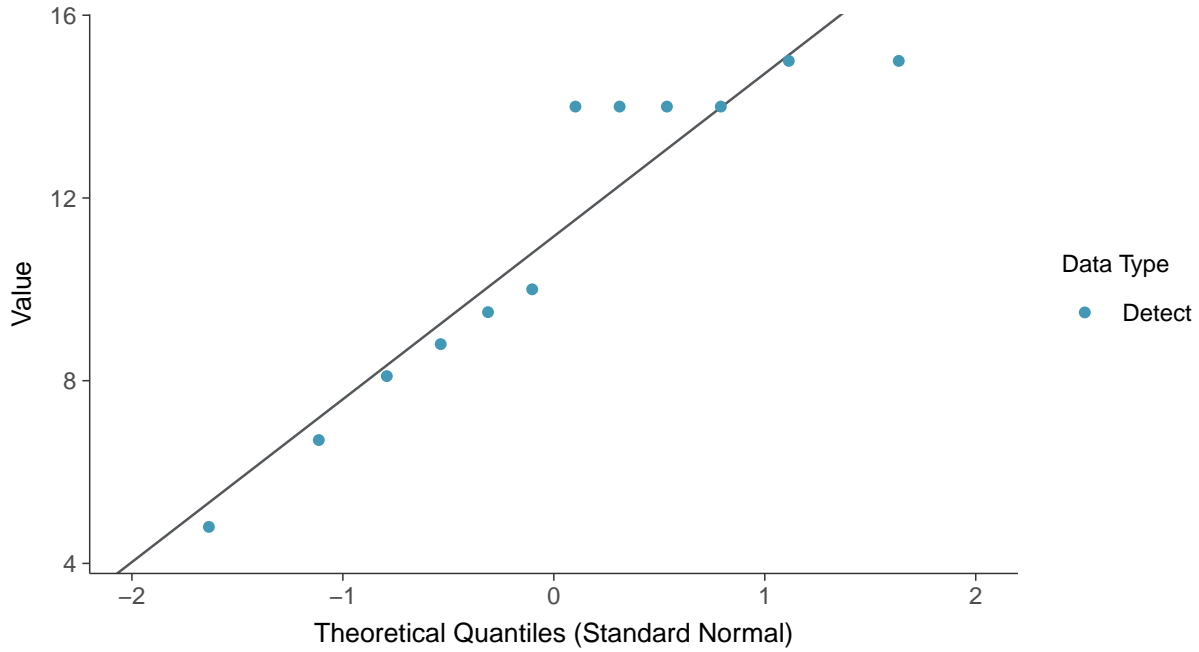
Fluoride, MW-01R (mg/L)





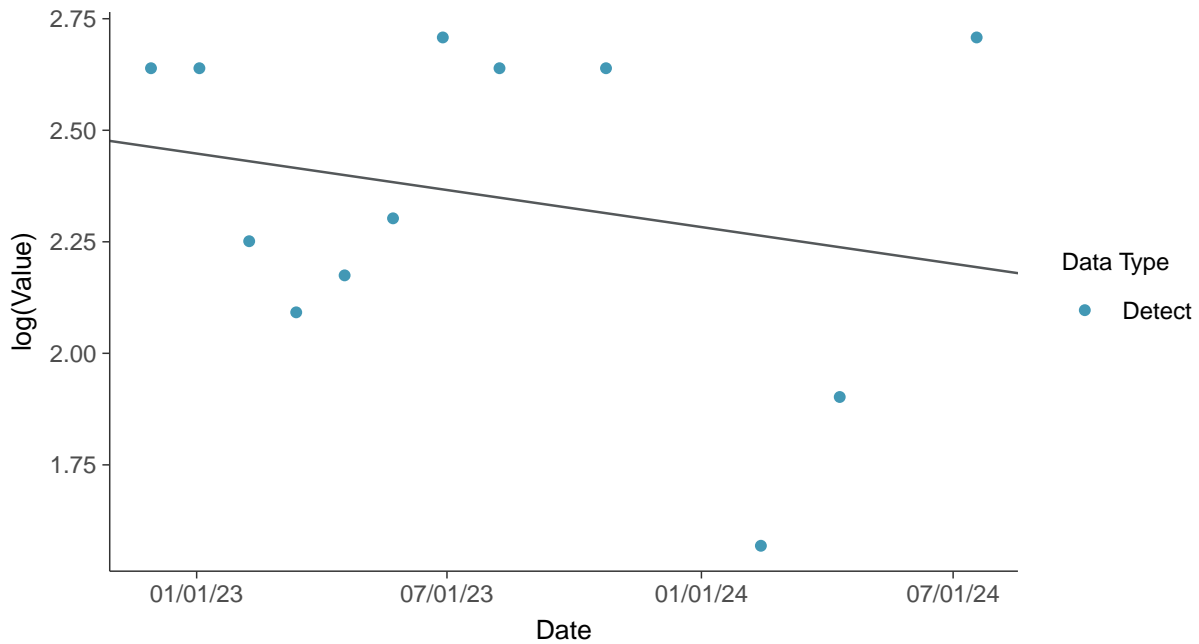
### Normal Q-Q plot

Fluoride, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

Fluoride, MW-01R (mg/L)

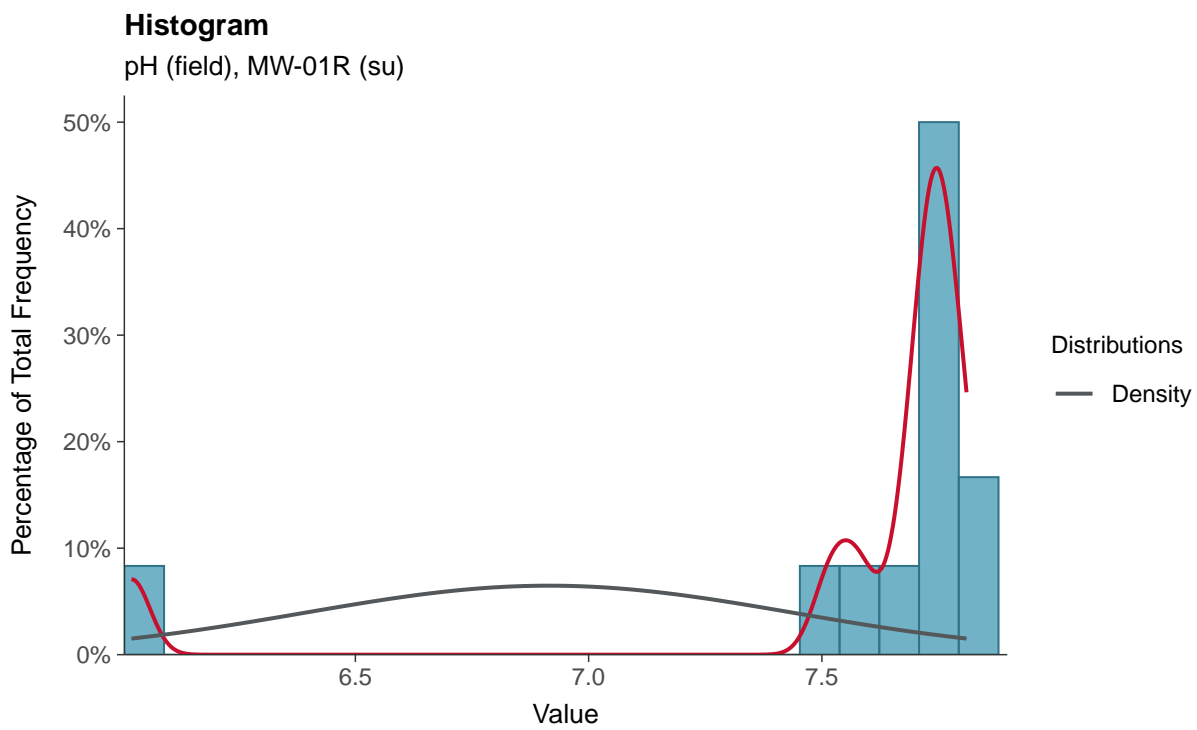
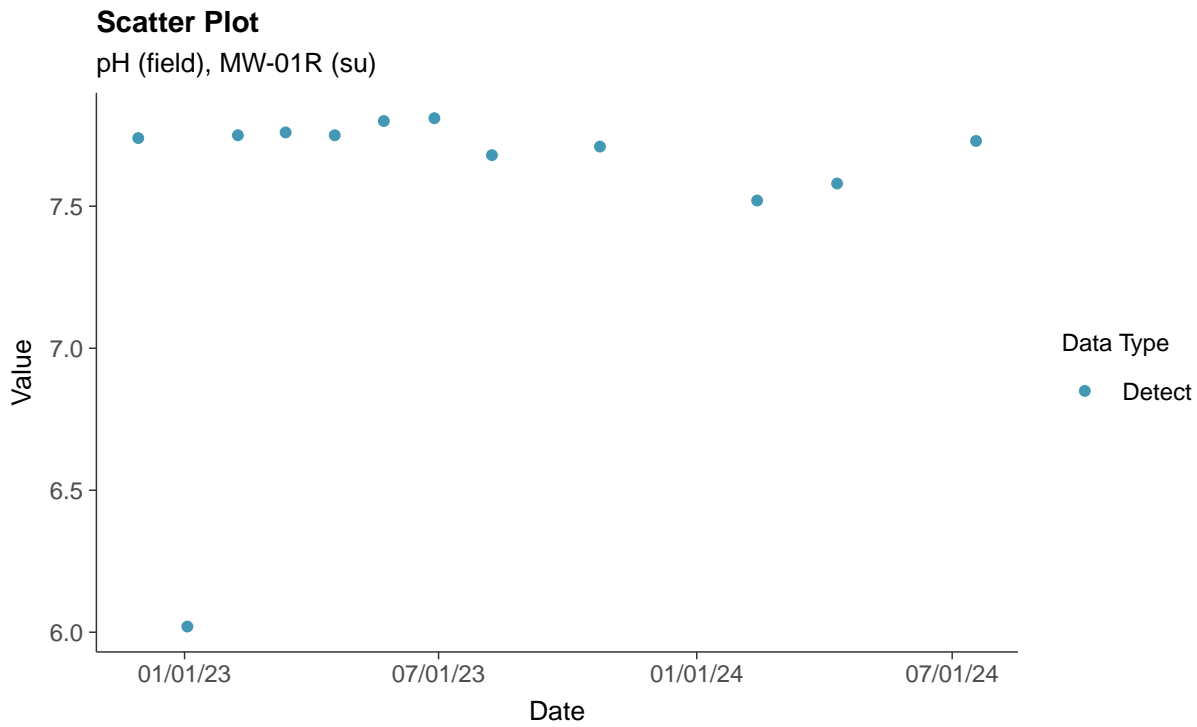






### Appendix III: pH (field), MW-01R

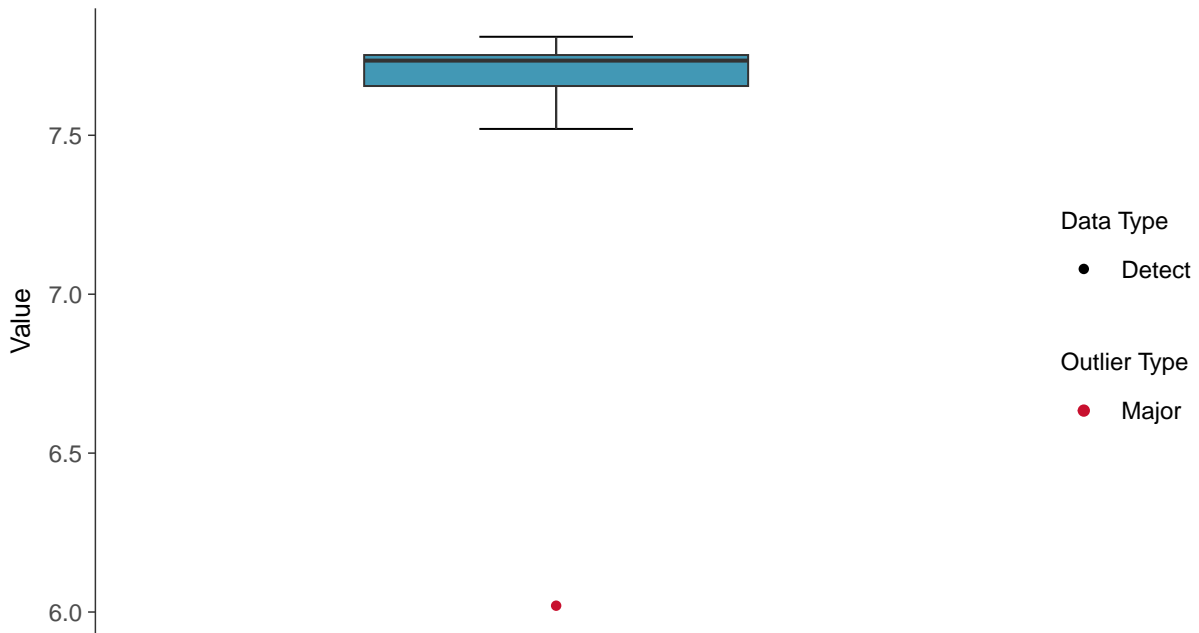
ID: 11\_2\_4\_120





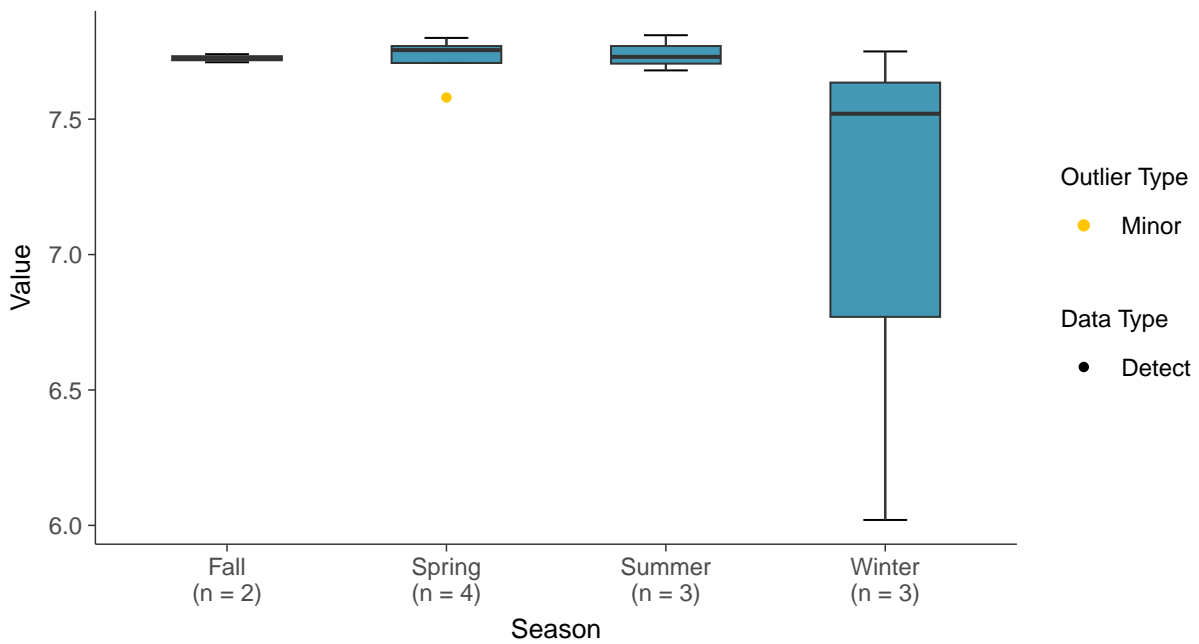
### Boxplot

pH (field), MW-01R (su)



### Boxplot by Season

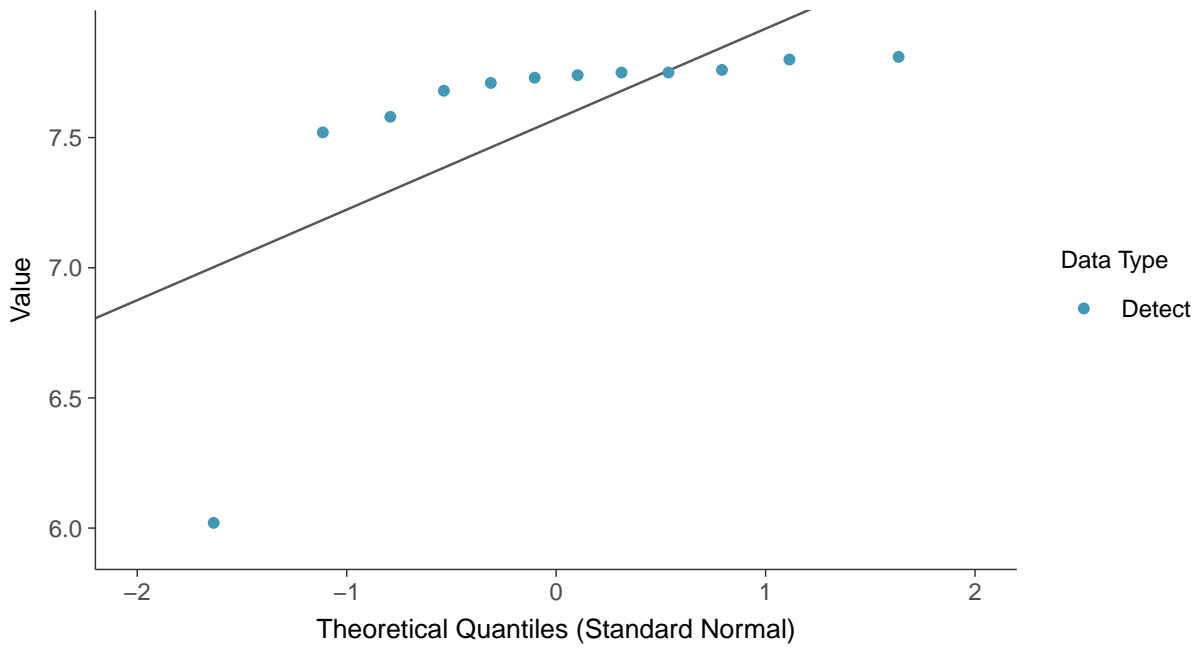
pH (field), MW-01R (su)





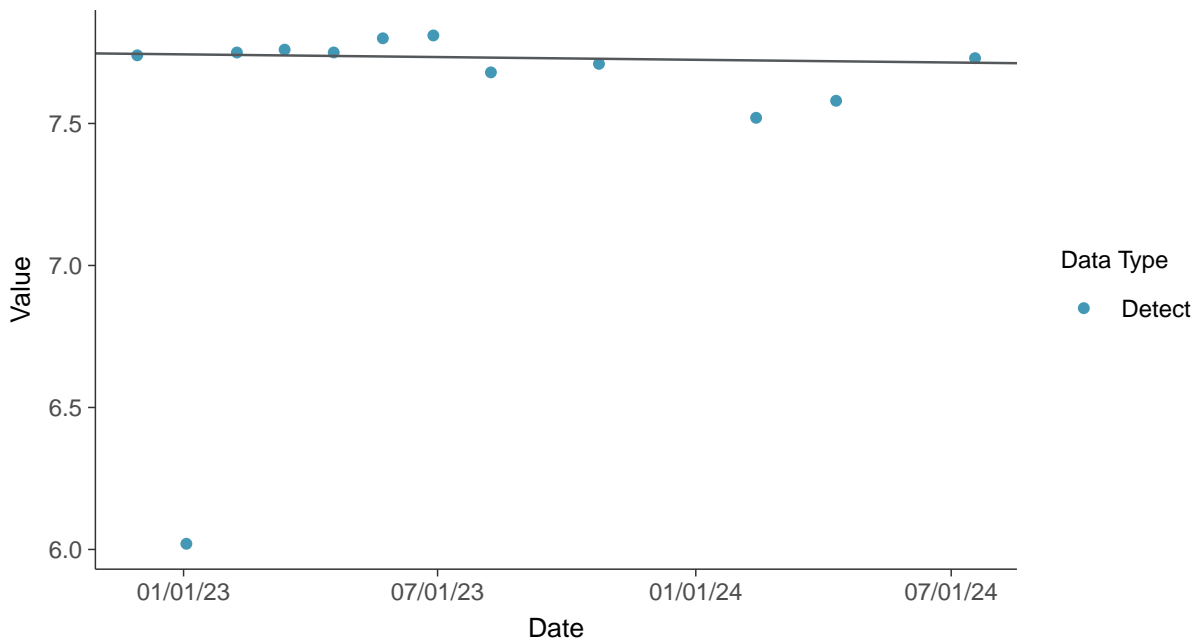
### Normal Q-Q plot

pH (field), MW-01R (su)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

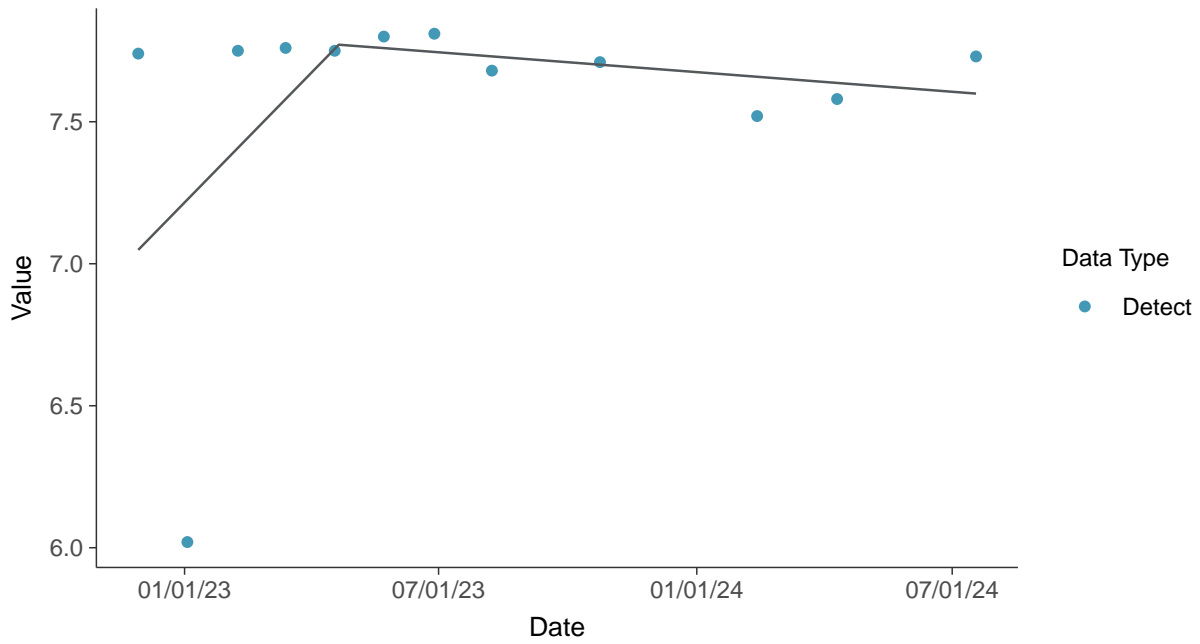
pH (field), MW-01R (su)





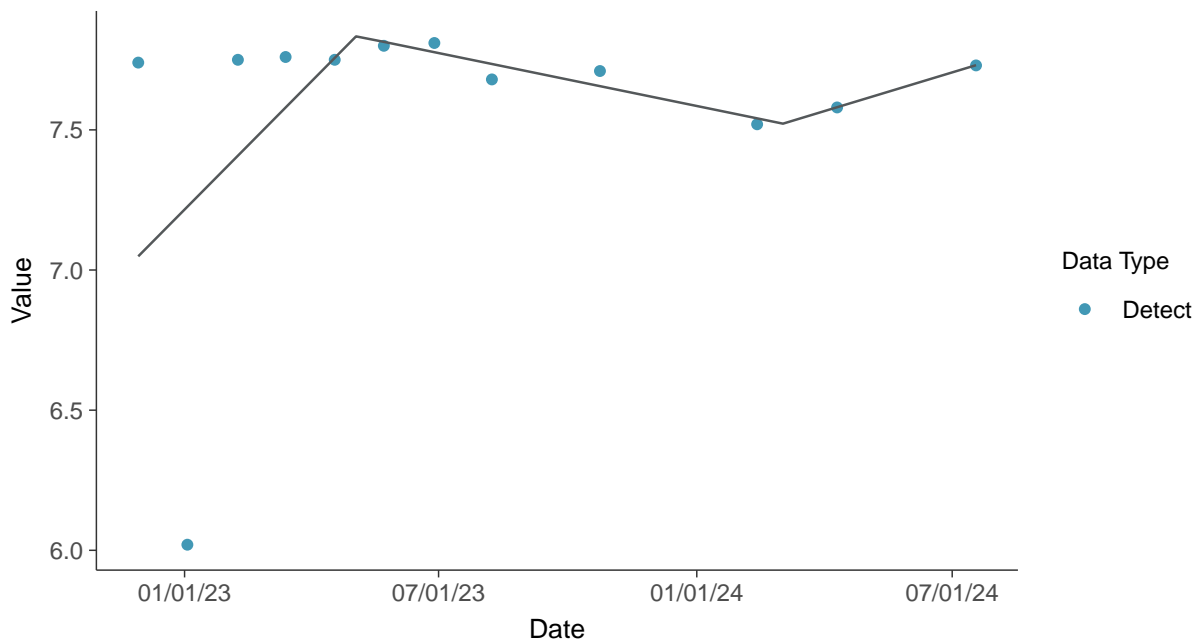
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-01R (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-01R (su)



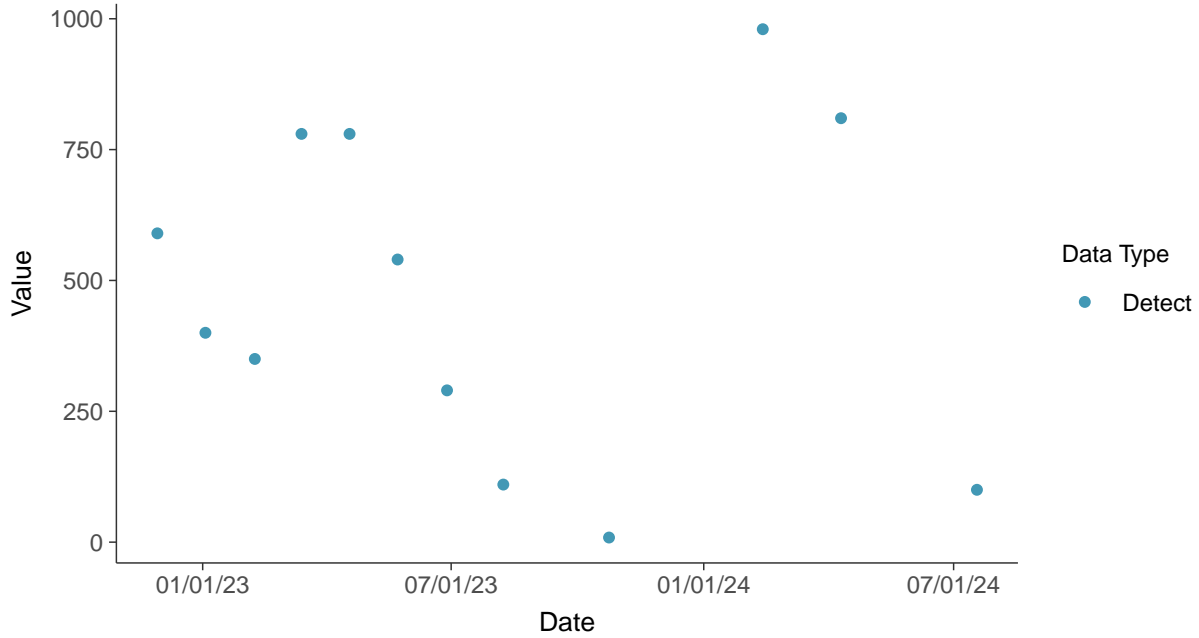


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-01R

ID: 11\_2\_4\_124

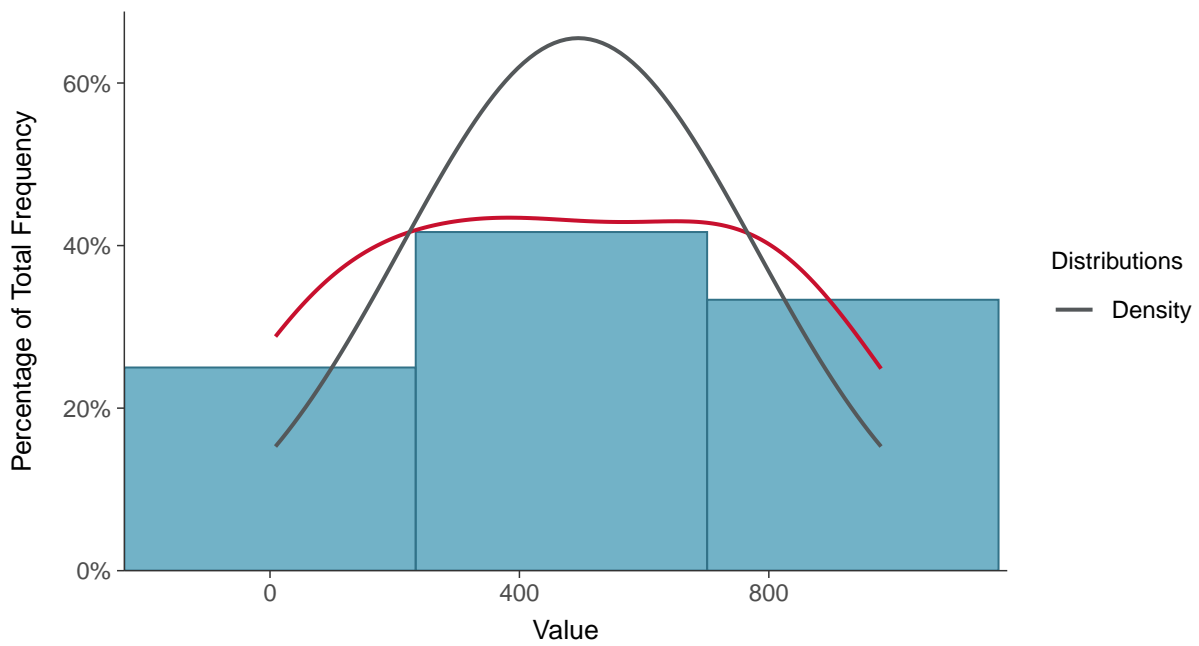
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



#### Histogram

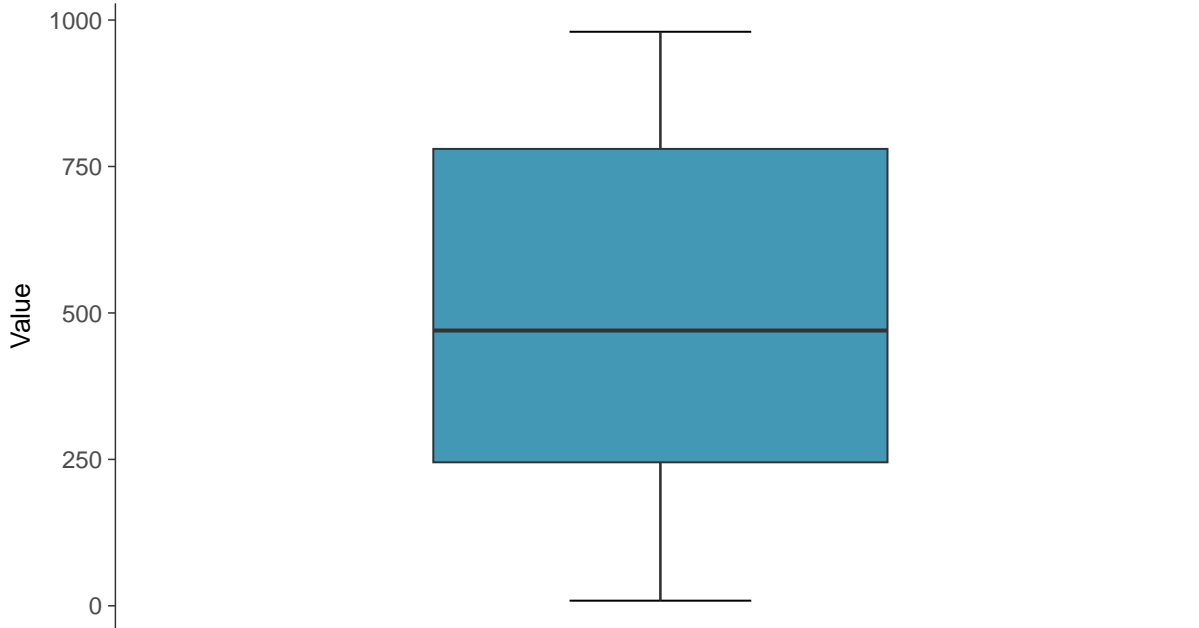
Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)





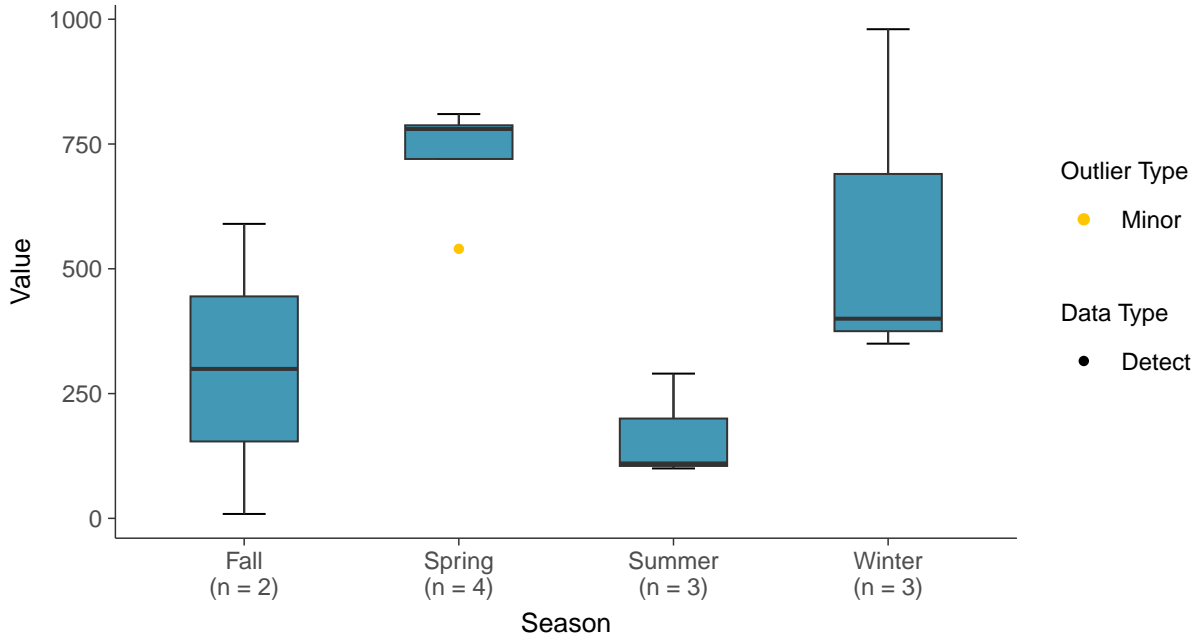
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



### Boxplot by Season

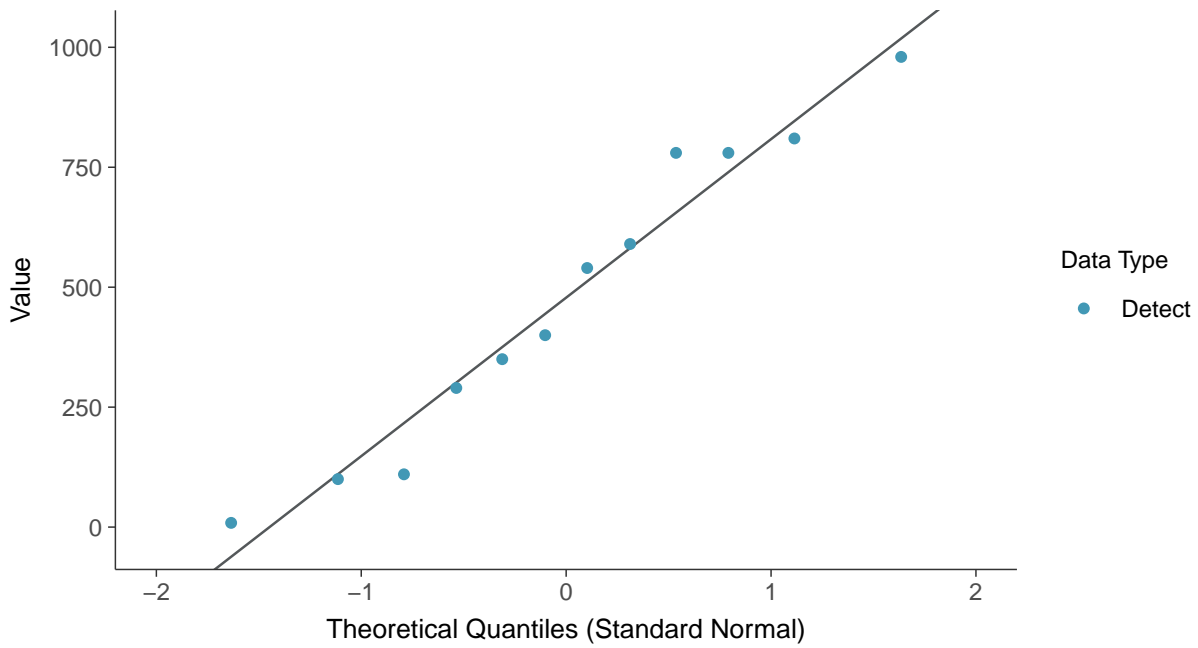
Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)





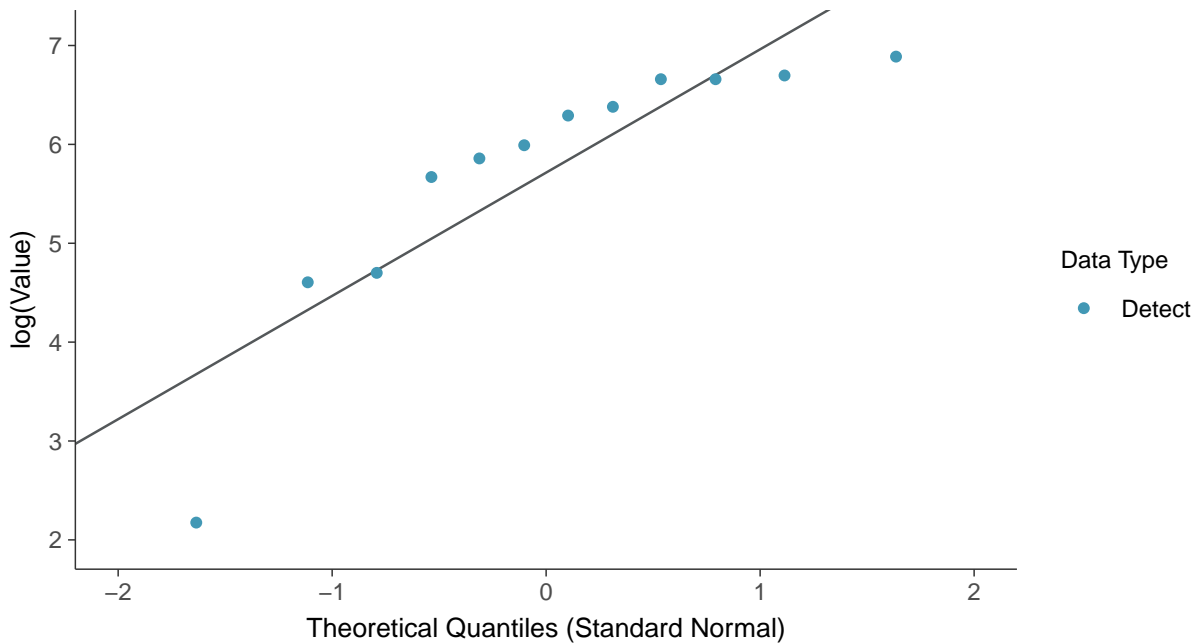
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



### Lognormal Q-Q plot

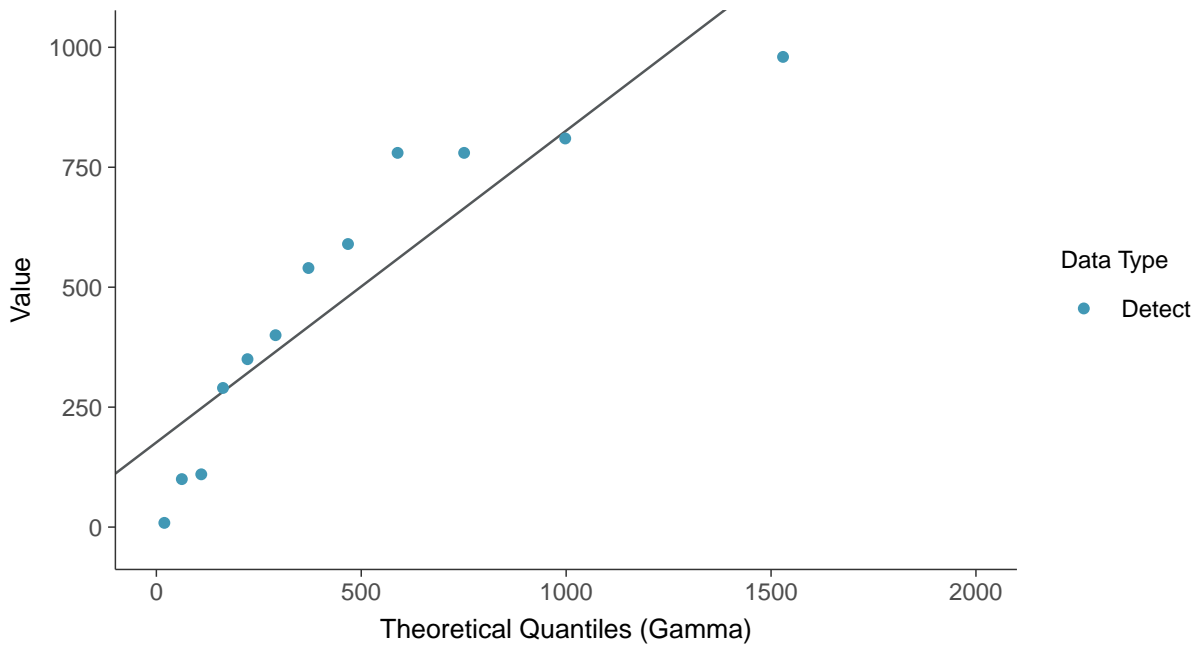
Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)





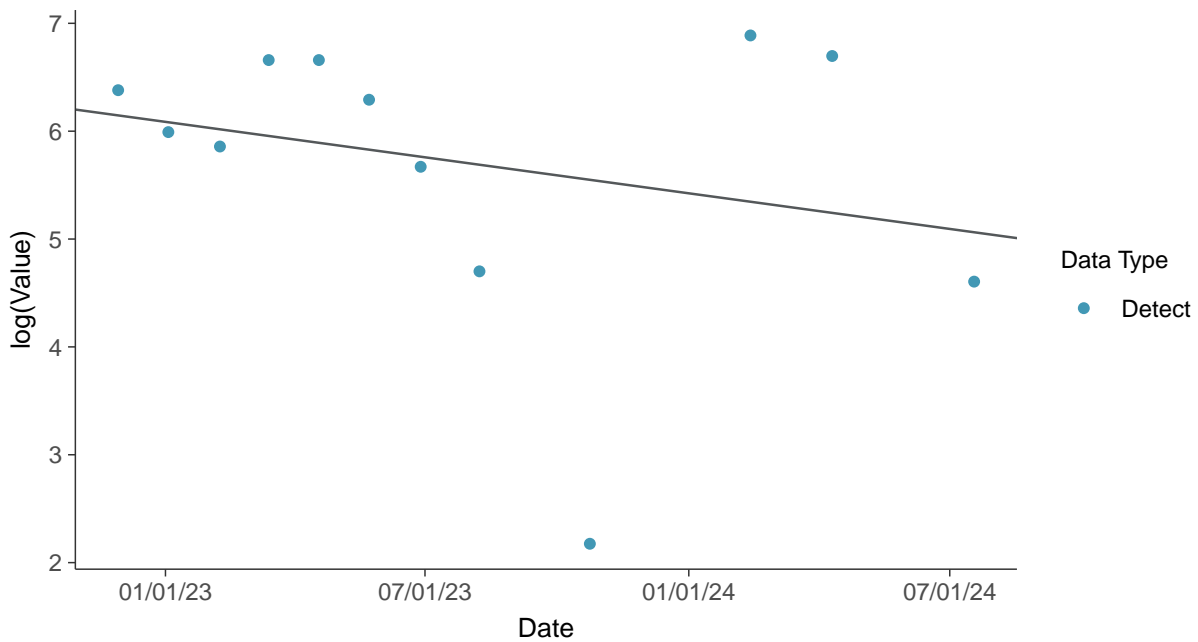
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)

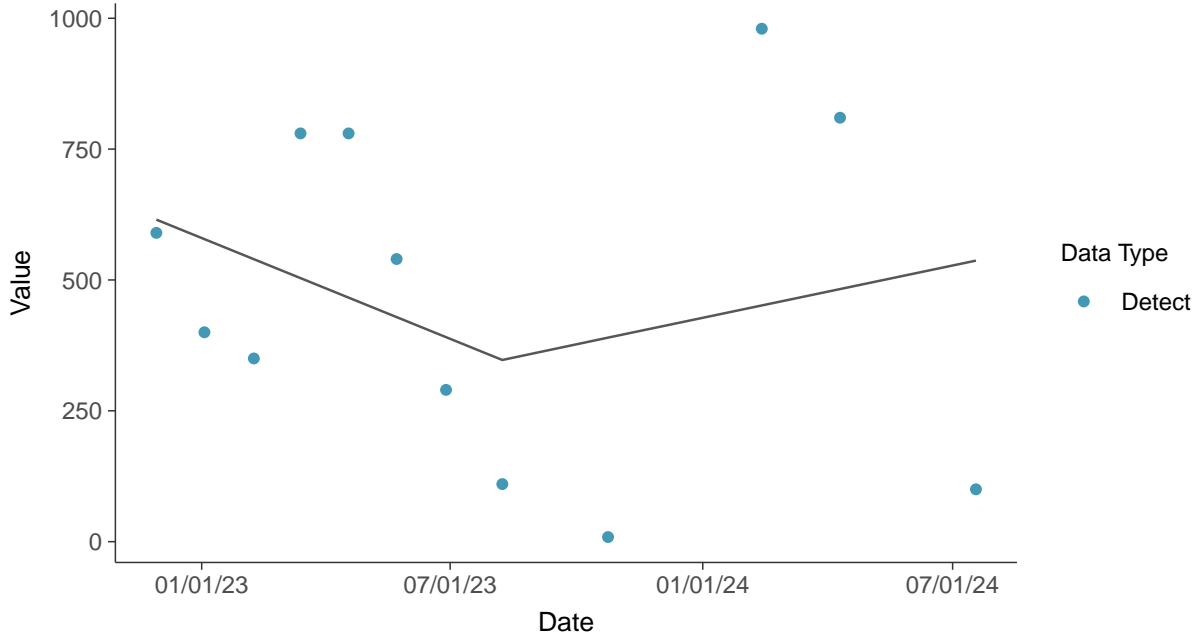






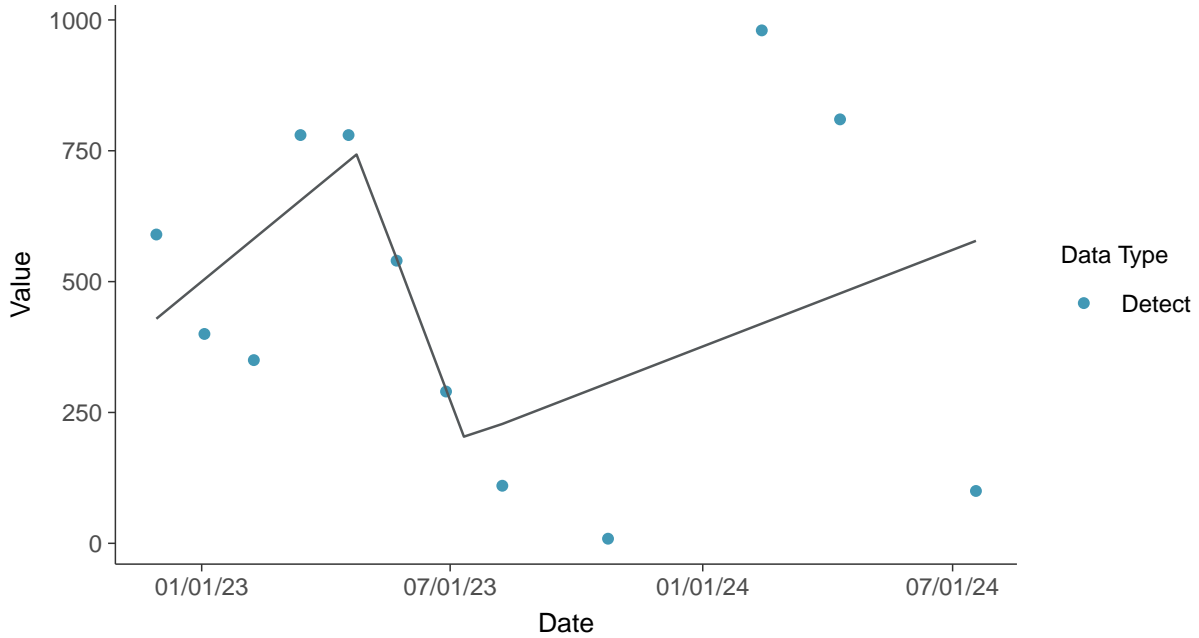
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-01R (mg/L)



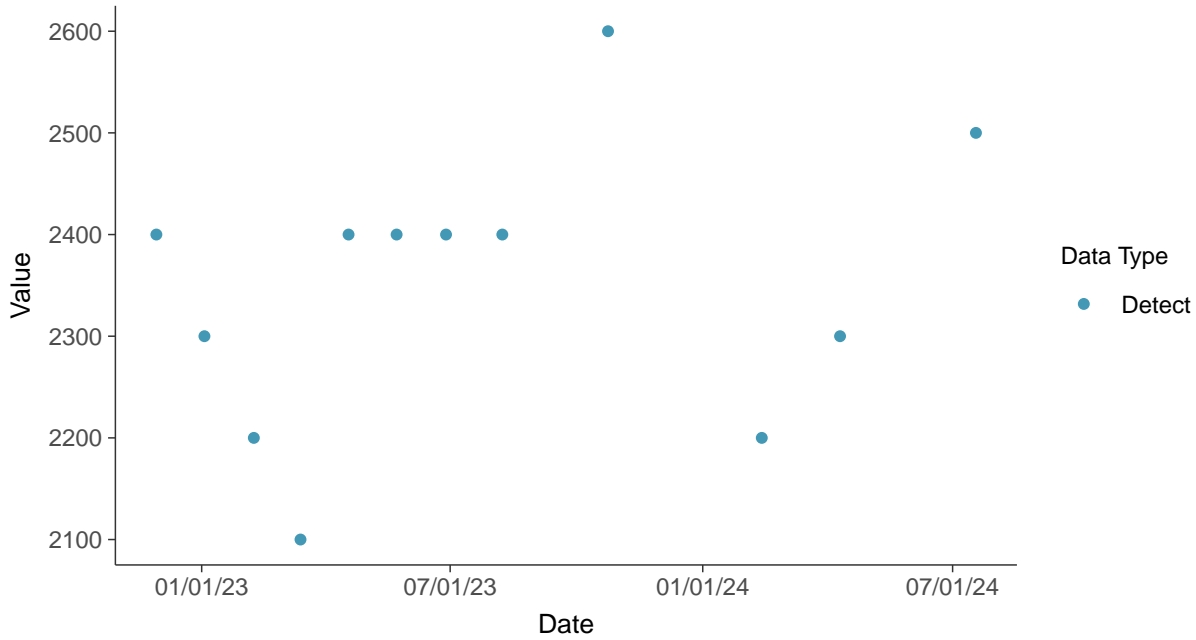


### Appendix III: Total Dissolved Solids, MW-01R

ID: 11\_2\_4\_126

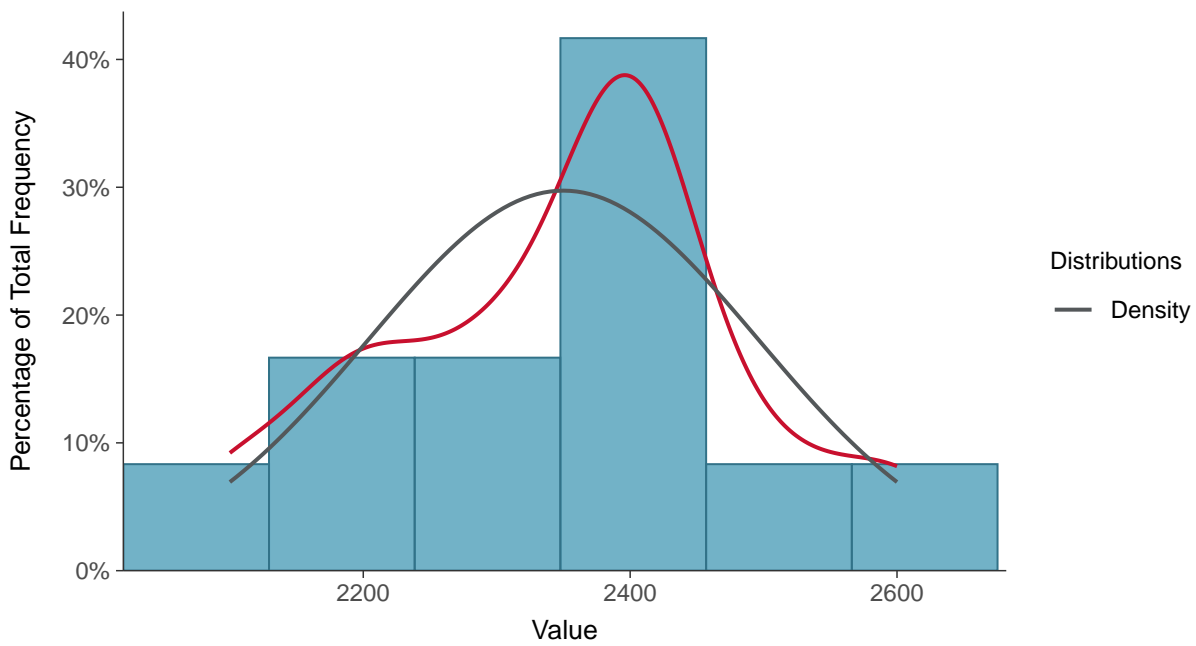
#### Scatter Plot

Total Dissolved Solids, MW-01R (mg/L)



#### Histogram

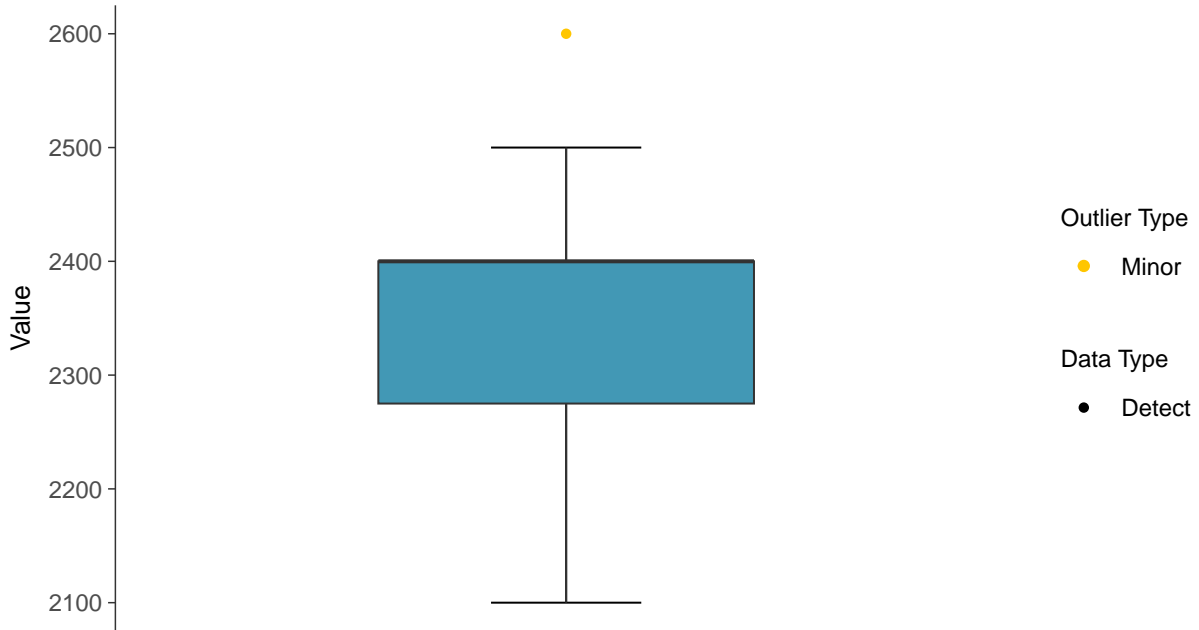
Total Dissolved Solids, MW-01R (mg/L)





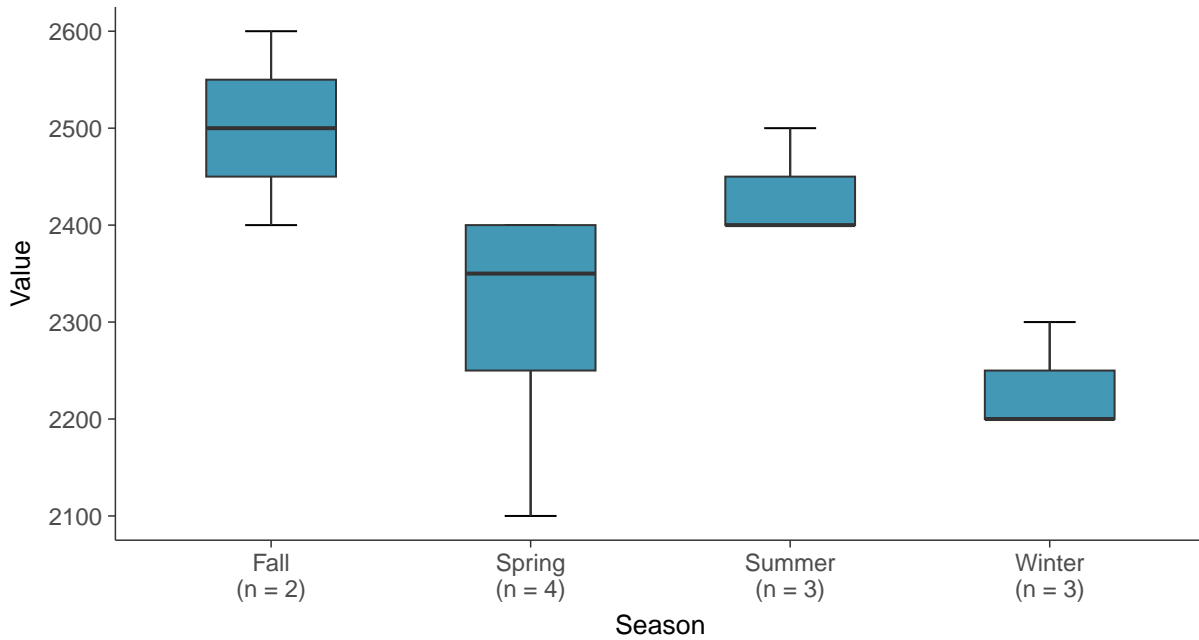
### Boxplot

Total Dissolved Solids, MW-01R (mg/L)



### Boxplot by Season

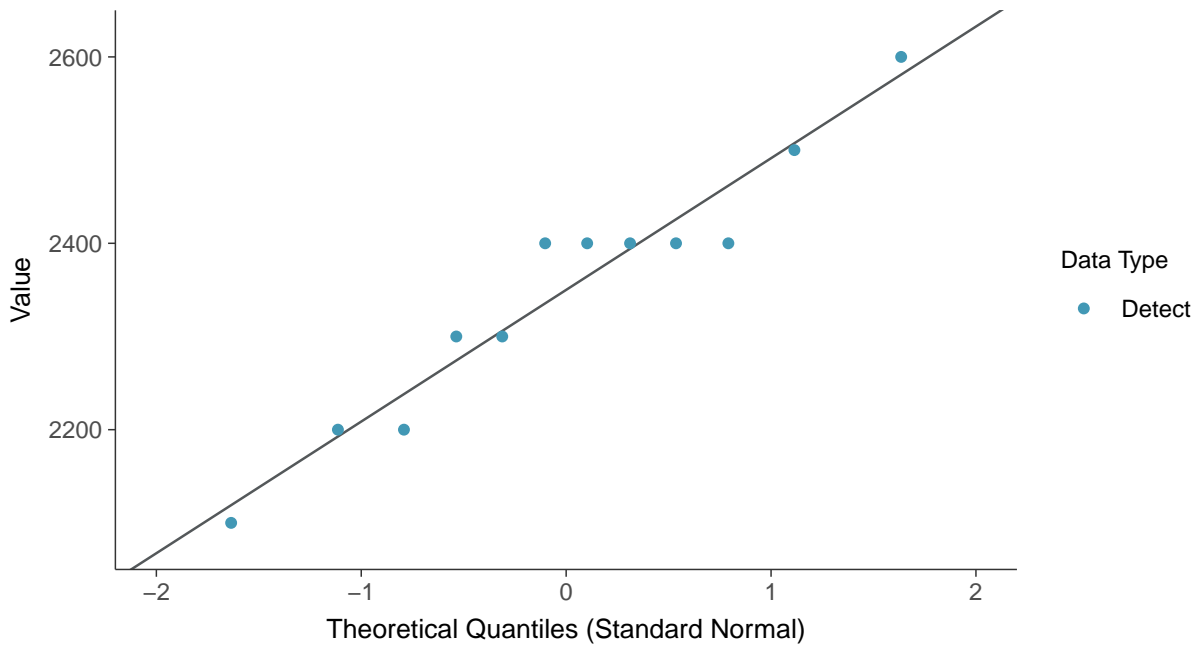
Total Dissolved Solids, MW-01R (mg/L)





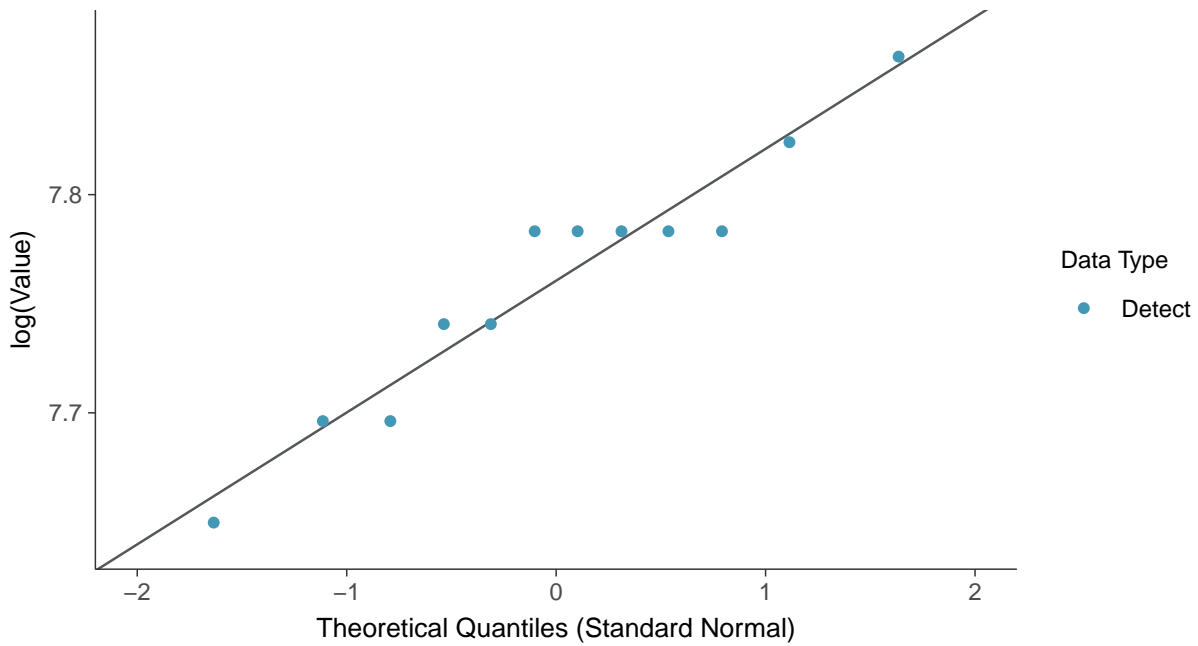
### Normal Q-Q plot

Total Dissolved Solids, MW-01R (mg/L)



### Lognormal Q-Q plot

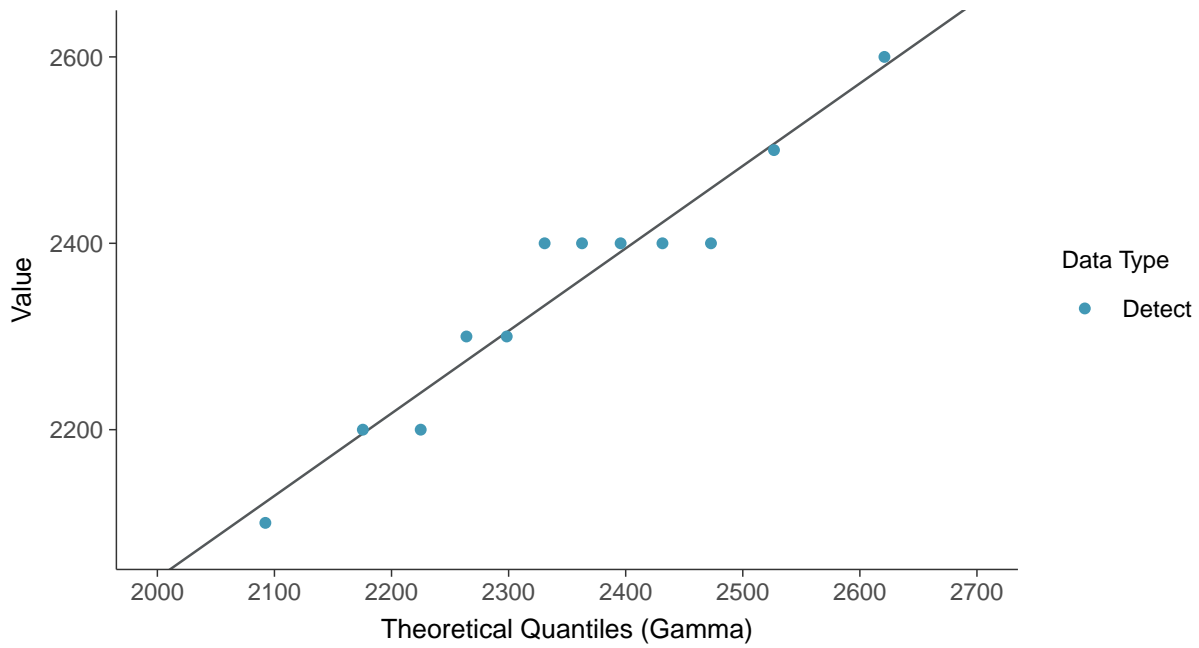
Total Dissolved Solids, MW-01R (mg/L)





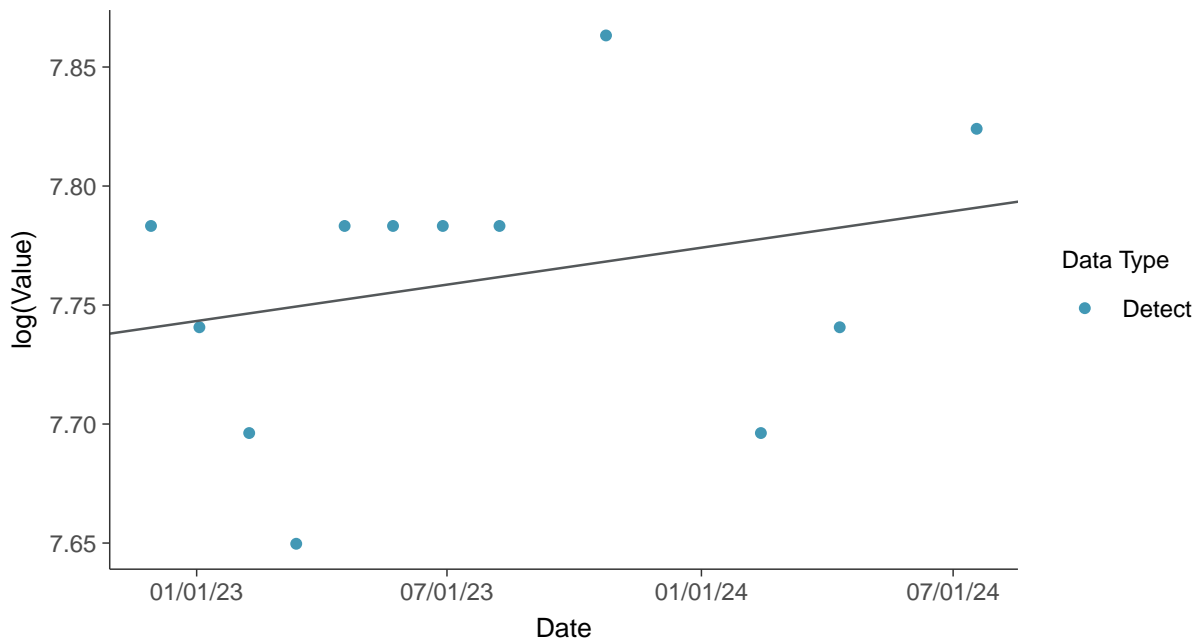
### Gamma Q-Q plot

Total Dissolved Solids, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

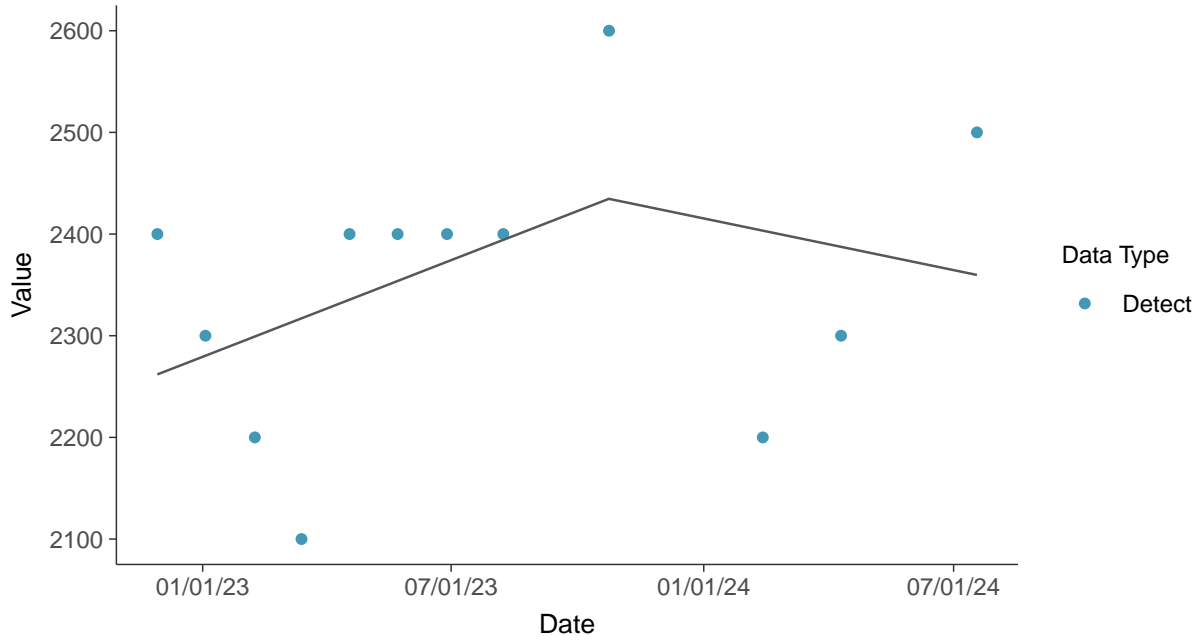
Total Dissolved Solids, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear

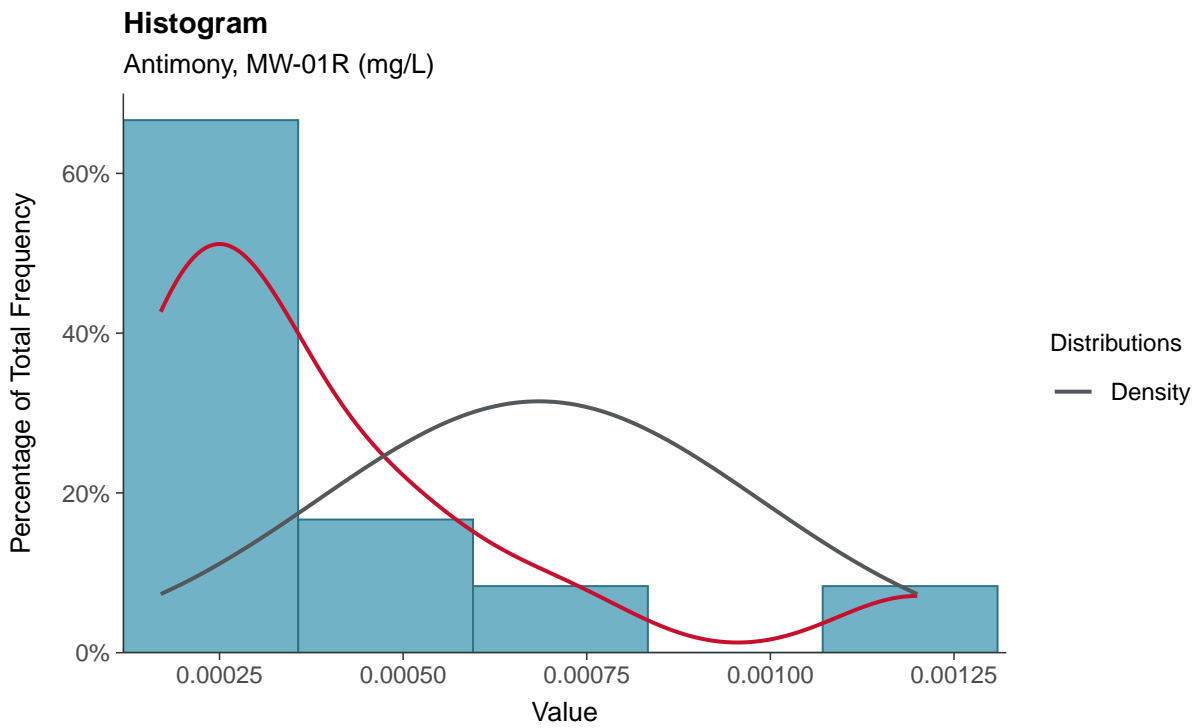
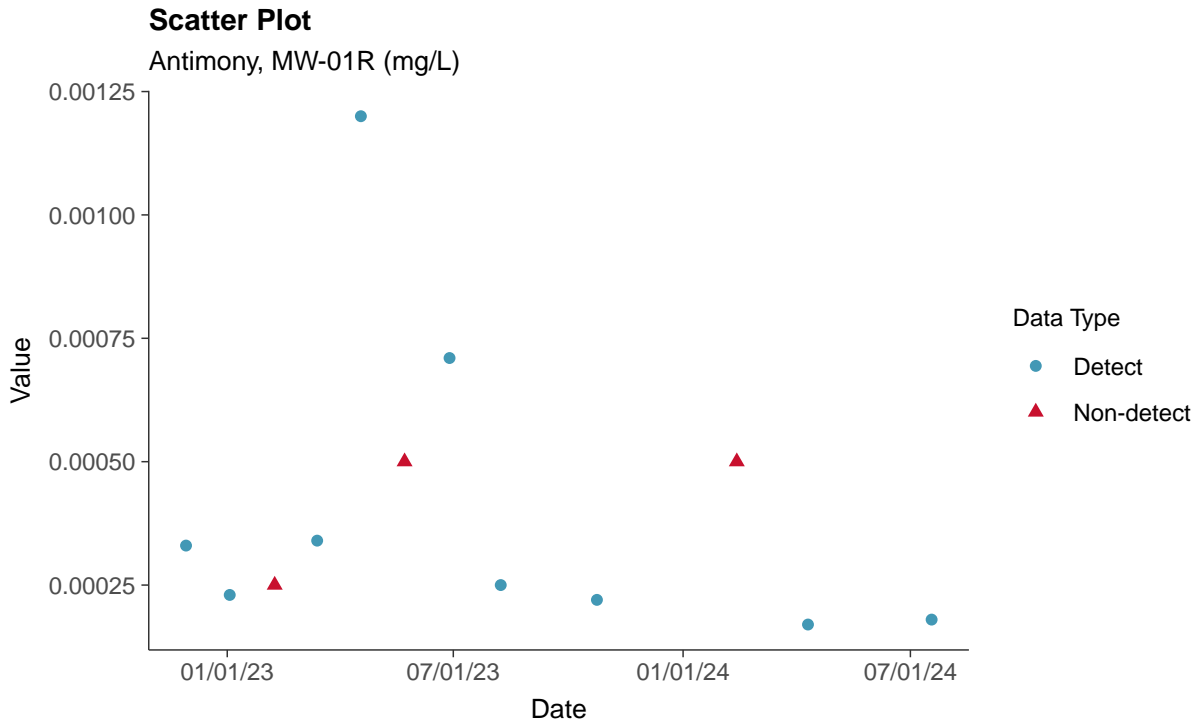
Total Dissolved Solids, MW-01R (mg/L)





### Appendix IV: Antimony, MW-01R

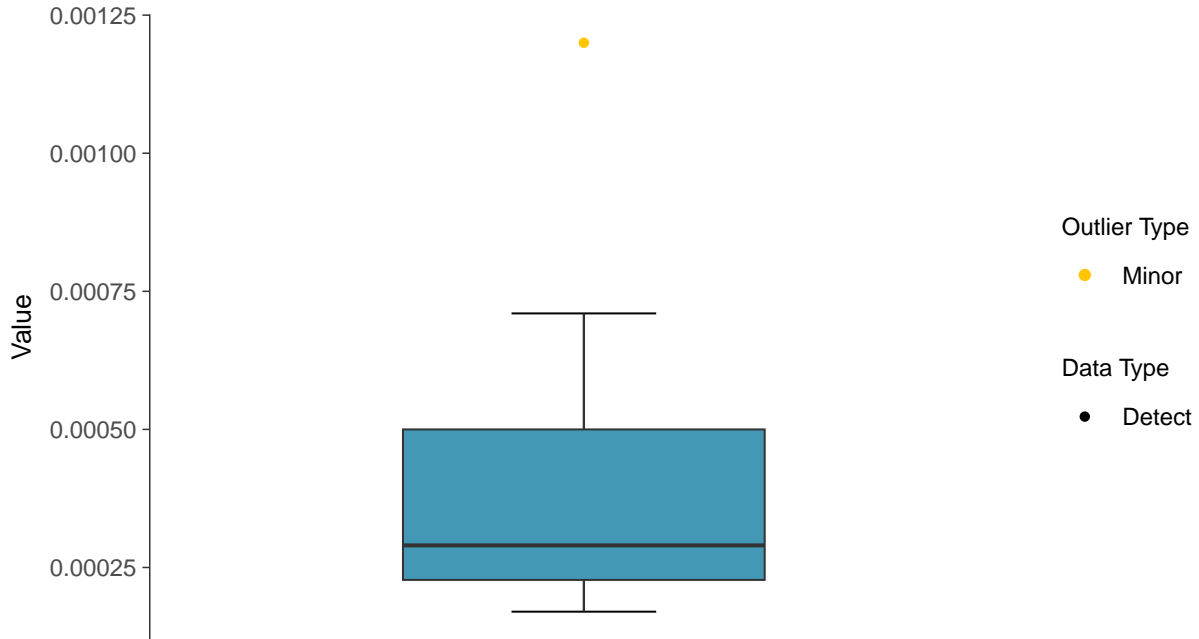
ID: 11\_2\_5\_101





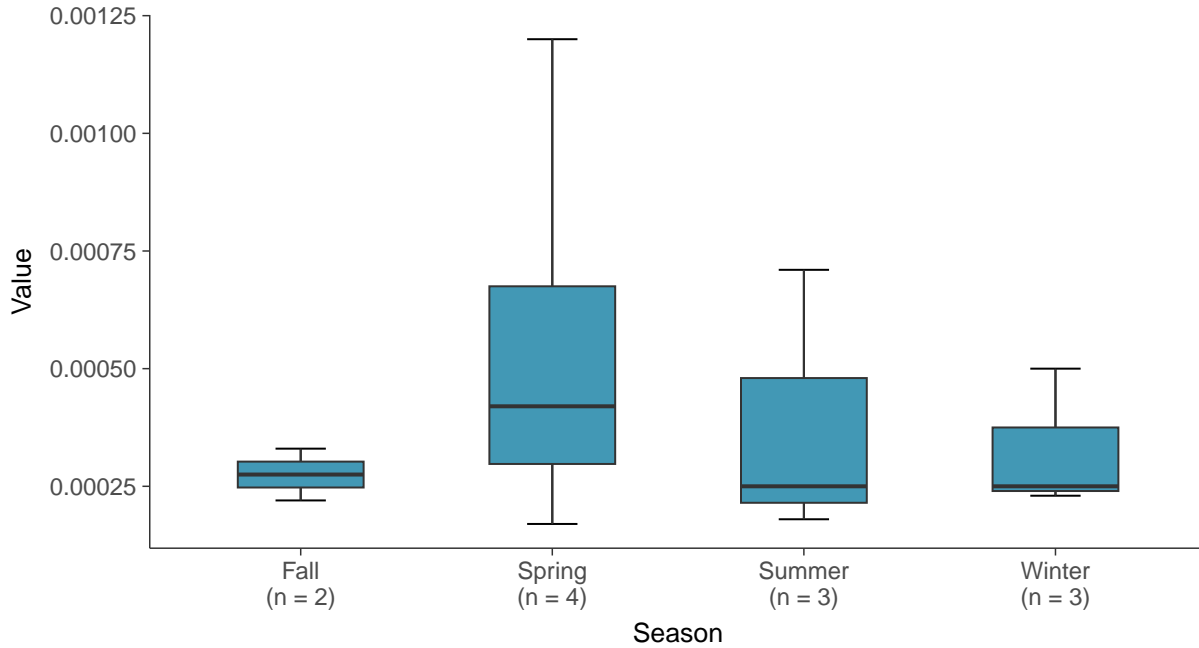
### Boxplot

Antimony, MW-01R (mg/L)



### Boxplot by Season

Antimony, MW-01R (mg/L)

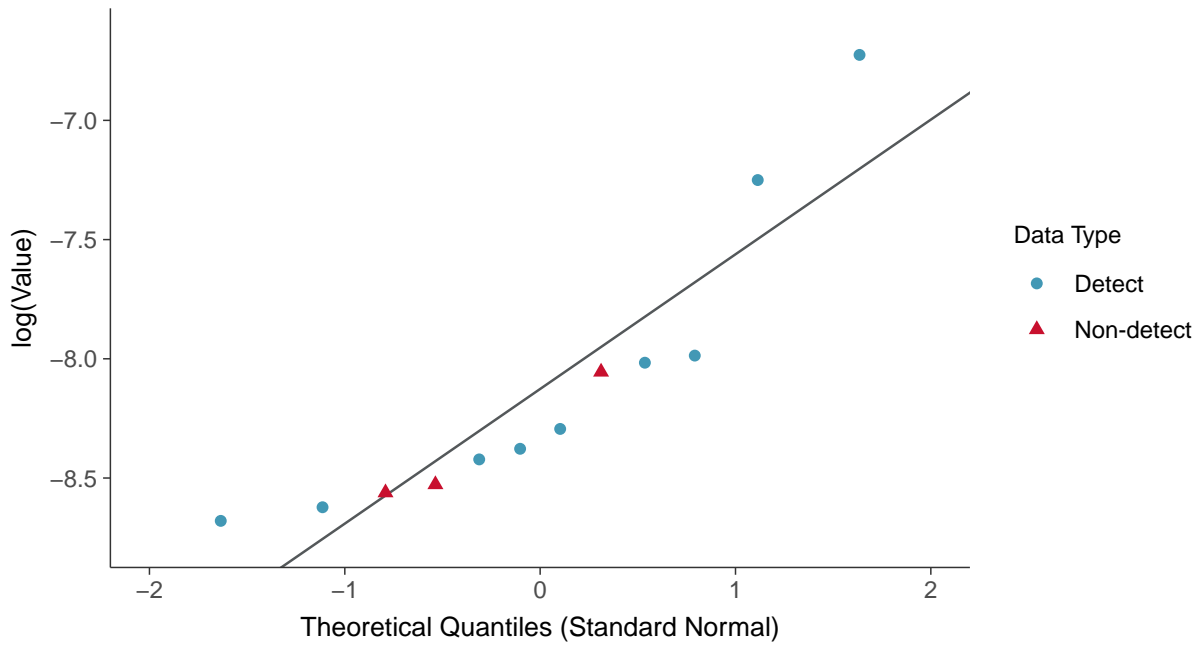






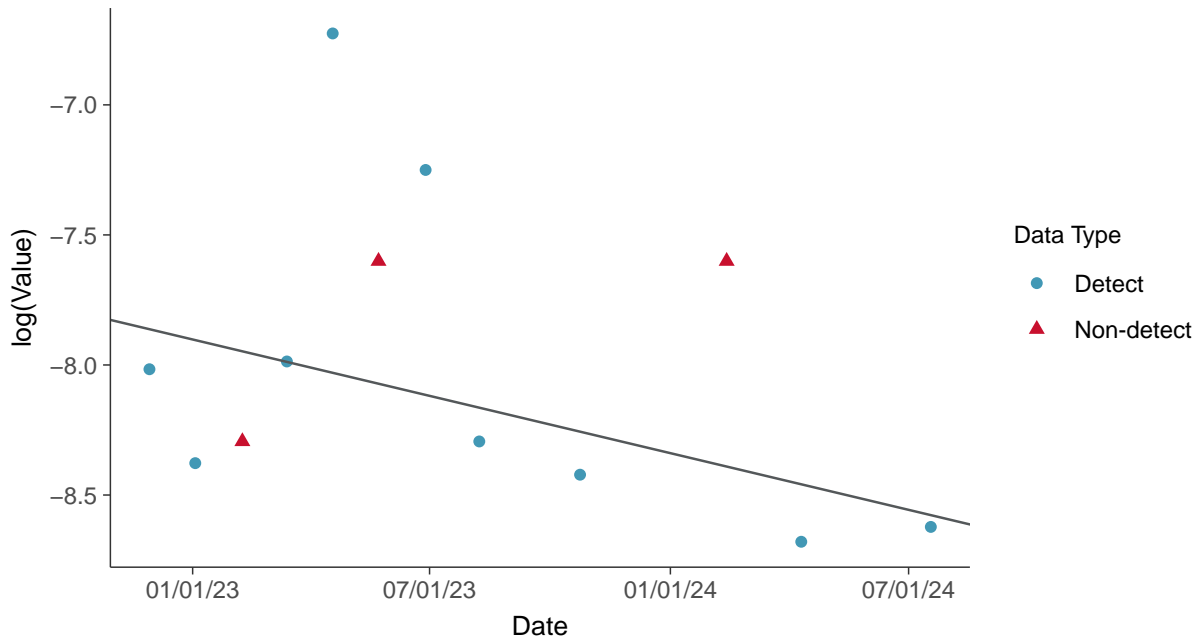
### Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

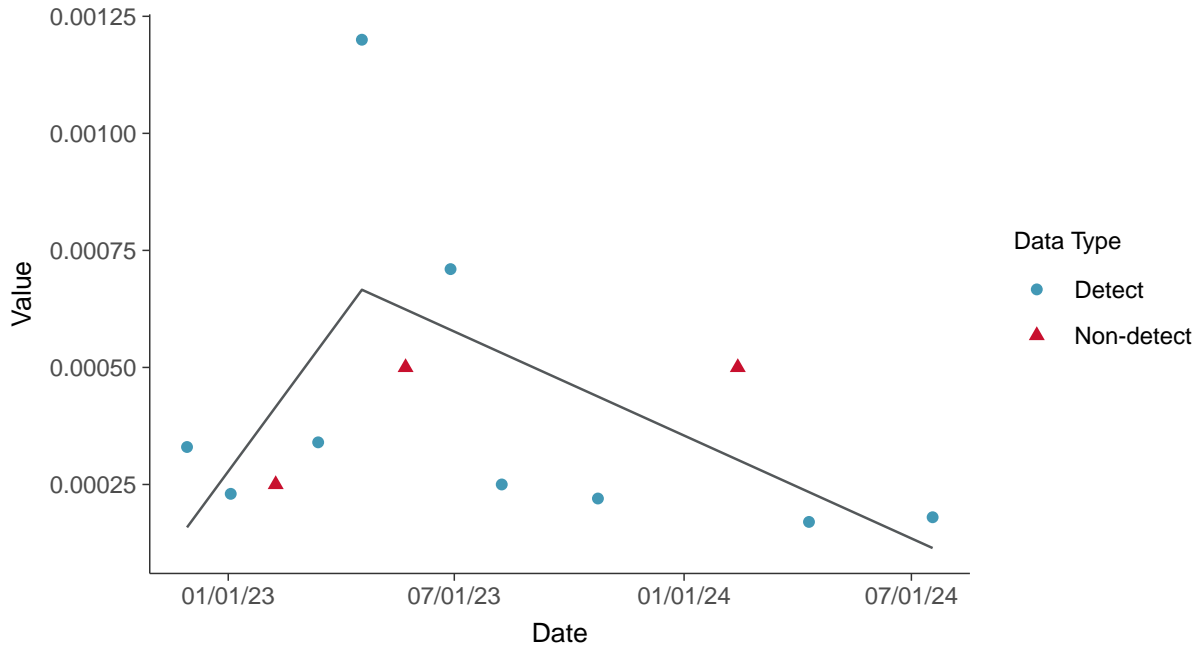
Antimony, MW-01R (mg/L)





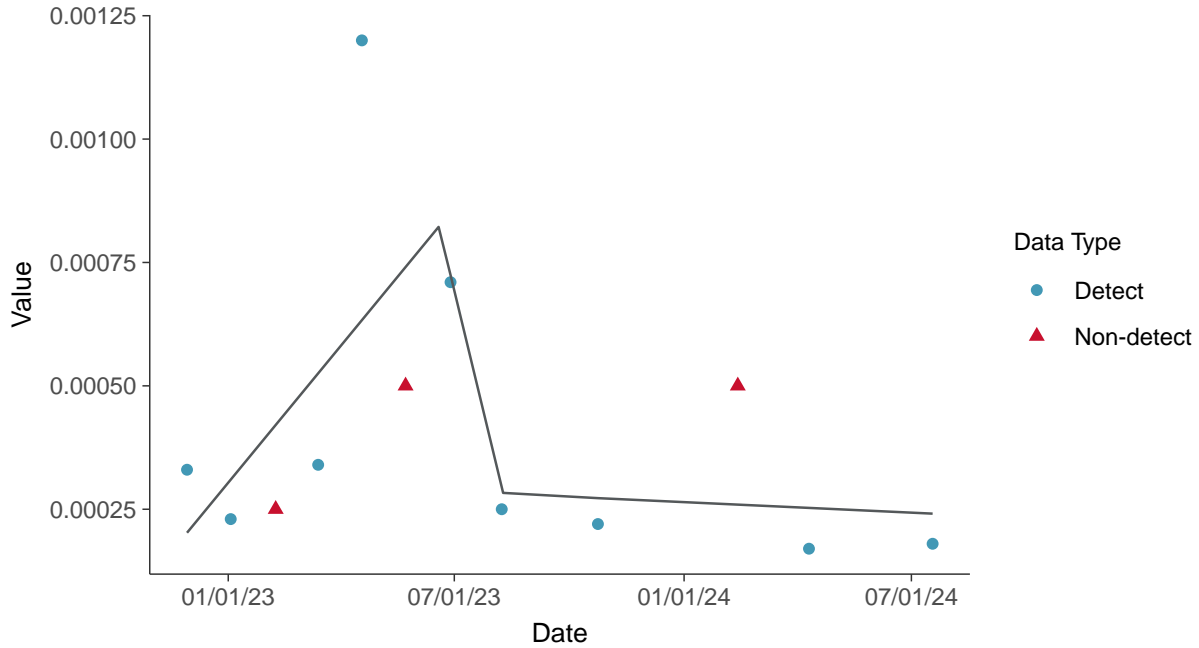
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

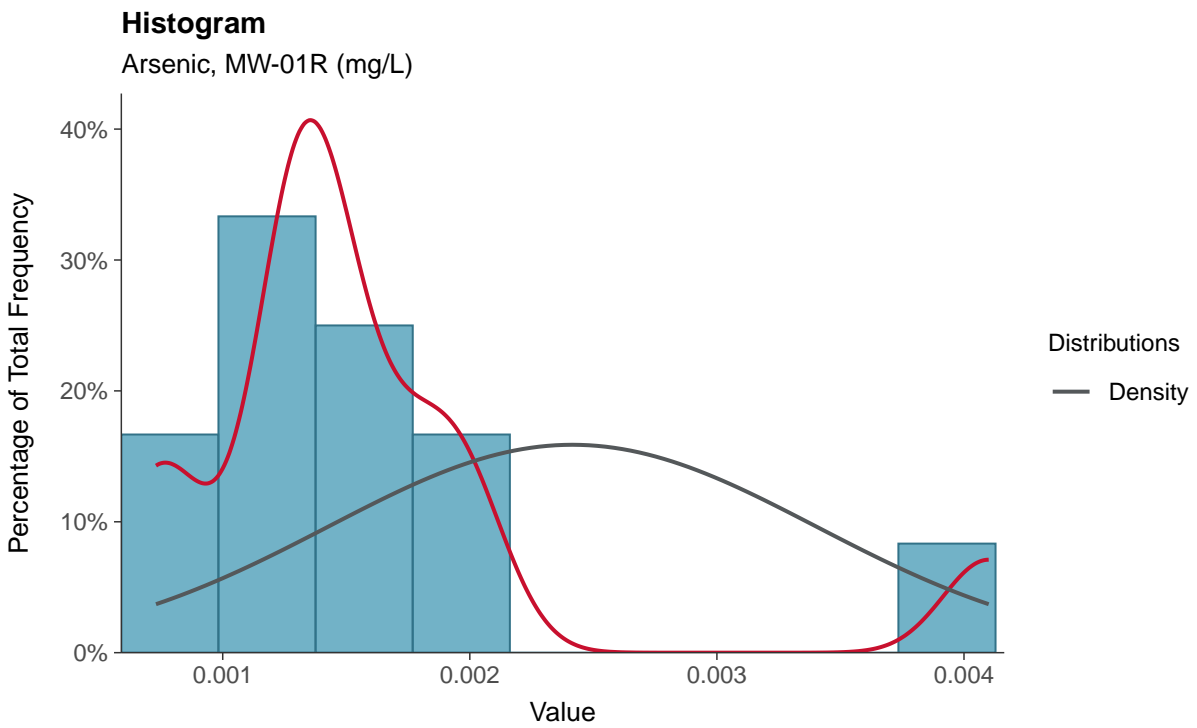
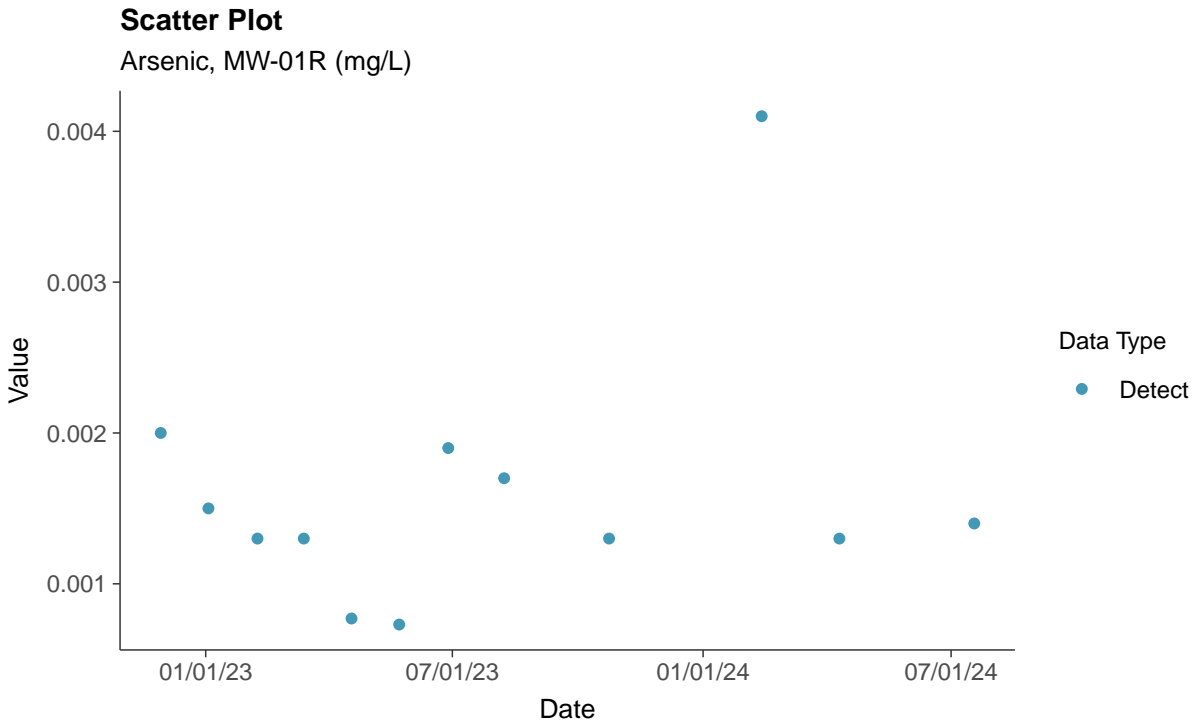
Antimony, MW-01R (mg/L)





### Appendix IV: Arsenic, MW-01R

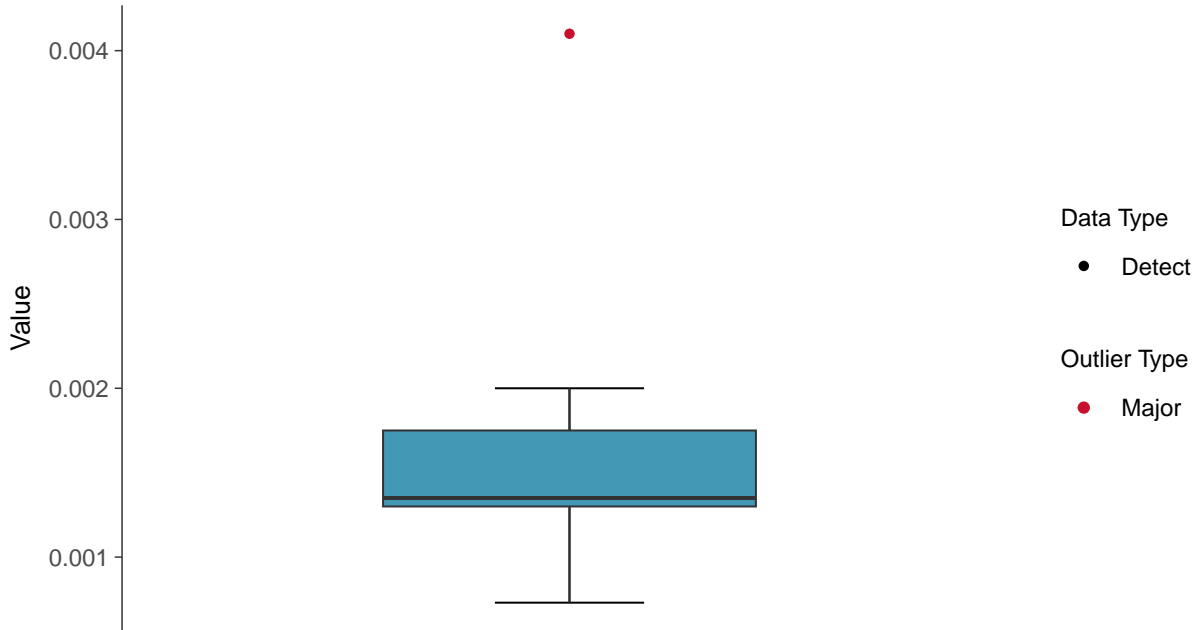
ID: 11\_2\_5\_102





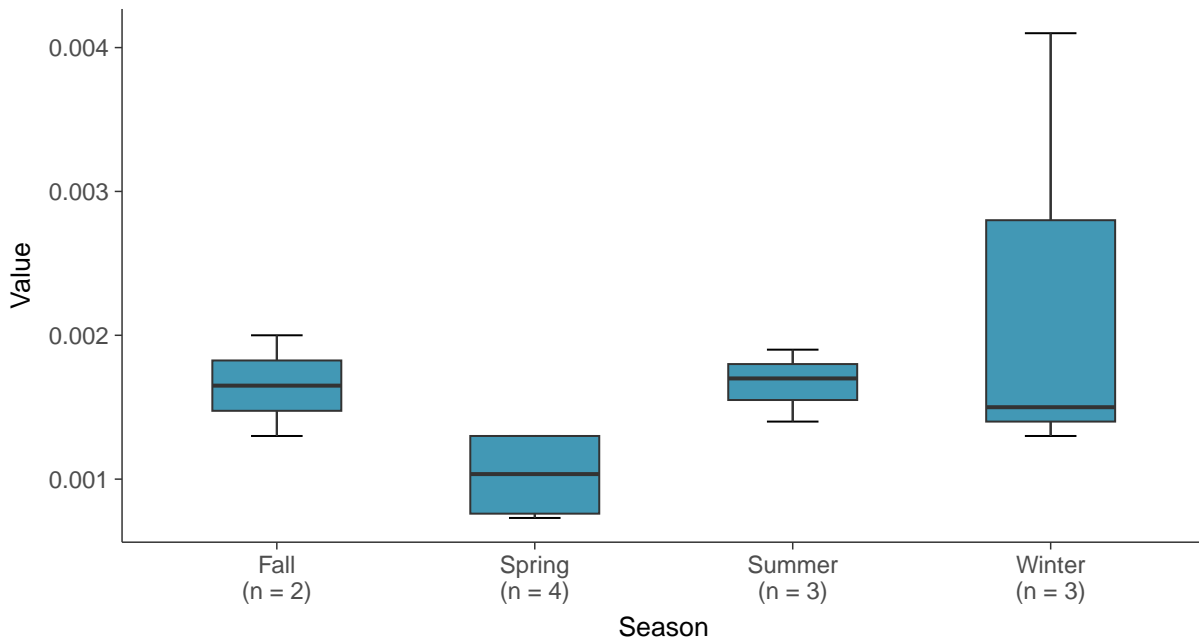
### Boxplot

Arsenic, MW-01R (mg/L)



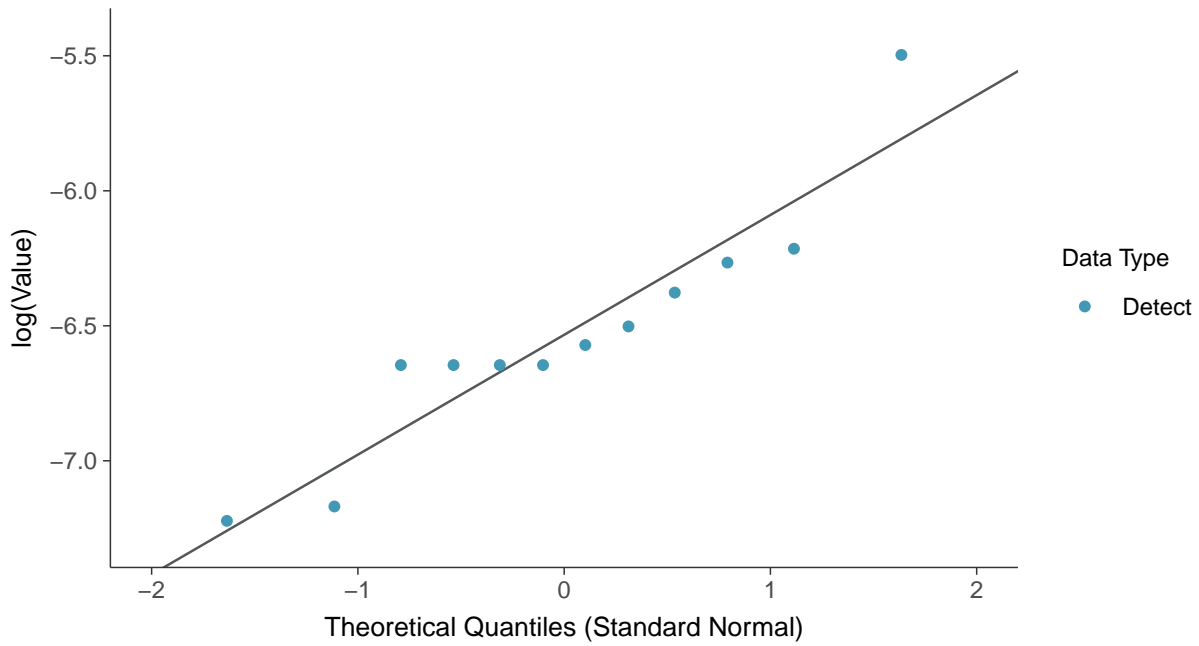
### Boxplot by Season

Arsenic, MW-01R (mg/L)

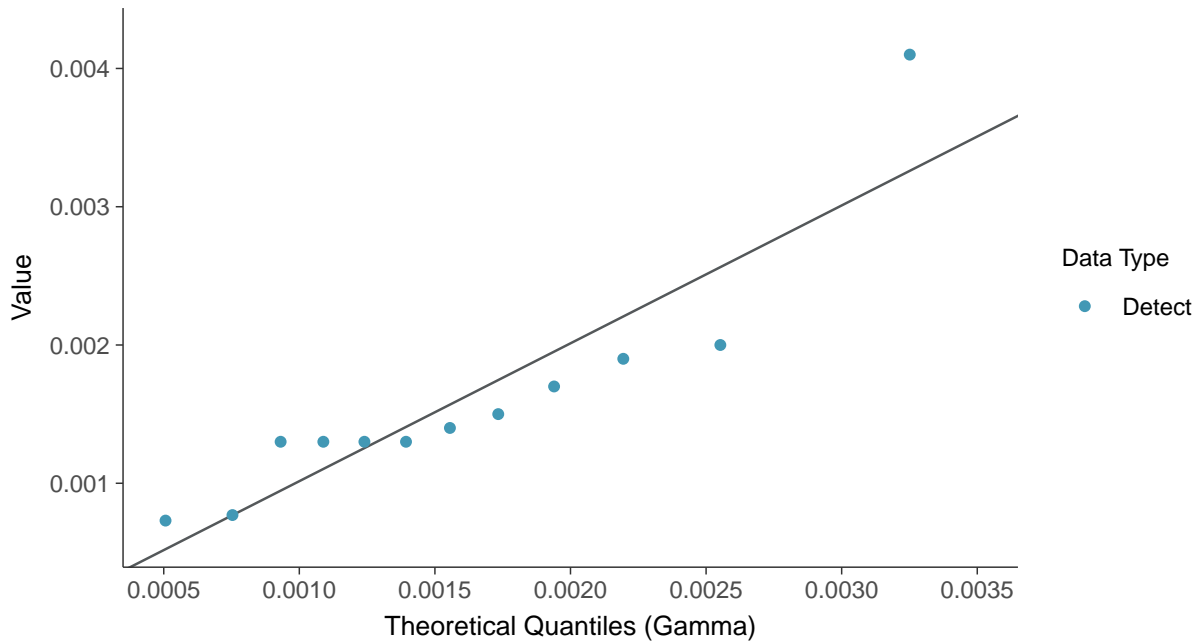




**Lognormal Q-Q plot**  
Arsenic, MW-01R (mg/L)



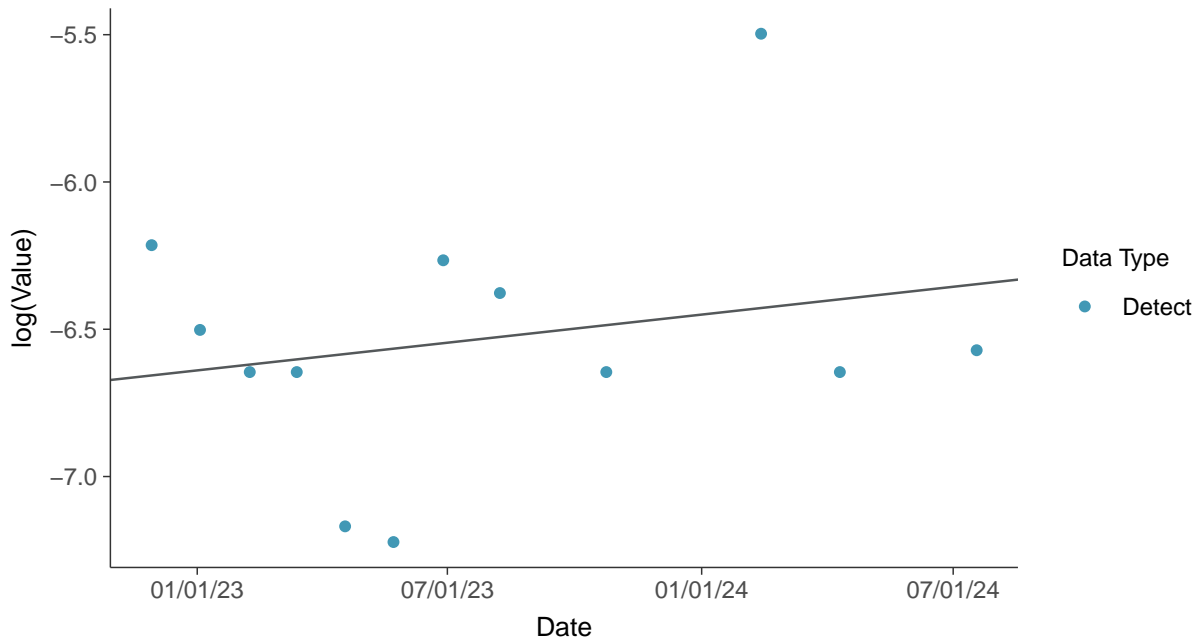
**Gamma Q-Q plot**  
Arsenic, MW-01R (mg/L)





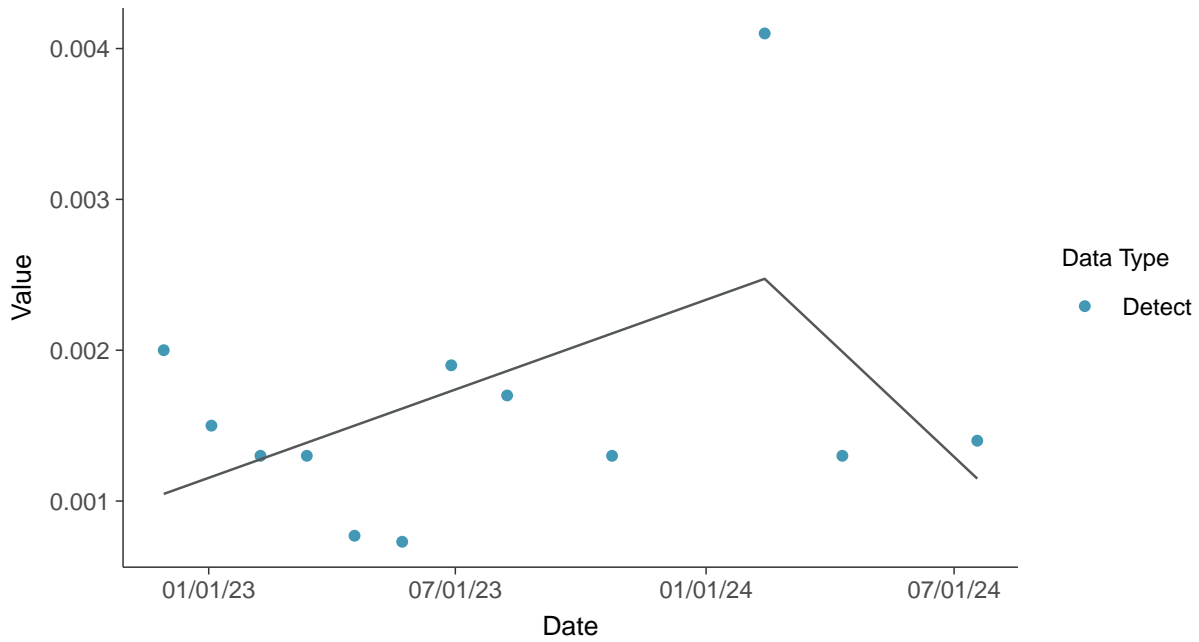
### Trend Regression: Lognormal MLE

Arsenic, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear

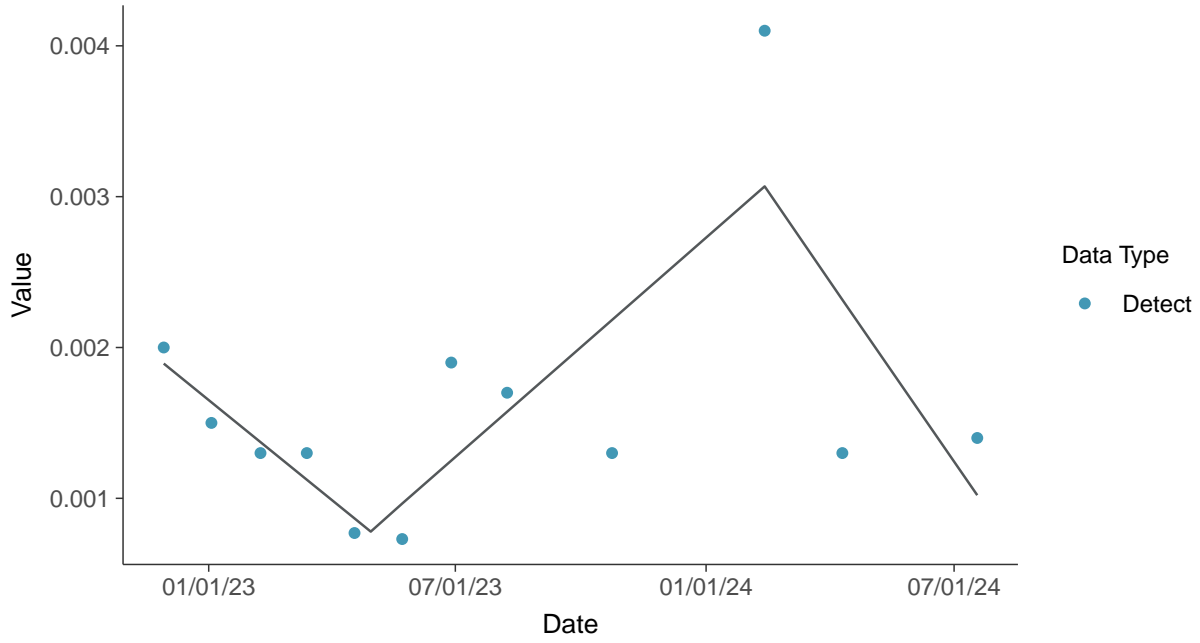
Arsenic, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-01R (mg/L)



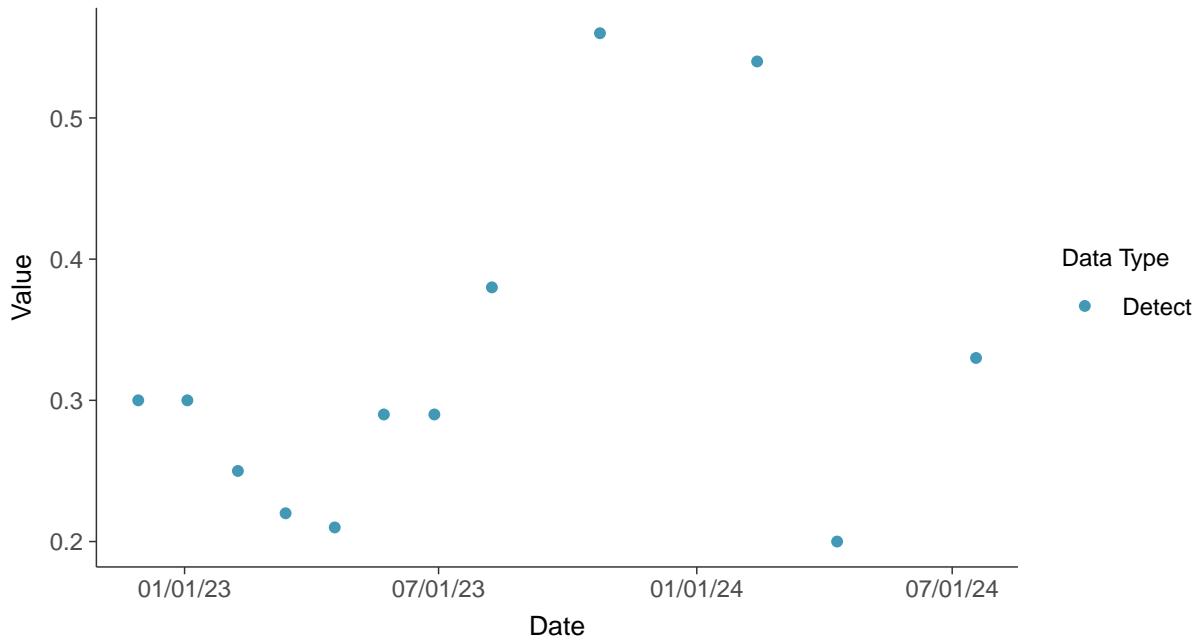


### Appendix IV: Barium, MW-01R

ID: 11\_2\_5\_103

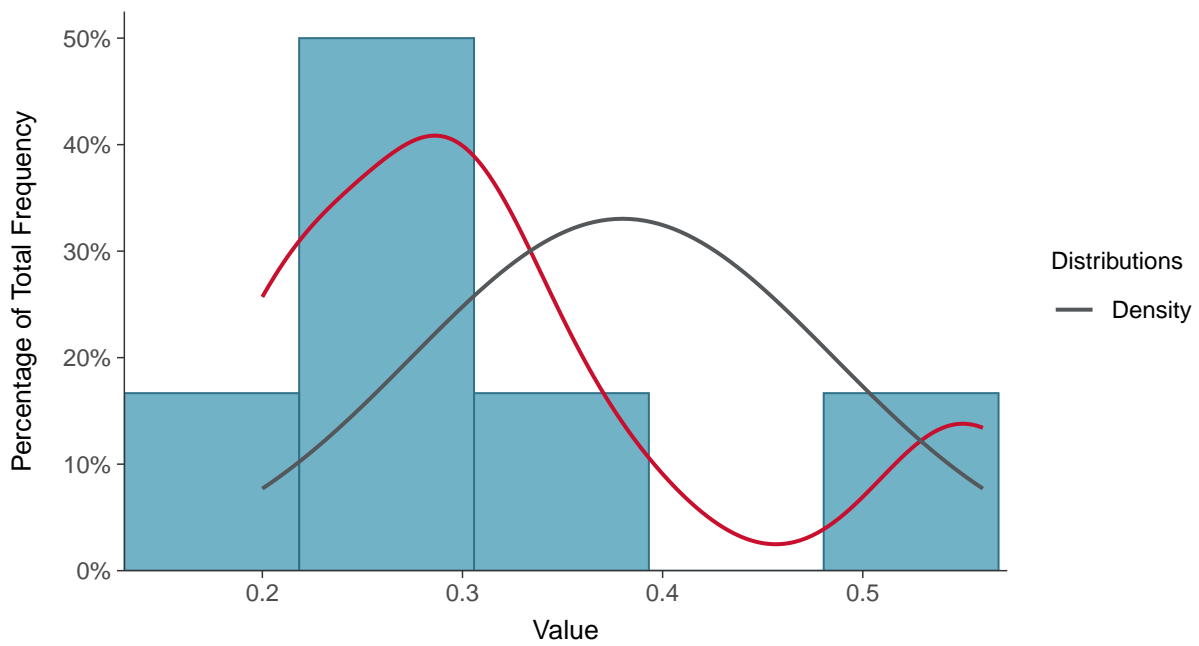
#### Scatter Plot

Barium, MW-01R (mg/L)



#### Histogram

Barium, MW-01R (mg/L)

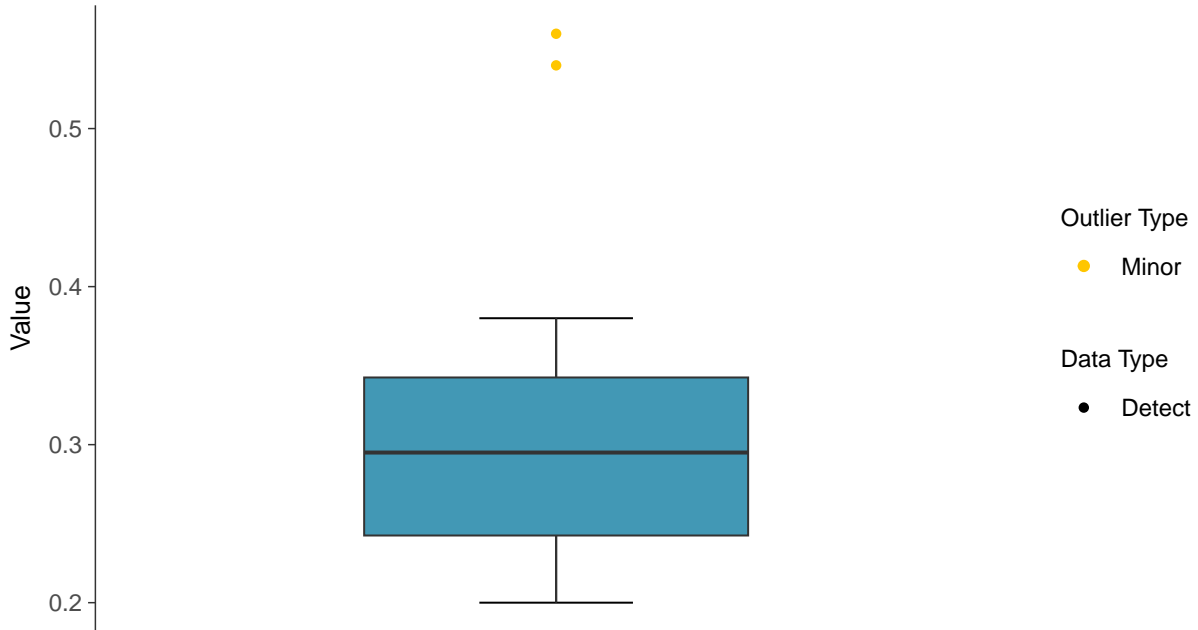






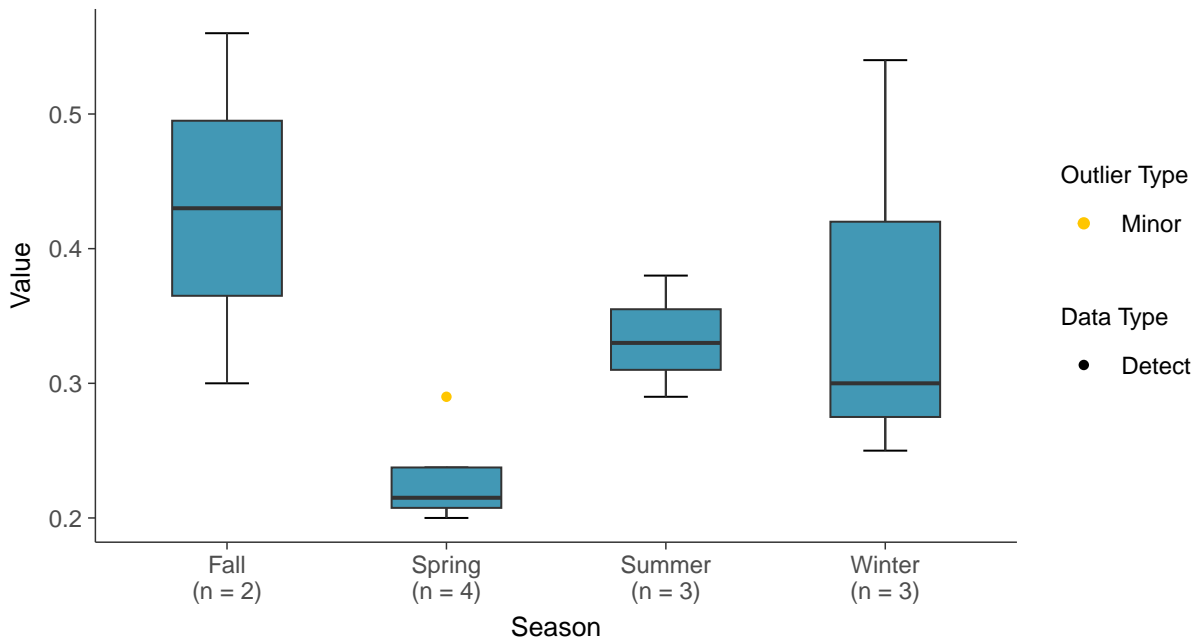
### Boxplot

Barium, MW-01R (mg/L)



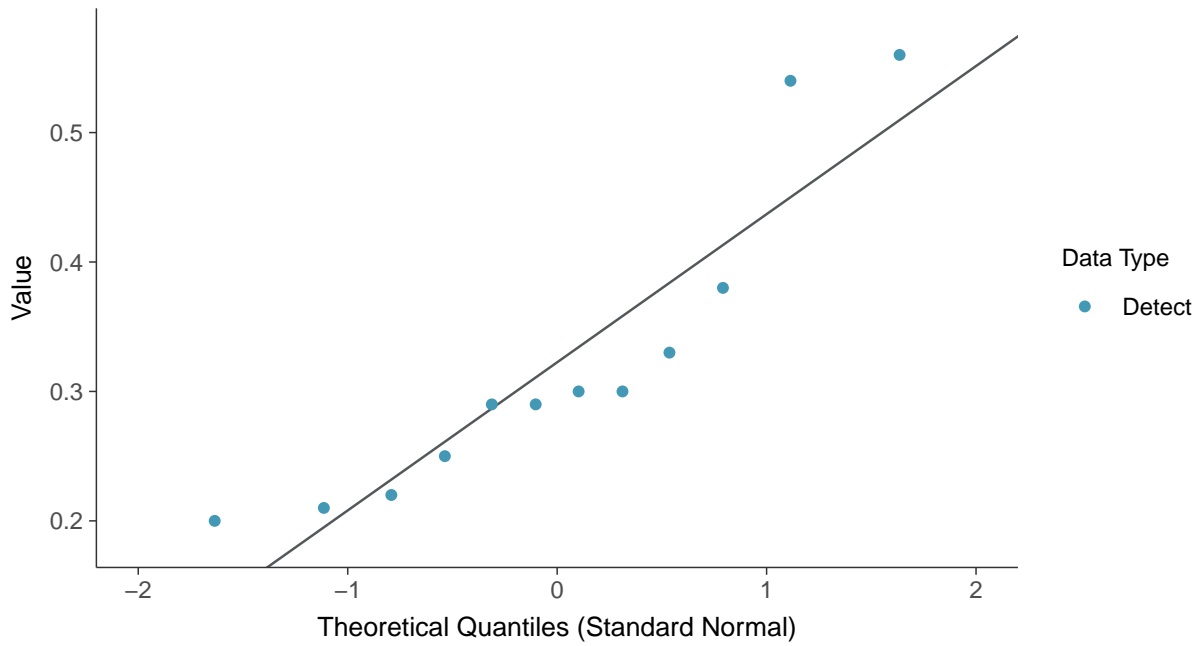
### Boxplot by Season

Barium, MW-01R (mg/L)

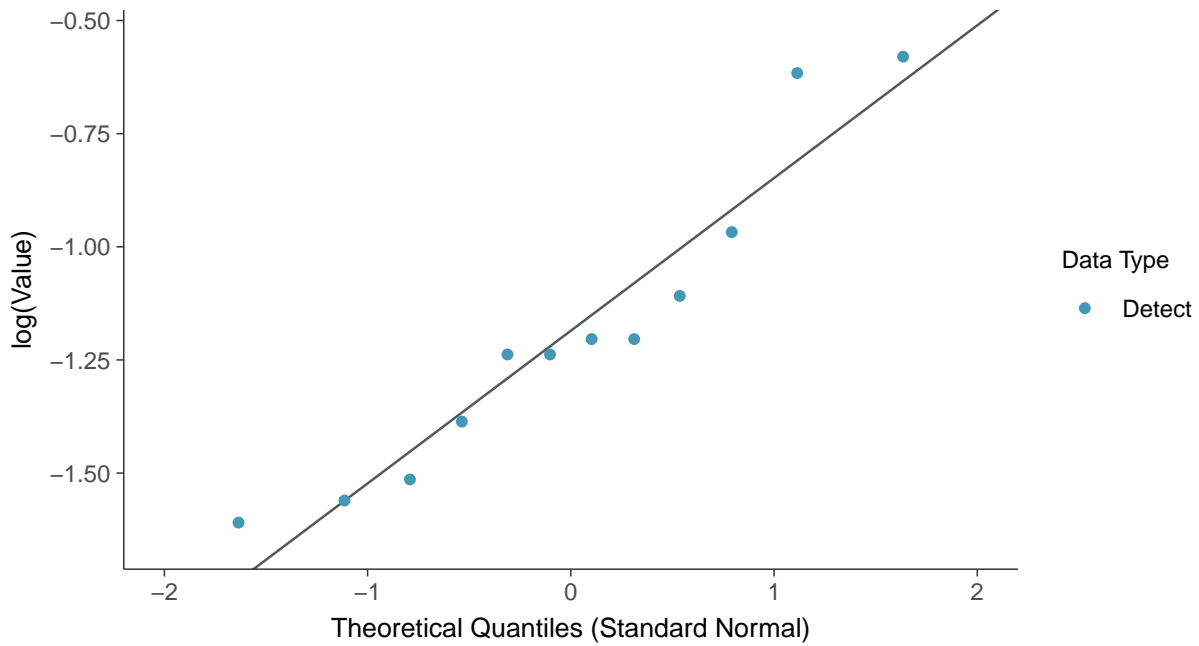




**Normal Q-Q plot**  
Barium, MW-01R (mg/L)



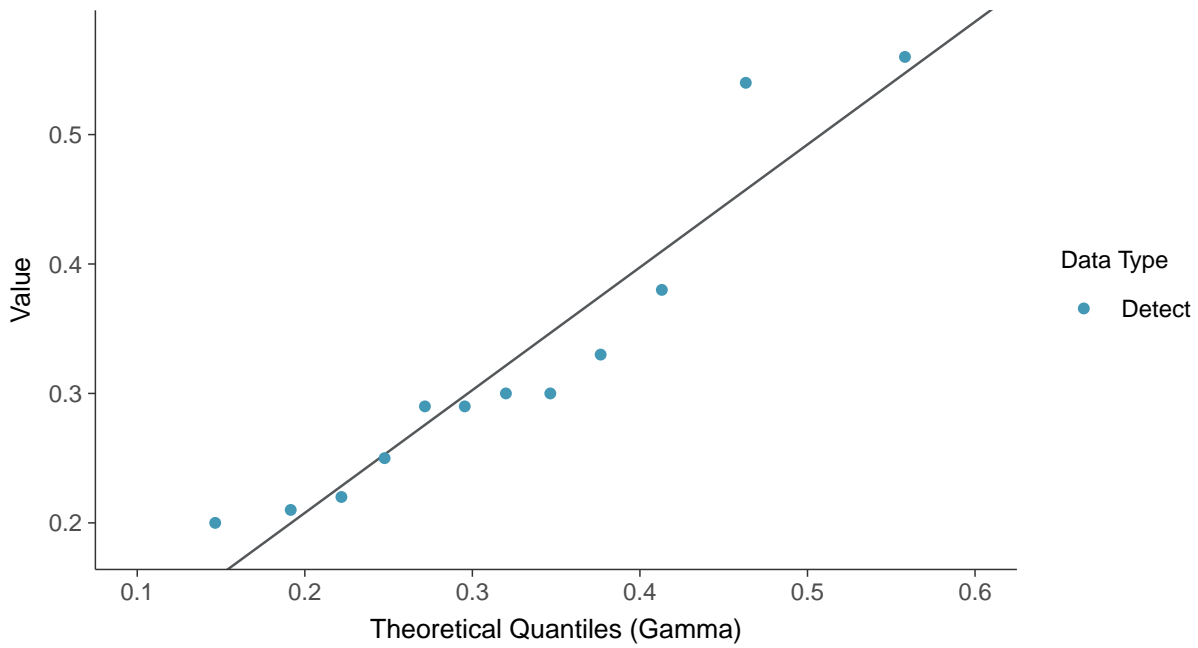
**Lognormal Q-Q plot**  
Barium, MW-01R (mg/L)





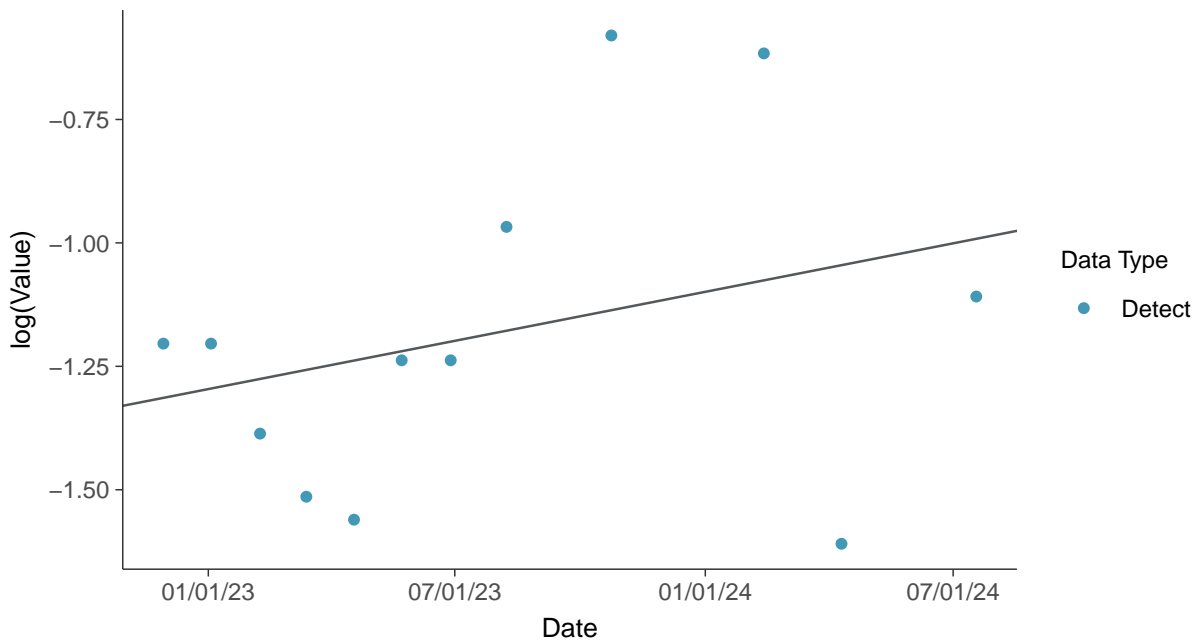
### Gamma Q-Q plot

Barium, MW-01R (mg/L)



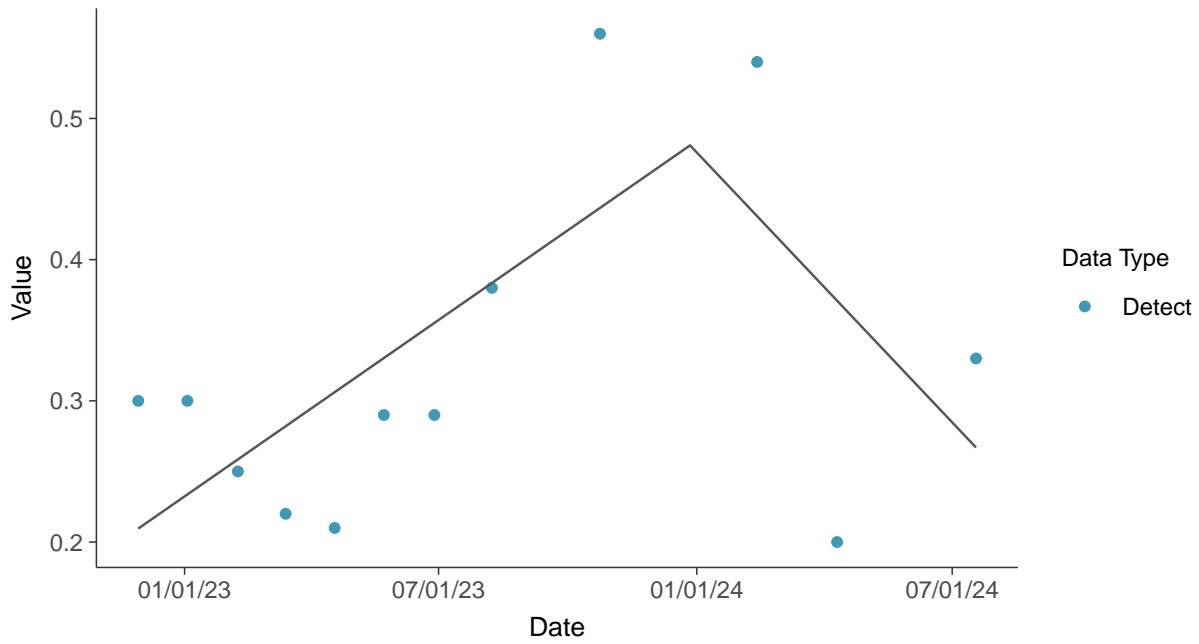
### Trend Regression: Lognormal MLE

Barium, MW-01R (mg/L)

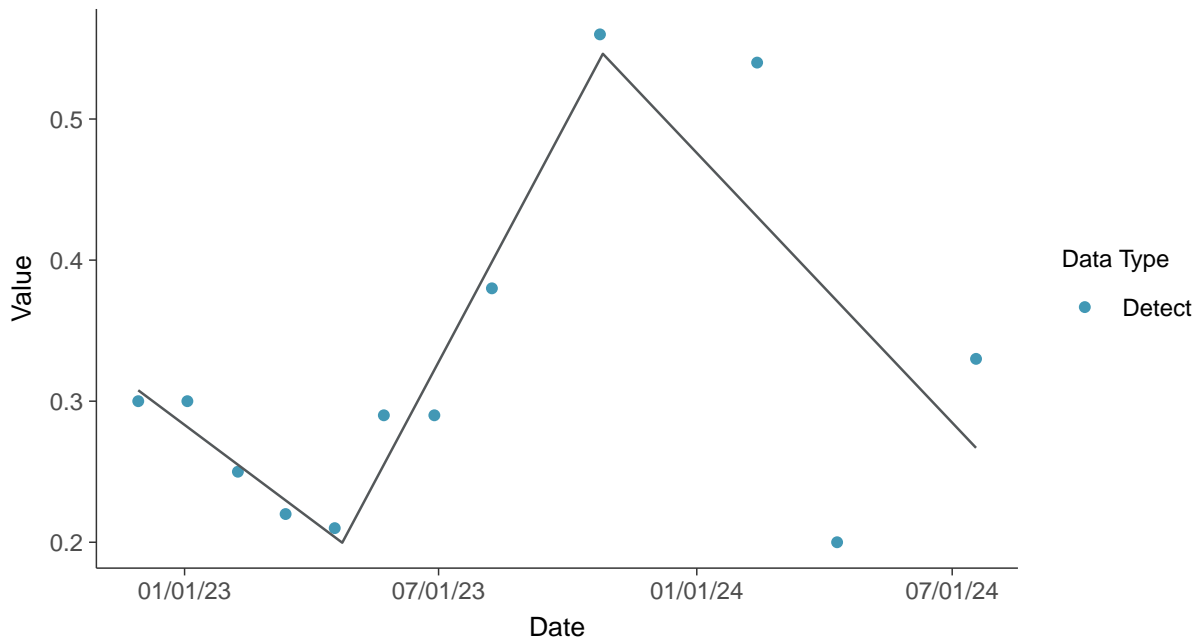




**Trend Regression: Piecewise Linear-Linear**  
Barium, MW-01R (mg/L)



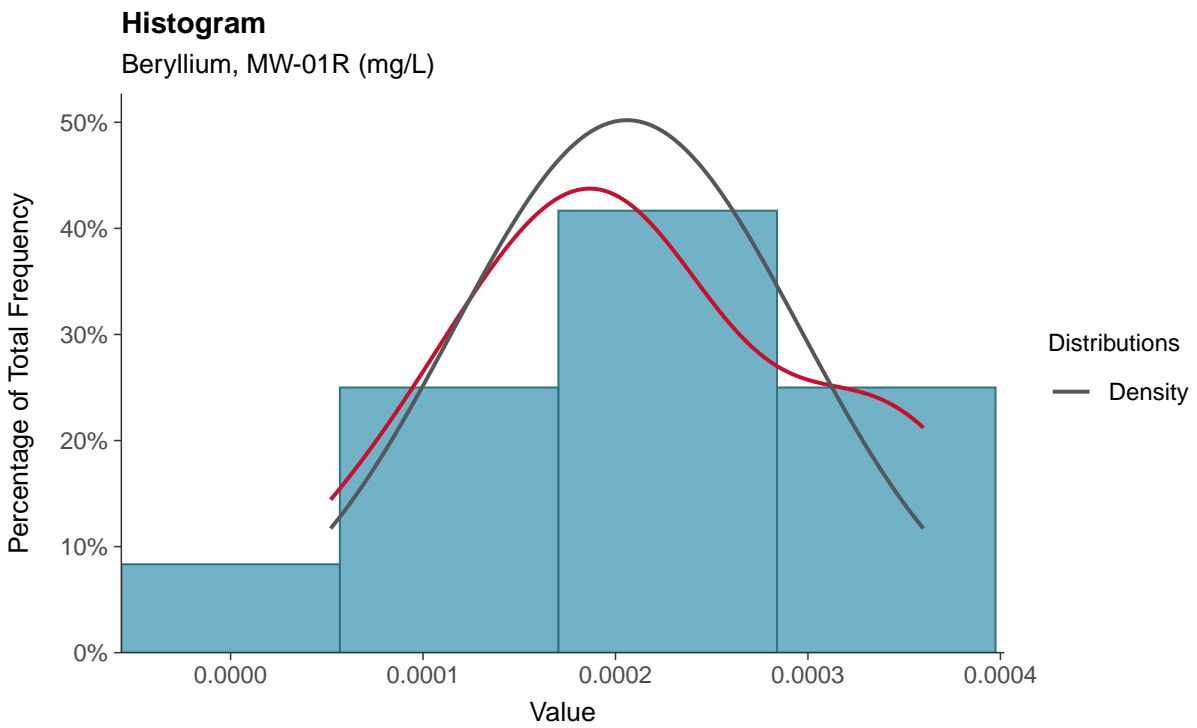
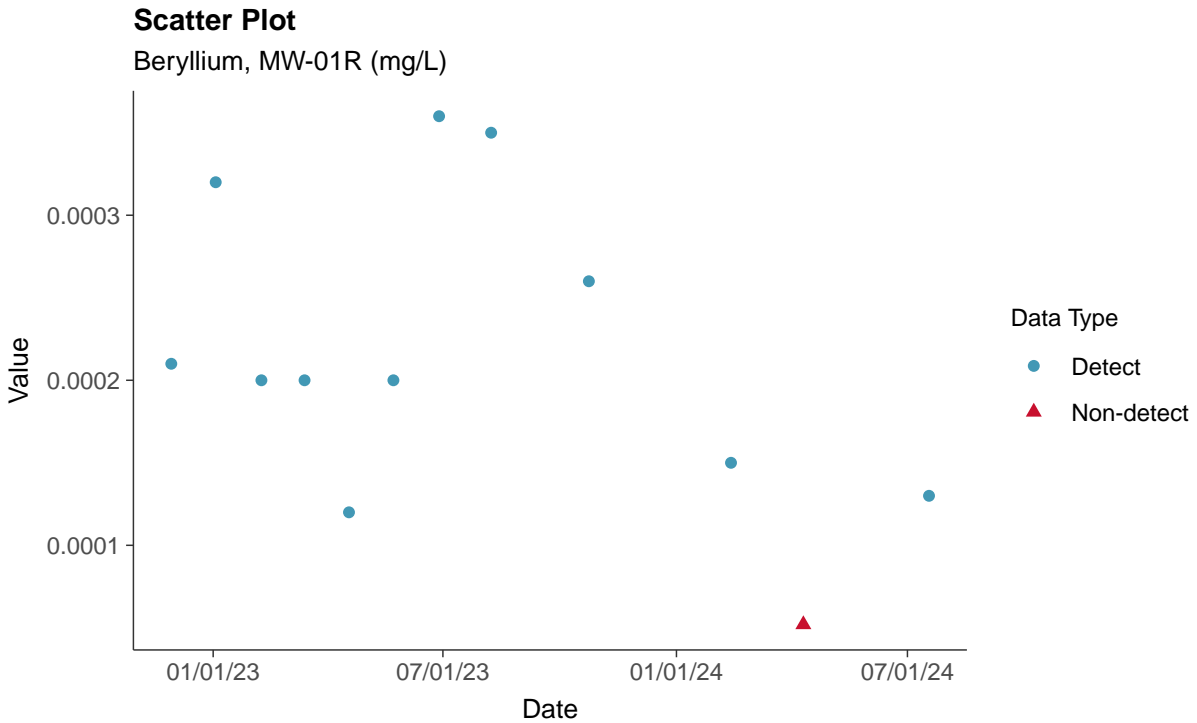
**Trend Regression: Piecewise Linear-Linear-Linear**  
Barium, MW-01R (mg/L)





### Appendix IV: Beryllium, MW-01R

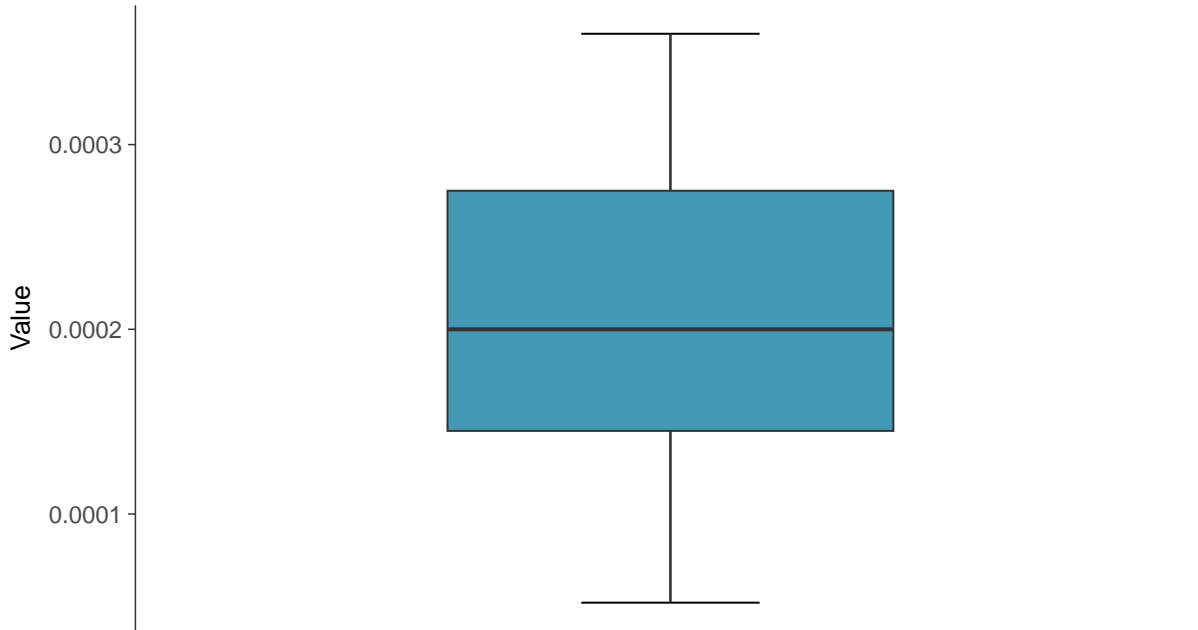
ID: 11\_2\_5\_104





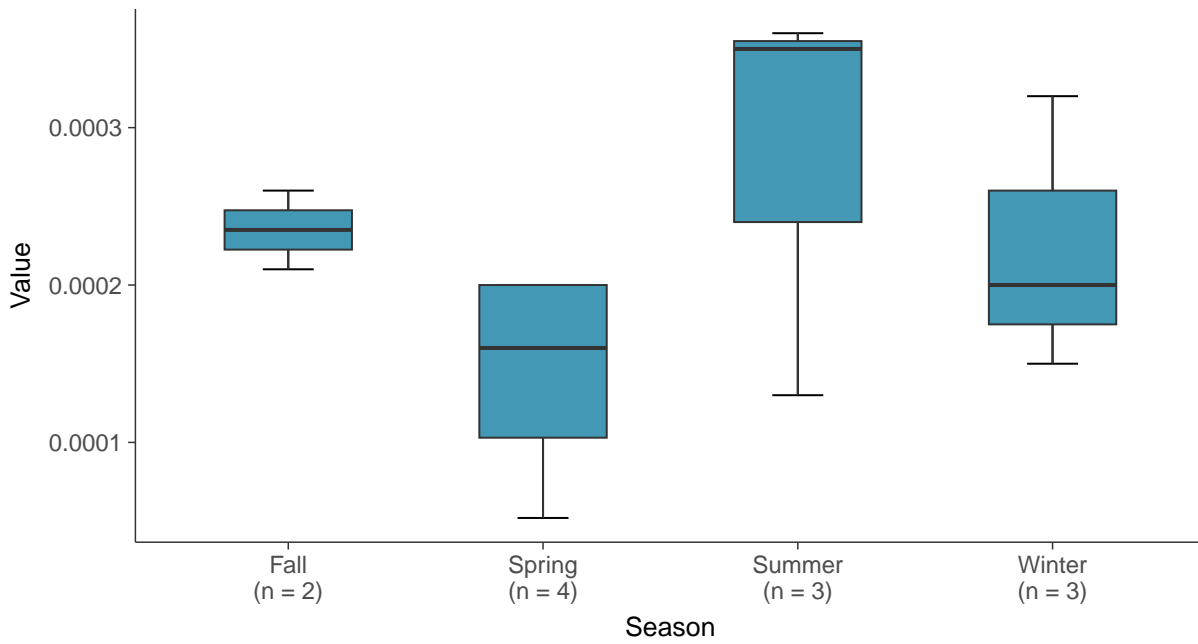
### Boxplot

Beryllium, MW-01R (mg/L)



### Boxplot by Season

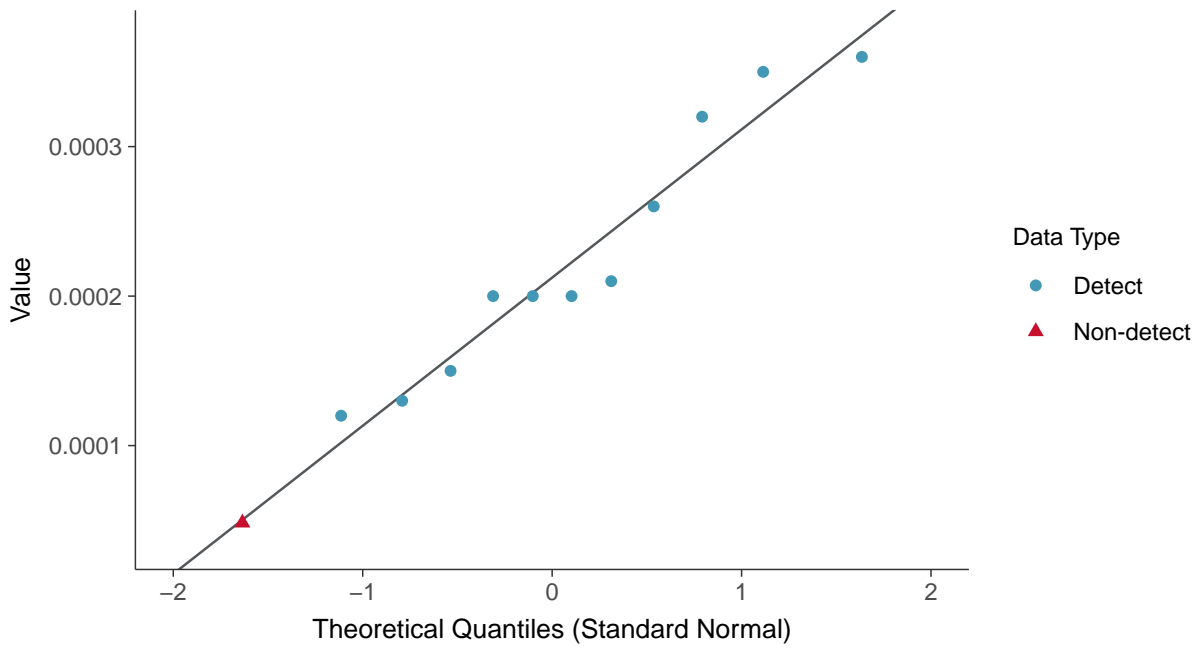
Beryllium, MW-01R (mg/L)





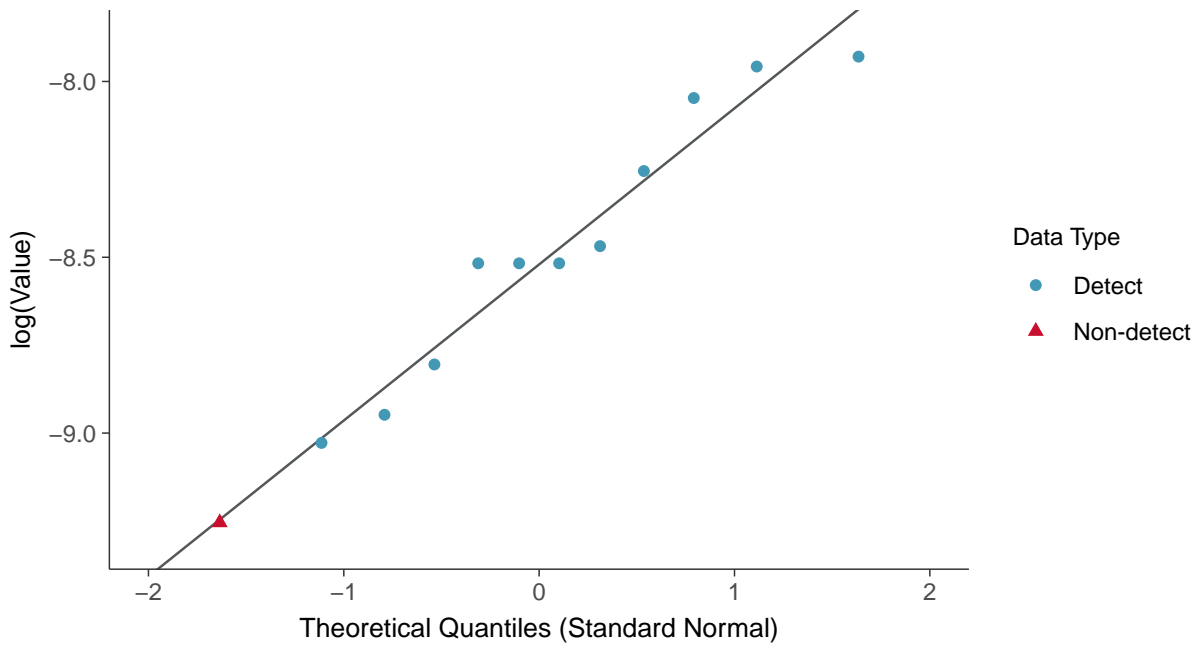
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-01R (mg/L)



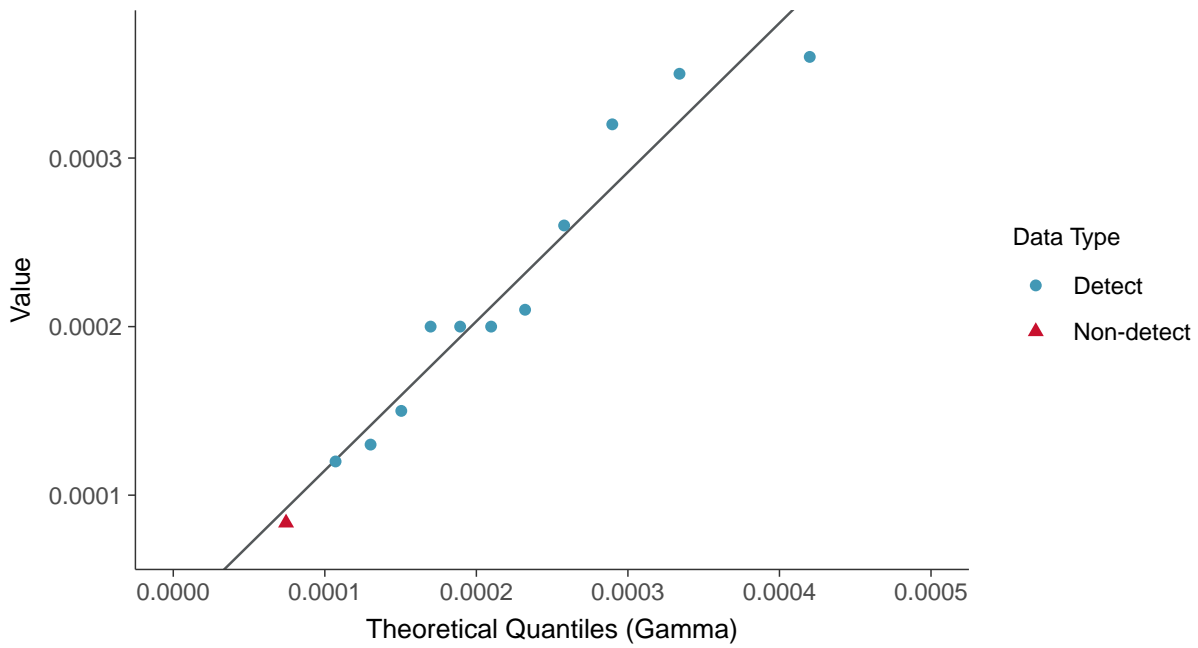
### Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-01R (mg/L)

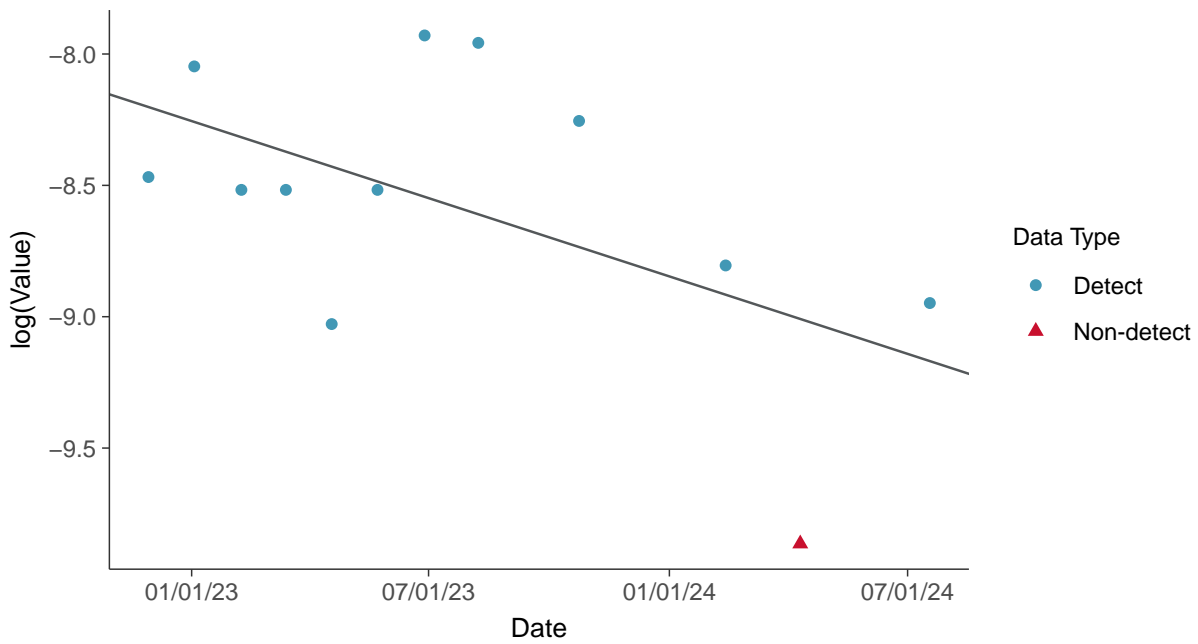




**Gamma Q-Q plot using ROS Imputed Estimates**  
Beryllium, MW-01R (mg/L)



**Trend Regression: Lognormal MLE**  
Beryllium, MW-01R (mg/L)

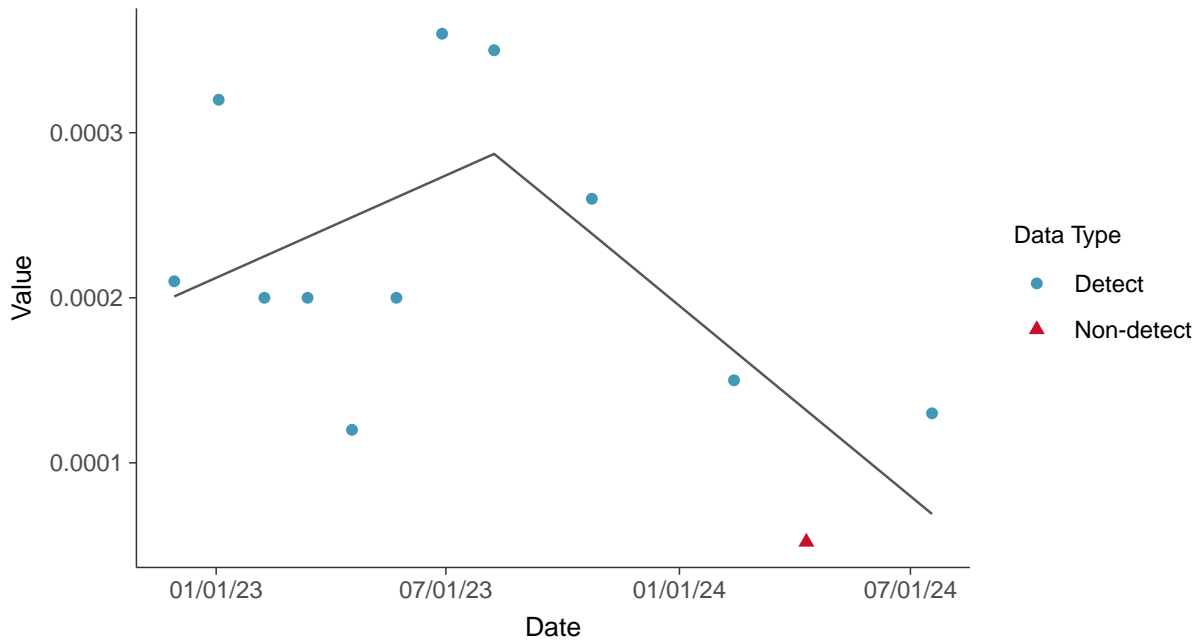






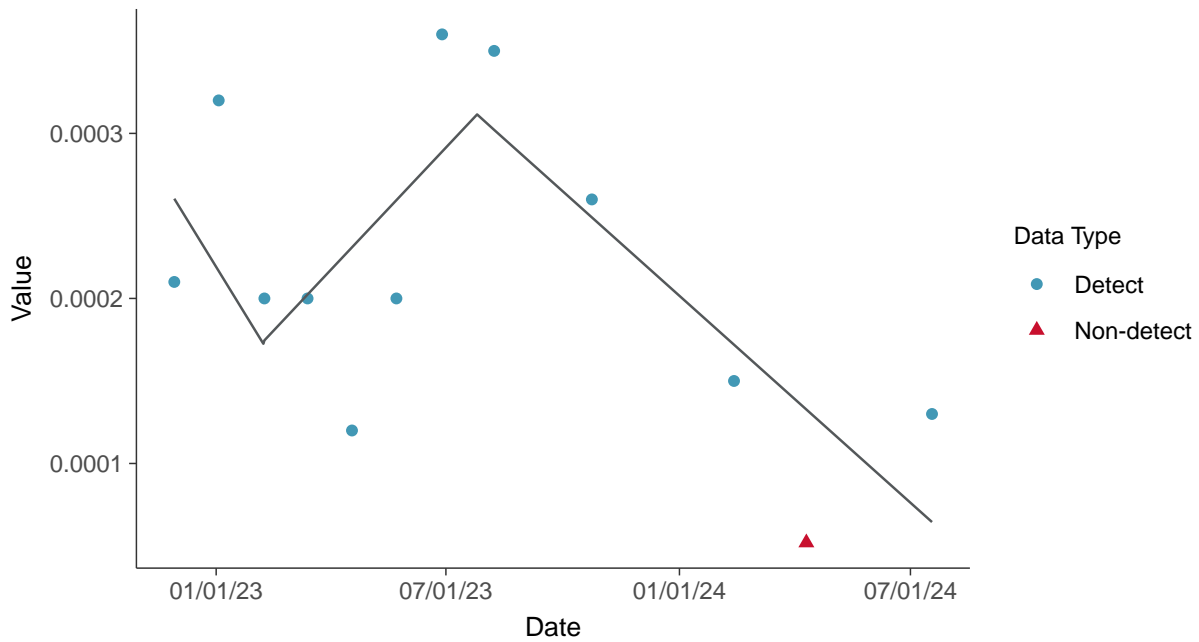
### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

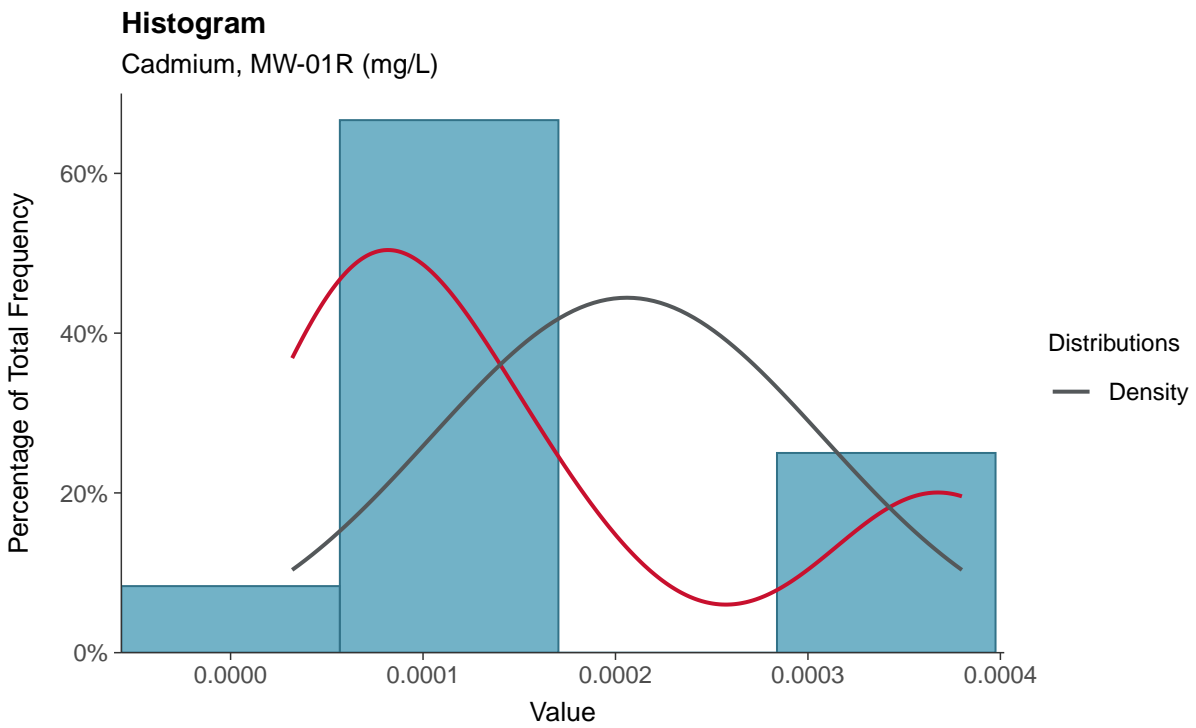
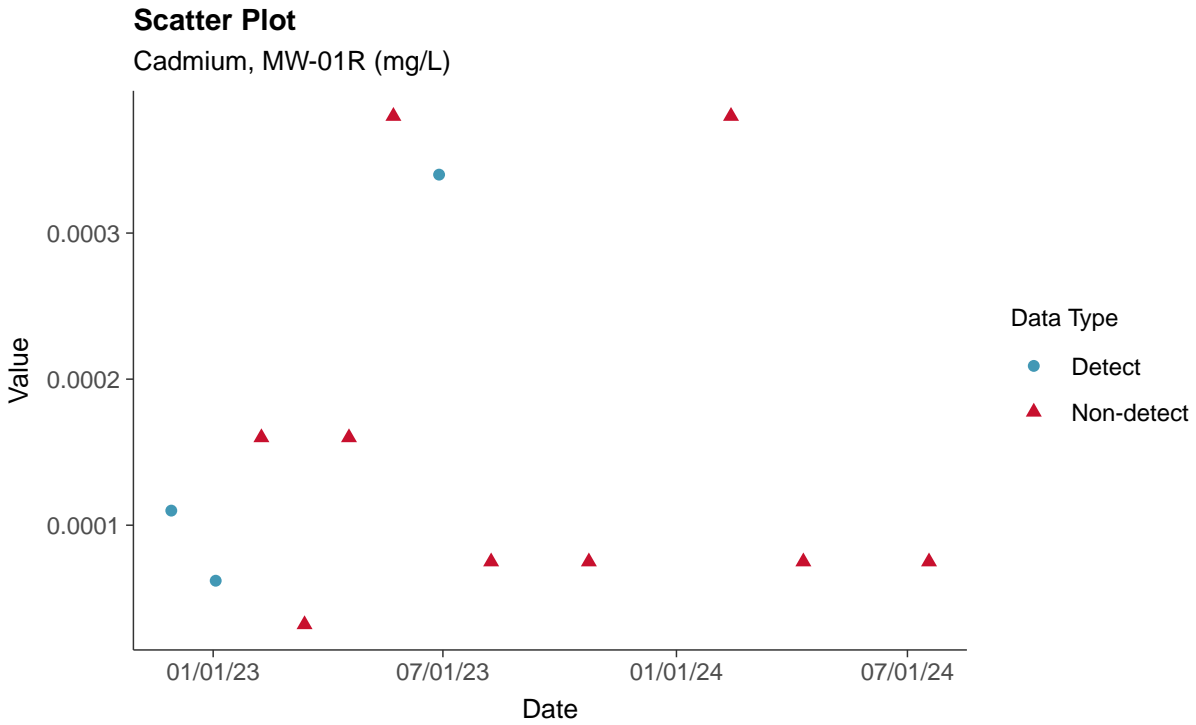
Beryllium, MW-01R (mg/L)





### Appendix IV: Cadmium, MW-01R

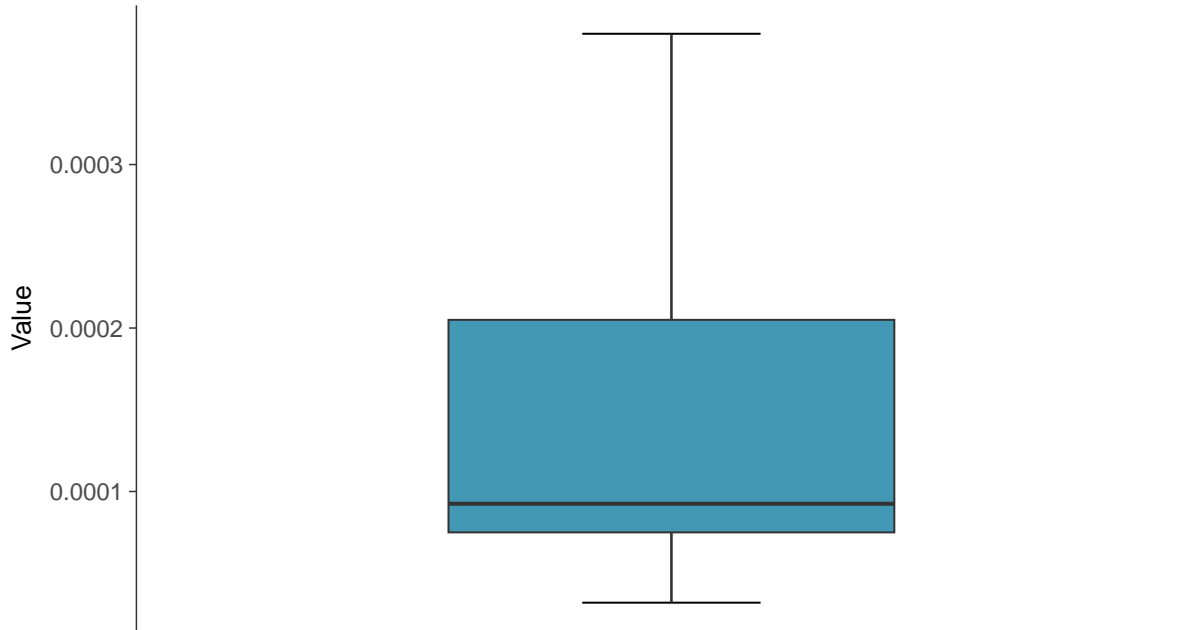
ID: 11\_2\_5\_106





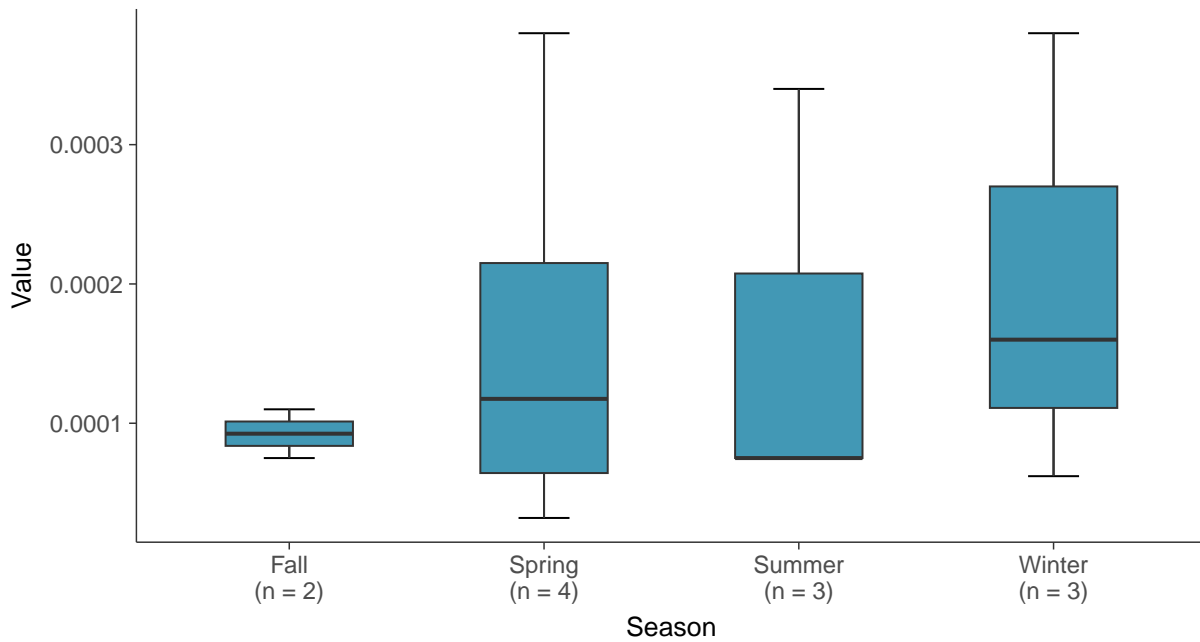
### Boxplot

Cadmium, MW-01R (mg/L)



### Boxplot by Season

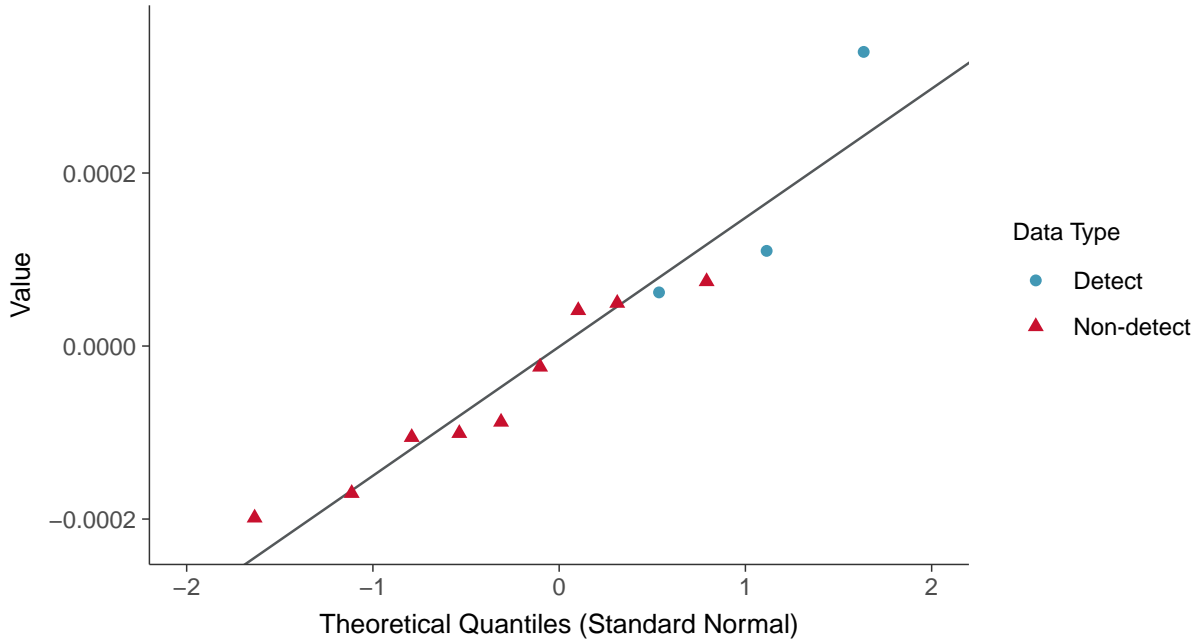
Cadmium, MW-01R (mg/L)





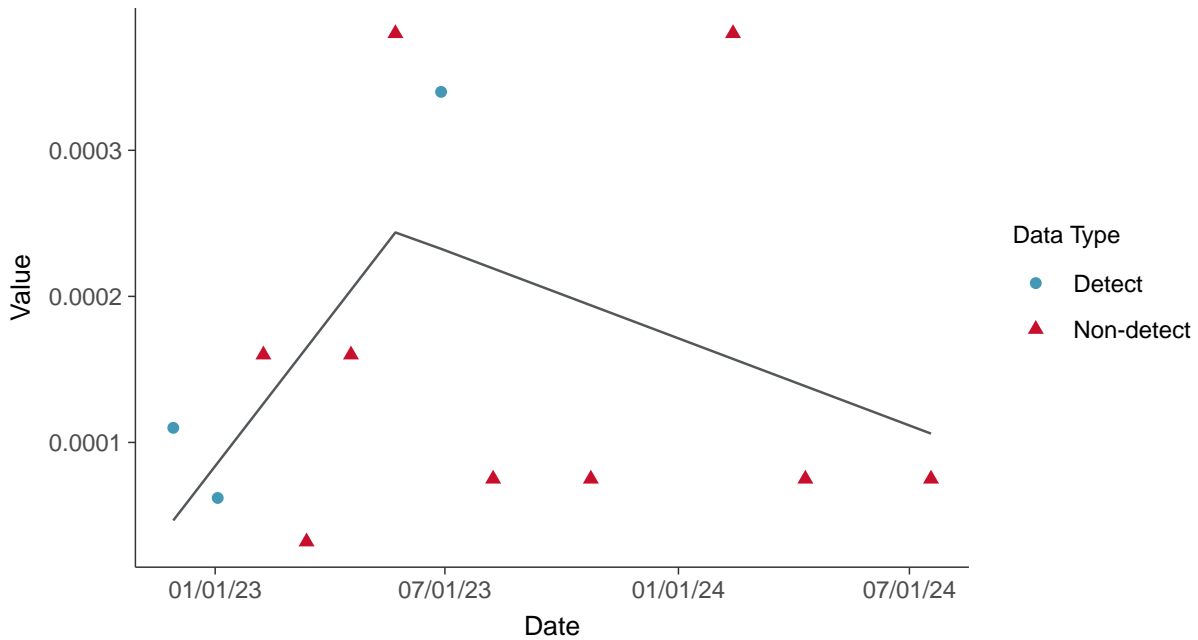
### Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear

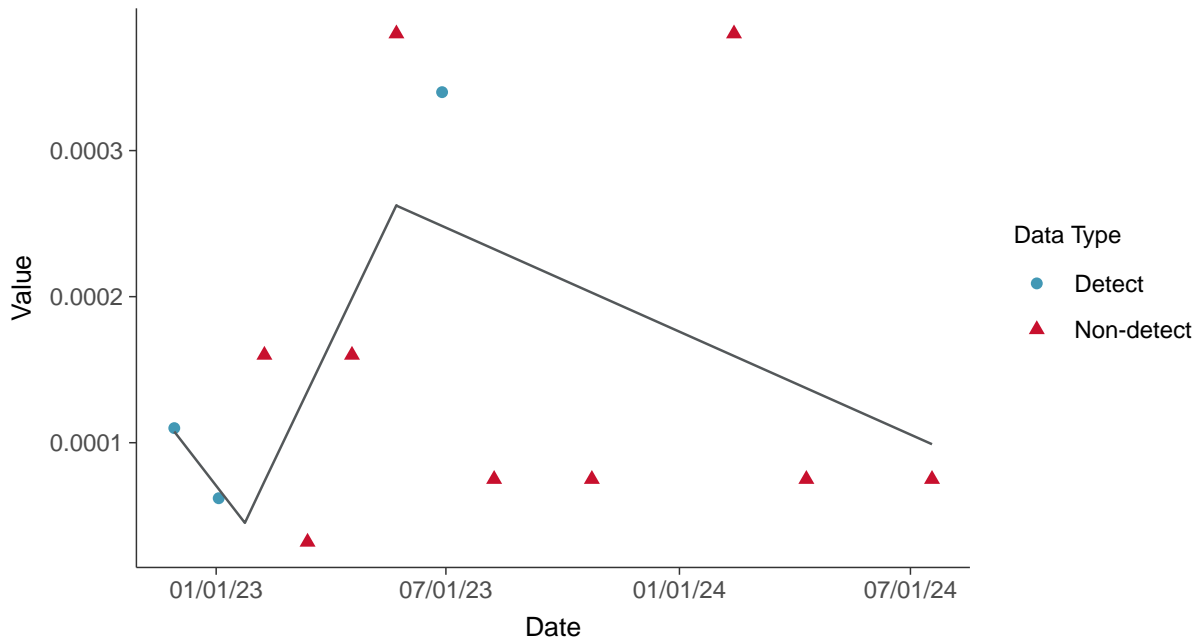
Cadmium, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-01R (mg/L)



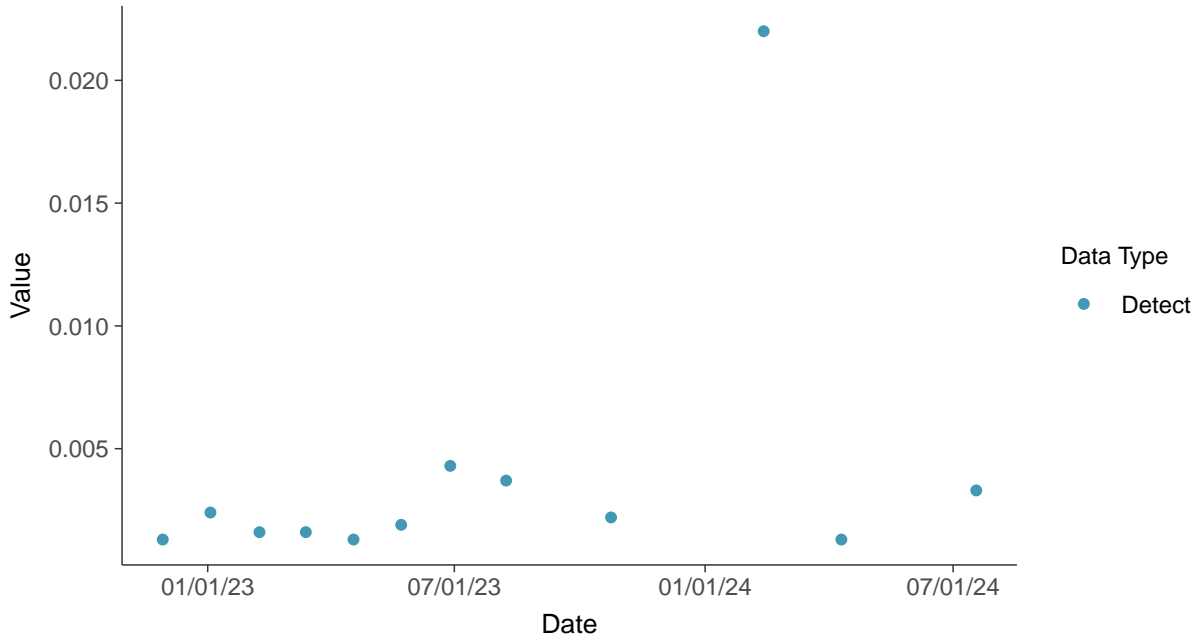


## Appendix IV: Chromium, Total, MW-01R

ID: 11\_2\_5\_109

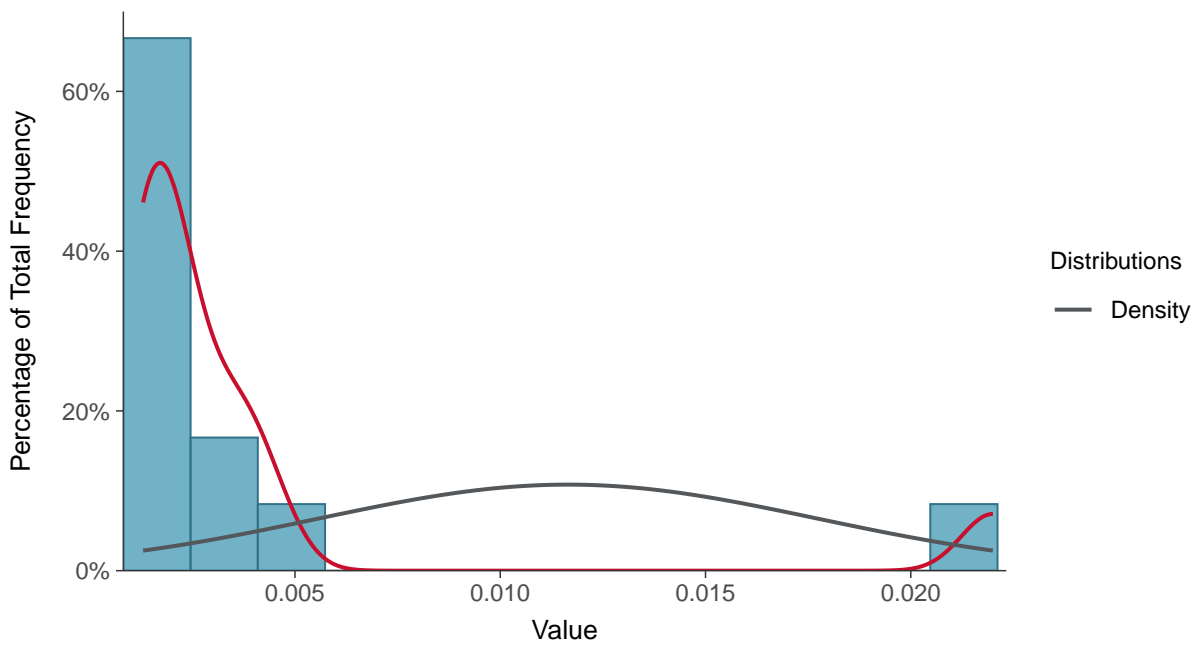
### Scatter Plot

Chromium, Total, MW-01R (mg/L)



### Histogram

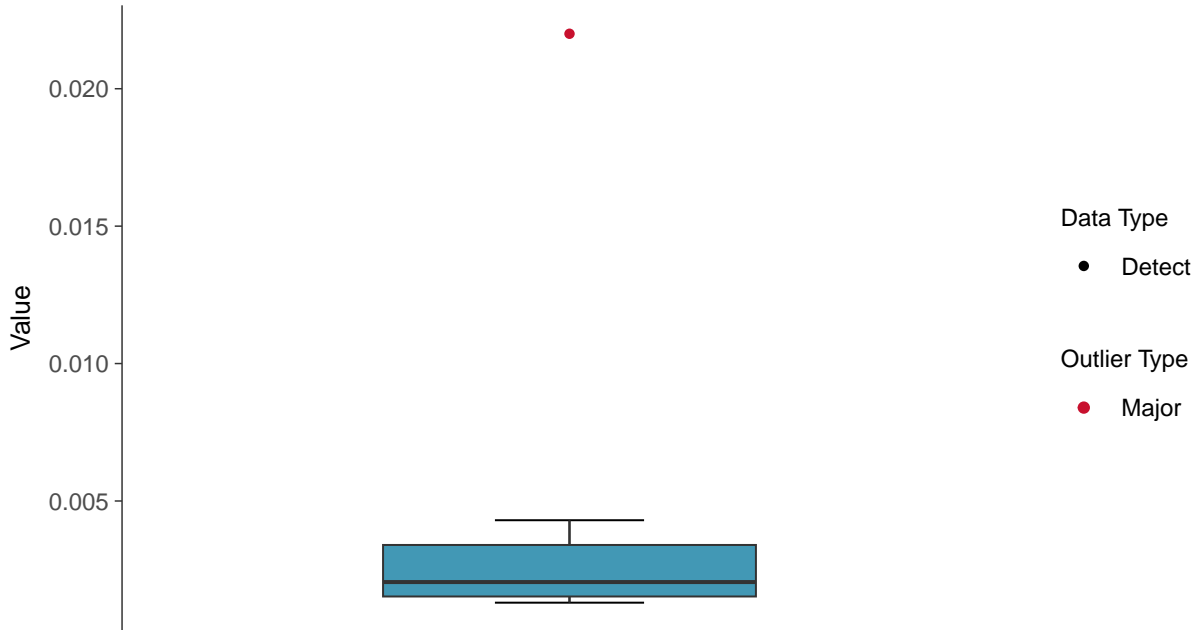
Chromium, Total, MW-01R (mg/L)





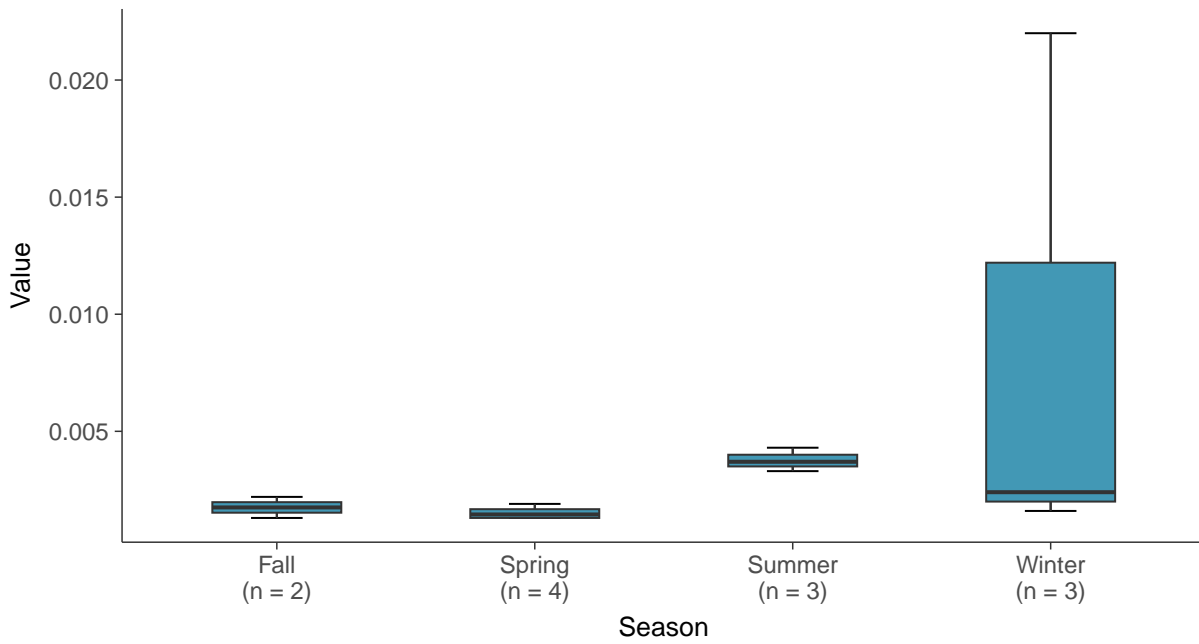
### Boxplot

Chromium, Total, MW-01R (mg/L)



### Boxplot by Season

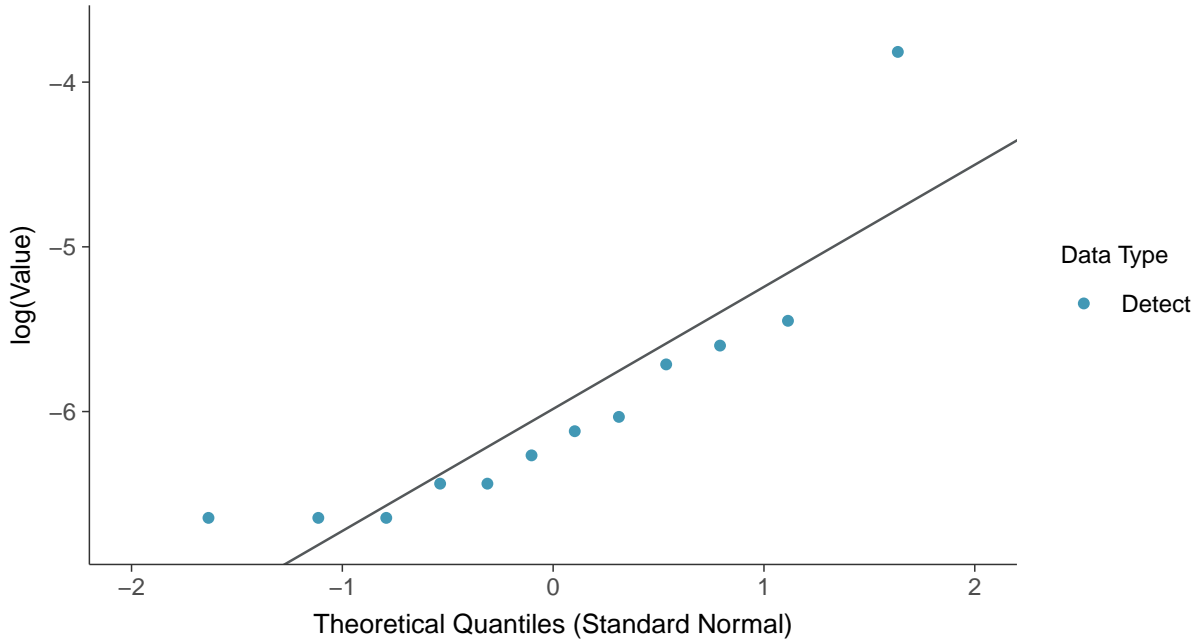
Chromium, Total, MW-01R (mg/L)





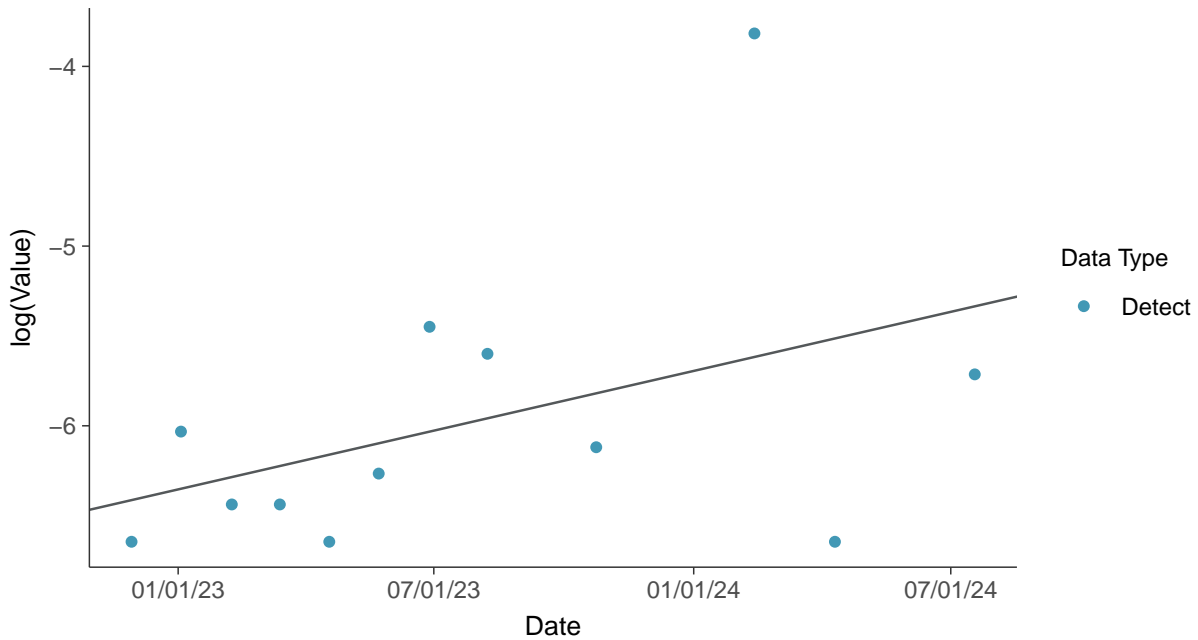
### Lognormal Q-Q plot

Chromium, Total, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

Chromium, Total, MW-01R (mg/L)

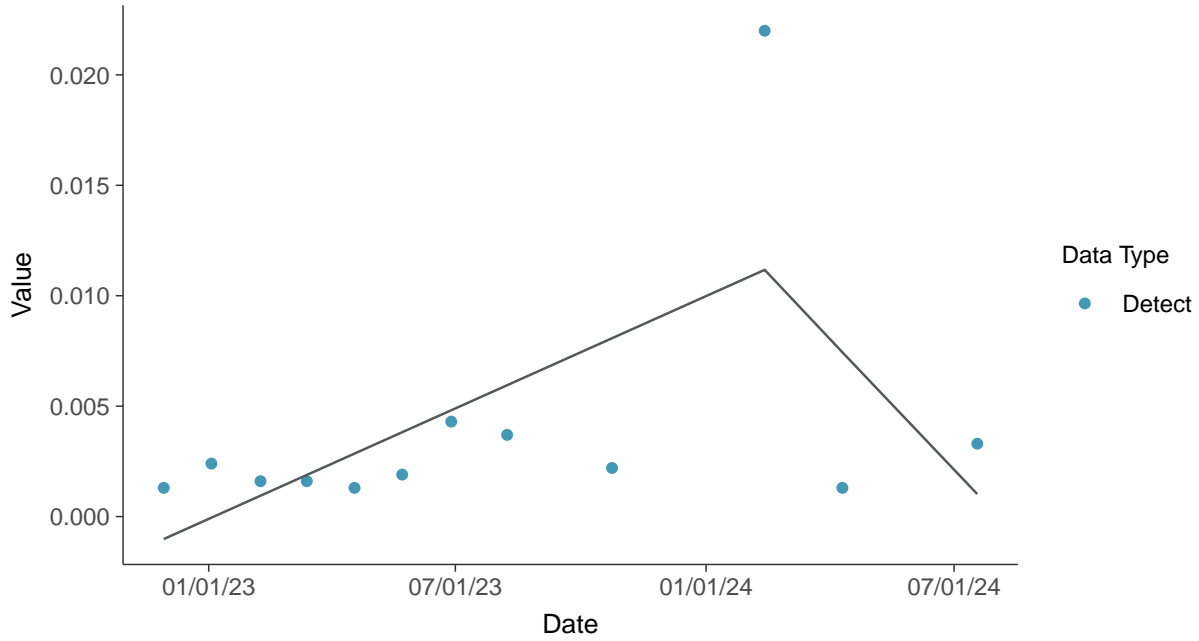






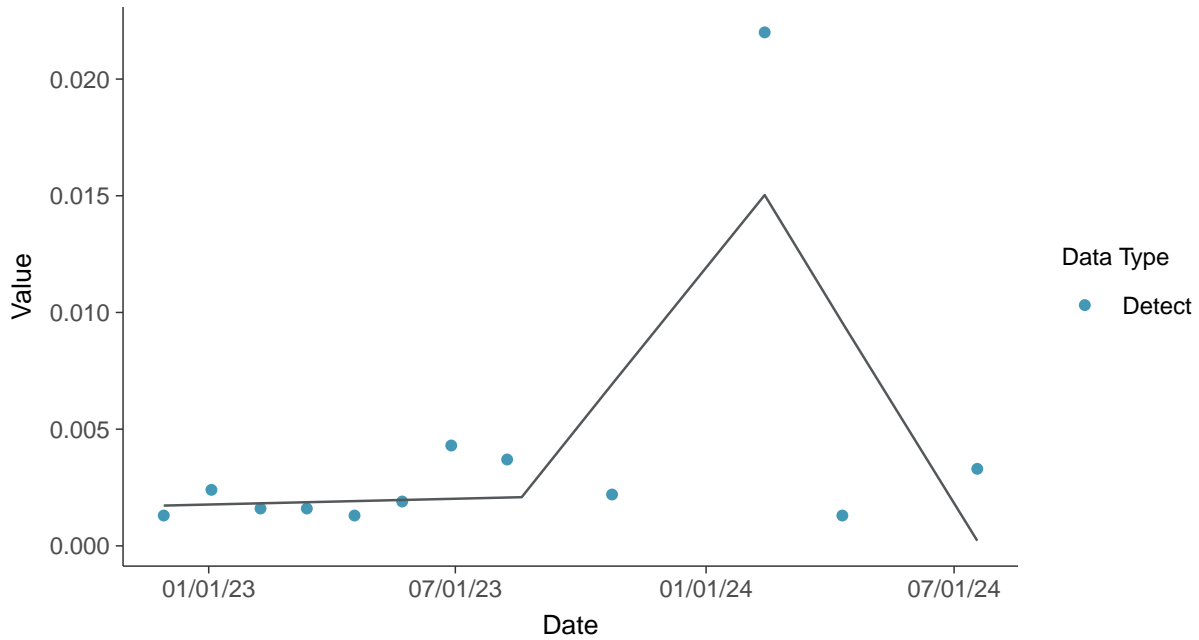
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

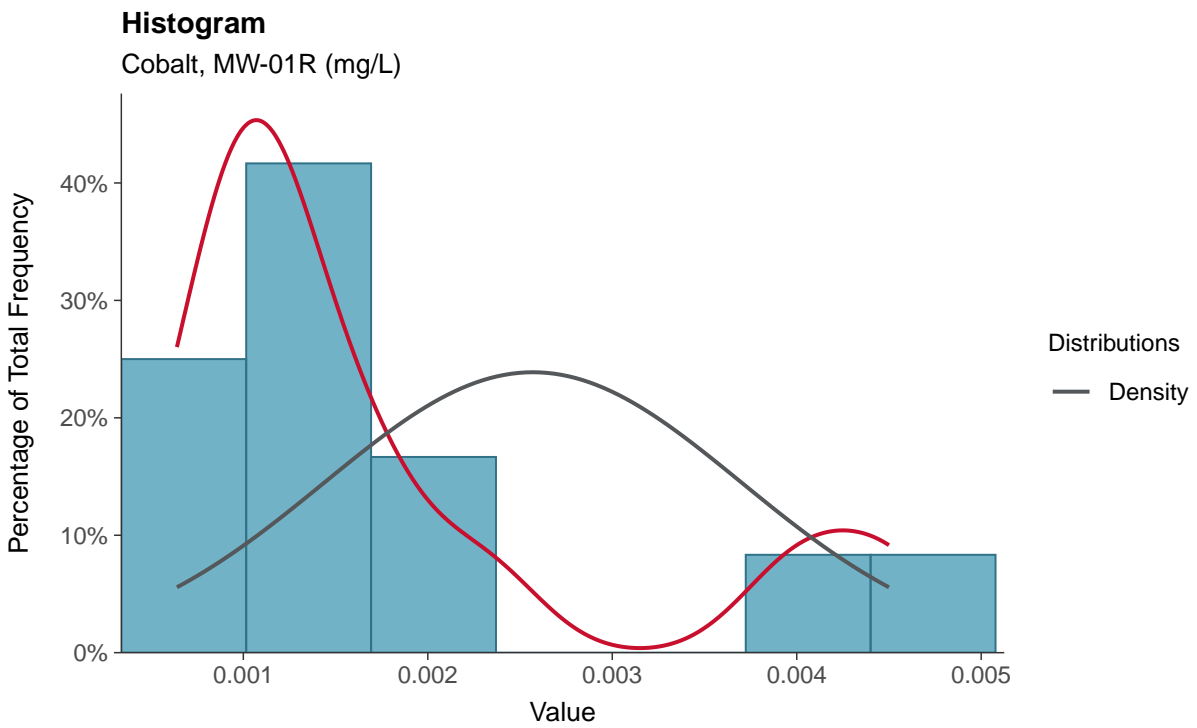
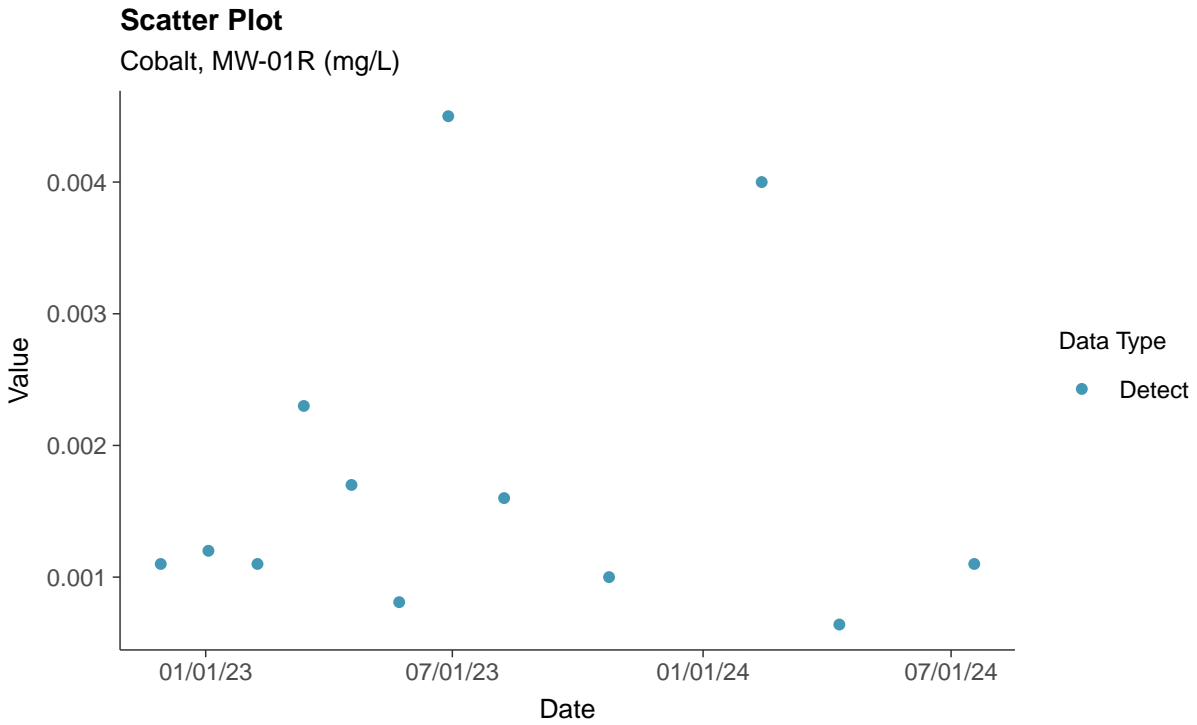
Chromium, Total, MW-01R (mg/L)





### Appendix IV: Cobalt, MW-01R

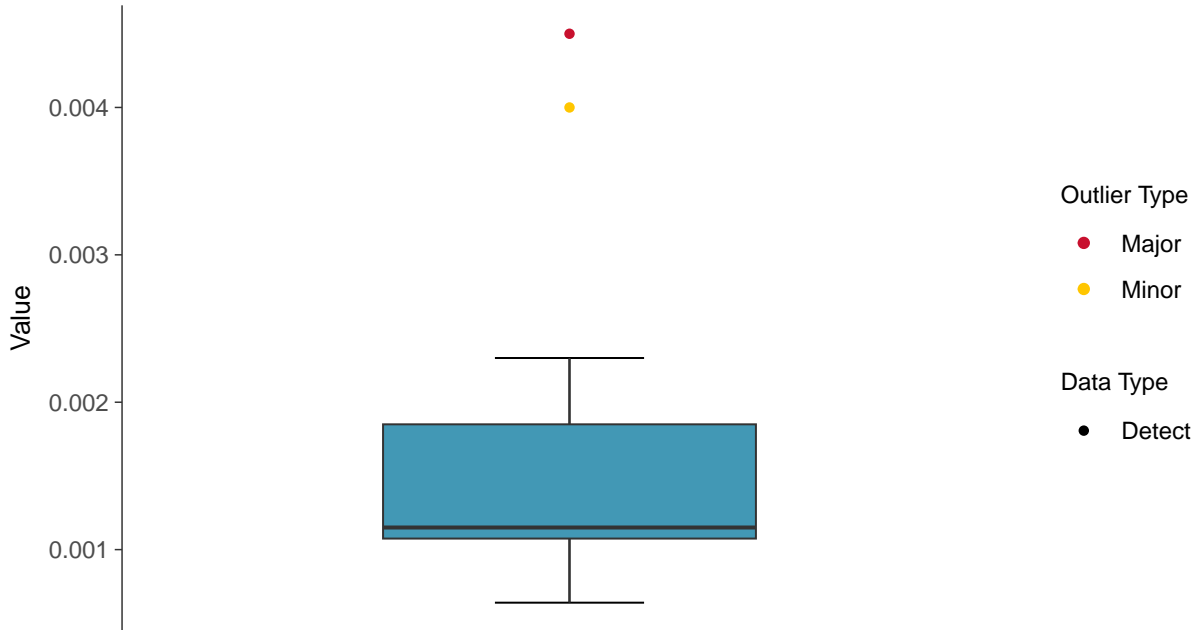
ID: 11\_2\_5\_110





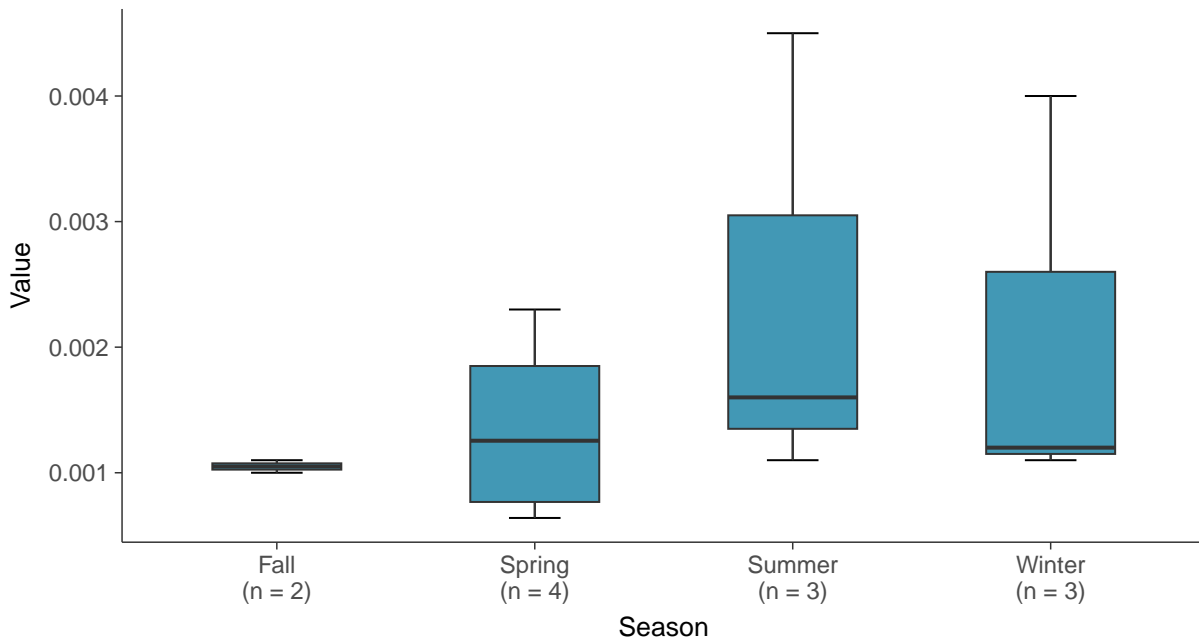
### Boxplot

Cobalt, MW-01R (mg/L)



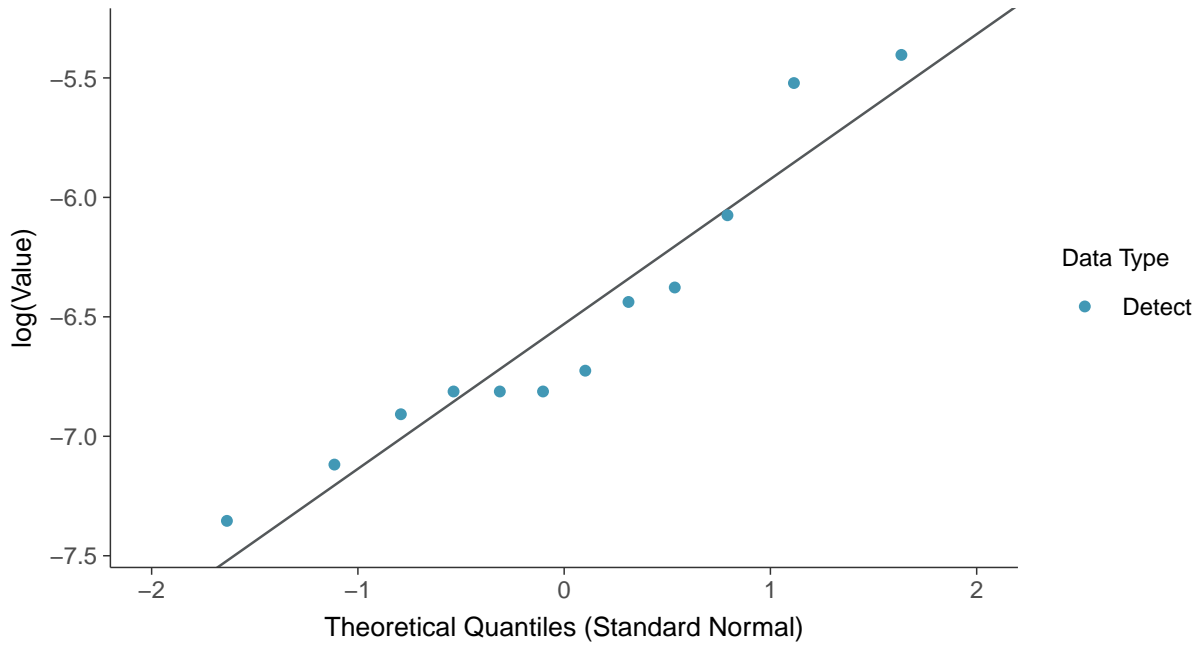
### Boxplot by Season

Cobalt, MW-01R (mg/L)

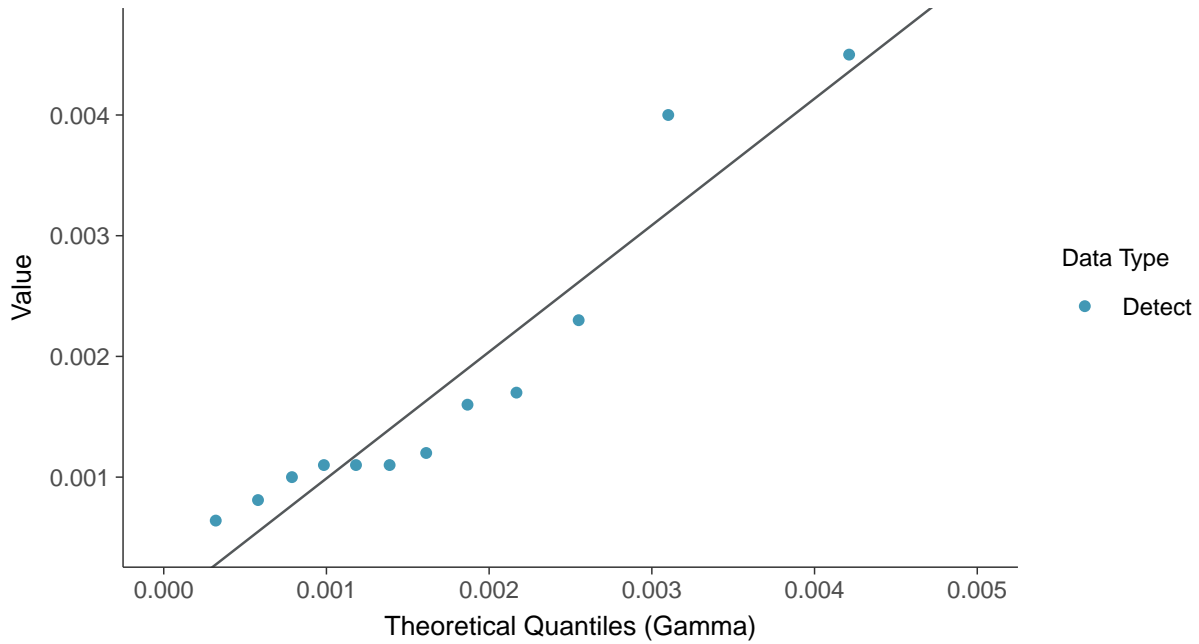




**Lognormal Q-Q plot**  
Cobalt, MW-01R (mg/L)



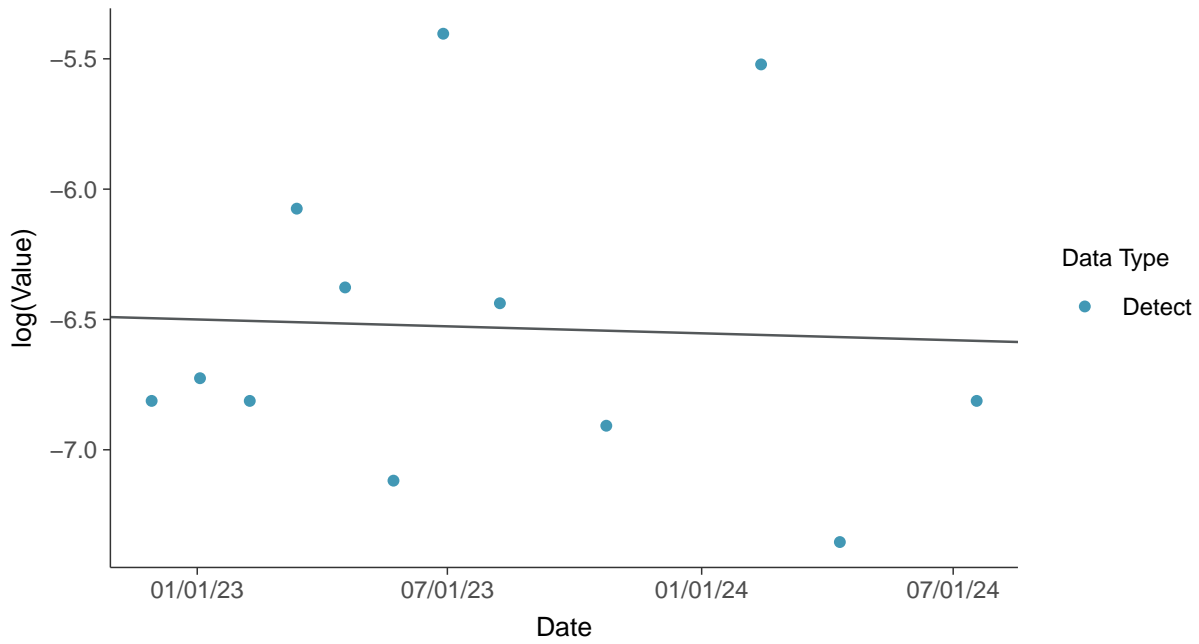
**Gamma Q-Q plot**  
Cobalt, MW-01R (mg/L)





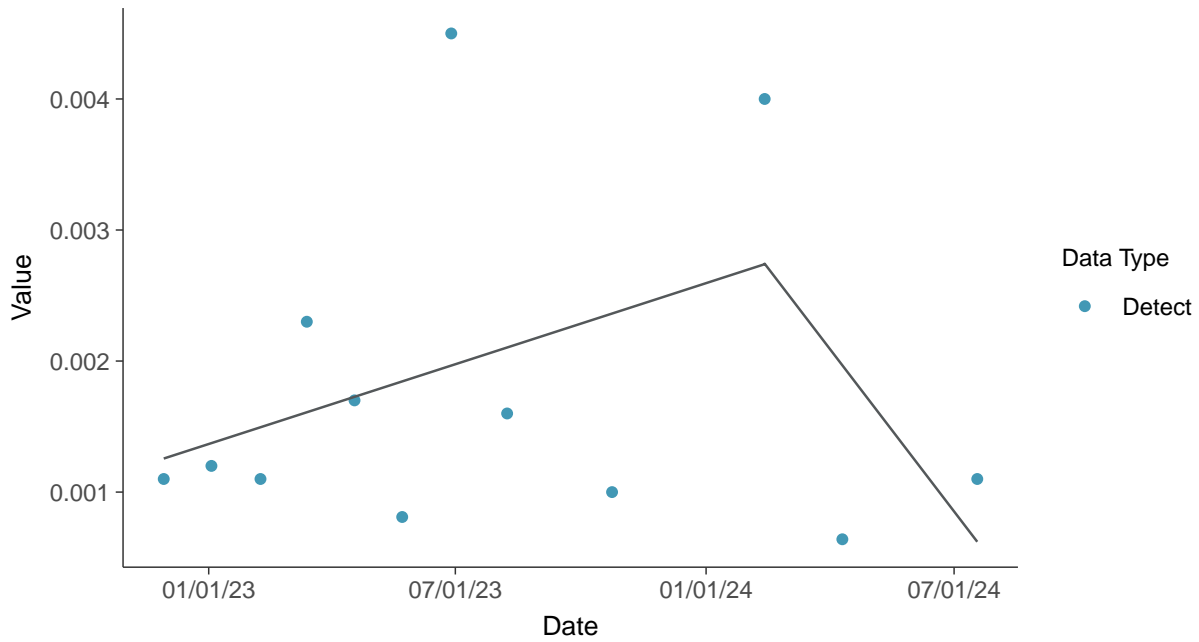
### Trend Regression: Lognormal MLE

Cobalt, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear

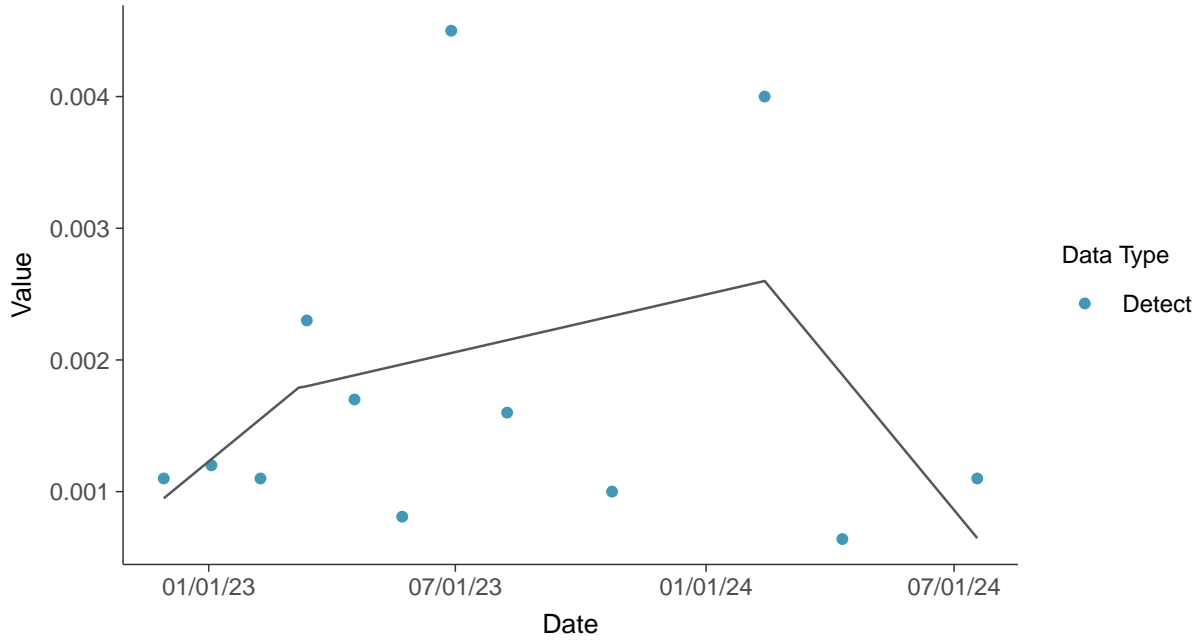
Cobalt, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

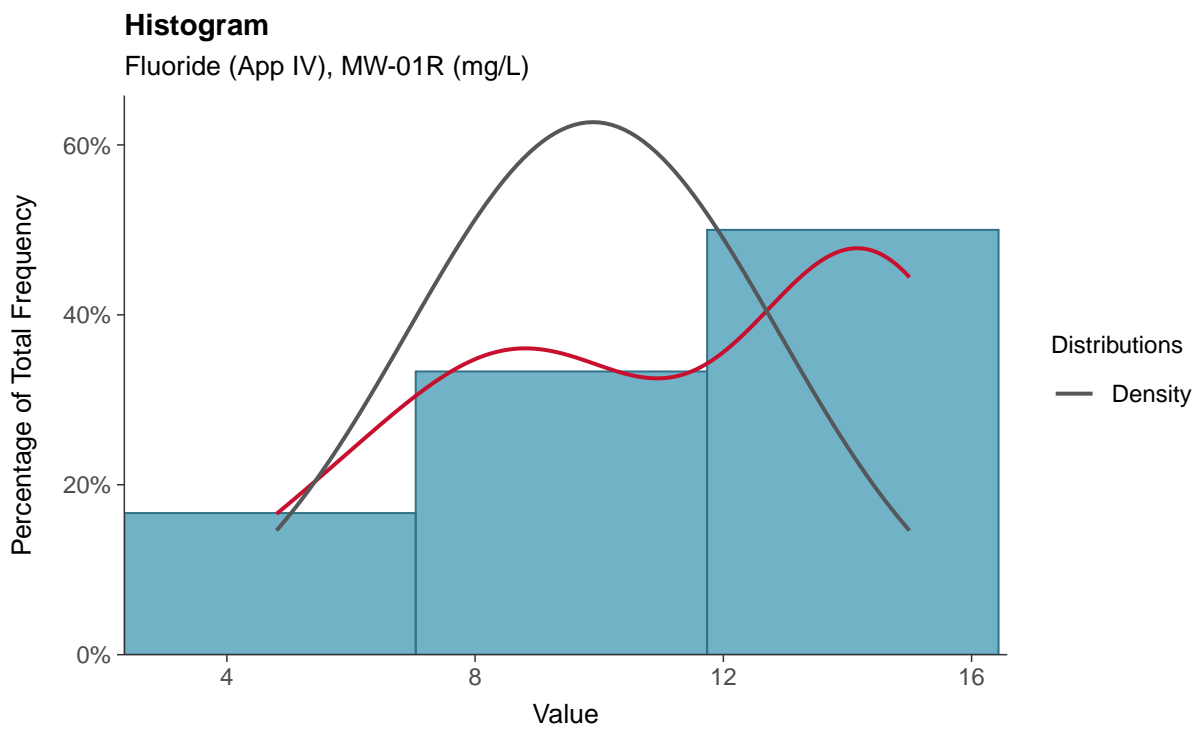
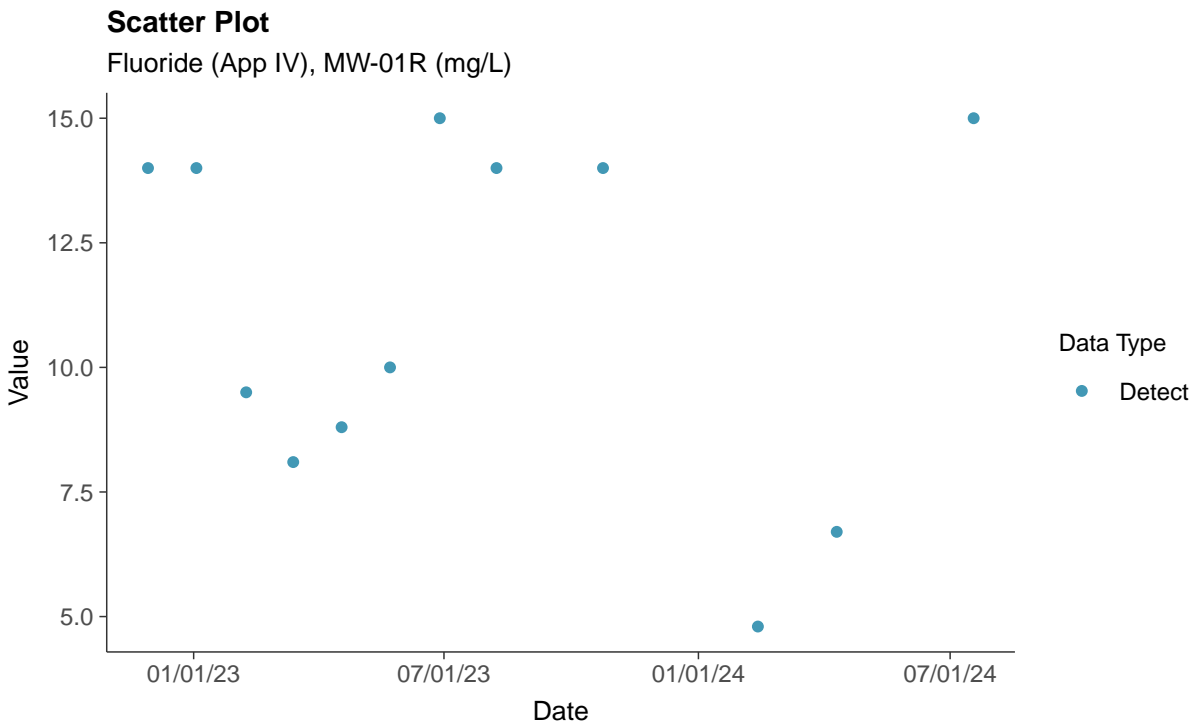
Cobalt, MW-01R (mg/L)





### Appendix IV: Fluoride (App IV), MW-01R

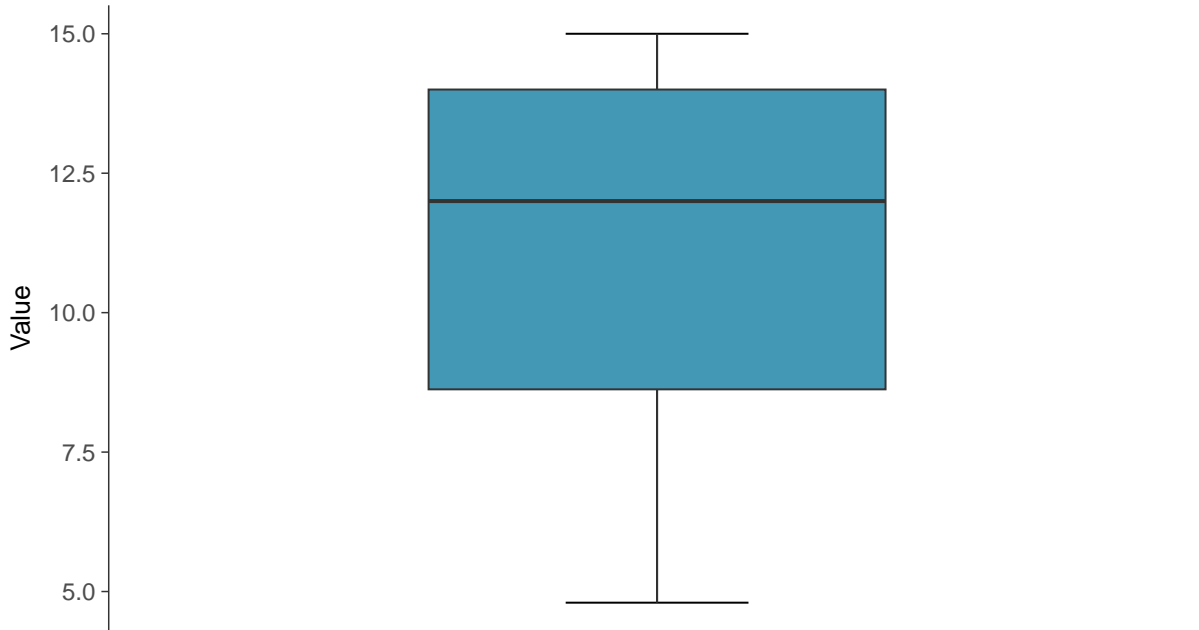
ID: 11\_2\_5\_113





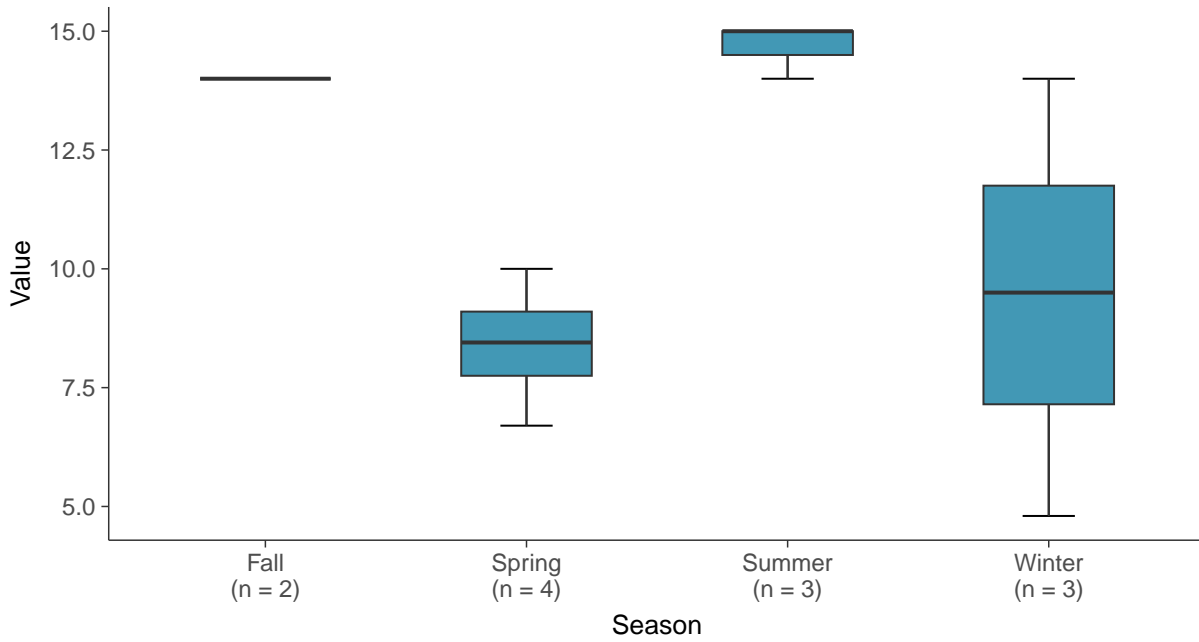
### Boxplot

Fluoride (App IV), MW-01R (mg/L)



### Boxplot by Season

Fluoride (App IV), MW-01R (mg/L)

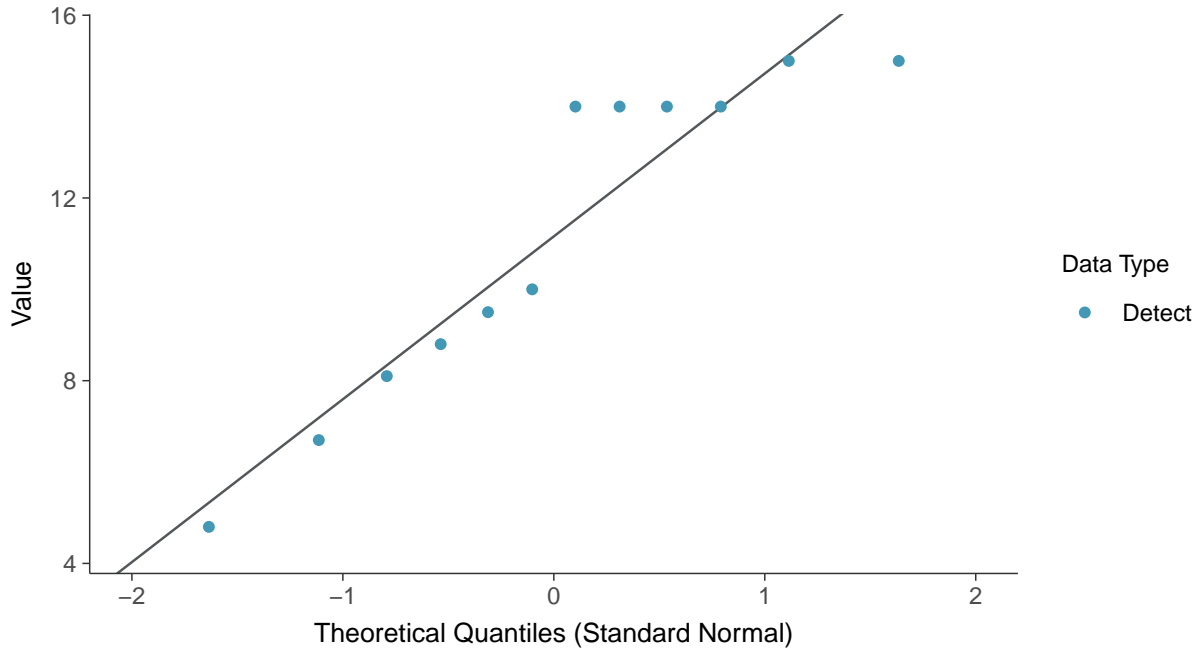






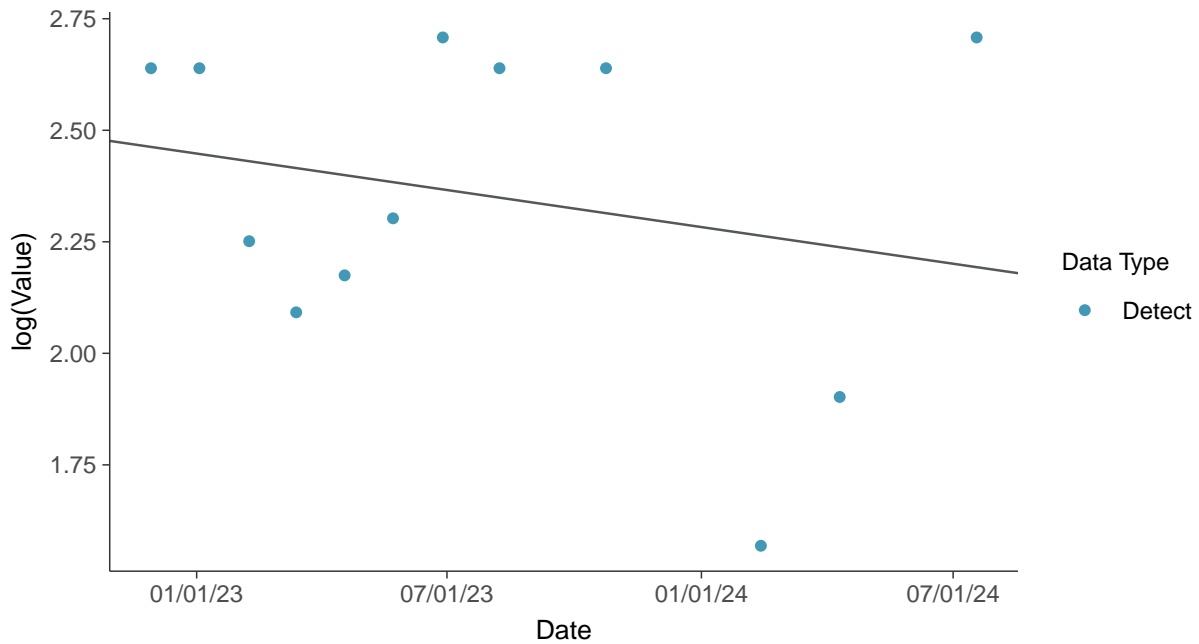
### Normal Q-Q plot

Fluoride (App IV), MW-01R (mg/L)



### Trend Regression: Lognormal MLE

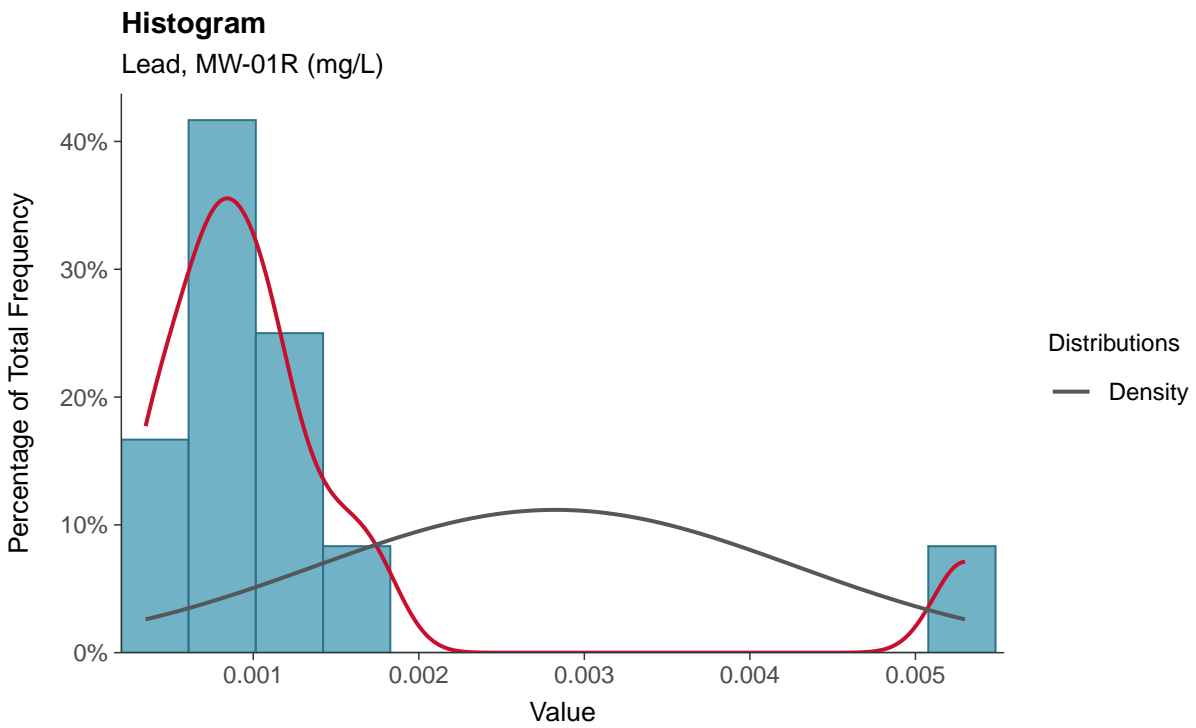
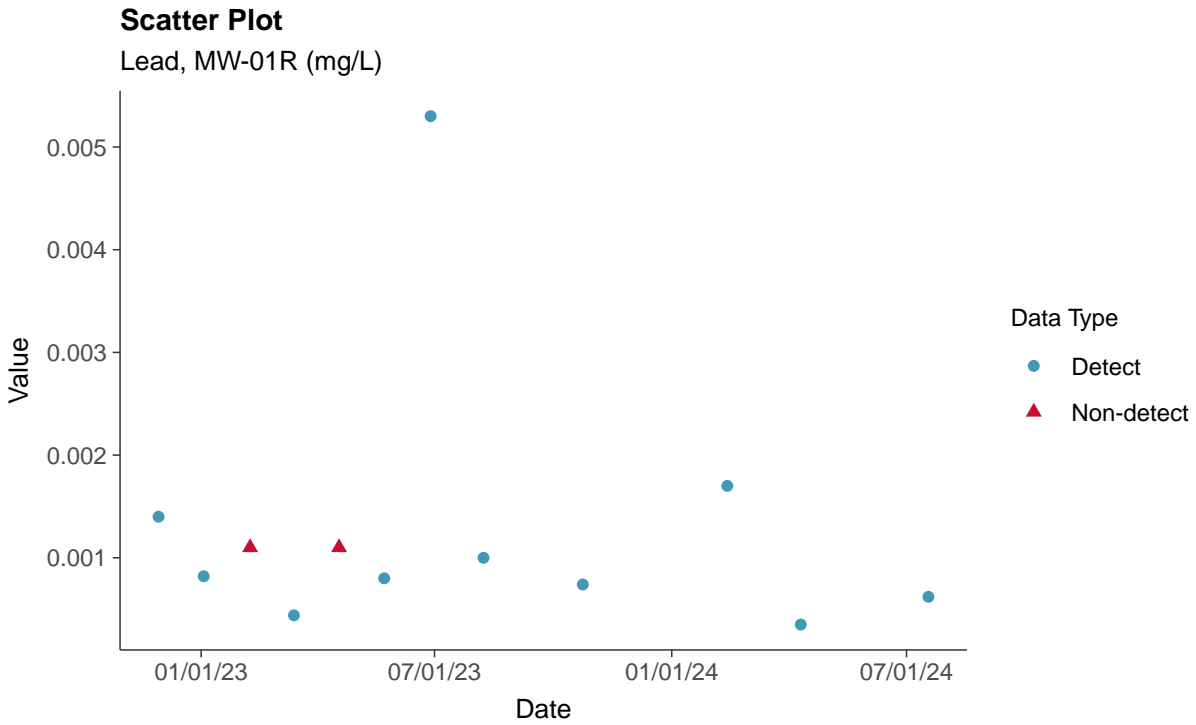
Fluoride (App IV), MW-01R (mg/L)





### Appendix IV: Lead, MW-01R

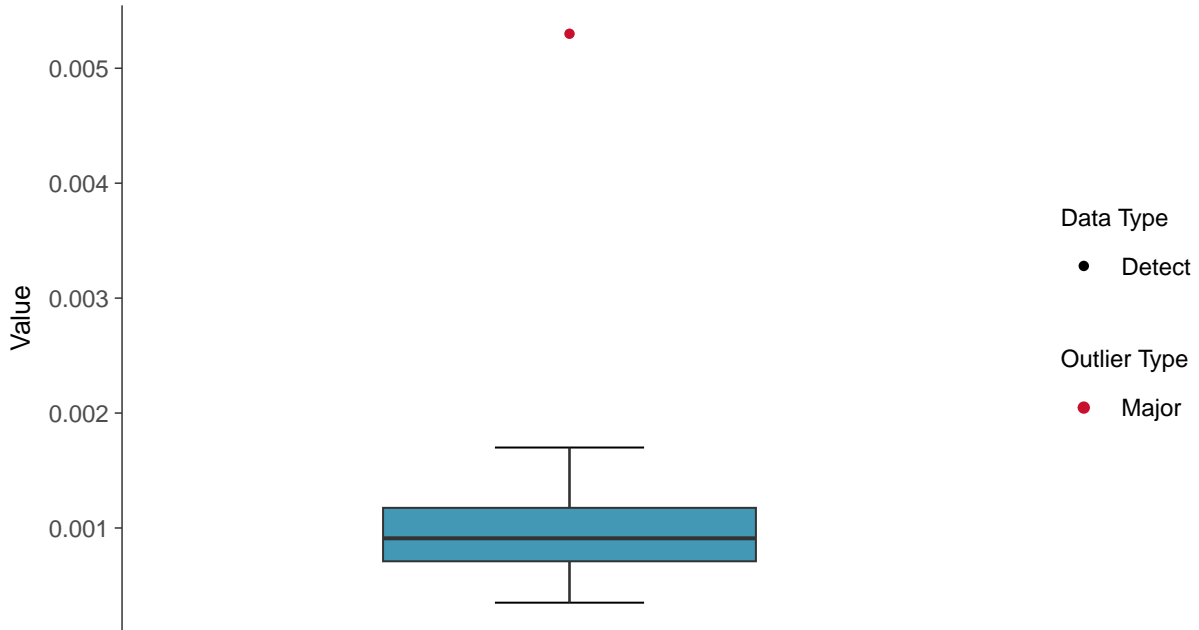
ID: 11\_2\_5\_115





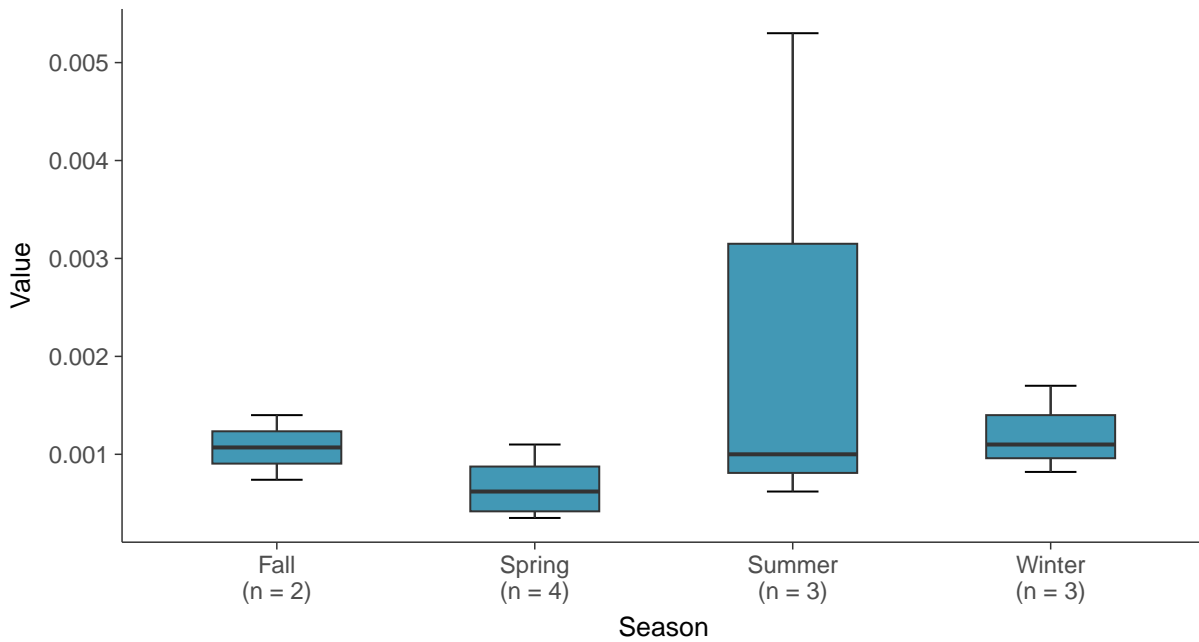
### Boxplot

Lead, MW-01R (mg/L)



### Boxplot by Season

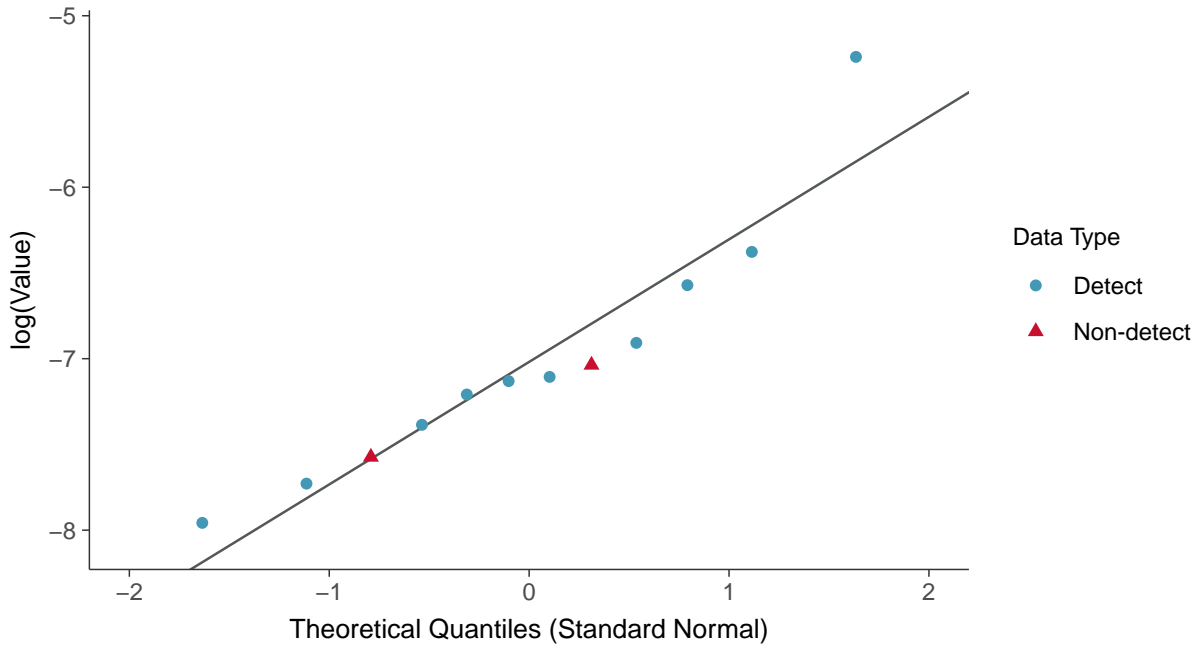
Lead, MW-01R (mg/L)





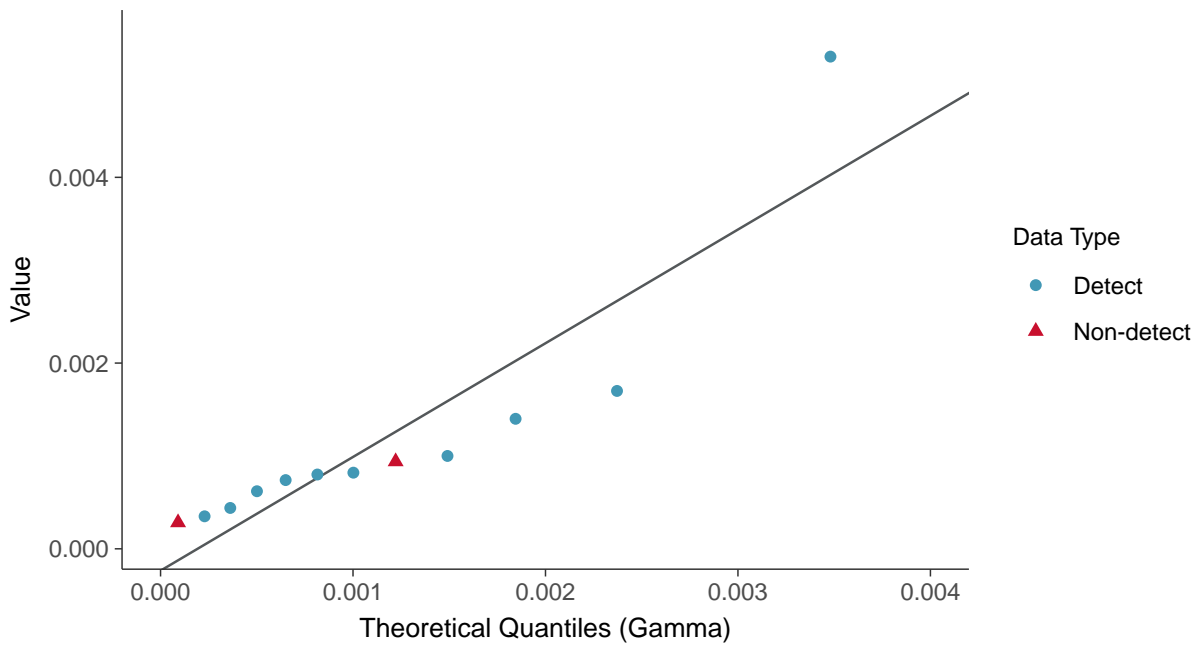
### Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-01R (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

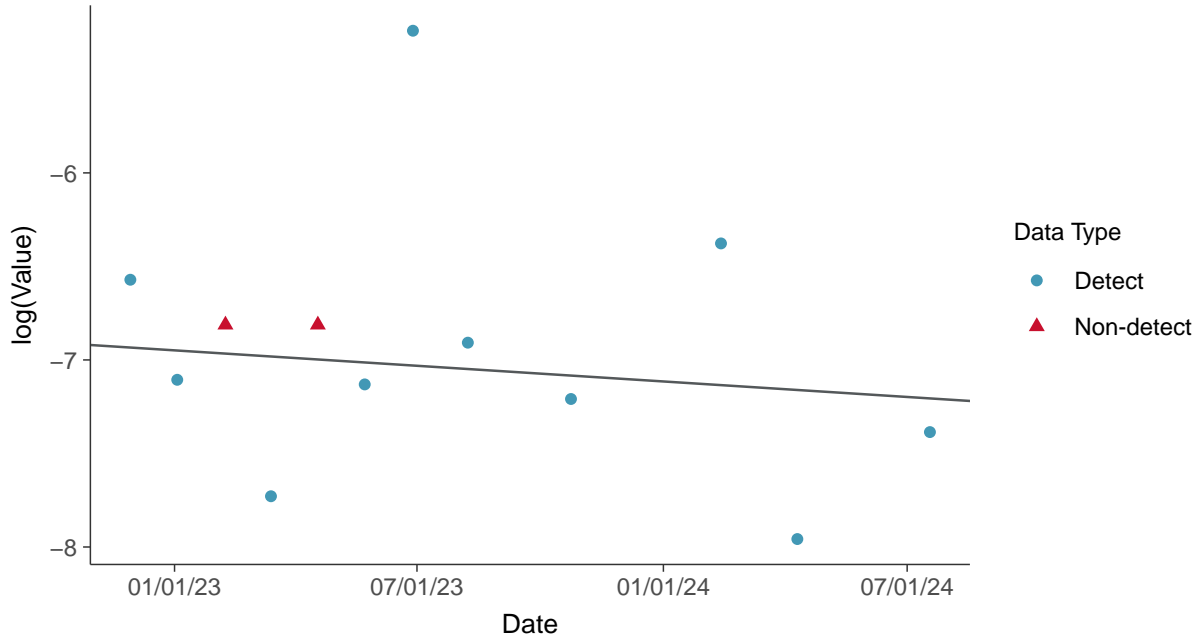
Lead, MW-01R (mg/L)





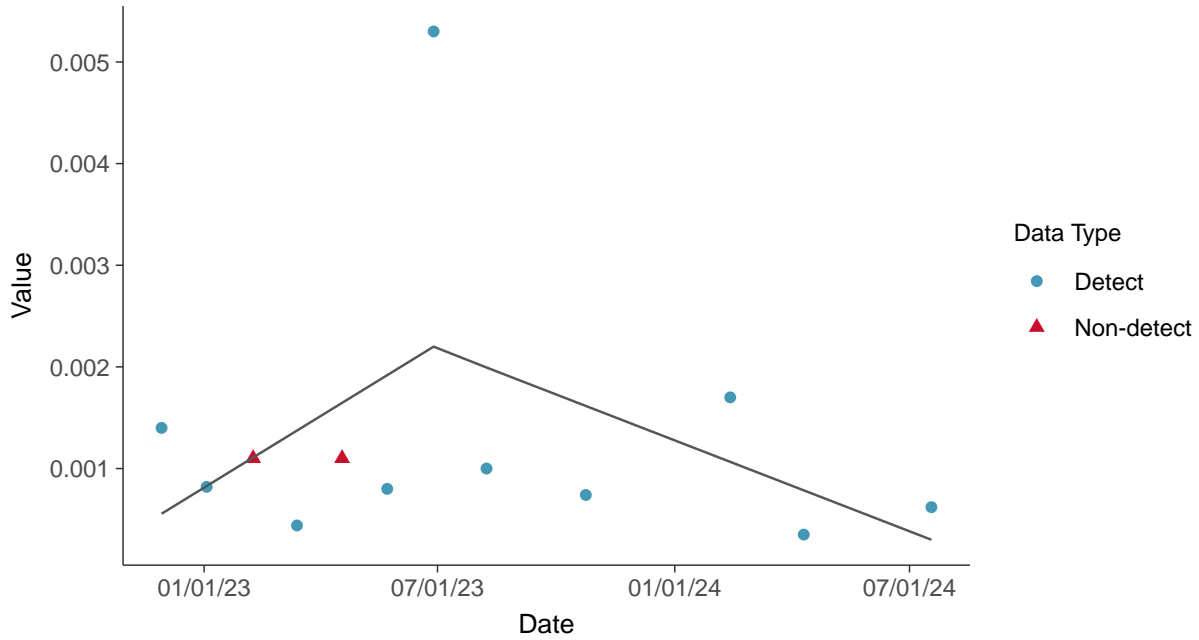
### Trend Regression: Lognormal MLE

Lead, MW-01R (mg/L)



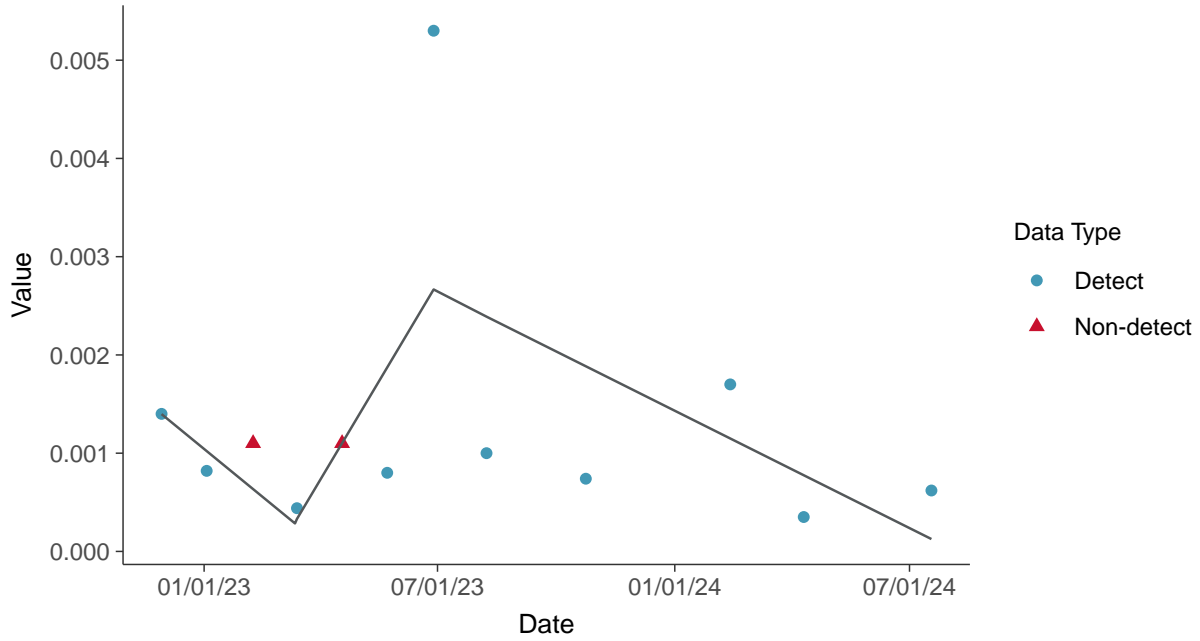
### Trend Regression: Piecewise Linear-Linear

Lead, MW-01R (mg/L)





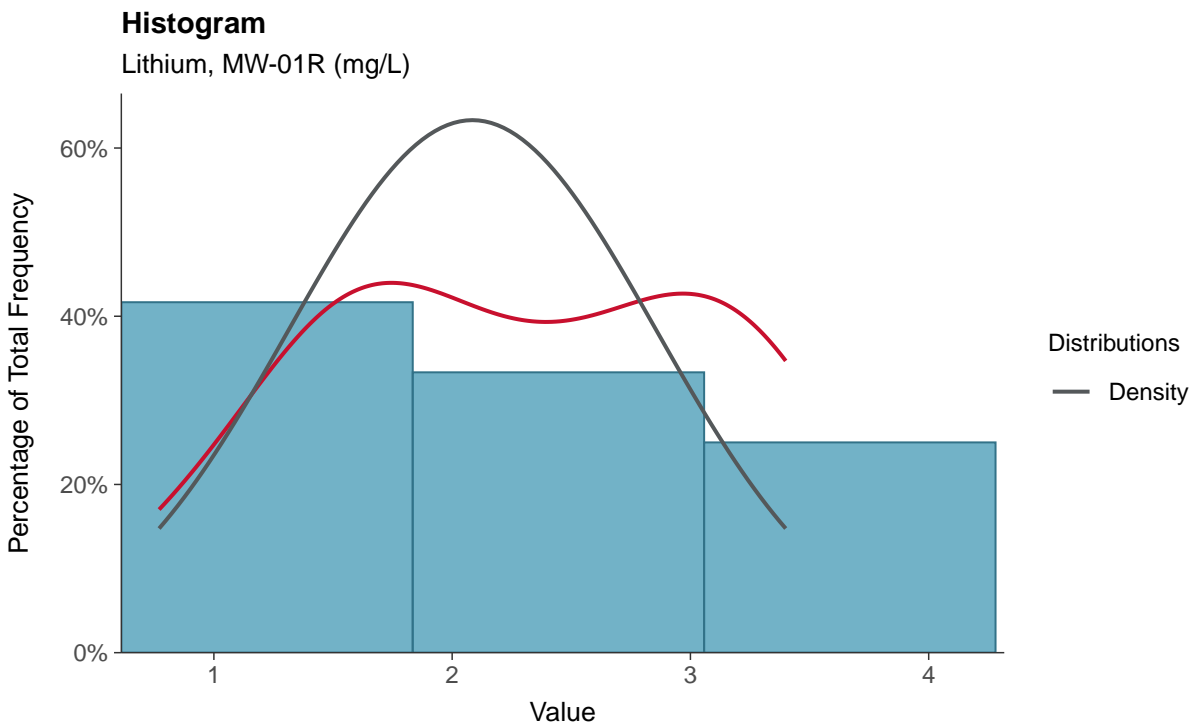
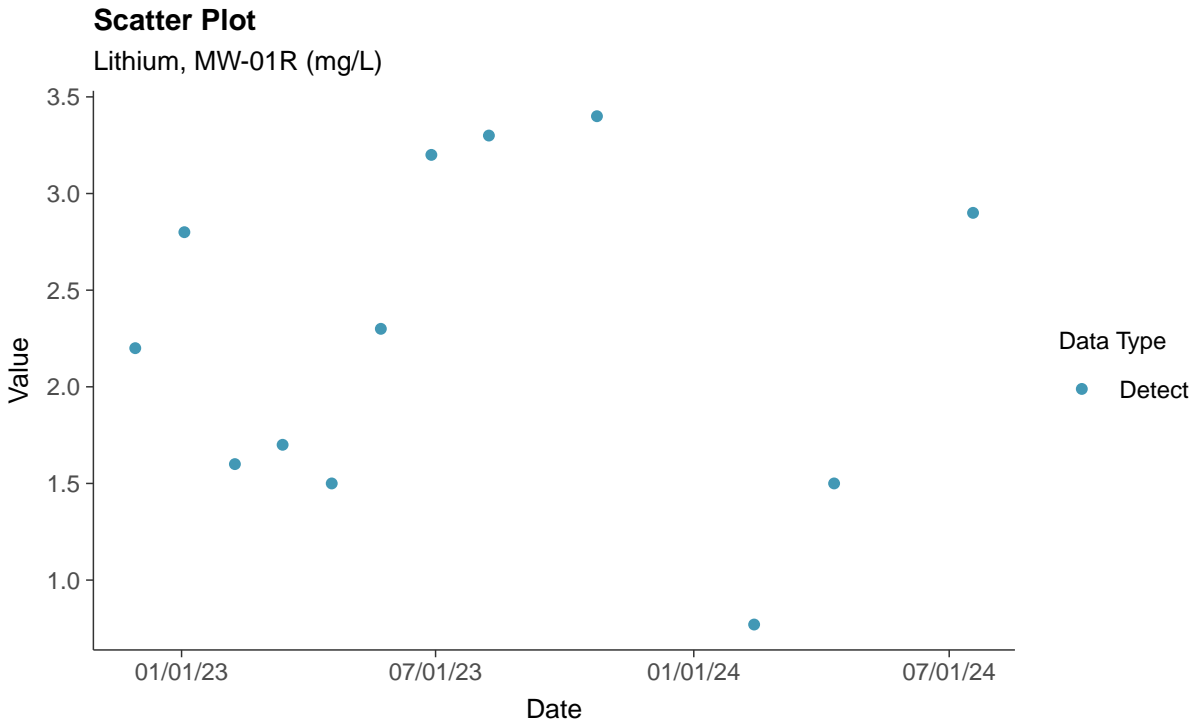
**Trend Regression: Piecewise Linear-Linear-Linear**  
Lead, MW-01R (mg/L)





### Appendix IV: Lithium, MW-01R

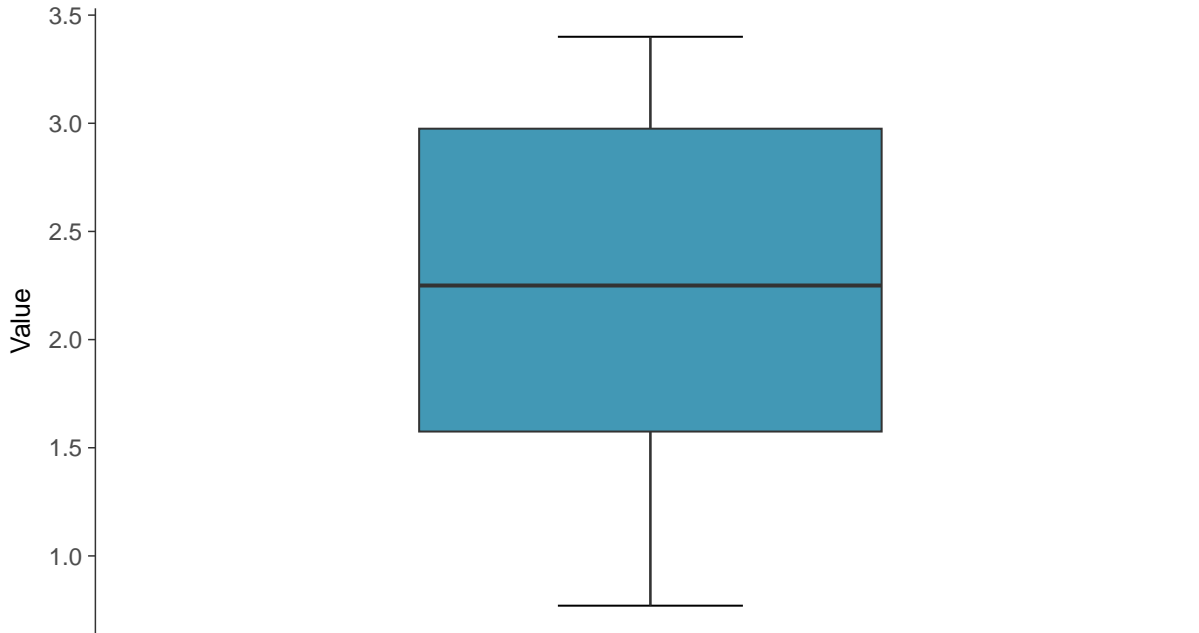
ID: 11\_2\_5\_116





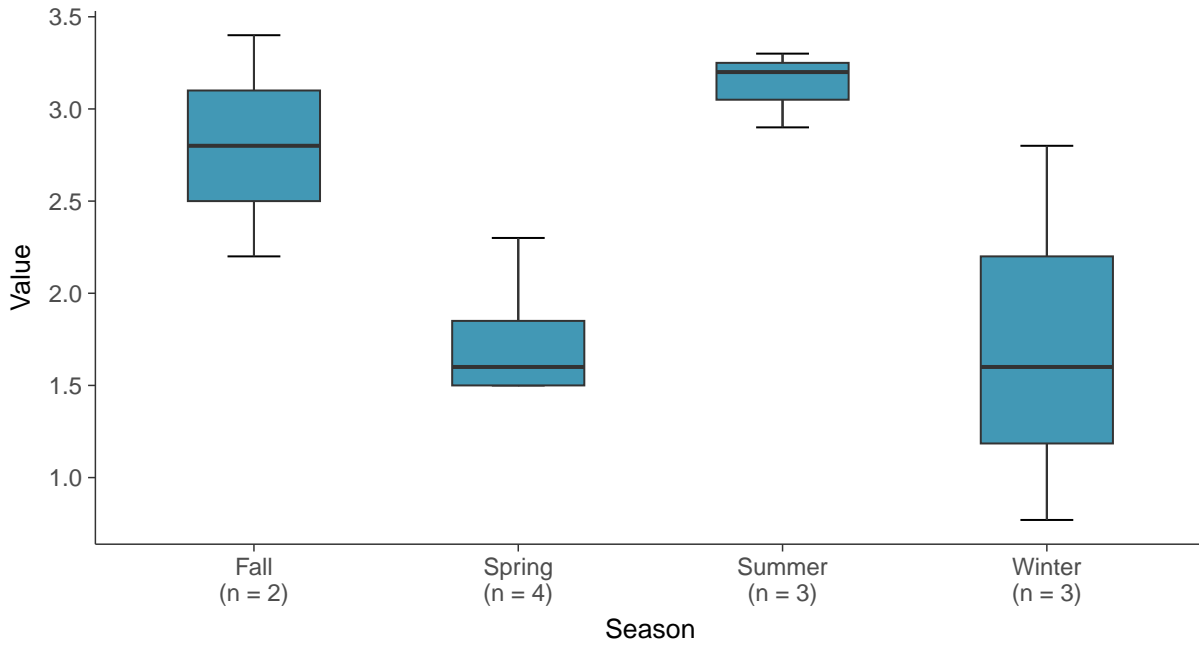
### Boxplot

Lithium, MW-01R (mg/L)



### Boxplot by Season

Lithium, MW-01R (mg/L)

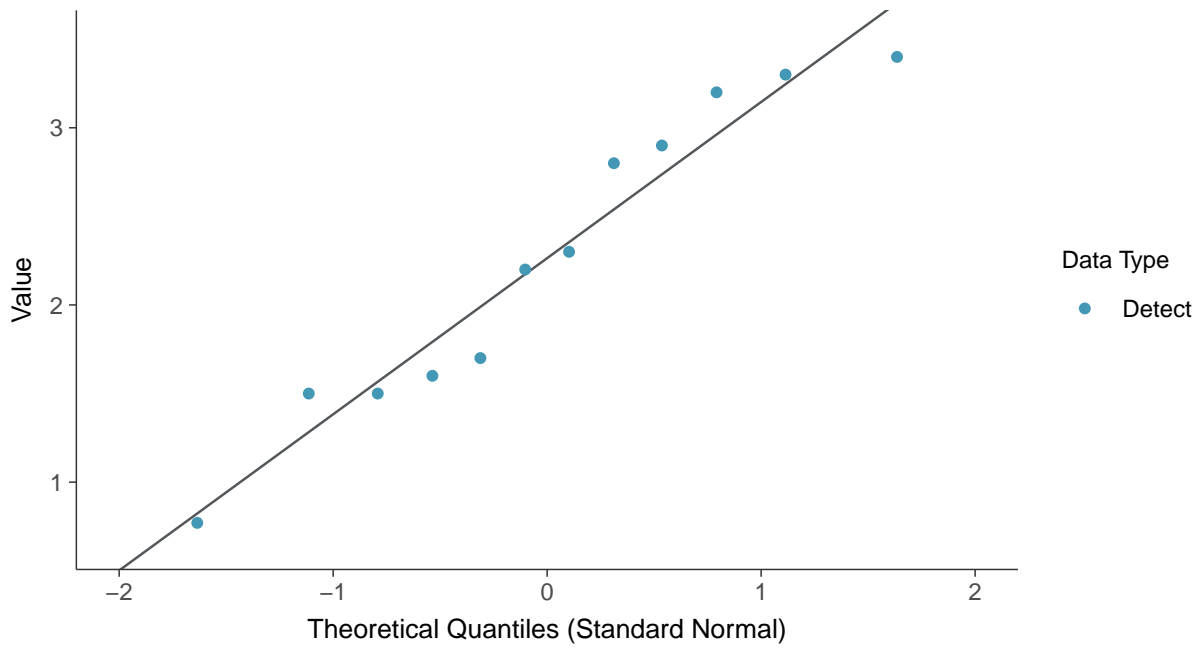






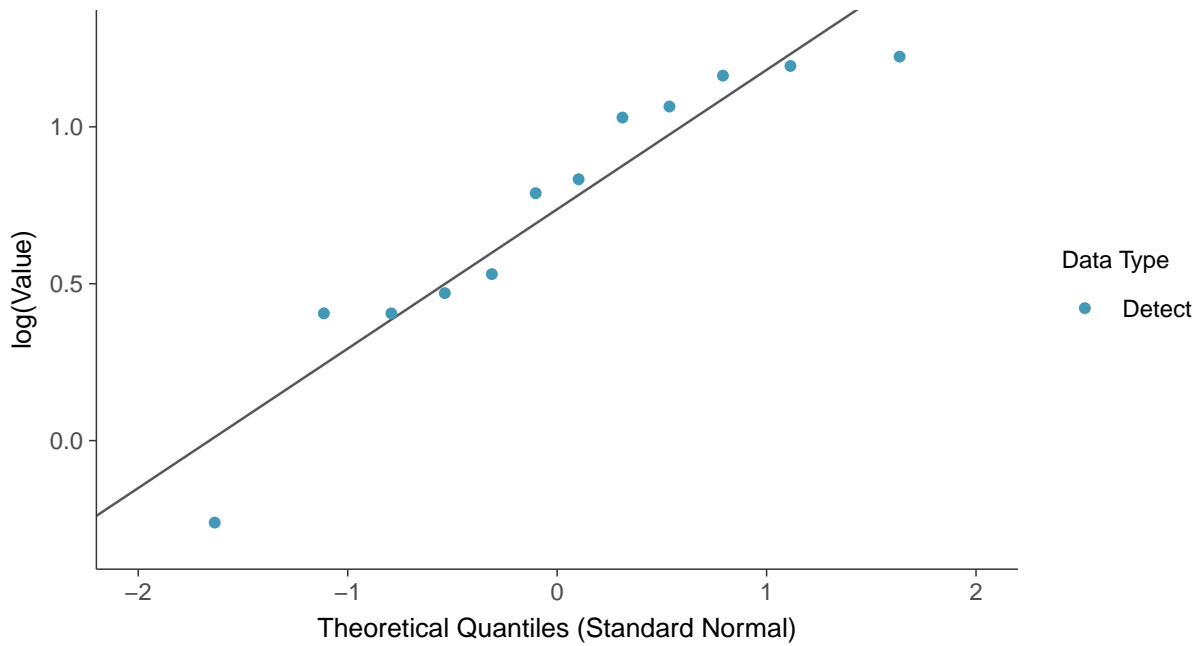
### Normal Q-Q plot

Lithium, MW-01R (mg/L)



### Lognormal Q-Q plot

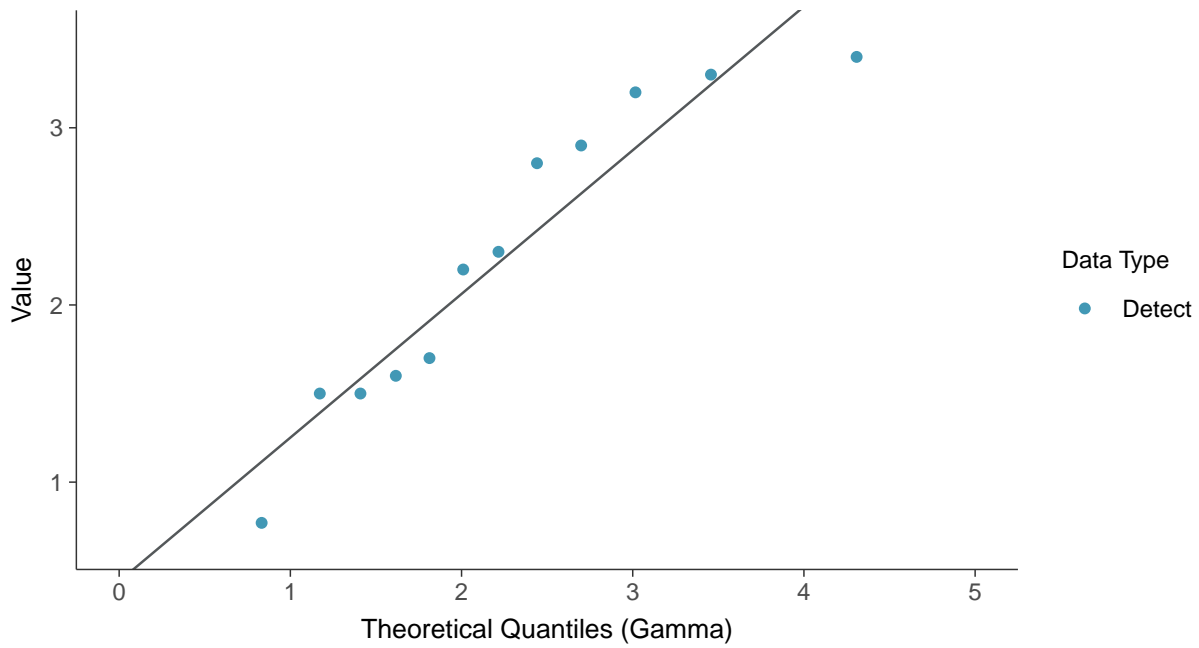
Lithium, MW-01R (mg/L)





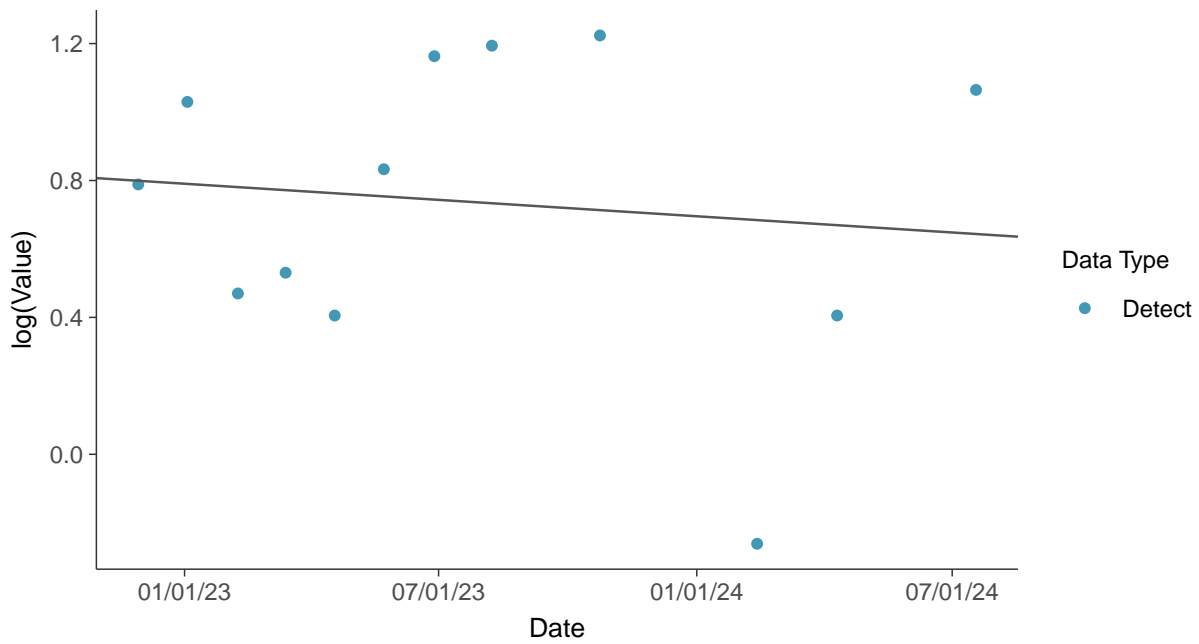
### Gamma Q-Q plot

Lithium, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

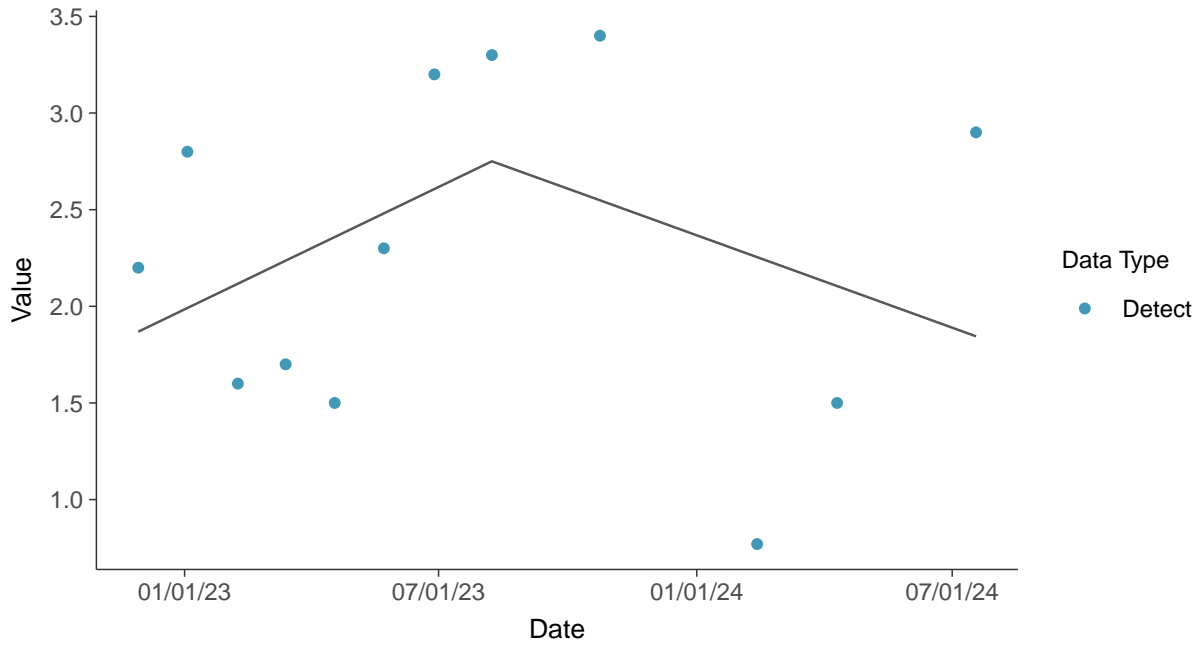
Lithium, MW-01R (mg/L)





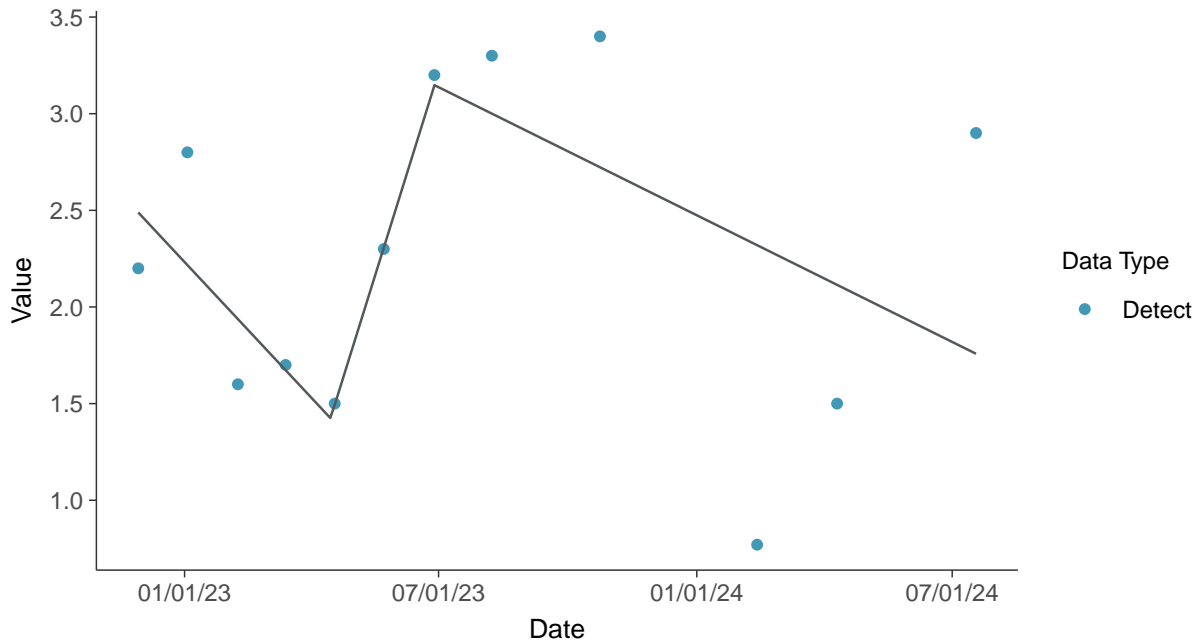
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

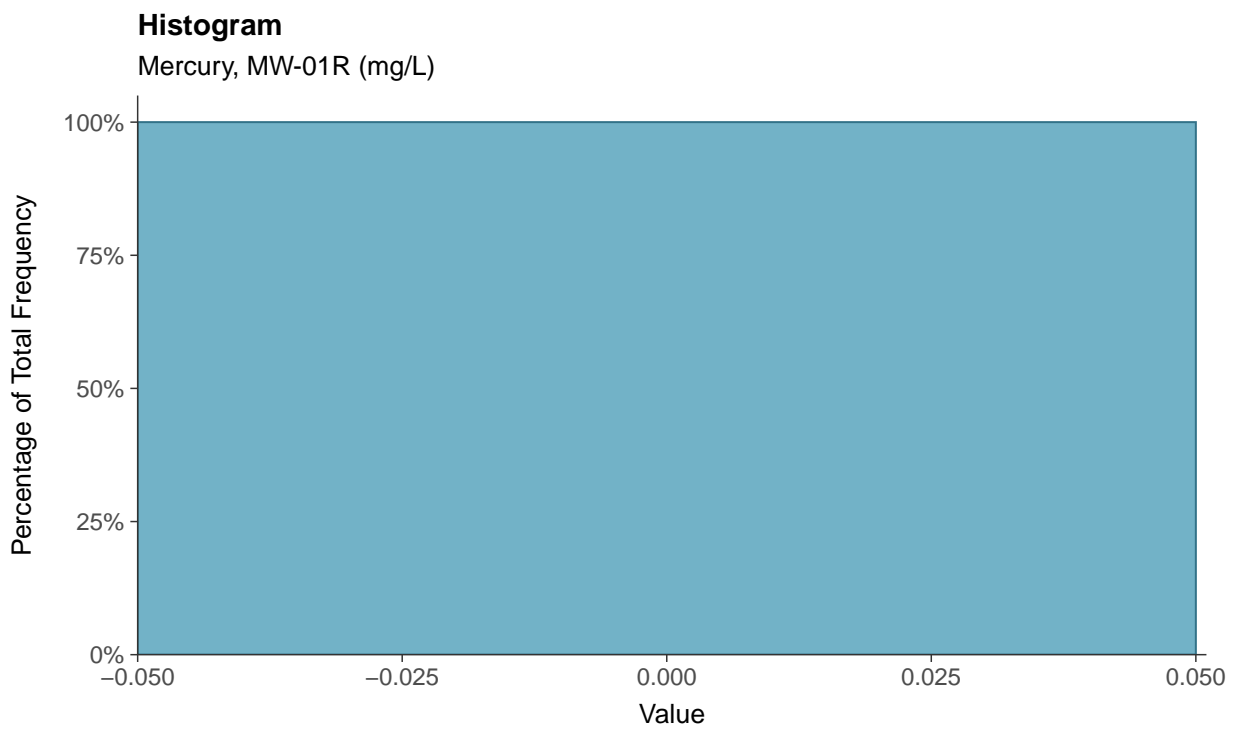
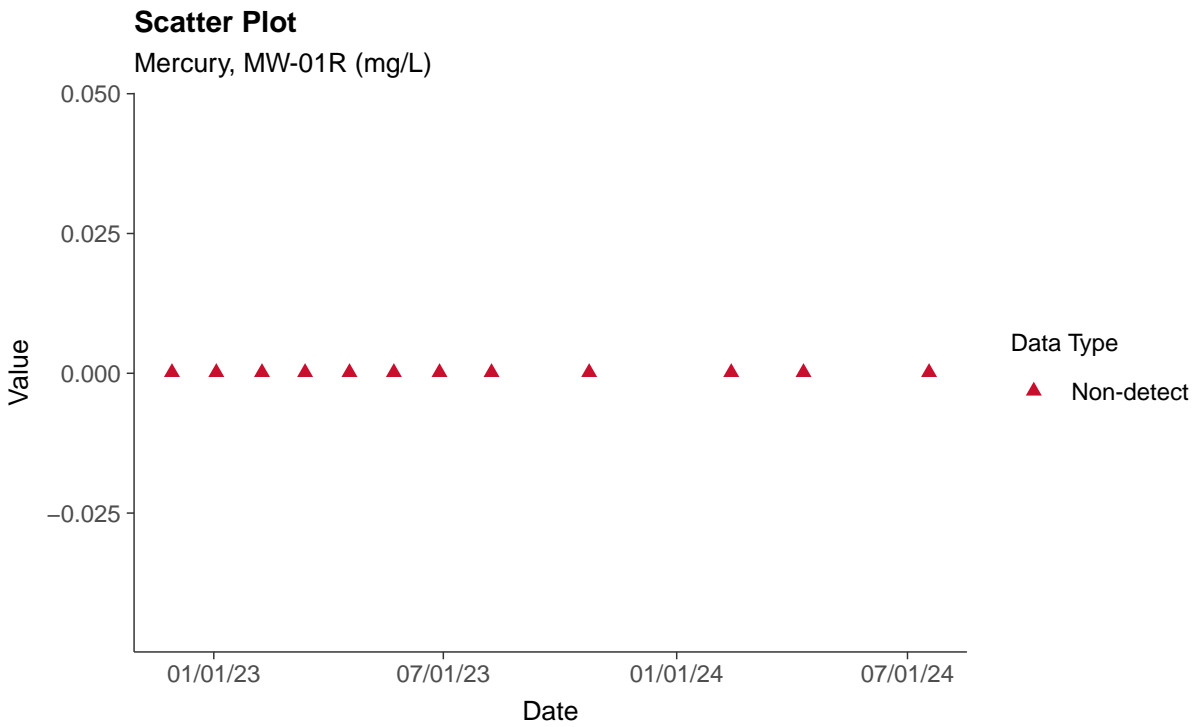
Lithium, MW-01R (mg/L)





### Appendix IV: Mercury, MW-01R

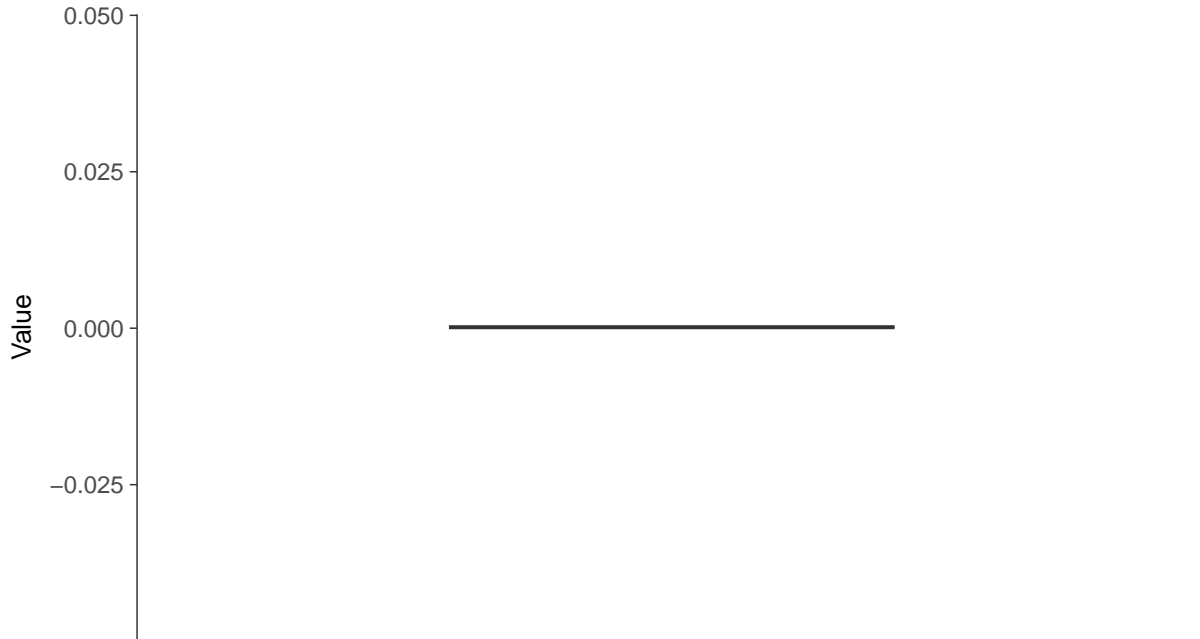
ID: 11\_2\_5\_117





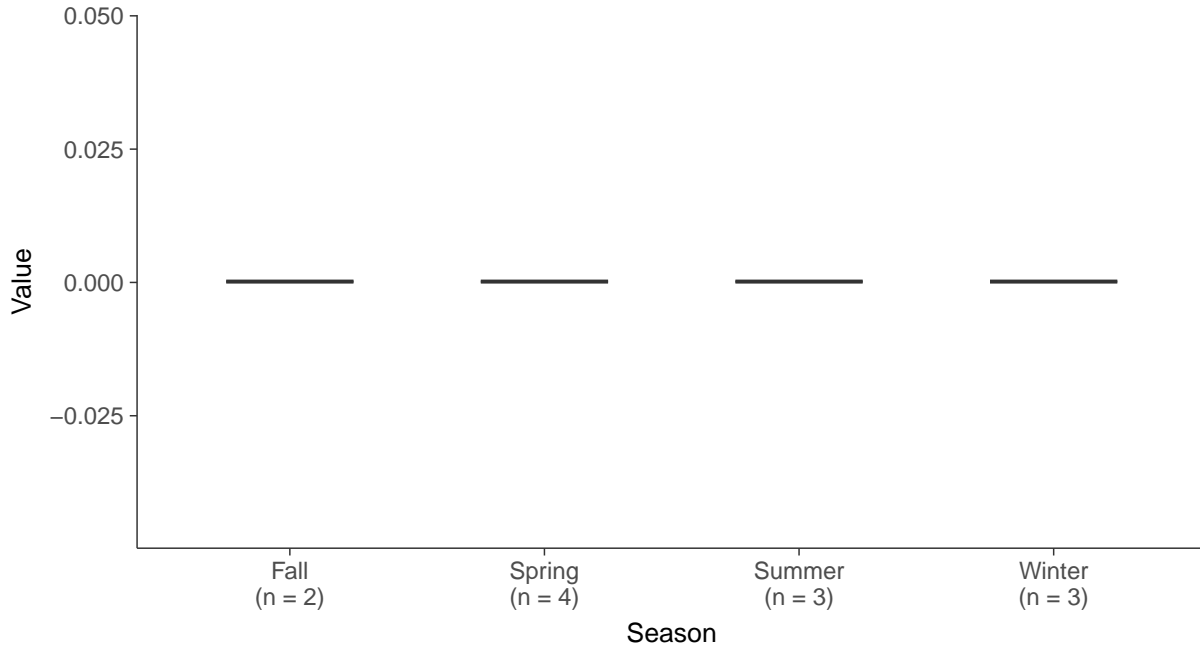
### Boxplot

Mercury, MW-01R (mg/L)



### Boxplot by Season

Mercury, MW-01R (mg/L)



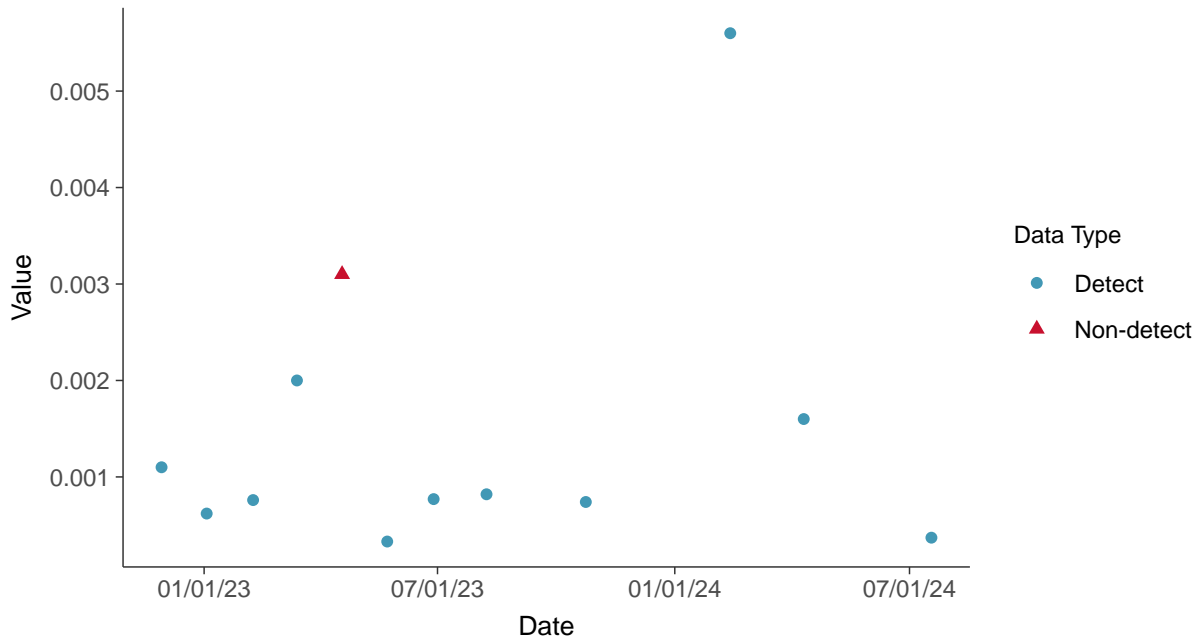


## Appendix IV: Molybdenum, MW-01R

ID: 11\_2\_5\_118

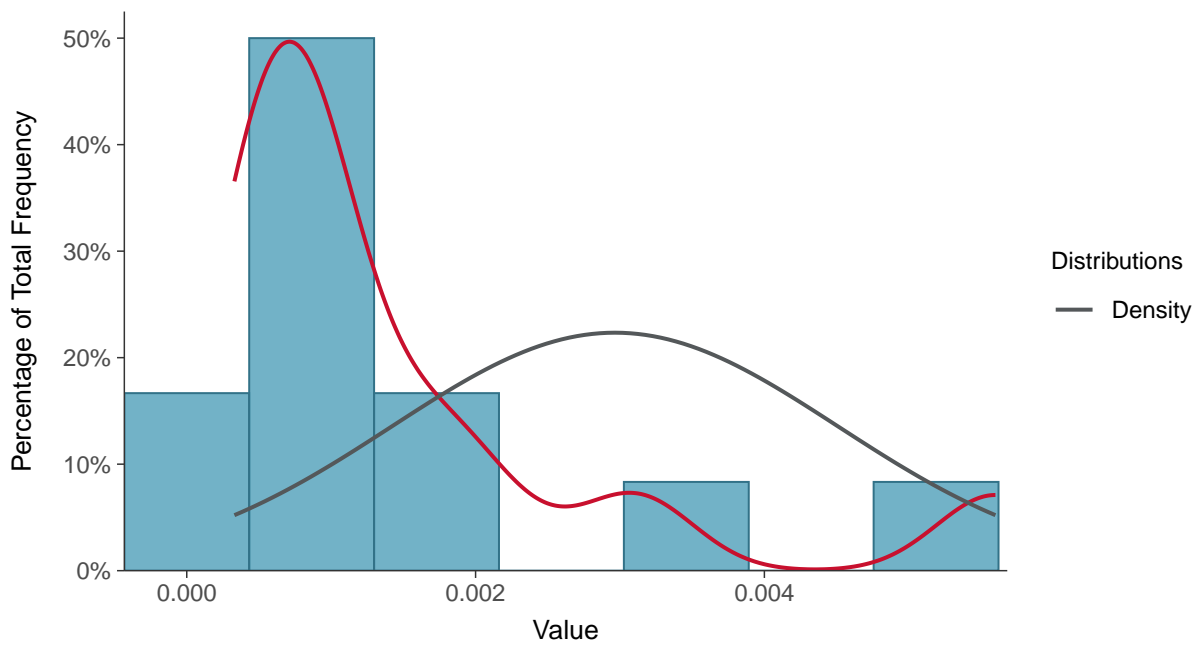
### Scatter Plot

Molybdenum, MW-01R (mg/L)



### Histogram

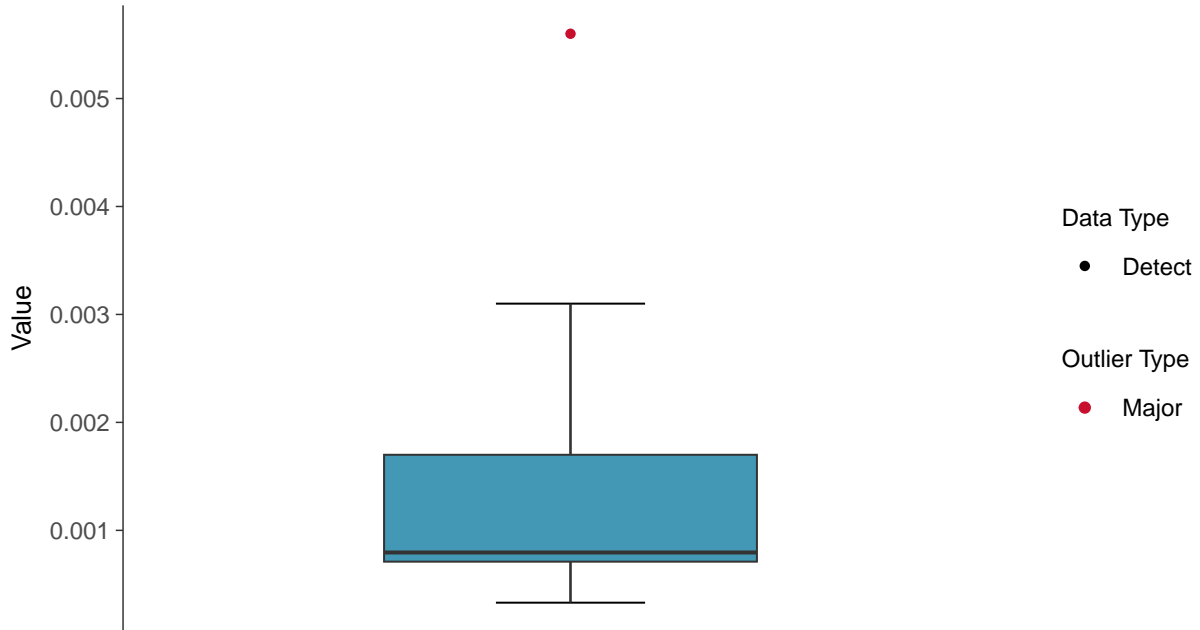
Molybdenum, MW-01R (mg/L)





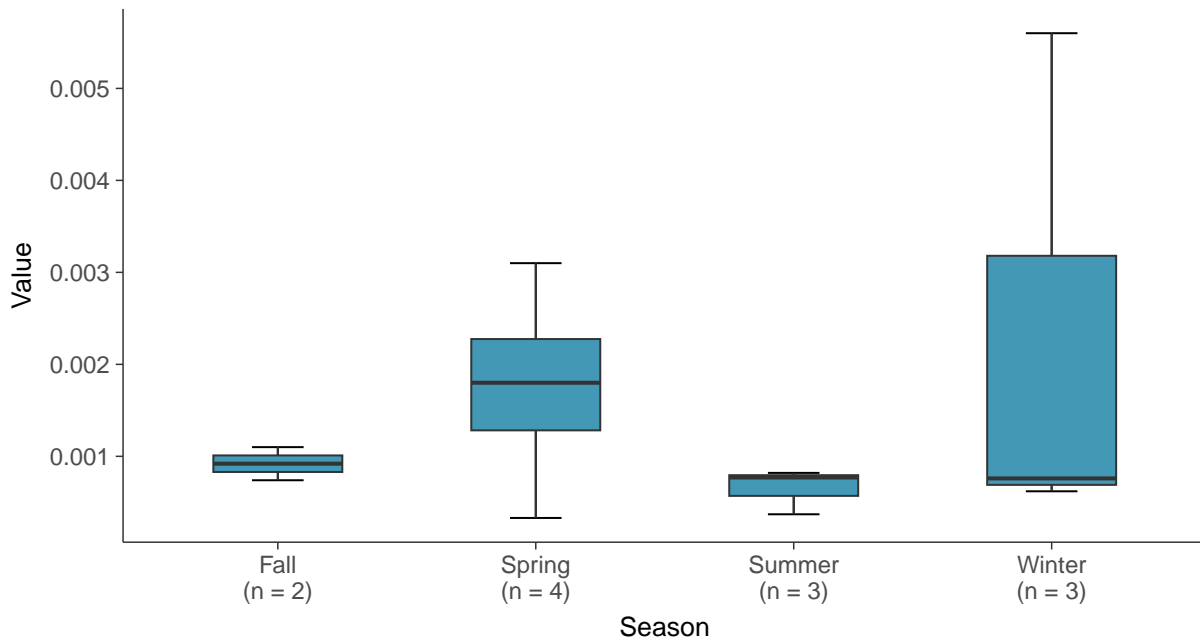
### Boxplot

Molybdenum, MW-01R (mg/L)



### Boxplot by Season

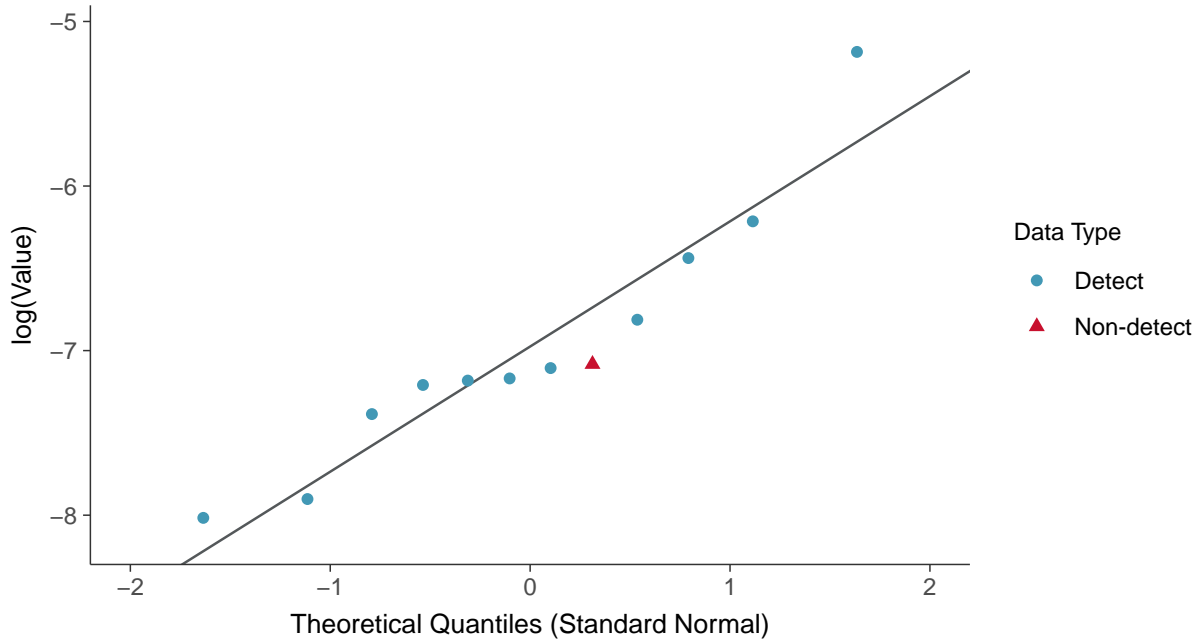
Molybdenum, MW-01R (mg/L)





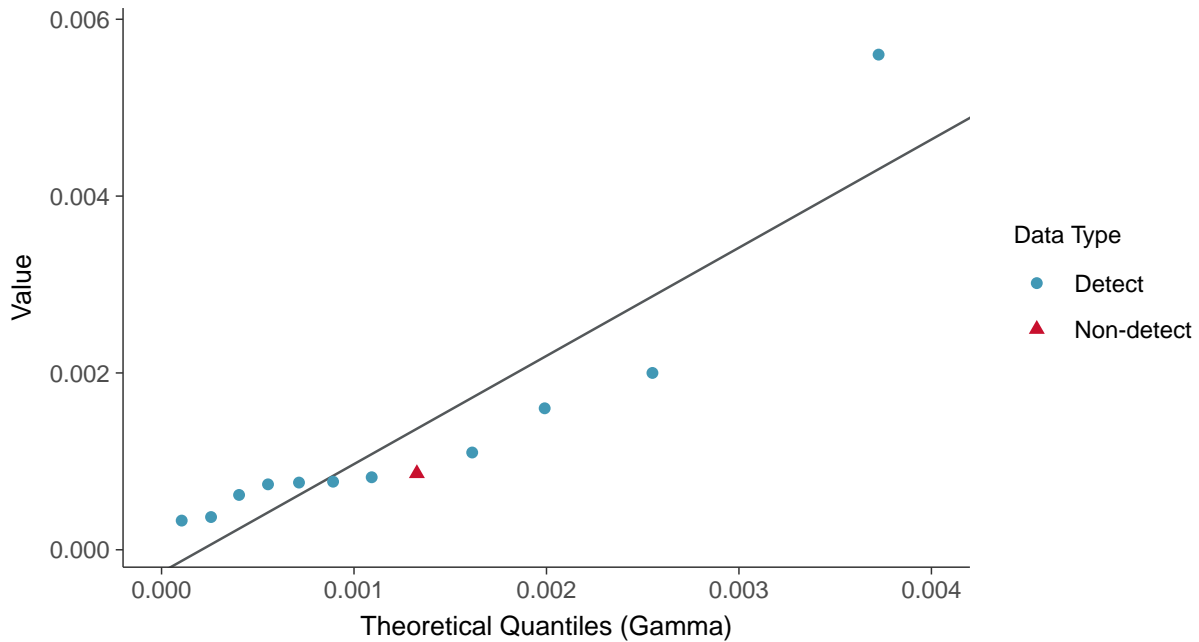
### Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-01R (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-01R (mg/L)

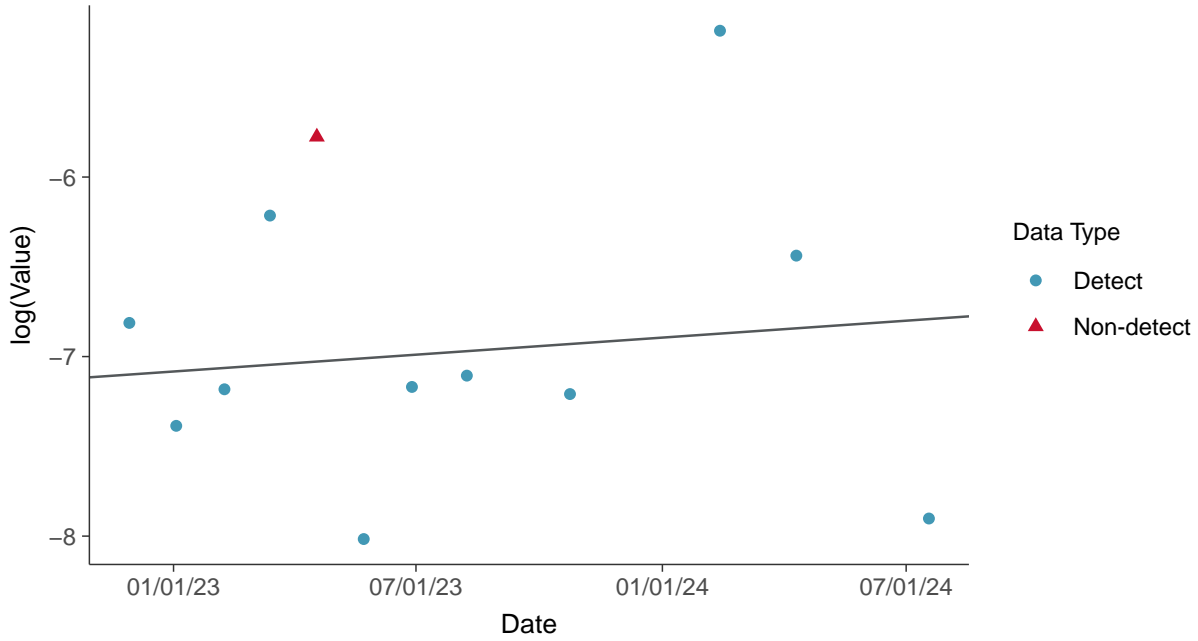






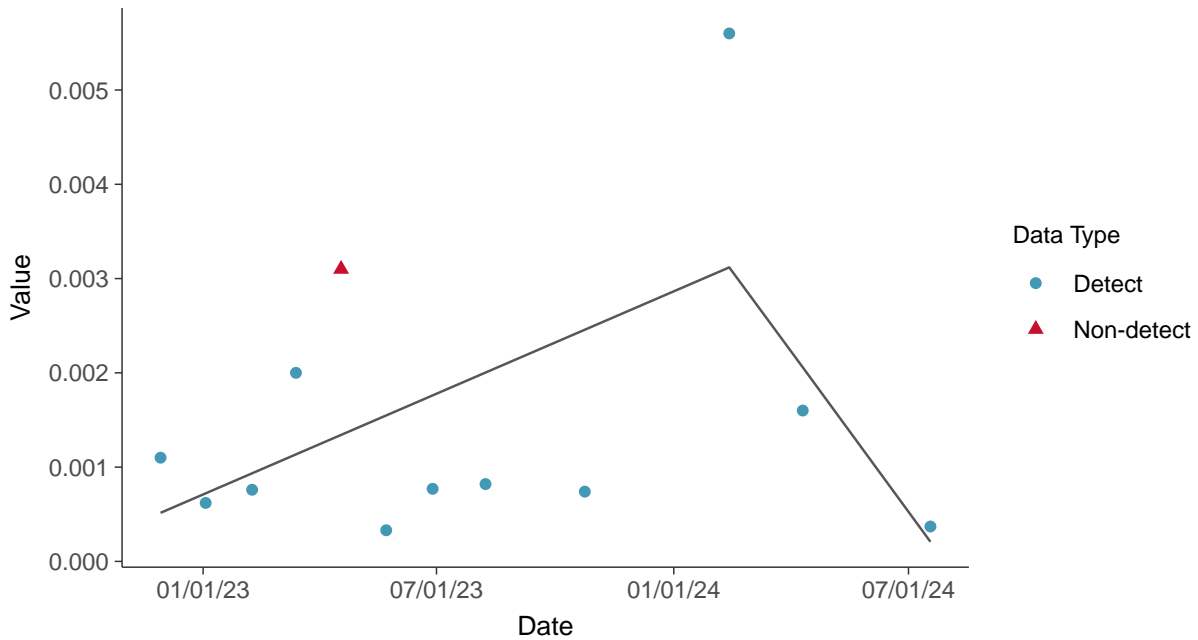
### Trend Regression: Lognormal MLE

Molybdenum, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-01R (mg/L)



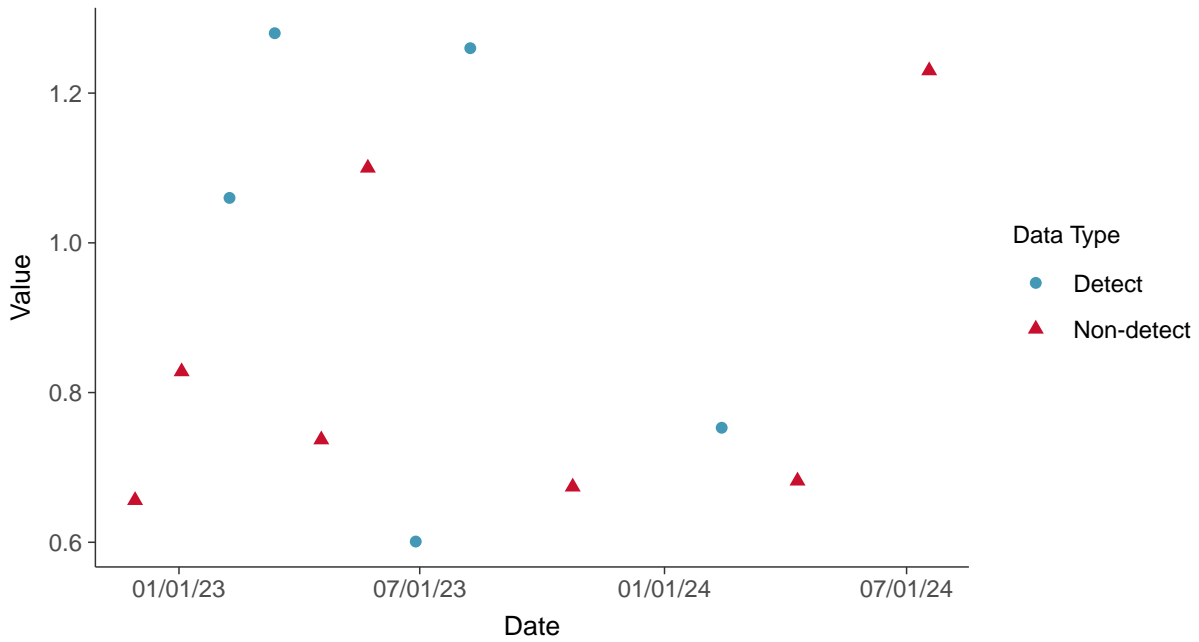


## Appendix IV: Radium 226 and 228, MW-01R

ID: 11\_2\_5\_121

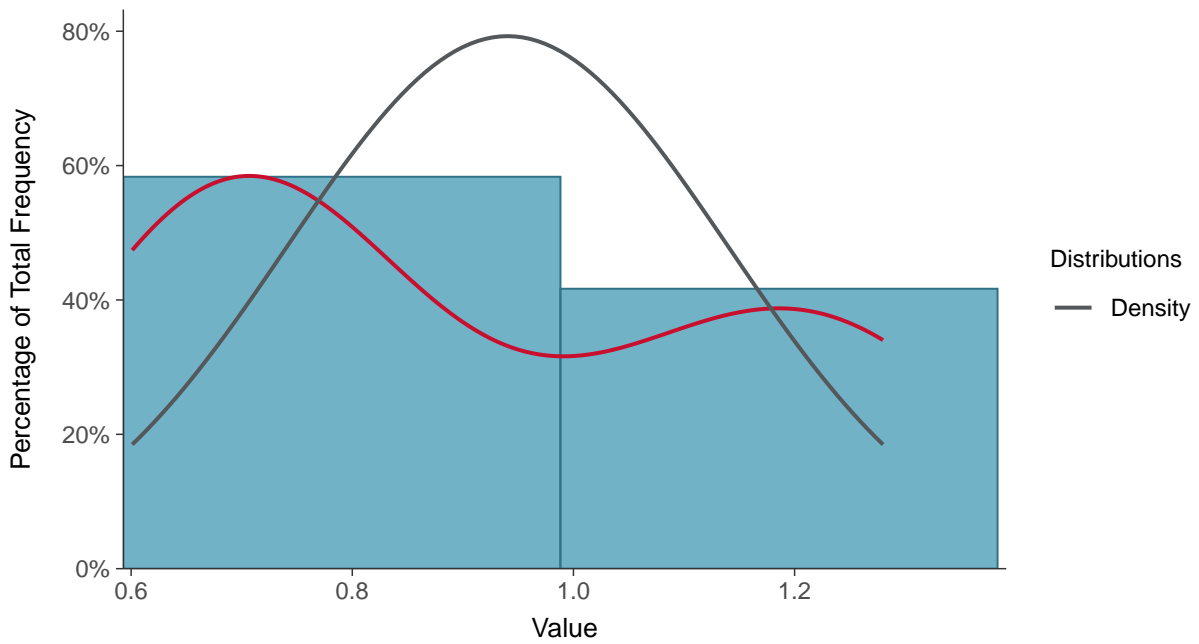
### Scatter Plot

Radium 226 and 228, MW-01R (pCi/L)



### Histogram

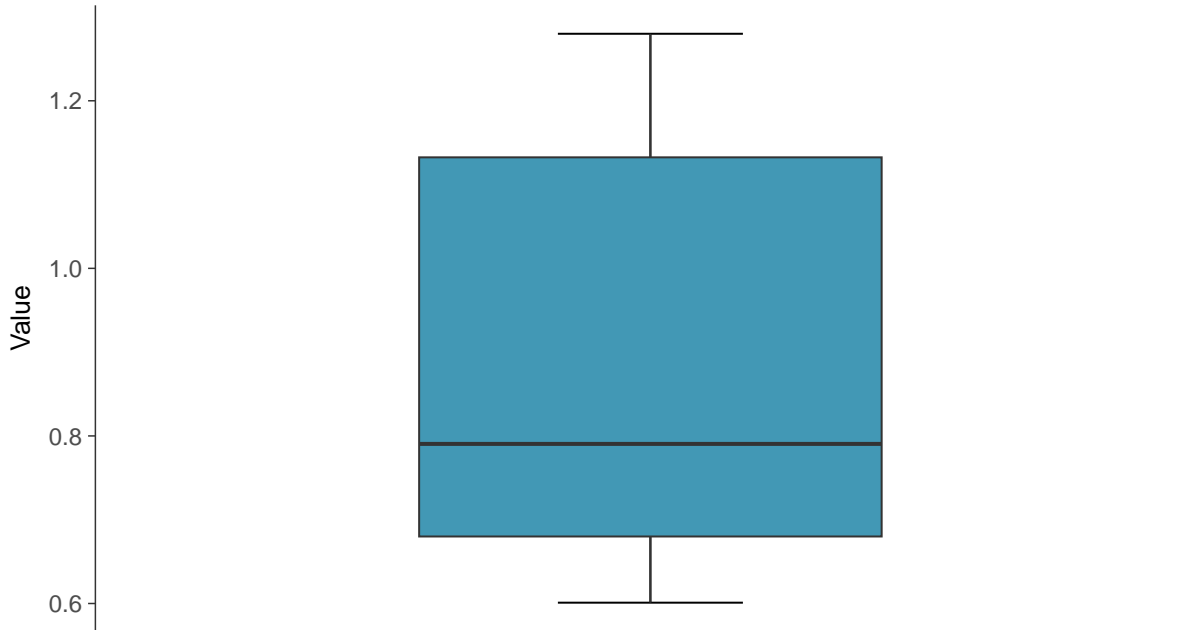
Radium 226 and 228, MW-01R (pCi/L)





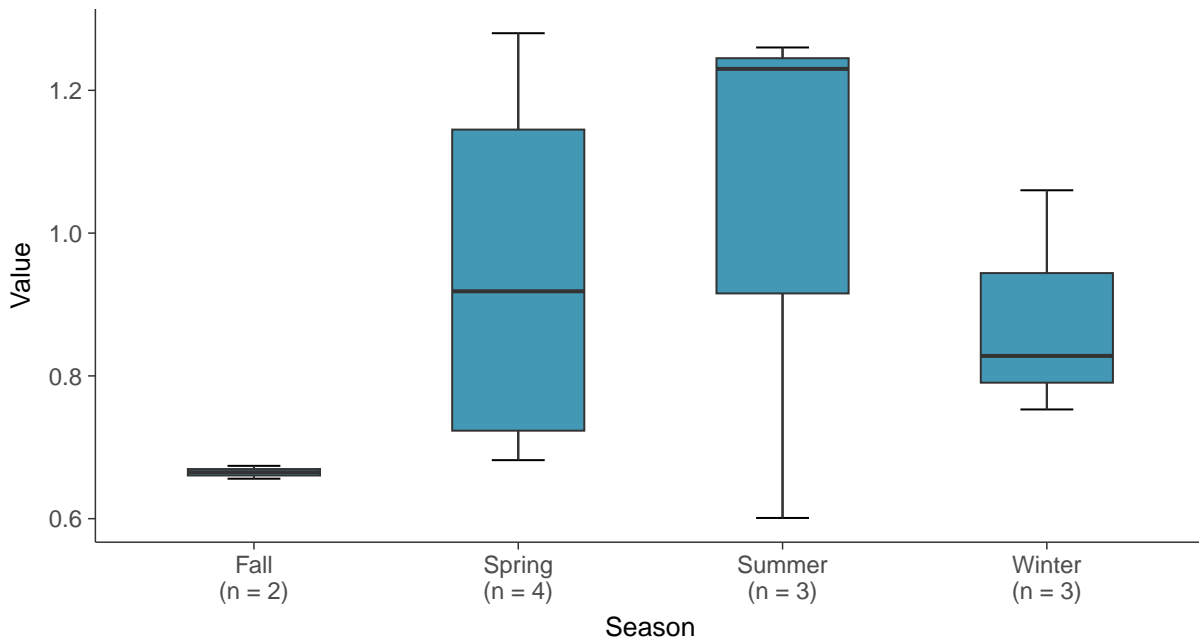
### Boxplot

Radium 226 and 228, MW-01R (pCi/L)



### Boxplot by Season

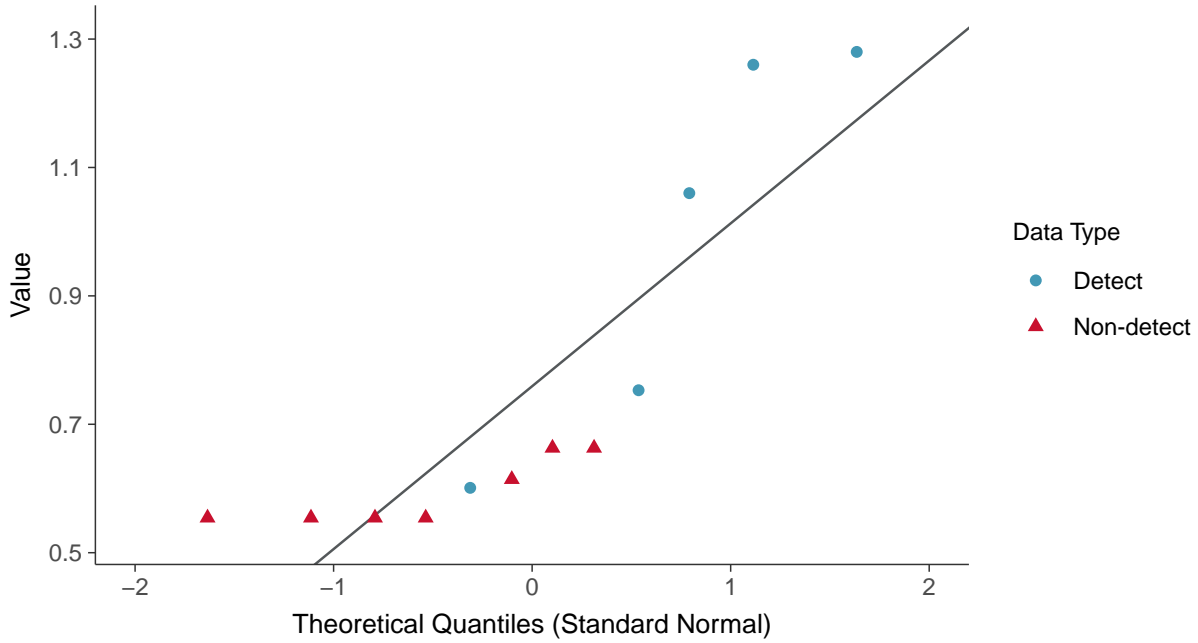
Radium 226 and 228, MW-01R (pCi/L)





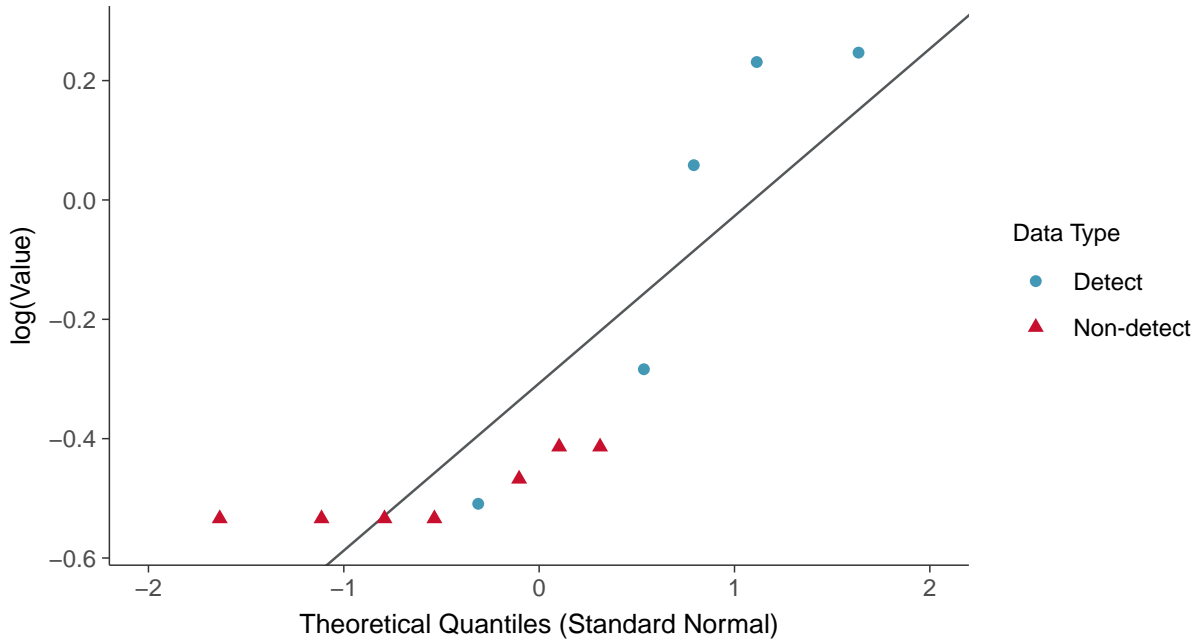
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-01R (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

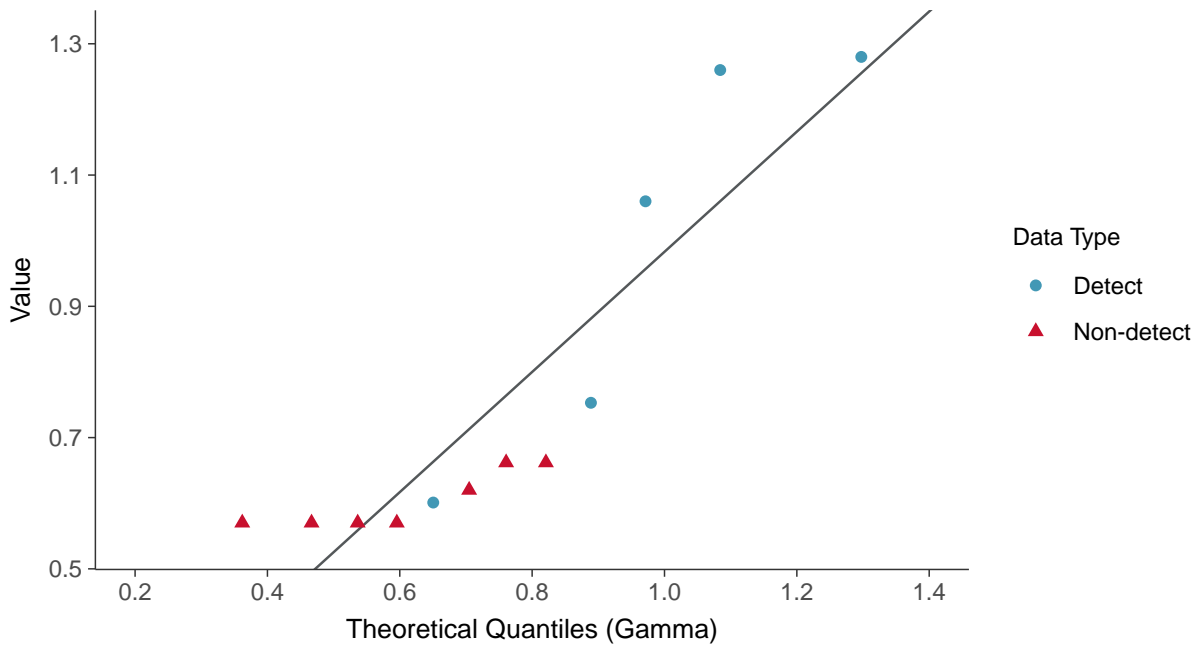
Radium 226 and 228, MW-01R (pCi/L)





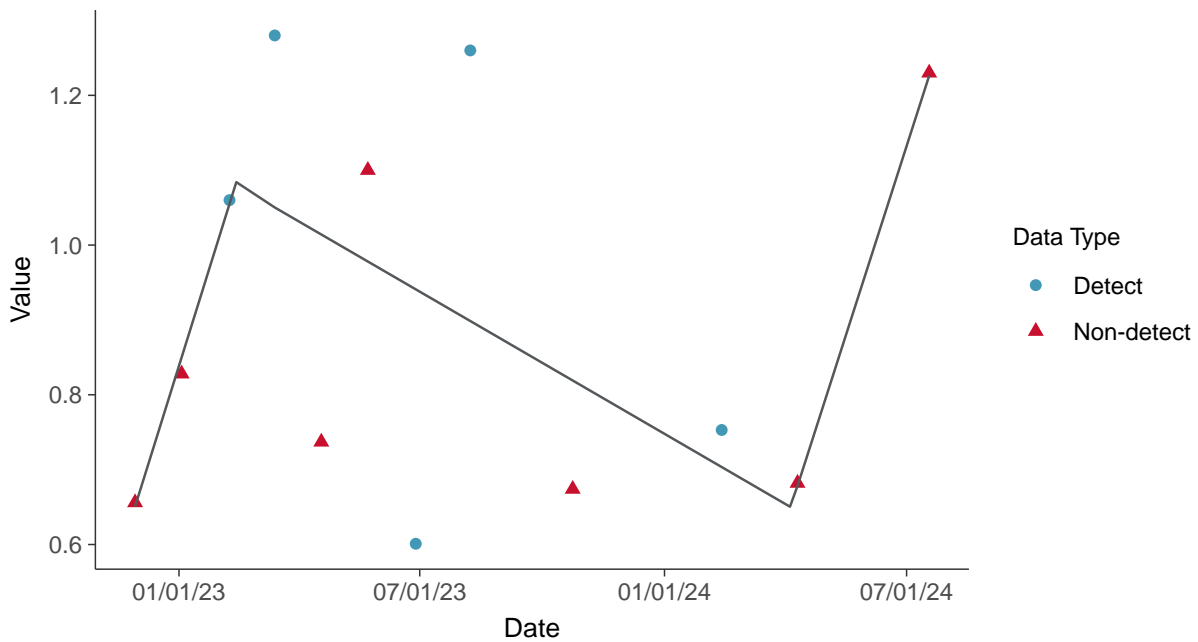
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-01R (pCi/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-01R (pCi/L)



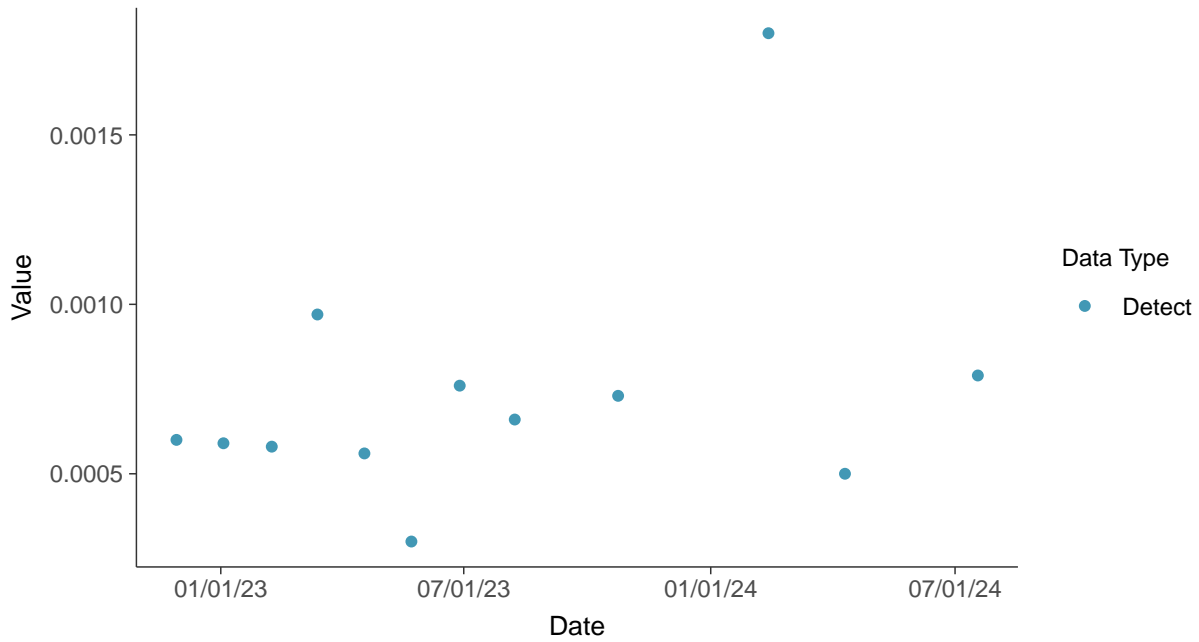


### Appendix IV: Selenium, MW-01R

ID: 11\_2\_5\_122

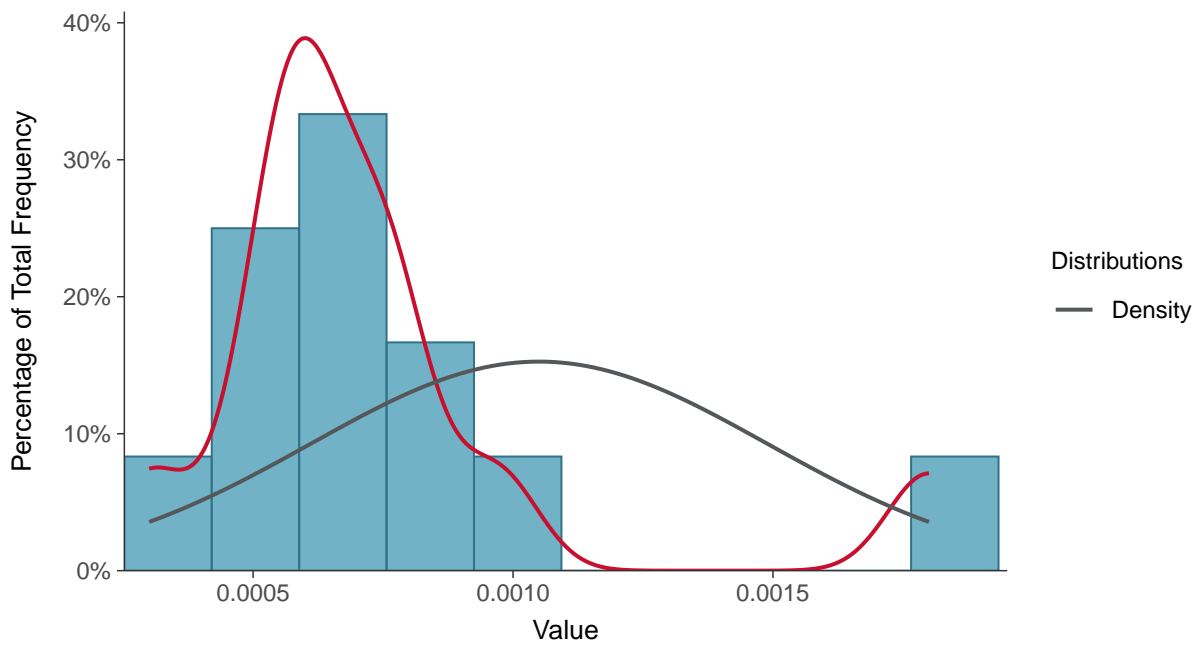
#### Scatter Plot

Selenium, MW-01R (mg/L)



#### Histogram

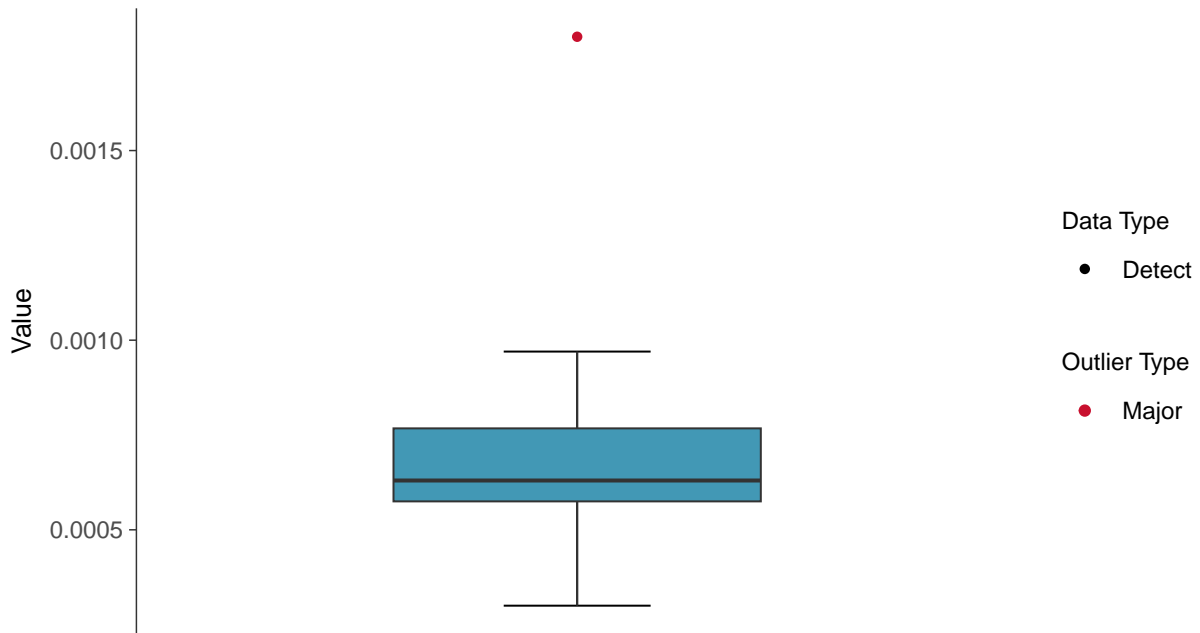
Selenium, MW-01R (mg/L)





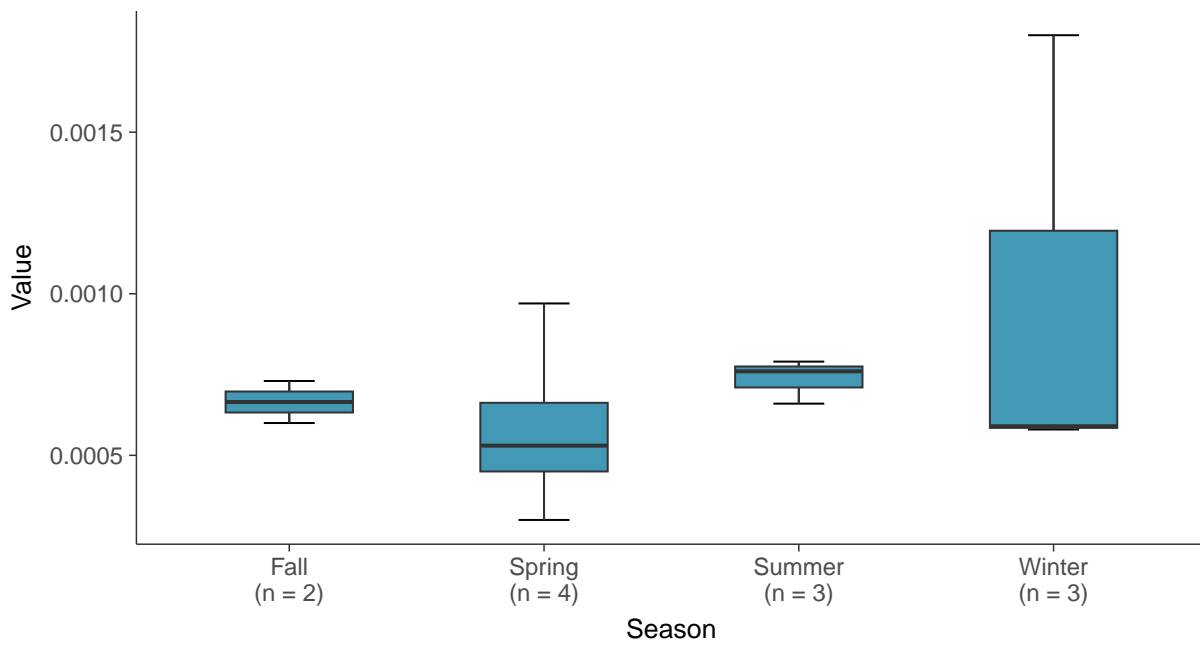
### Boxplot

Selenium, MW-01R (mg/L)



### Boxplot by Season

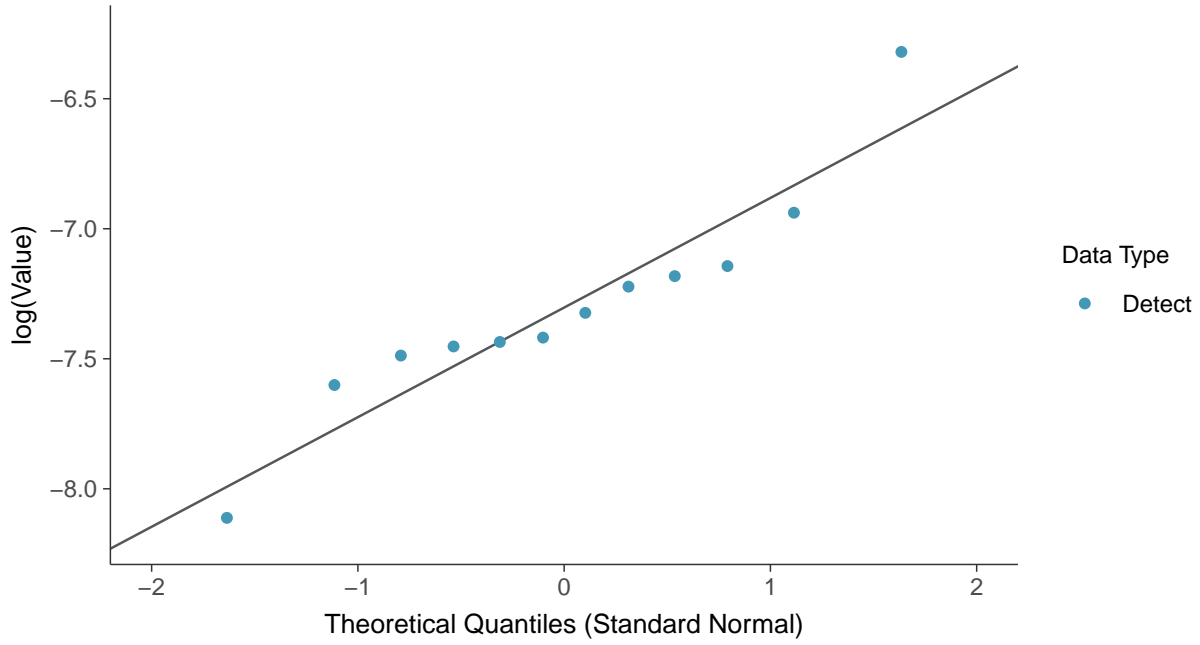
Selenium, MW-01R (mg/L)





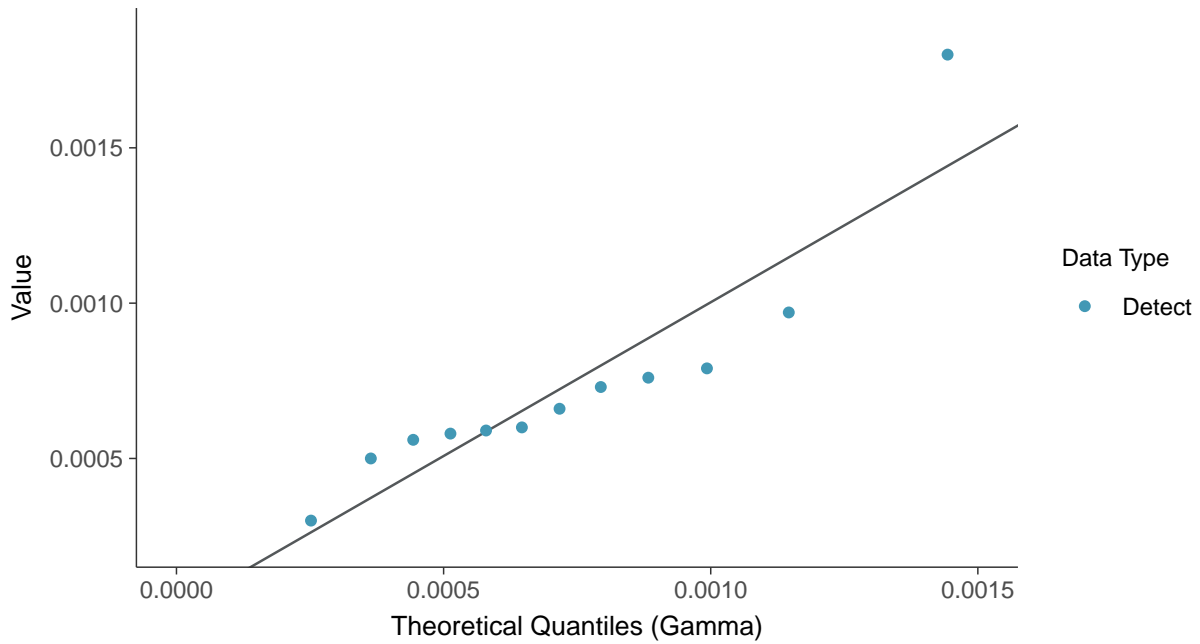
### Lognormal Q-Q plot

Selenium, MW-01R (mg/L)



### Gamma Q-Q plot

Selenium, MW-01R (mg/L)

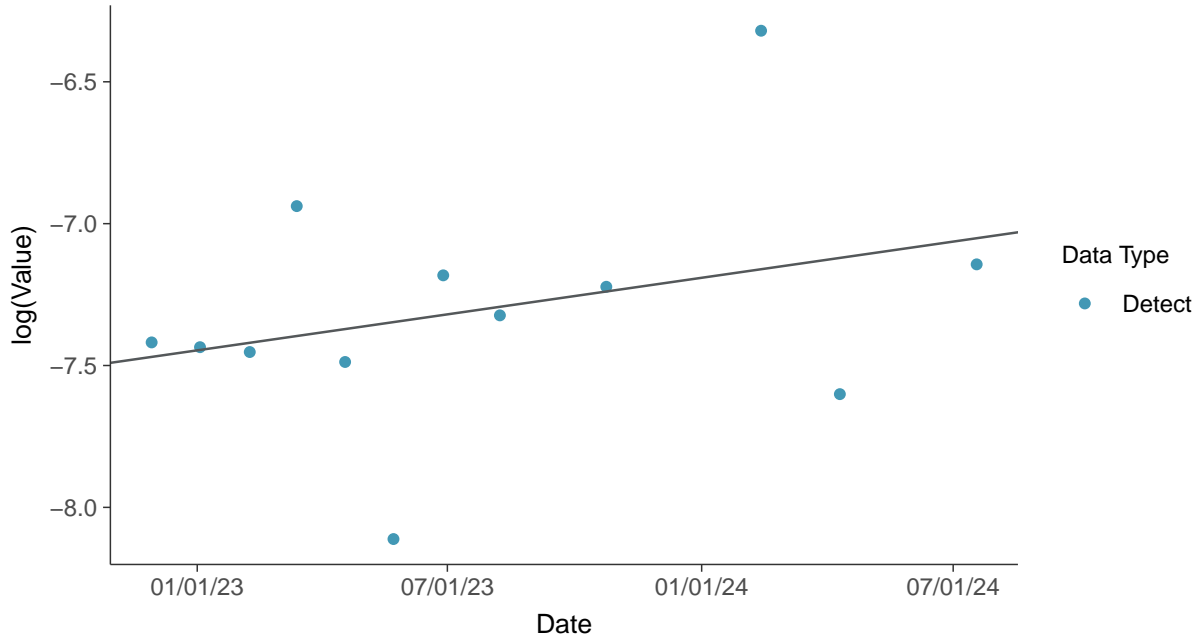






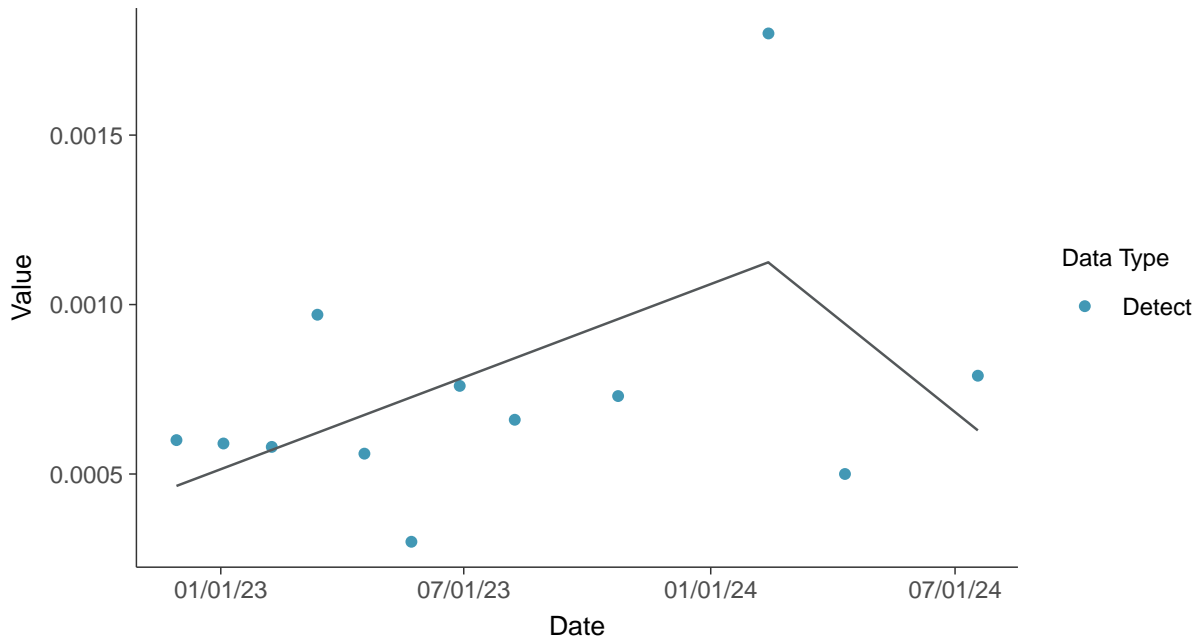
### Trend Regression: Lognormal MLE

Selenium, MW-01R (mg/L)



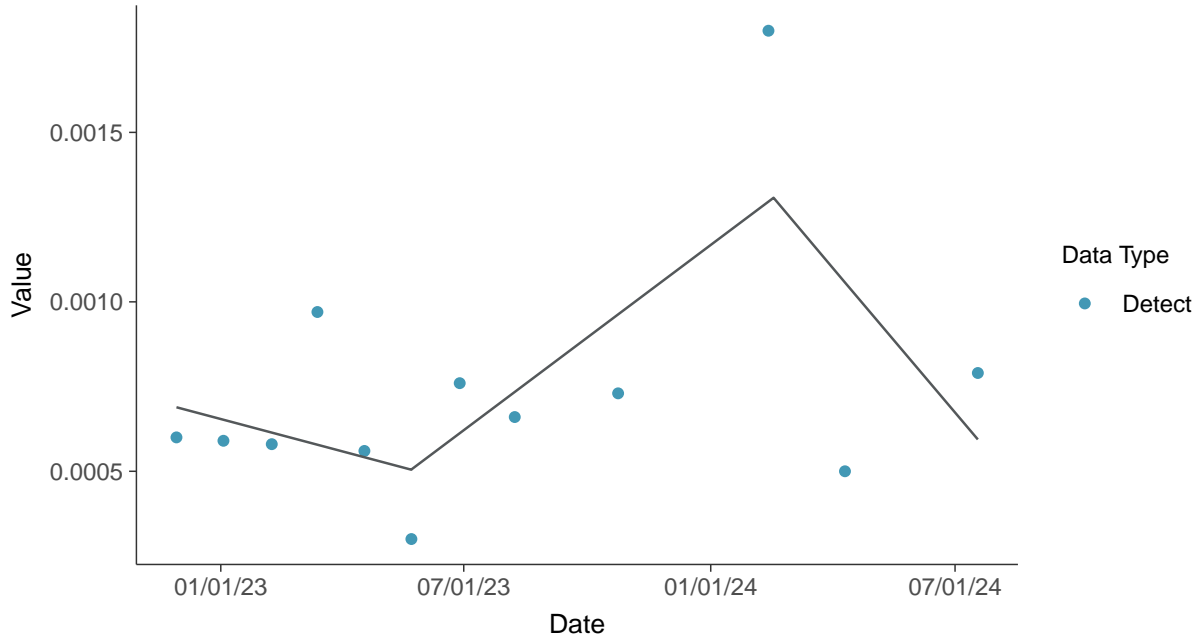
### Trend Regression: Piecewise Linear-Linear

Selenium, MW-01R (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-01R (mg/L)



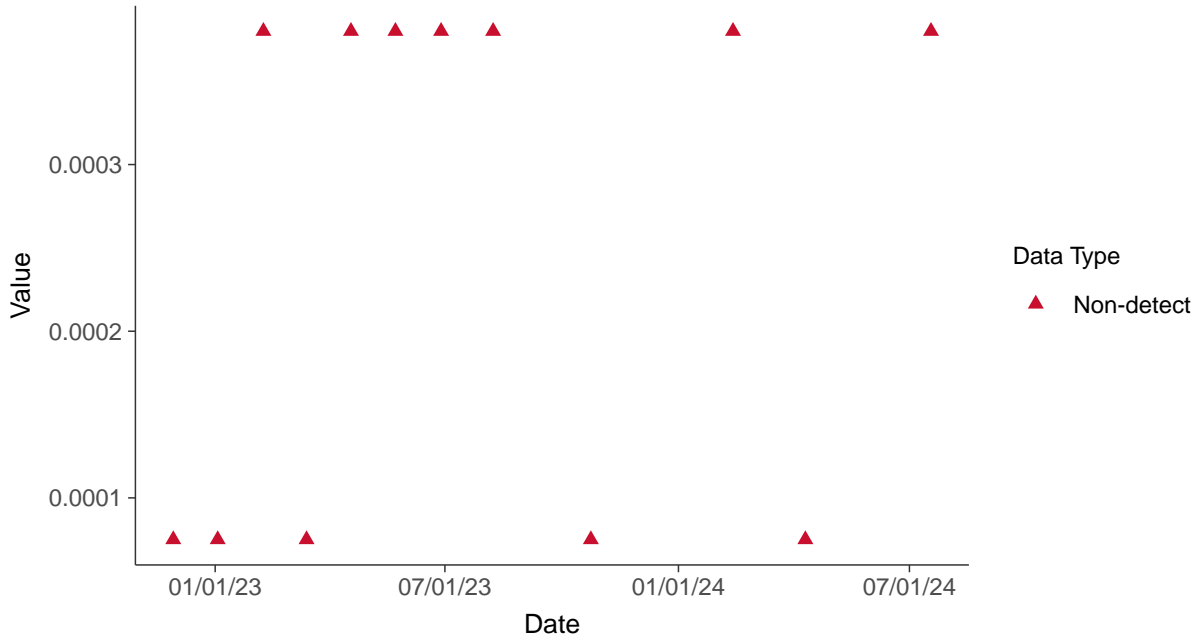


### Appendix IV: Thallium, MW-01R

ID: 11\_2\_5\_125

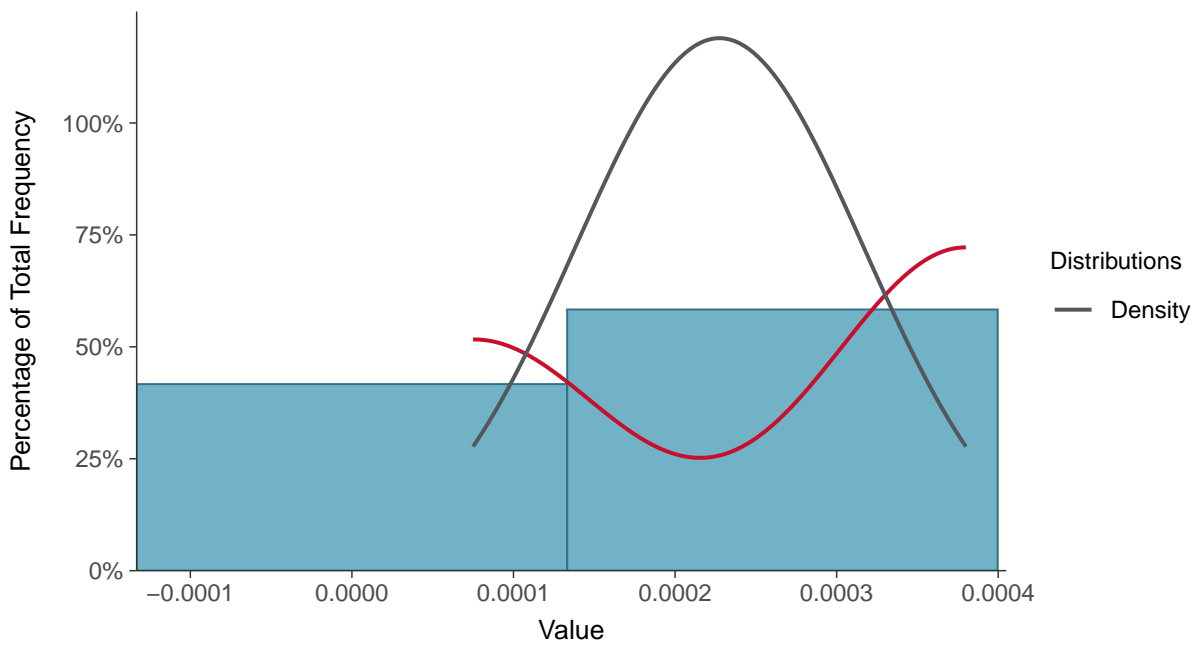
#### Scatter Plot

Thallium, MW-01R (mg/L)



#### Histogram

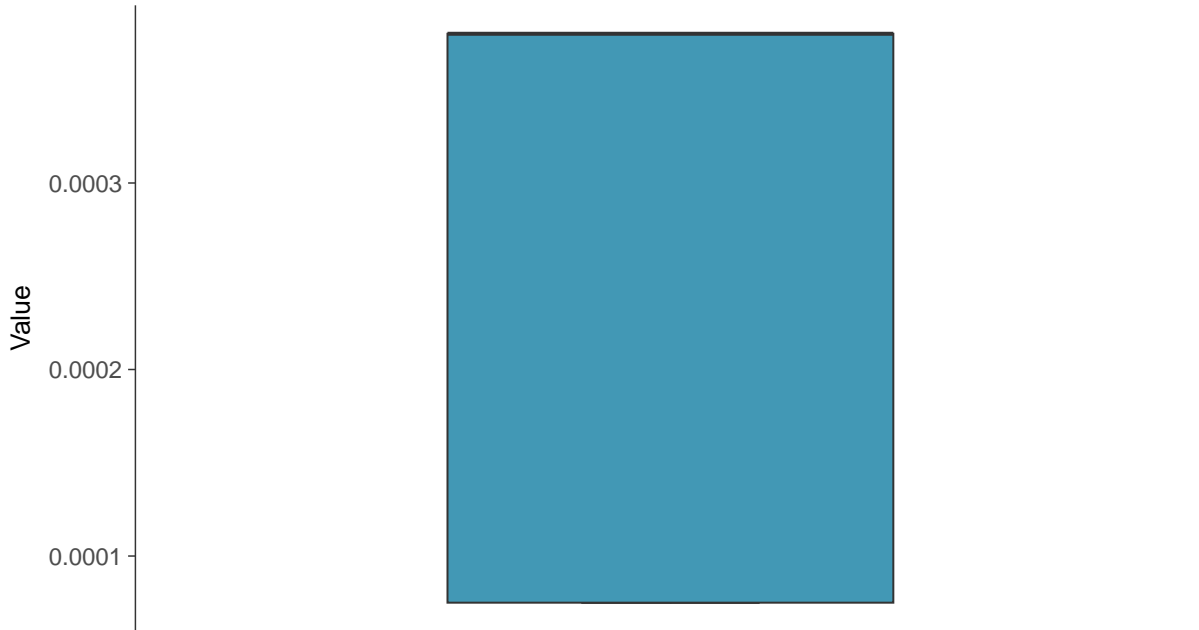
Thallium, MW-01R (mg/L)





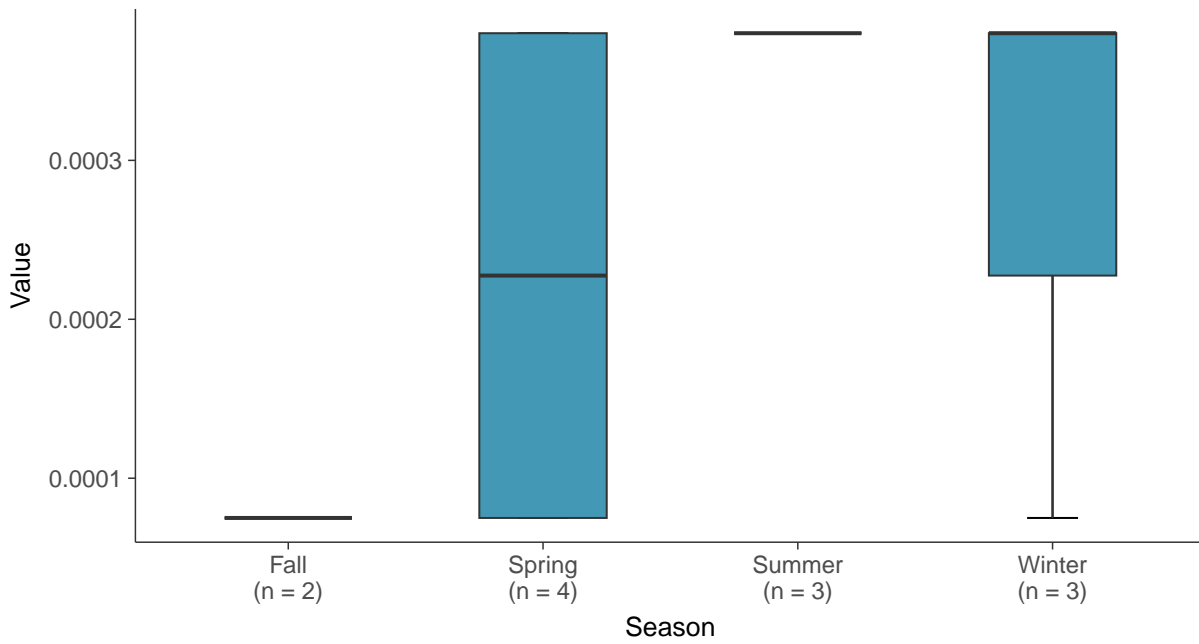
### Boxplot

Thallium, MW-01R (mg/L)



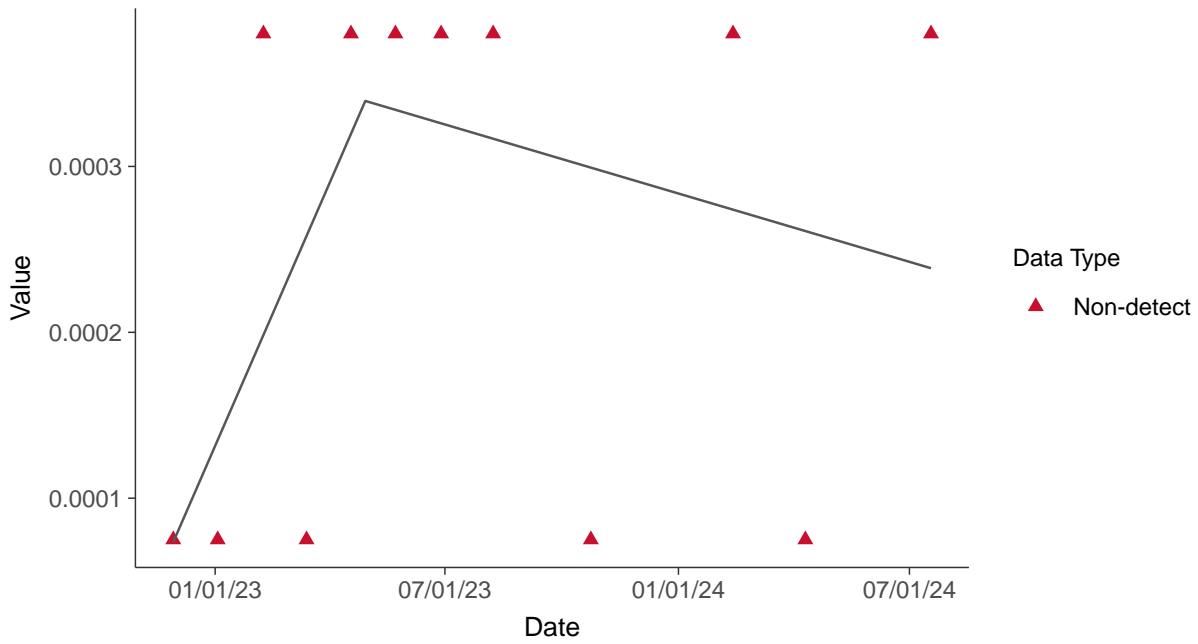
### Boxplot by Season

Thallium, MW-01R (mg/L)

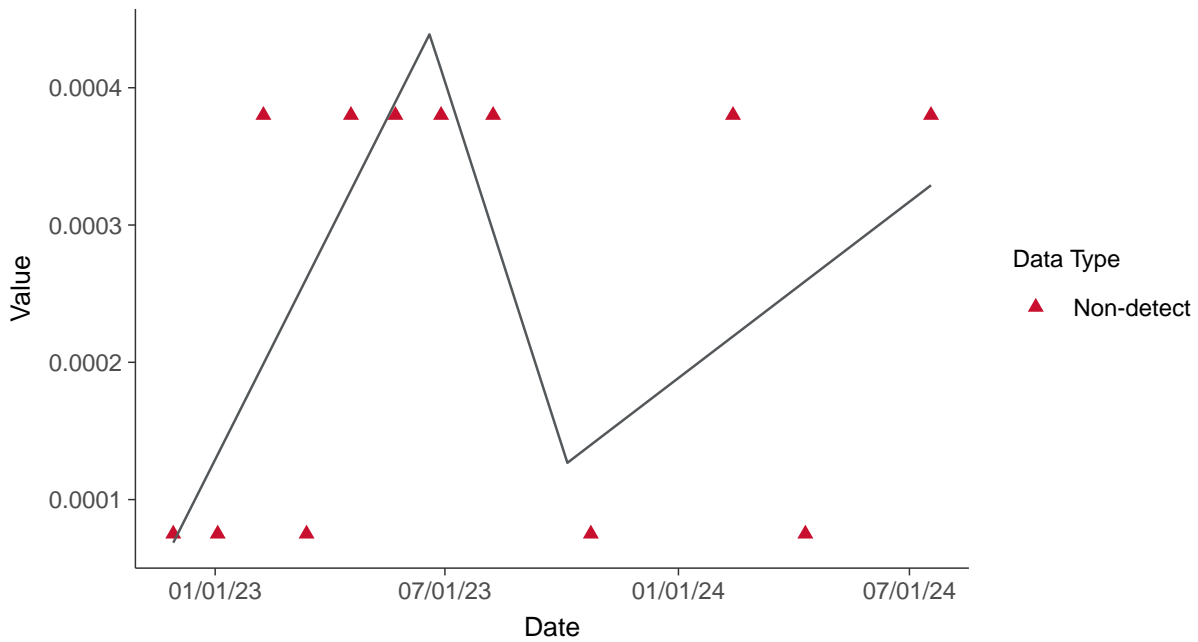




**Trend Regression: Piecewise Linear-Linear**  
Thallium, MW-01R (mg/L)



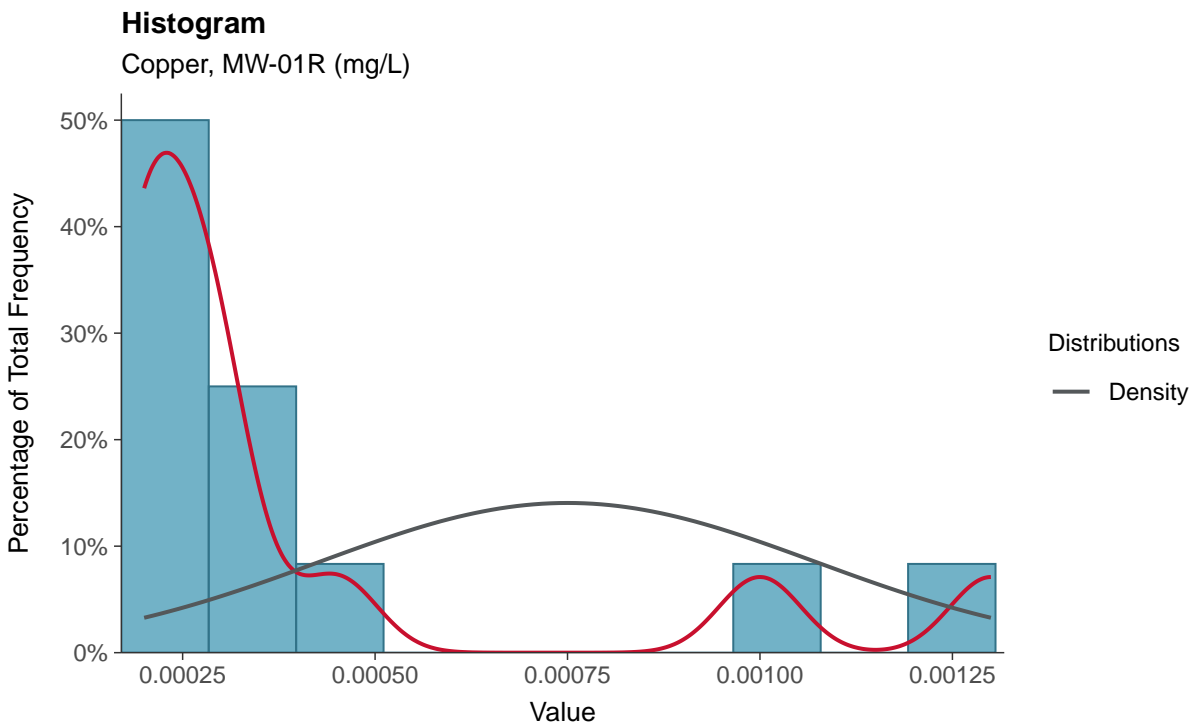
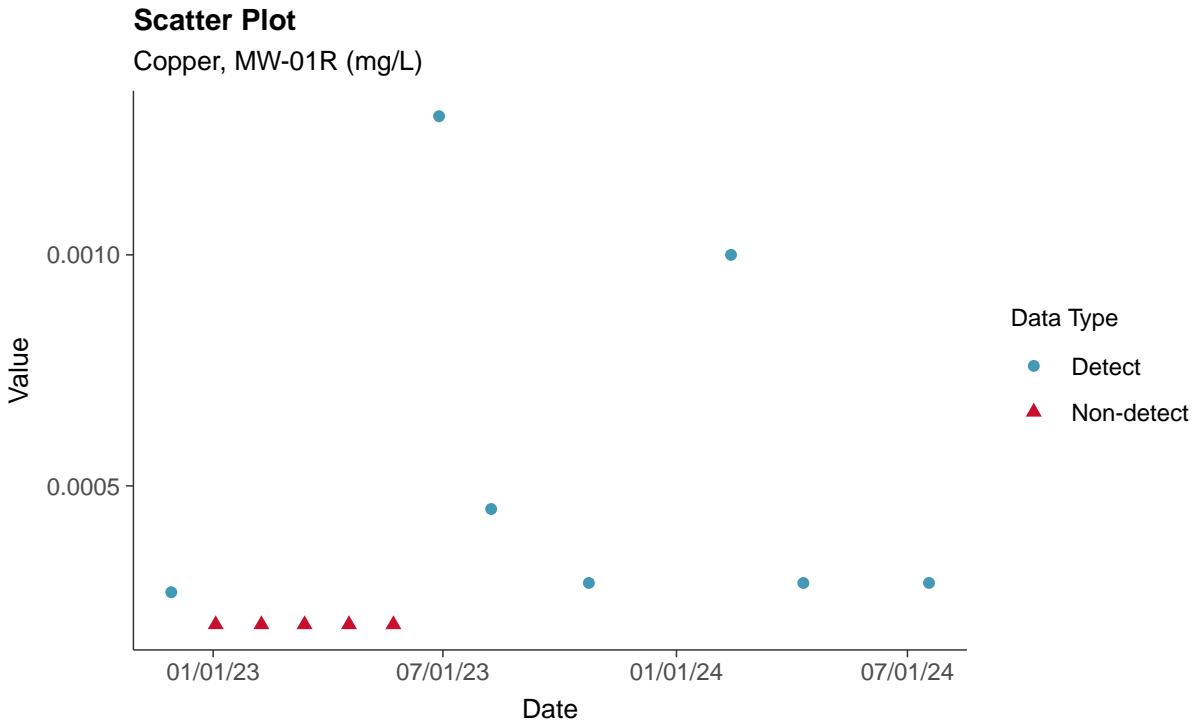
**Trend Regression: Piecewise Linear-Linear-Linear**  
Thallium, MW-01R (mg/L)





### Part 115: Copper, MW-01R

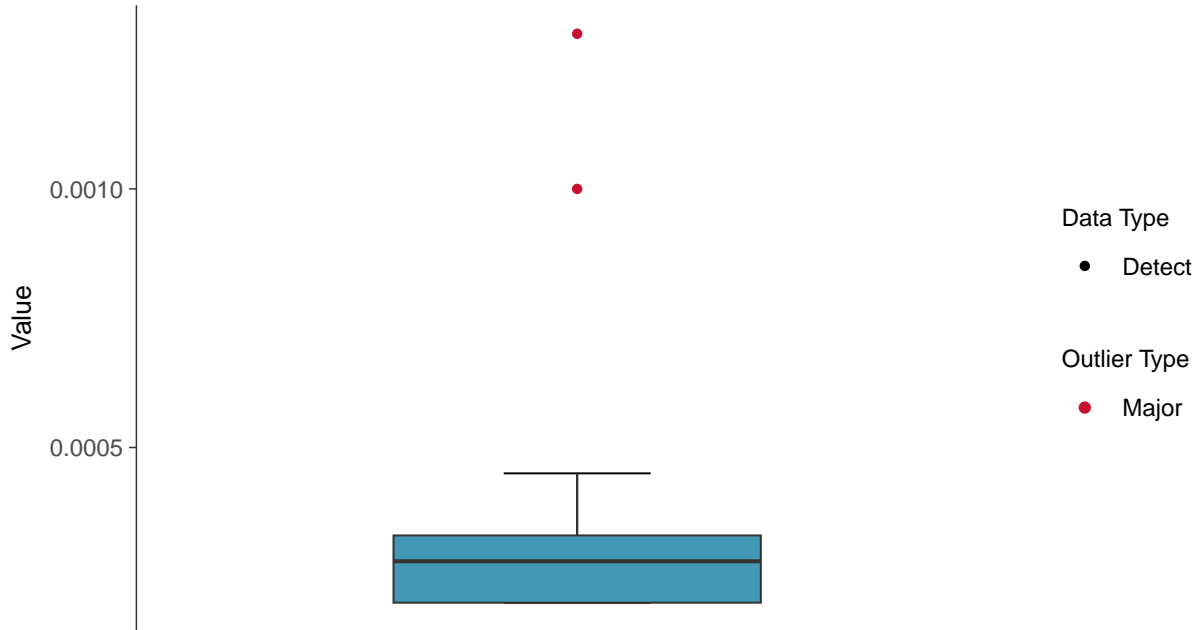
ID: 11\_2\_6\_111





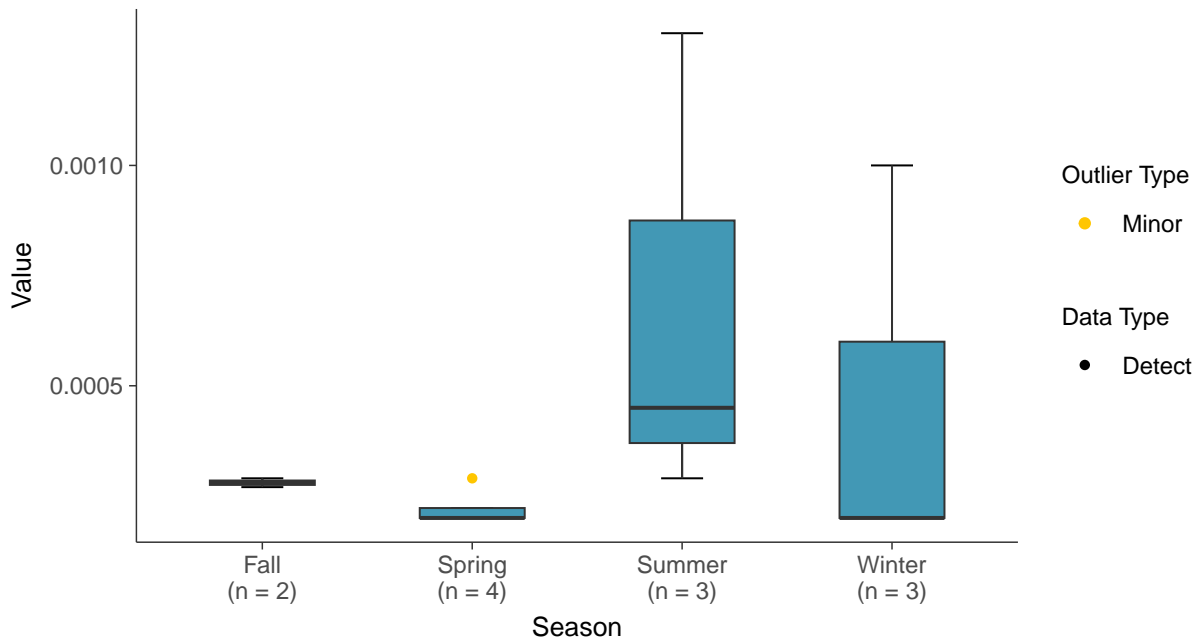
### Boxplot

Copper, MW-01R (mg/L)



### Boxplot by Season

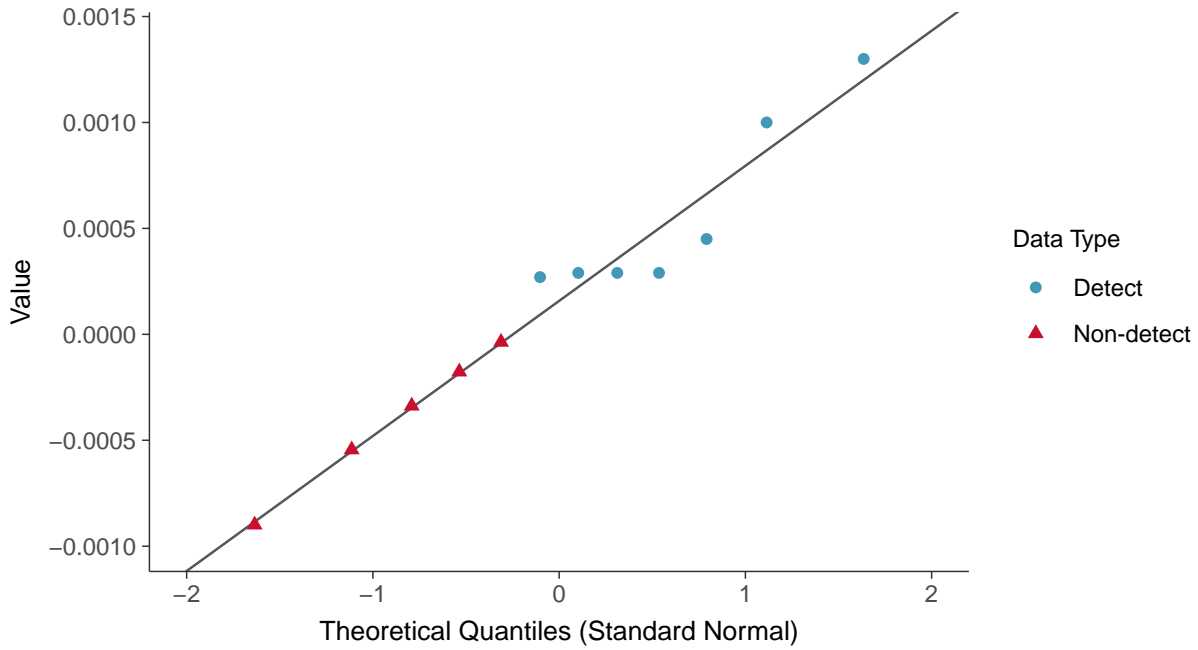
Copper, MW-01R (mg/L)





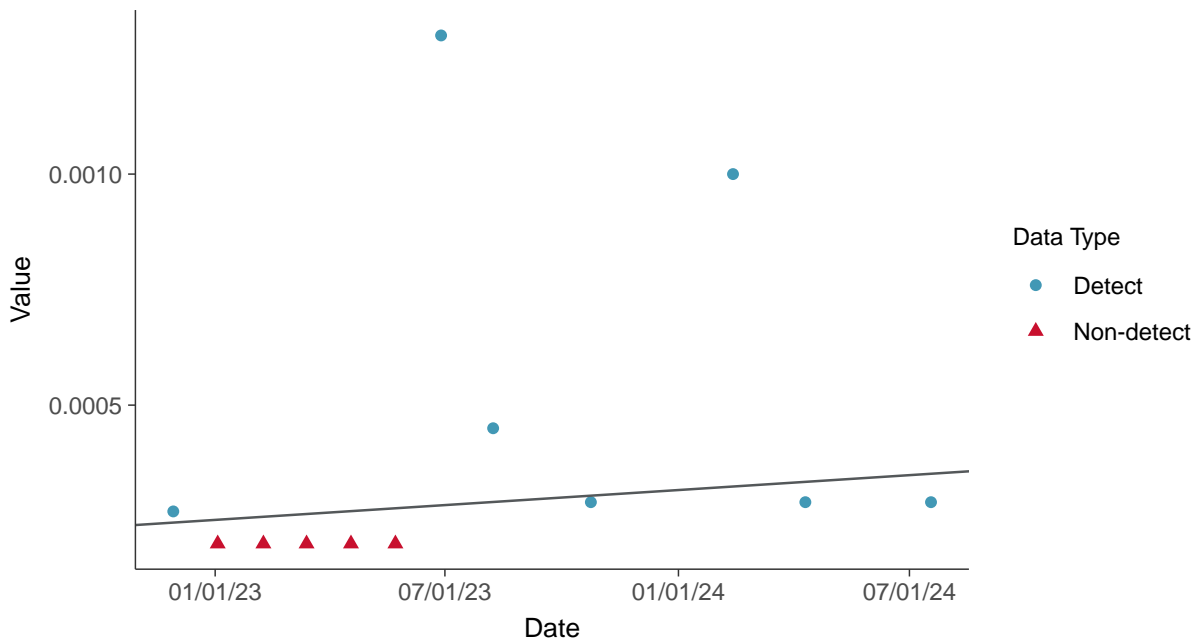
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-01R (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Copper, MW-01R (mg/L)

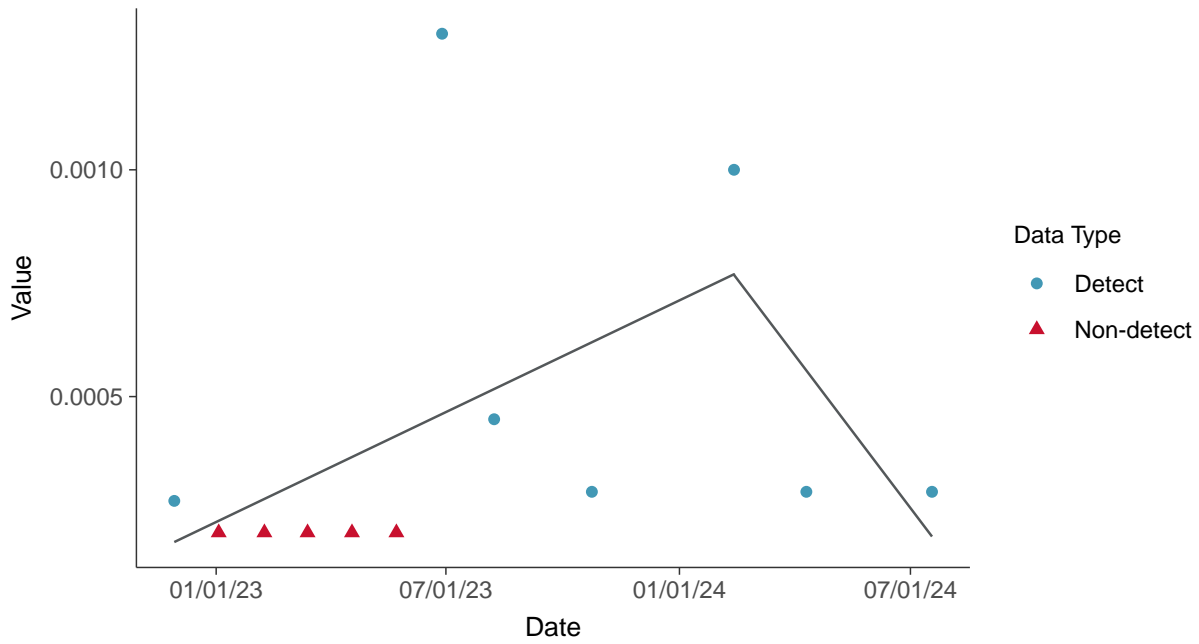






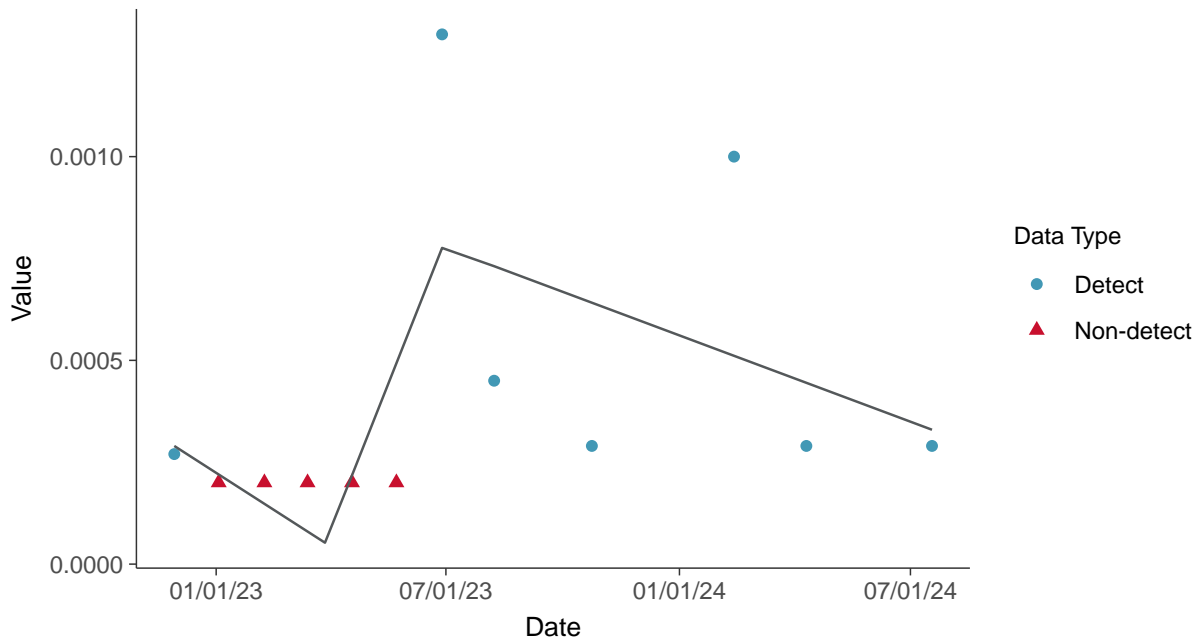
### Trend Regression: Piecewise Linear-Linear

Copper, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

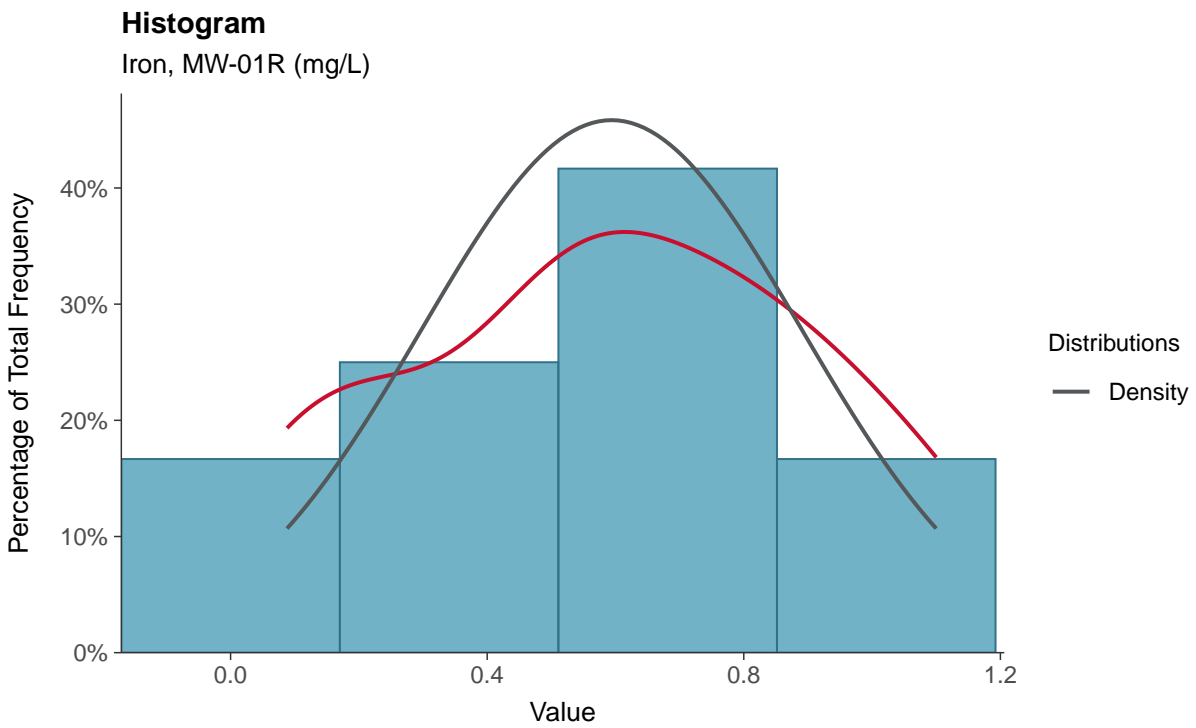
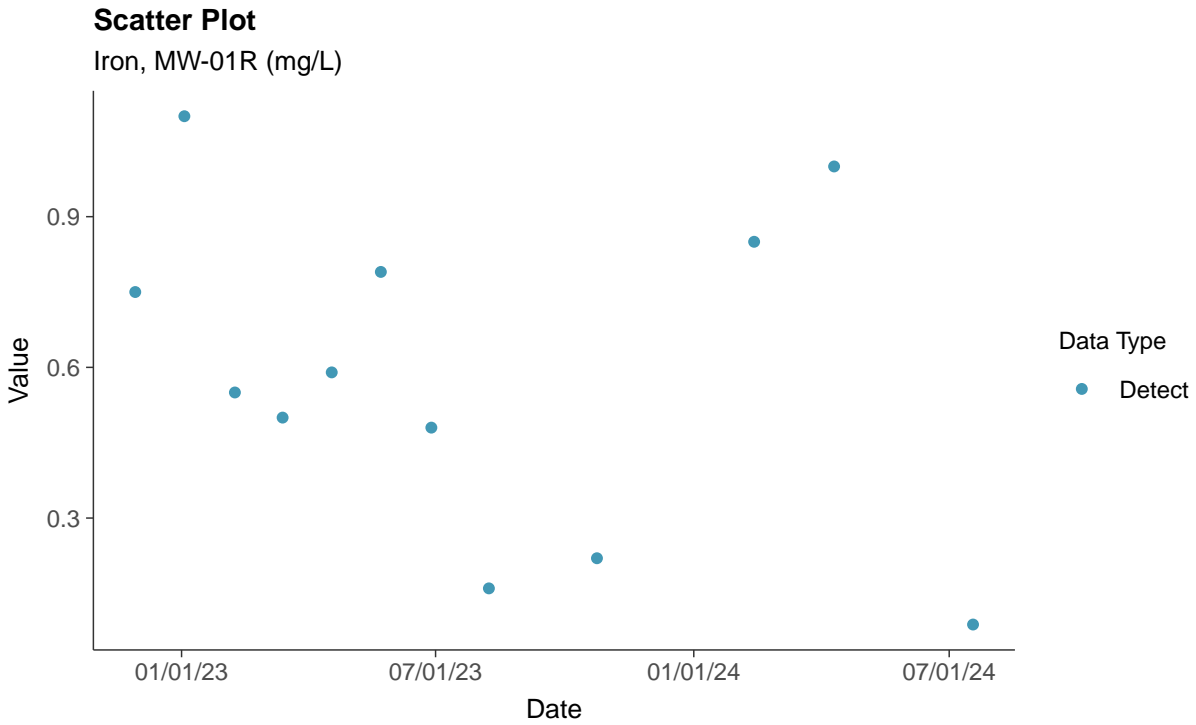
Copper, MW-01R (mg/L)





### Part 115: Iron, MW-01R

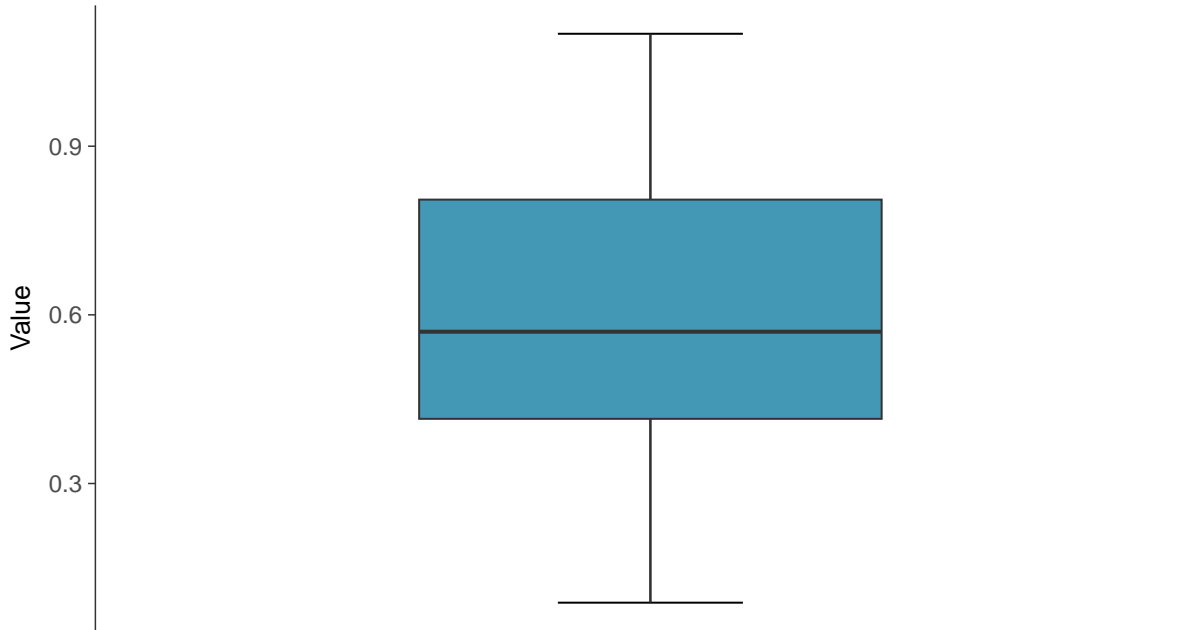
ID: 11\_2\_6\_114





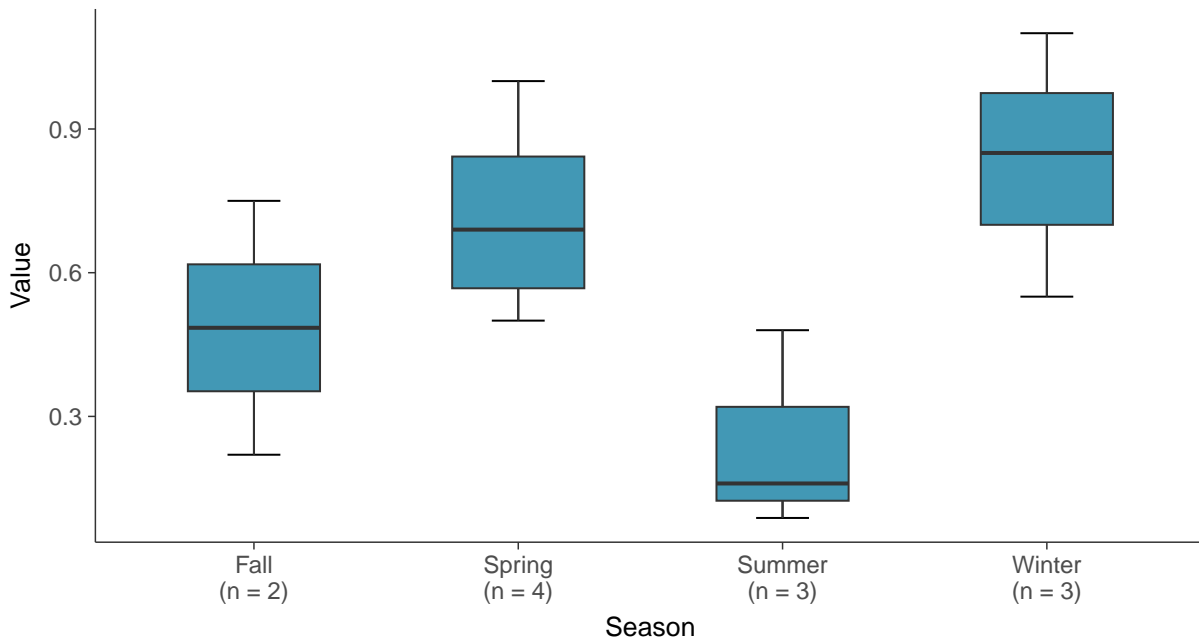
### Boxplot

Iron, MW-01R (mg/L)



### Boxplot by Season

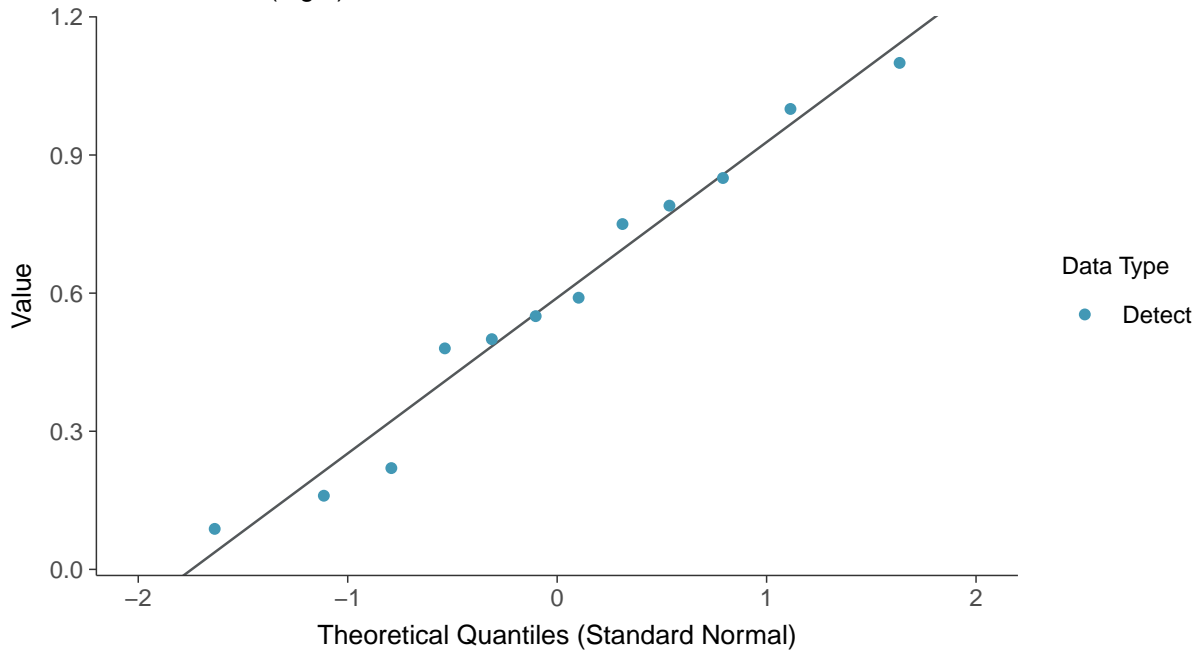
Iron, MW-01R (mg/L)





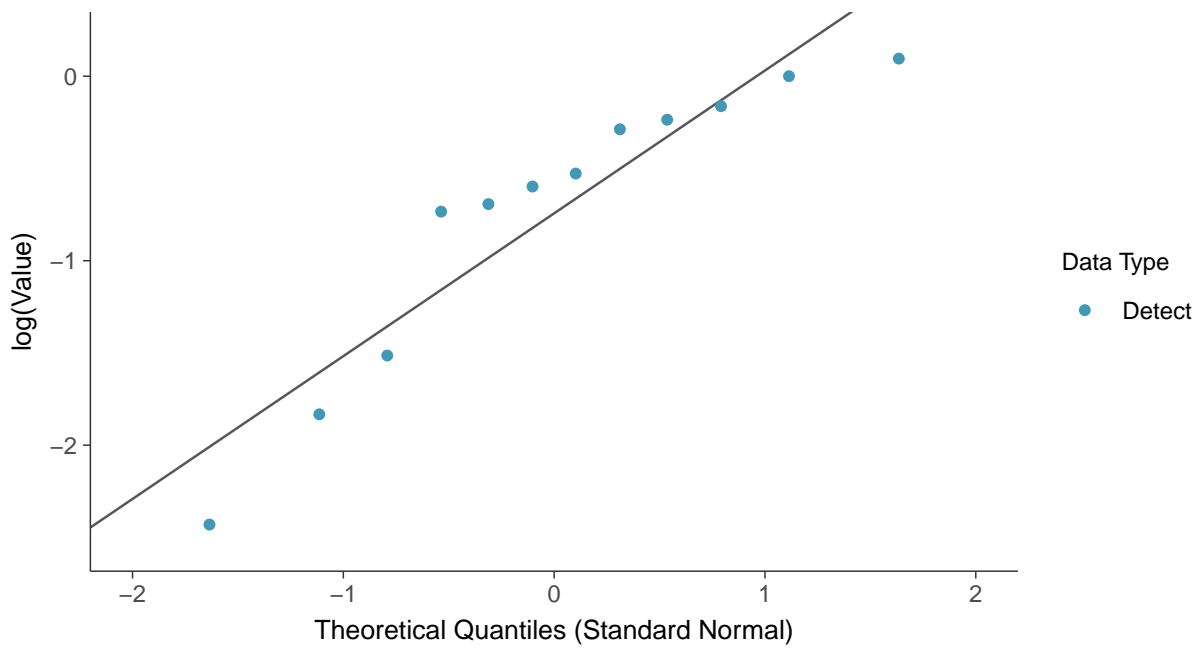
### Normal Q-Q plot

Iron, MW-01R (mg/L)



### Lognormal Q-Q plot

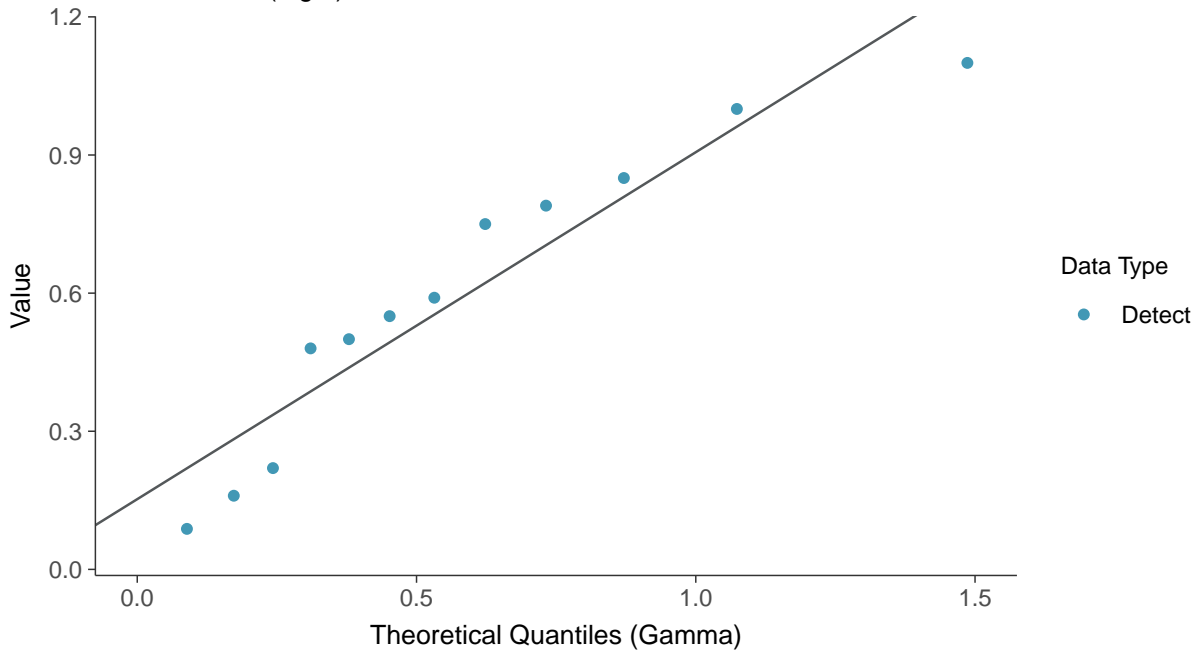
Iron, MW-01R (mg/L)





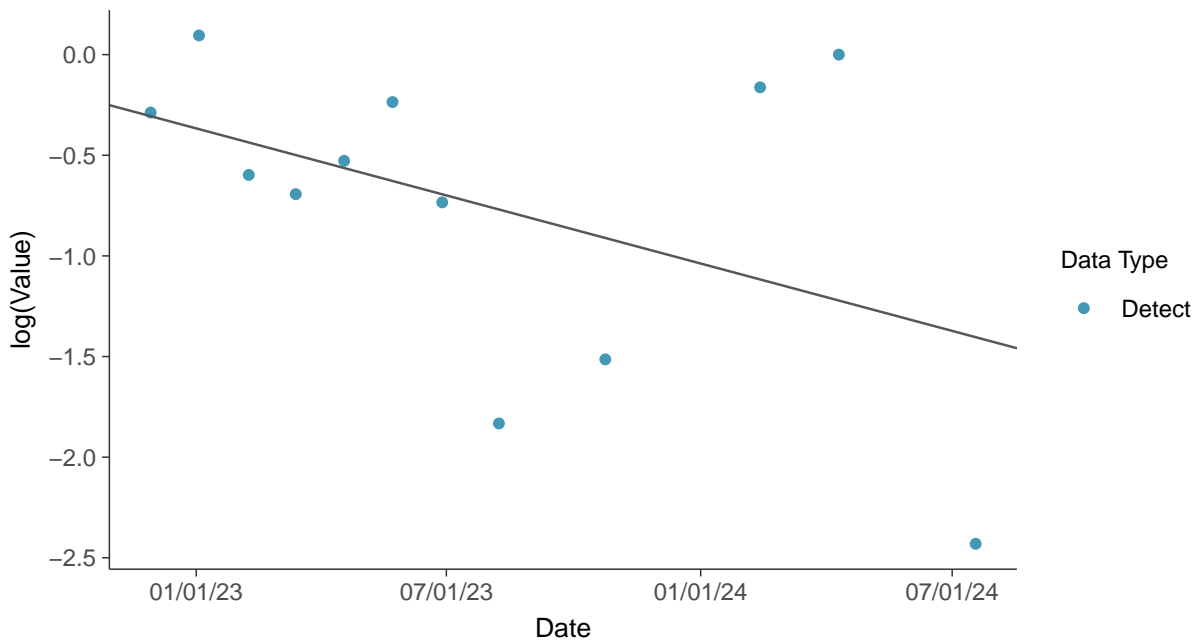
### Gamma Q-Q plot

Iron, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

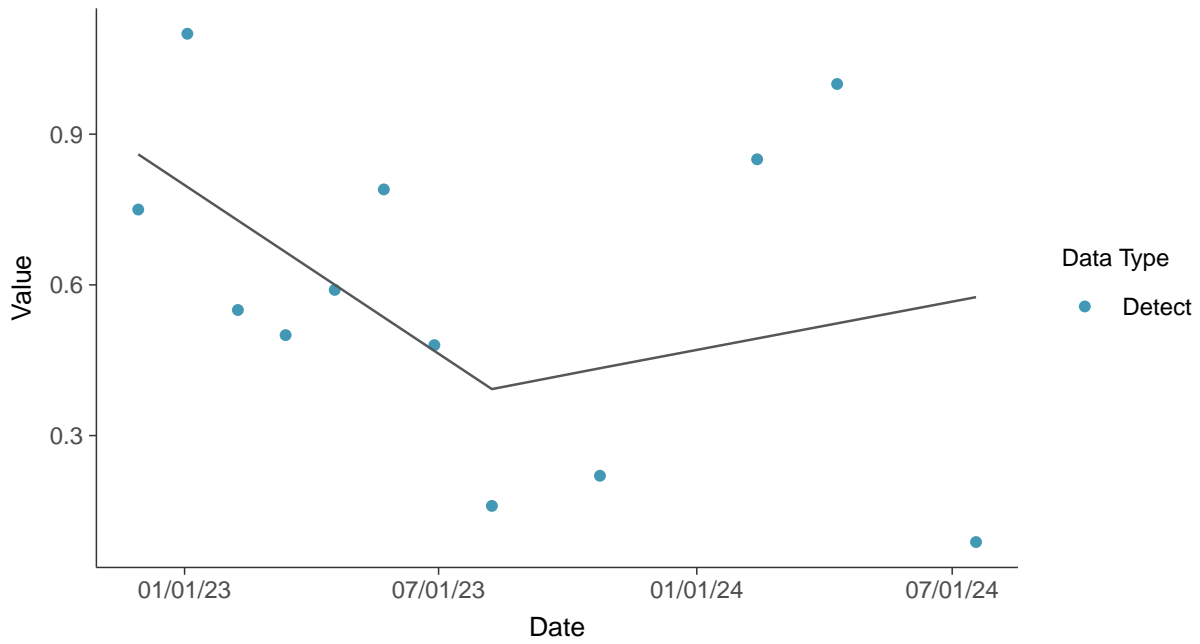
Iron, MW-01R (mg/L)





### Trend Regression: Piecewise Linear-Linear

Iron, MW-01R (mg/L)



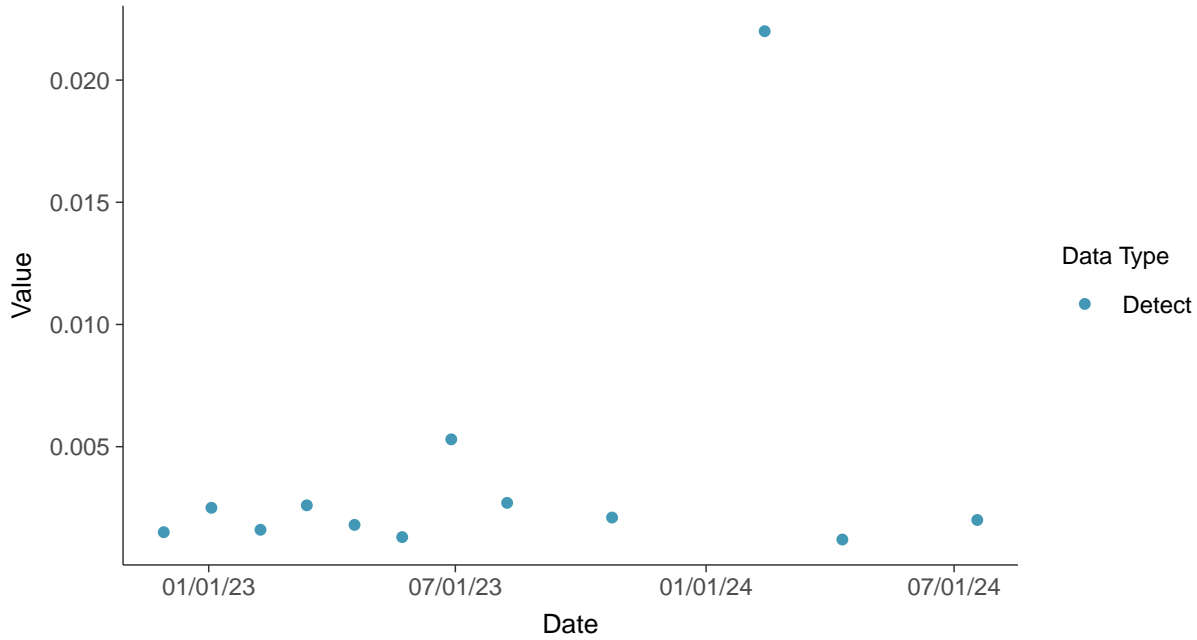


### Part 115: Nickel, MW-01R

ID: 11\_2\_6\_119

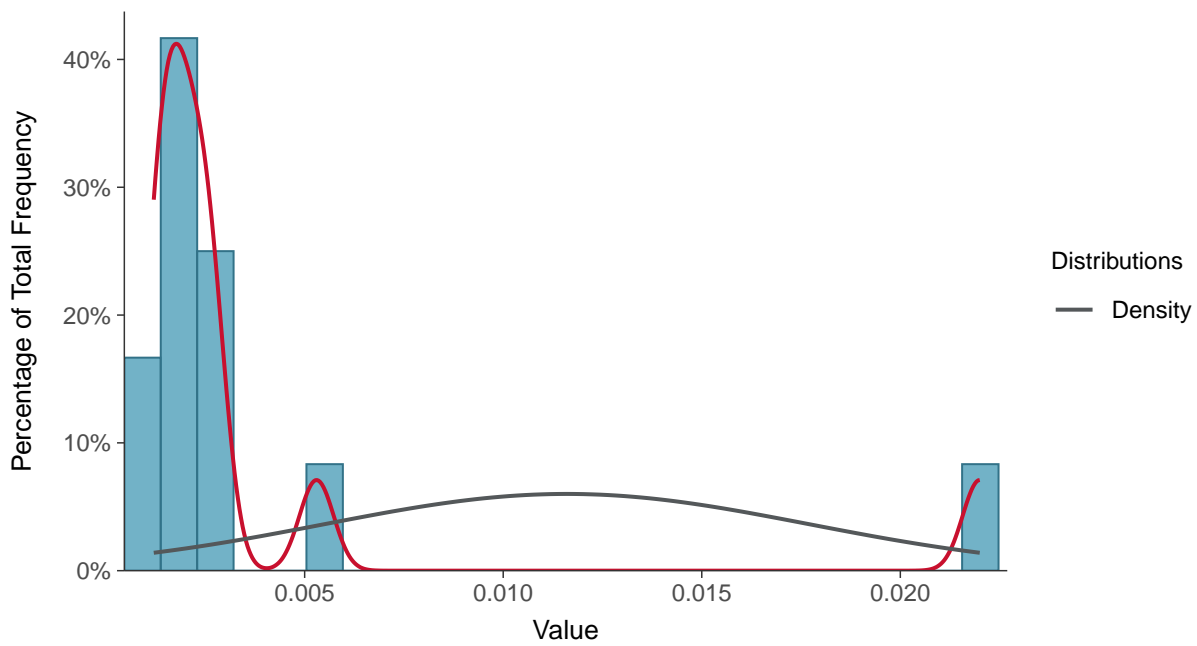
#### Scatter Plot

Nickel, MW-01R (mg/L)



#### Histogram

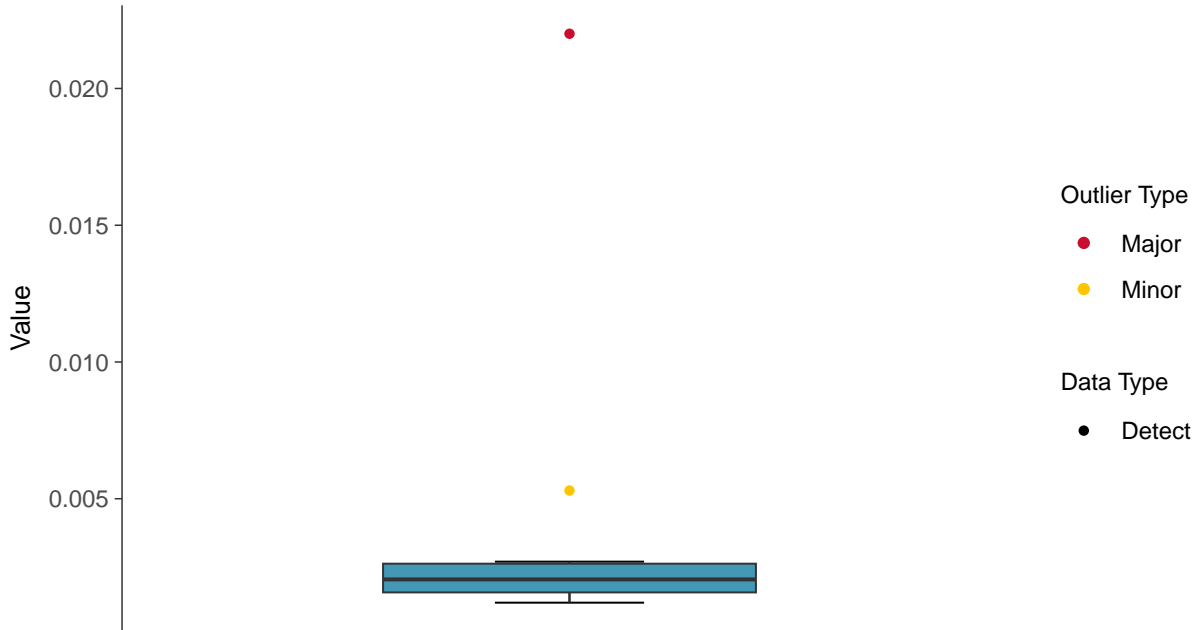
Nickel, MW-01R (mg/L)





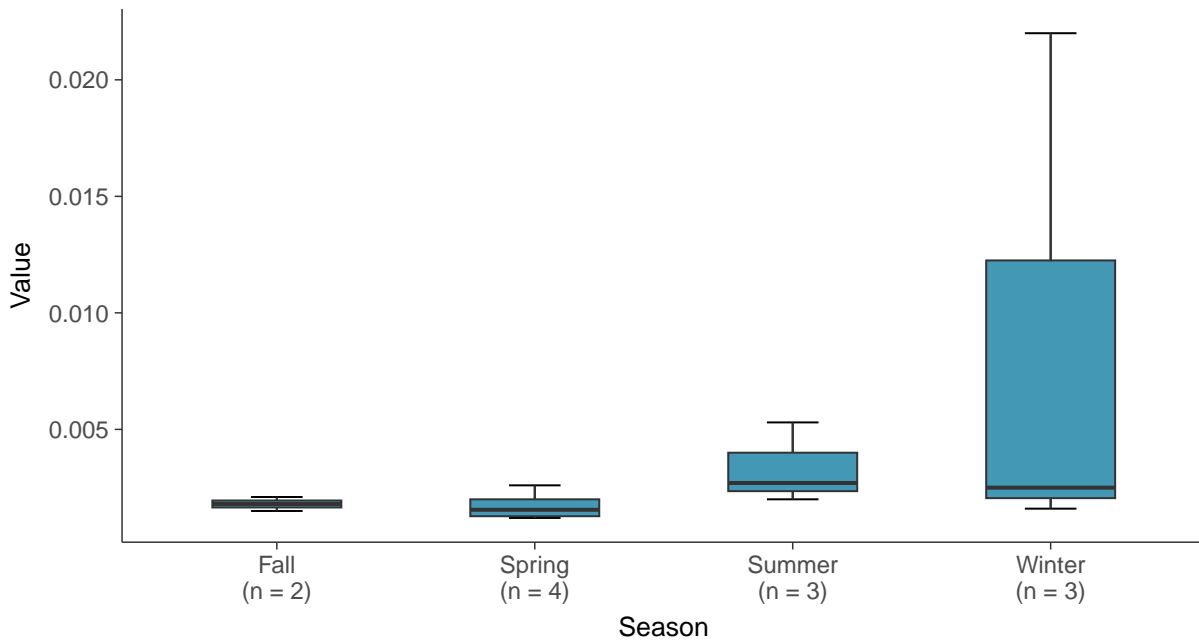
### Boxplot

Nickel, MW-01R (mg/L)



### Boxplot by Season

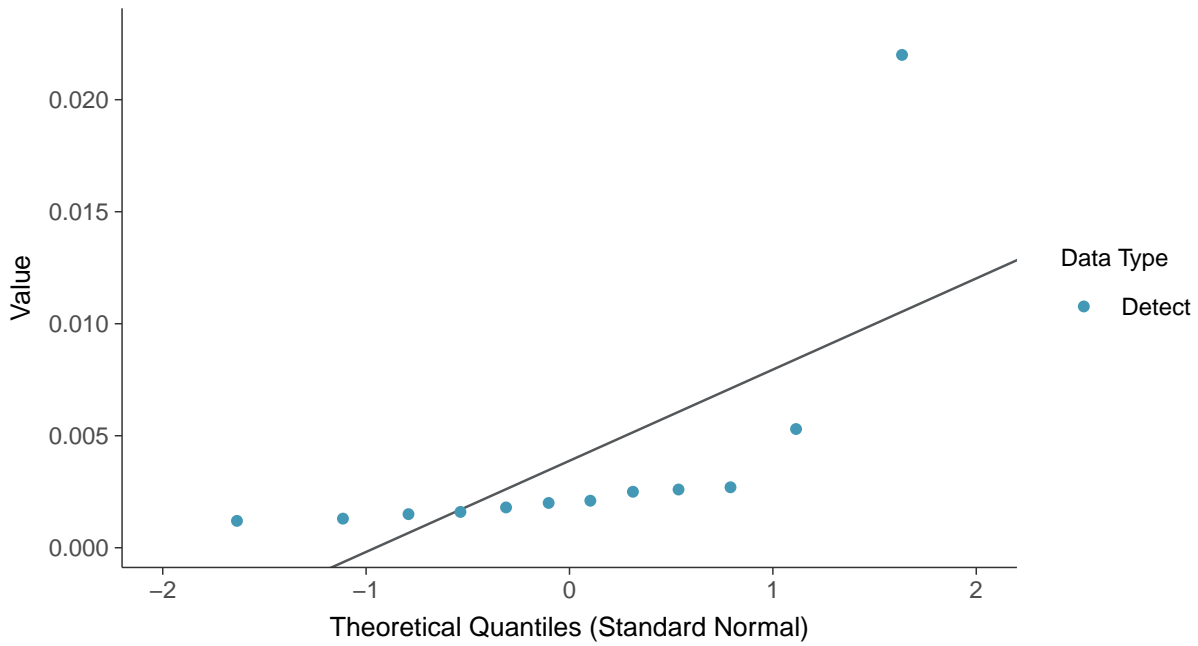
Nickel, MW-01R (mg/L)



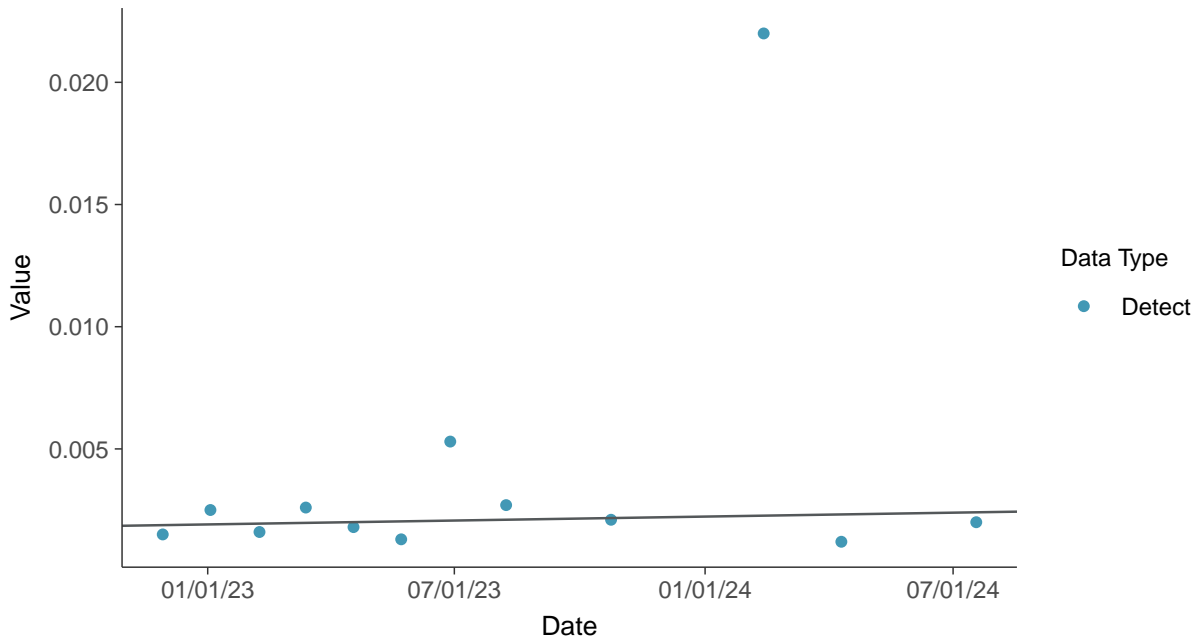




**Normal Q-Q plot**  
Nickel, MW-01R (mg/L)



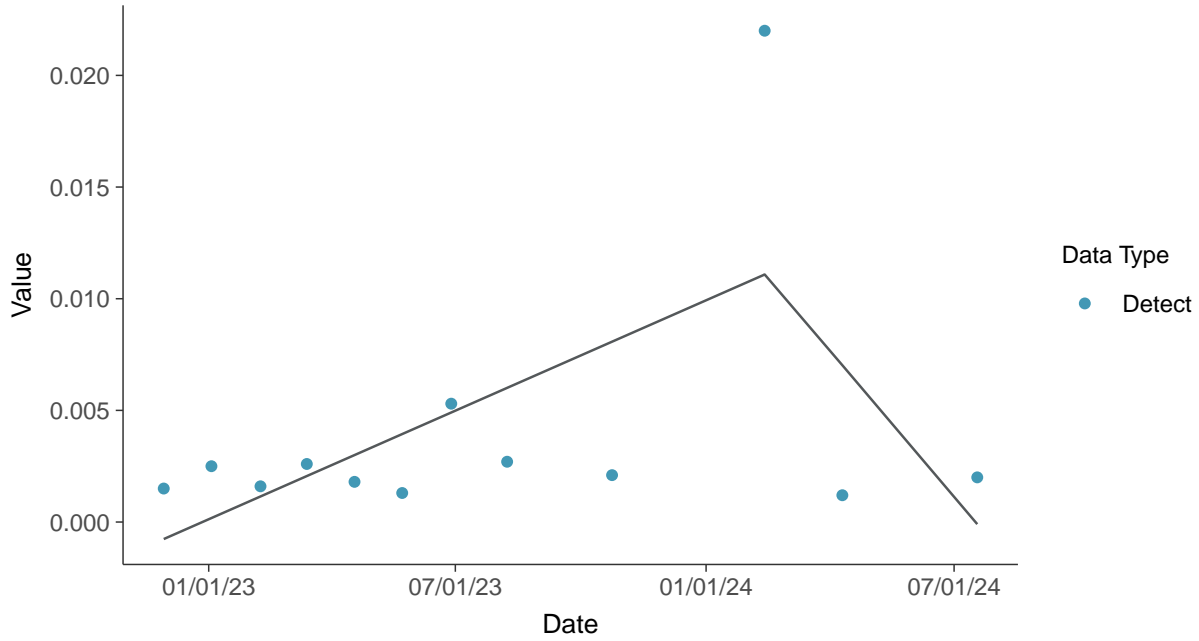
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Nickel, MW-01R (mg/L)





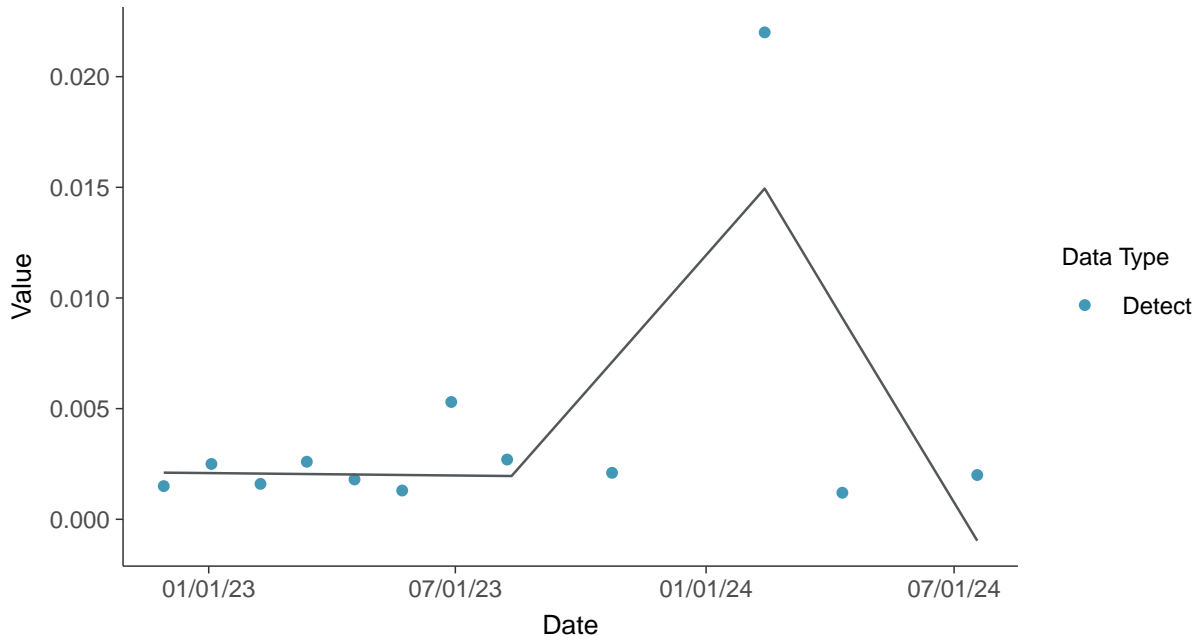
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

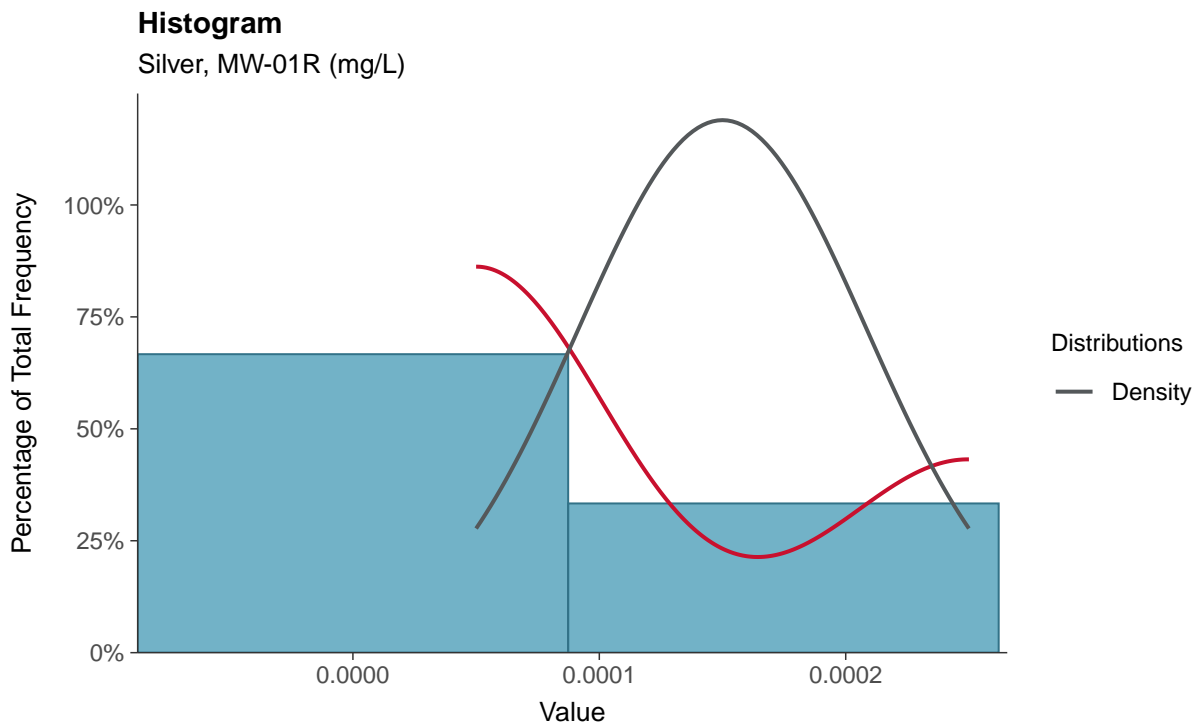
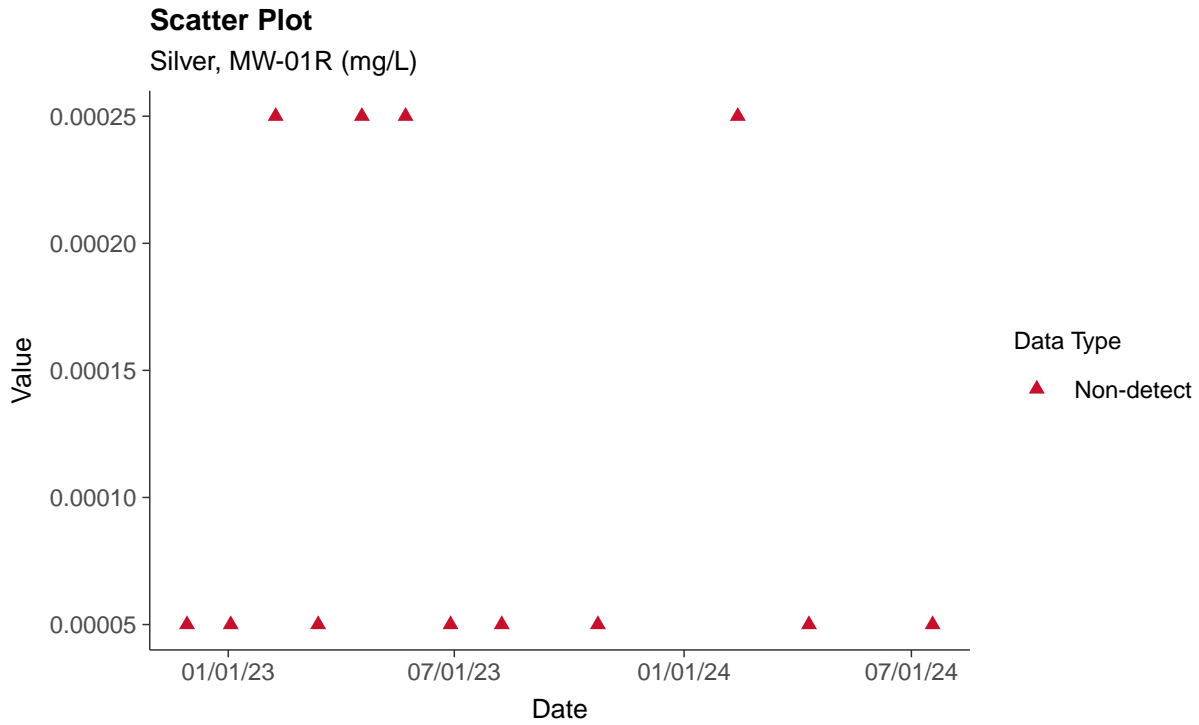
Nickel, MW-01R (mg/L)





### Part 115: Silver, MW-01R

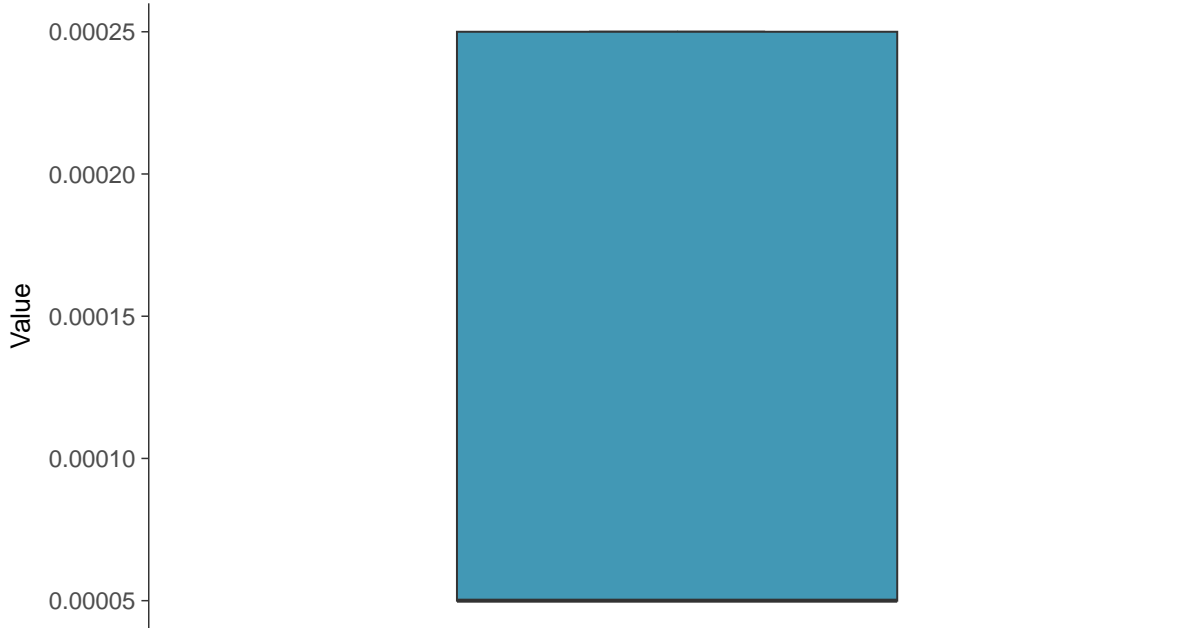
ID: 11\_2\_6\_123





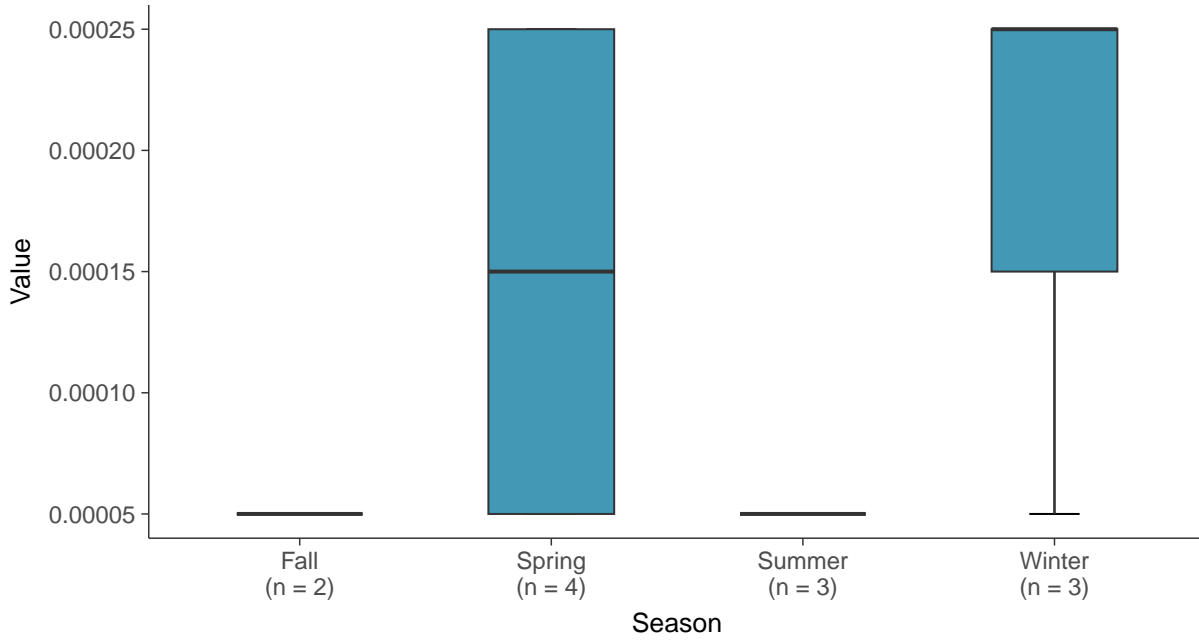
### Boxplot

Silver, MW-01R (mg/L)



### Boxplot by Season

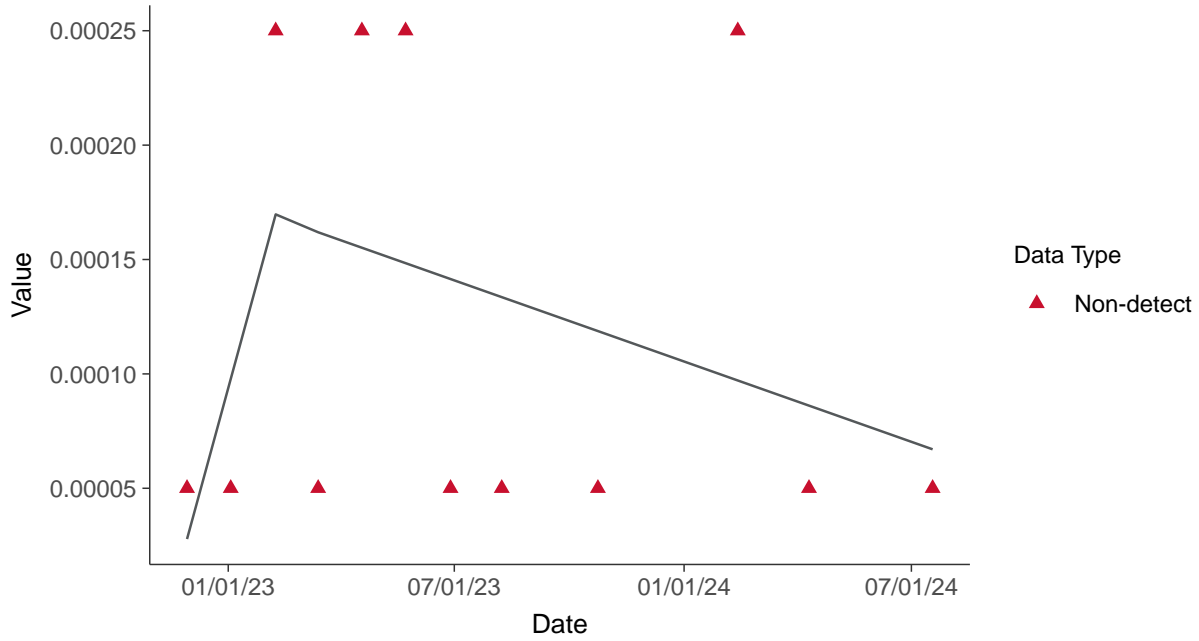
Silver, MW-01R (mg/L)





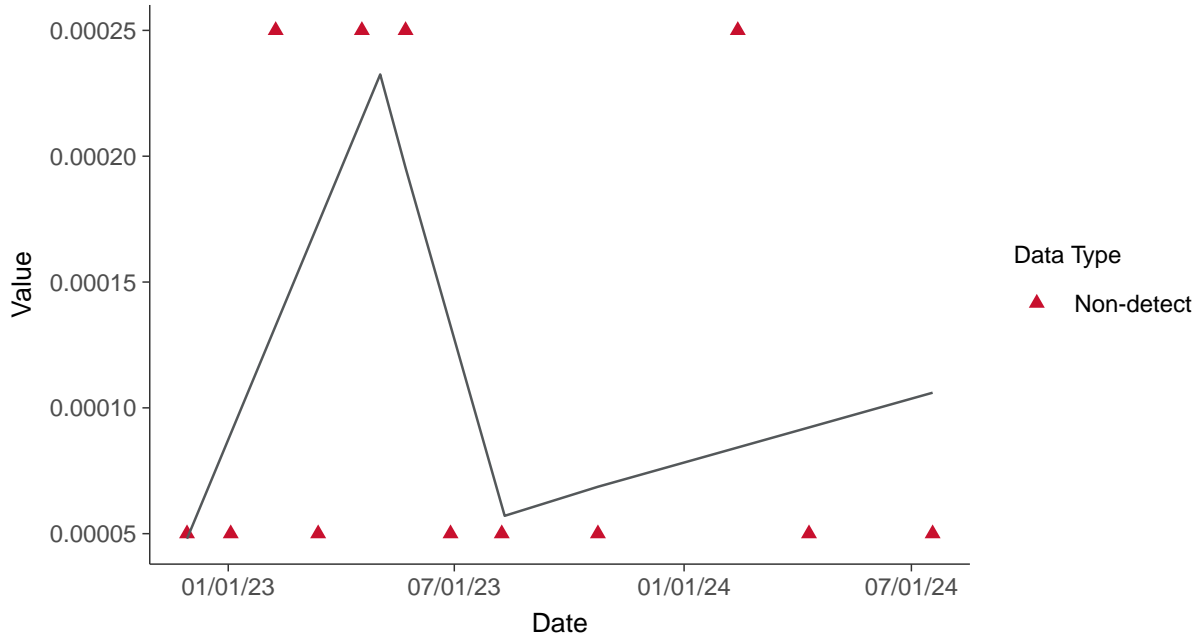
### Trend Regression: Piecewise Linear-Linear

Silver, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

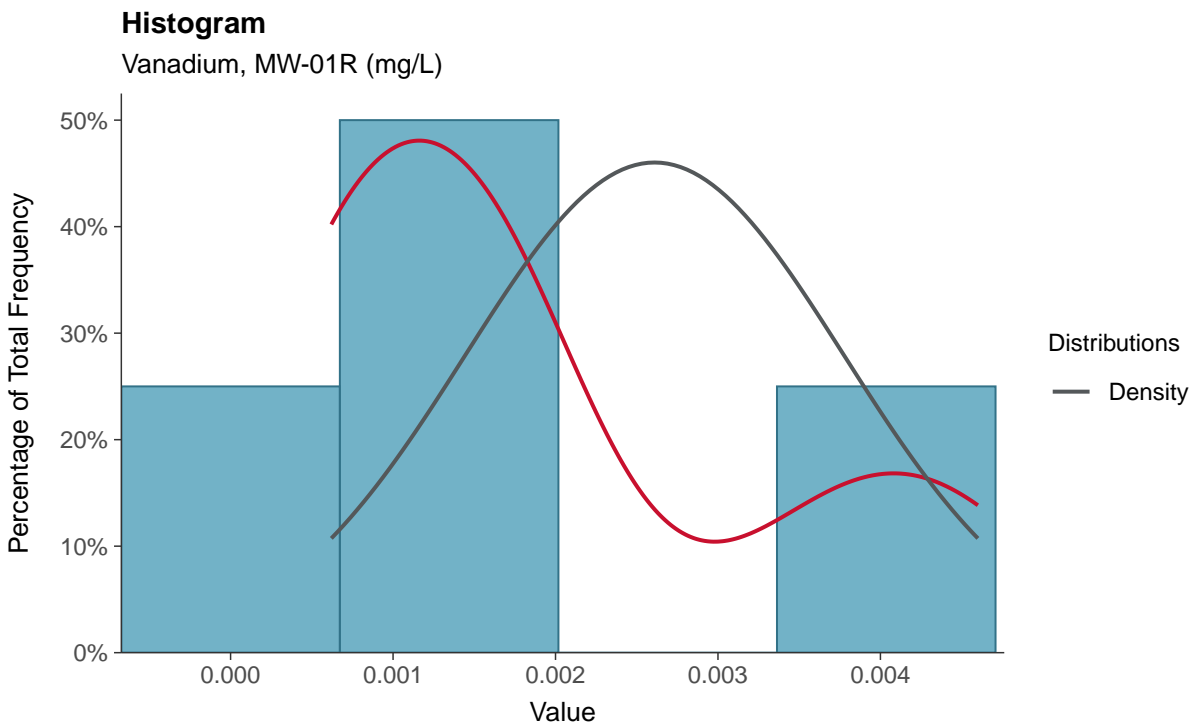
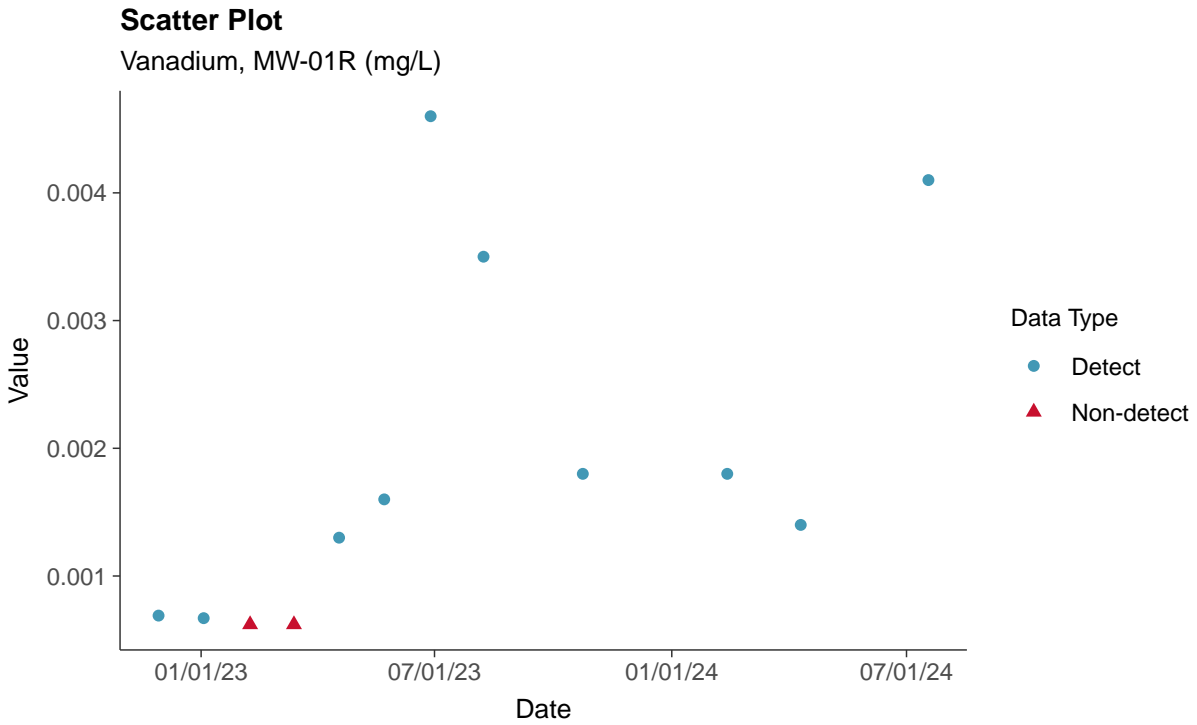
Silver, MW-01R (mg/L)





### Part 115: Vanadium, MW-01R

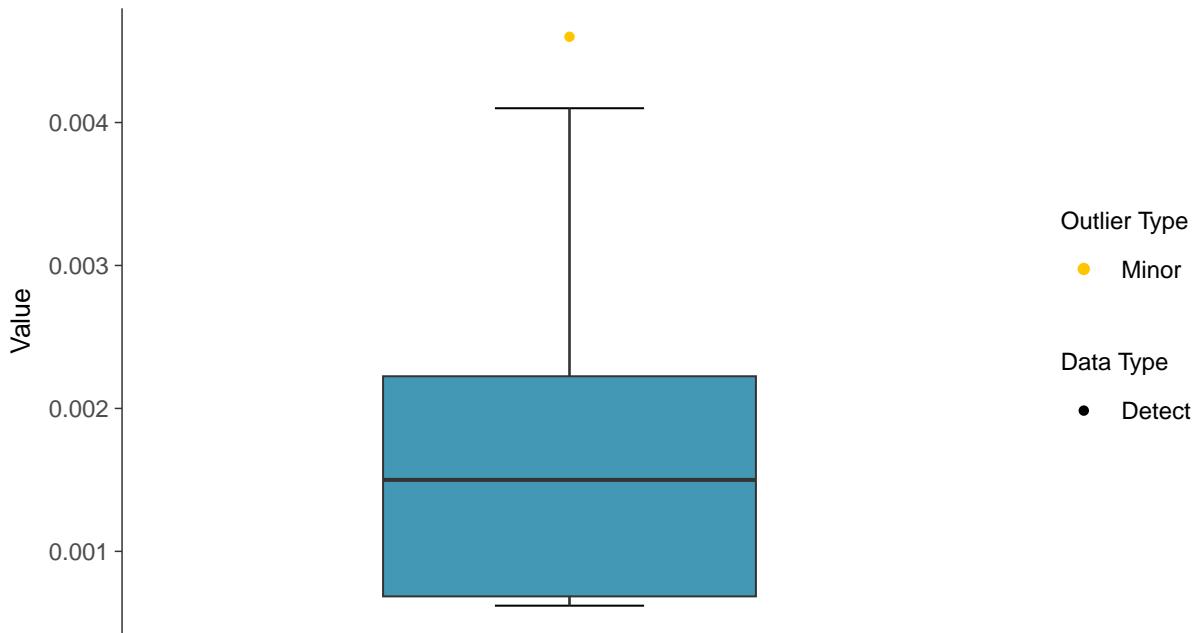
ID: 11\_2\_6\_129





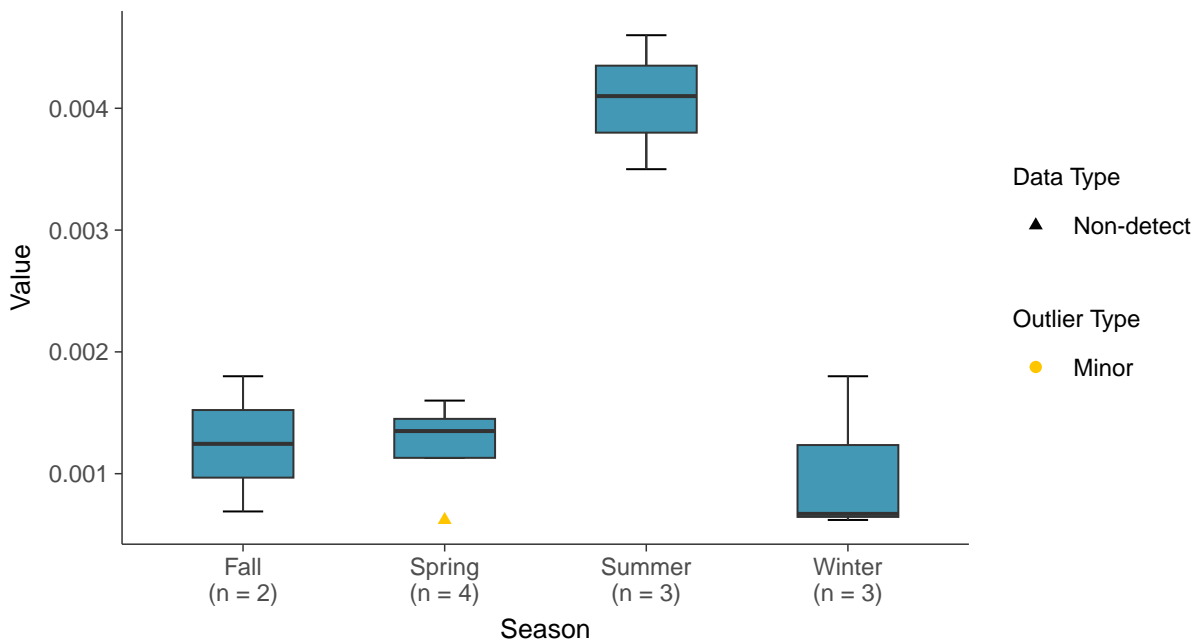
### Boxplot

Vanadium, MW-01R (mg/L)



### Boxplot by Season

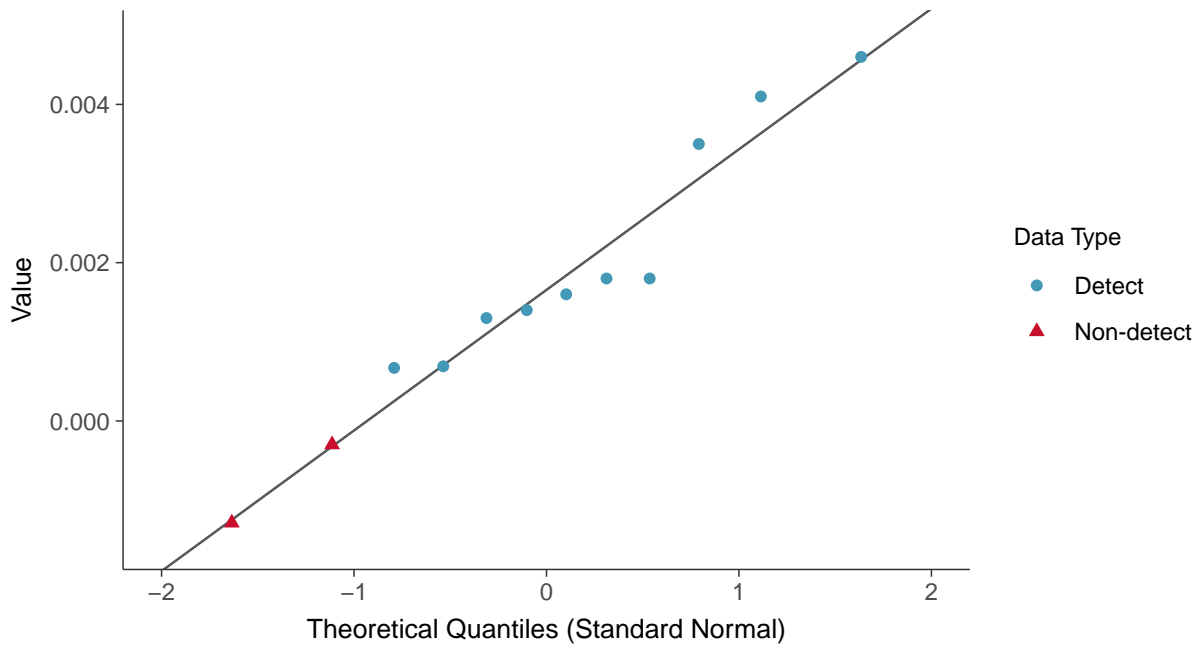
Vanadium, MW-01R (mg/L)





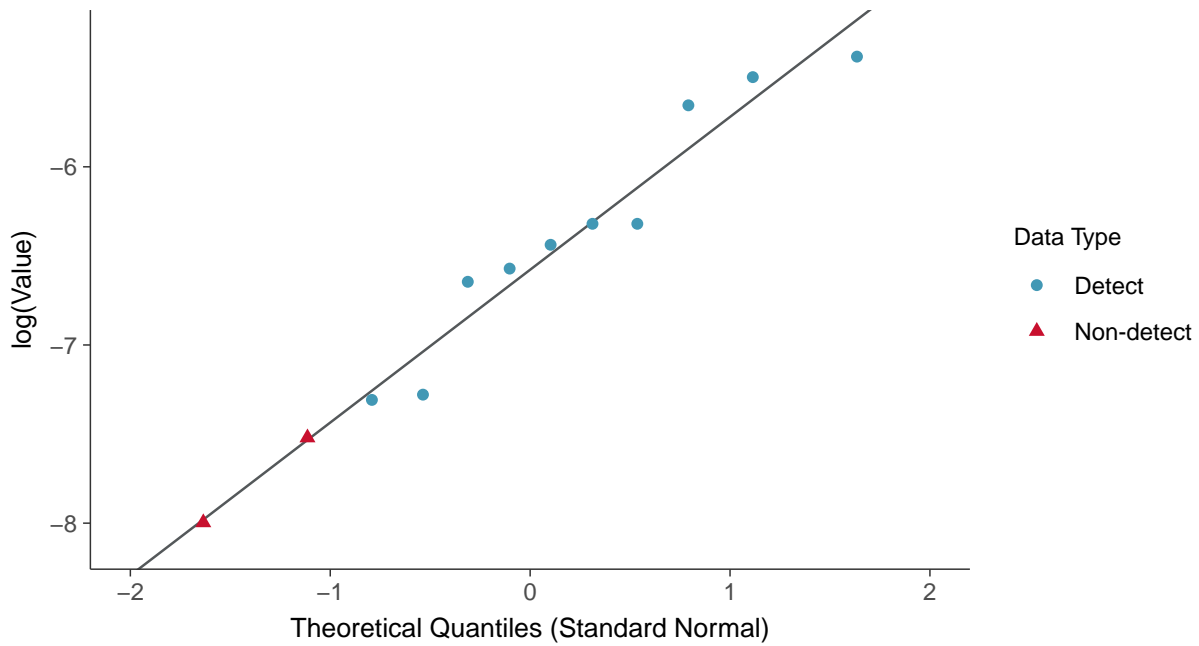
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-01R (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-01R (mg/L)

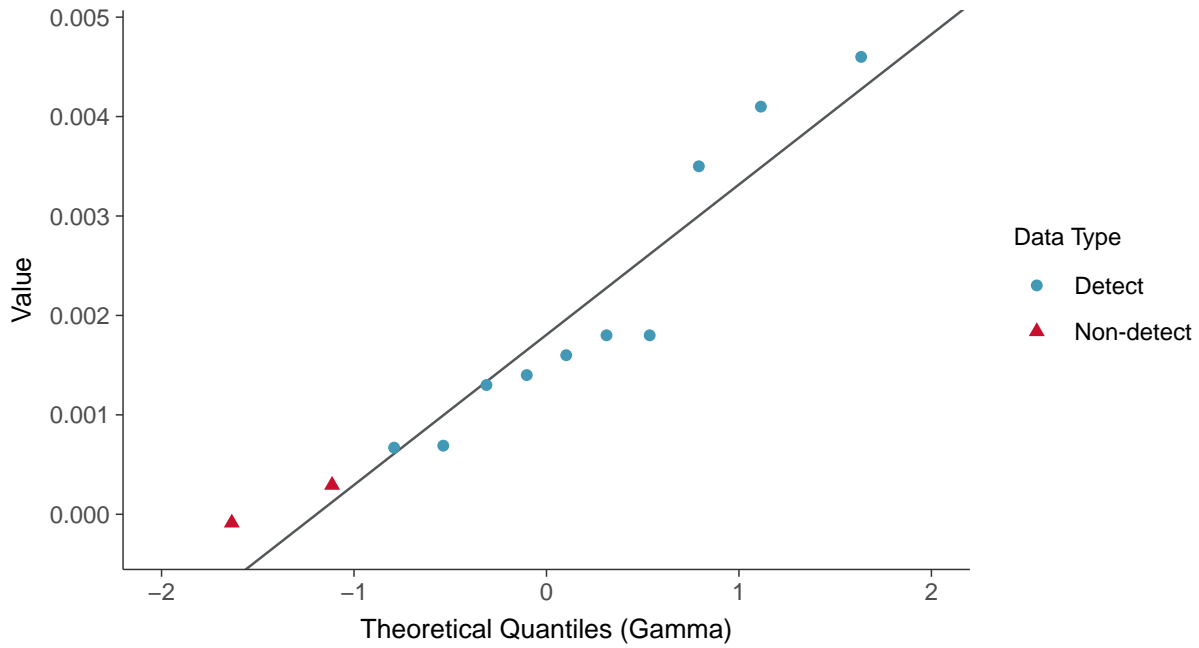






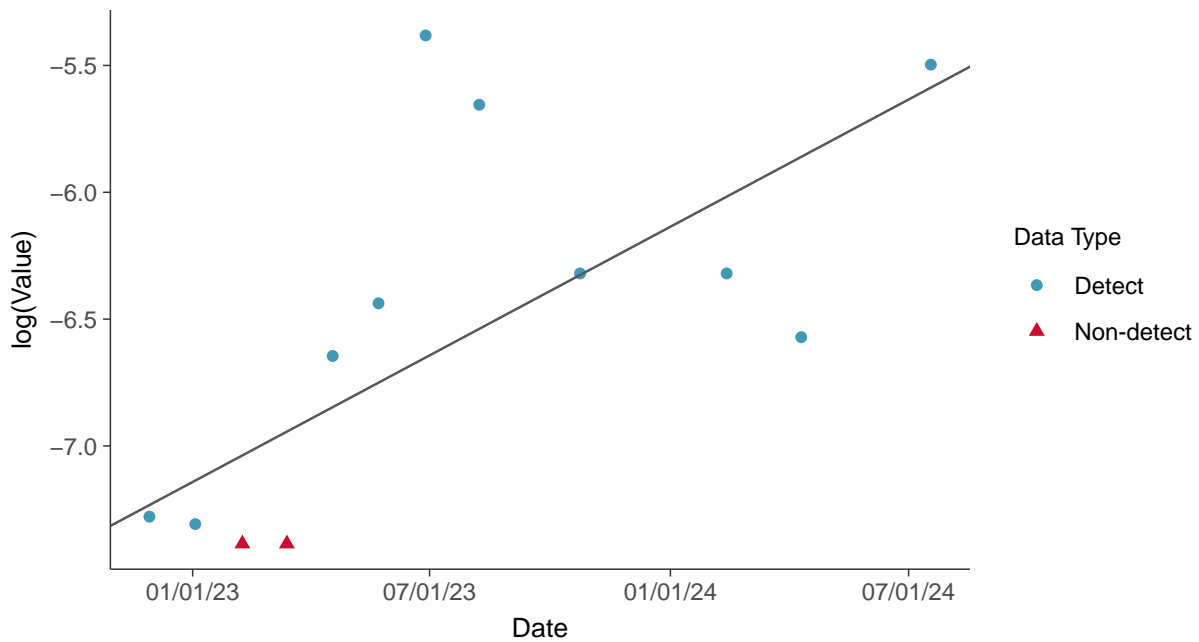
### Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-01R (mg/L)



### Trend Regression: Lognormal MLE

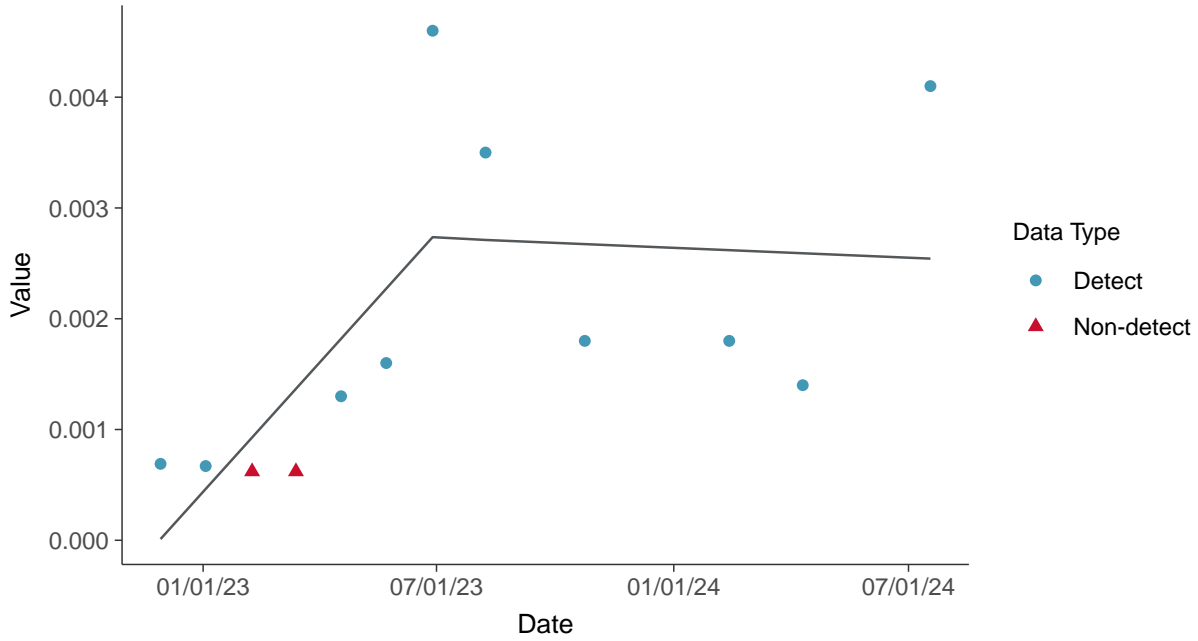
Vanadium, MW-01R (mg/L)





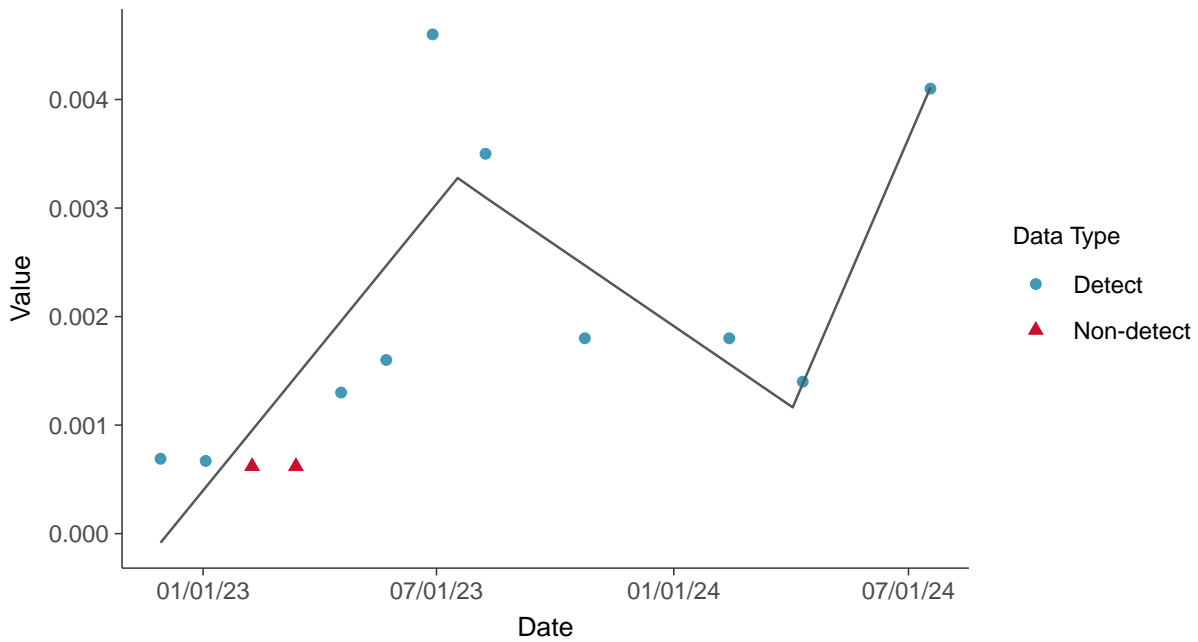
### Trend Regression: Piecewise Linear-Linear

Vanadium, MW-01R (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

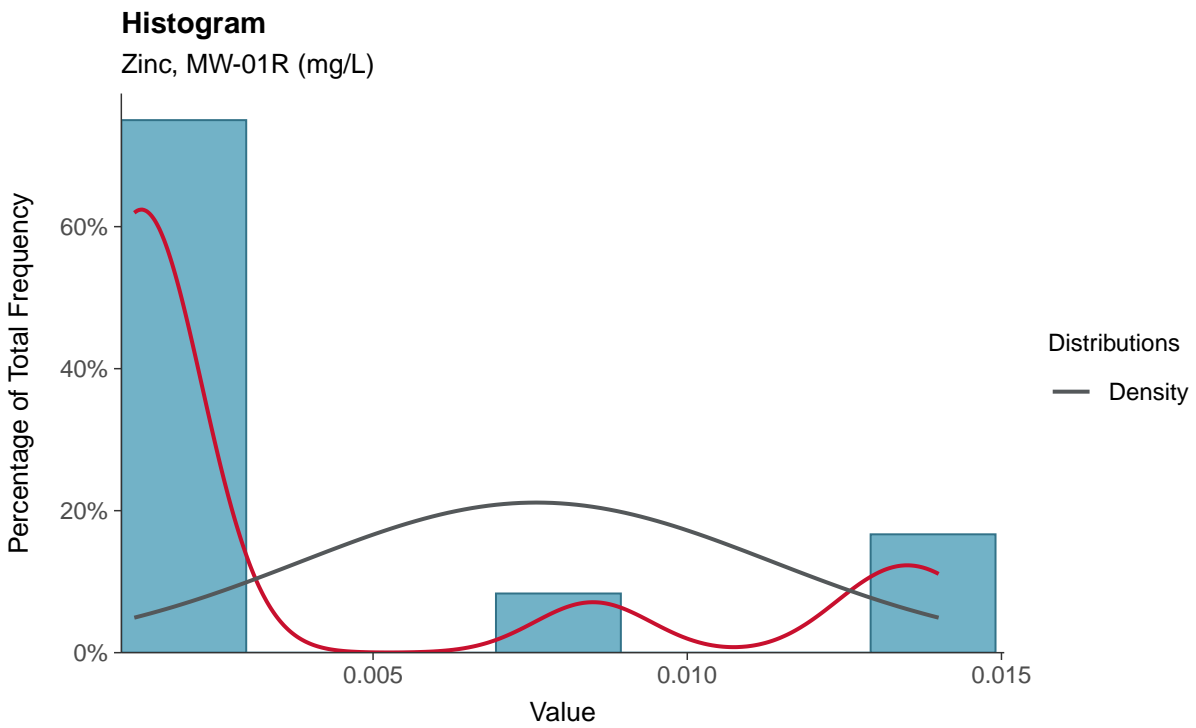
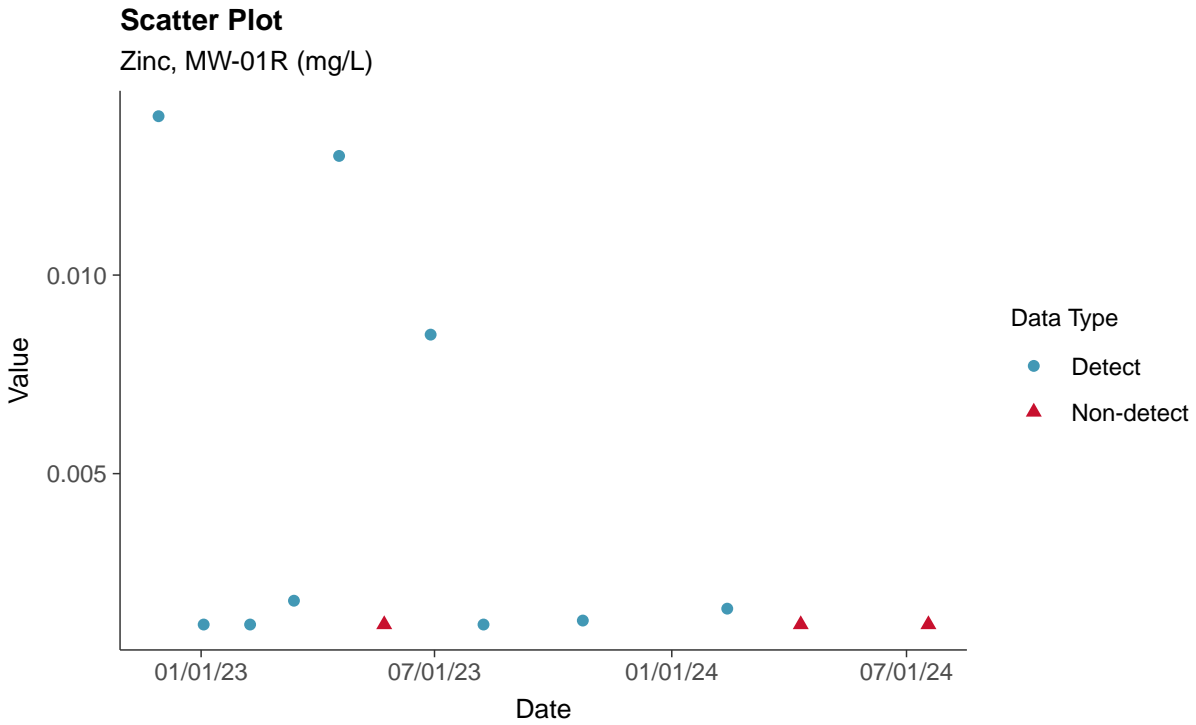
Vanadium, MW-01R (mg/L)





### Part 115: Zinc, MW-01R

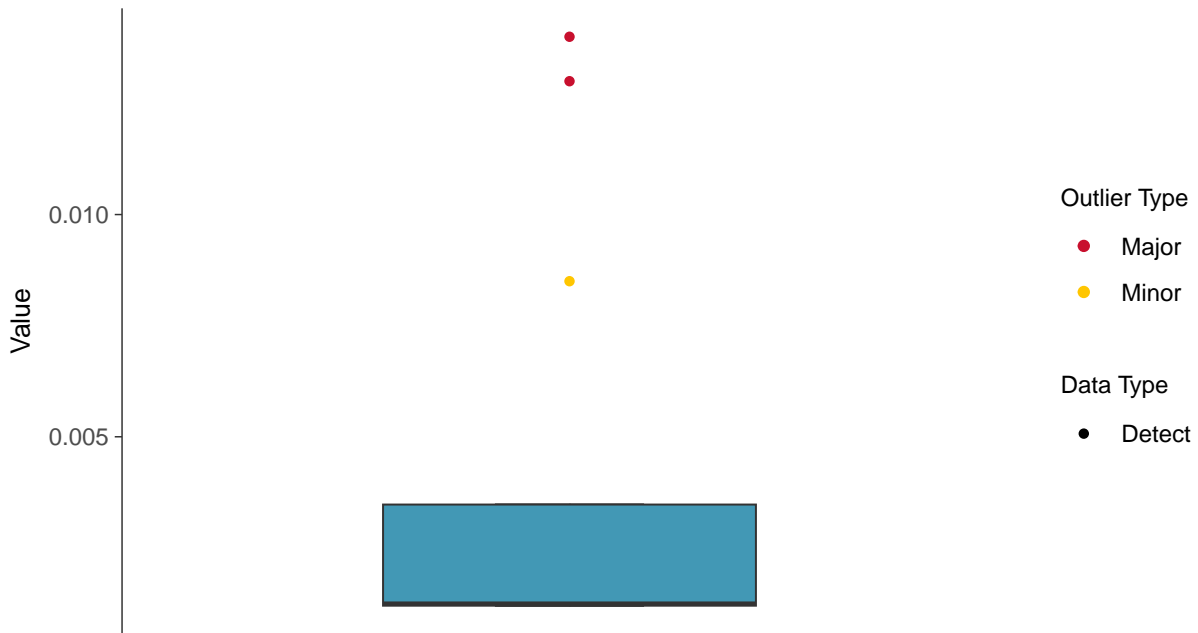
ID: 11\_2\_6\_130





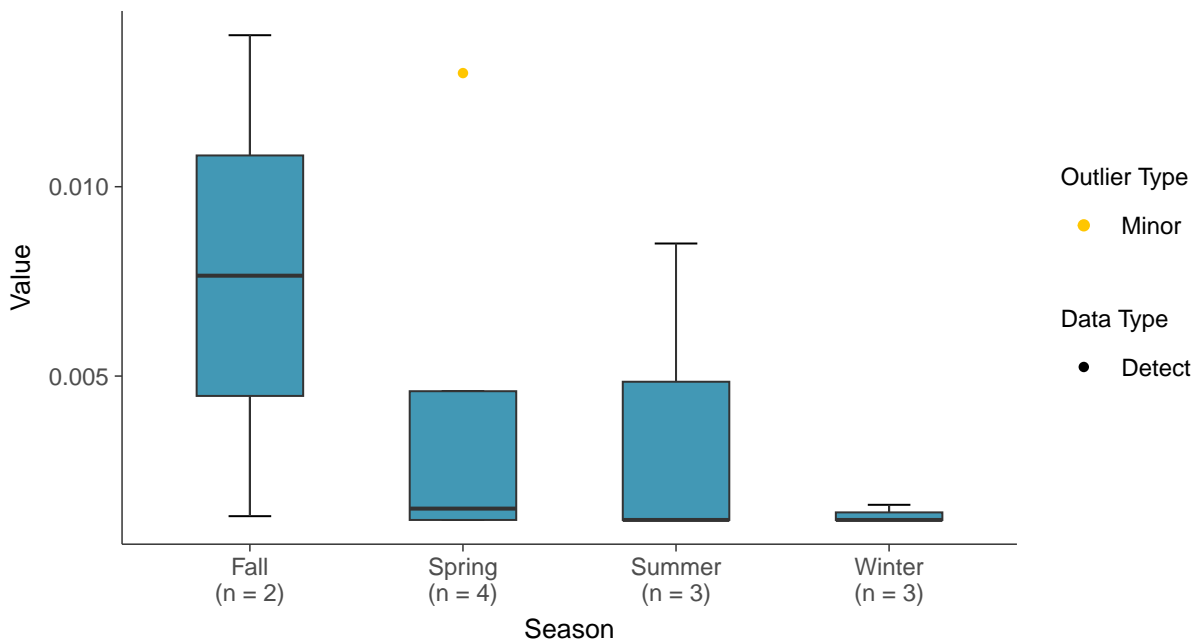
### Boxplot

Zinc, MW-01R (mg/L)



### Boxplot by Season

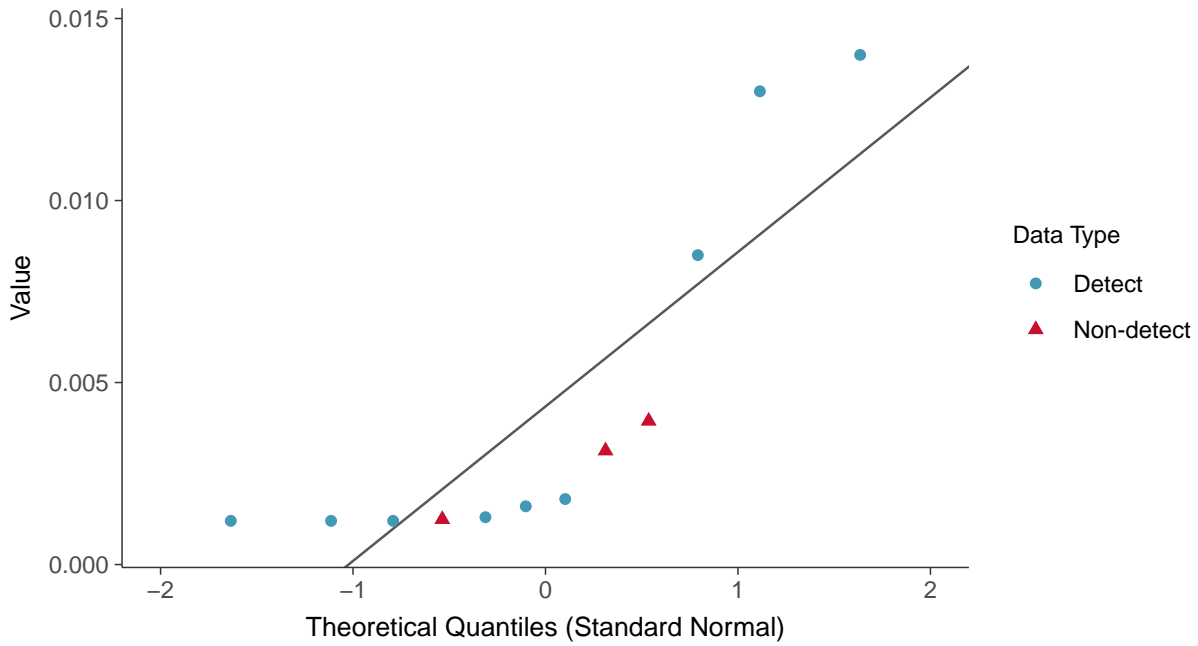
Zinc, MW-01R (mg/L)





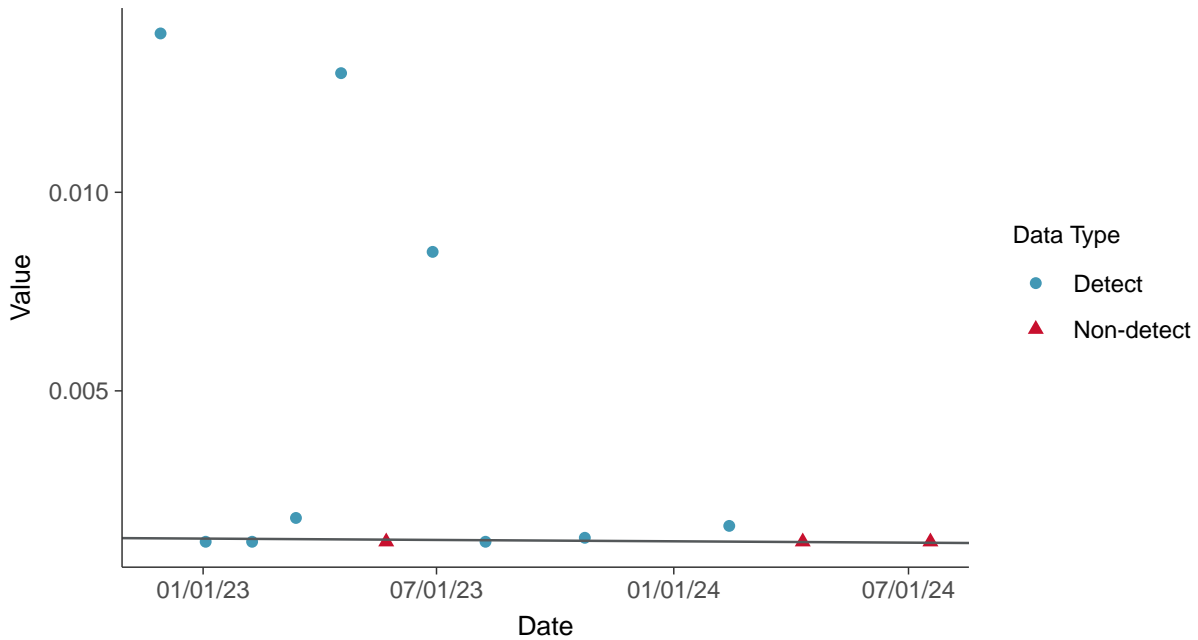
### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-01R (mg/L)



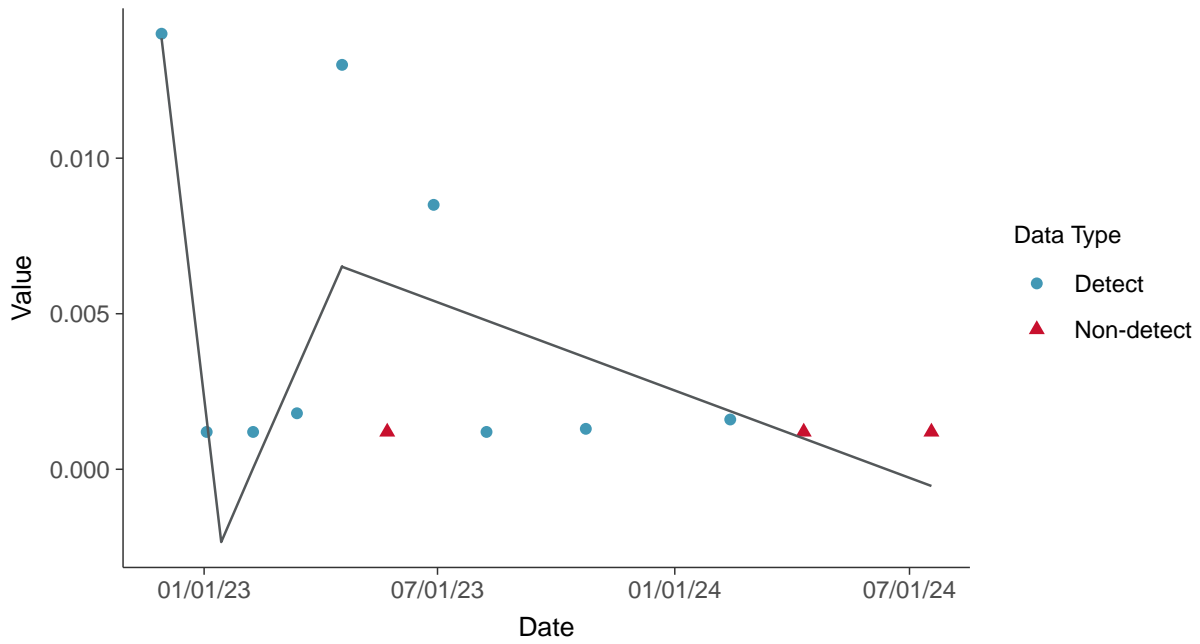
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-01R (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Zinc, MW-01R (mg/L)



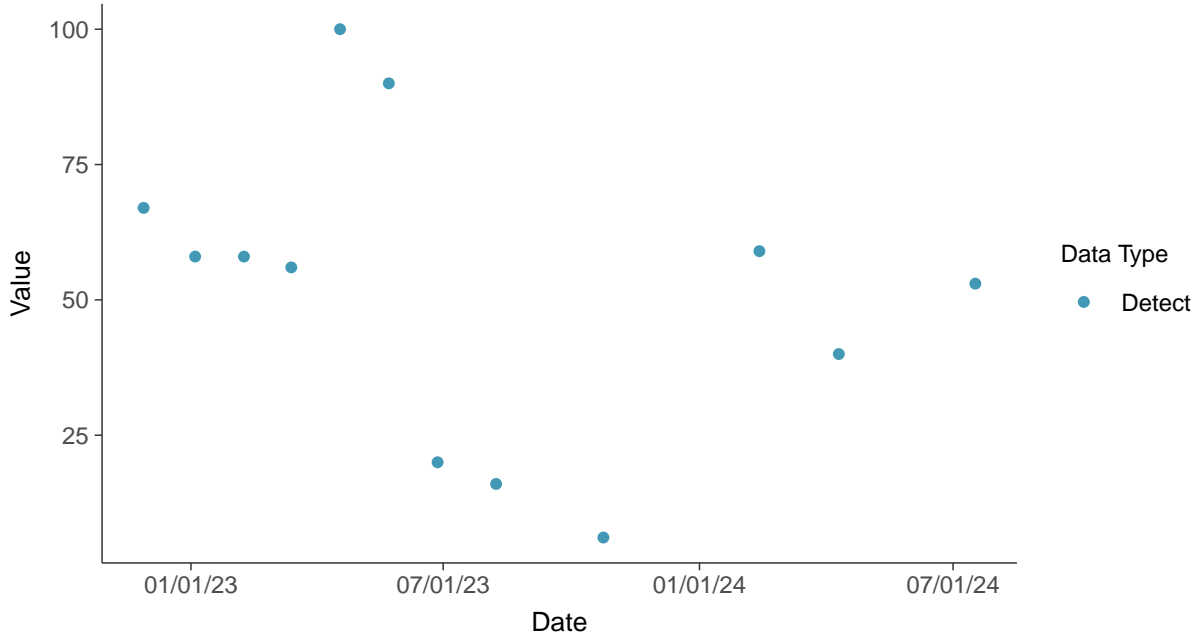


### Additional Parameters: Total Suspended Solids, MW-02

ID: 12\_2\_3\_127

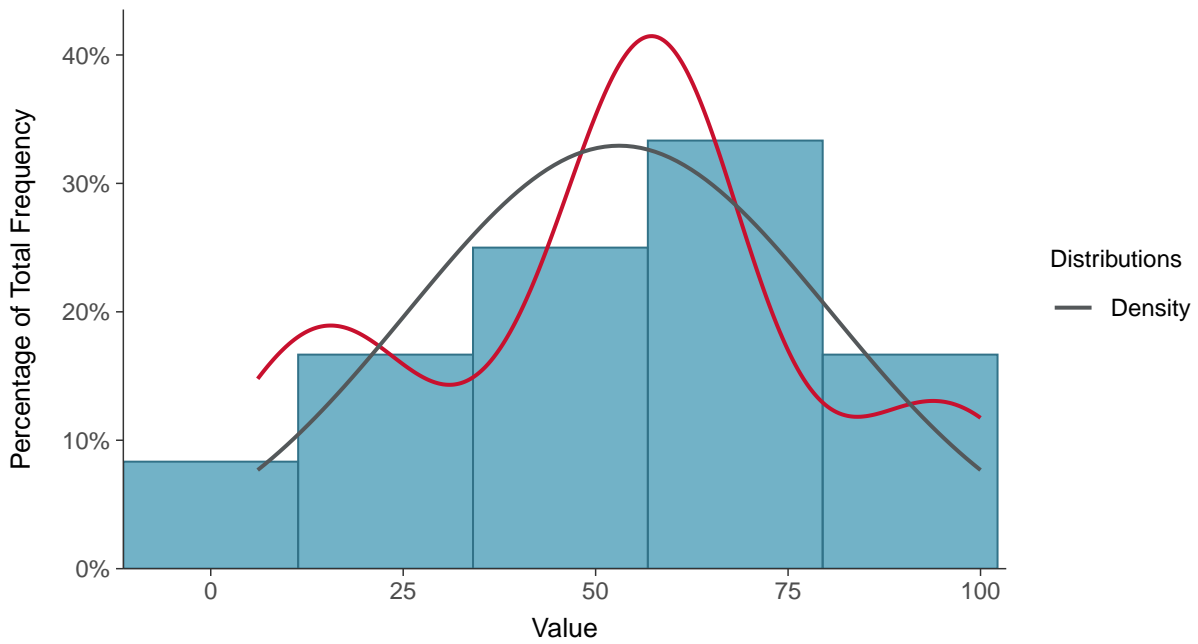
#### Scatter Plot

Total Suspended Solids, MW-02 (mg/L)



#### Histogram

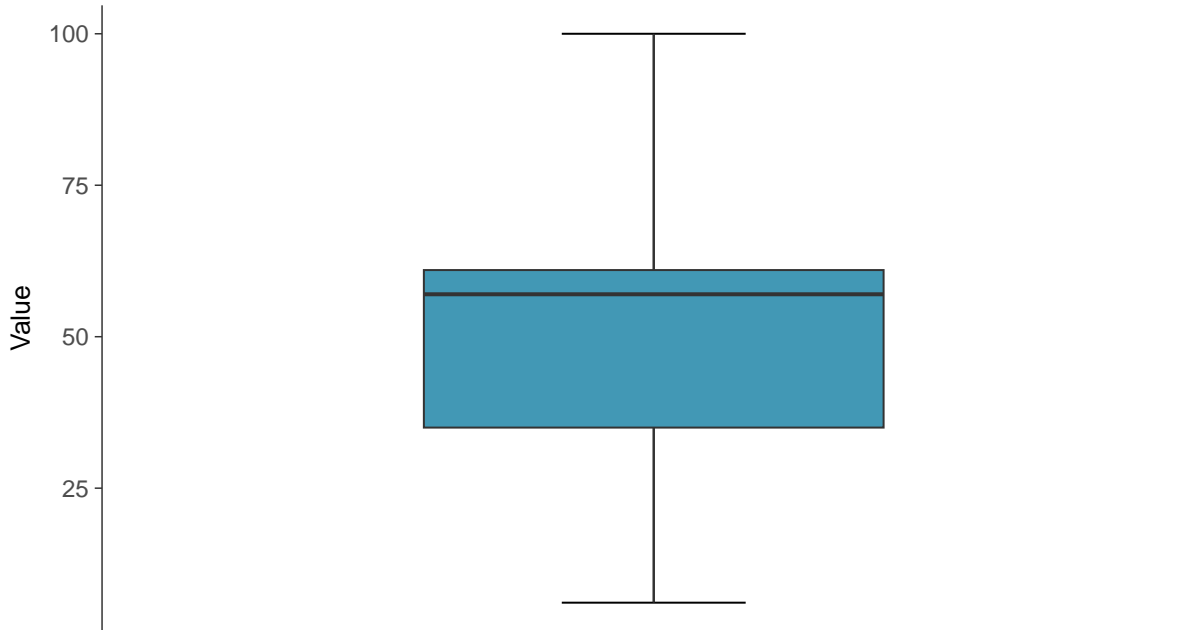
Total Suspended Solids, MW-02 (mg/L)





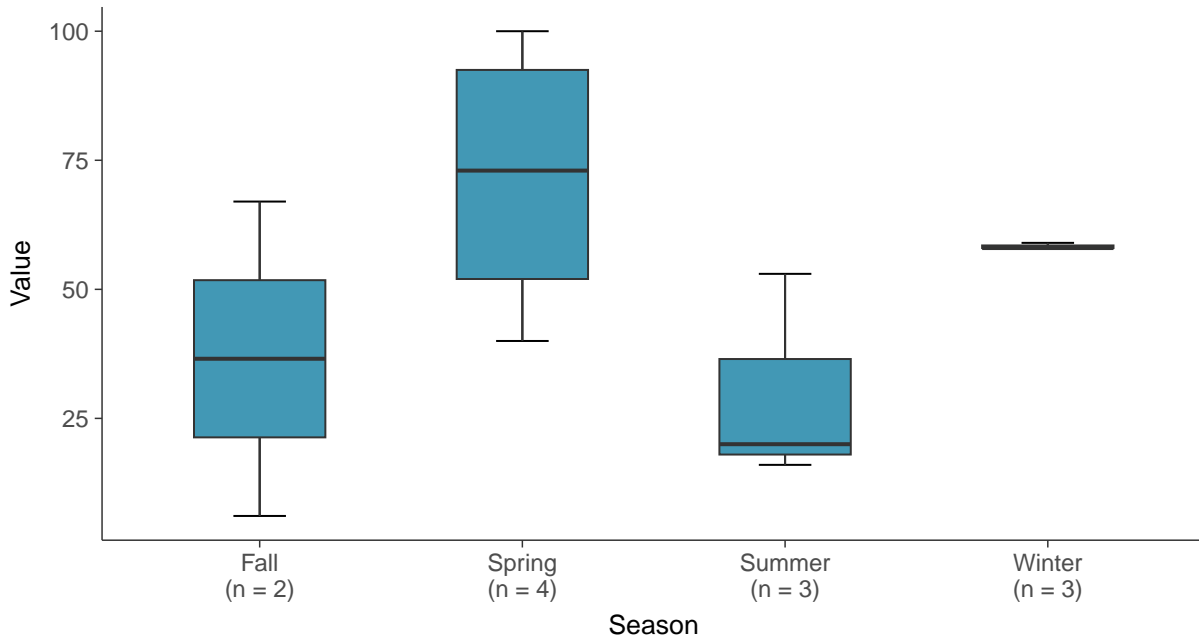
### Boxplot

Total Suspended Solids, MW-02 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-02 (mg/L)

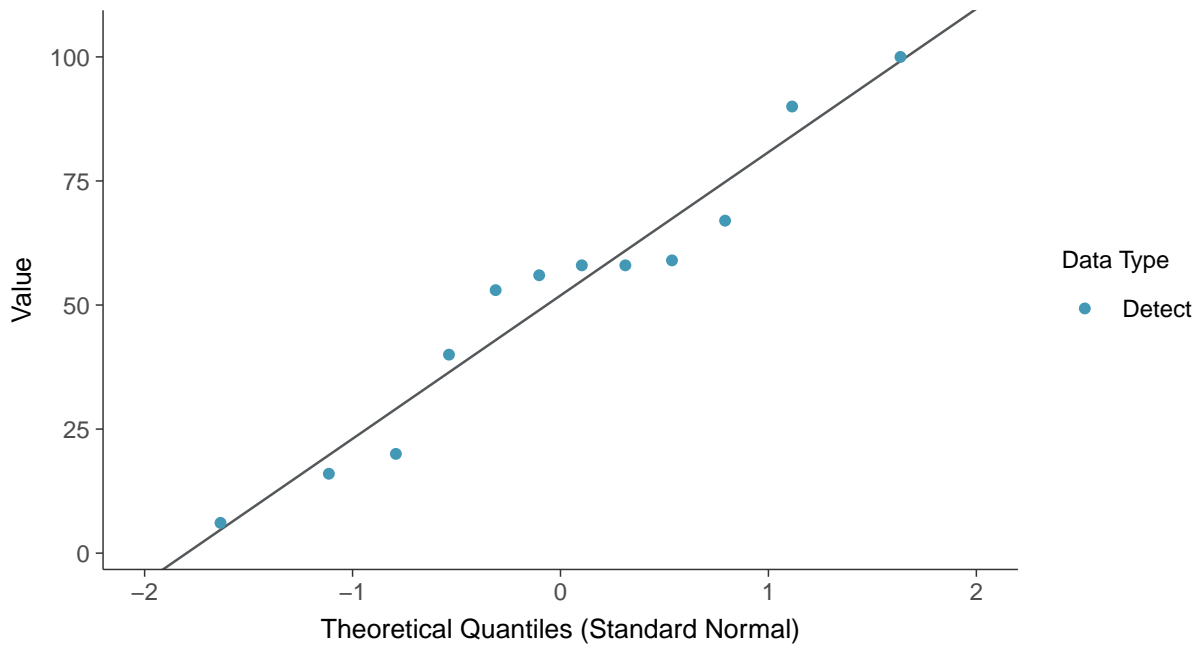






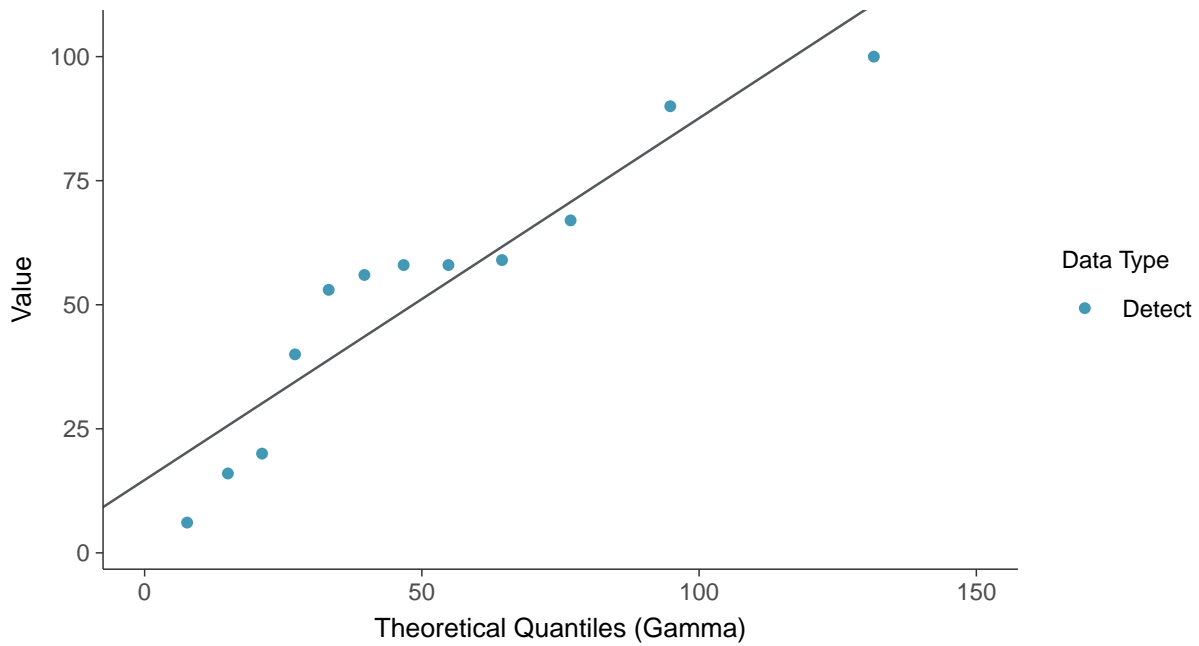
### Normal Q-Q plot

Total Suspended Solids, MW-02 (mg/L)



### Gamma Q-Q plot

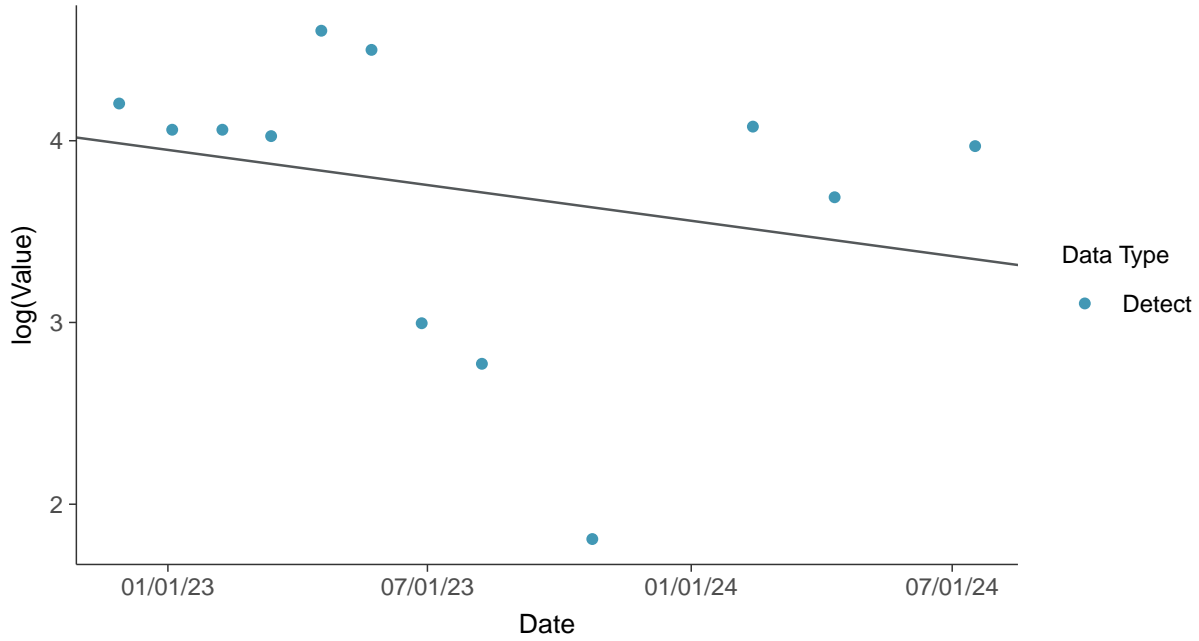
Total Suspended Solids, MW-02 (mg/L)





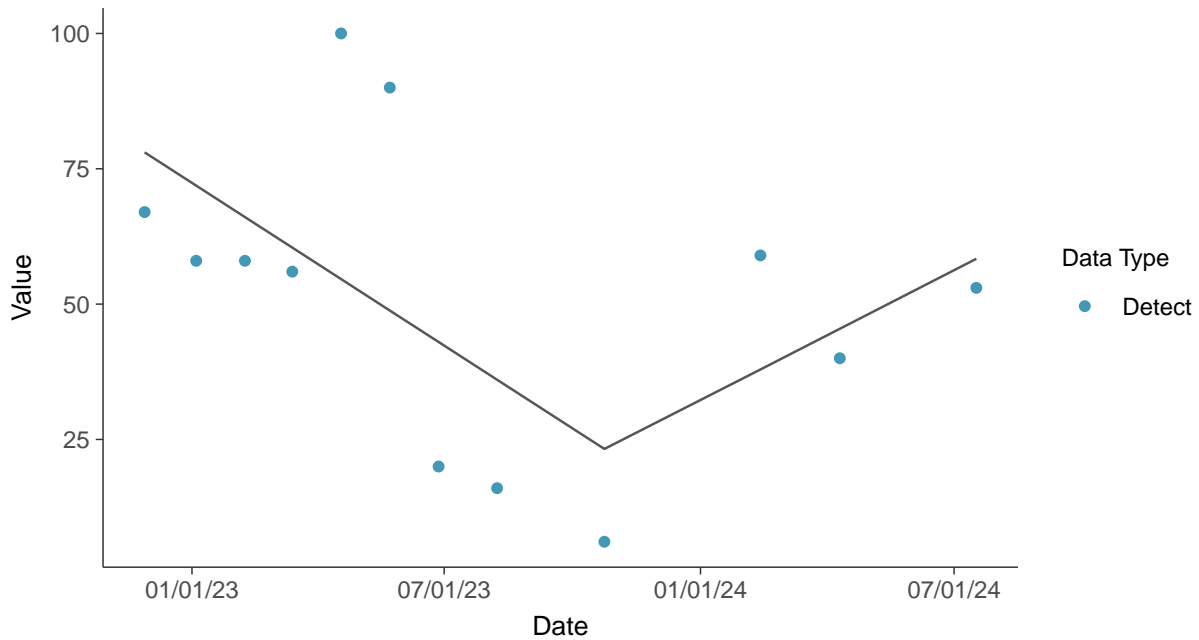
### Trend Regression: Lognormal MLE

Total Suspended Solids, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-02 (mg/L)



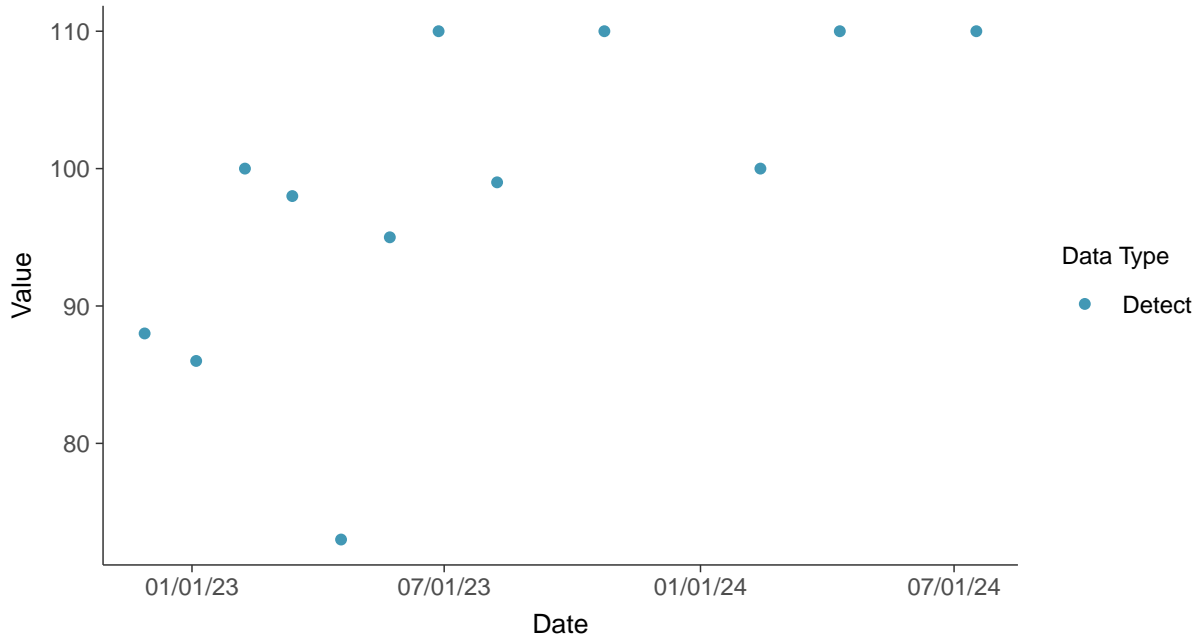


### Appendix III: Boron, MW-02

ID: 12\_2\_4\_105

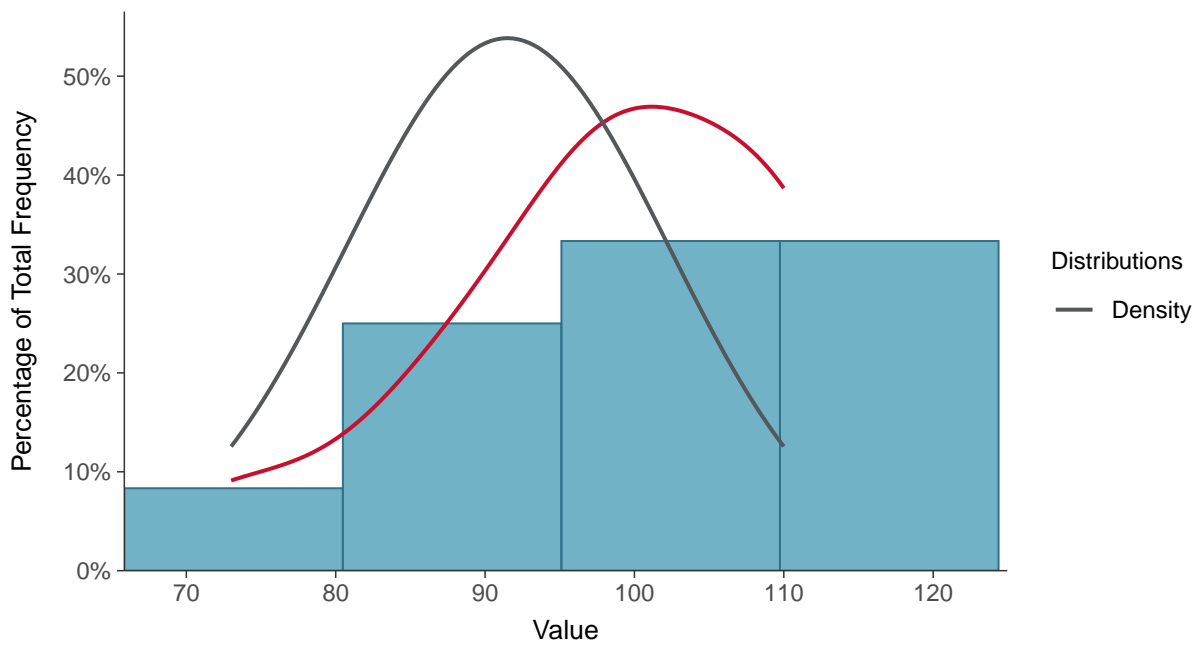
#### Scatter Plot

Boron, MW-02 (mg/L)



#### Histogram

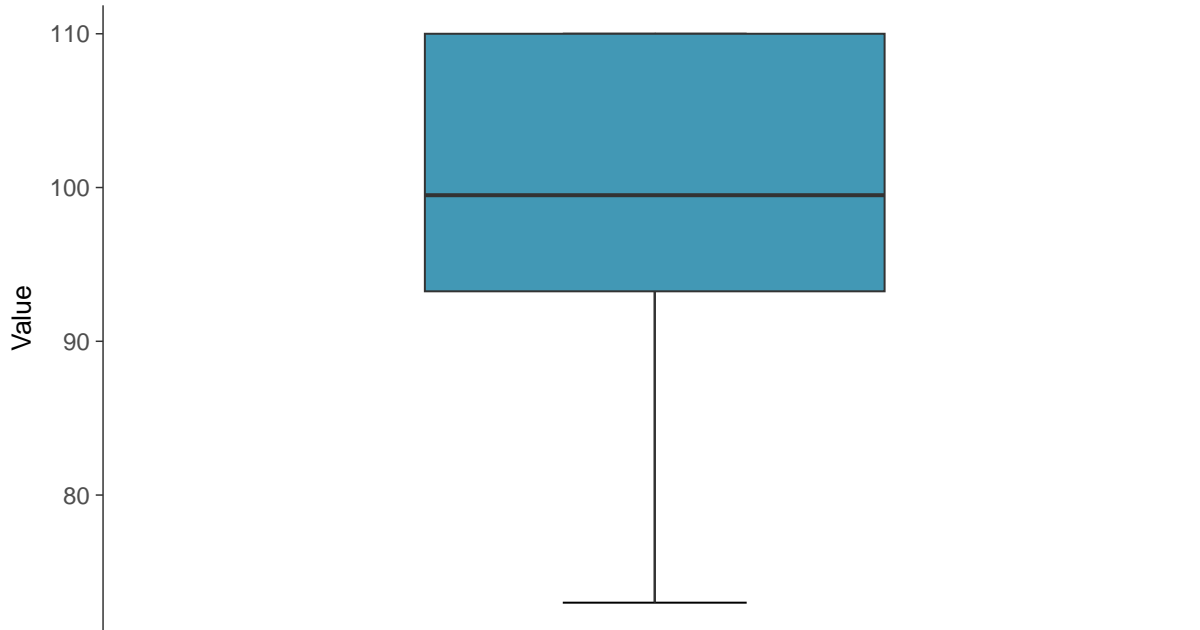
Boron, MW-02 (mg/L)





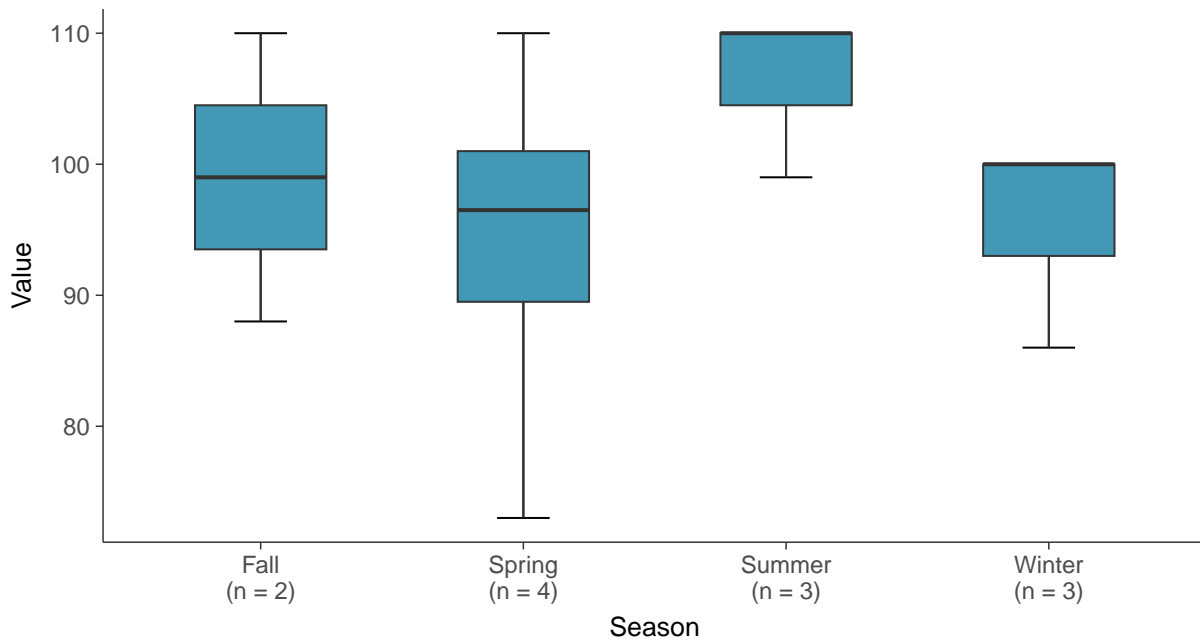
### Boxplot

Boron, MW-02 (mg/L)



### Boxplot by Season

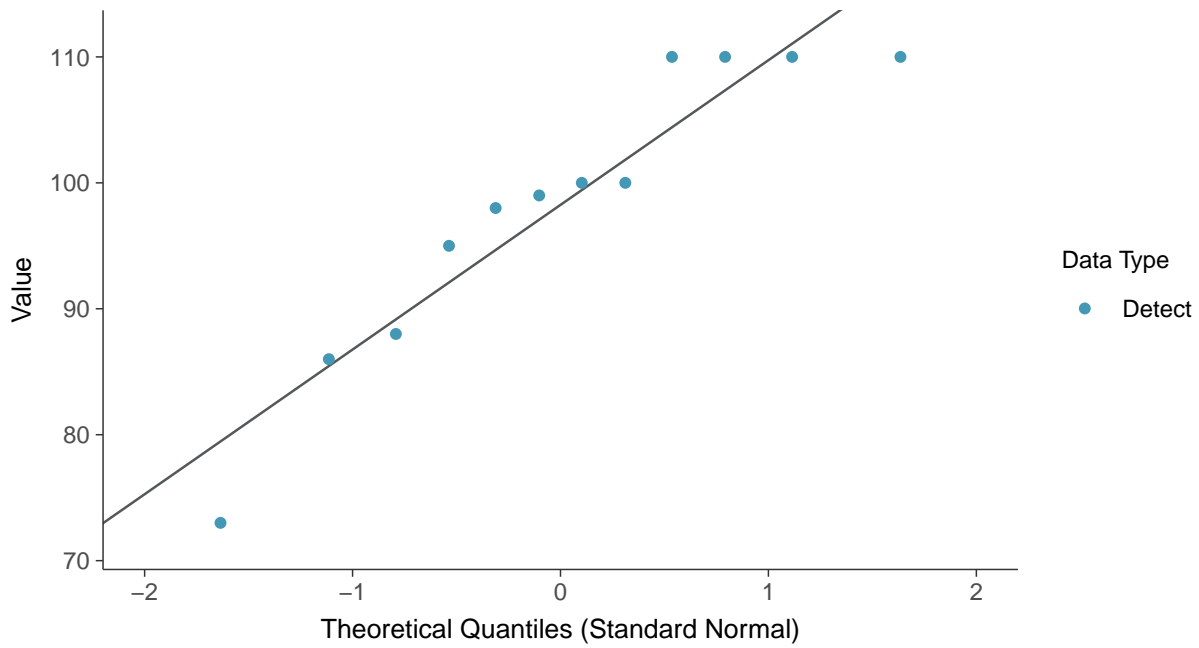
Boron, MW-02 (mg/L)





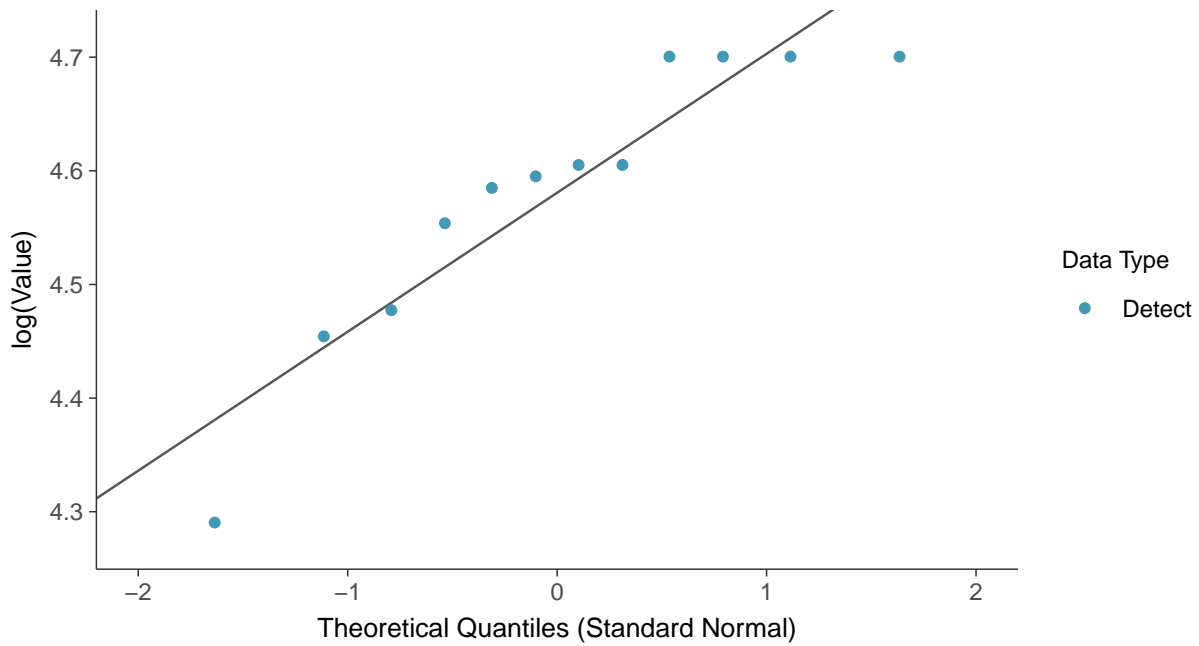
### Normal Q-Q plot

Boron, MW-02 (mg/L)



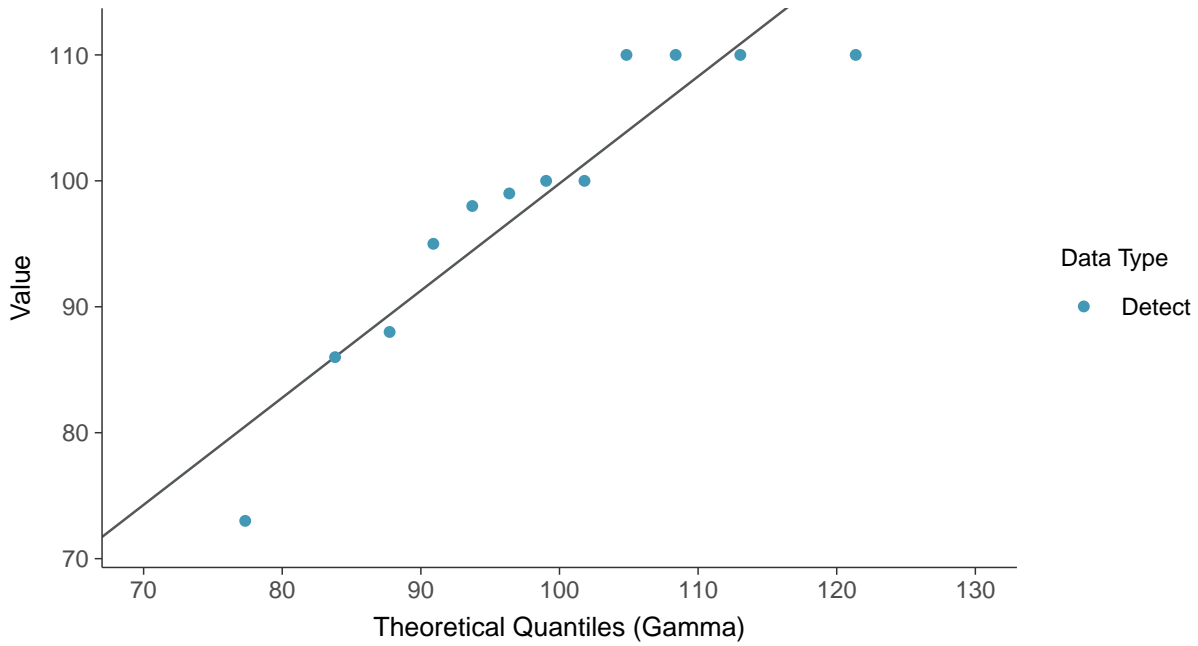
### Lognormal Q-Q plot

Boron, MW-02 (mg/L)

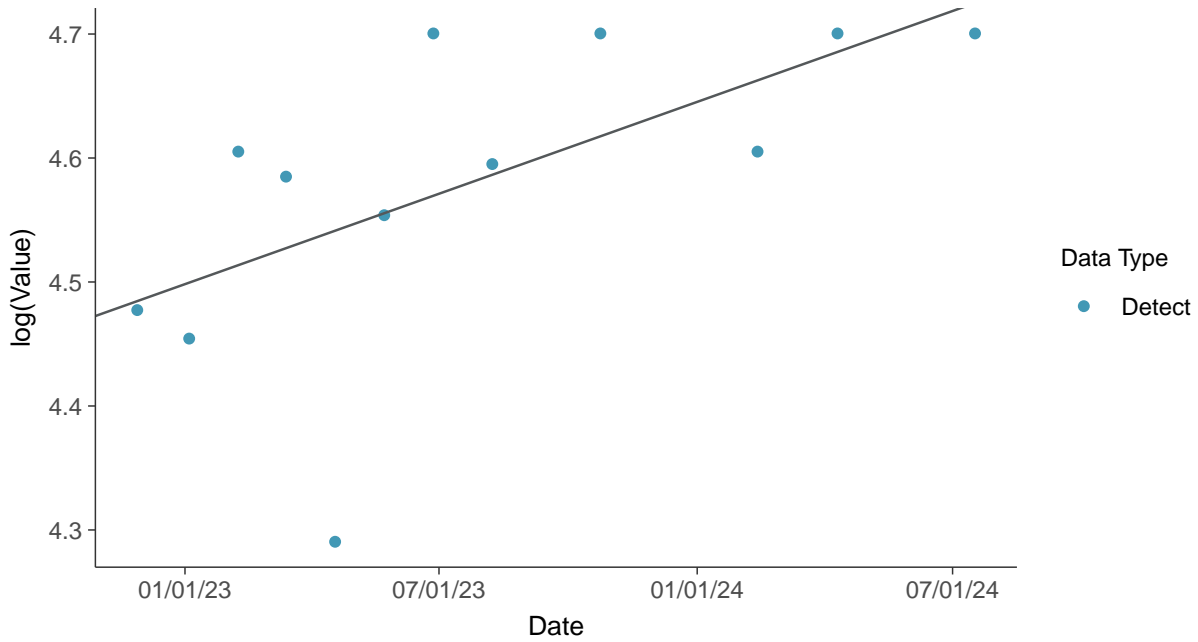




**Gamma Q-Q plot**  
Boron, MW-02 (mg/L)



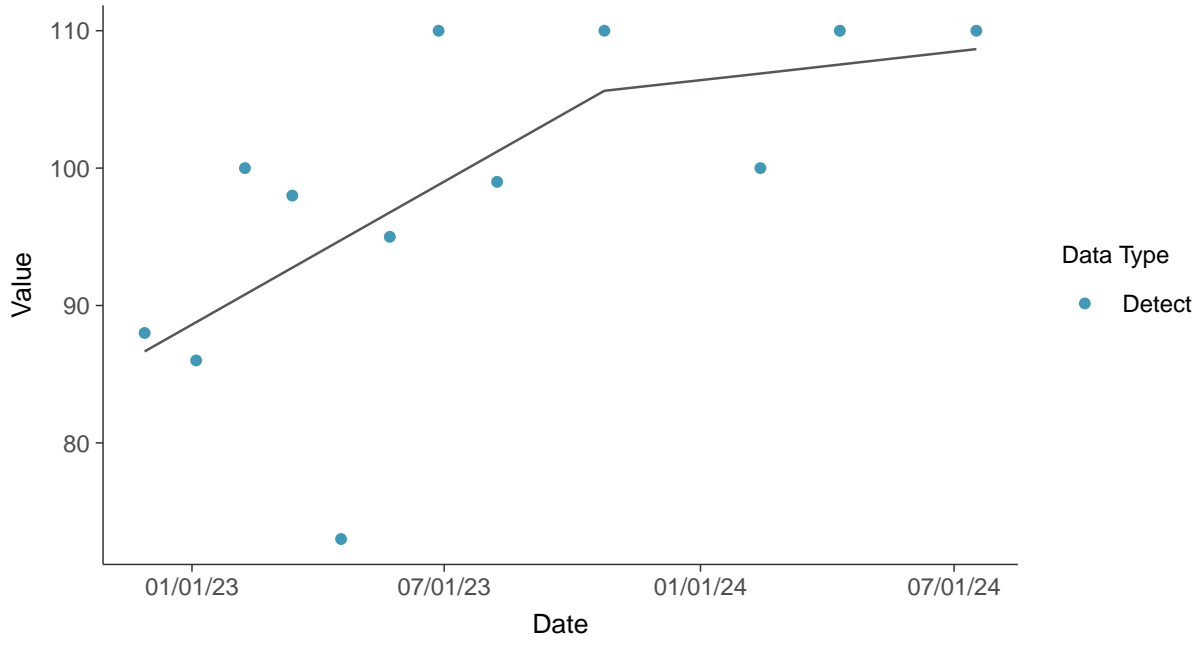
**Trend Regression: Lognormal MLE**  
Boron, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Boron, MW-02 (mg/L)



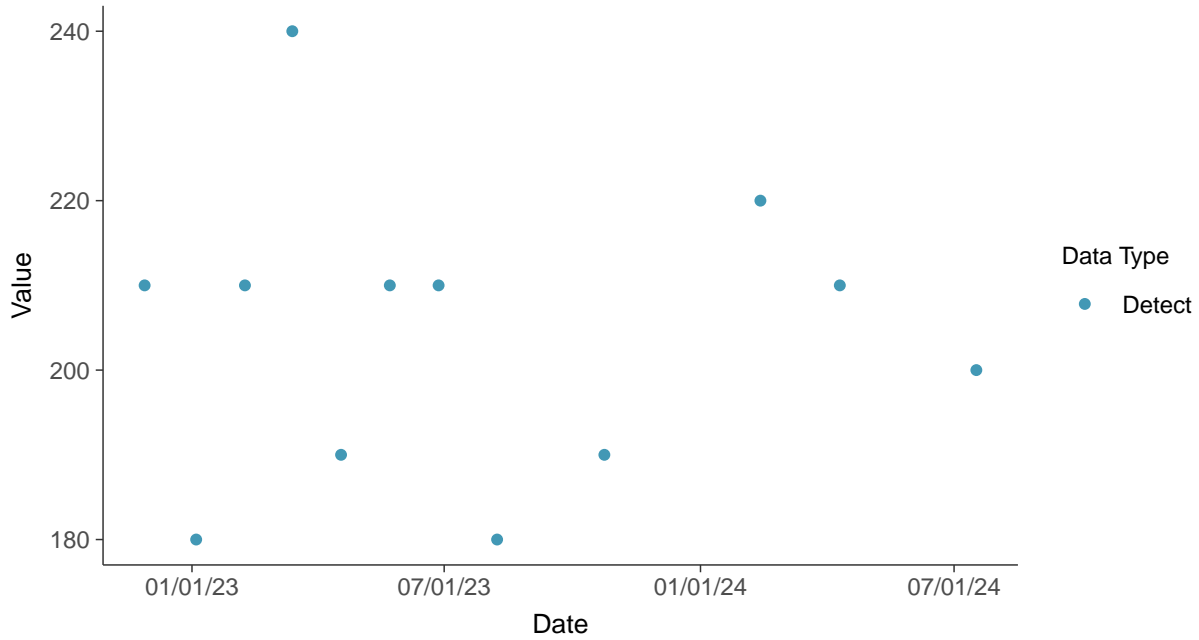


### Appendix III: Calcium, MW-02

ID: 12\_2\_4\_107

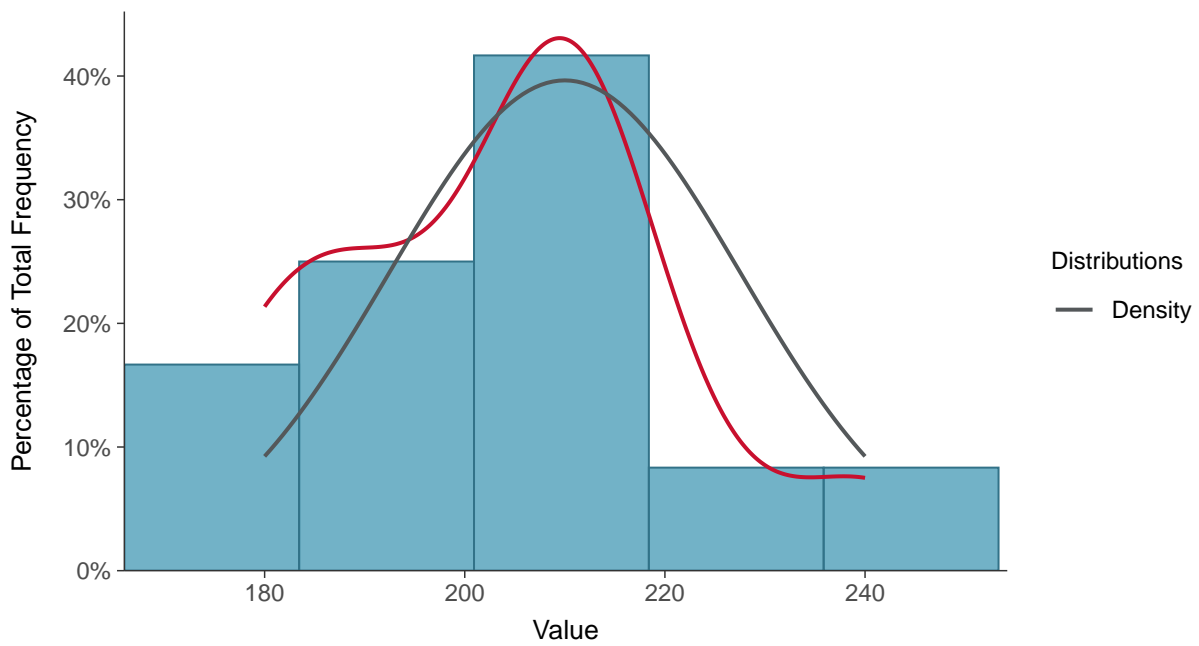
#### Scatter Plot

Calcium, MW-02 (mg/L)



#### Histogram

Calcium, MW-02 (mg/L)

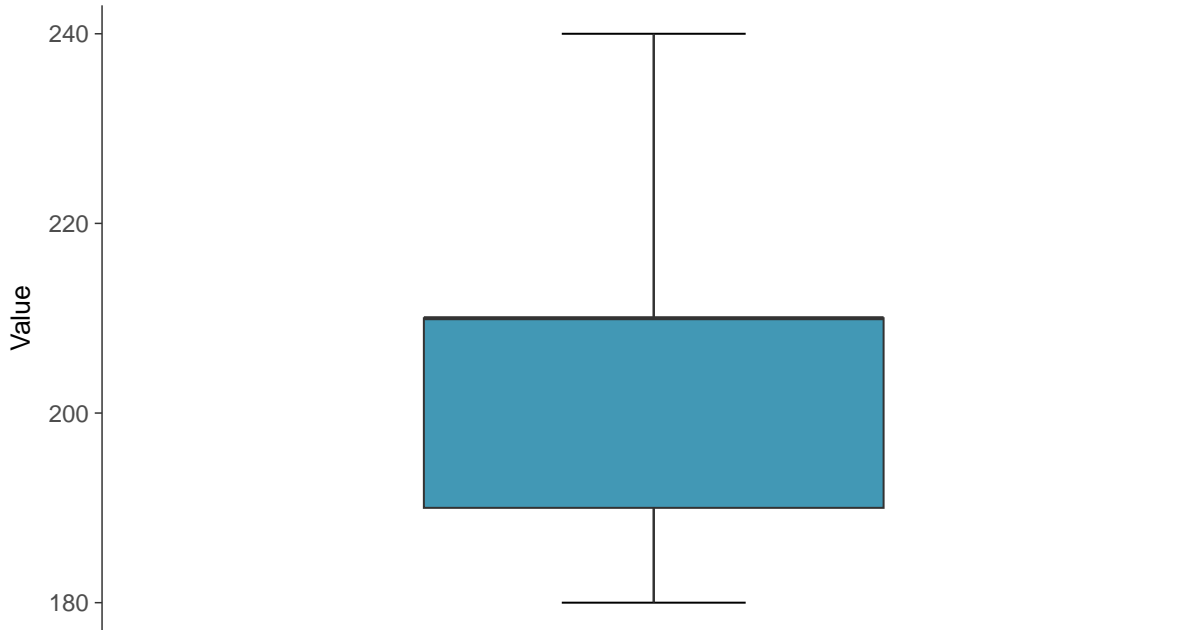






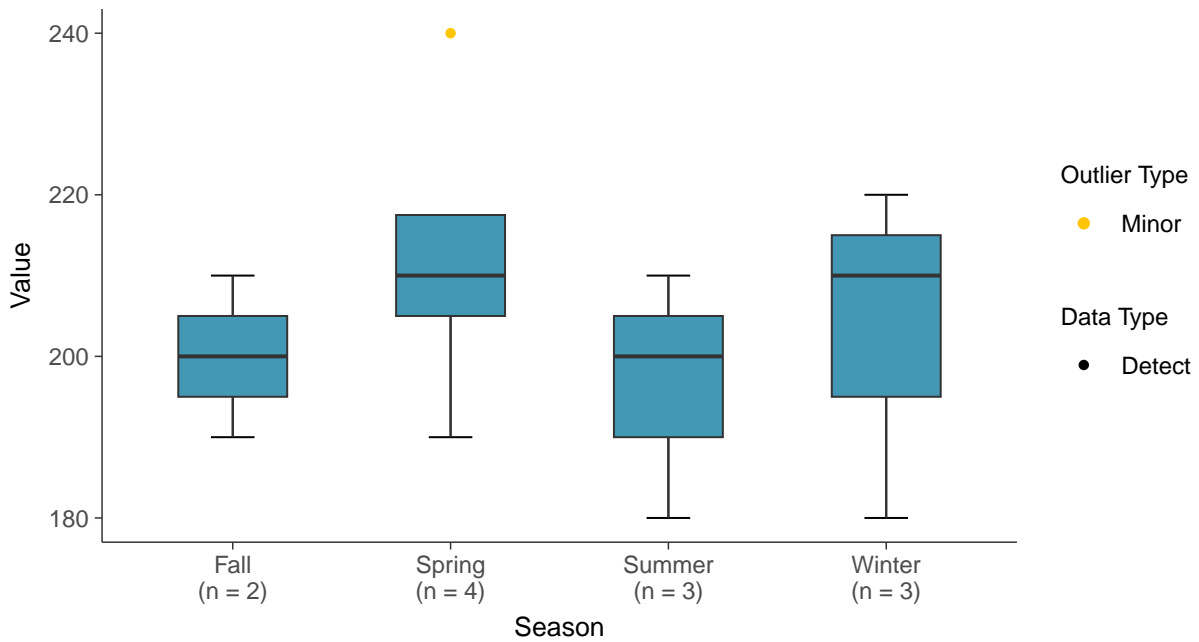
### Boxplot

Calcium, MW-02 (mg/L)



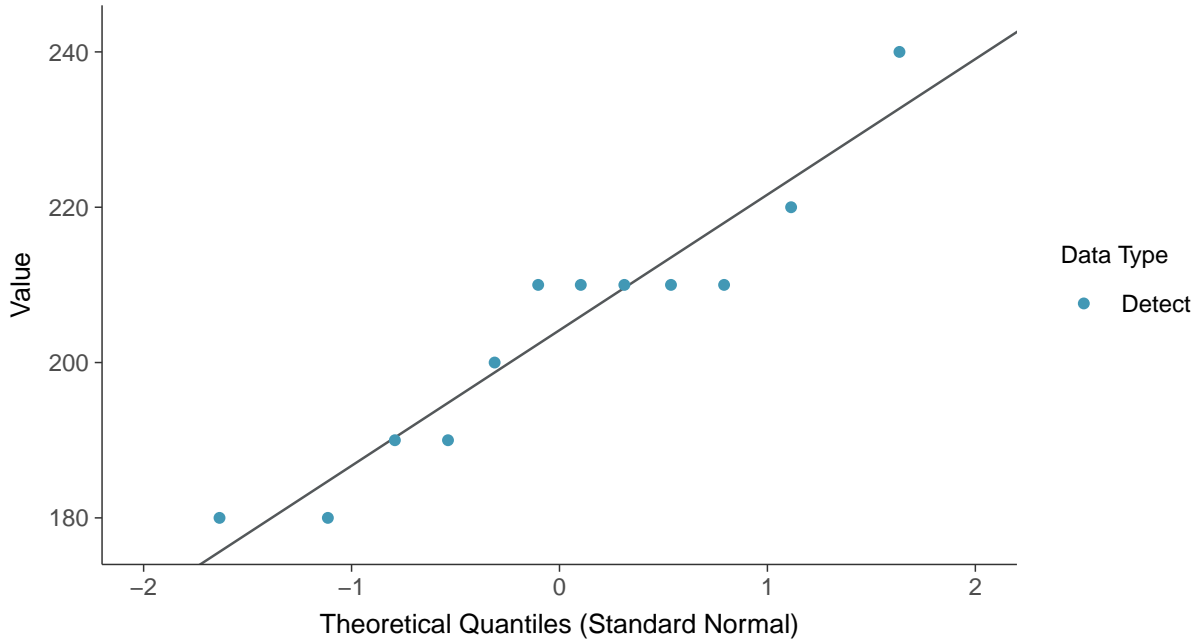
### Boxplot by Season

Calcium, MW-02 (mg/L)

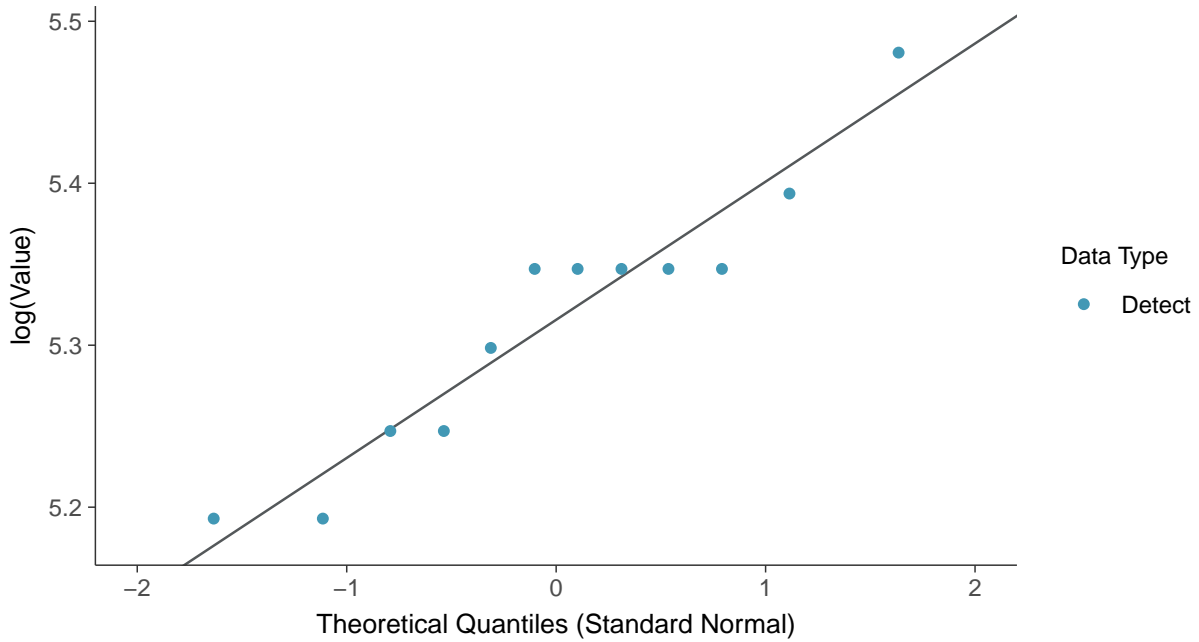




**Normal Q-Q plot**  
Calcium, MW-02 (mg/L)

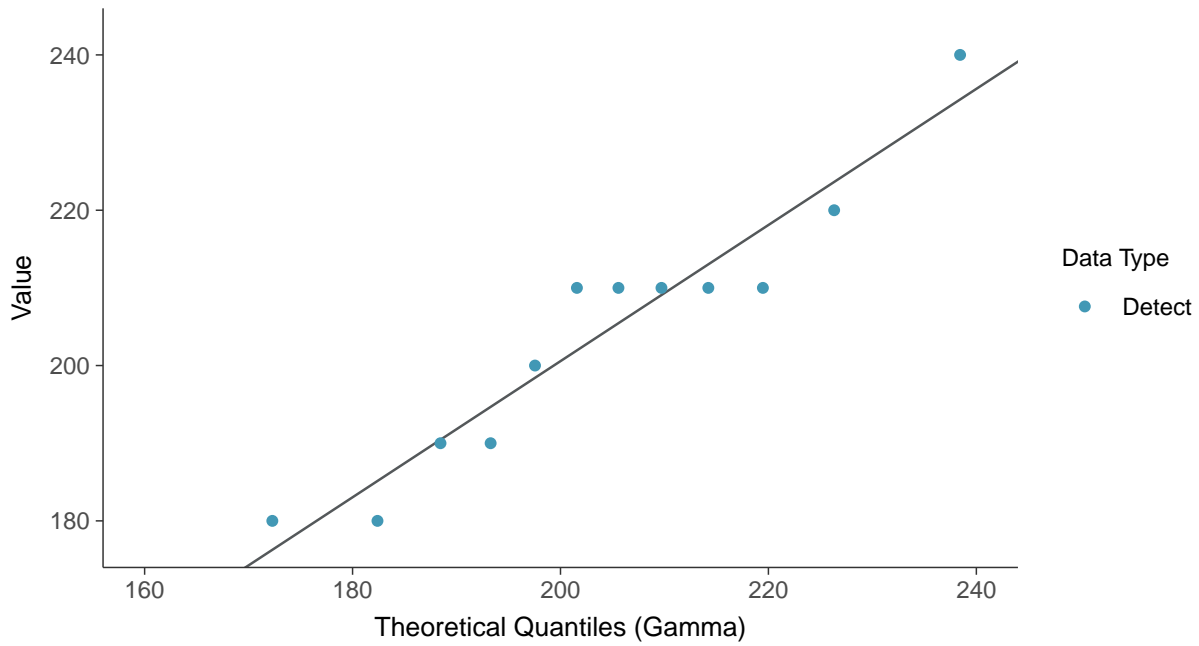


**Lognormal Q-Q plot**  
Calcium, MW-02 (mg/L)

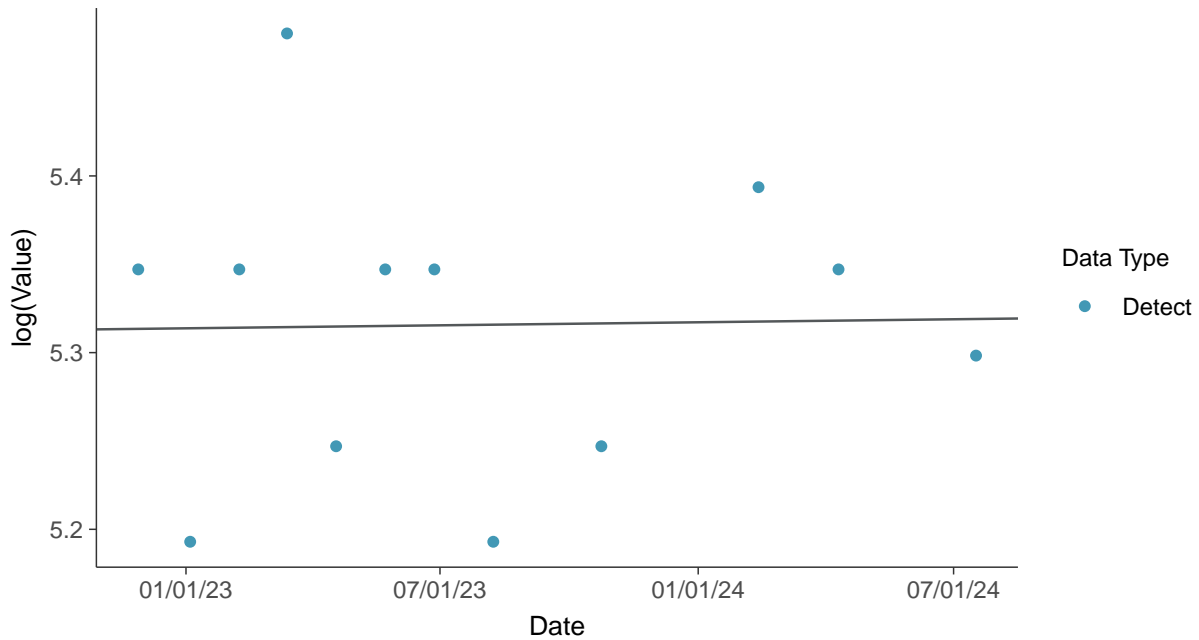




**Gamma Q-Q plot**  
Calcium, MW-02 (mg/L)



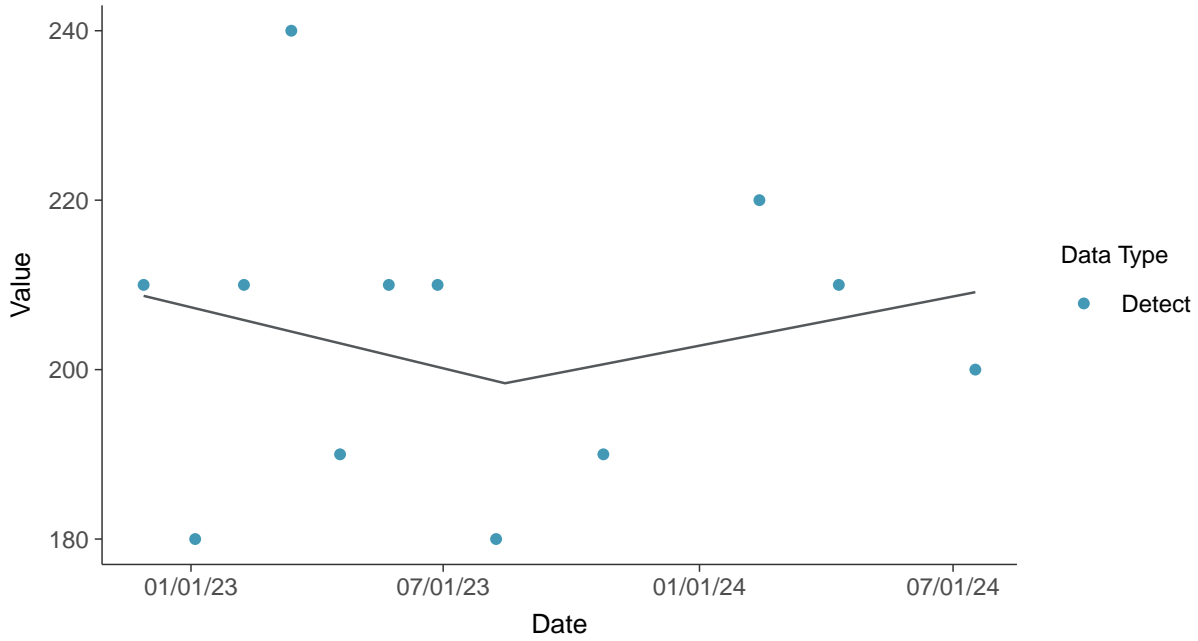
**Trend Regression: Lognormal MLE**  
Calcium, MW-02 (mg/L)





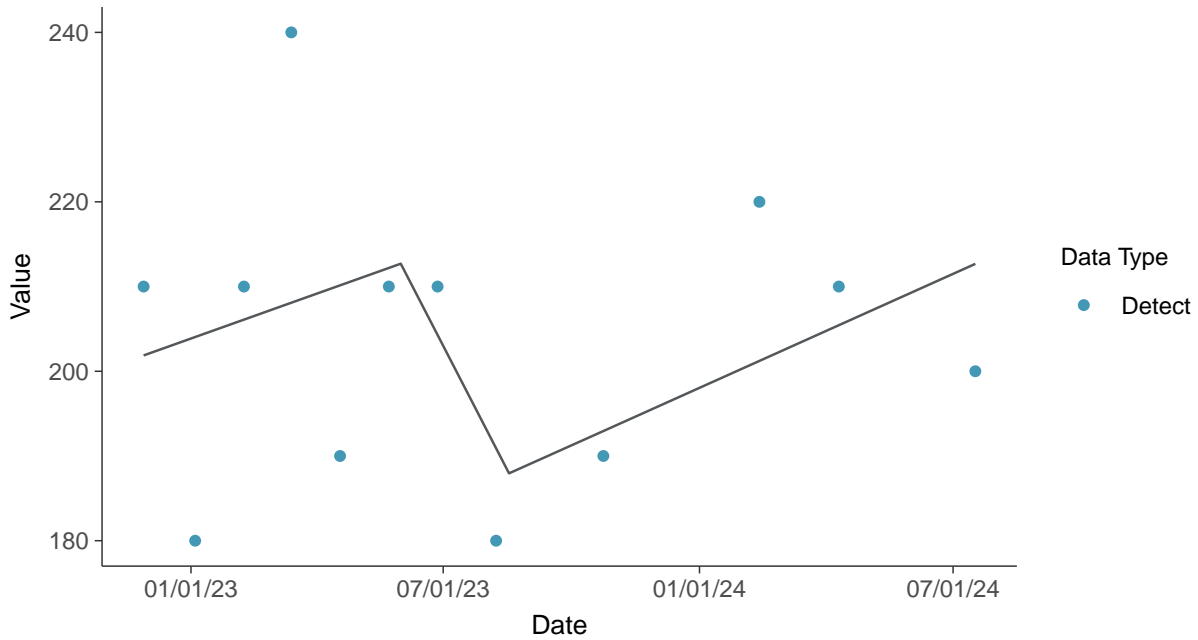
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-02 (mg/L)



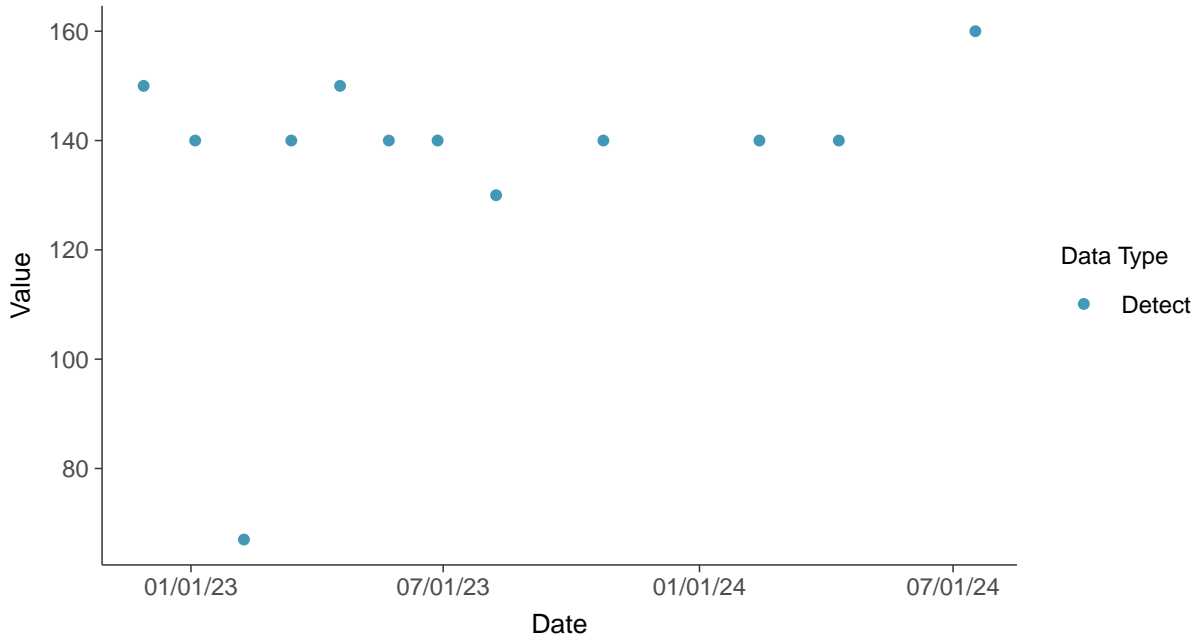


### Appendix III: Chloride (as Cl), MW-02

ID: 12\_2\_4\_108

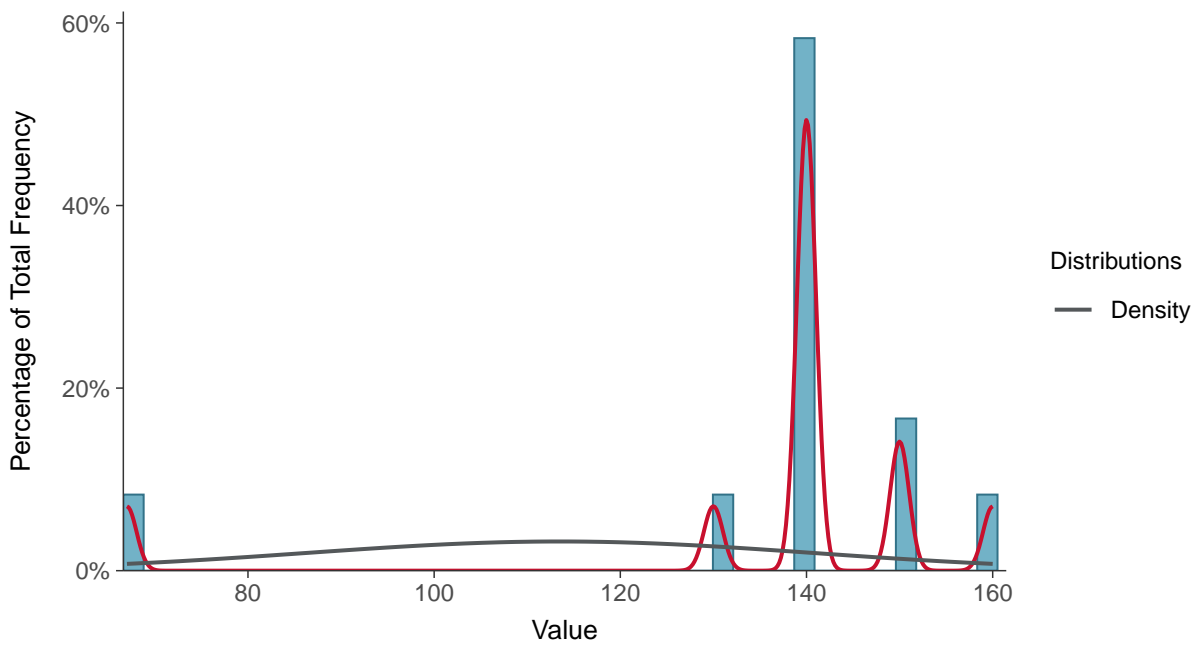
#### Scatter Plot

Chloride (as Cl), MW-02 (mg/L)



#### Histogram

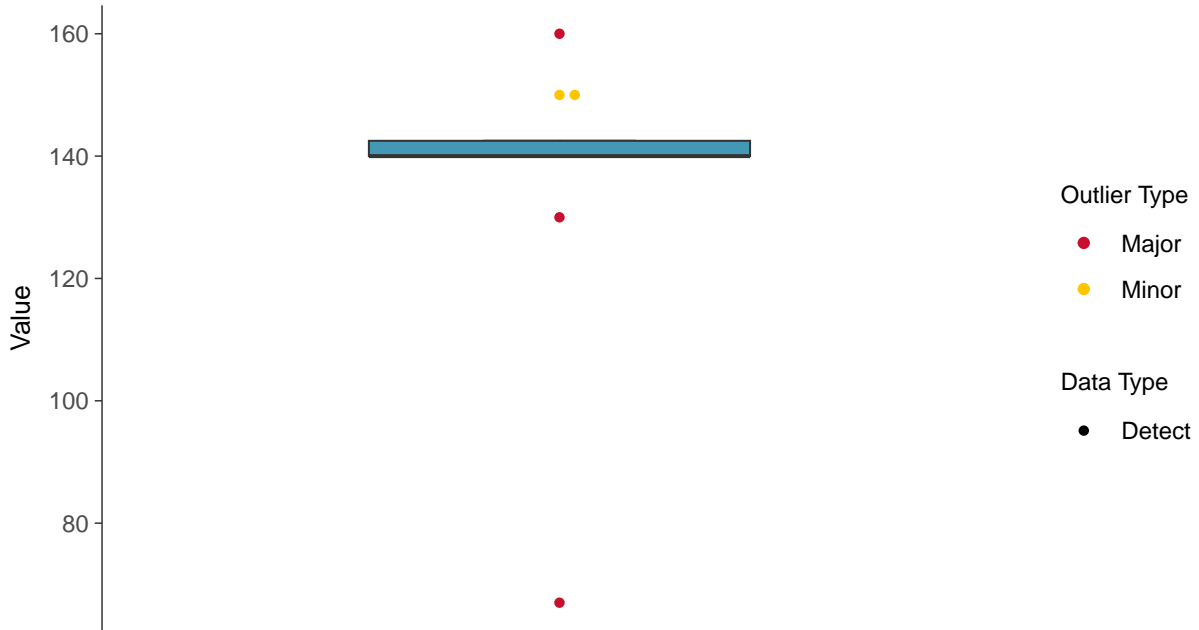
Chloride (as Cl), MW-02 (mg/L)





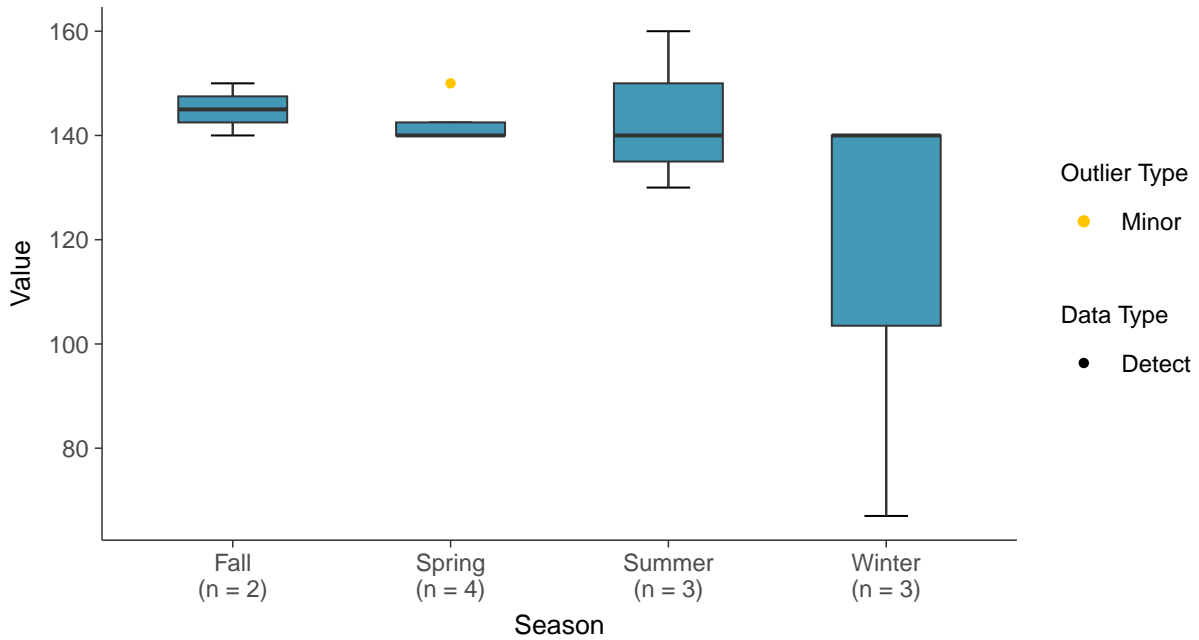
### Boxplot

Chloride (as Cl), MW-02 (mg/L)



### Boxplot by Season

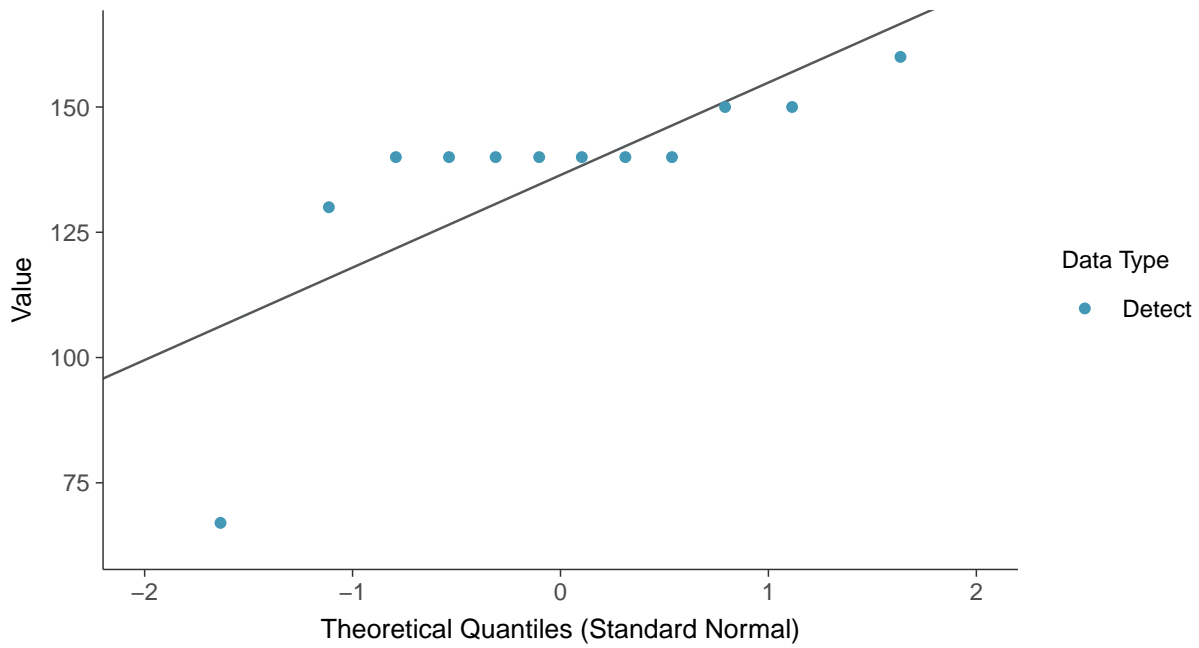
Chloride (as Cl), MW-02 (mg/L)





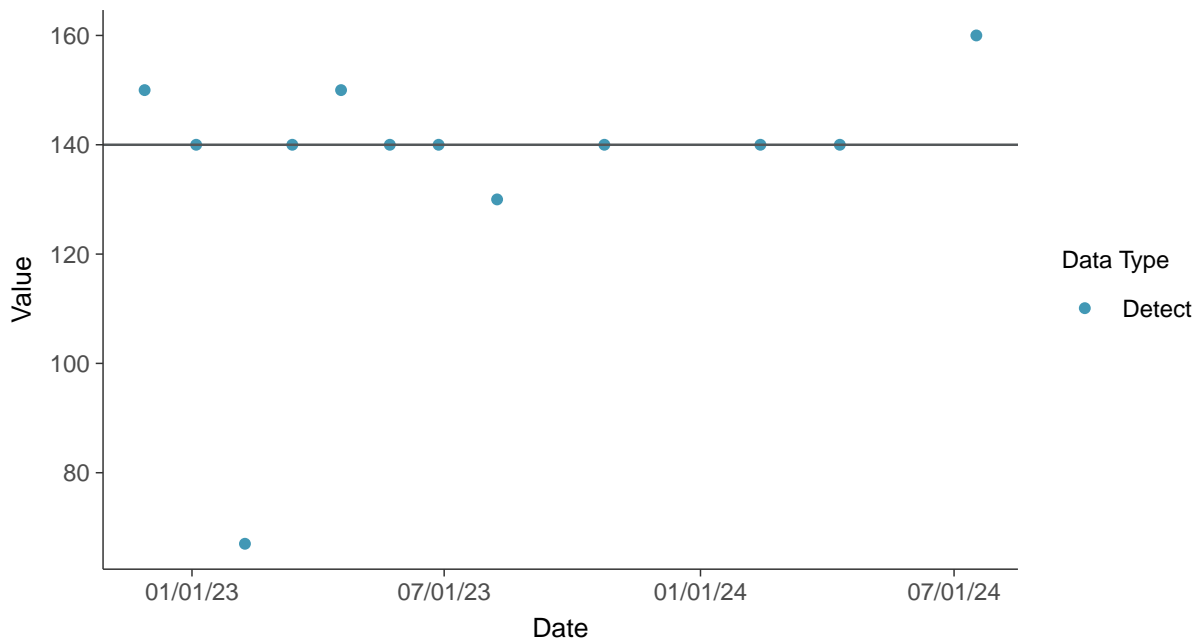
### Normal Q-Q plot

Chloride (as Cl), MW-02 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

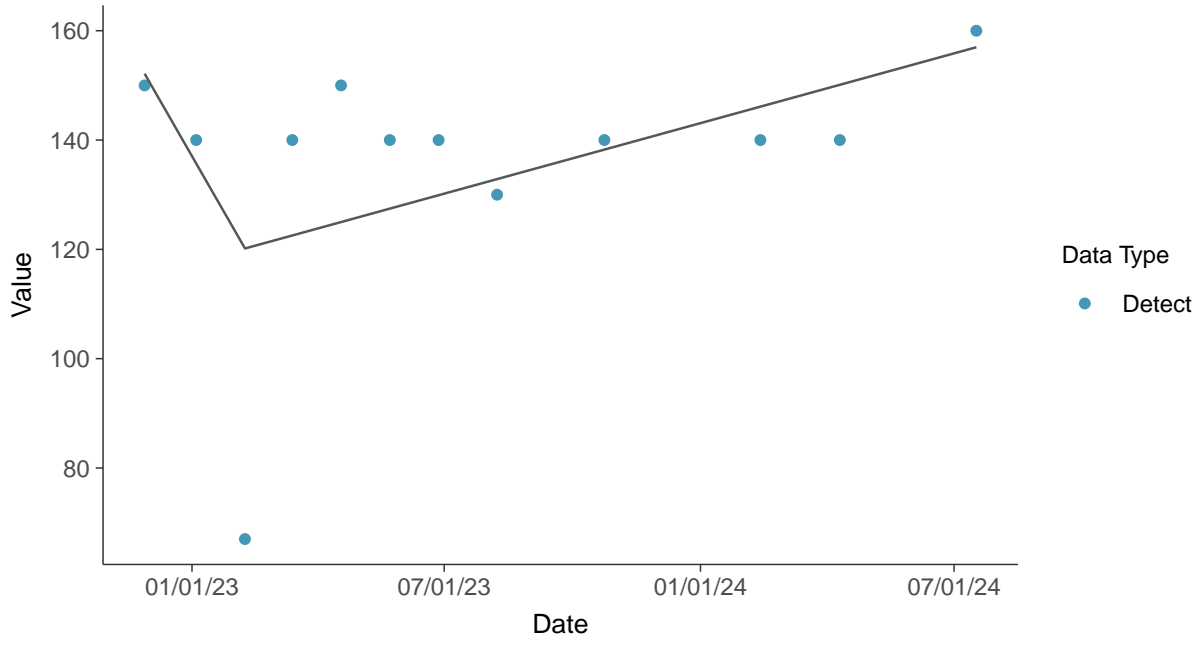
Chloride (as Cl), MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-02 (mg/L)





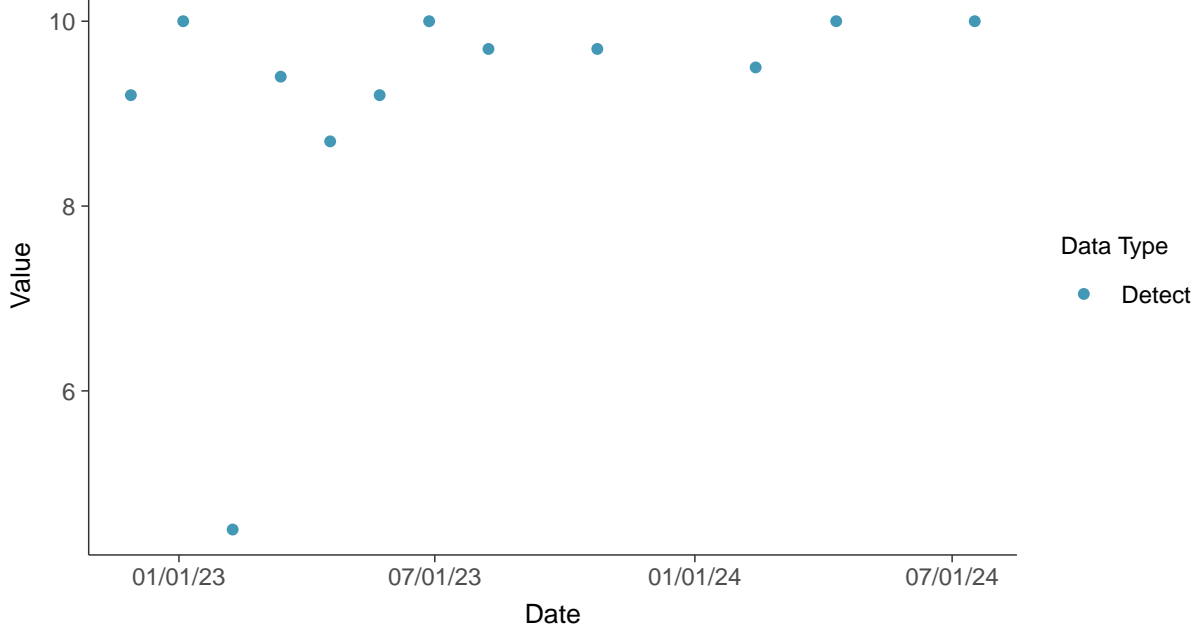


### Appendix III: Fluoride, MW-02

ID: 12\_2\_4\_112

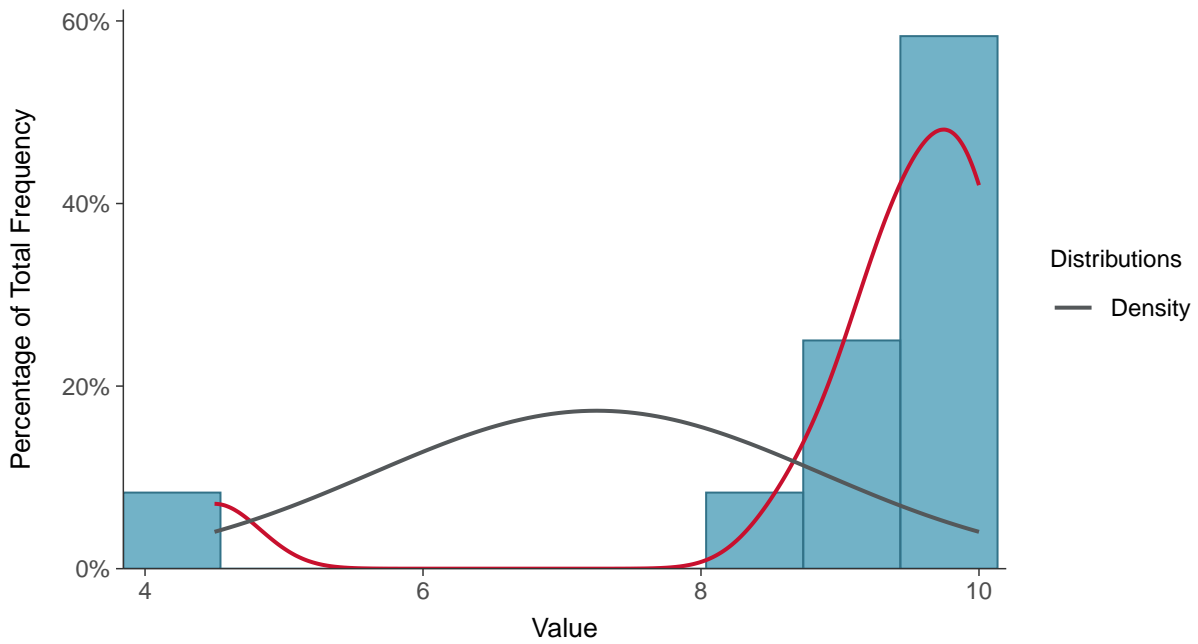
#### Scatter Plot

Fluoride, MW-02 (mg/L)



#### Histogram

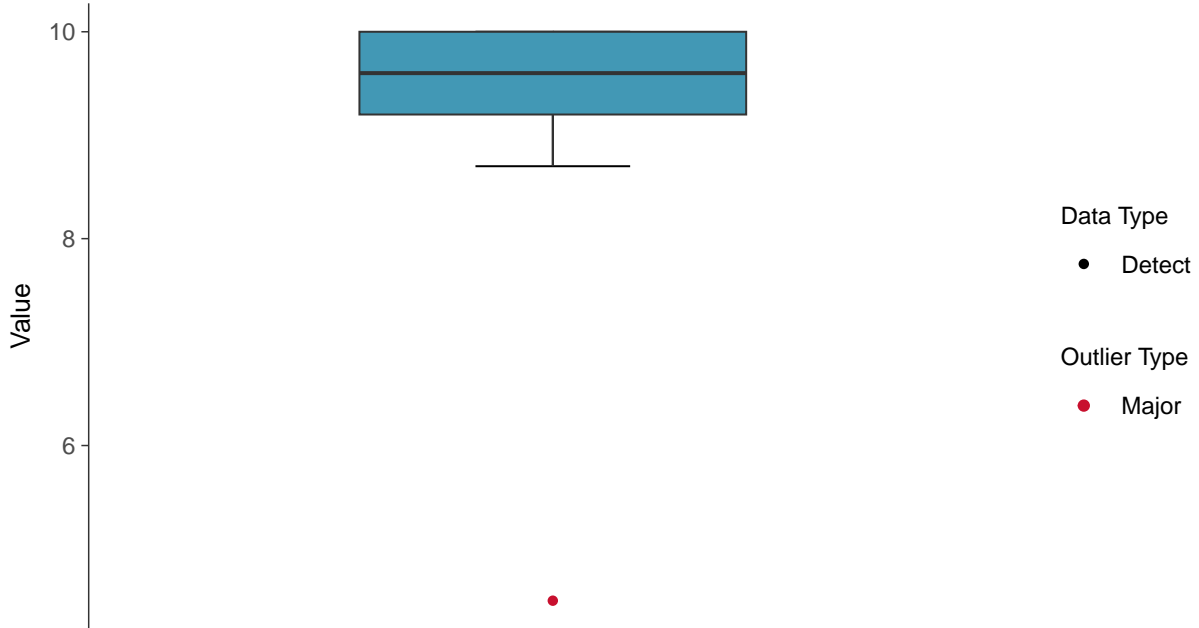
Fluoride, MW-02 (mg/L)





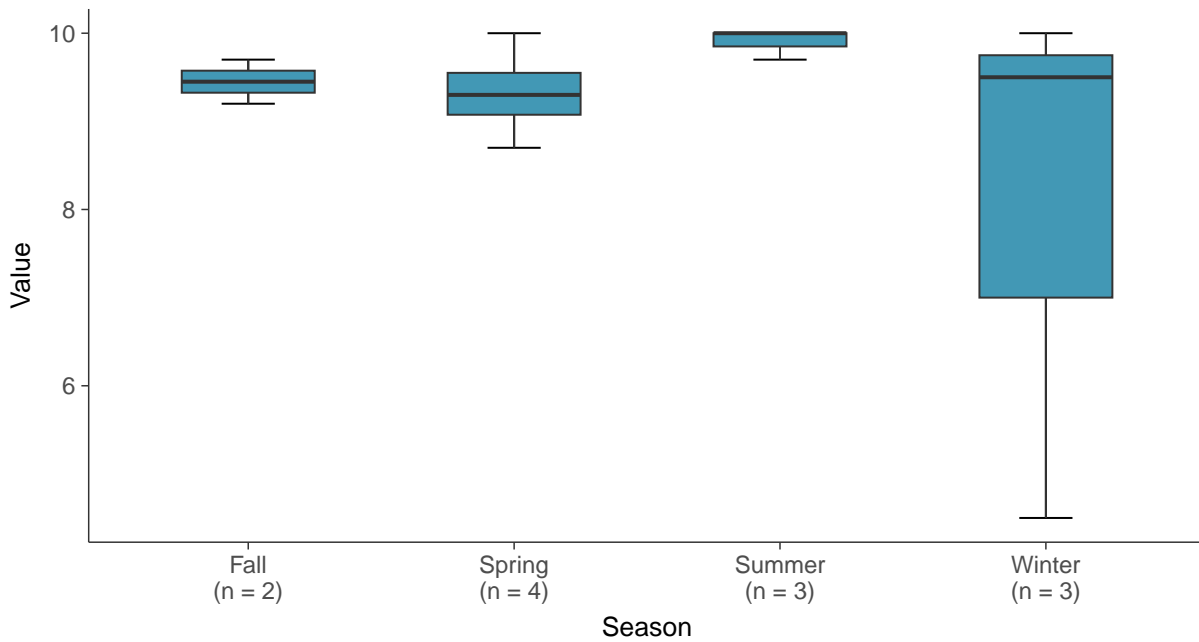
### Boxplot

Fluoride, MW-02 (mg/L)



### Boxplot by Season

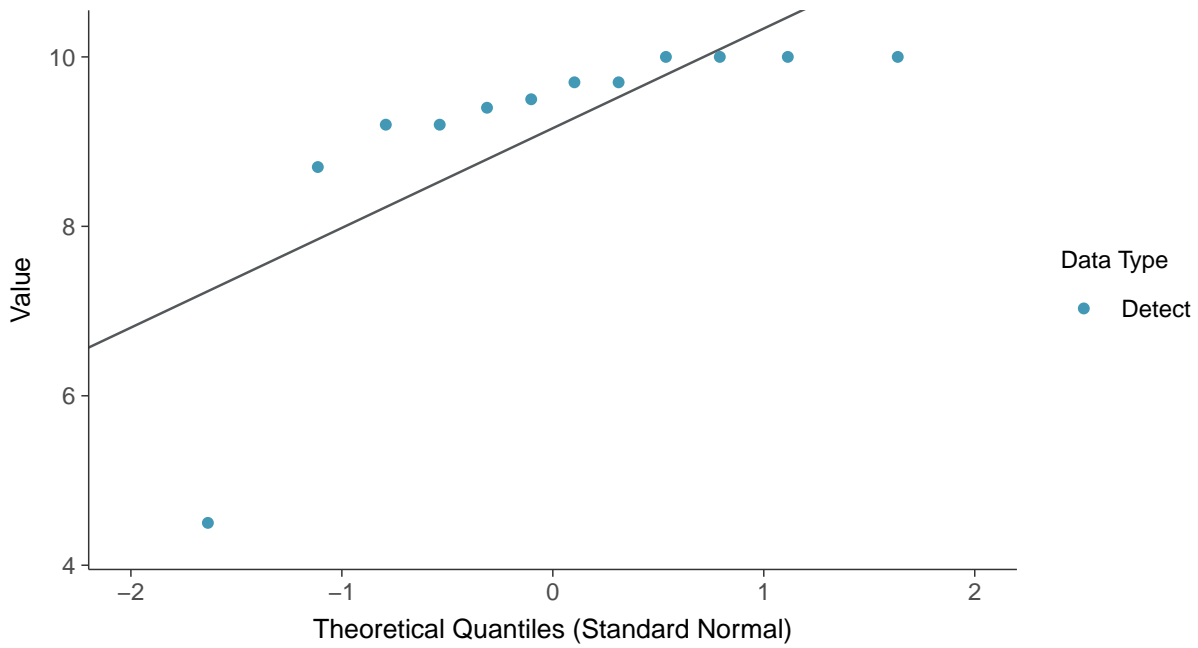
Fluoride, MW-02 (mg/L)





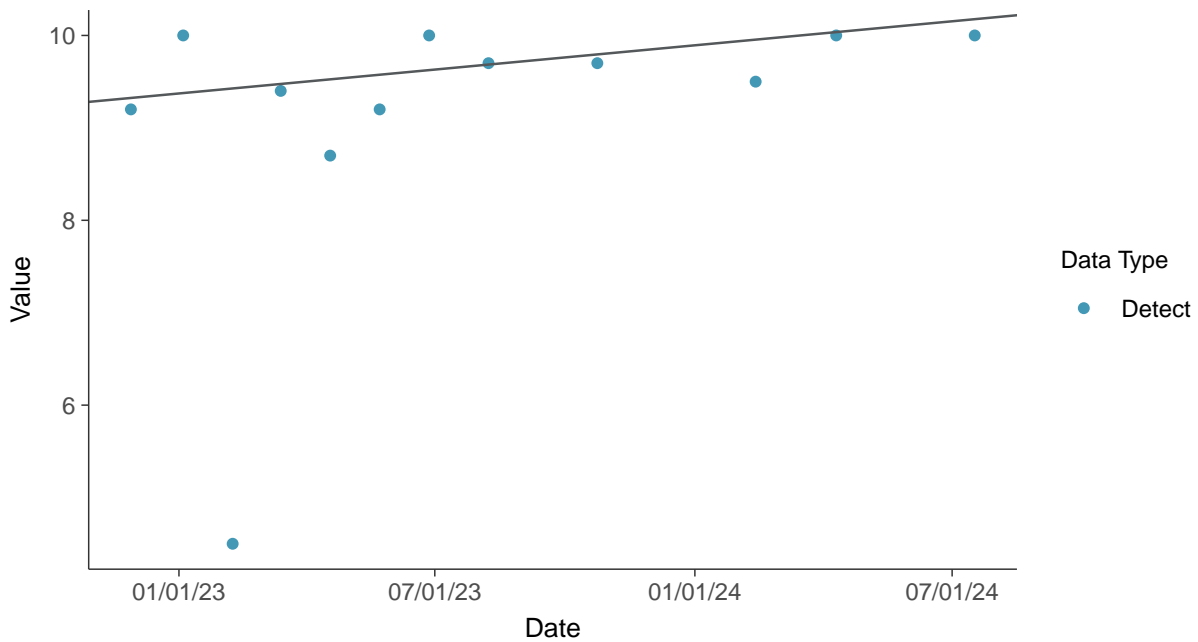
### Normal Q-Q plot

Fluoride, MW-02 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

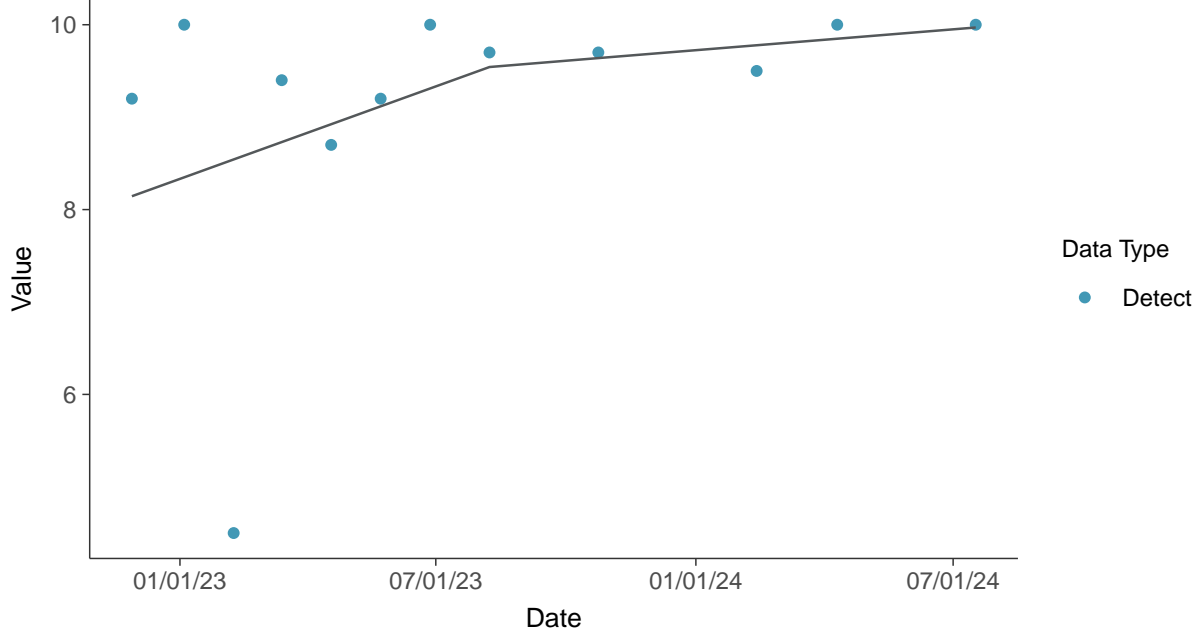
Fluoride, MW-02 (mg/L)





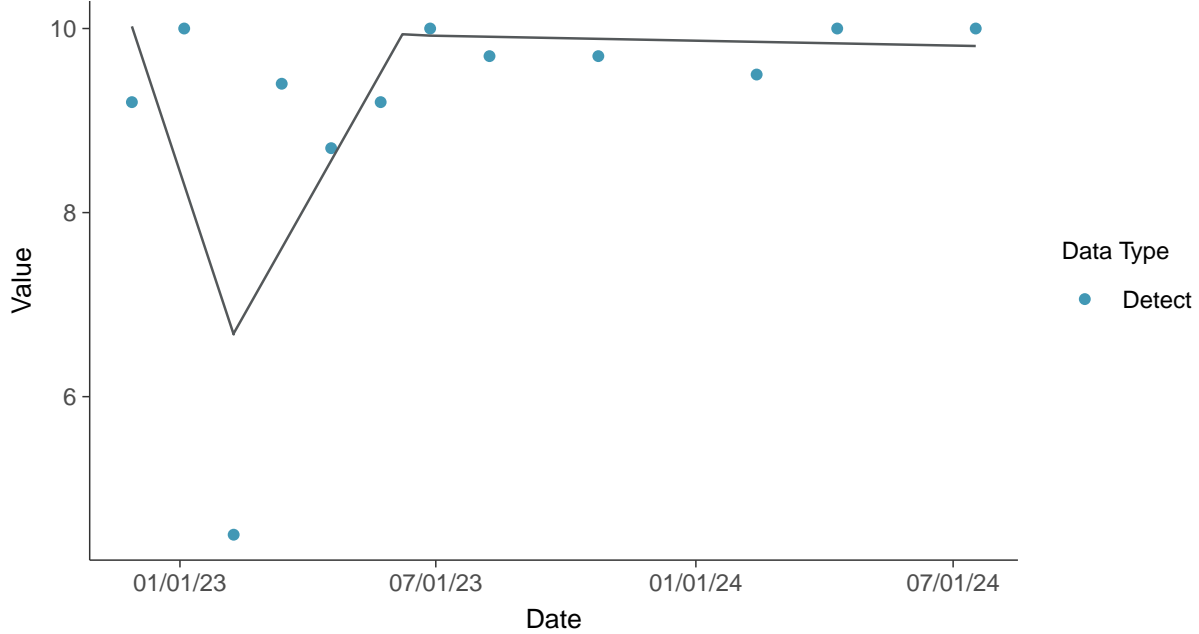
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-02 (mg/L)



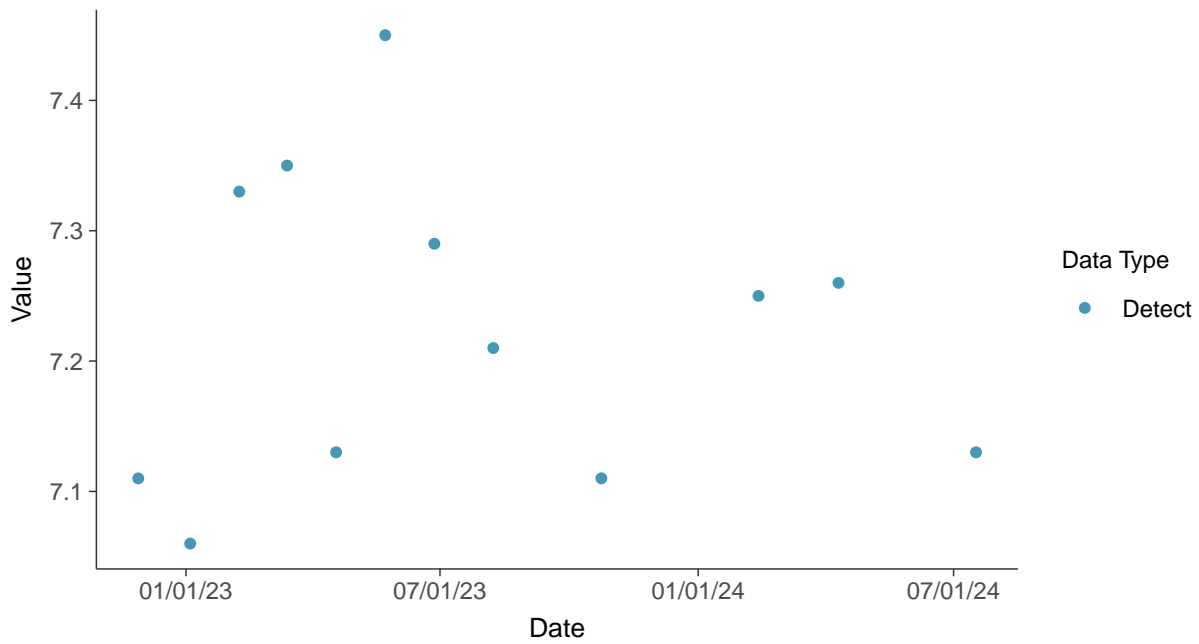


### Appendix III: pH (field), MW-02

ID: 12\_2\_4\_120

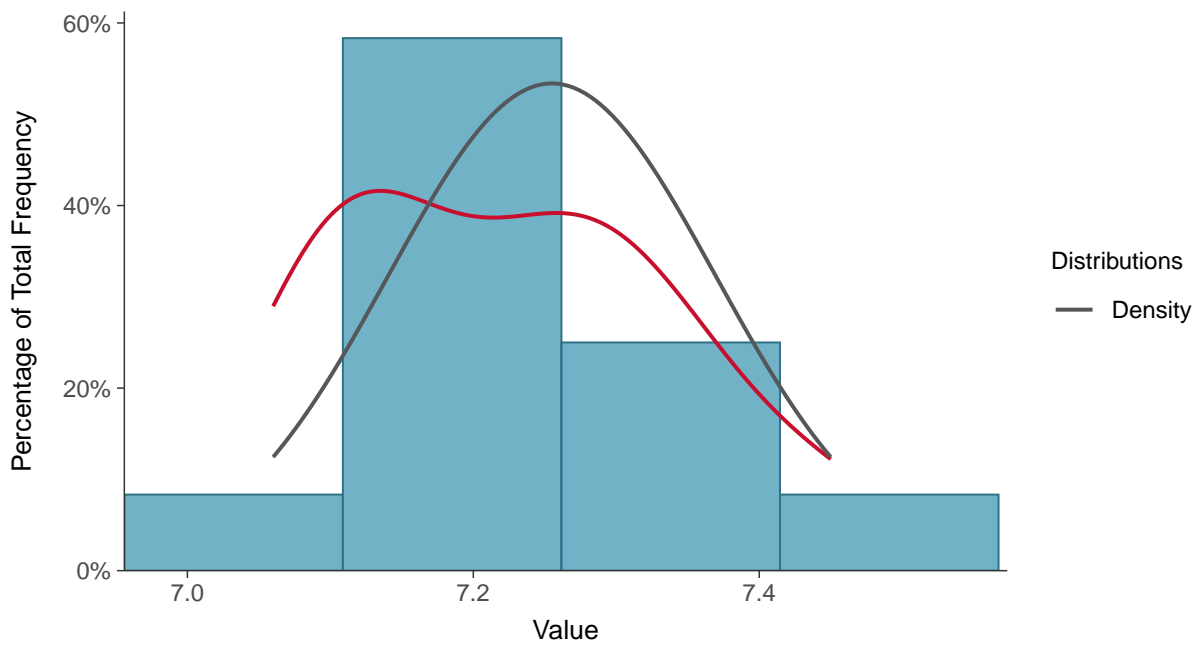
#### Scatter Plot

pH (field), MW-02 (su)



#### Histogram

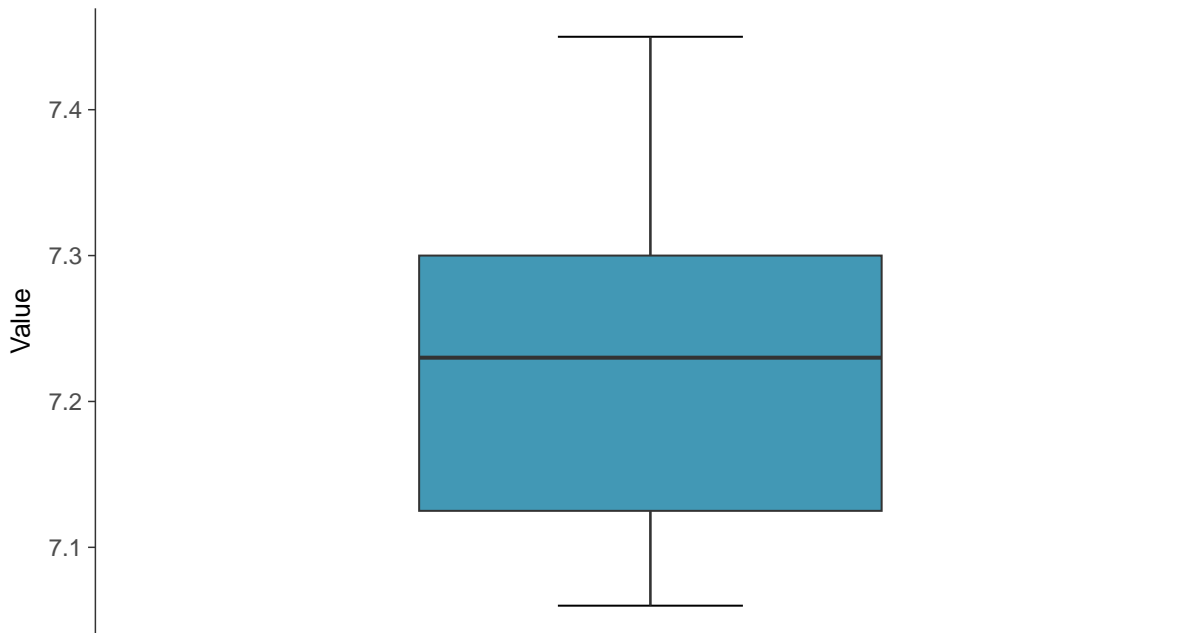
pH (field), MW-02 (su)





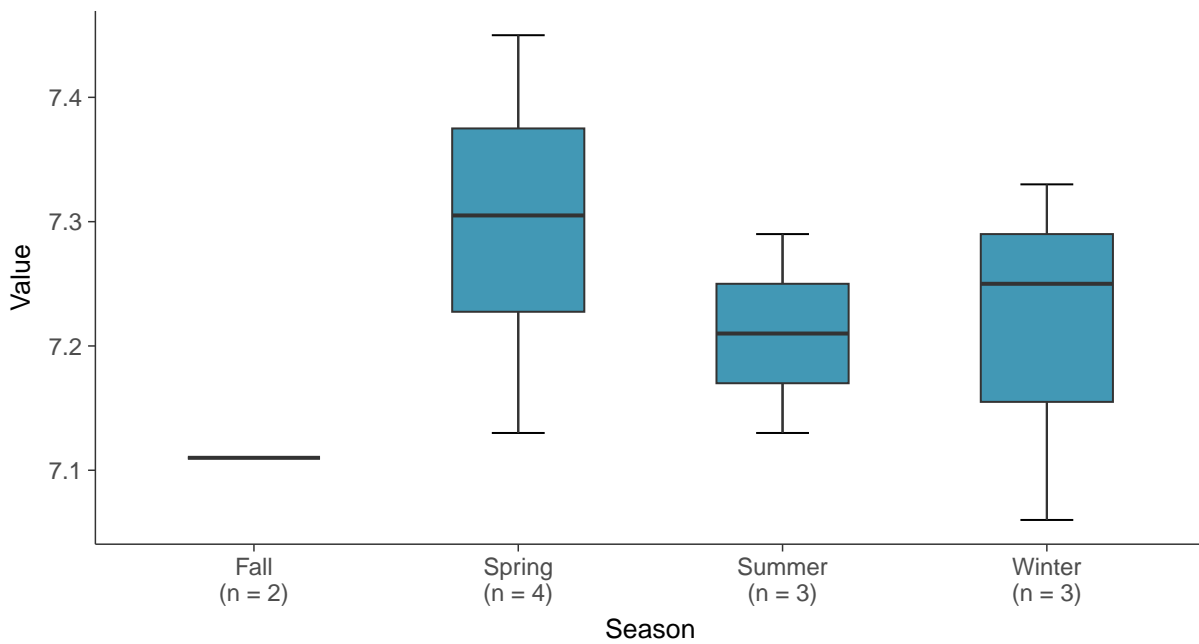
### Boxplot

pH (field), MW-02 (su)



### Boxplot by Season

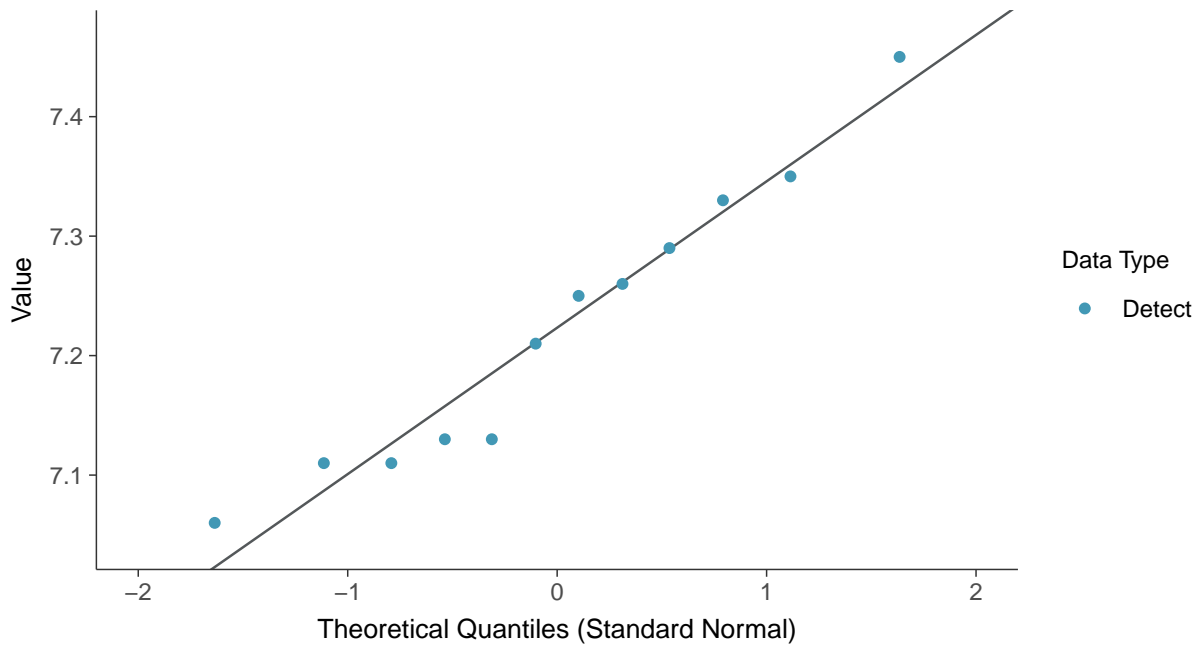
pH (field), MW-02 (su)





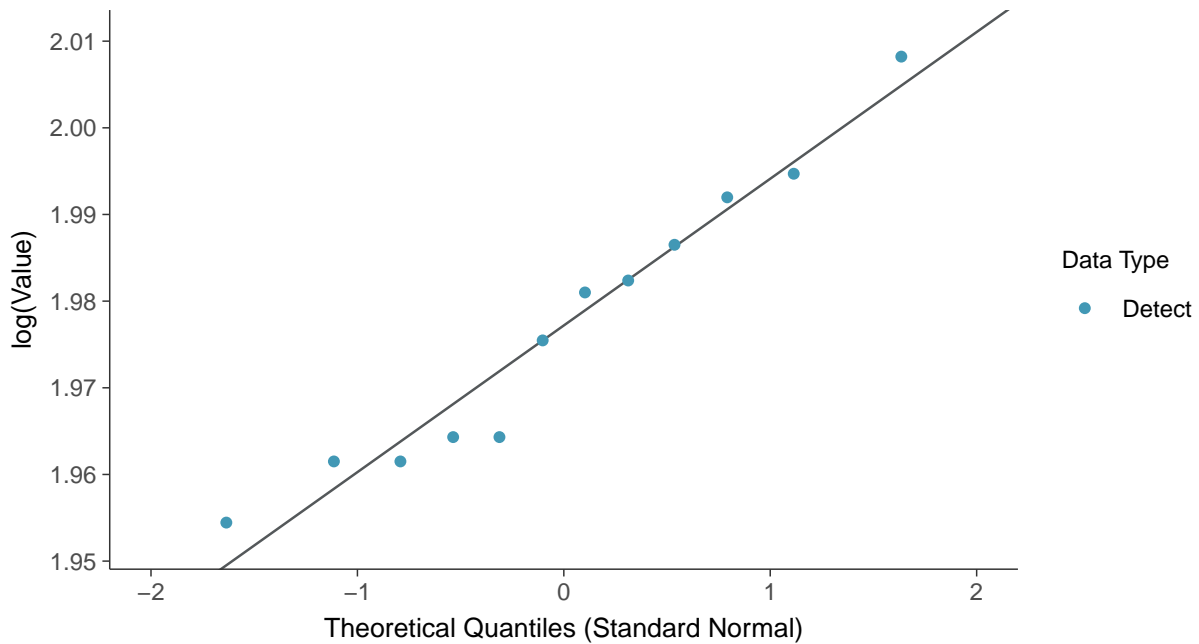
### Normal Q-Q plot

pH (field), MW-02 (su)



### Lognormal Q-Q plot

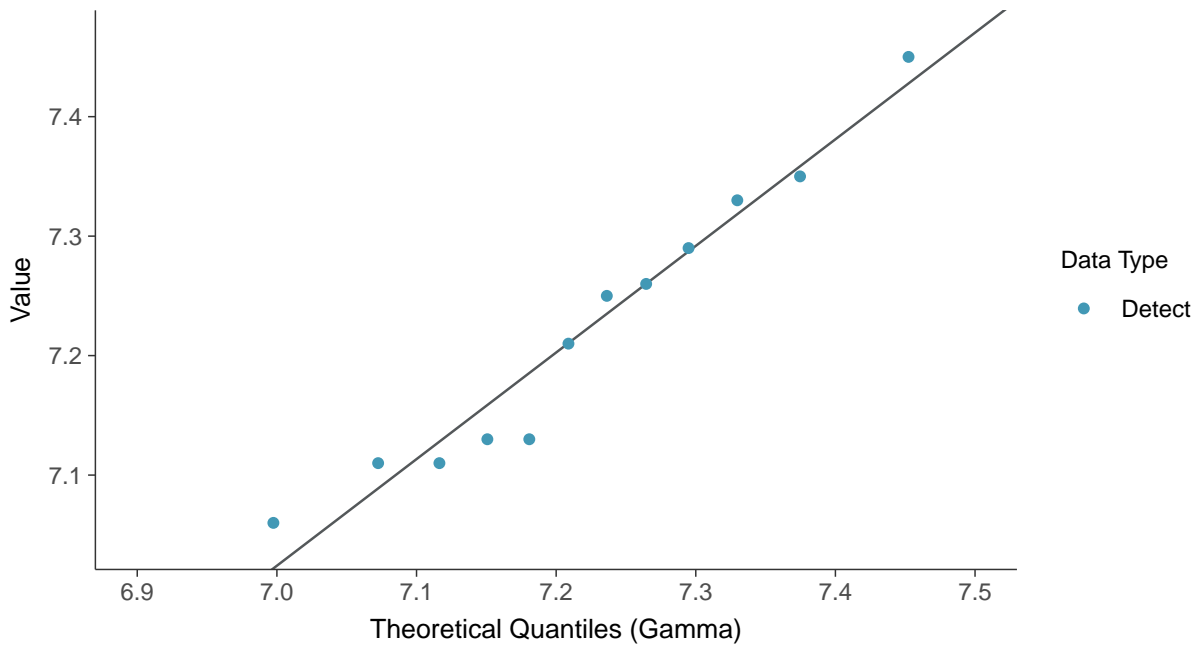
pH (field), MW-02 (su)





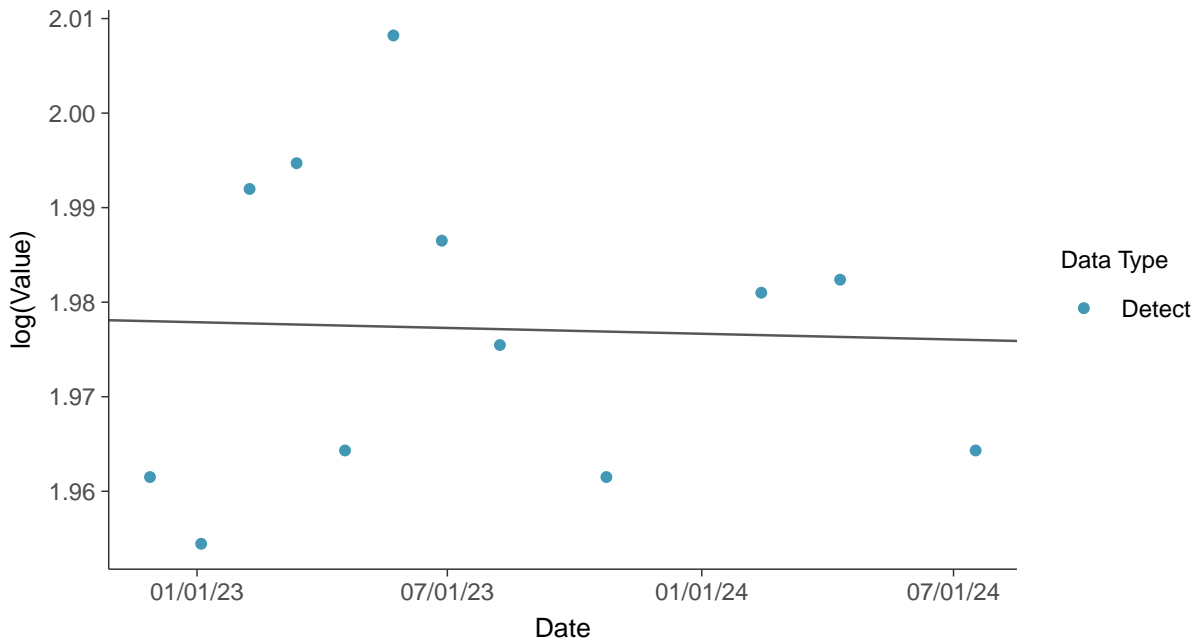
### Gamma Q-Q plot

pH (field), MW-02 (su)



### Trend Regression: Lognormal MLE

pH (field), MW-02 (su)

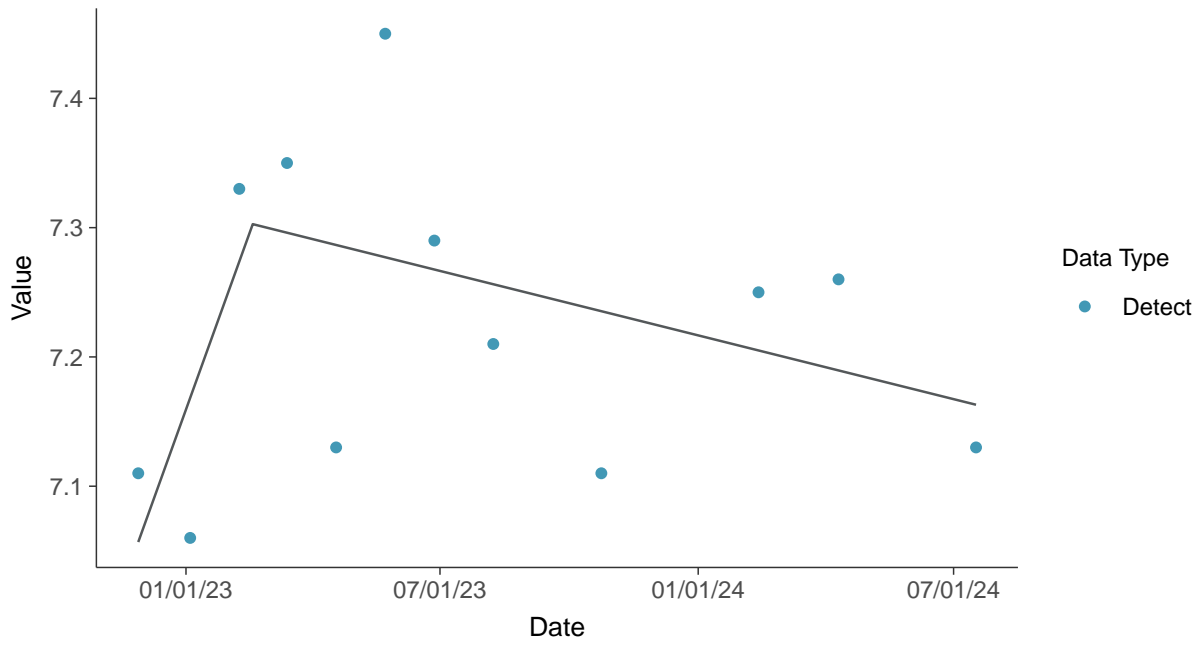






### Trend Regression: Piecewise Linear-Linear

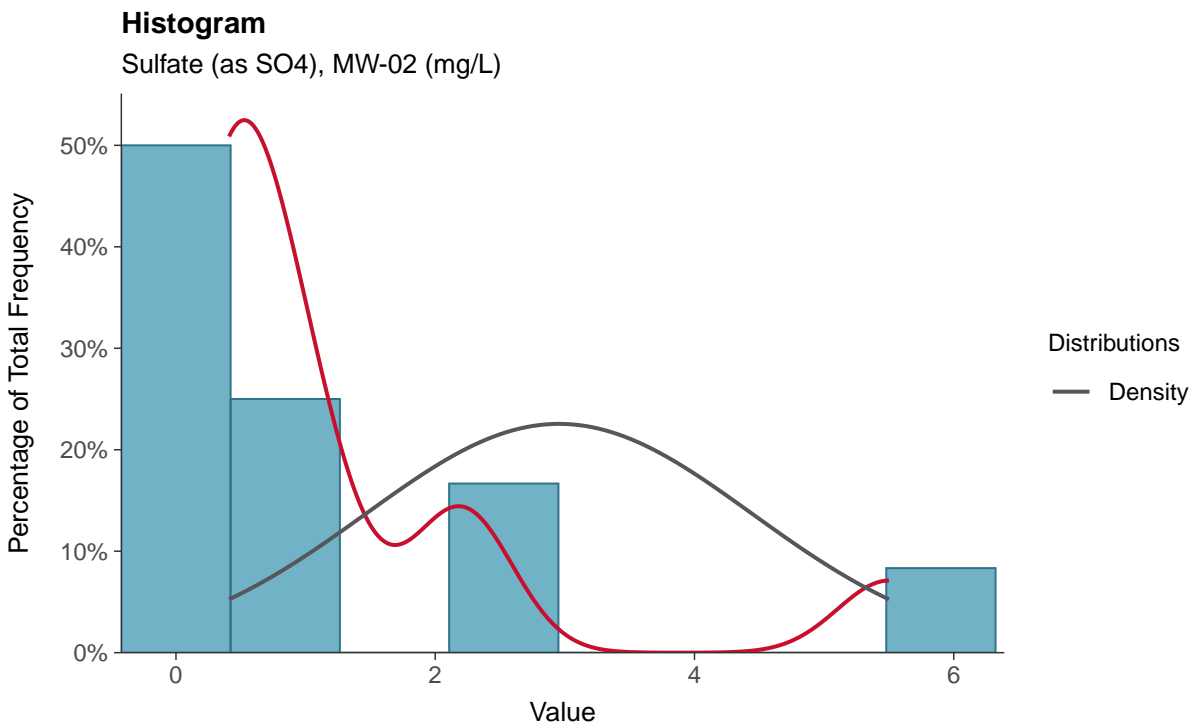
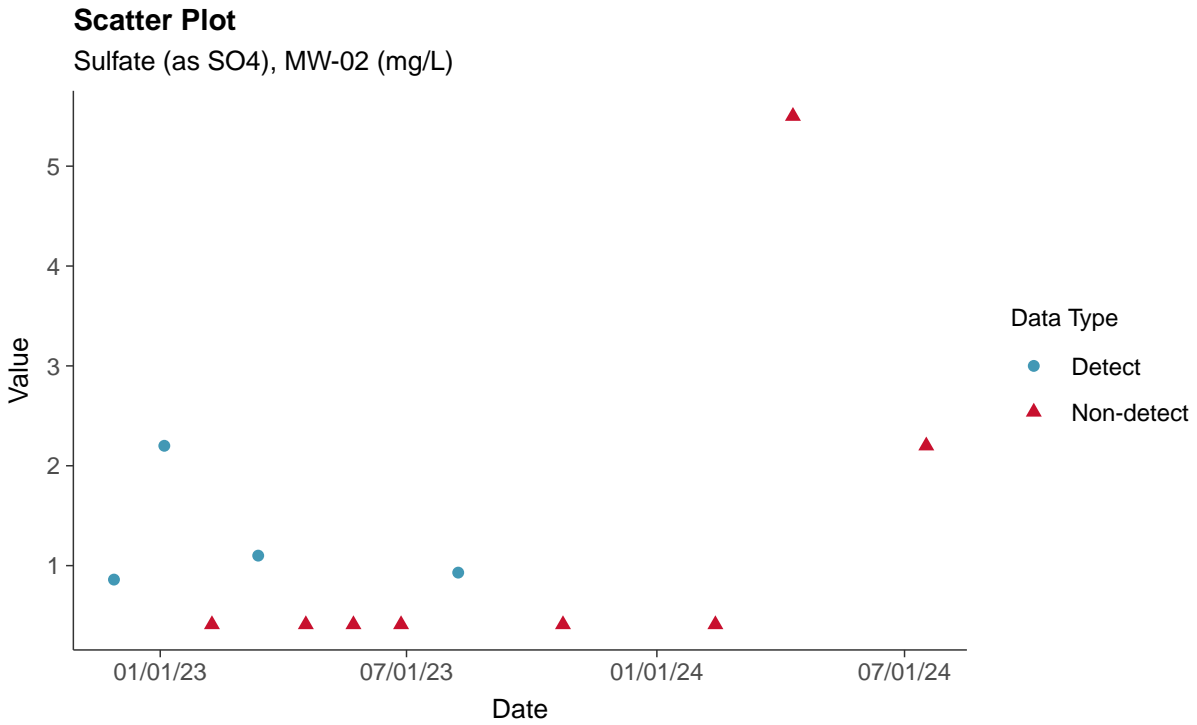
pH (field), MW-02 (su)





### Appendix III: Sulfate (as SO<sub>4</sub>), MW-02

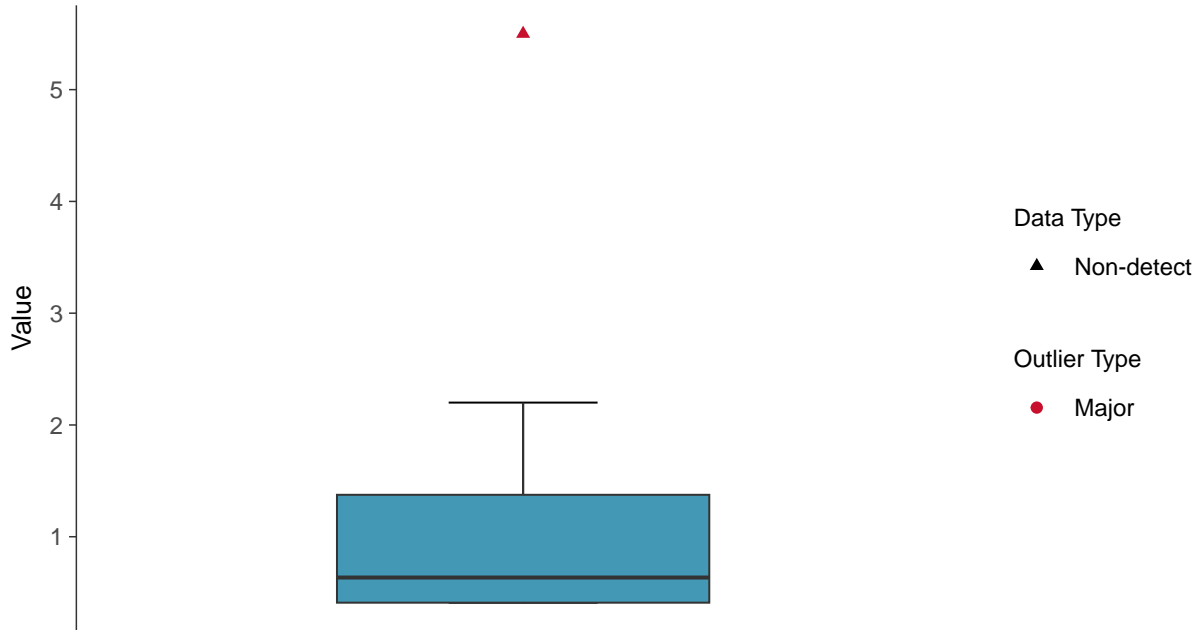
ID: 12\_2\_4\_124





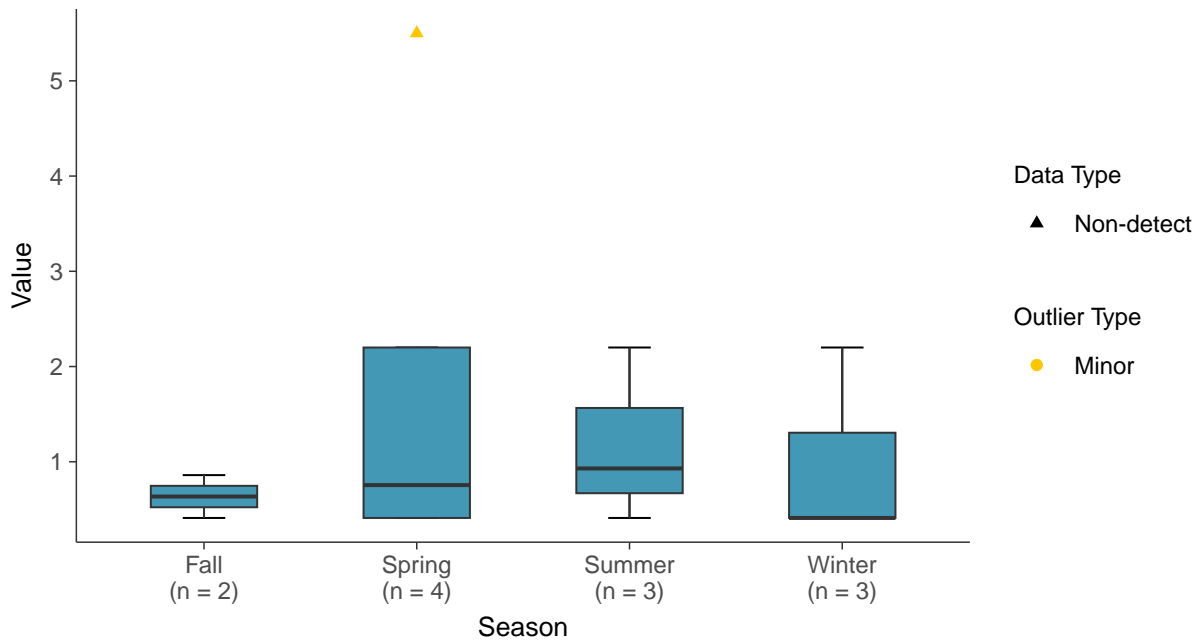
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-02 (mg/L)



### Boxplot by Season

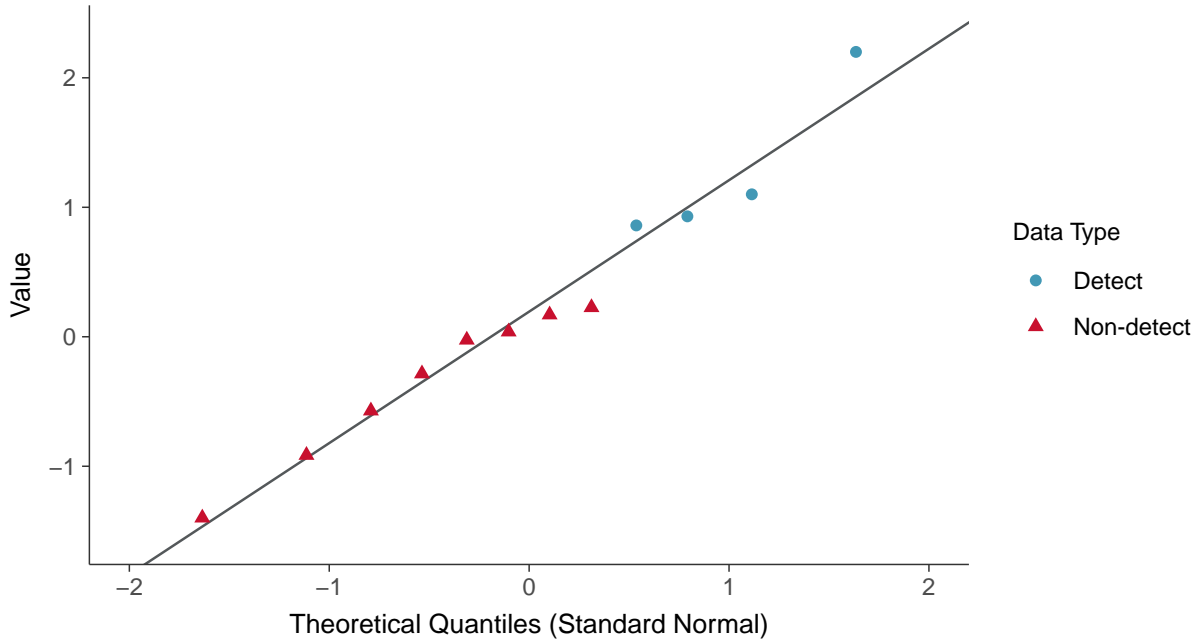
Sulfate (as SO<sub>4</sub>), MW-02 (mg/L)





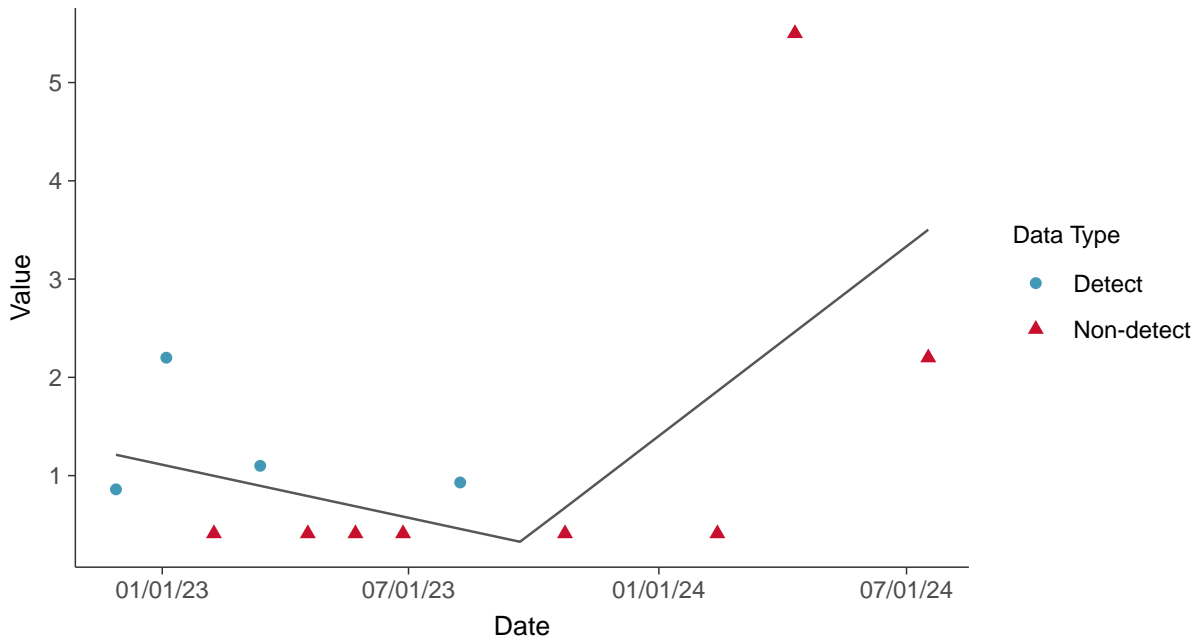
### Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO<sub>4</sub>), MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

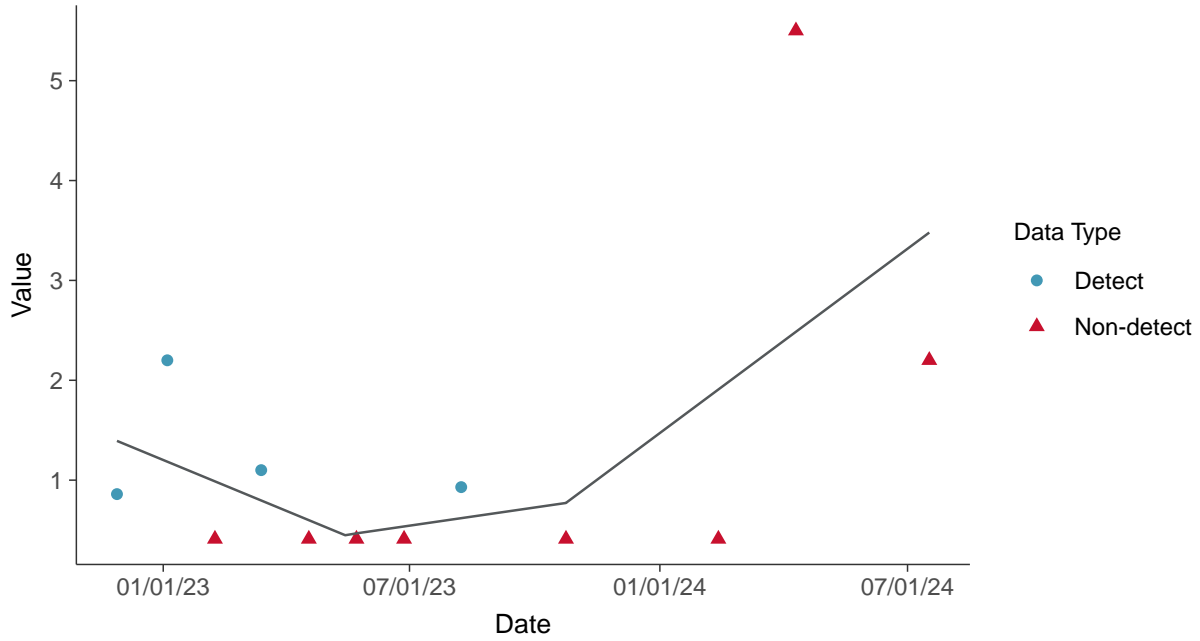
Sulfate (as SO<sub>4</sub>), MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-02 (mg/L)



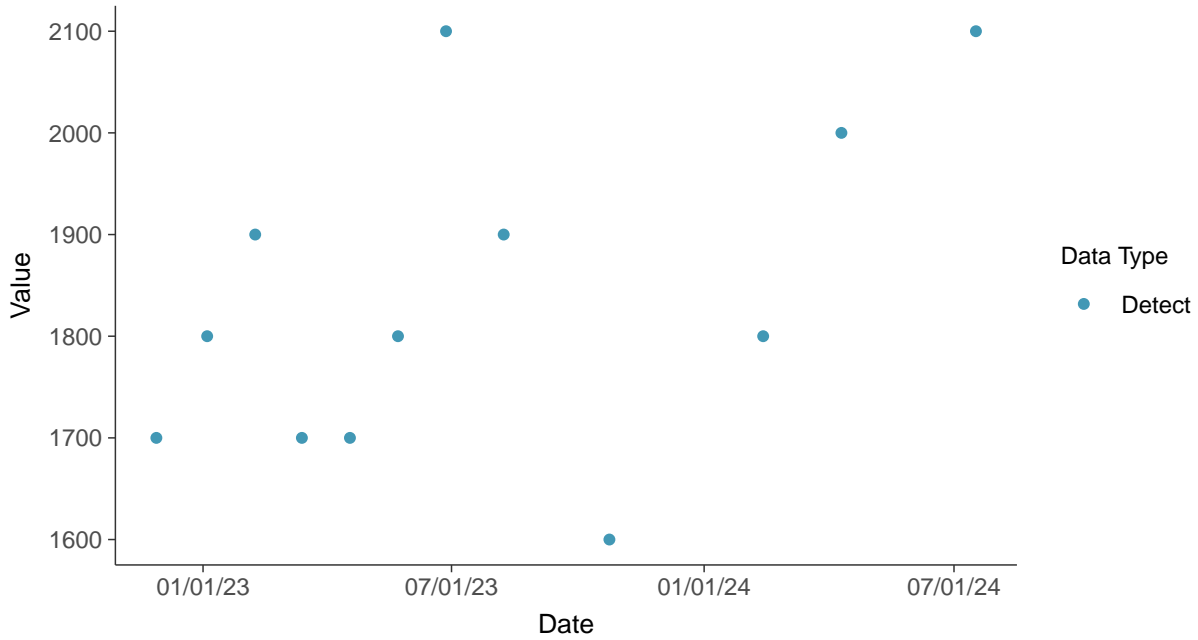


### Appendix III: Total Dissolved Solids, MW-02

ID: 12\_2\_4\_126

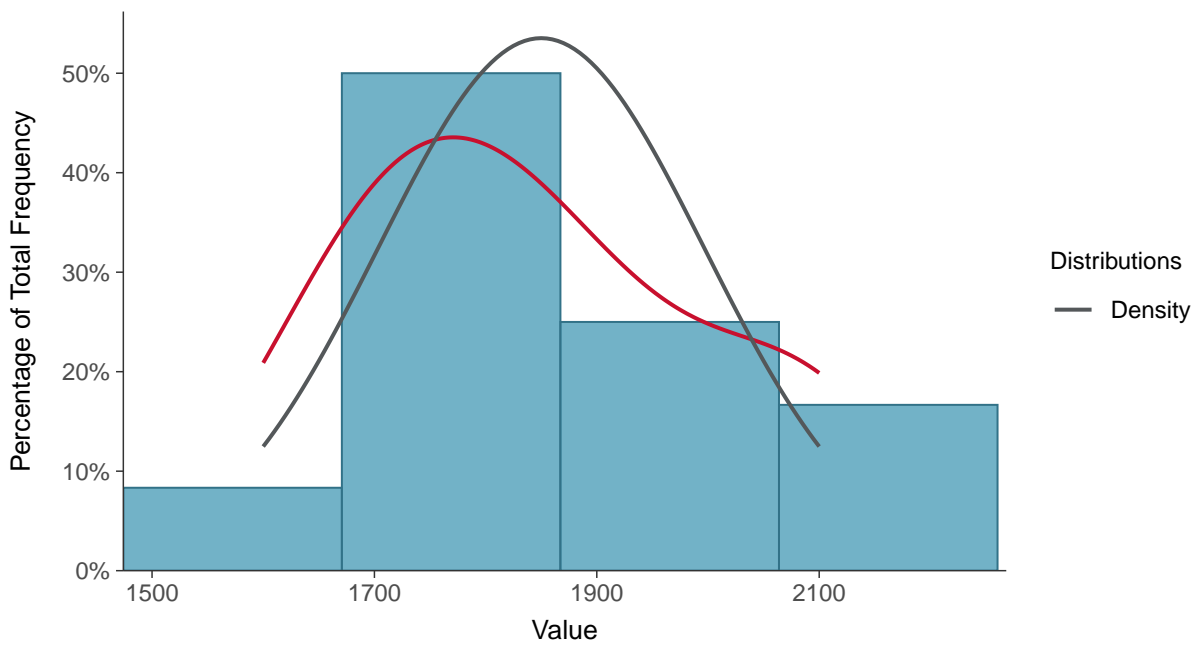
#### Scatter Plot

Total Dissolved Solids, MW-02 (mg/L)



#### Histogram

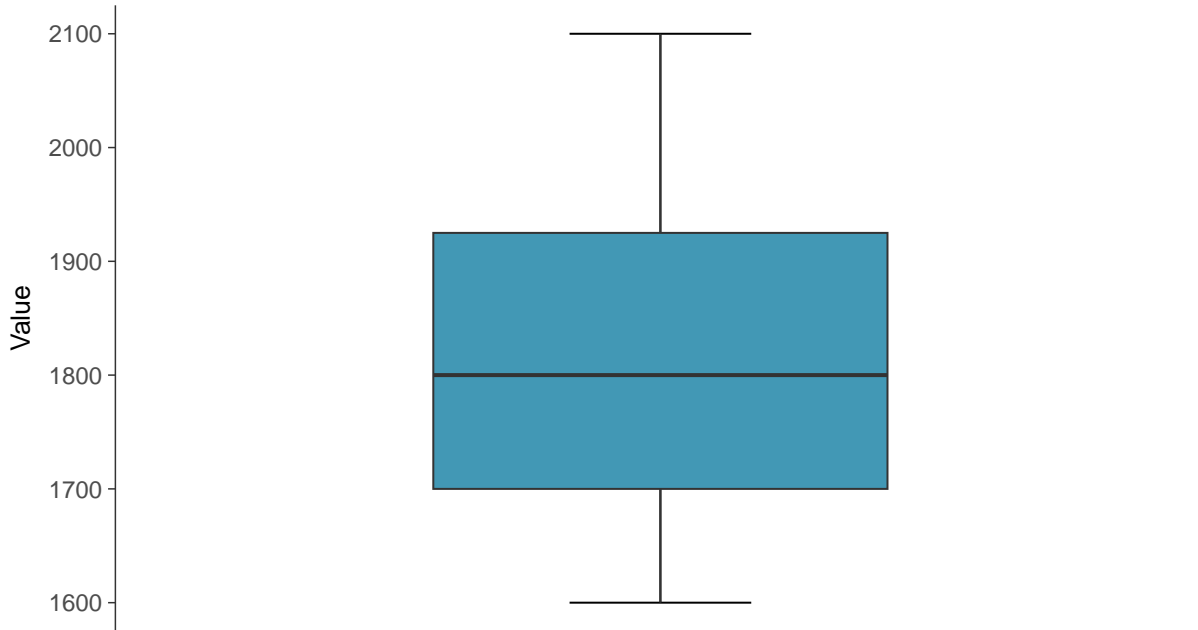
Total Dissolved Solids, MW-02 (mg/L)





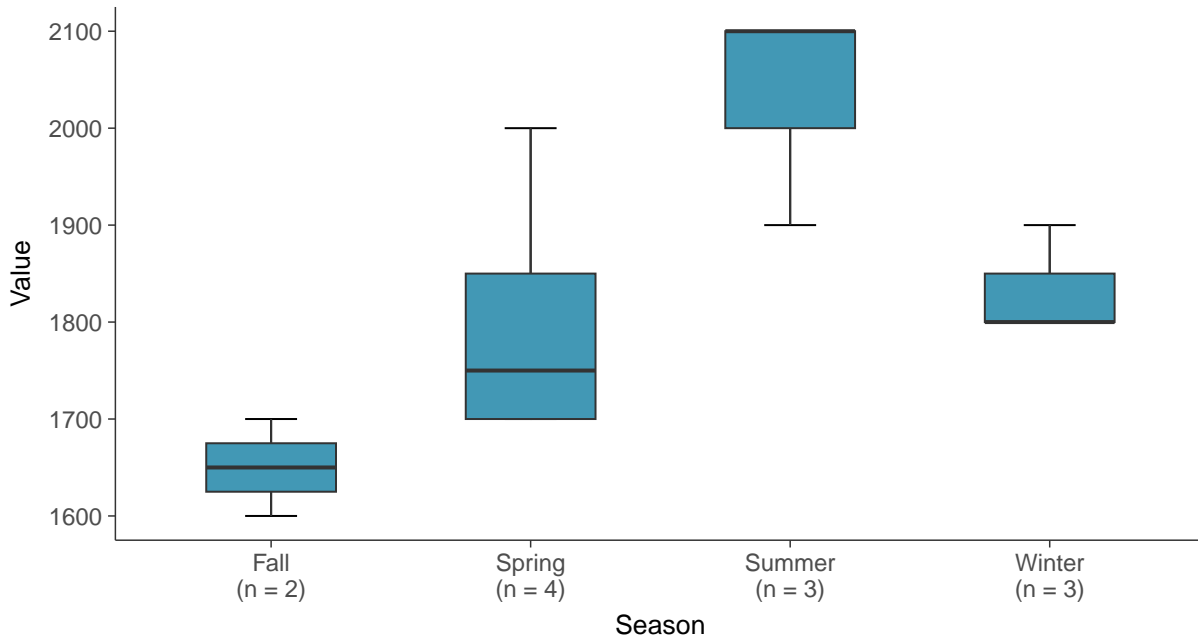
### Boxplot

Total Dissolved Solids, MW-02 (mg/L)



### Boxplot by Season

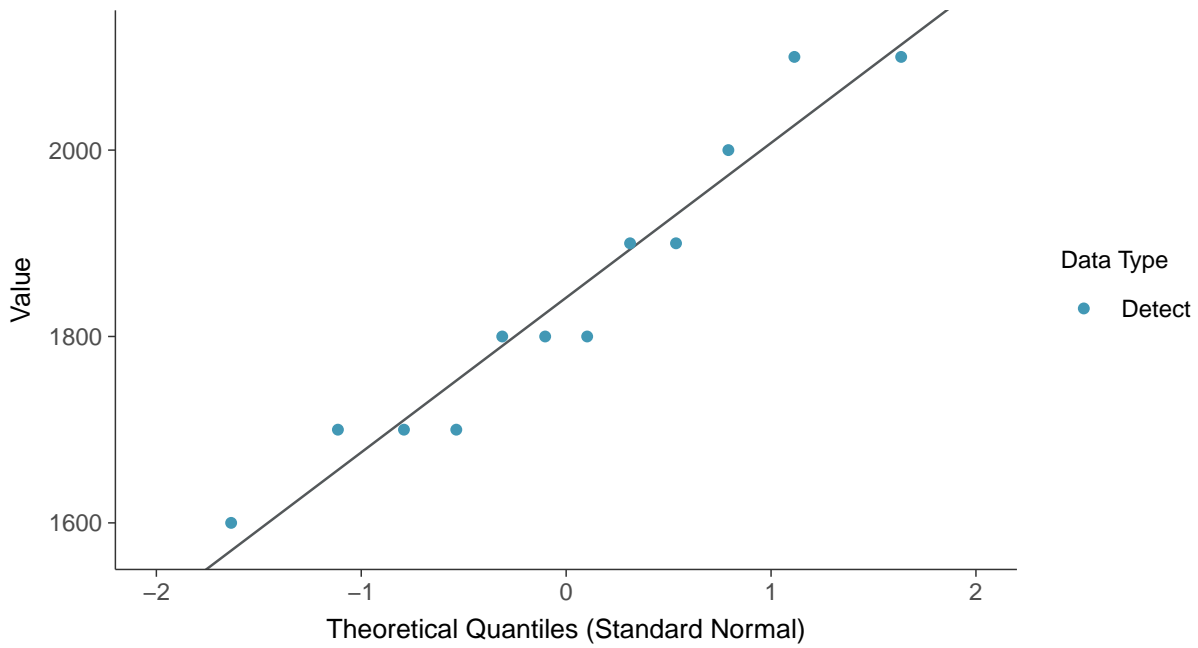
Total Dissolved Solids, MW-02 (mg/L)





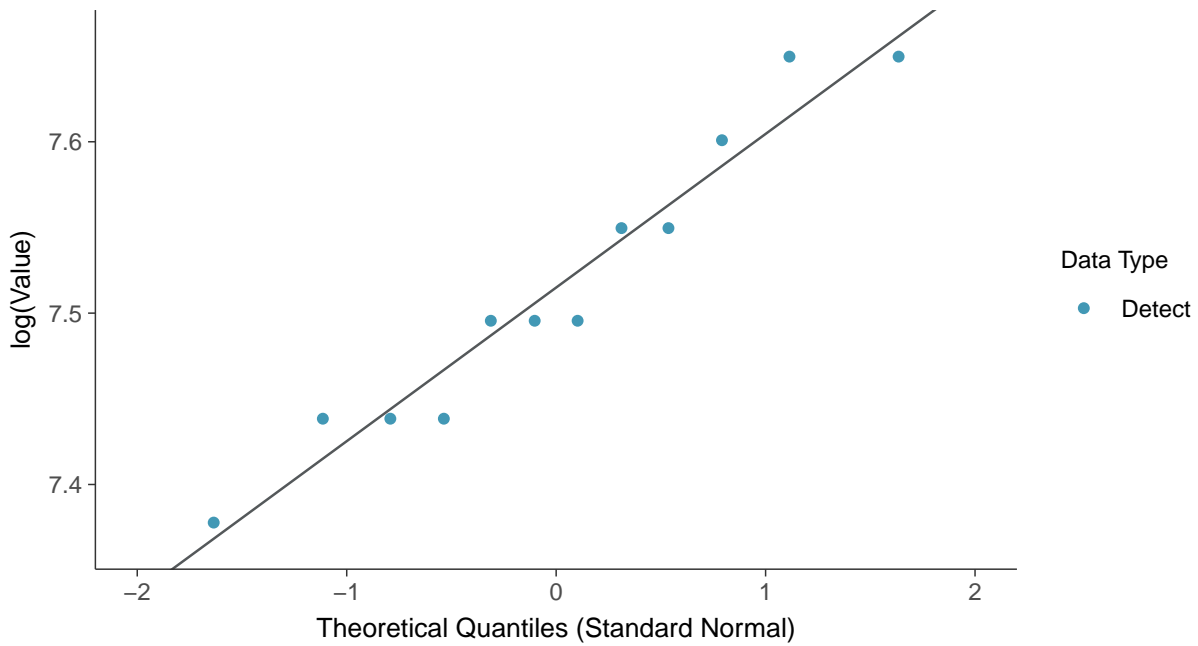
### Normal Q-Q plot

Total Dissolved Solids, MW-02 (mg/L)



### Lognormal Q-Q plot

Total Dissolved Solids, MW-02 (mg/L)

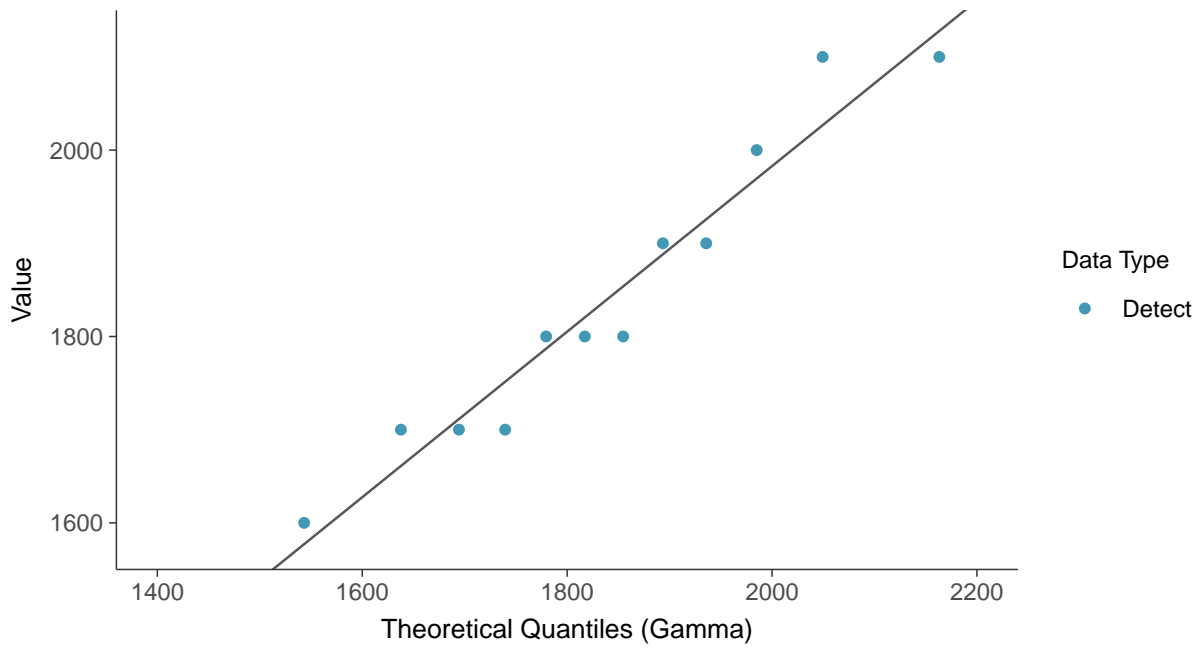






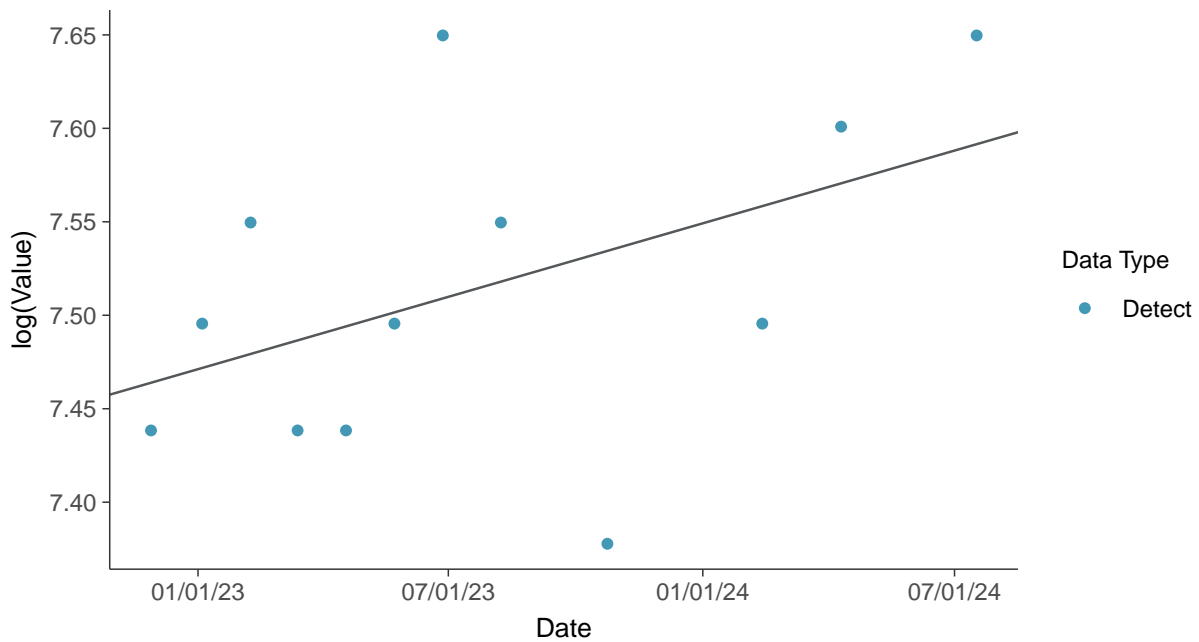
### Gamma Q-Q plot

Total Dissolved Solids, MW-02 (mg/L)



### Trend Regression: Lognormal MLE

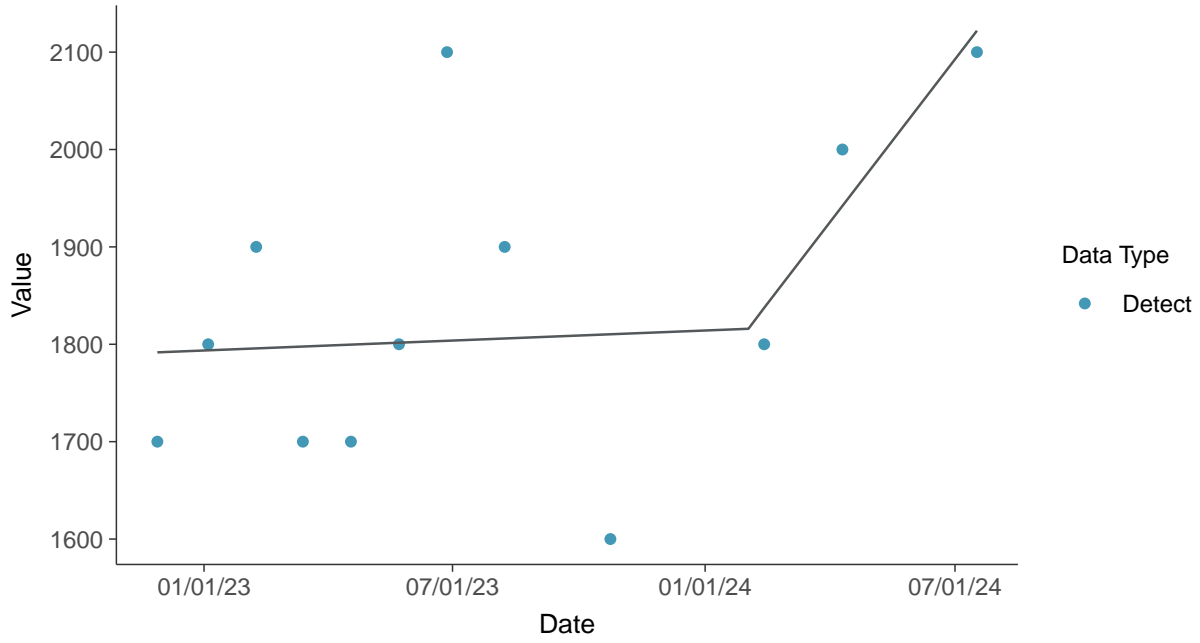
Total Dissolved Solids, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-02 (mg/L)



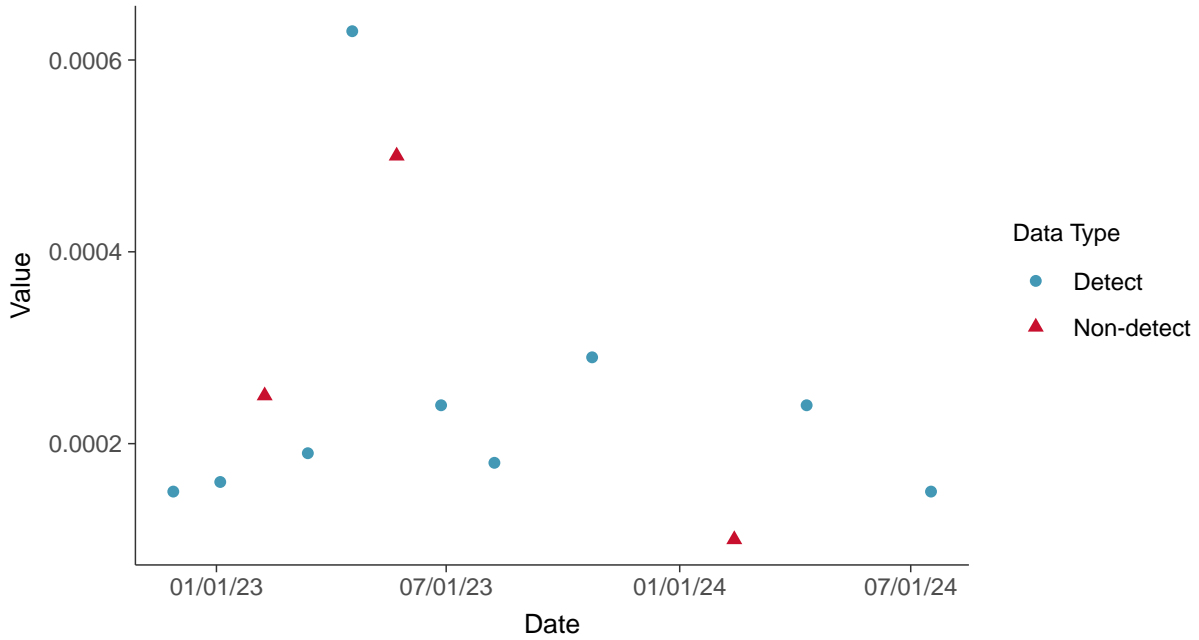


### Appendix IV: Antimony, MW-02

ID: 12\_2\_5\_101

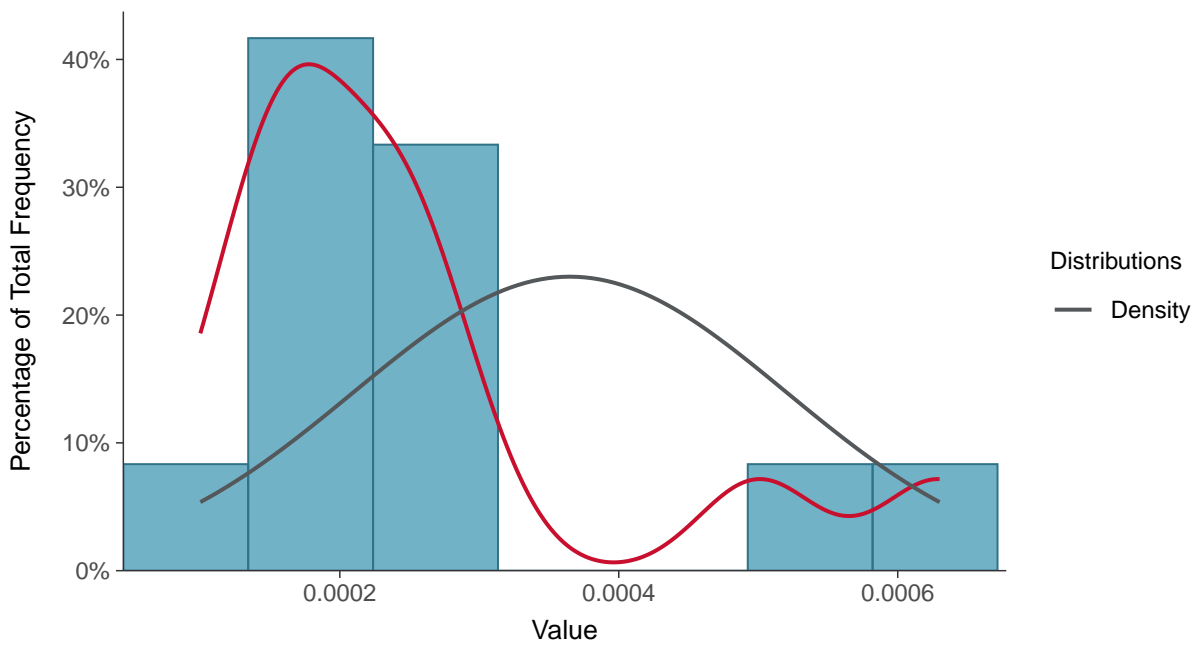
#### Scatter Plot

Antimony, MW-02 (mg/L)



#### Histogram

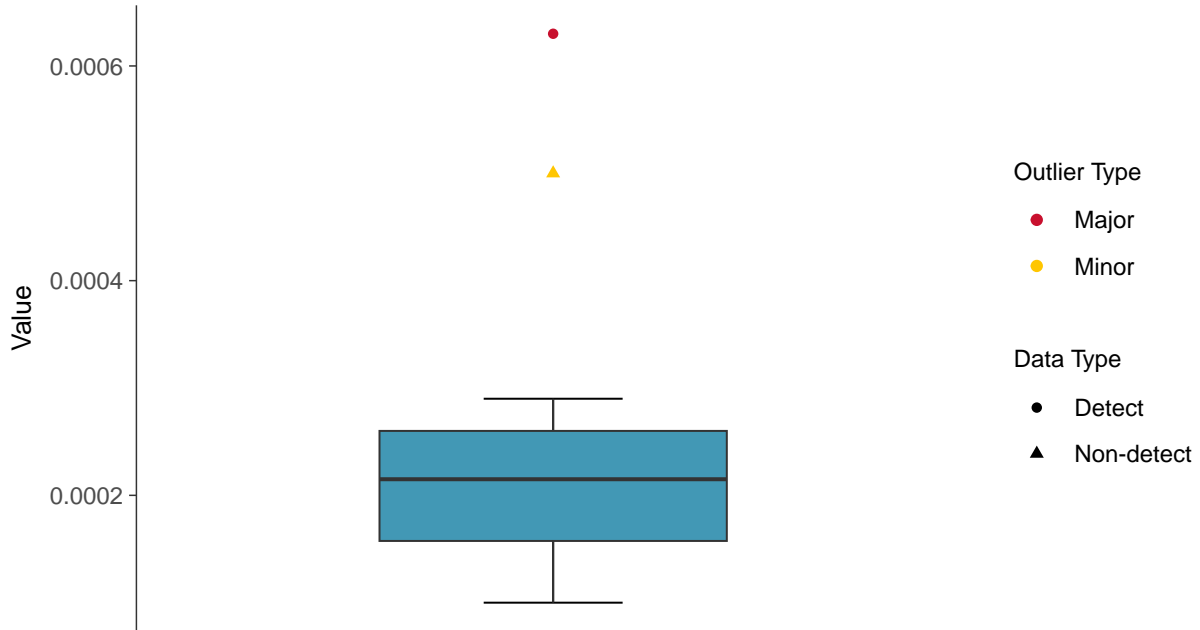
Antimony, MW-02 (mg/L)





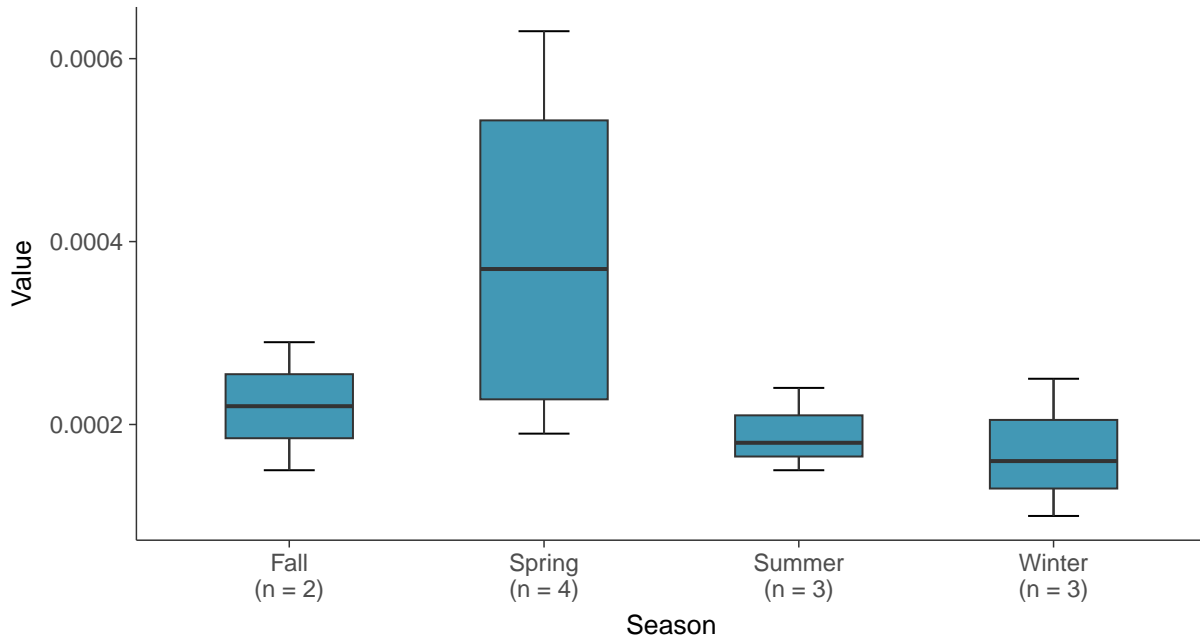
### Boxplot

Antimony, MW-02 (mg/L)



### Boxplot by Season

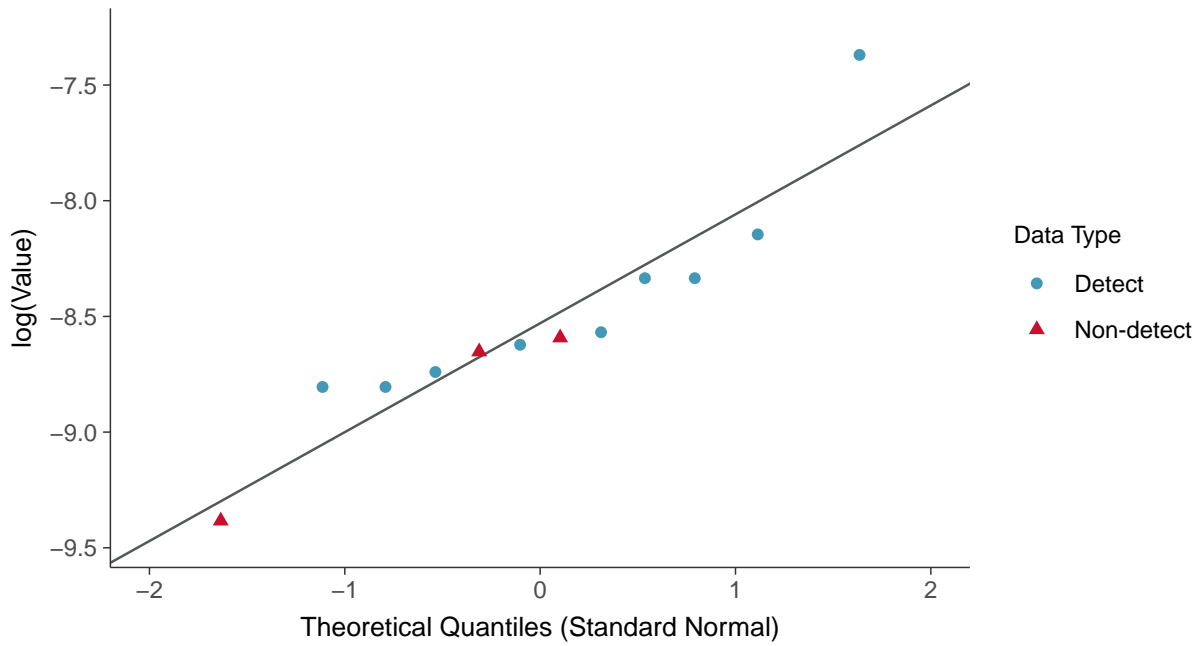
Antimony, MW-02 (mg/L)





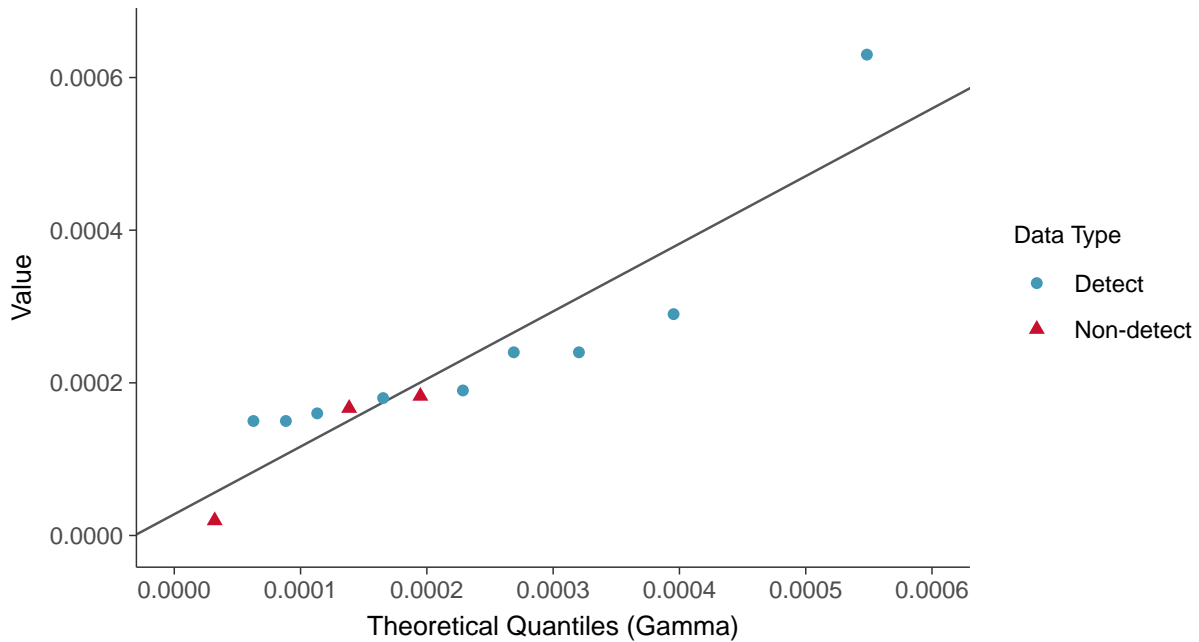
### Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-02 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

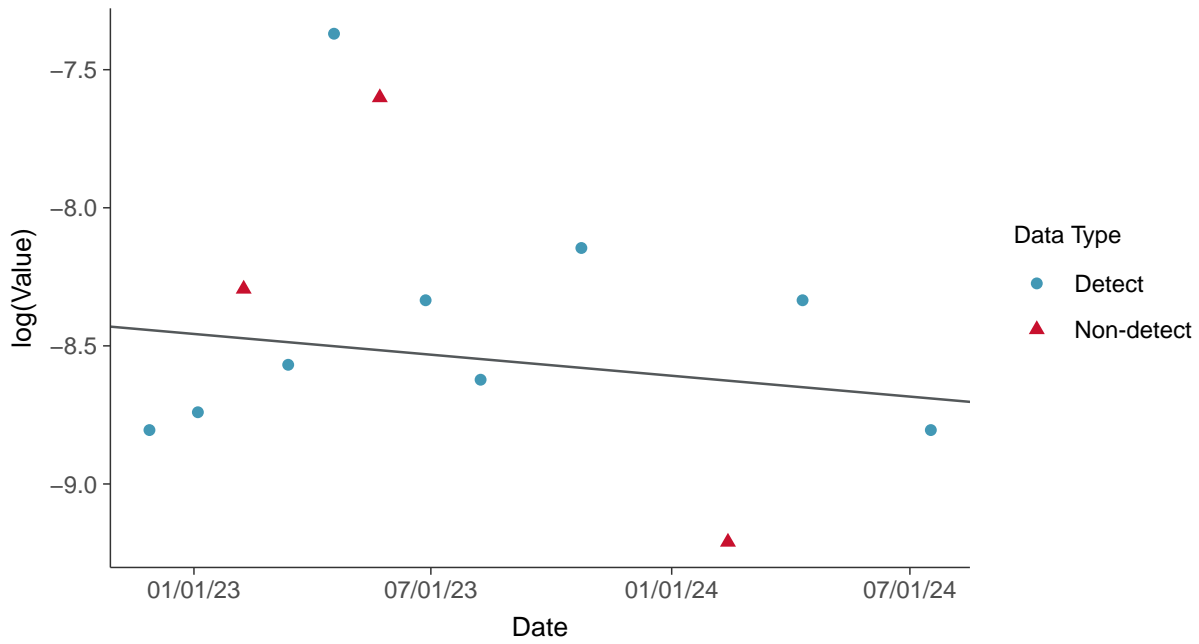
Antimony, MW-02 (mg/L)





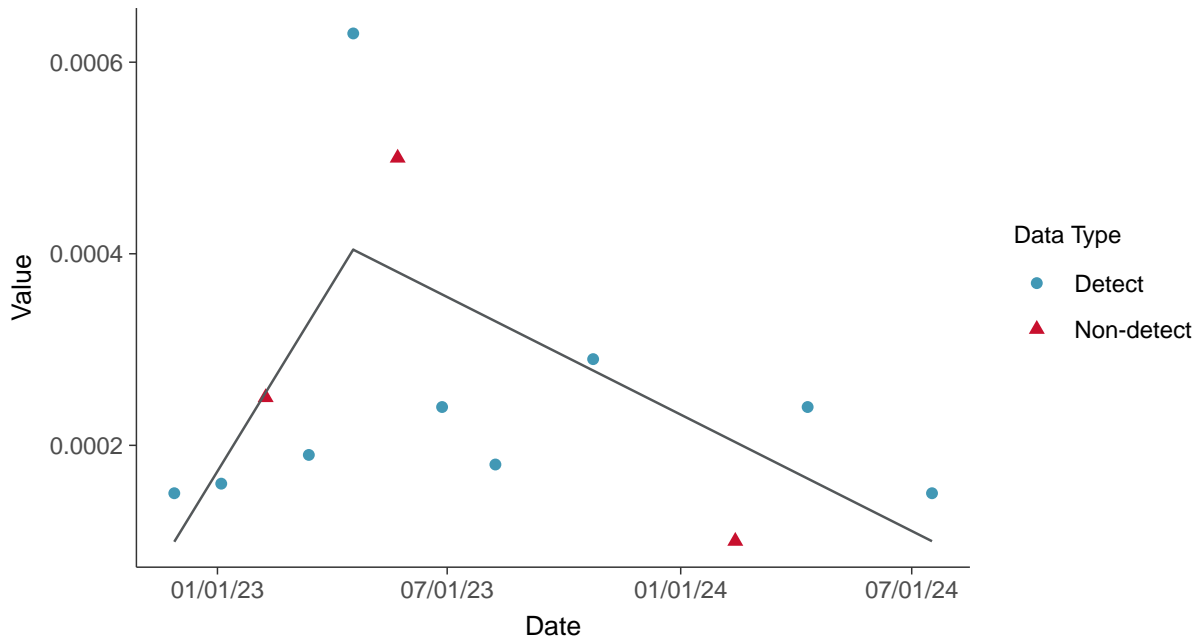
### Trend Regression: Lognormal MLE

Antimony, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

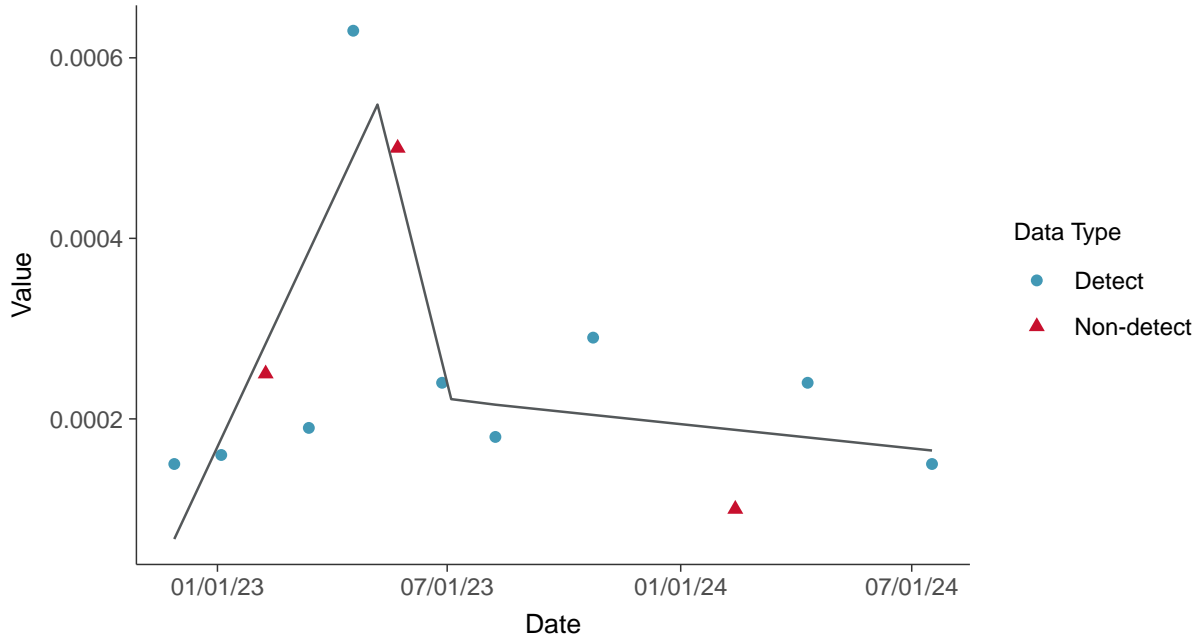
Antimony, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

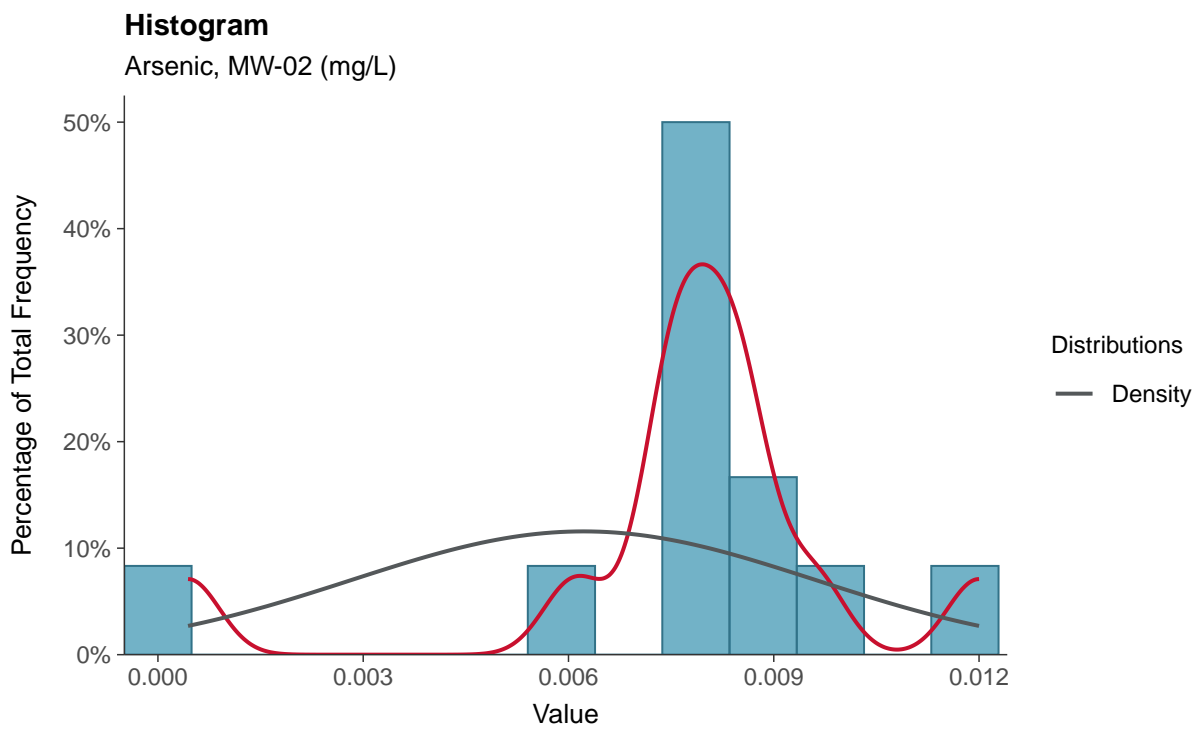
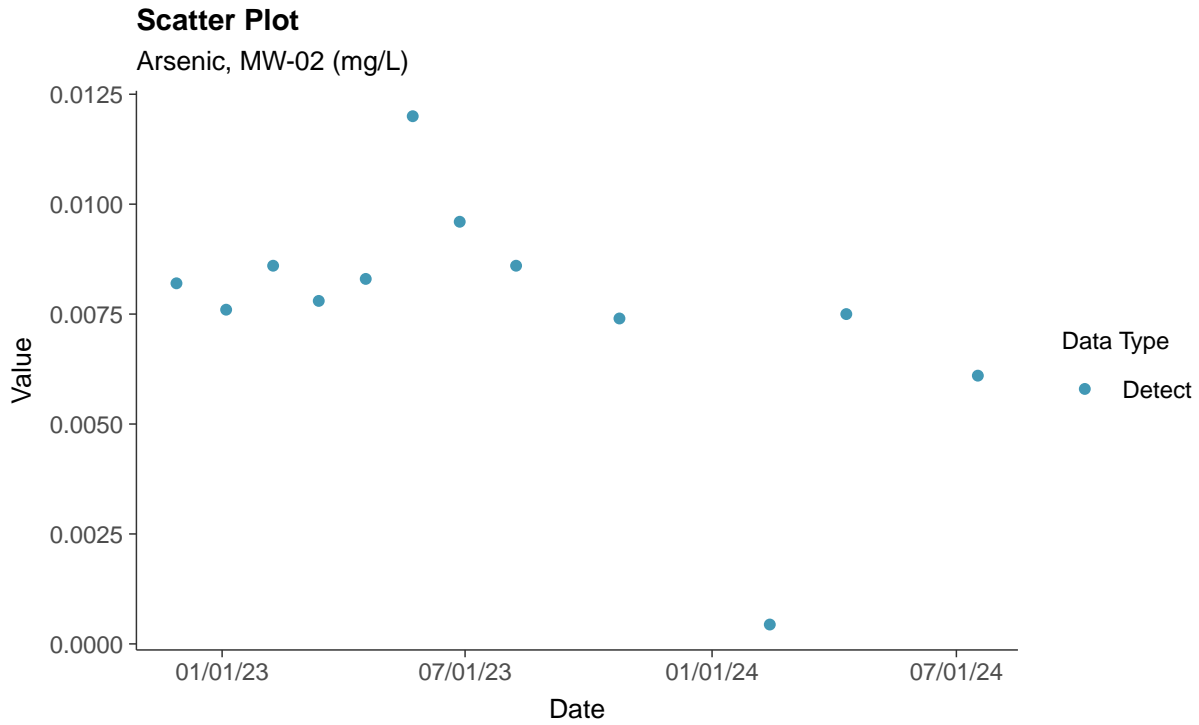
Antimony, MW-02 (mg/L)





## Appendix IV: Arsenic, MW-02

ID: 12\_2\_5\_102

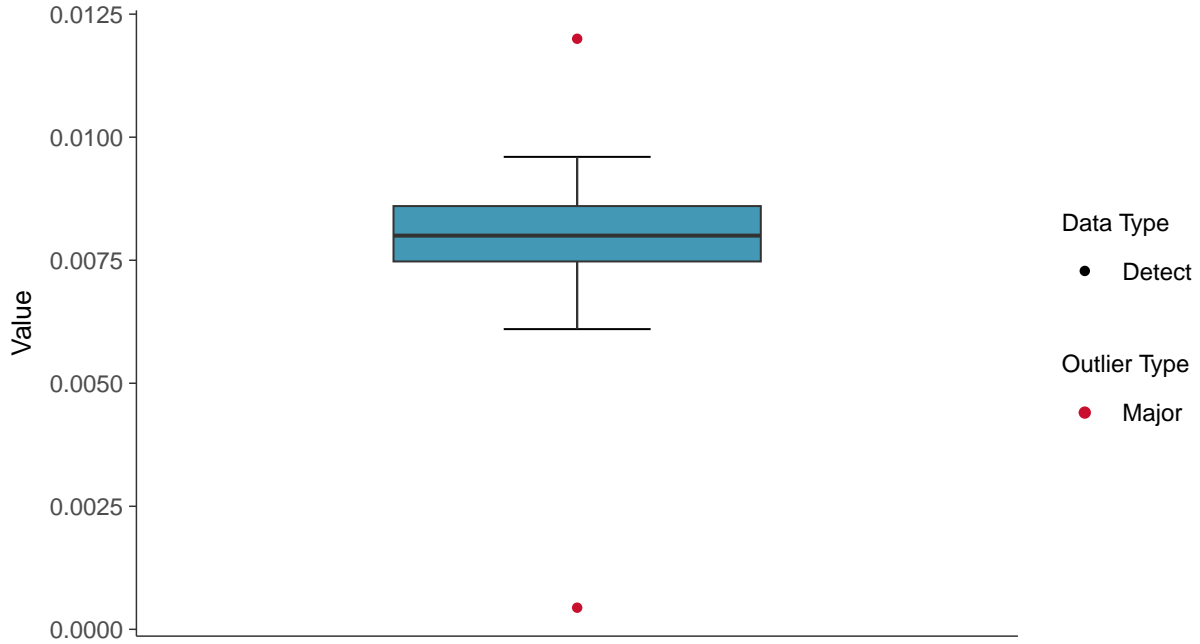






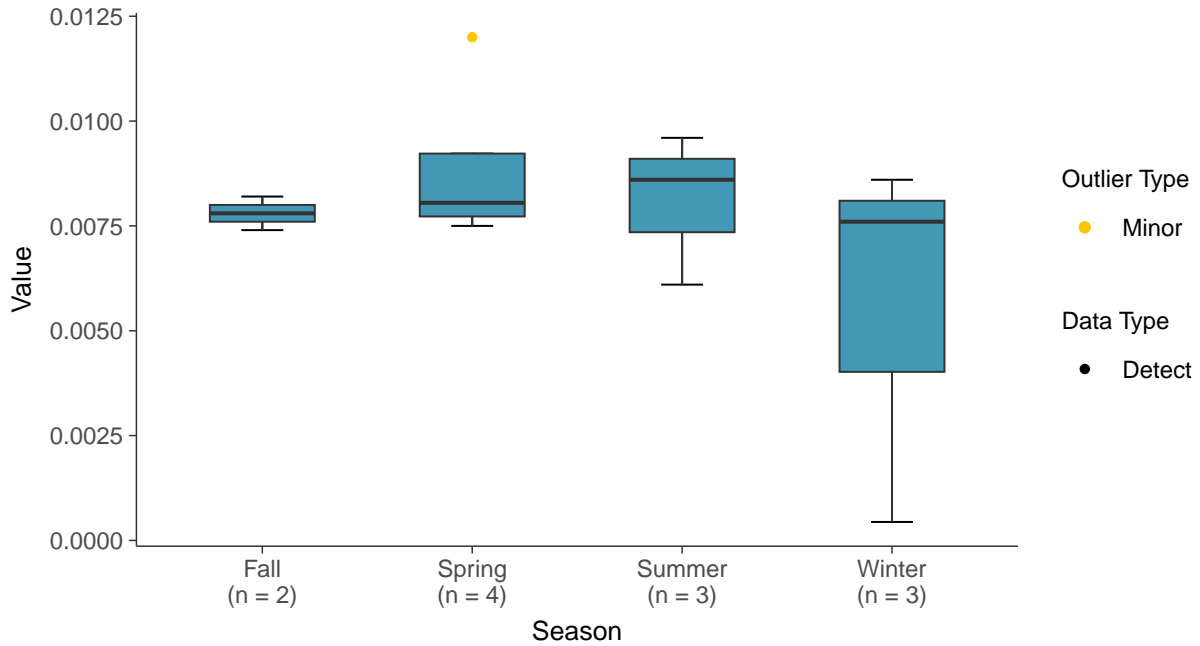
### Boxplot

Arsenic, MW-02 (mg/L)



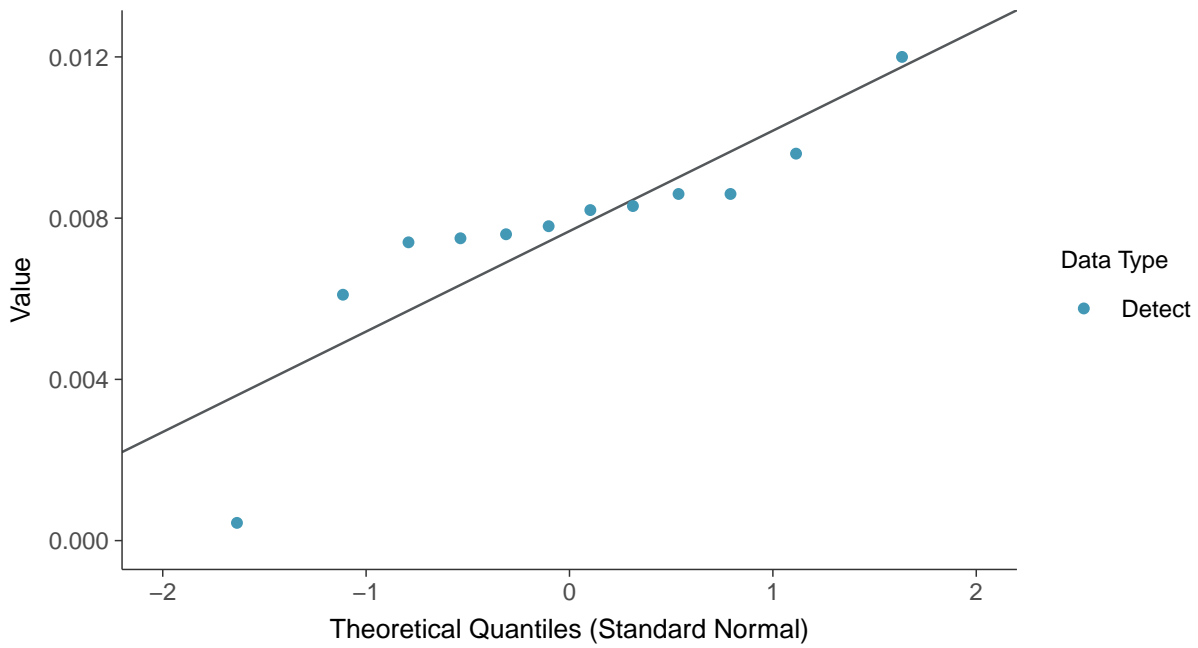
### Boxplot by Season

Arsenic, MW-02 (mg/L)

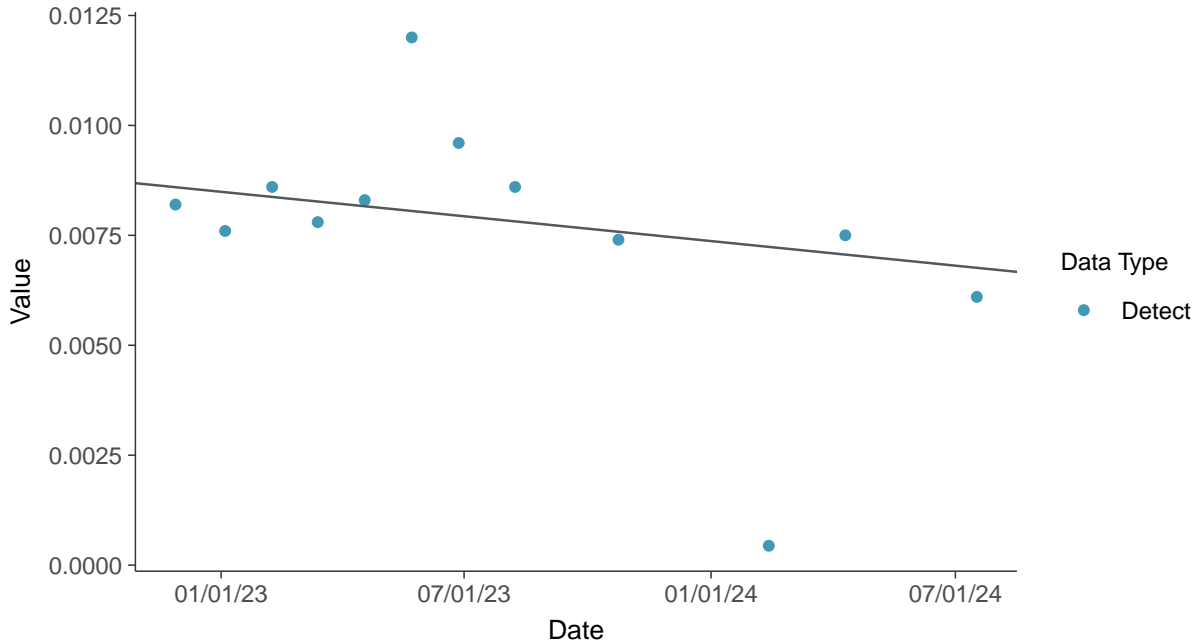




**Normal Q-Q plot**  
Arsenic, MW-02 (mg/L)



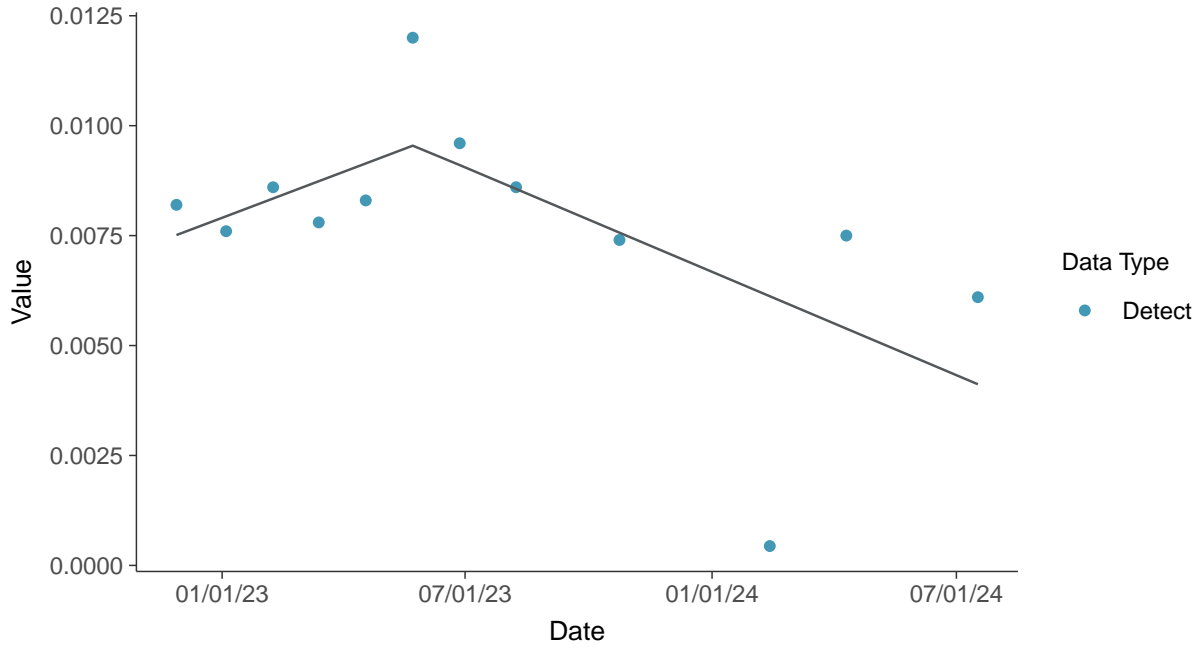
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Arsenic, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-02 (mg/L)



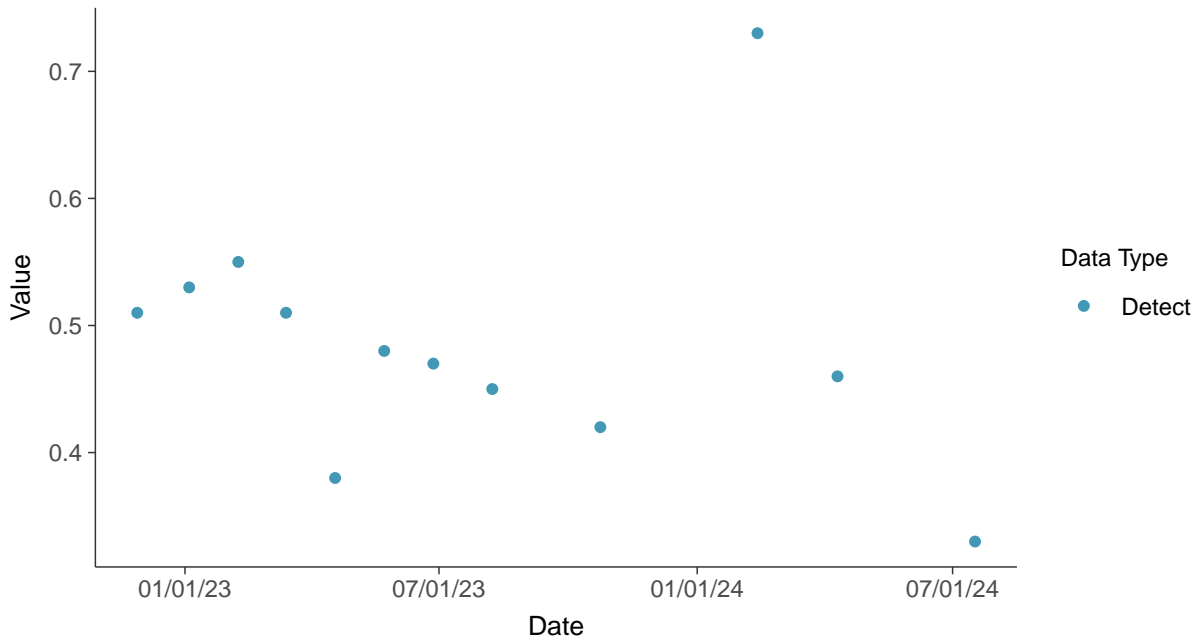


### Appendix IV: Barium, MW-02

ID: 12\_2\_5\_103

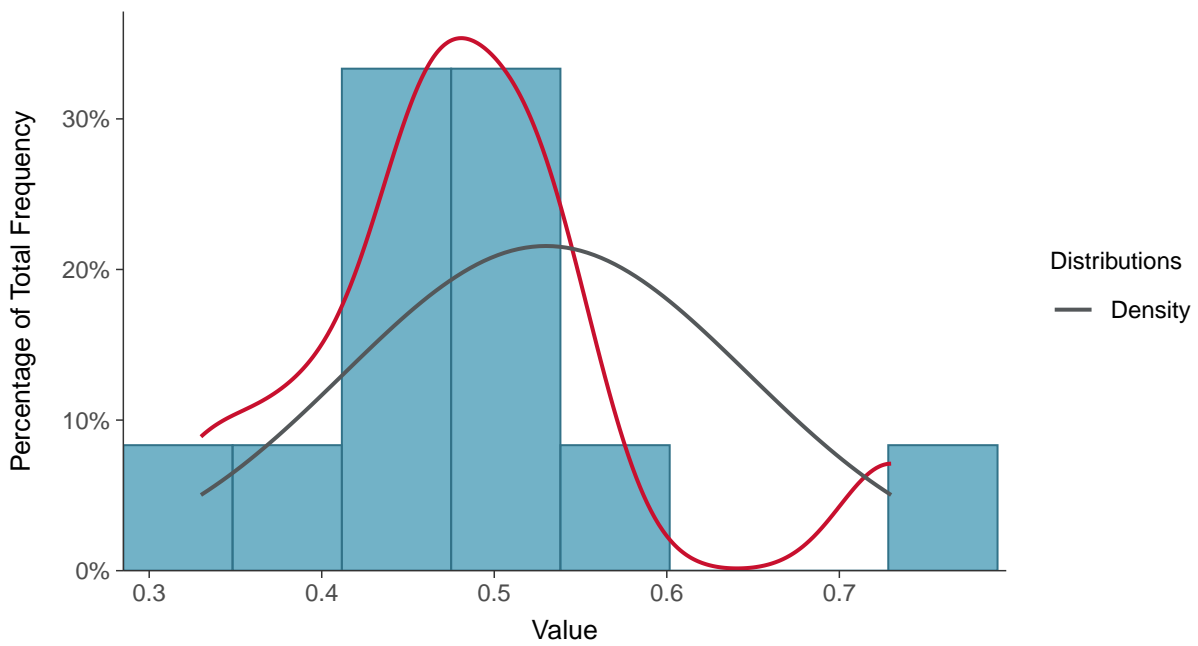
#### Scatter Plot

Barium, MW-02 (mg/L)



#### Histogram

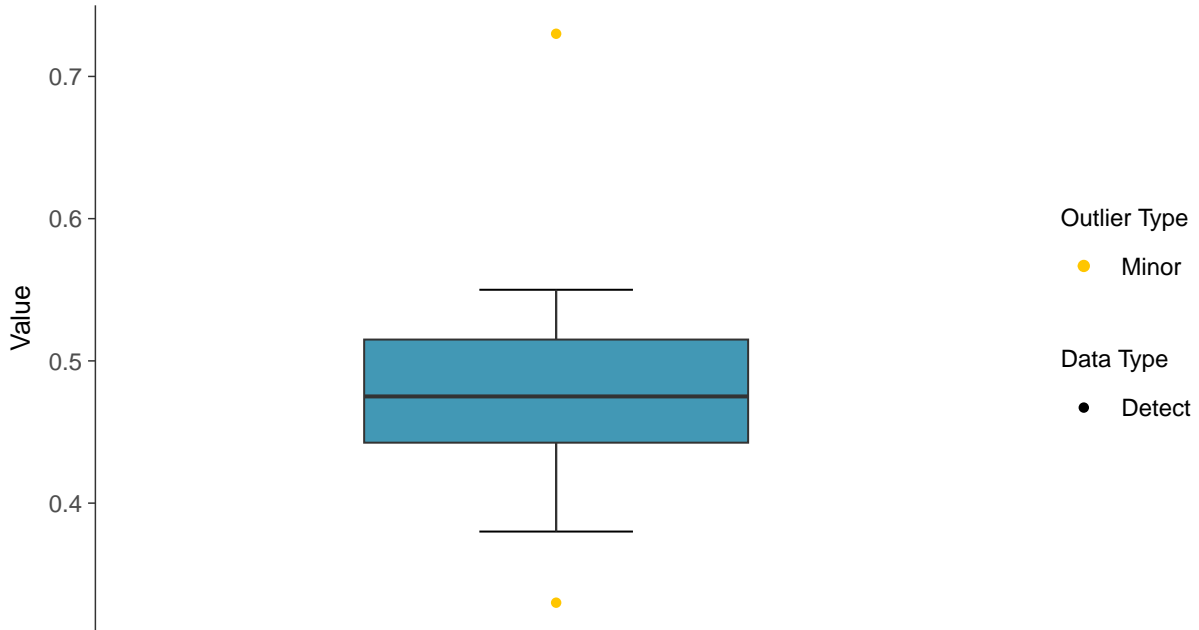
Barium, MW-02 (mg/L)





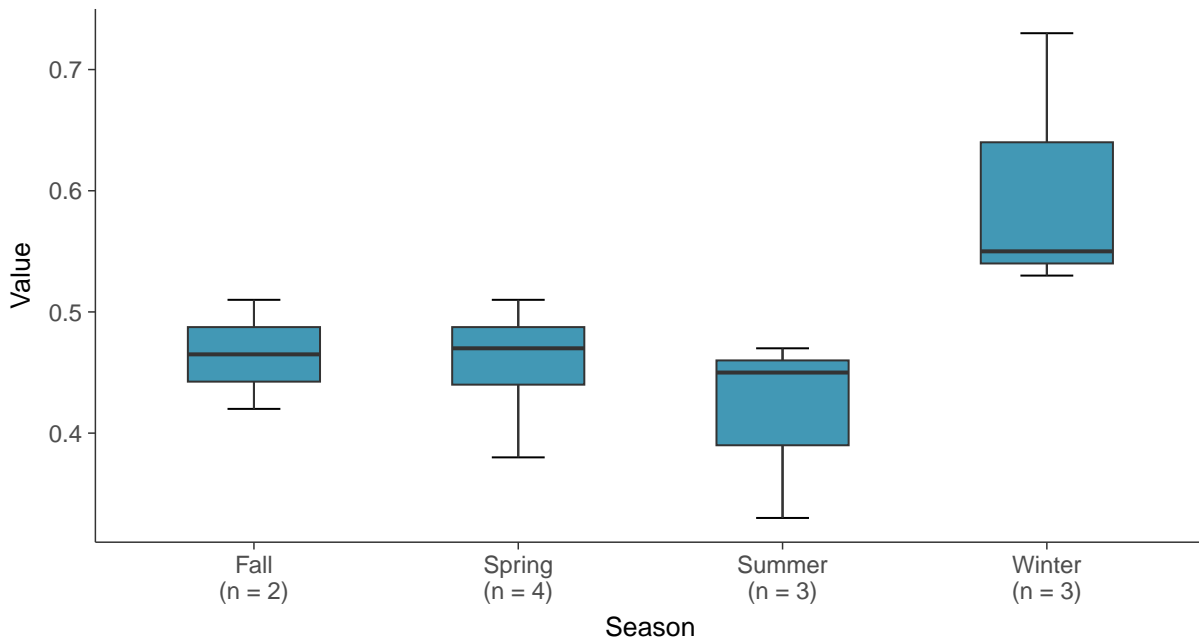
### Boxplot

Barium, MW-02 (mg/L)



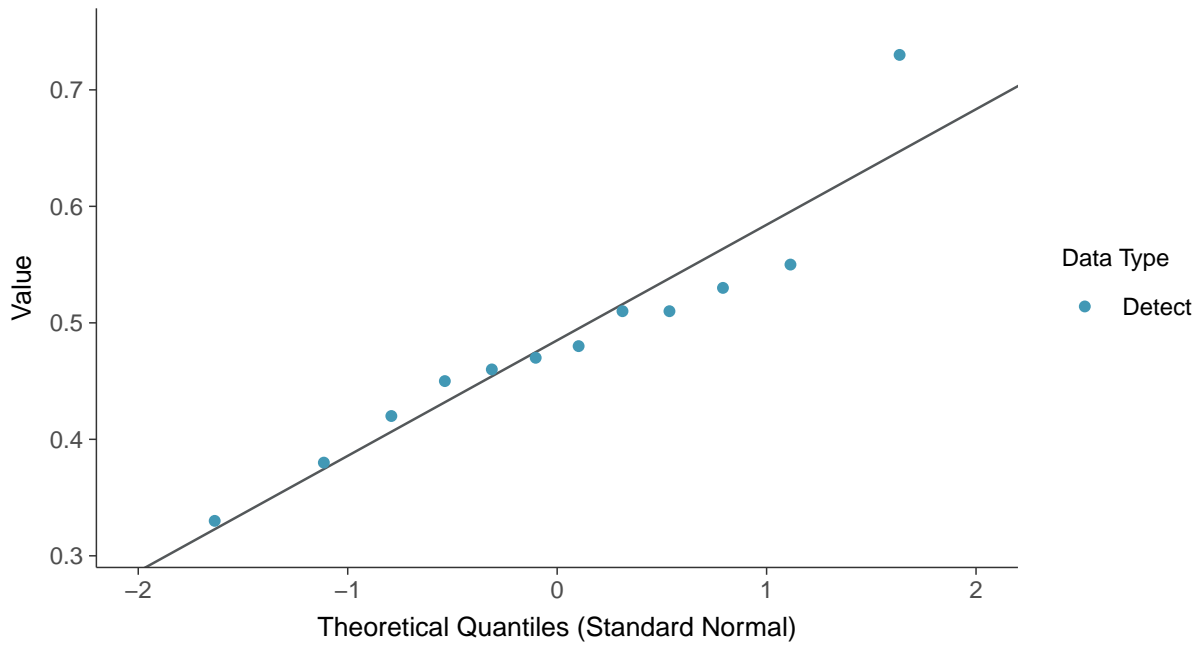
### Boxplot by Season

Barium, MW-02 (mg/L)

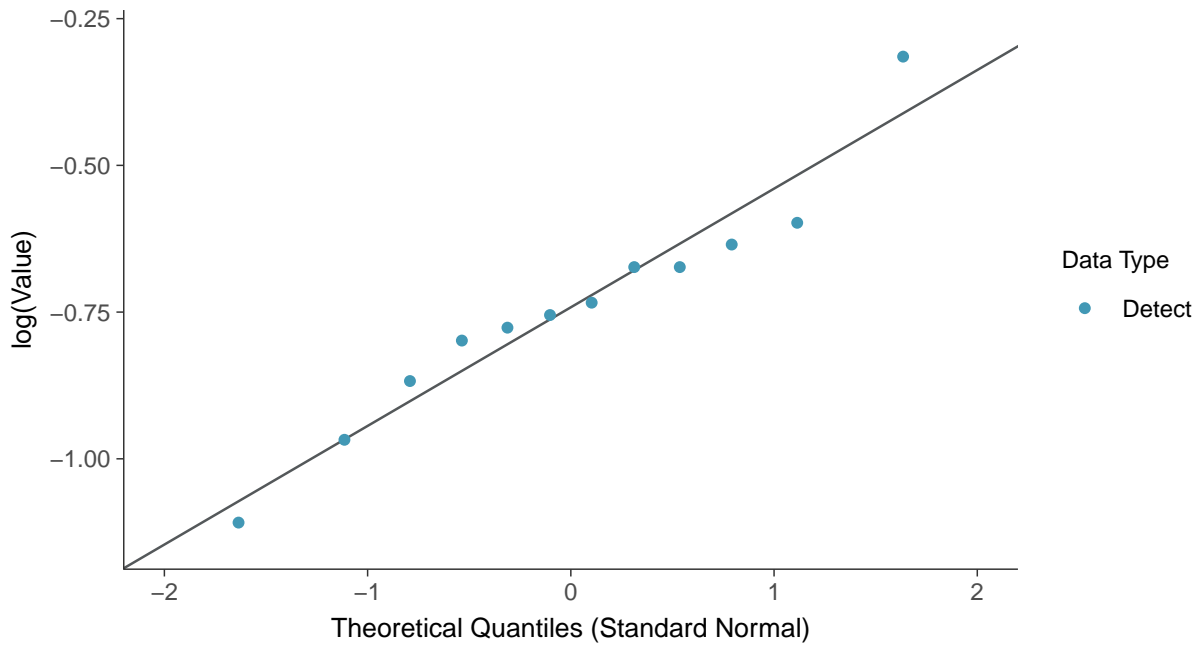




**Normal Q-Q plot**  
Barium, MW-02 (mg/L)

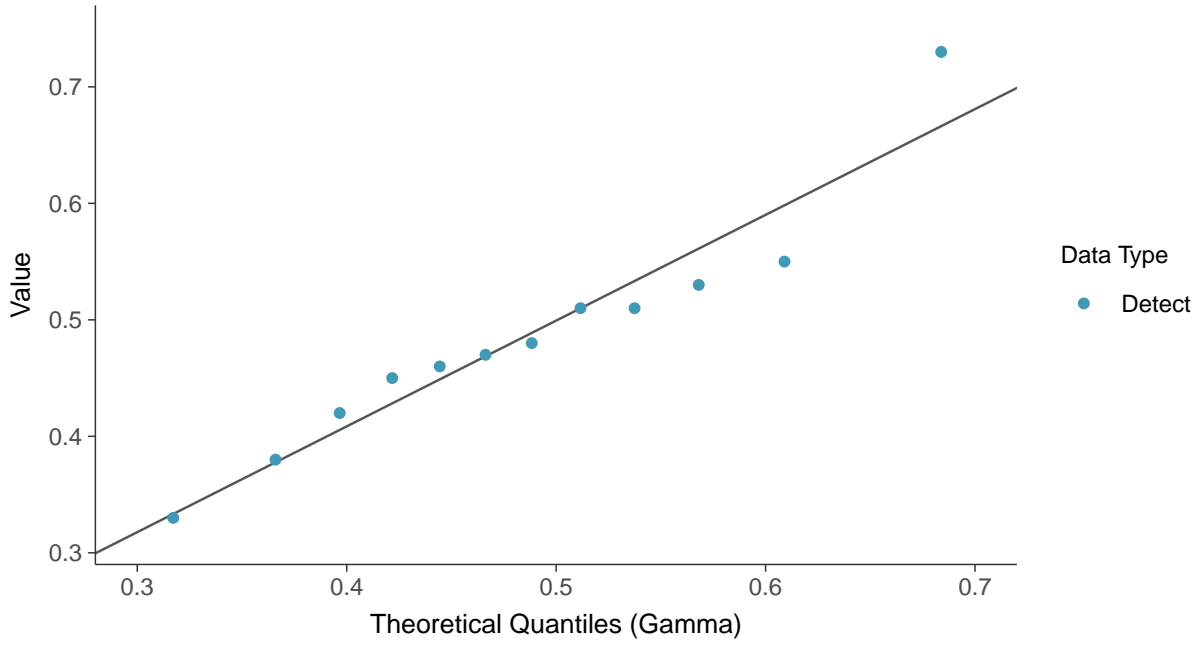


**Lognormal Q-Q plot**  
Barium, MW-02 (mg/L)

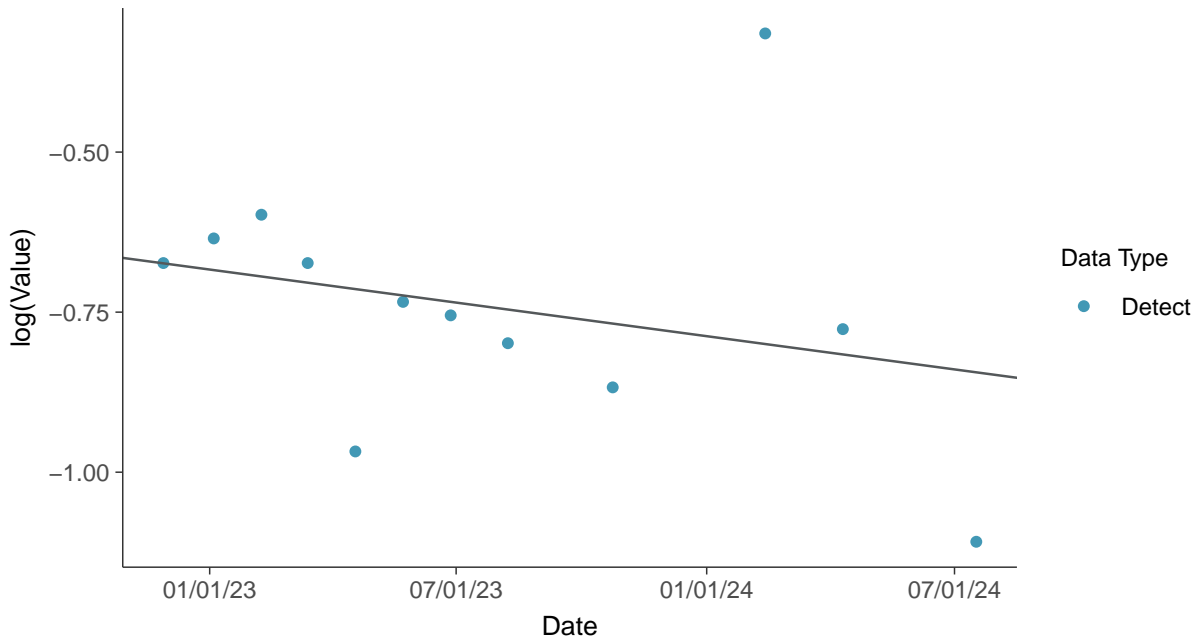




**Gamma Q-Q plot**  
Barium, MW-02 (mg/L)

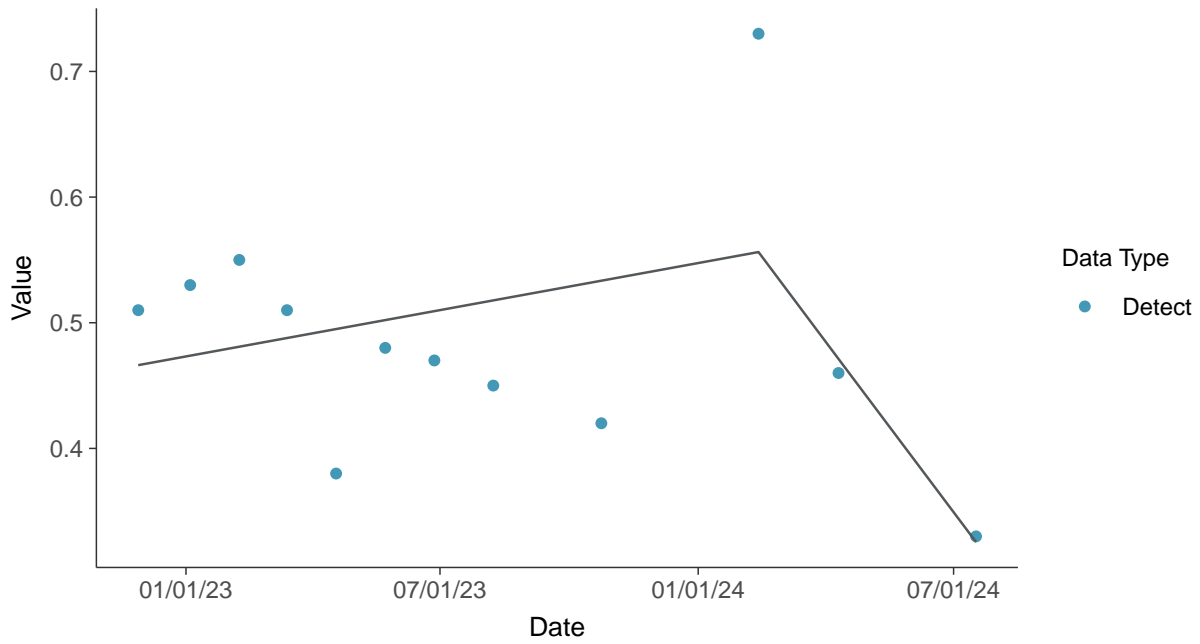


**Trend Regression: Lognormal MLE**  
Barium, MW-02 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Barium, MW-02 (mg/L)

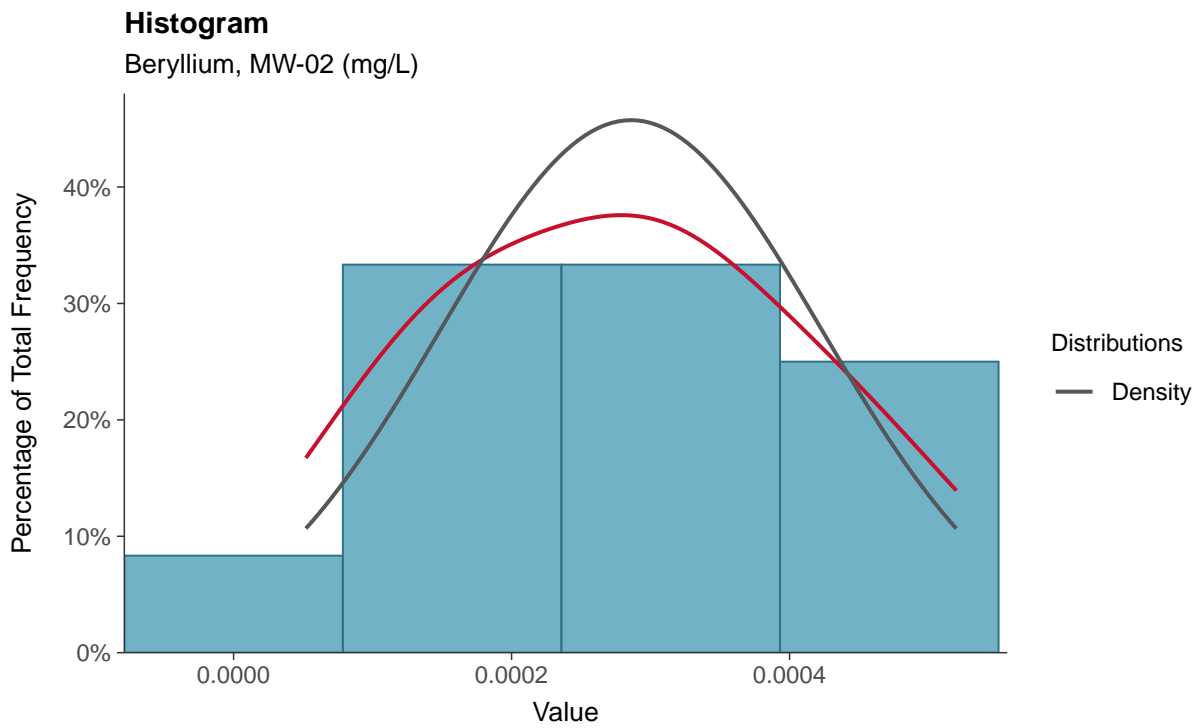
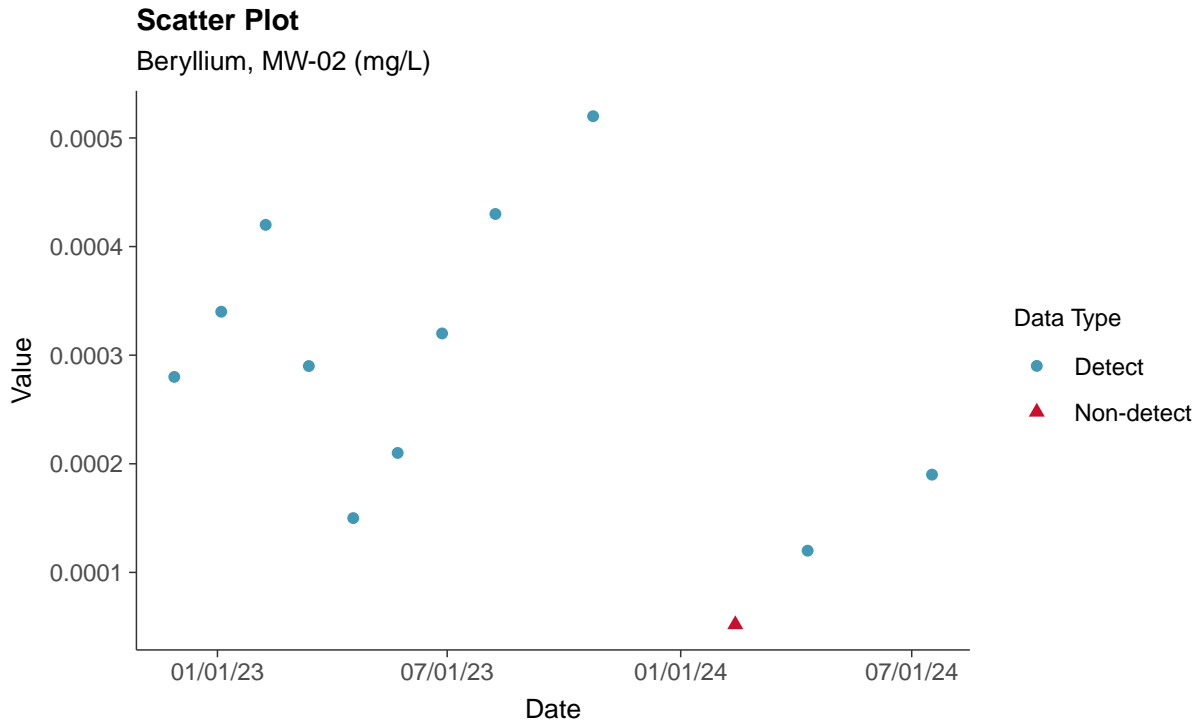






### Appendix IV: Beryllium, MW-02

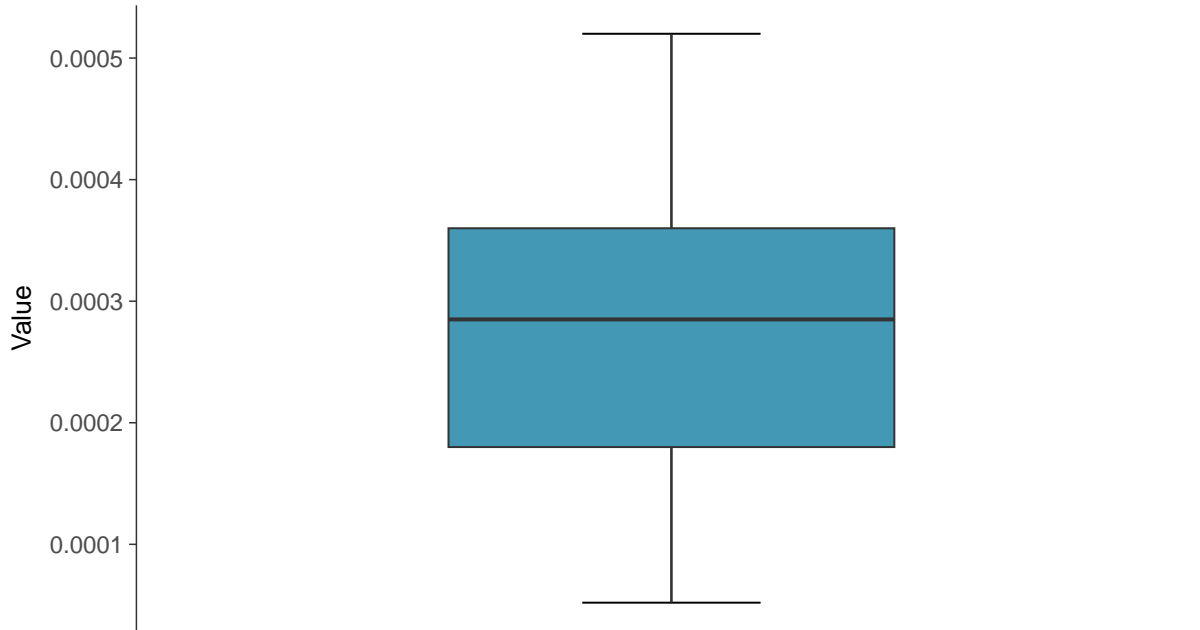
ID: 12\_2\_5\_104





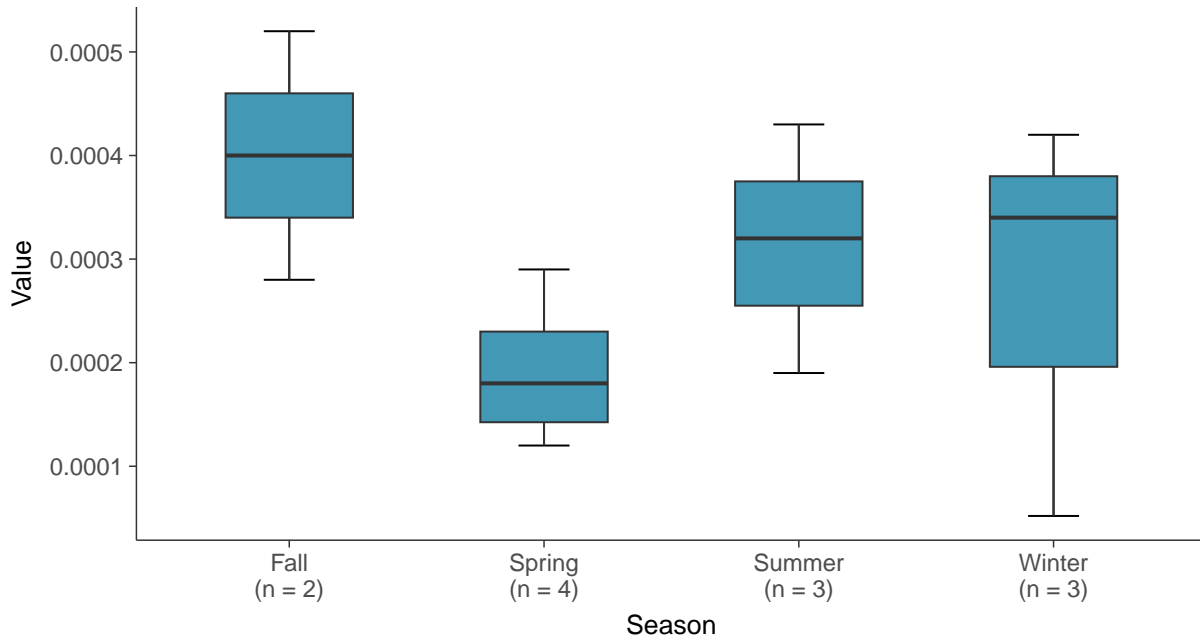
### Boxplot

Beryllium, MW-02 (mg/L)



### Boxplot by Season

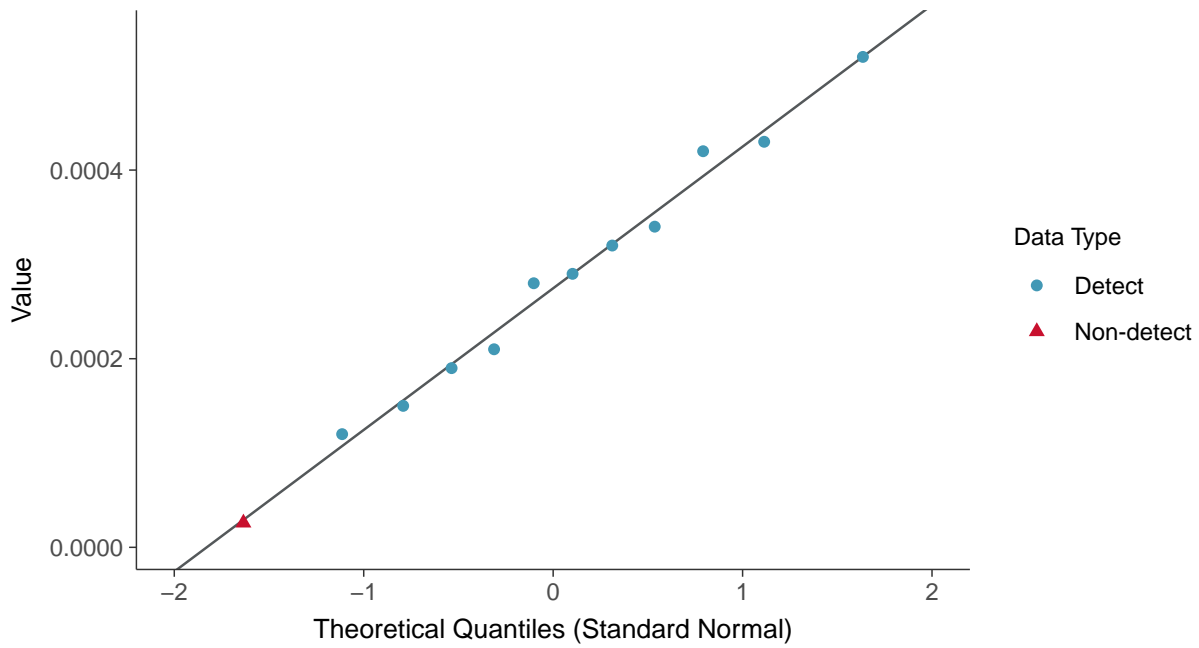
Beryllium, MW-02 (mg/L)





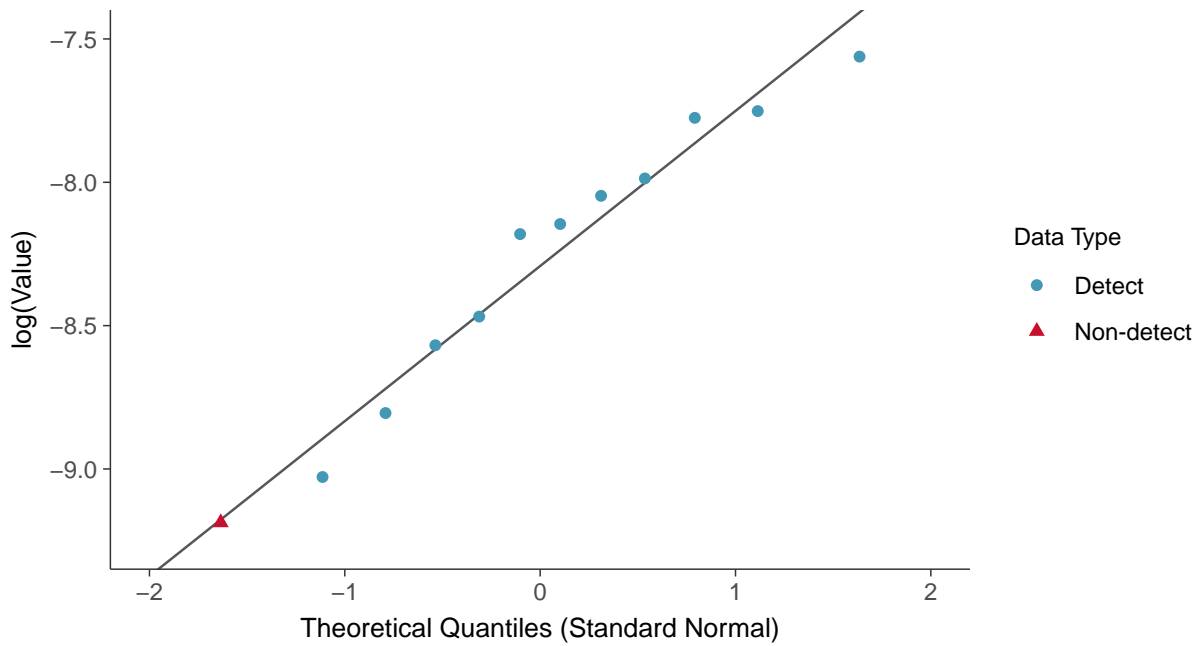
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-02 (mg/L)



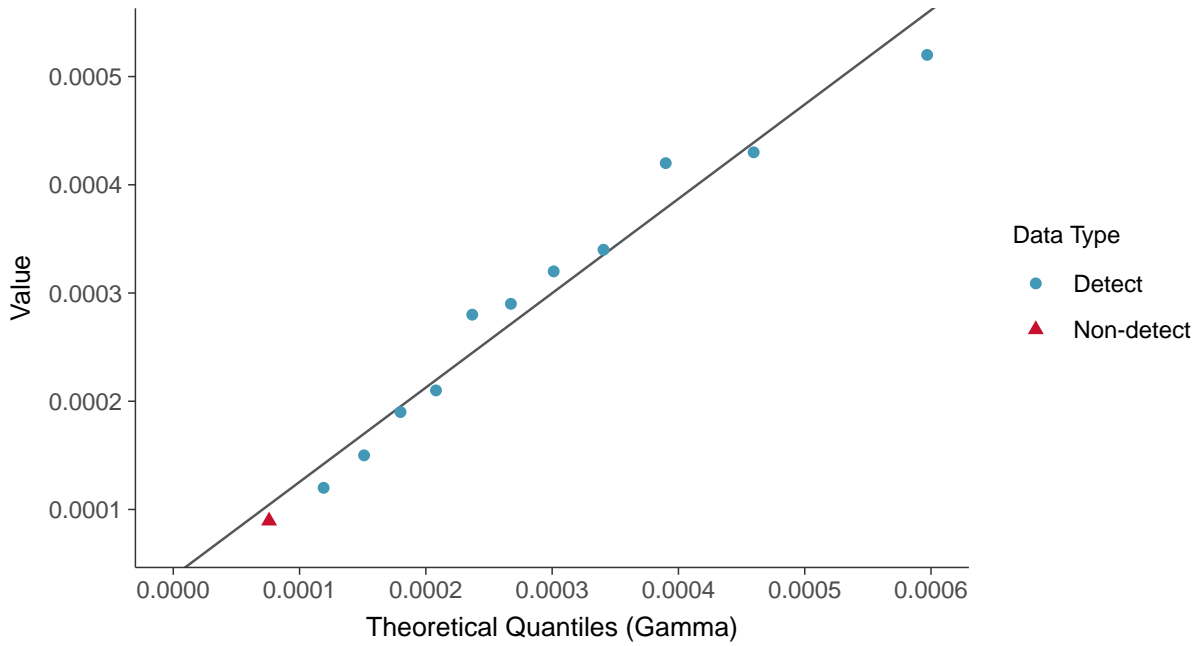
### Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-02 (mg/L)

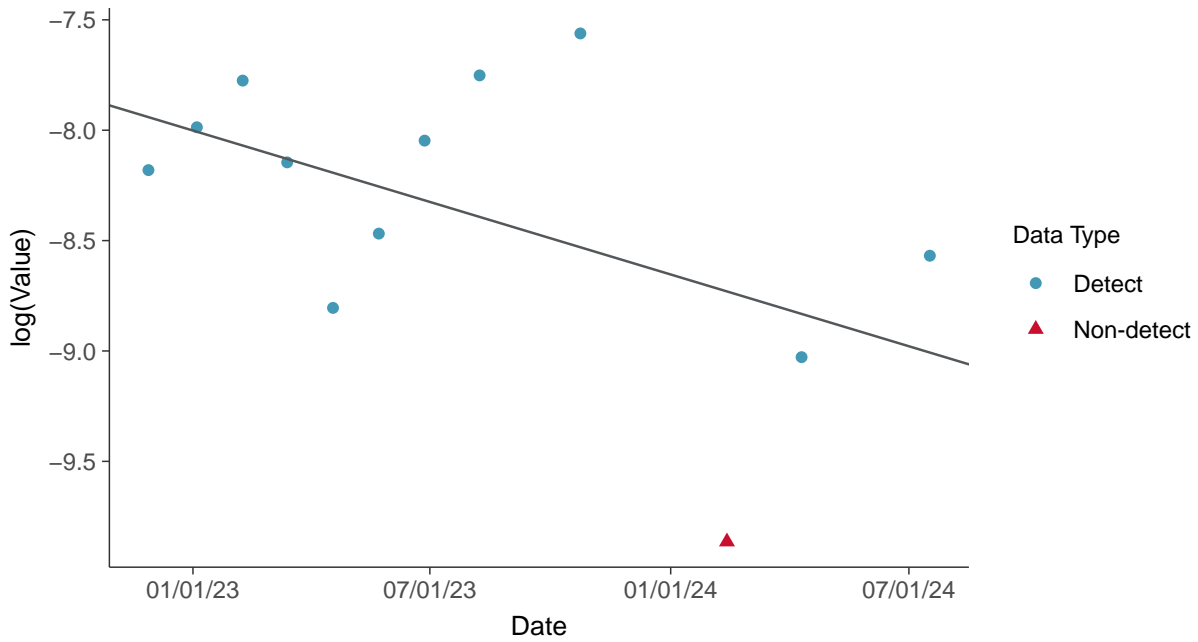




**Gamma Q-Q plot using ROS Imputed Estimates**  
Beryllium, MW-02 (mg/L)

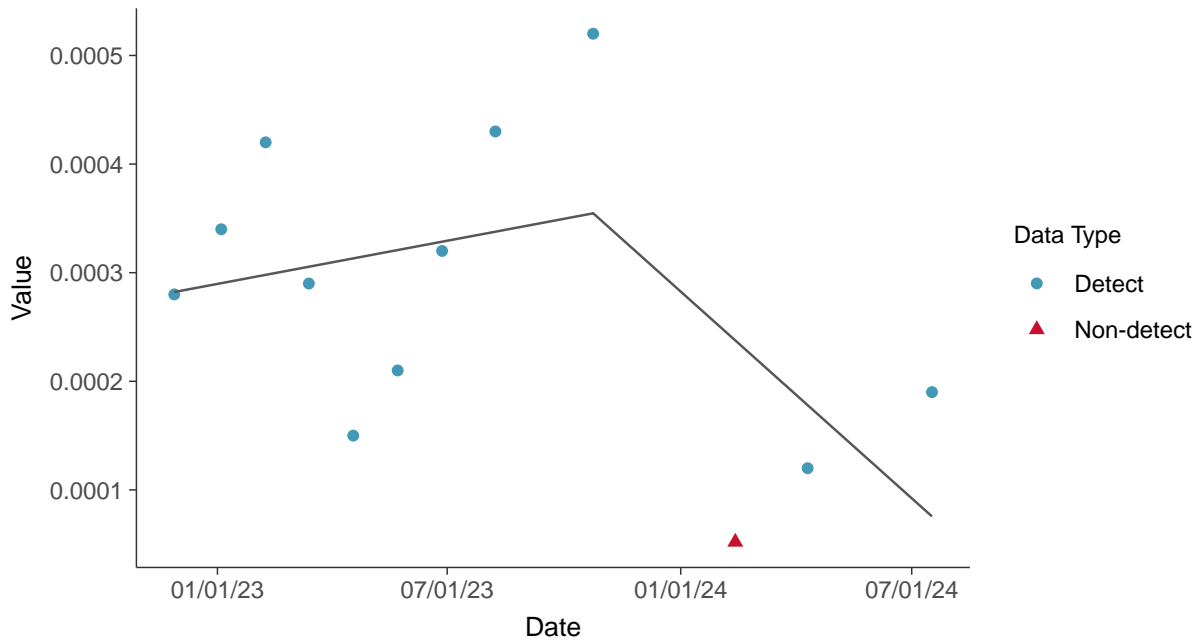


**Trend Regression: Lognormal MLE**  
Beryllium, MW-02 (mg/L)

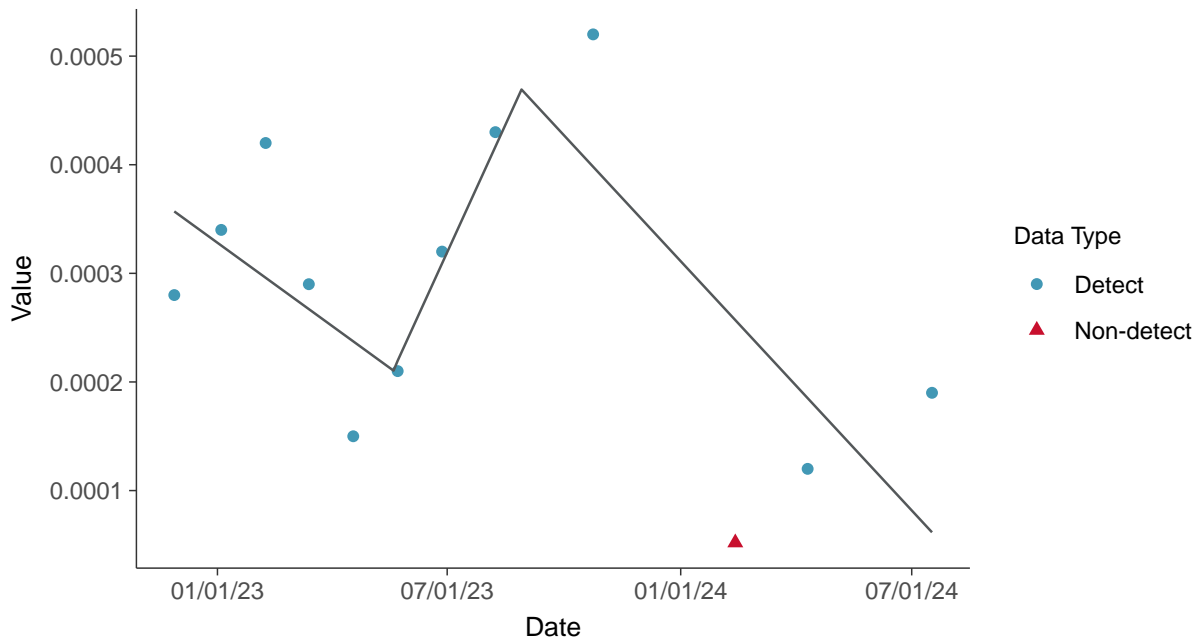




**Trend Regression: Piecewise Linear-Linear**  
Beryllium, MW-02 (mg/L)



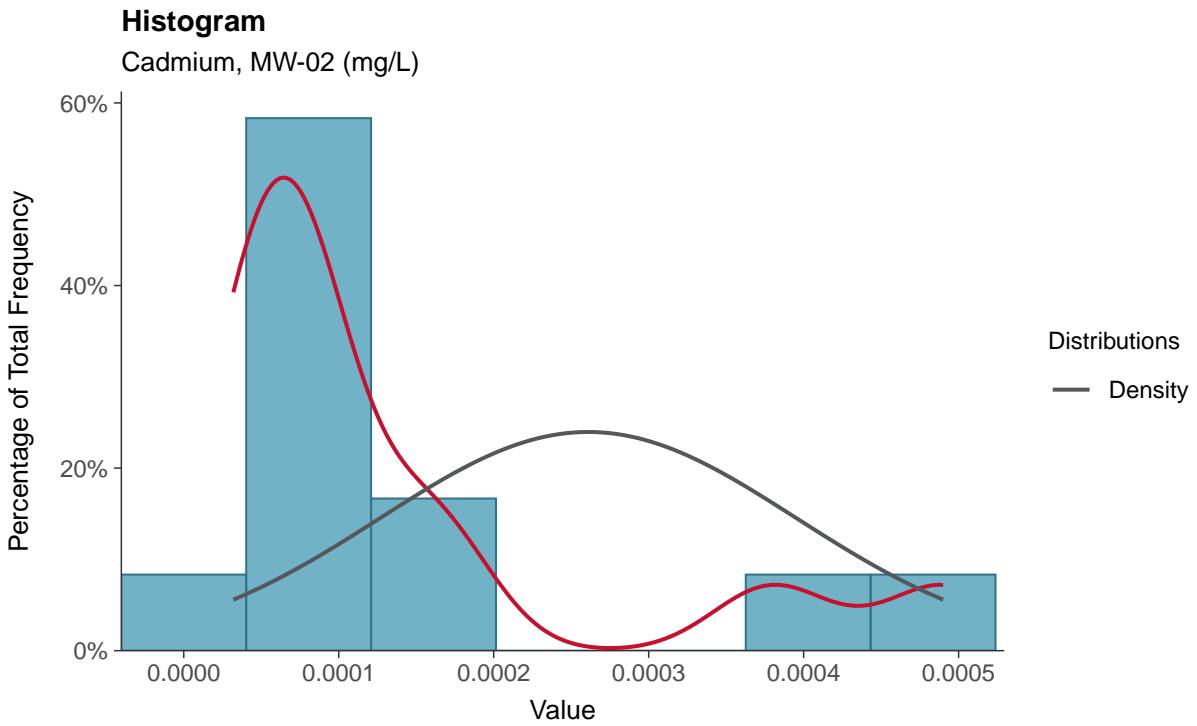
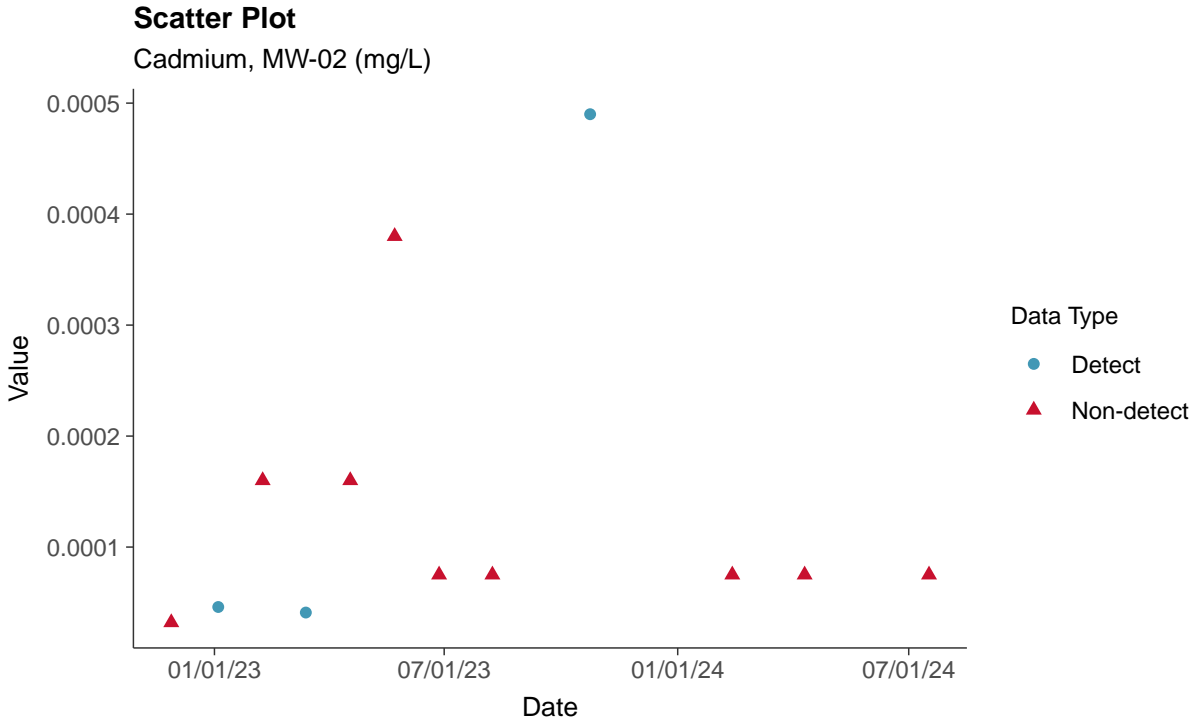
**Trend Regression: Piecewise Linear-Linear-Linear**  
Beryllium, MW-02 (mg/L)





### Appendix IV: Cadmium, MW-02

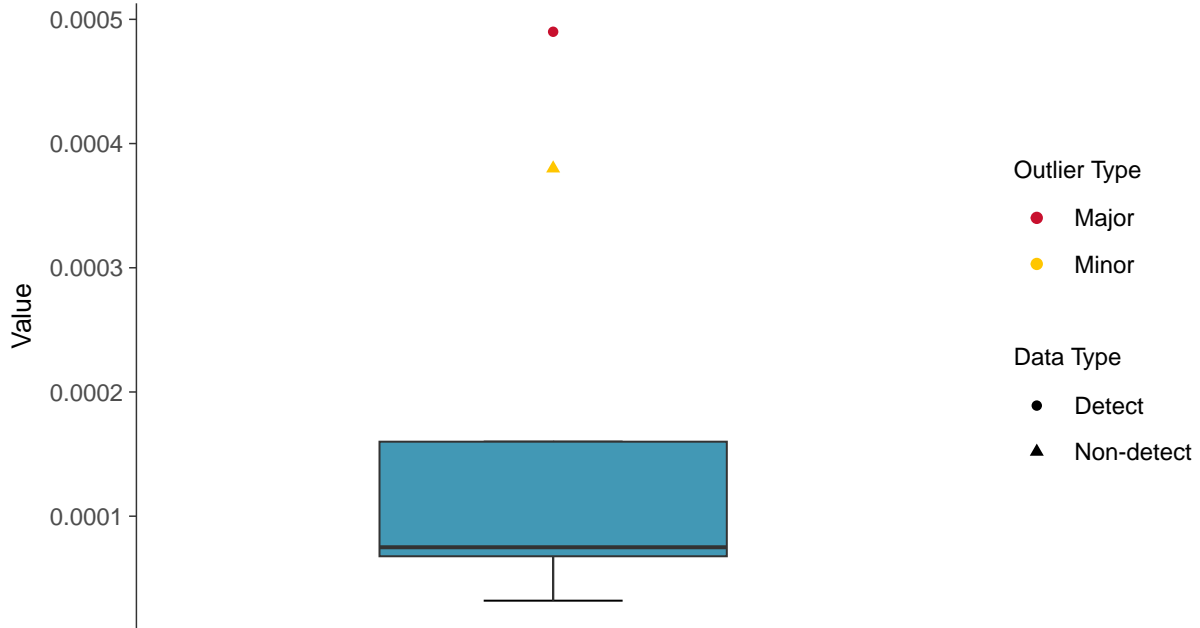
ID: 12\_2\_5\_106





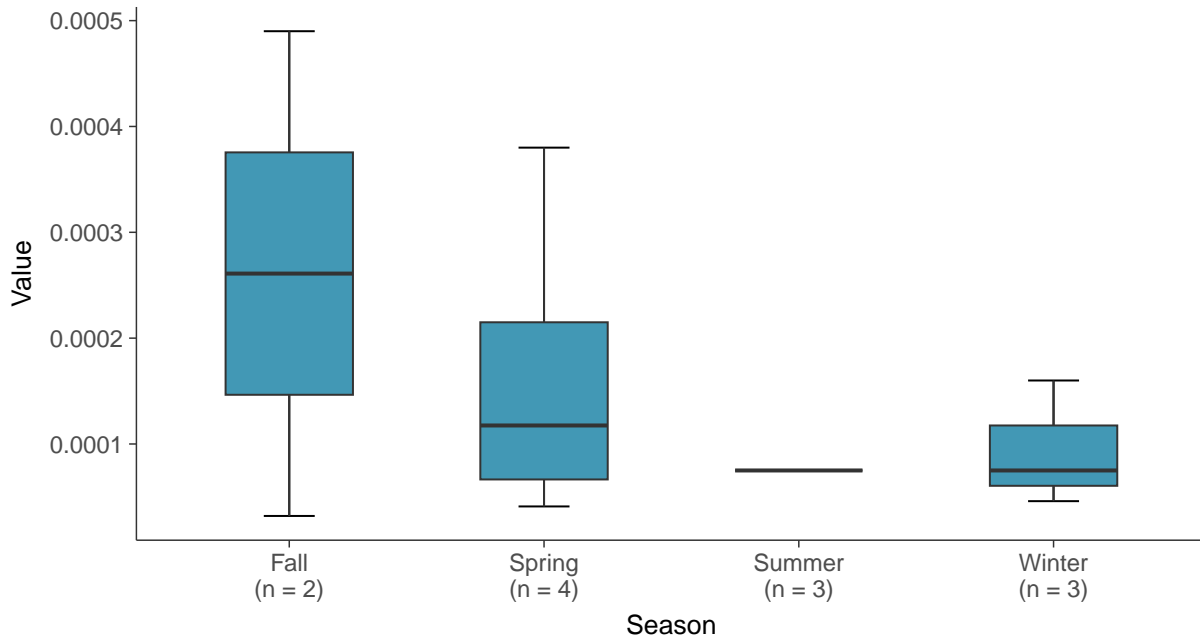
### Boxplot

Cadmium, MW-02 (mg/L)



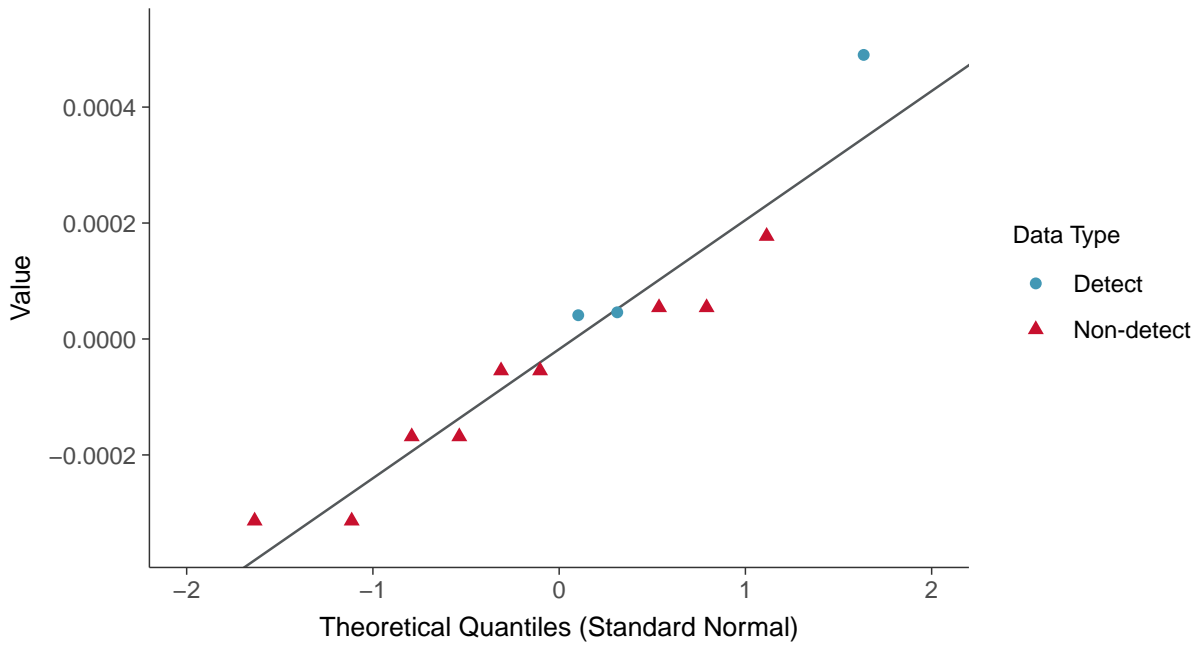
### Boxplot by Season

Cadmium, MW-02 (mg/L)

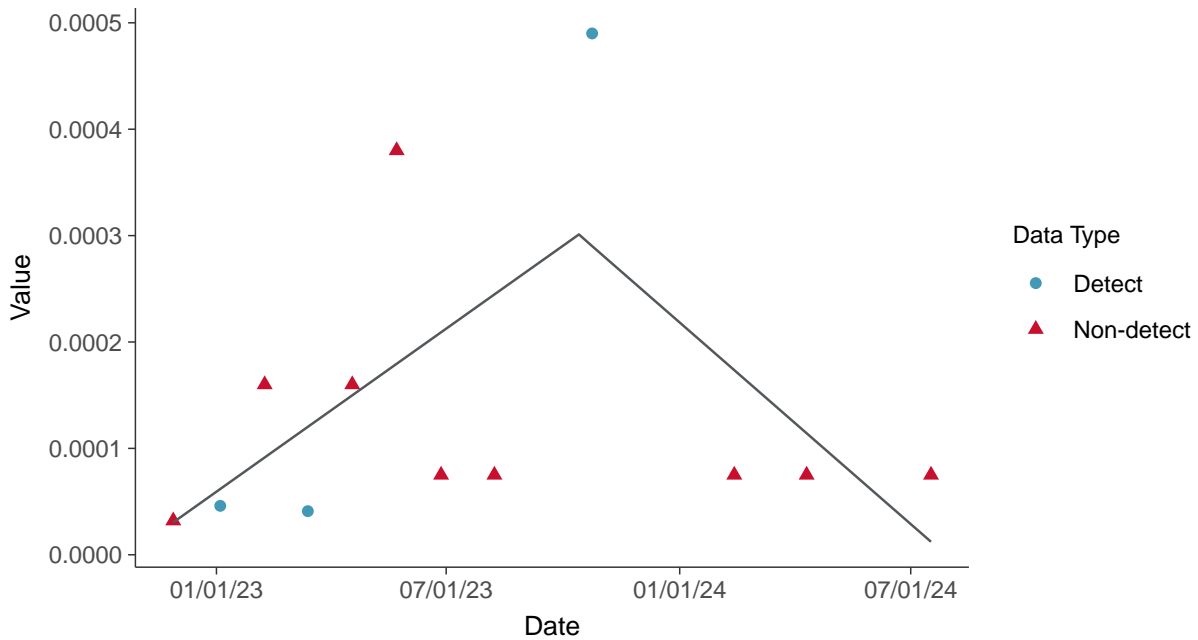




**Normal Q-Q plot using ROS Imputed Estimates**  
Cadmium, MW-02 (mg/L)



**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-02 (mg/L)

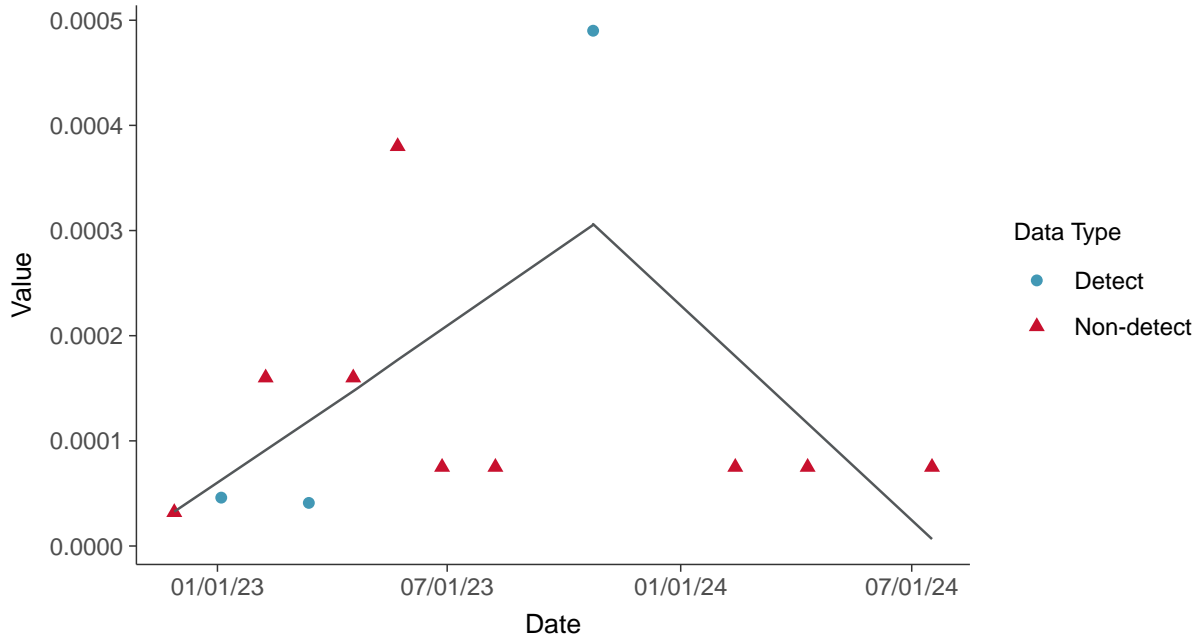






### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-02 (mg/L)



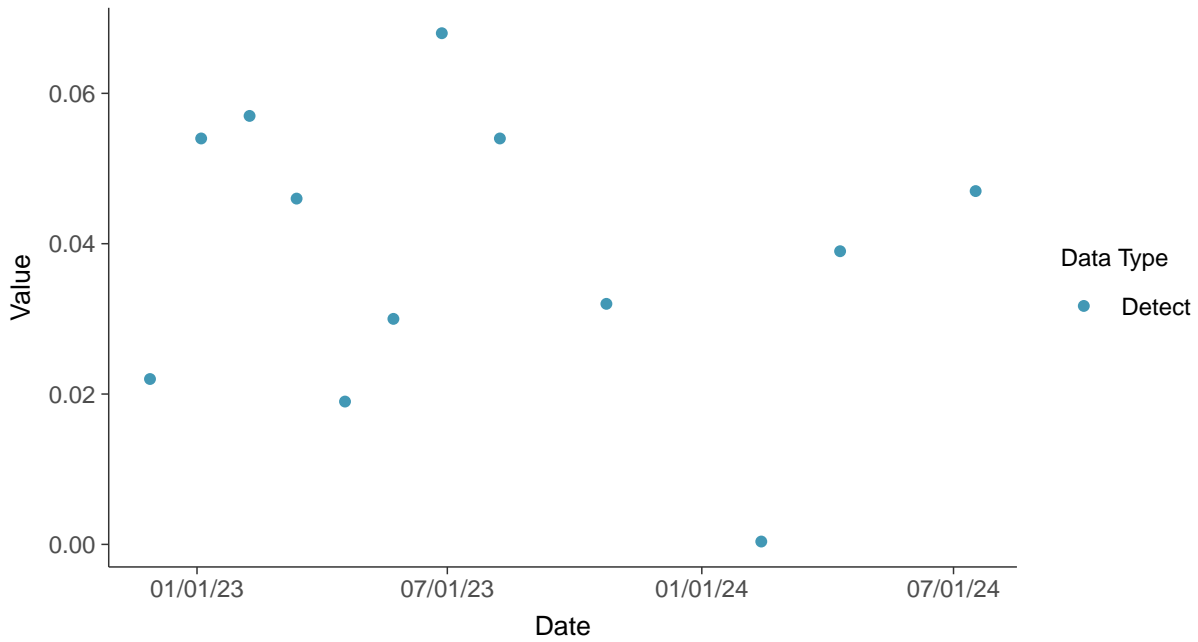


## Appendix IV: Chromium, Total, MW-02

ID: 12\_2\_5\_109

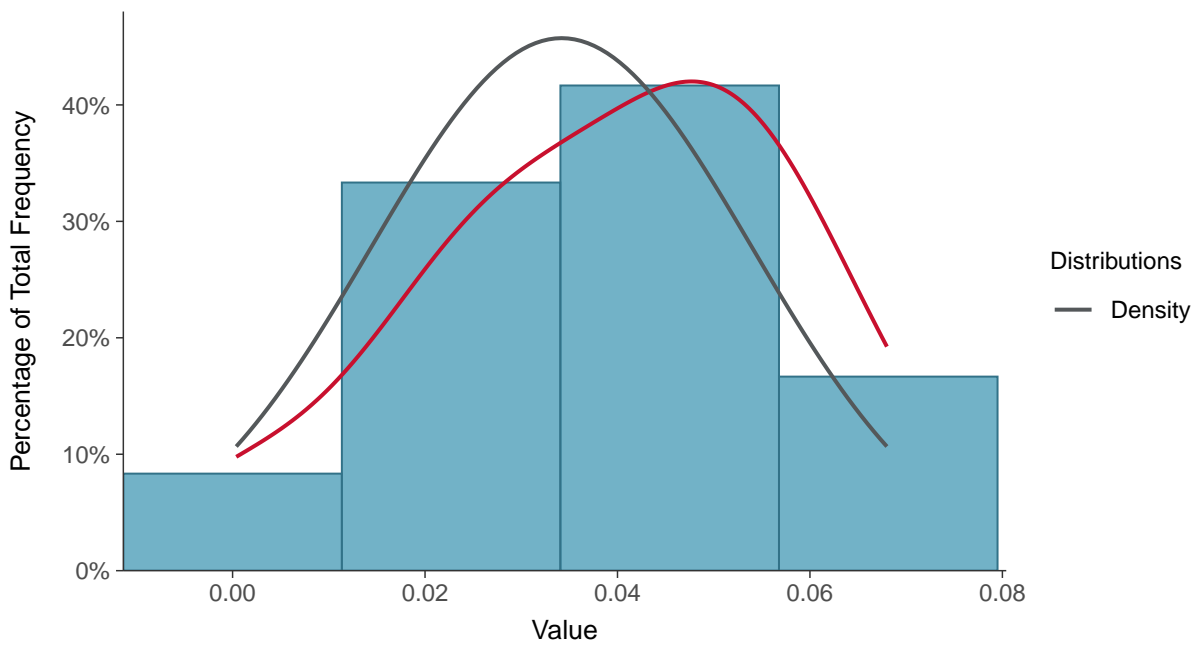
### Scatter Plot

Chromium, Total, MW-02 (mg/L)



### Histogram

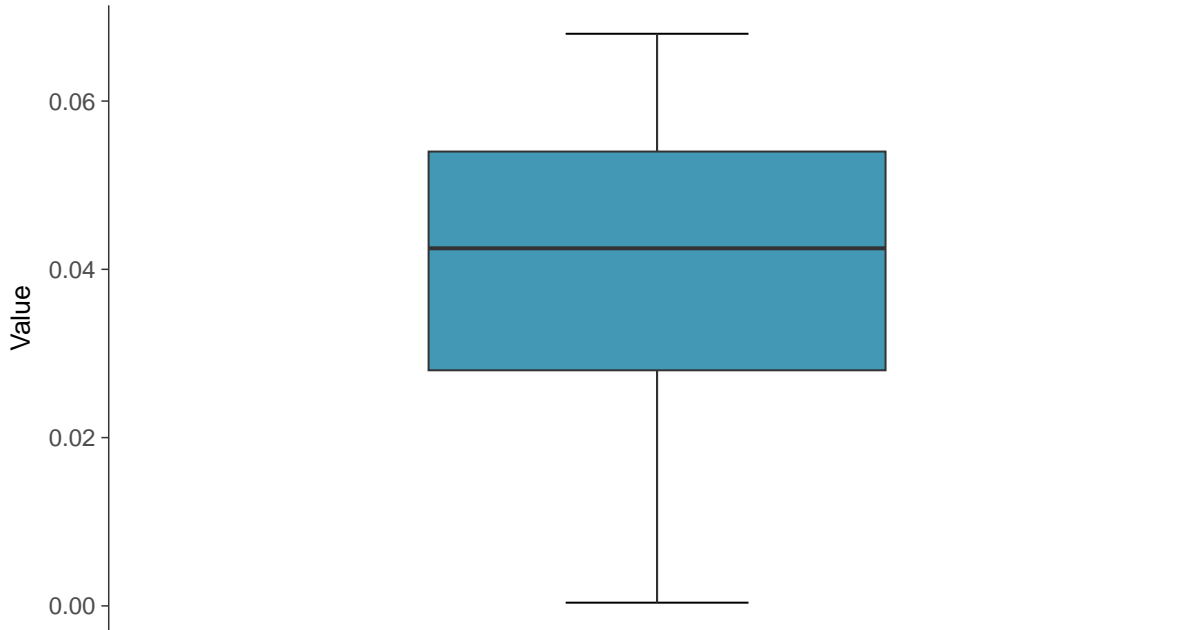
Chromium, Total, MW-02 (mg/L)





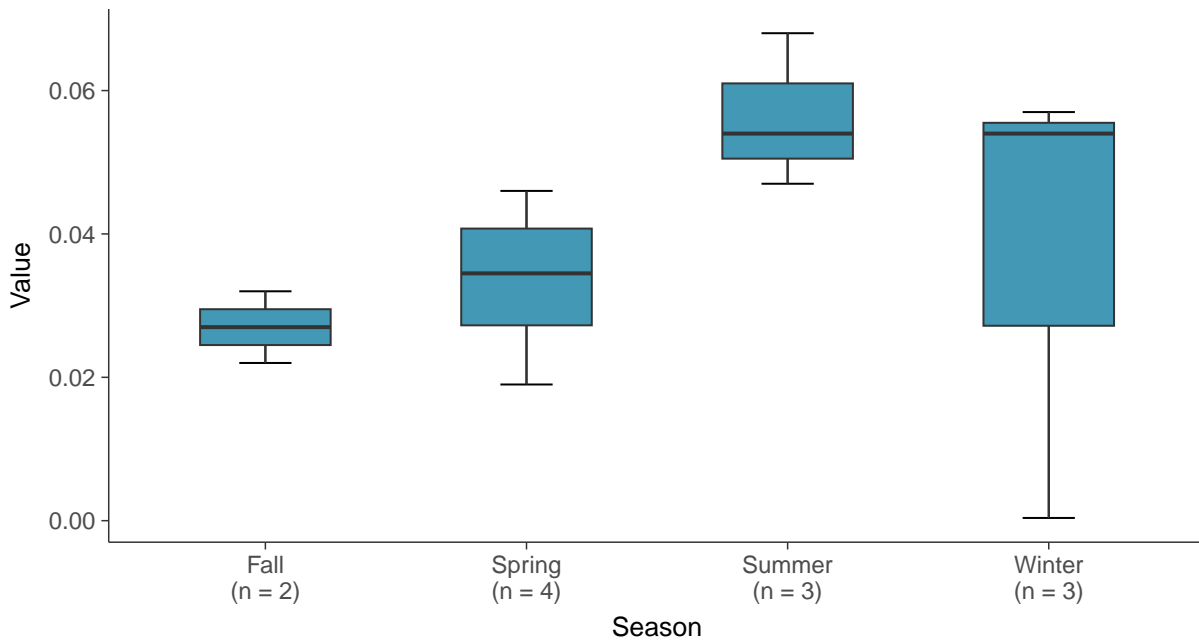
### Boxplot

Chromium, Total, MW-02 (mg/L)



### Boxplot by Season

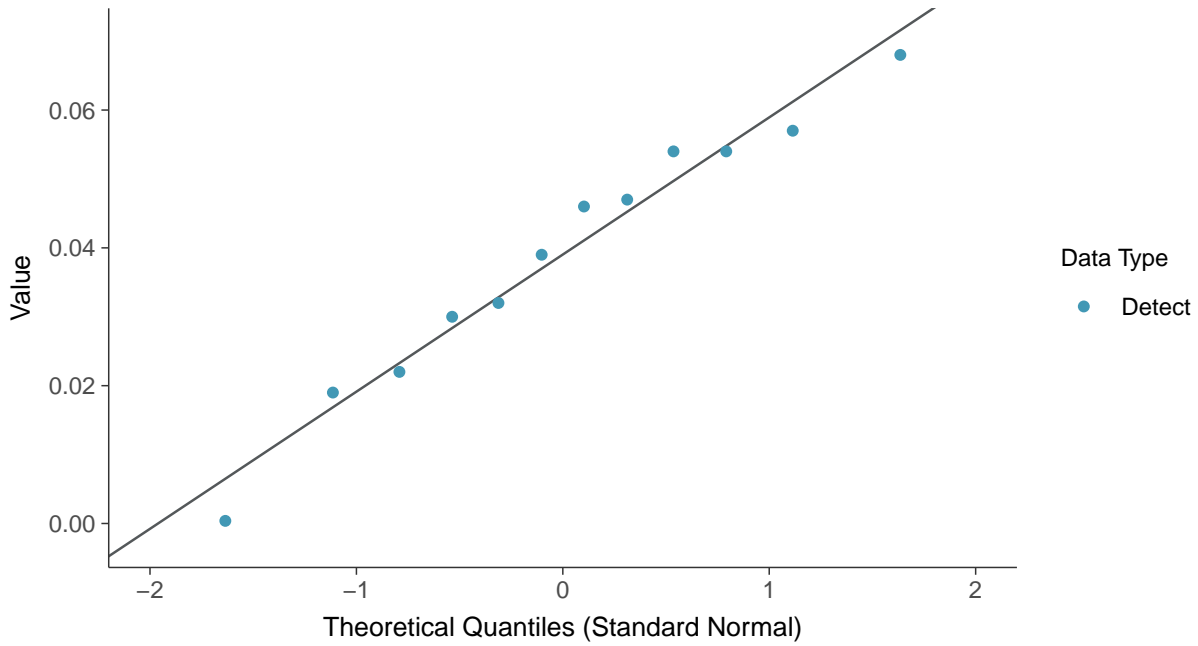
Chromium, Total, MW-02 (mg/L)





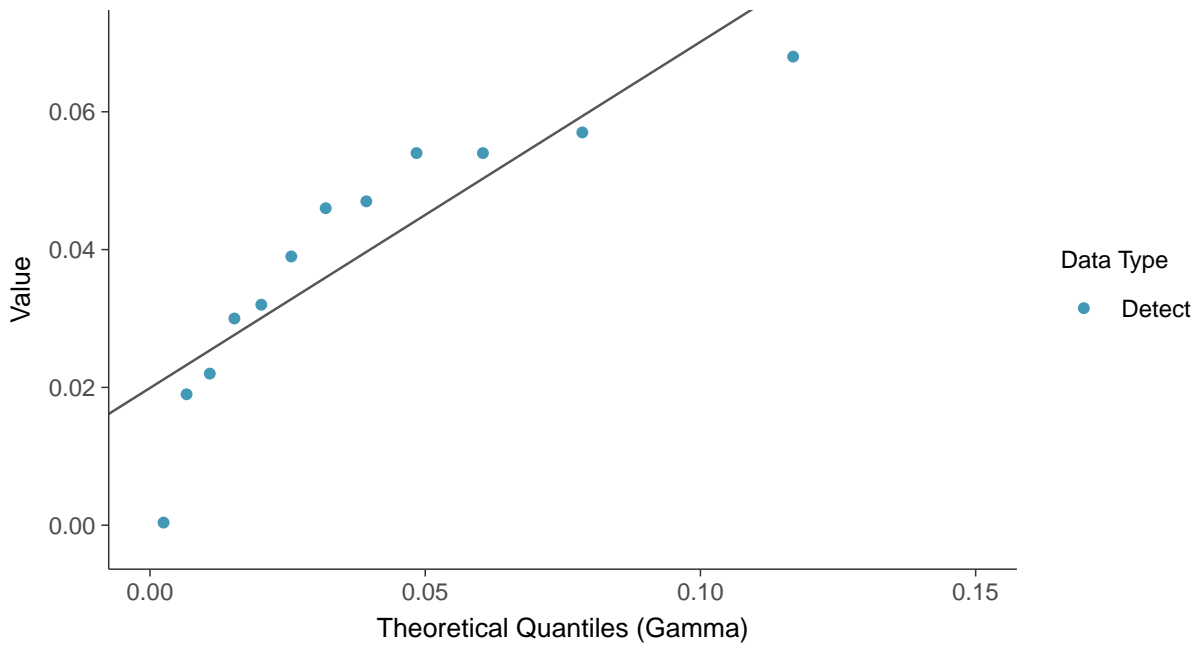
### Normal Q-Q plot

Chromium, Total, MW-02 (mg/L)



### Gamma Q-Q plot

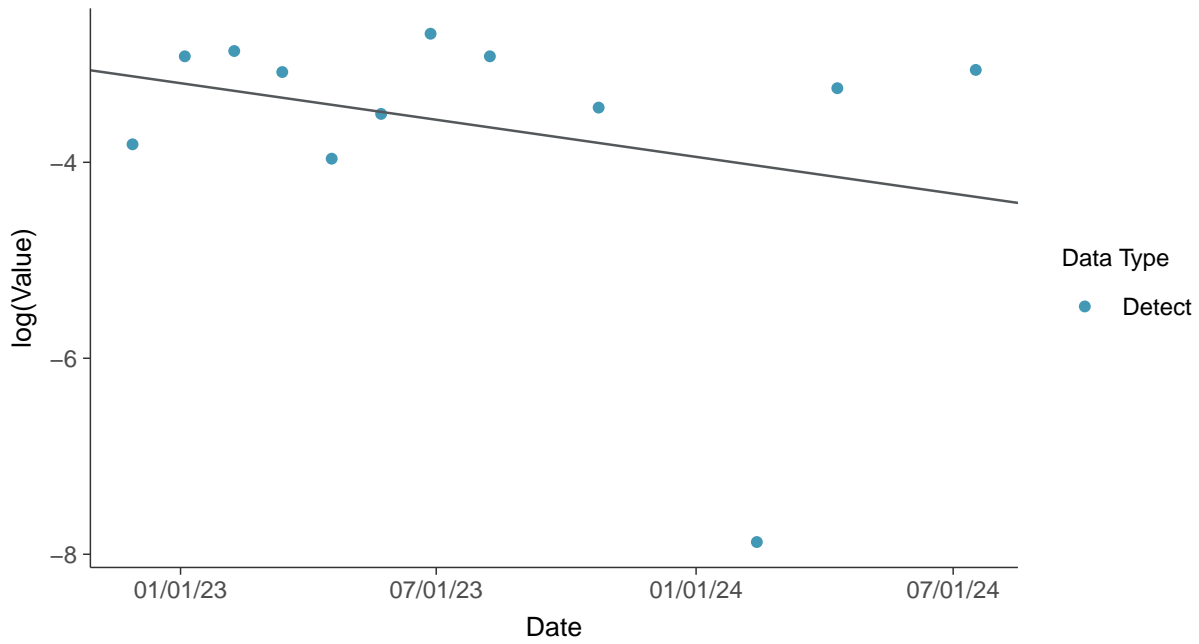
Chromium, Total, MW-02 (mg/L)





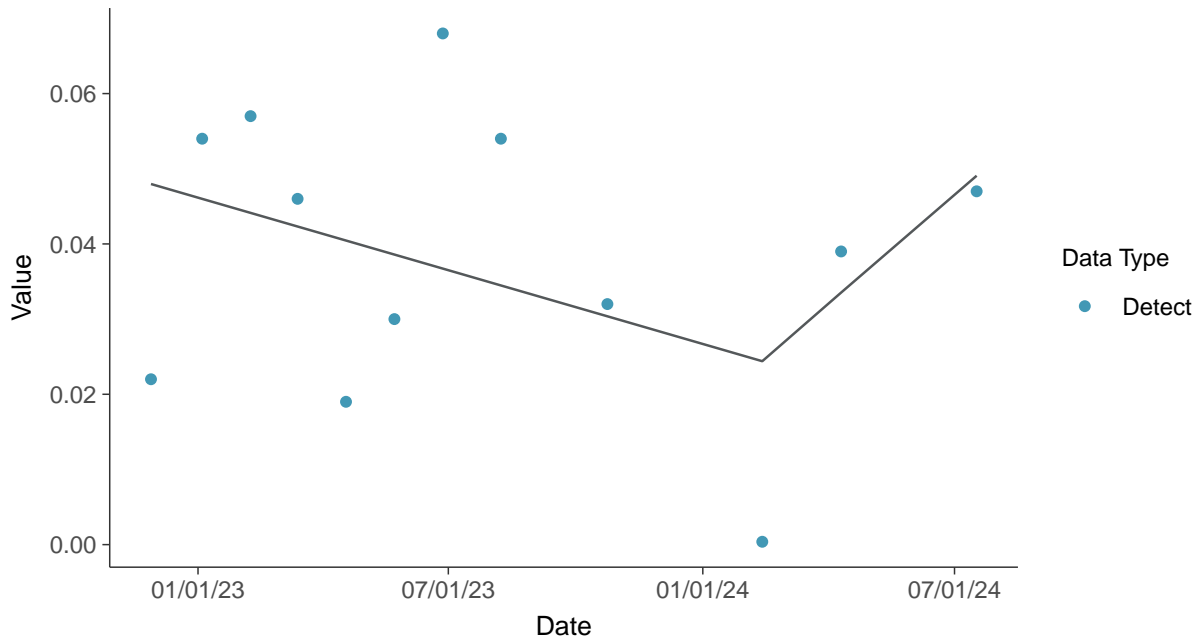
### Trend Regression: Lognormal MLE

Chromium, Total, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

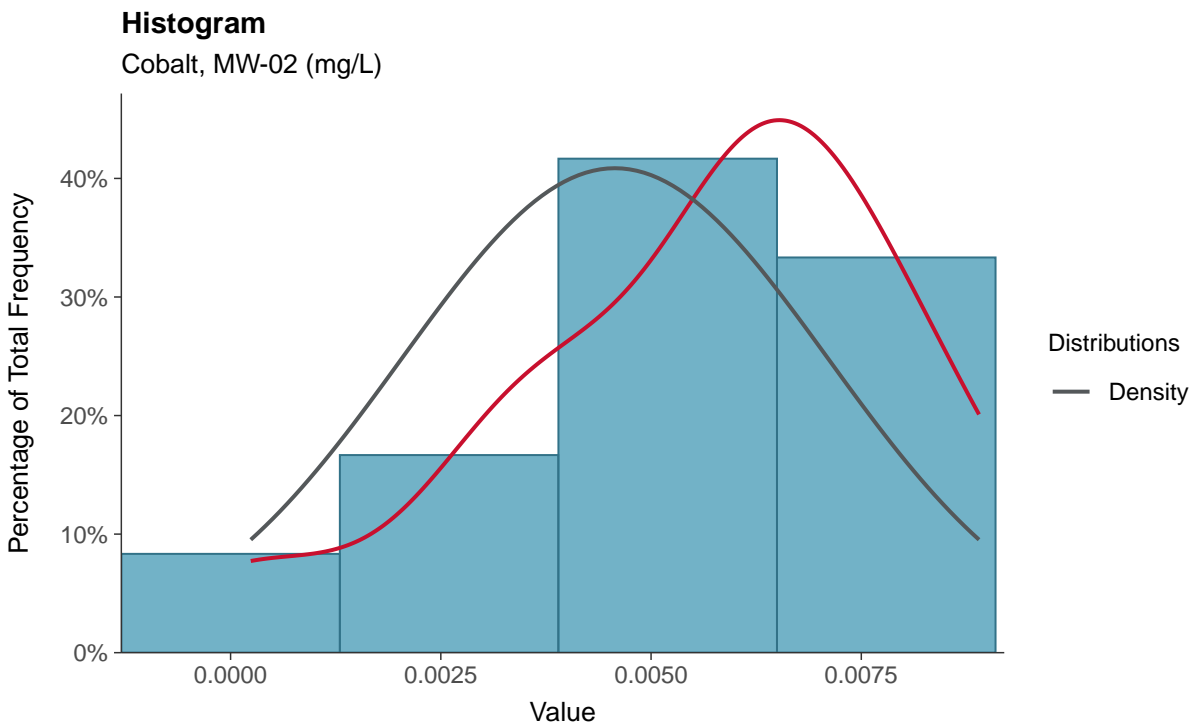
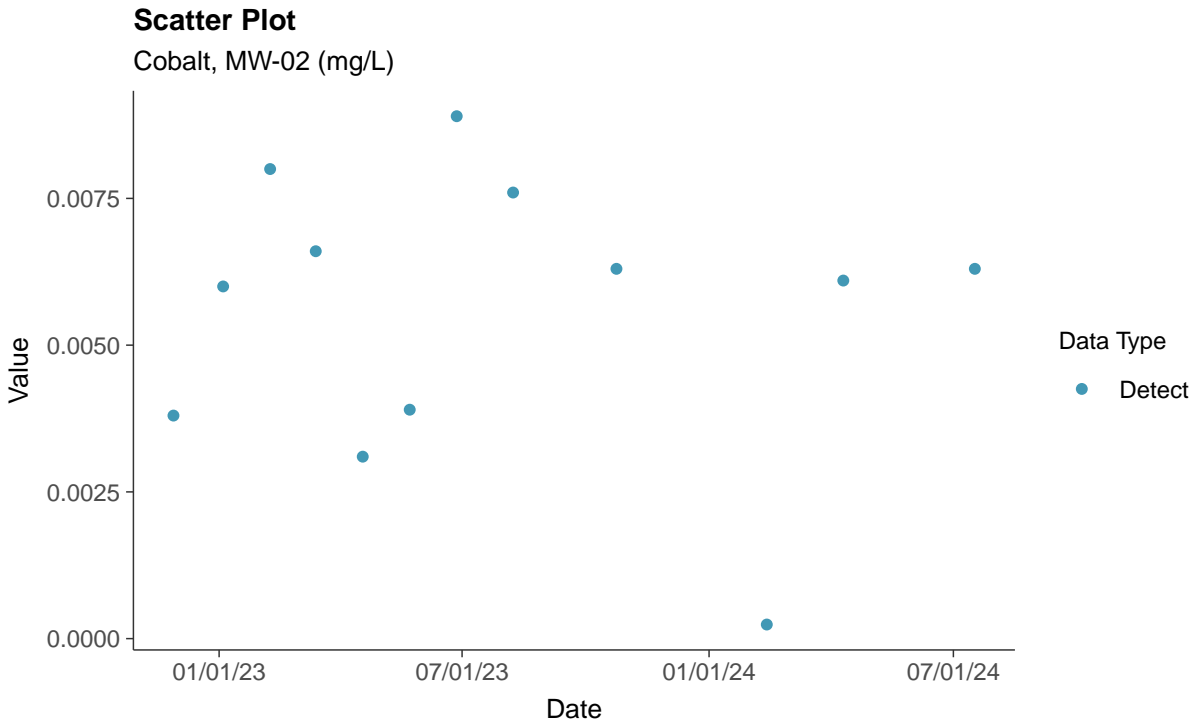
Chromium, Total, MW-02 (mg/L)





### Appendix IV: Cobalt, MW-02

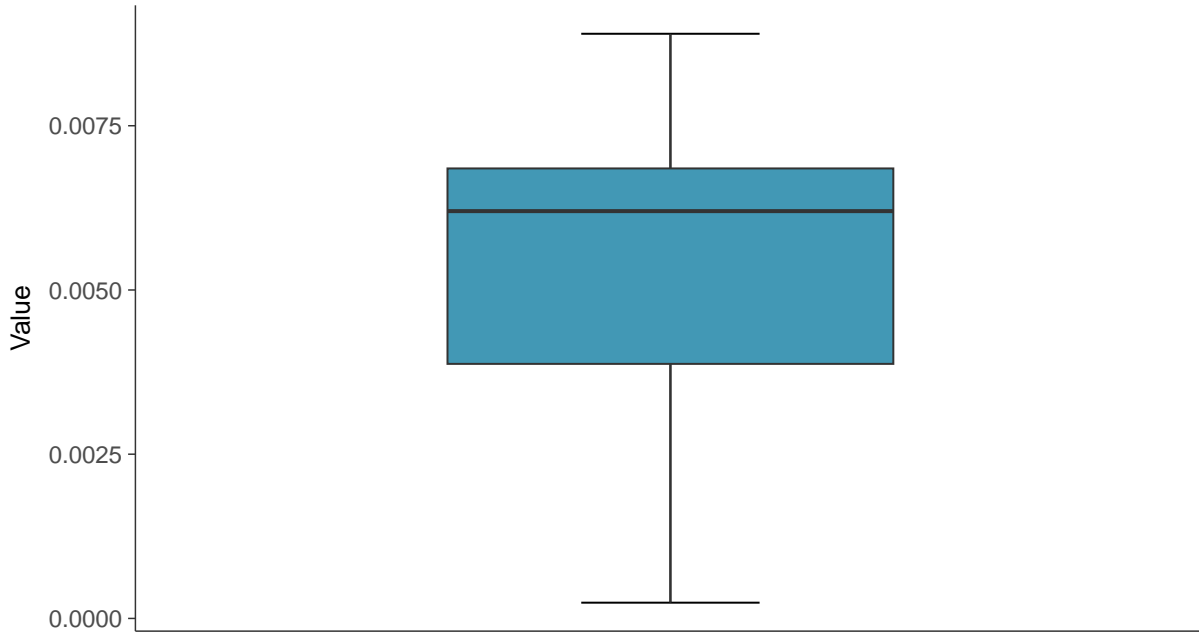
ID: 12\_2\_5\_110





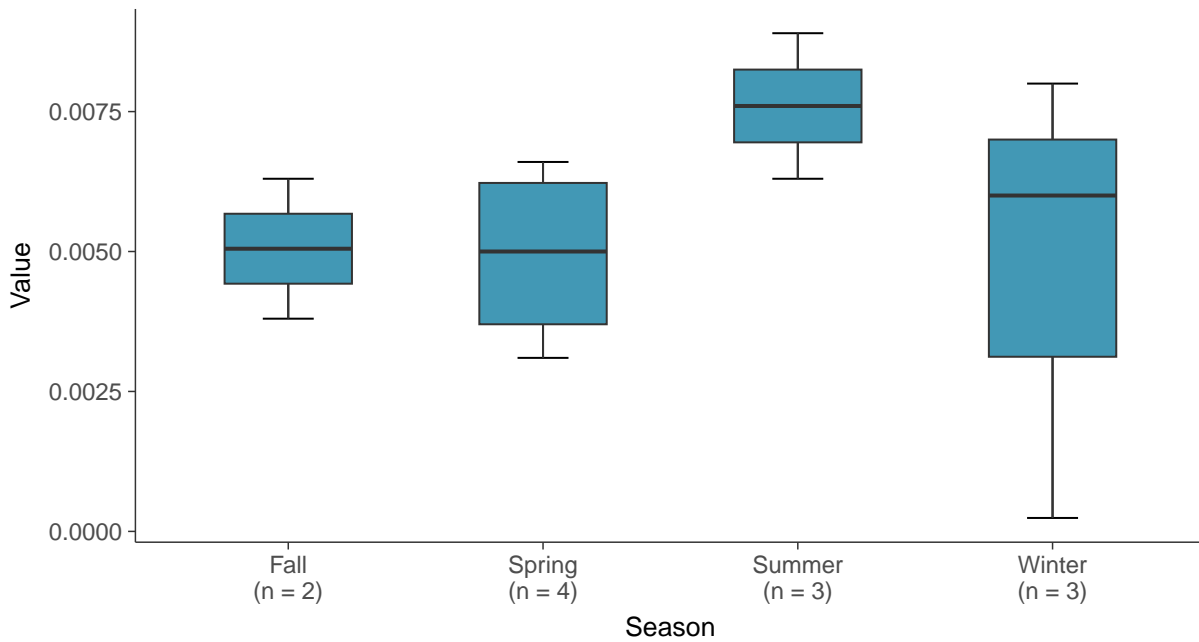
### Boxplot

Cobalt, MW-02 (mg/L)



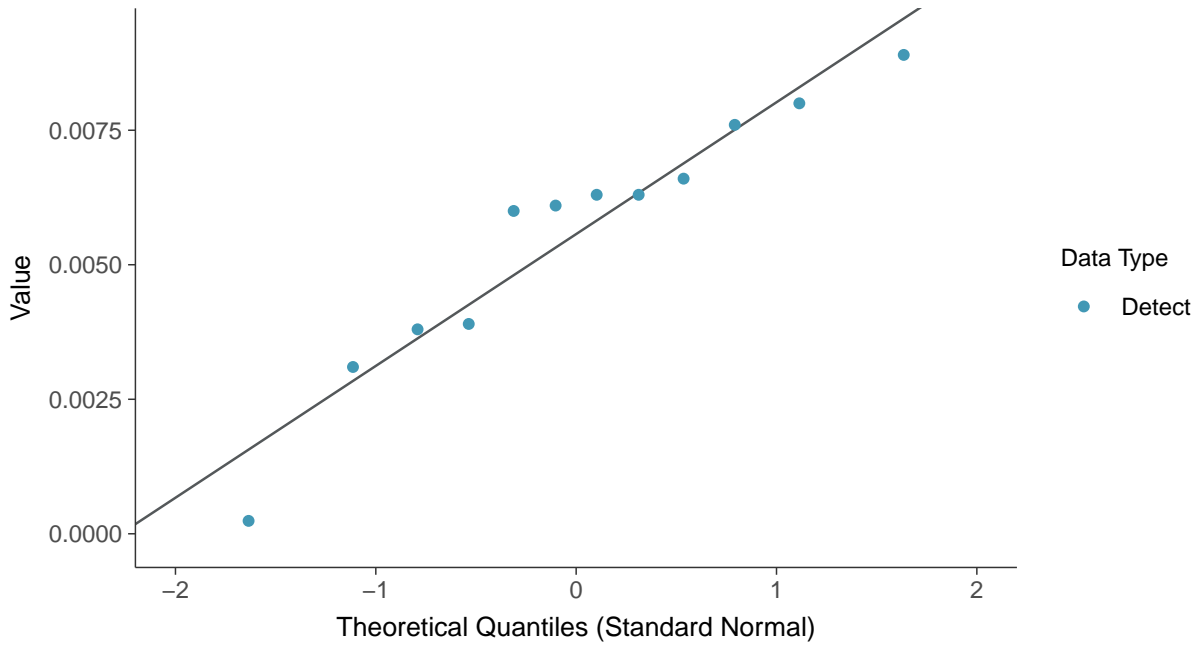
### Boxplot by Season

Cobalt, MW-02 (mg/L)

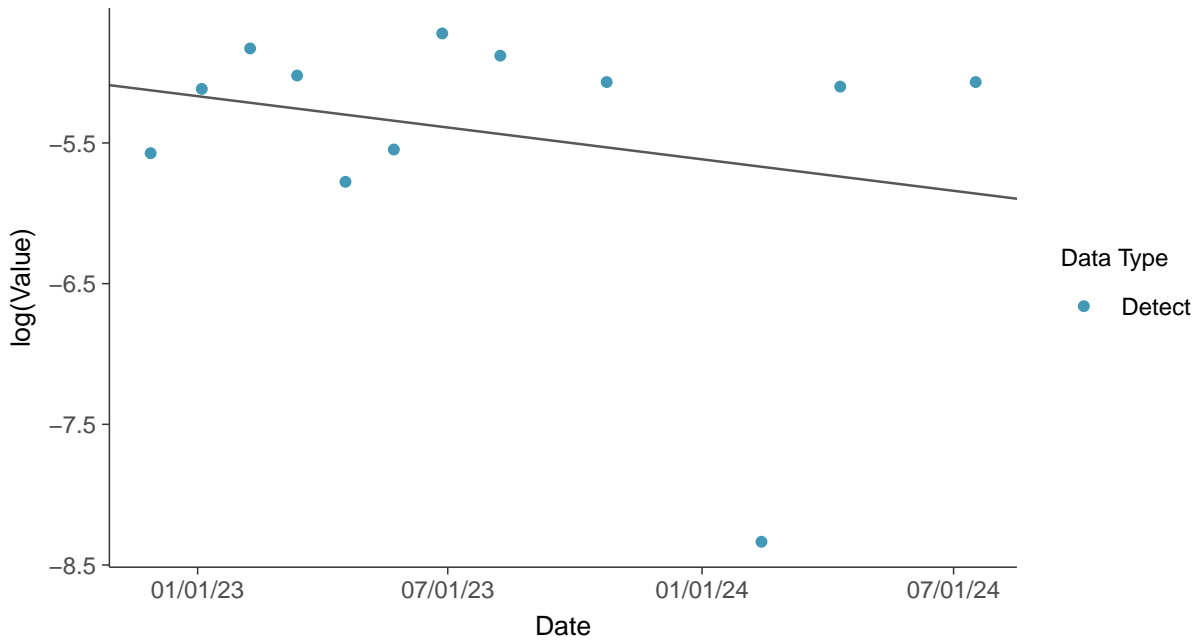




**Normal Q-Q plot**  
Cobalt, MW-02 (mg/L)



**Trend Regression: Lognormal MLE**  
Cobalt, MW-02 (mg/L)

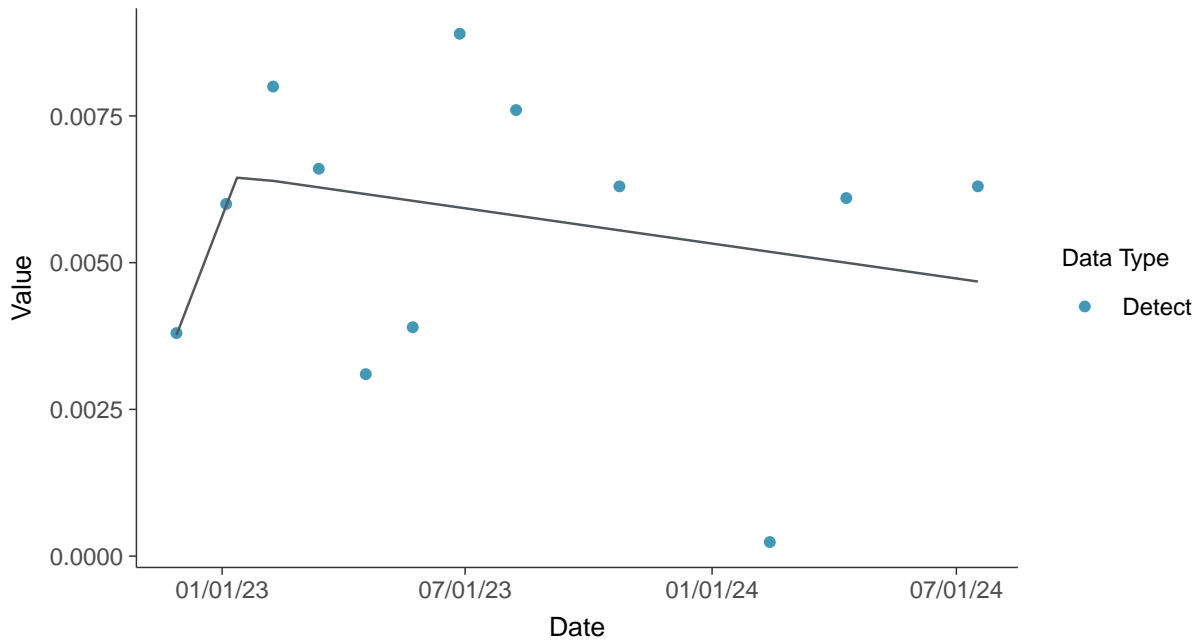






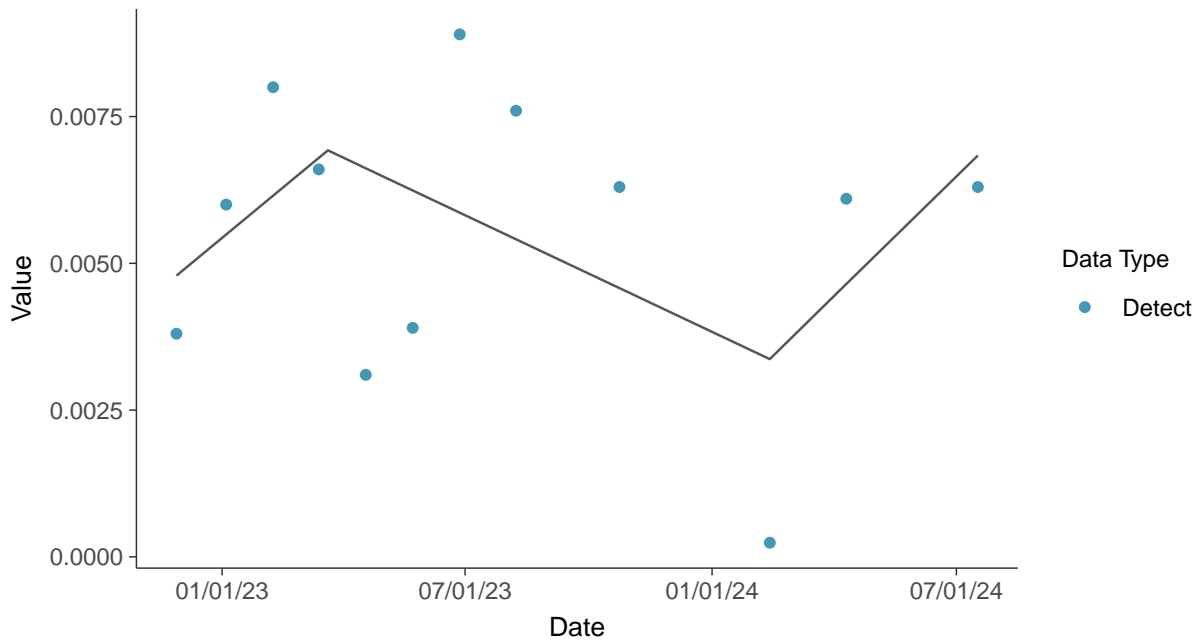
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-02 (mg/L)



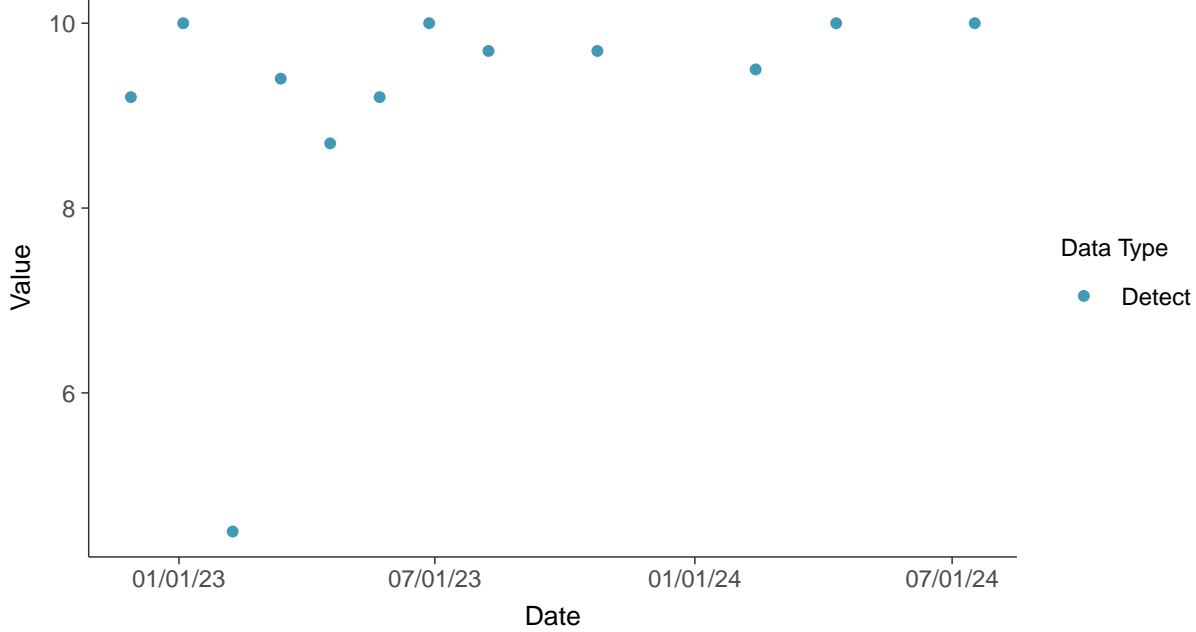


### Appendix IV: Fluoride (App IV), MW-02

ID: 12\_2\_5\_113

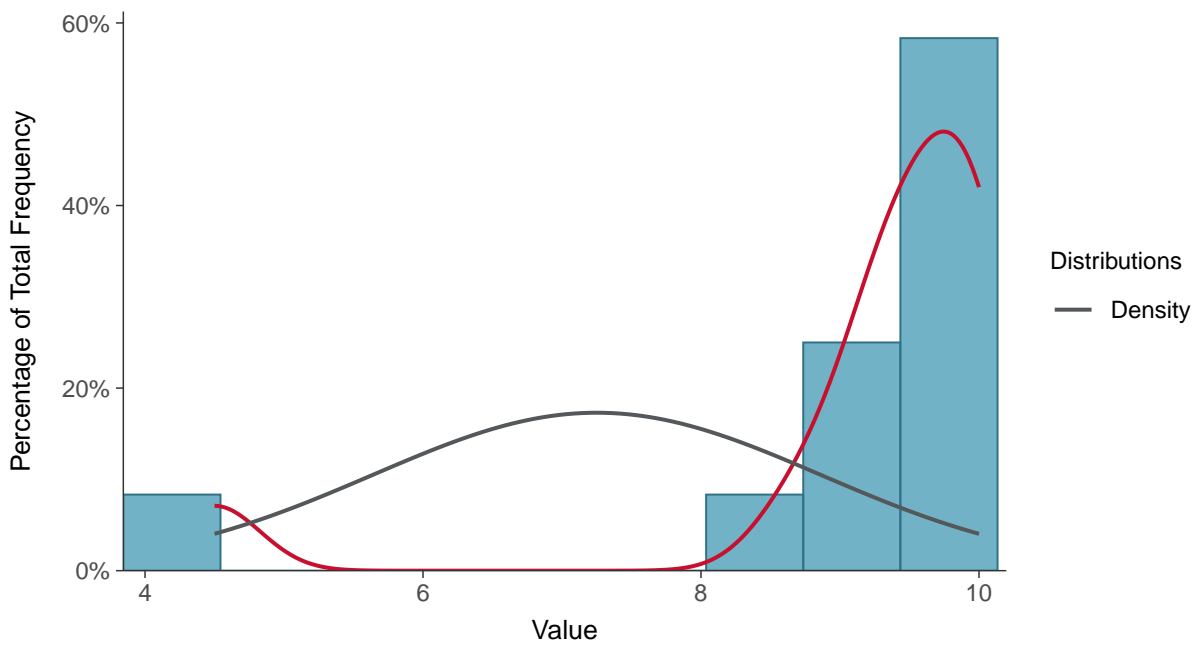
#### Scatter Plot

Fluoride (App IV), MW-02 (mg/L)



#### Histogram

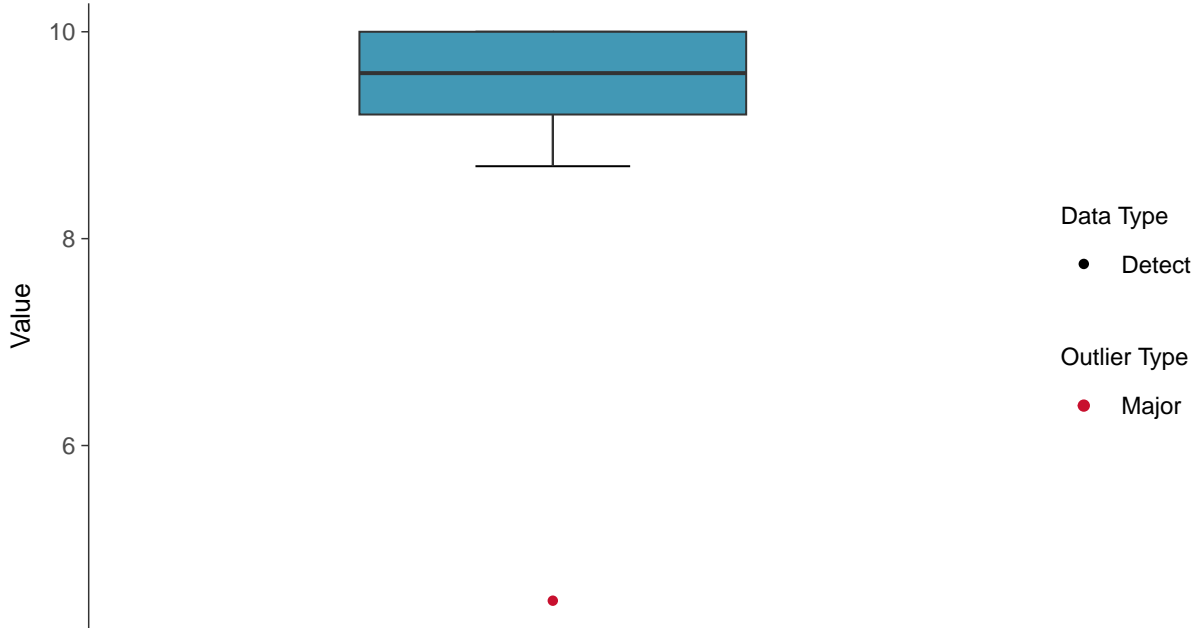
Fluoride (App IV), MW-02 (mg/L)





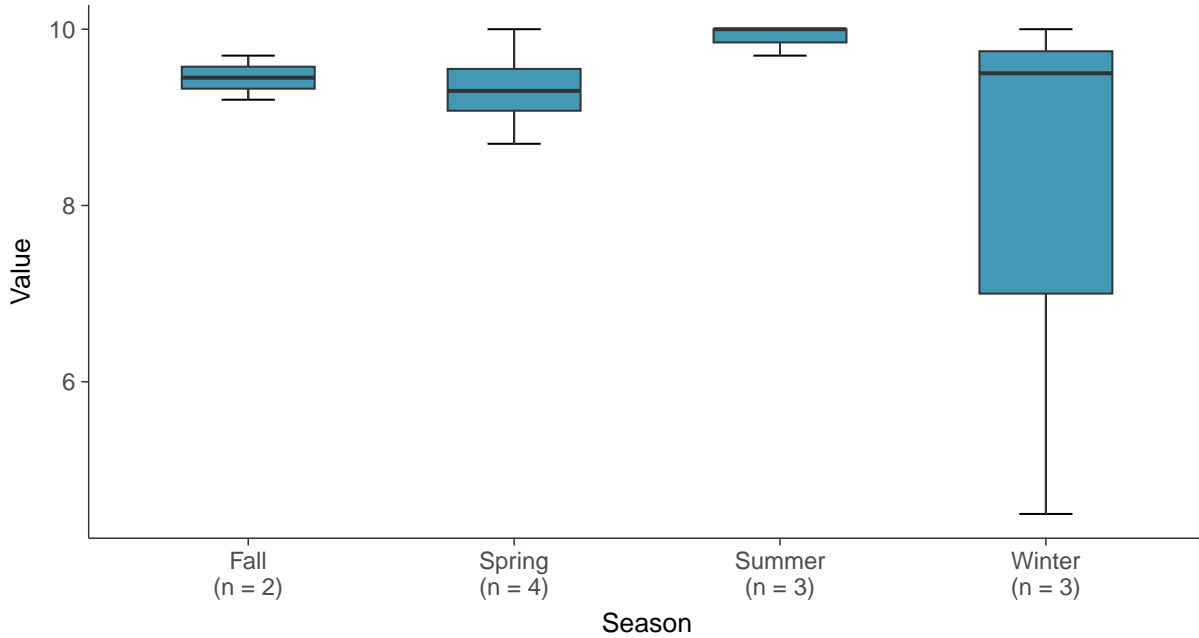
### Boxplot

Fluoride (App IV), MW-02 (mg/L)



### Boxplot by Season

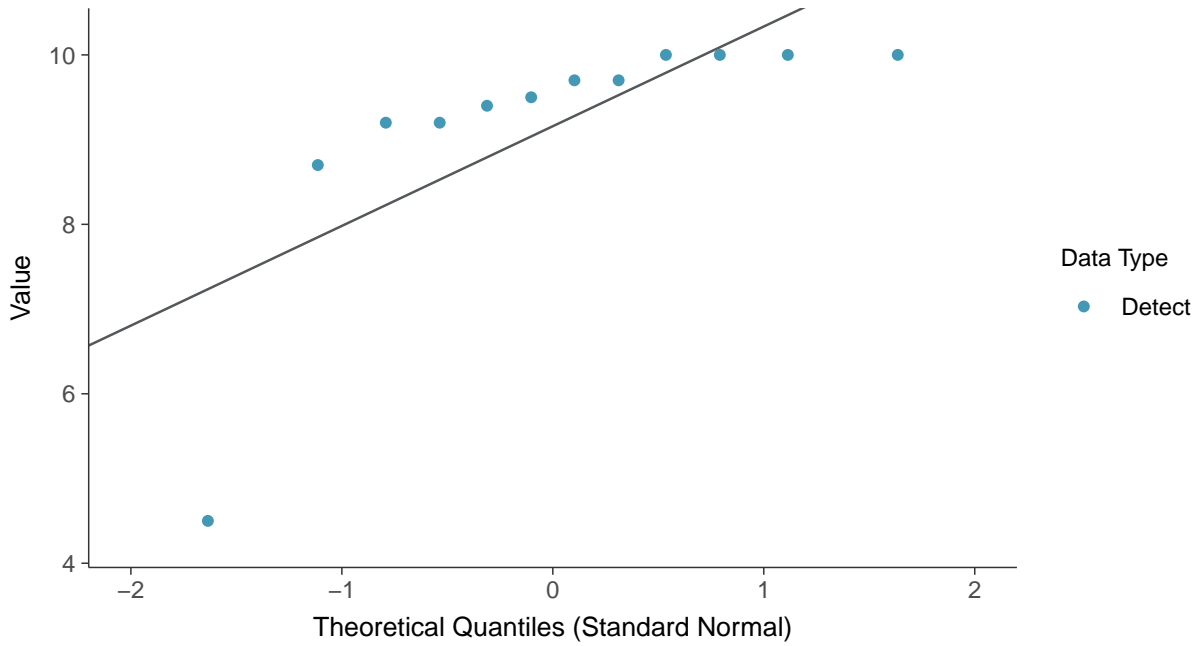
Fluoride (App IV), MW-02 (mg/L)





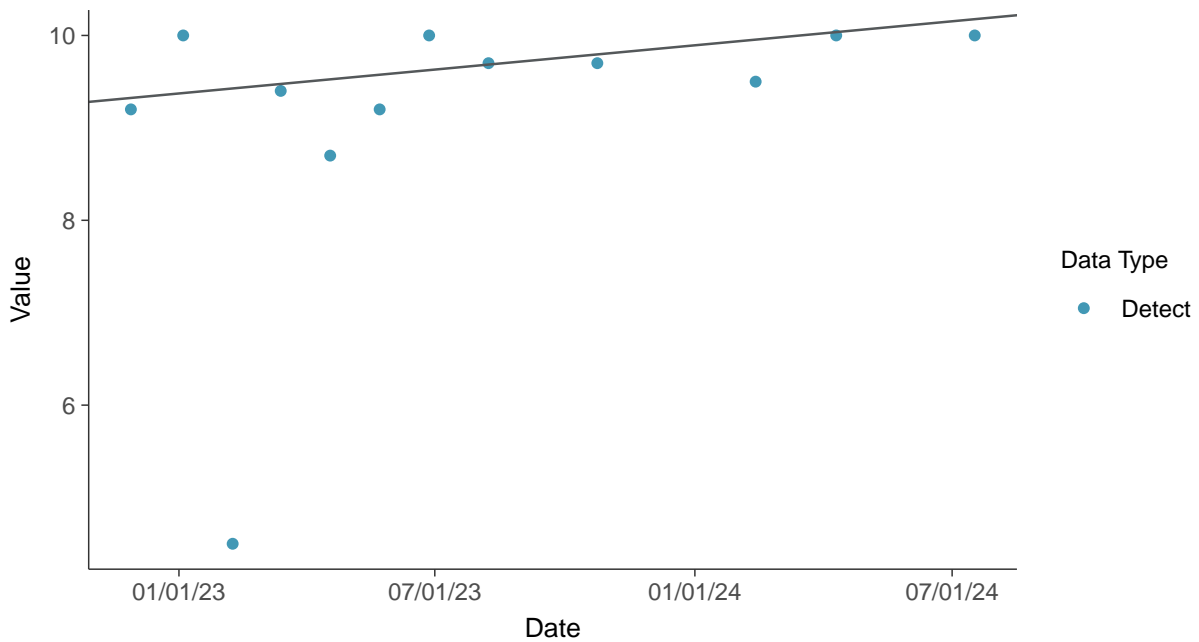
### Normal Q-Q plot

Fluoride (App IV), MW-02 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

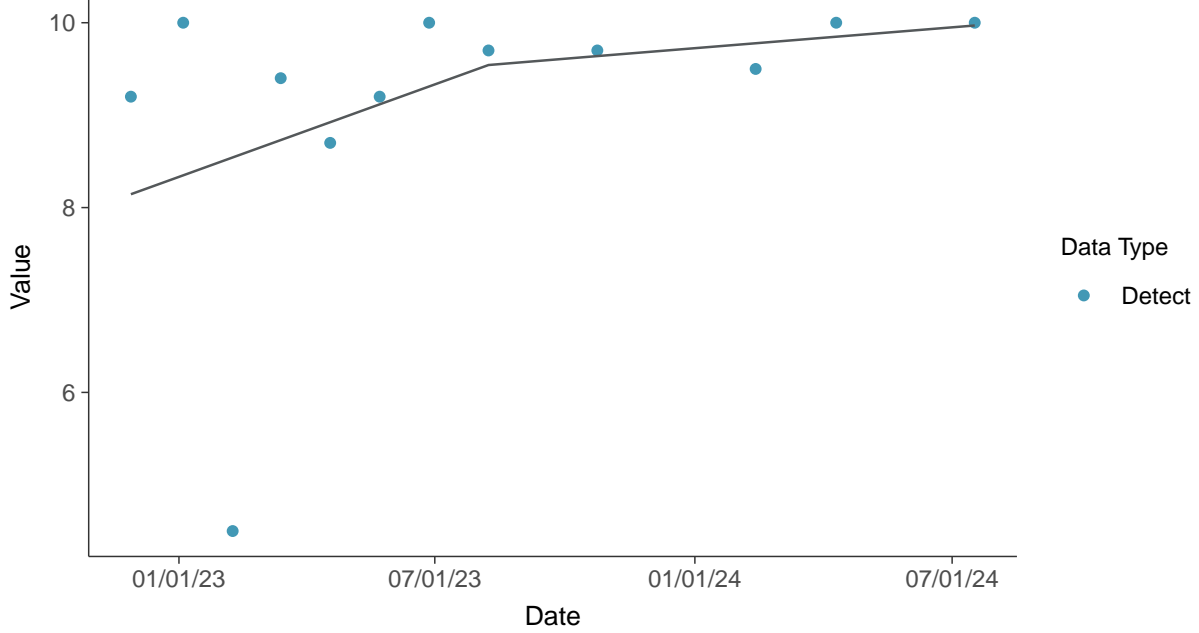
Fluoride (App IV), MW-02 (mg/L)





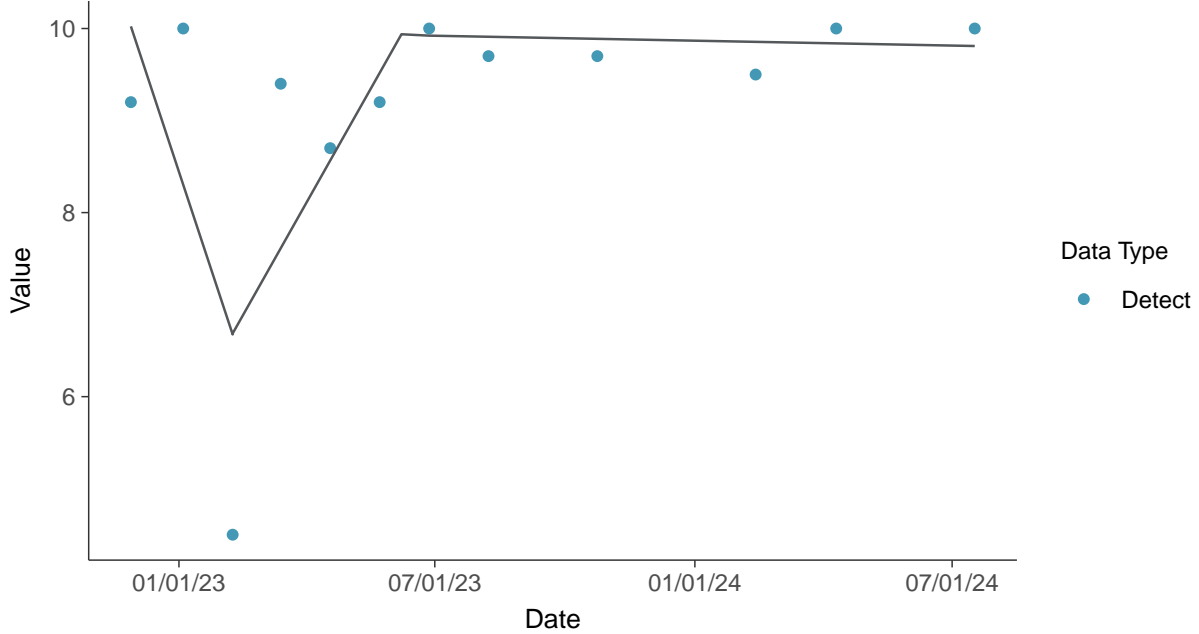
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

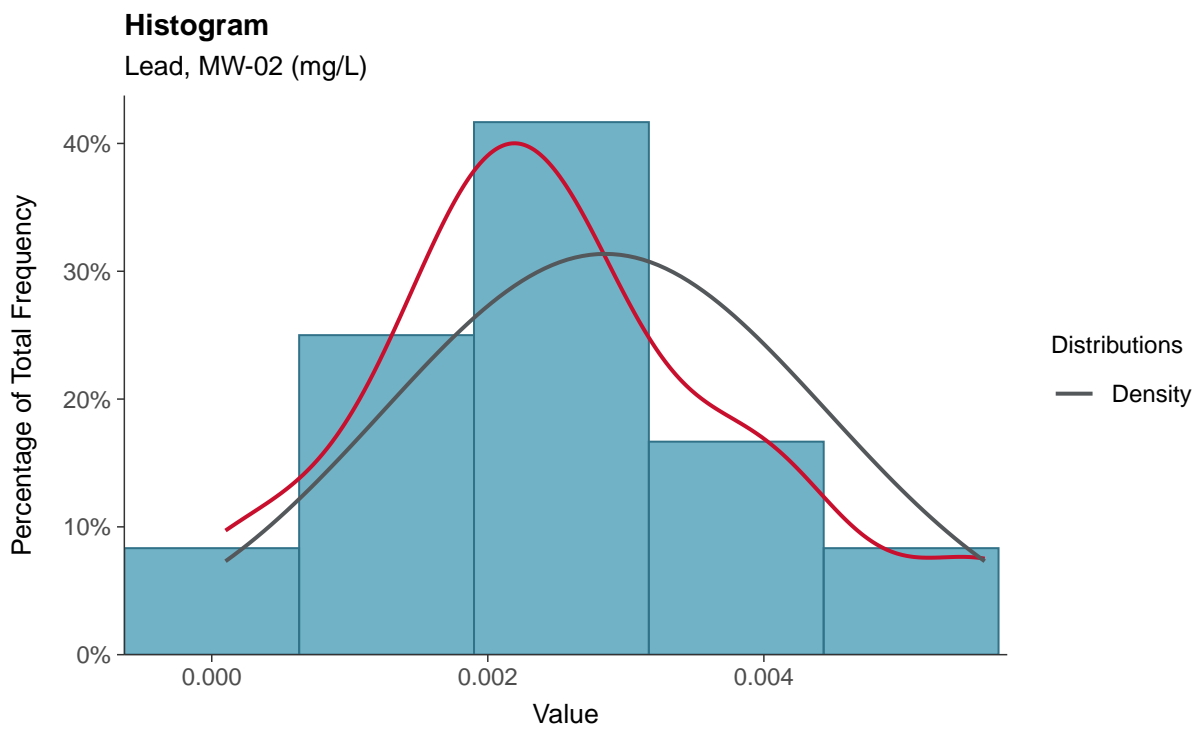
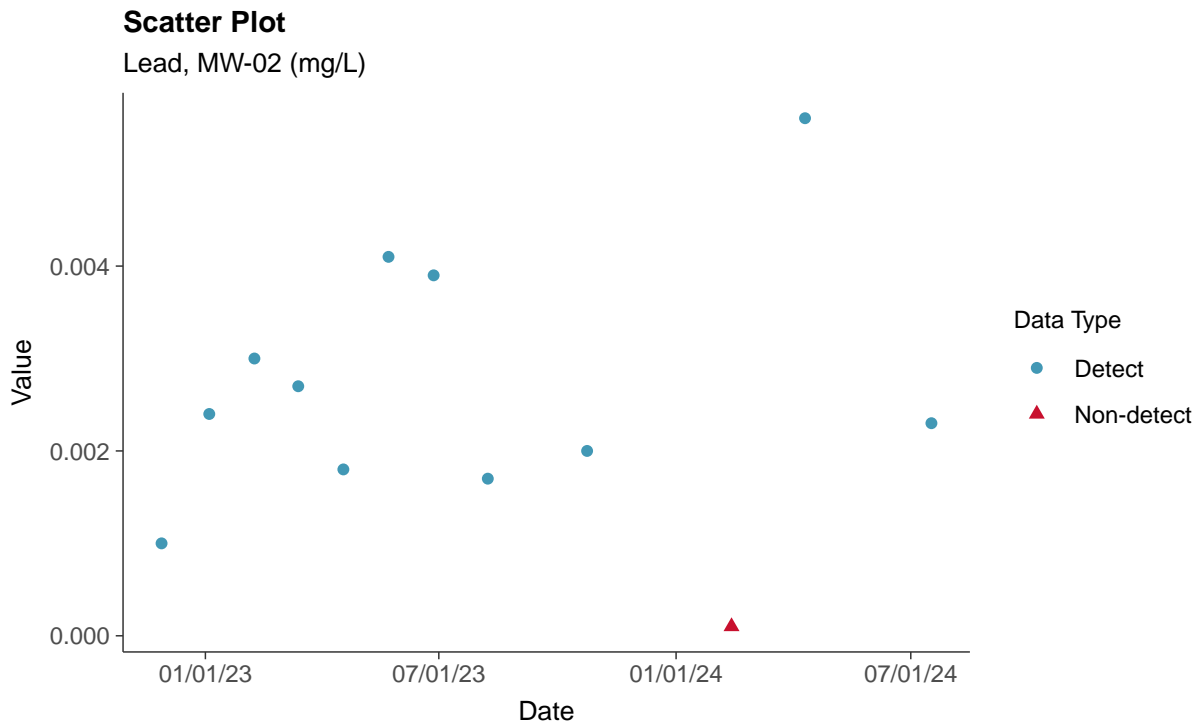
Fluoride (App IV), MW-02 (mg/L)





### Appendix IV: Lead, MW-02

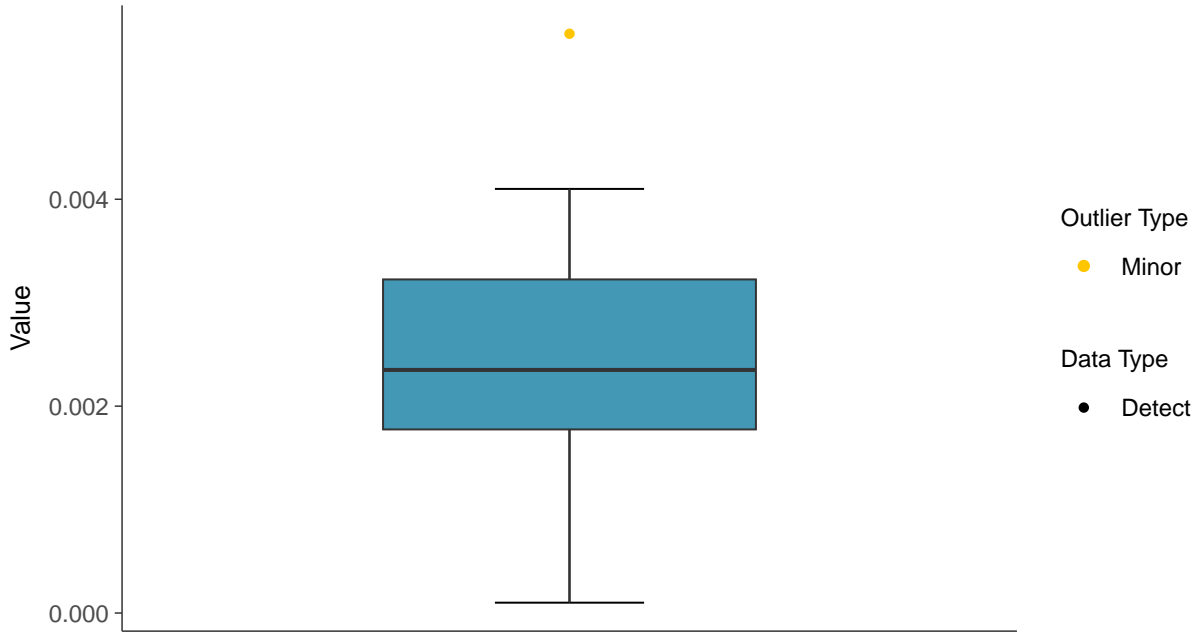
ID: 12\_2\_5\_115





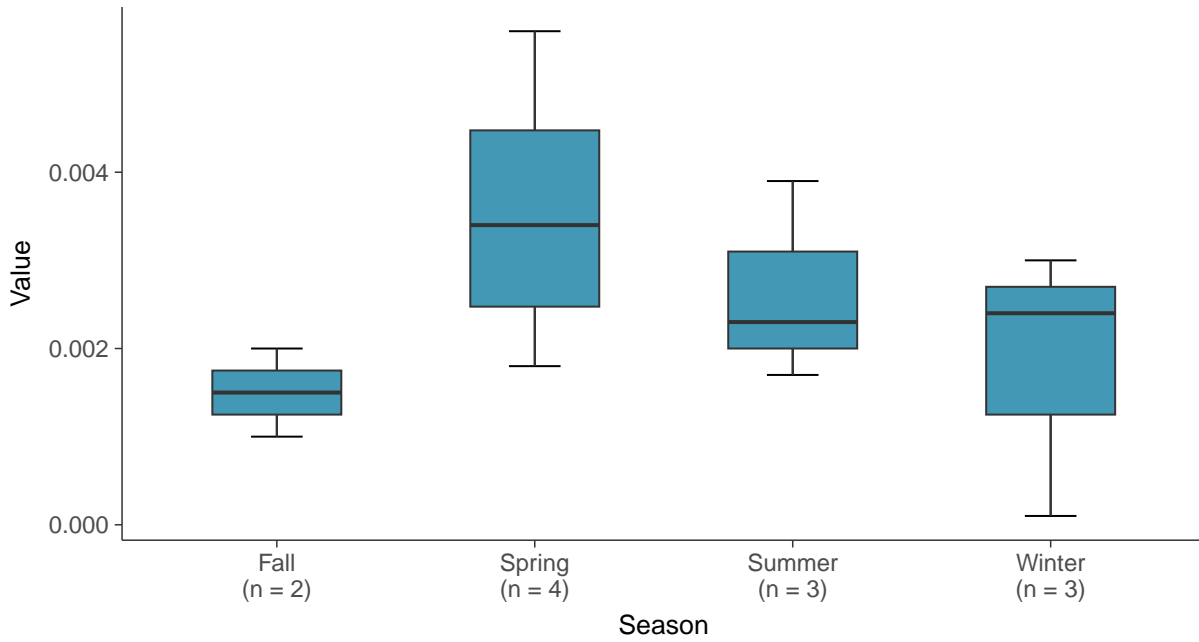
### Boxplot

Lead, MW-02 (mg/L)



### Boxplot by Season

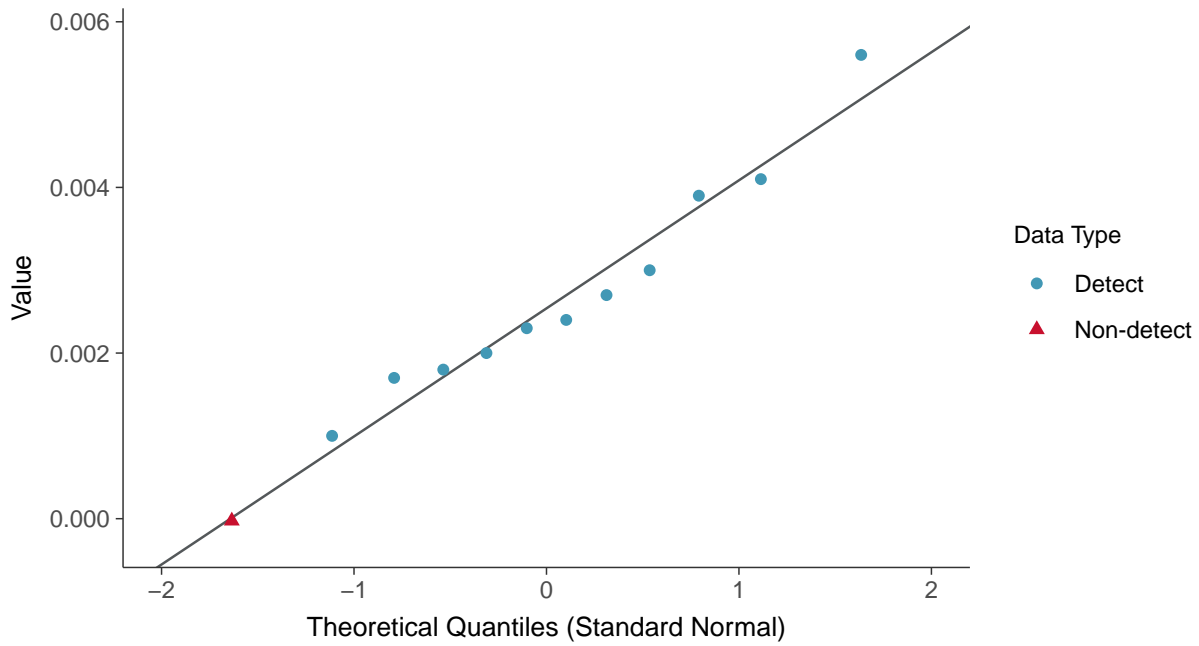
Lead, MW-02 (mg/L)





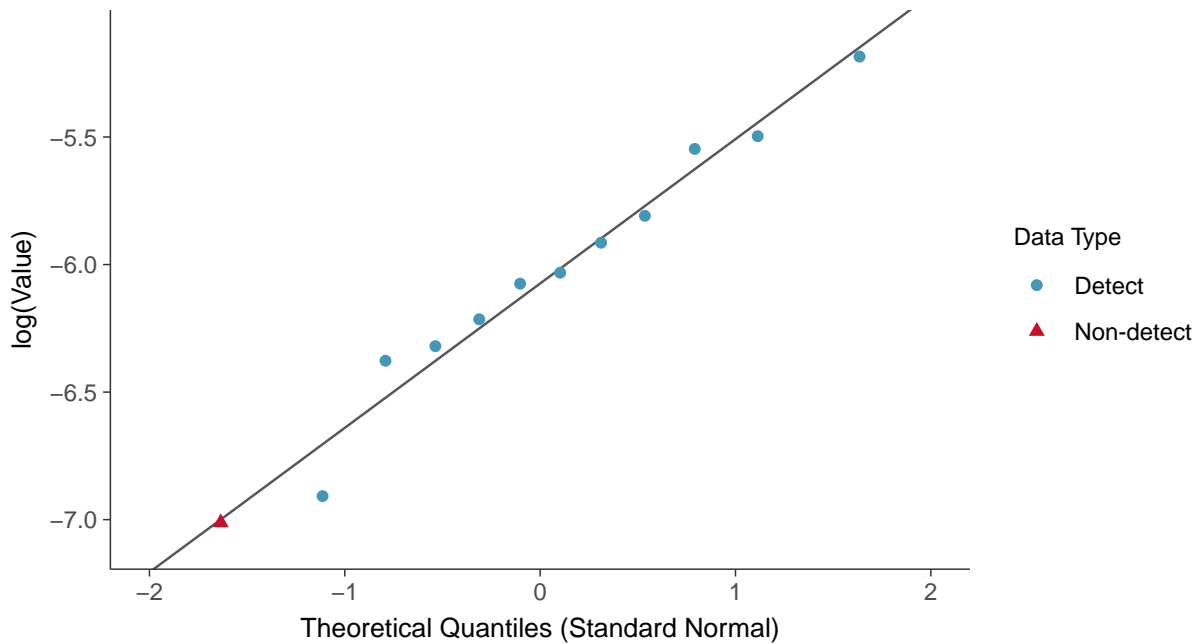
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-02 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-02 (mg/L)

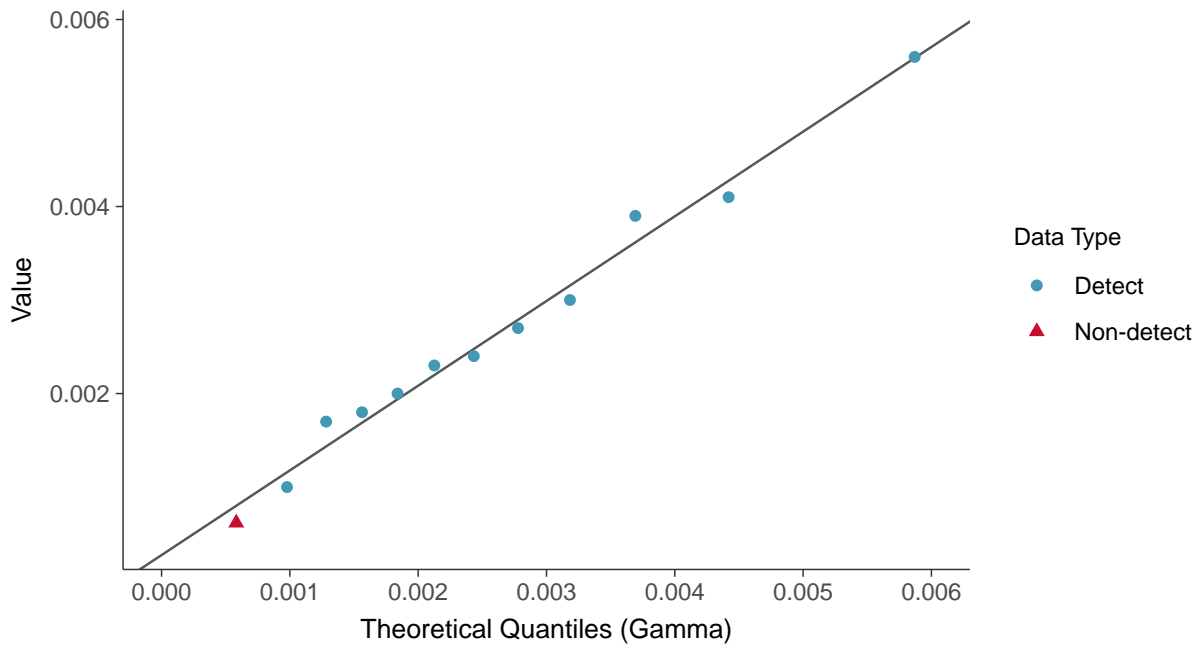






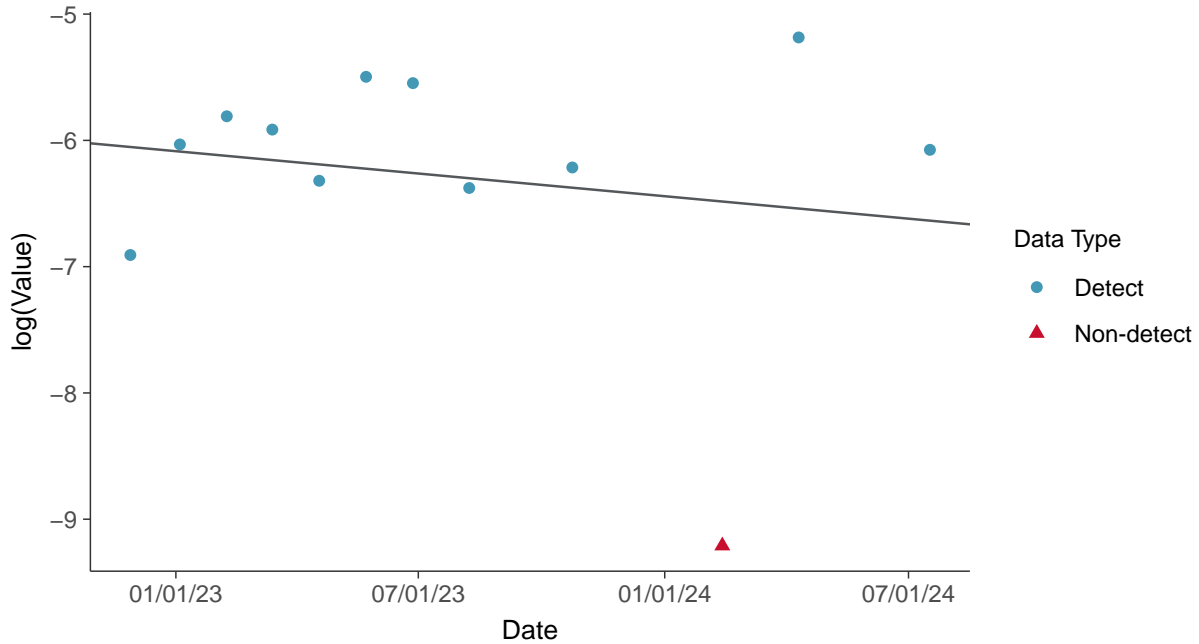
### Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-02 (mg/L)



### Trend Regression: Lognormal MLE

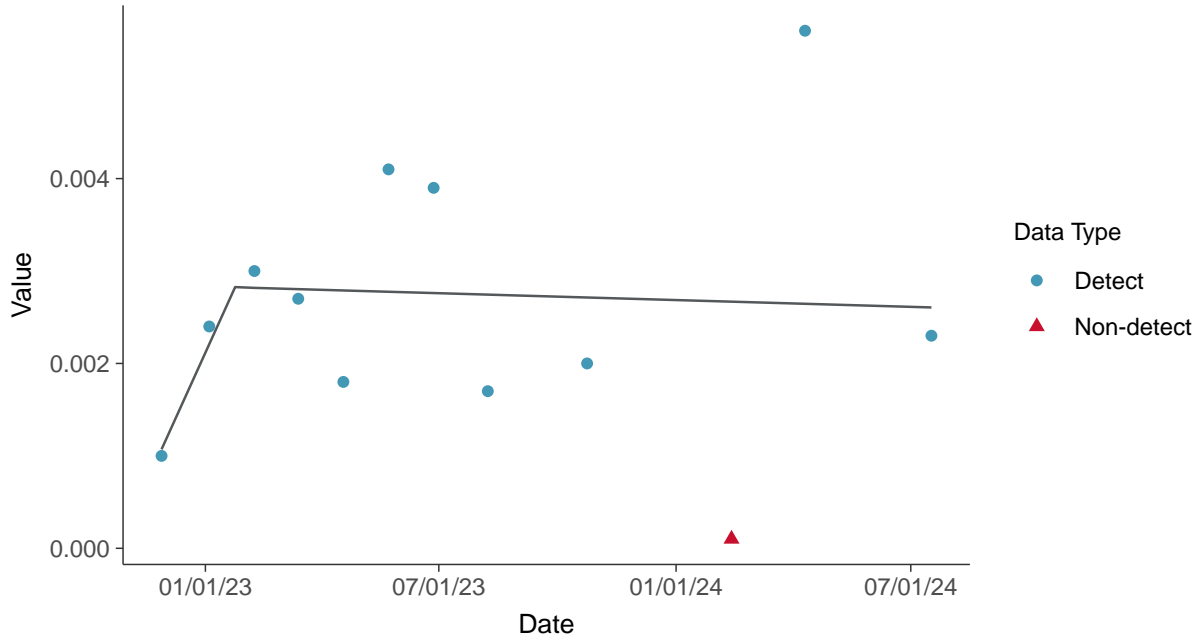
Lead, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear

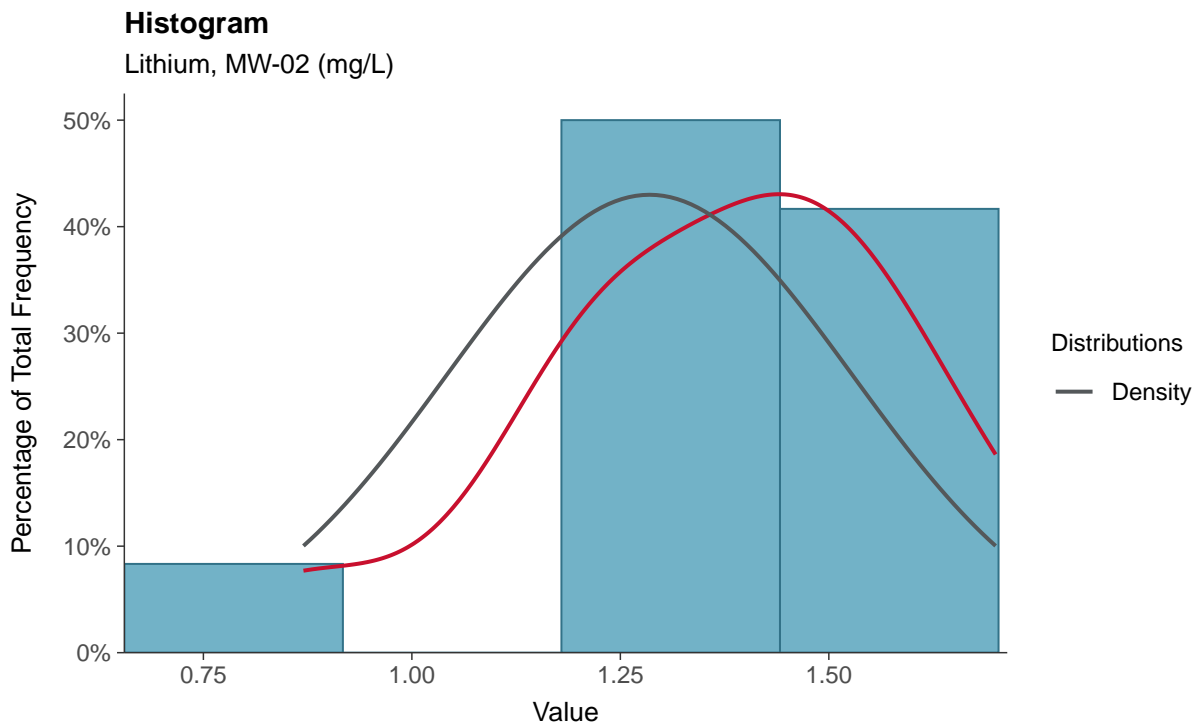
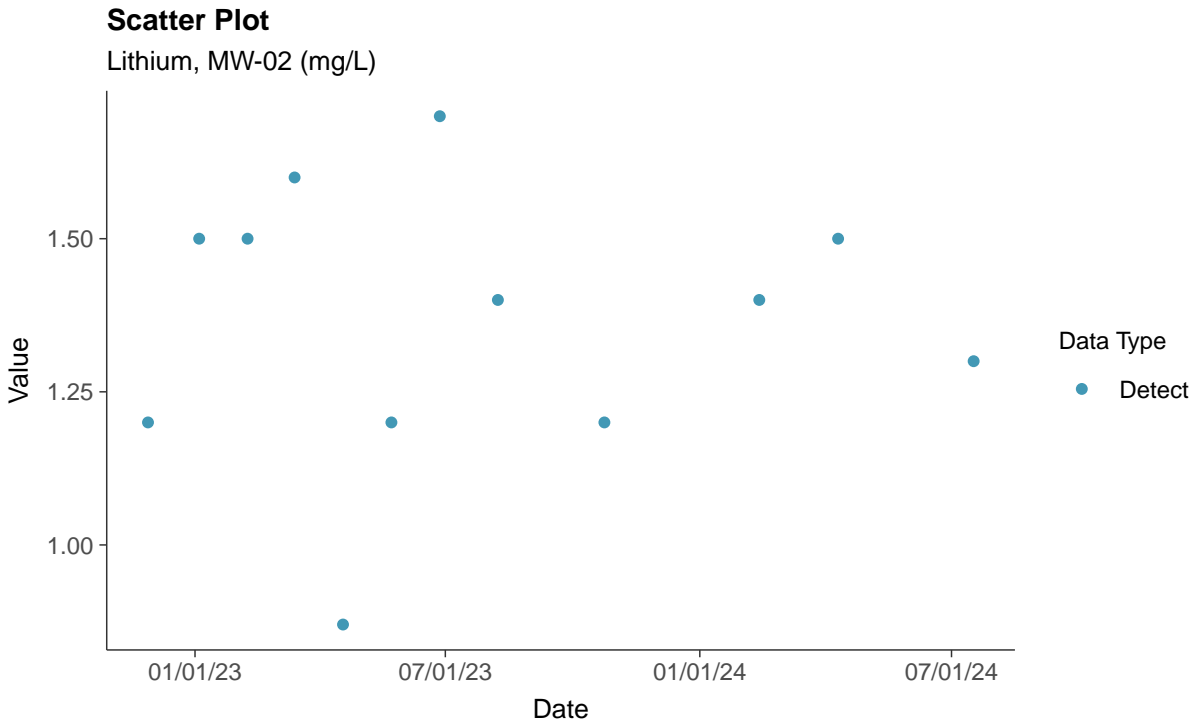
Lead, MW-02 (mg/L)





### Appendix IV: Lithium, MW-02

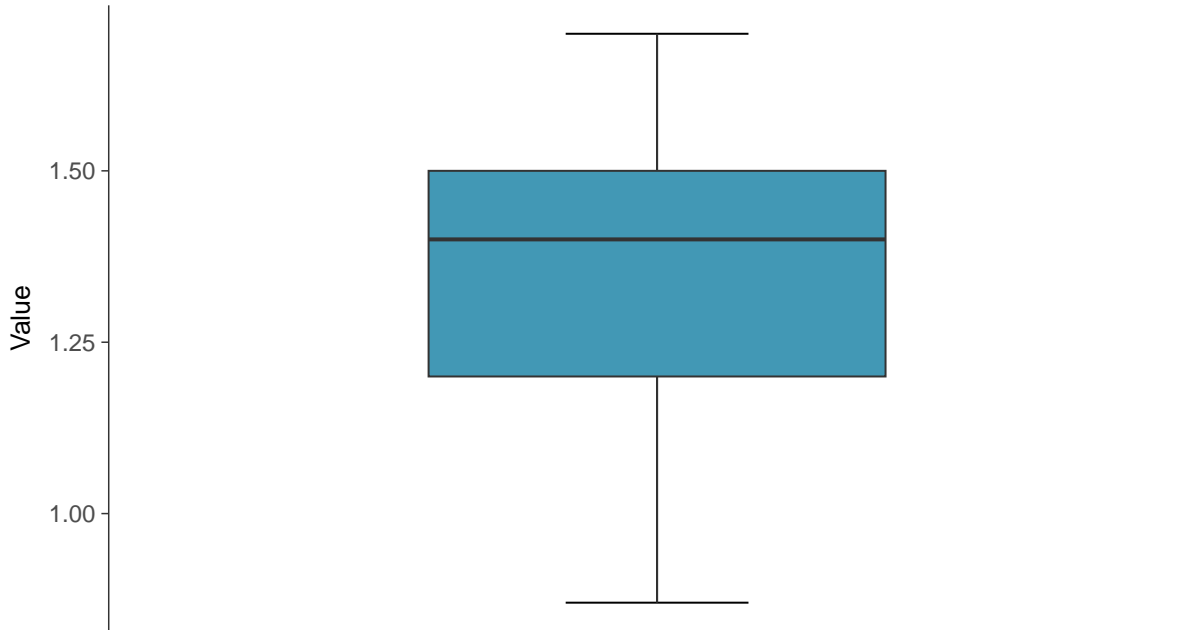
ID: 12\_2\_5\_116





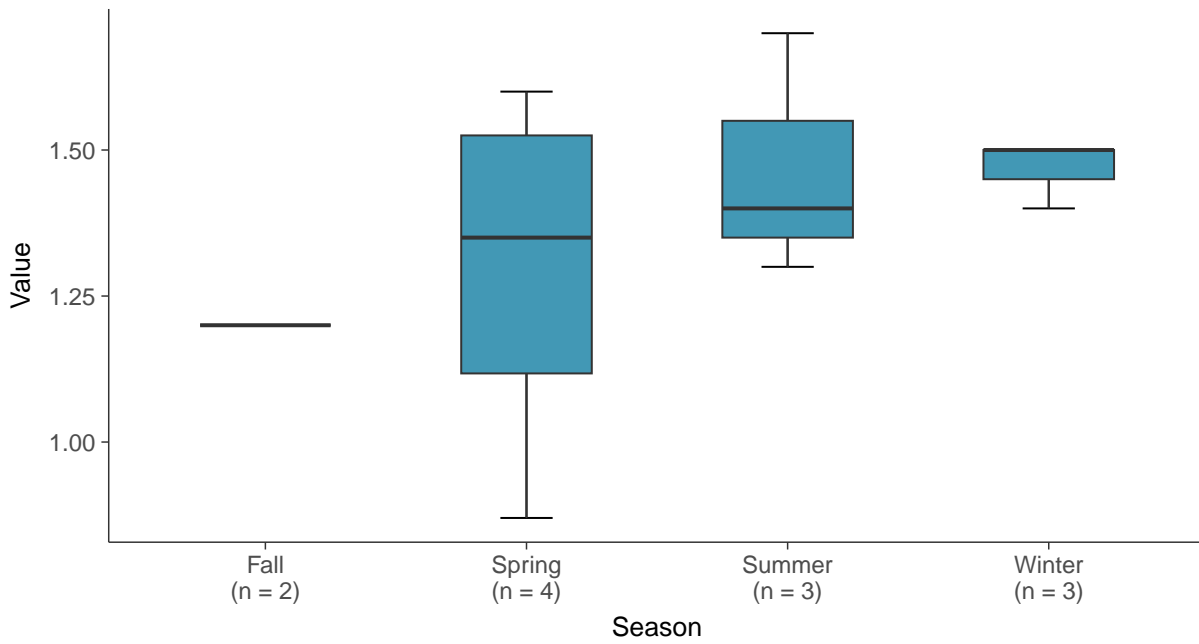
### Boxplot

Lithium, MW-02 (mg/L)



### Boxplot by Season

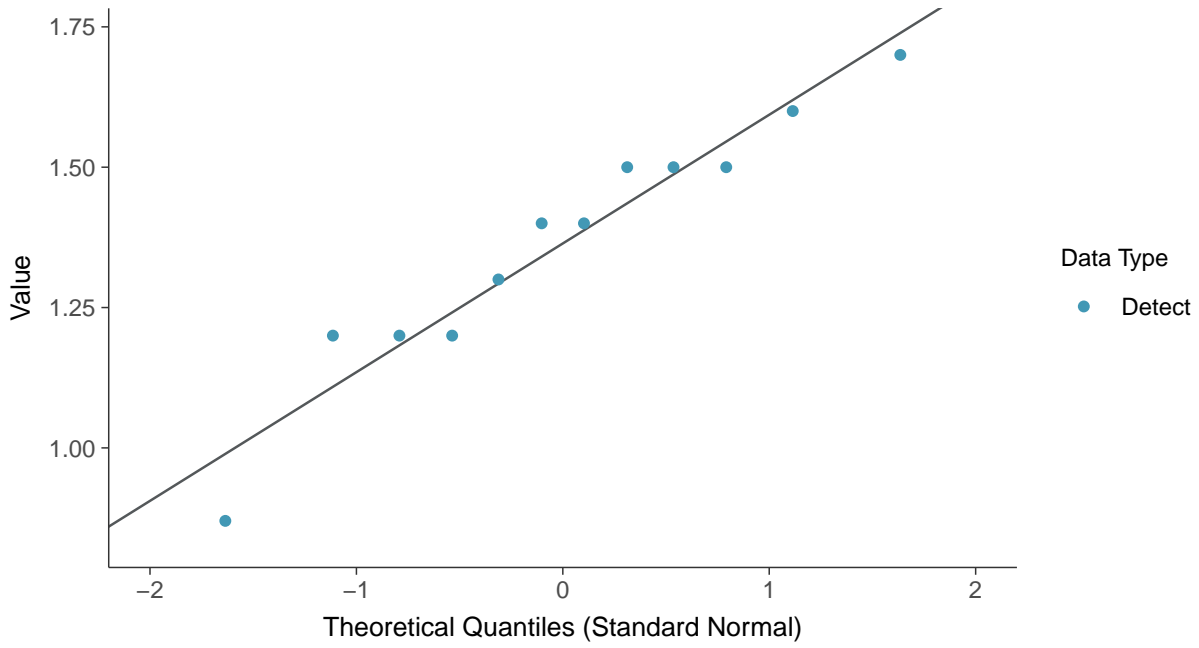
Lithium, MW-02 (mg/L)





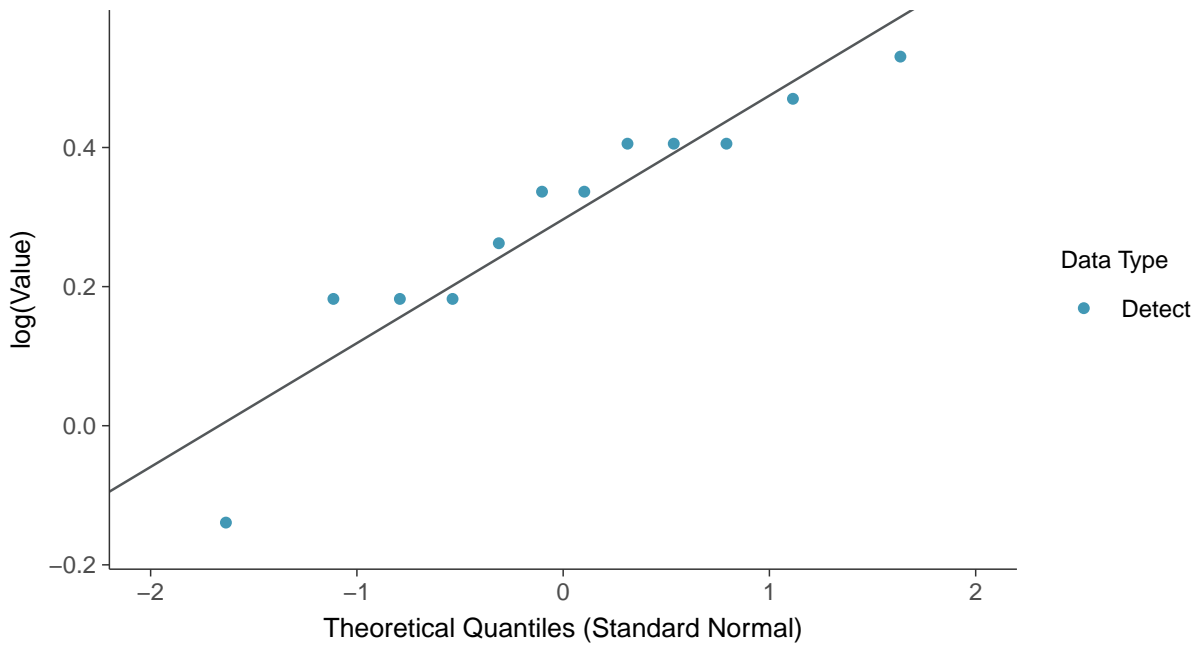
### Normal Q-Q plot

Lithium, MW-02 (mg/L)



### Lognormal Q-Q plot

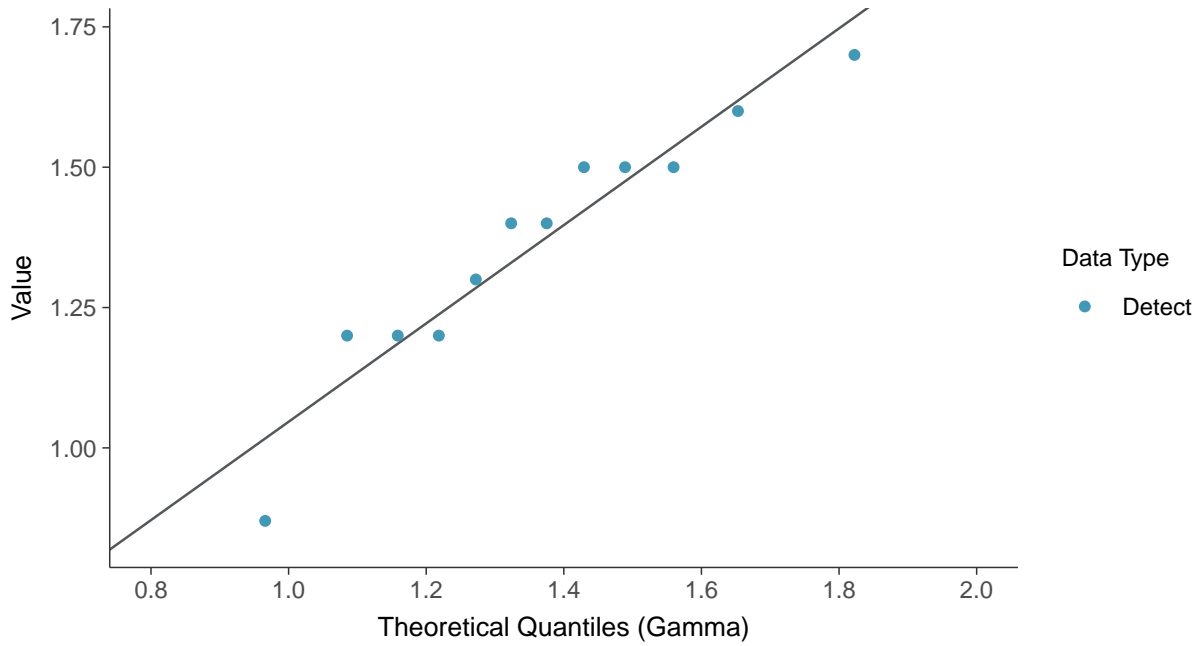
Lithium, MW-02 (mg/L)





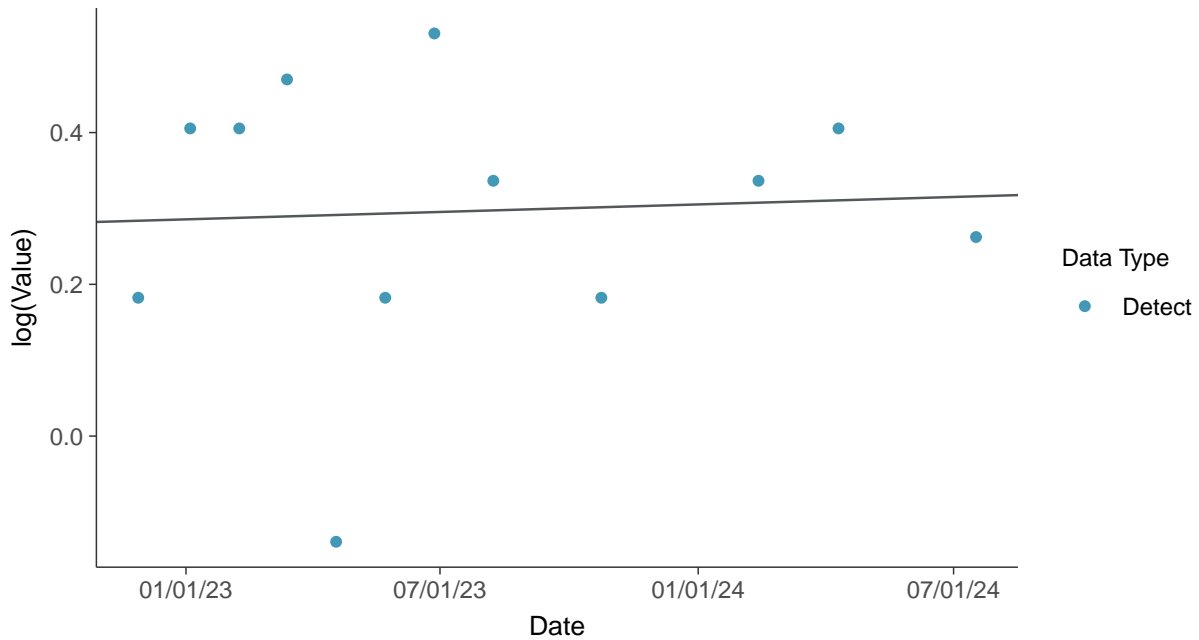
### Gamma Q-Q plot

Lithium, MW-02 (mg/L)



### Trend Regression: Lognormal MLE

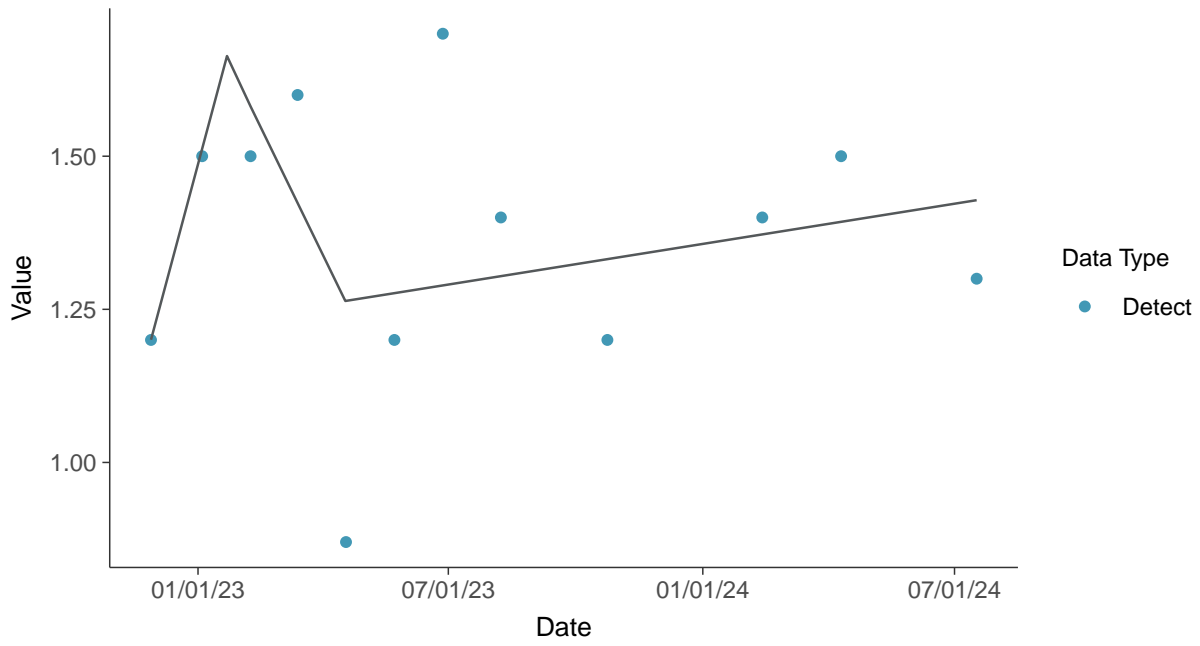
Lithium, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

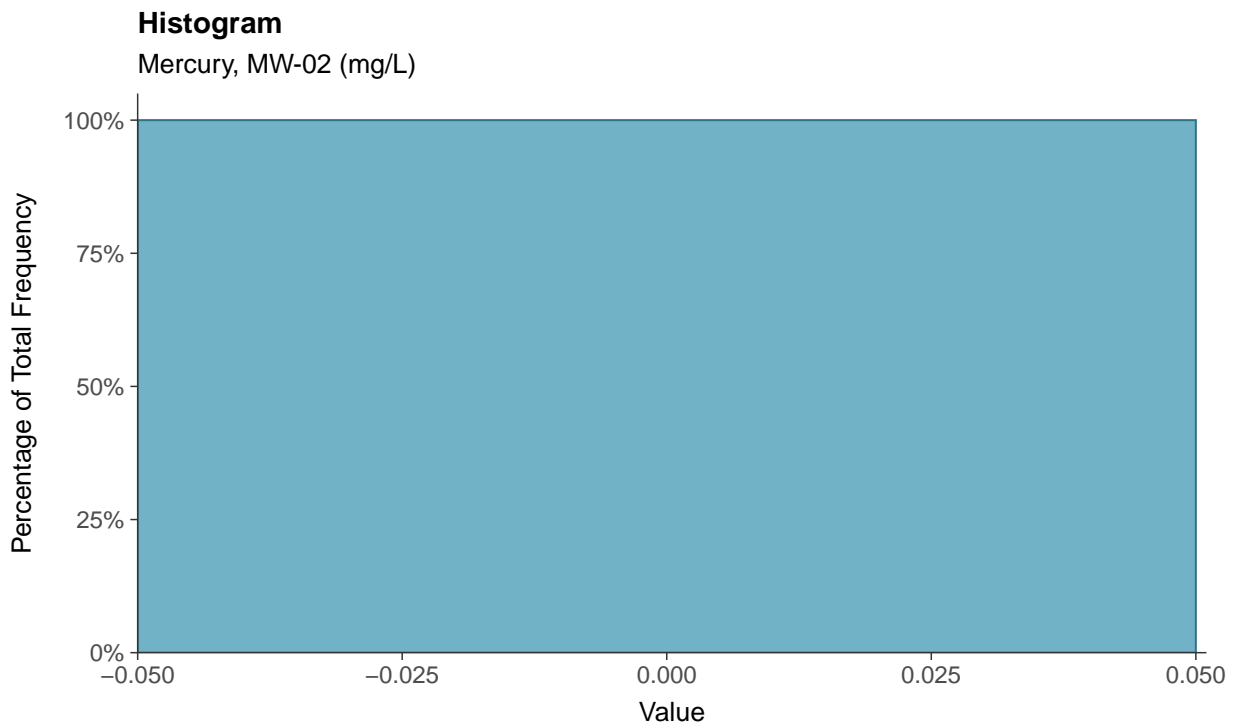
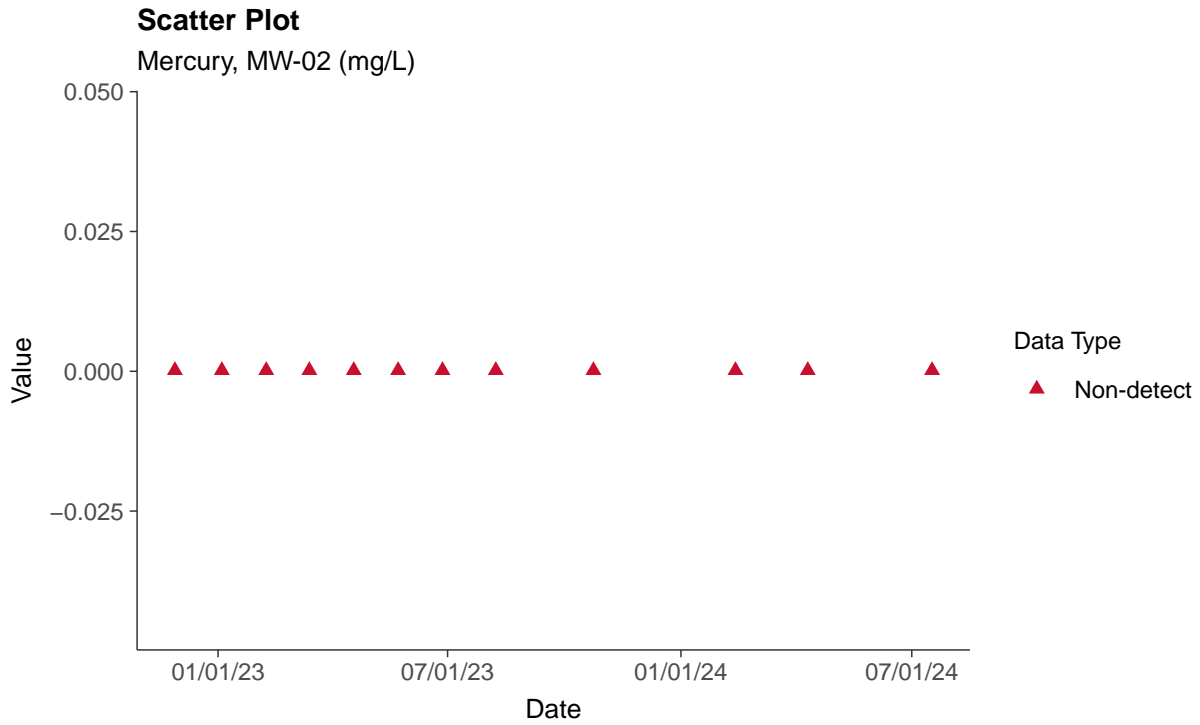
Lithium, MW-02 (mg/L)





## Appendix IV: Mercury, MW-02

ID: 12\_2\_5\_117

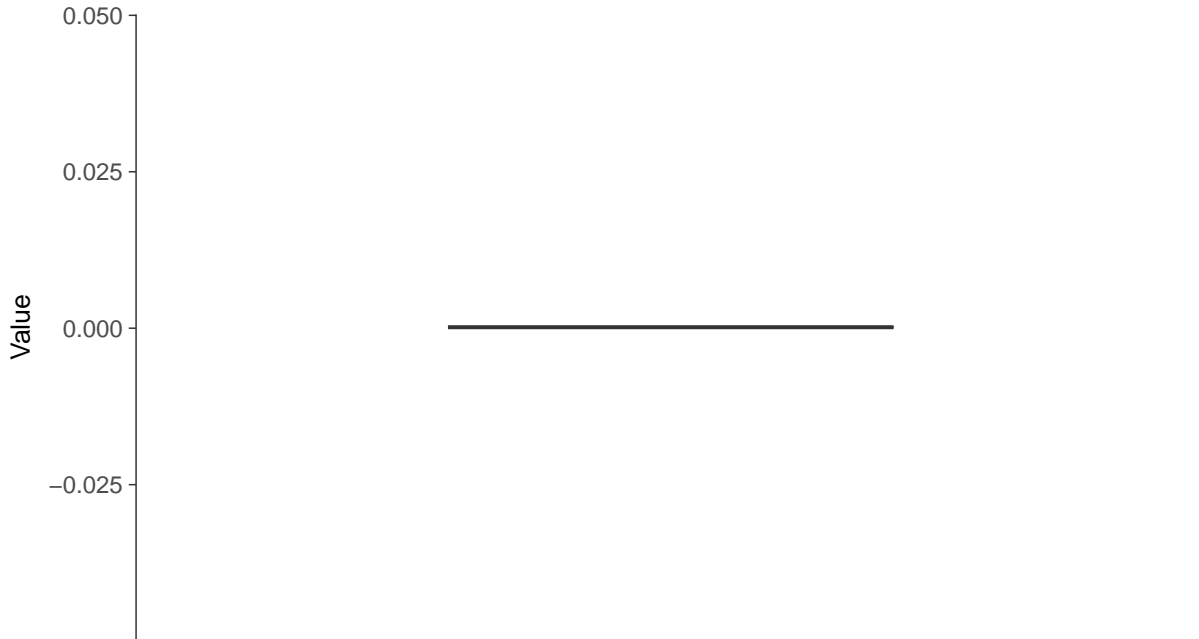






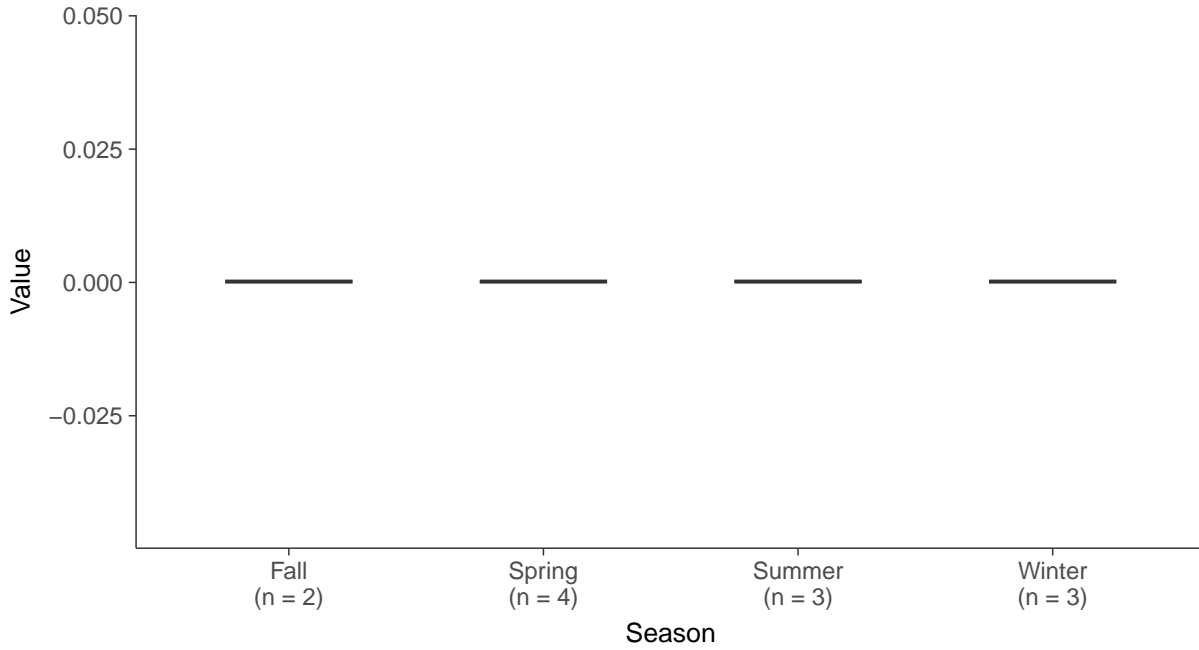
### Boxplot

Mercury, MW-02 (mg/L)



### Boxplot by Season

Mercury, MW-02 (mg/L)



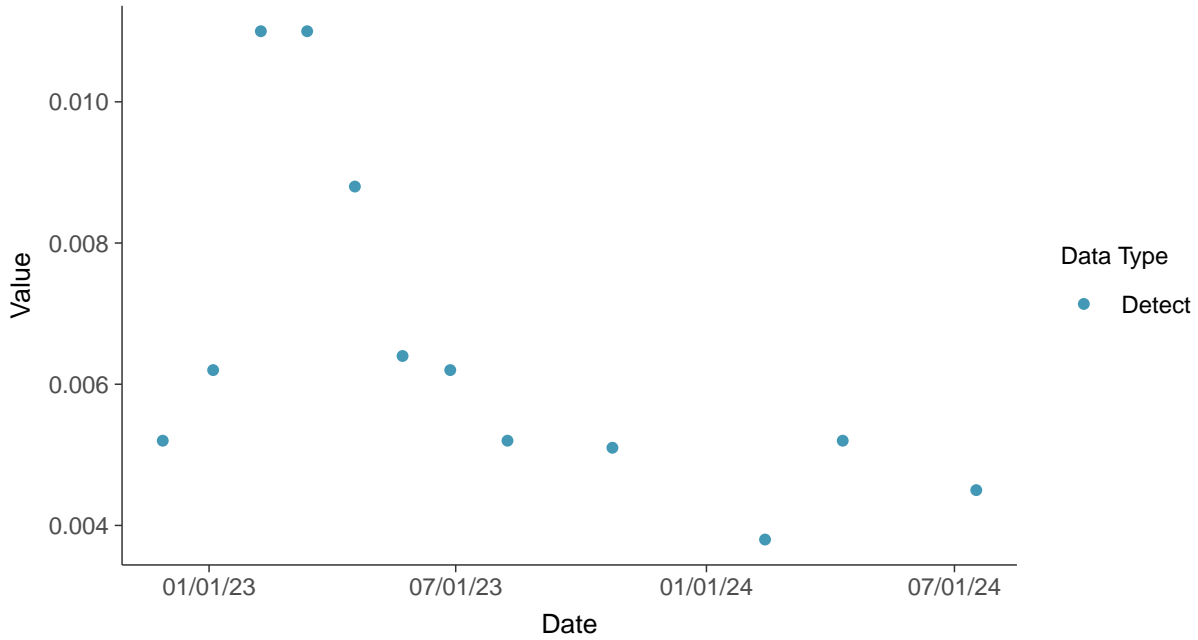


### Appendix IV: Molybdenum, MW-02

ID: 12\_2\_5\_118

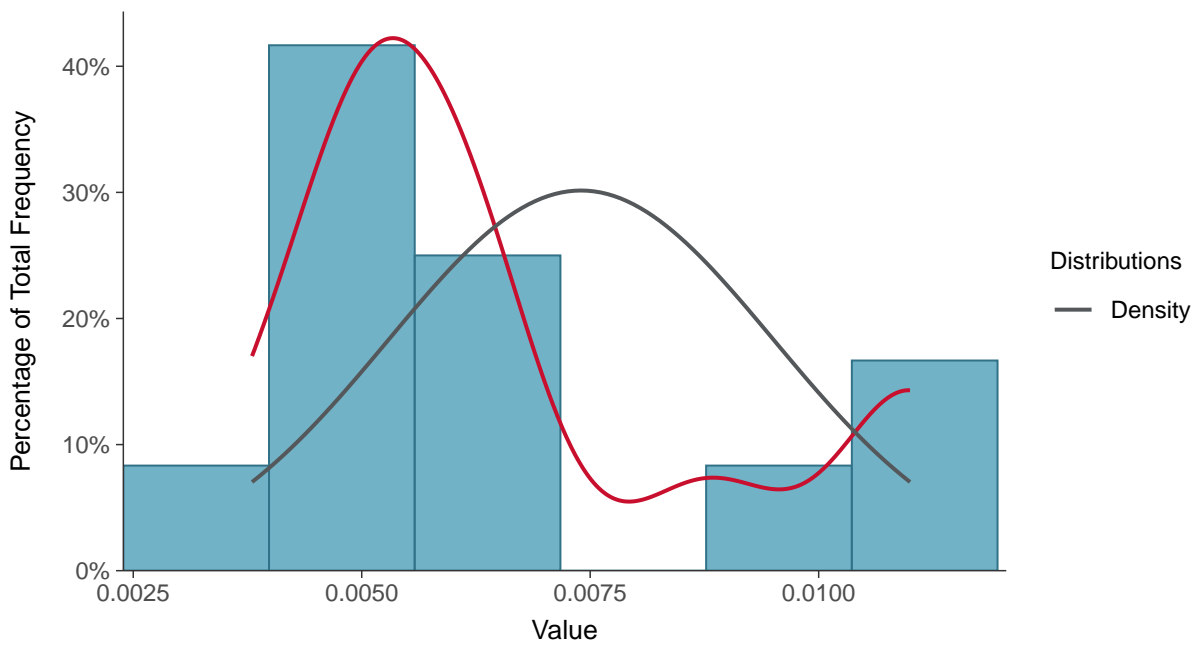
#### Scatter Plot

Molybdenum, MW-02 (mg/L)



#### Histogram

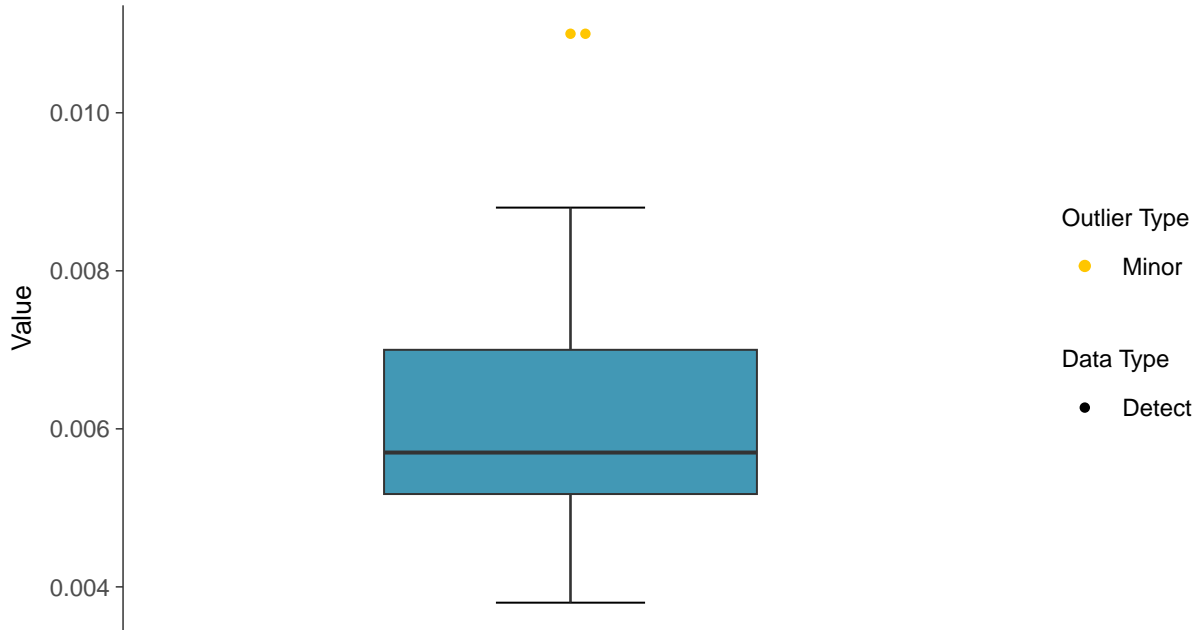
Molybdenum, MW-02 (mg/L)





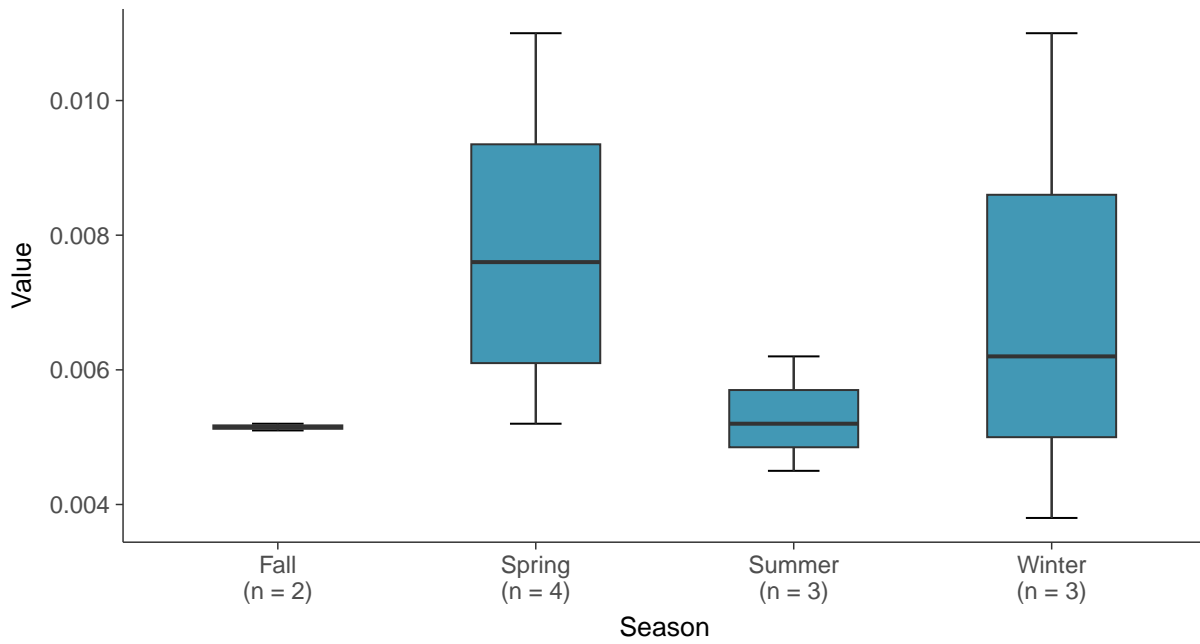
### Boxplot

Molybdenum, MW-02 (mg/L)



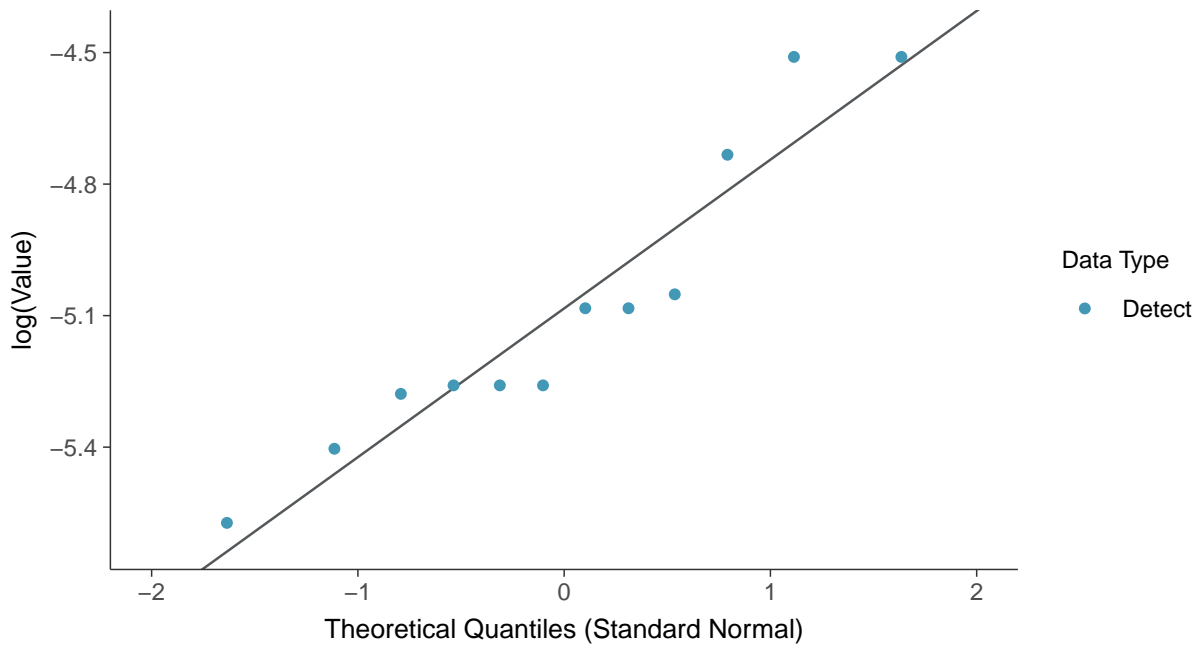
### Boxplot by Season

Molybdenum, MW-02 (mg/L)

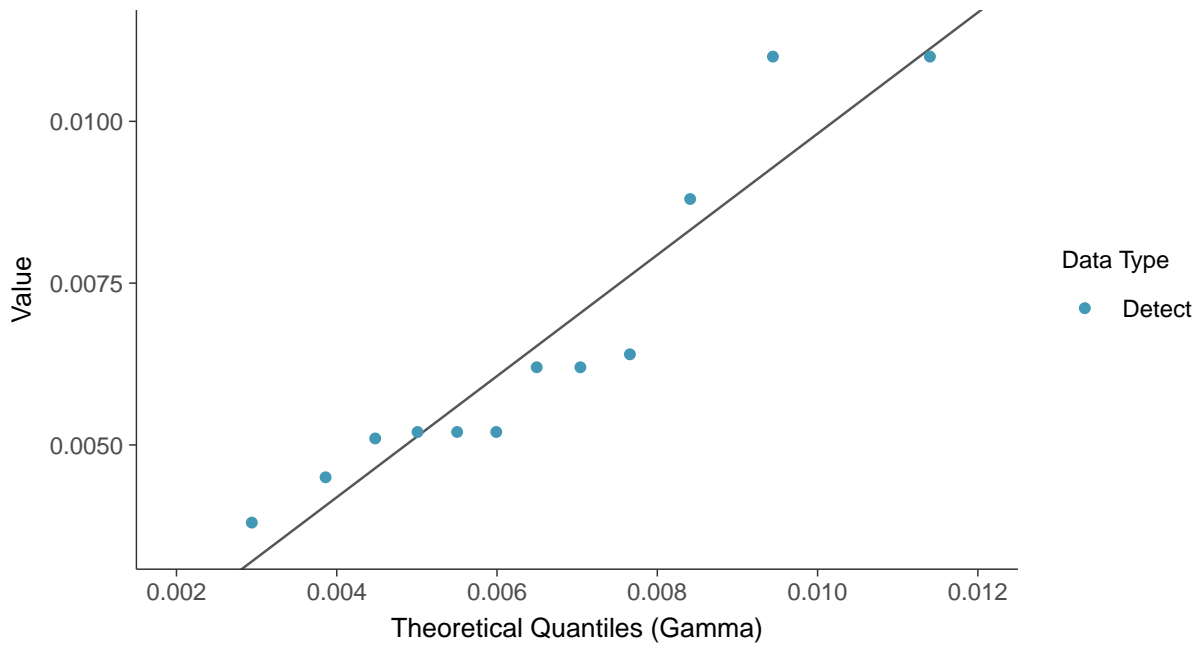




**Lognormal Q-Q plot**  
Molybdenum, MW-02 (mg/L)



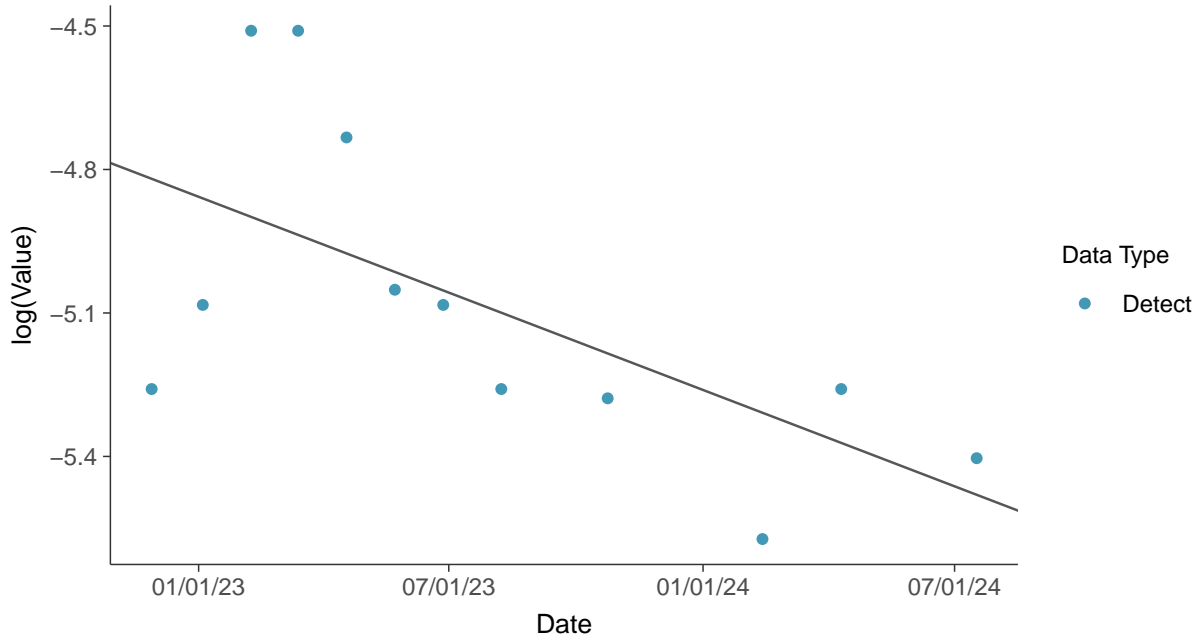
**Gamma Q-Q plot**  
Molybdenum, MW-02 (mg/L)





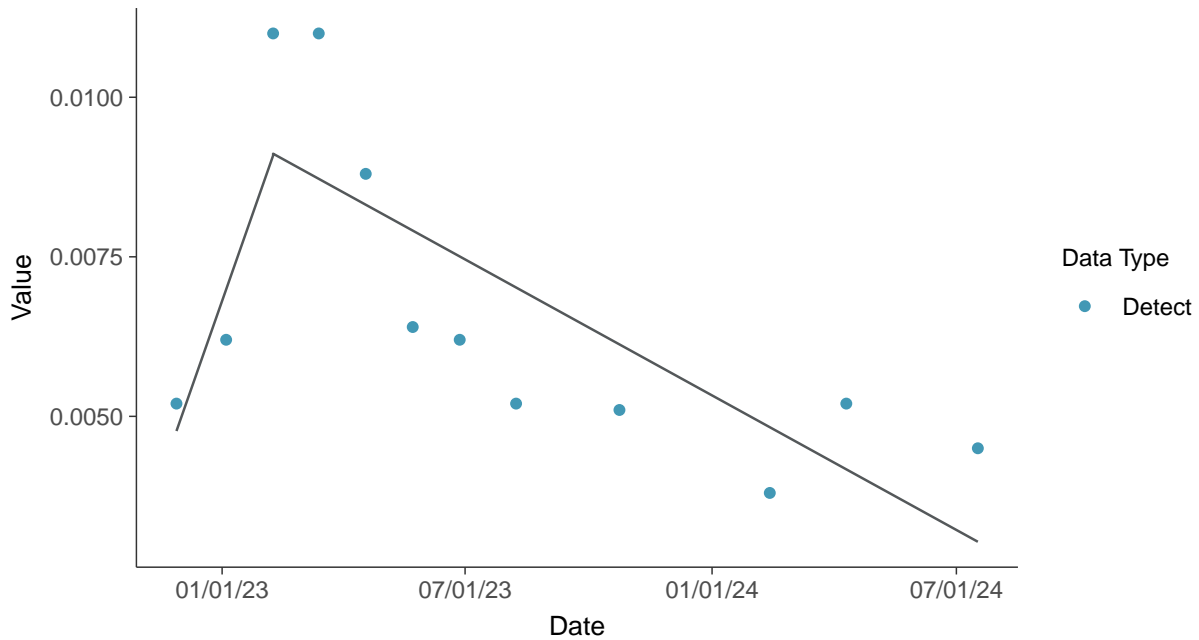
### Trend Regression: Lognormal MLE

Molybdenum, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

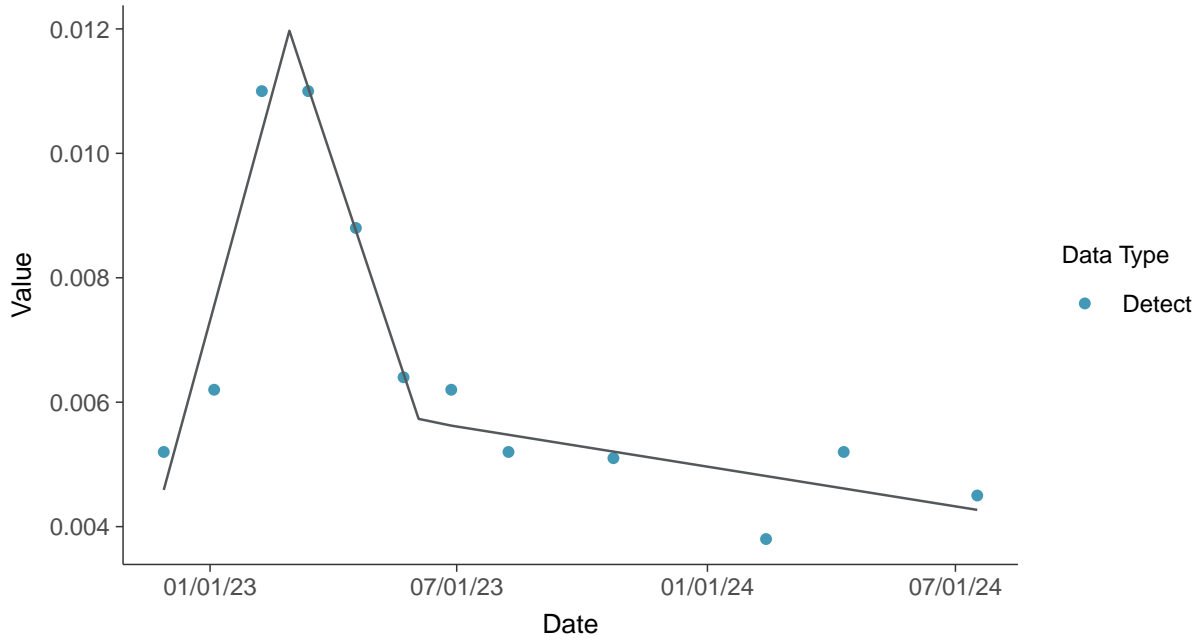
Molybdenum, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-02 (mg/L)



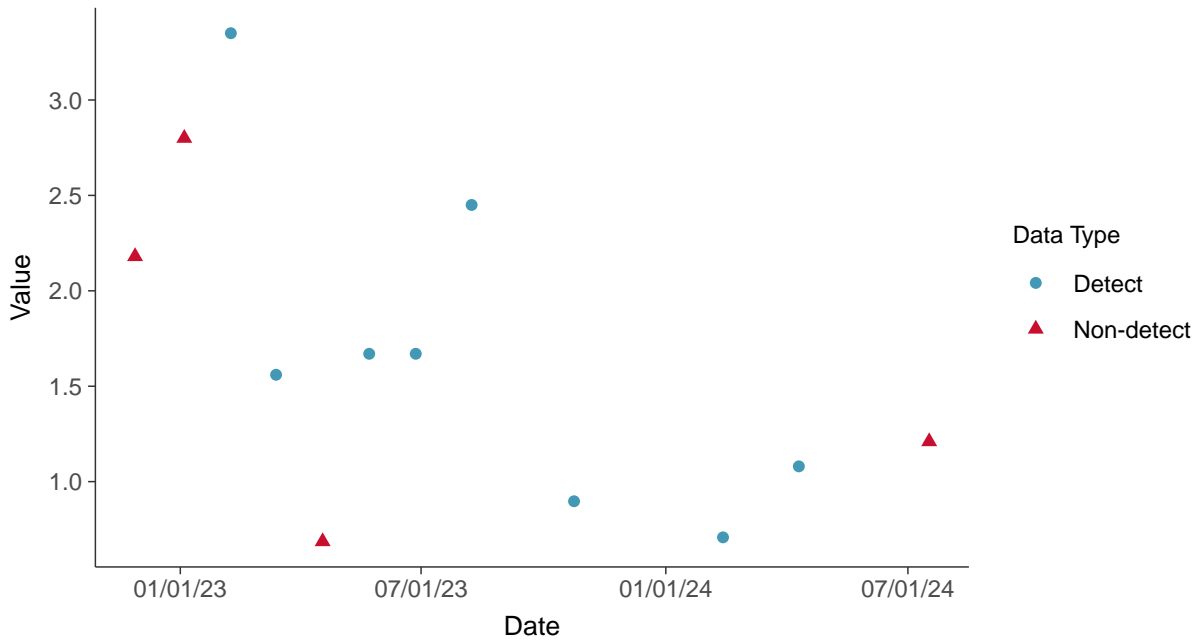


### Appendix IV: Radium 226 and 228, MW-02

ID: 12\_2\_5\_121

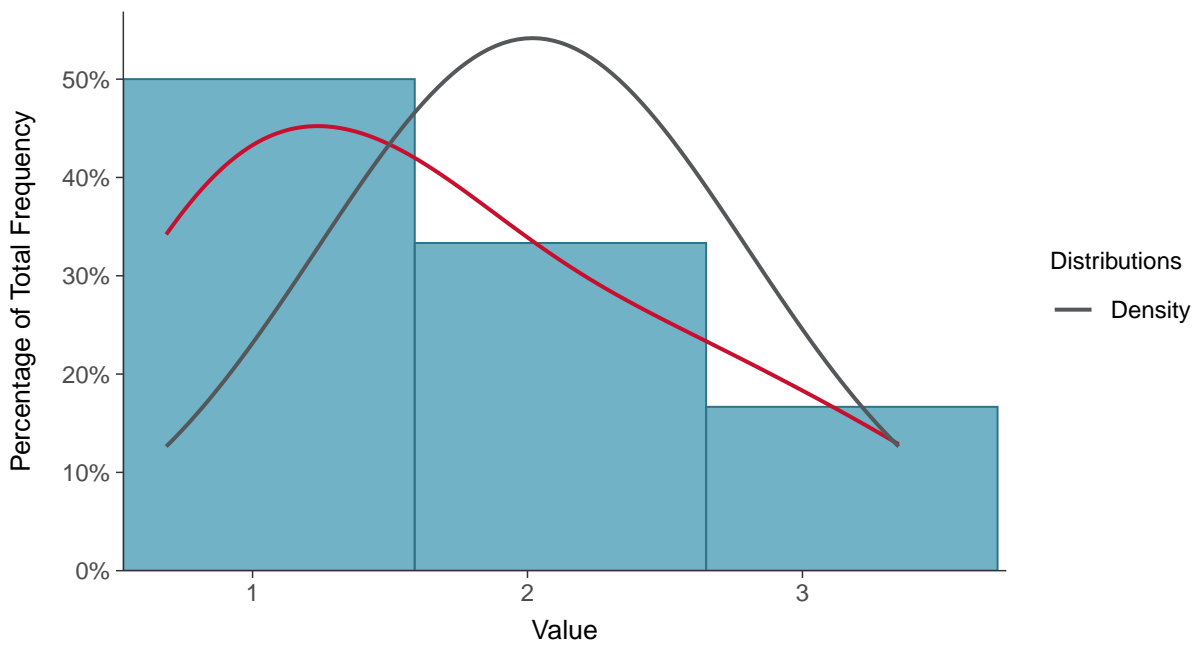
#### Scatter Plot

Radium 226 and 228, MW-02 (pCi/L)



#### Histogram

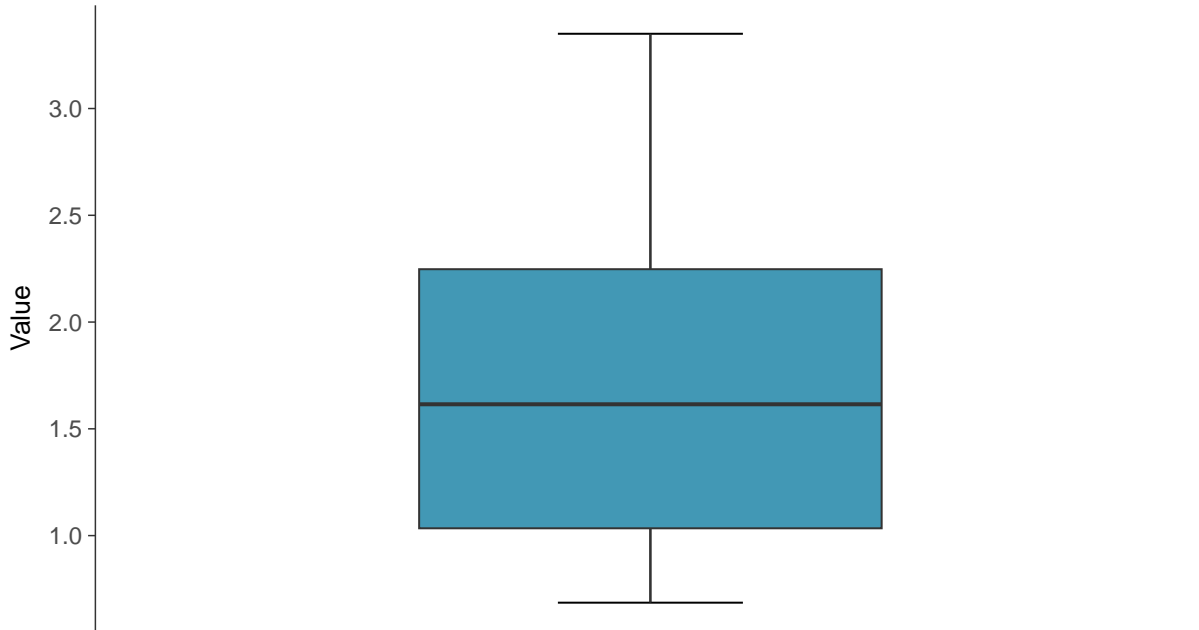
Radium 226 and 228, MW-02 (pCi/L)





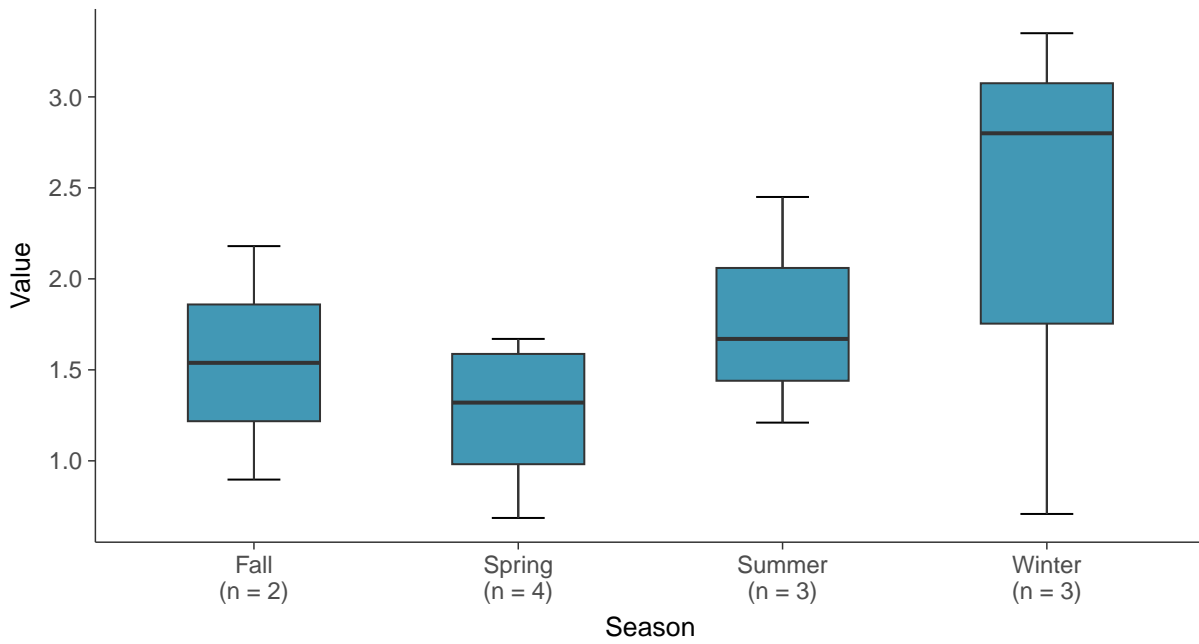
### Boxplot

Radium 226 and 228, MW-02 (pCi/L)



### Boxplot by Season

Radium 226 and 228, MW-02 (pCi/L)

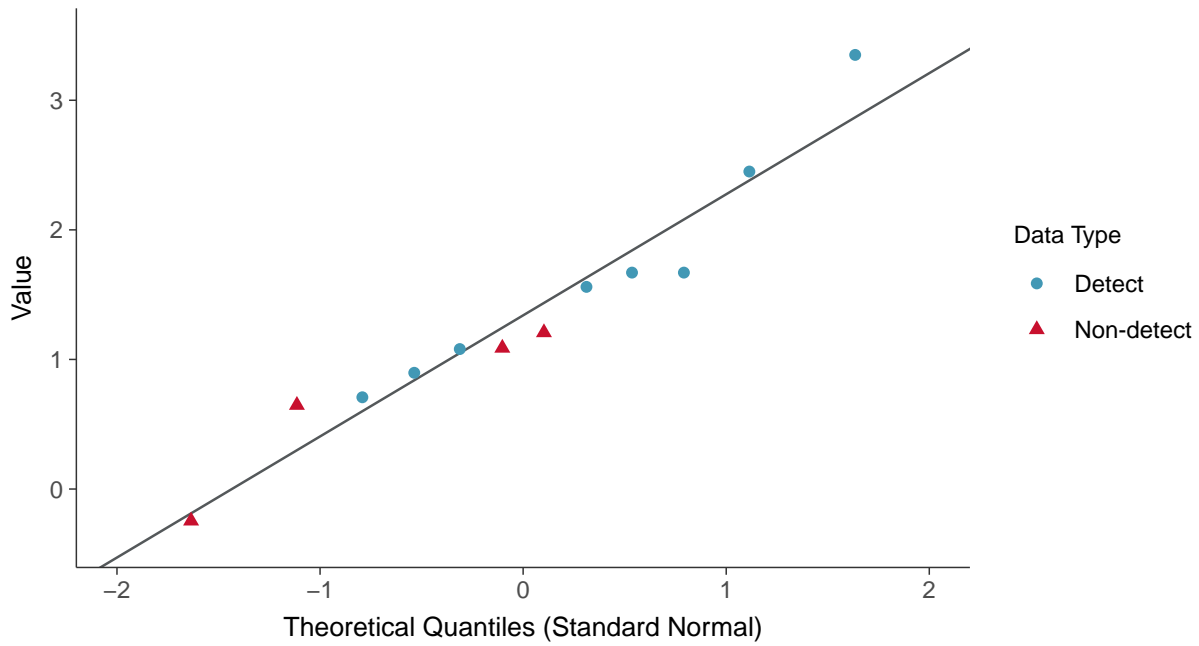






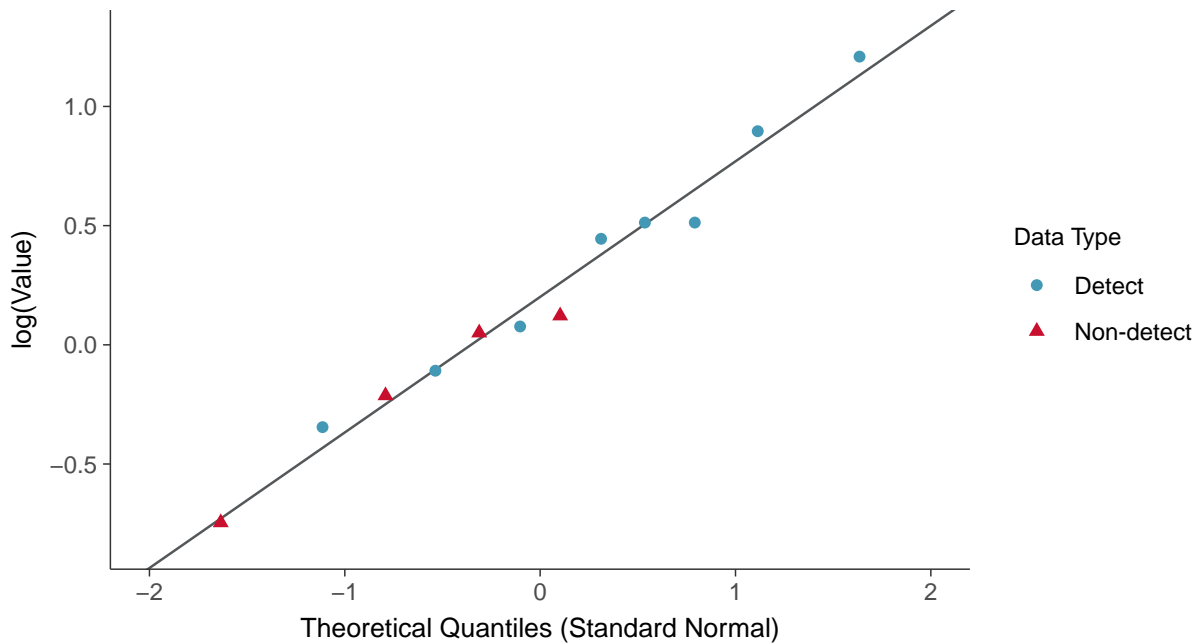
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

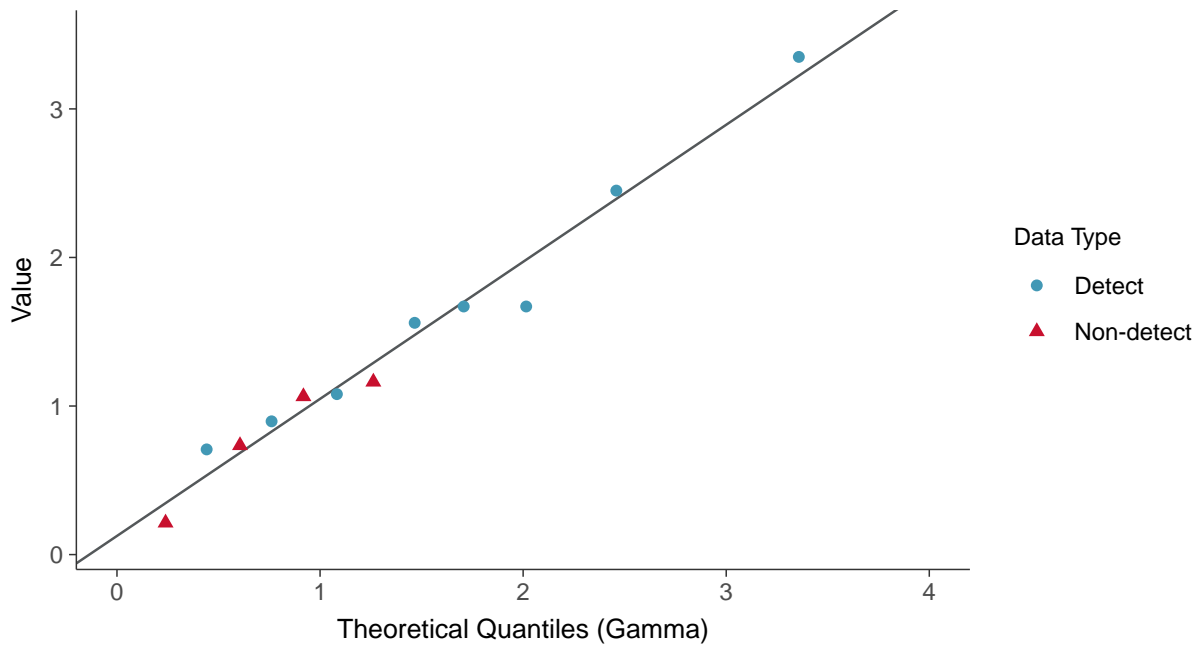
Radium 226 and 228, MW-02 (pCi/L)





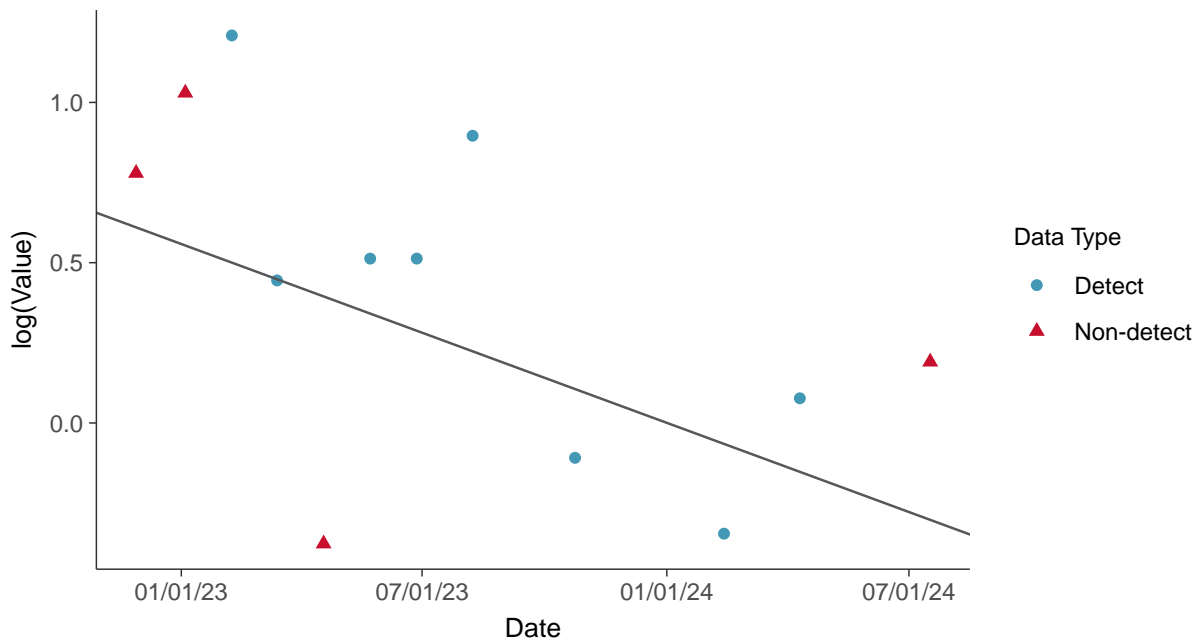
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-02 (pCi/L)



### Trend Regression: Lognormal MLE

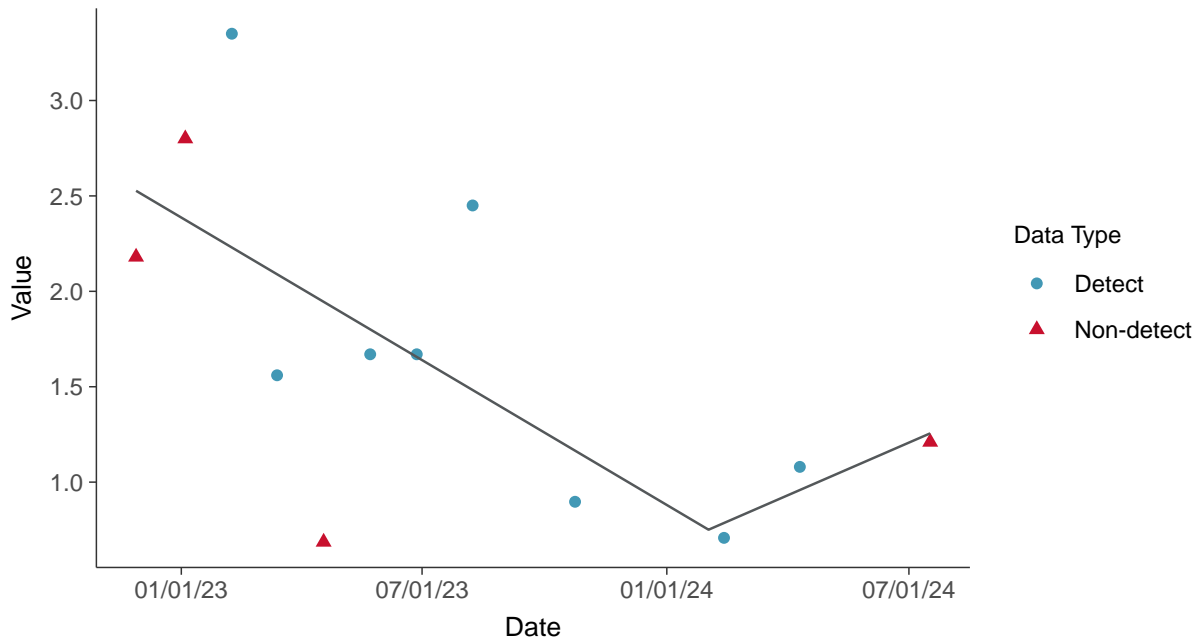
Radium 226 and 228, MW-02 (pCi/L)





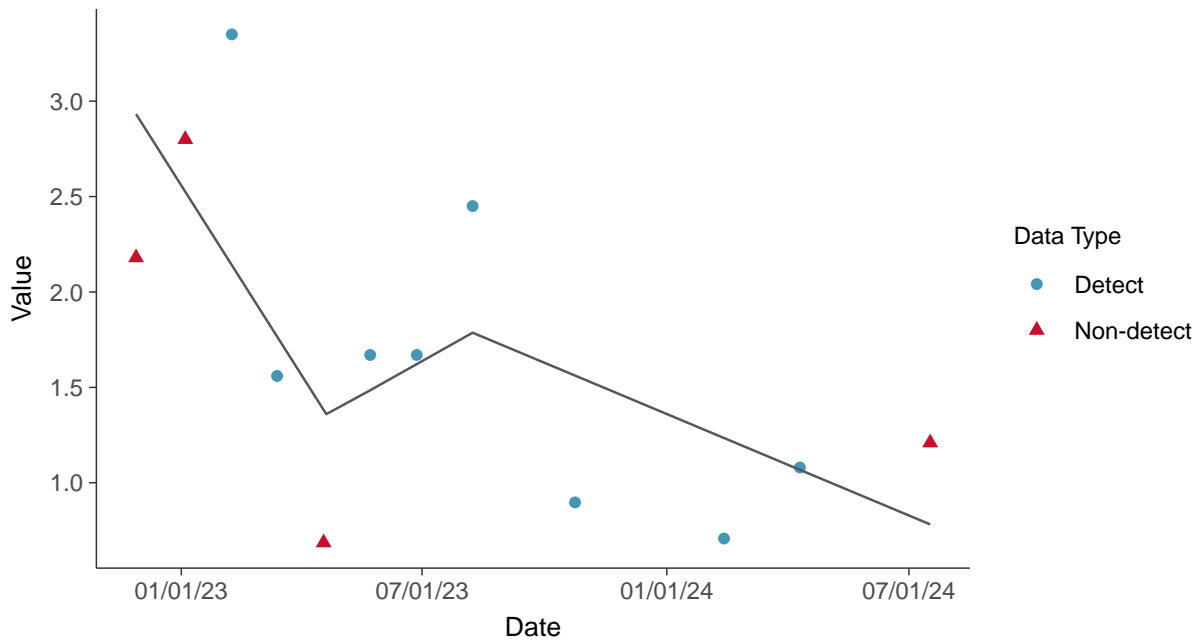
### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-02 (pCi/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-02 (pCi/L)



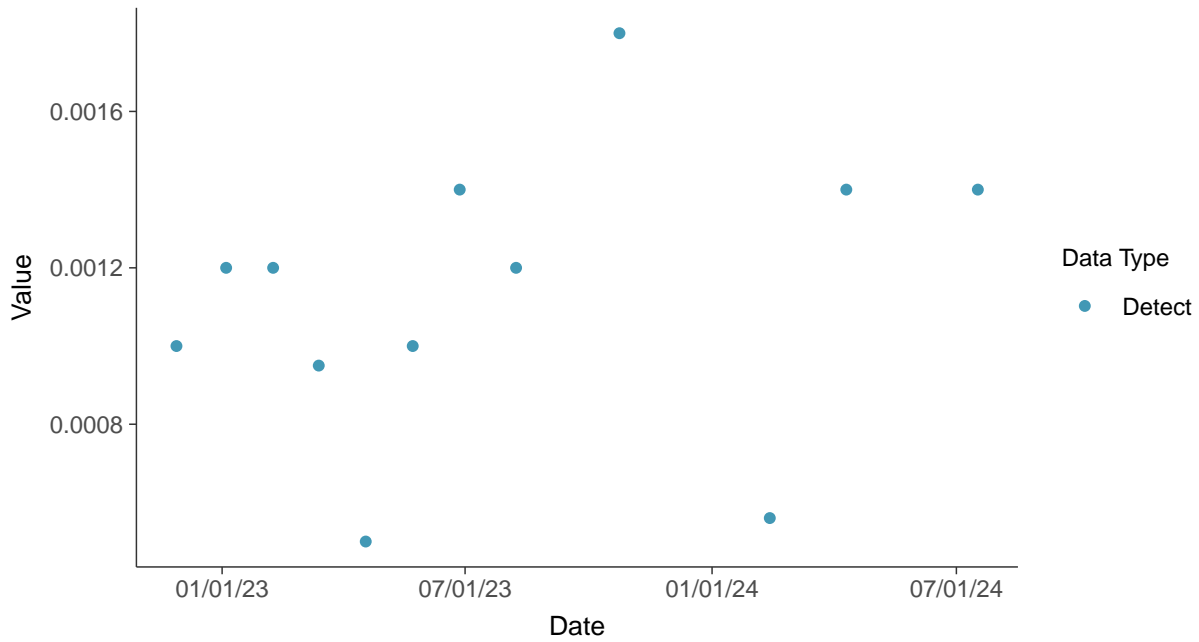


## Appendix IV: Selenium, MW-02

ID: 12\_2\_5\_122

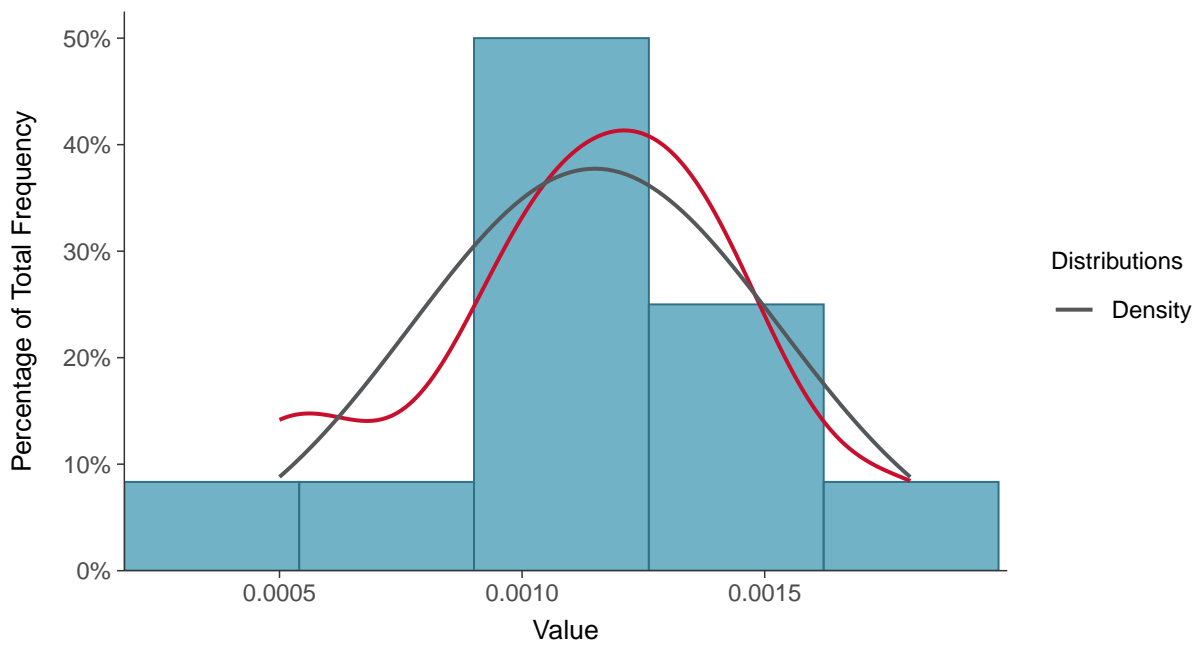
### Scatter Plot

Selenium, MW-02 (mg/L)



### Histogram

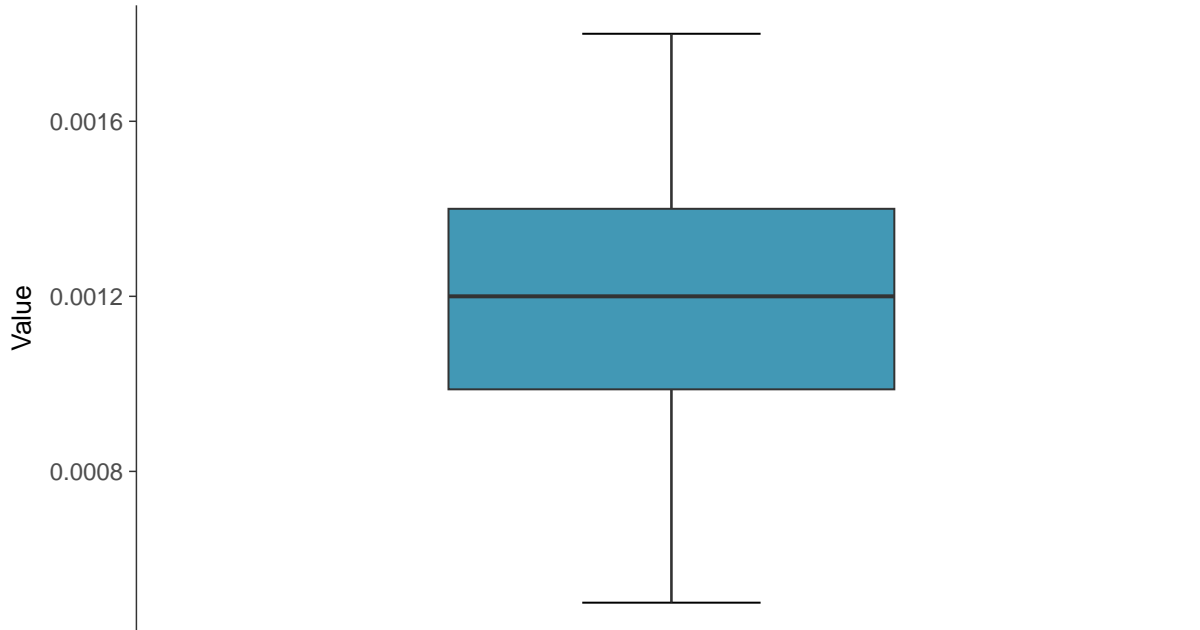
Selenium, MW-02 (mg/L)





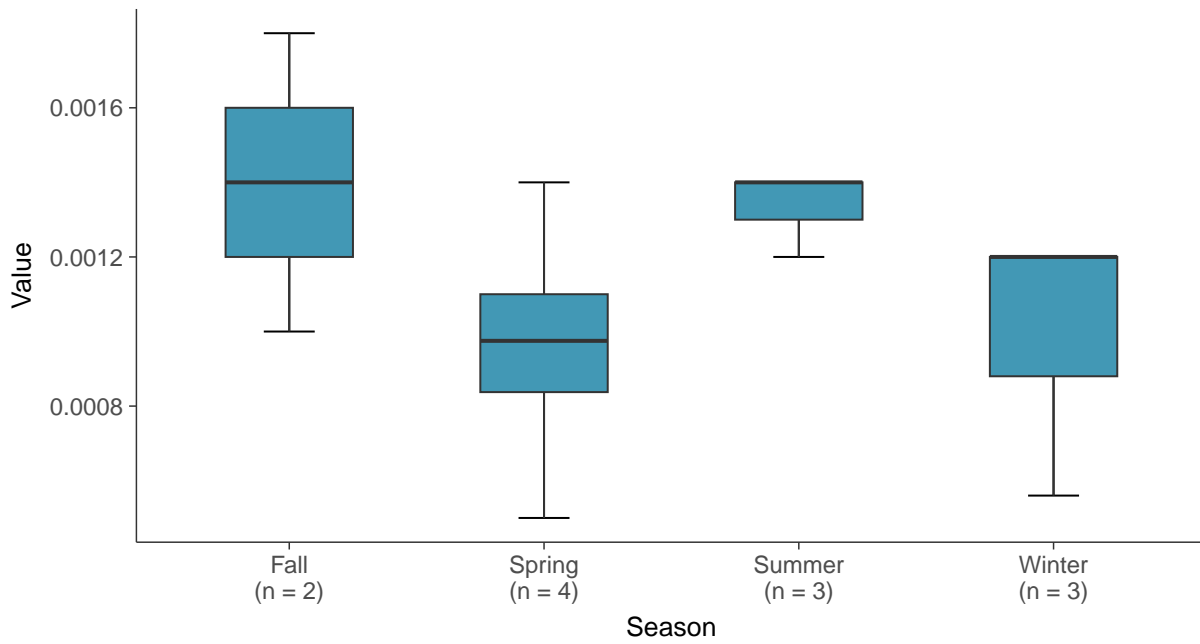
### Boxplot

Selenium, MW-02 (mg/L)



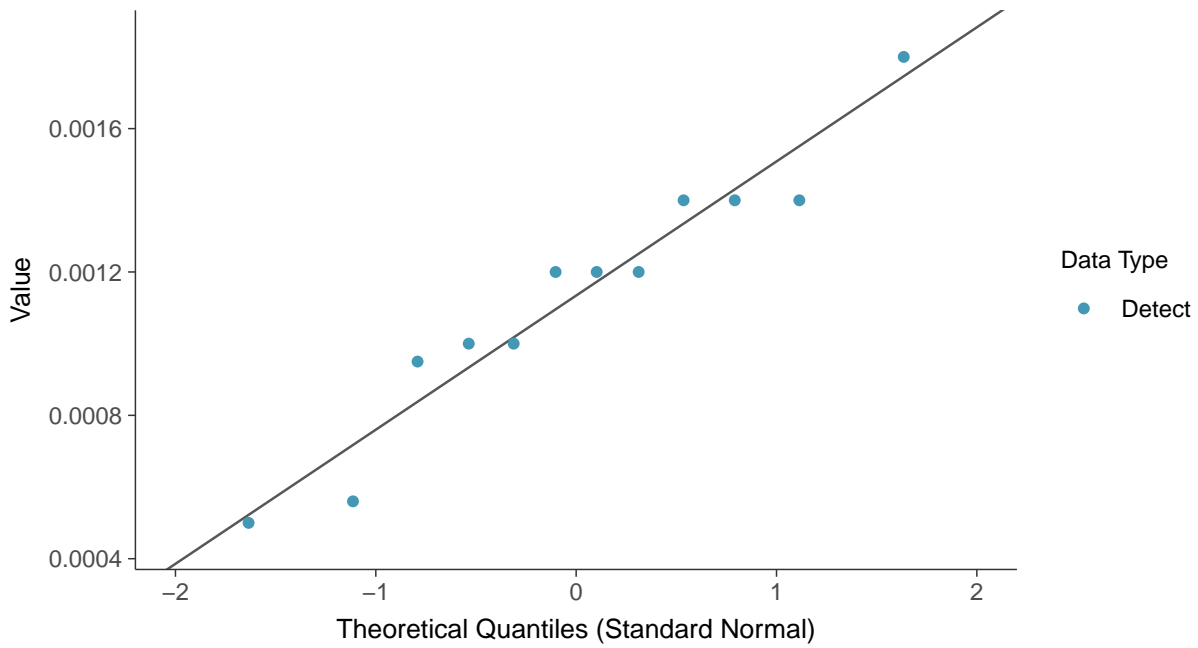
### Boxplot by Season

Selenium, MW-02 (mg/L)

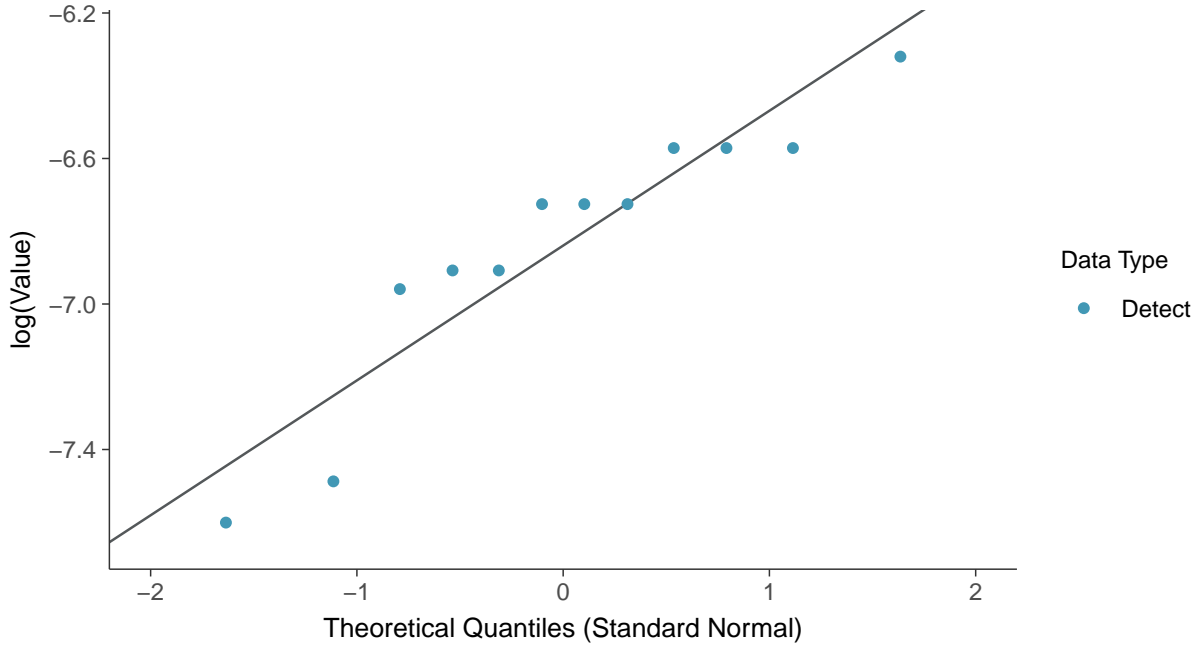




**Normal Q-Q plot**  
Selenium, MW-02 (mg/L)

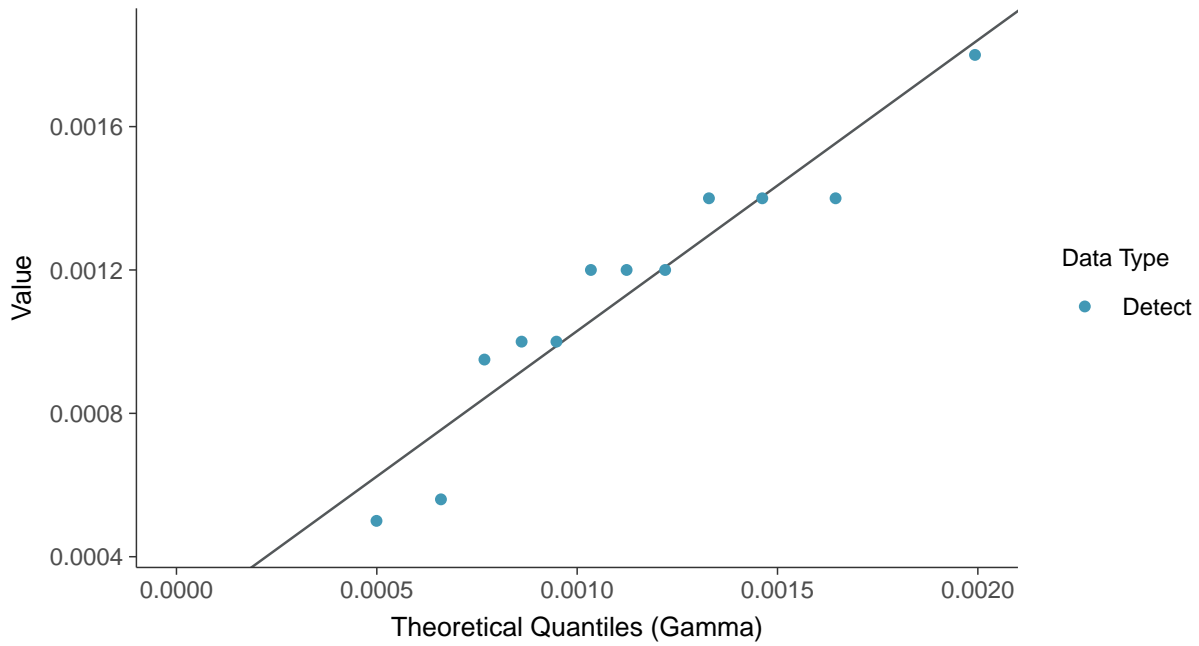


**Lognormal Q-Q plot**  
Selenium, MW-02 (mg/L)

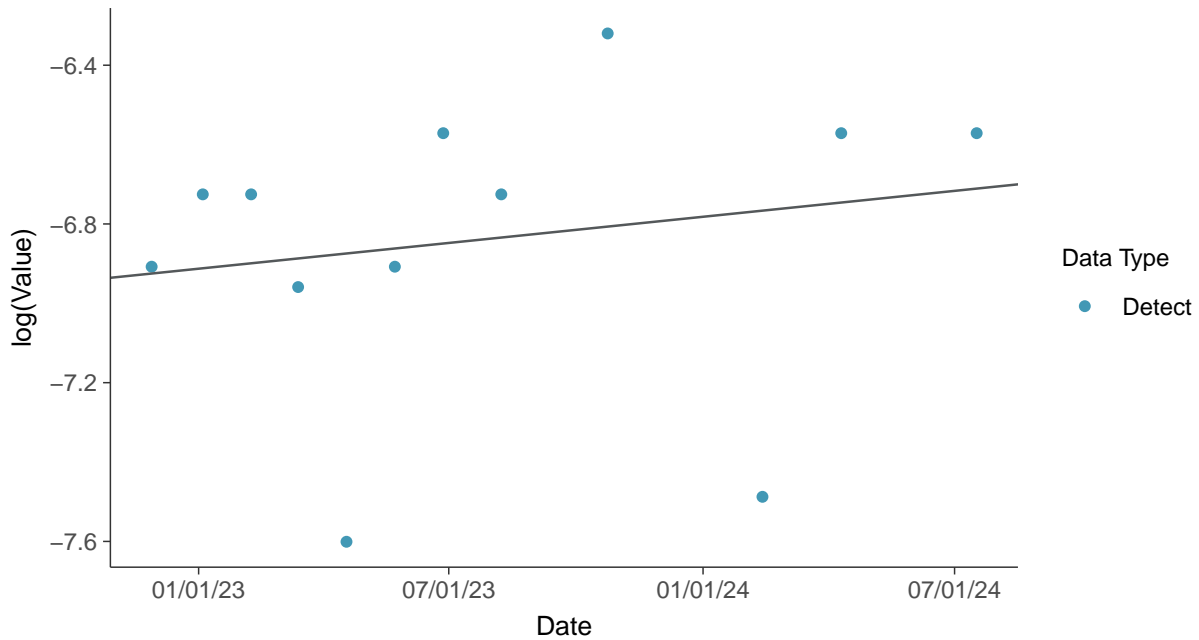




**Gamma Q-Q plot**  
Selenium, MW-02 (mg/L)

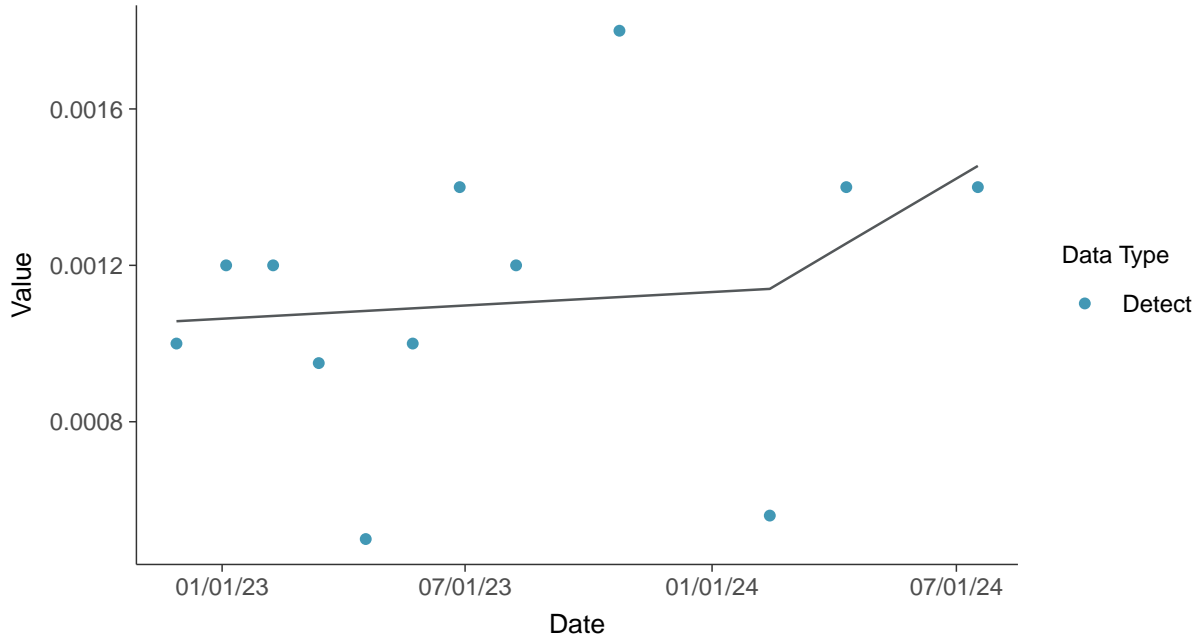


**Trend Regression: Lognormal MLE**  
Selenium, MW-02 (mg/L)

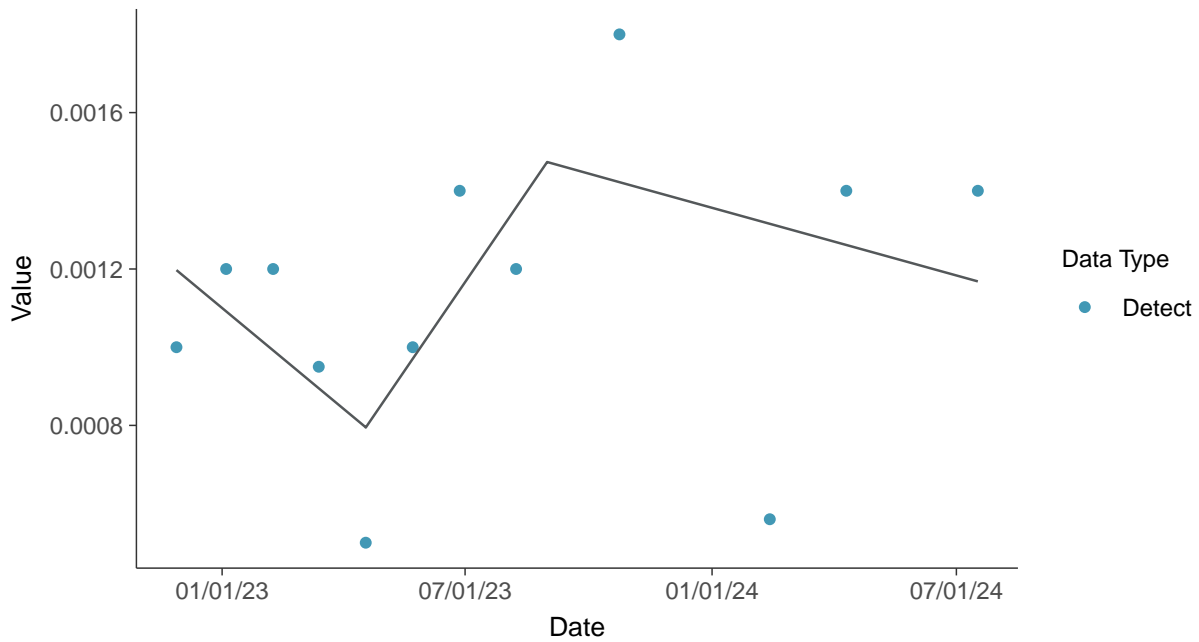




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-02 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-02 (mg/L)





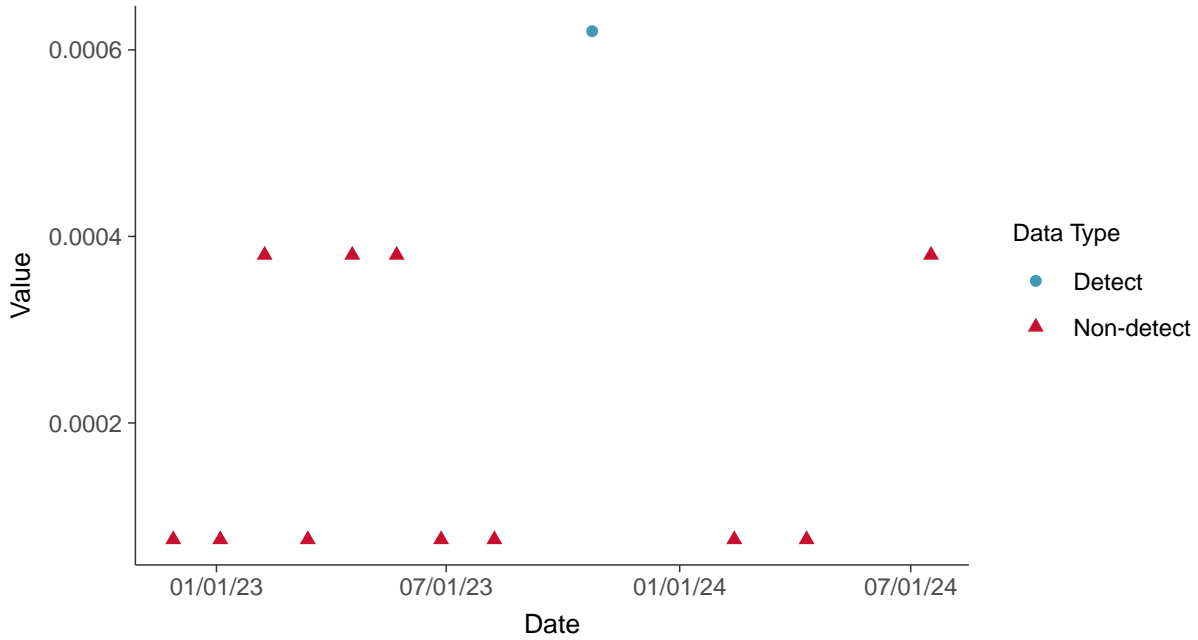


### Appendix IV: Thallium, MW-02

ID: 12\_2\_5\_125

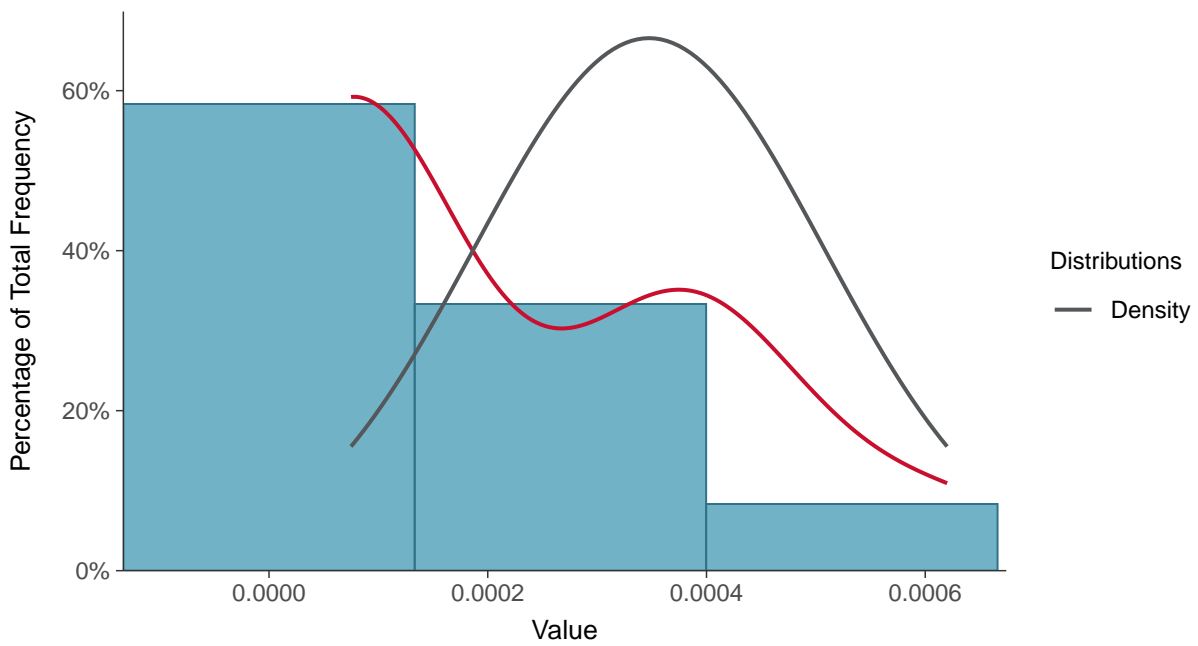
#### Scatter Plot

Thallium, MW-02 (mg/L)



#### Histogram

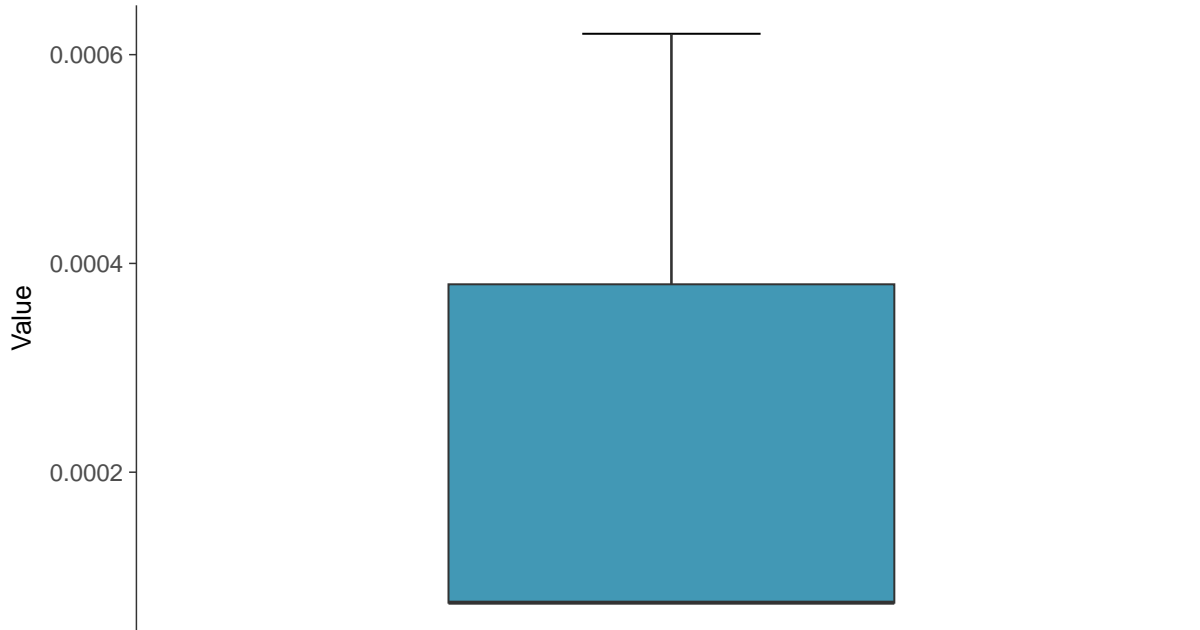
Thallium, MW-02 (mg/L)





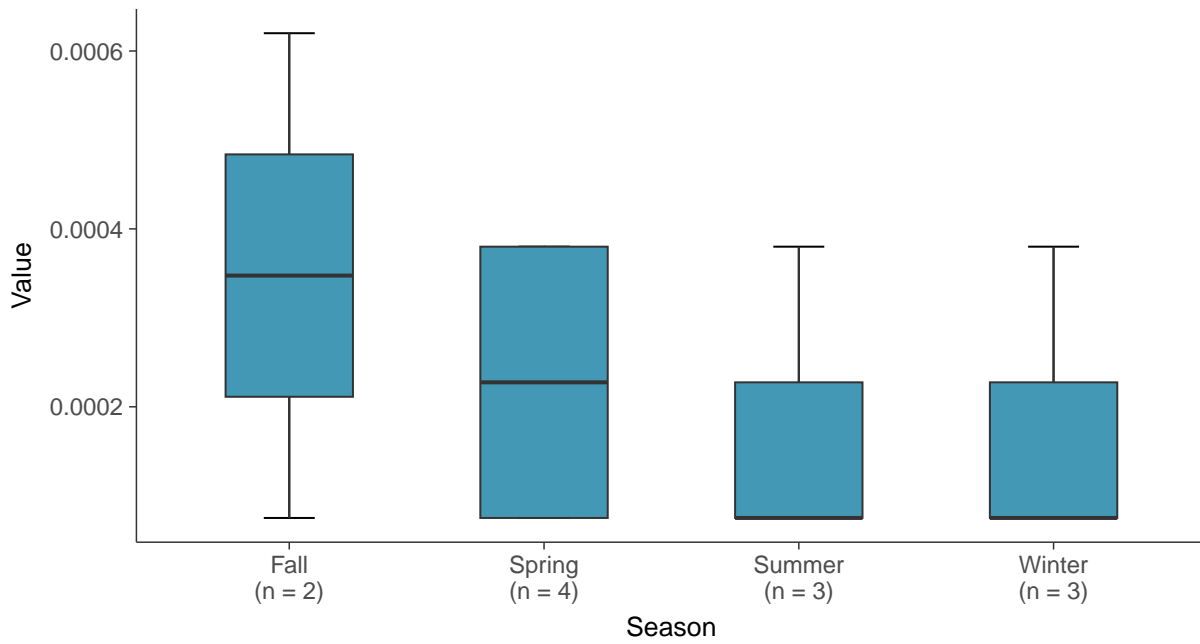
### Boxplot

Thallium, MW-02 (mg/L)



### Boxplot by Season

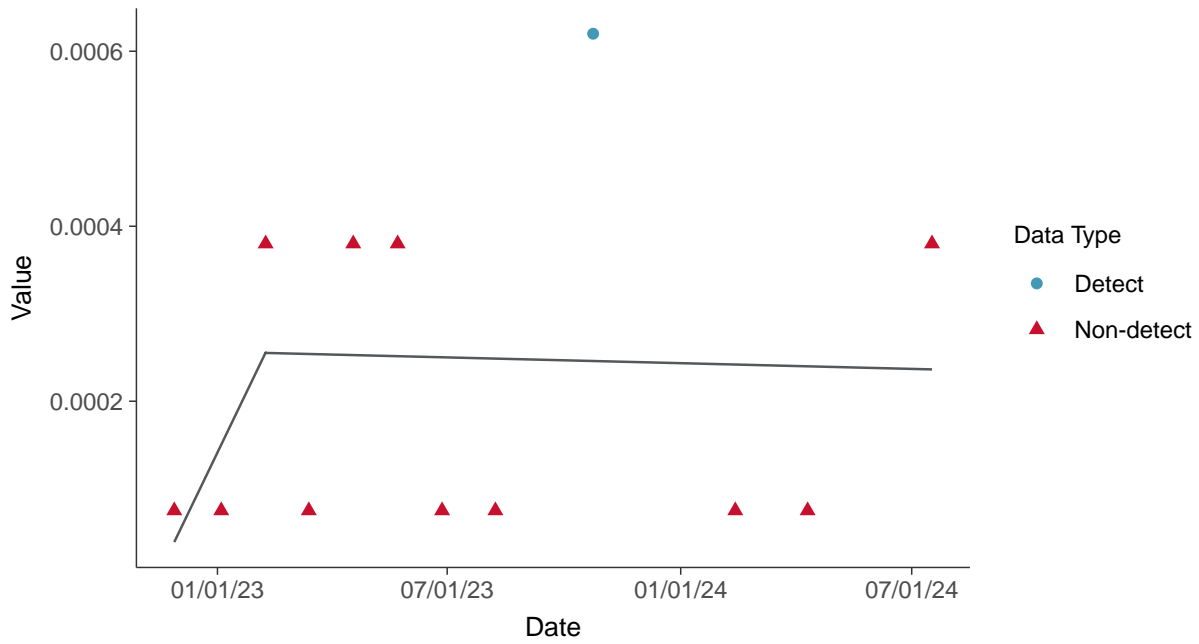
Thallium, MW-02 (mg/L)





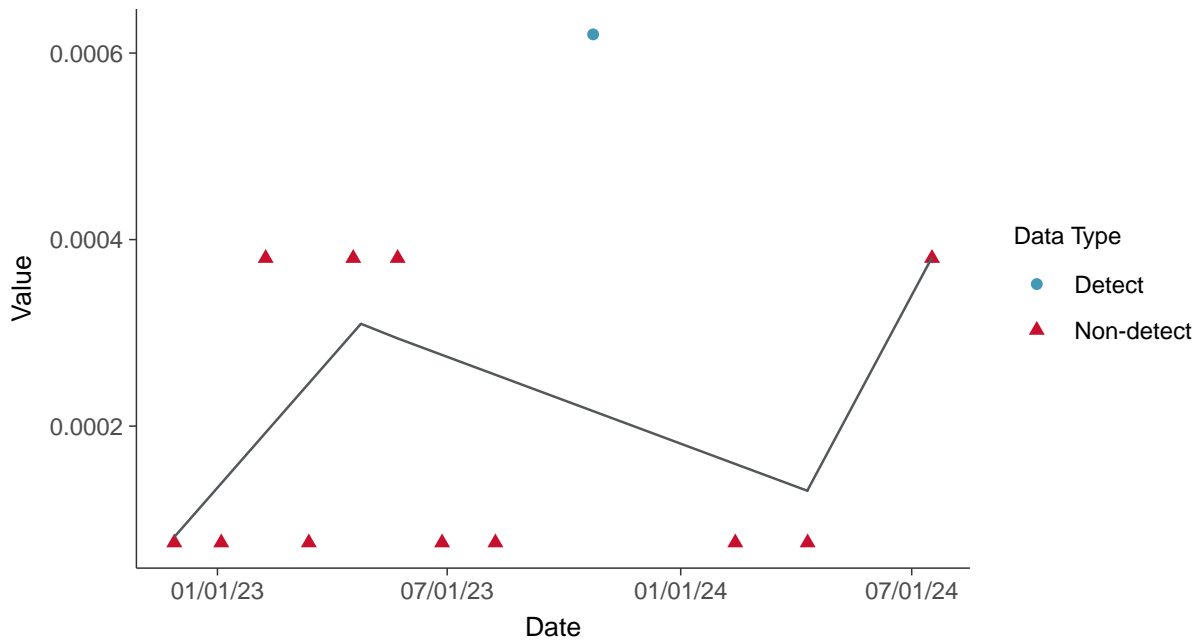
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-02 (mg/L)



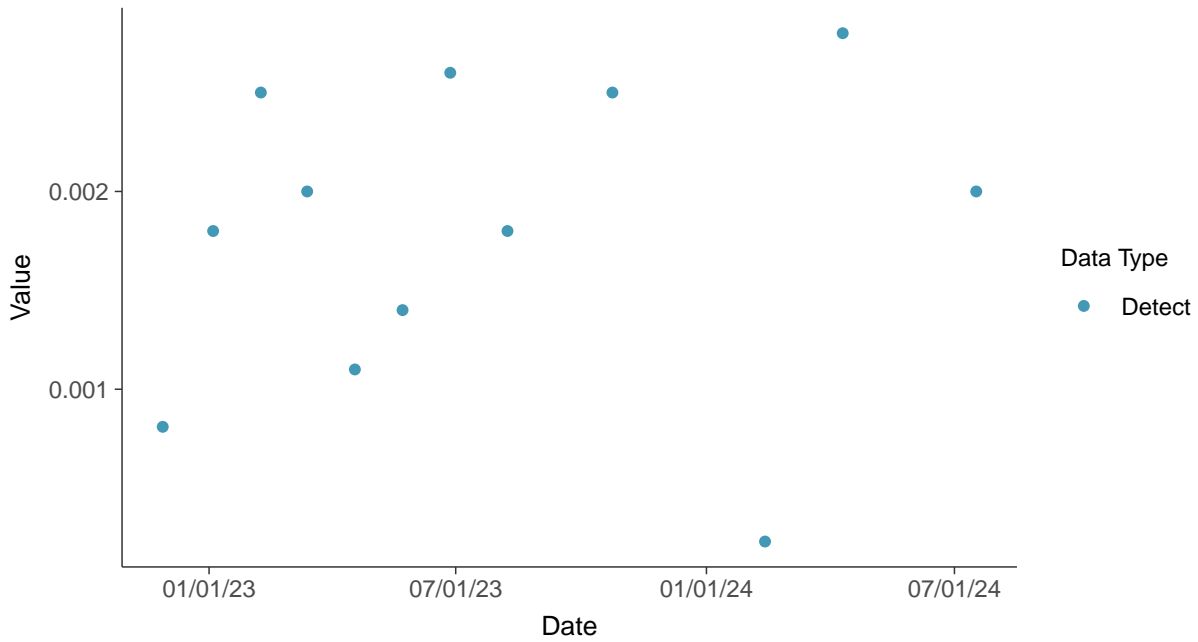


### Part 115: Copper, MW-02

ID: 12\_2\_6\_111

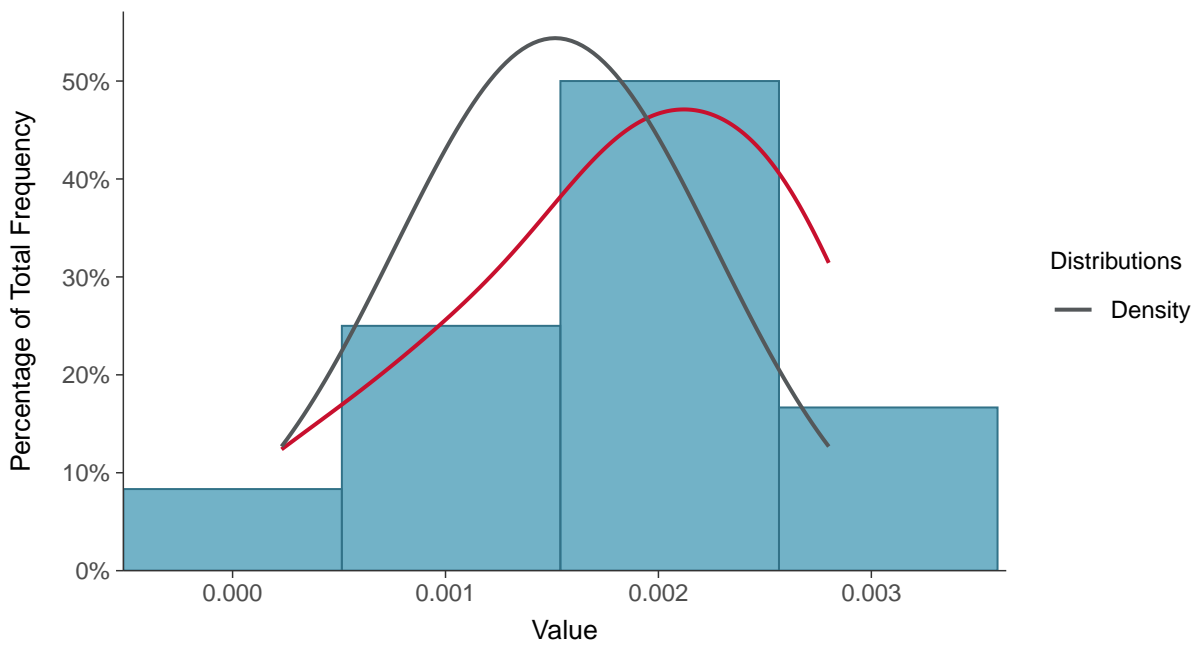
#### Scatter Plot

Copper, MW-02 (mg/L)



#### Histogram

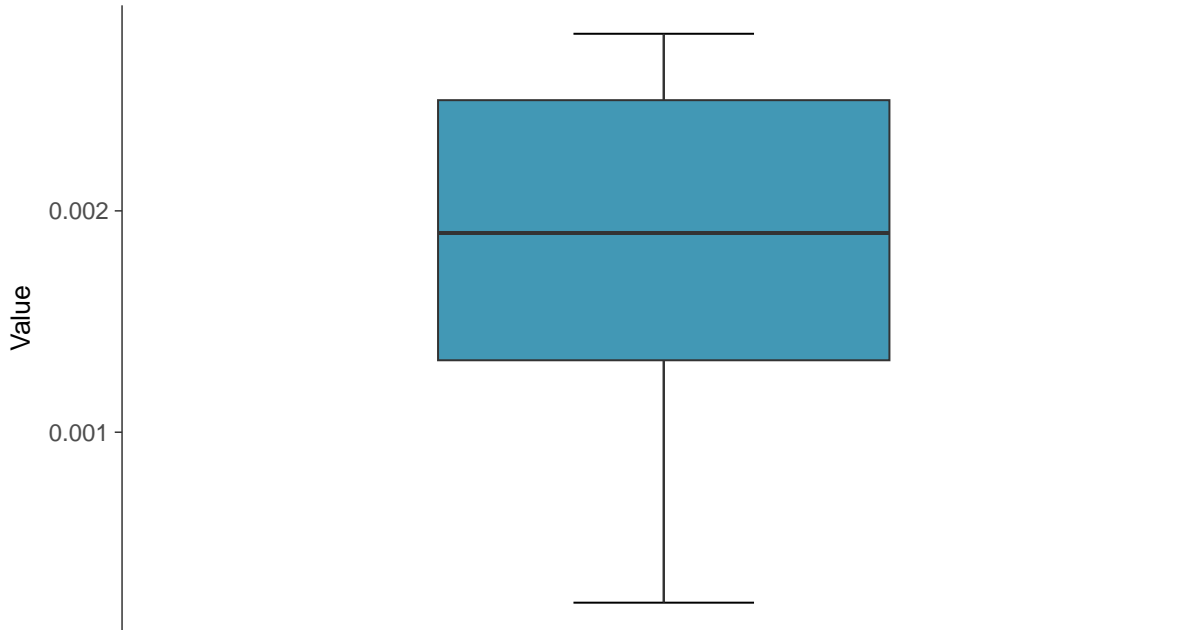
Copper, MW-02 (mg/L)





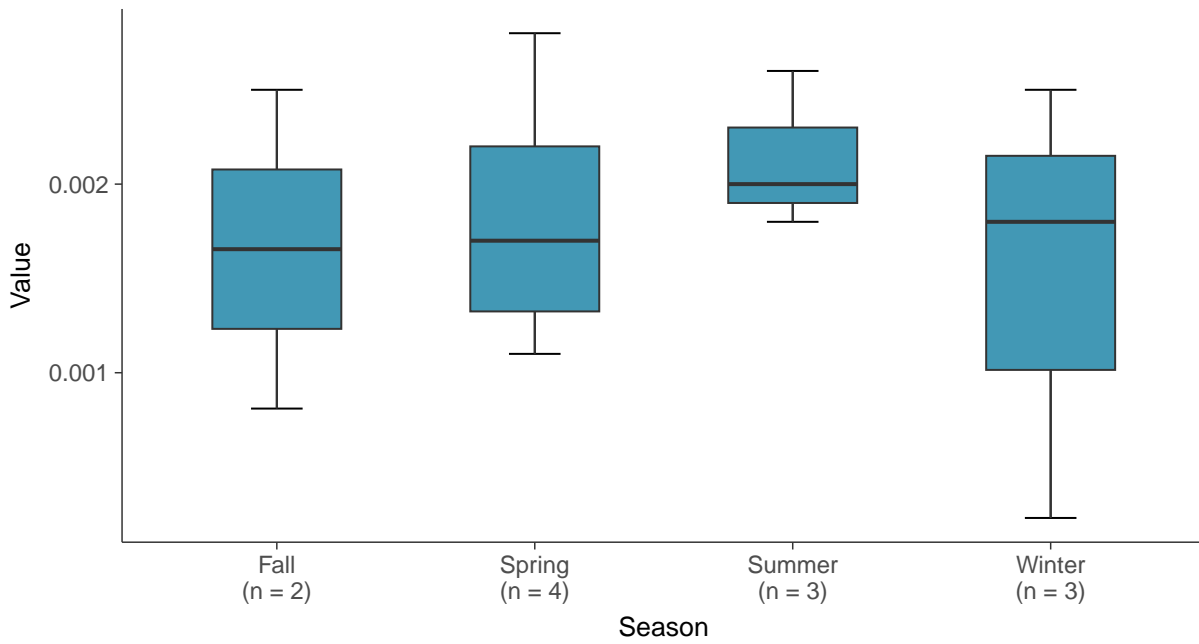
### Boxplot

Copper, MW-02 (mg/L)



### Boxplot by Season

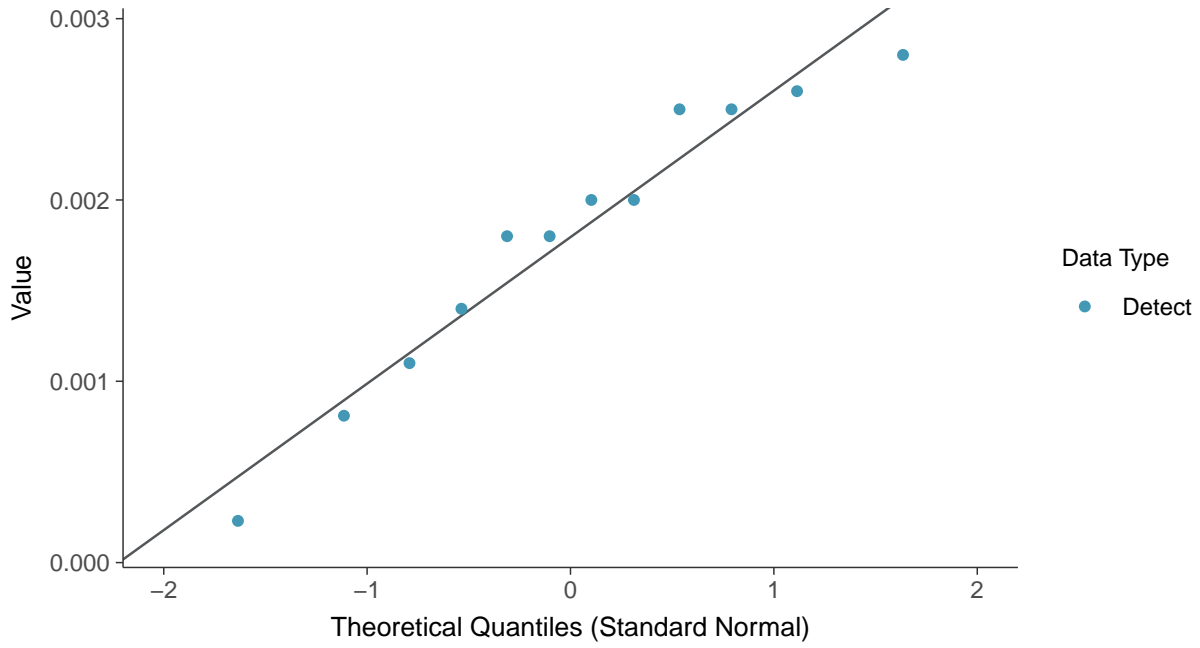
Copper, MW-02 (mg/L)





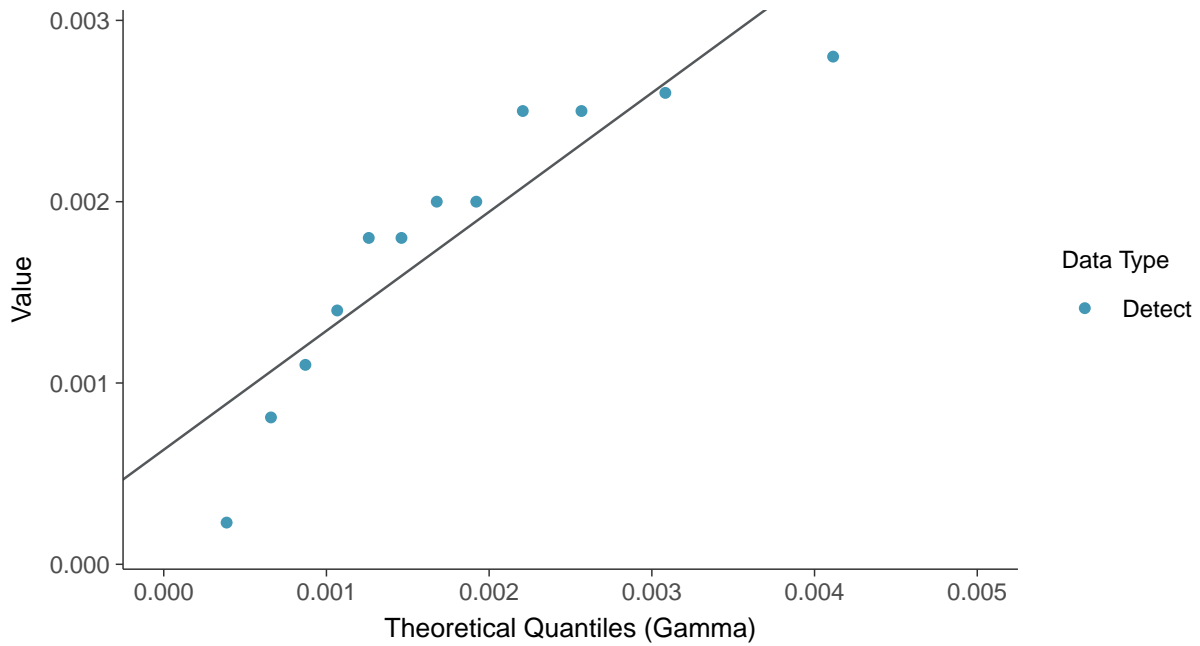
### Normal Q-Q plot

Copper, MW-02 (mg/L)



### Gamma Q-Q plot

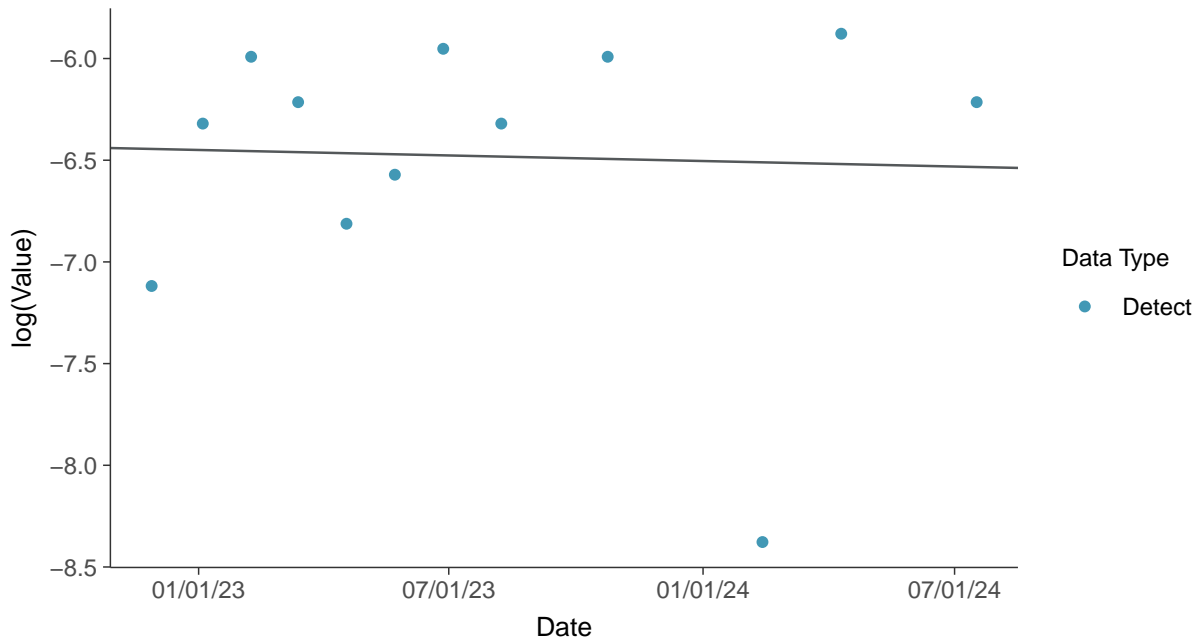
Copper, MW-02 (mg/L)





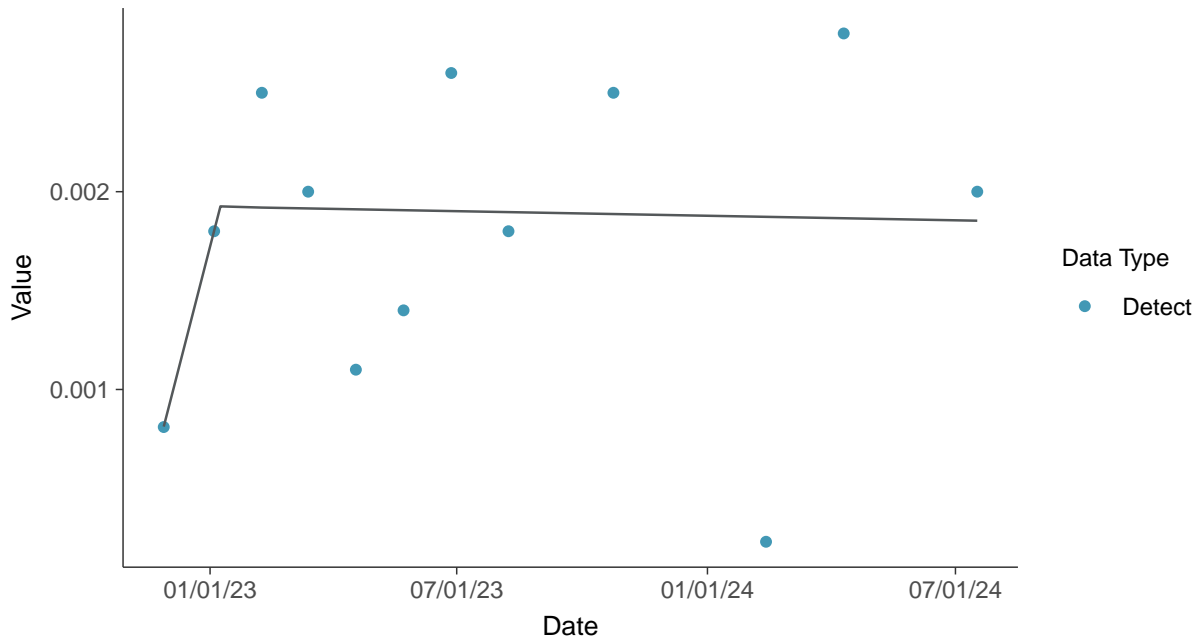
### Trend Regression: Lognormal MLE

Copper, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear

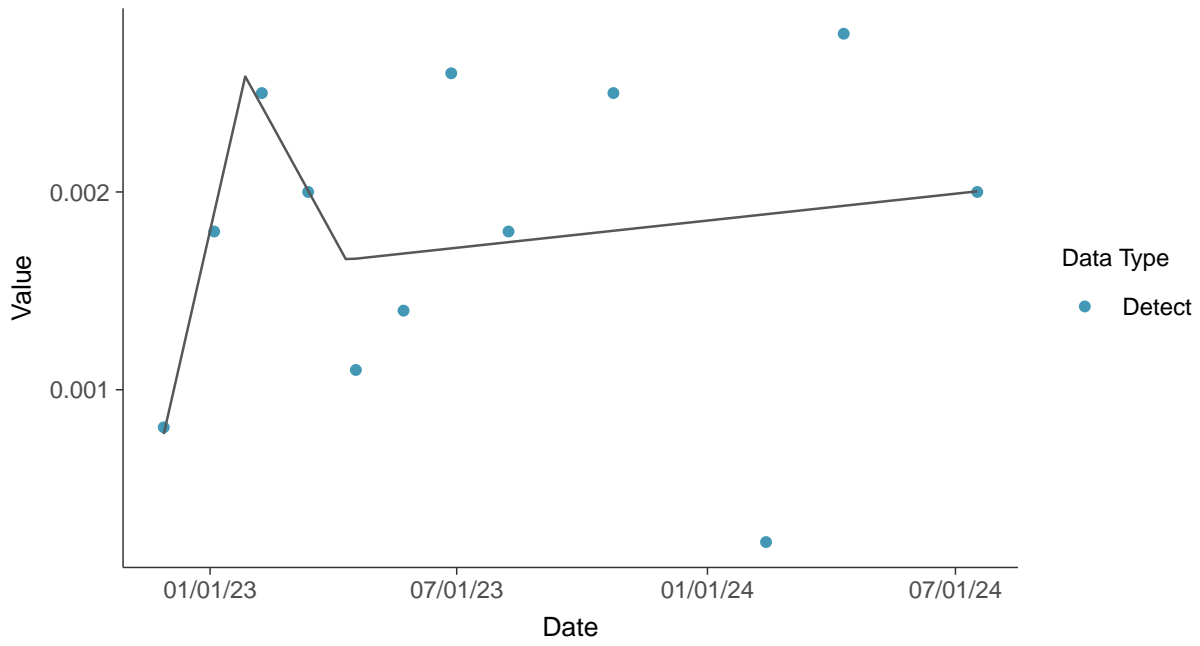
Copper, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-02 (mg/L)





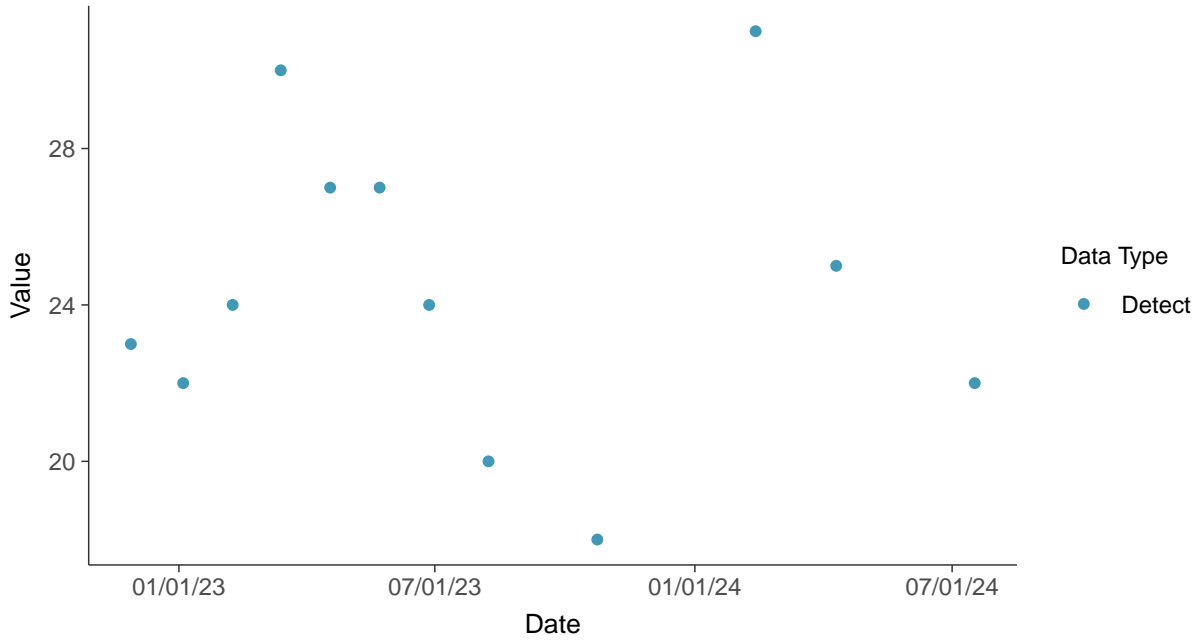


### Part 115: Iron, MW-02

ID: 12\_2\_6\_114

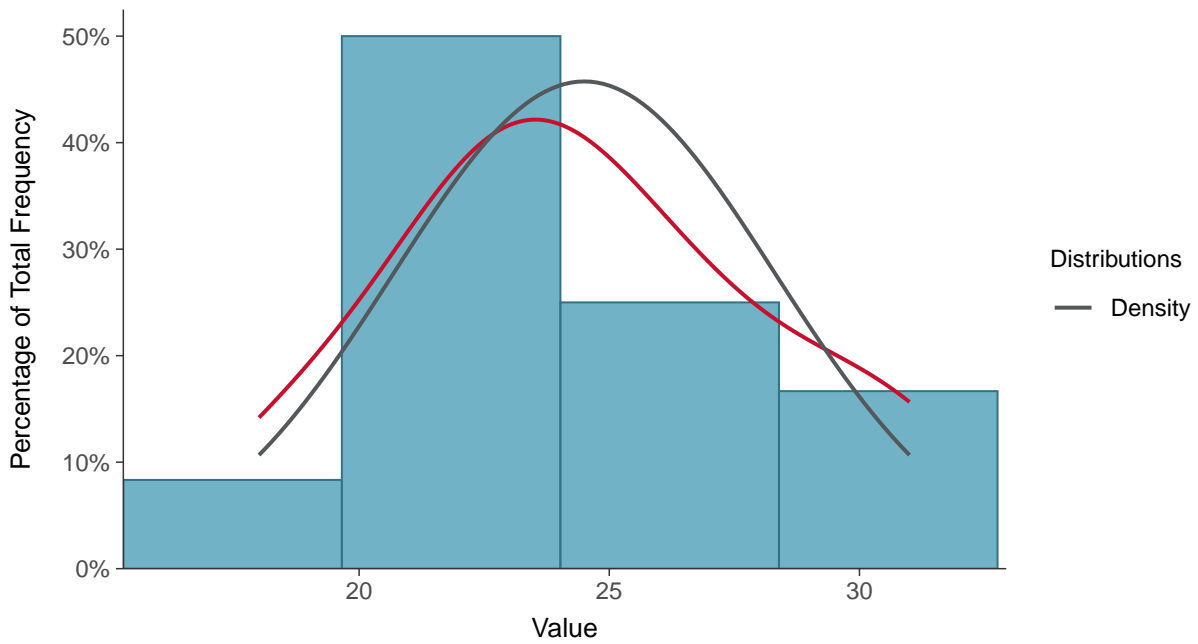
#### Scatter Plot

Iron, MW-02 (mg/L)



#### Histogram

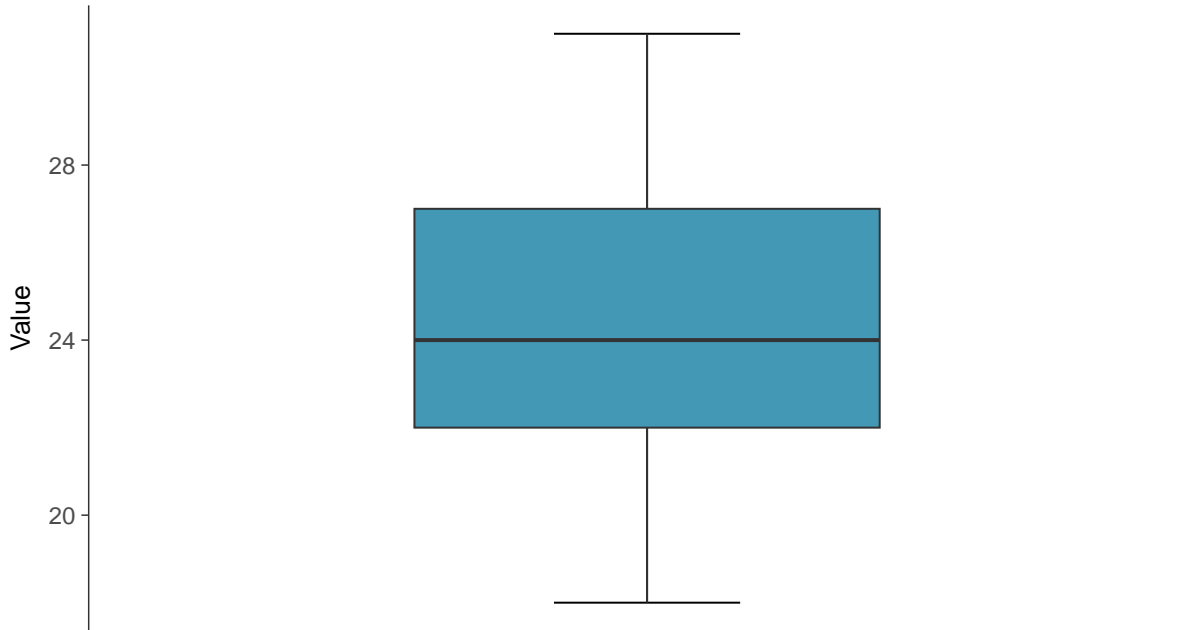
Iron, MW-02 (mg/L)





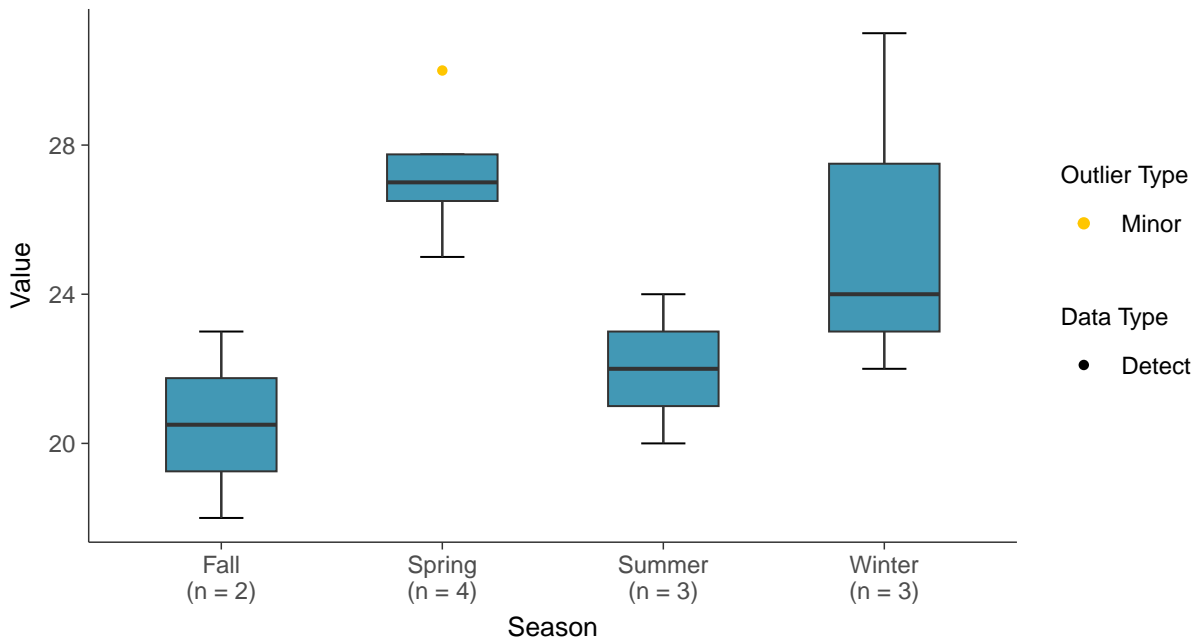
### Boxplot

Iron, MW-02 (mg/L)



### Boxplot by Season

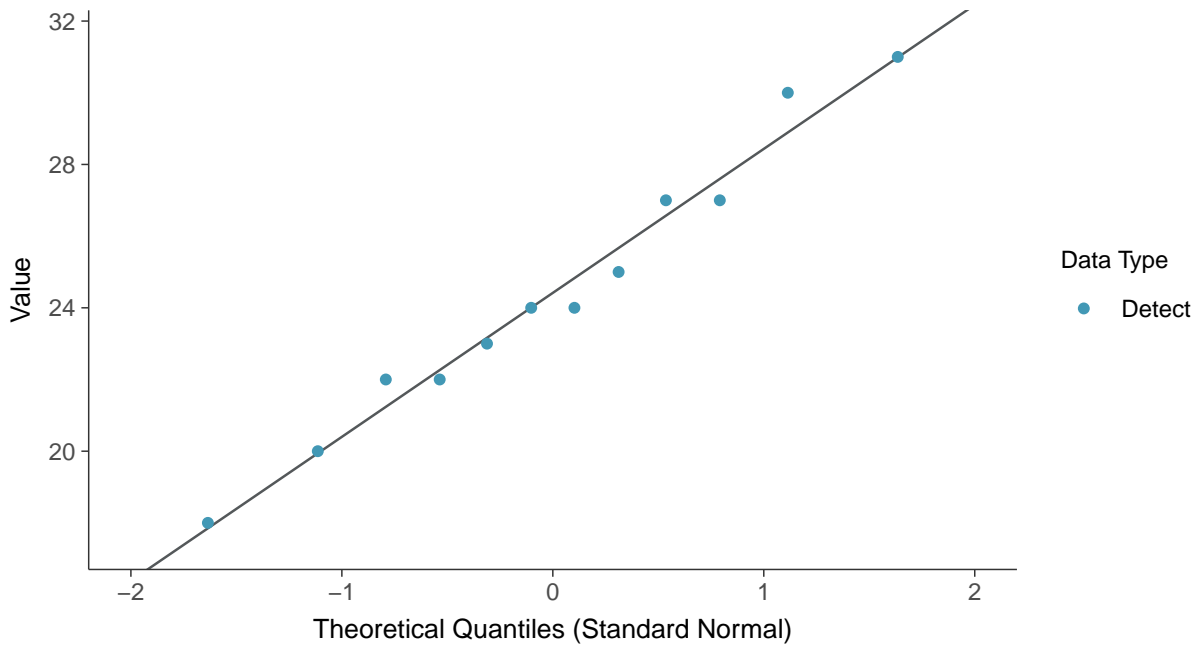
Iron, MW-02 (mg/L)





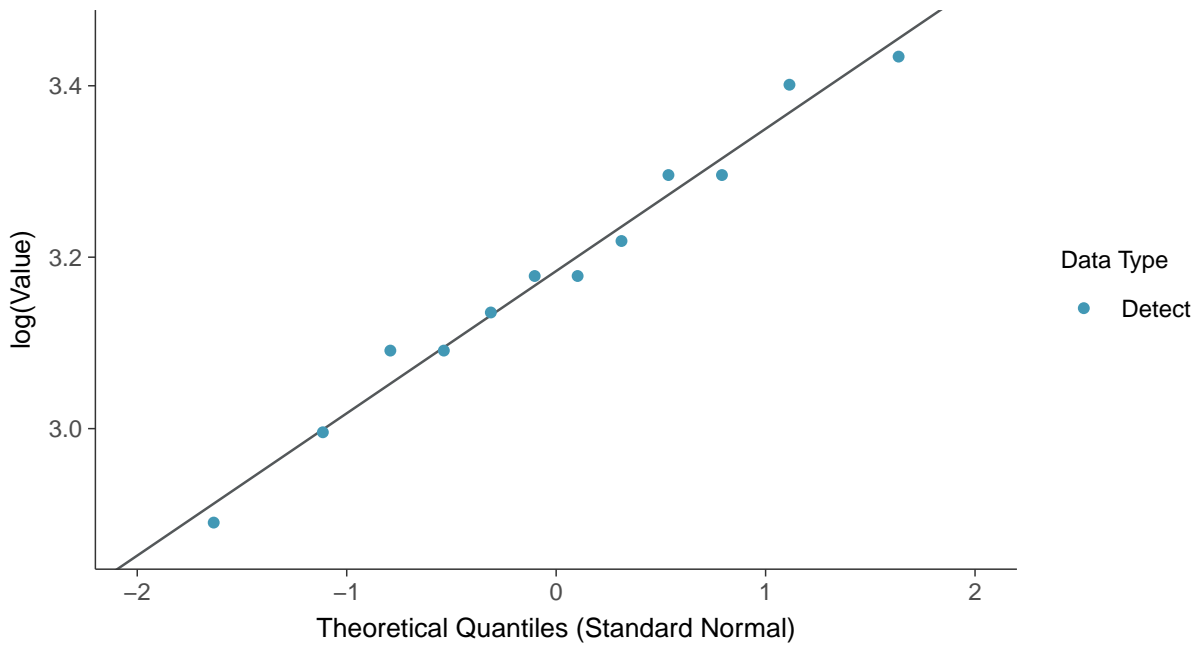
### Normal Q-Q plot

Iron, MW-02 (mg/L)



### Lognormal Q-Q plot

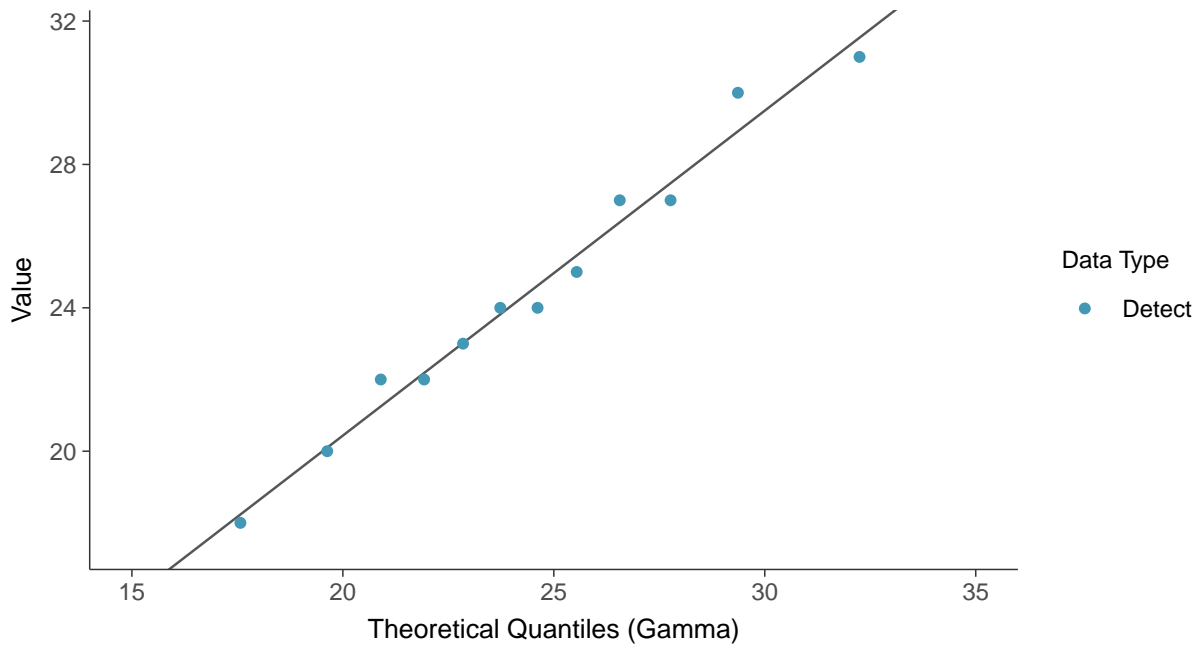
Iron, MW-02 (mg/L)





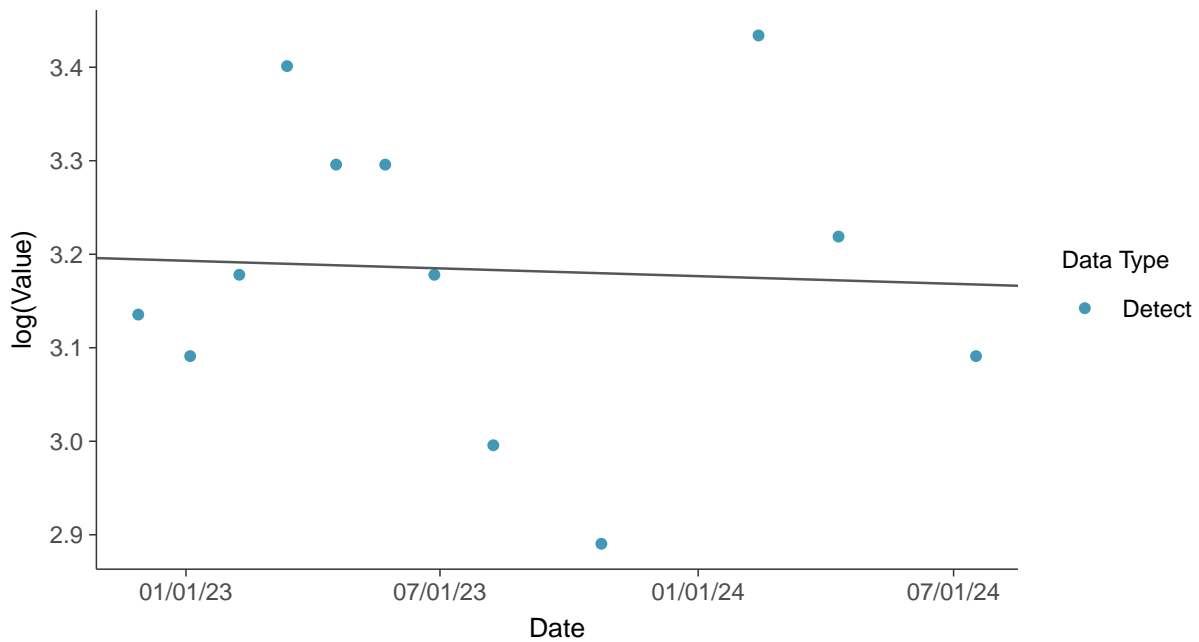
### Gamma Q-Q plot

Iron, MW-02 (mg/L)



### Trend Regression: Lognormal MLE

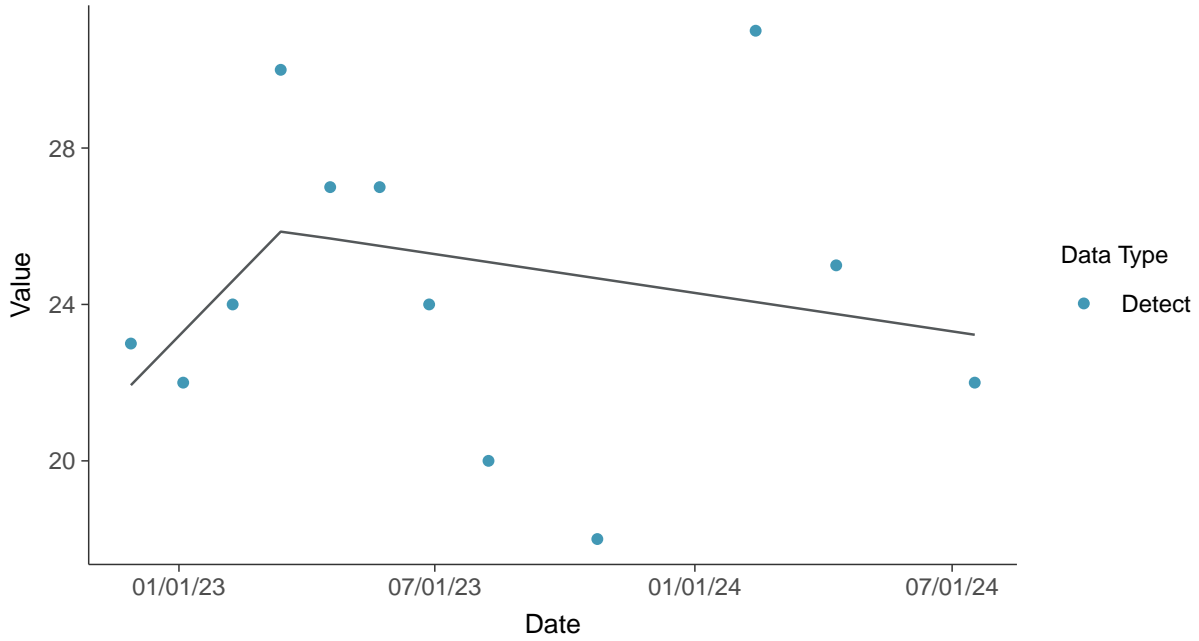
Iron, MW-02 (mg/L)





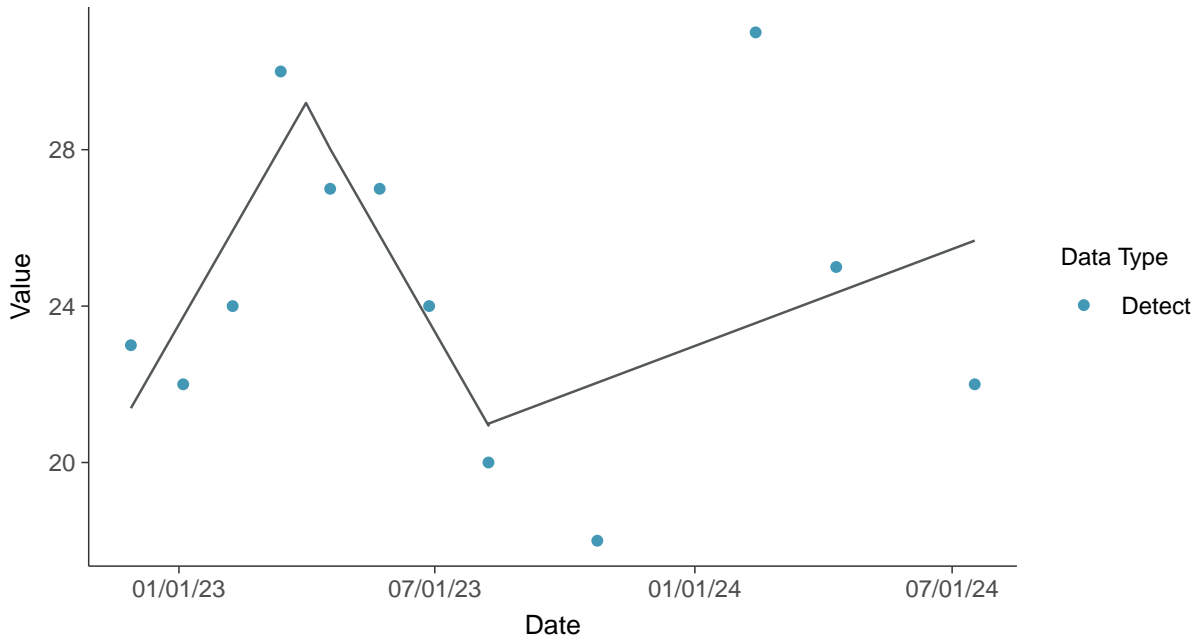
### Trend Regression: Piecewise Linear-Linear

Iron, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

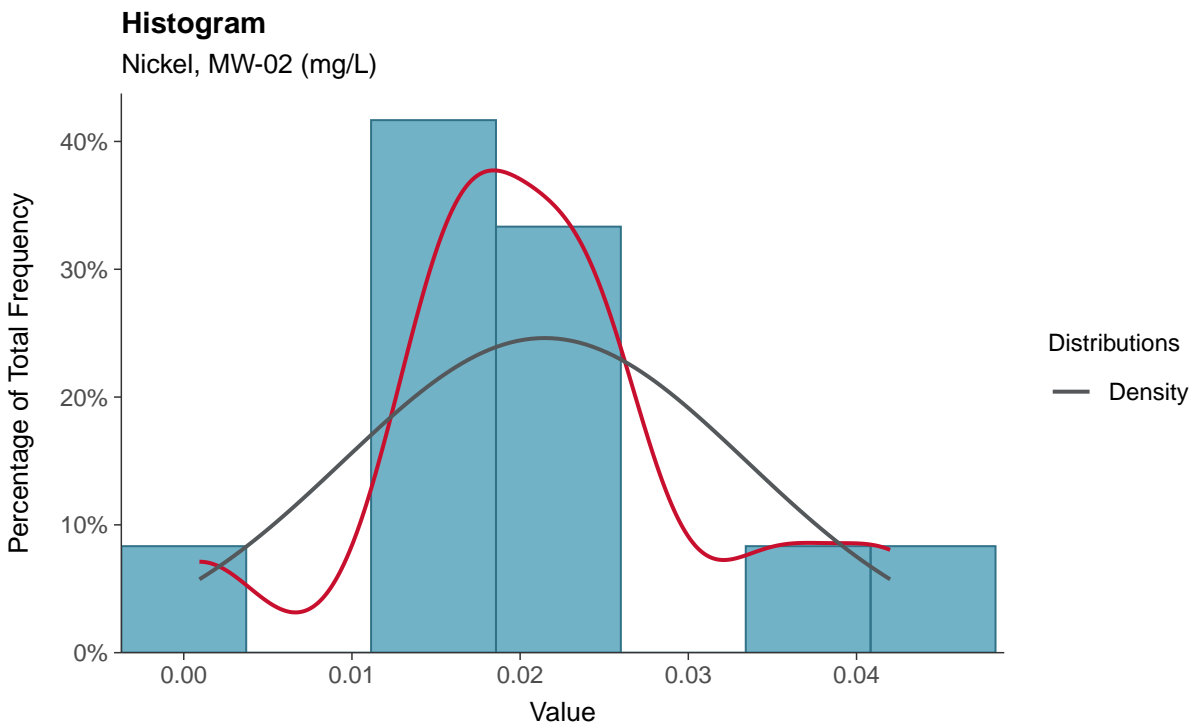
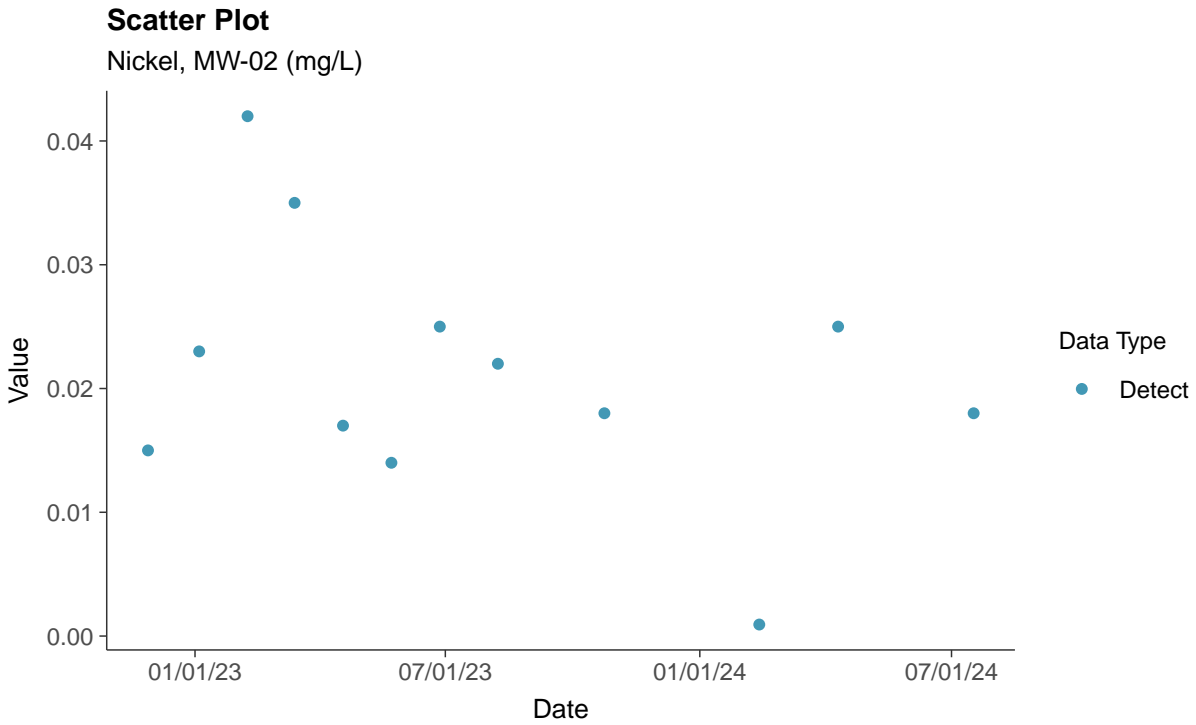
Iron, MW-02 (mg/L)





### Part 115: Nickel, MW-02

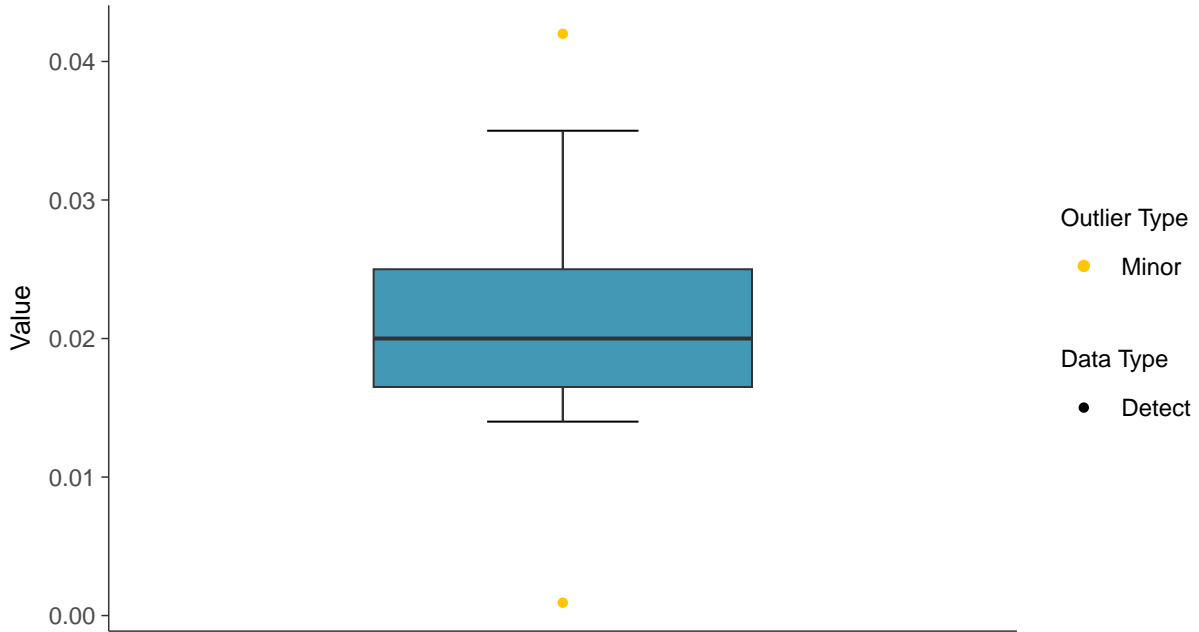
ID: 12\_2\_6\_119





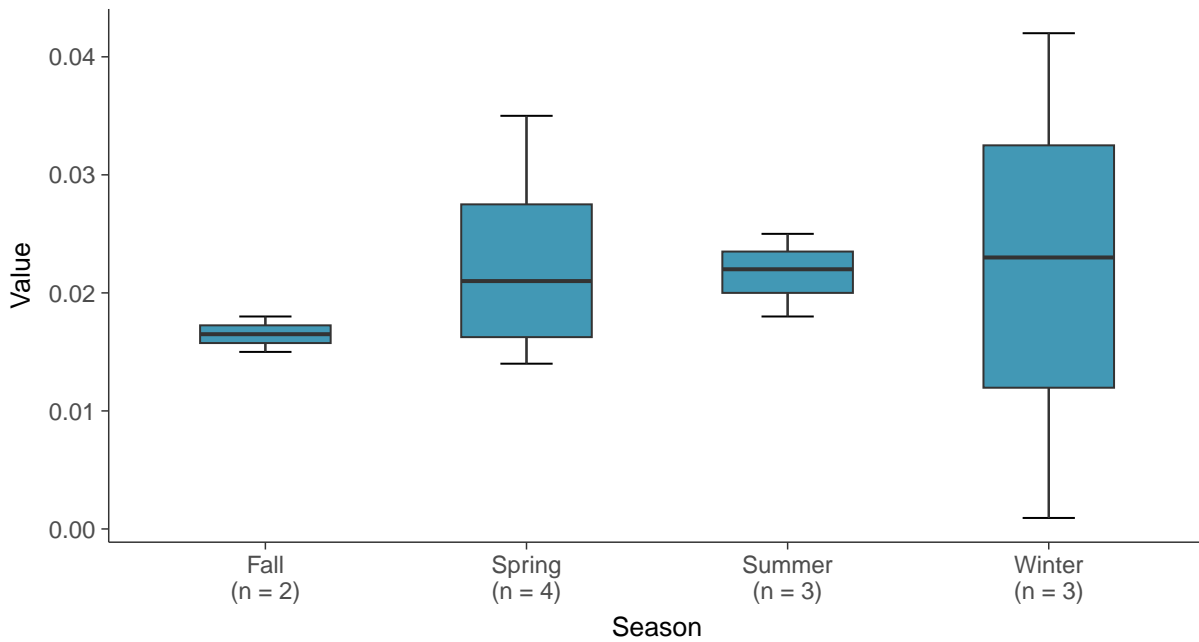
### Boxplot

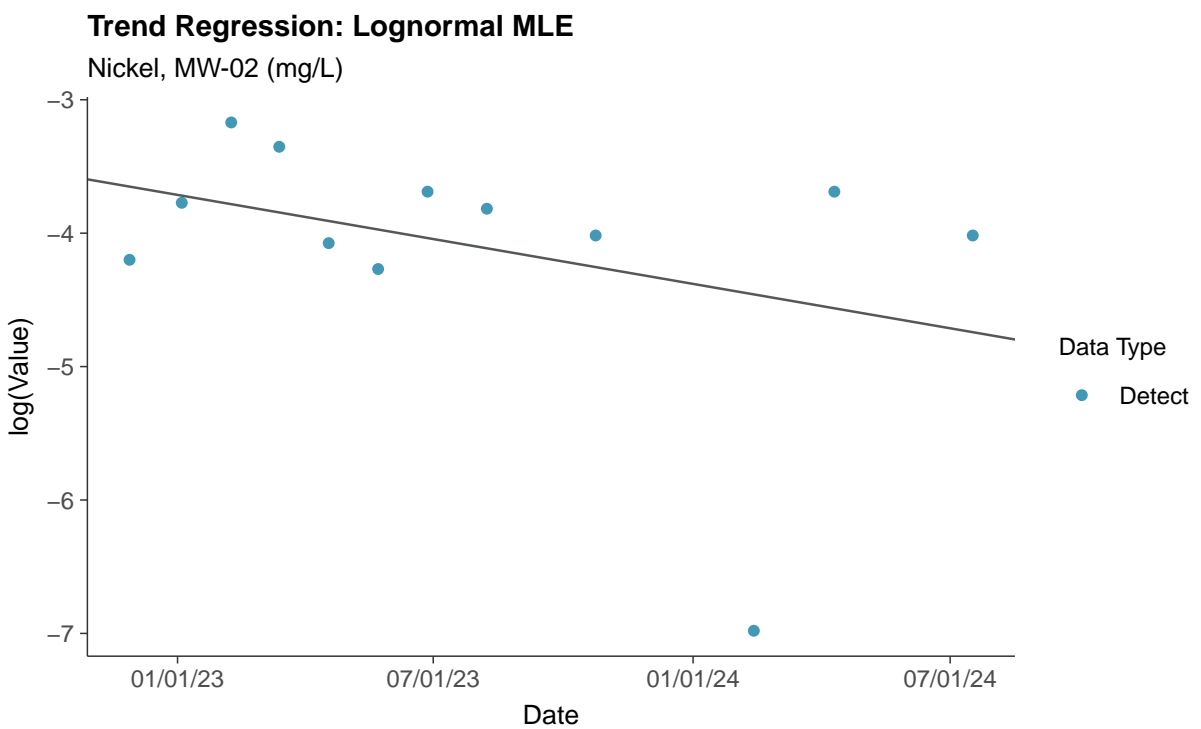
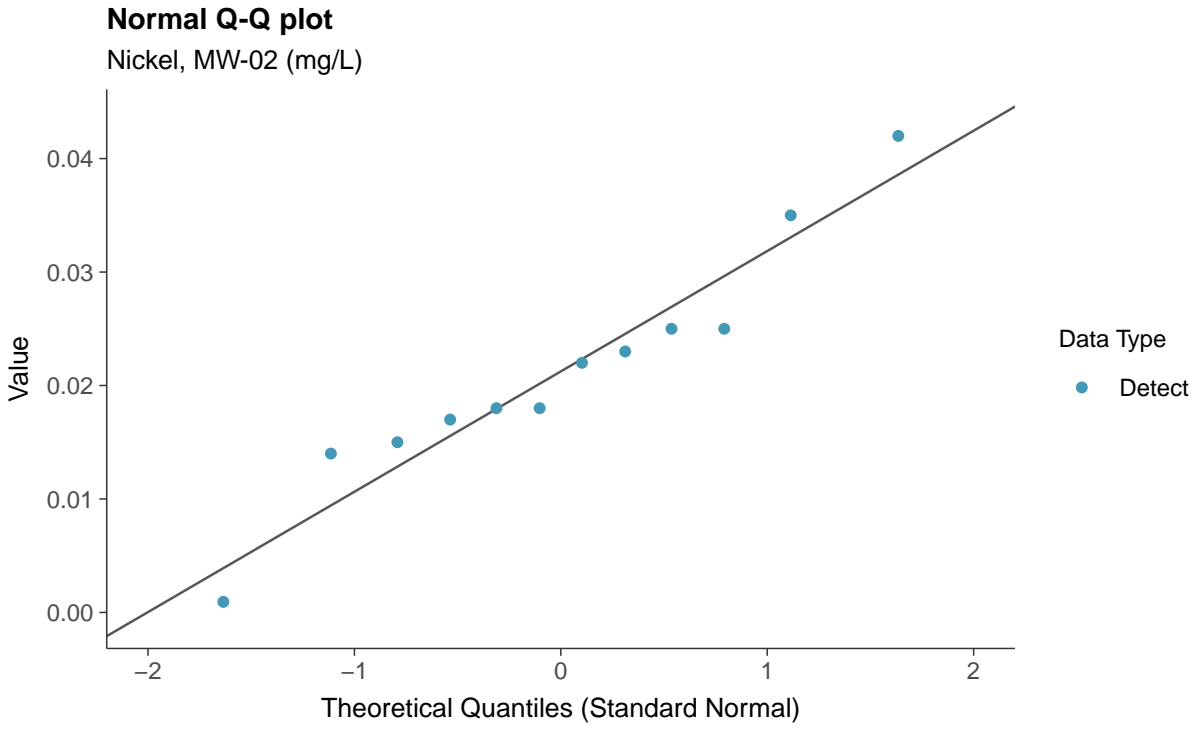
Nickel, MW-02 (mg/L)



### Boxplot by Season

Nickel, MW-02 (mg/L)



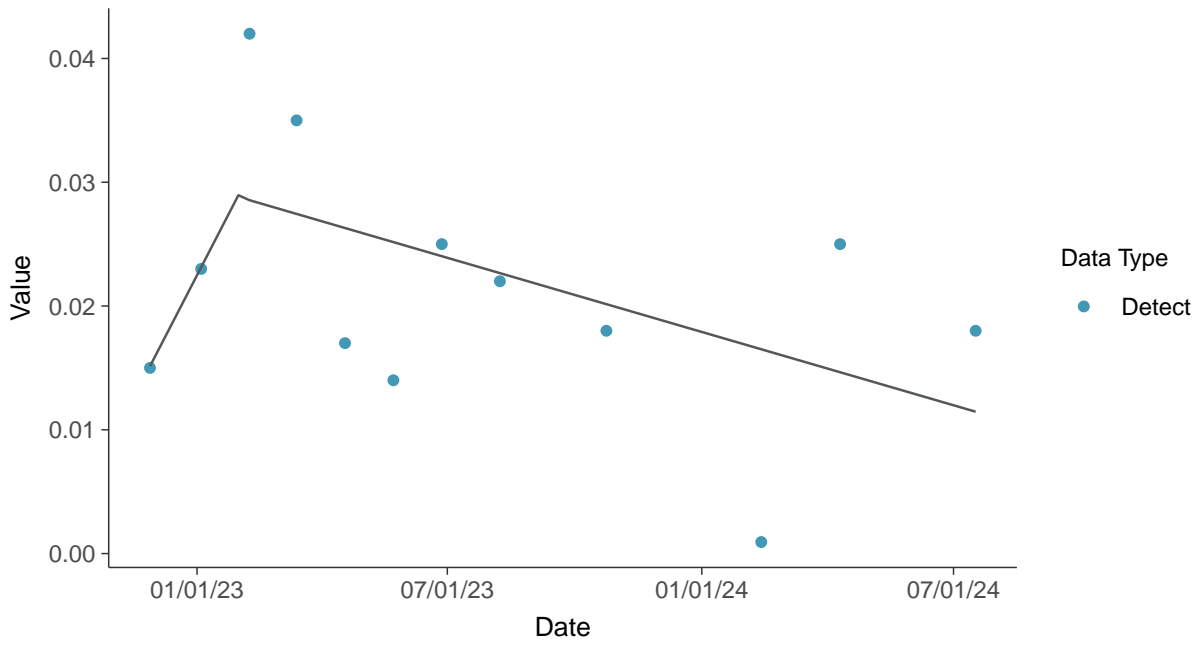






### Trend Regression: Piecewise Linear-Linear

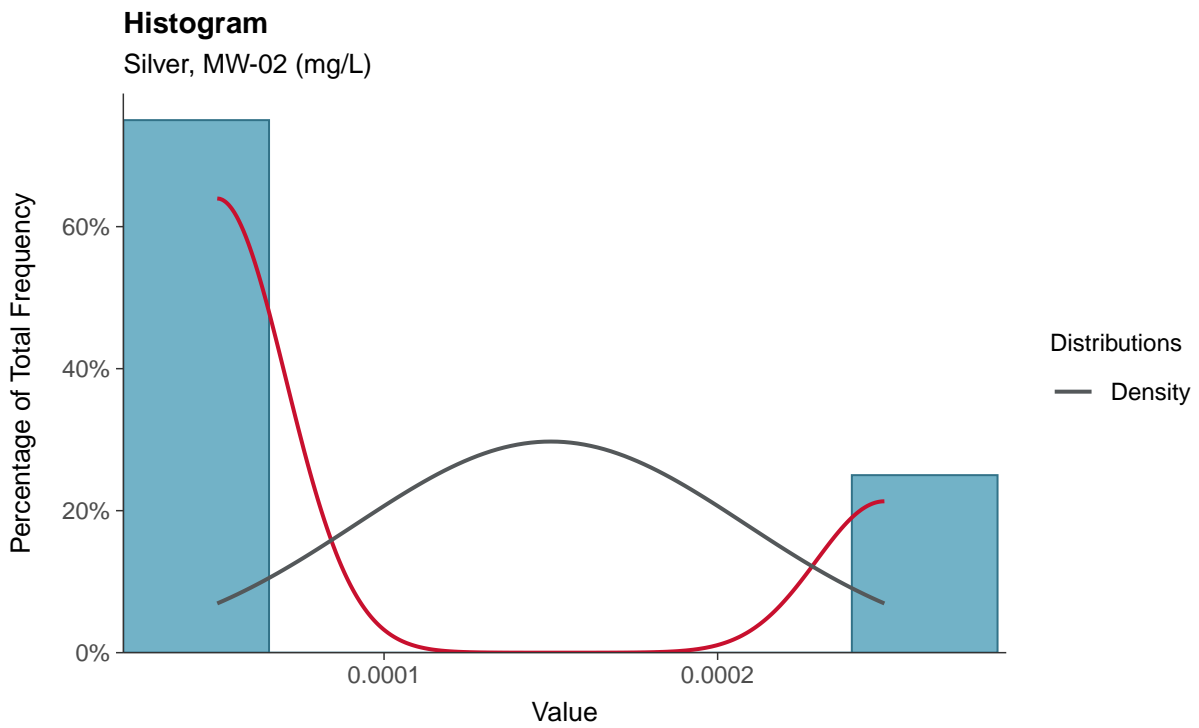
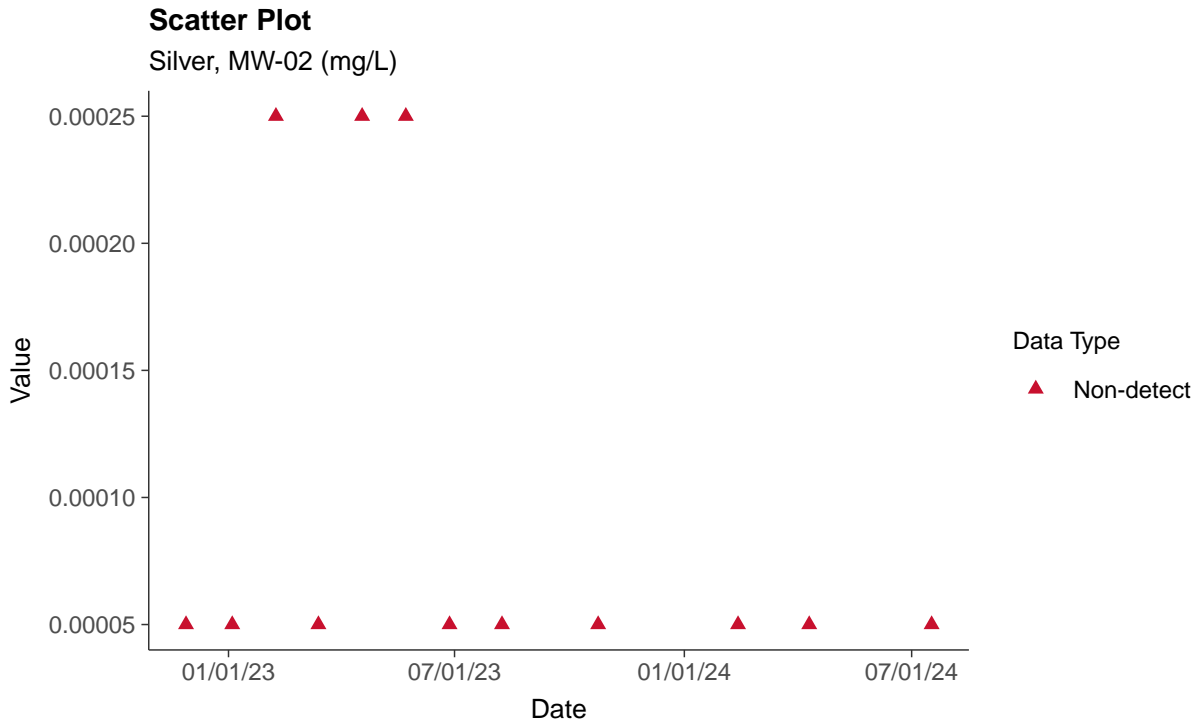
Nickel, MW-02 (mg/L)





### Part 115: Silver, MW-02

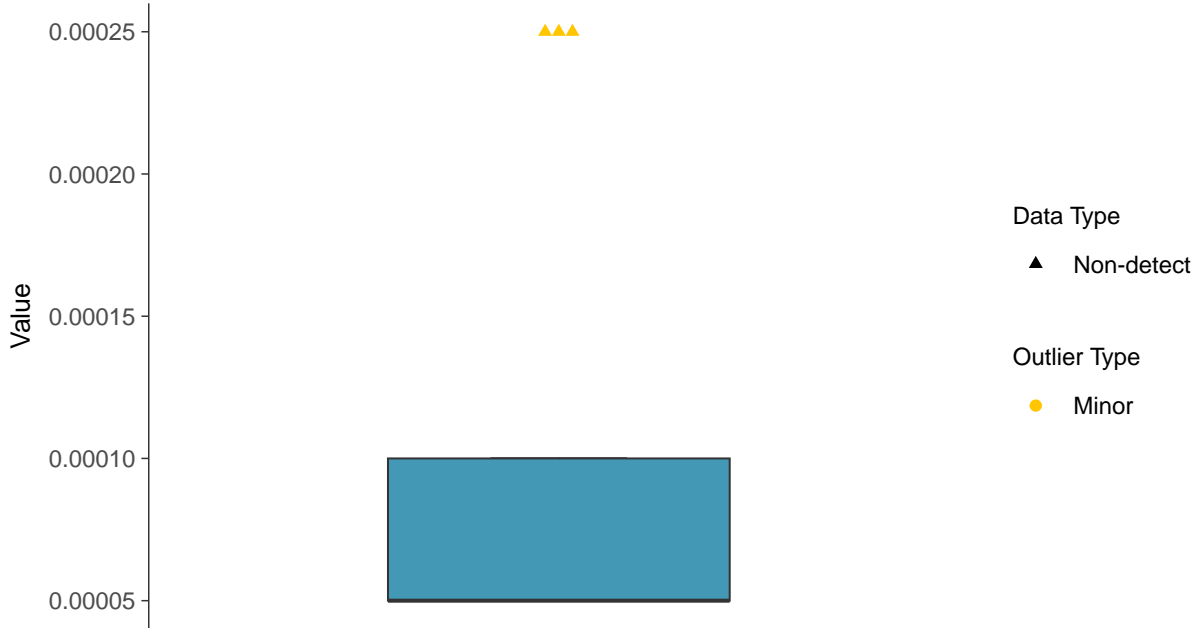
ID: 12\_2\_6\_123





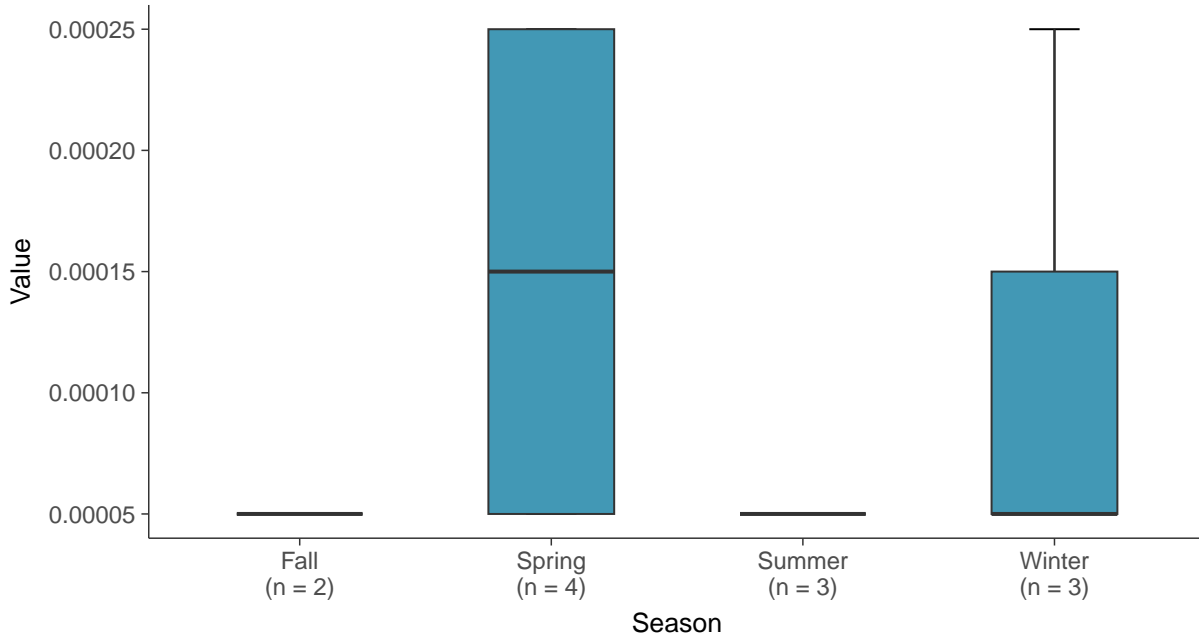
### Boxplot

Silver, MW-02 (mg/L)



### Boxplot by Season

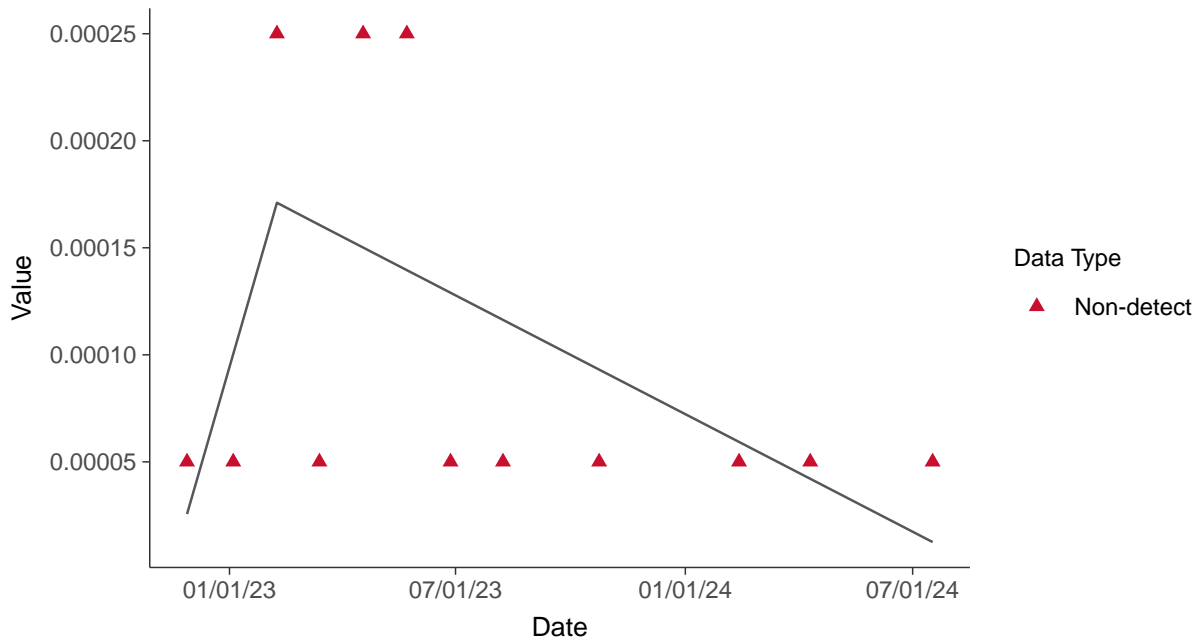
Silver, MW-02 (mg/L)





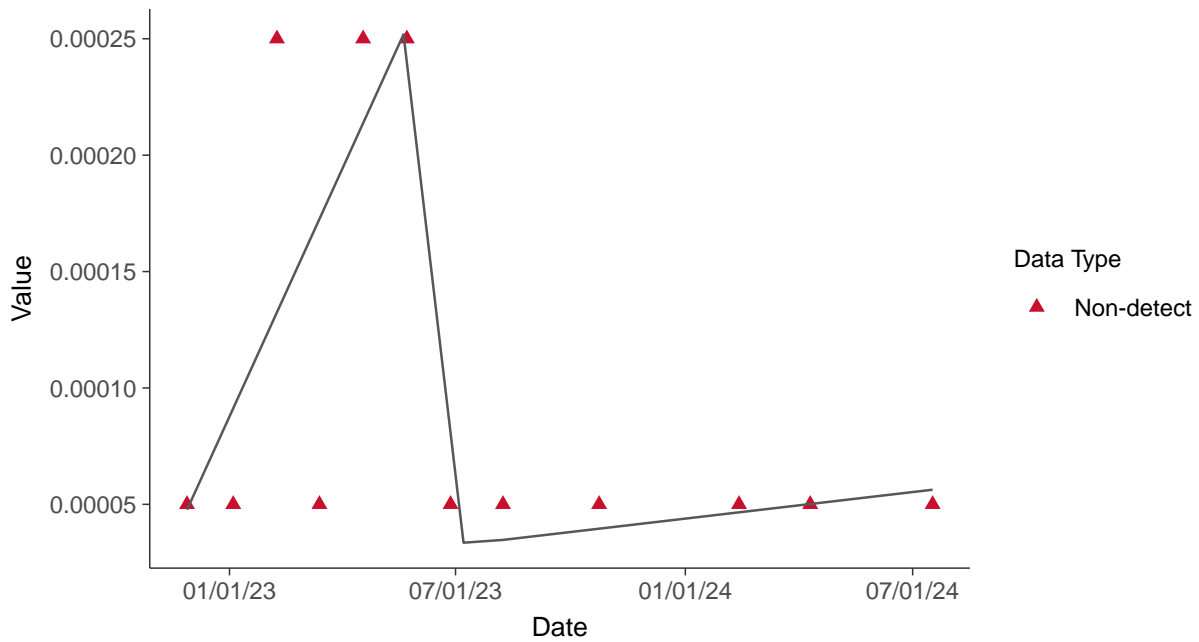
### Trend Regression: Piecewise Linear-Linear

Silver, MW-02 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-02 (mg/L)



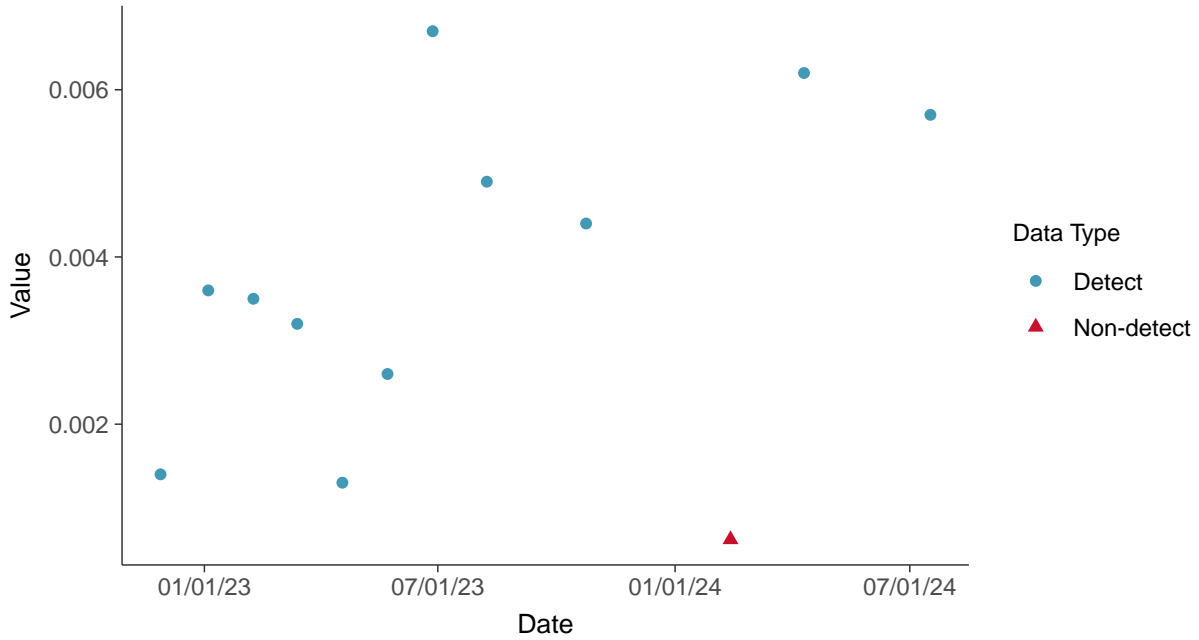


### Part 115: Vanadium, MW-02

ID: 12\_2\_6\_129

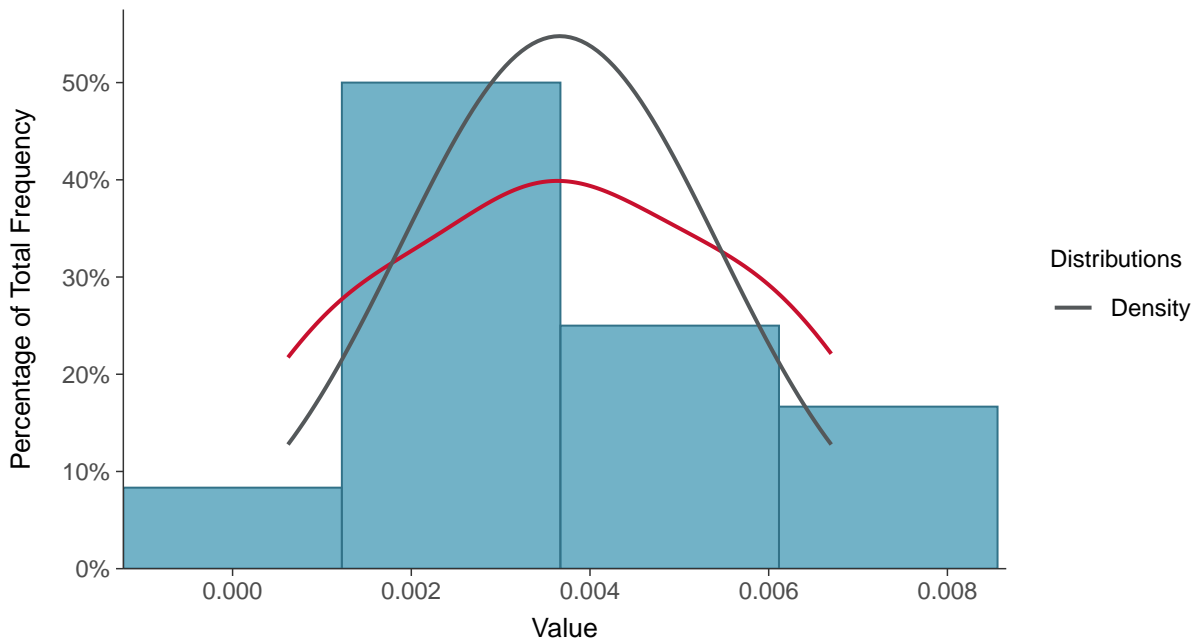
#### Scatter Plot

Vanadium, MW-02 (mg/L)



#### Histogram

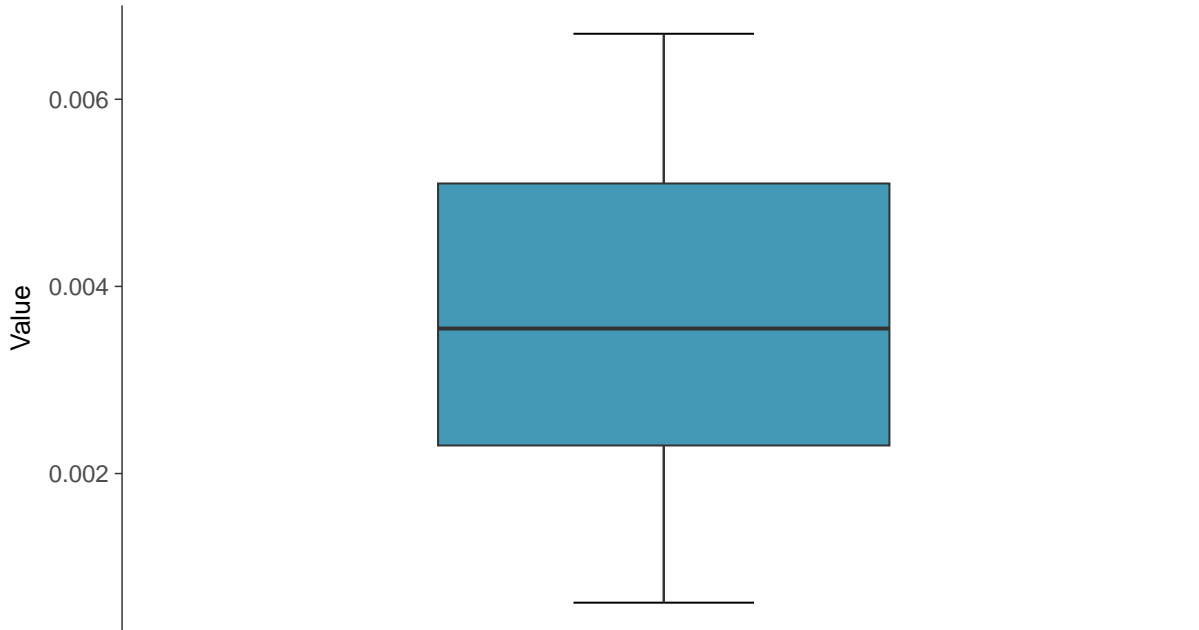
Vanadium, MW-02 (mg/L)





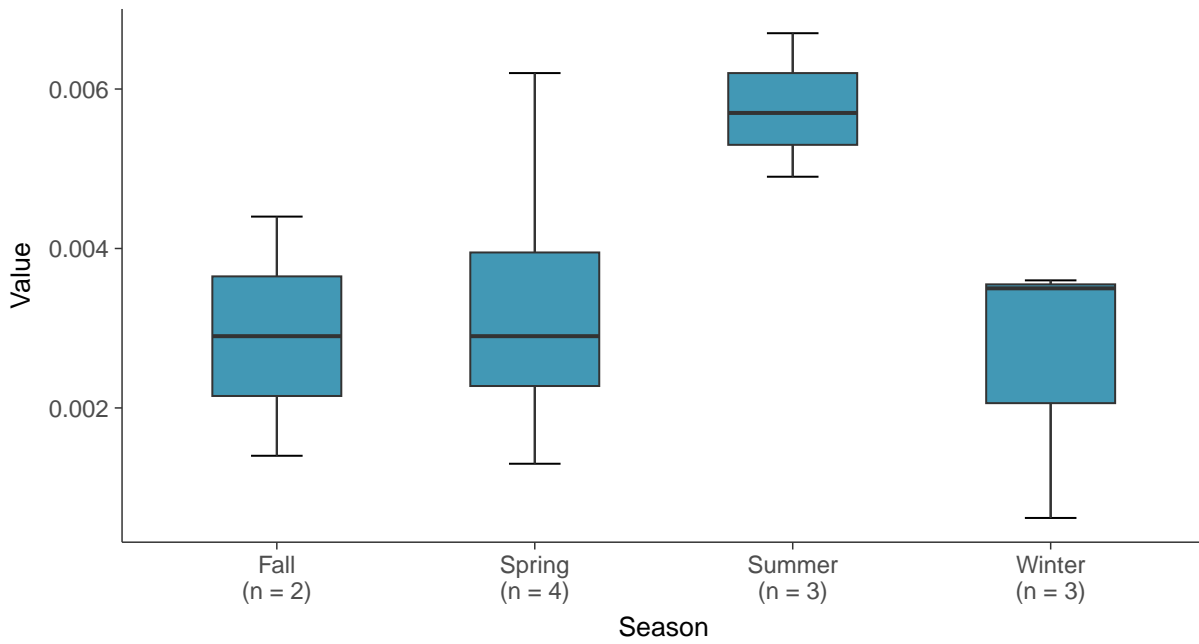
### Boxplot

Vanadium, MW-02 (mg/L)



### Boxplot by Season

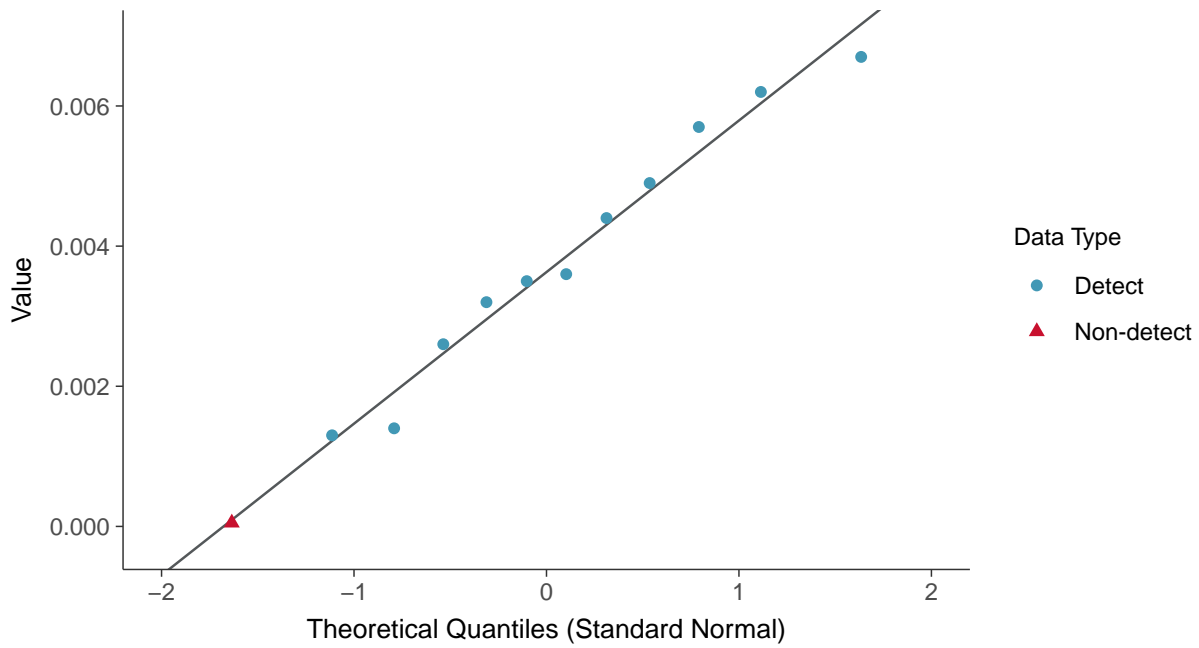
Vanadium, MW-02 (mg/L)





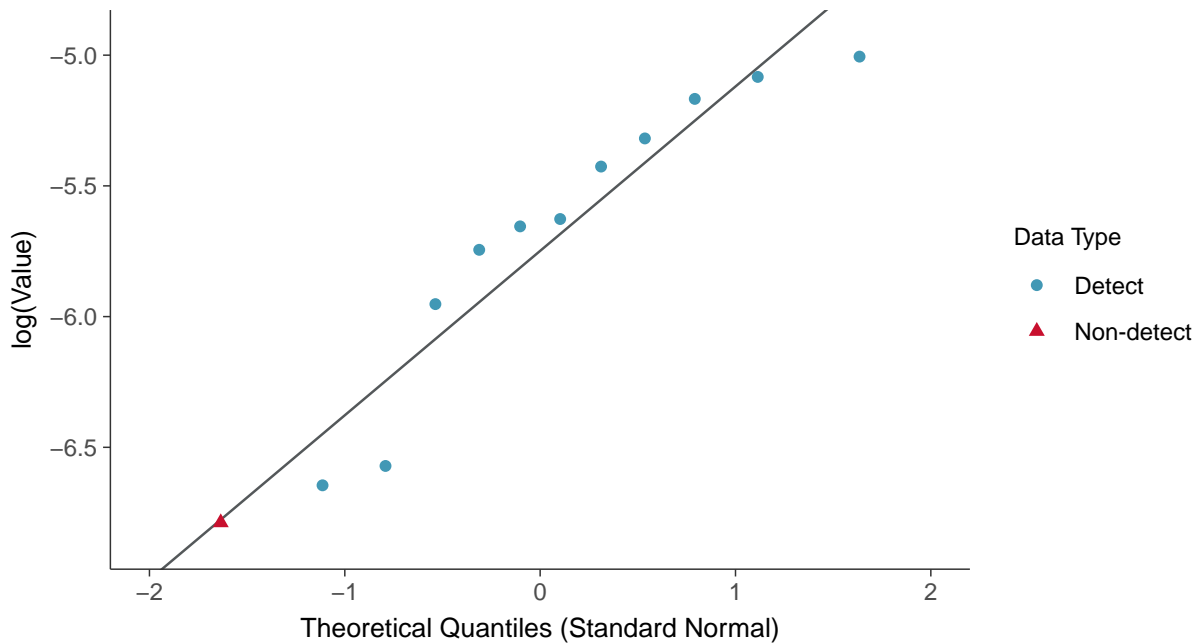
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-02 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

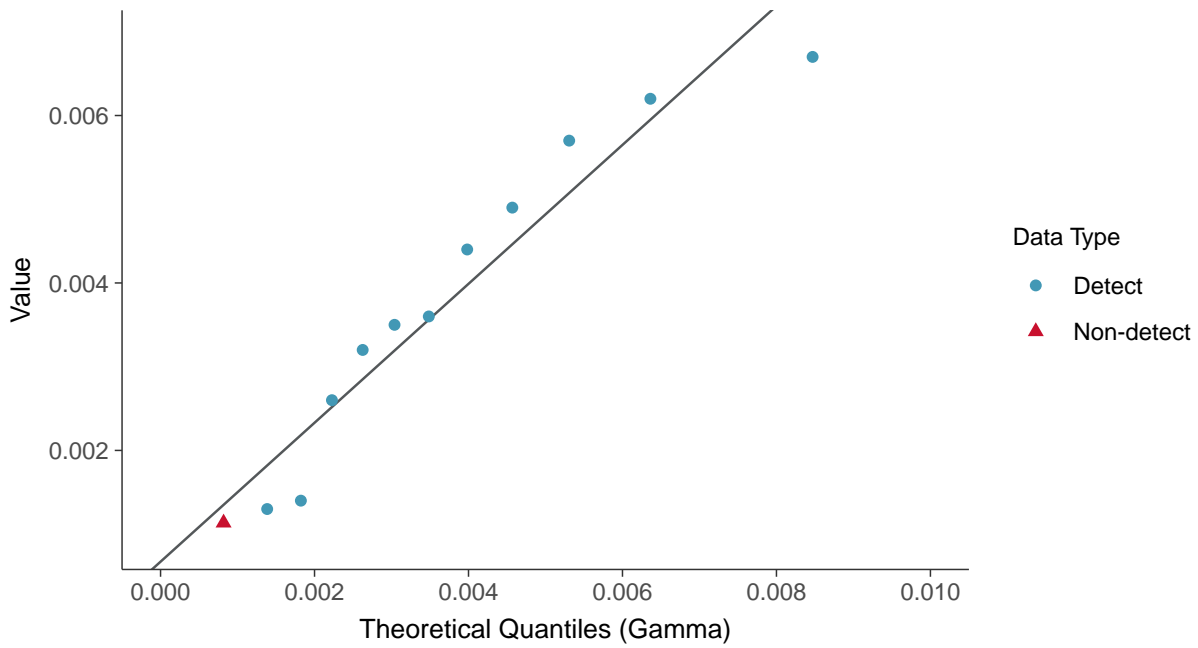
Vanadium, MW-02 (mg/L)





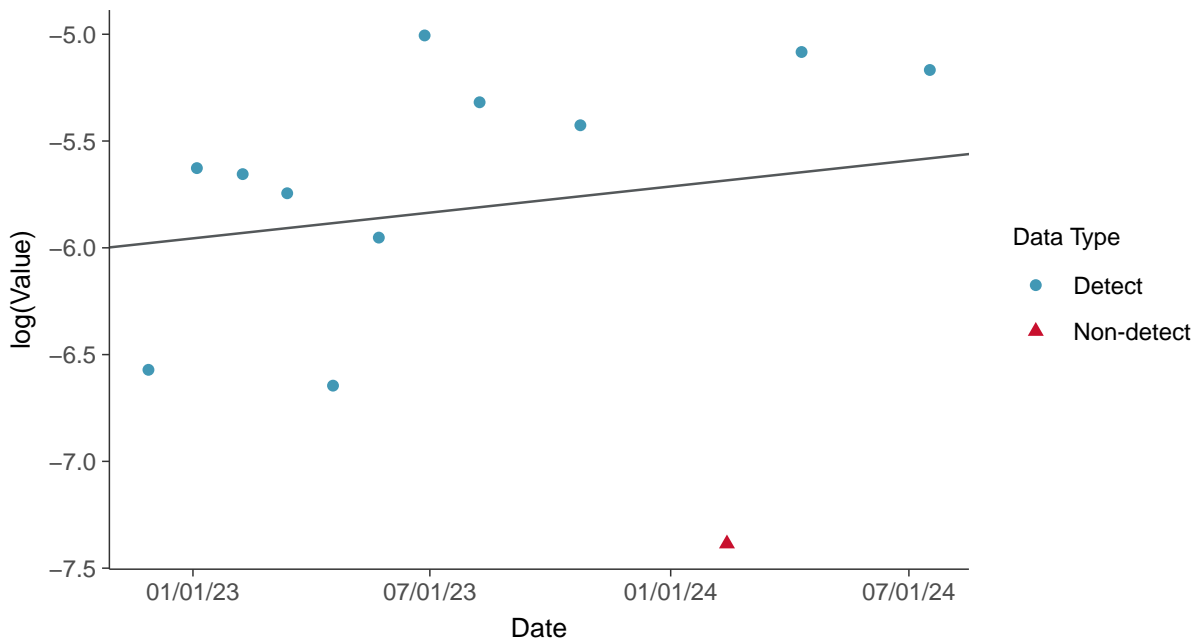
### Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-02 (mg/L)



### Trend Regression: Lognormal MLE

Vanadium, MW-02 (mg/L)

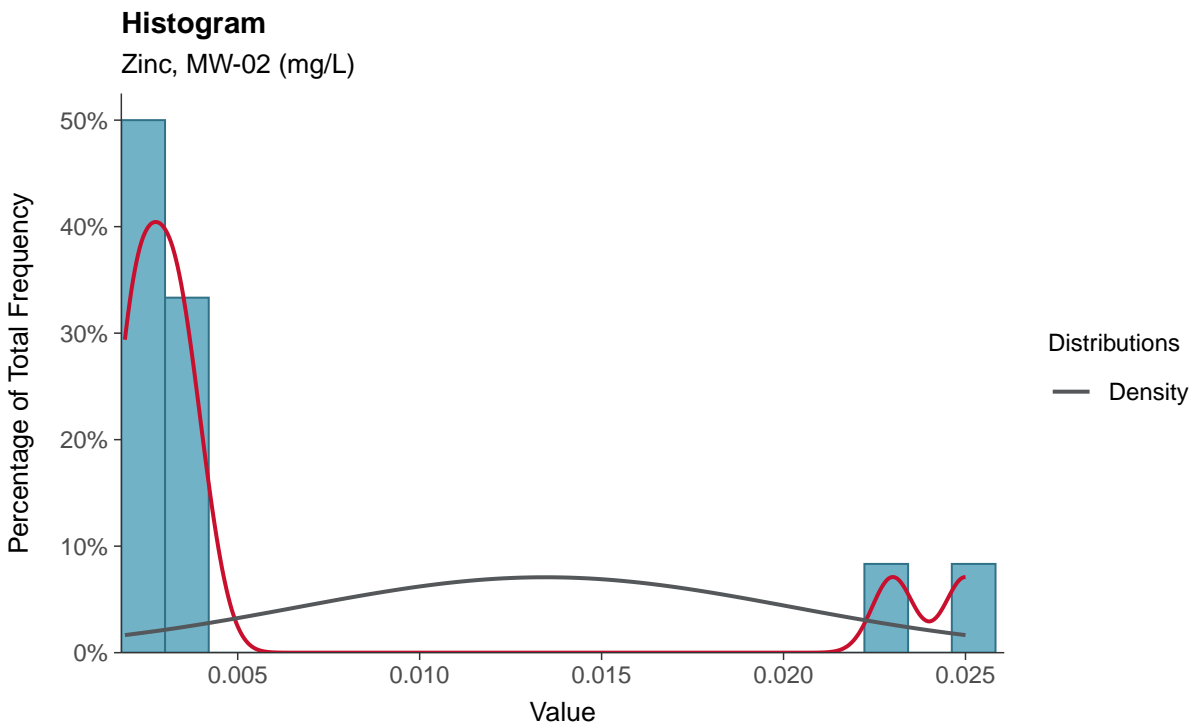
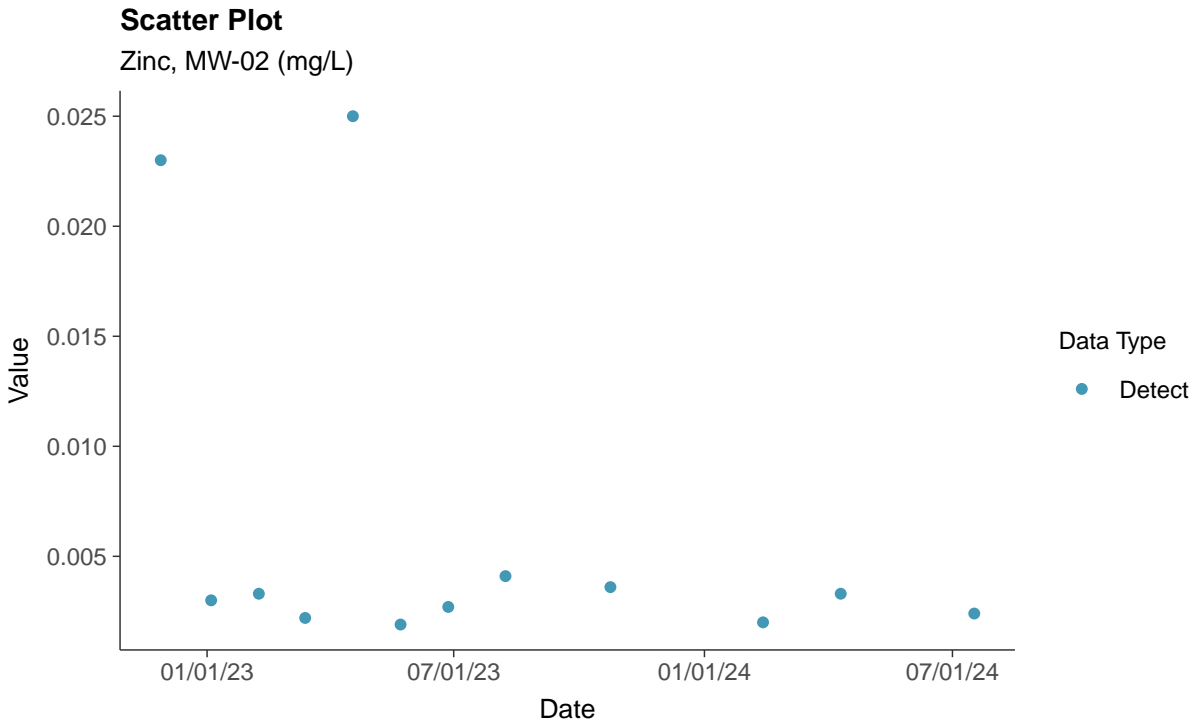






### Part 115: Zinc, MW-02

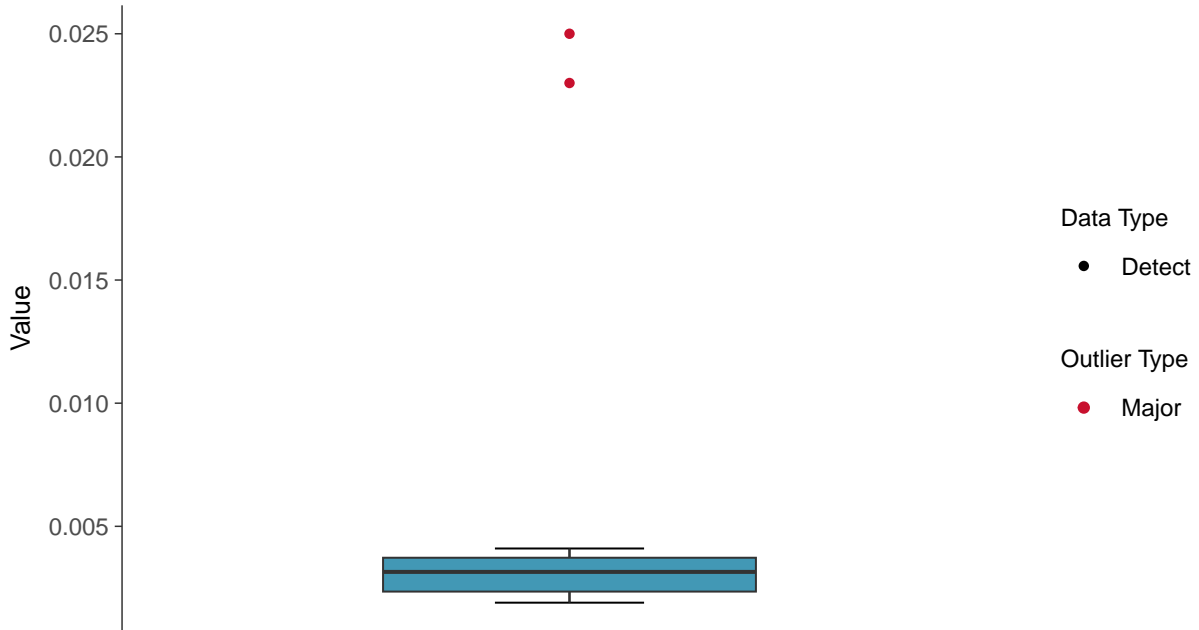
ID: 12\_2\_6\_130





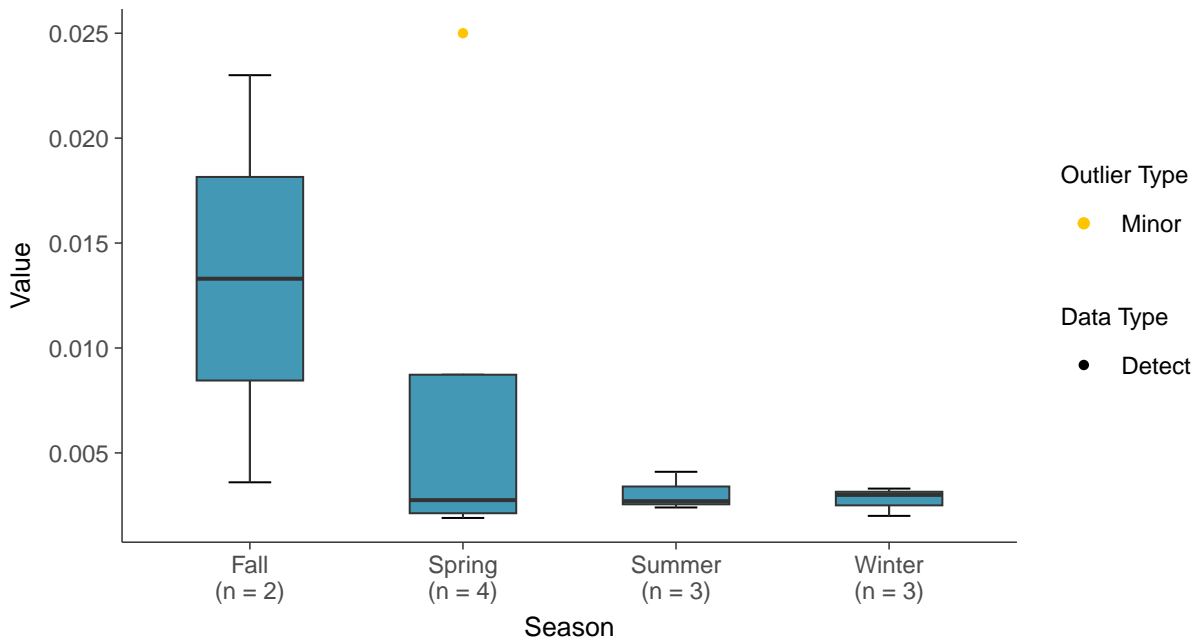
### Boxplot

Zinc, MW-02 (mg/L)



### Boxplot by Season

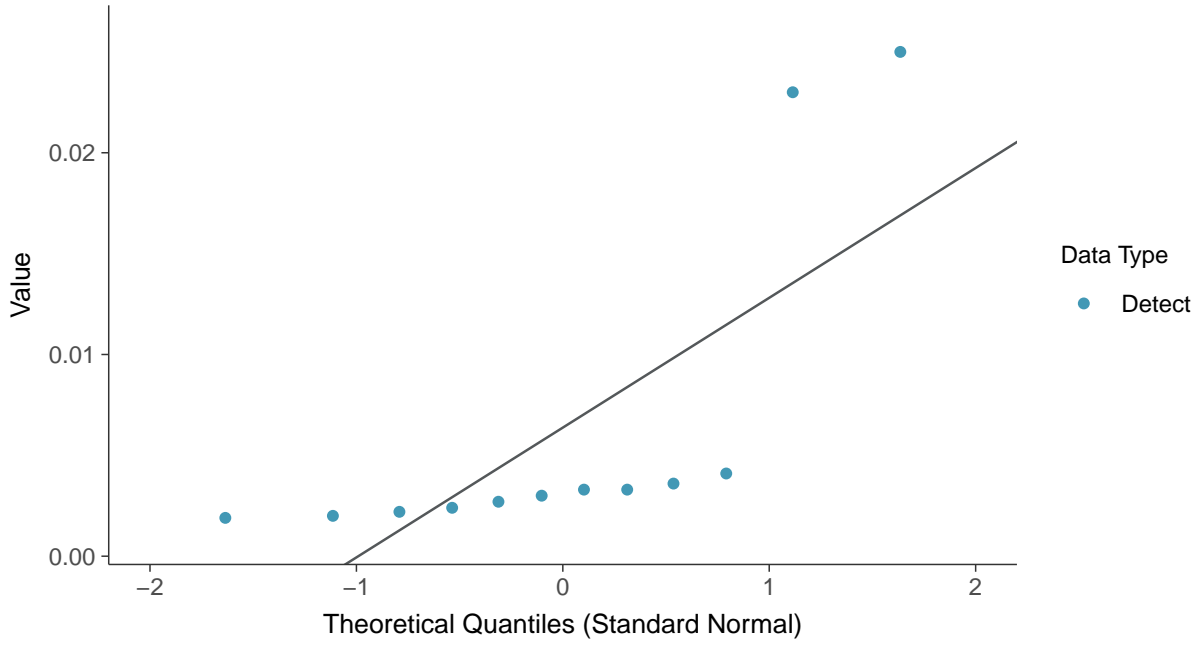
Zinc, MW-02 (mg/L)





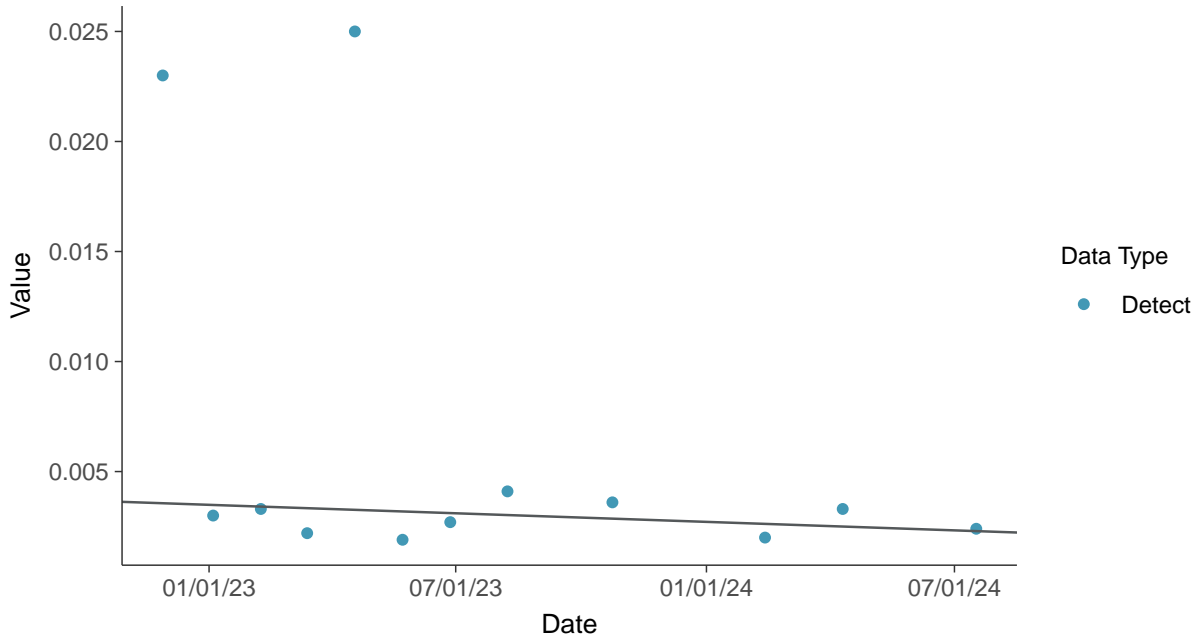
### Normal Q-Q plot

Zinc, MW-02 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

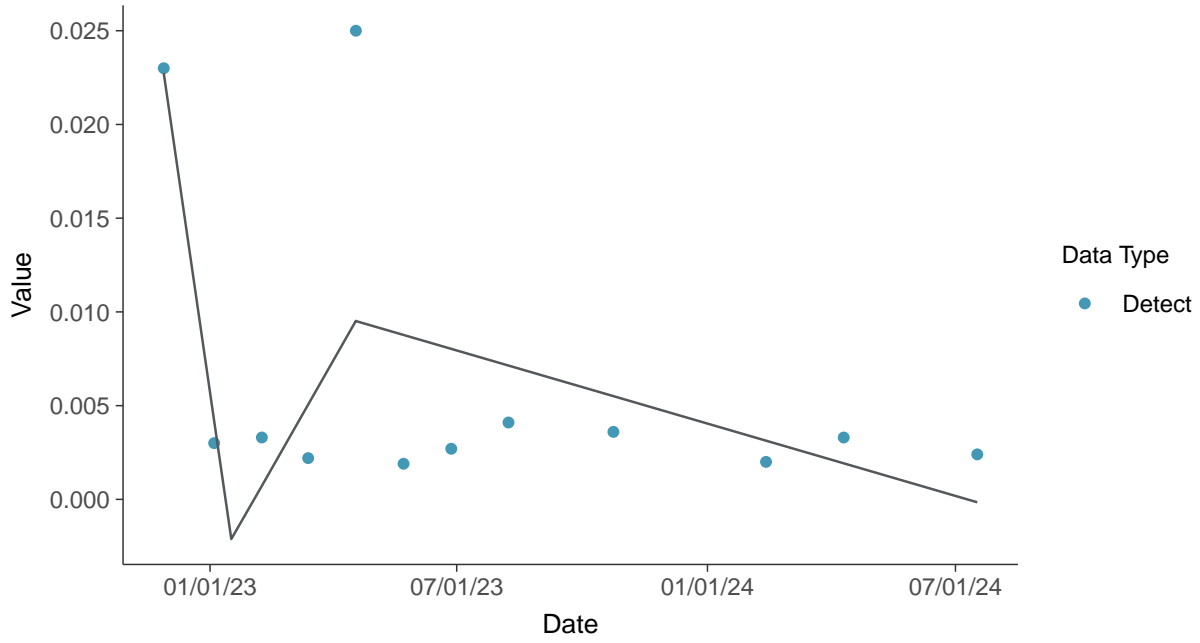
Zinc, MW-02 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-02 (mg/L)



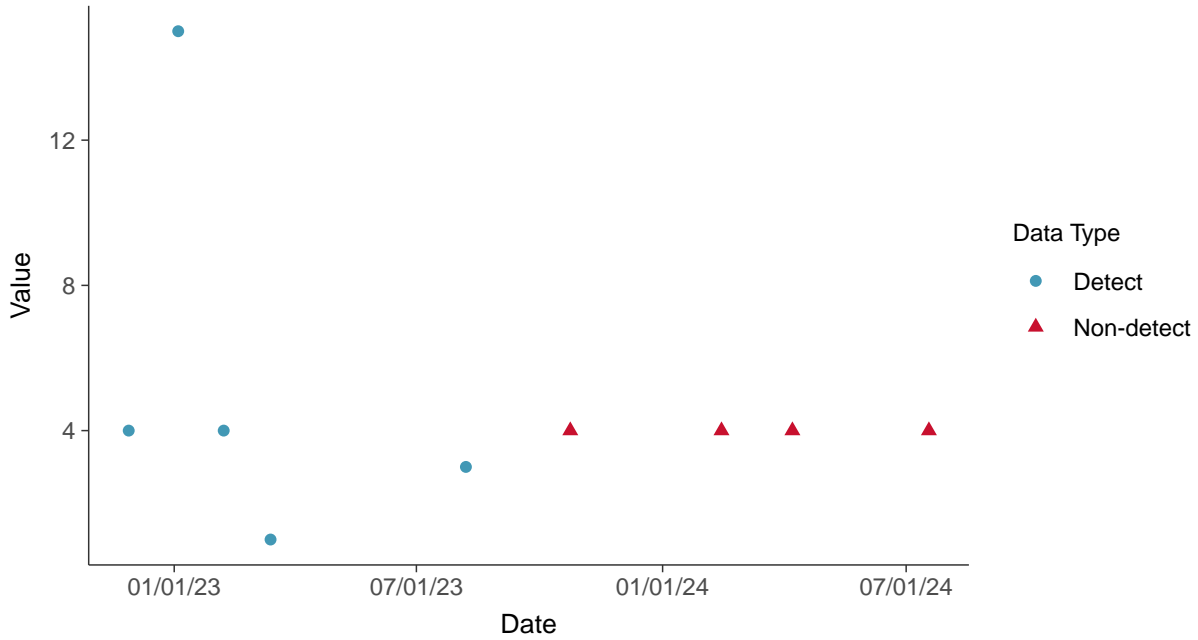


### Additional Parameters: Total Suspended Solids, MW-03

ID: 13\_2\_3\_127

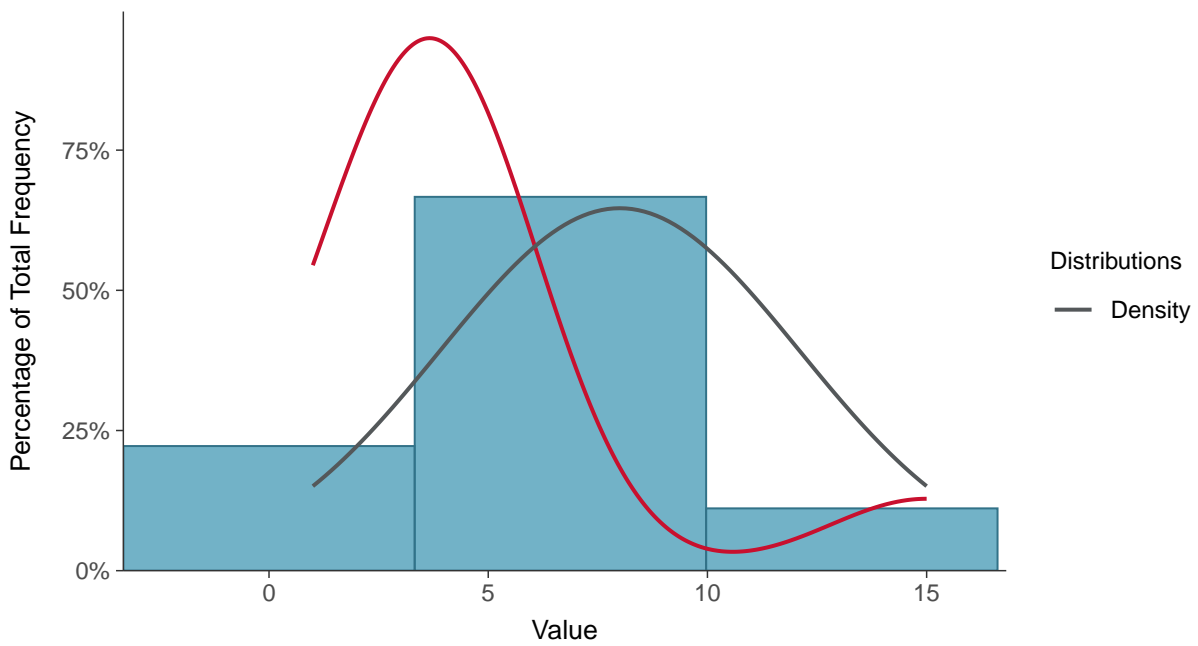
#### Scatter Plot

Total Suspended Solids, MW-03 (mg/L)



#### Histogram

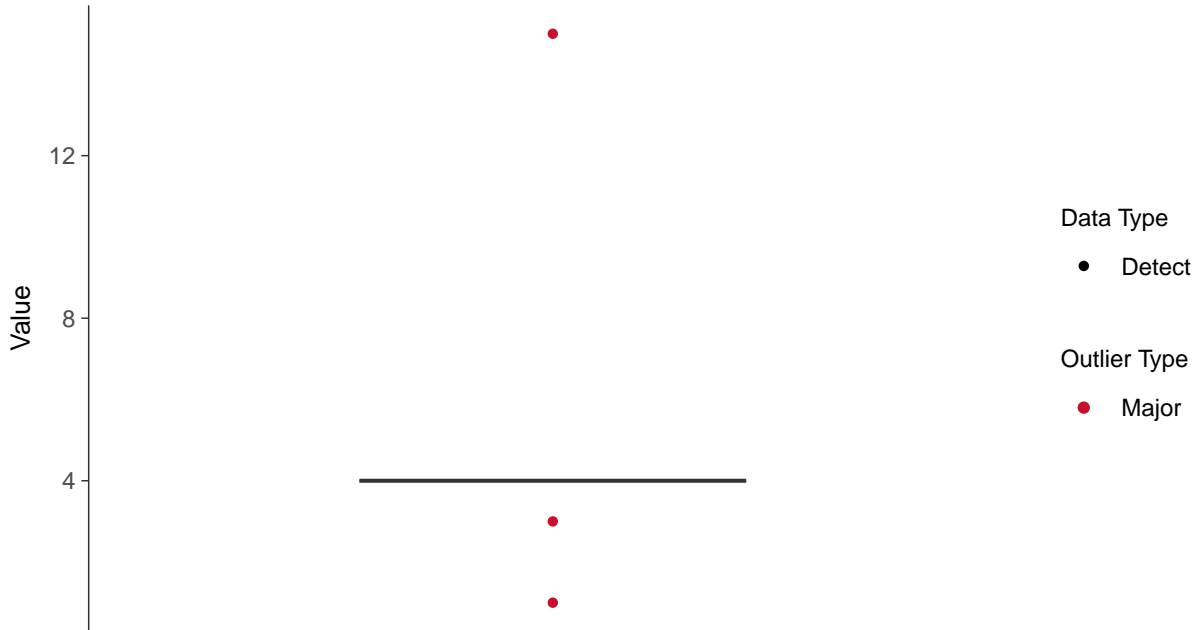
Total Suspended Solids, MW-03 (mg/L)





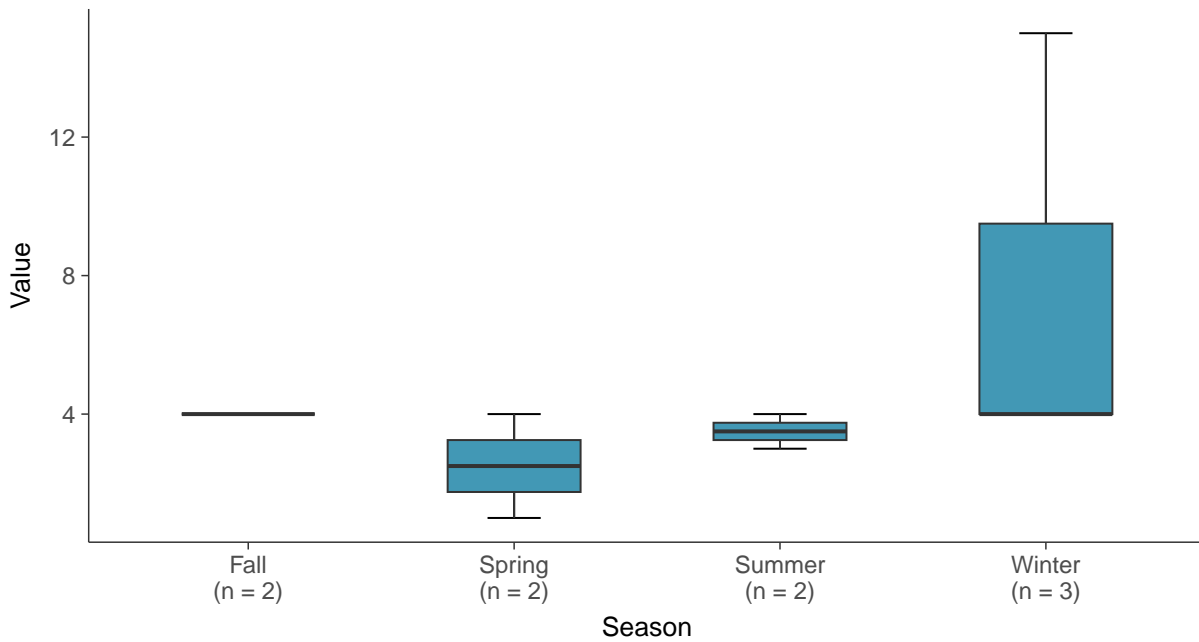
### Boxplot

Total Suspended Solids, MW-03 (mg/L)



### Boxplot by Season

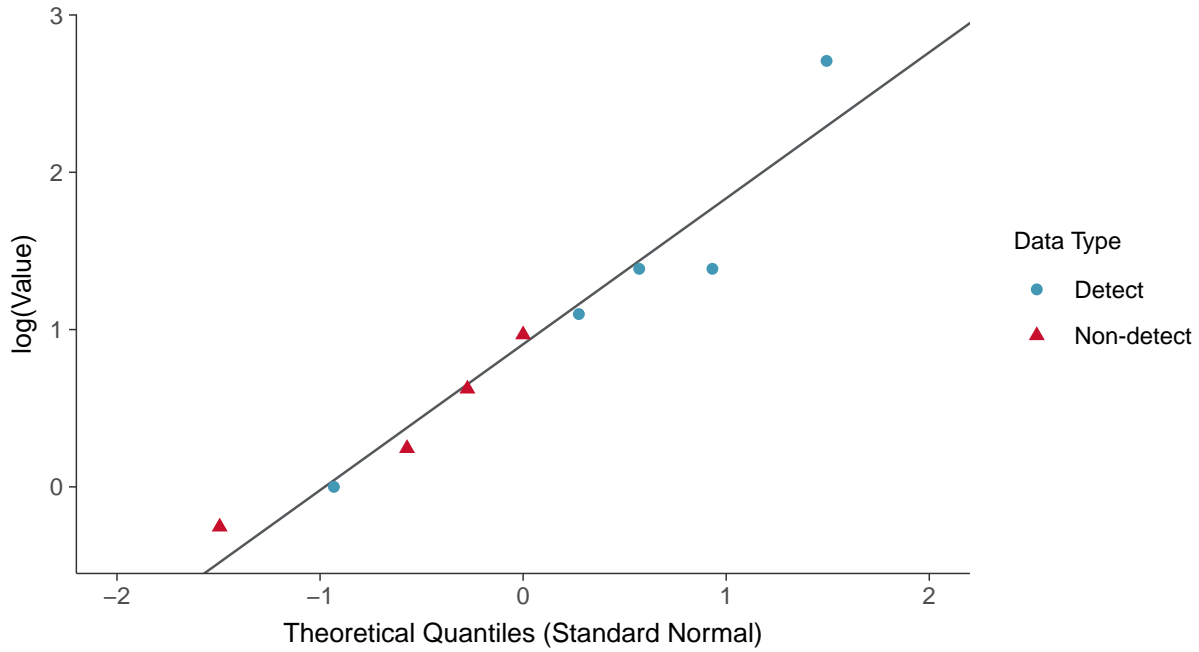
Total Suspended Solids, MW-03 (mg/L)





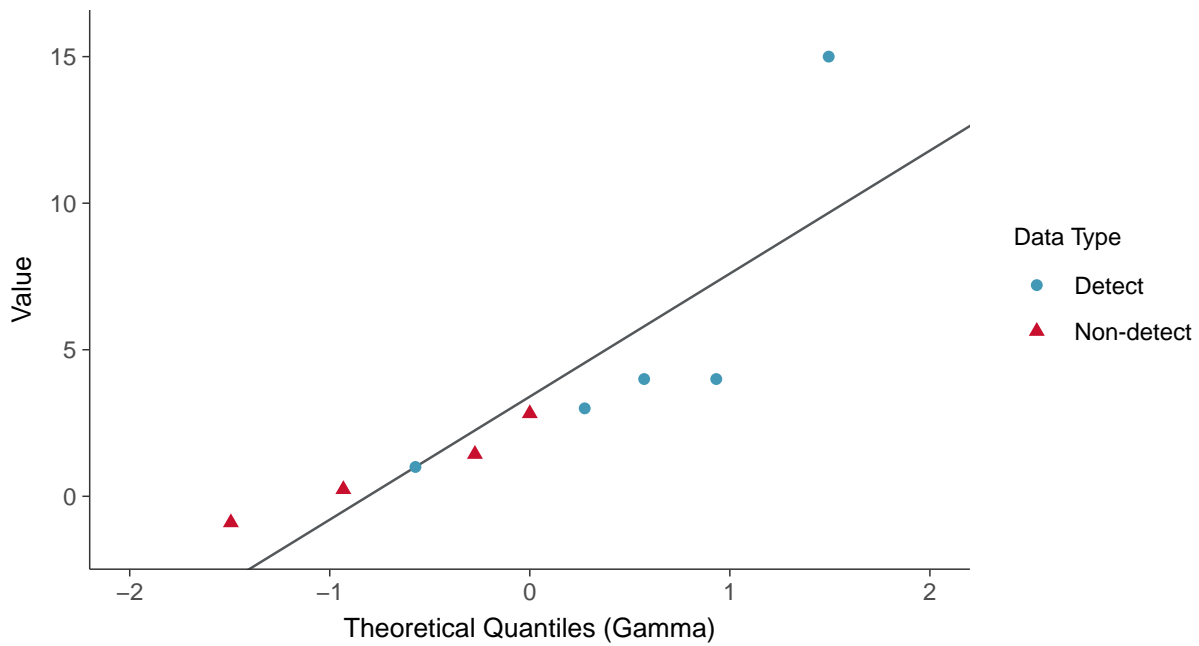
### Lognormal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-03 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

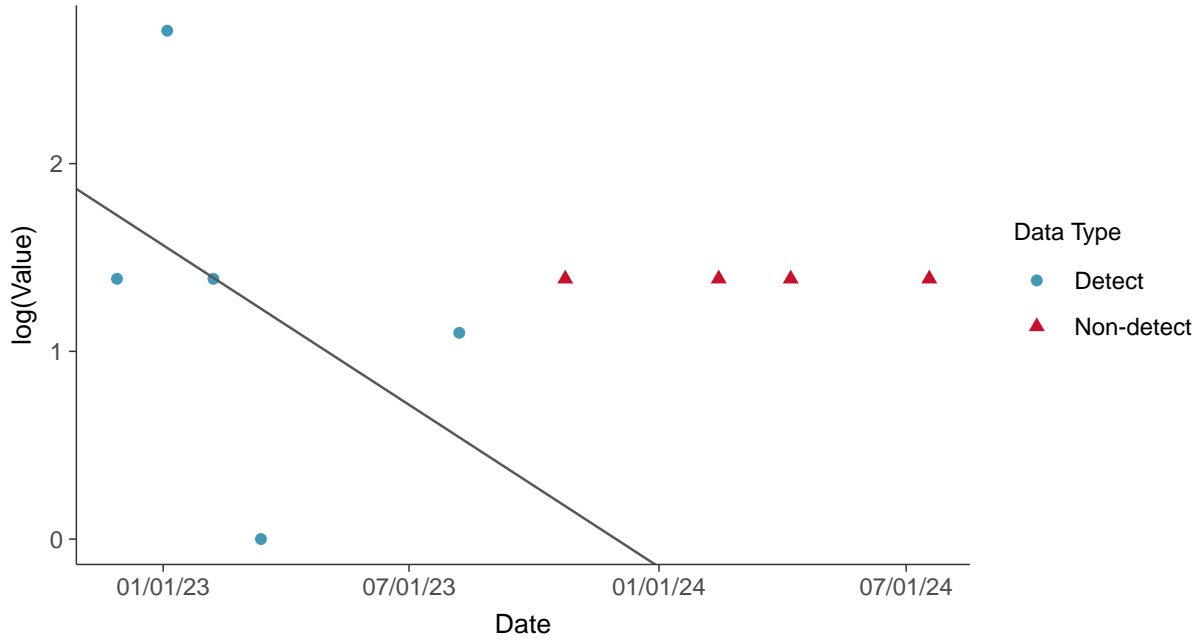
Total Suspended Solids, MW-03 (mg/L)





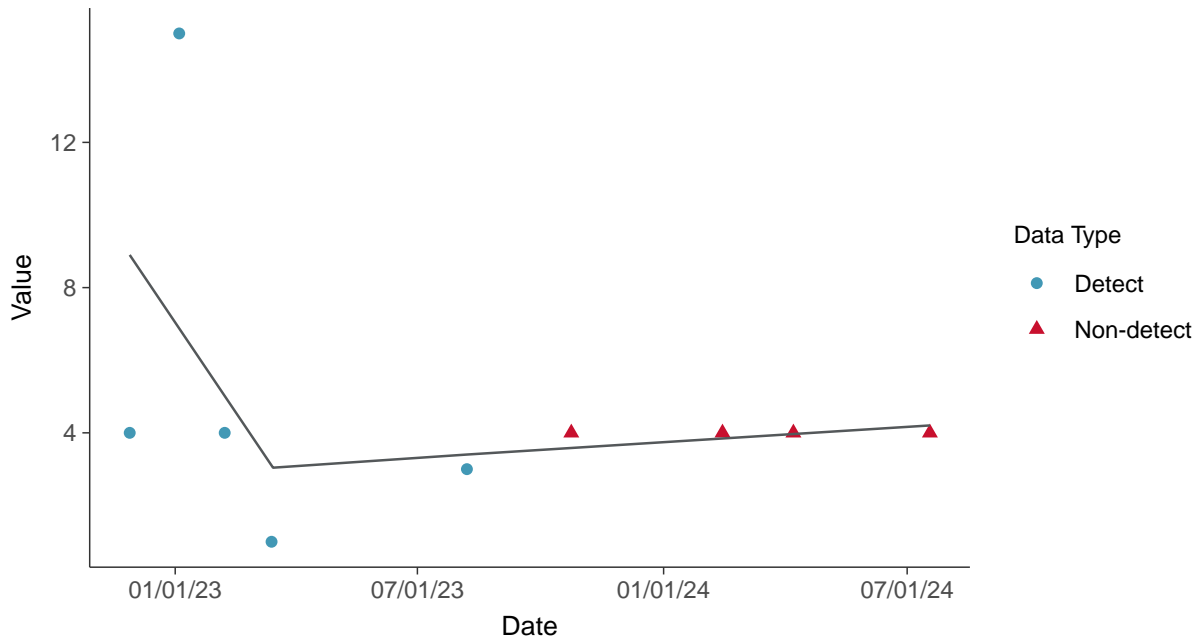
### Trend Regression: Lognormal MLE

Total Suspended Solids, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-03 (mg/L)

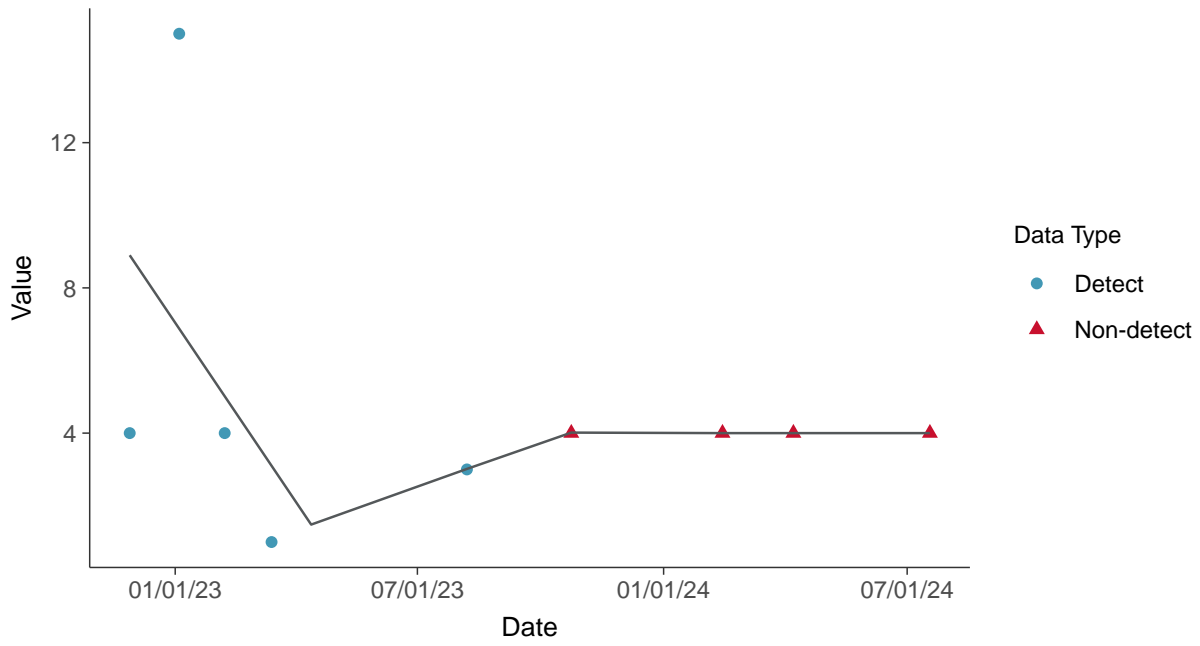






### Trend Regression: Piecewise Linear-Linear-Linear

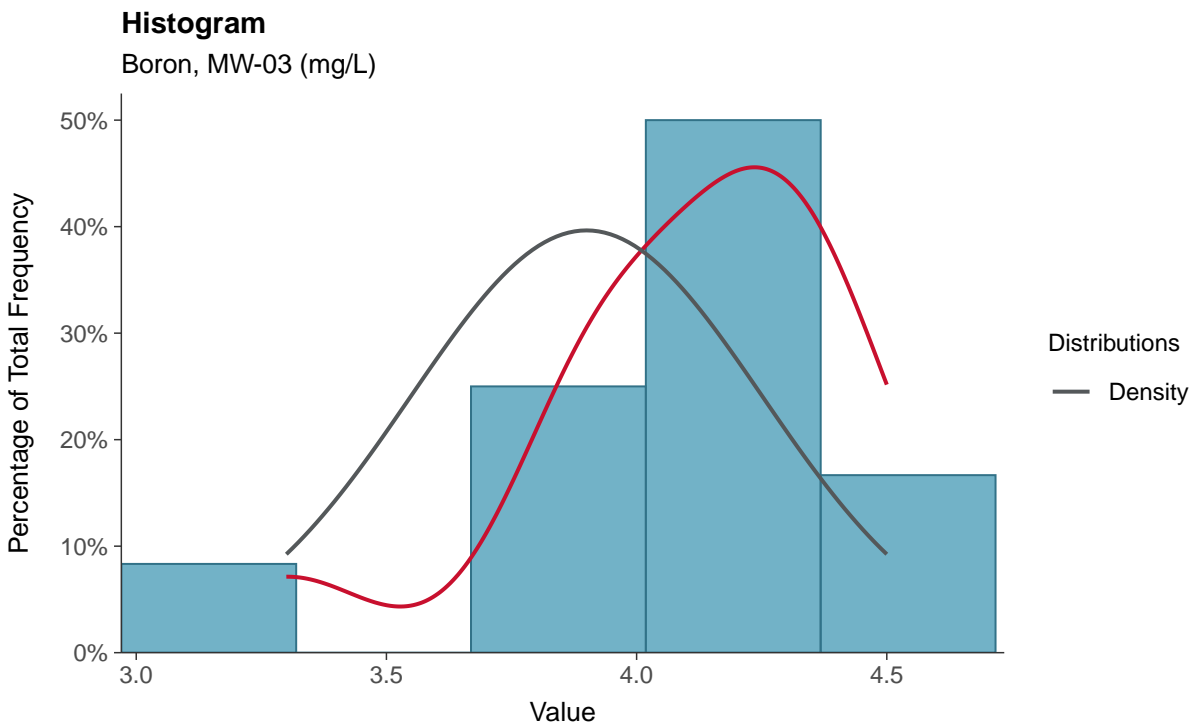
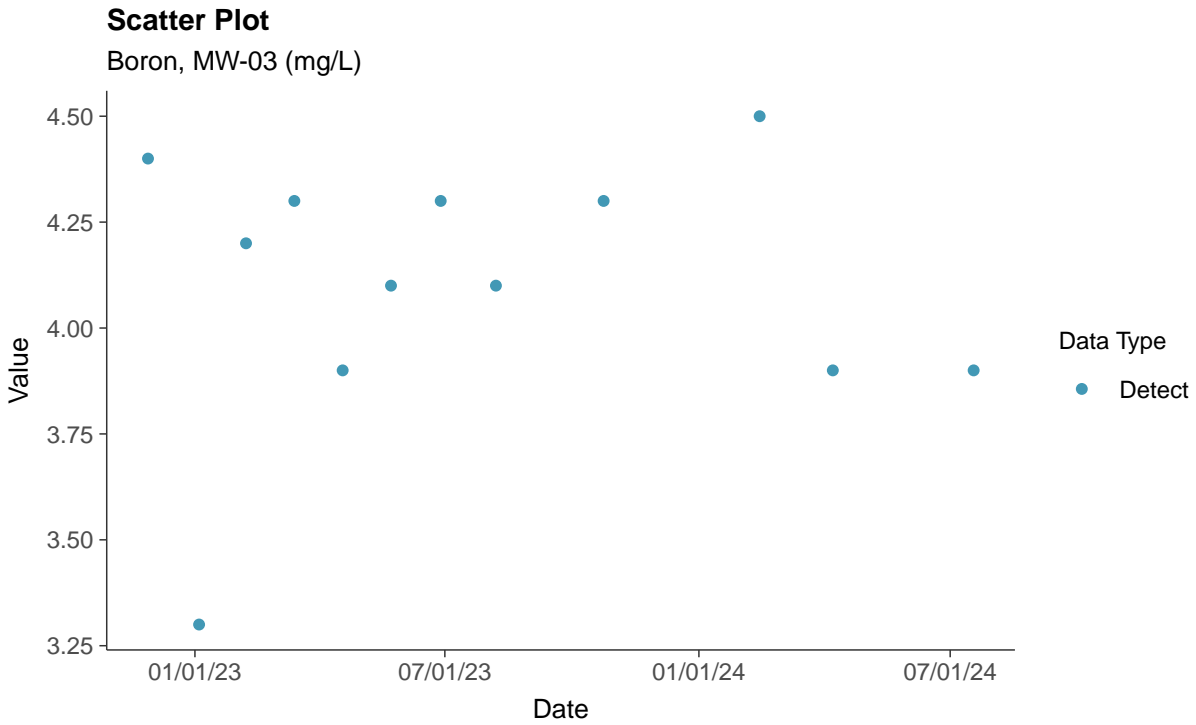
Total Suspended Solids, MW-03 (mg/L)





### Appendix III: Boron, MW-03

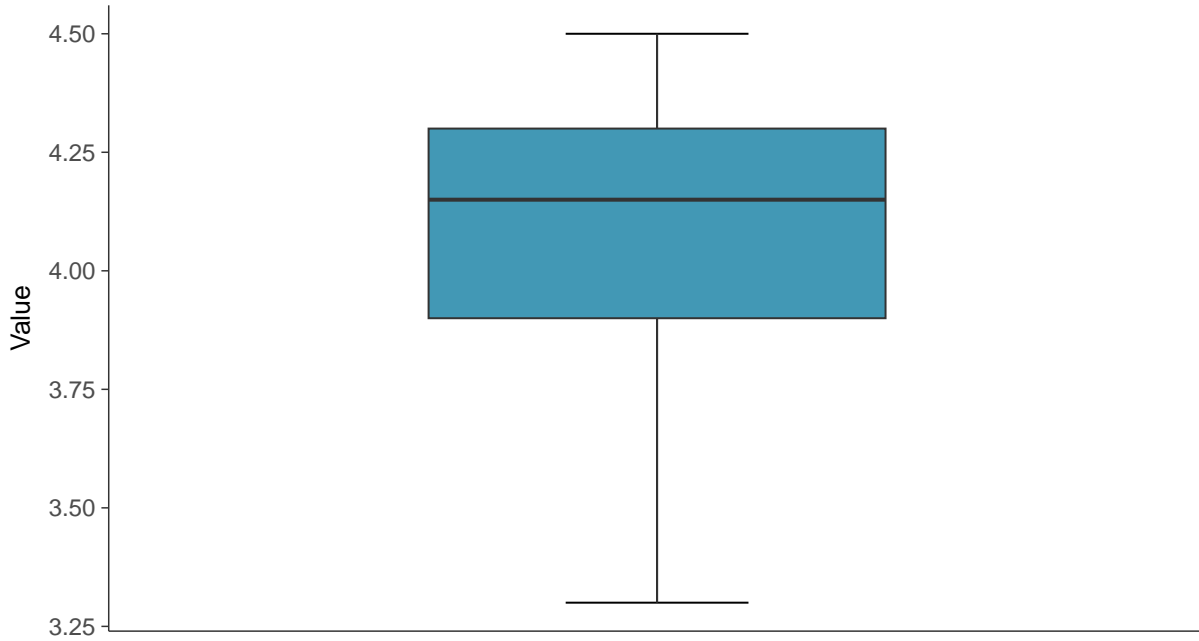
ID: 13\_2\_4\_105





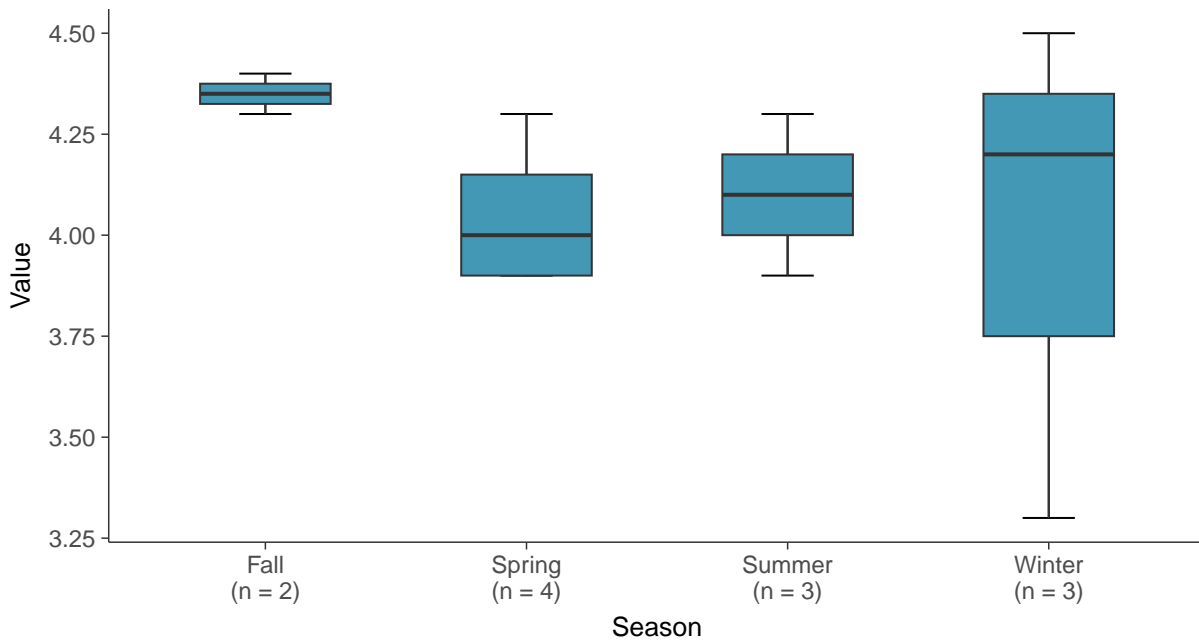
### Boxplot

Boron, MW-03 (mg/L)



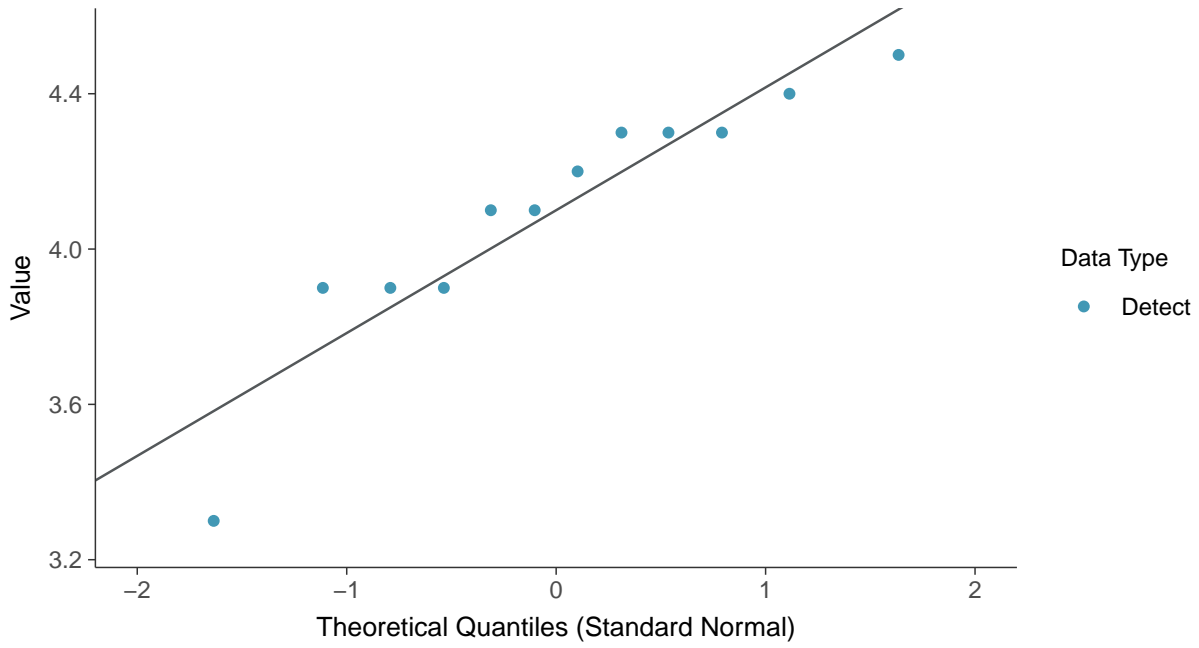
### Boxplot by Season

Boron, MW-03 (mg/L)

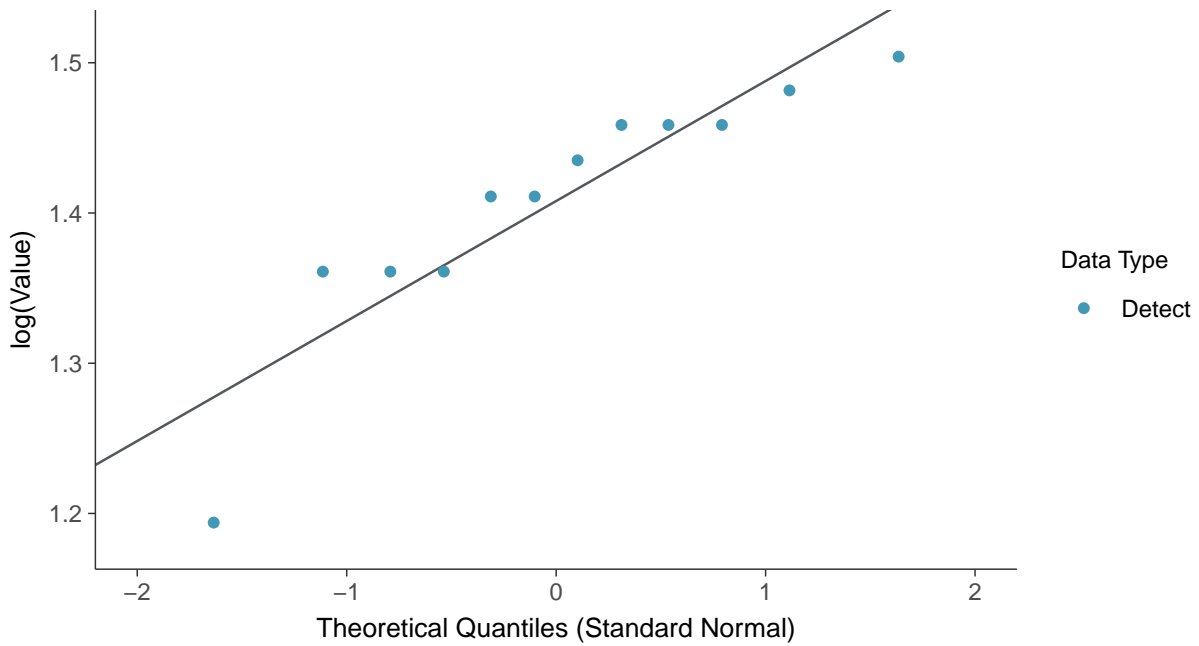




**Normal Q-Q plot**  
Boron, MW-03 (mg/L)



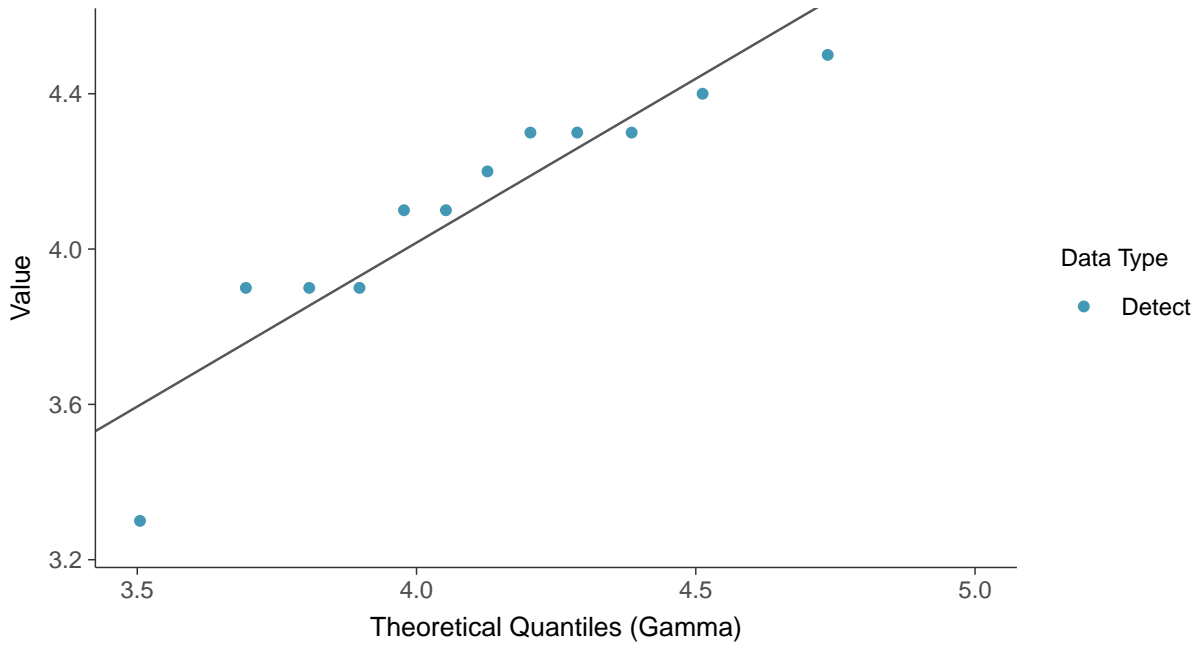
**Lognormal Q-Q plot**  
Boron, MW-03 (mg/L)





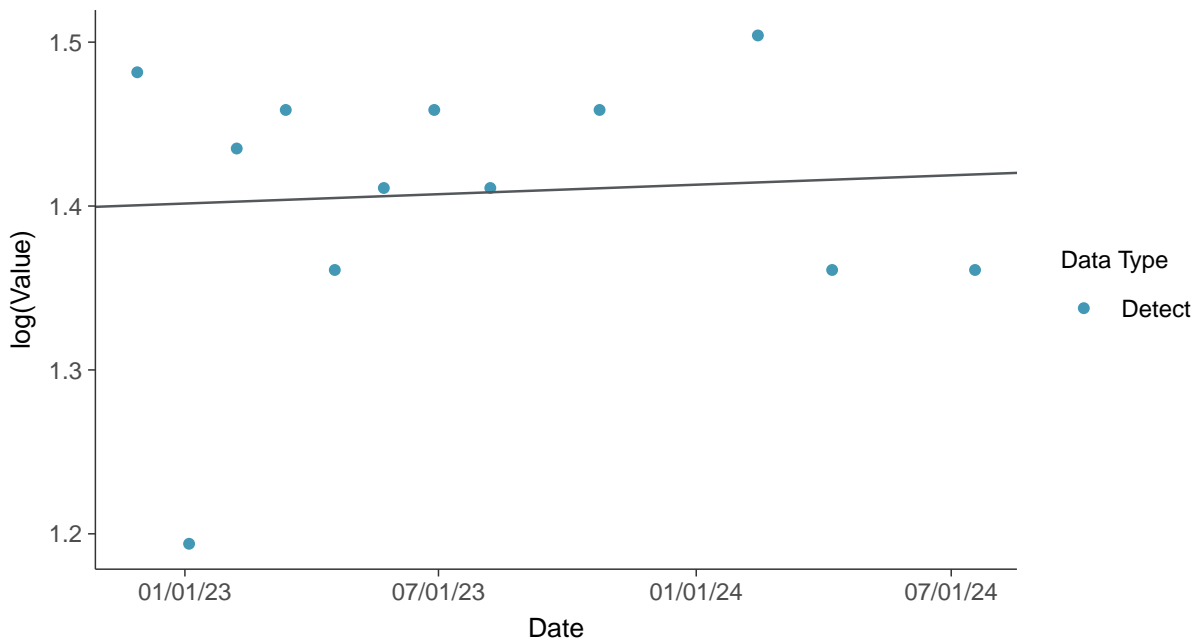
### Gamma Q-Q plot

Boron, MW-03 (mg/L)



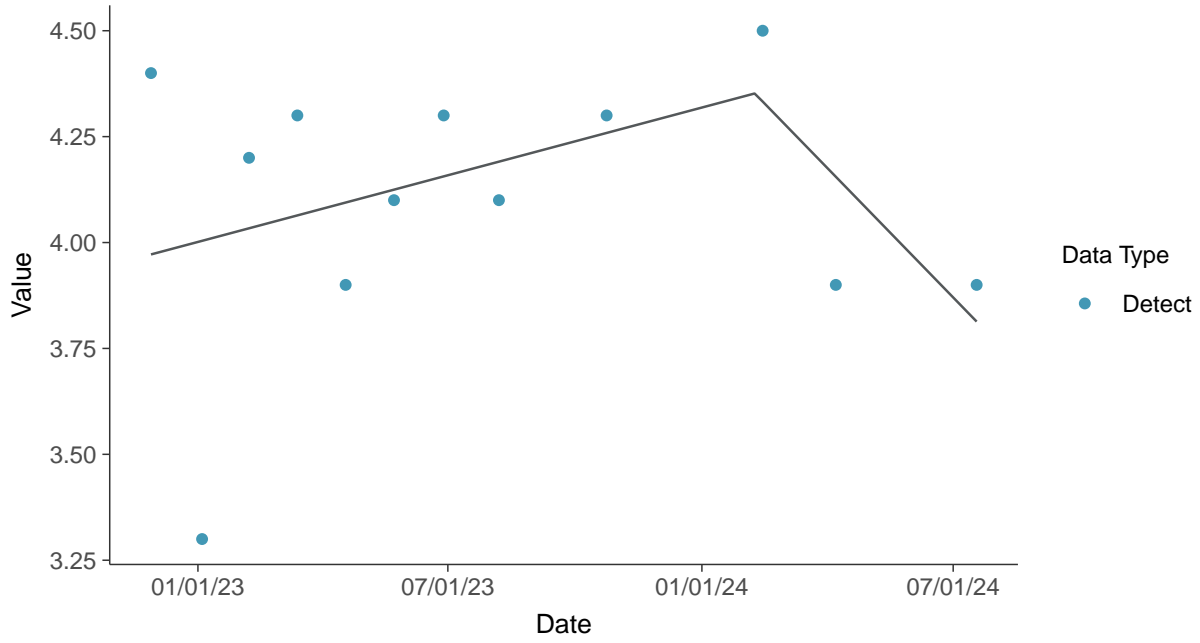
### Trend Regression: Lognormal MLE

Boron, MW-03 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Boron, MW-03 (mg/L)



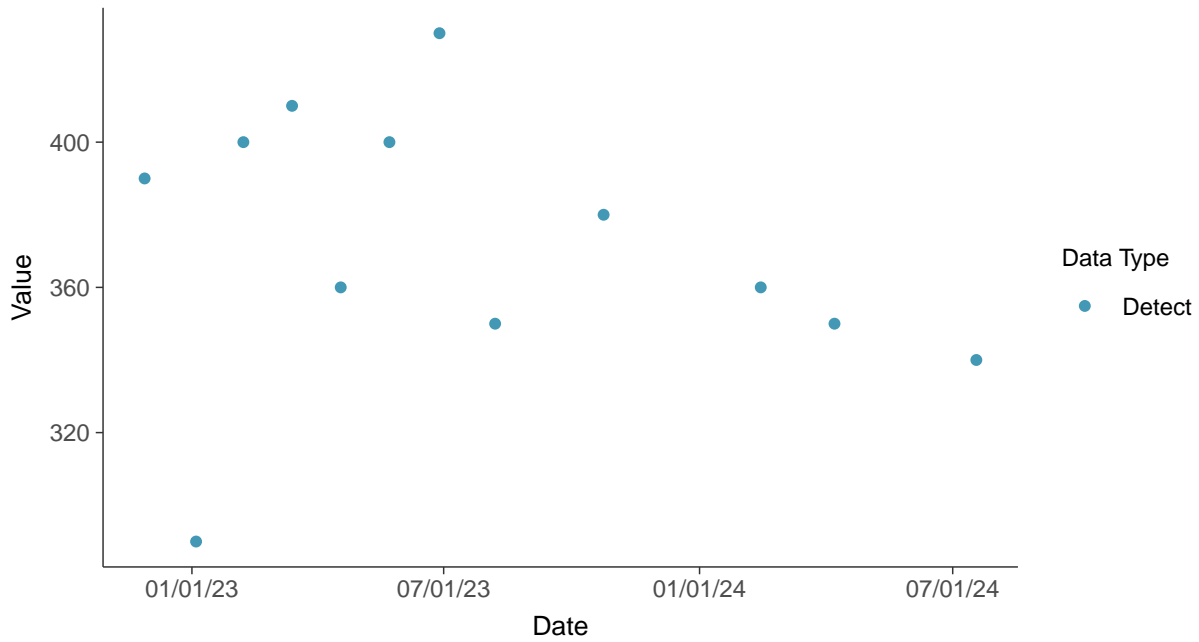


### Appendix III: Calcium, MW-03

ID: 13\_2\_4\_107

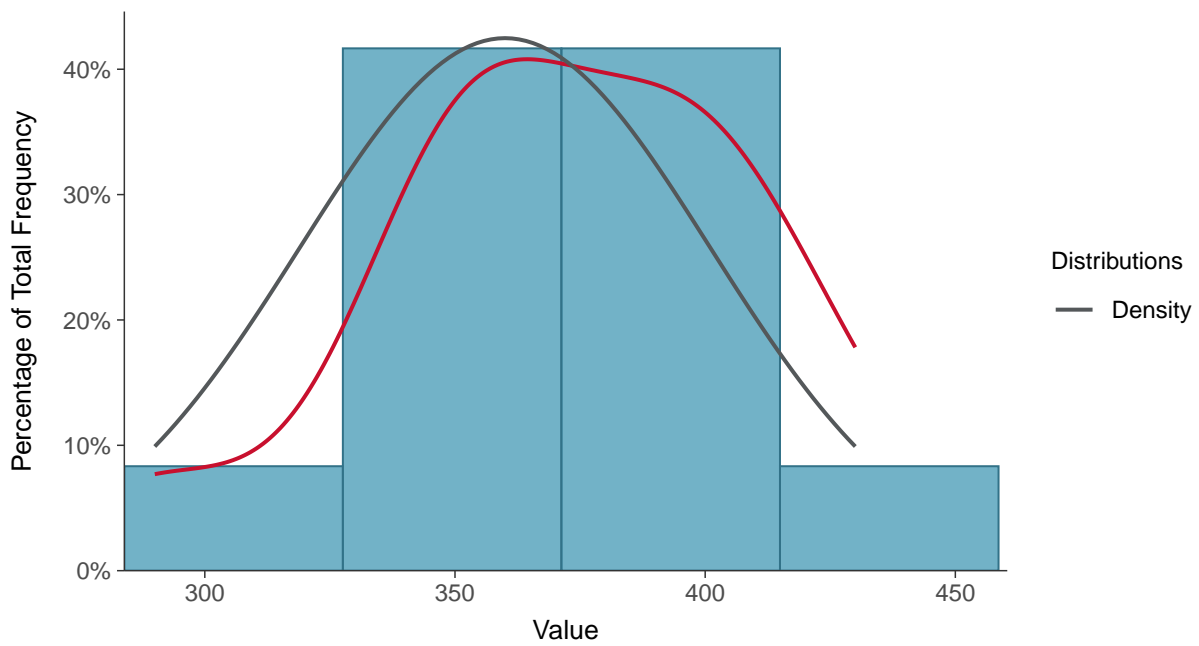
#### Scatter Plot

Calcium, MW-03 (mg/L)



#### Histogram

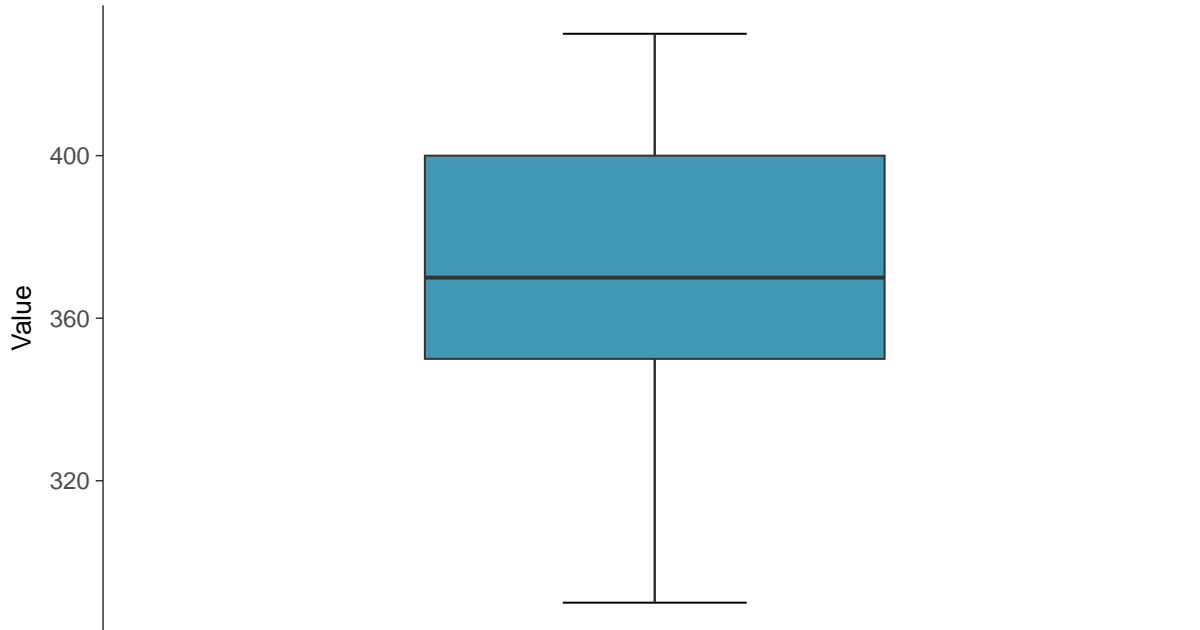
Calcium, MW-03 (mg/L)





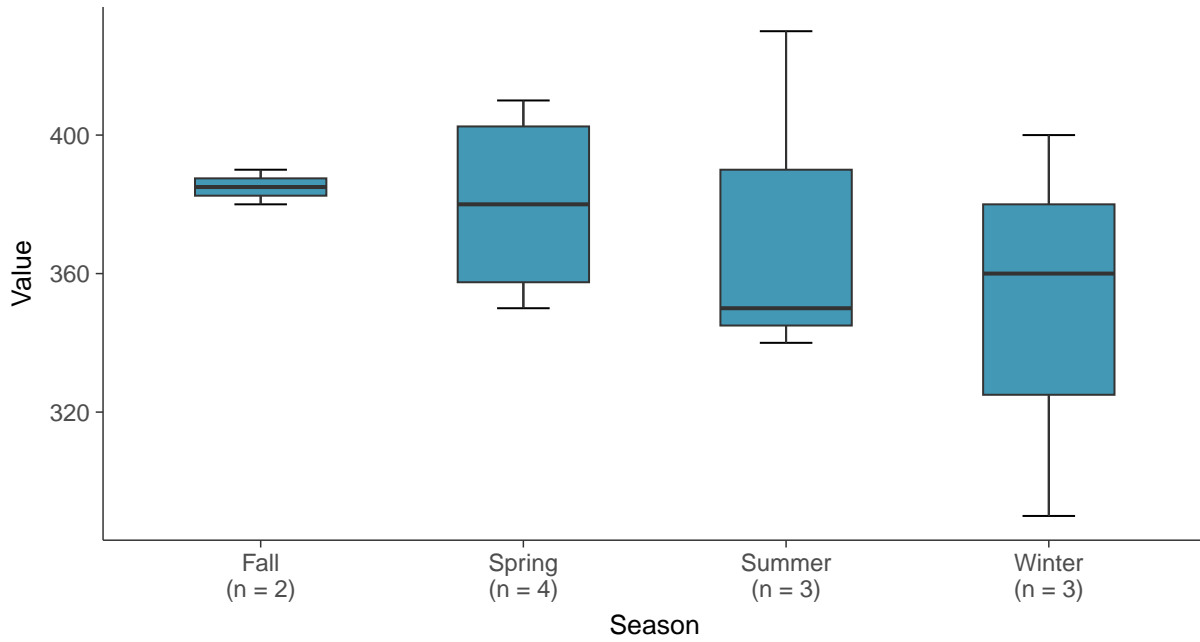
### Boxplot

Calcium, MW-03 (mg/L)



### Boxplot by Season

Calcium, MW-03 (mg/L)

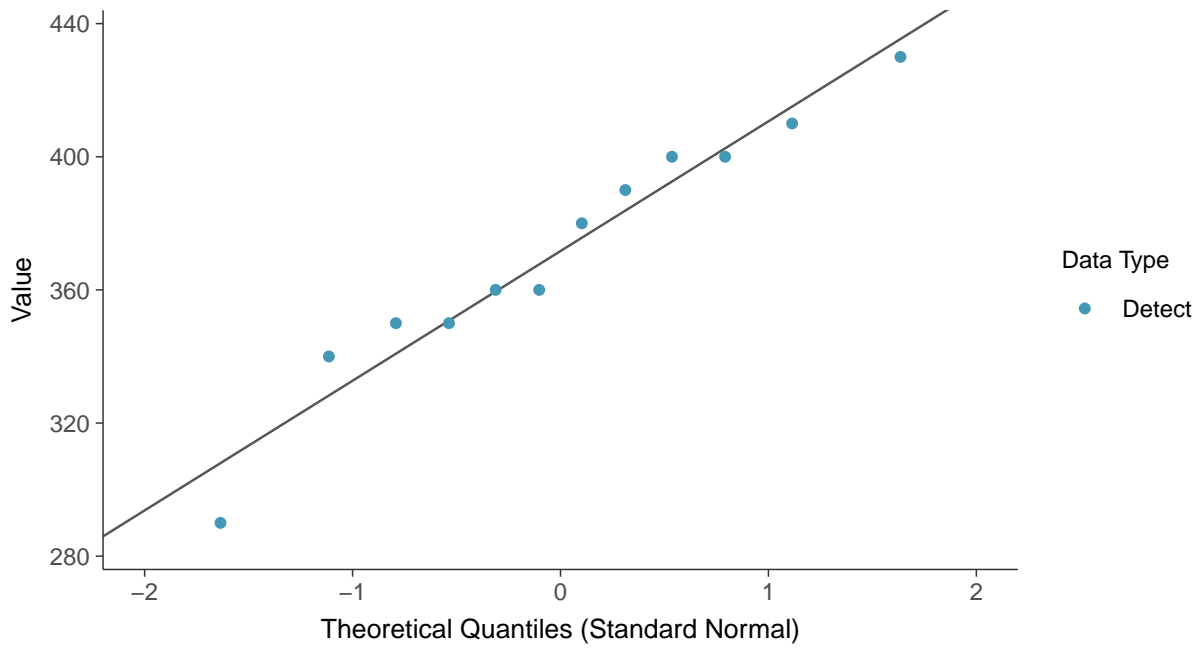






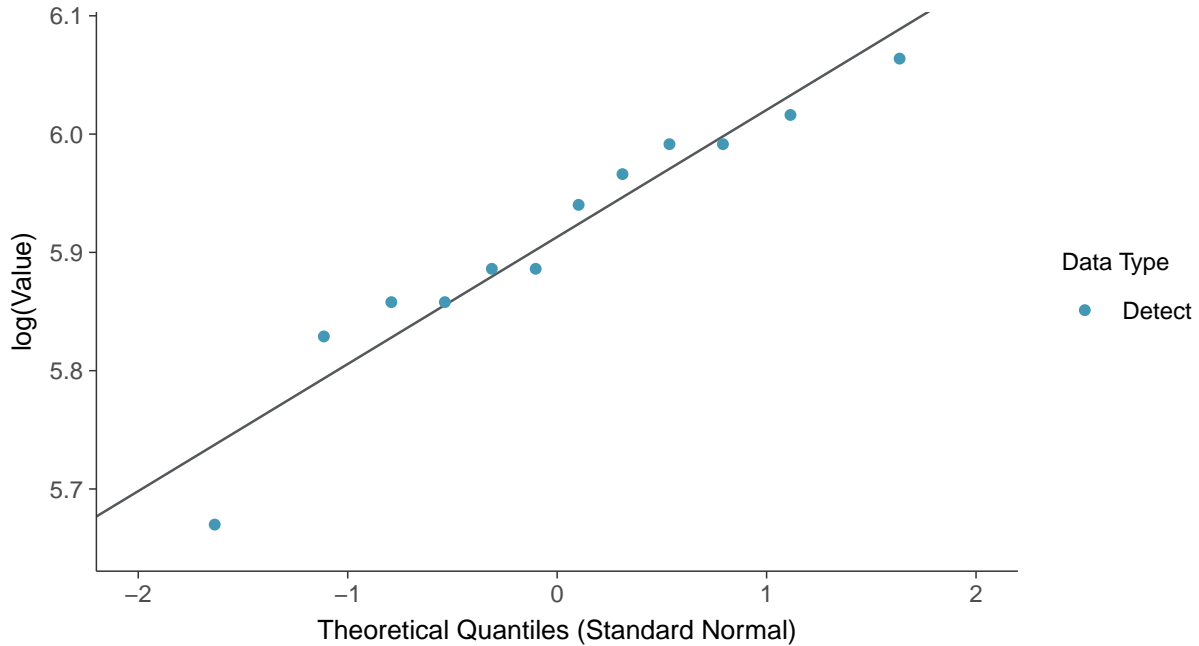
### Normal Q-Q plot

Calcium, MW-03 (mg/L)



### Lognormal Q-Q plot

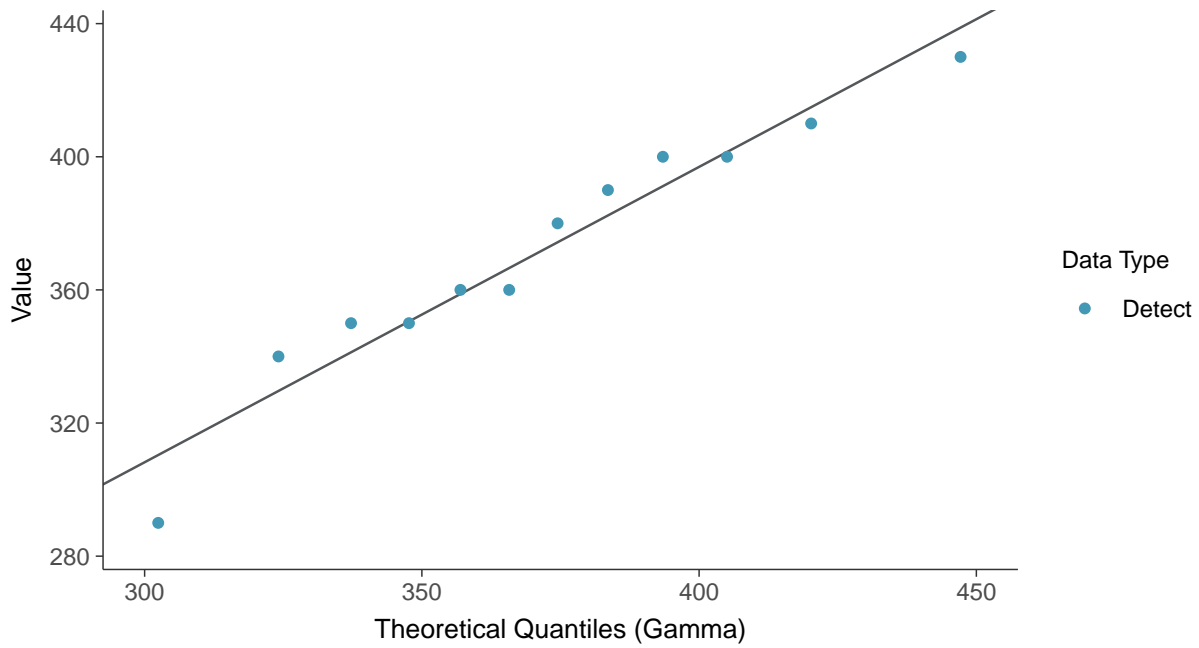
Calcium, MW-03 (mg/L)





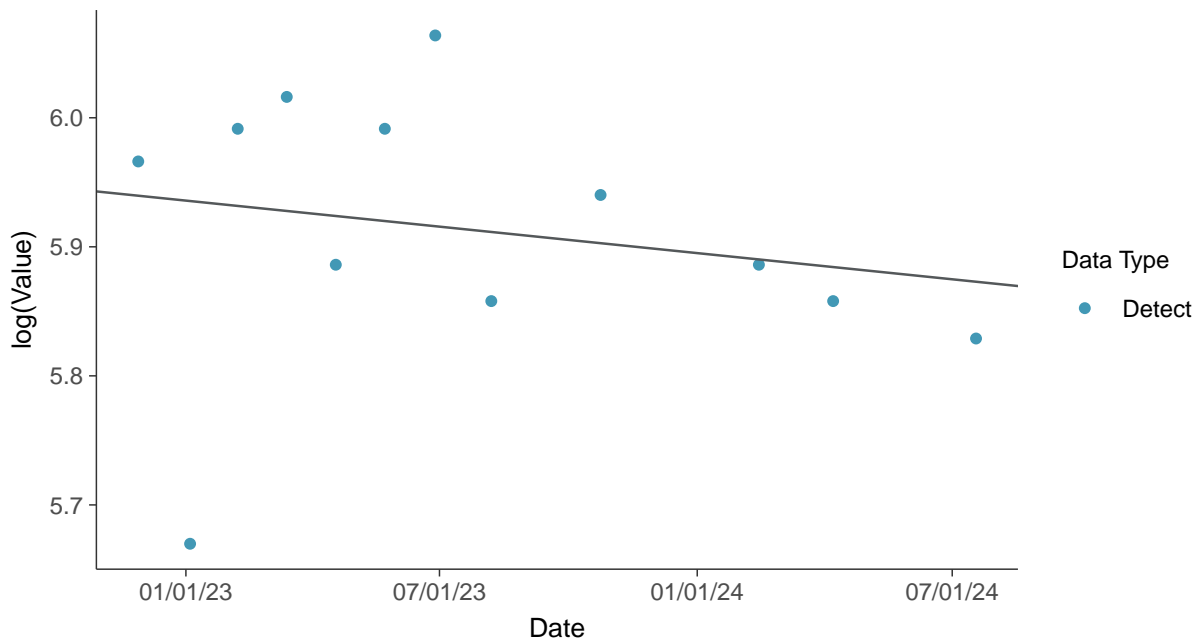
### Gamma Q-Q plot

Calcium, MW-03 (mg/L)



### Trend Regression: Lognormal MLE

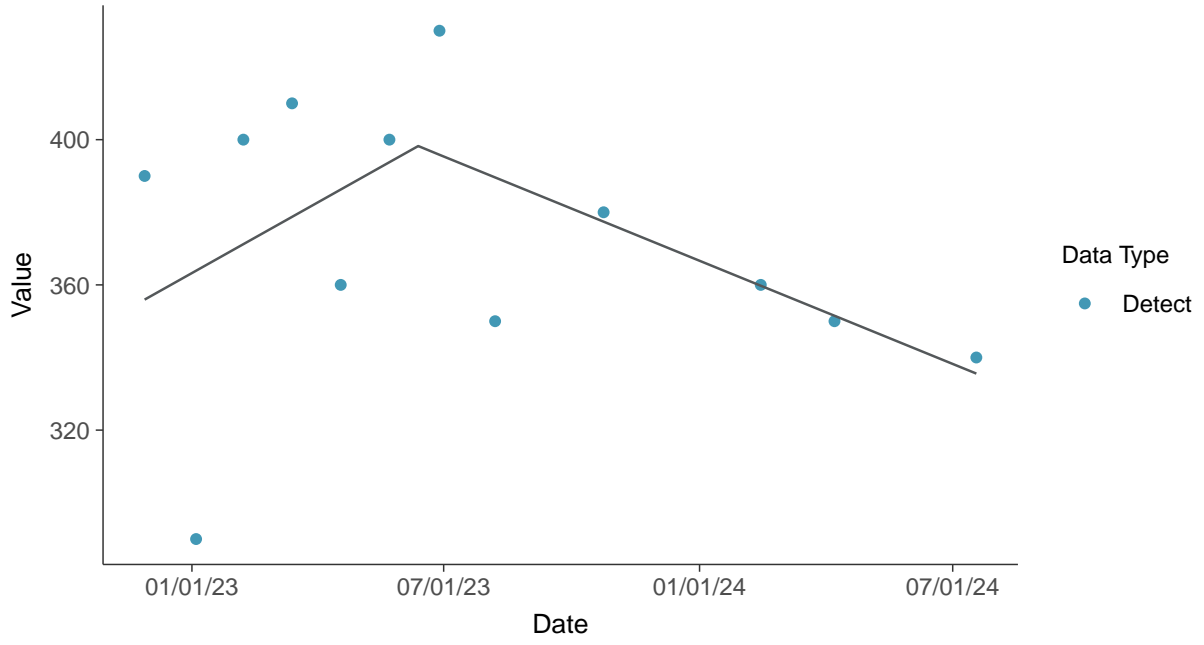
Calcium, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Calcium, MW-03 (mg/L)



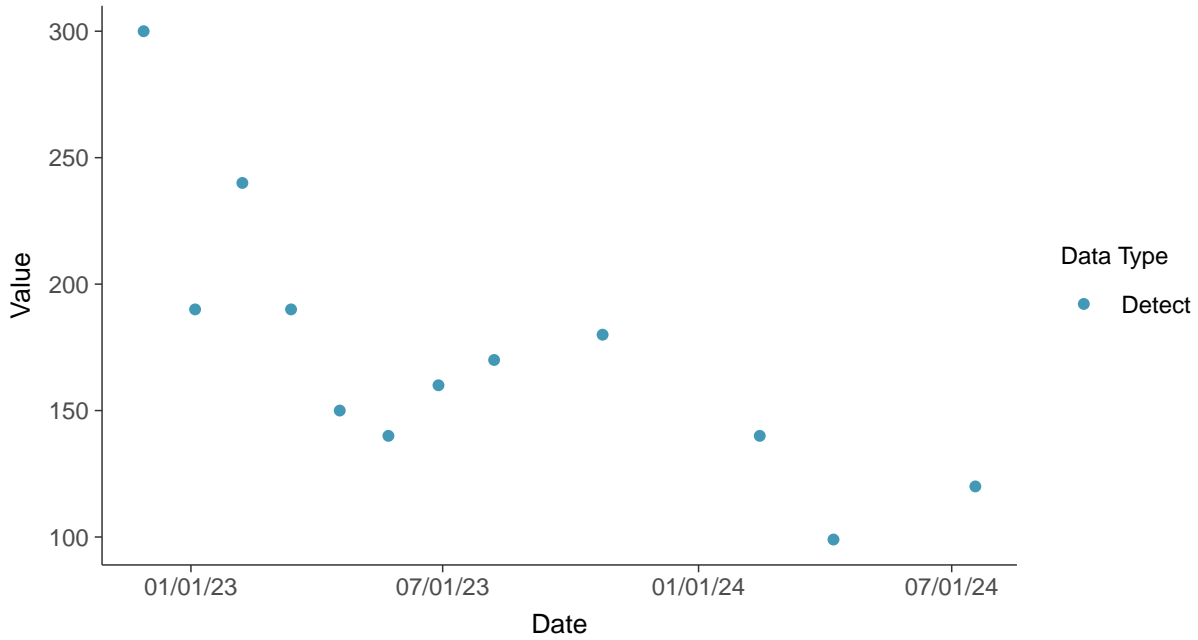


### Appendix III: Chloride (as Cl), MW-03

ID: 13\_2\_4\_108

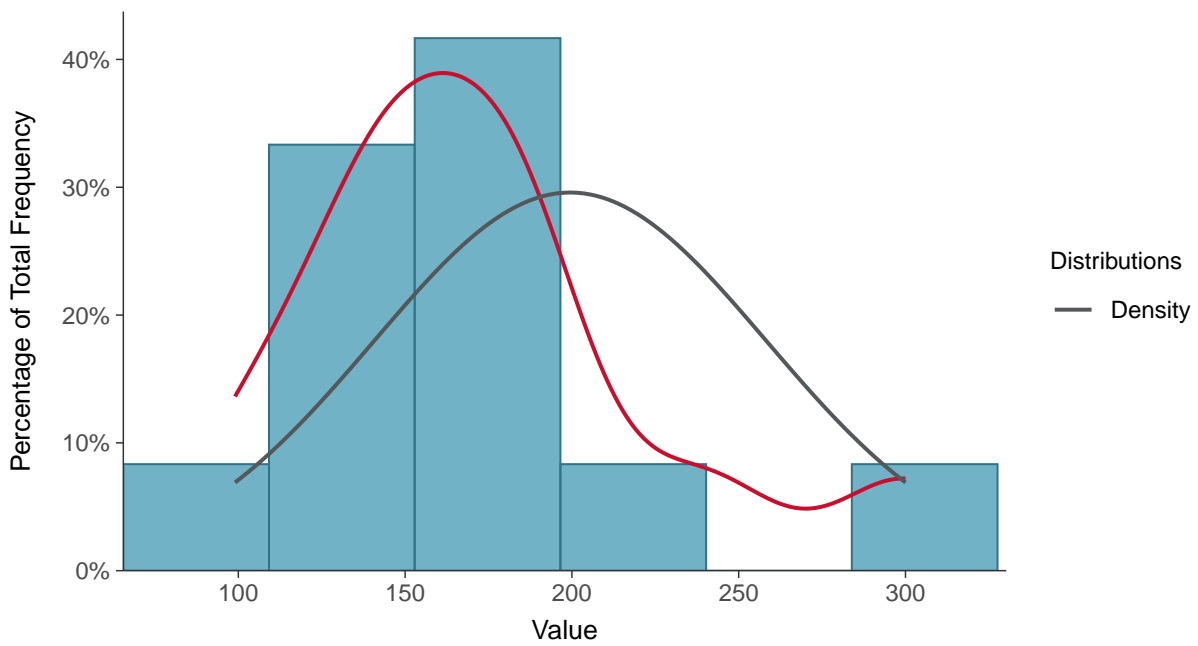
#### Scatter Plot

Chloride (as Cl), MW-03 (mg/L)



#### Histogram

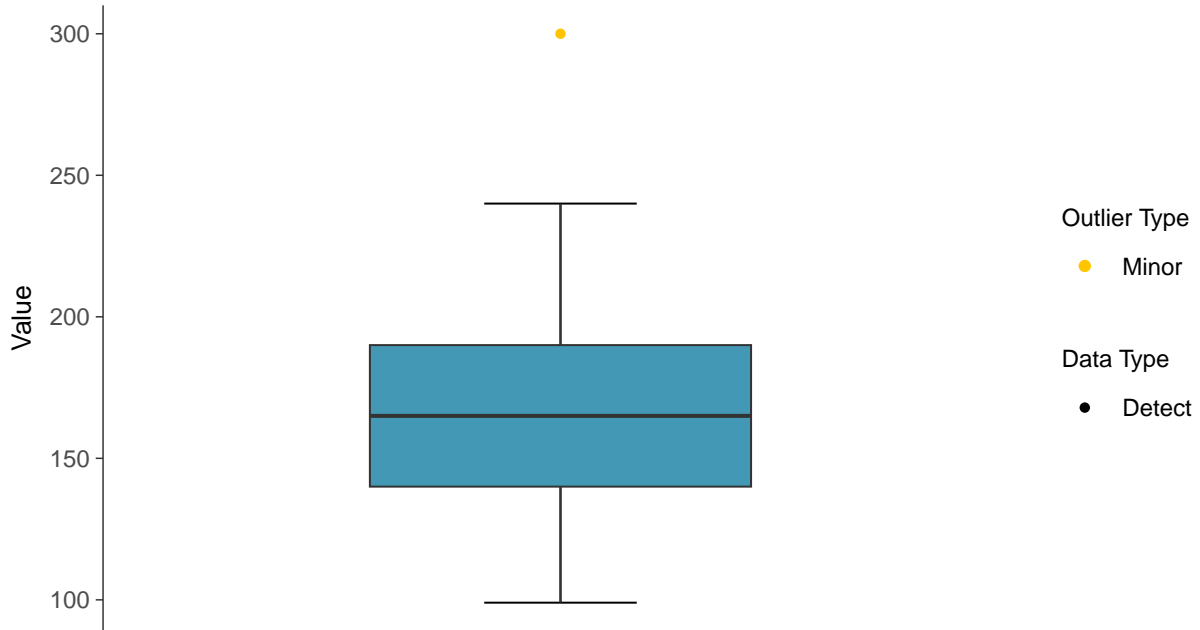
Chloride (as Cl), MW-03 (mg/L)





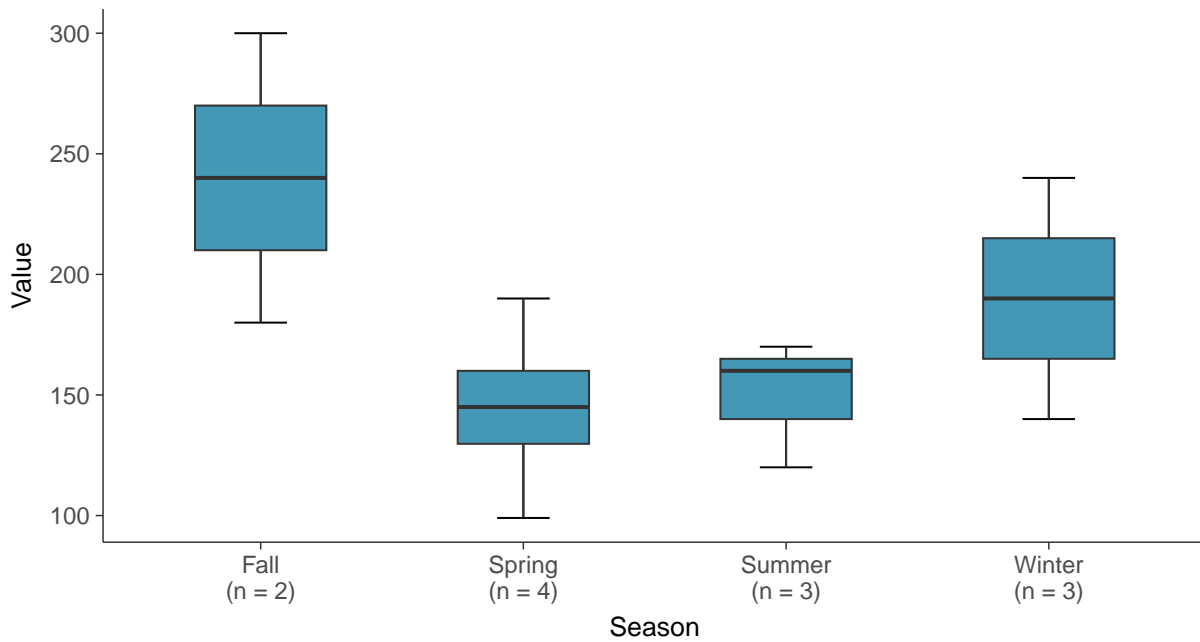
### Boxplot

Chloride (as Cl), MW-03 (mg/L)



### Boxplot by Season

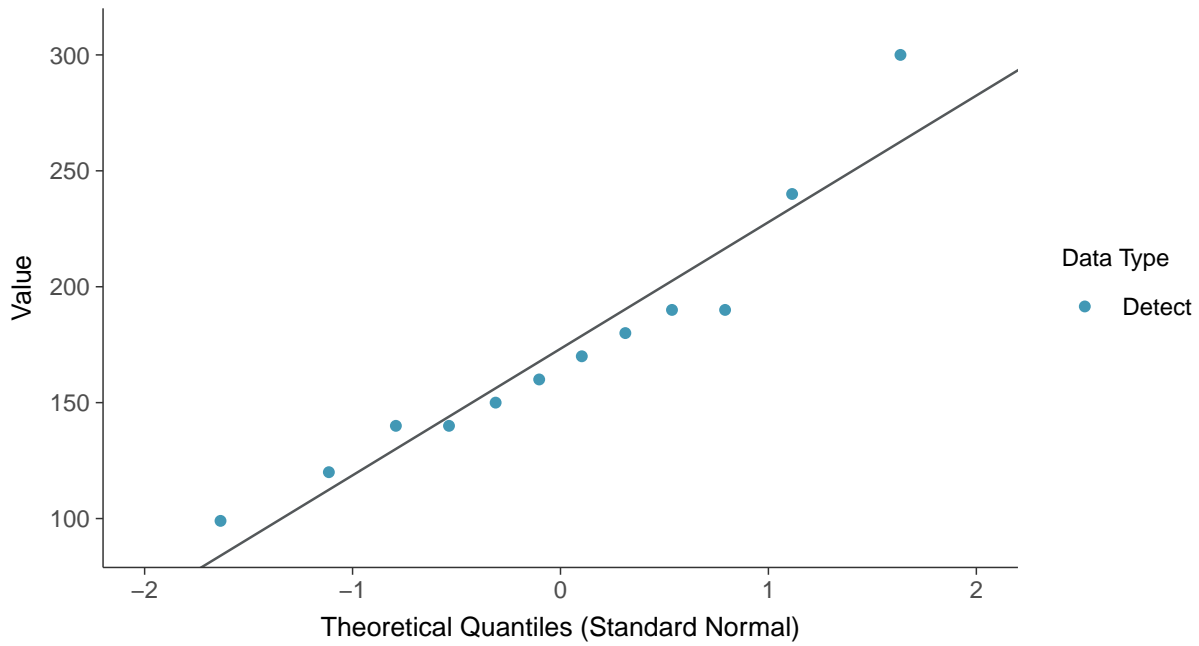
Chloride (as Cl), MW-03 (mg/L)





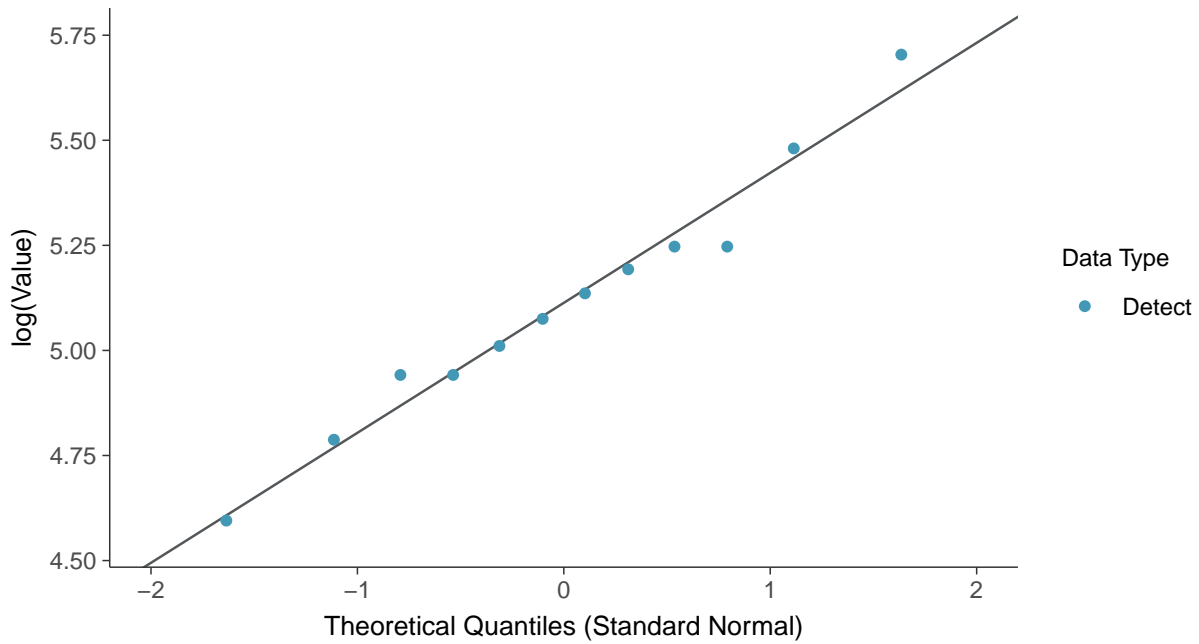
### Normal Q-Q plot

Chloride (as Cl), MW-03 (mg/L)



### Lognormal Q-Q plot

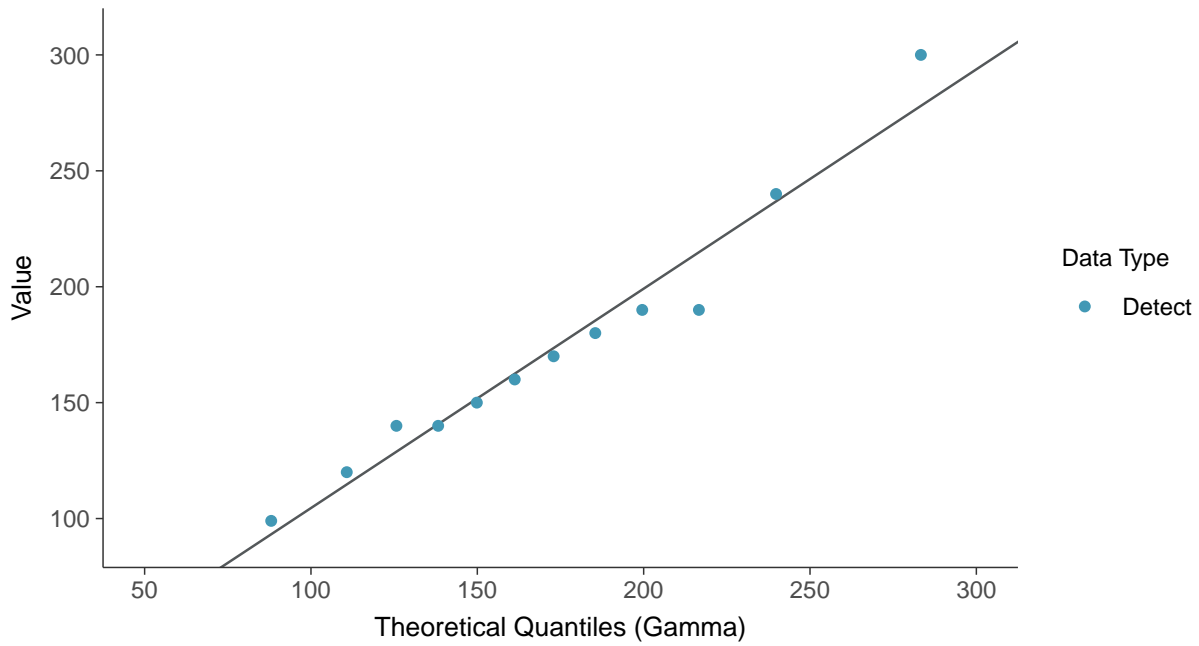
Chloride (as Cl), MW-03 (mg/L)





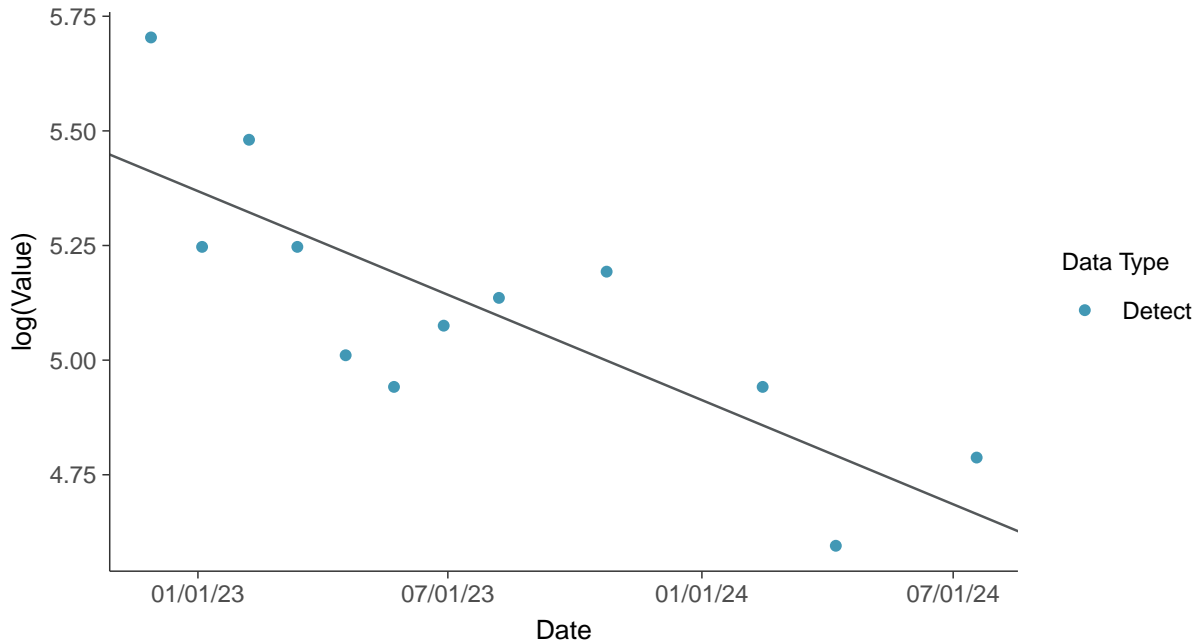
### Gamma Q-Q plot

Chloride (as Cl), MW-03 (mg/L)



### Trend Regression: Lognormal MLE

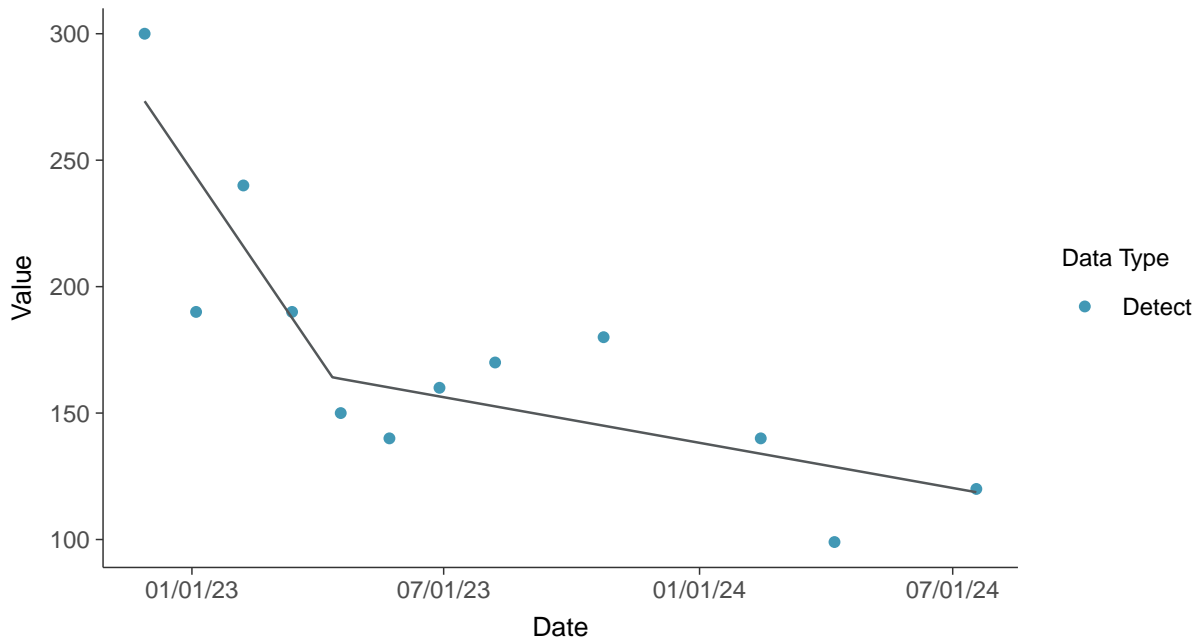
Chloride (as Cl), MW-03 (mg/L)





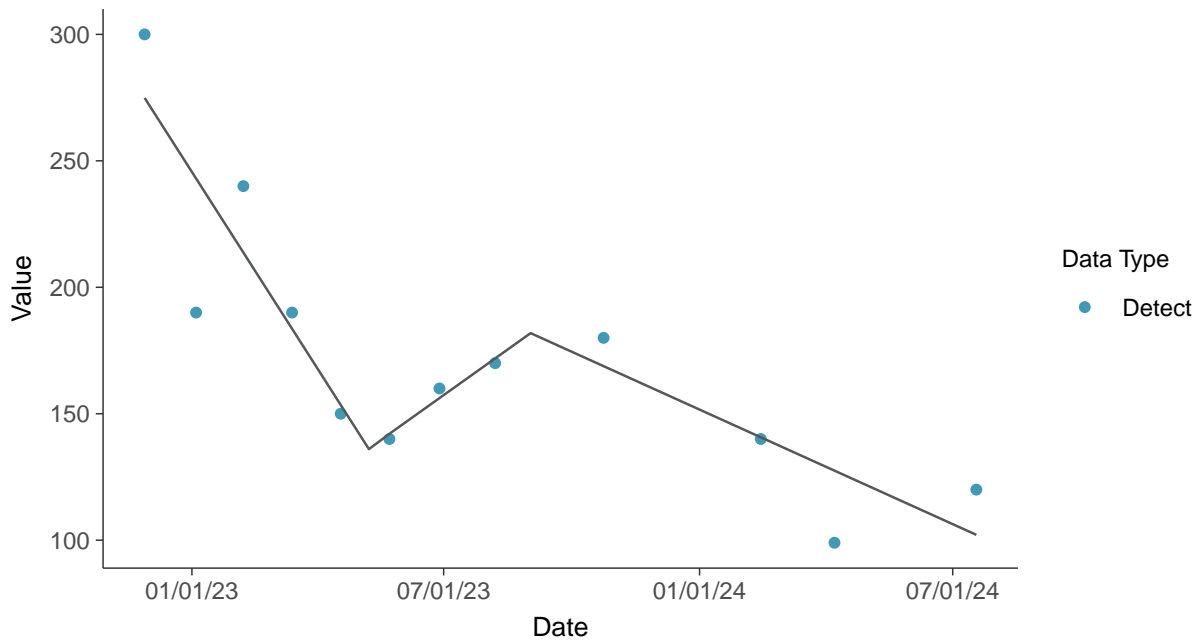
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-03 (mg/L)

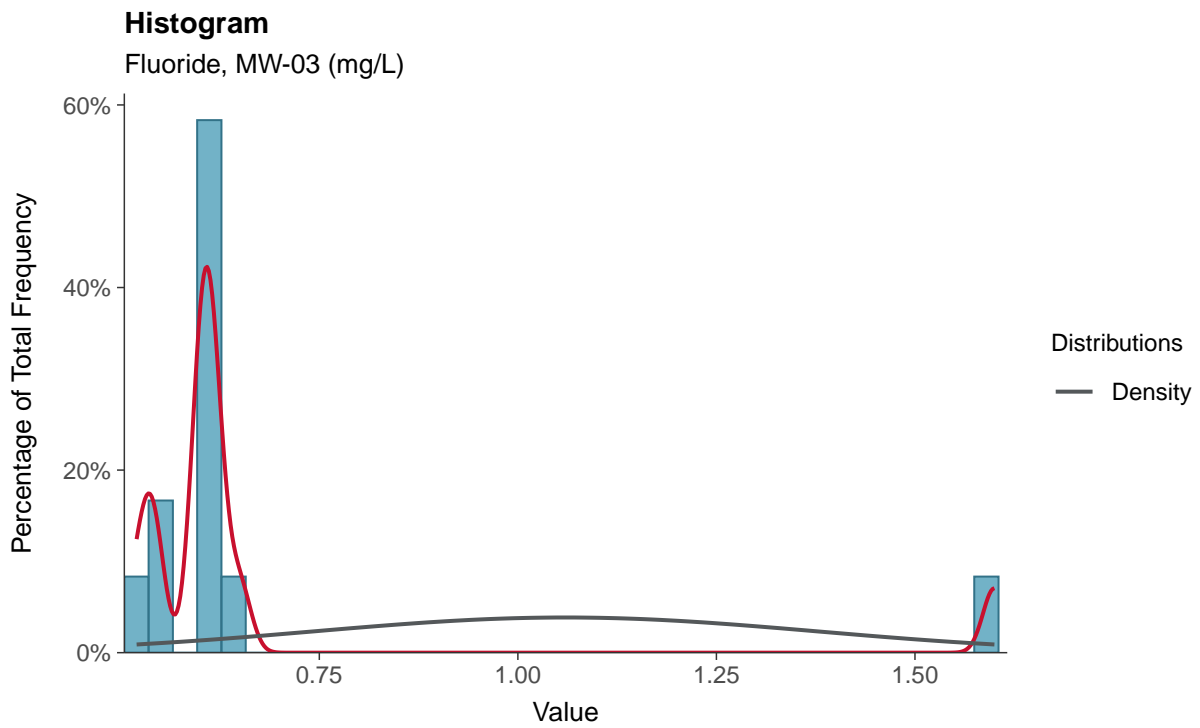
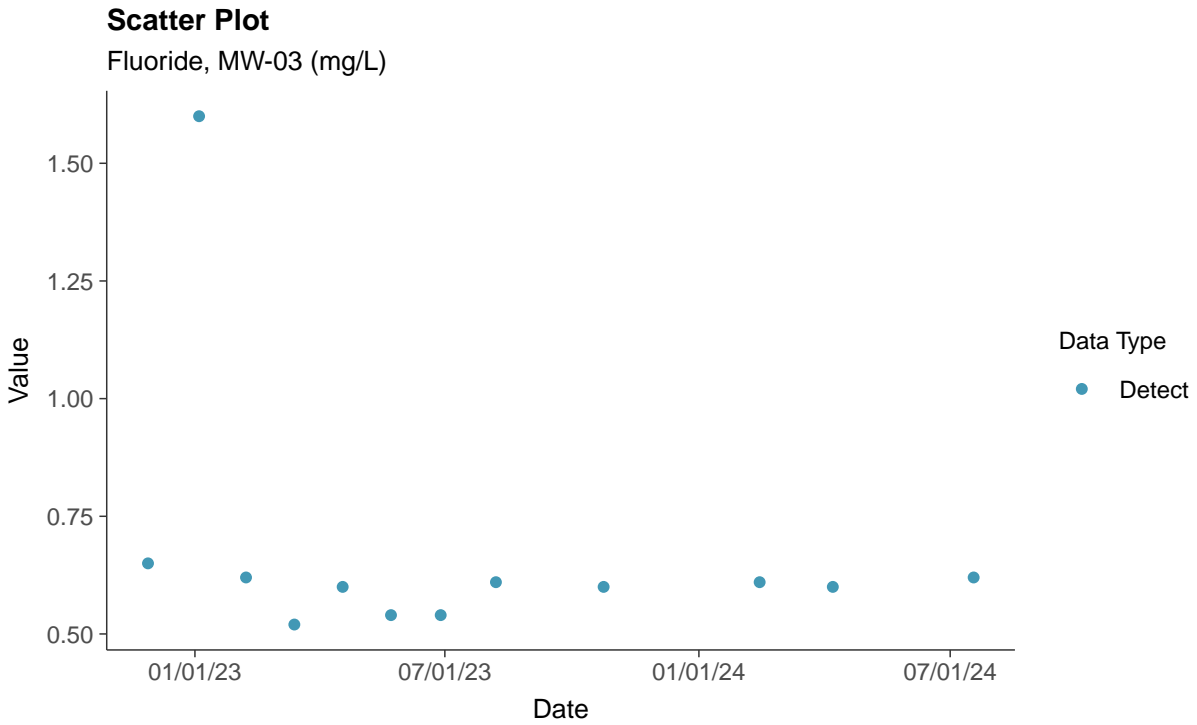






### Appendix III: Fluoride, MW-03

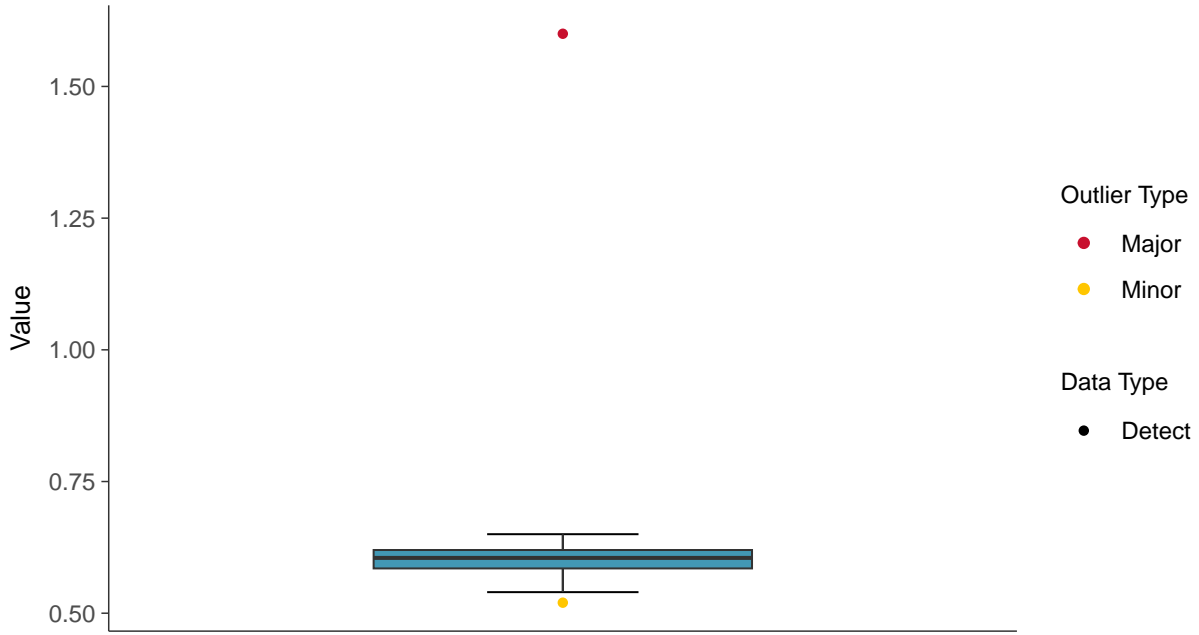
ID: 13\_2\_4\_112





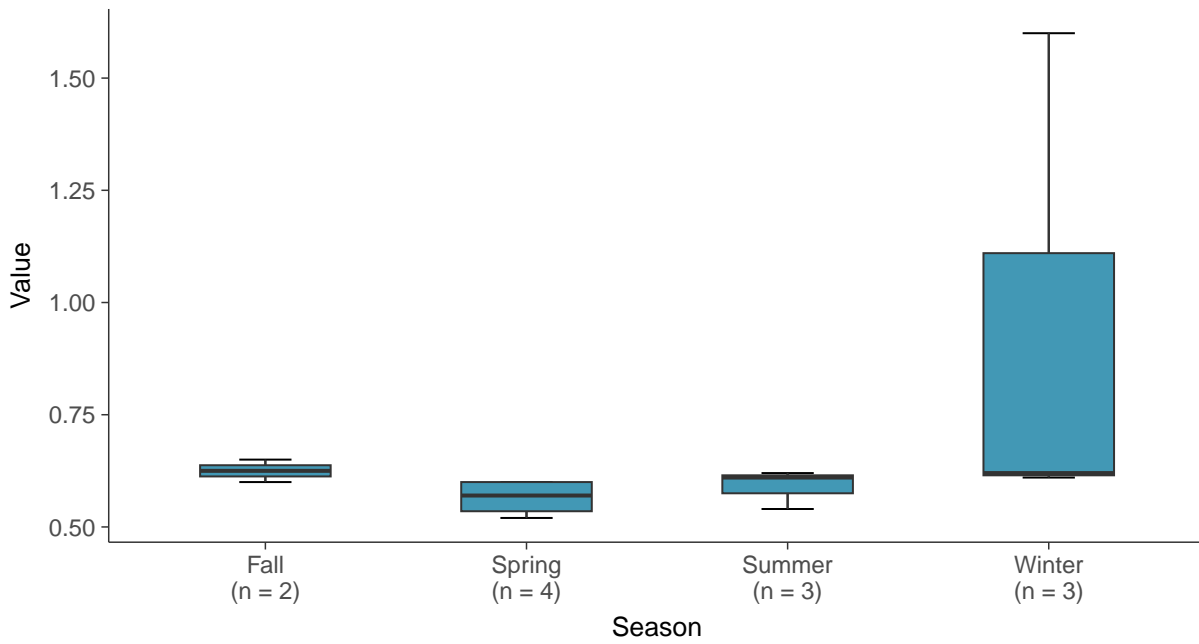
### Boxplot

Fluoride, MW-03 (mg/L)



### Boxplot by Season

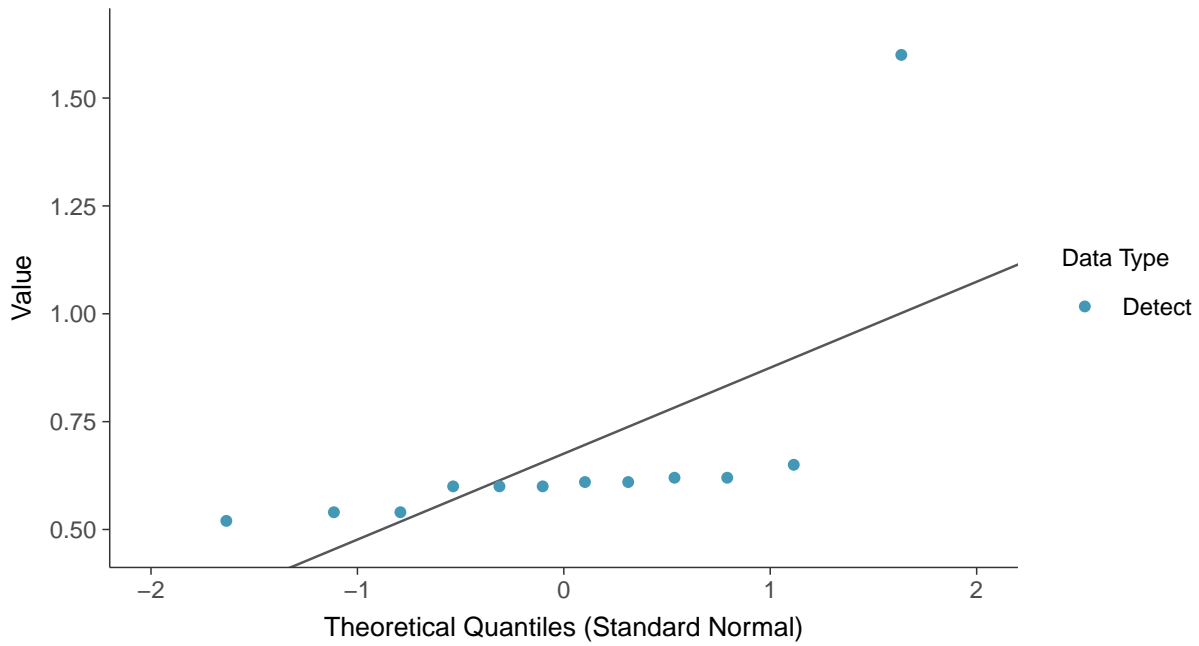
Fluoride, MW-03 (mg/L)





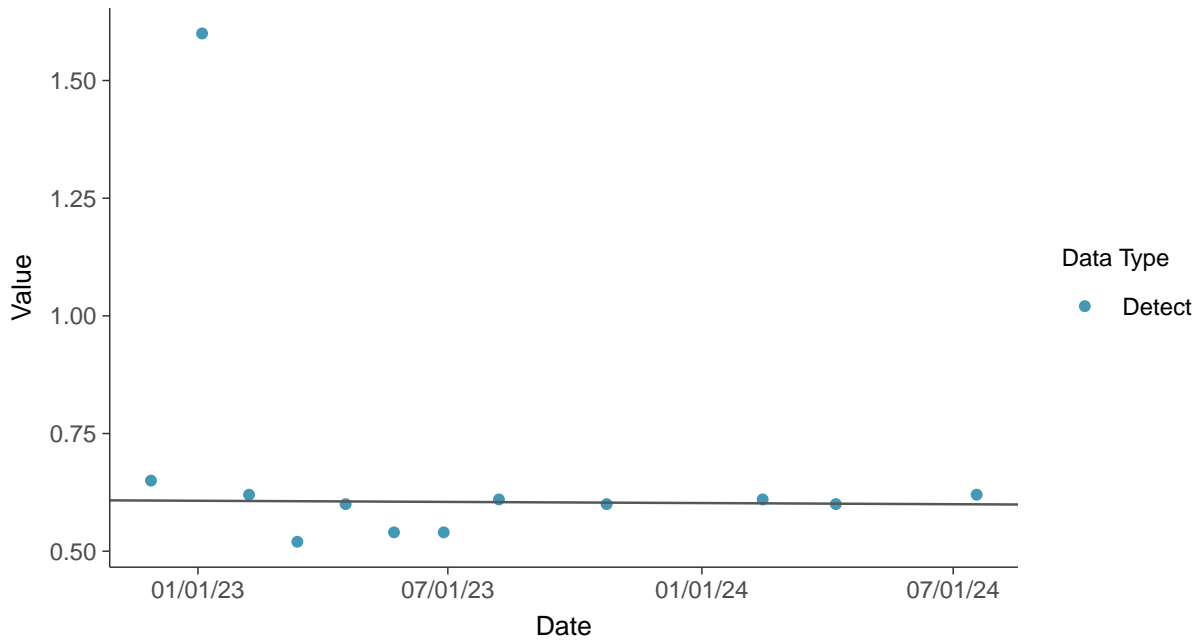
### Normal Q-Q plot

Fluoride, MW-03 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

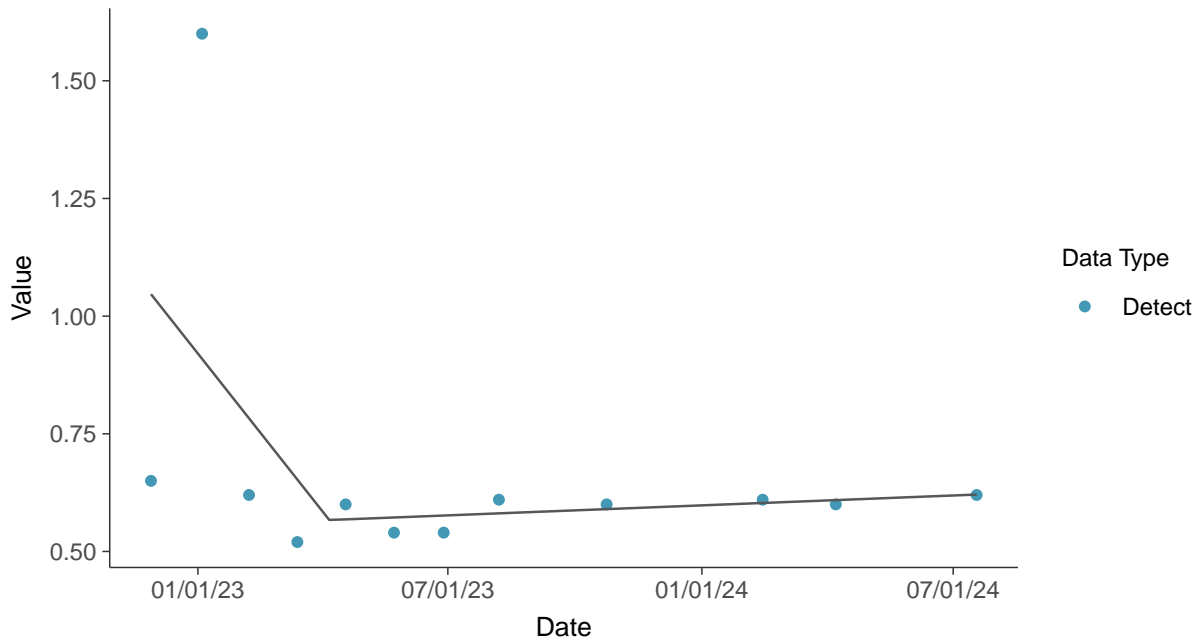
Fluoride, MW-03 (mg/L)





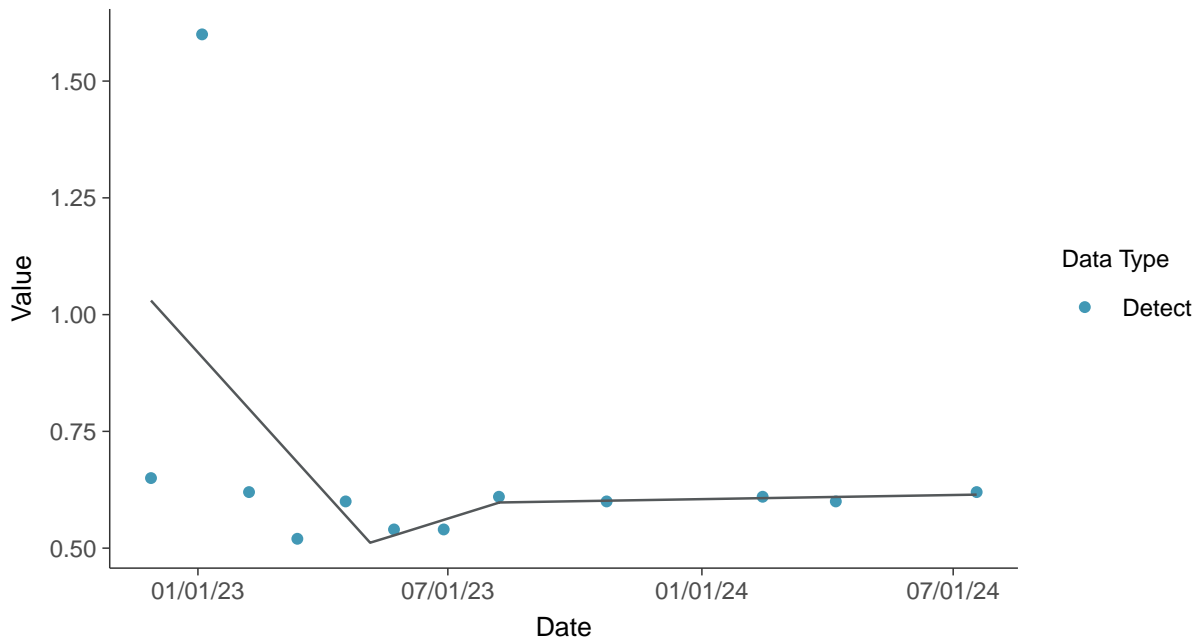
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

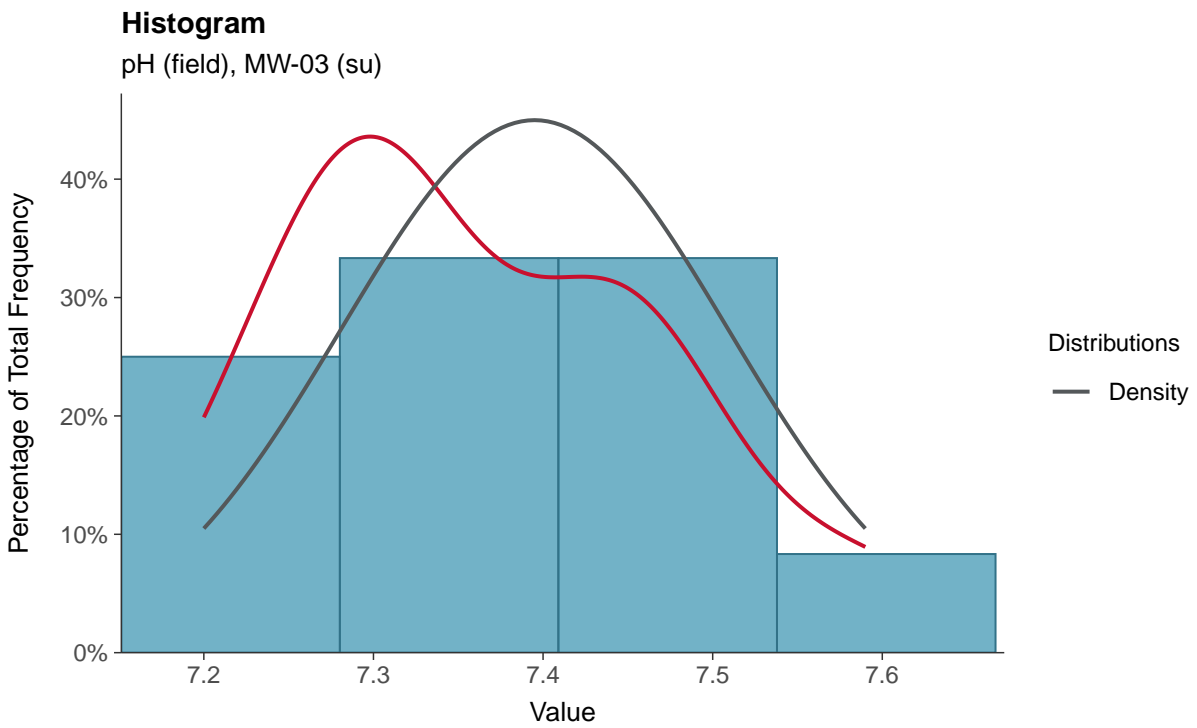
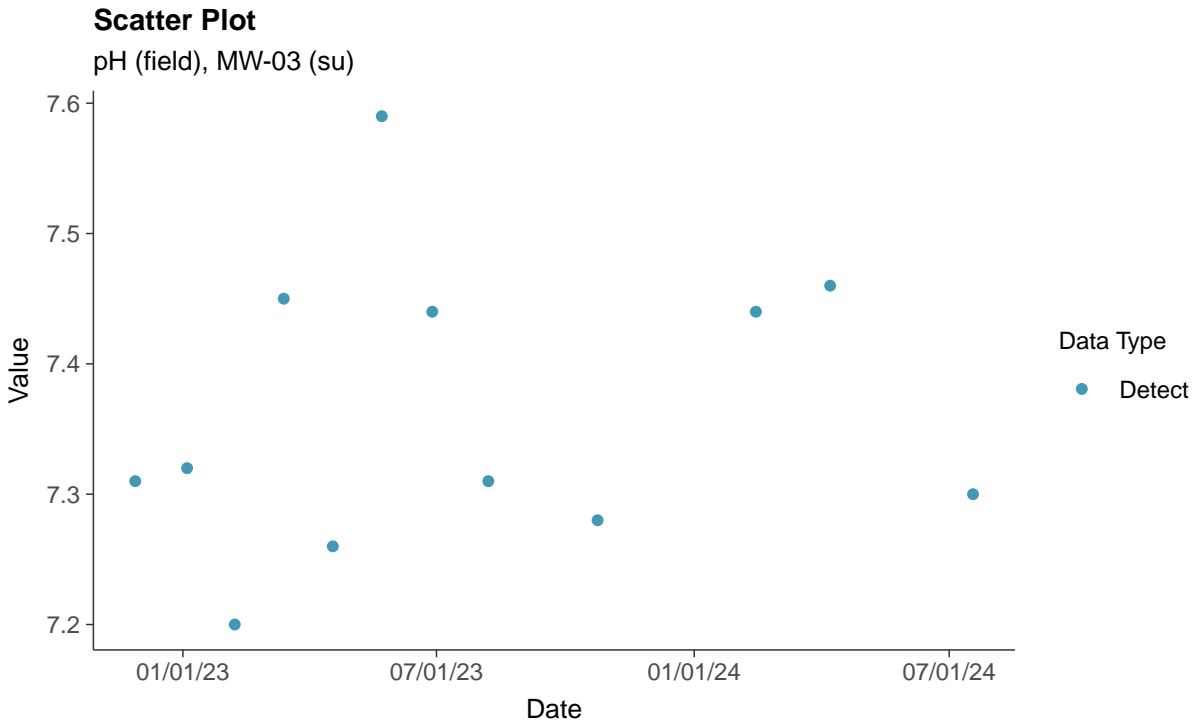
Fluoride, MW-03 (mg/L)





### Appendix III: pH (field), MW-03

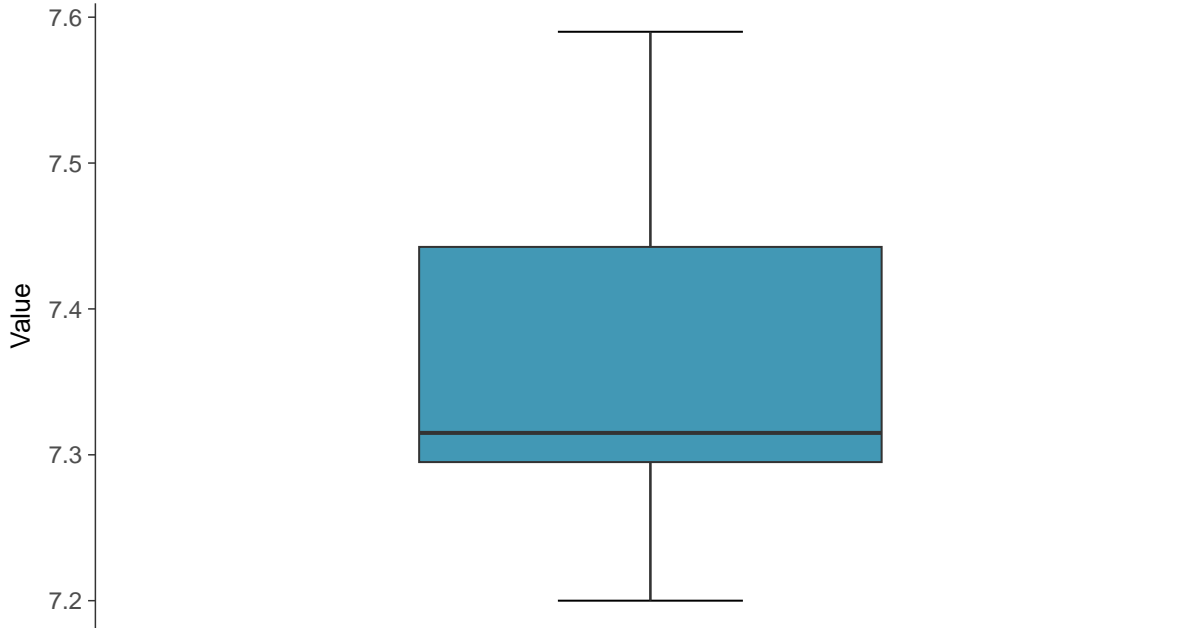
ID: 13\_2\_4\_120





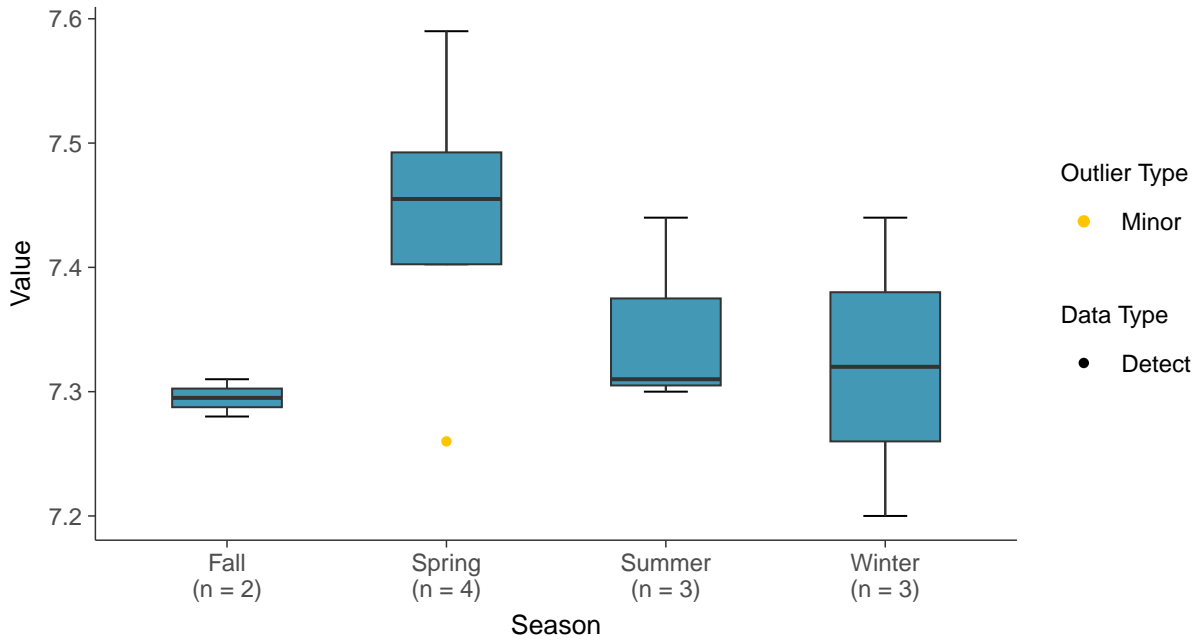
### Boxplot

pH (field), MW-03 (su)



### Boxplot by Season

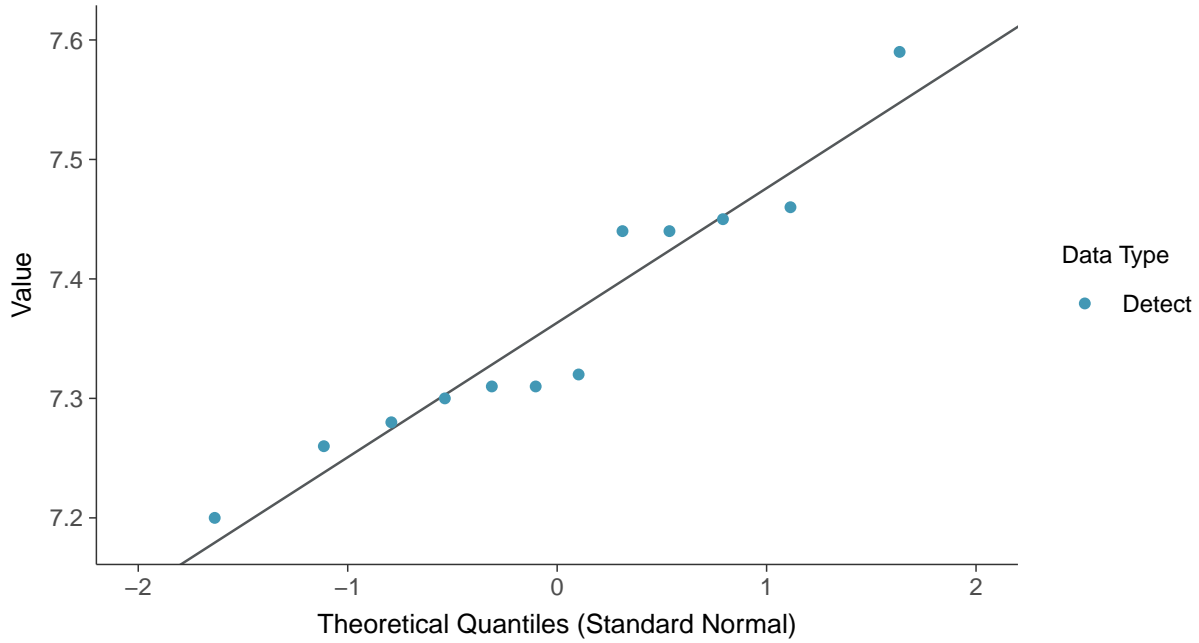
pH (field), MW-03 (su)





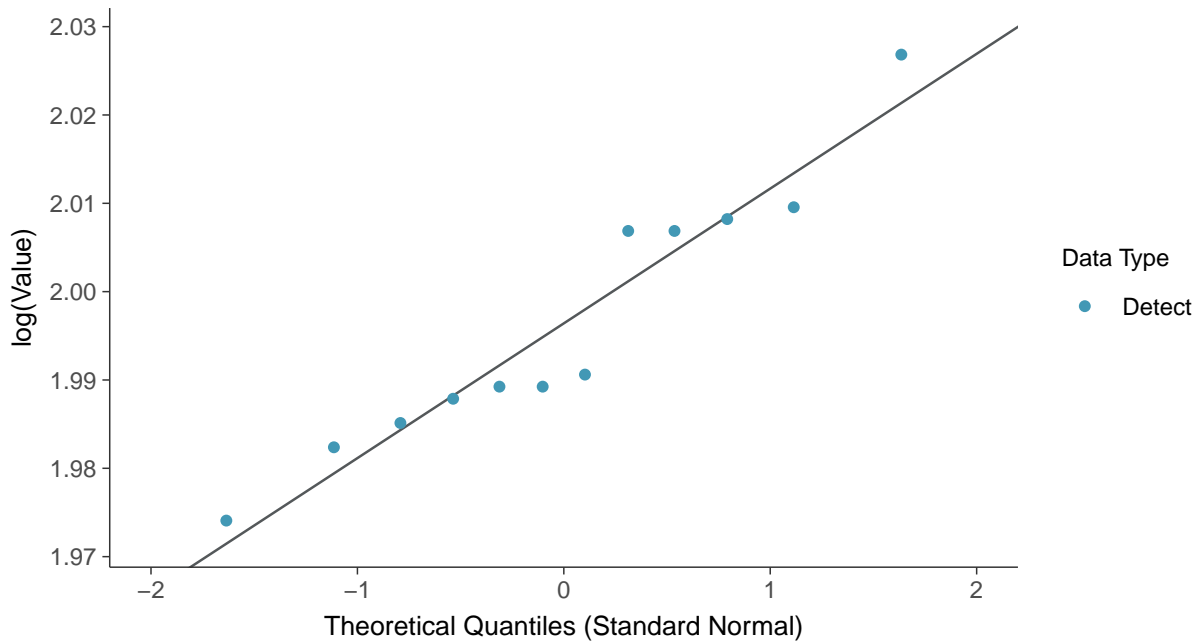
### Normal Q-Q plot

pH (field), MW-03 (su)



### Lognormal Q-Q plot

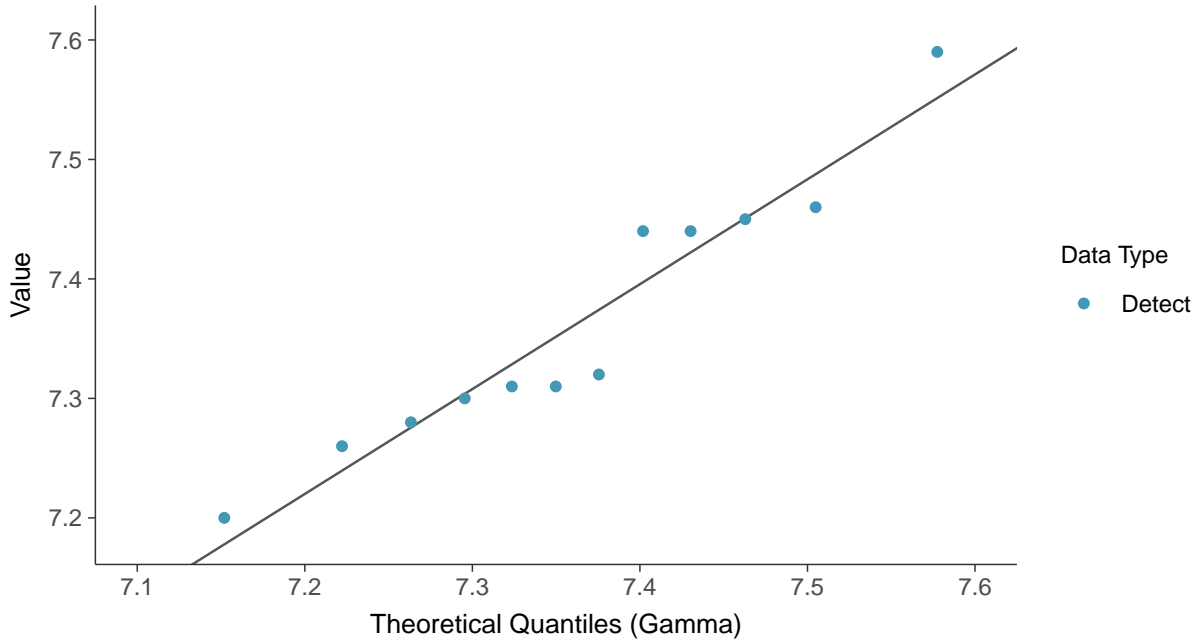
pH (field), MW-03 (su)





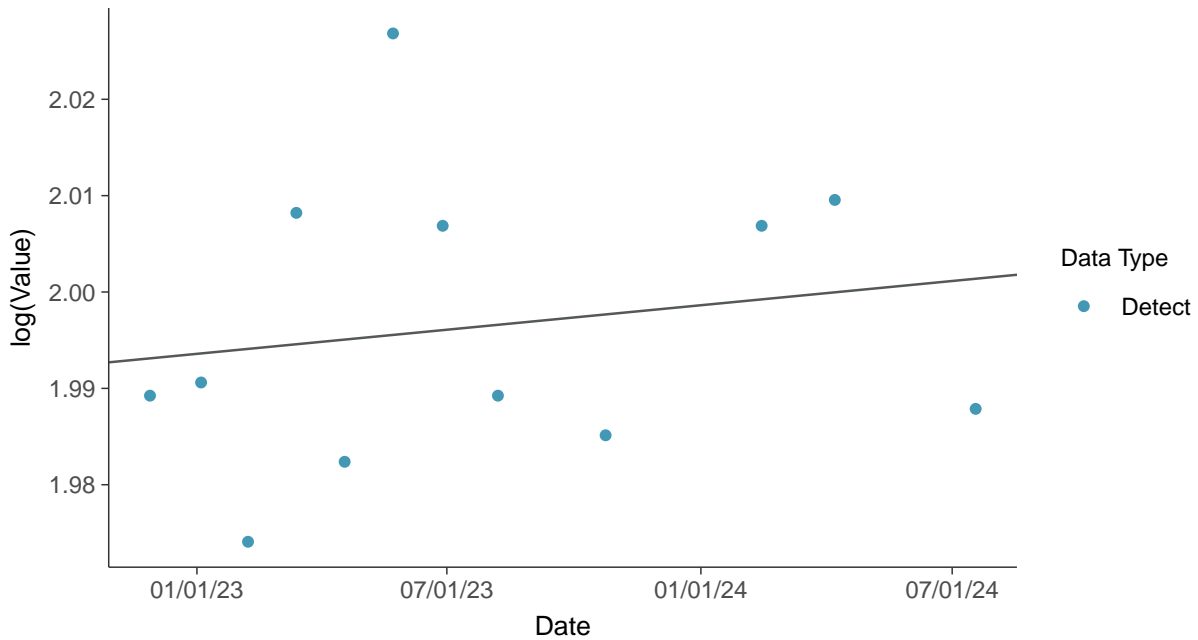
### Gamma Q-Q plot

pH (field), MW-03 (su)



### Trend Regression: Lognormal MLE

pH (field), MW-03 (su)





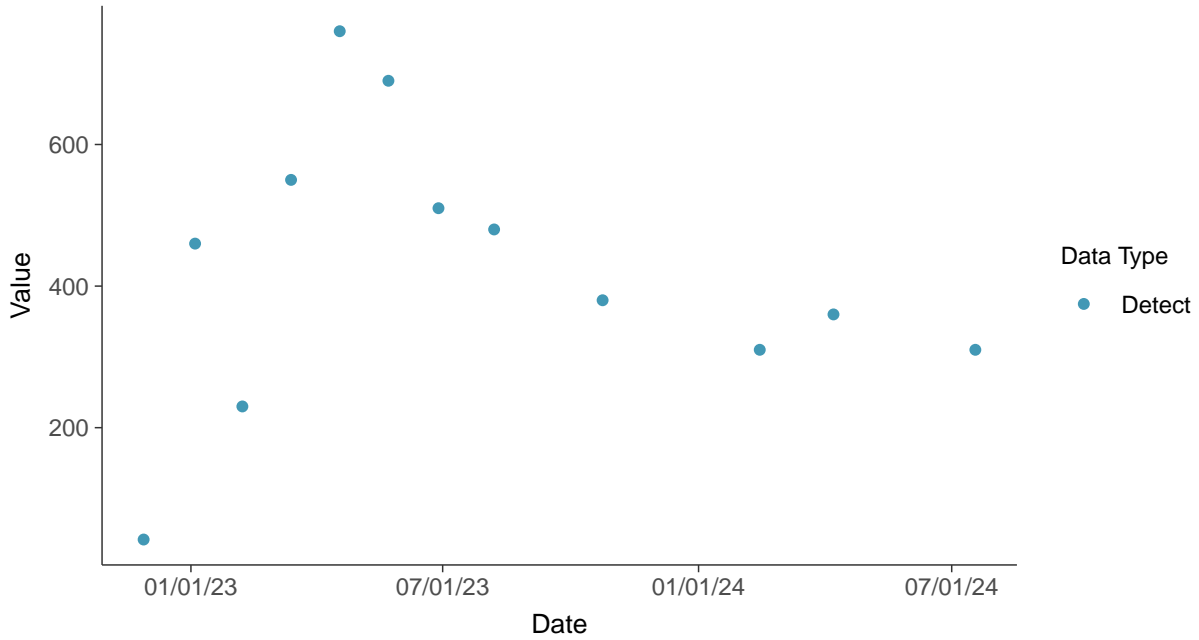


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-03

ID: 13\_2\_4\_124

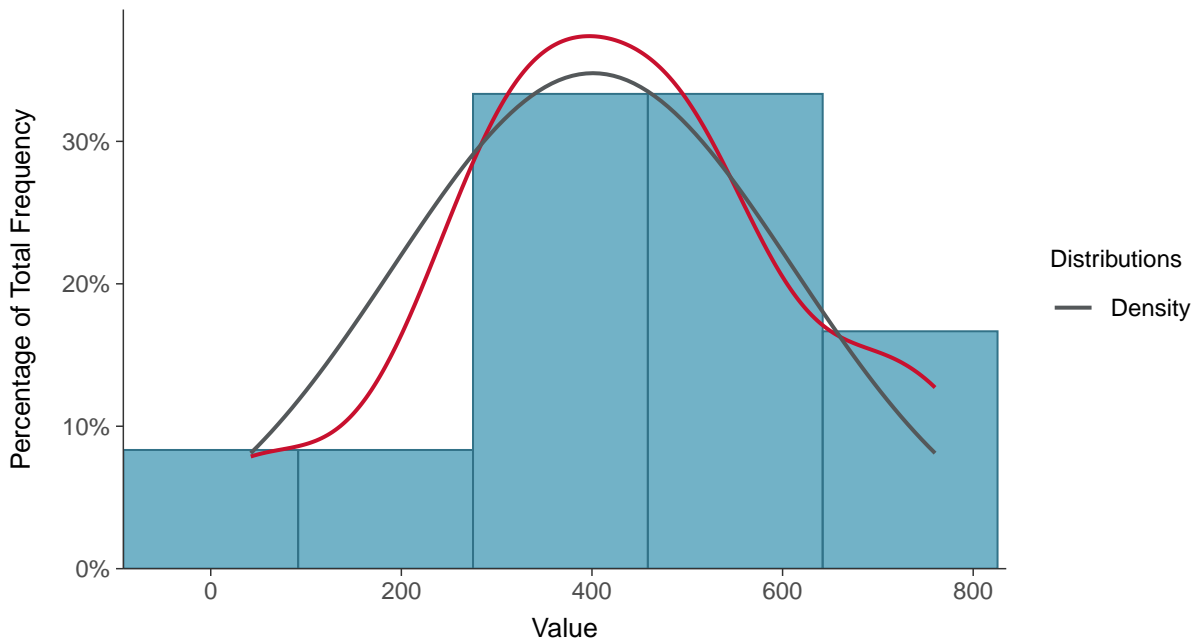
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)



#### Histogram

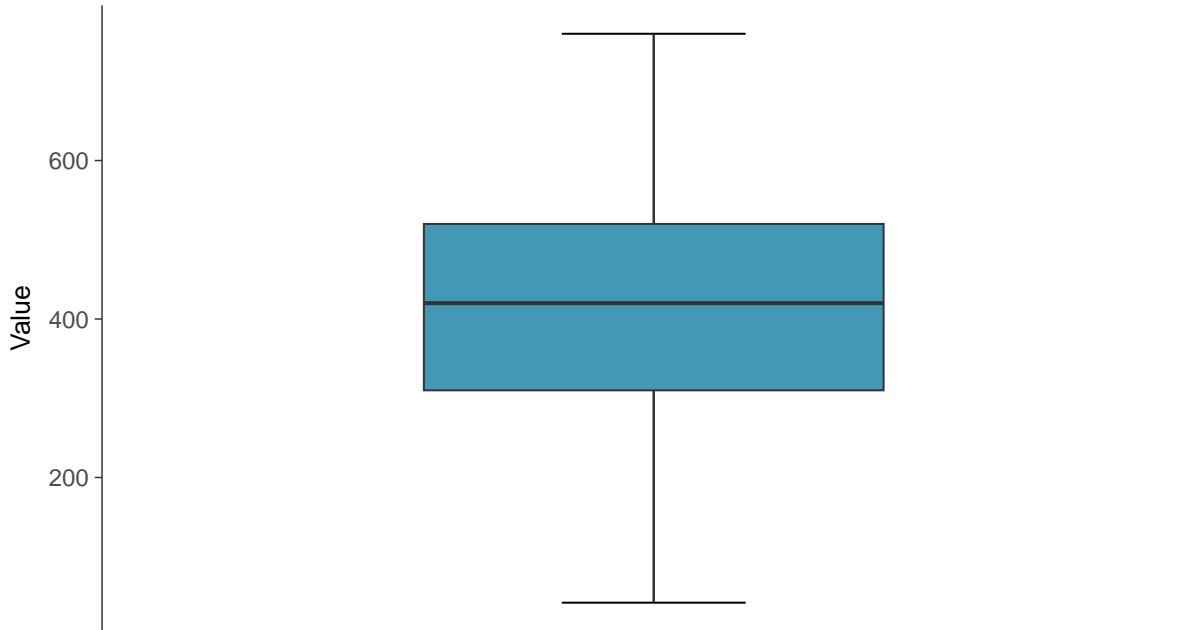
Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)





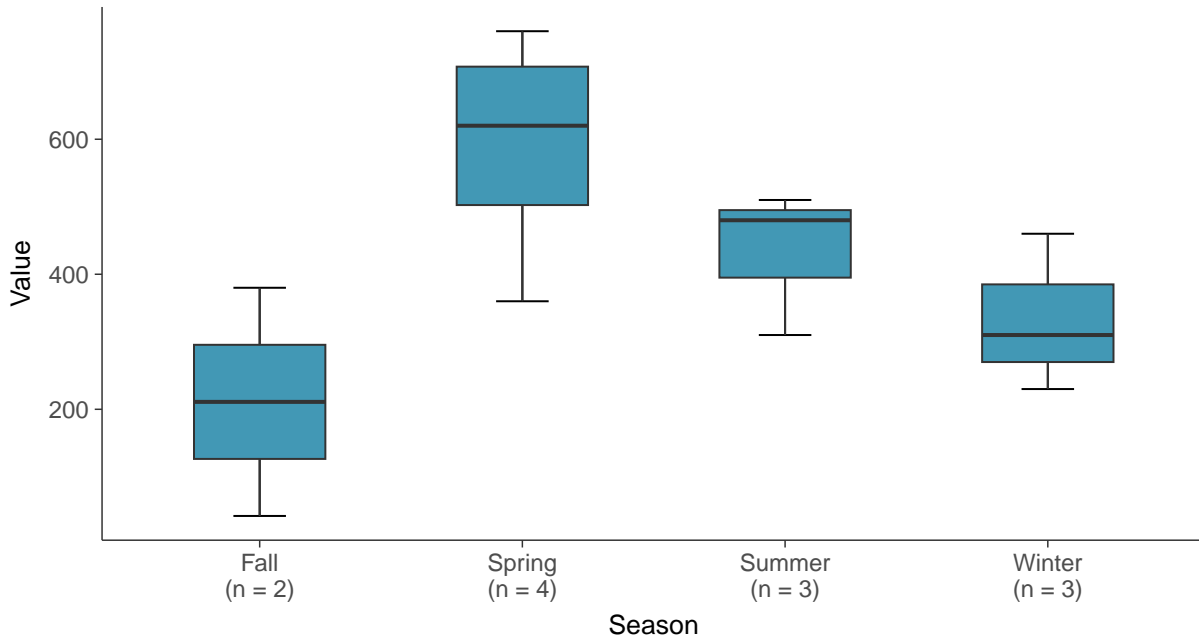
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)



### Boxplot by Season

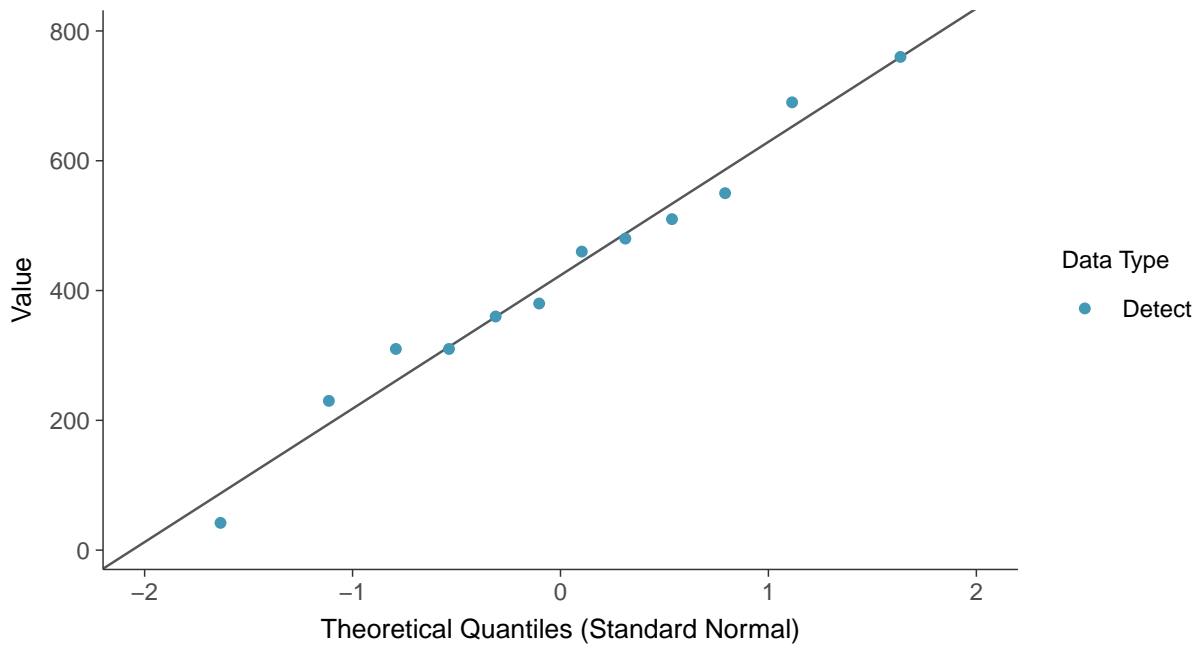
Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)





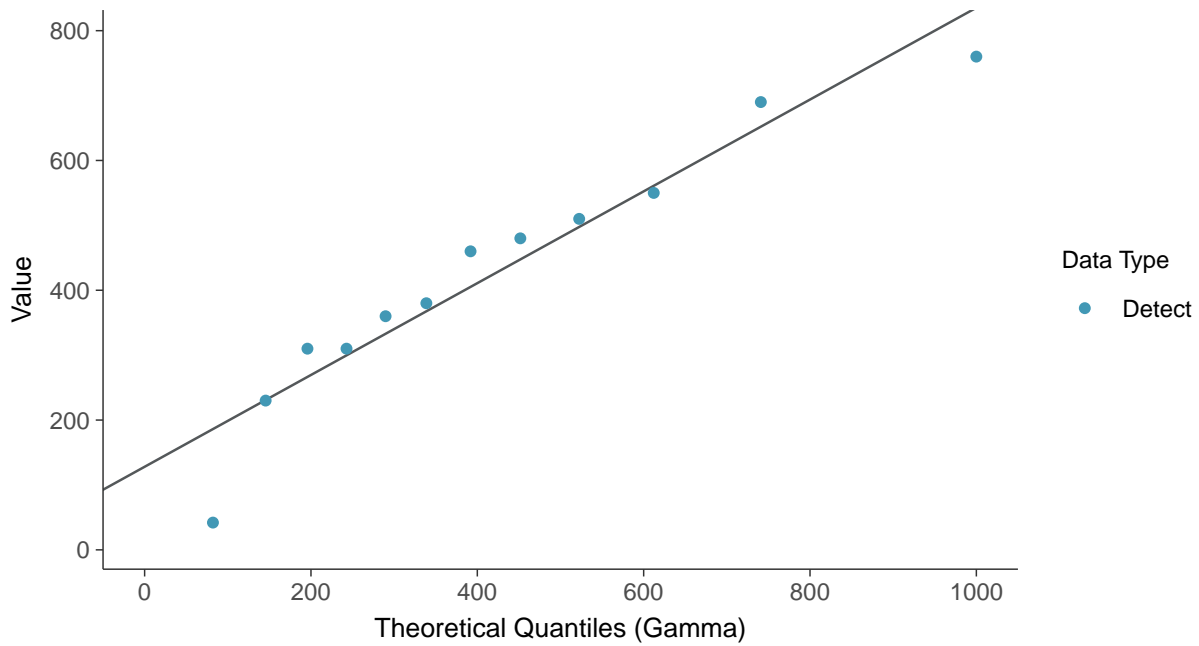
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)



### Gamma Q-Q plot

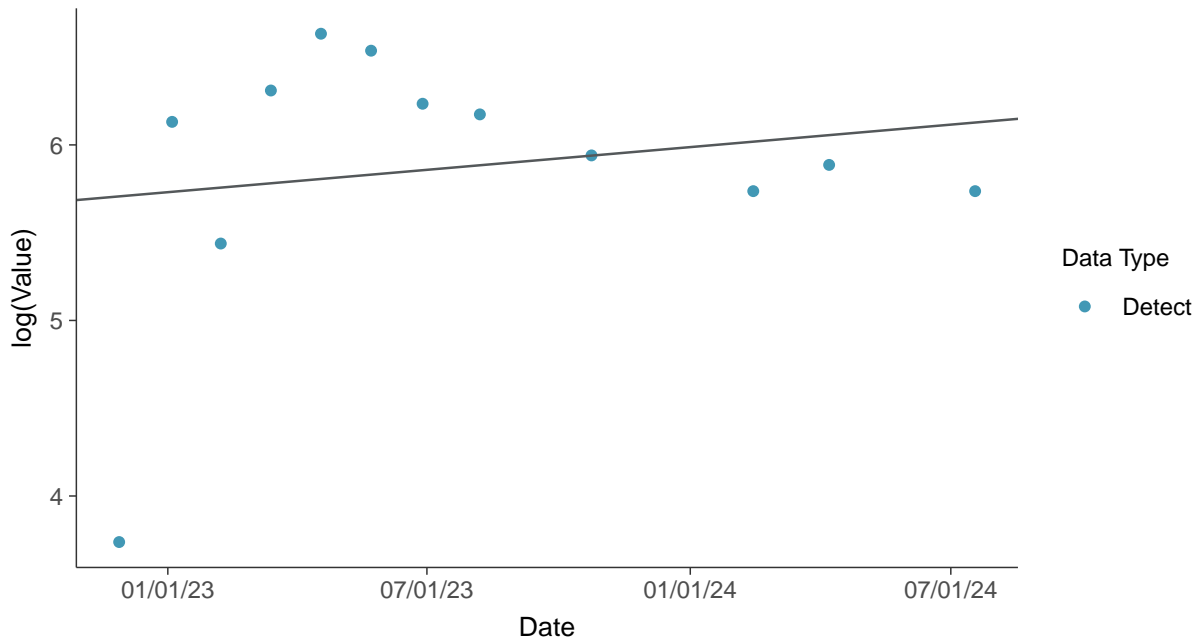
Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)





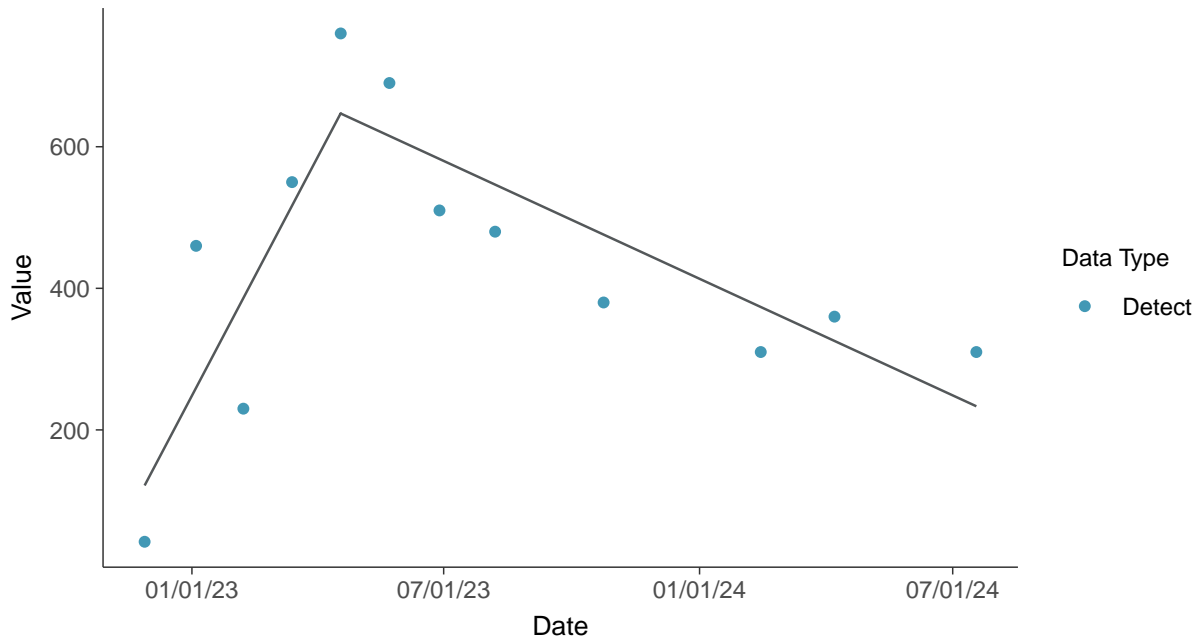
### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

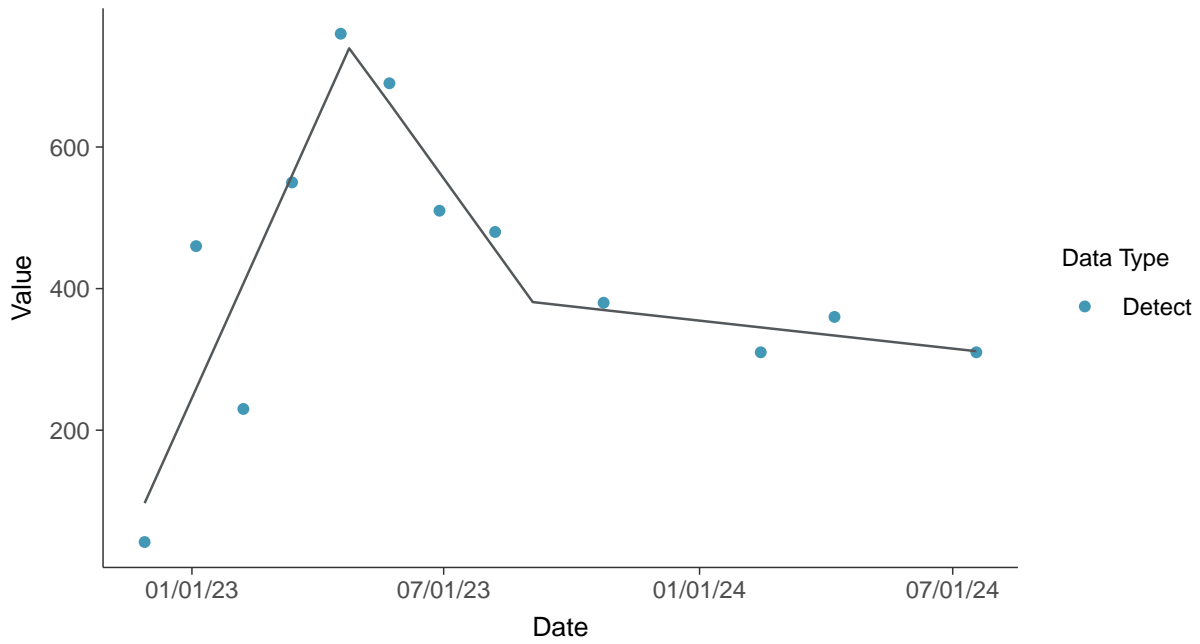
Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-03 (mg/L)



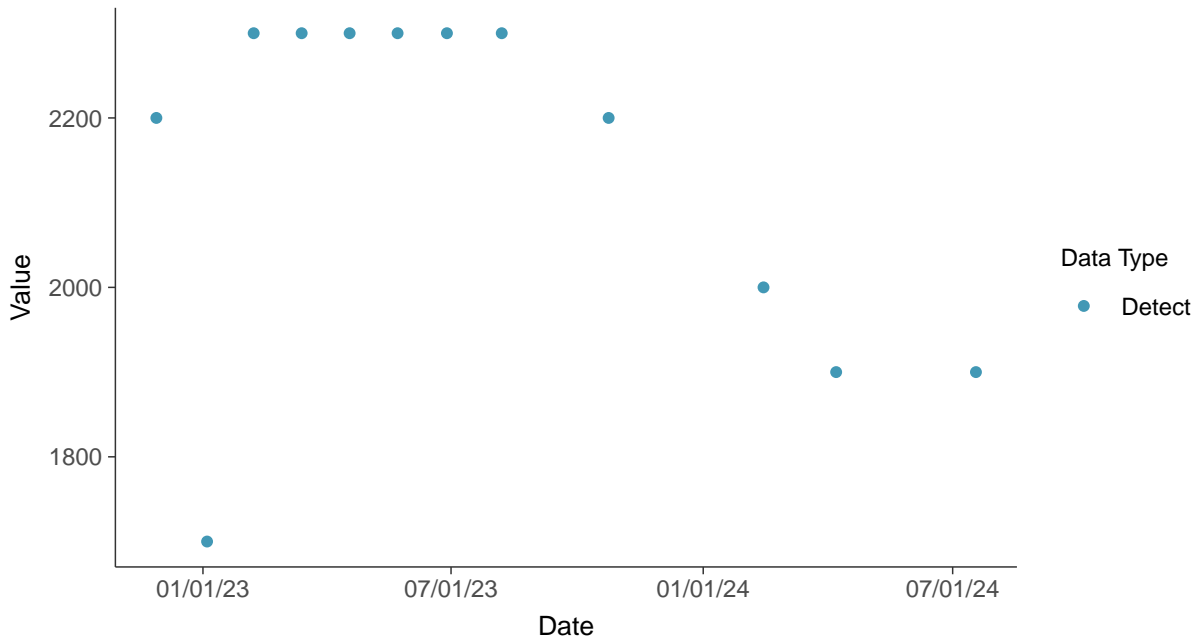


### Appendix III: Total Dissolved Solids, MW-03

ID: 13\_2\_4\_126

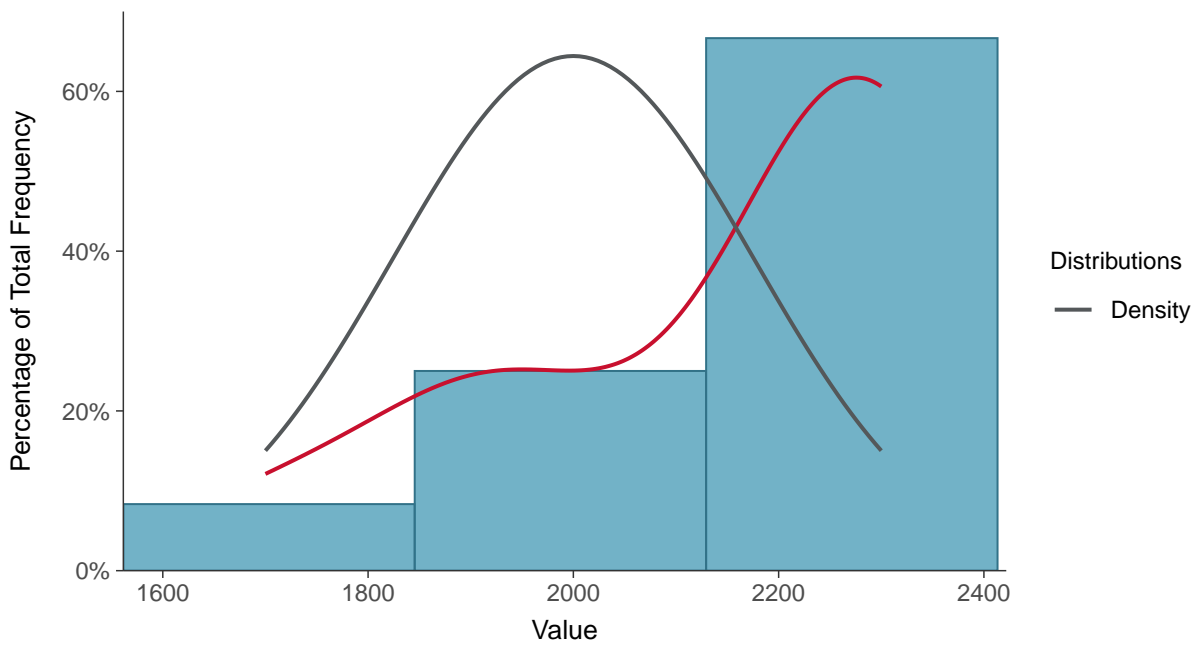
#### Scatter Plot

Total Dissolved Solids, MW-03 (mg/L)



#### Histogram

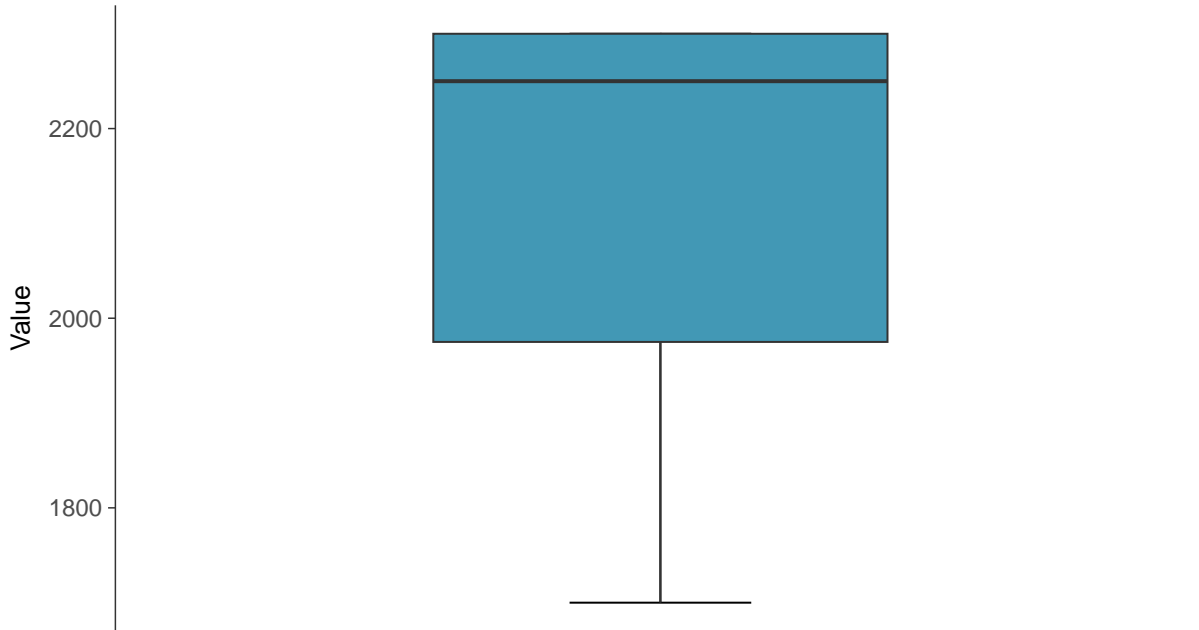
Total Dissolved Solids, MW-03 (mg/L)





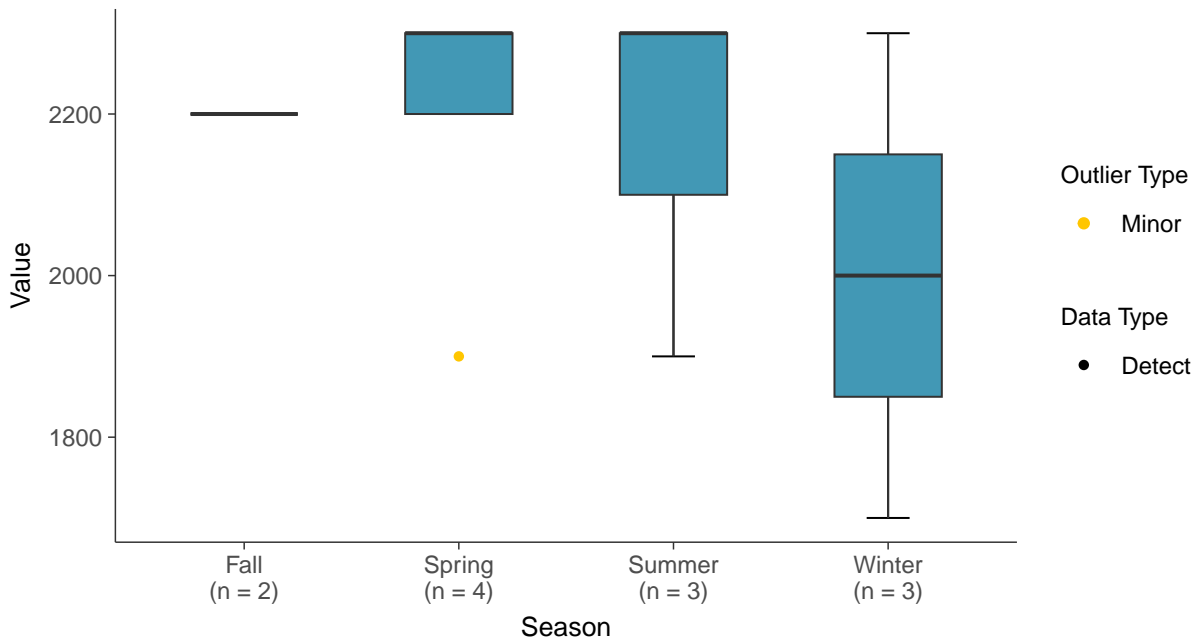
### Boxplot

Total Dissolved Solids, MW-03 (mg/L)



### Boxplot by Season

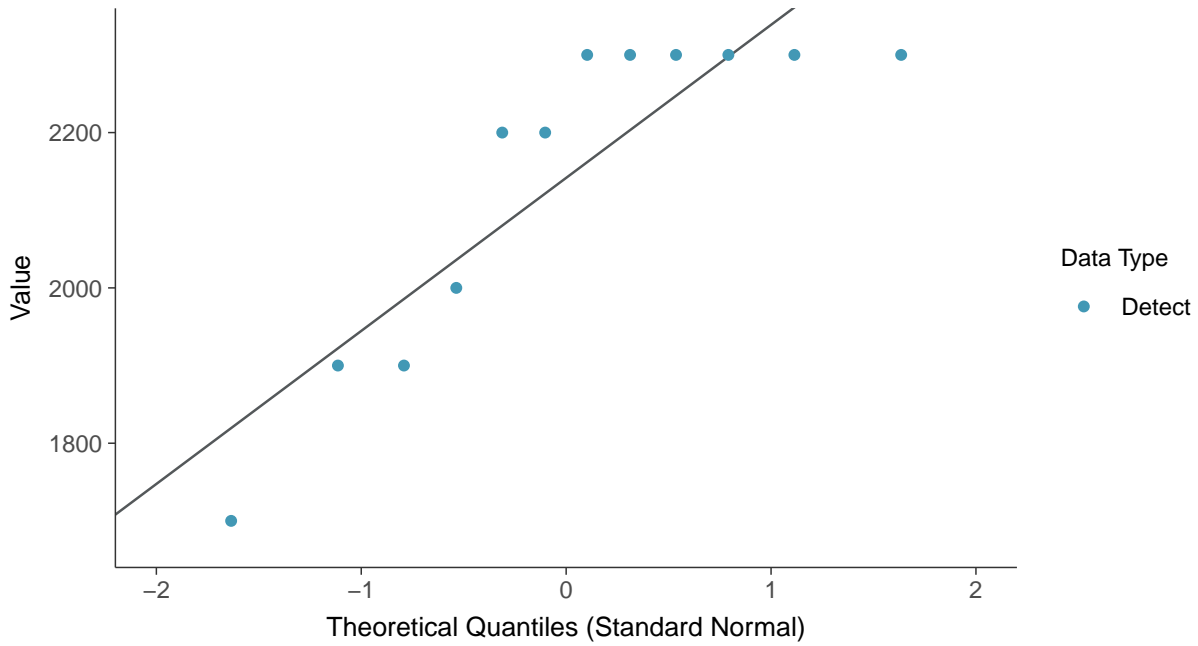
Total Dissolved Solids, MW-03 (mg/L)





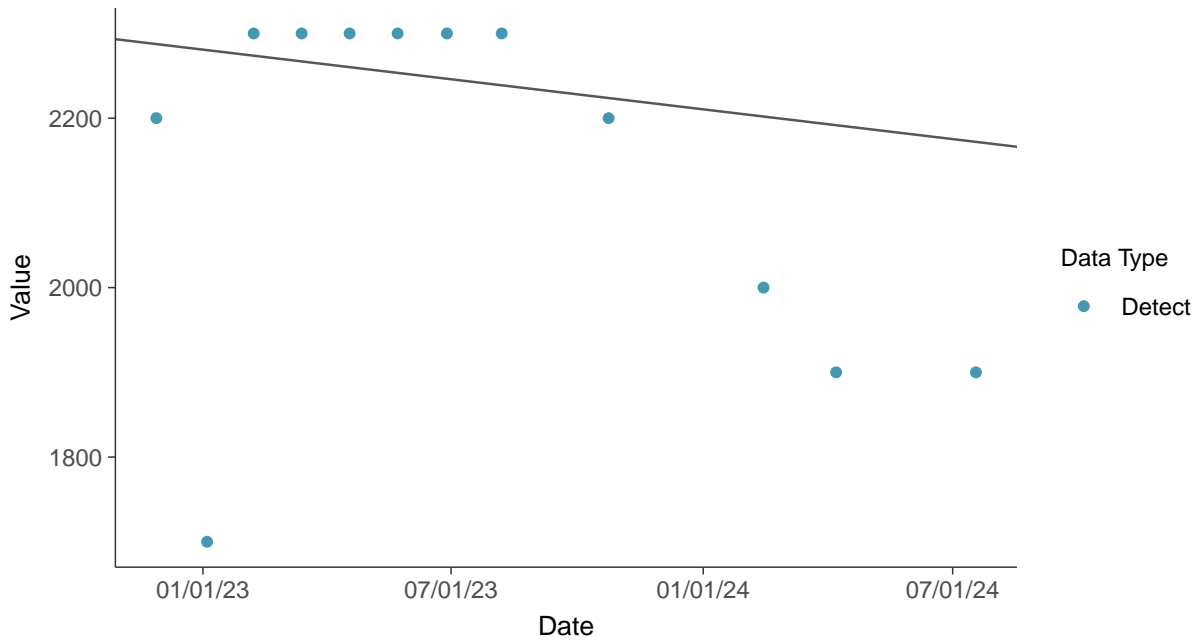
### Normal Q-Q plot

Total Dissolved Solids, MW-03 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-03 (mg/L)

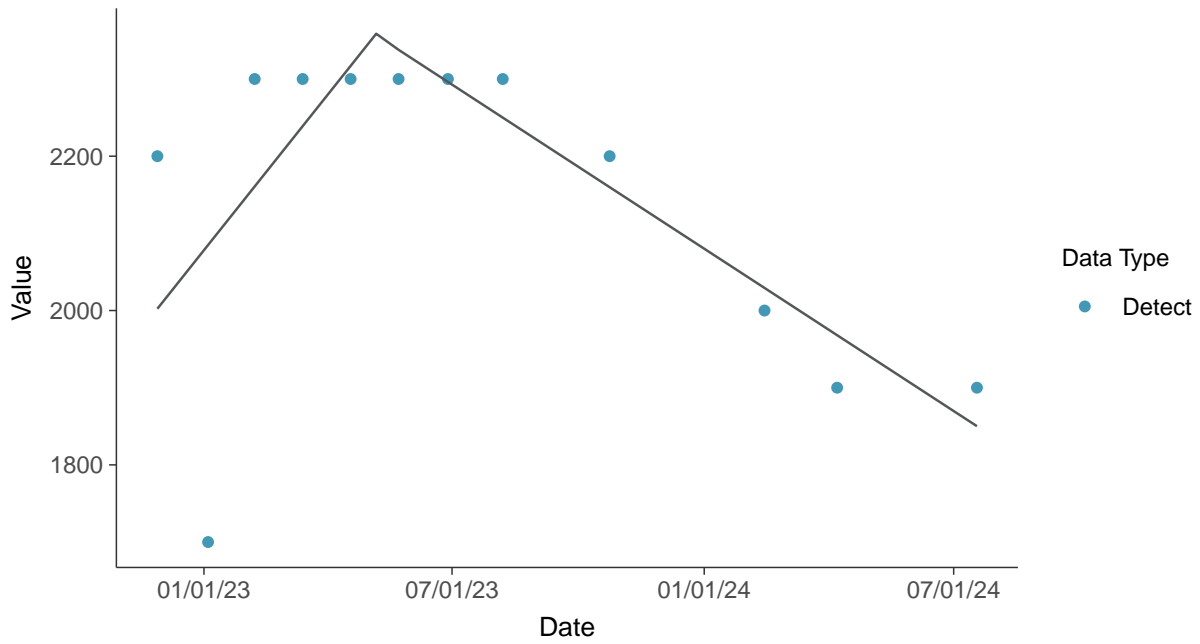






### Trend Regression: Piecewise Linear-Linear

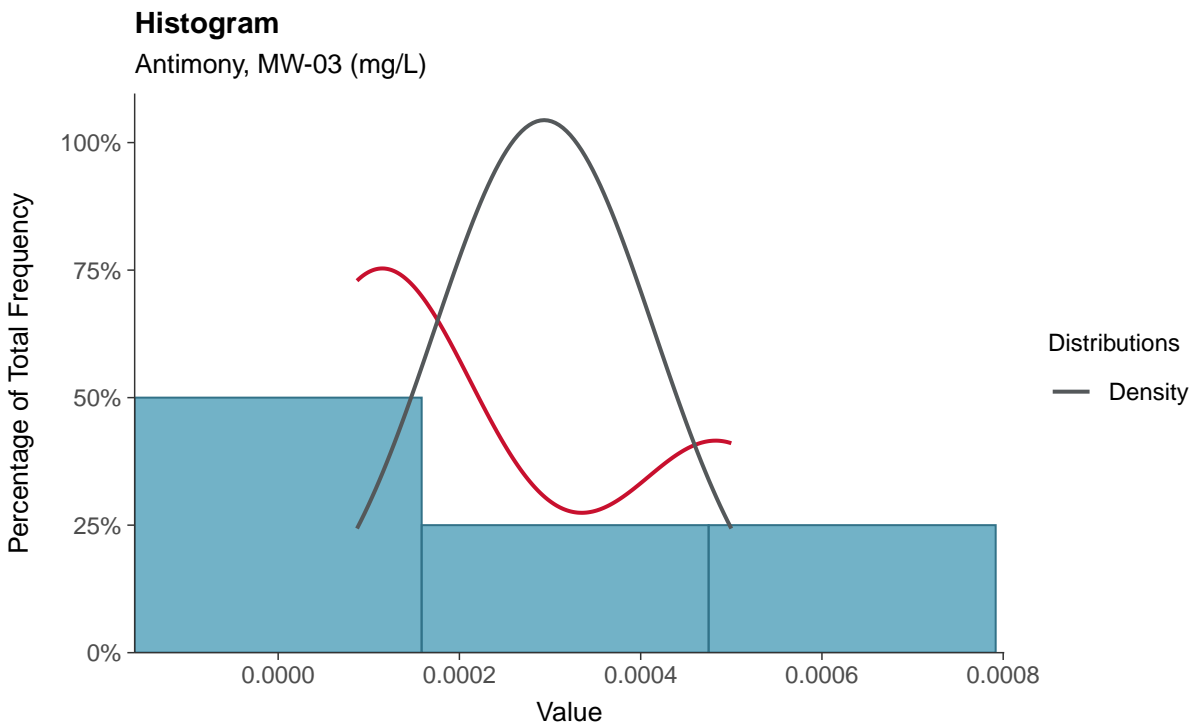
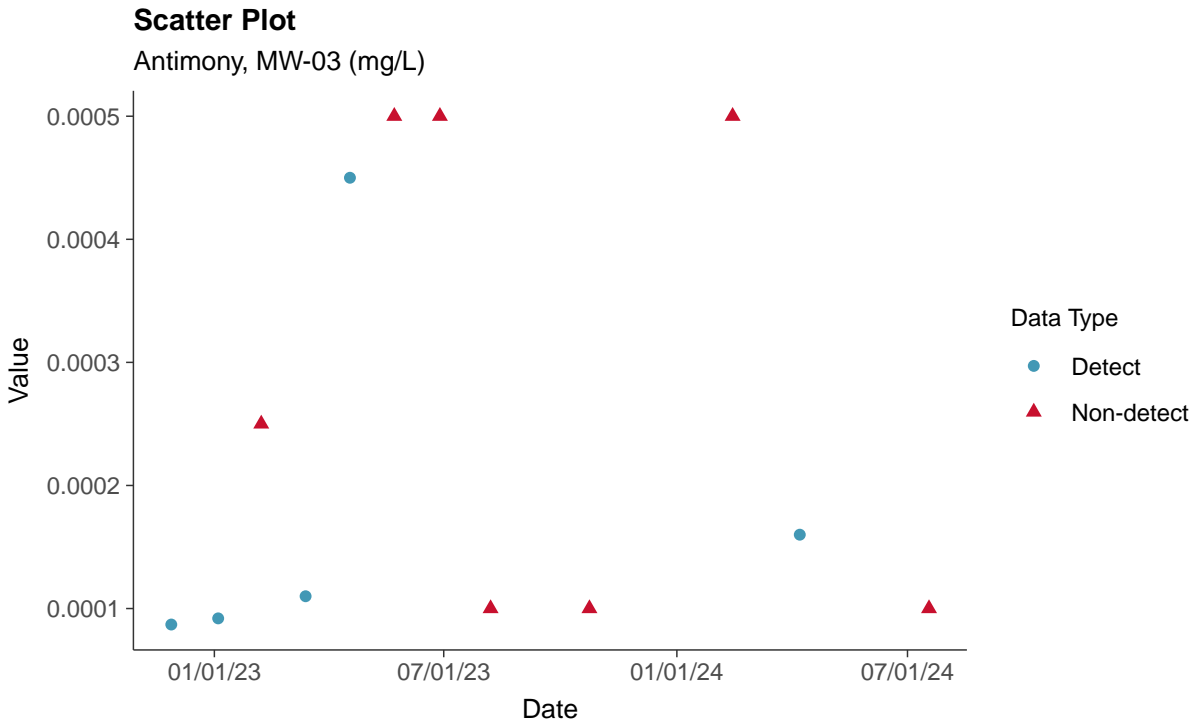
Total Dissolved Solids, MW-03 (mg/L)





### Appendix IV: Antimony, MW-03

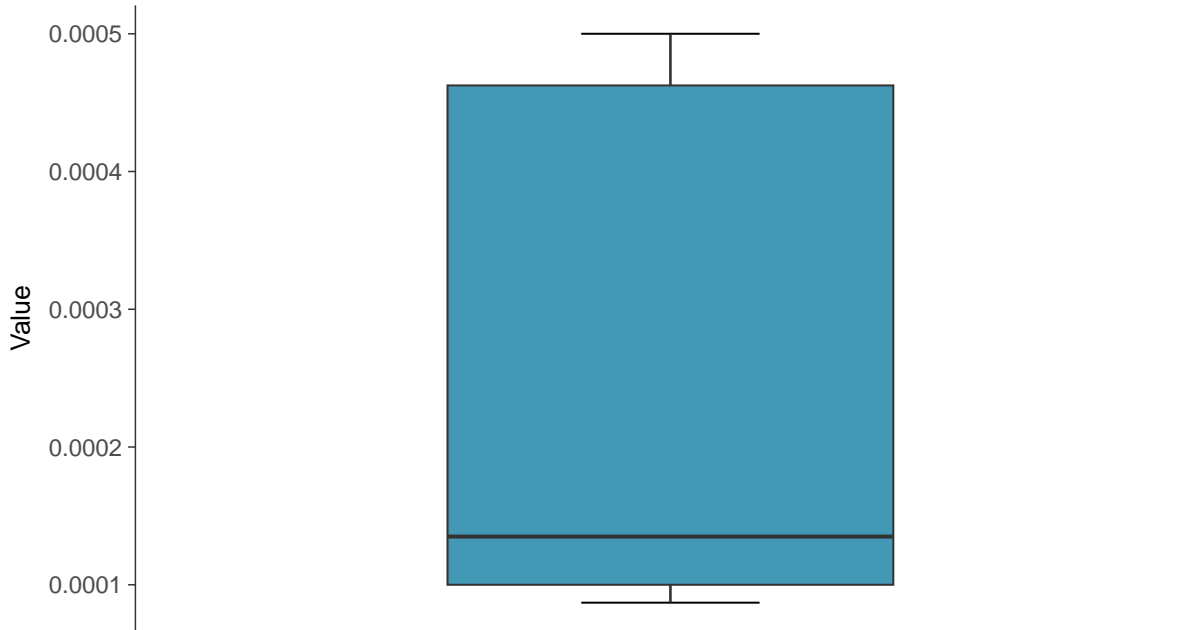
ID: 13\_2\_5\_101





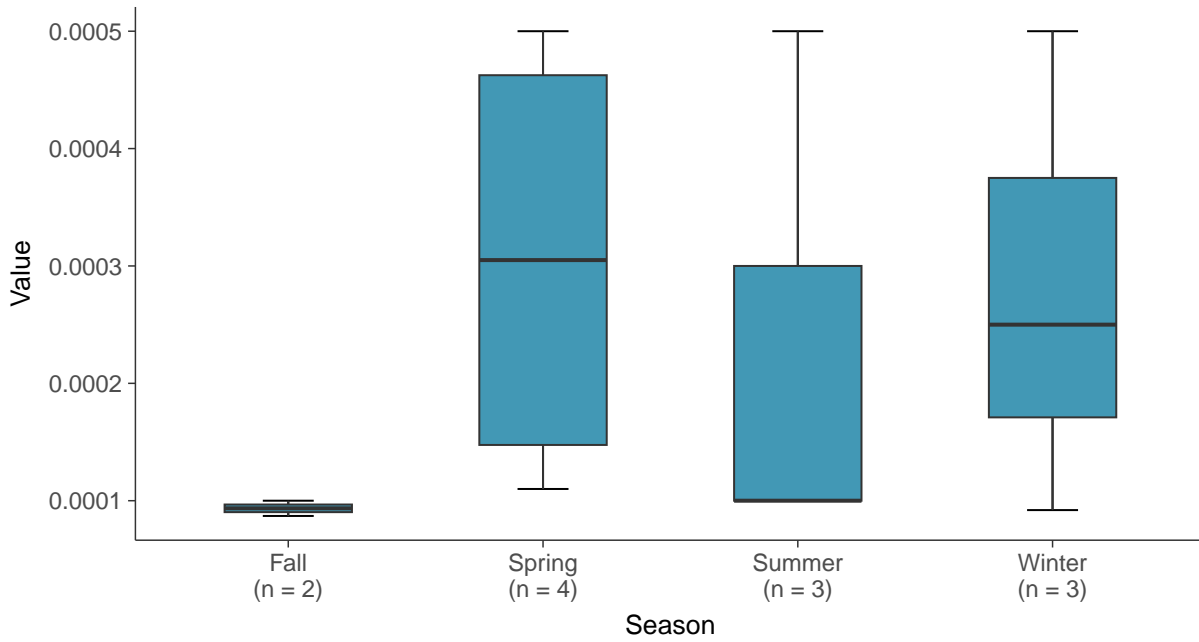
### Boxplot

Antimony, MW-03 (mg/L)



### Boxplot by Season

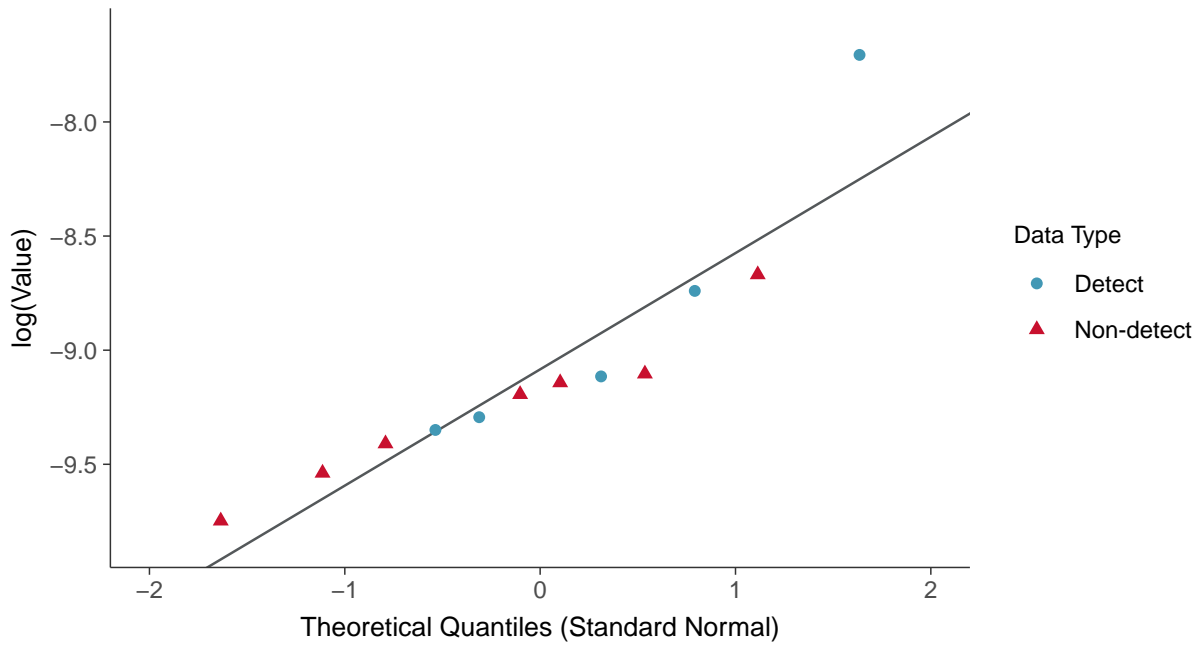
Antimony, MW-03 (mg/L)





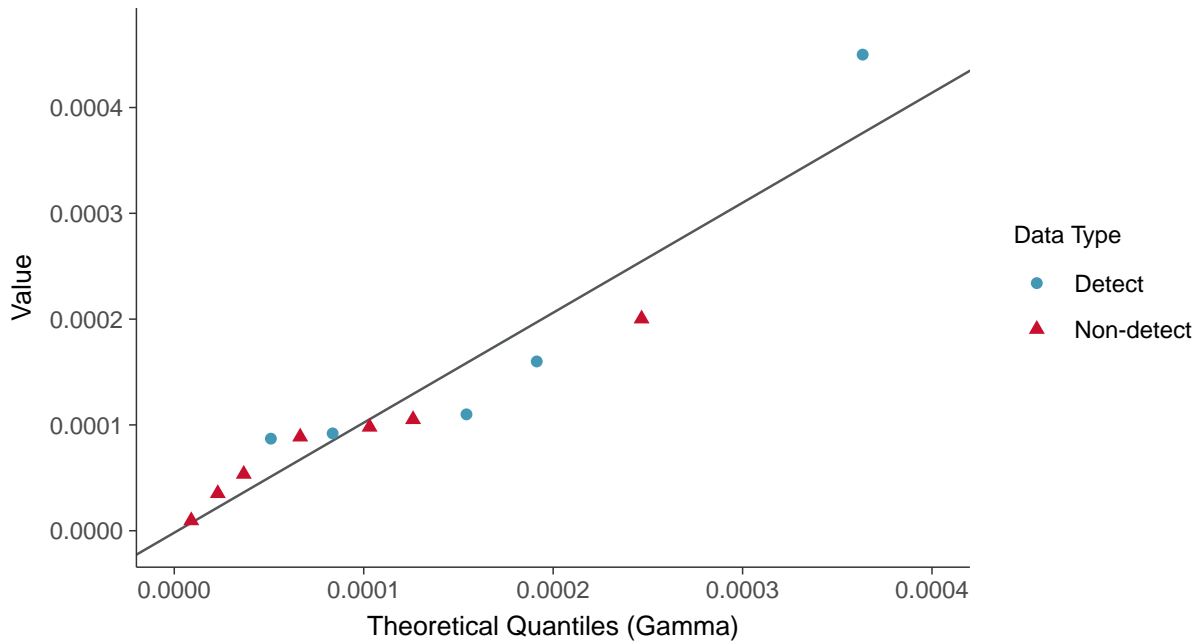
### Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-03 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

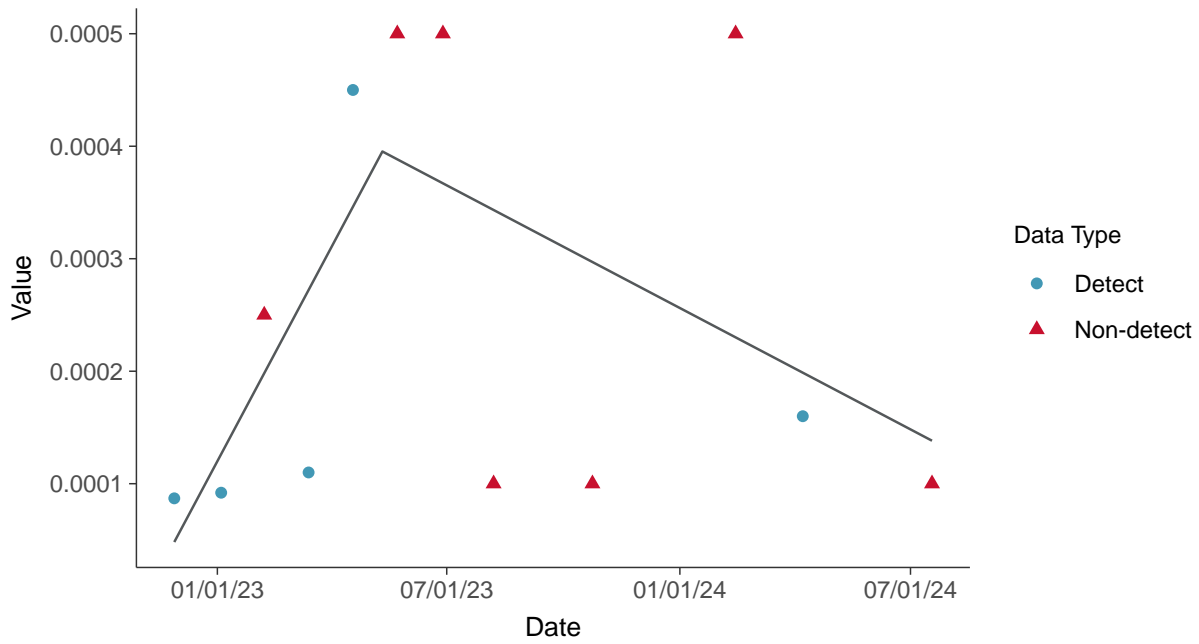
Antimony, MW-03 (mg/L)





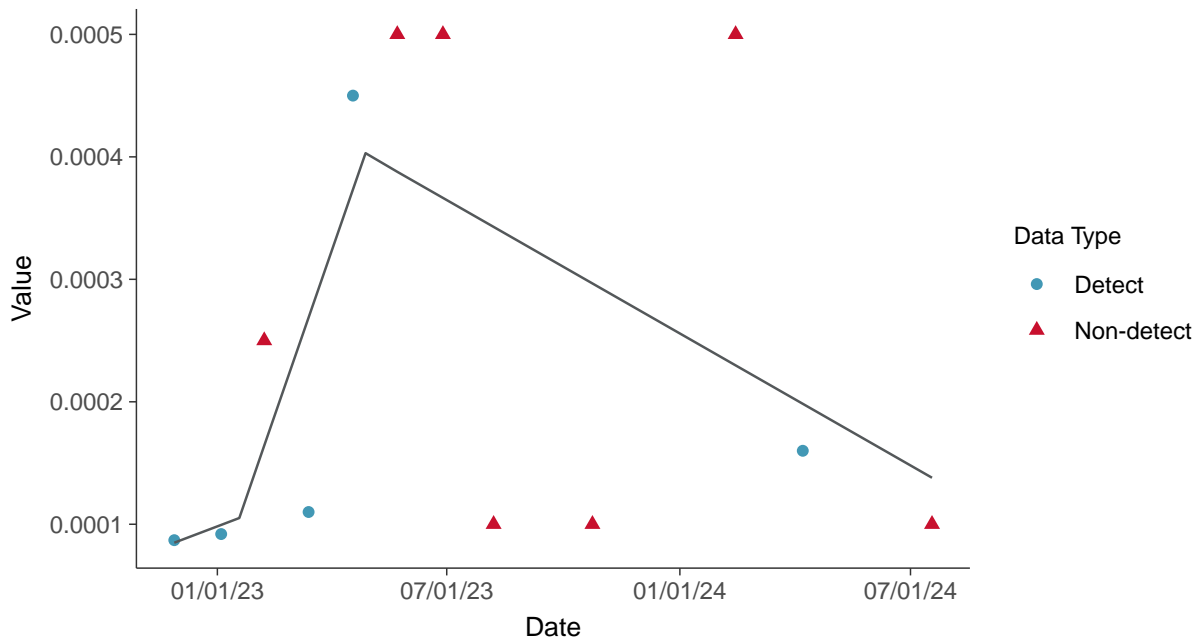
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-03 (mg/L)



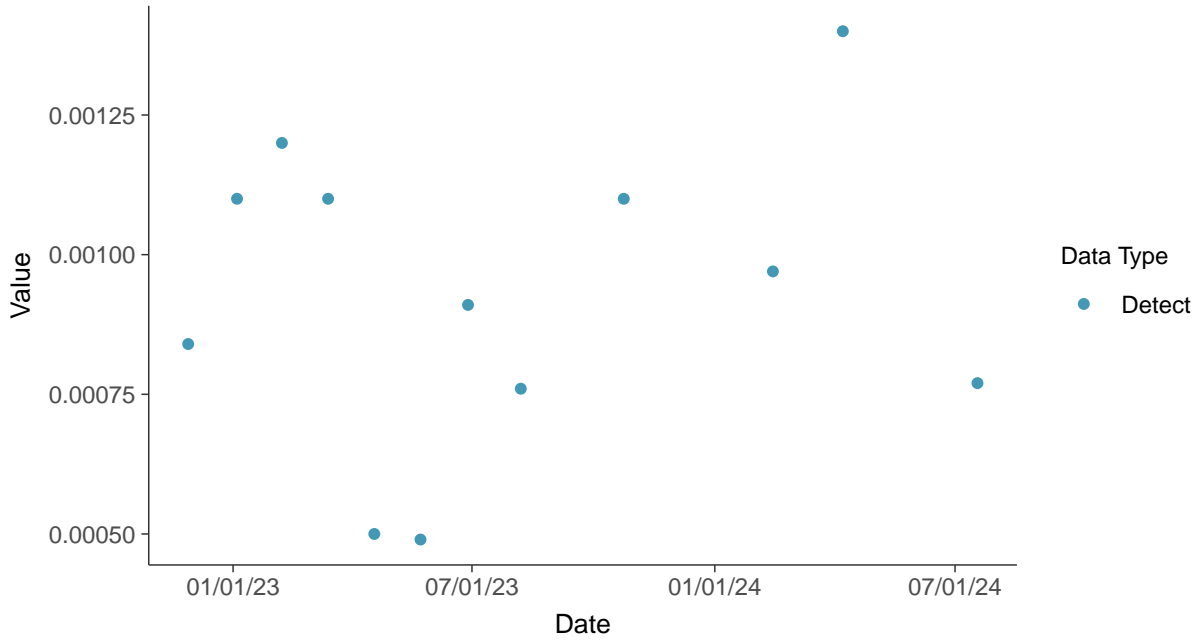


### Appendix IV: Arsenic, MW-03

ID: 13\_2\_5\_102

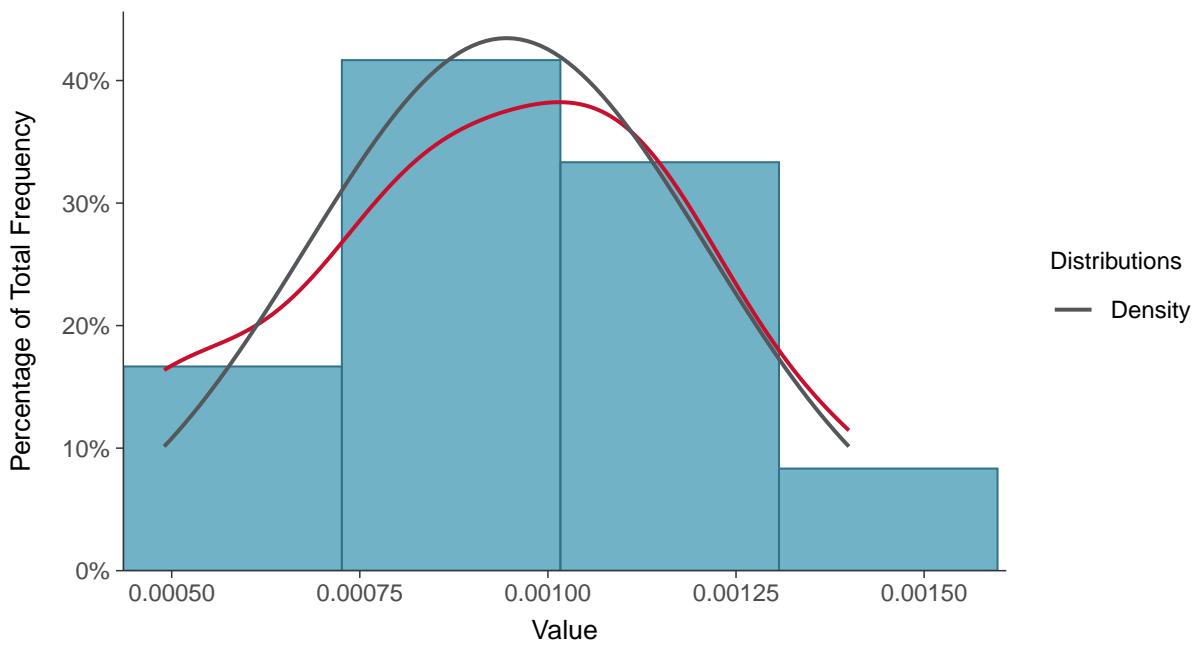
#### Scatter Plot

Arsenic, MW-03 (mg/L)



#### Histogram

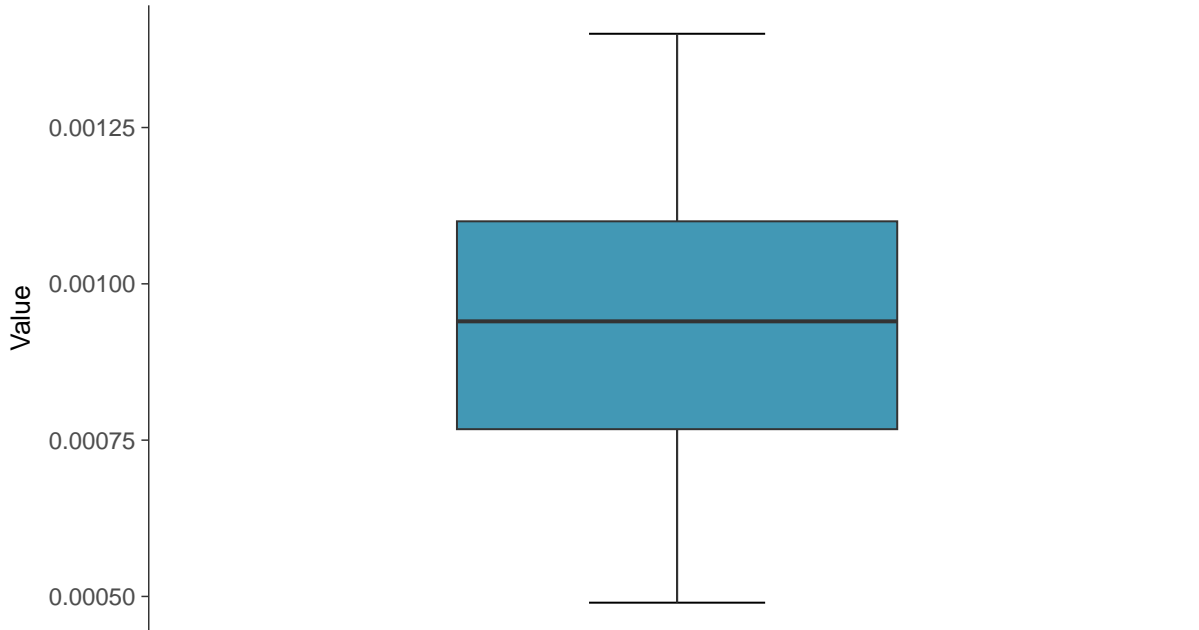
Arsenic, MW-03 (mg/L)





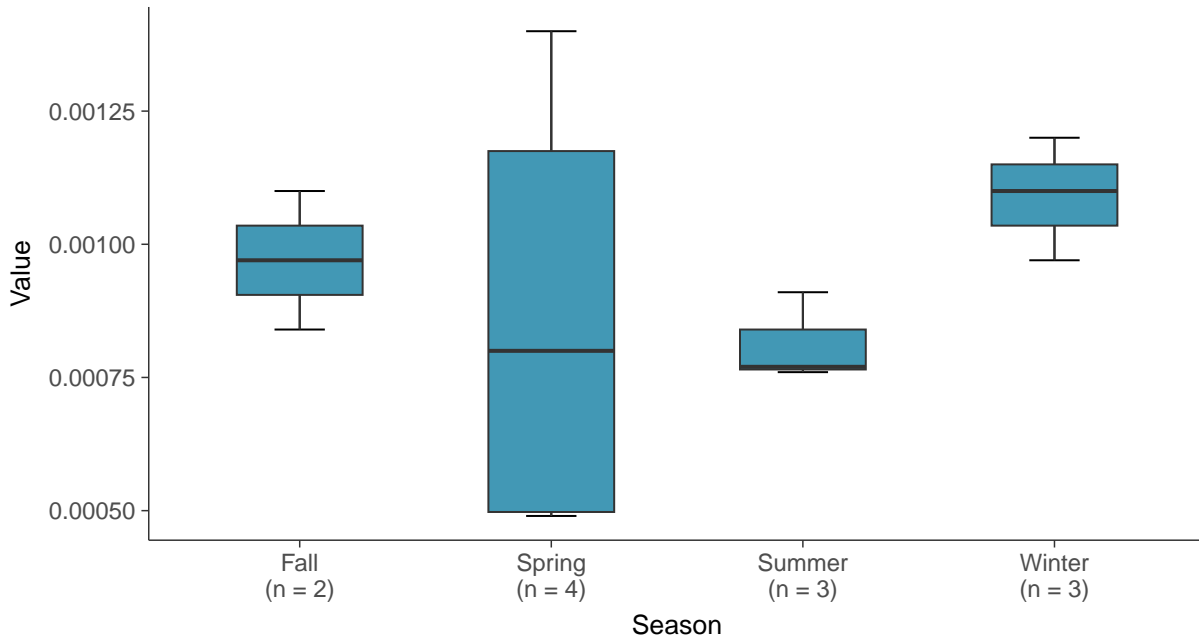
### Boxplot

Arsenic, MW-03 (mg/L)



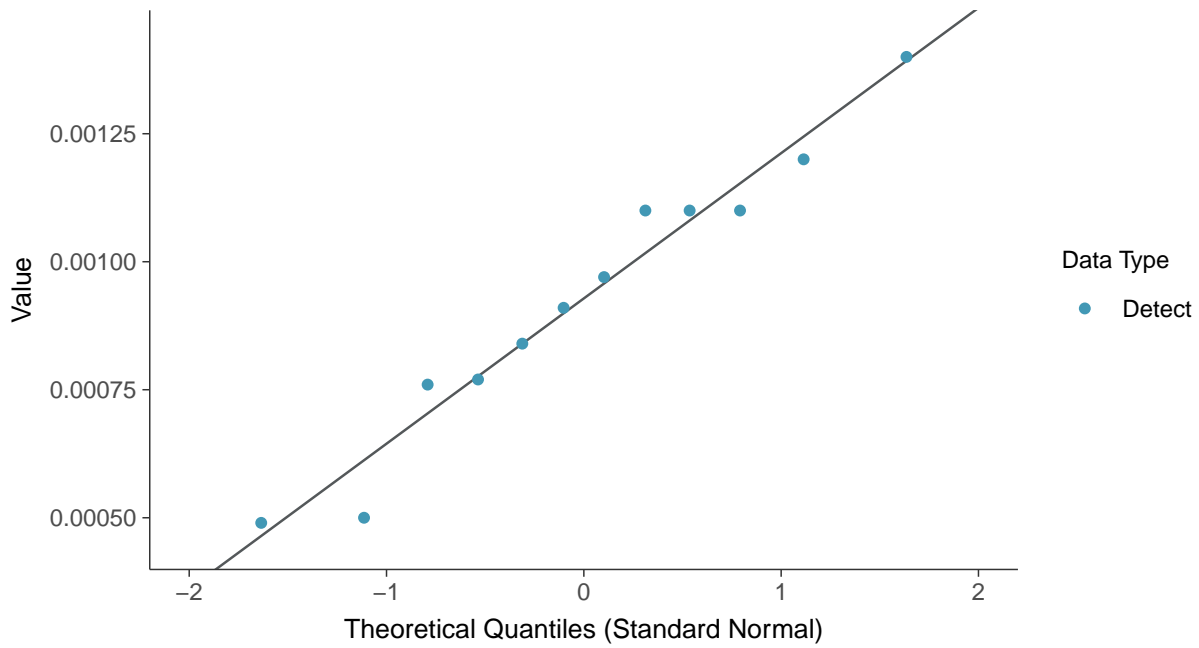
### Boxplot by Season

Arsenic, MW-03 (mg/L)

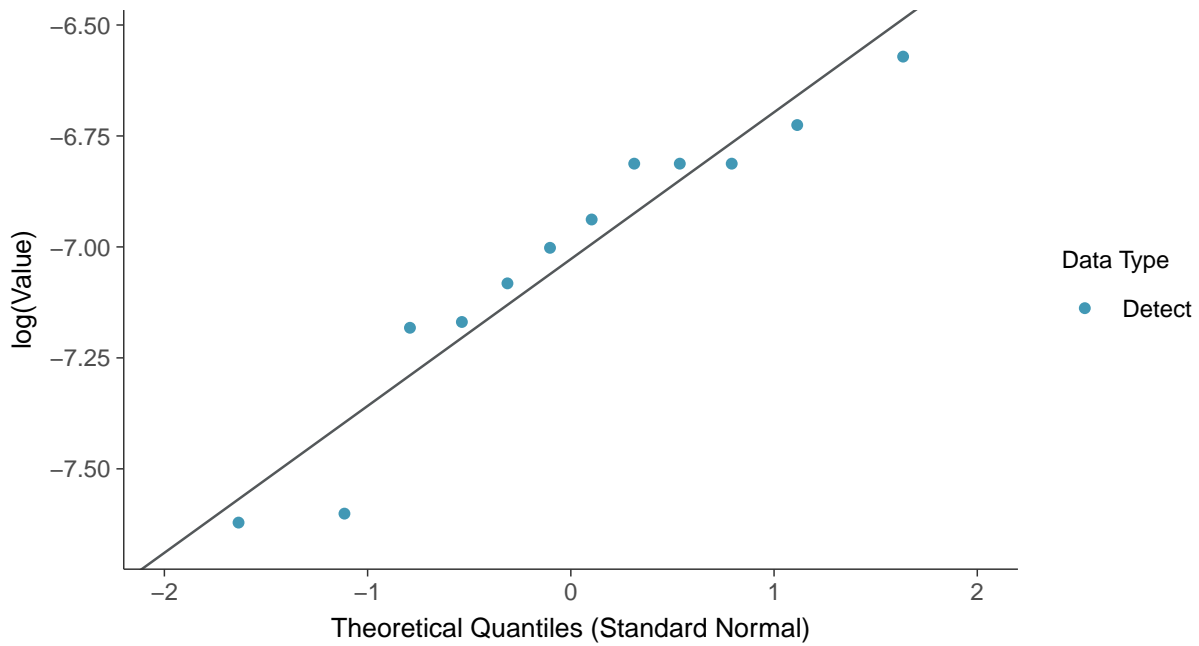




**Normal Q-Q plot**  
Arsenic, MW-03 (mg/L)



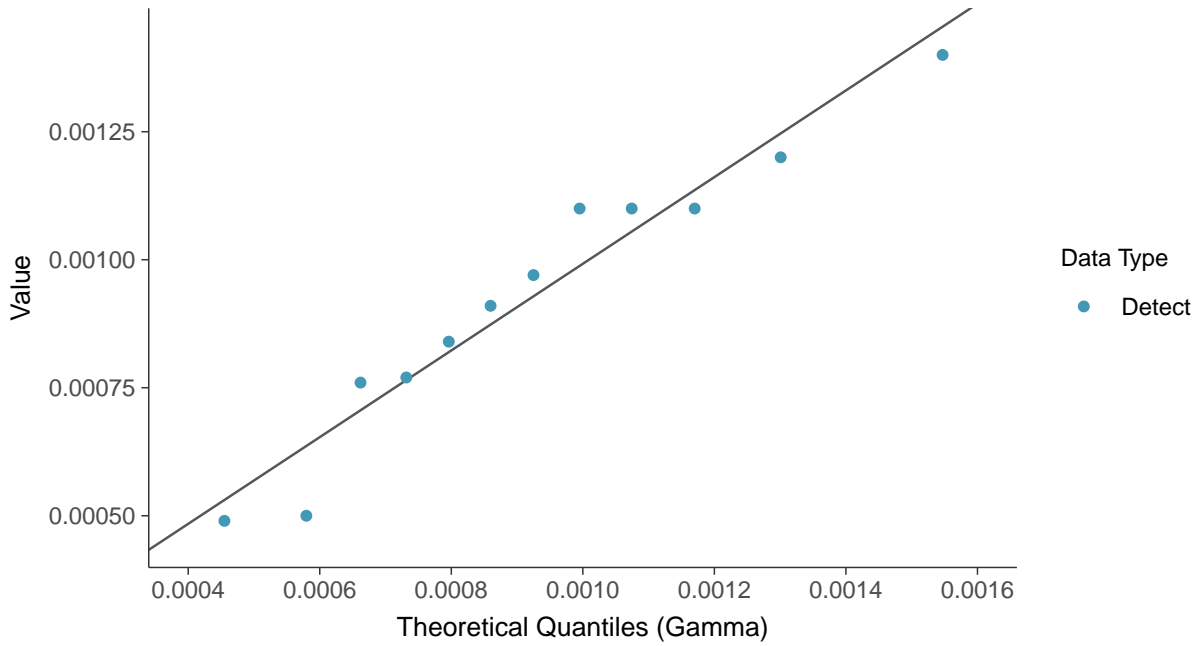
**Lognormal Q-Q plot**  
Arsenic, MW-03 (mg/L)



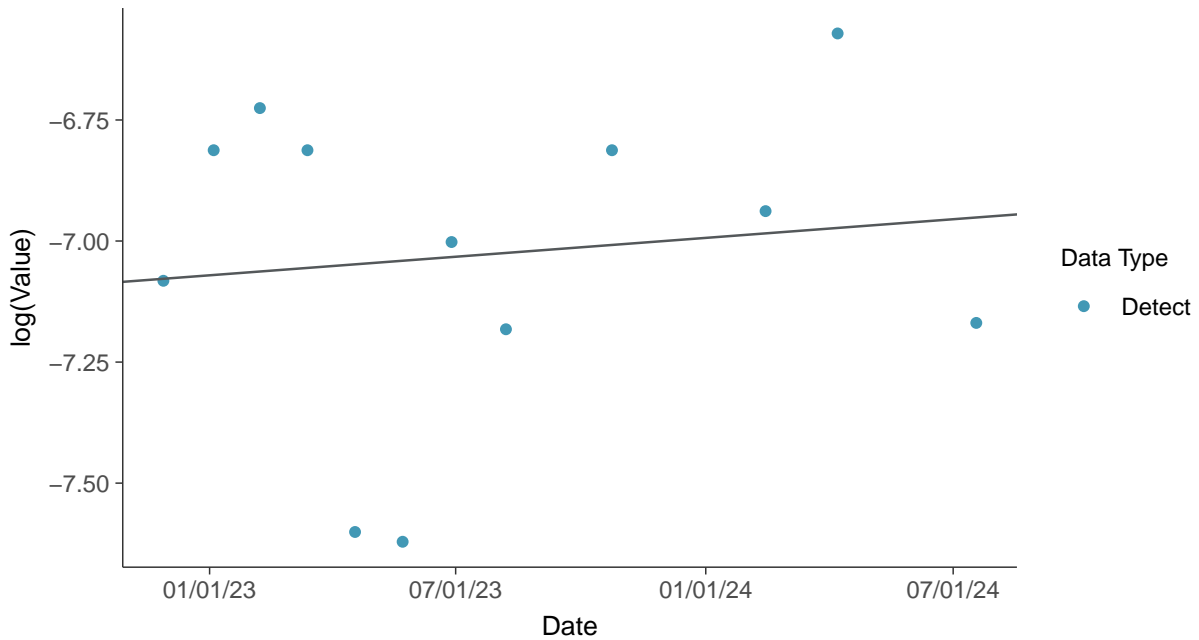




**Gamma Q-Q plot**  
Arsenic, MW-03 (mg/L)



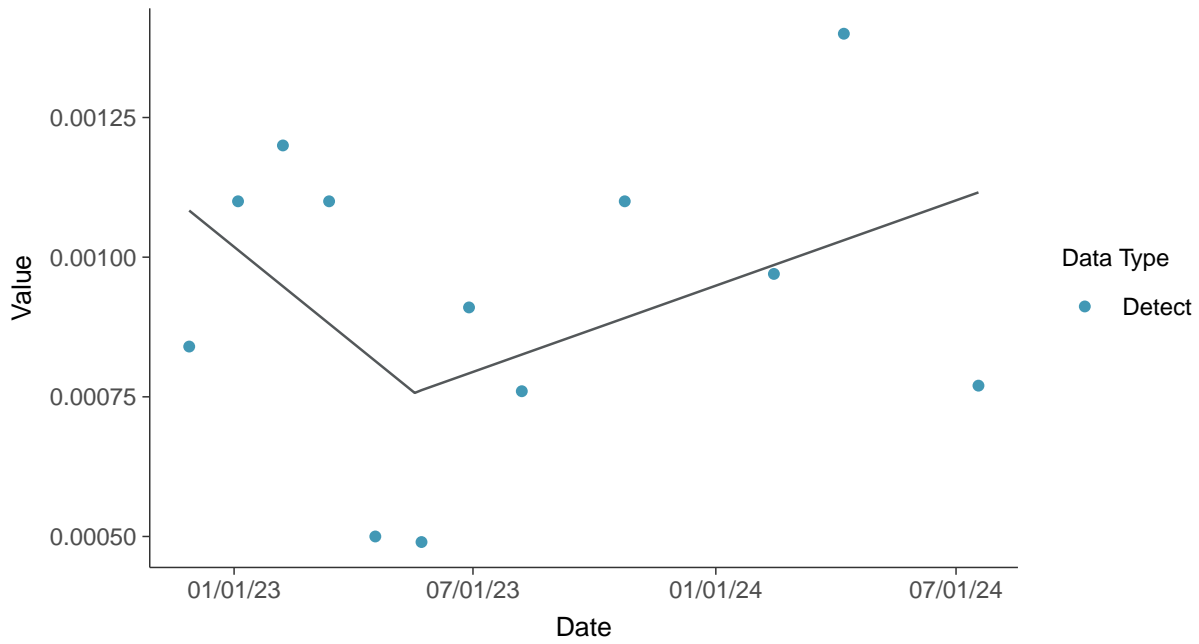
**Trend Regression: Lognormal MLE**  
Arsenic, MW-03 (mg/L)





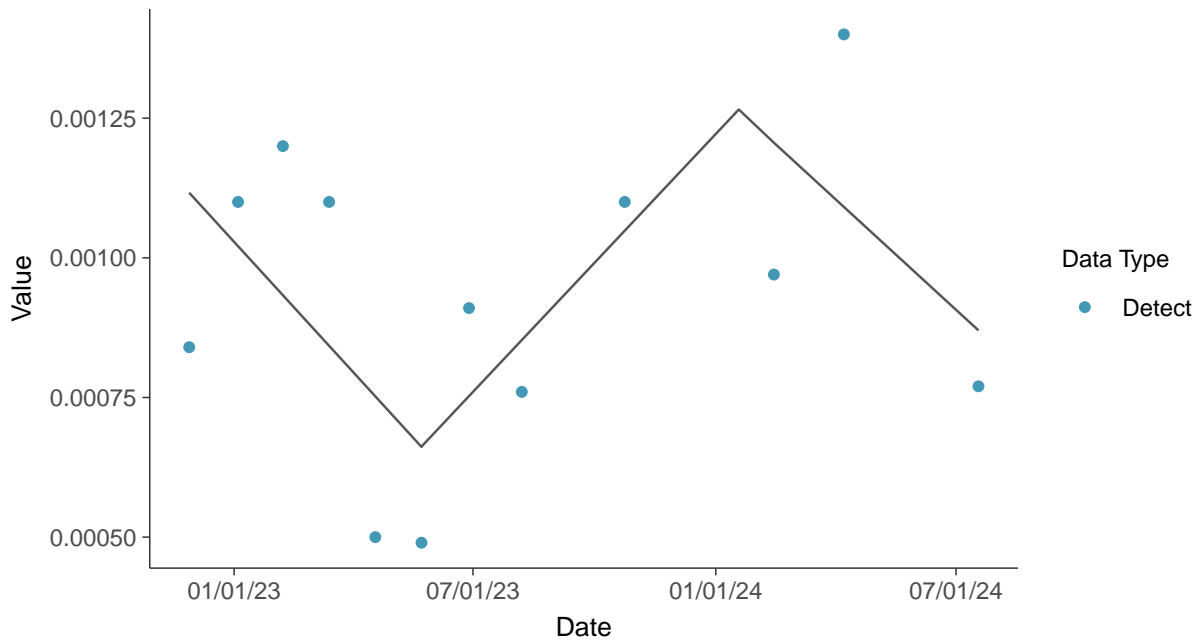
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

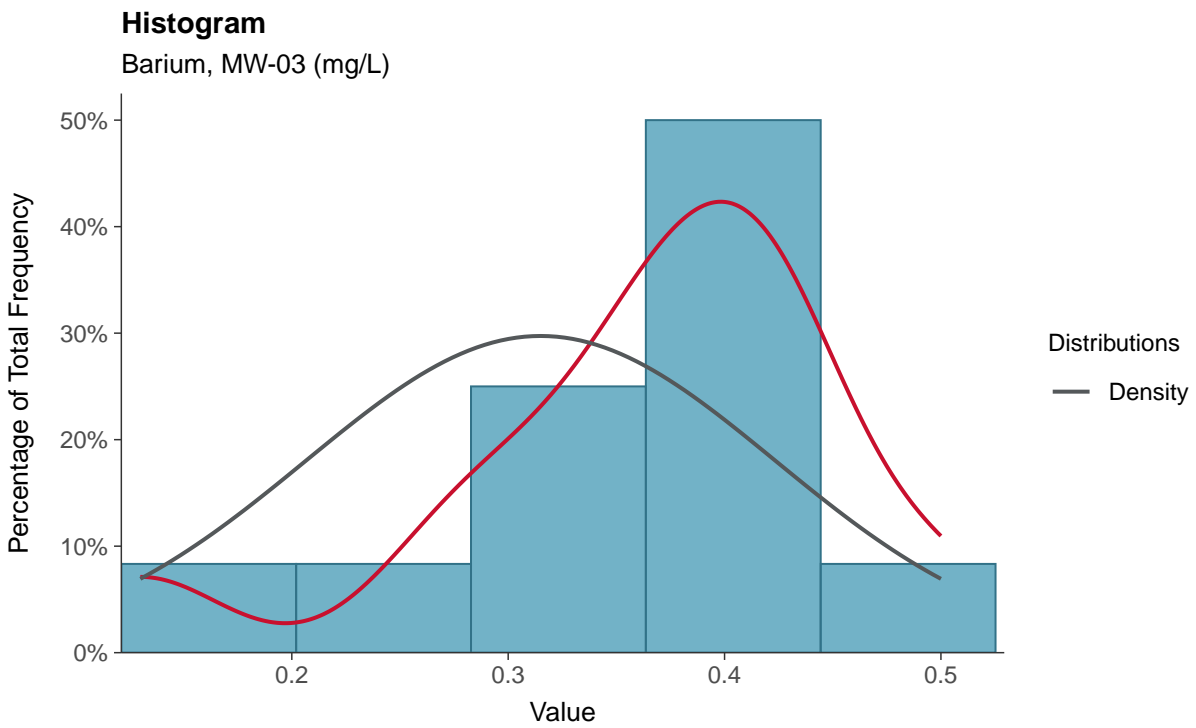
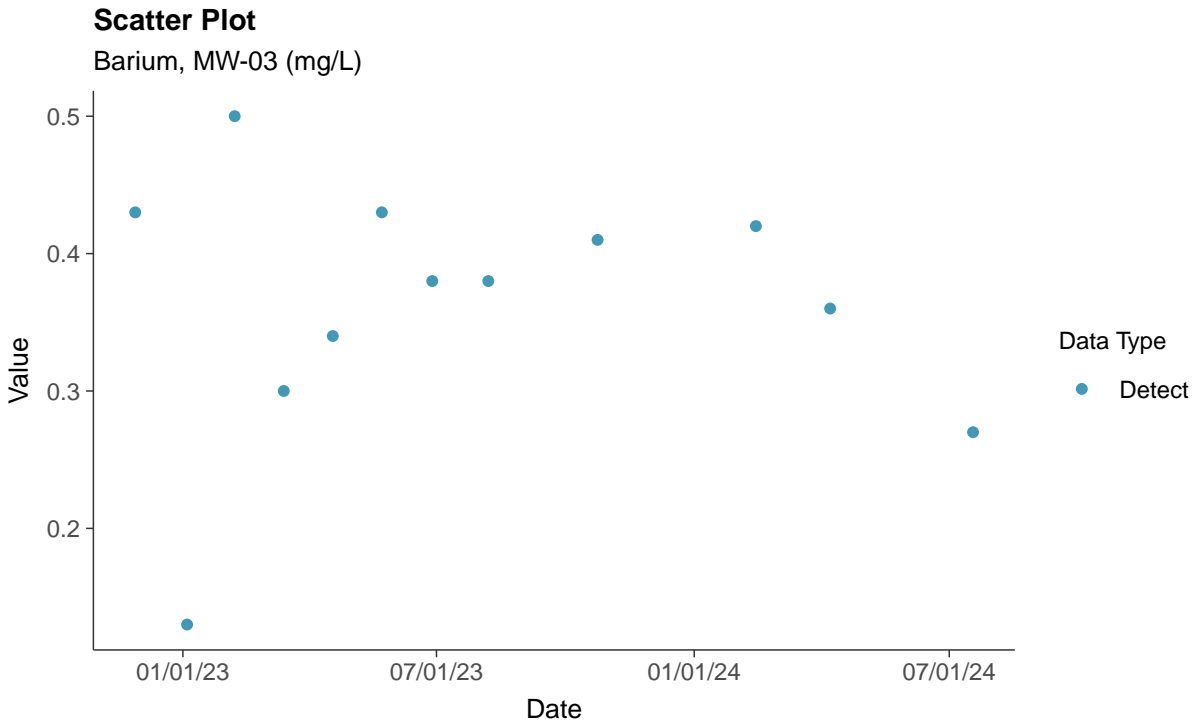
Arsenic, MW-03 (mg/L)





### Appendix IV: Barium, MW-03

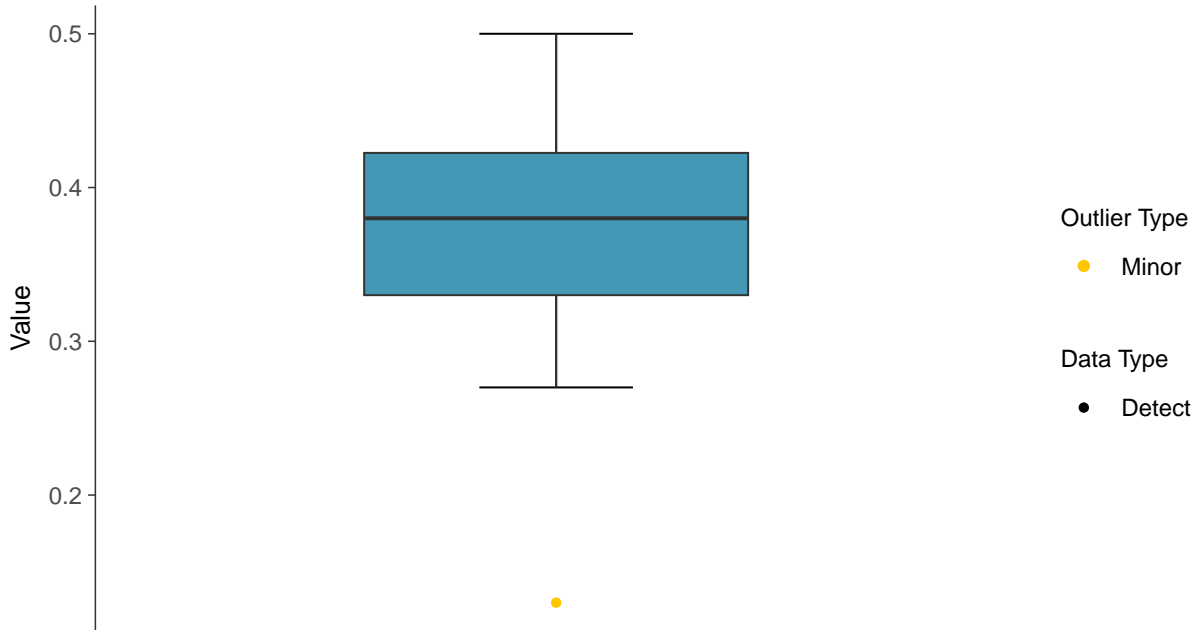
ID: 13\_2\_5\_103





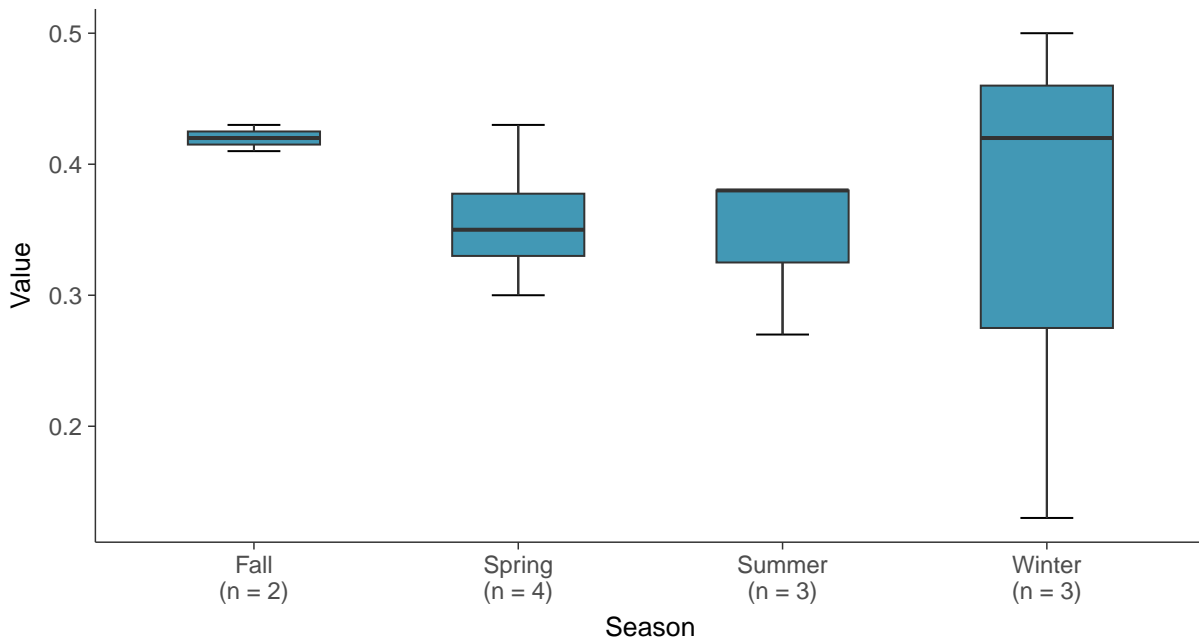
### Boxplot

Barium, MW-03 (mg/L)



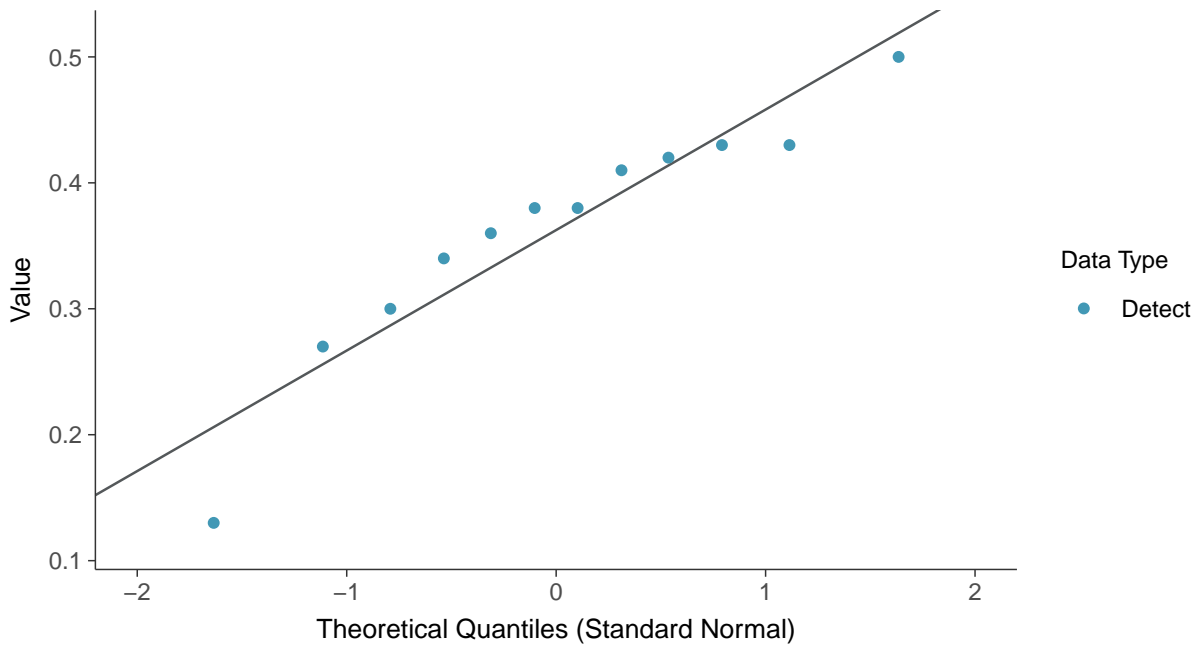
### Boxplot by Season

Barium, MW-03 (mg/L)

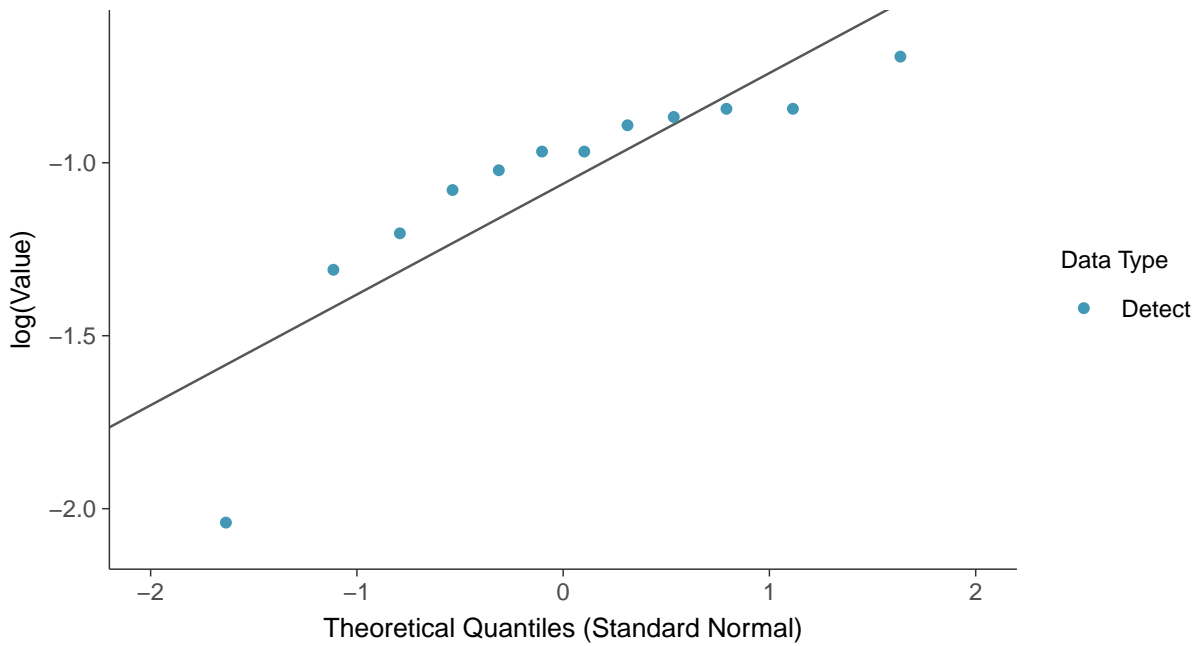




**Normal Q-Q plot**  
Barium, MW-03 (mg/L)

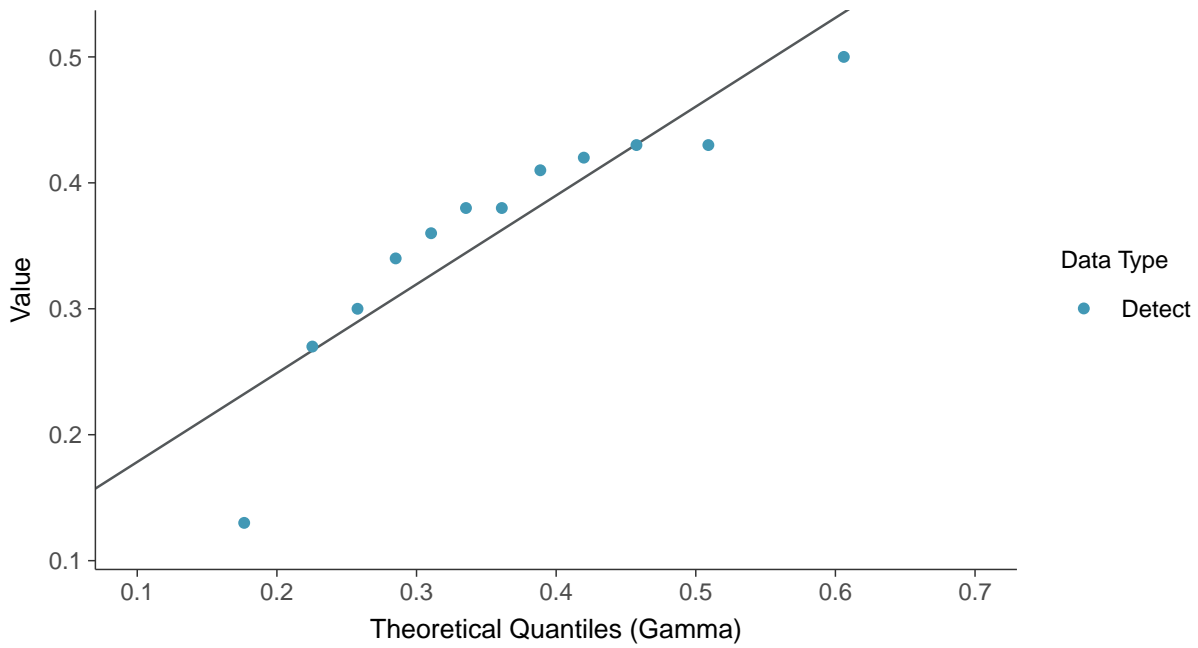


**Lognormal Q-Q plot**  
Barium, MW-03 (mg/L)

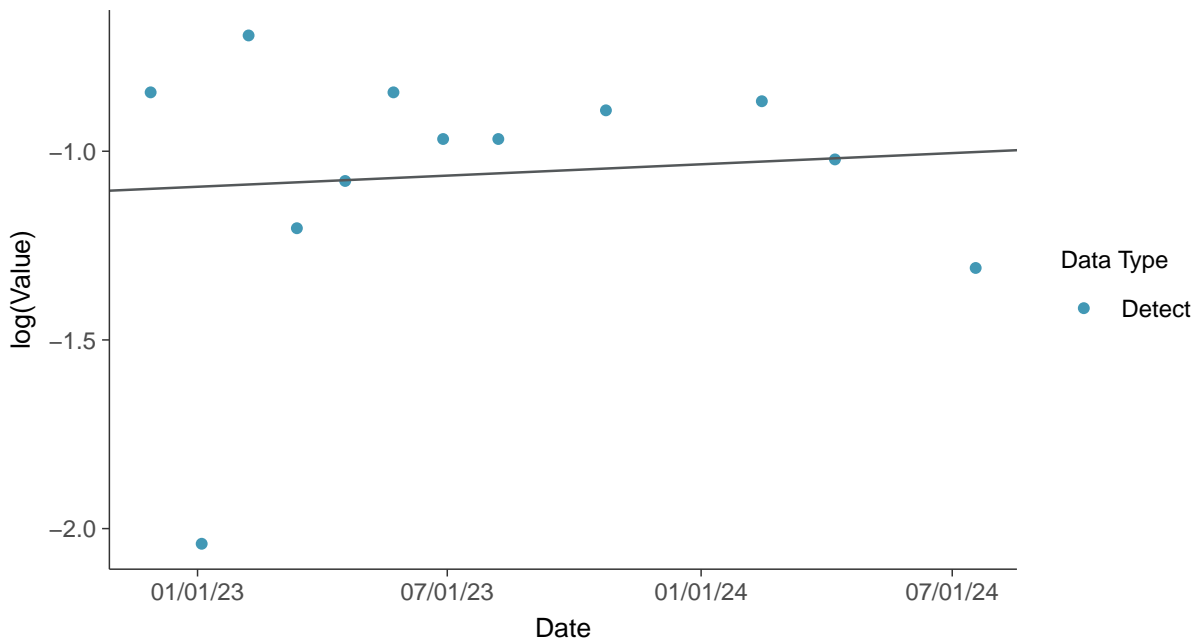




**Gamma Q-Q plot**  
Barium, MW-03 (mg/L)



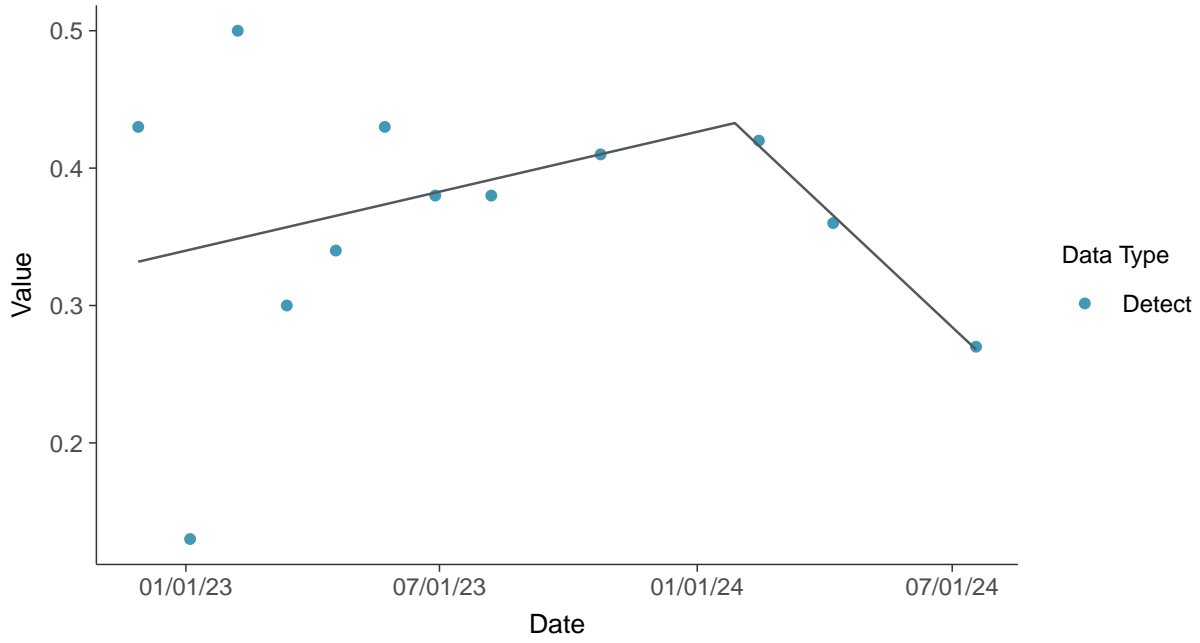
**Trend Regression: Lognormal MLE**  
Barium, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear

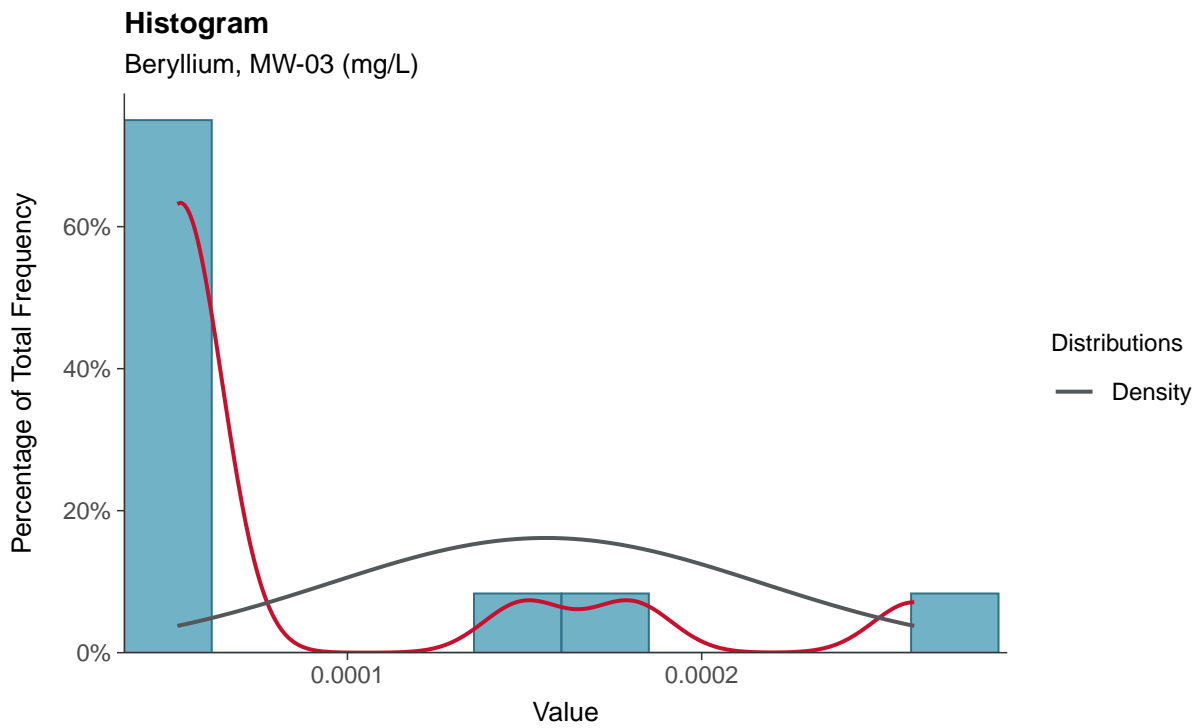
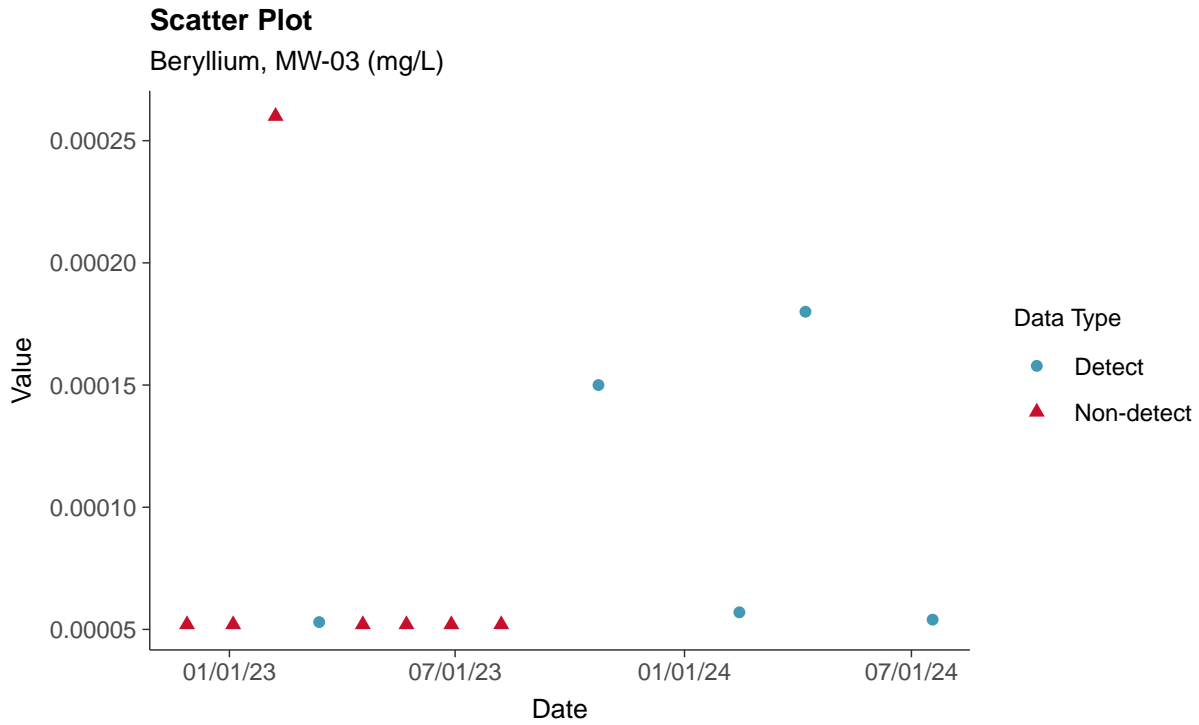
Barium, MW-03 (mg/L)





### Appendix IV: Beryllium, MW-03

ID: 13\_2\_5\_104

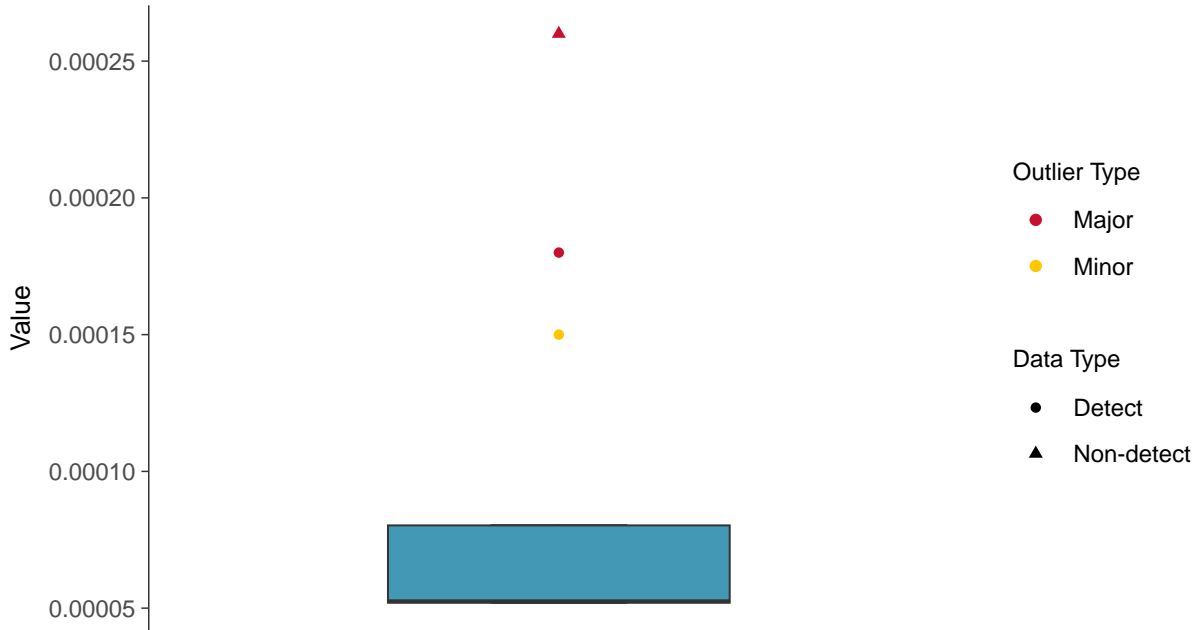






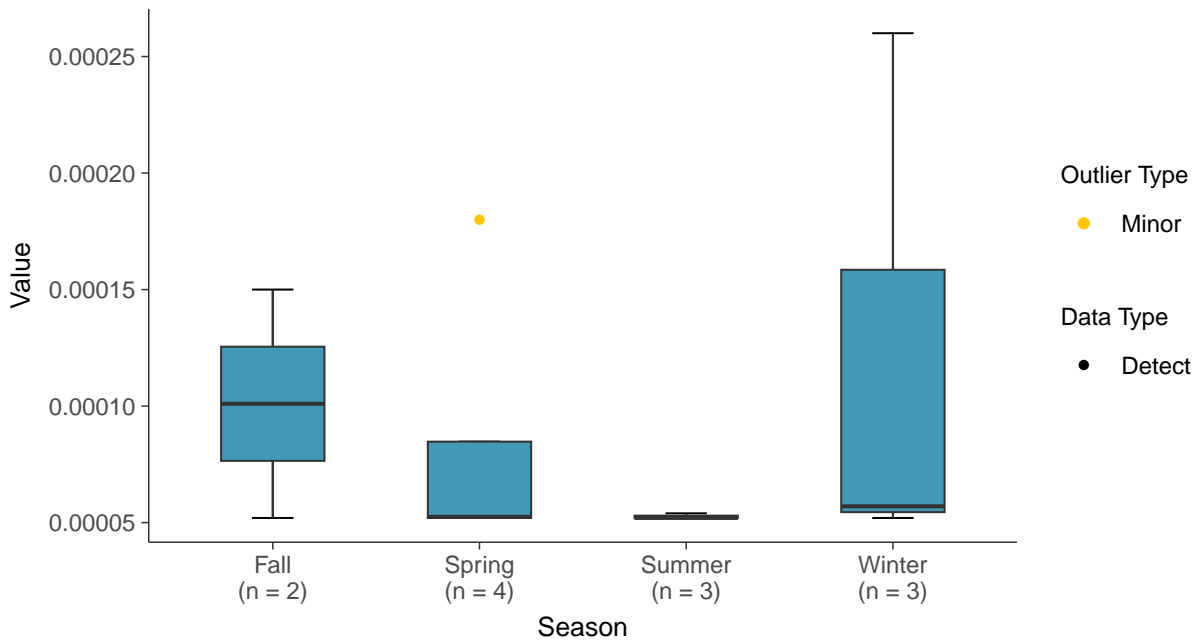
### Boxplot

Beryllium, MW-03 (mg/L)



### Boxplot by Season

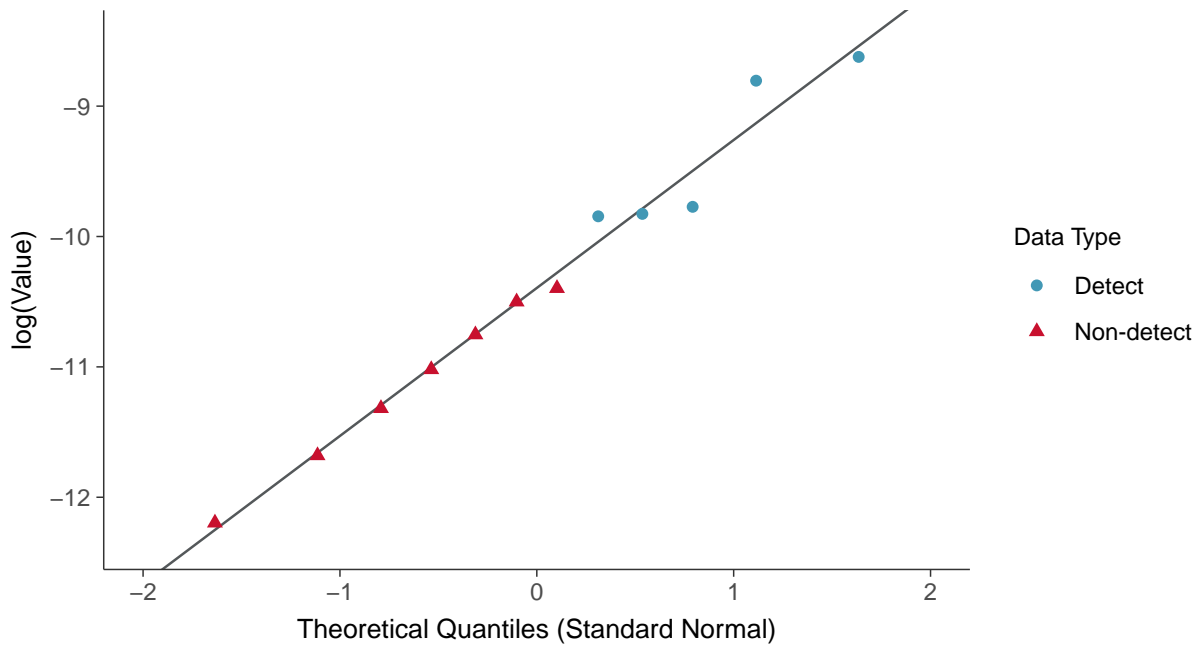
Beryllium, MW-03 (mg/L)





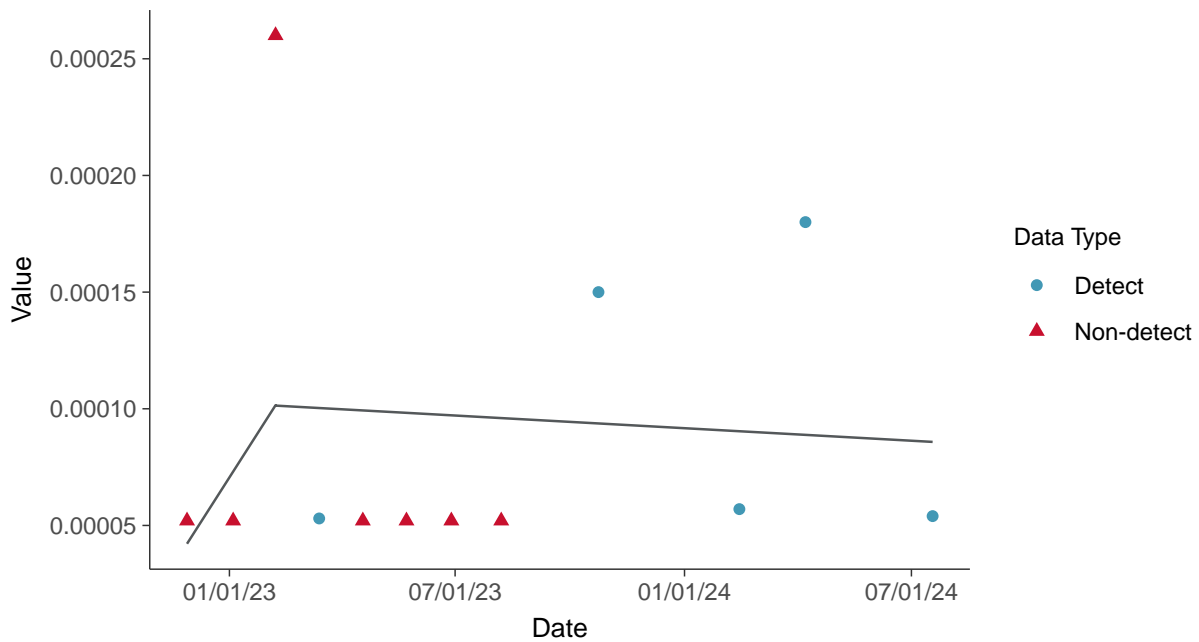
### Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

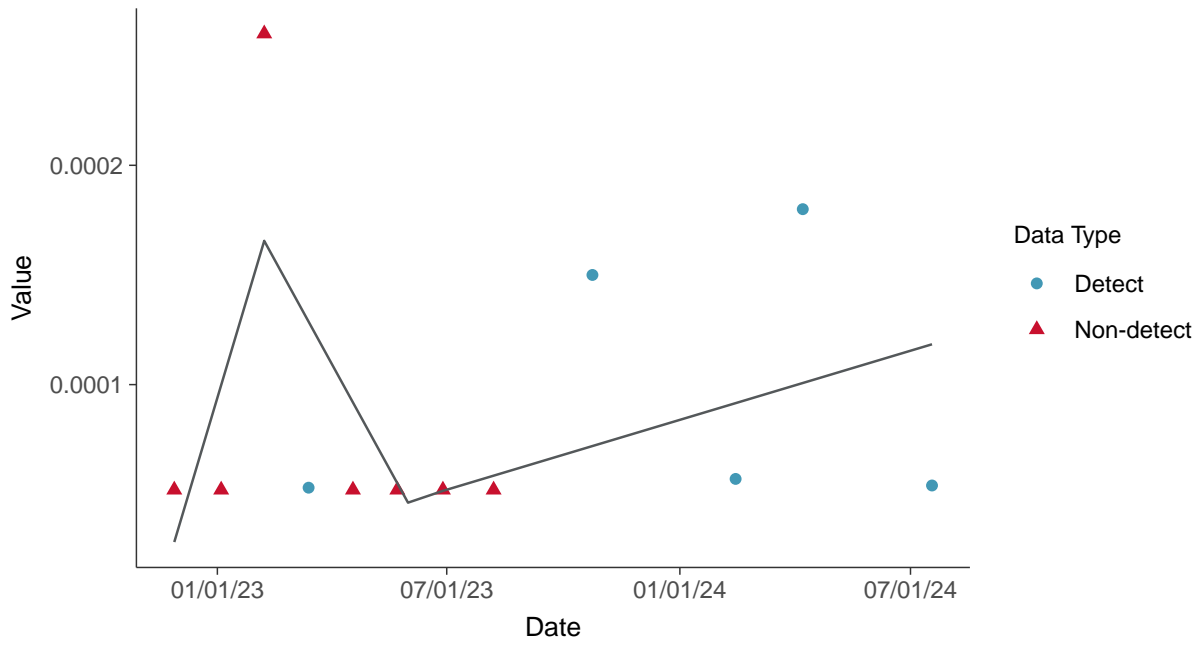
Beryllium, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

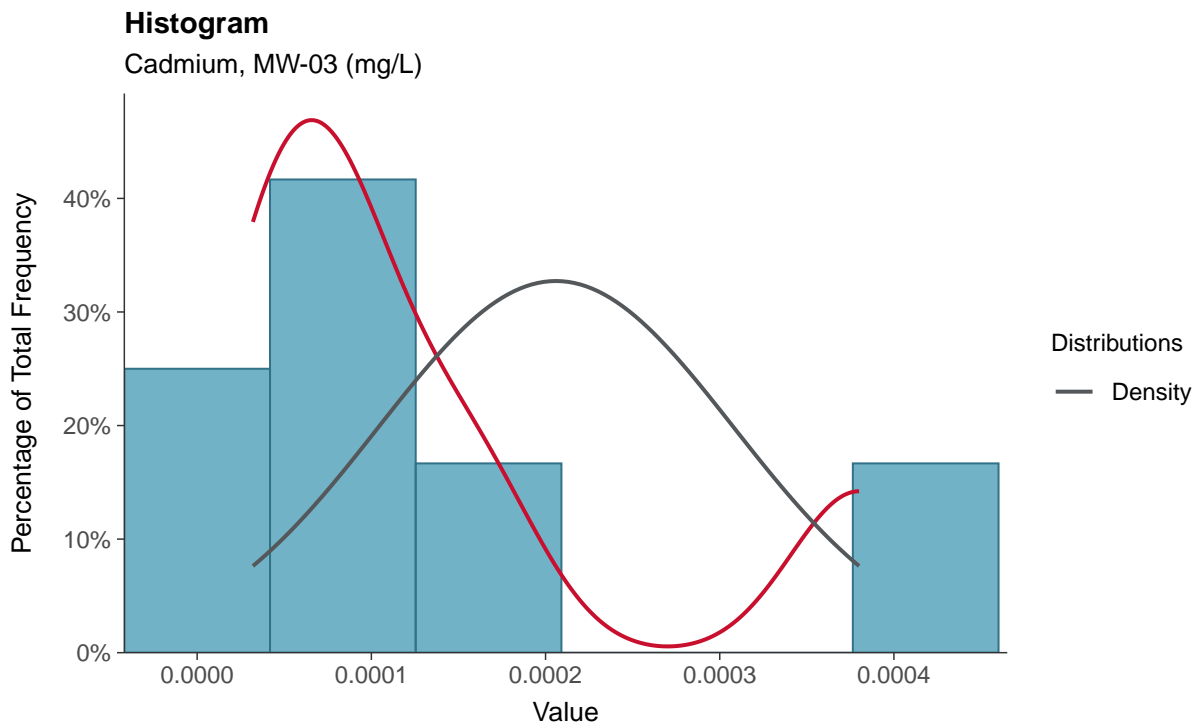
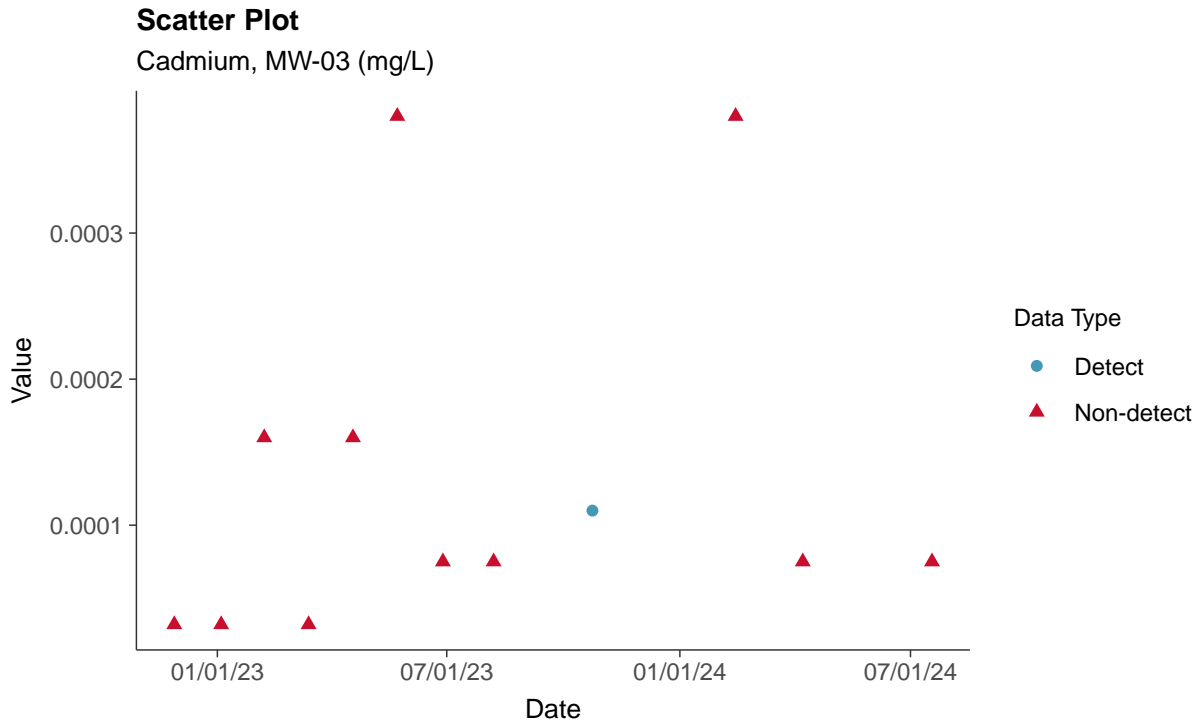
Beryllium, MW-03 (mg/L)





### Appendix IV: Cadmium, MW-03

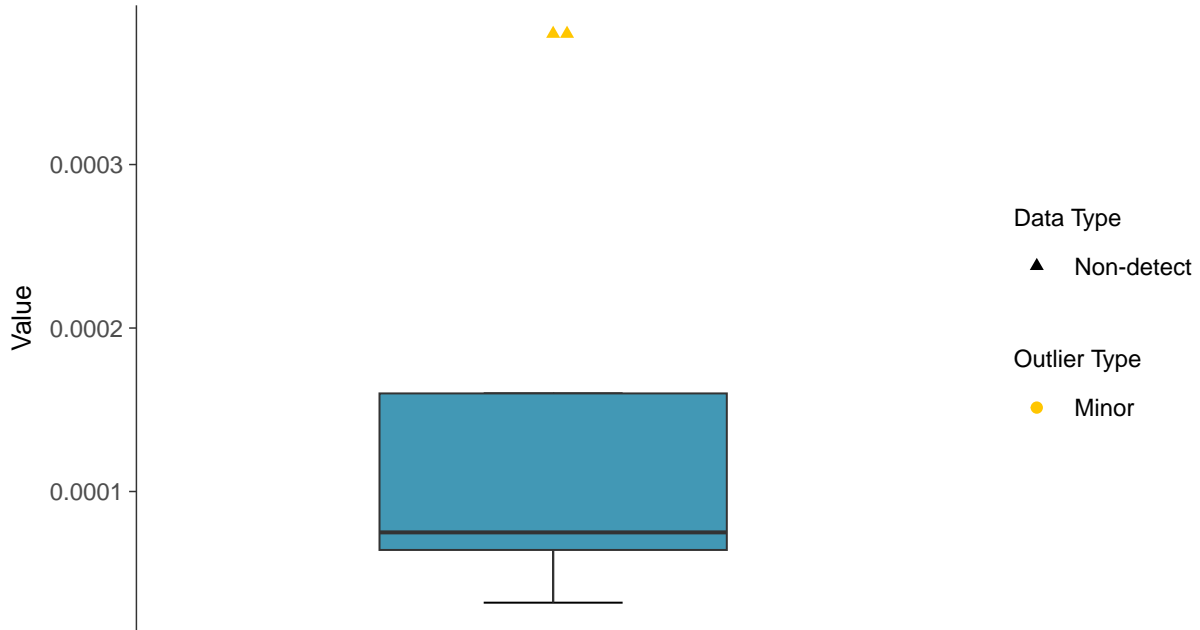
ID: 13\_2\_5\_106





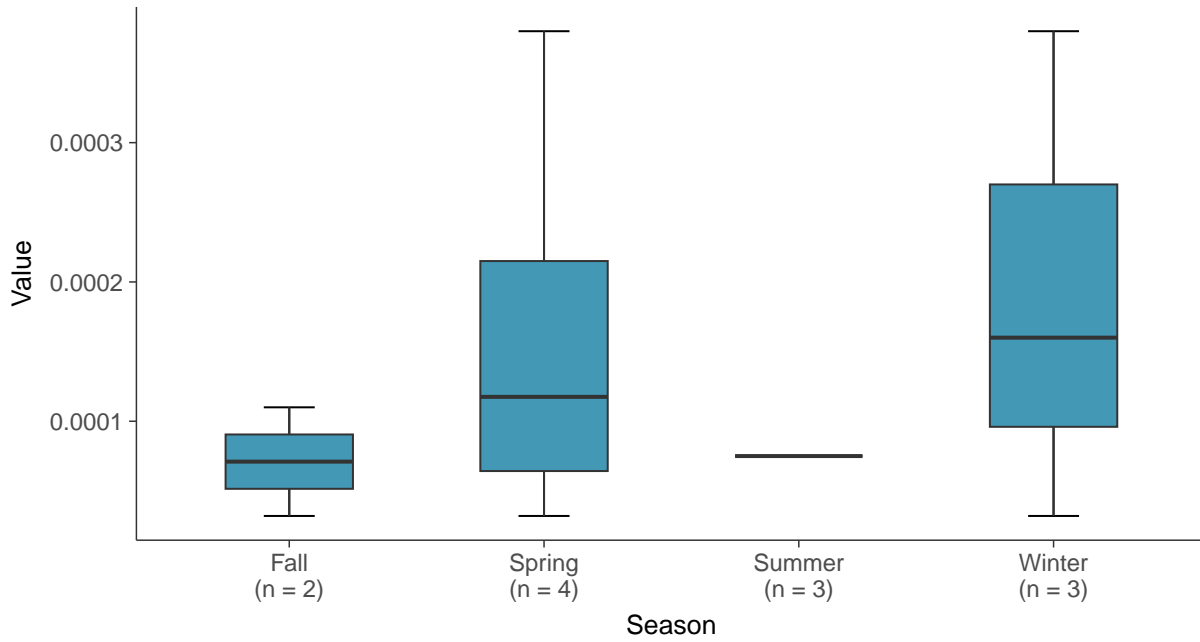
### Boxplot

Cadmium, MW-03 (mg/L)



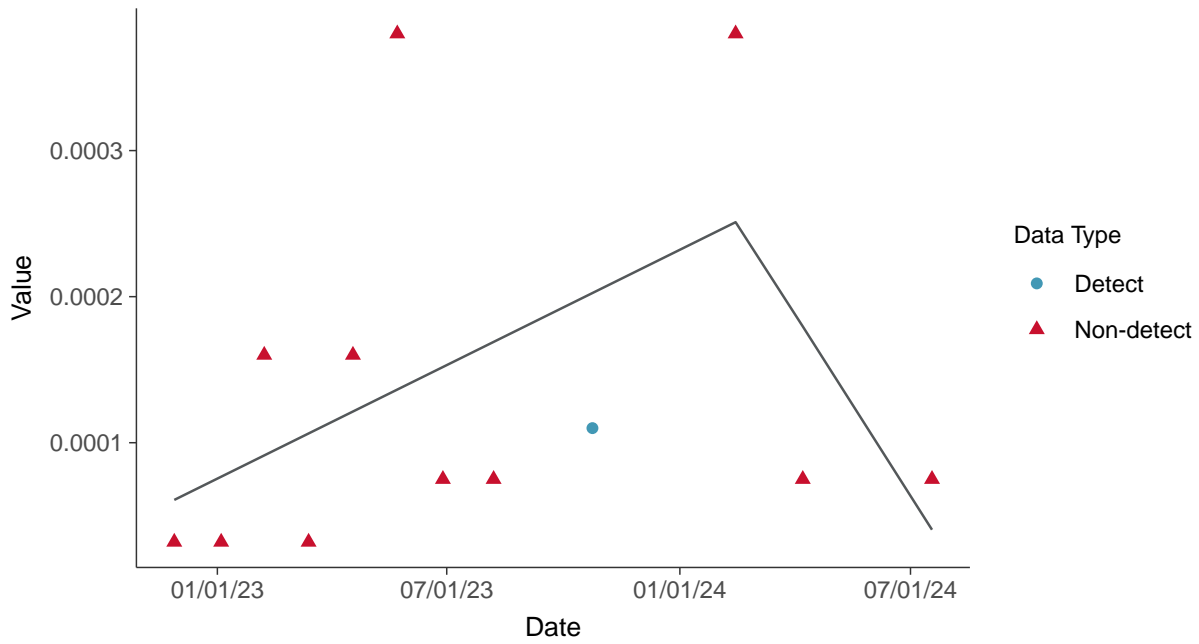
### Boxplot by Season

Cadmium, MW-03 (mg/L)

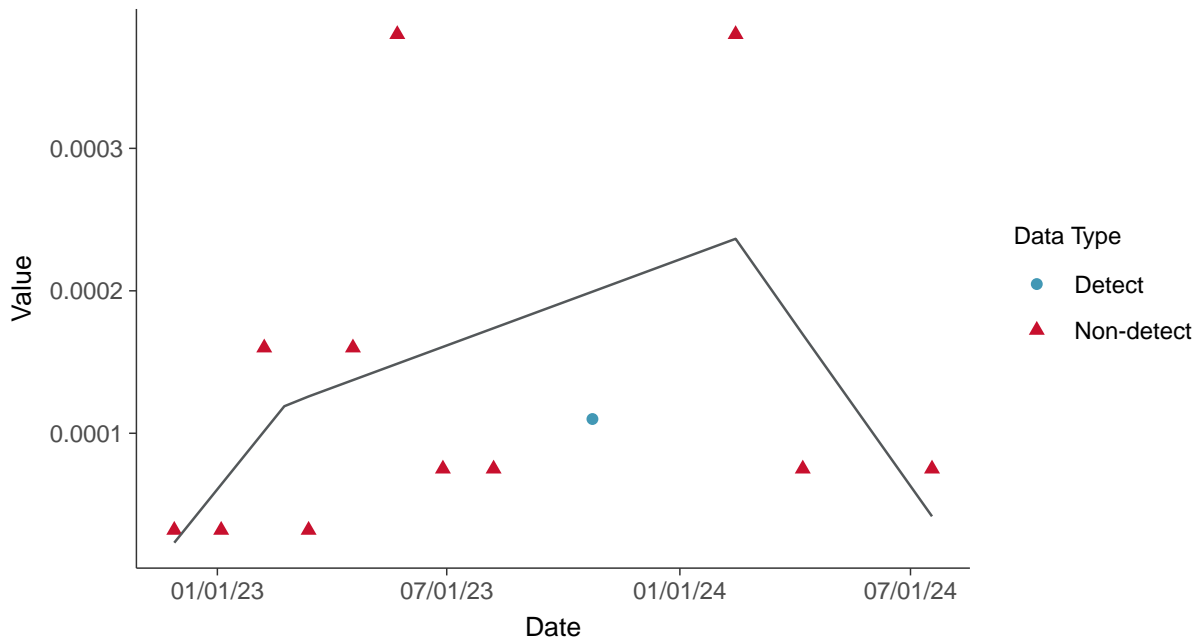




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-03 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-03 (mg/L)



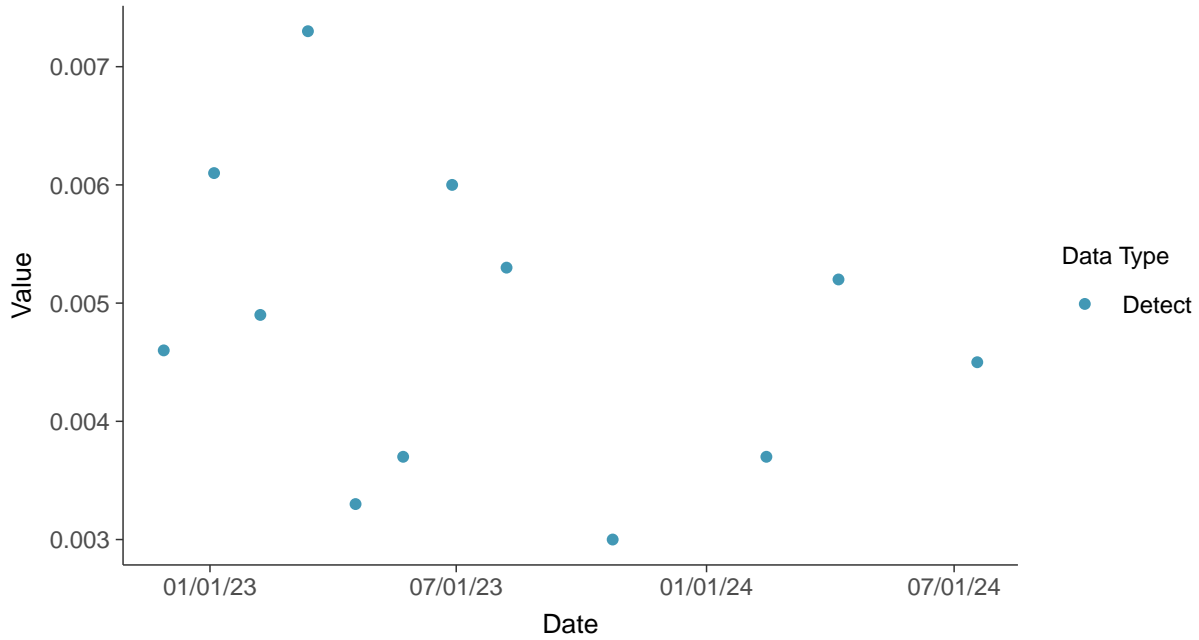


### Appendix IV: Chromium, Total, MW-03

ID: 13\_2\_5\_109

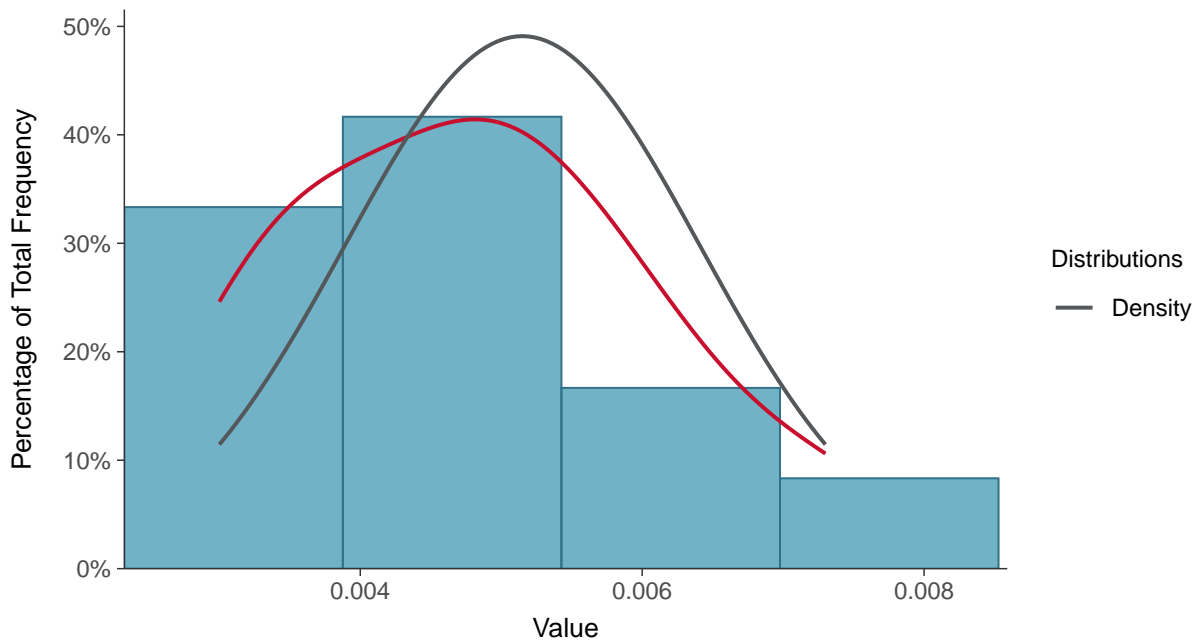
#### Scatter Plot

Chromium, Total, MW-03 (mg/L)



#### Histogram

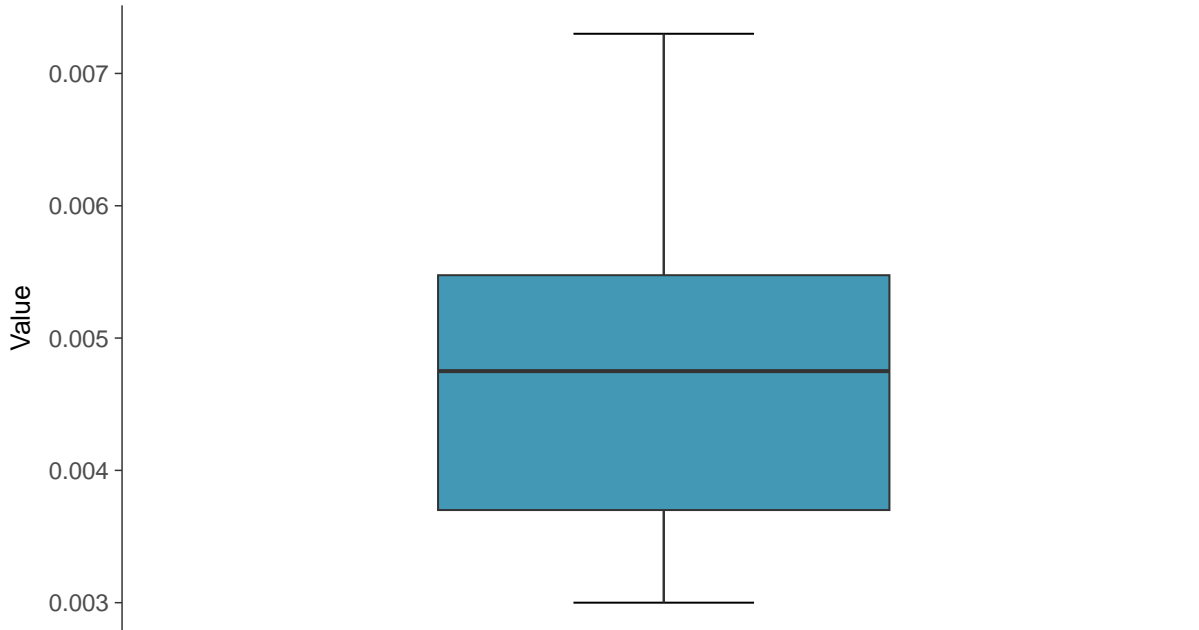
Chromium, Total, MW-03 (mg/L)





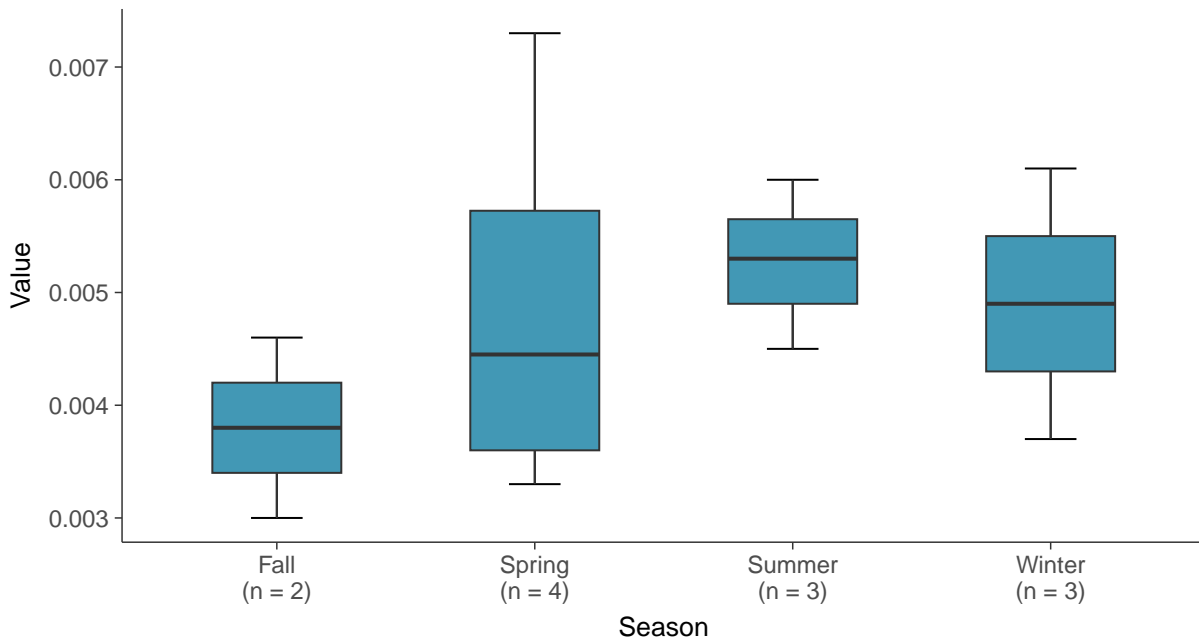
### Boxplot

Chromium, Total, MW-03 (mg/L)



### Boxplot by Season

Chromium, Total, MW-03 (mg/L)

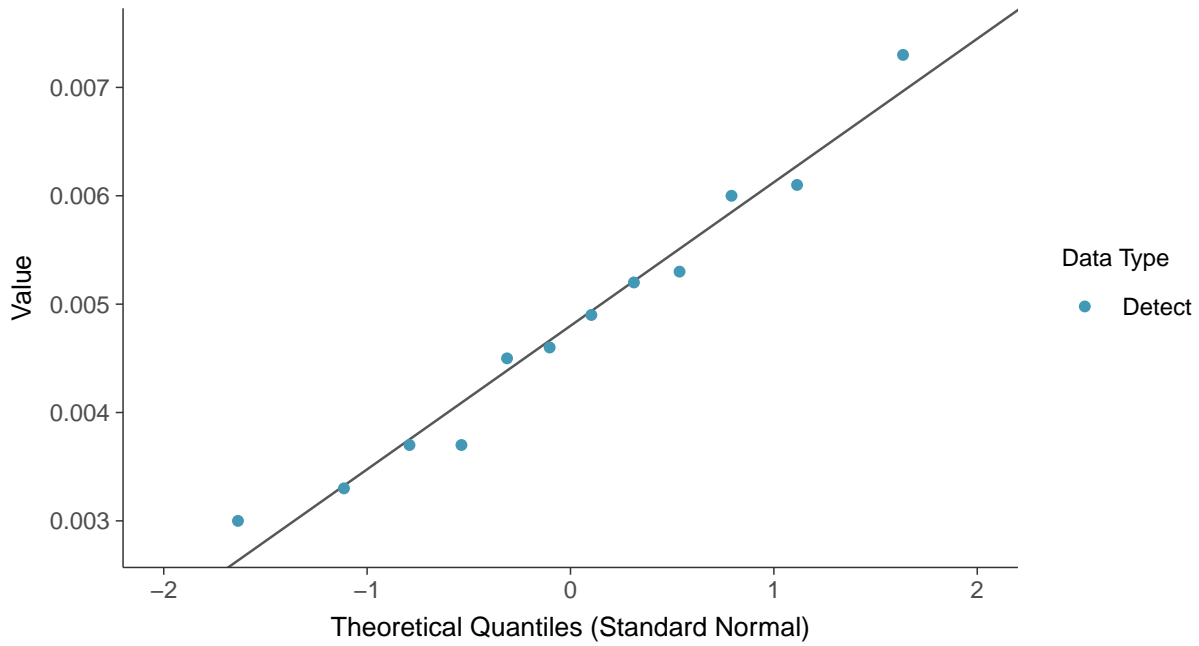






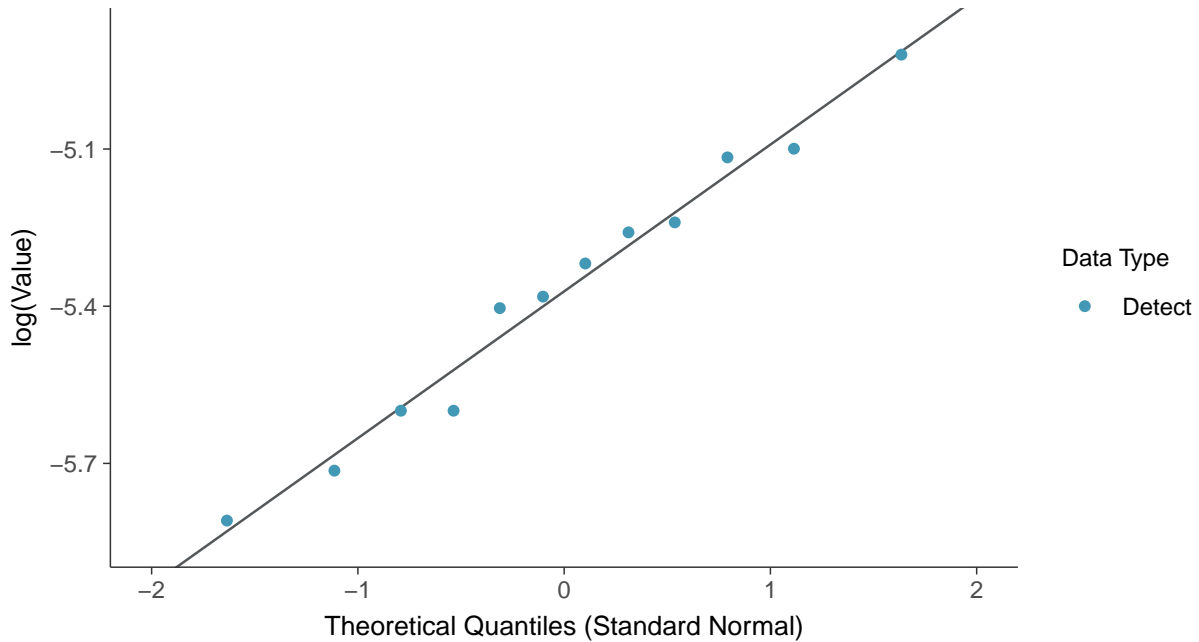
### Normal Q-Q plot

Chromium, Total, MW-03 (mg/L)



### Lognormal Q-Q plot

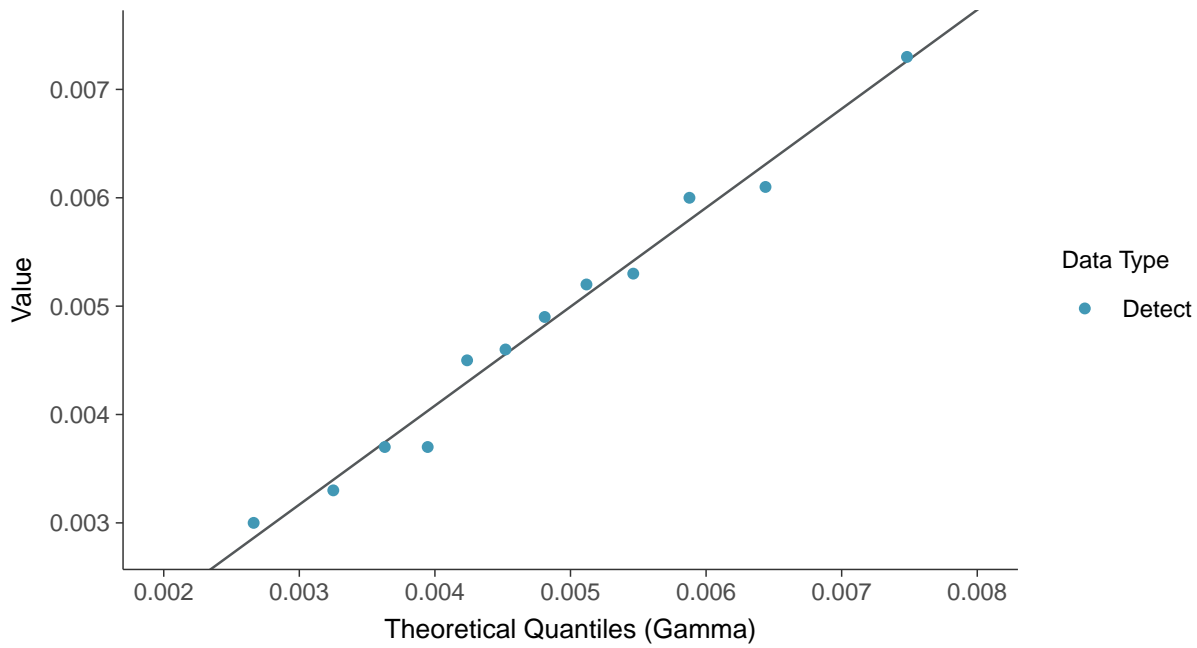
Chromium, Total, MW-03 (mg/L)





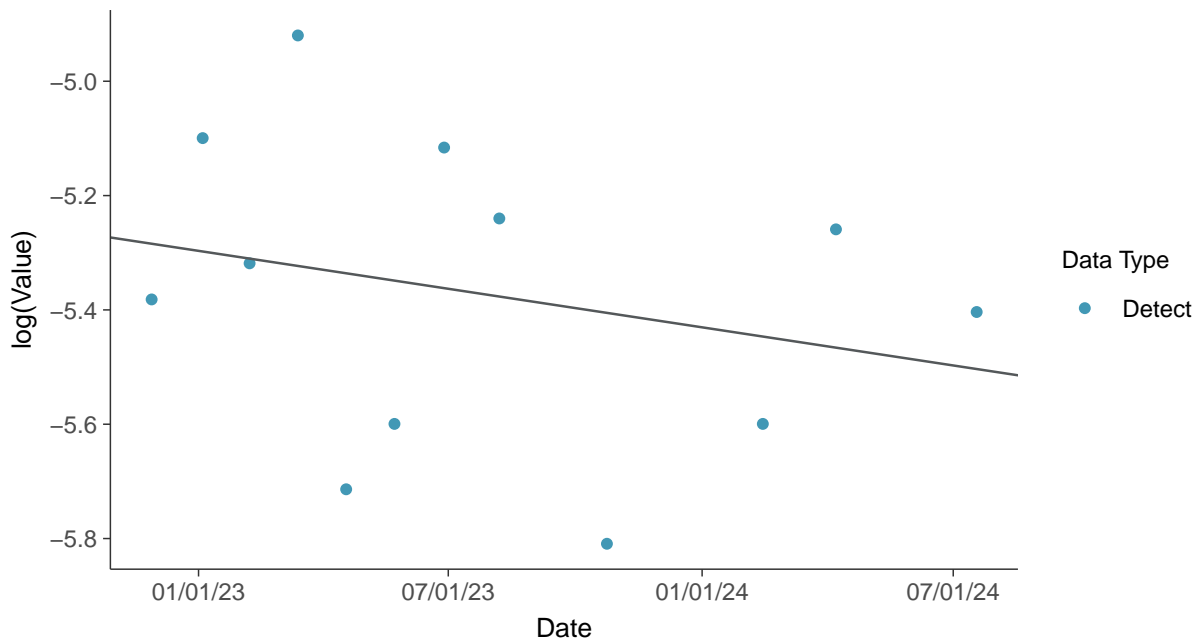
### Gamma Q-Q plot

Chromium, Total, MW-03 (mg/L)



### Trend Regression: Lognormal MLE

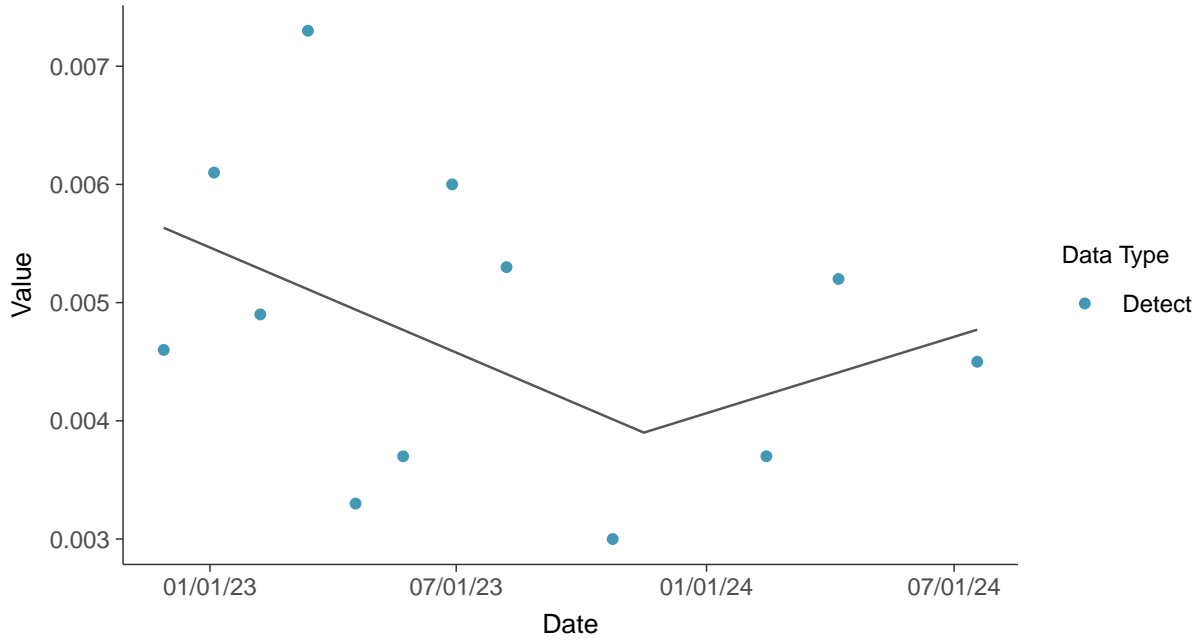
Chromium, Total, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear

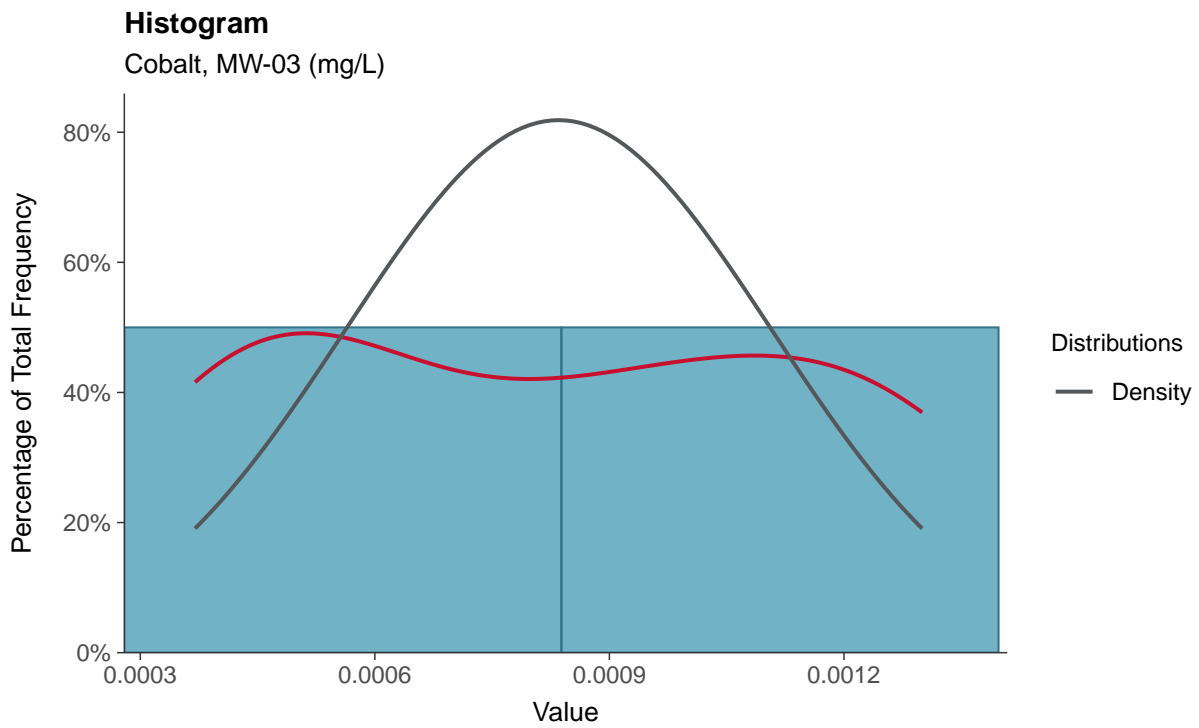
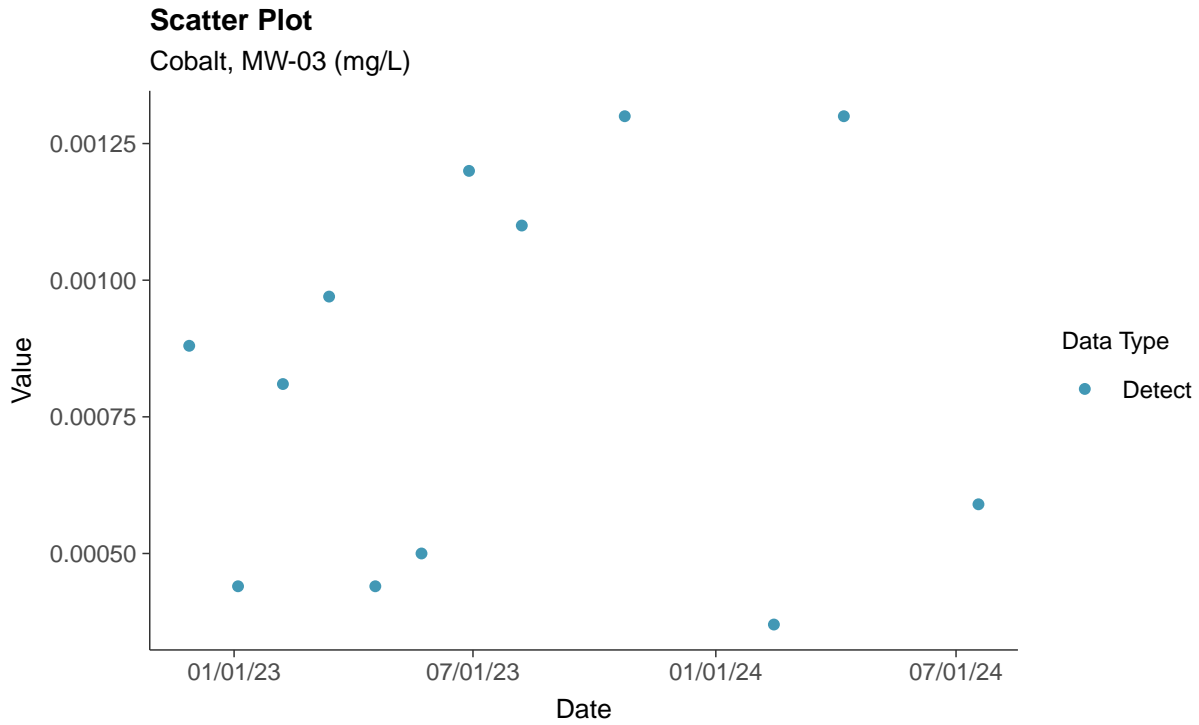
Chromium, Total, MW-03 (mg/L)





### Appendix IV: Cobalt, MW-03

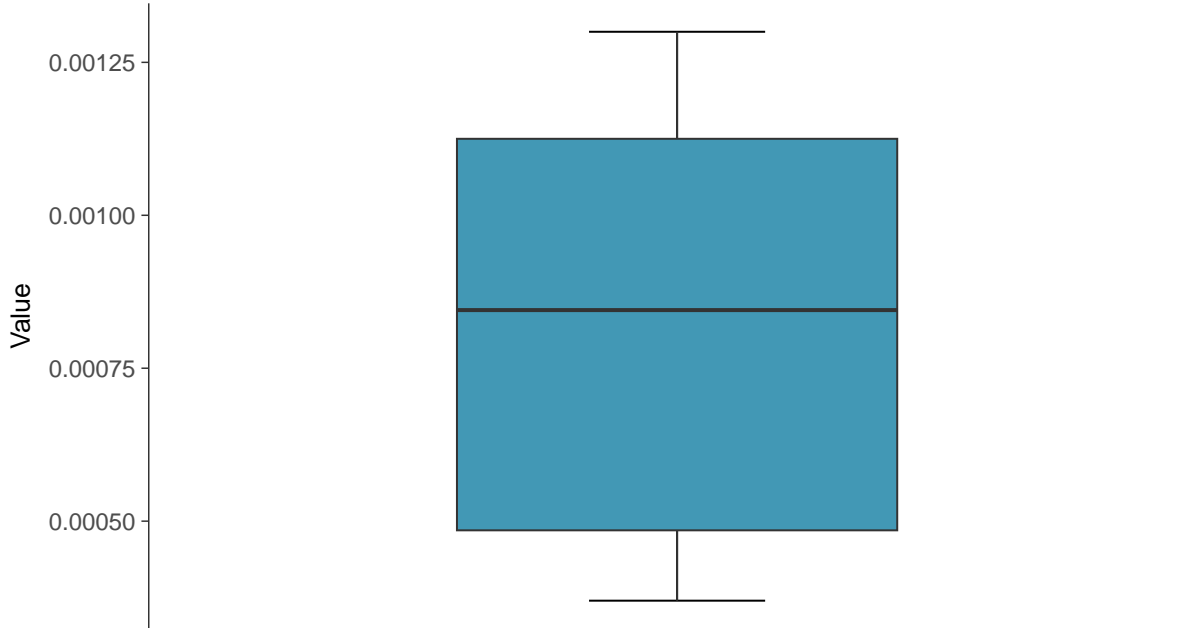
ID: 13\_2\_5\_110





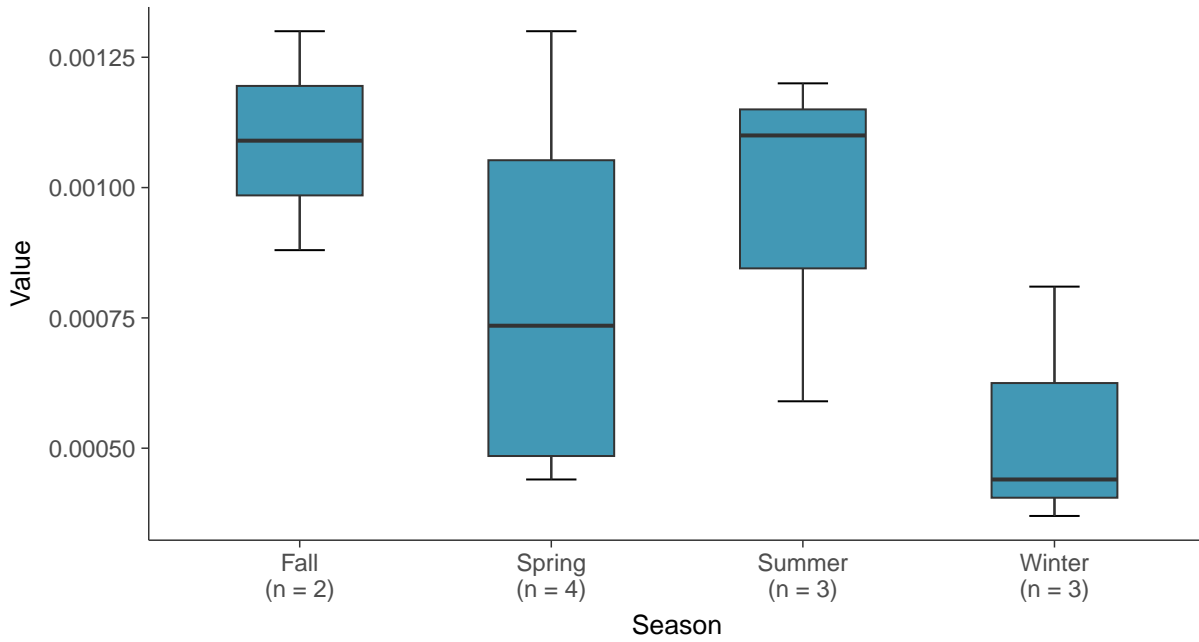
### Boxplot

Cobalt, MW-03 (mg/L)



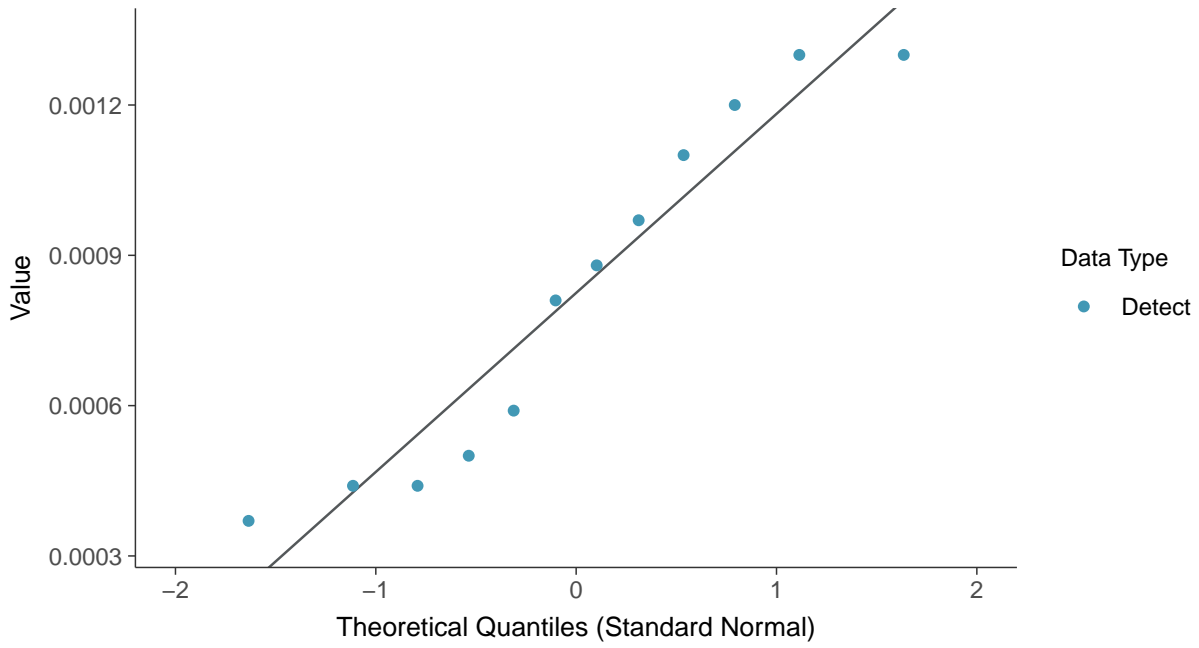
### Boxplot by Season

Cobalt, MW-03 (mg/L)

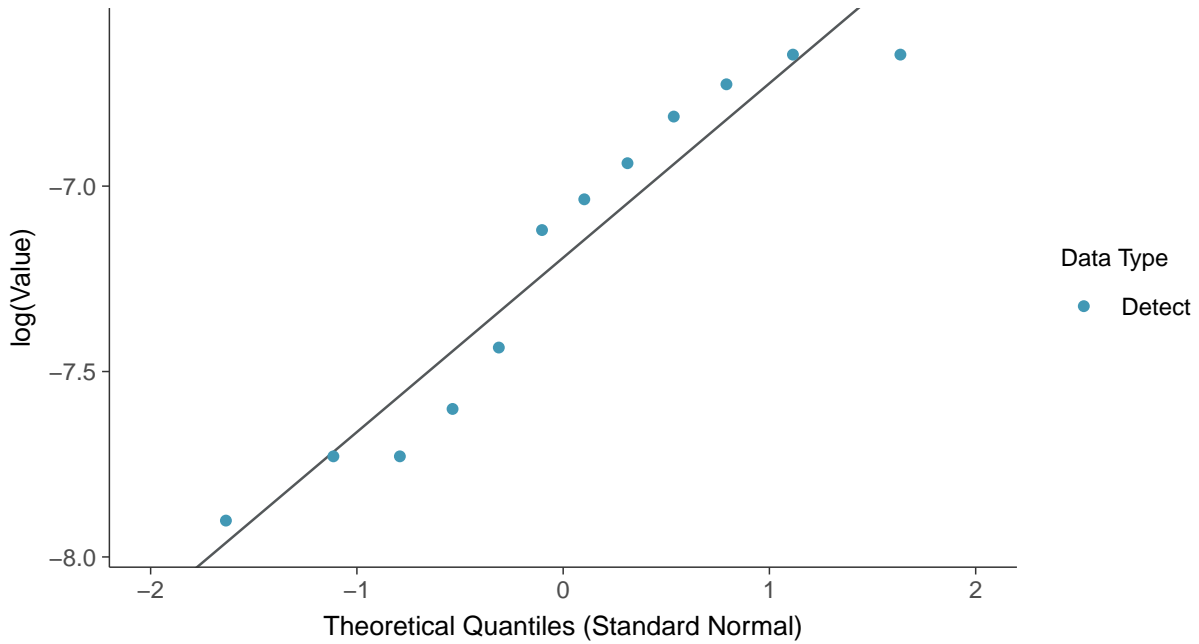




**Normal Q-Q plot**  
Cobalt, MW-03 (mg/L)

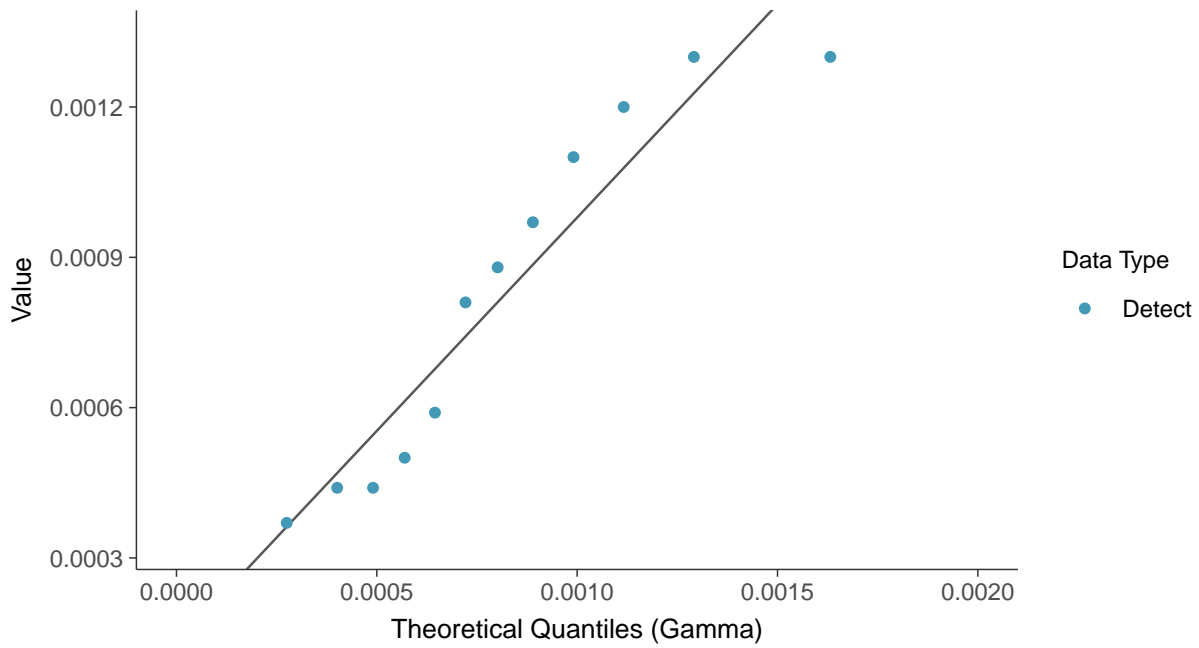


**Lognormal Q-Q plot**  
Cobalt, MW-03 (mg/L)

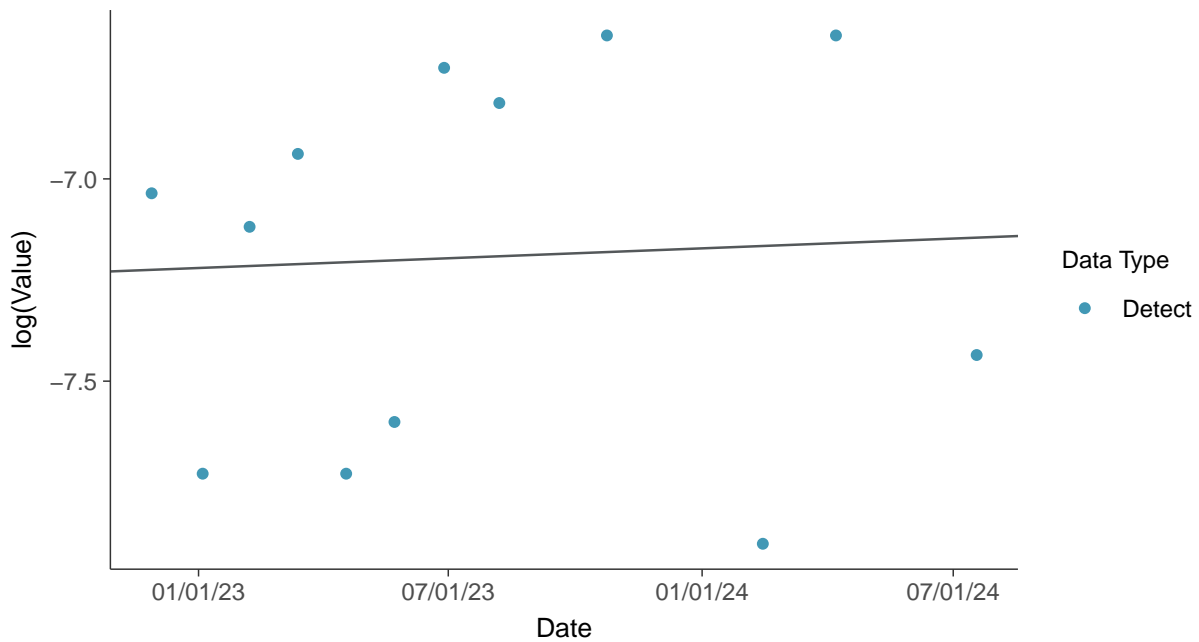




**Gamma Q-Q plot**  
Cobalt, MW-03 (mg/L)



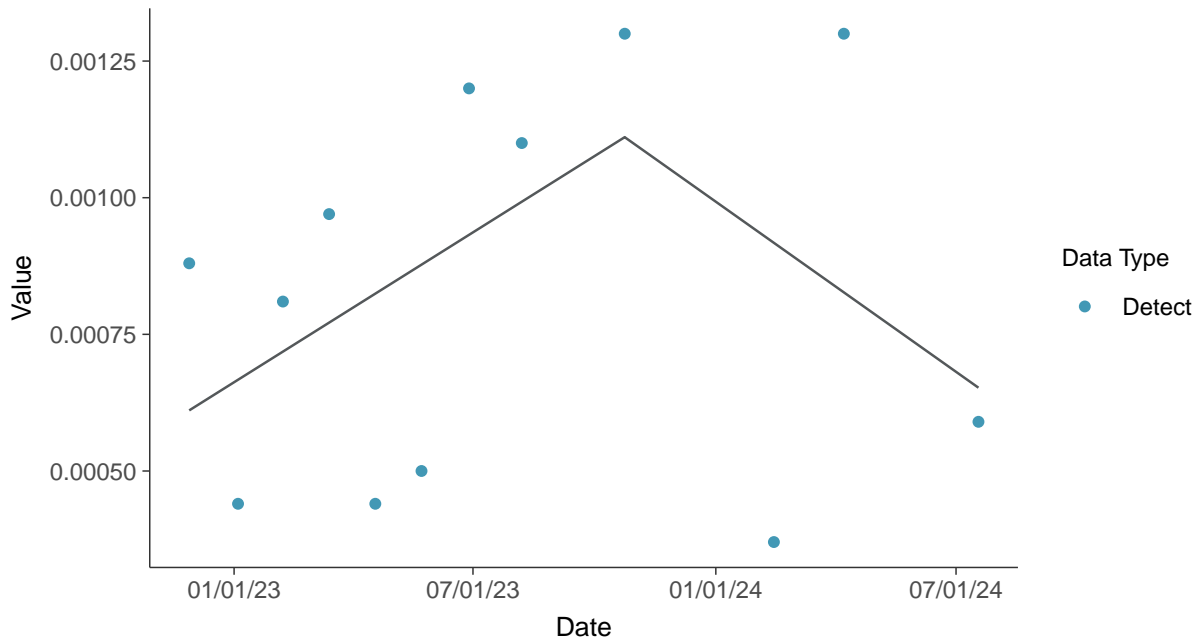
**Trend Regression: Lognormal MLE**  
Cobalt, MW-03 (mg/L)





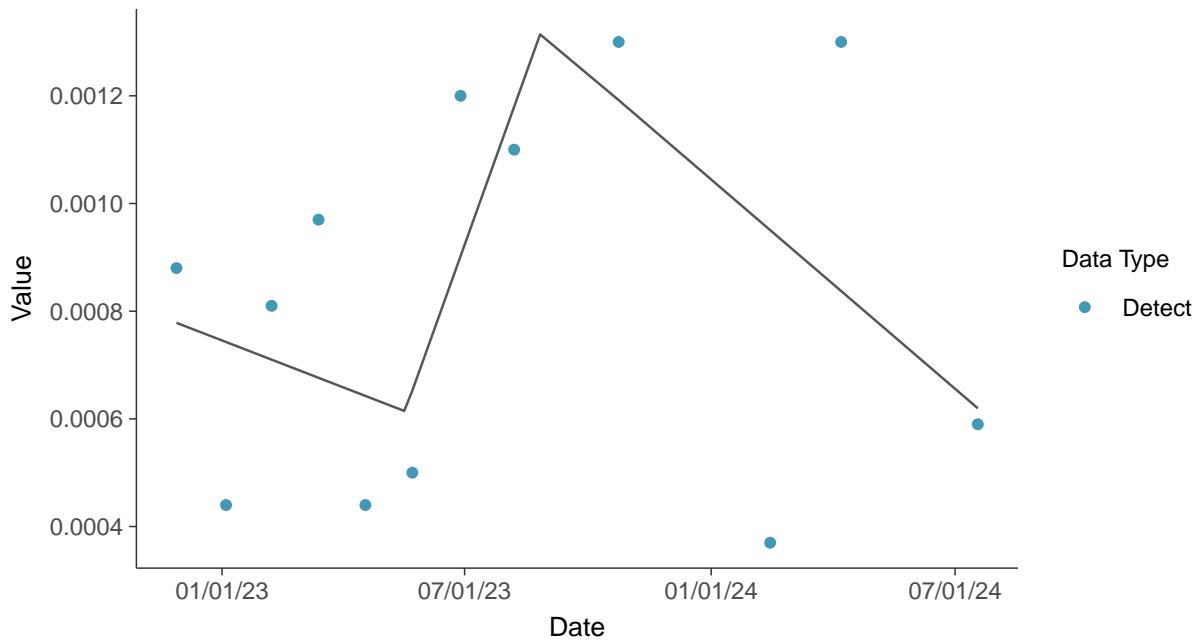
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-03 (mg/L)

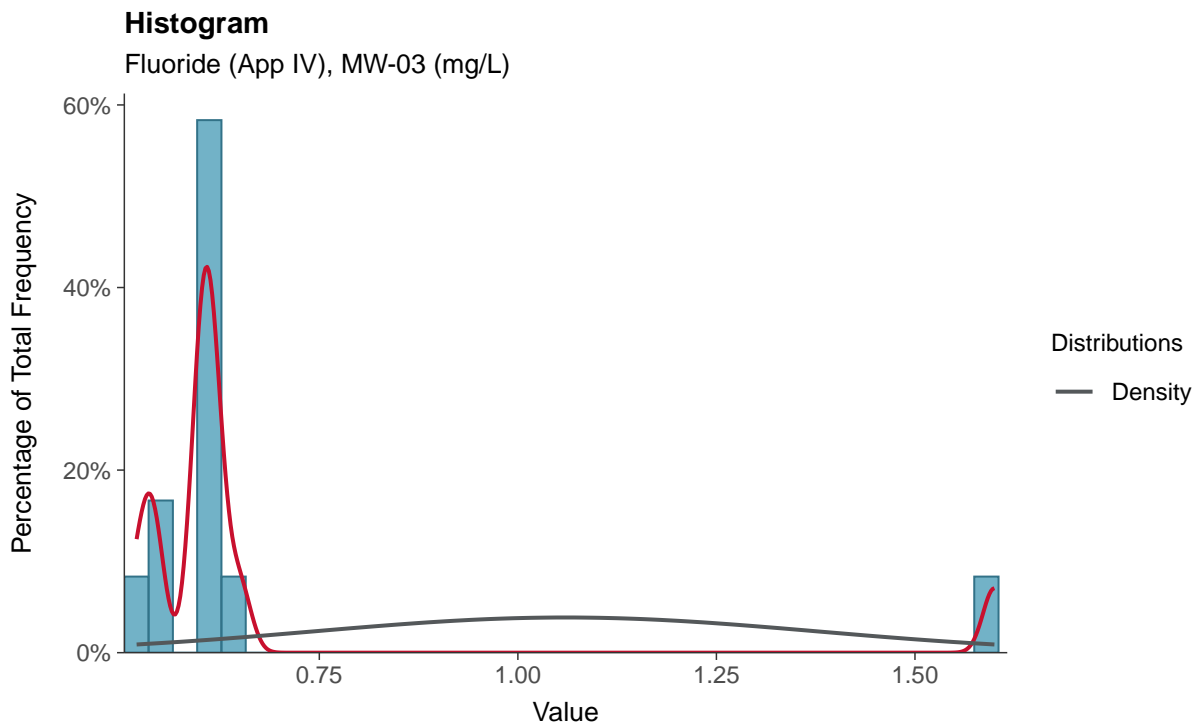
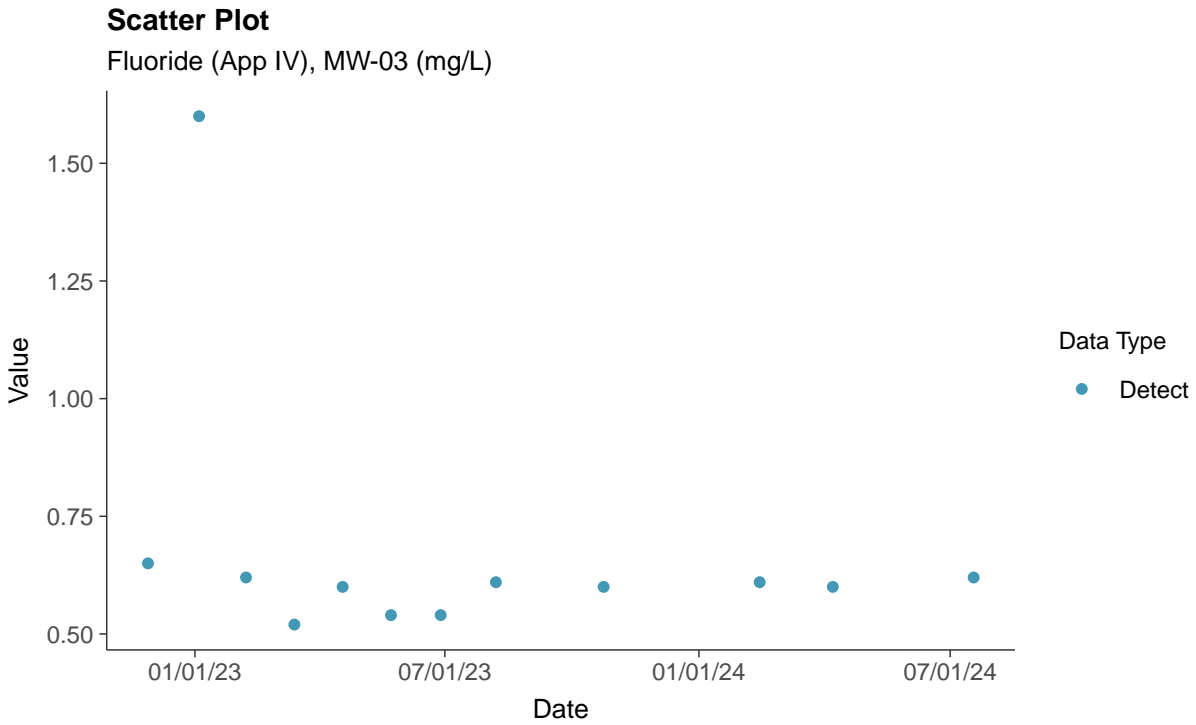






### Appendix IV: Fluoride (App IV), MW-03

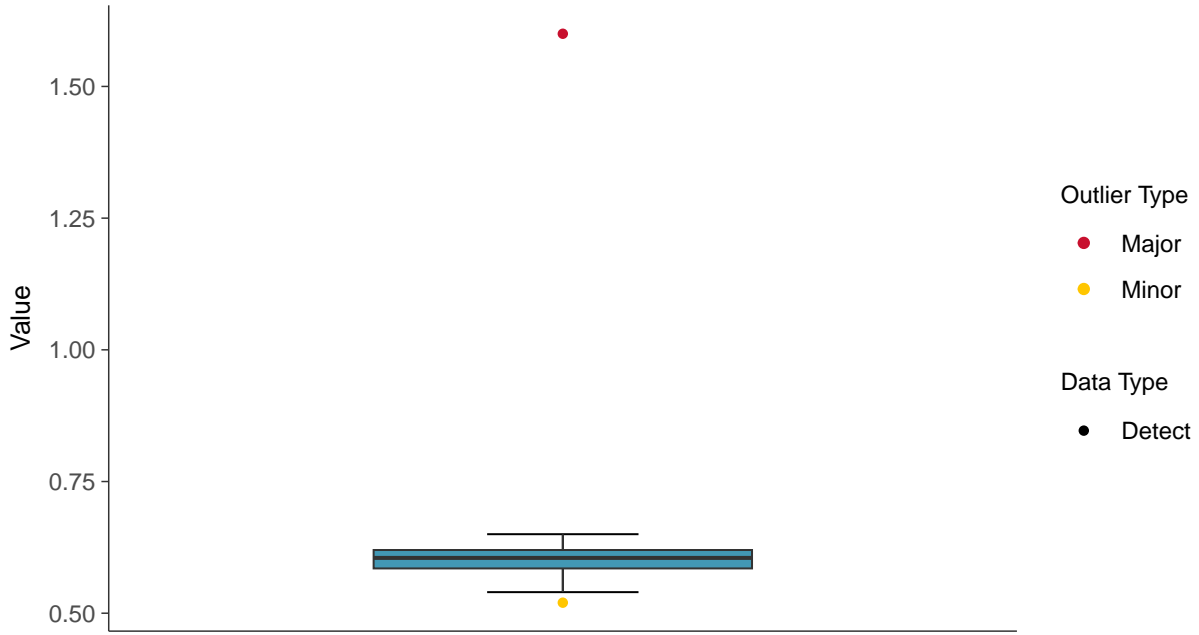
ID: 13\_2\_5\_113





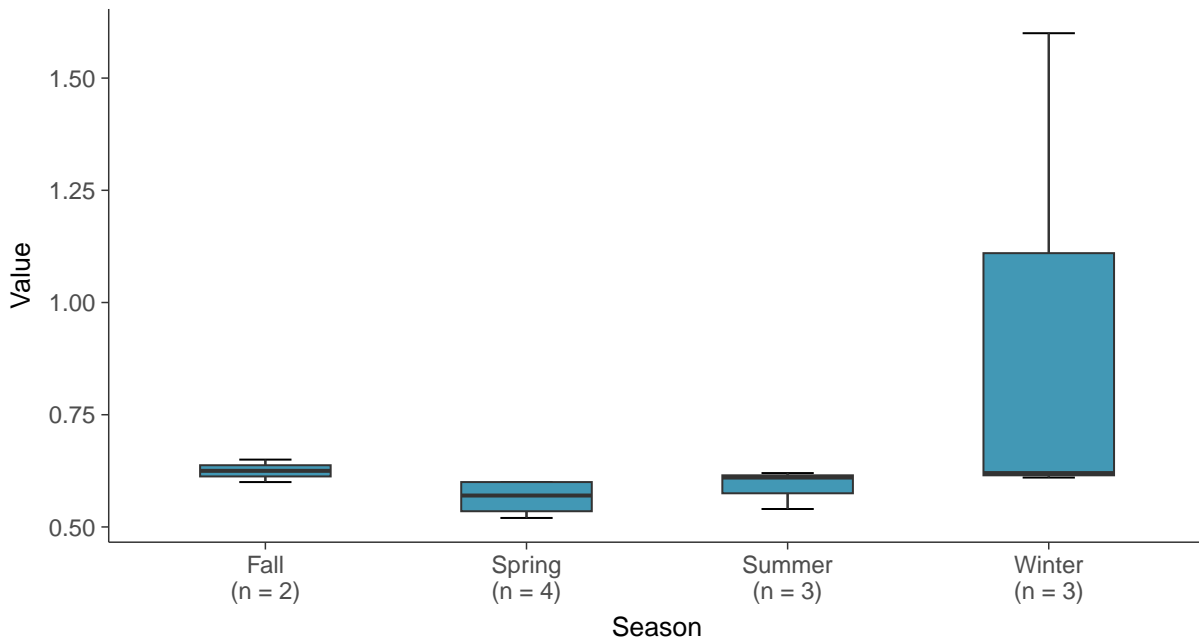
### Boxplot

Fluoride (App IV), MW-03 (mg/L)



### Boxplot by Season

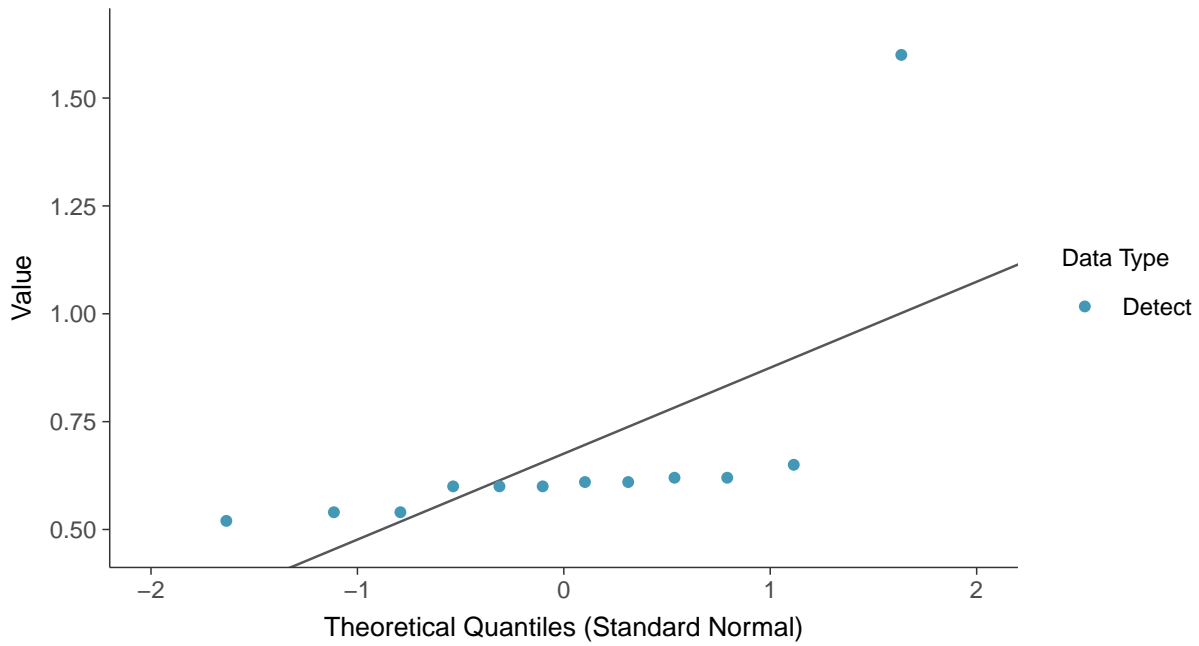
Fluoride (App IV), MW-03 (mg/L)





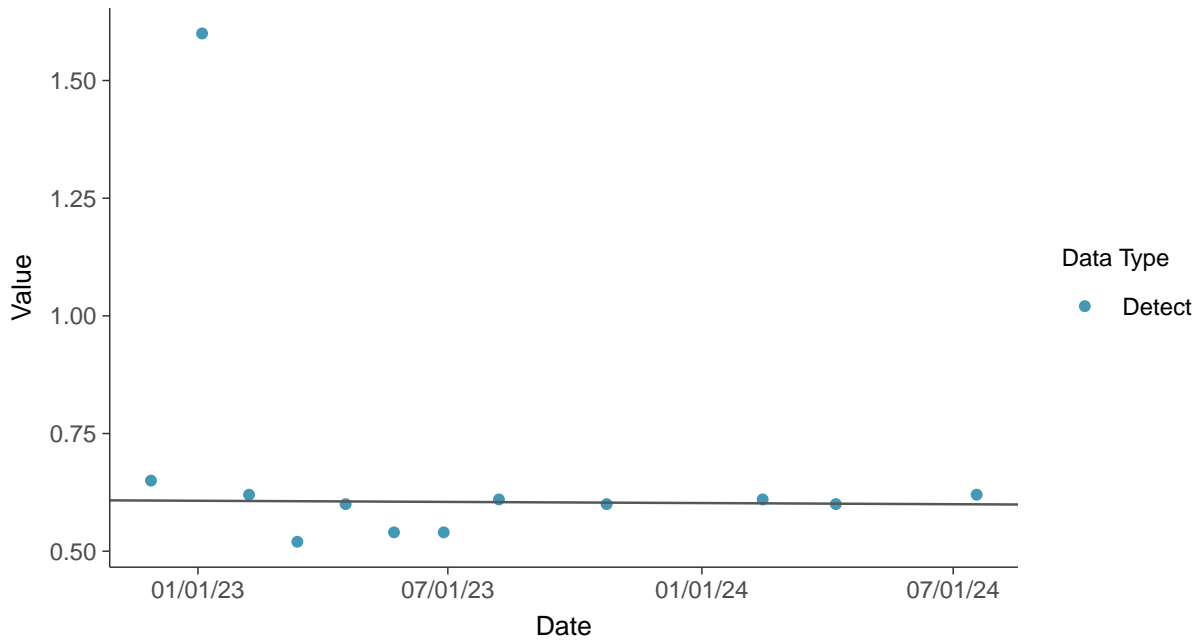
### Normal Q-Q plot

Fluoride (App IV), MW-03 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

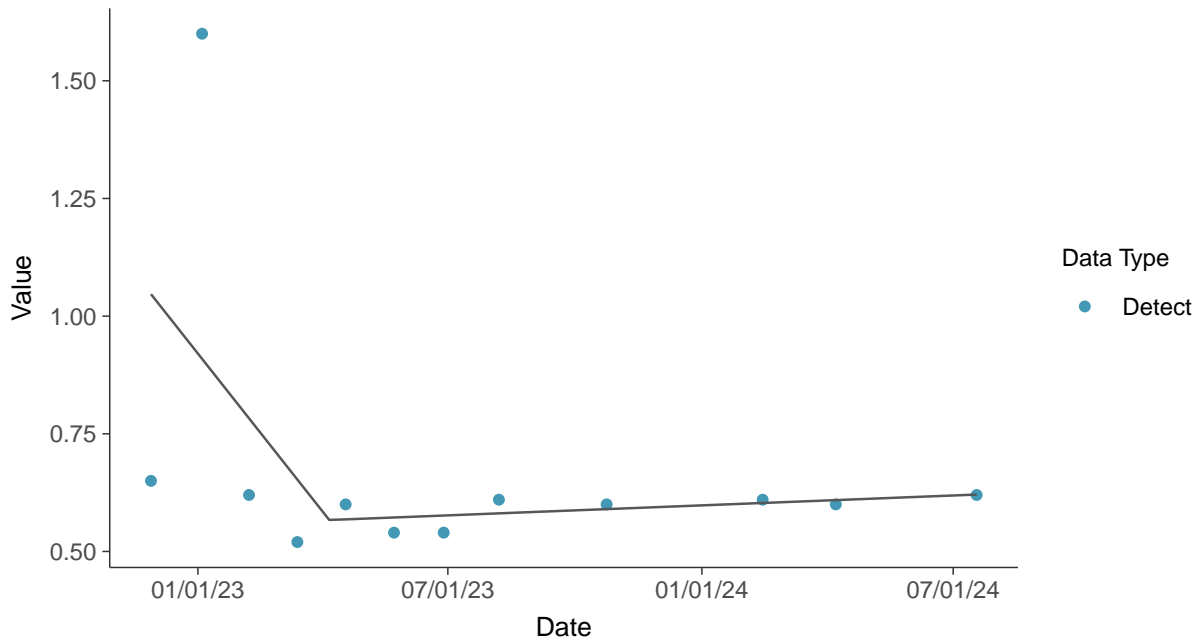
Fluoride (App IV), MW-03 (mg/L)





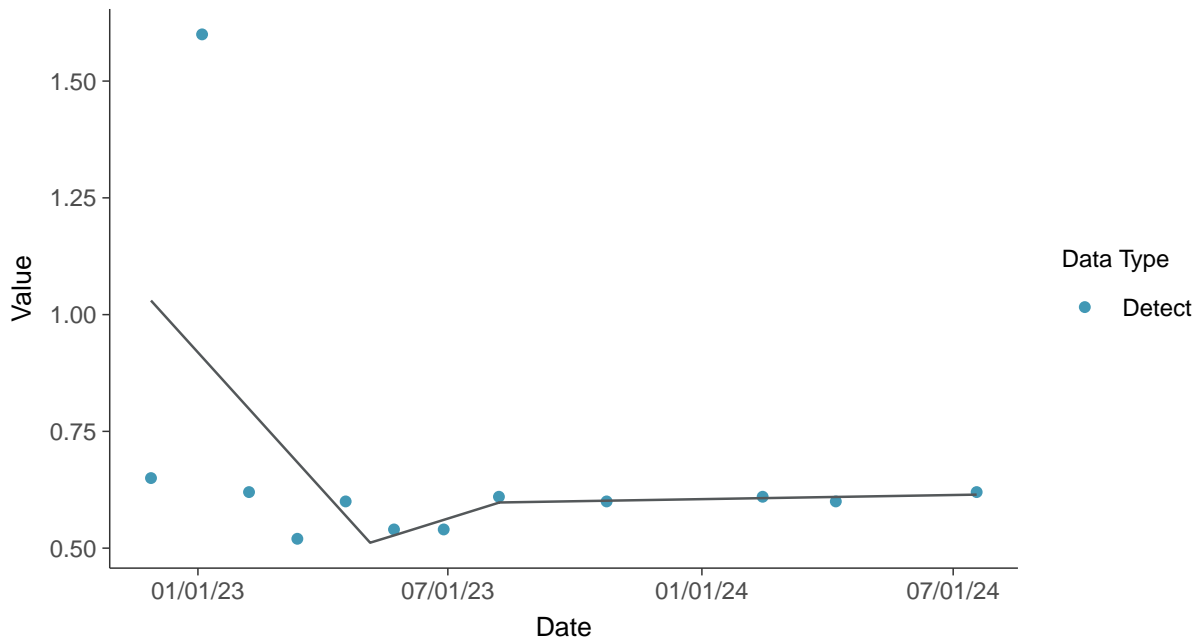
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

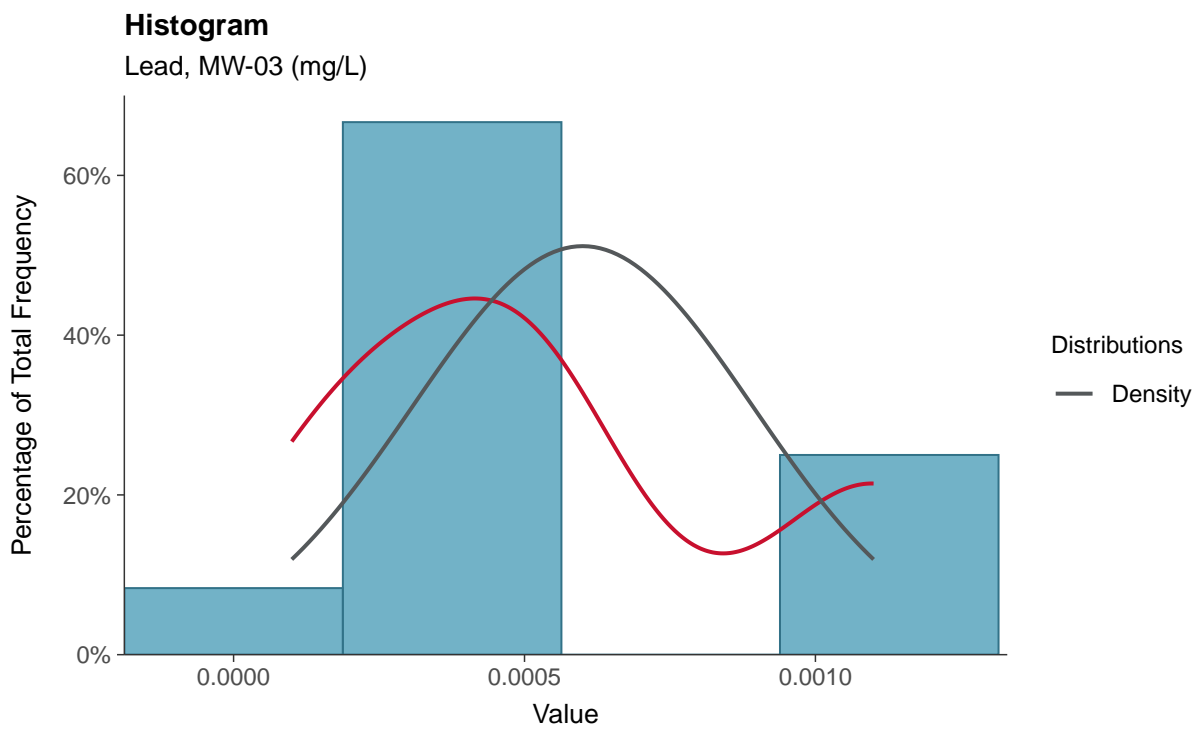
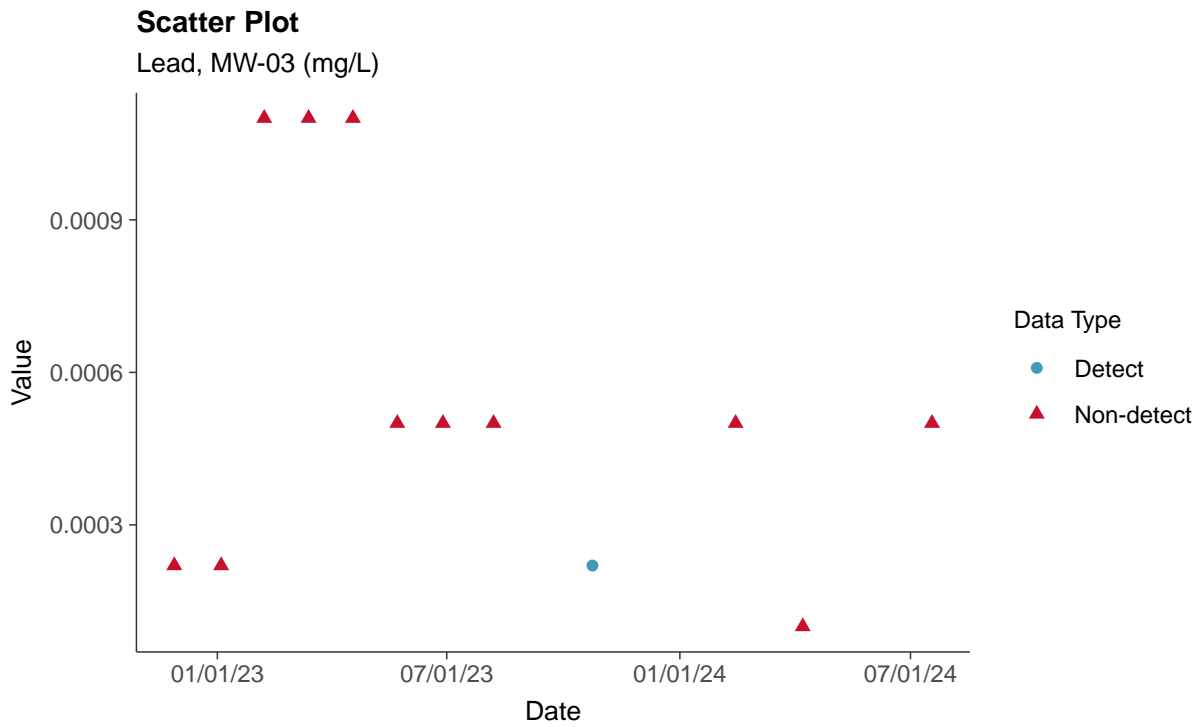
Fluoride (App IV), MW-03 (mg/L)





### Appendix IV: Lead, MW-03

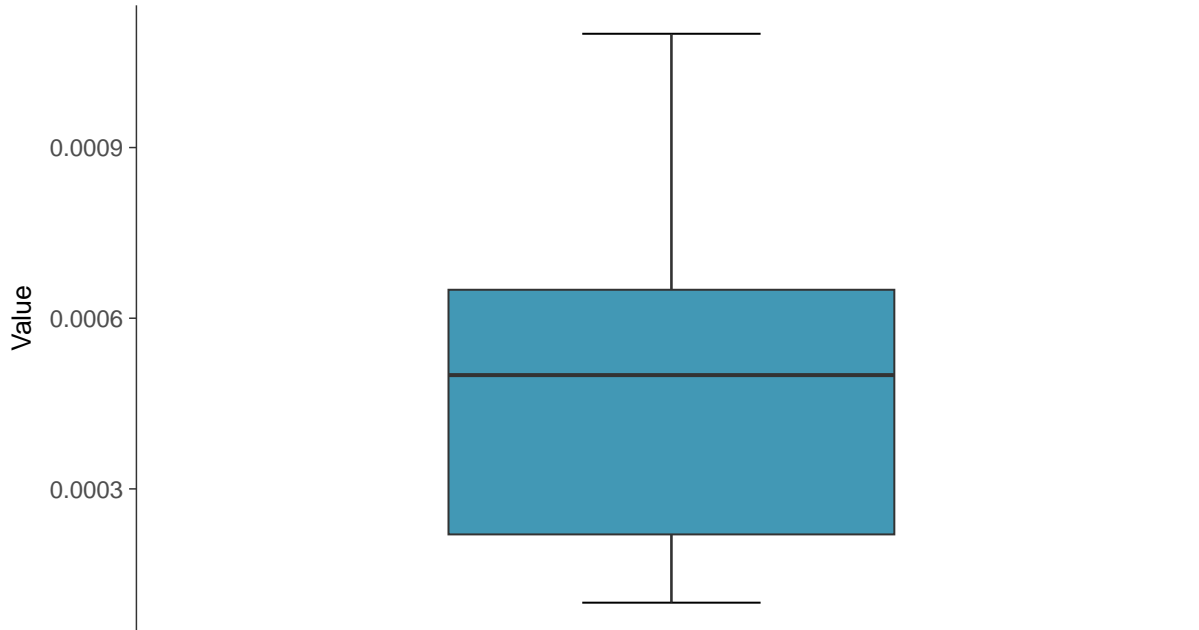
ID: 13\_2\_5\_115





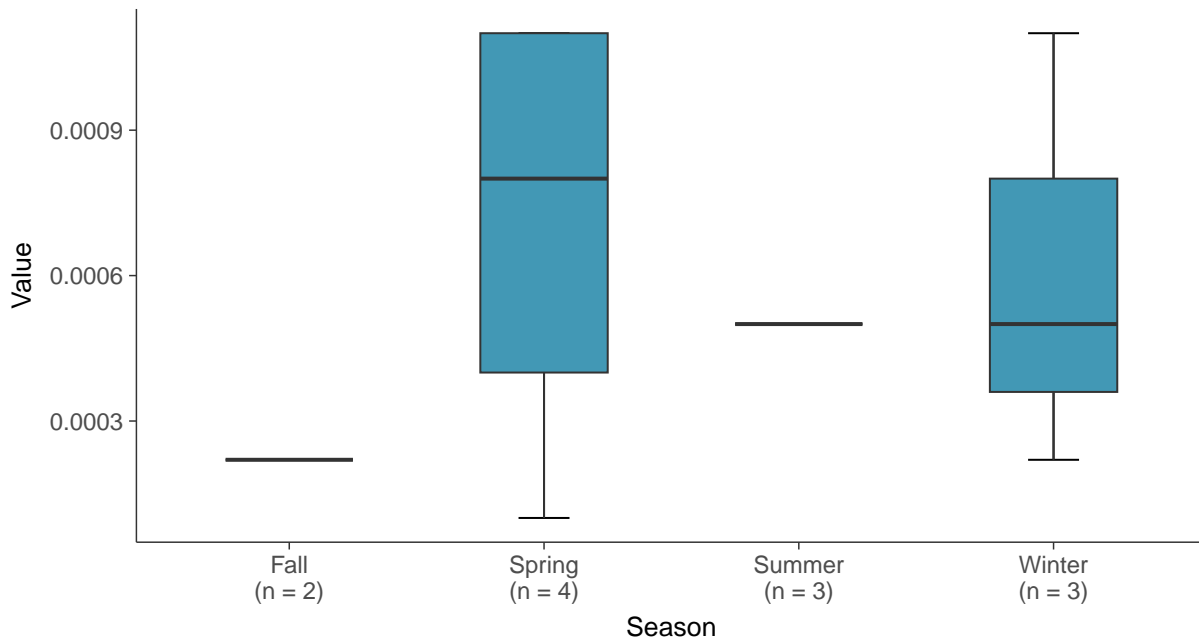
### Boxplot

Lead, MW-03 (mg/L)



### Boxplot by Season

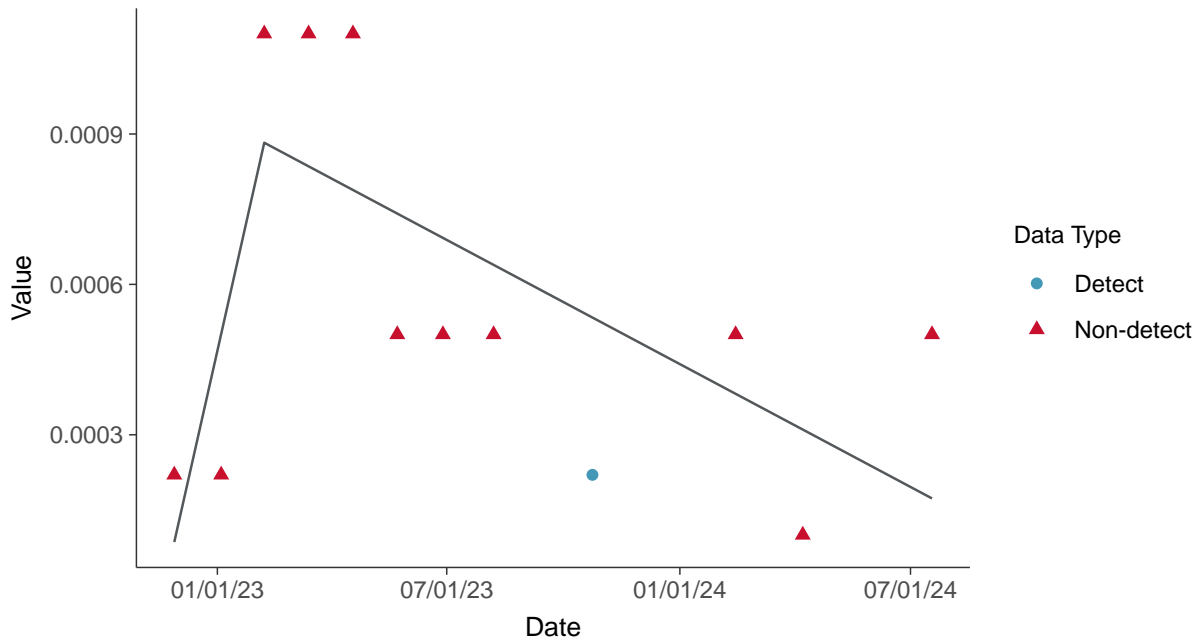
Lead, MW-03 (mg/L)





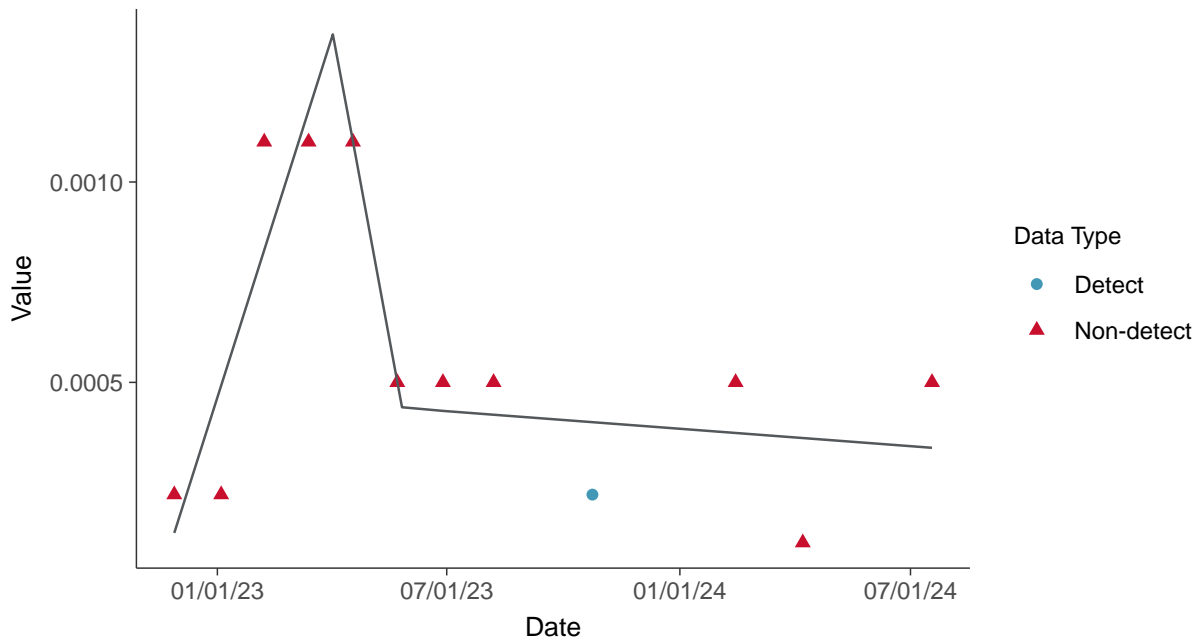
### Trend Regression: Piecewise Linear-Linear

Lead, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

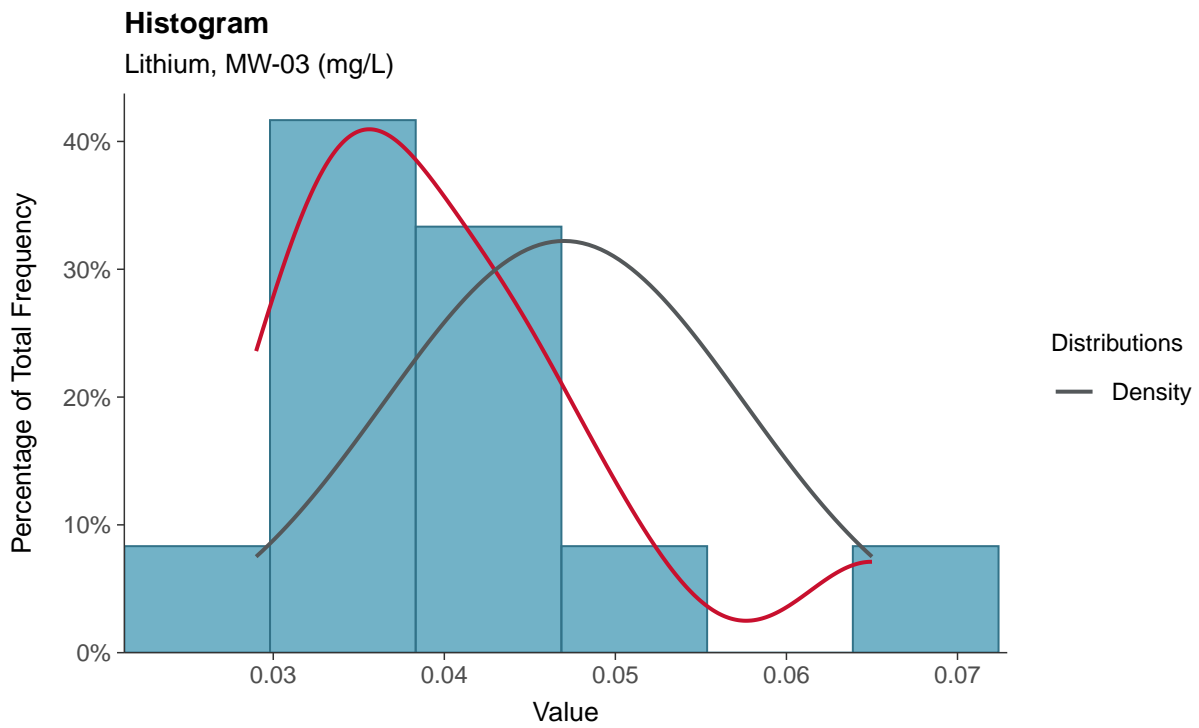
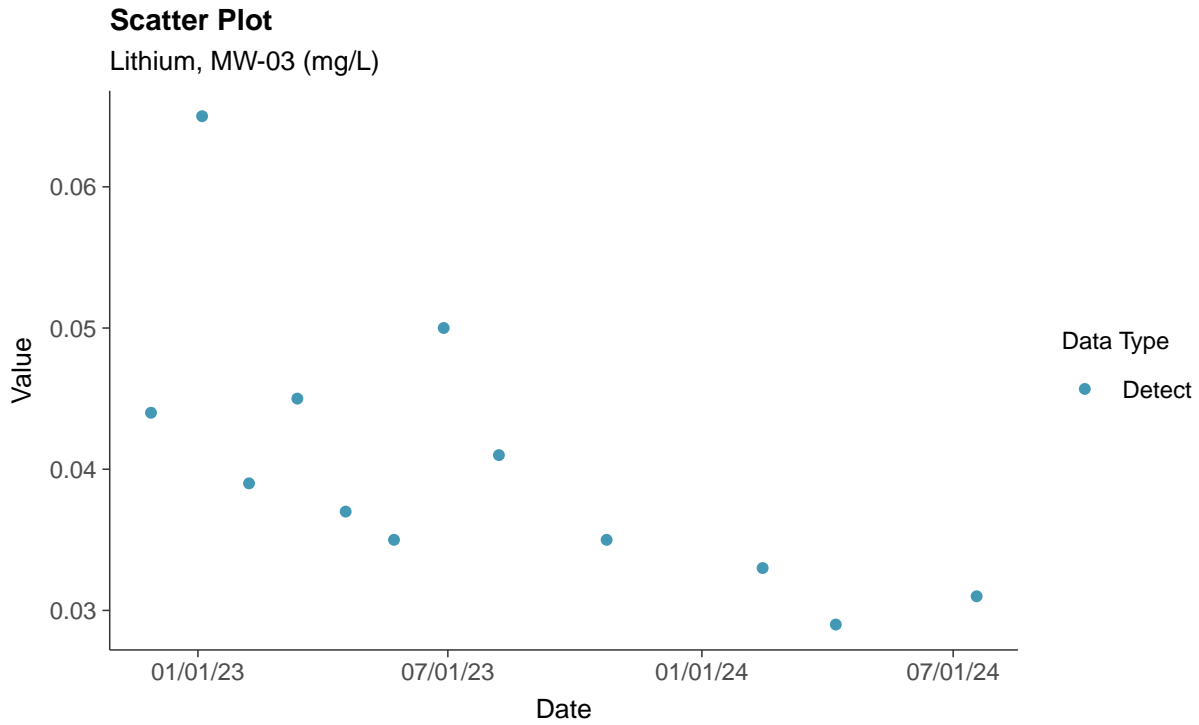
Lead, MW-03 (mg/L)





### Appendix IV: Lithium, MW-03

ID: 13\_2\_5\_116

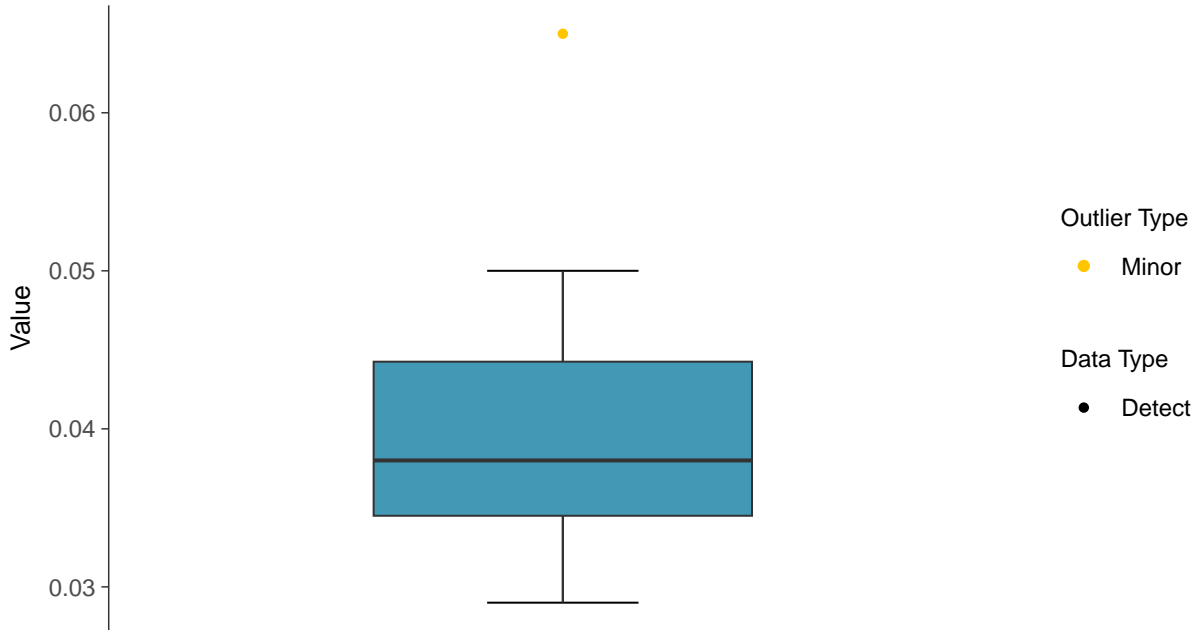






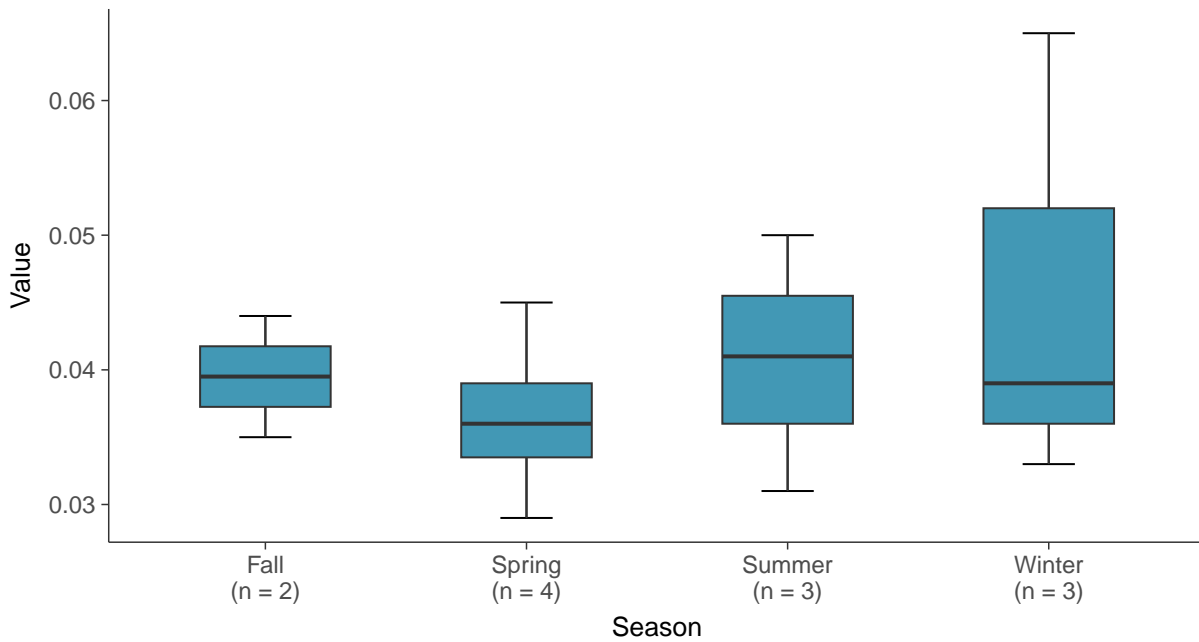
### Boxplot

Lithium, MW-03 (mg/L)



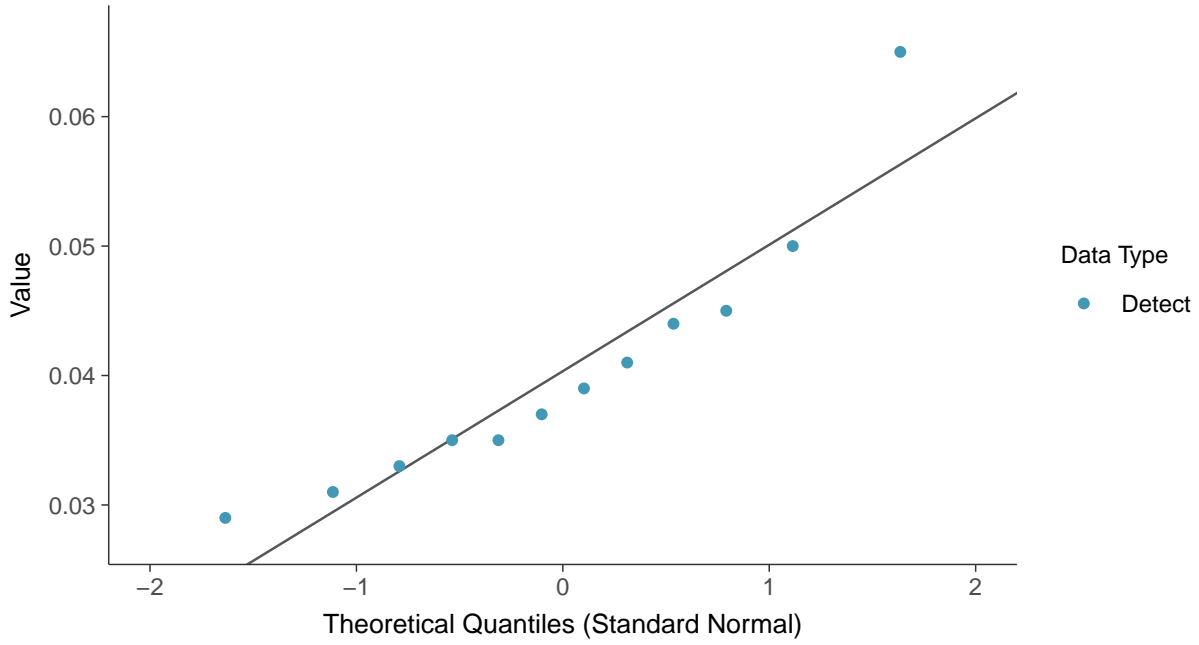
### Boxplot by Season

Lithium, MW-03 (mg/L)

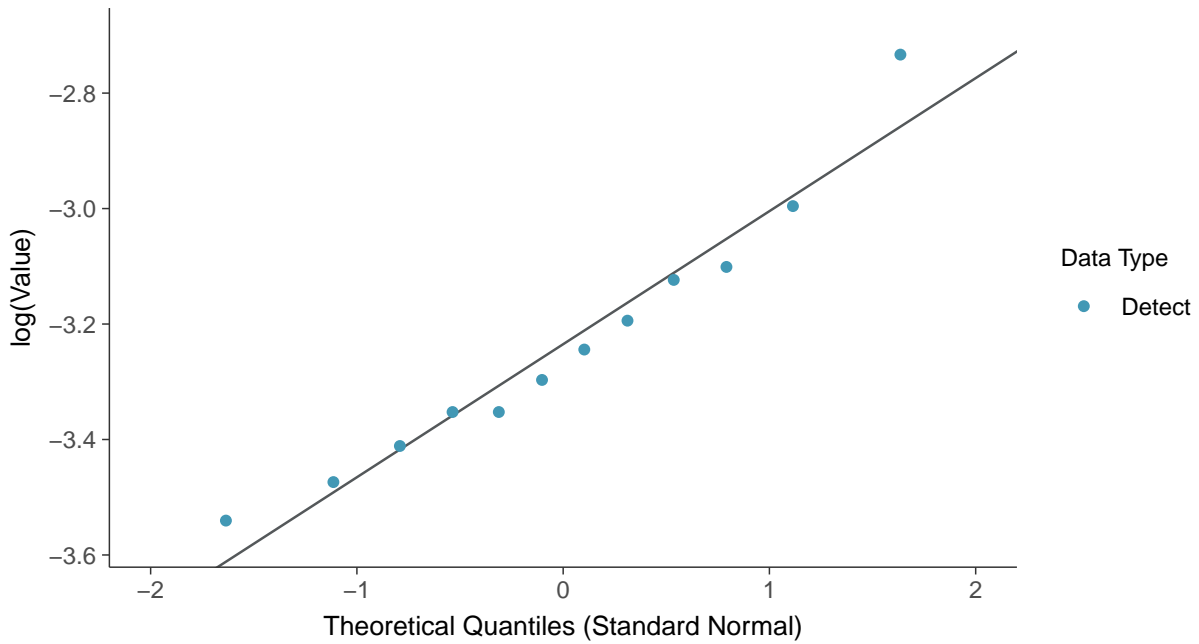




**Normal Q-Q plot**  
Lithium, MW-03 (mg/L)

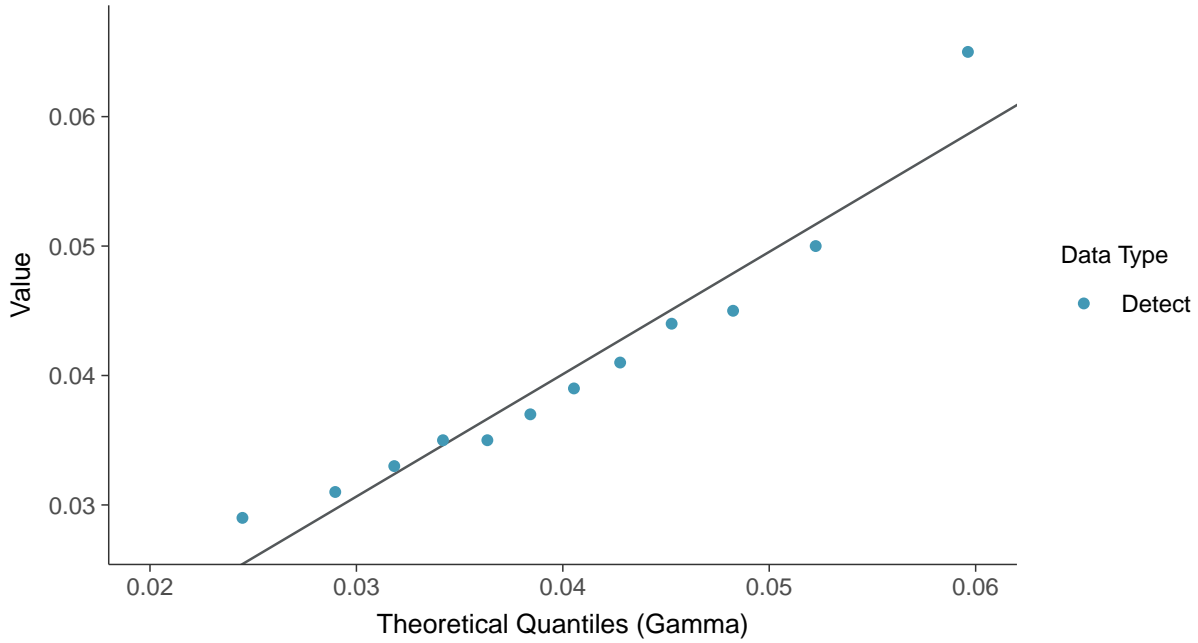


**Lognormal Q-Q plot**  
Lithium, MW-03 (mg/L)

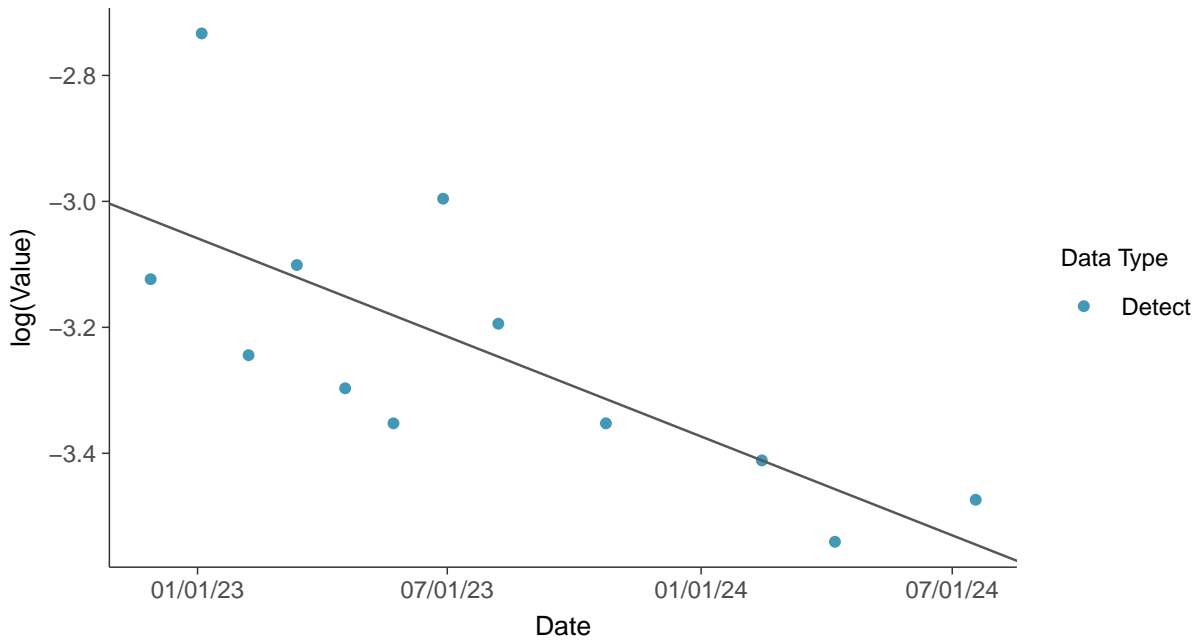




**Gamma Q-Q plot**  
Lithium, MW-03 (mg/L)

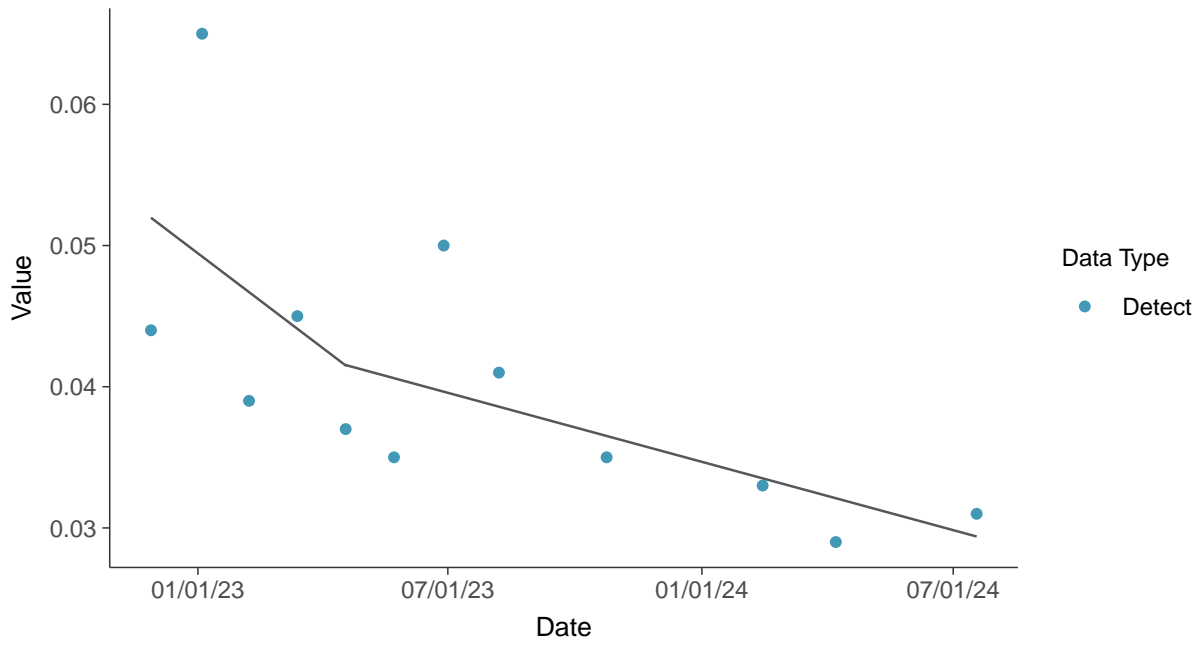


**Trend Regression: Lognormal MLE**  
Lithium, MW-03 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Lithium, MW-03 (mg/L)



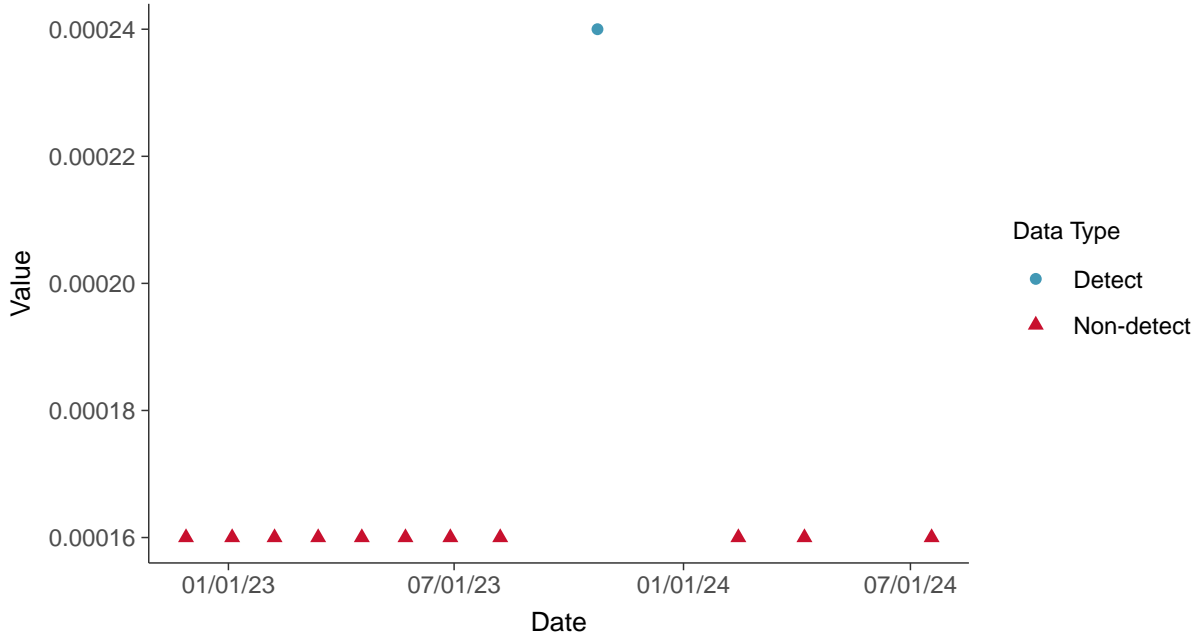


### Appendix IV: Mercury, MW-03

ID: 13\_2\_5\_117

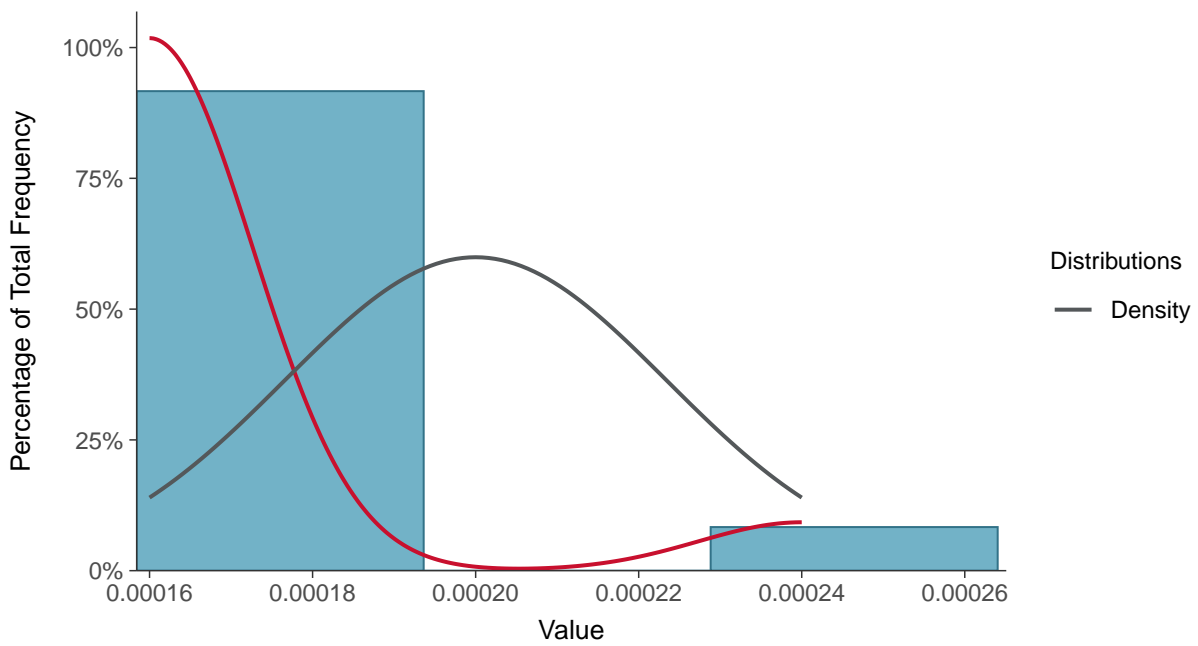
#### Scatter Plot

Mercury, MW-03 (mg/L)



#### Histogram

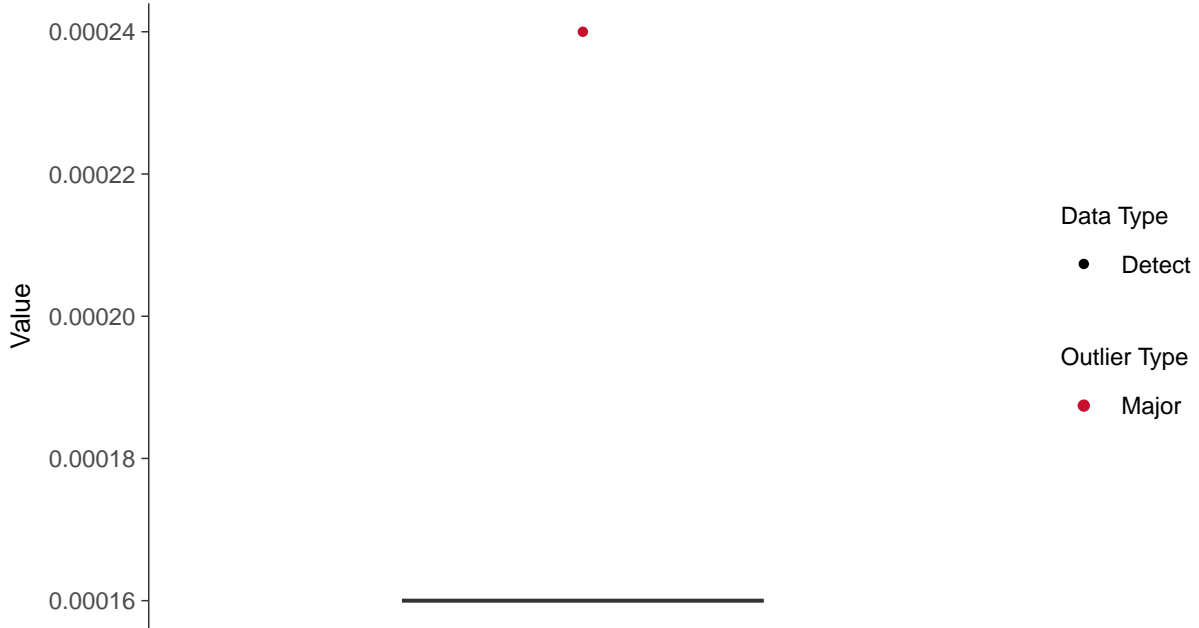
Mercury, MW-03 (mg/L)





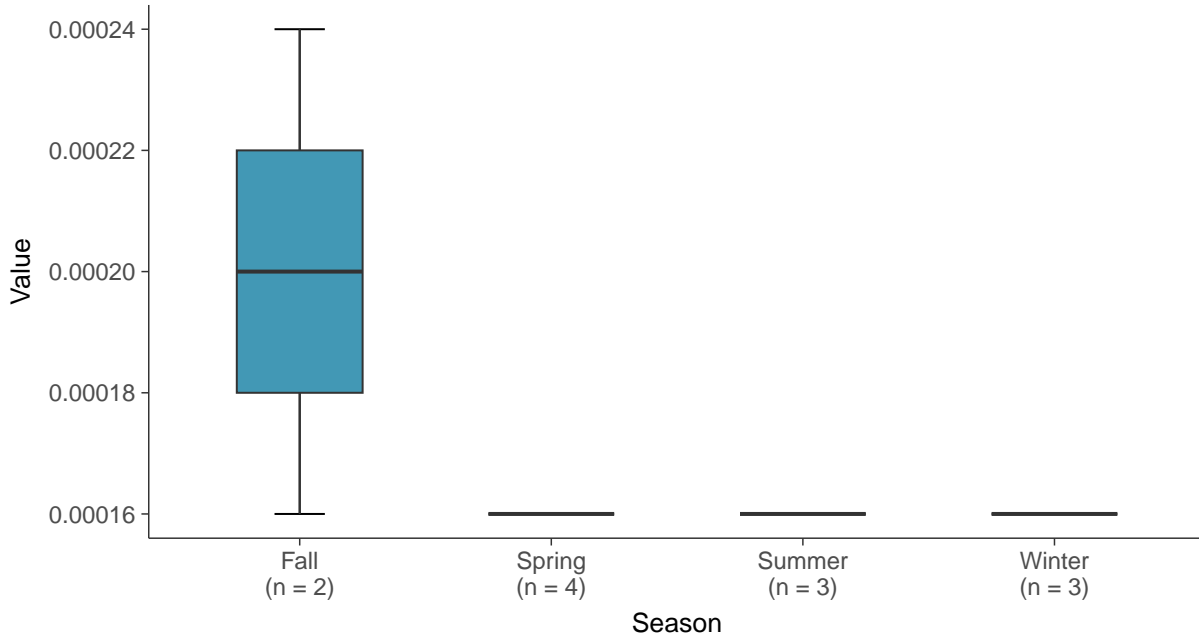
### Boxplot

Mercury, MW-03 (mg/L)



### Boxplot by Season

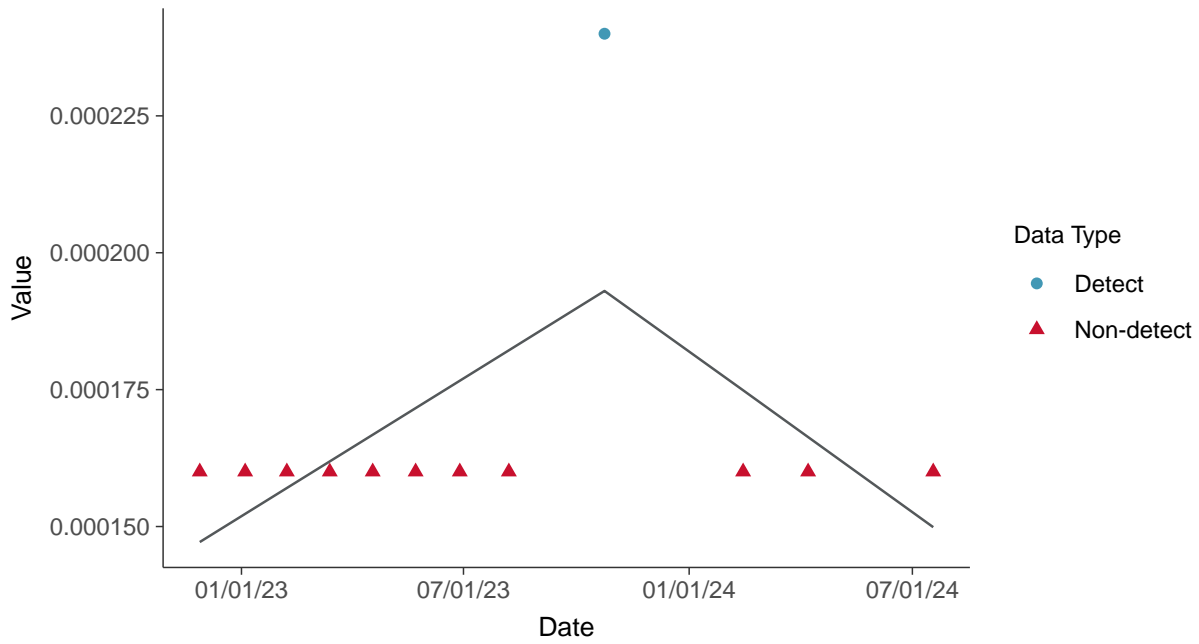
Mercury, MW-03 (mg/L)





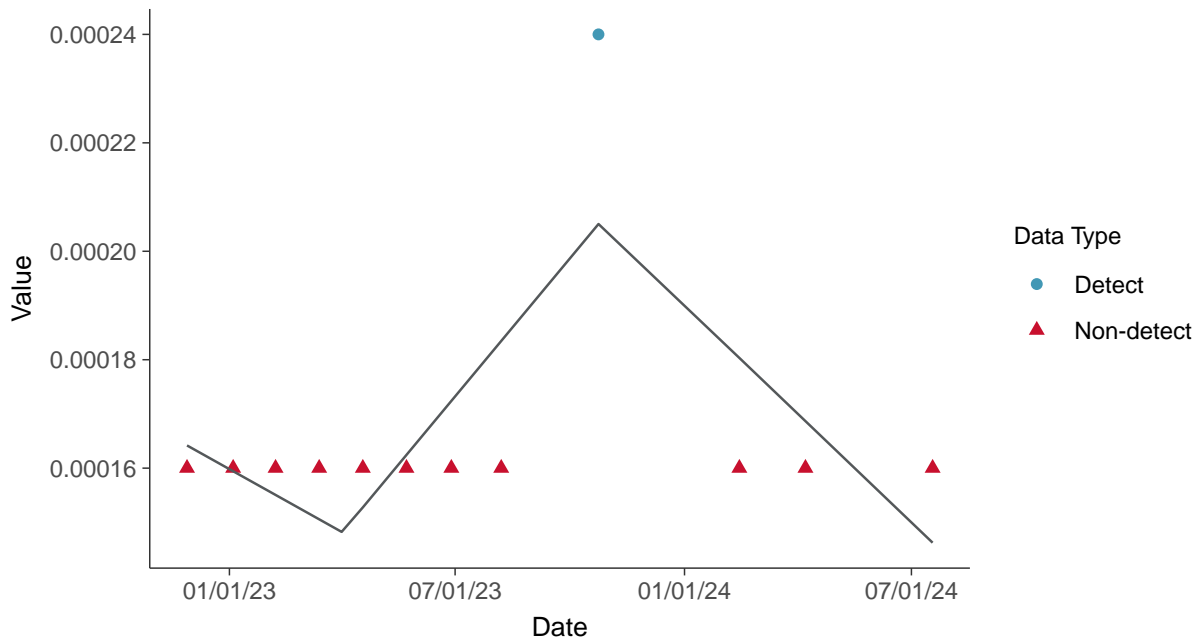
### Trend Regression: Piecewise Linear-Linear

Mercury, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

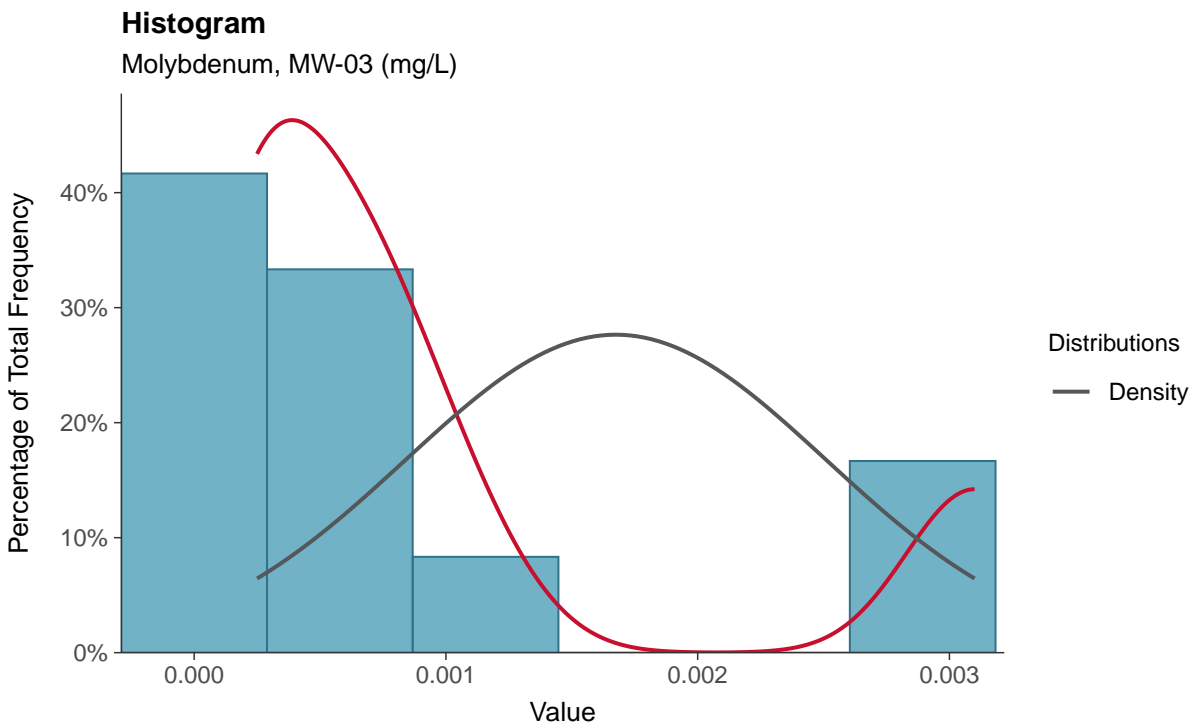
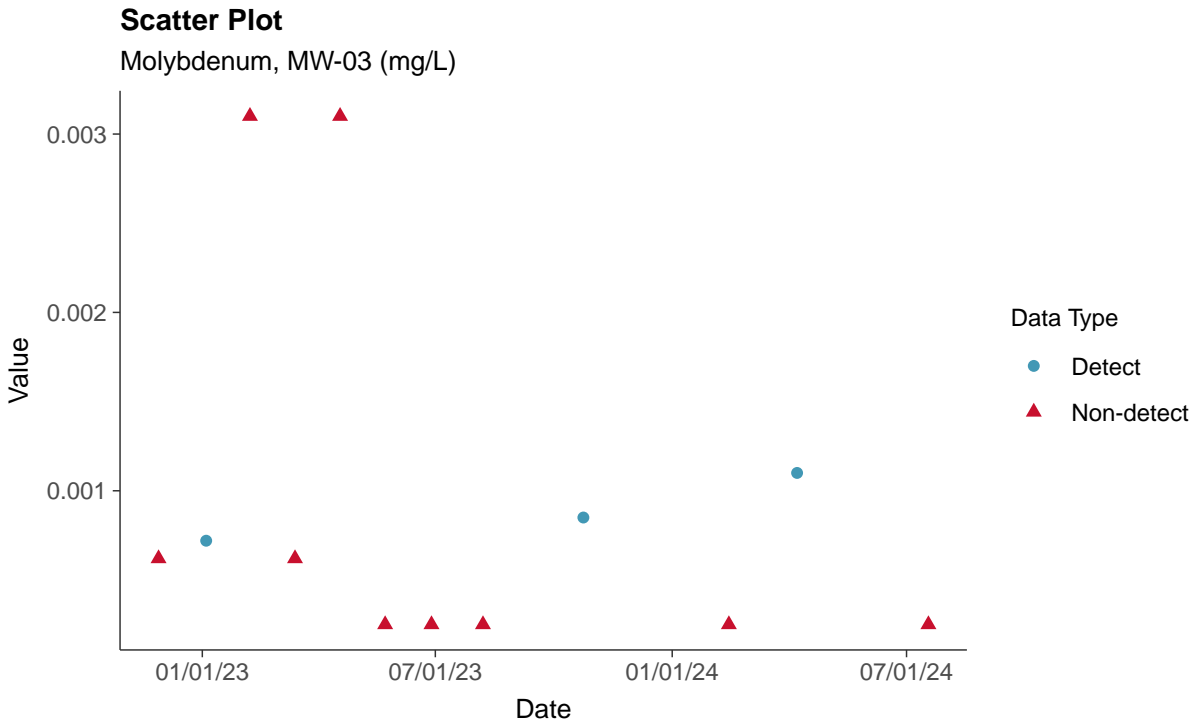
Mercury, MW-03 (mg/L)





### Appendix IV: Molybdenum, MW-03

ID: 13\_2\_5\_118

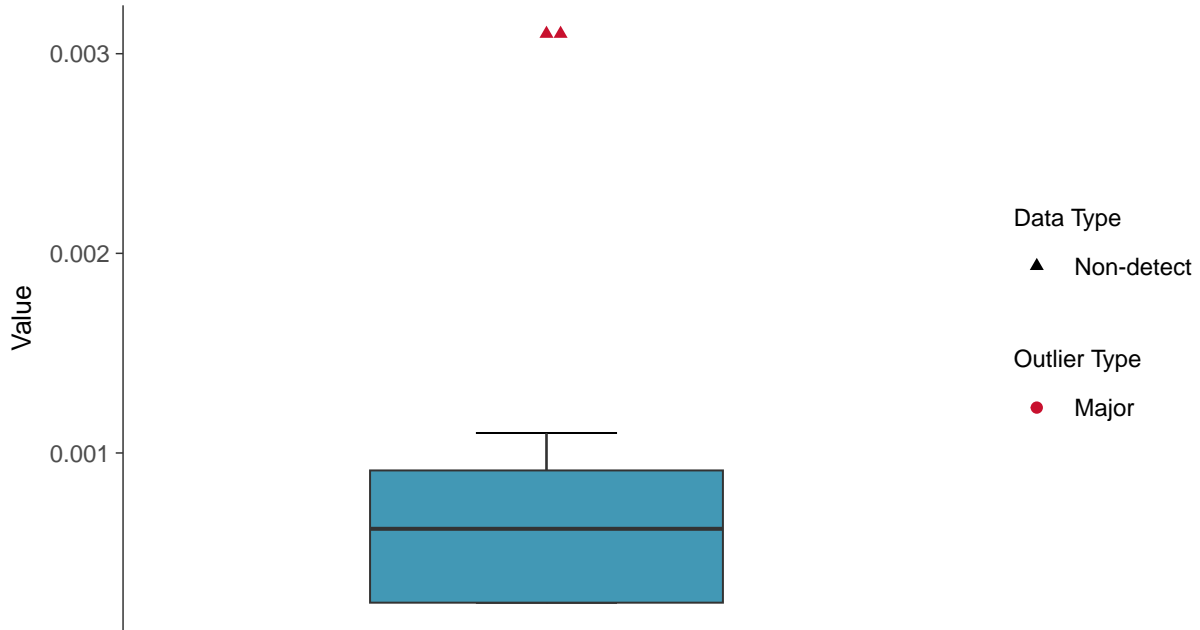






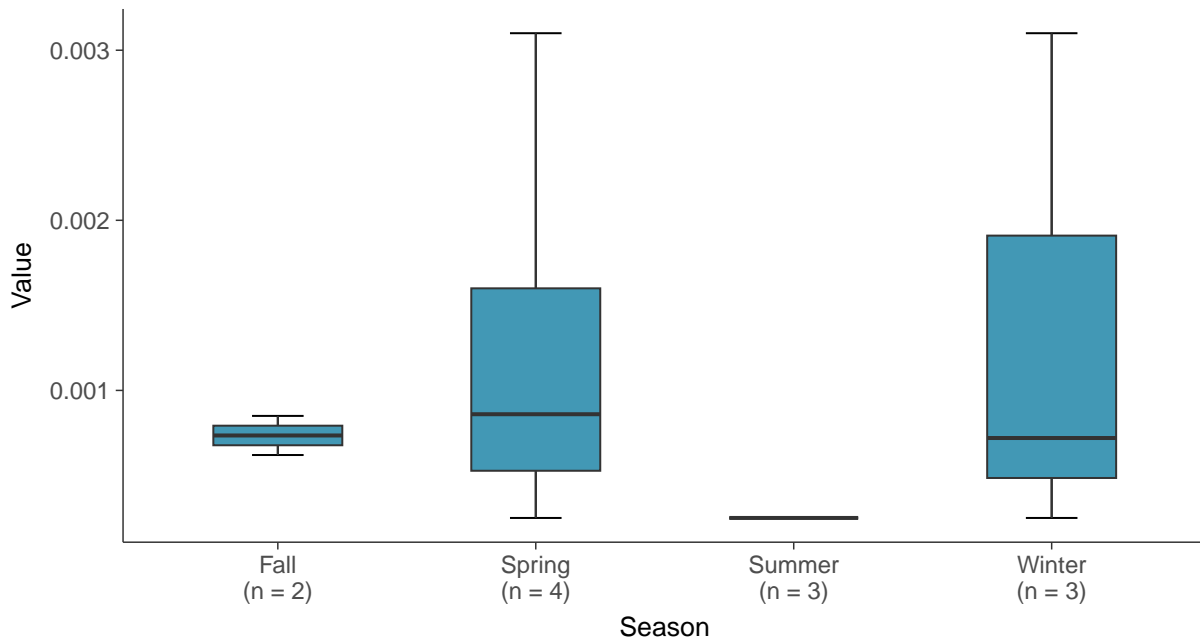
### Boxplot

Molybdenum, MW-03 (mg/L)



### Boxplot by Season

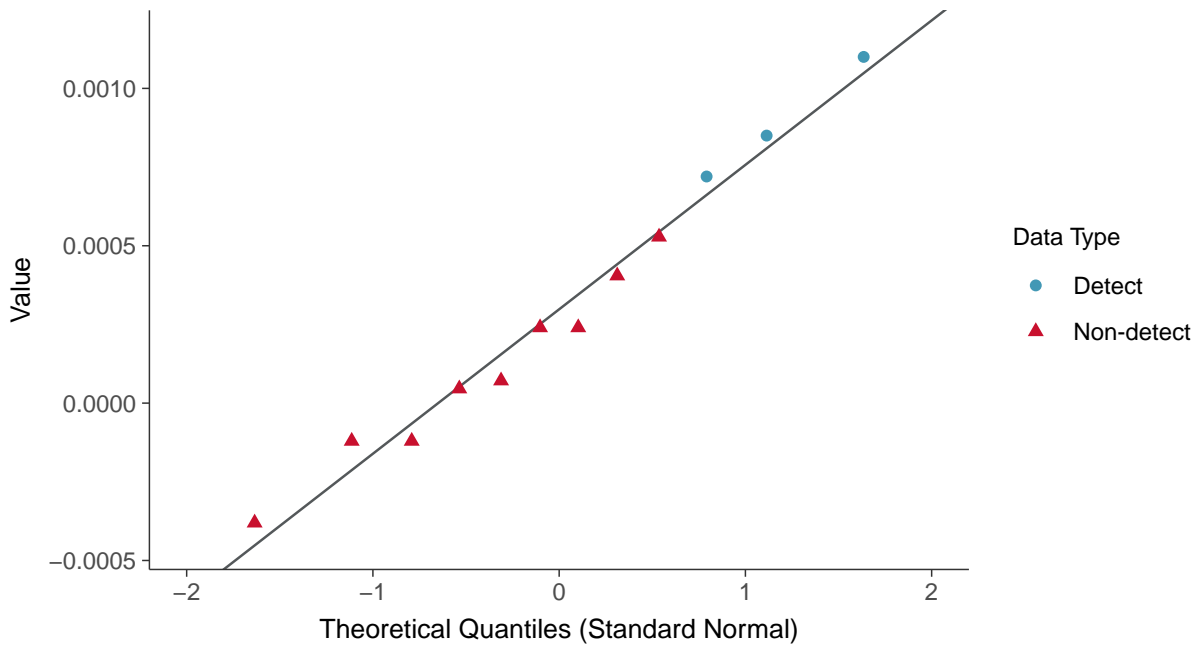
Molybdenum, MW-03 (mg/L)





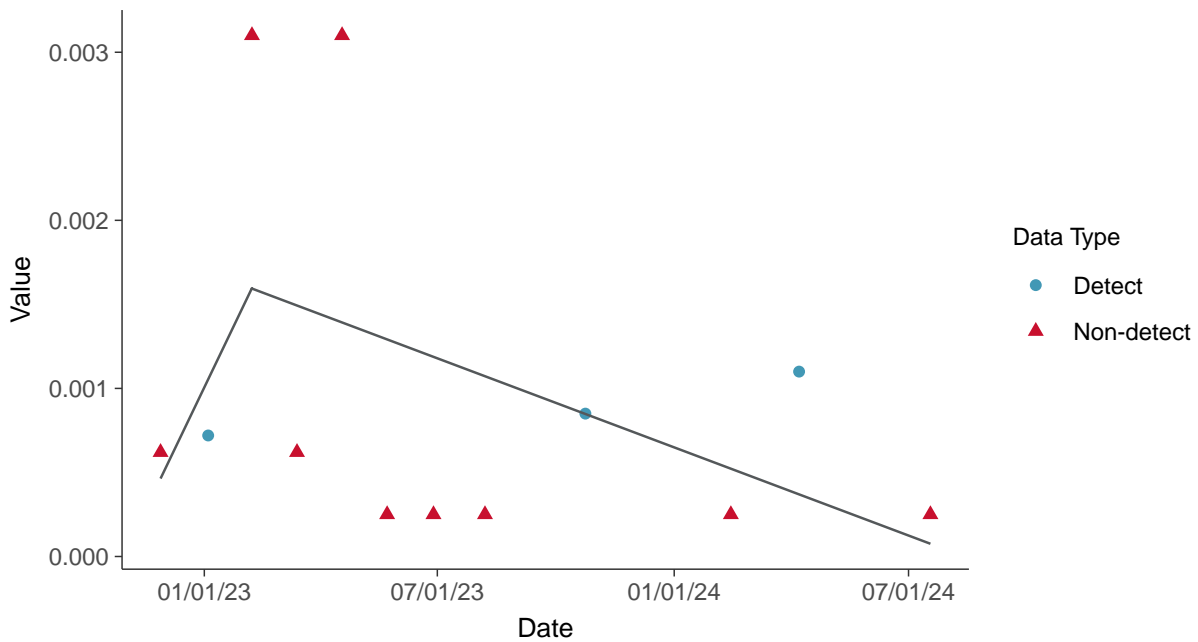
### Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-03 (mg/L)



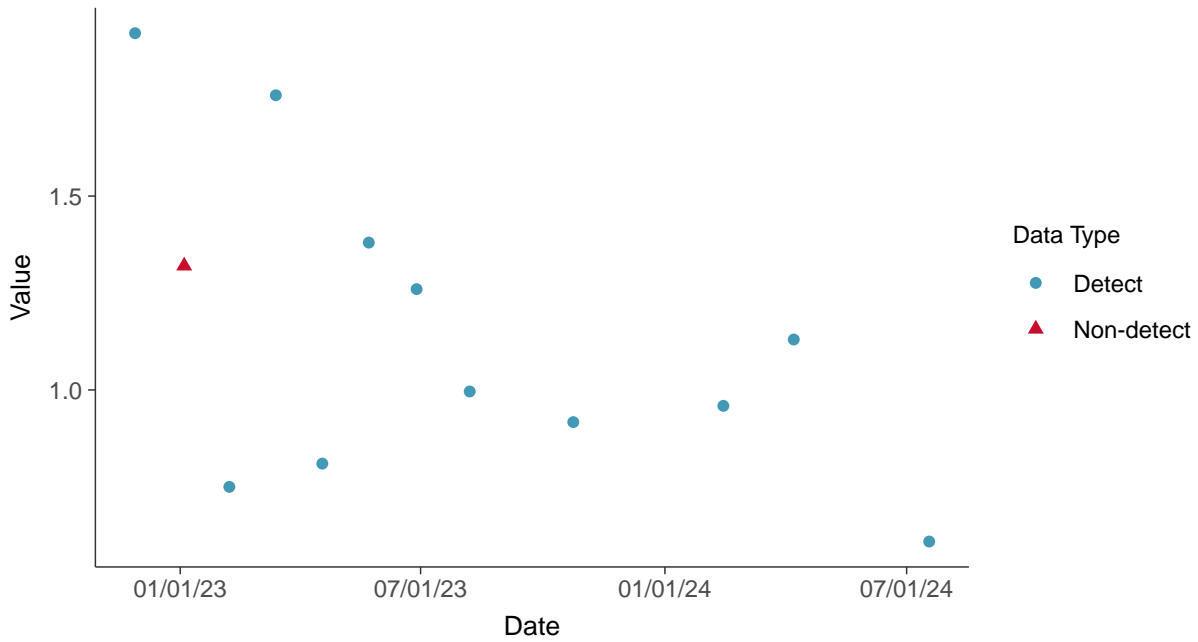


### Appendix IV: Radium 226 and 228, MW-03

ID: 13\_2\_5\_121

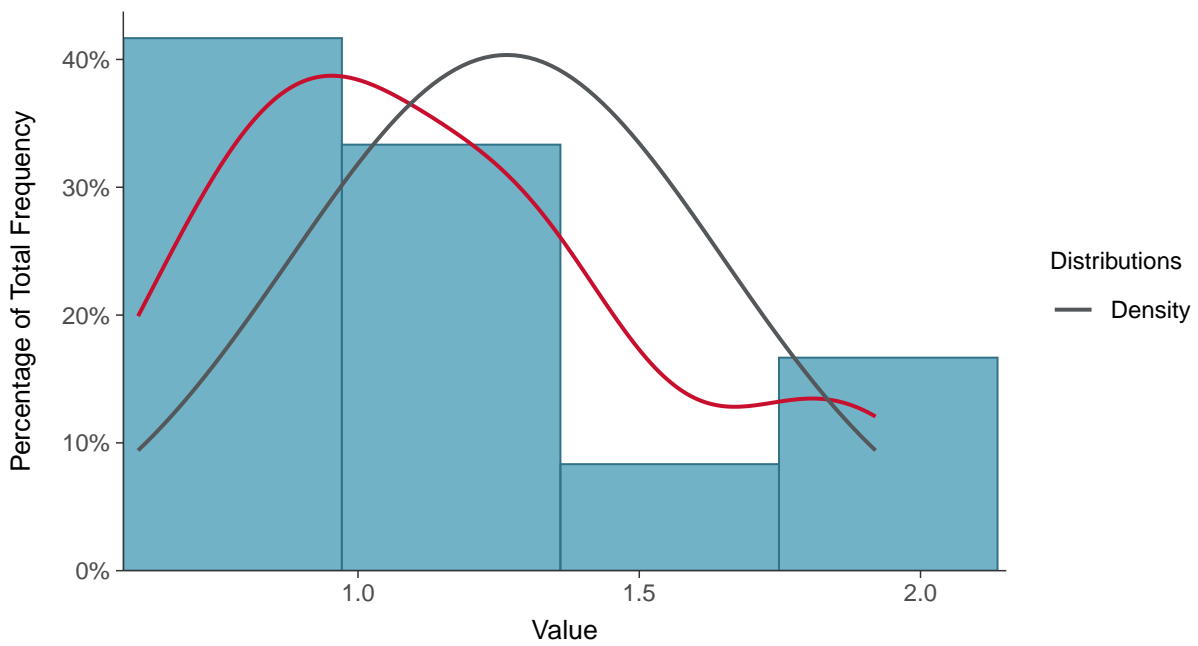
#### Scatter Plot

Radium 226 and 228, MW-03 (pCi/L)



#### Histogram

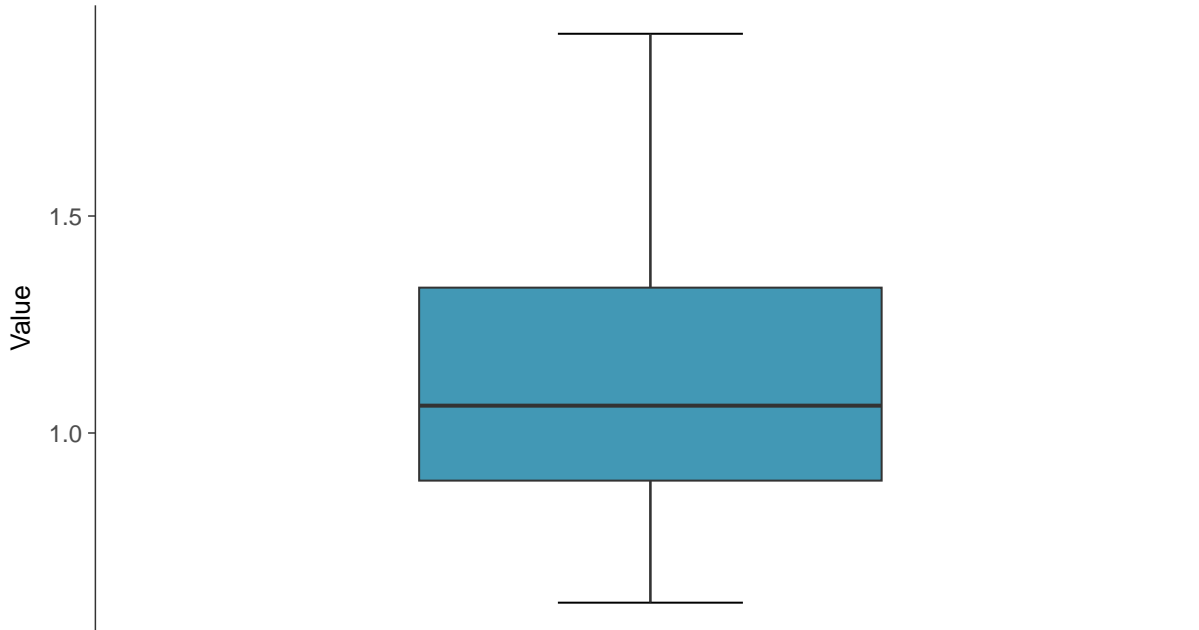
Radium 226 and 228, MW-03 (pCi/L)





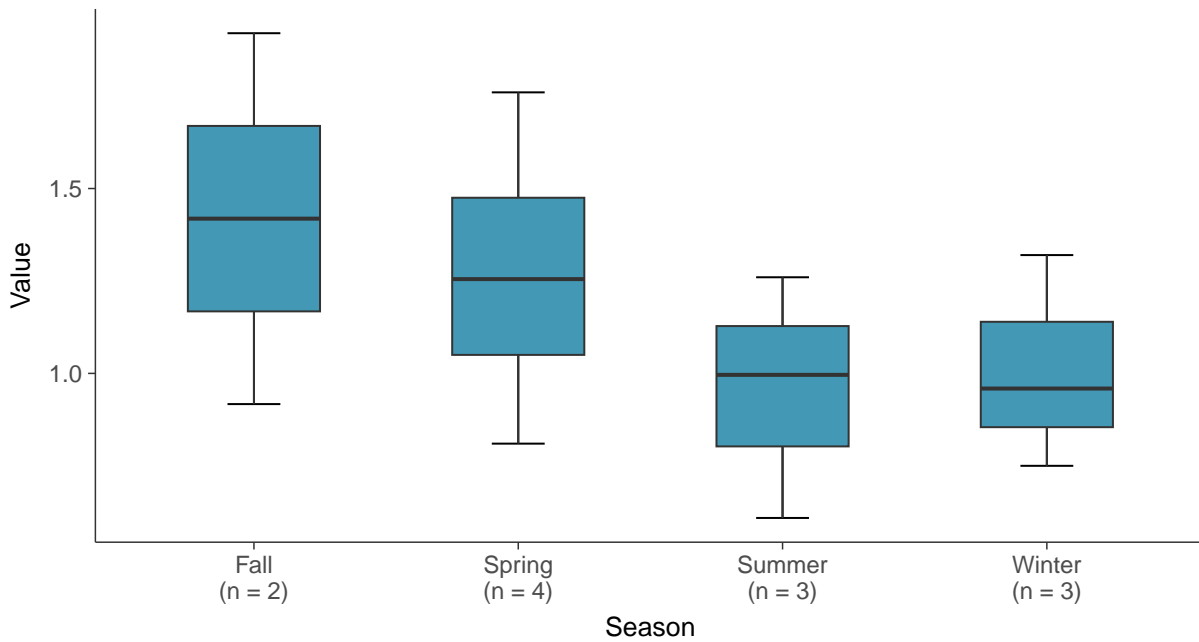
### Boxplot

Radium 226 and 228, MW-03 (pCi/L)



### Boxplot by Season

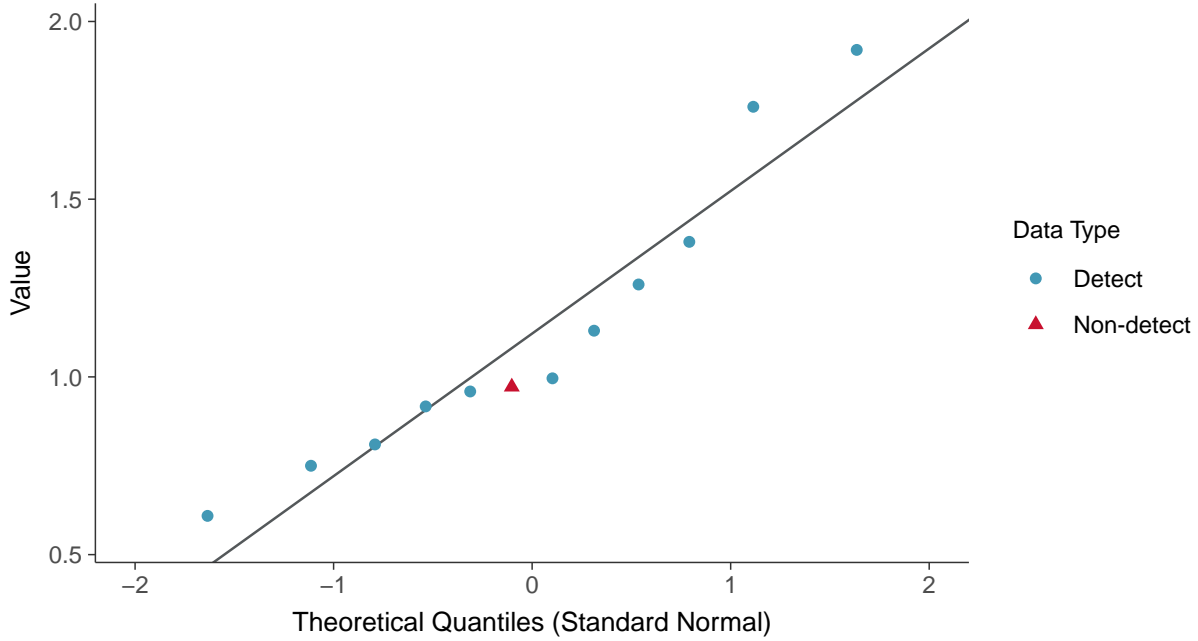
Radium 226 and 228, MW-03 (pCi/L)





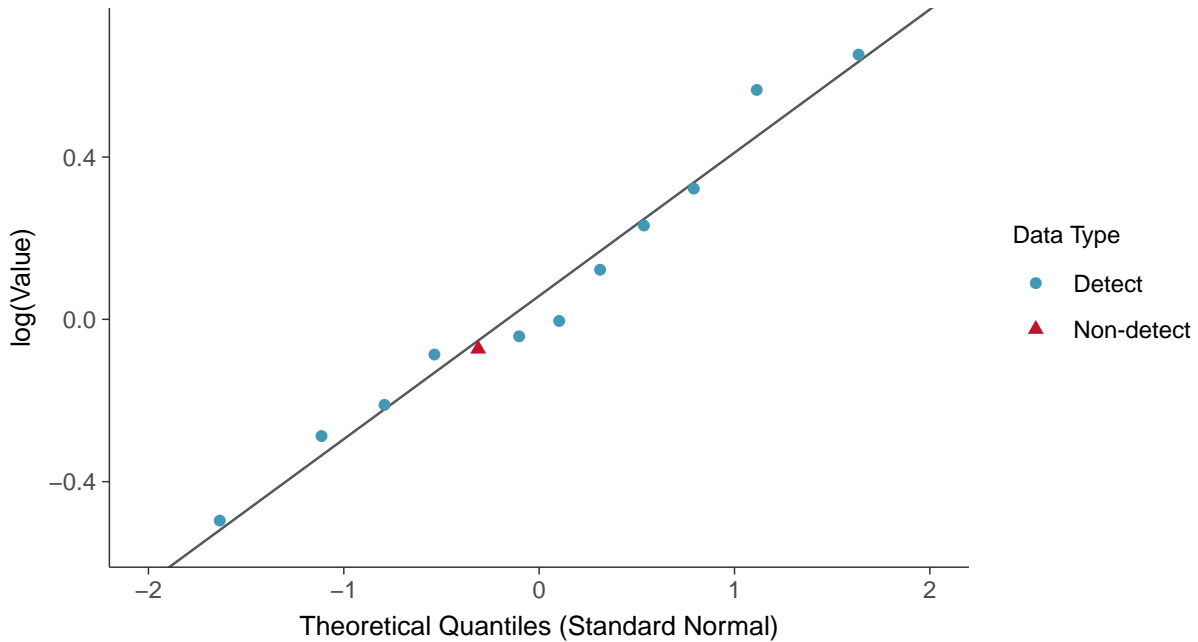
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

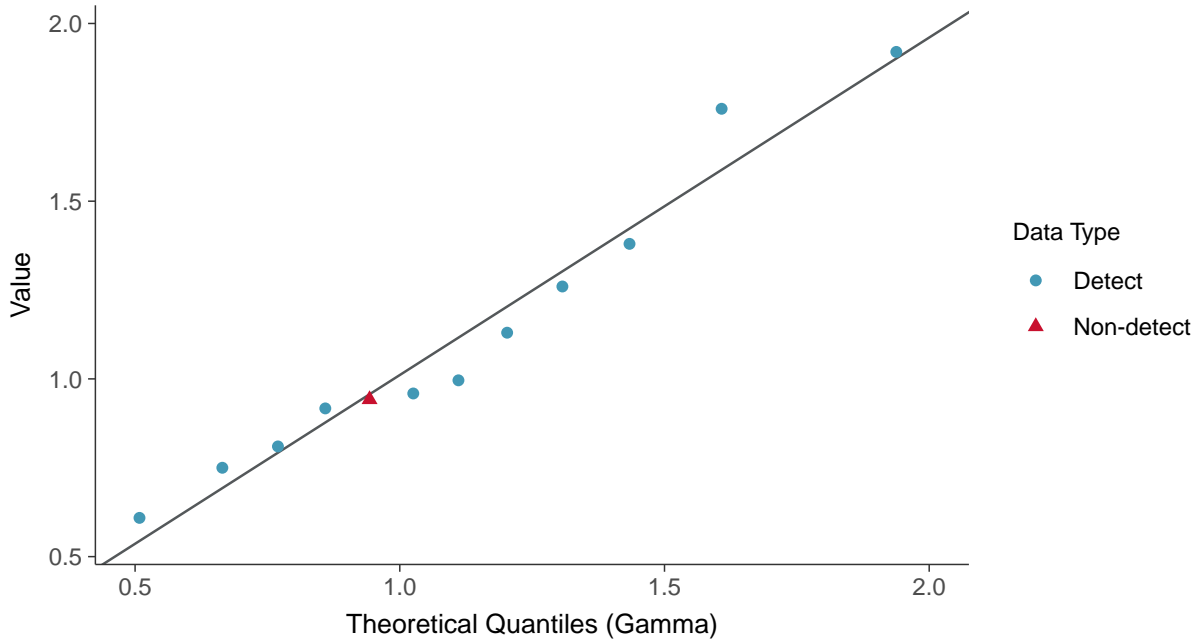
Radium 226 and 228, MW-03 (pCi/L)





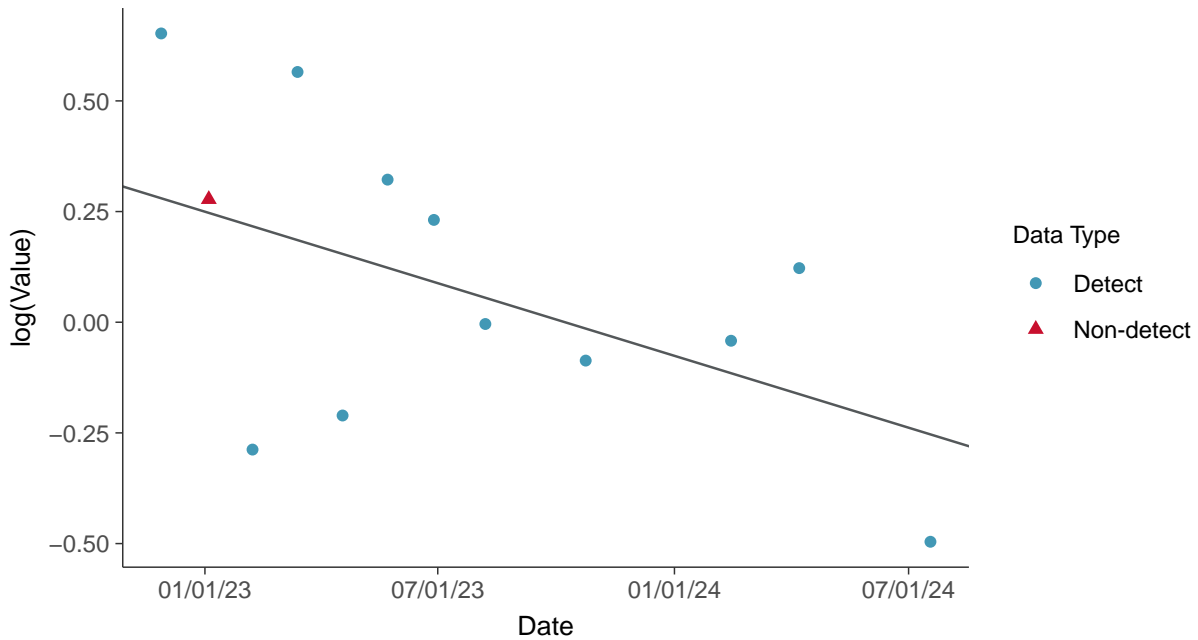
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-03 (pCi/L)



### Trend Regression: Lognormal MLE

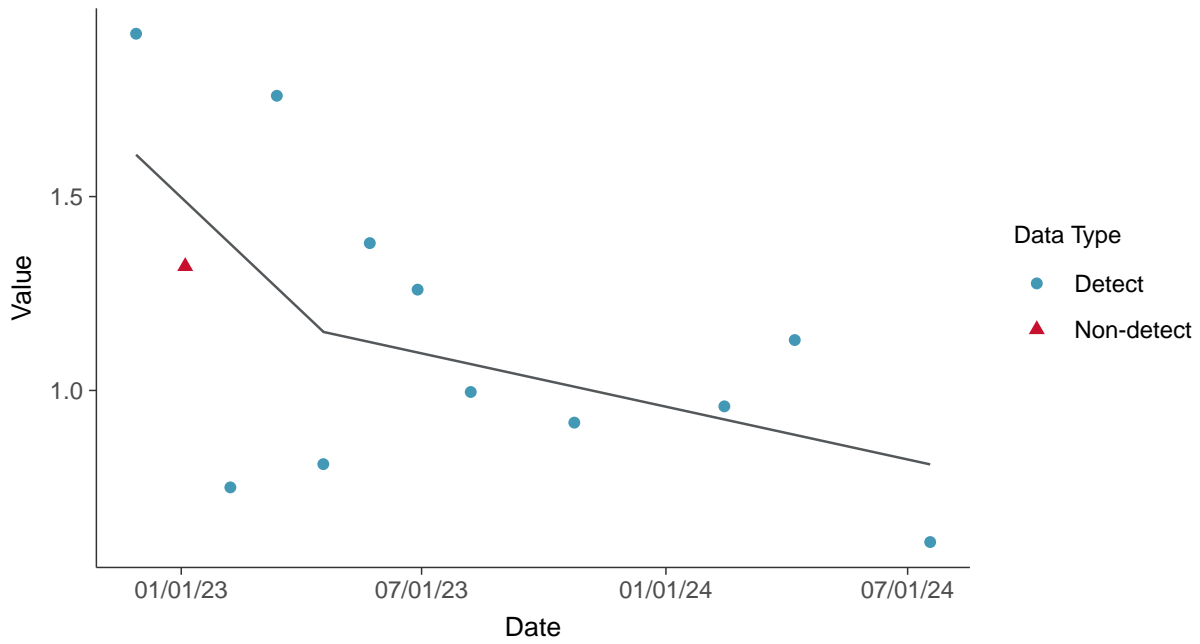
Radium 226 and 228, MW-03 (pCi/L)





### Trend Regression: Piecewise Linear-Linear

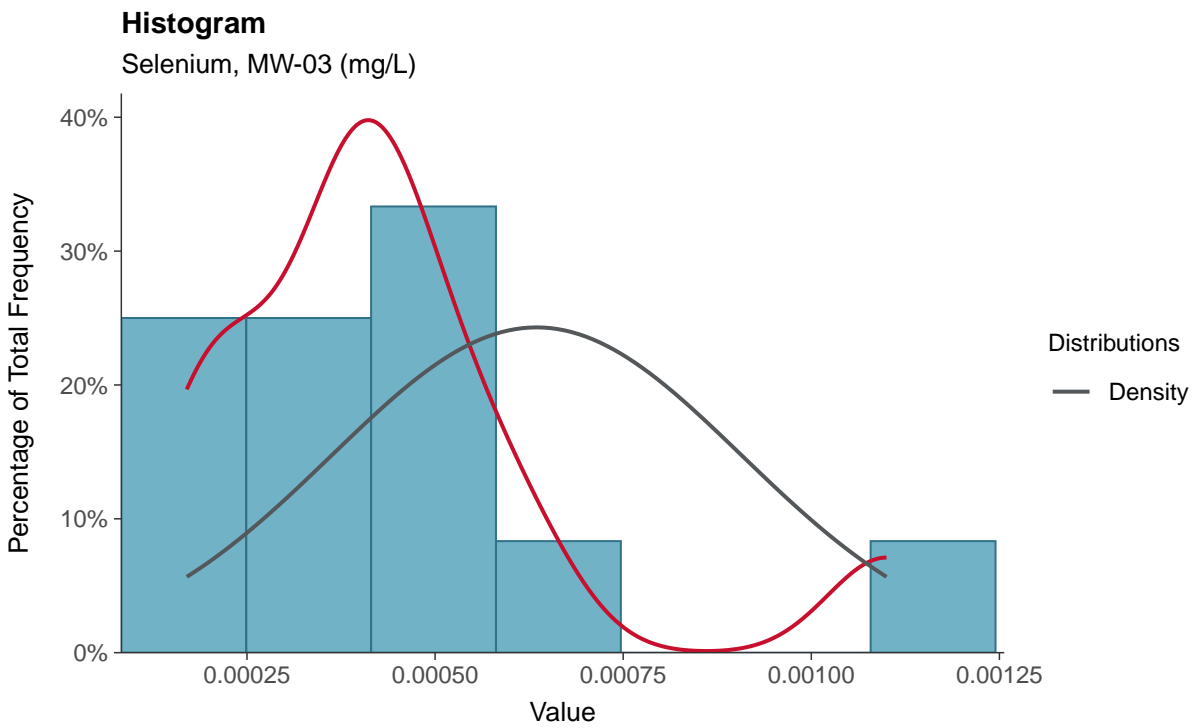
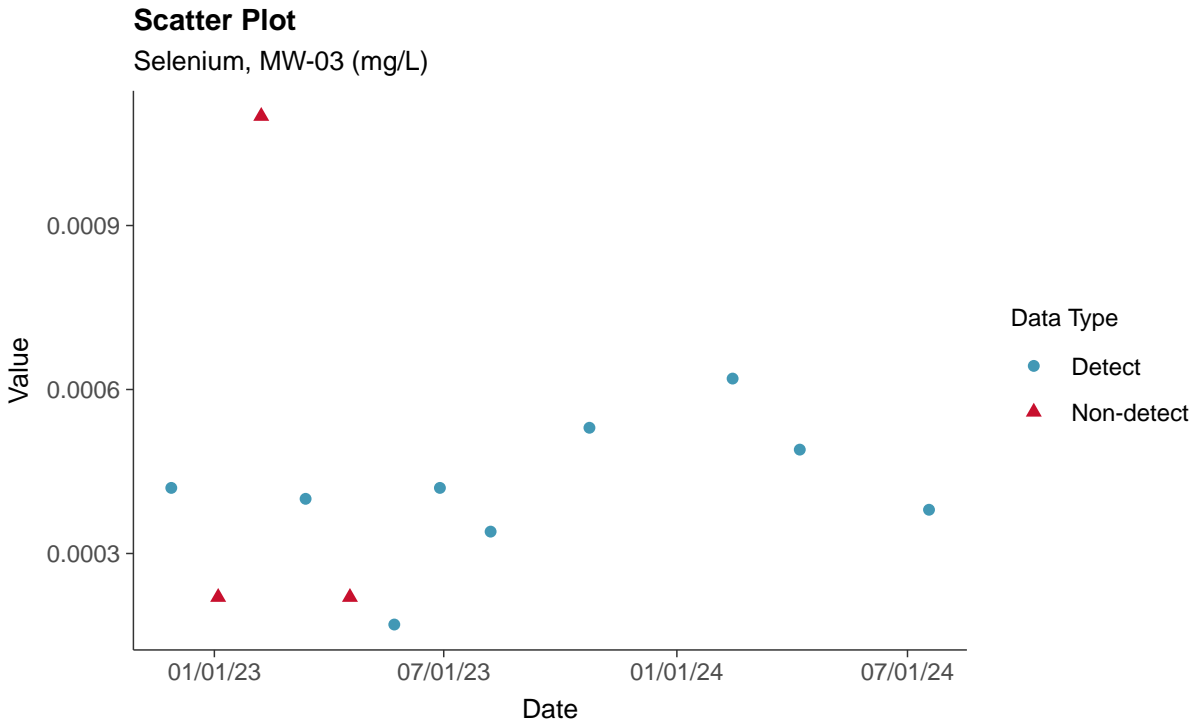
Radium 226 and 228, MW-03 (pCi/L)





### Appendix IV: Selenium, MW-03

ID: 13\_2\_5\_122

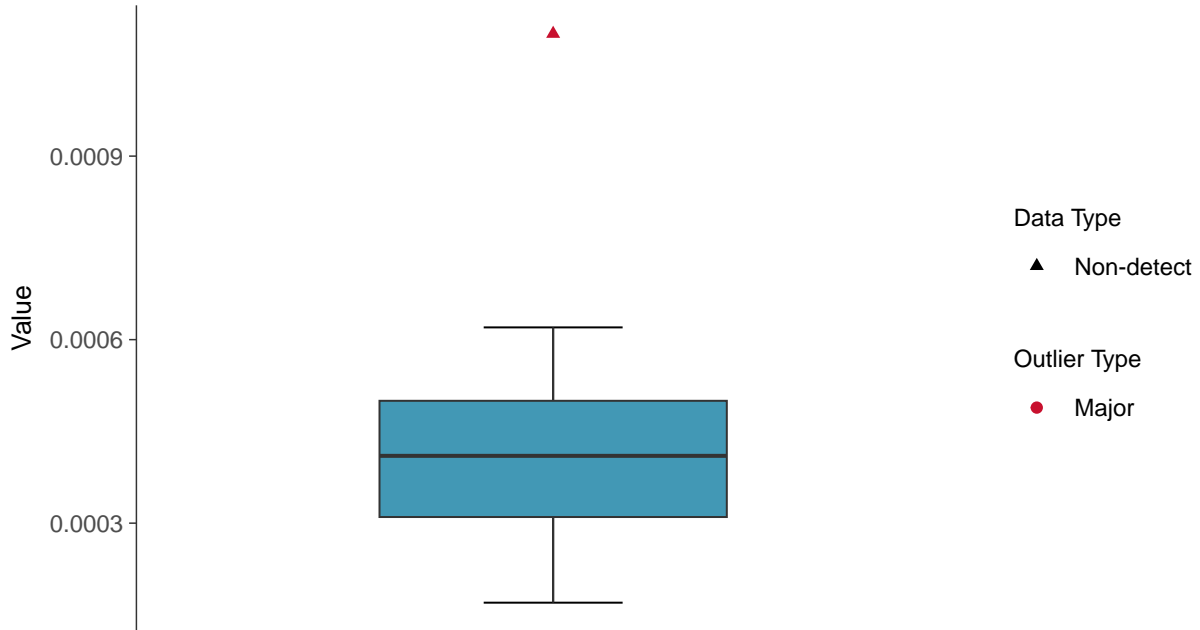






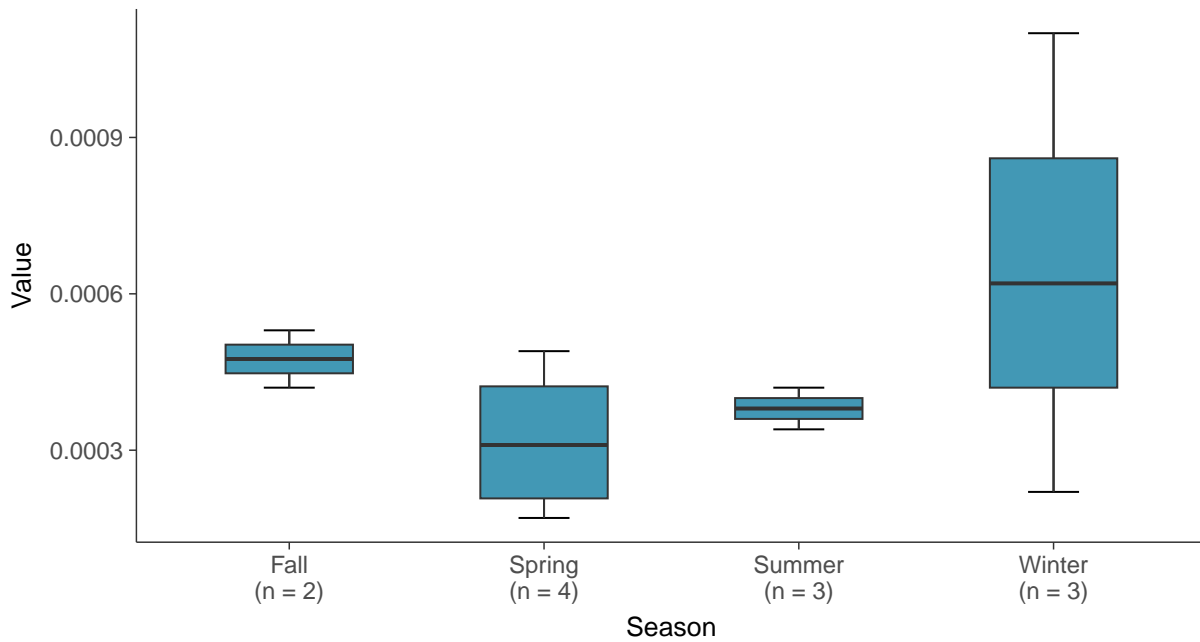
### Boxplot

Selenium, MW-03 (mg/L)



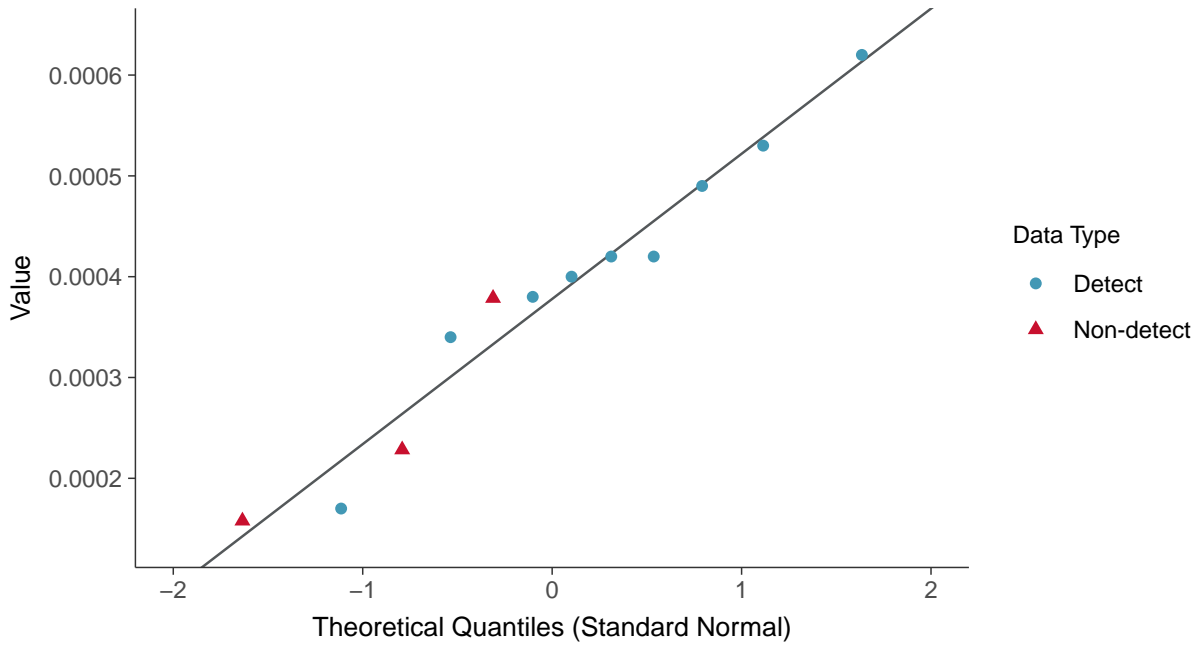
### Boxplot by Season

Selenium, MW-03 (mg/L)

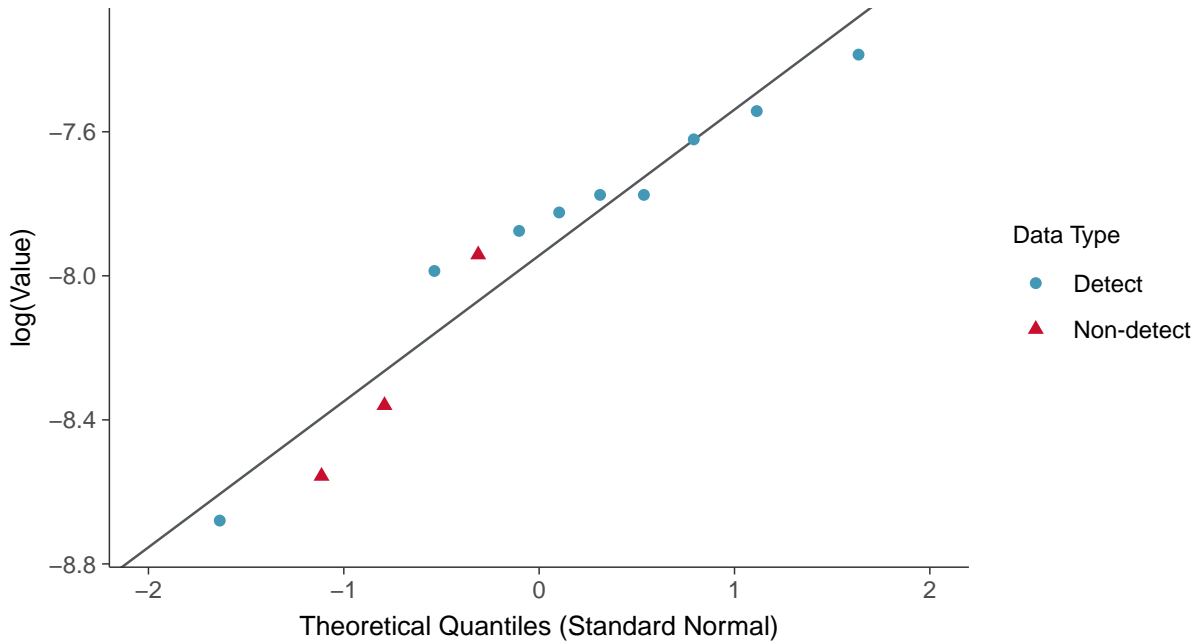




**Normal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-03 (mg/L)

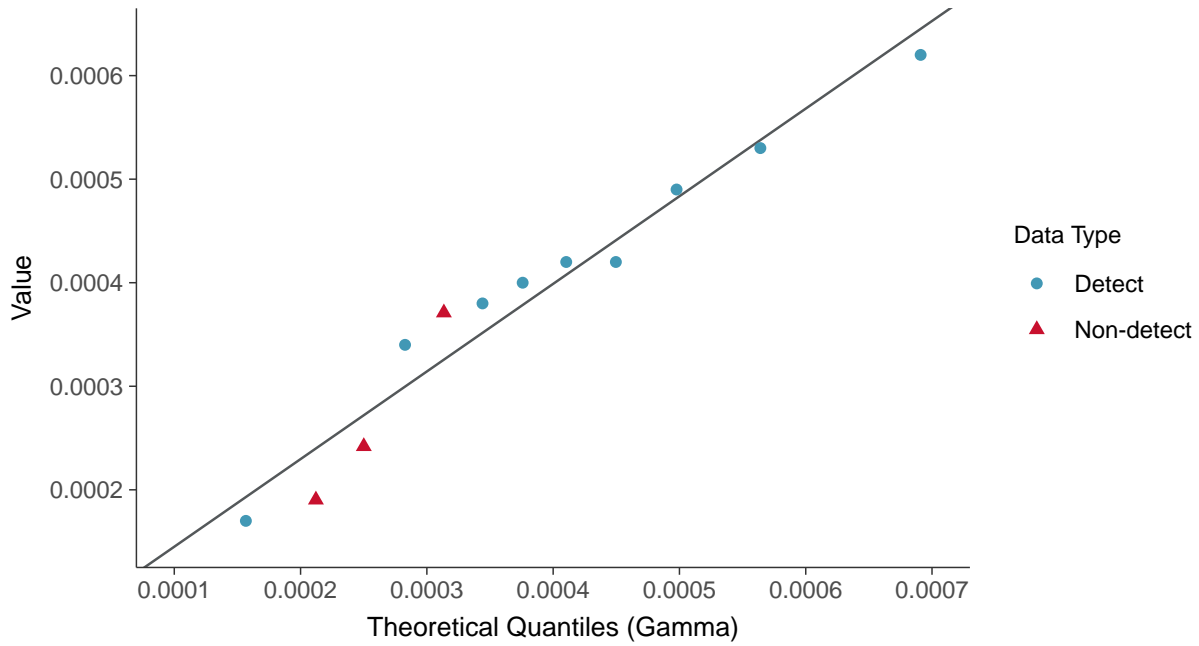


**Lognormal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-03 (mg/L)

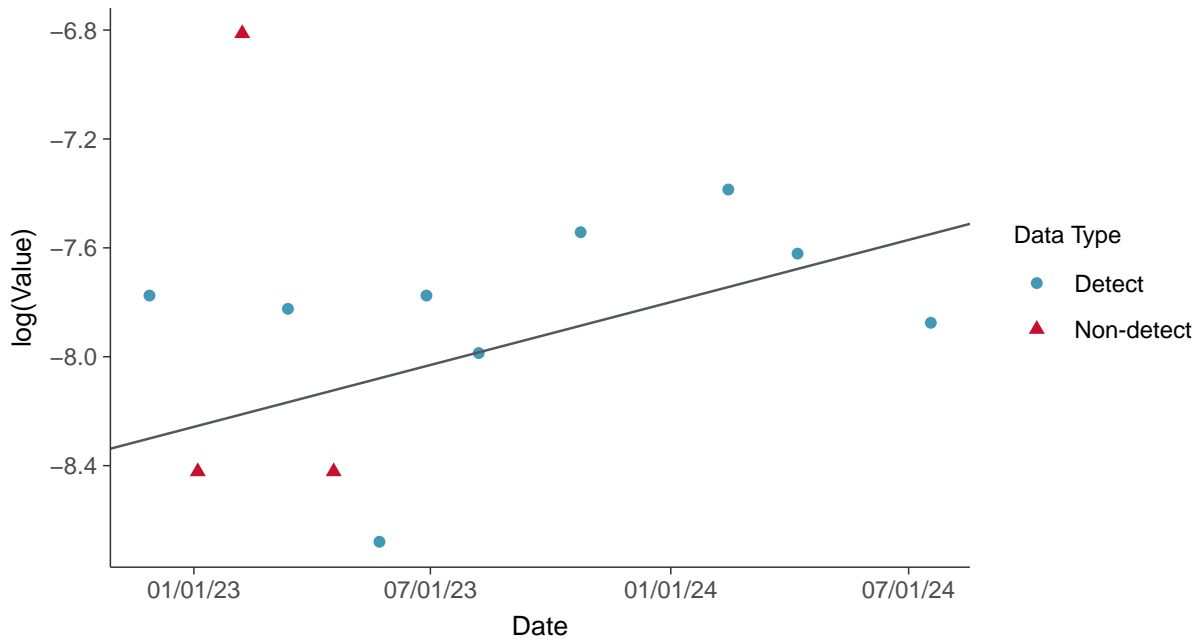




**Gamma Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-03 (mg/L)

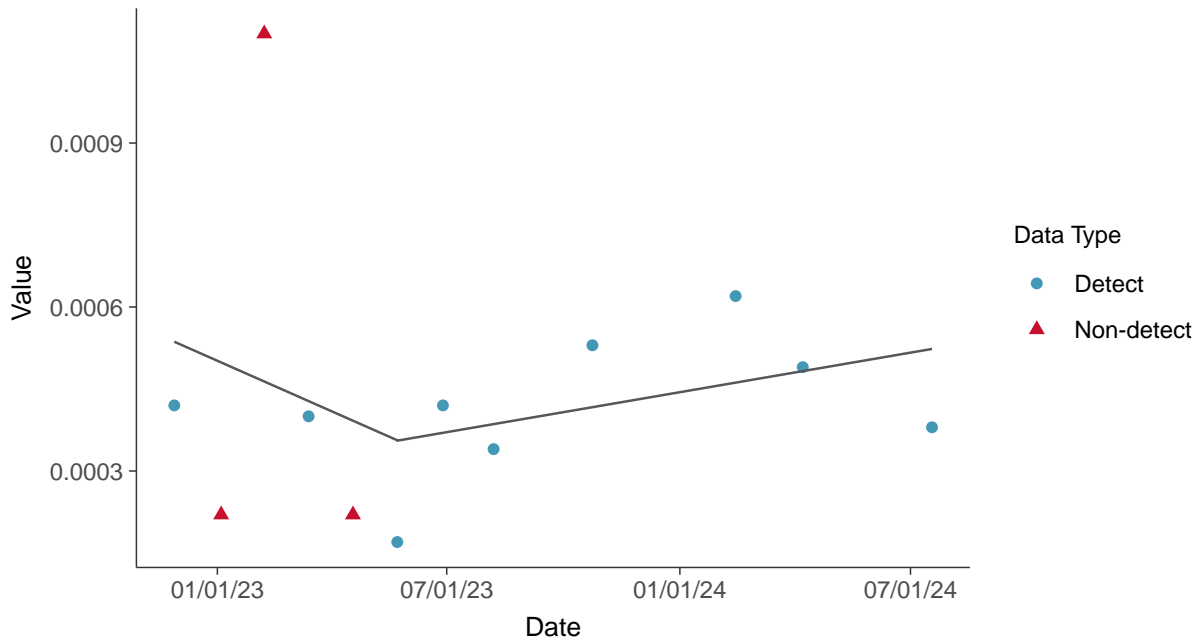


**Trend Regression: Lognormal MLE**  
Selenium, MW-03 (mg/L)

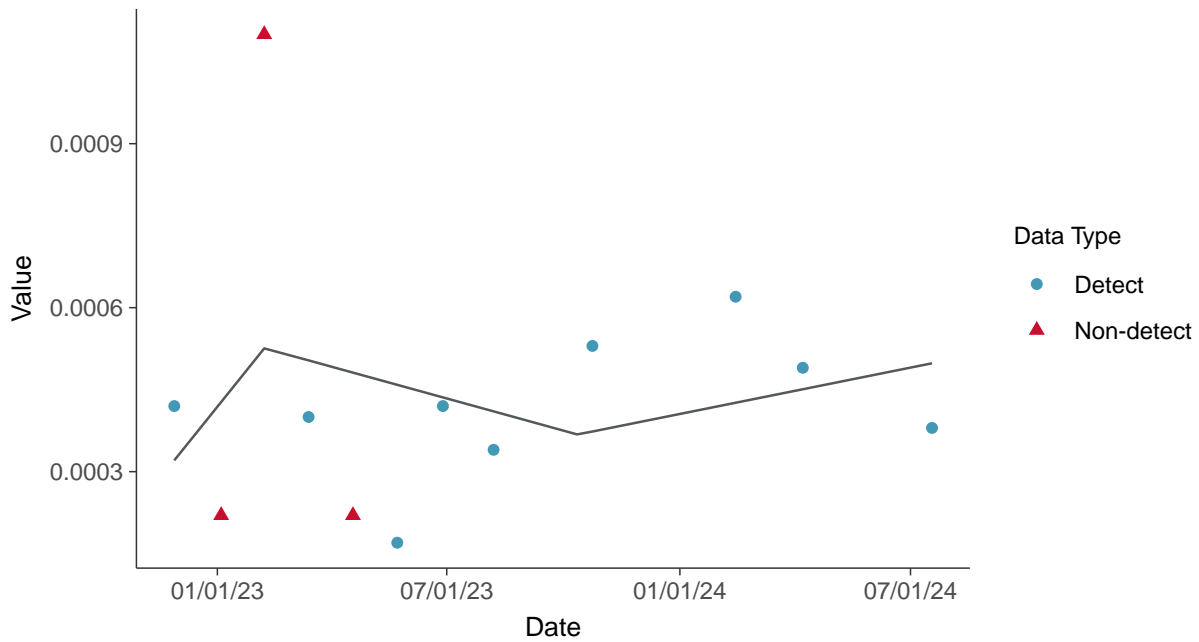




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-03 (mg/L)



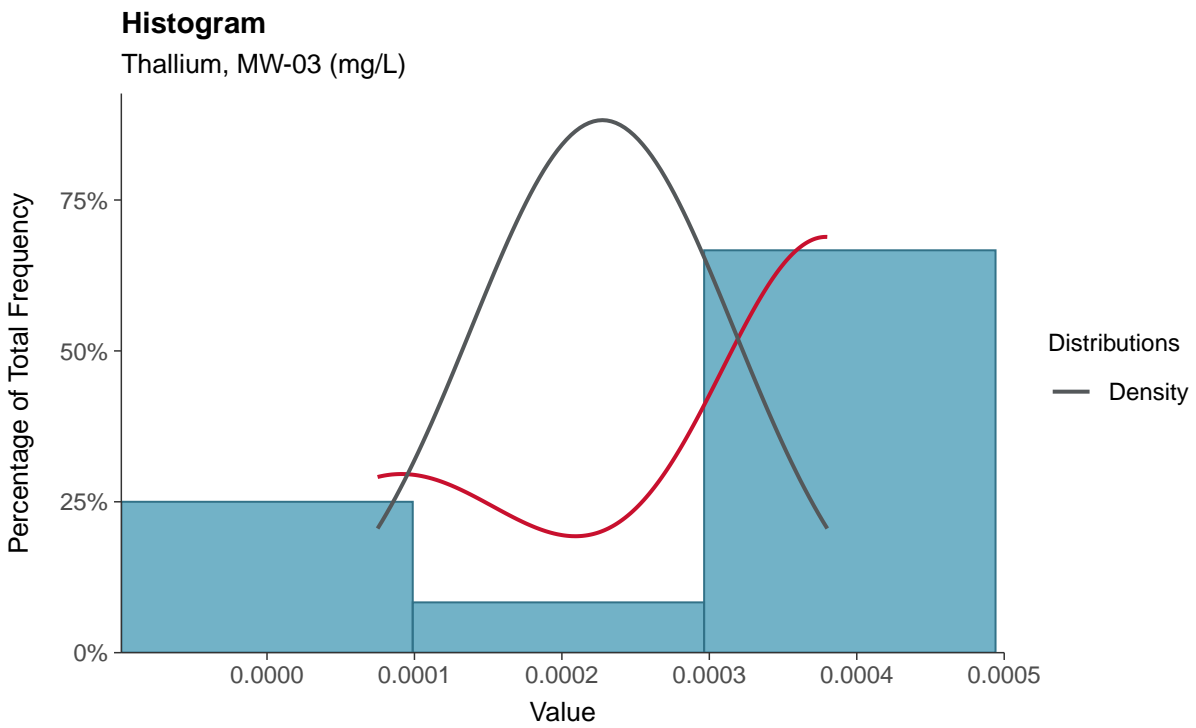
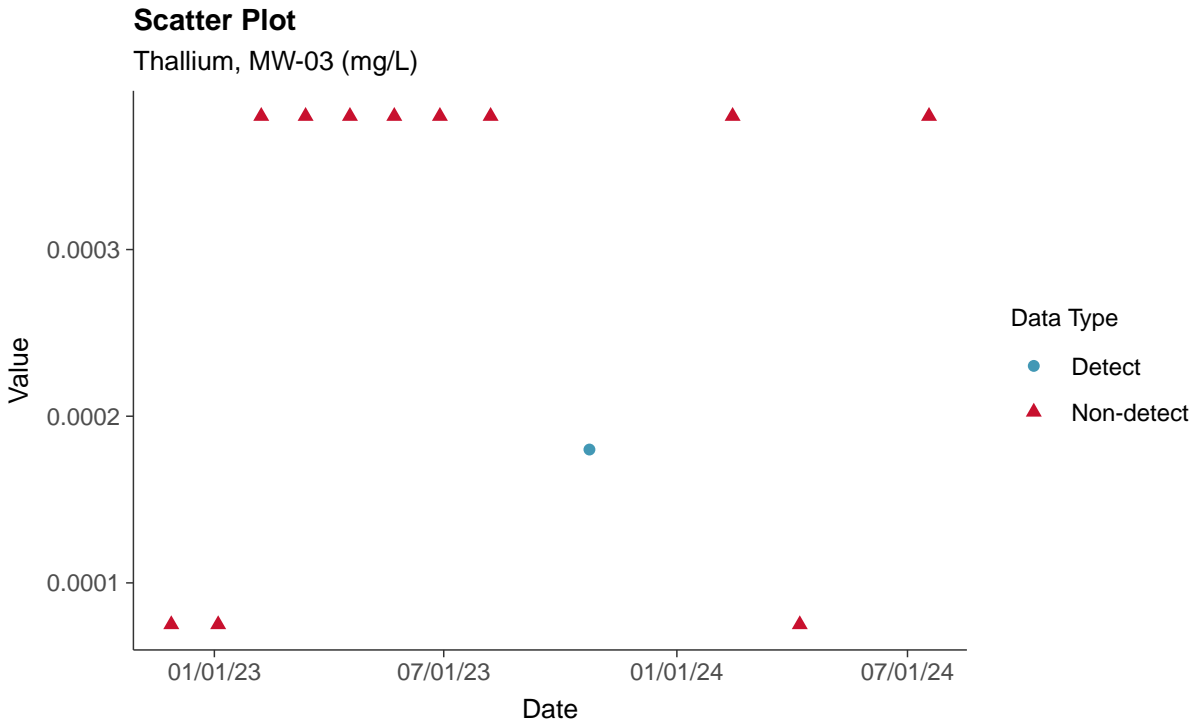
**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-03 (mg/L)





### Appendix IV: Thallium, MW-03

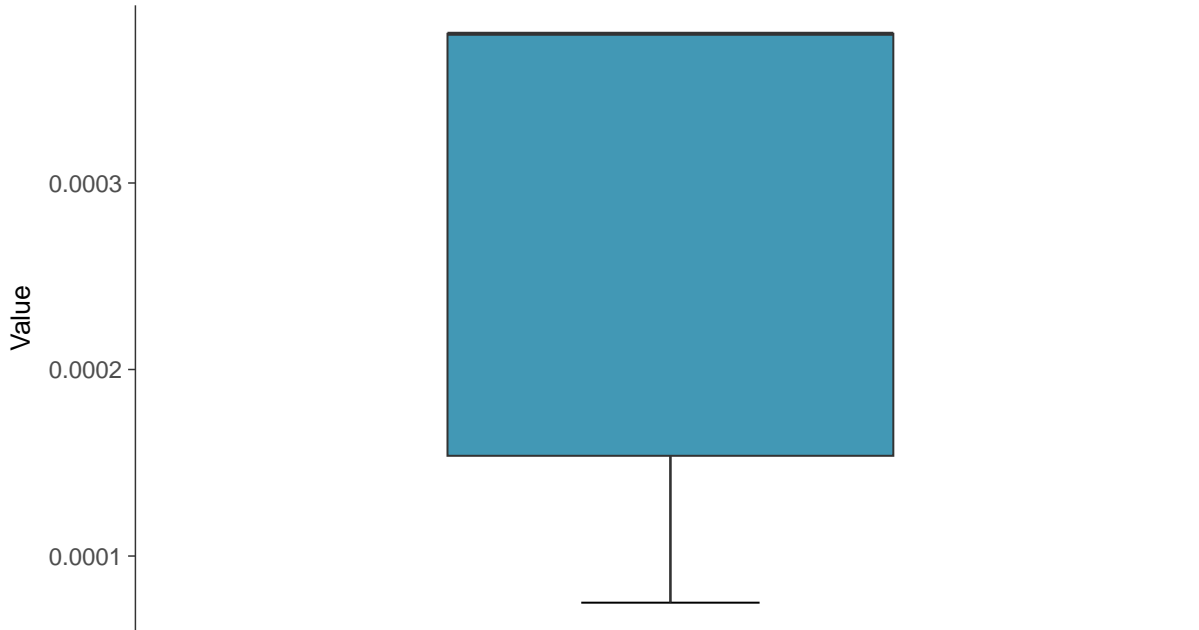
ID: 13\_2\_5\_125





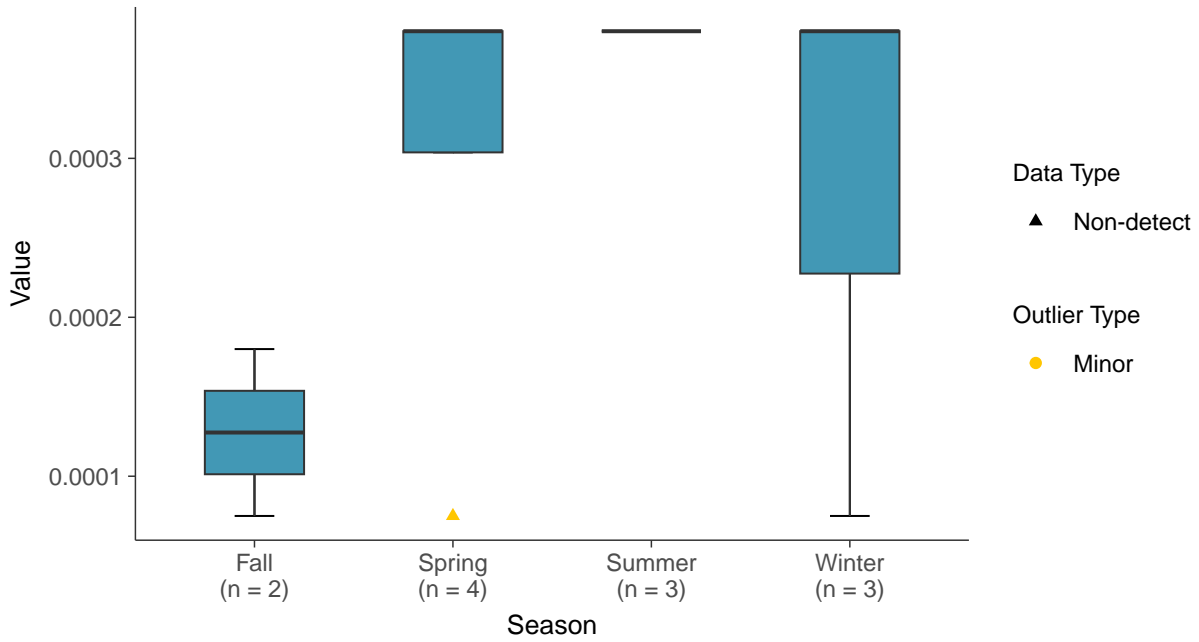
### Boxplot

Thallium, MW-03 (mg/L)



### Boxplot by Season

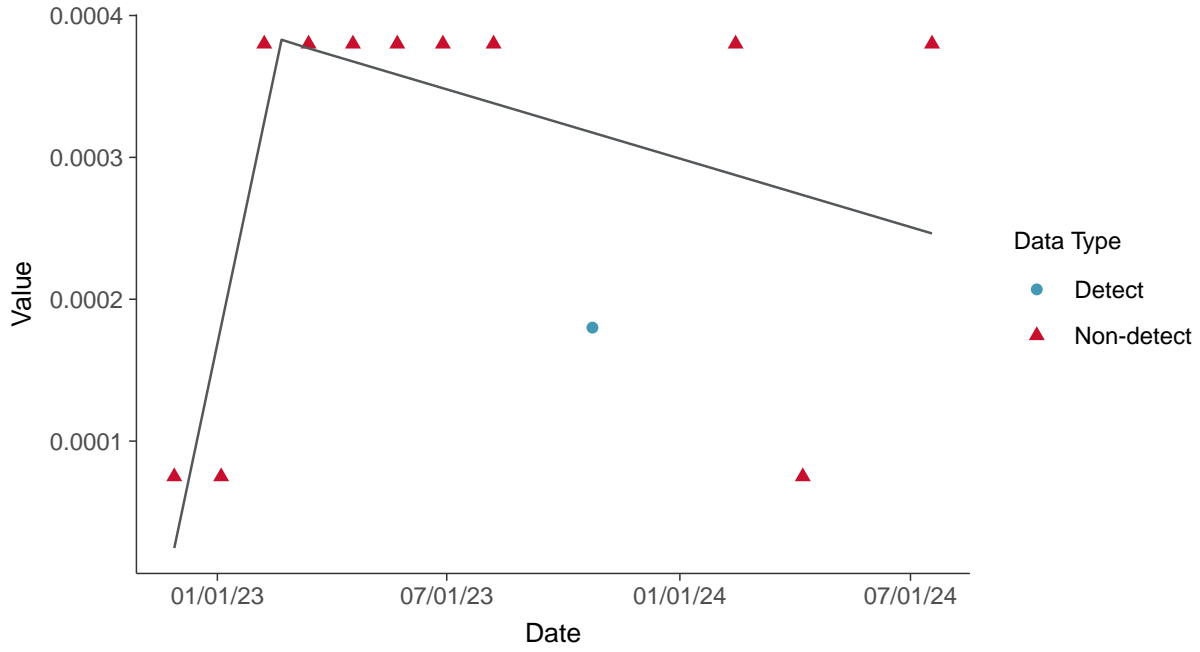
Thallium, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear

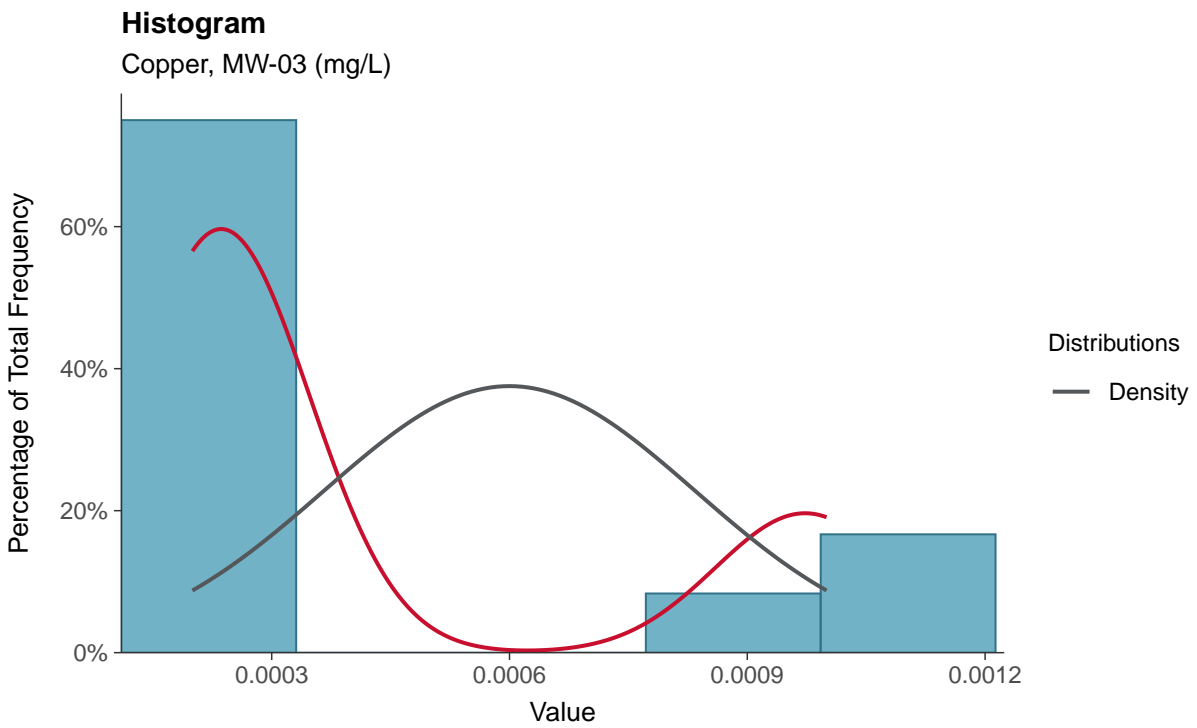
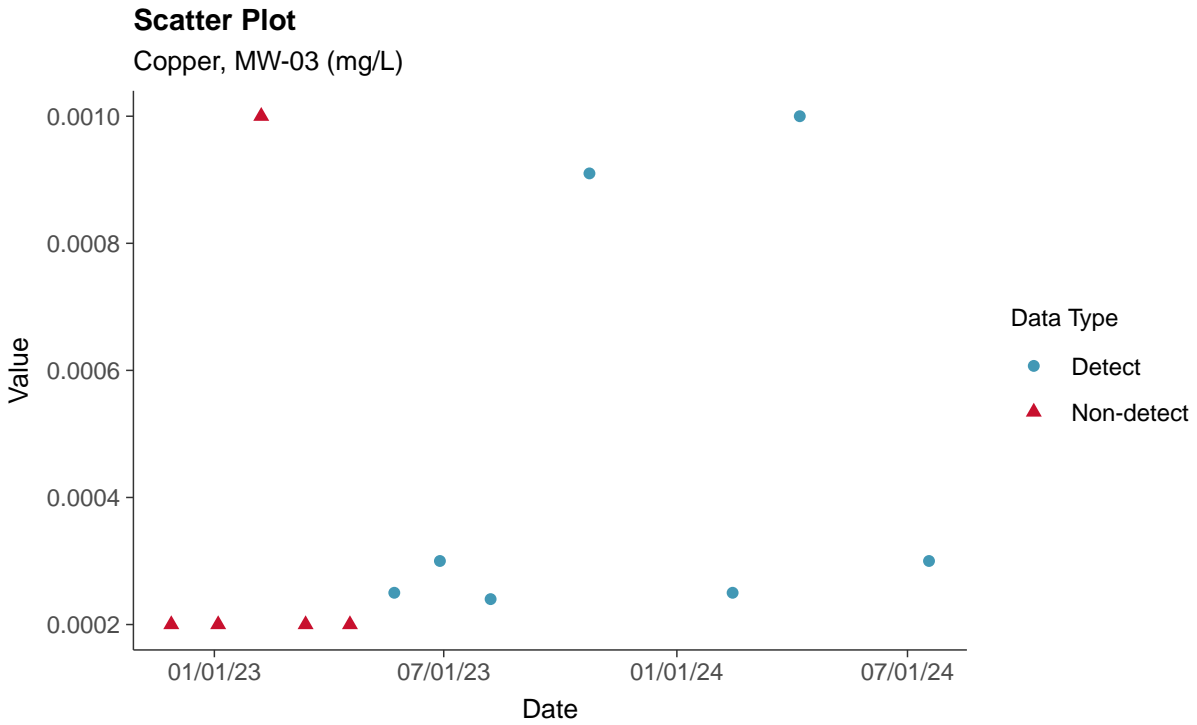
Thallium, MW-03 (mg/L)





### Part 115: Copper, MW-03

ID: 13\_2\_6\_111

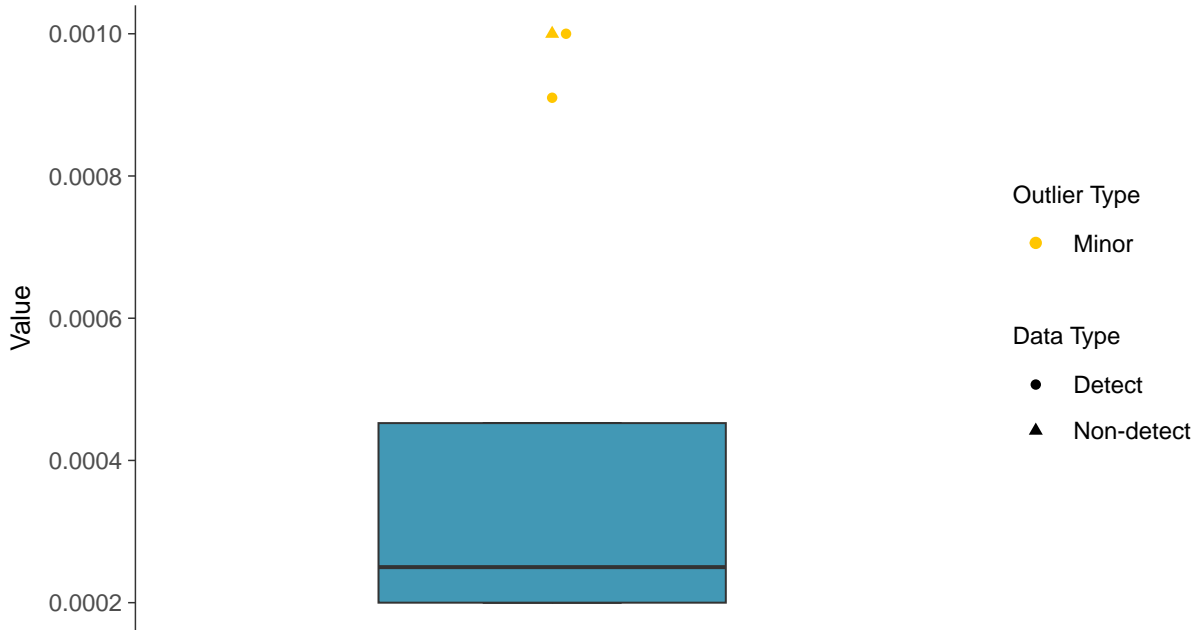






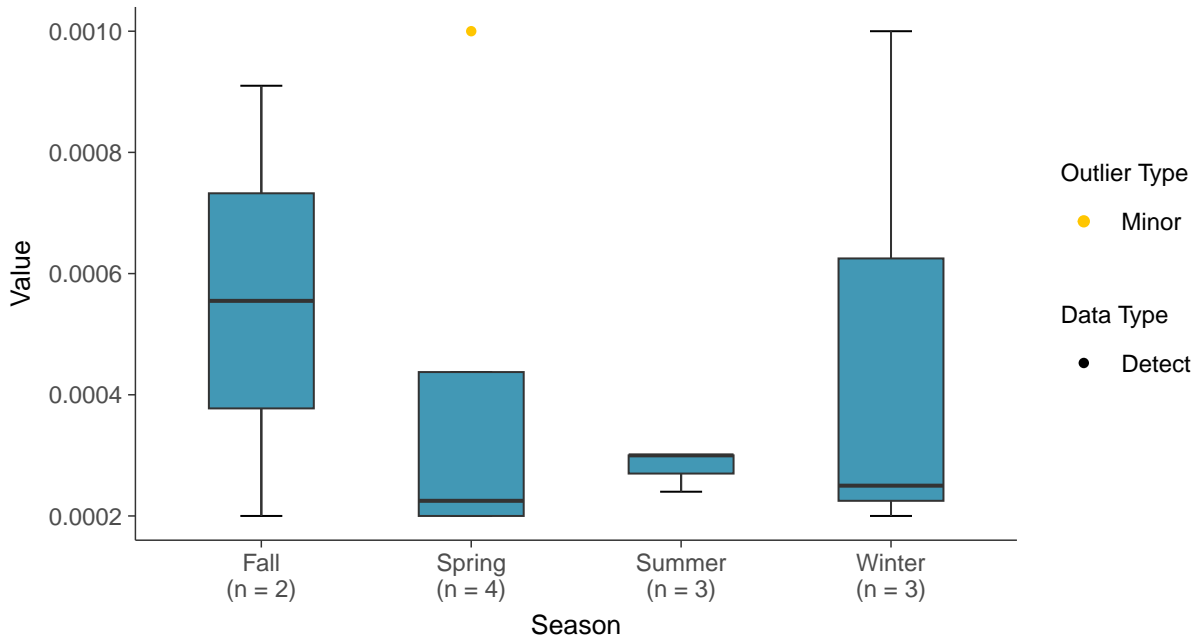
### Boxplot

Copper, MW-03 (mg/L)



### Boxplot by Season

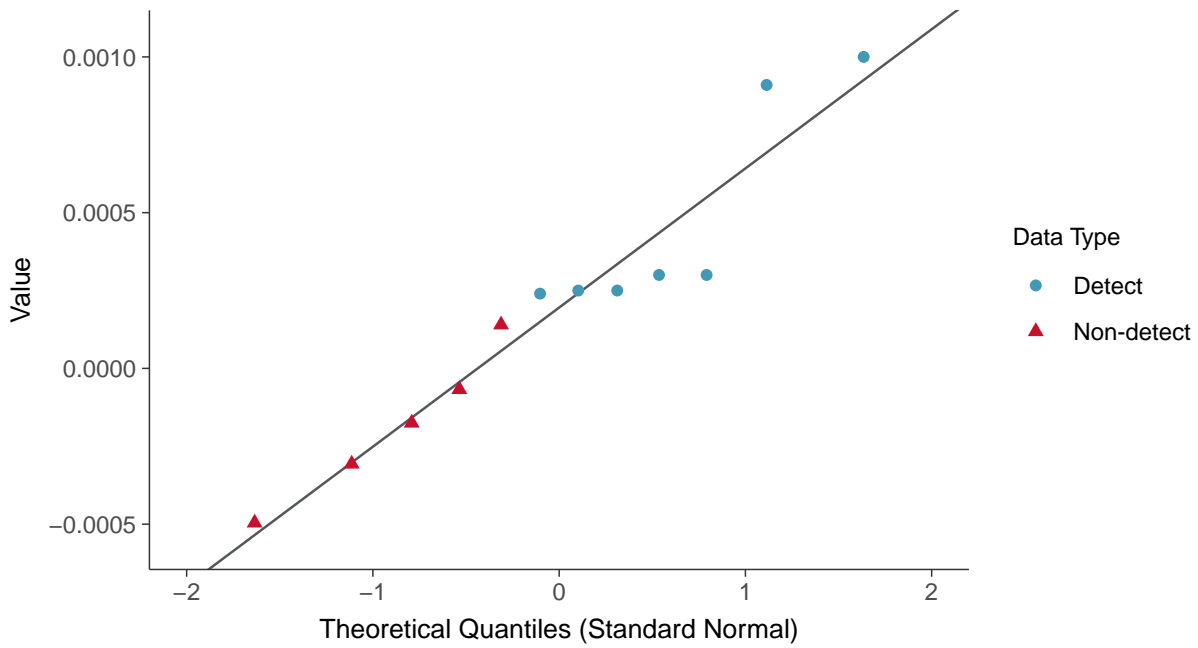
Copper, MW-03 (mg/L)





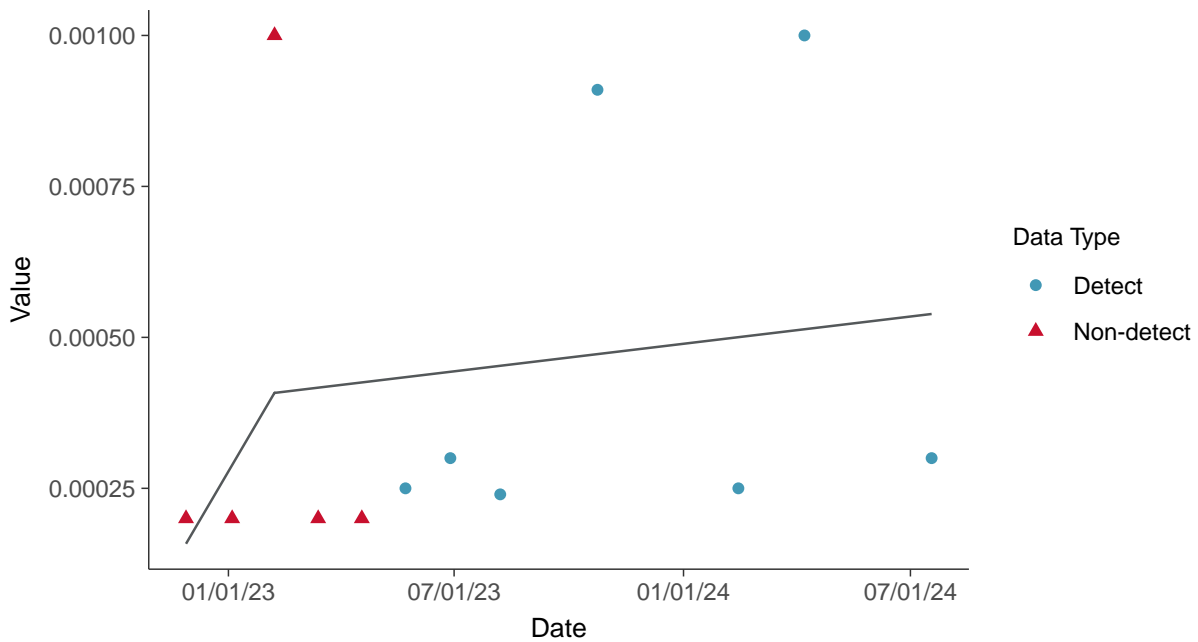
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

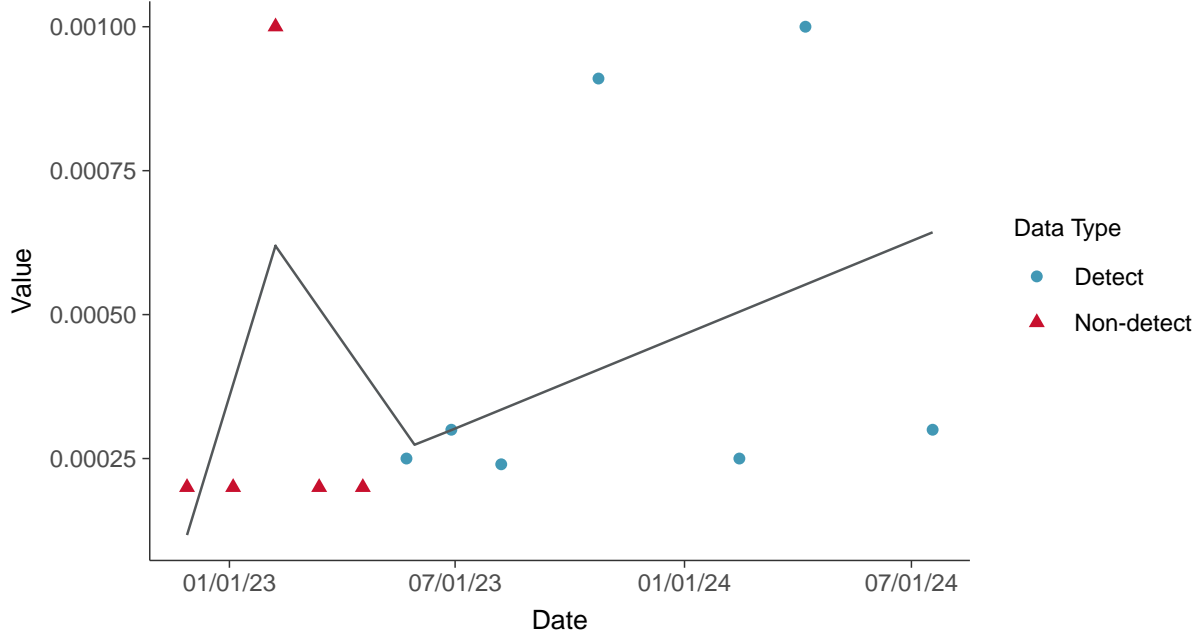
Copper, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

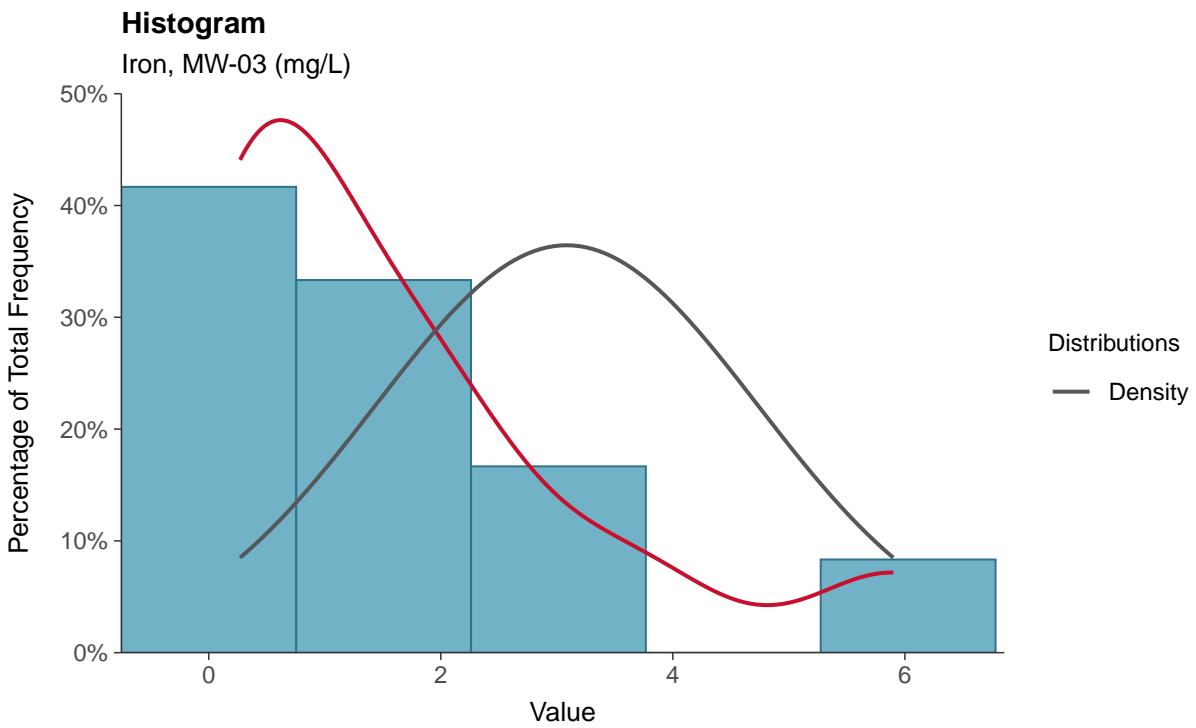
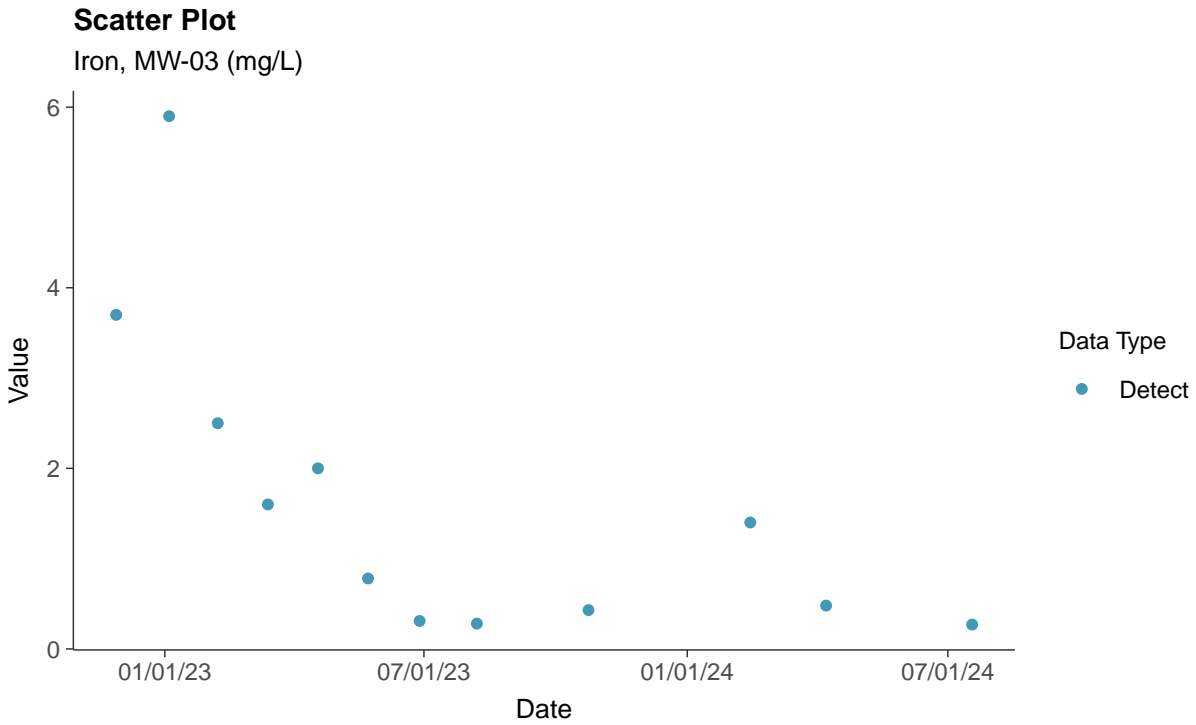
Copper, MW-03 (mg/L)





### Part 115: Iron, MW-03

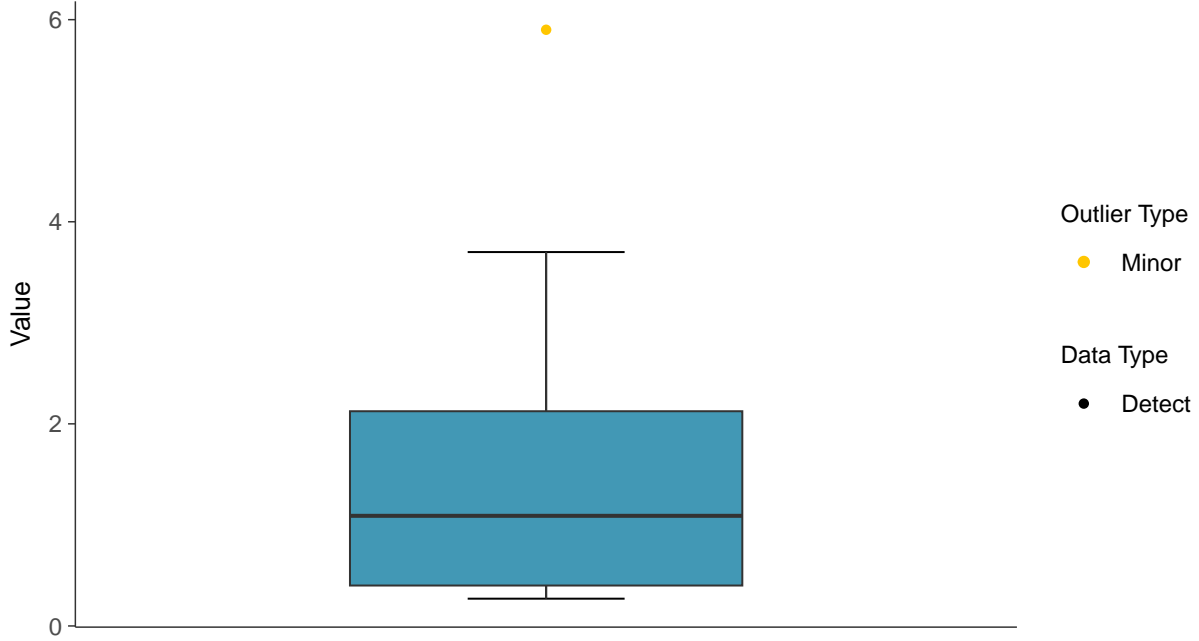
ID: 13\_2\_6\_114





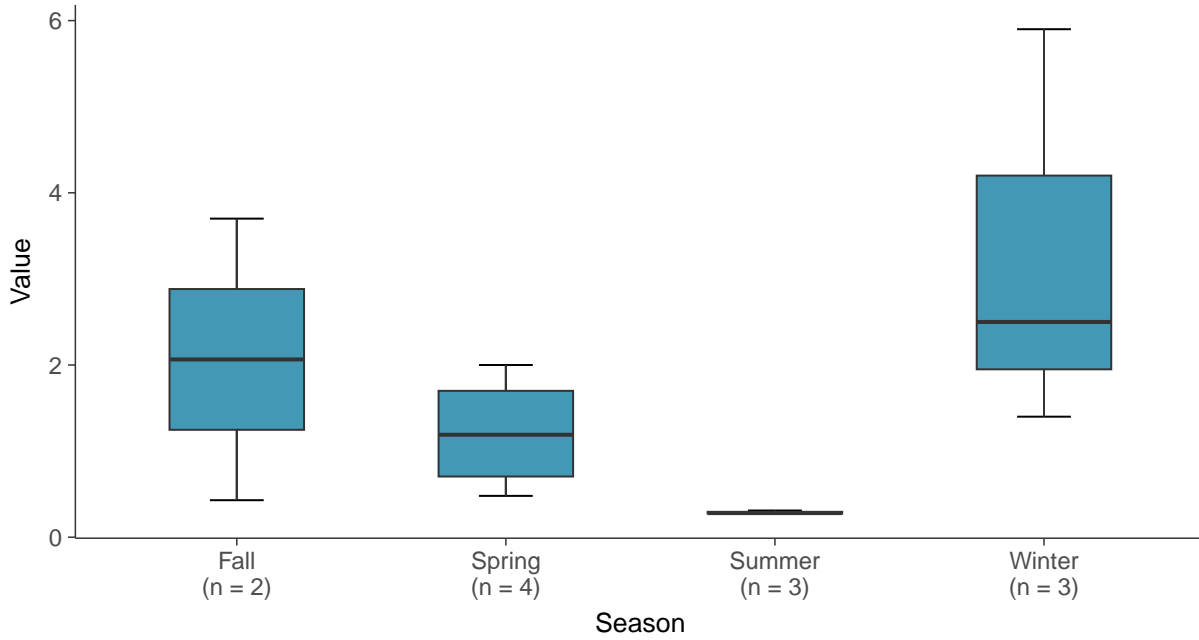
### Boxplot

Iron, MW-03 (mg/L)



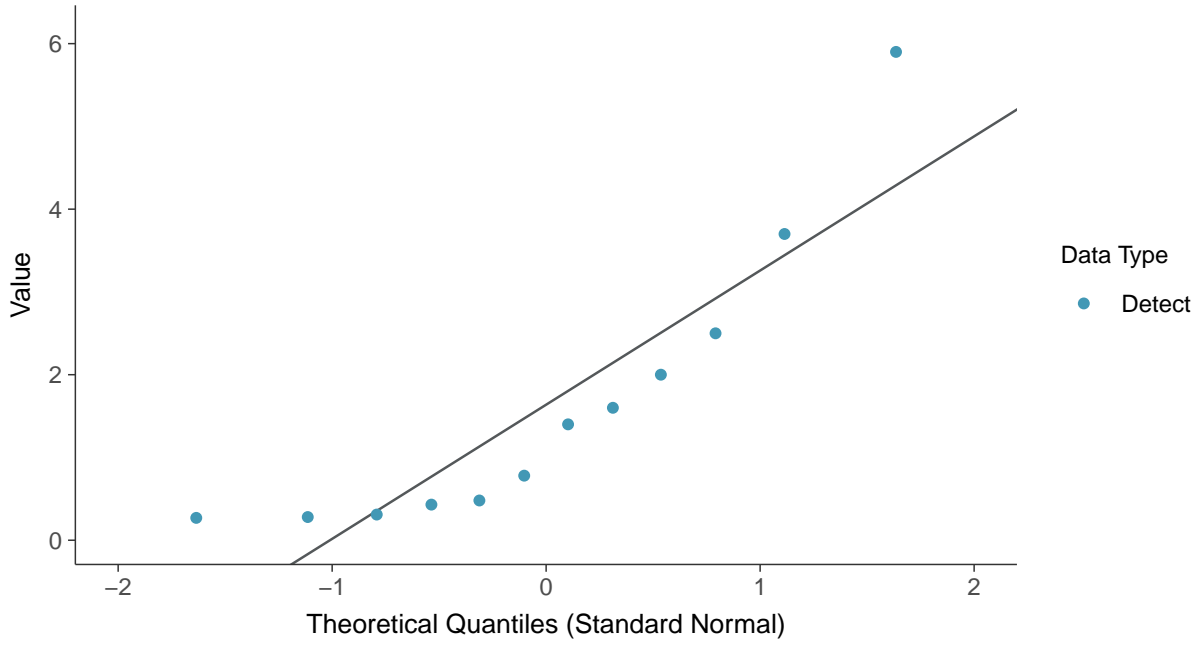
### Boxplot by Season

Iron, MW-03 (mg/L)

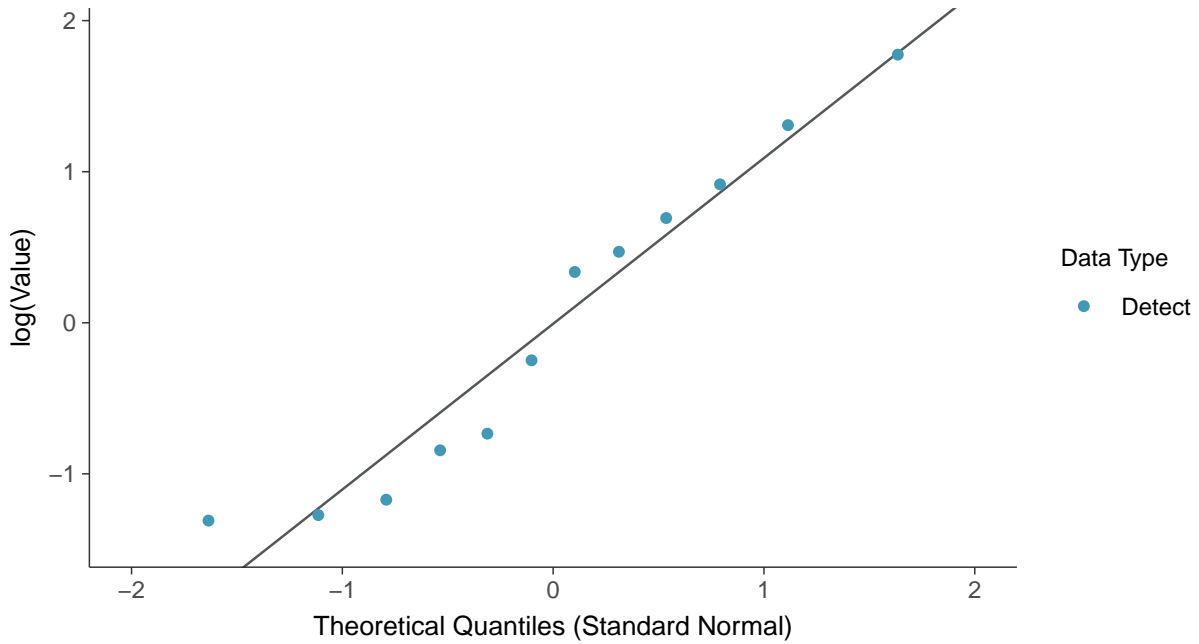




**Normal Q-Q plot**  
Iron, MW-03 (mg/L)

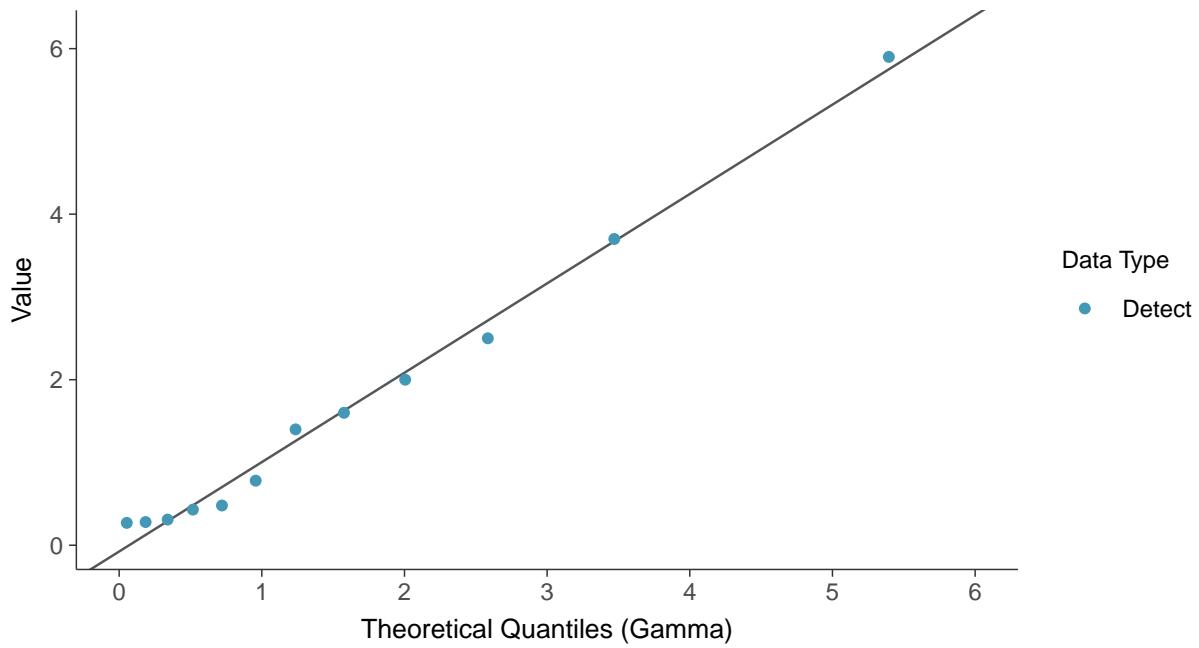


**Lognormal Q-Q plot**  
Iron, MW-03 (mg/L)

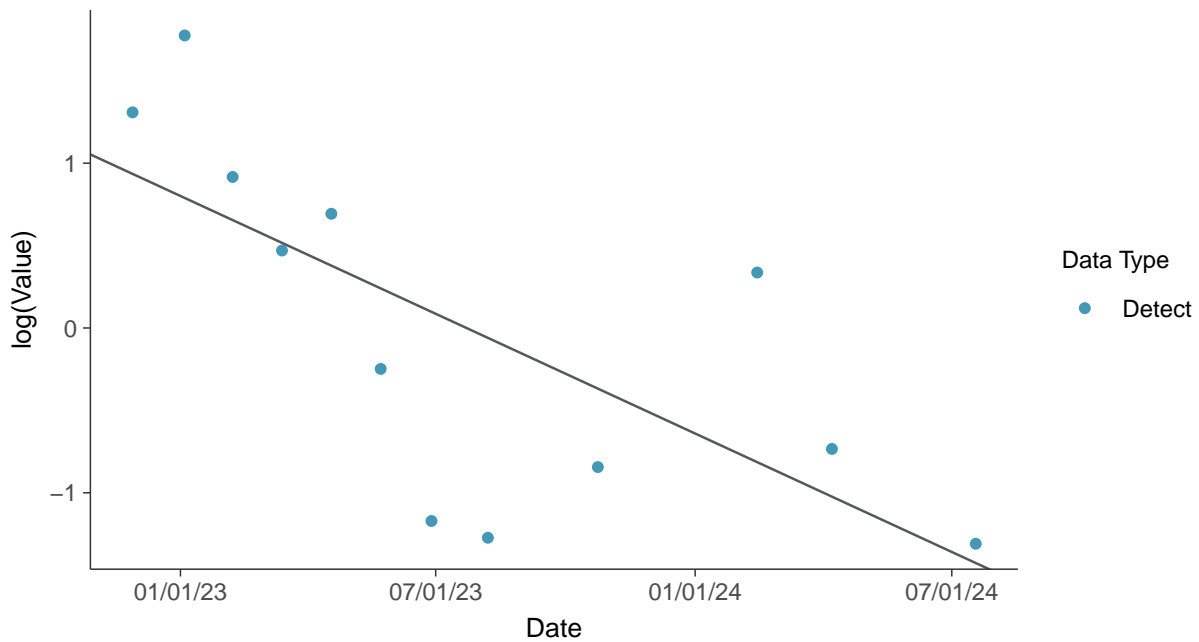




**Gamma Q-Q plot**  
Iron, MW-03 (mg/L)



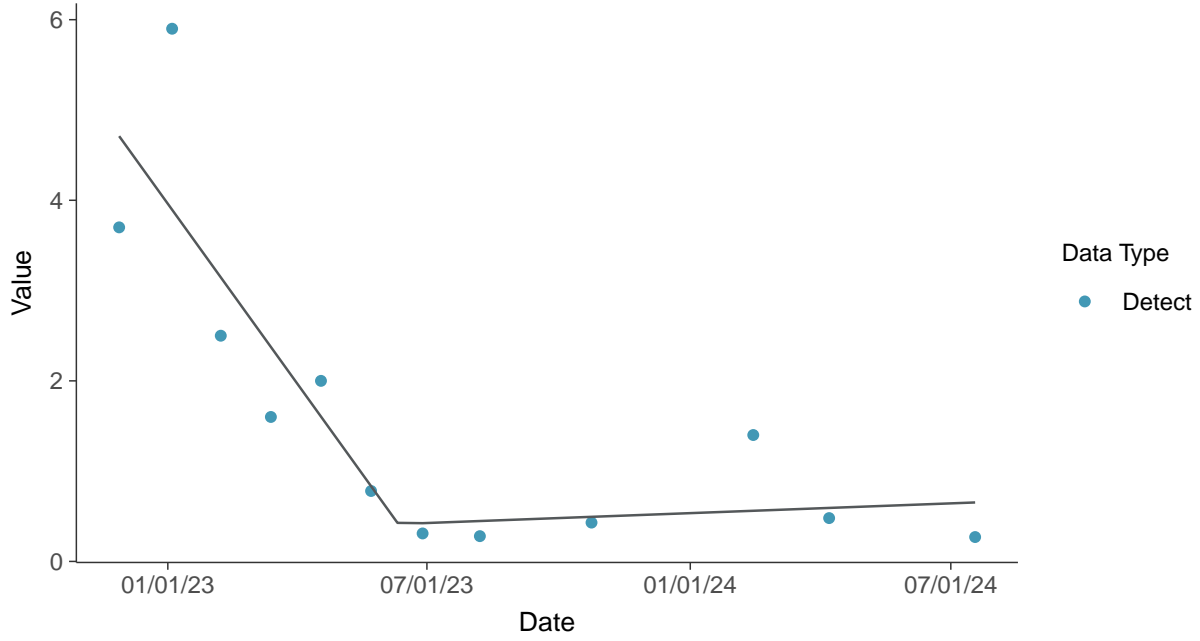
**Trend Regression: Lognormal MLE**  
Iron, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Iron, MW-03 (mg/L)

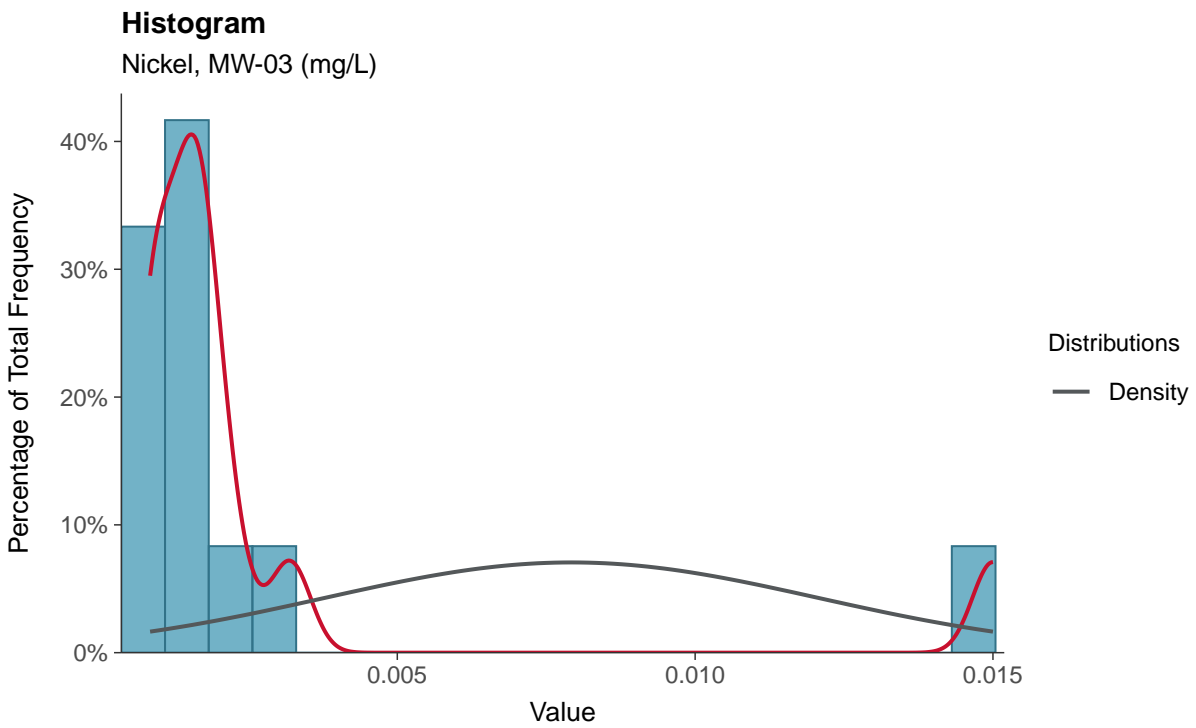
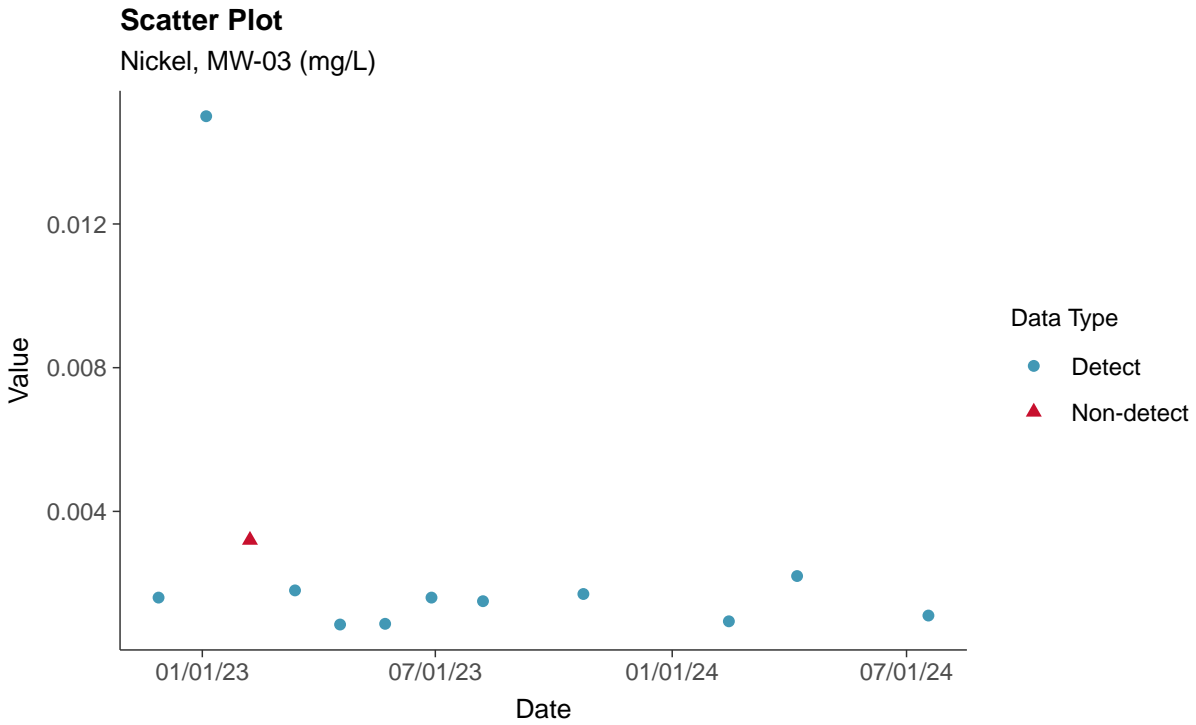






### Part 115: Nickel, MW-03

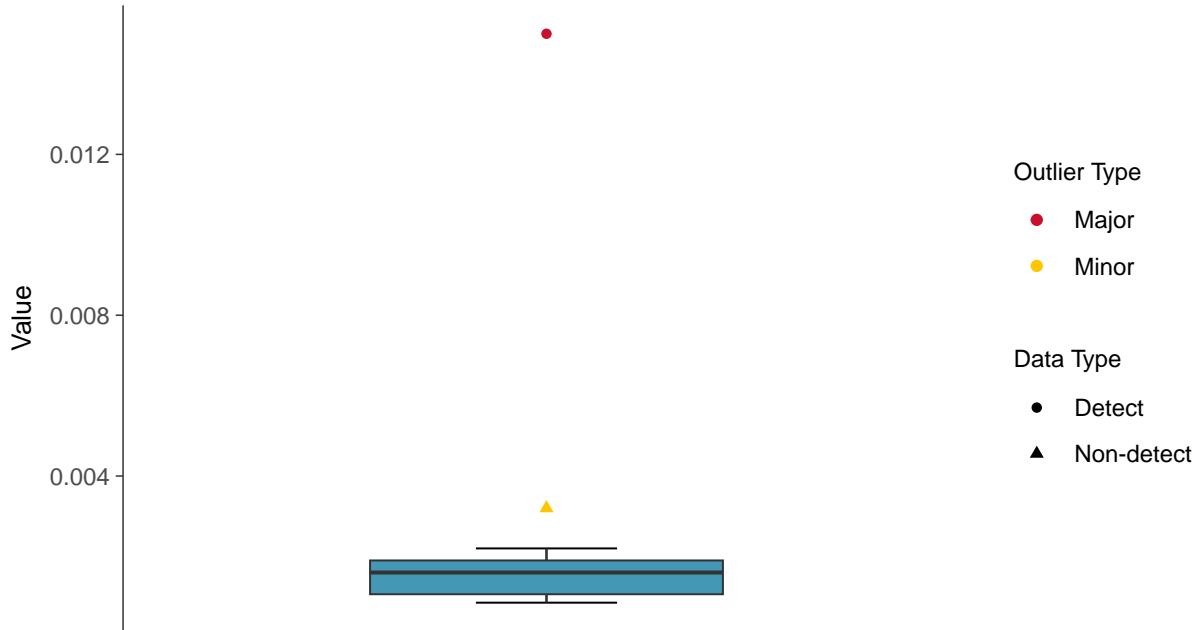
ID: 13\_2\_6\_119





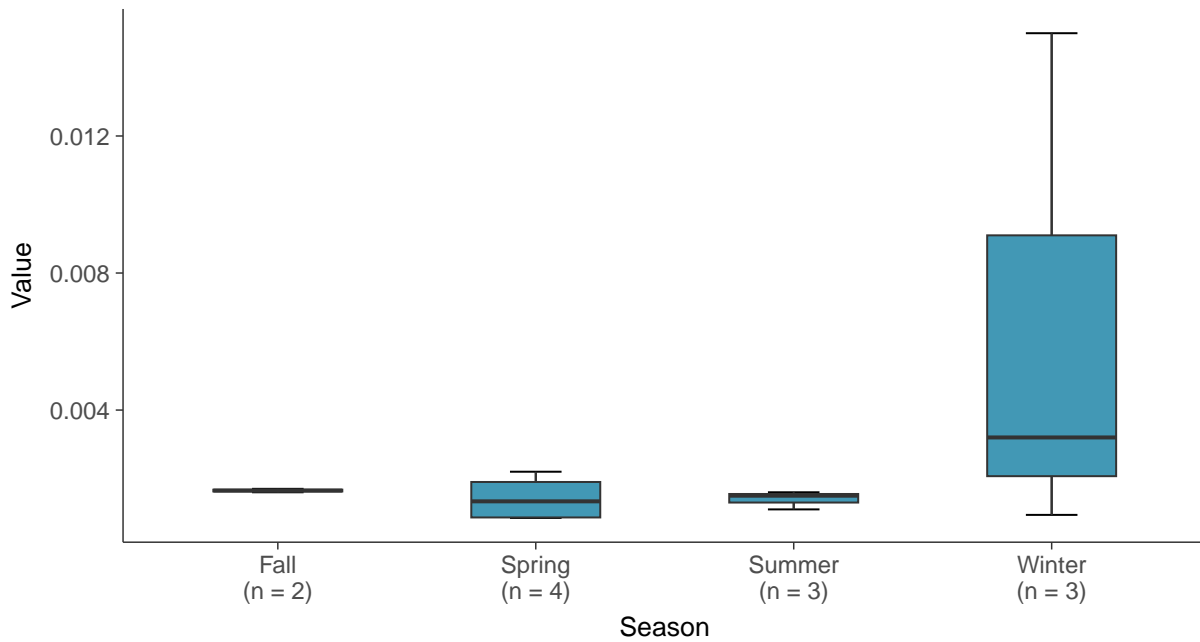
### Boxplot

Nickel, MW-03 (mg/L)



### Boxplot by Season

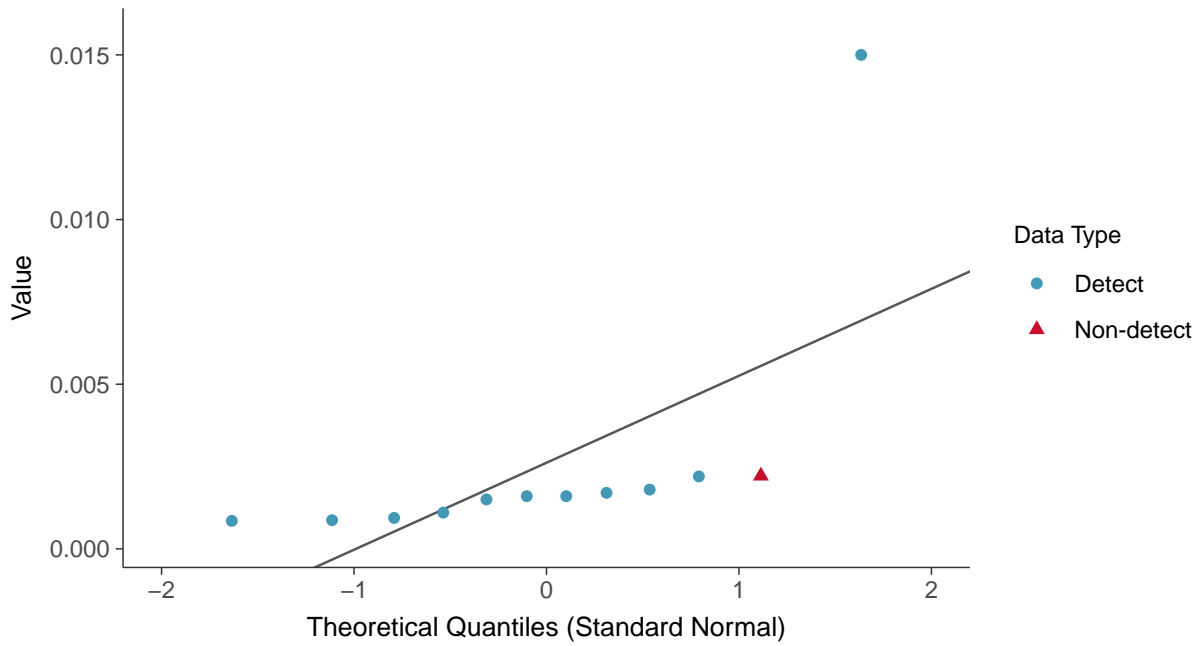
Nickel, MW-03 (mg/L)





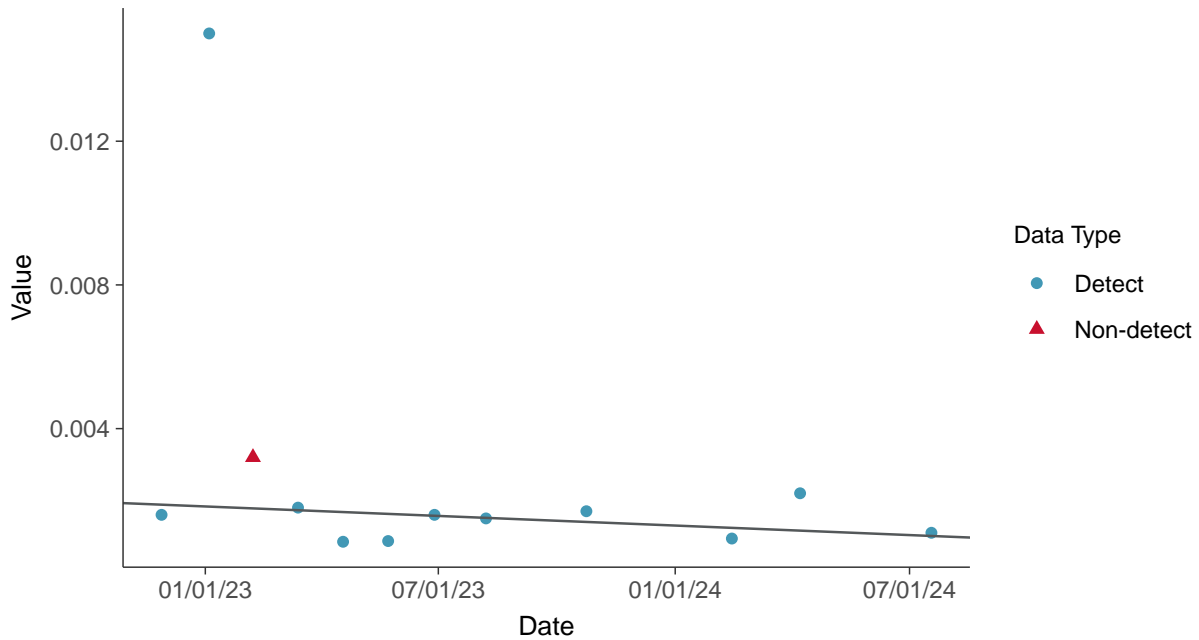
### Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-03 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

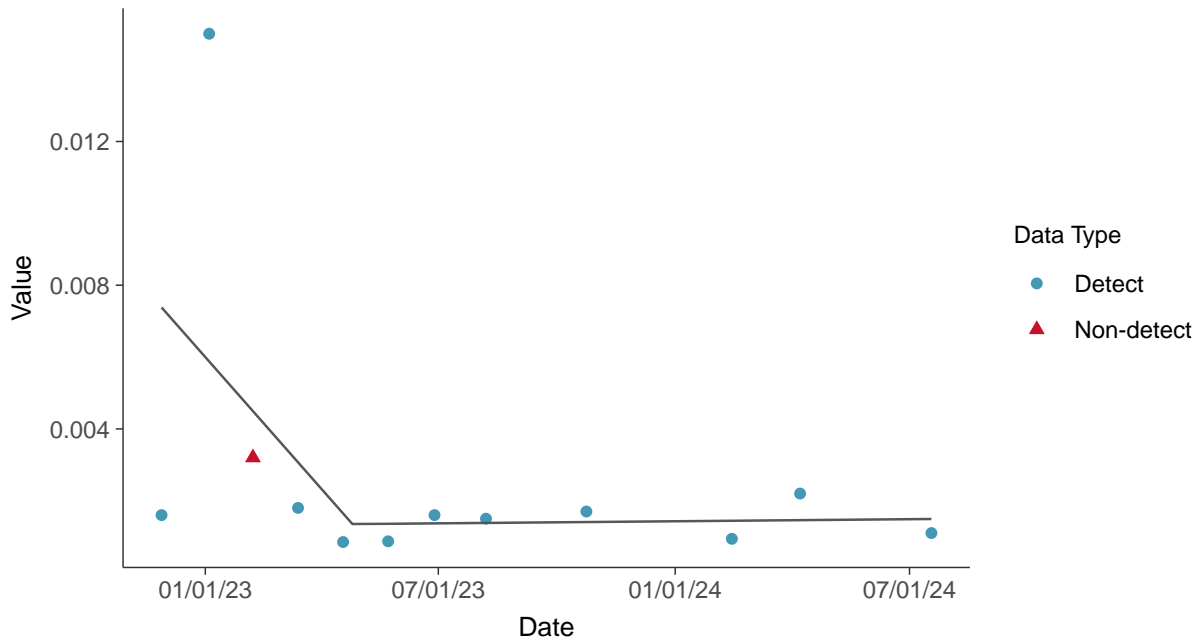
Nickel, MW-03 (mg/L)





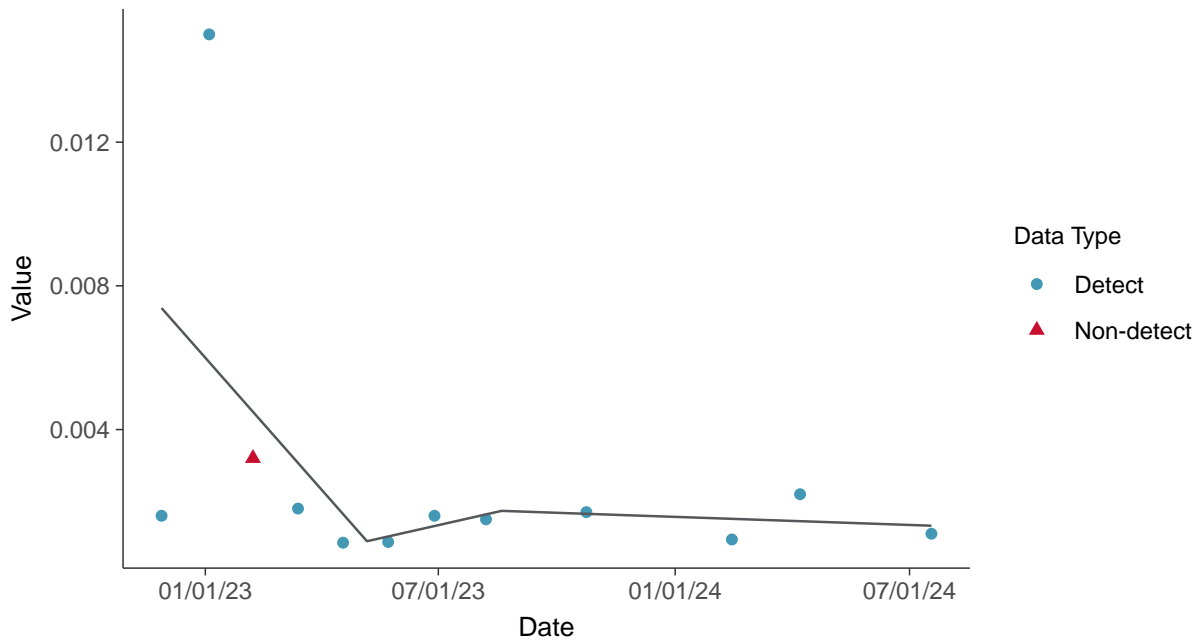
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

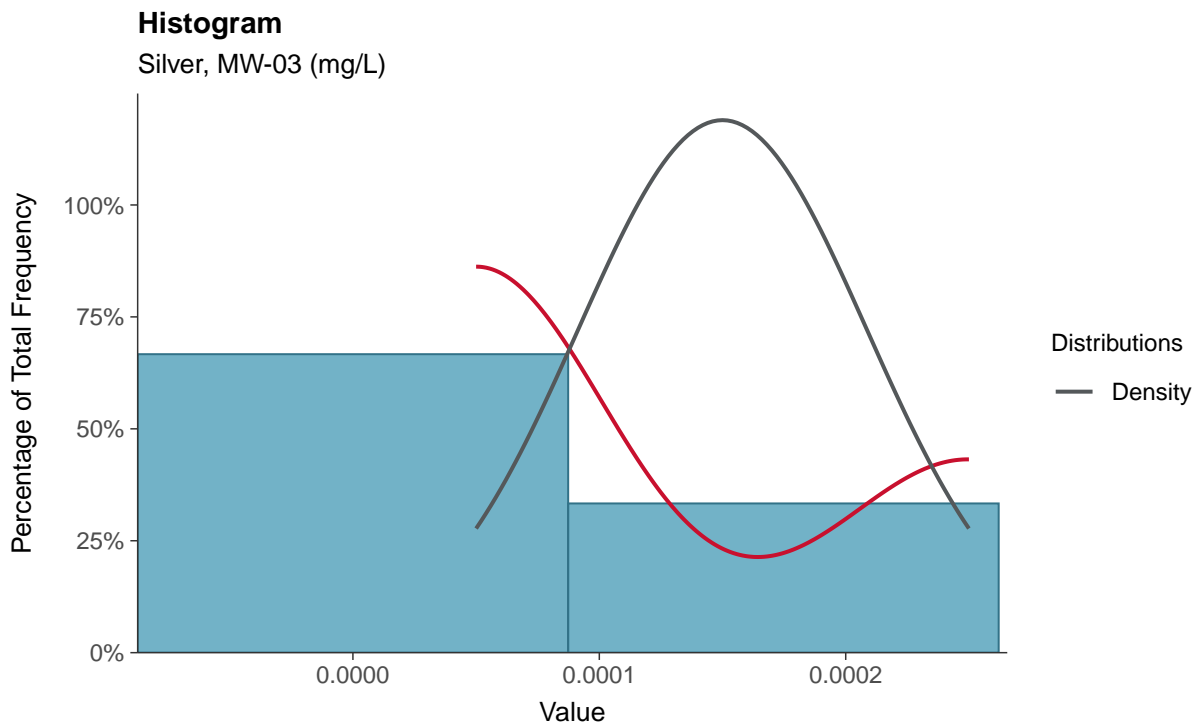
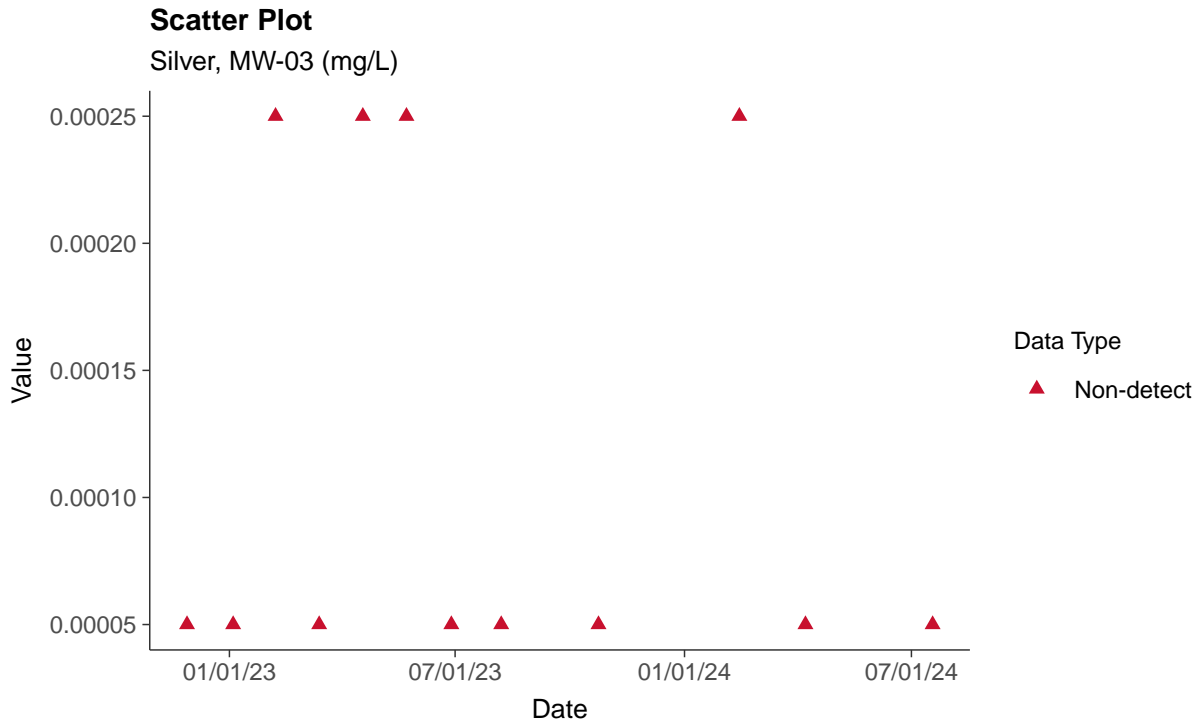
Nickel, MW-03 (mg/L)





### Part 115: Silver, MW-03

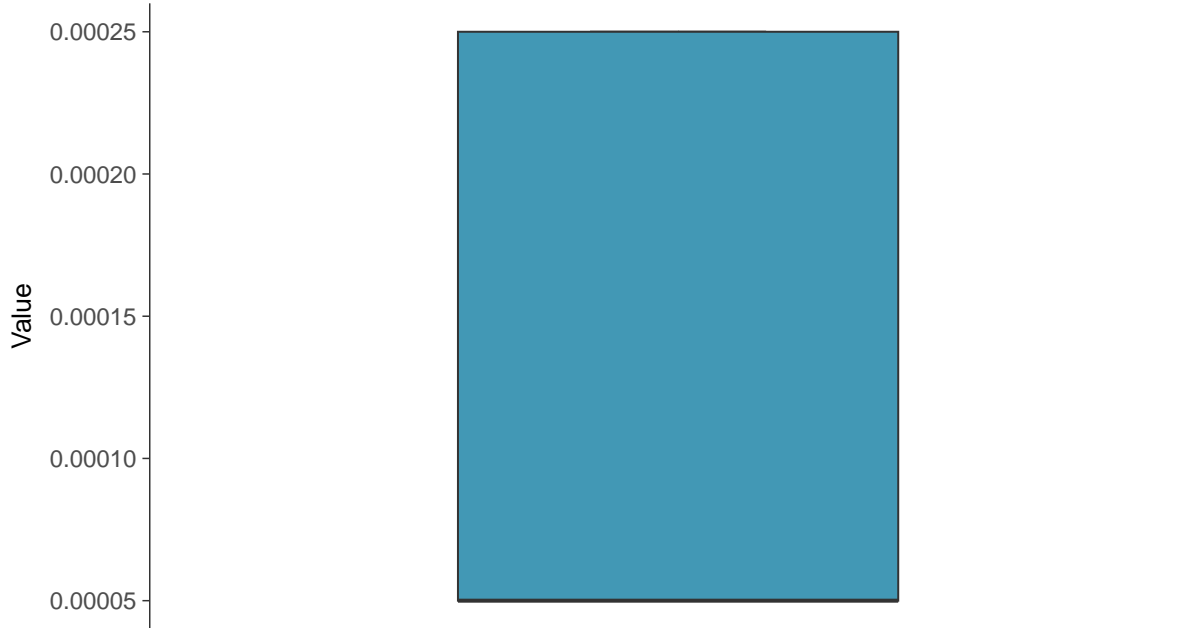
ID: 13\_2\_6\_123





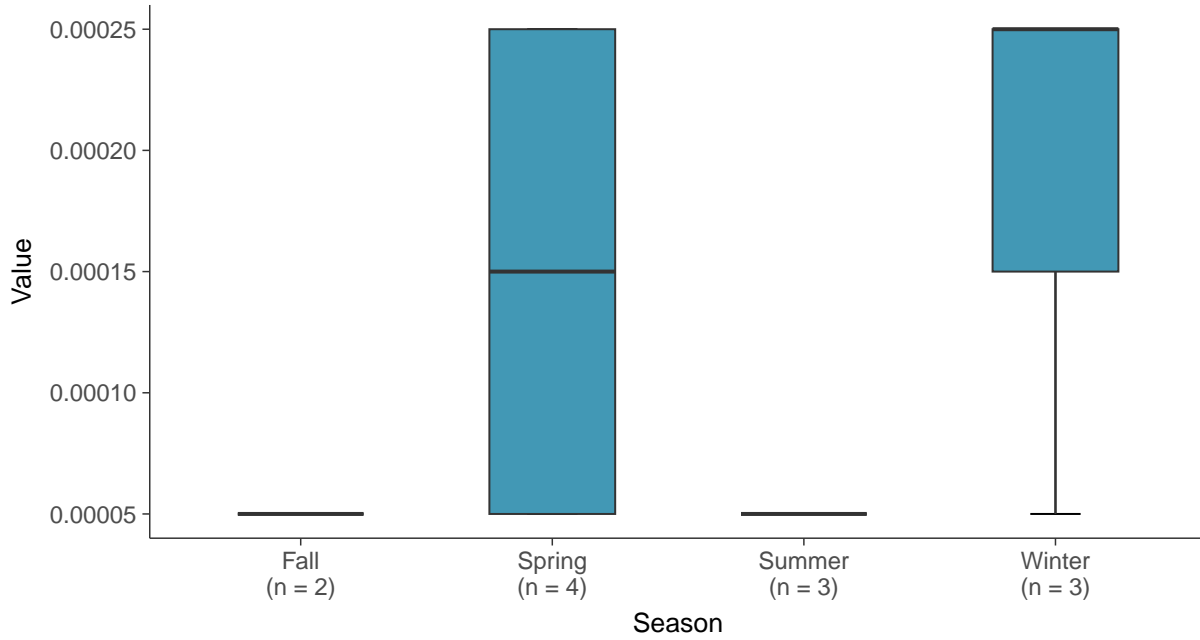
### Boxplot

Silver, MW-03 (mg/L)



### Boxplot by Season

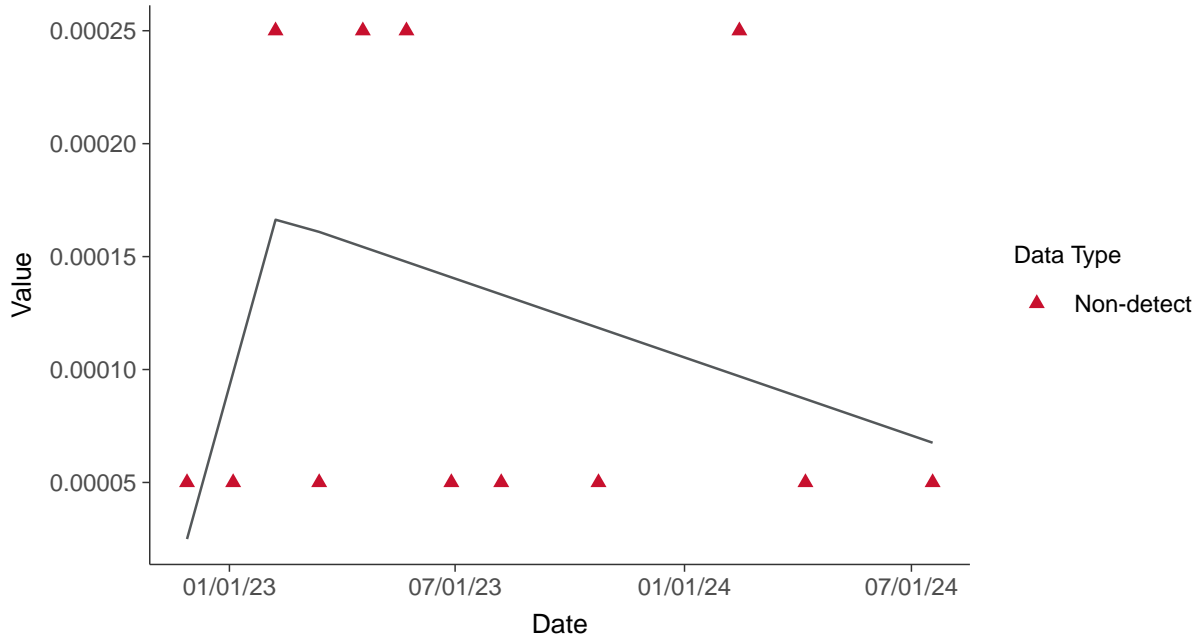
Silver, MW-03 (mg/L)





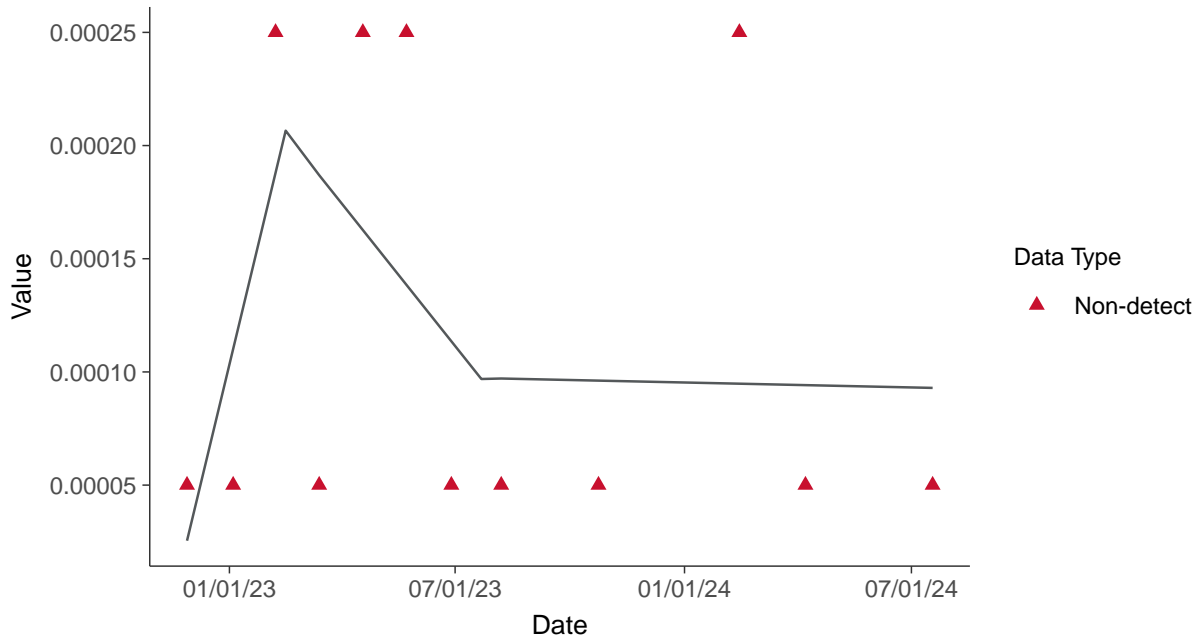
### Trend Regression: Piecewise Linear-Linear

Silver, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-03 (mg/L)



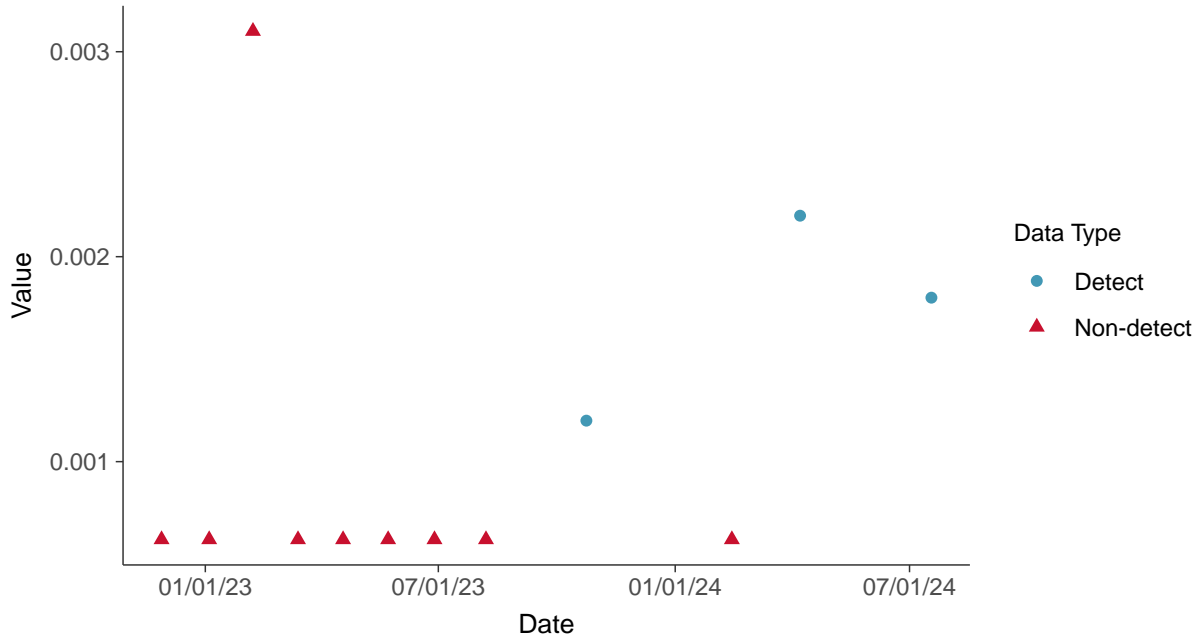


### Part 115: Vanadium, MW-03

ID: 13\_2\_6\_129

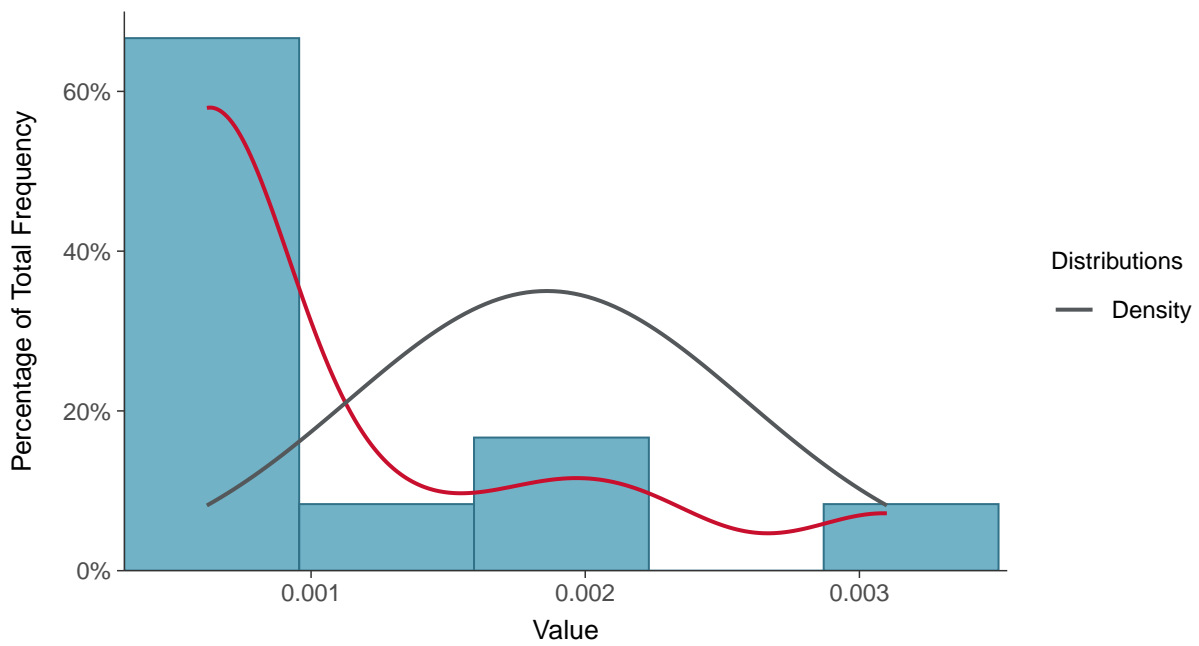
#### Scatter Plot

Vanadium, MW-03 (mg/L)



#### Histogram

Vanadium, MW-03 (mg/L)

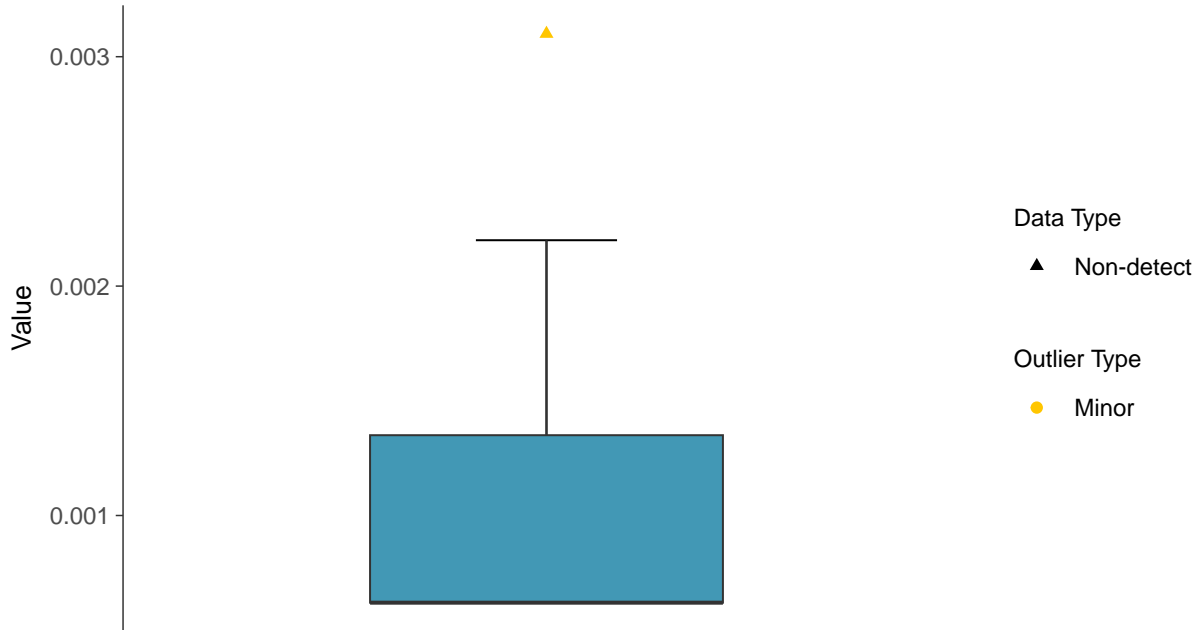






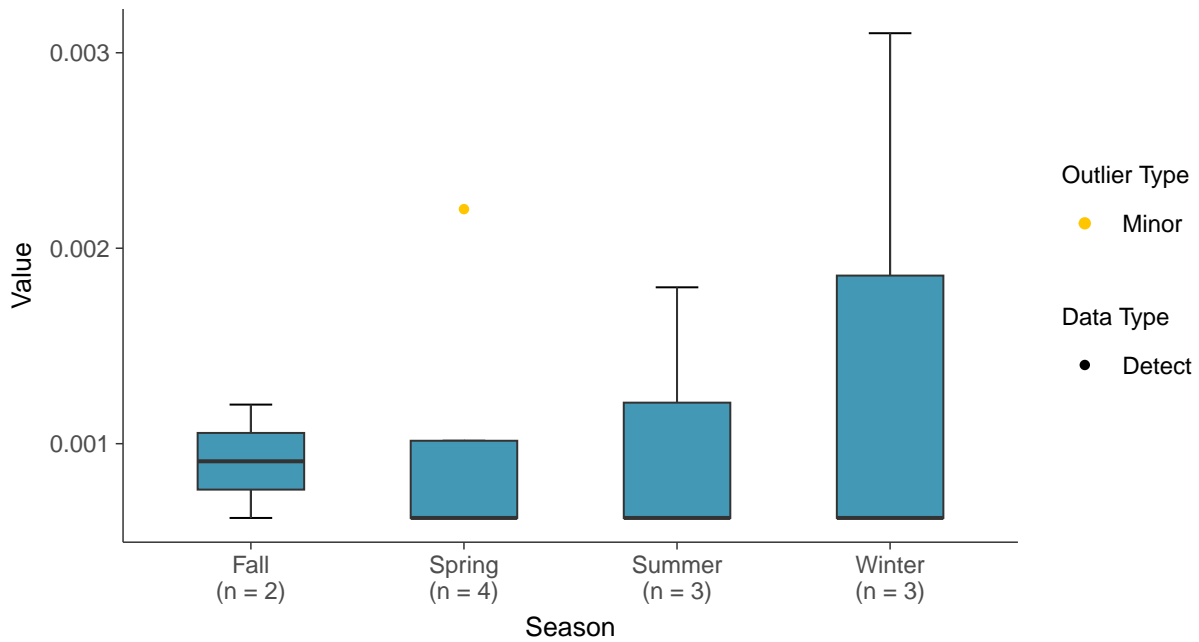
### Boxplot

Vanadium, MW-03 (mg/L)



### Boxplot by Season

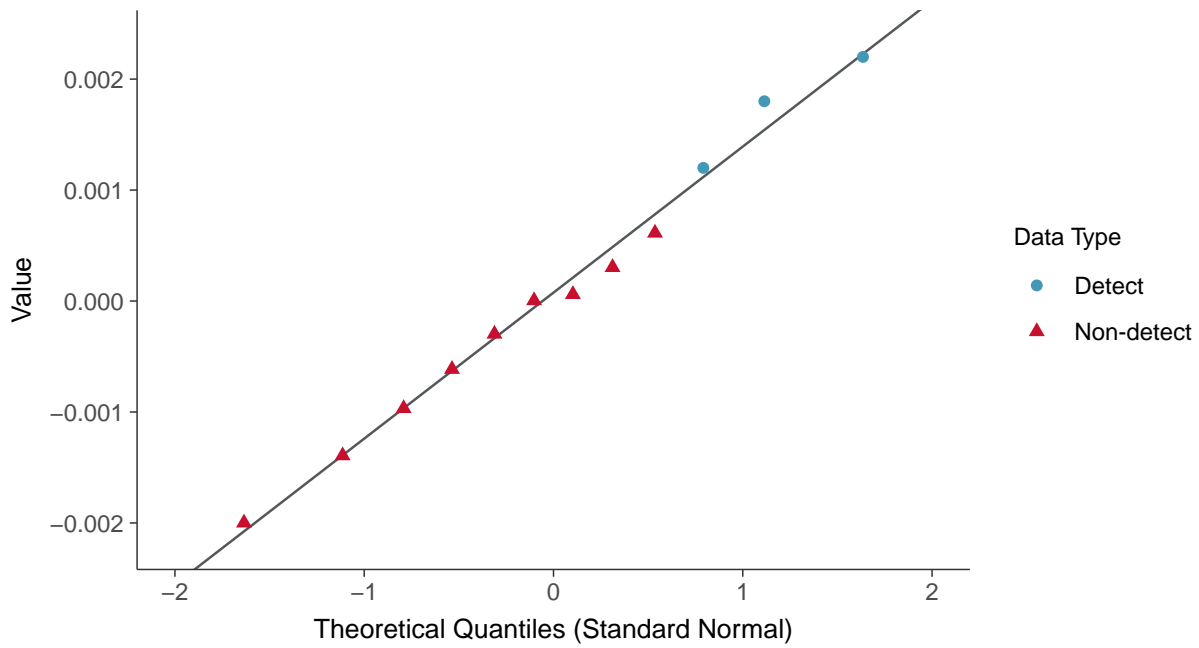
Vanadium, MW-03 (mg/L)





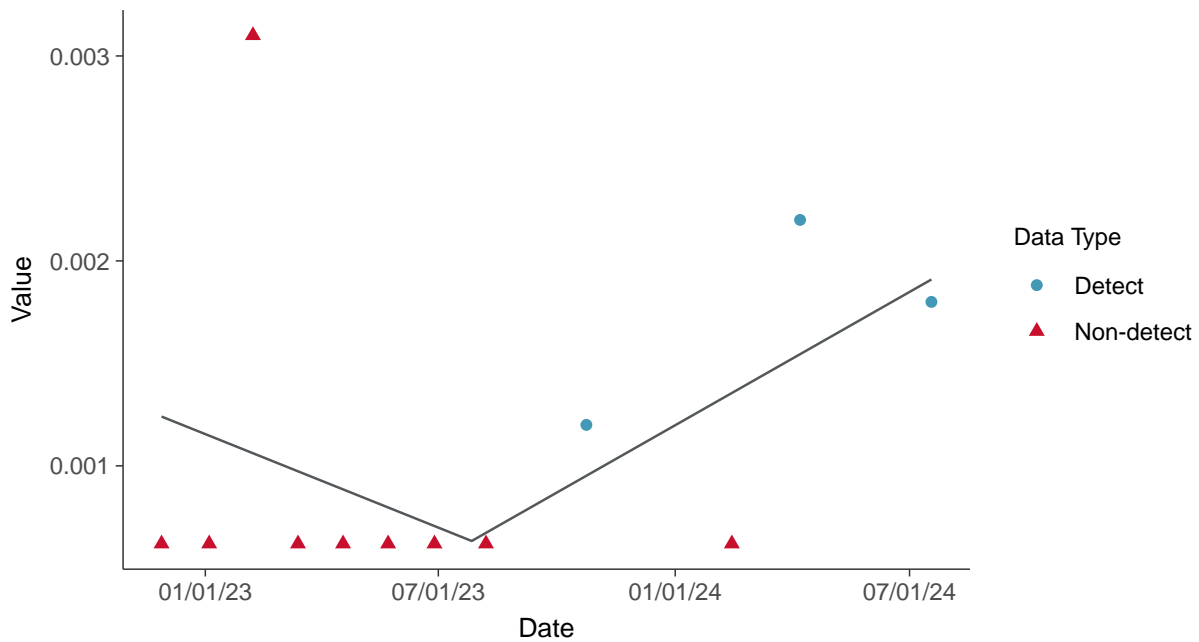
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-03 (mg/L)



### Trend Regression: Piecewise Linear-Linear

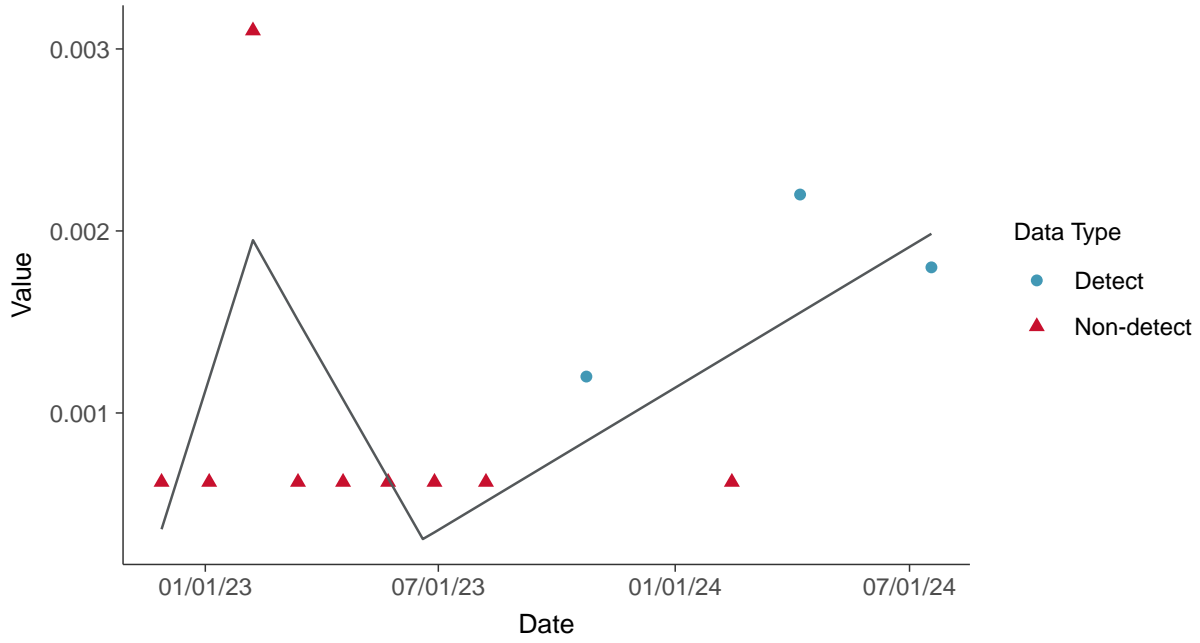
Vanadium, MW-03 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

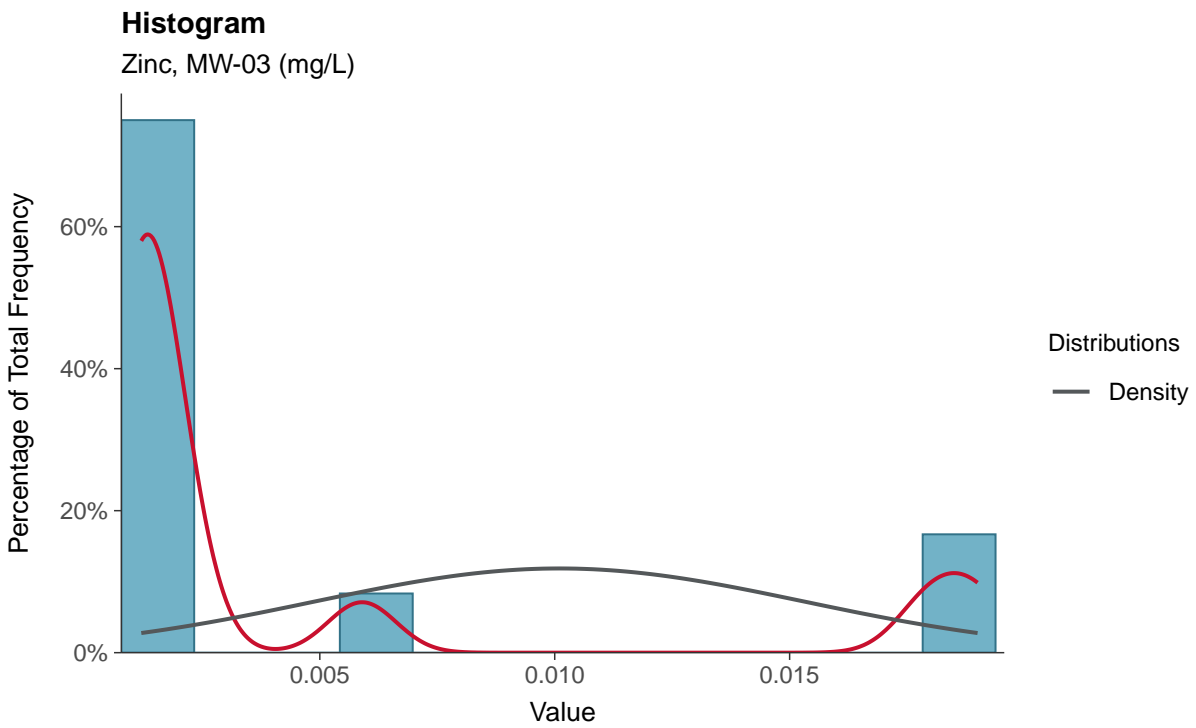
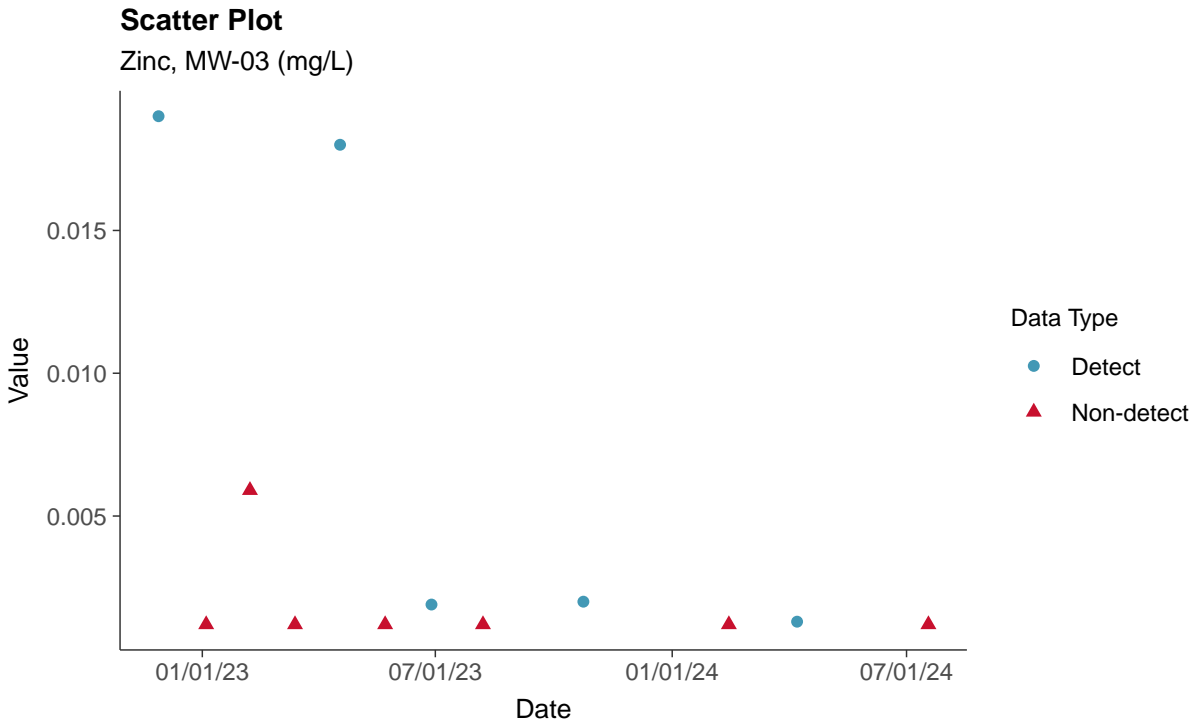
Vanadium, MW-03 (mg/L)





### Part 115: Zinc, MW-03

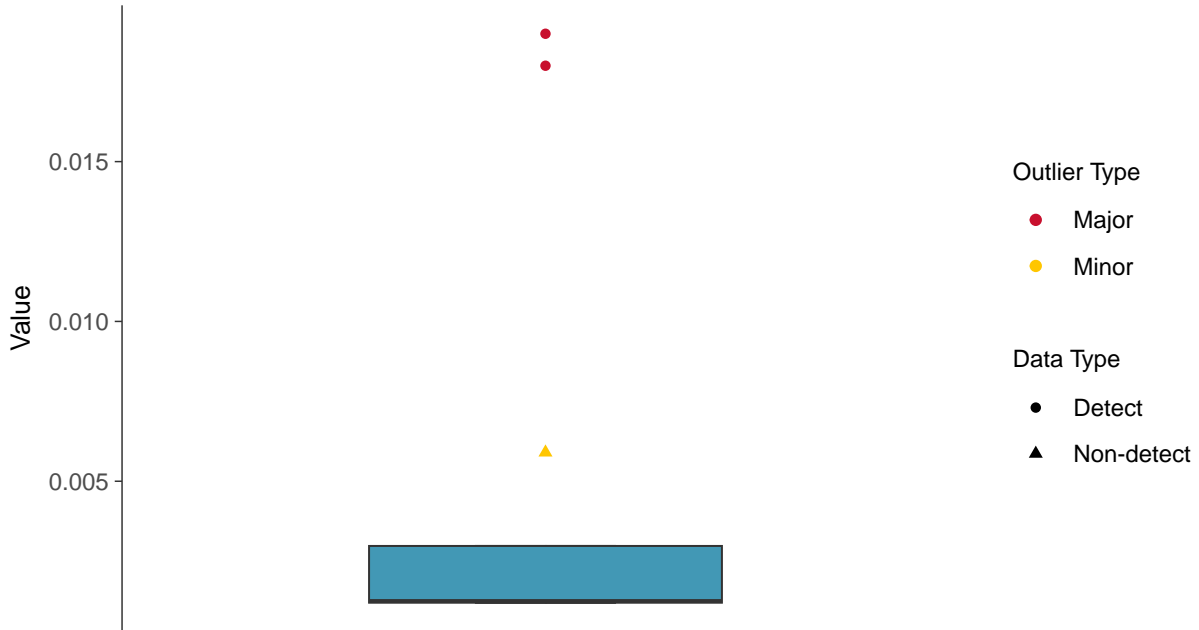
ID: 13\_2\_6\_130





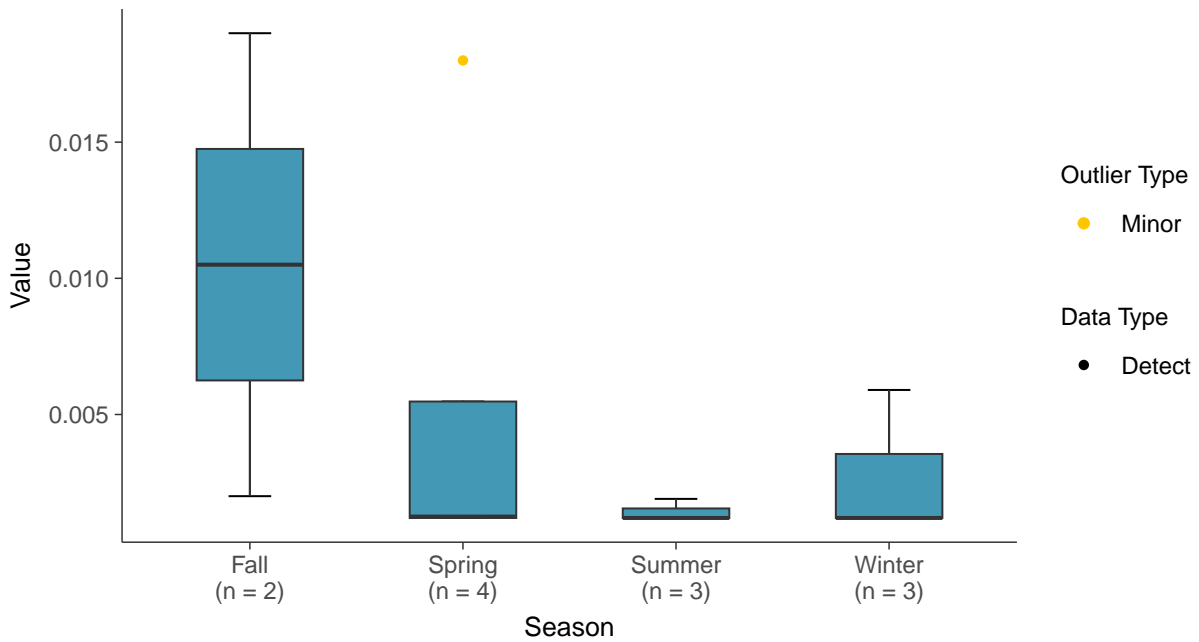
### Boxplot

Zinc, MW-03 (mg/L)



### Boxplot by Season

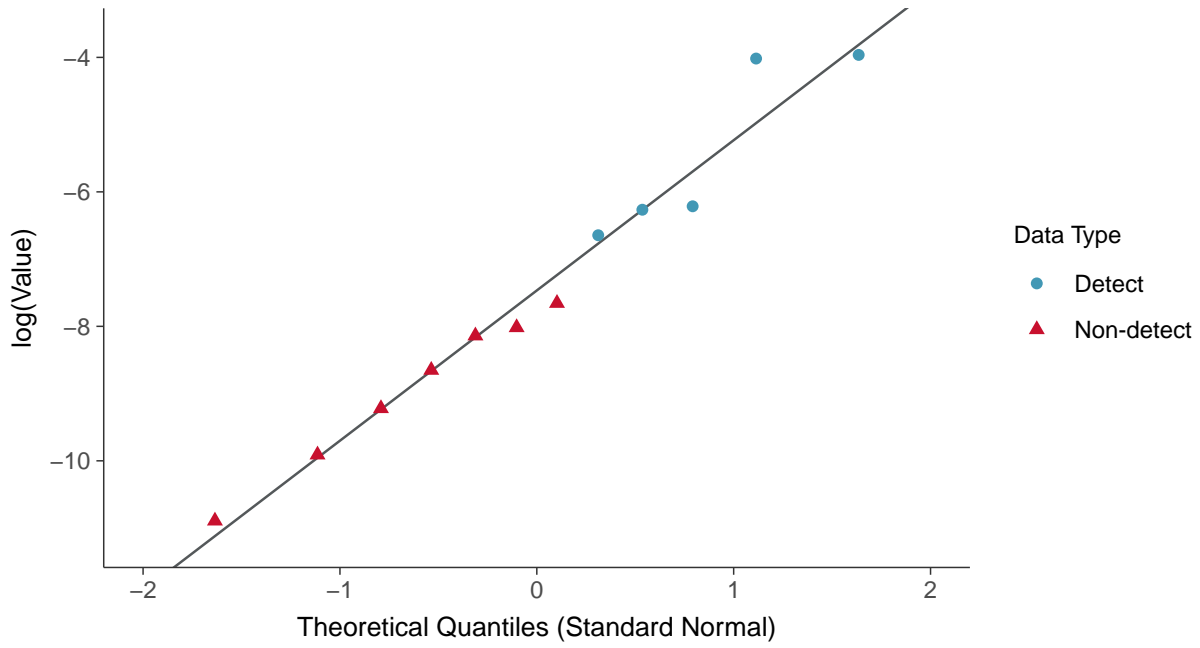
Zinc, MW-03 (mg/L)





### Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-03 (mg/L)



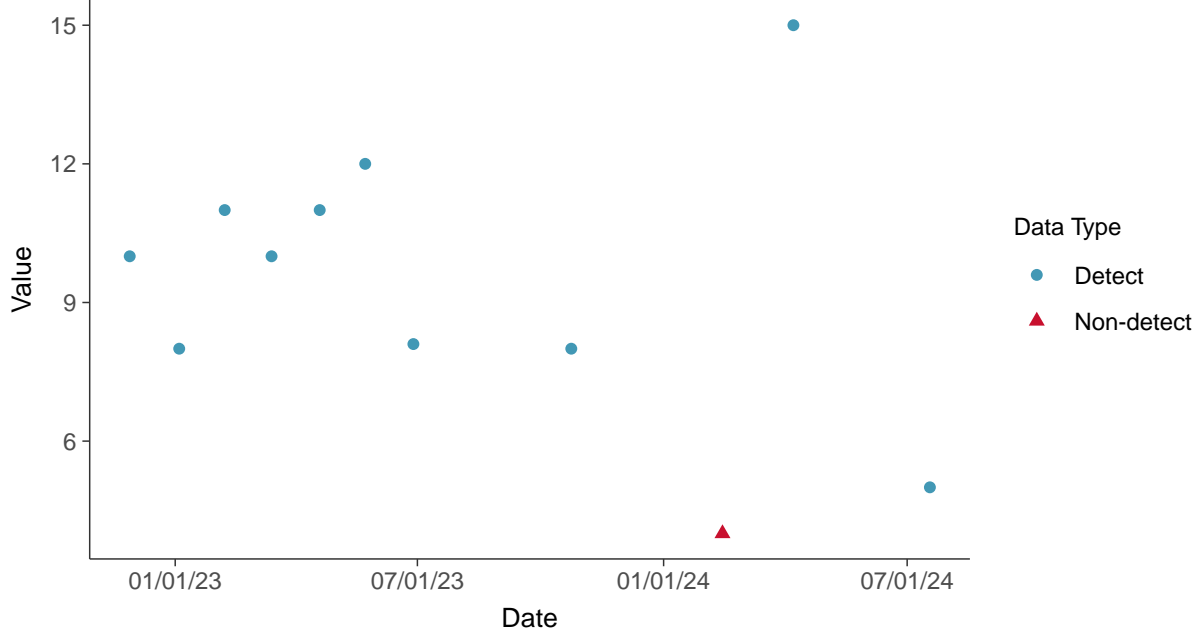


### Additional Parameters: Total Suspended Solids, MW-04

ID: 14\_2\_3\_127

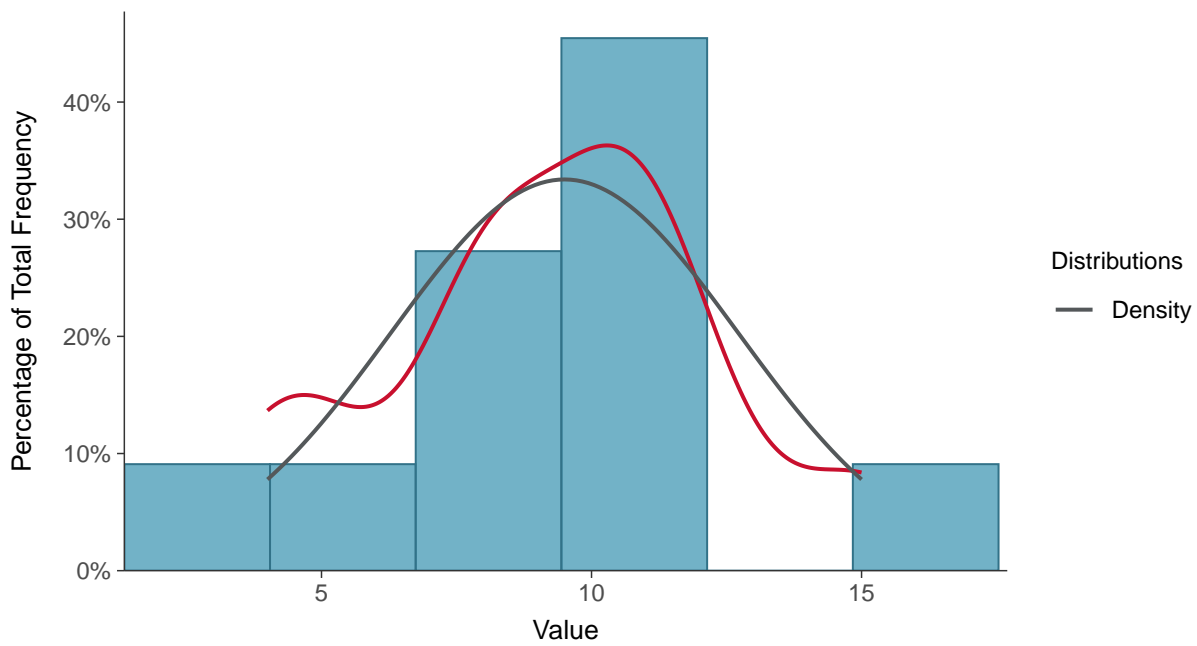
#### Scatter Plot

Total Suspended Solids, MW-04 (mg/L)



#### Histogram

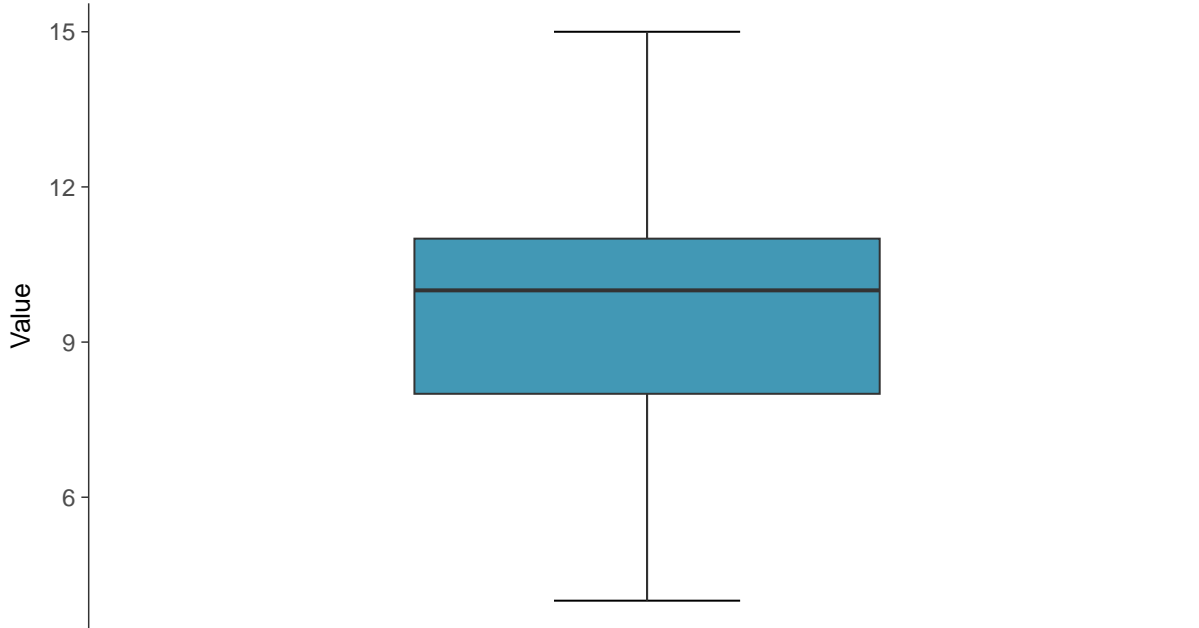
Total Suspended Solids, MW-04 (mg/L)





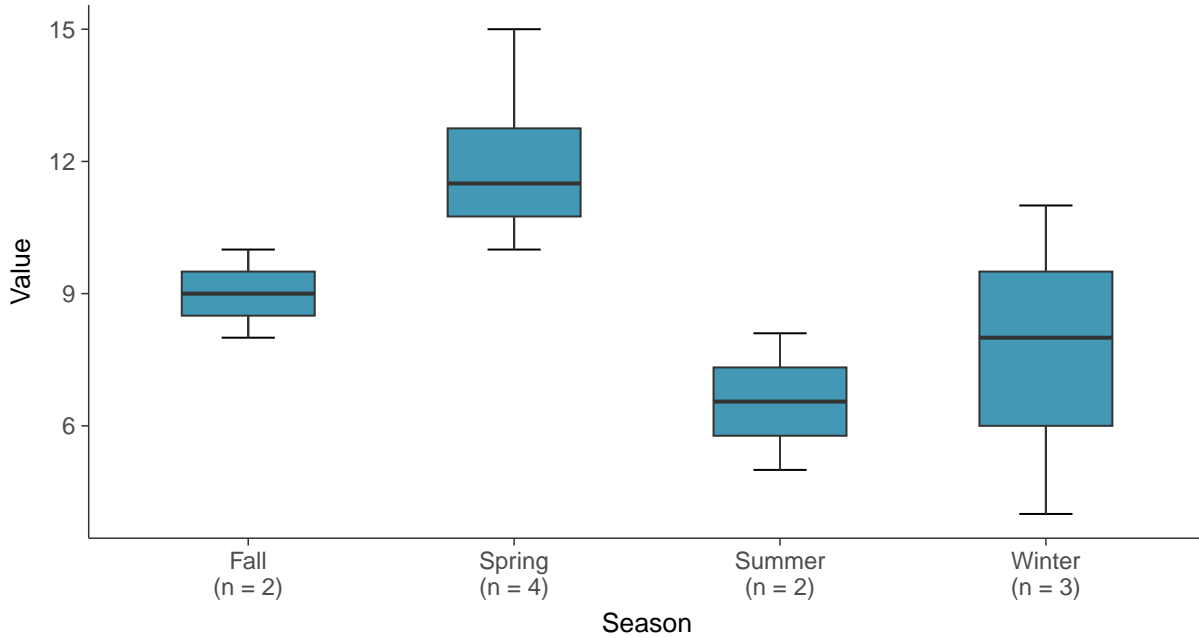
### Boxplot

Total Suspended Solids, MW-04 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-04 (mg/L)

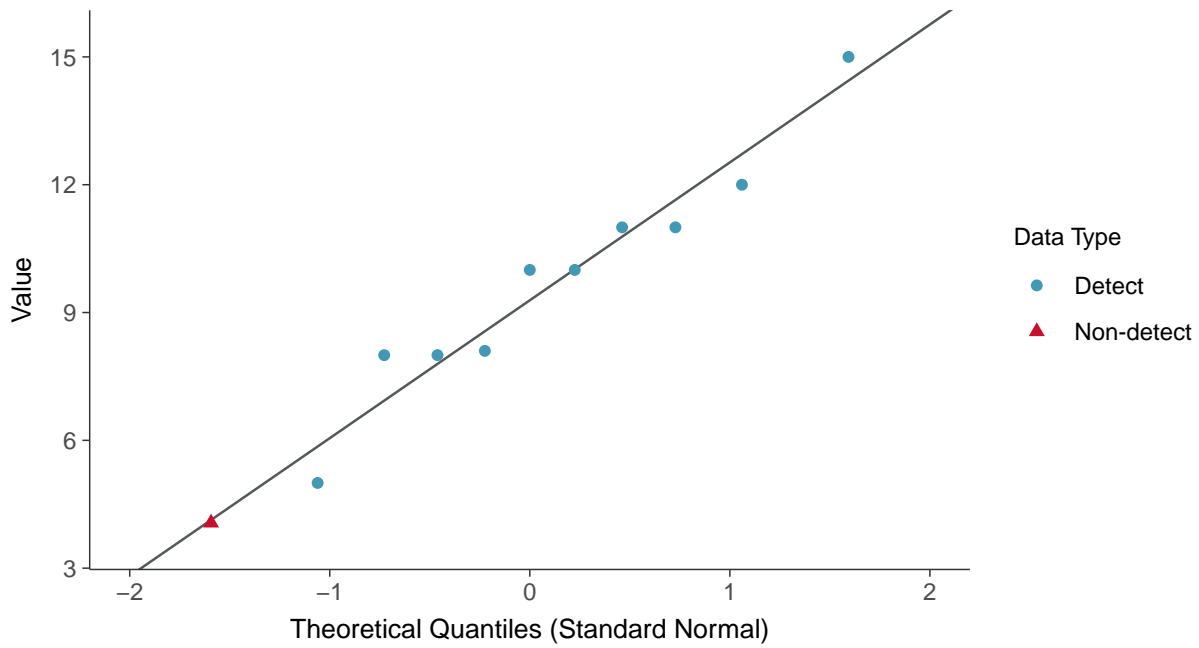






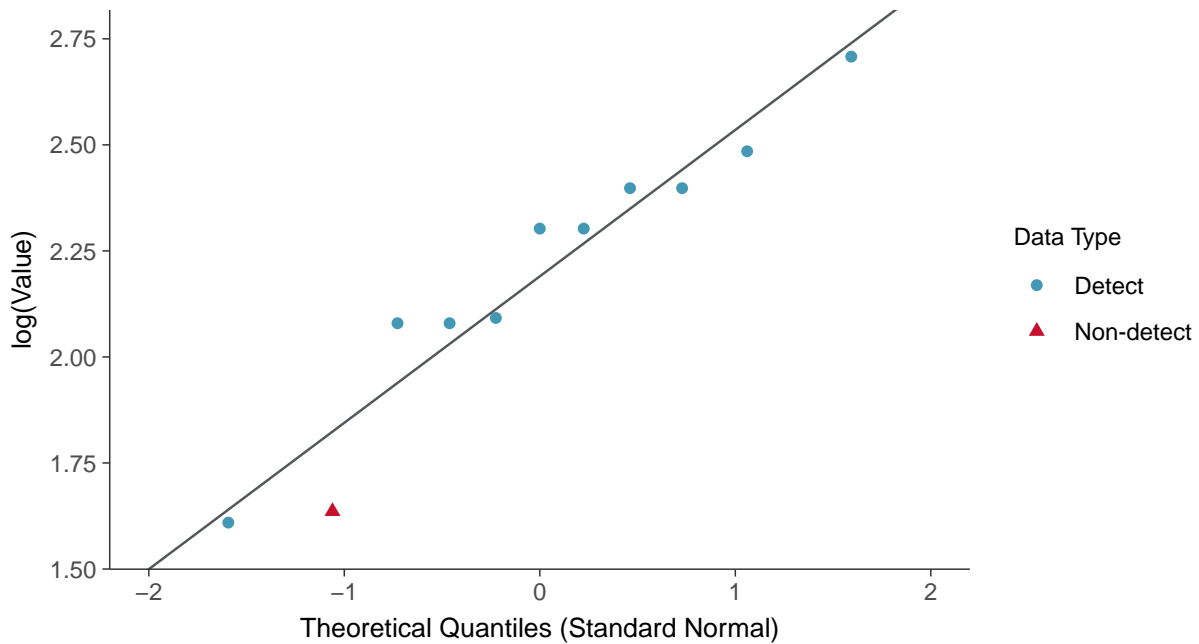
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-04 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

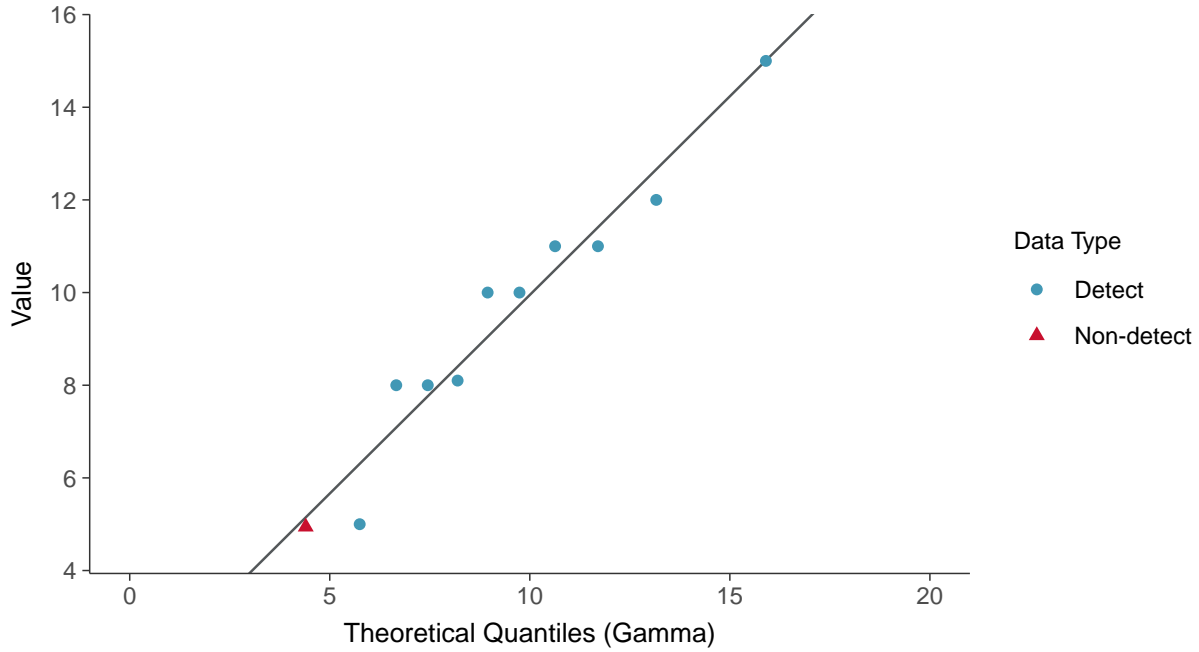
Total Suspended Solids, MW-04 (mg/L)





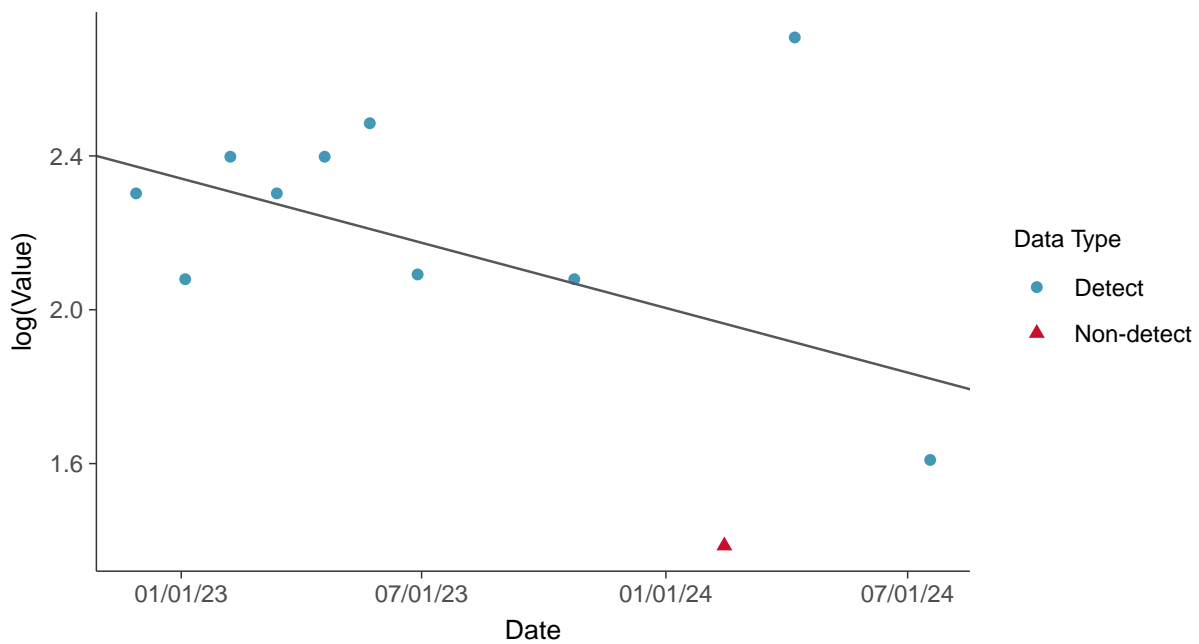
### Gamma Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

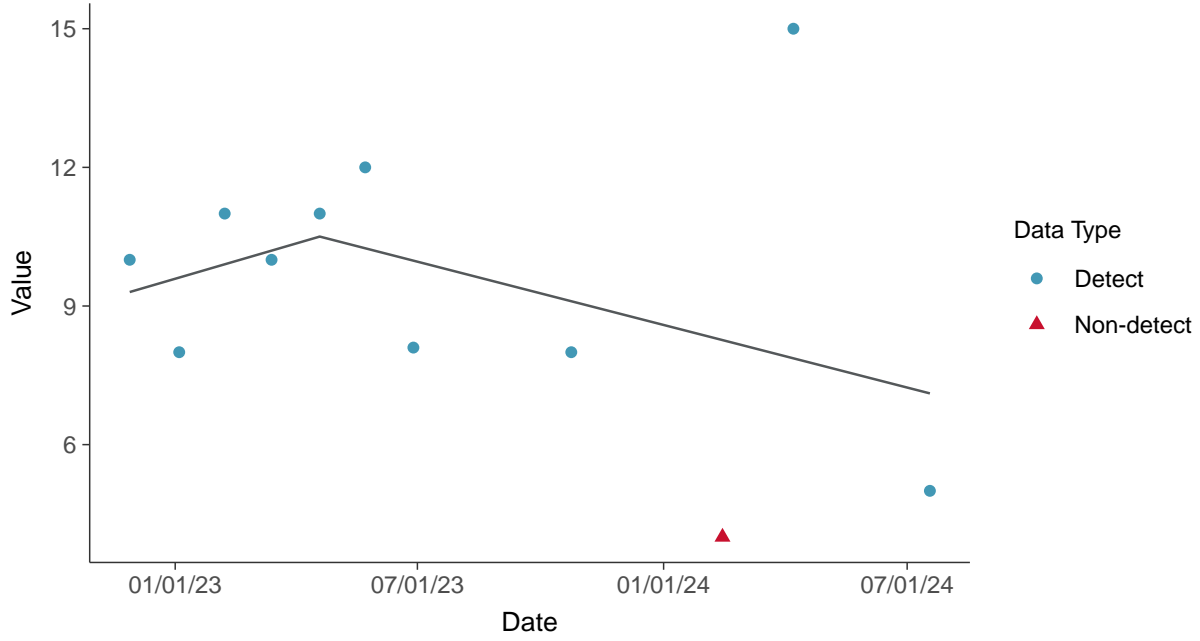
Total Suspended Solids, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

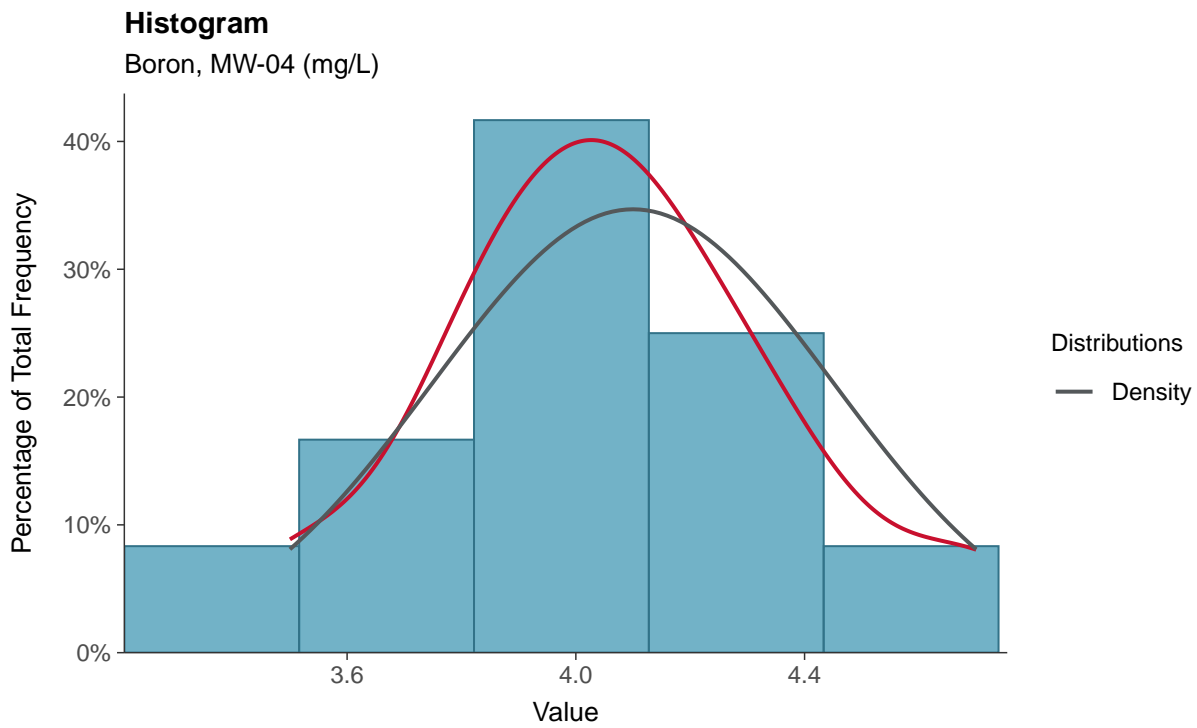
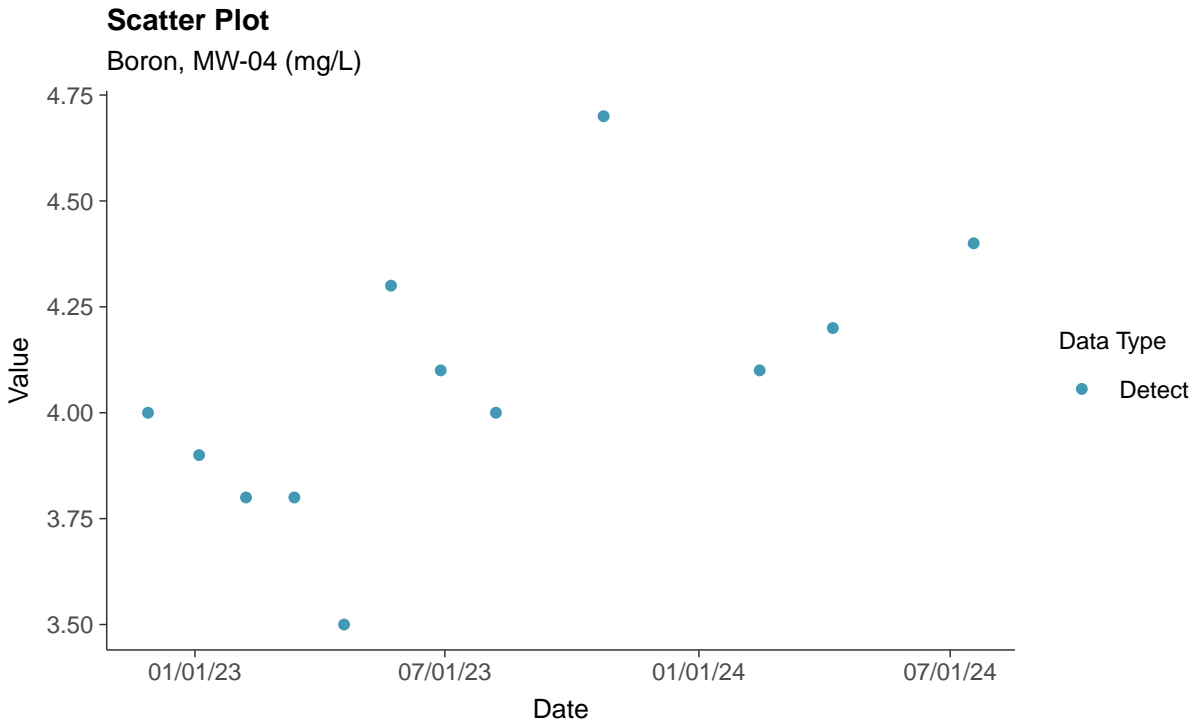
Total Suspended Solids, MW-04 (mg/L)





### Appendix III: Boron, MW-04

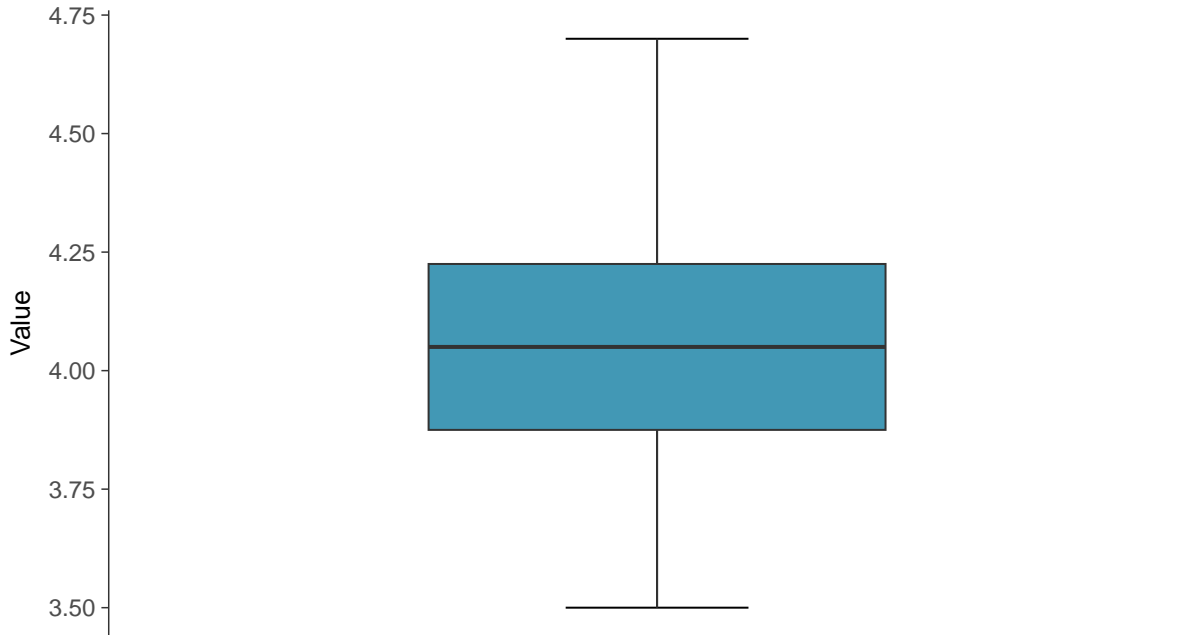
ID: 14\_2\_4\_105





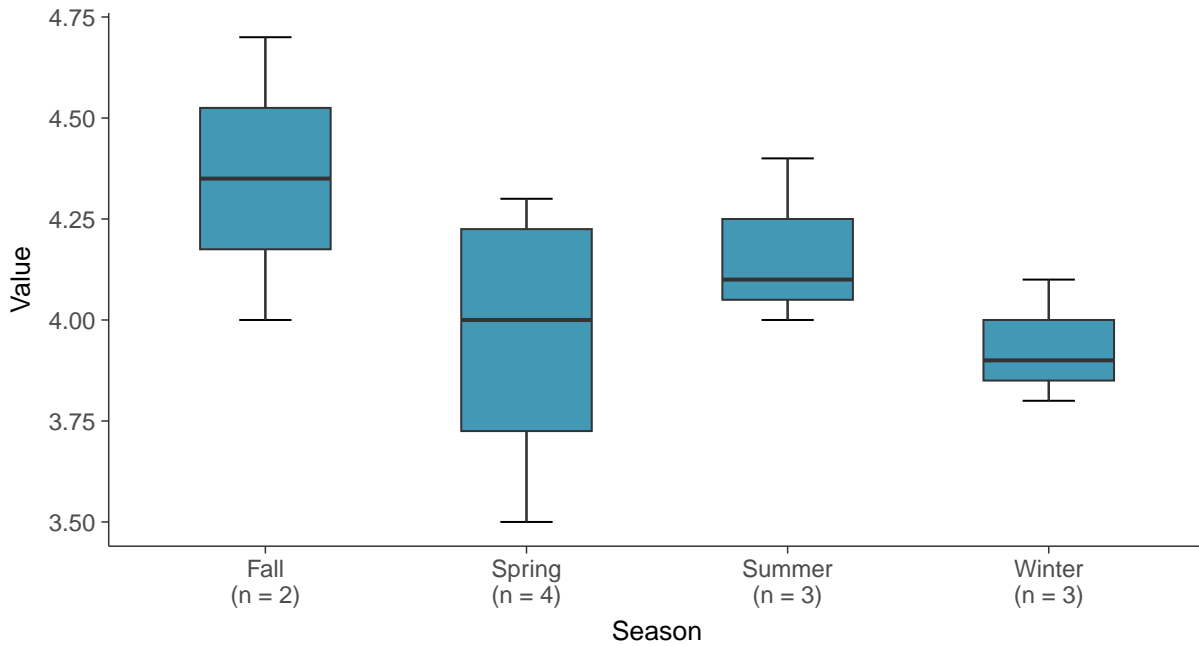
### Boxplot

Boron, MW-04 (mg/L)



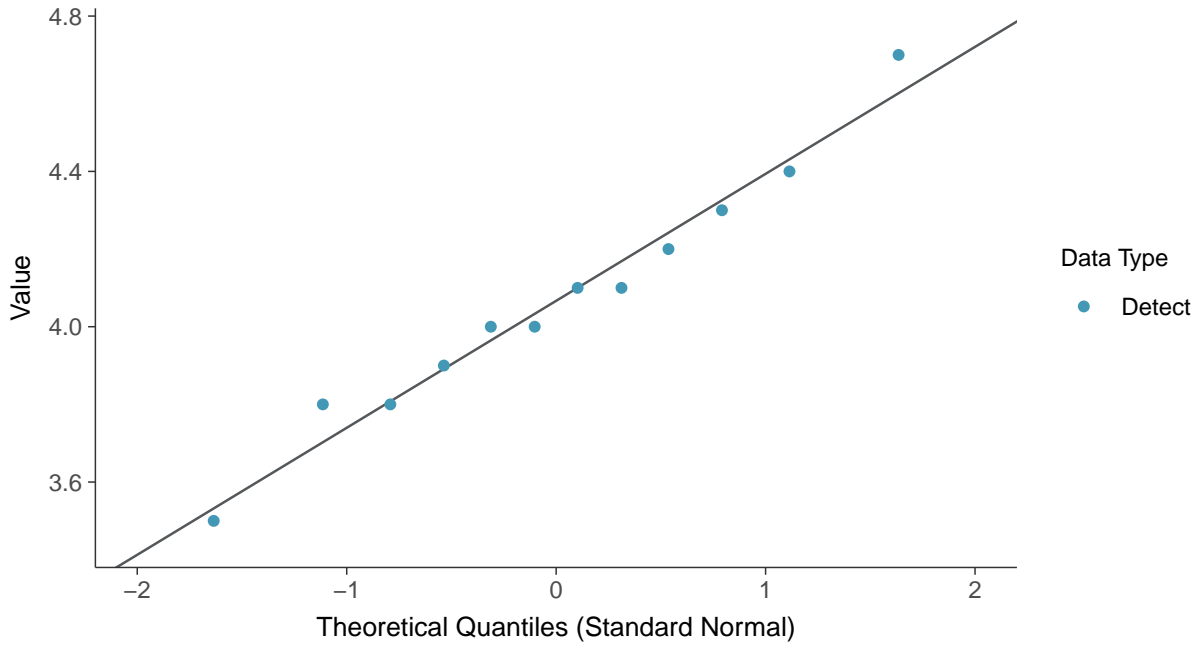
### Boxplot by Season

Boron, MW-04 (mg/L)

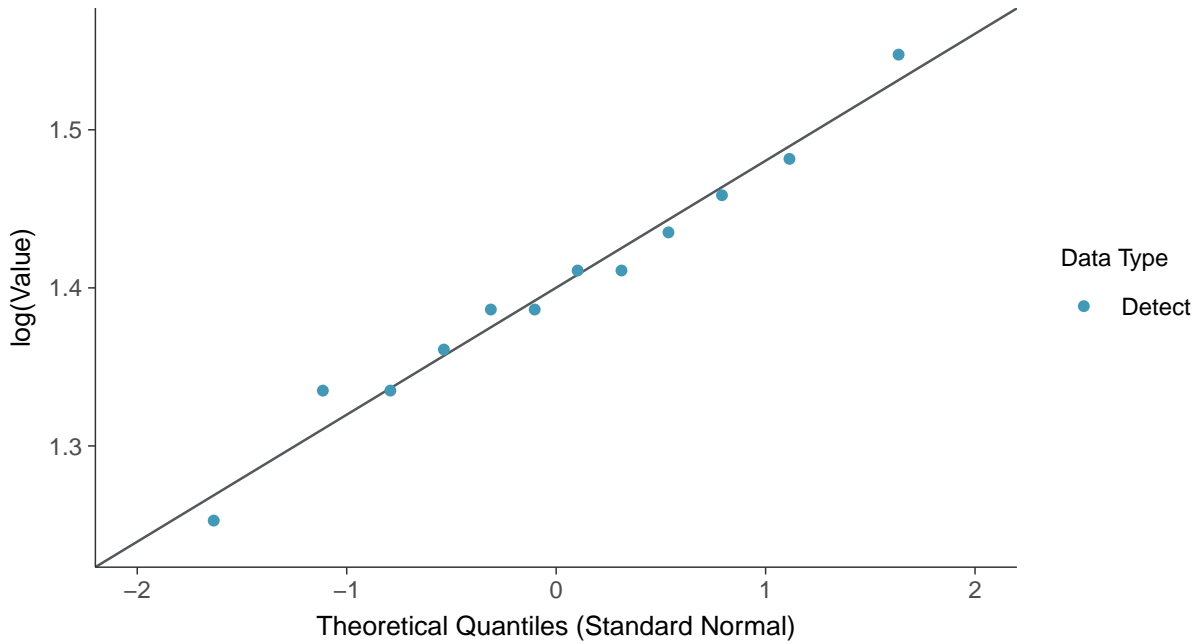




**Normal Q-Q plot**  
Boron, MW-04 (mg/L)



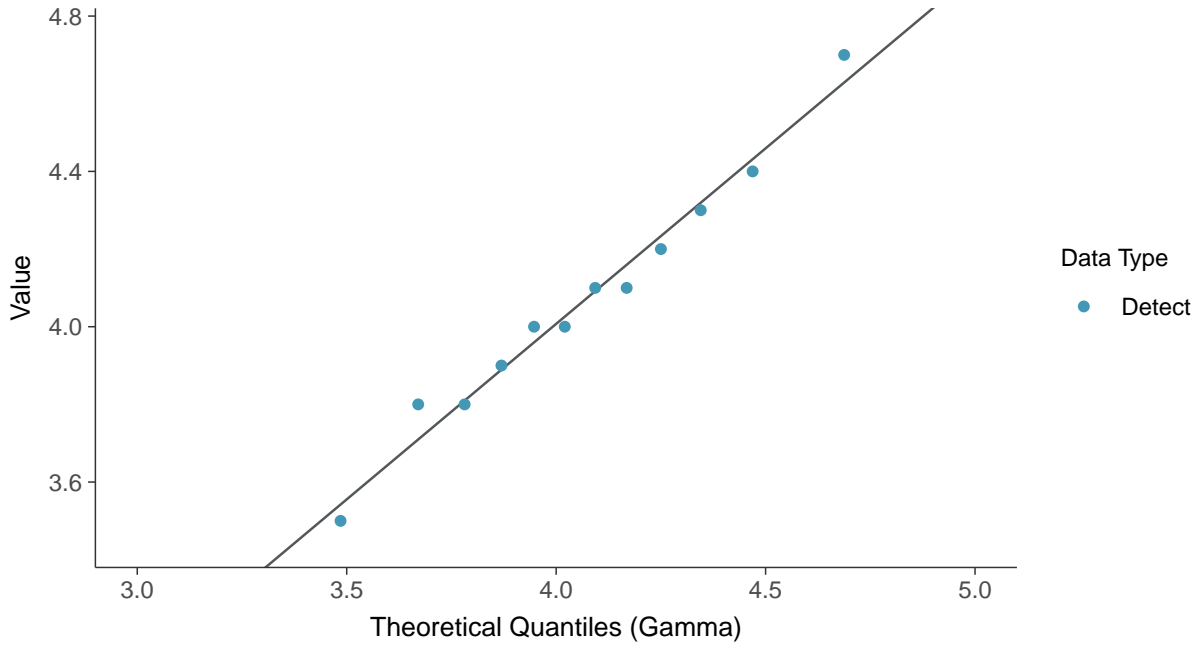
**Lognormal Q-Q plot**  
Boron, MW-04 (mg/L)





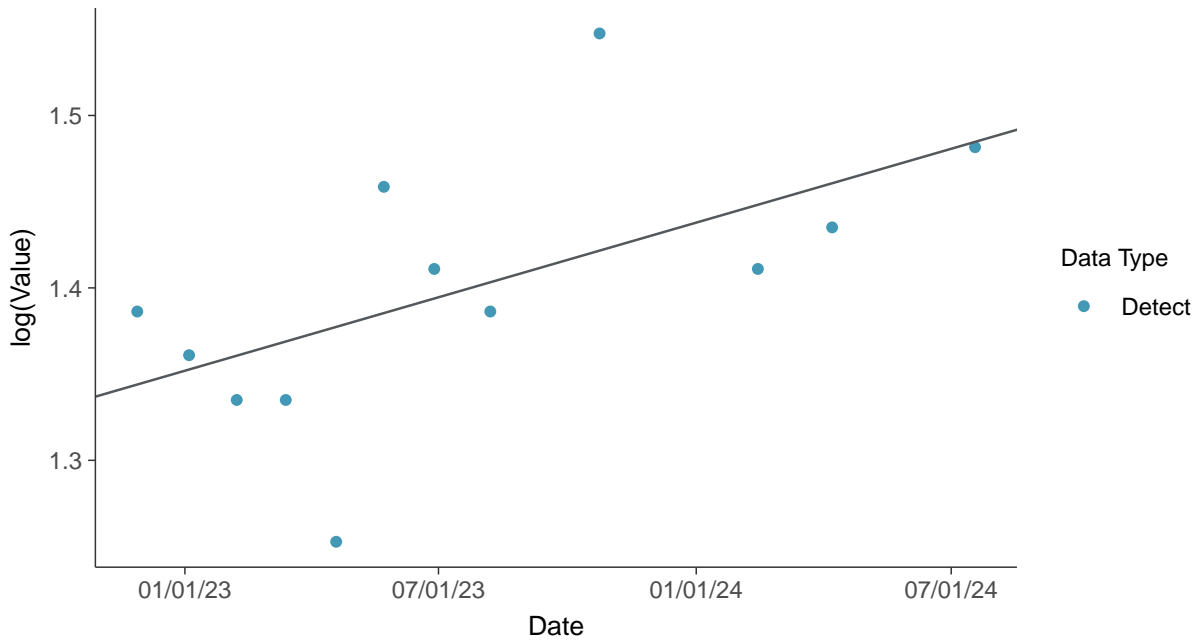
### Gamma Q-Q plot

Boron, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

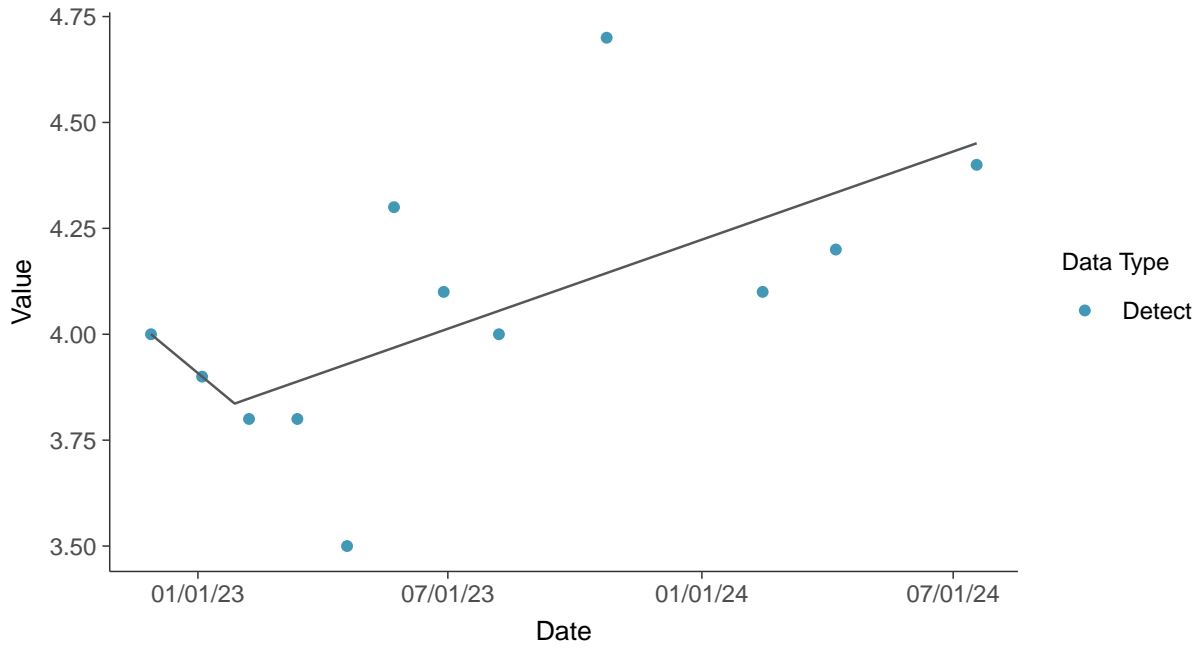
Boron, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Boron, MW-04 (mg/L)





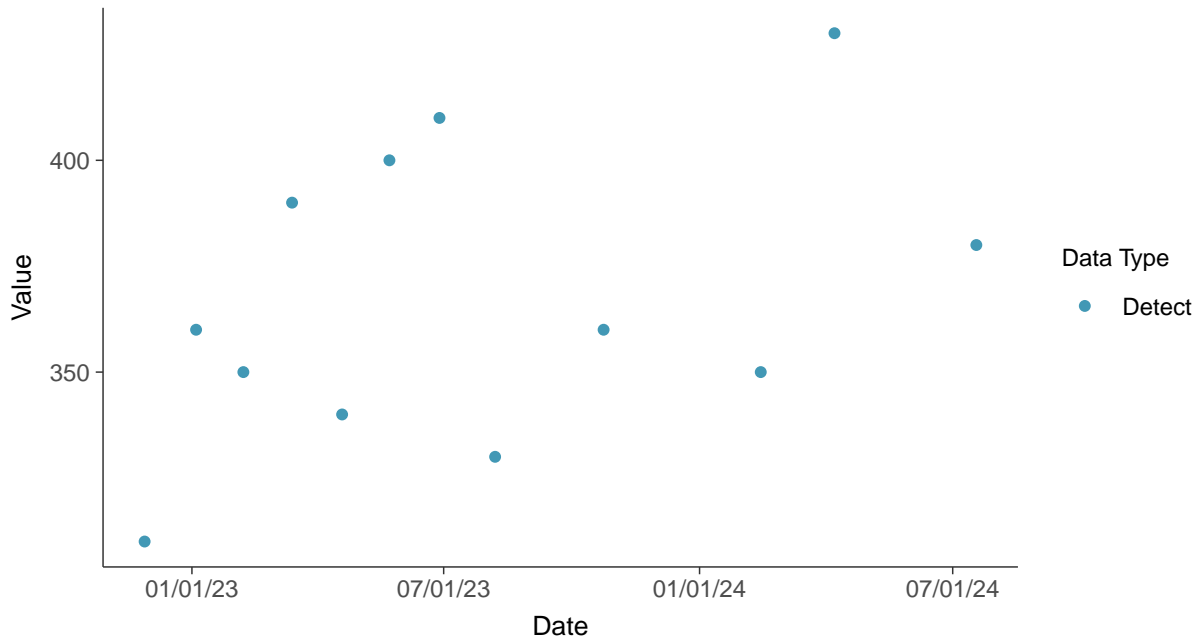


### Appendix III: Calcium, MW-04

ID: 14\_2\_4\_107

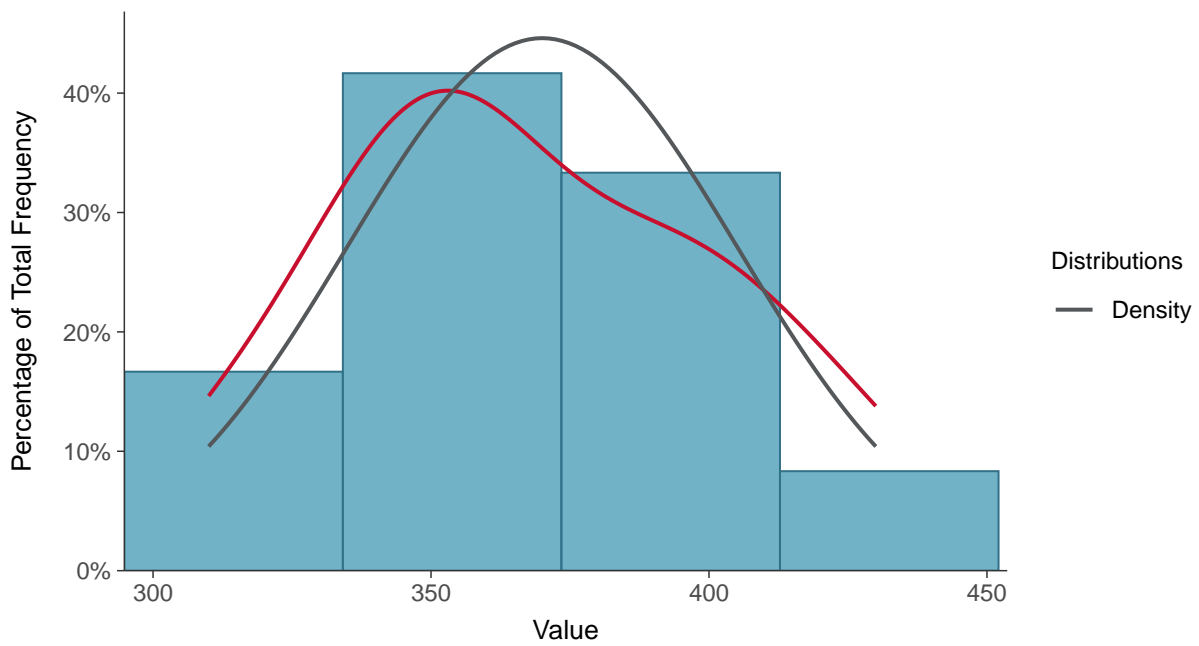
#### Scatter Plot

Calcium, MW-04 (mg/L)



#### Histogram

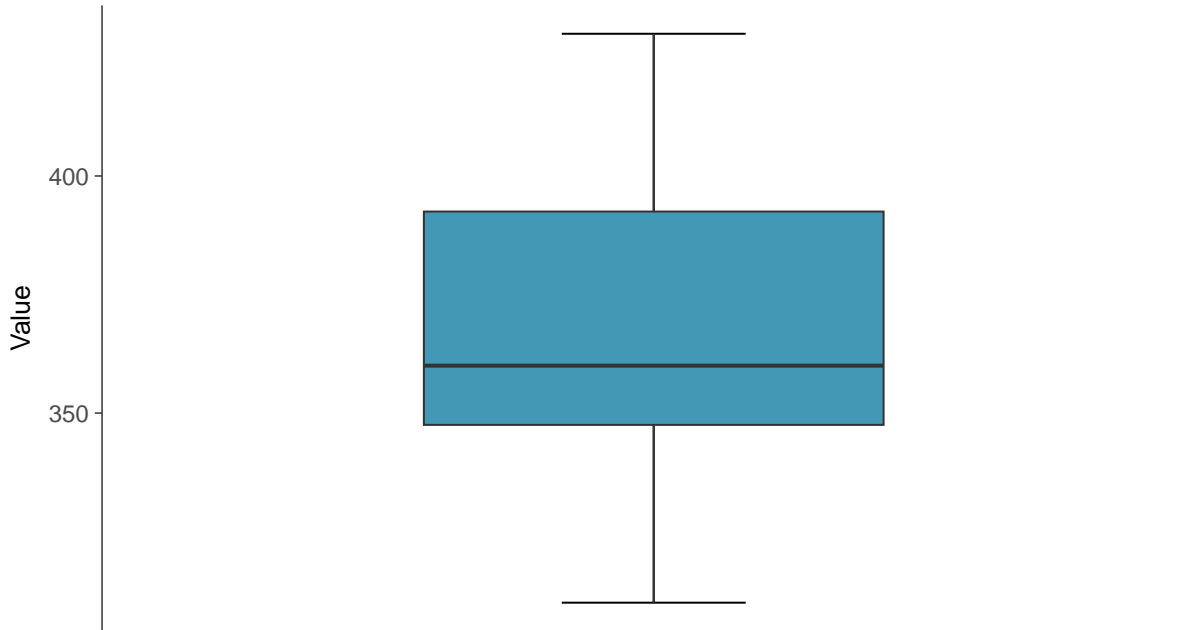
Calcium, MW-04 (mg/L)





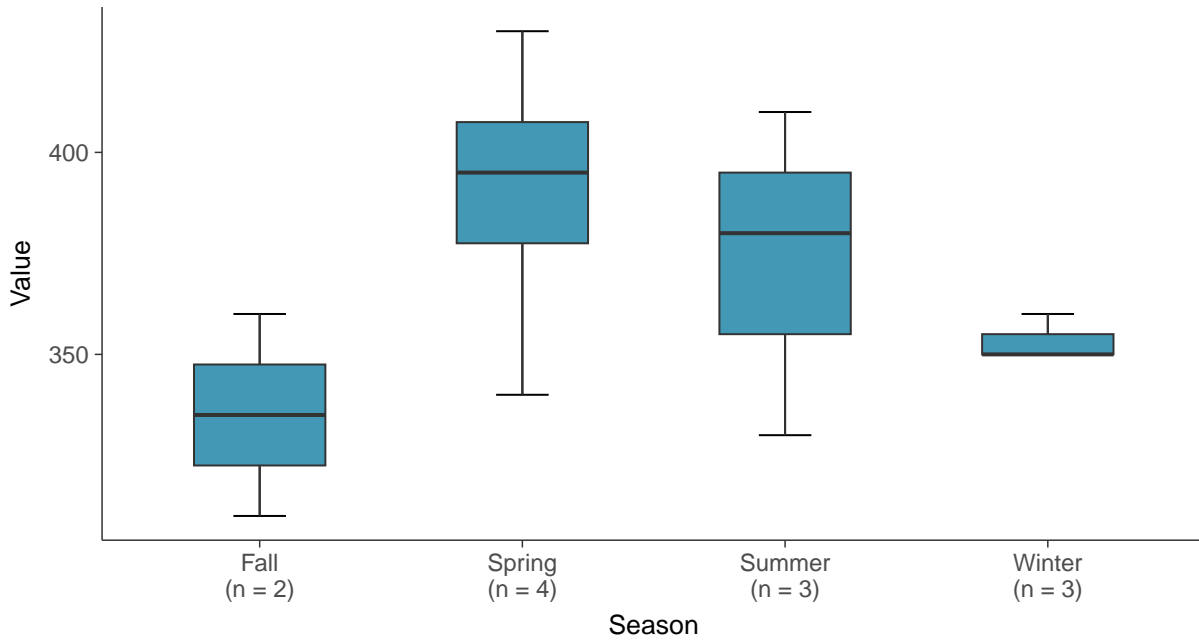
### Boxplot

Calcium, MW-04 (mg/L)



### Boxplot by Season

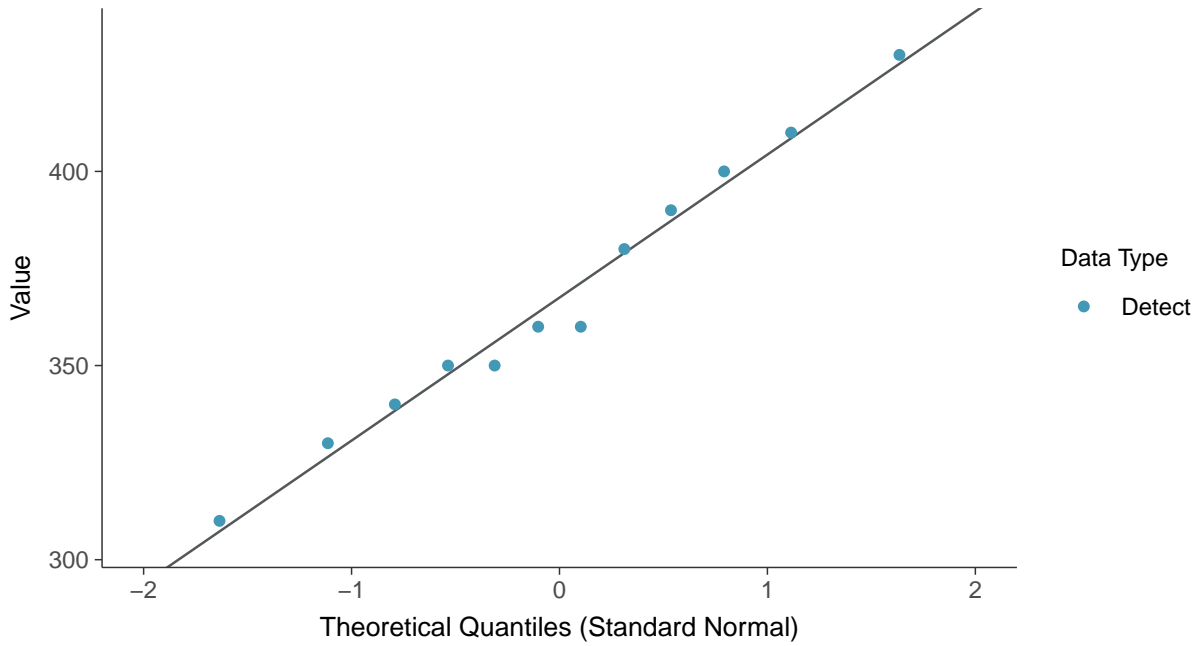
Calcium, MW-04 (mg/L)





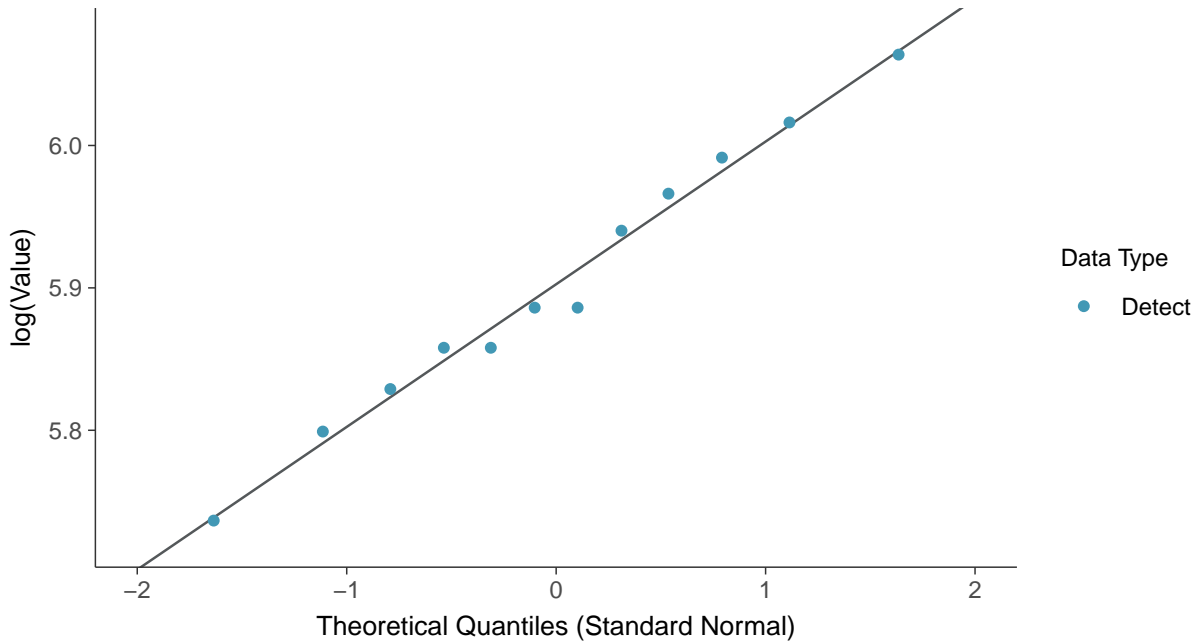
### Normal Q-Q plot

Calcium, MW-04 (mg/L)



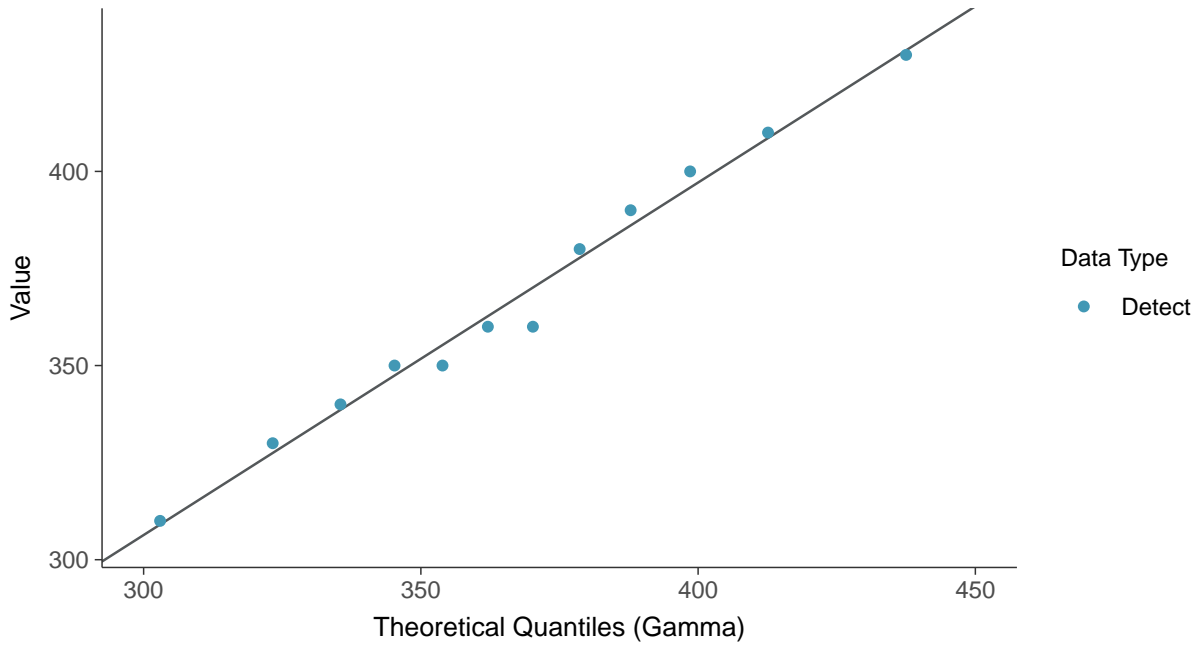
### Lognormal Q-Q plot

Calcium, MW-04 (mg/L)

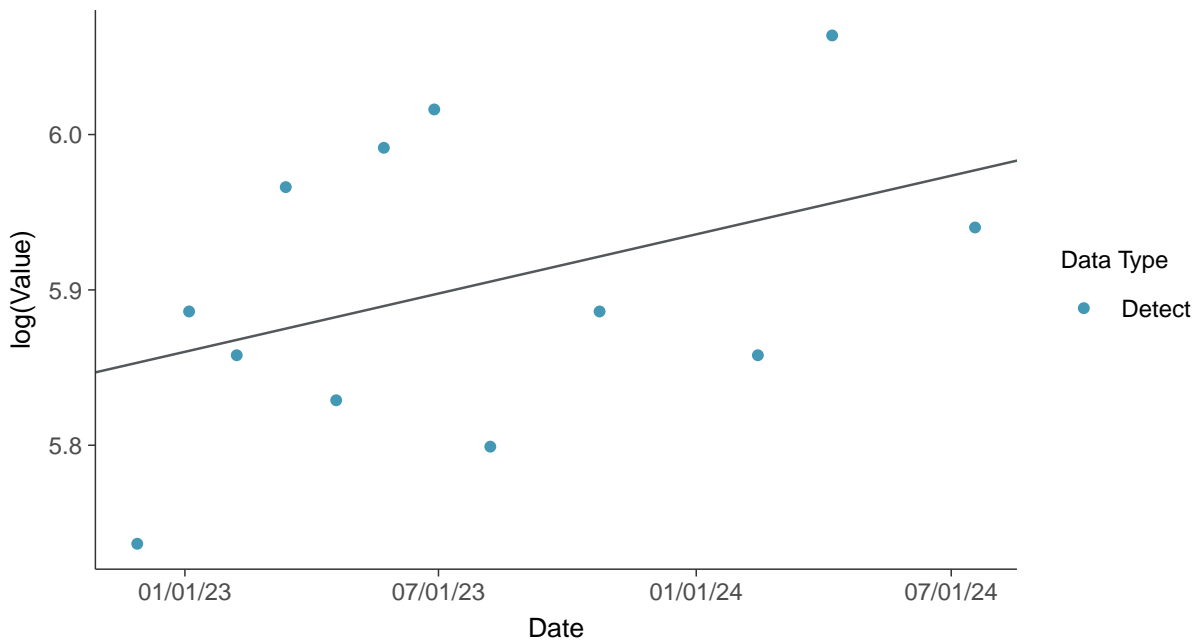




**Gamma Q-Q plot**  
Calcium, MW-04 (mg/L)



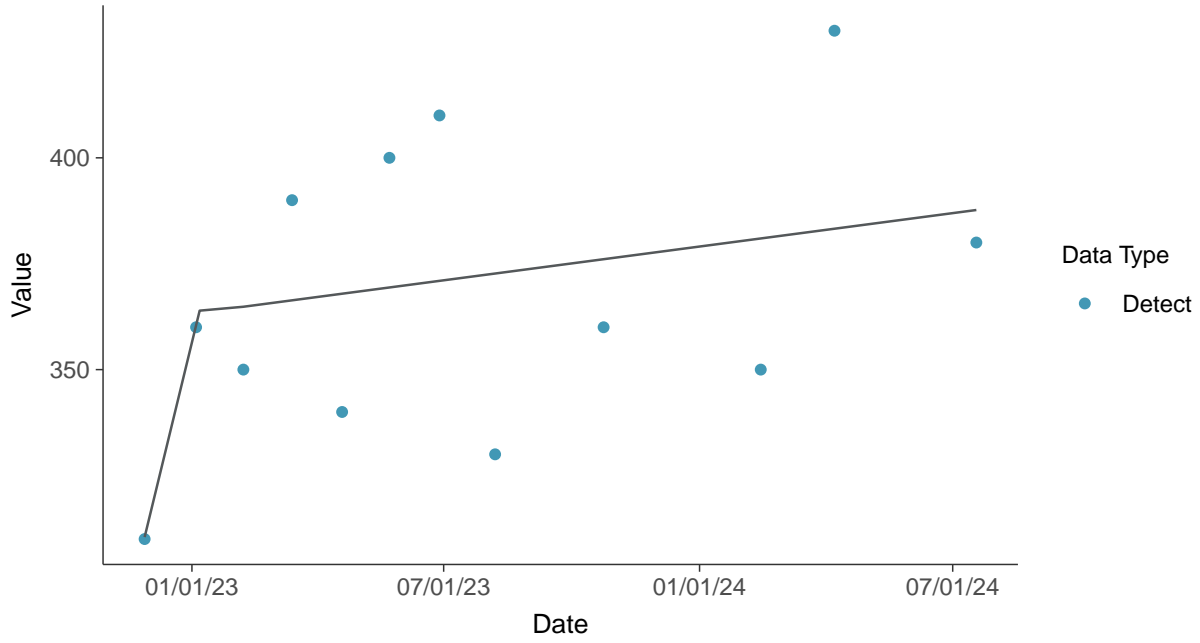
**Trend Regression: Lognormal MLE**  
Calcium, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Calcium, MW-04 (mg/L)



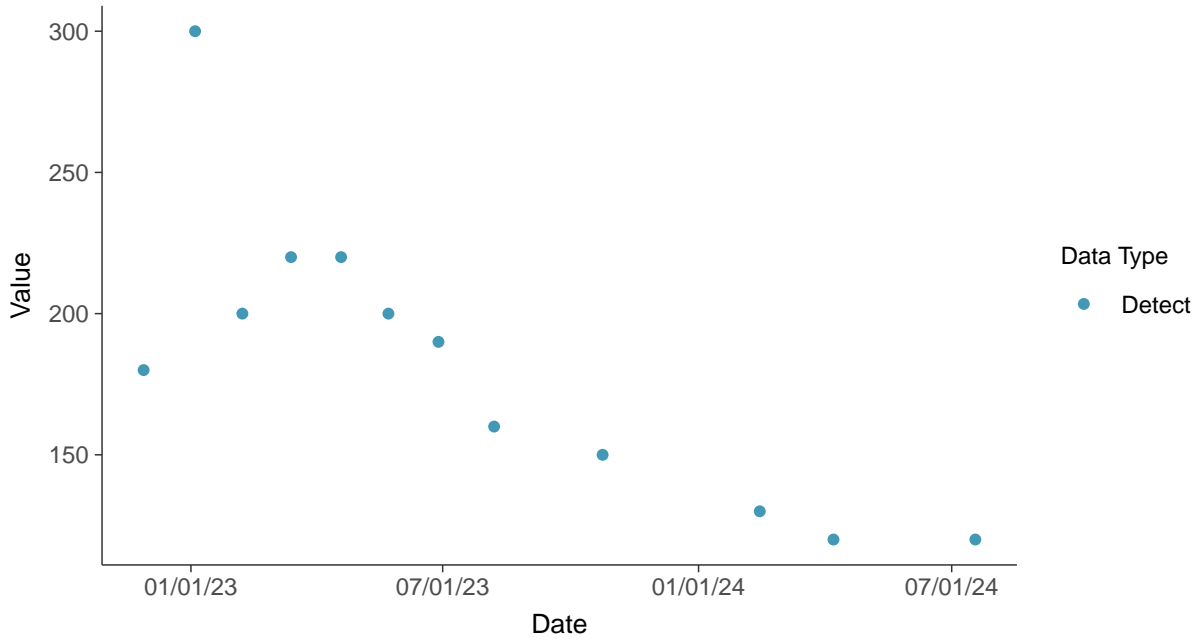


### Appendix III: Chloride (as Cl), MW-04

ID: 14\_2\_4\_108

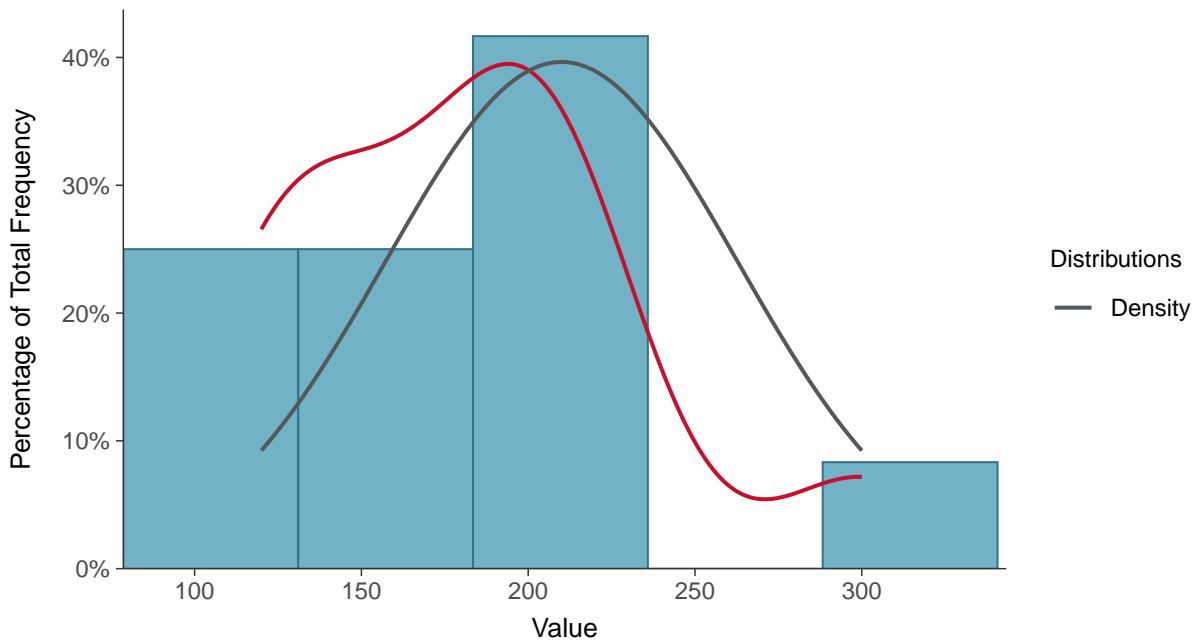
#### Scatter Plot

Chloride (as Cl), MW-04 (mg/L)



#### Histogram

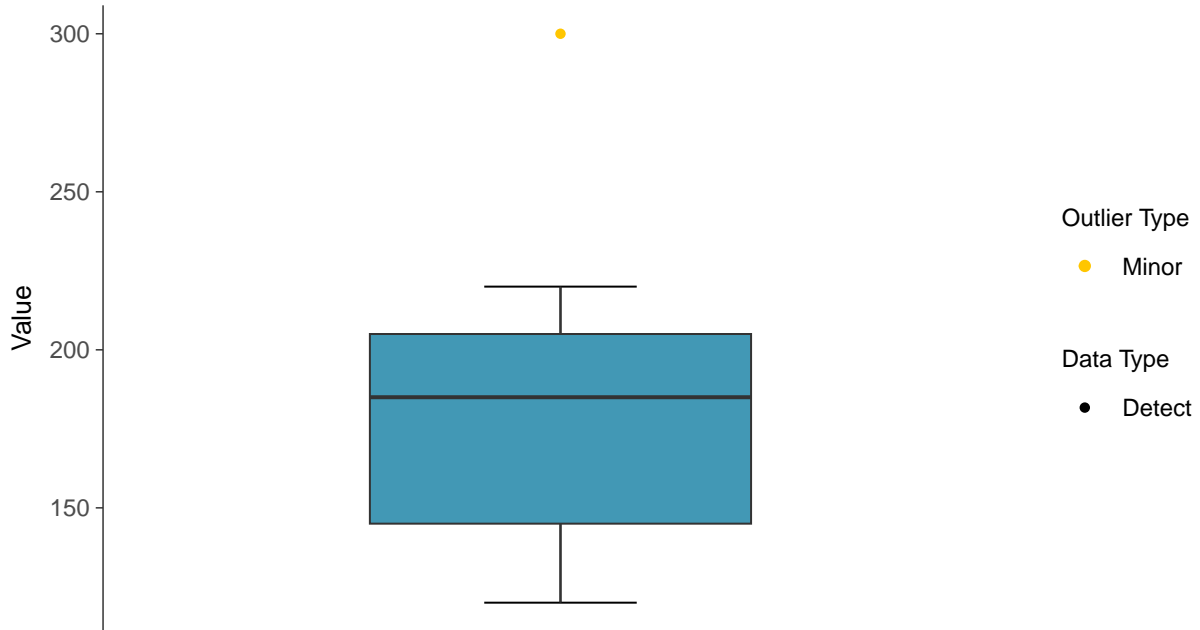
Chloride (as Cl), MW-04 (mg/L)





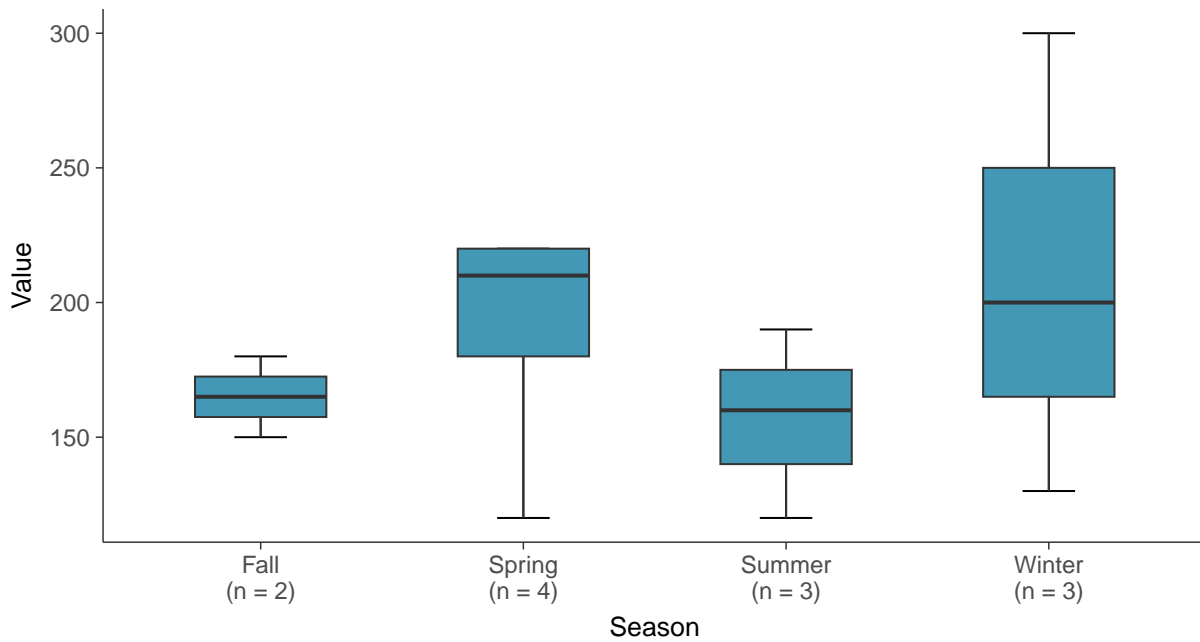
### Boxplot

Chloride (as Cl), MW-04 (mg/L)



### Boxplot by Season

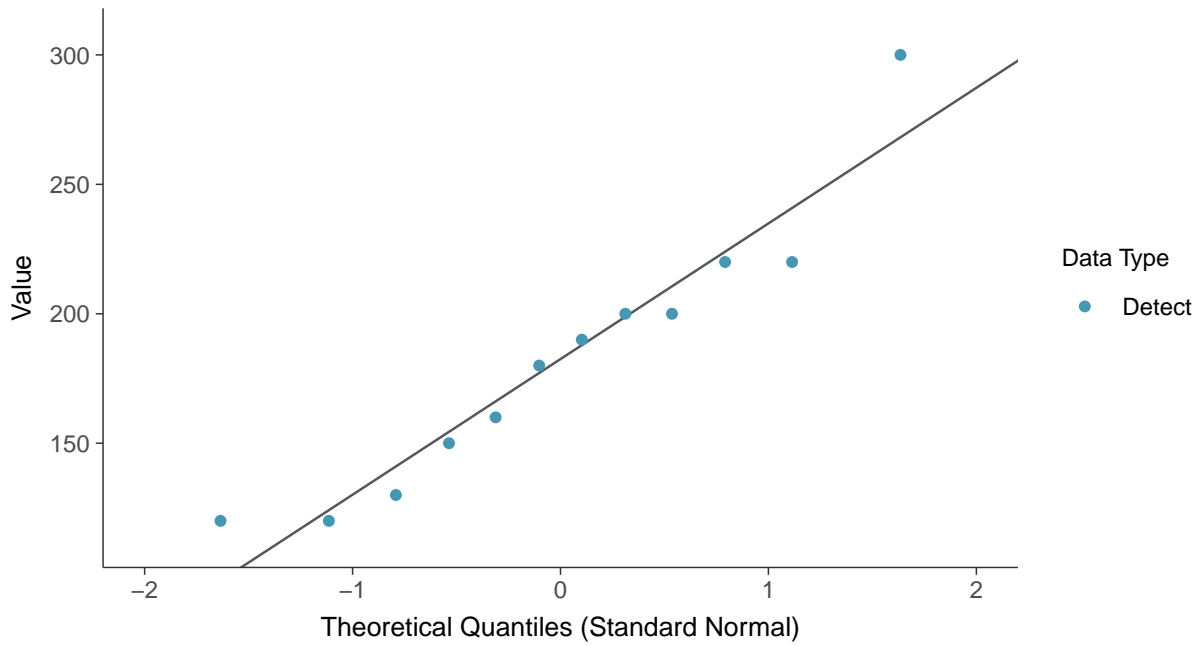
Chloride (as Cl), MW-04 (mg/L)





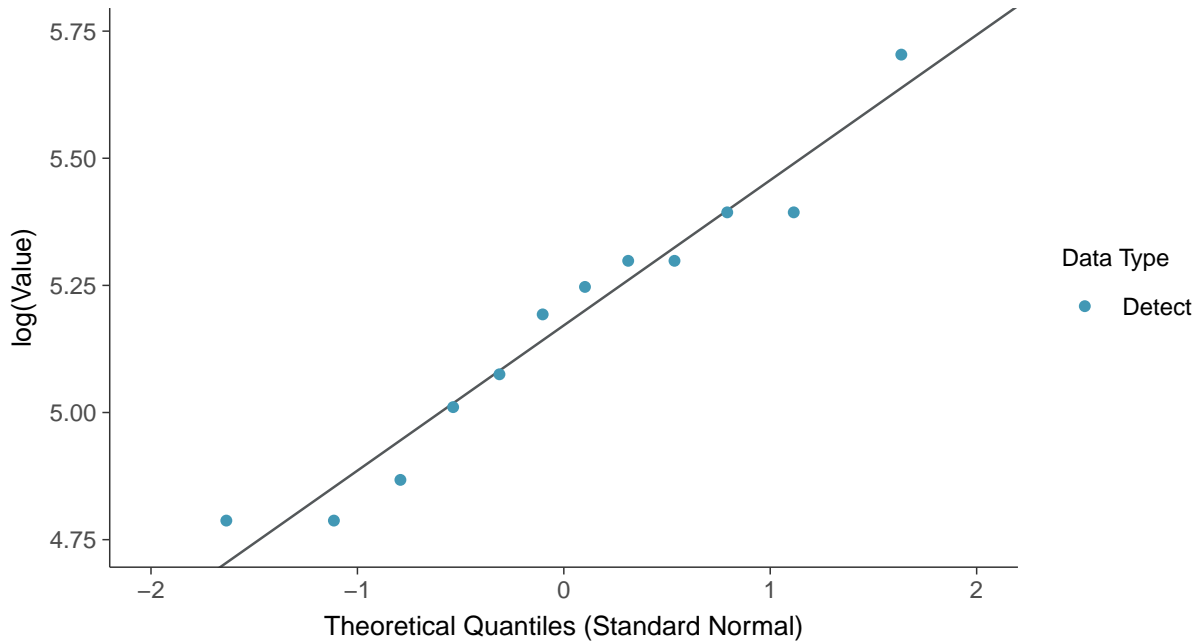
### Normal Q-Q plot

Chloride (as Cl), MW-04 (mg/L)



### Lognormal Q-Q plot

Chloride (as Cl), MW-04 (mg/L)

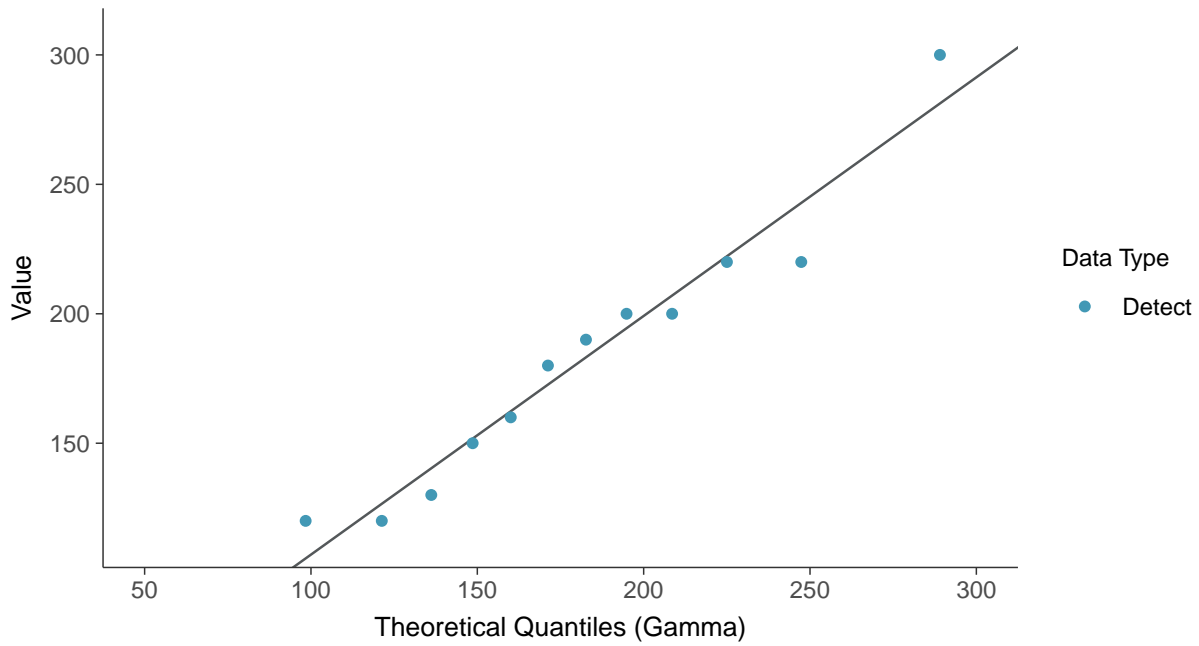






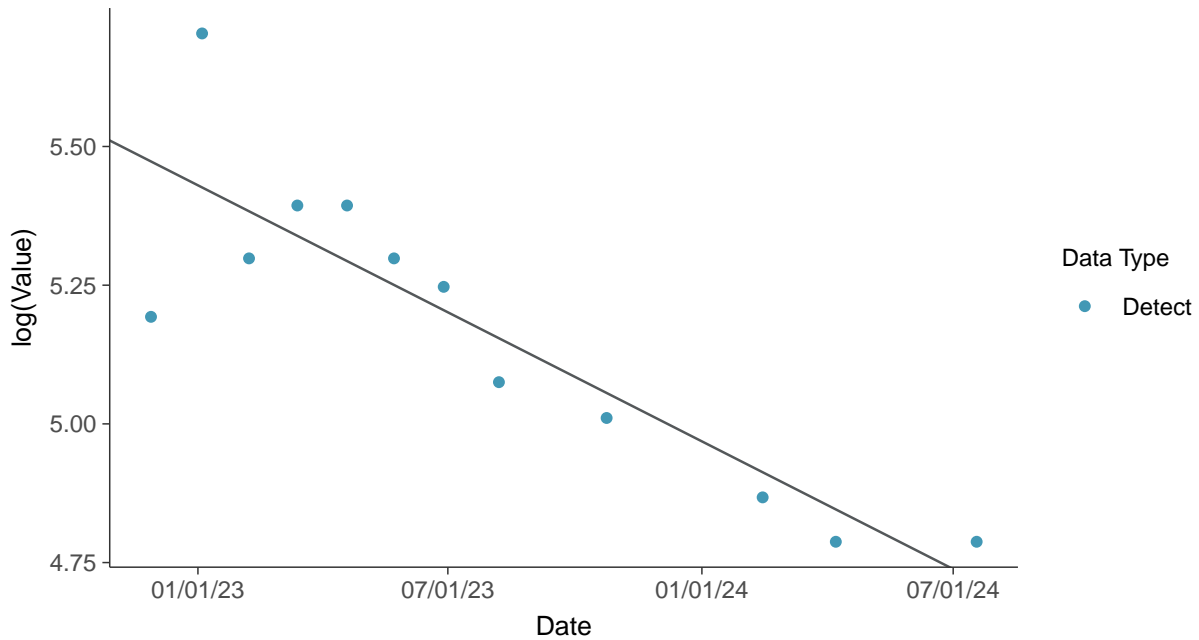
### Gamma Q-Q plot

Chloride (as Cl), MW-04 (mg/L)



### Trend Regression: Lognormal MLE

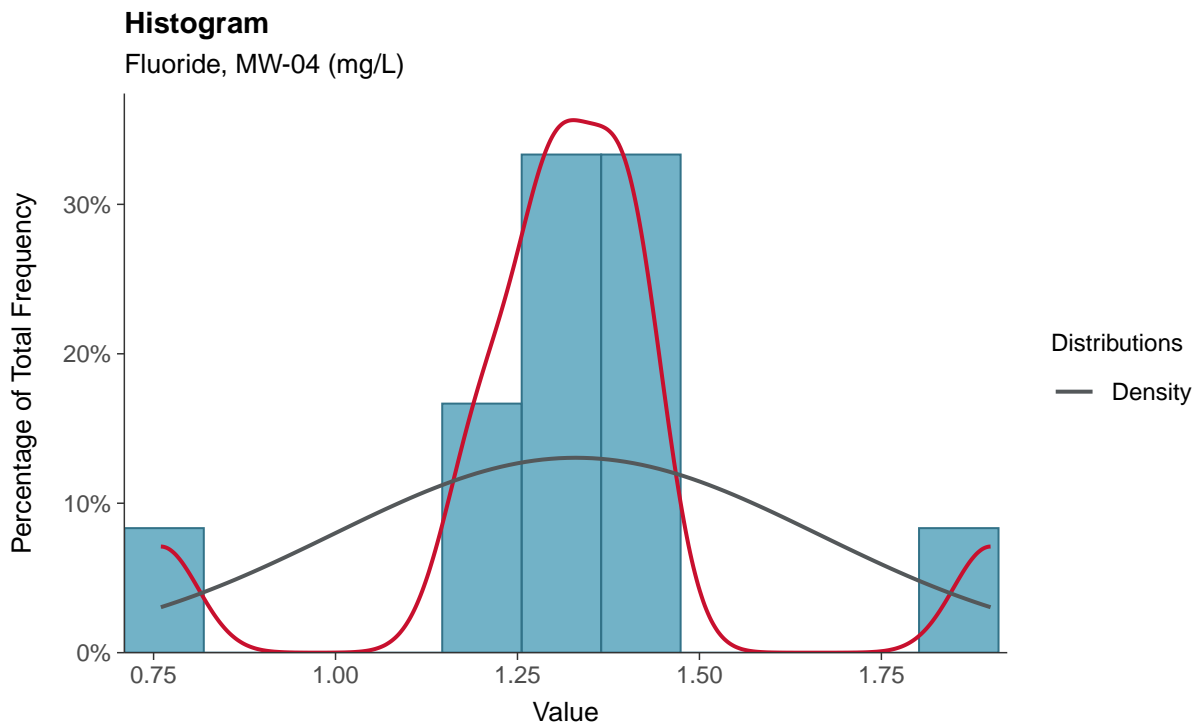
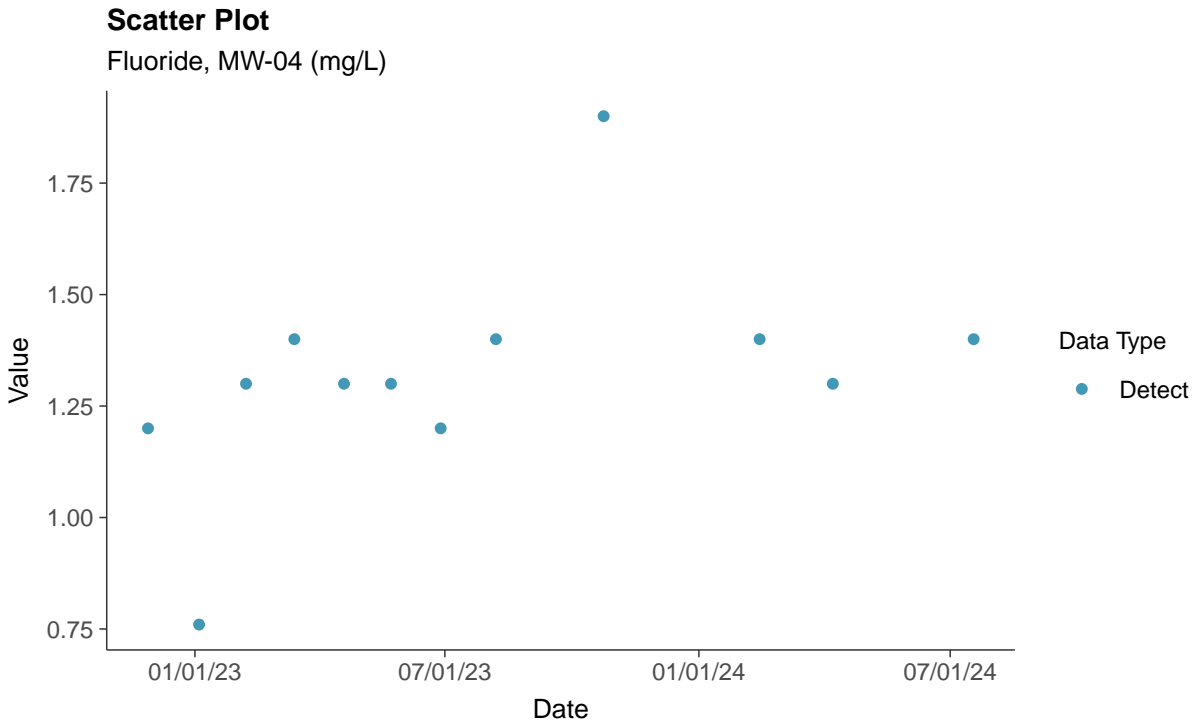
Chloride (as Cl), MW-04 (mg/L)





### Appendix III: Fluoride, MW-04

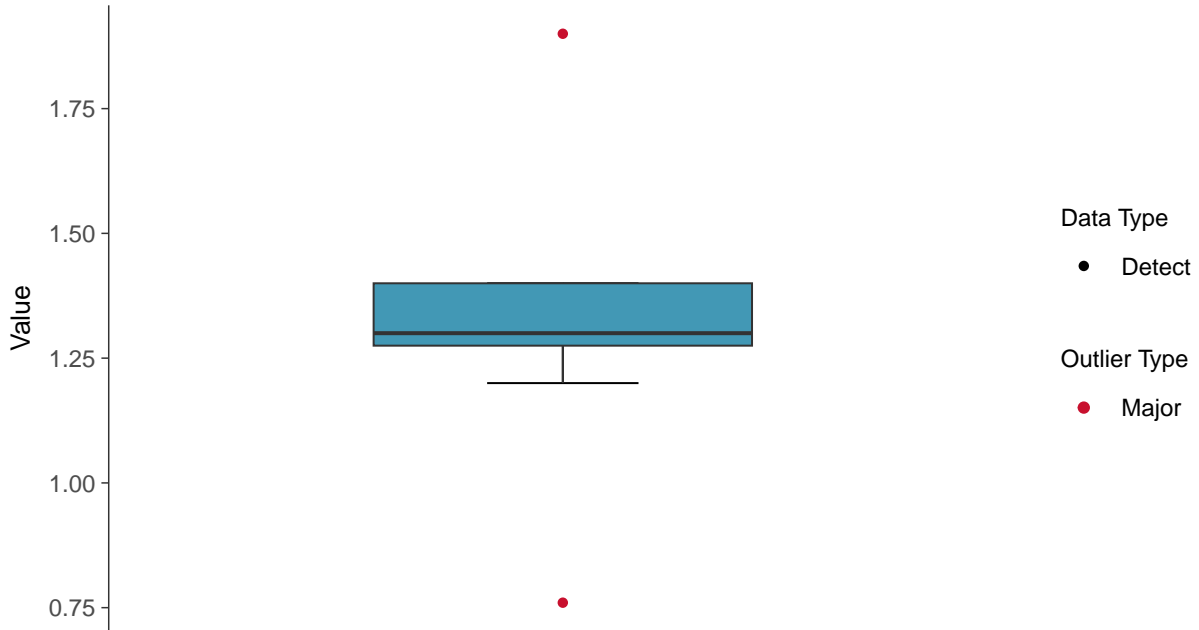
ID: 14\_2\_4\_112





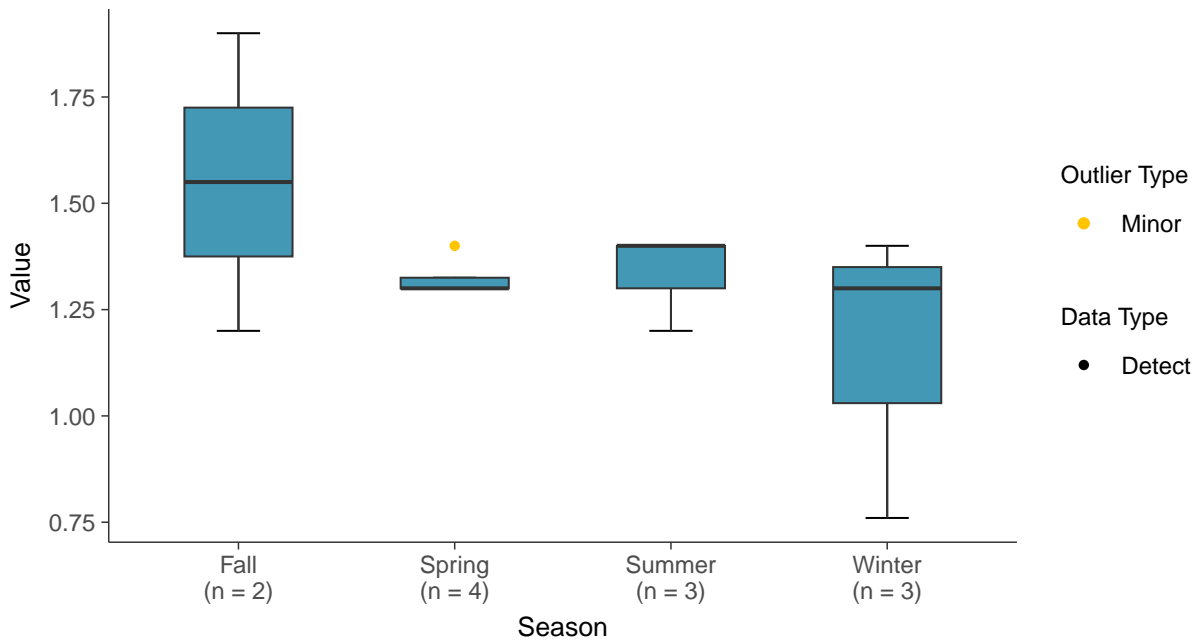
### Boxplot

Fluoride, MW-04 (mg/L)



### Boxplot by Season

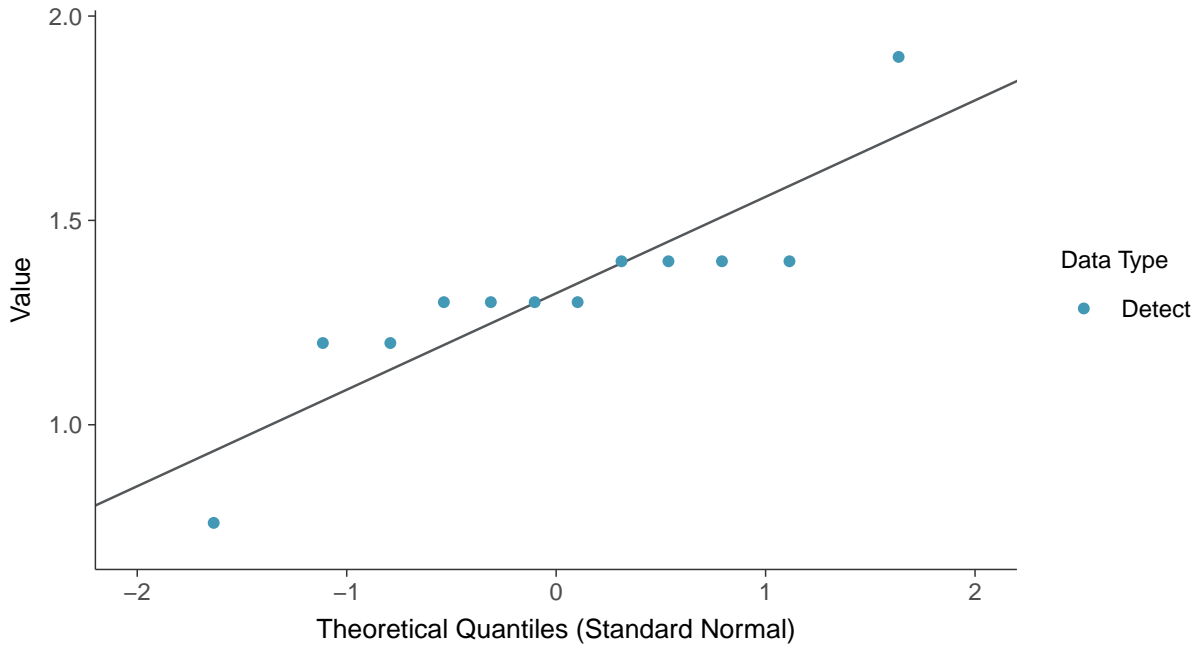
Fluoride, MW-04 (mg/L)





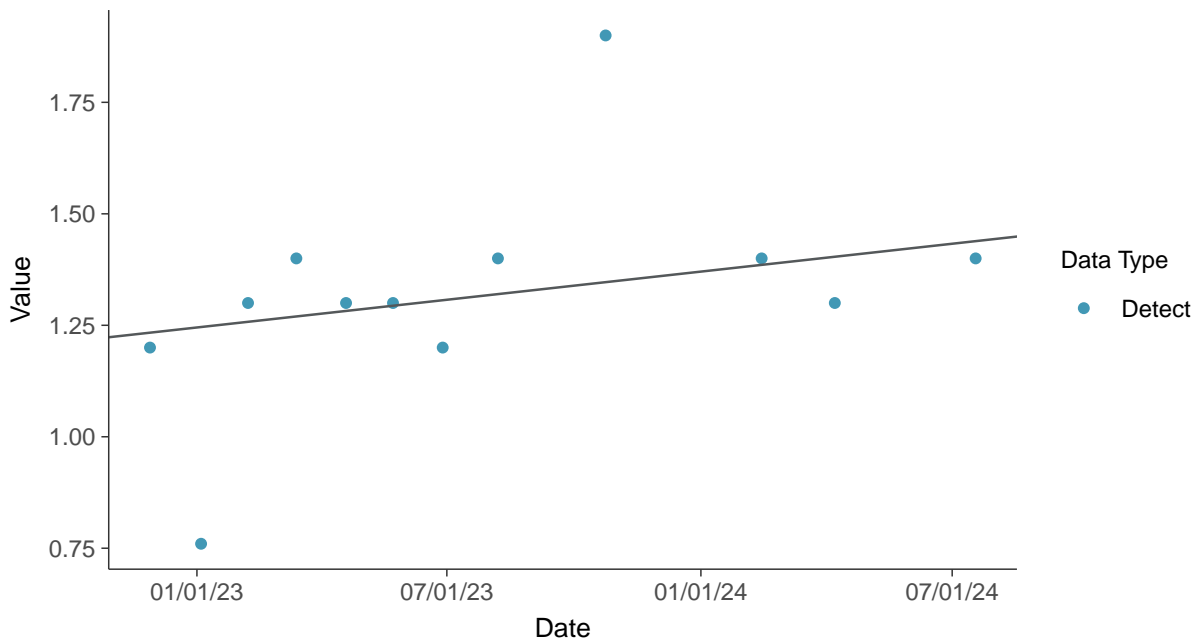
### Normal Q-Q plot

Fluoride, MW-04 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

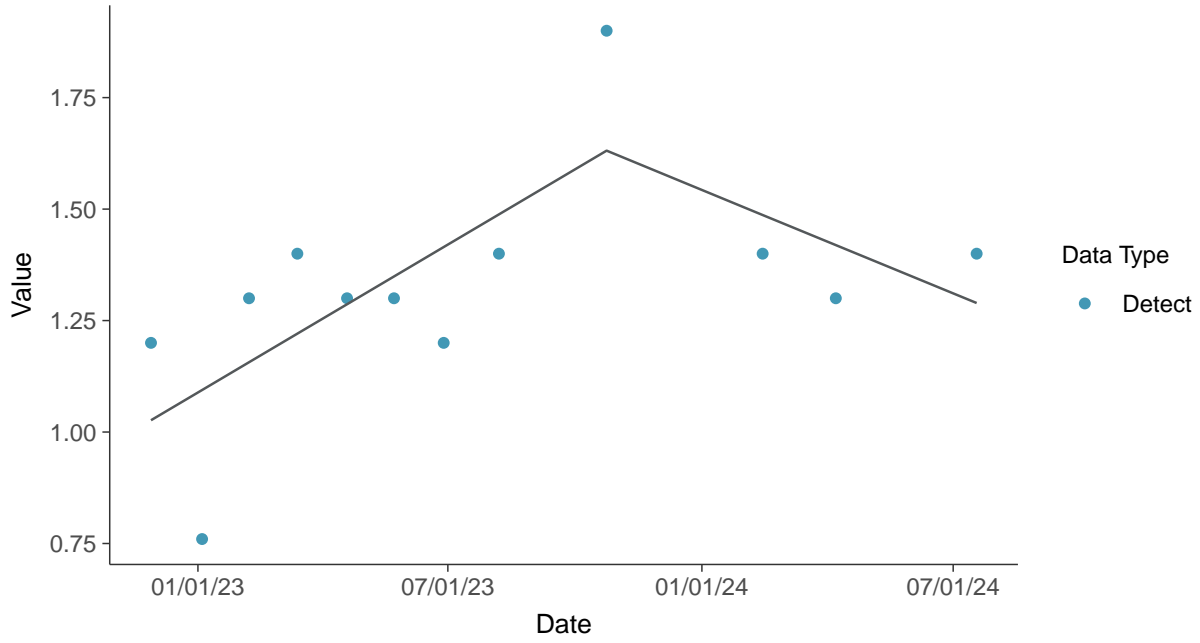
Fluoride, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

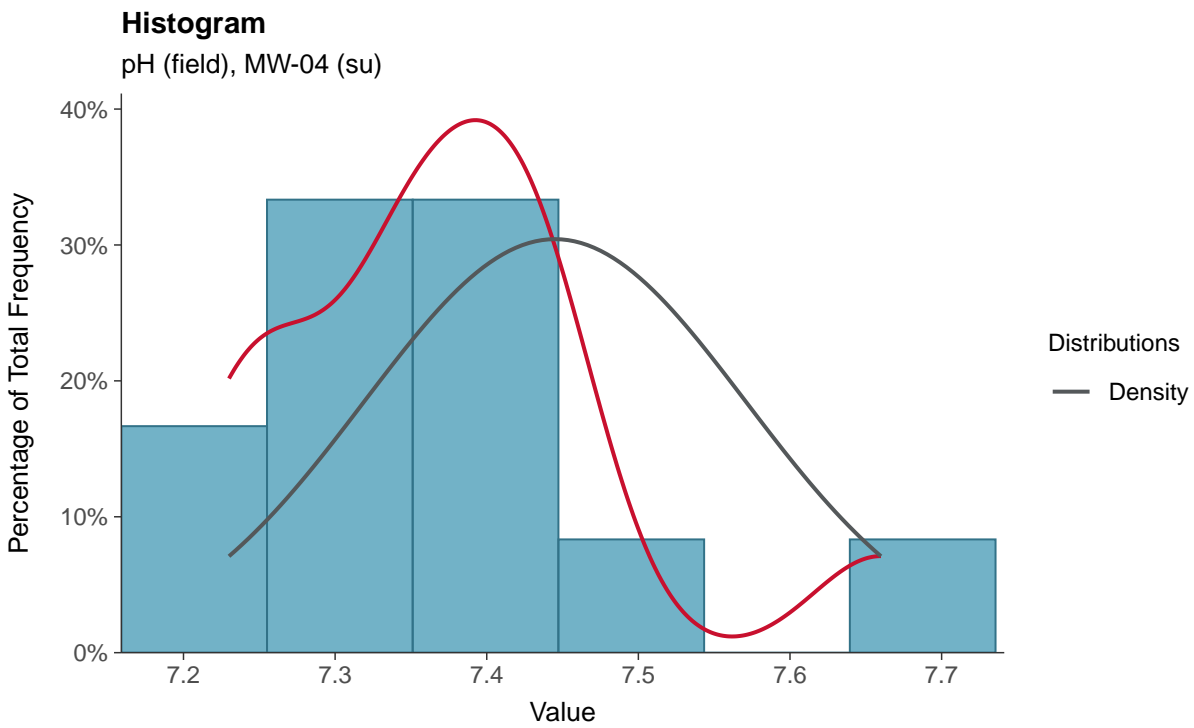
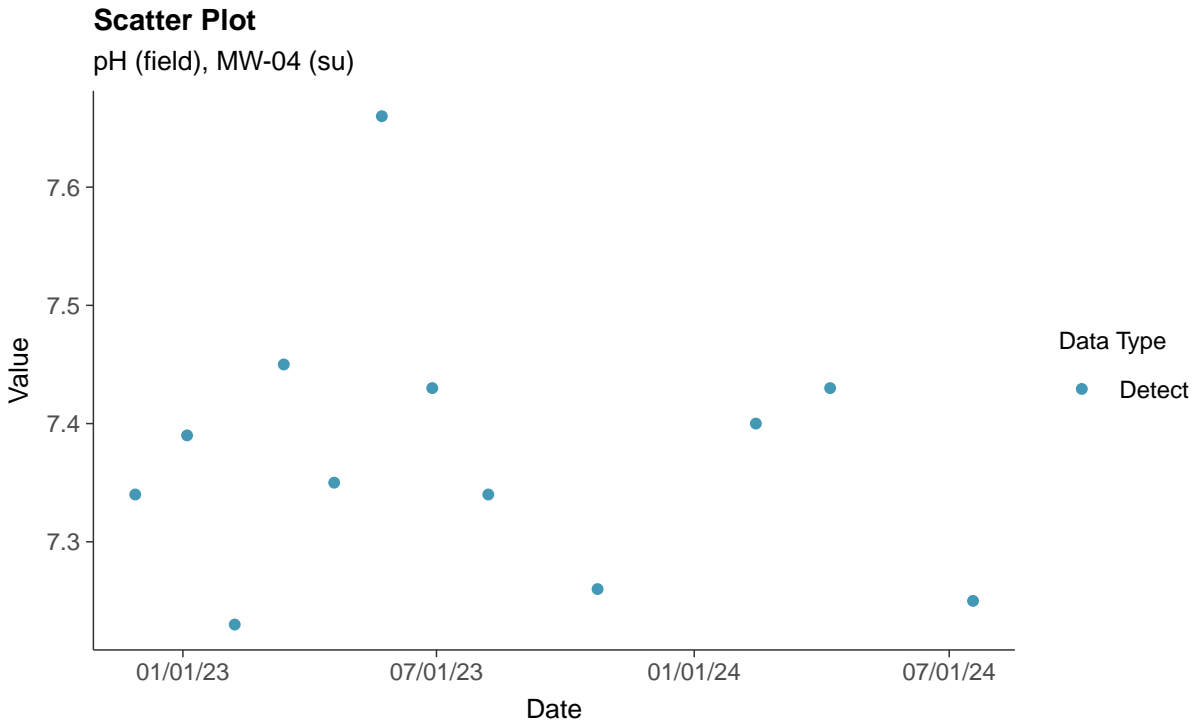
Fluoride, MW-04 (mg/L)





### Appendix III: pH (field), MW-04

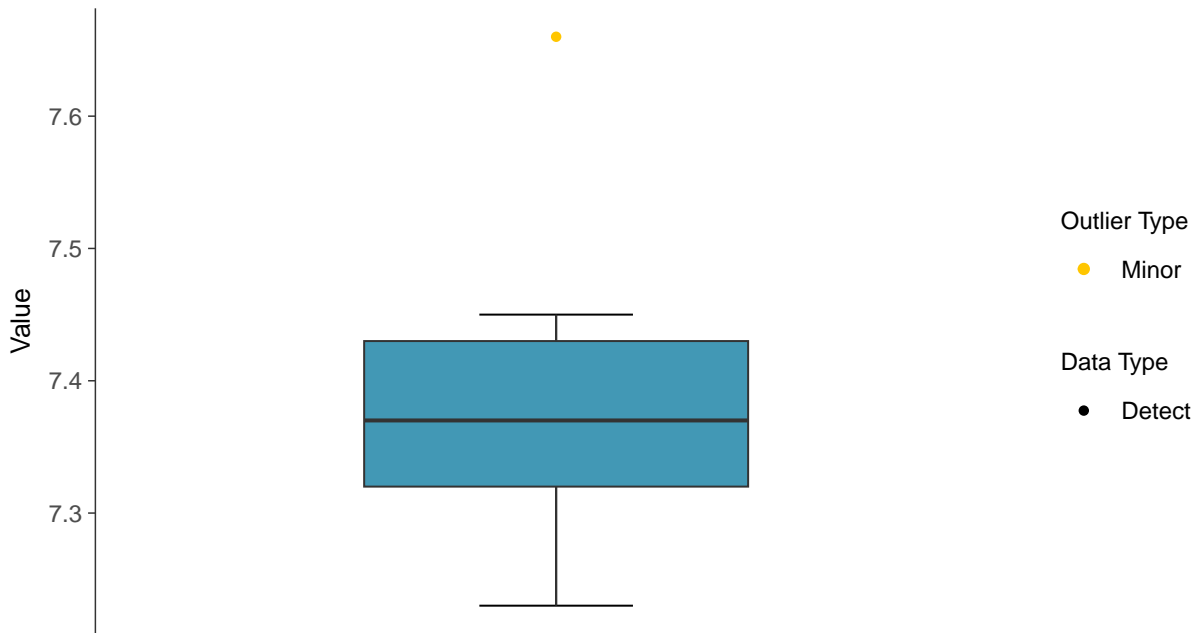
ID: 14\_2\_4\_120





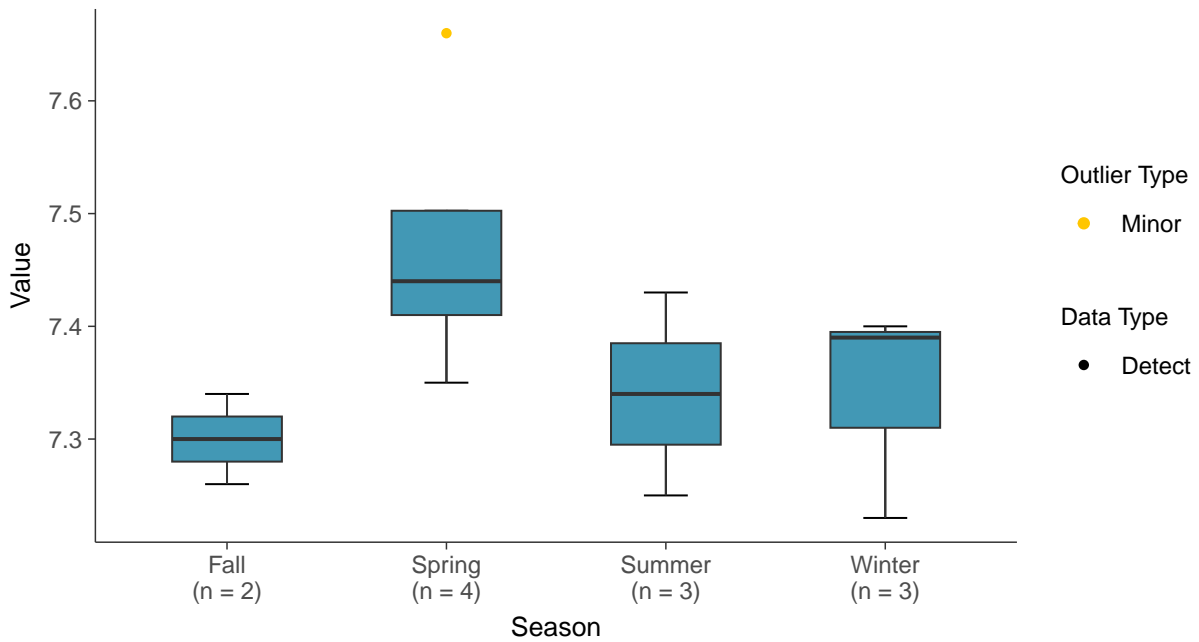
### Boxplot

pH (field), MW-04 (su)



### Boxplot by Season

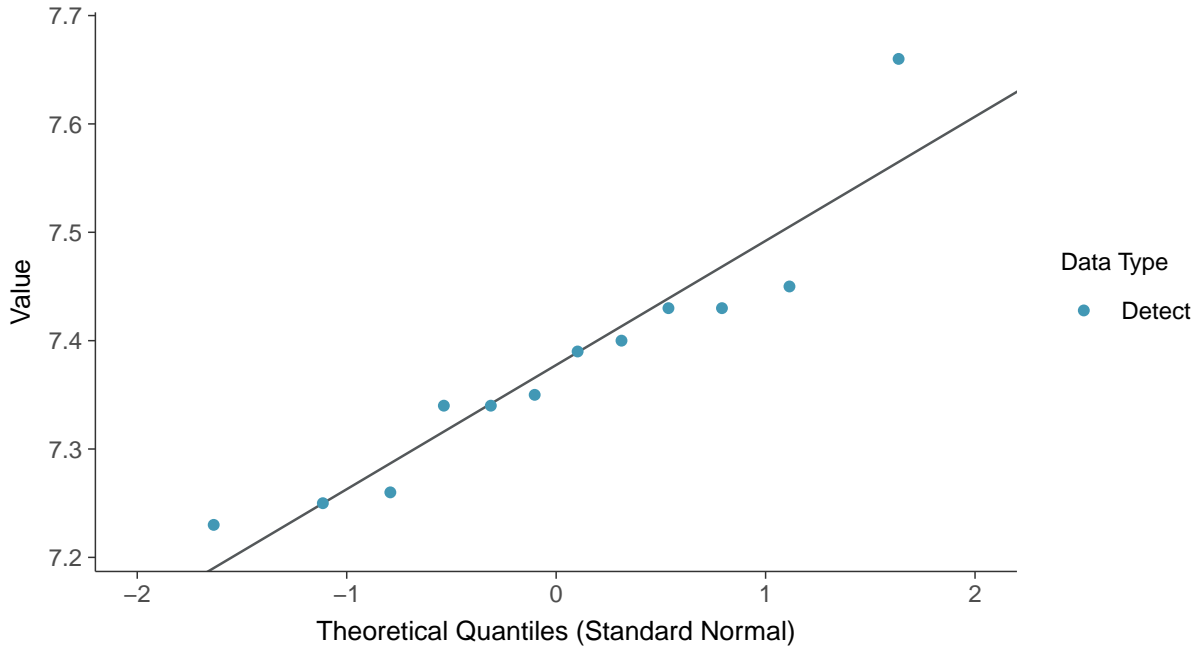
pH (field), MW-04 (su)





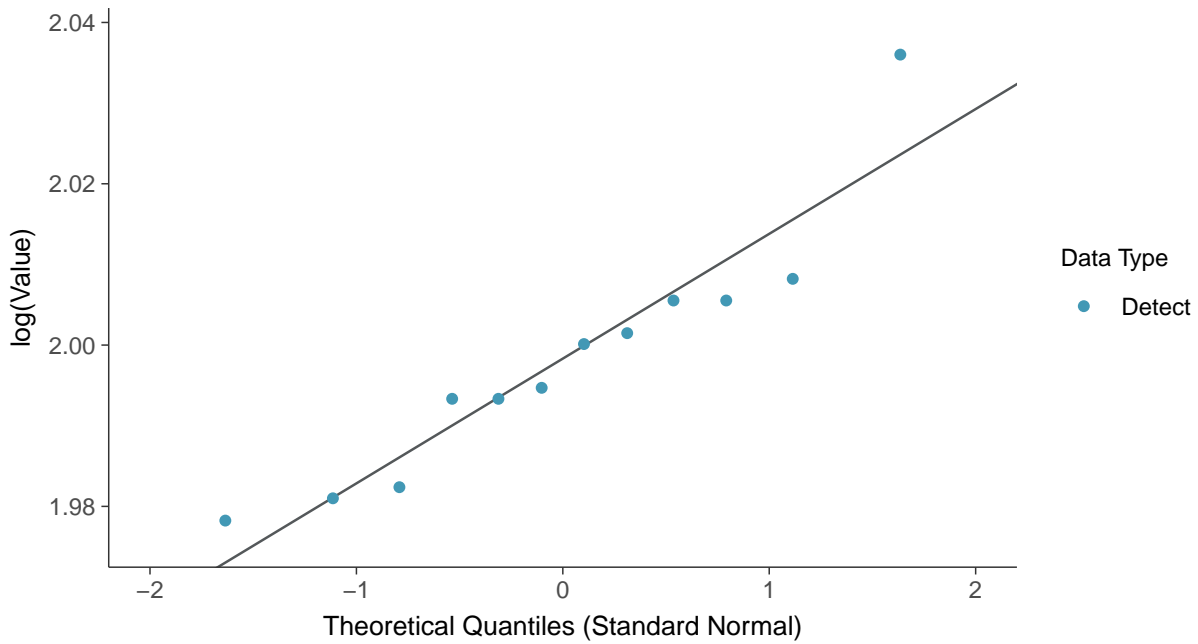
### Normal Q-Q plot

pH (field), MW-04 (su)



### Lognormal Q-Q plot

pH (field), MW-04 (su)

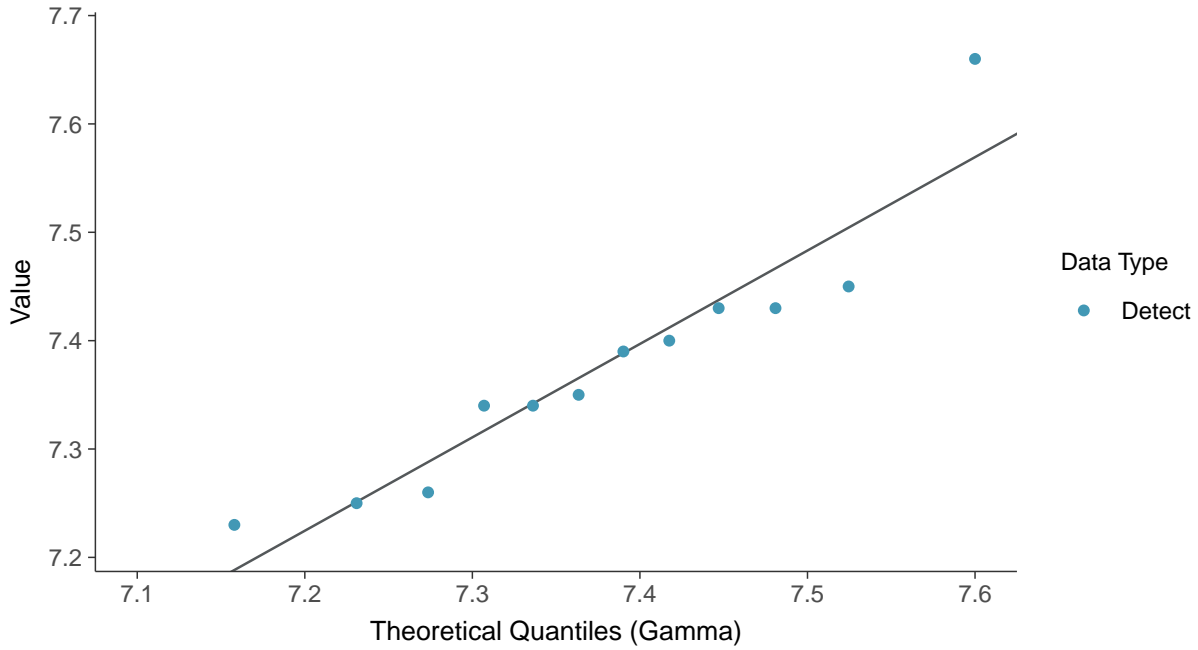






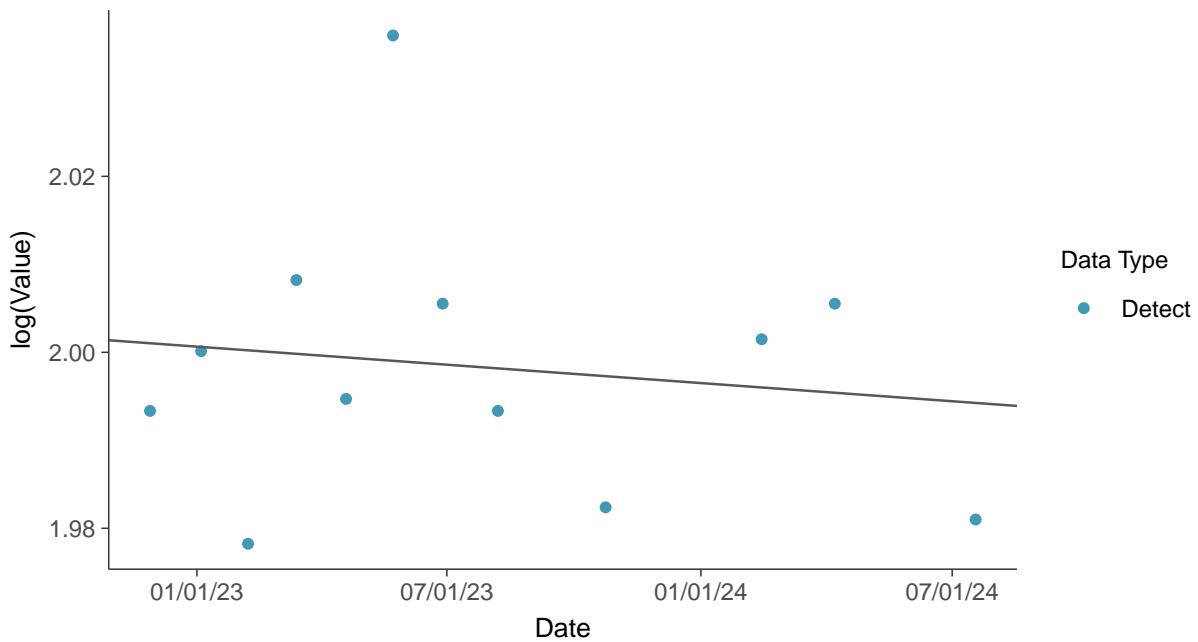
### Gamma Q-Q plot

pH (field), MW-04 (su)



### Trend Regression: Lognormal MLE

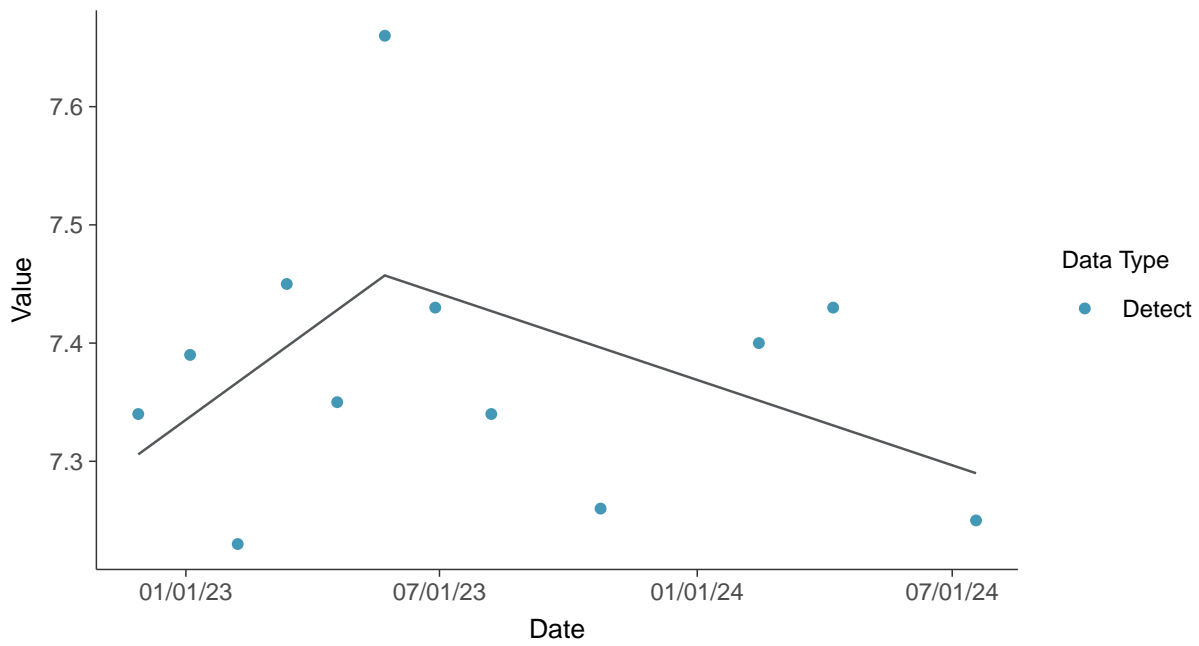
pH (field), MW-04 (su)





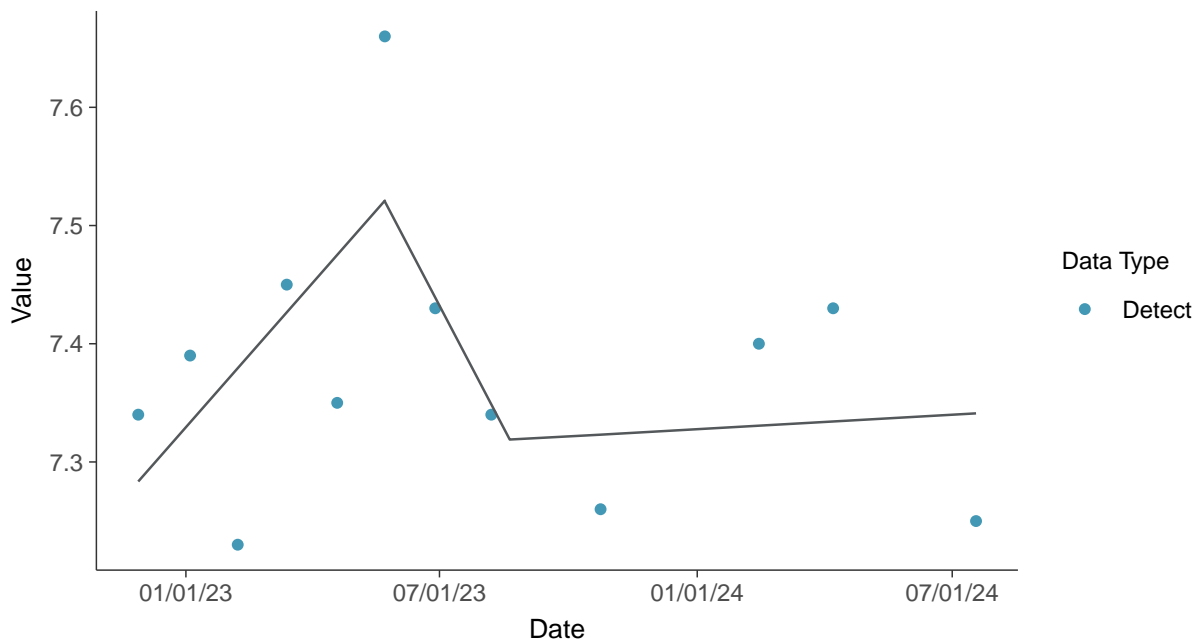
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-04 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-04 (su)



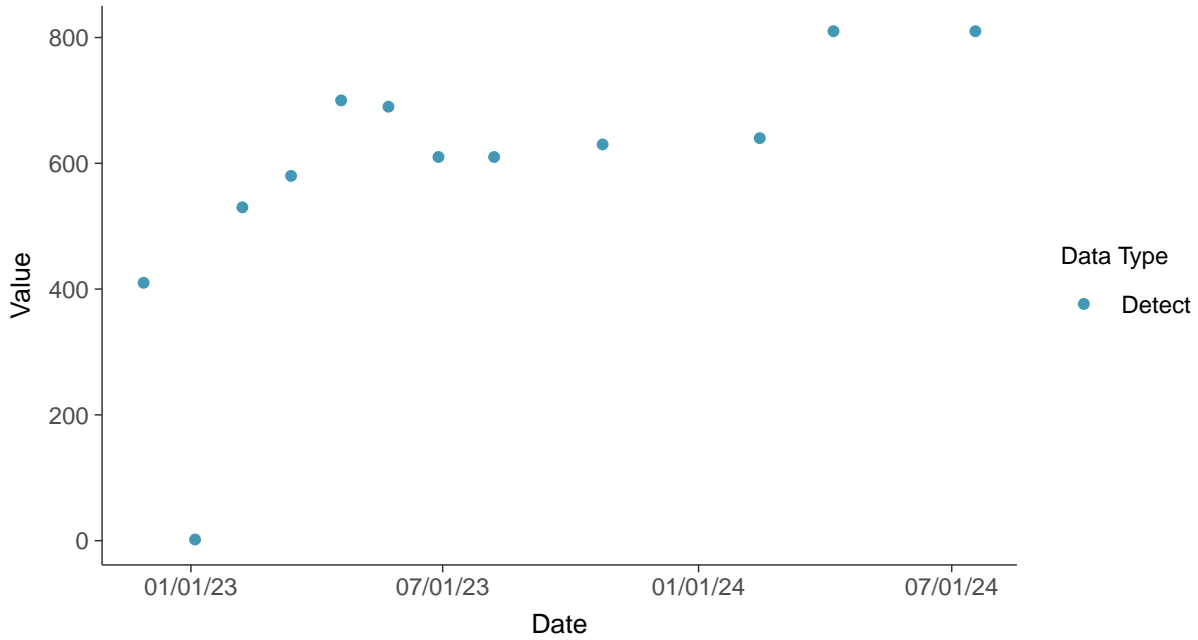


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-04

ID: 14\_2\_4\_124

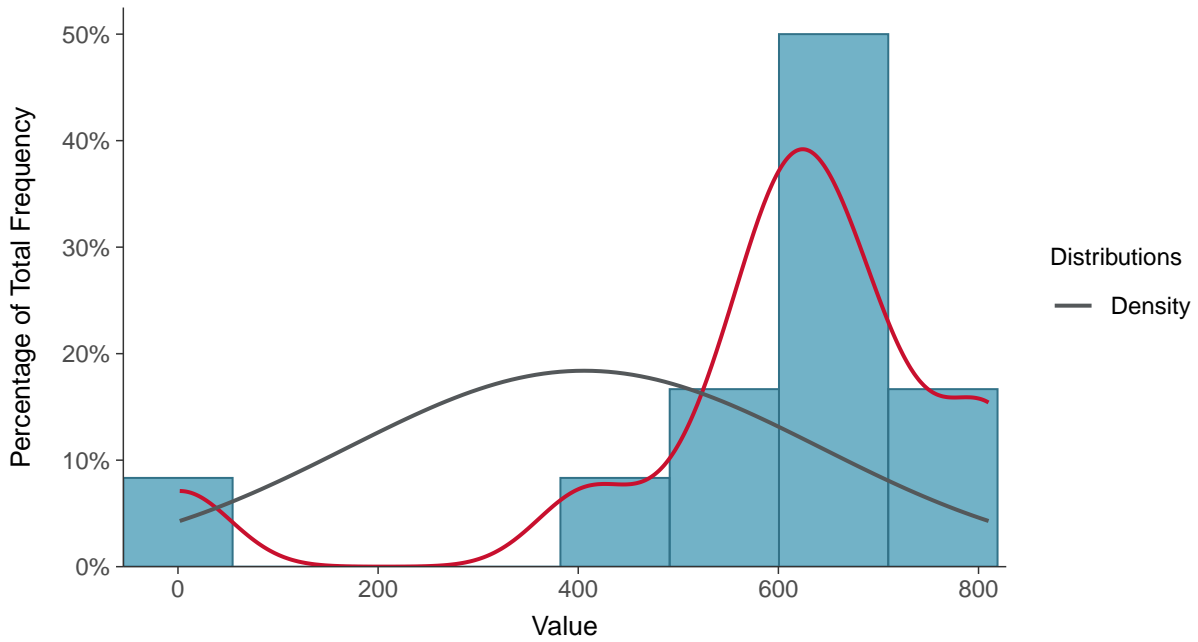
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)



#### Histogram

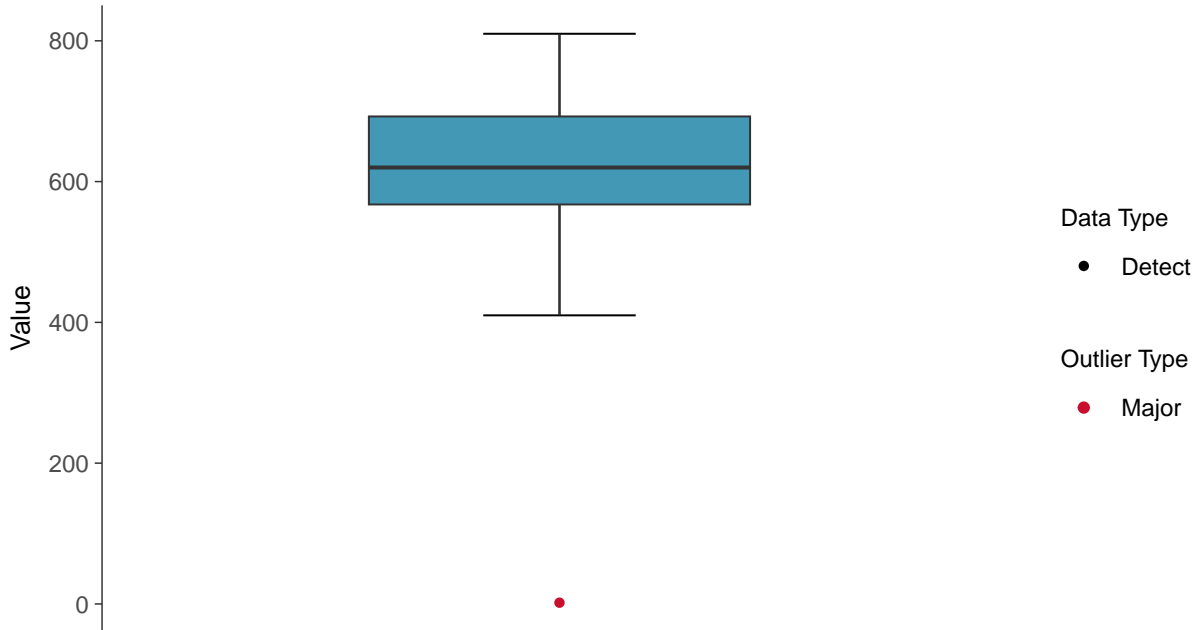
Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)





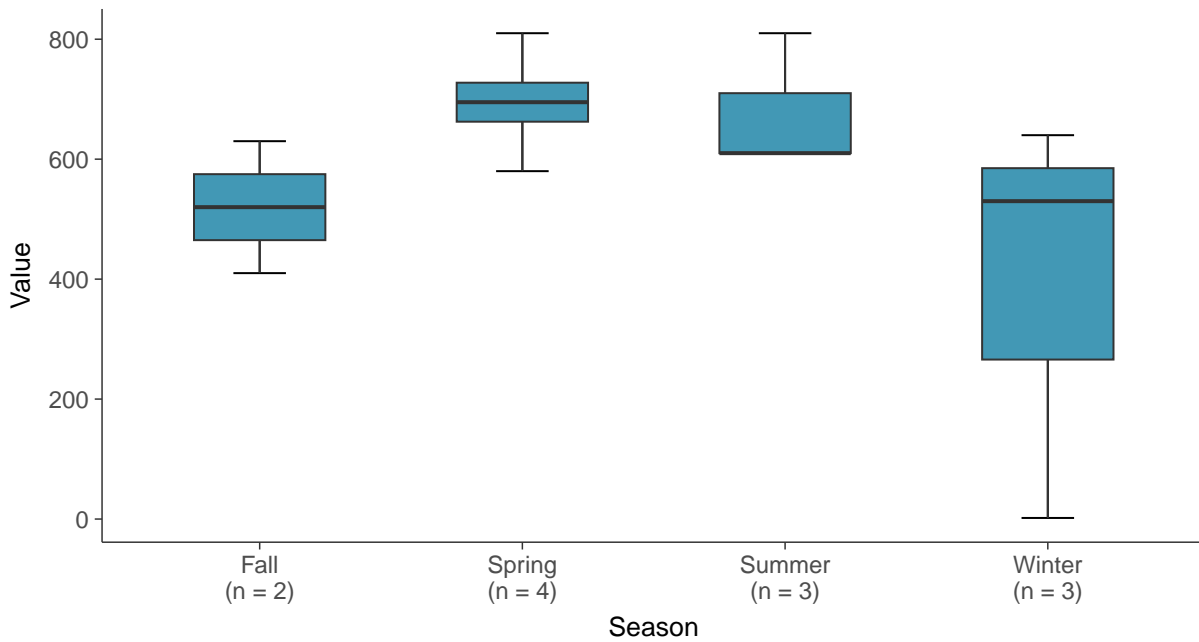
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)



### Boxplot by Season

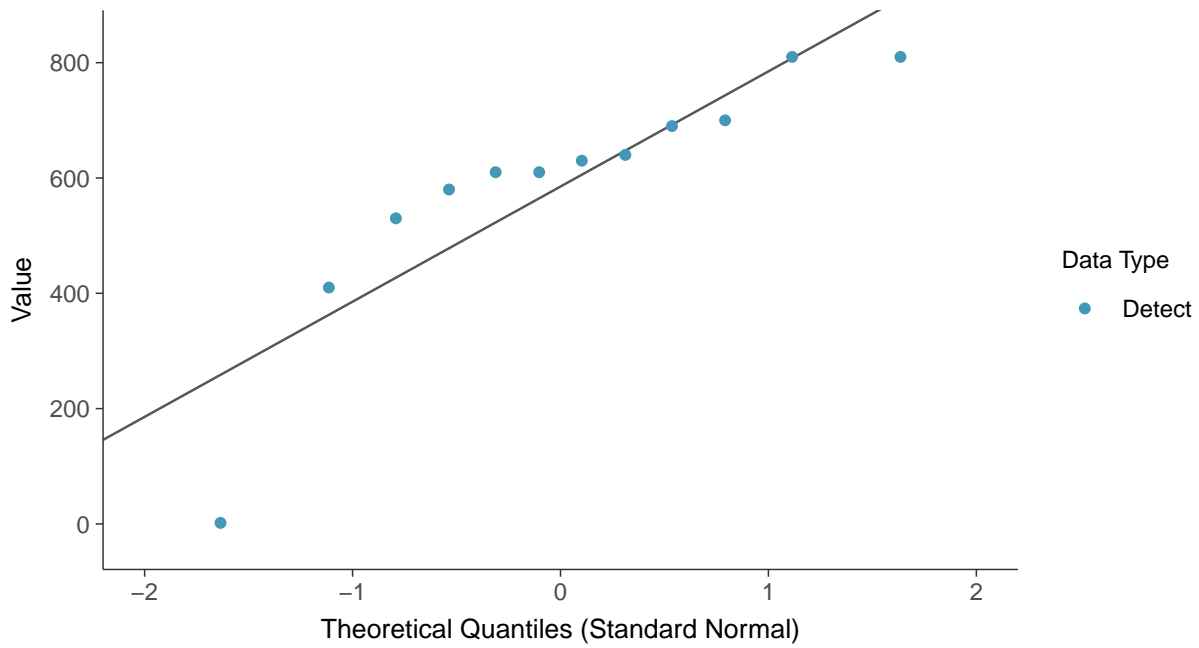
Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)





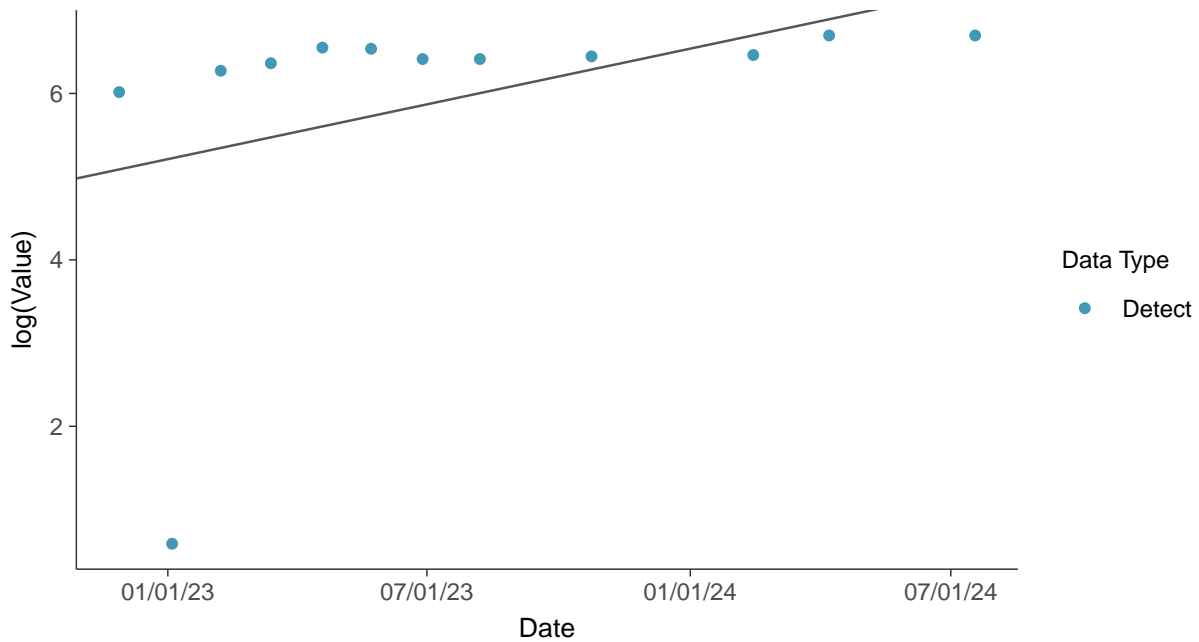
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)



### Trend Regression: Lognormal MLE

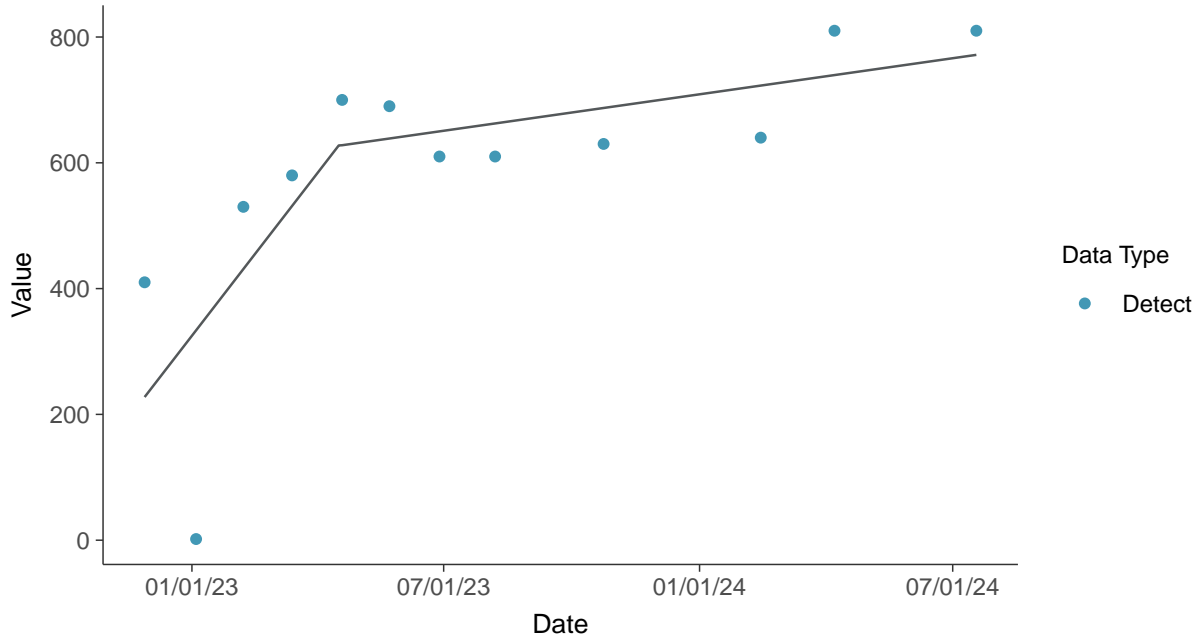
Sulfate (as SO<sub>4</sub>), MW-04 (mg/L)





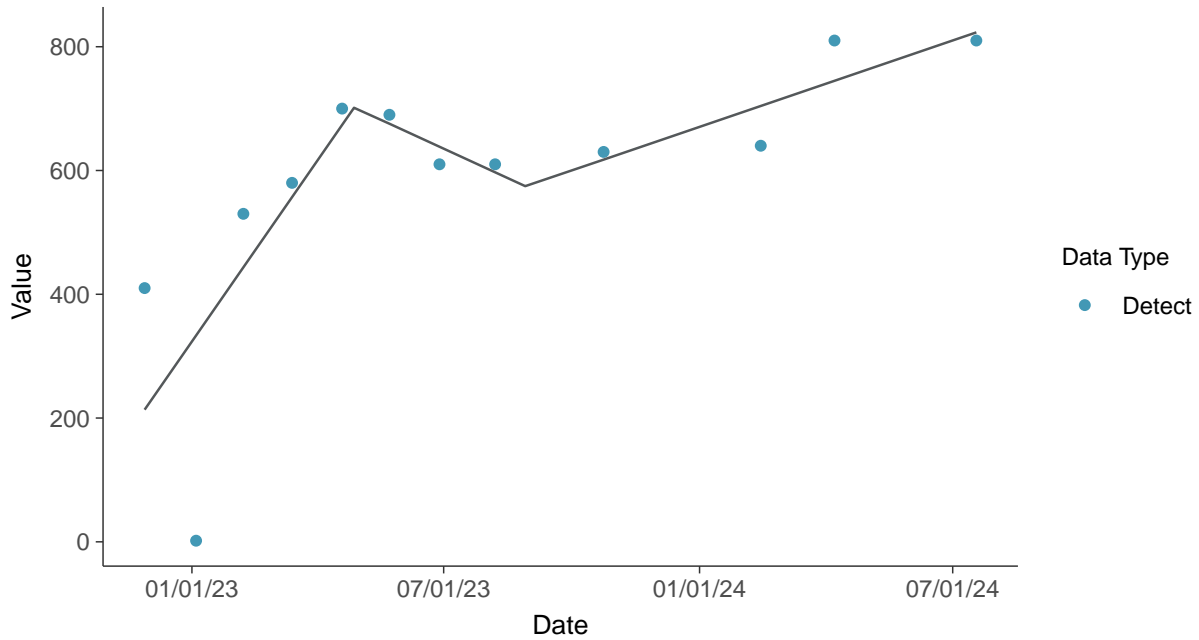
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO4), MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO4), MW-04 (mg/L)



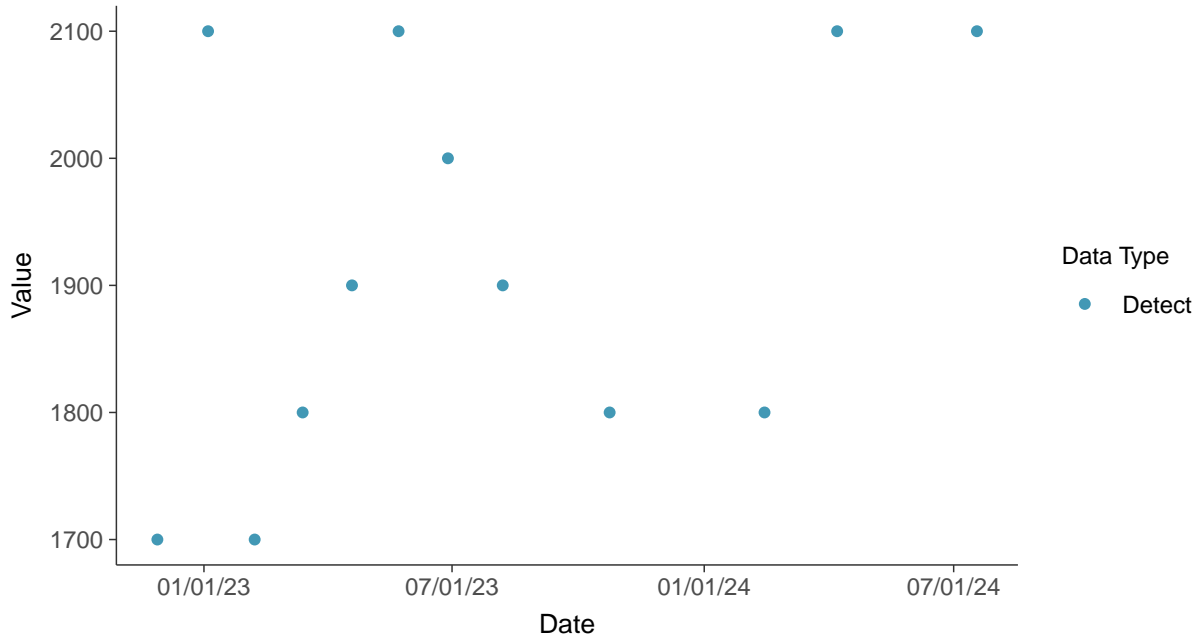


### Appendix III: Total Dissolved Solids, MW-04

ID: 14\_2\_4\_126

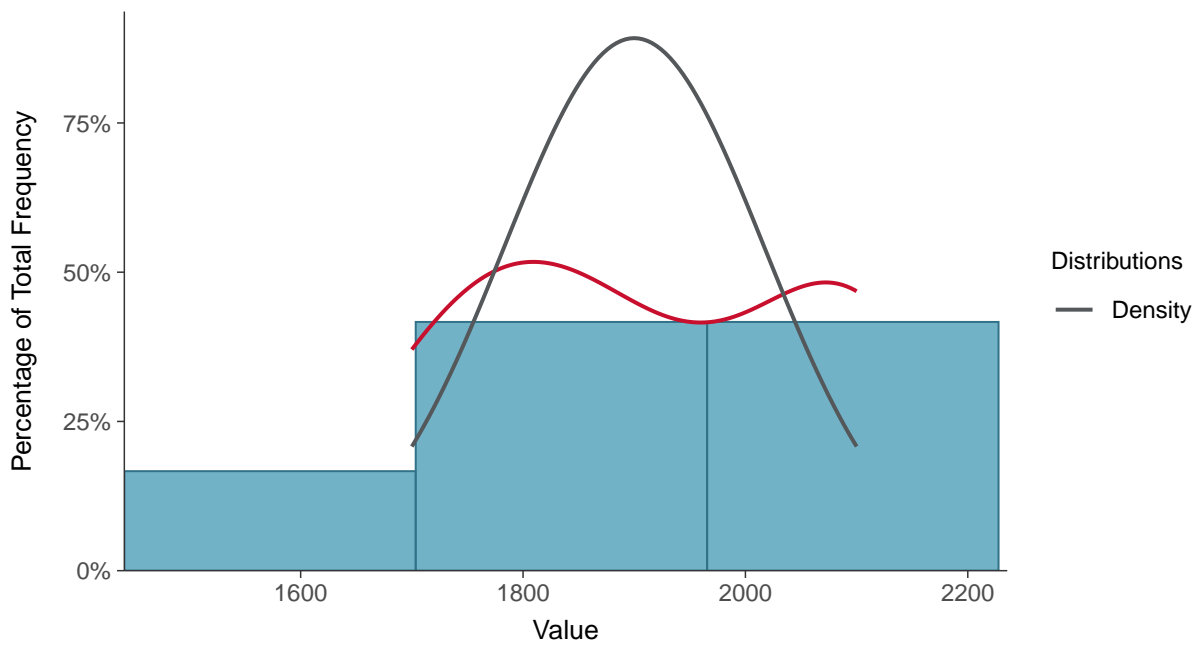
#### Scatter Plot

Total Dissolved Solids, MW-04 (mg/L)



#### Histogram

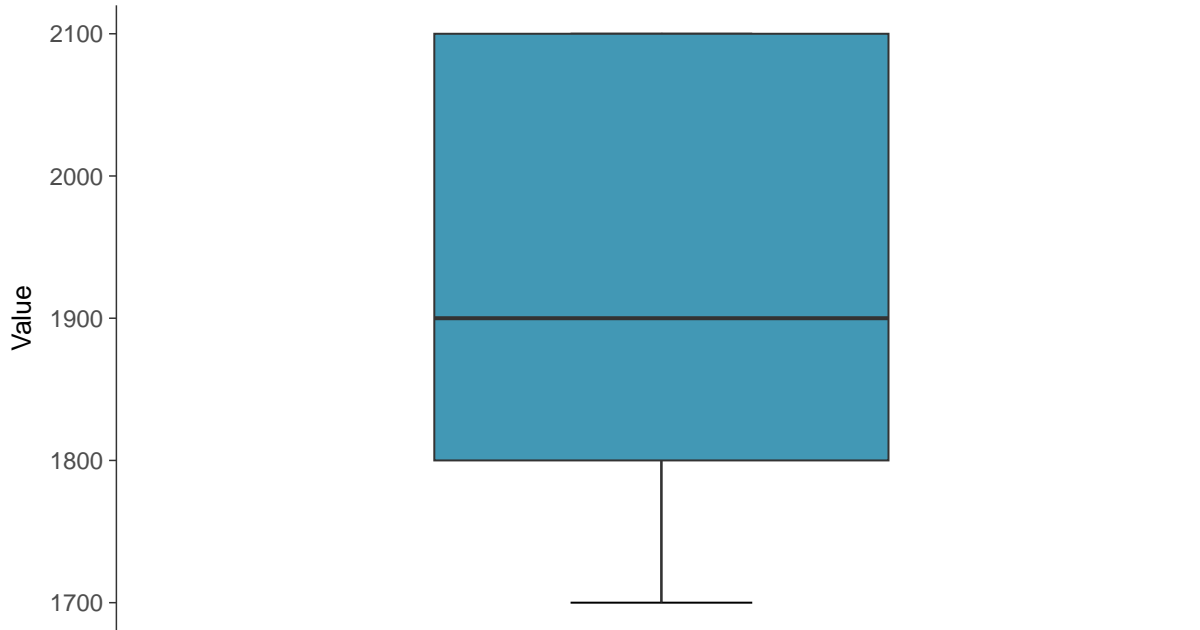
Total Dissolved Solids, MW-04 (mg/L)





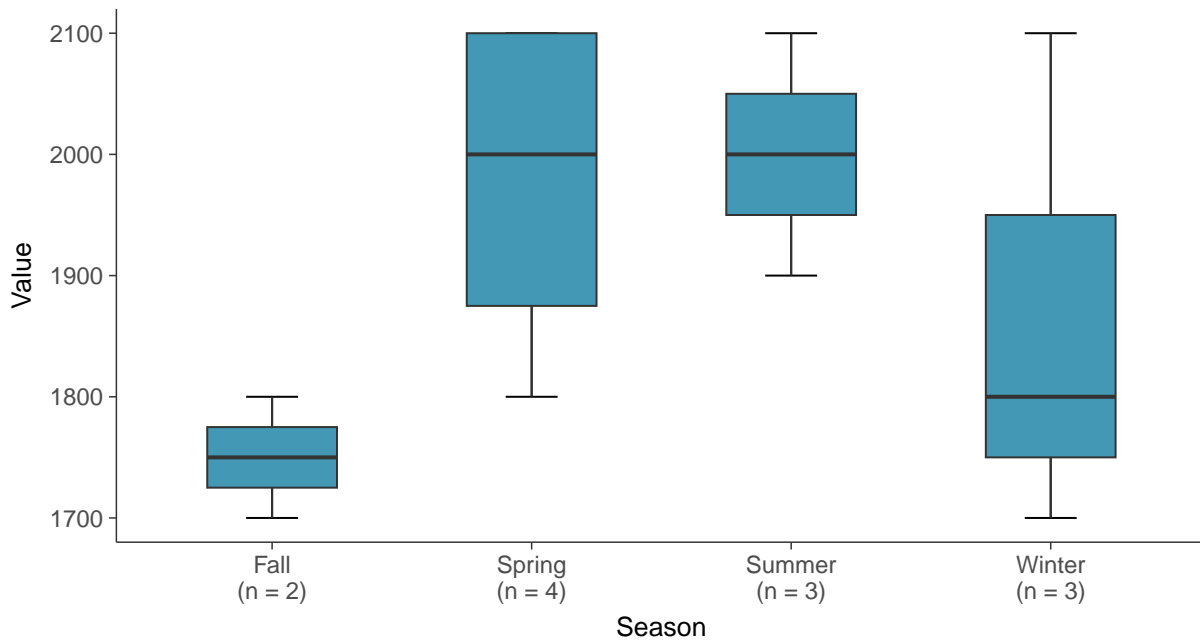
### Boxplot

Total Dissolved Solids, MW-04 (mg/L)



### Boxplot by Season

Total Dissolved Solids, MW-04 (mg/L)

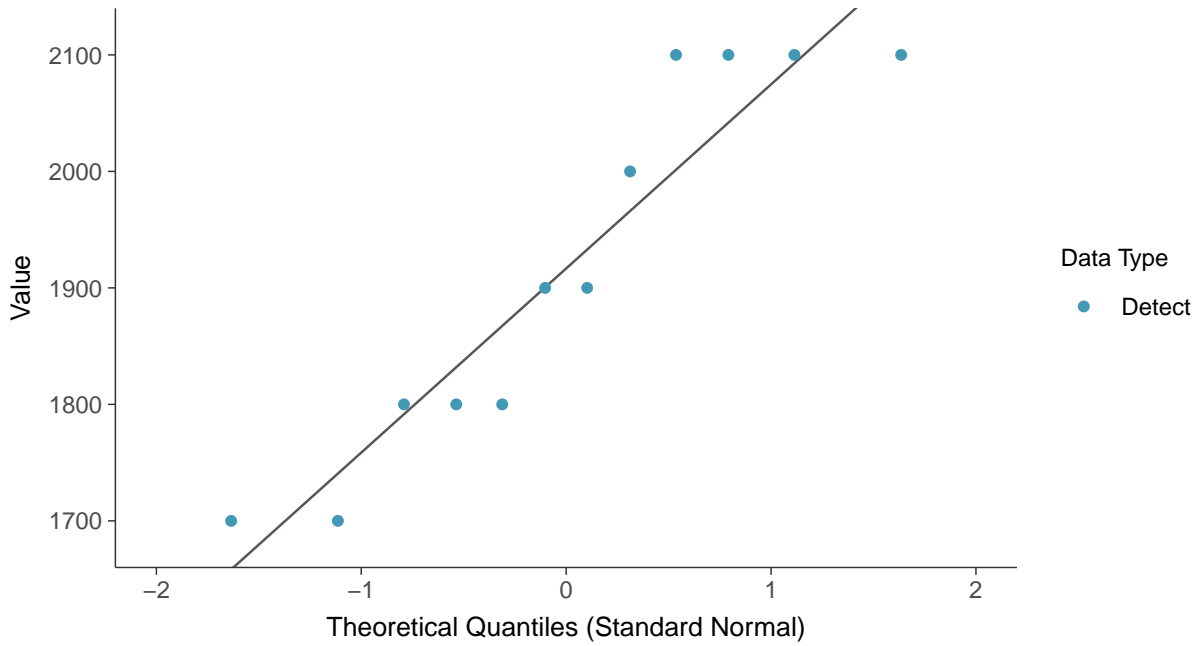






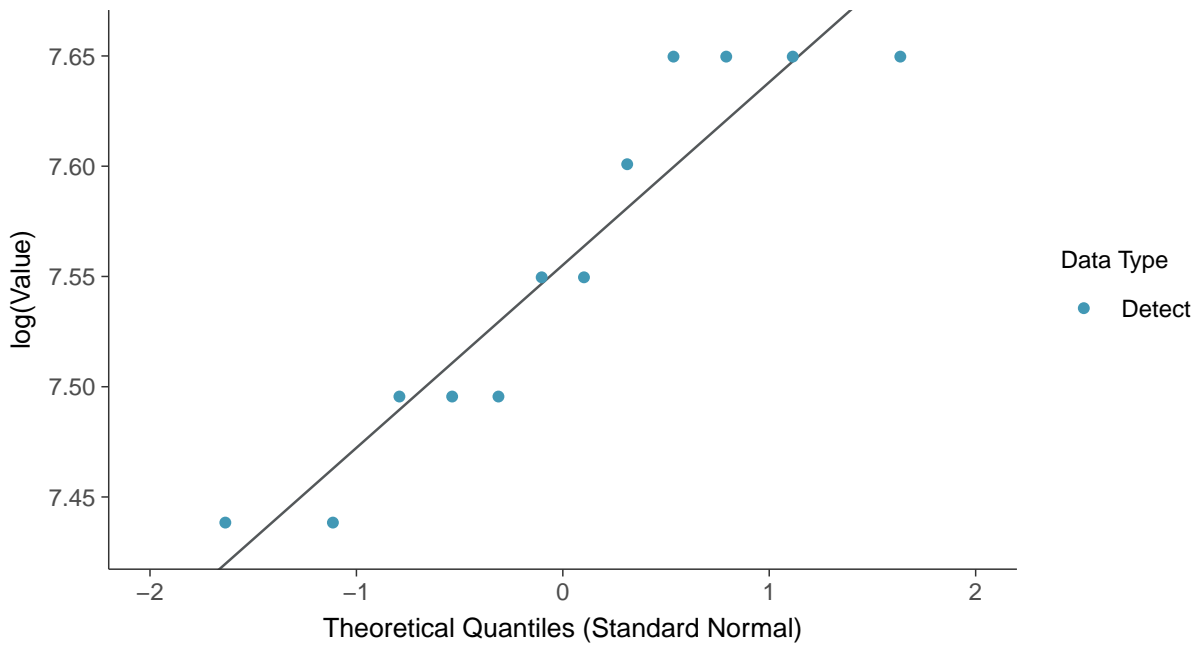
### Normal Q-Q plot

Total Dissolved Solids, MW-04 (mg/L)



### Lognormal Q-Q plot

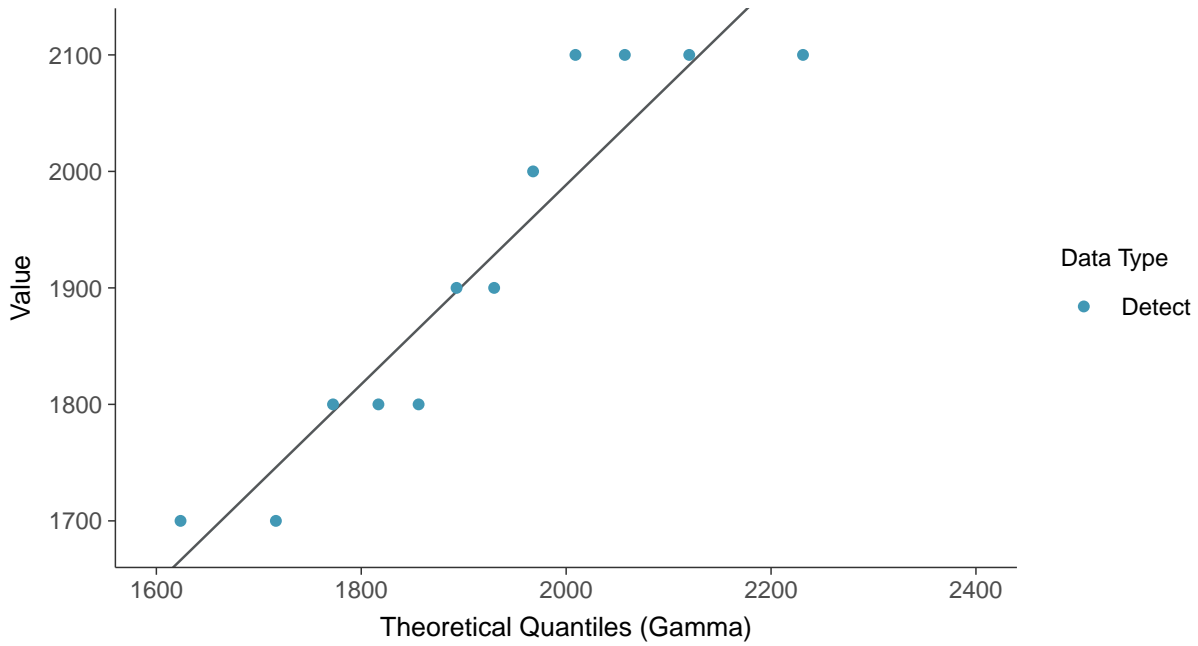
Total Dissolved Solids, MW-04 (mg/L)





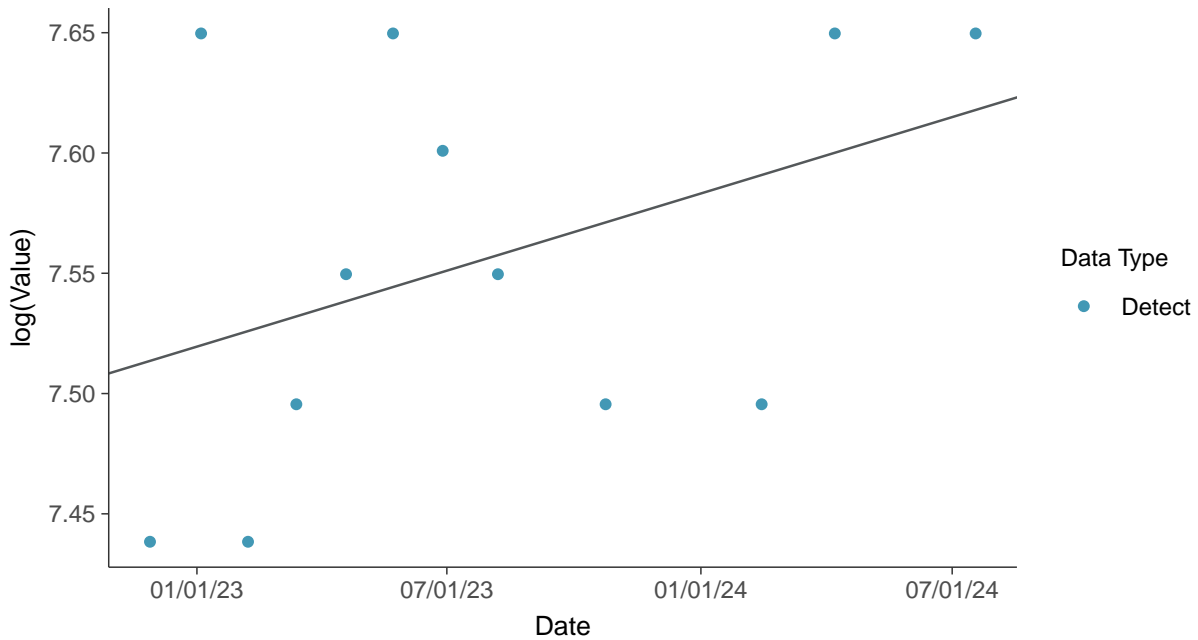
### Gamma Q-Q plot

Total Dissolved Solids, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

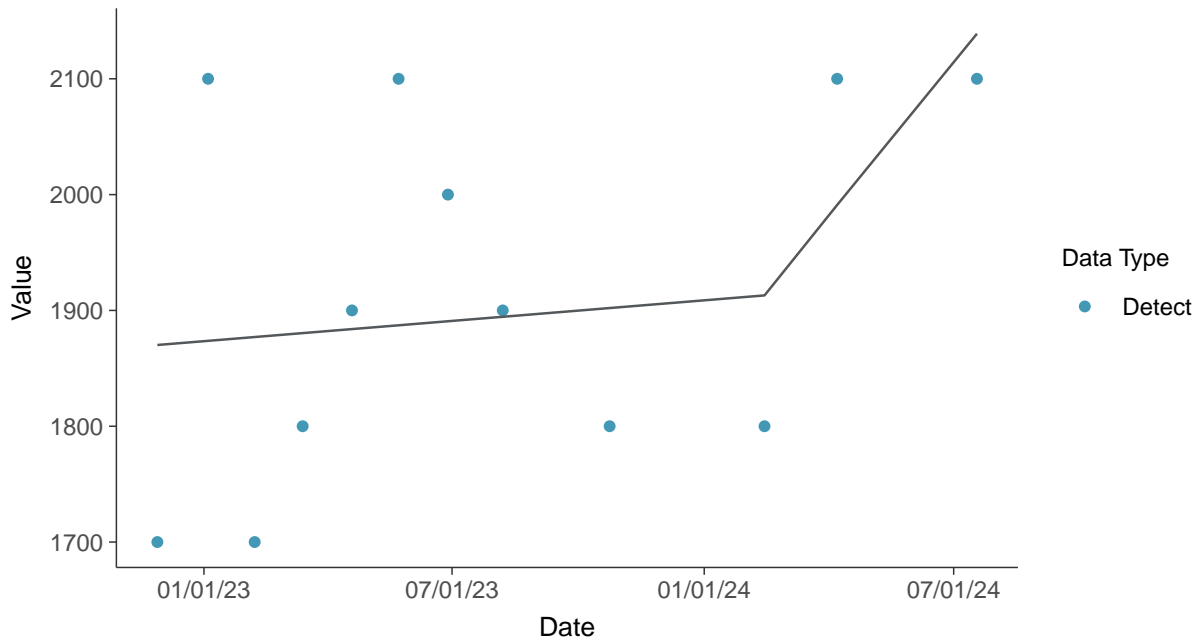
Total Dissolved Solids, MW-04 (mg/L)





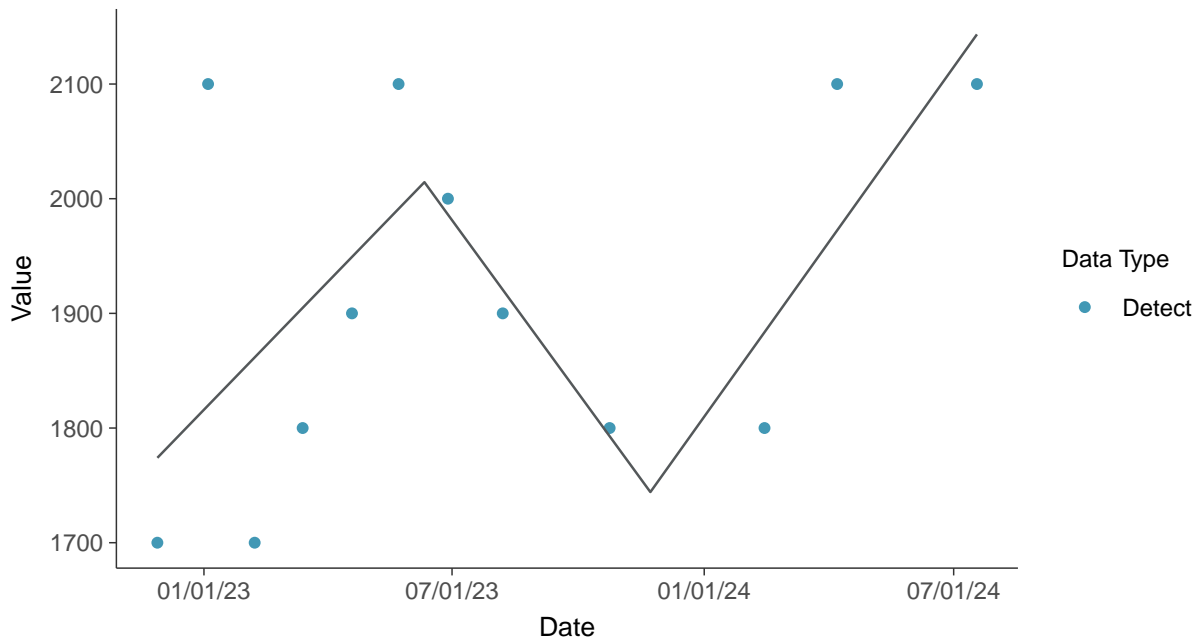
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

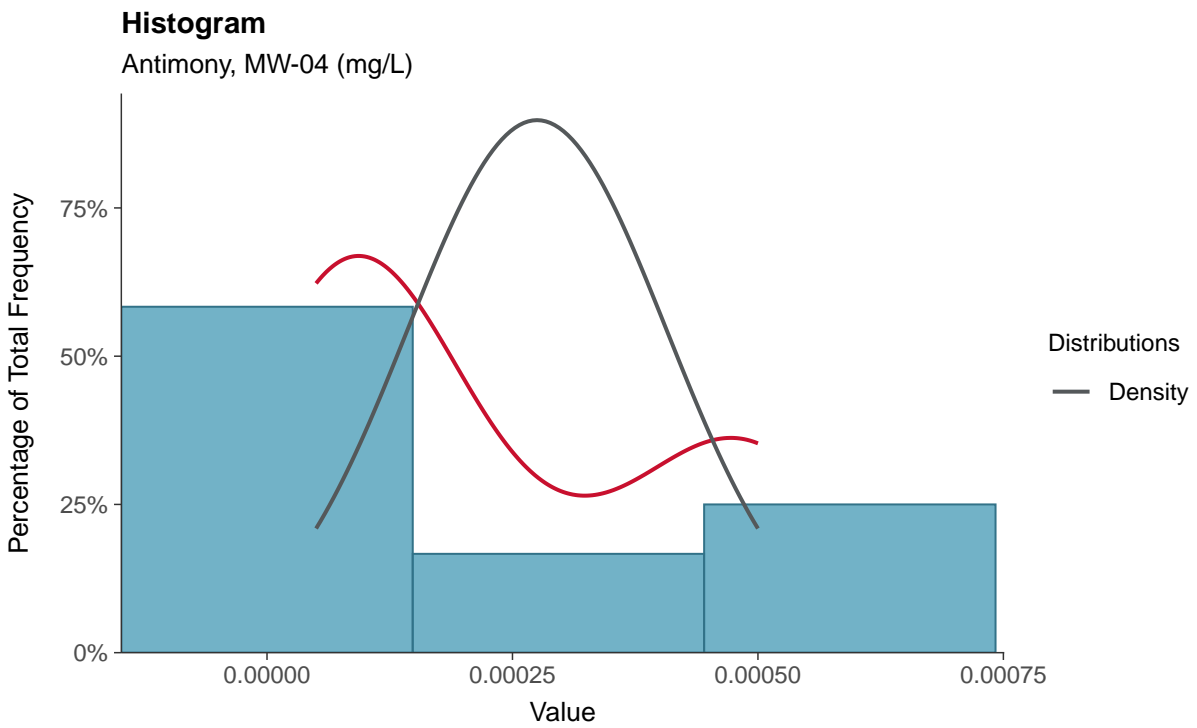
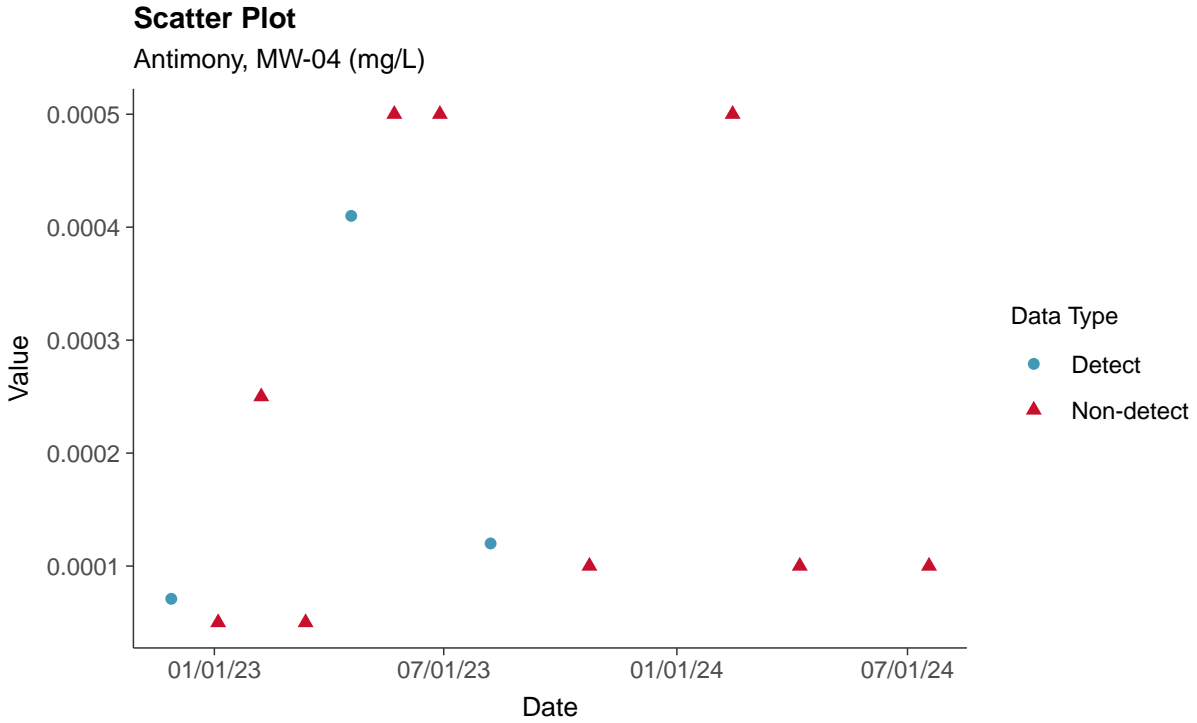
Total Dissolved Solids, MW-04 (mg/L)





### Appendix IV: Antimony, MW-04

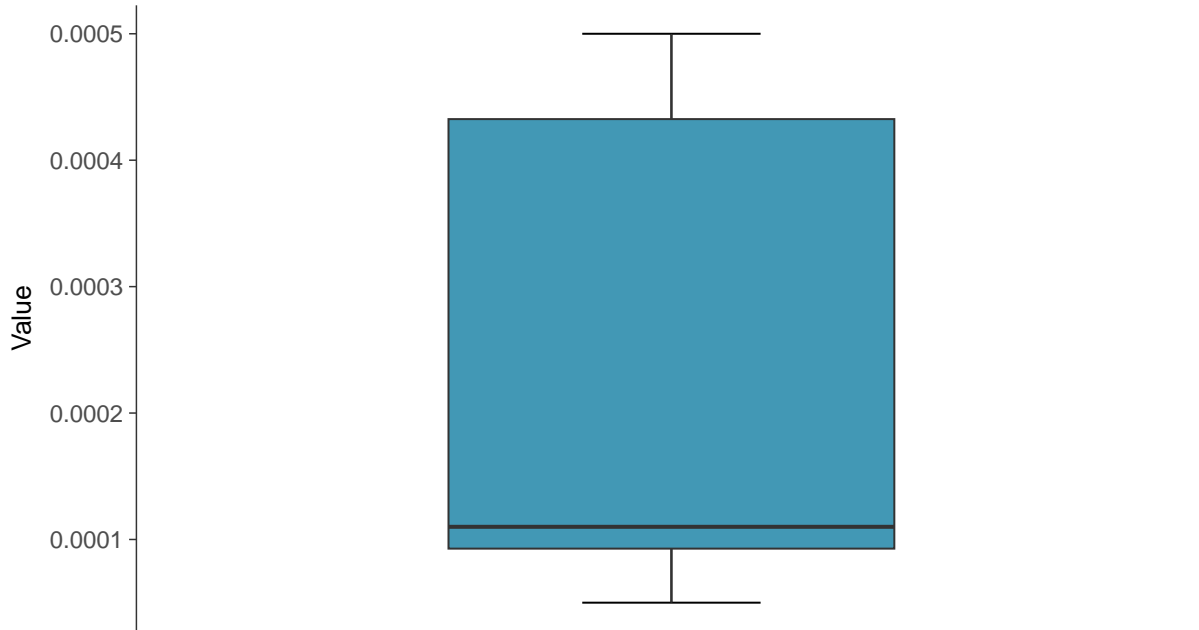
ID: 14\_2\_5\_101





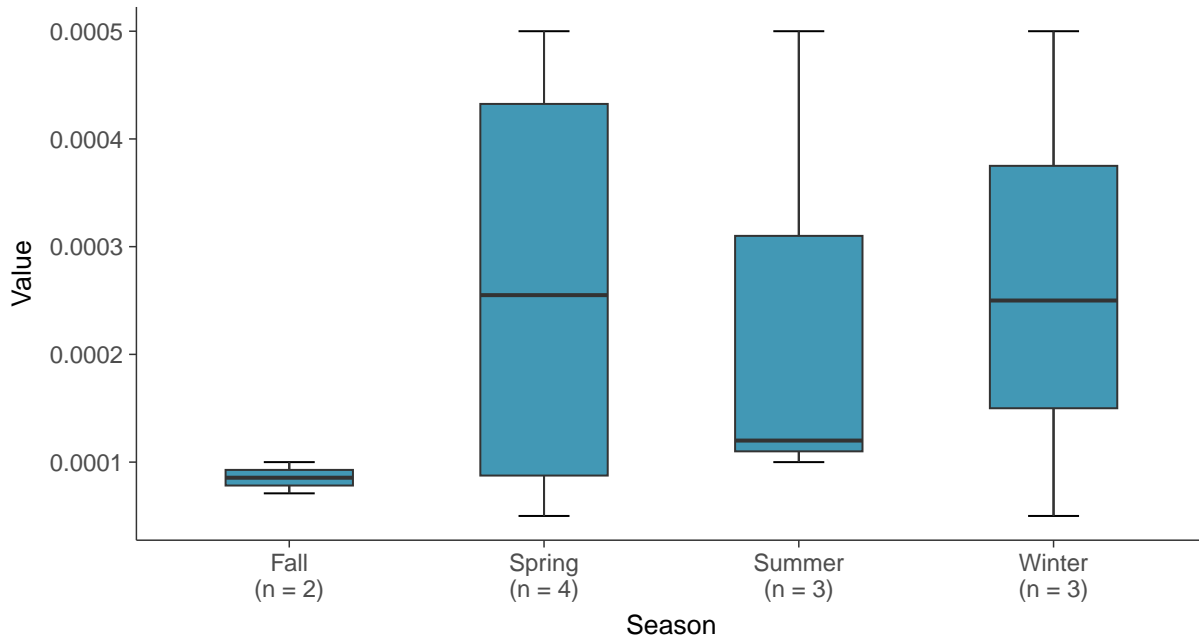
### Boxplot

Antimony, MW-04 (mg/L)



### Boxplot by Season

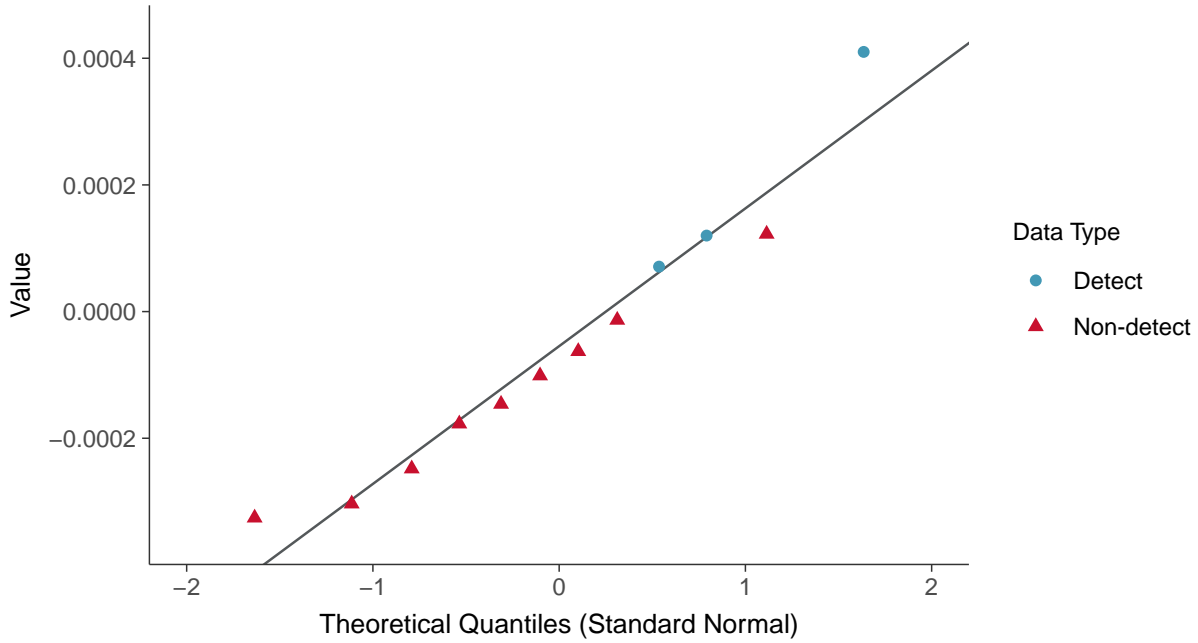
Antimony, MW-04 (mg/L)





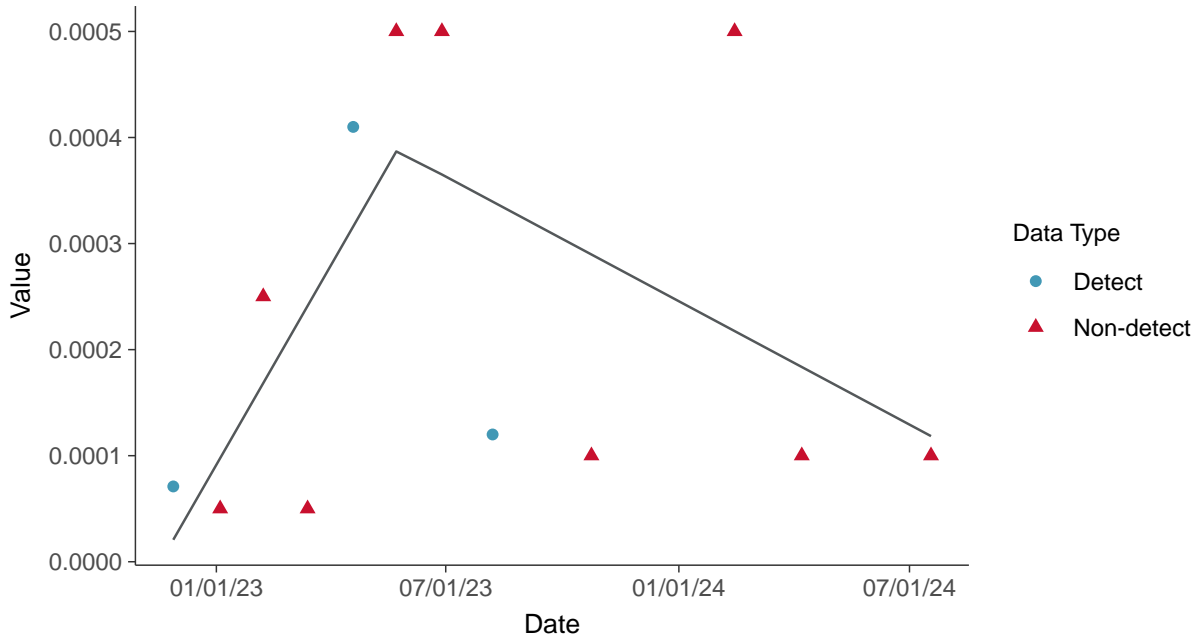
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear

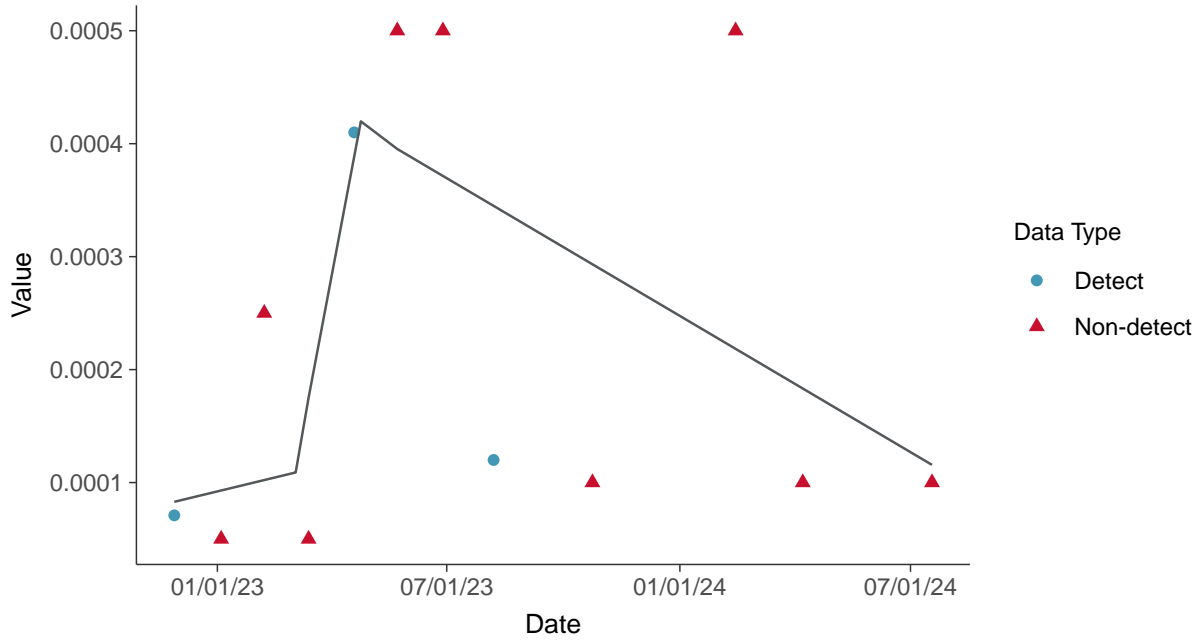
Antimony, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

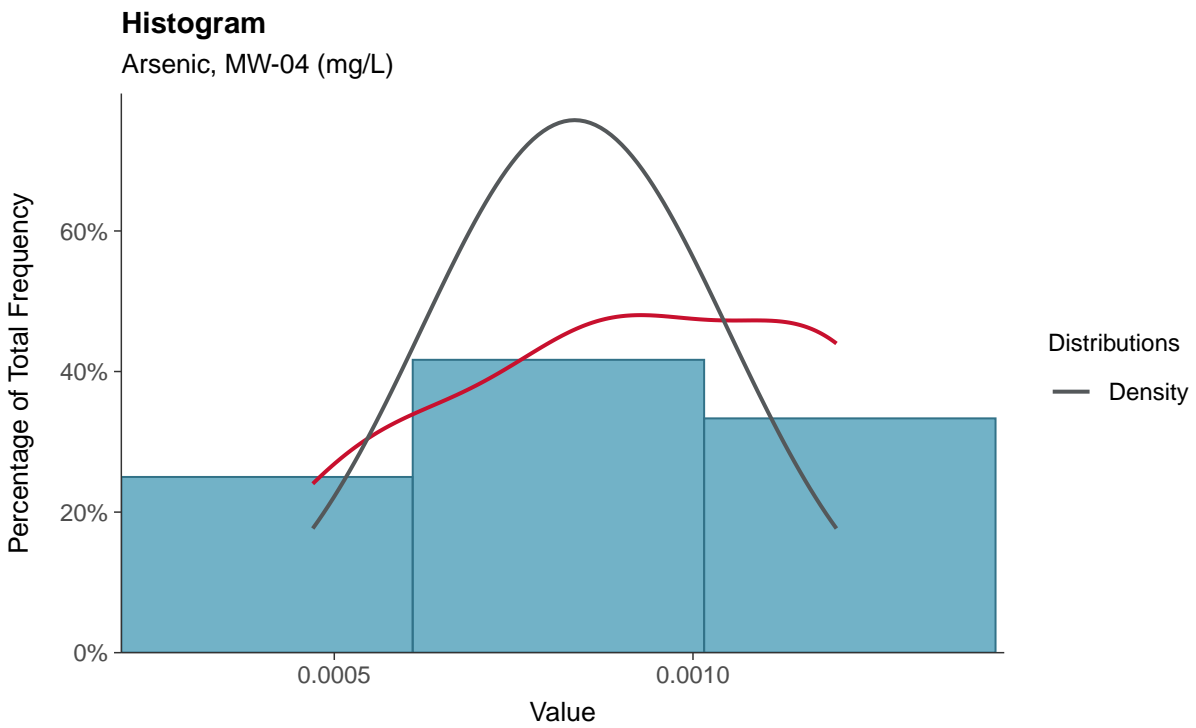
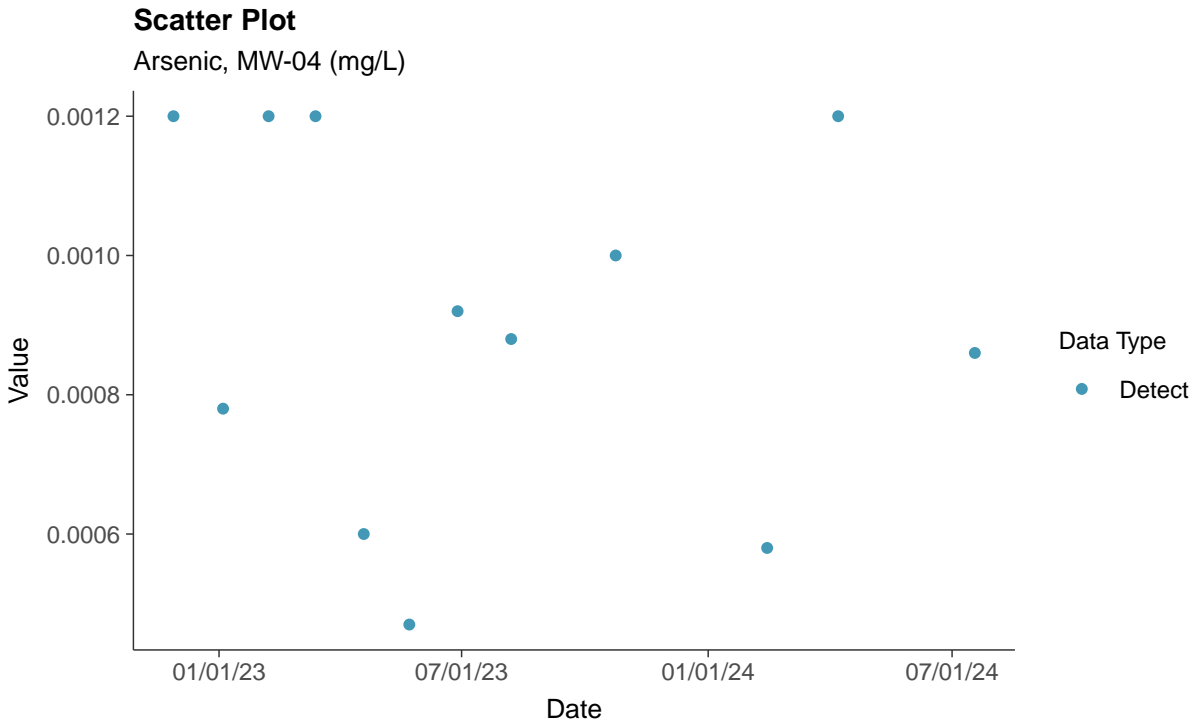
Antimony, MW-04 (mg/L)





### Appendix IV: Arsenic, MW-04

ID: 14\_2\_5\_102

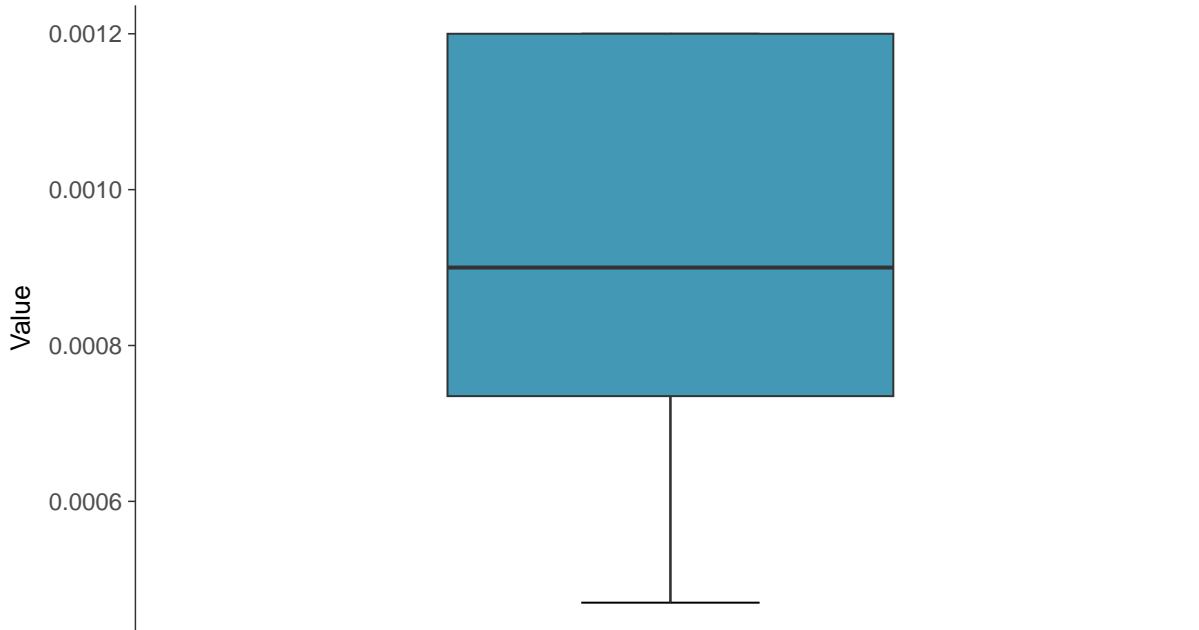






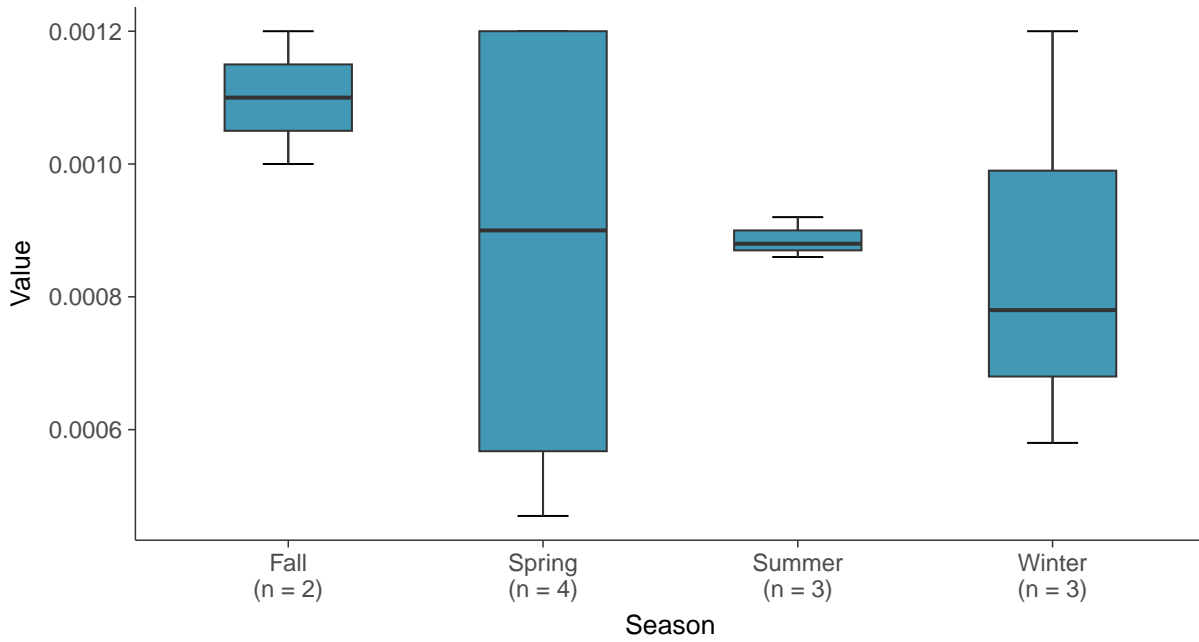
### Boxplot

Arsenic, MW-04 (mg/L)



### Boxplot by Season

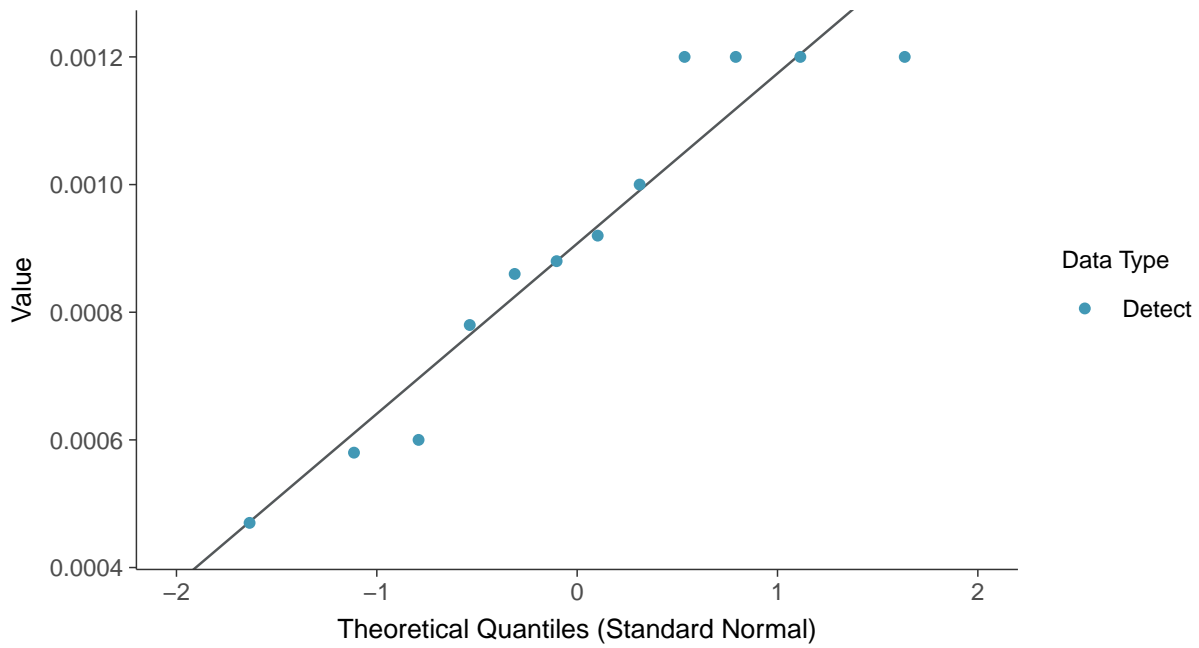
Arsenic, MW-04 (mg/L)





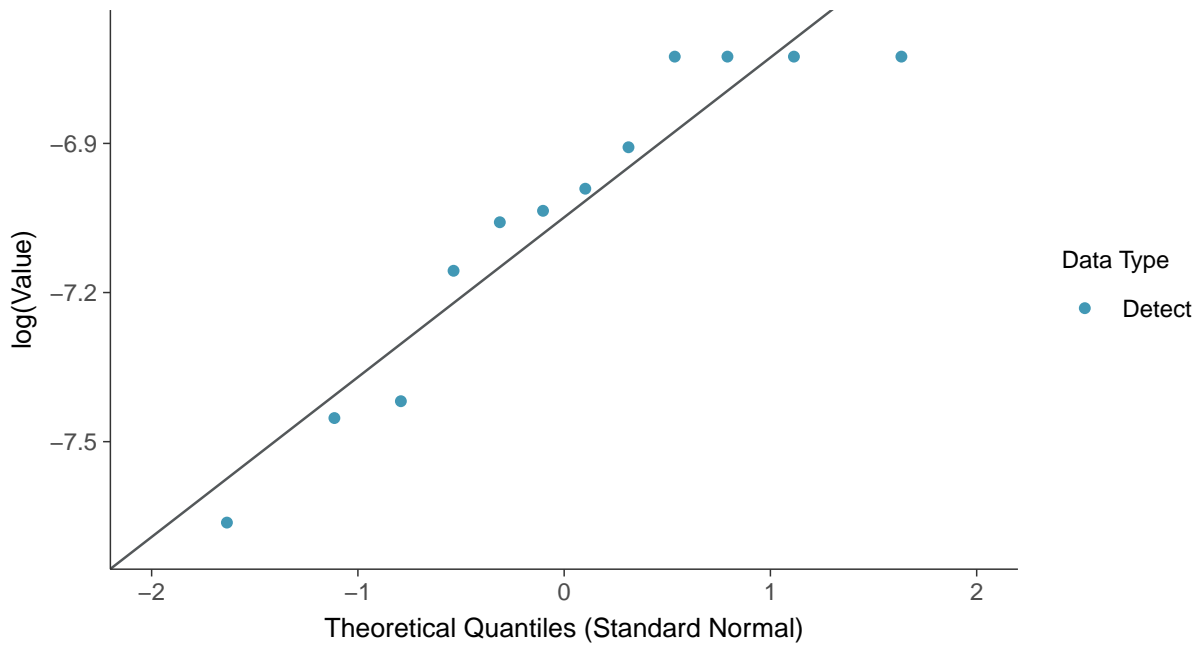
### Normal Q-Q plot

Arsenic, MW-04 (mg/L)



### Lognormal Q-Q plot

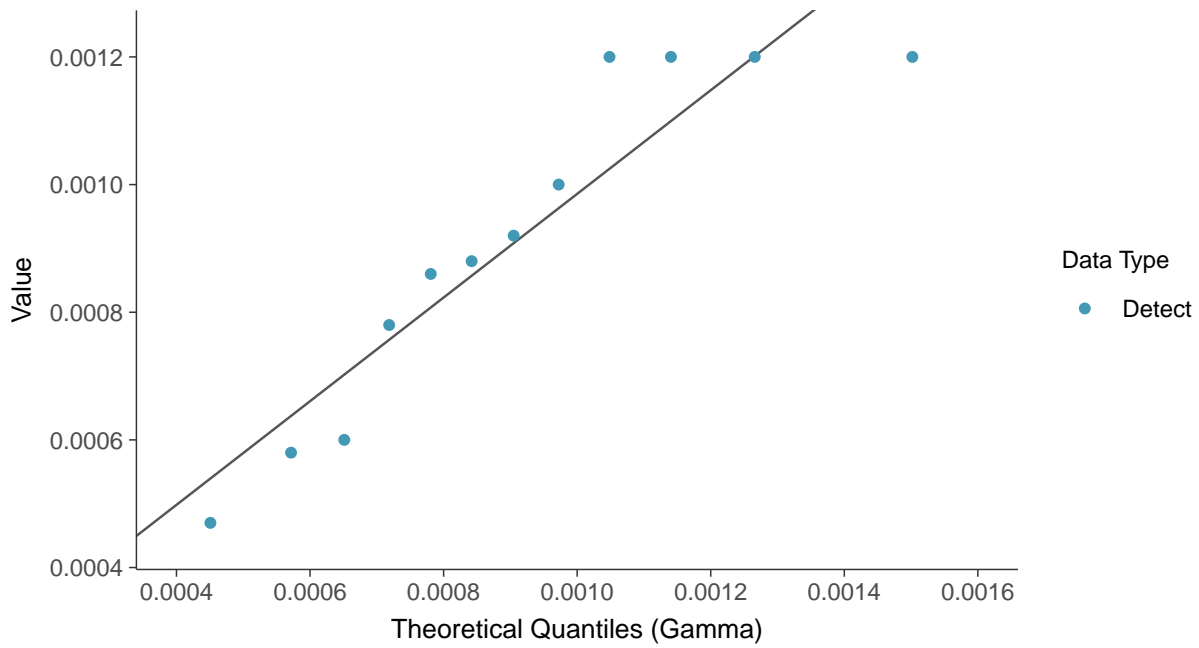
Arsenic, MW-04 (mg/L)





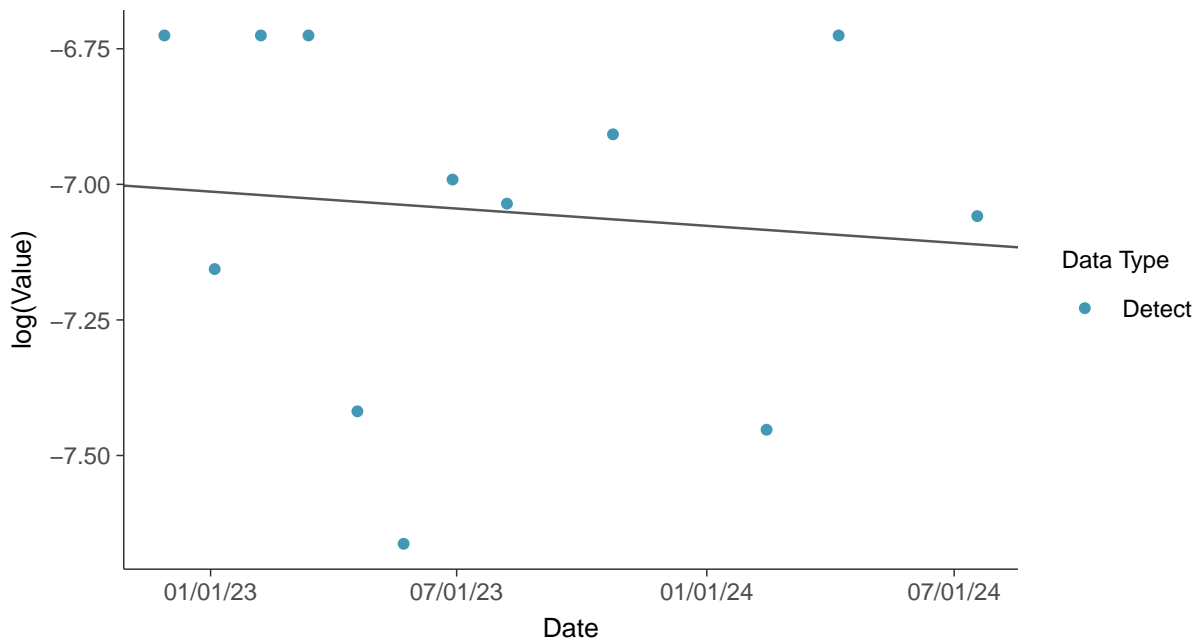
### Gamma Q-Q plot

Arsenic, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

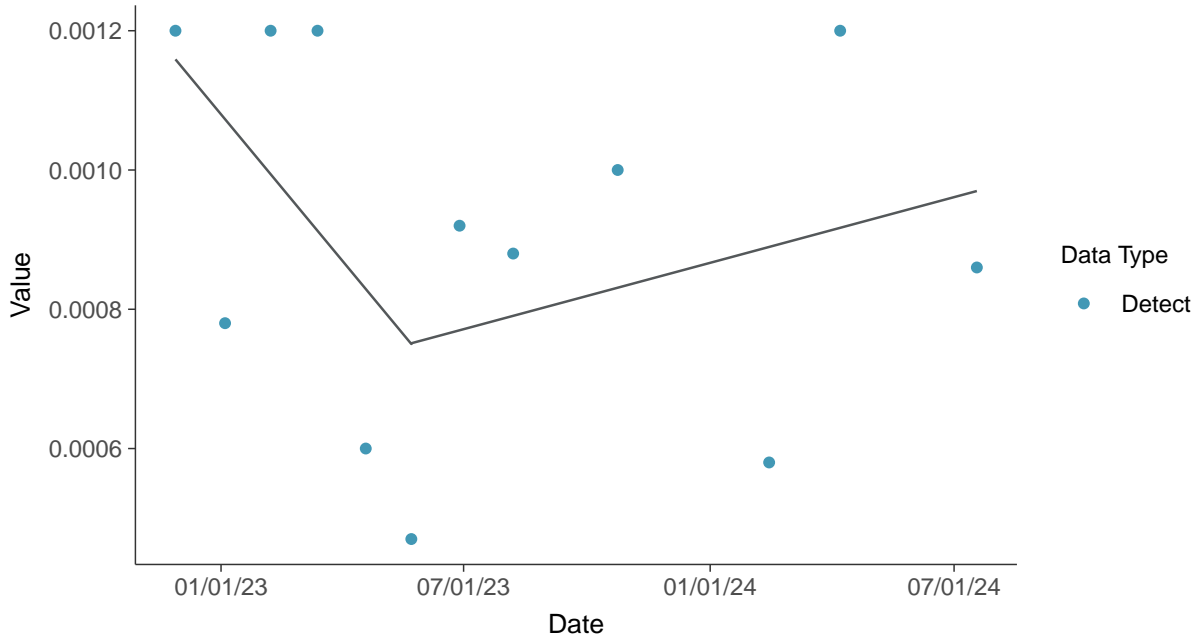
Arsenic, MW-04 (mg/L)





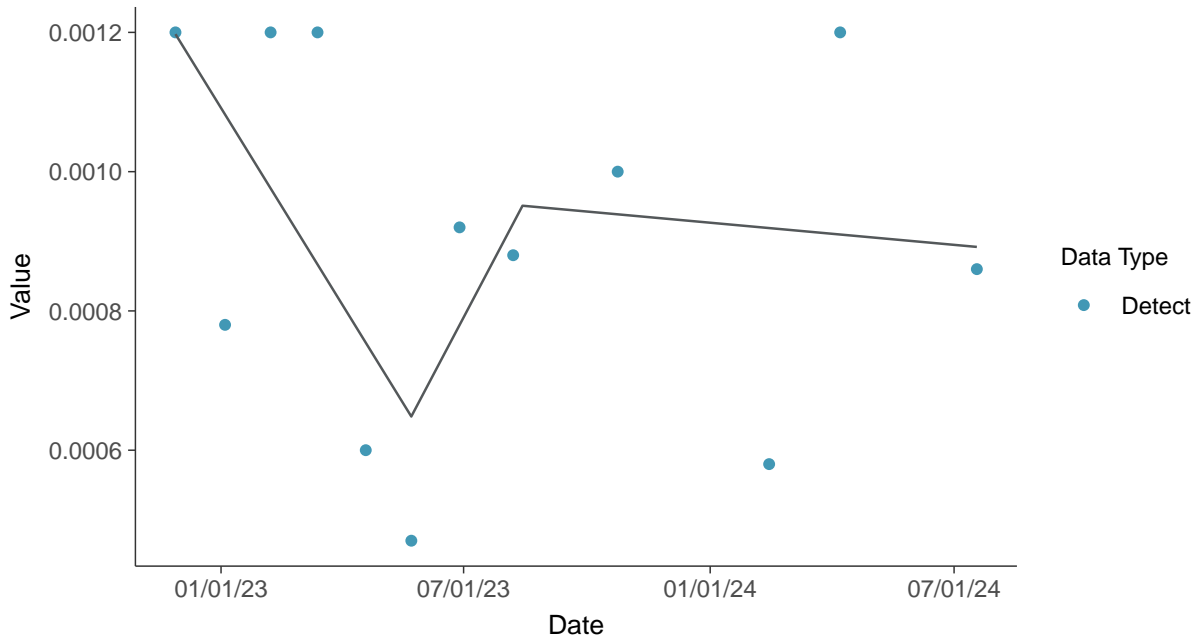
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

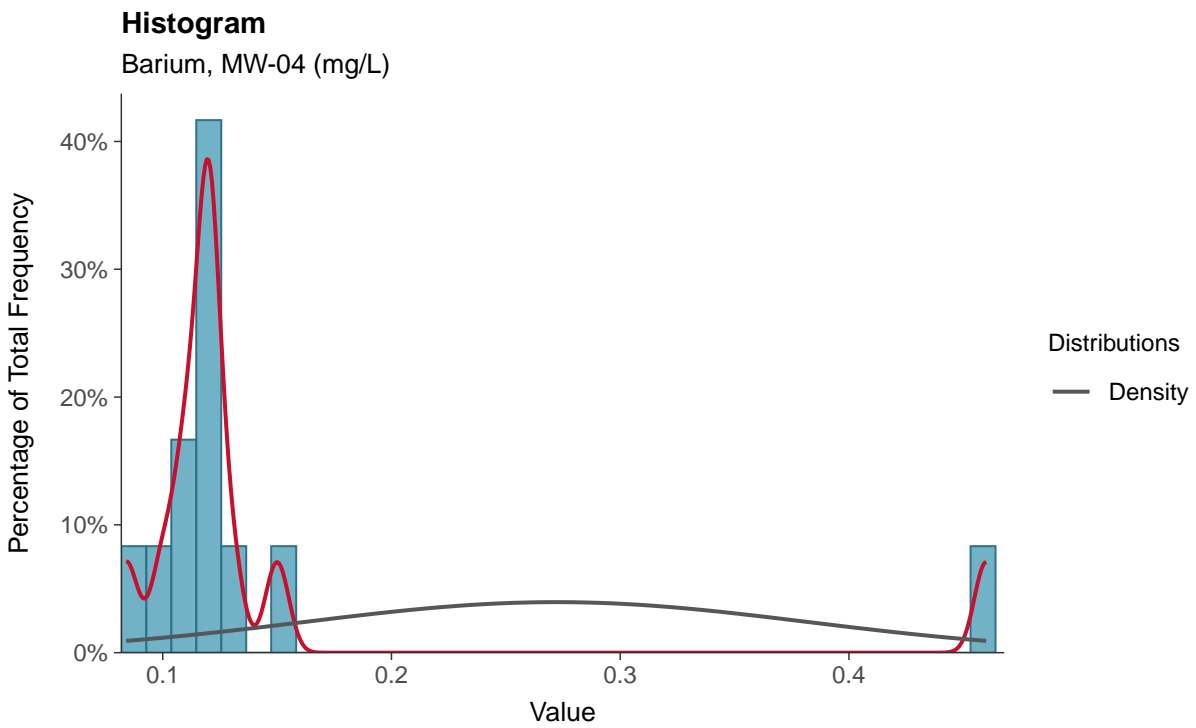
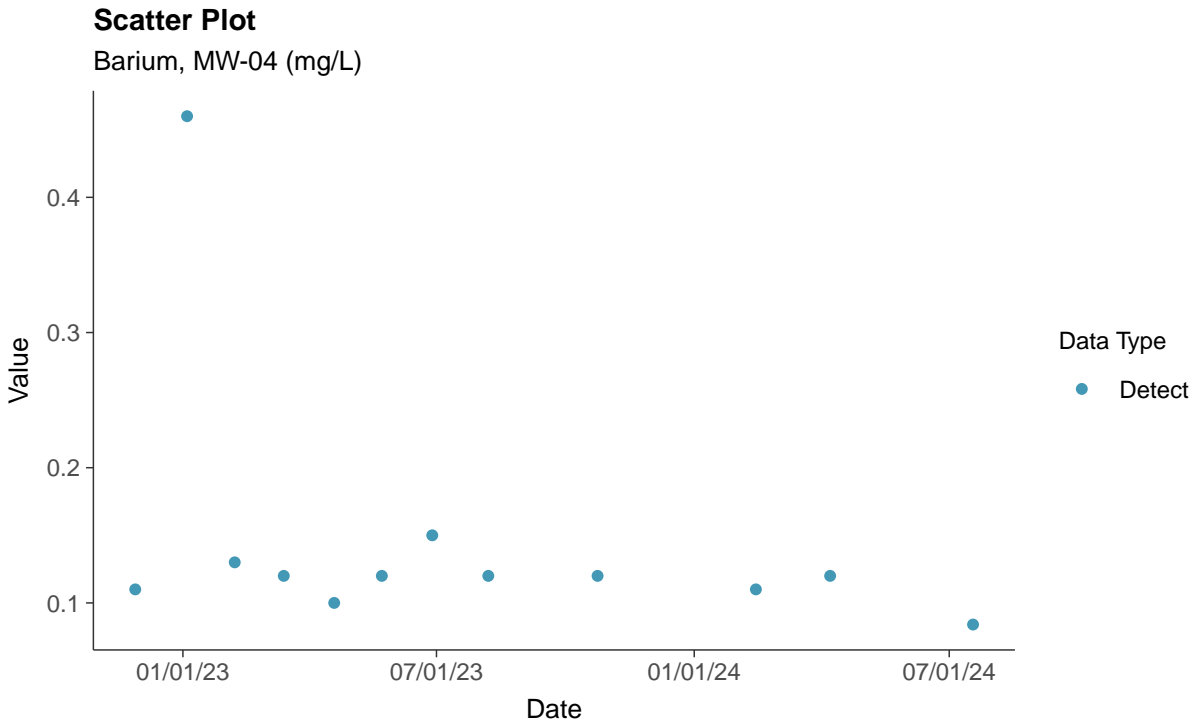
Arsenic, MW-04 (mg/L)





### Appendix IV: Barium, MW-04

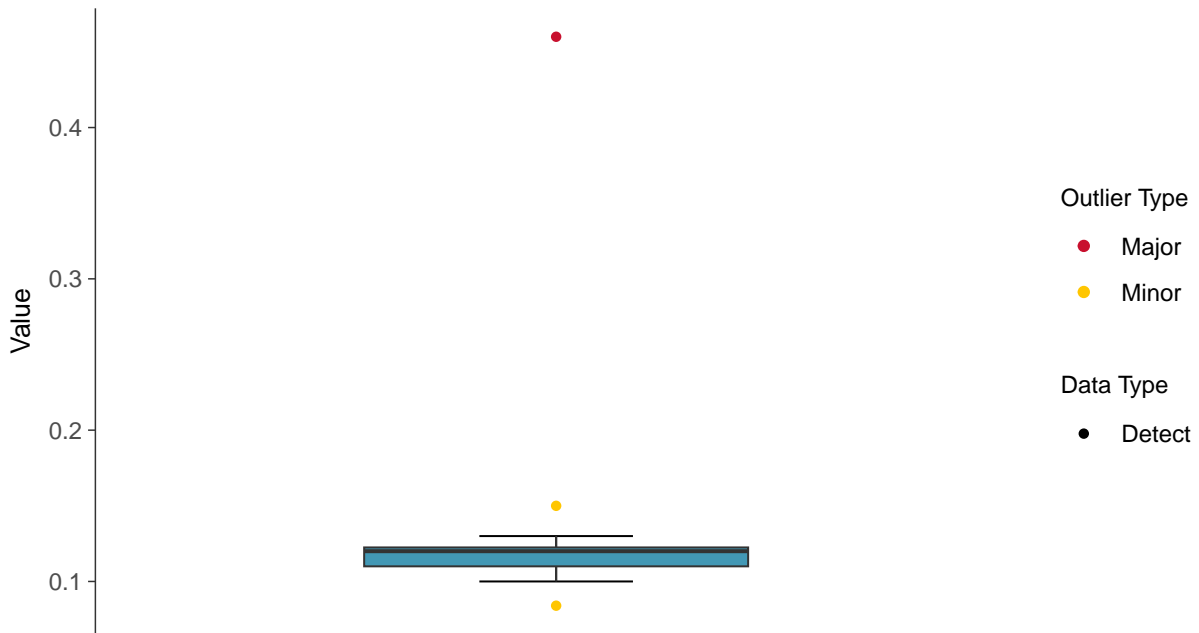
ID: 14\_2\_5\_103





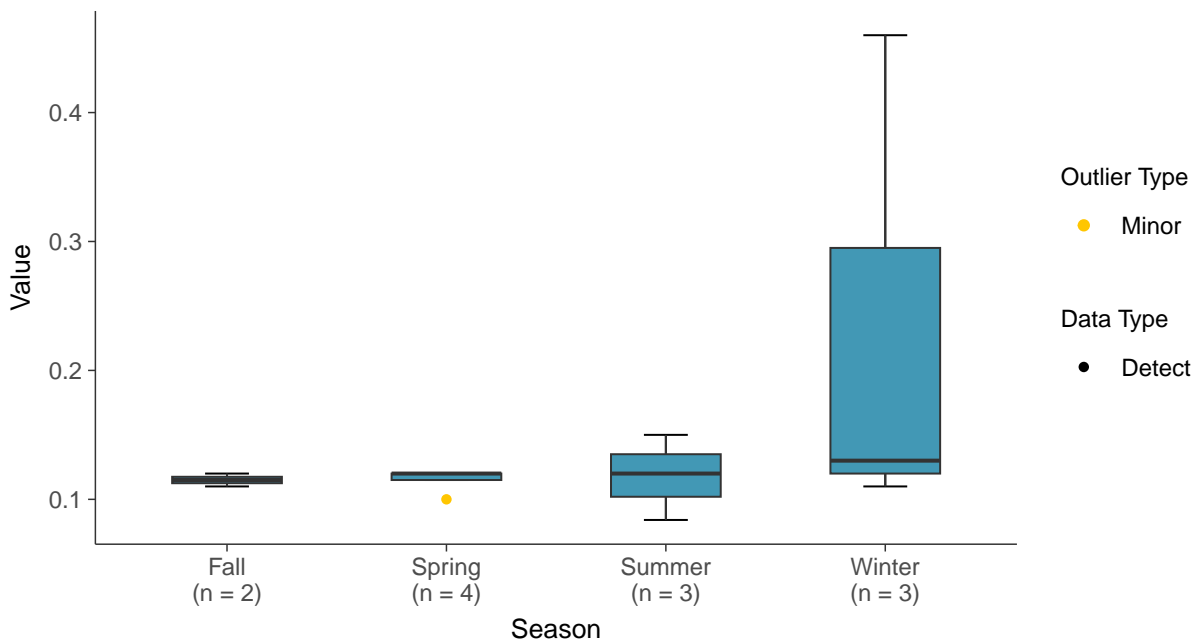
### Boxplot

Barium, MW-04 (mg/L)



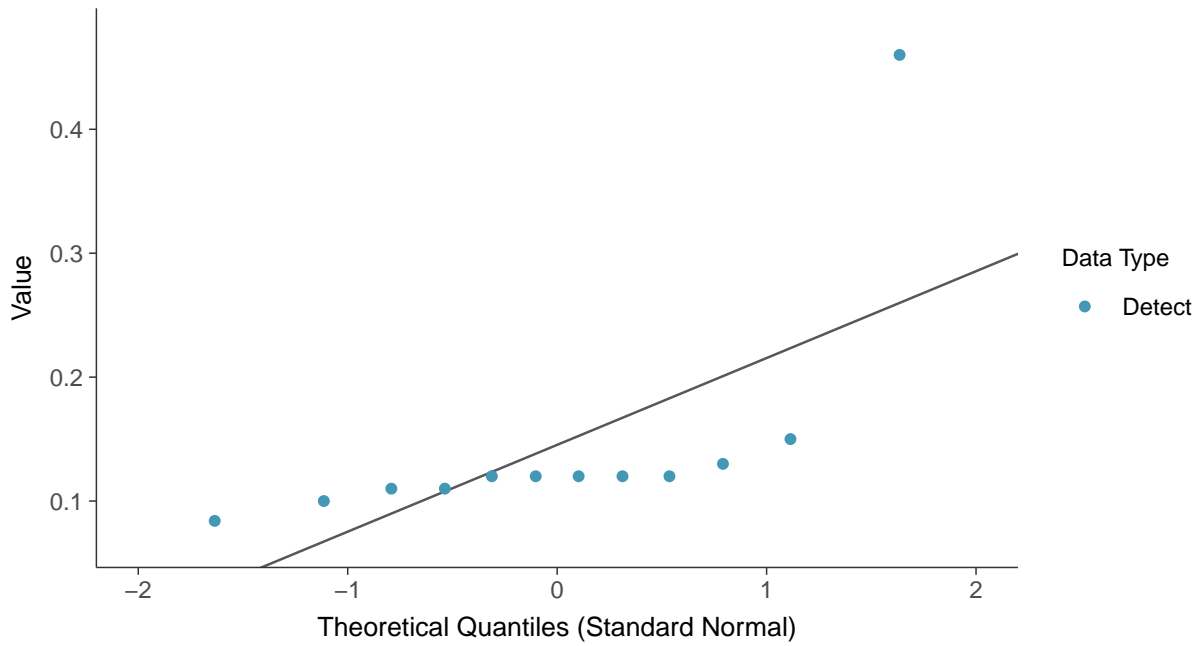
### Boxplot by Season

Barium, MW-04 (mg/L)

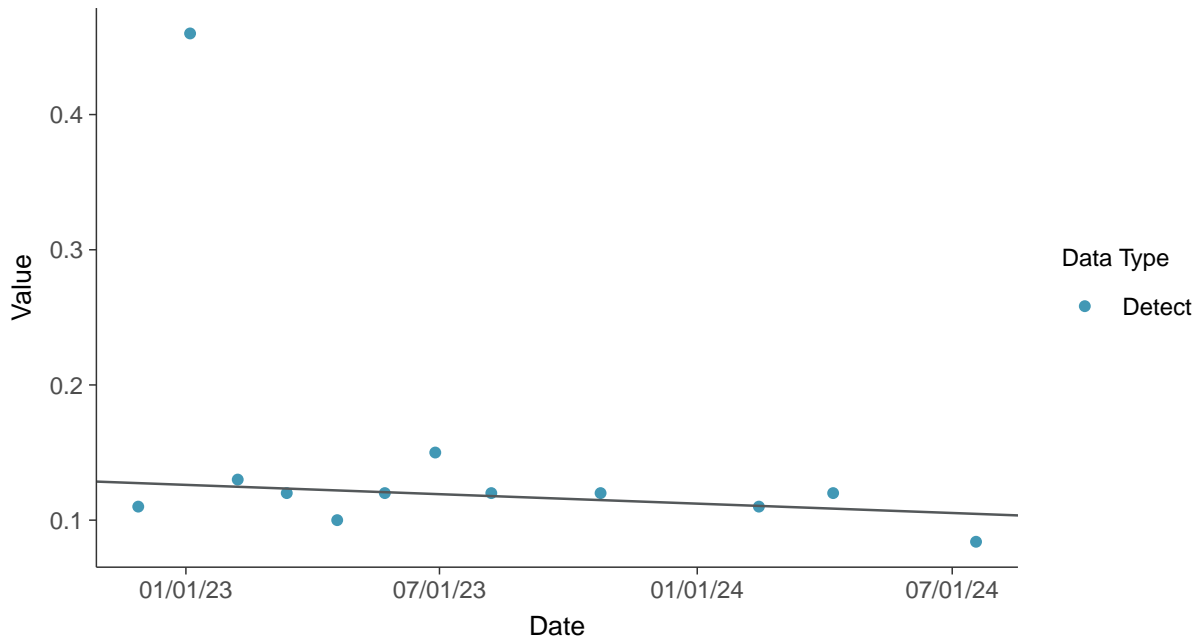




**Normal Q-Q plot**  
Barium, MW-04 (mg/L)



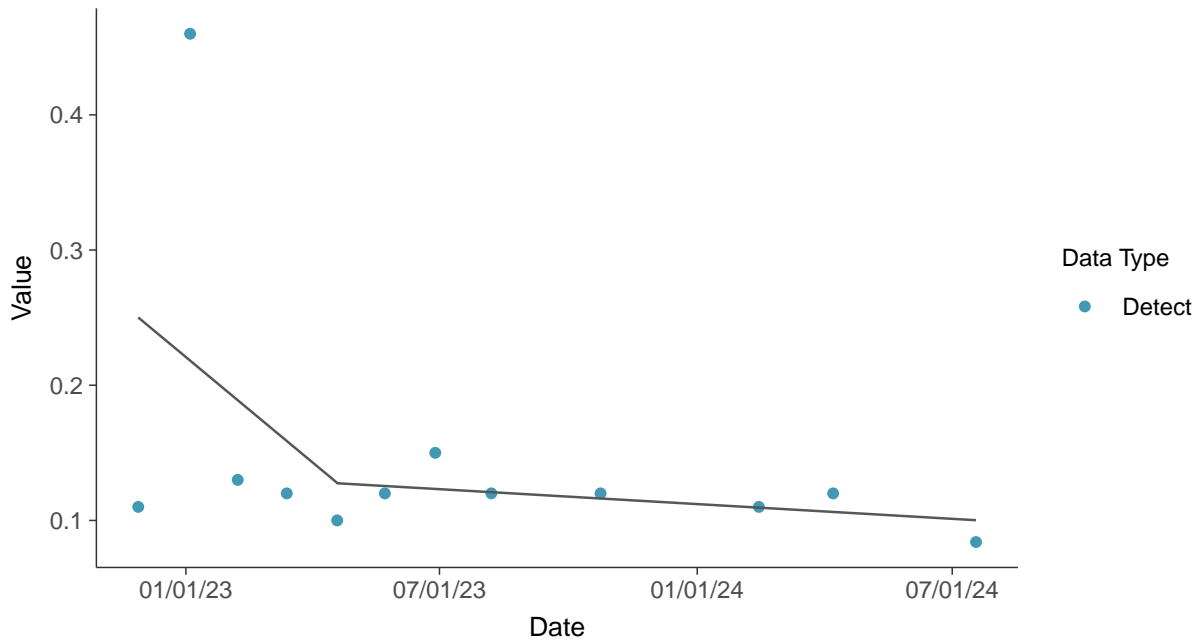
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Barium, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Barium, MW-04 (mg/L)

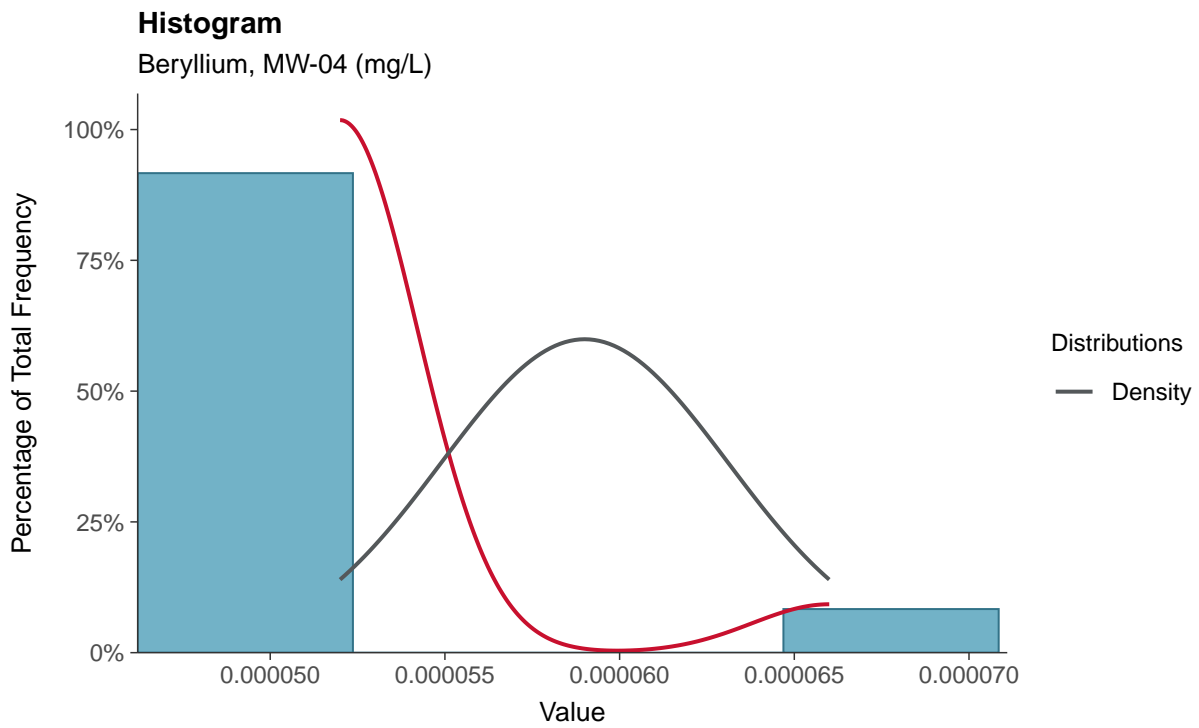
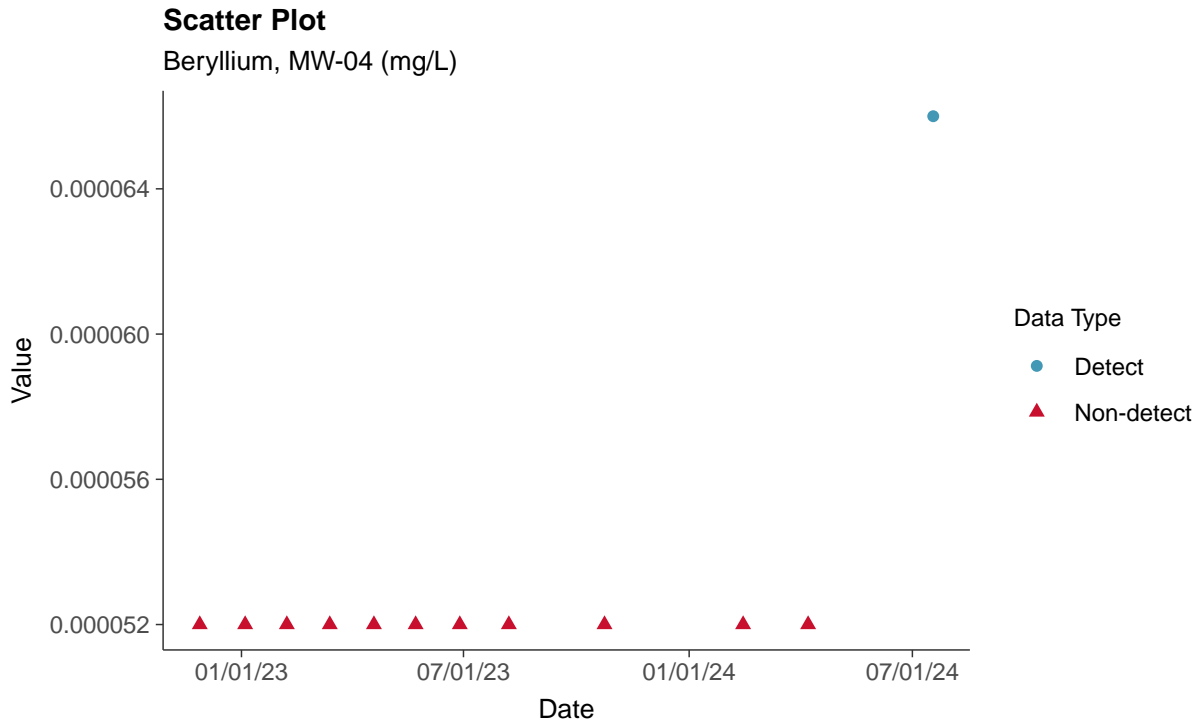






### Appendix IV: Beryllium, MW-04

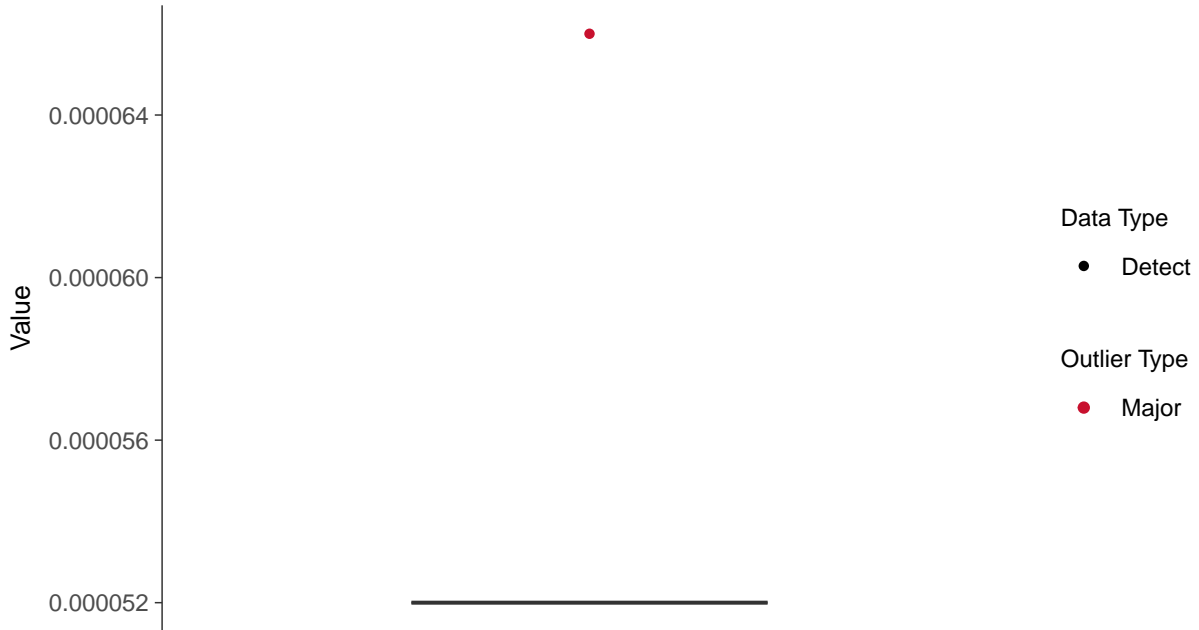
ID: 14\_2\_5\_104





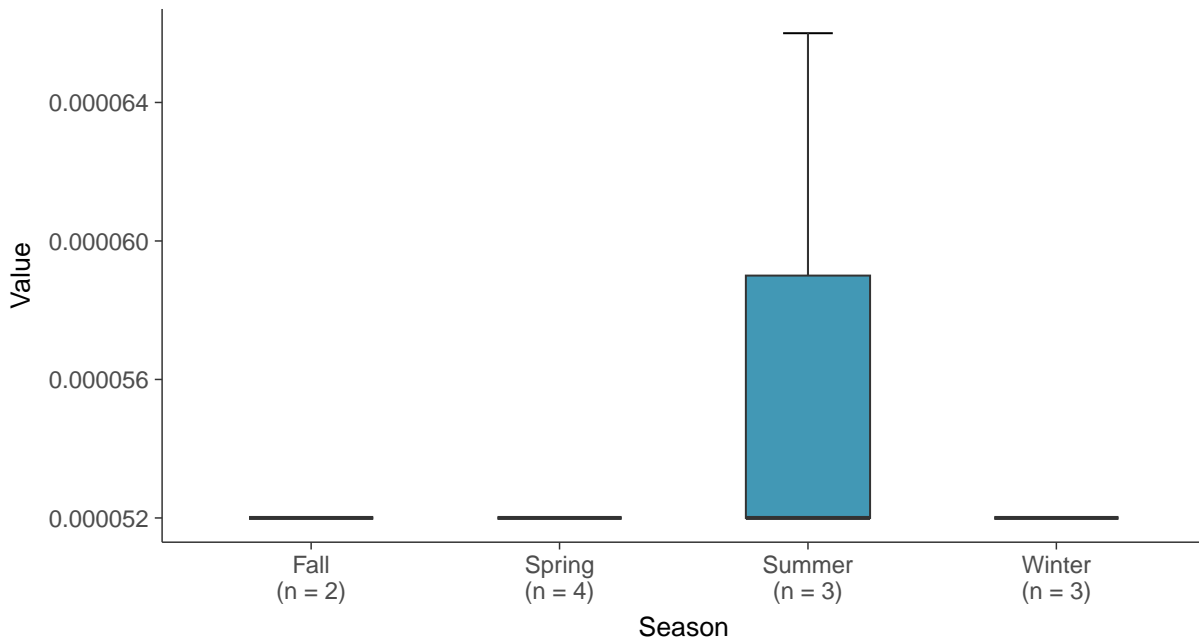
### Boxplot

Beryllium, MW-04 (mg/L)



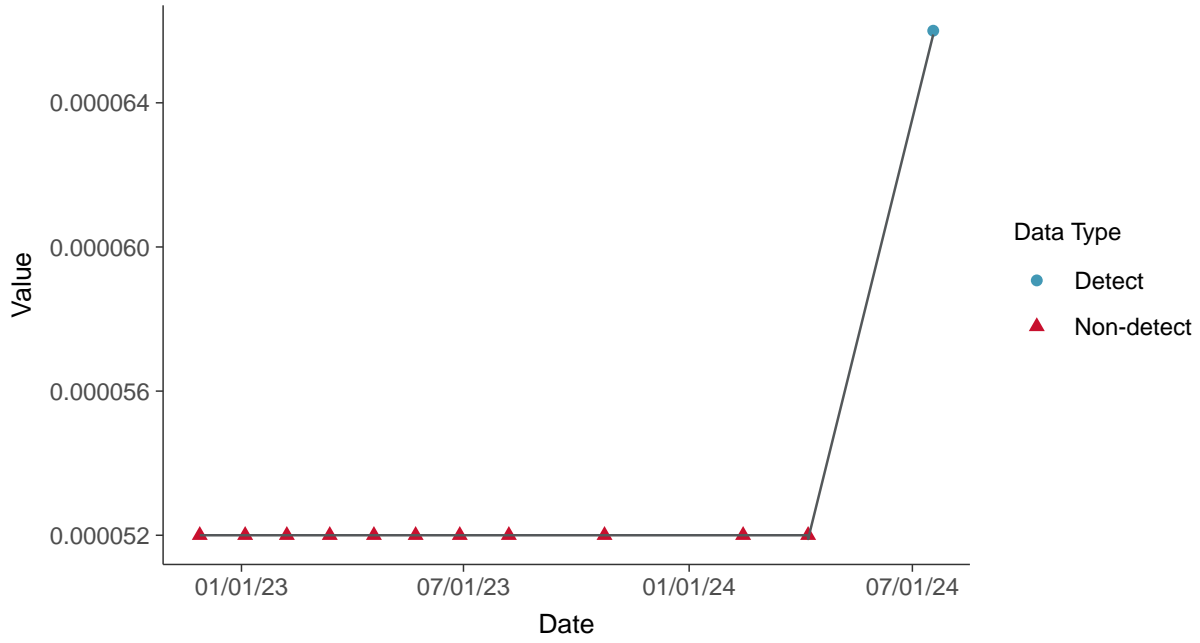
### Boxplot by Season

Beryllium, MW-04 (mg/L)





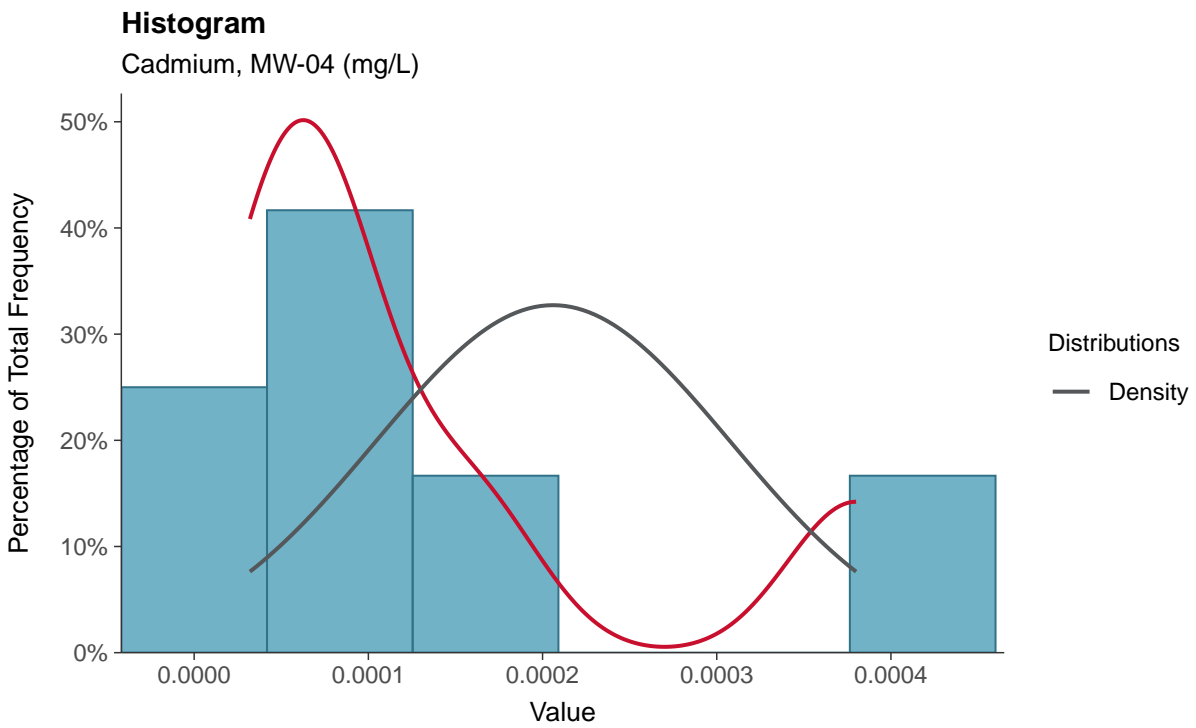
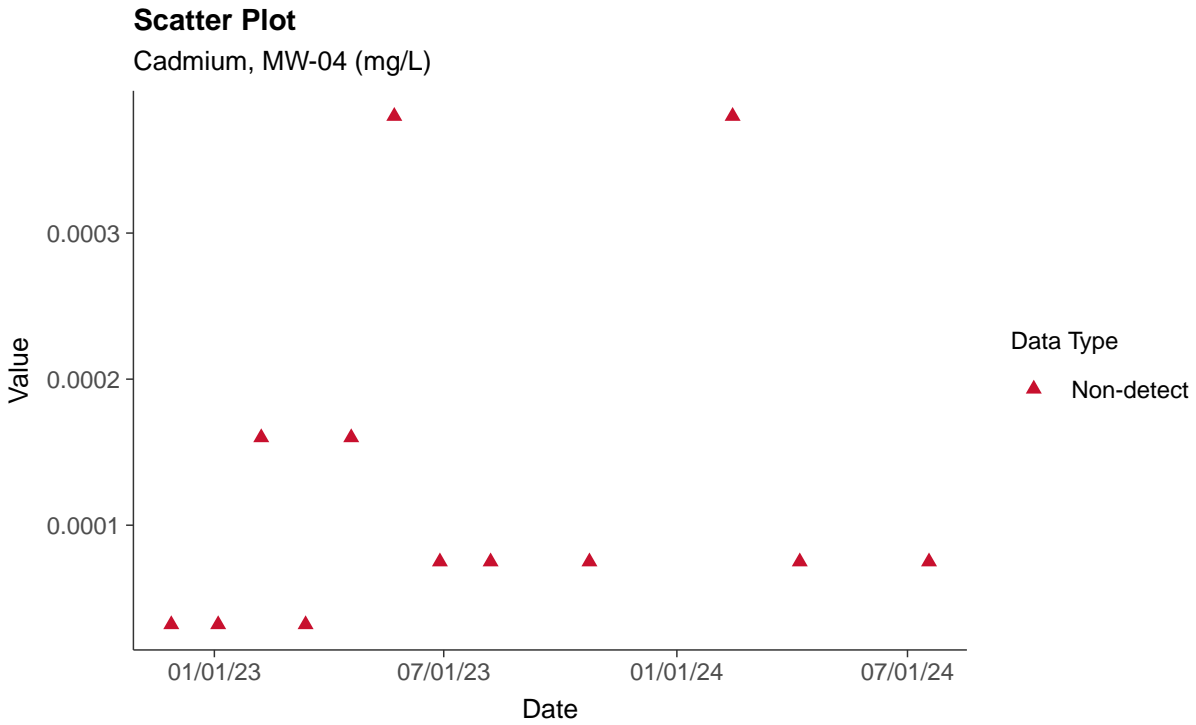
**Trend Regression: Piecewise Linear-Linear**  
Beryllium, MW-04 (mg/L)





### Appendix IV: Cadmium, MW-04

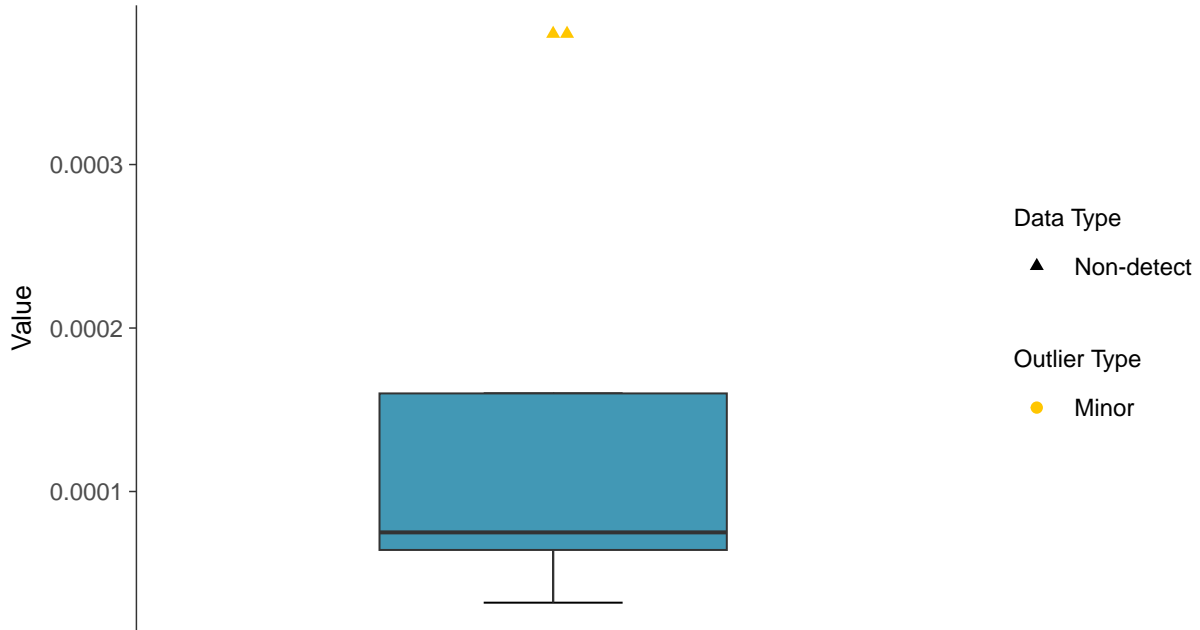
ID: 14\_2\_5\_106





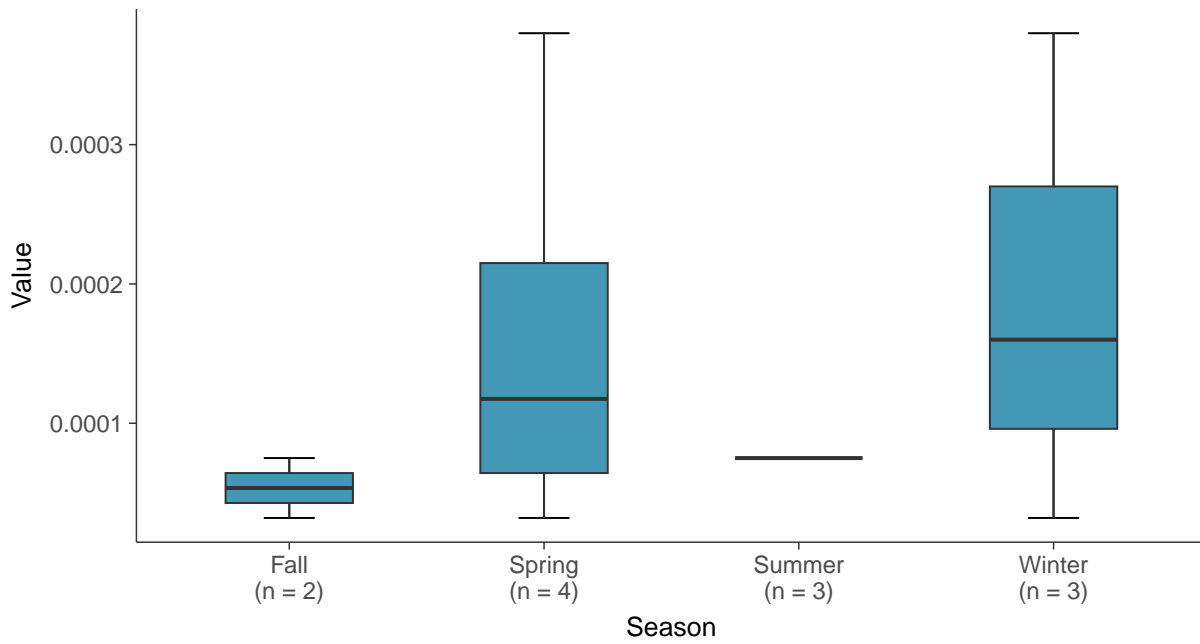
### Boxplot

Cadmium, MW-04 (mg/L)



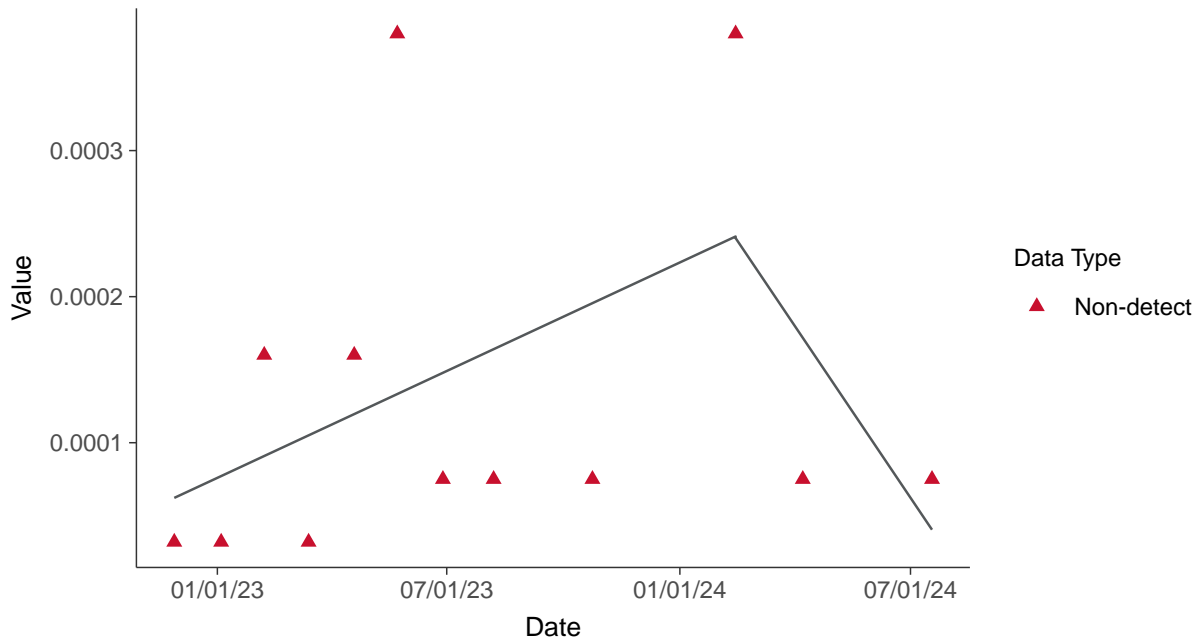
### Boxplot by Season

Cadmium, MW-04 (mg/L)

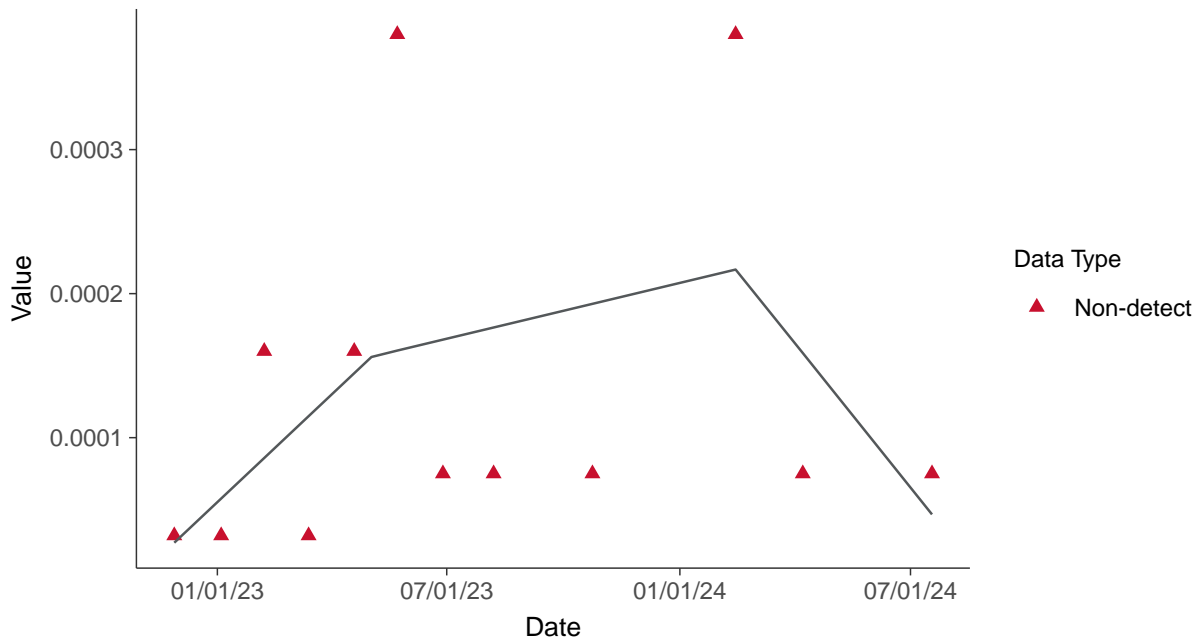




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-04 (mg/L)



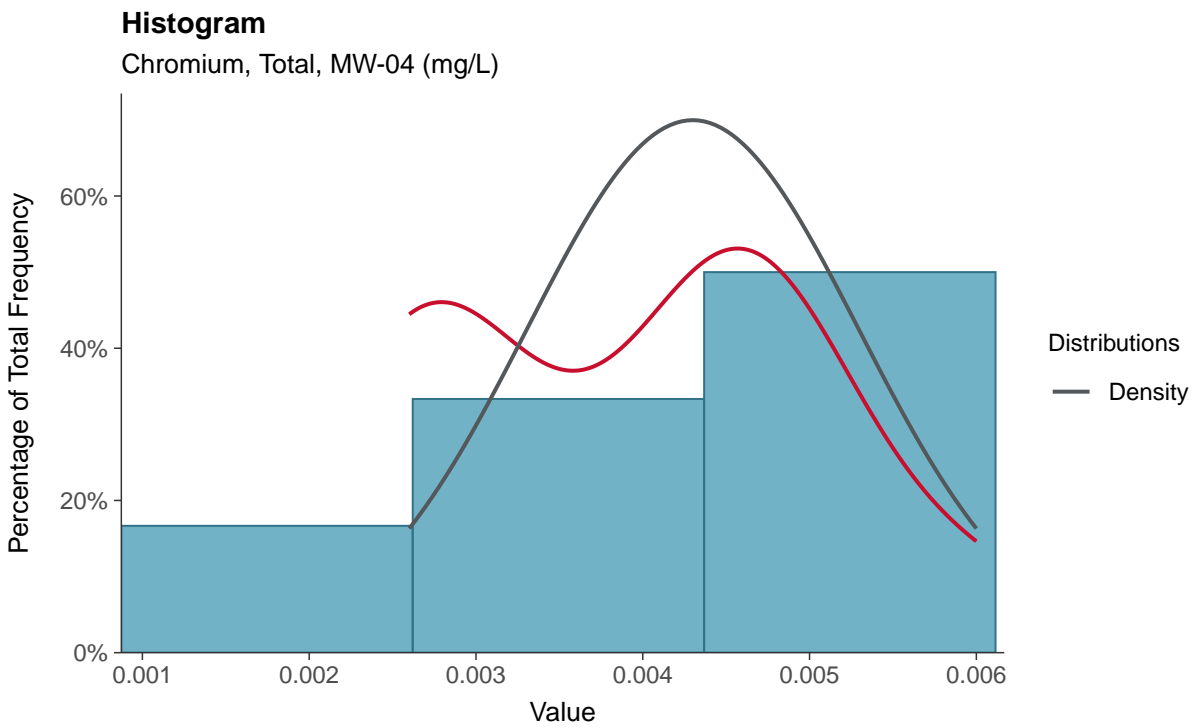
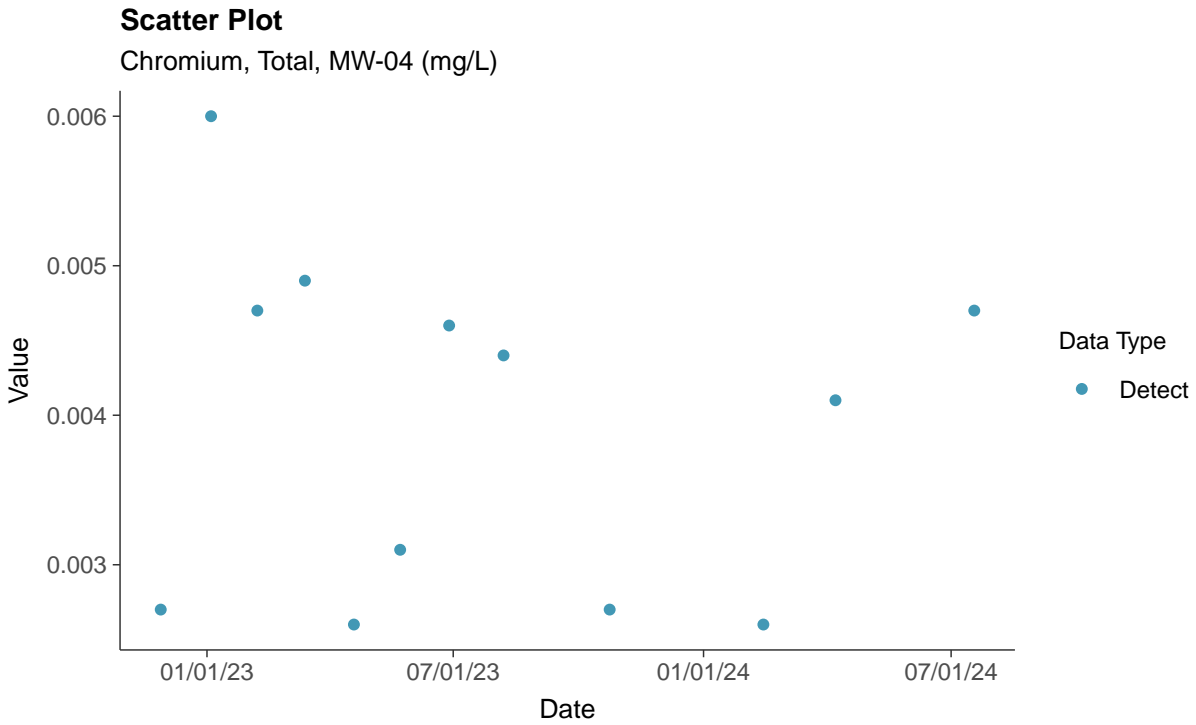
**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-04 (mg/L)





### Appendix IV: Chromium, Total, MW-04

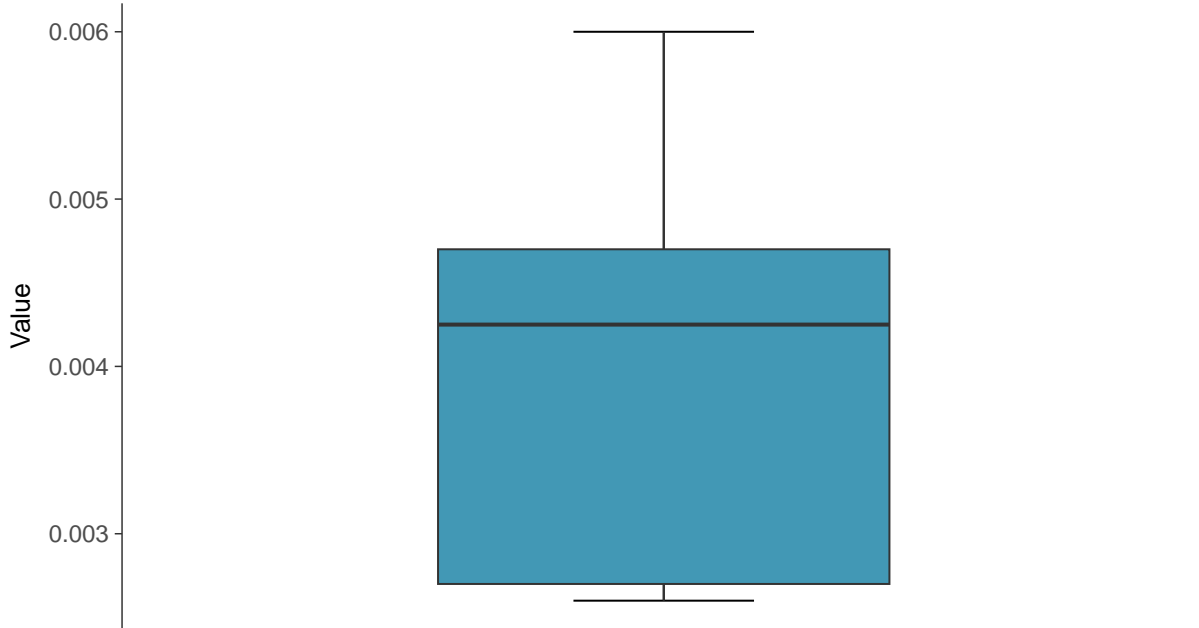
ID: 14\_2\_5\_109





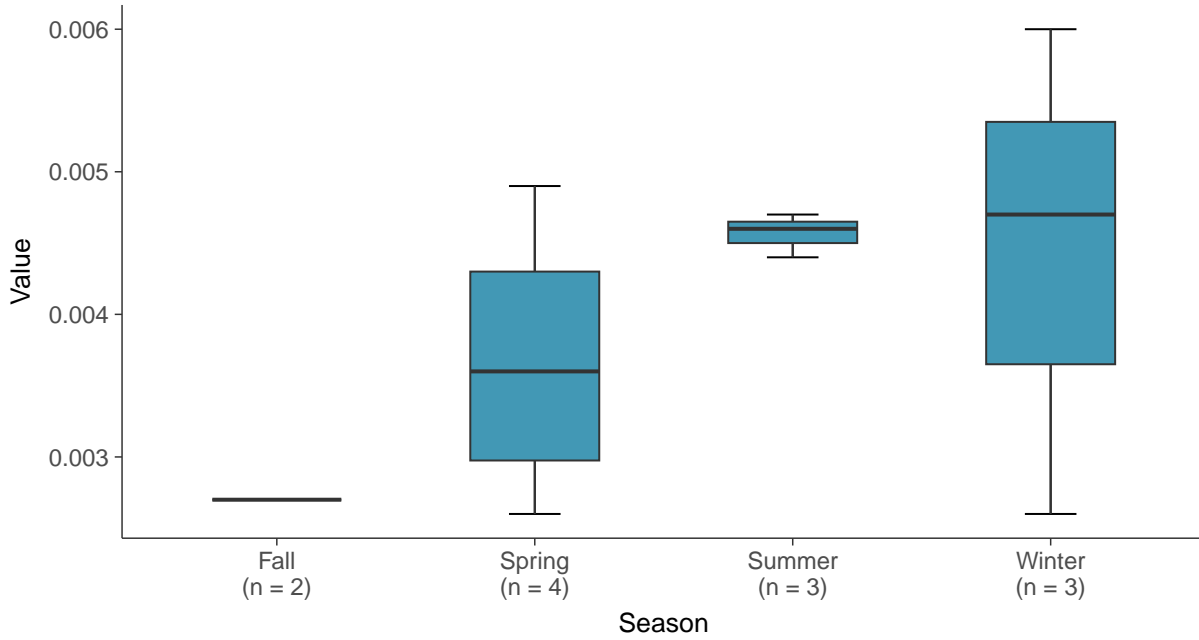
### Boxplot

Chromium, Total, MW-04 (mg/L)



### Boxplot by Season

Chromium, Total, MW-04 (mg/L)

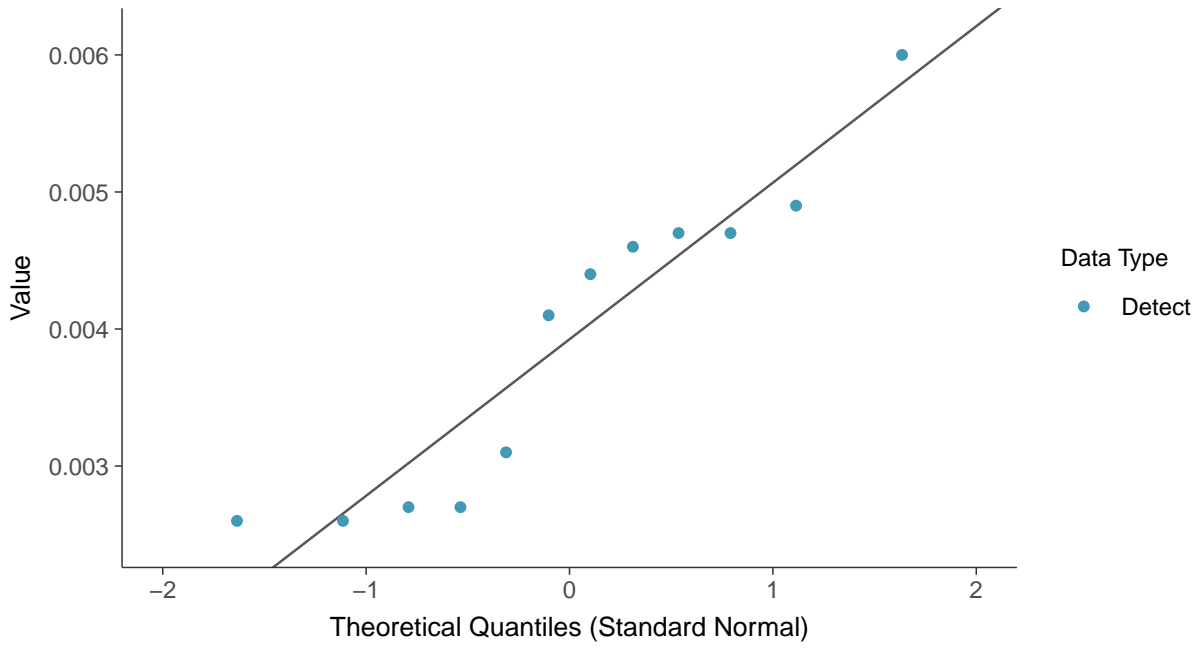






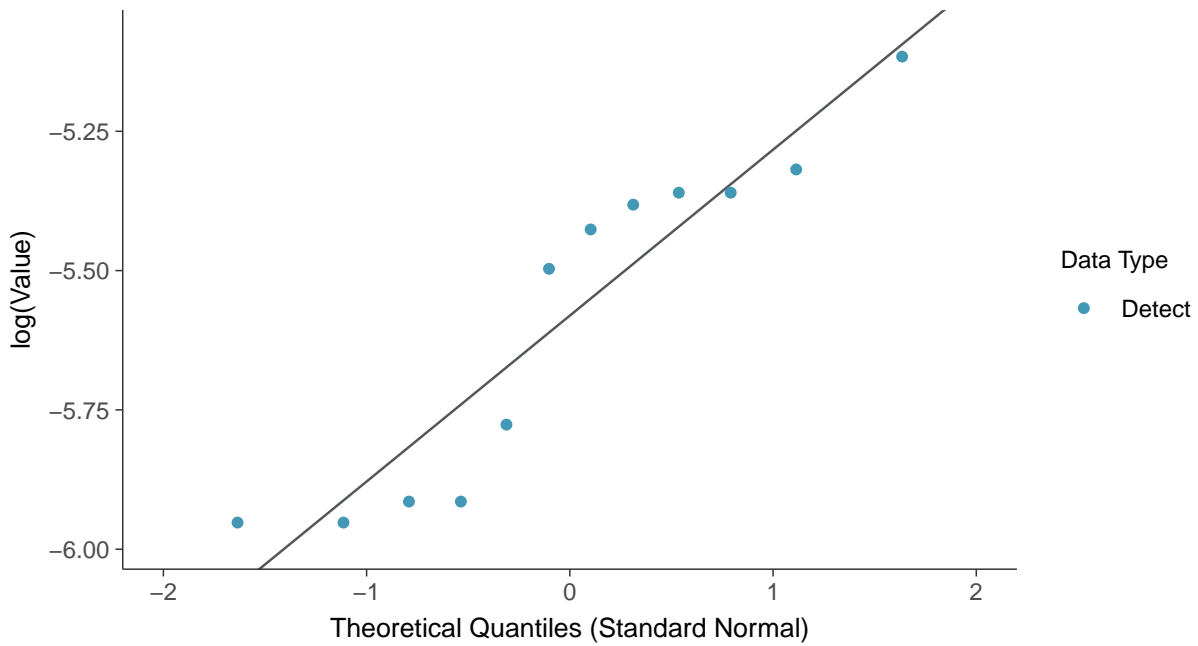
### Normal Q-Q plot

Chromium, Total, MW-04 (mg/L)



### Lognormal Q-Q plot

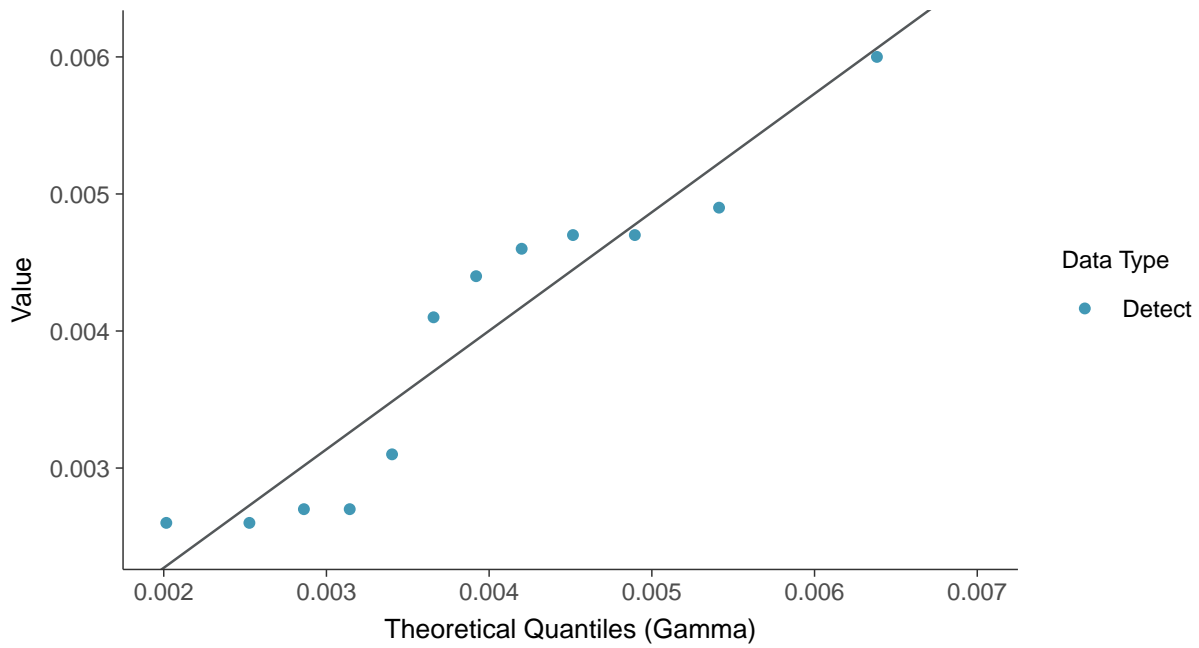
Chromium, Total, MW-04 (mg/L)





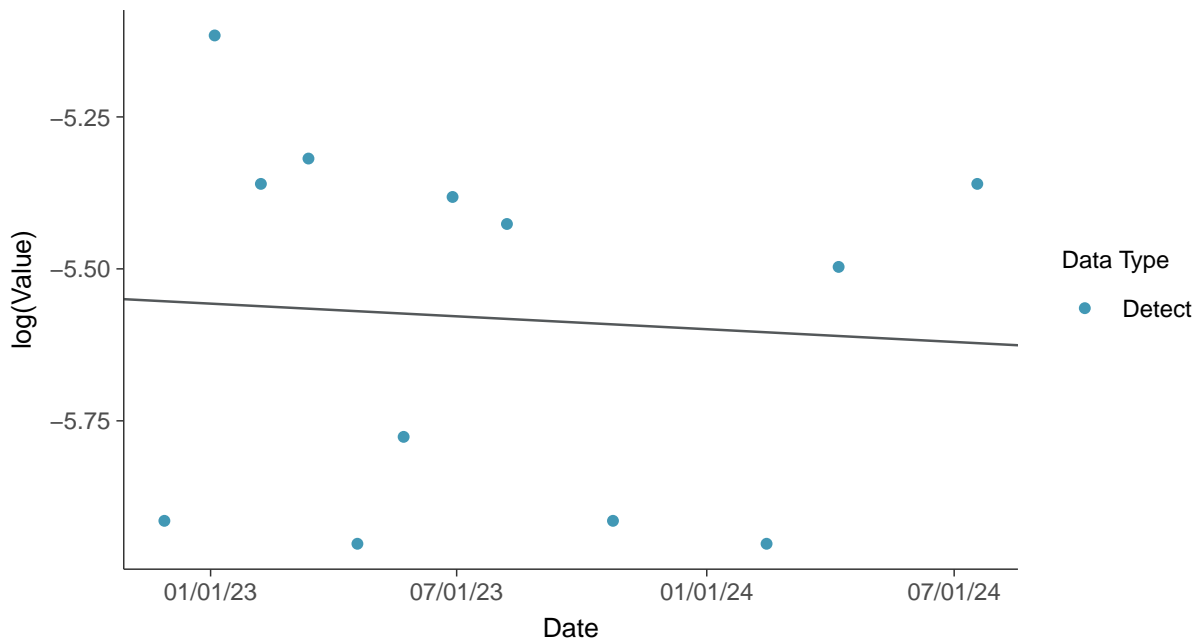
### Gamma Q-Q plot

Chromium, Total, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

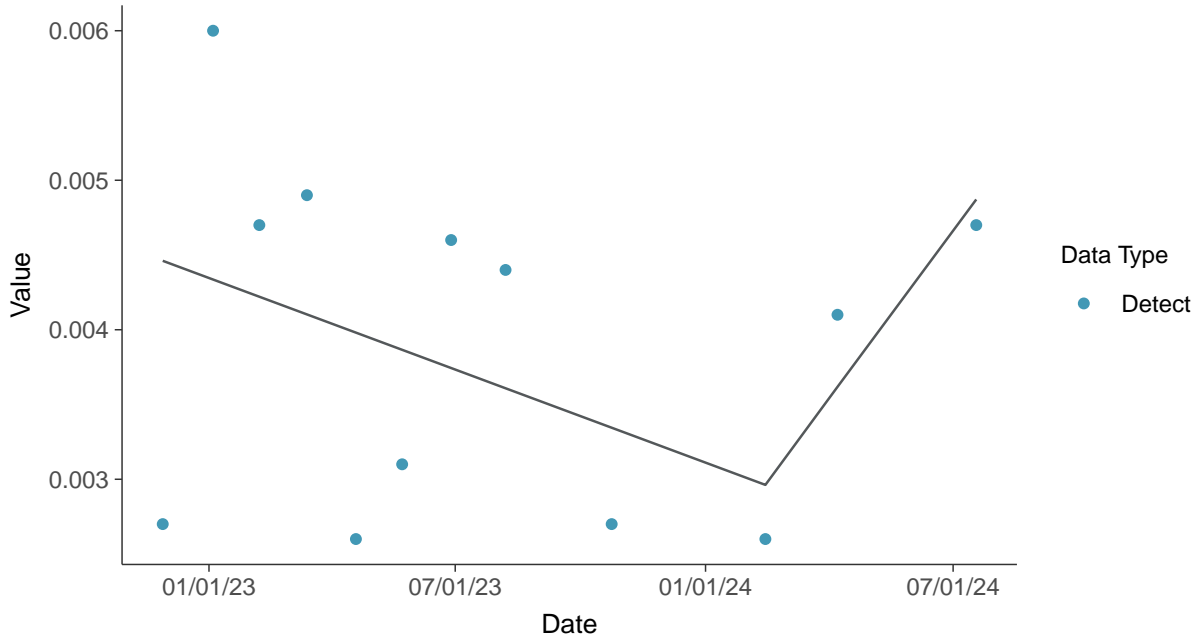
Chromium, Total, MW-04 (mg/L)





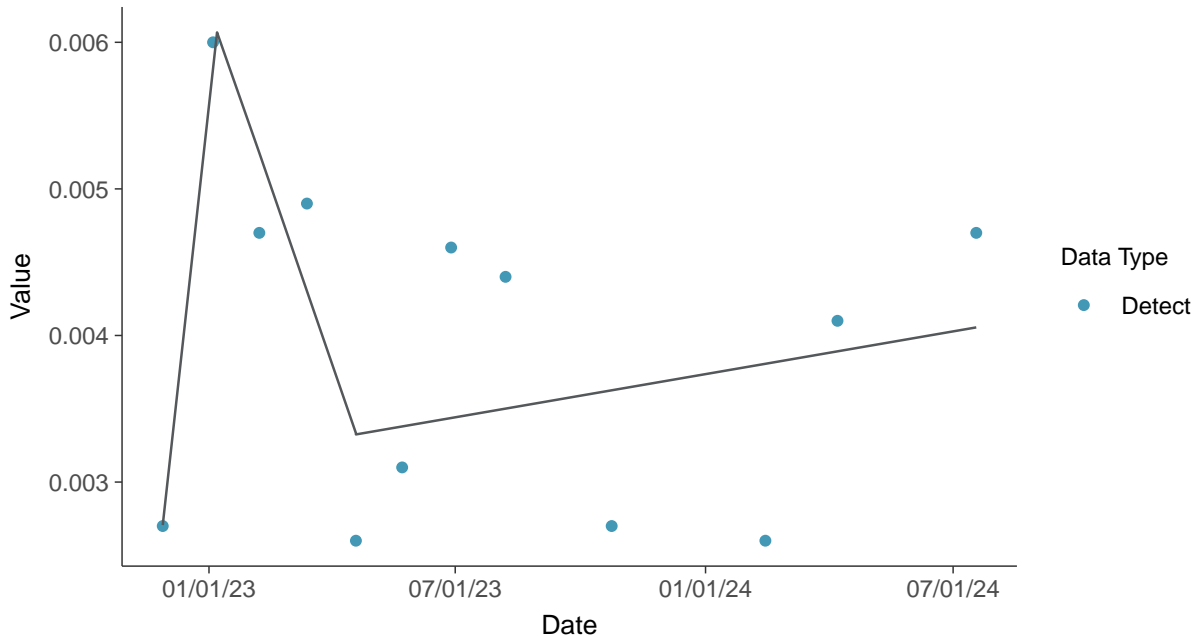
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

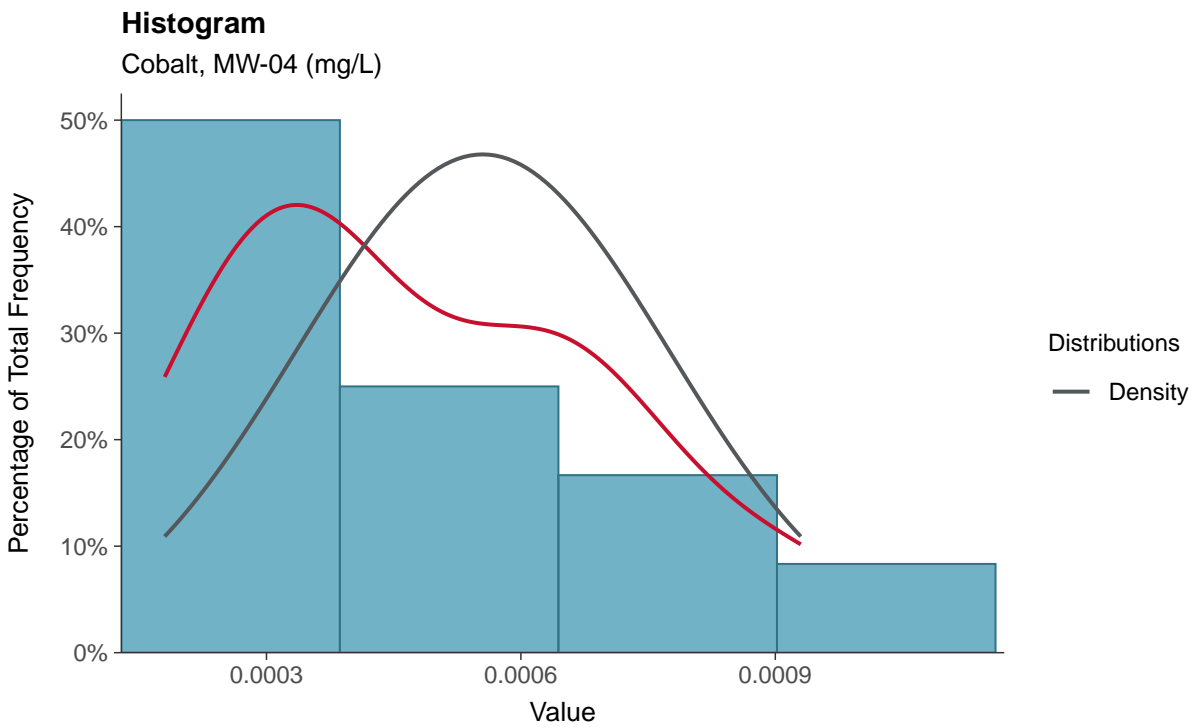
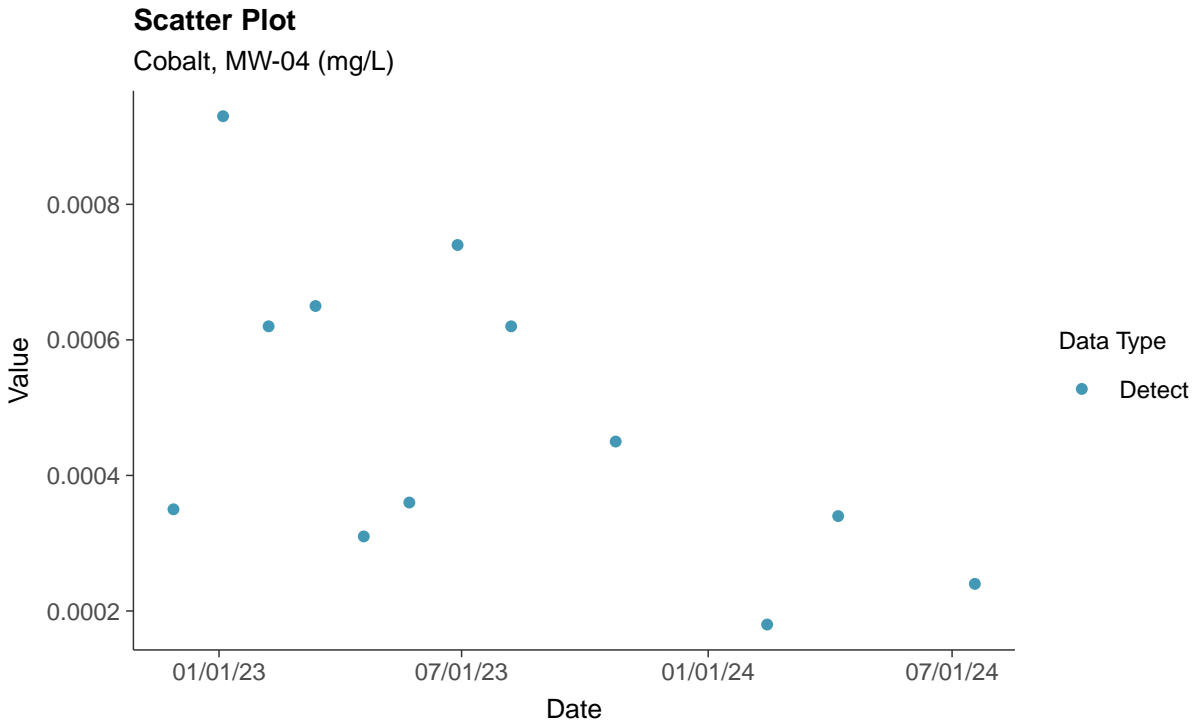
Chromium, Total, MW-04 (mg/L)





### Appendix IV: Cobalt, MW-04

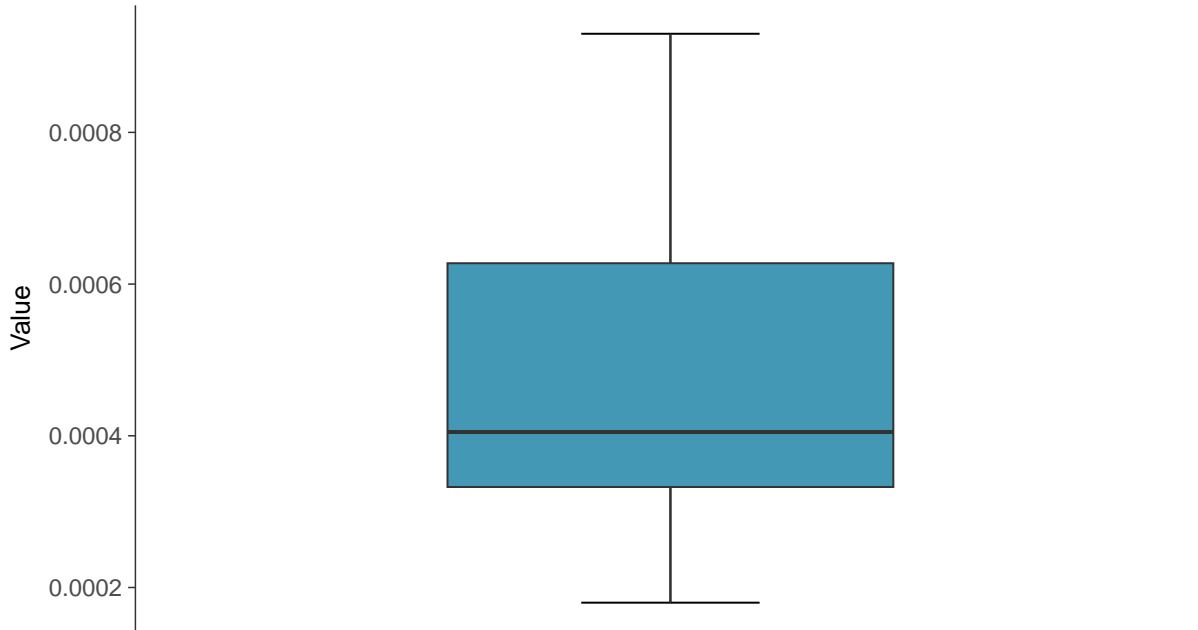
ID: 14\_2\_5\_110





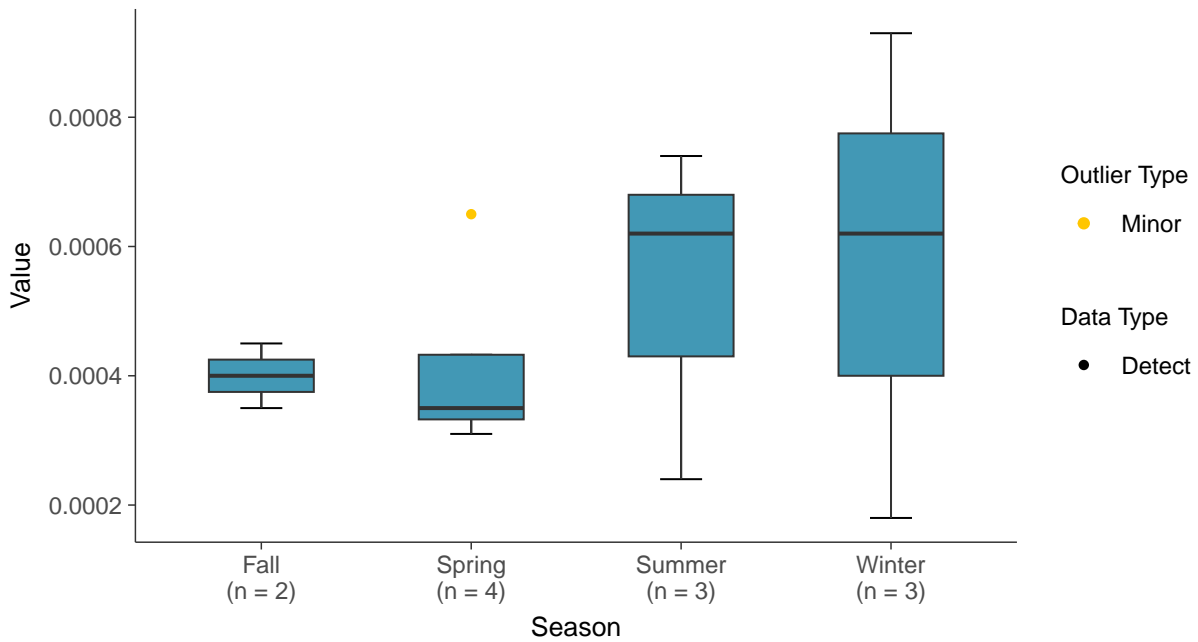
### Boxplot

Cobalt, MW-04 (mg/L)



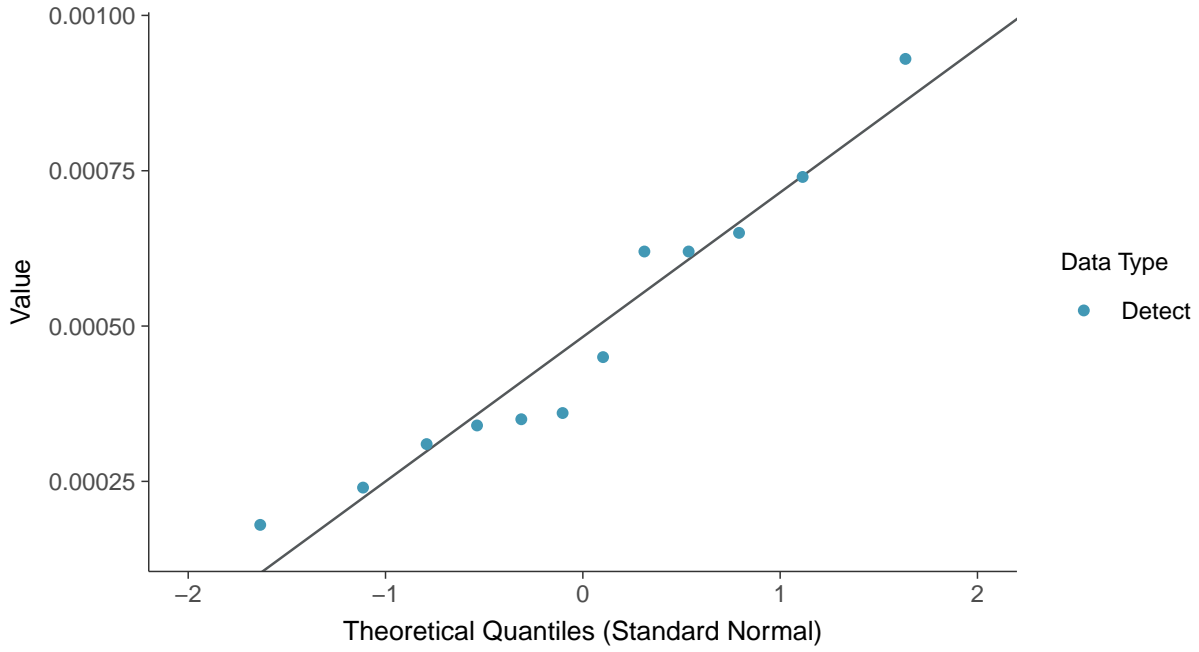
### Boxplot by Season

Cobalt, MW-04 (mg/L)

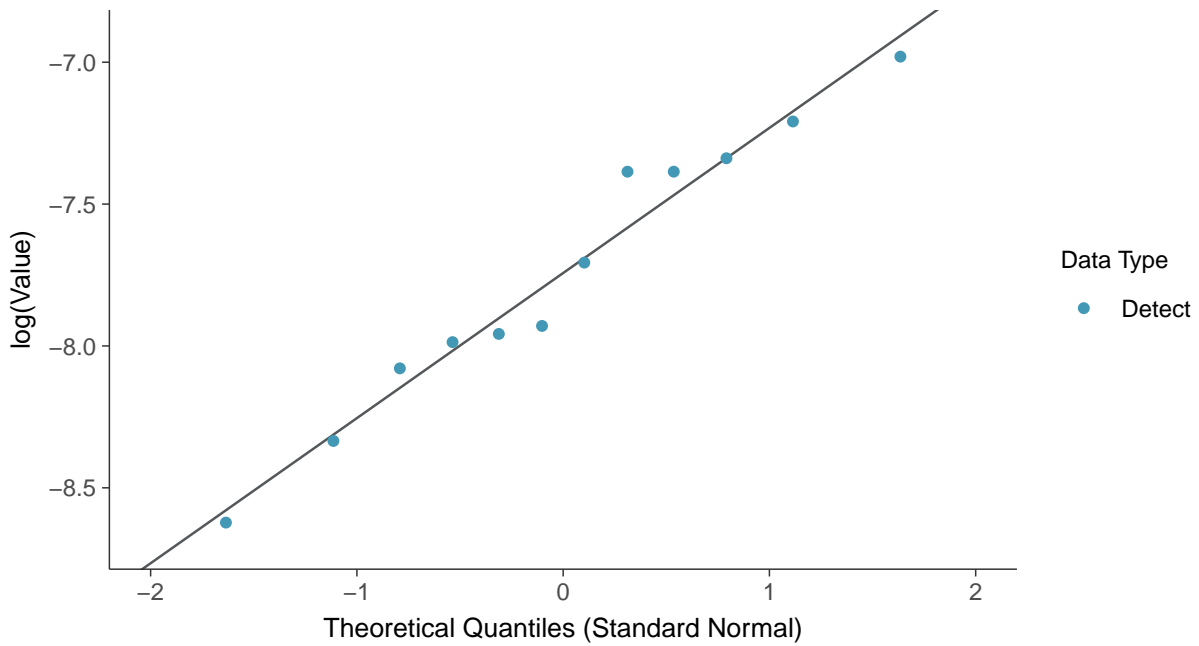




**Normal Q-Q plot**  
Cobalt, MW-04 (mg/L)

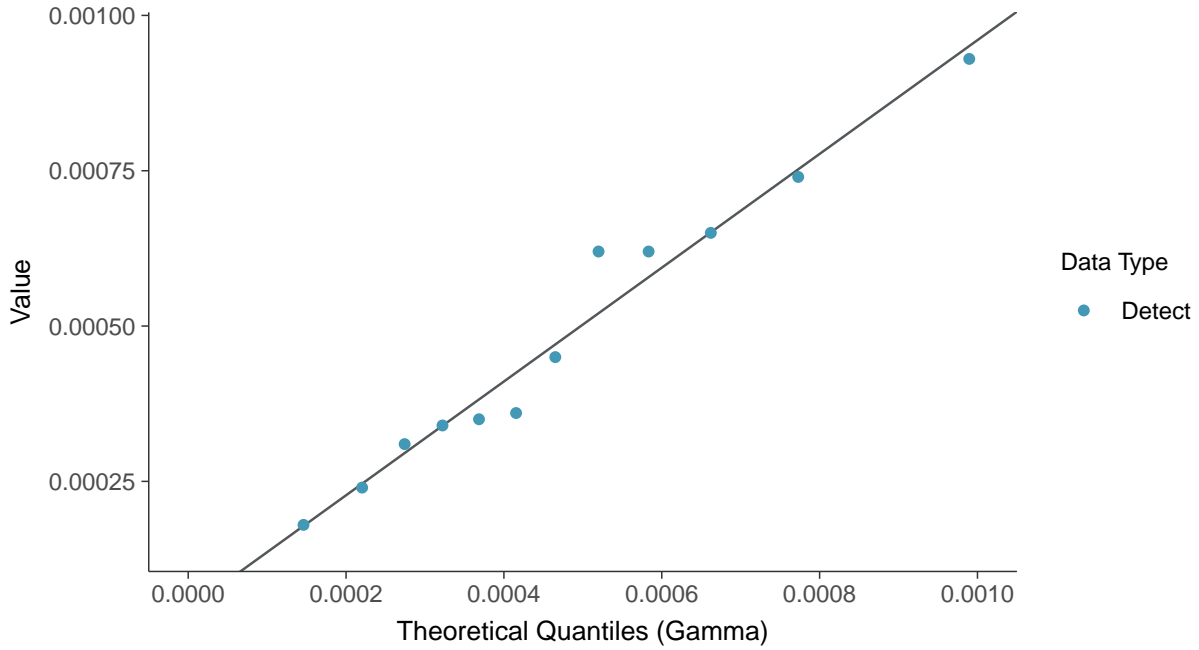


**Lognormal Q-Q plot**  
Cobalt, MW-04 (mg/L)

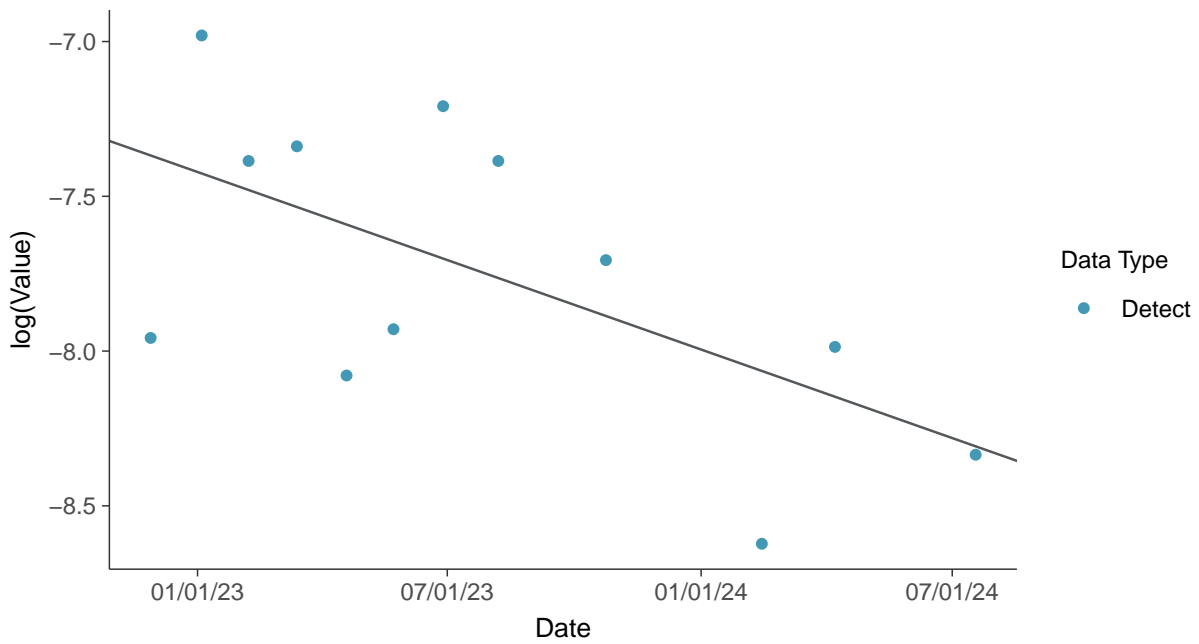




**Gamma Q-Q plot**  
Cobalt, MW-04 (mg/L)

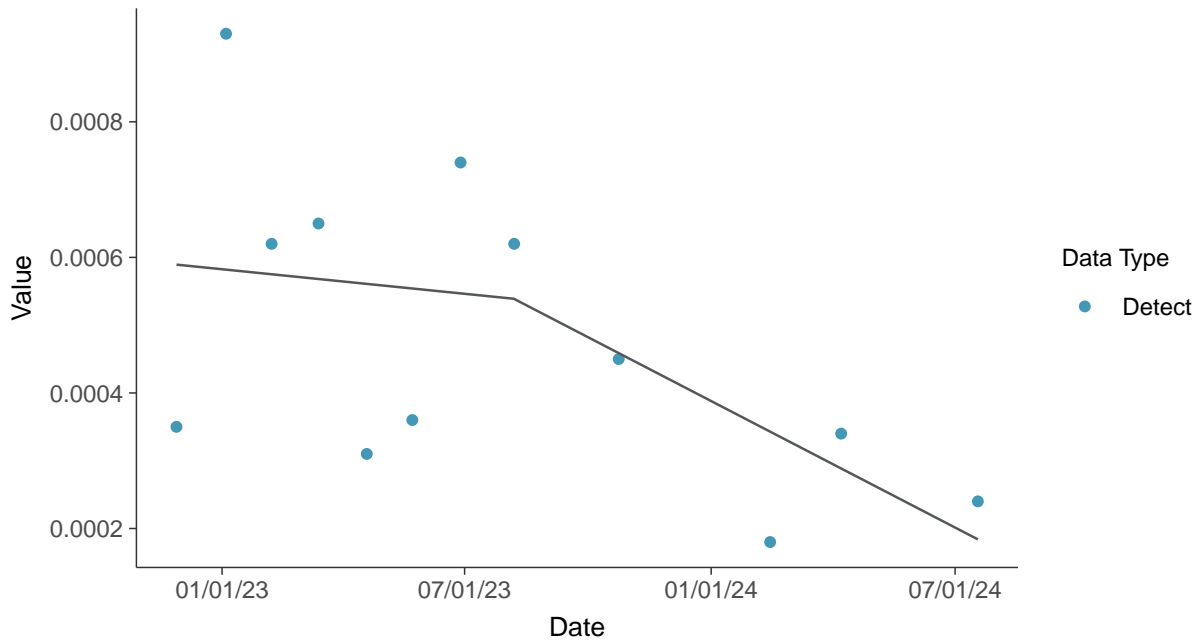


**Trend Regression: Lognormal MLE**  
Cobalt, MW-04 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Cobalt, MW-04 (mg/L)

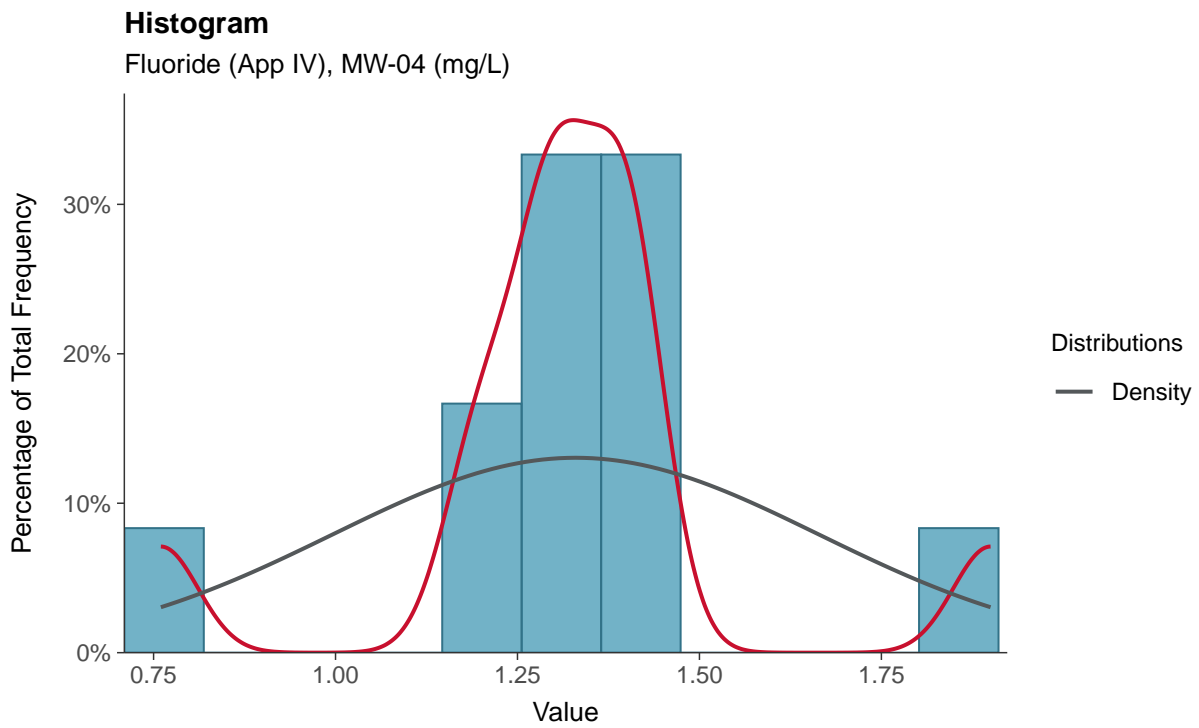
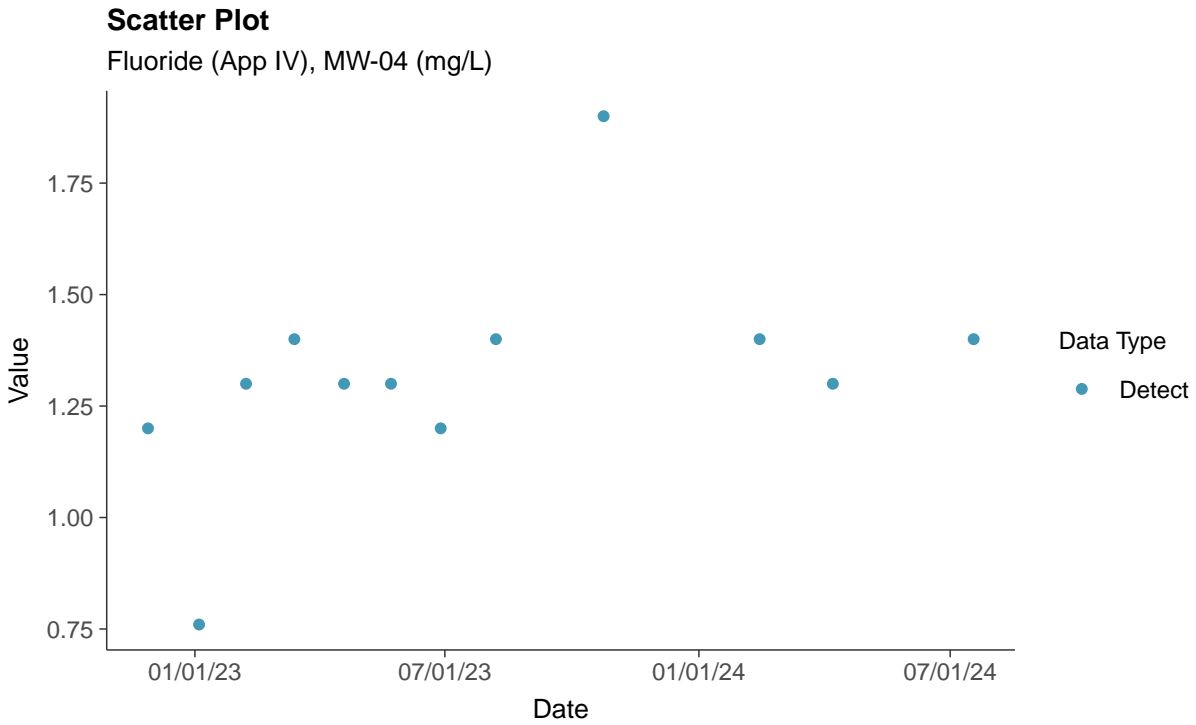






### Appendix IV: Fluoride (App IV), MW-04

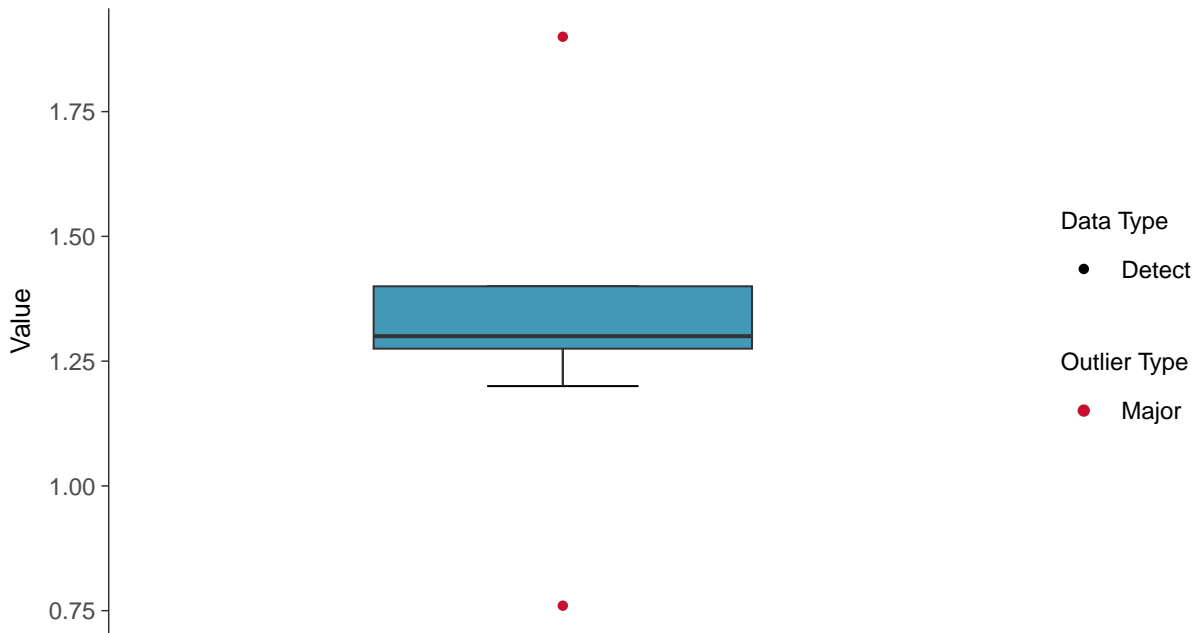
ID: 14\_2\_5\_113





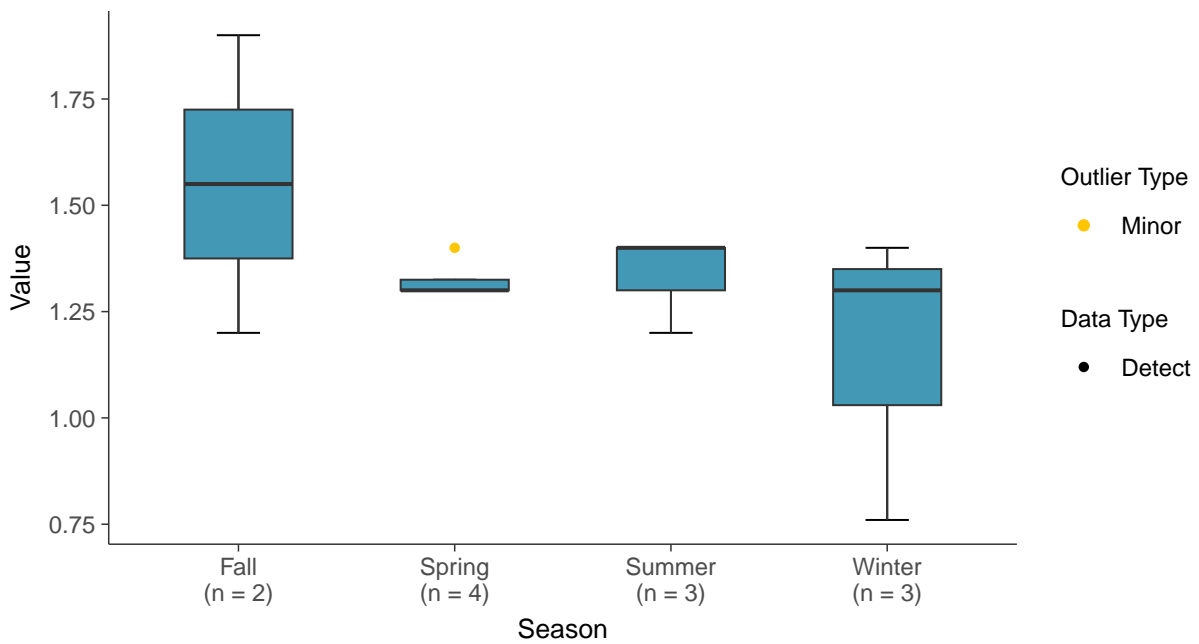
### Boxplot

Fluoride (App IV), MW-04 (mg/L)



### Boxplot by Season

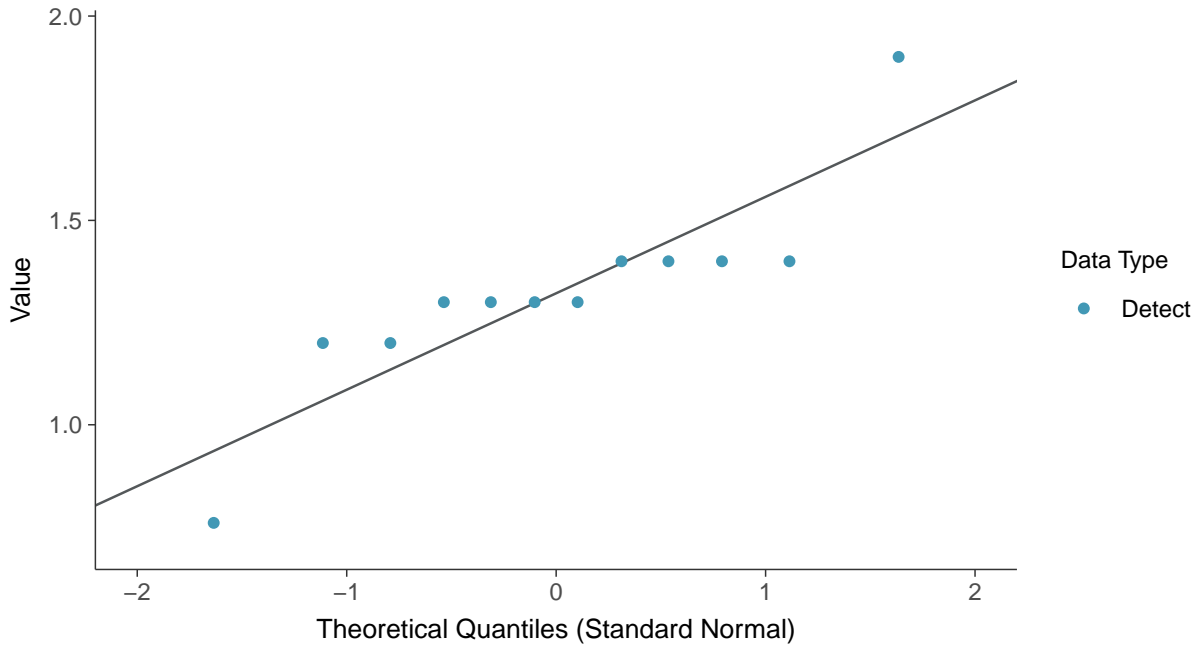
Fluoride (App IV), MW-04 (mg/L)





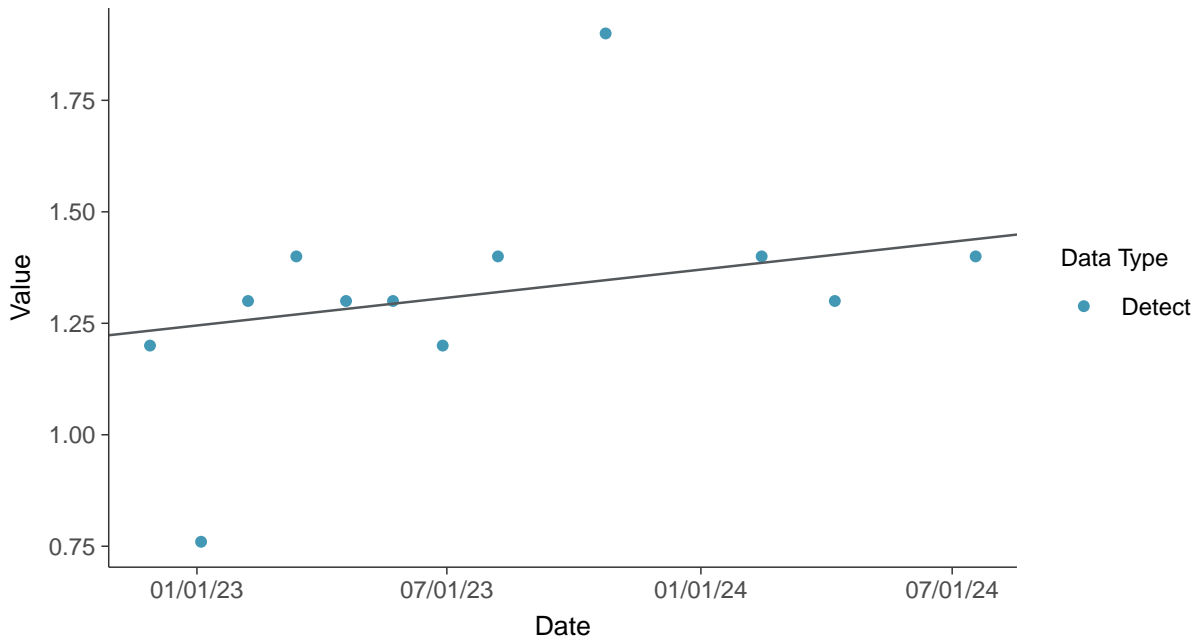
### Normal Q-Q plot

Fluoride (App IV), MW-04 (mg/L)



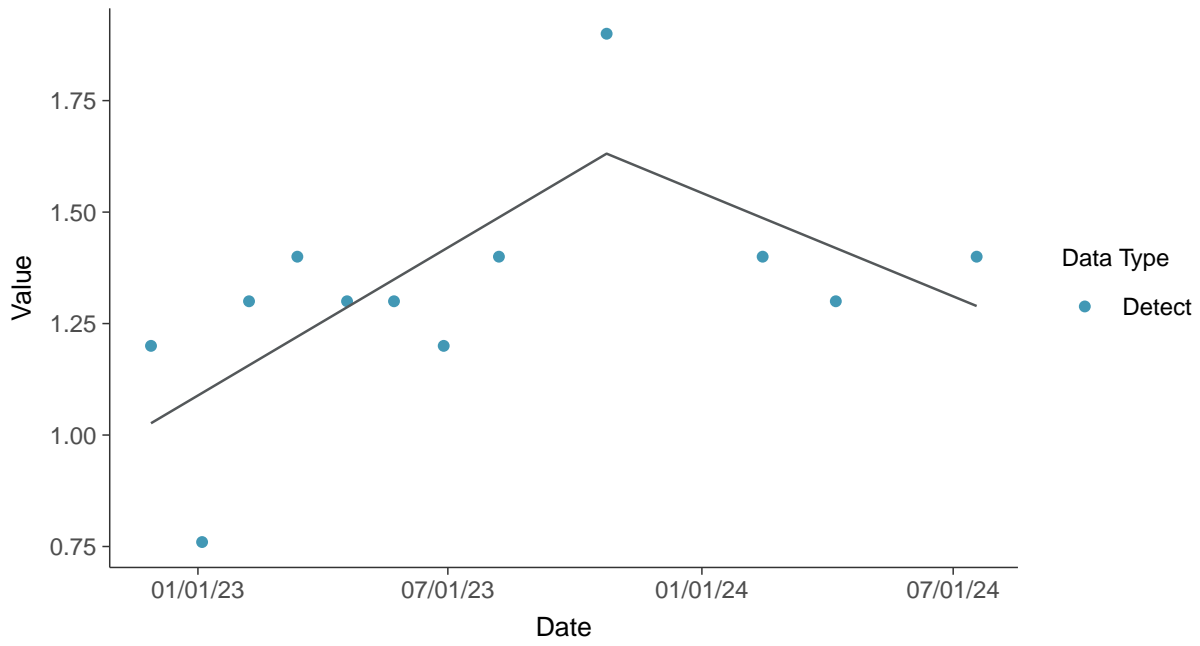
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride (App IV), MW-04 (mg/L)





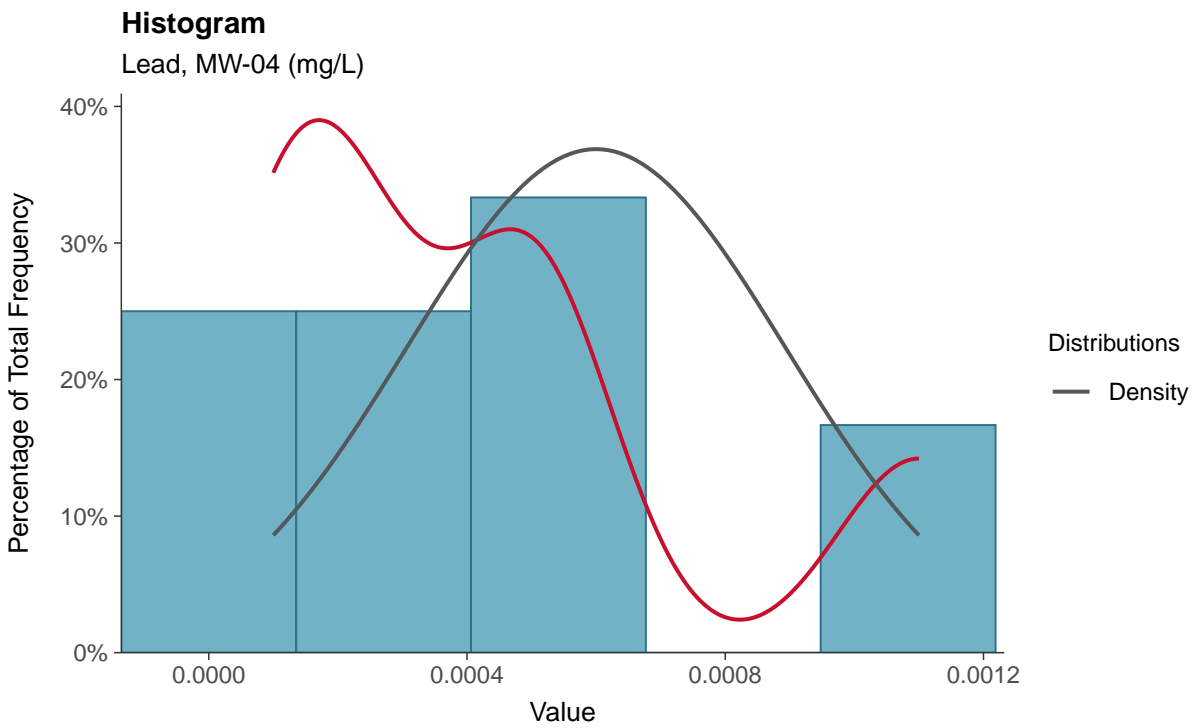
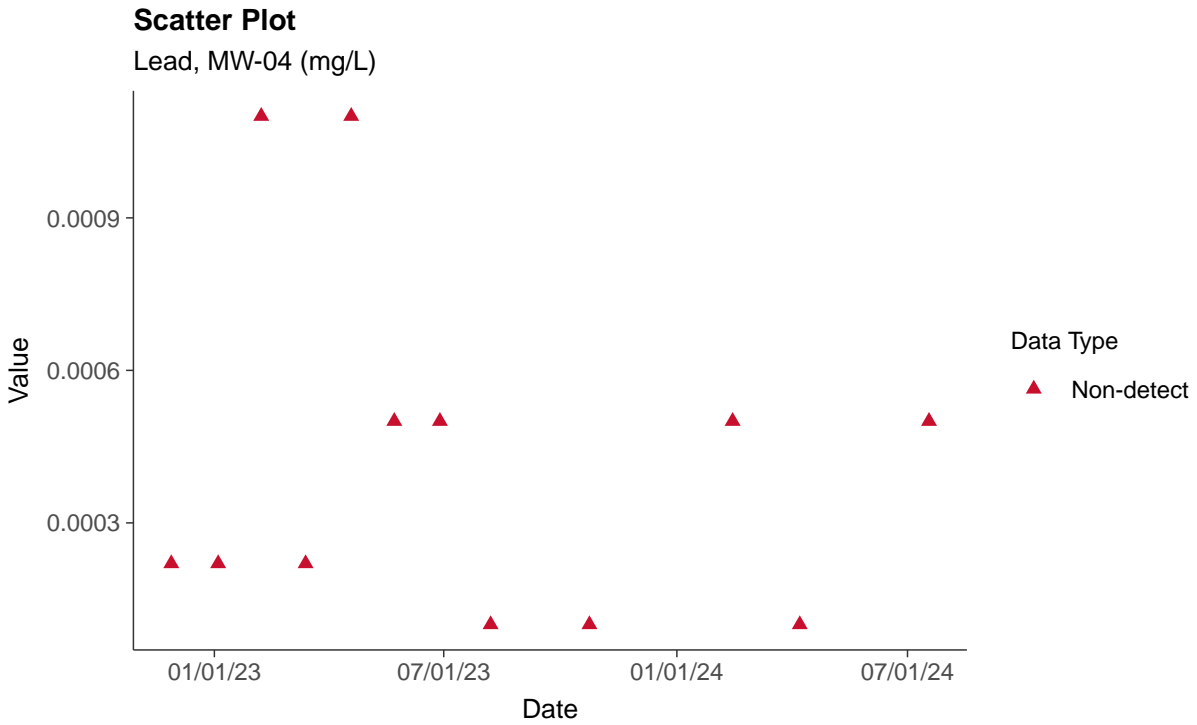
**Trend Regression: Piecewise Linear-Linear**  
Fluoride (App IV), MW-04 (mg/L)





### Appendix IV: Lead, MW-04

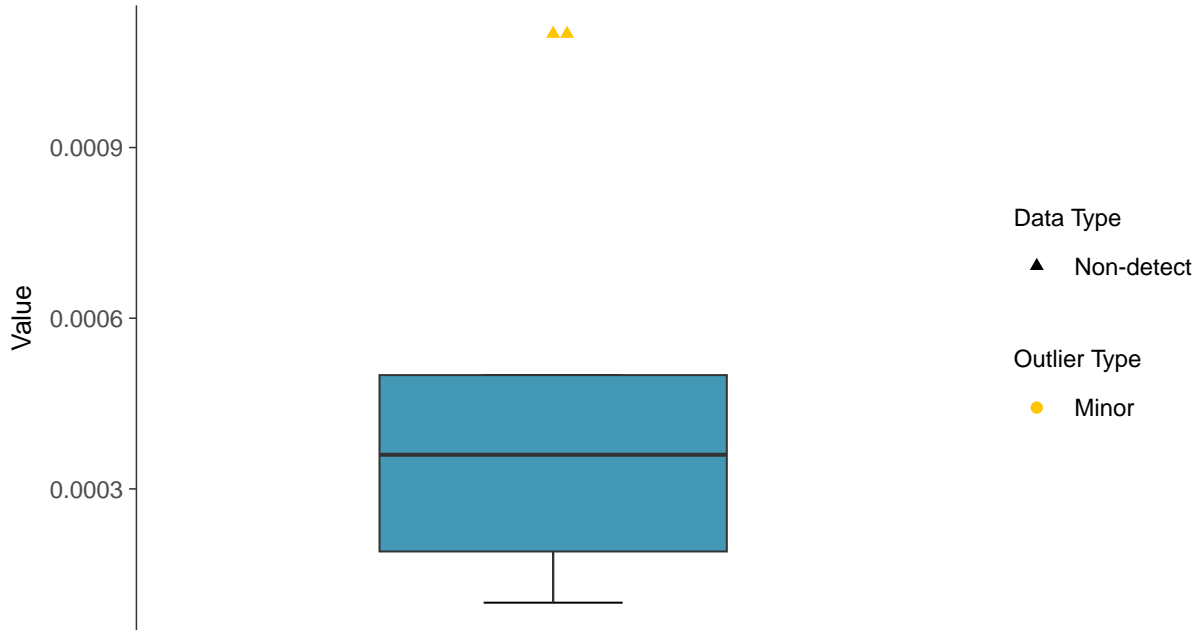
ID: 14\_2\_5\_115





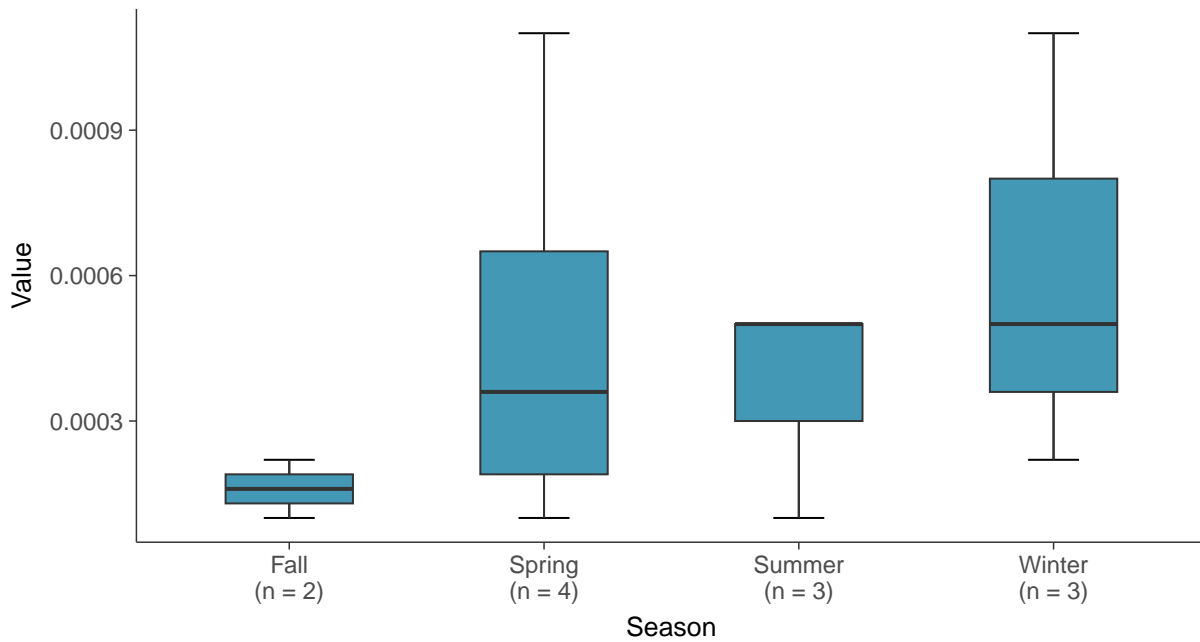
### Boxplot

Lead, MW-04 (mg/L)



### Boxplot by Season

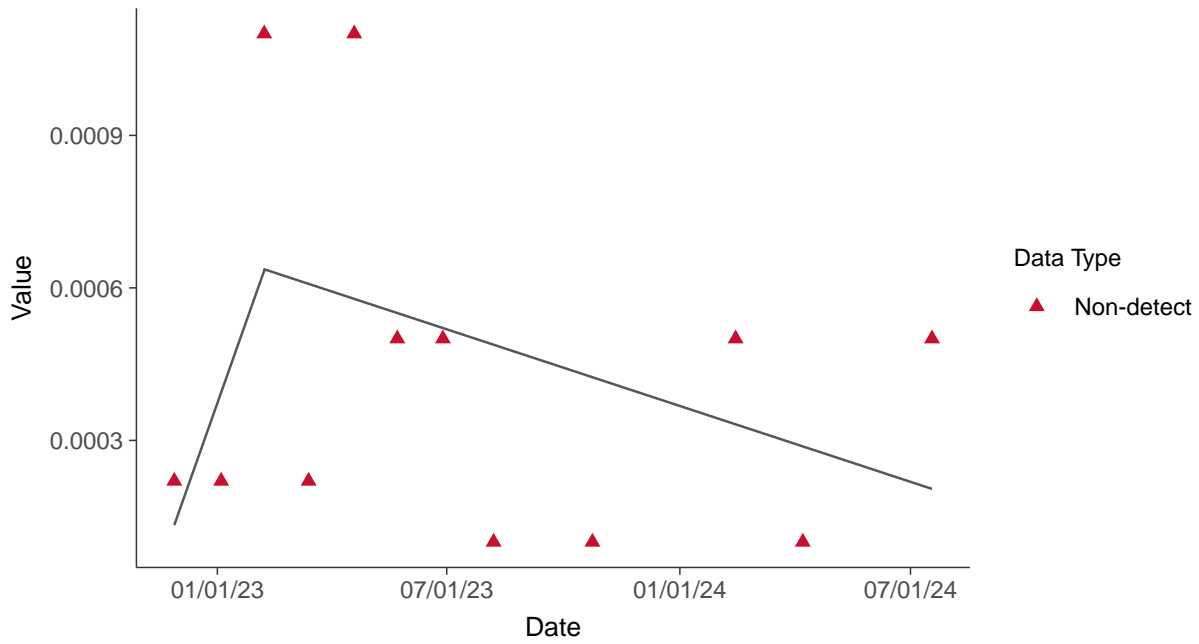
Lead, MW-04 (mg/L)





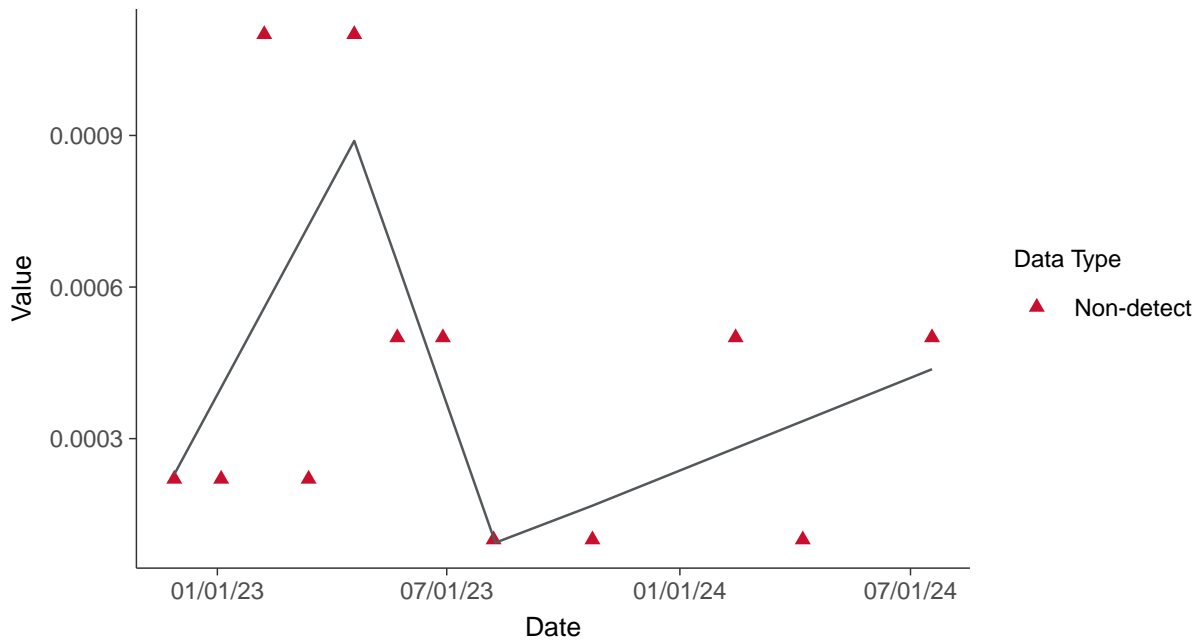
### Trend Regression: Piecewise Linear-Linear

Lead, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-04 (mg/L)



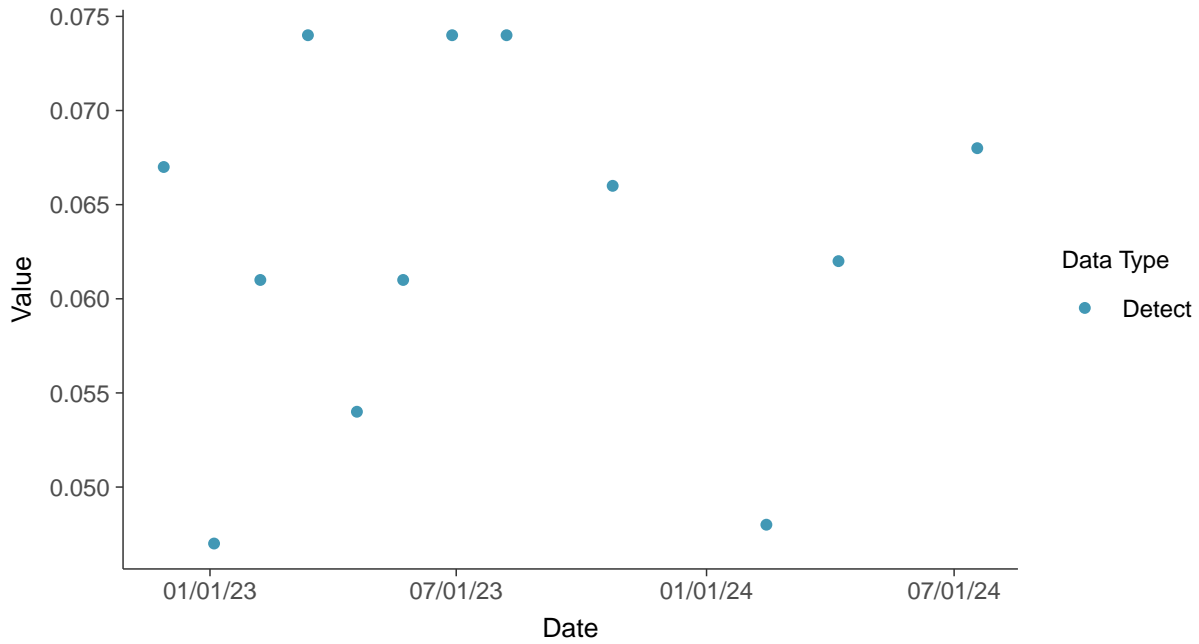


### Appendix IV: Lithium, MW-04

ID: 14\_2\_5\_116

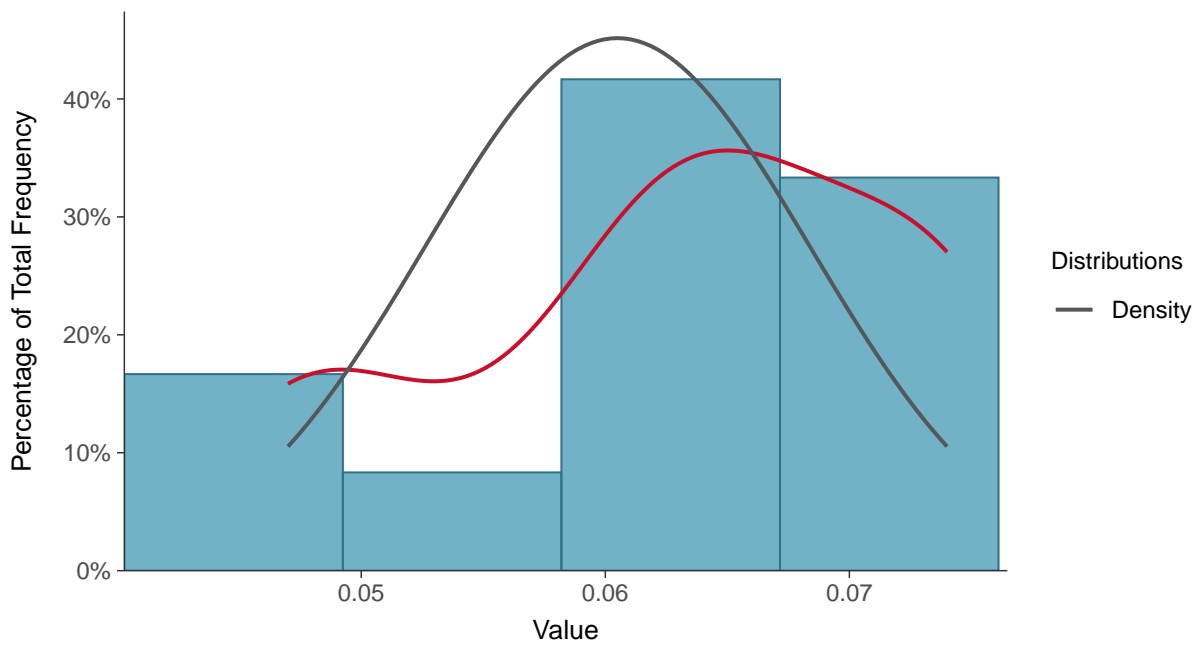
#### Scatter Plot

Lithium, MW-04 (mg/L)



#### Histogram

Lithium, MW-04 (mg/L)

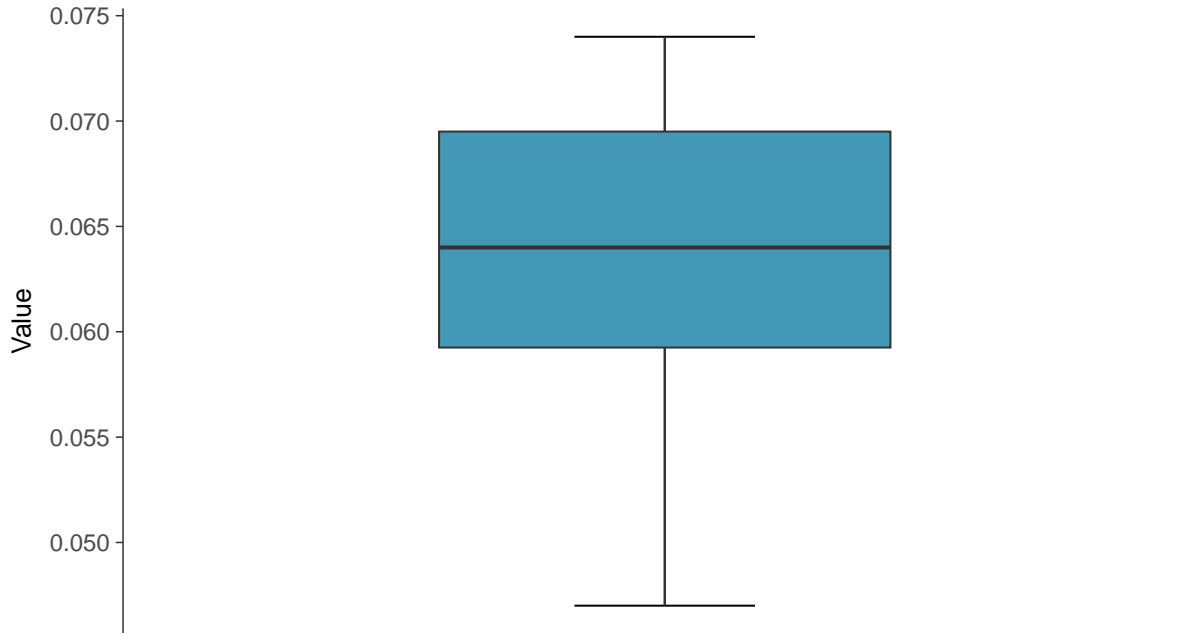






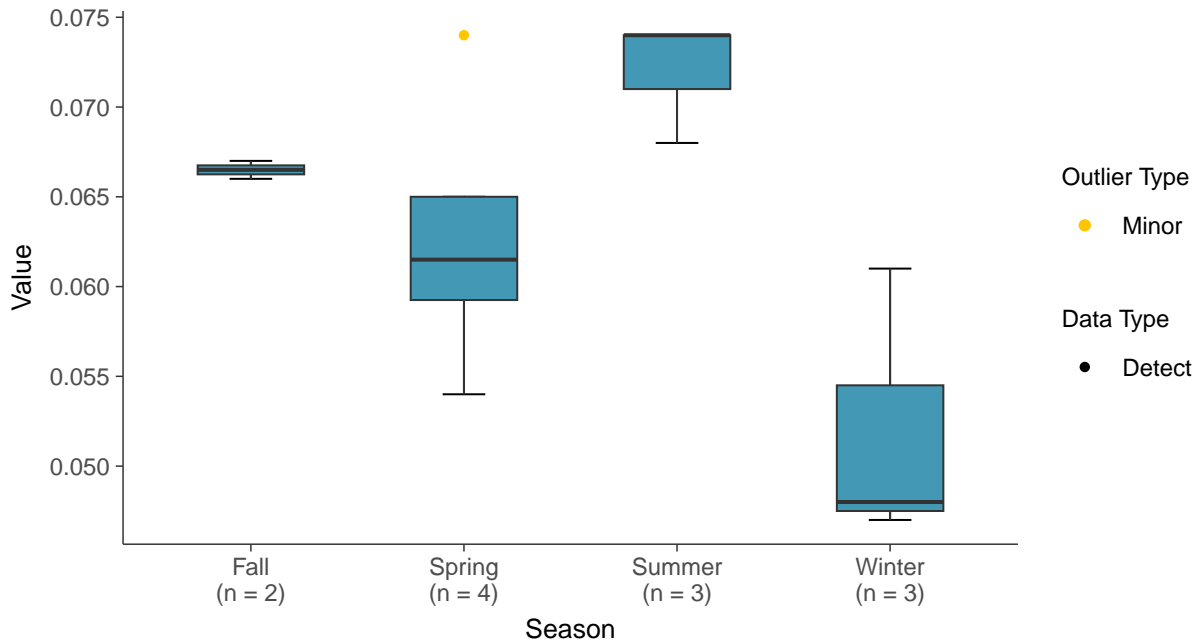
### Boxplot

Lithium, MW-04 (mg/L)



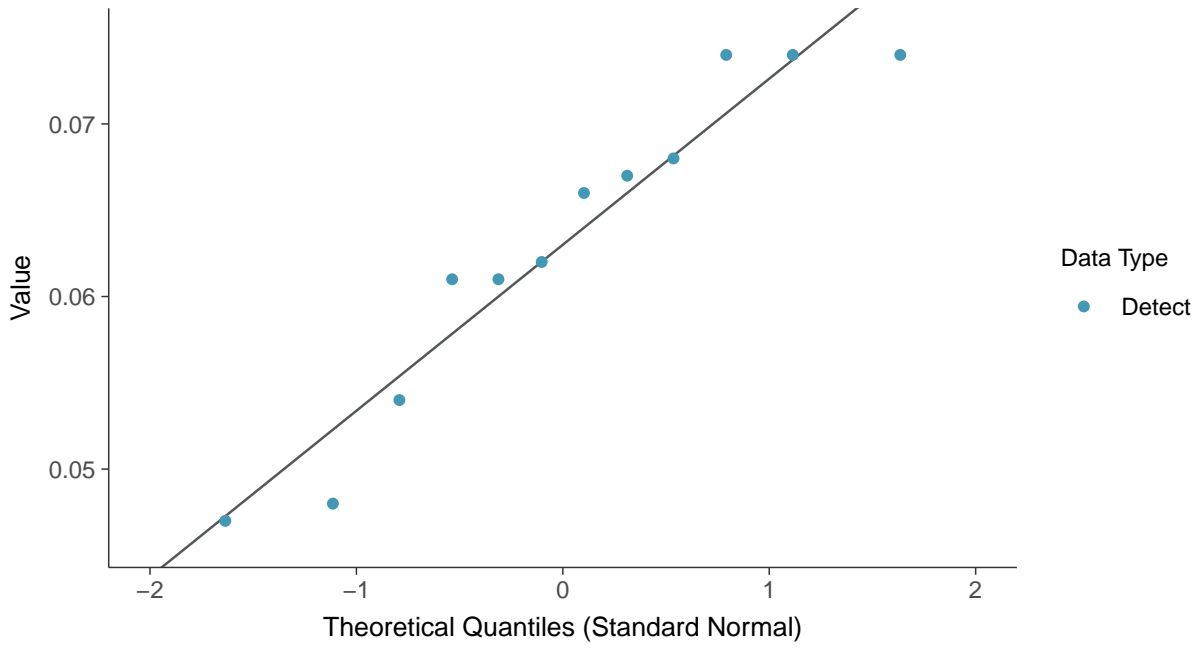
### Boxplot by Season

Lithium, MW-04 (mg/L)

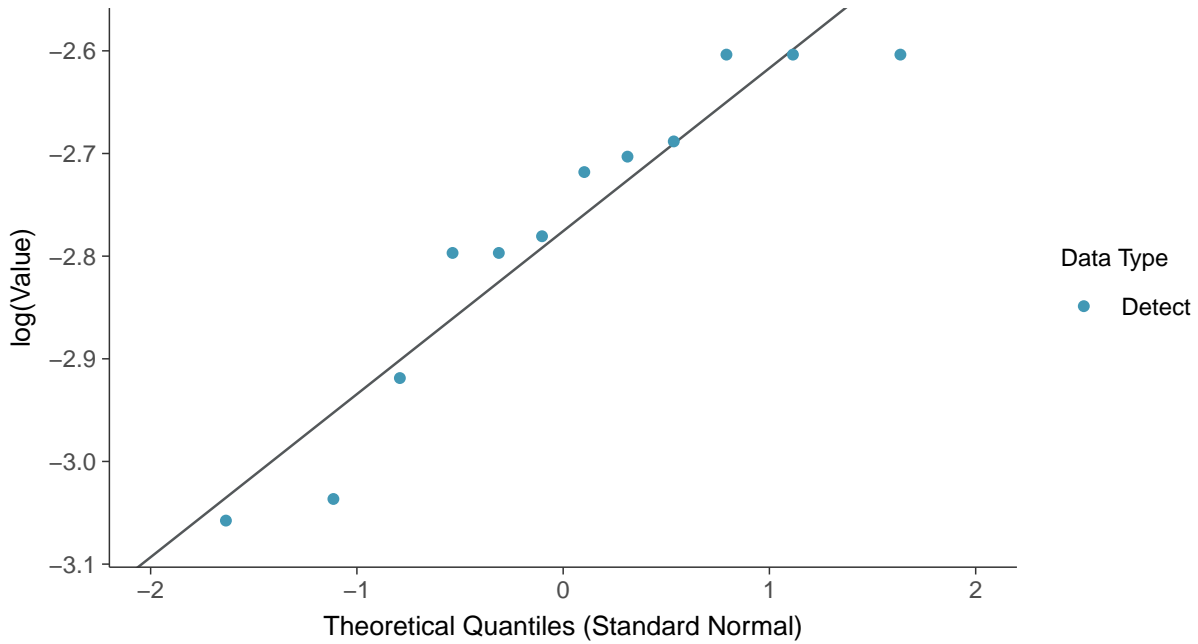




**Normal Q-Q plot**  
Lithium, MW-04 (mg/L)

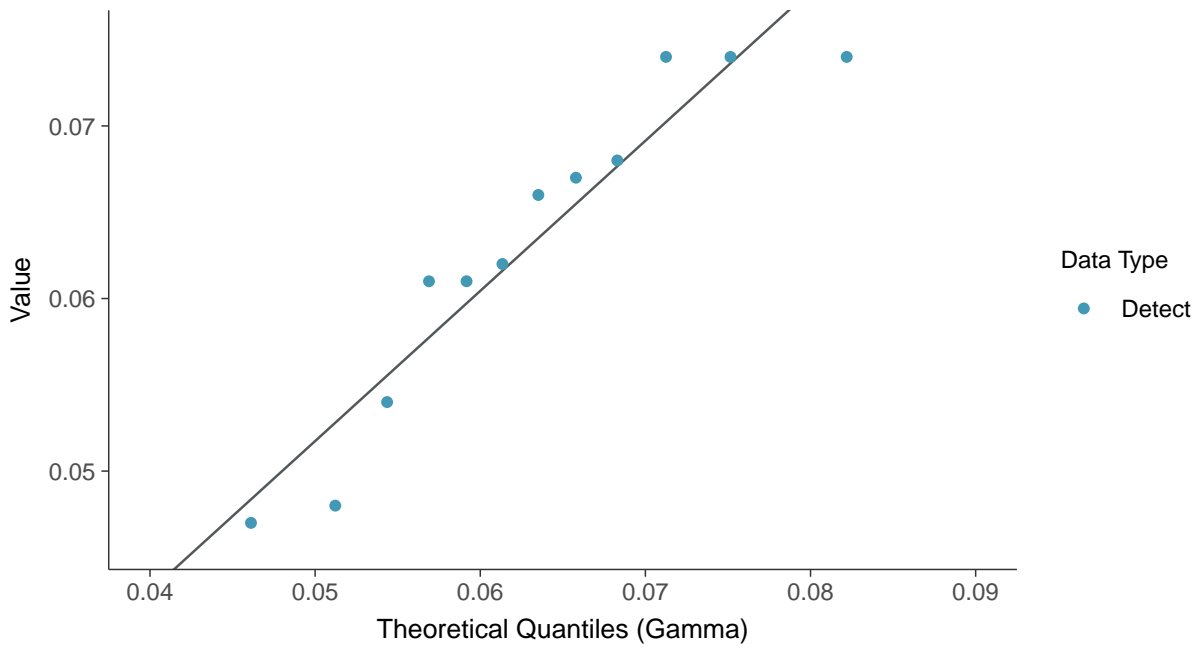


**Lognormal Q-Q plot**  
Lithium, MW-04 (mg/L)

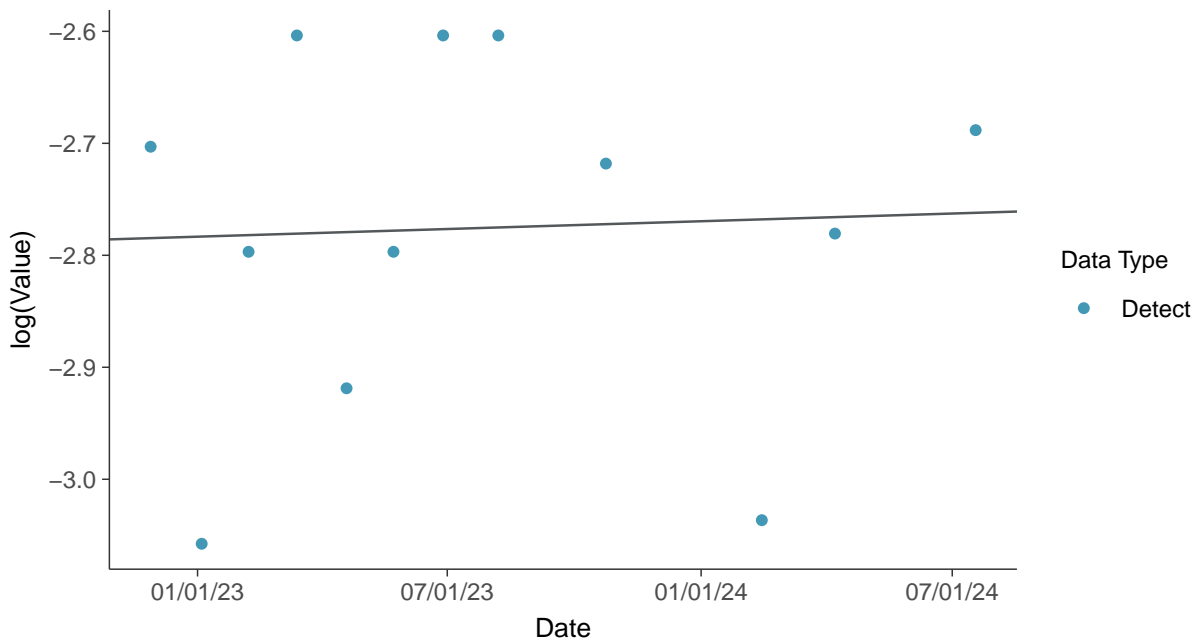




**Gamma Q-Q plot**  
Lithium, MW-04 (mg/L)



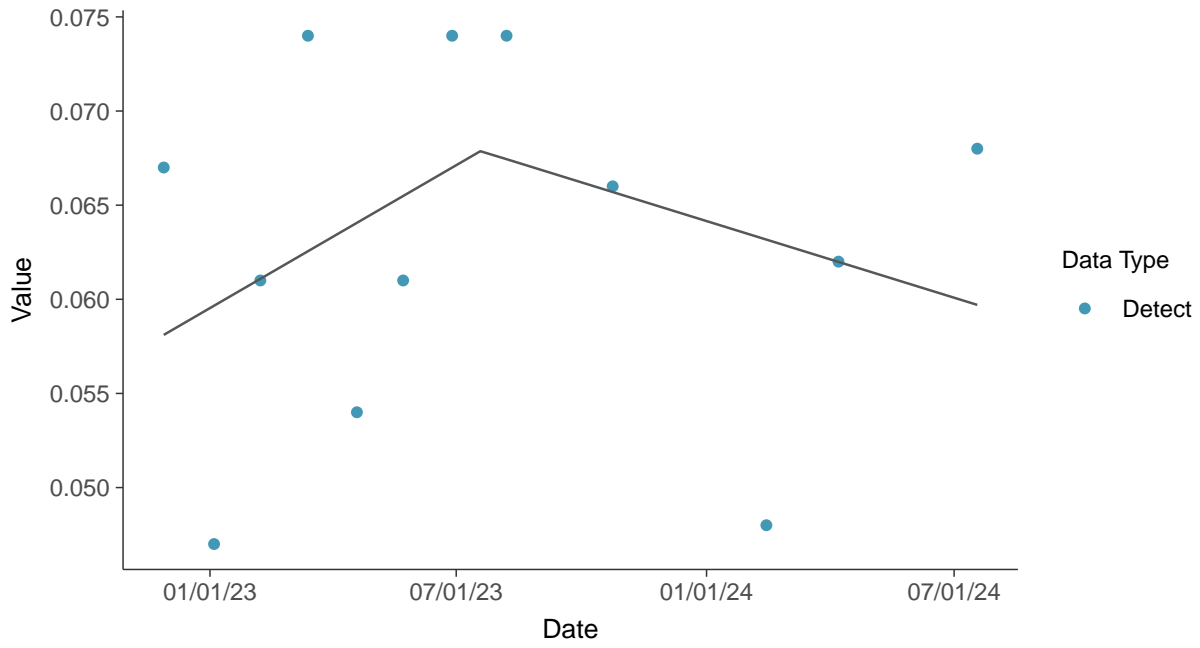
**Trend Regression: Lognormal MLE**  
Lithium, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear

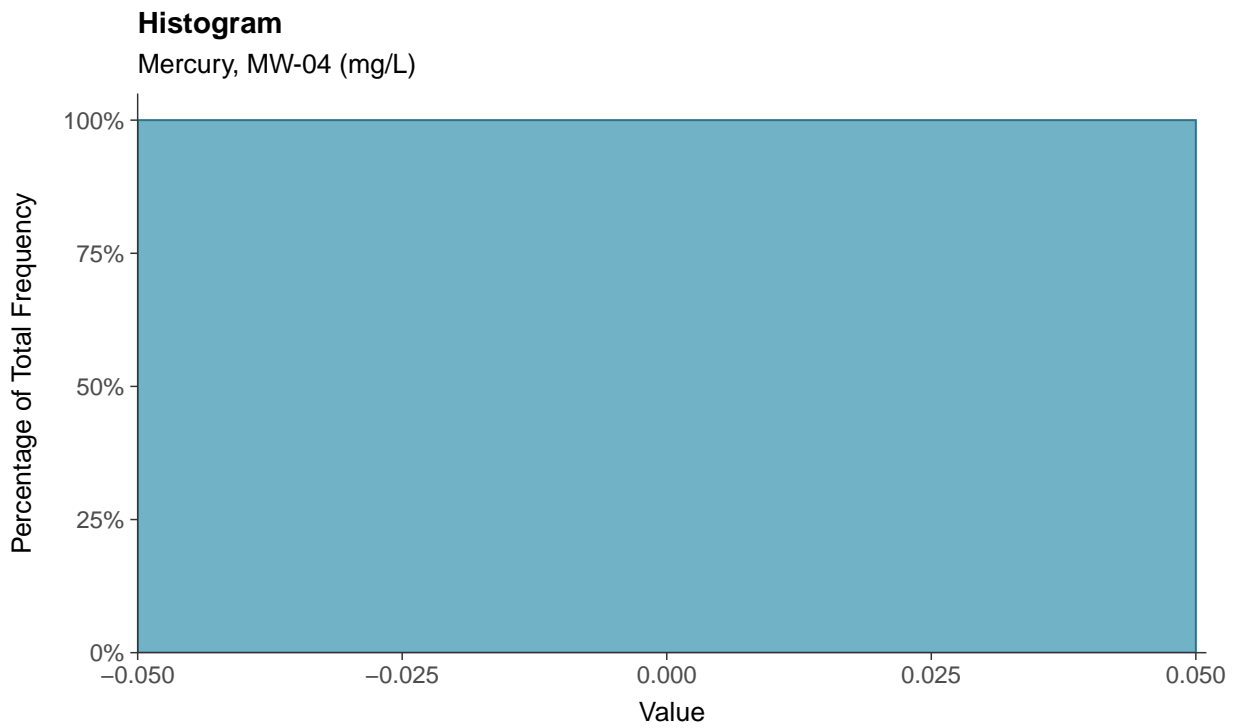
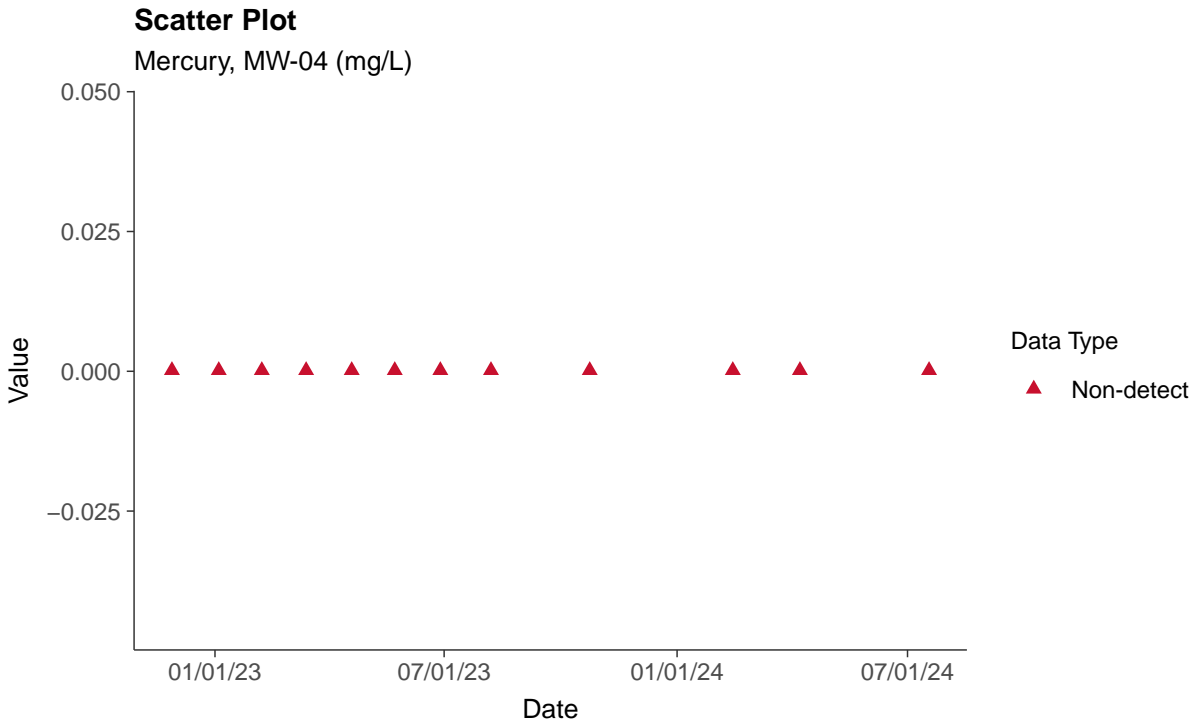
Lithium, MW-04 (mg/L)





### Appendix IV: Mercury, MW-04

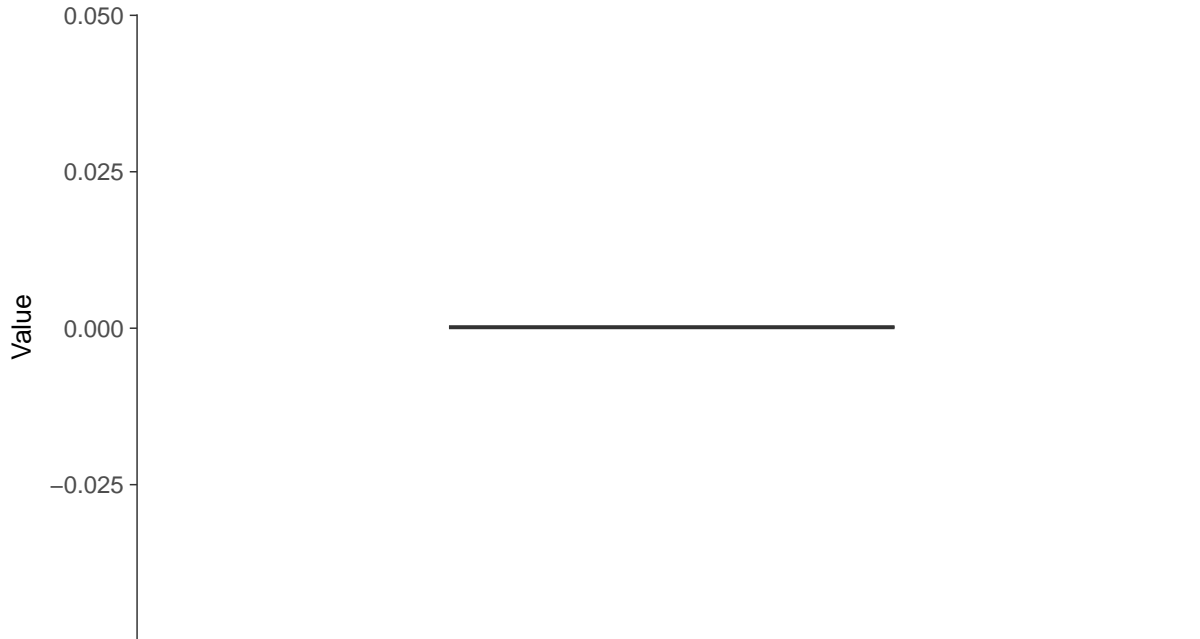
ID: 14\_2\_5\_117





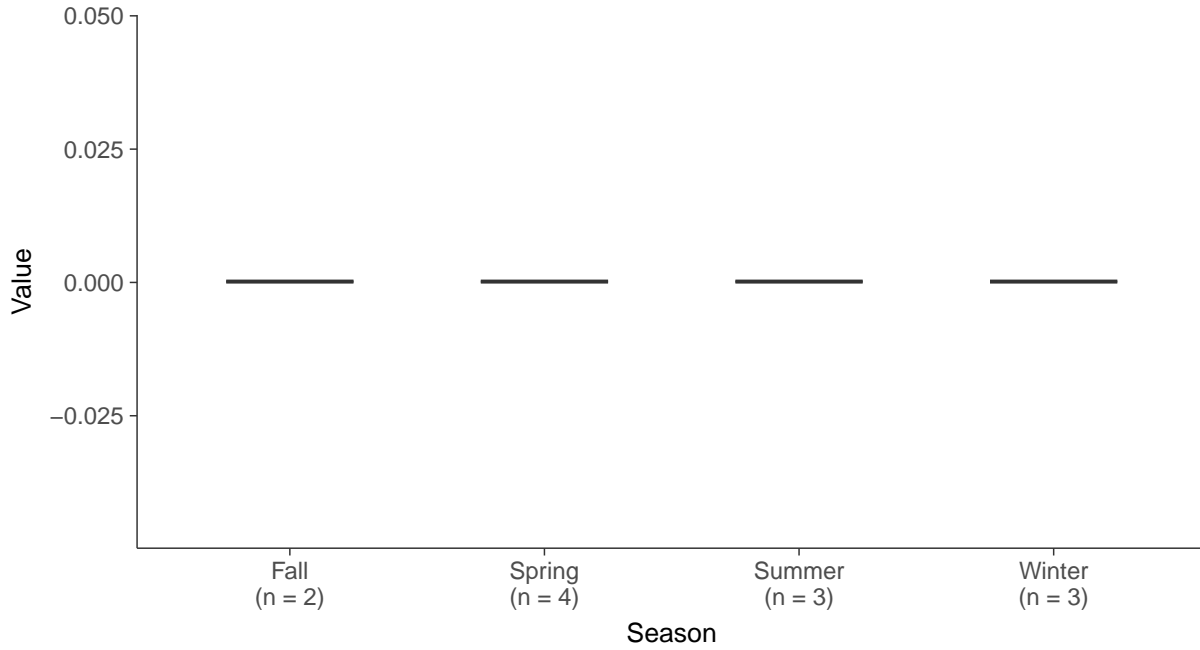
### Boxplot

Mercury, MW-04 (mg/L)



### Boxplot by Season

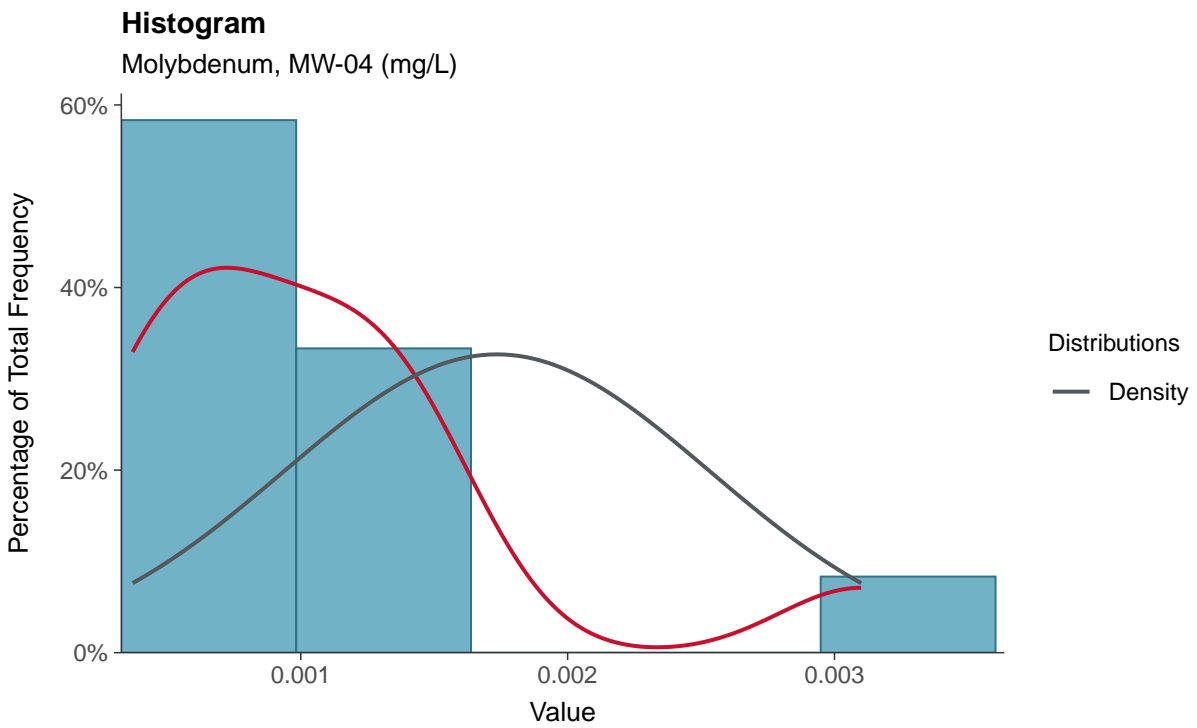
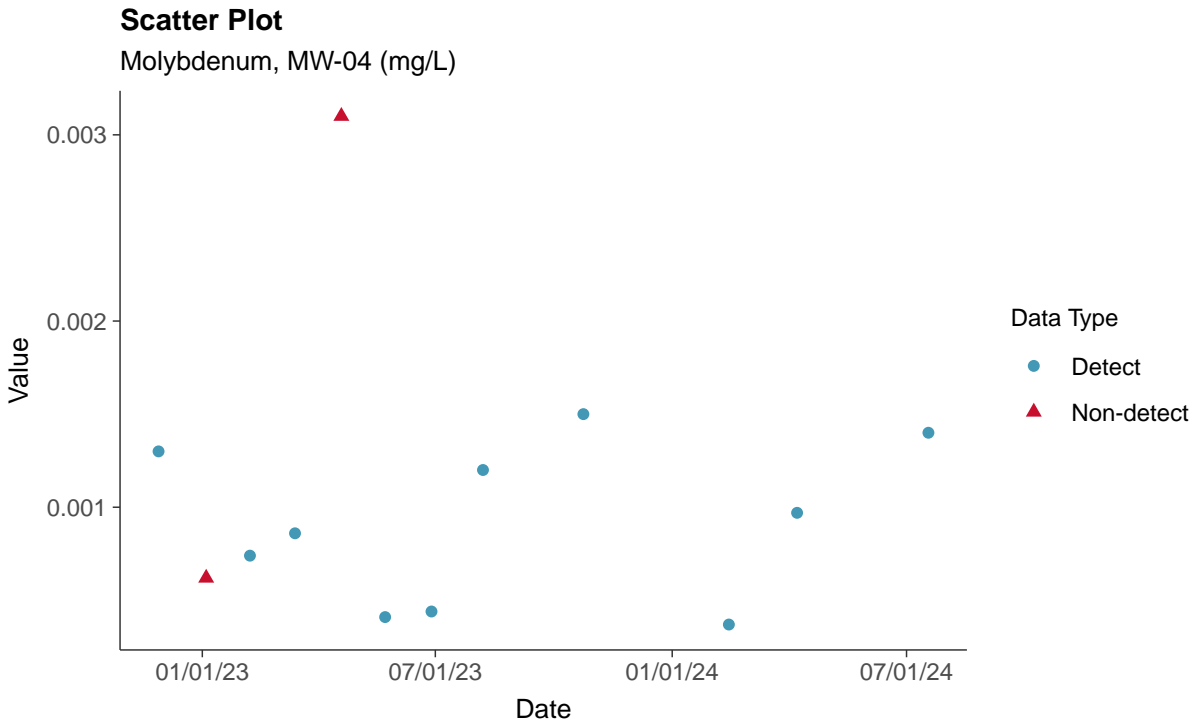
Mercury, MW-04 (mg/L)





### Appendix IV: Molybdenum, MW-04

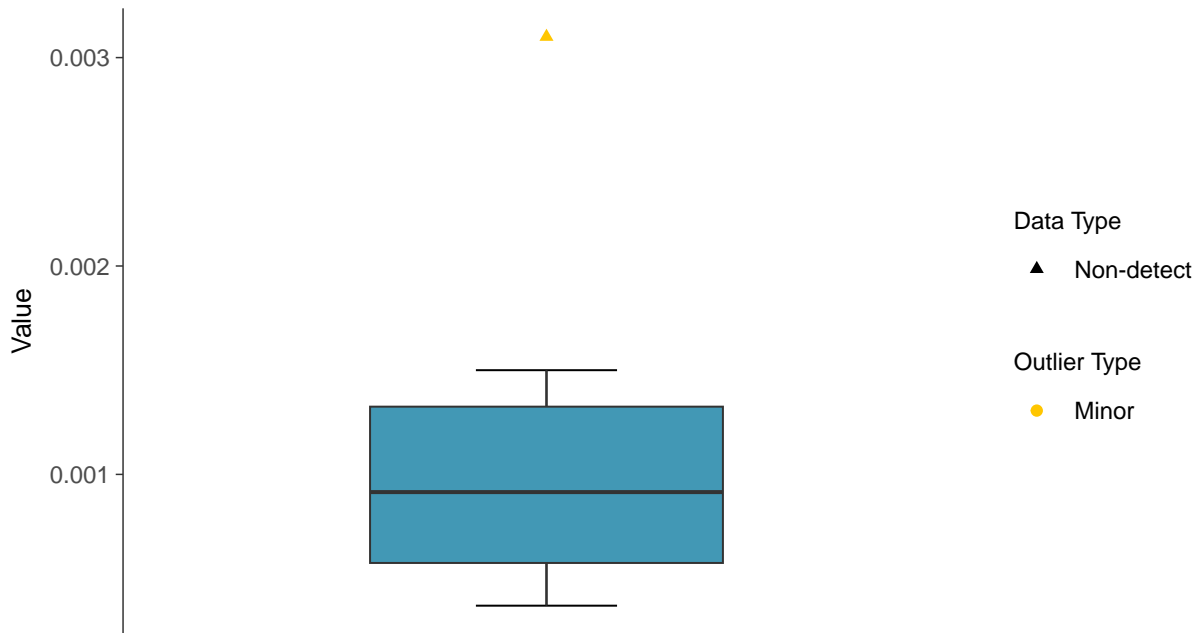
ID: 14\_2\_5\_118





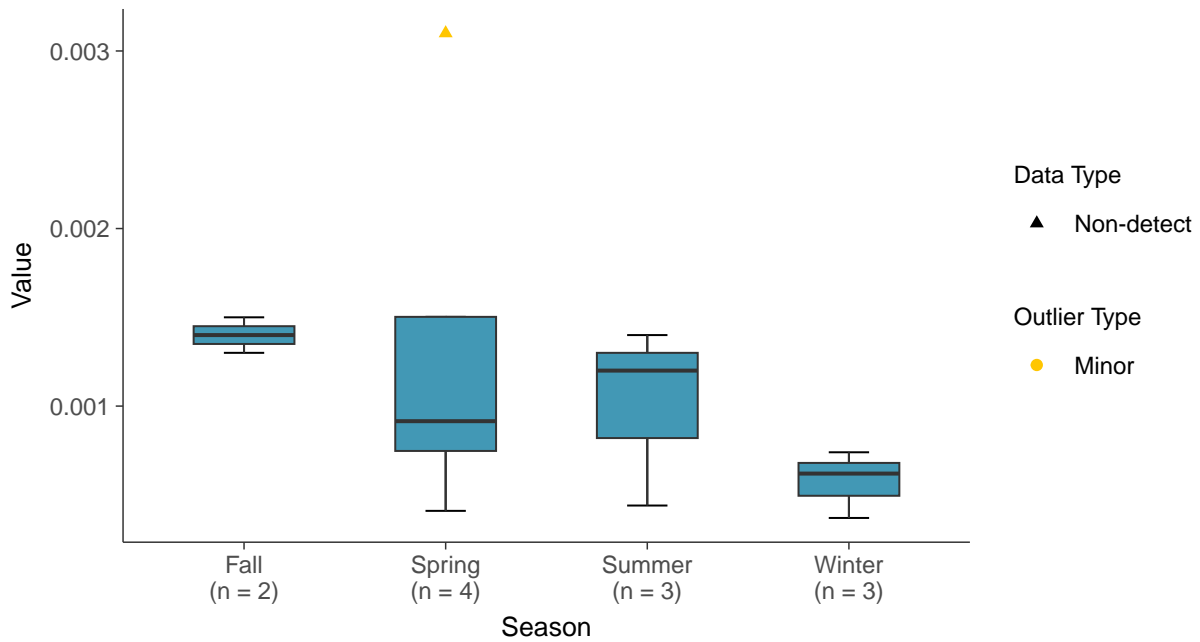
### Boxplot

Molybdenum, MW-04 (mg/L)



### Boxplot by Season

Molybdenum, MW-04 (mg/L)

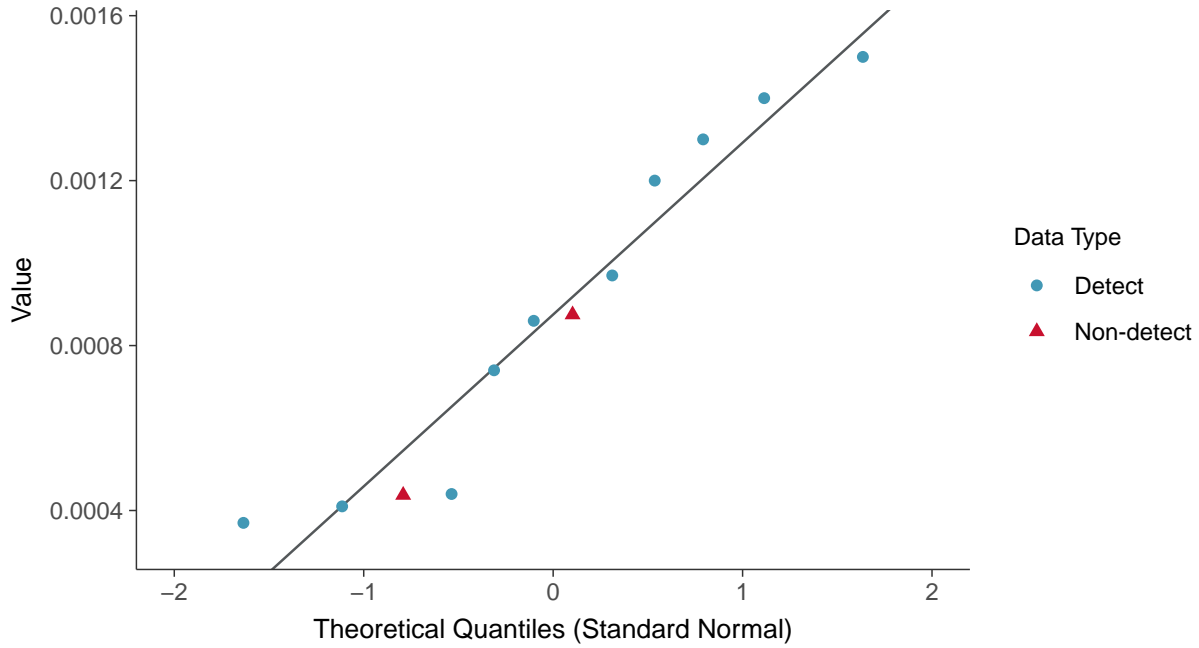






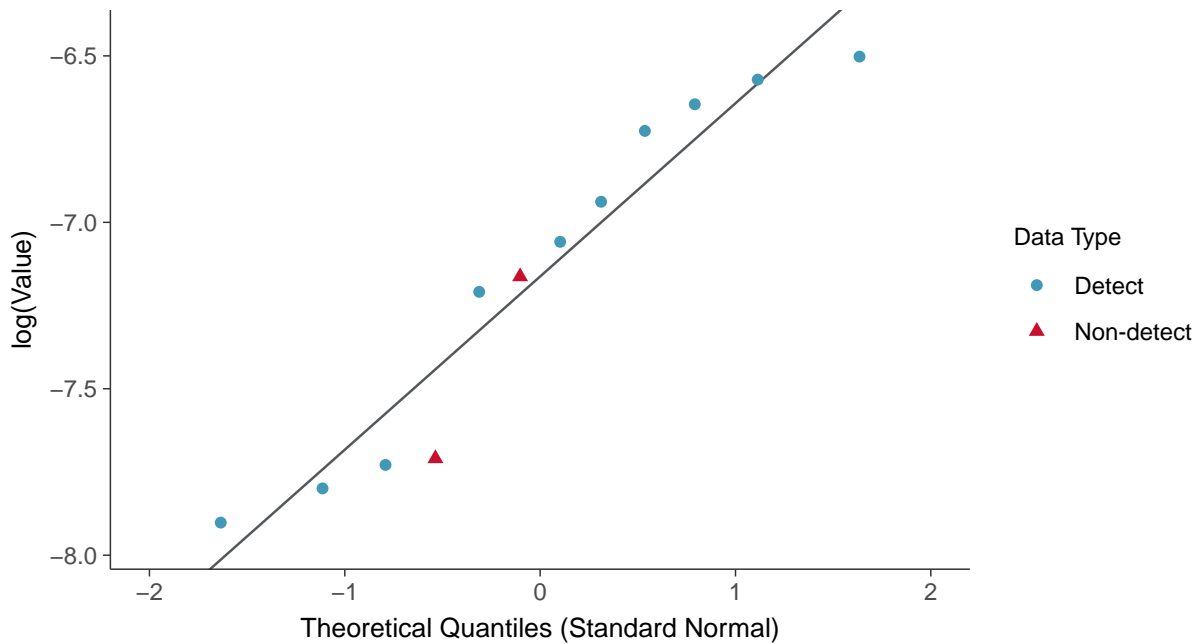
### Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

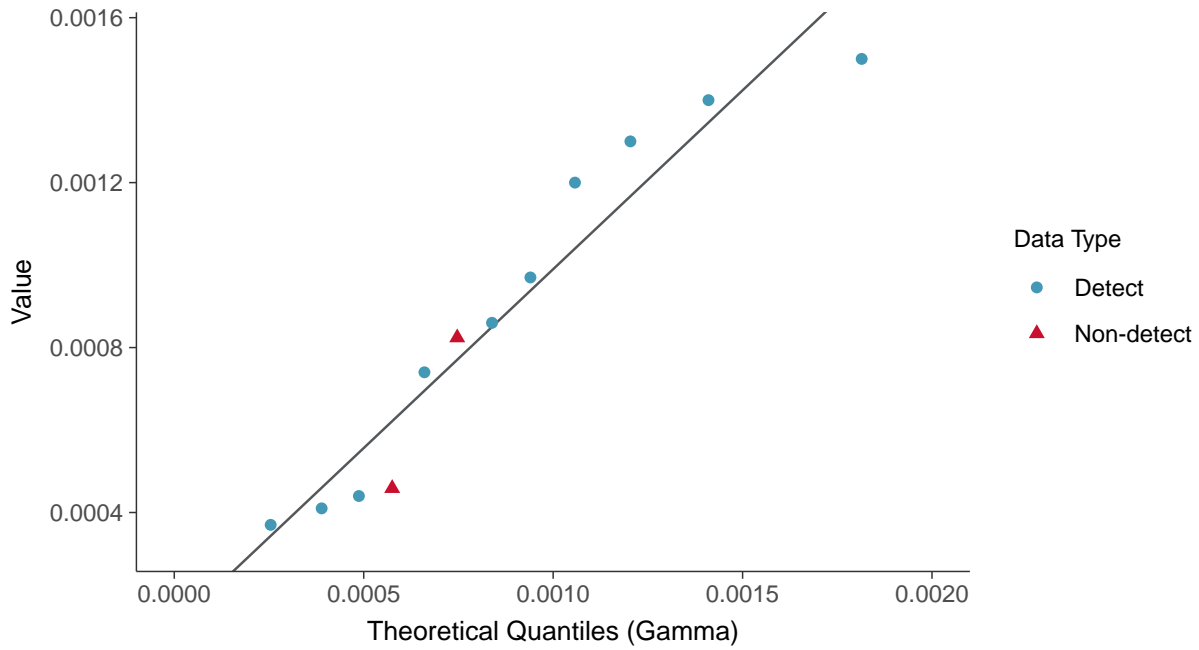
Molybdenum, MW-04 (mg/L)





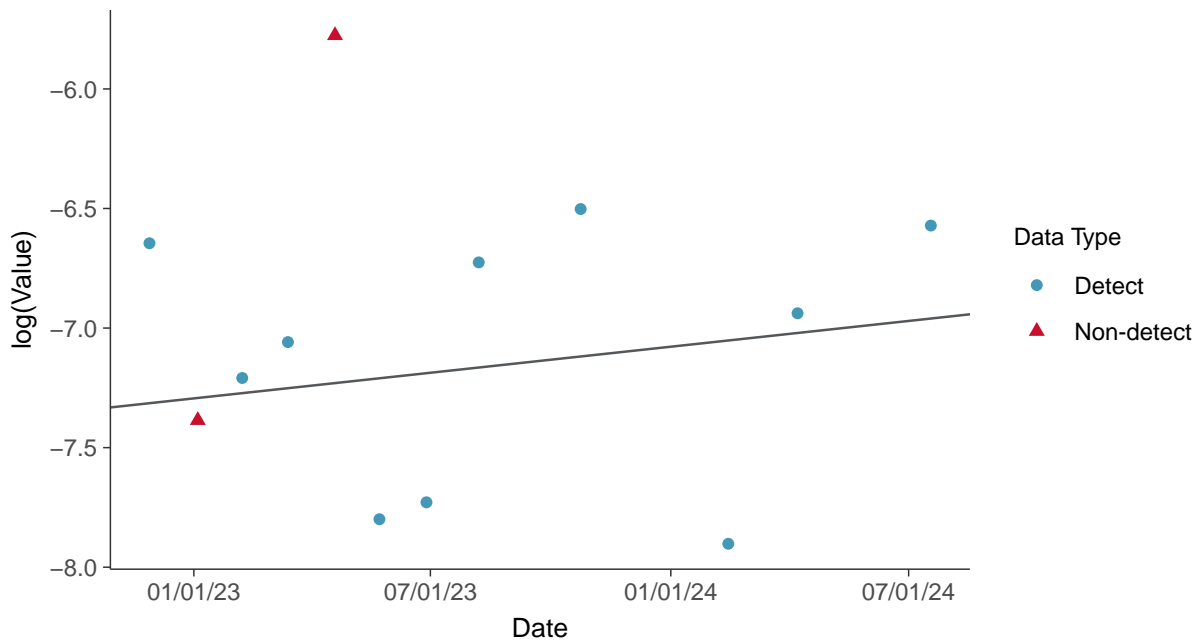
### Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

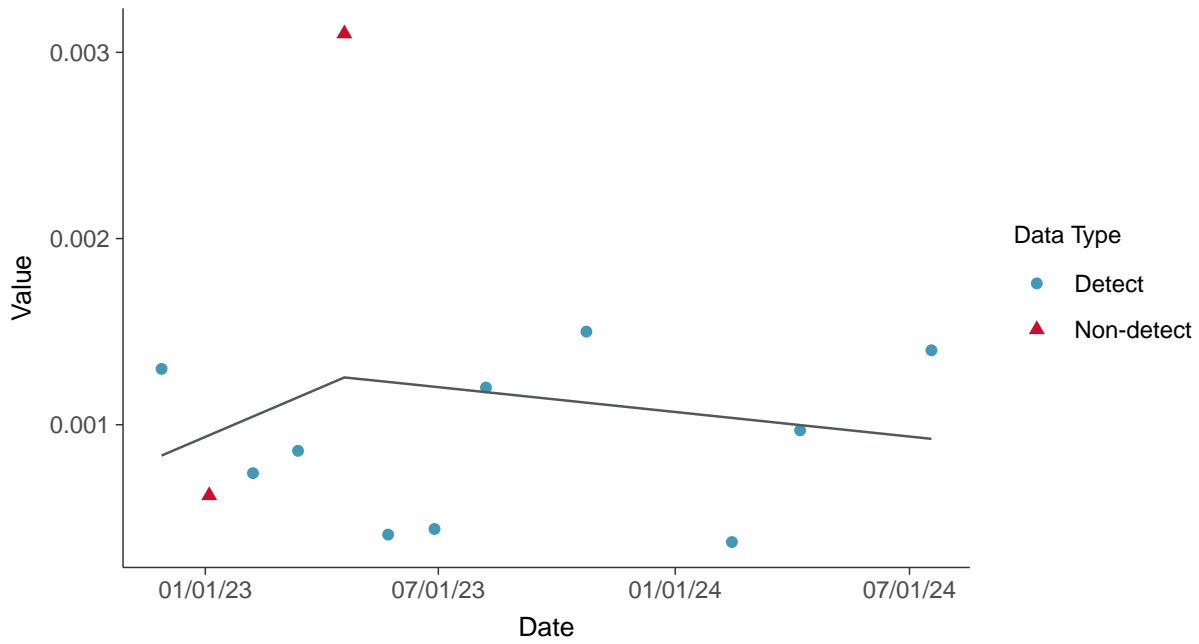
Molybdenum, MW-04 (mg/L)





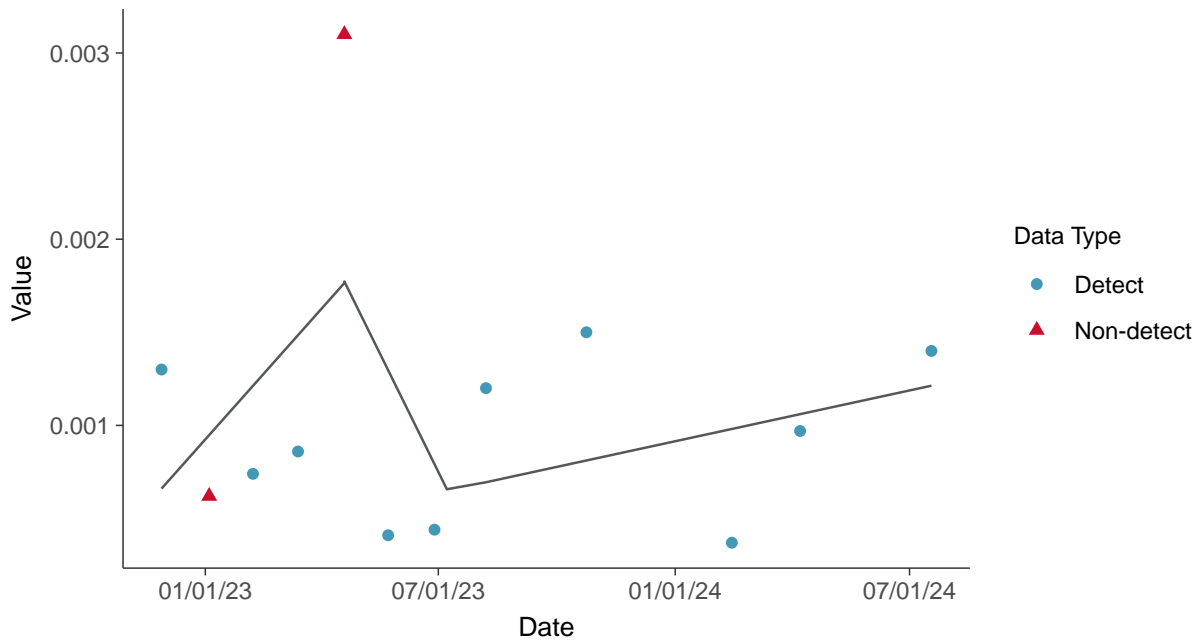
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-04 (mg/L)



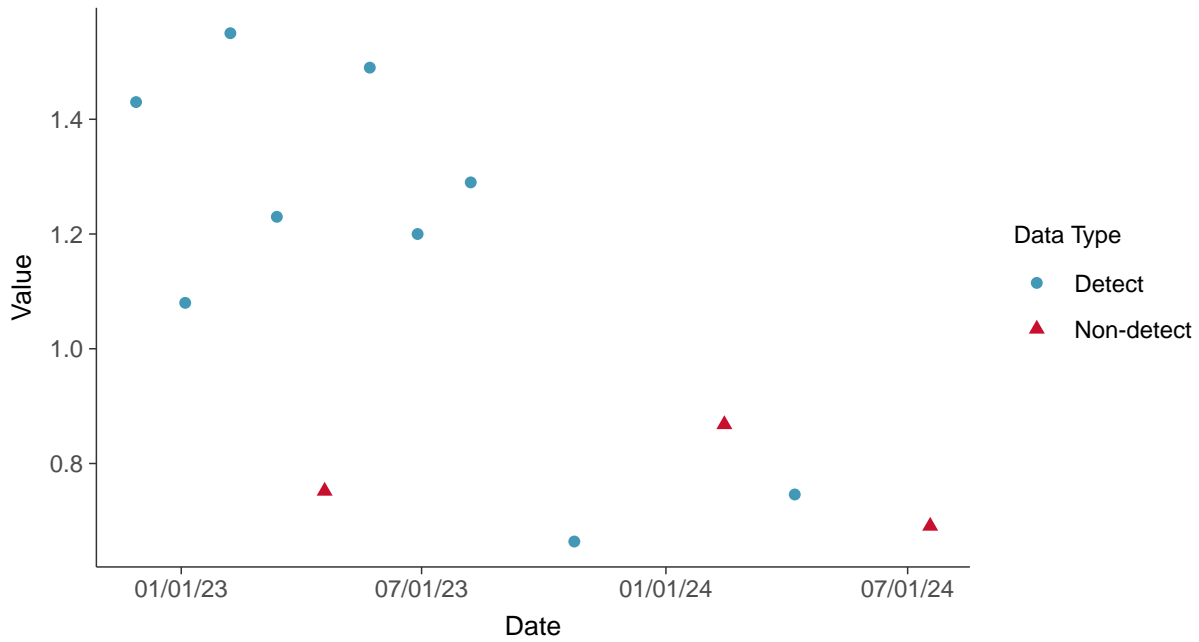


### Appendix IV: Radium 226 and 228, MW-04

ID: 14\_2\_5\_121

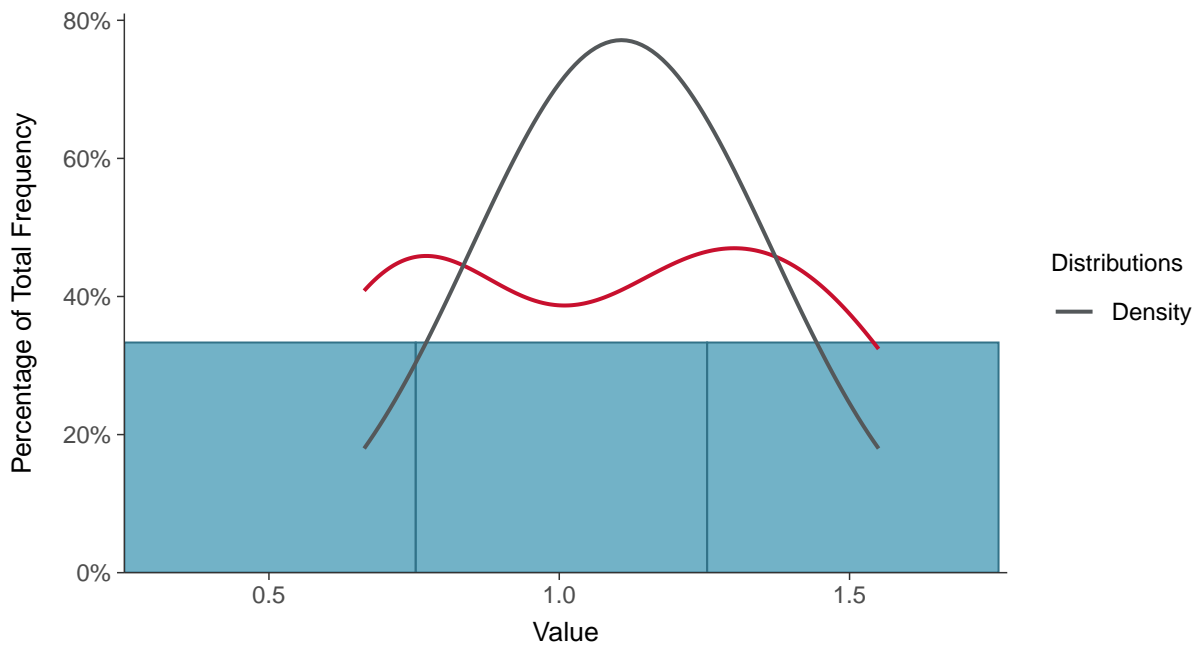
#### Scatter Plot

Radium 226 and 228, MW-04 (pCi/L)



#### Histogram

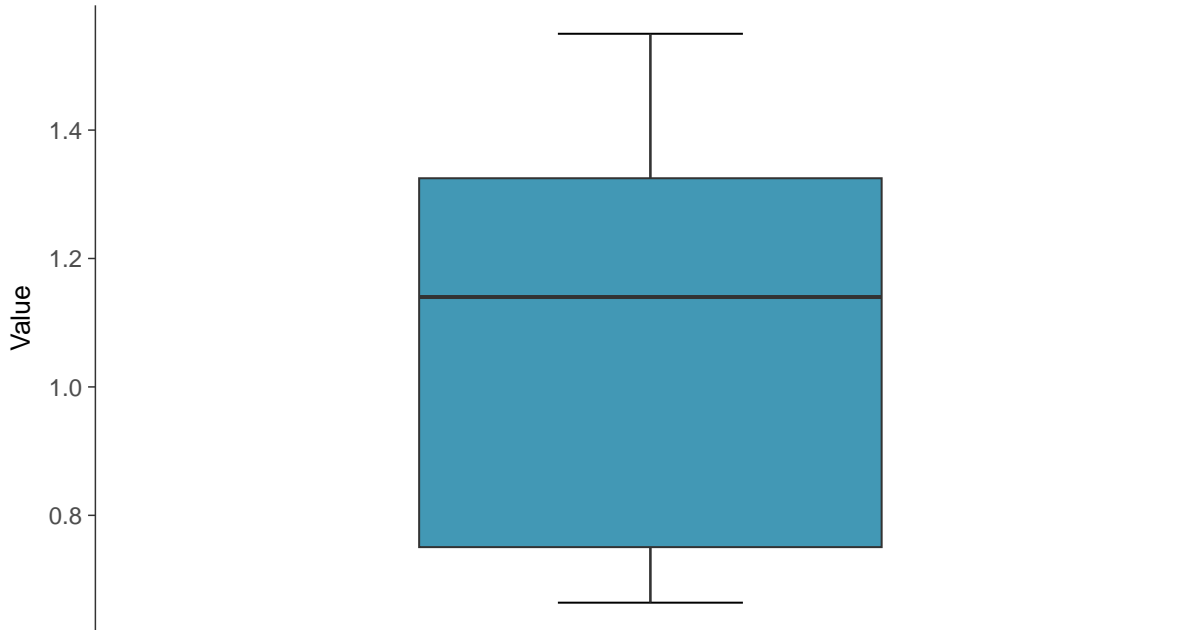
Radium 226 and 228, MW-04 (pCi/L)





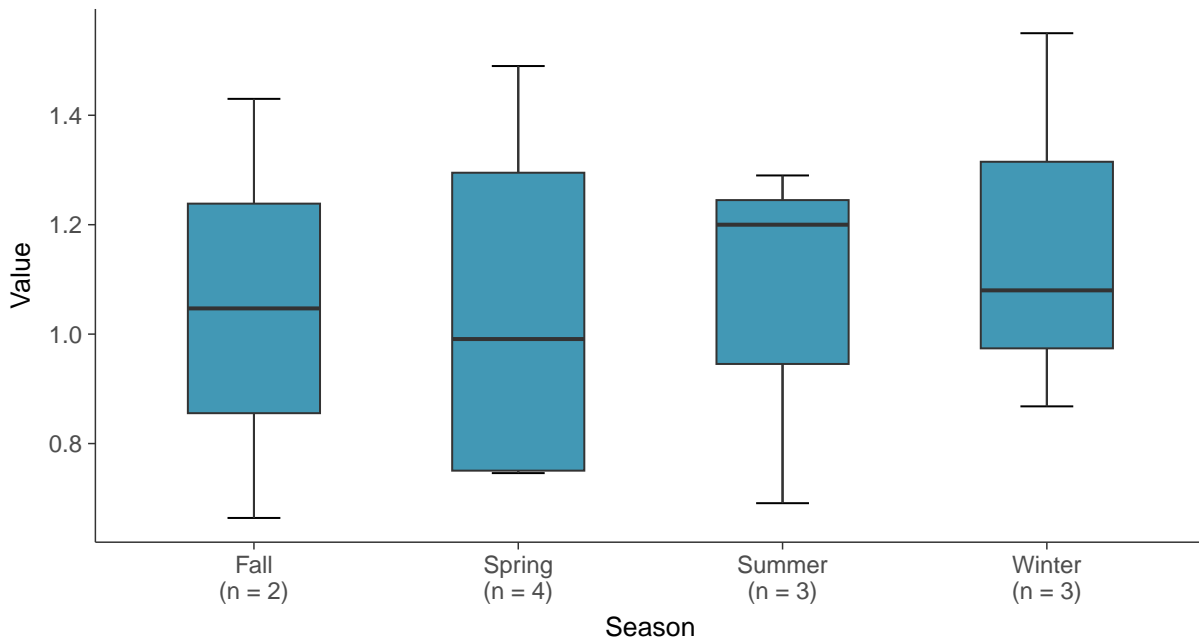
### Boxplot

Radium 226 and 228, MW-04 (pCi/L)



### Boxplot by Season

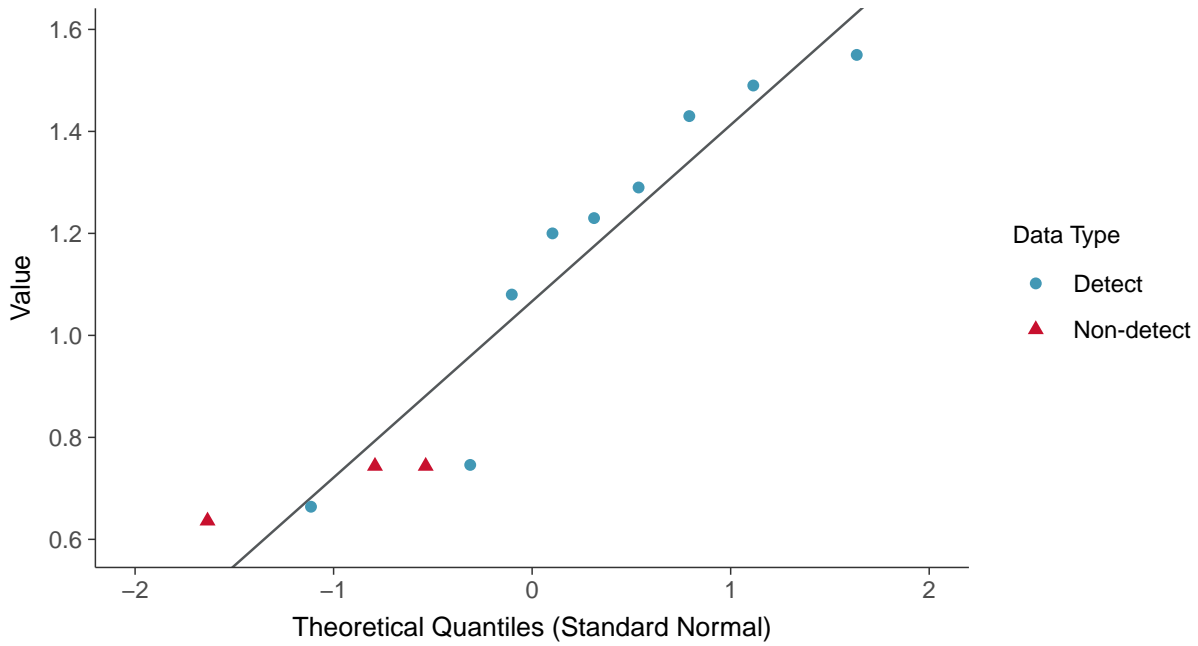
Radium 226 and 228, MW-04 (pCi/L)





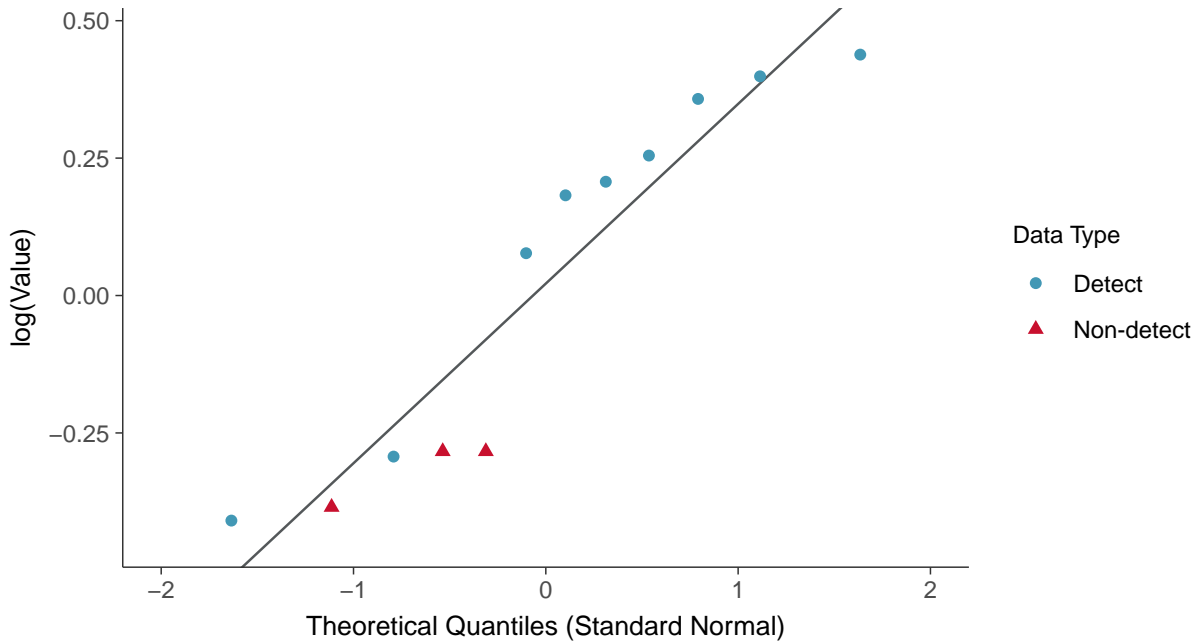
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

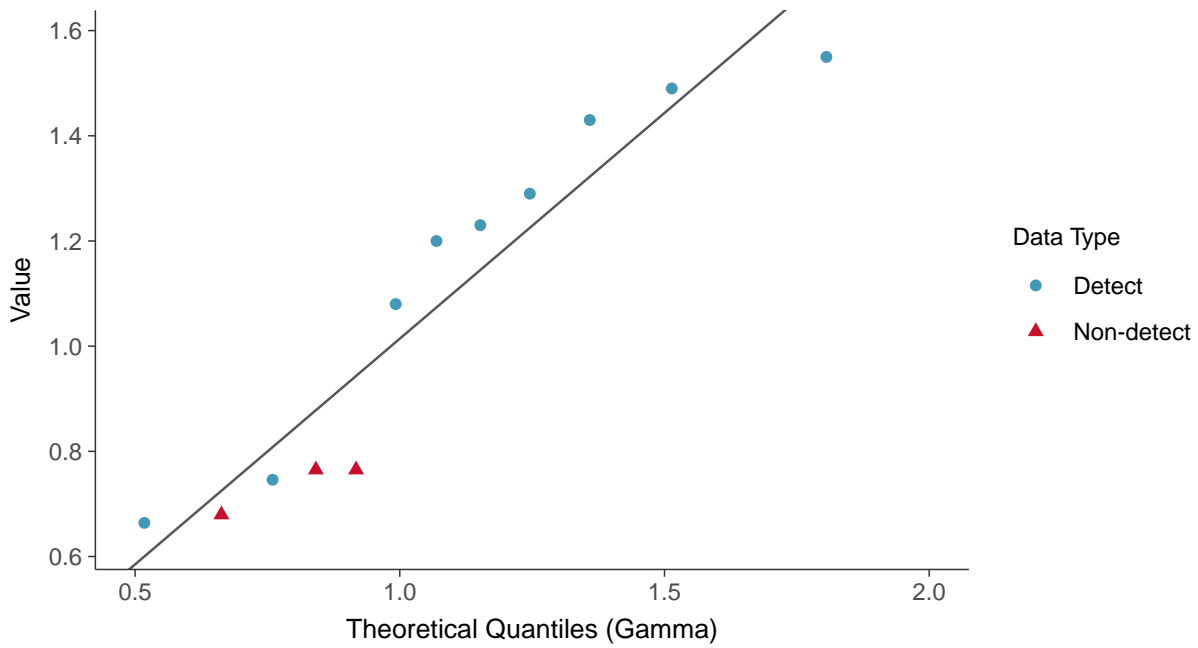
Radium 226 and 228, MW-04 (pCi/L)





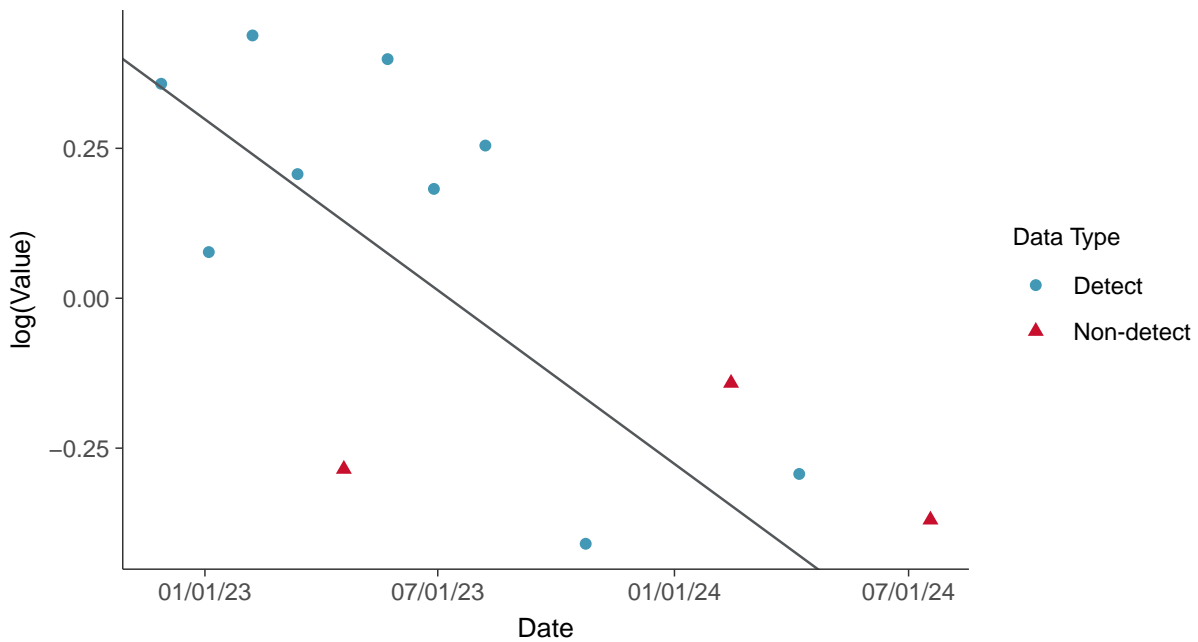
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-04 (pCi/L)



### Trend Regression: Lognormal MLE

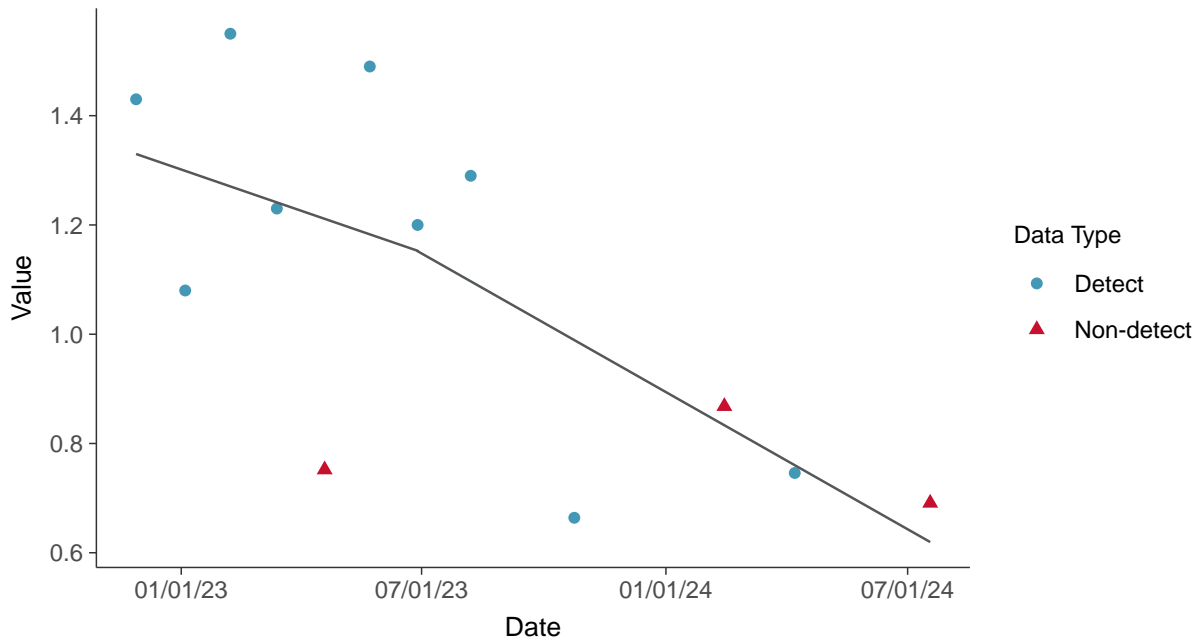
Radium 226 and 228, MW-04 (pCi/L)





### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-04 (pCi/L)

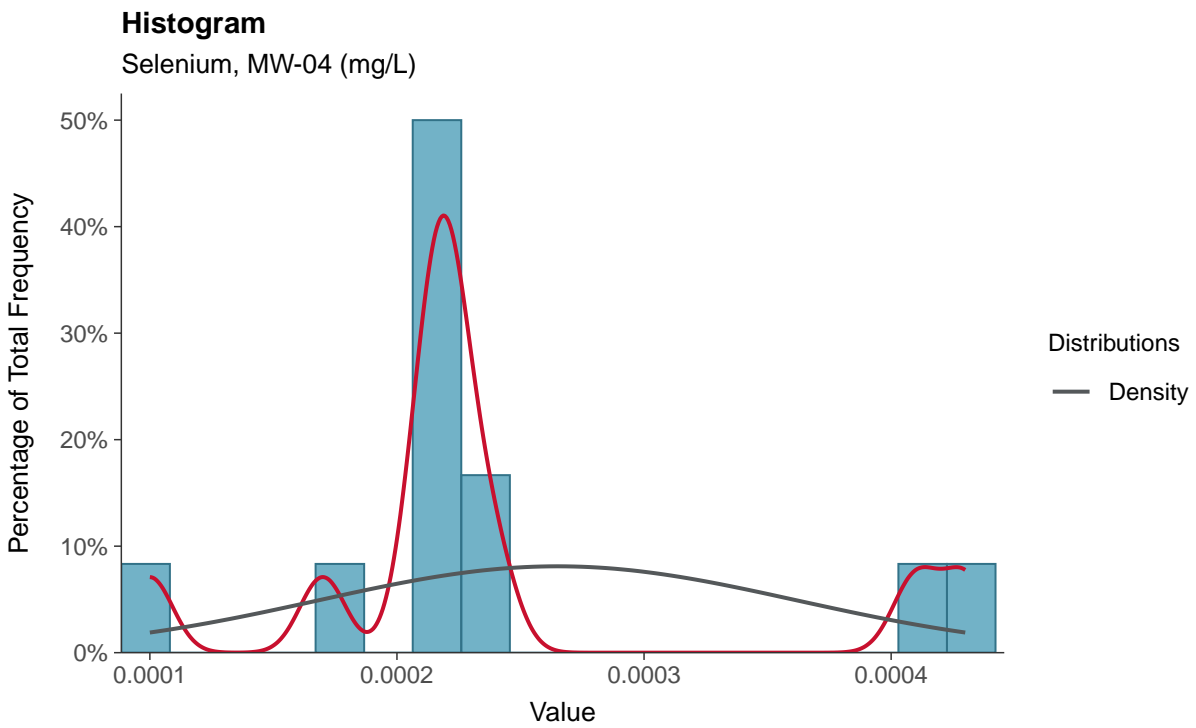
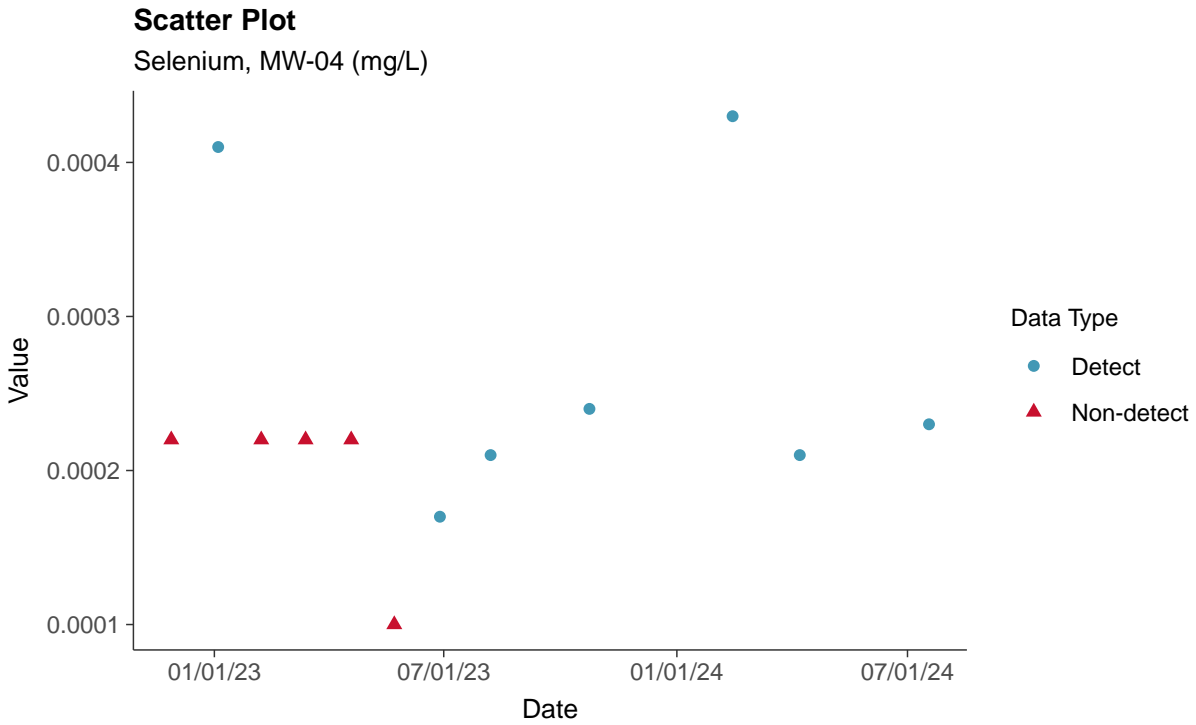






### Appendix IV: Selenium, MW-04

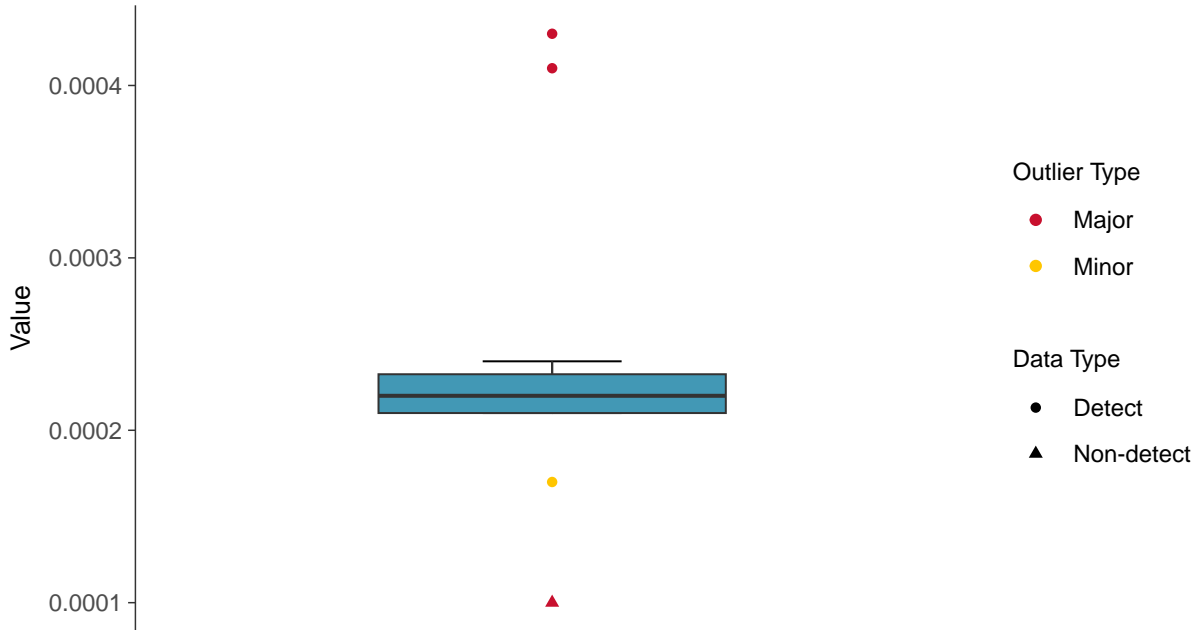
ID: 14\_2\_5\_122





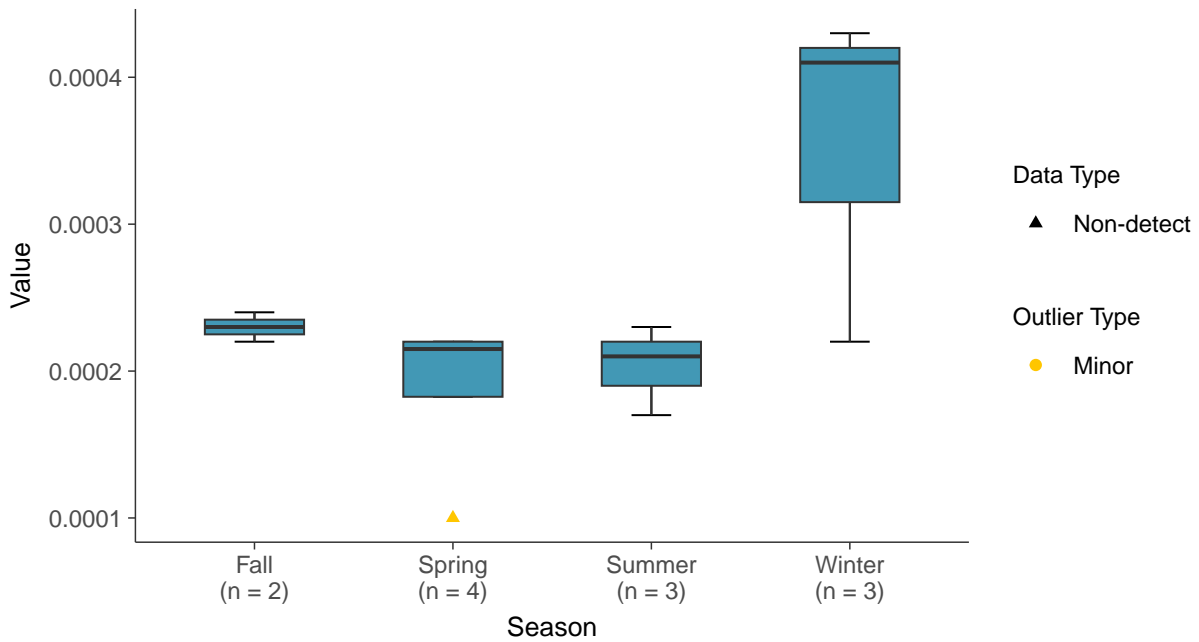
### Boxplot

Selenium, MW-04 (mg/L)



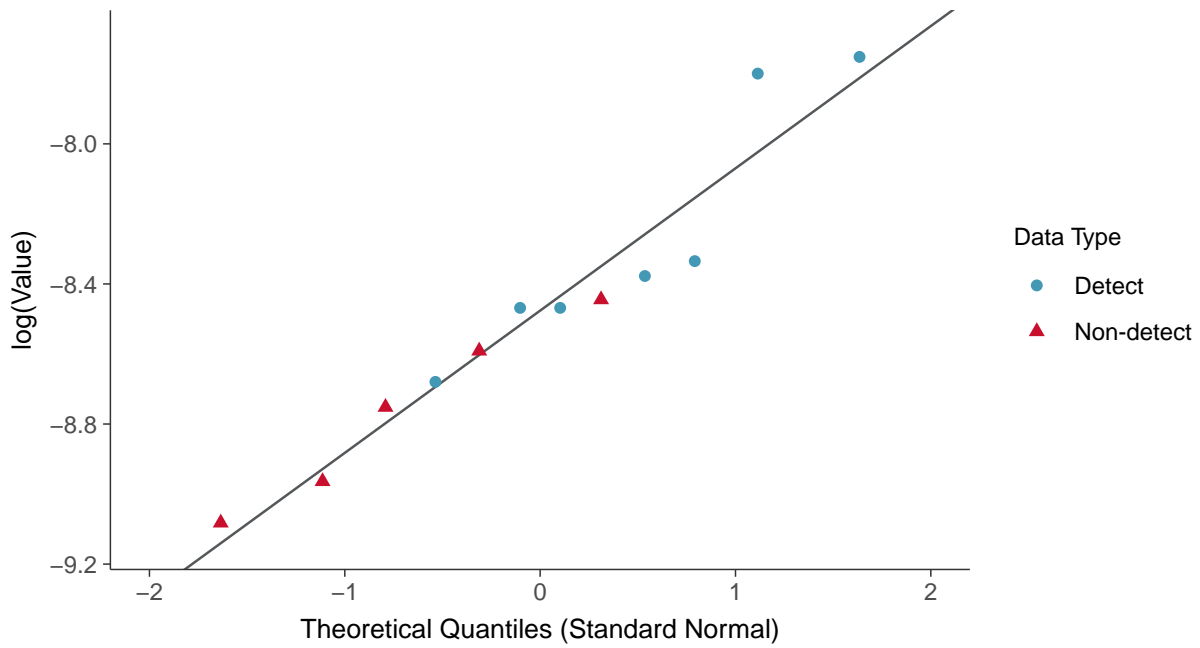
### Boxplot by Season

Selenium, MW-04 (mg/L)

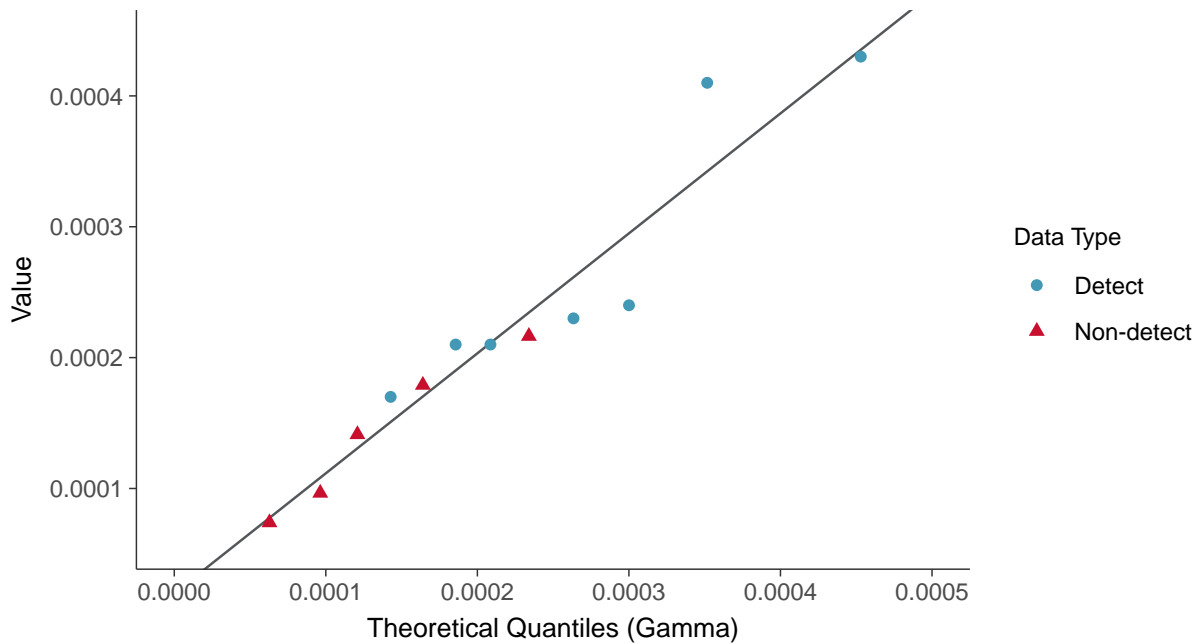




**Lognormal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-04 (mg/L)



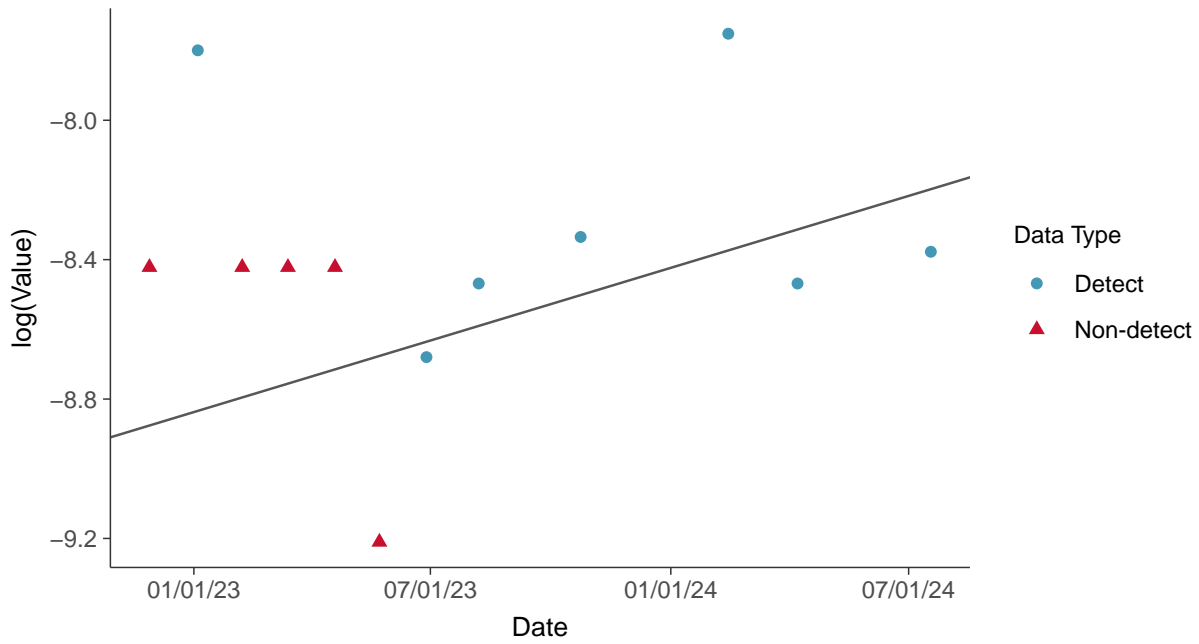
**Gamma Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-04 (mg/L)





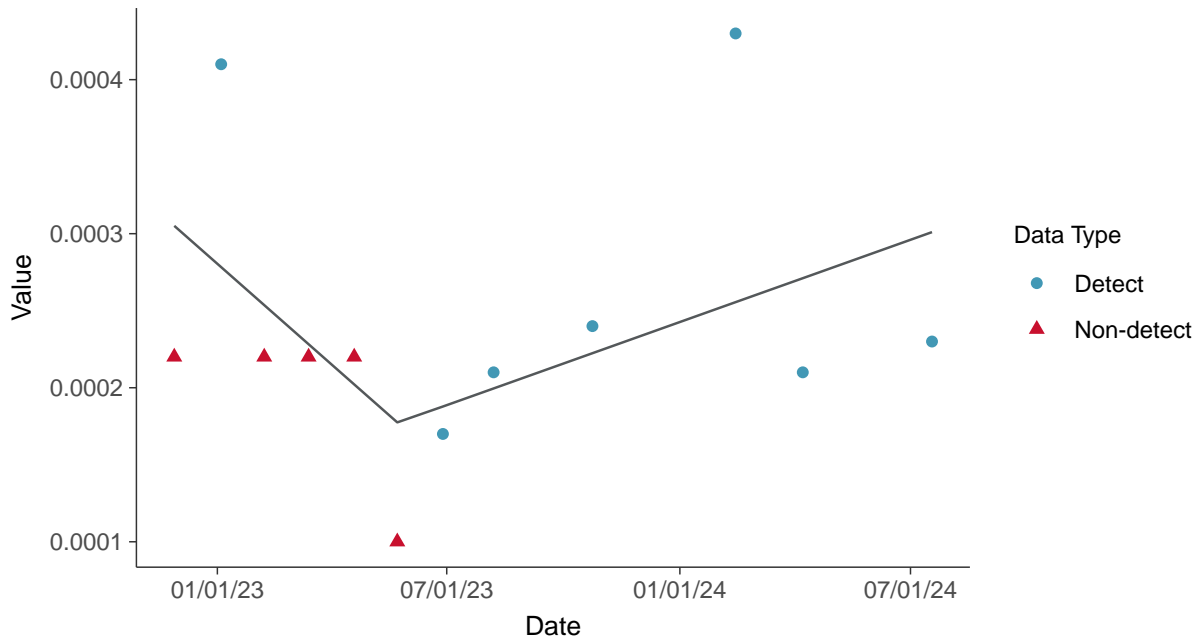
### Trend Regression: Lognormal MLE

Selenium, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear

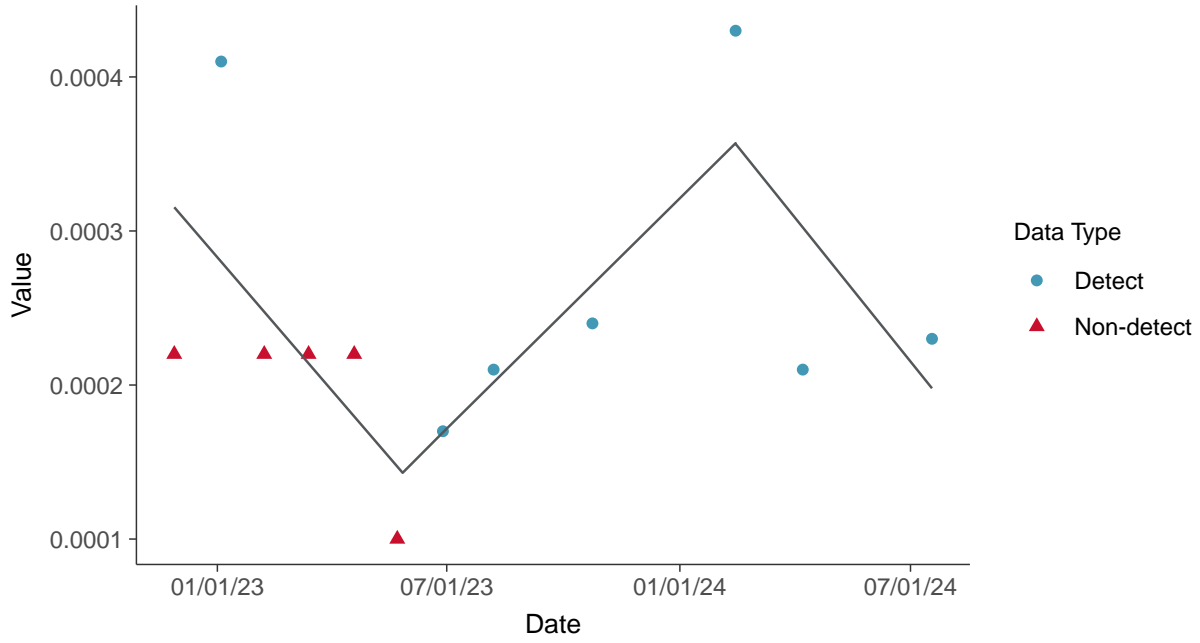
Selenium, MW-04 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-04 (mg/L)



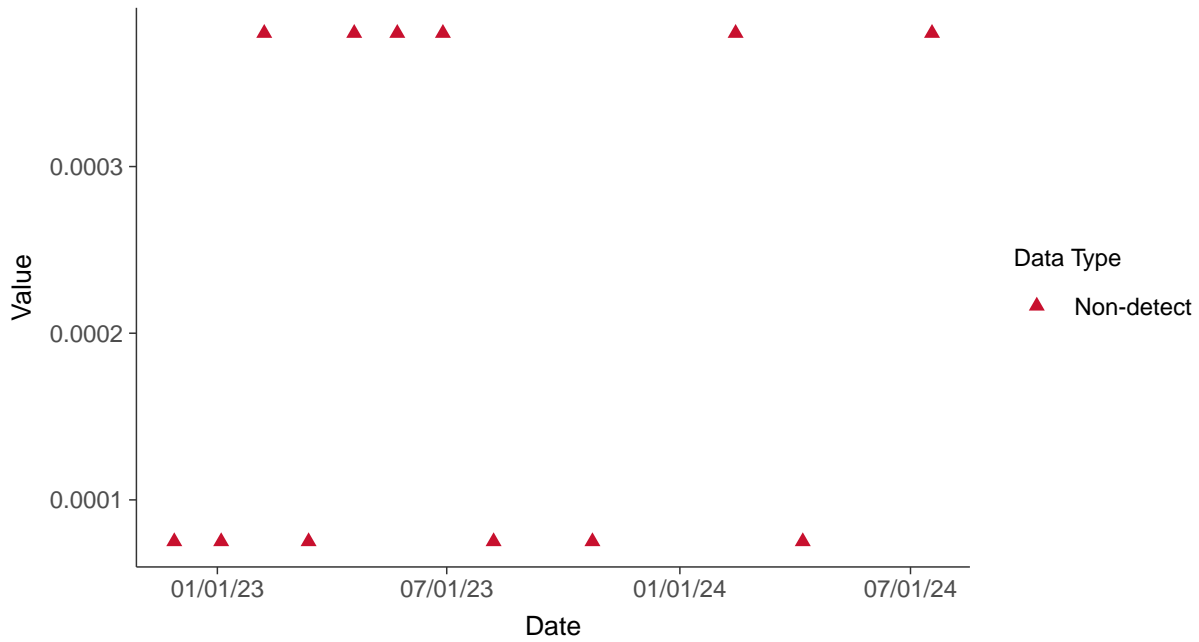


### Appendix IV: Thallium, MW-04

ID: 14\_2\_5\_125

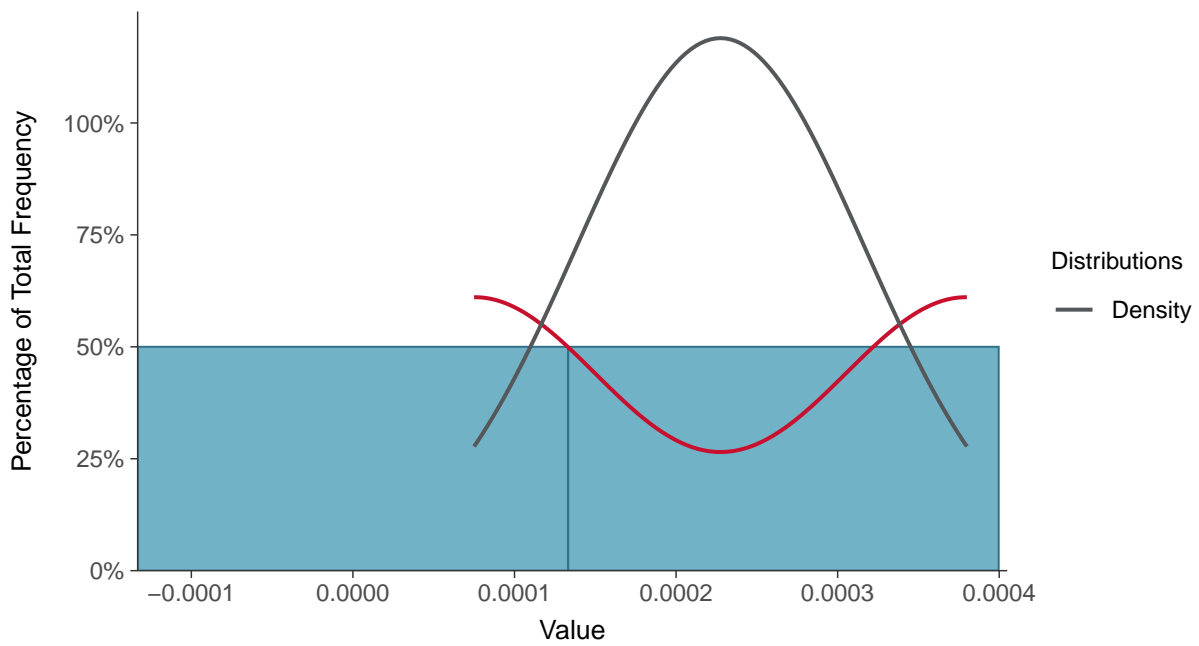
#### Scatter Plot

Thallium, MW-04 (mg/L)



#### Histogram

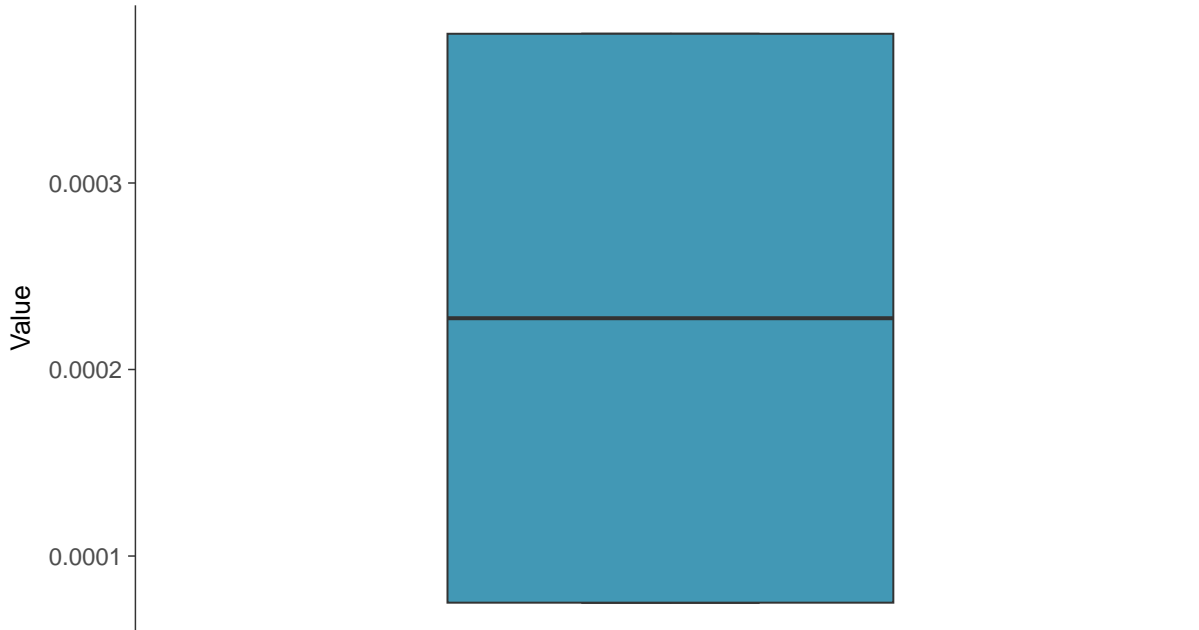
Thallium, MW-04 (mg/L)





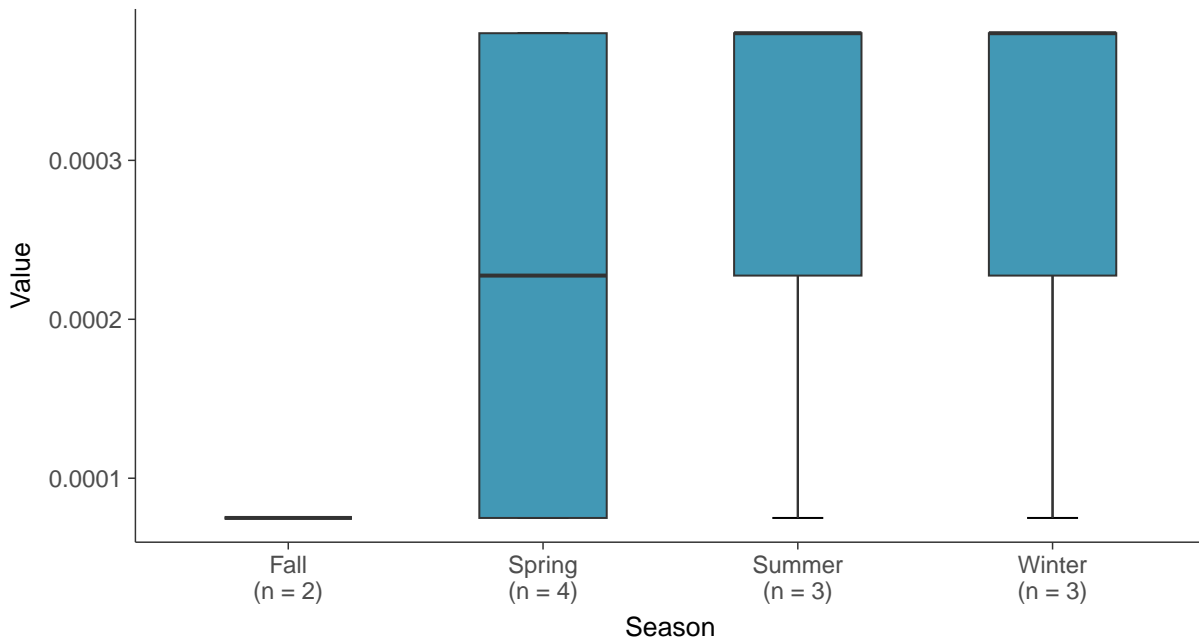
### Boxplot

Thallium, MW-04 (mg/L)



### Boxplot by Season

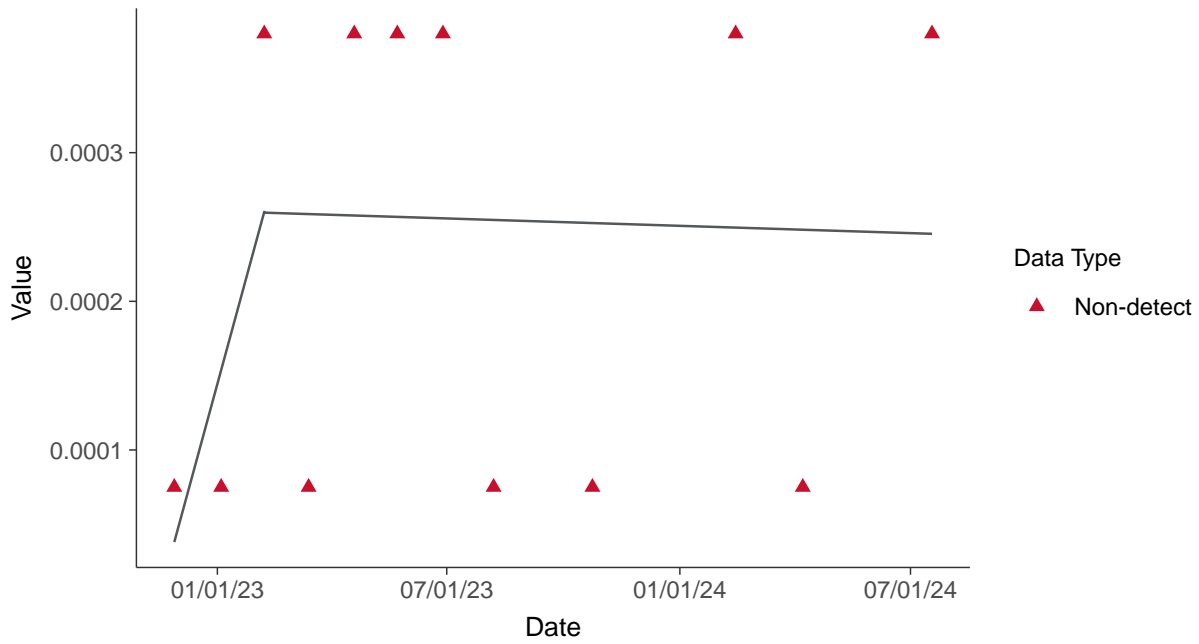
Thallium, MW-04 (mg/L)





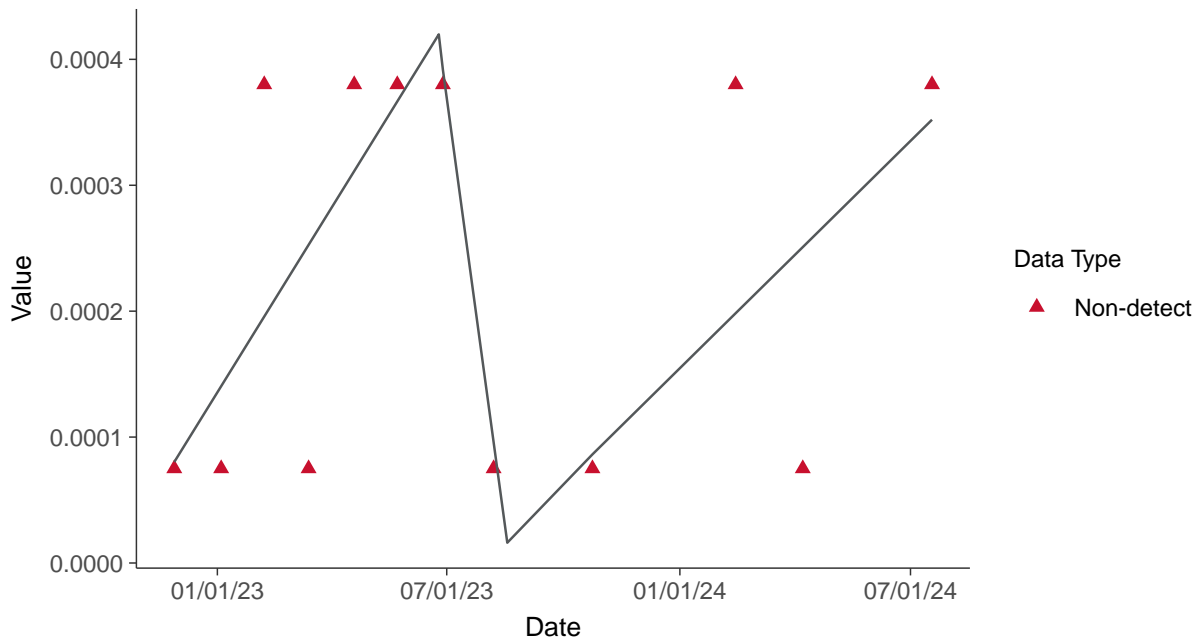
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-04 (mg/L)

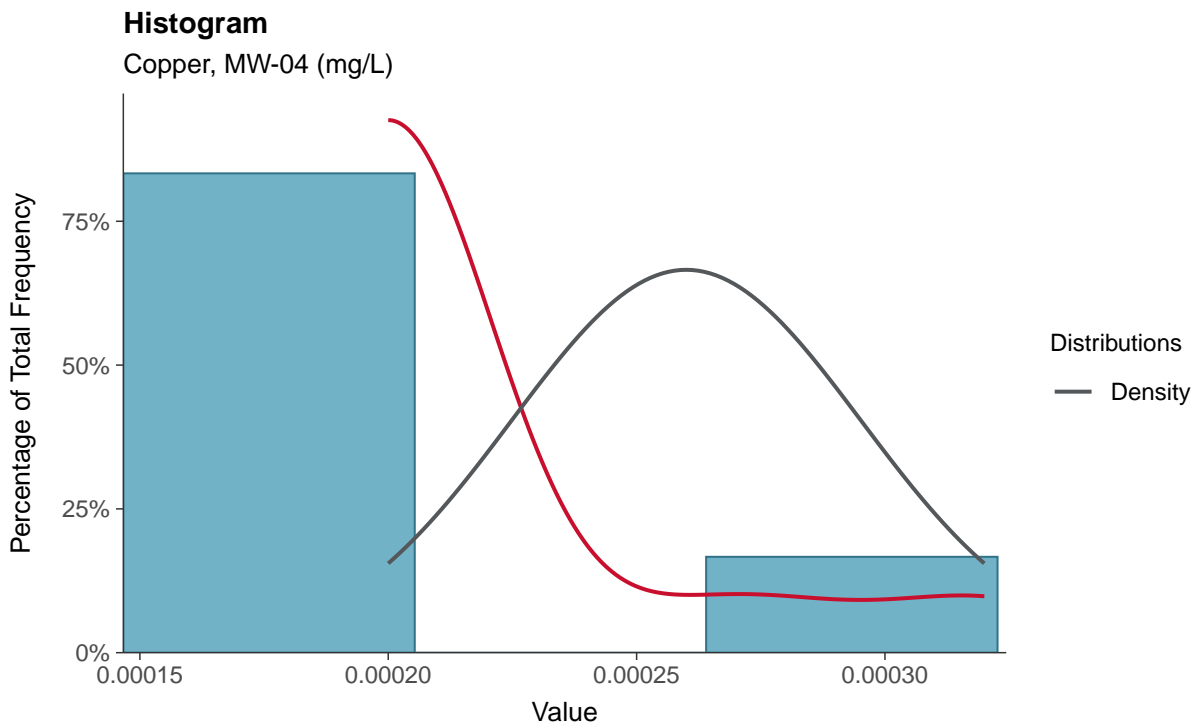
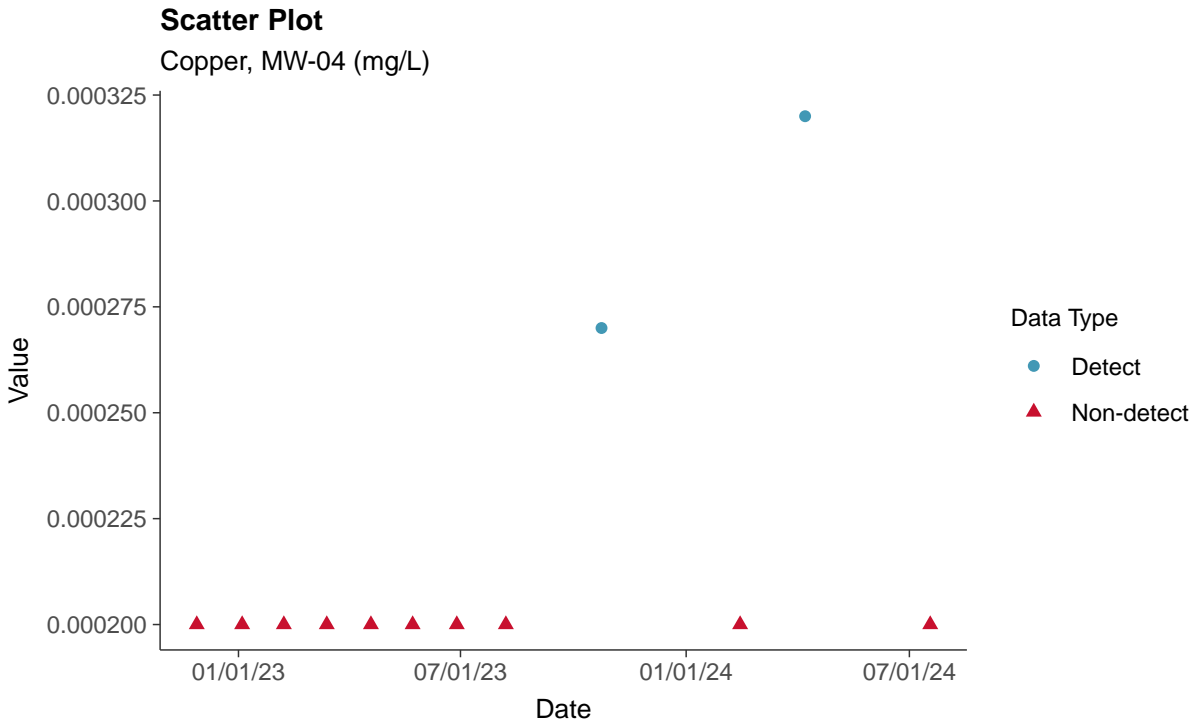






**Part 115: Copper, MW-04**

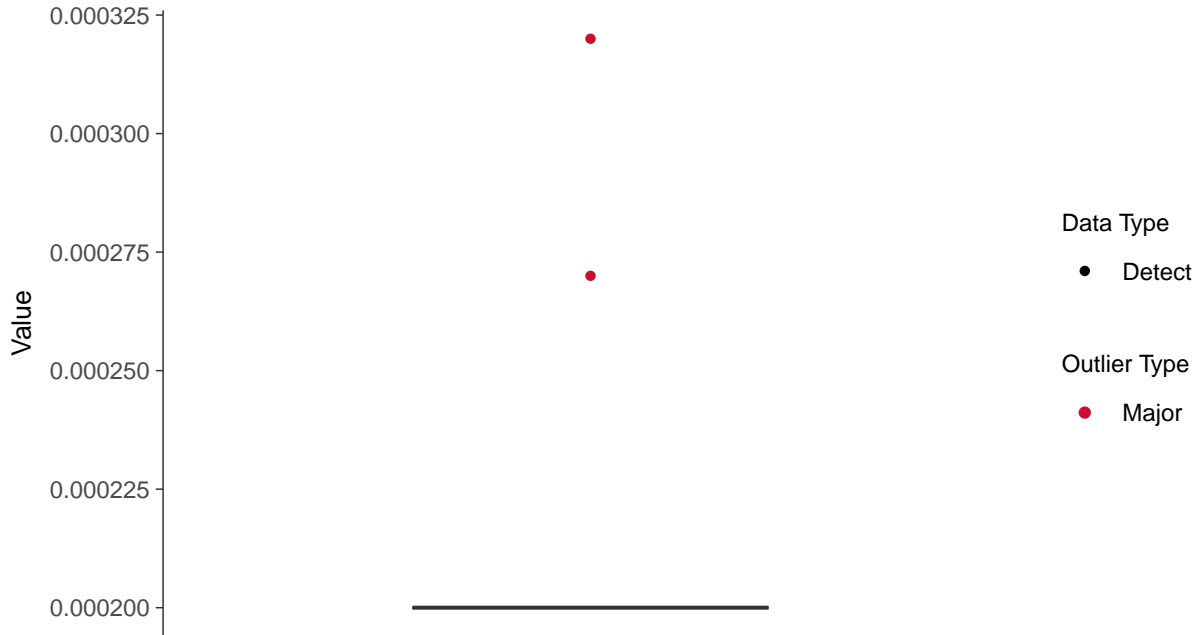
ID: 14\_2\_6\_111





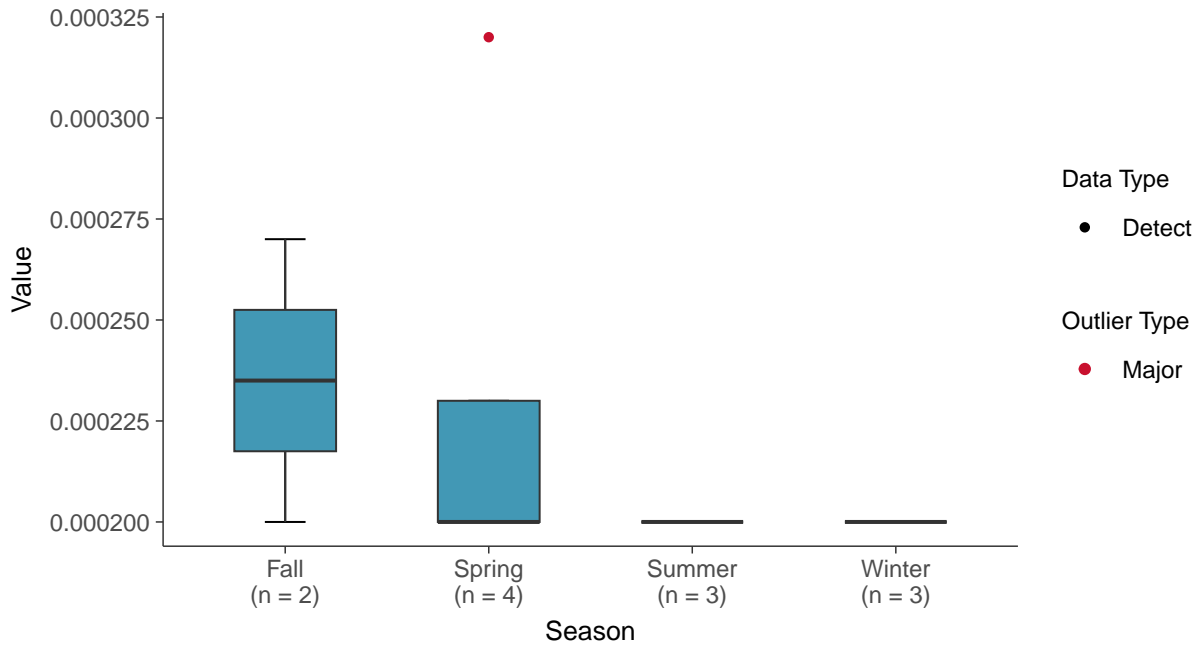
### Boxplot

Copper, MW-04 (mg/L)



### Boxplot by Season

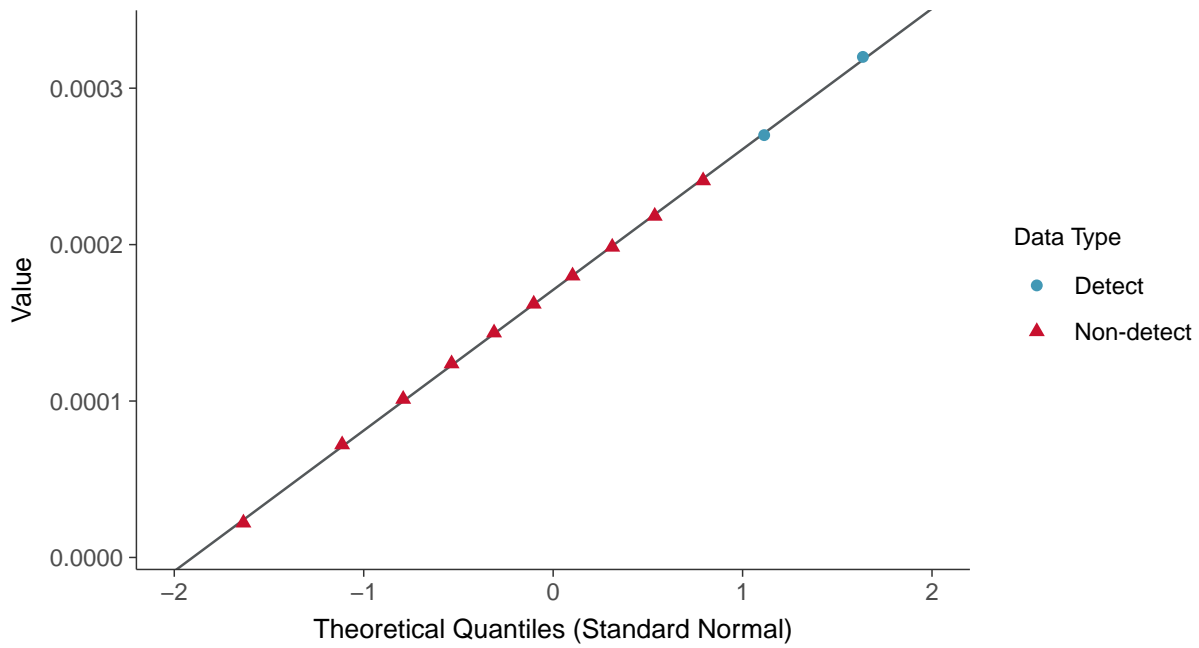
Copper, MW-04 (mg/L)





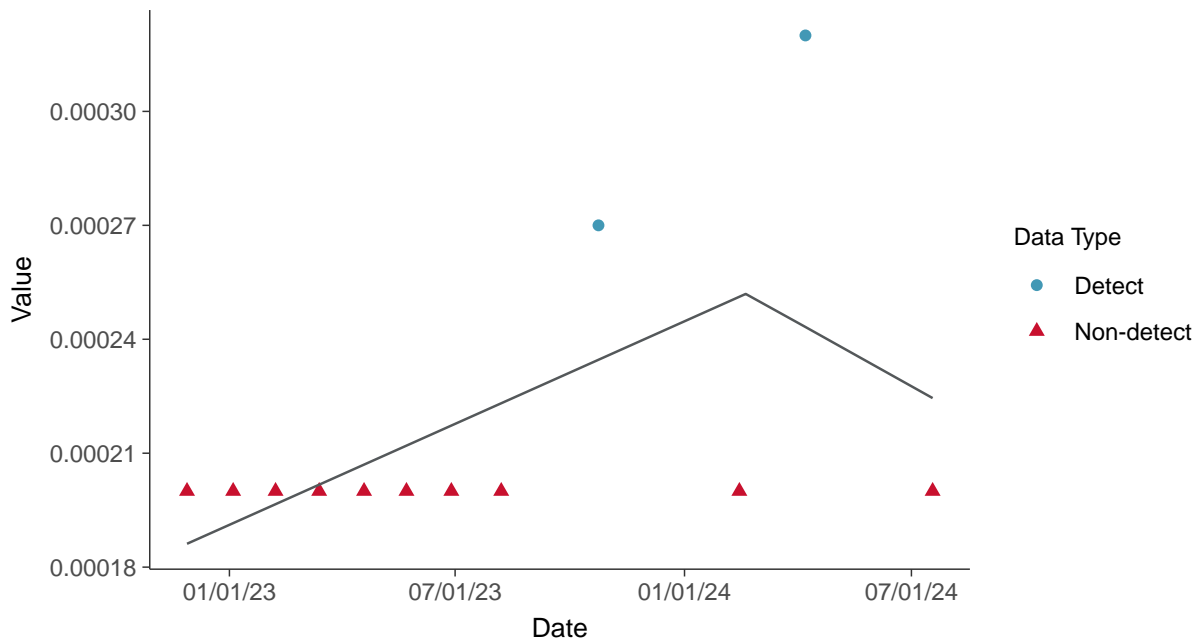
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Copper, MW-04 (mg/L)



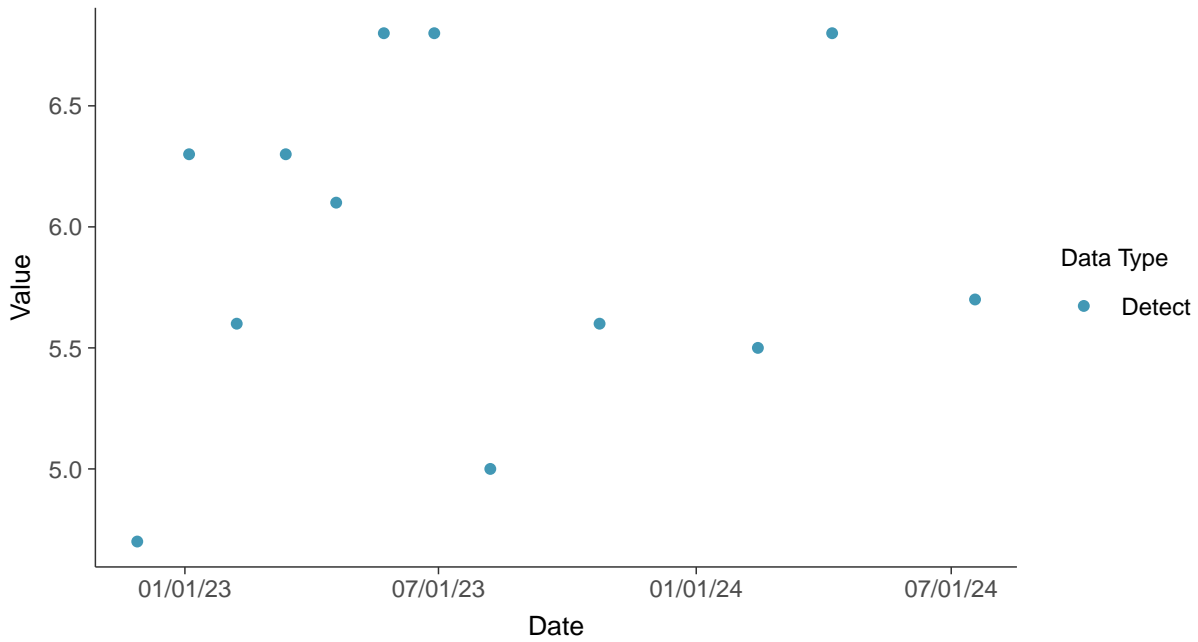


### Part 115: Iron, MW-04

ID: 14\_2\_6\_114

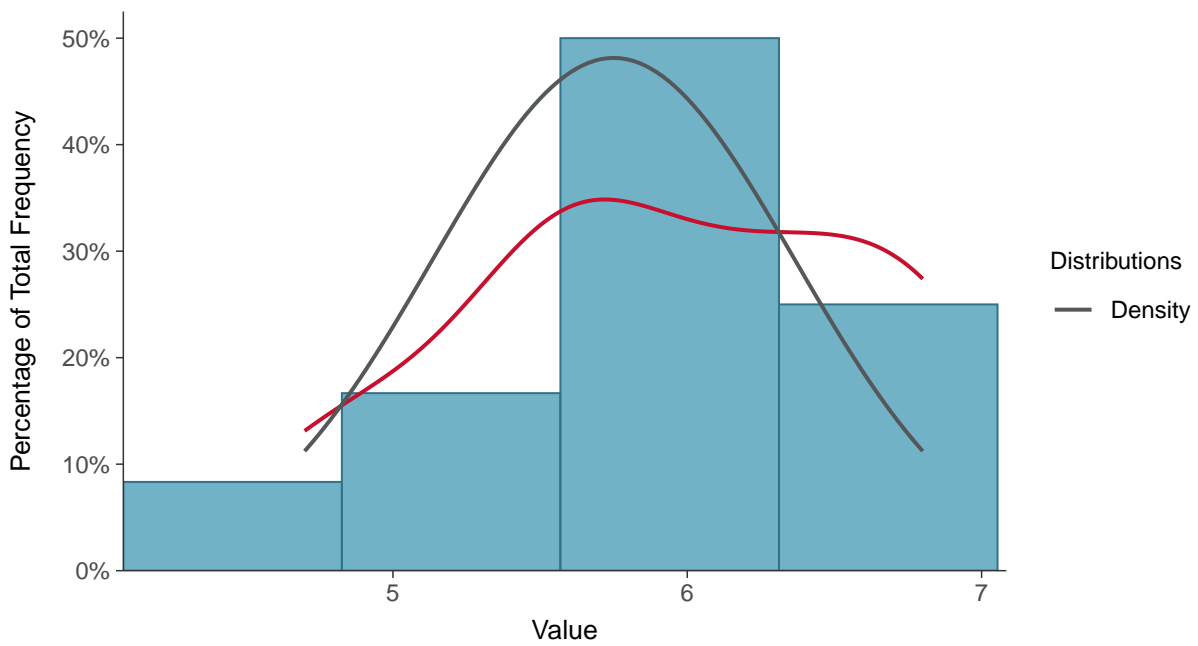
#### Scatter Plot

Iron, MW-04 (mg/L)



#### Histogram

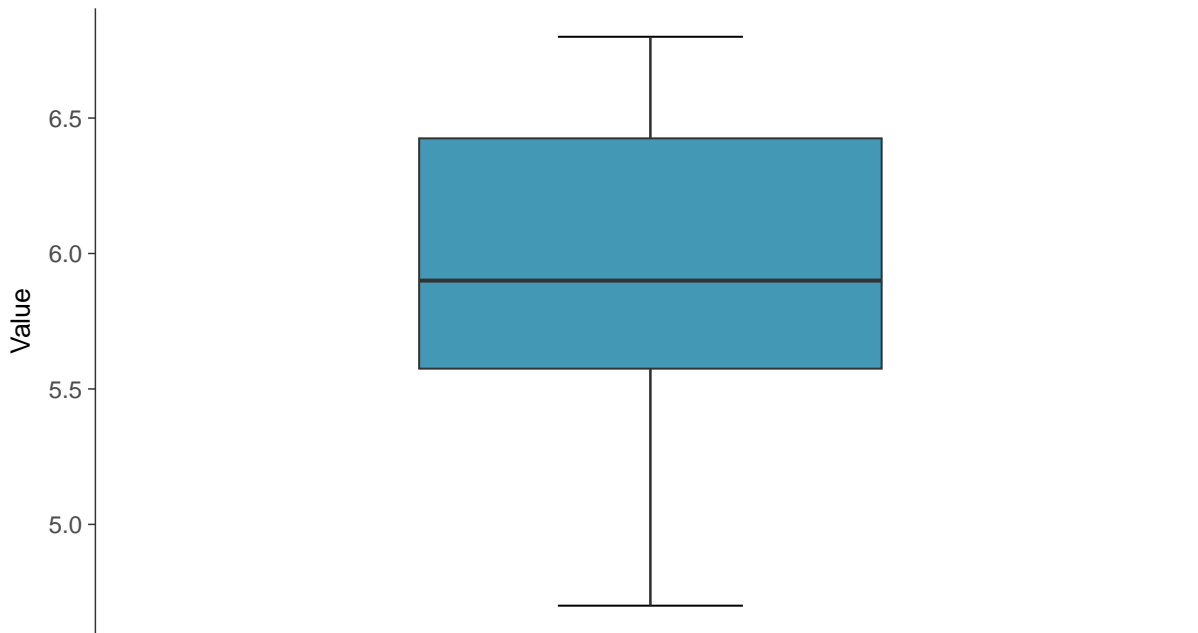
Iron, MW-04 (mg/L)





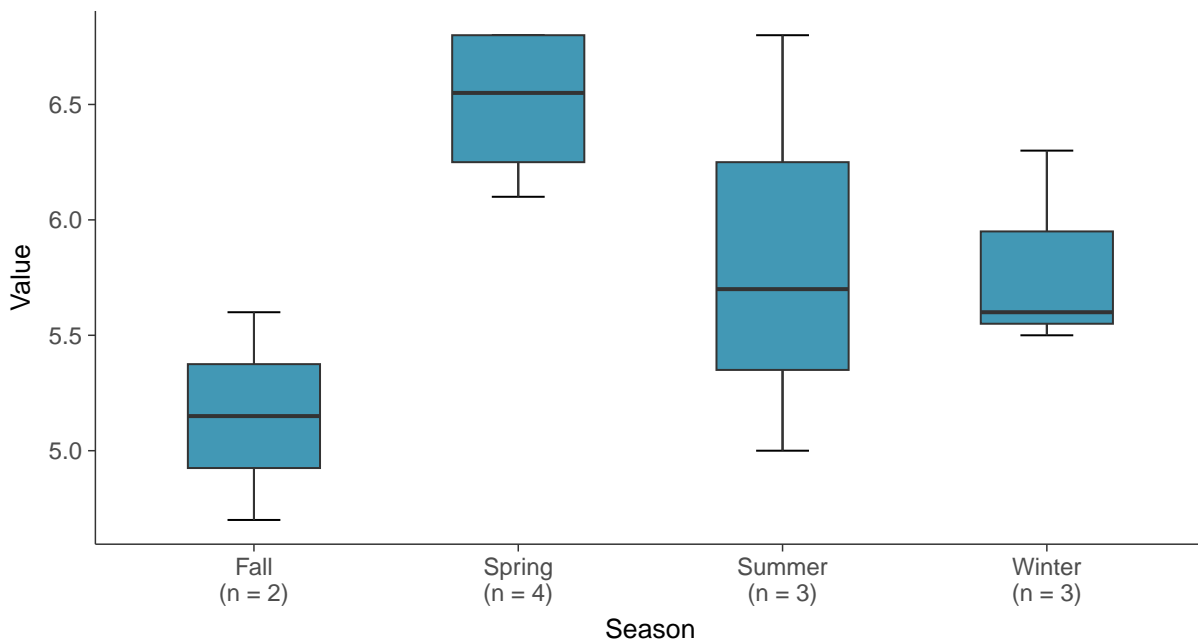
### Boxplot

Iron, MW-04 (mg/L)



### Boxplot by Season

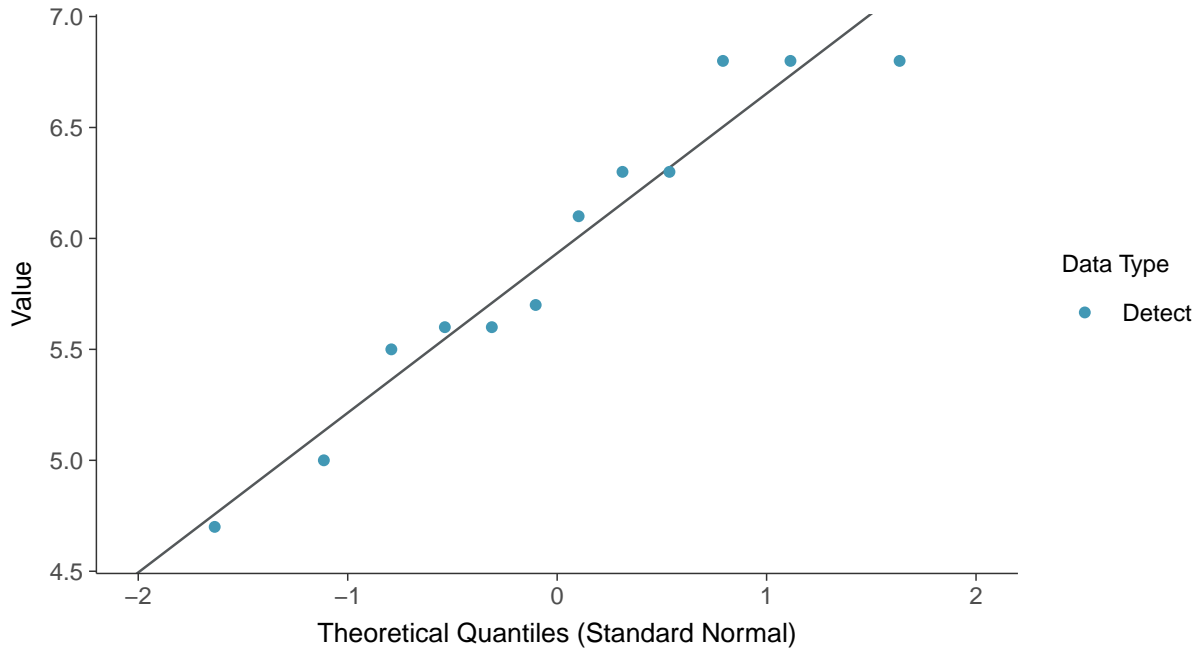
Iron, MW-04 (mg/L)





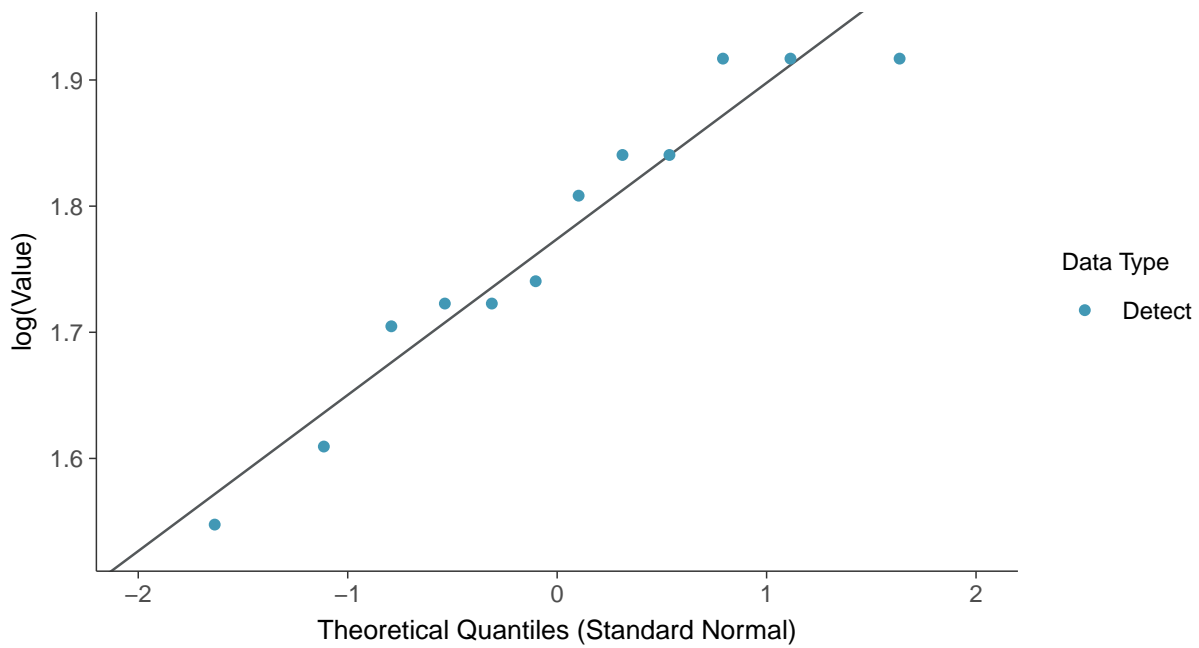
### Normal Q-Q plot

Iron, MW-04 (mg/L)



### Lognormal Q-Q plot

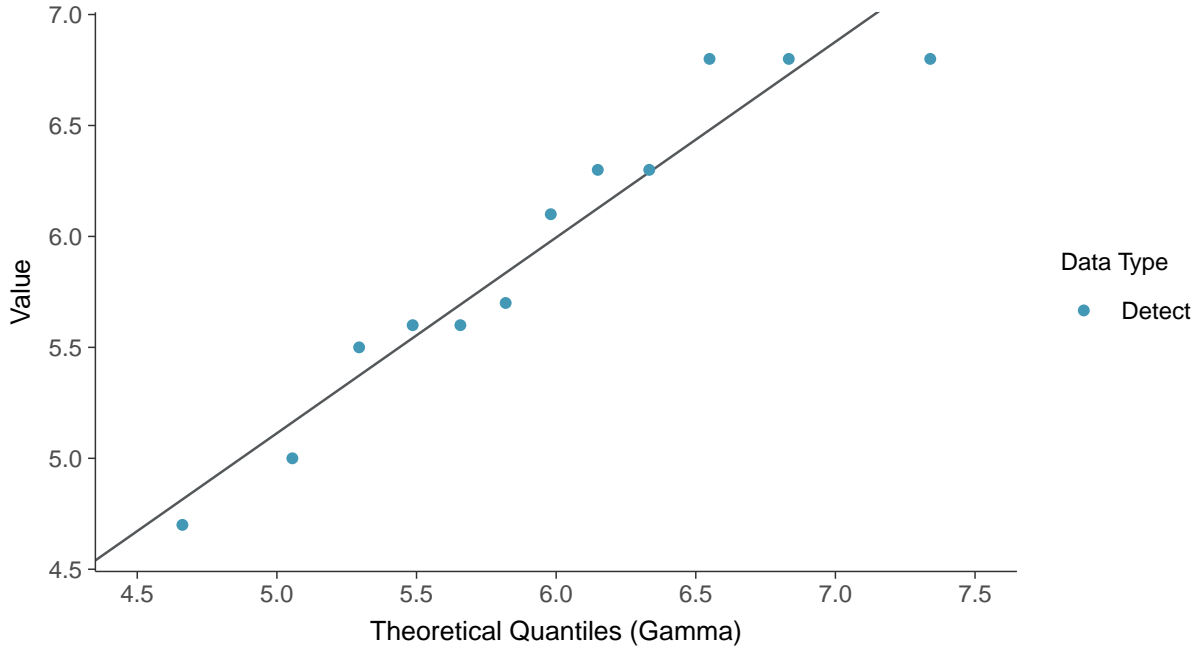
Iron, MW-04 (mg/L)





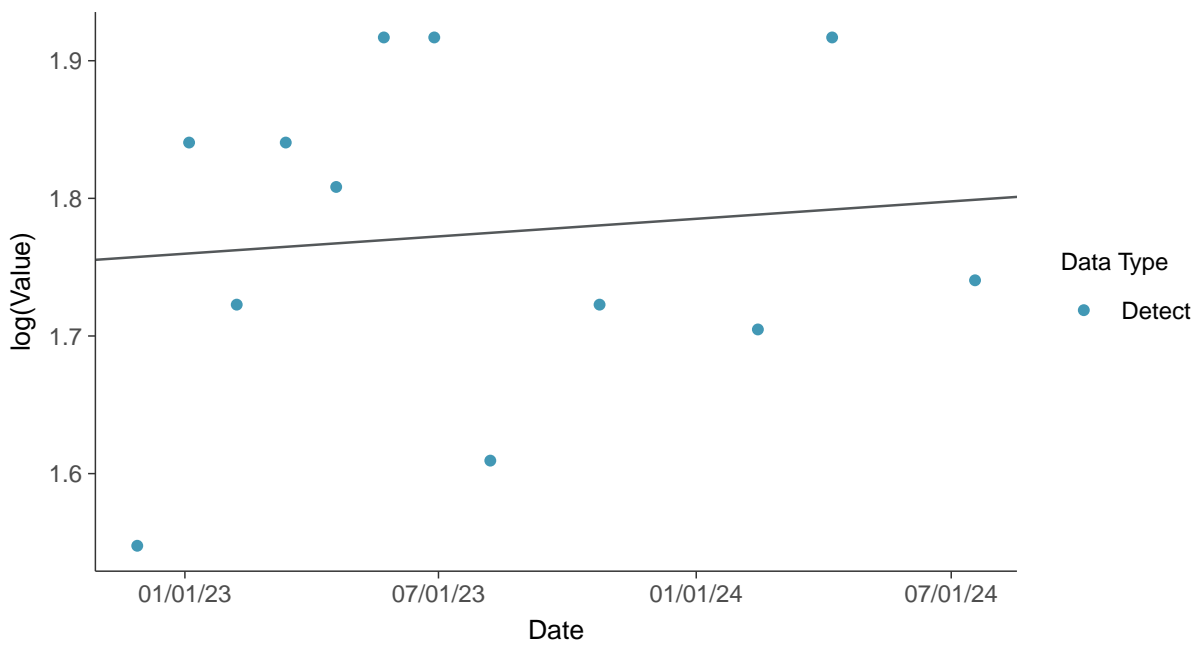
### Gamma Q-Q plot

Iron, MW-04 (mg/L)



### Trend Regression: Lognormal MLE

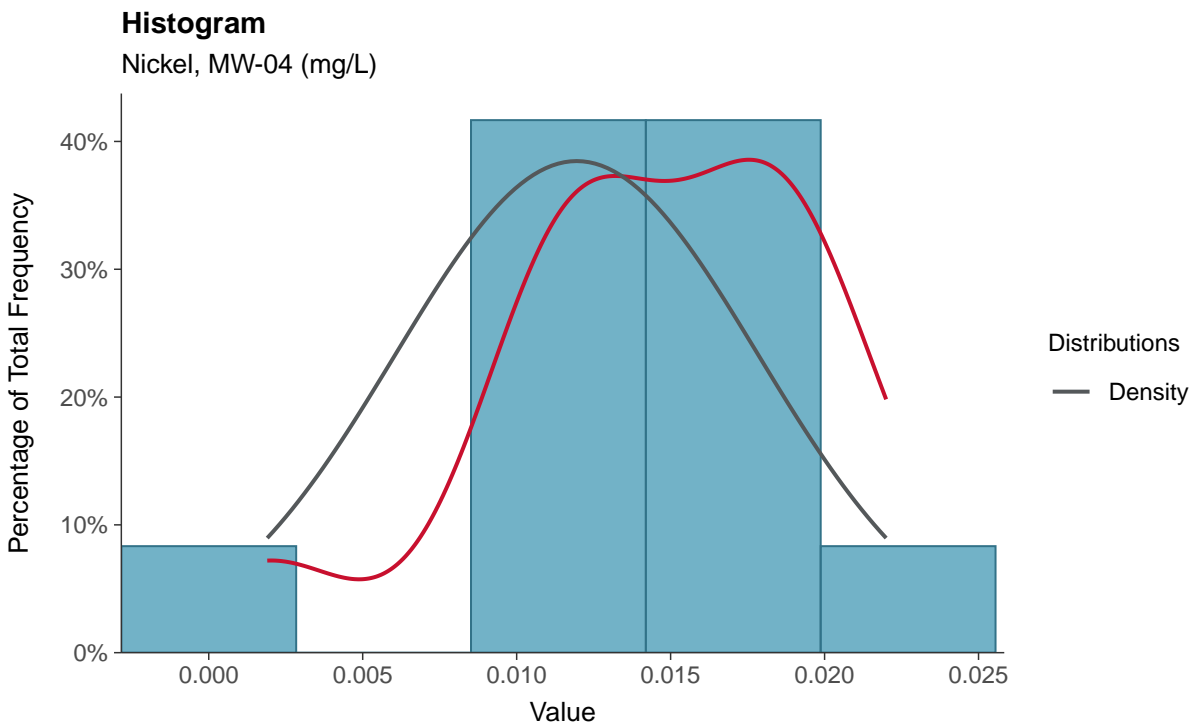
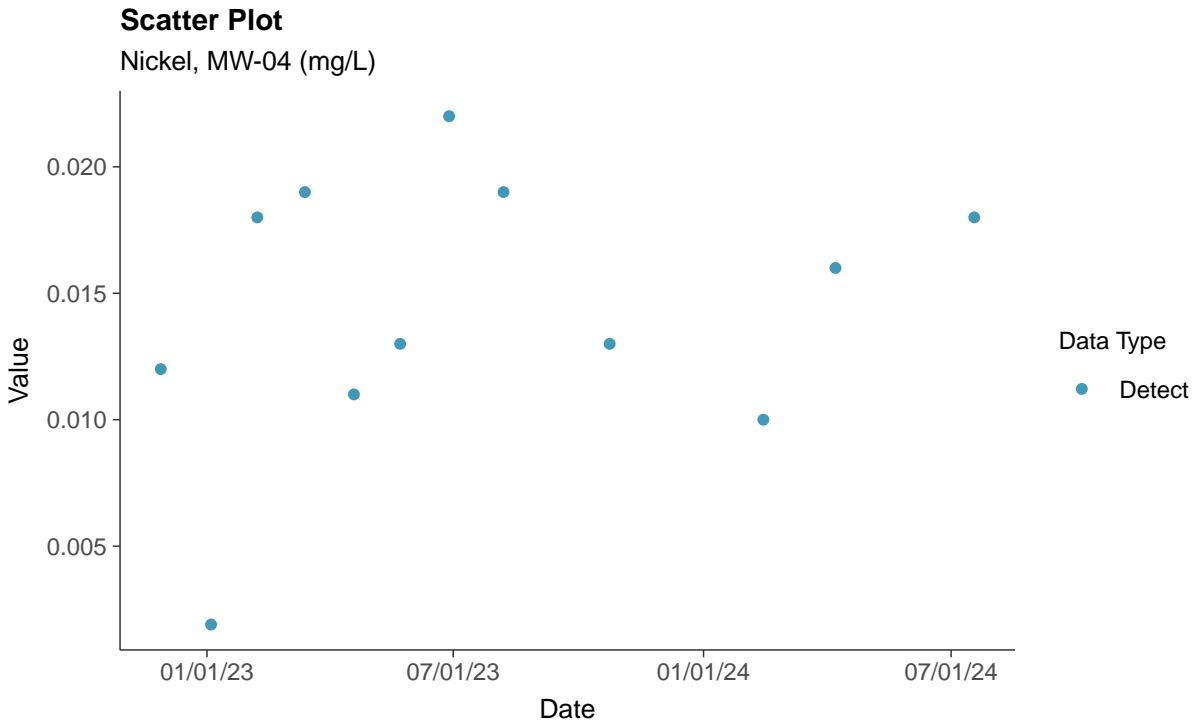
Iron, MW-04 (mg/L)





### Part 115: Nickel, MW-04

ID: 14\_2\_6\_119

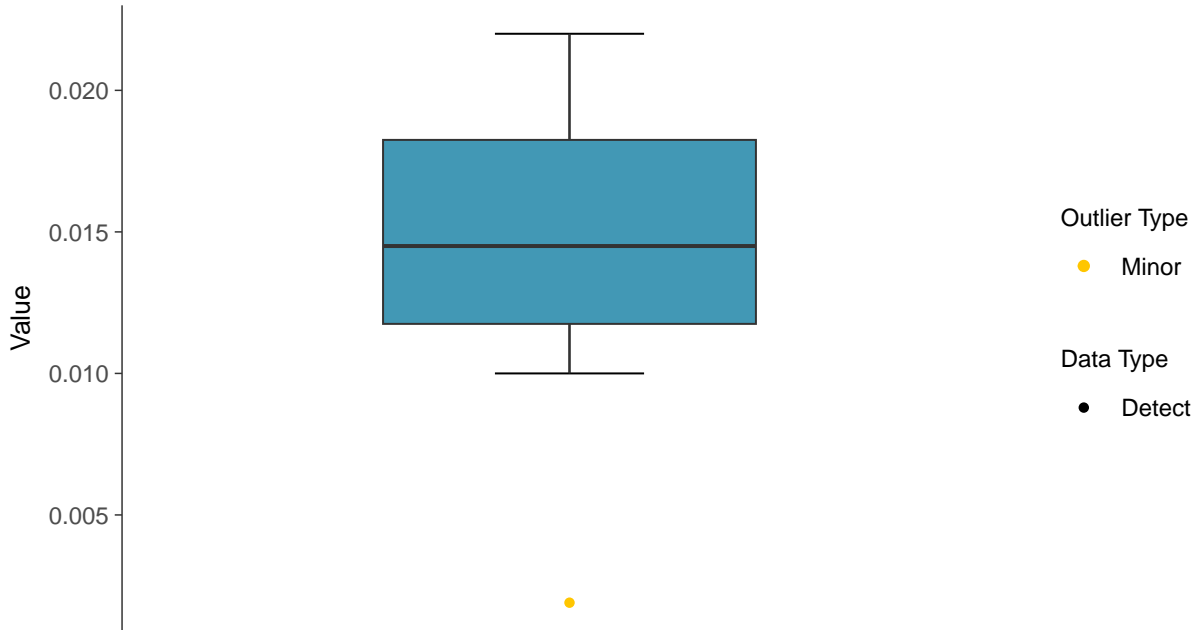






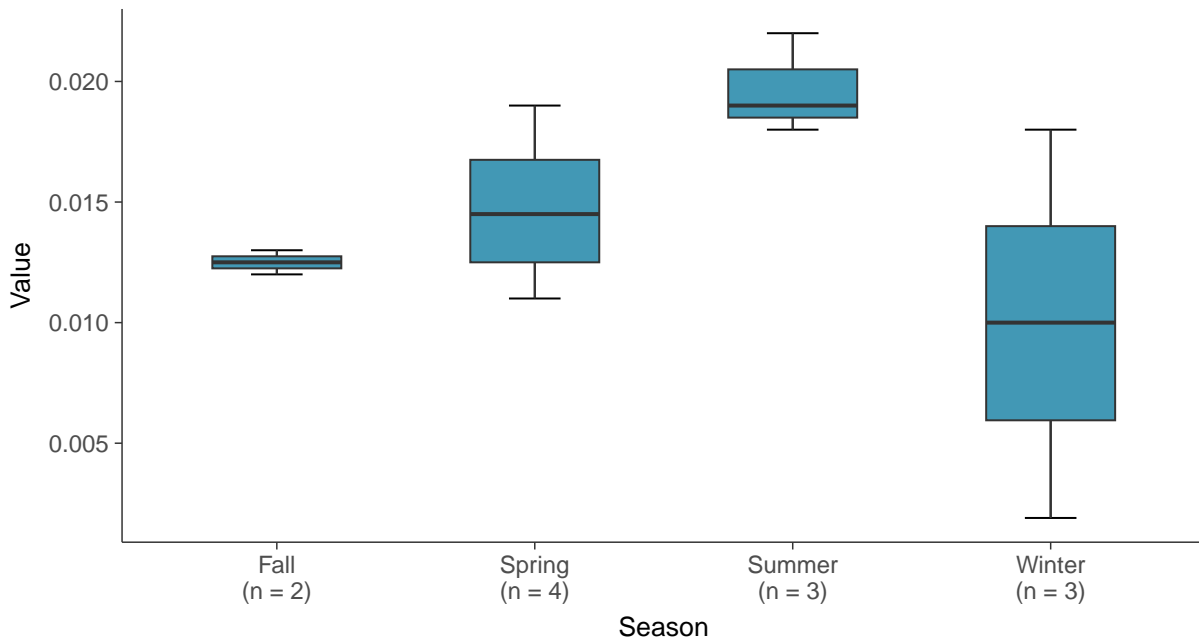
### Boxplot

Nickel, MW-04 (mg/L)



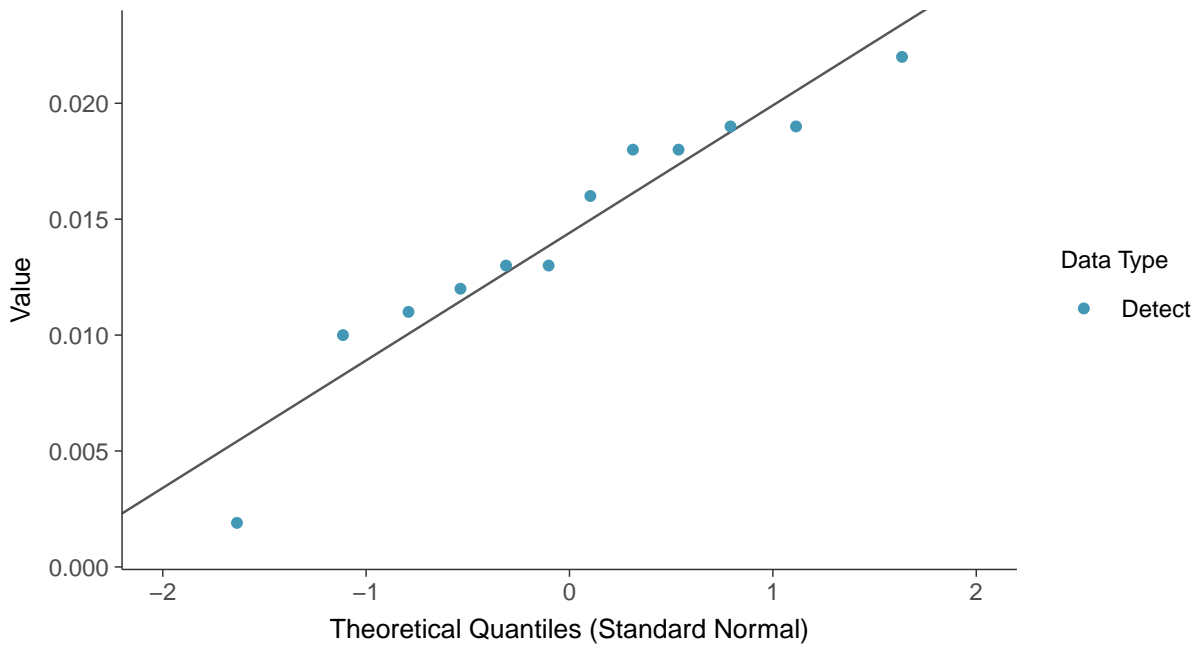
### Boxplot by Season

Nickel, MW-04 (mg/L)

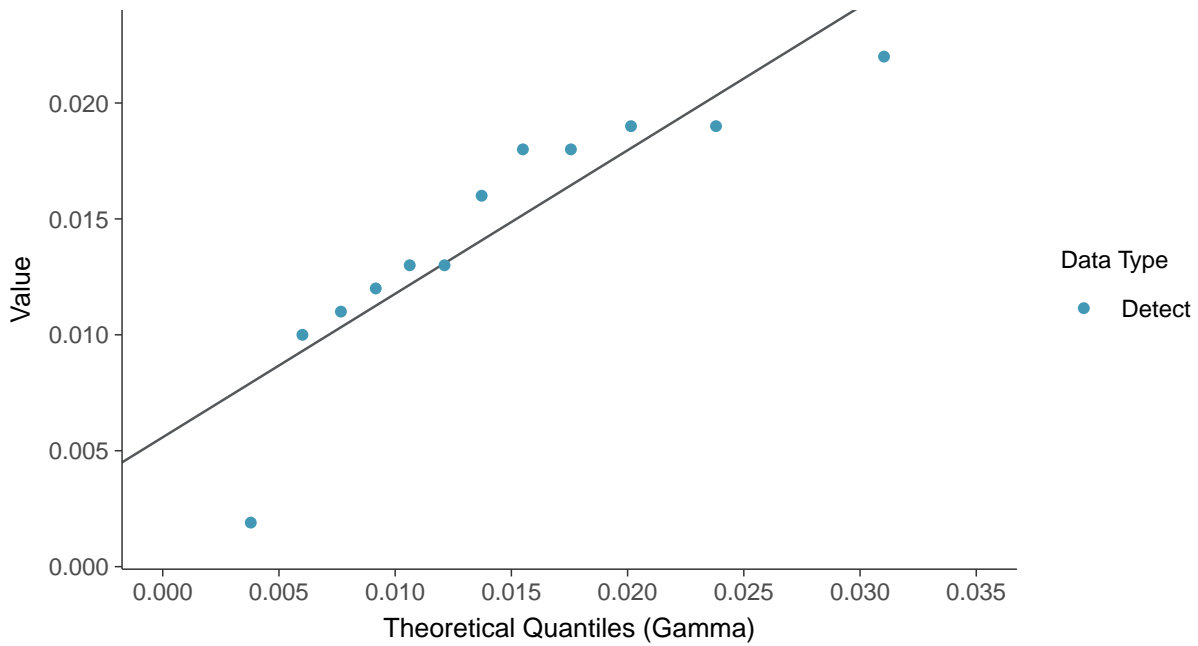




**Normal Q-Q plot**  
Nickel, MW-04 (mg/L)



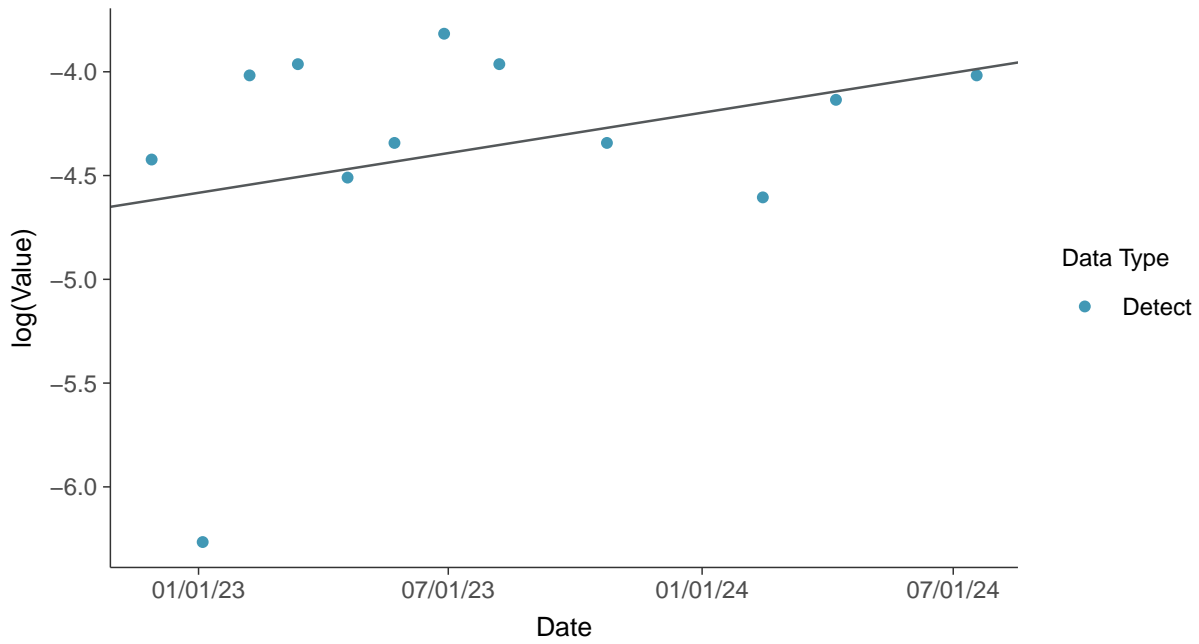
**Gamma Q-Q plot**  
Nickel, MW-04 (mg/L)





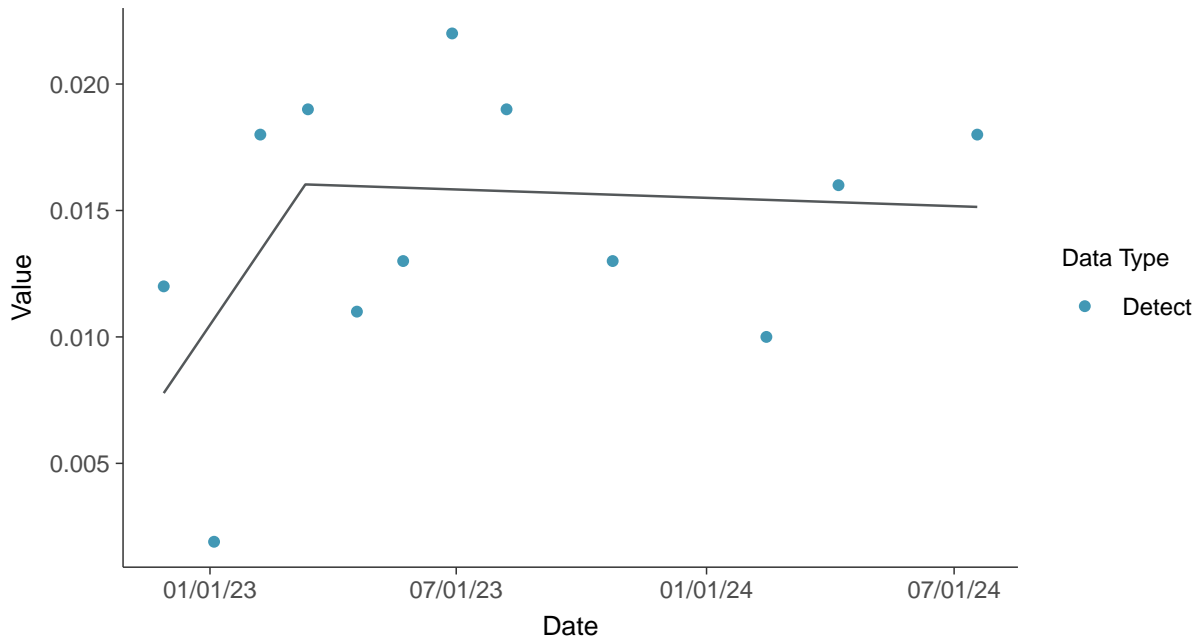
### Trend Regression: Lognormal MLE

Nickel, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear

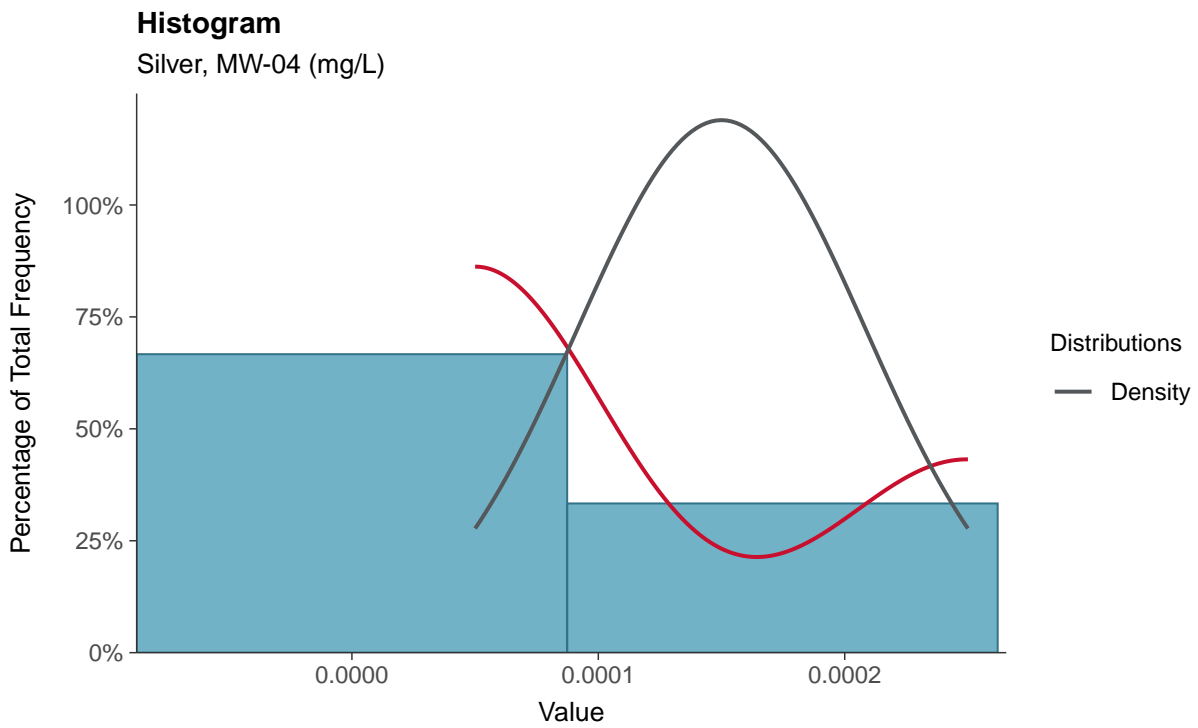
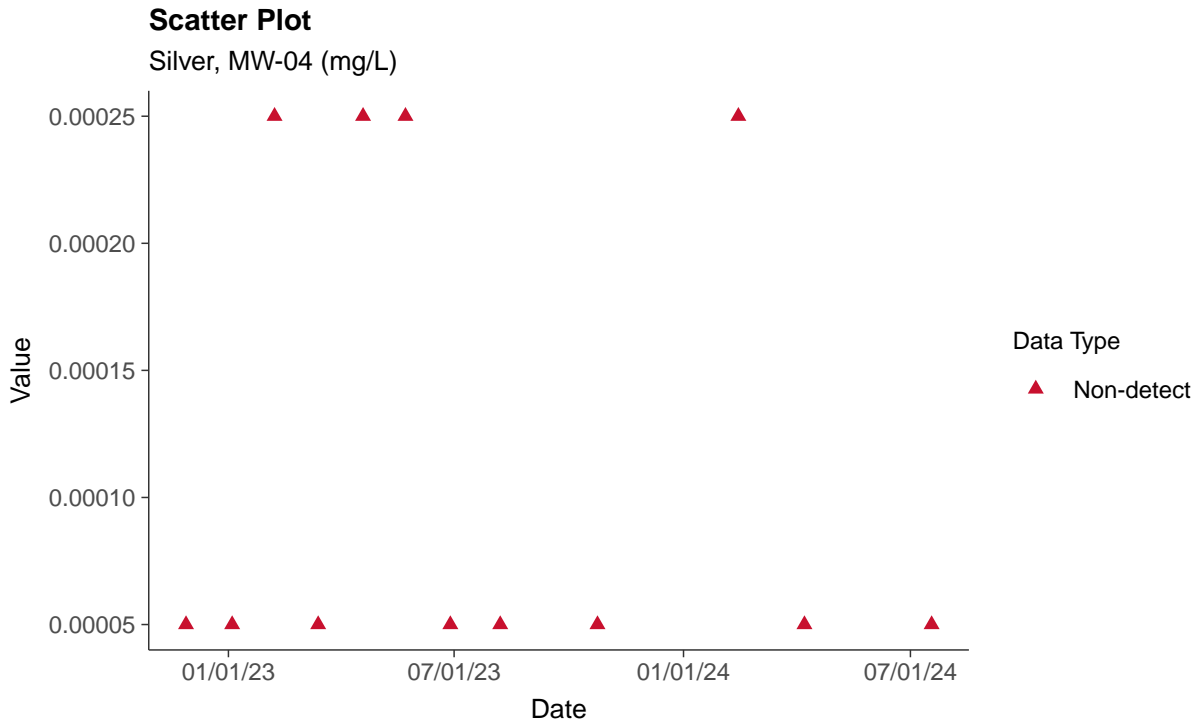
Nickel, MW-04 (mg/L)





### Part 115: Silver, MW-04

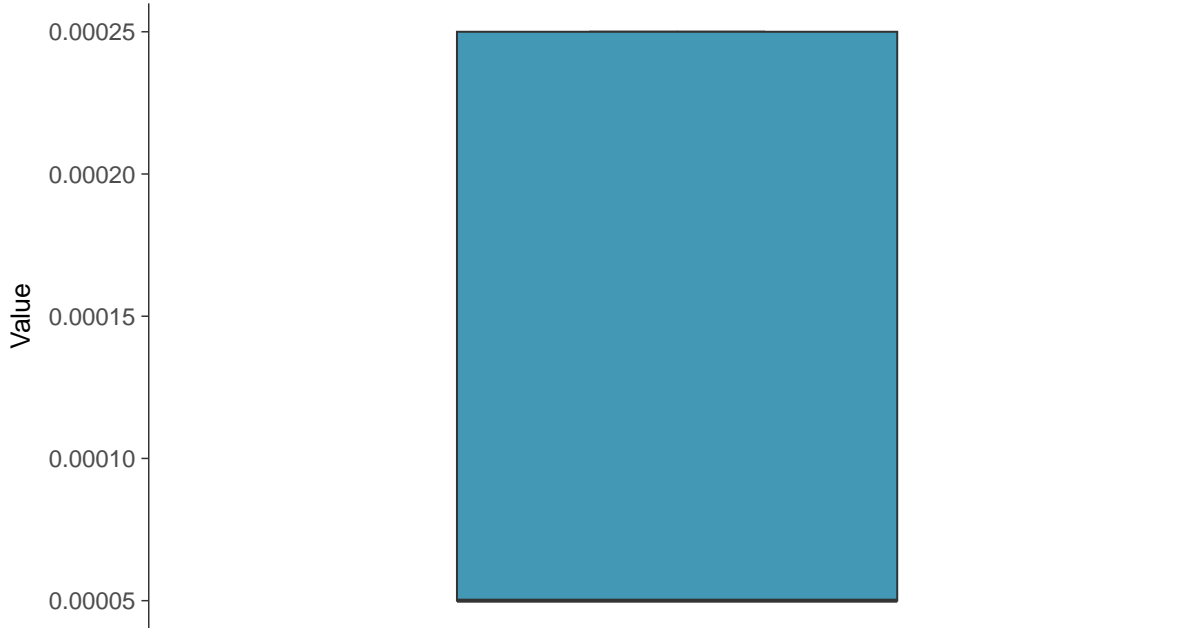
ID: 14\_2\_6\_123





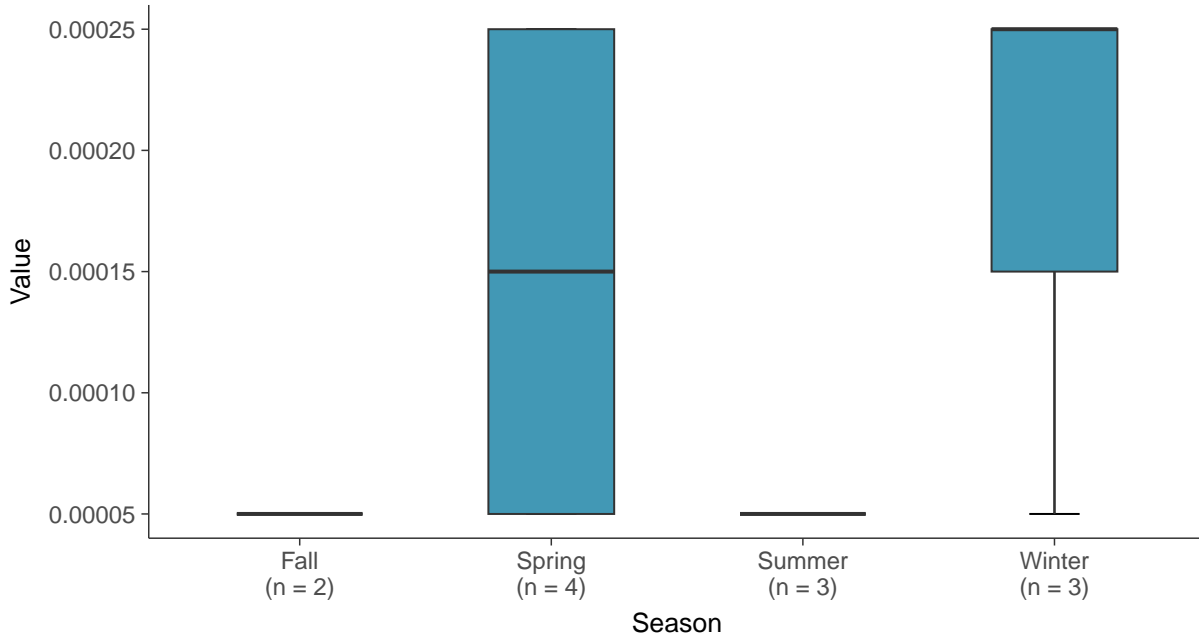
### Boxplot

Silver, MW-04 (mg/L)



### Boxplot by Season

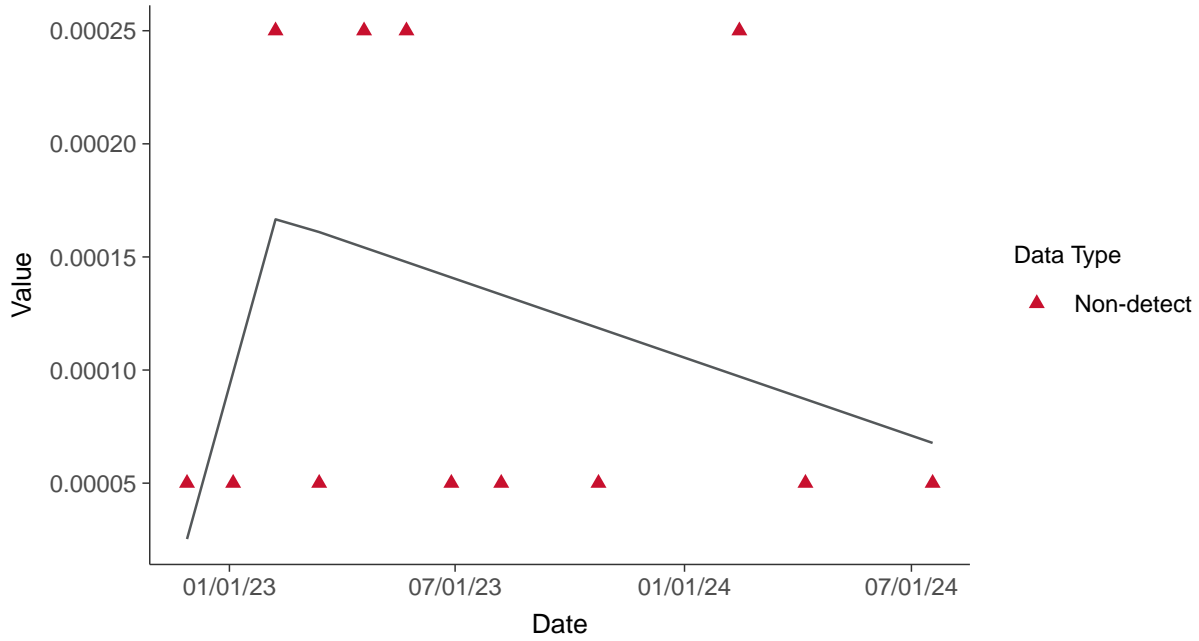
Silver, MW-04 (mg/L)





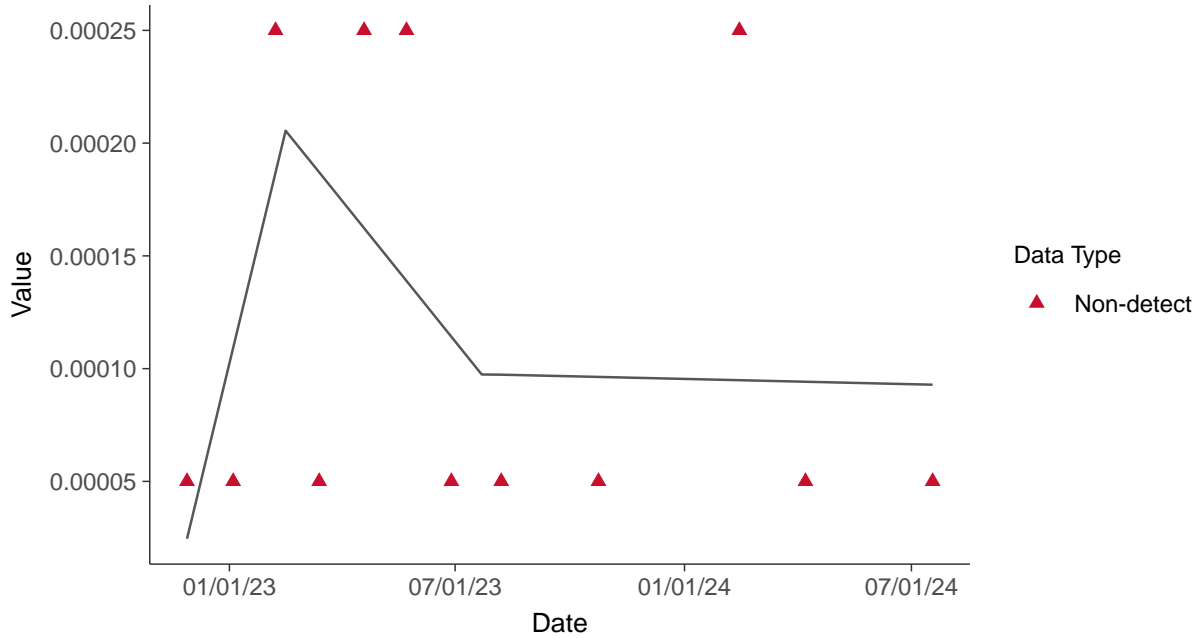
### Trend Regression: Piecewise Linear-Linear

Silver, MW-04 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-04 (mg/L)



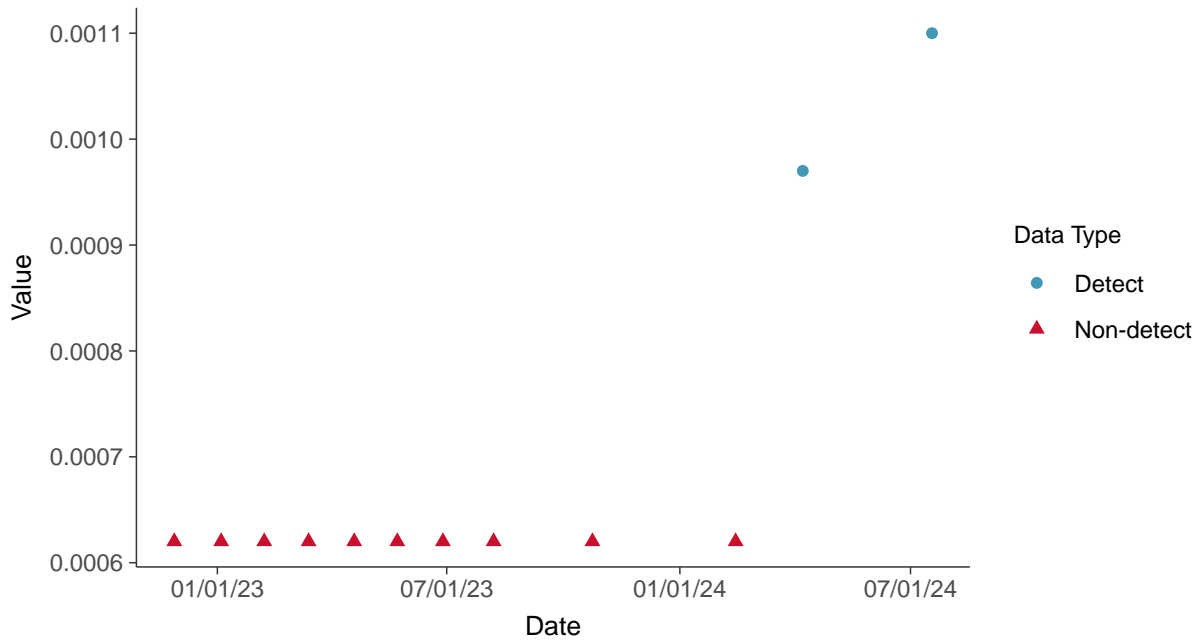


### Part 115: Vanadium, MW-04

ID: 14\_2\_6\_129

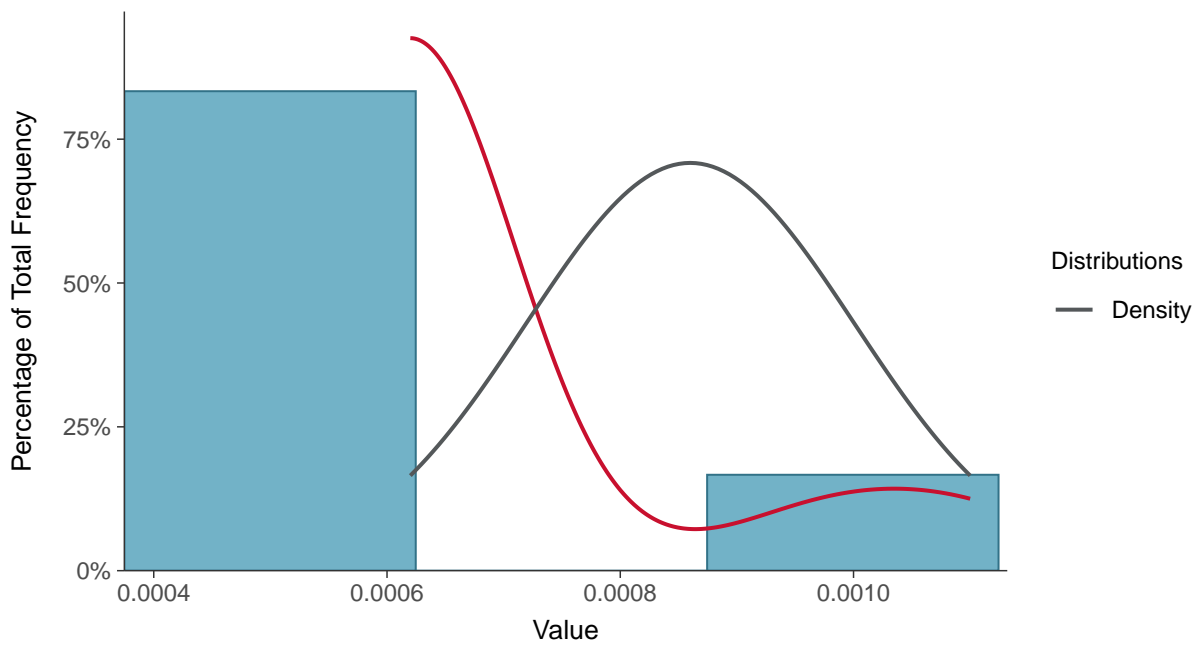
#### Scatter Plot

Vanadium, MW-04 (mg/L)



#### Histogram

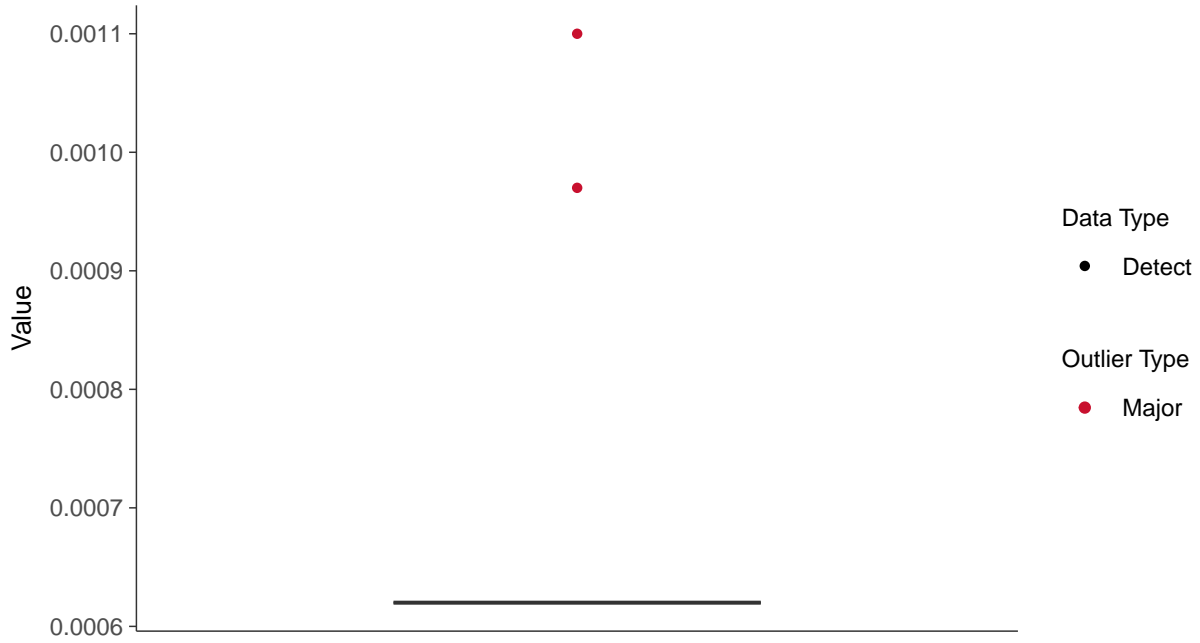
Vanadium, MW-04 (mg/L)





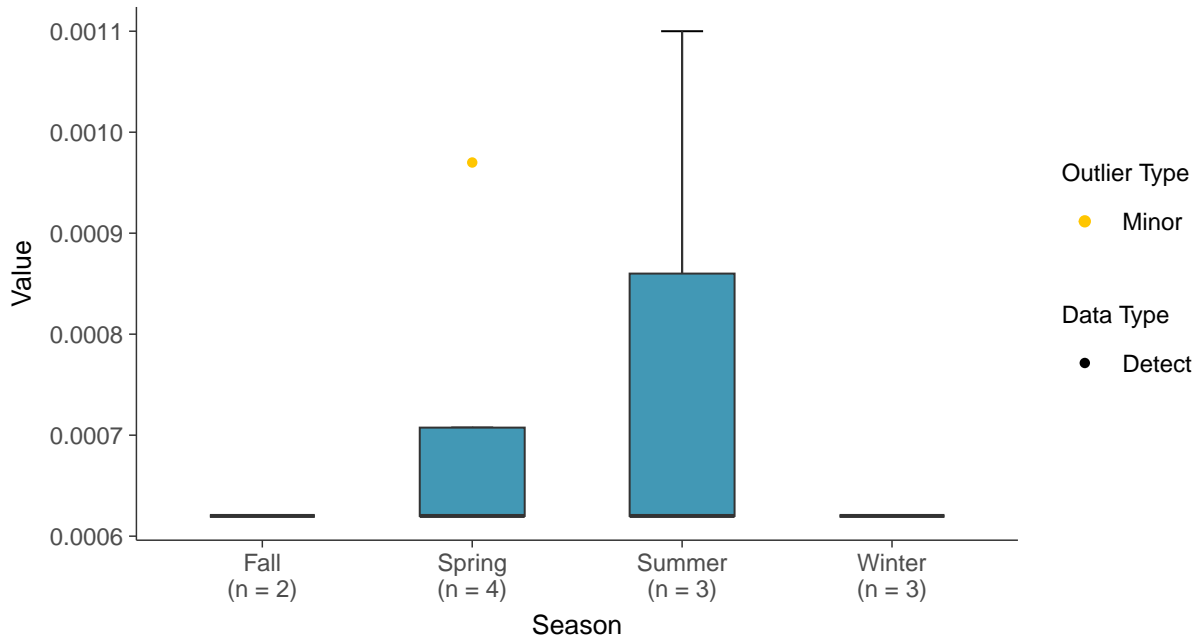
### Boxplot

Vanadium, MW-04 (mg/L)



### Boxplot by Season

Vanadium, MW-04 (mg/L)

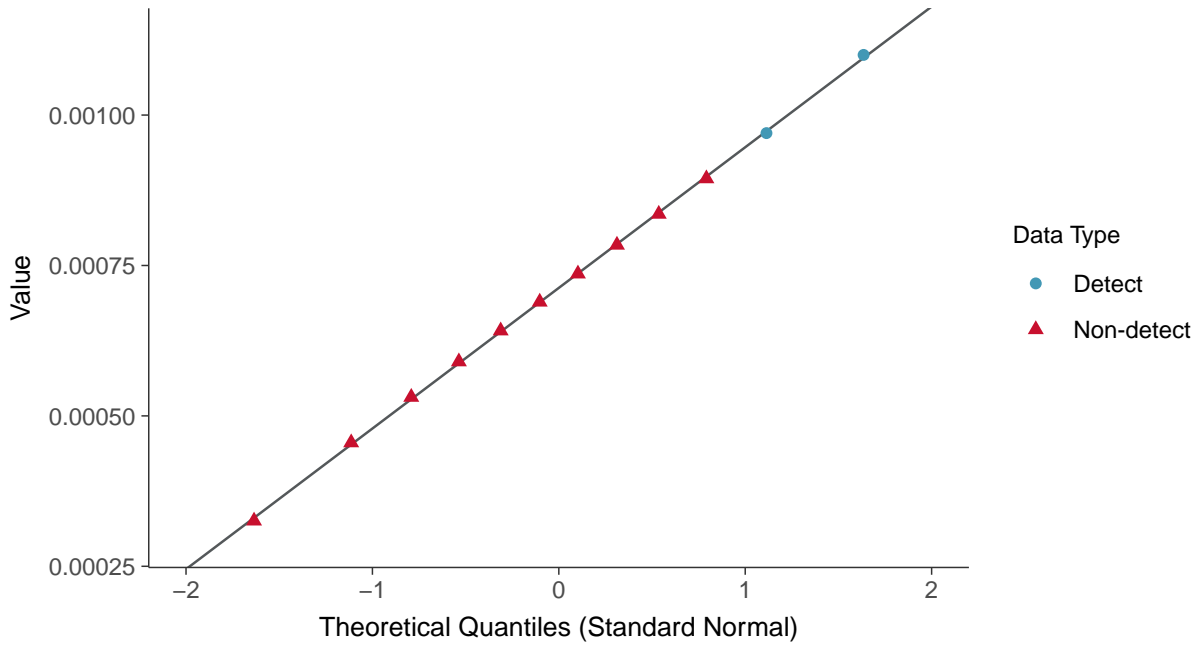






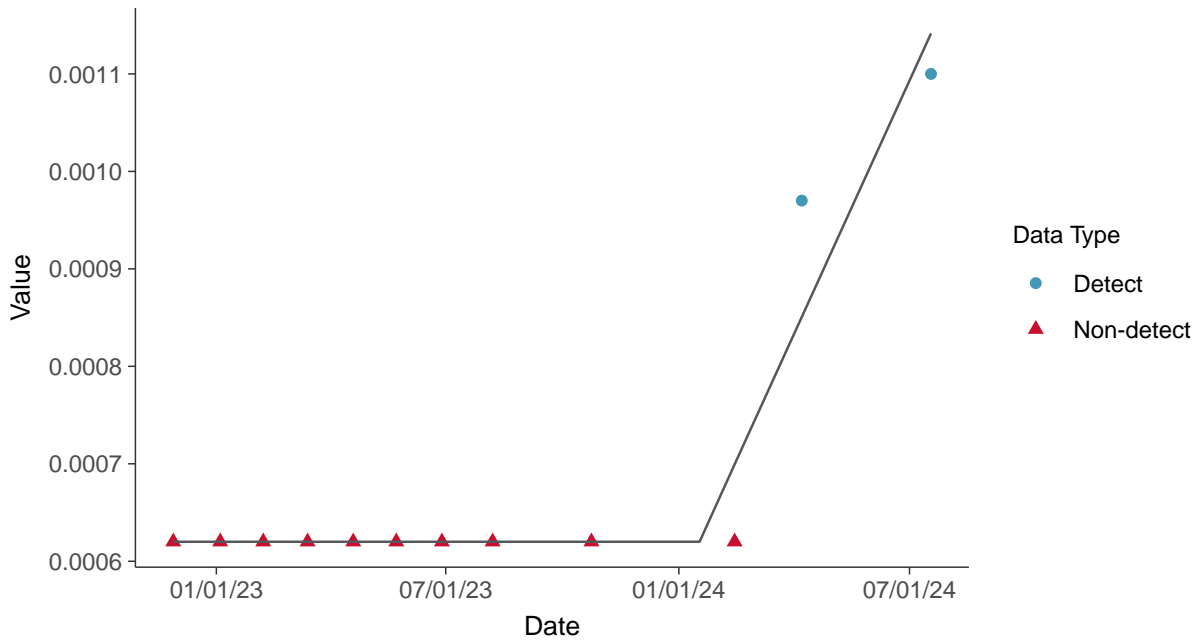
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-04 (mg/L)



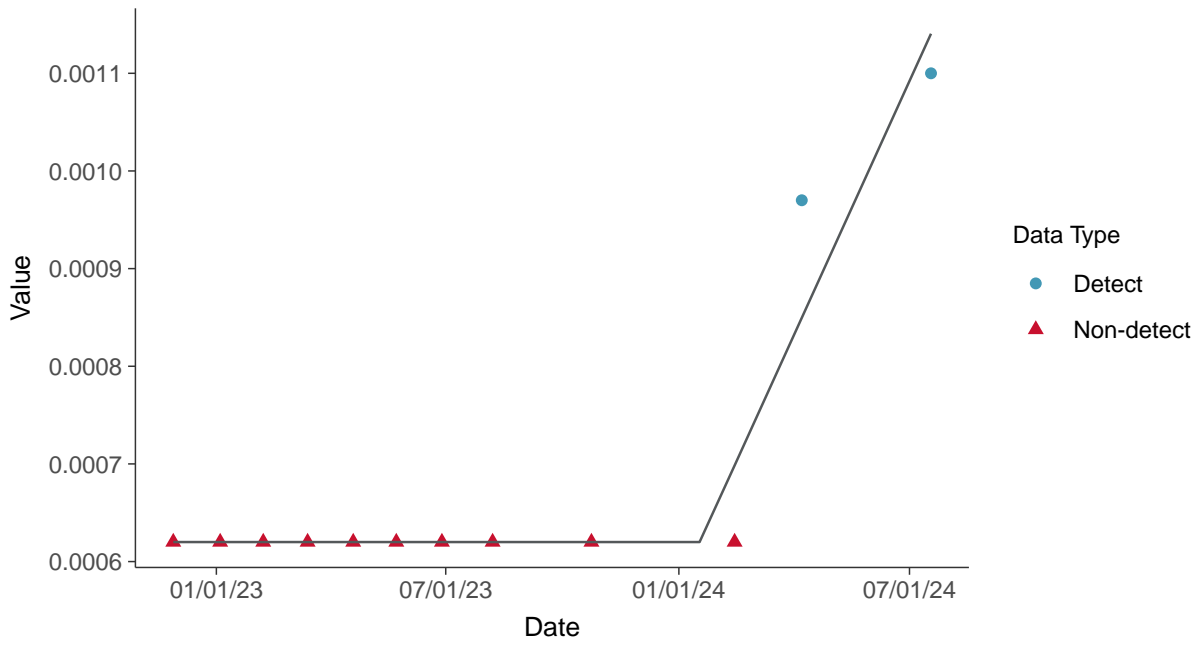
### Trend Regression: Piecewise Linear-Linear

Vanadium, MW-04 (mg/L)





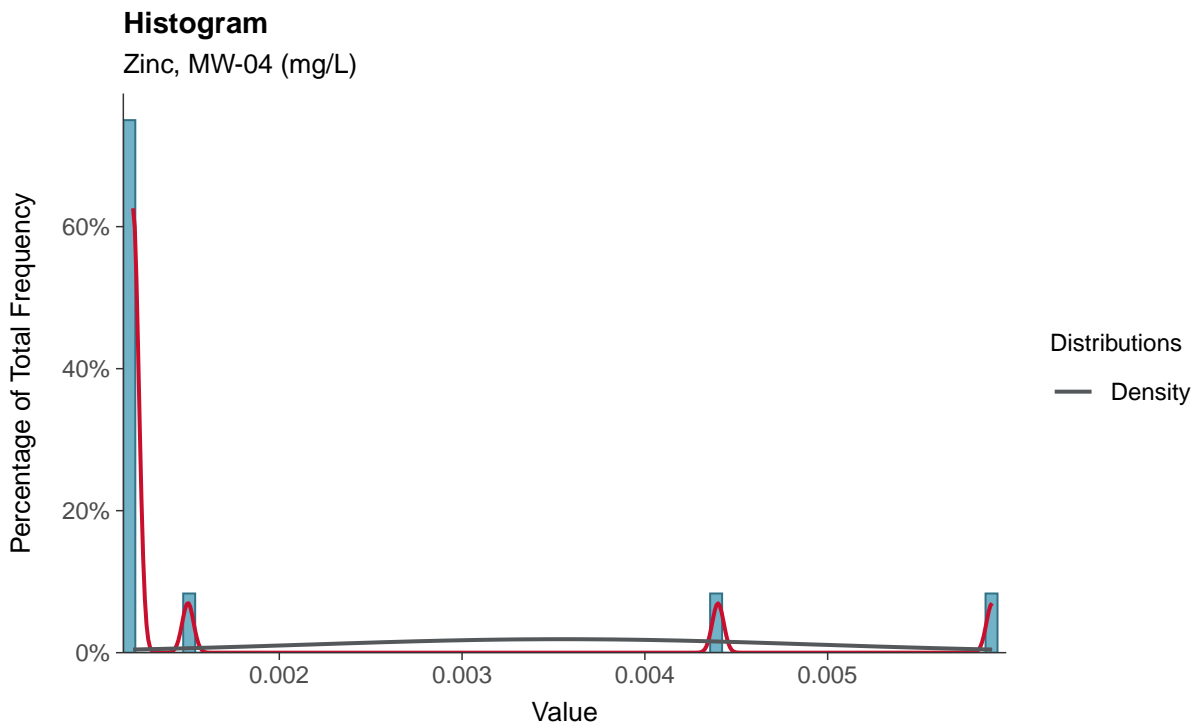
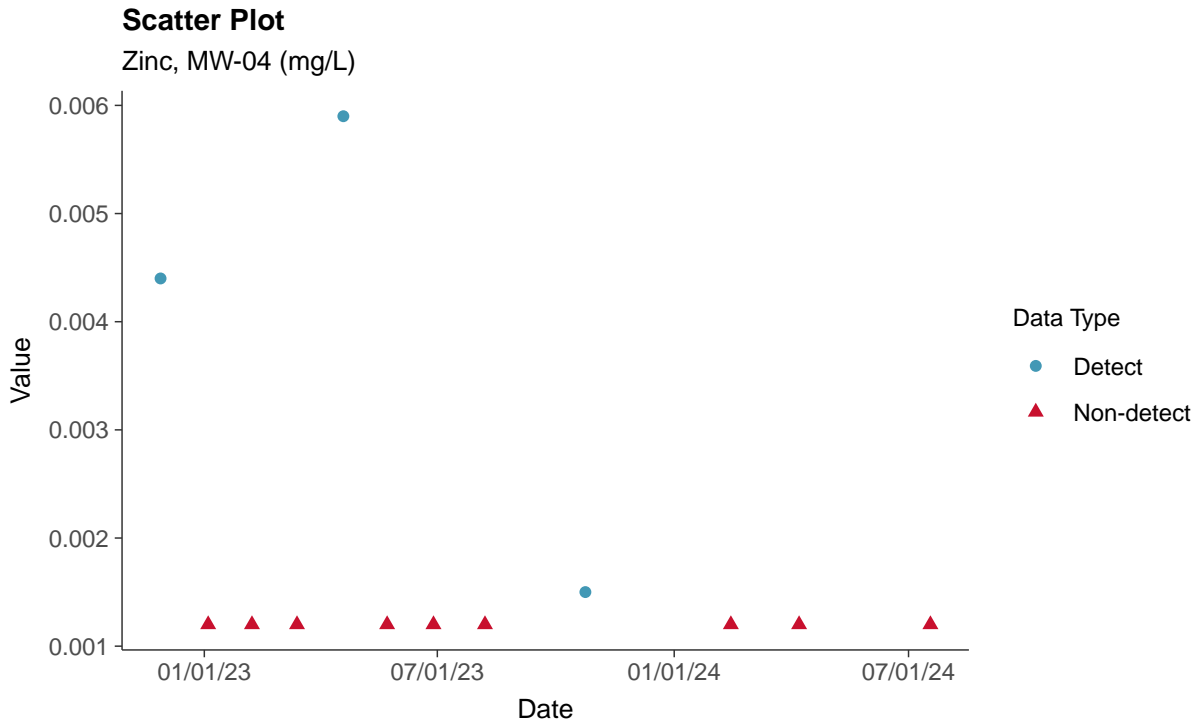
### Trend Regression: Piecewise Linear-Linear-Linear Vanadium, MW-04 (mg/L)





### Part 115: Zinc, MW-04

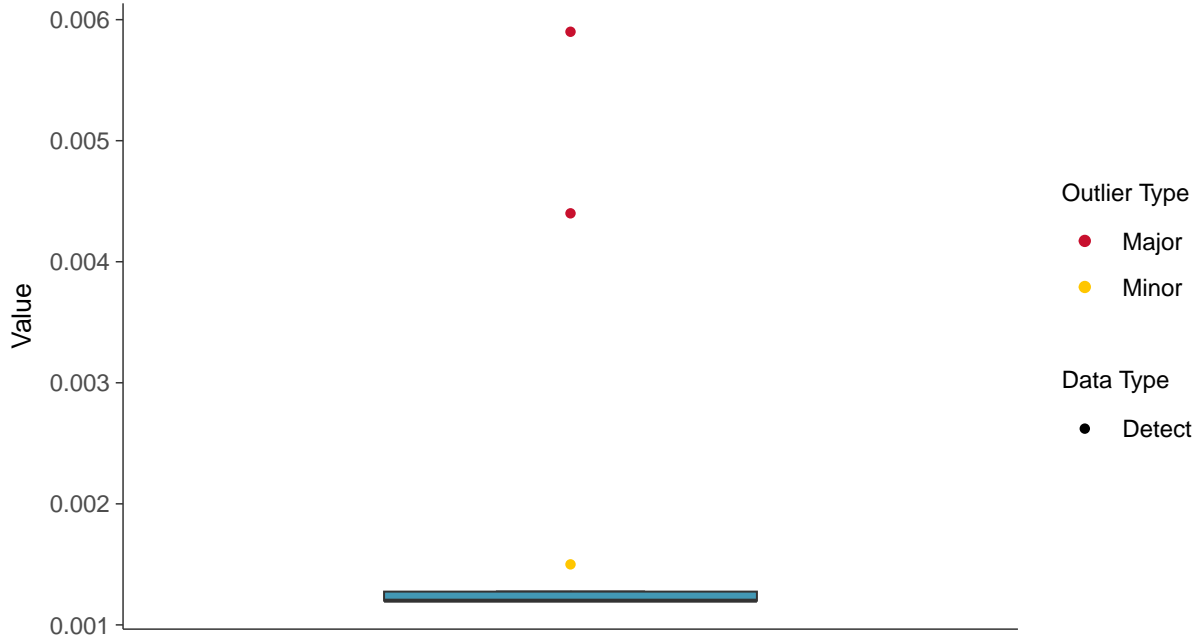
ID: 14\_2\_6\_130





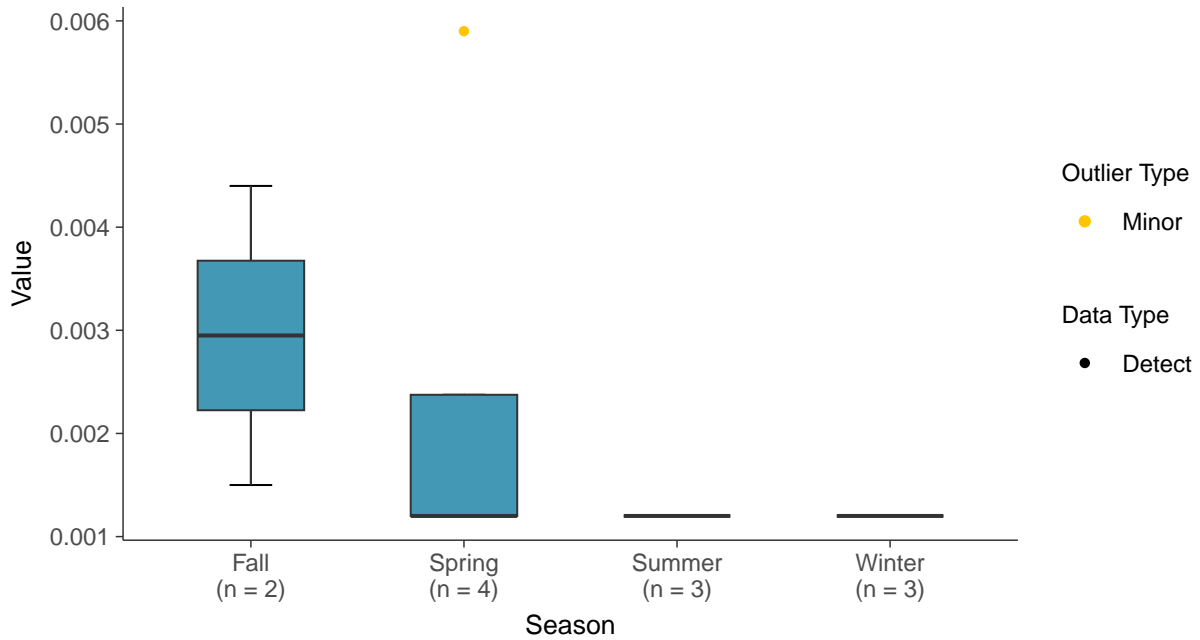
### Boxplot

Zinc, MW-04 (mg/L)



### Boxplot by Season

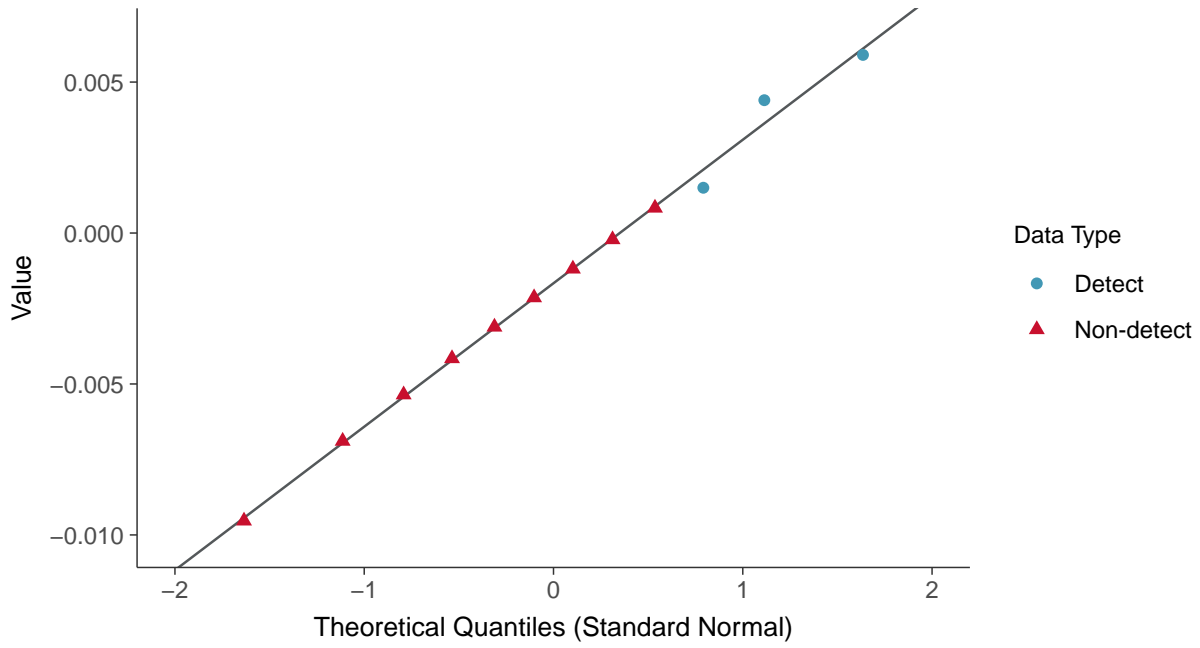
Zinc, MW-04 (mg/L)





### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-04 (mg/L)



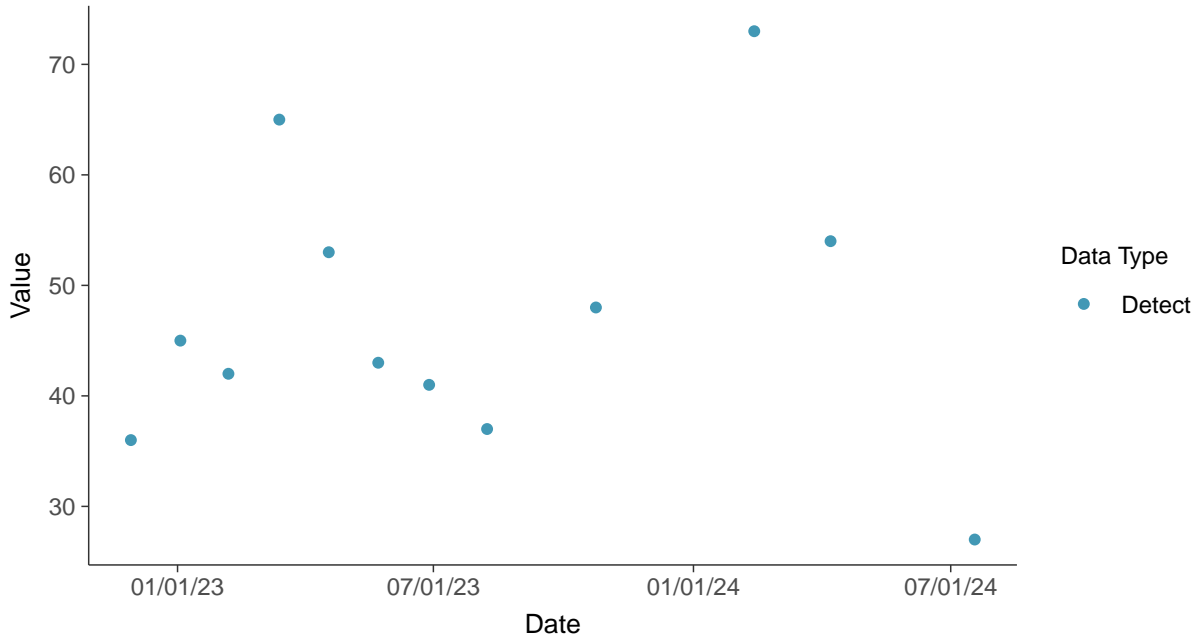


### Additional Parameters: Total Suspended Solids, MW-06

ID: 16\_1\_3\_127

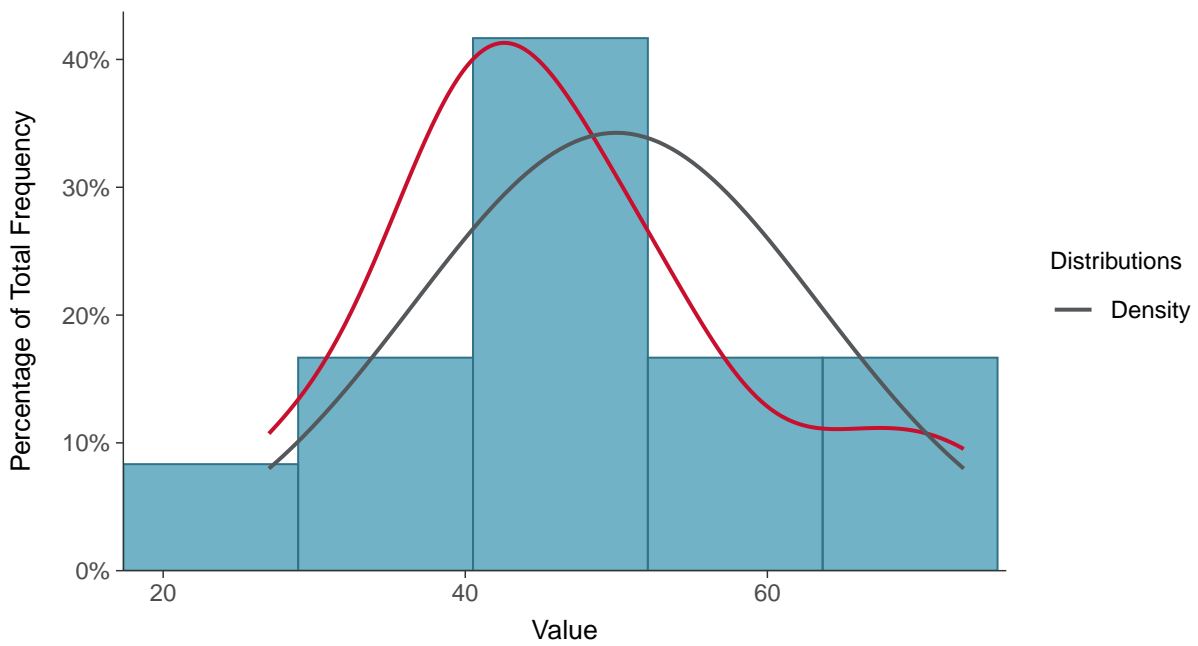
#### Scatter Plot

Total Suspended Solids, MW-06 (mg/L)



#### Histogram

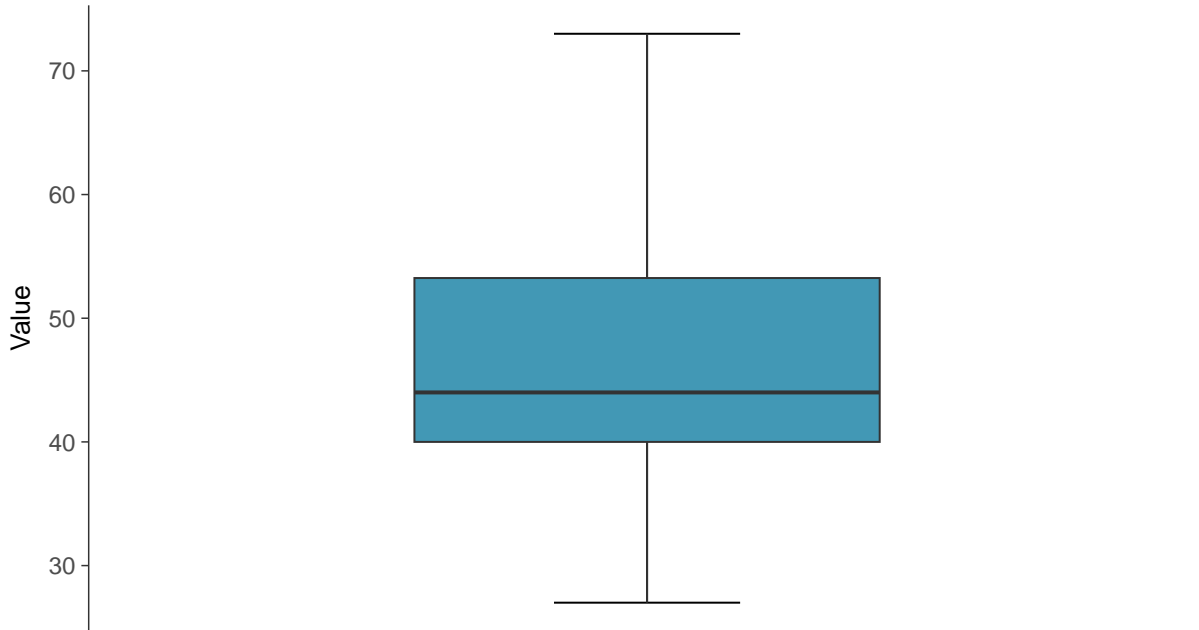
Total Suspended Solids, MW-06 (mg/L)





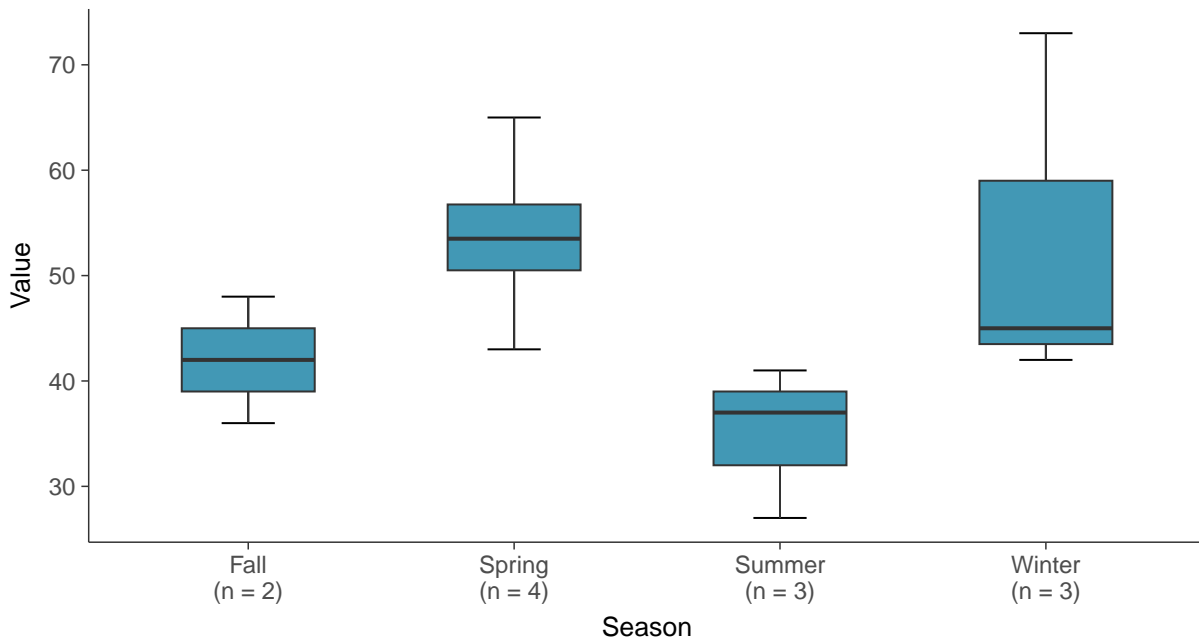
### Boxplot

Total Suspended Solids, MW-06 (mg/L)



### Boxplot by Season

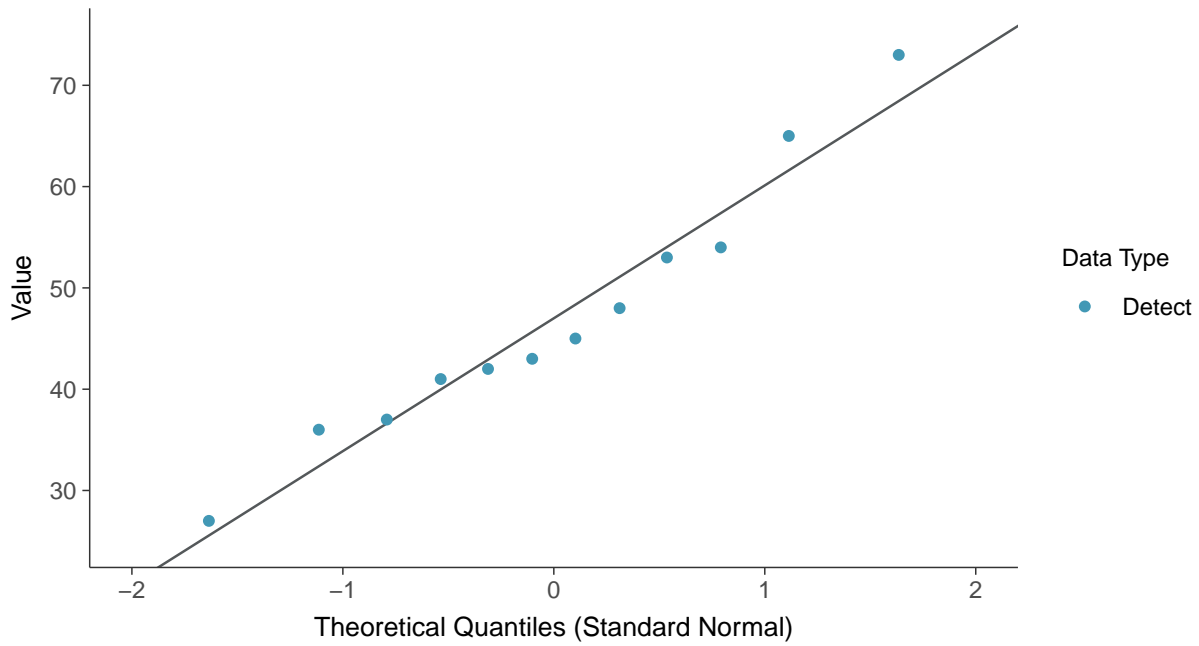
Total Suspended Solids, MW-06 (mg/L)





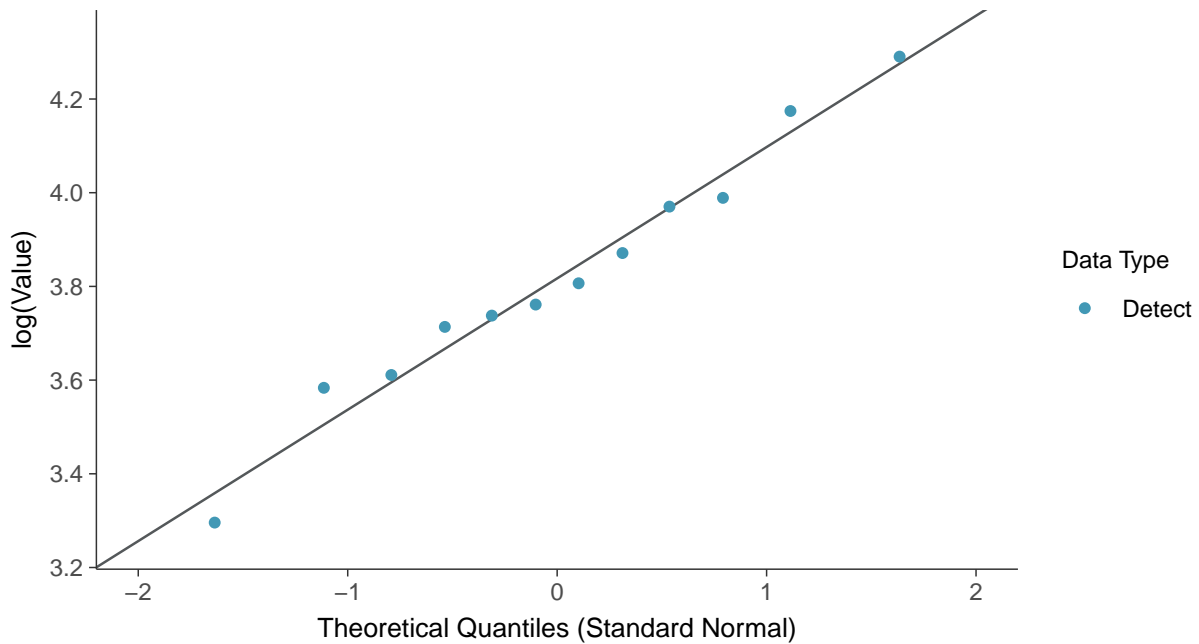
### Normal Q-Q plot

Total Suspended Solids, MW-06 (mg/L)



### Lognormal Q-Q plot

Total Suspended Solids, MW-06 (mg/L)

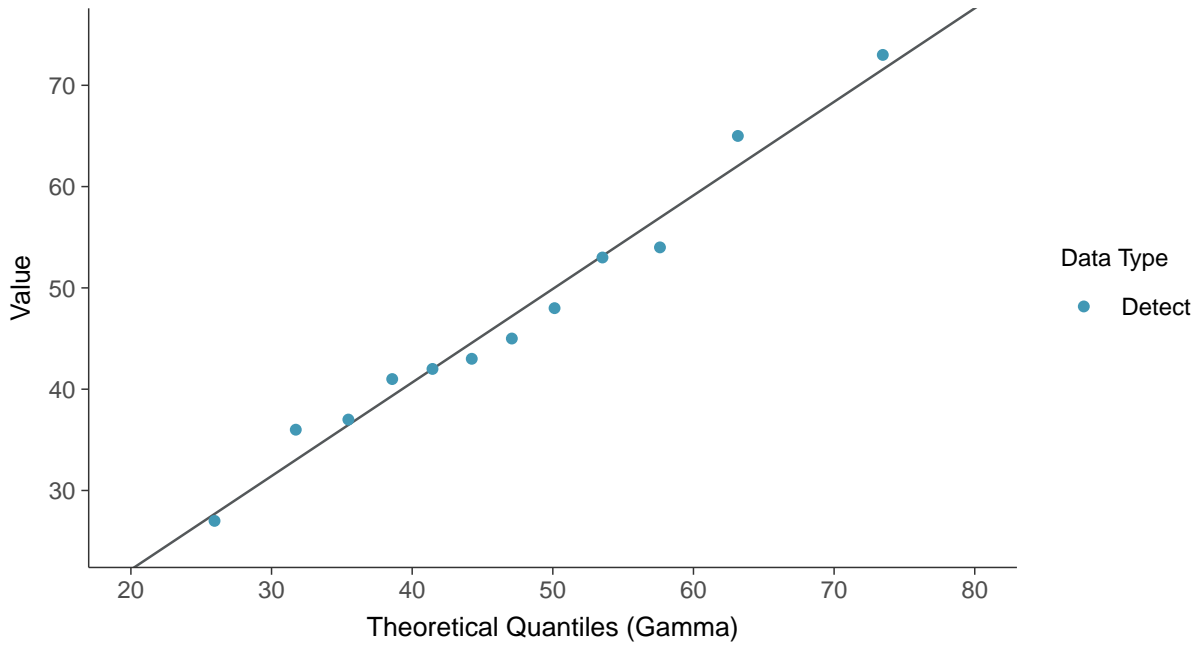






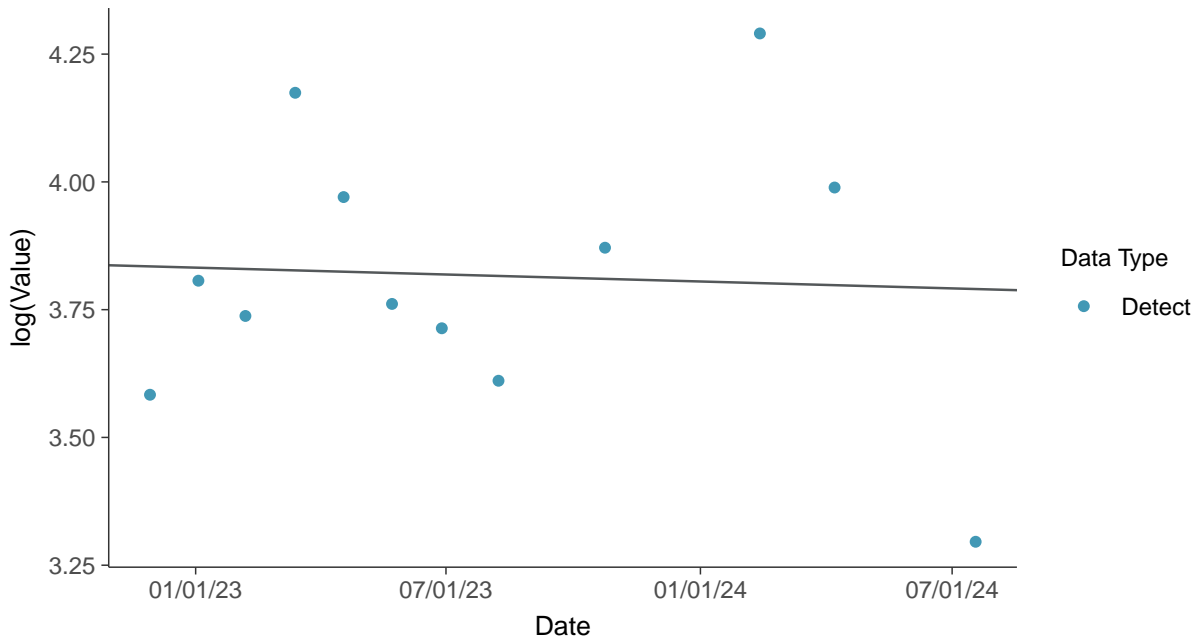
### Gamma Q-Q plot

Total Suspended Solids, MW-06 (mg/L)



### Trend Regression: Lognormal MLE

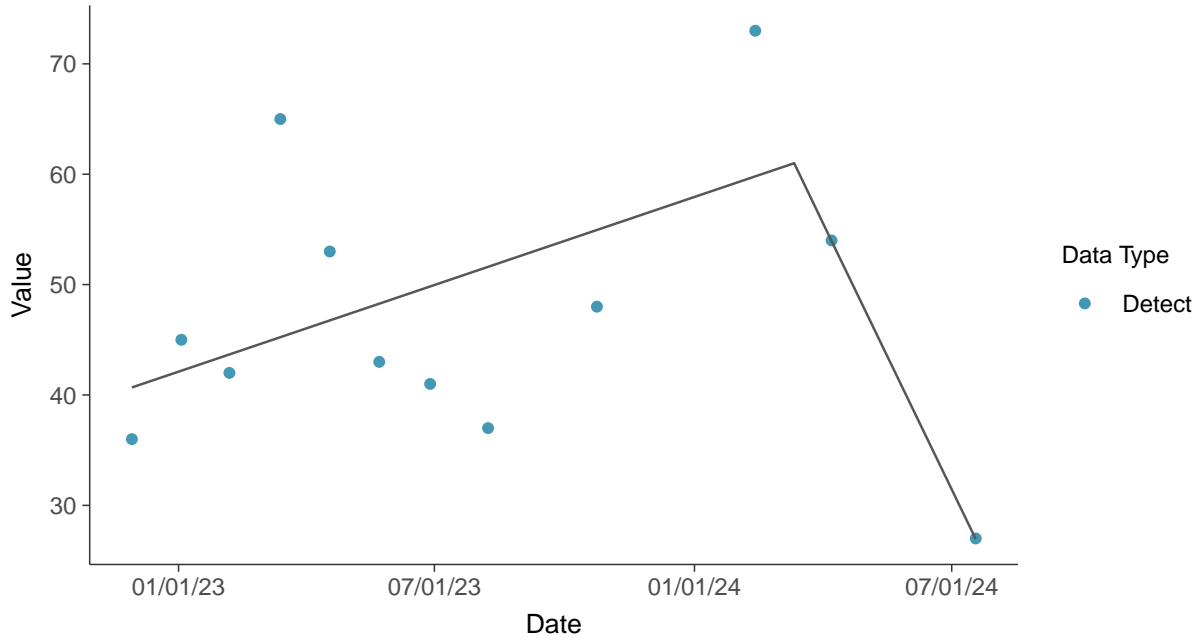
Total Suspended Solids, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear

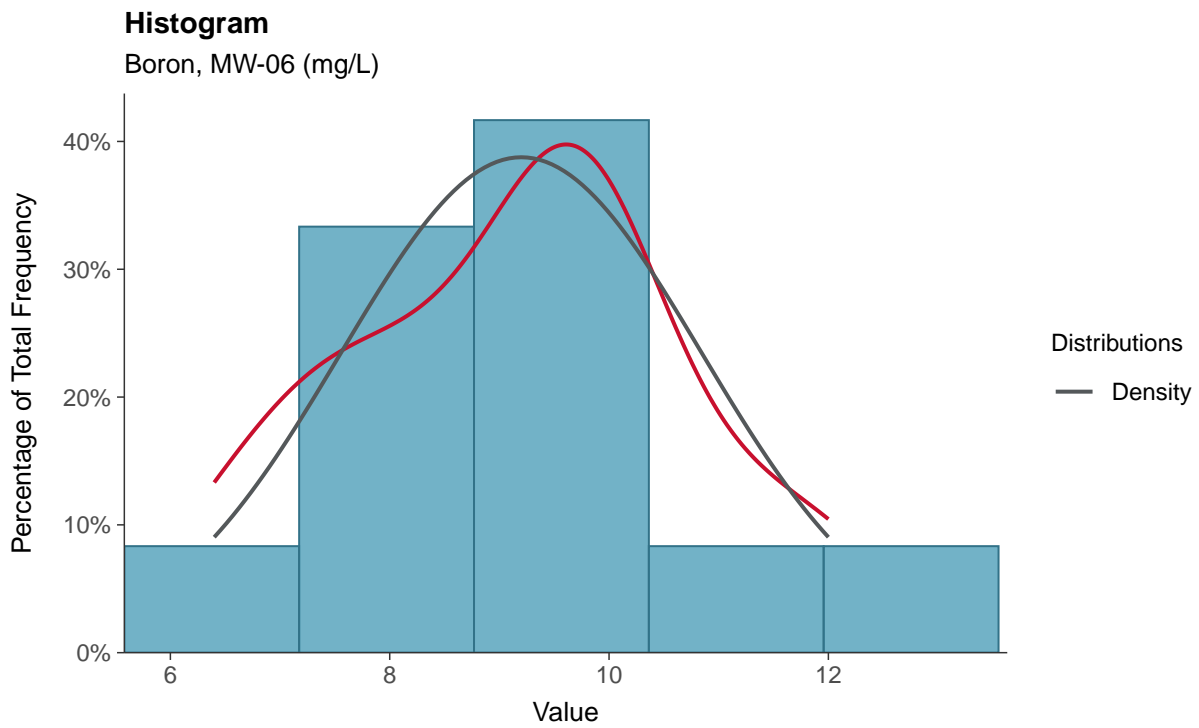
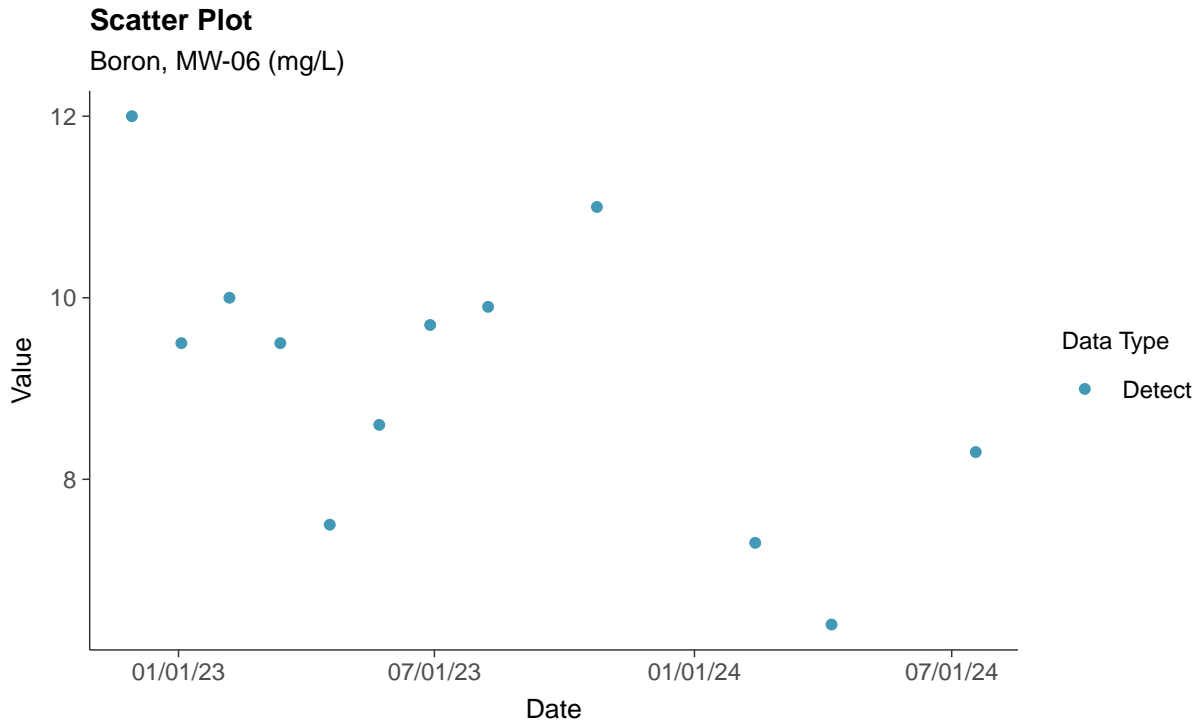
Total Suspended Solids, MW-06 (mg/L)





### Appendix III: Boron, MW-06

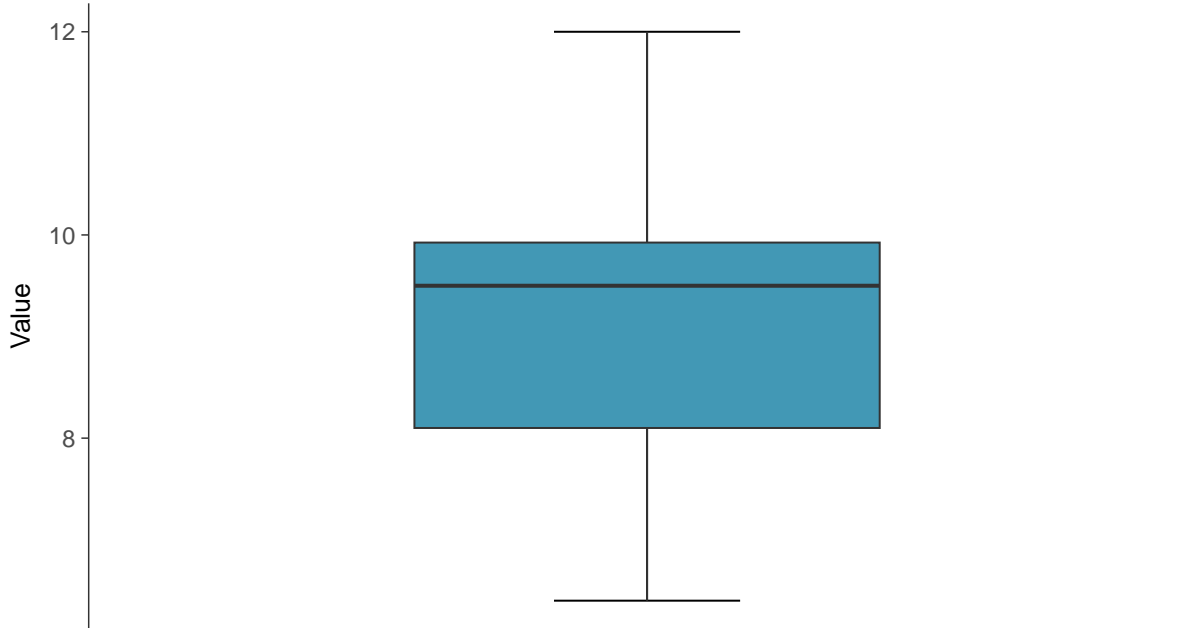
ID: 16\_1\_4\_105





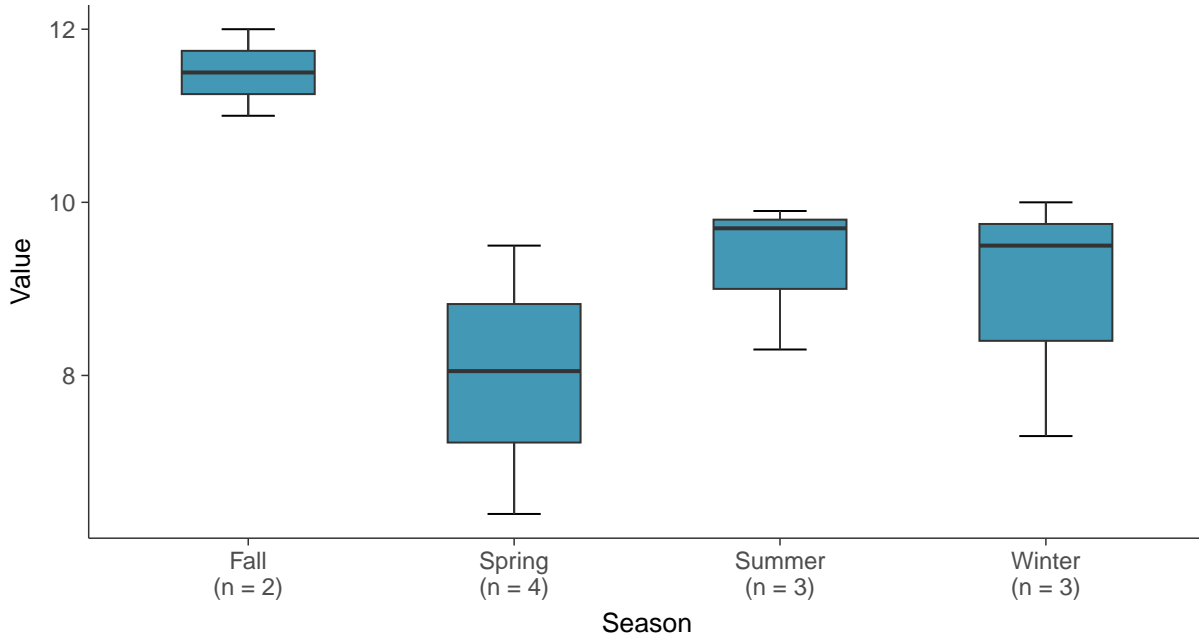
### Boxplot

Boron, MW-06 (mg/L)



### Boxplot by Season

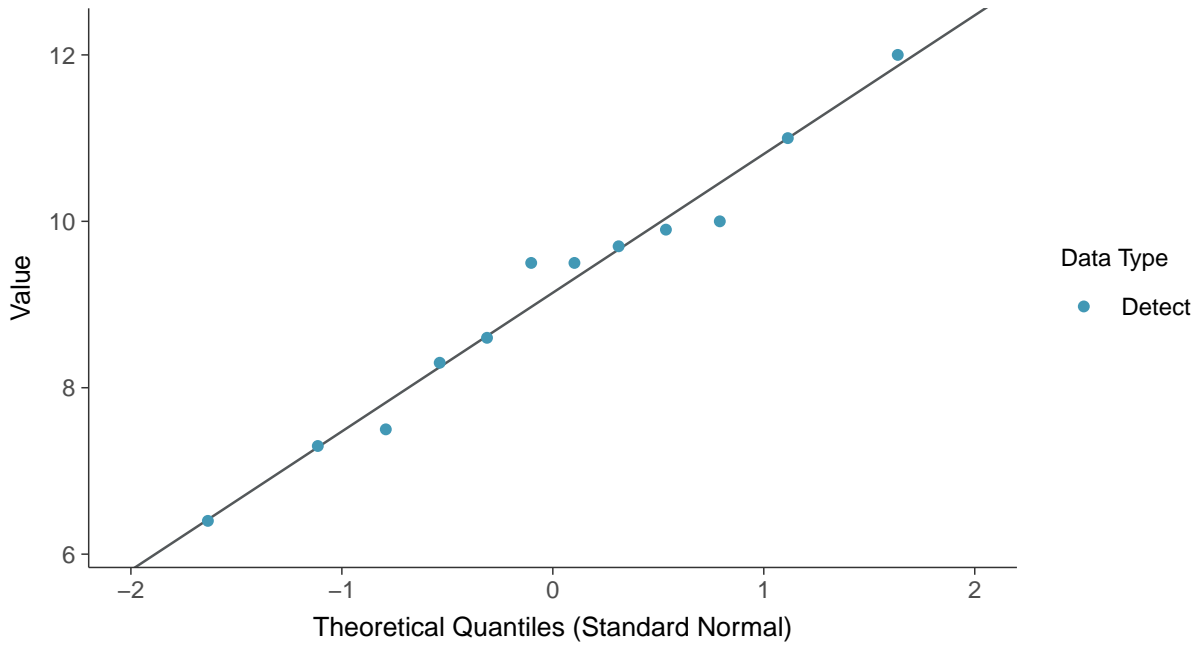
Boron, MW-06 (mg/L)





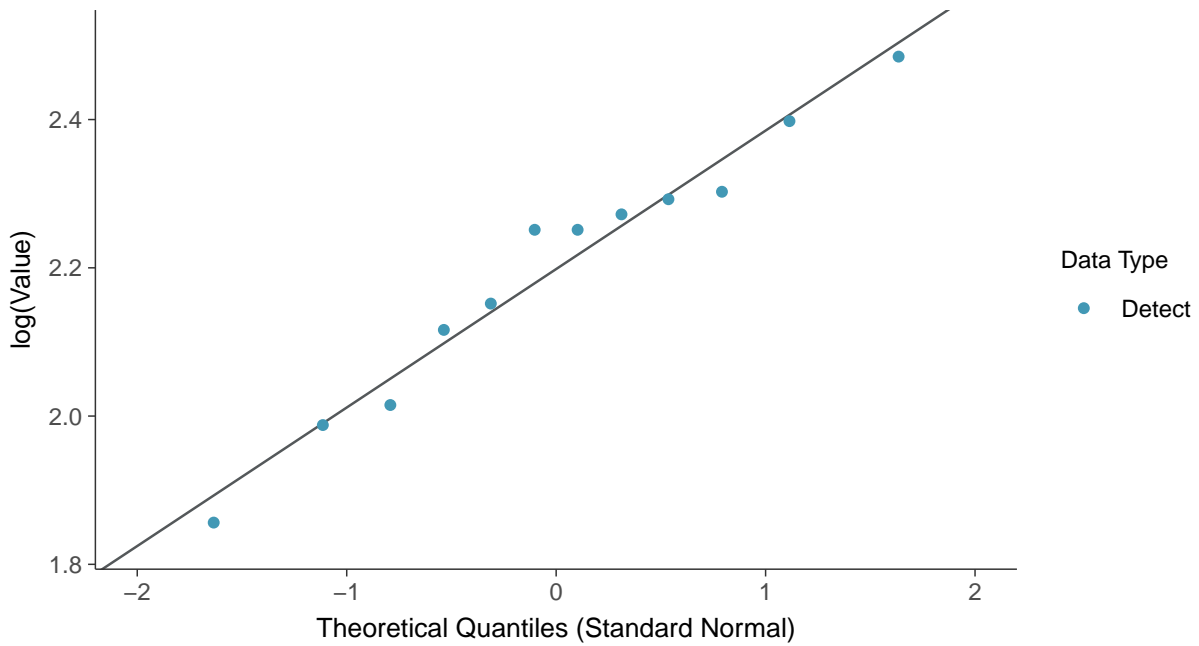
### Normal Q-Q plot

Boron, MW-06 (mg/L)



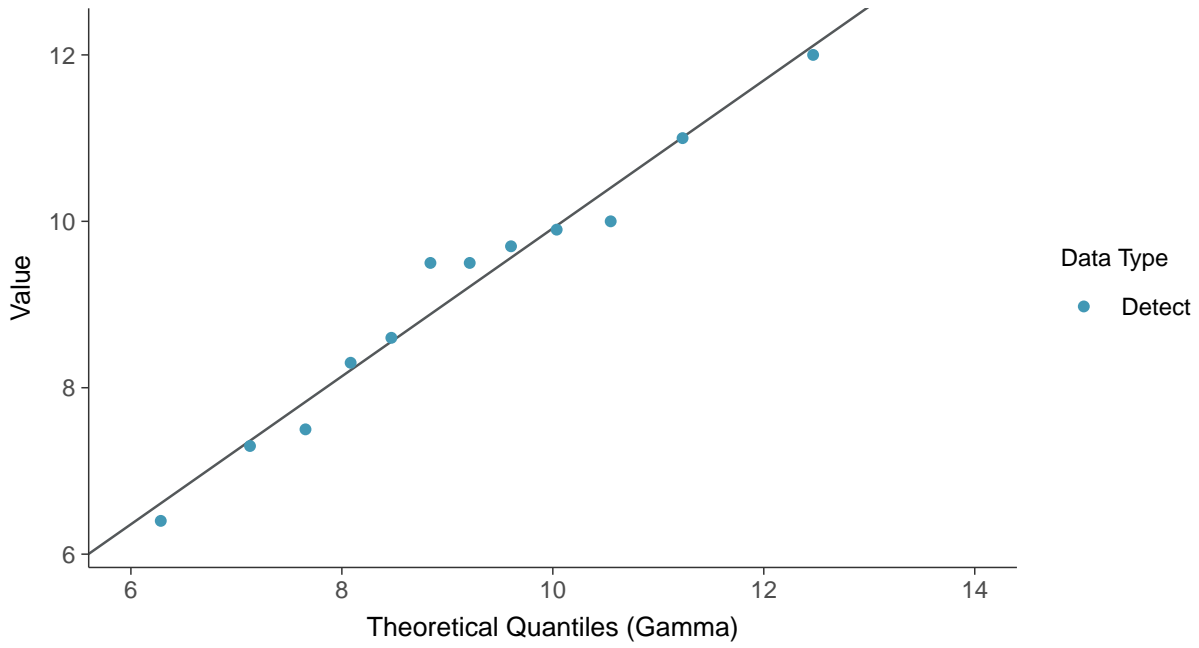
### Lognormal Q-Q plot

Boron, MW-06 (mg/L)

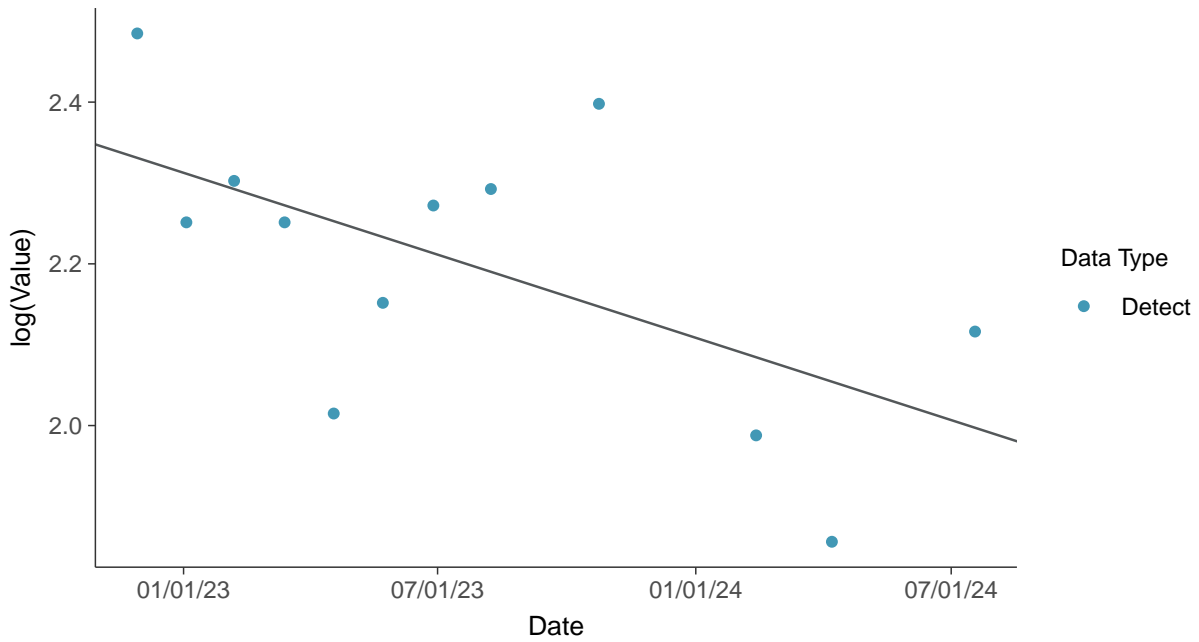




**Gamma Q-Q plot**  
Boron, MW-06 (mg/L)



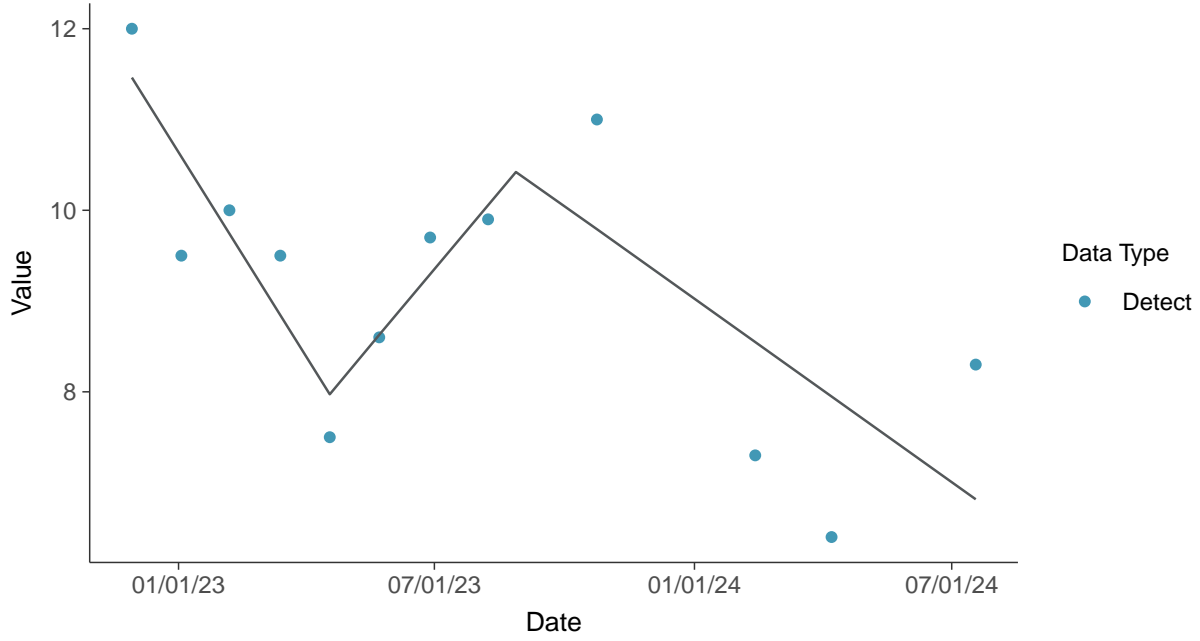
**Trend Regression: Lognormal MLE**  
Boron, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-06 (mg/L)



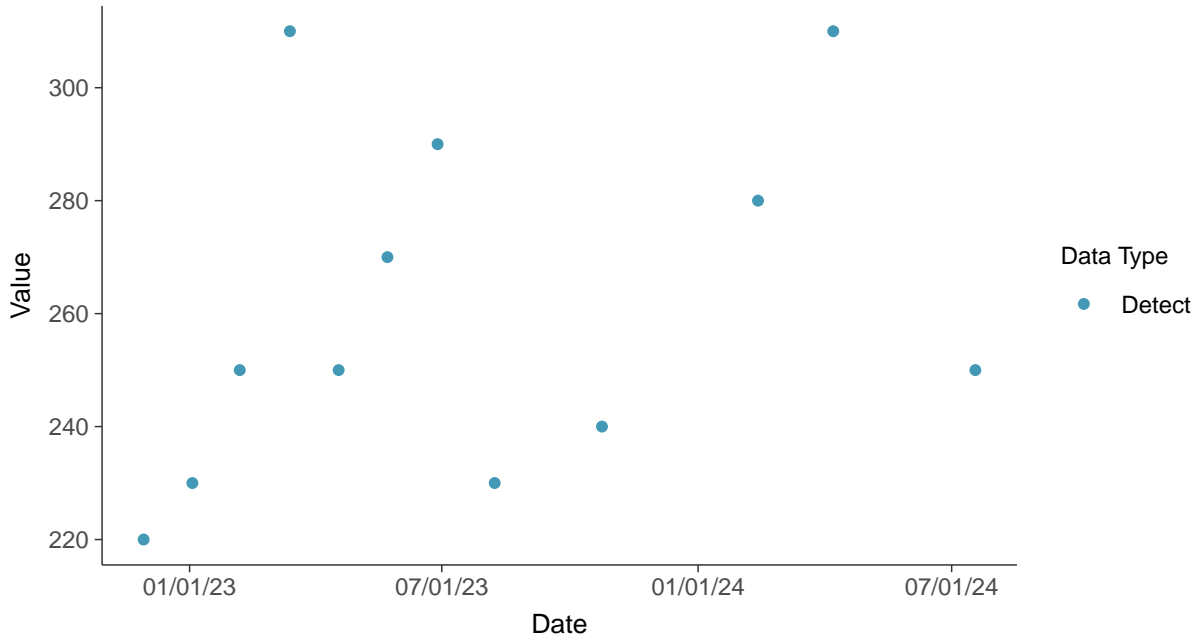


### Appendix III: Calcium, MW-06

ID: 16\_1\_4\_107

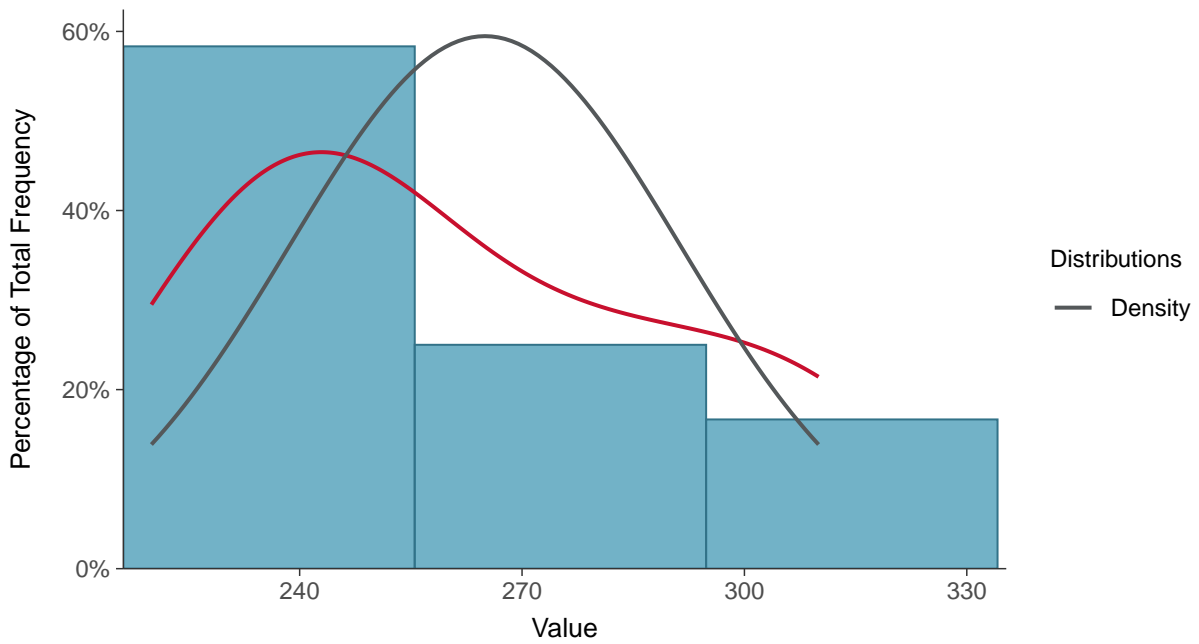
#### Scatter Plot

Calcium, MW-06 (mg/L)



#### Histogram

Calcium, MW-06 (mg/L)

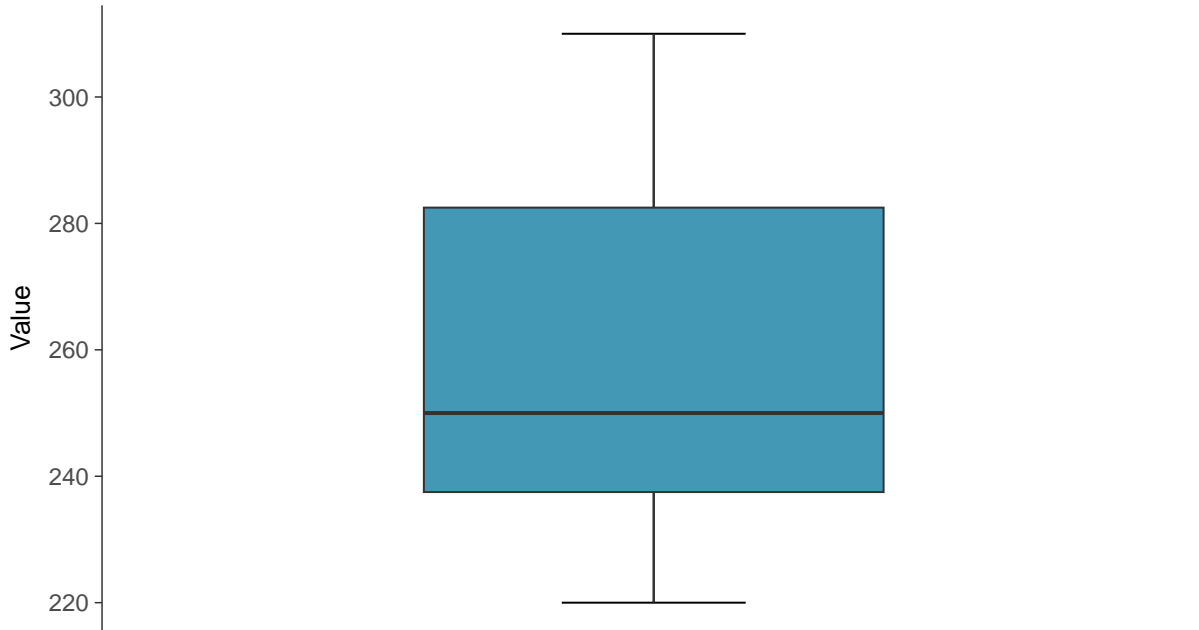






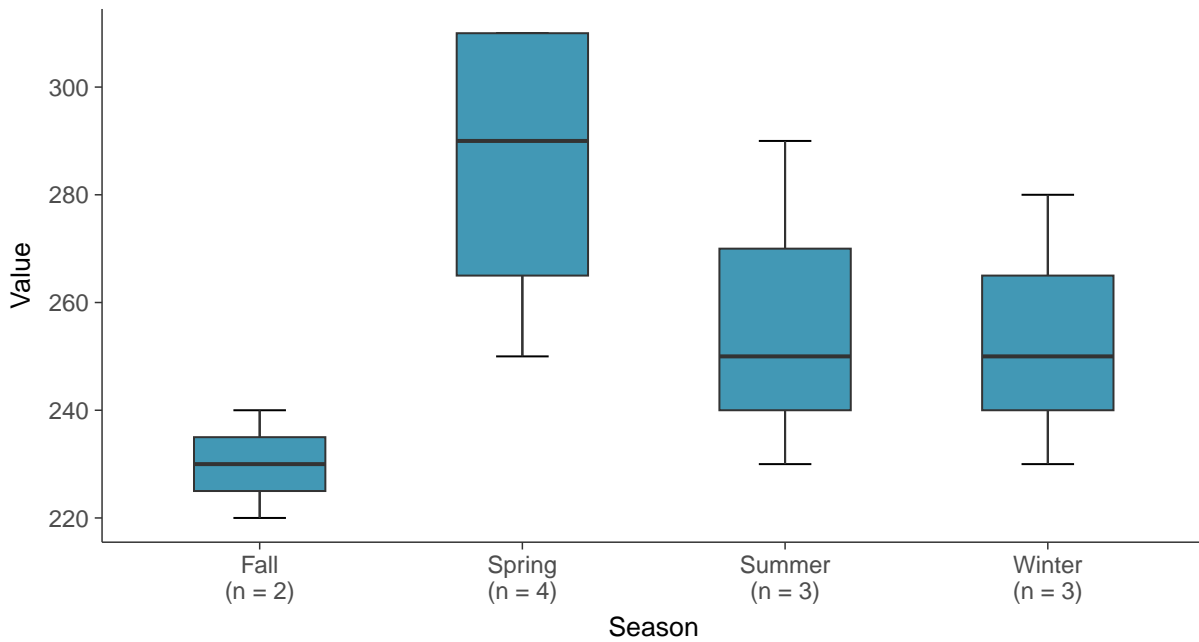
### Boxplot

Calcium, MW-06 (mg/L)



### Boxplot by Season

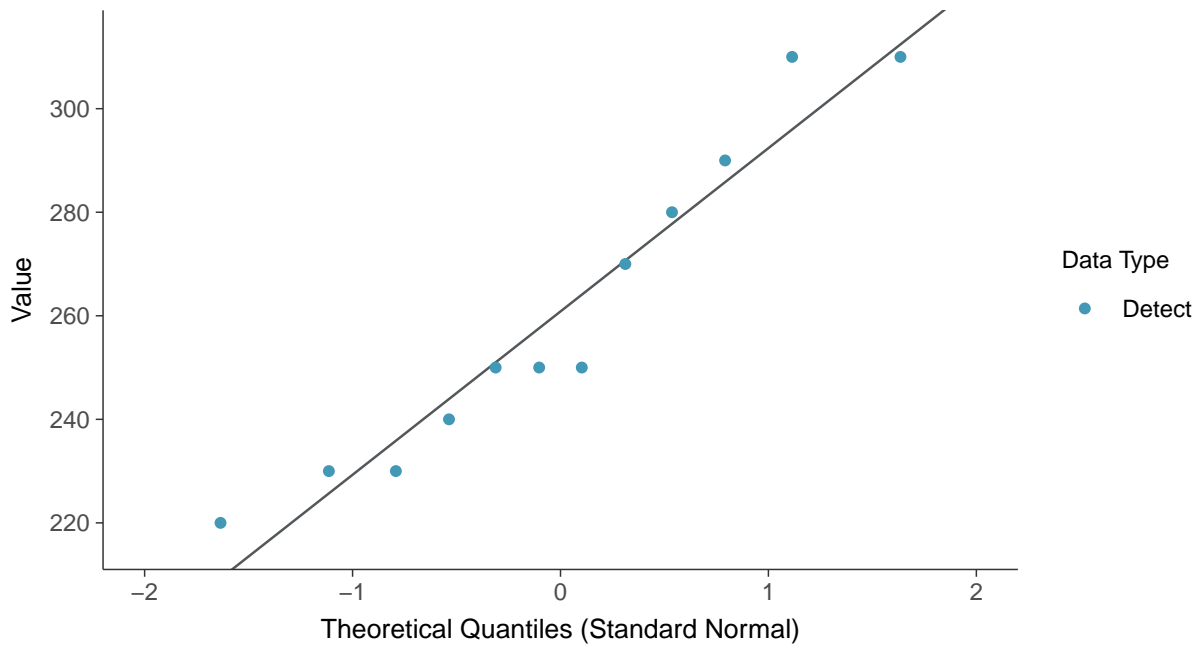
Calcium, MW-06 (mg/L)





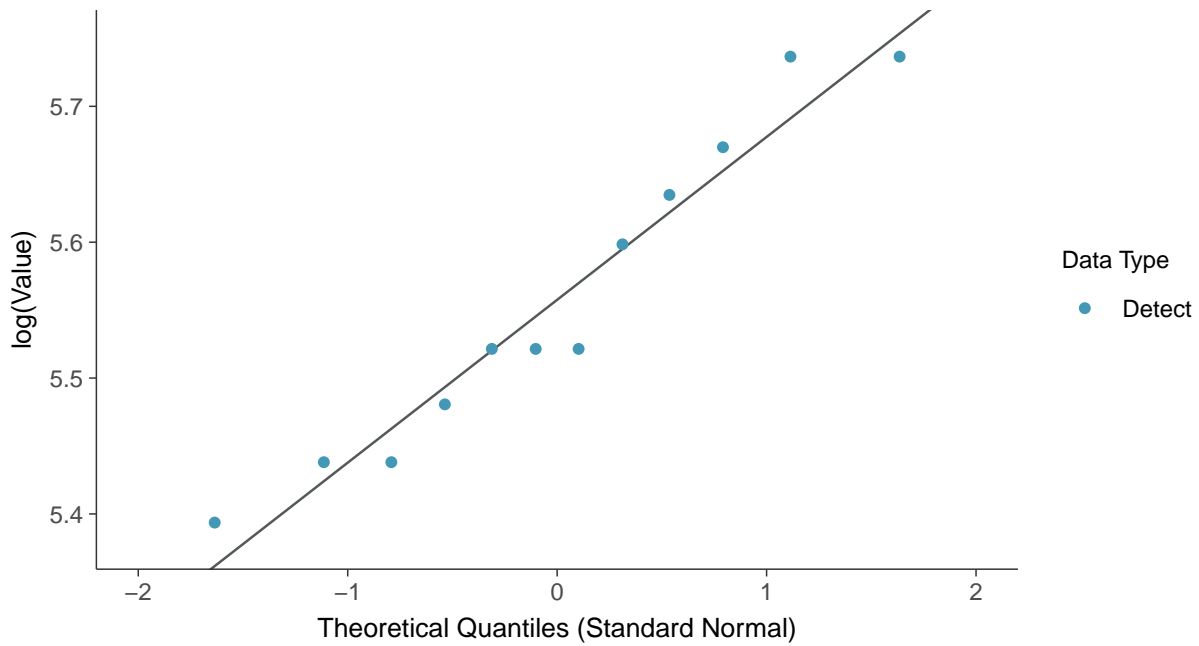
### Normal Q-Q plot

Calcium, MW-06 (mg/L)



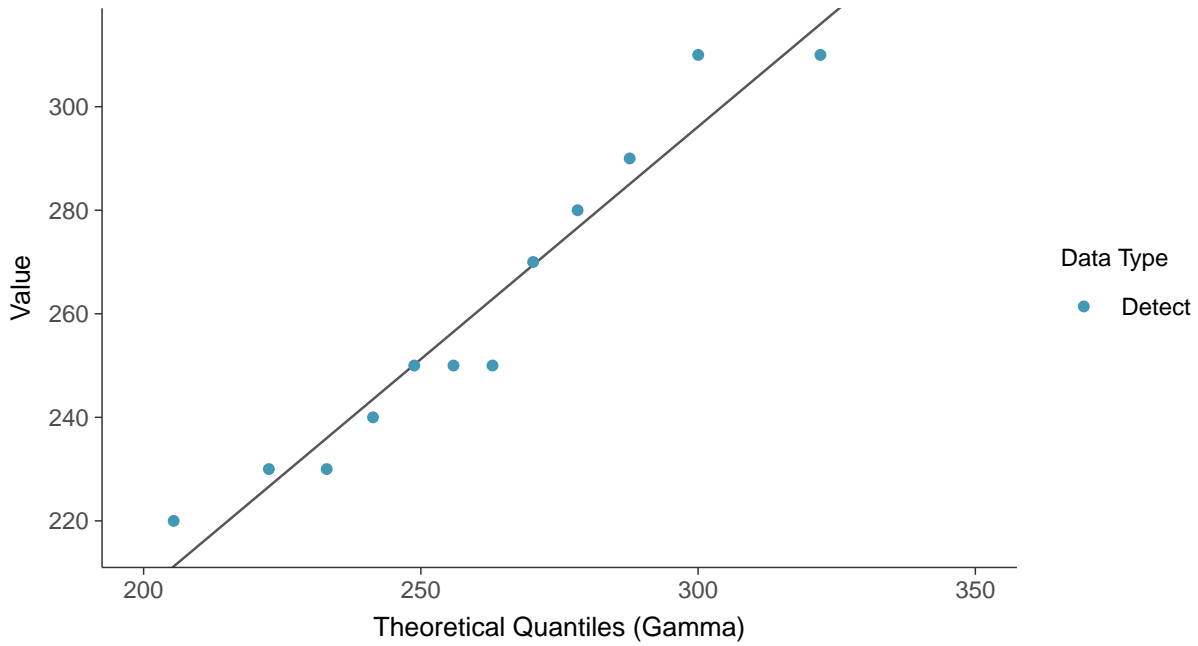
### Lognormal Q-Q plot

Calcium, MW-06 (mg/L)

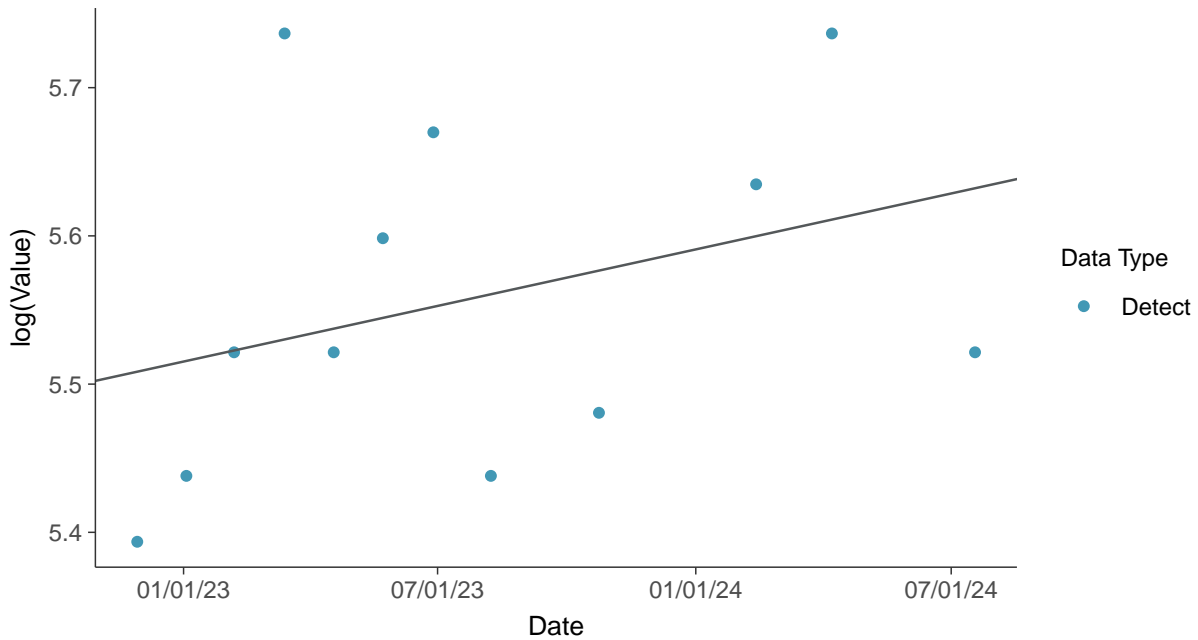




**Gamma Q-Q plot**  
Calcium, MW-06 (mg/L)



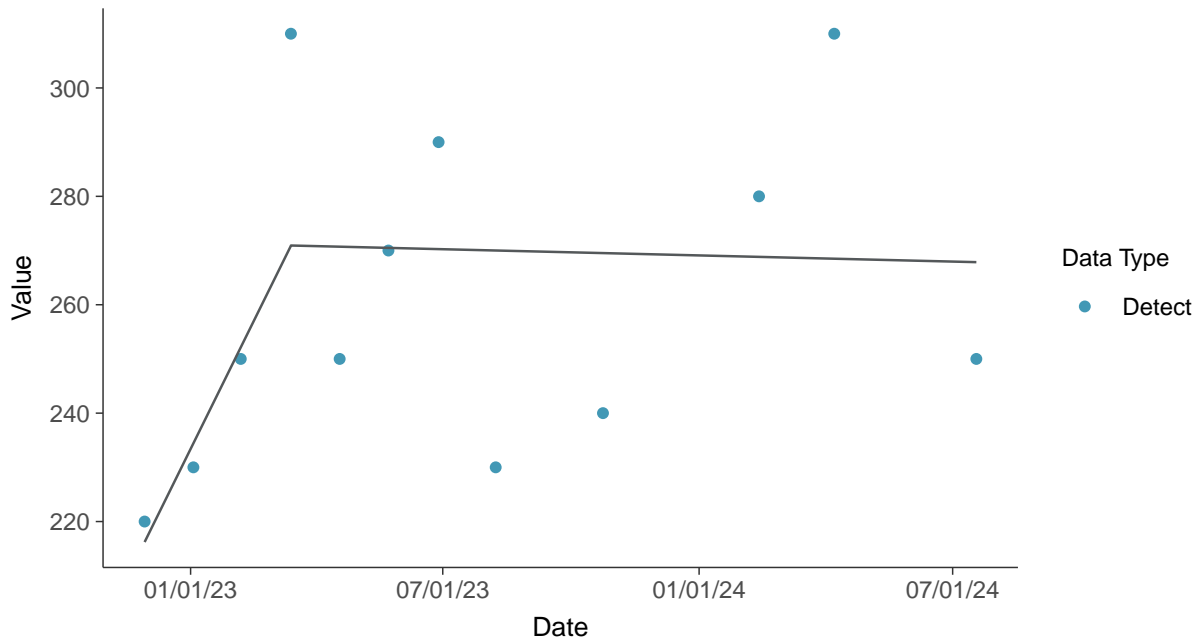
**Trend Regression: Lognormal MLE**  
Calcium, MW-06 (mg/L)





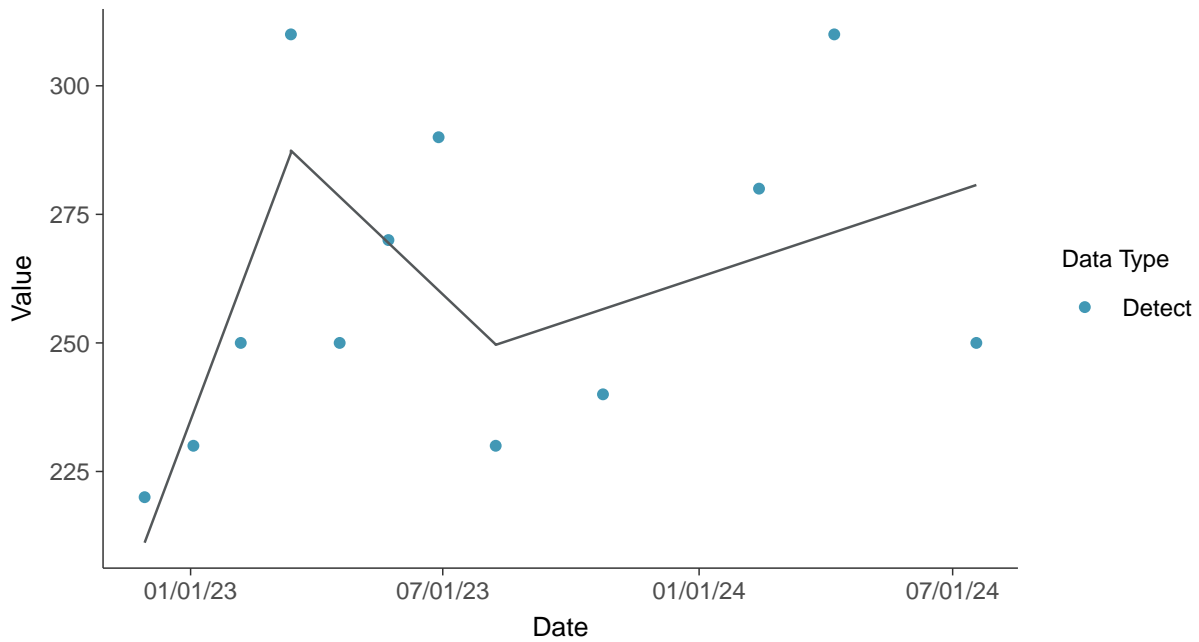
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-06 (mg/L)



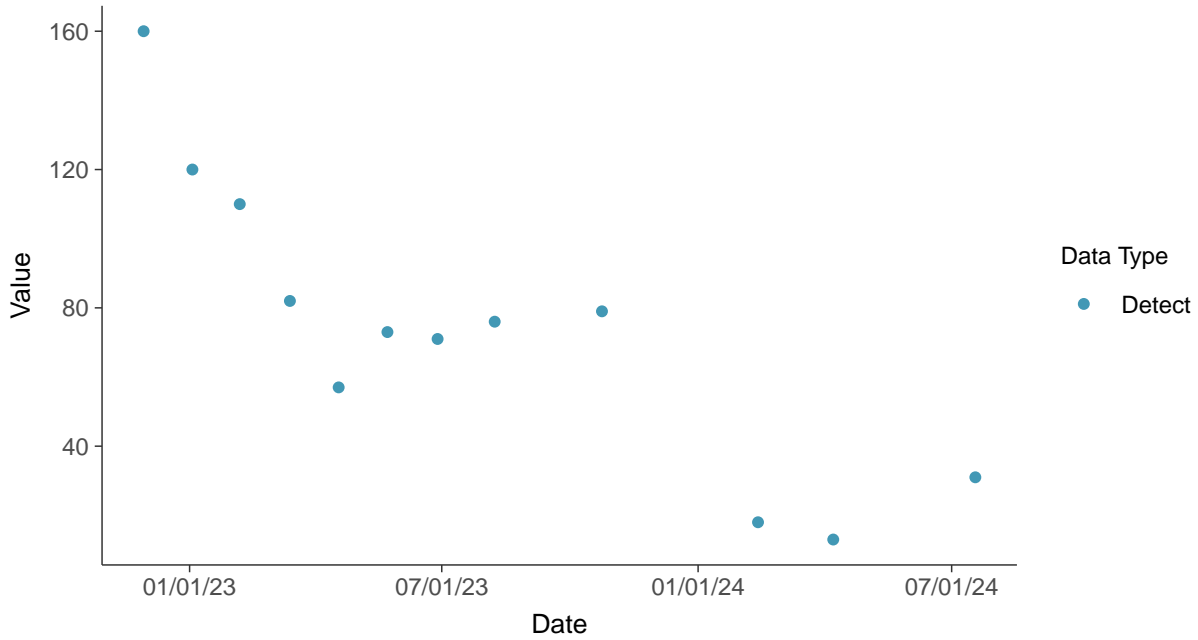


### Appendix III: Chloride (as Cl), MW-06

ID: 16\_1\_4\_108

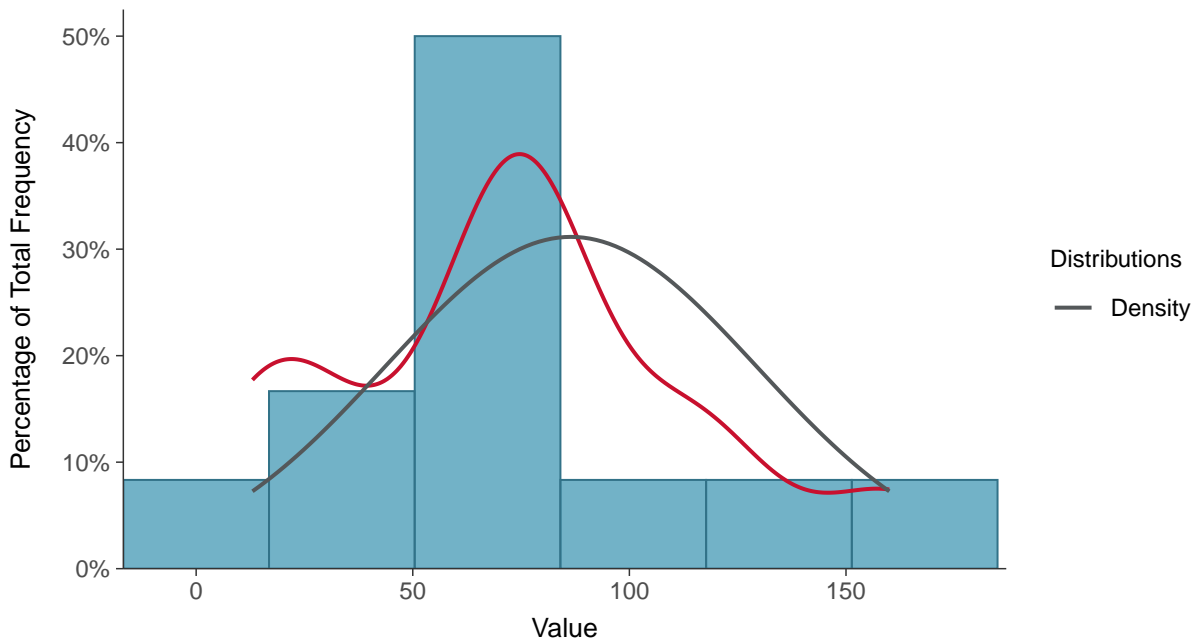
#### Scatter Plot

Chloride (as Cl), MW-06 (mg/L)



#### Histogram

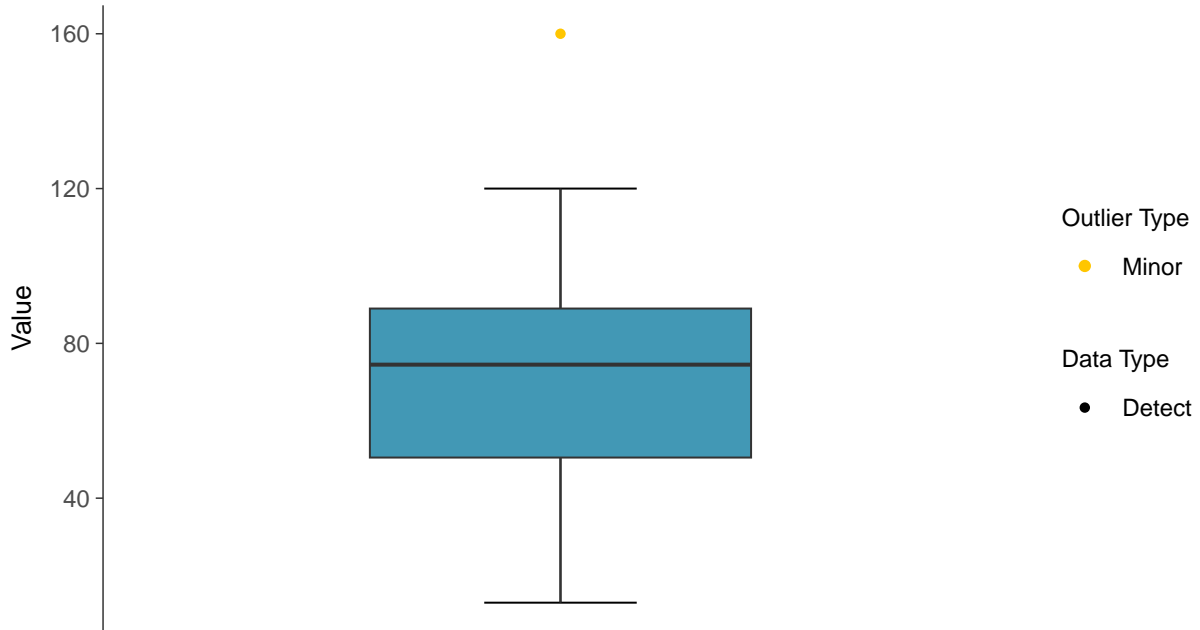
Chloride (as Cl), MW-06 (mg/L)





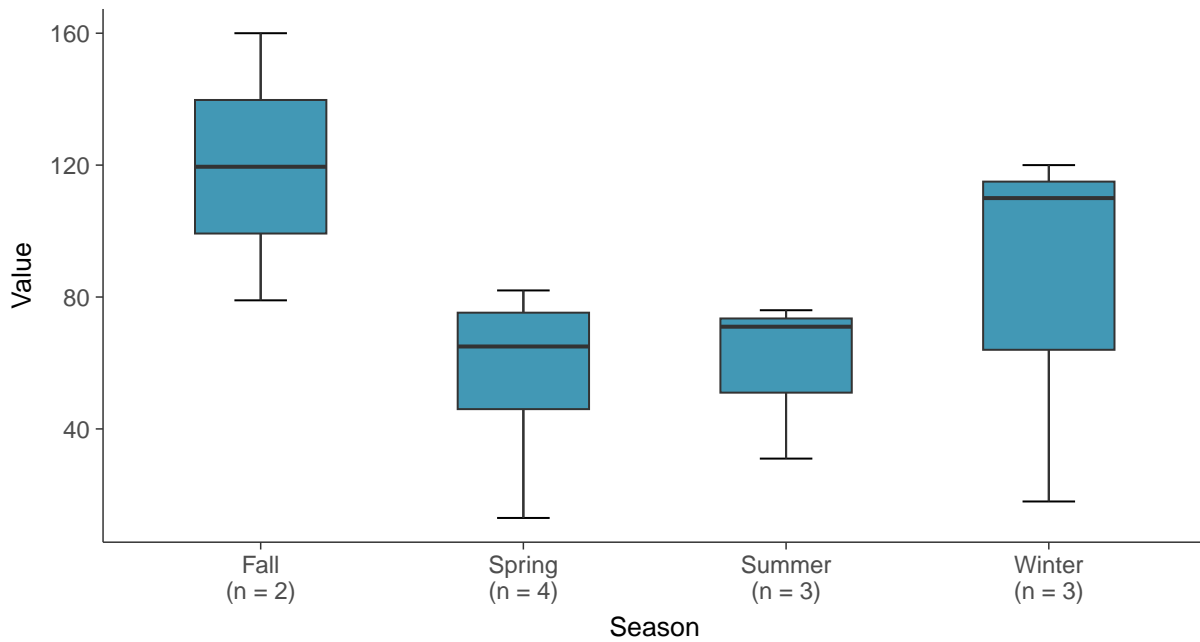
### Boxplot

Chloride (as Cl), MW-06 (mg/L)



### Boxplot by Season

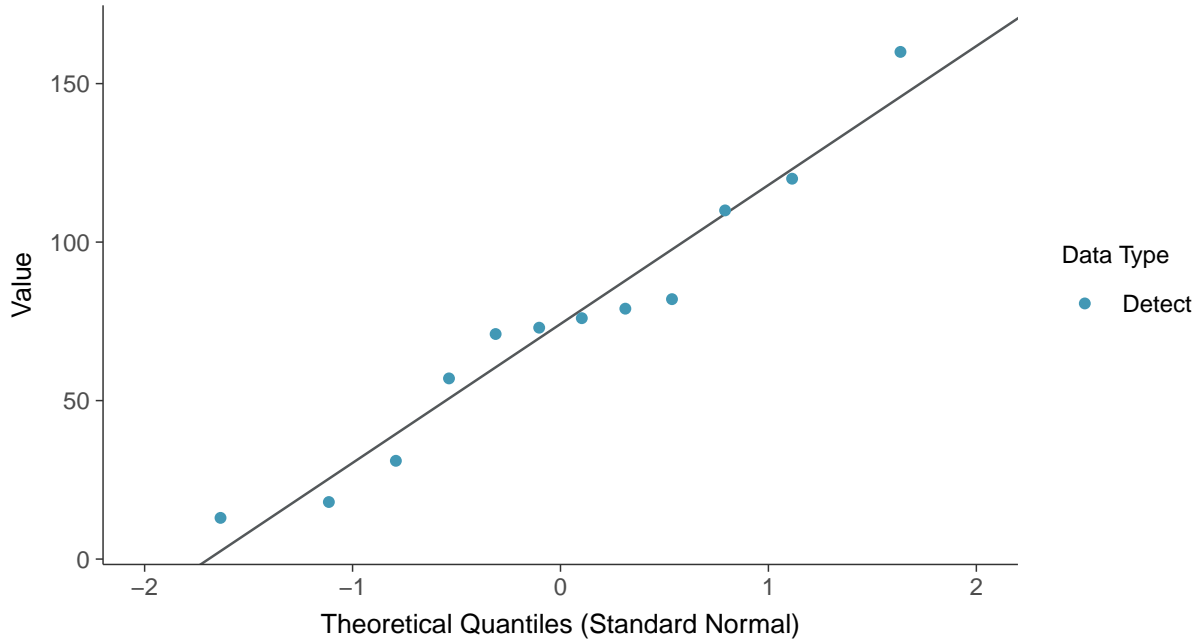
Chloride (as Cl), MW-06 (mg/L)





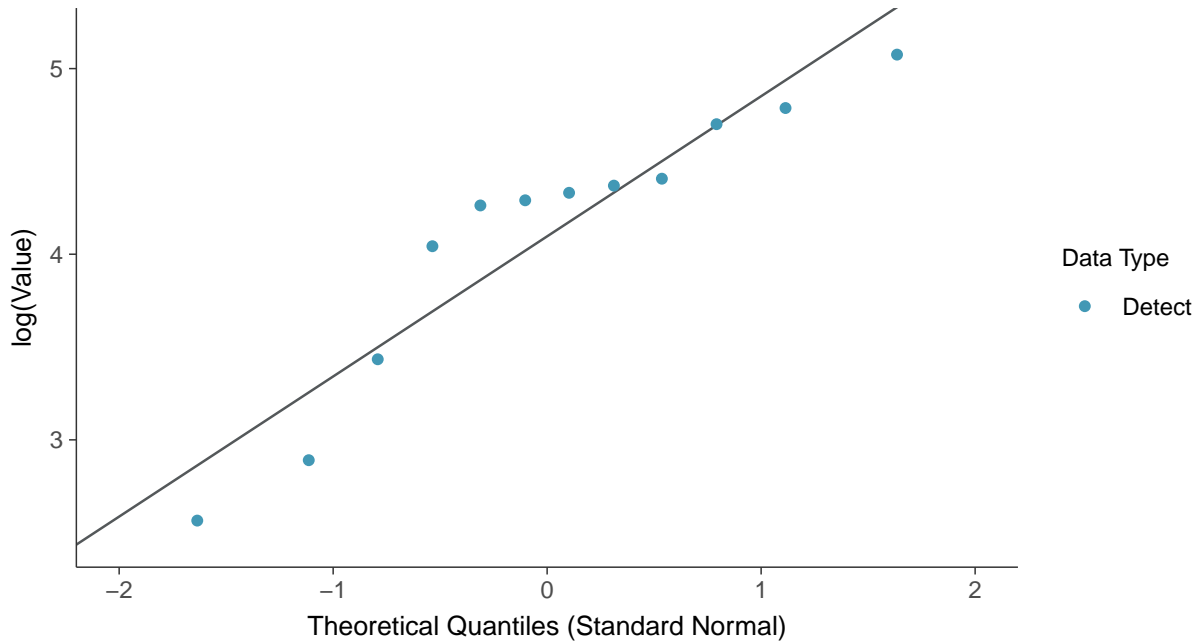
### Normal Q-Q plot

Chloride (as Cl), MW-06 (mg/L)



### Lognormal Q-Q plot

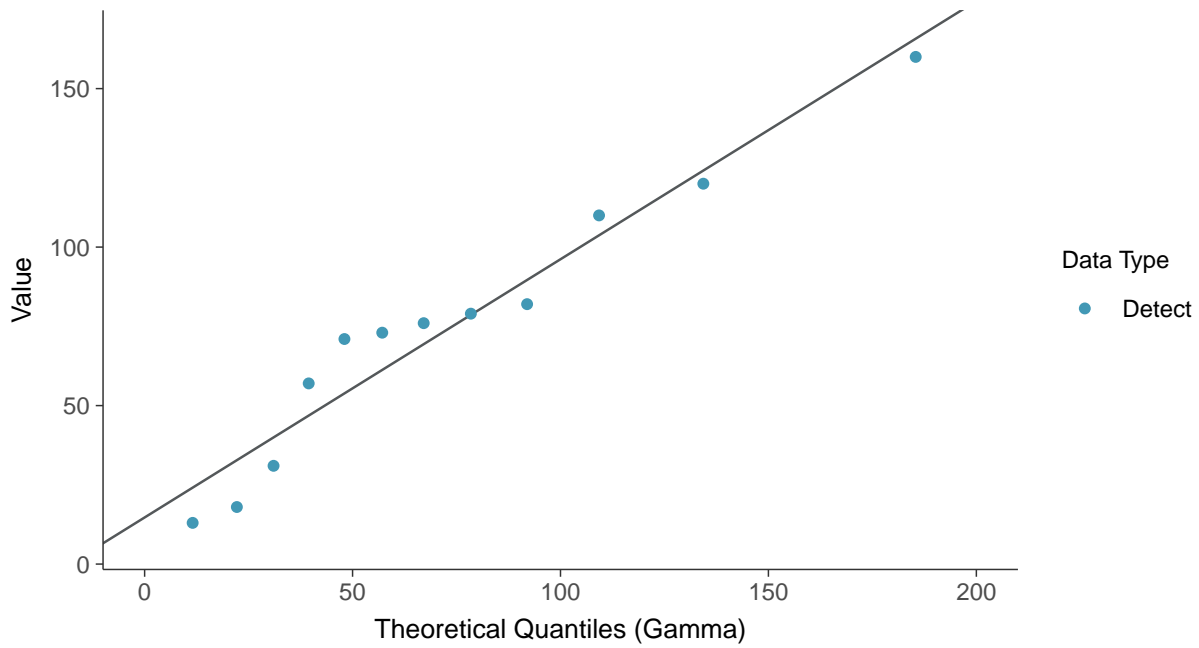
Chloride (as Cl), MW-06 (mg/L)





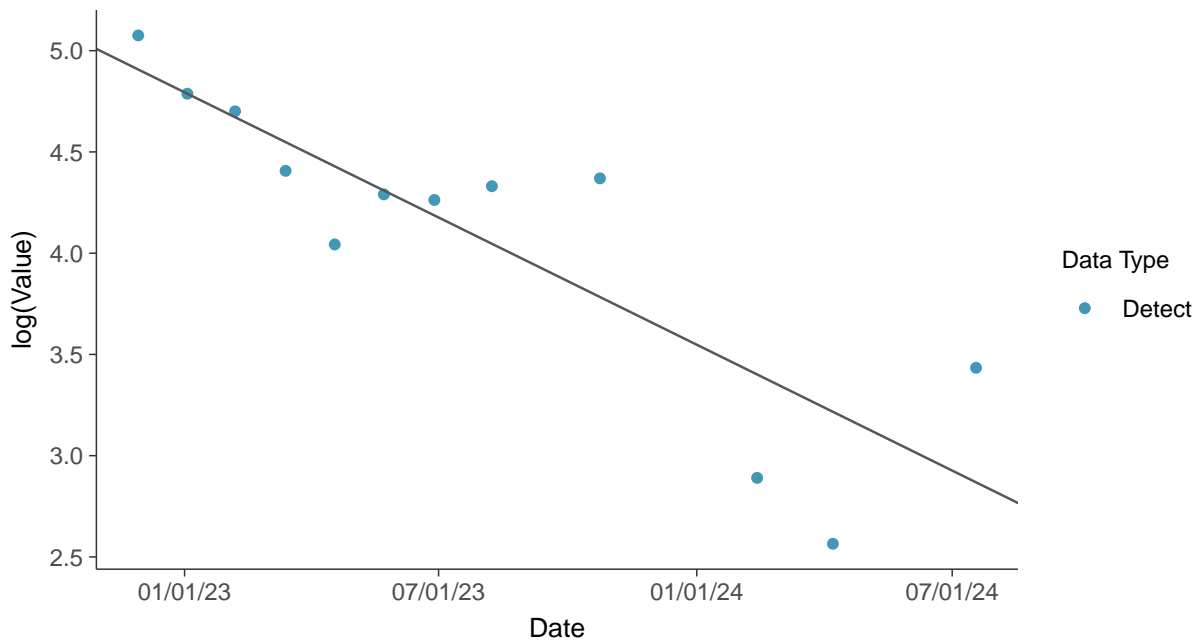
### Gamma Q-Q plot

Chloride (as Cl), MW-06 (mg/L)



### Trend Regression: Lognormal MLE

Chloride (as Cl), MW-06 (mg/L)

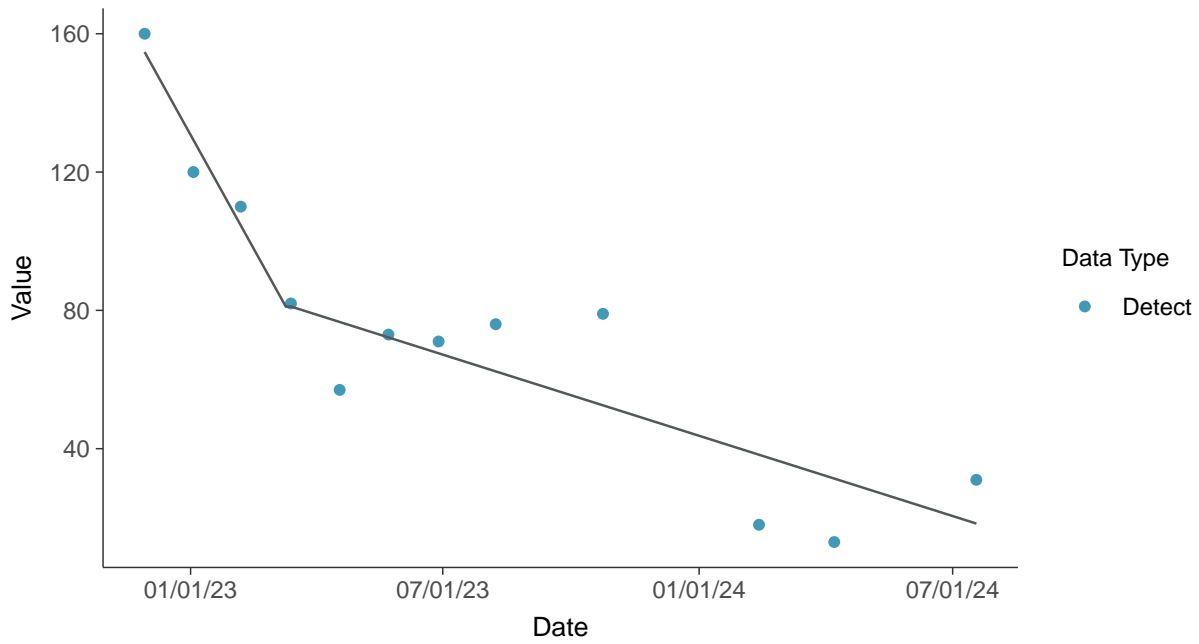






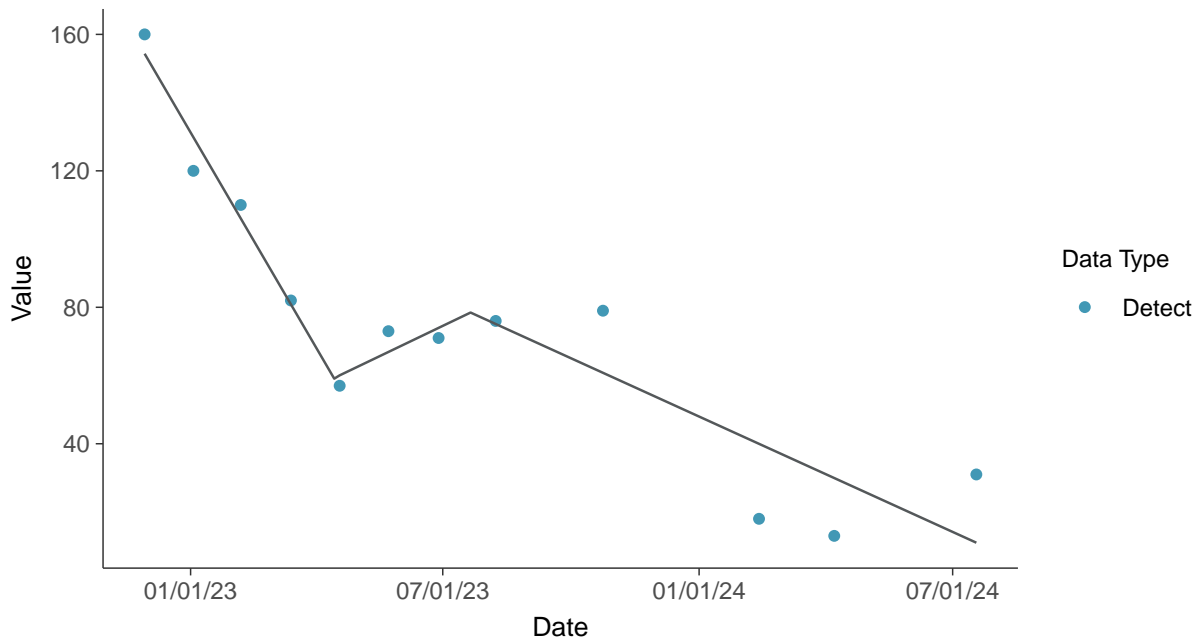
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-06 (mg/L)



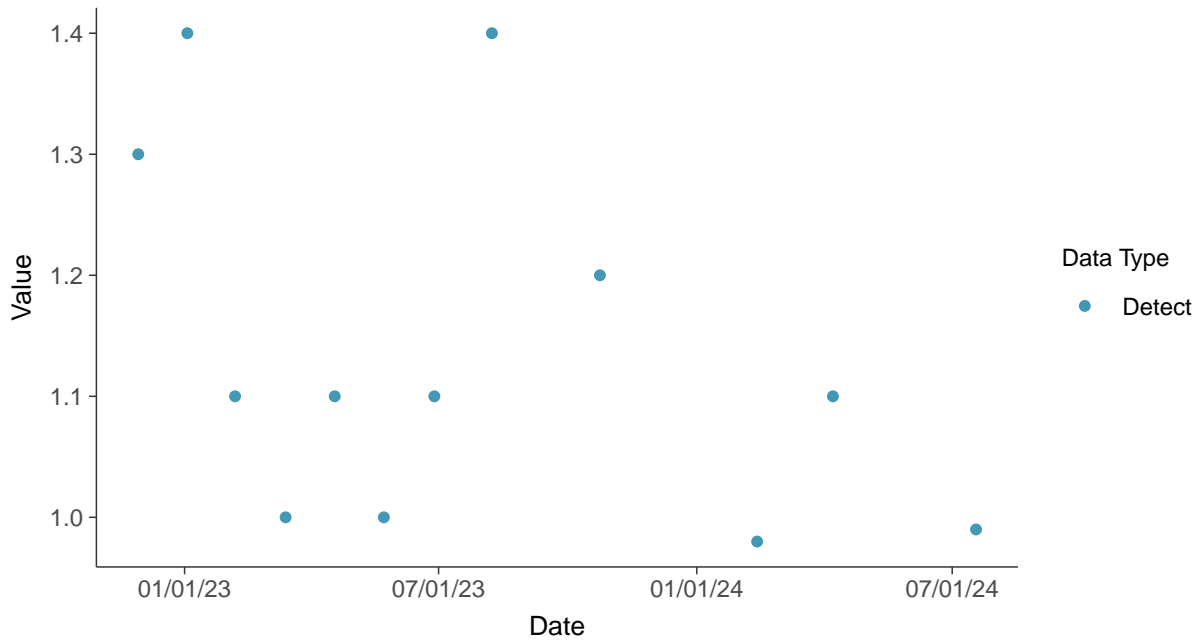


### Appendix III: Fluoride, MW-06

ID: 16\_1\_4\_112

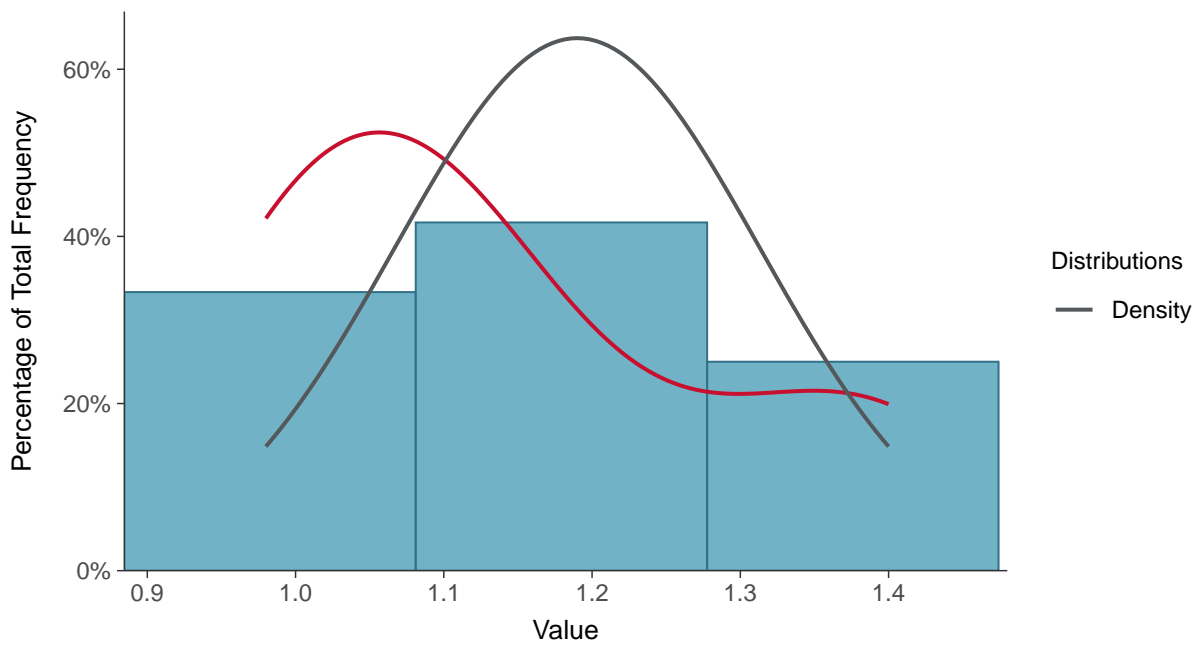
#### Scatter Plot

Fluoride, MW-06 (mg/L)



#### Histogram

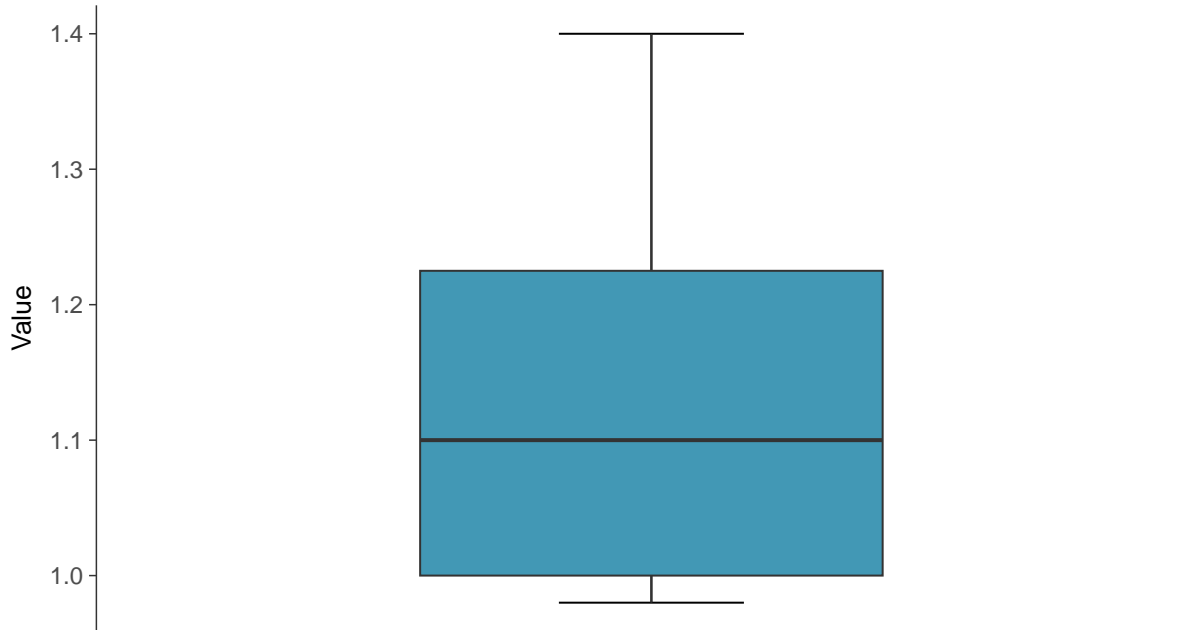
Fluoride, MW-06 (mg/L)





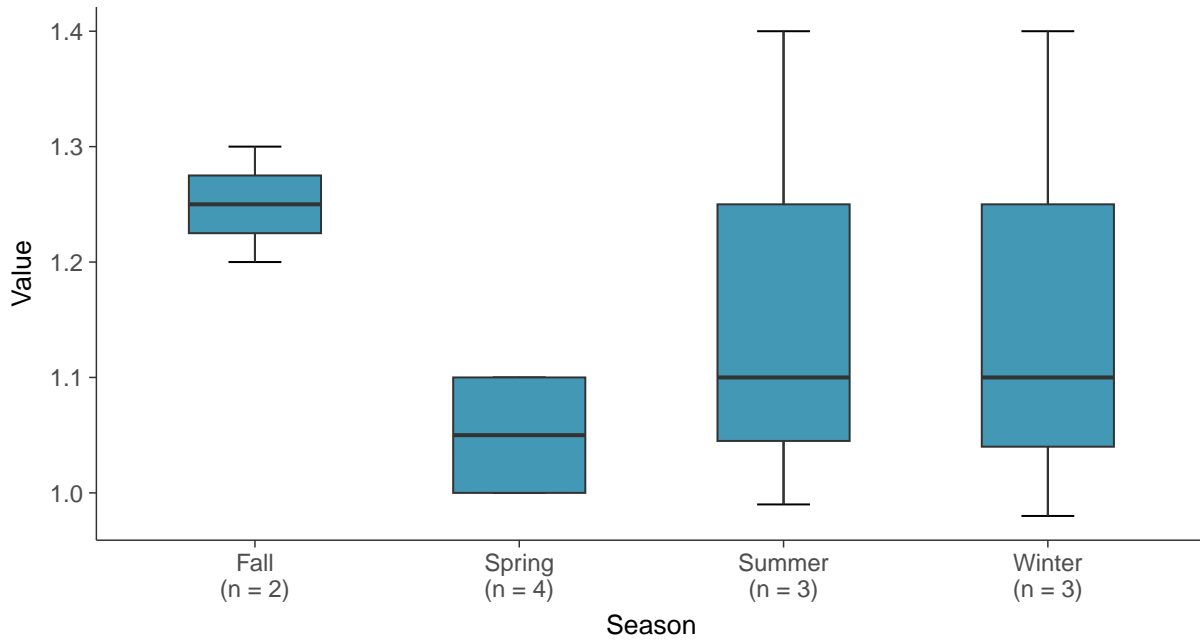
### Boxplot

Fluoride, MW-06 (mg/L)



### Boxplot by Season

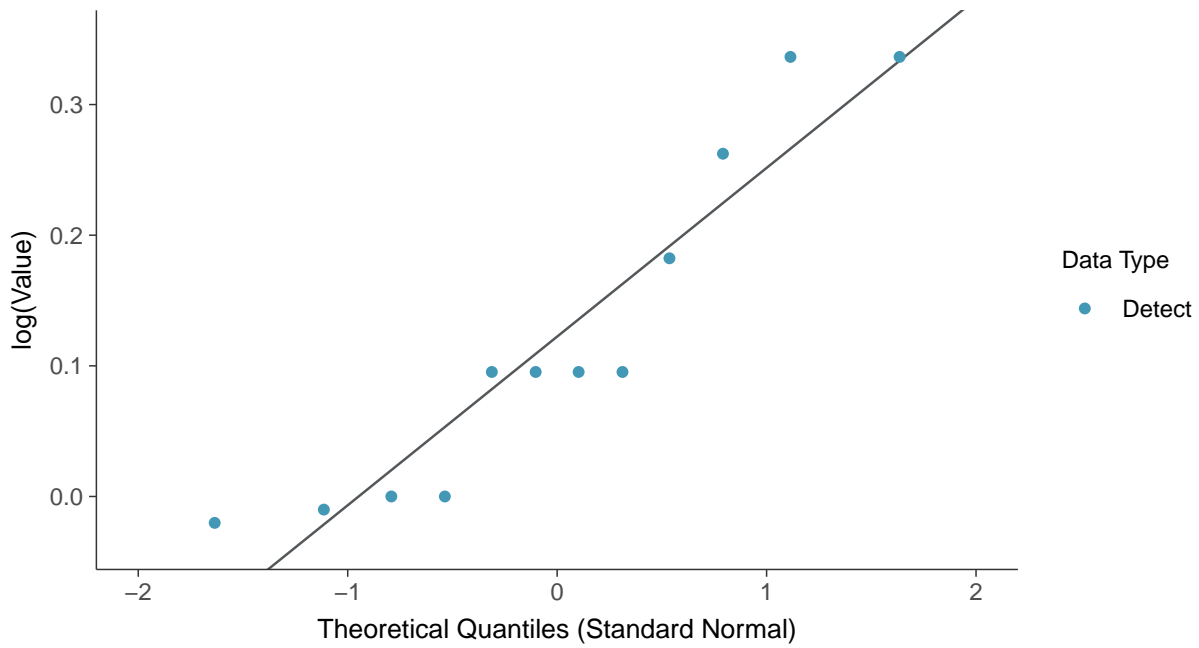
Fluoride, MW-06 (mg/L)





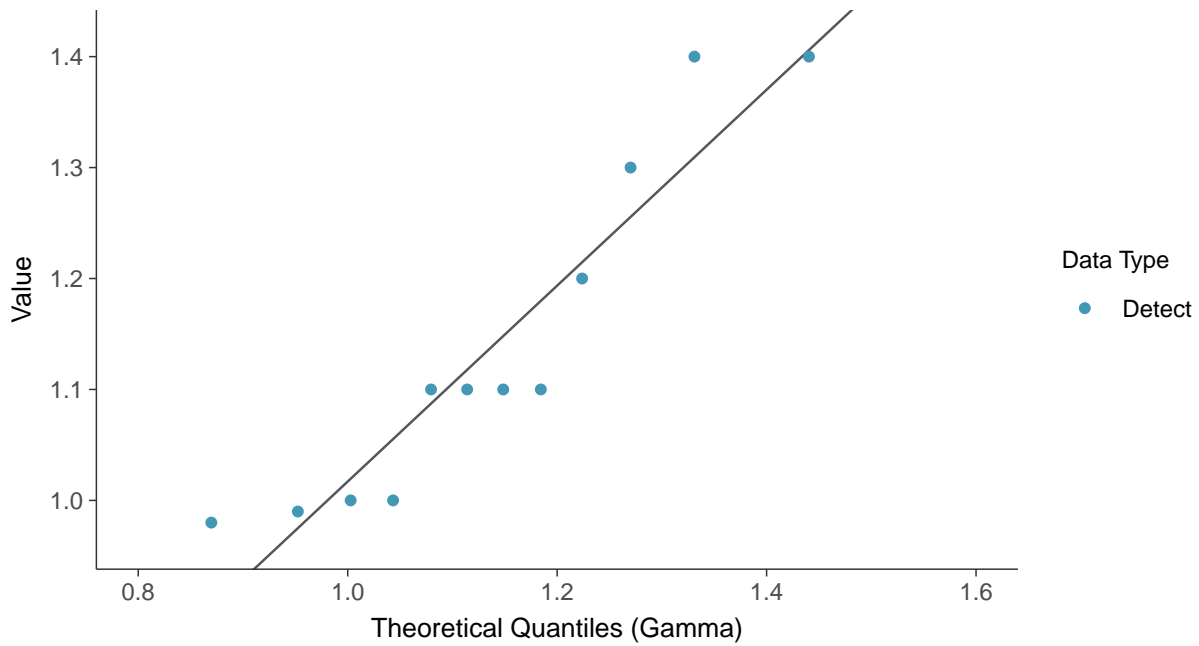
### Lognormal Q-Q plot

Fluoride, MW-06 (mg/L)



### Gamma Q-Q plot

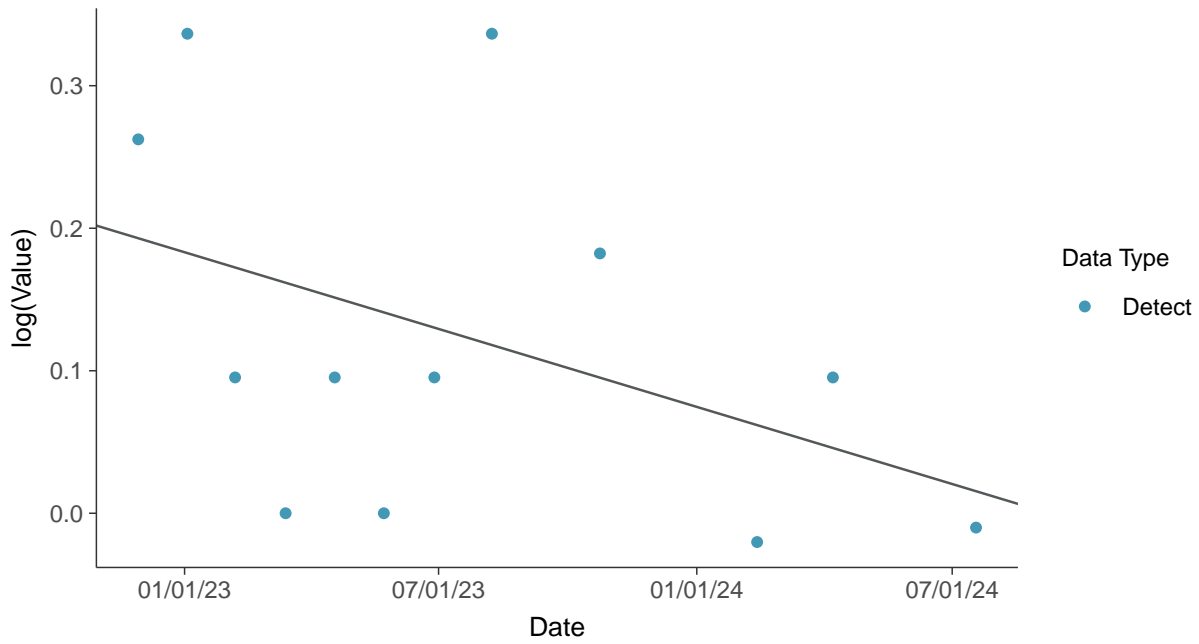
Fluoride, MW-06 (mg/L)





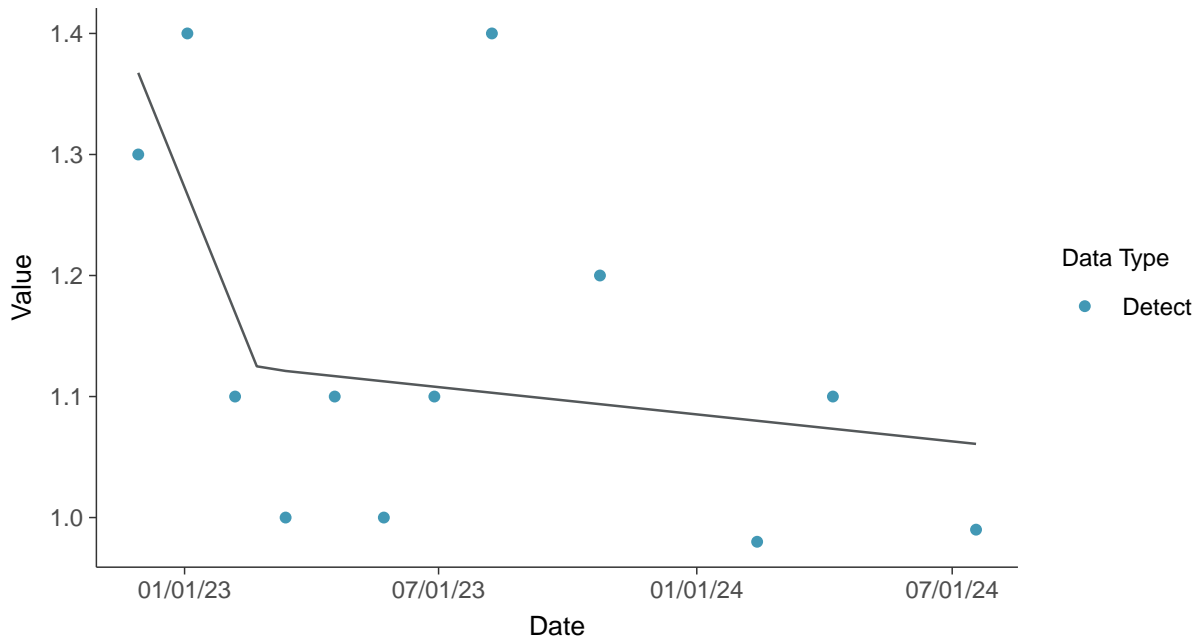
### Trend Regression: Lognormal MLE

Fluoride, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

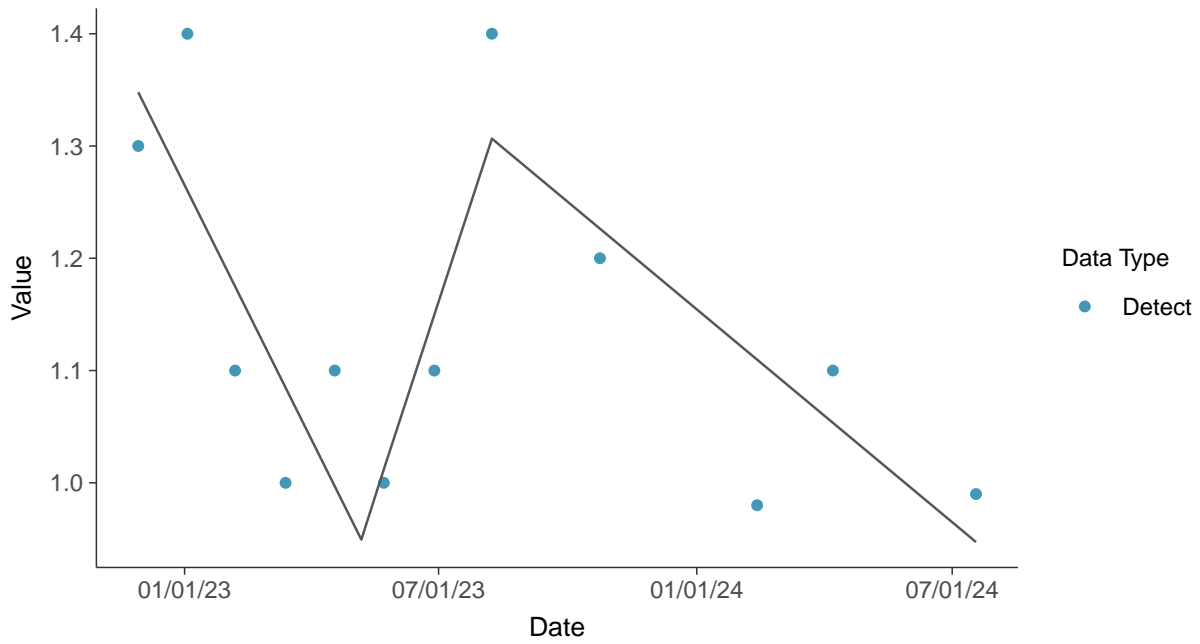
Fluoride, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

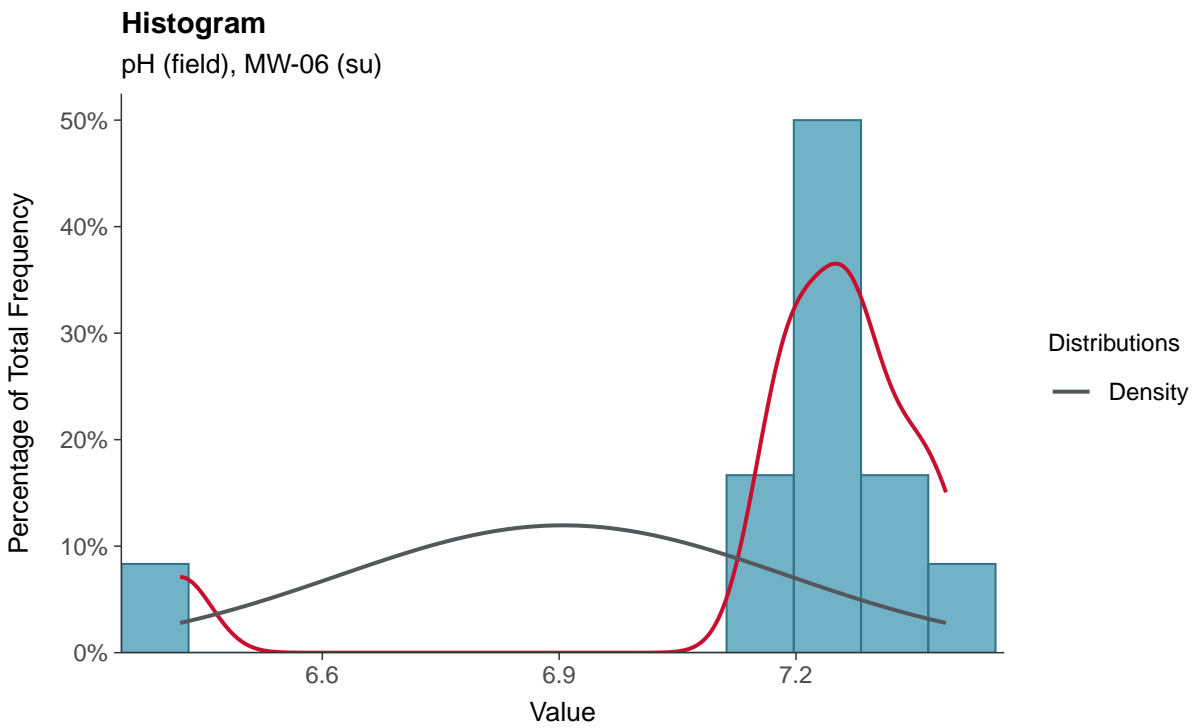
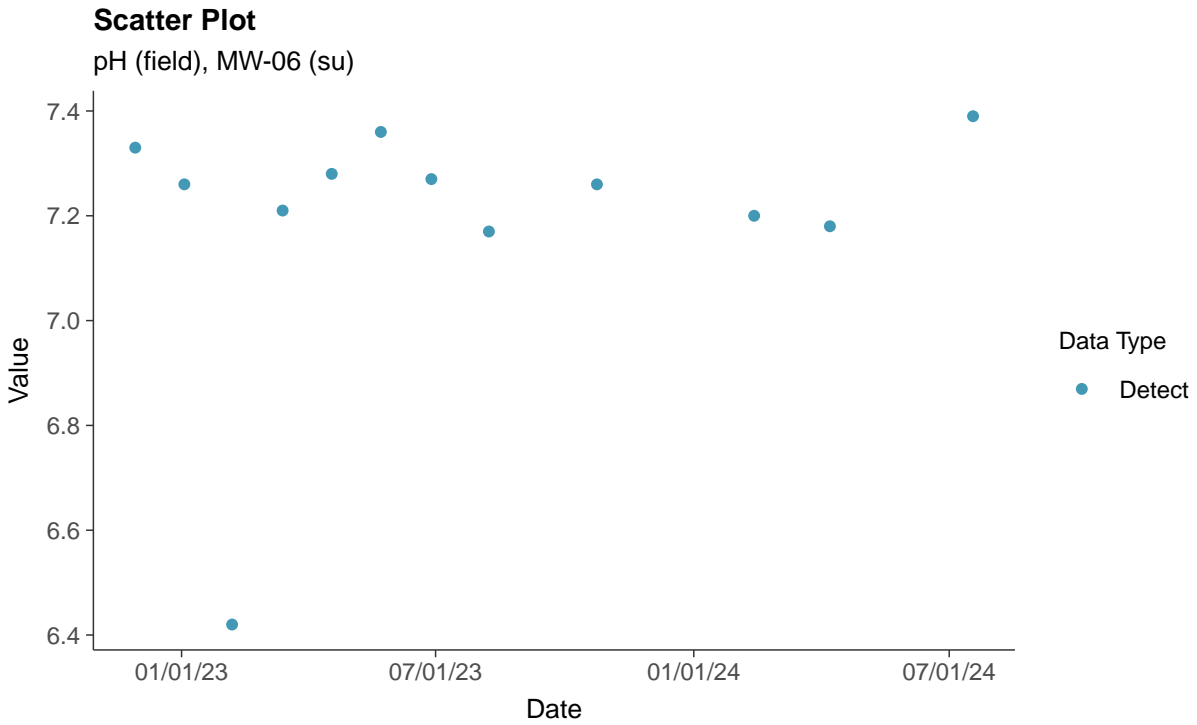
Fluoride, MW-06 (mg/L)





### Appendix III: pH (field), MW-06

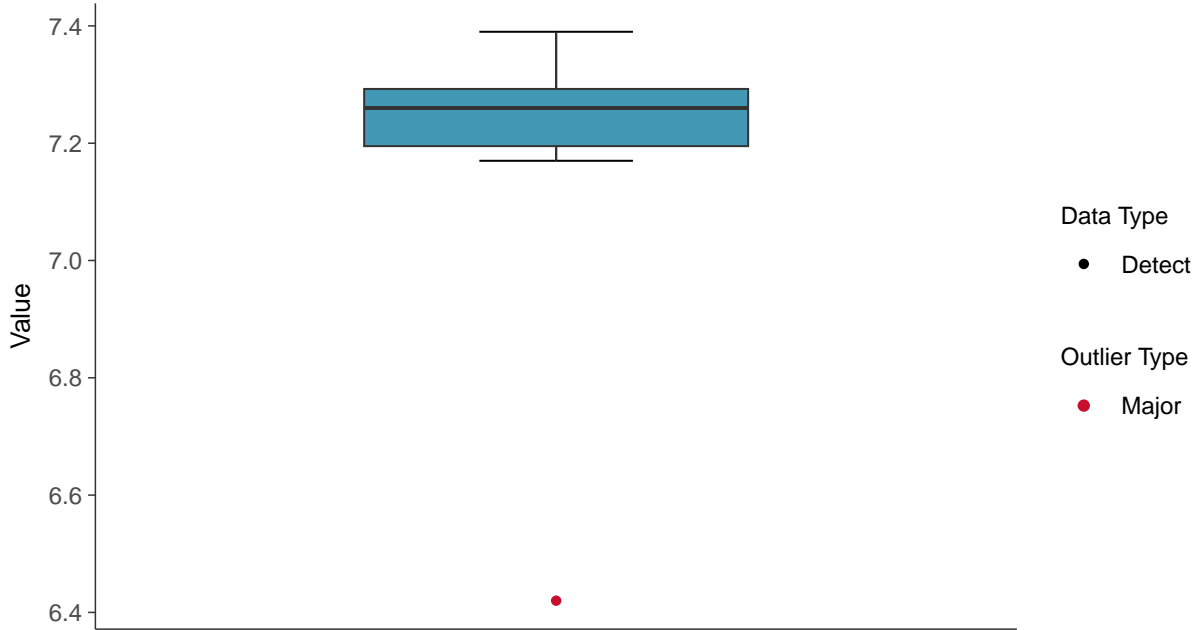
ID: 16\_1\_4\_120





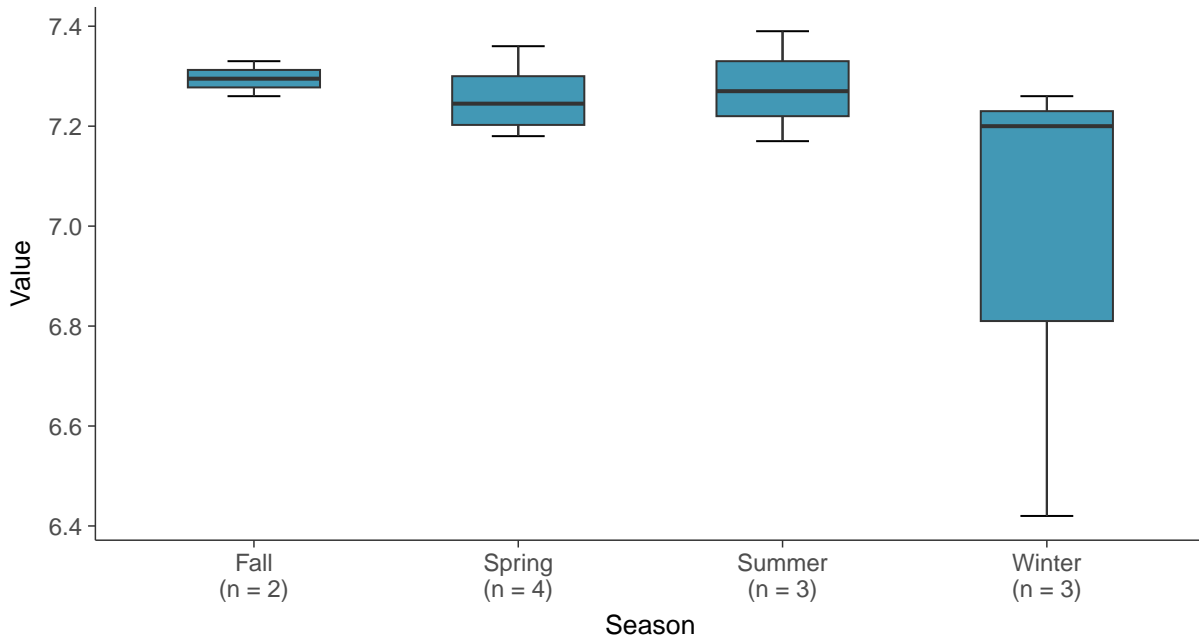
### Boxplot

pH (field), MW-06 (su)



### Boxplot by Season

pH (field), MW-06 (su)

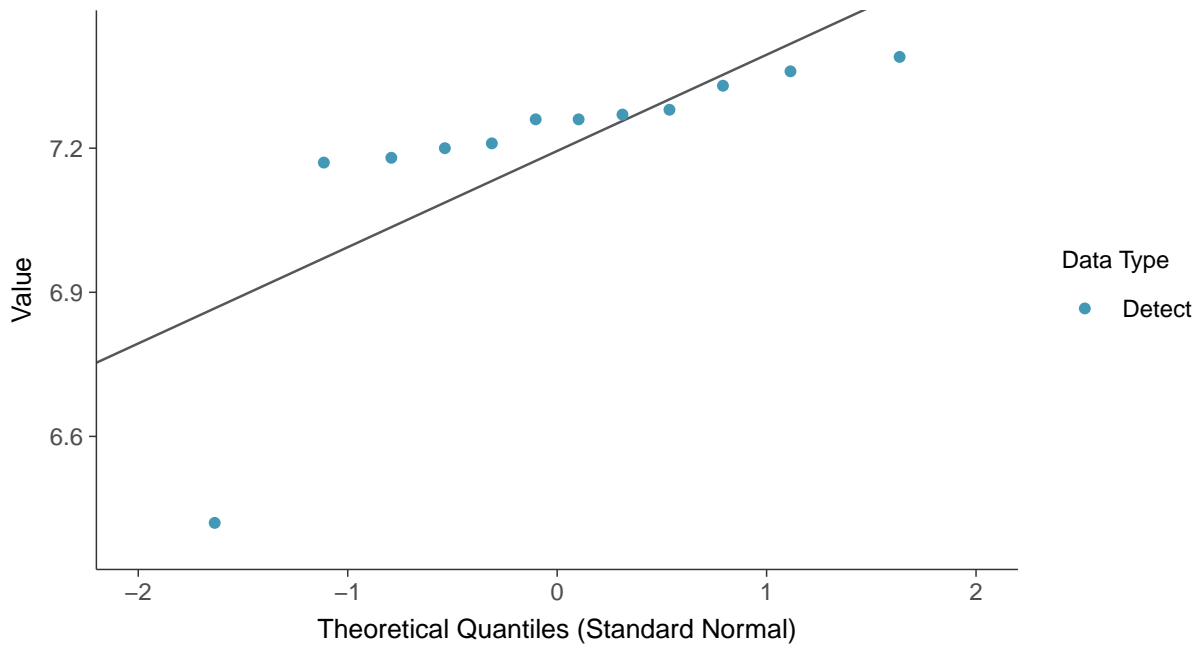






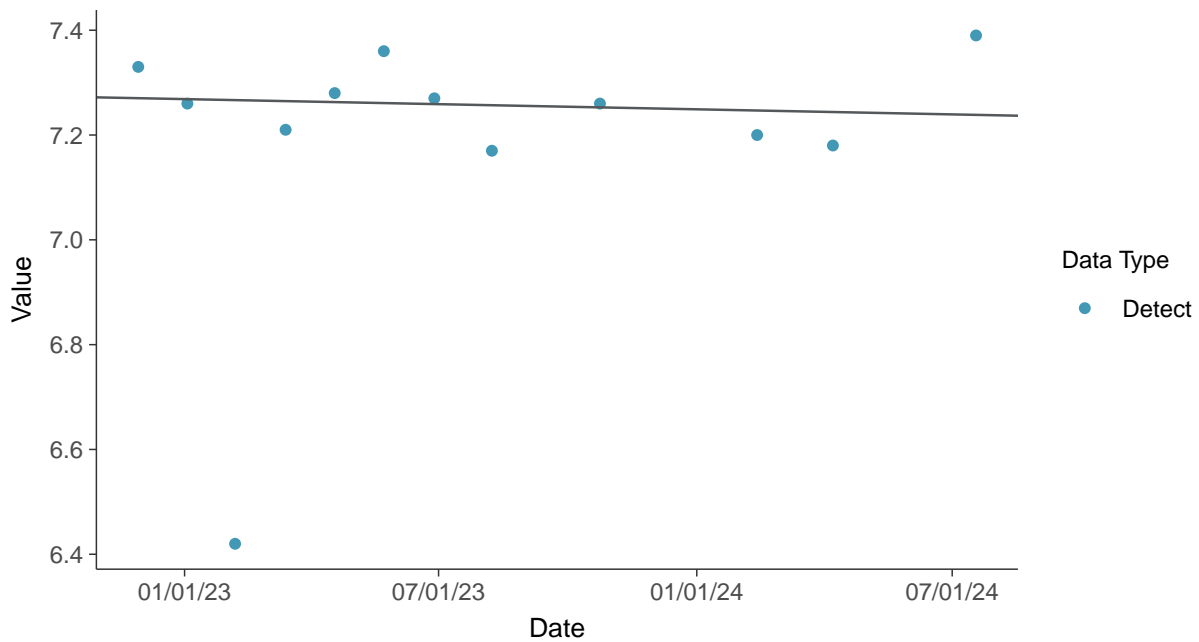
### Normal Q-Q plot

pH (field), MW-06 (su)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

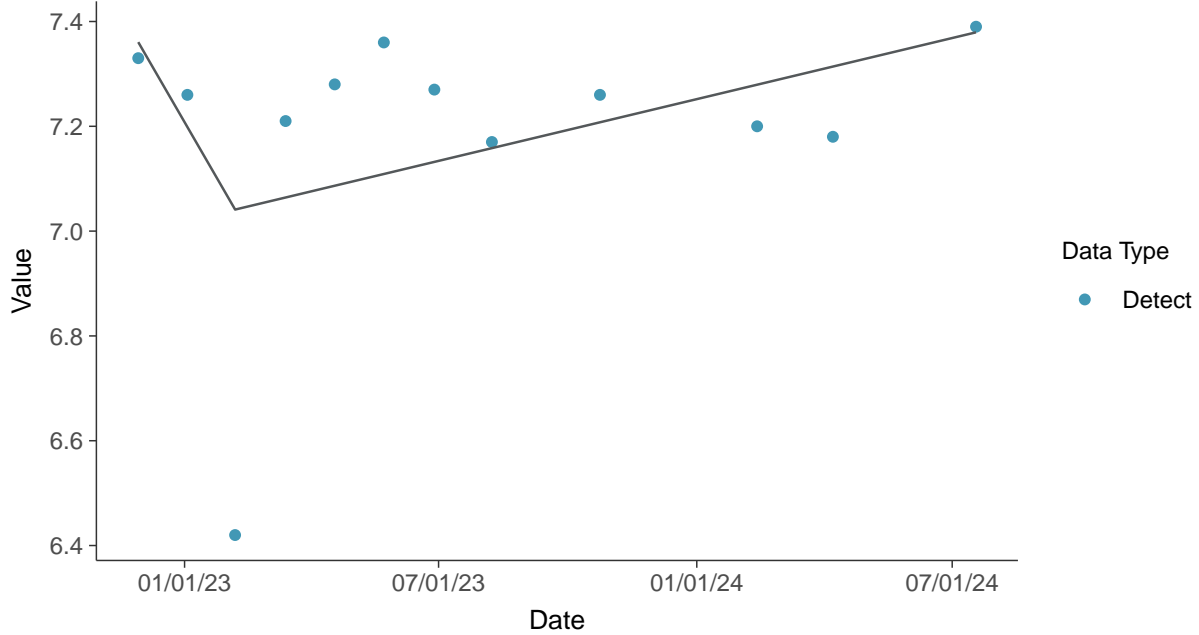
pH (field), MW-06 (su)





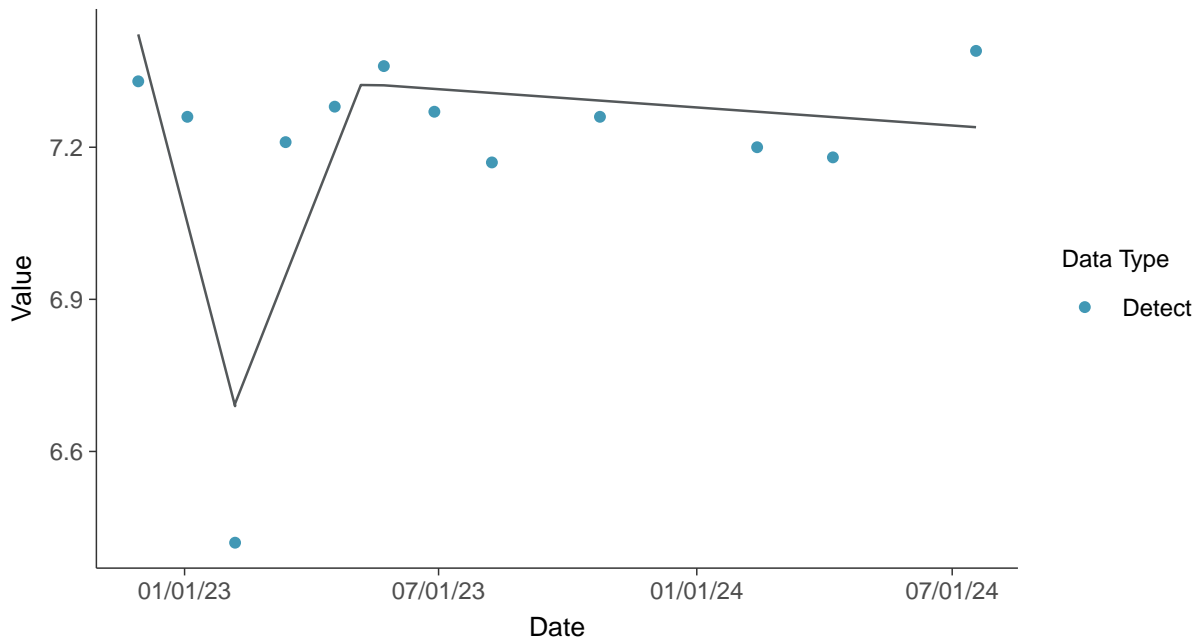
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-06 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

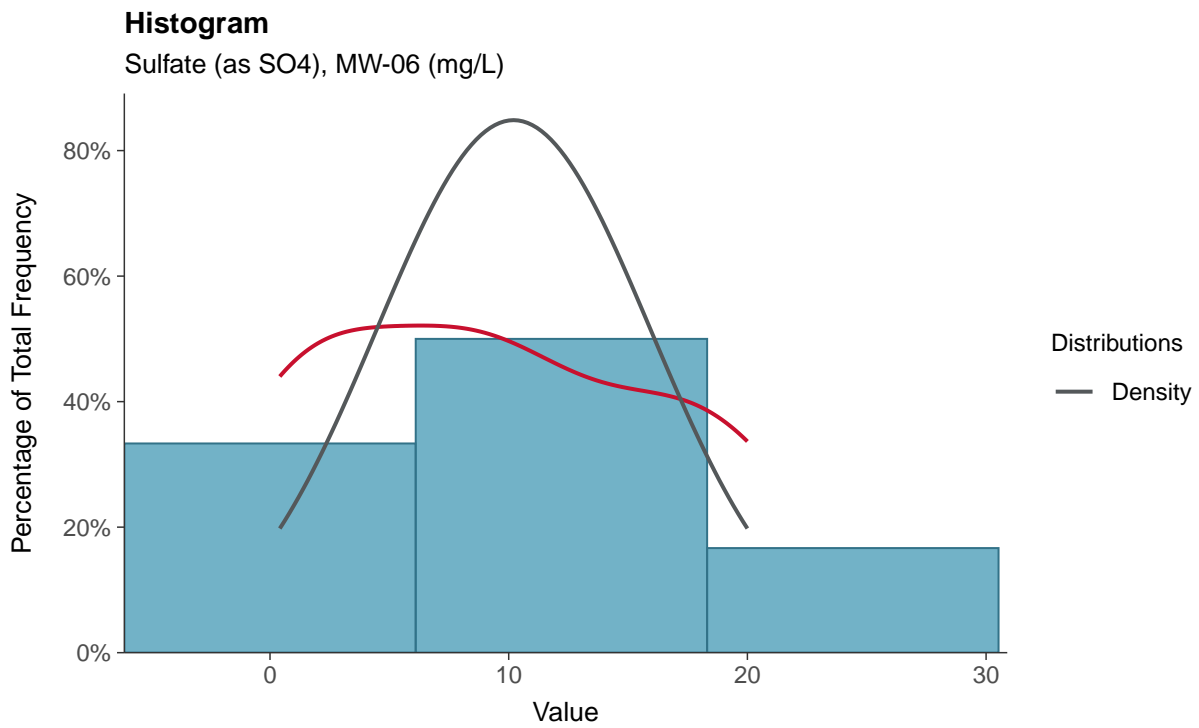
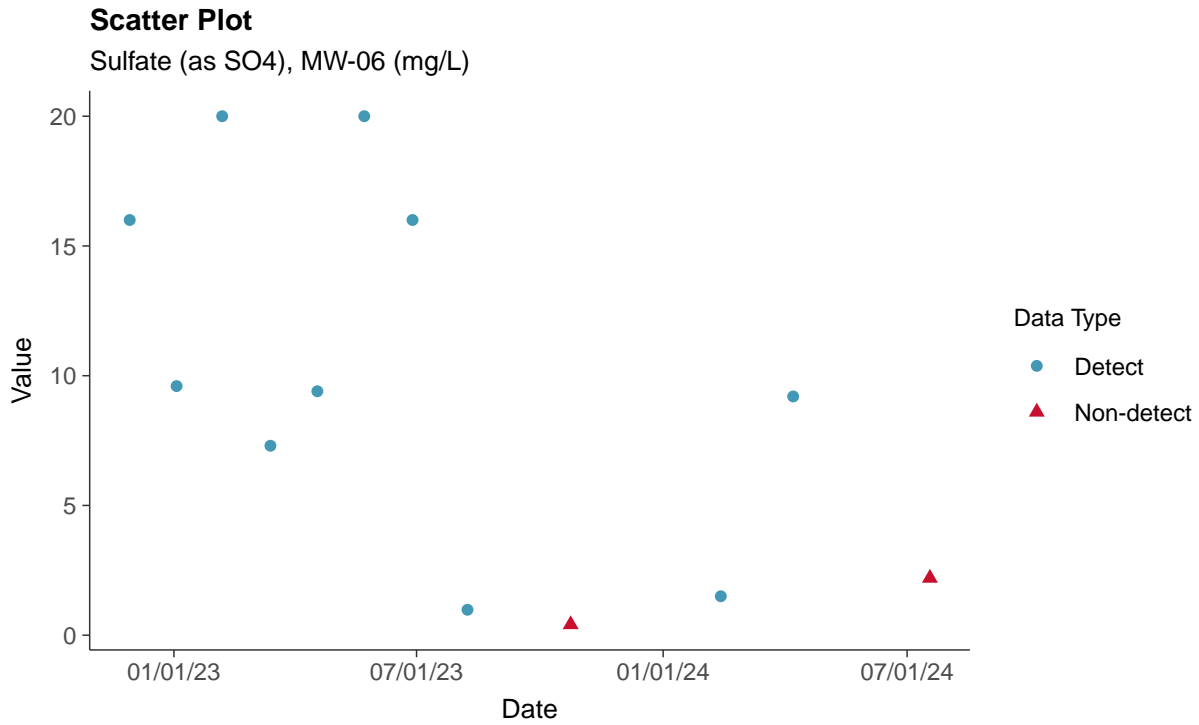
pH (field), MW-06 (su)





### Appendix III: Sulfate (as SO<sub>4</sub>), MW-06

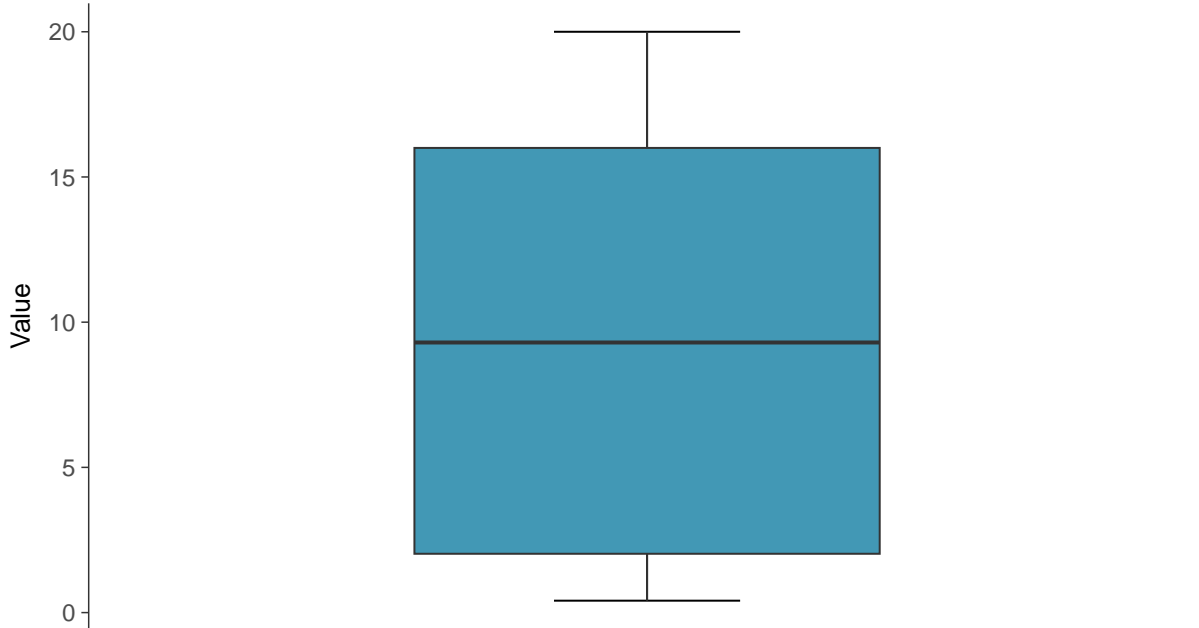
ID: 16\_1\_4\_124





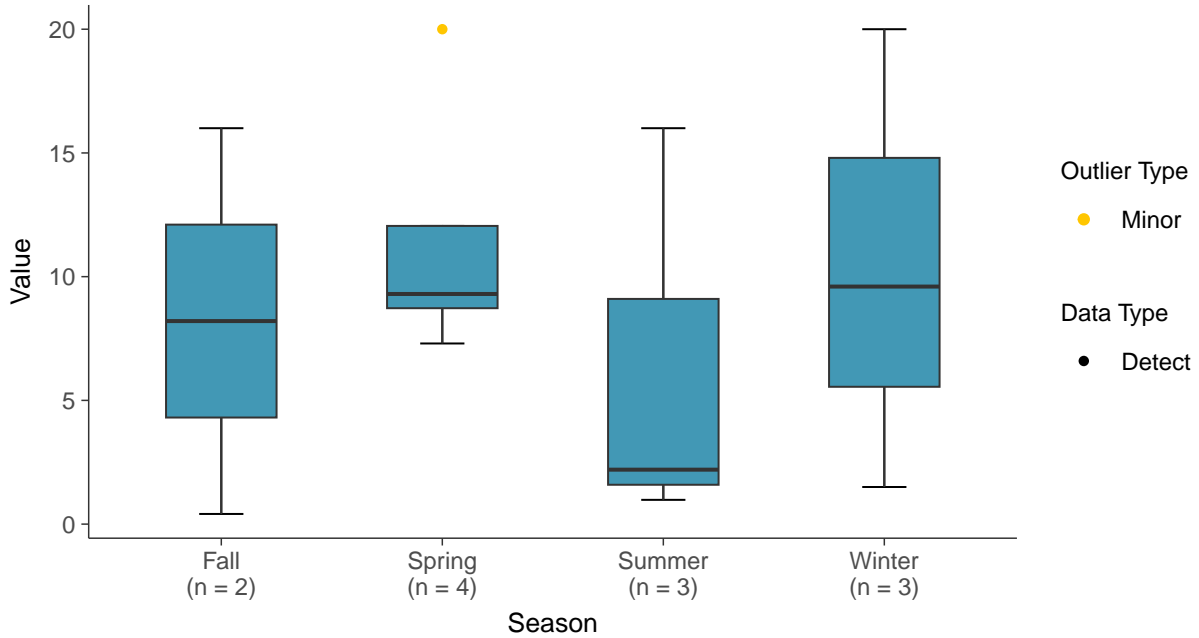
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)



### Boxplot by Season

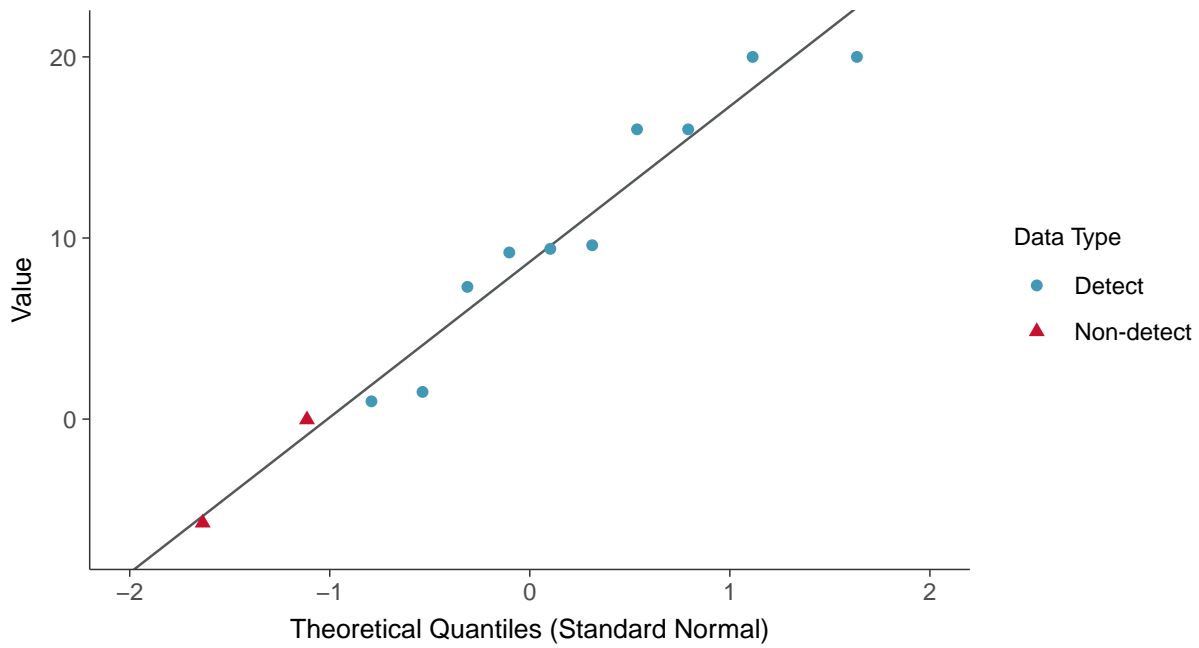
Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)





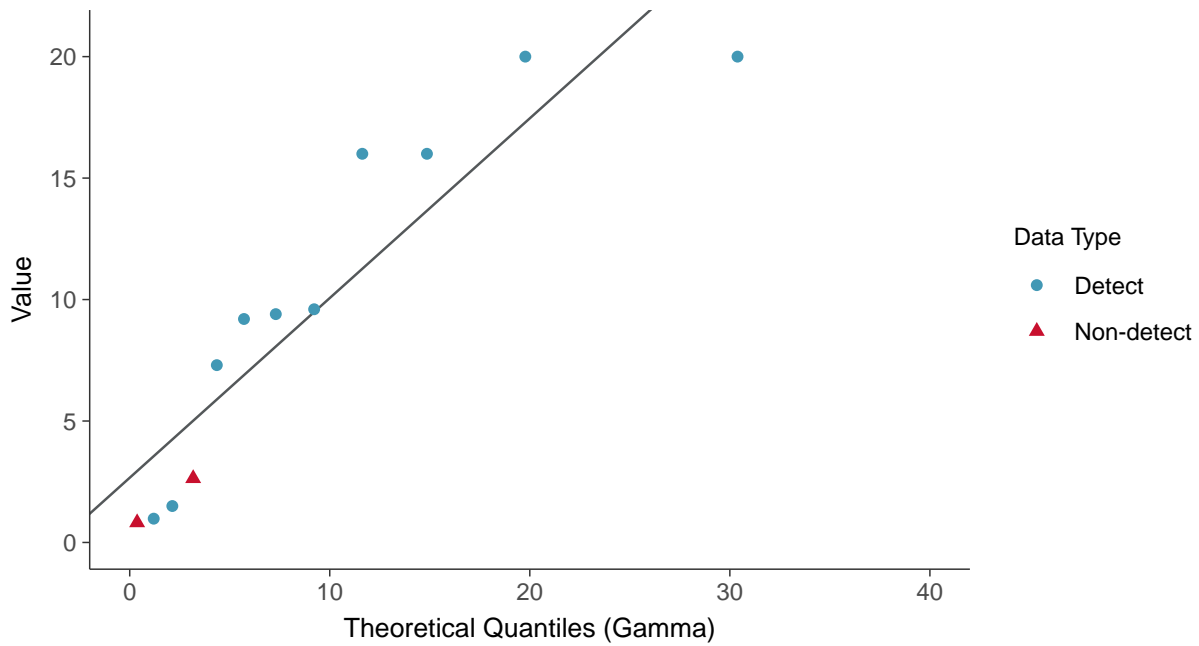
### Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

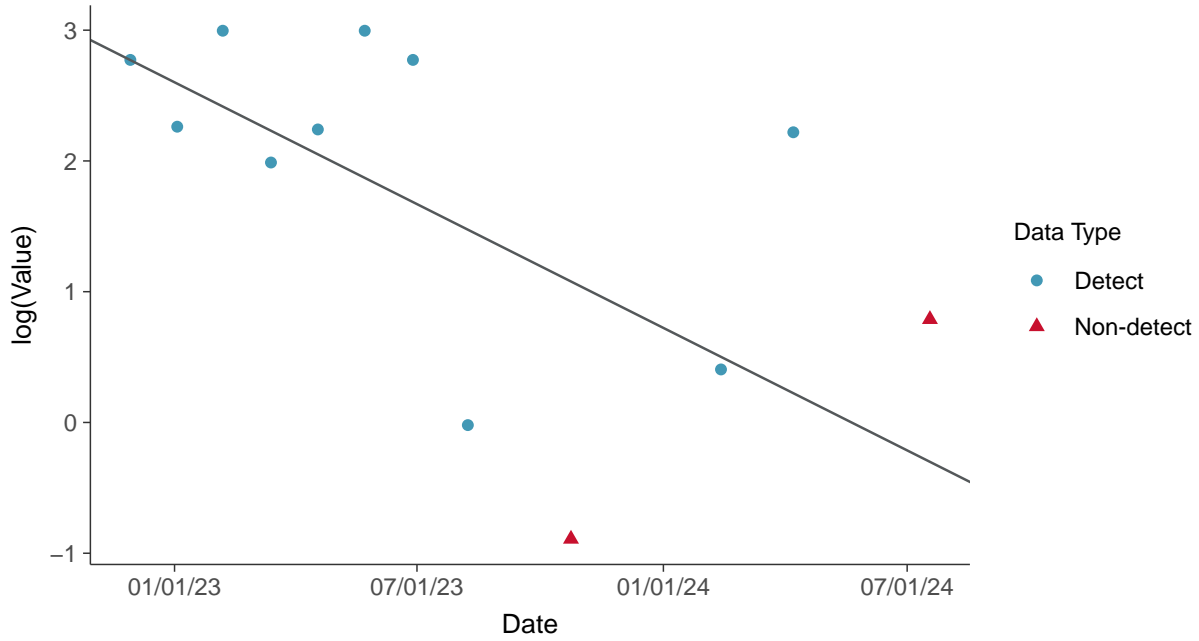
Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)





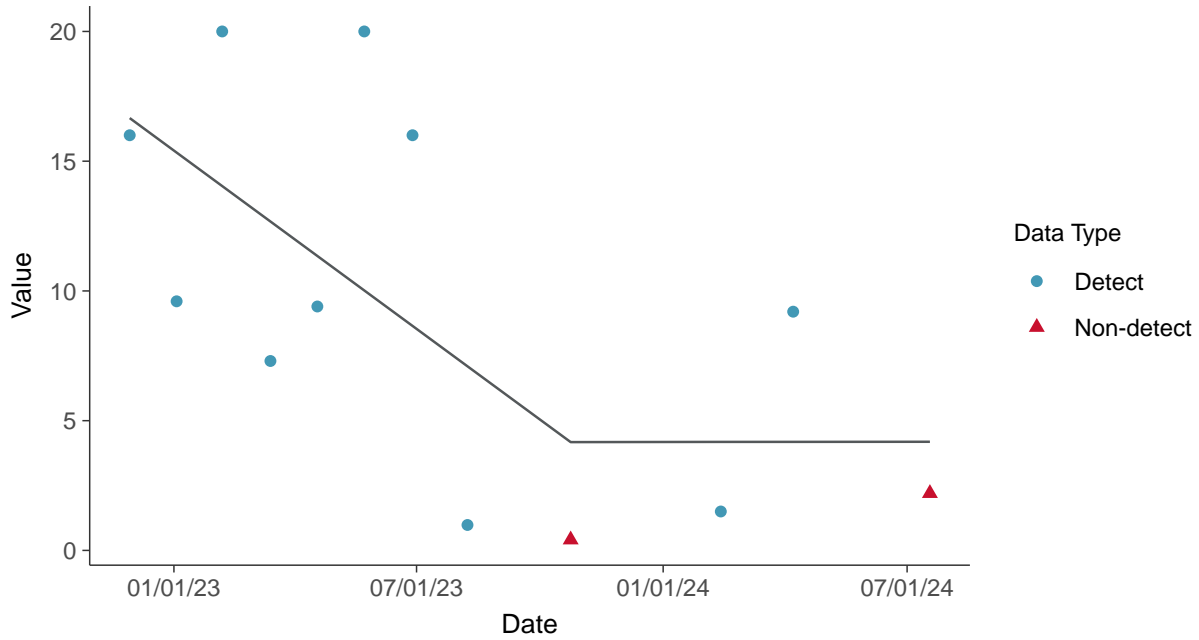
### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-06 (mg/L)



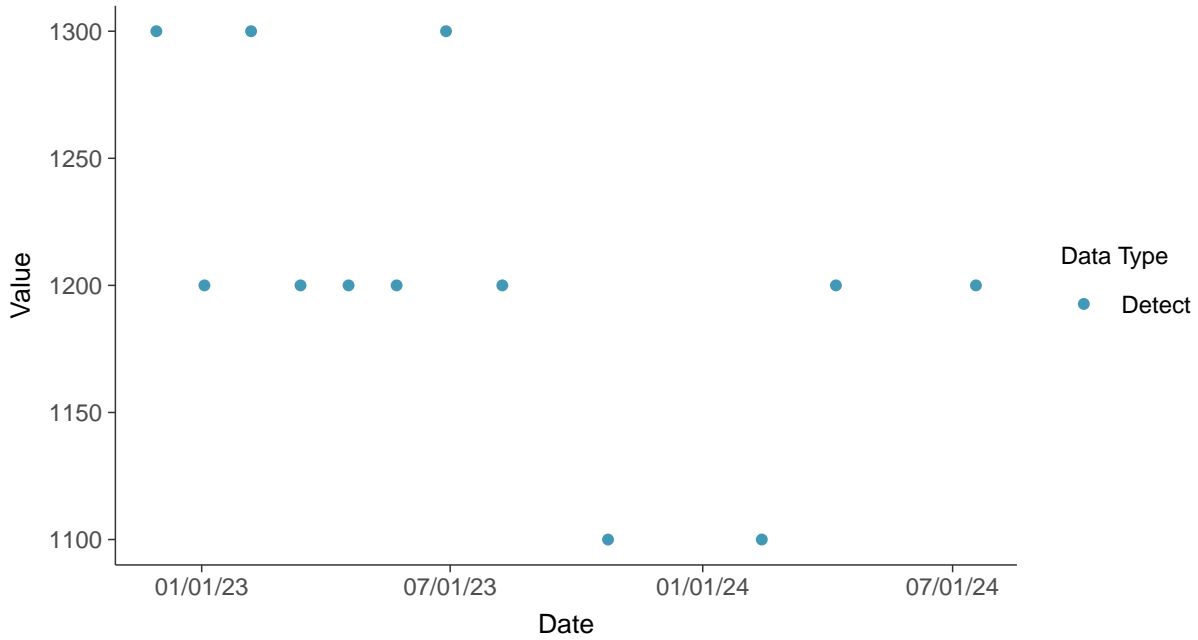


### Appendix III: Total Dissolved Solids, MW-06

ID: 16\_1\_4\_126

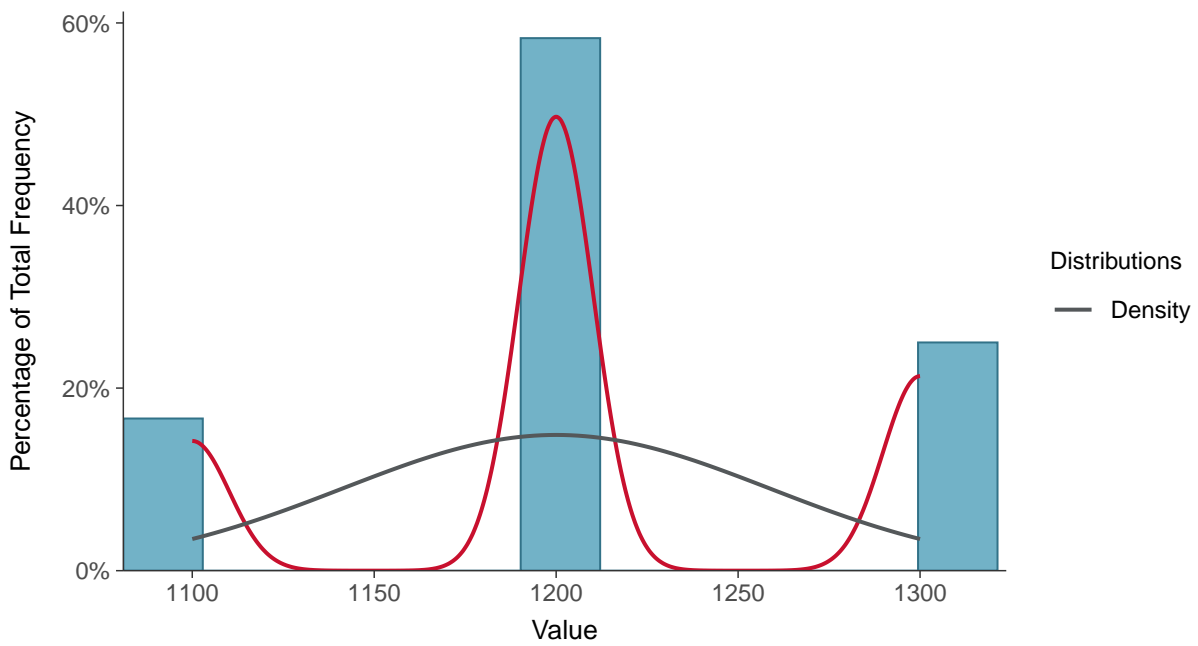
#### Scatter Plot

Total Dissolved Solids, MW-06 (mg/L)



#### Histogram

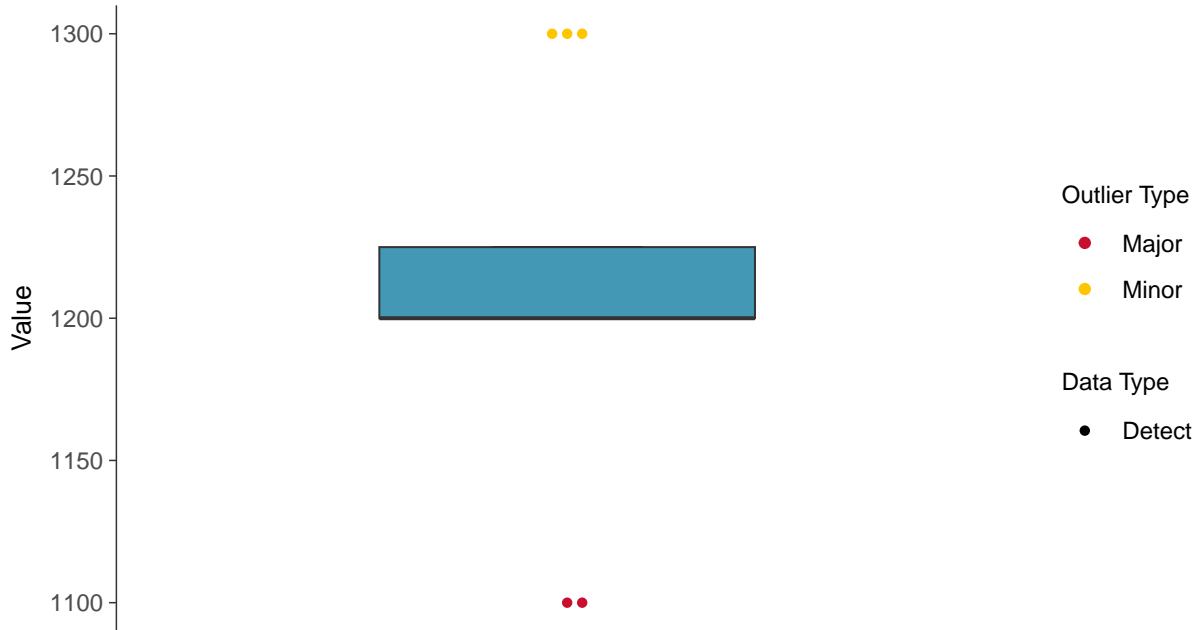
Total Dissolved Solids, MW-06 (mg/L)





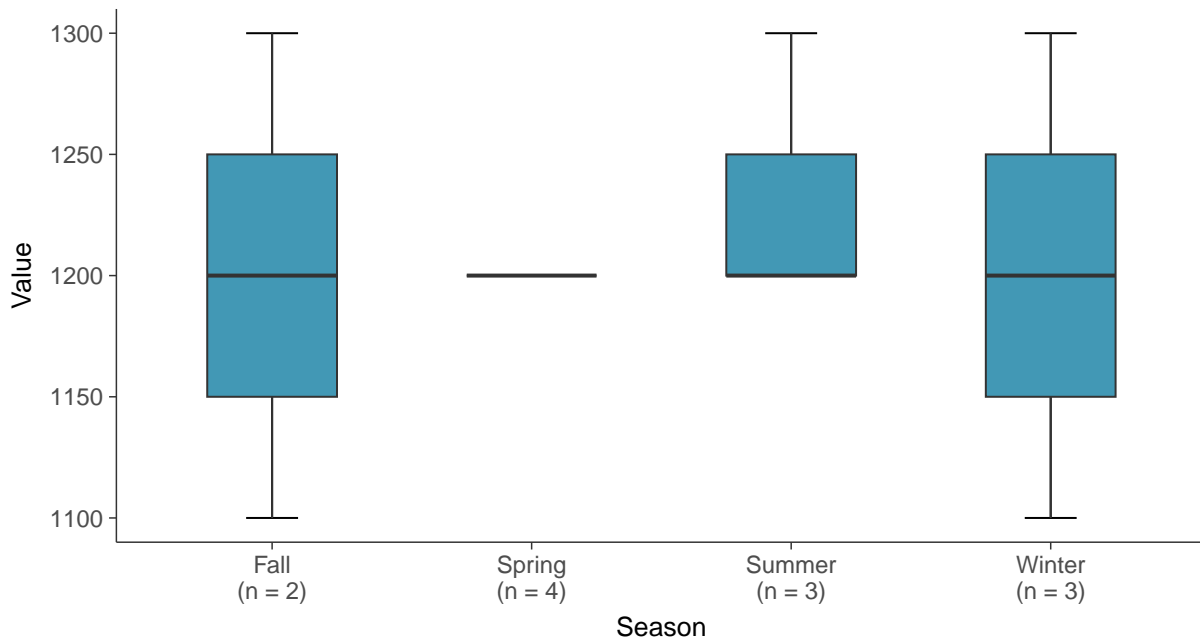
### Boxplot

Total Dissolved Solids, MW-06 (mg/L)



### Boxplot by Season

Total Dissolved Solids, MW-06 (mg/L)

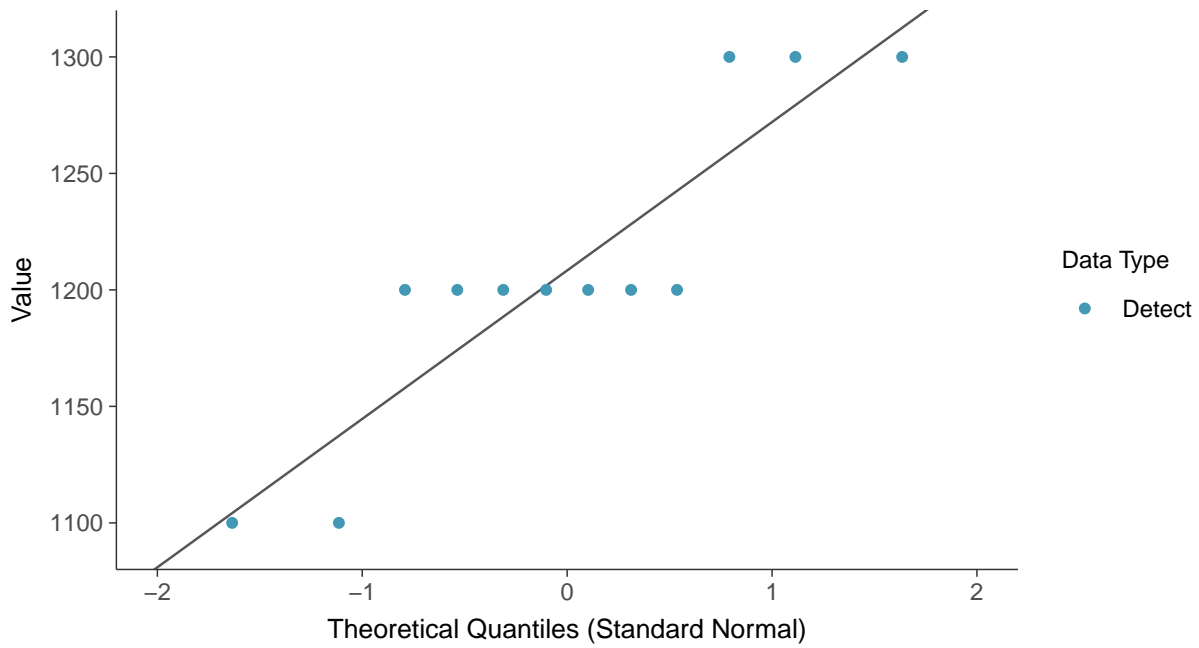






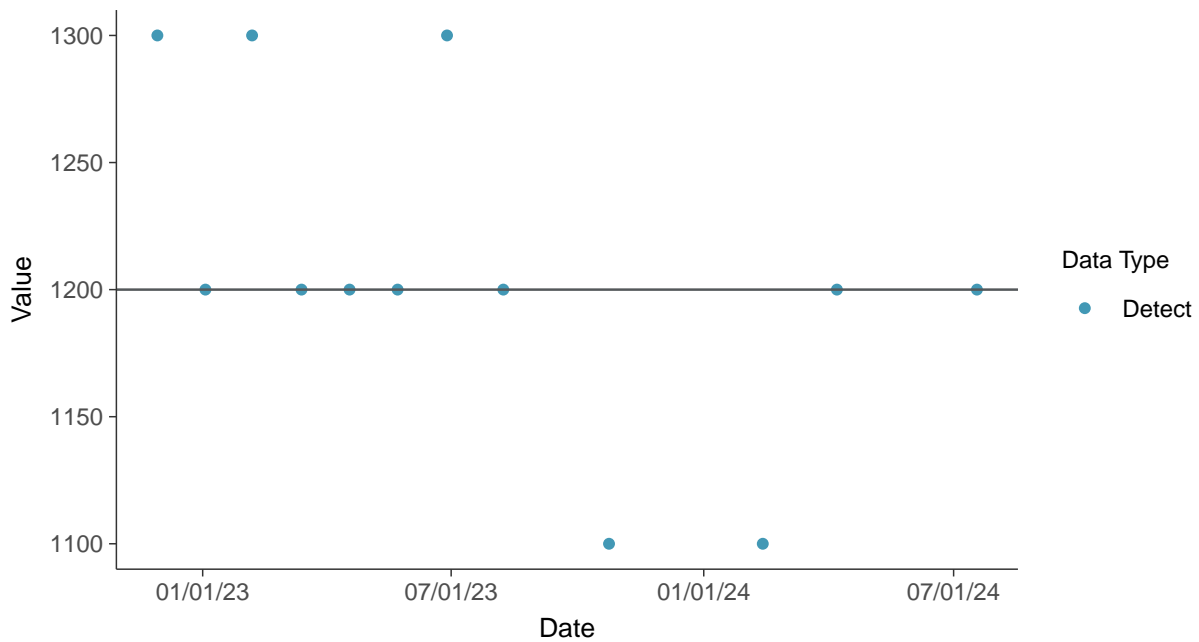
### Normal Q-Q plot

Total Dissolved Solids, MW-06 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

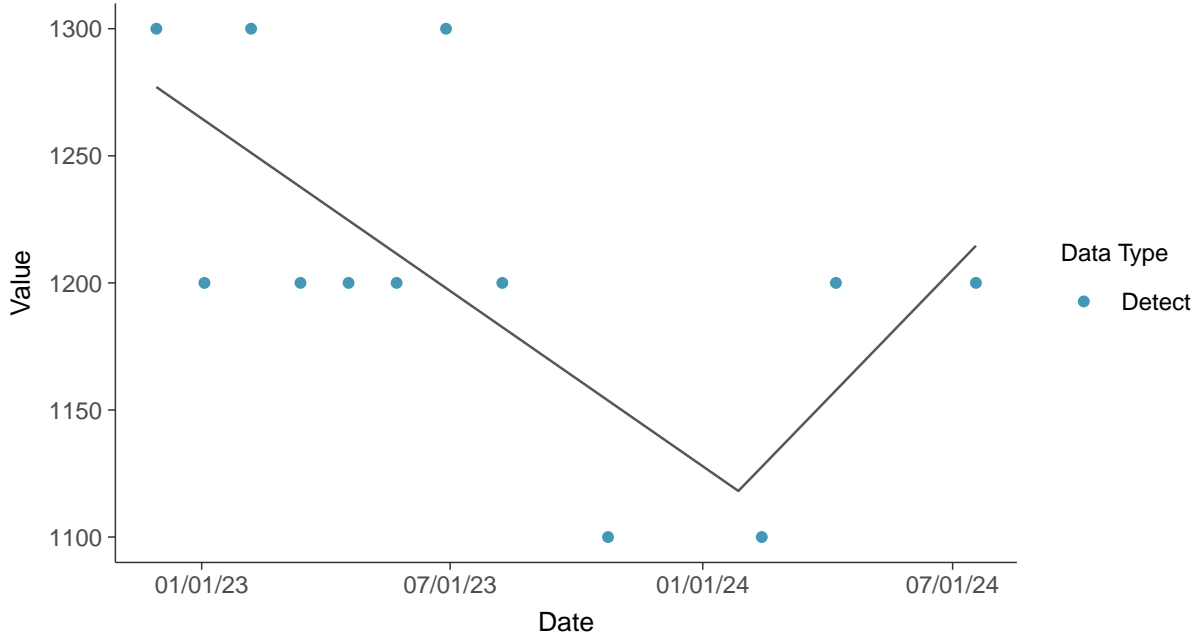
Total Dissolved Solids, MW-06 (mg/L)





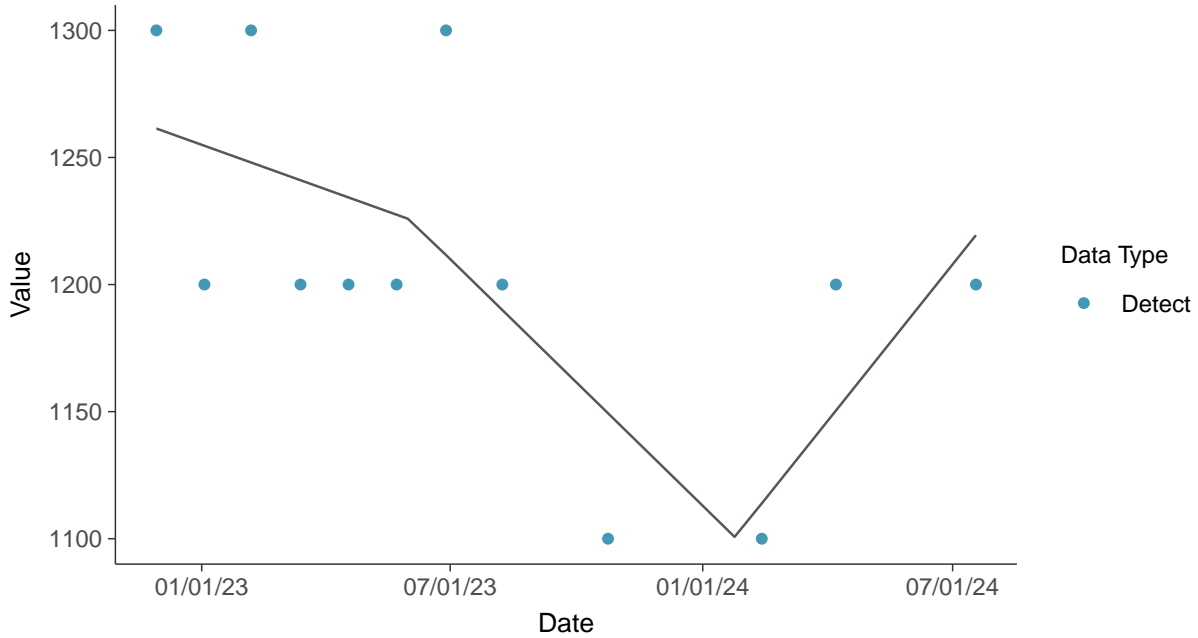
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

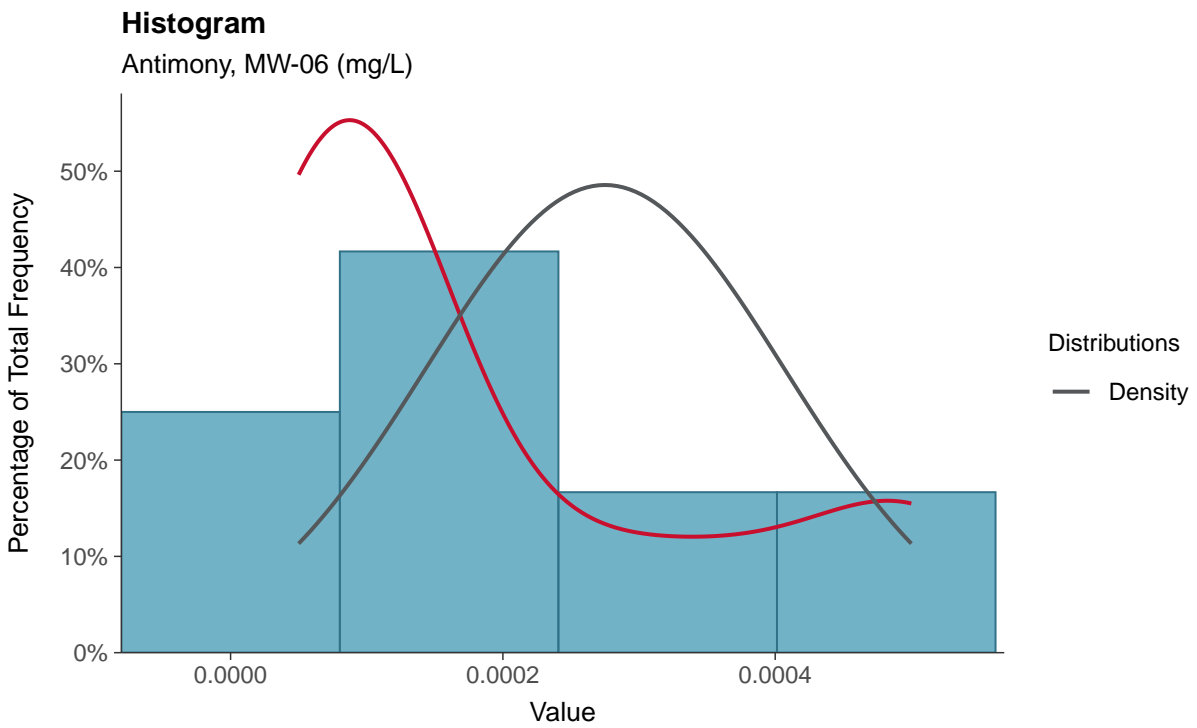
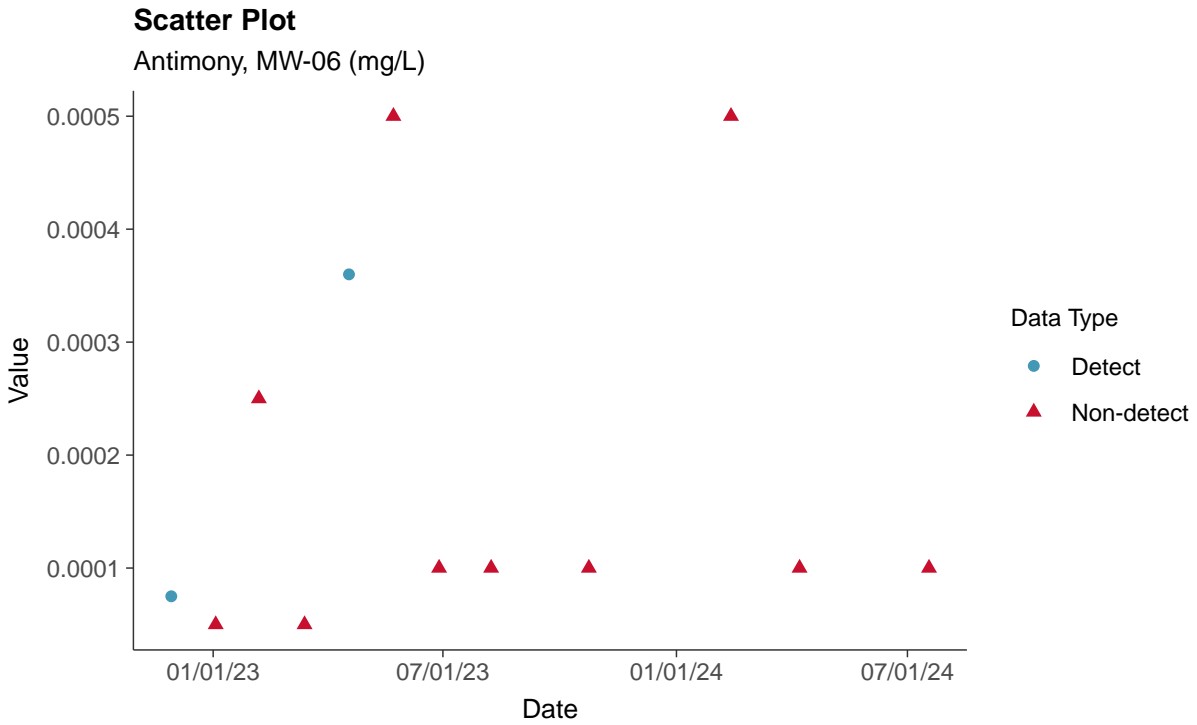
Total Dissolved Solids, MW-06 (mg/L)





### Appendix IV: Antimony, MW-06

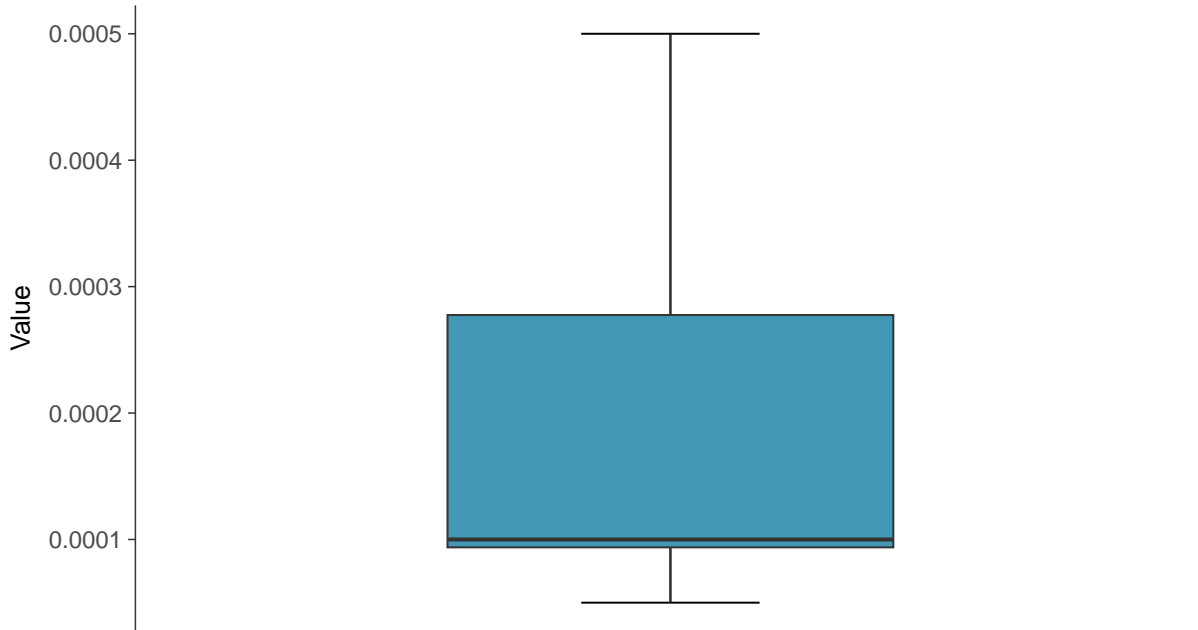
ID: 16\_1\_5\_101





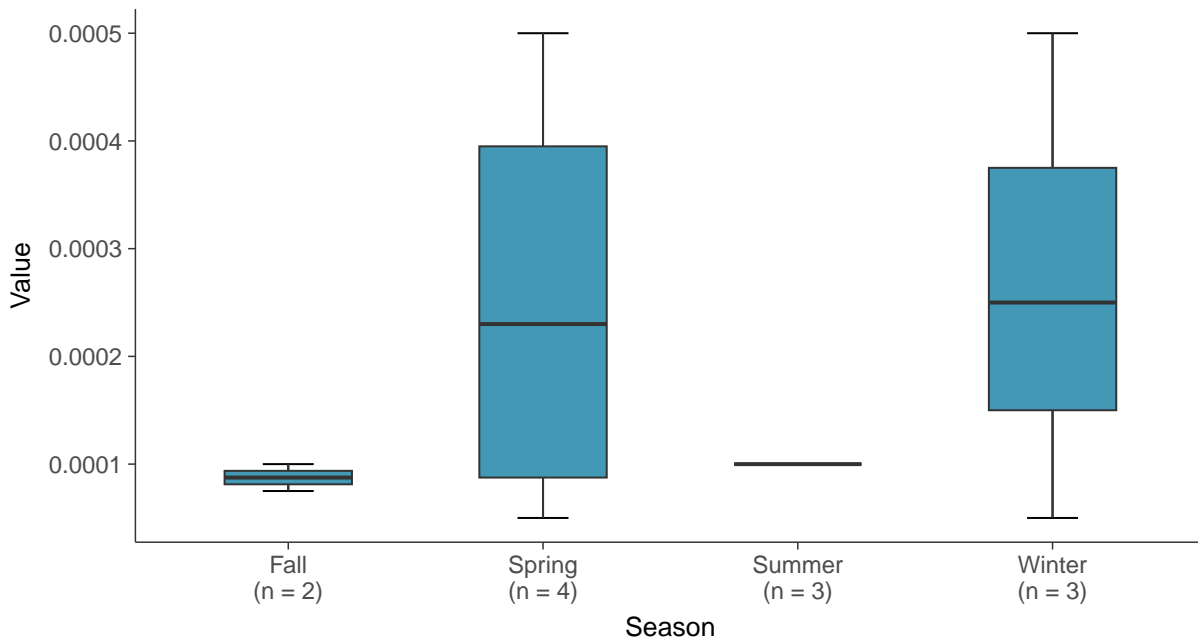
### Boxplot

Antimony, MW-06 (mg/L)



### Boxplot by Season

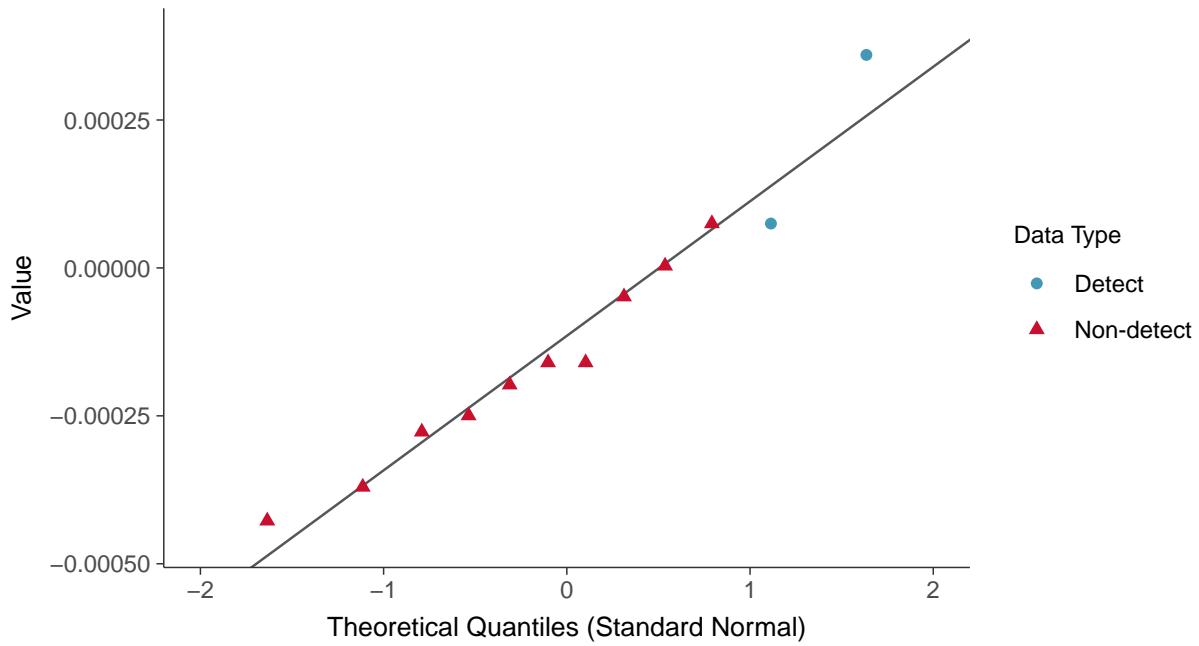
Antimony, MW-06 (mg/L)





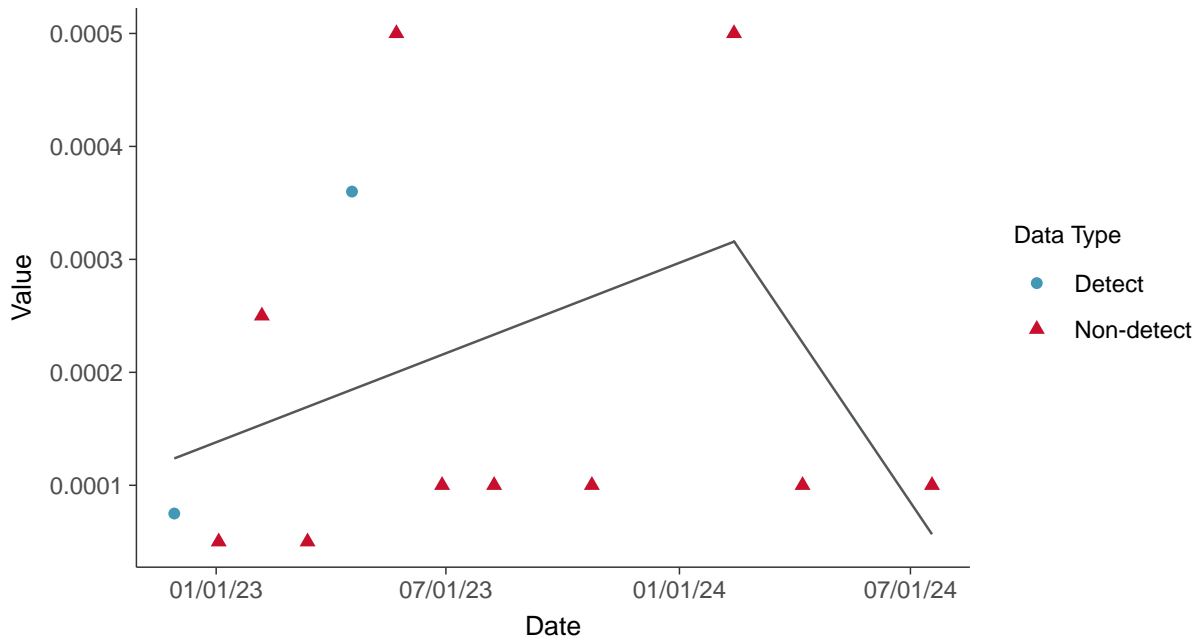
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

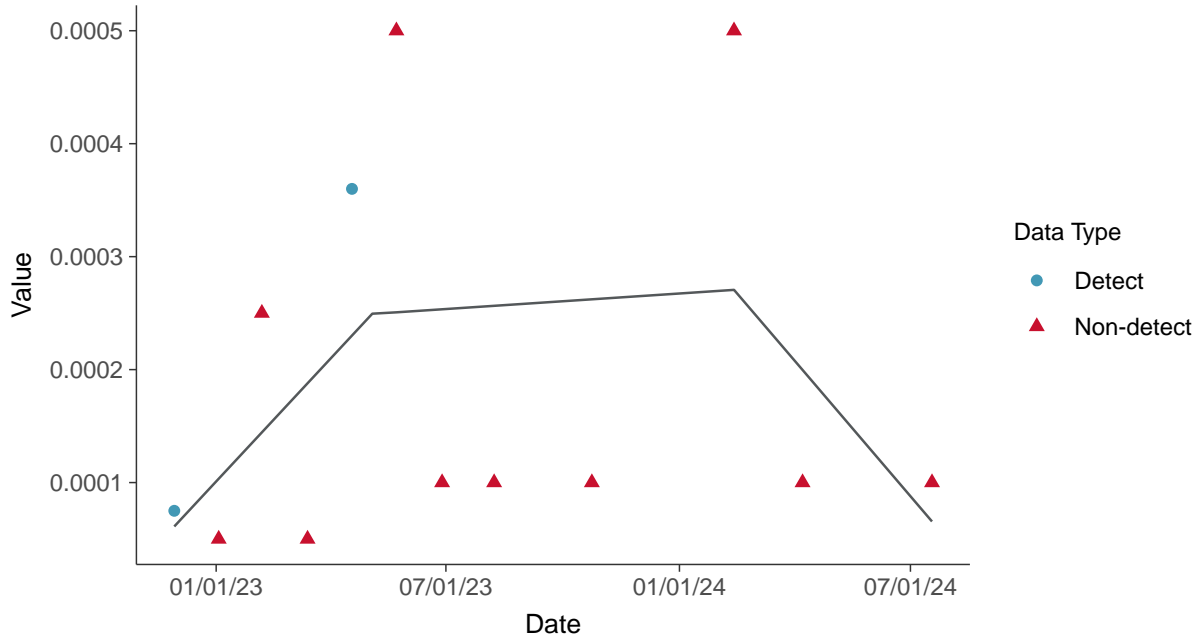
Antimony, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-06 (mg/L)



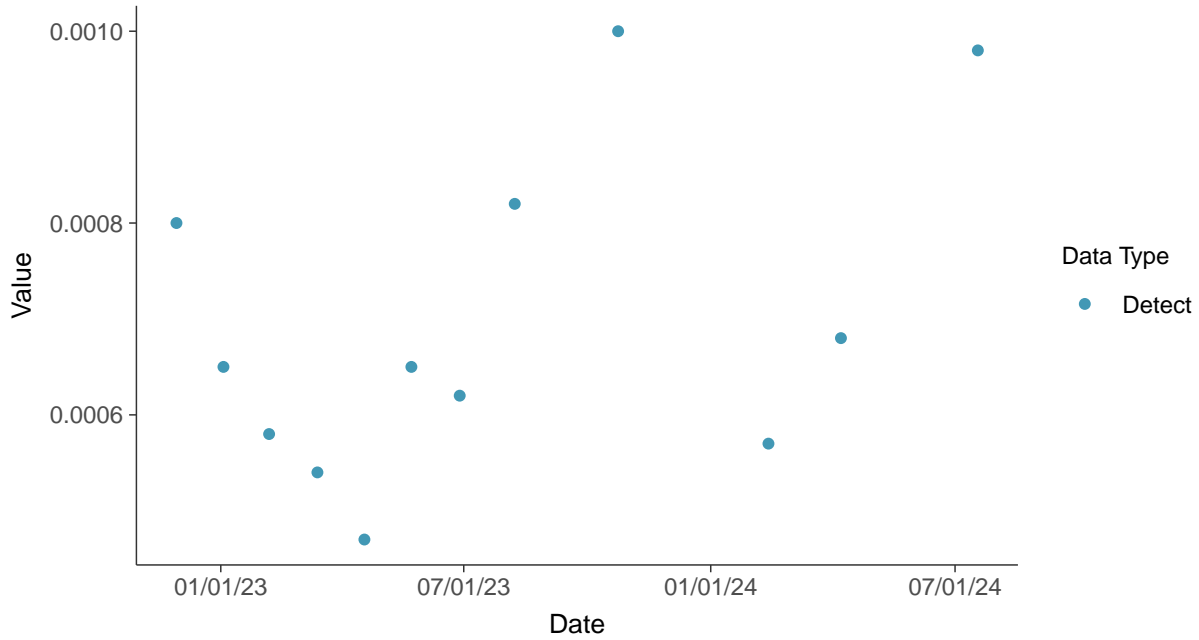


### Appendix IV: Arsenic, MW-06

ID: 16\_1\_5\_102

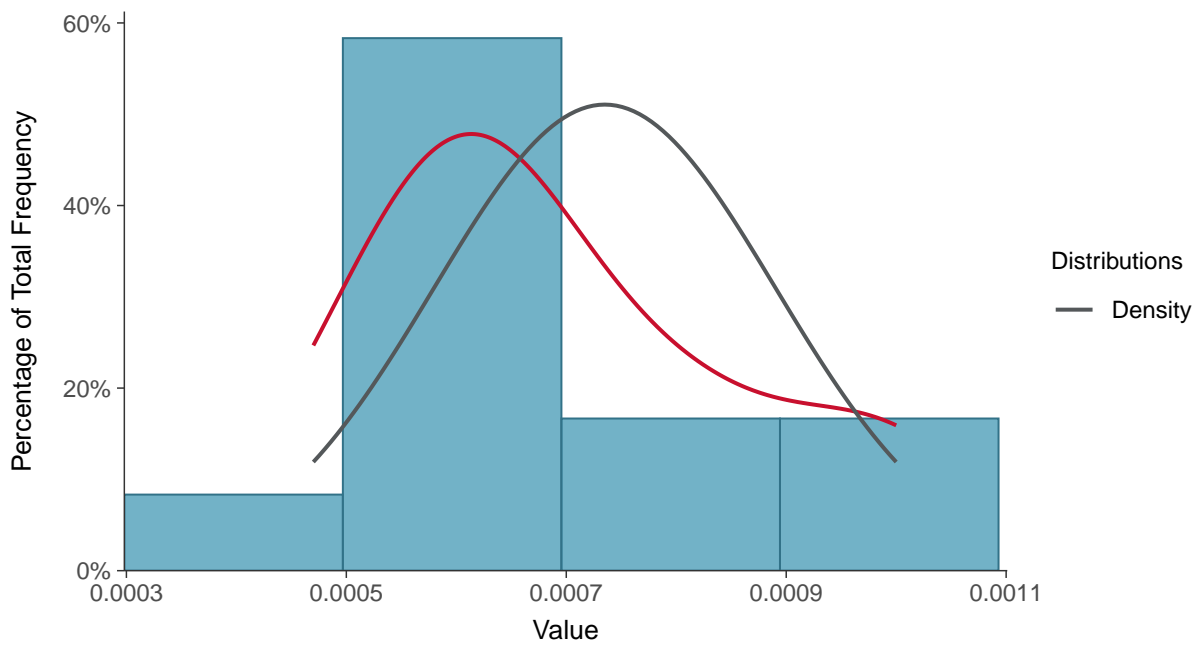
#### Scatter Plot

Arsenic, MW-06 (mg/L)



#### Histogram

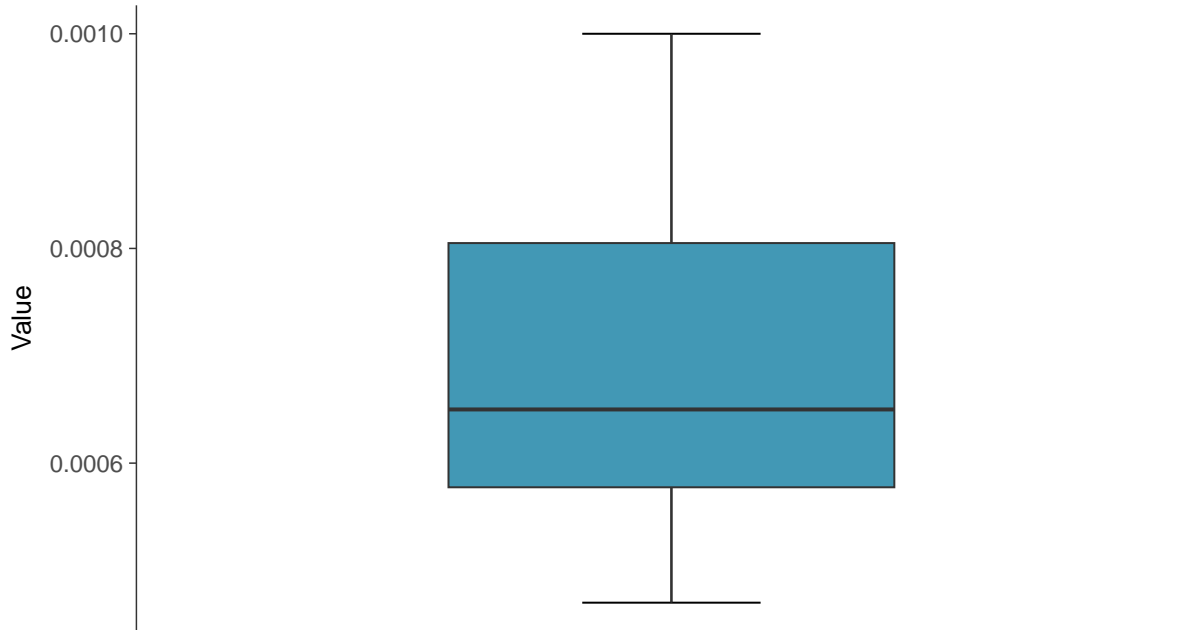
Arsenic, MW-06 (mg/L)





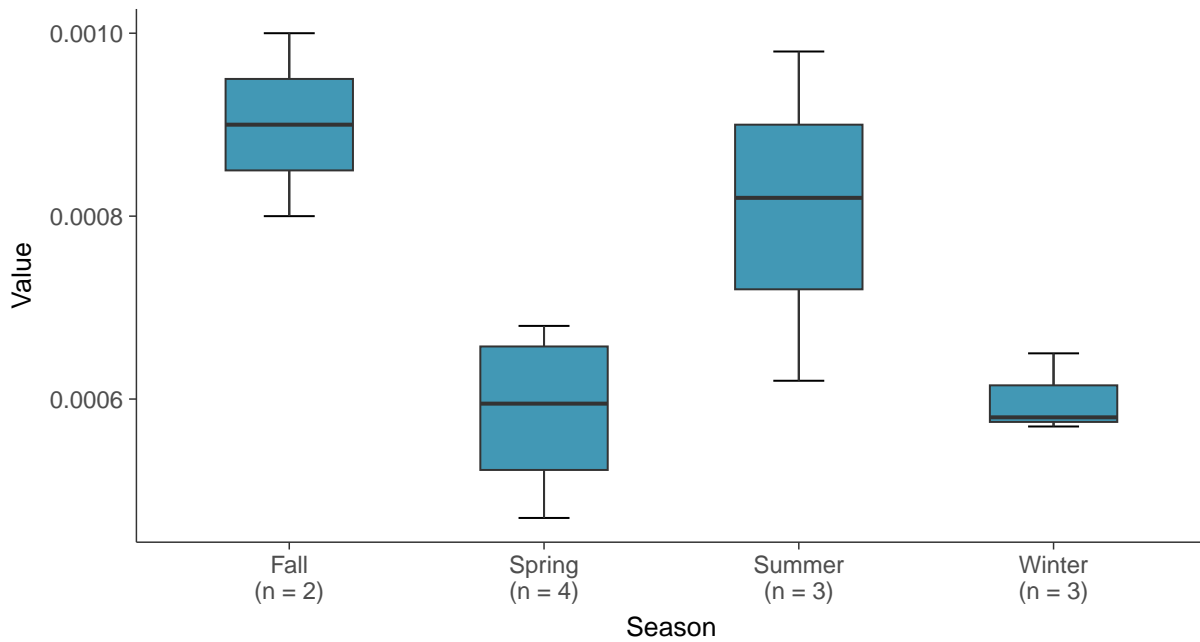
### Boxplot

Arsenic, MW-06 (mg/L)



### Boxplot by Season

Arsenic, MW-06 (mg/L)

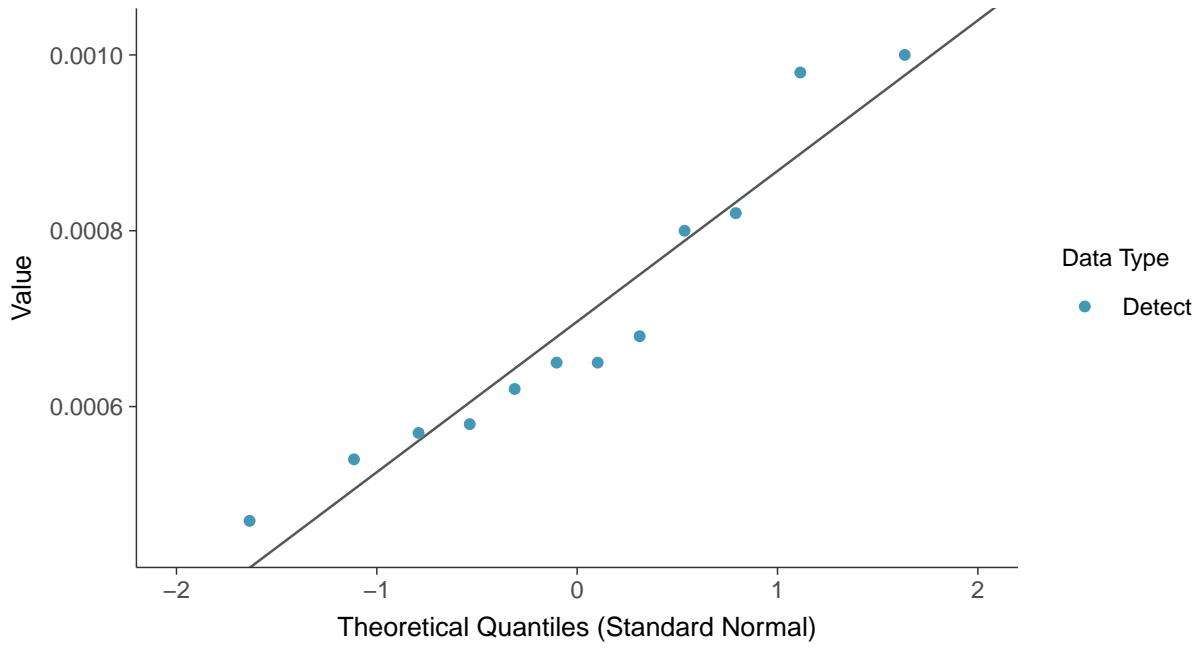






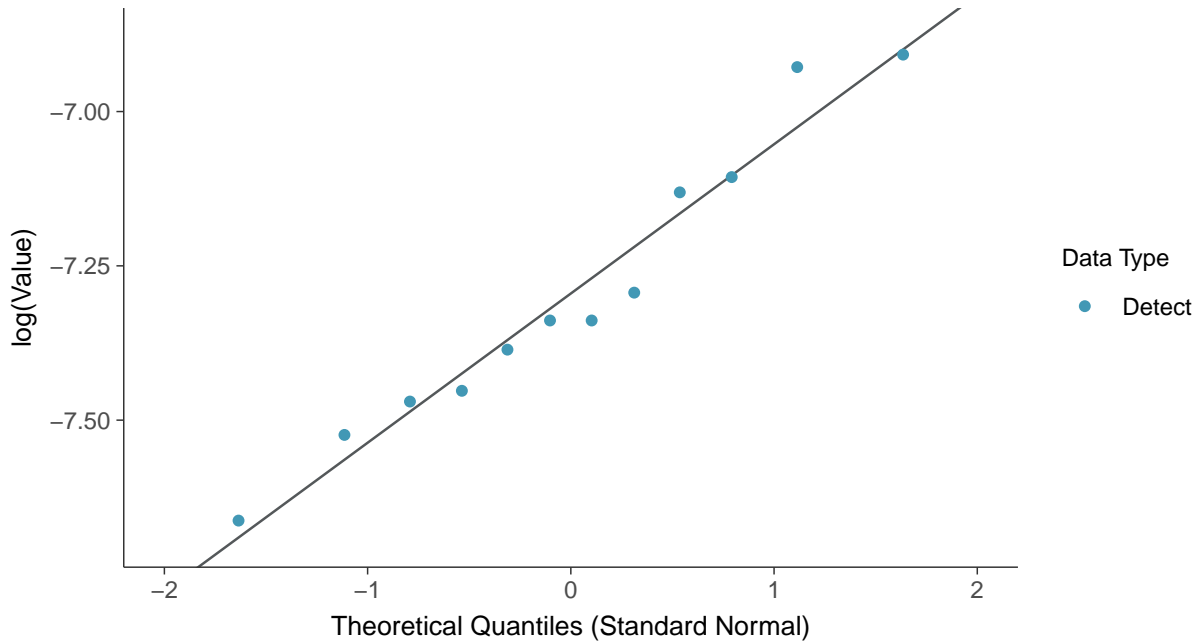
### Normal Q-Q plot

Arsenic, MW-06 (mg/L)



### Lognormal Q-Q plot

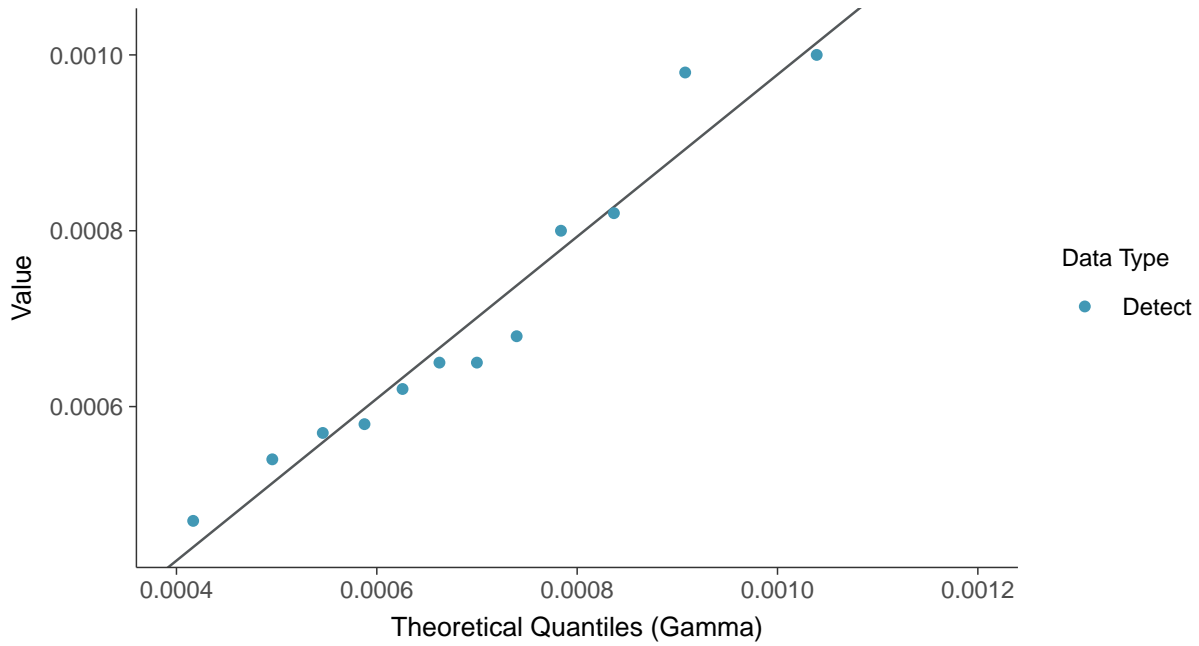
Arsenic, MW-06 (mg/L)





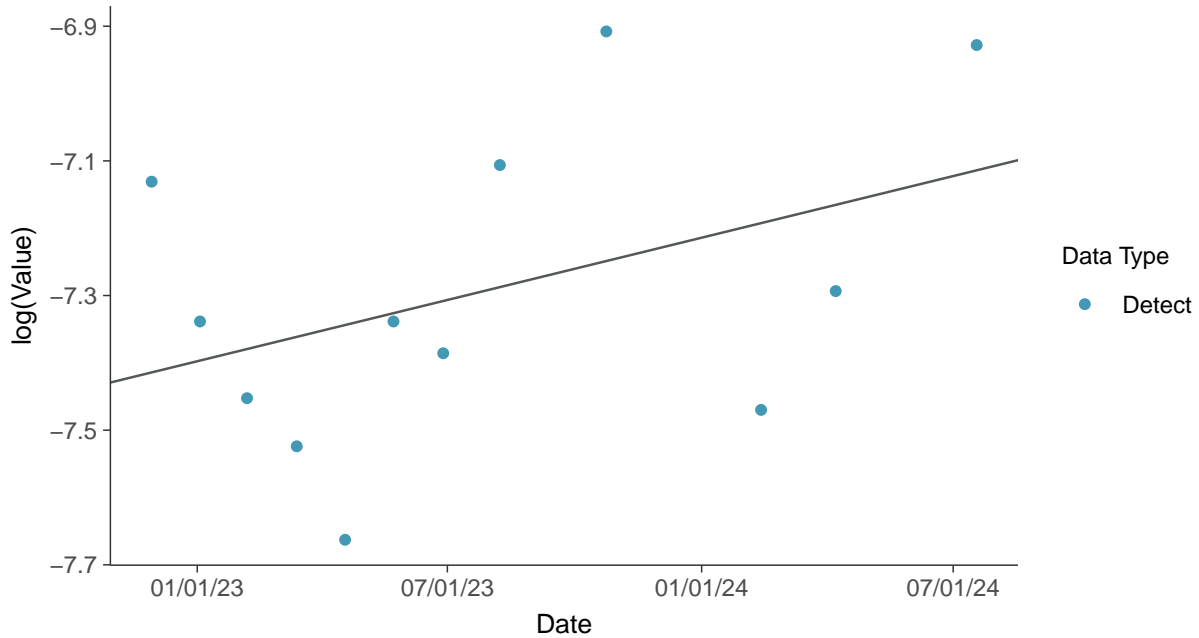
### Gamma Q-Q plot

Arsenic, MW-06 (mg/L)



### Trend Regression: Lognormal MLE

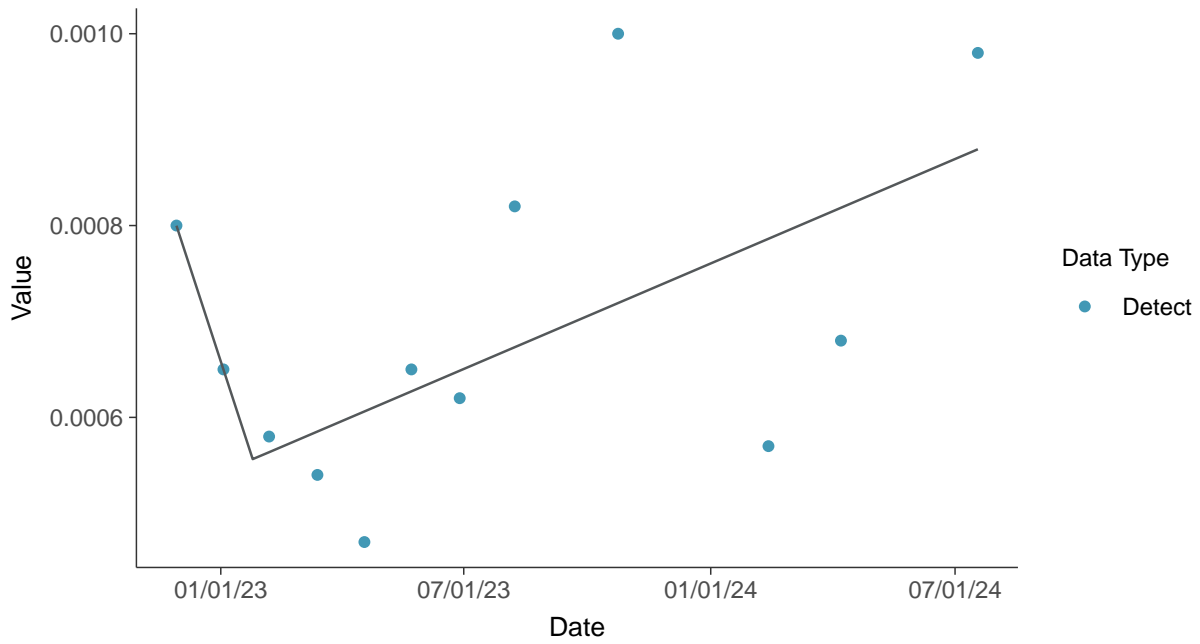
Arsenic, MW-06 (mg/L)





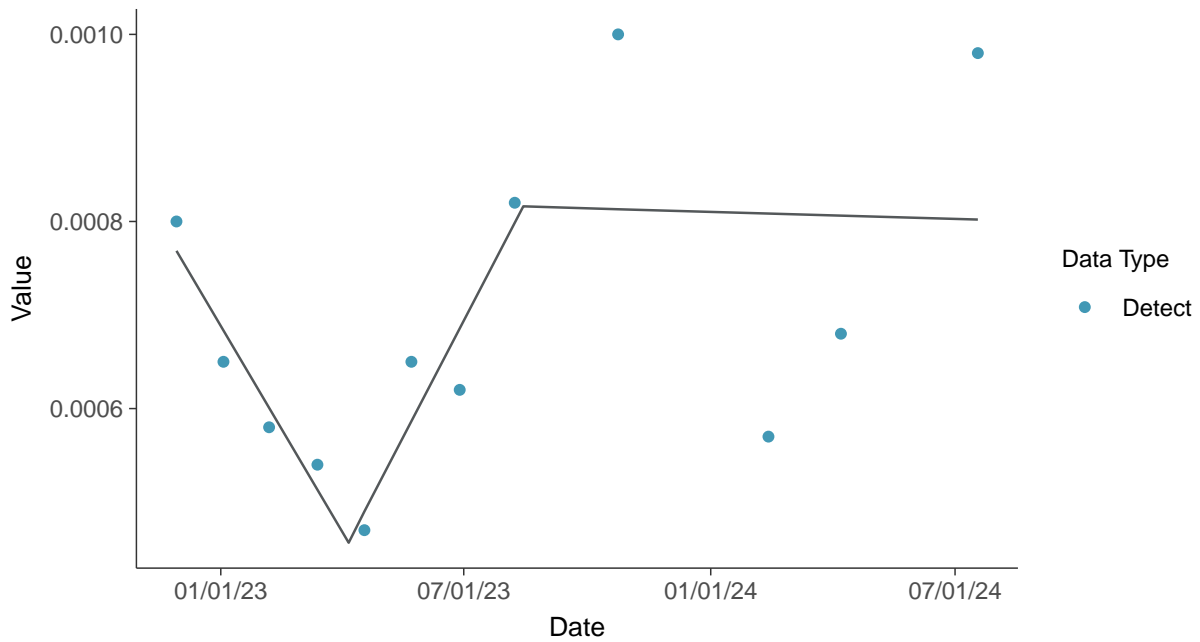
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-06 (mg/L)



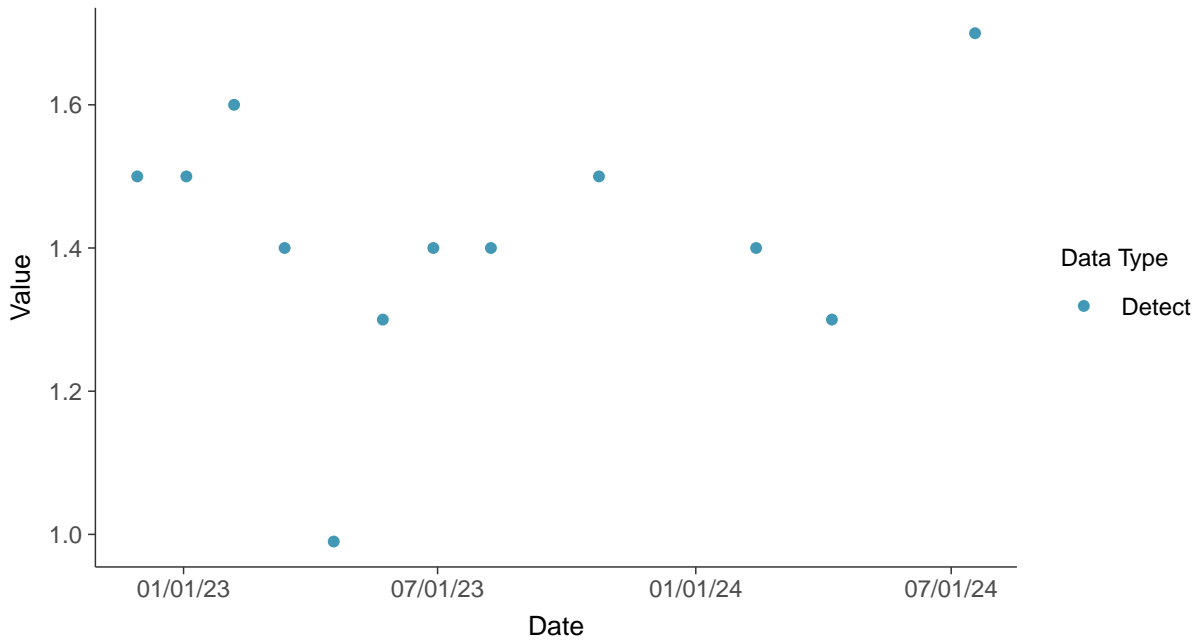


### Appendix IV: Barium, MW-06

ID: 16\_1\_5\_103

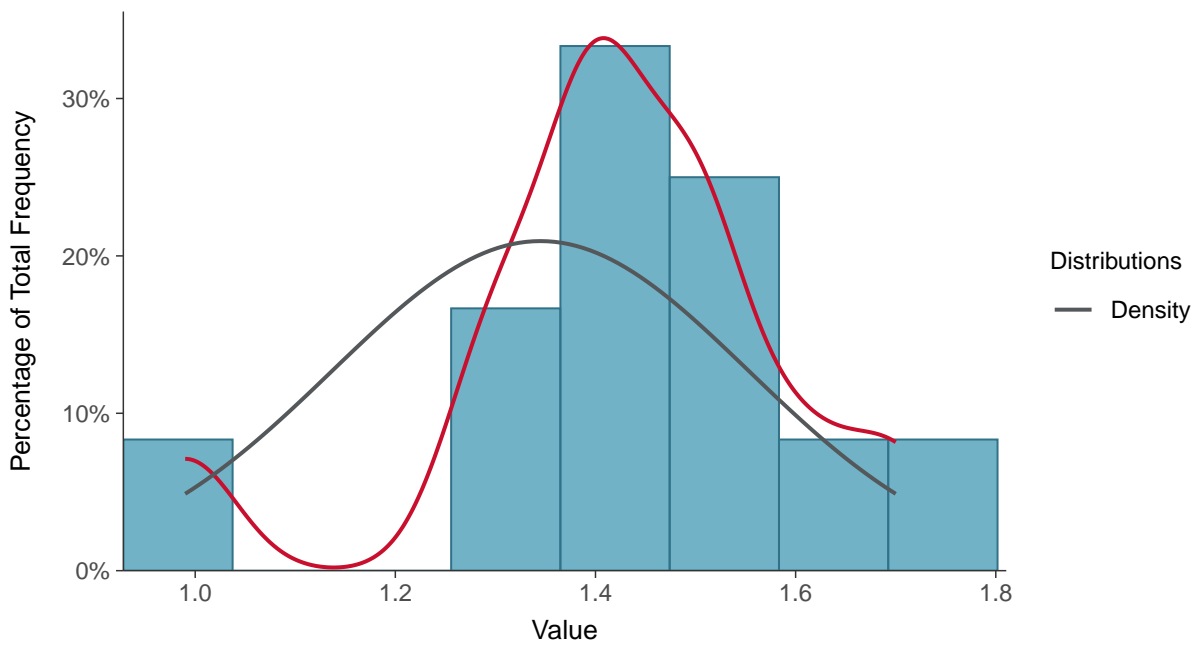
#### Scatter Plot

Barium, MW-06 (mg/L)



#### Histogram

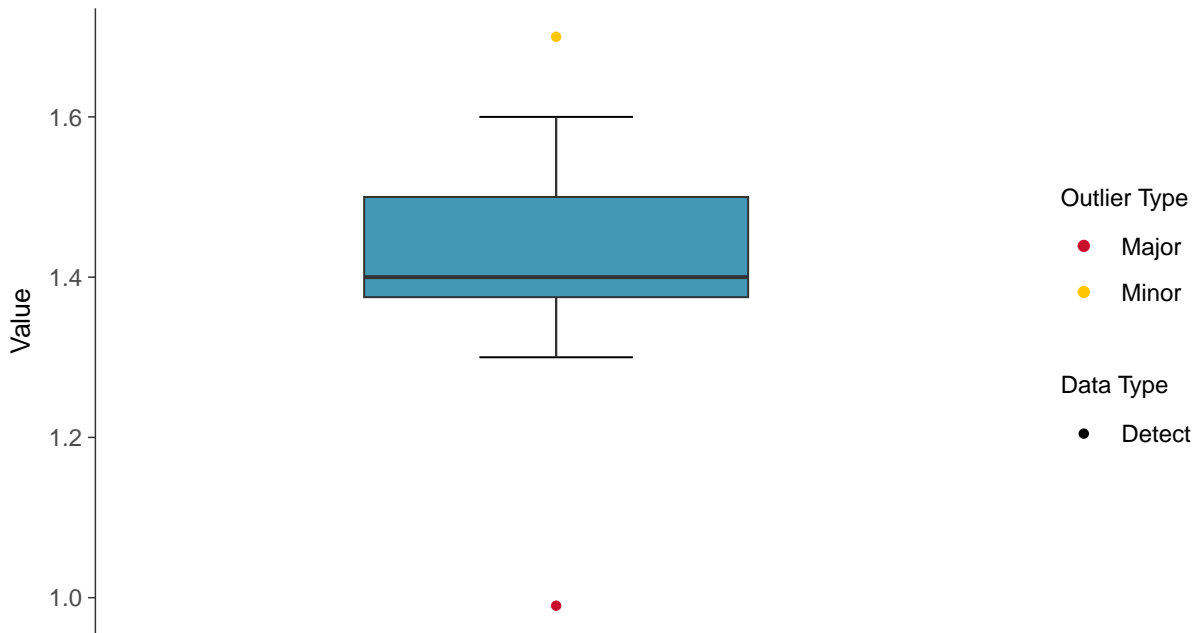
Barium, MW-06 (mg/L)





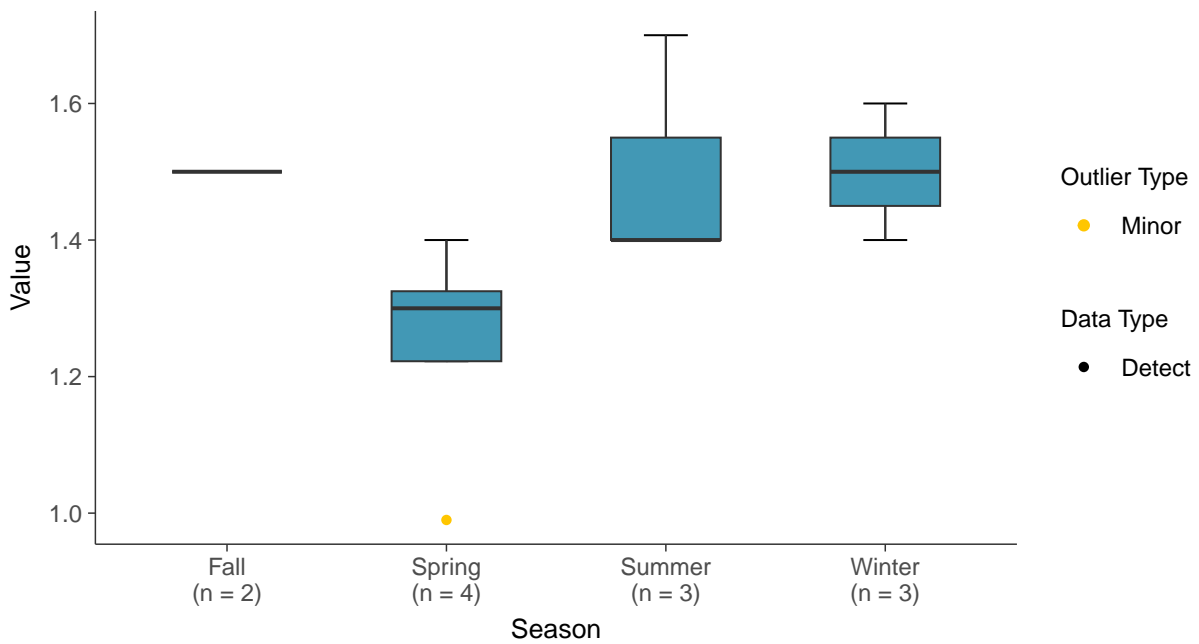
### Boxplot

Barium, MW-06 (mg/L)



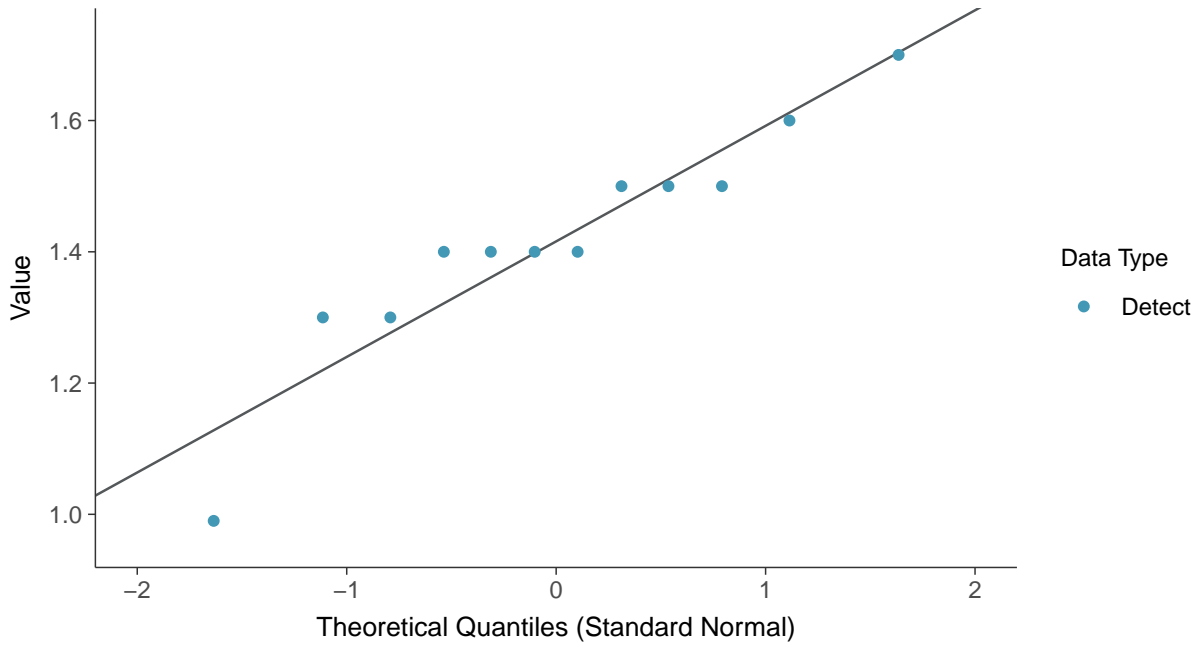
### Boxplot by Season

Barium, MW-06 (mg/L)

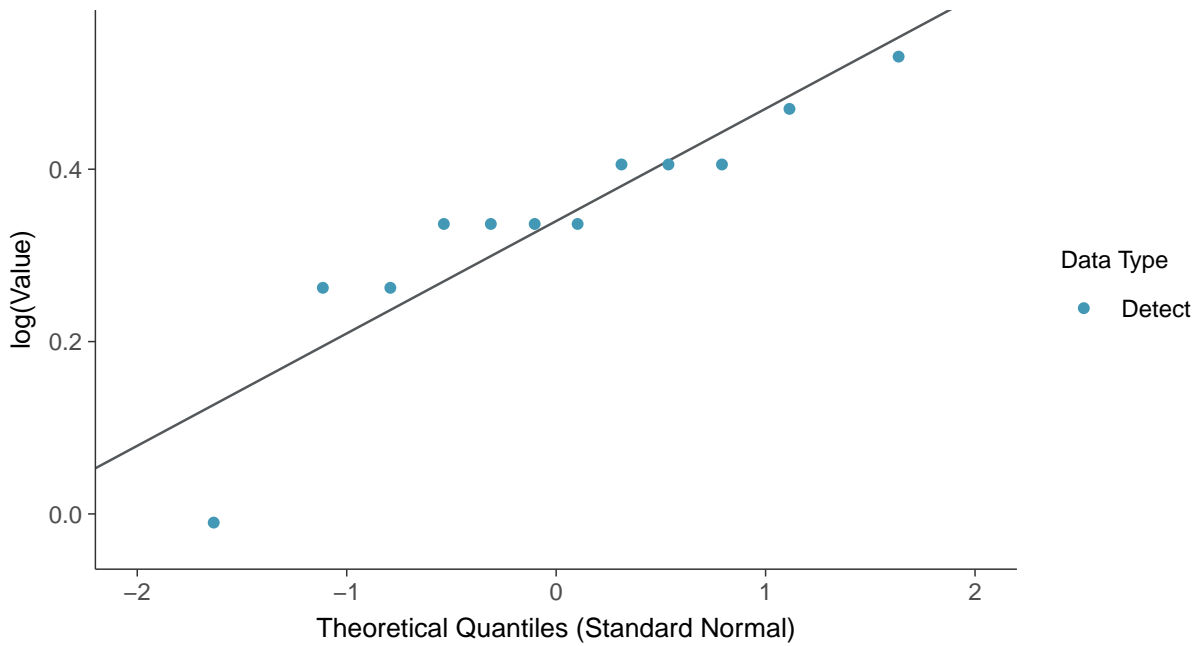




**Normal Q-Q plot**  
Barium, MW-06 (mg/L)

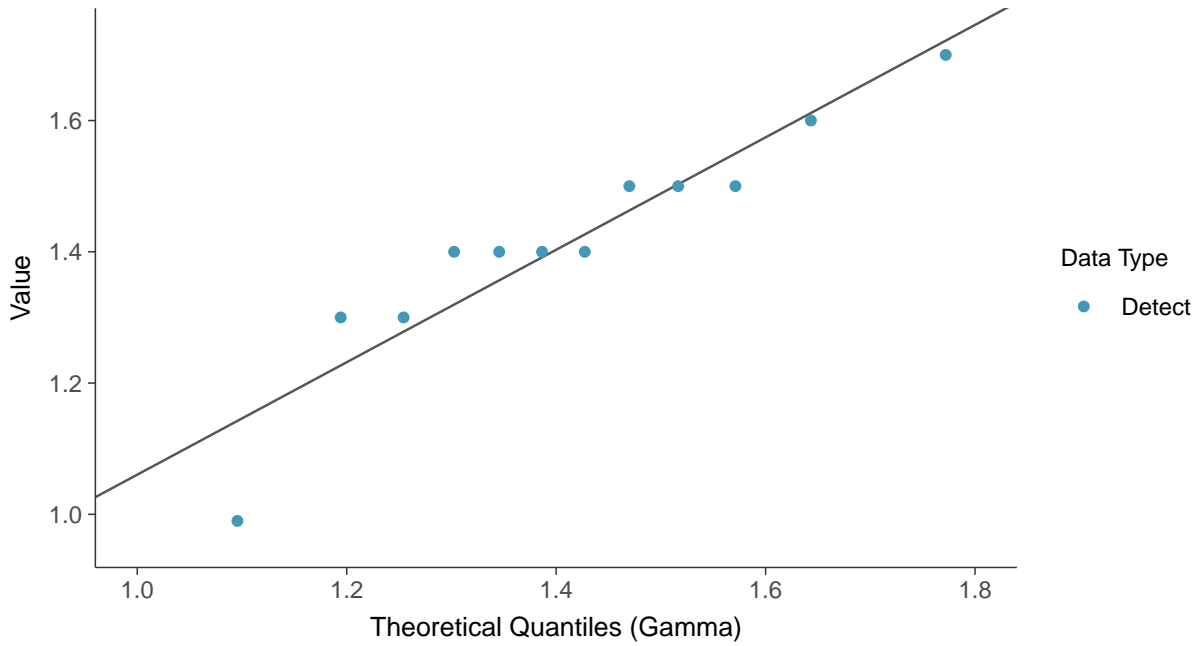


**Lognormal Q-Q plot**  
Barium, MW-06 (mg/L)

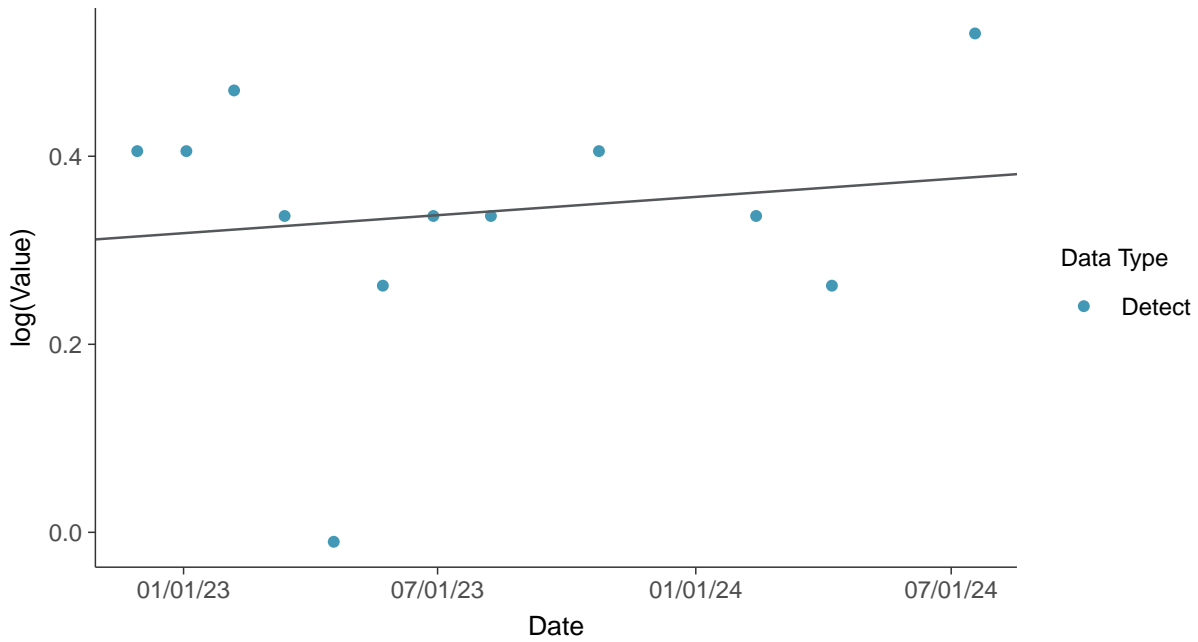




**Gamma Q-Q plot**  
Barium, MW-06 (mg/L)

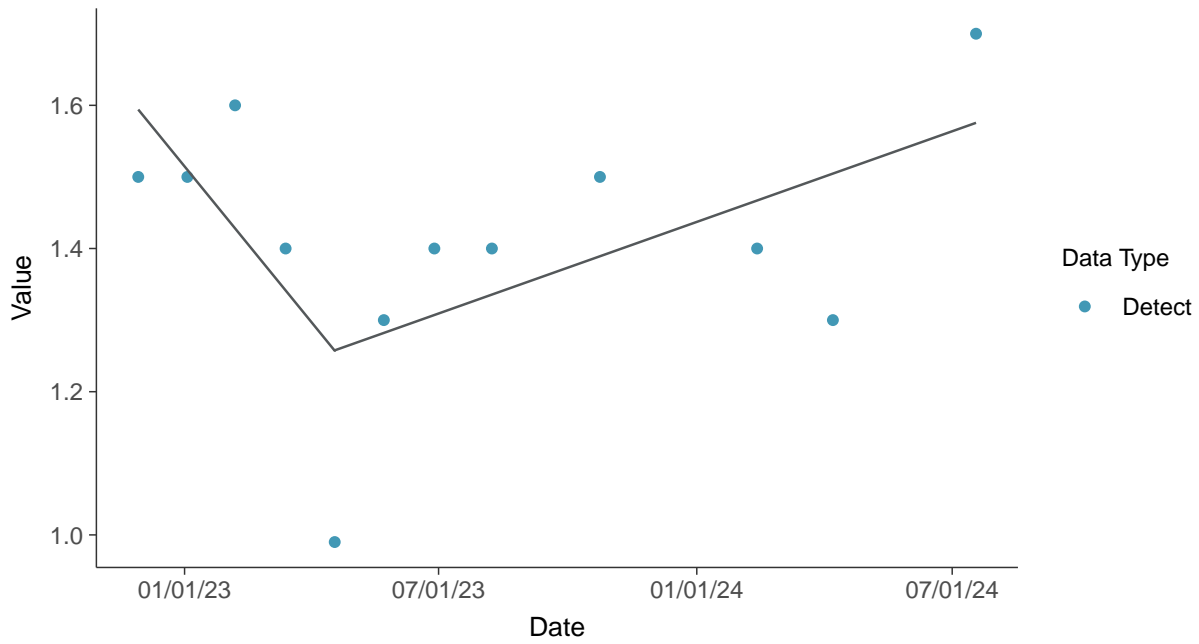


**Trend Regression: Lognormal MLE**  
Barium, MW-06 (mg/L)

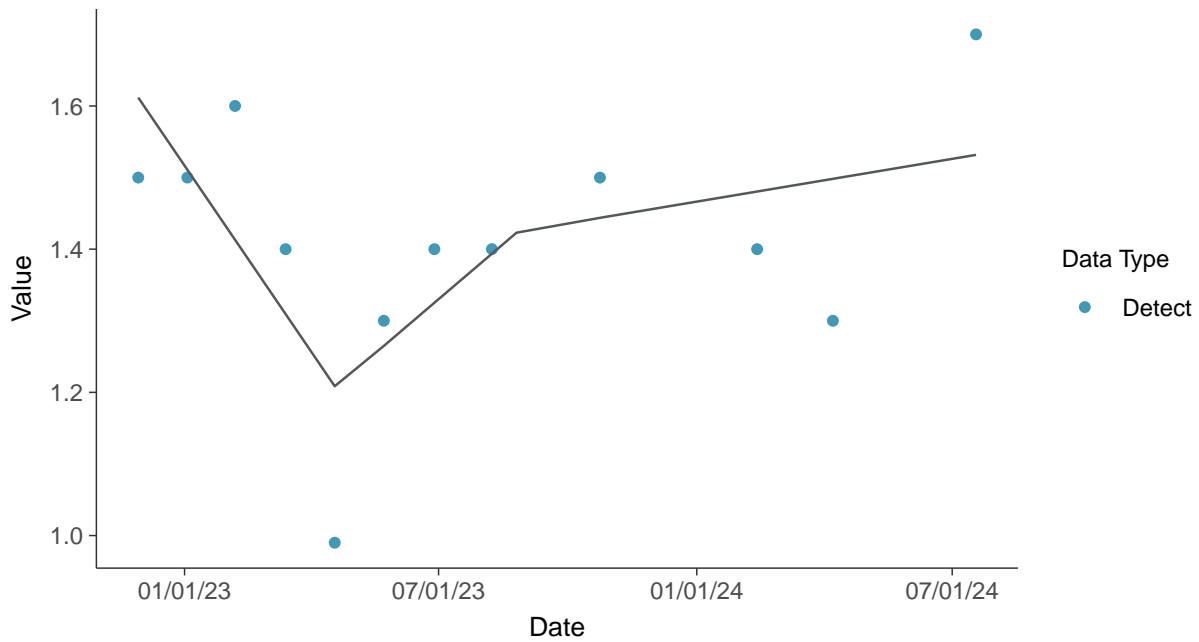




**Trend Regression: Piecewise Linear-Linear**  
Barium, MW-06 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Barium, MW-06 (mg/L)

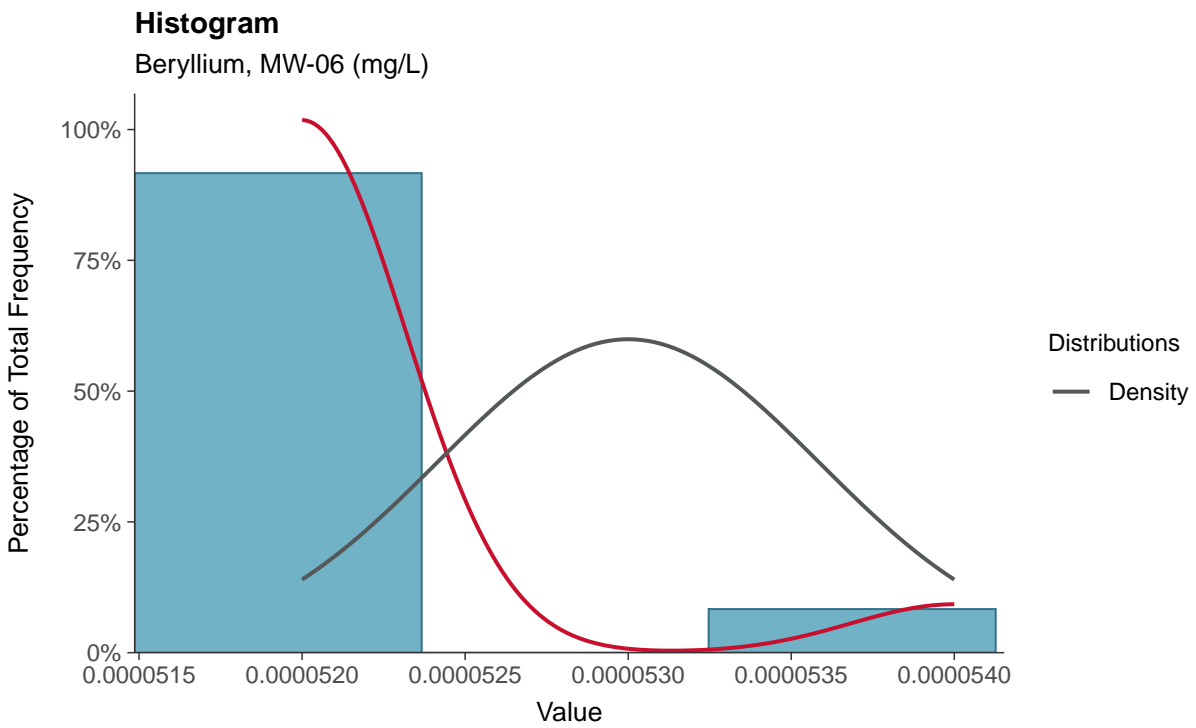
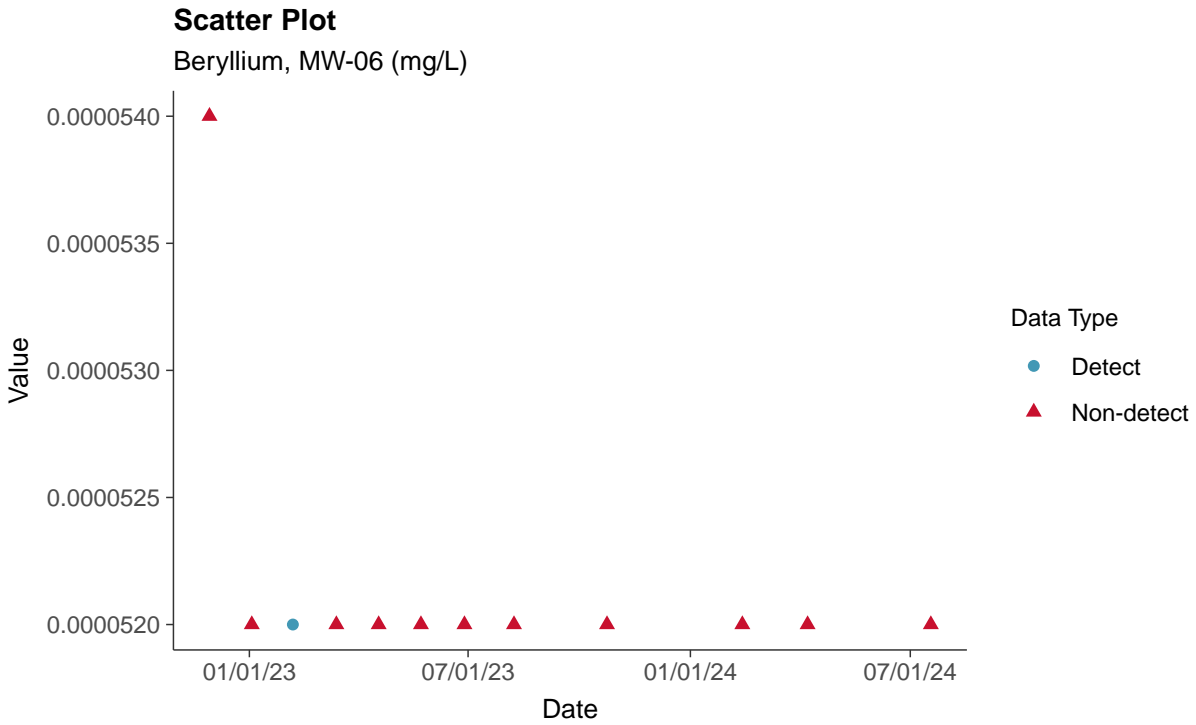






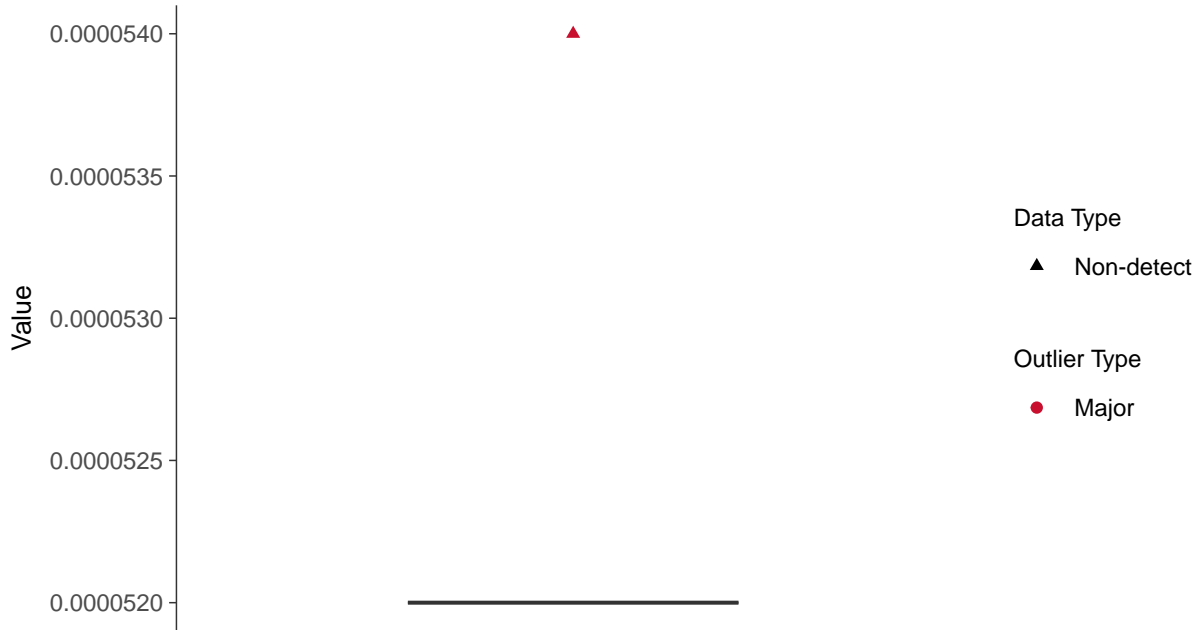
### Appendix IV: Beryllium, MW-06

ID: 16\_1\_5\_104

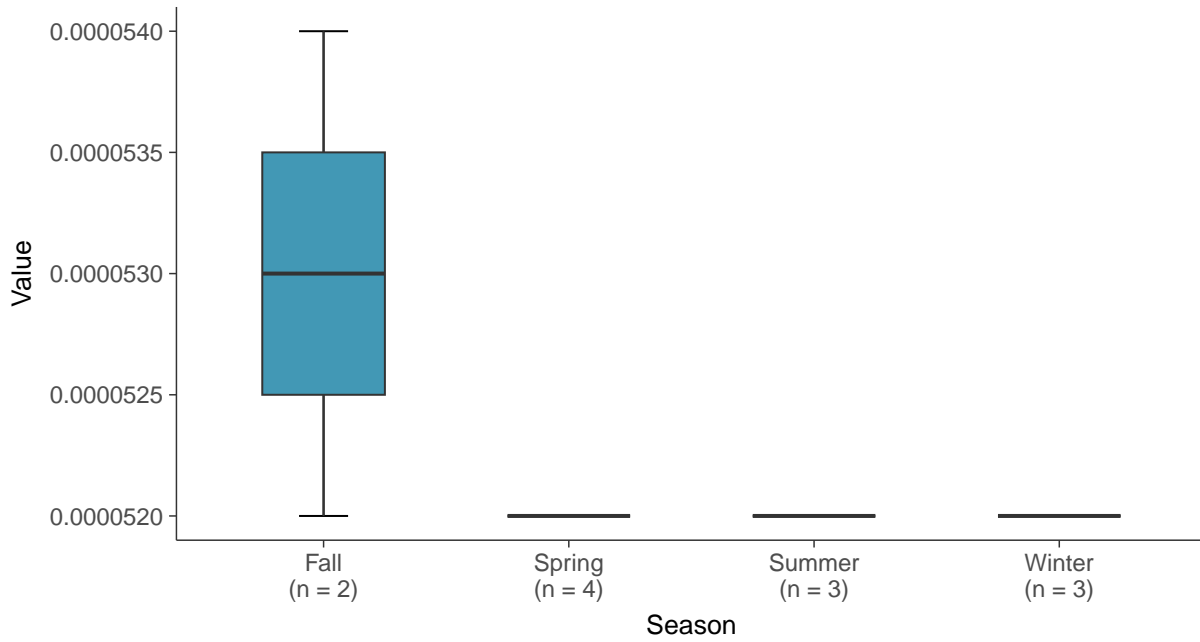




**Boxplot**  
Beryllium, MW-06 (mg/L)



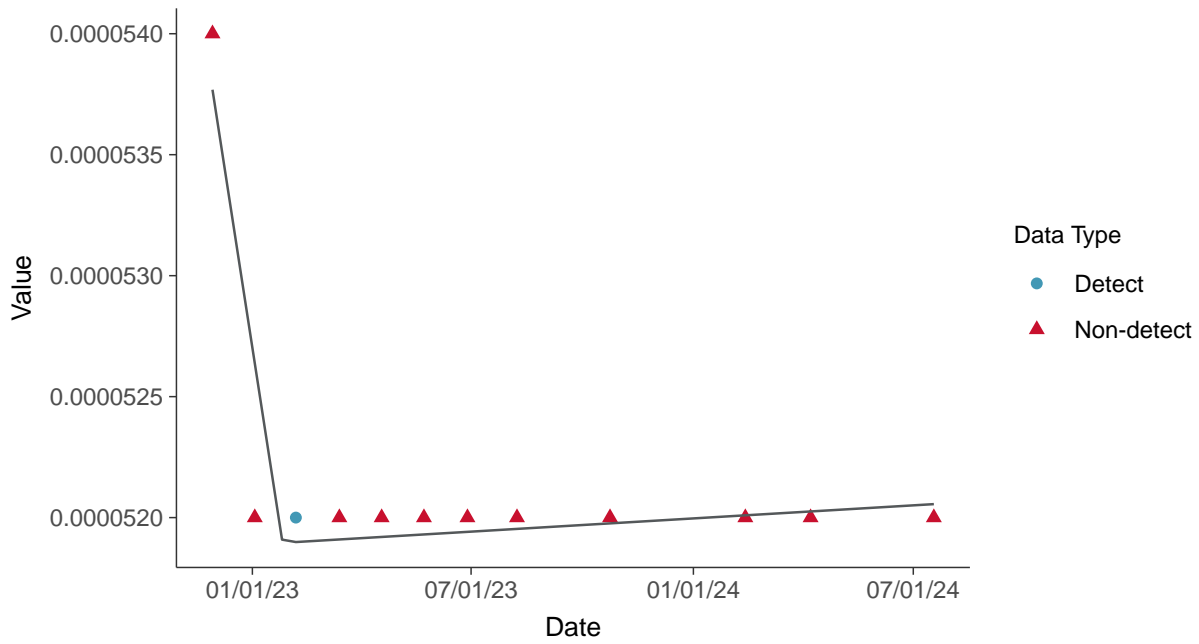
**Boxplot by Season**  
Beryllium, MW-06 (mg/L)





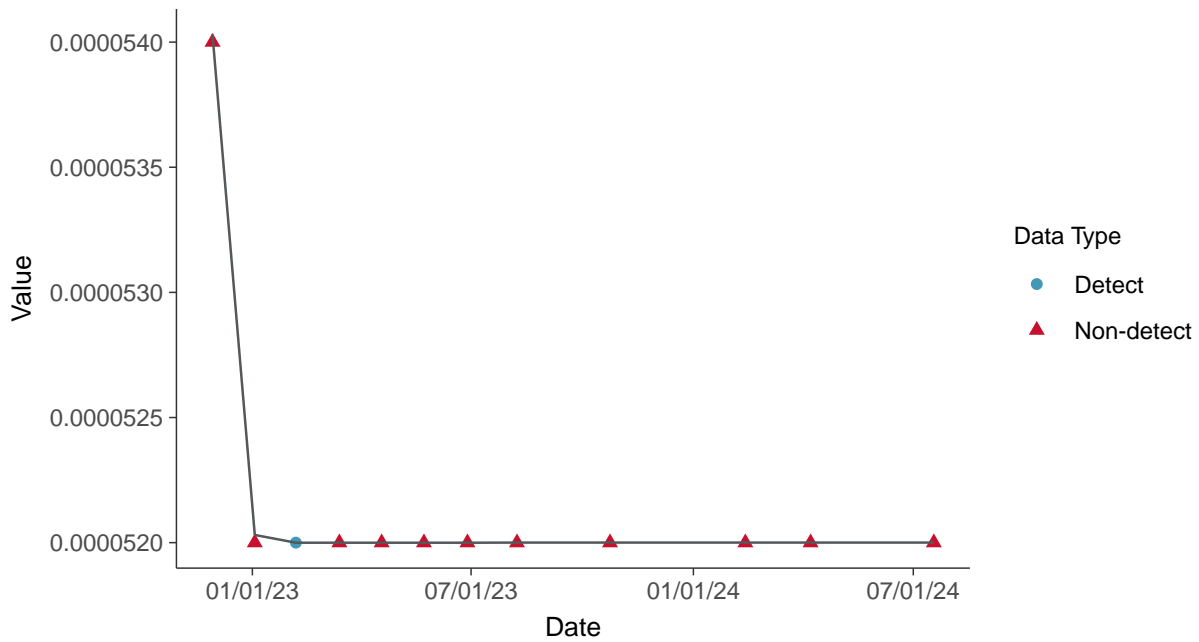
### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-06 (mg/L)



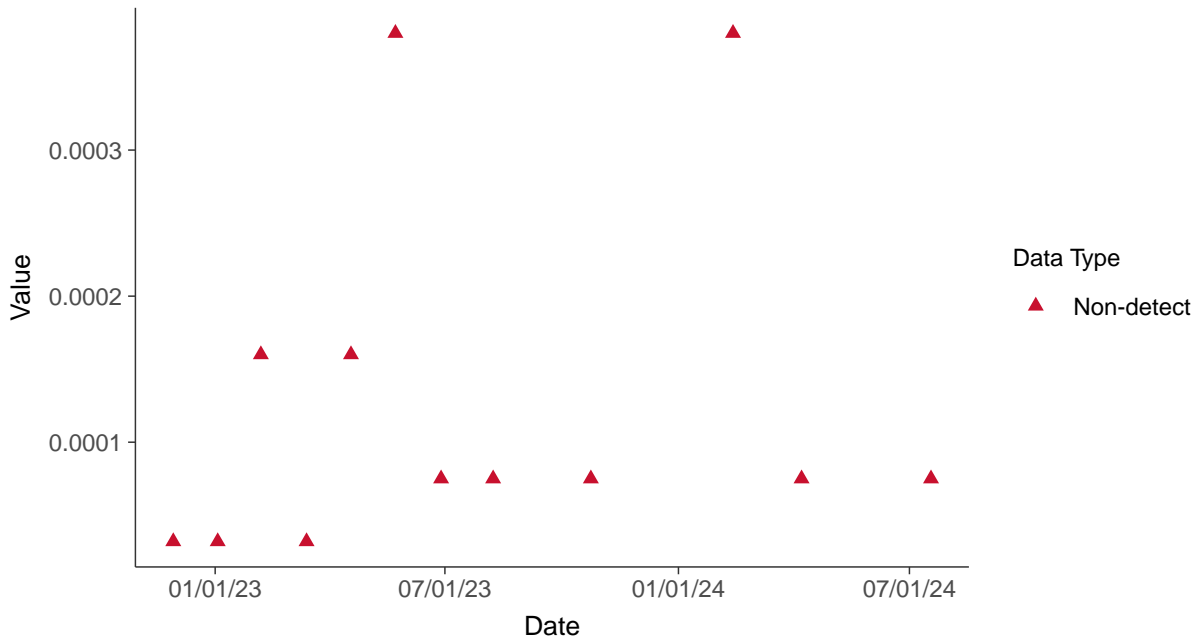


### Appendix IV: Cadmium, MW-06

ID: 16\_1\_5\_106

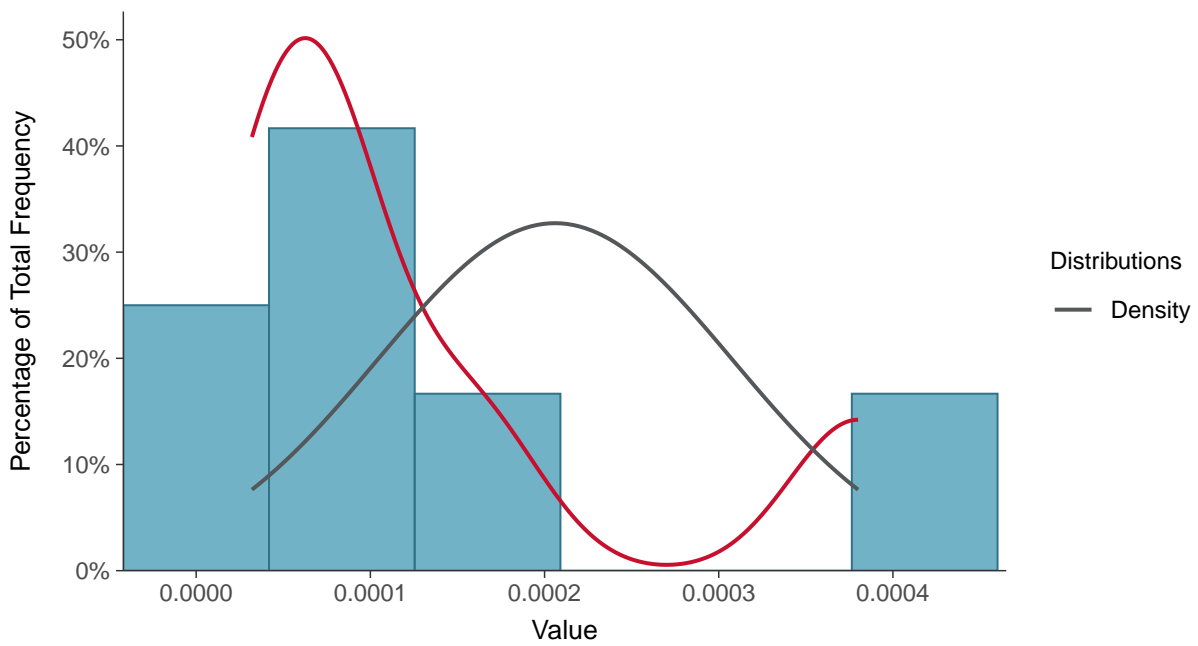
#### Scatter Plot

Cadmium, MW-06 (mg/L)



#### Histogram

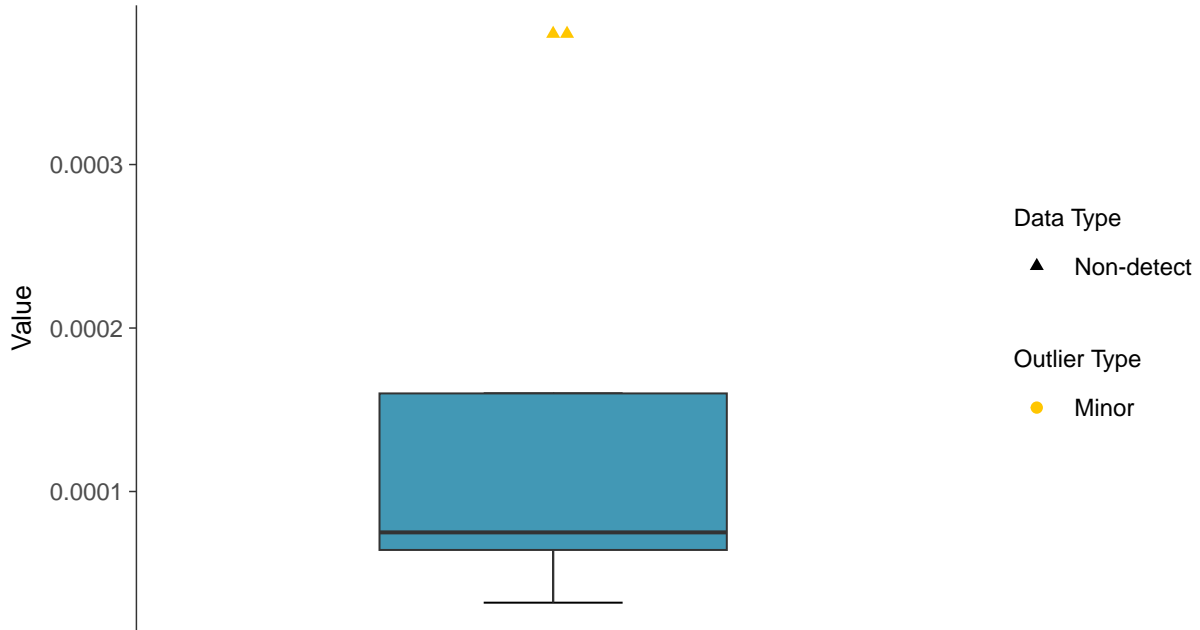
Cadmium, MW-06 (mg/L)





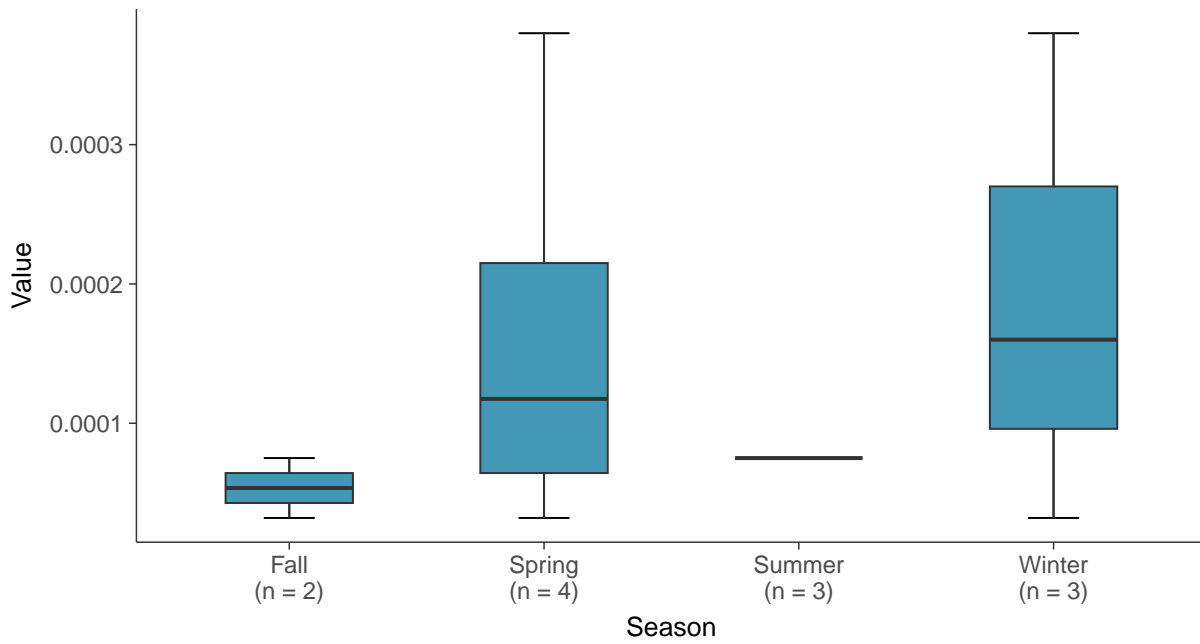
### Boxplot

Cadmium, MW-06 (mg/L)



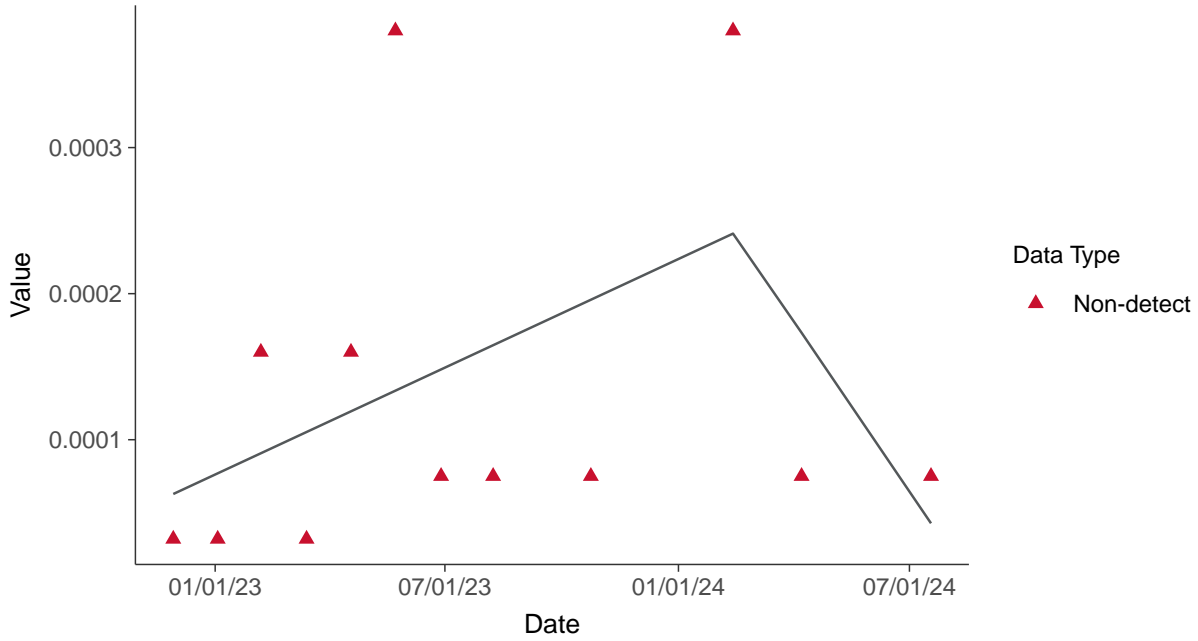
### Boxplot by Season

Cadmium, MW-06 (mg/L)

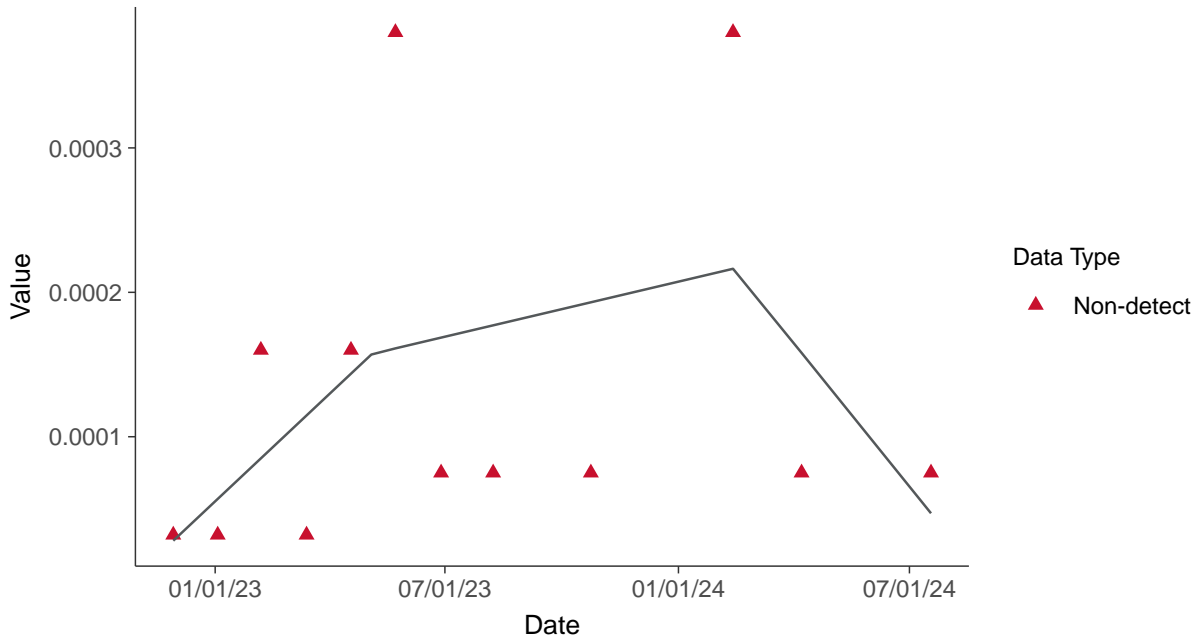




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-06 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-06 (mg/L)



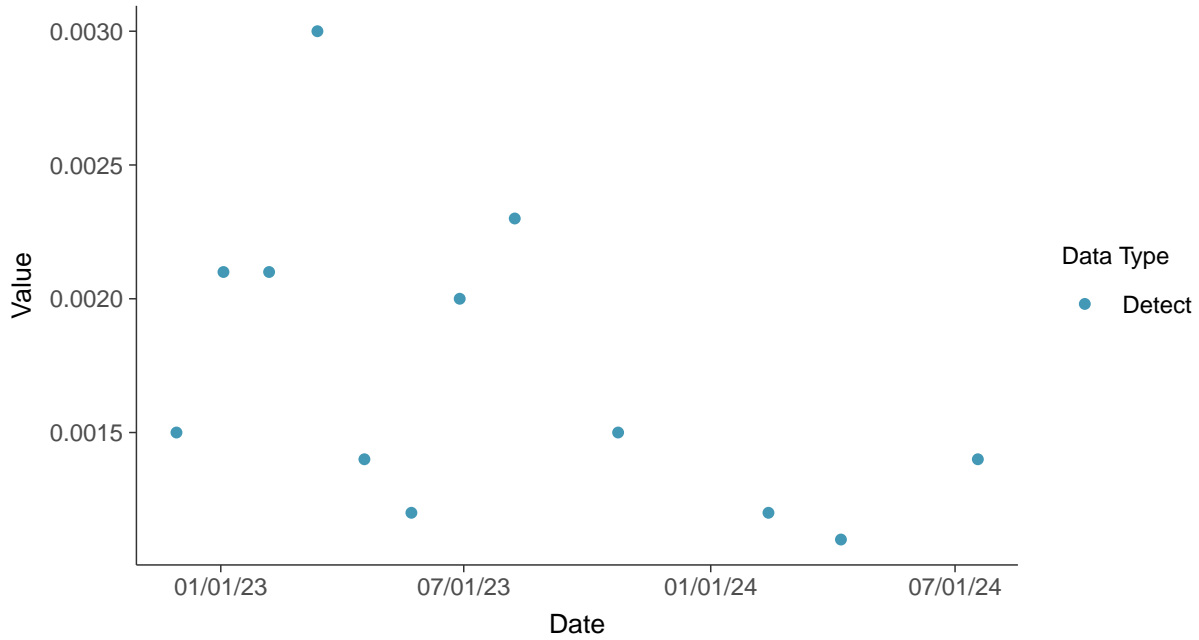


### Appendix IV: Chromium, Total, MW-06

ID: 16\_1\_5\_109

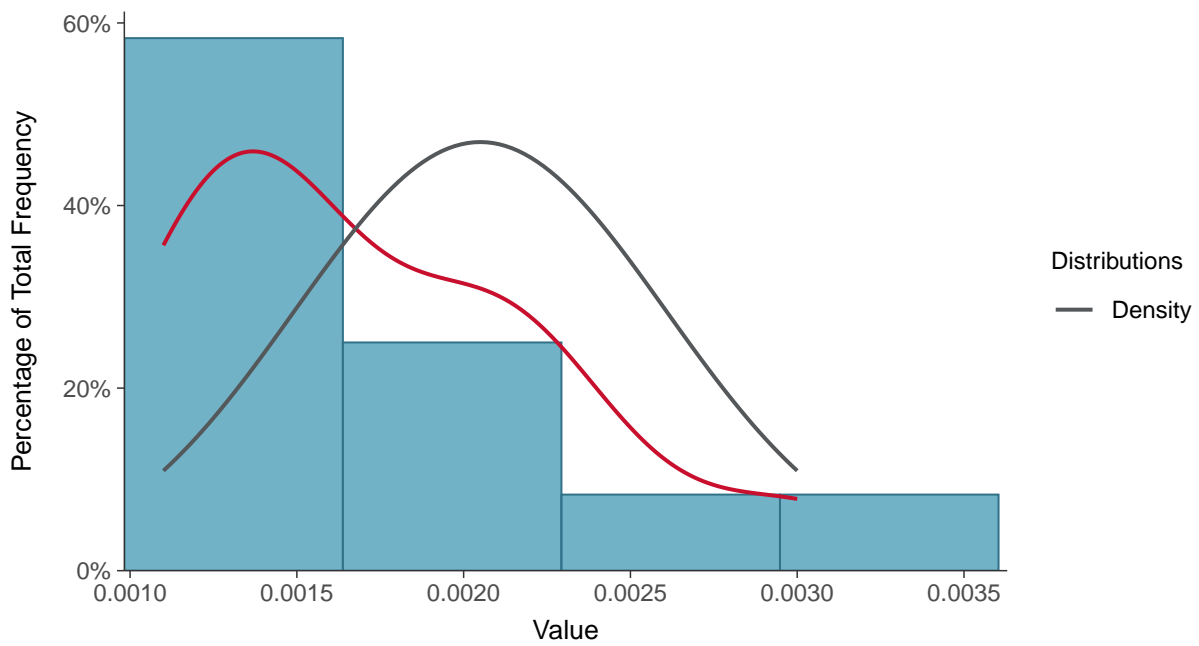
#### Scatter Plot

Chromium, Total, MW-06 (mg/L)



#### Histogram

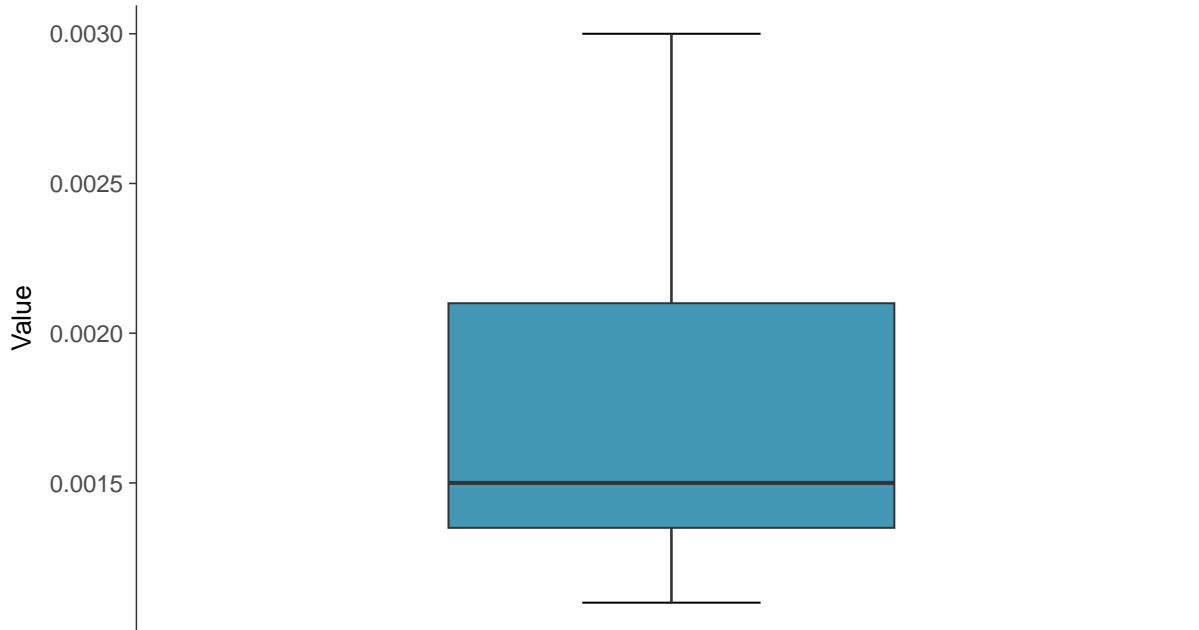
Chromium, Total, MW-06 (mg/L)





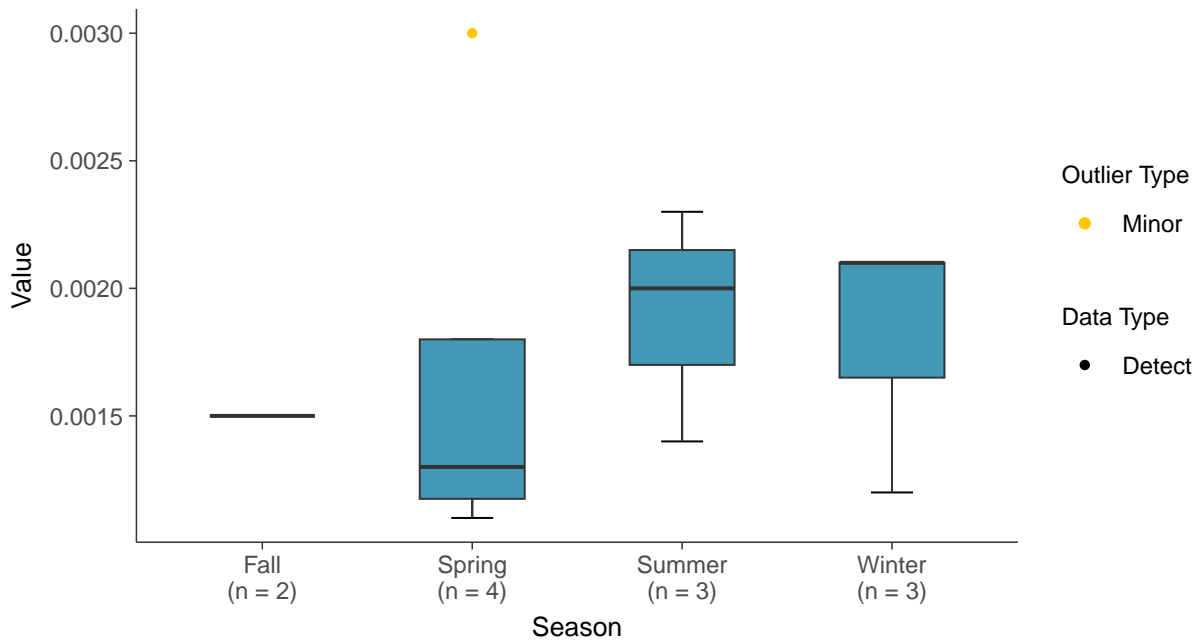
### Boxplot

Chromium, Total, MW-06 (mg/L)



### Boxplot by Season

Chromium, Total, MW-06 (mg/L)

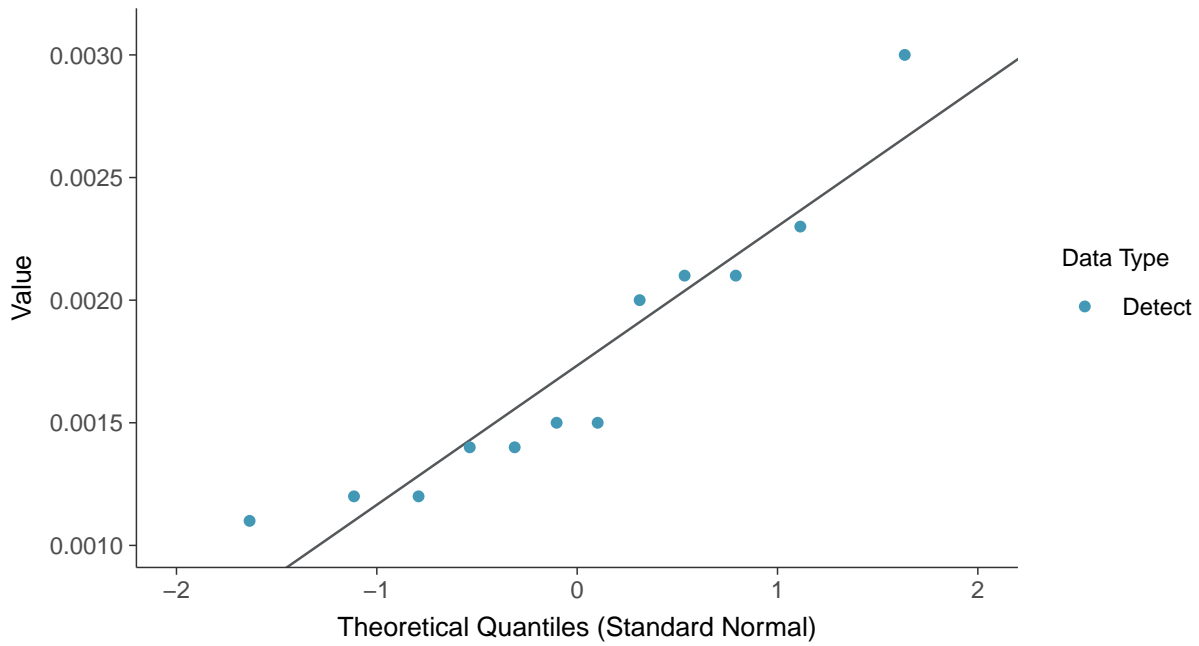






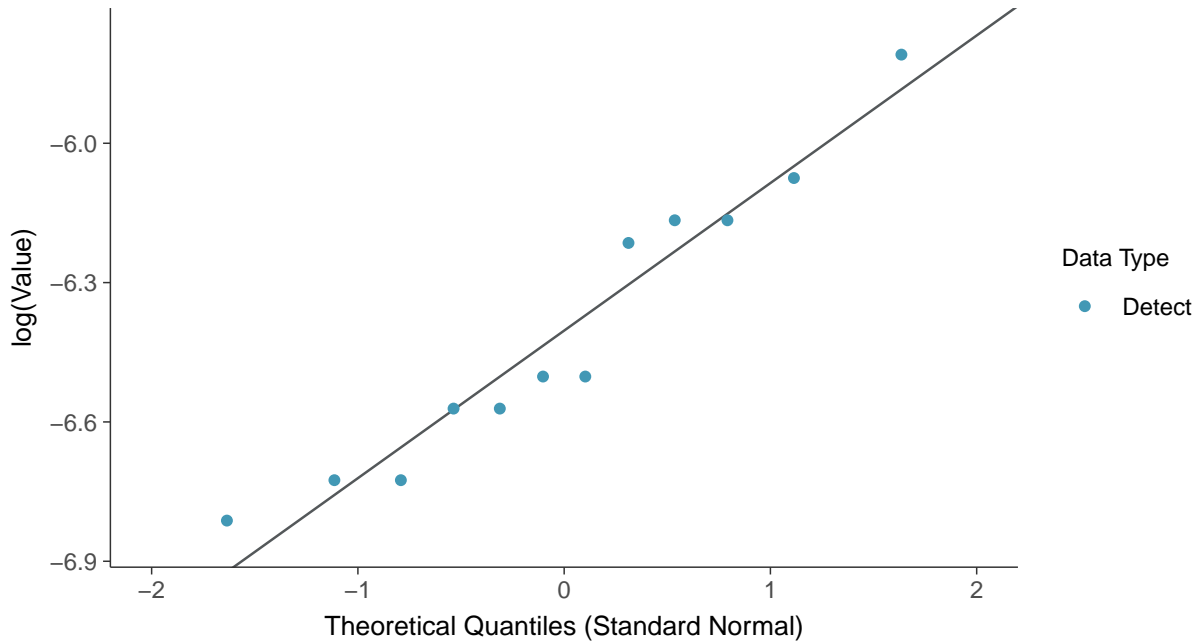
### Normal Q-Q plot

Chromium, Total, MW-06 (mg/L)



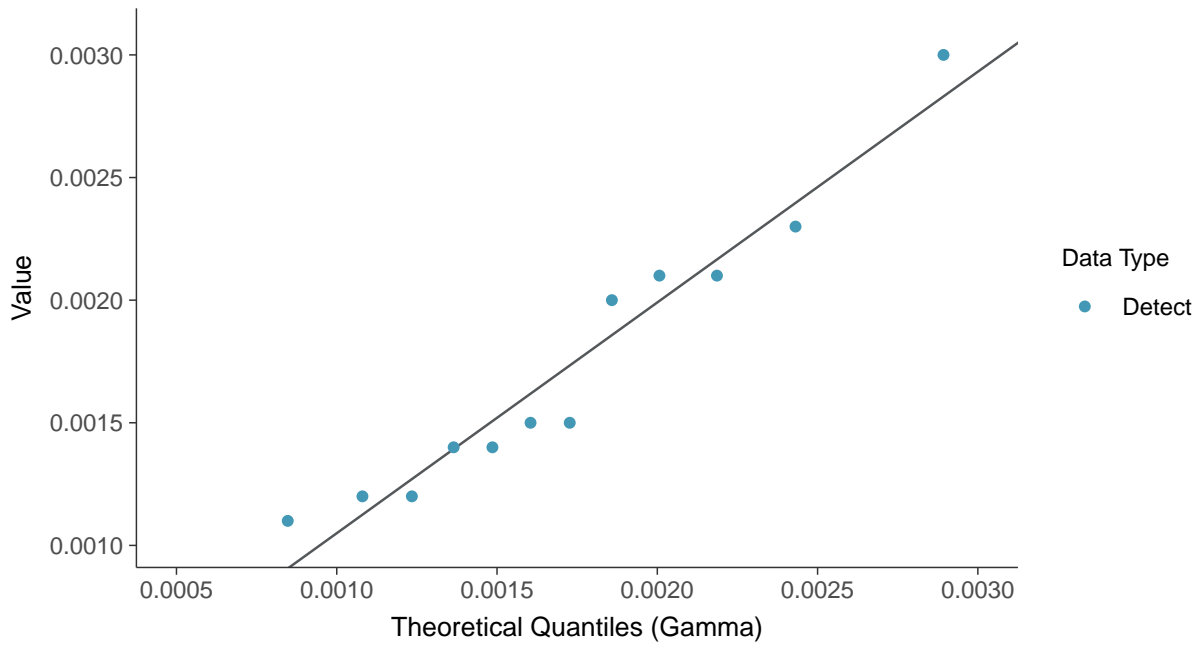
### Lognormal Q-Q plot

Chromium, Total, MW-06 (mg/L)

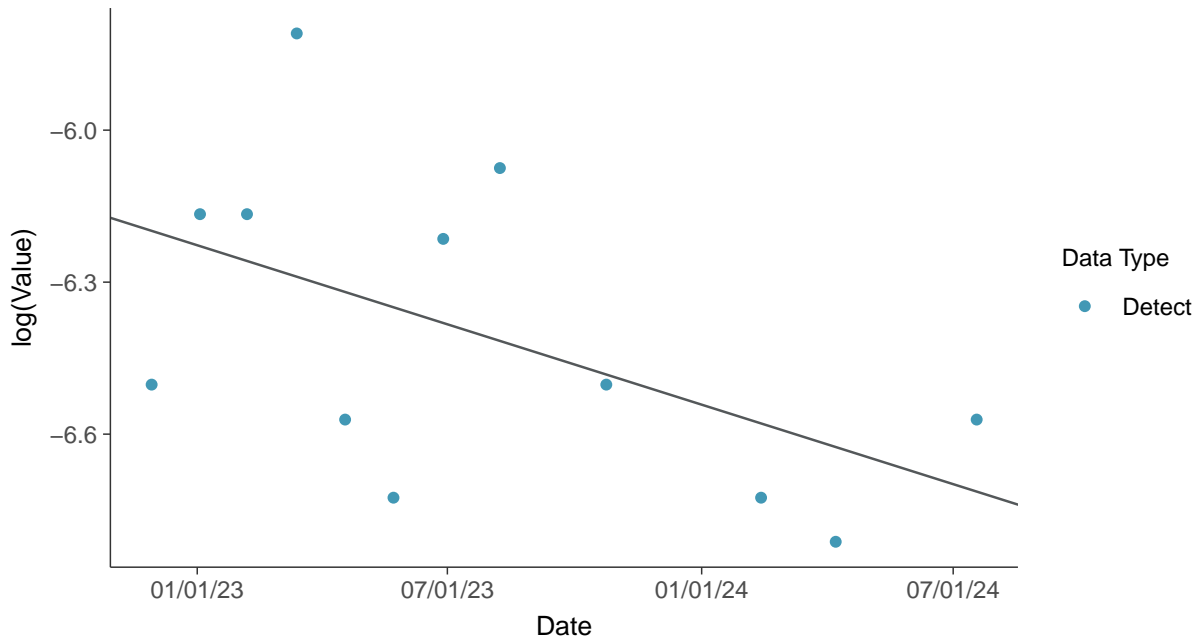




**Gamma Q-Q plot**  
Chromium, Total, MW-06 (mg/L)



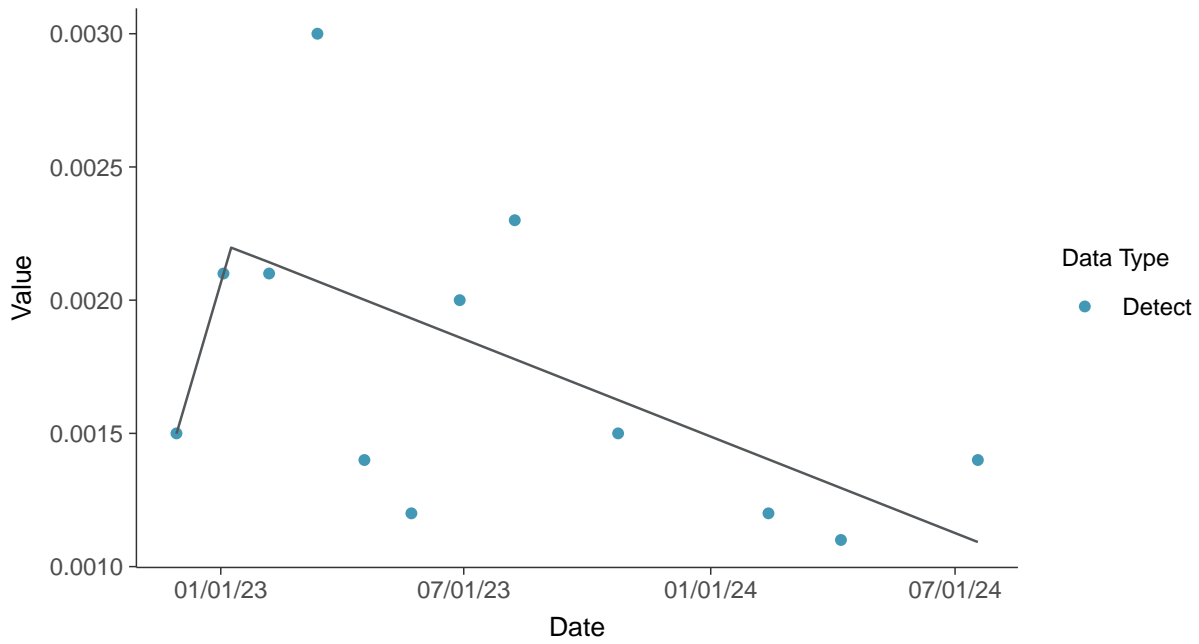
**Trend Regression: Lognormal MLE**  
Chromium, Total, MW-06 (mg/L)





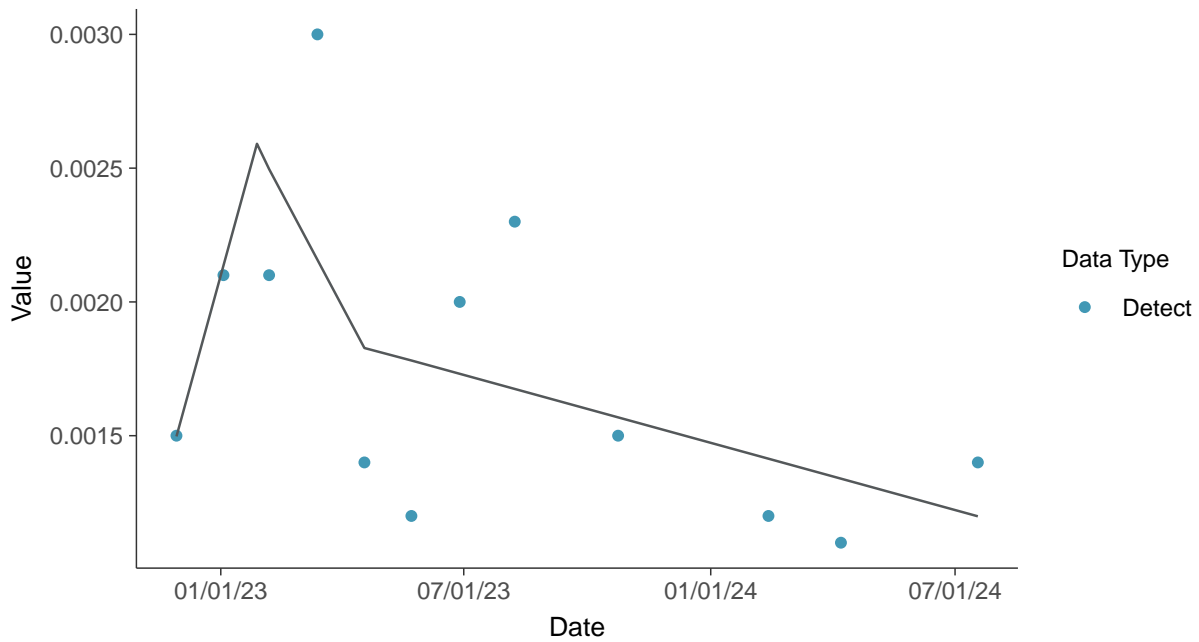
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

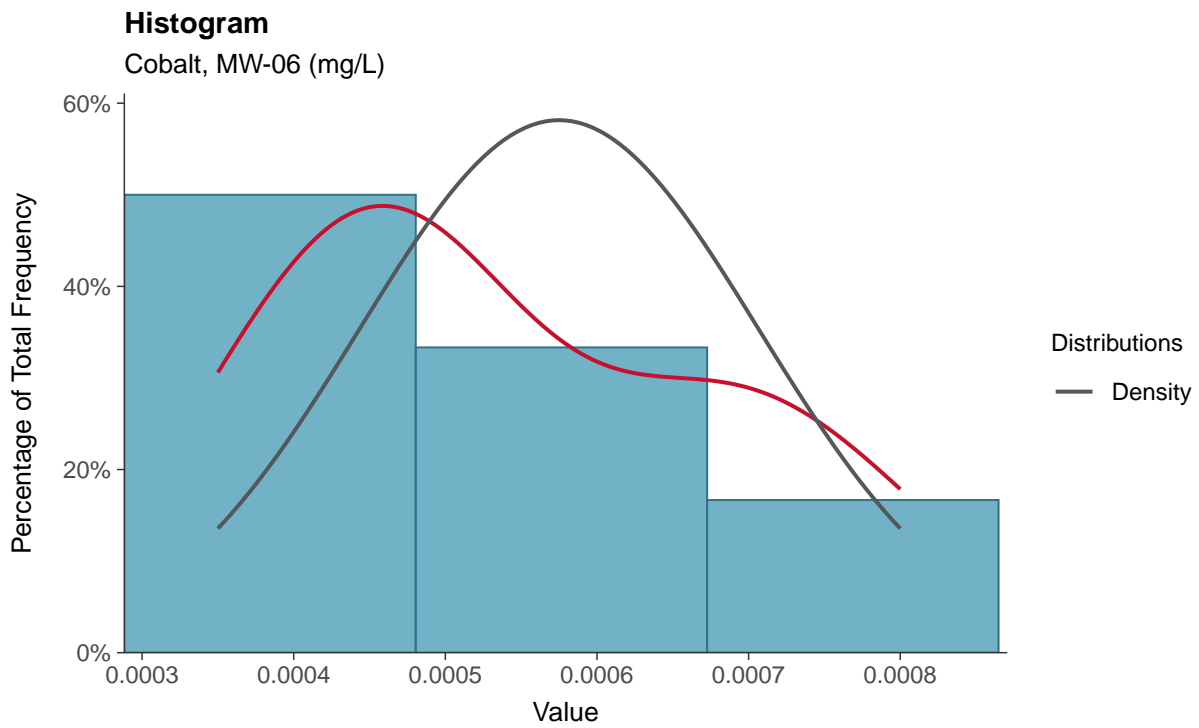
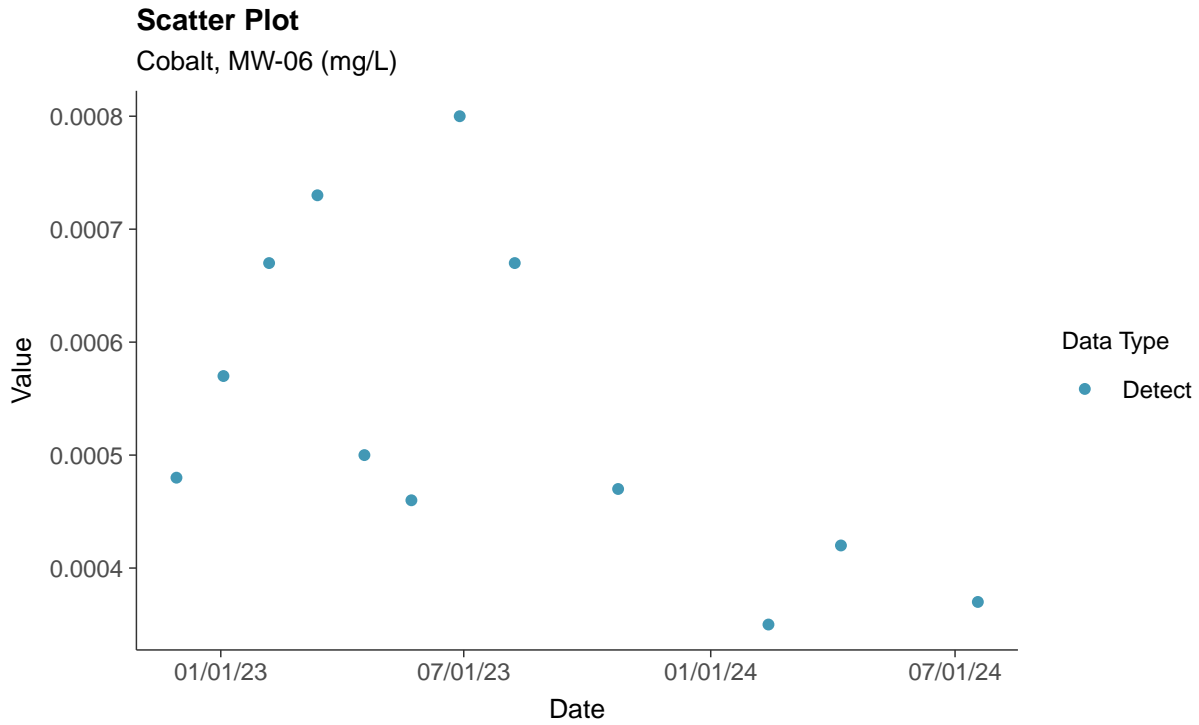
Chromium, Total, MW-06 (mg/L)





### Appendix IV: Cobalt, MW-06

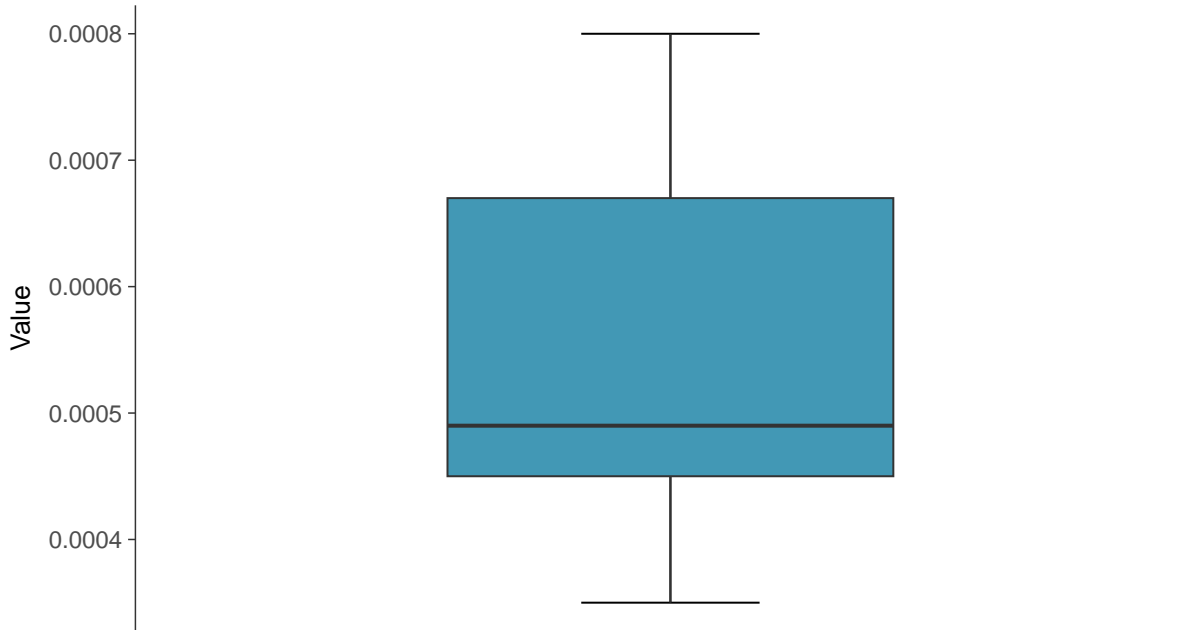
ID: 16\_1\_5\_110





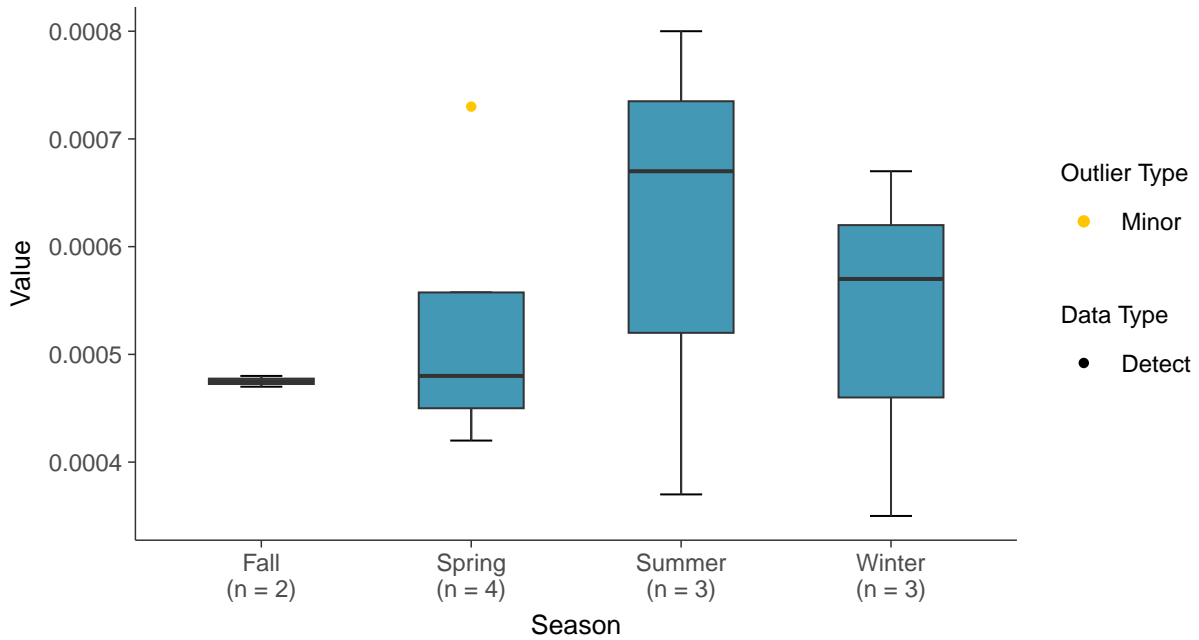
### Boxplot

Cobalt, MW-06 (mg/L)



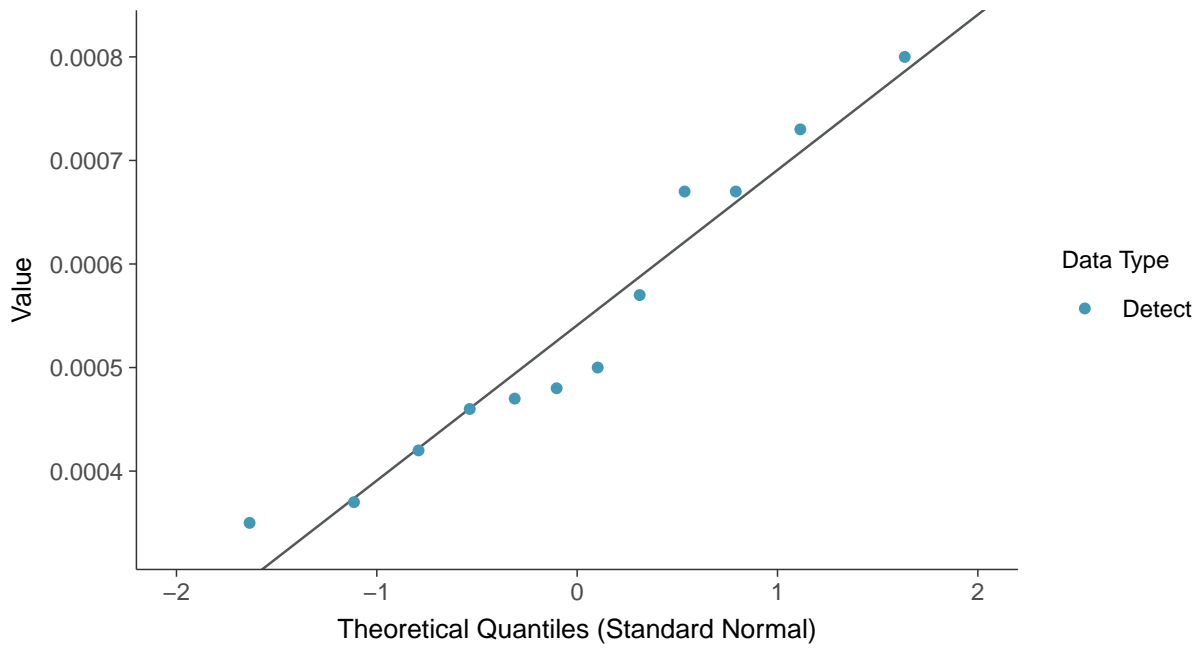
### Boxplot by Season

Cobalt, MW-06 (mg/L)

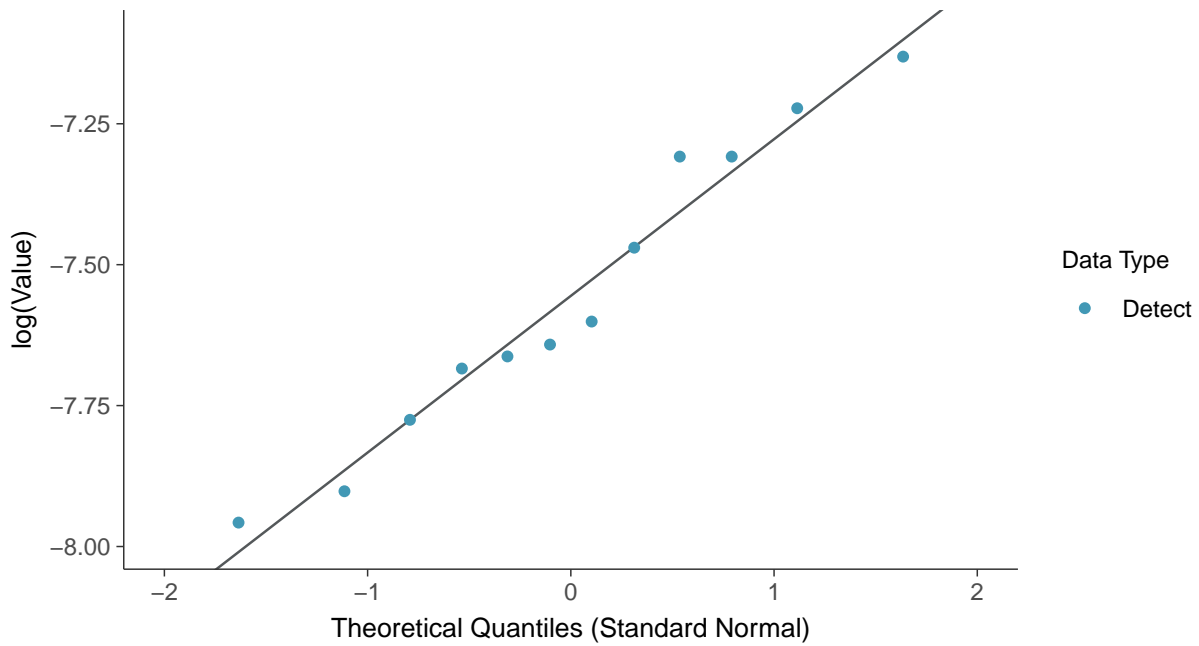




**Normal Q-Q plot**  
Cobalt, MW-06 (mg/L)

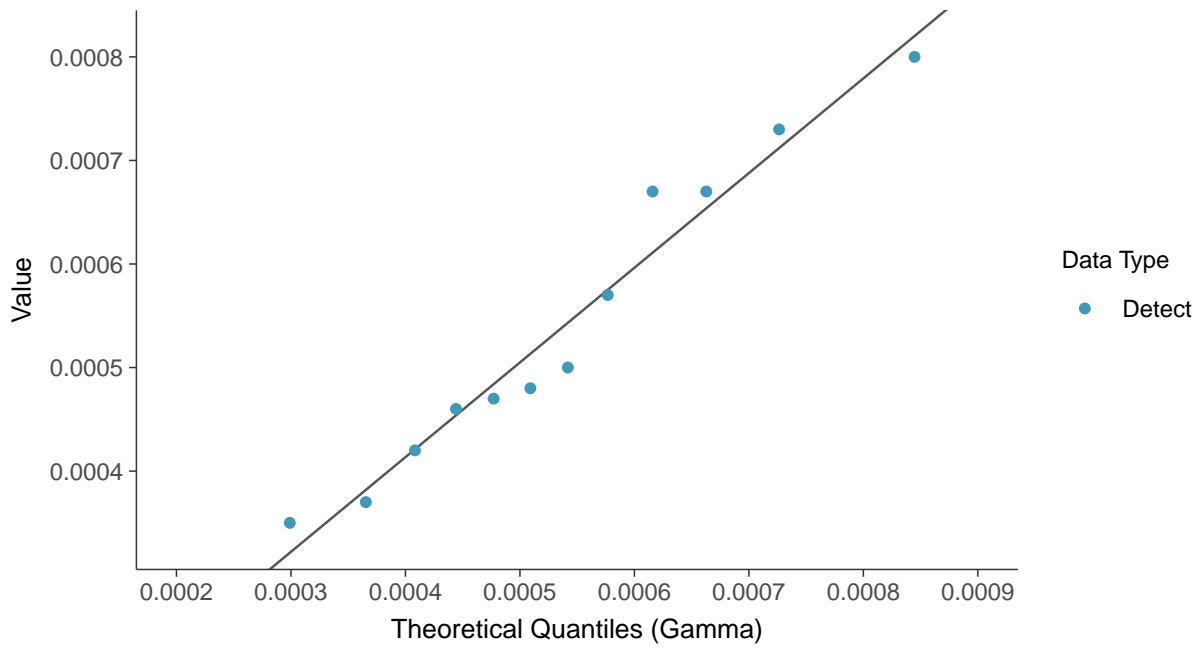


**Lognormal Q-Q plot**  
Cobalt, MW-06 (mg/L)

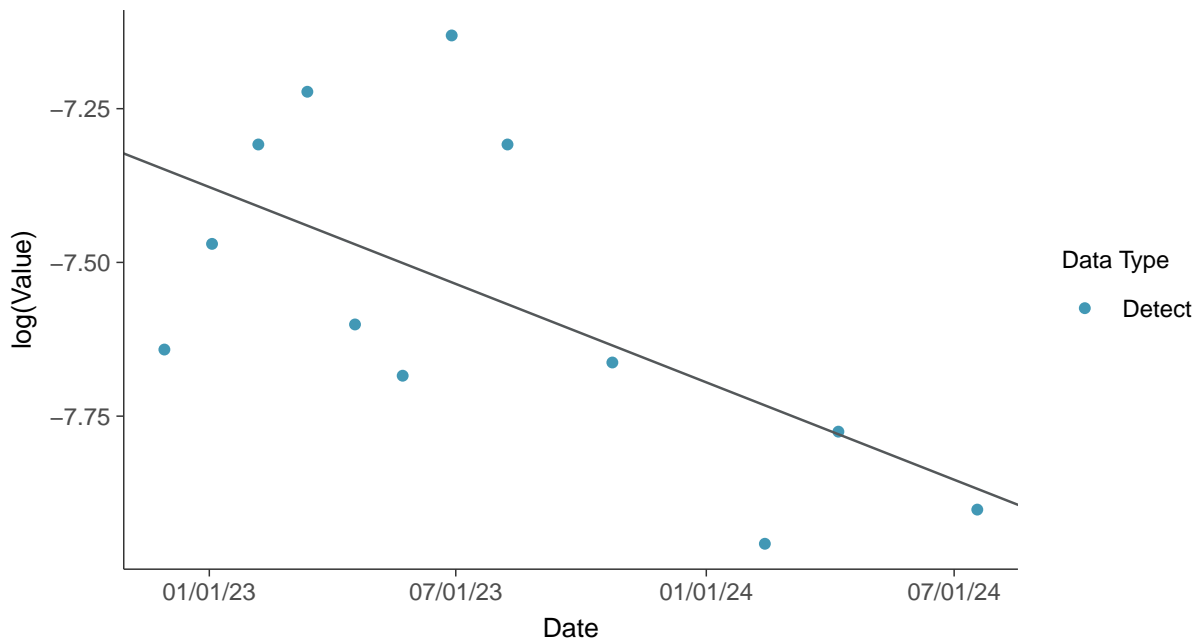




**Gamma Q-Q plot**  
Cobalt, MW-06 (mg/L)



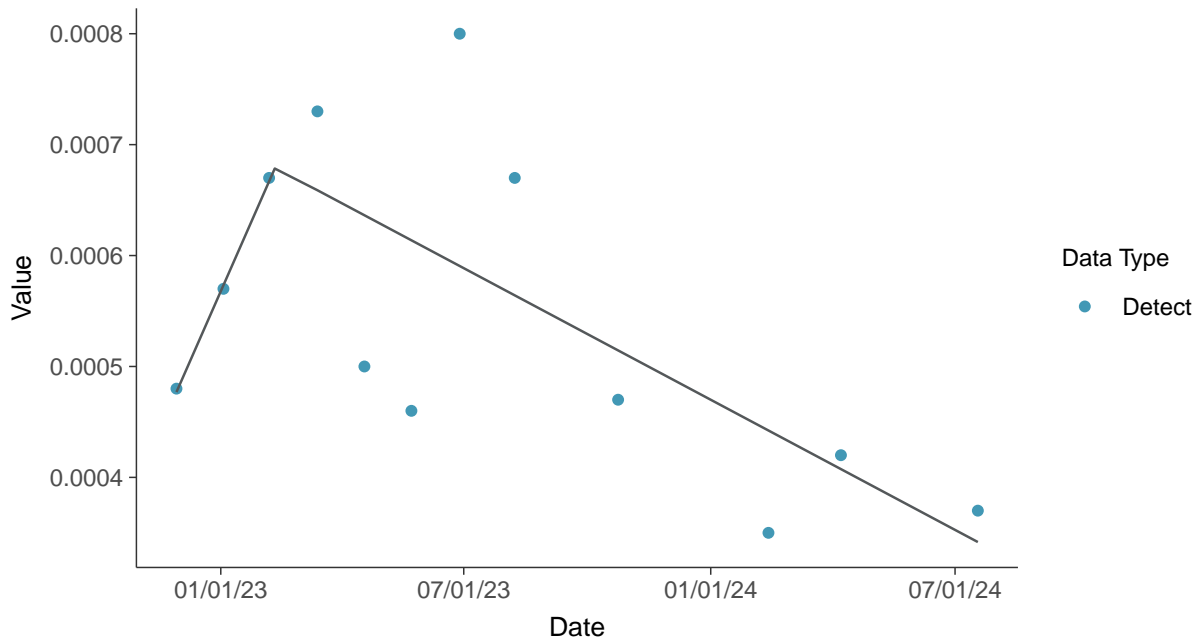
**Trend Regression: Lognormal MLE**  
Cobalt, MW-06 (mg/L)





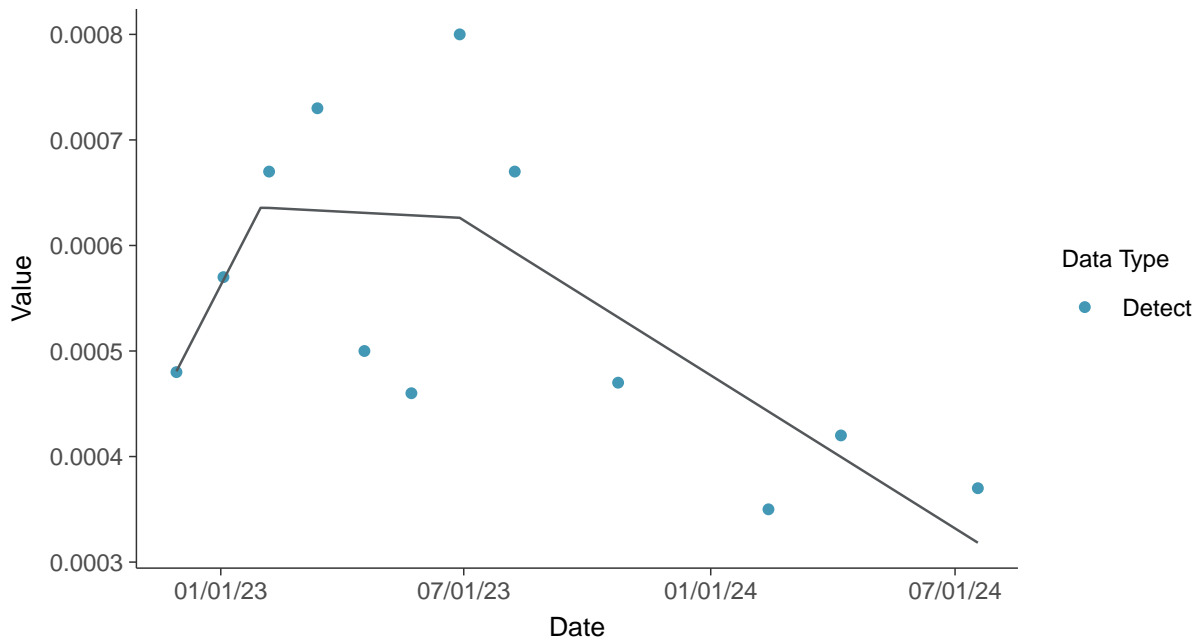
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-06 (mg/L)

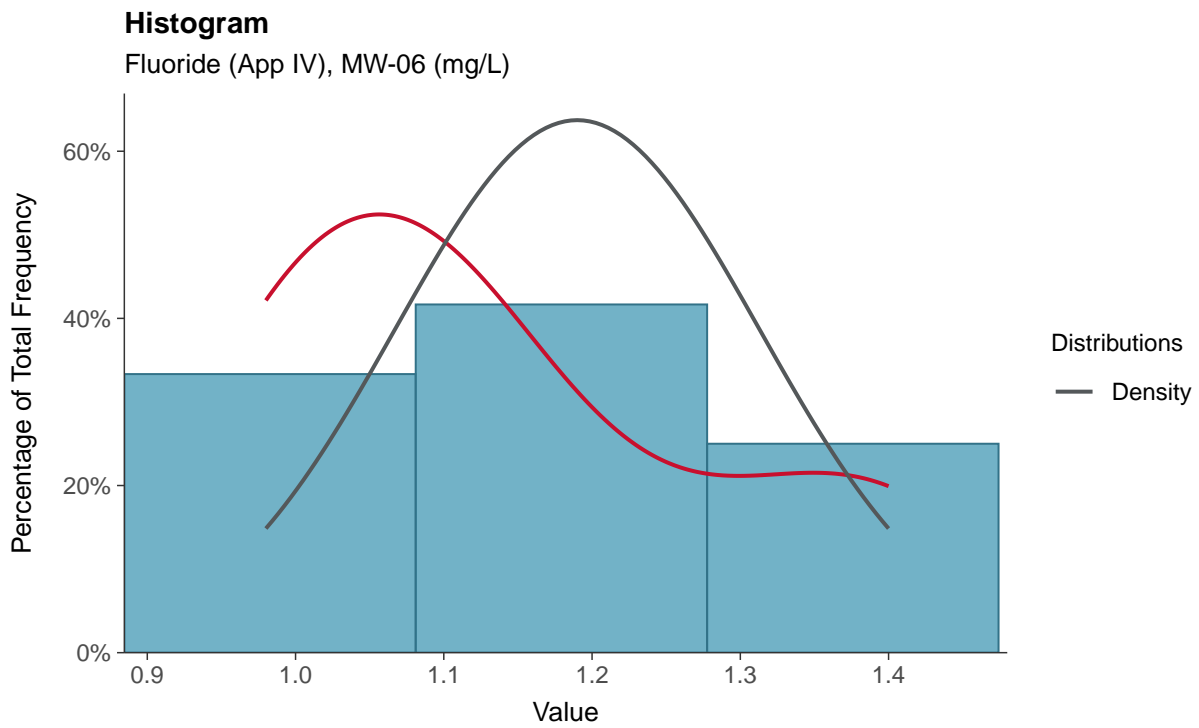
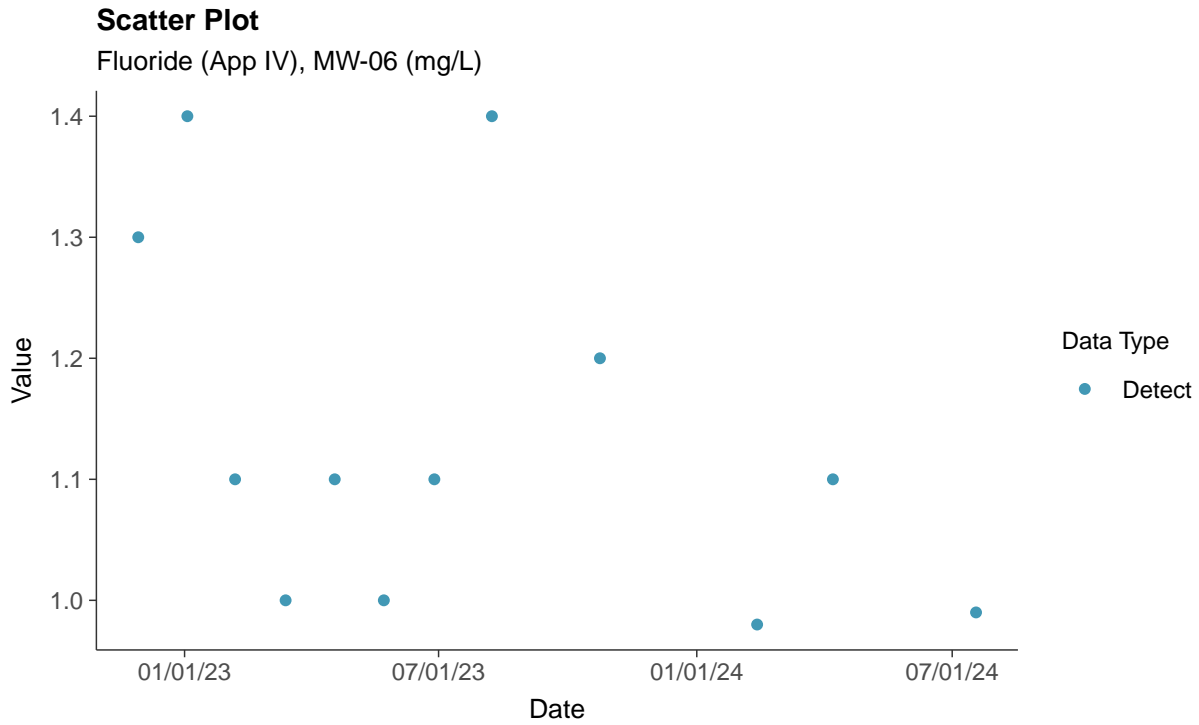






### Appendix IV: Fluoride (App IV), MW-06

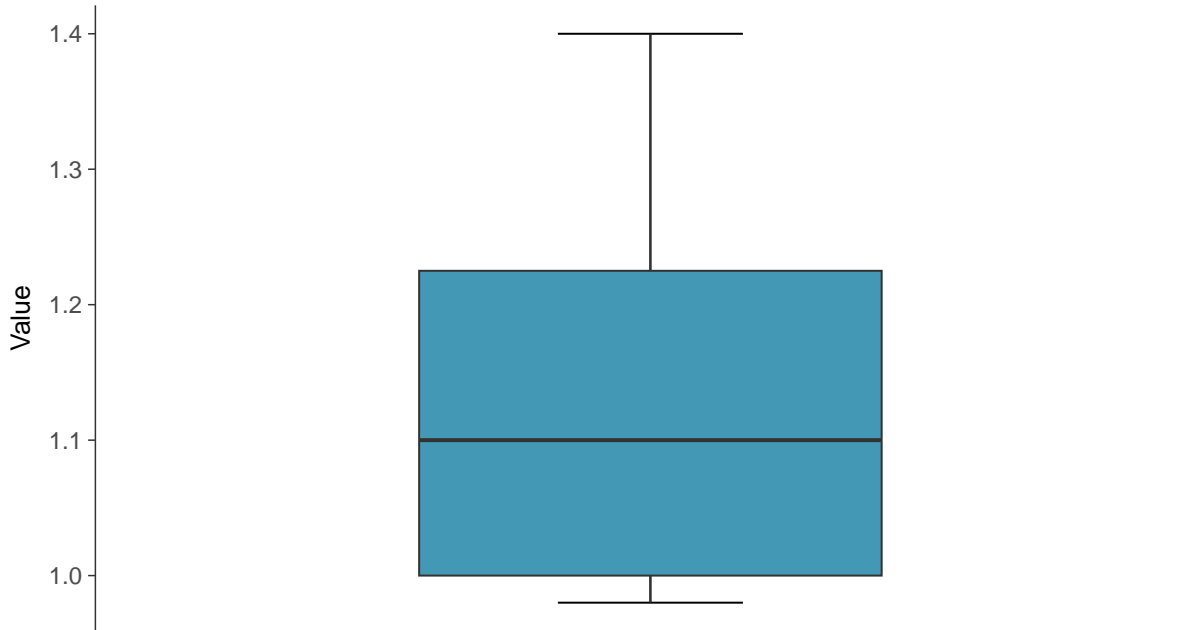
ID: 16\_1\_5\_113





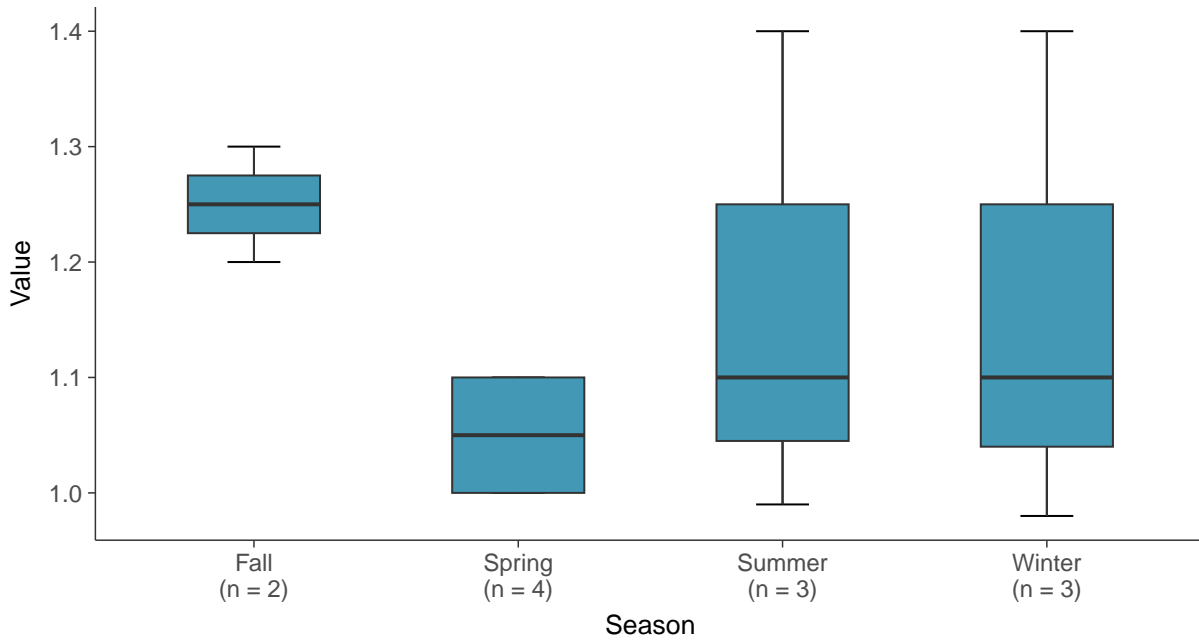
### Boxplot

Fluoride (App IV), MW-06 (mg/L)



### Boxplot by Season

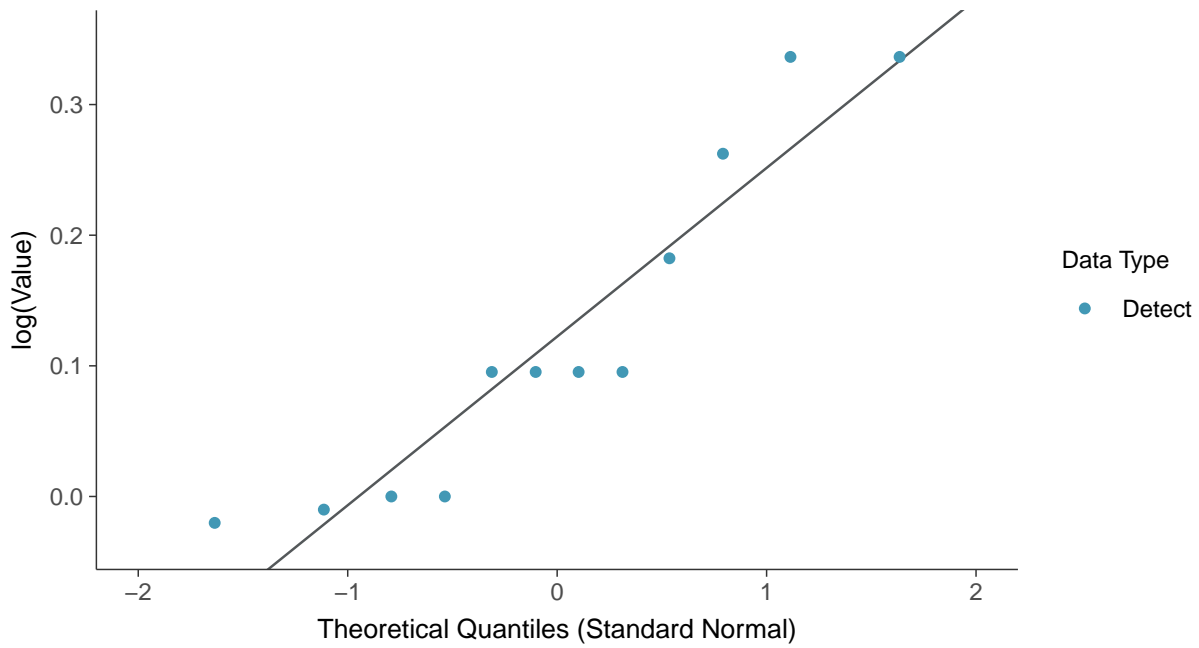
Fluoride (App IV), MW-06 (mg/L)





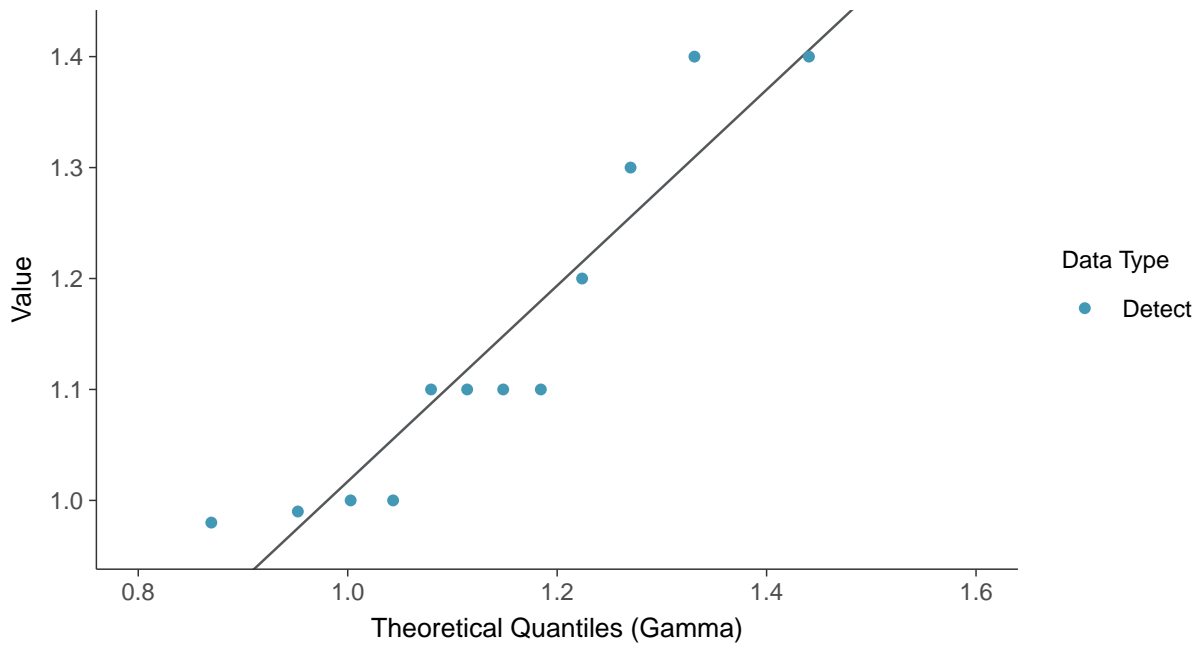
### Lognormal Q-Q plot

Fluoride (App IV), MW-06 (mg/L)



### Gamma Q-Q plot

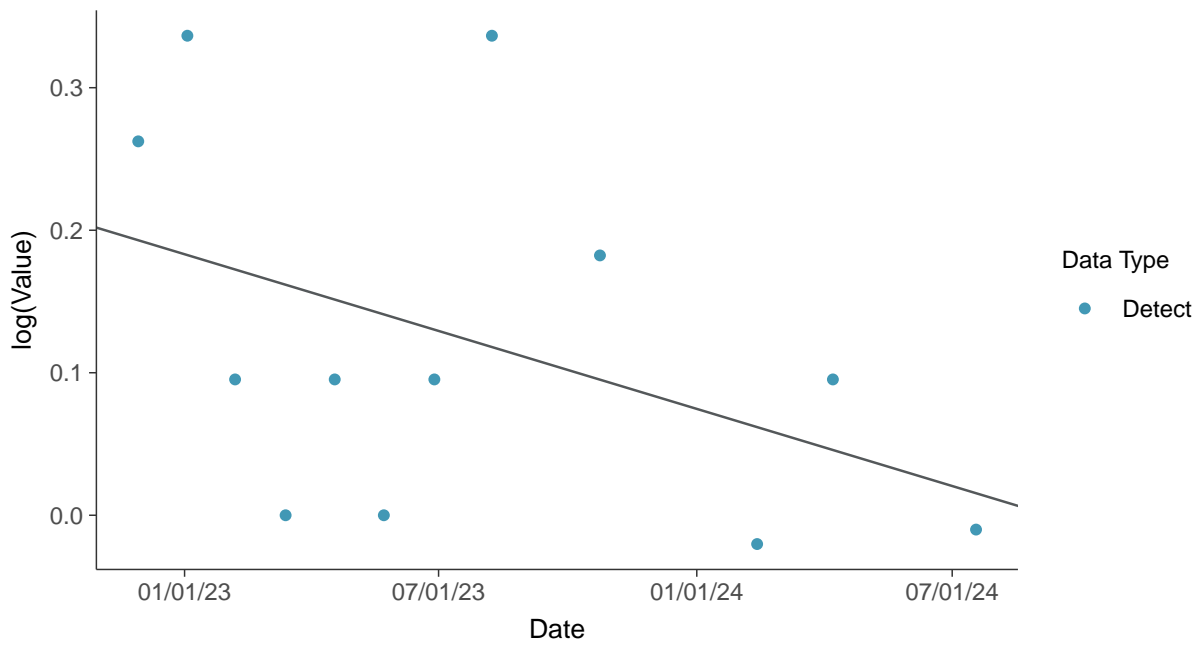
Fluoride (App IV), MW-06 (mg/L)





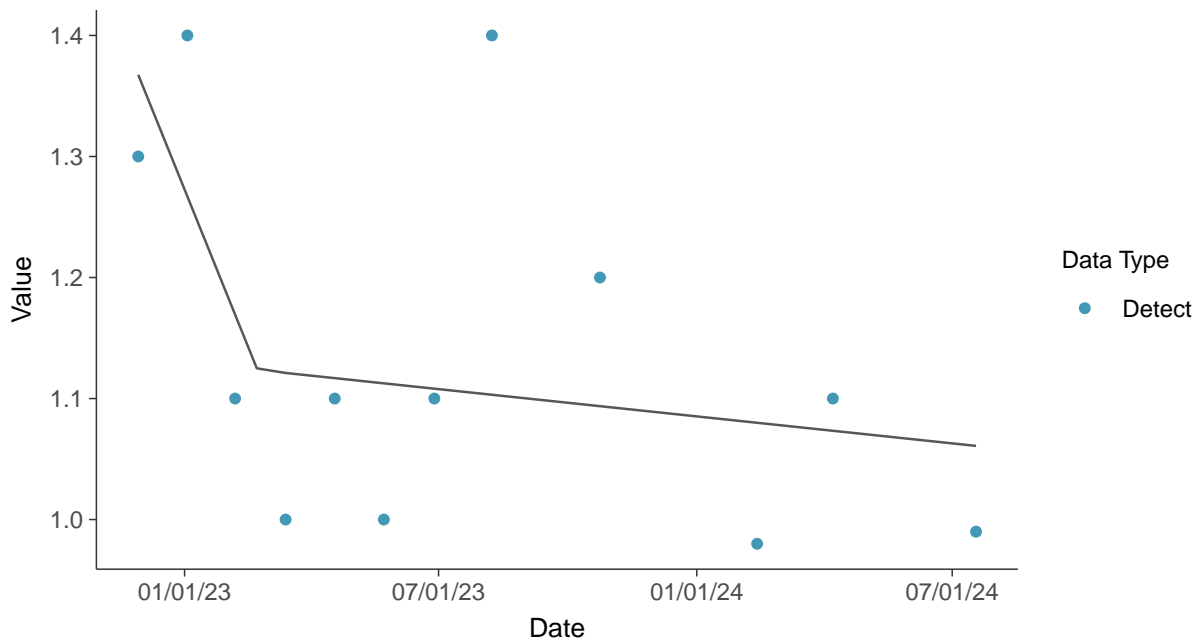
### Trend Regression: Lognormal MLE

Fluoride (App IV), MW-06 (mg/L)



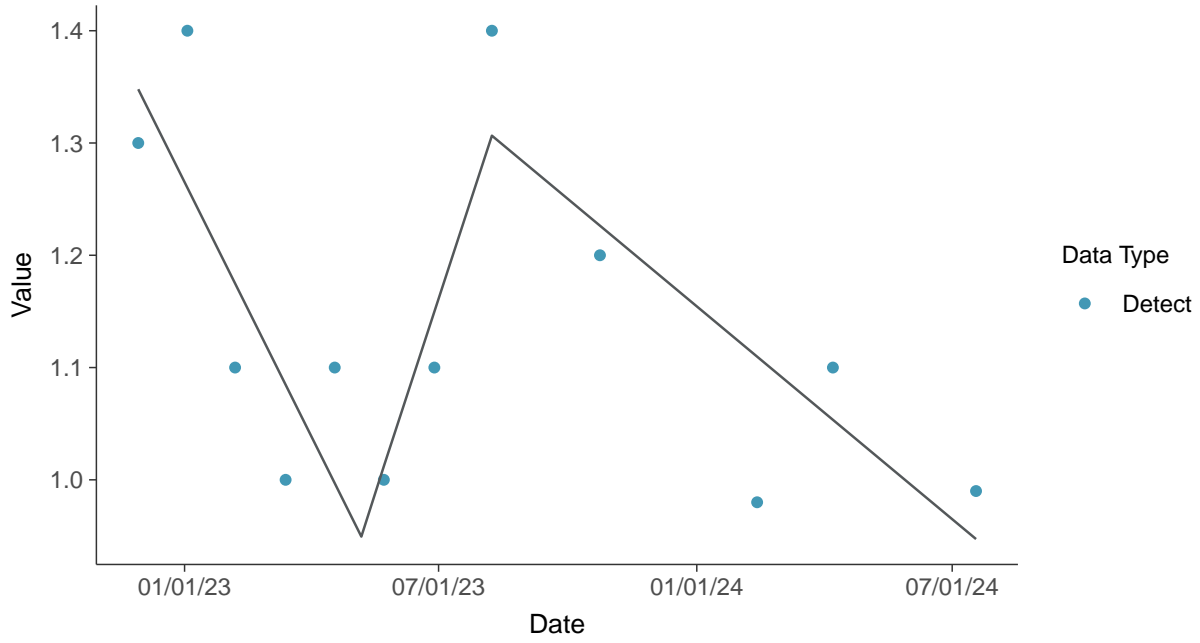
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-06 (mg/L)





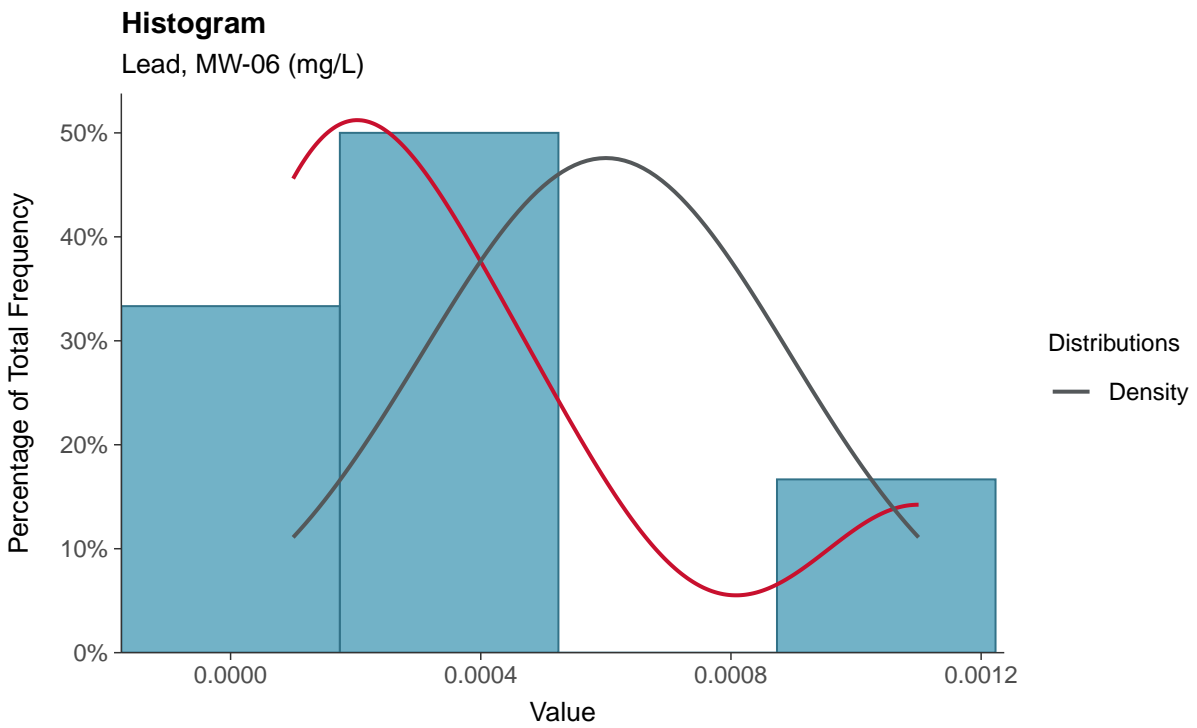
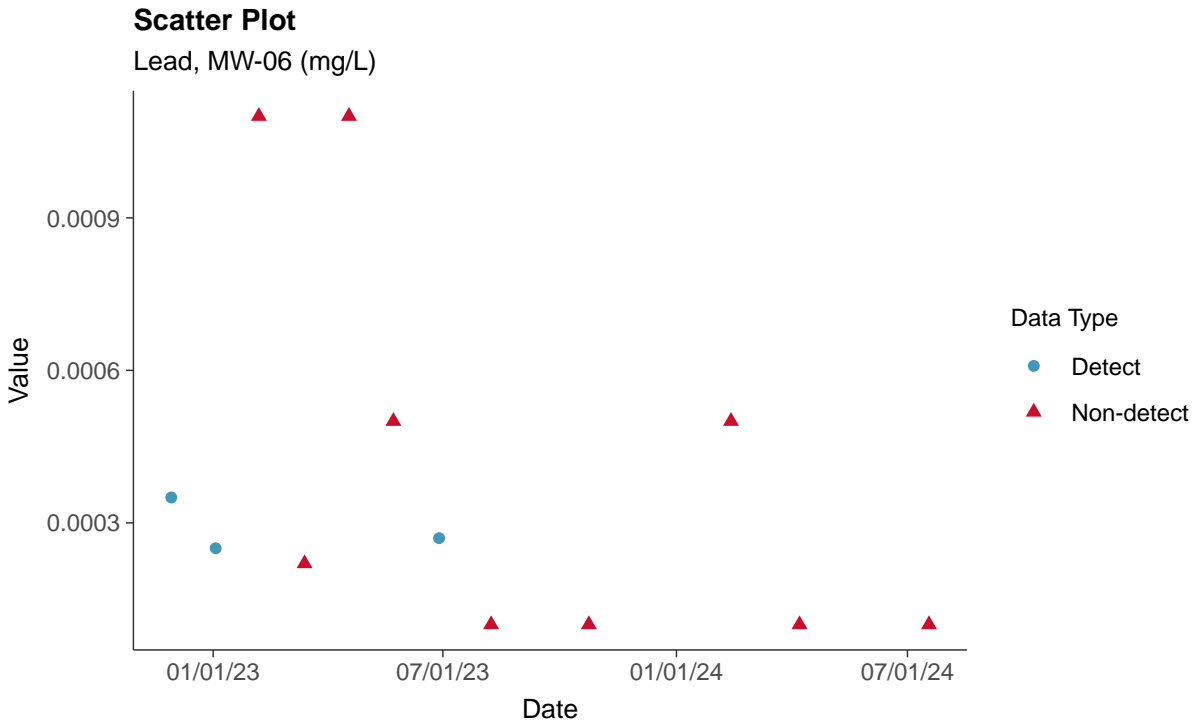
**Trend Regression: Piecewise Linear-Linear-Linear**  
Fluoride (App IV), MW-06 (mg/L)





### Appendix IV: Lead, MW-06

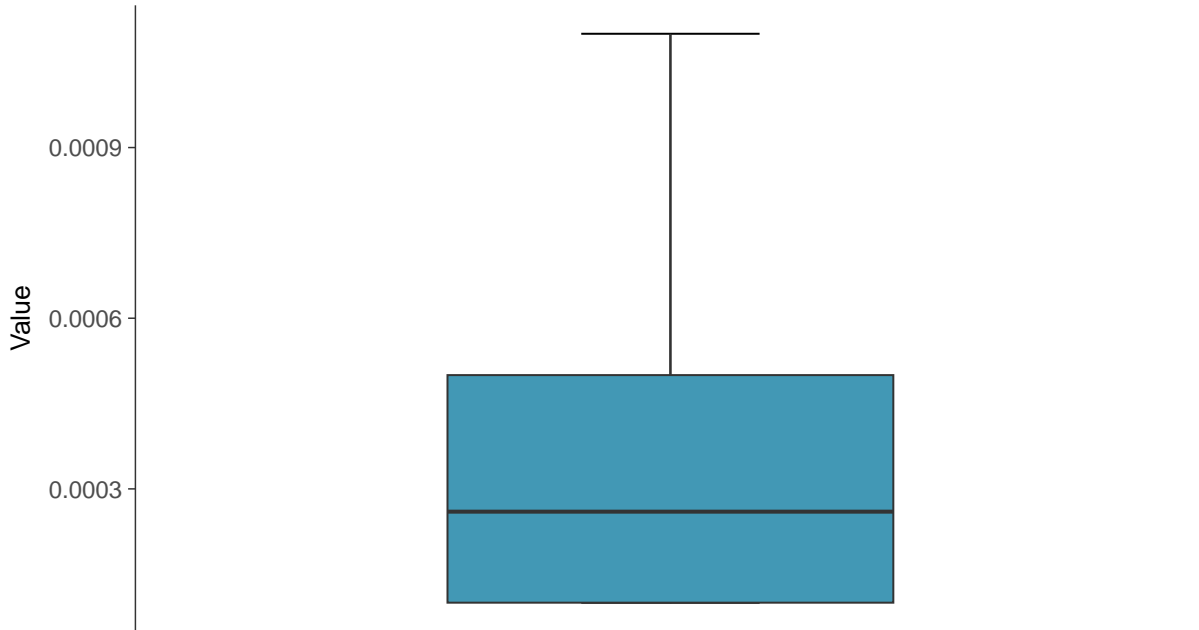
ID: 16\_1\_5\_115





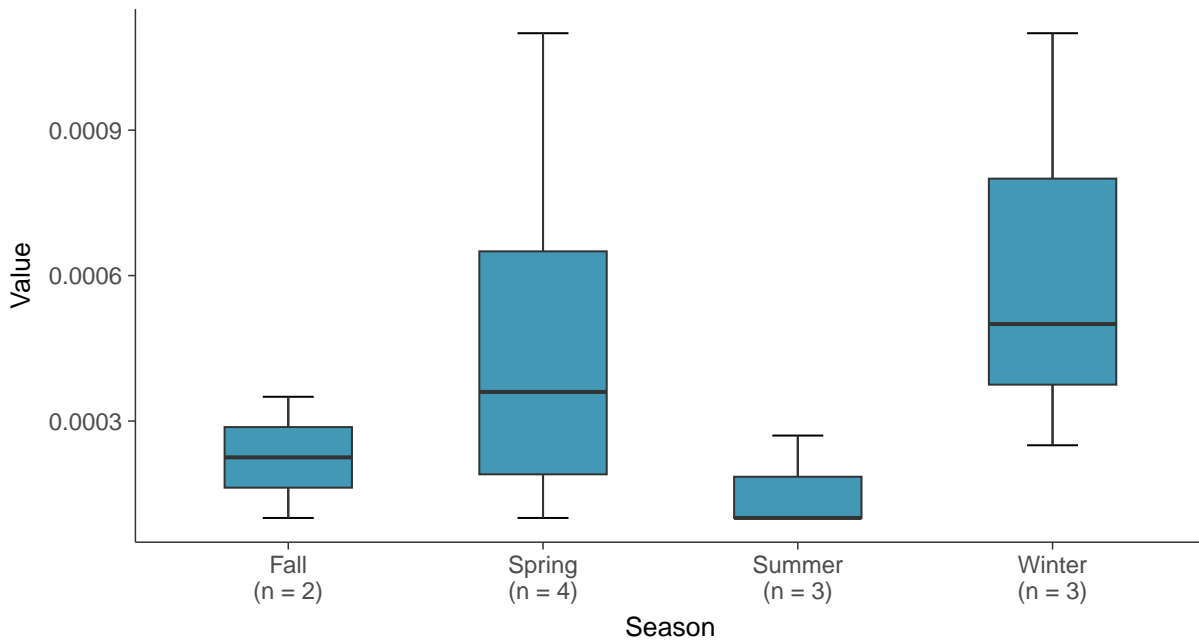
### Boxplot

Lead, MW-06 (mg/L)



### Boxplot by Season

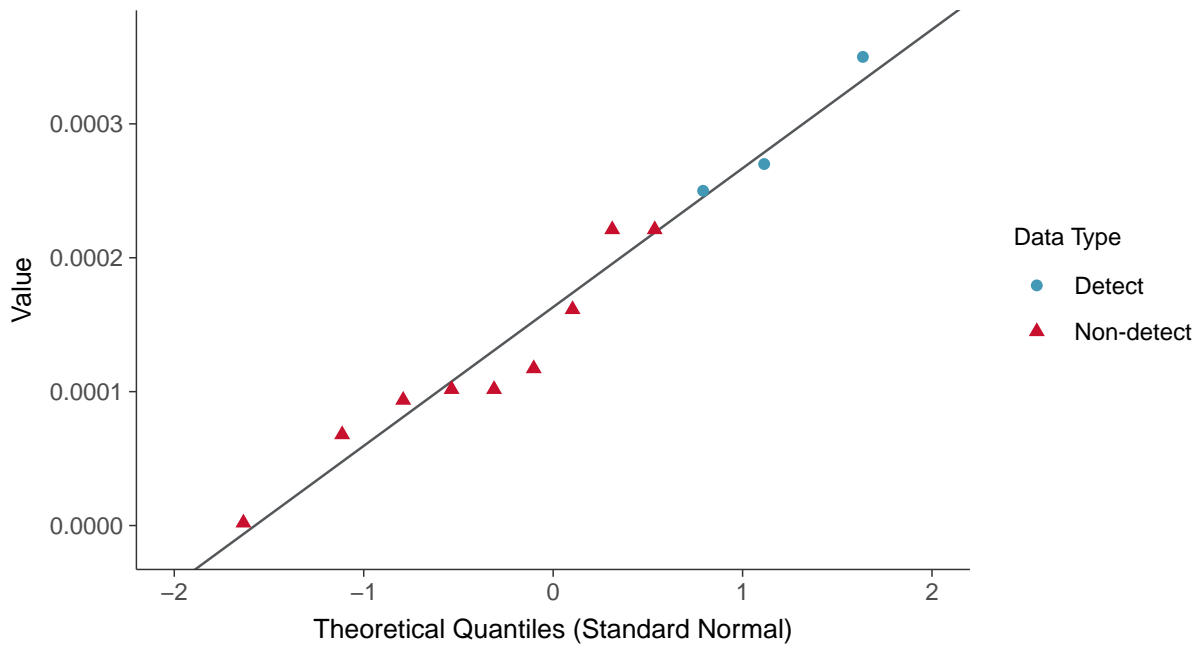
Lead, MW-06 (mg/L)





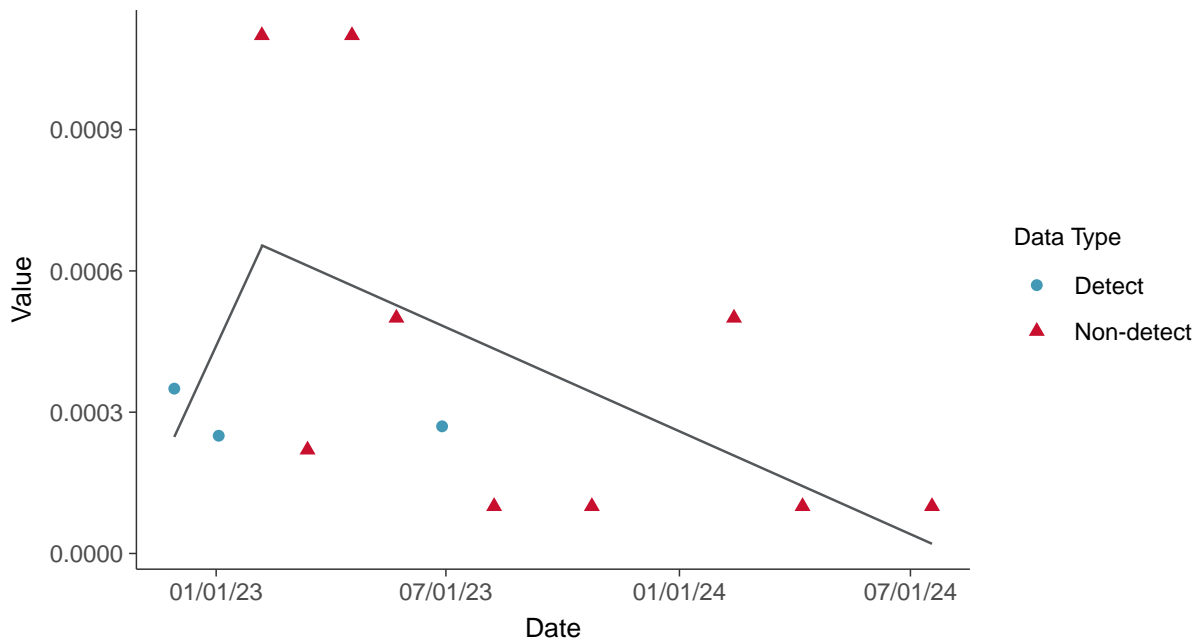
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Lead, MW-06 (mg/L)

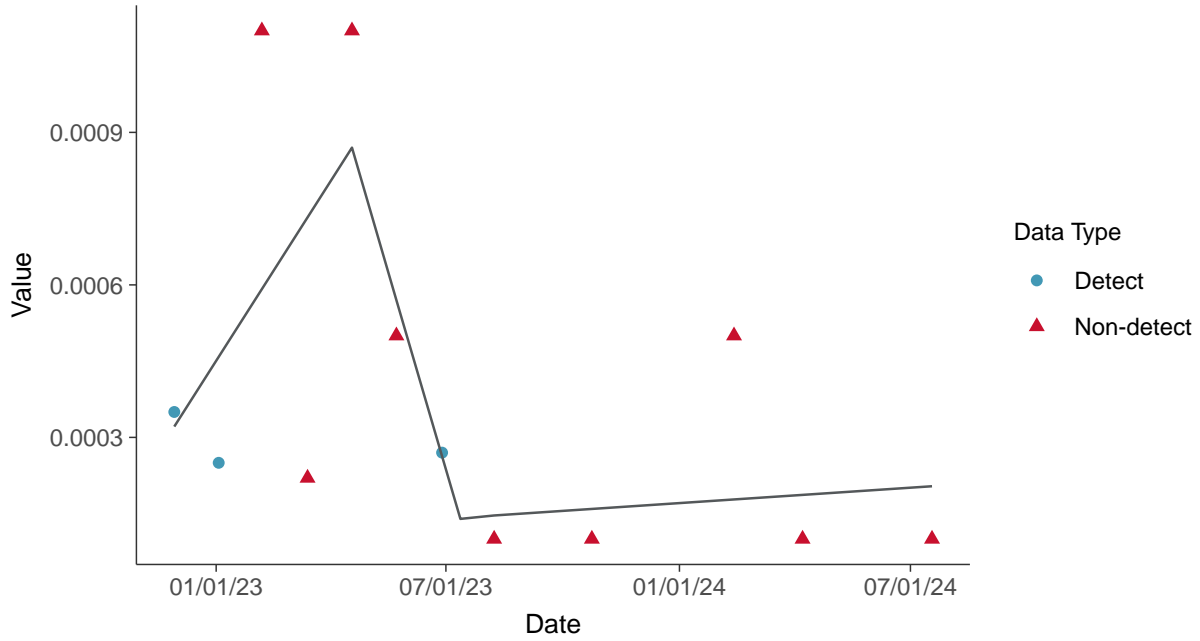






### Trend Regression: Piecewise Linear-Linear-Linear

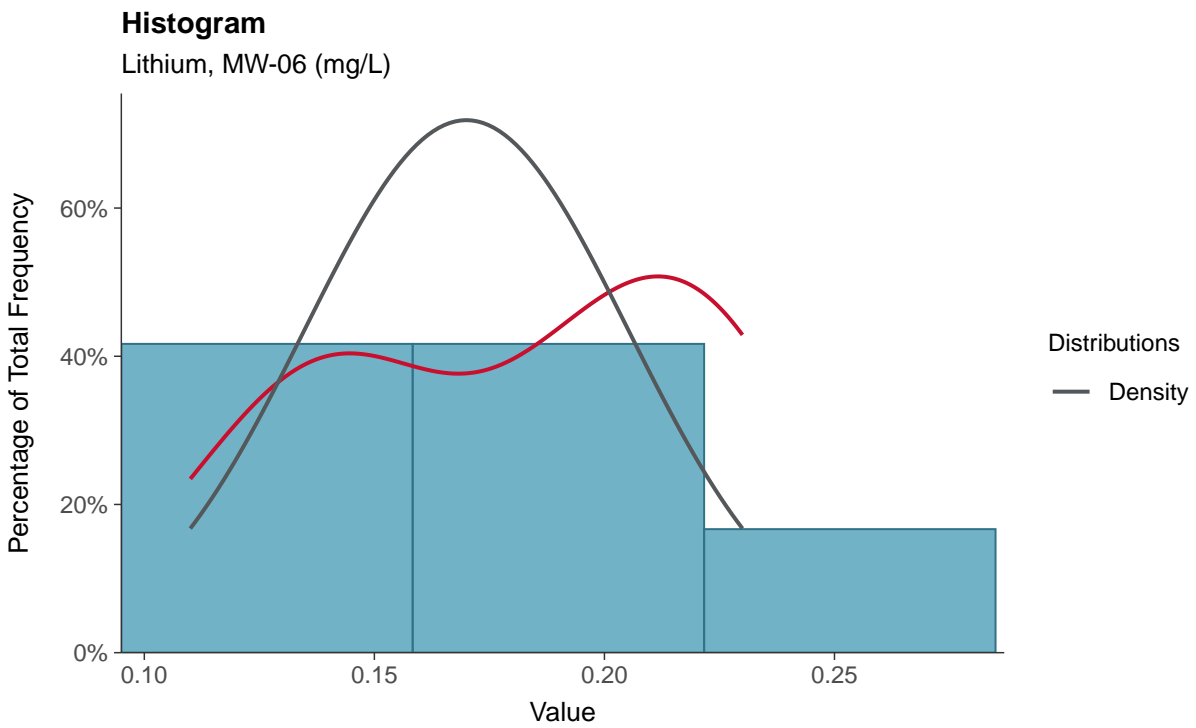
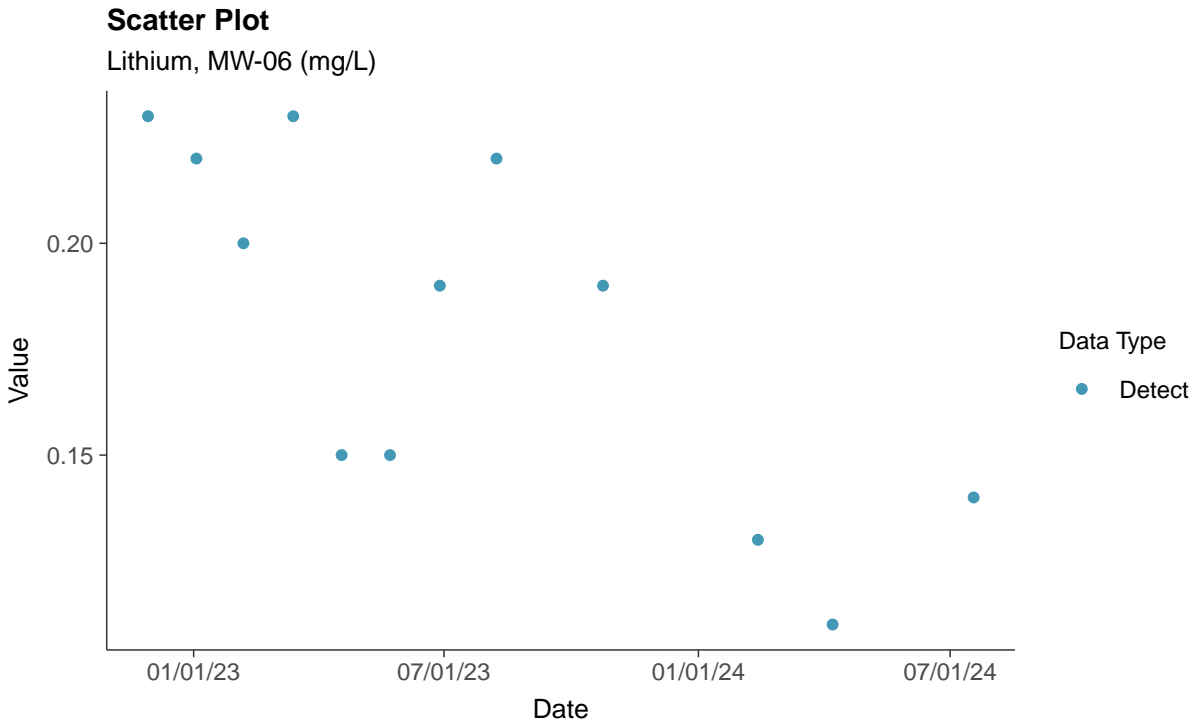
Lead, MW-06 (mg/L)





### Appendix IV: Lithium, MW-06

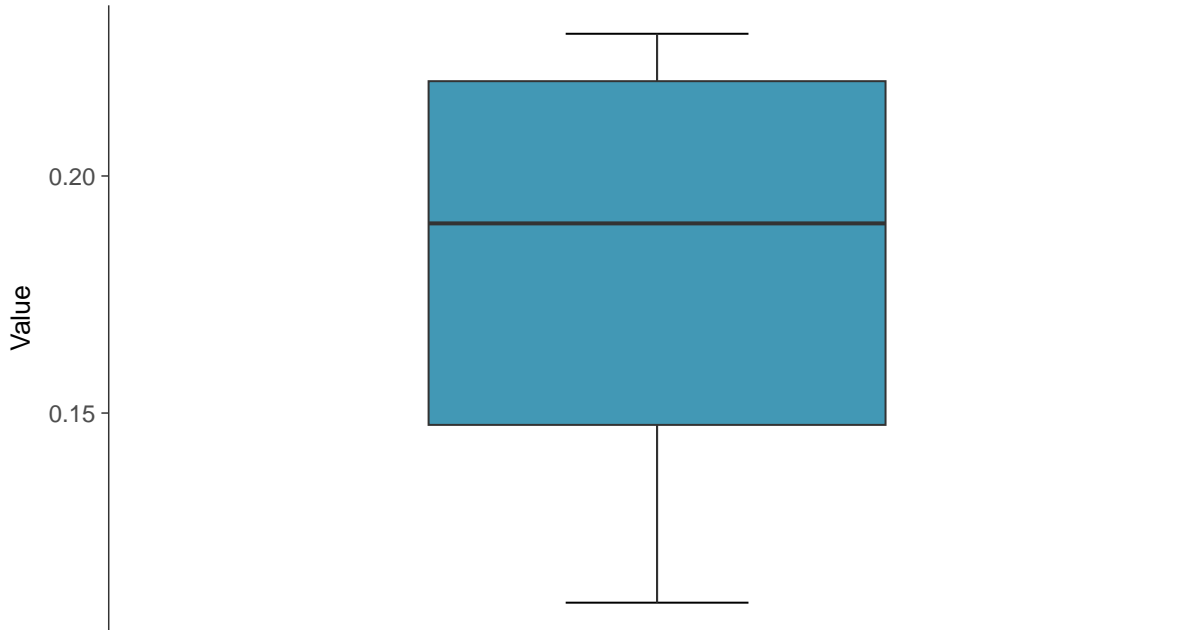
ID: 16\_1\_5\_116





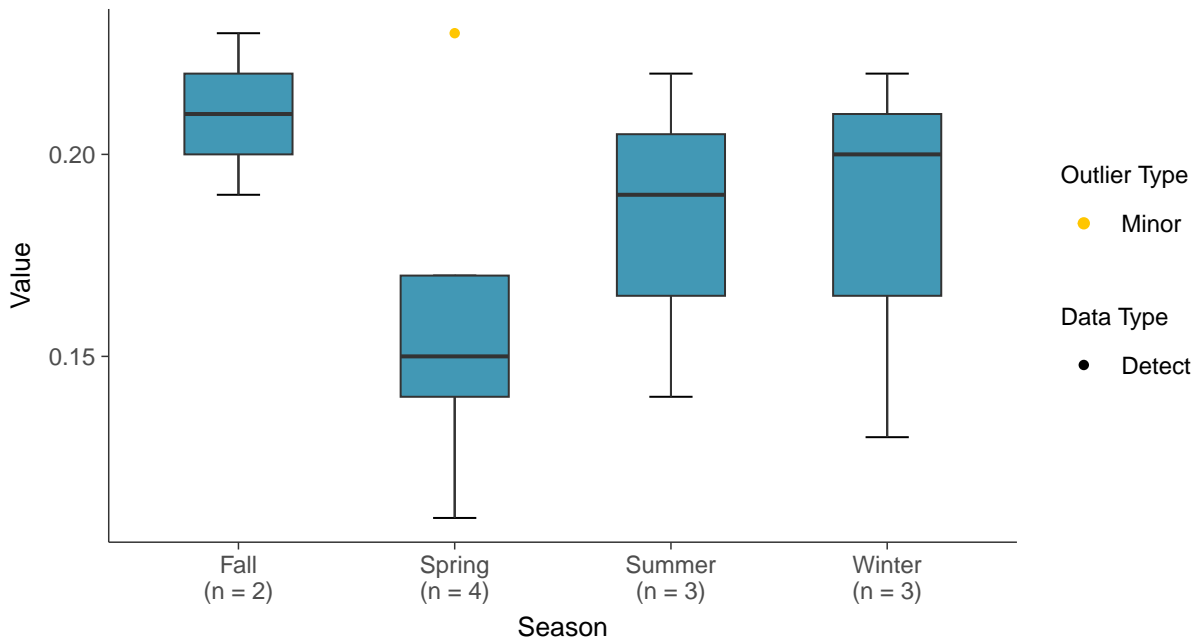
### Boxplot

Lithium, MW-06 (mg/L)



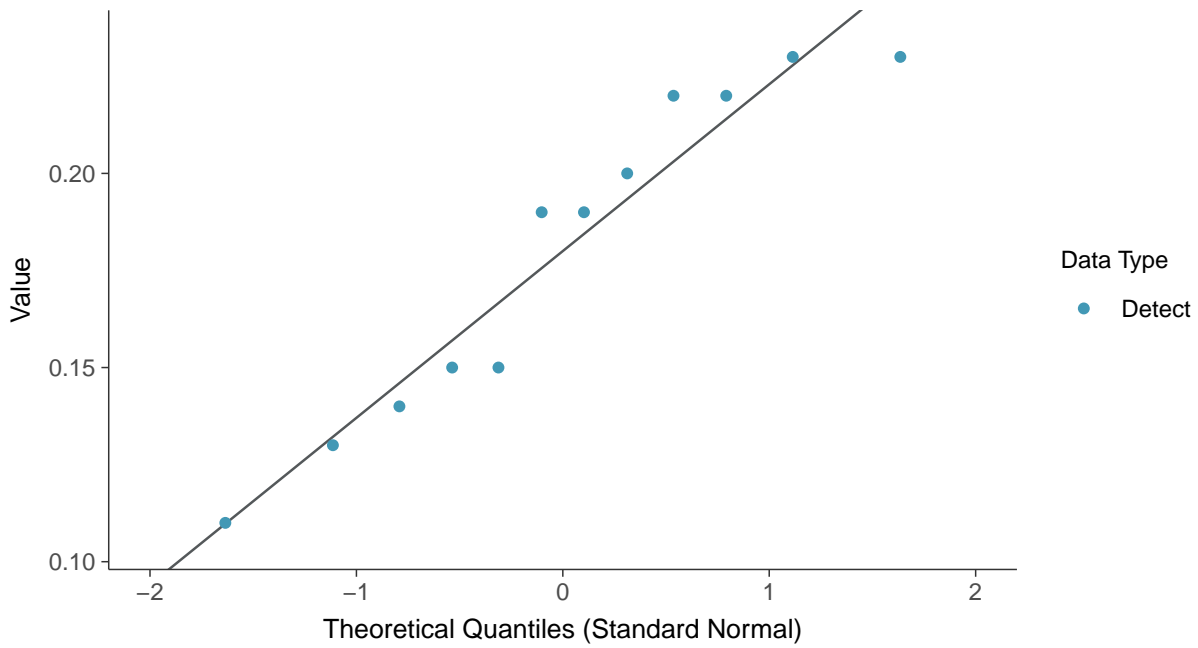
### Boxplot by Season

Lithium, MW-06 (mg/L)

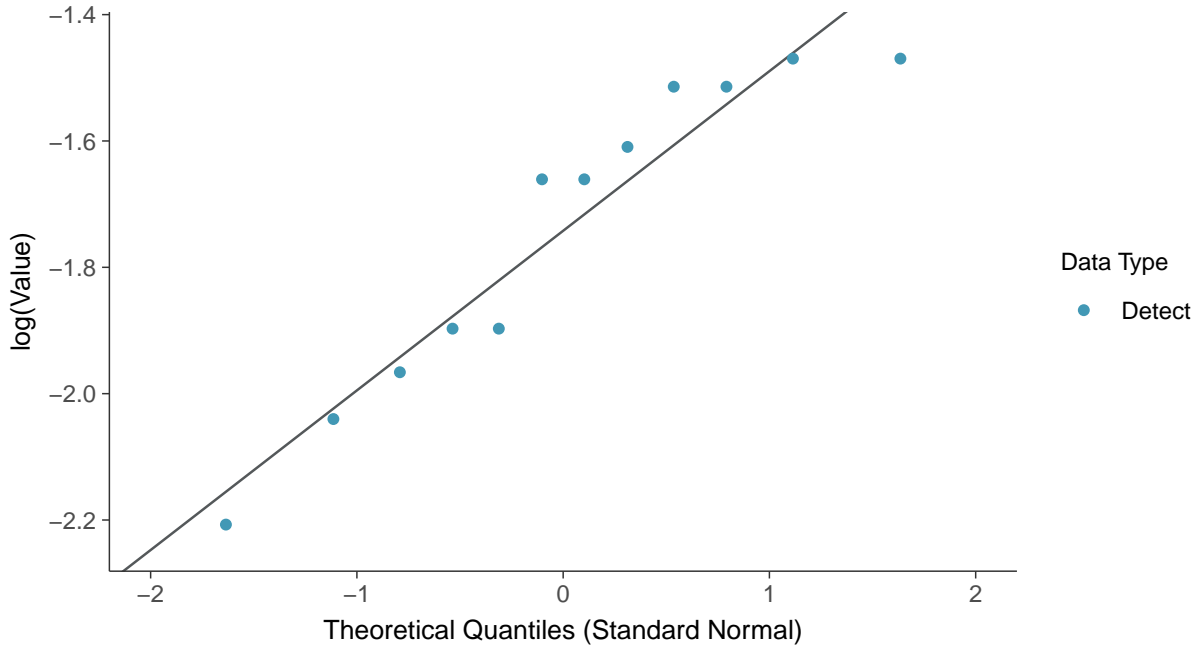


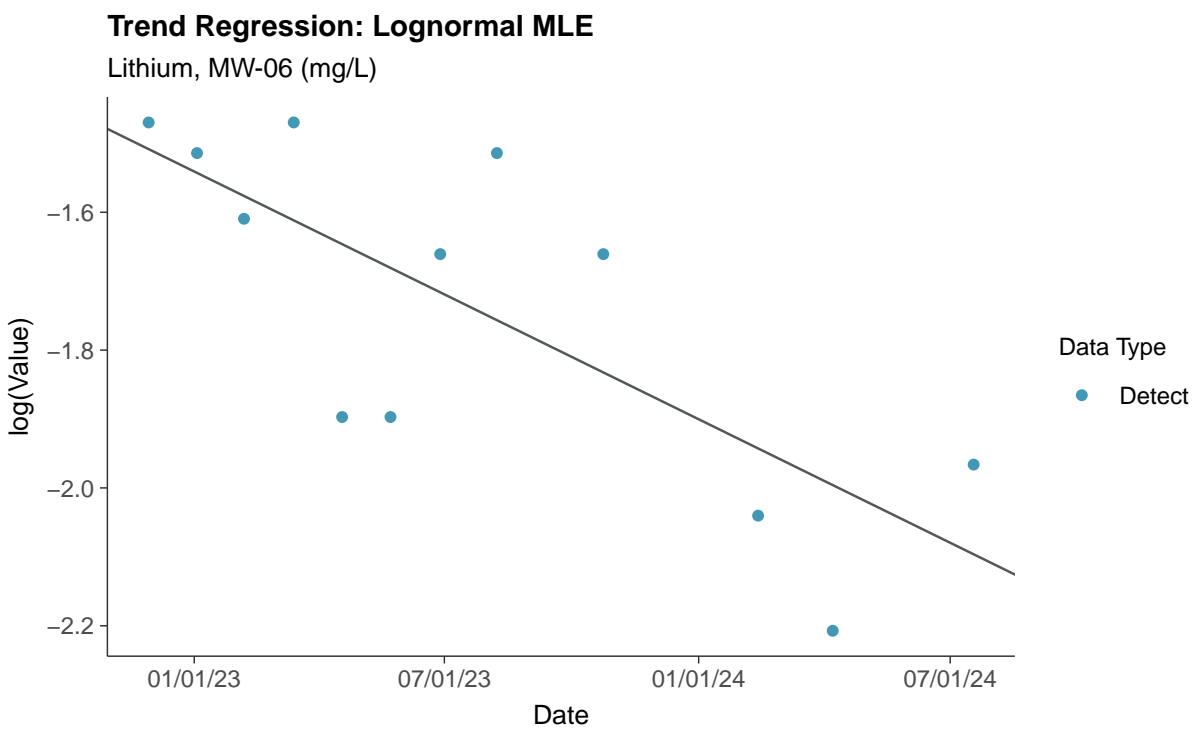
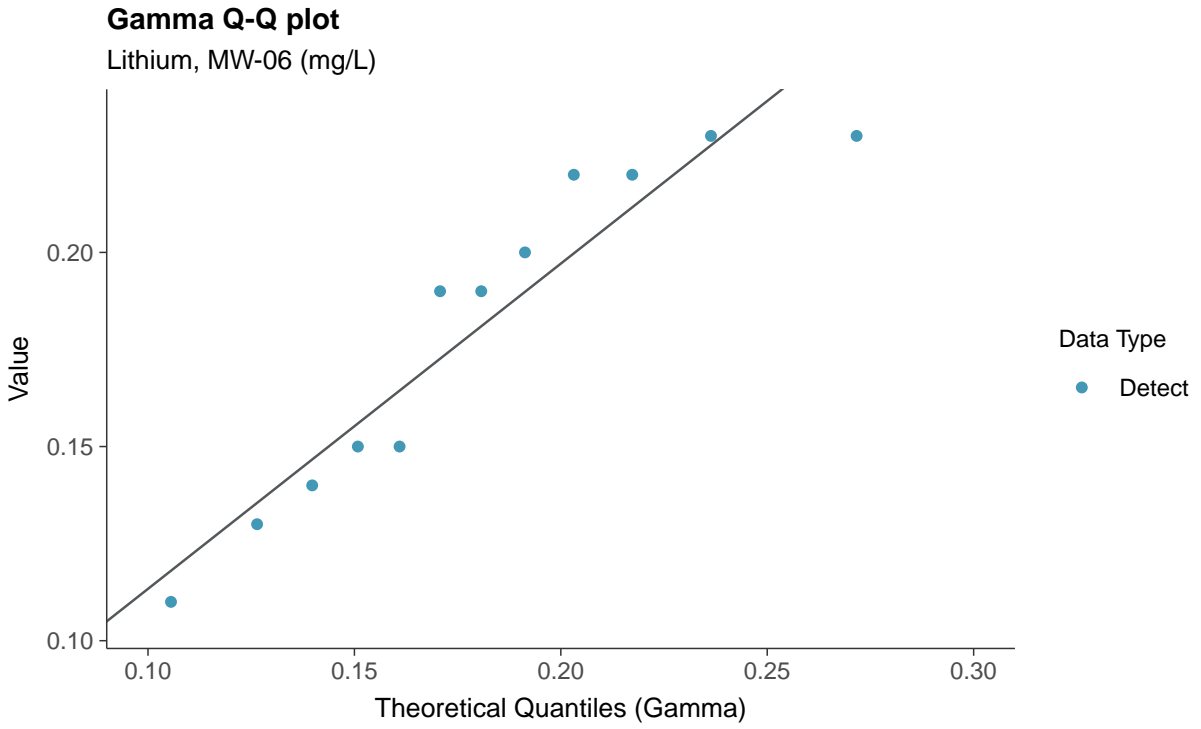


**Normal Q-Q plot**  
Lithium, MW-06 (mg/L)



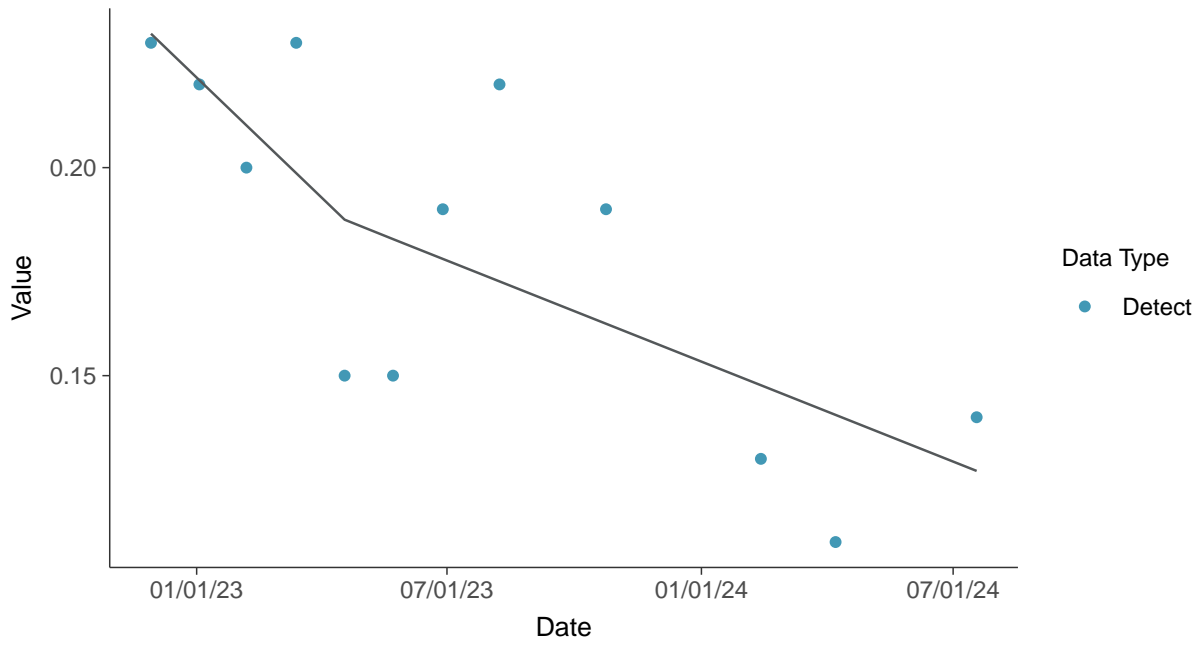
**Lognormal Q-Q plot**  
Lithium, MW-06 (mg/L)







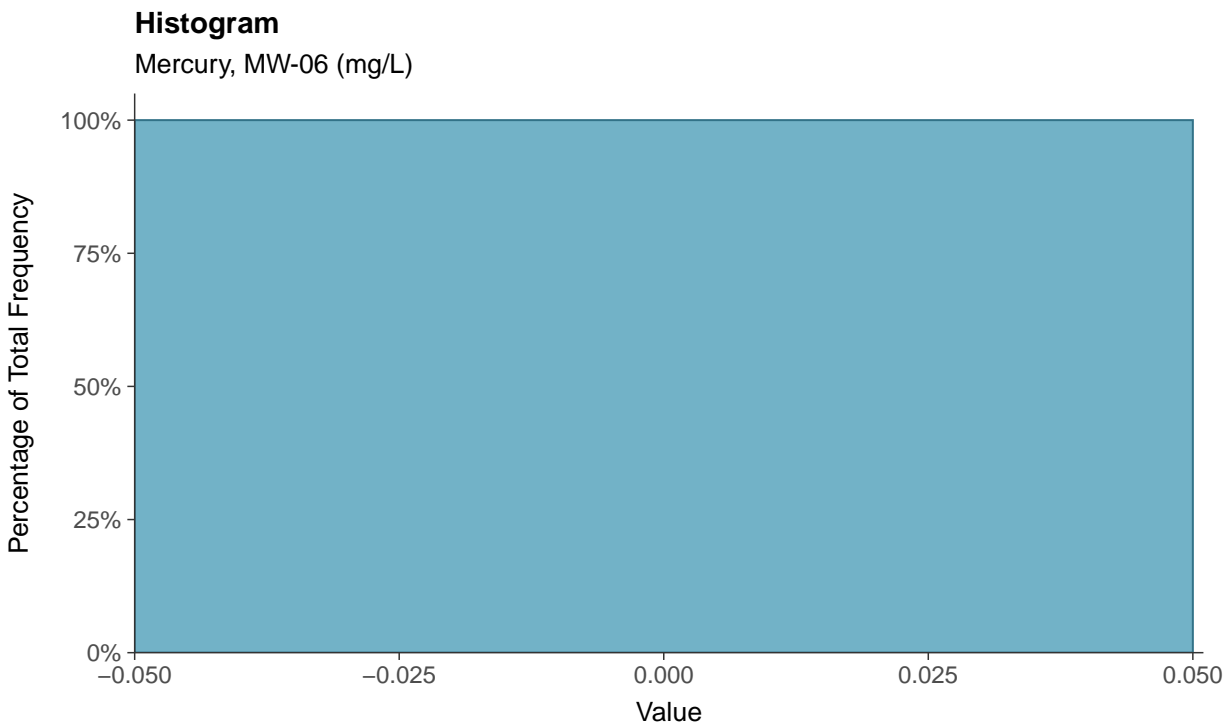
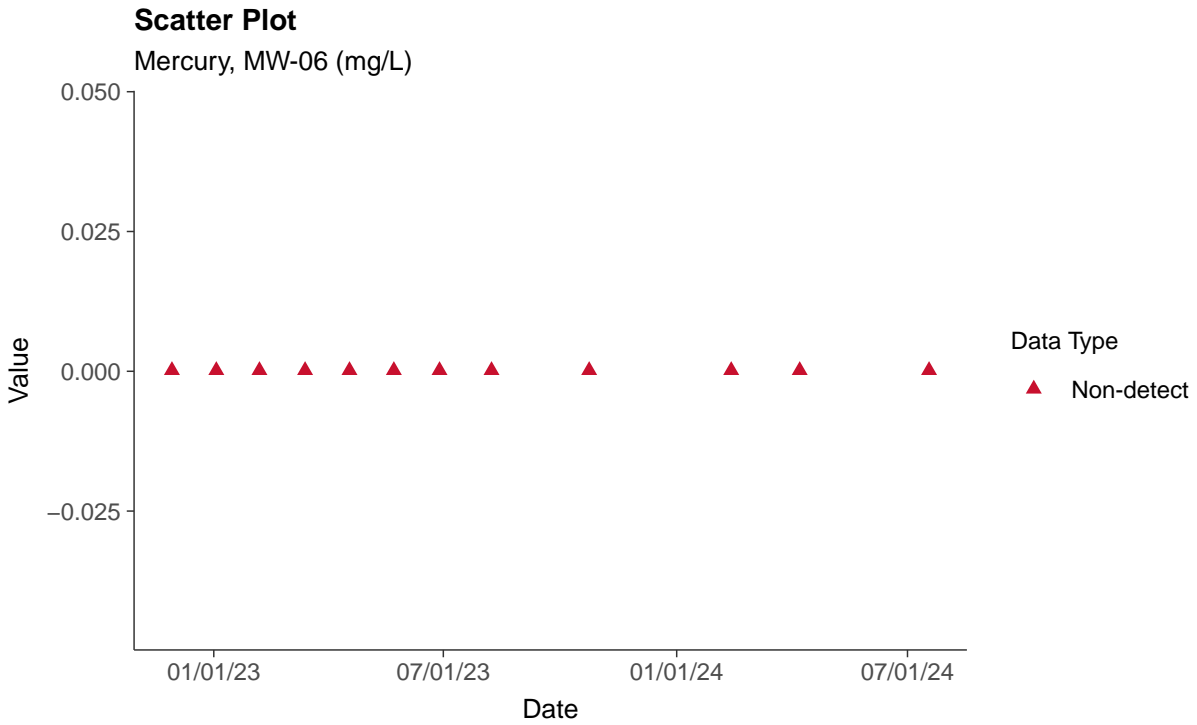
**Trend Regression: Piecewise Linear-Linear**  
Lithium, MW-06 (mg/L)





### Appendix IV: Mercury, MW-06

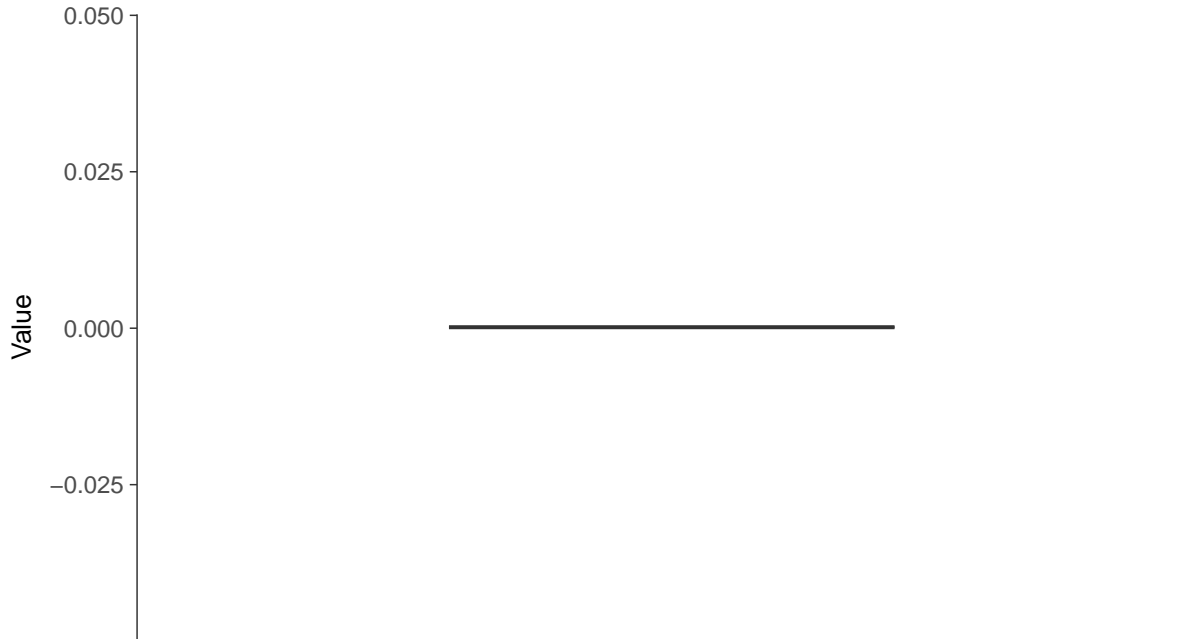
ID: 16\_1\_5\_117





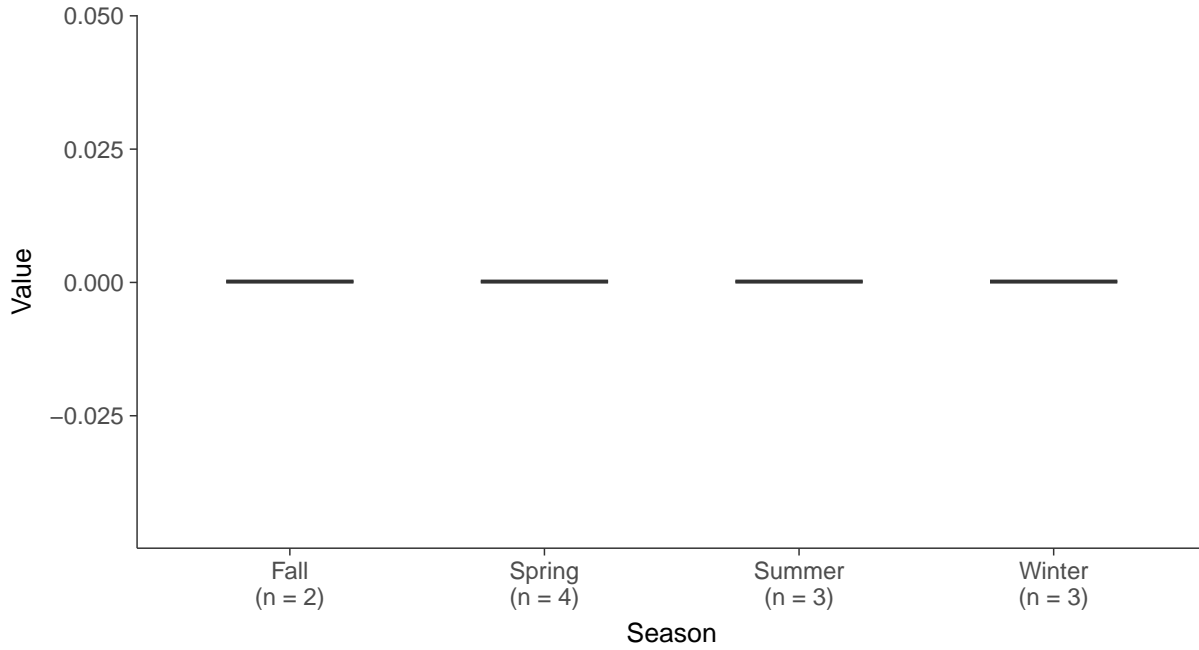
### Boxplot

Mercury, MW-06 (mg/L)



### Boxplot by Season

Mercury, MW-06 (mg/L)

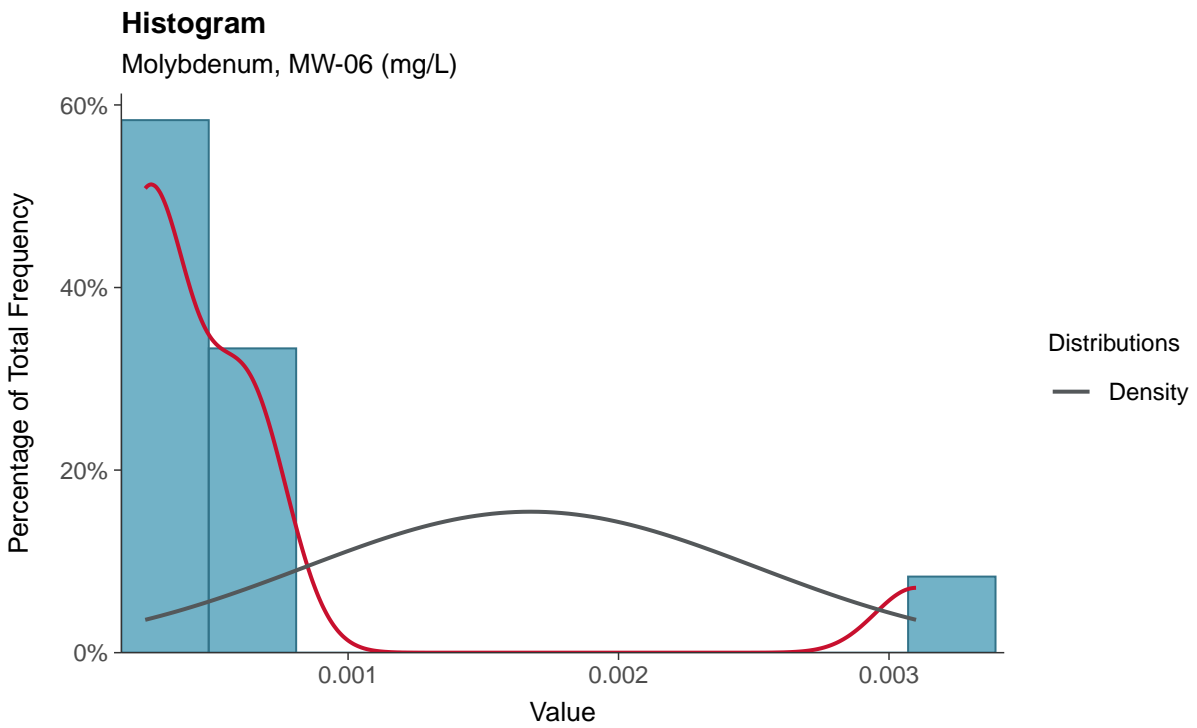
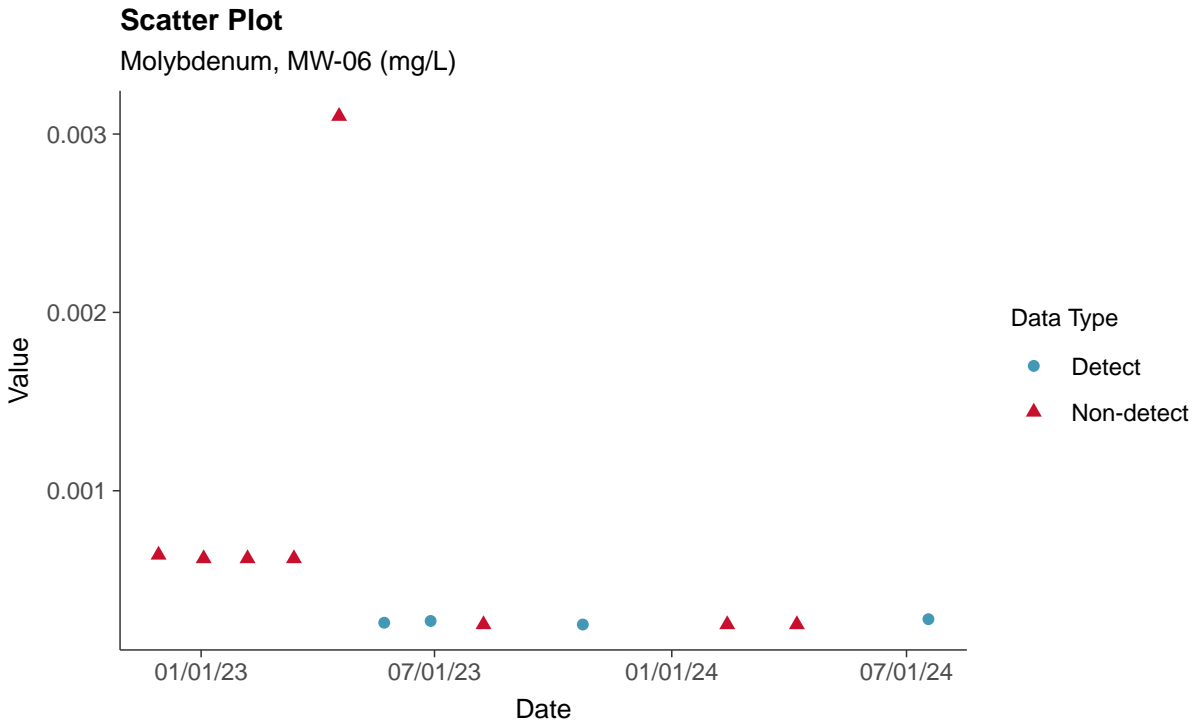






## Appendix IV: Molybdenum, MW-06

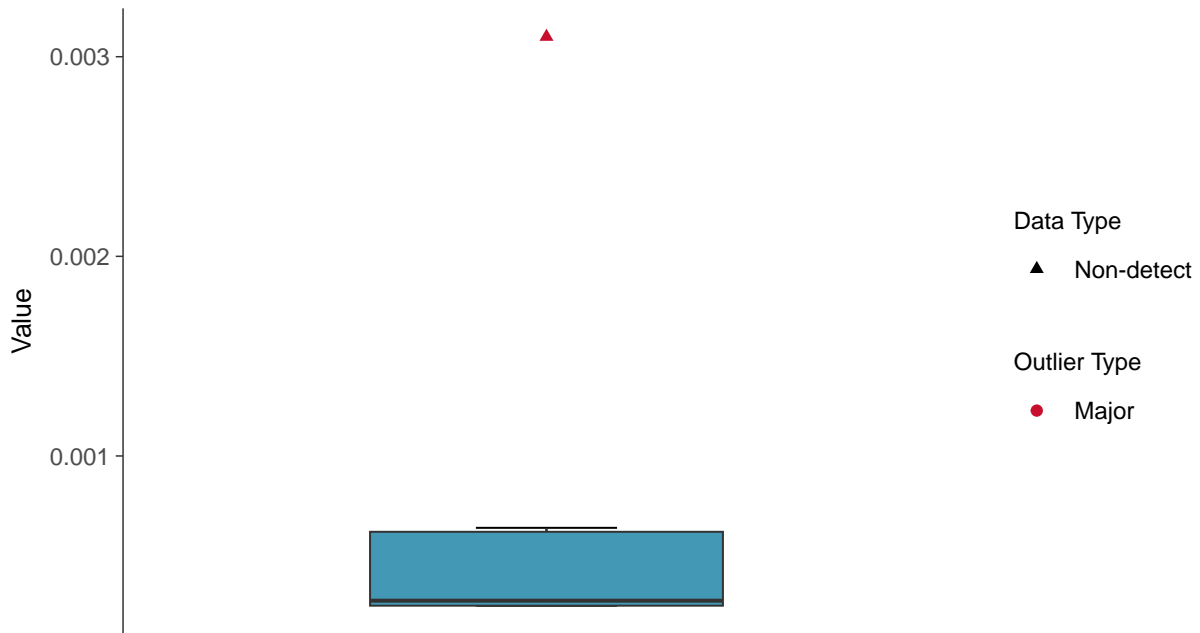
ID: 16\_1\_5\_118





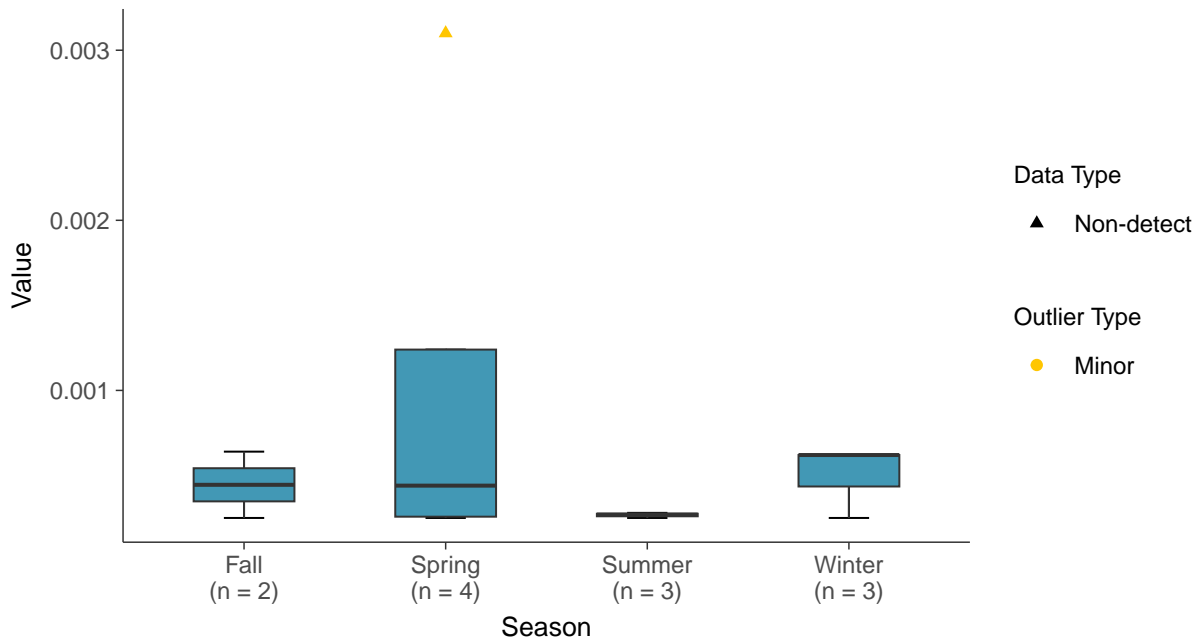
### Boxplot

Molybdenum, MW-06 (mg/L)



### Boxplot by Season

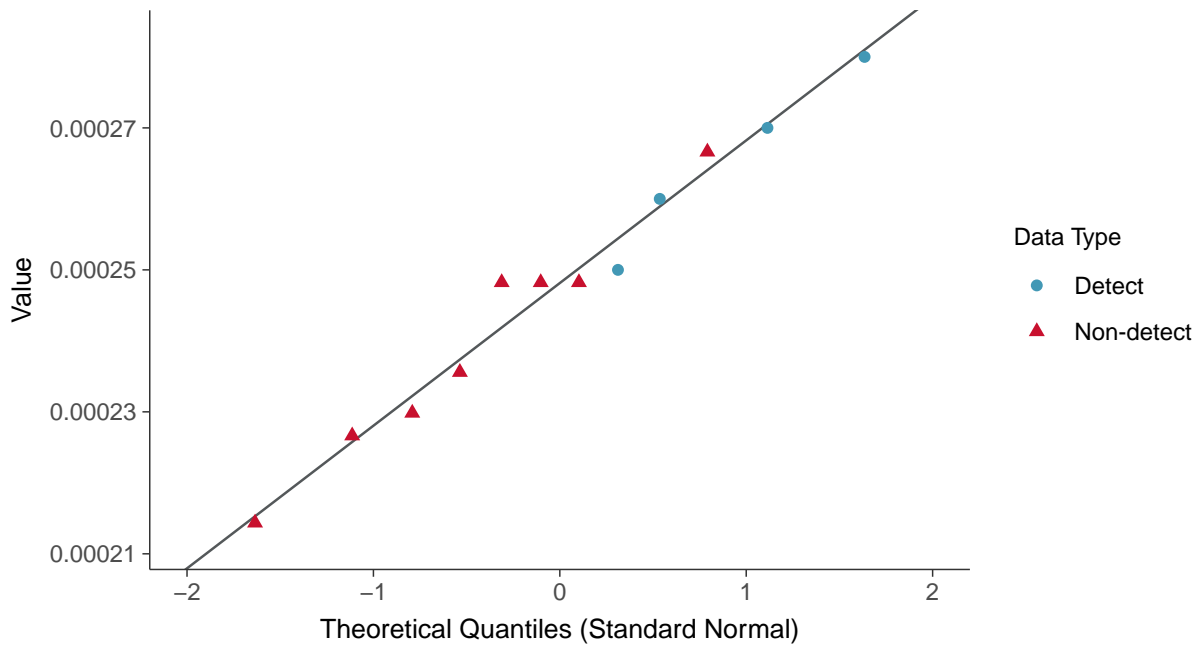
Molybdenum, MW-06 (mg/L)





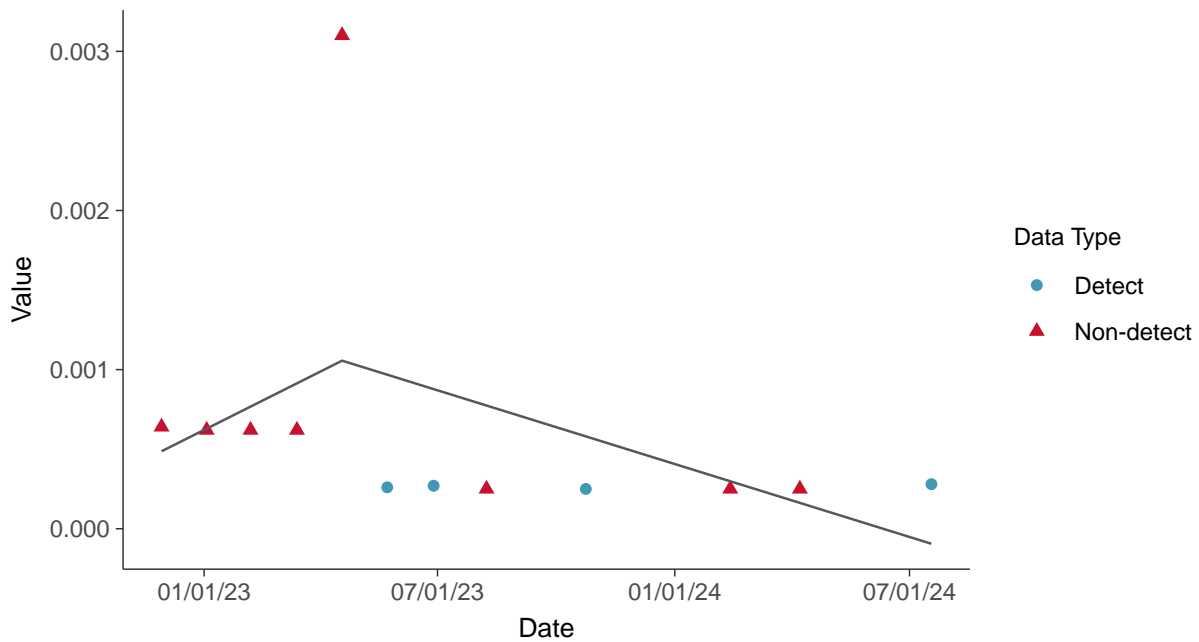
### Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

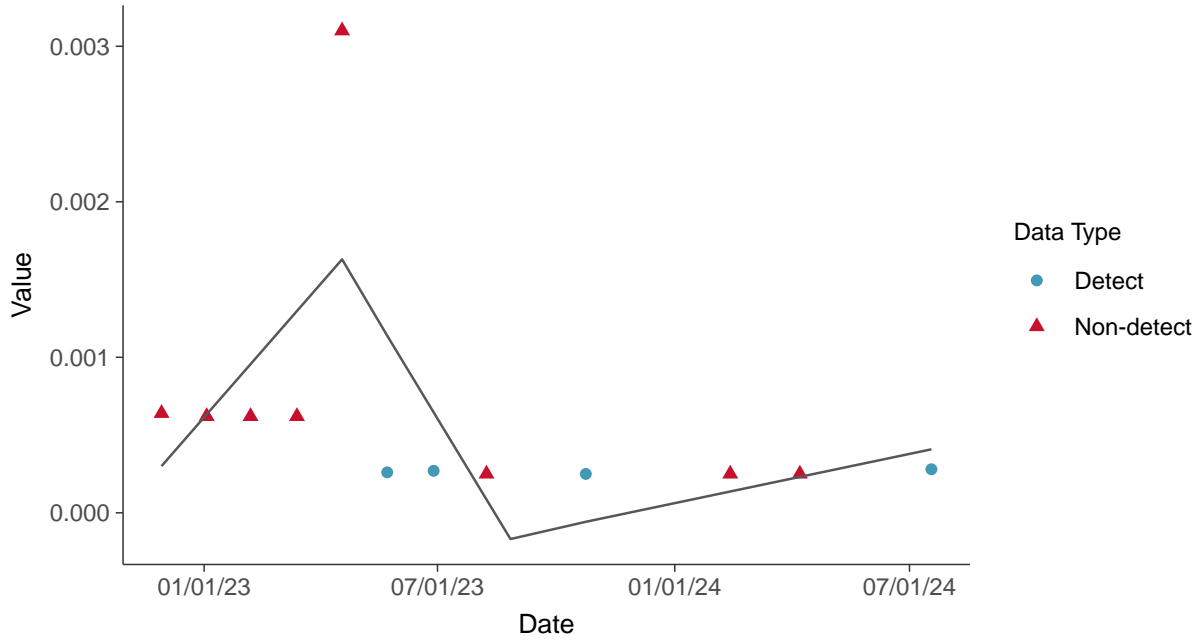
Molybdenum, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-06 (mg/L)



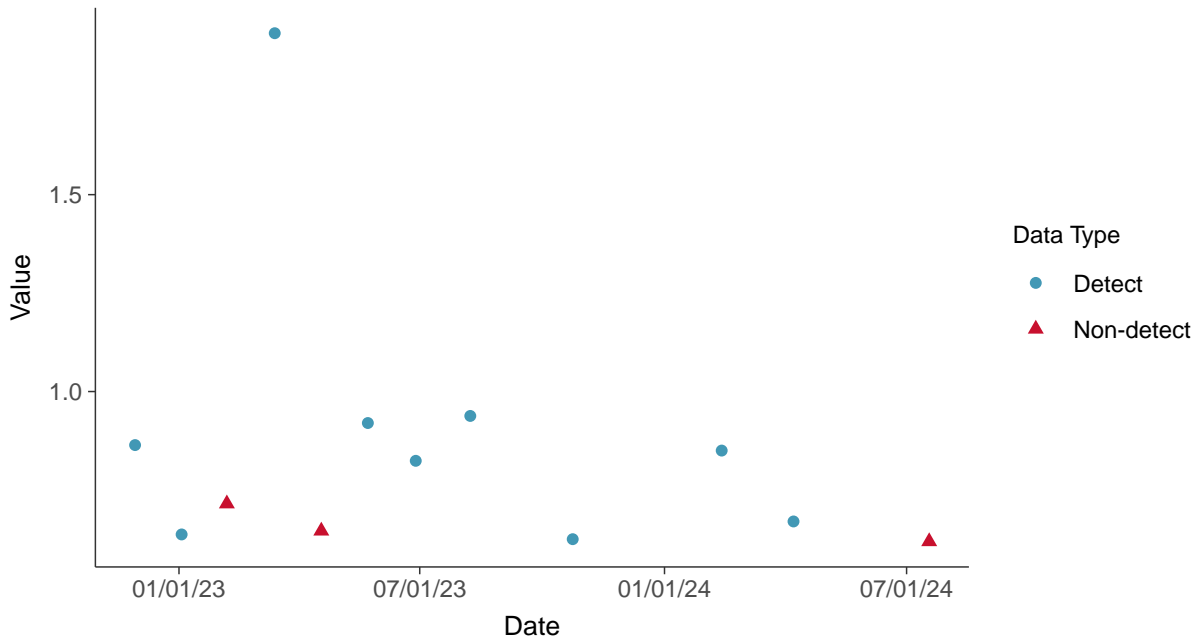


## Appendix IV: Radium 226 and 228, MW-06

ID: 16\_1\_5\_121

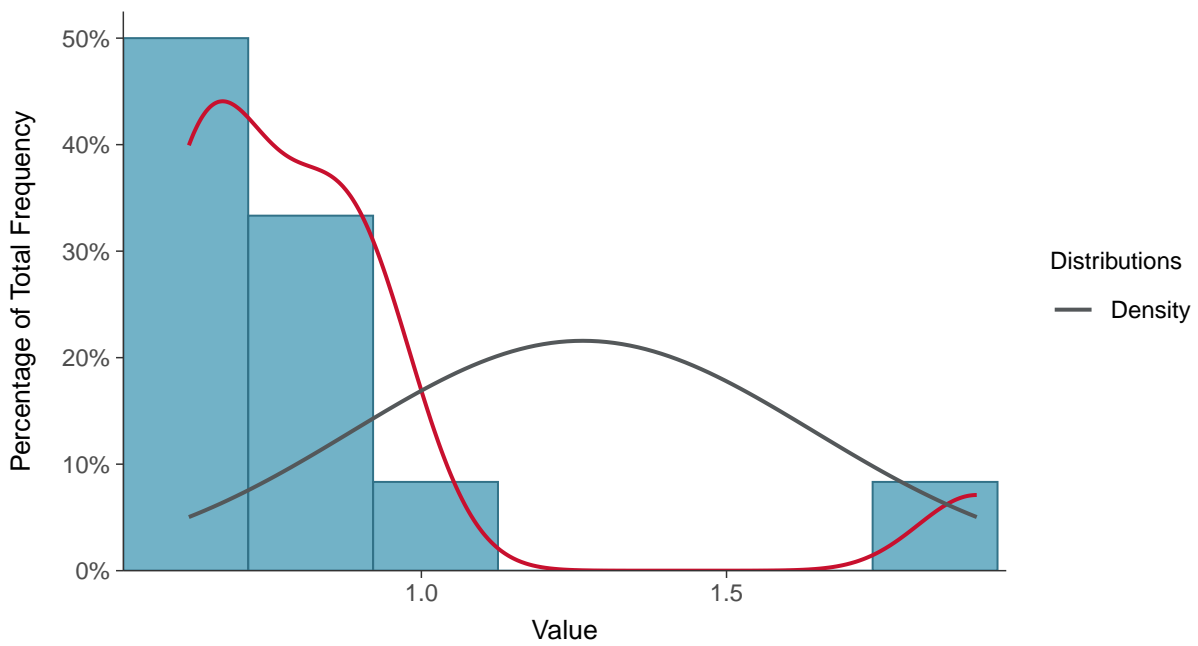
### Scatter Plot

Radium 226 and 228, MW-06 (pCi/L)



### Histogram

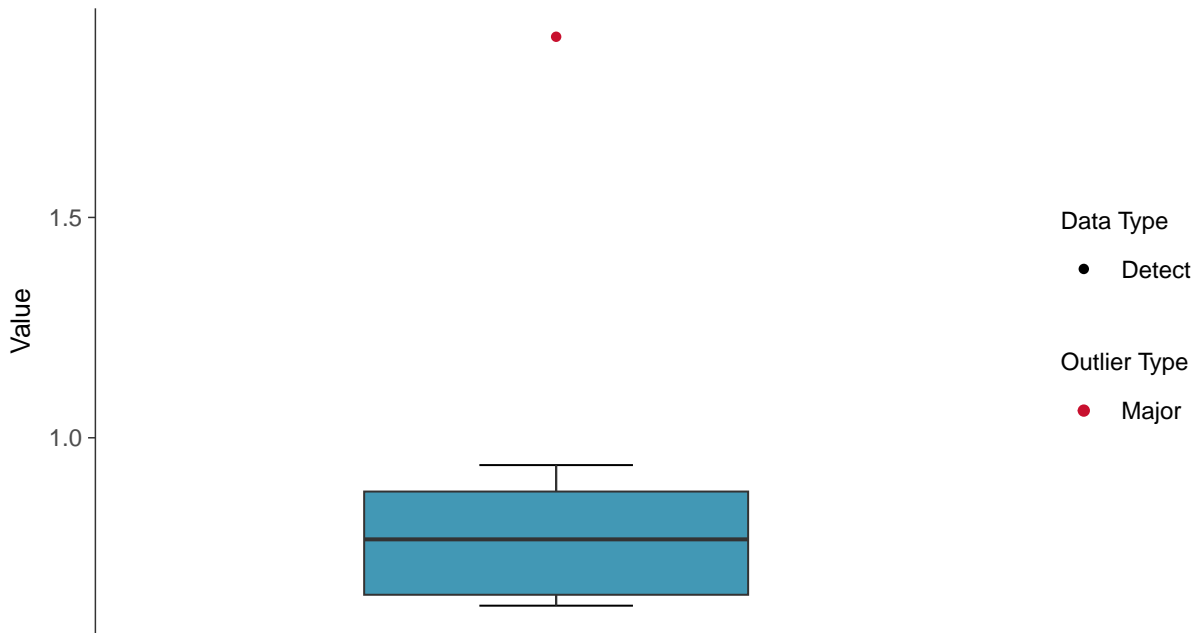
Radium 226 and 228, MW-06 (pCi/L)





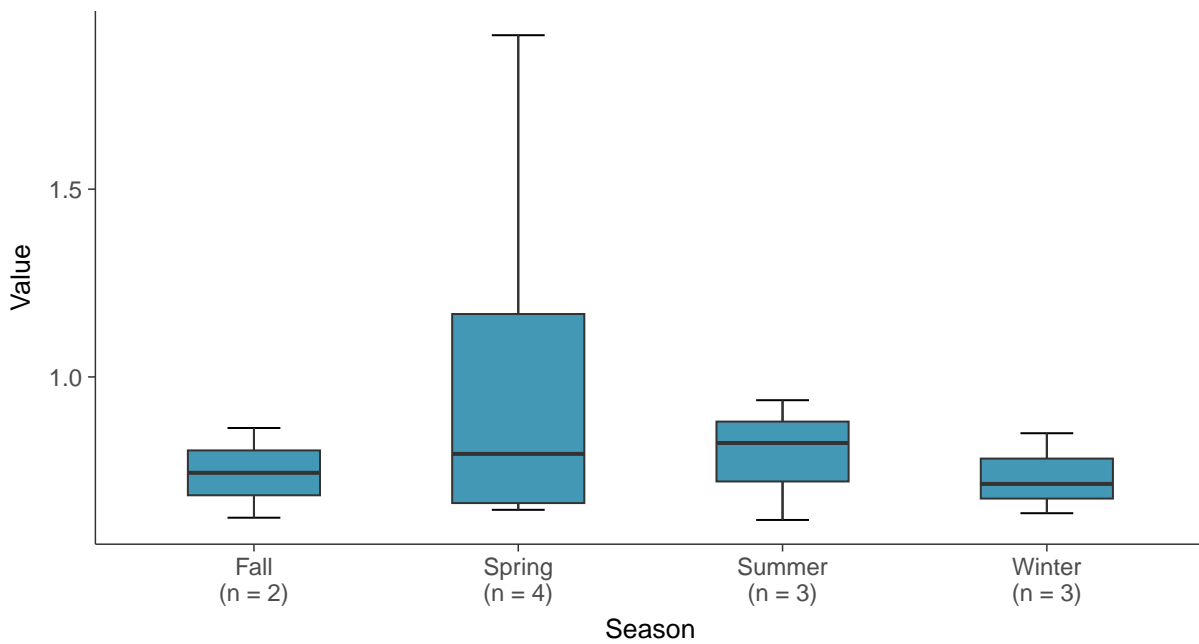
### Boxplot

Radium 226 and 228, MW-06 (pCi/L)



### Boxplot by Season

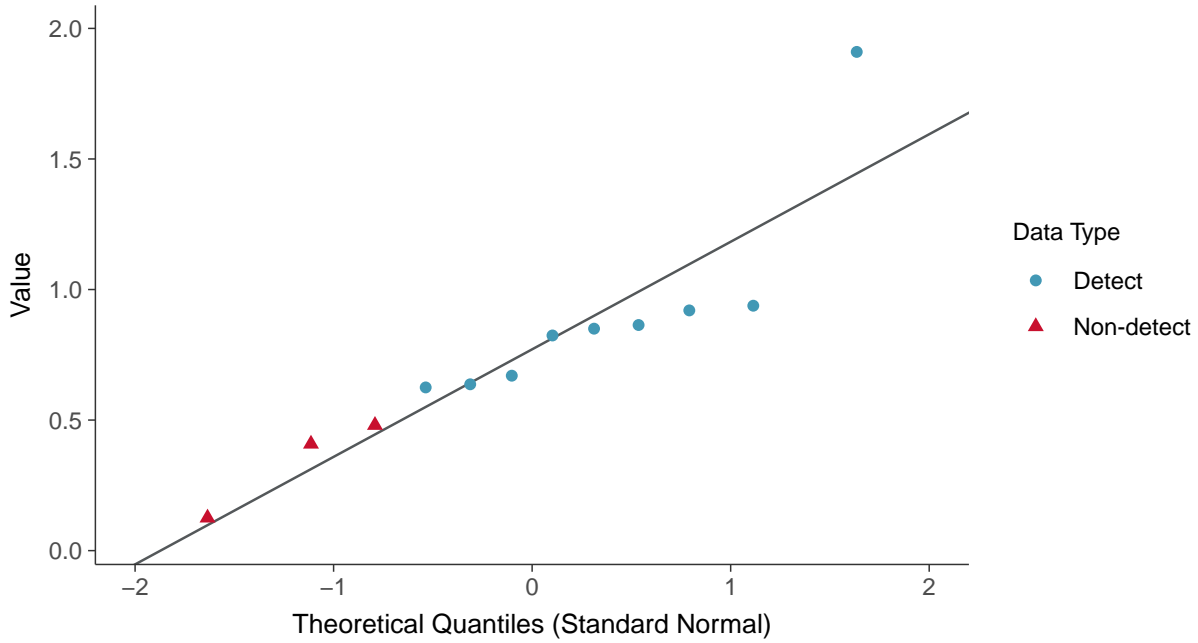
Radium 226 and 228, MW-06 (pCi/L)





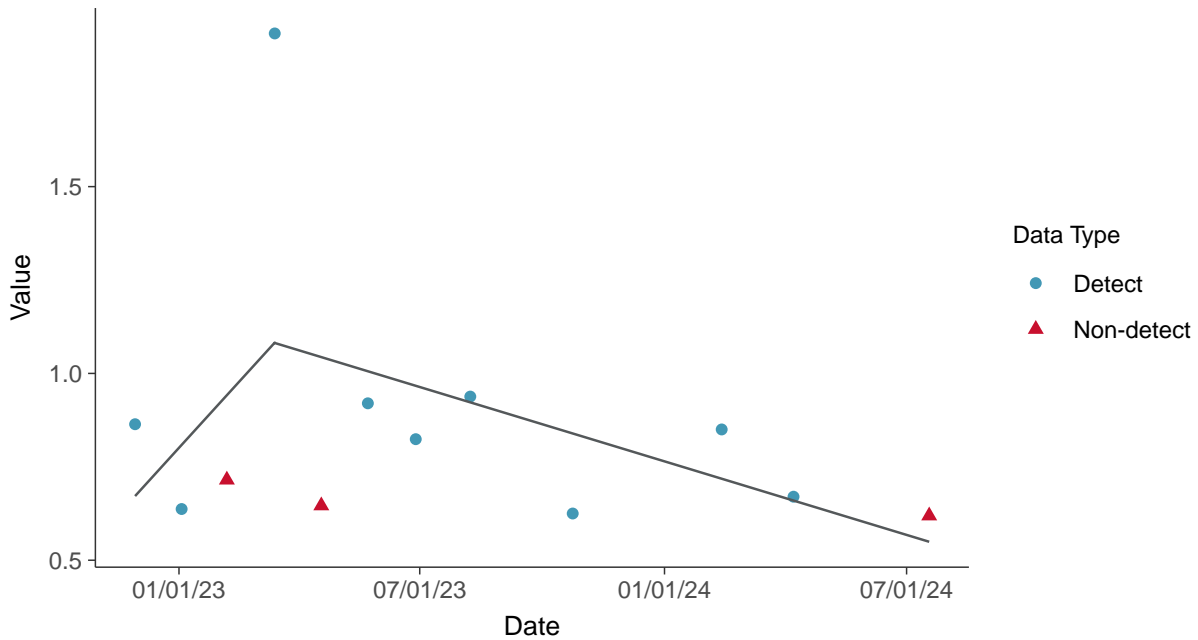
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-06 (pCi/L)



### Trend Regression: Piecewise Linear-Linear

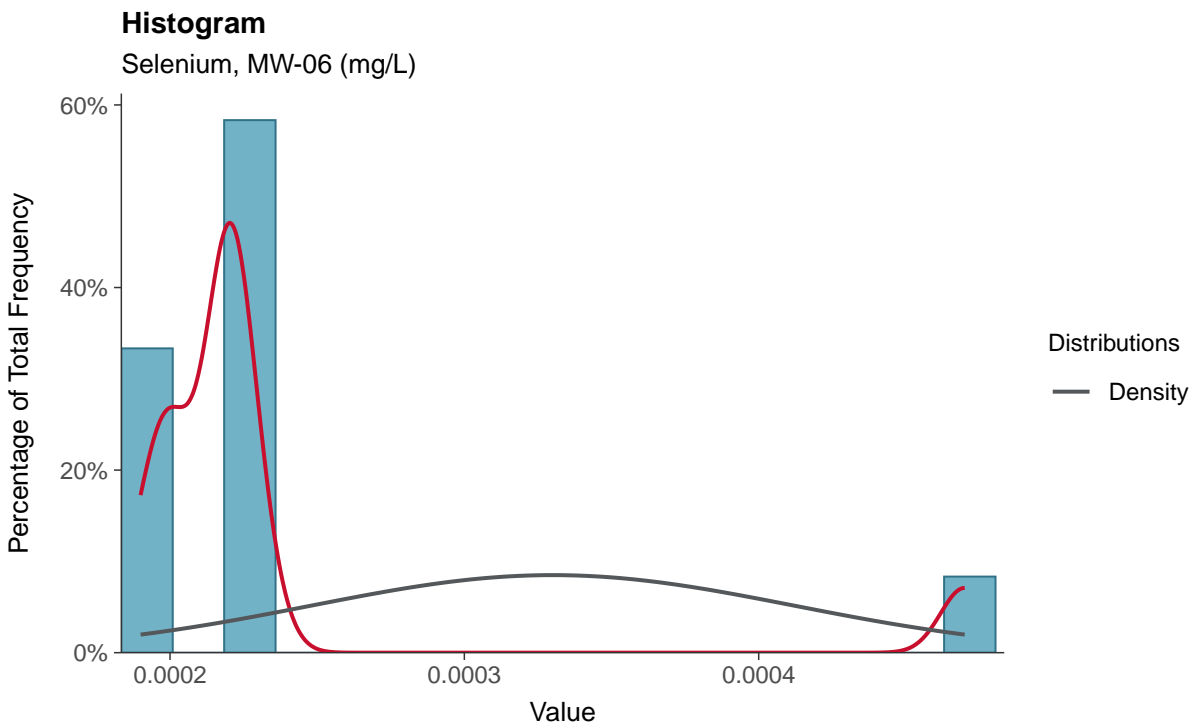
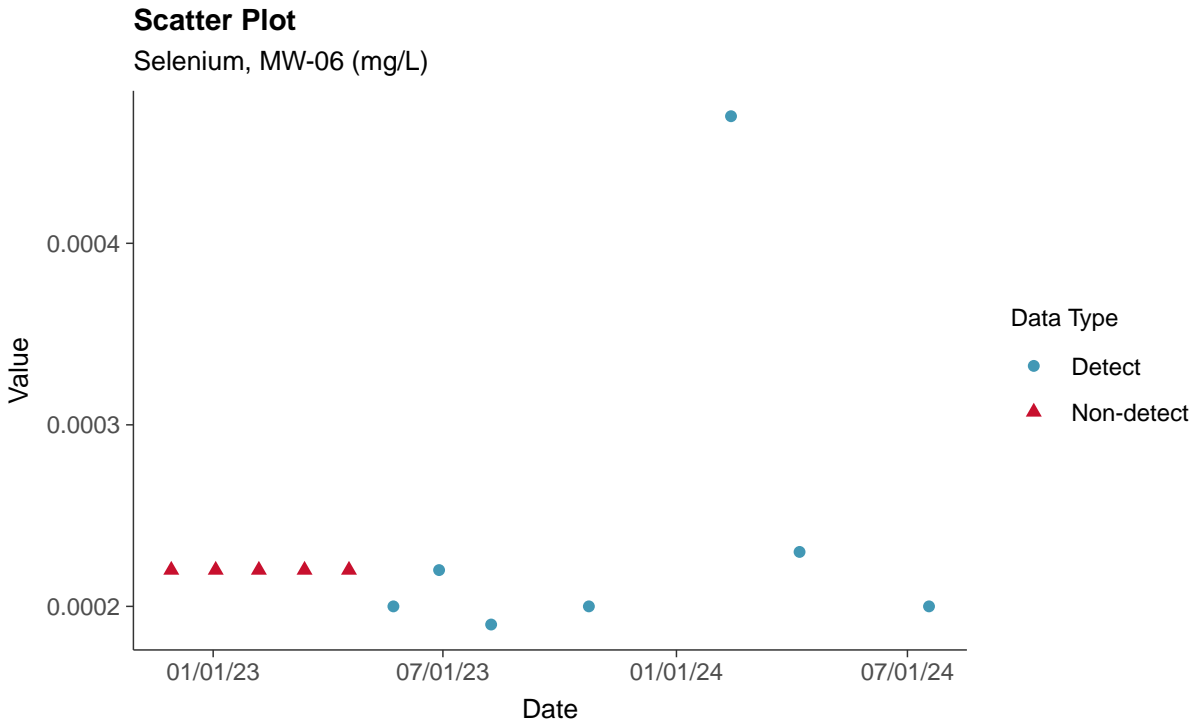
Radium 226 and 228, MW-06 (pCi/L)





### Appendix IV: Selenium, MW-06

ID: 16\_1\_5\_122

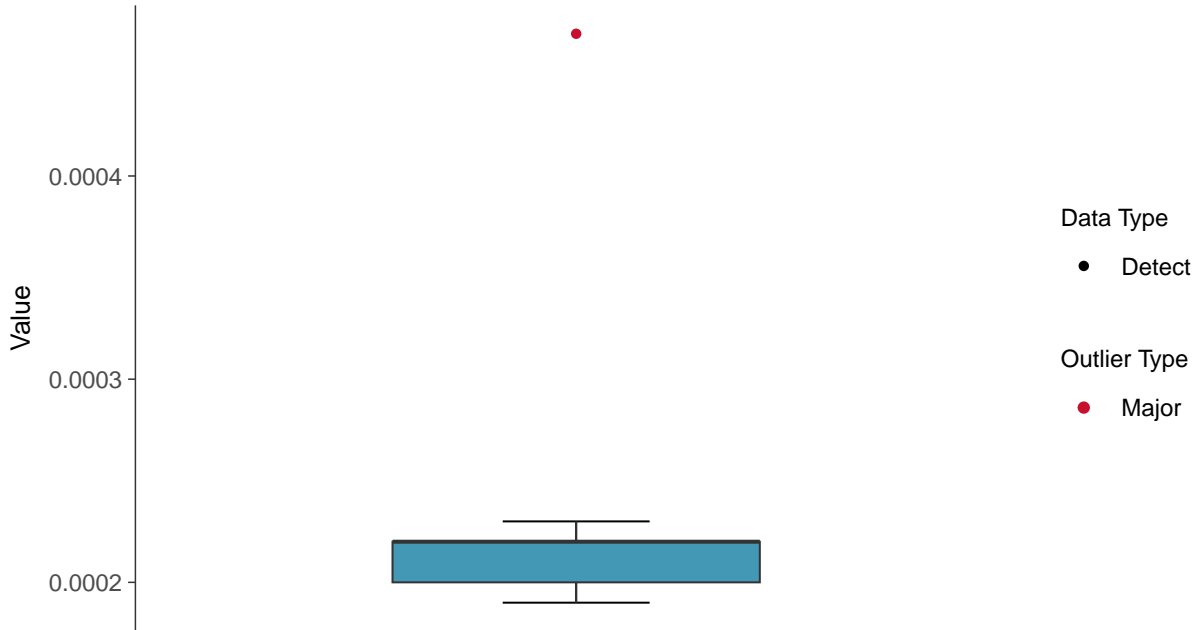






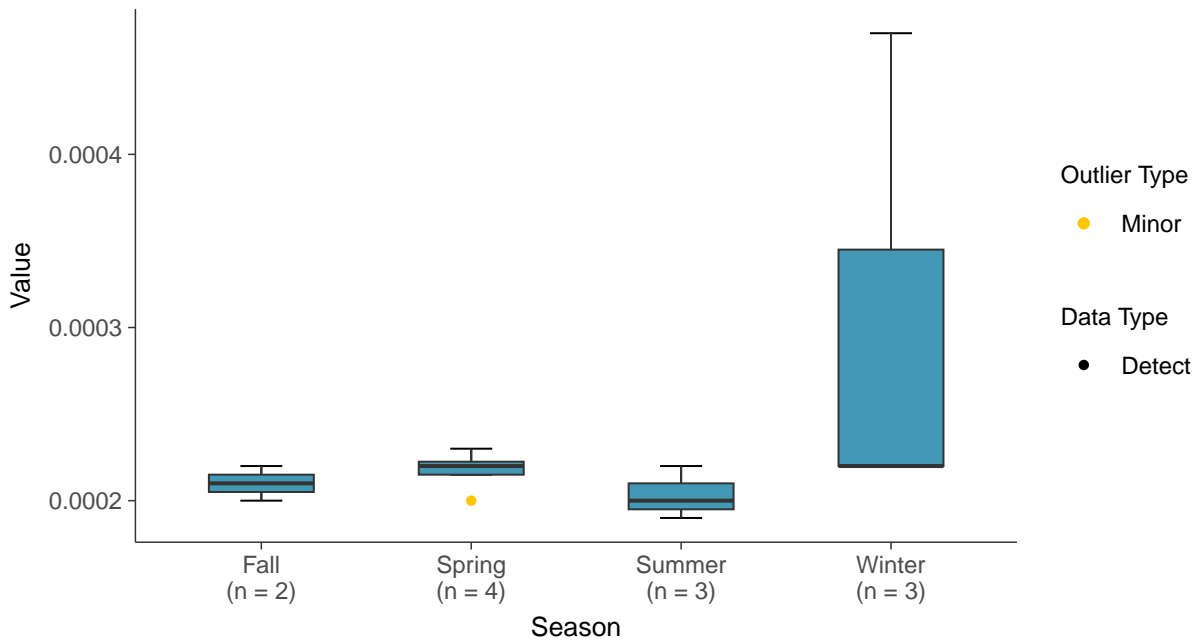
### Boxplot

Selenium, MW-06 (mg/L)



### Boxplot by Season

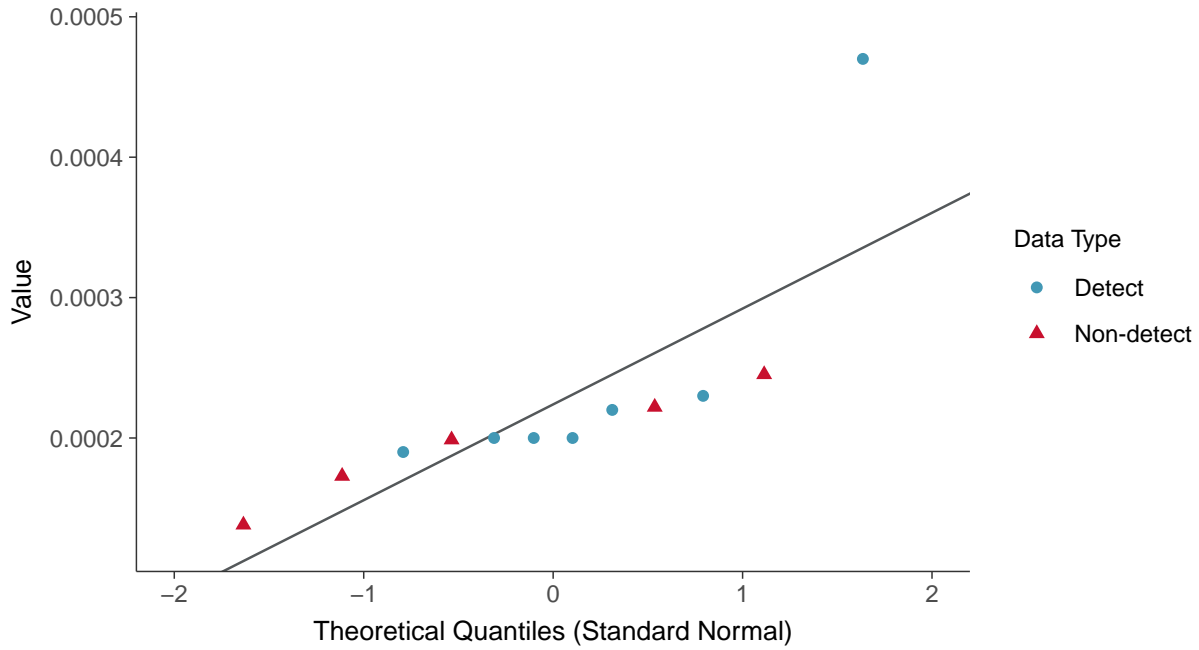
Selenium, MW-06 (mg/L)





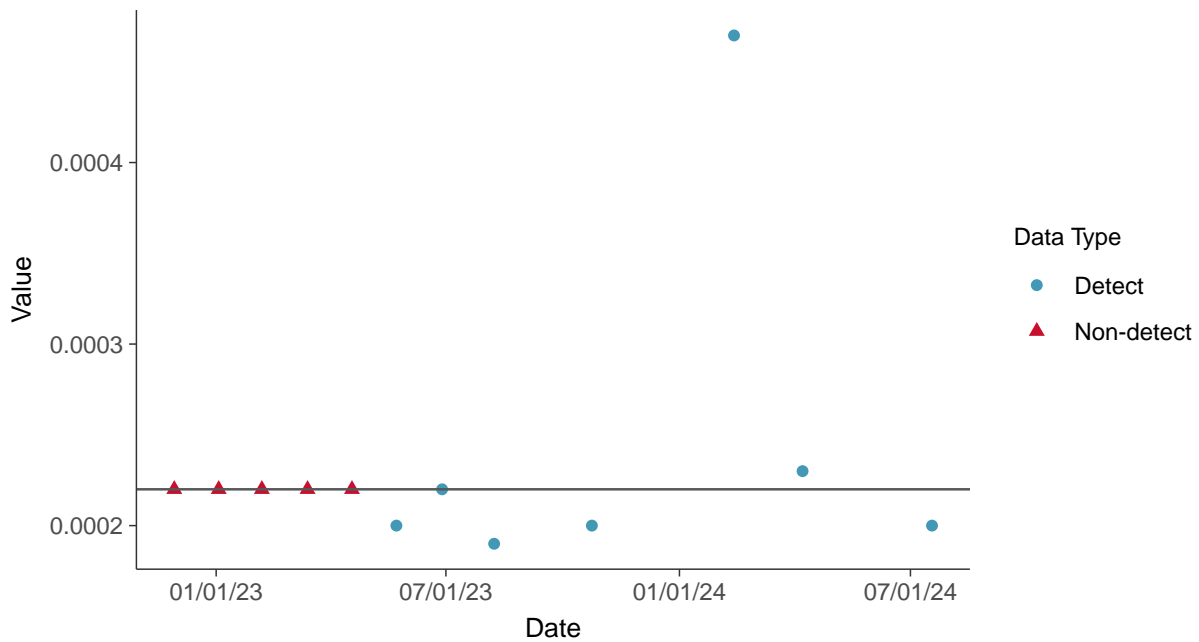
### Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-06 (mg/L)



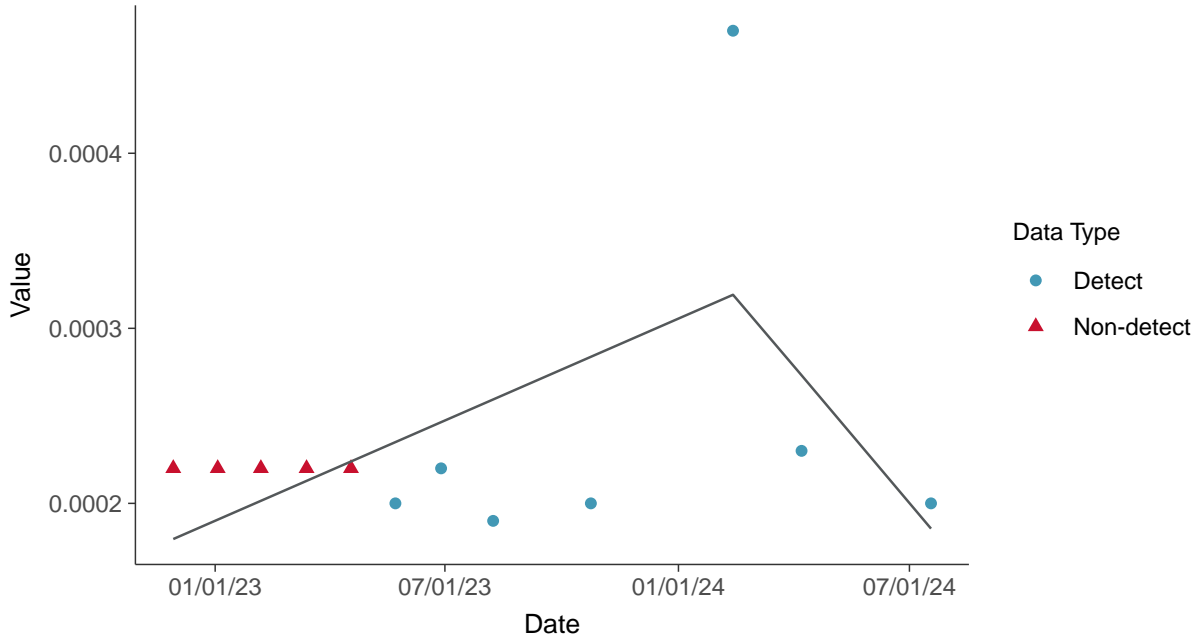
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Selenium, MW-06 (mg/L)

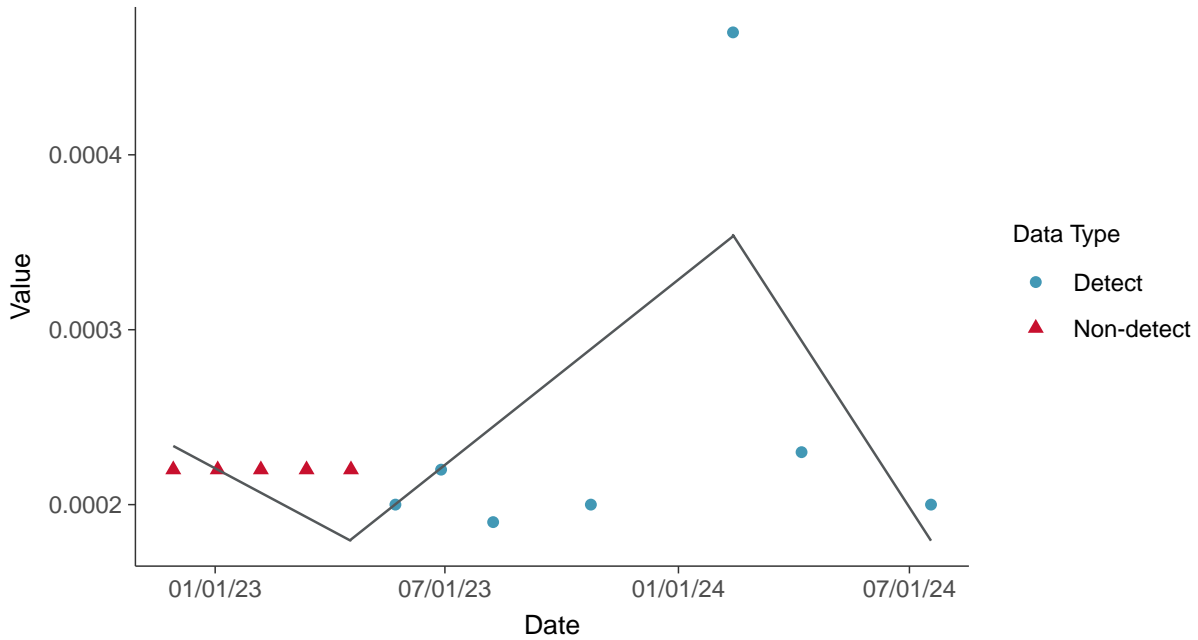




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-06 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-06 (mg/L)



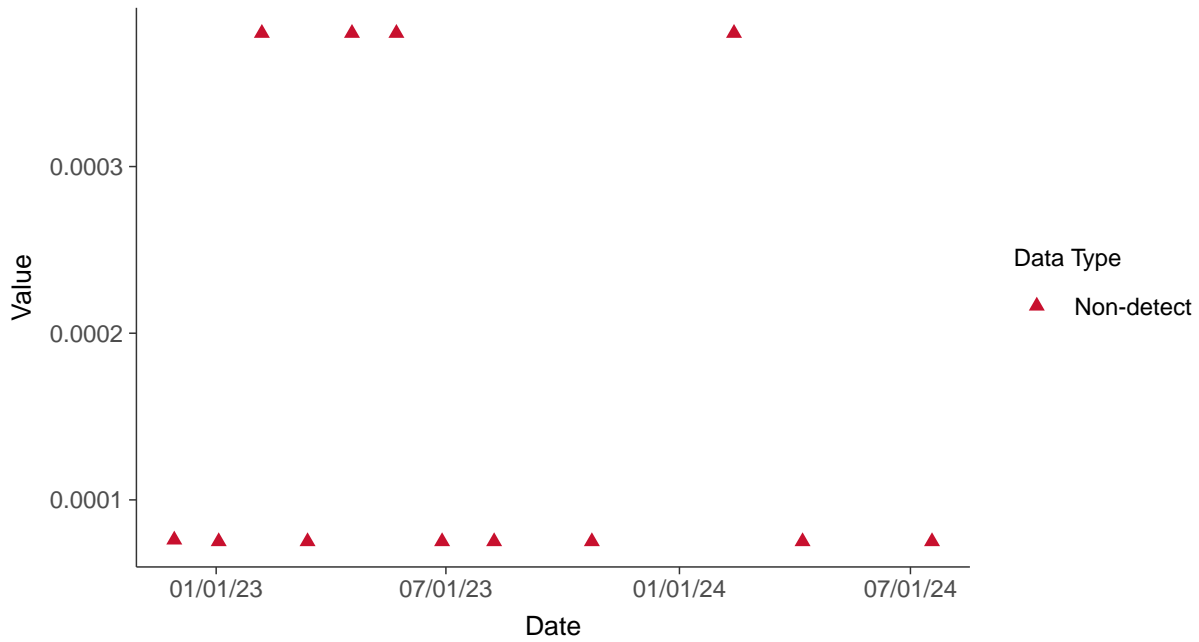


### Appendix IV: Thallium, MW-06

ID: 16\_1\_5\_125

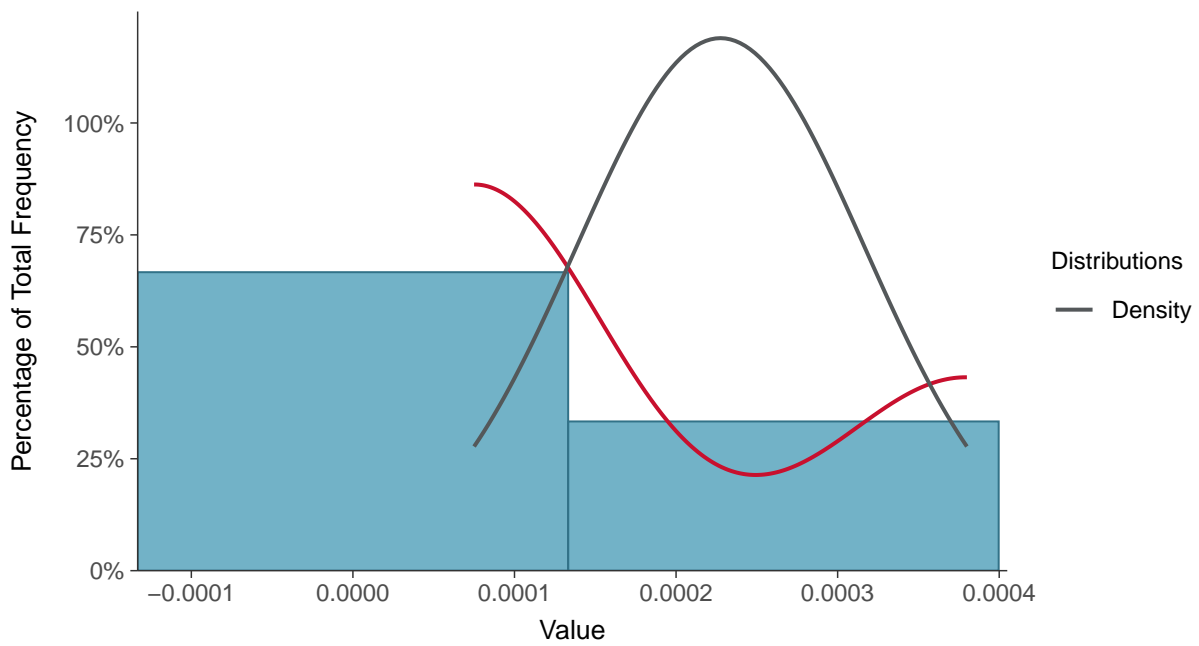
#### Scatter Plot

Thallium, MW-06 (mg/L)



#### Histogram

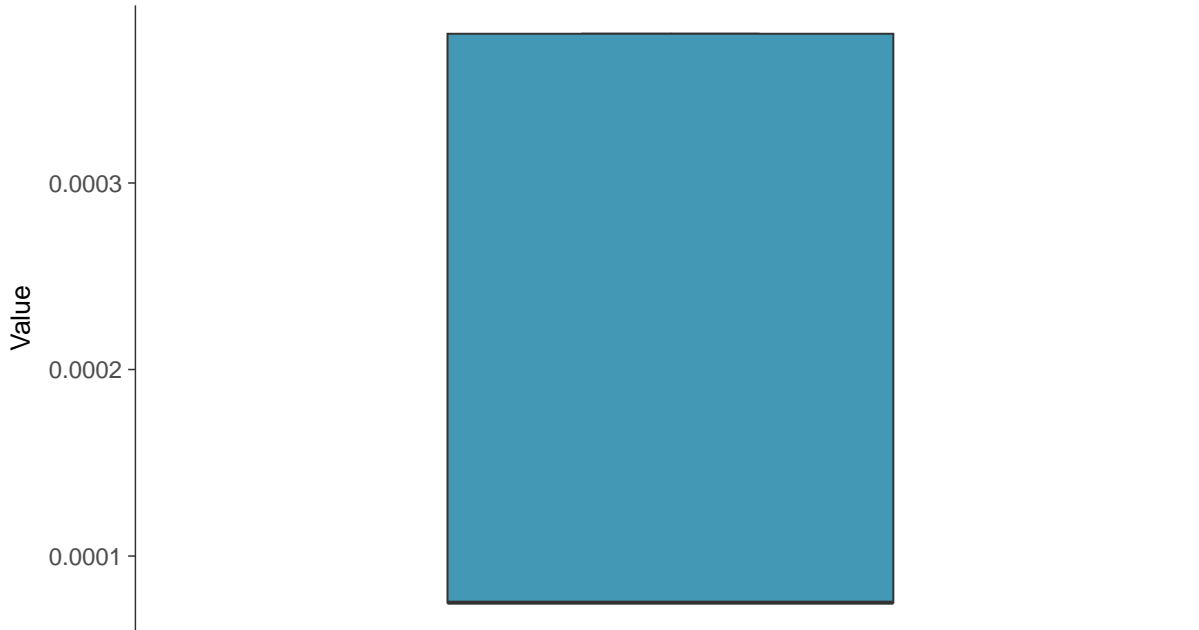
Thallium, MW-06 (mg/L)





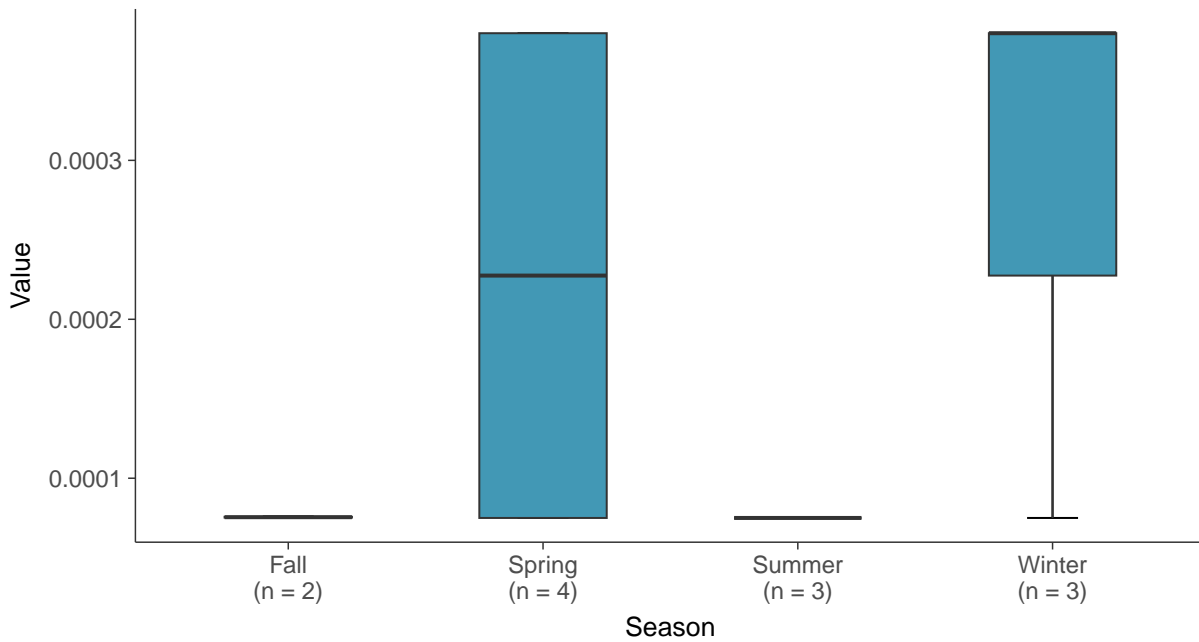
### Boxplot

Thallium, MW-06 (mg/L)



### Boxplot by Season

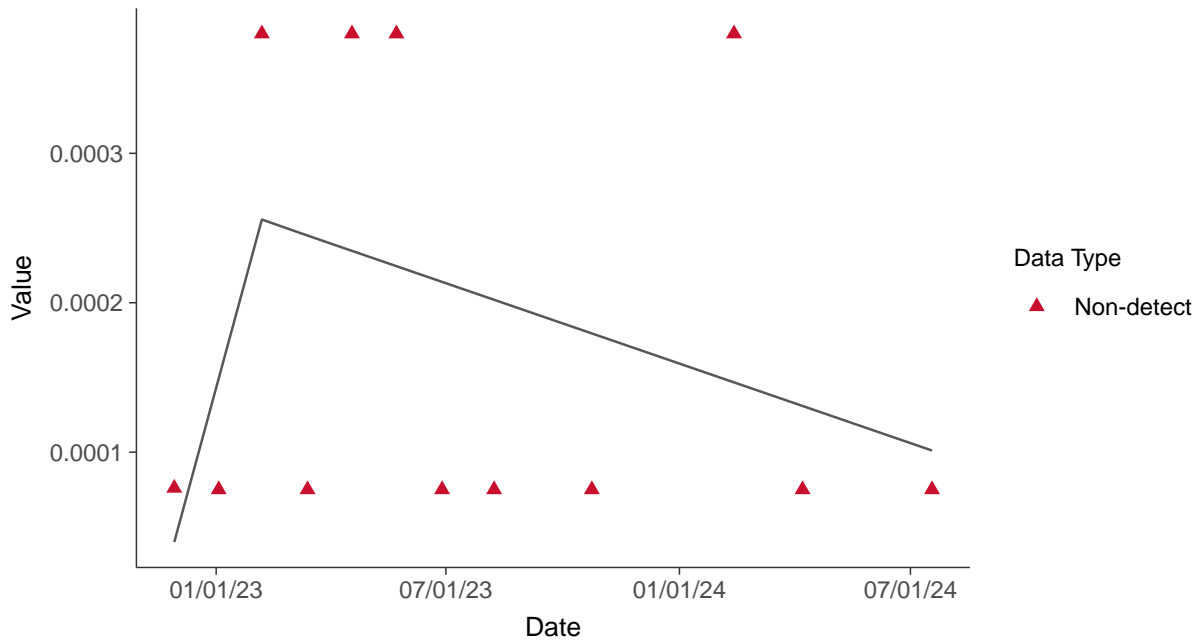
Thallium, MW-06 (mg/L)





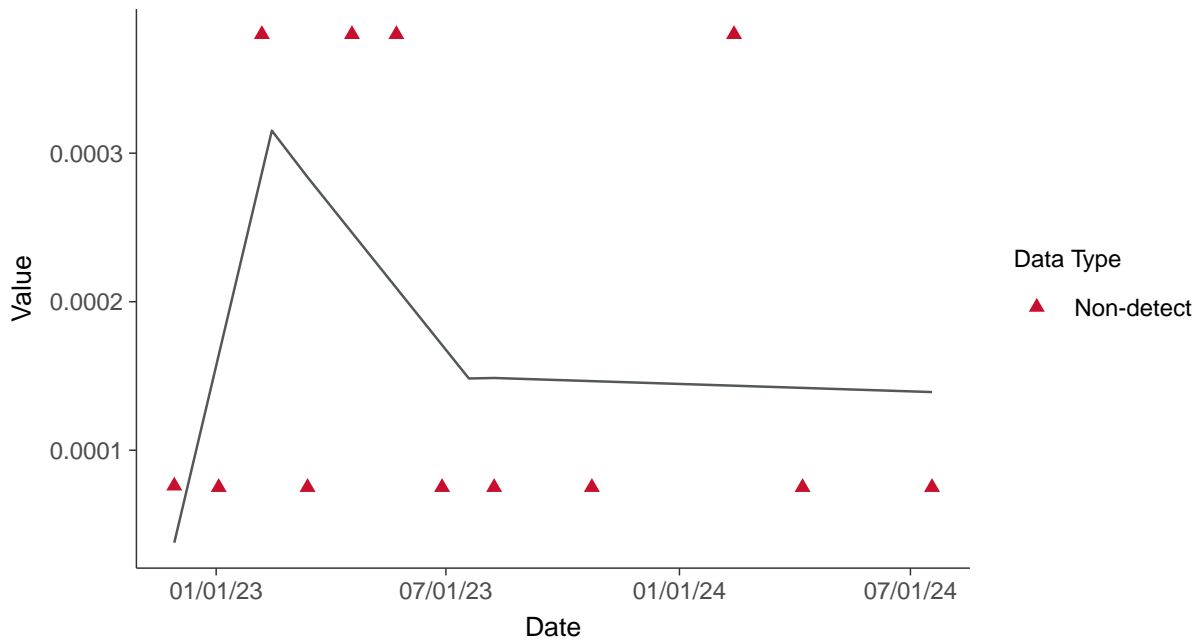
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-06 (mg/L)



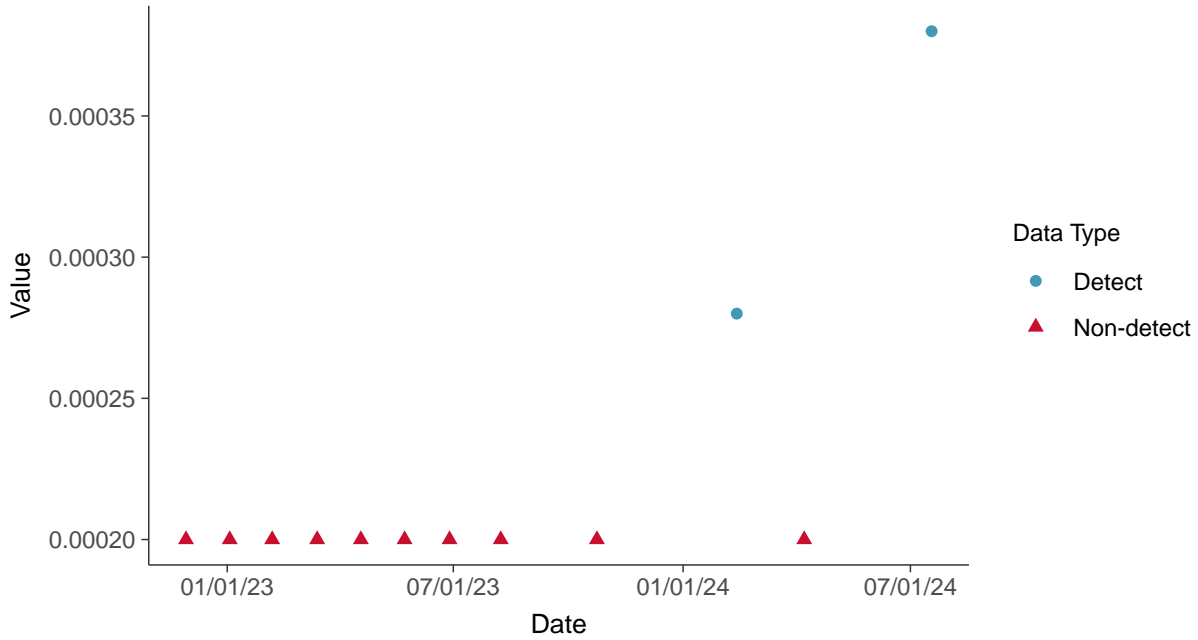


### Part 115: Copper, MW-06

ID: 16\_1\_6\_111

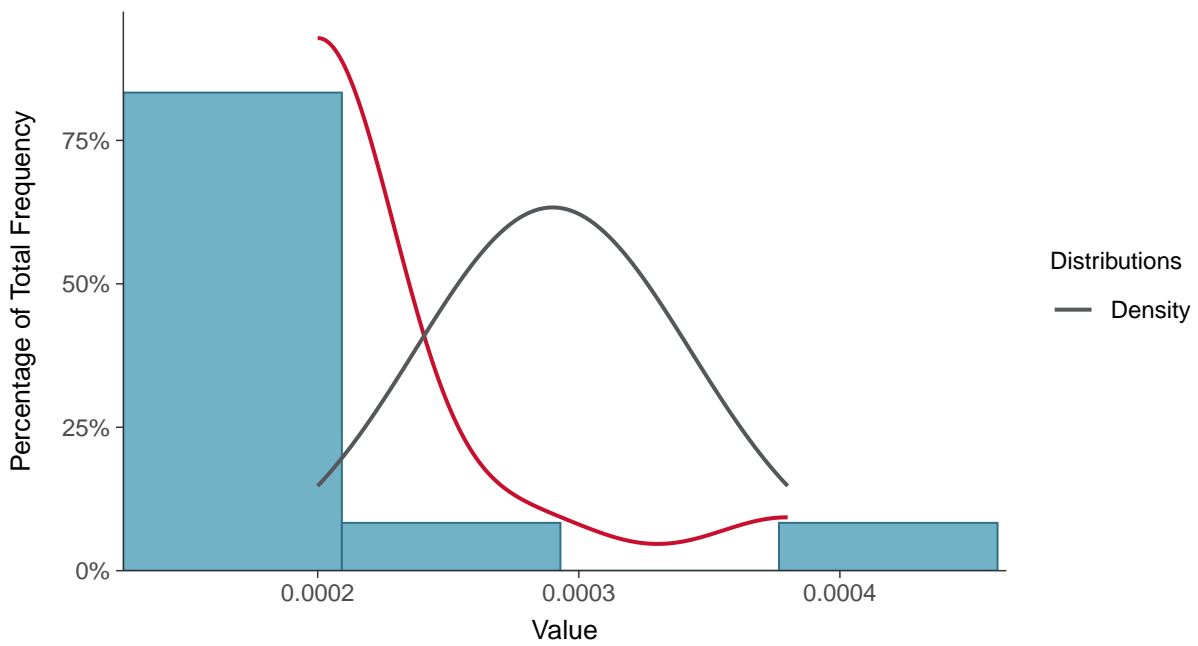
#### Scatter Plot

Copper, MW-06 (mg/L)



#### Histogram

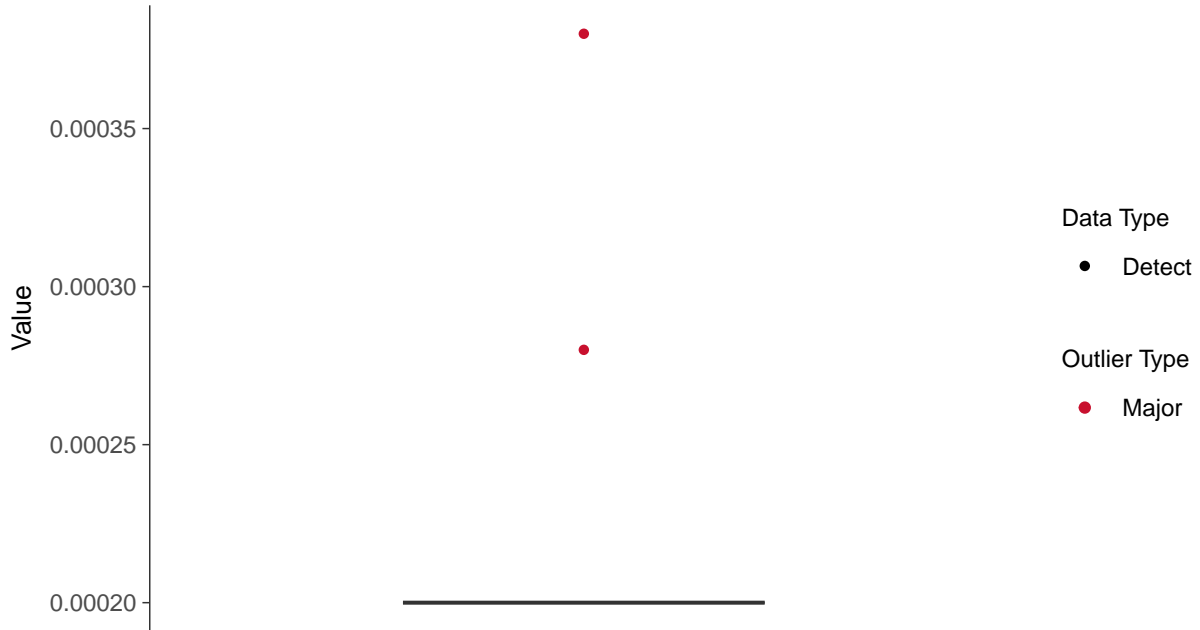
Copper, MW-06 (mg/L)





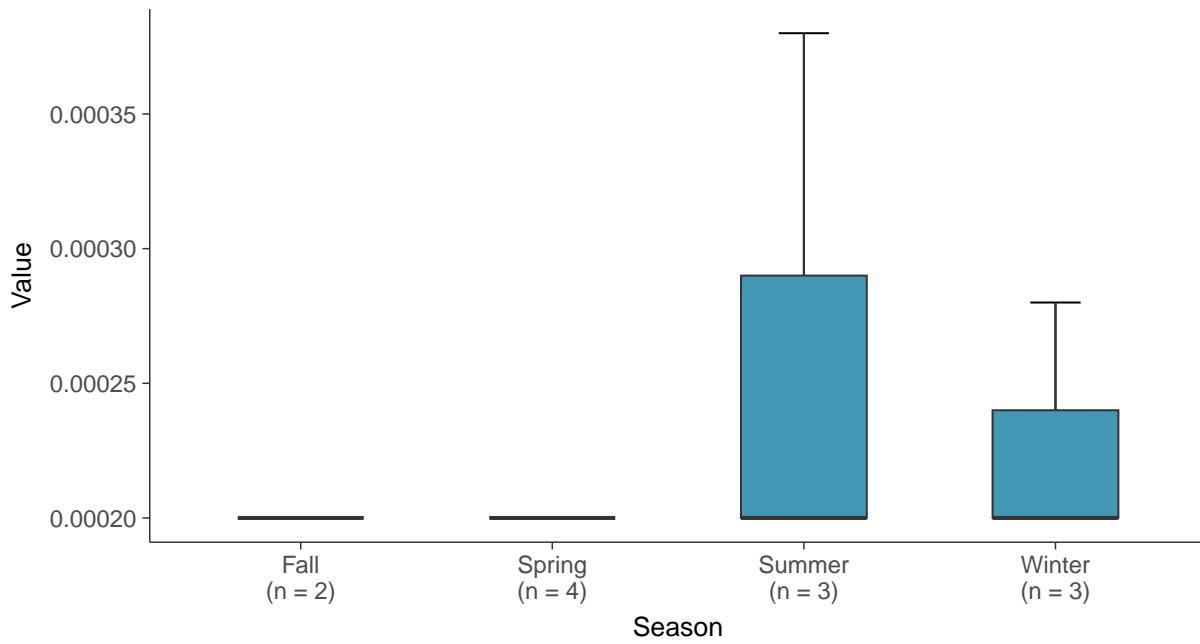
### Boxplot

Copper, MW-06 (mg/L)



### Boxplot by Season

Copper, MW-06 (mg/L)

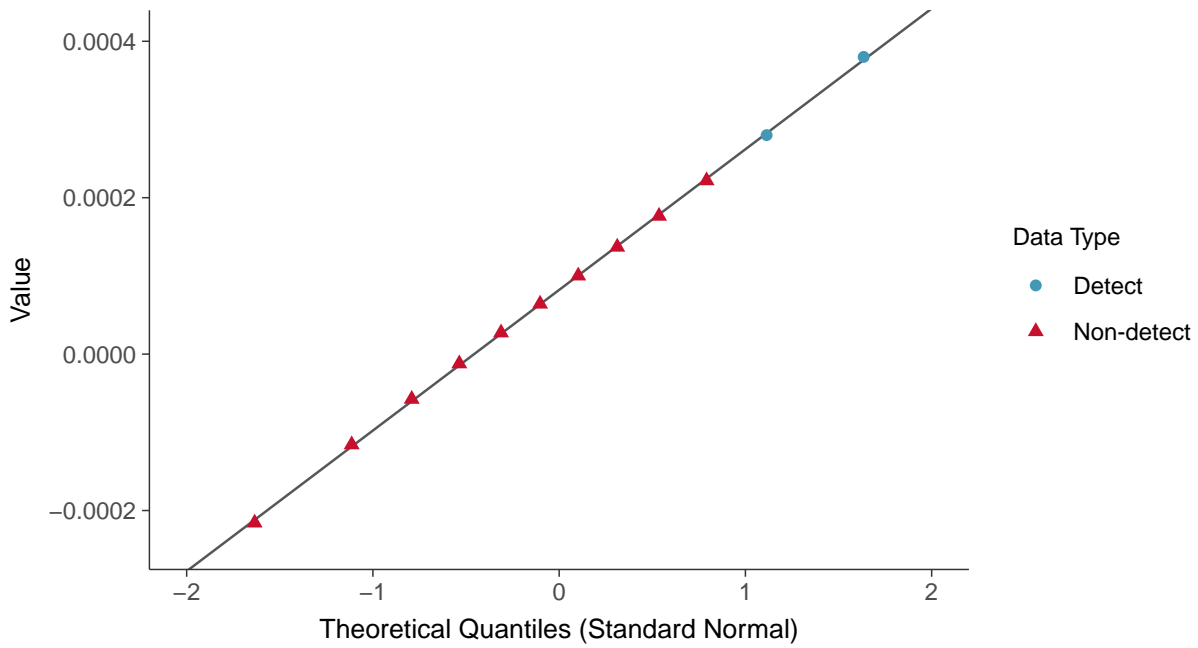






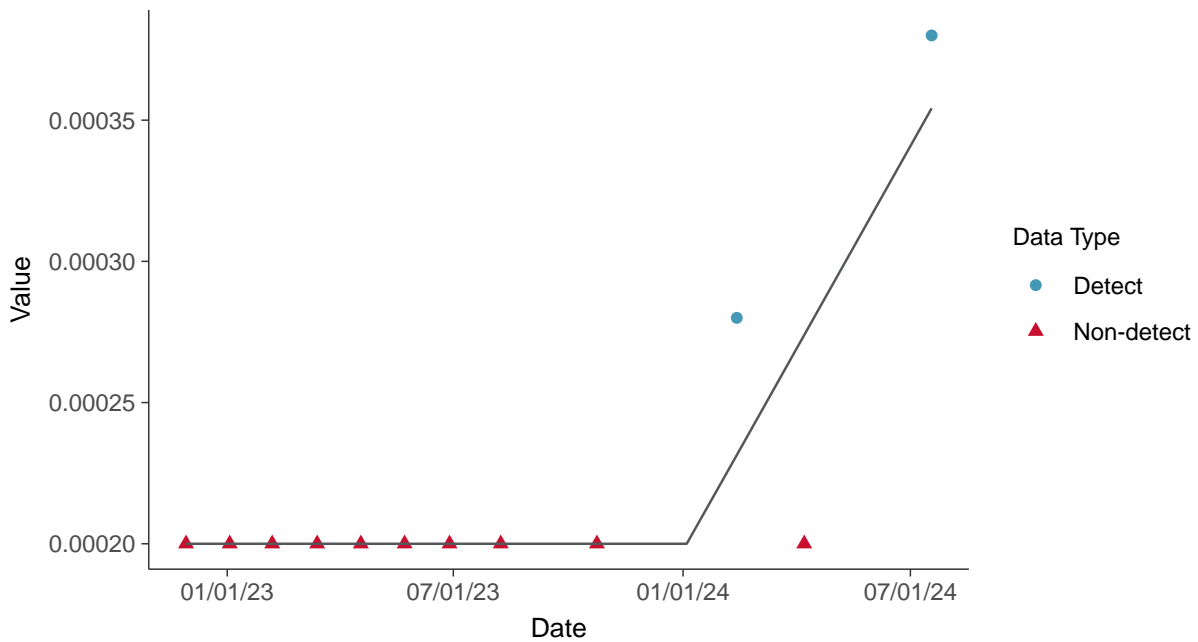
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear

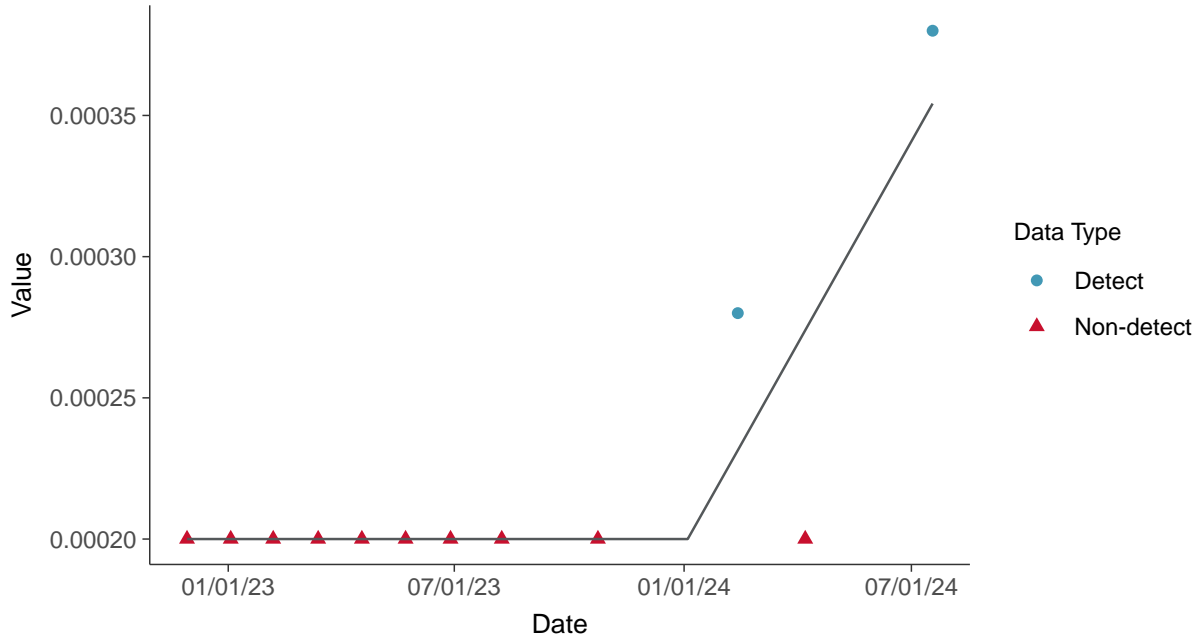
Copper, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-06 (mg/L)



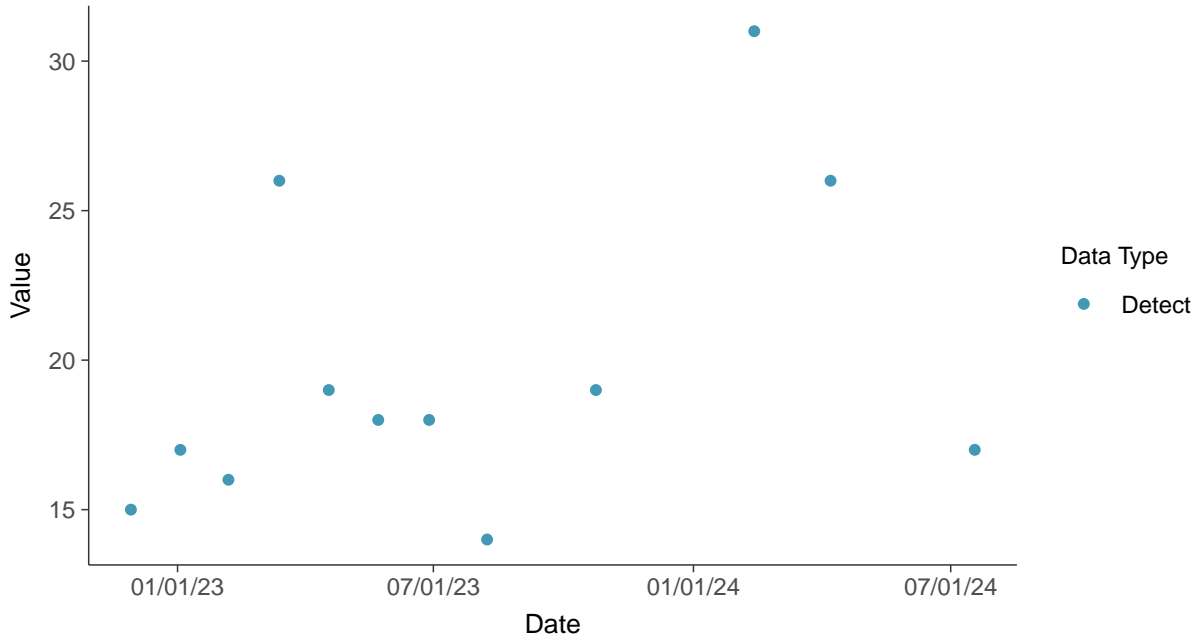


### Part 115: Iron, MW-06

ID: 16\_1\_6\_114

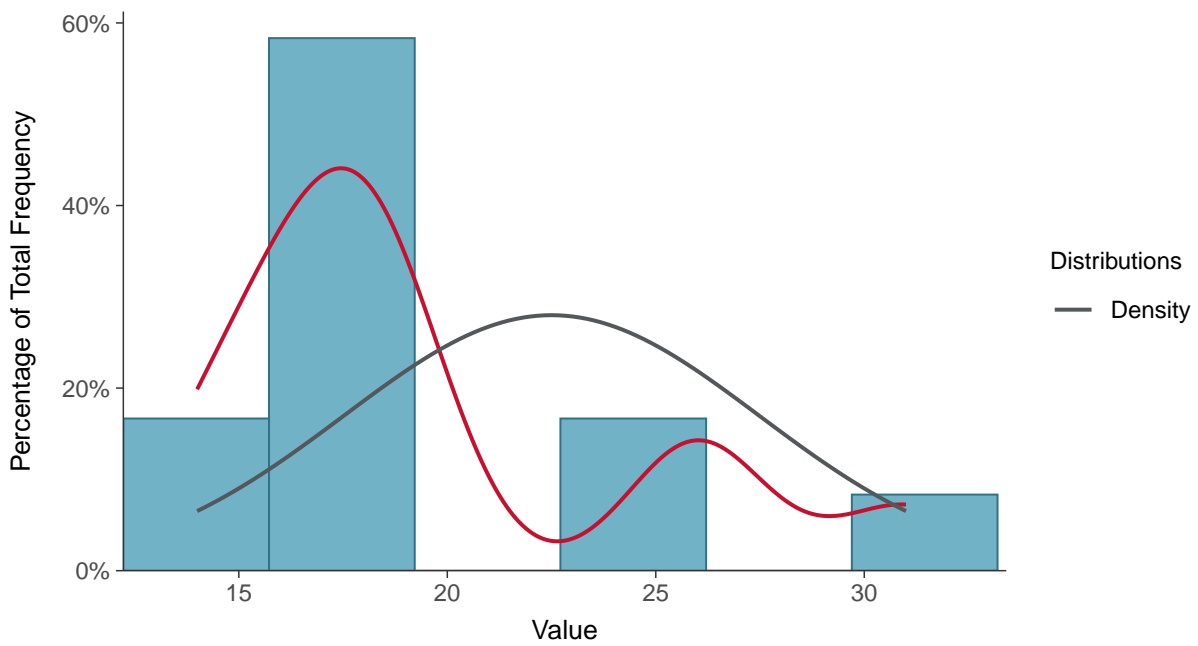
#### Scatter Plot

Iron, MW-06 (mg/L)



#### Histogram

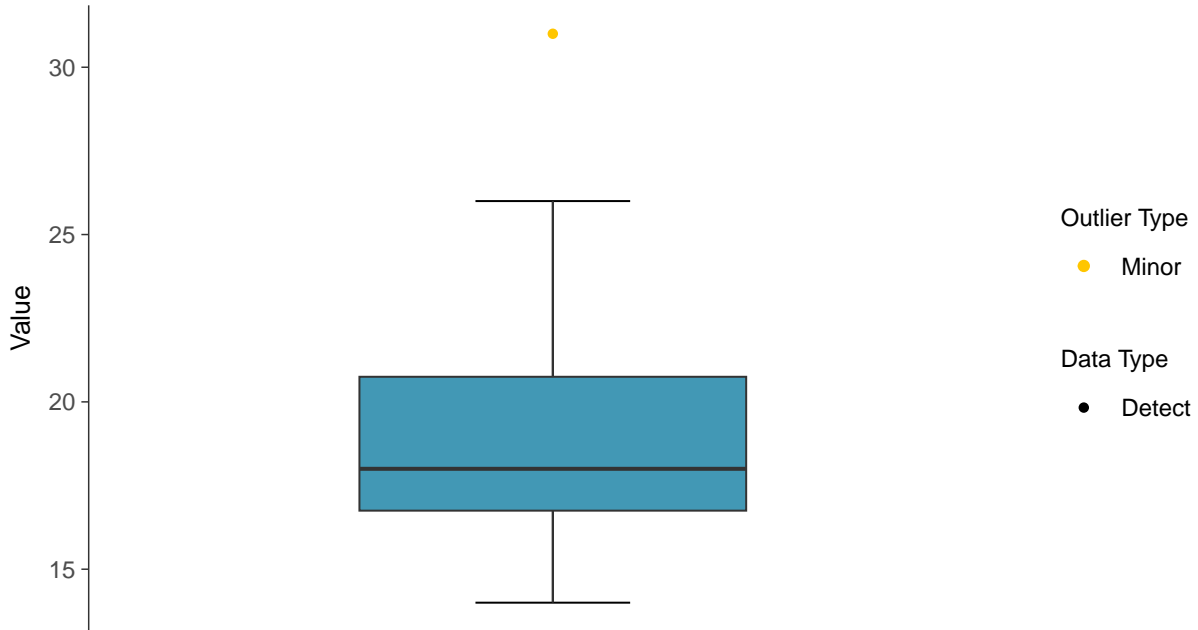
Iron, MW-06 (mg/L)





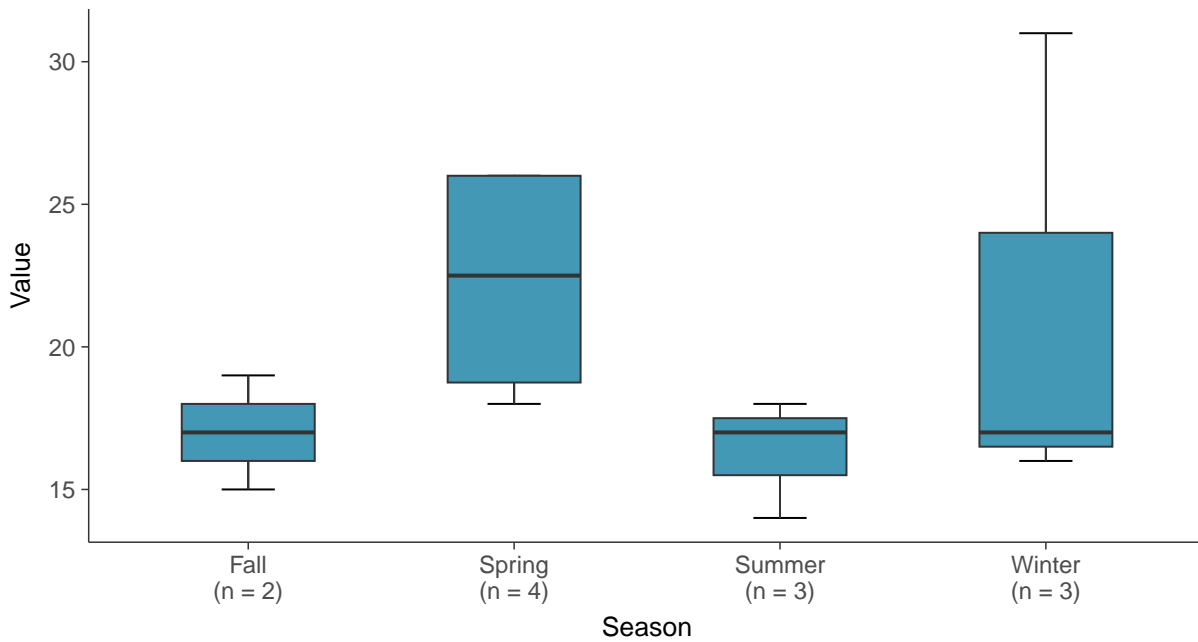
### Boxplot

Iron, MW-06 (mg/L)



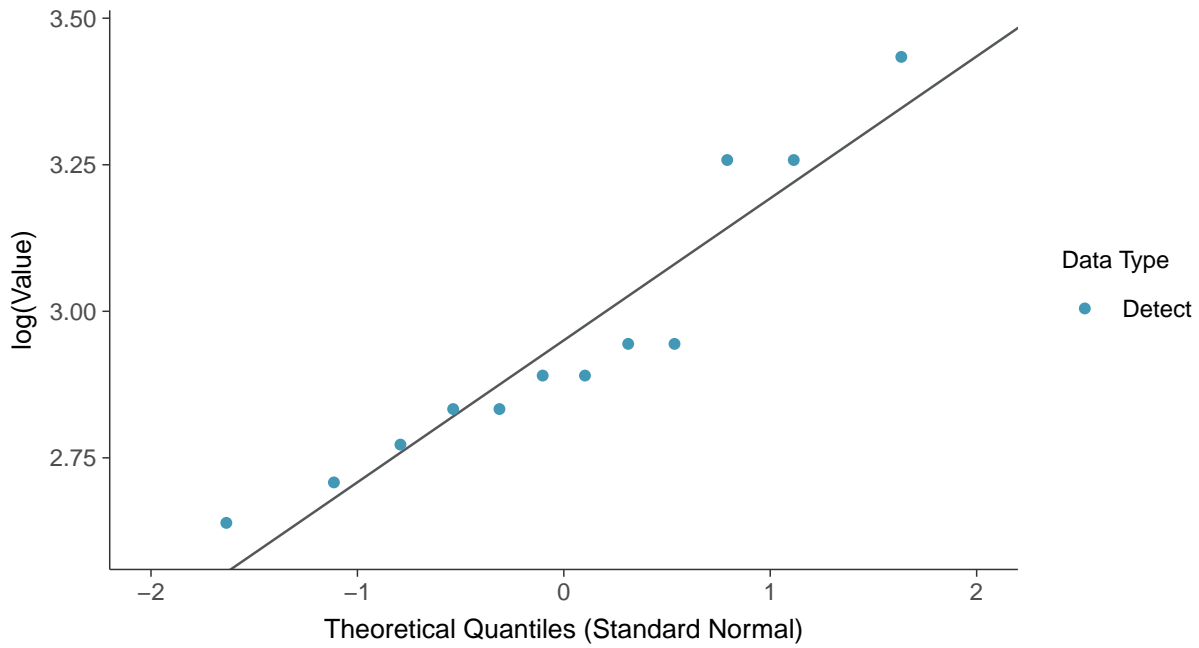
### Boxplot by Season

Iron, MW-06 (mg/L)

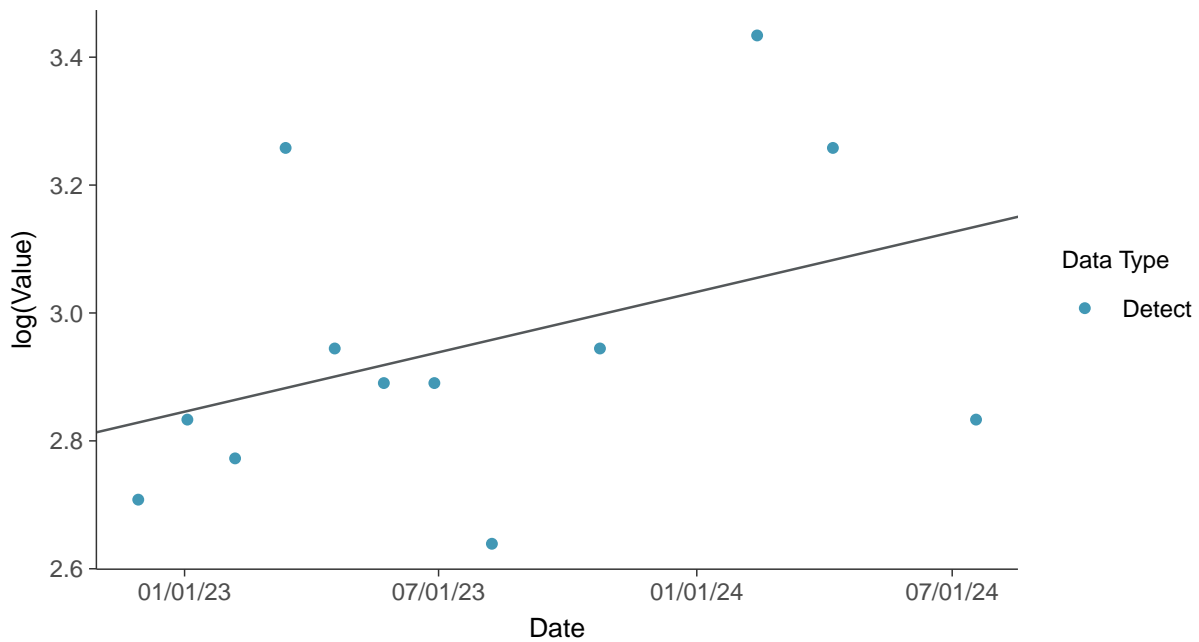




### Lognormal Q-Q plot Iron, MW-06 (mg/L)



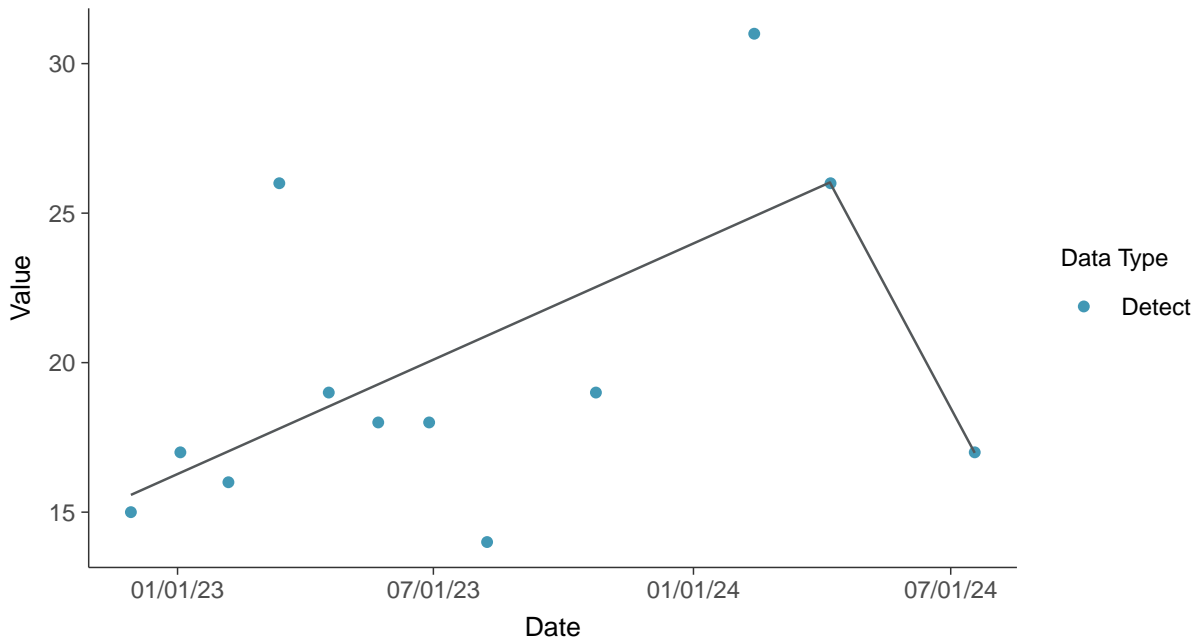
### Trend Regression: Lognormal MLE Iron, MW-06 (mg/L)





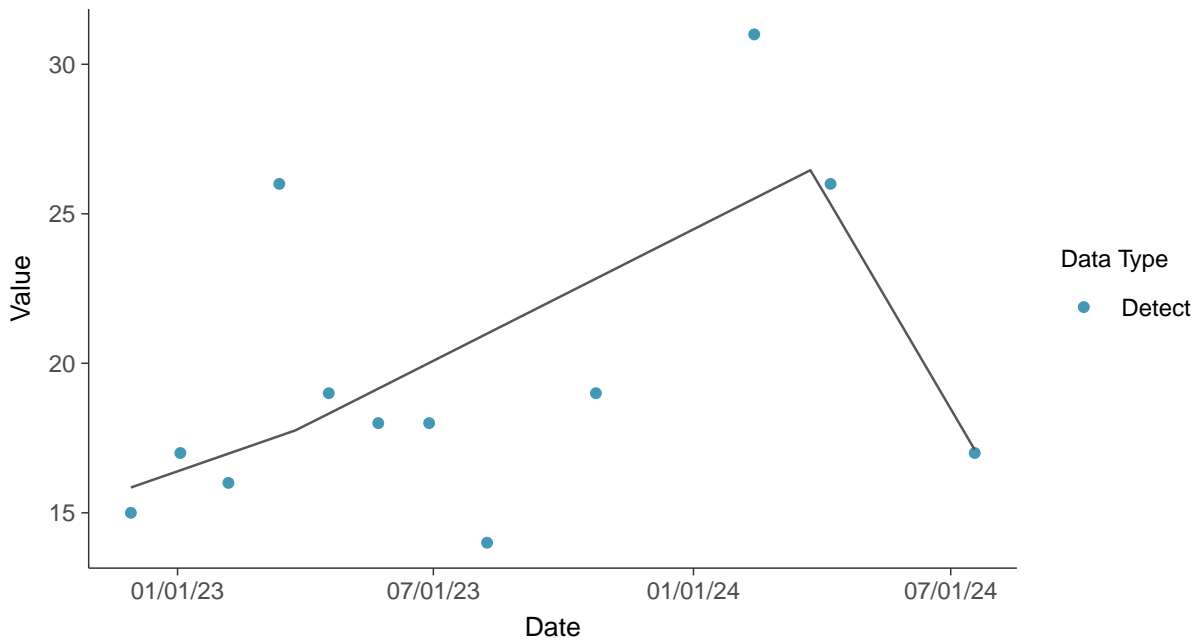
### Trend Regression: Piecewise Linear-Linear

Iron, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

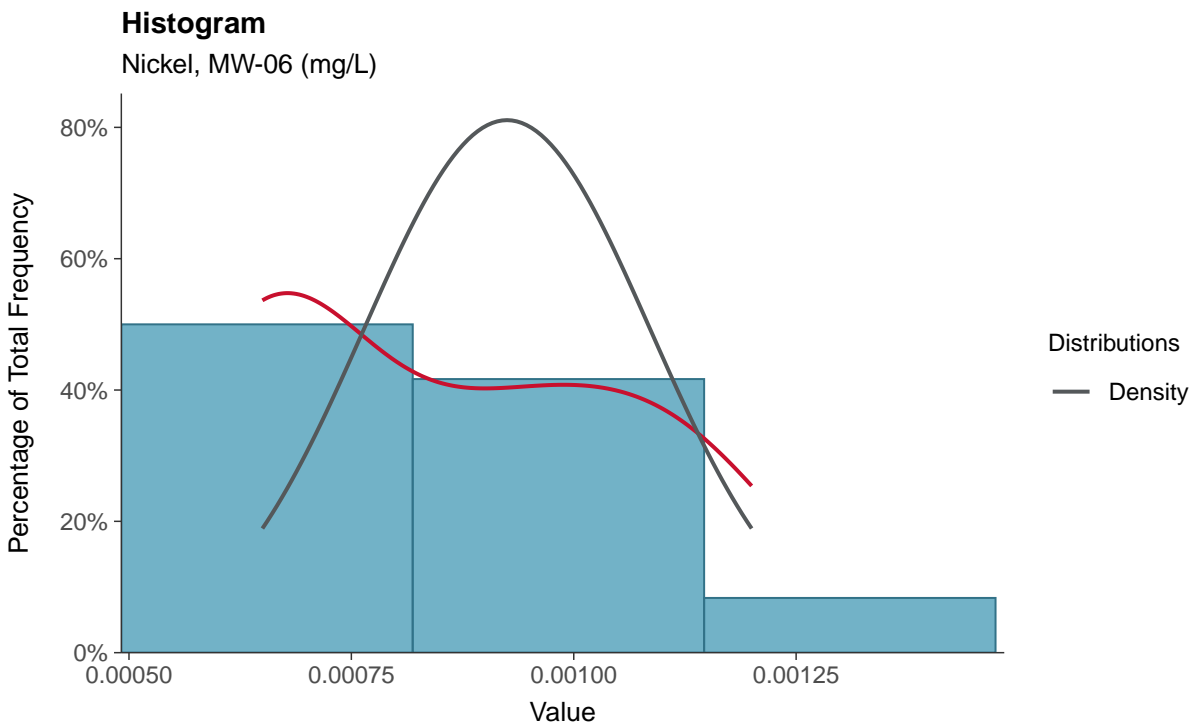
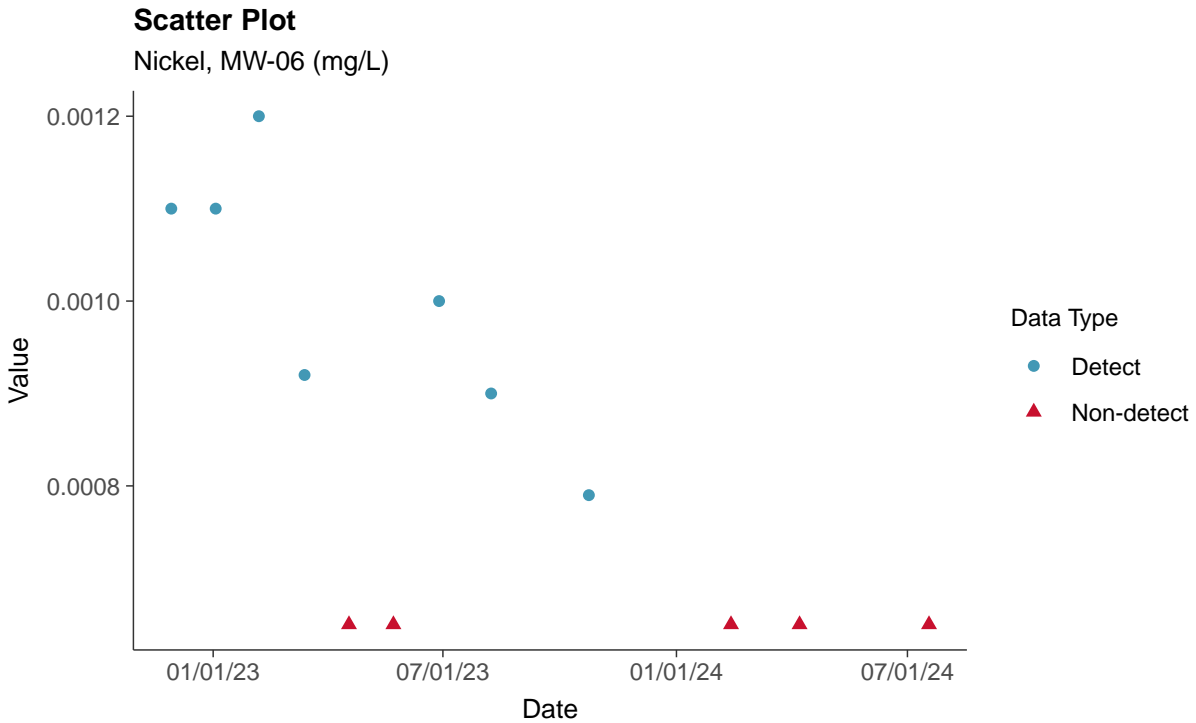
Iron, MW-06 (mg/L)





### Part 115: Nickel, MW-06

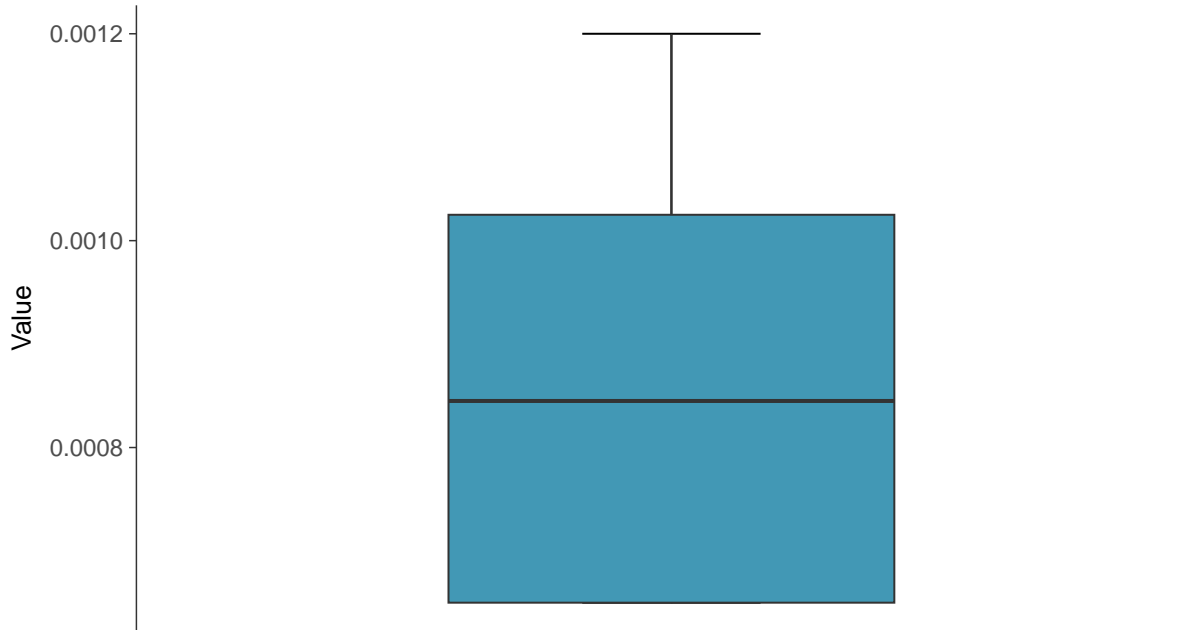
ID: 16\_1\_6\_119





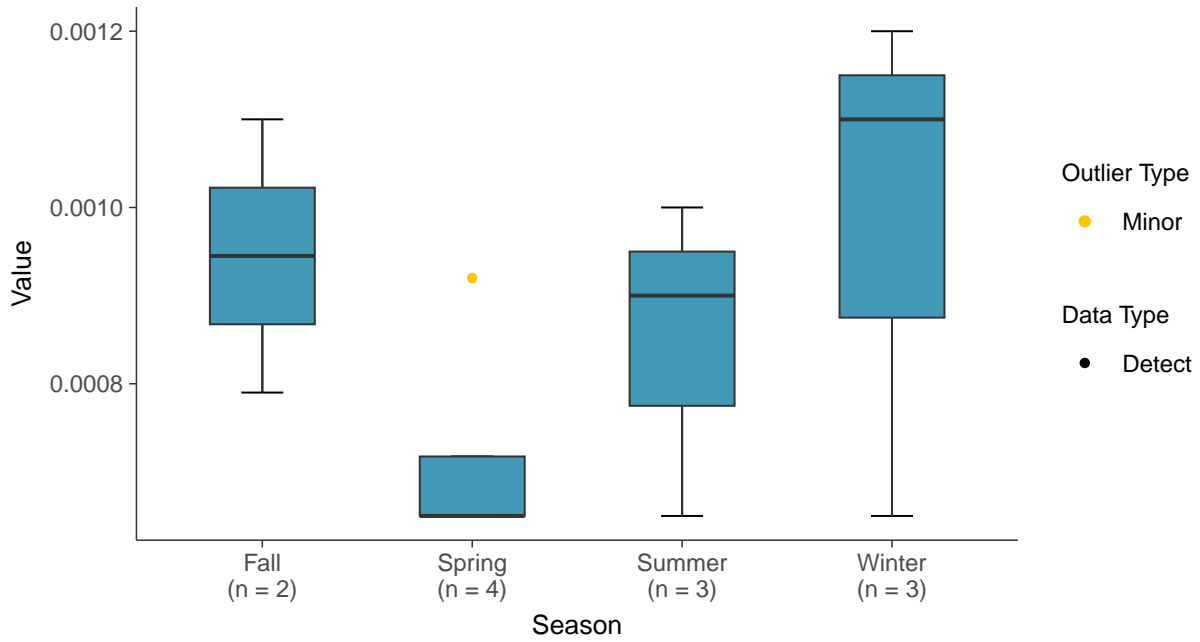
### Boxplot

Nickel, MW-06 (mg/L)



### Boxplot by Season

Nickel, MW-06 (mg/L)

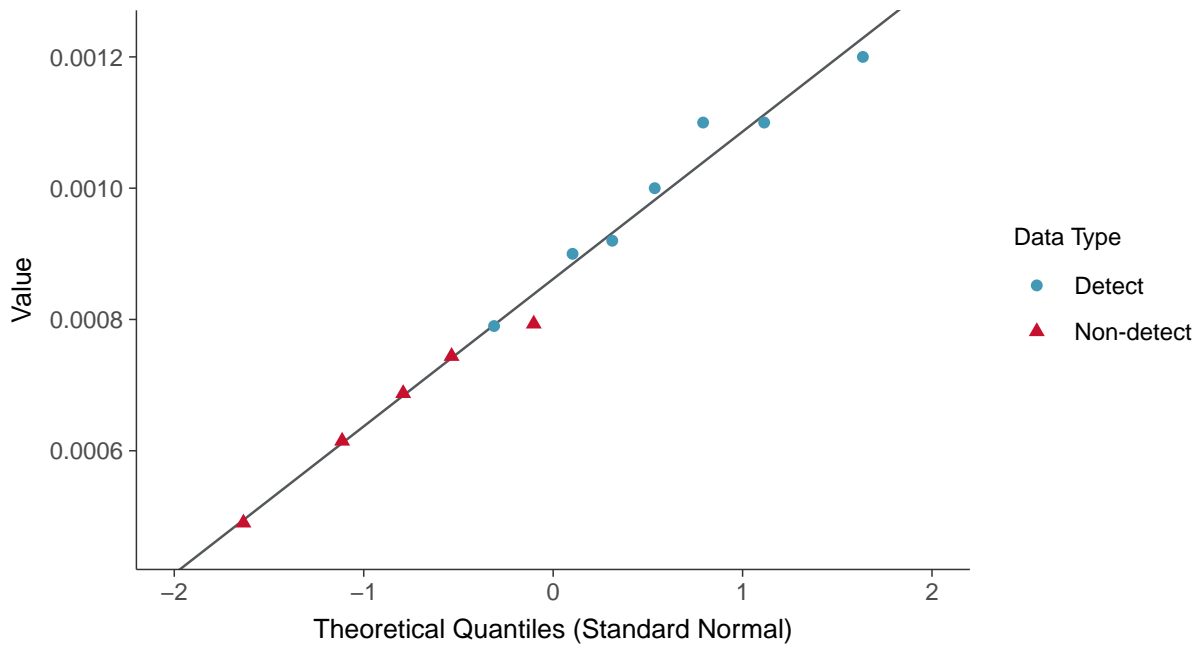






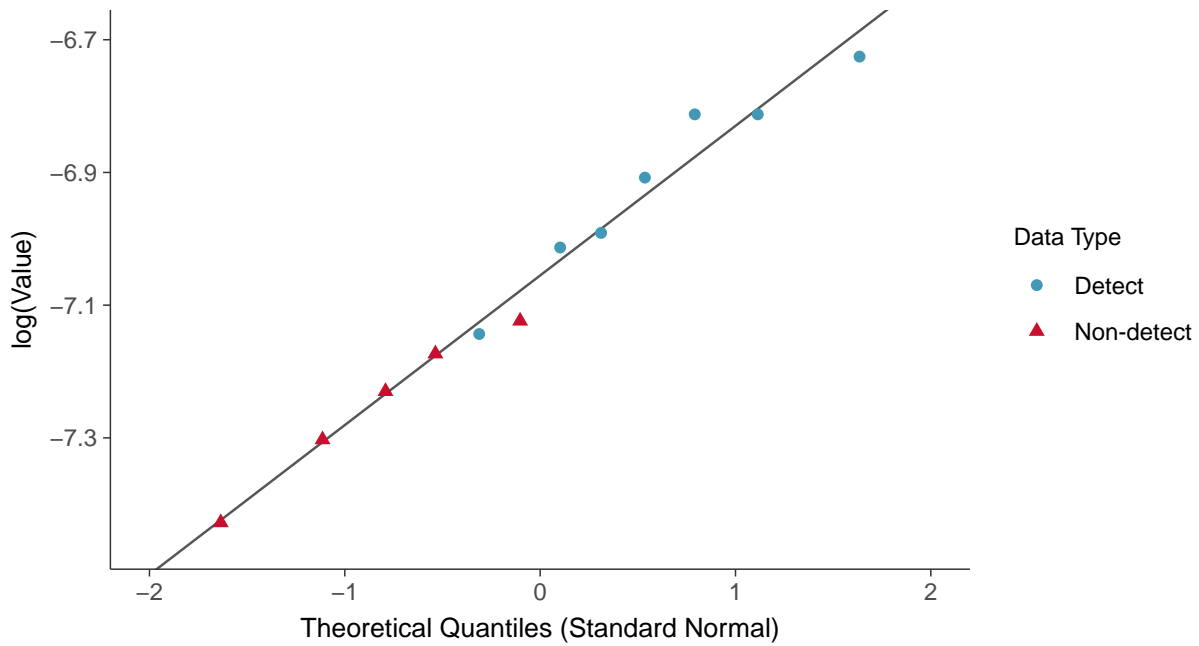
### Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-06 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

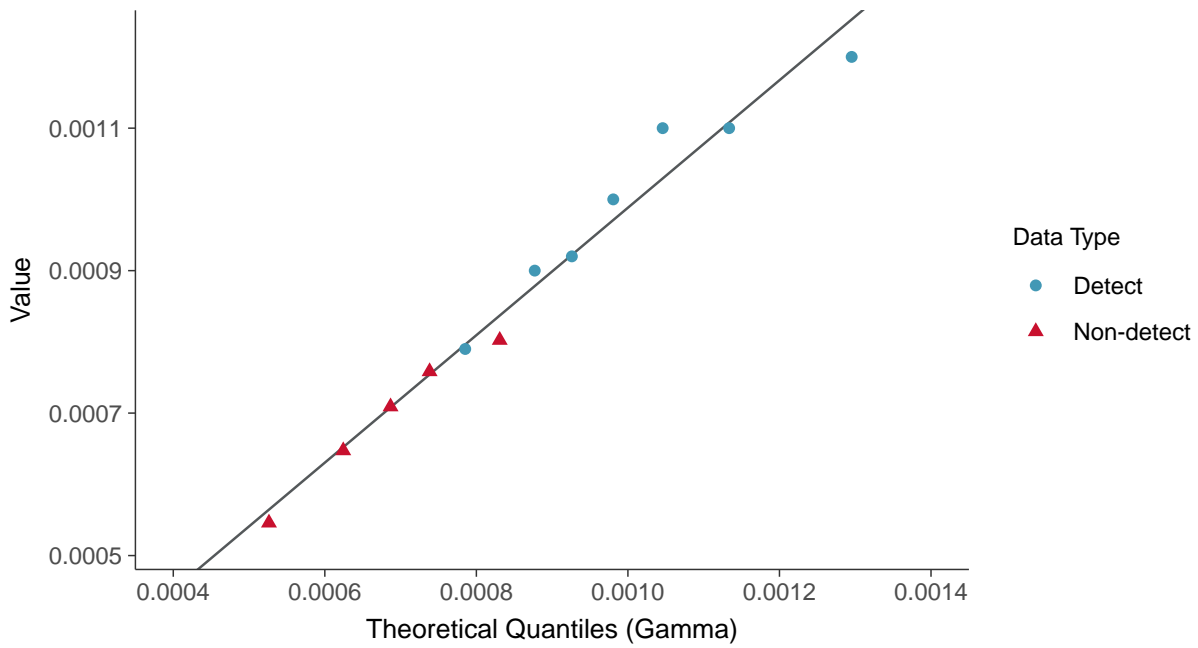
Nickel, MW-06 (mg/L)





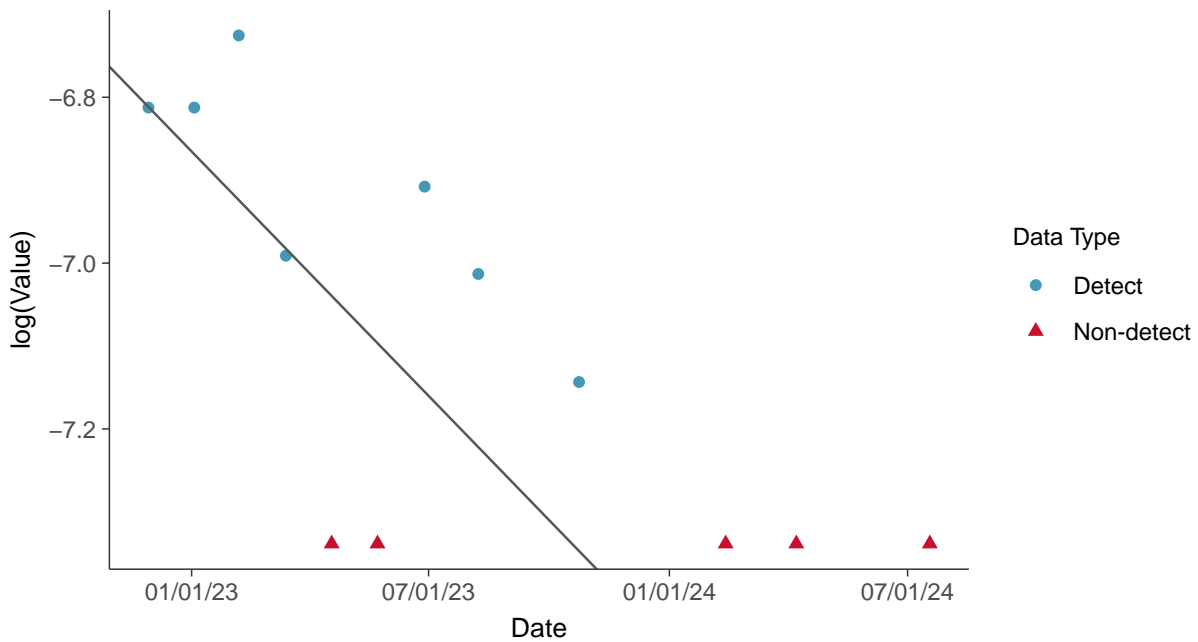
### Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-06 (mg/L)



### Trend Regression: Lognormal MLE

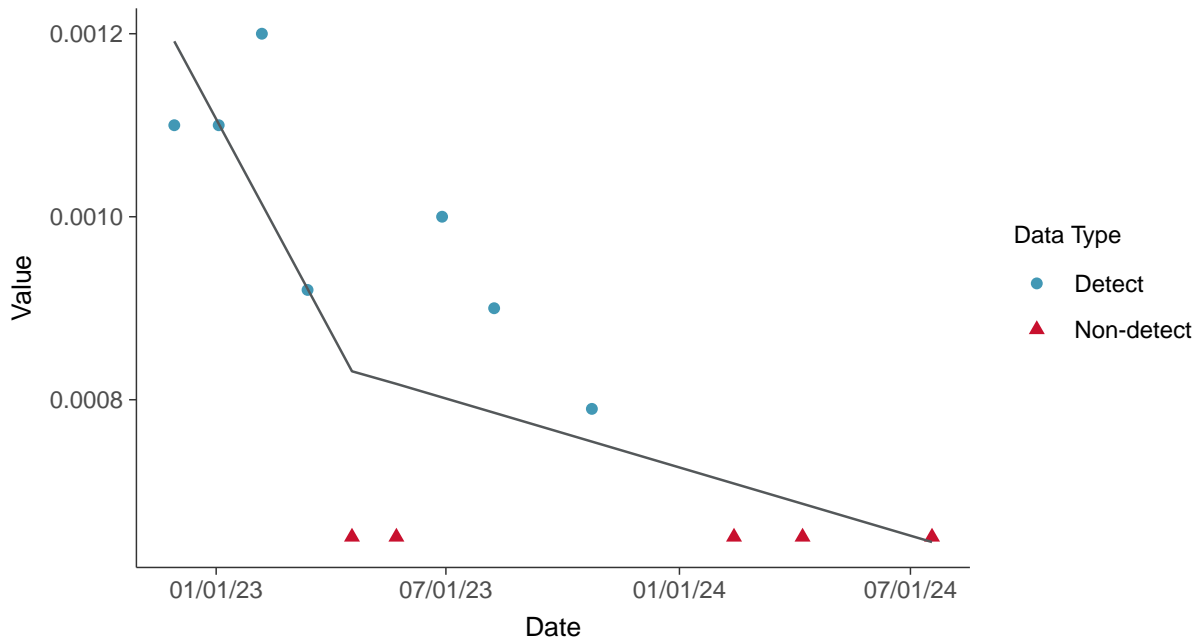
Nickel, MW-06 (mg/L)





### Trend Regression: Piecewise Linear-Linear

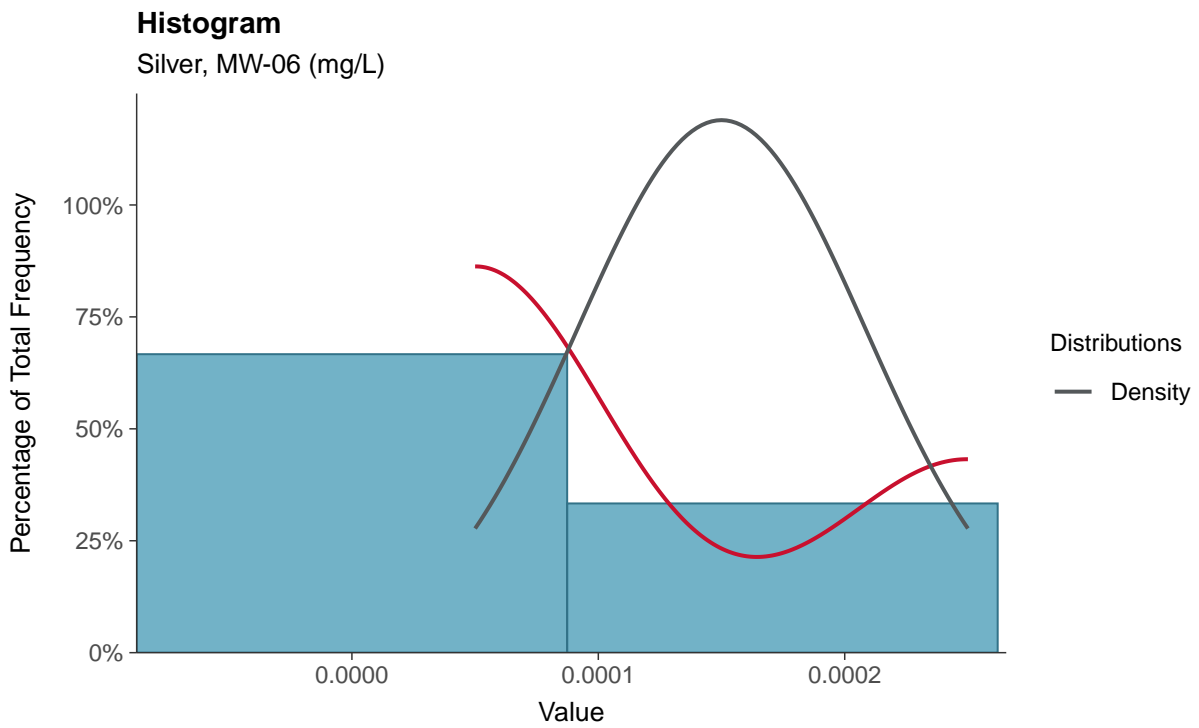
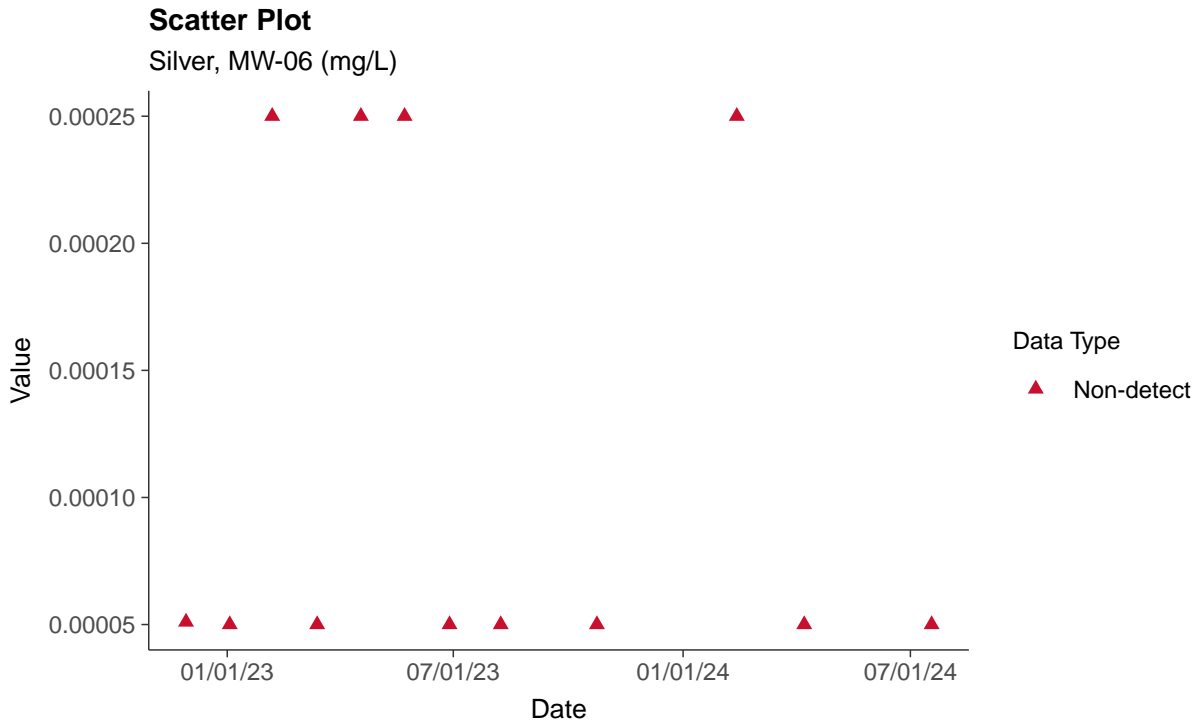
Nickel, MW-06 (mg/L)





### Part 115: Silver, MW-06

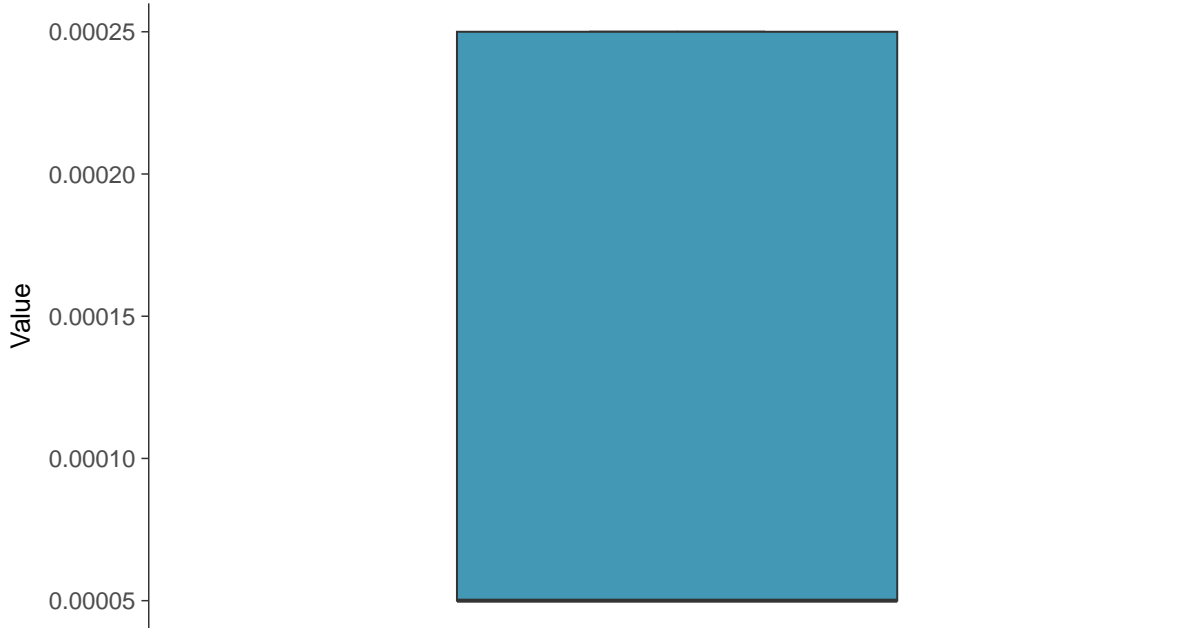
ID: 16\_1\_6\_123





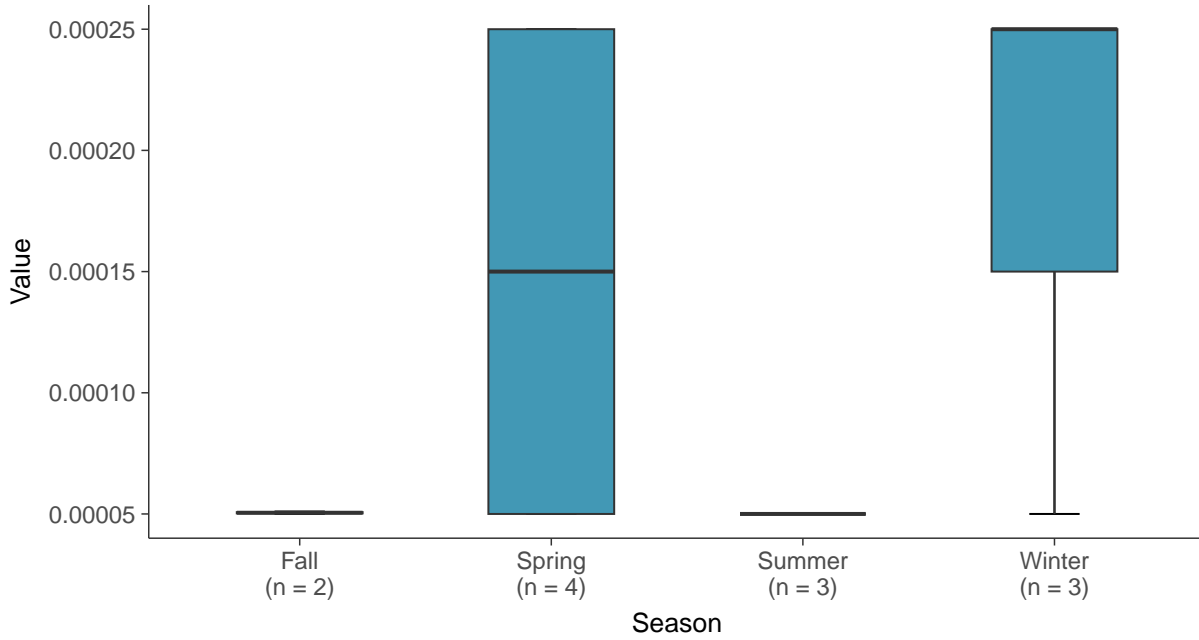
### Boxplot

Silver, MW-06 (mg/L)



### Boxplot by Season

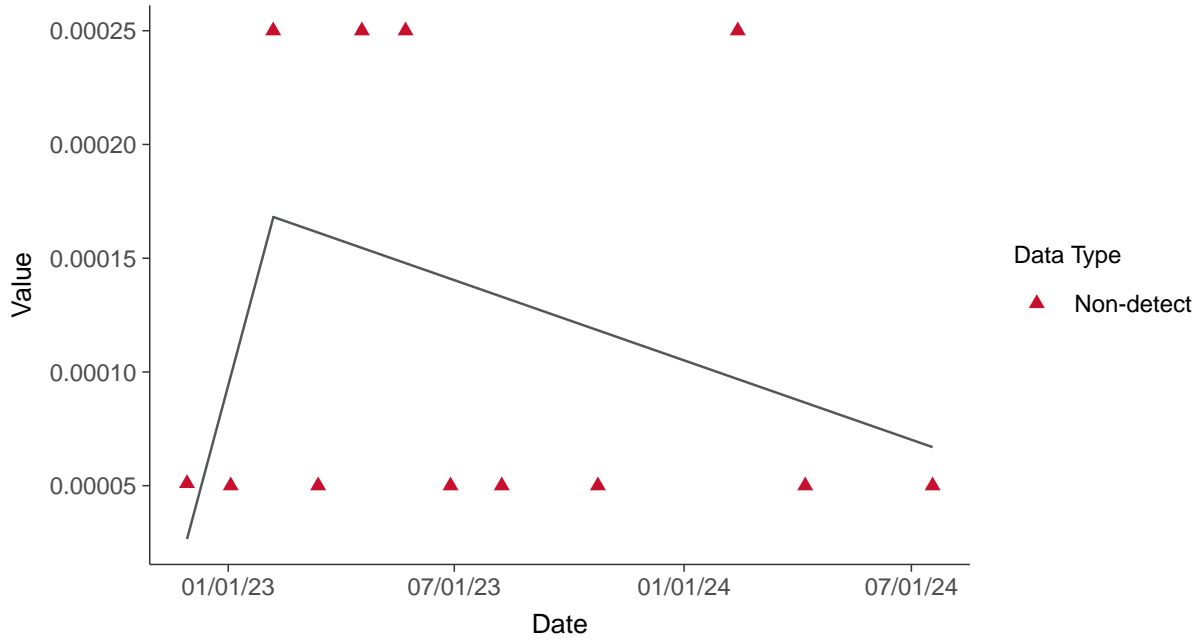
Silver, MW-06 (mg/L)





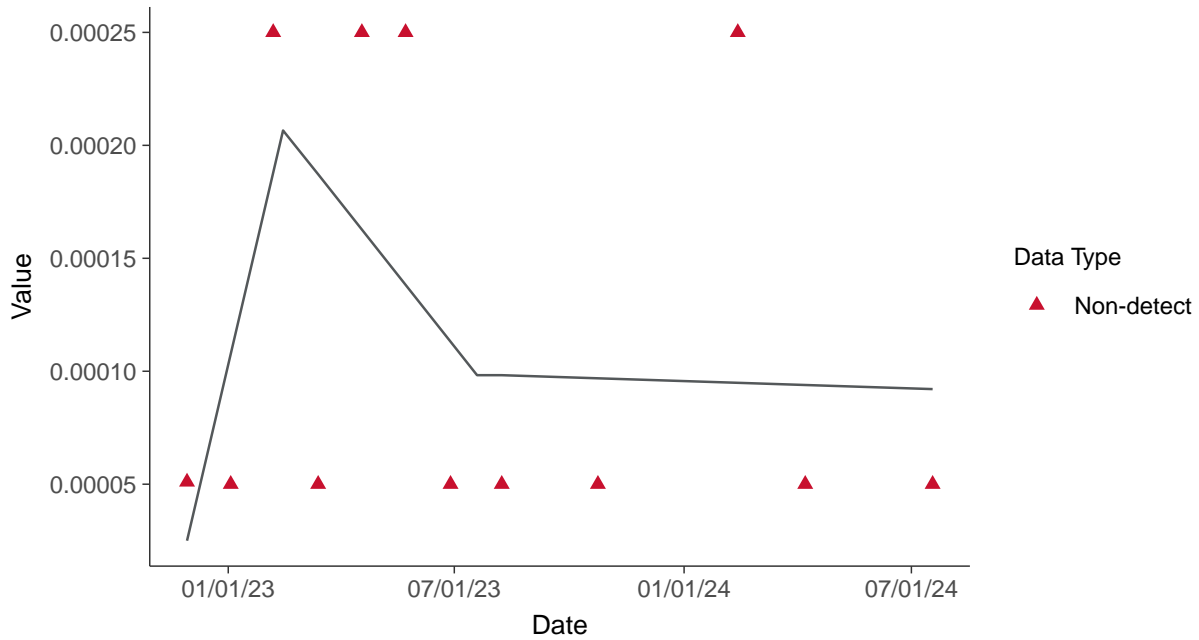
### Trend Regression: Piecewise Linear-Linear

Silver, MW-06 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

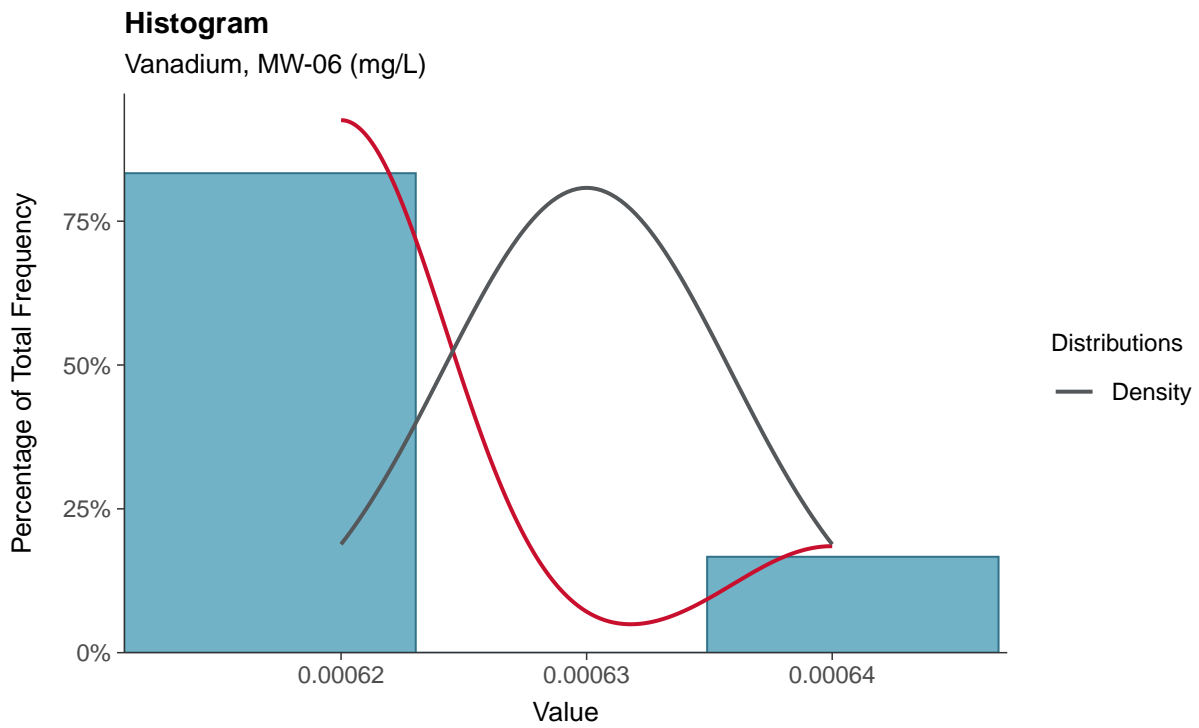
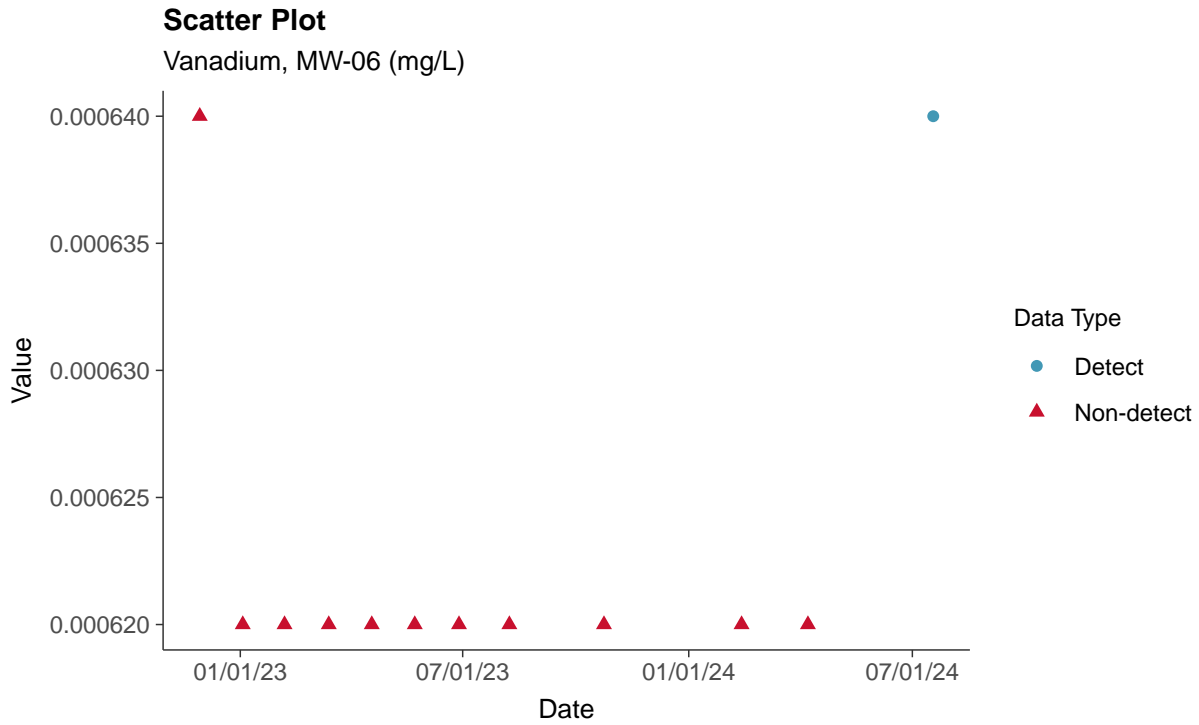
Silver, MW-06 (mg/L)





### Part 115: Vanadium, MW-06

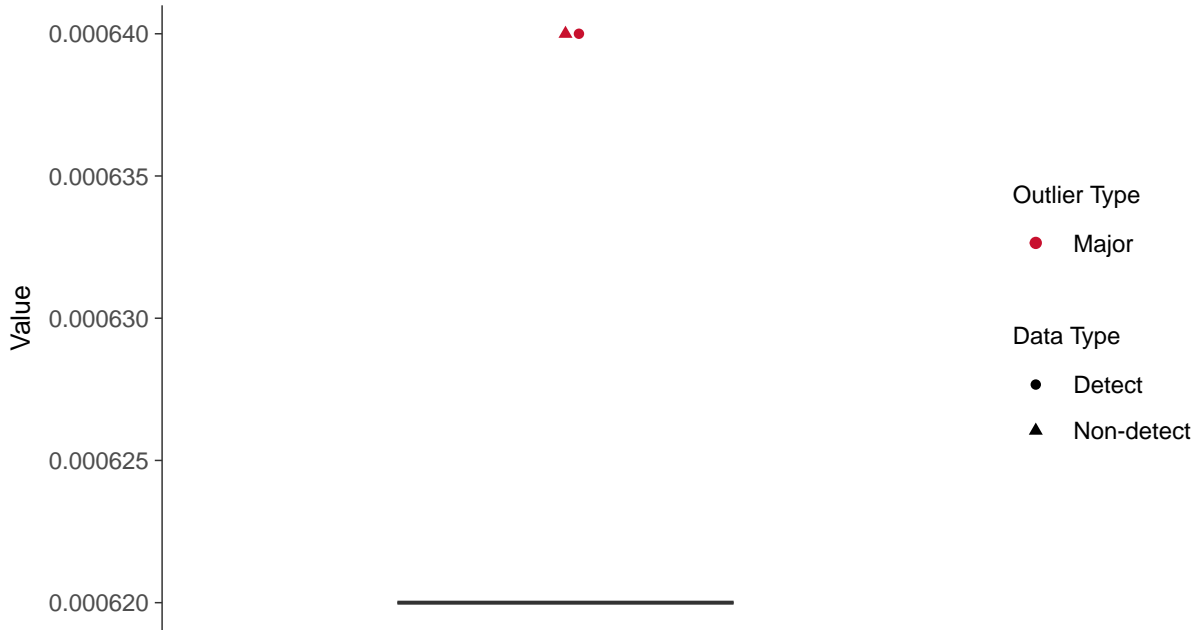
ID: 16\_1\_6\_129





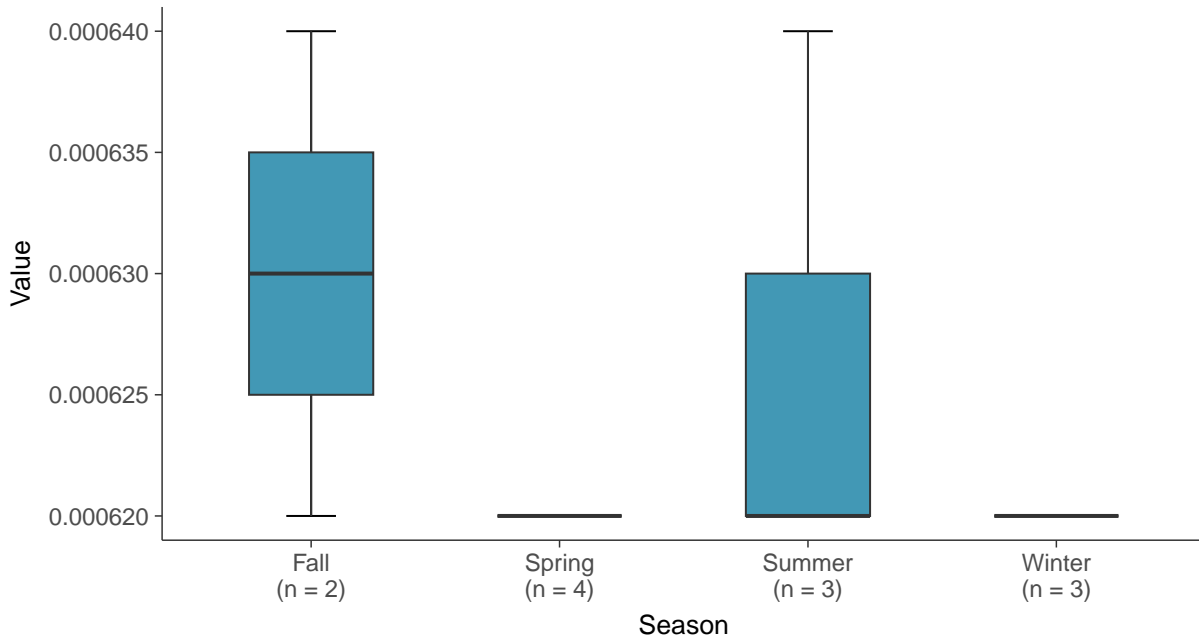
### Boxplot

Vanadium, MW-06 (mg/L)



### Boxplot by Season

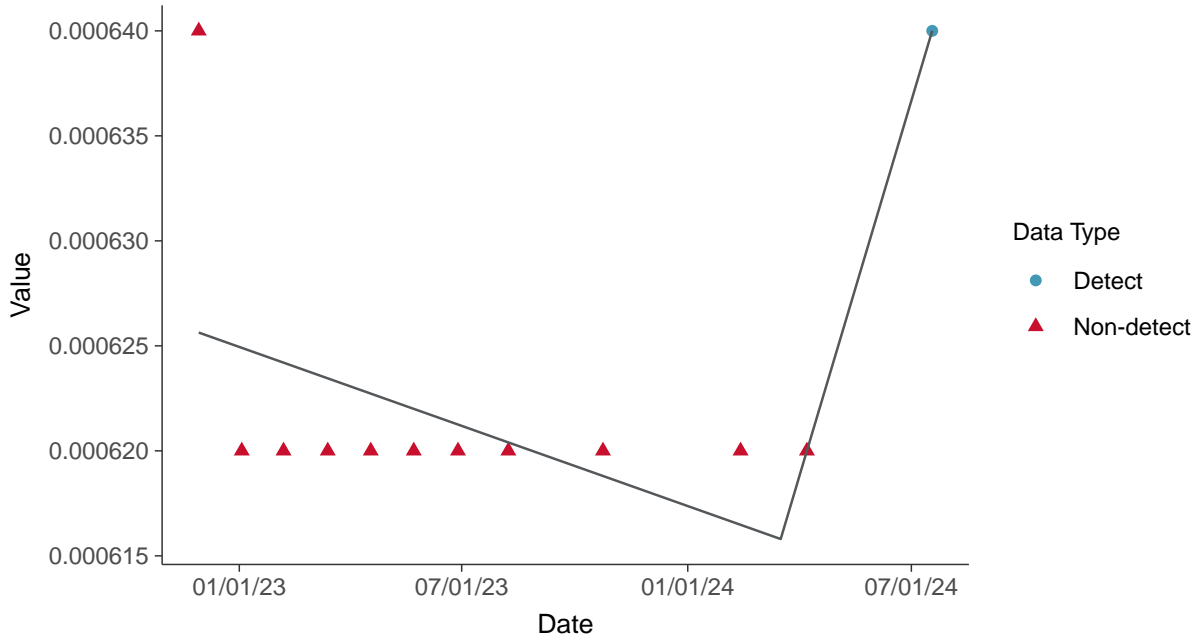
Vanadium, MW-06 (mg/L)



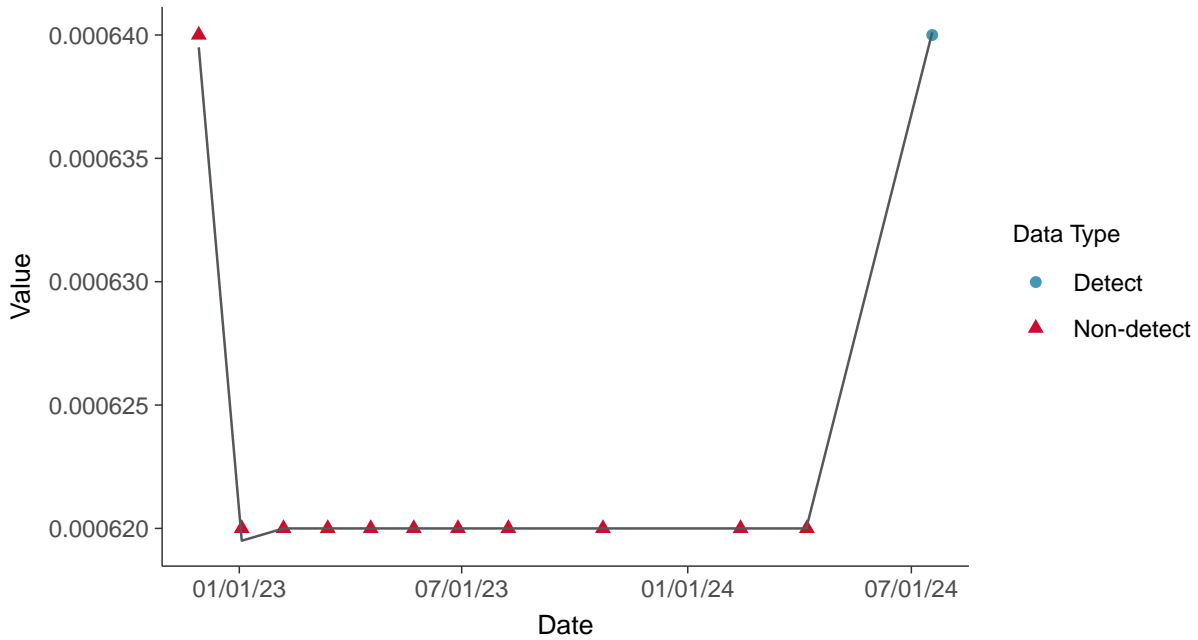




**Trend Regression: Piecewise Linear-Linear**  
Vanadium, MW-06 (mg/L)



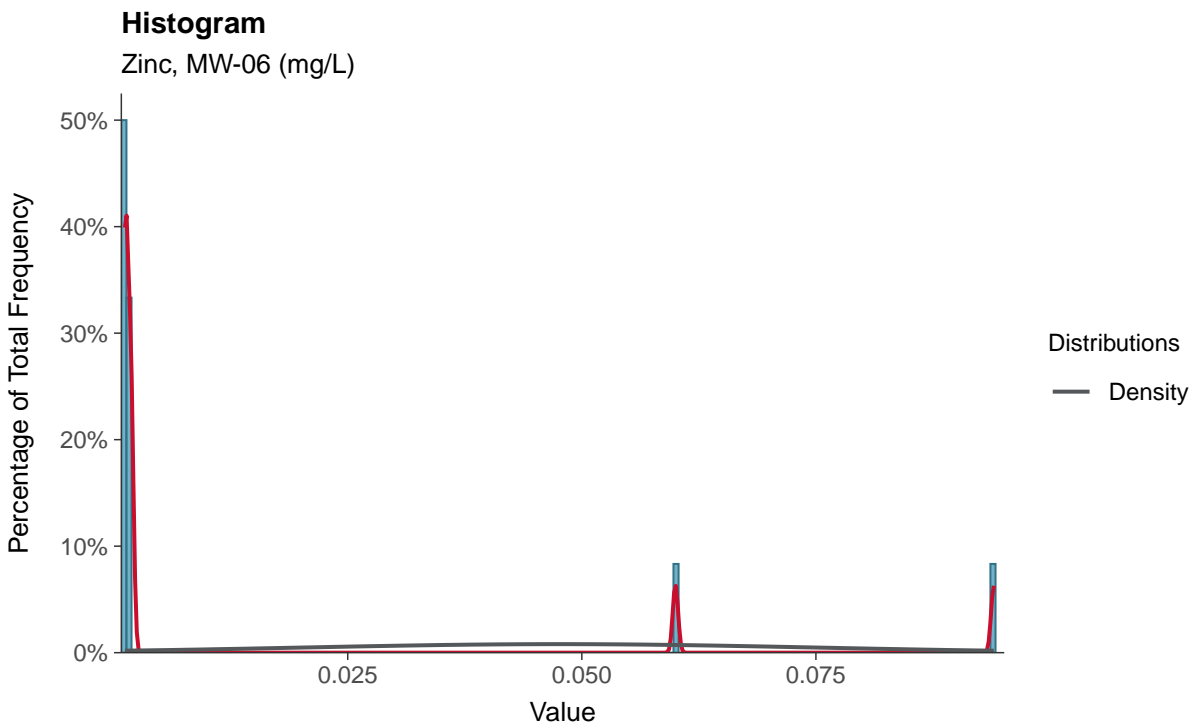
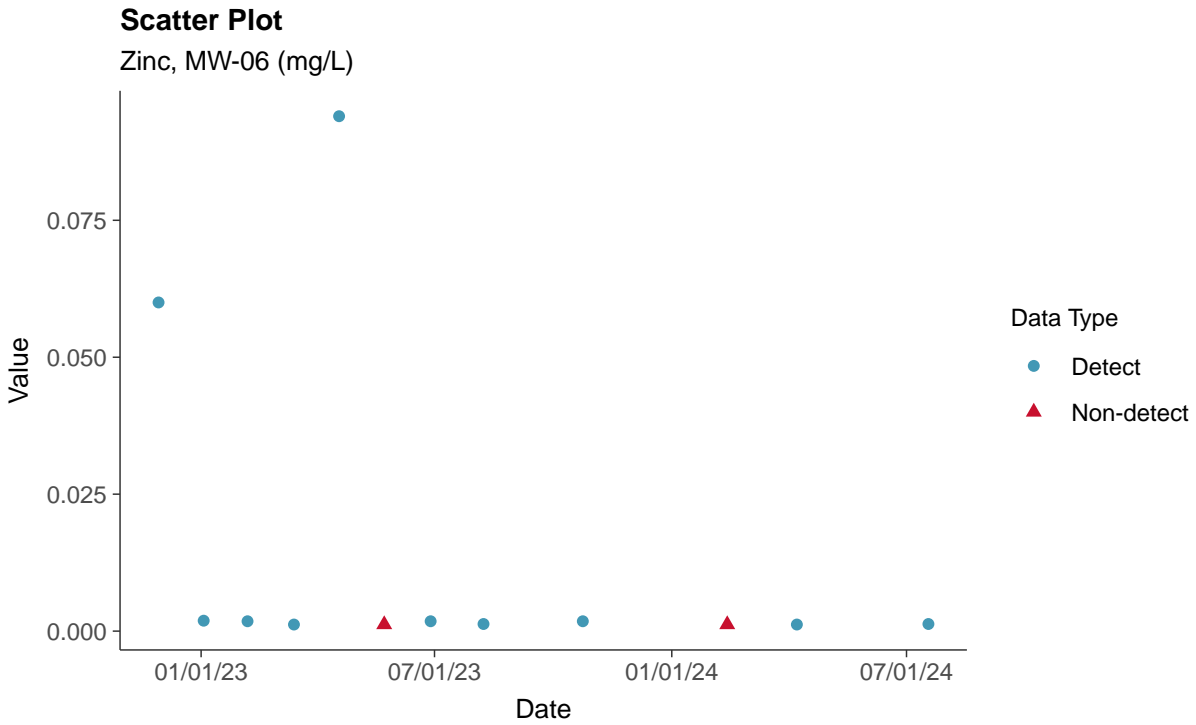
**Trend Regression: Piecewise Linear-Linear-Linear**  
Vanadium, MW-06 (mg/L)





### Part 115: Zinc, MW-06

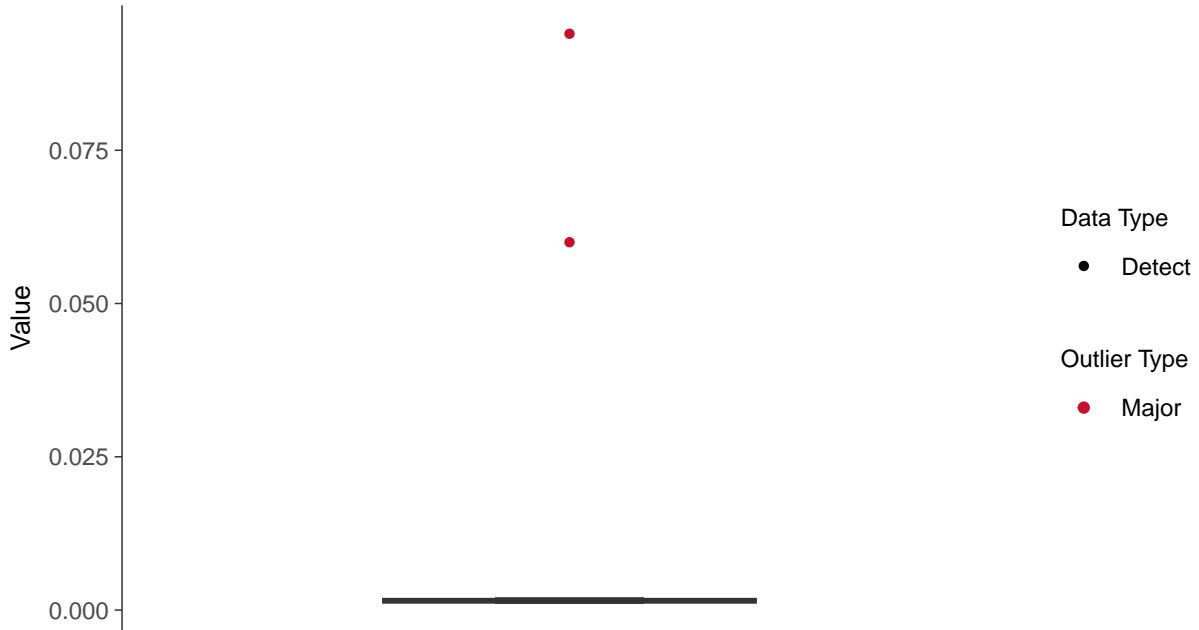
ID: 16\_1\_6\_130





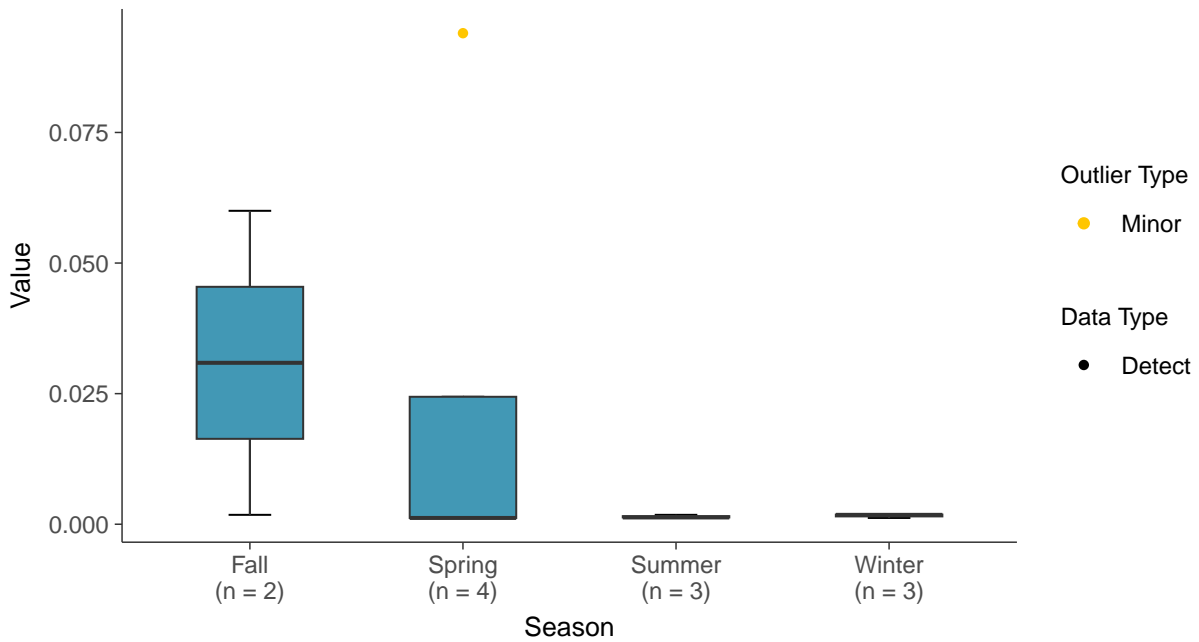
### Boxplot

Zinc, MW-06 (mg/L)



### Boxplot by Season

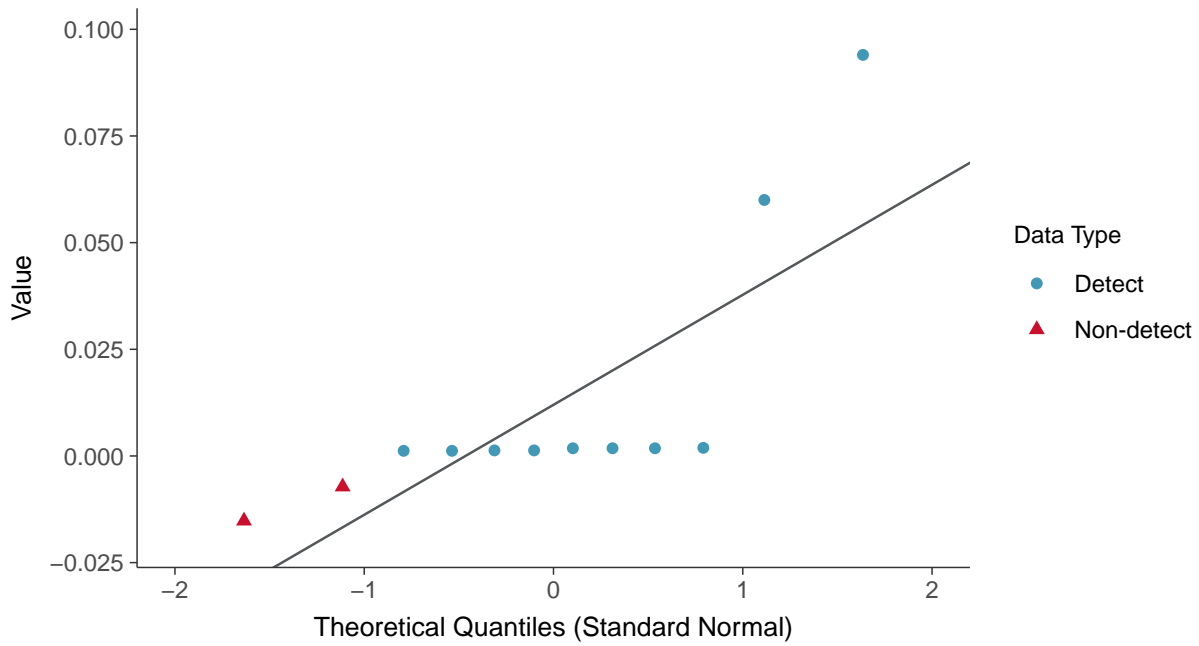
Zinc, MW-06 (mg/L)





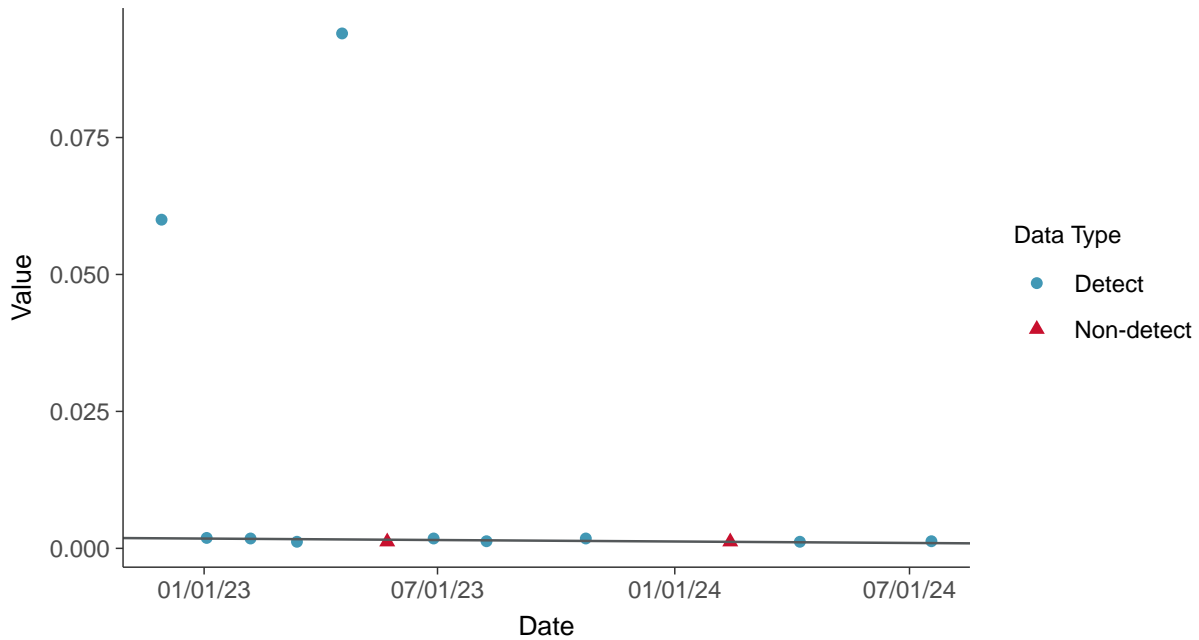
### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-06 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-06 (mg/L)



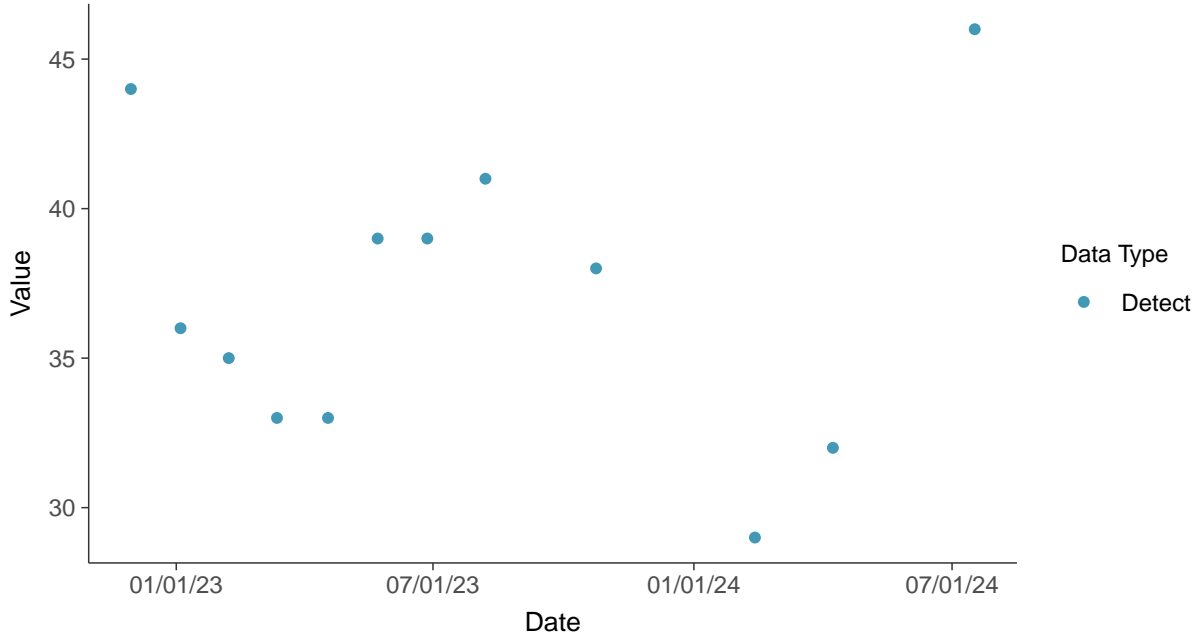


### Additional Parameters: Total Suspended Solids, MW-07

ID: 17\_1\_3\_127

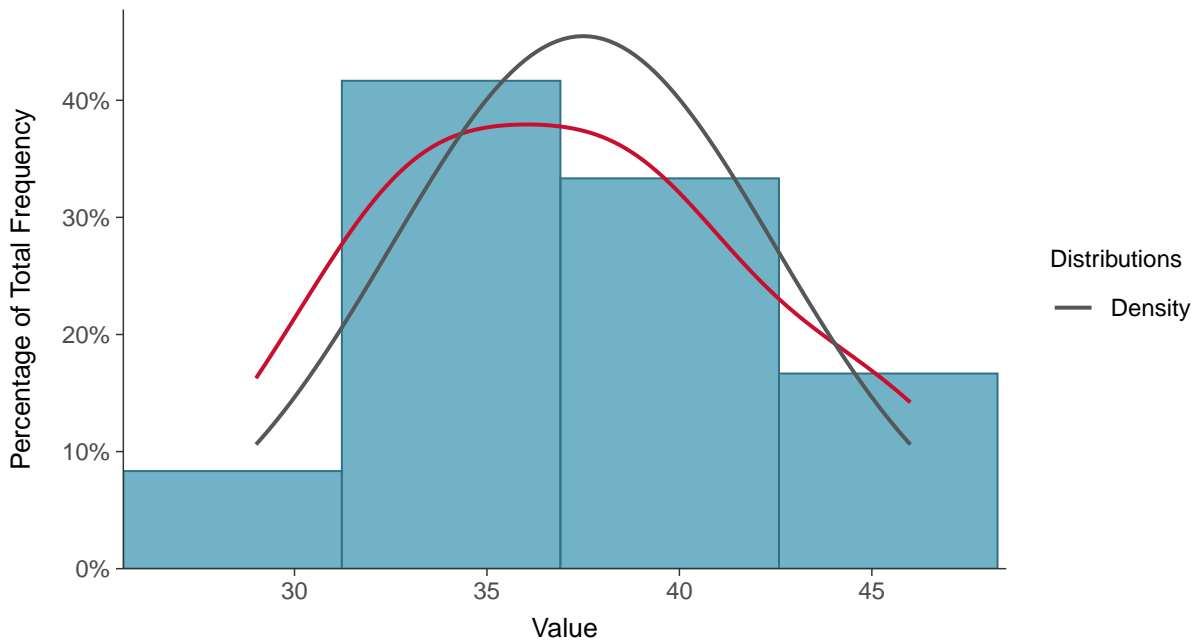
#### Scatter Plot

Total Suspended Solids, MW-07 (mg/L)



#### Histogram

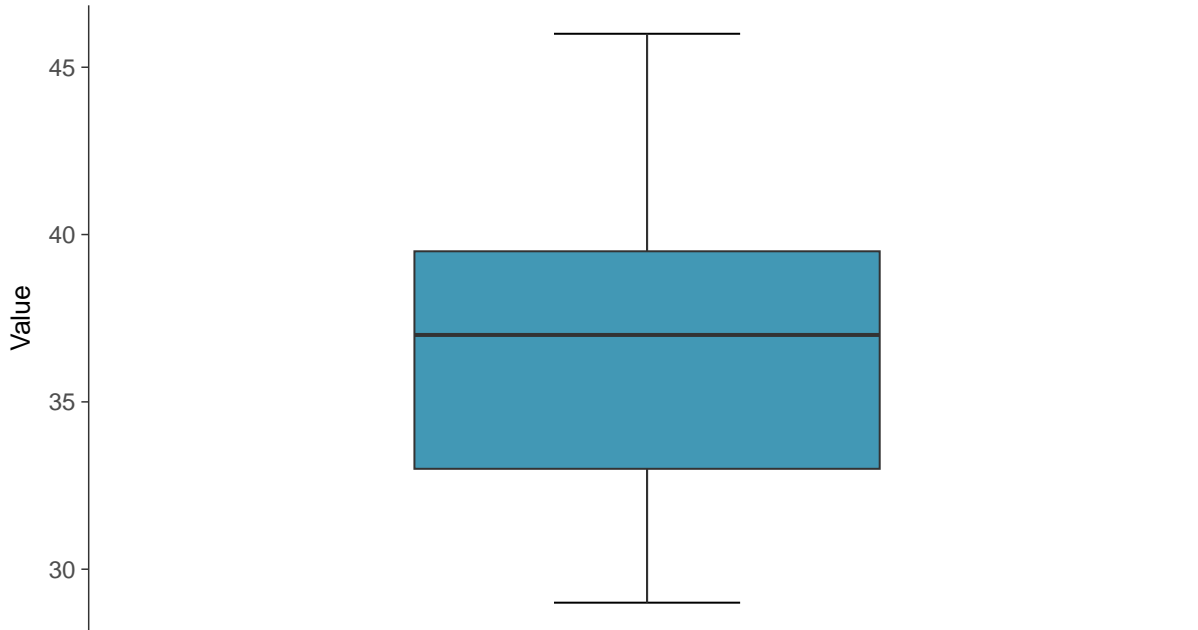
Total Suspended Solids, MW-07 (mg/L)





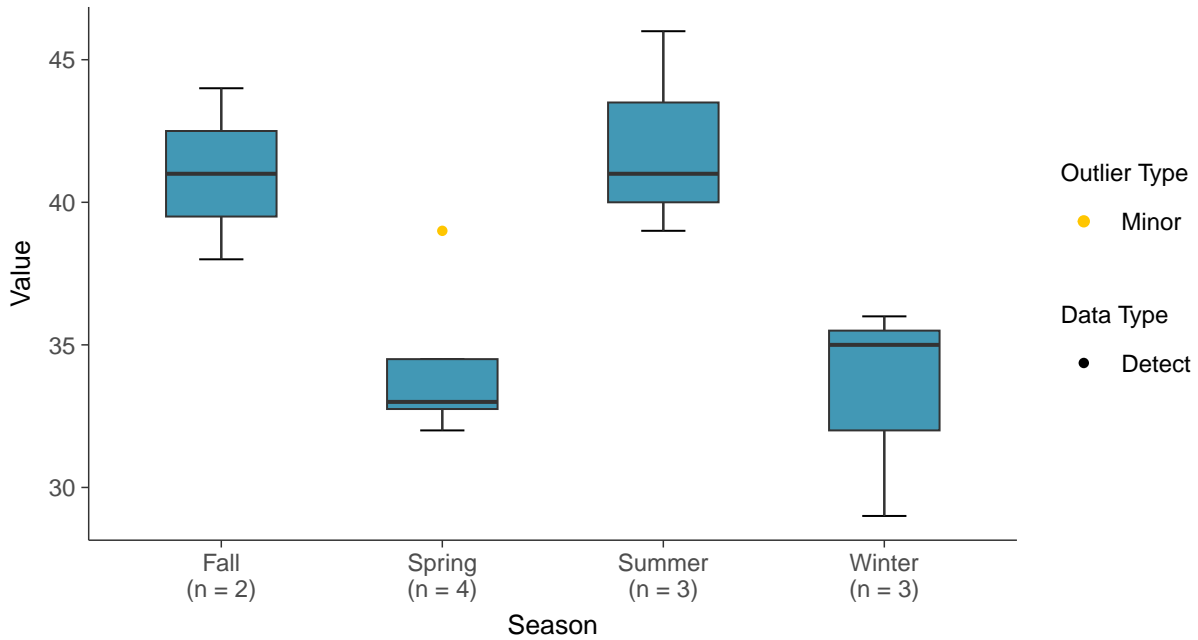
### Boxplot

Total Suspended Solids, MW-07 (mg/L)



### Boxplot by Season

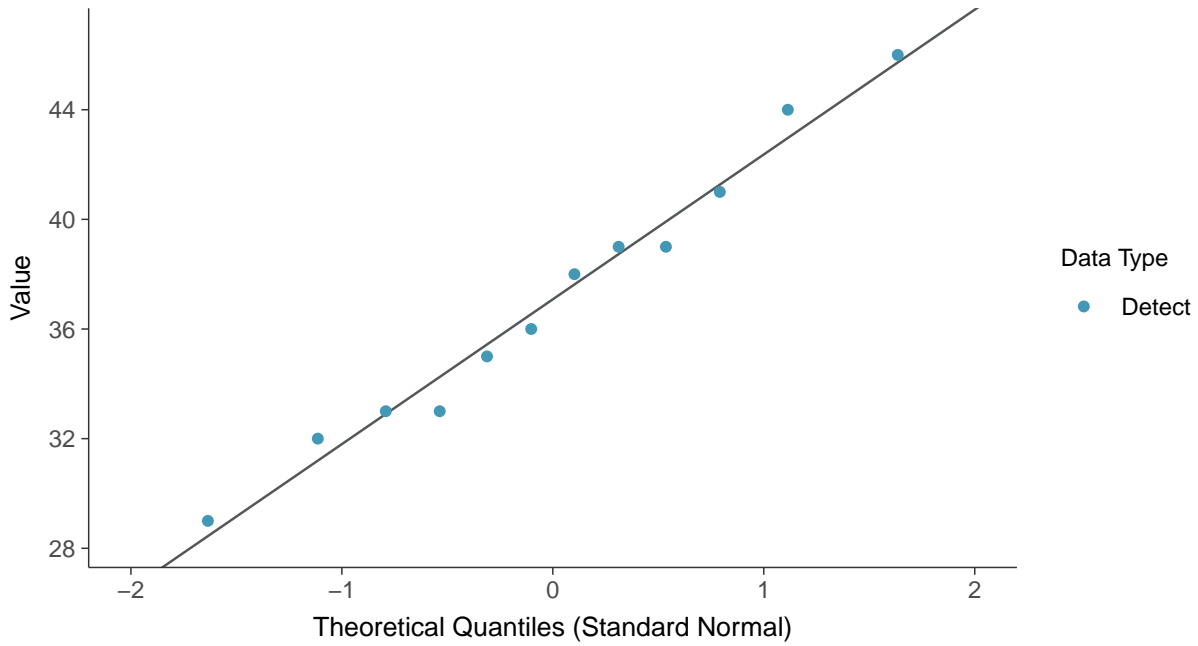
Total Suspended Solids, MW-07 (mg/L)





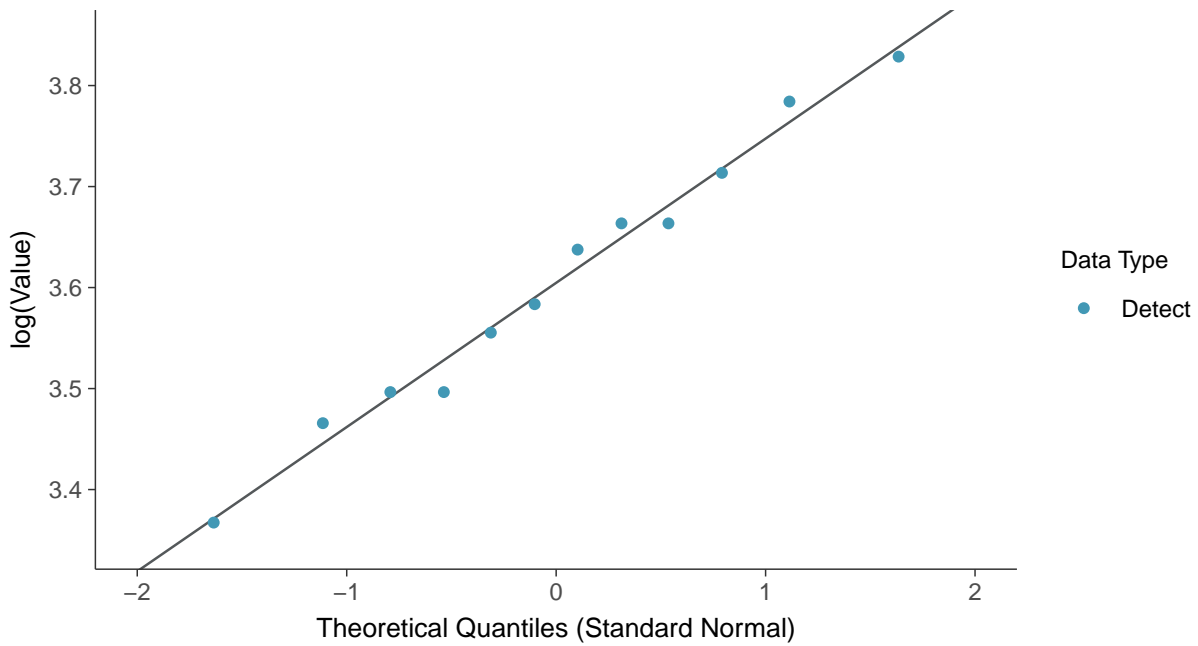
### Normal Q-Q plot

Total Suspended Solids, MW-07 (mg/L)



### Lognormal Q-Q plot

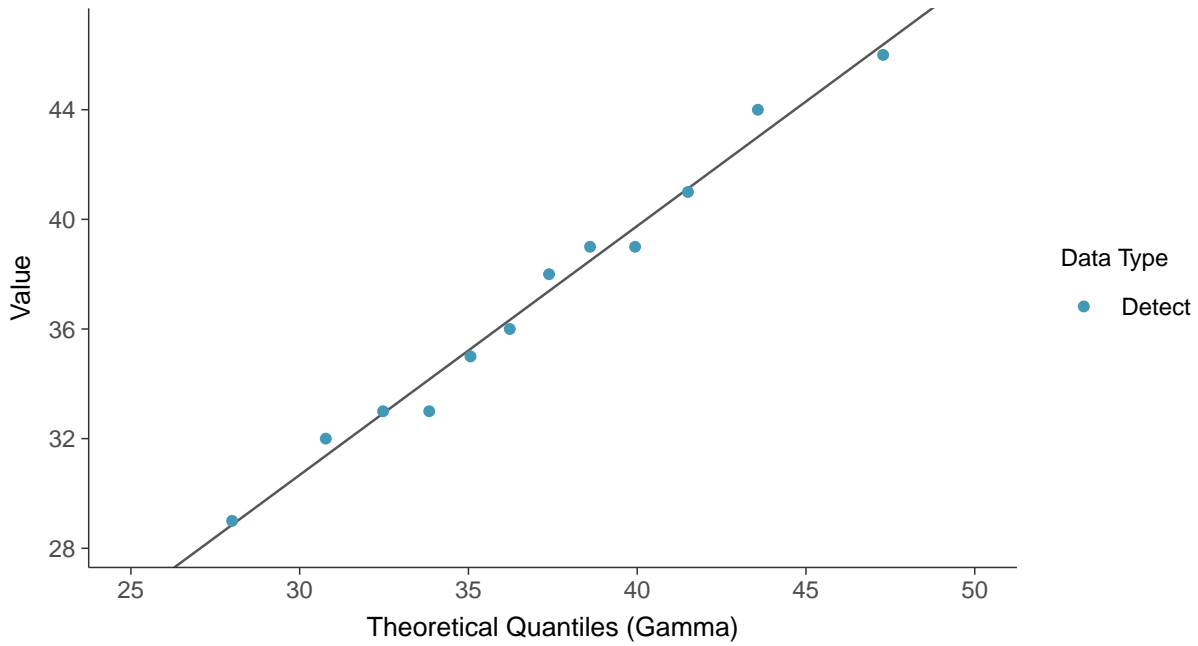
Total Suspended Solids, MW-07 (mg/L)





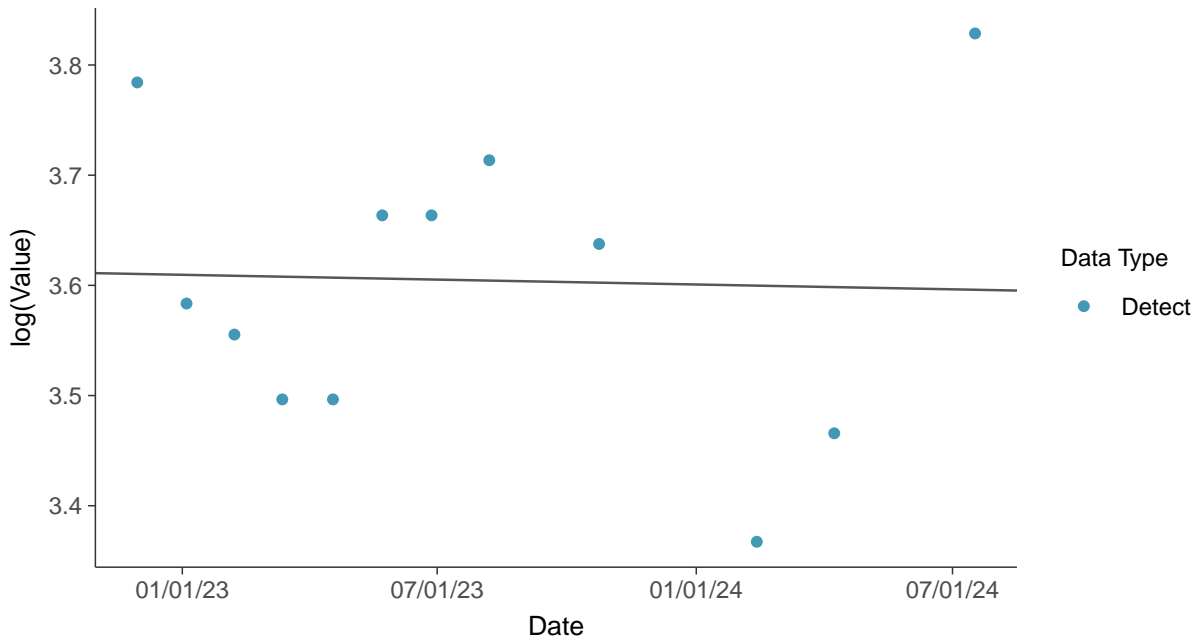
### Gamma Q-Q plot

Total Suspended Solids, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

Total Suspended Solids, MW-07 (mg/L)





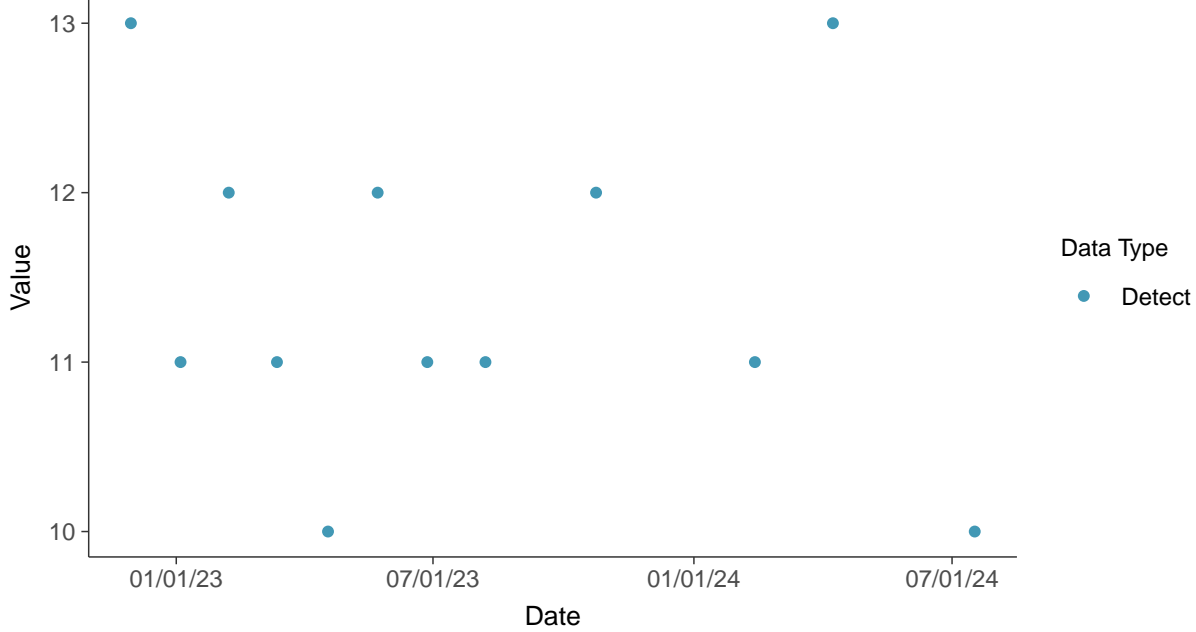


### Appendix III: Boron, MW-07

ID: 17\_1\_4\_105

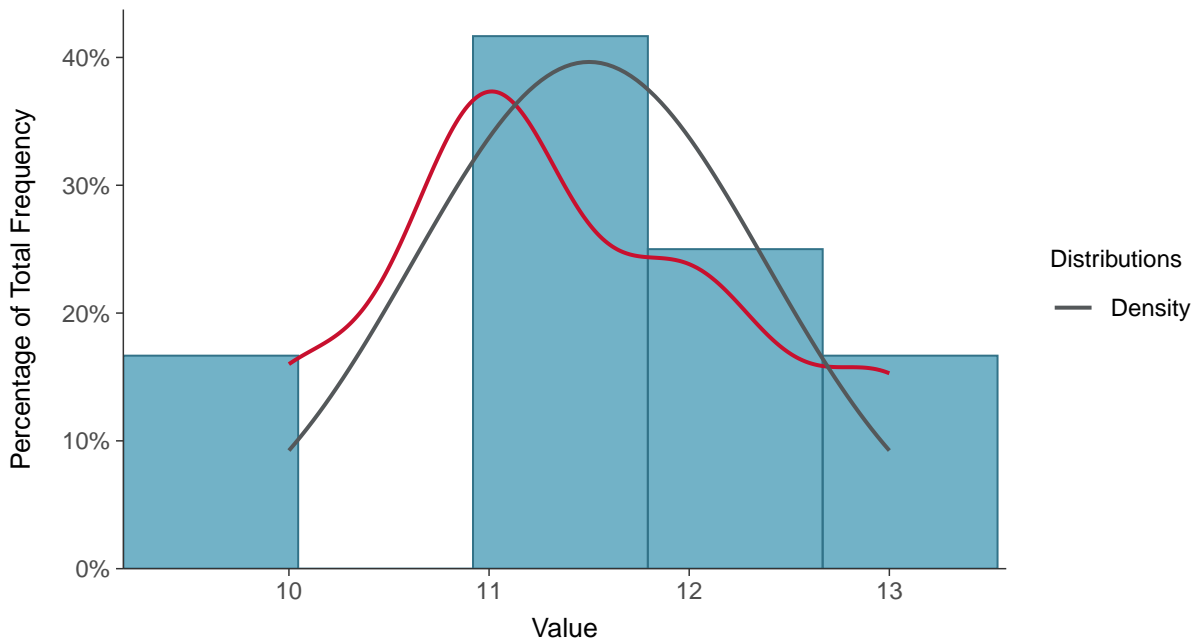
#### Scatter Plot

Boron, MW-07 (mg/L)



#### Histogram

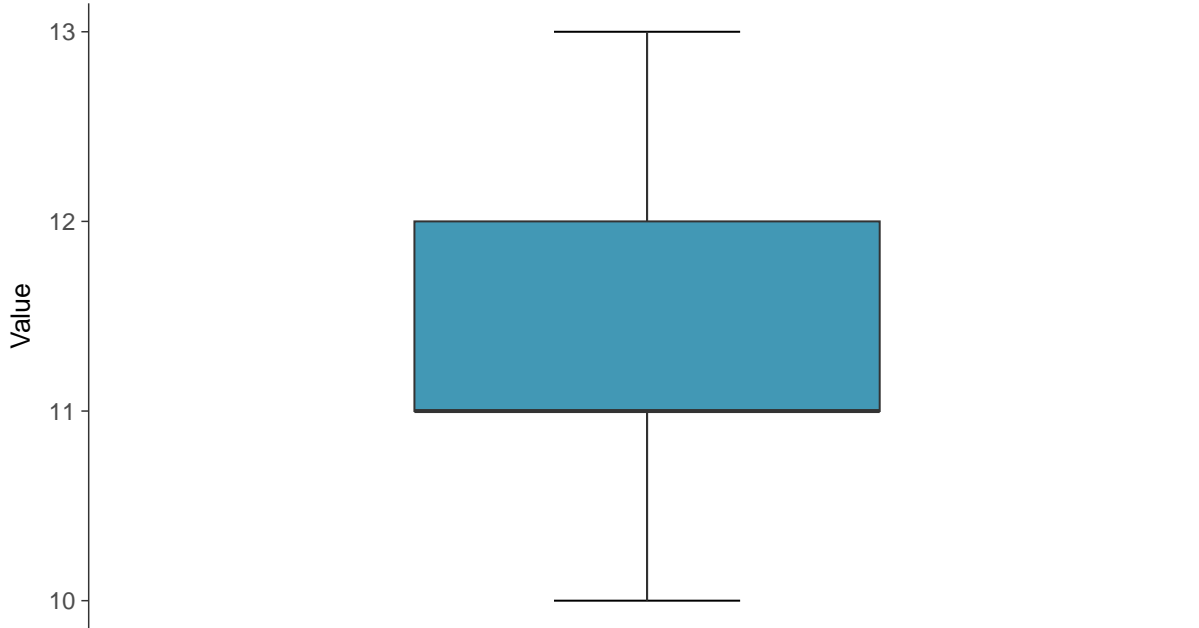
Boron, MW-07 (mg/L)





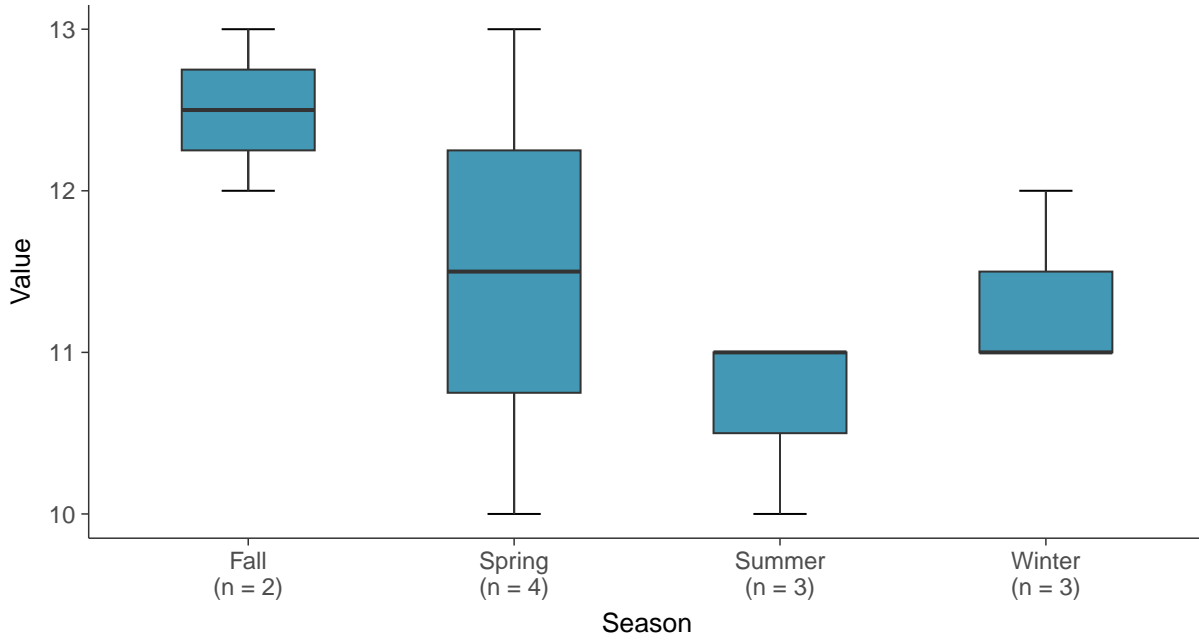
### Boxplot

Boron, MW-07 (mg/L)



### Boxplot by Season

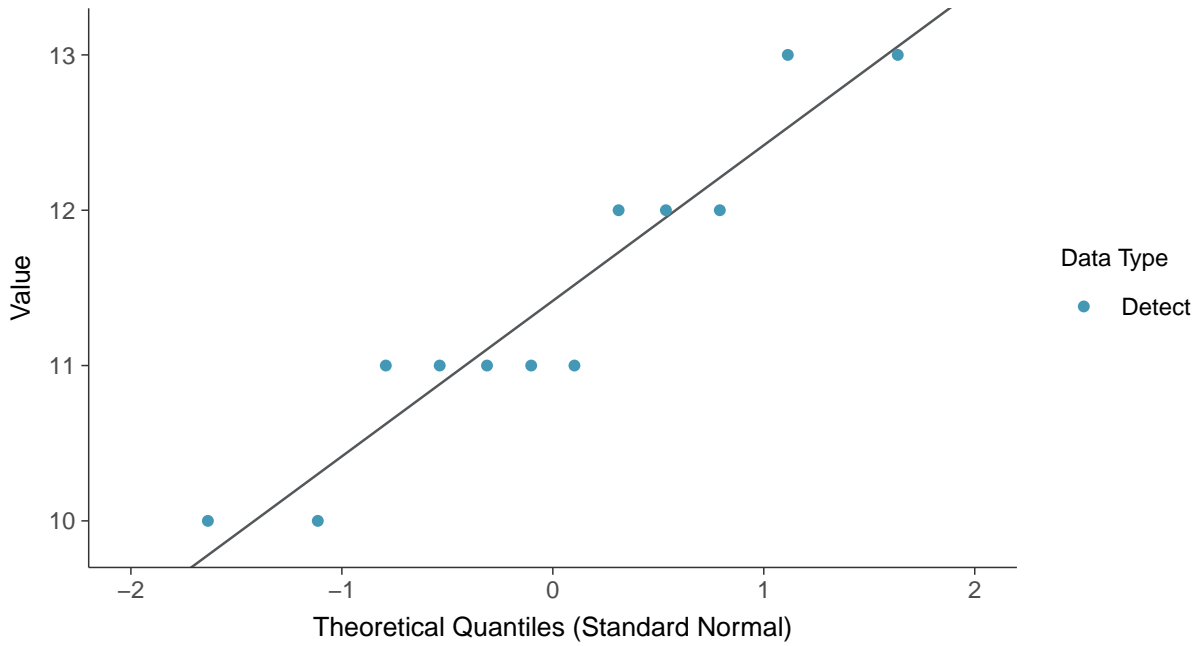
Boron, MW-07 (mg/L)





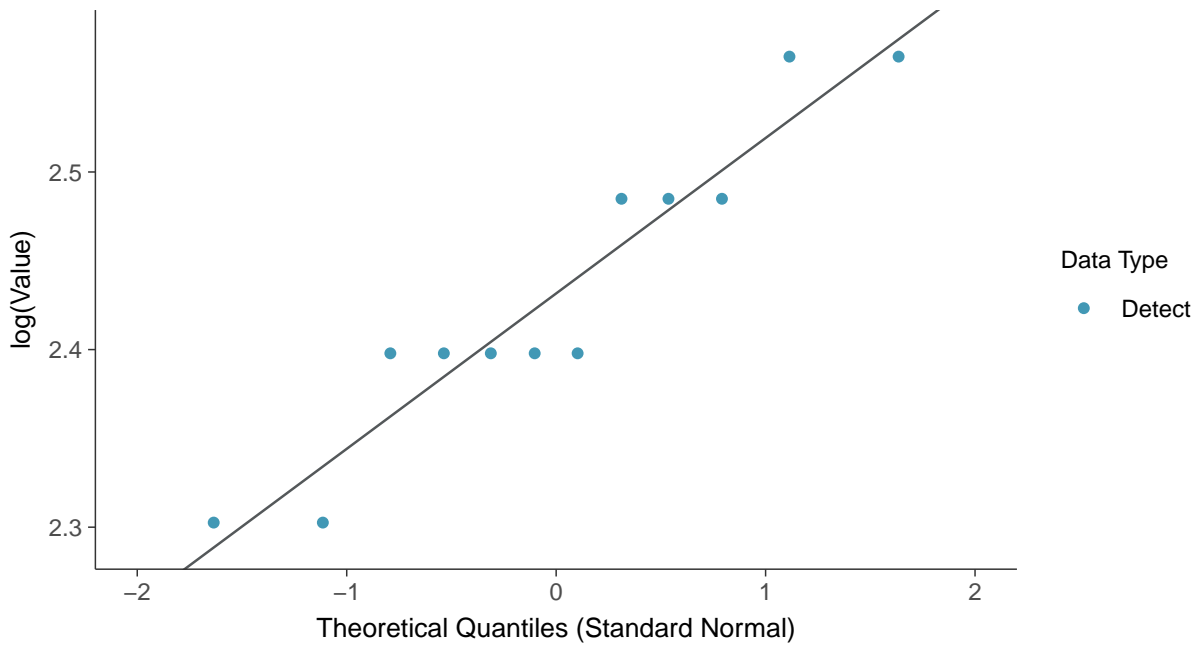
### Normal Q-Q plot

Boron, MW-07 (mg/L)



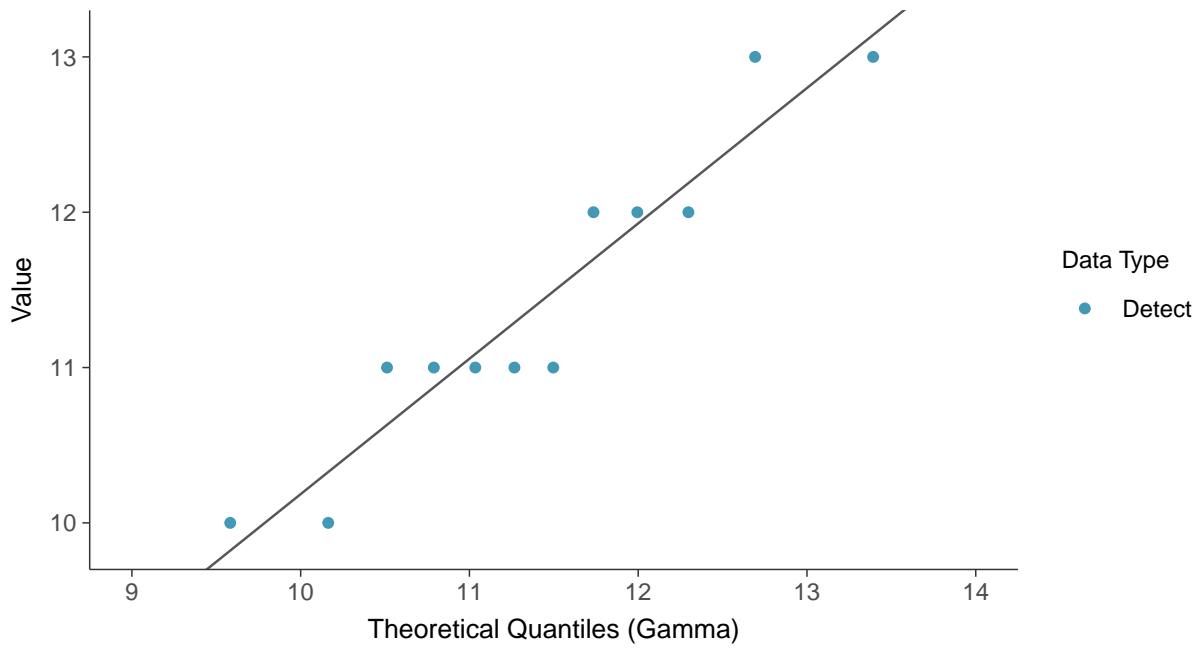
### Lognormal Q-Q plot

Boron, MW-07 (mg/L)

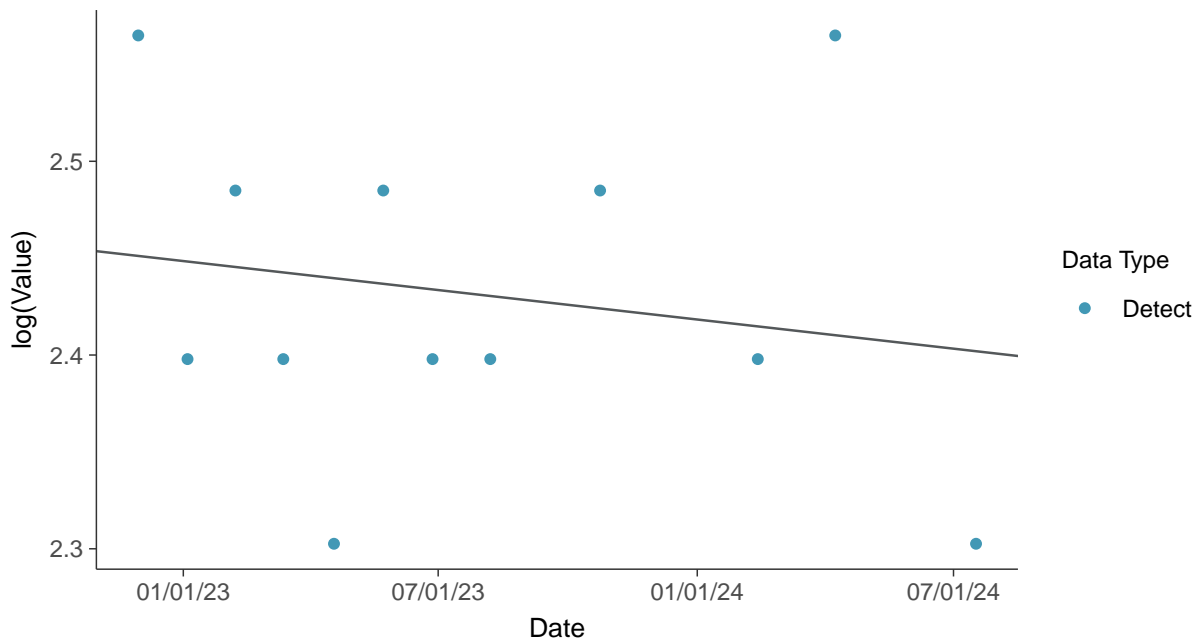




**Gamma Q-Q plot**  
Boron, MW-07 (mg/L)



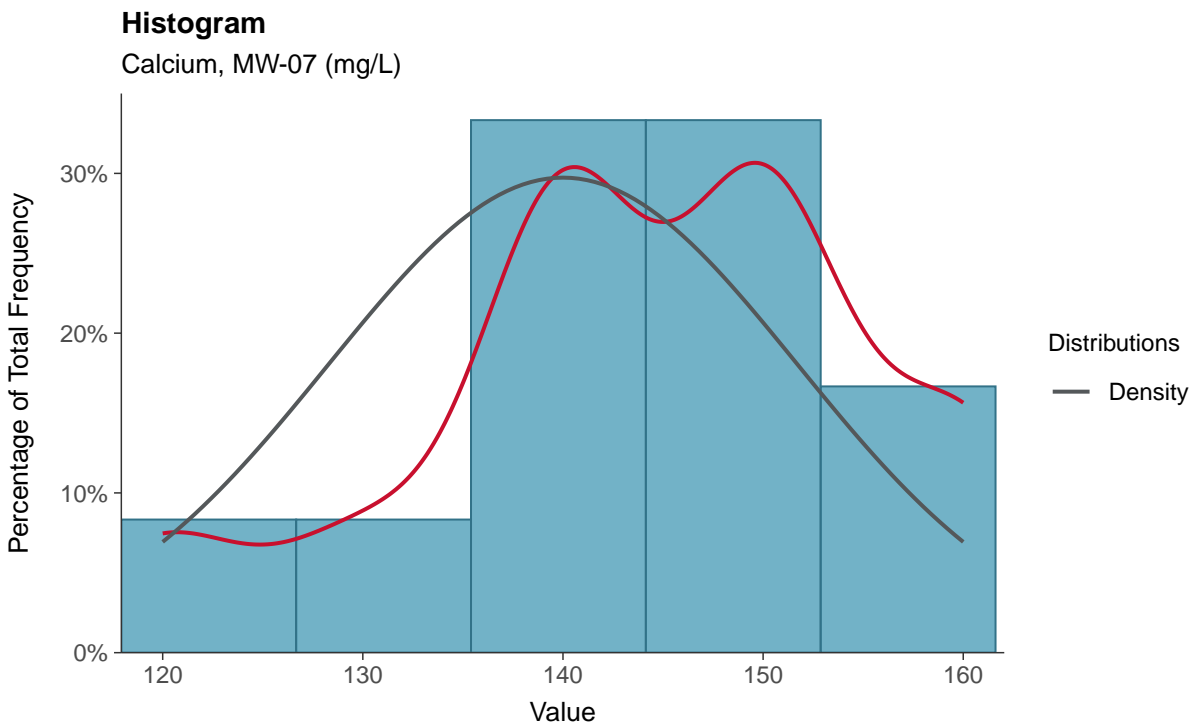
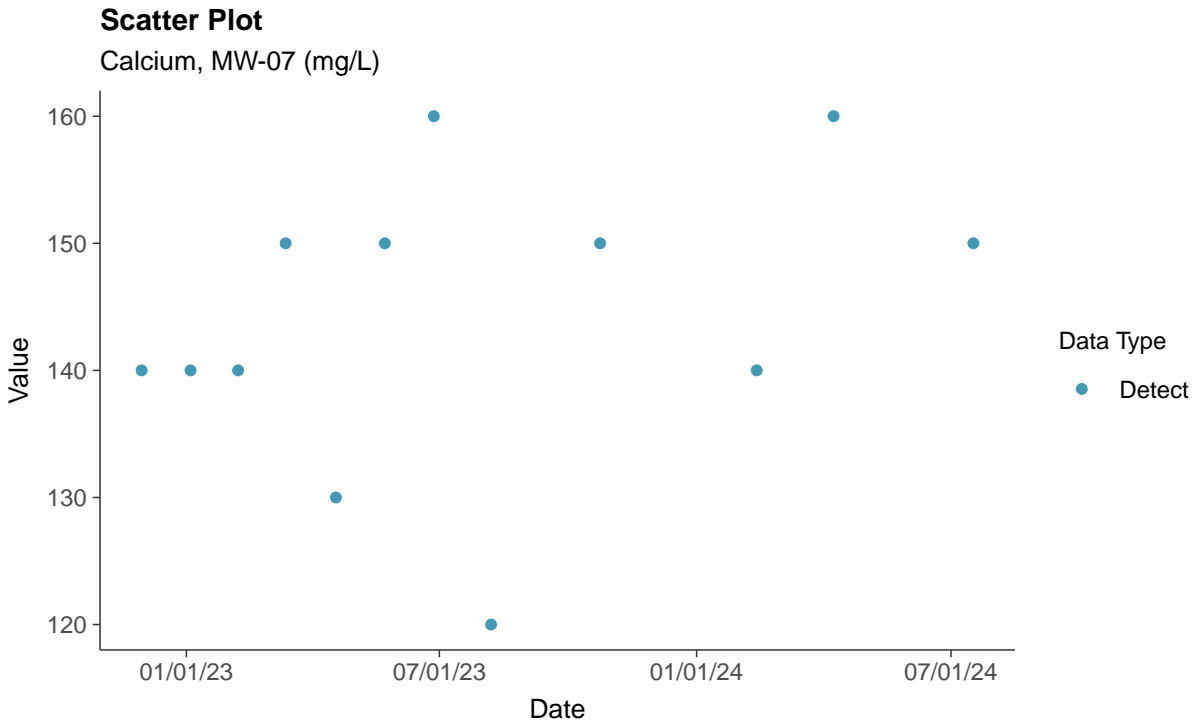
**Trend Regression: Lognormal MLE**  
Boron, MW-07 (mg/L)





### Appendix III: Calcium, MW-07

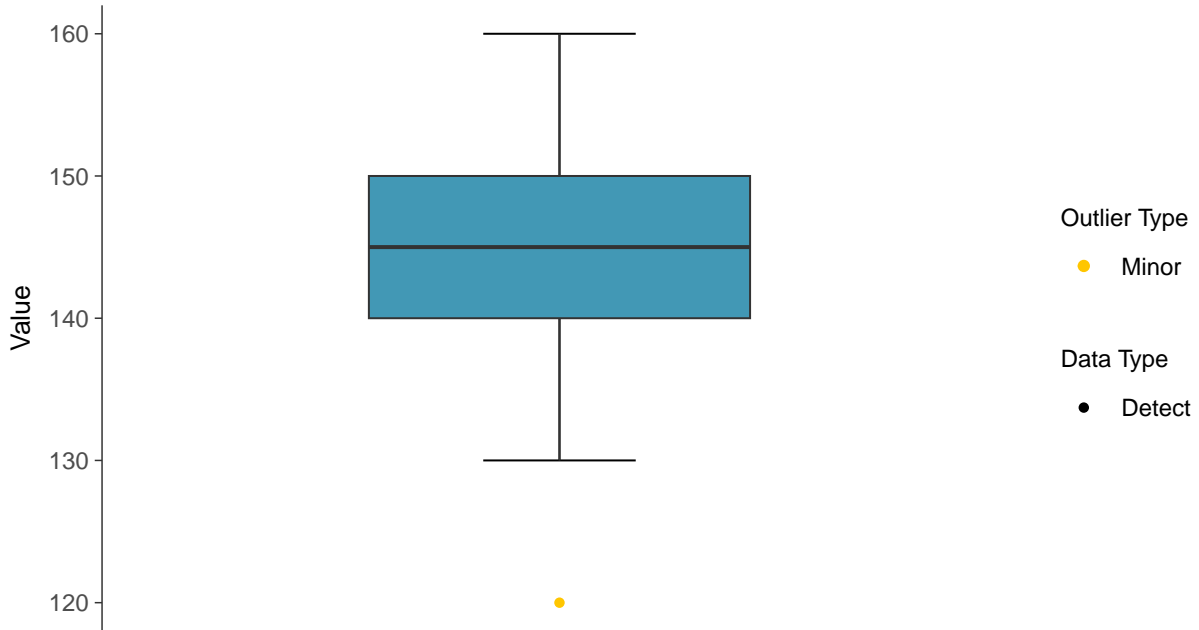
ID: 17\_1\_4\_107





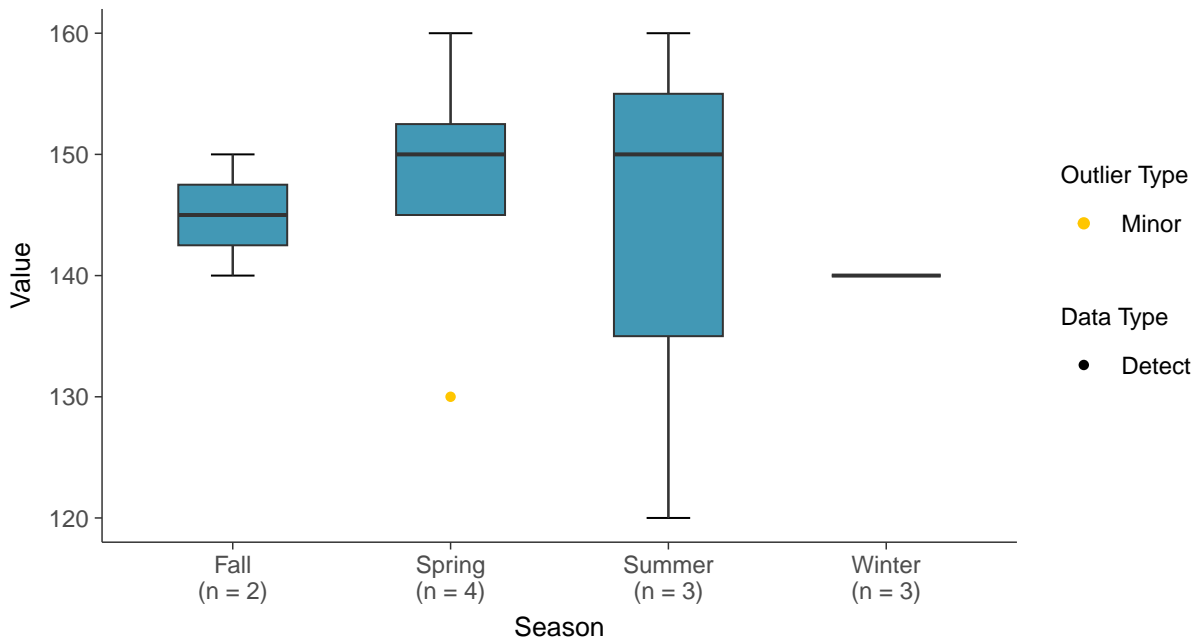
### Boxplot

Calcium, MW-07 (mg/L)



### Boxplot by Season

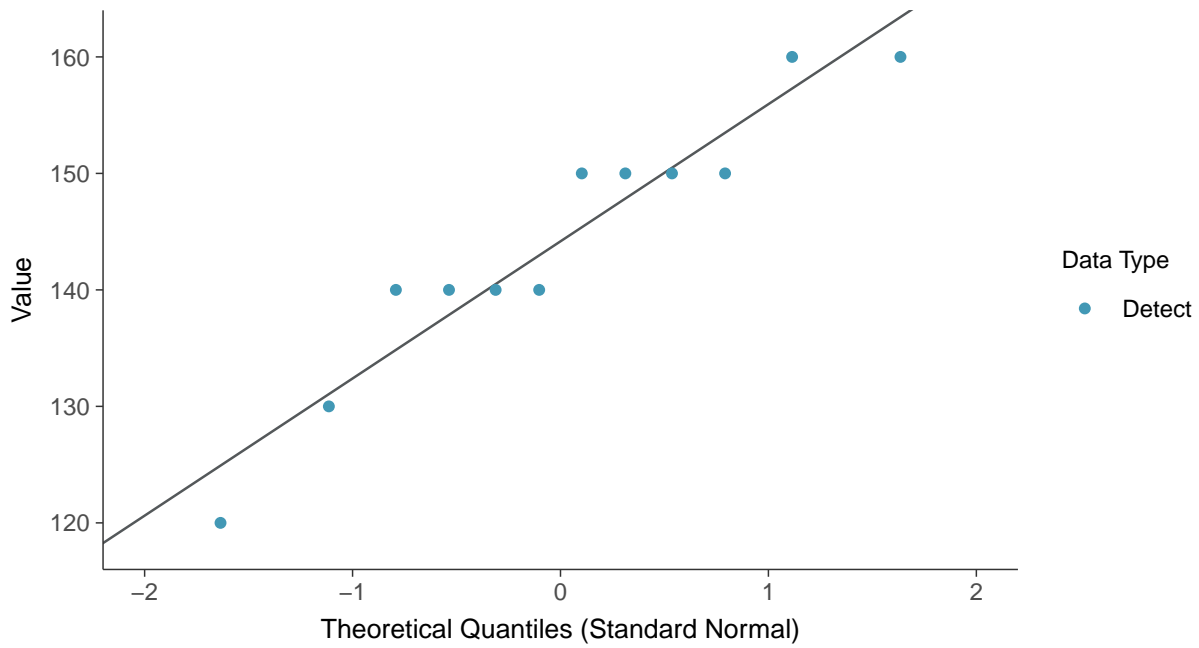
Calcium, MW-07 (mg/L)





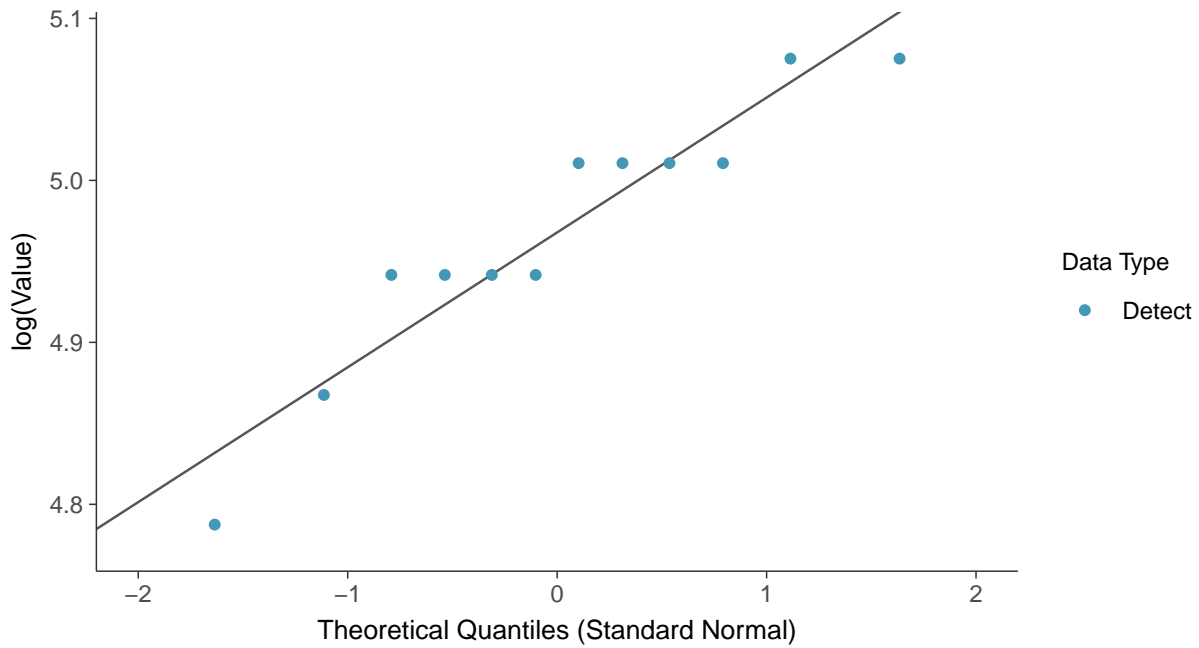
### Normal Q-Q plot

Calcium, MW-07 (mg/L)



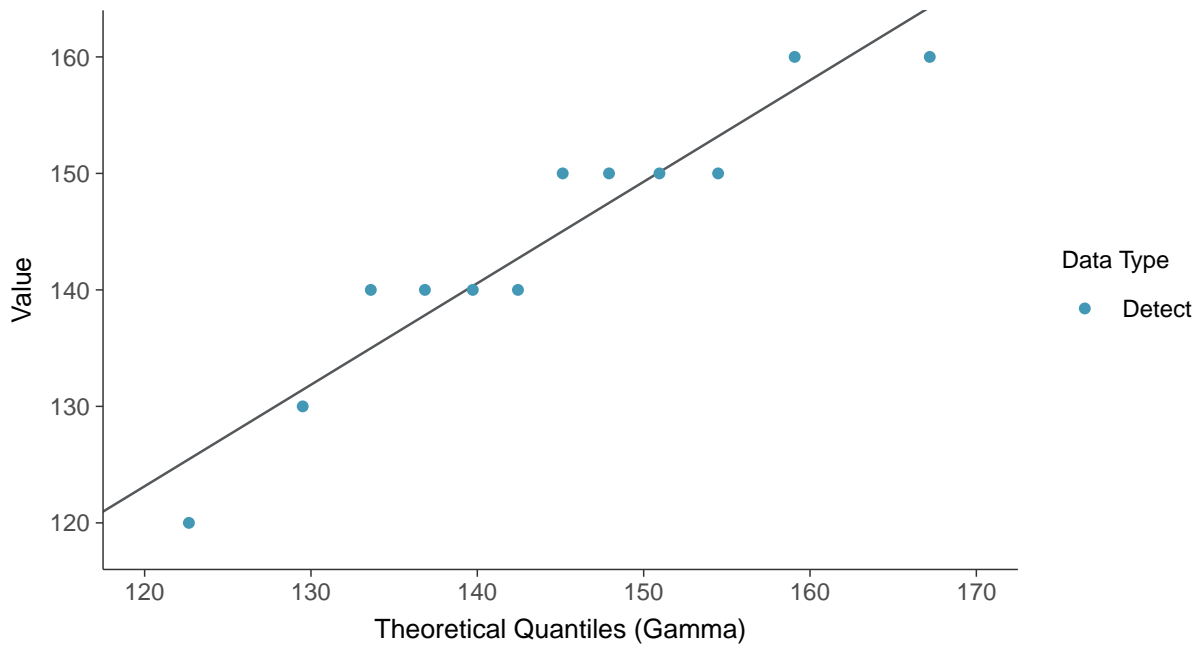
### Lognormal Q-Q plot

Calcium, MW-07 (mg/L)

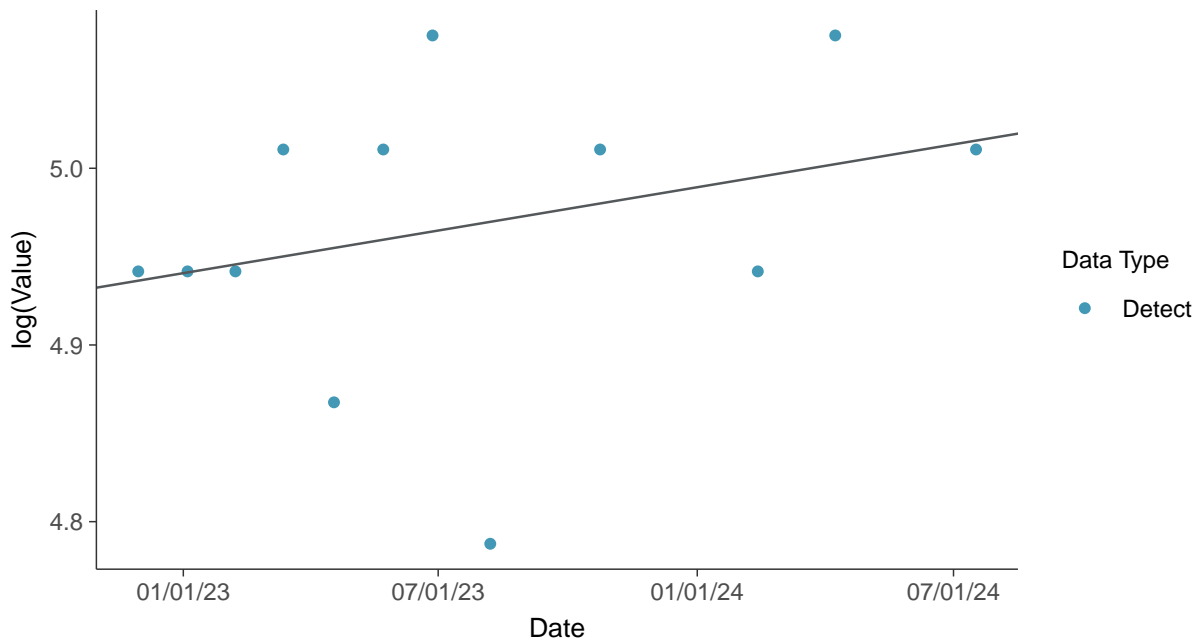




**Gamma Q-Q plot**  
Calcium, MW-07 (mg/L)



**Trend Regression: Lognormal MLE**  
Calcium, MW-07 (mg/L)

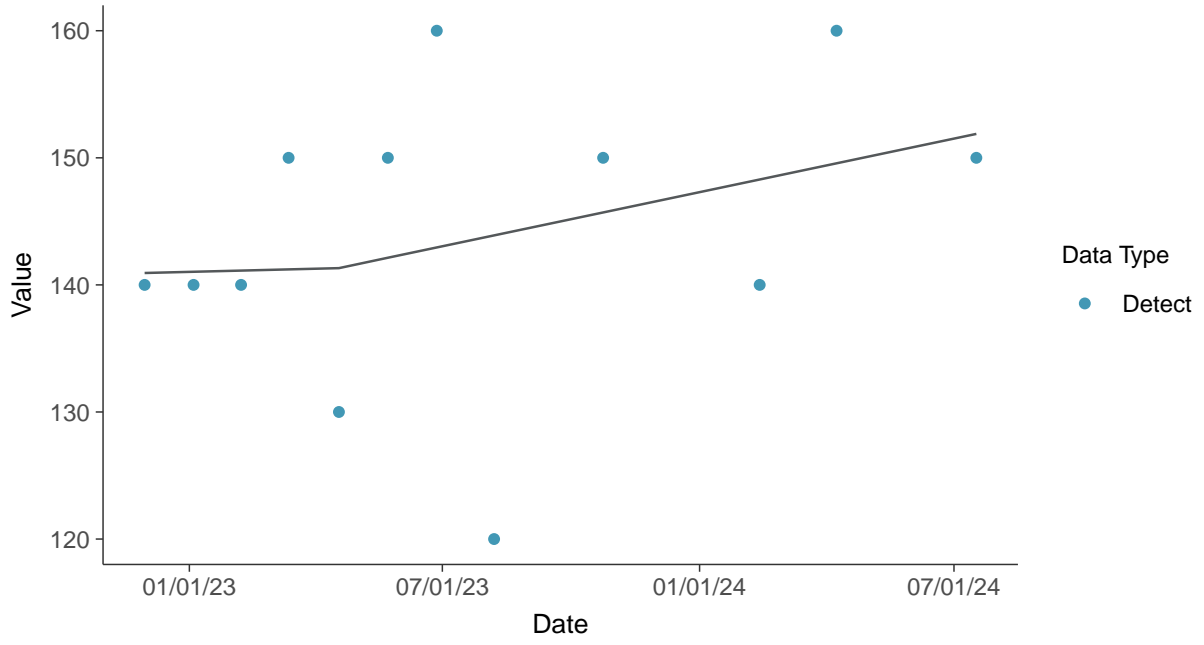






### Trend Regression: Piecewise Linear-Linear

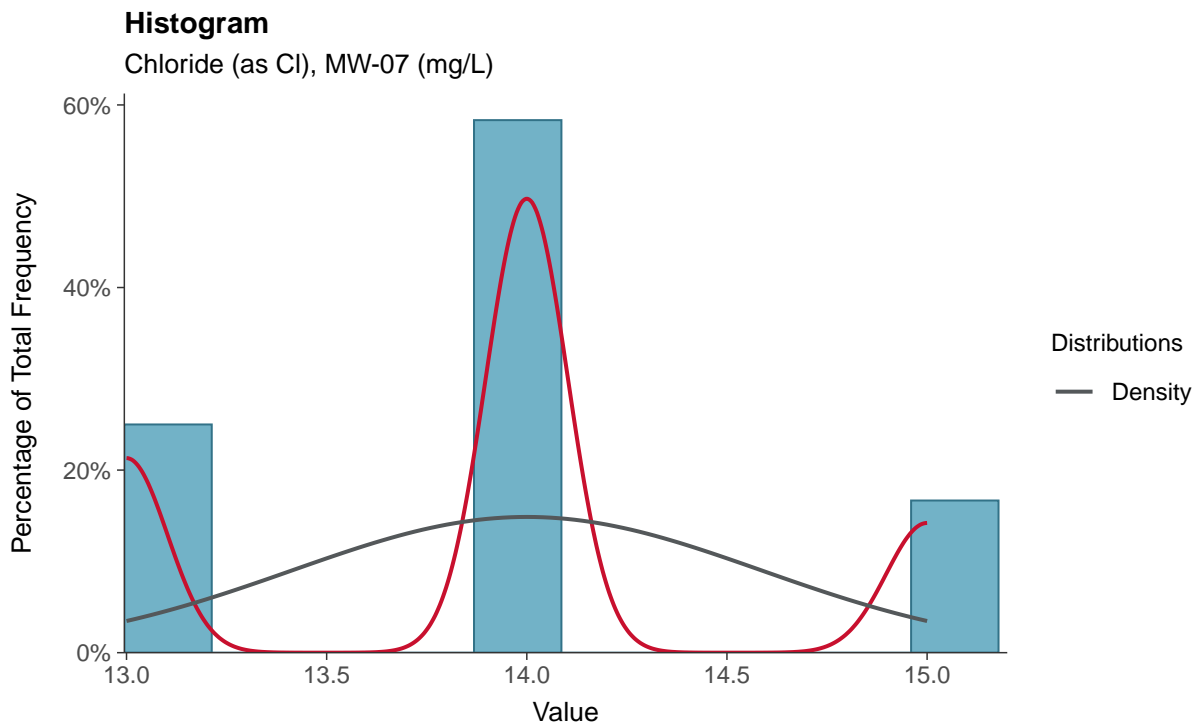
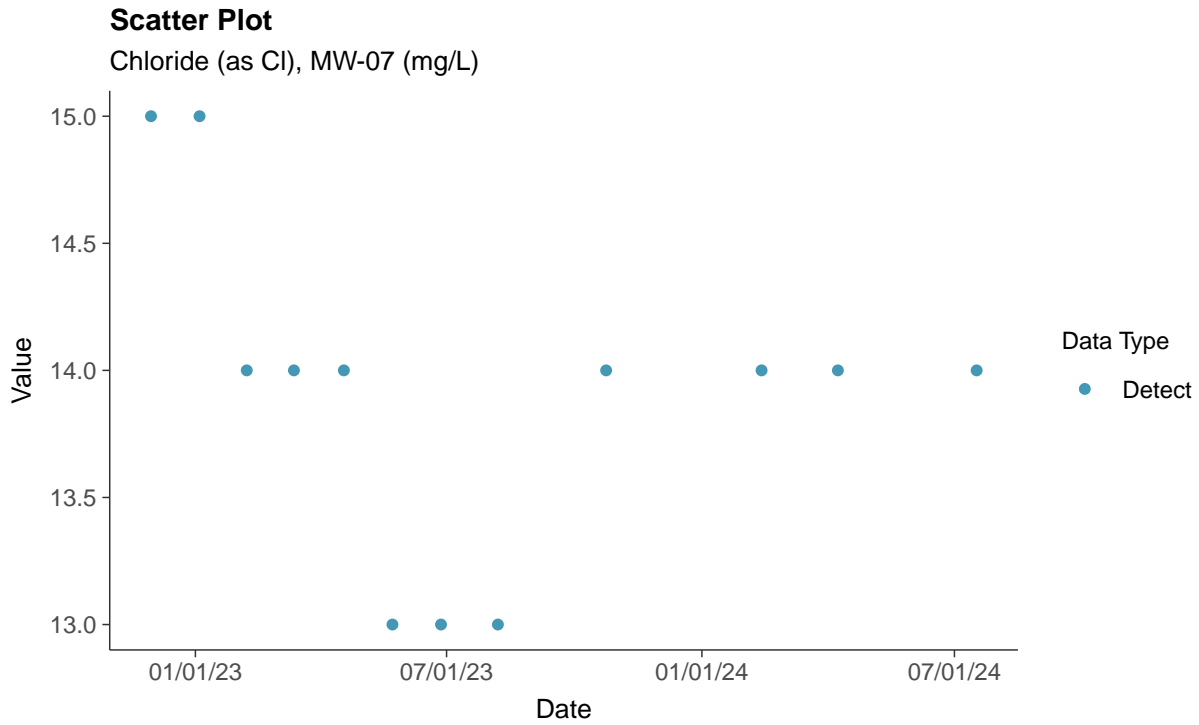
Calcium, MW-07 (mg/L)





### Appendix III: Chloride (as Cl), MW-07

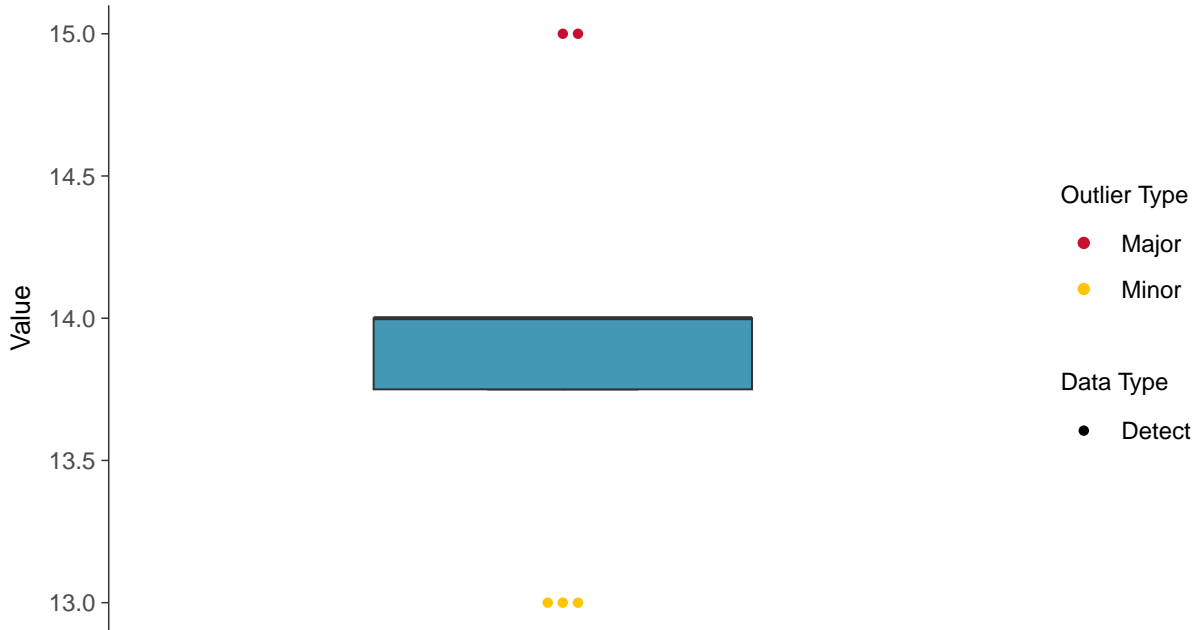
ID: 17\_1\_4\_108





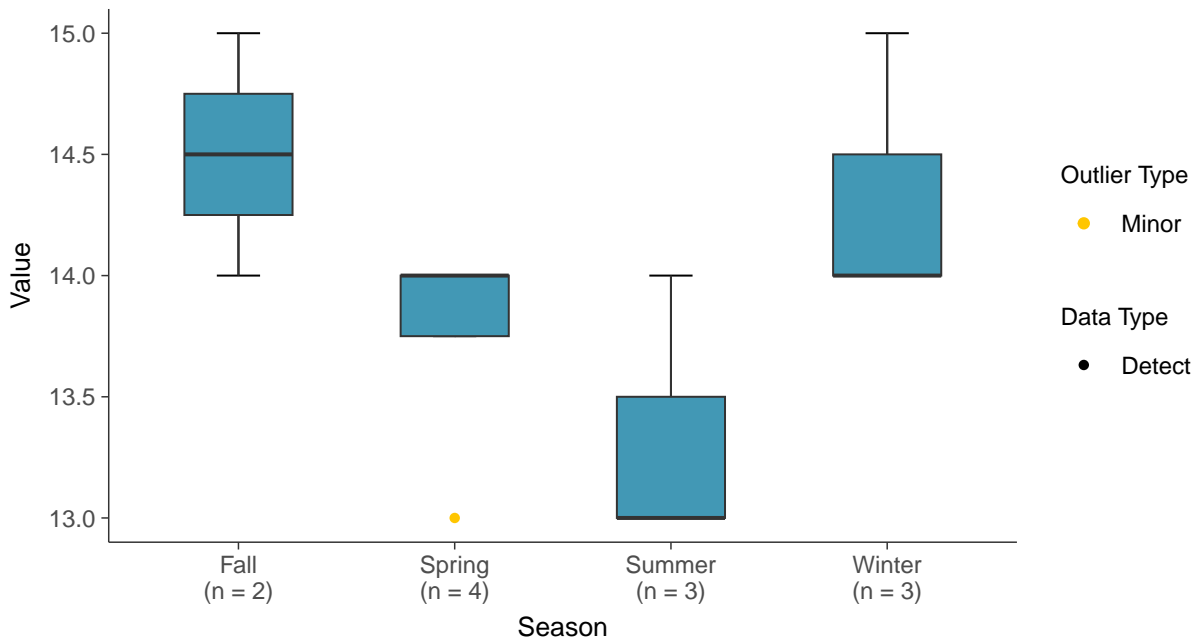
### Boxplot

Chloride (as Cl), MW-07 (mg/L)



### Boxplot by Season

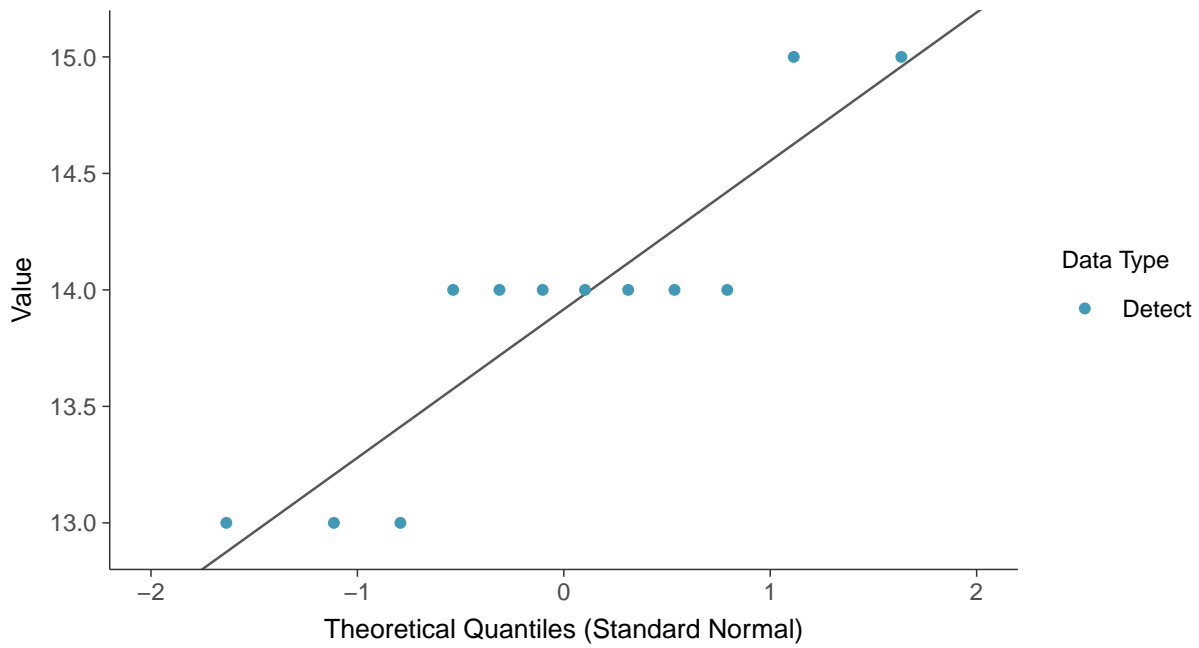
Chloride (as Cl), MW-07 (mg/L)





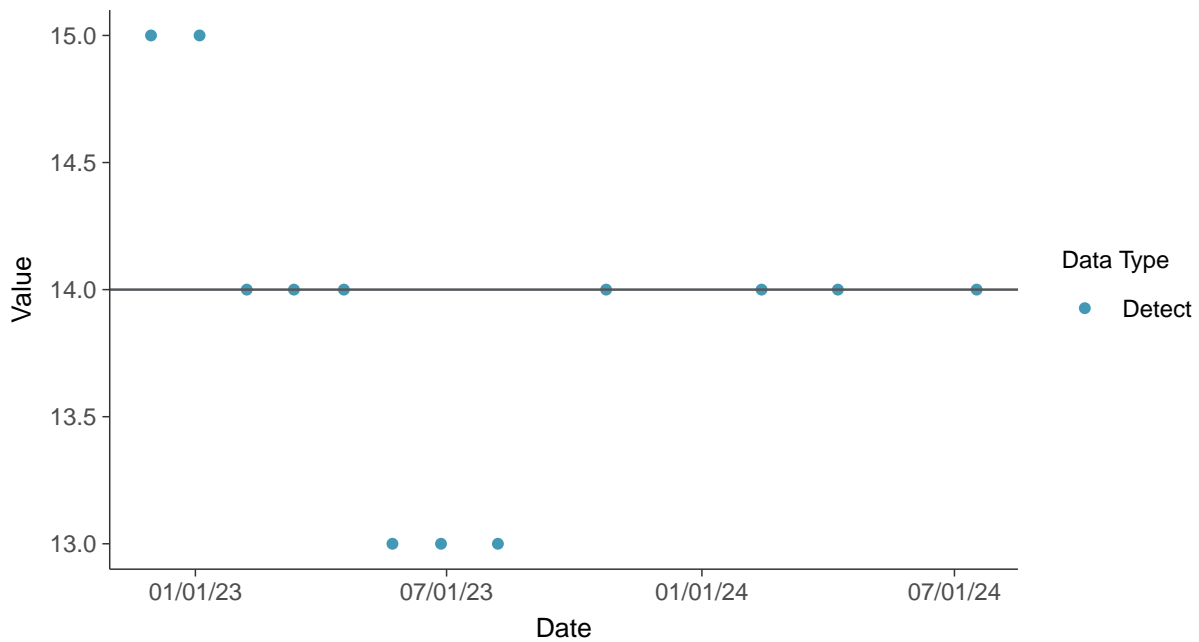
### Normal Q-Q plot

Chloride (as Cl), MW-07 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

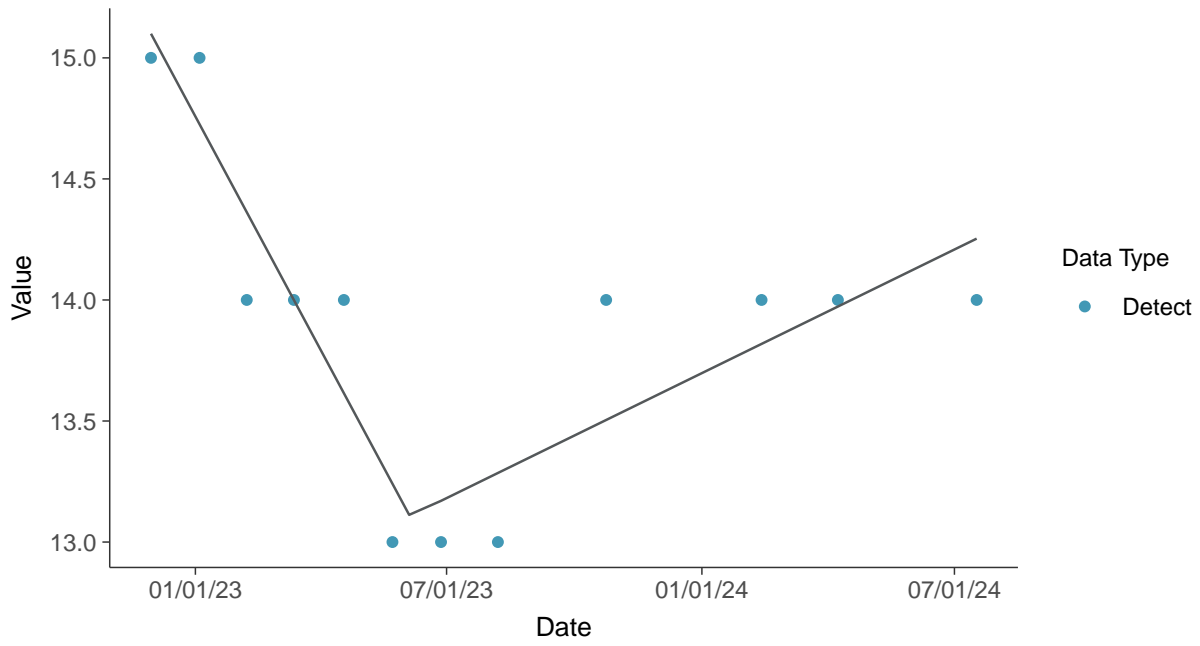
Chloride (as Cl), MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear

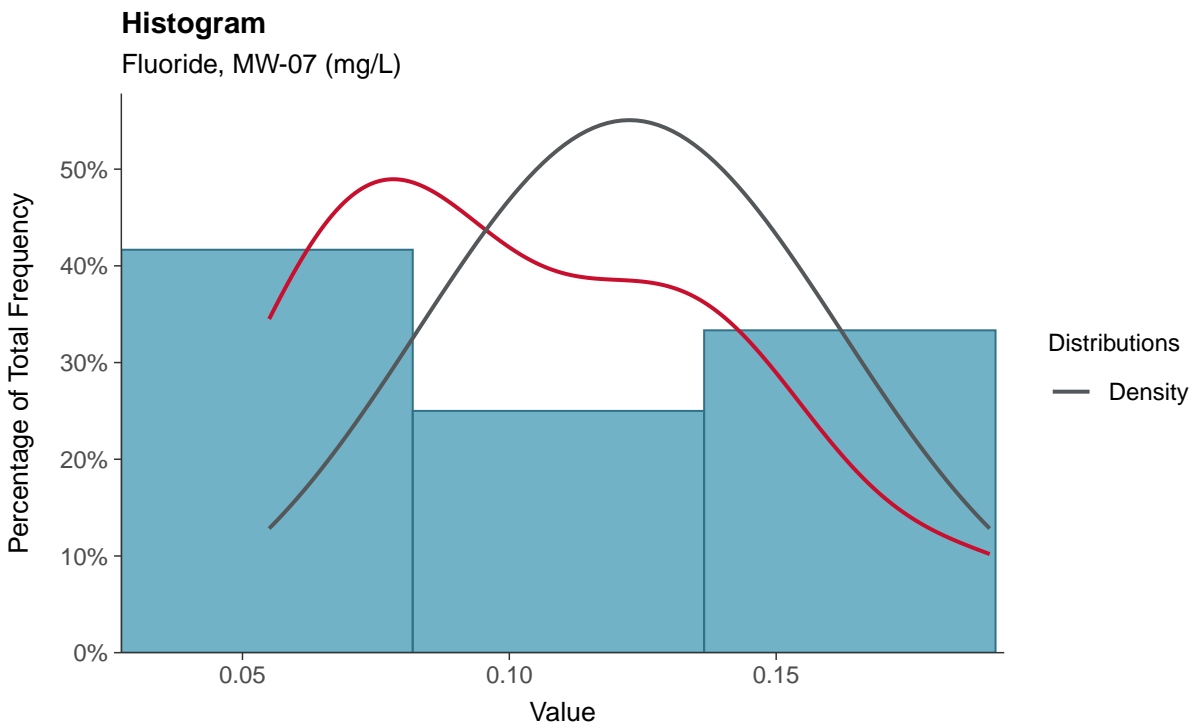
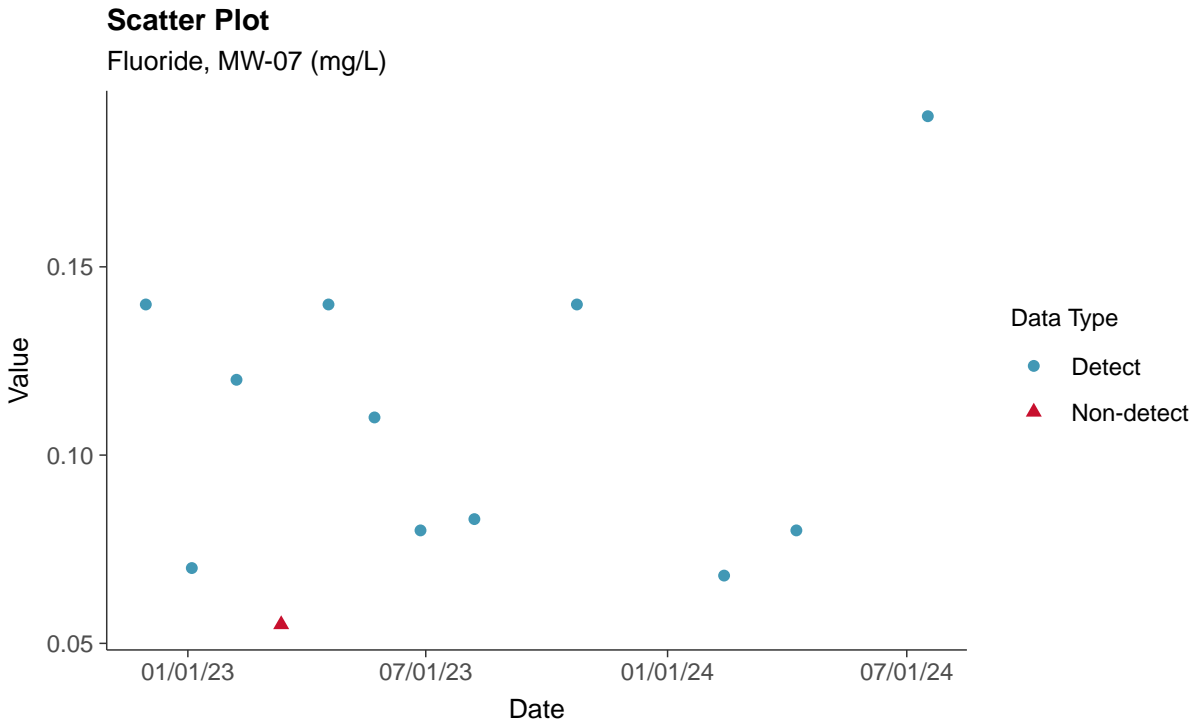
Chloride (as Cl), MW-07 (mg/L)





### Appendix III: Fluoride, MW-07

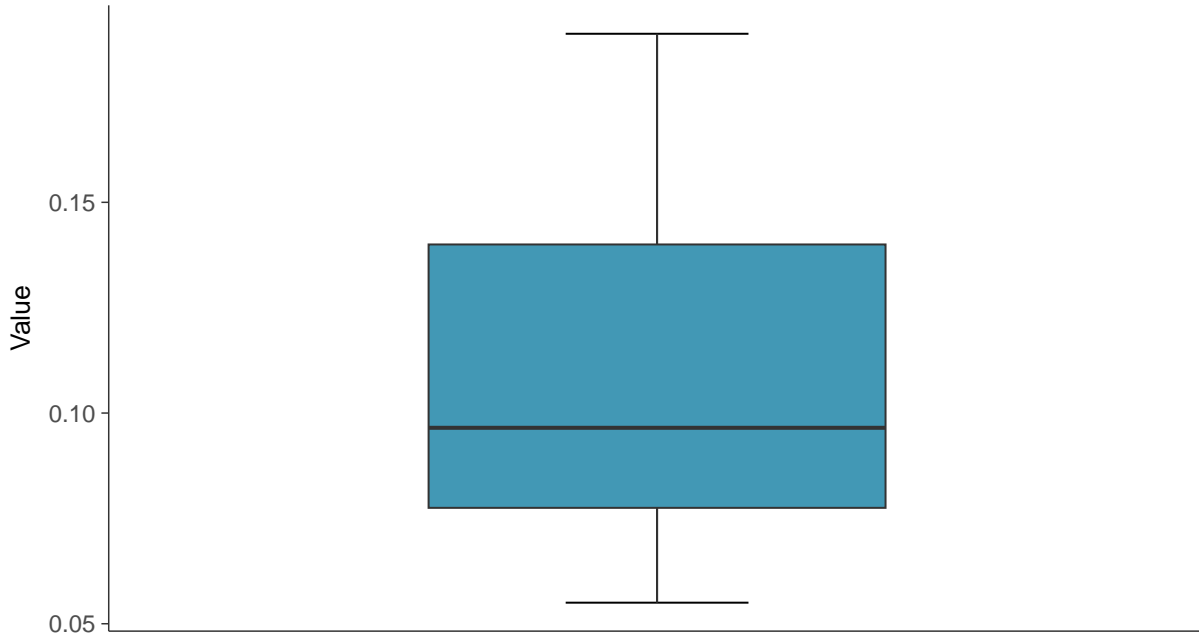
ID: 17\_1\_4\_112





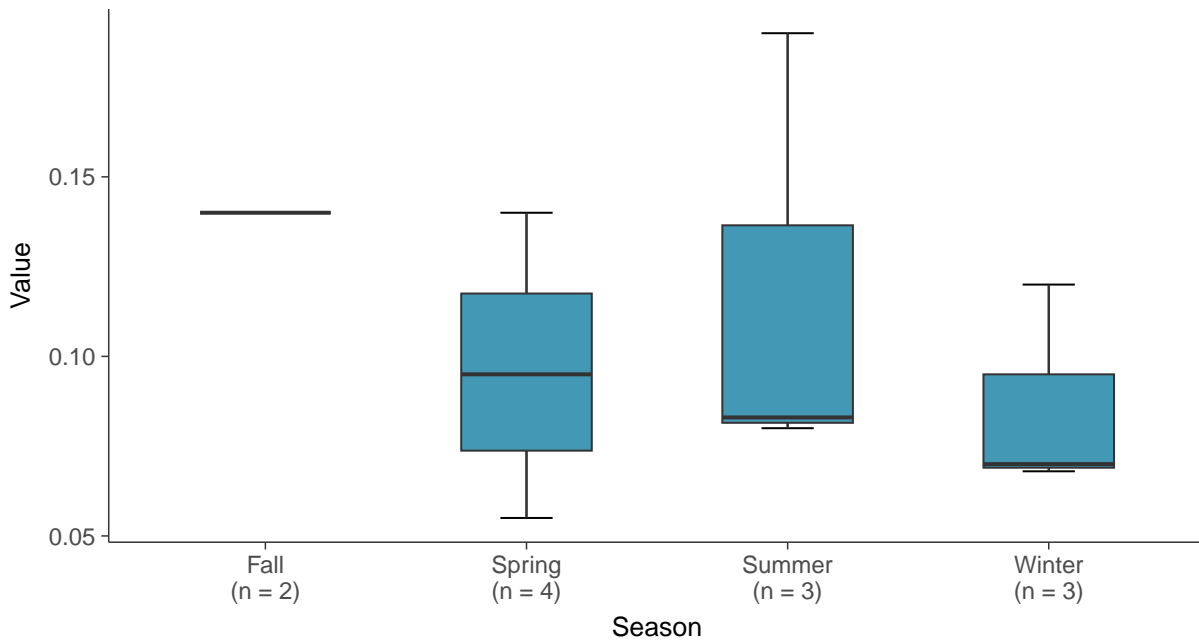
### Boxplot

Fluoride, MW-07 (mg/L)



### Boxplot by Season

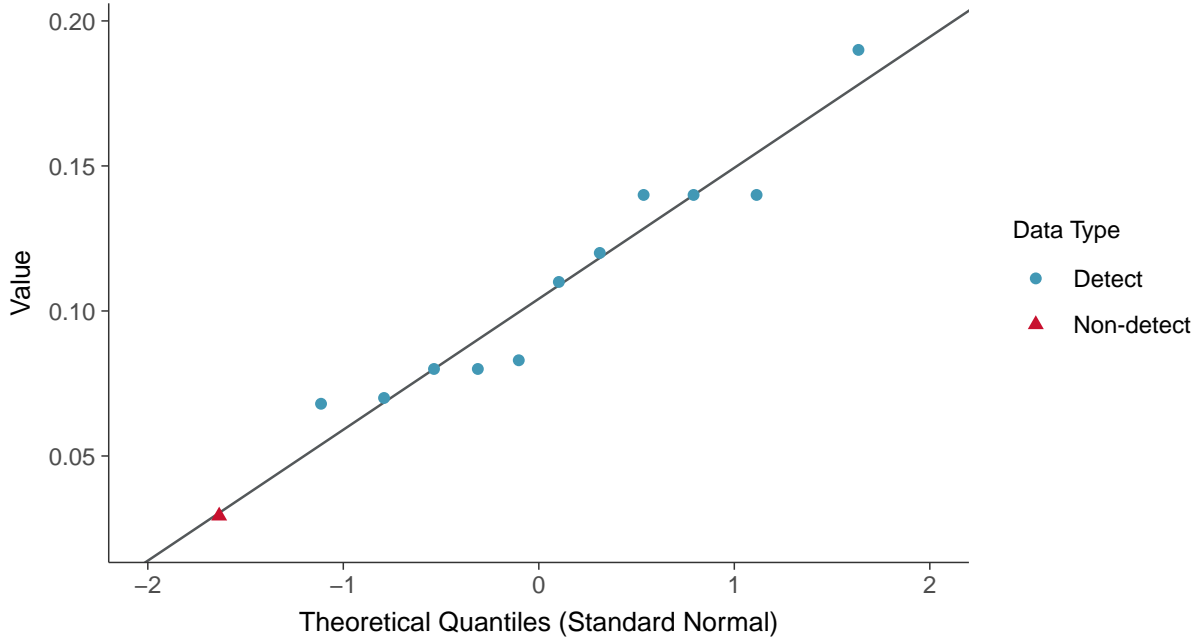
Fluoride, MW-07 (mg/L)





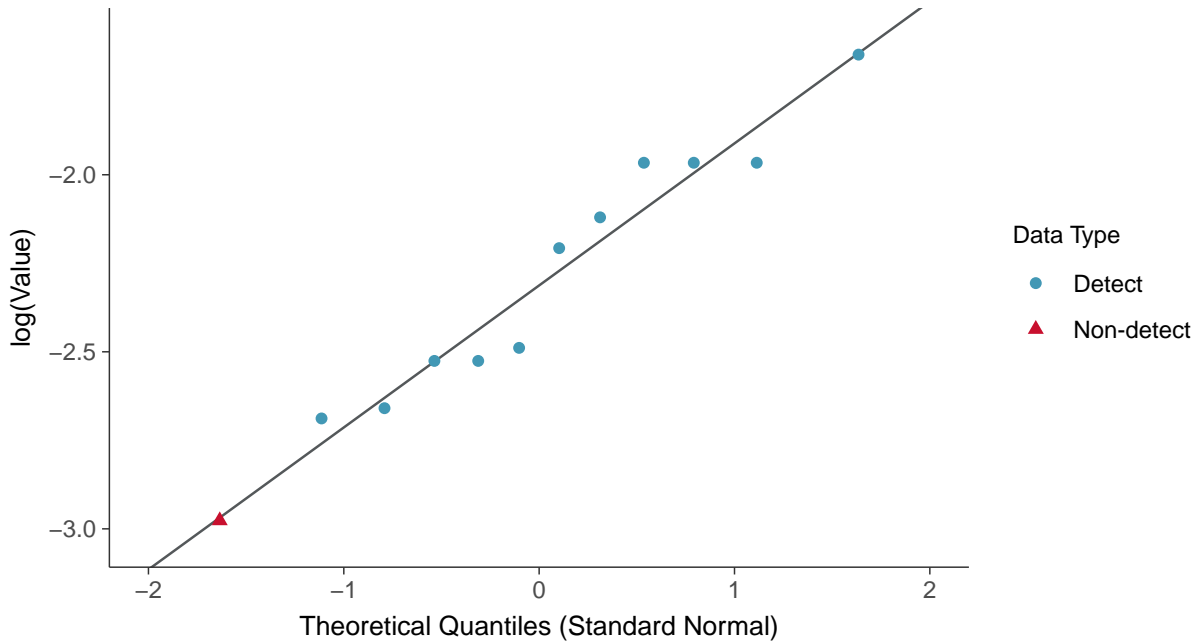
### Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-07 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-07 (mg/L)

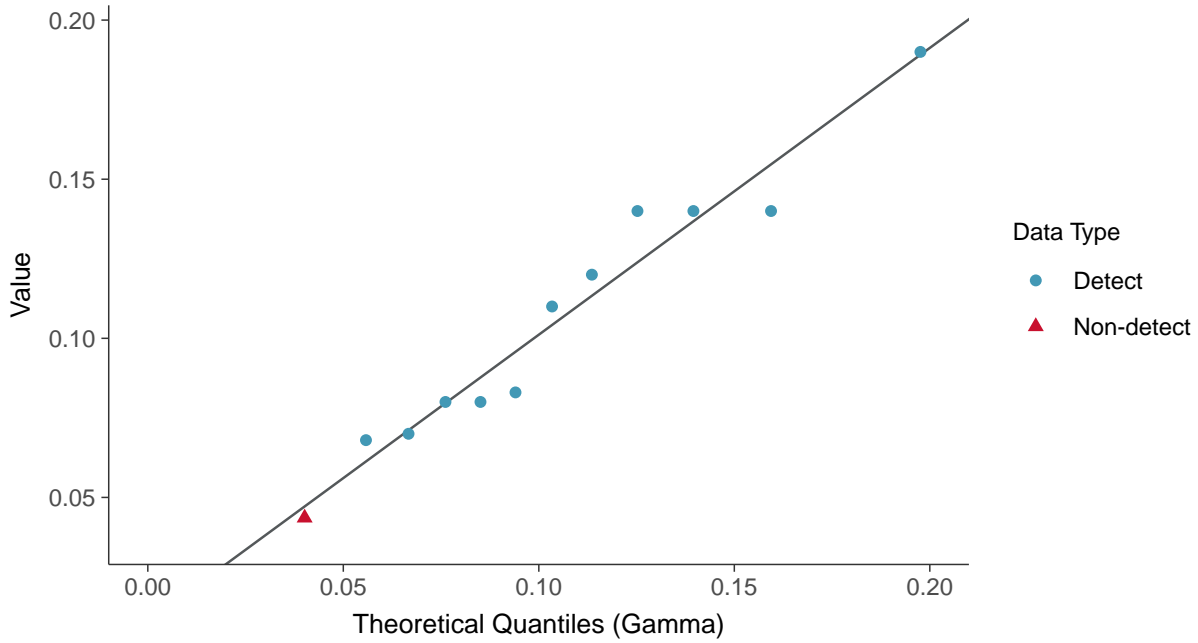






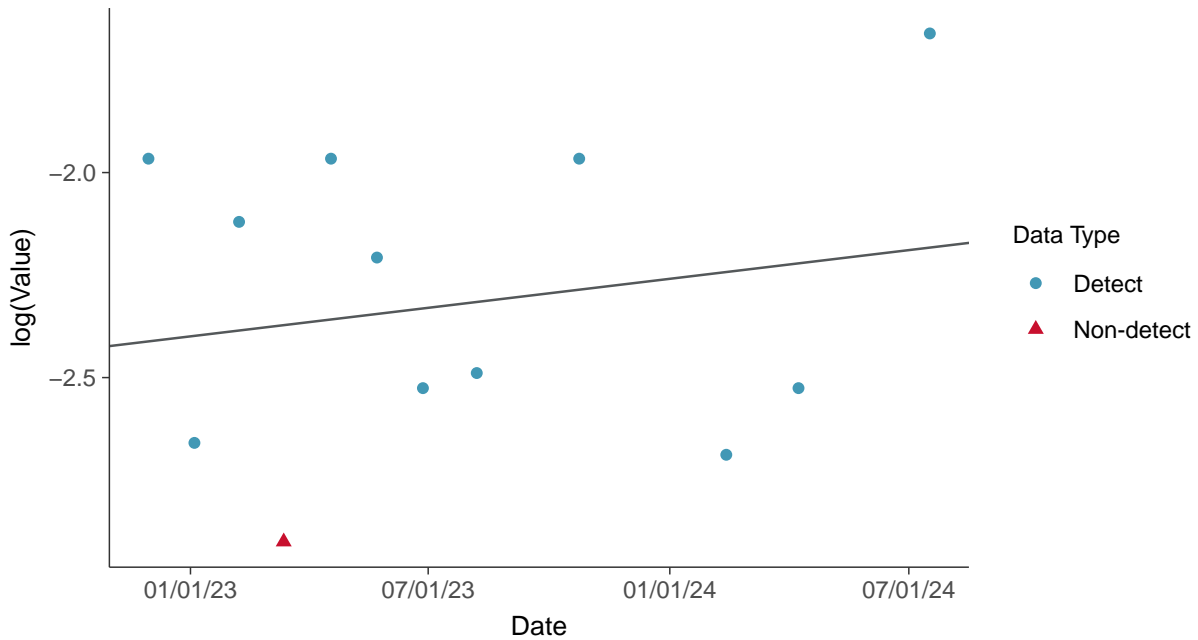
### Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

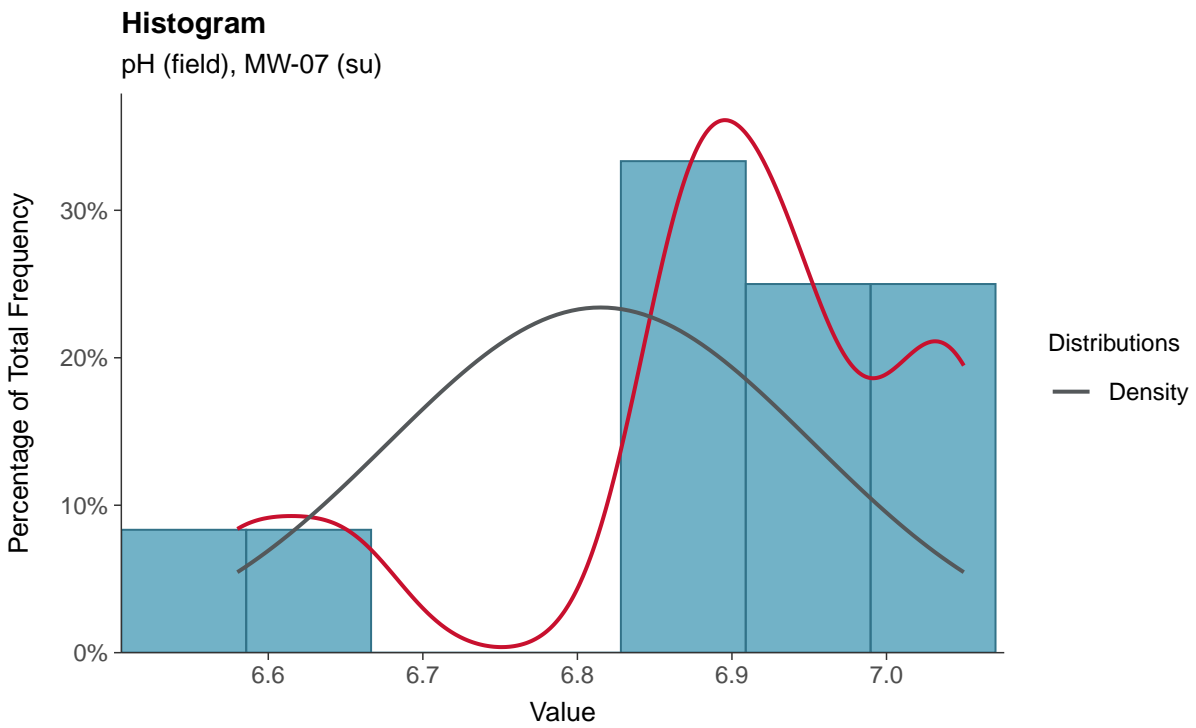
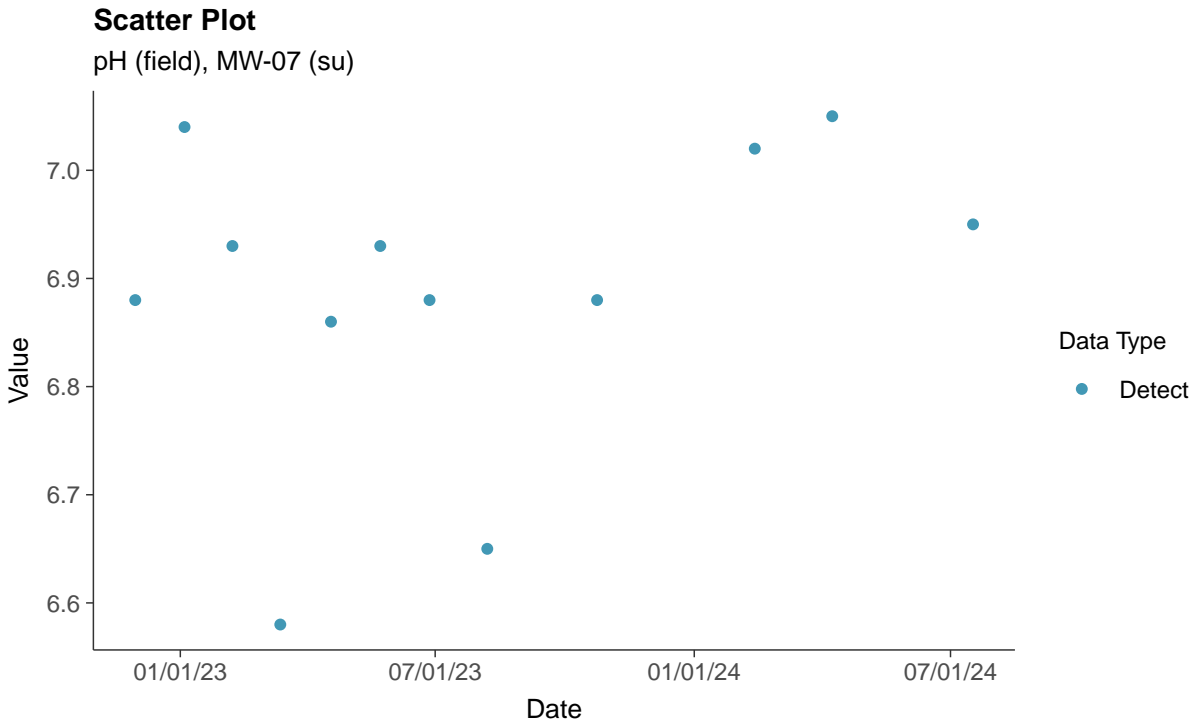
Fluoride, MW-07 (mg/L)





### Appendix III: pH (field), MW-07

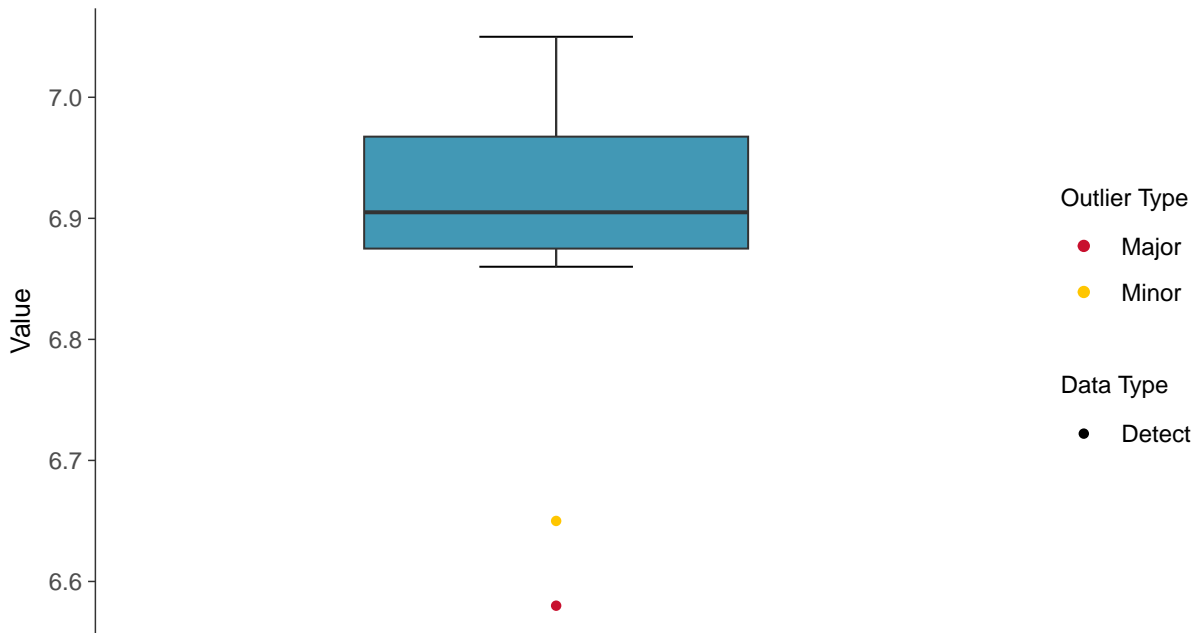
ID: 17\_1\_4\_120





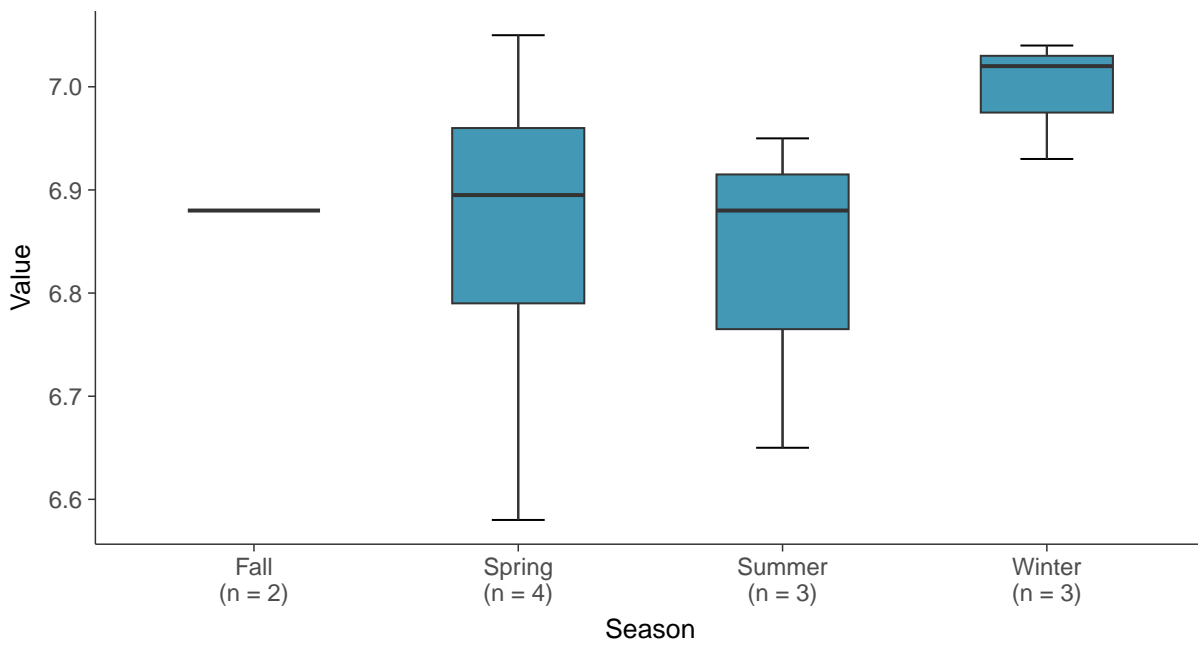
### Boxplot

pH (field), MW-07 (su)



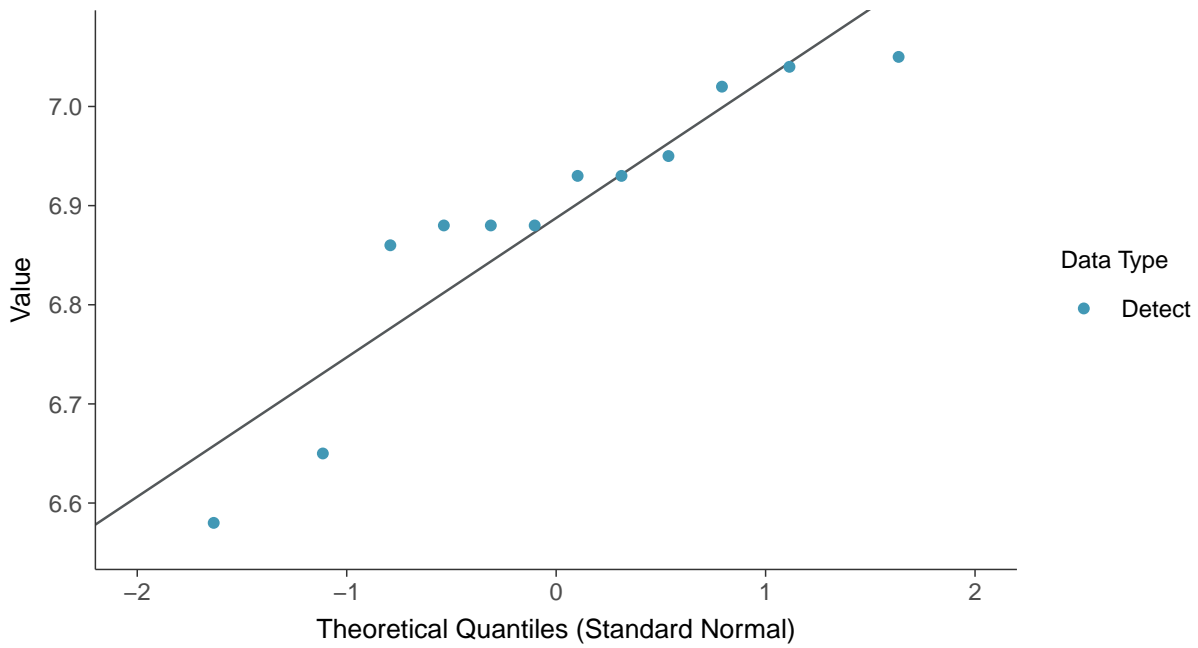
### Boxplot by Season

pH (field), MW-07 (su)

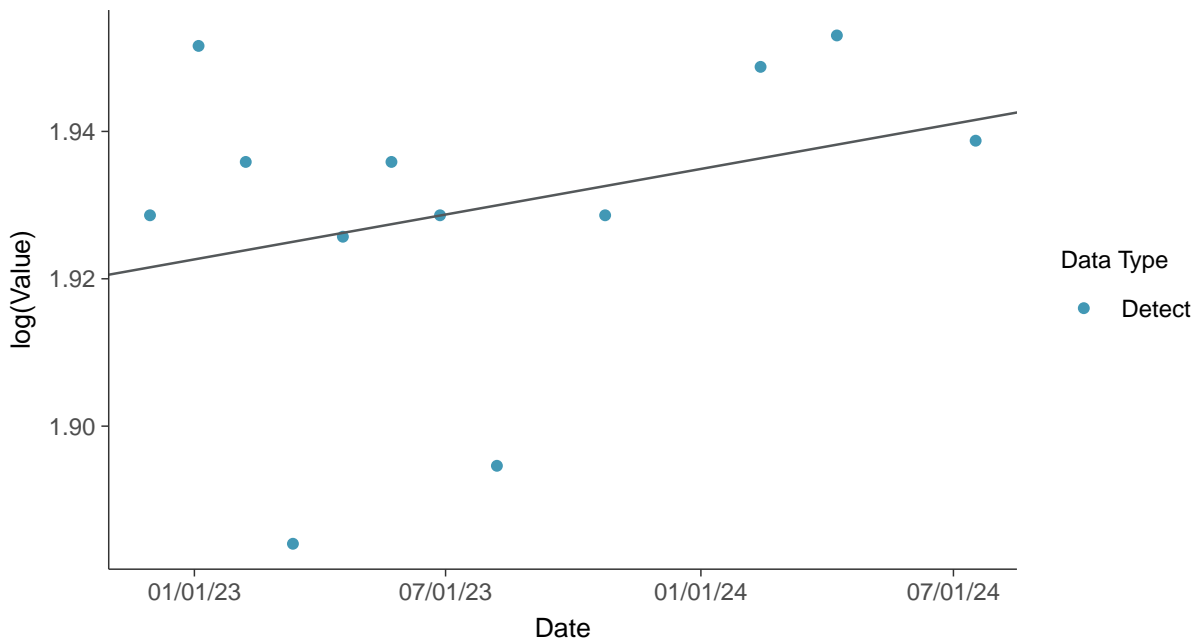




**Normal Q-Q plot**  
pH (field), MW-07 (su)



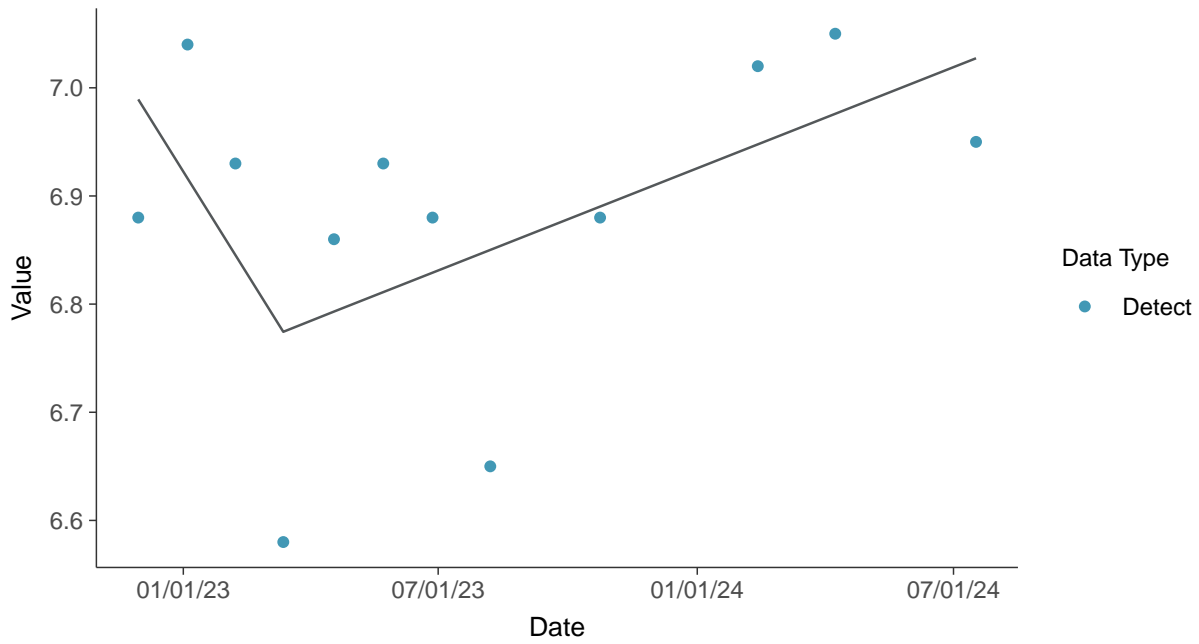
**Trend Regression: Lognormal MLE**  
pH (field), MW-07 (su)





### Trend Regression: Piecewise Linear-Linear

pH (field), MW-07 (su)



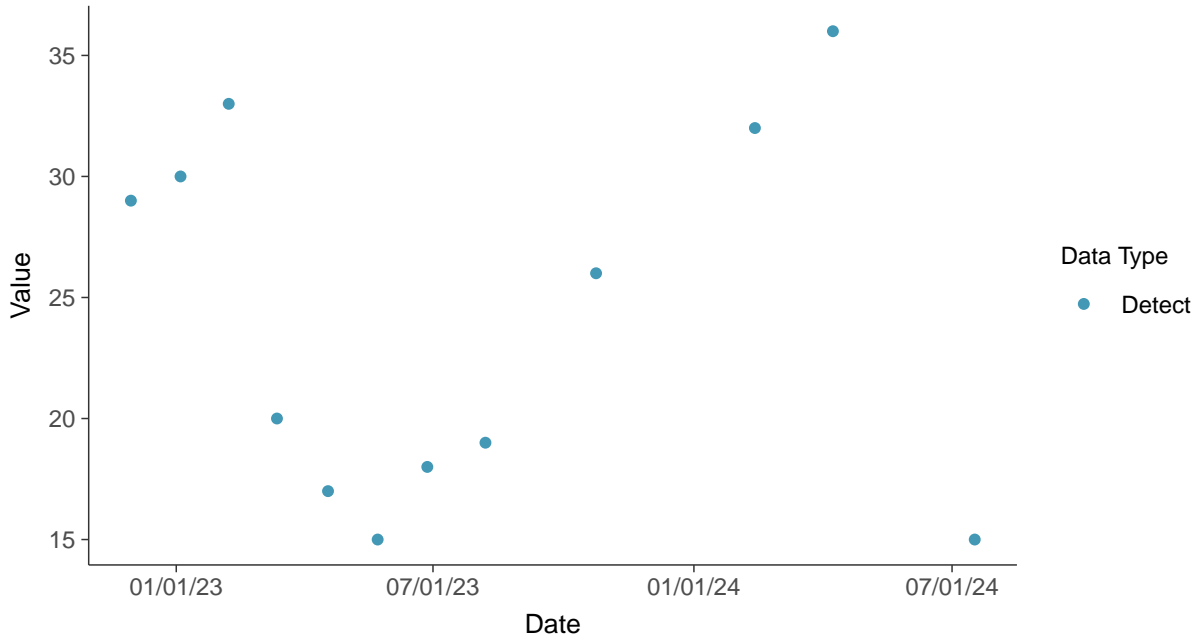


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-07

ID: 17\_1\_4\_124

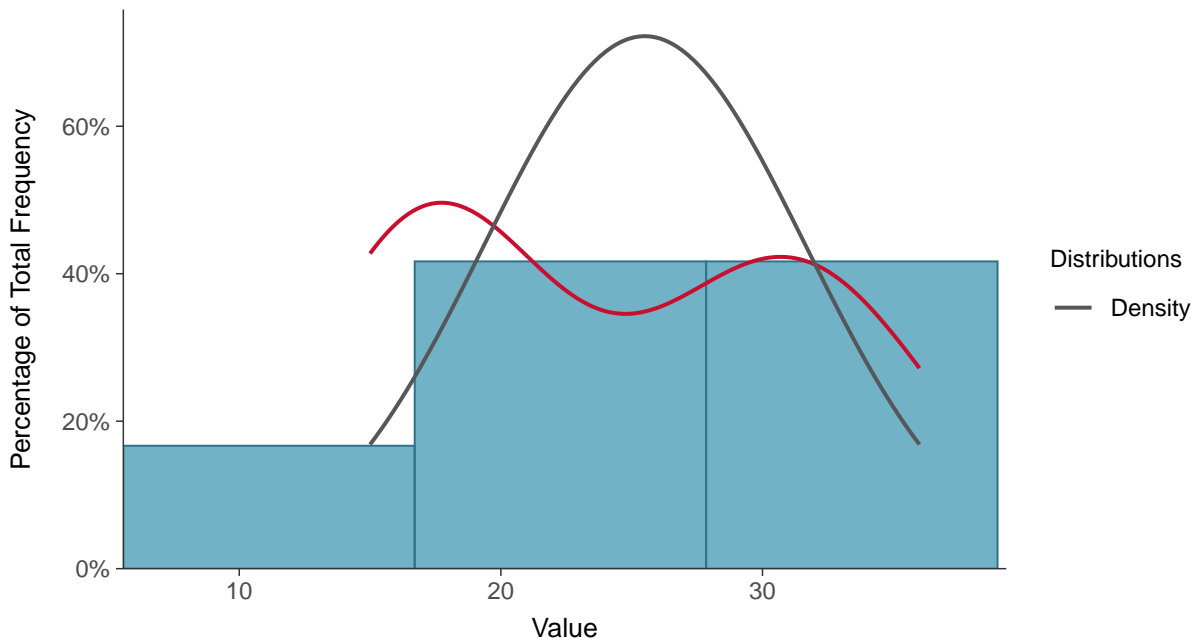
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



#### Histogram

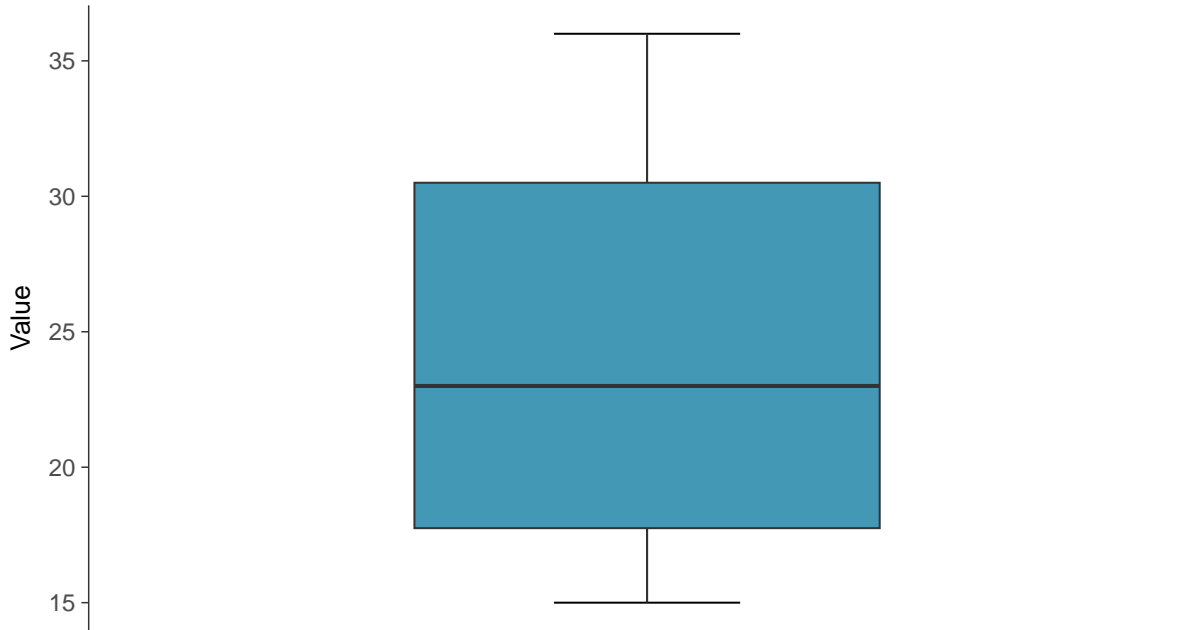
Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)





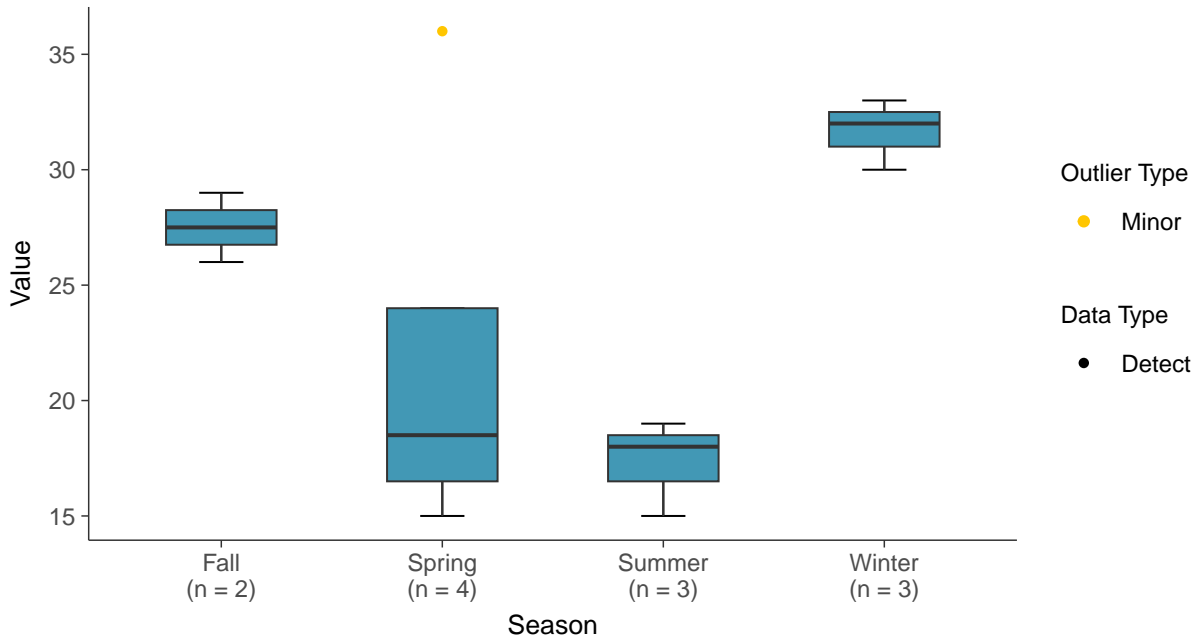
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



### Boxplot by Season

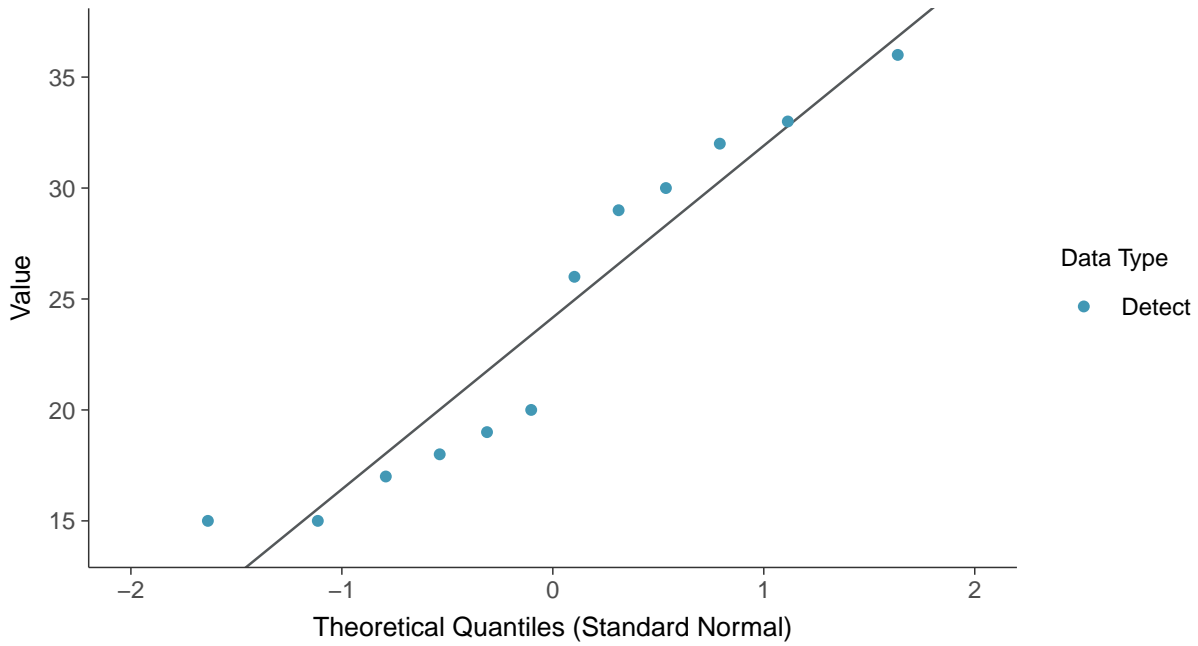
Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)





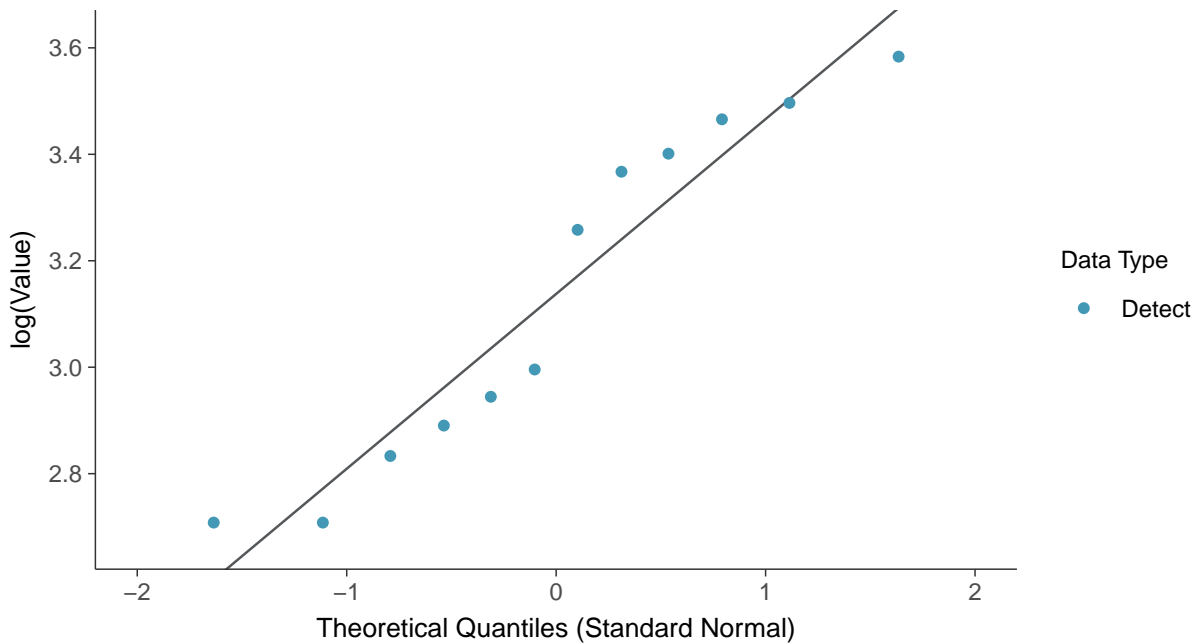
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



### Lognormal Q-Q plot

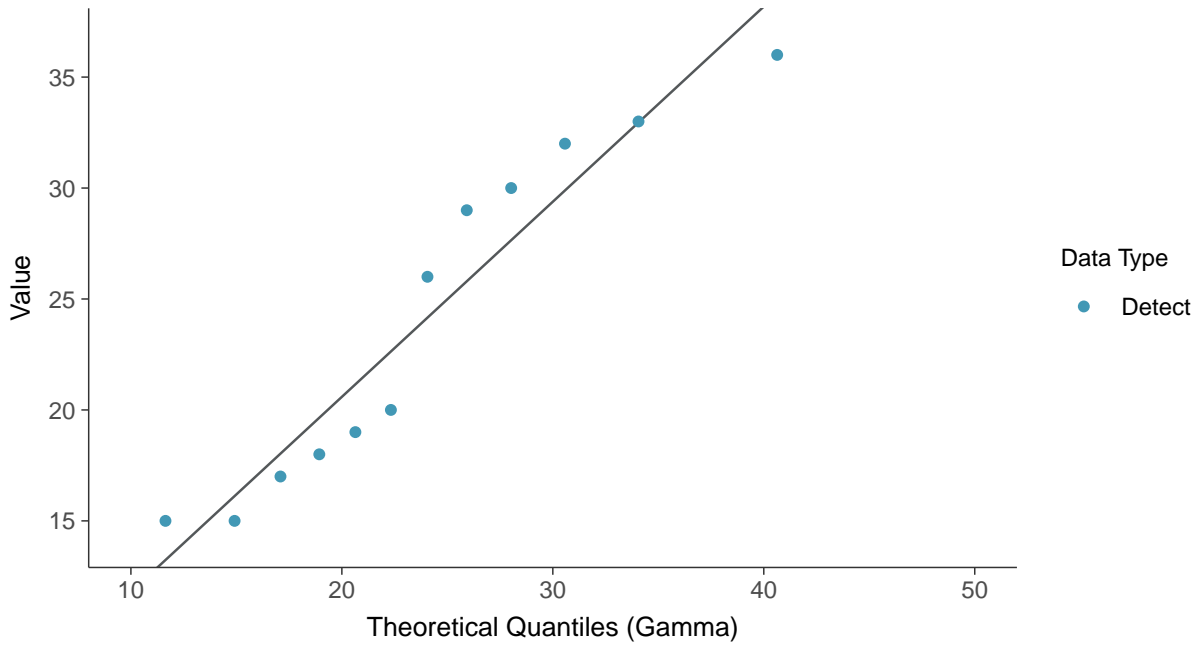
Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



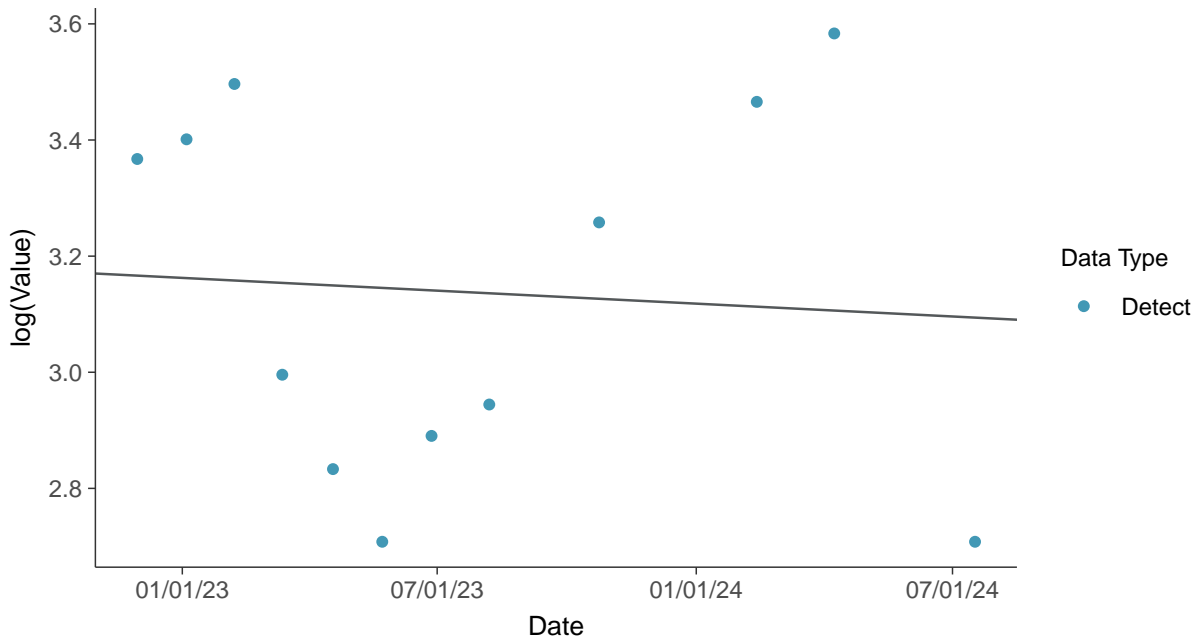




**Gamma Q-Q plot**  
Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



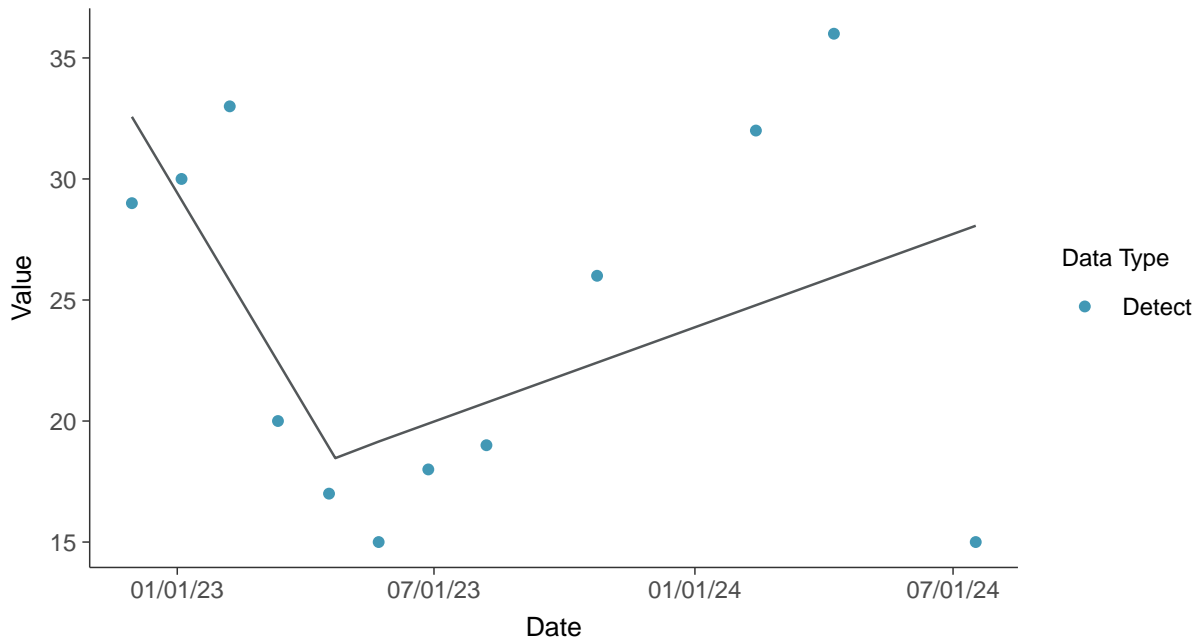
**Trend Regression: Lognormal MLE**  
Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-07 (mg/L)



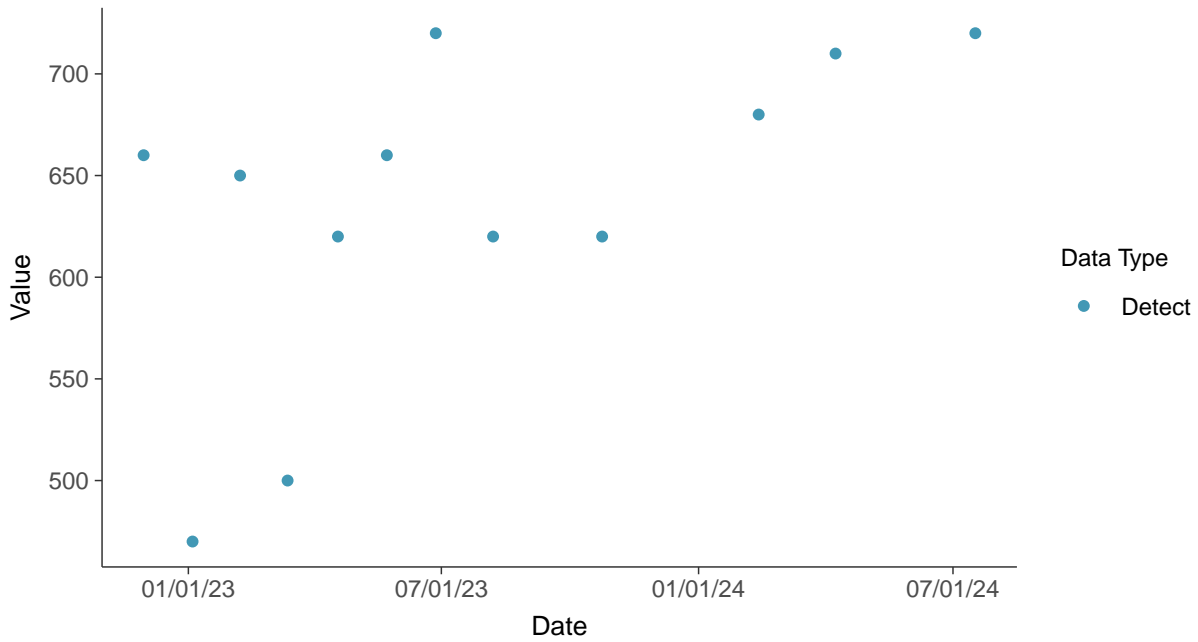


### Appendix III: Total Dissolved Solids, MW-07

ID: 17\_1\_4\_126

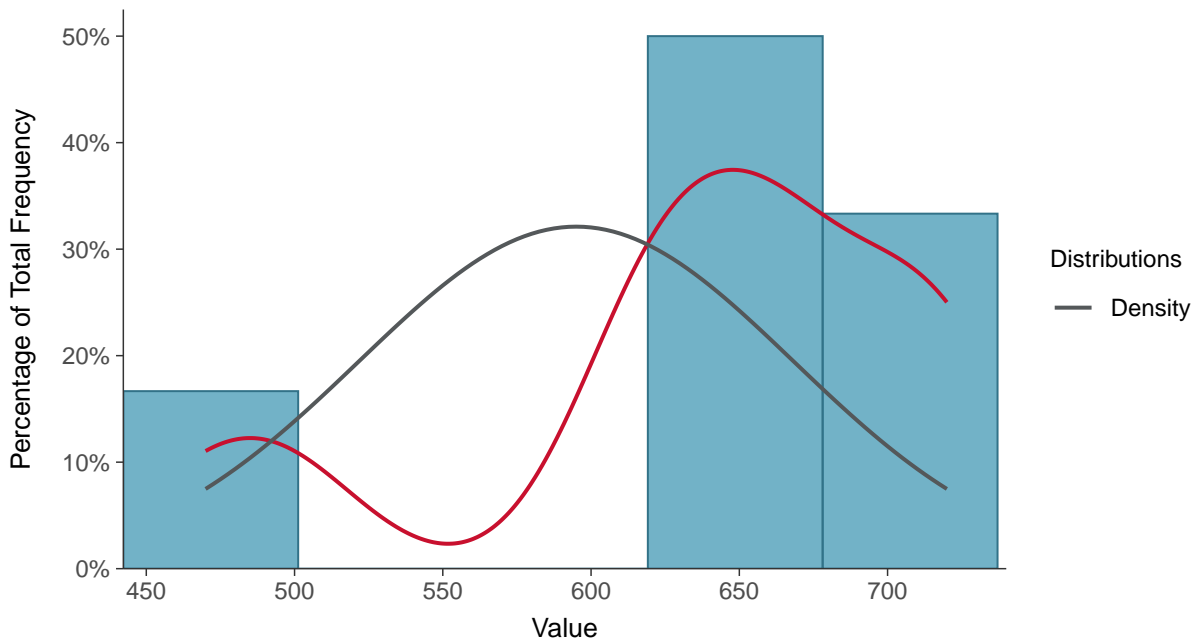
#### Scatter Plot

Total Dissolved Solids, MW-07 (mg/L)



#### Histogram

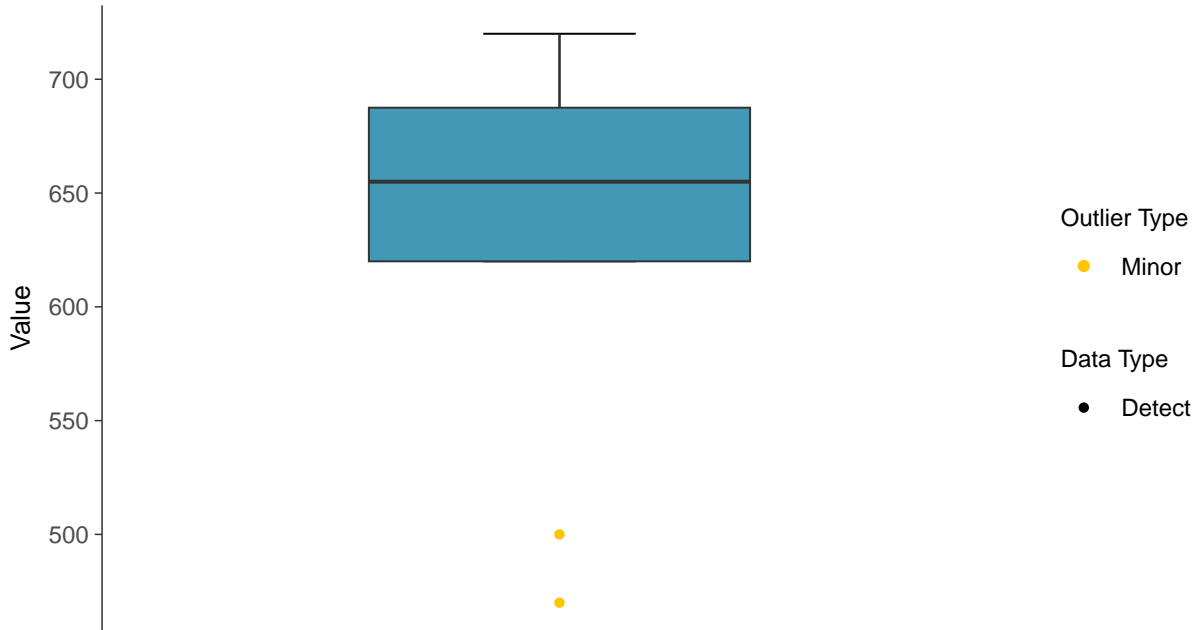
Total Dissolved Solids, MW-07 (mg/L)





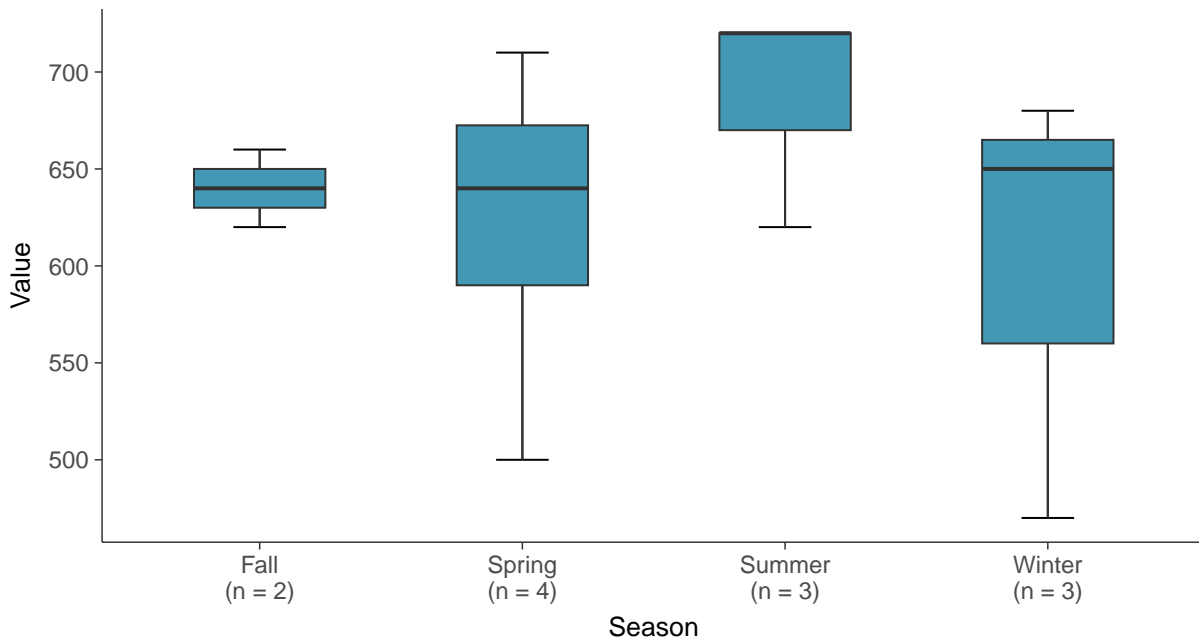
### Boxplot

Total Dissolved Solids, MW-07 (mg/L)



### Boxplot by Season

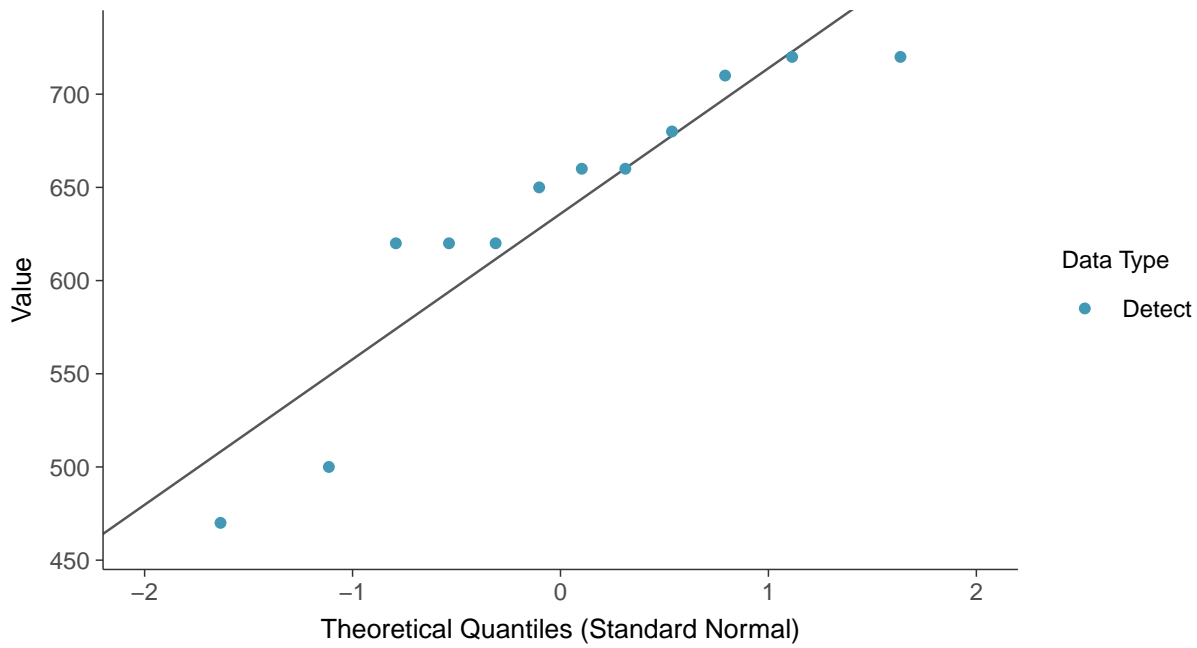
Total Dissolved Solids, MW-07 (mg/L)





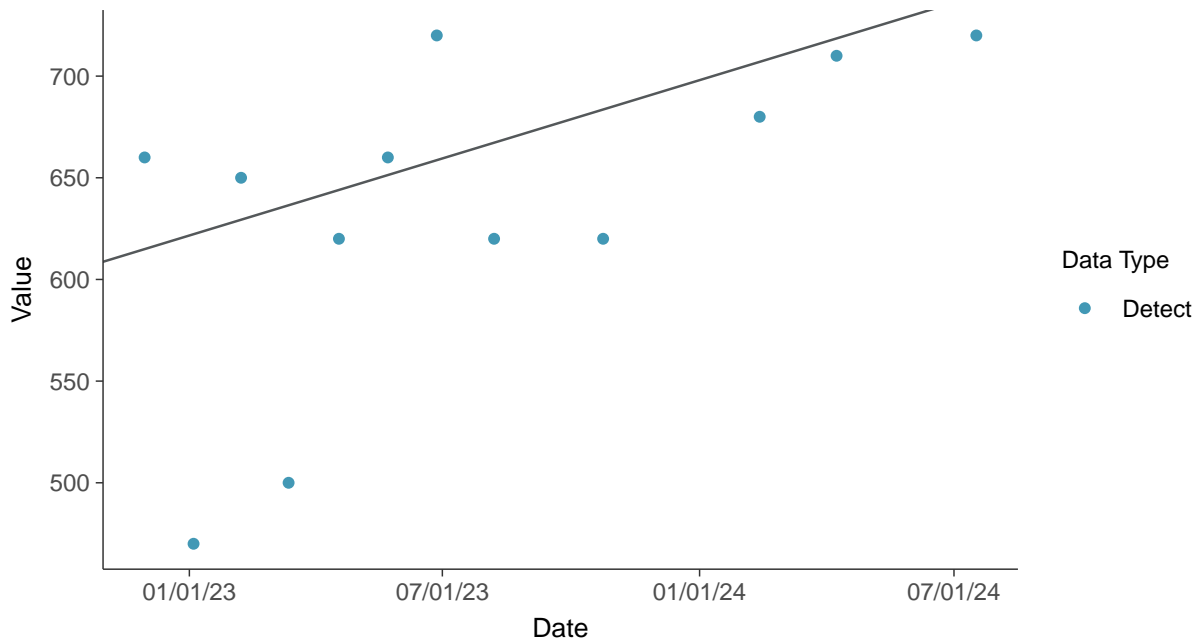
### Normal Q-Q plot

Total Dissolved Solids, MW-07 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-07 (mg/L)



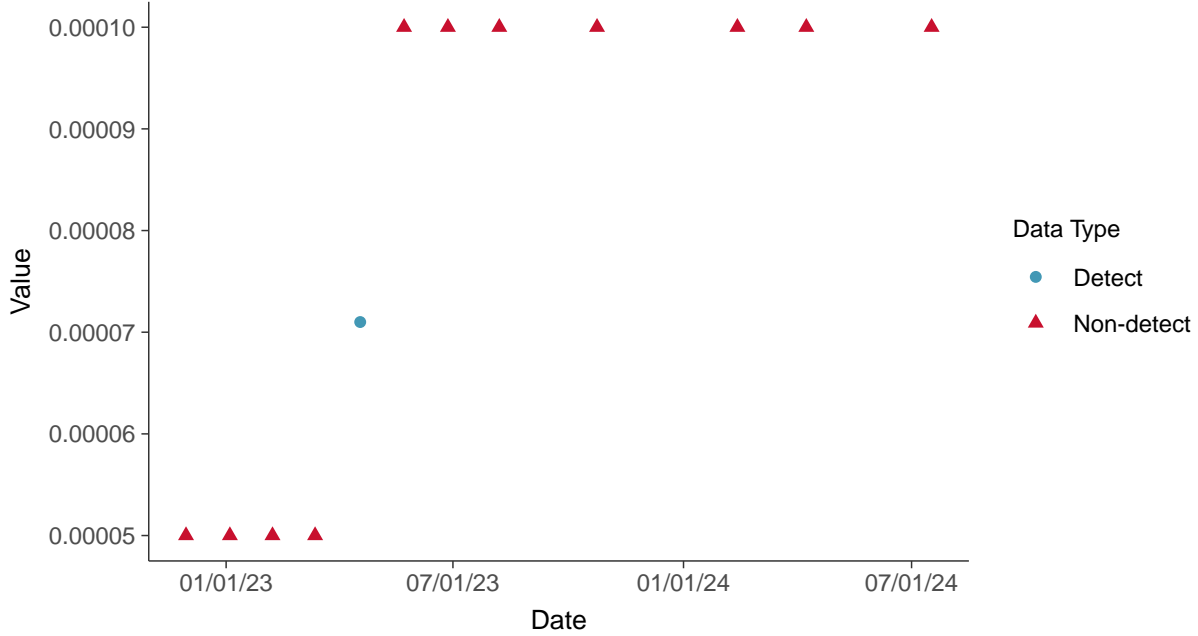


### Appendix IV: Antimony, MW-07

ID: 17\_1\_5\_101

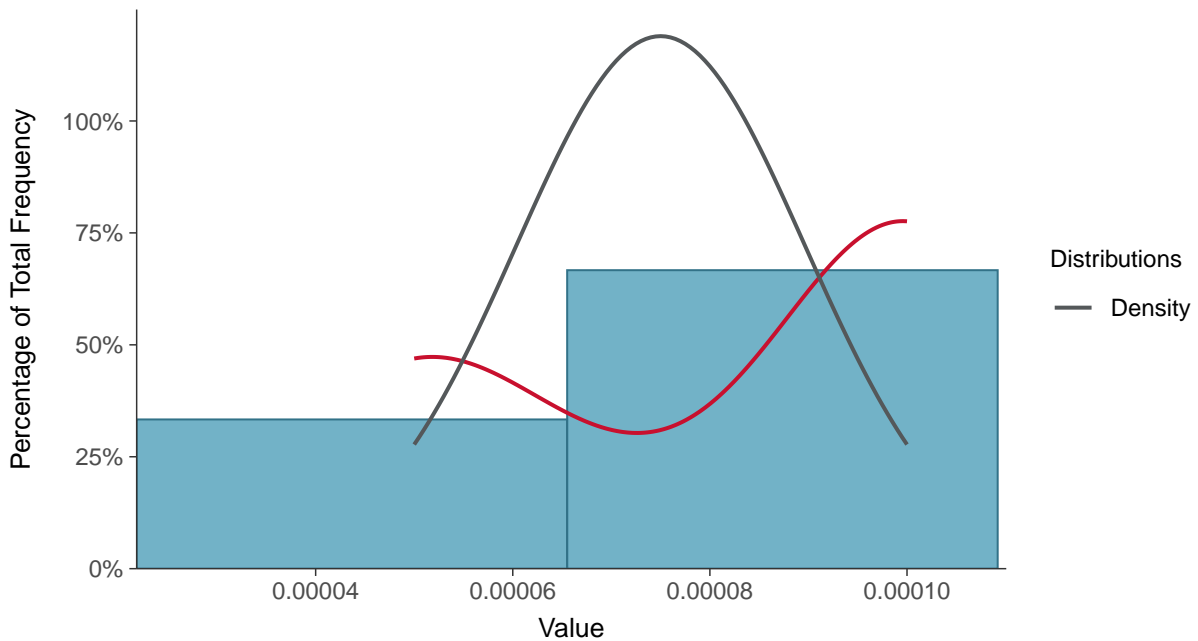
#### Scatter Plot

Antimony, MW-07 (mg/L)



#### Histogram

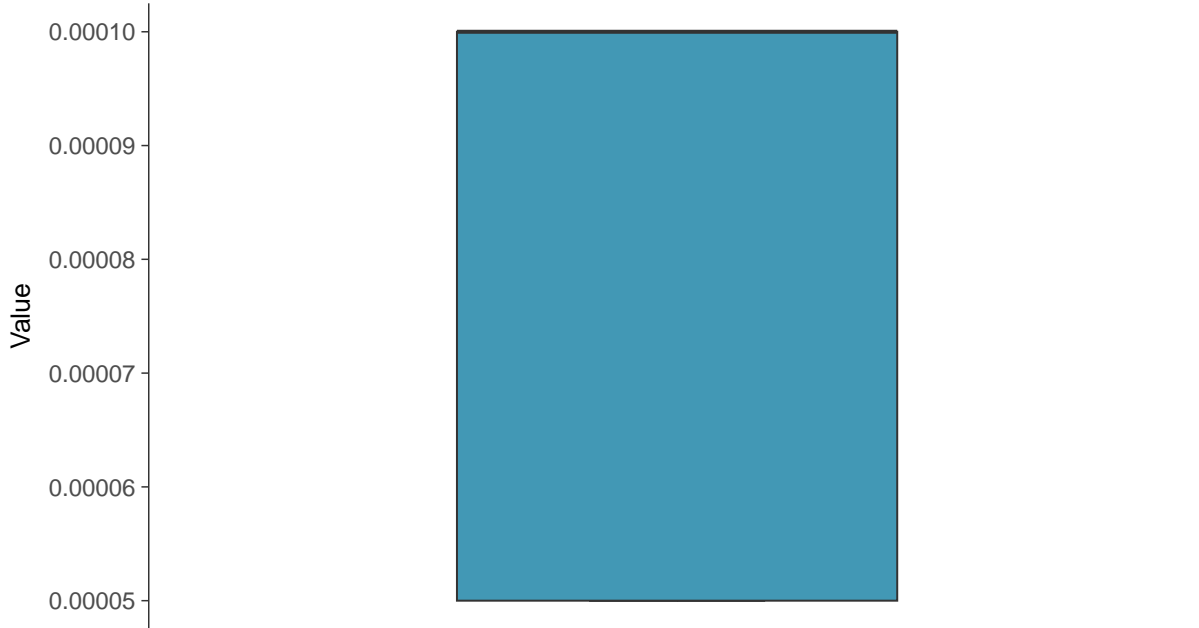
Antimony, MW-07 (mg/L)





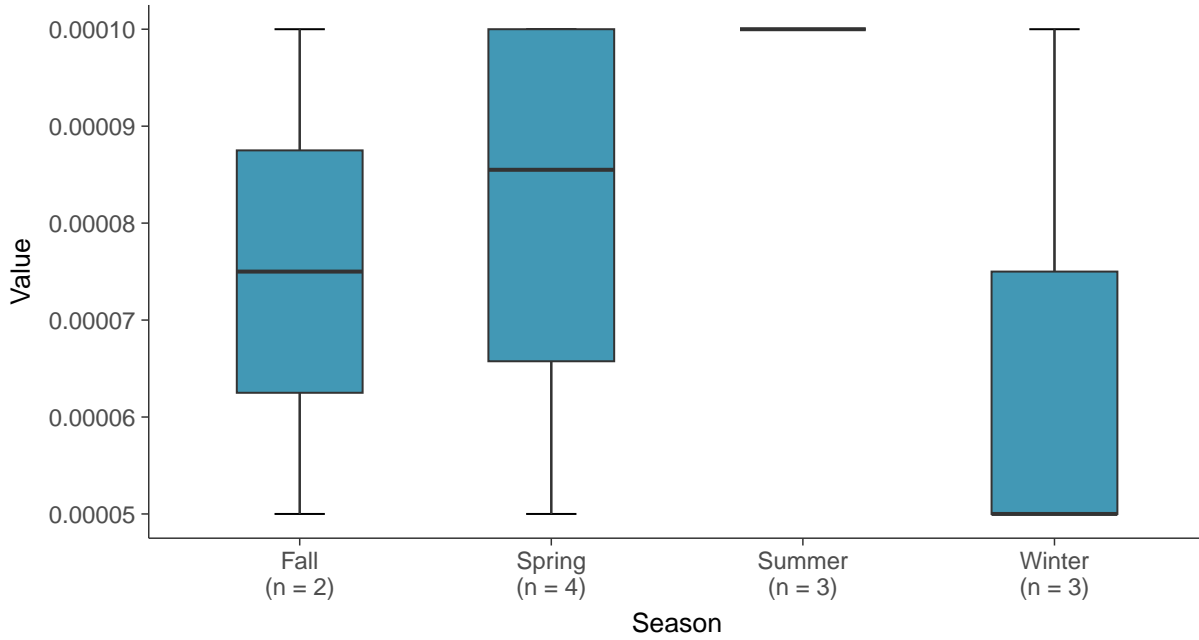
### Boxplot

Antimony, MW-07 (mg/L)



### Boxplot by Season

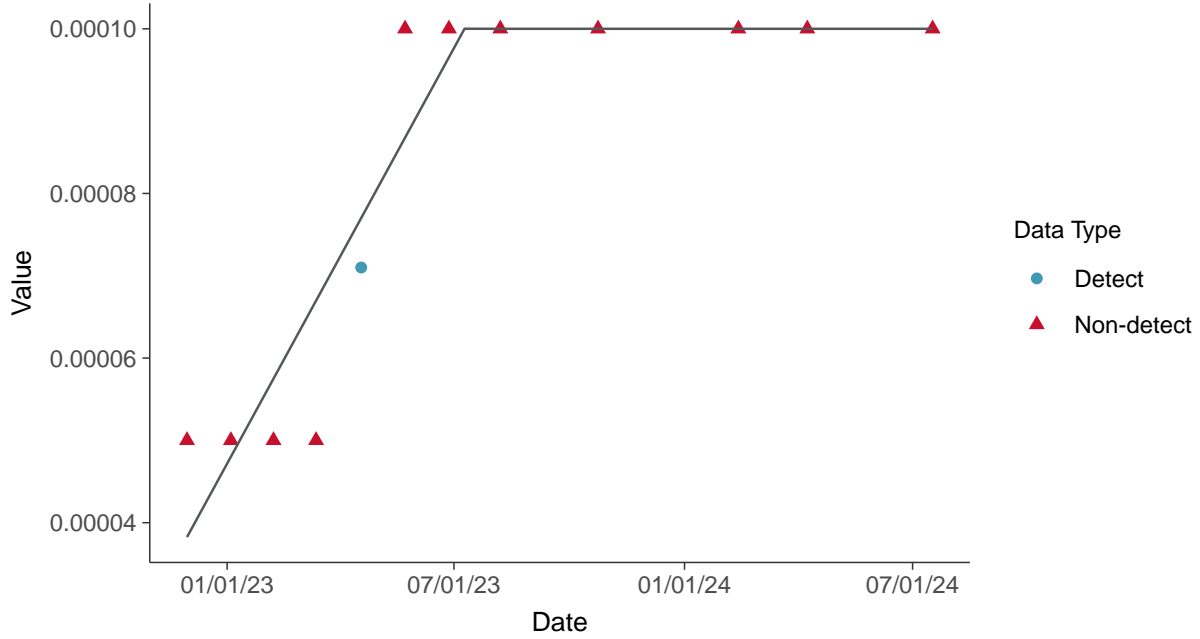
Antimony, MW-07 (mg/L)





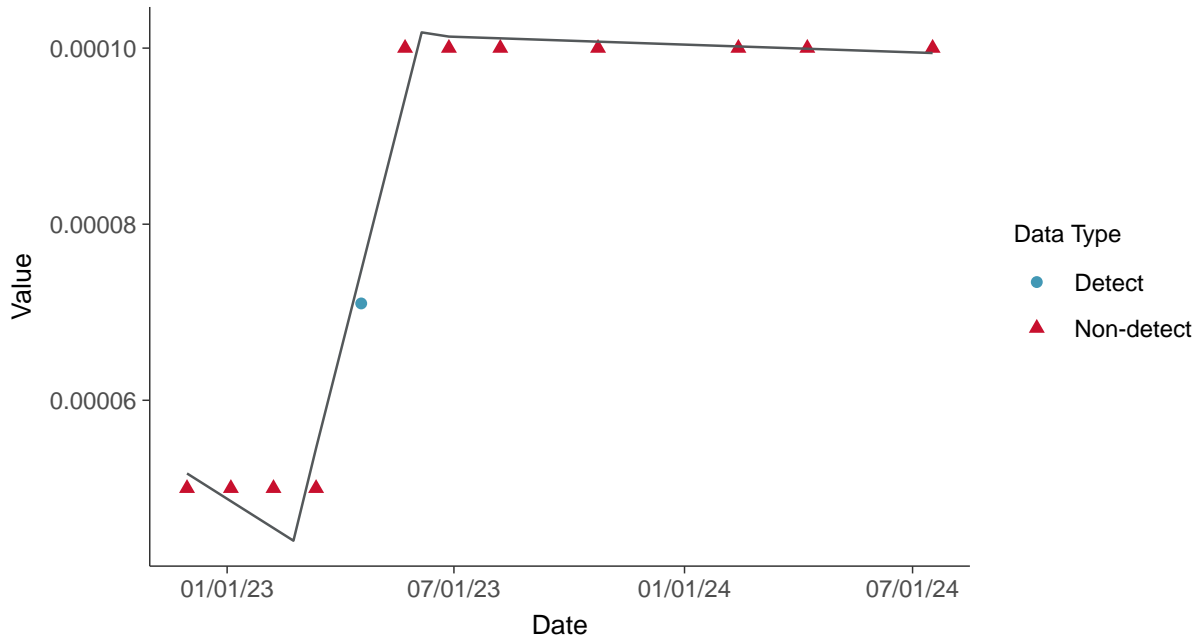
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-07 (mg/L)





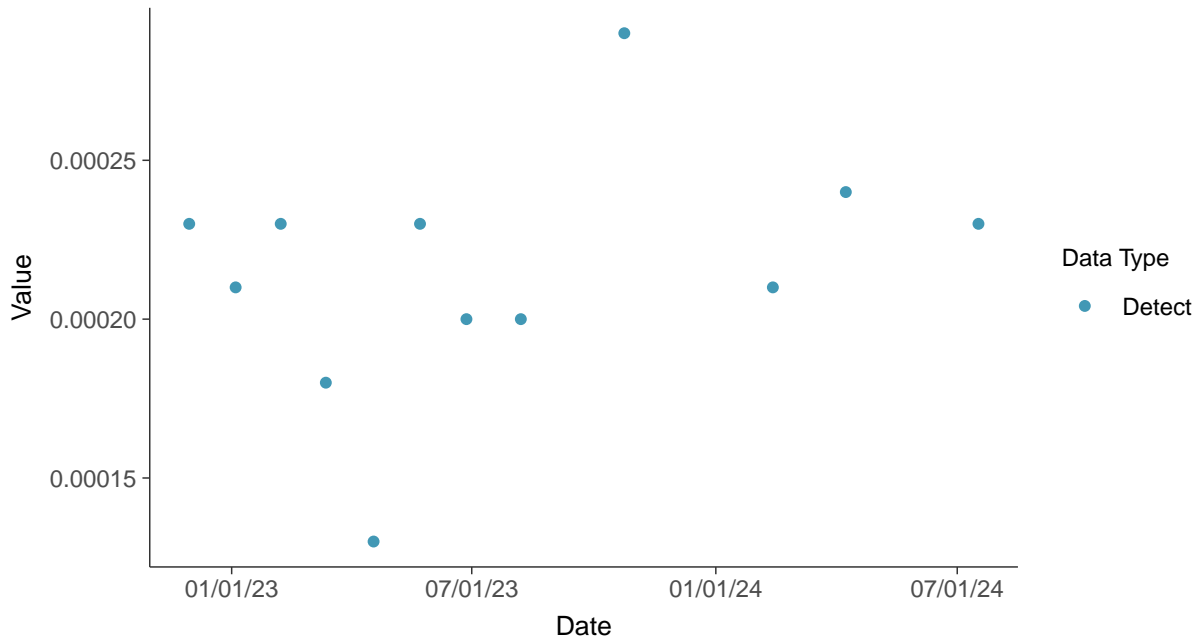


### Appendix IV: Arsenic, MW-07

ID: 17\_1\_5\_102

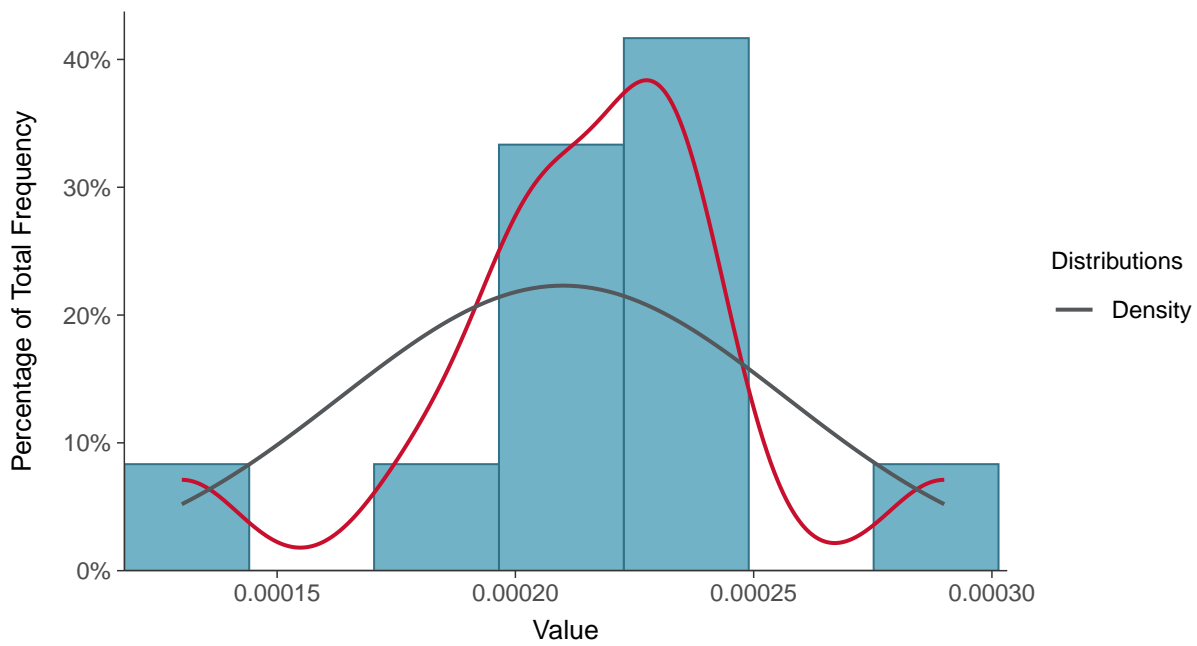
#### Scatter Plot

Arsenic, MW-07 (mg/L)



#### Histogram

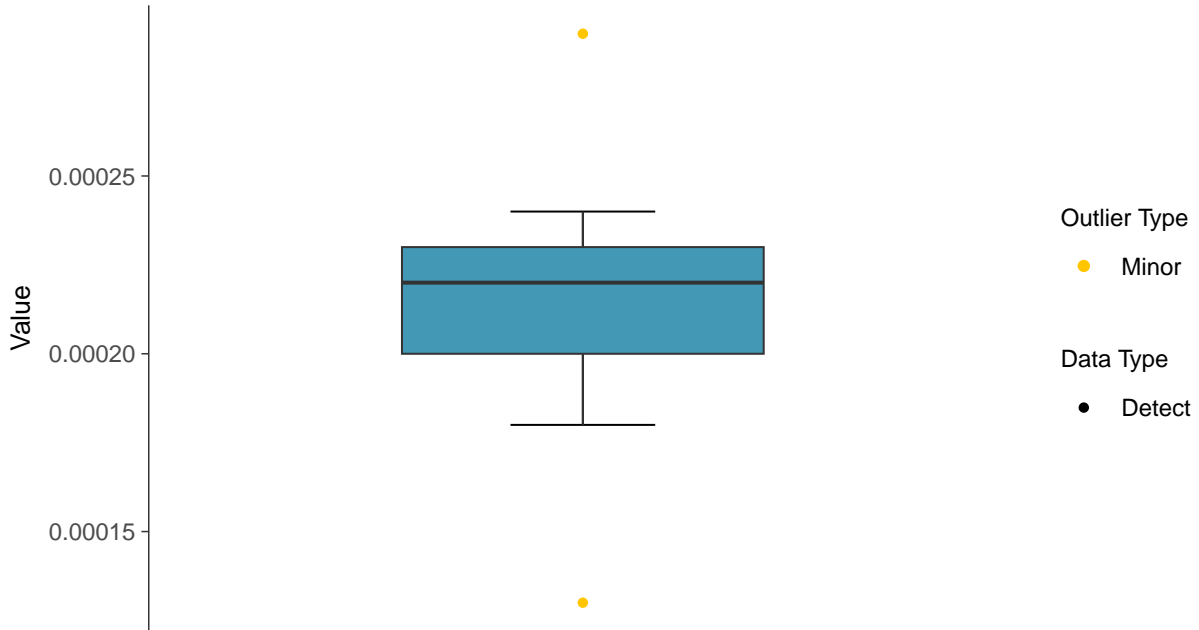
Arsenic, MW-07 (mg/L)





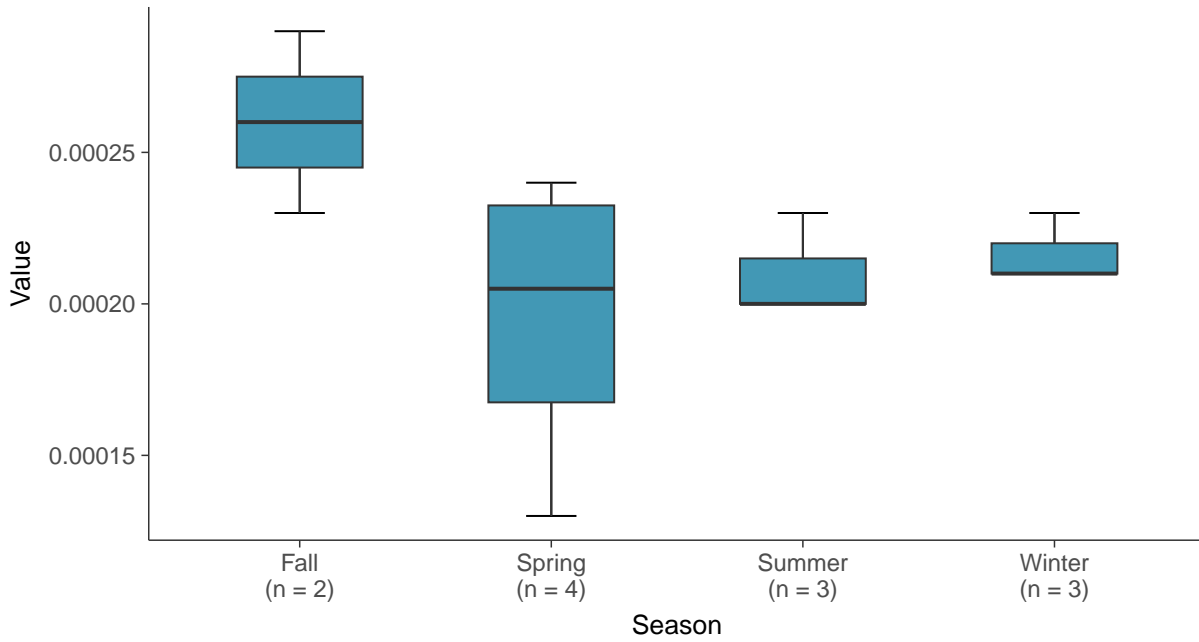
### Boxplot

Arsenic, MW-07 (mg/L)



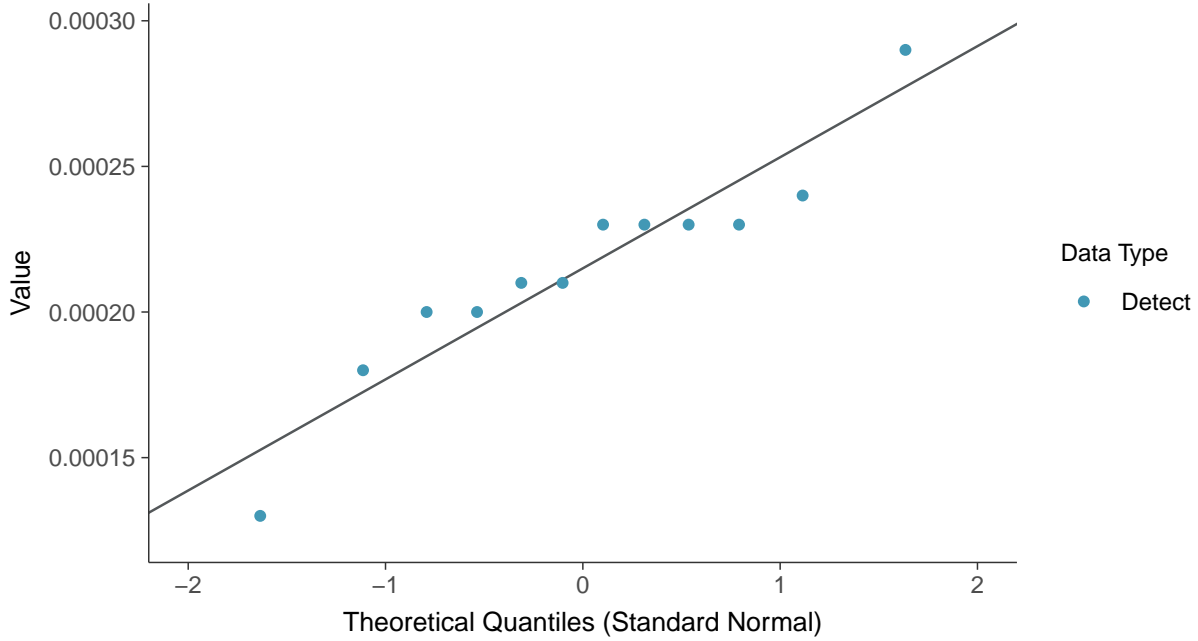
### Boxplot by Season

Arsenic, MW-07 (mg/L)

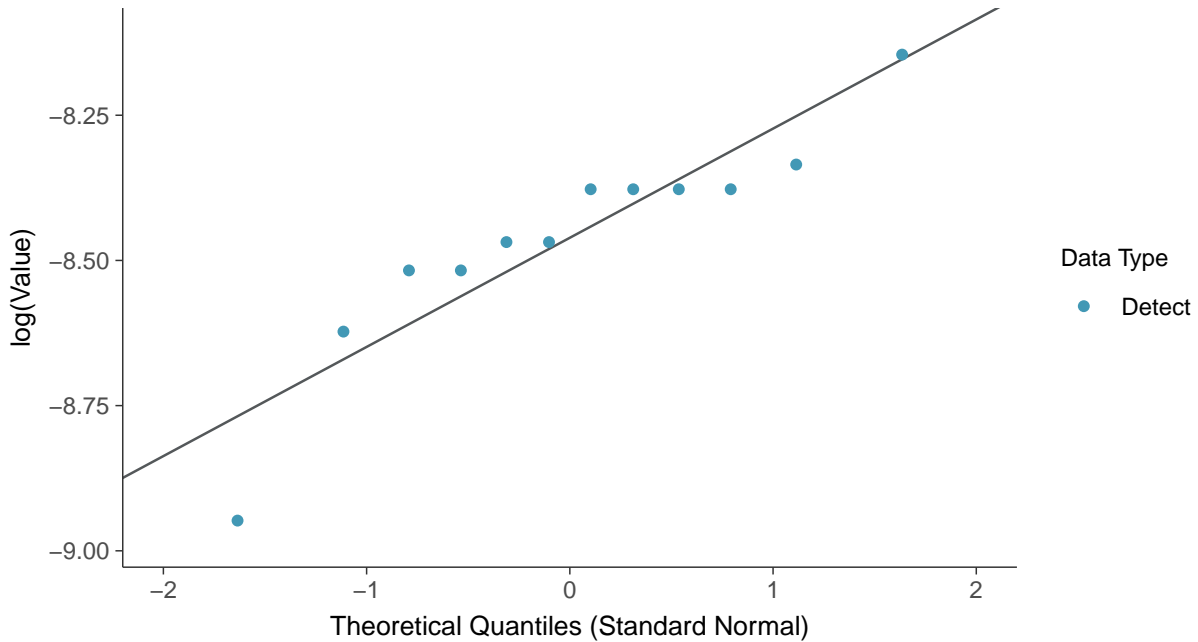




**Normal Q-Q plot**  
Arsenic, MW-07 (mg/L)



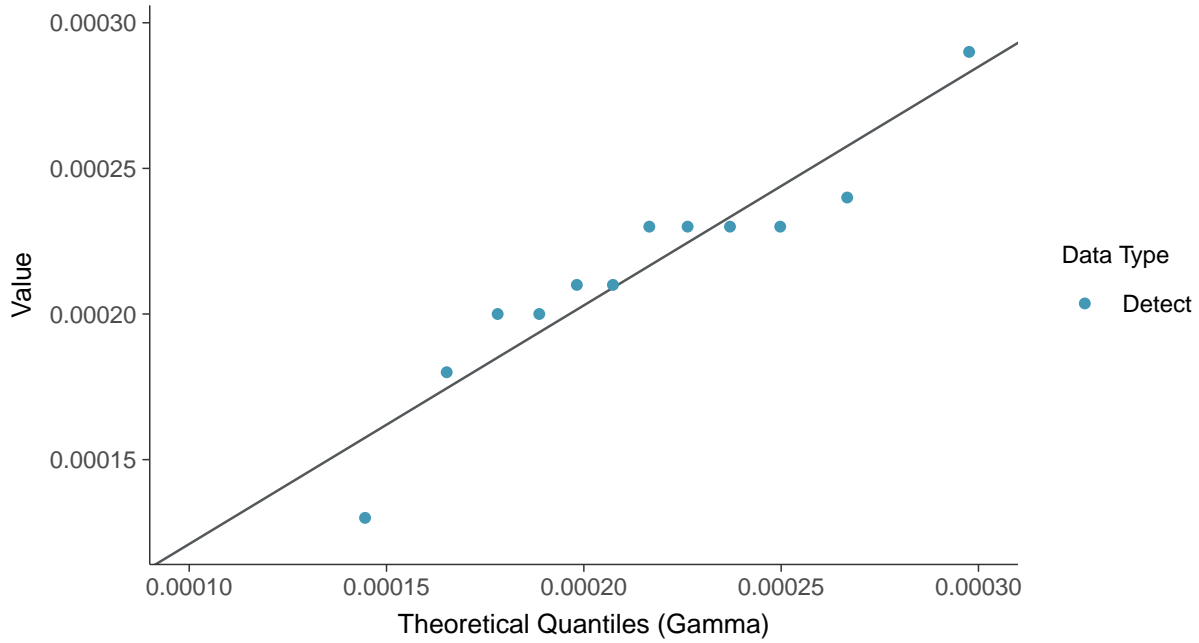
**Lognormal Q-Q plot**  
Arsenic, MW-07 (mg/L)





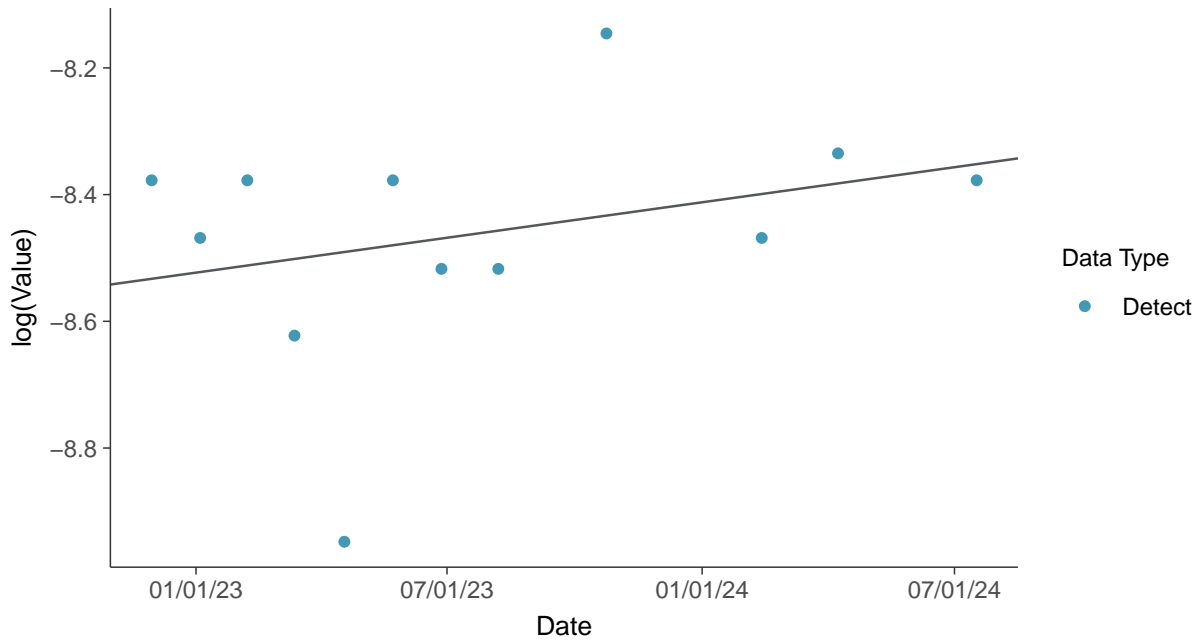
### Gamma Q-Q plot

Arsenic, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

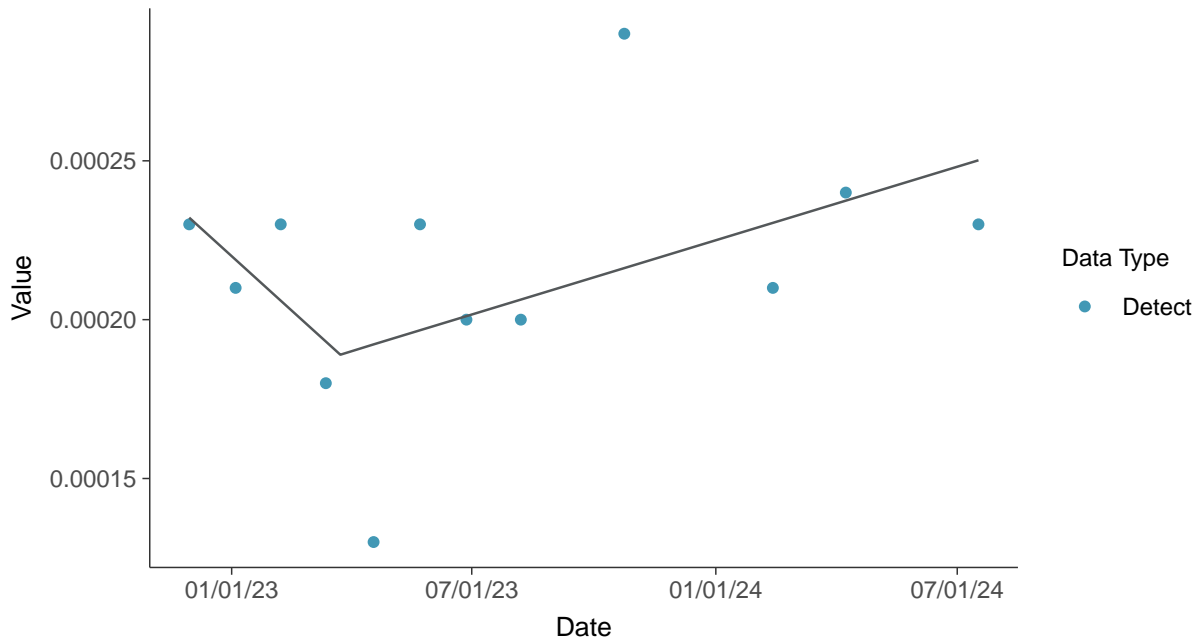
Arsenic, MW-07 (mg/L)





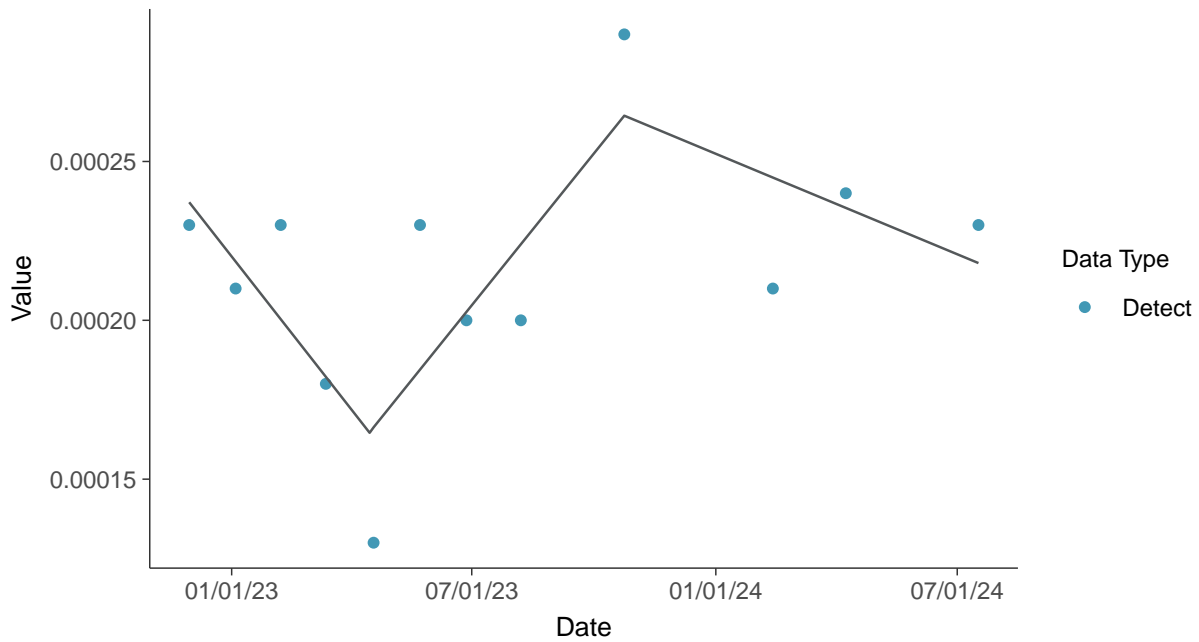
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

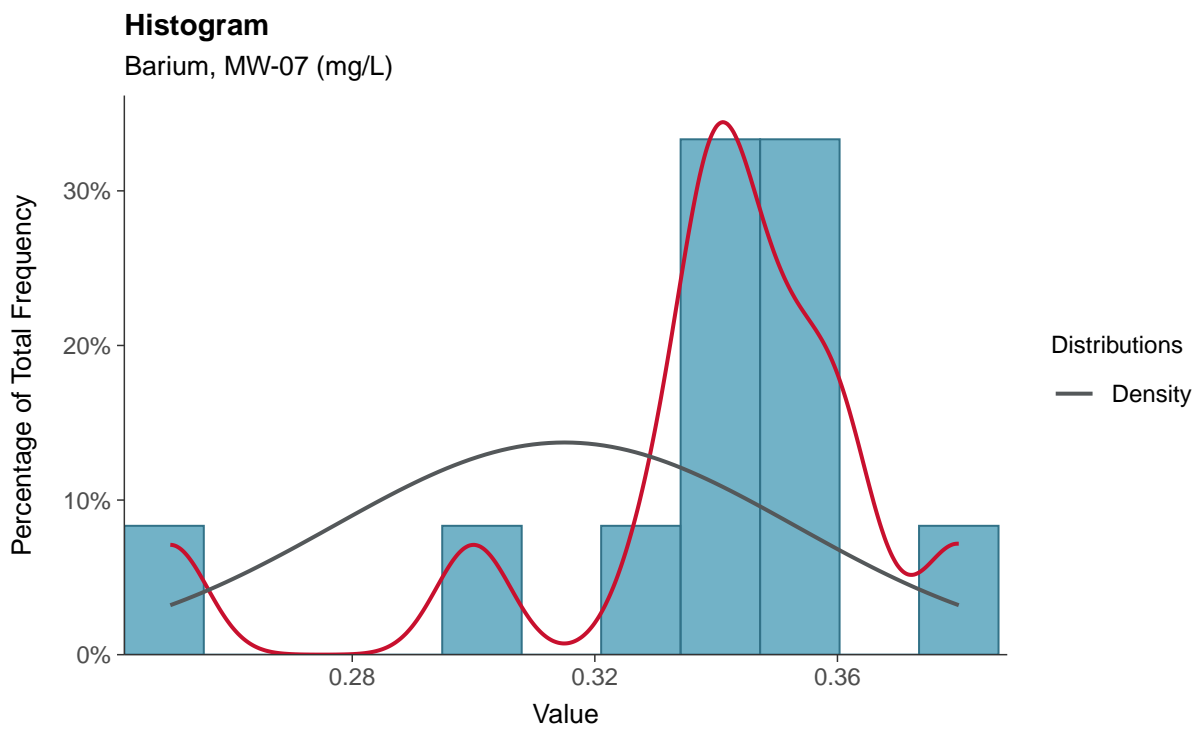
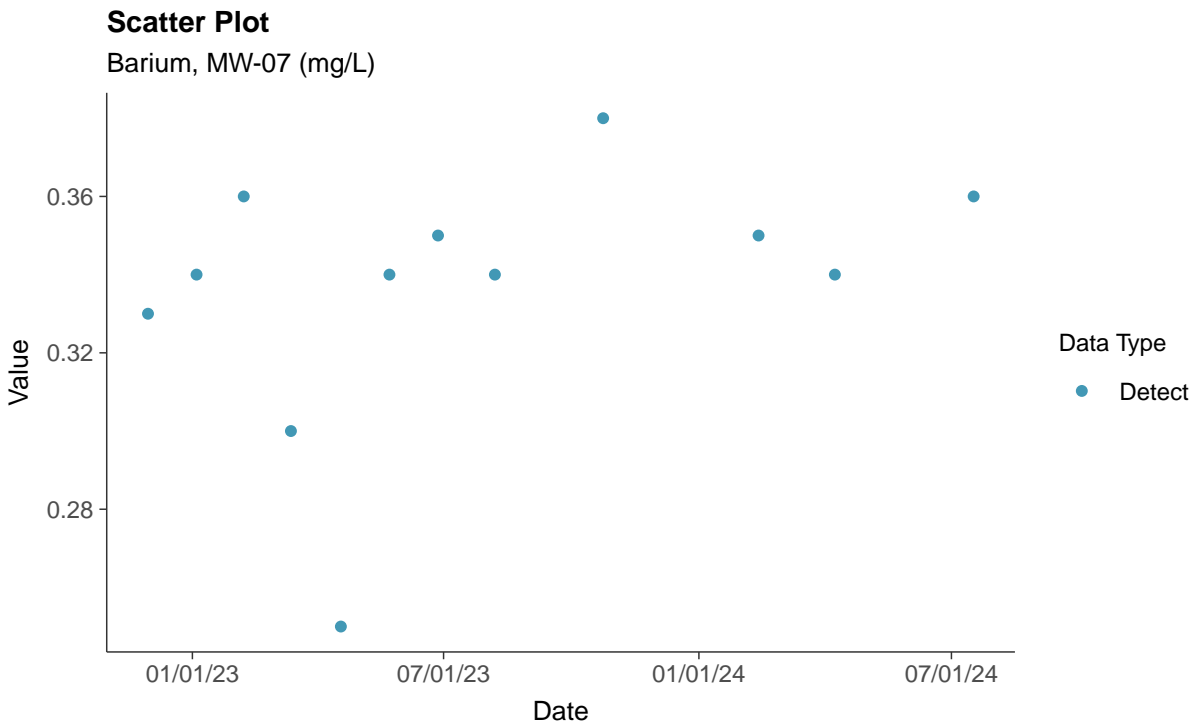
Arsenic, MW-07 (mg/L)





### Appendix IV: Barium, MW-07

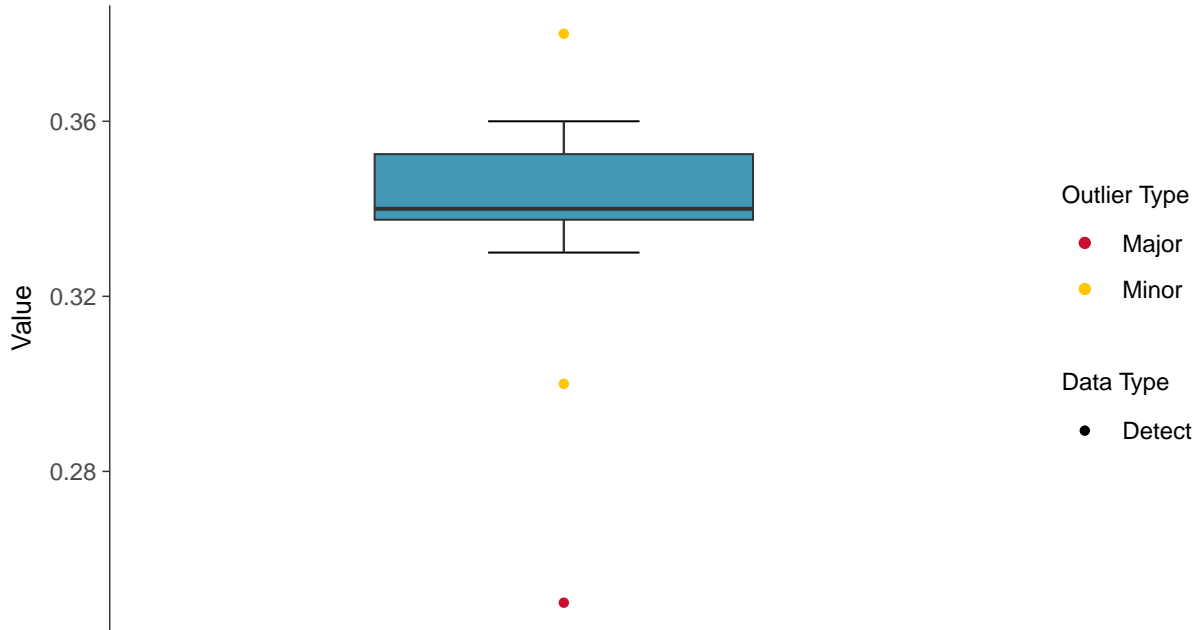
ID: 17\_1\_5\_103





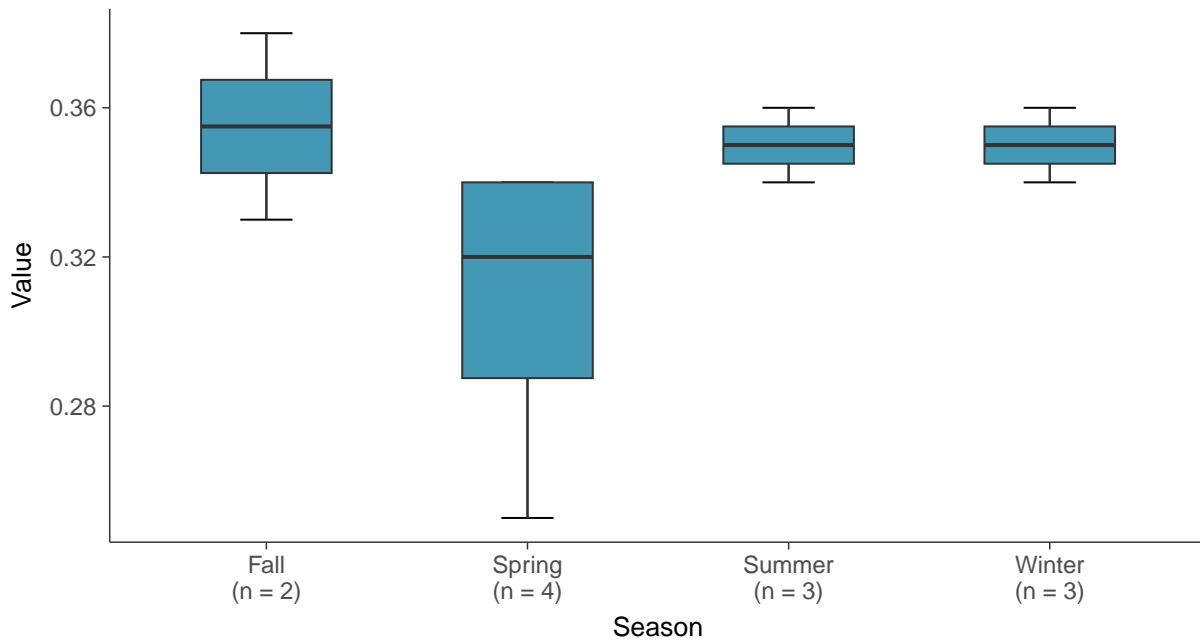
### Boxplot

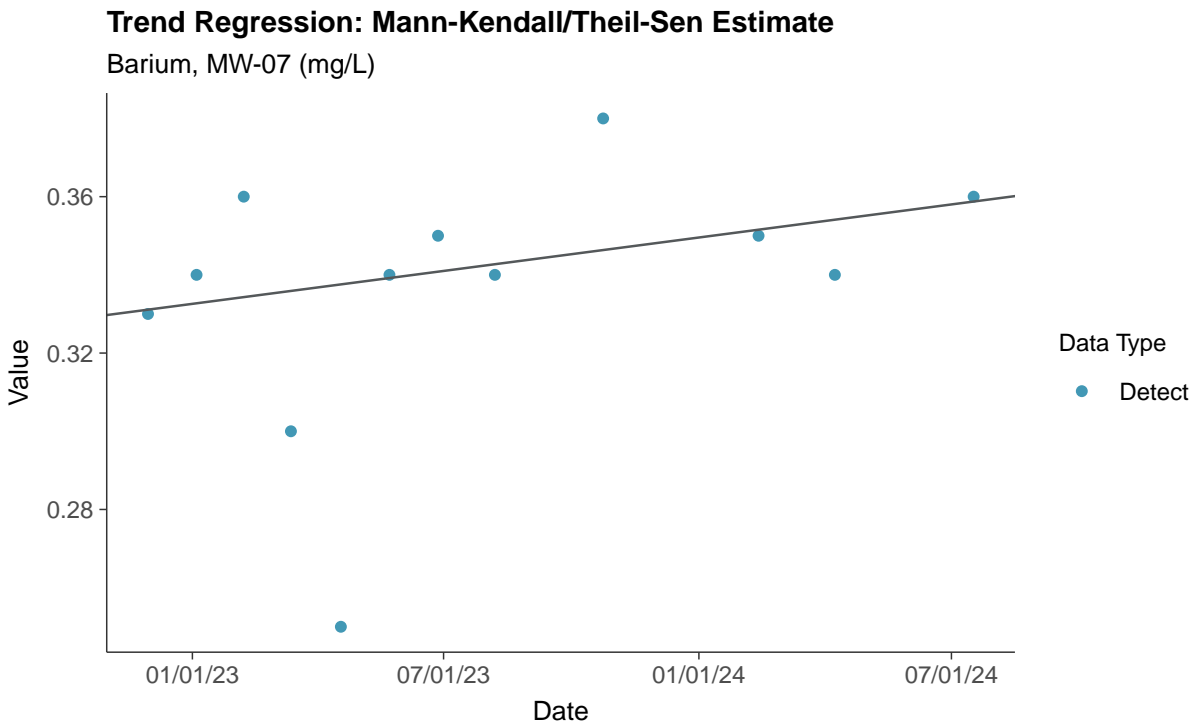
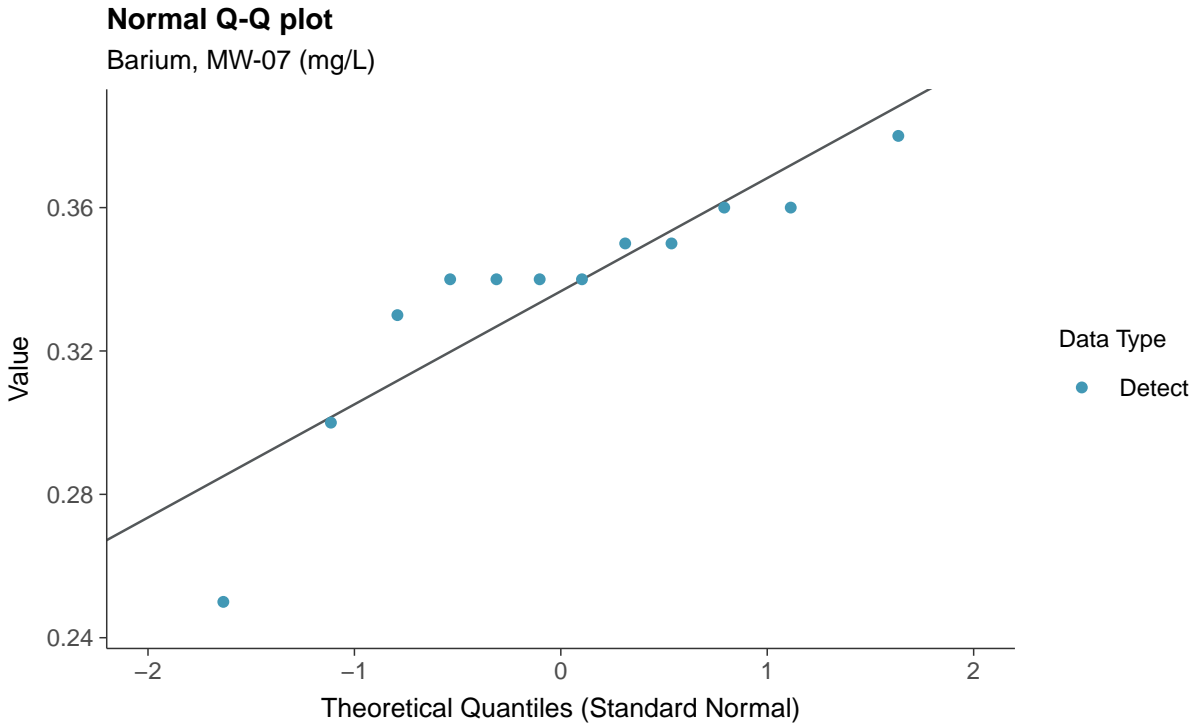
Barium, MW-07 (mg/L)



### Boxplot by Season

Barium, MW-07 (mg/L)



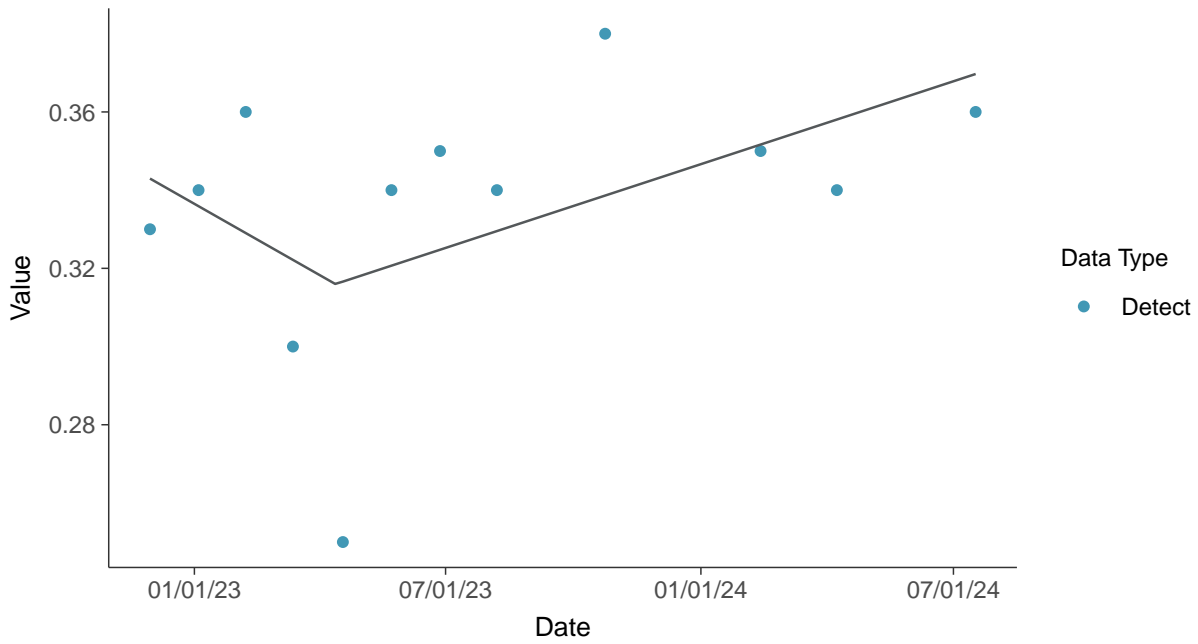






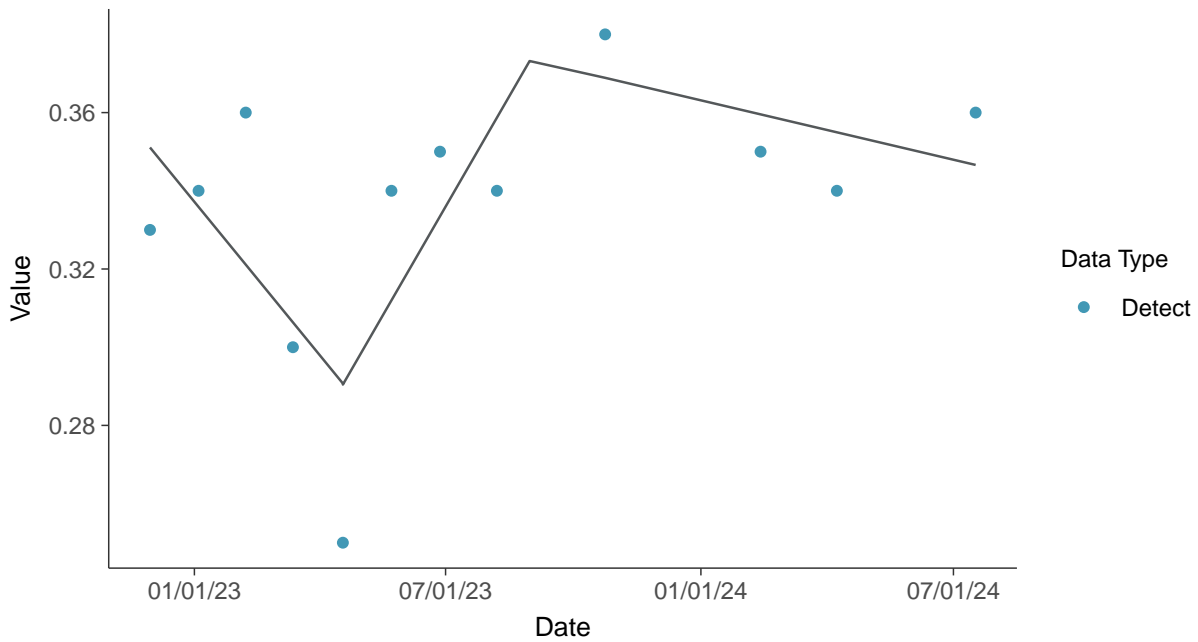
### Trend Regression: Piecewise Linear-Linear

Barium, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

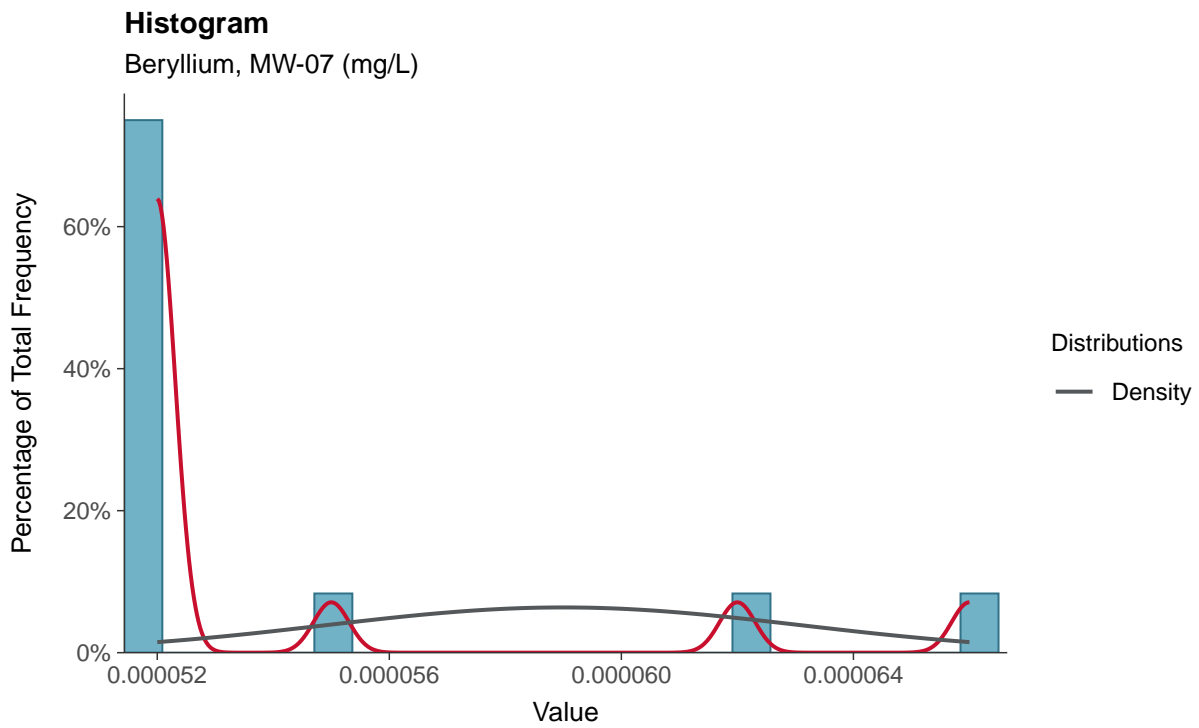
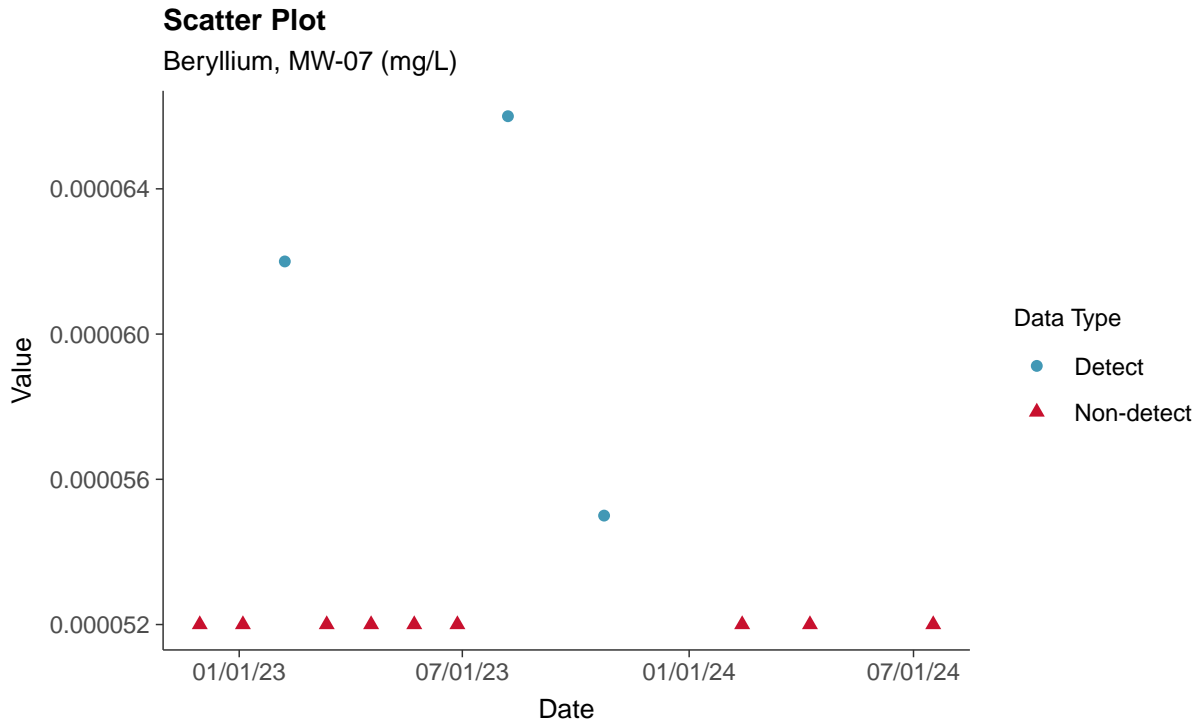
Barium, MW-07 (mg/L)





### Appendix IV: Beryllium, MW-07

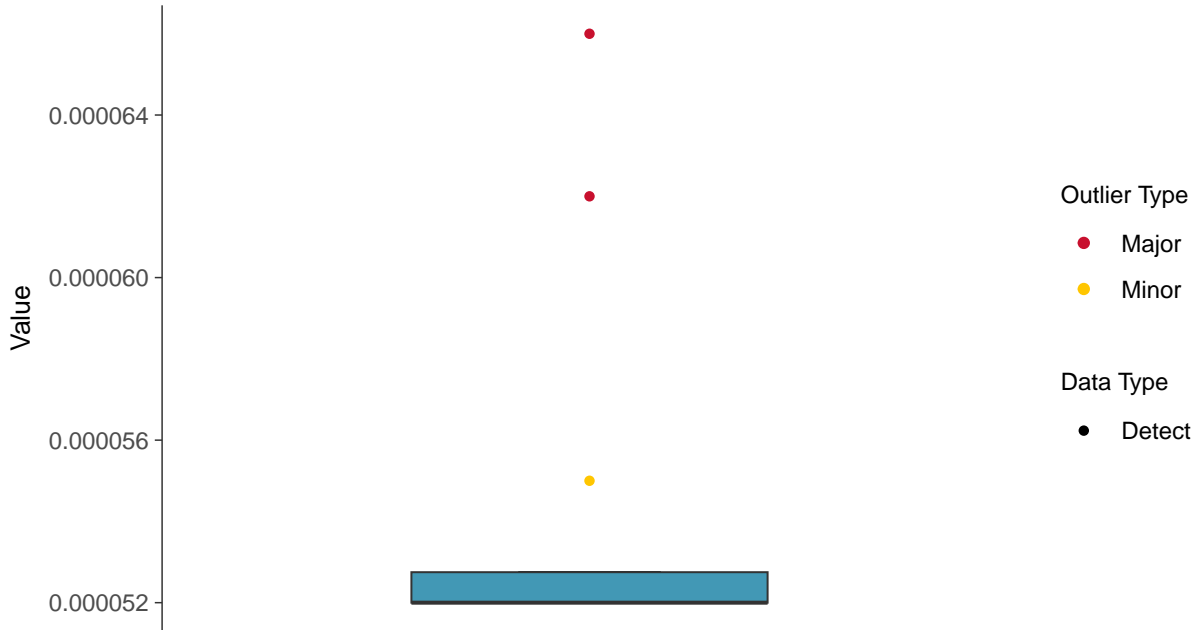
ID: 17\_1\_5\_104





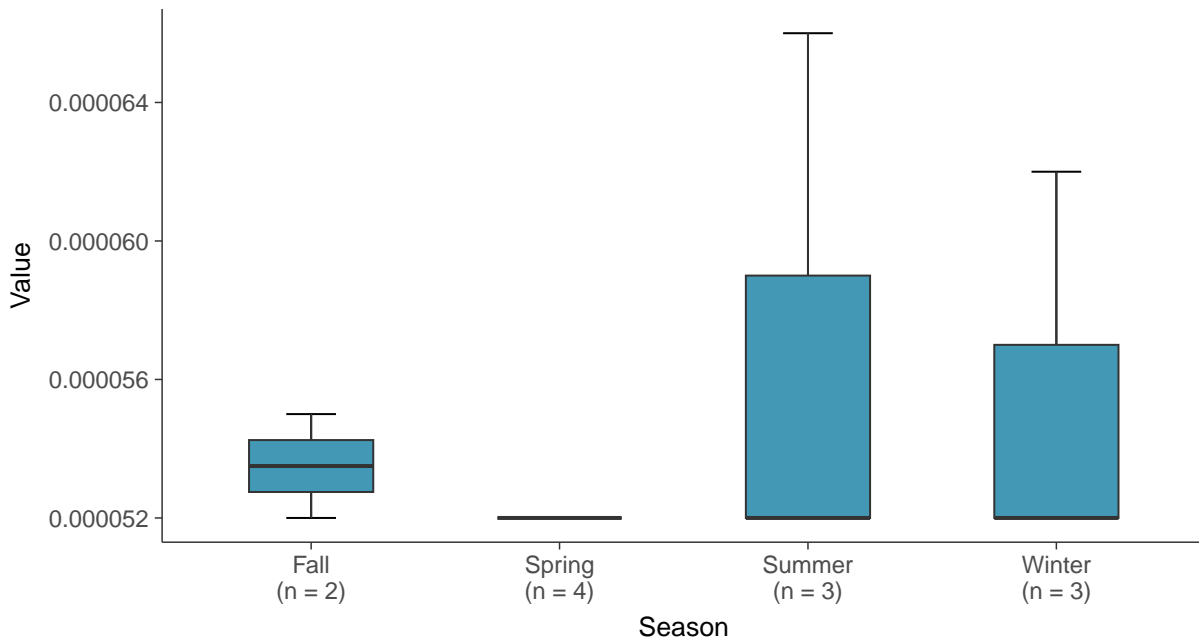
### Boxplot

Beryllium, MW-07 (mg/L)



### Boxplot by Season

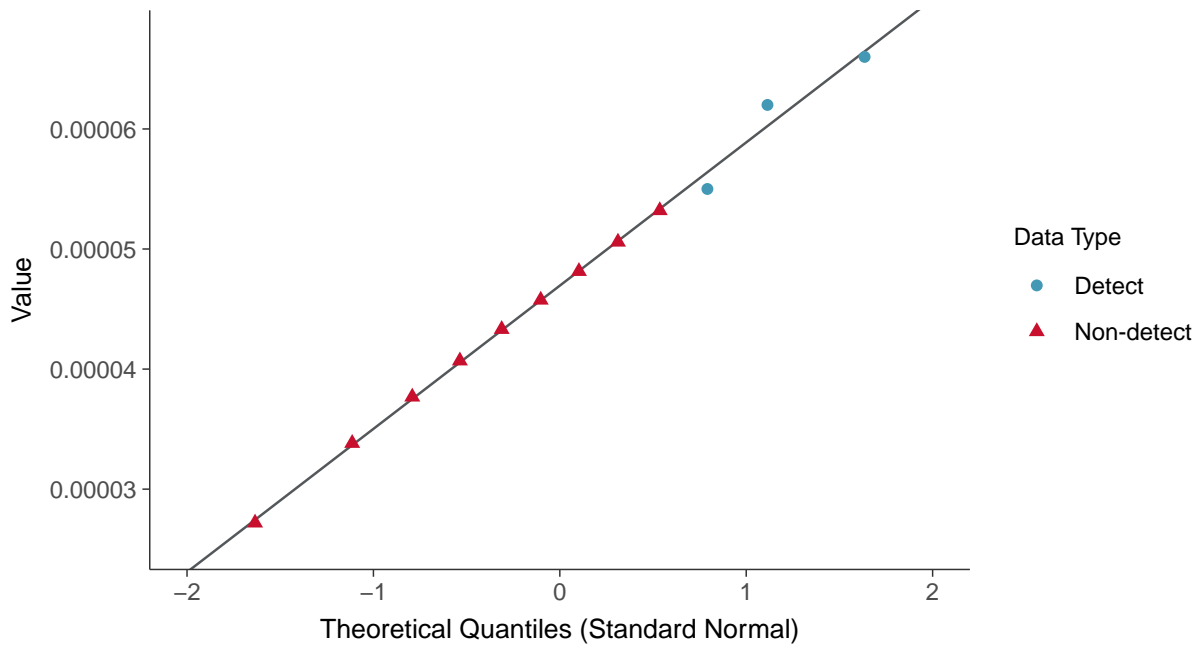
Beryllium, MW-07 (mg/L)





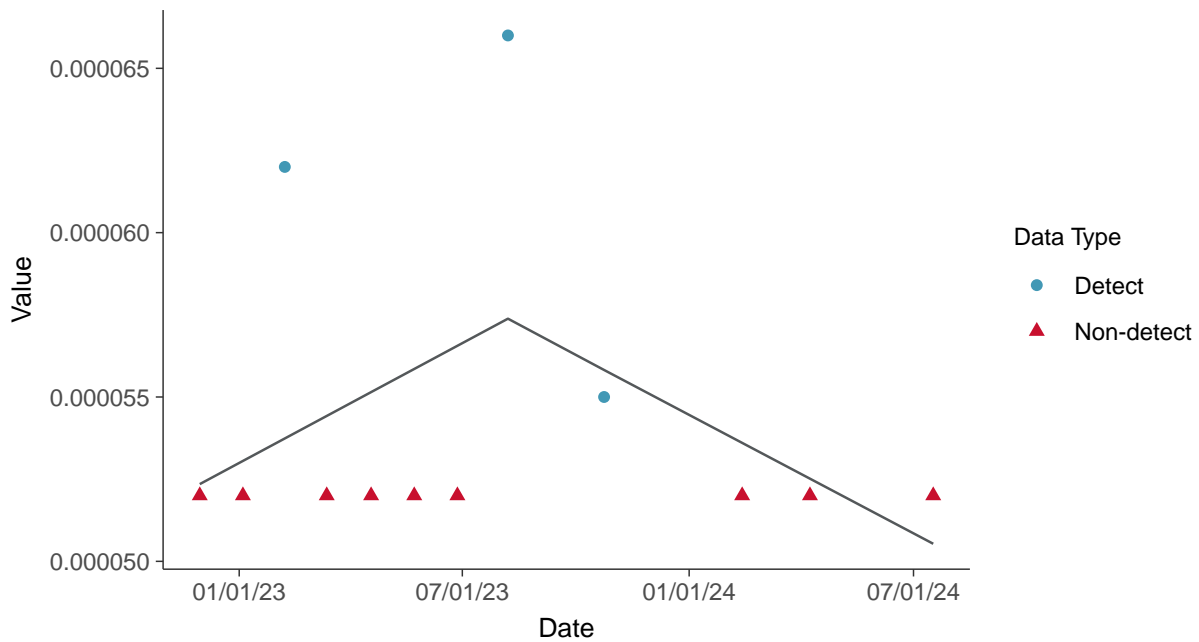
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear

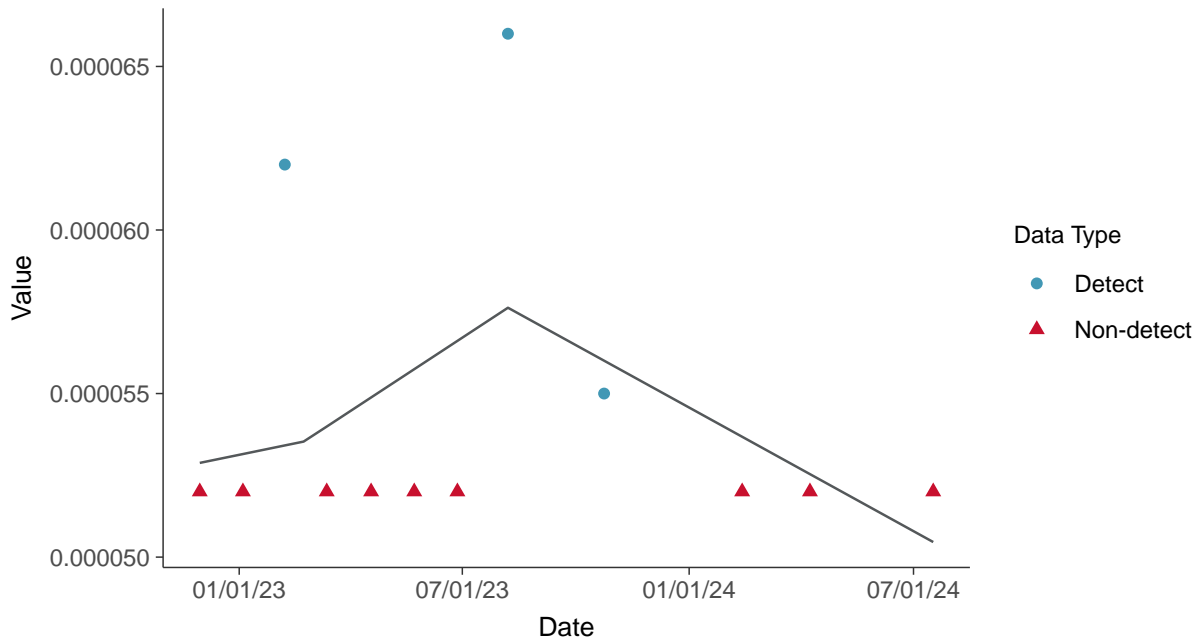
Beryllium, MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

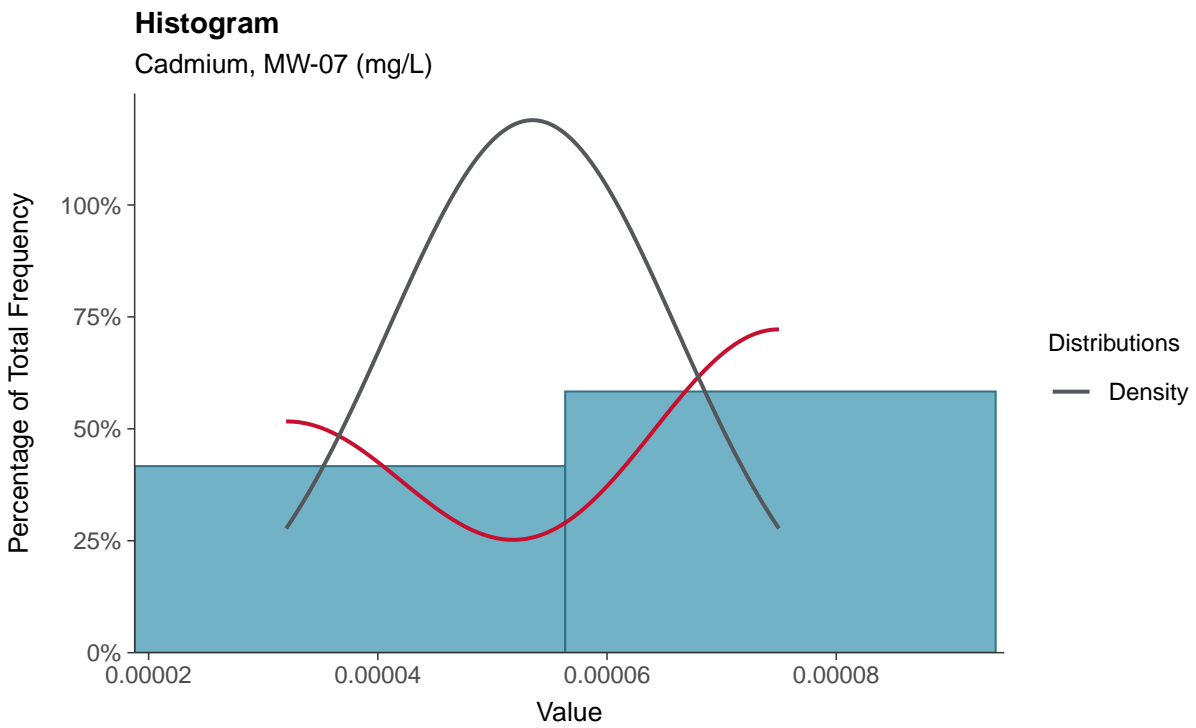
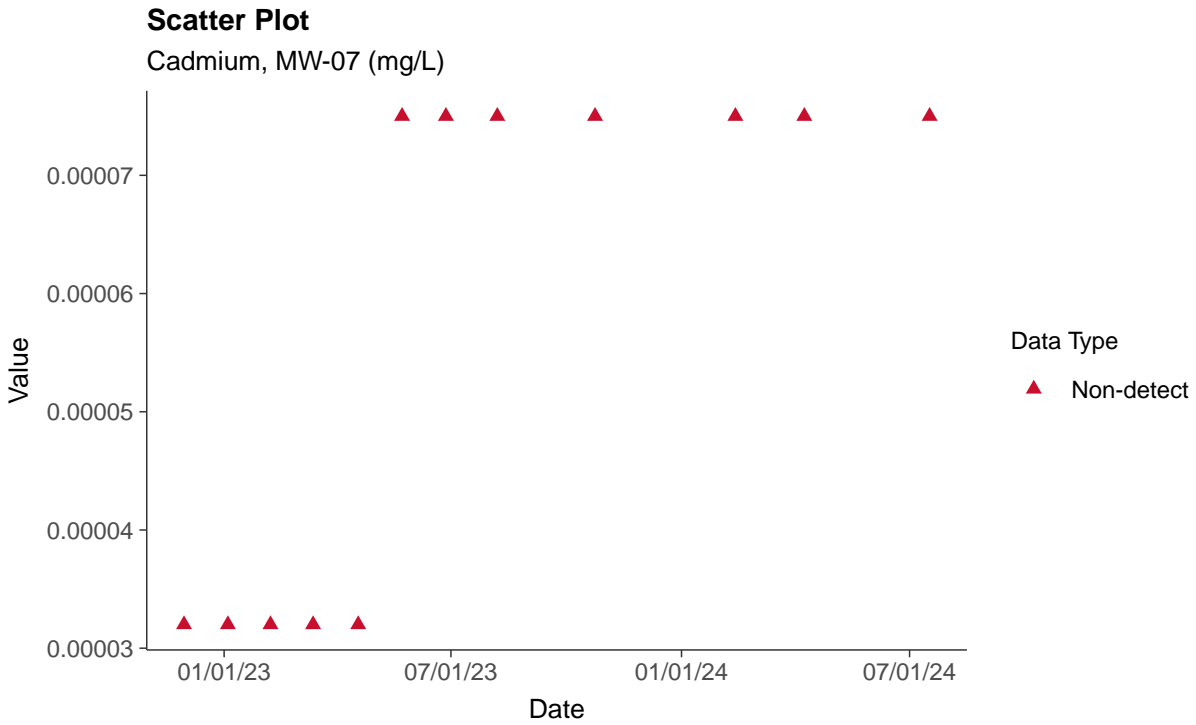
Beryllium, MW-07 (mg/L)





### Appendix IV: Cadmium, MW-07

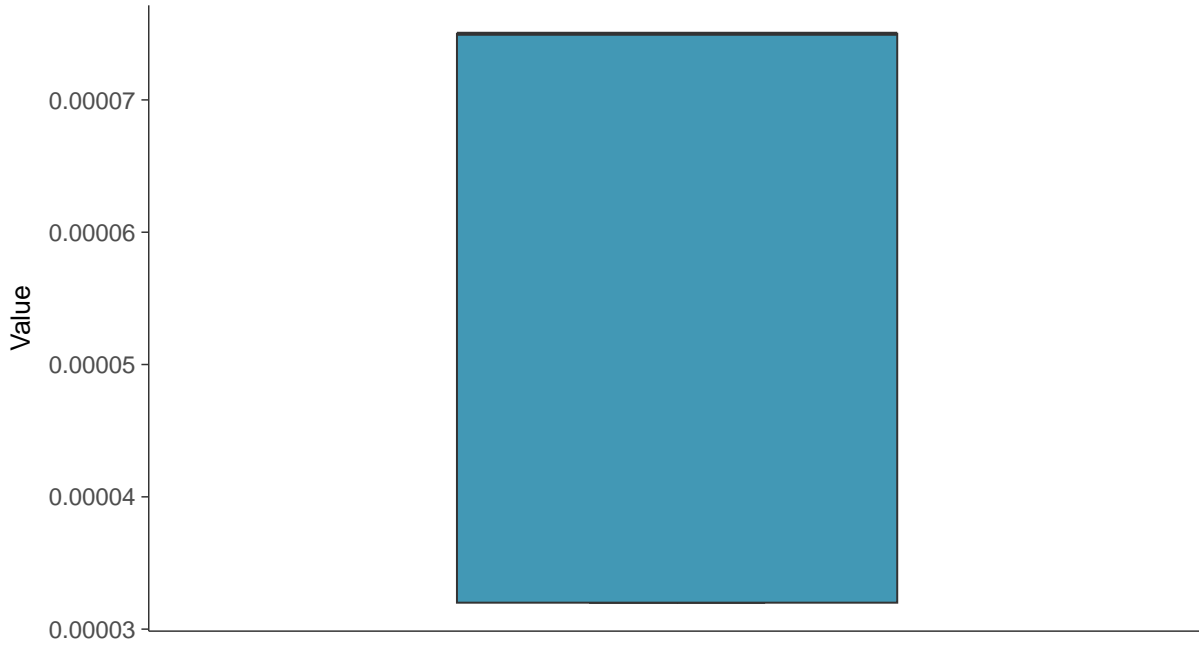
ID: 17\_1\_5\_106





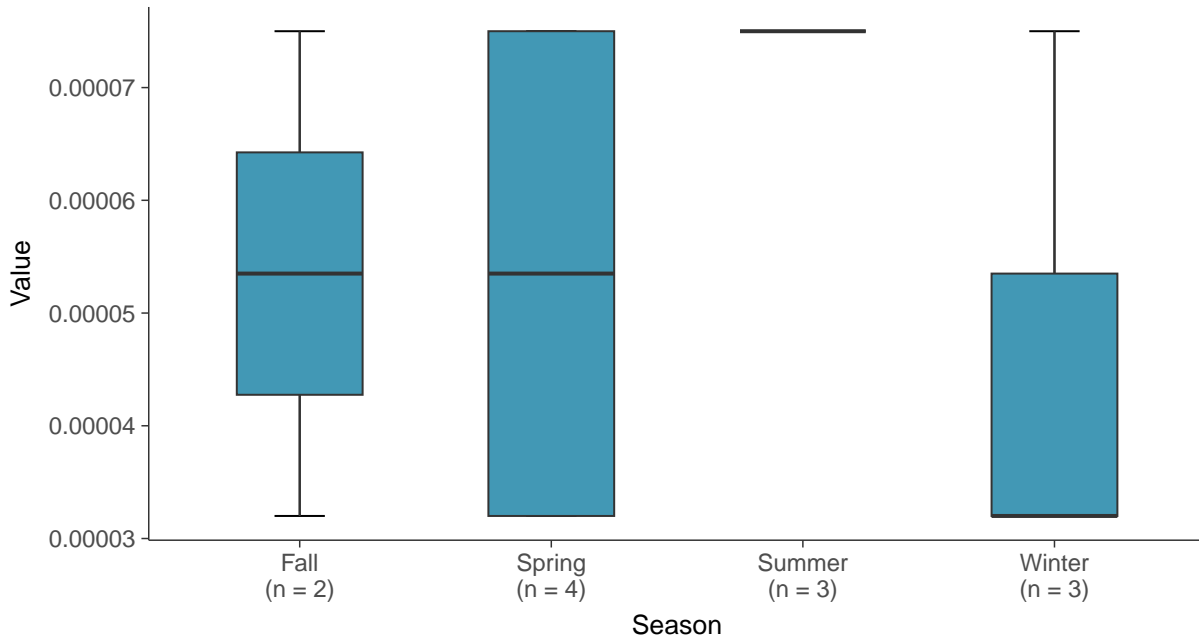
### Boxplot

Cadmium, MW-07 (mg/L)



### Boxplot by Season

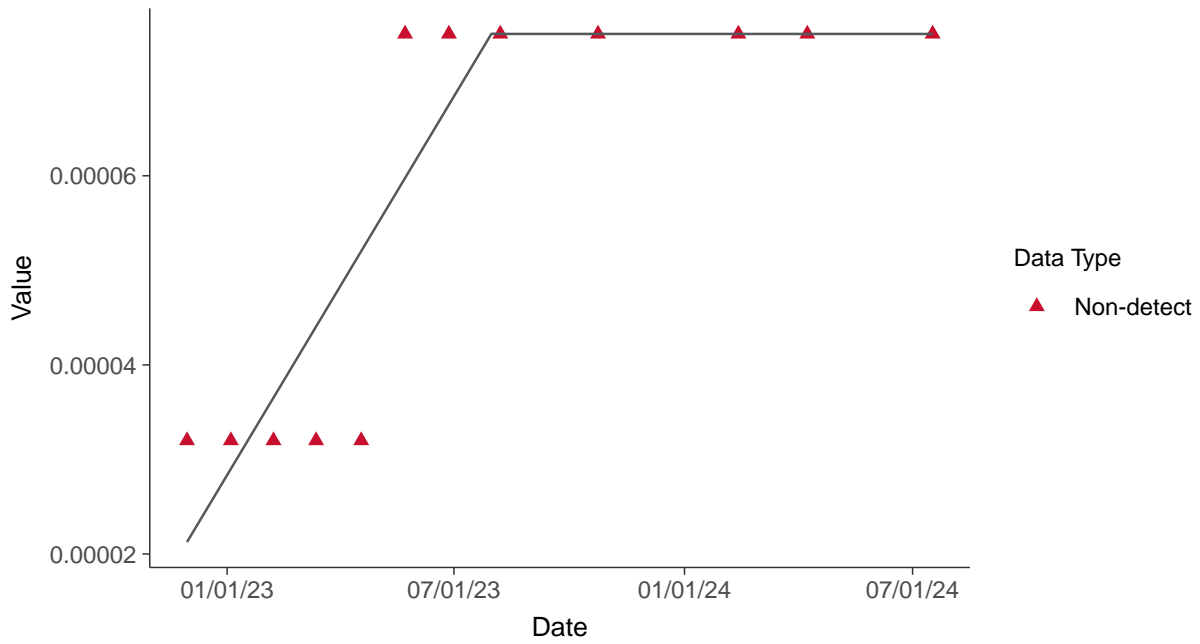
Cadmium, MW-07 (mg/L)





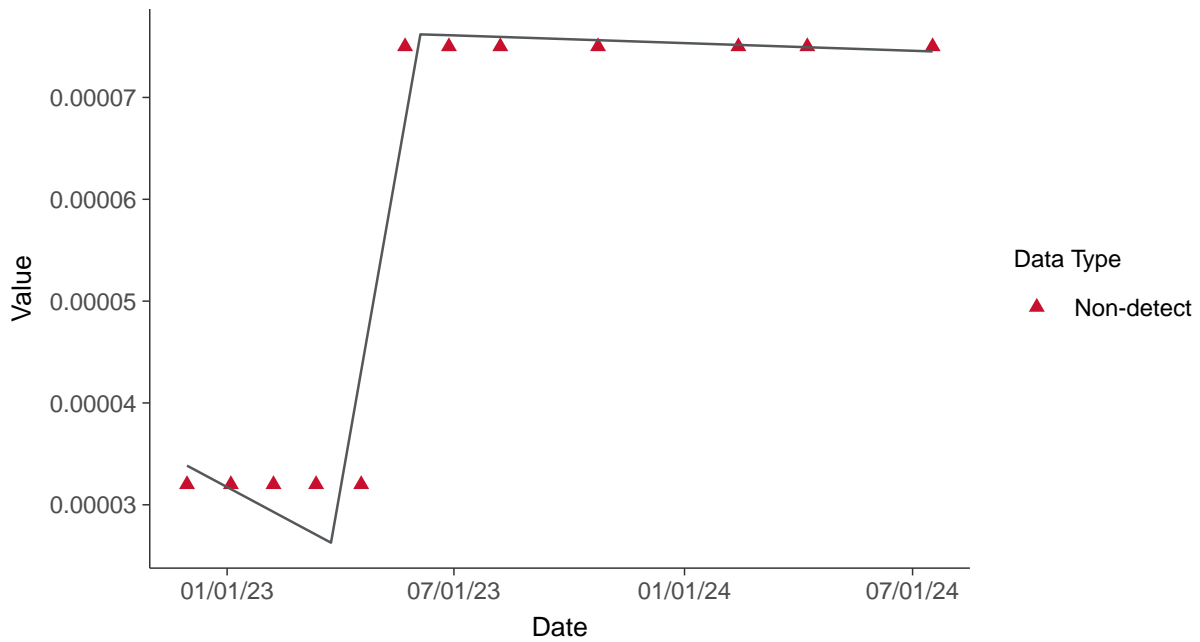
### Trend Regression: Piecewise Linear-Linear

Cadmium, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-07 (mg/L)





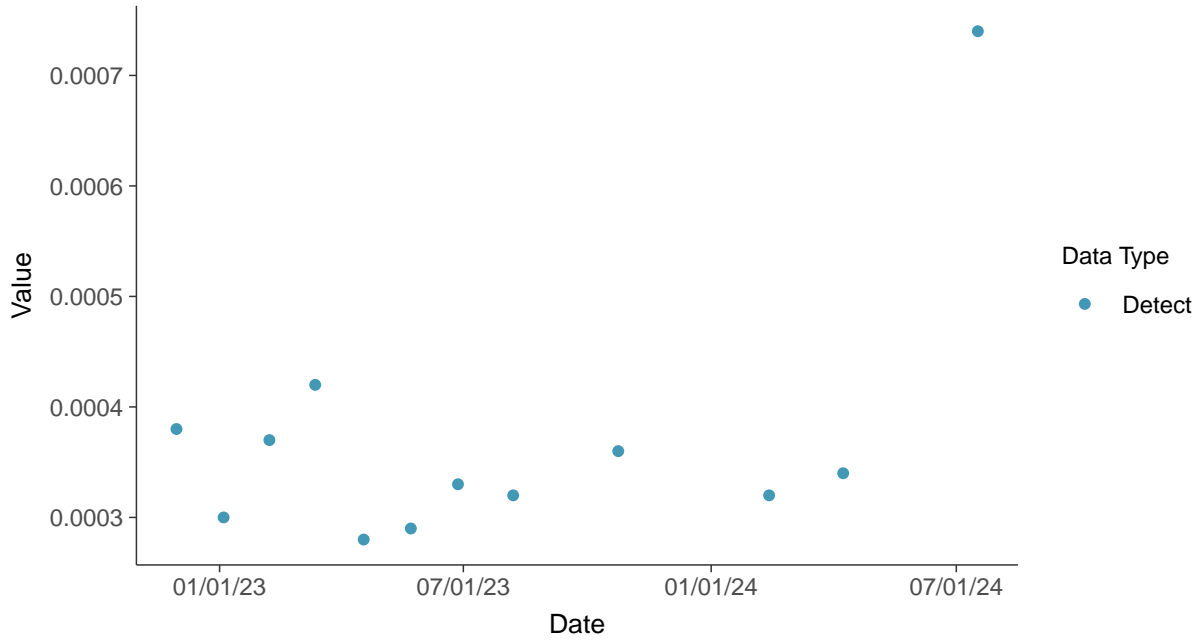


### Appendix IV: Chromium, Total, MW-07

ID: 17\_1\_5\_109

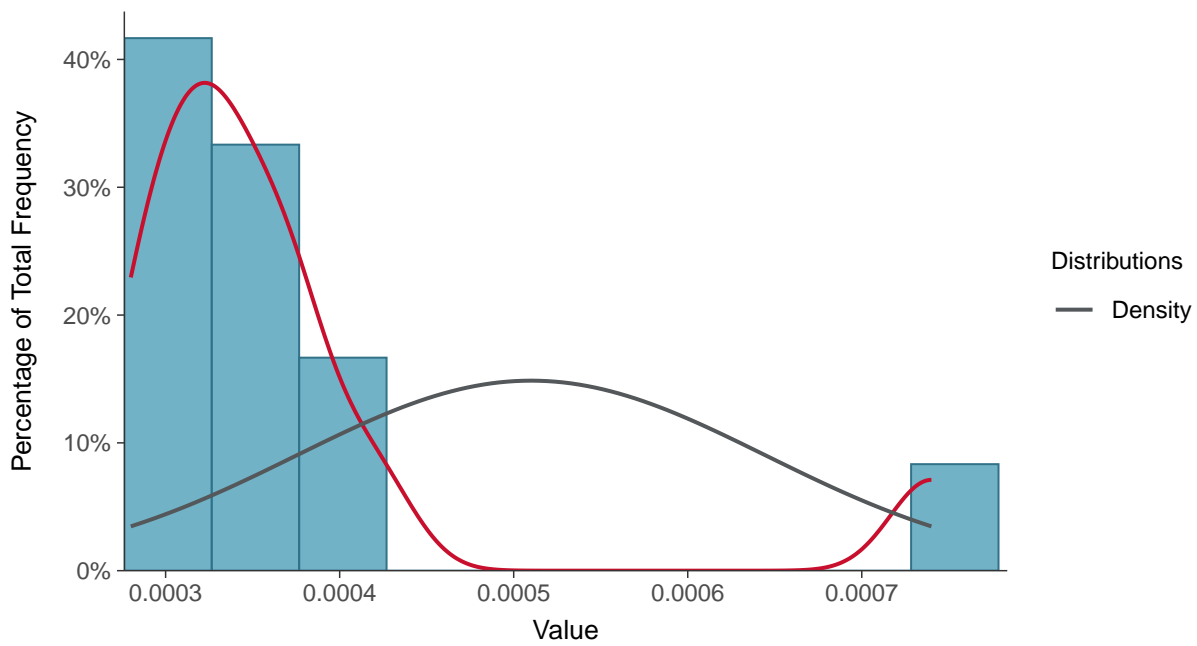
#### Scatter Plot

Chromium, Total, MW-07 (mg/L)



#### Histogram

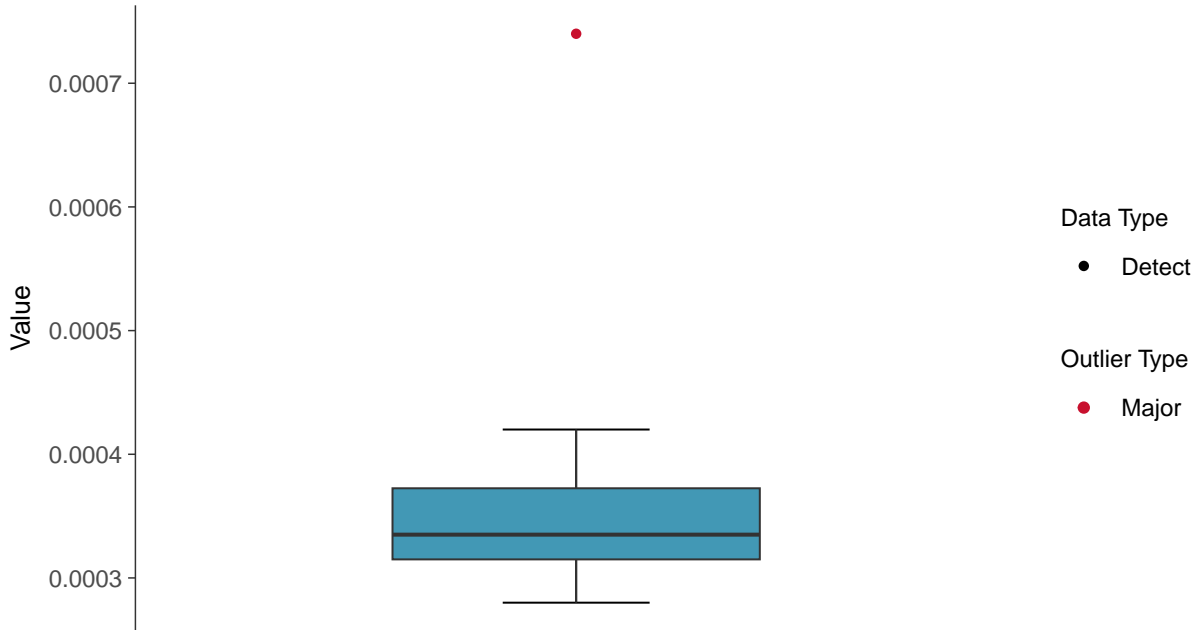
Chromium, Total, MW-07 (mg/L)





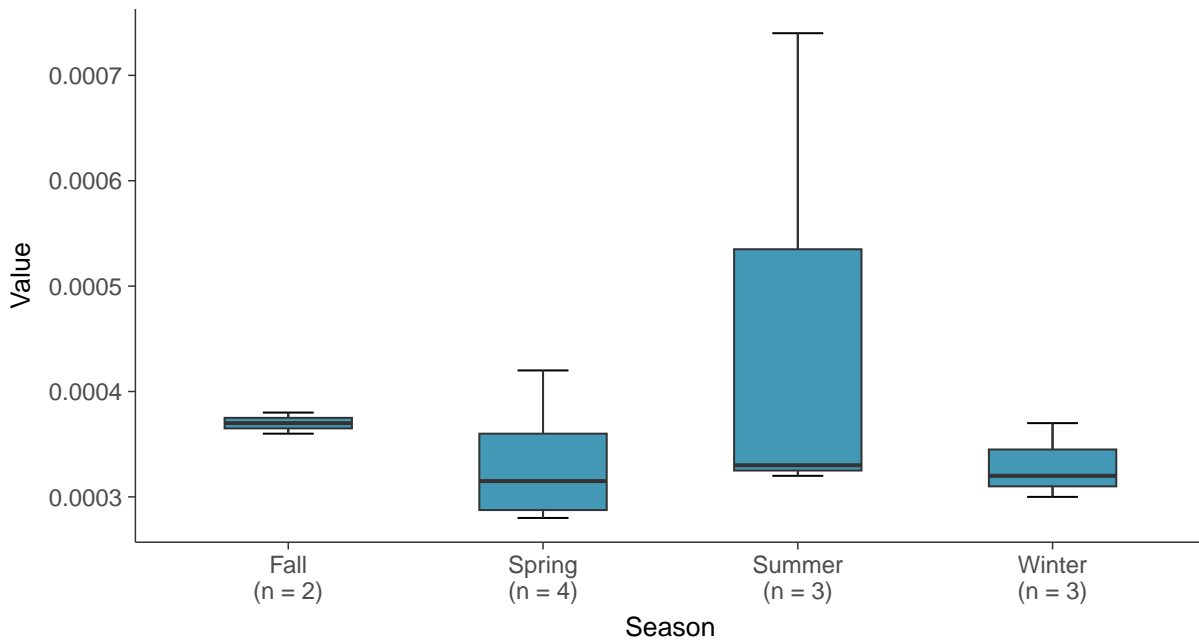
### Boxplot

Chromium, Total, MW-07 (mg/L)



### Boxplot by Season

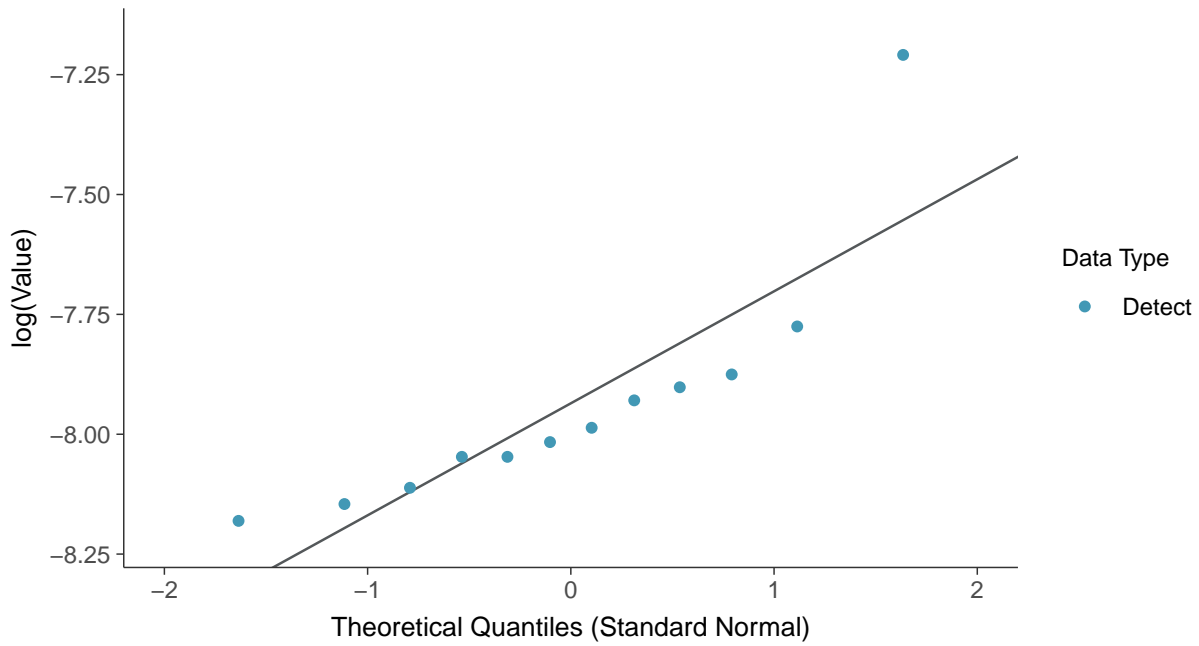
Chromium, Total, MW-07 (mg/L)





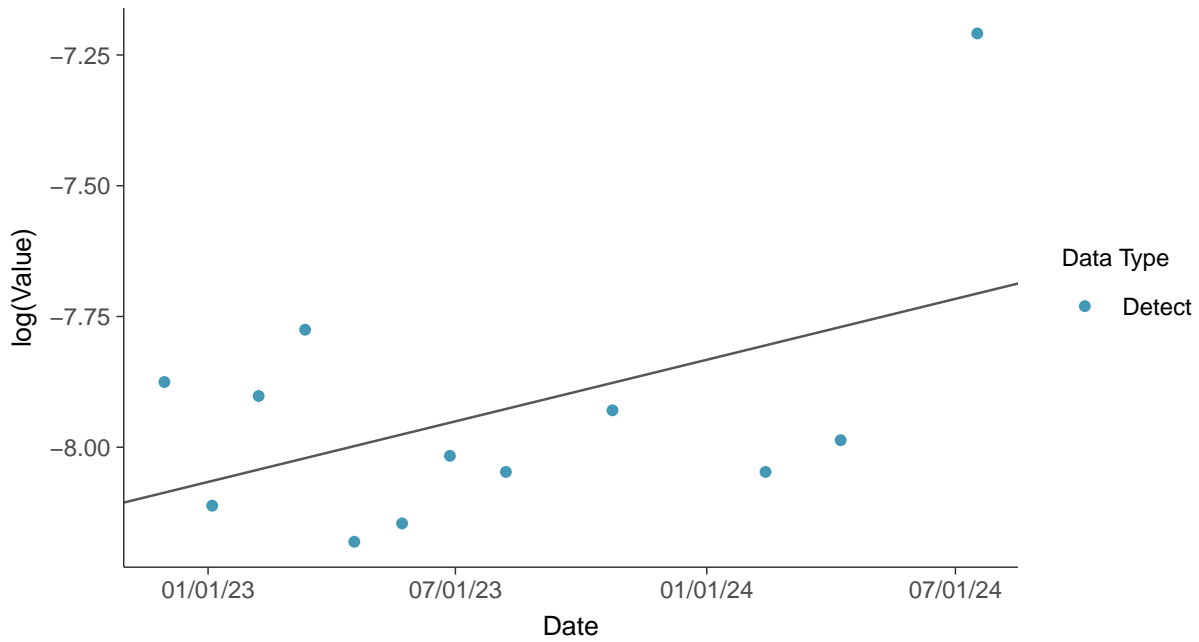
### Lognormal Q-Q plot

Chromium, Total, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

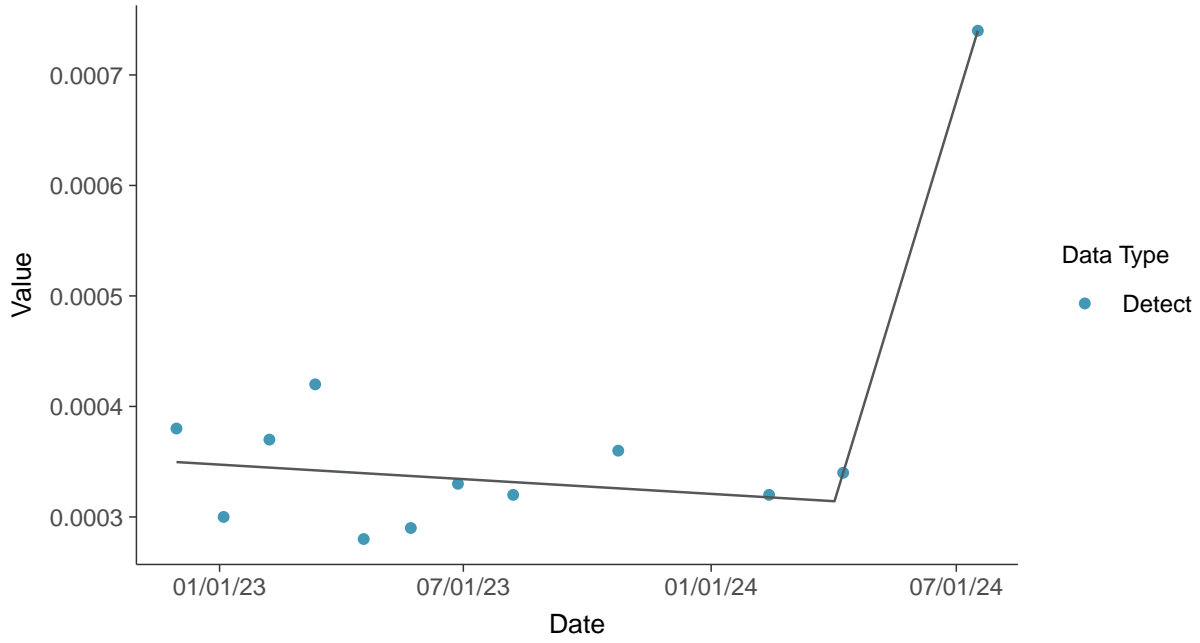
Chromium, Total, MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear

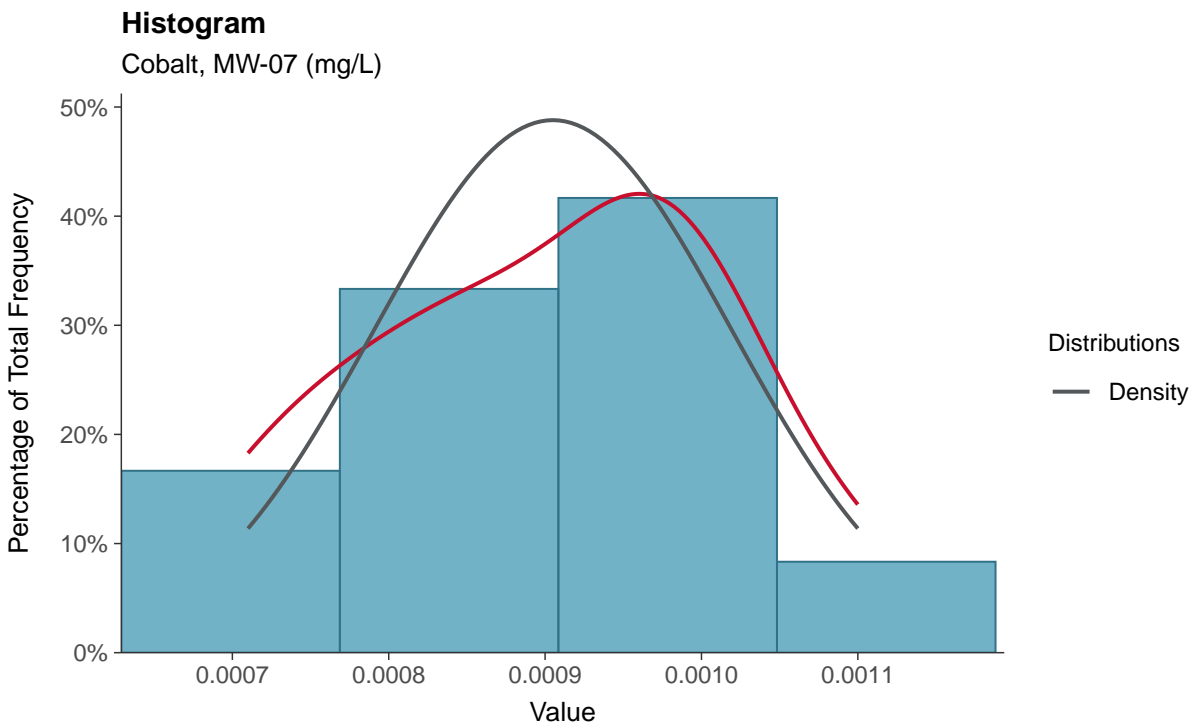
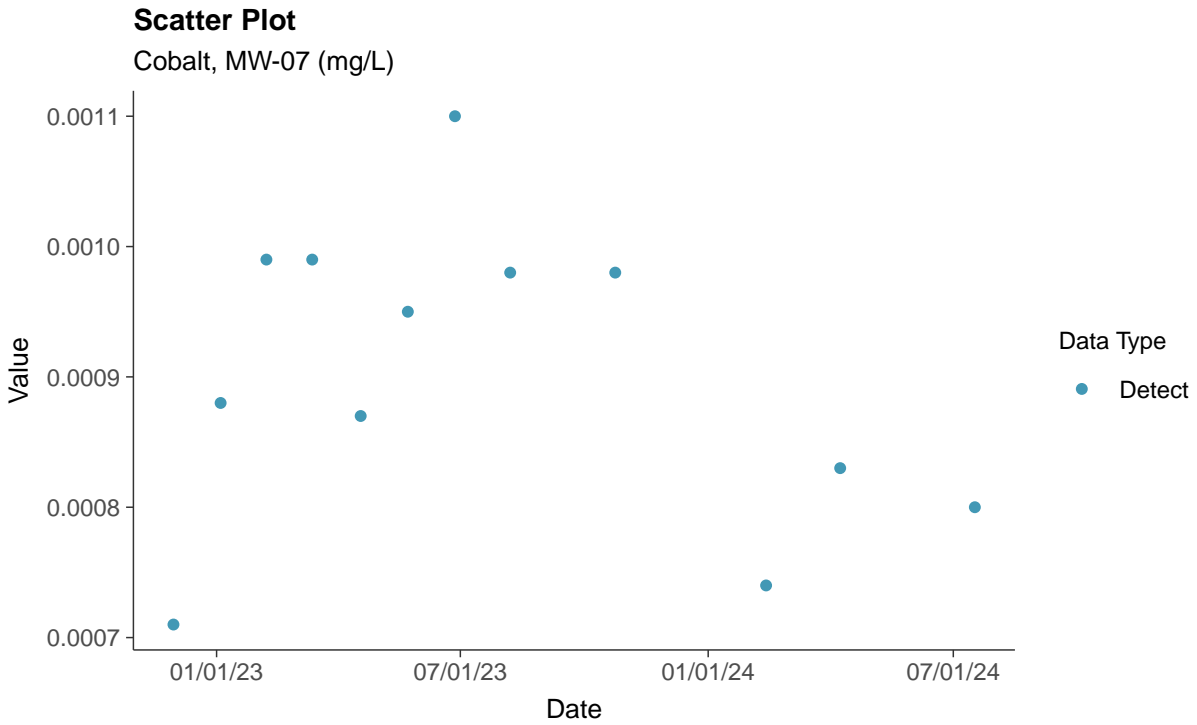
Chromium, Total, MW-07 (mg/L)





### Appendix IV: Cobalt, MW-07

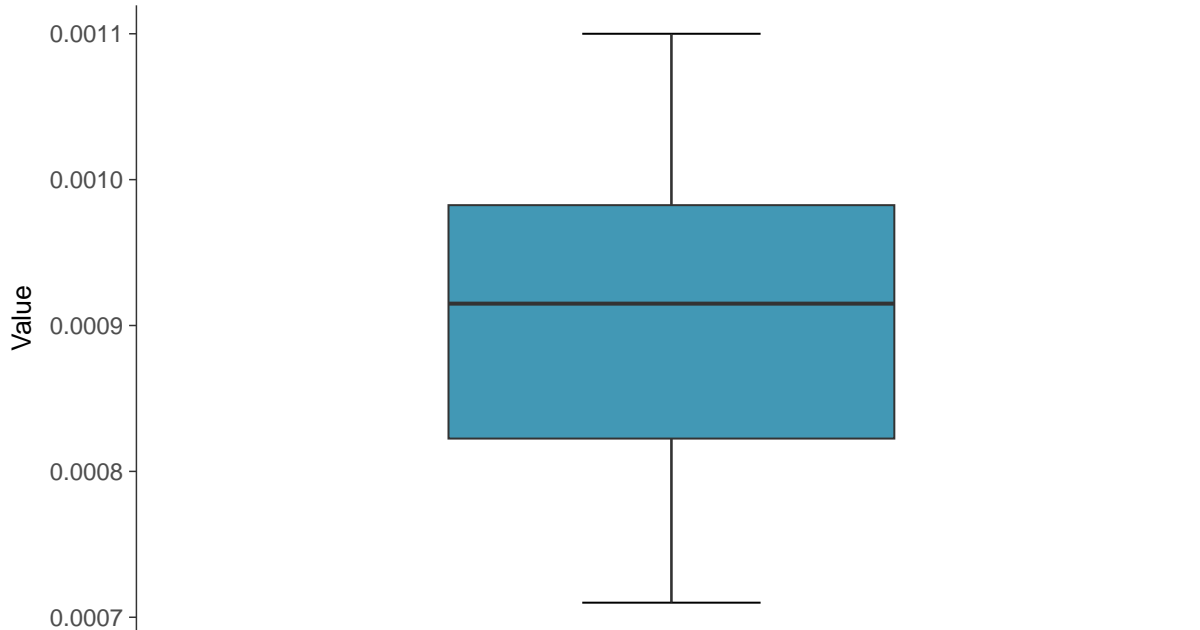
ID: 17\_1\_5\_110





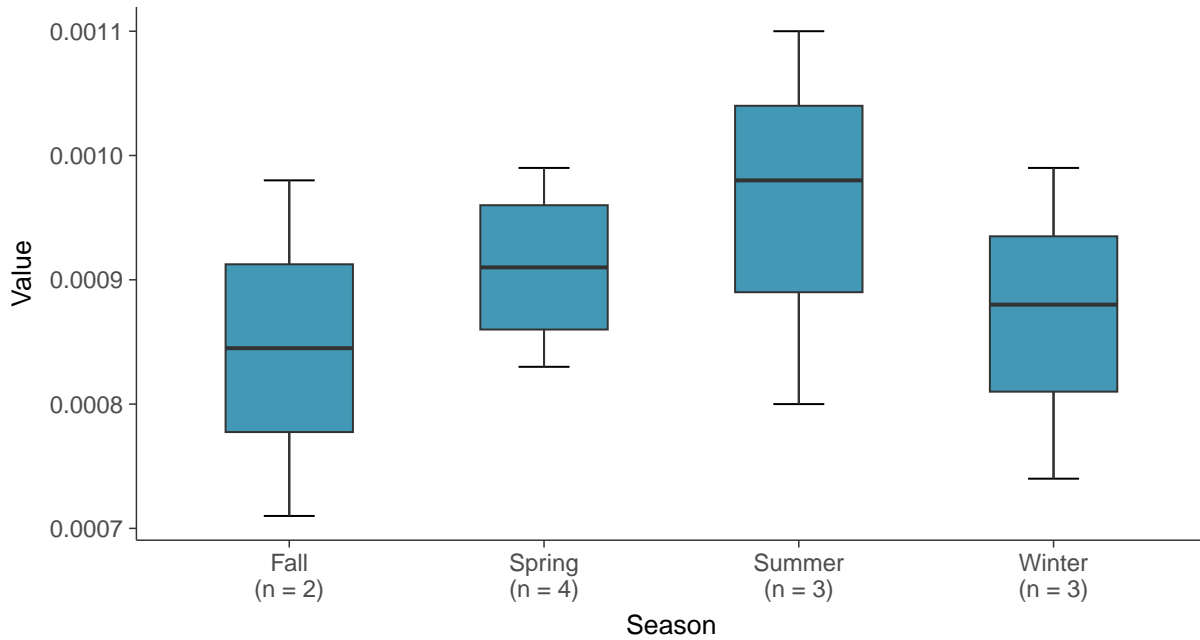
### Boxplot

Cobalt, MW-07 (mg/L)



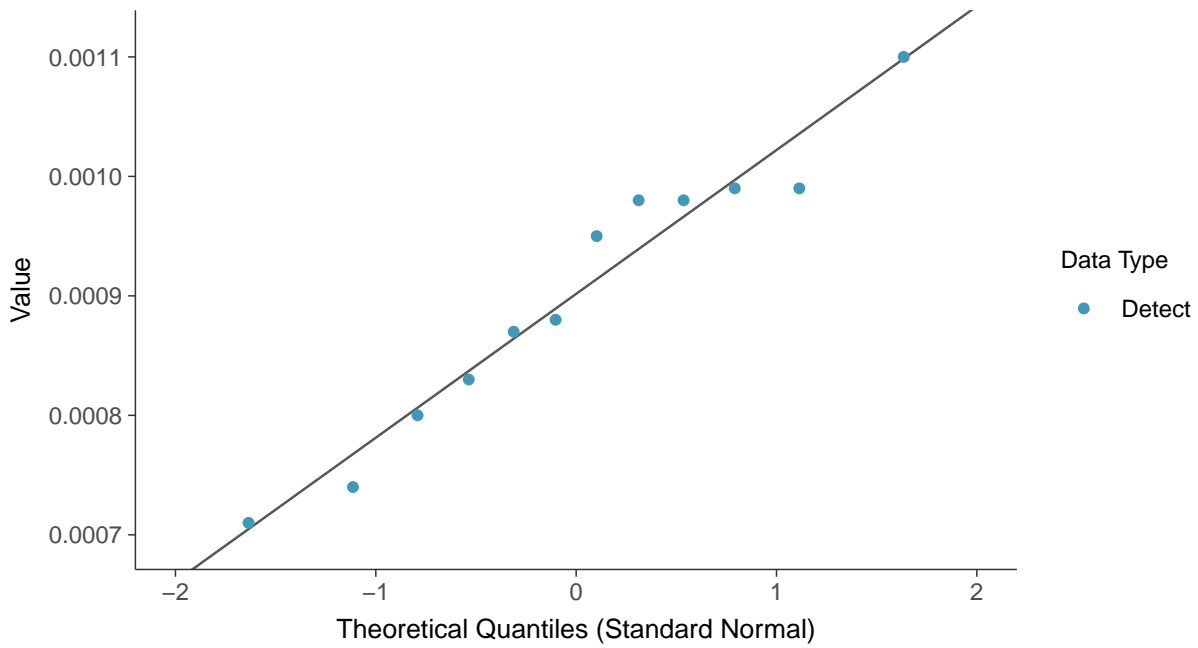
### Boxplot by Season

Cobalt, MW-07 (mg/L)

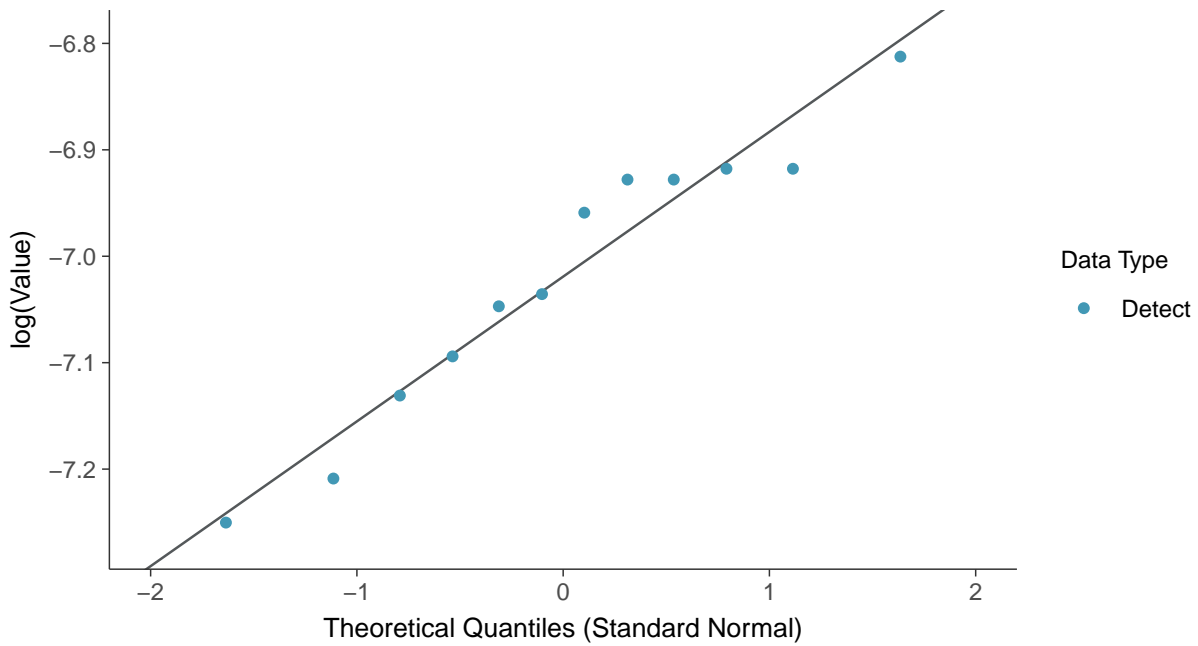




**Normal Q-Q plot**  
Cobalt, MW-07 (mg/L)

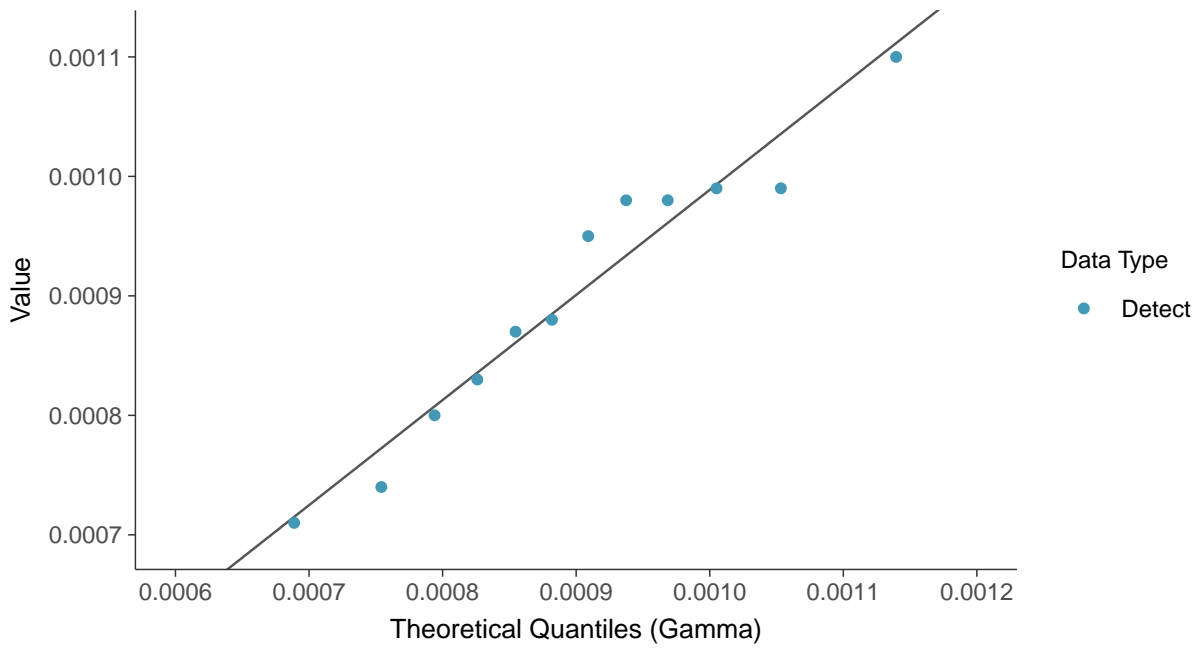


**Lognormal Q-Q plot**  
Cobalt, MW-07 (mg/L)

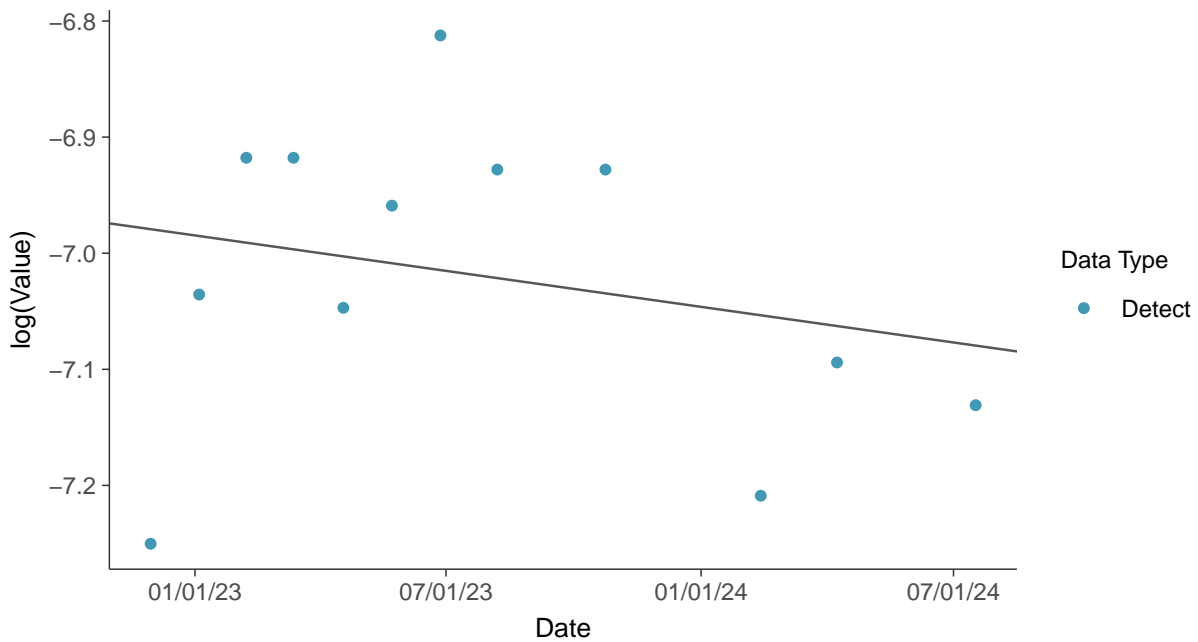




**Gamma Q-Q plot**  
Cobalt, MW-07 (mg/L)



**Trend Regression: Lognormal MLE**  
Cobalt, MW-07 (mg/L)

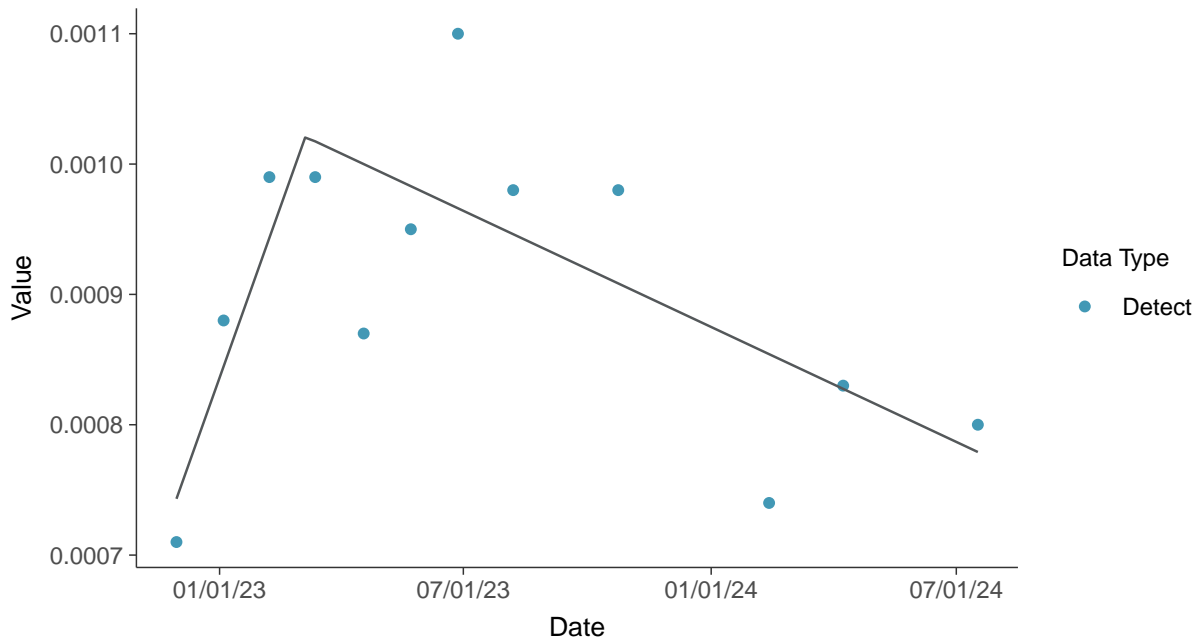






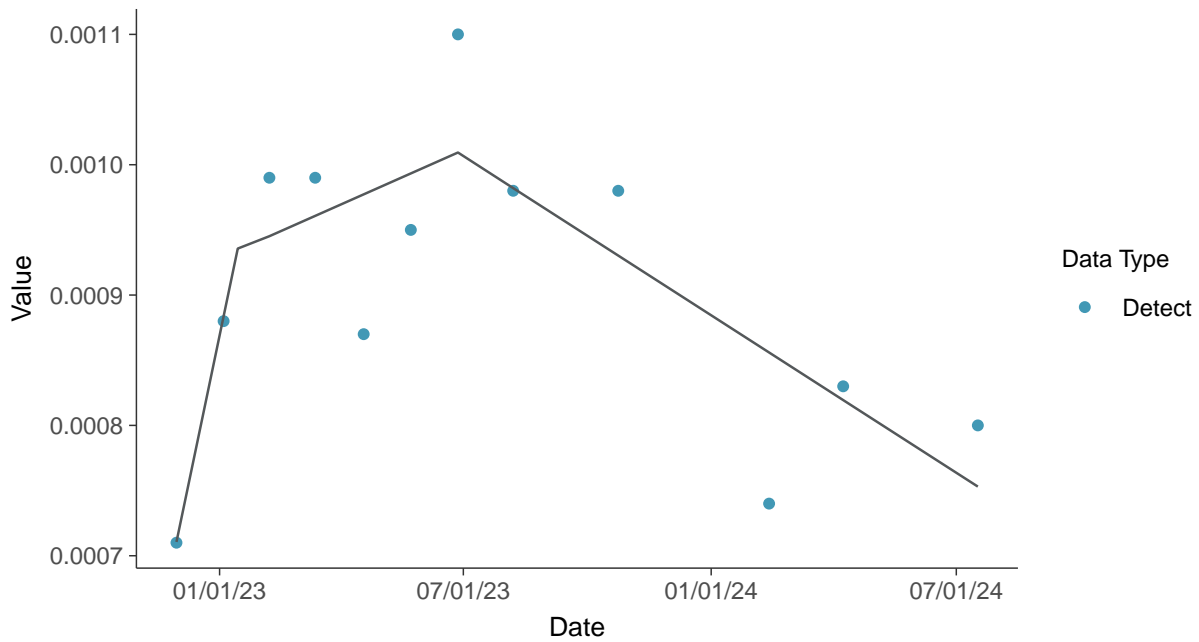
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

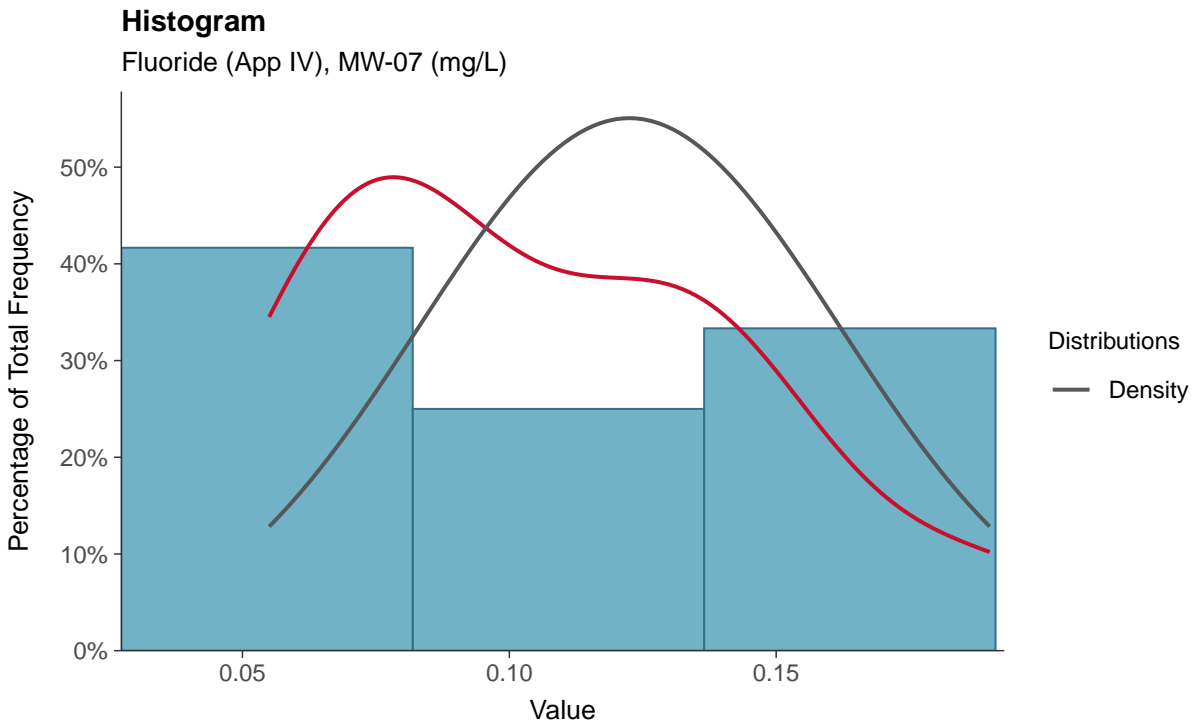
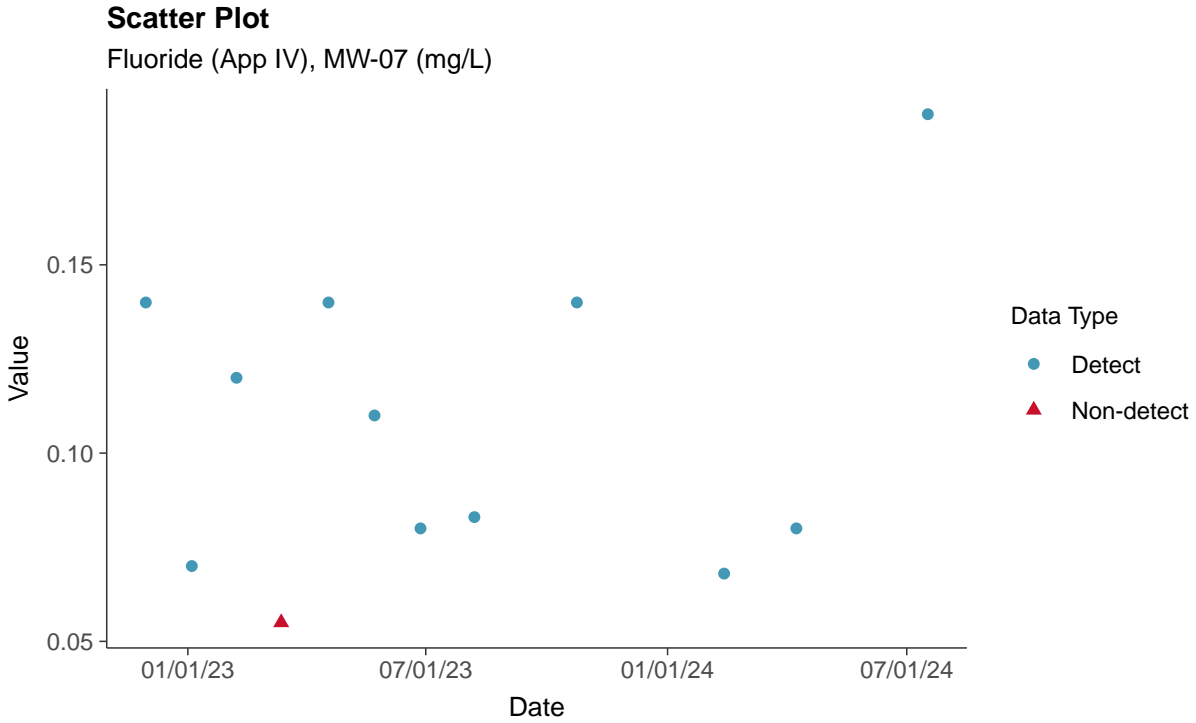
Cobalt, MW-07 (mg/L)





### Appendix IV: Fluoride (App IV), MW-07

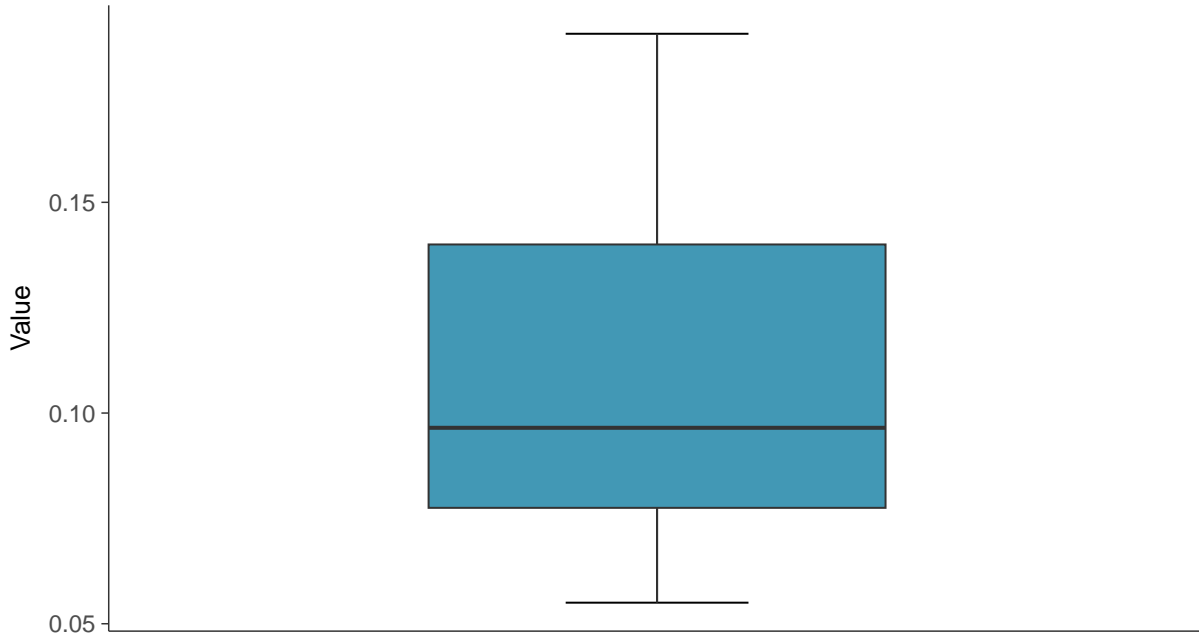
ID: 17\_1\_5\_113





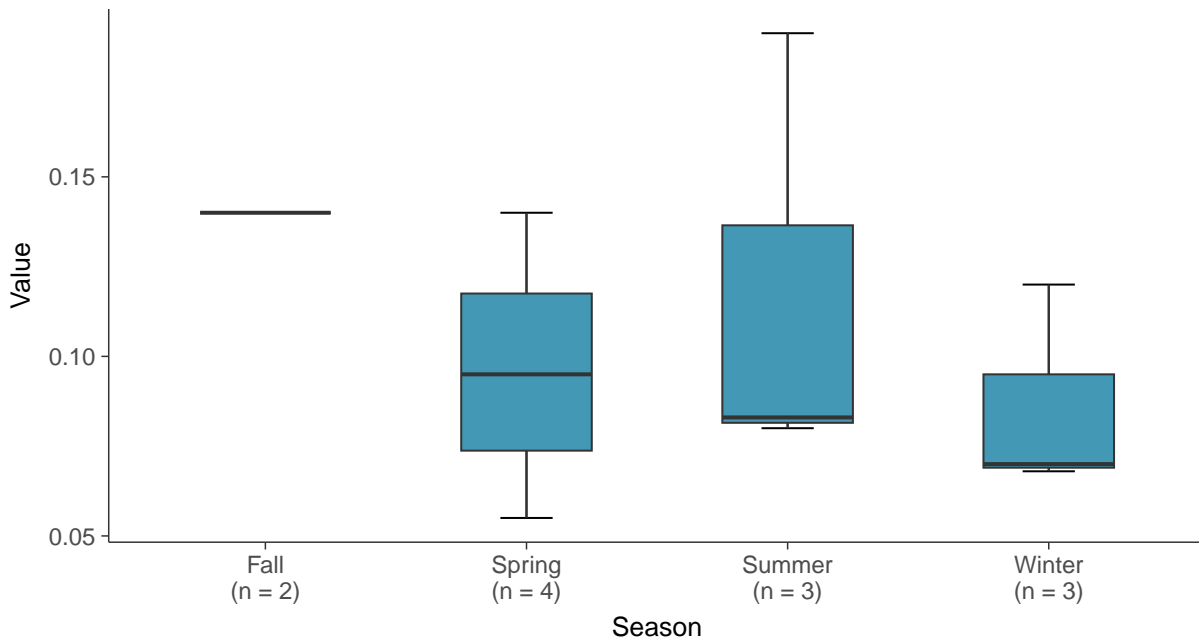
### Boxplot

Fluoride (App IV), MW-07 (mg/L)



### Boxplot by Season

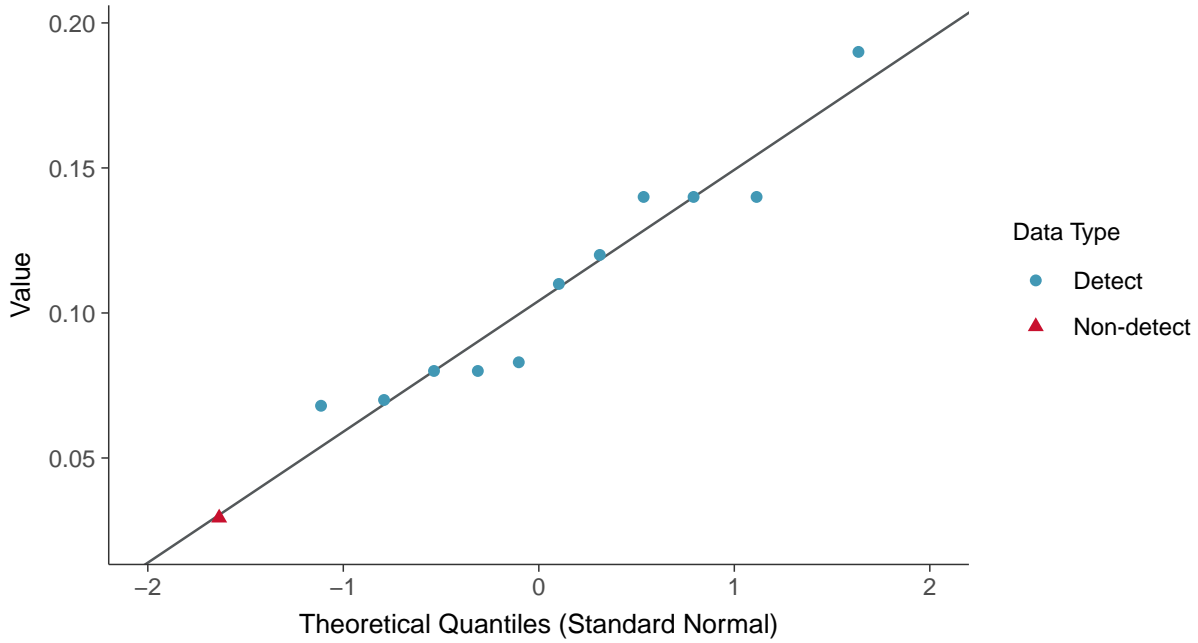
Fluoride (App IV), MW-07 (mg/L)





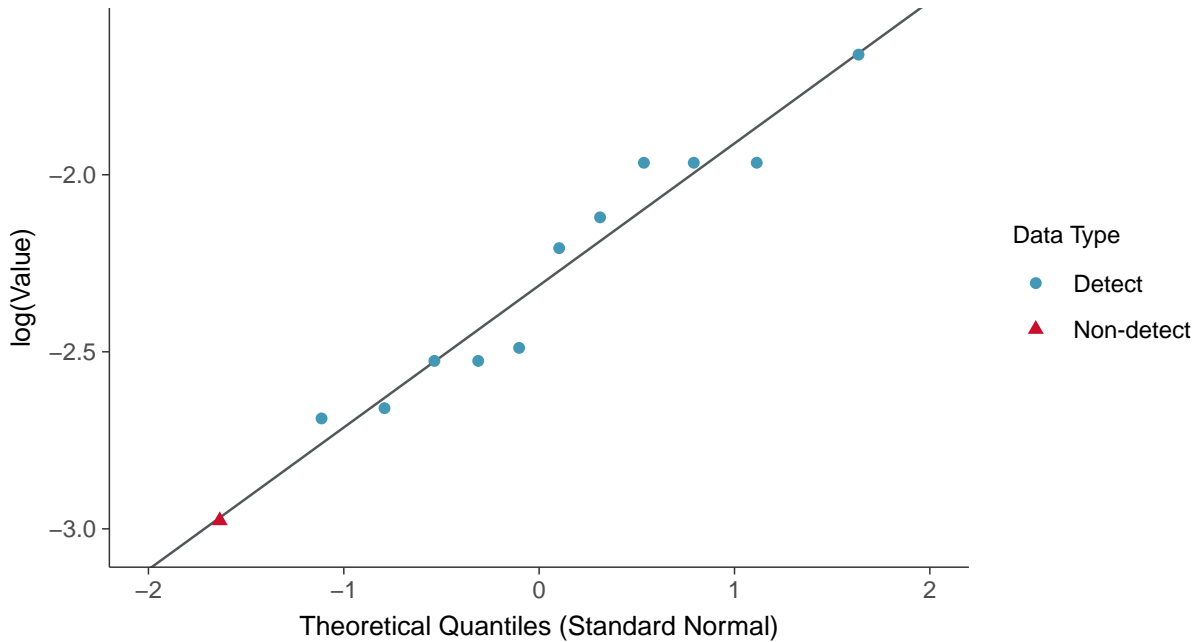
### Normal Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

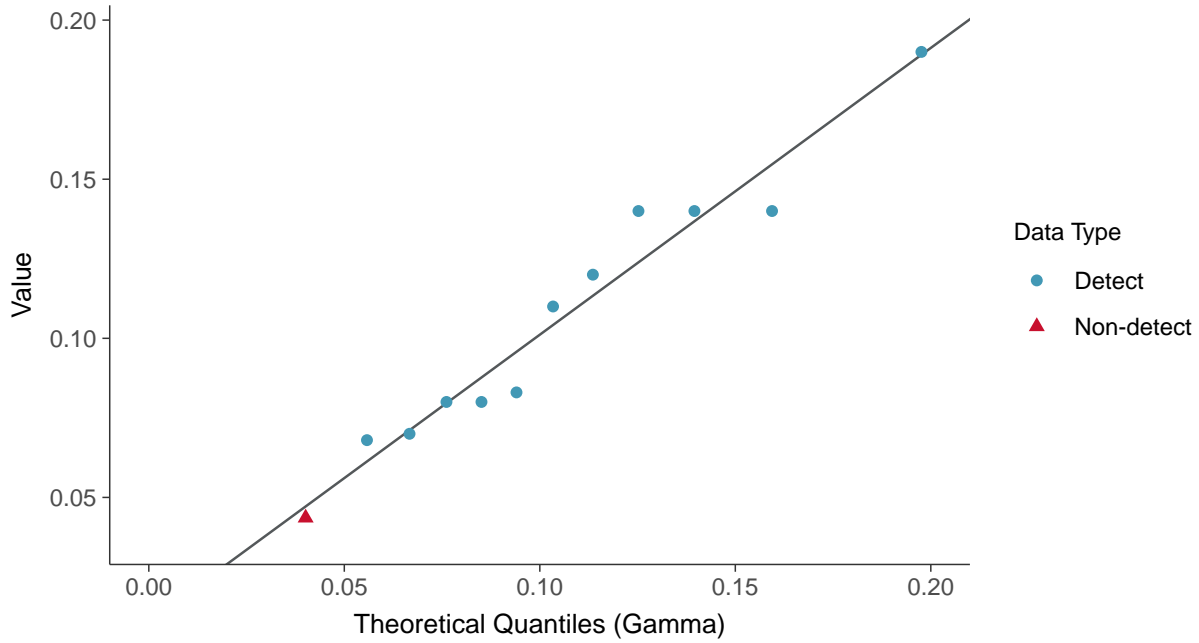
Fluoride (App IV), MW-07 (mg/L)





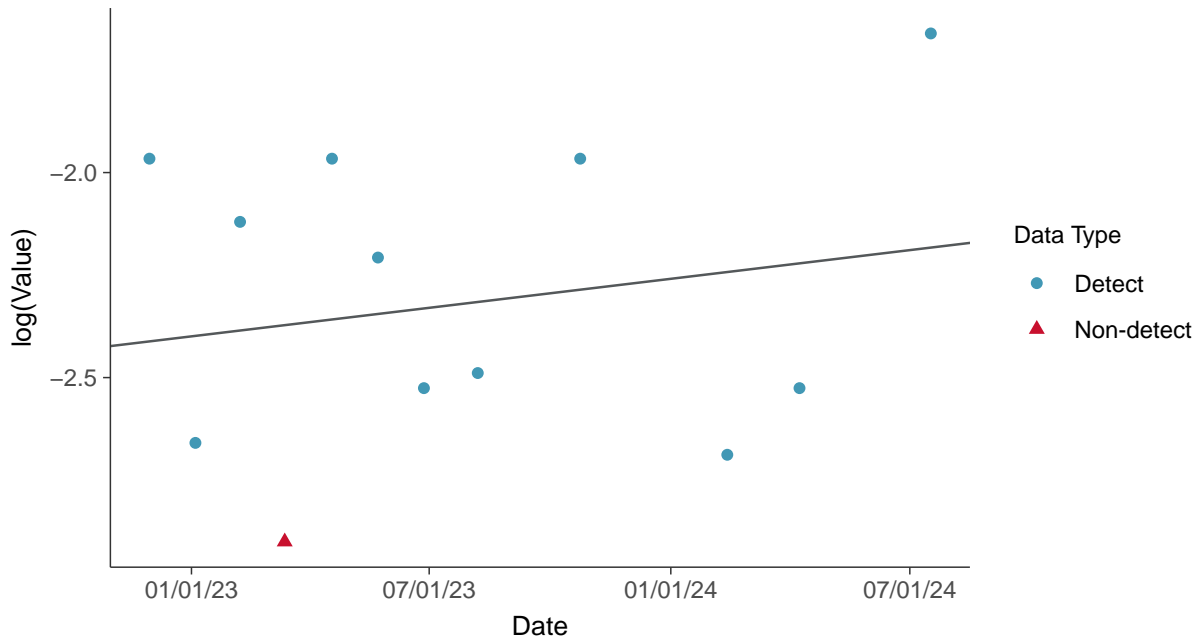
### Gamma Q-Q plot using ROS Imputed Estimates

Fluoride (App IV), MW-07 (mg/L)



### Trend Regression: Lognormal MLE

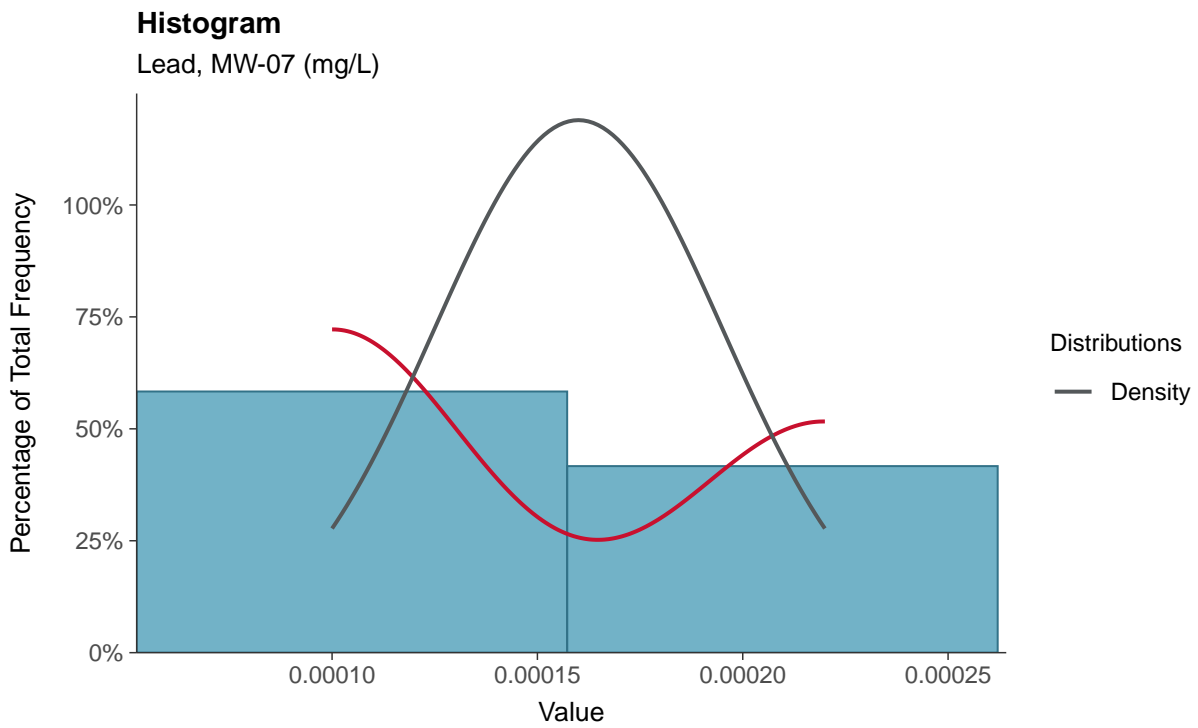
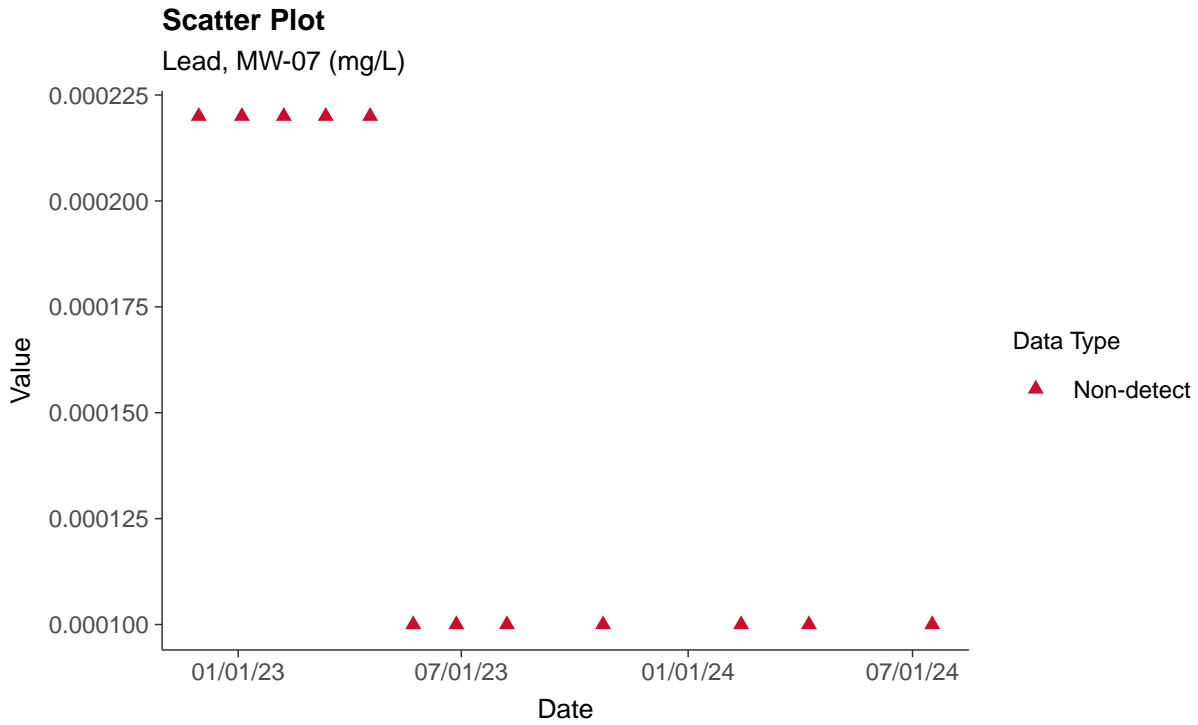
Fluoride (App IV), MW-07 (mg/L)





### Appendix IV: Lead, MW-07

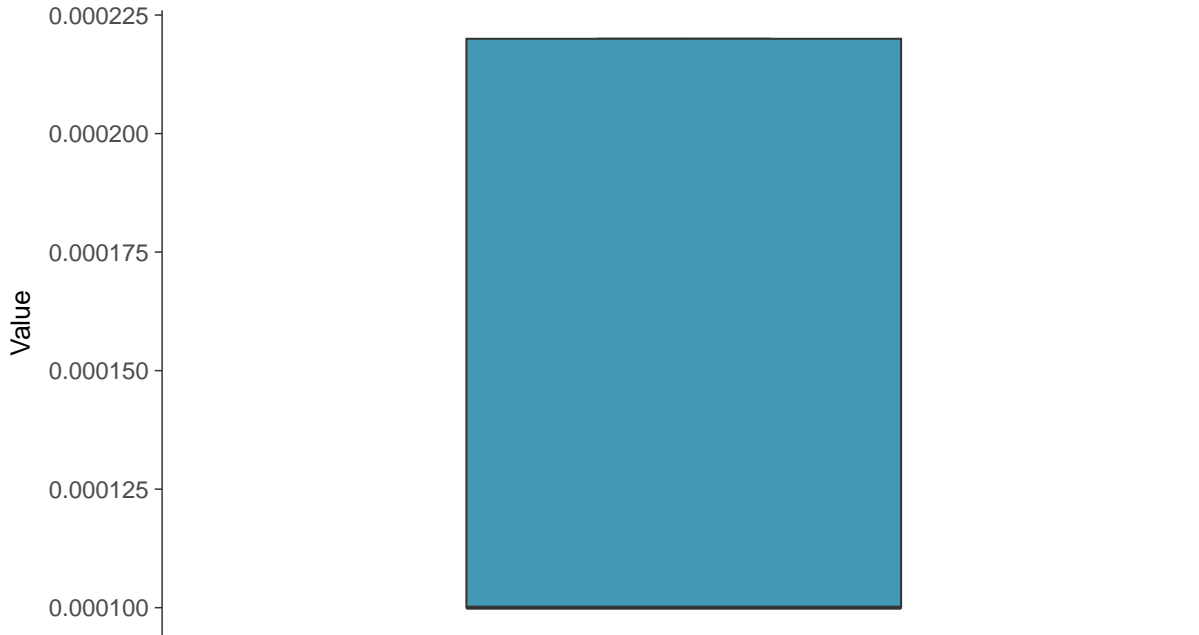
ID: 17\_1\_5\_115





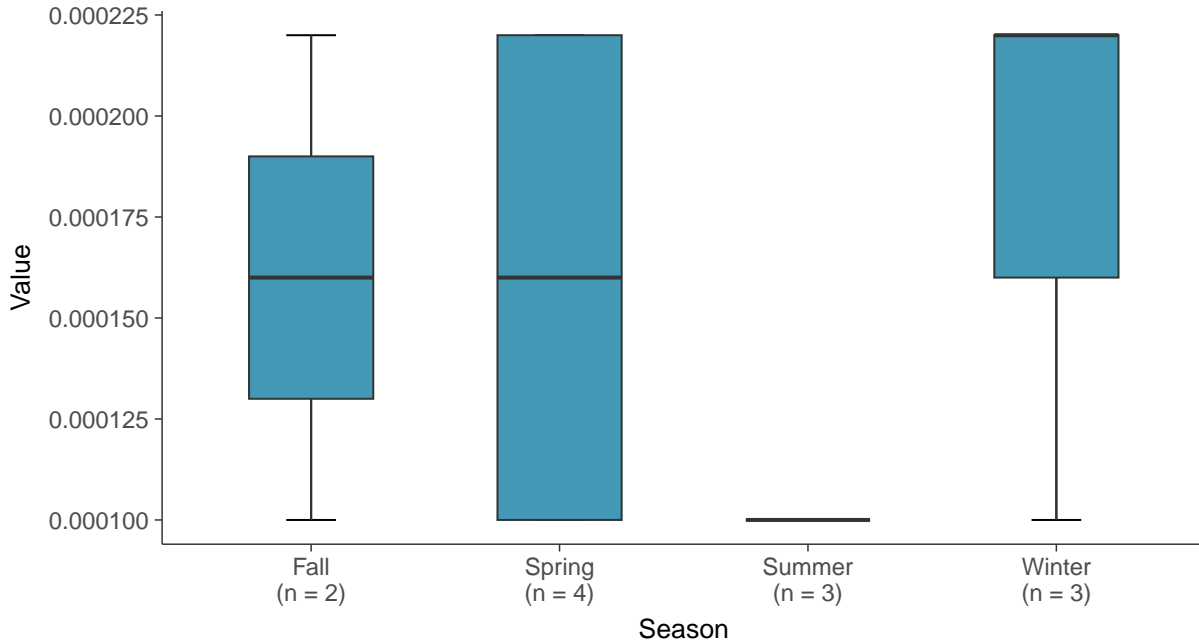
### Boxplot

Lead, MW-07 (mg/L)



### Boxplot by Season

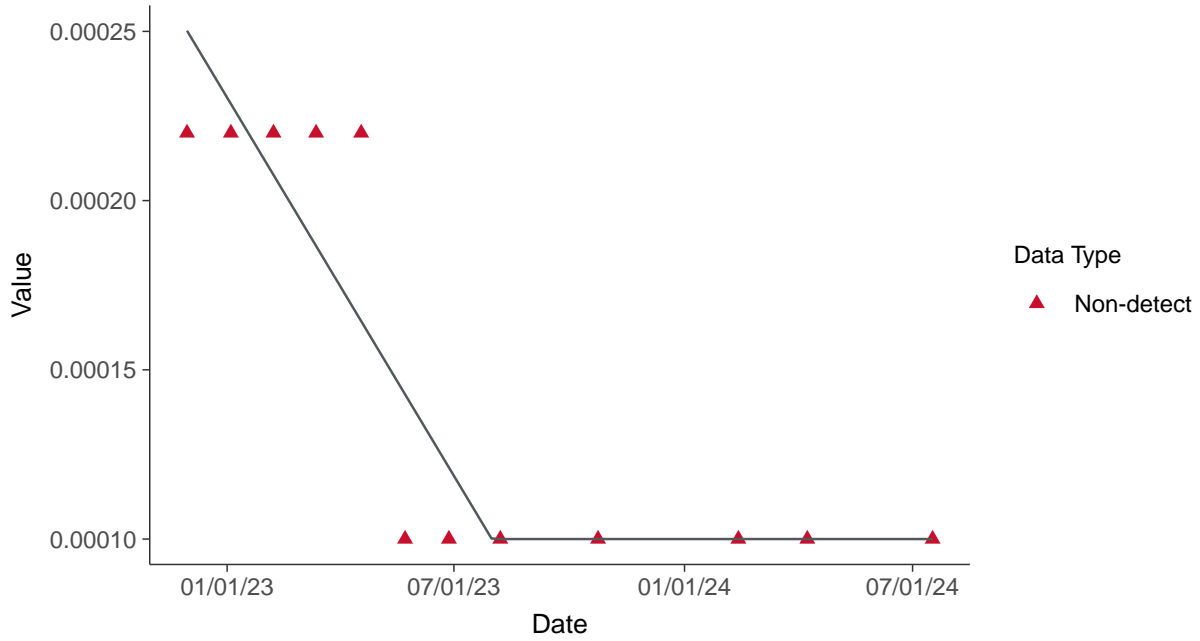
Lead, MW-07 (mg/L)





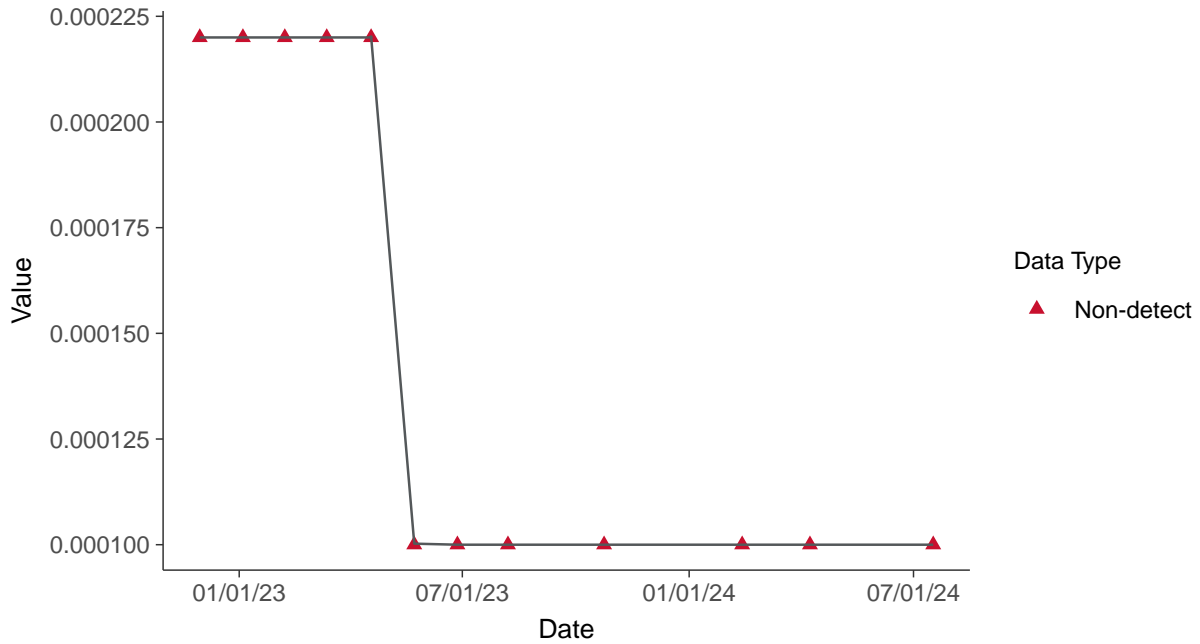
### Trend Regression: Piecewise Linear-Linear

Lead, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-07 (mg/L)





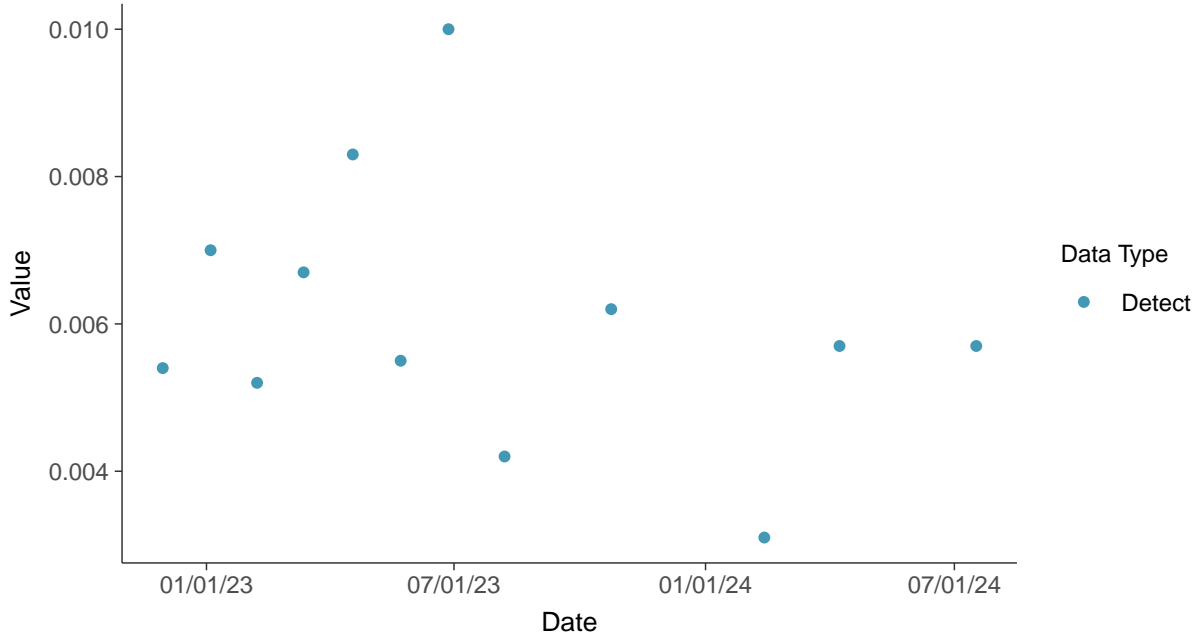


### Appendix IV: Lithium, MW-07

ID: 17\_1\_5\_116

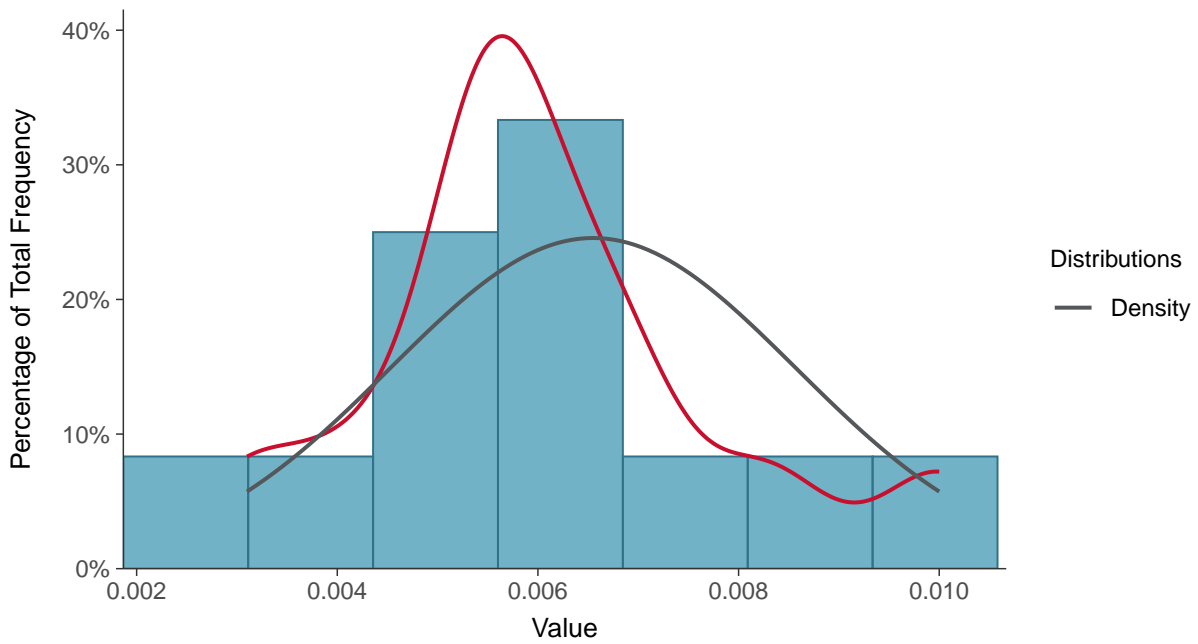
#### Scatter Plot

Lithium, MW-07 (mg/L)



#### Histogram

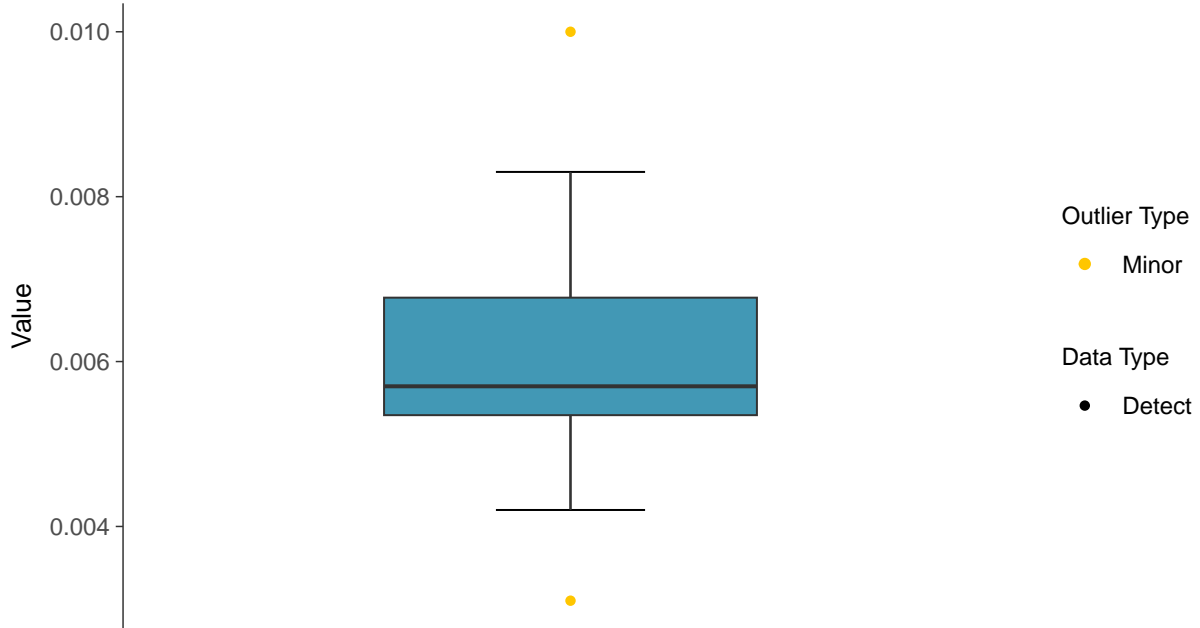
Lithium, MW-07 (mg/L)





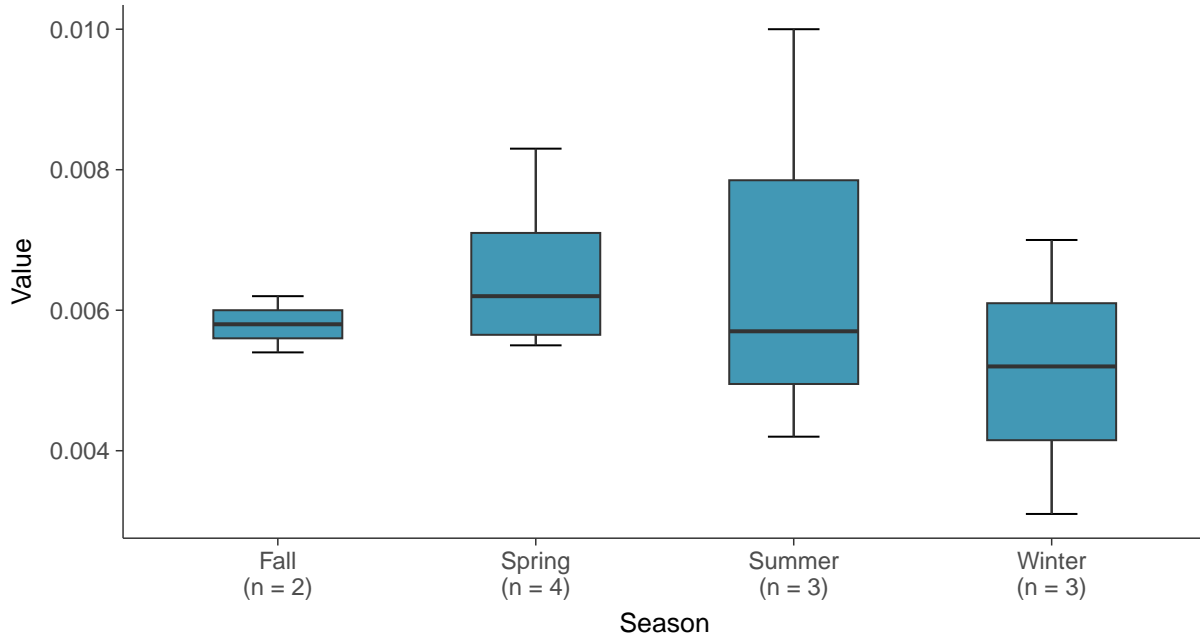
### Boxplot

Lithium, MW-07 (mg/L)



### Boxplot by Season

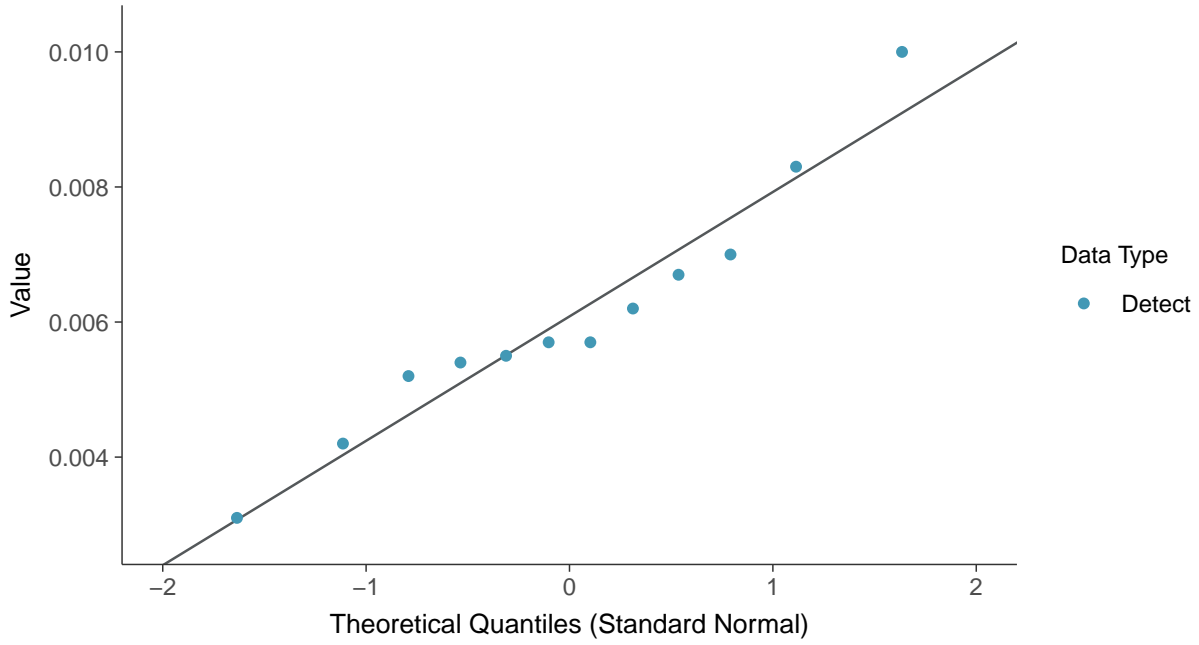
Lithium, MW-07 (mg/L)





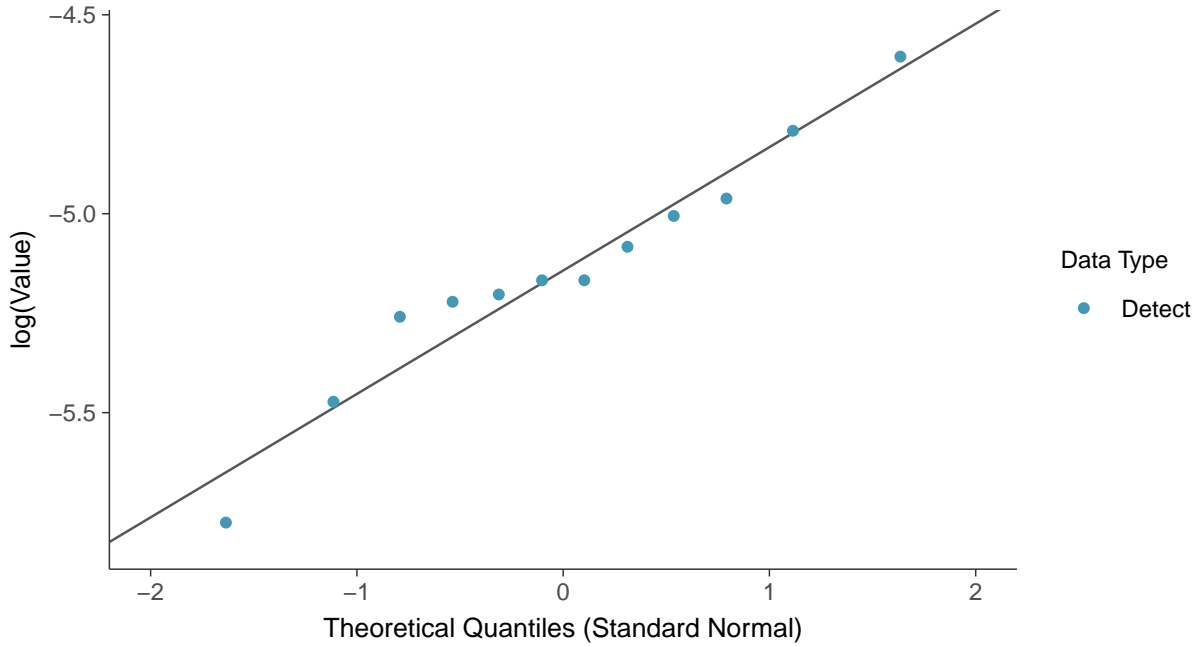
### Normal Q-Q plot

Lithium, MW-07 (mg/L)



### Lognormal Q-Q plot

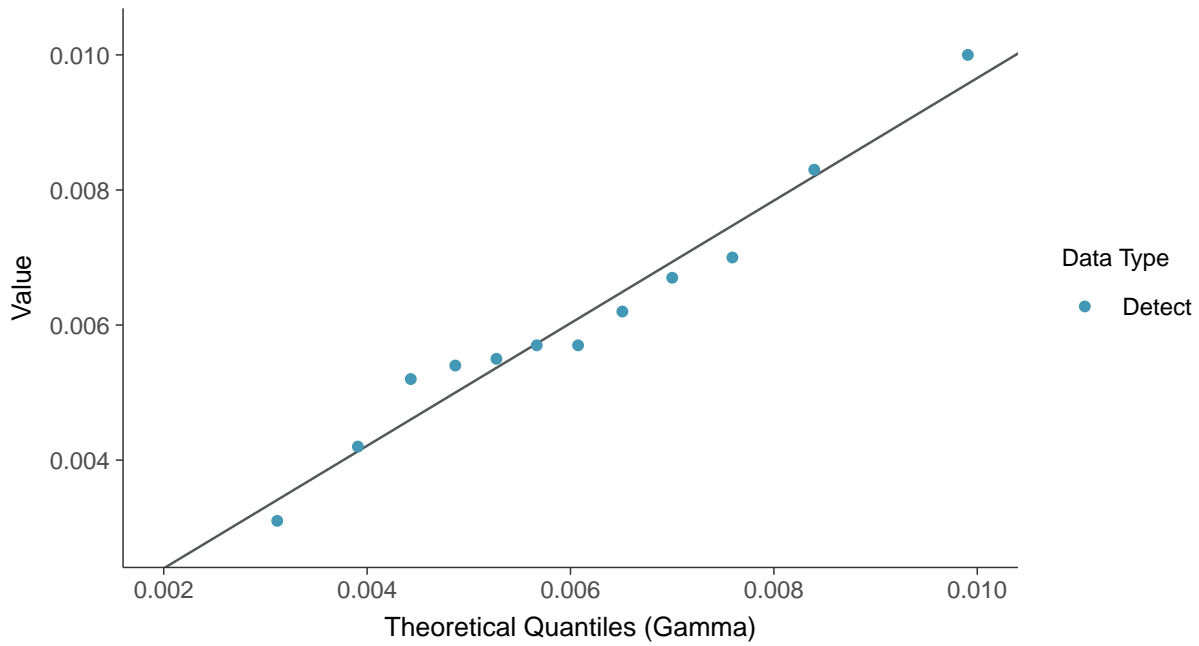
Lithium, MW-07 (mg/L)





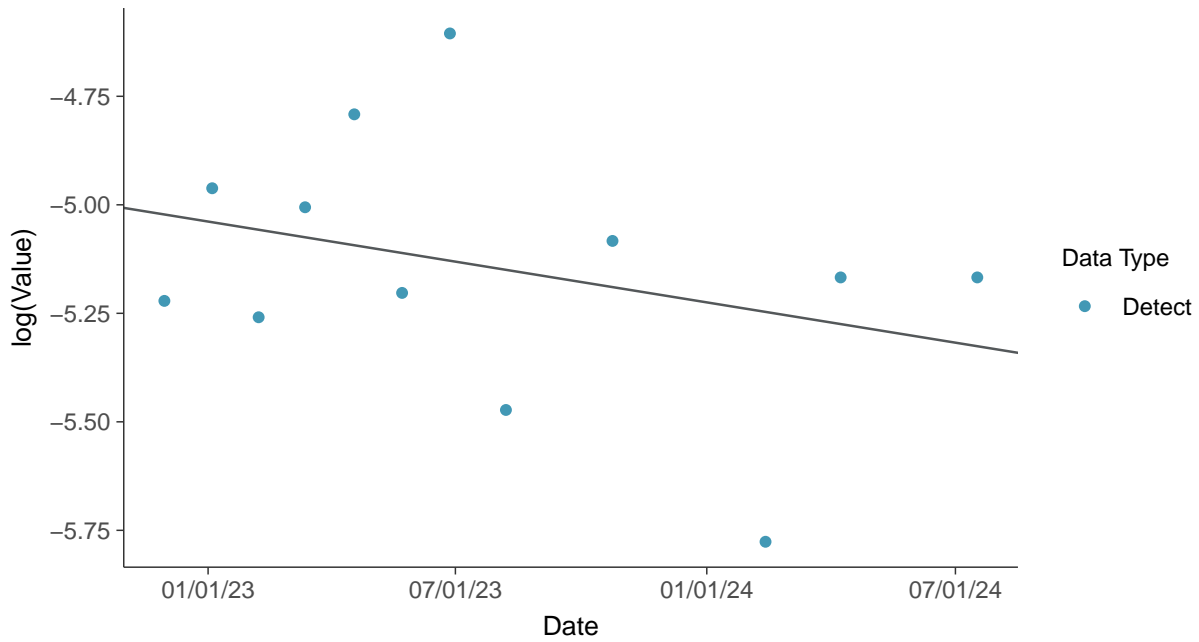
### Gamma Q-Q plot

Lithium, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

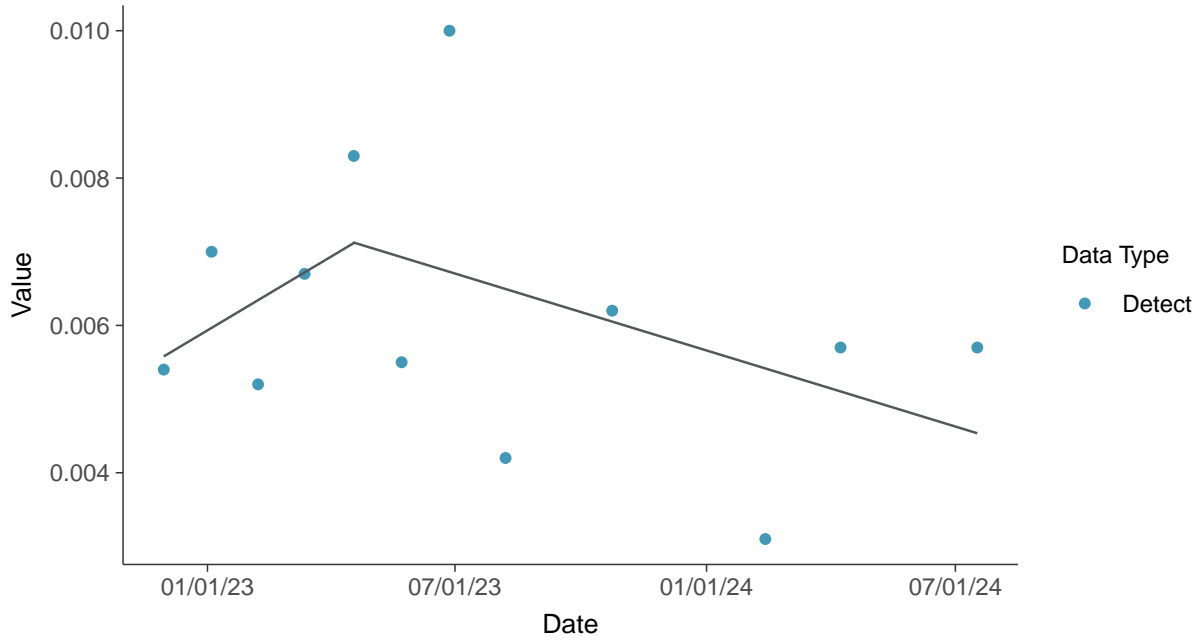
Lithium, MW-07 (mg/L)





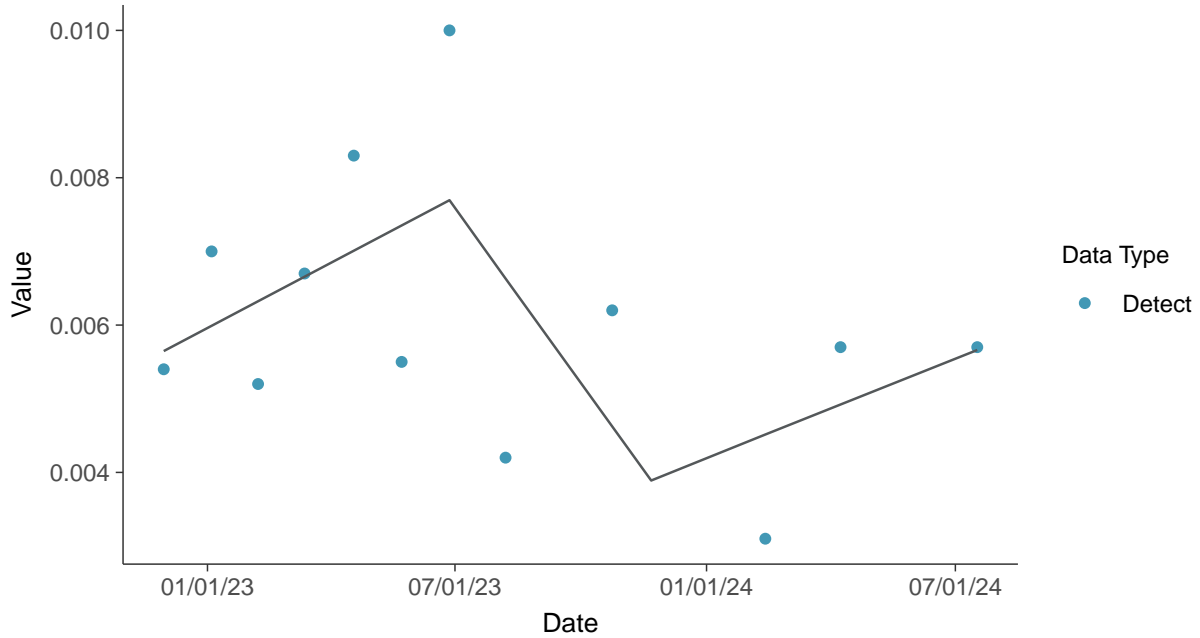
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

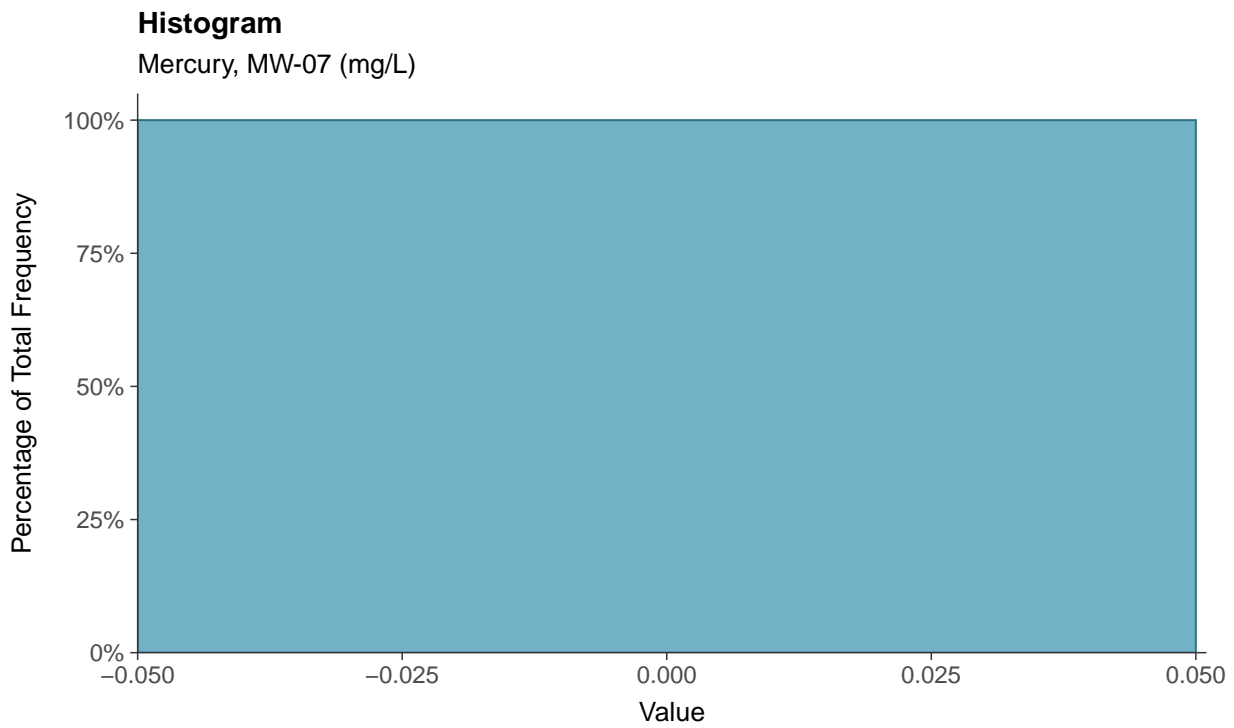
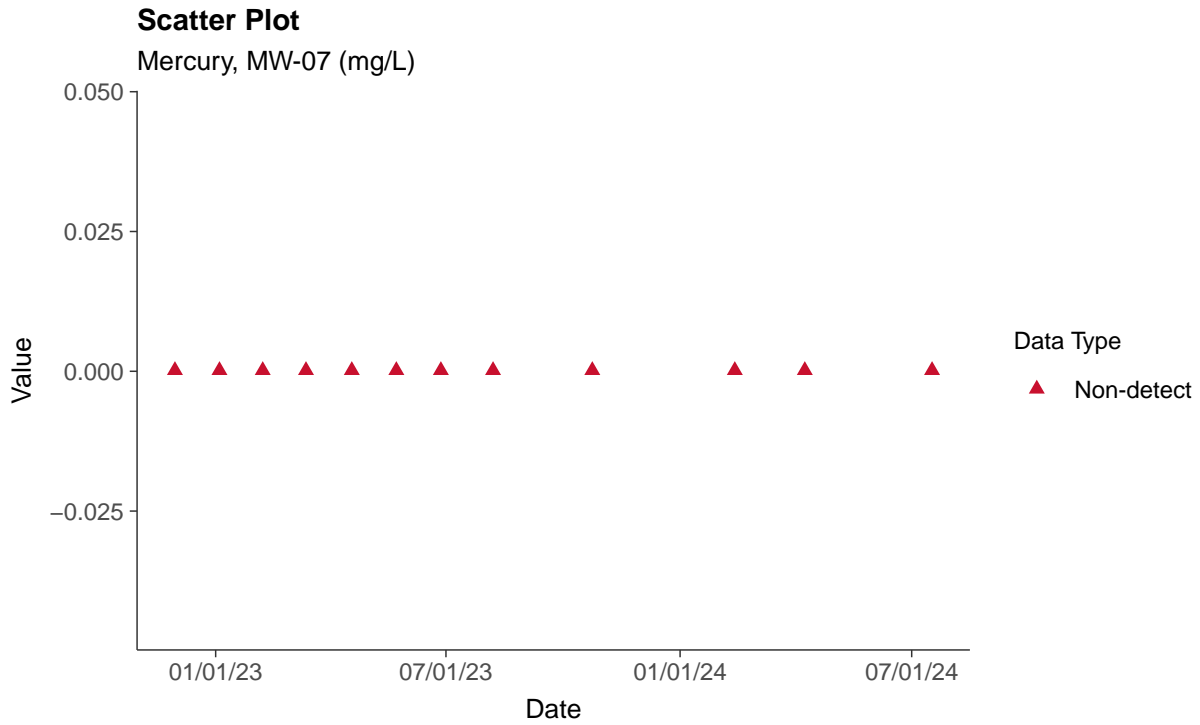
Lithium, MW-07 (mg/L)





### Appendix IV: Mercury, MW-07

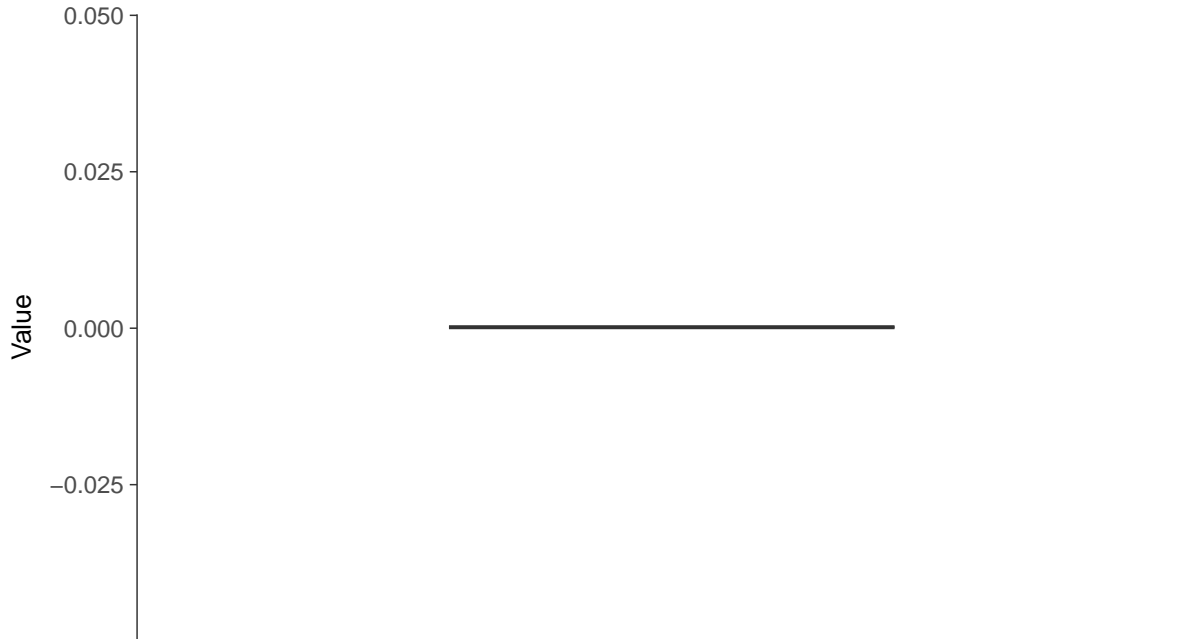
ID: 17\_1\_5\_117





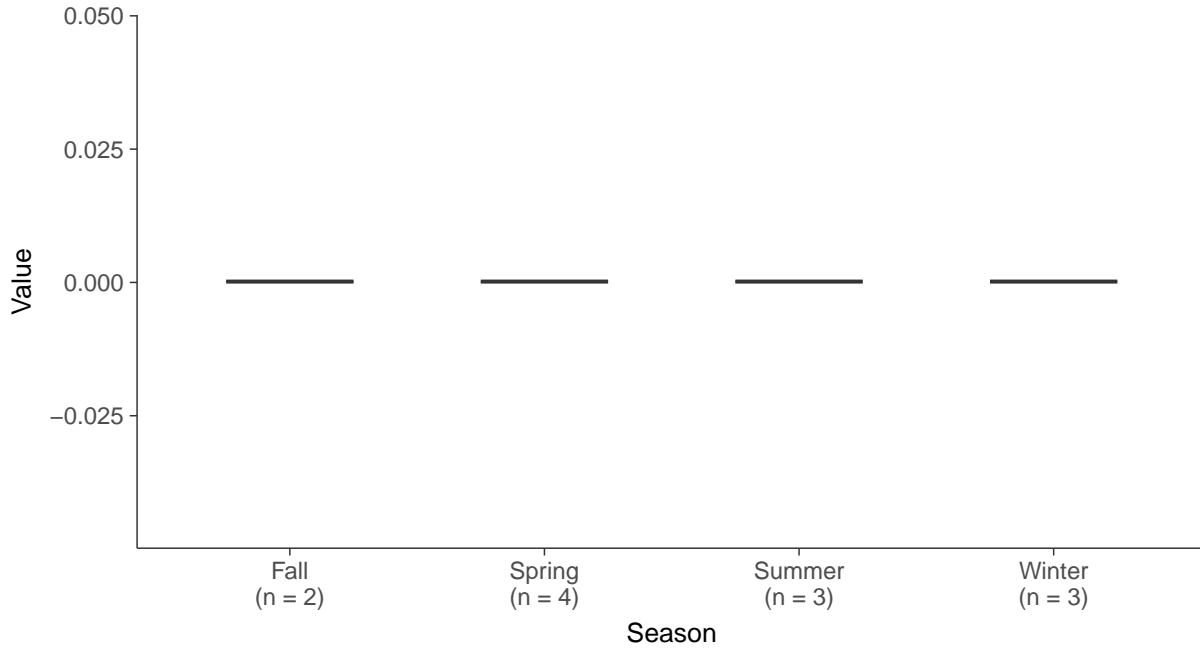
### Boxplot

Mercury, MW-07 (mg/L)



### Boxplot by Season

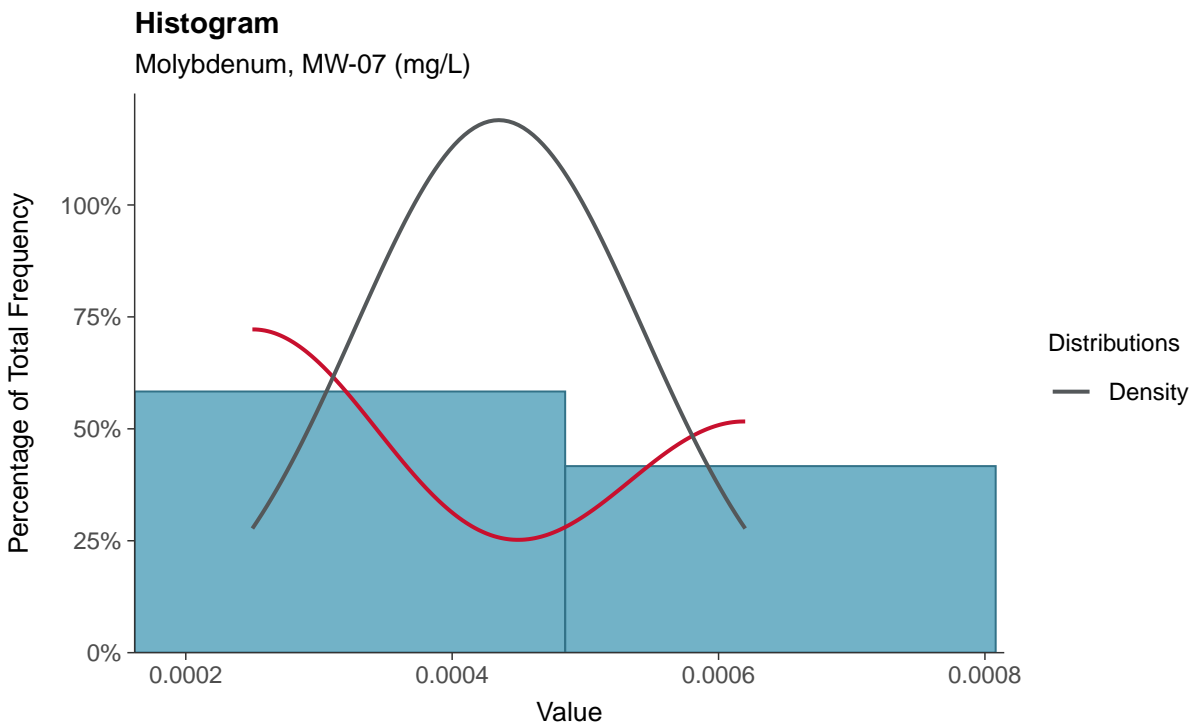
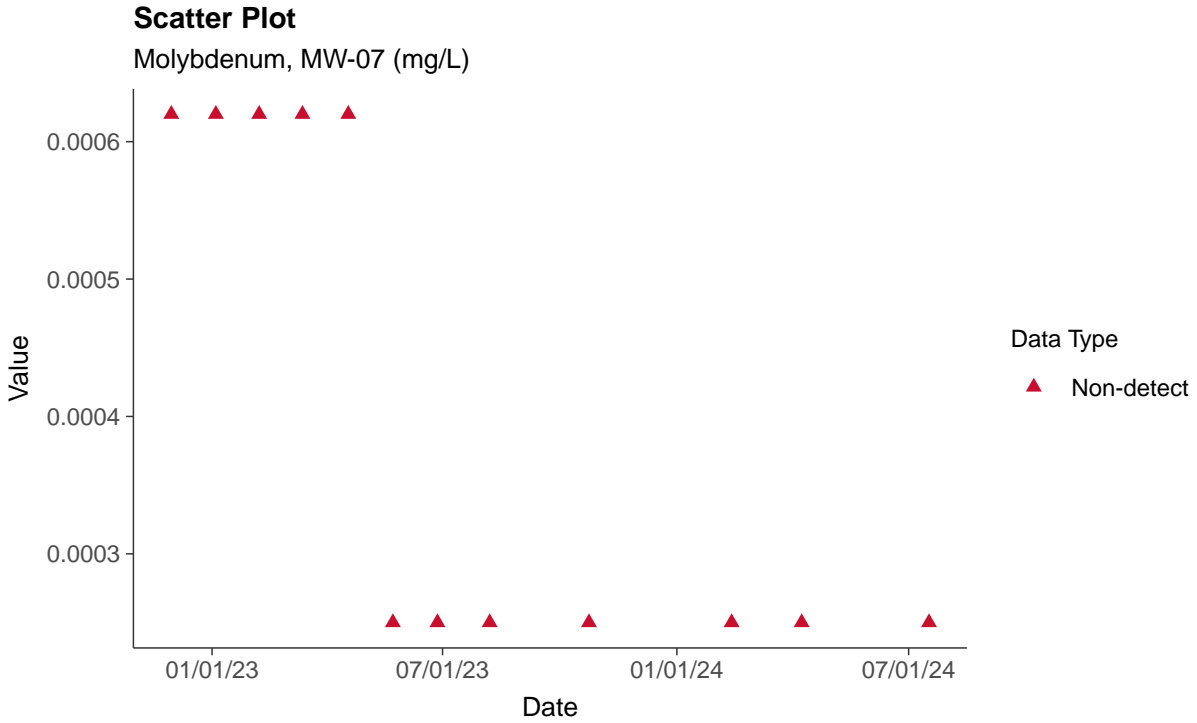
Mercury, MW-07 (mg/L)





### Appendix IV: Molybdenum, MW-07

ID: 17\_1\_5\_118

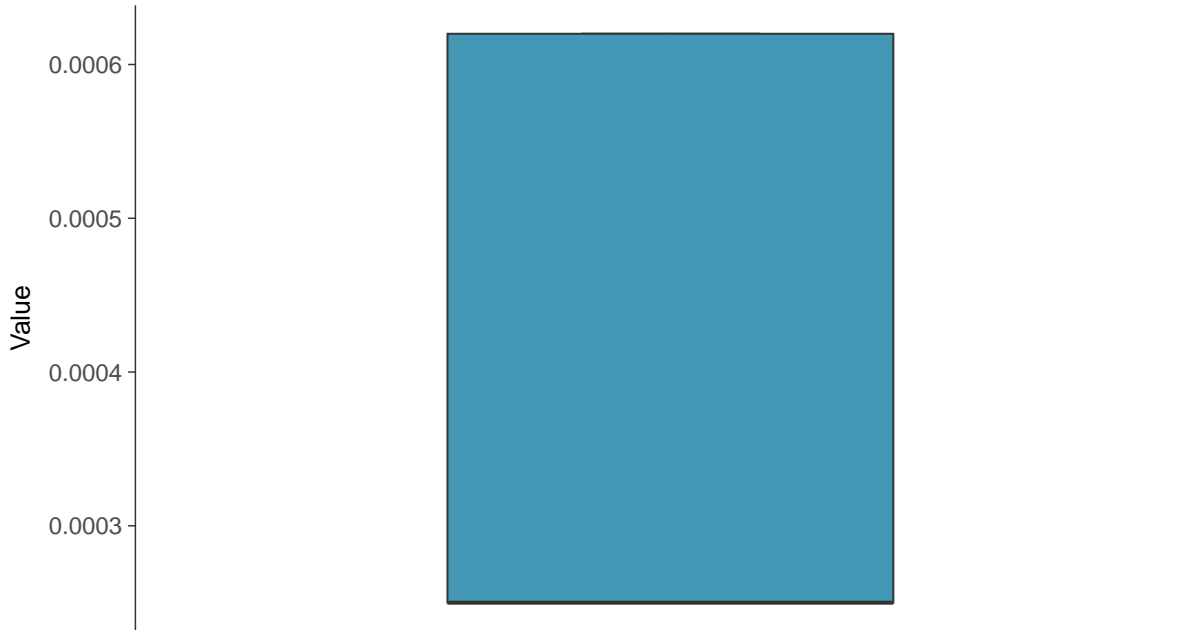






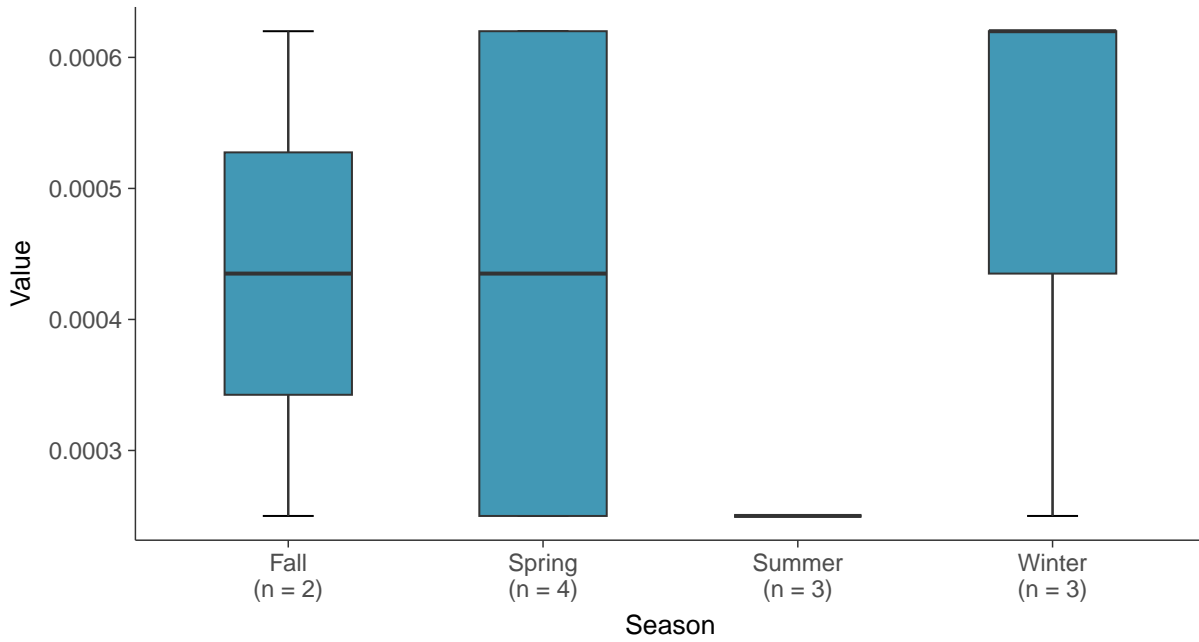
### Boxplot

Molybdenum, MW-07 (mg/L)



### Boxplot by Season

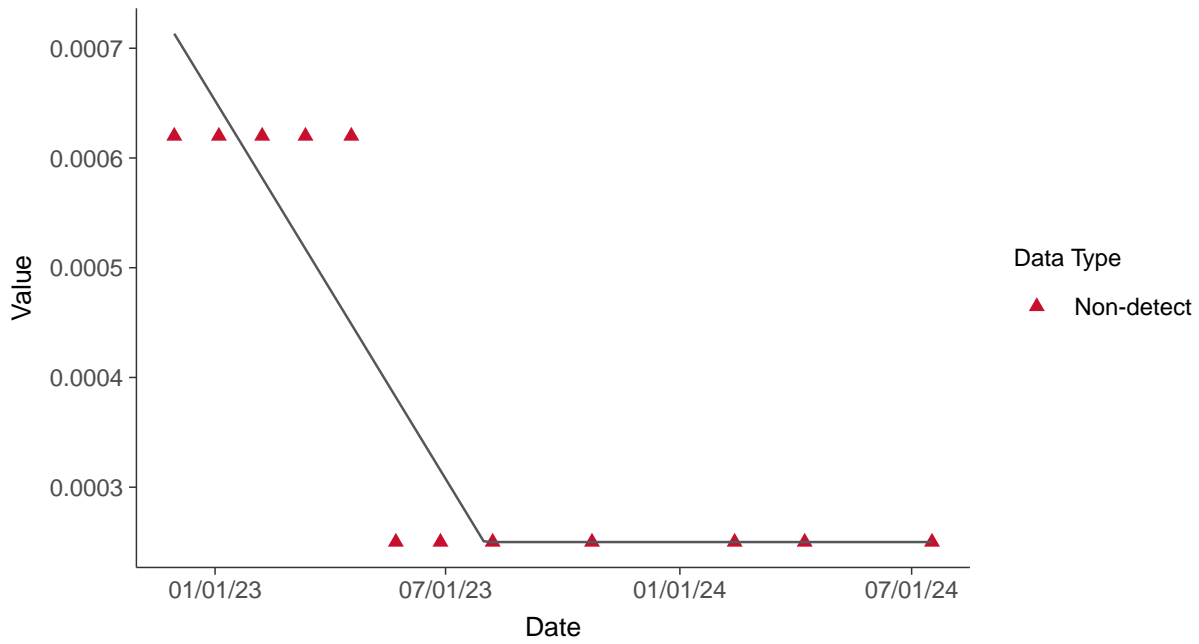
Molybdenum, MW-07 (mg/L)





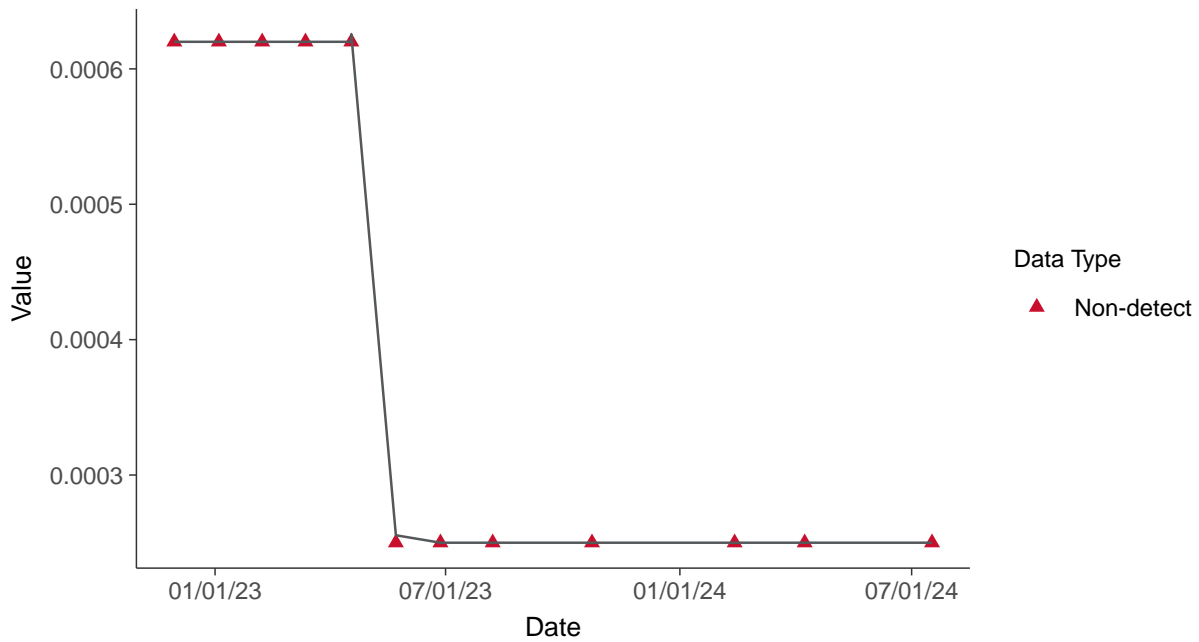
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-07 (mg/L)



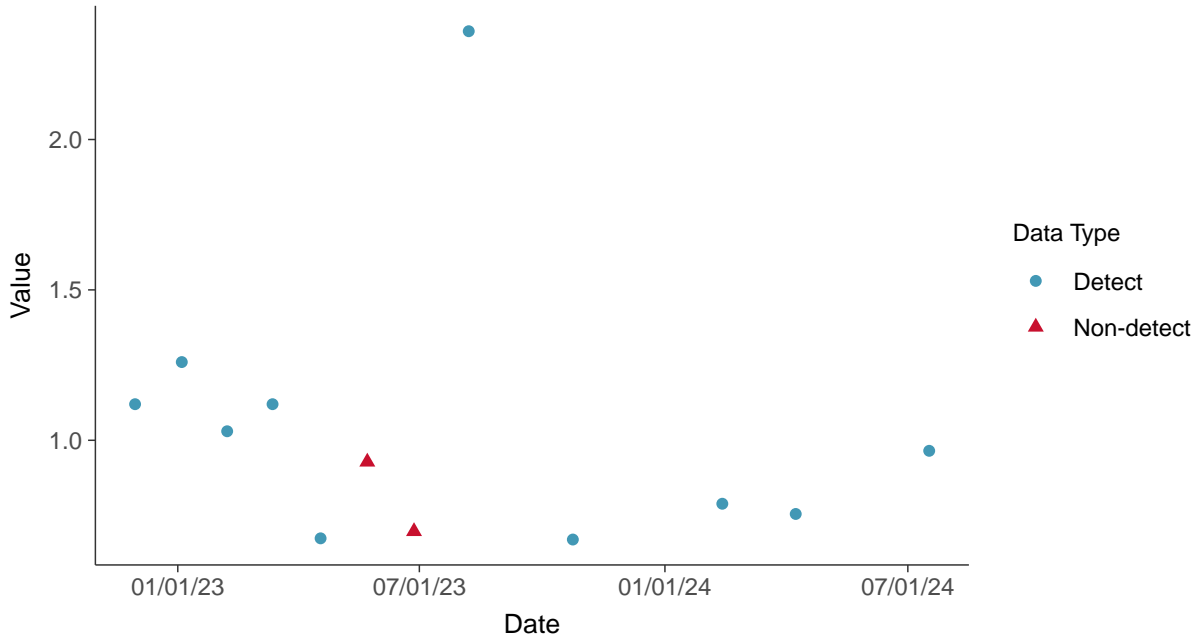


### Appendix IV: Radium 226 and 228, MW-07

ID: 17\_1\_5\_121

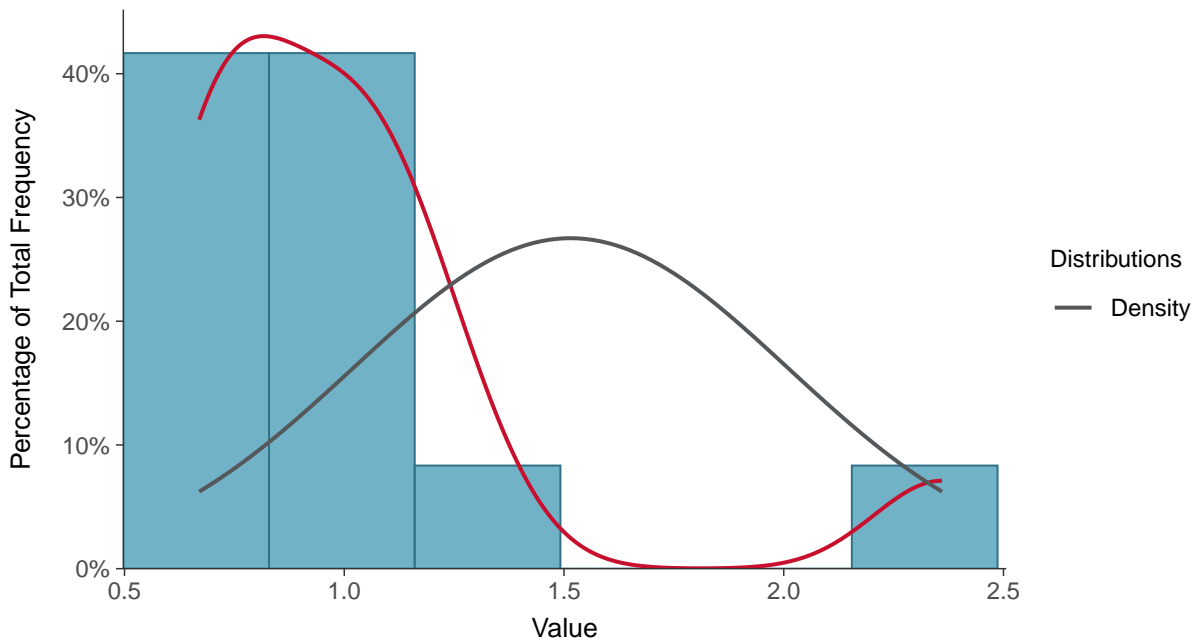
#### Scatter Plot

Radium 226 and 228, MW-07 (pCi/L)



#### Histogram

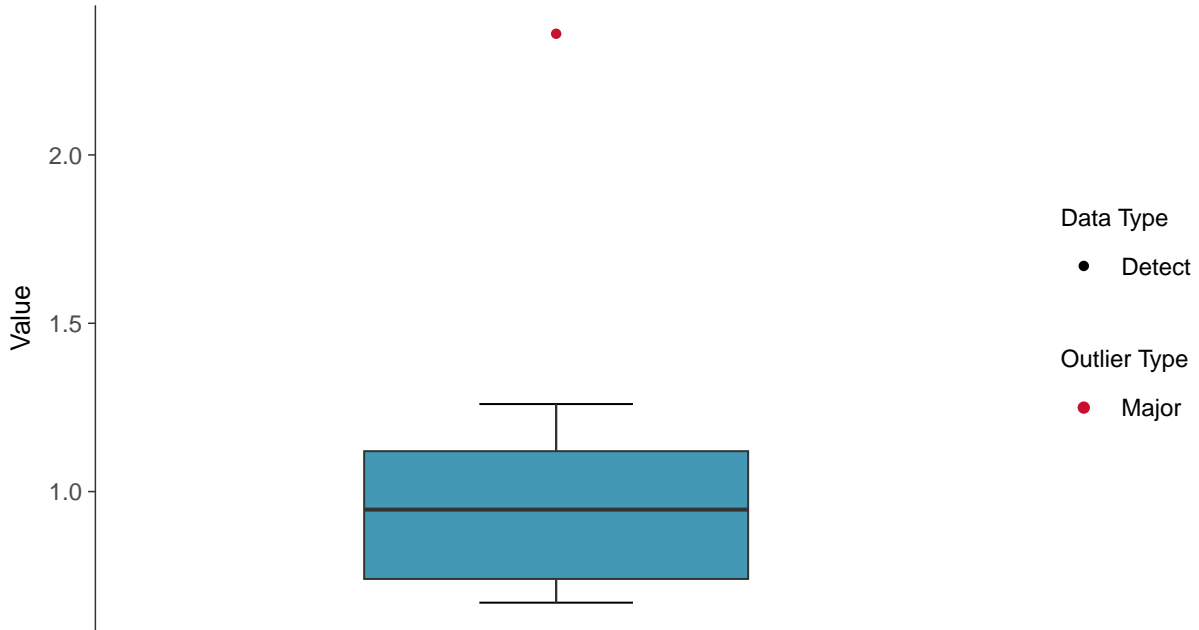
Radium 226 and 228, MW-07 (pCi/L)





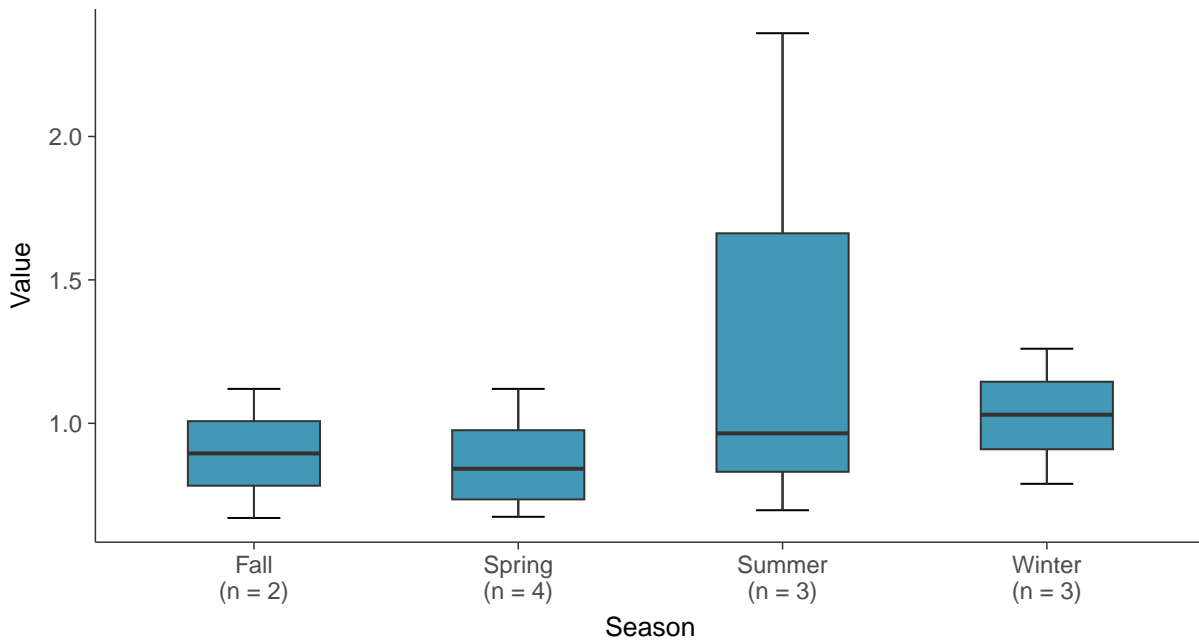
### Boxplot

Radium 226 and 228, MW-07 (pCi/L)



### Boxplot by Season

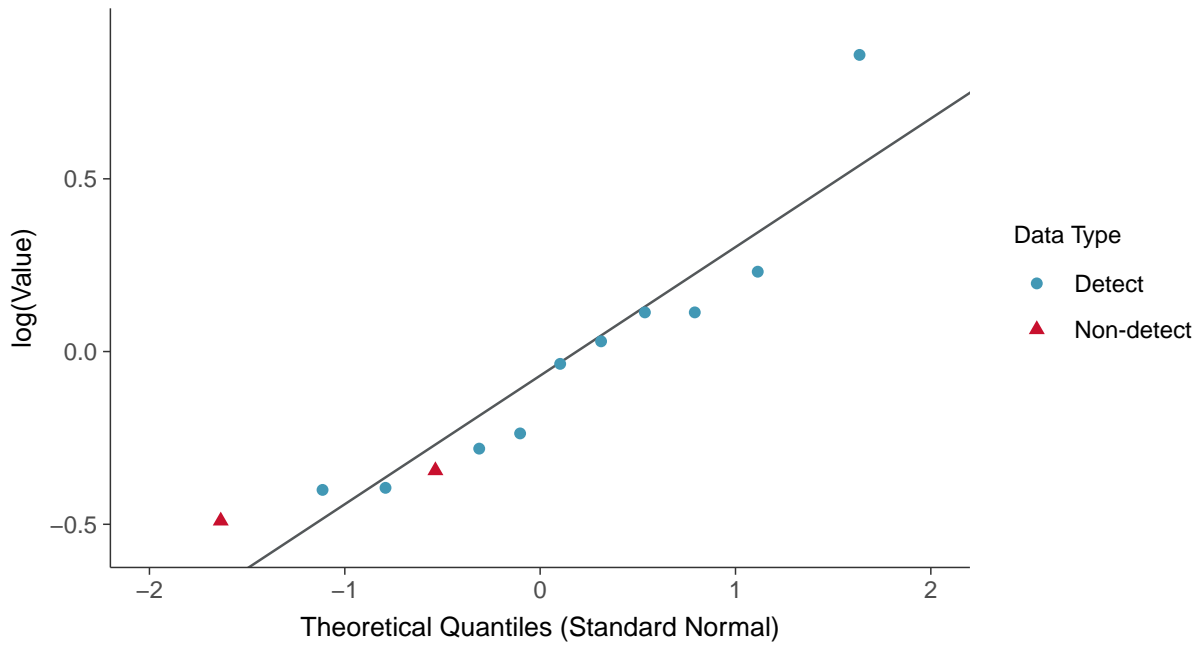
Radium 226 and 228, MW-07 (pCi/L)





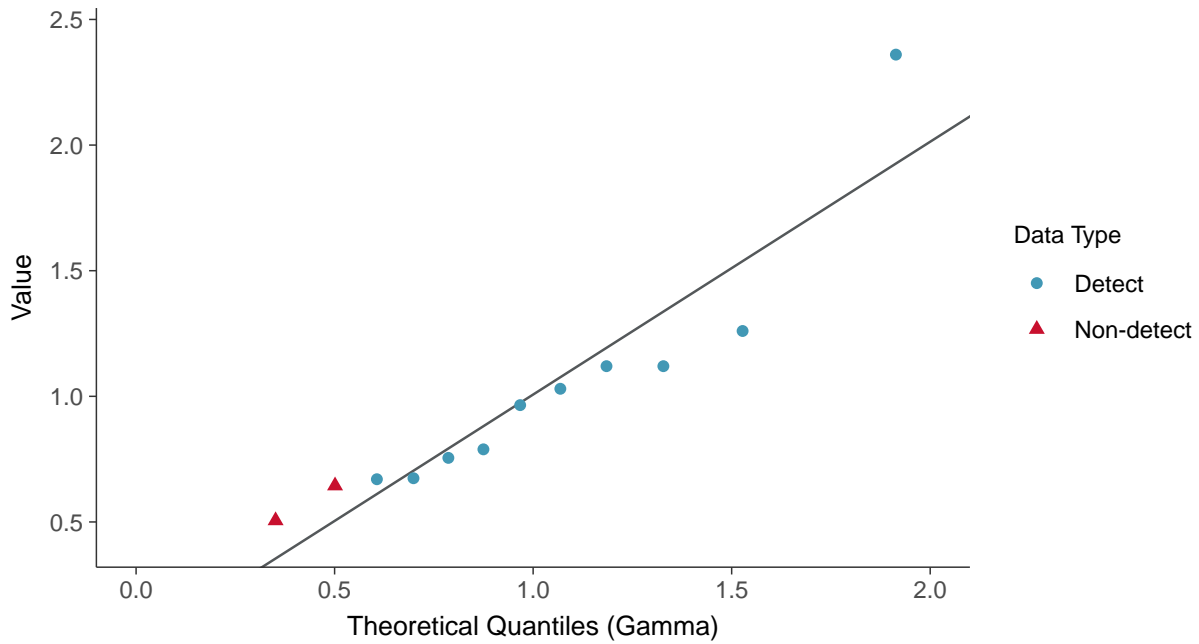
### Lognormal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-07 (pCi/L)



### Gamma Q-Q plot using ROS Imputed Estimates

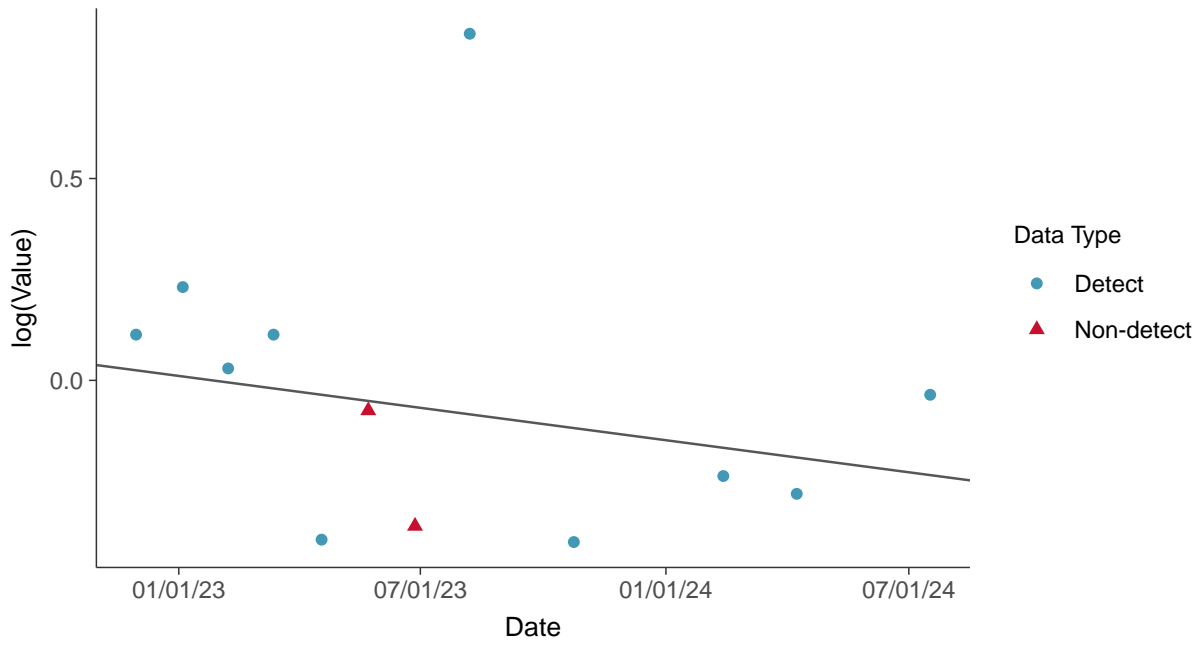
Radium 226 and 228, MW-07 (pCi/L)





### Trend Regression: Lognormal MLE

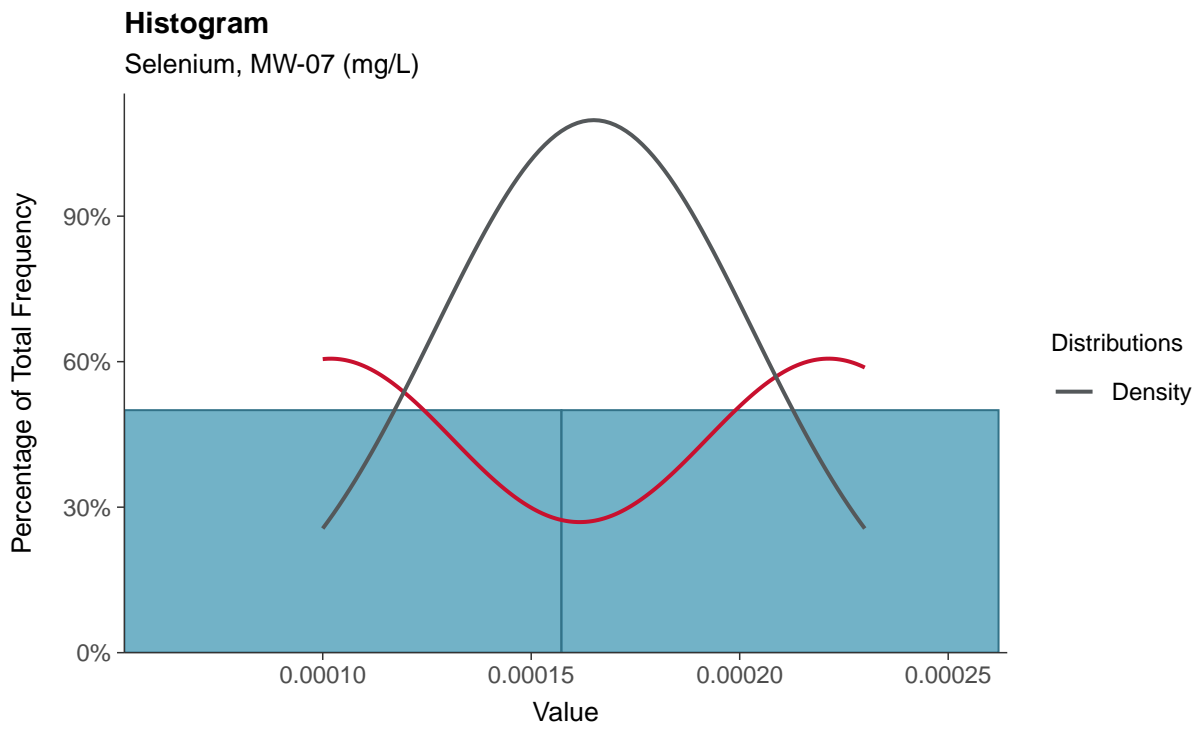
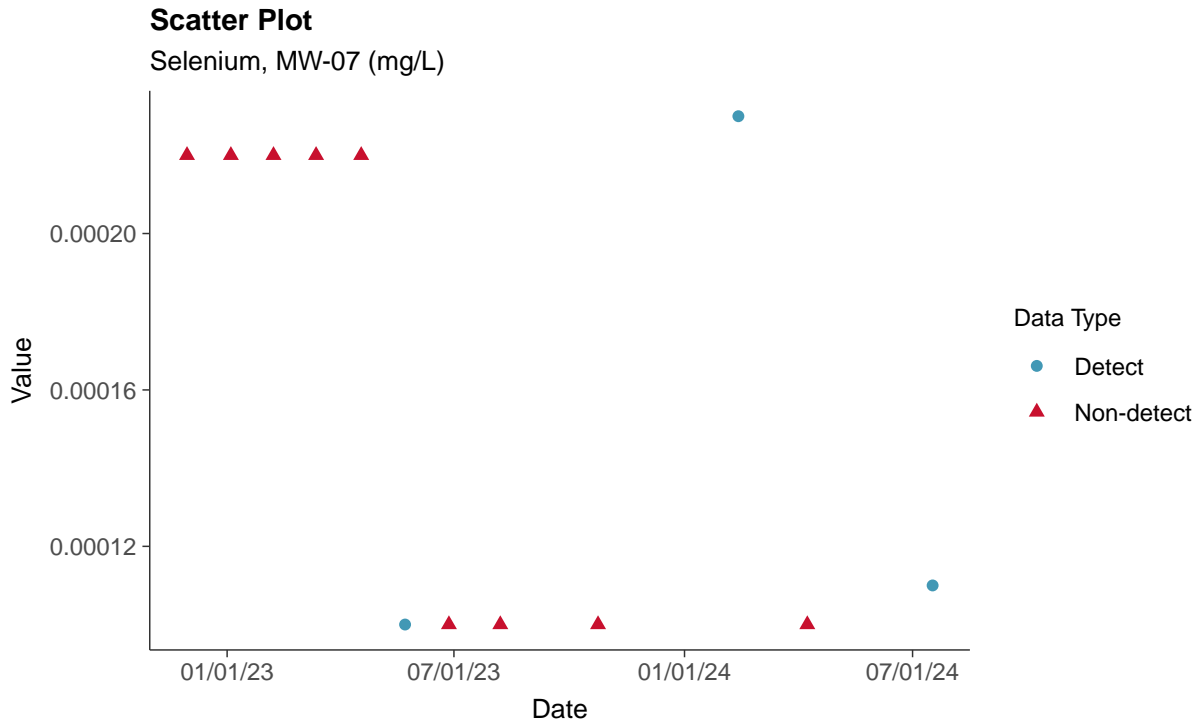
Radium 226 and 228, MW-07 (pCi/L)





### Appendix IV: Selenium, MW-07

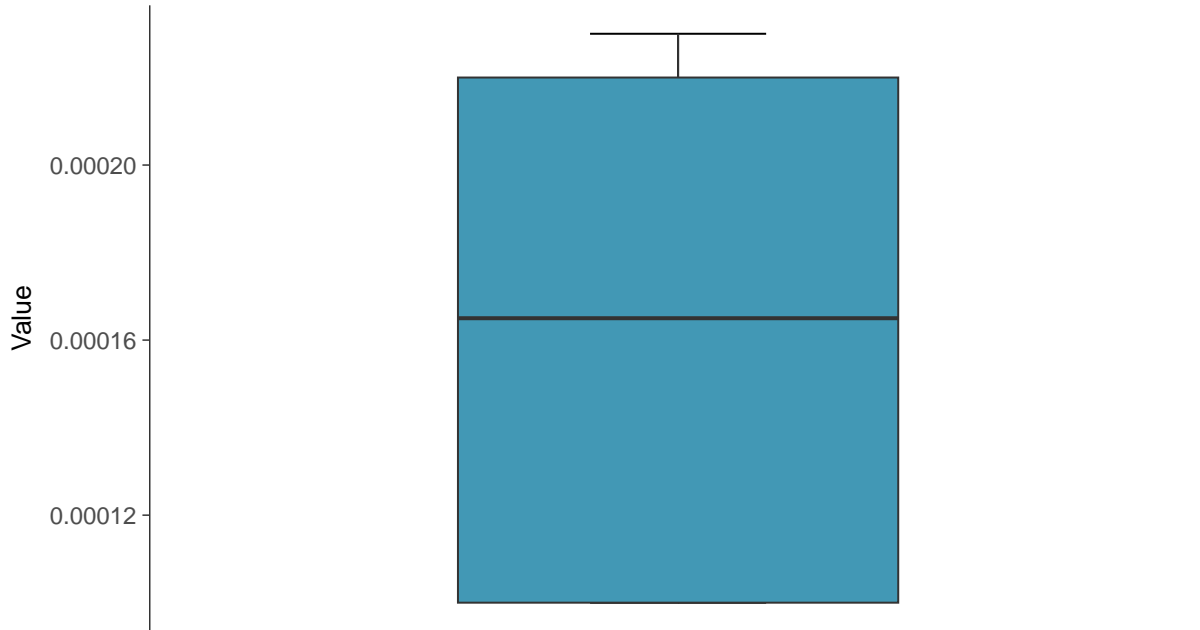
ID: 17\_1\_5\_122





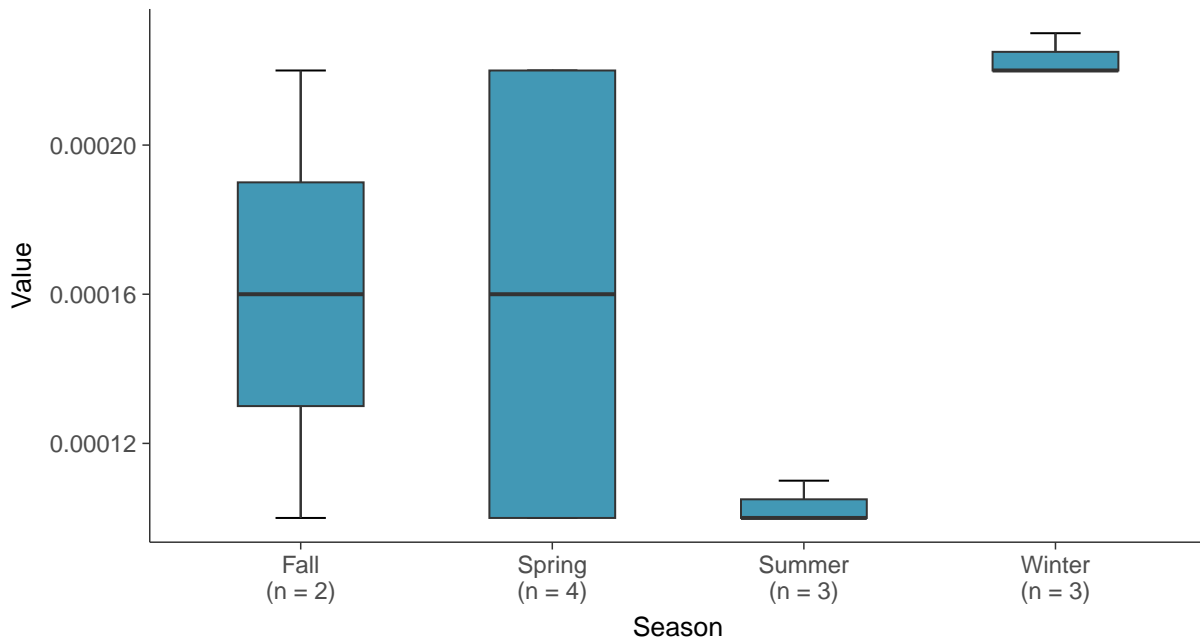
### Boxplot

Selenium, MW-07 (mg/L)



### Boxplot by Season

Selenium, MW-07 (mg/L)

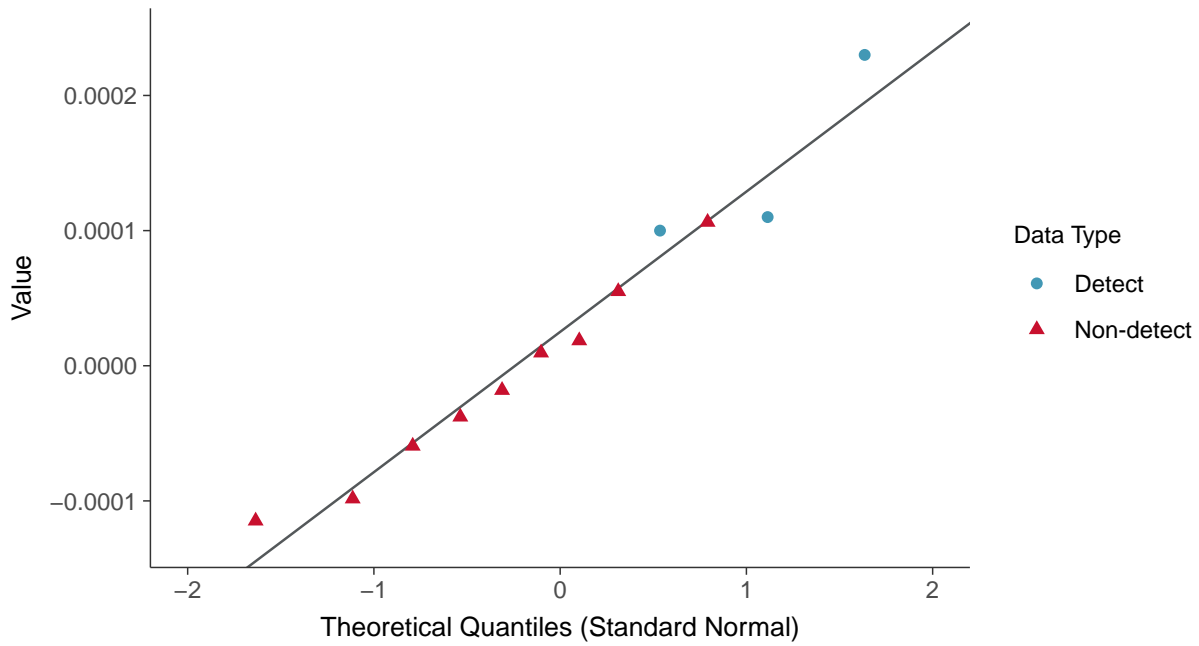






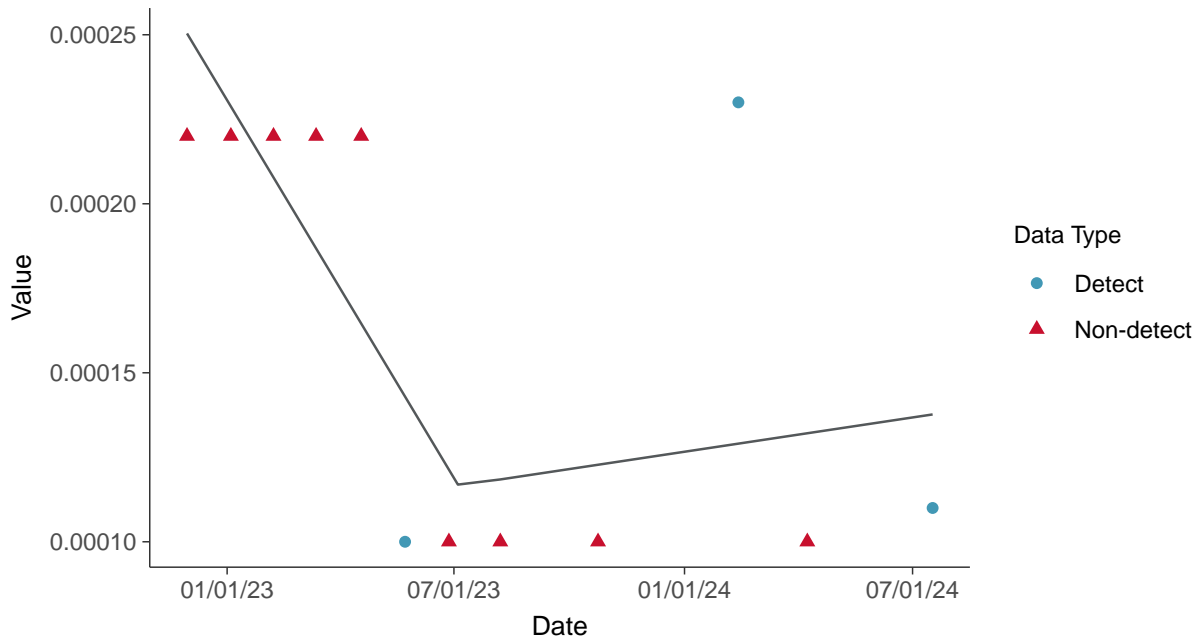
### Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear

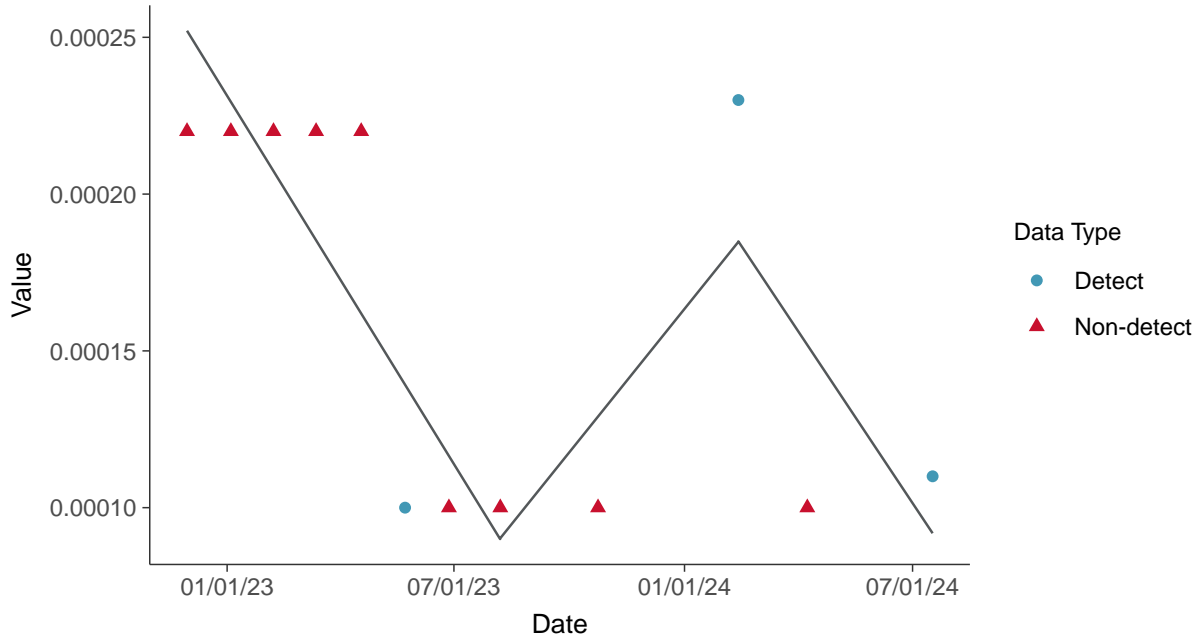
Selenium, MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

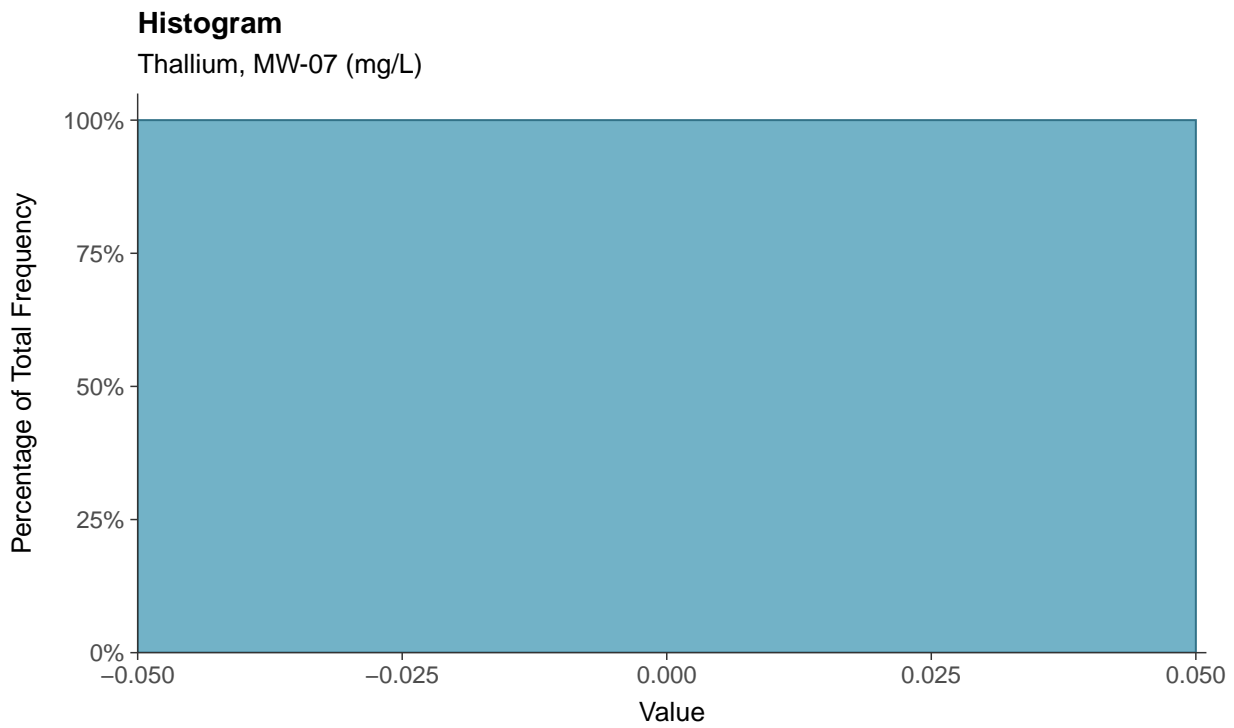
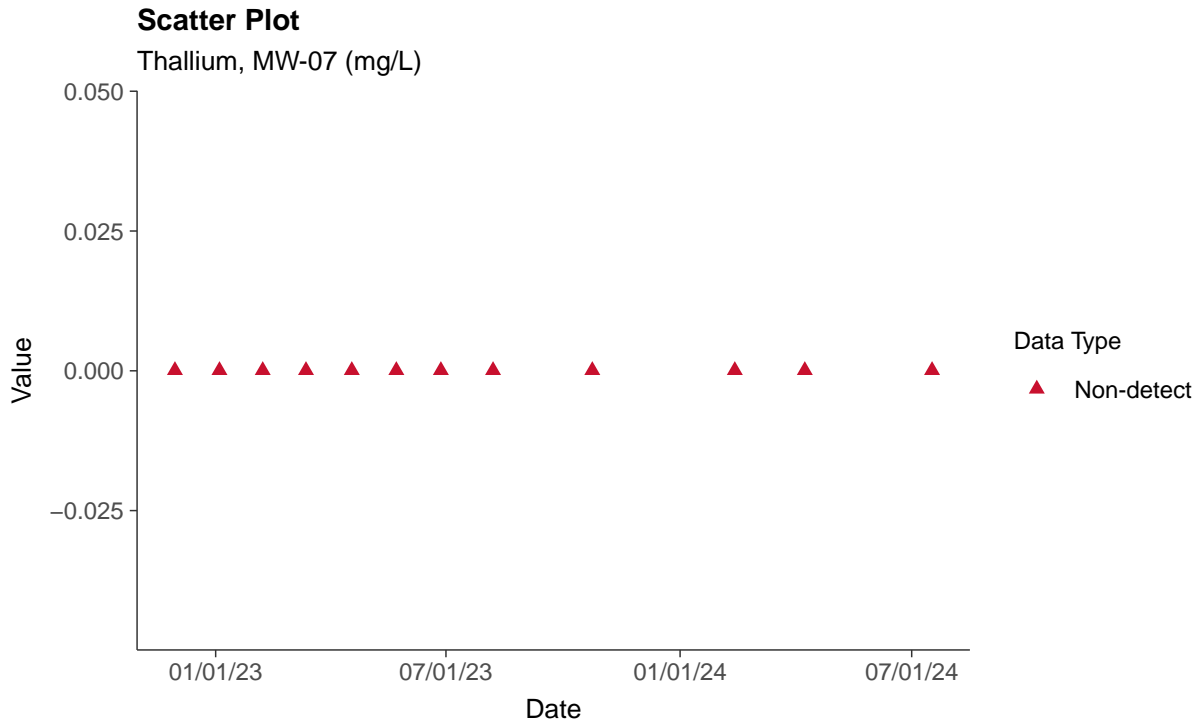
Selenium, MW-07 (mg/L)





### Appendix IV: Thallium, MW-07

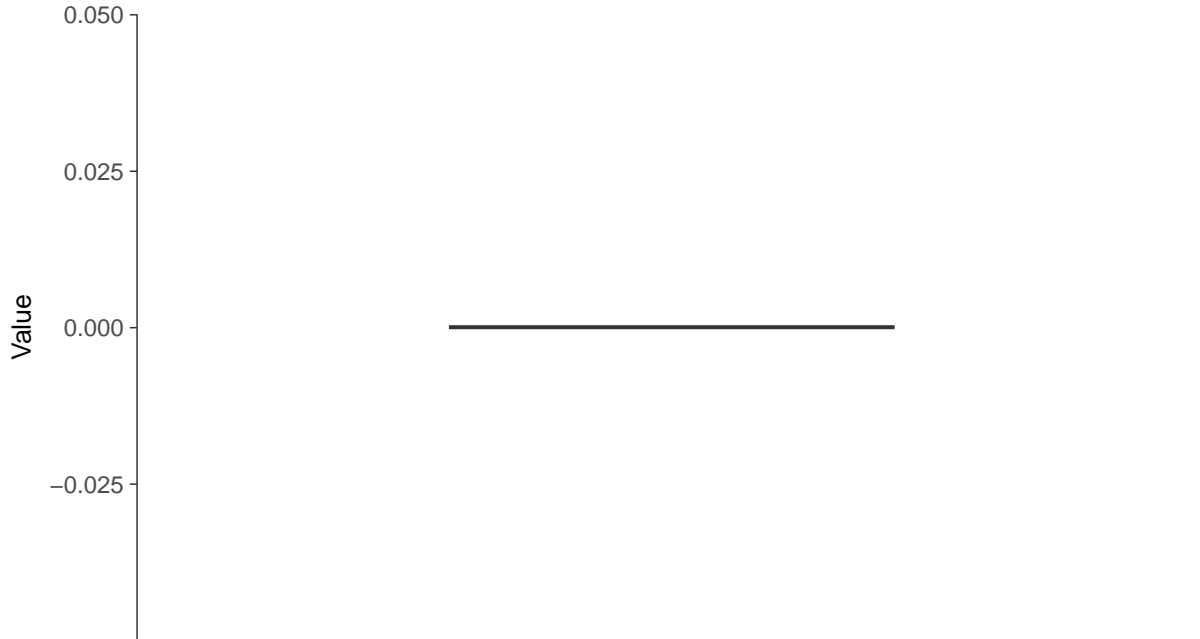
ID: 17\_1\_5\_125





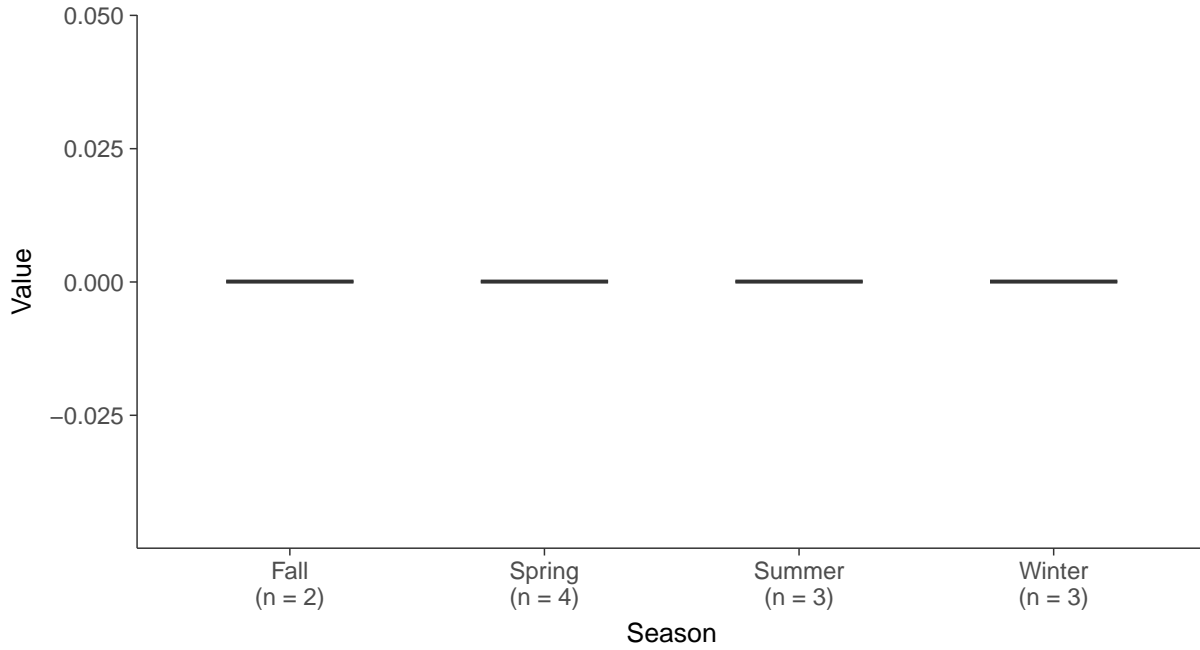
### Boxplot

Thallium, MW-07 (mg/L)



### Boxplot by Season

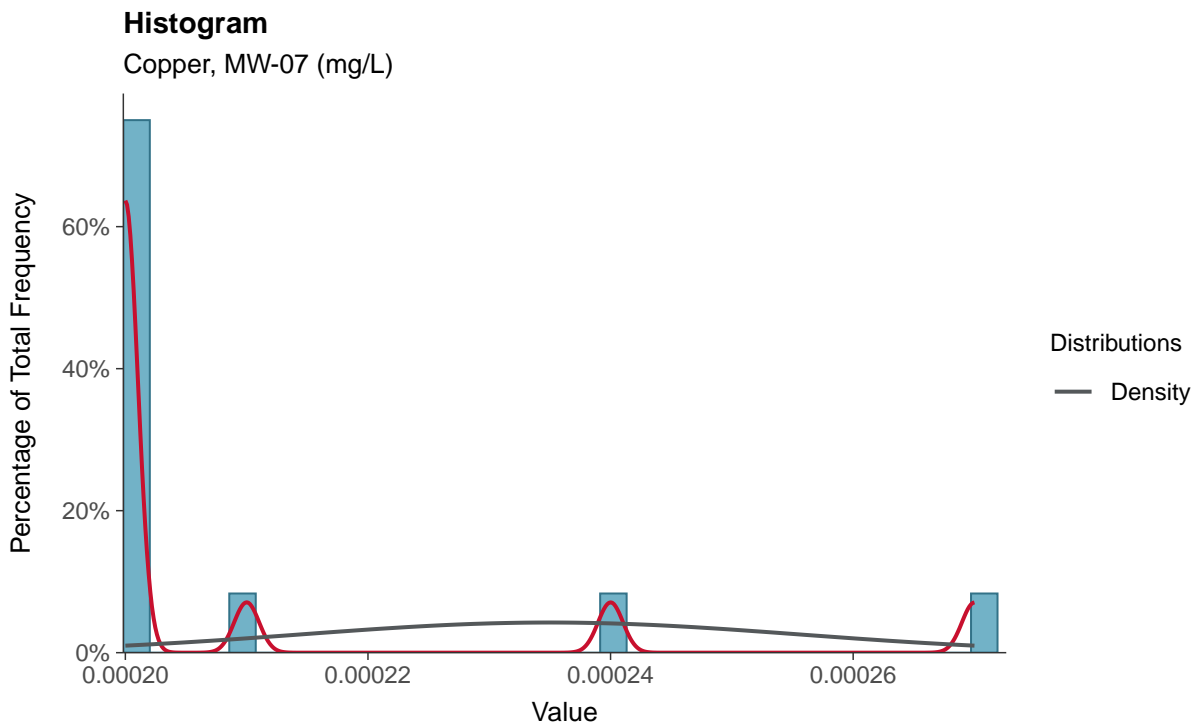
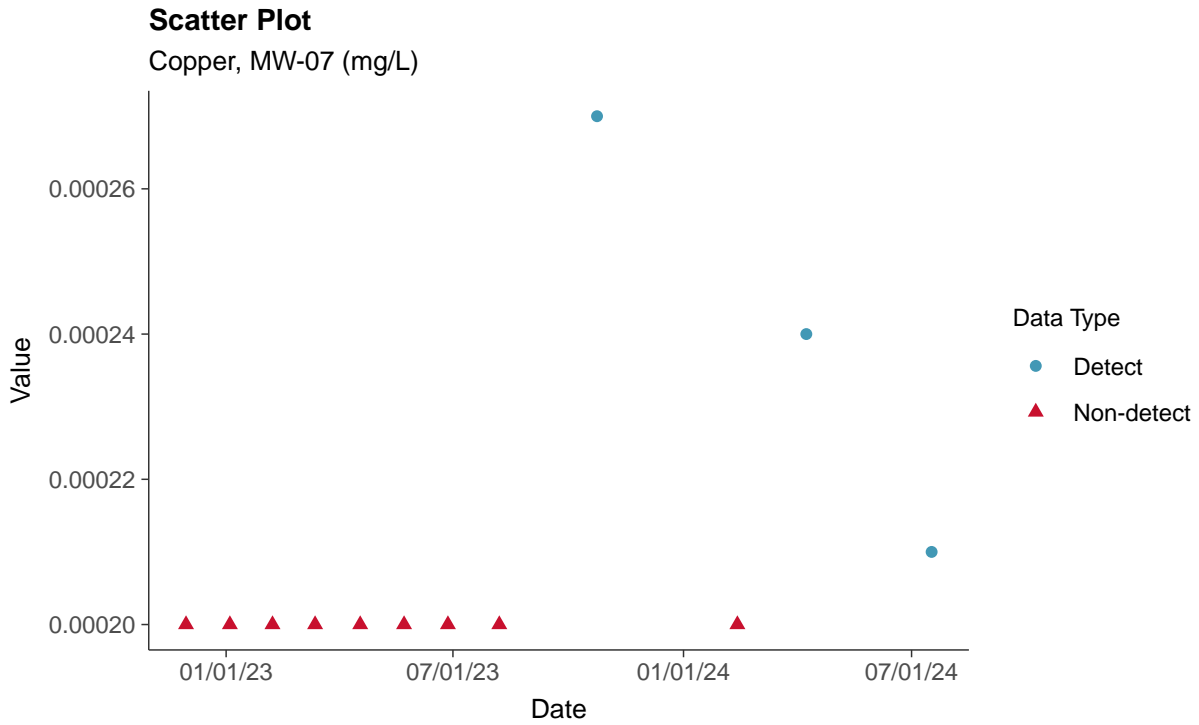
Thallium, MW-07 (mg/L)





### Part 115: Copper, MW-07

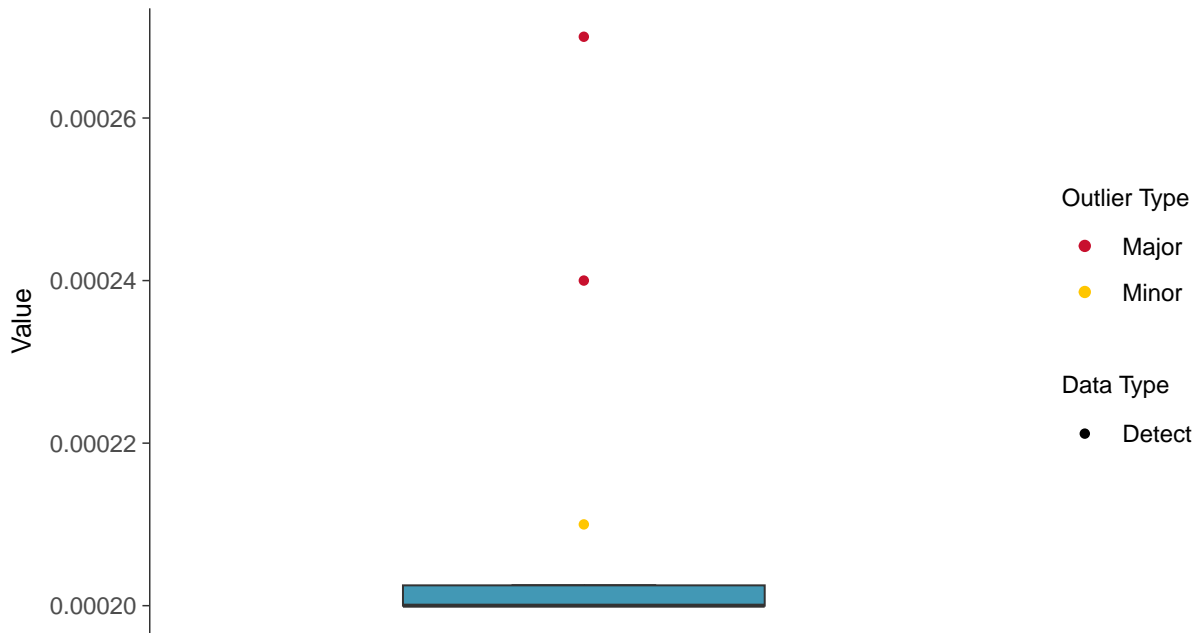
ID: 17\_1\_6\_111





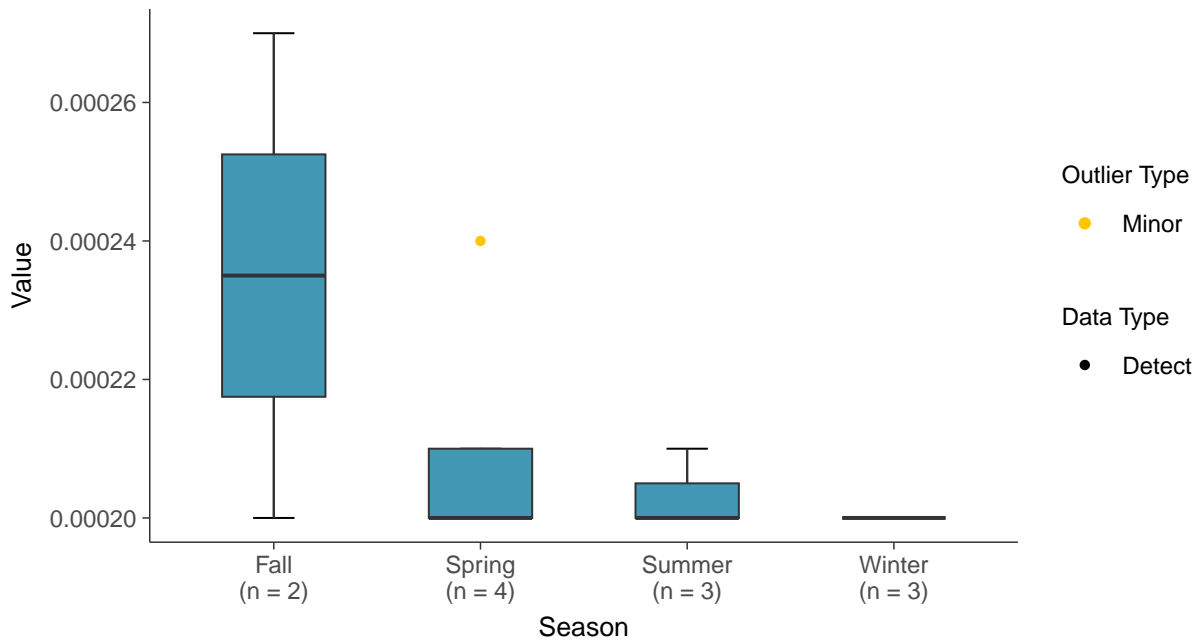
### Boxplot

Copper, MW-07 (mg/L)



### Boxplot by Season

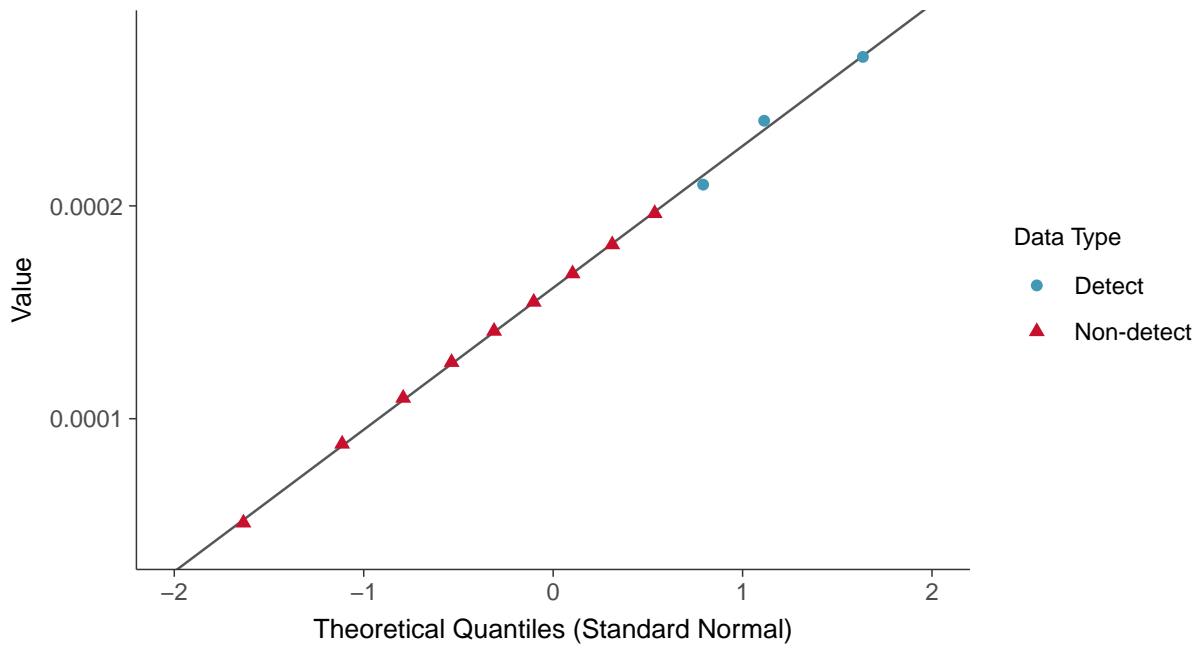
Copper, MW-07 (mg/L)





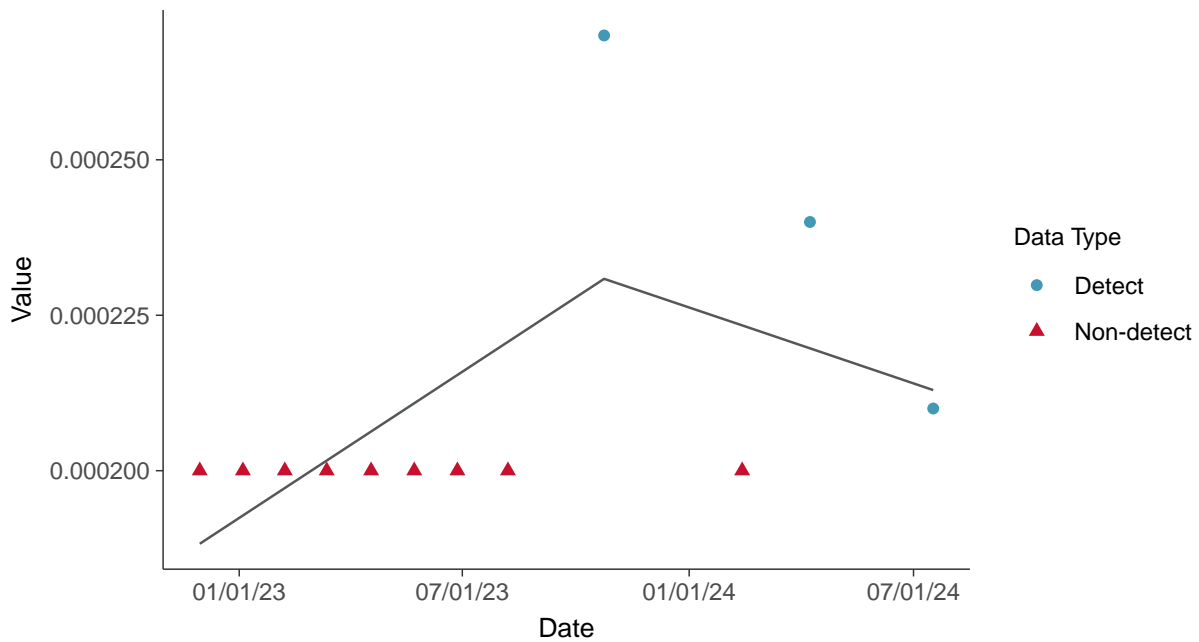
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-07 (mg/L)



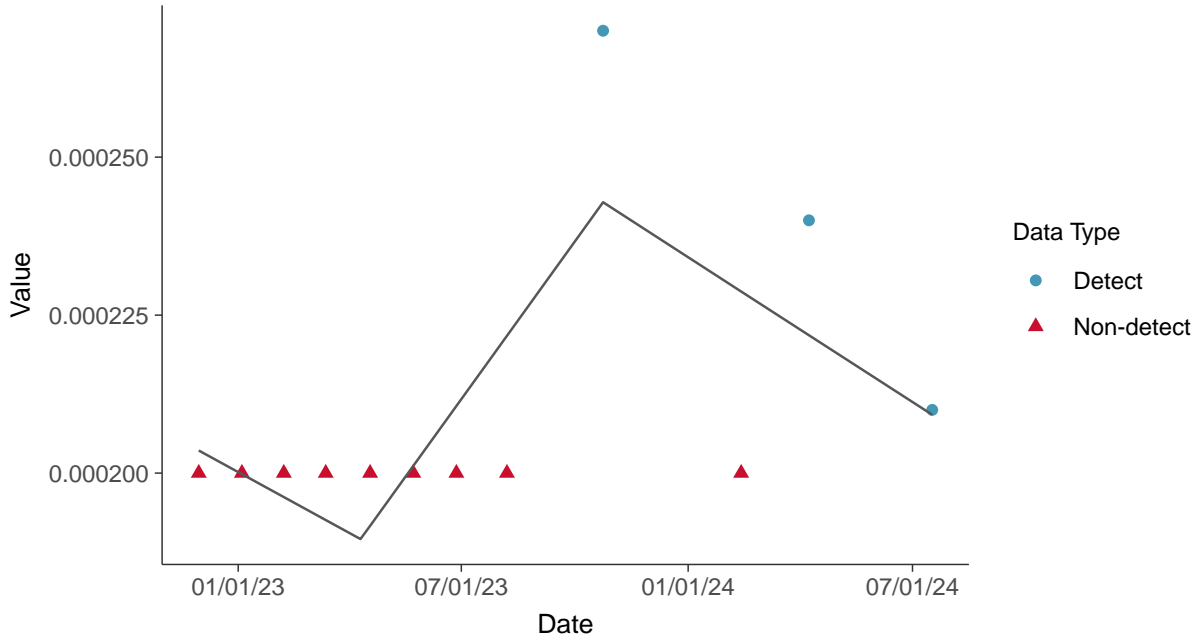
### Trend Regression: Piecewise Linear-Linear

Copper, MW-07 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Copper, MW-07 (mg/L)





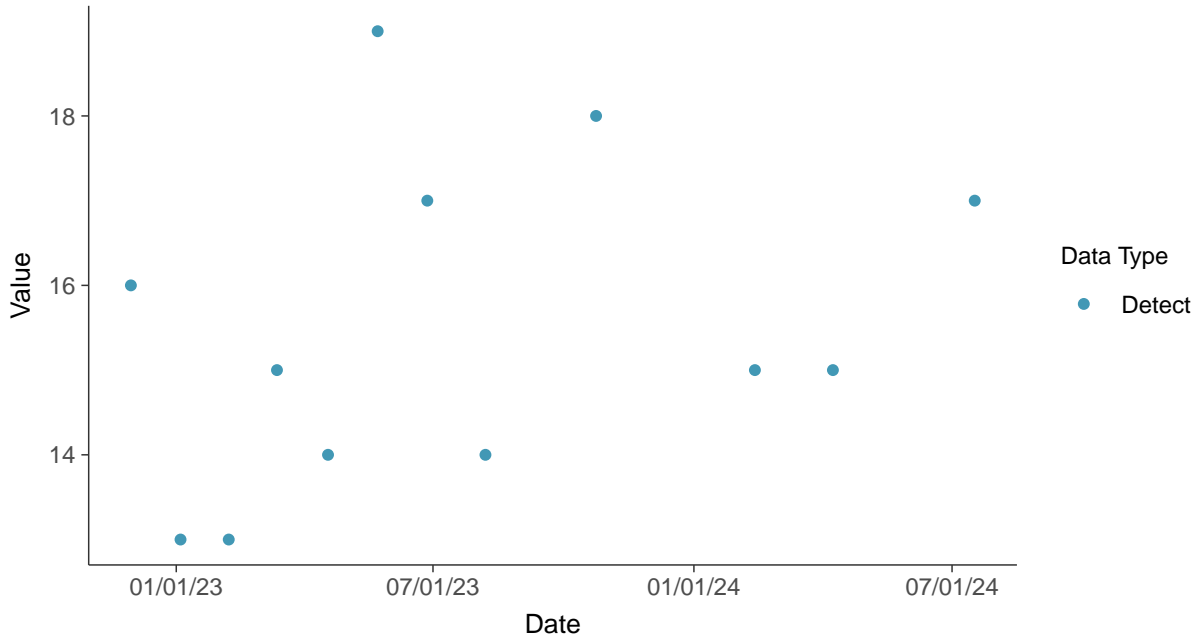


### Part 115: Iron, MW-07

ID: 17\_1\_6\_114

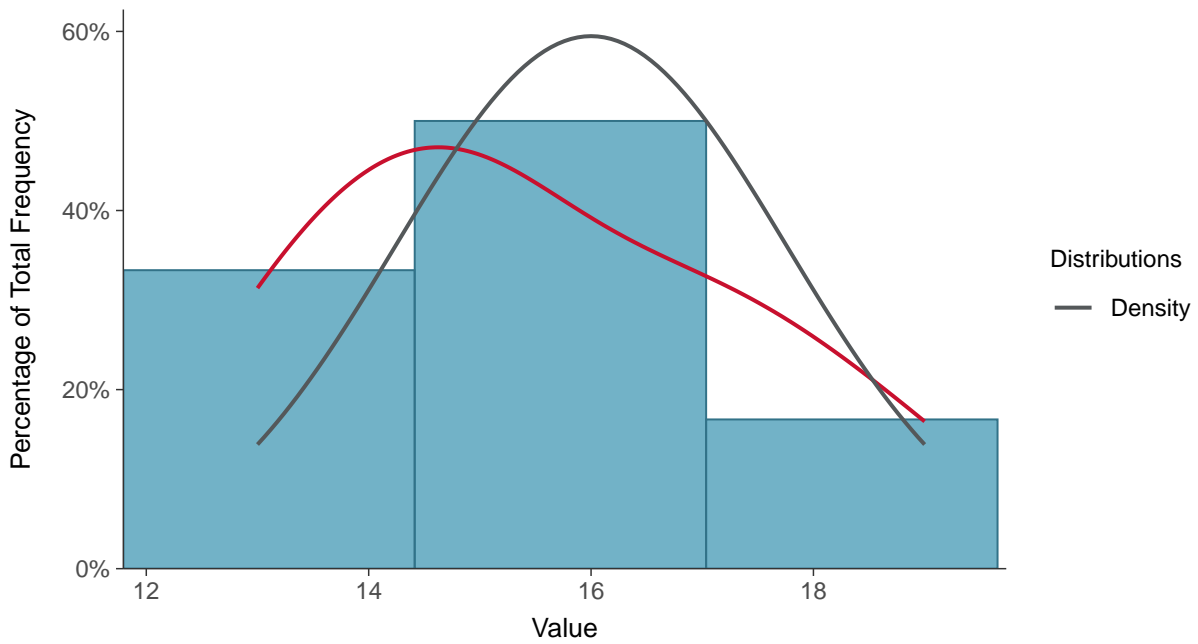
#### Scatter Plot

Iron, MW-07 (mg/L)



#### Histogram

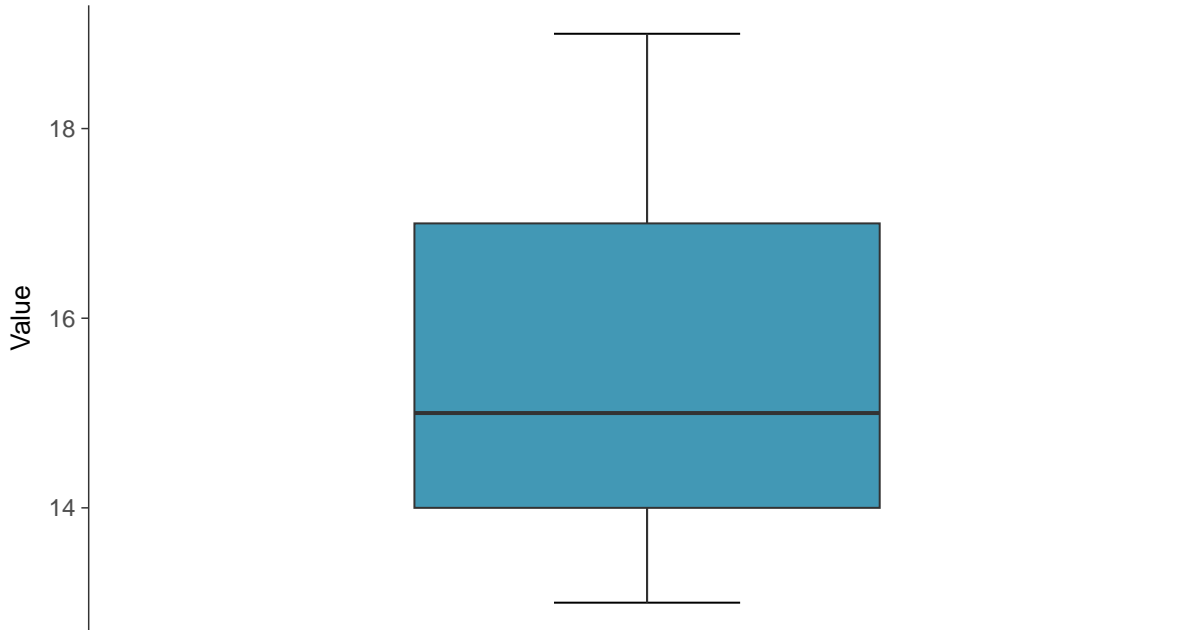
Iron, MW-07 (mg/L)





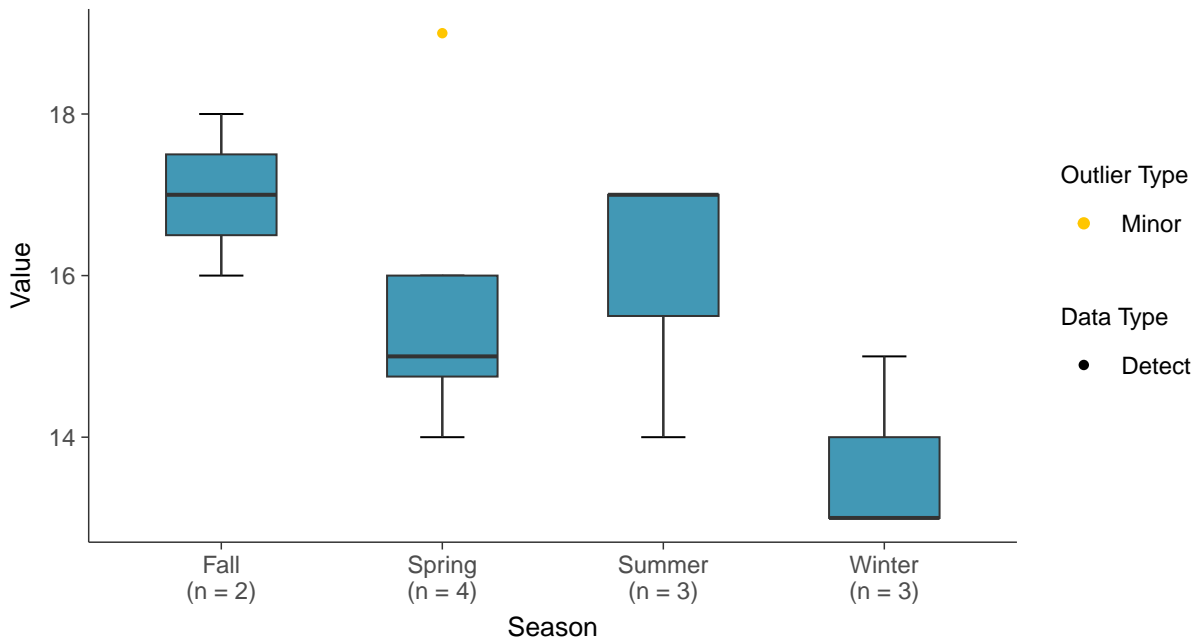
### Boxplot

Iron, MW-07 (mg/L)



### Boxplot by Season

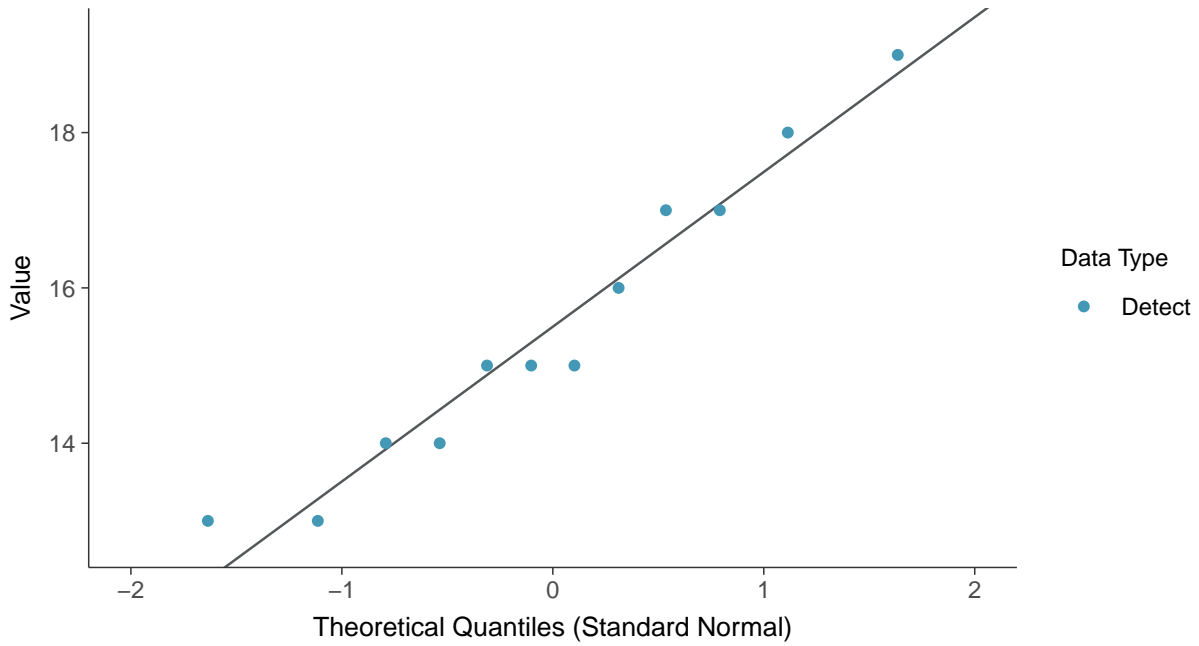
Iron, MW-07 (mg/L)





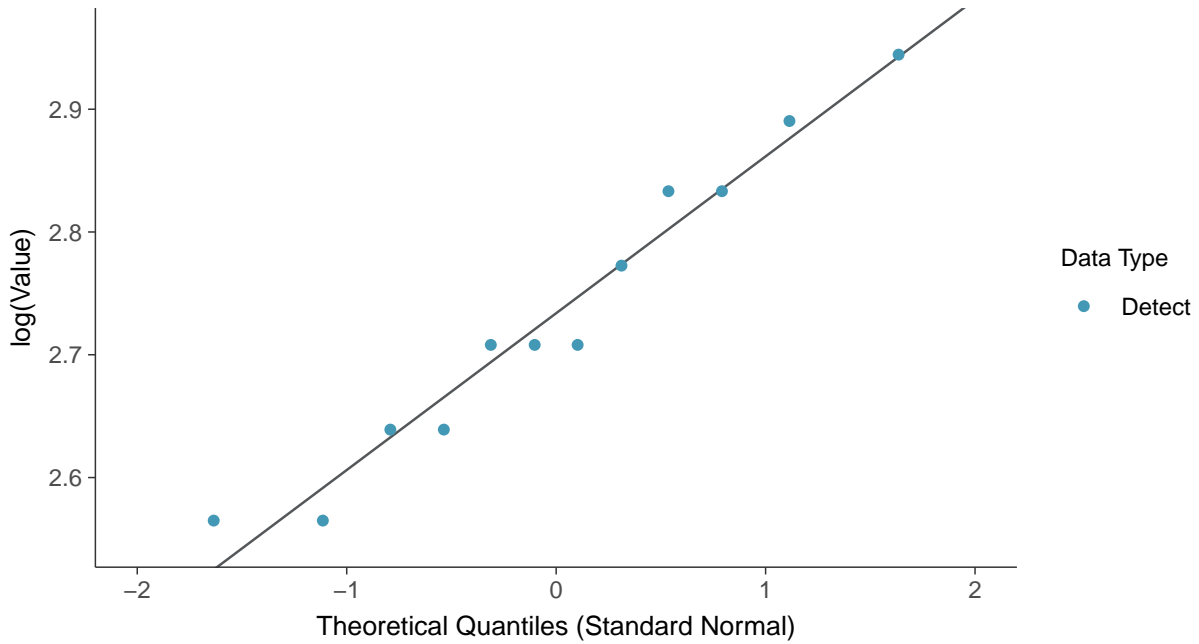
### Normal Q-Q plot

Iron, MW-07 (mg/L)



### Lognormal Q-Q plot

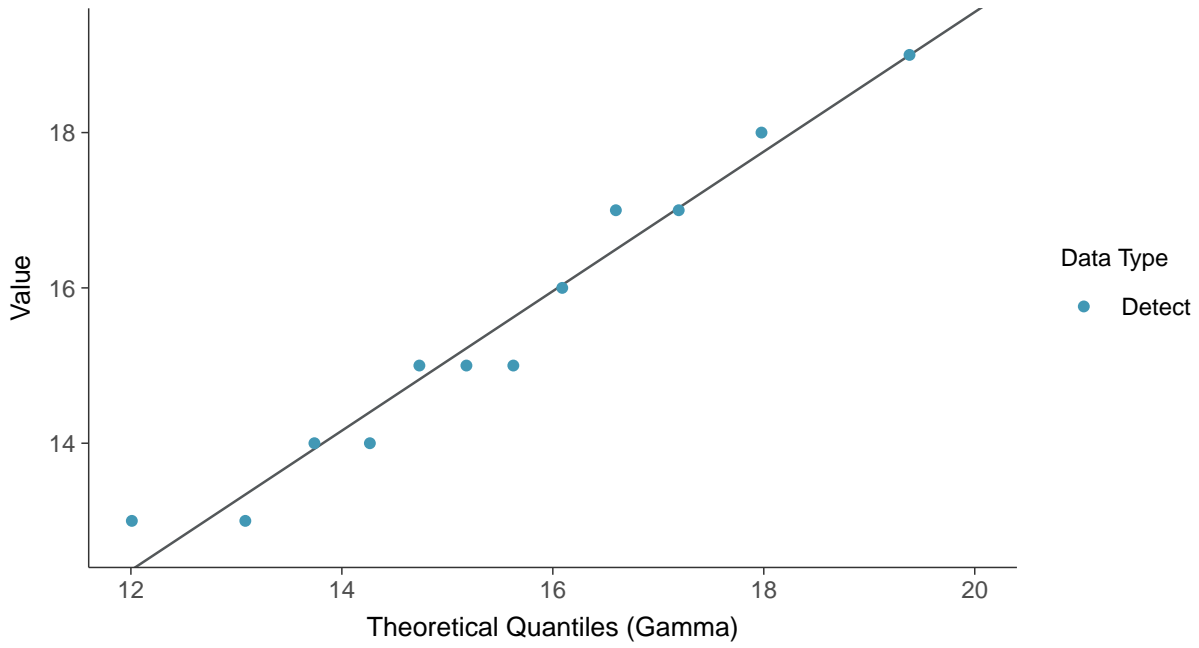
Iron, MW-07 (mg/L)





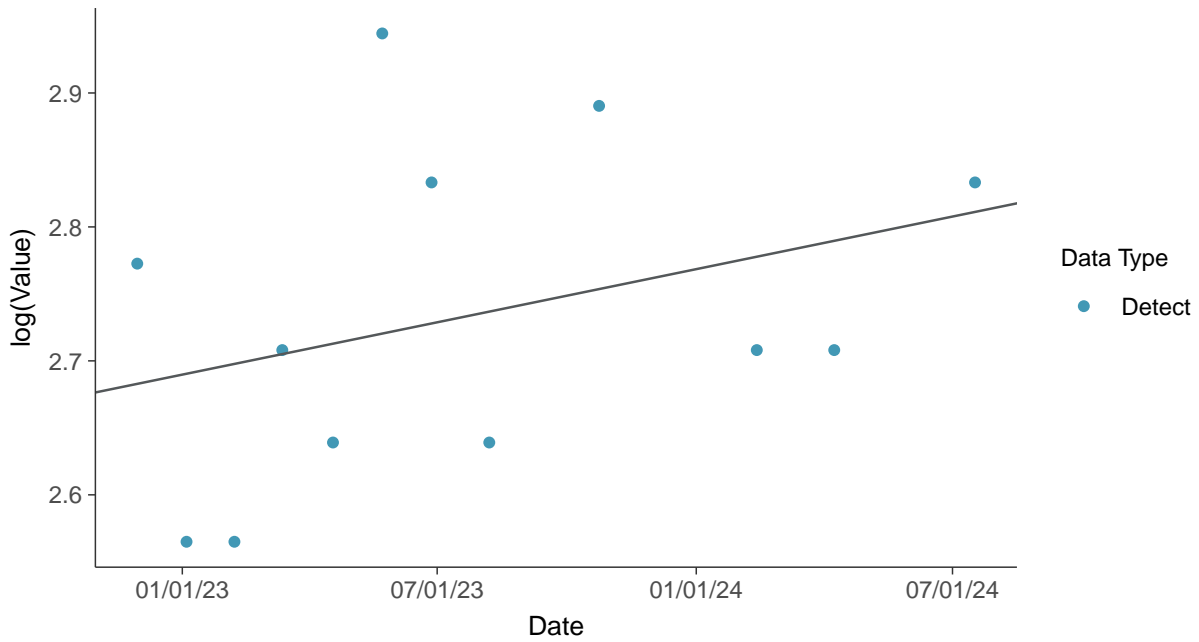
### Gamma Q-Q plot

Iron, MW-07 (mg/L)



### Trend Regression: Lognormal MLE

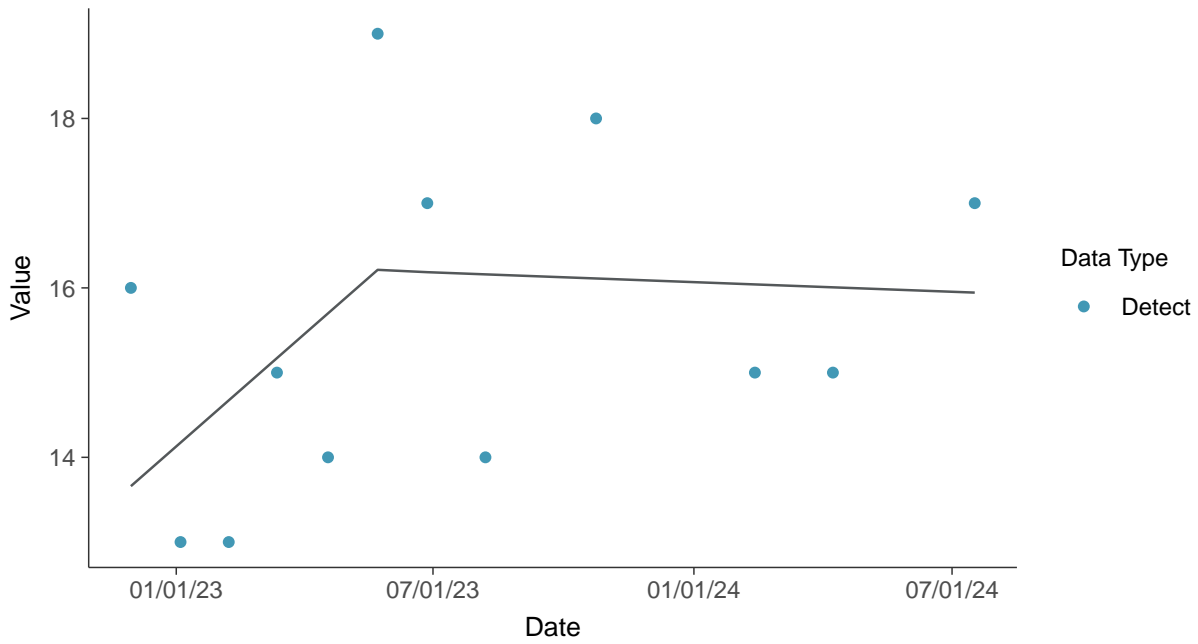
Iron, MW-07 (mg/L)





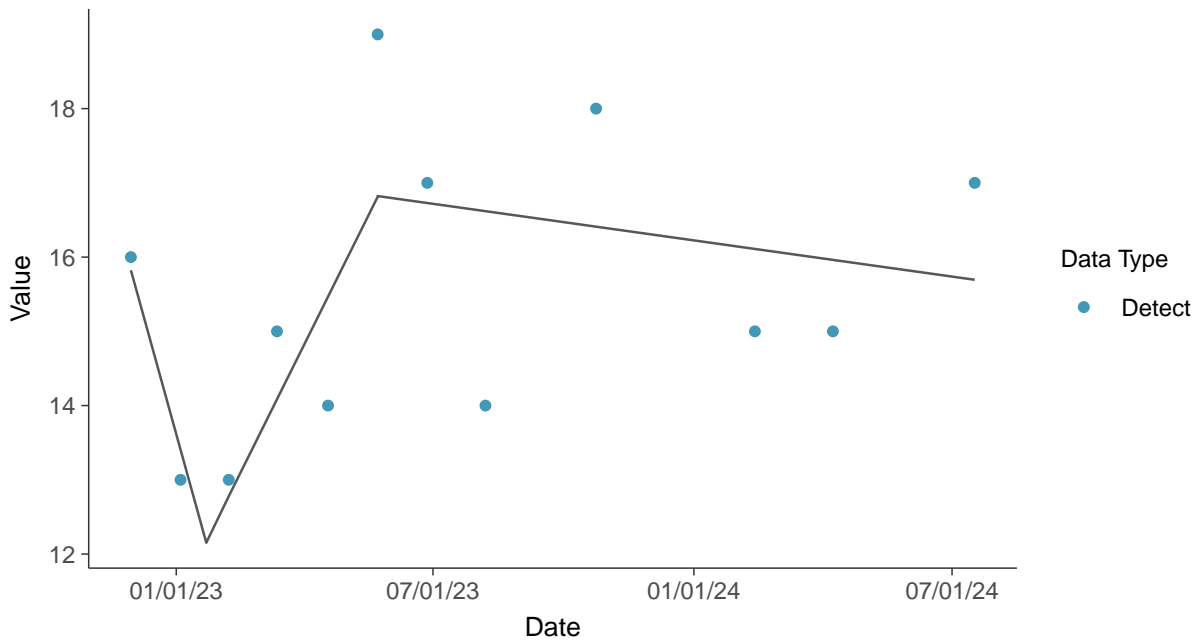
### Trend Regression: Piecewise Linear-Linear

Iron, MW-07 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

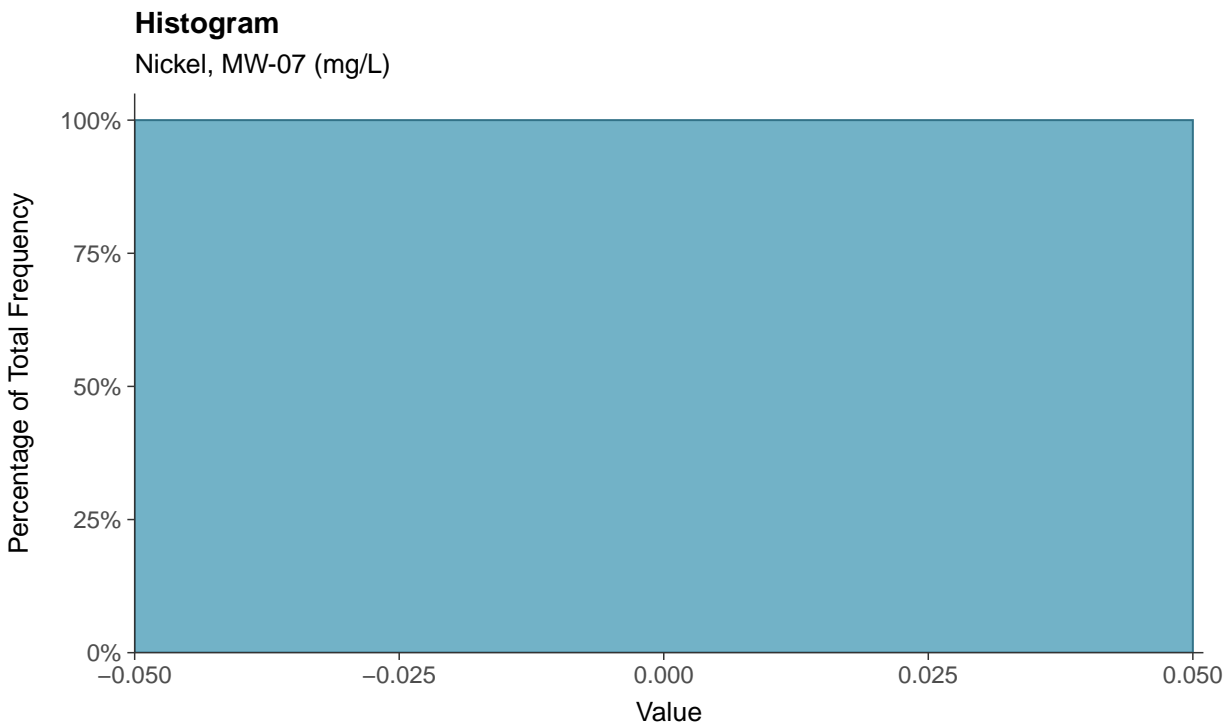
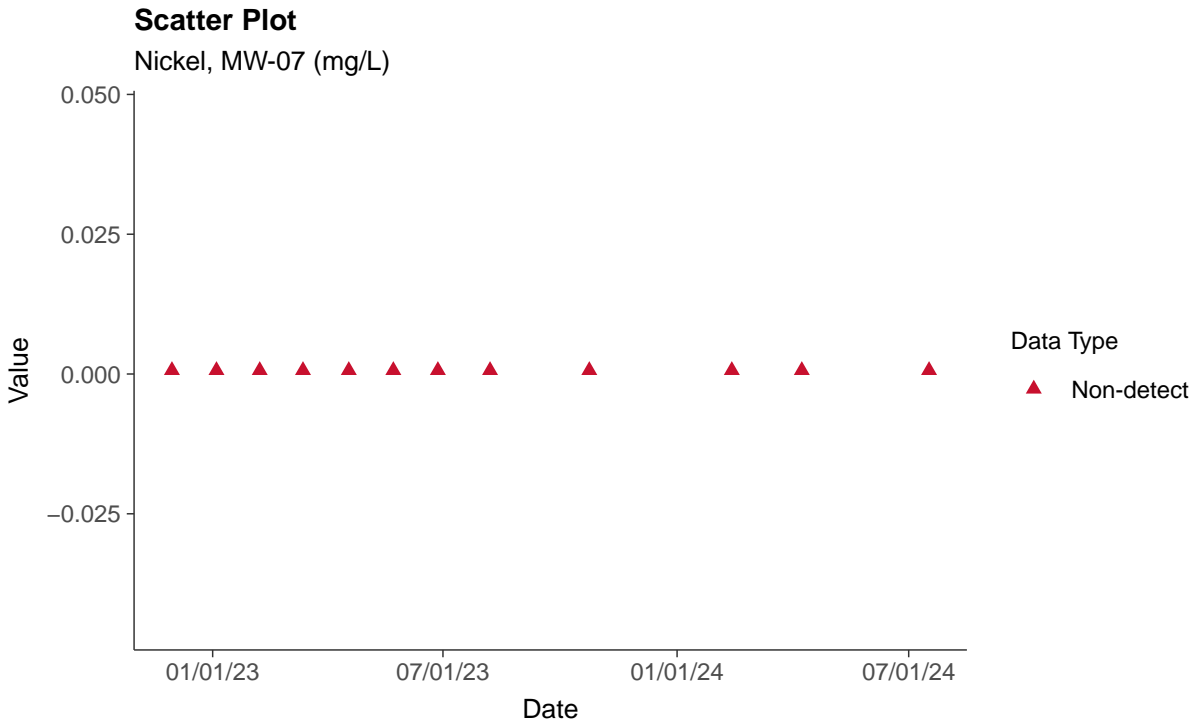
Iron, MW-07 (mg/L)





### Part 115: Nickel, MW-07

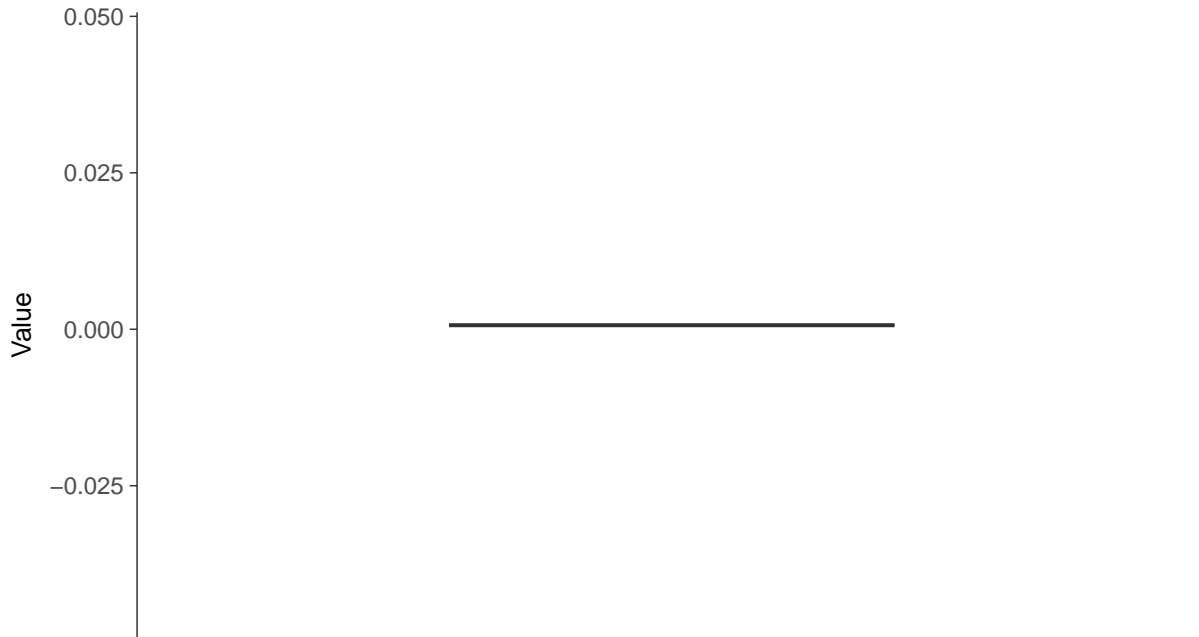
ID: 17\_1\_6\_119





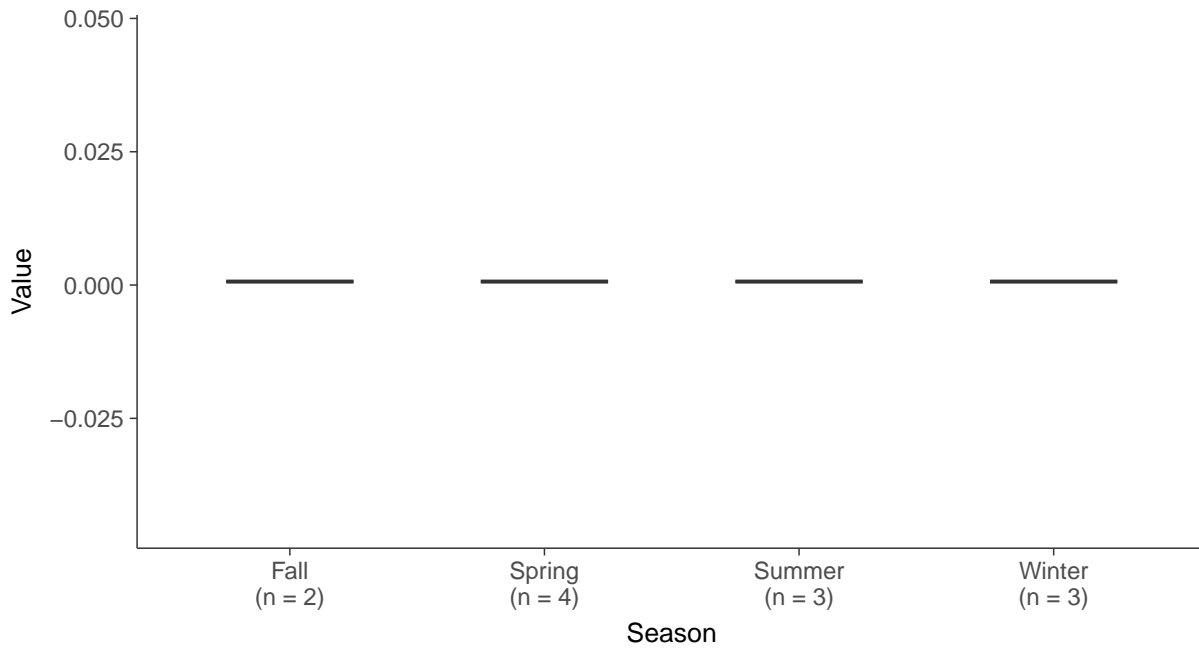
### Boxplot

Nickel, MW-07 (mg/L)



### Boxplot by Season

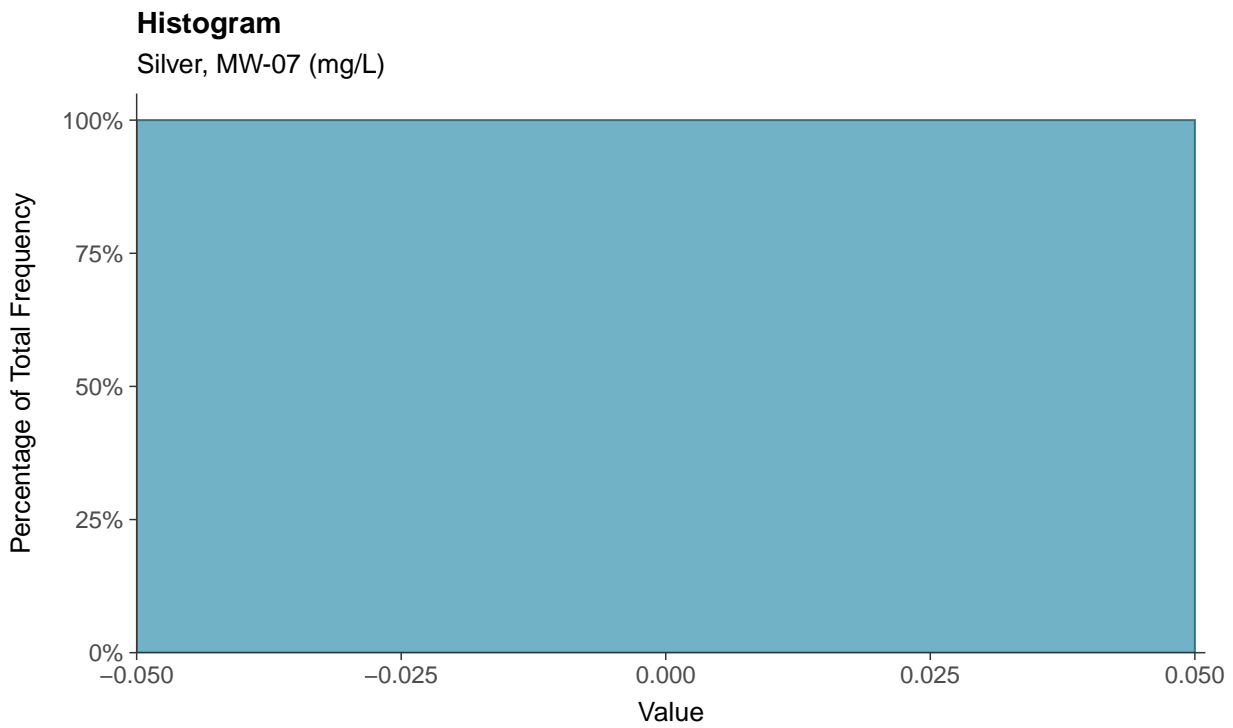
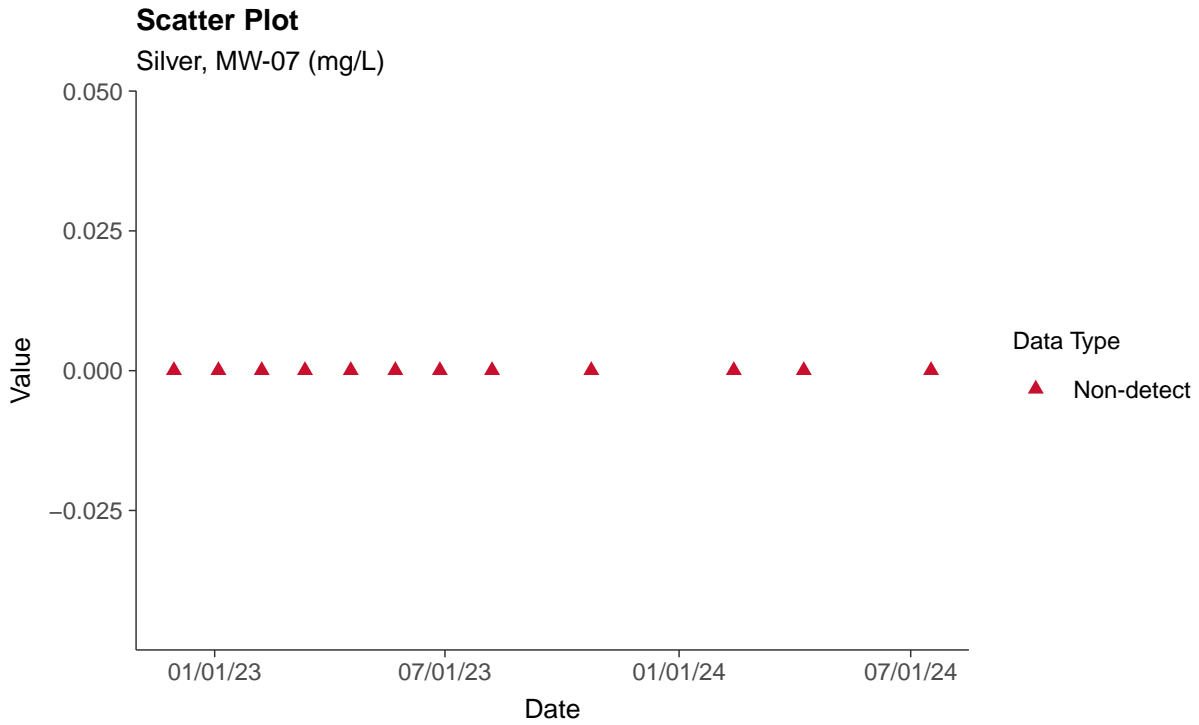
Nickel, MW-07 (mg/L)





### Part 115: Silver, MW-07

ID: 17\_1\_6\_123

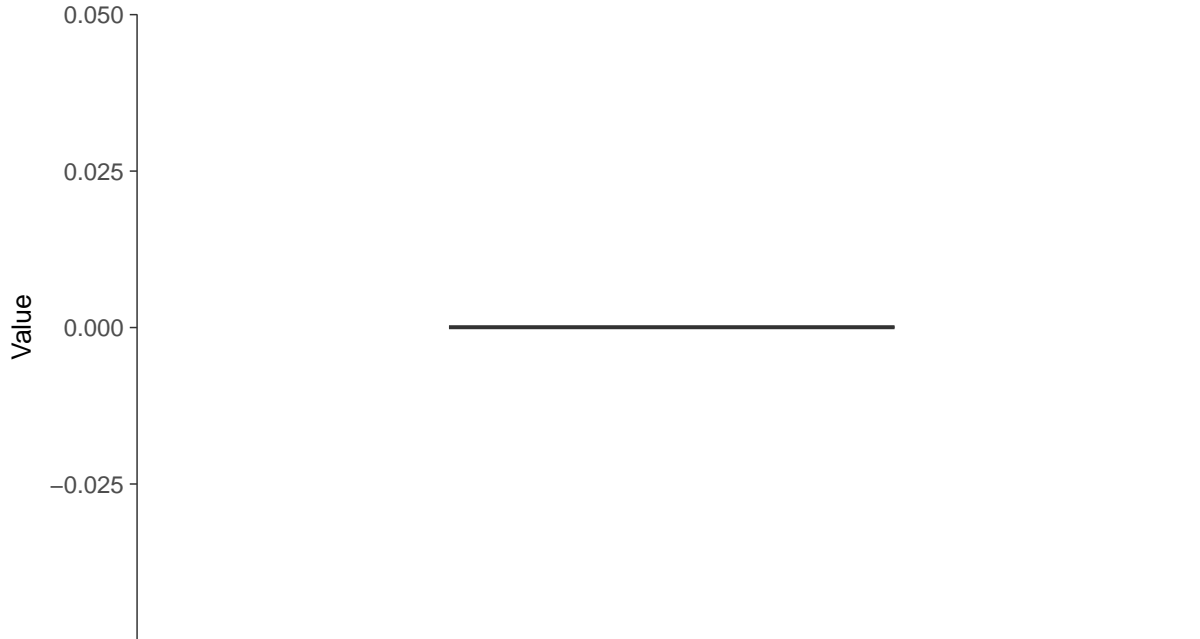






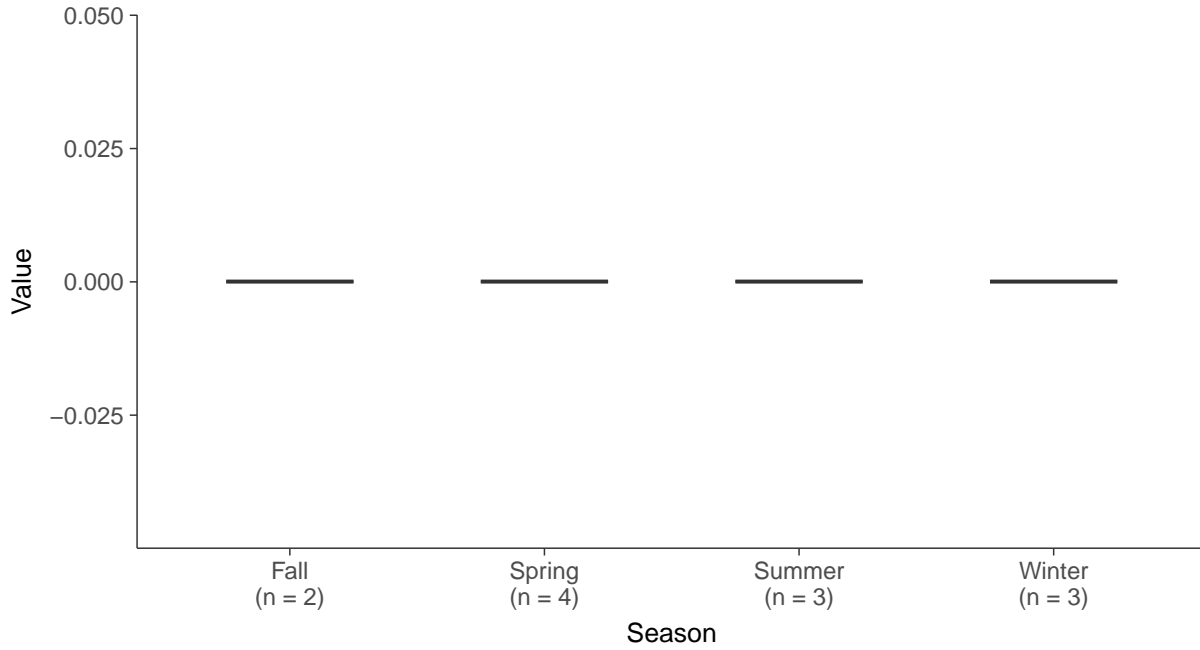
### Boxplot

Silver, MW-07 (mg/L)



### Boxplot by Season

Silver, MW-07 (mg/L)



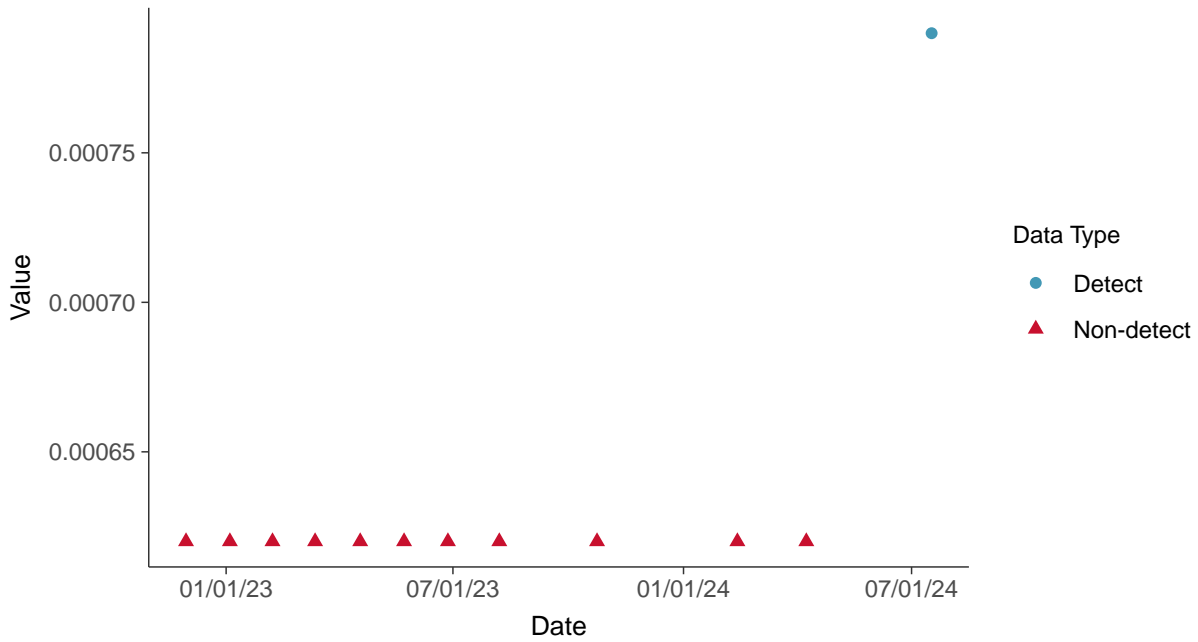


### Part 115: Vanadium, MW-07

ID: 17\_1\_6\_129

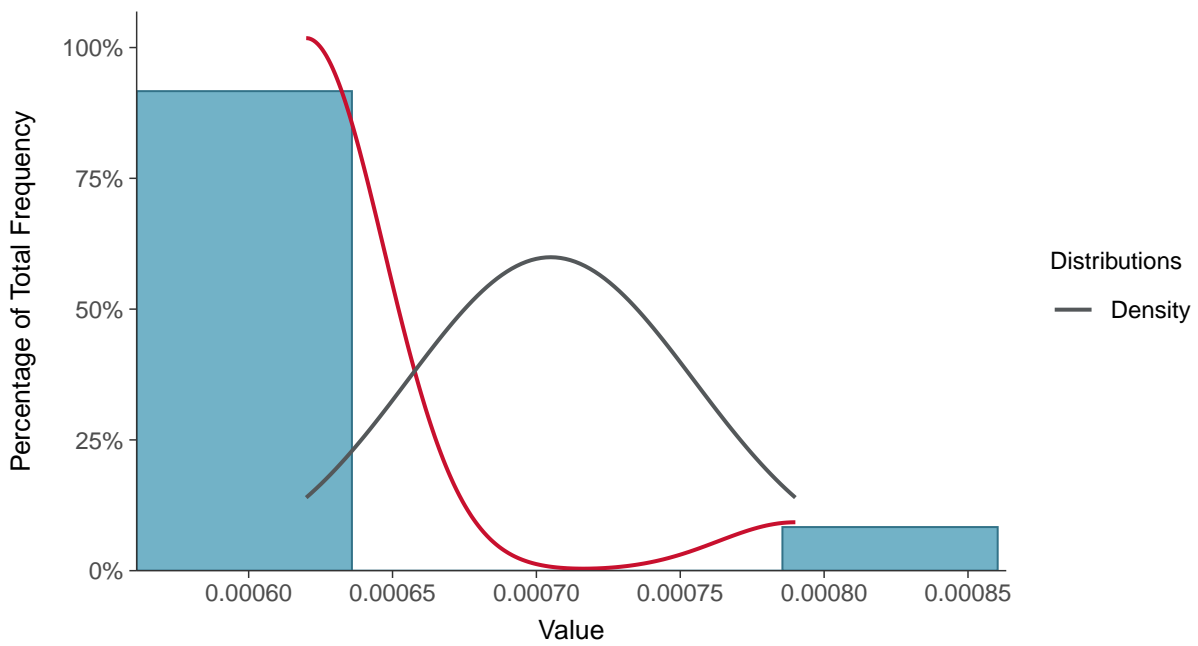
#### Scatter Plot

Vanadium, MW-07 (mg/L)



#### Histogram

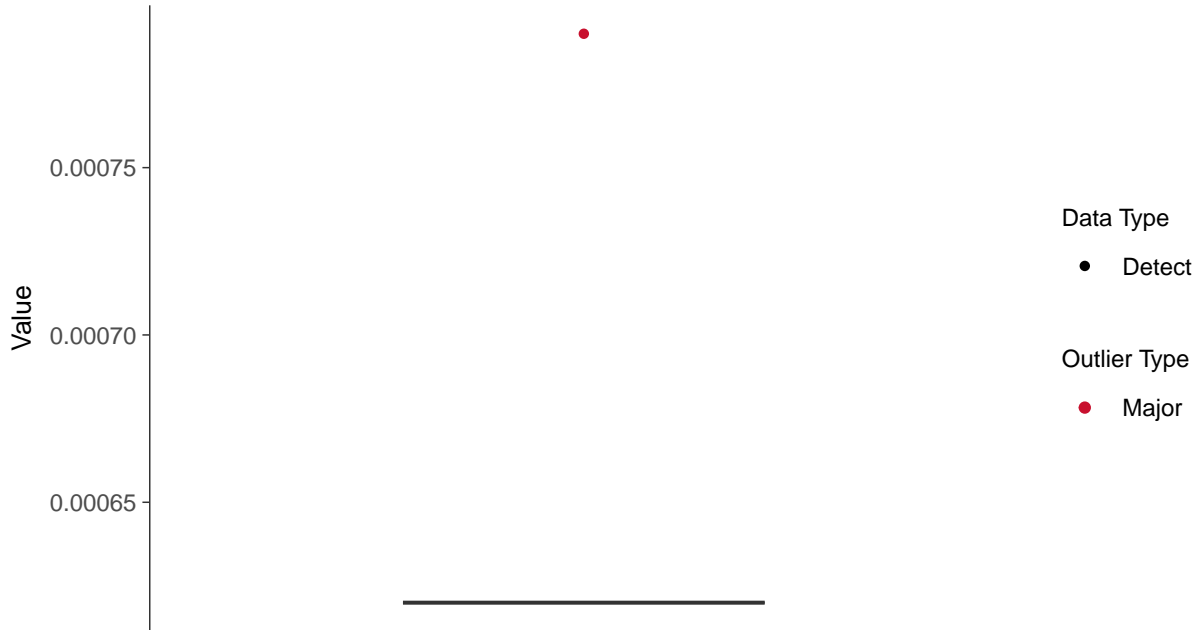
Vanadium, MW-07 (mg/L)





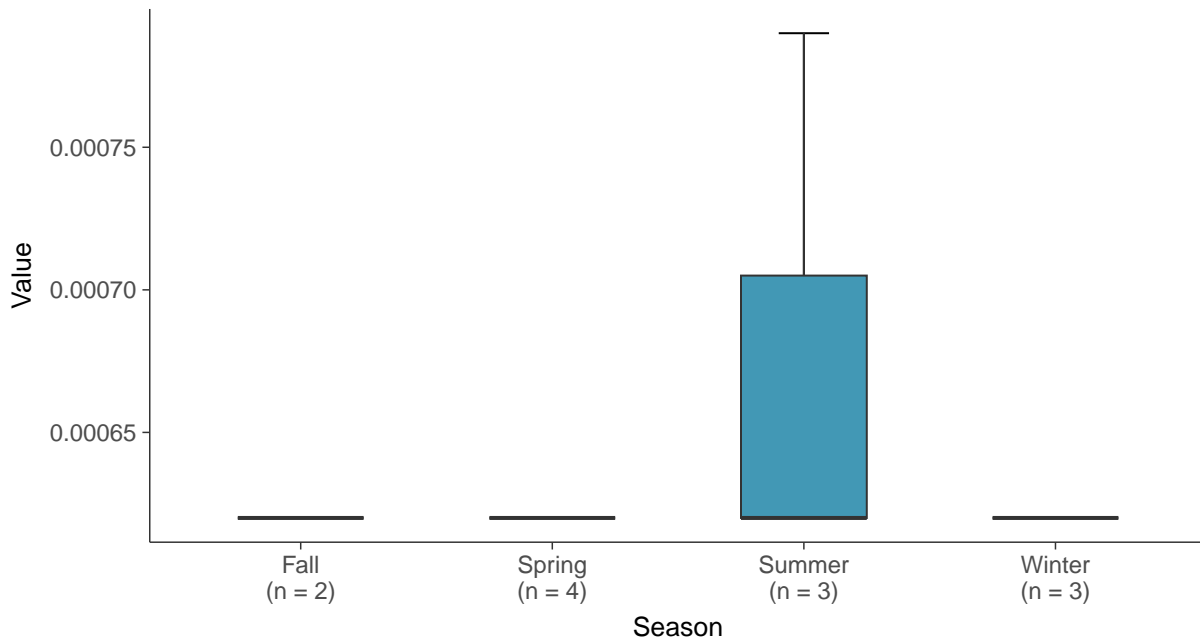
### Boxplot

Vanadium, MW-07 (mg/L)



### Boxplot by Season

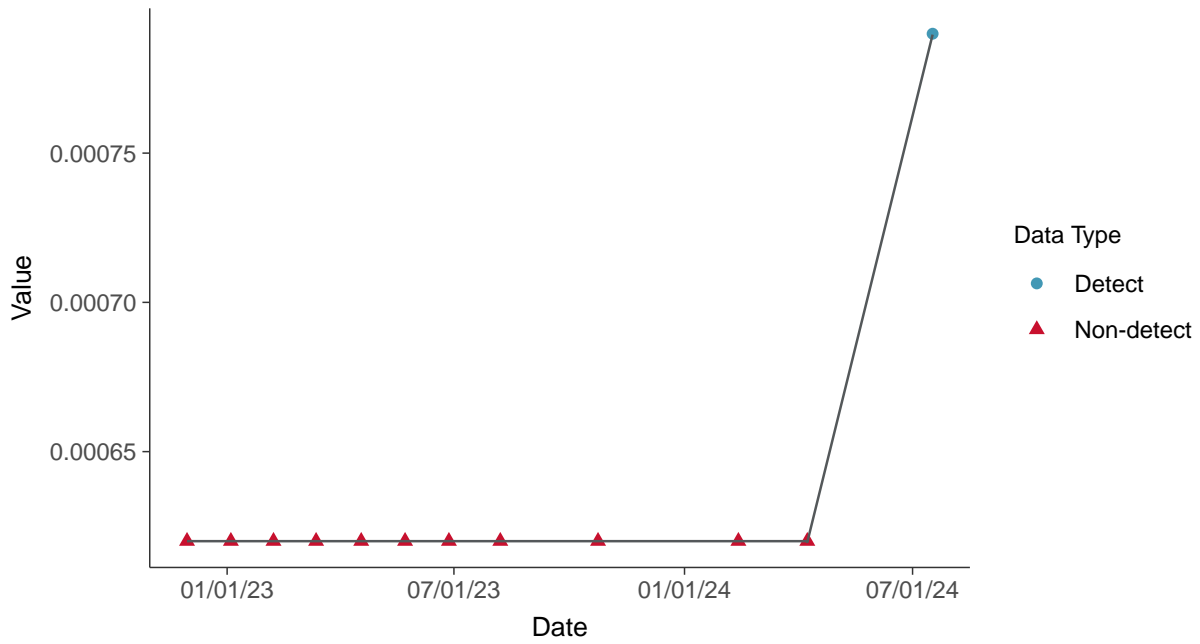
Vanadium, MW-07 (mg/L)





### Trend Regression: Piecewise Linear-Linear

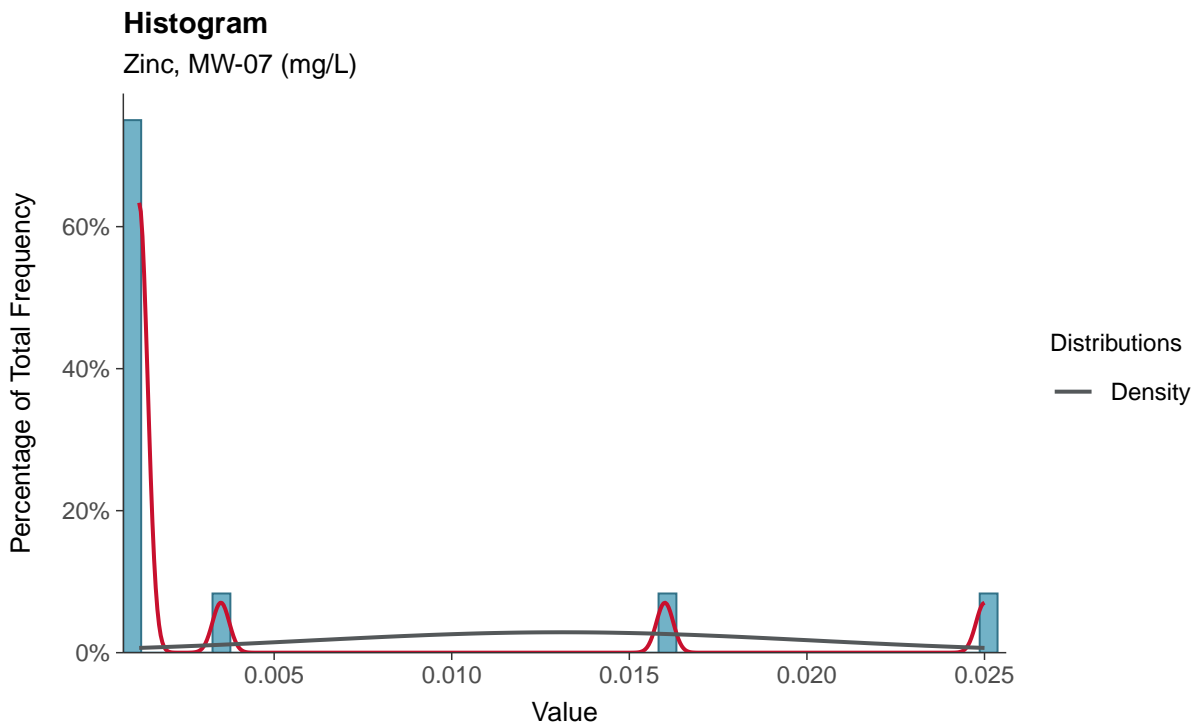
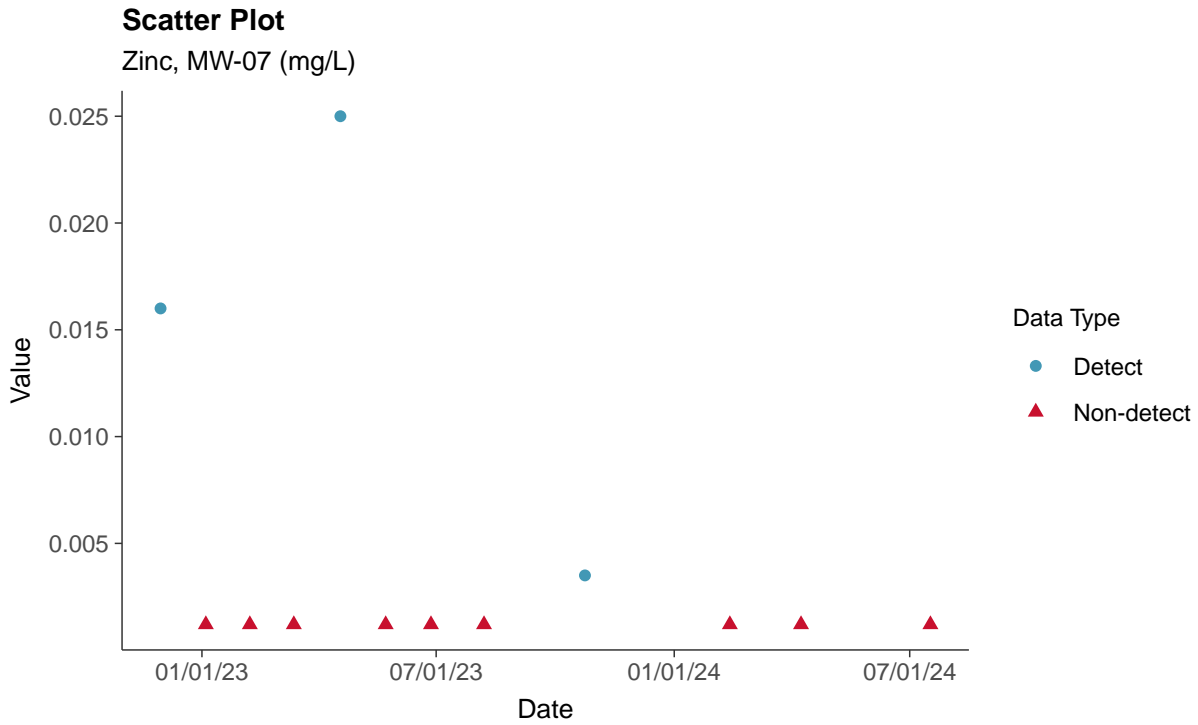
Vanadium, MW-07 (mg/L)





### Part 115: Zinc, MW-07

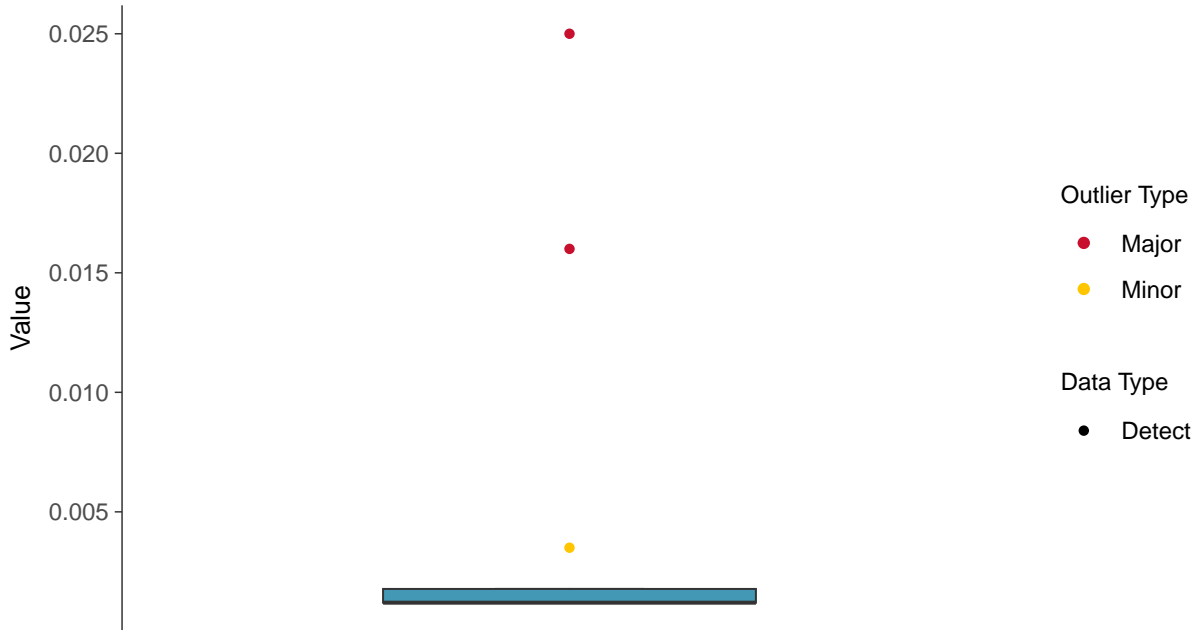
ID: 17\_1\_6\_130





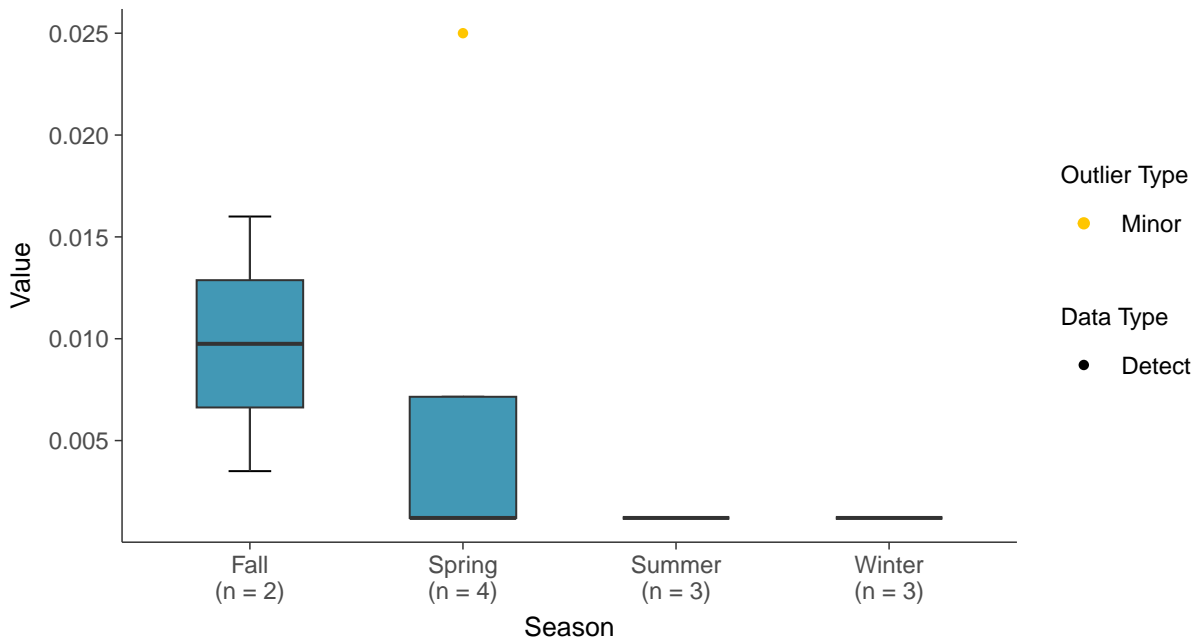
### Boxplot

Zinc, MW-07 (mg/L)



### Boxplot by Season

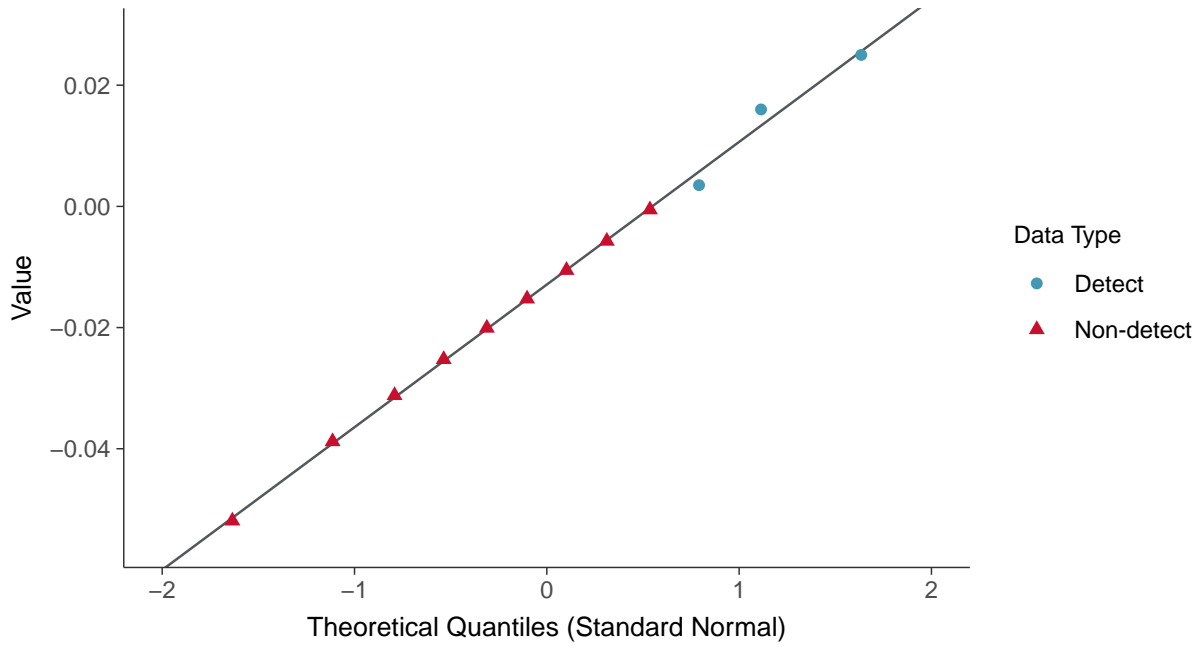
Zinc, MW-07 (mg/L)





### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-07 (mg/L)



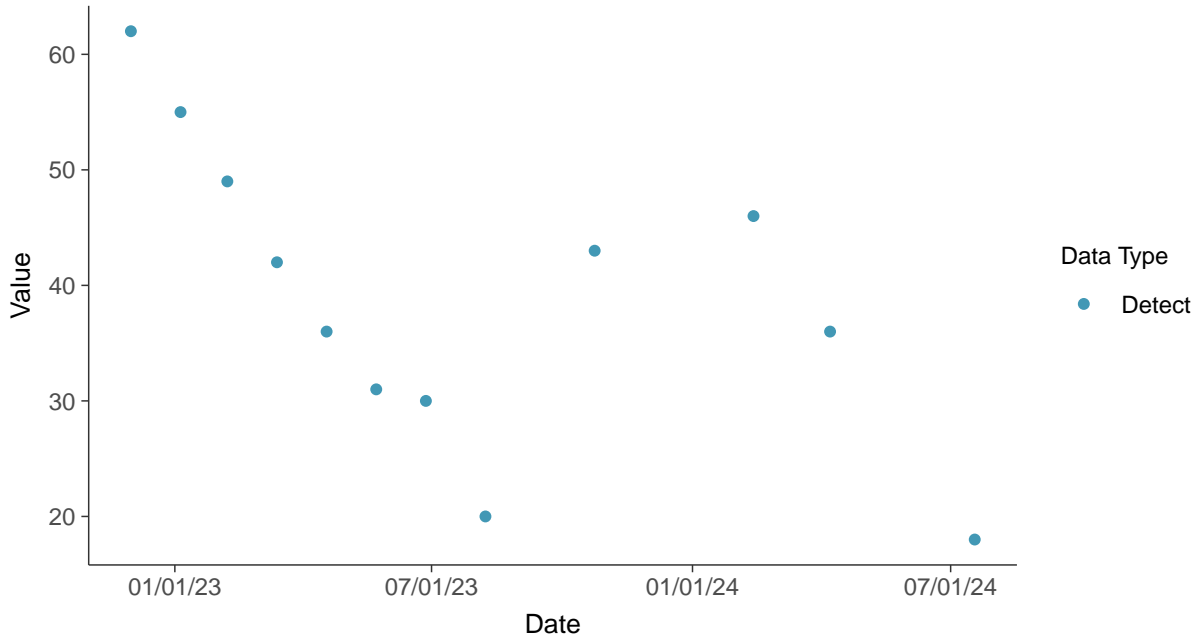


### Additional Parameters: Total Suspended Solids, MW-08

ID: 18\_1\_3\_127

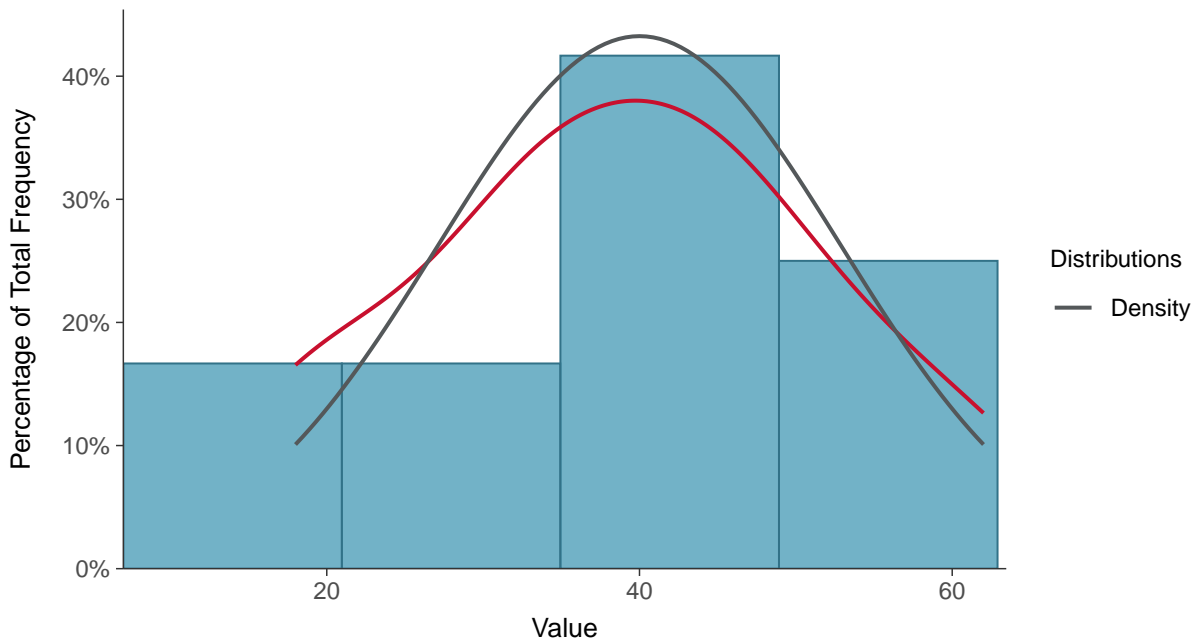
#### Scatter Plot

Total Suspended Solids, MW-08 (mg/L)



#### Histogram

Total Suspended Solids, MW-08 (mg/L)

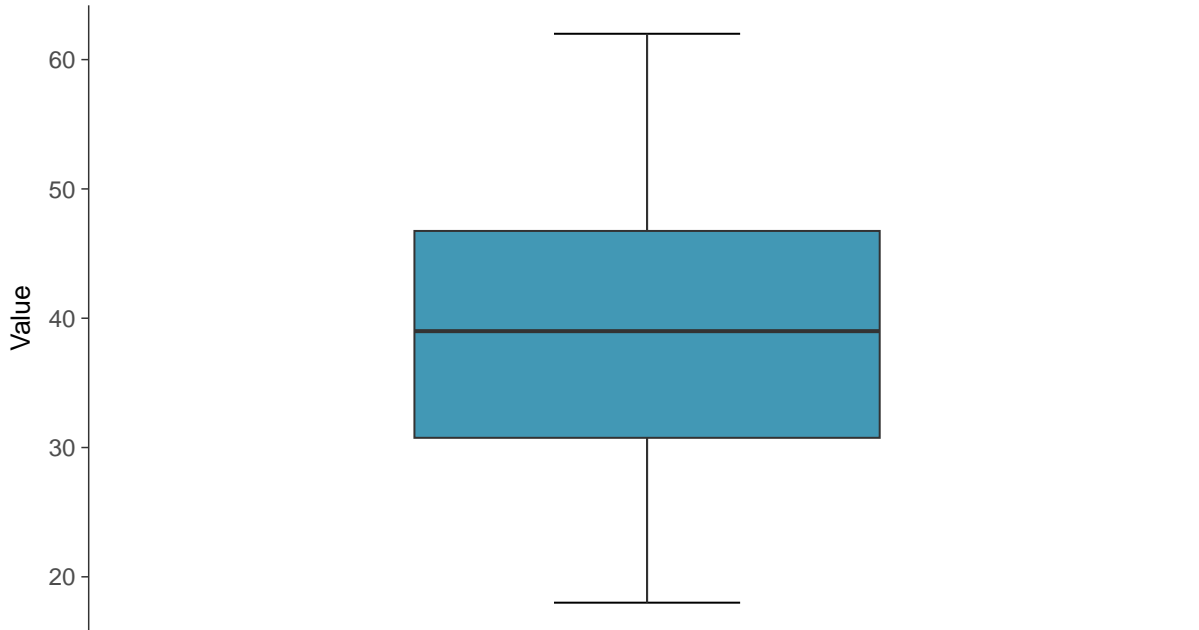






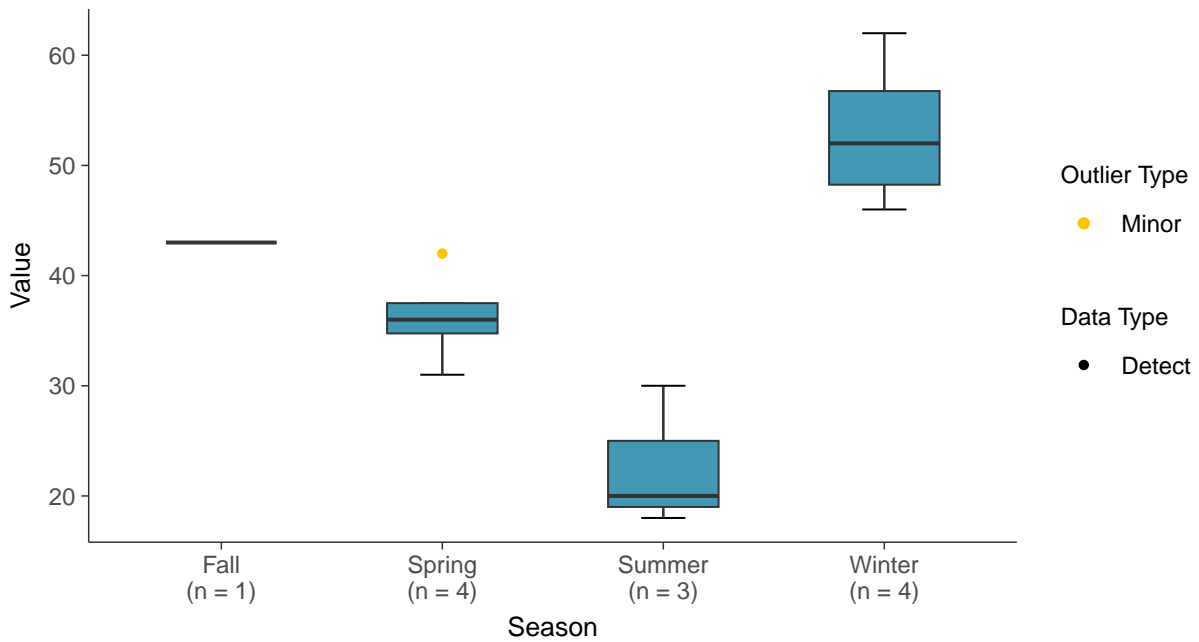
### Boxplot

Total Suspended Solids, MW-08 (mg/L)



### Boxplot by Season

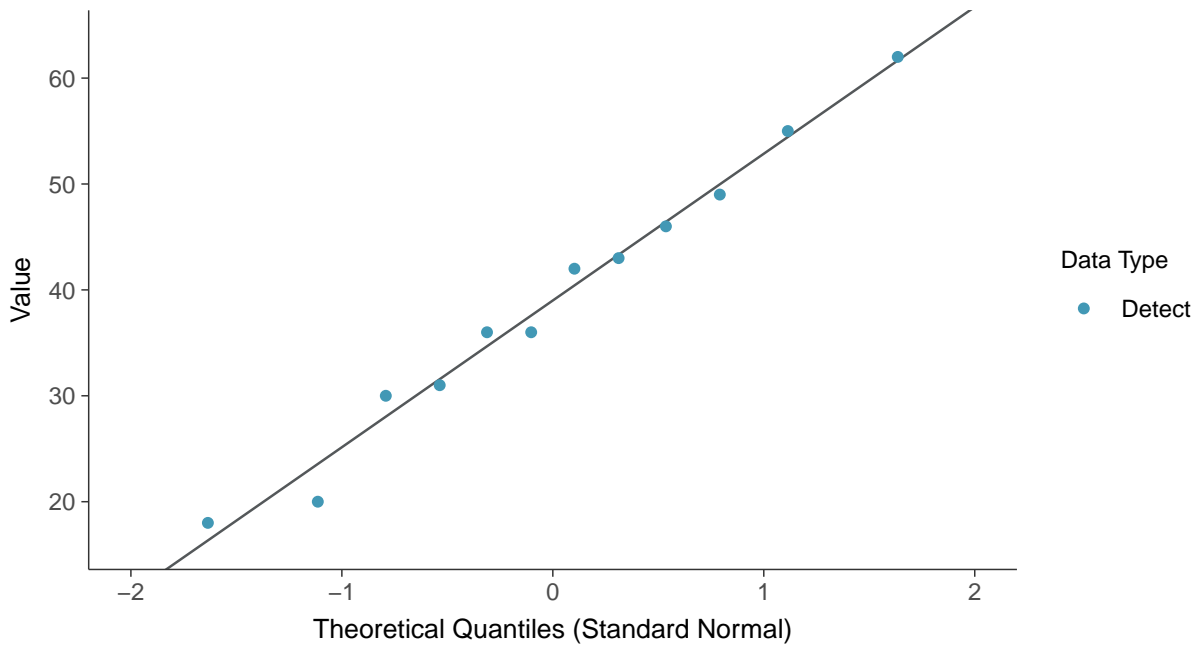
Total Suspended Solids, MW-08 (mg/L)





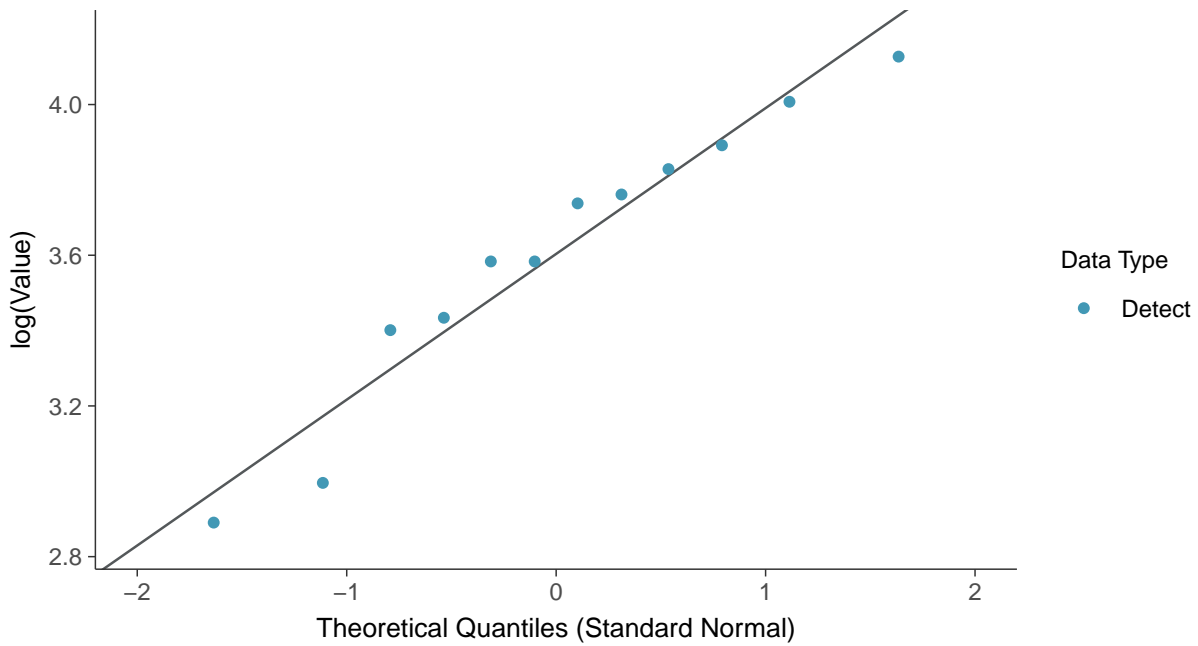
### Normal Q-Q plot

Total Suspended Solids, MW-08 (mg/L)



### Lognormal Q-Q plot

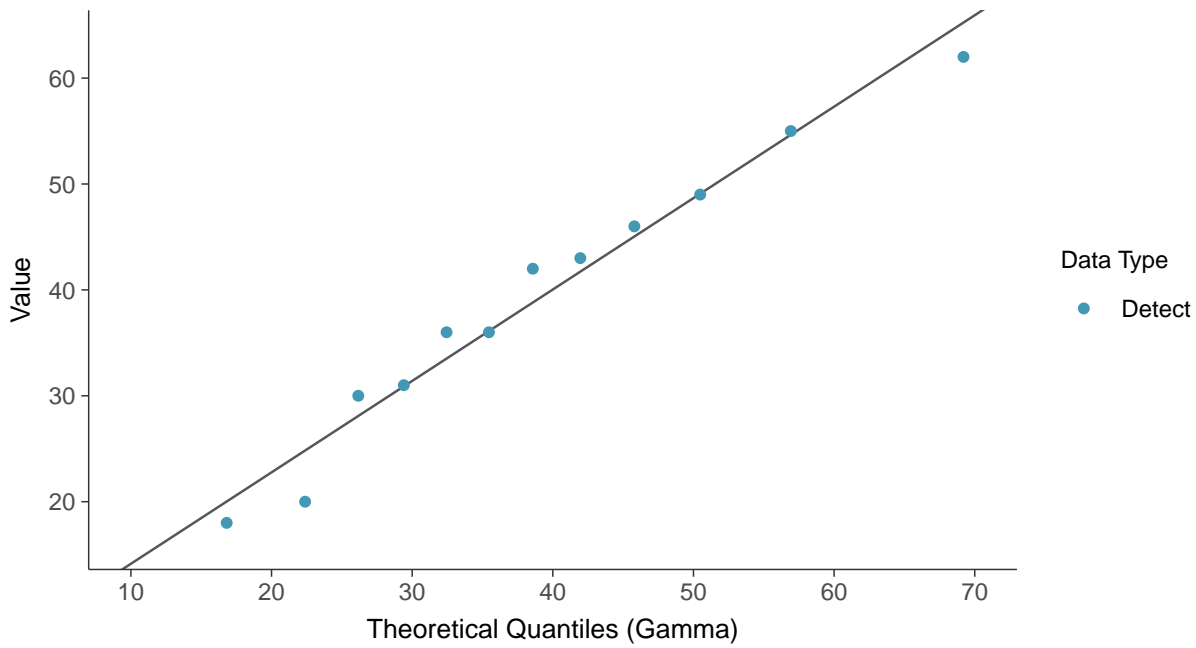
Total Suspended Solids, MW-08 (mg/L)





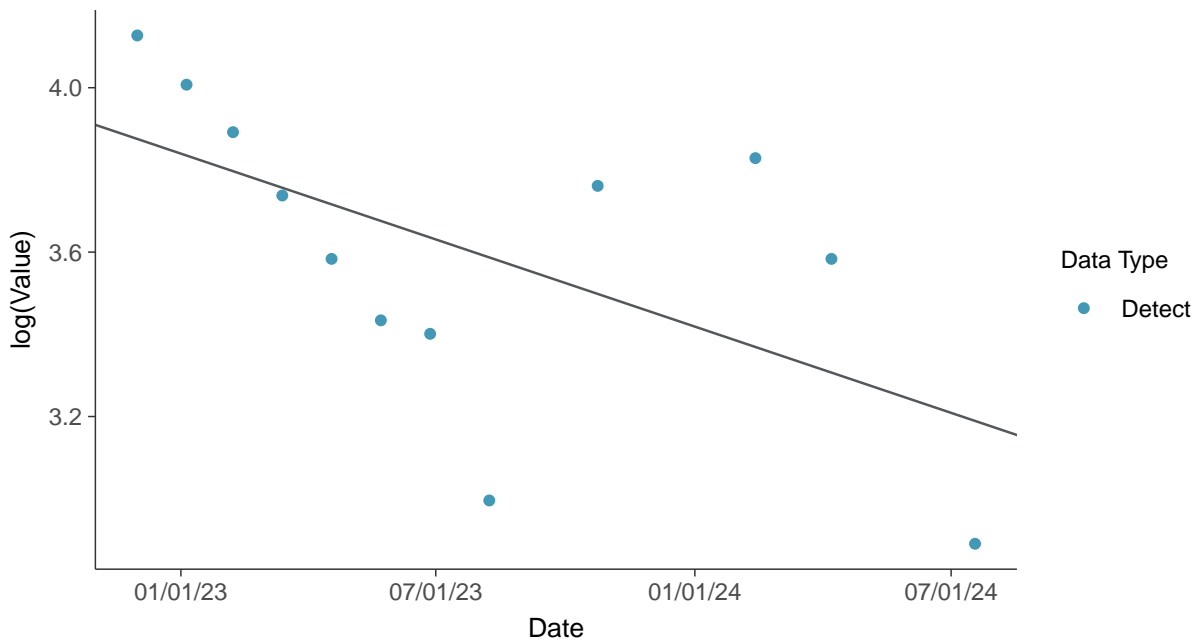
### Gamma Q-Q plot

Total Suspended Solids, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

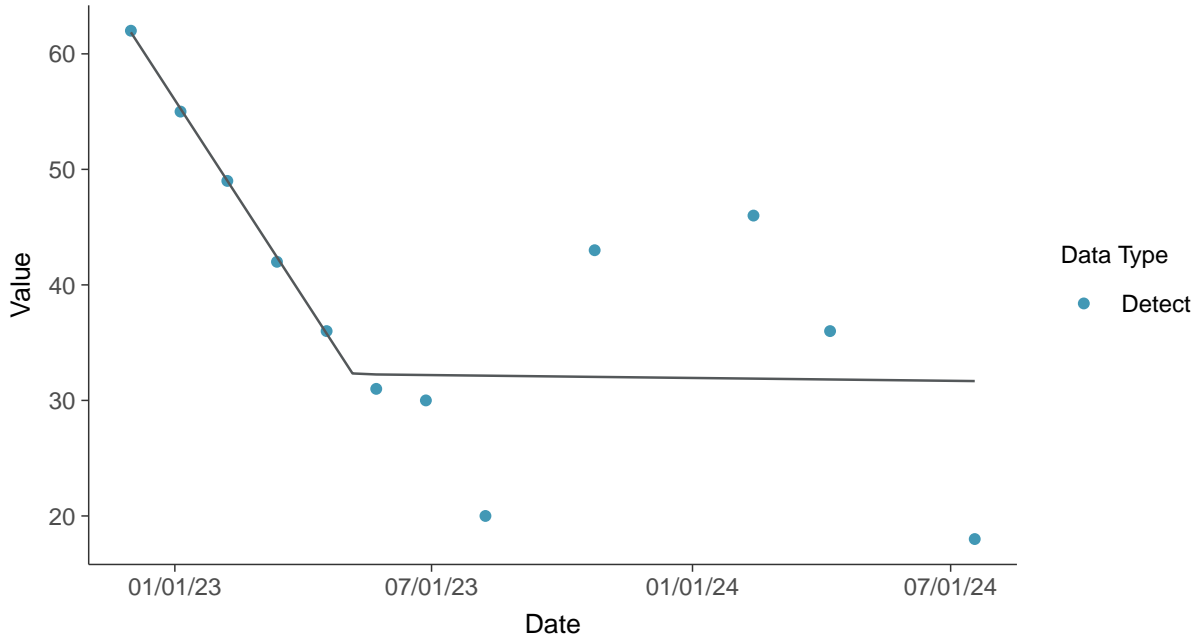
Total Suspended Solids, MW-08 (mg/L)





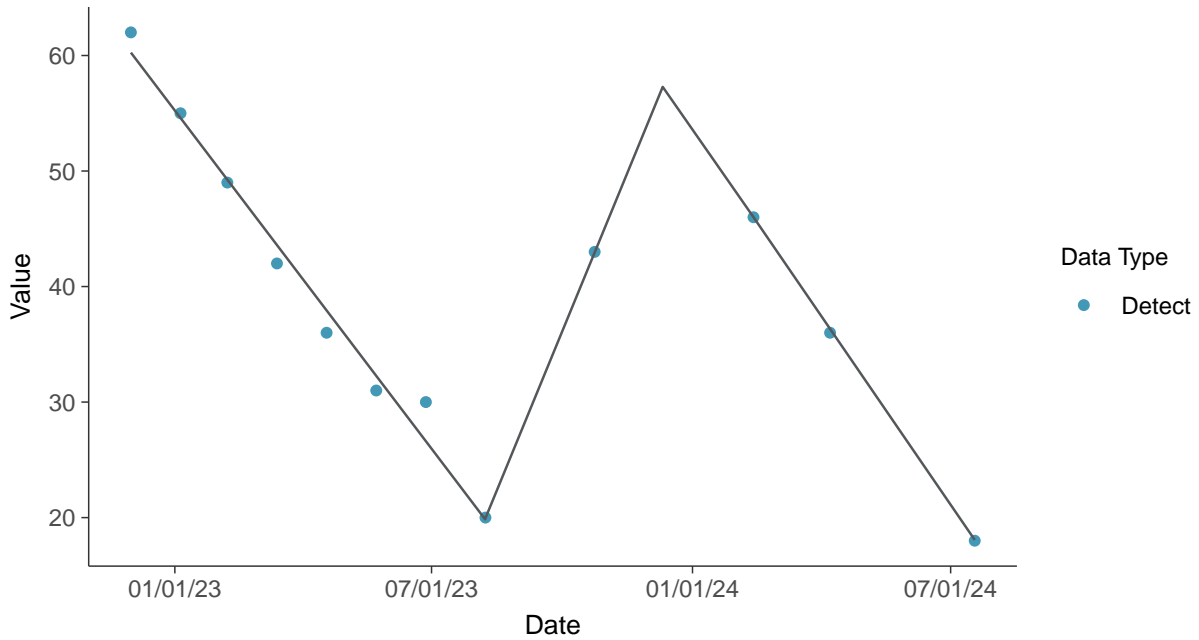
### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

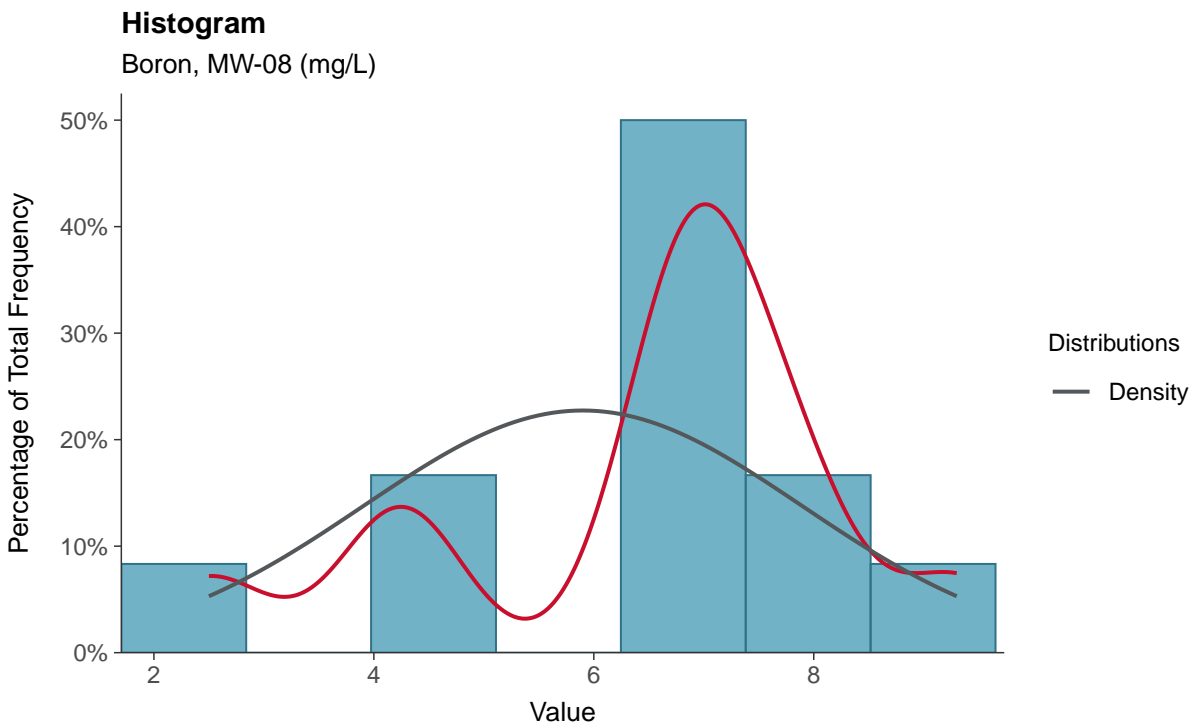
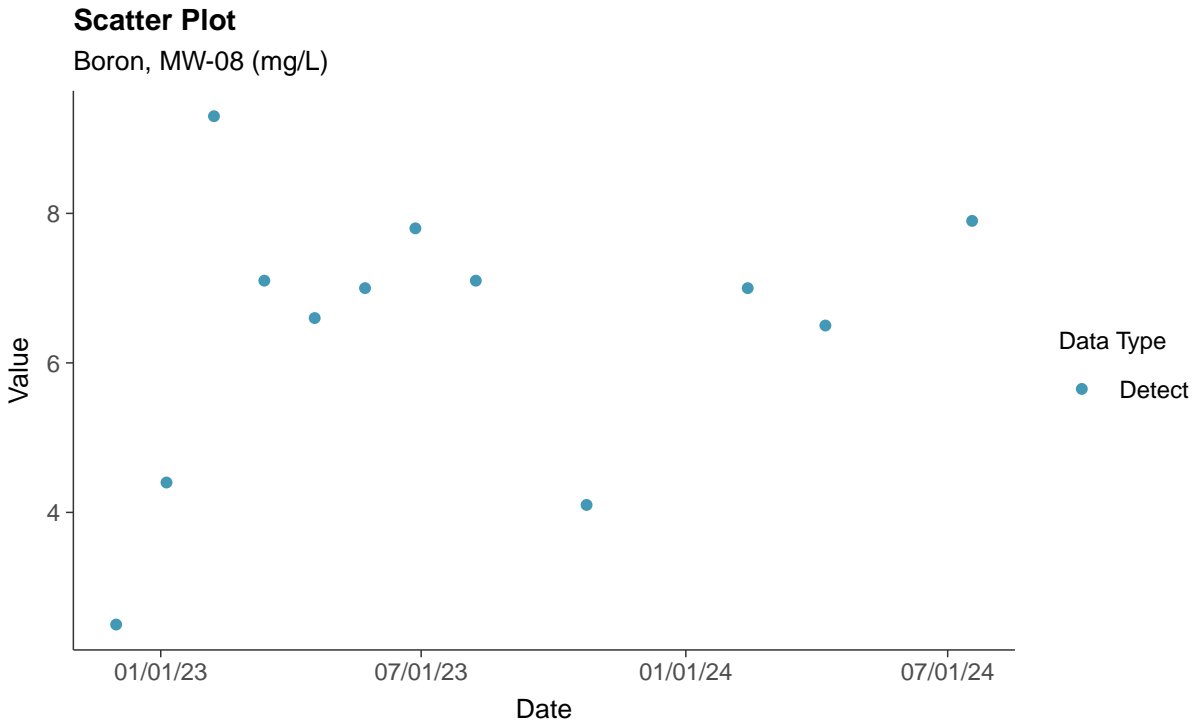
Total Suspended Solids, MW-08 (mg/L)





### Appendix III: Boron, MW-08

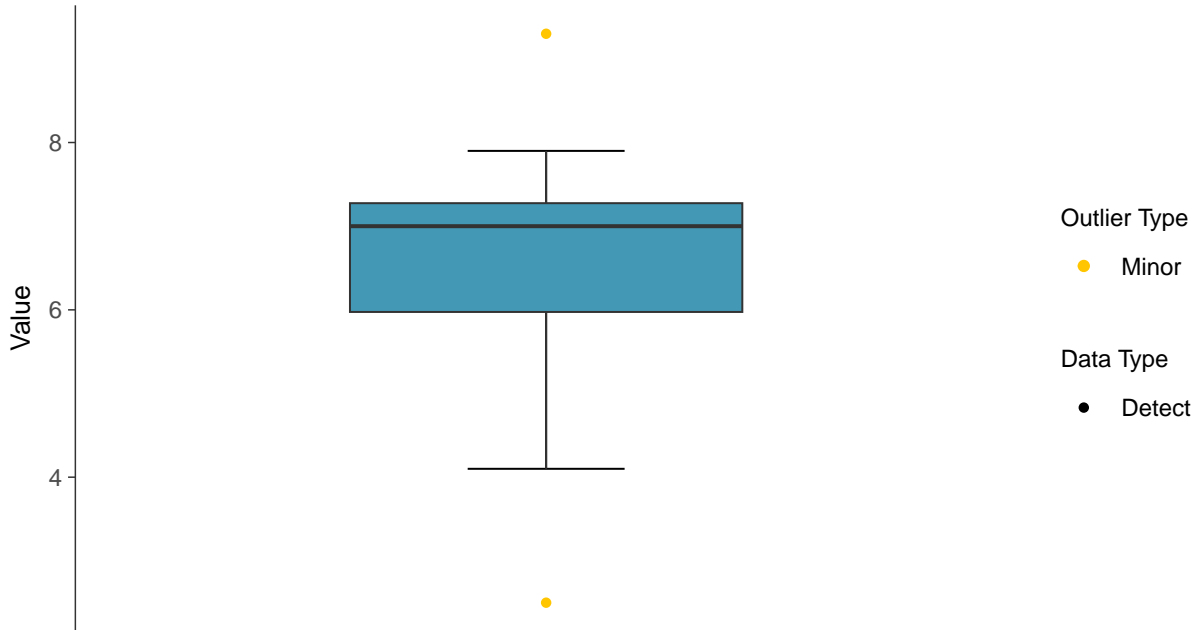
ID: 18\_1\_4\_105





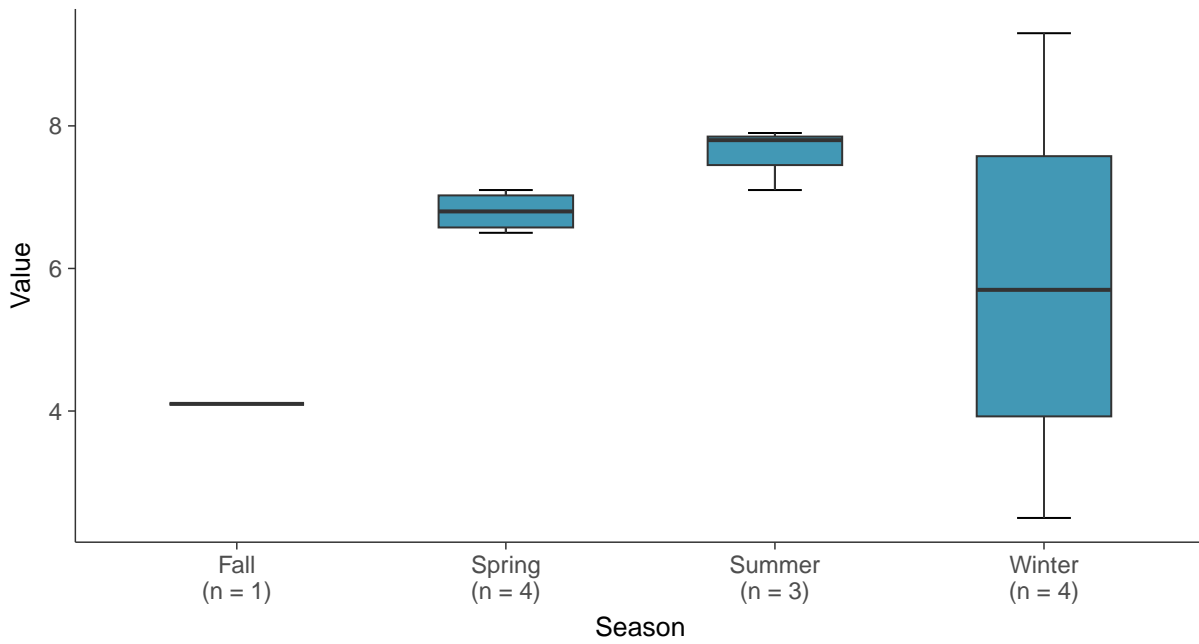
### Boxplot

Boron, MW-08 (mg/L)



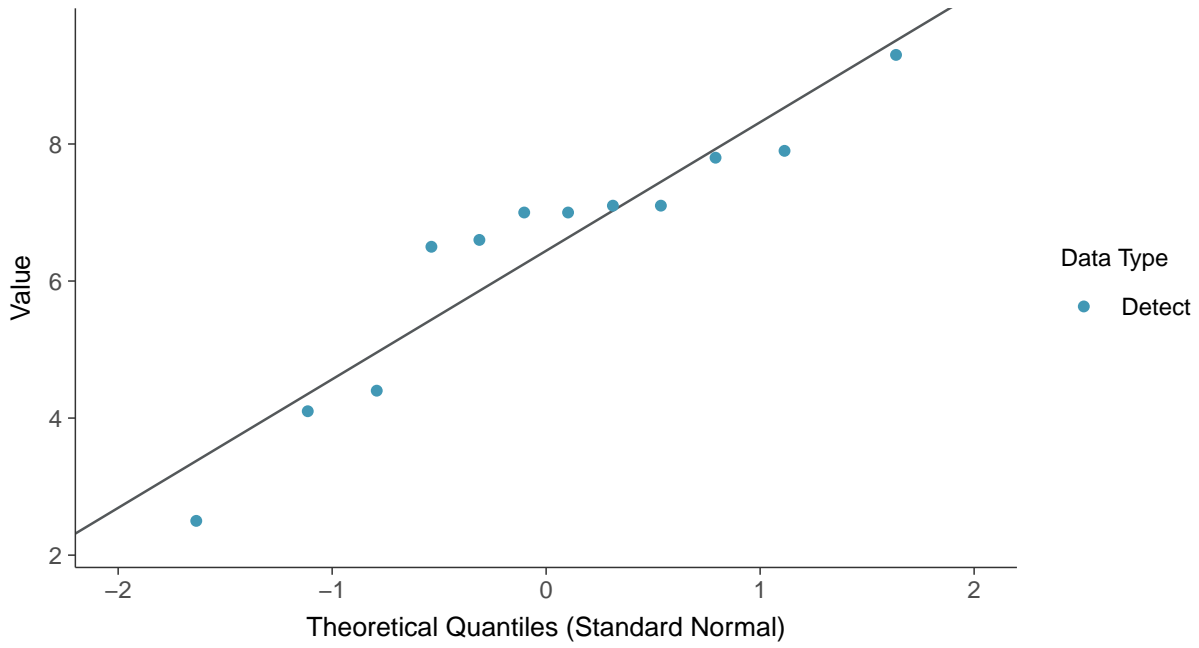
### Boxplot by Season

Boron, MW-08 (mg/L)

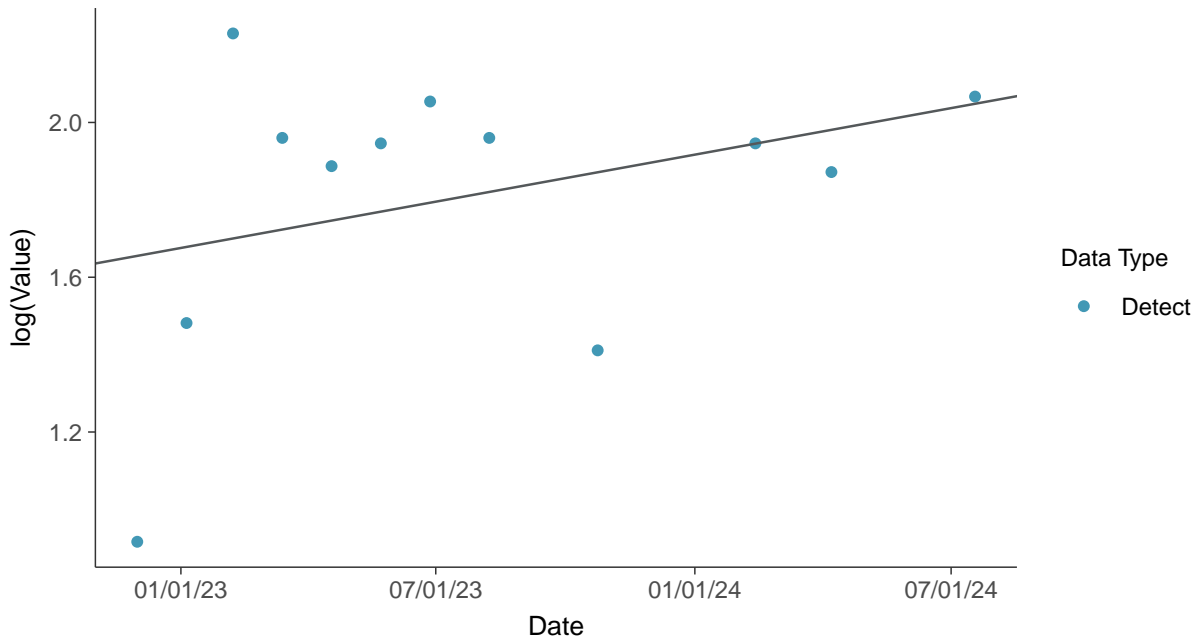




**Normal Q-Q plot**  
Boron, MW-08 (mg/L)



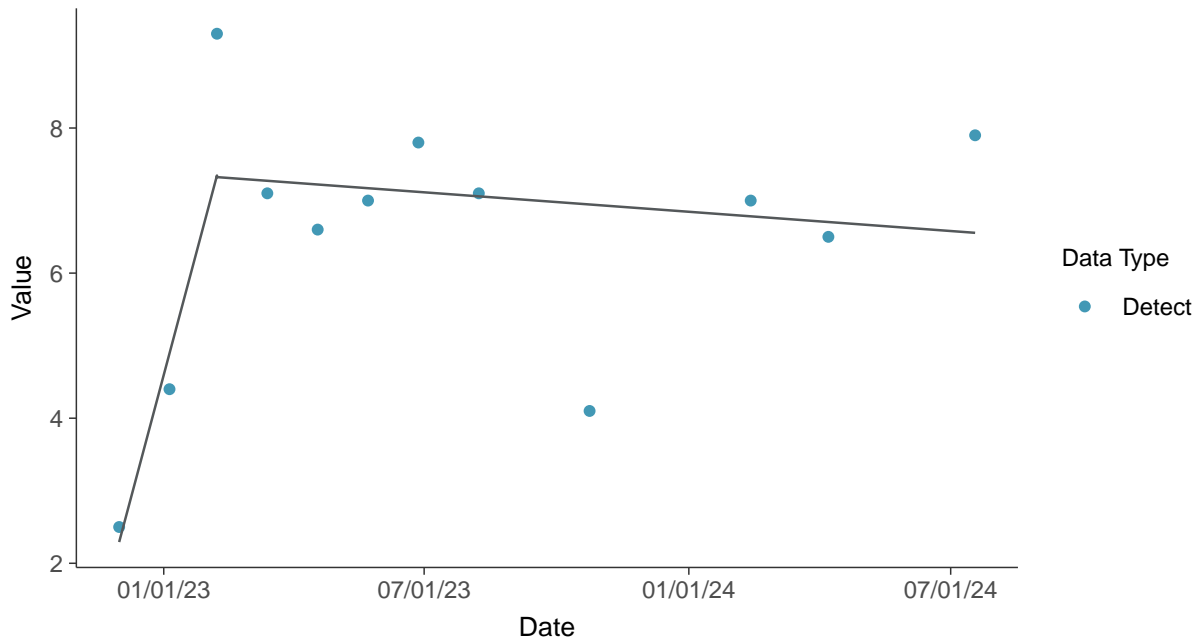
**Trend Regression: Lognormal MLE**  
Boron, MW-08 (mg/L)





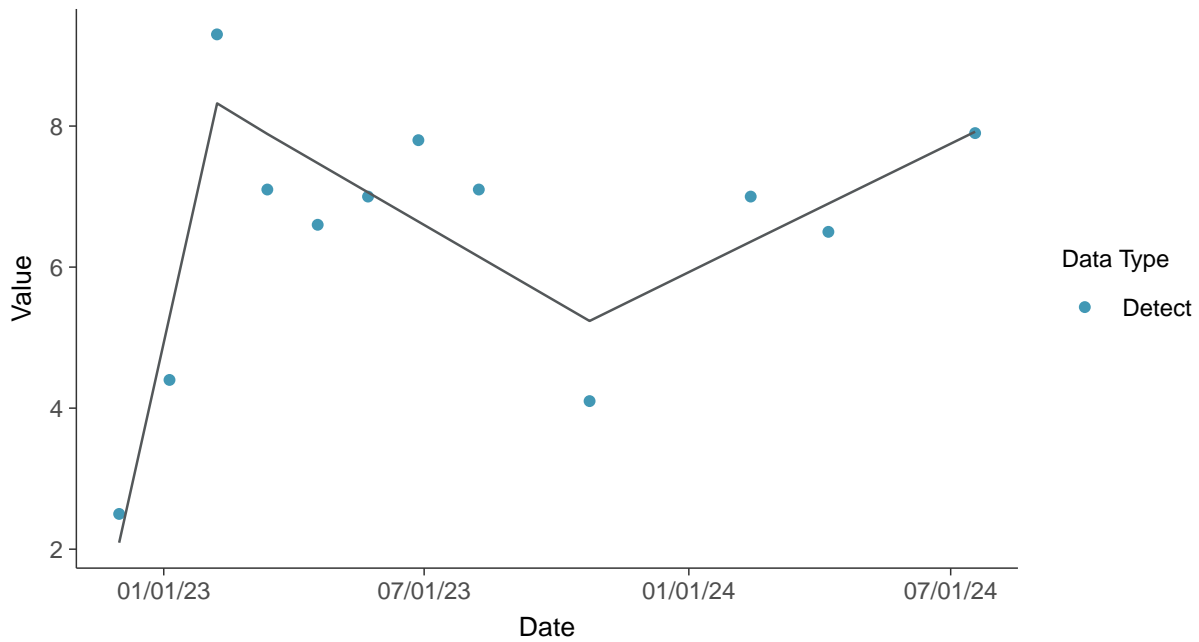
### Trend Regression: Piecewise Linear-Linear

Boron, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-08 (mg/L)

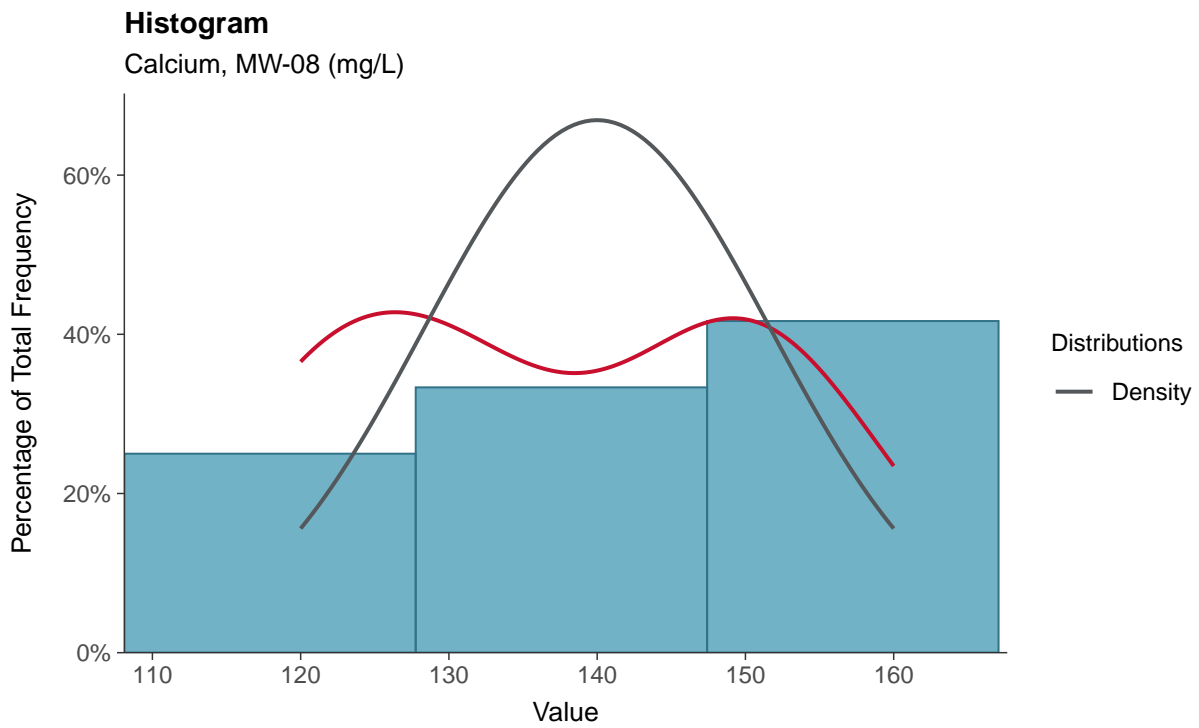
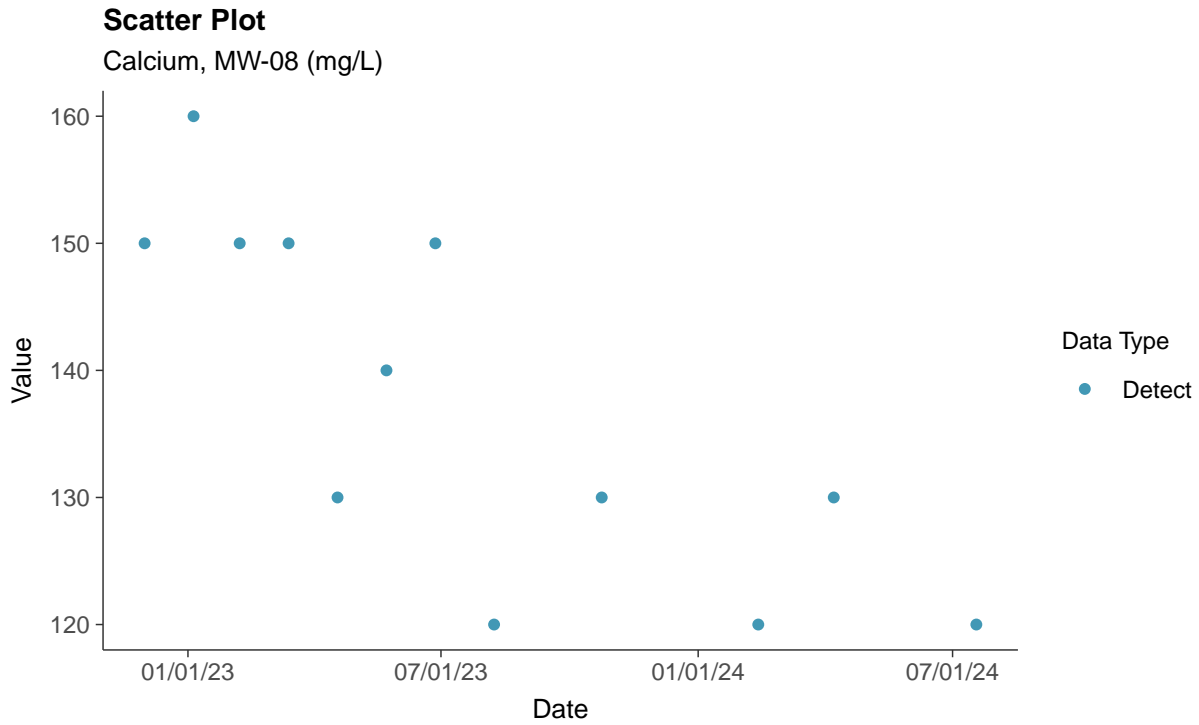






### Appendix III: Calcium, MW-08

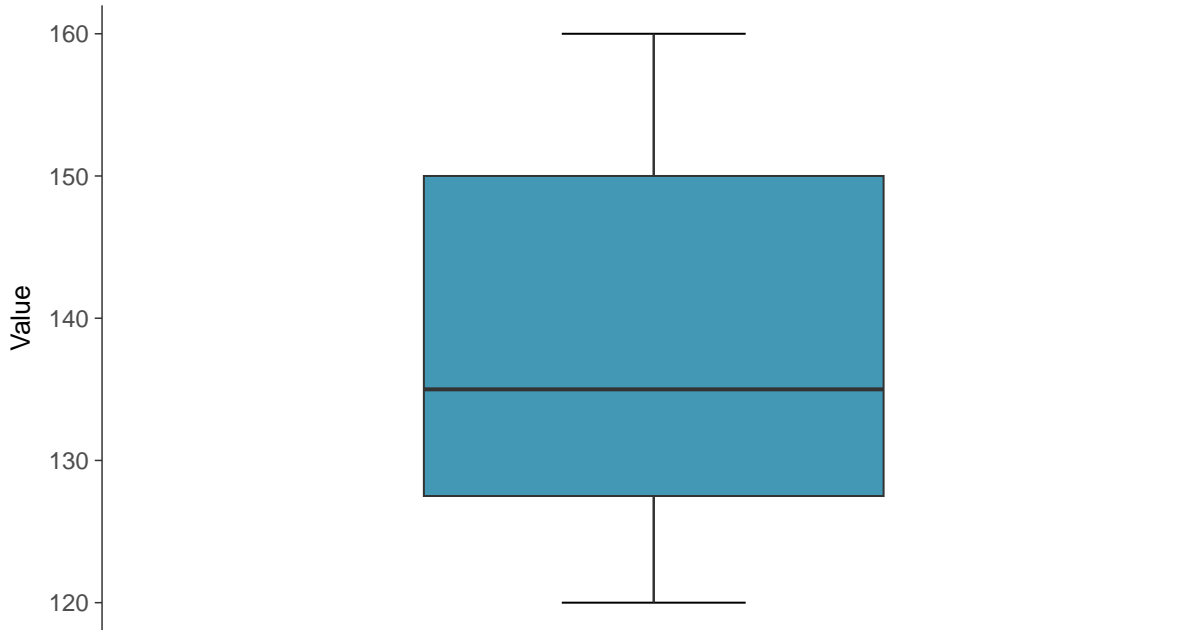
ID: 18\_1\_4\_107





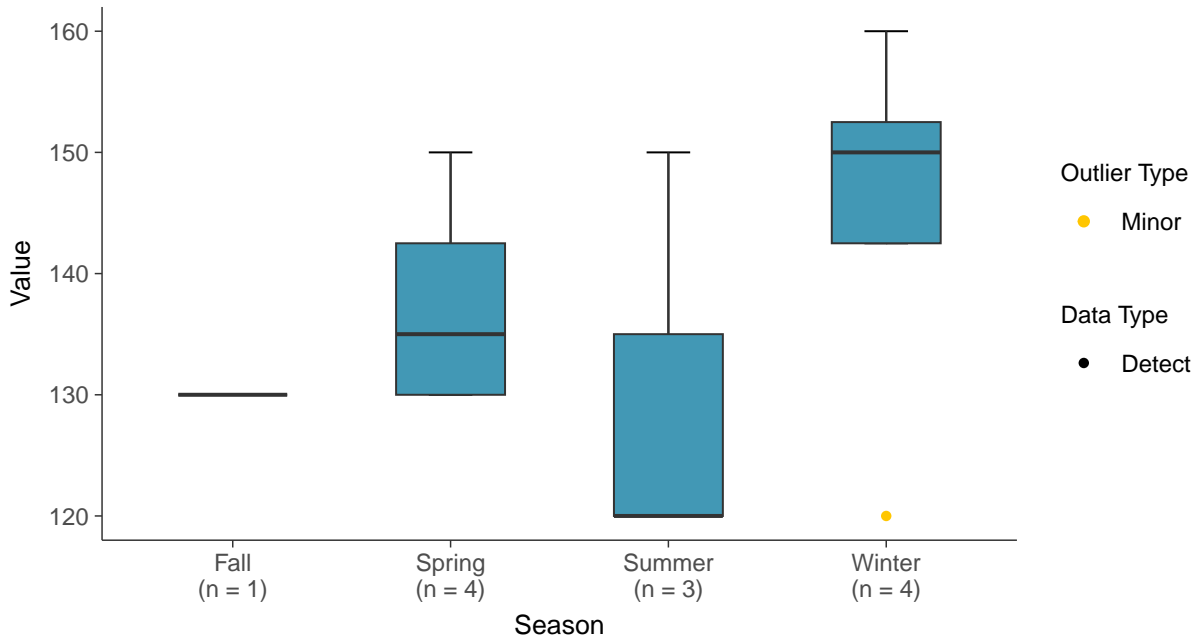
### Boxplot

Calcium, MW-08 (mg/L)



### Boxplot by Season

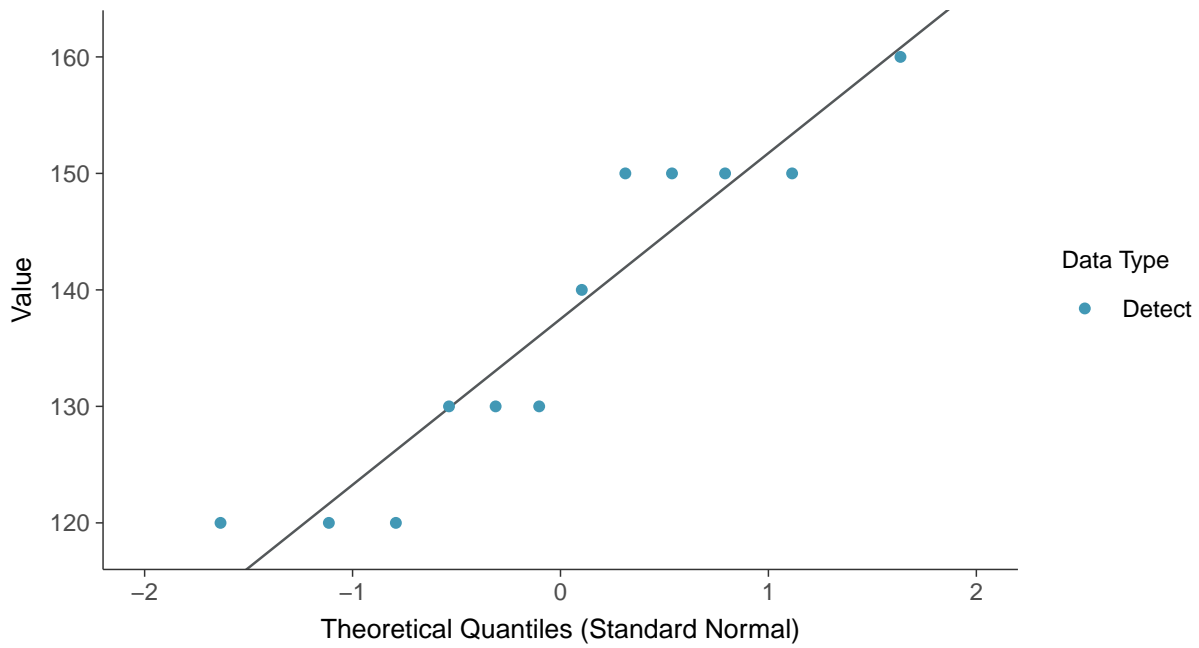
Calcium, MW-08 (mg/L)





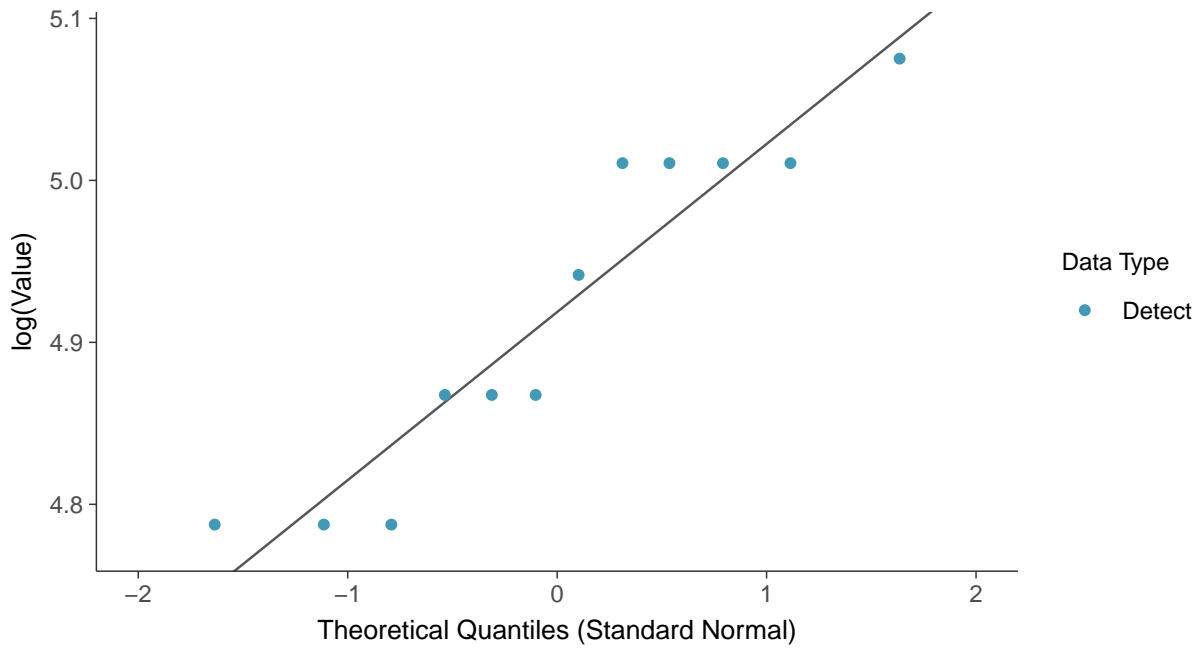
### Normal Q-Q plot

Calcium, MW-08 (mg/L)



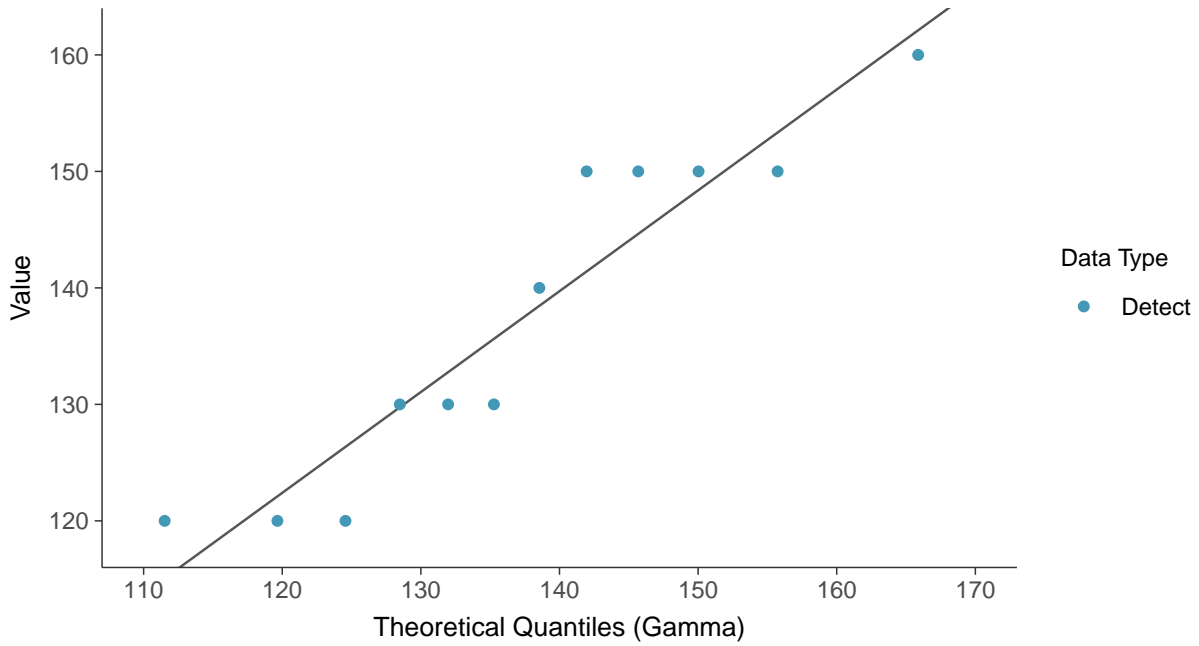
### Lognormal Q-Q plot

Calcium, MW-08 (mg/L)

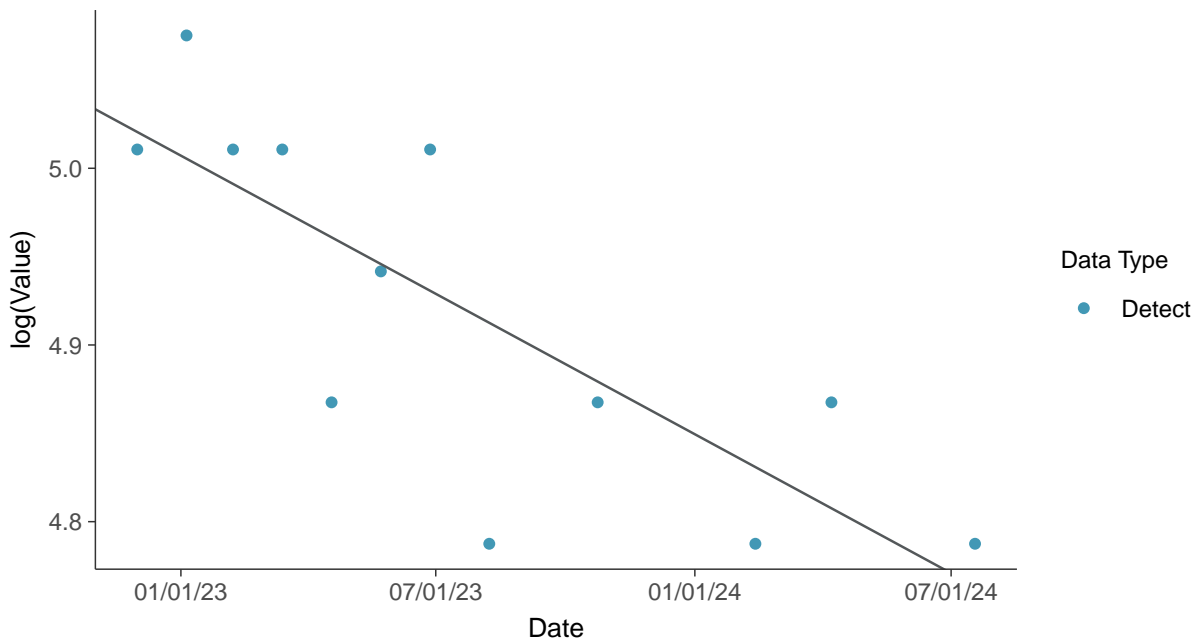




**Gamma Q-Q plot**  
Calcium, MW-08 (mg/L)



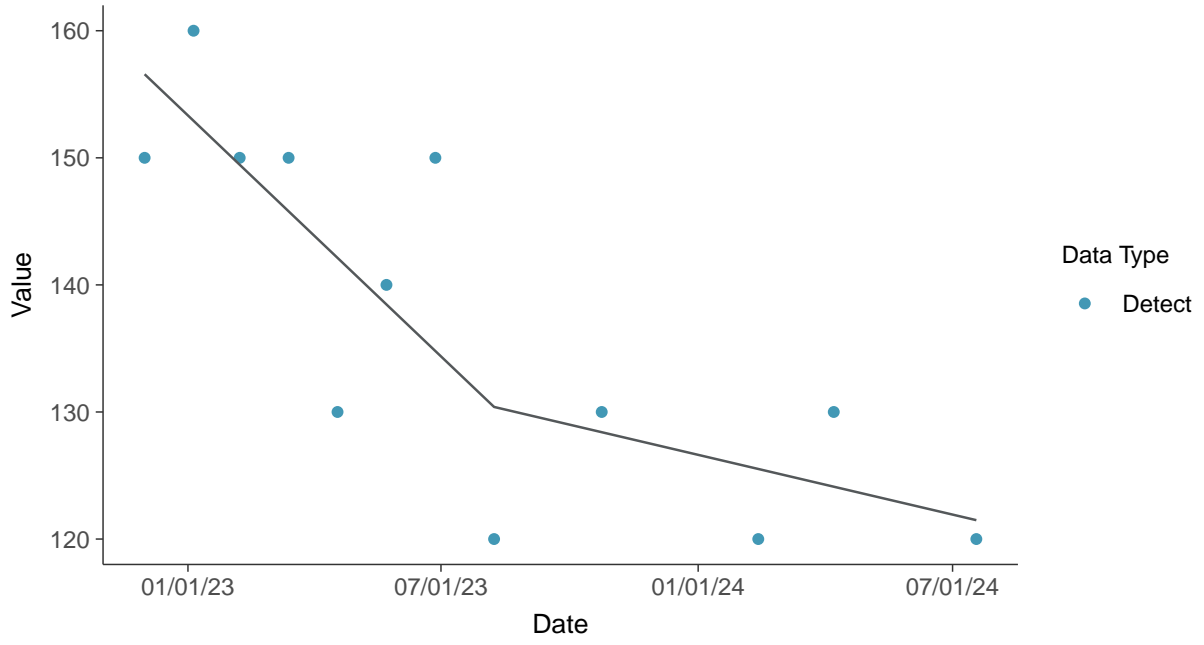
**Trend Regression: Lognormal MLE**  
Calcium, MW-08 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Calcium, MW-08 (mg/L)



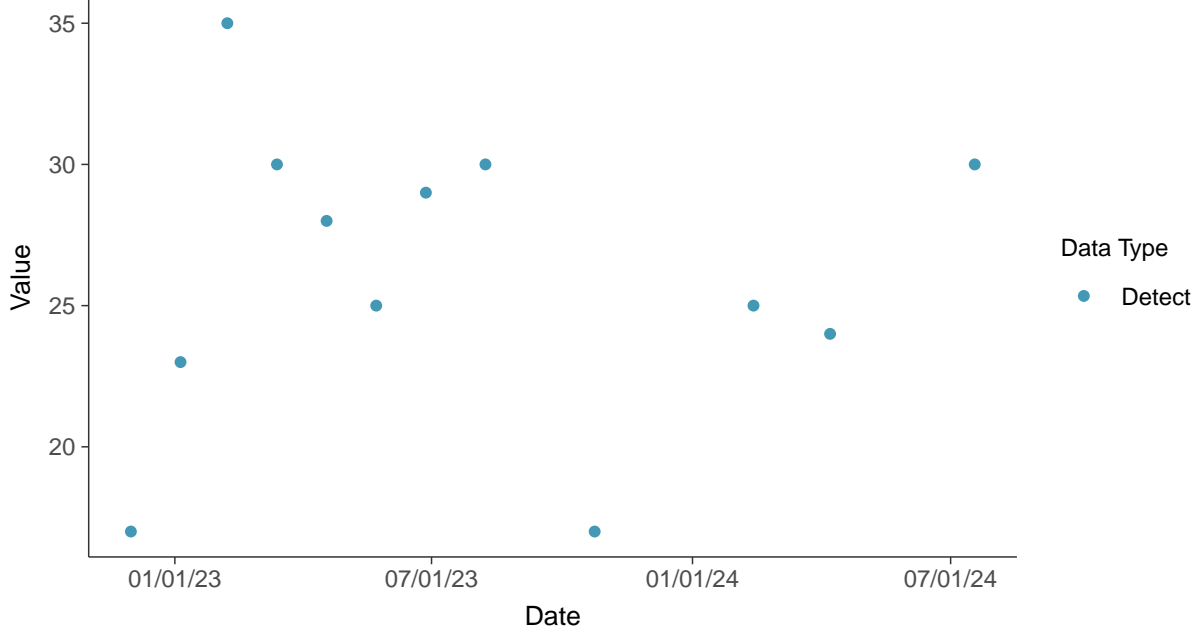


### Appendix III: Chloride (as Cl), MW-08

ID: 18\_1\_4\_108

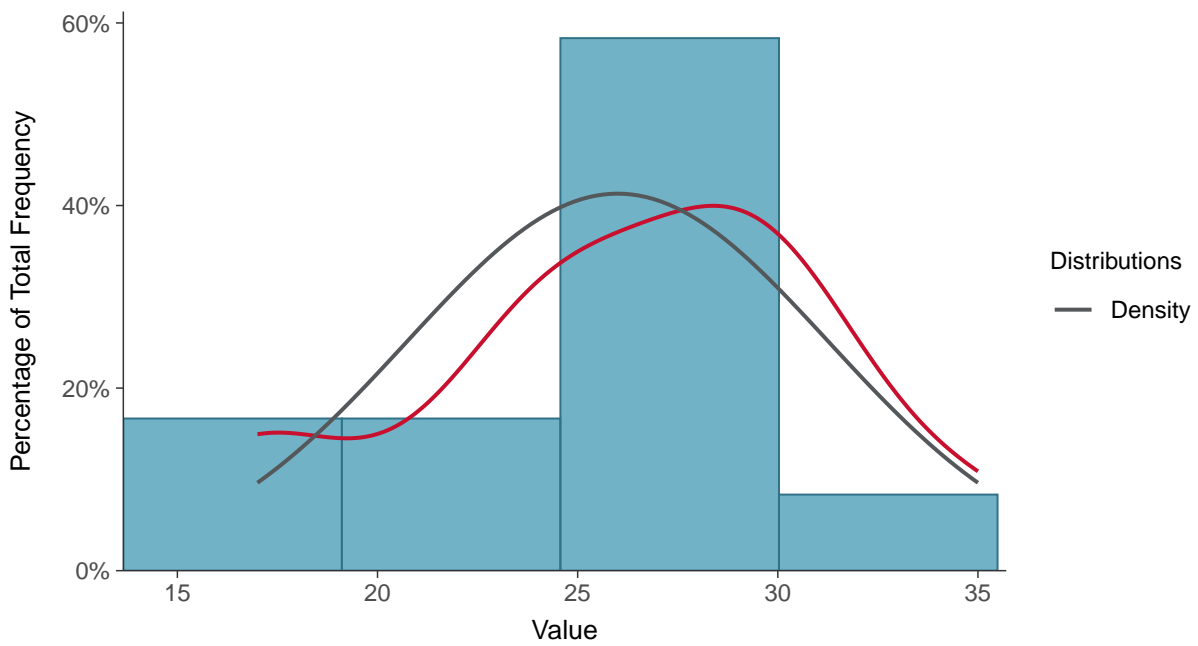
#### Scatter Plot

Chloride (as Cl), MW-08 (mg/L)



#### Histogram

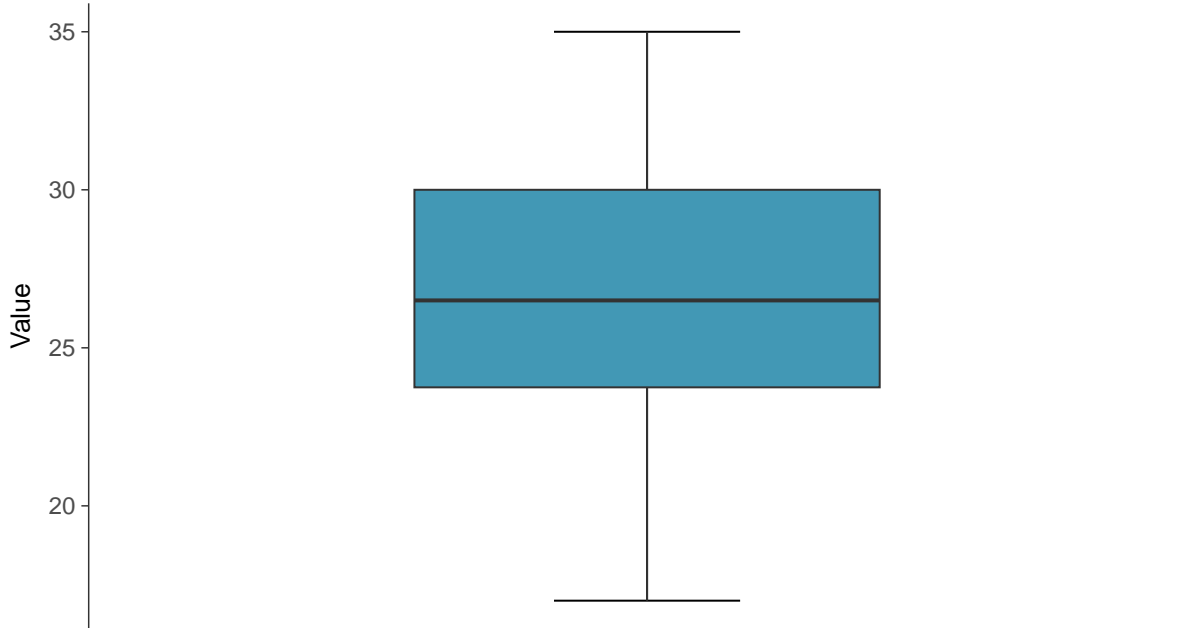
Chloride (as Cl), MW-08 (mg/L)





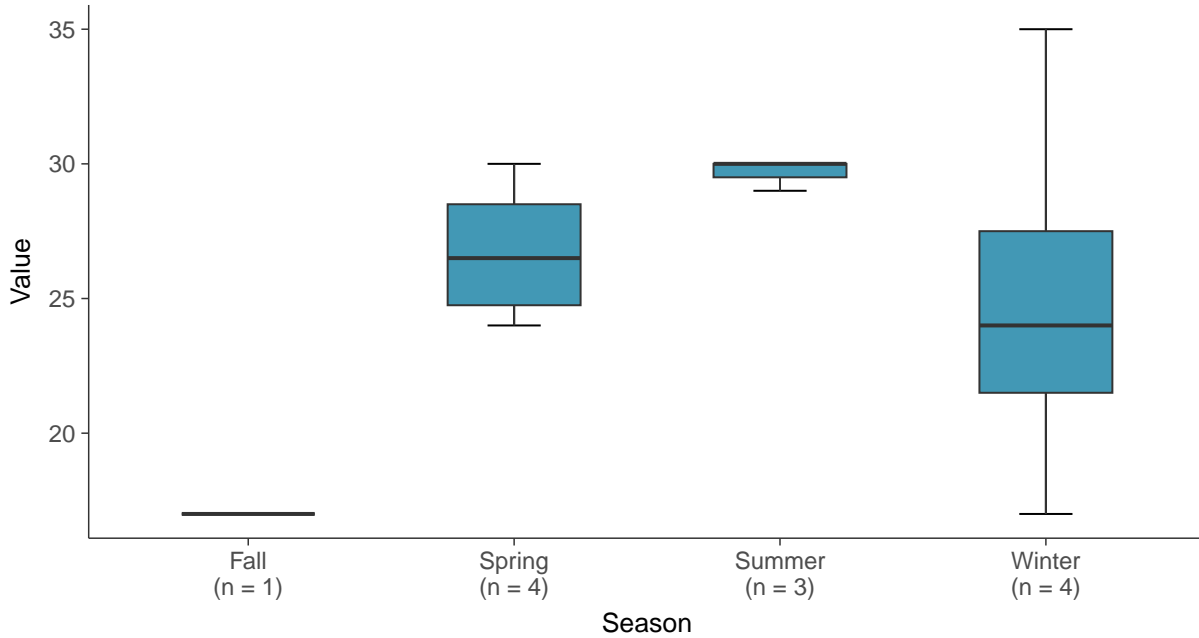
### Boxplot

Chloride (as Cl), MW-08 (mg/L)



### Boxplot by Season

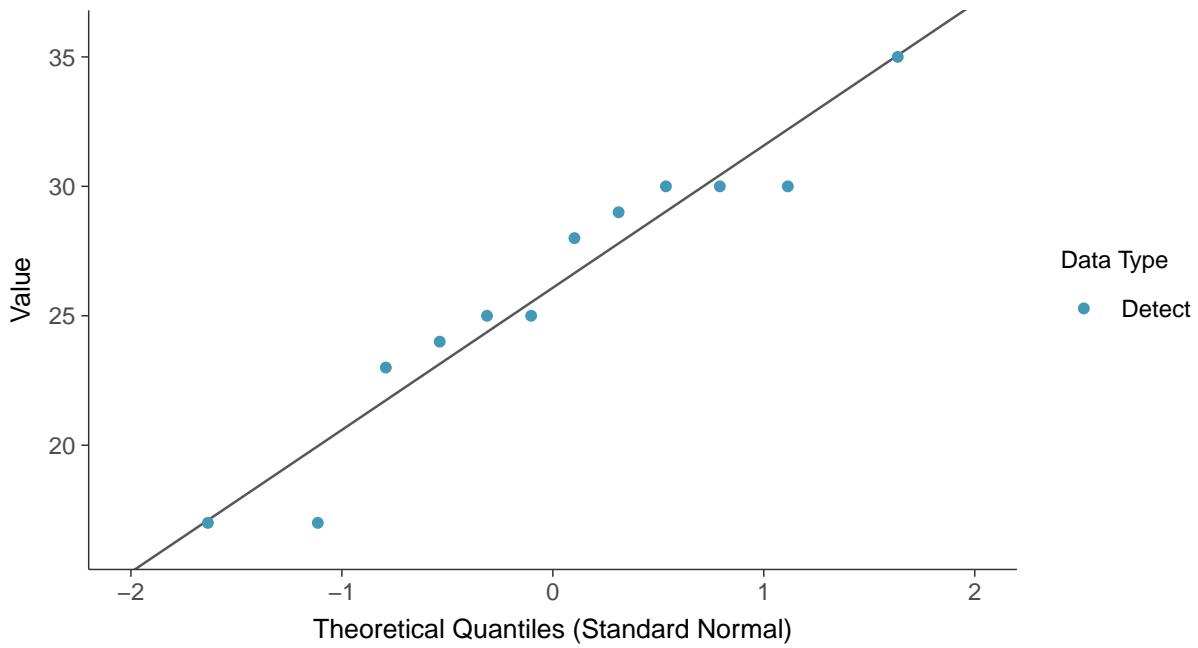
Chloride (as Cl), MW-08 (mg/L)





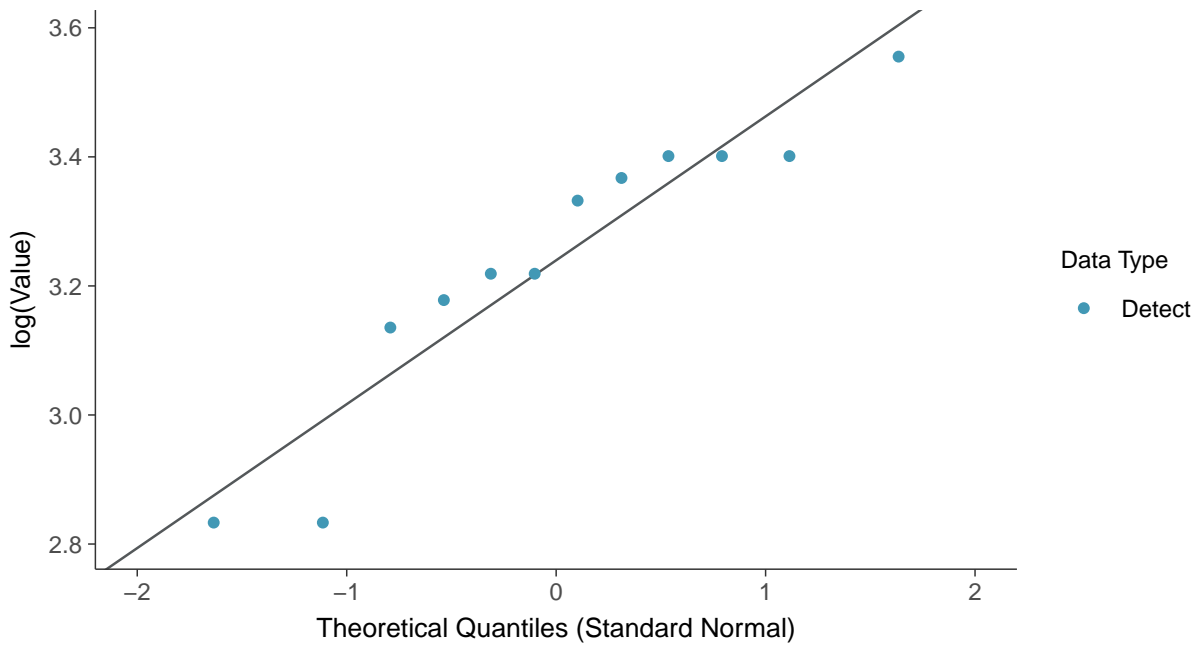
### Normal Q-Q plot

Chloride (as Cl), MW-08 (mg/L)



### Lognormal Q-Q plot

Chloride (as Cl), MW-08 (mg/L)

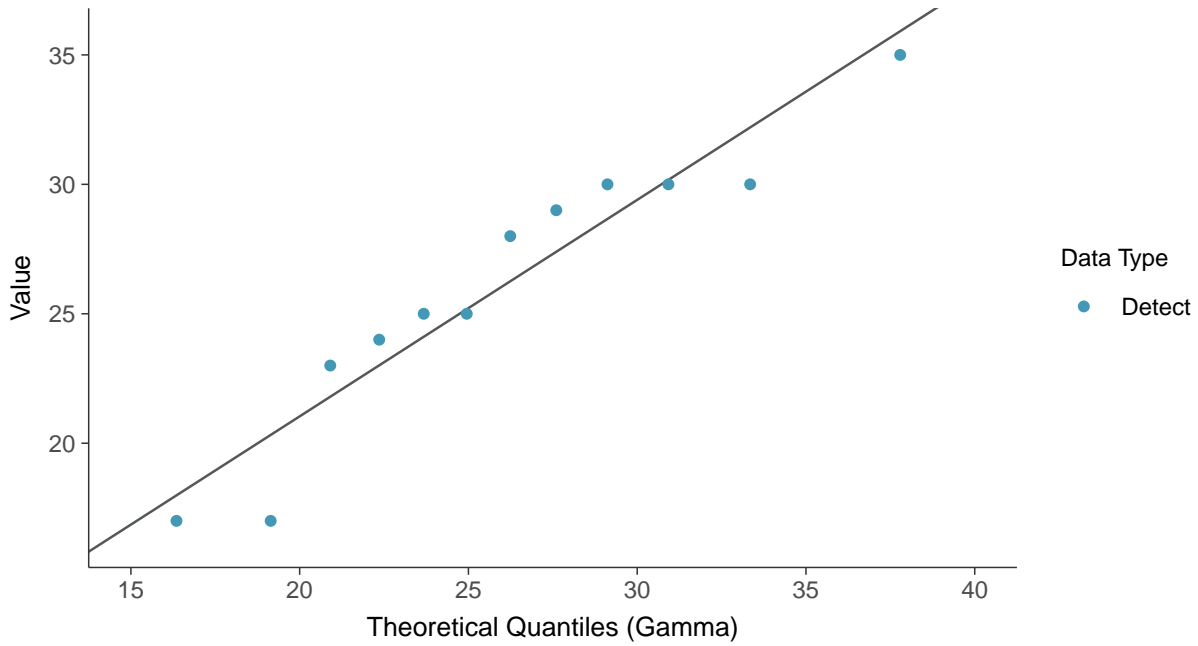






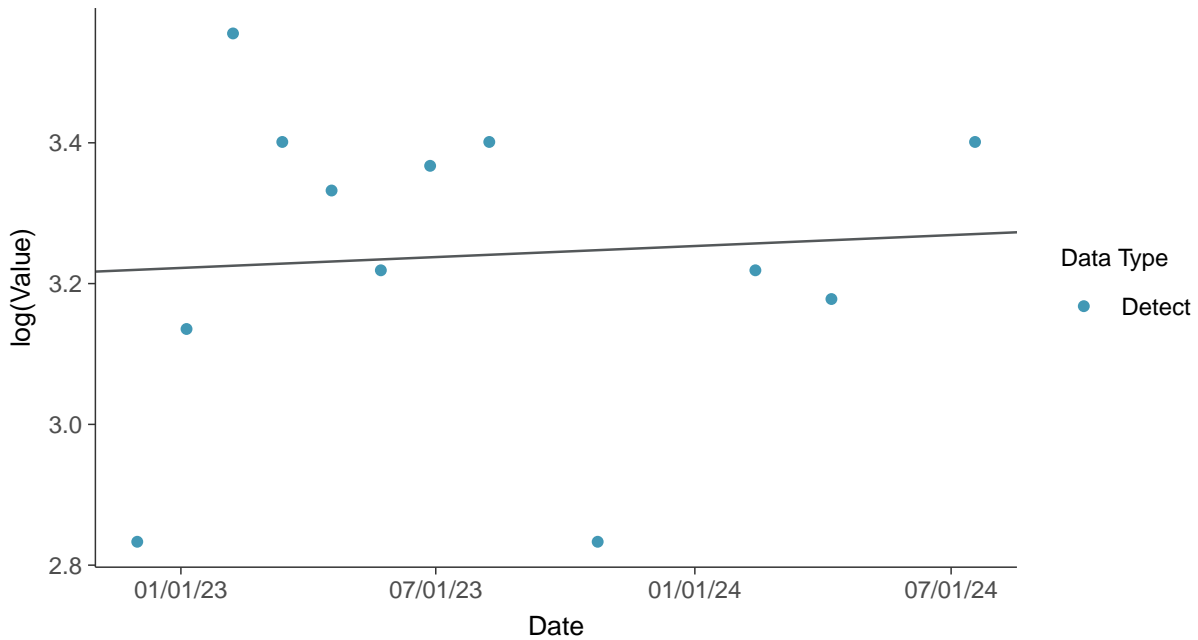
### Gamma Q-Q plot

Chloride (as Cl), MW-08 (mg/L)



### Trend Regression: Lognormal MLE

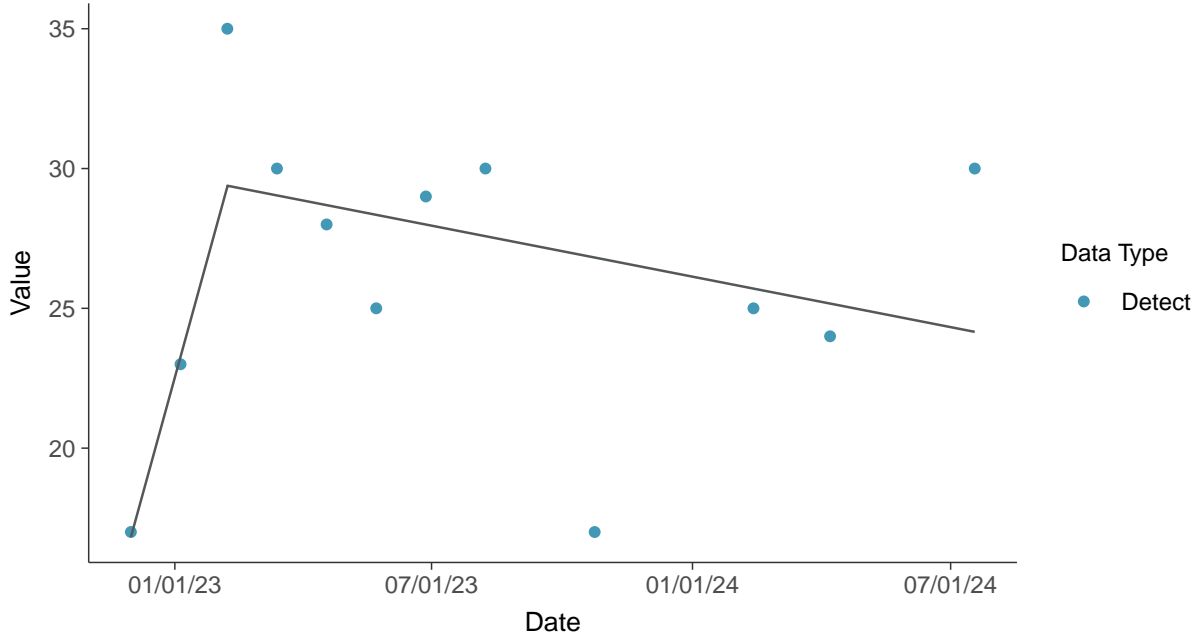
Chloride (as Cl), MW-08 (mg/L)





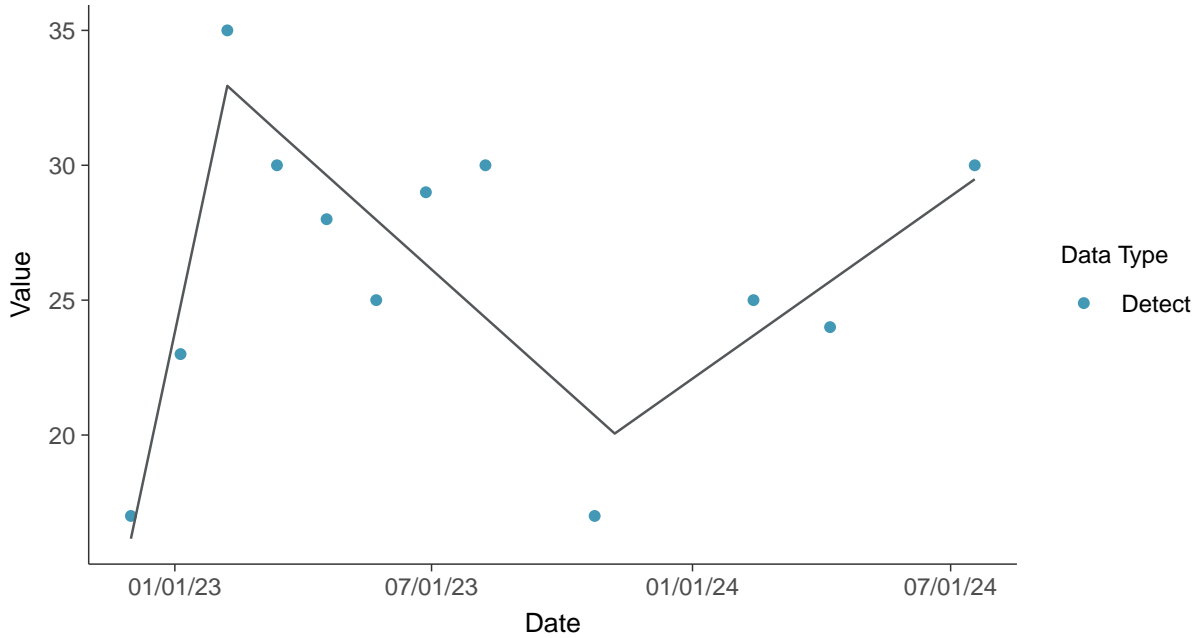
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-08 (mg/L)



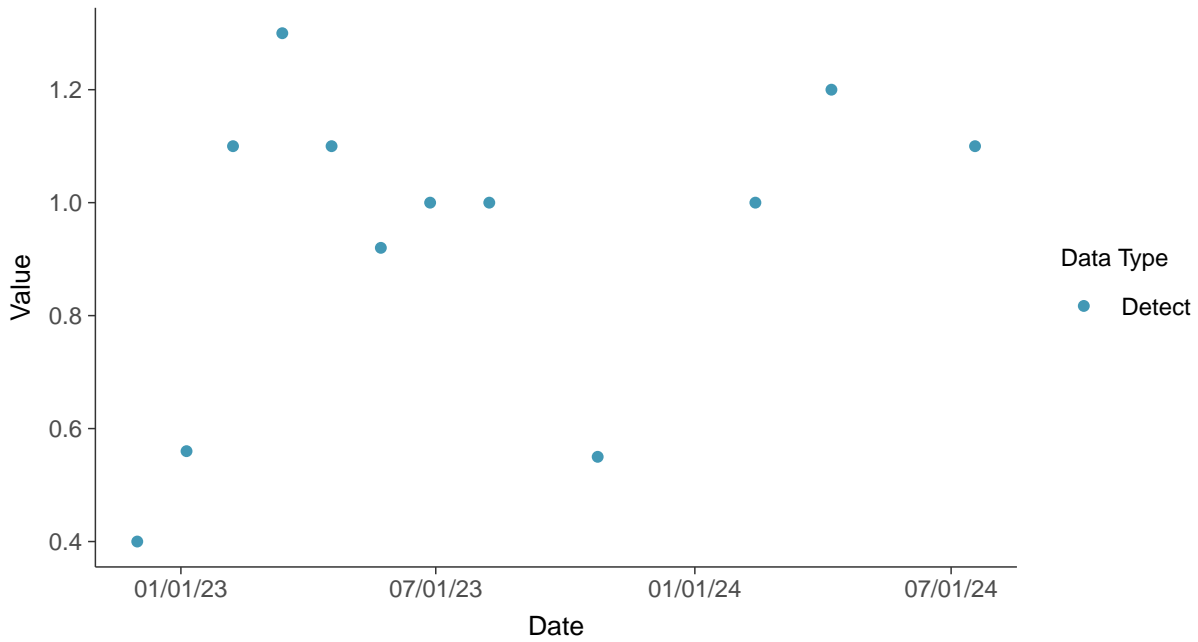


### Appendix III: Fluoride, MW-08

ID: 18\_1\_4\_112

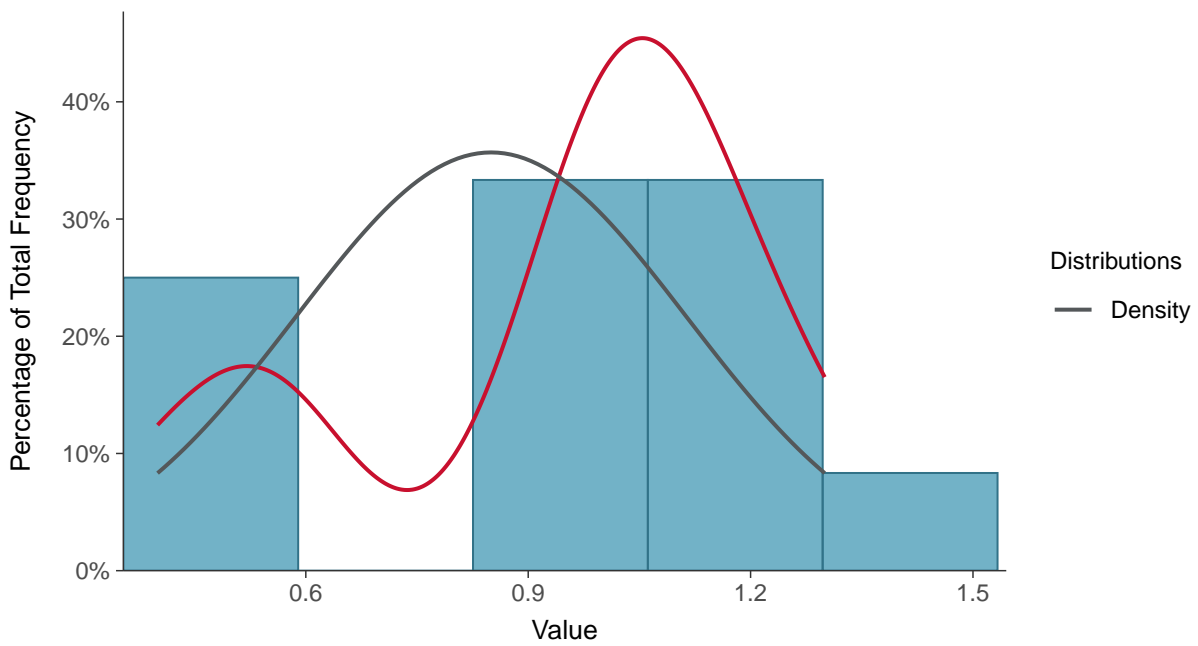
#### Scatter Plot

Fluoride, MW-08 (mg/L)



#### Histogram

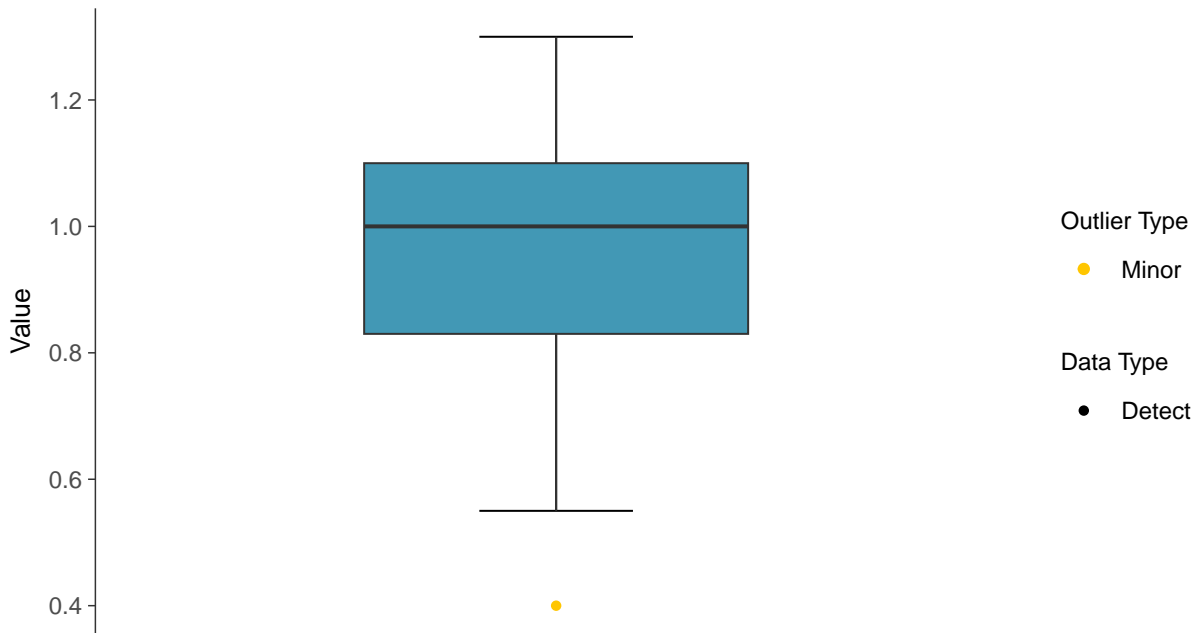
Fluoride, MW-08 (mg/L)





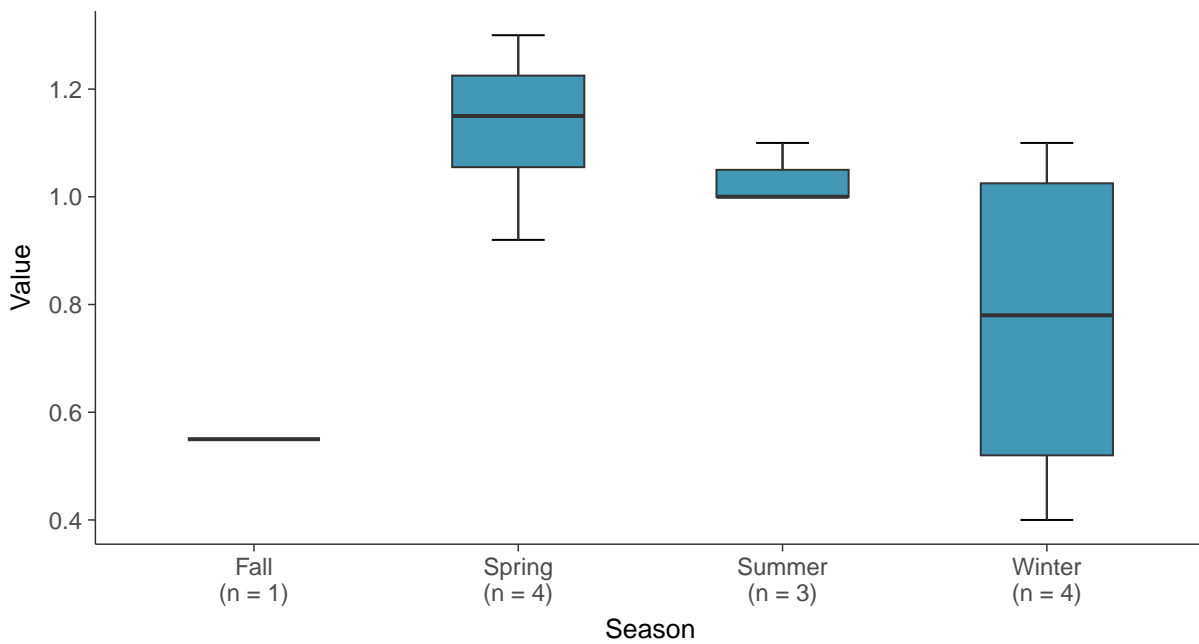
### Boxplot

Fluoride, MW-08 (mg/L)



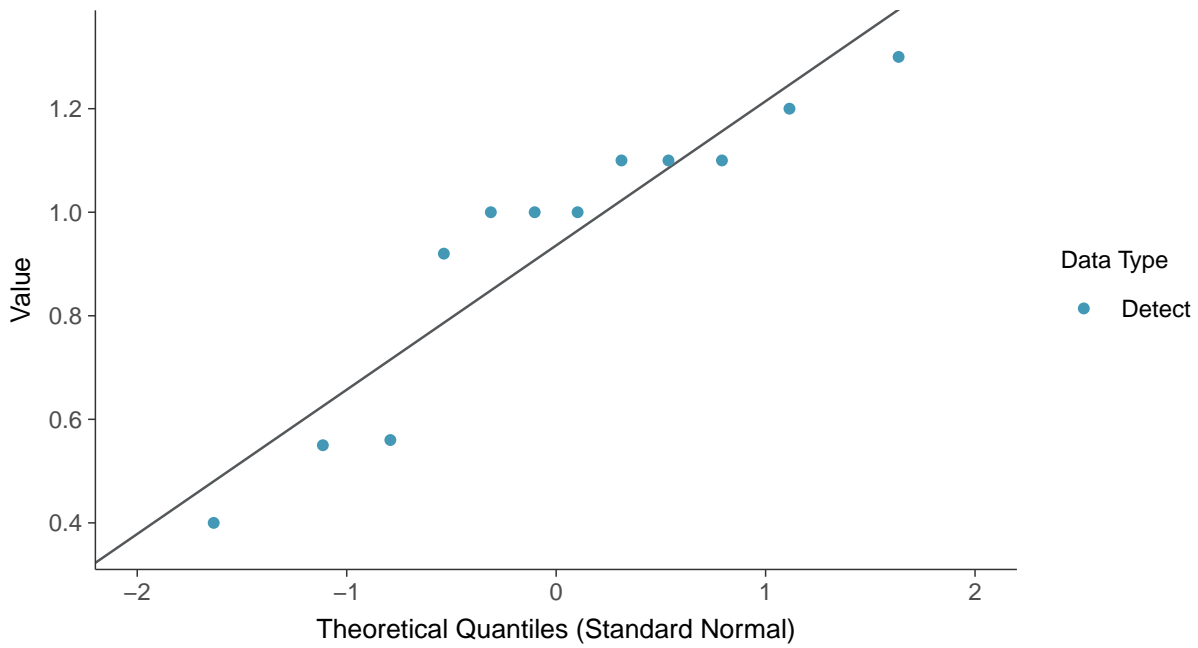
### Boxplot by Season

Fluoride, MW-08 (mg/L)

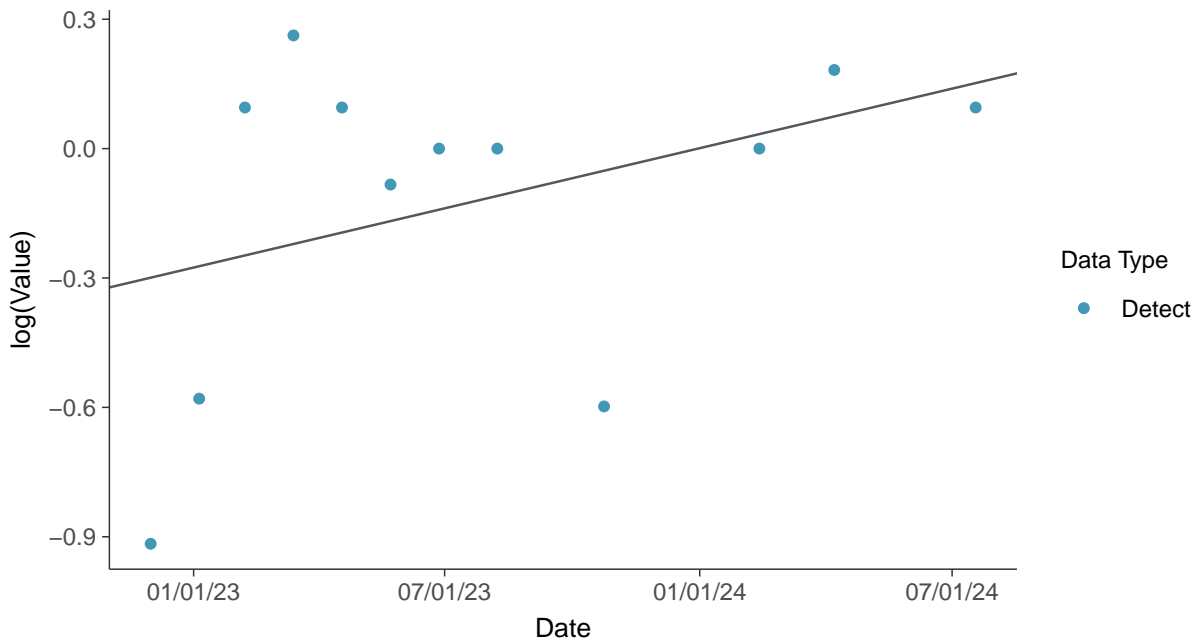




**Normal Q-Q plot**  
Fluoride, MW-08 (mg/L)



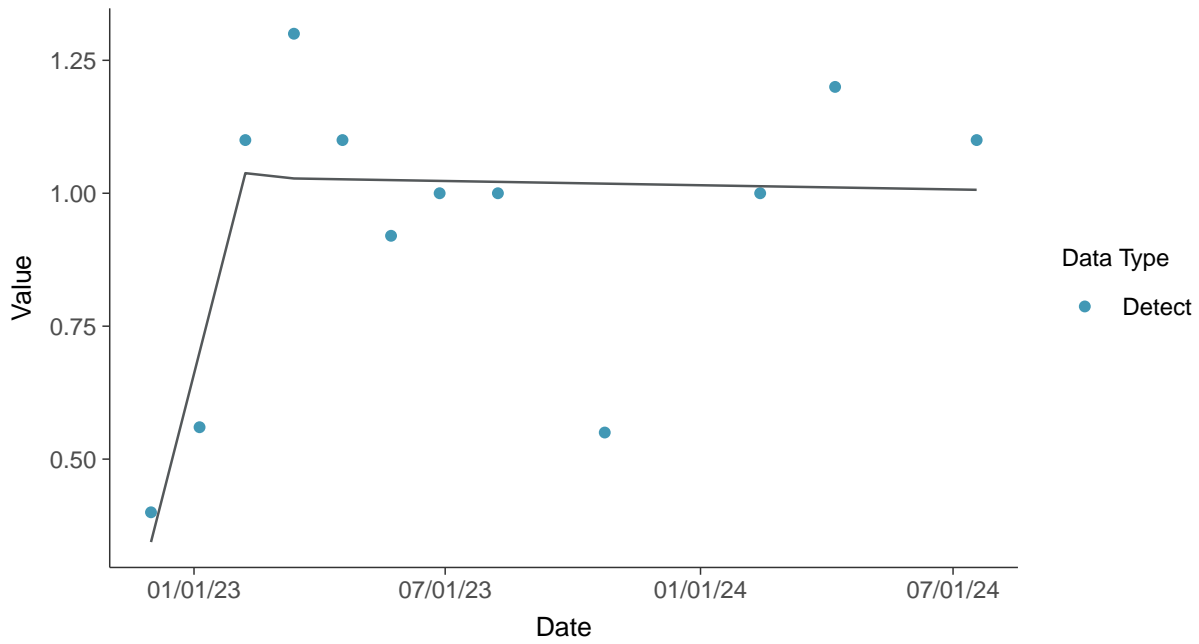
**Trend Regression: Lognormal MLE**  
Fluoride, MW-08 (mg/L)





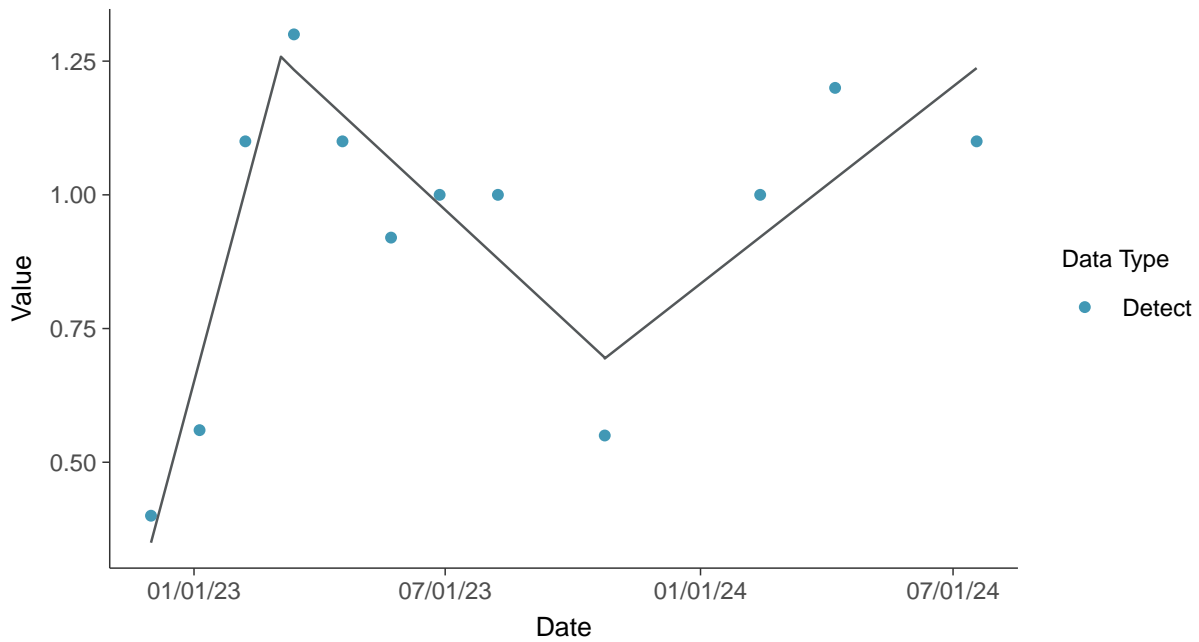
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-08 (mg/L)



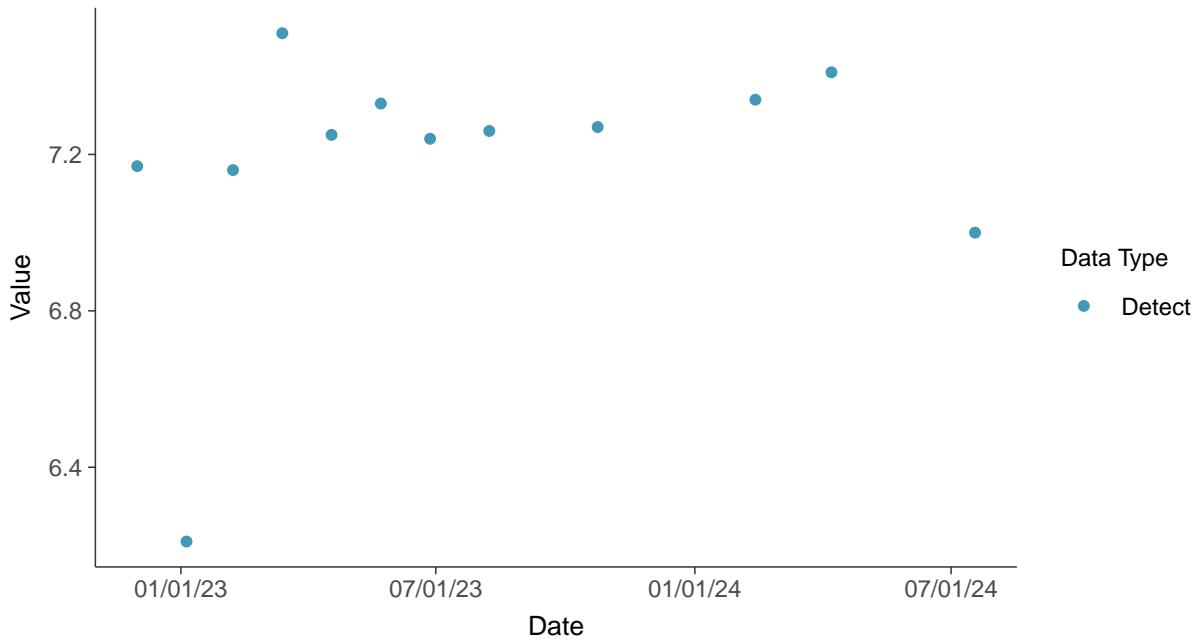


### Appendix III: pH (field), MW-08

ID: 18\_1\_4\_120

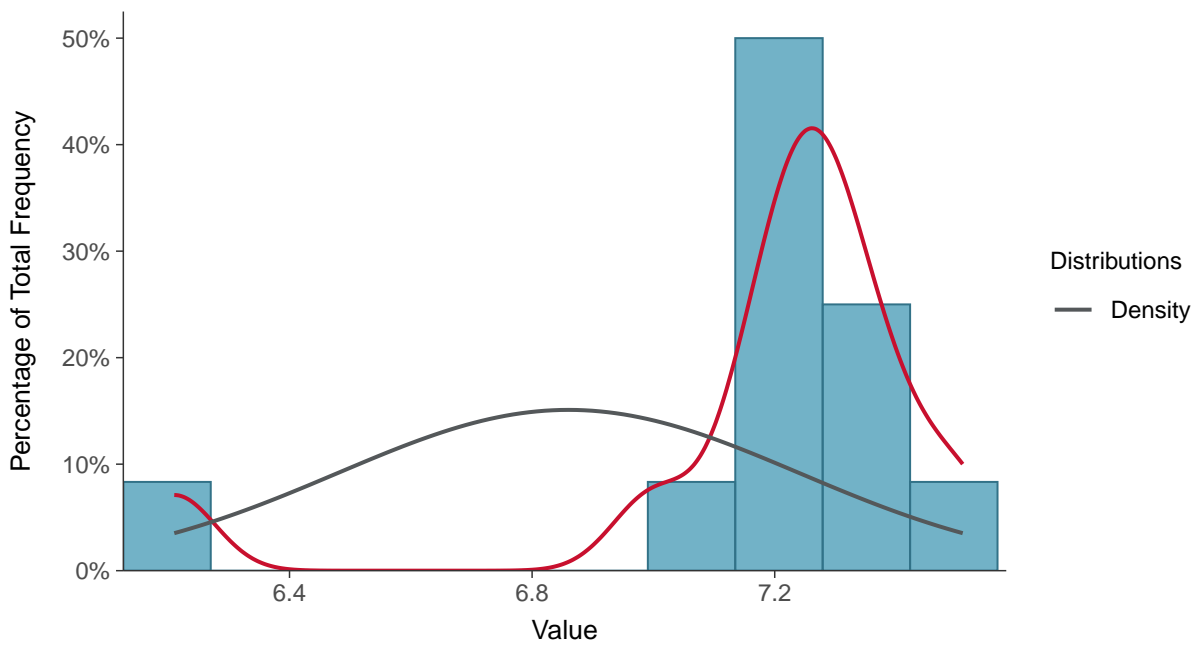
#### Scatter Plot

pH (field), MW-08 (su)



#### Histogram

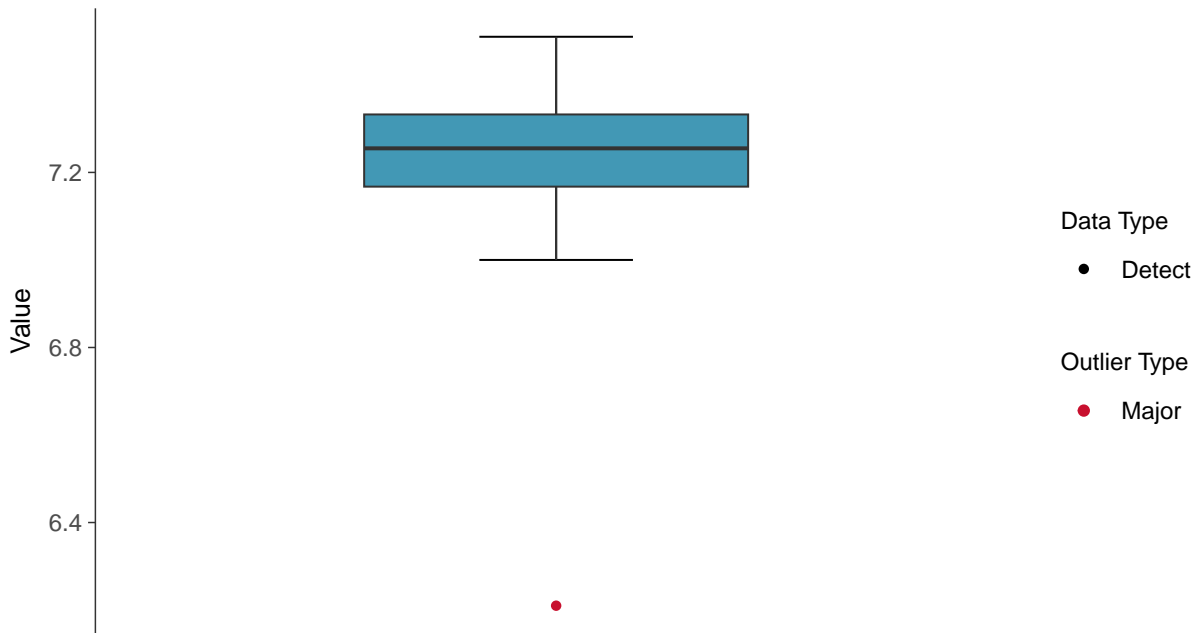
pH (field), MW-08 (su)





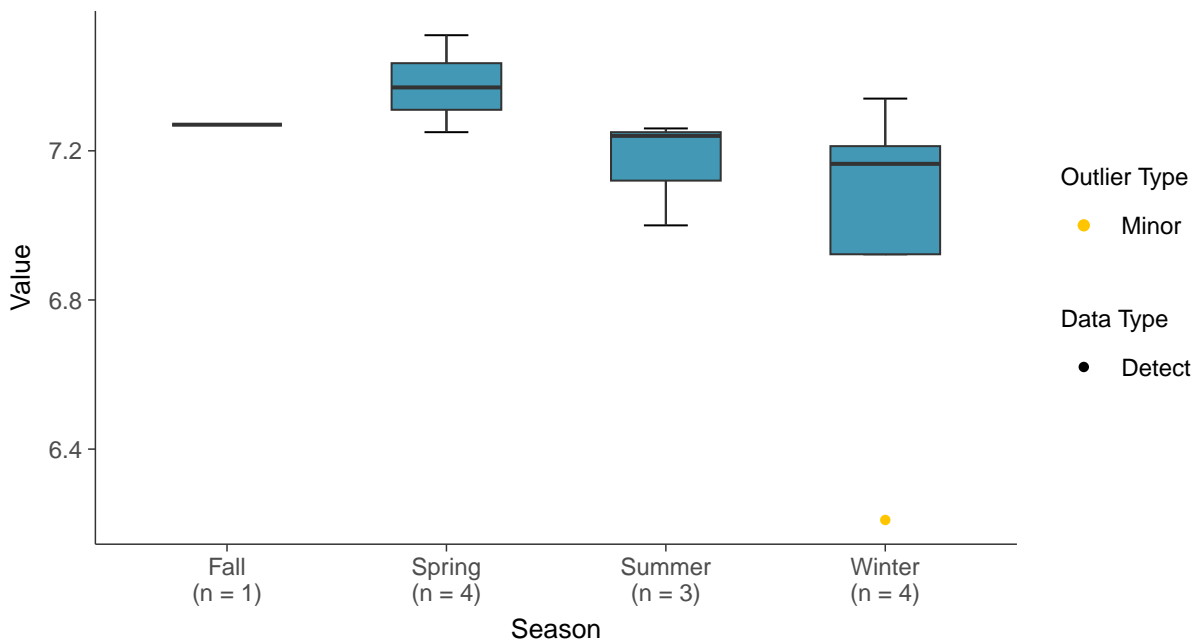
### Boxplot

pH (field), MW-08 (su)



### Boxplot by Season

pH (field), MW-08 (su)

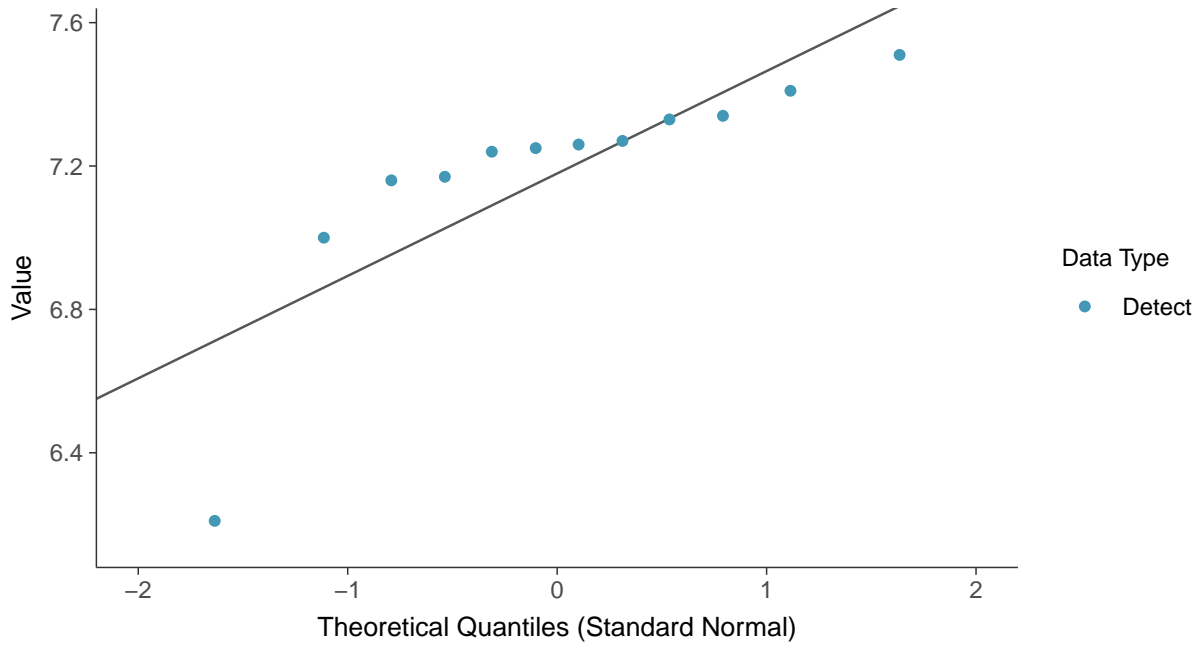






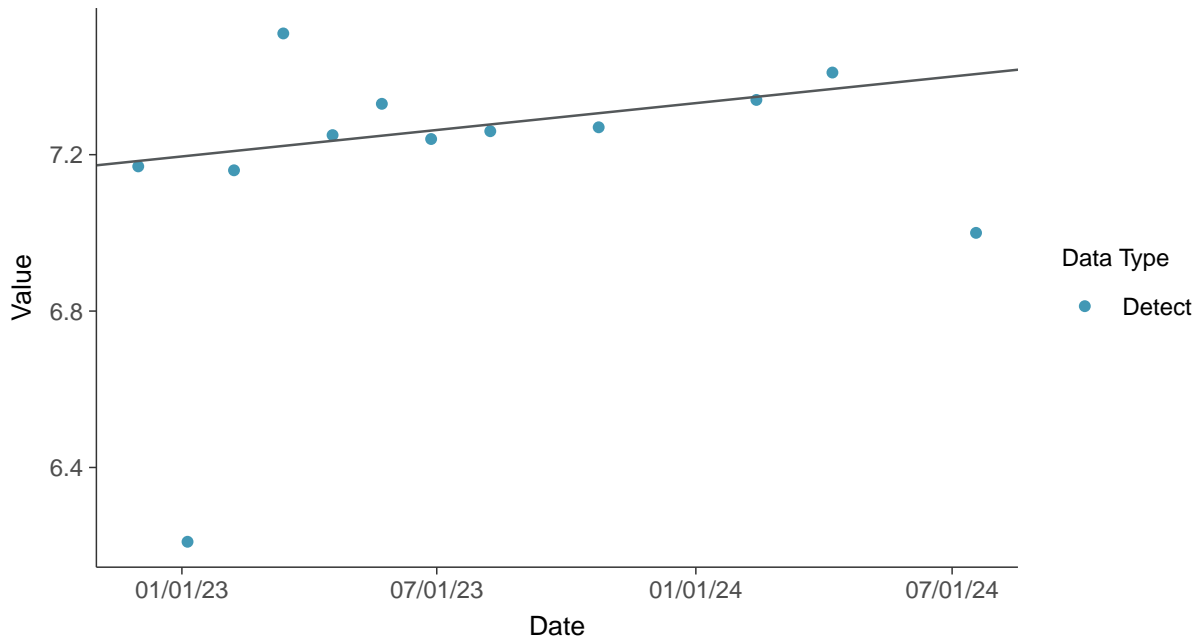
### Normal Q-Q plot

pH (field), MW-08 (su)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

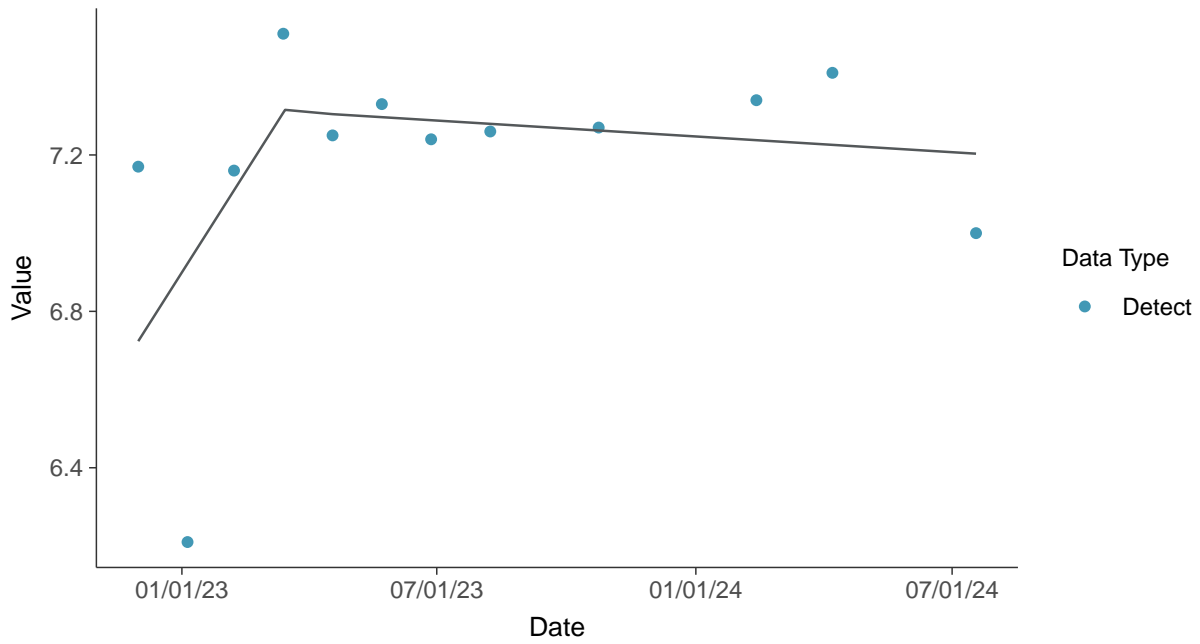
pH (field), MW-08 (su)





### Trend Regression: Piecewise Linear-Linear

pH (field), MW-08 (su)



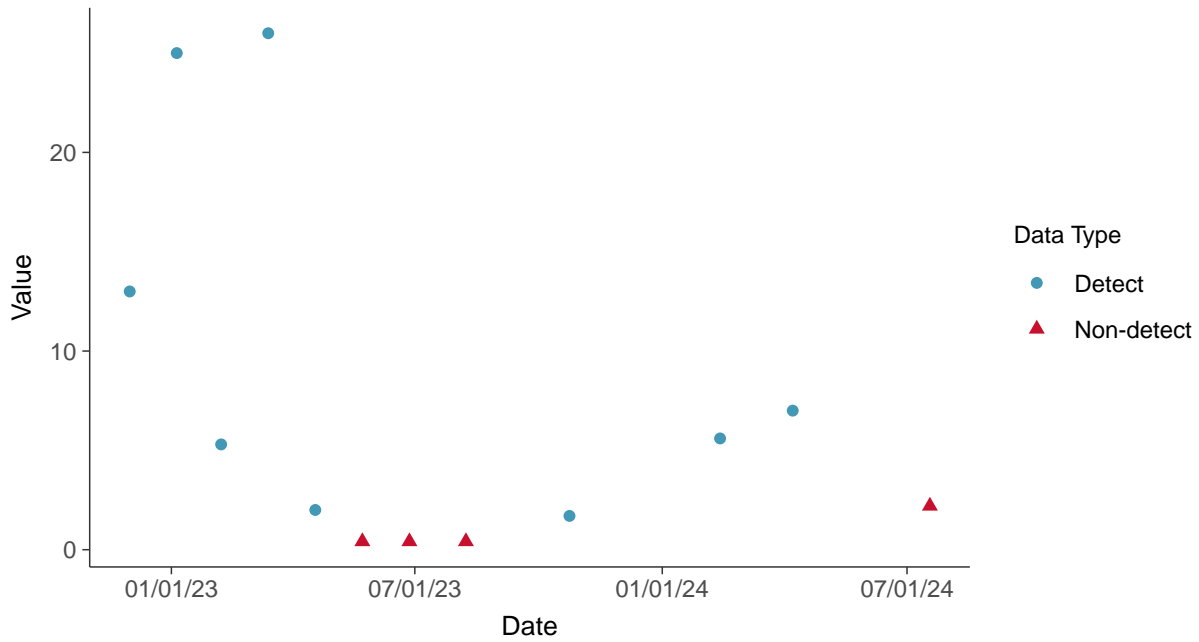


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-08

ID: 18\_1\_4\_124

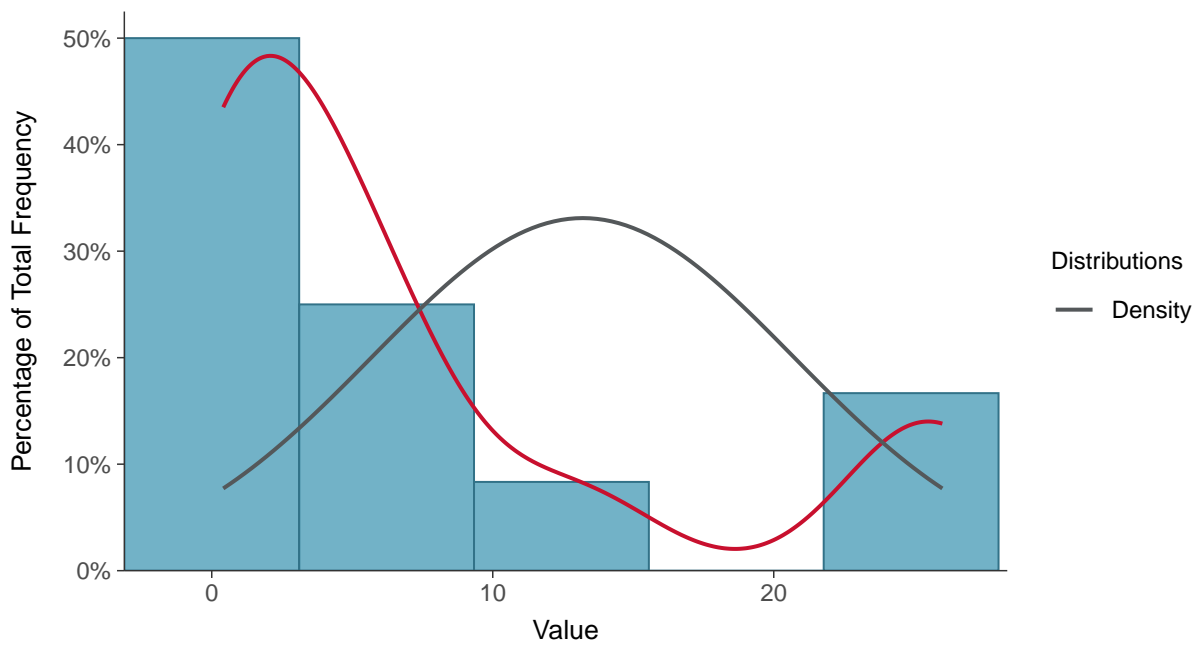
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)



#### Histogram

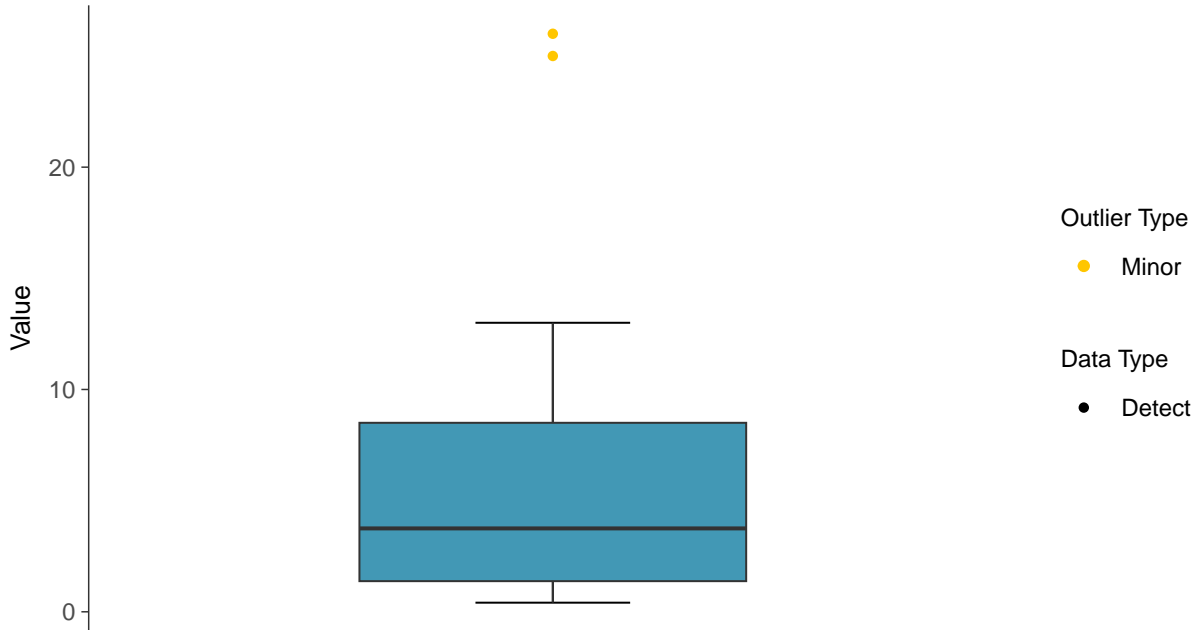
Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)





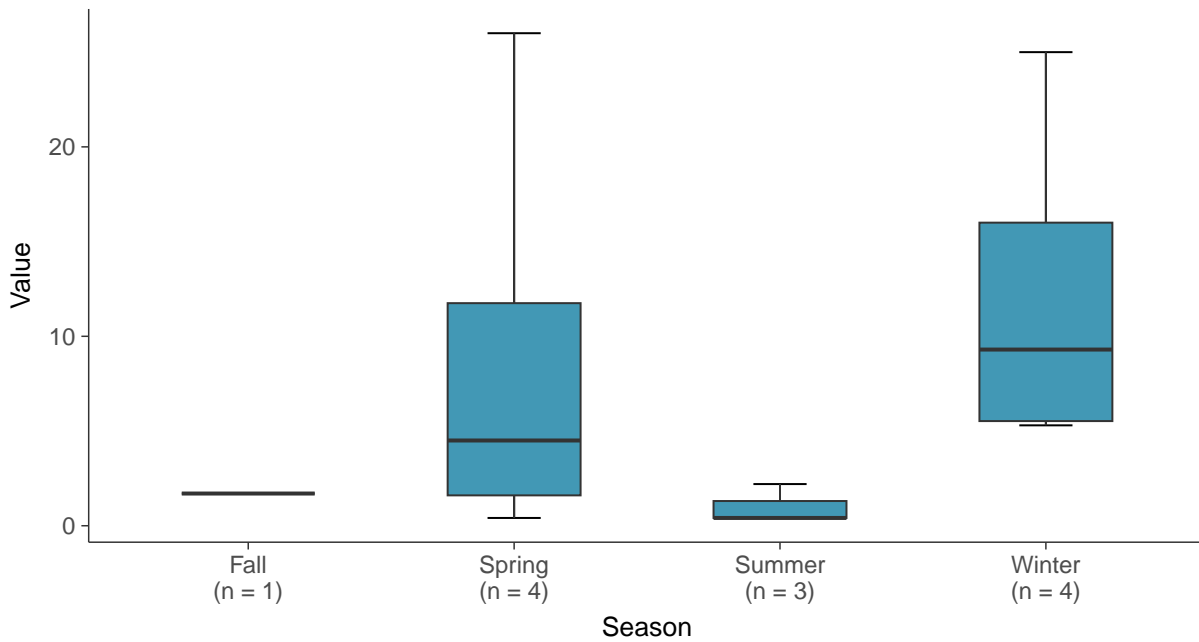
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)



### Boxplot by Season

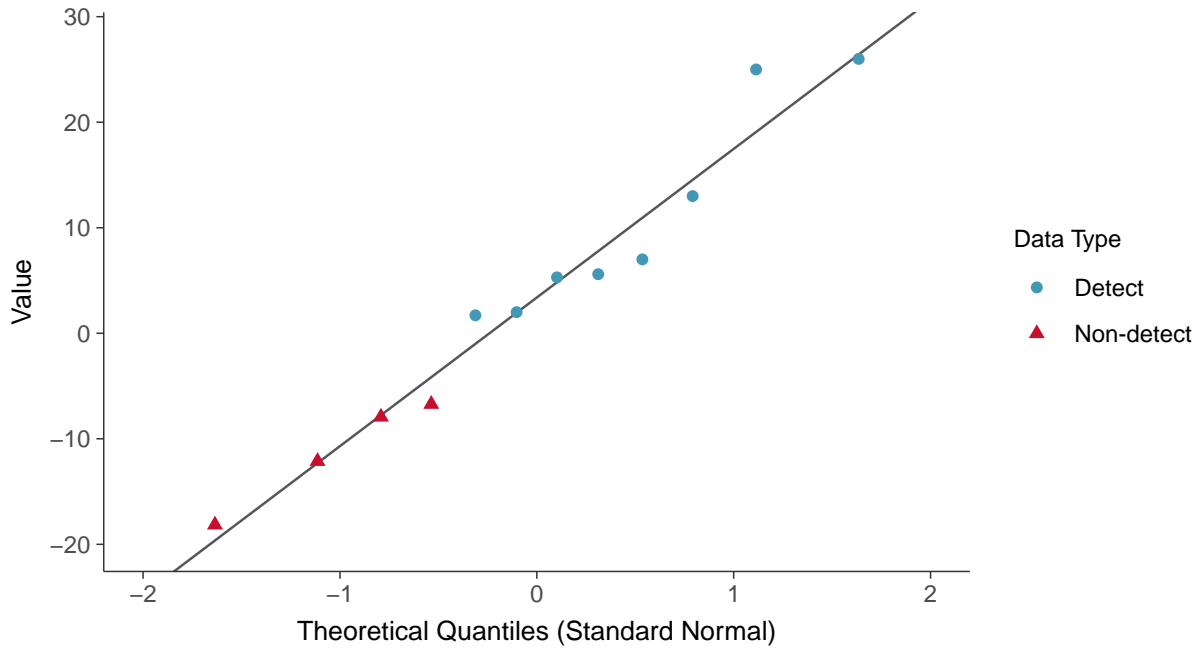
Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)





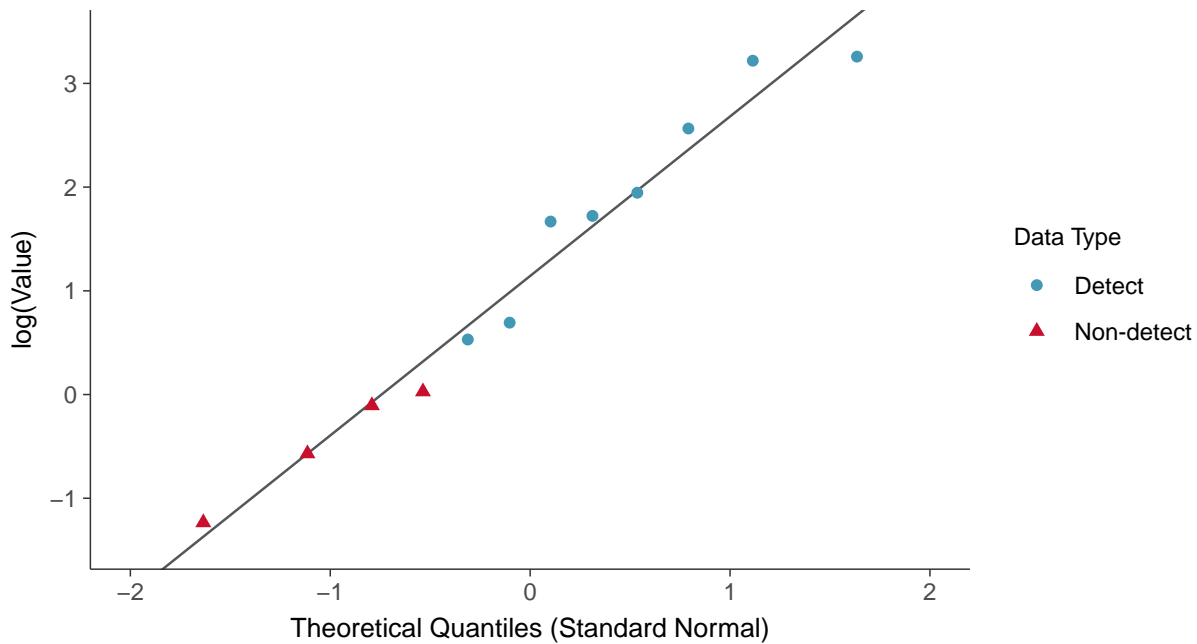
### Normal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

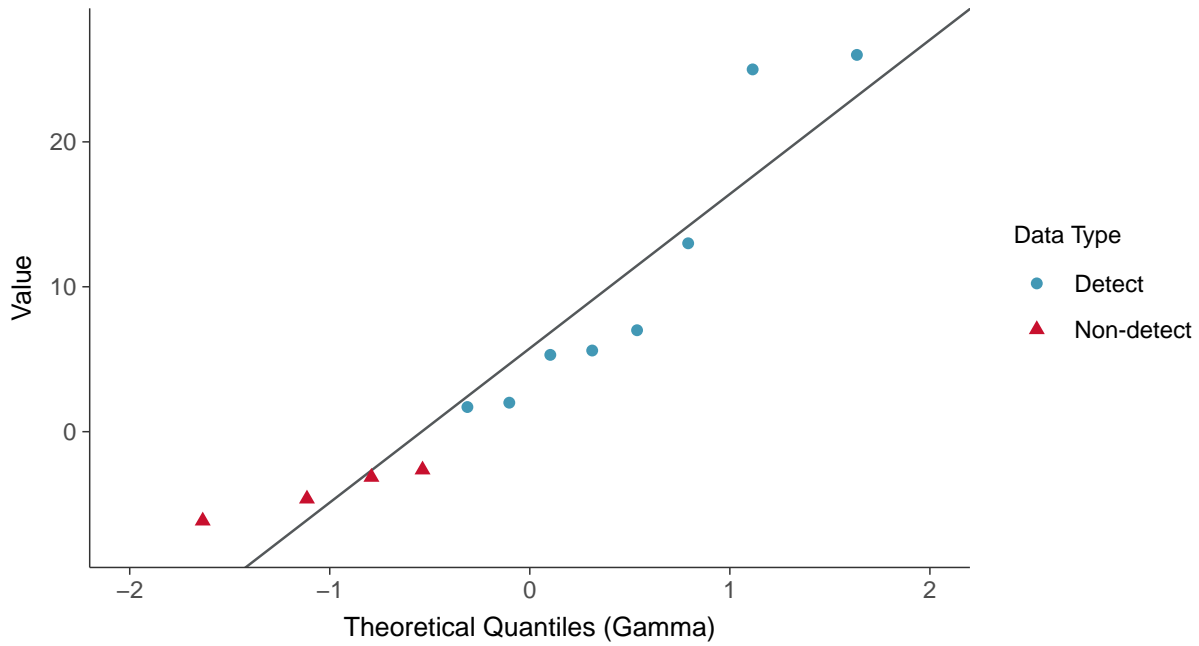
Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)





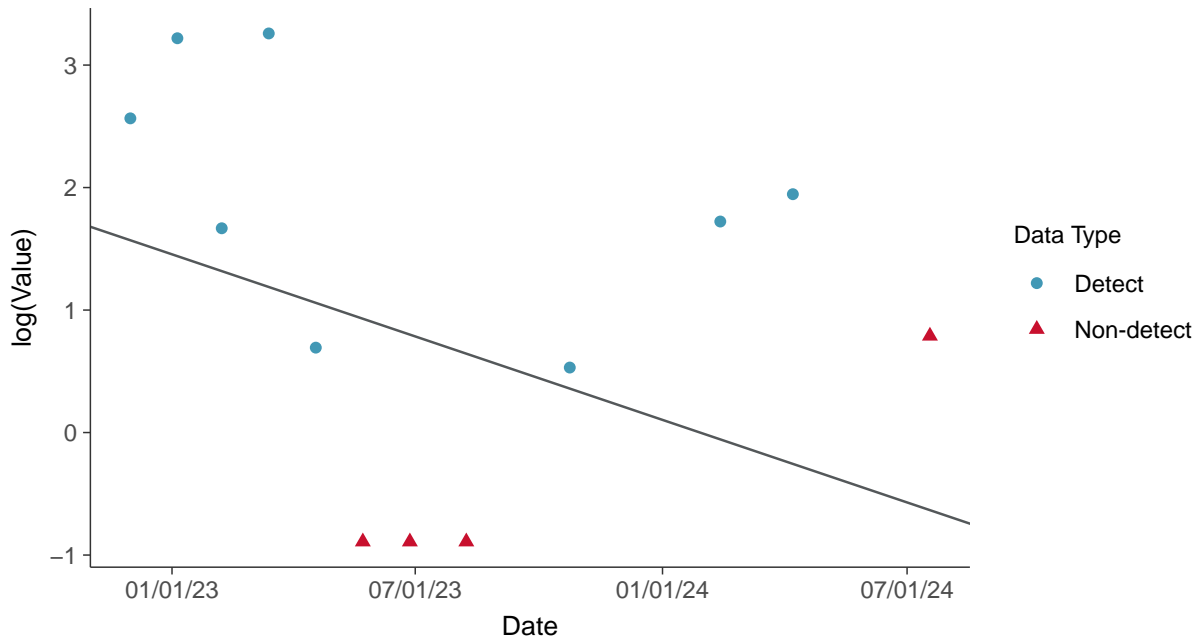
### Gamma Q-Q plot using ROS Imputed Estimates

Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)



### Trend Regression: Lognormal MLE

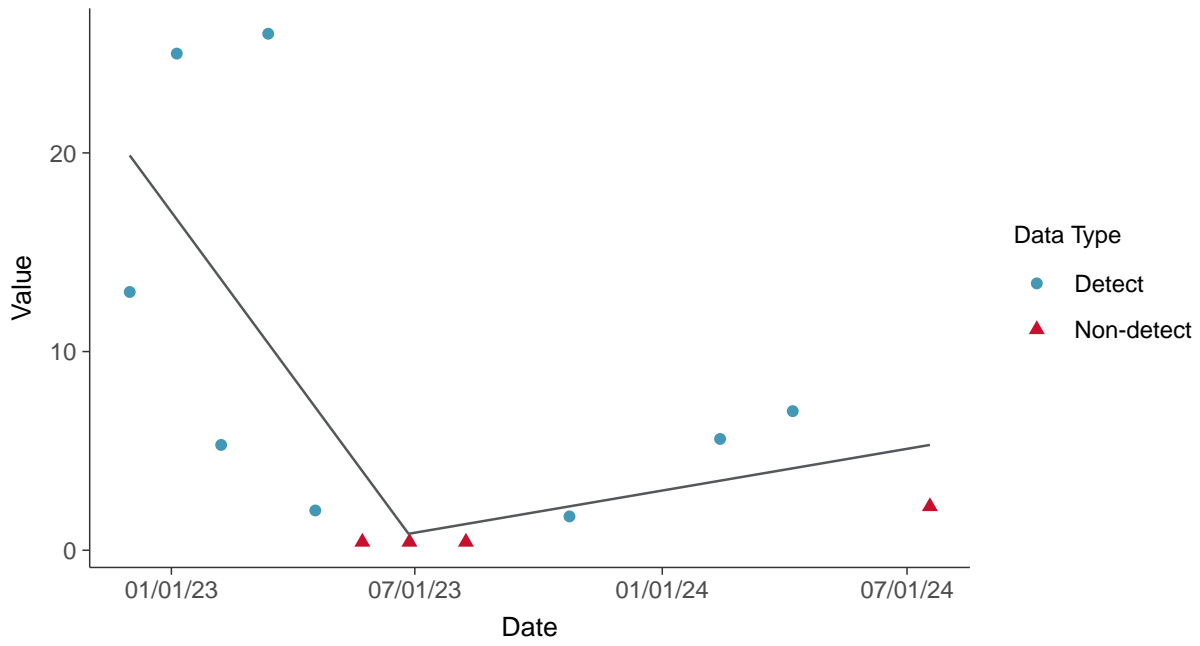
Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-08 (mg/L)



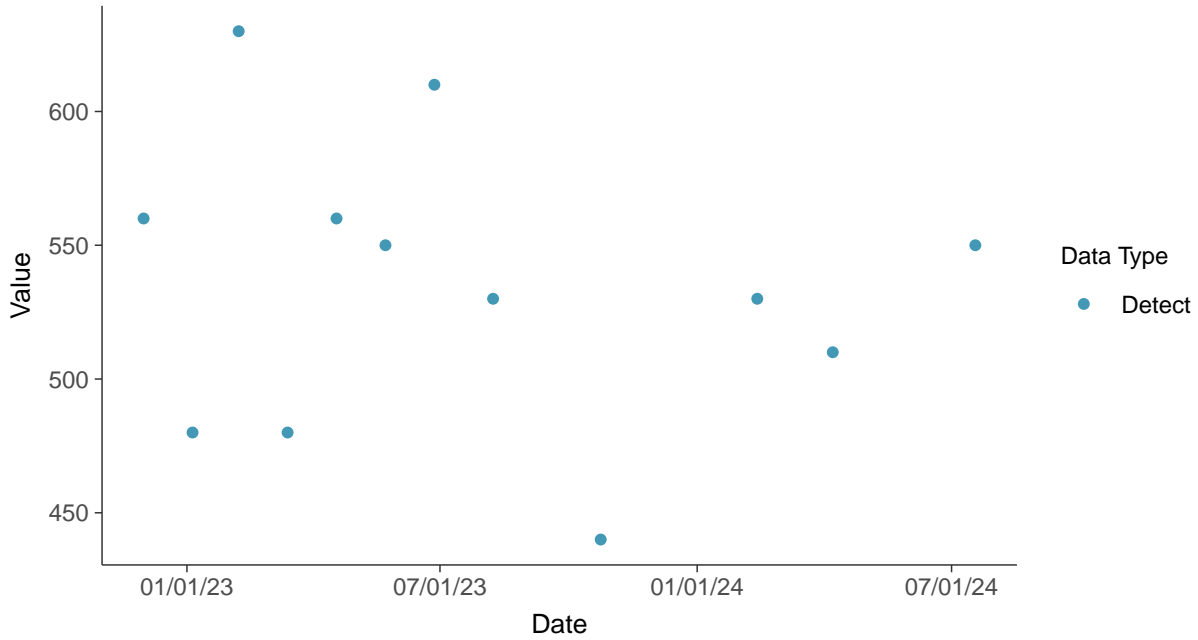


### Appendix III: Total Dissolved Solids, MW-08

ID: 18\_1\_4\_126

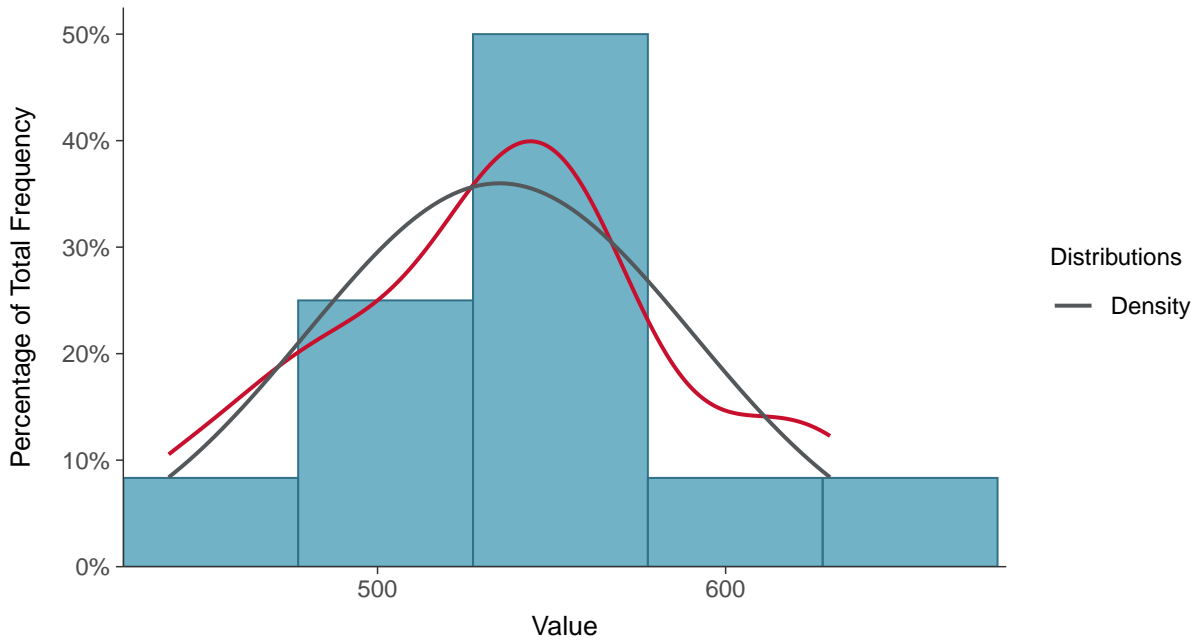
#### Scatter Plot

Total Dissolved Solids, MW-08 (mg/L)



#### Histogram

Total Dissolved Solids, MW-08 (mg/L)

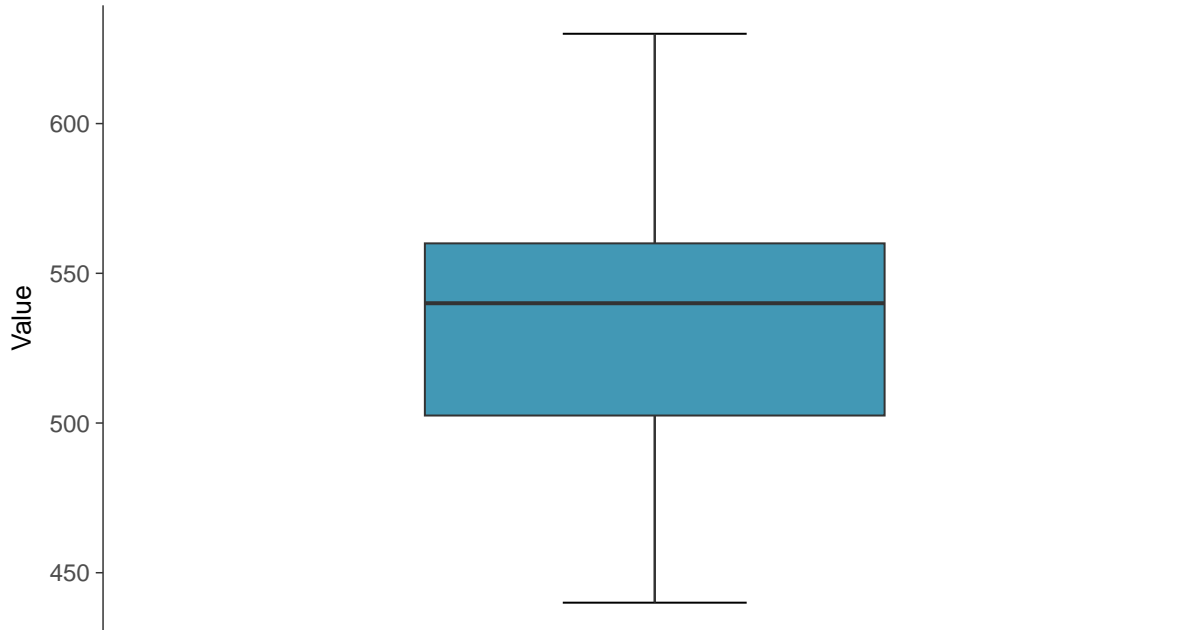






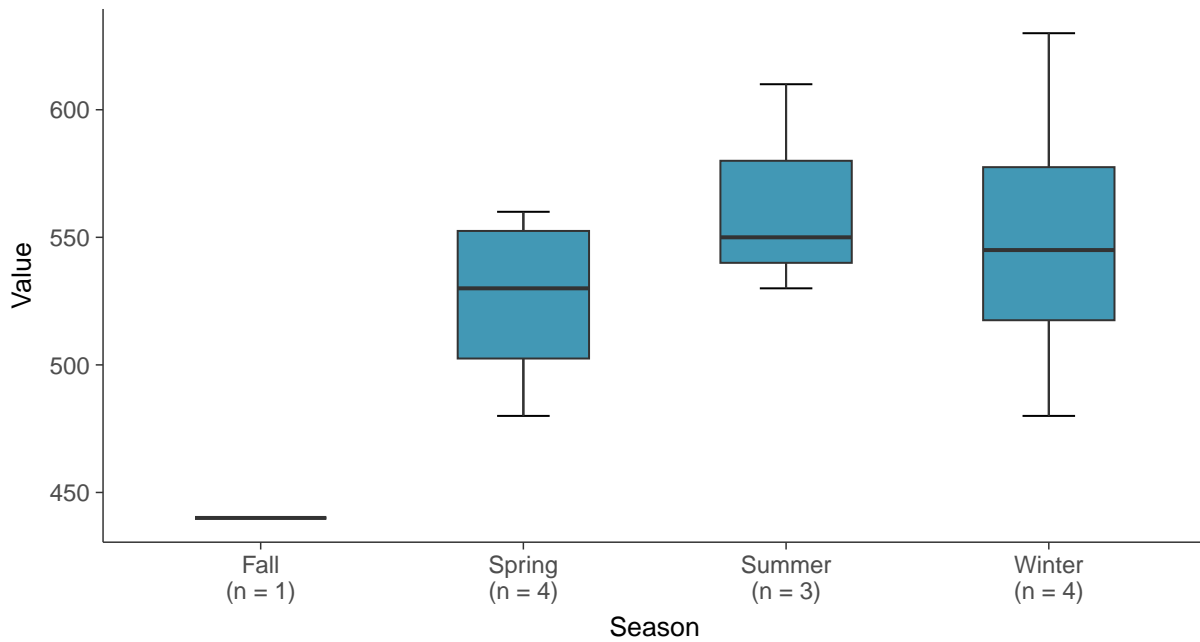
### Boxplot

Total Dissolved Solids, MW-08 (mg/L)



### Boxplot by Season

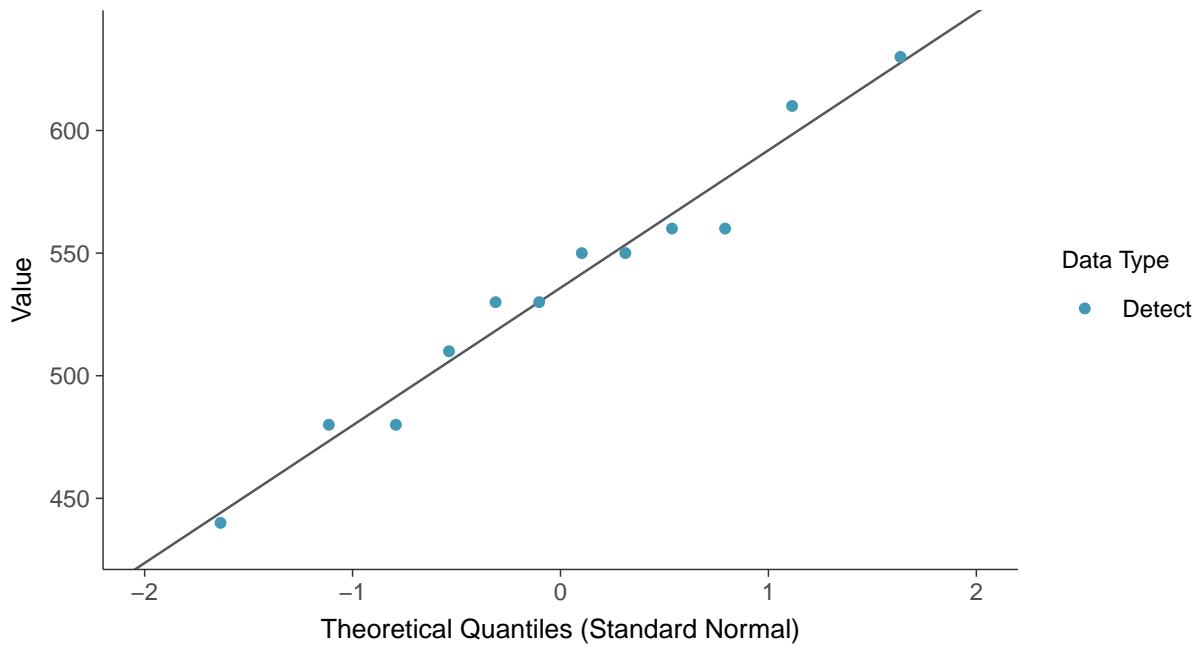
Total Dissolved Solids, MW-08 (mg/L)





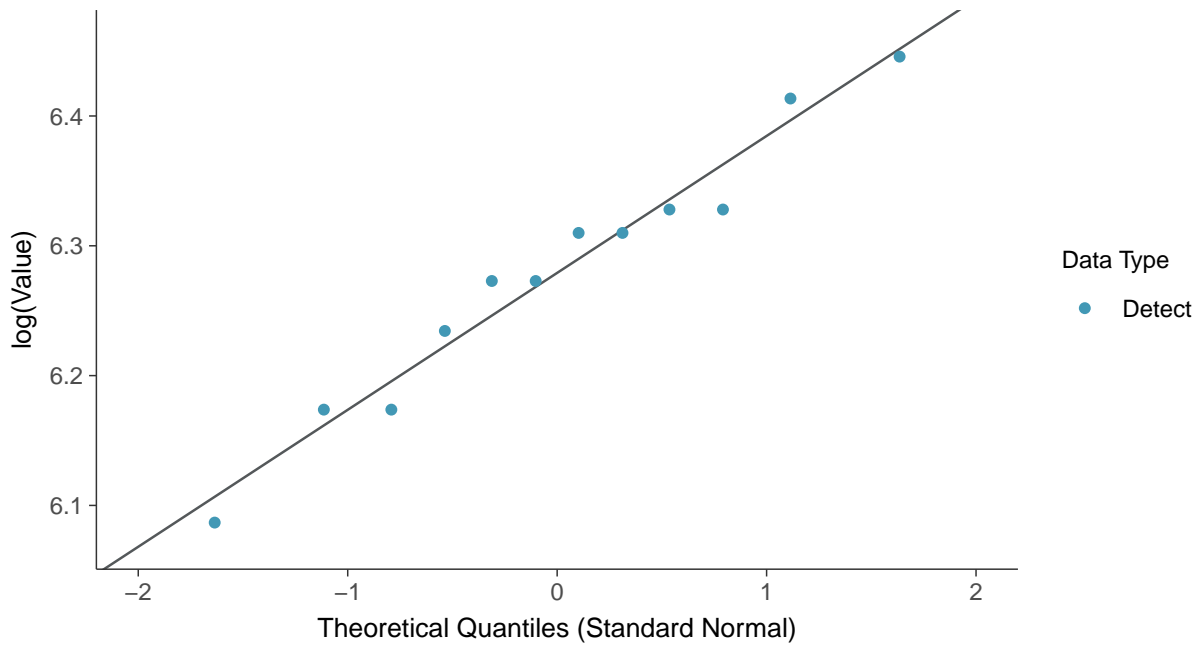
### Normal Q-Q plot

Total Dissolved Solids, MW-08 (mg/L)



### Lognormal Q-Q plot

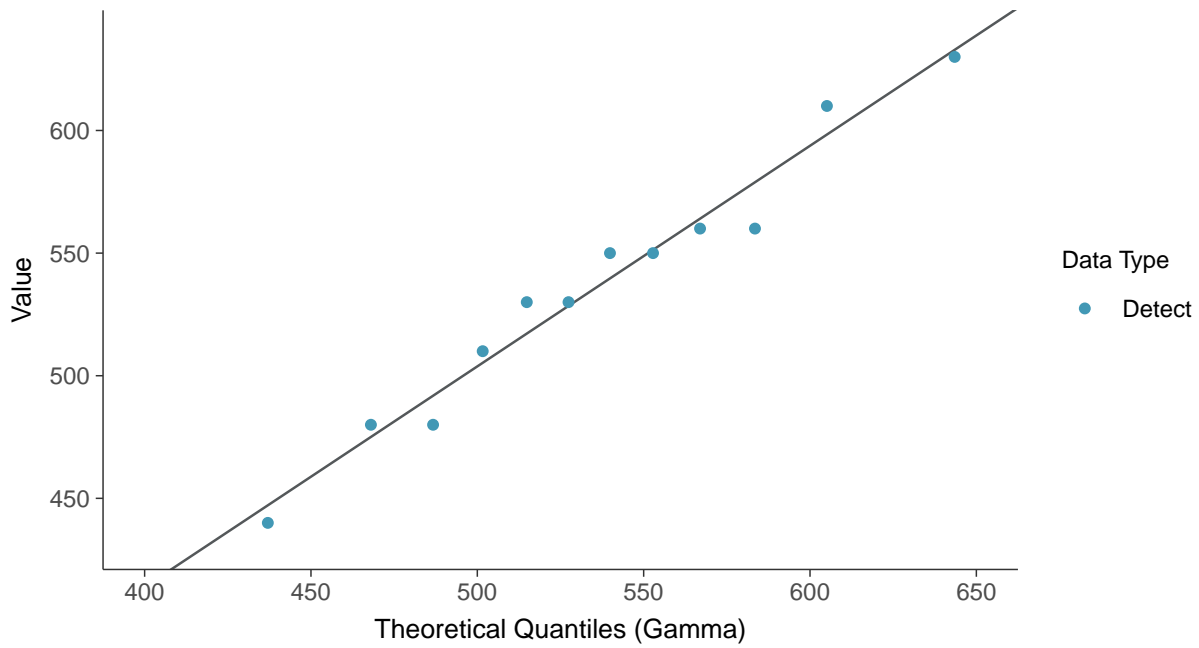
Total Dissolved Solids, MW-08 (mg/L)





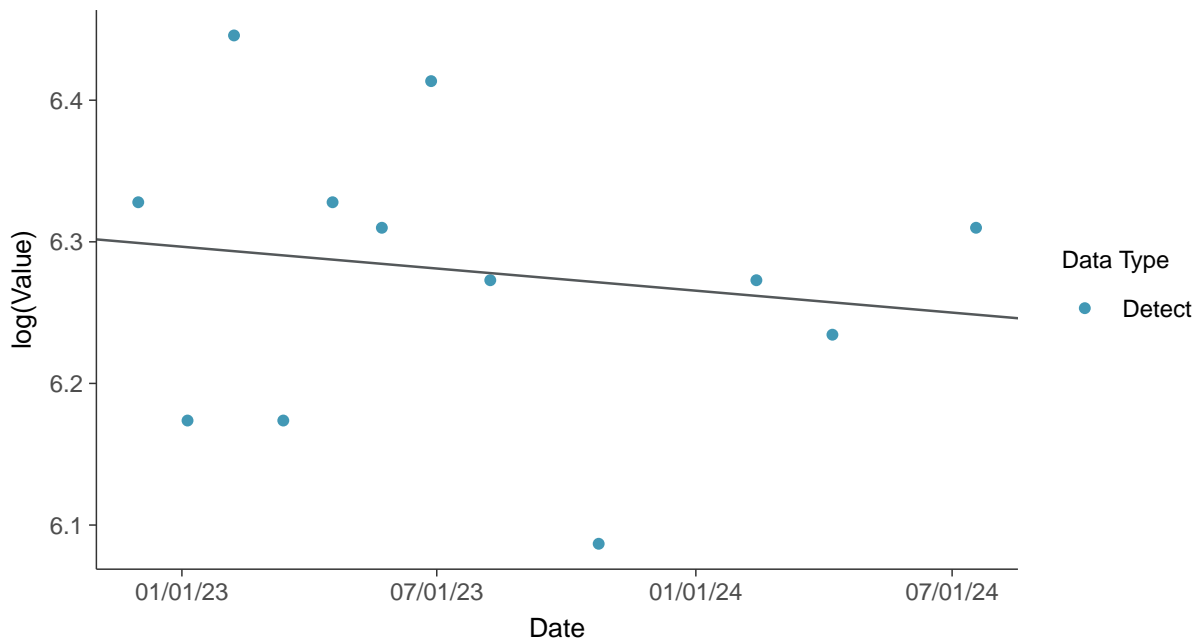
### Gamma Q-Q plot

Total Dissolved Solids, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

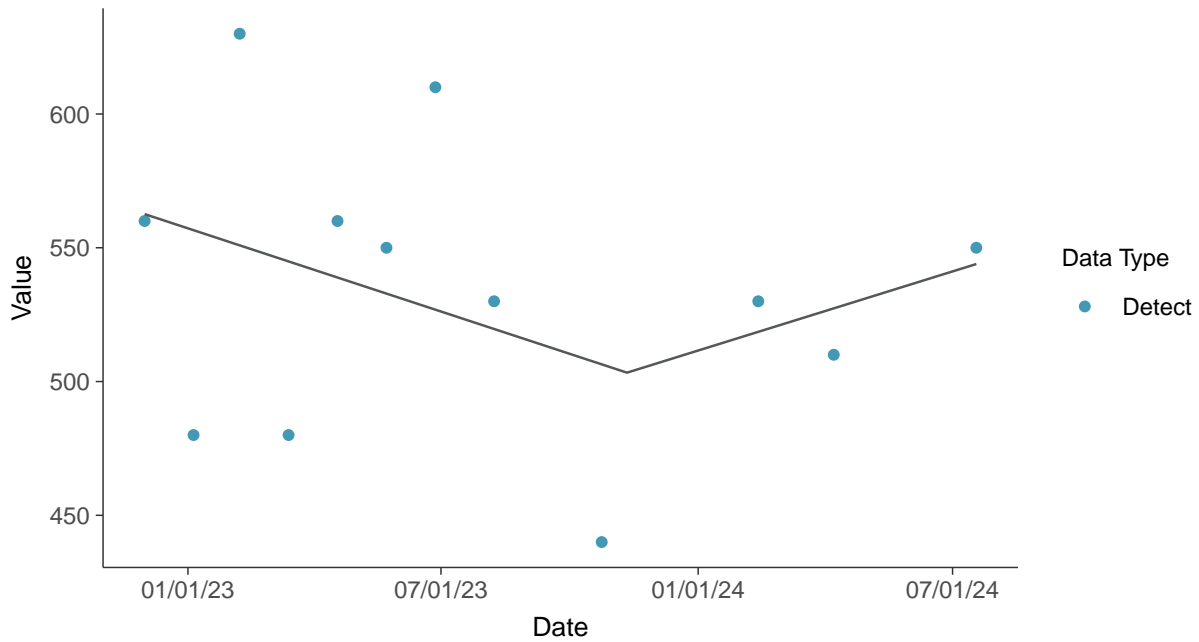
Total Dissolved Solids, MW-08 (mg/L)





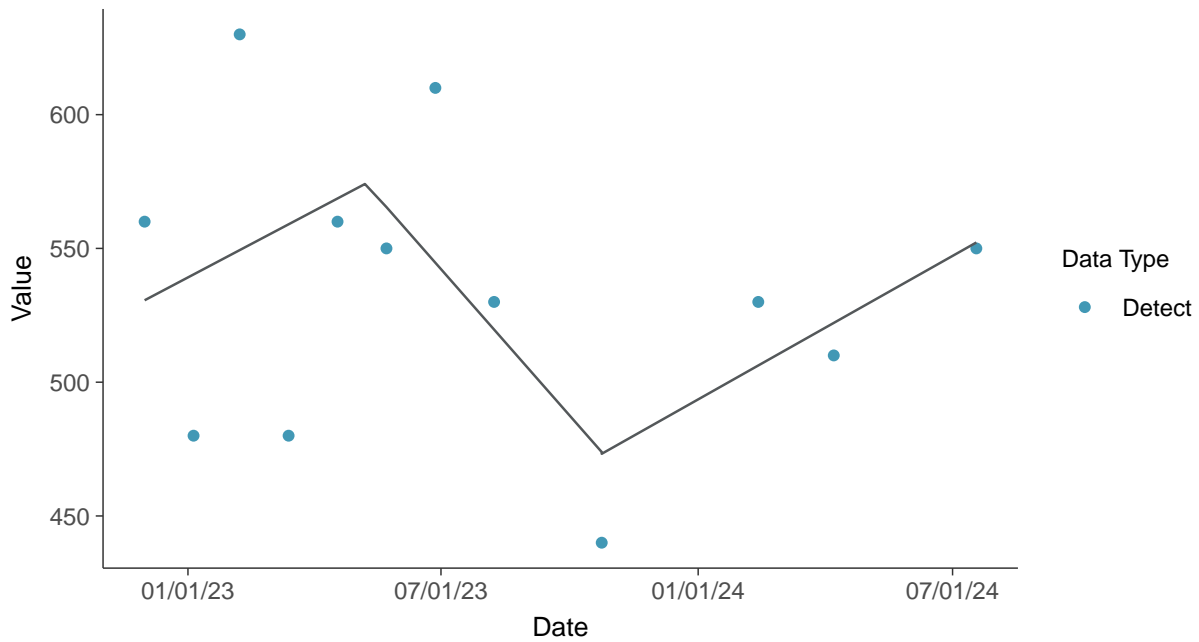
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-08 (mg/L)



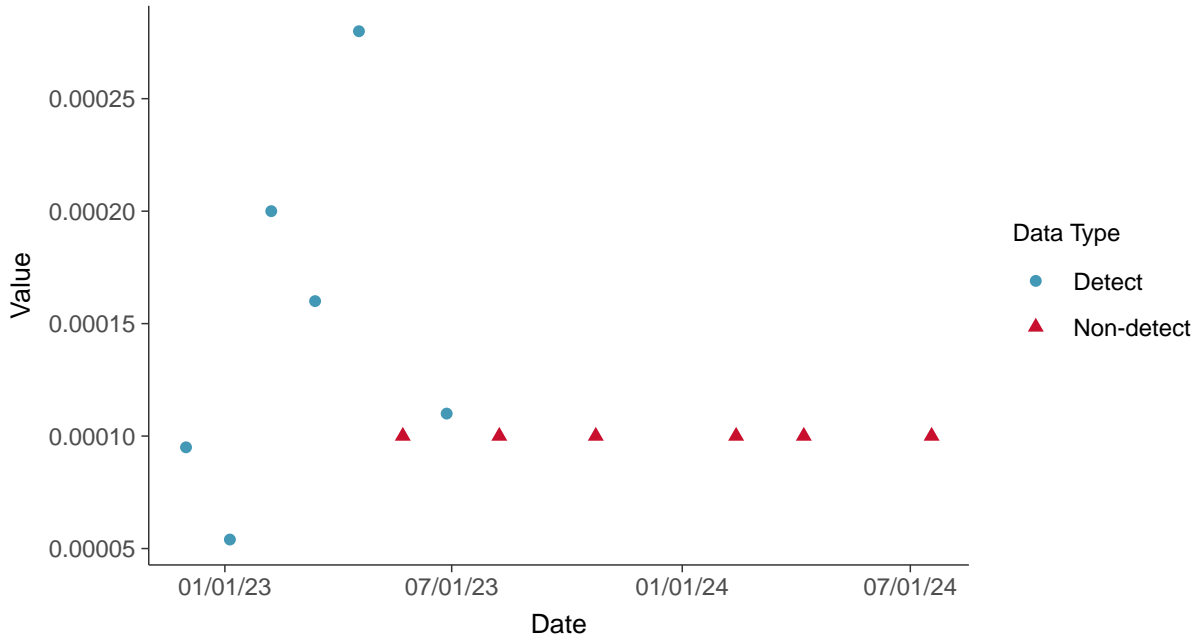


### Appendix IV: Antimony, MW-08

ID: 18\_1\_5\_101

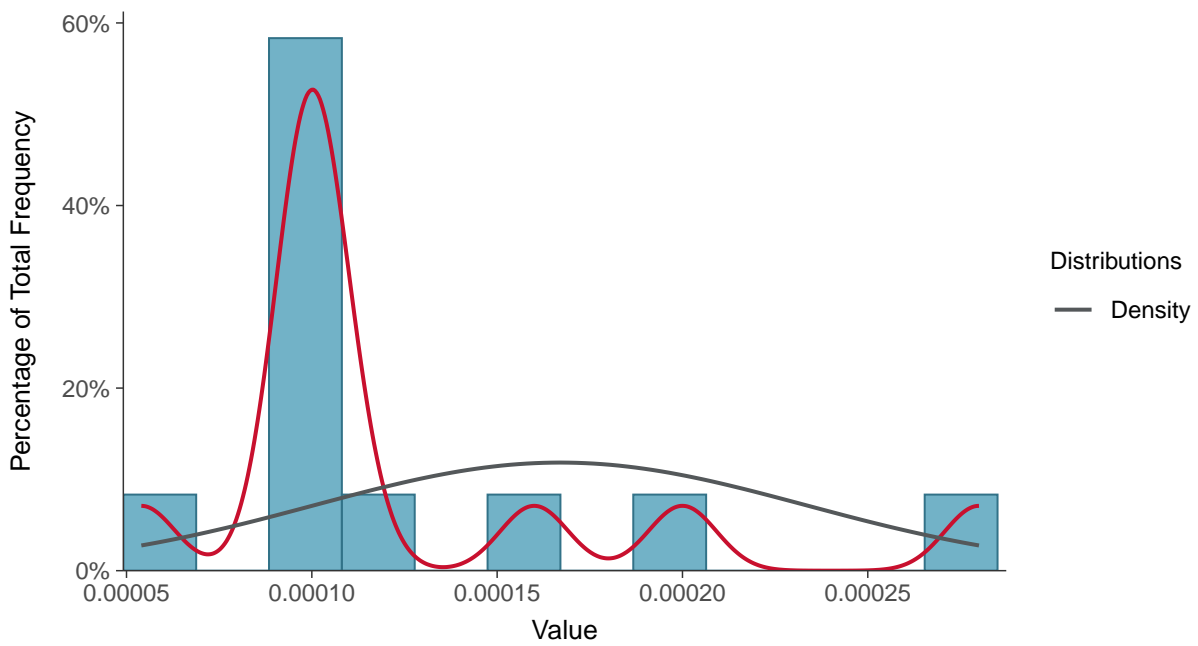
#### Scatter Plot

Antimony, MW-08 (mg/L)



#### Histogram

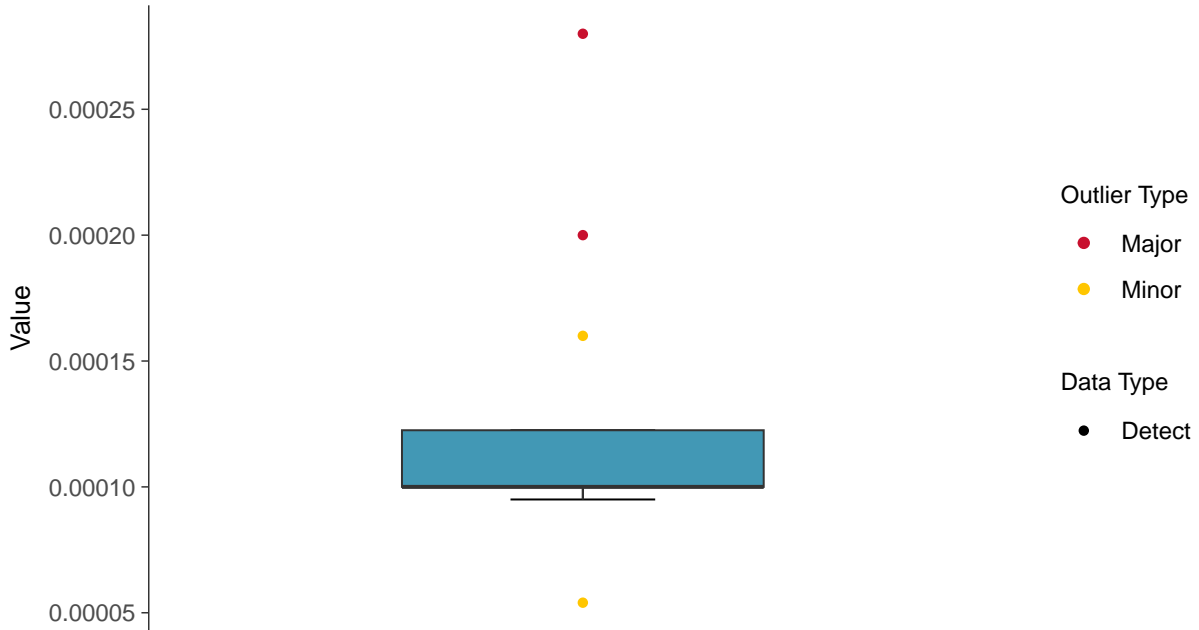
Antimony, MW-08 (mg/L)





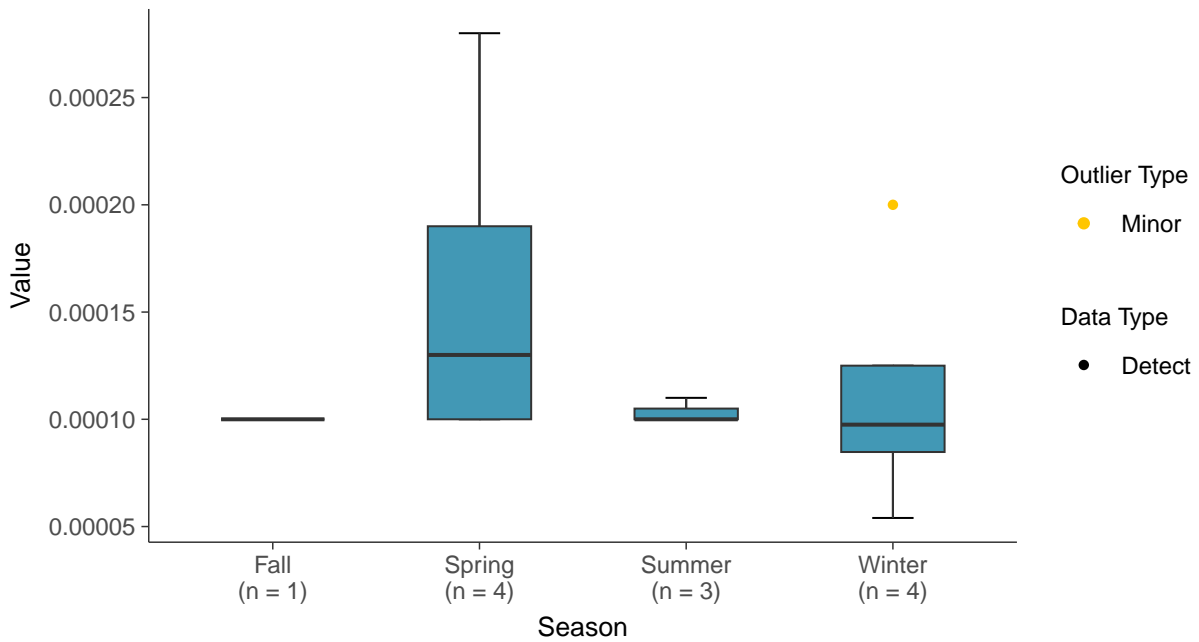
### Boxplot

Antimony, MW-08 (mg/L)



### Boxplot by Season

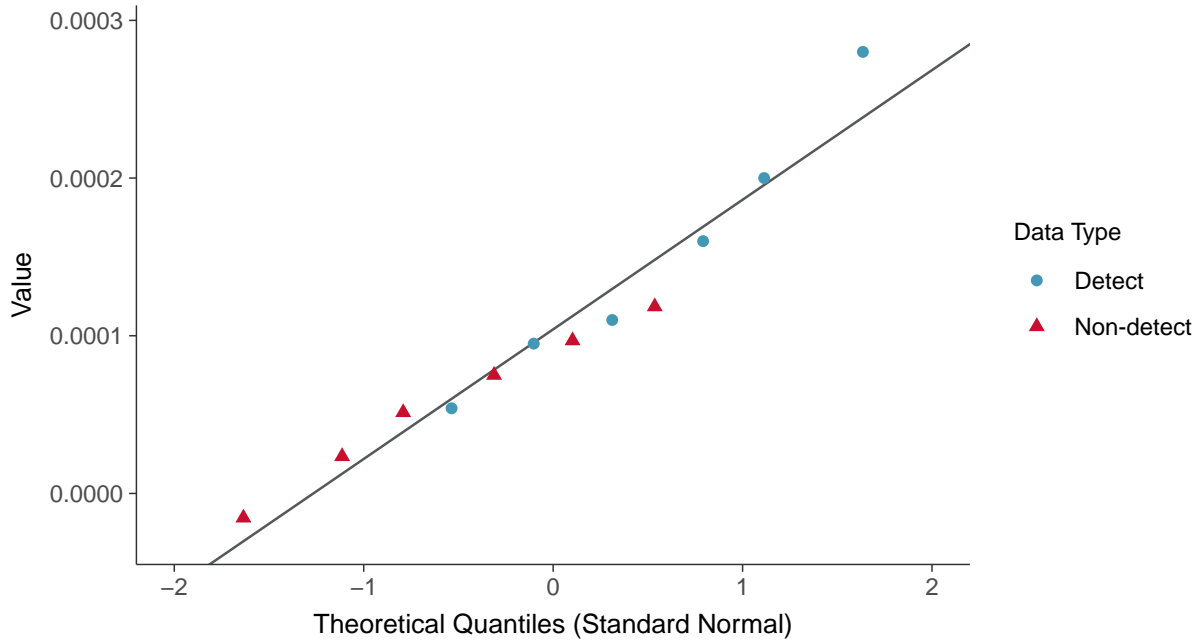
Antimony, MW-08 (mg/L)





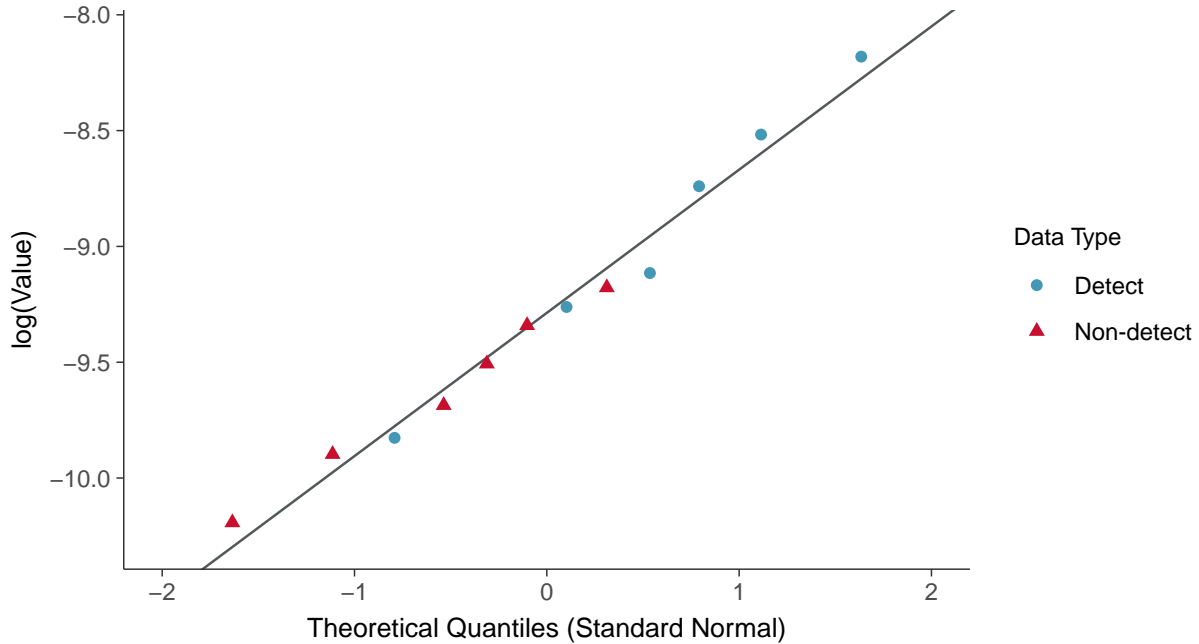
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

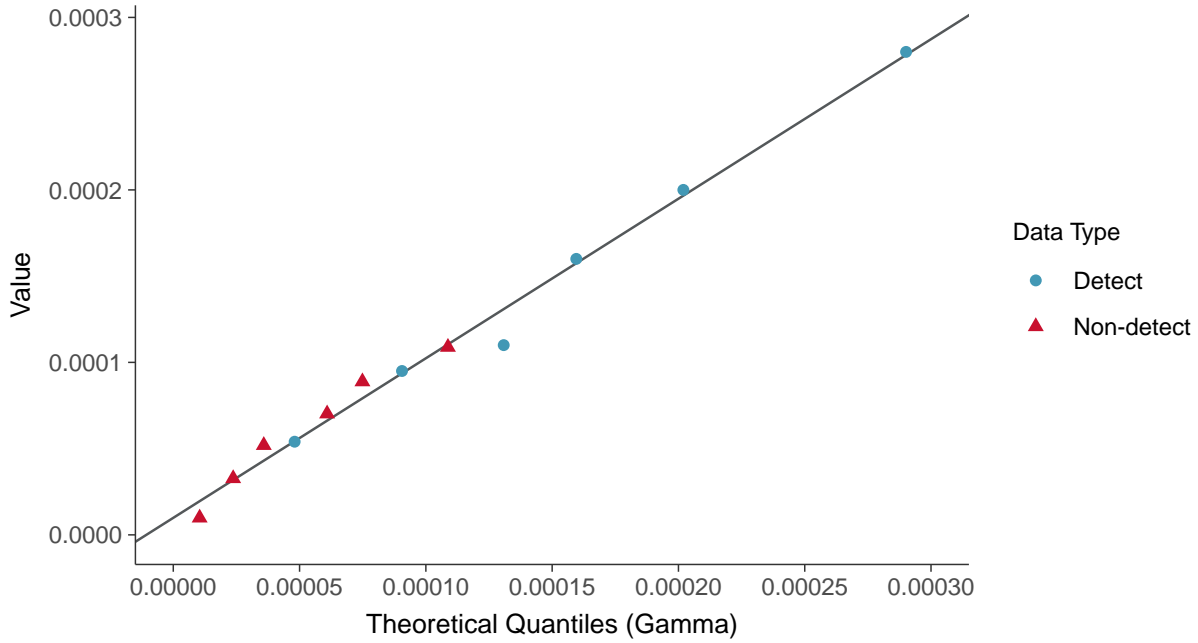
Antimony, MW-08 (mg/L)





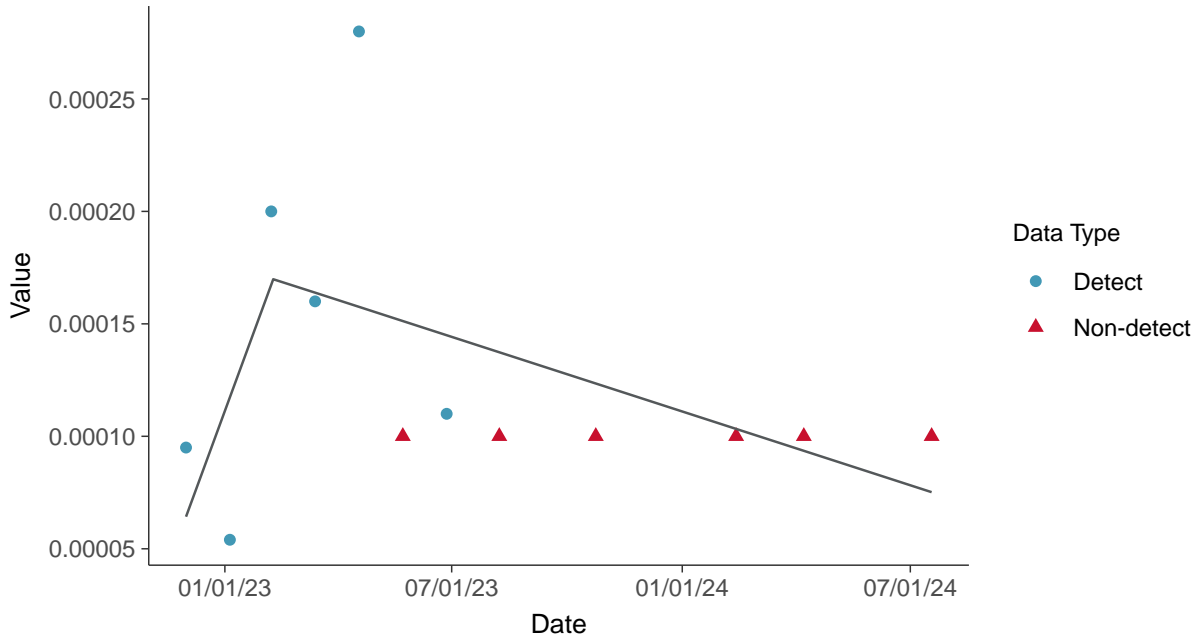
### Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Antimony, MW-08 (mg/L)

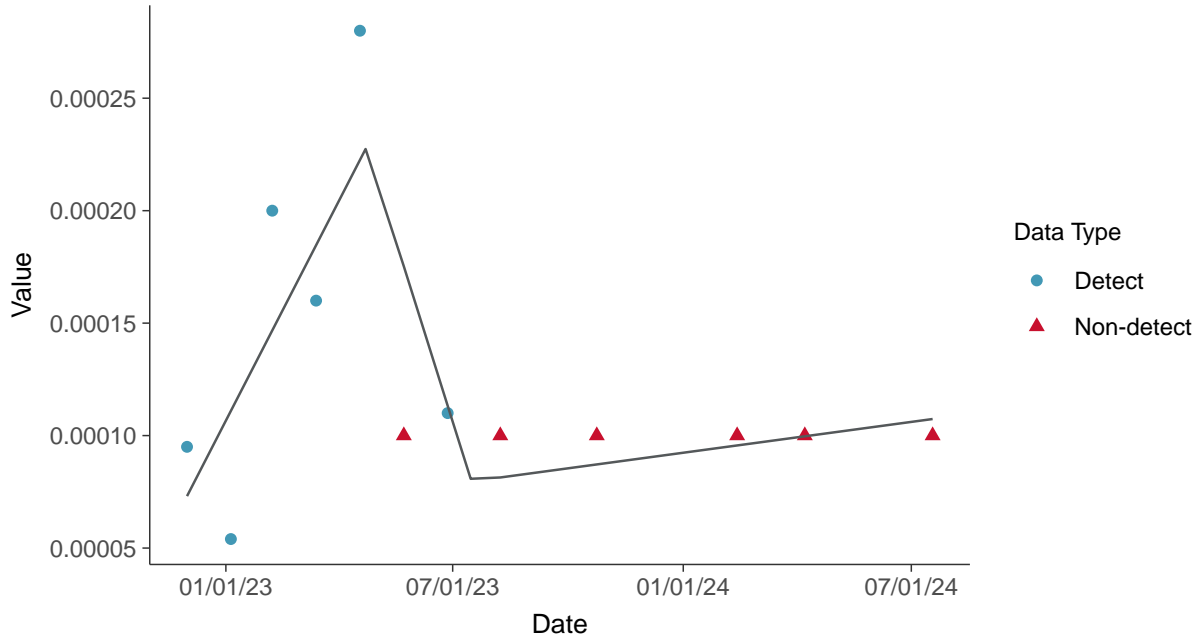






### Trend Regression: Piecewise Linear-Linear-Linear

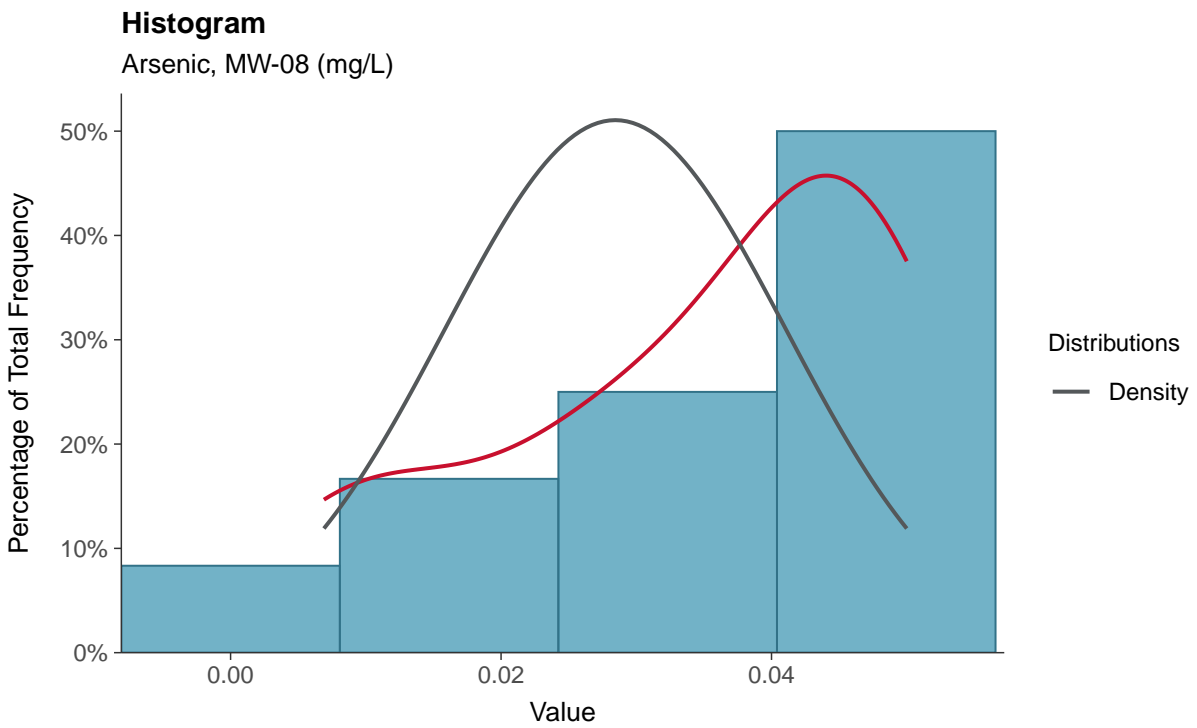
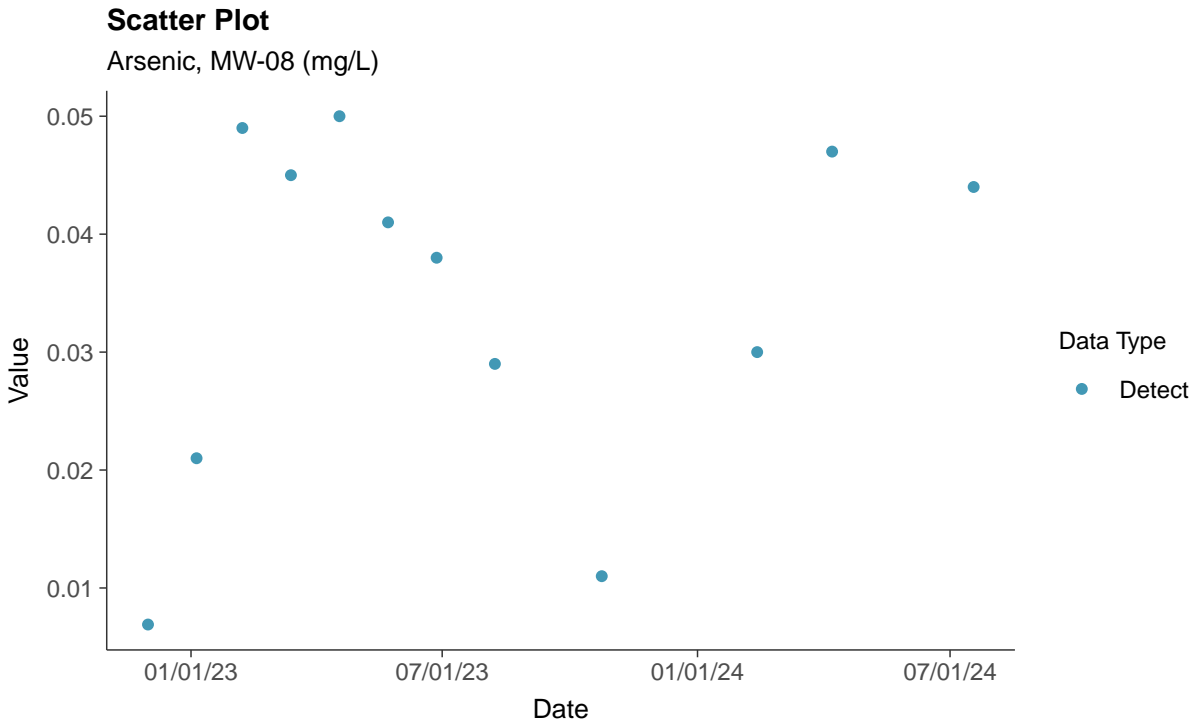
Antimony, MW-08 (mg/L)





### Appendix IV: Arsenic, MW-08

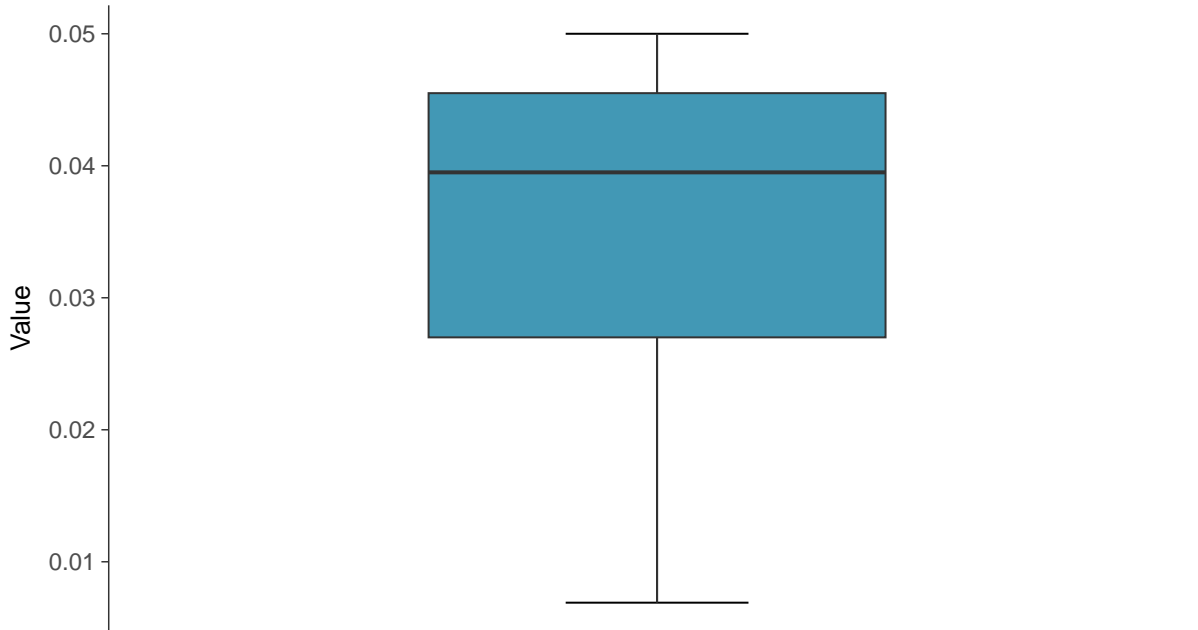
ID: 18\_1\_5\_102





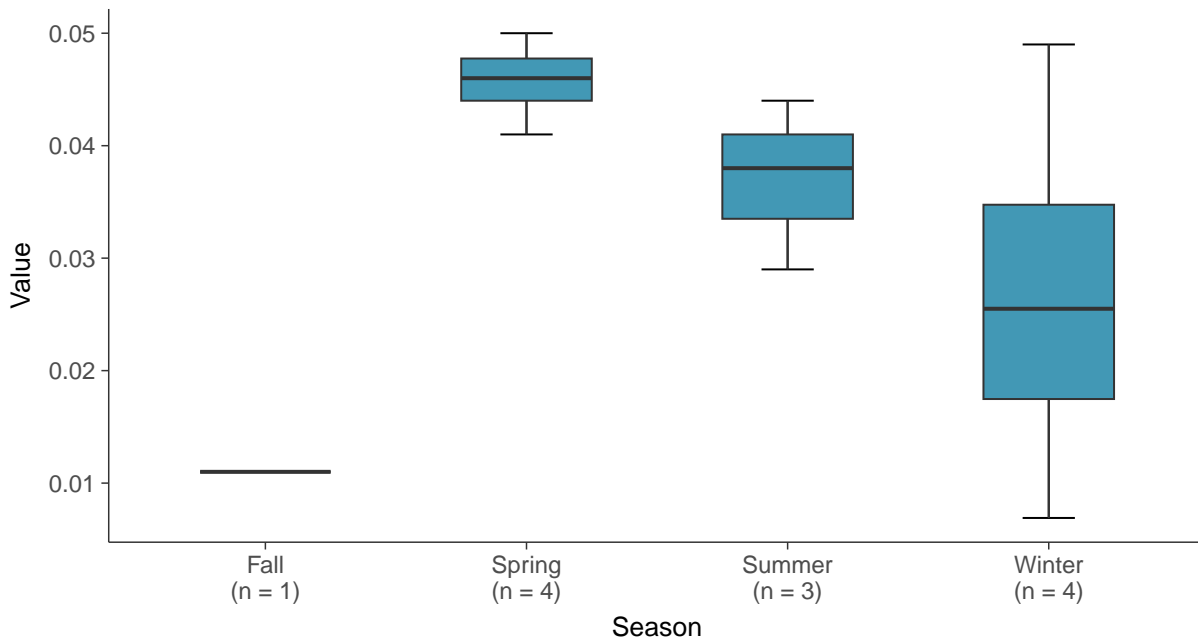
### Boxplot

Arsenic, MW-08 (mg/L)



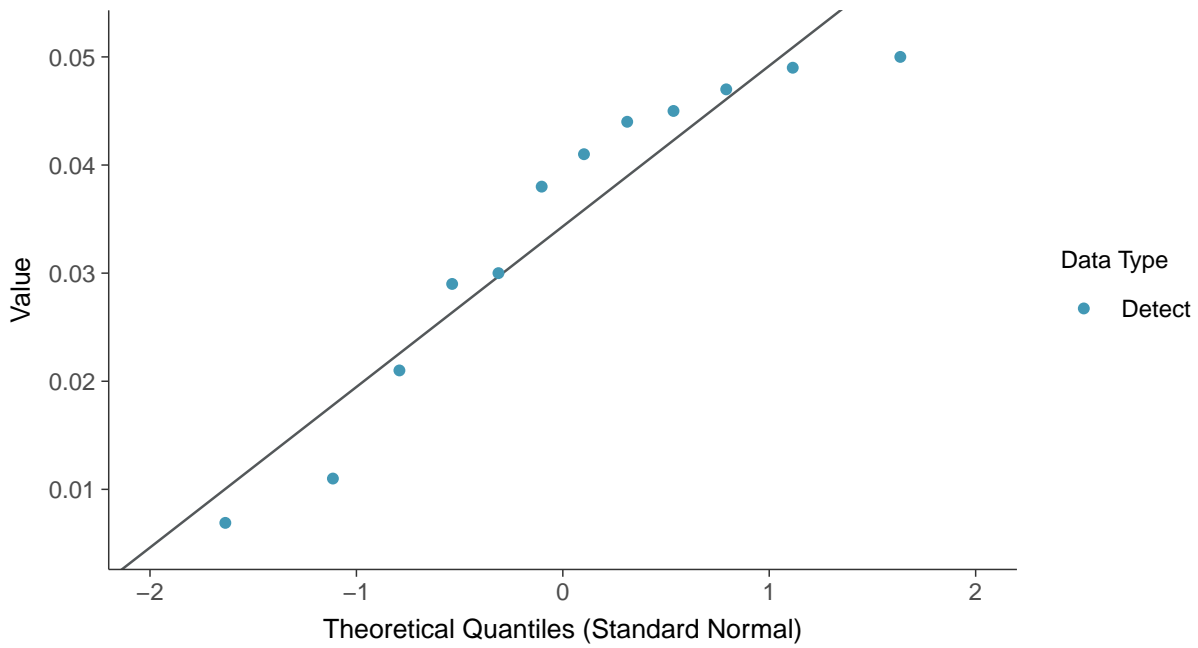
### Boxplot by Season

Arsenic, MW-08 (mg/L)

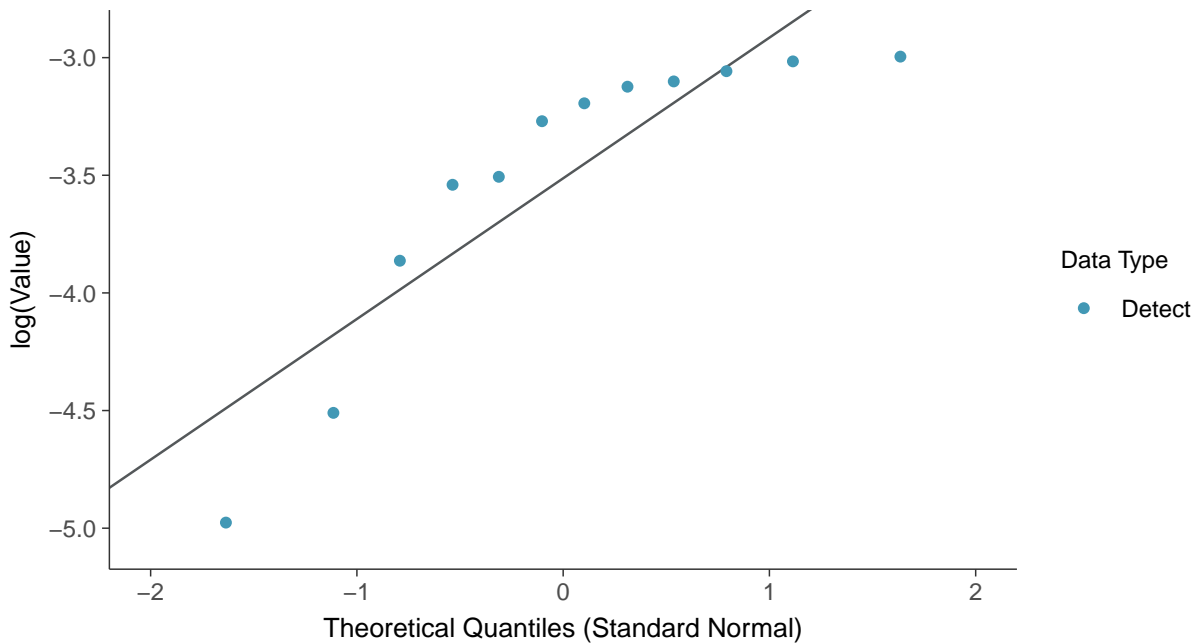




**Normal Q-Q plot**  
Arsenic, MW-08 (mg/L)



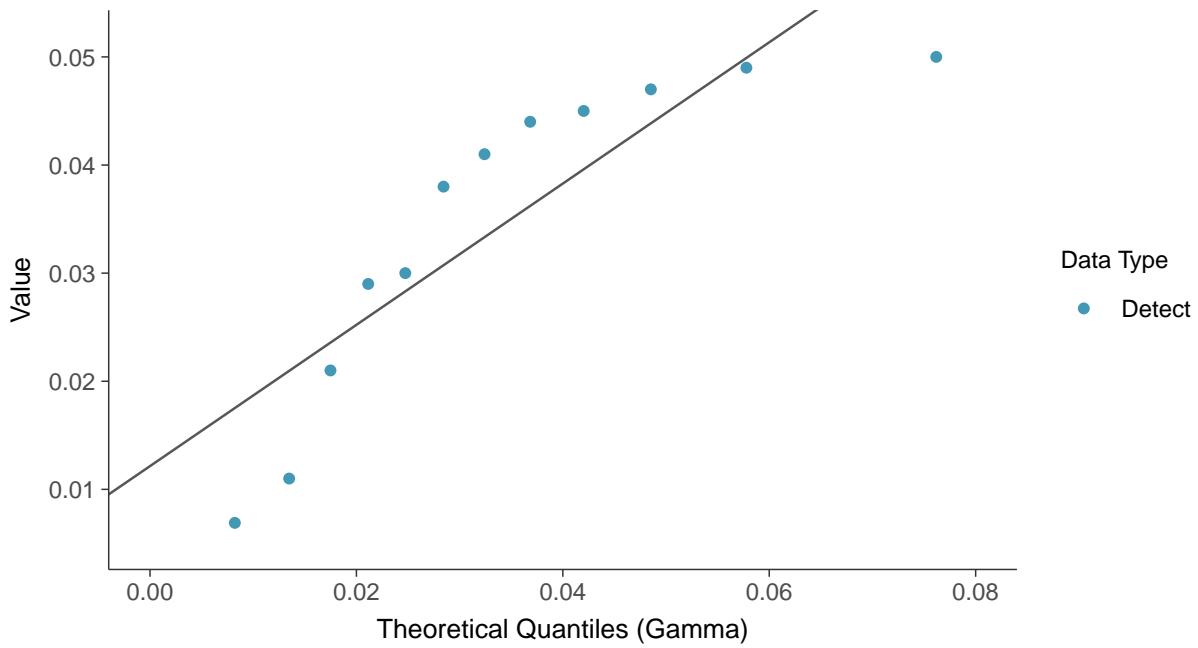
**Lognormal Q-Q plot**  
Arsenic, MW-08 (mg/L)





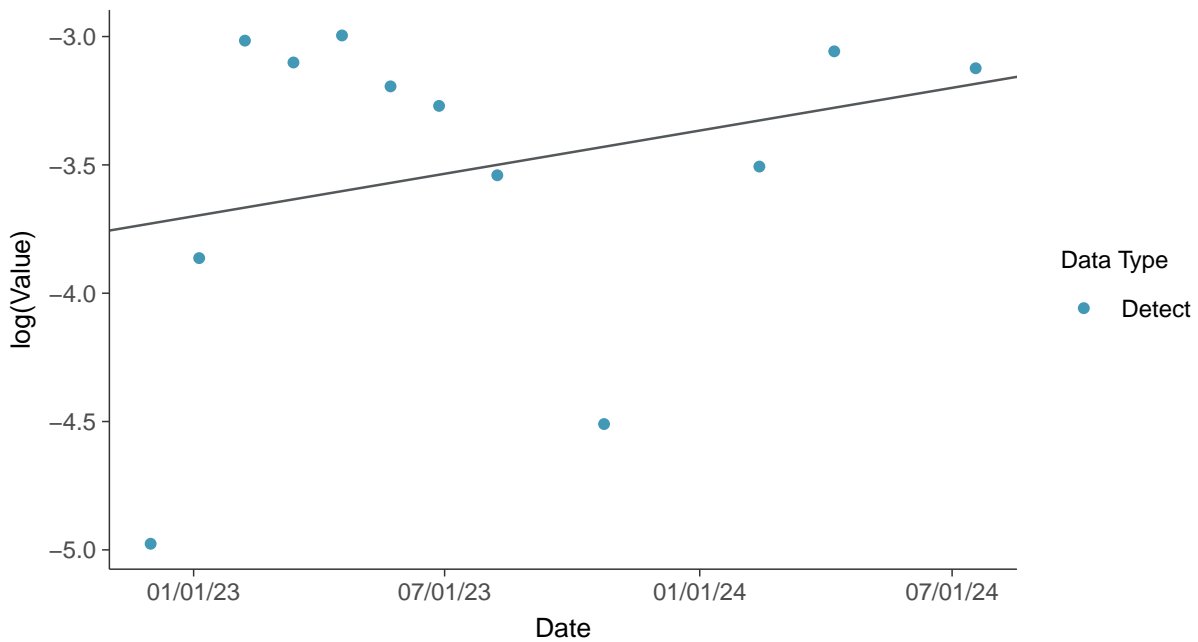
### Gamma Q-Q plot

Arsenic, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

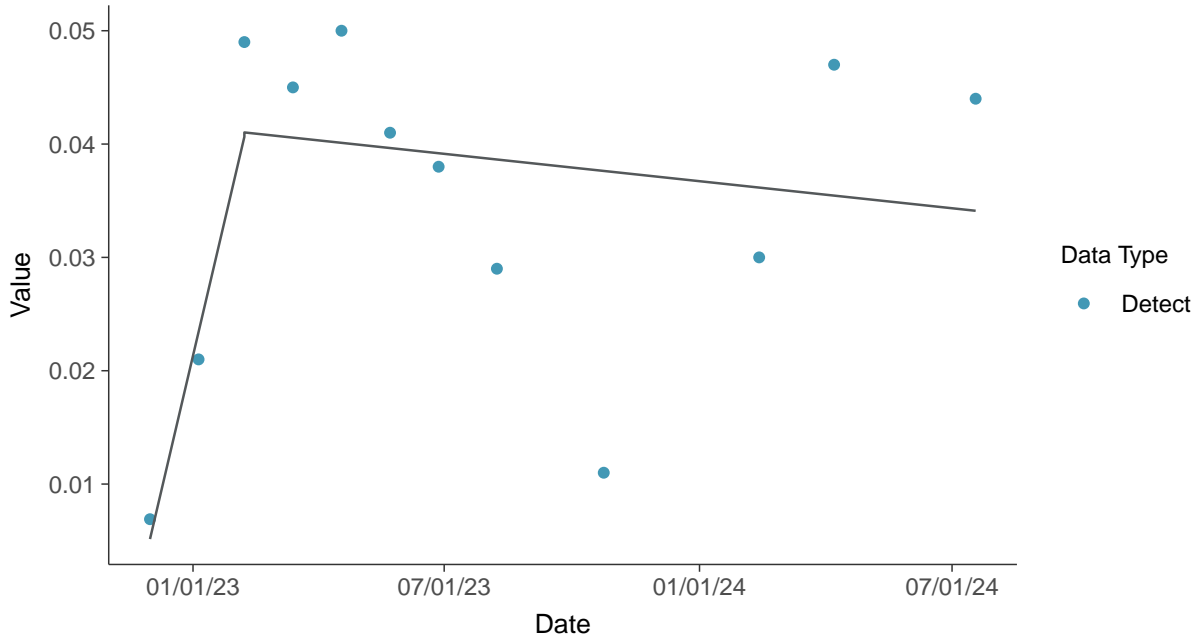
Arsenic, MW-08 (mg/L)





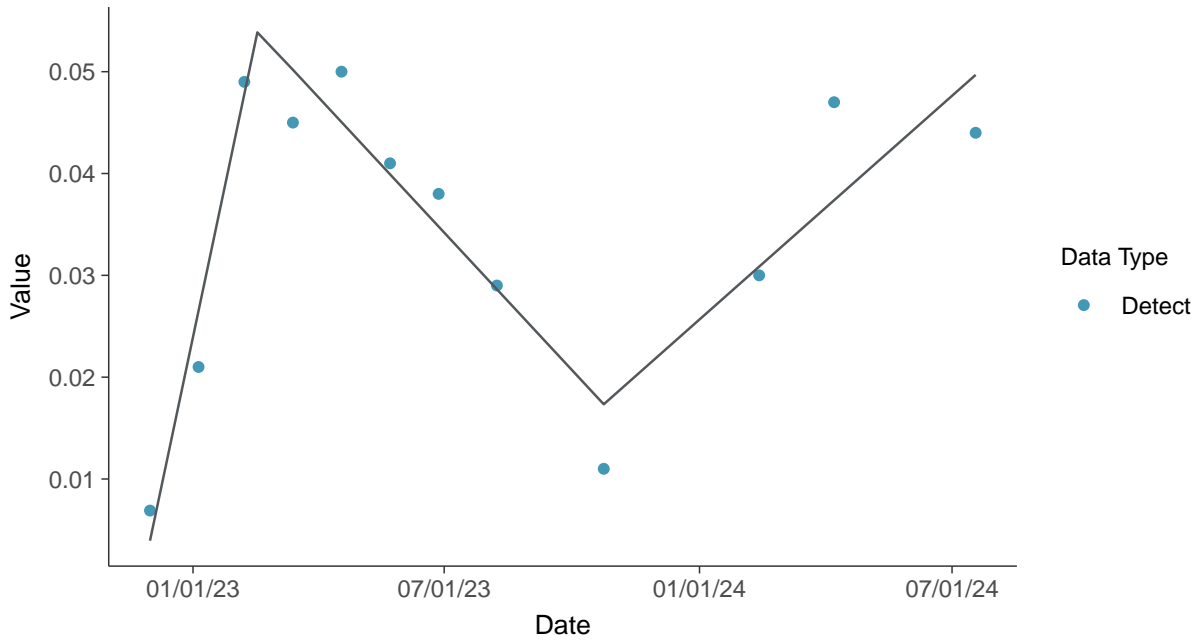
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

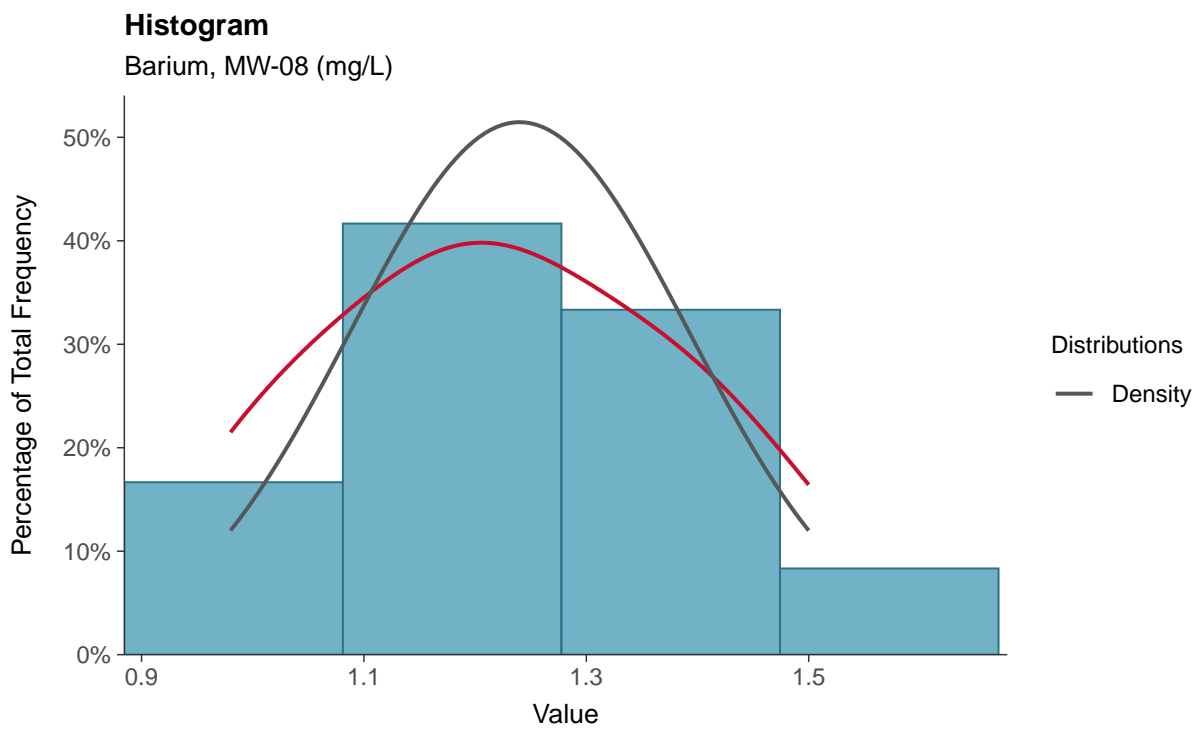
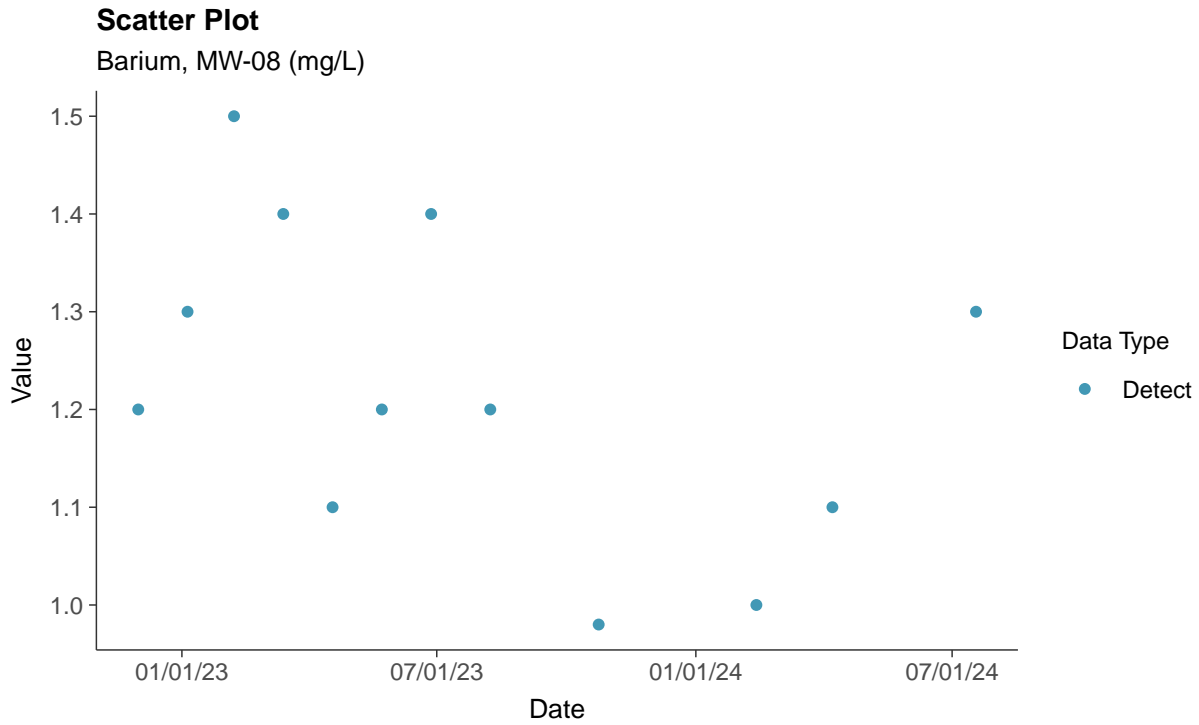
Arsenic, MW-08 (mg/L)





### Appendix IV: Barium, MW-08

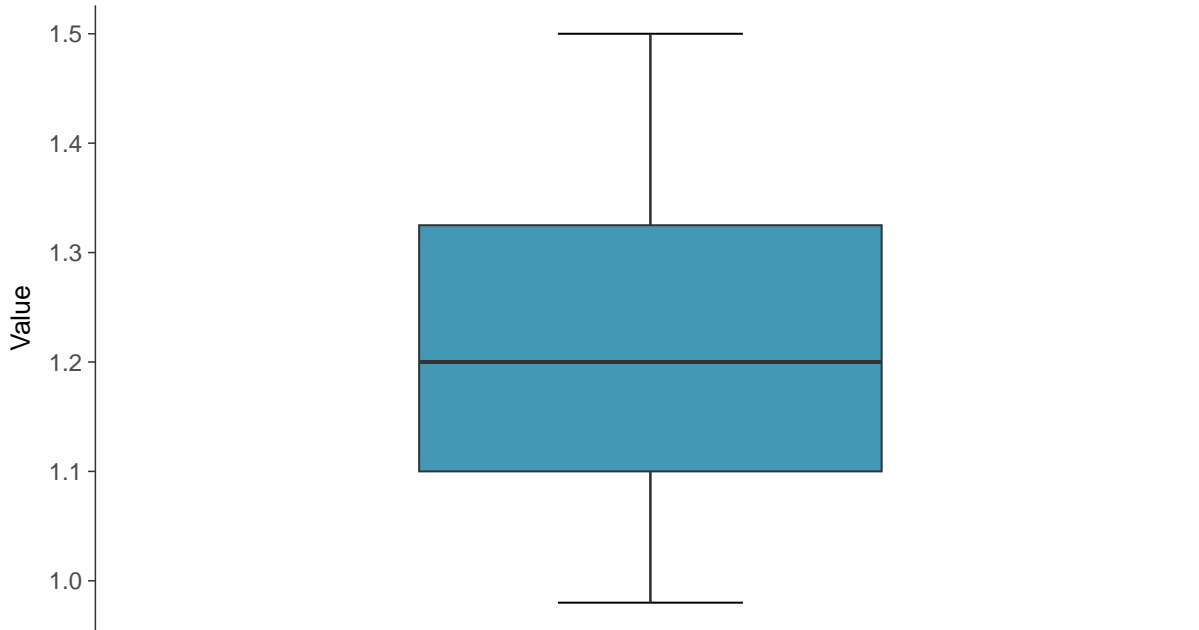
ID: 18\_1\_5\_103





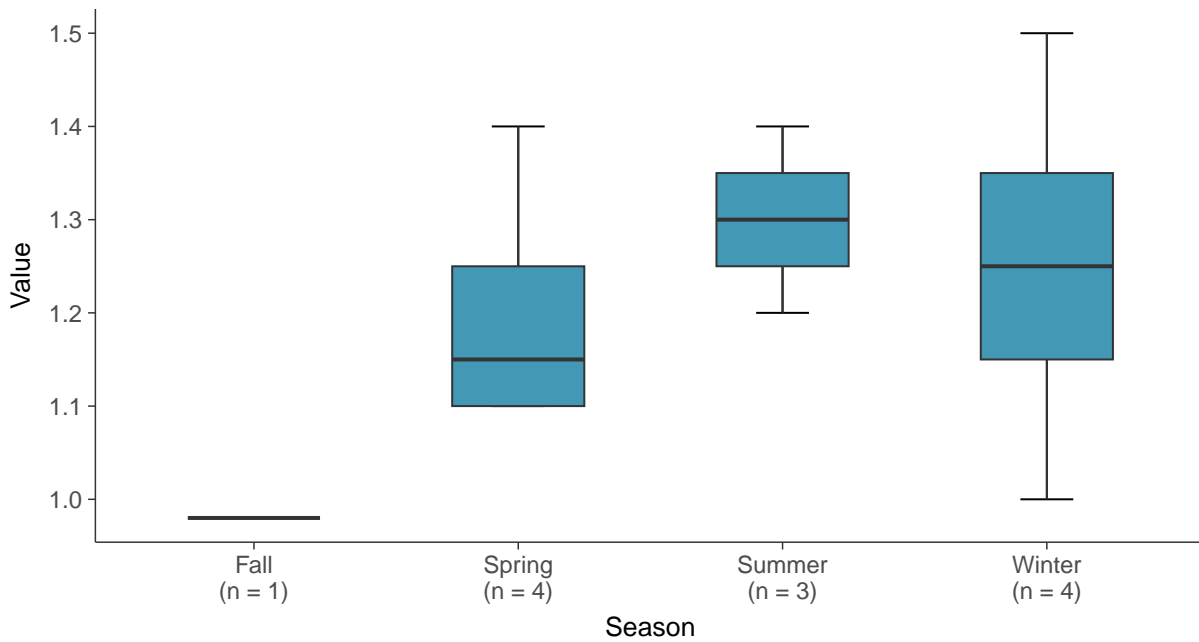
### Boxplot

Barium, MW-08 (mg/L)



### Boxplot by Season

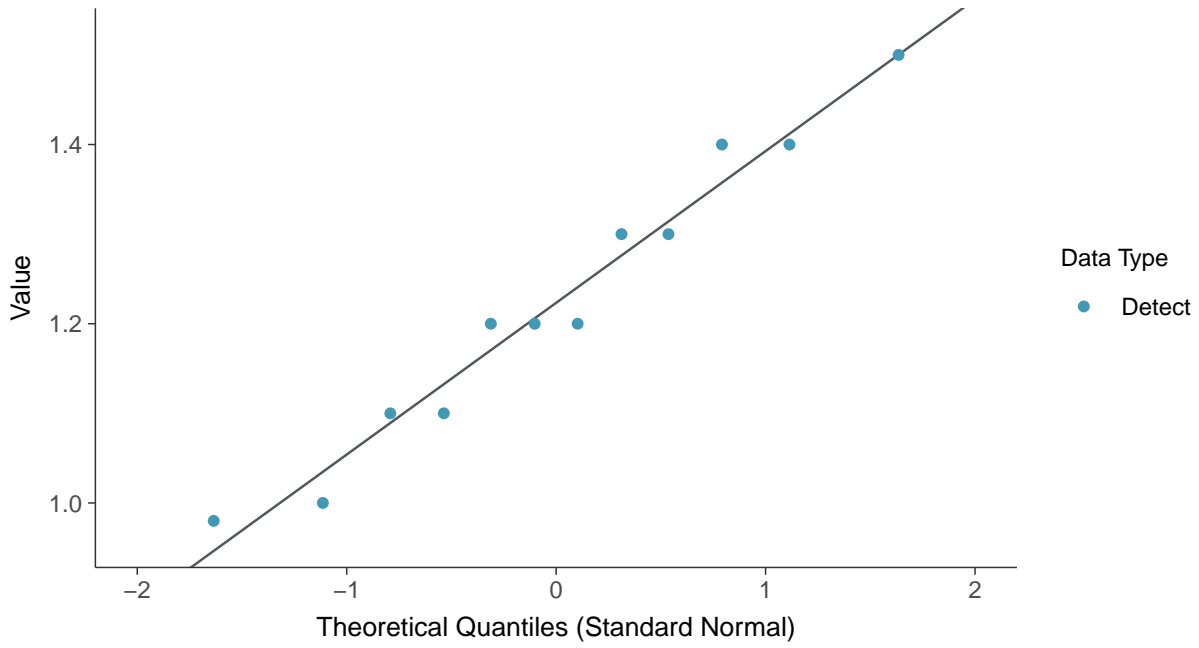
Barium, MW-08 (mg/L)



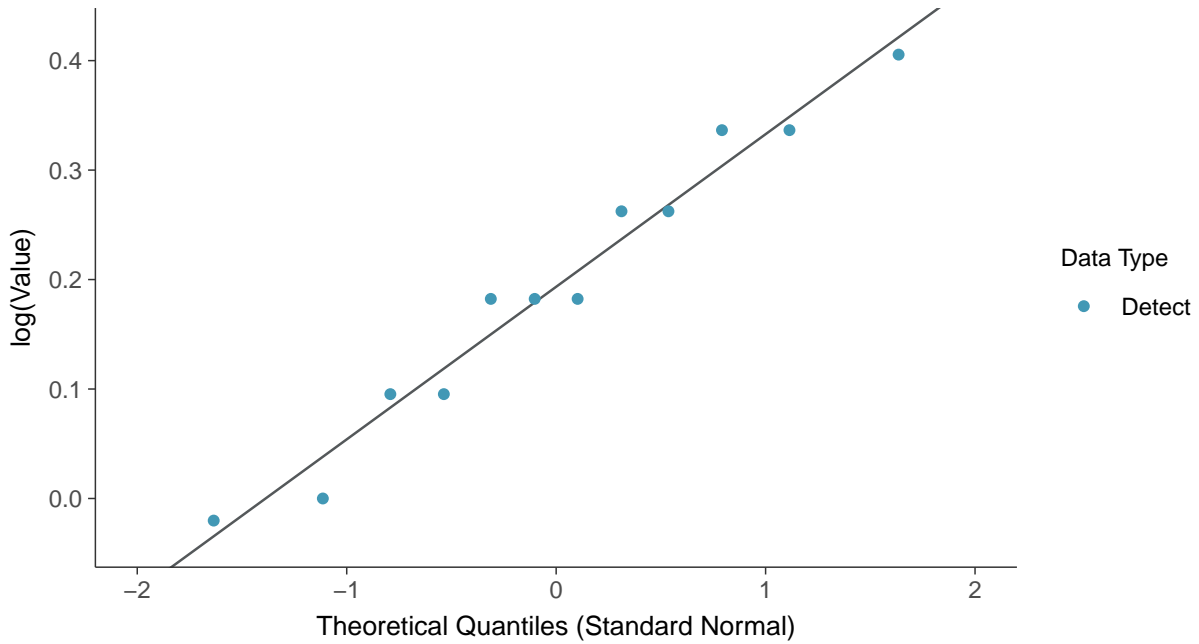




**Normal Q-Q plot**  
Barium, MW-08 (mg/L)

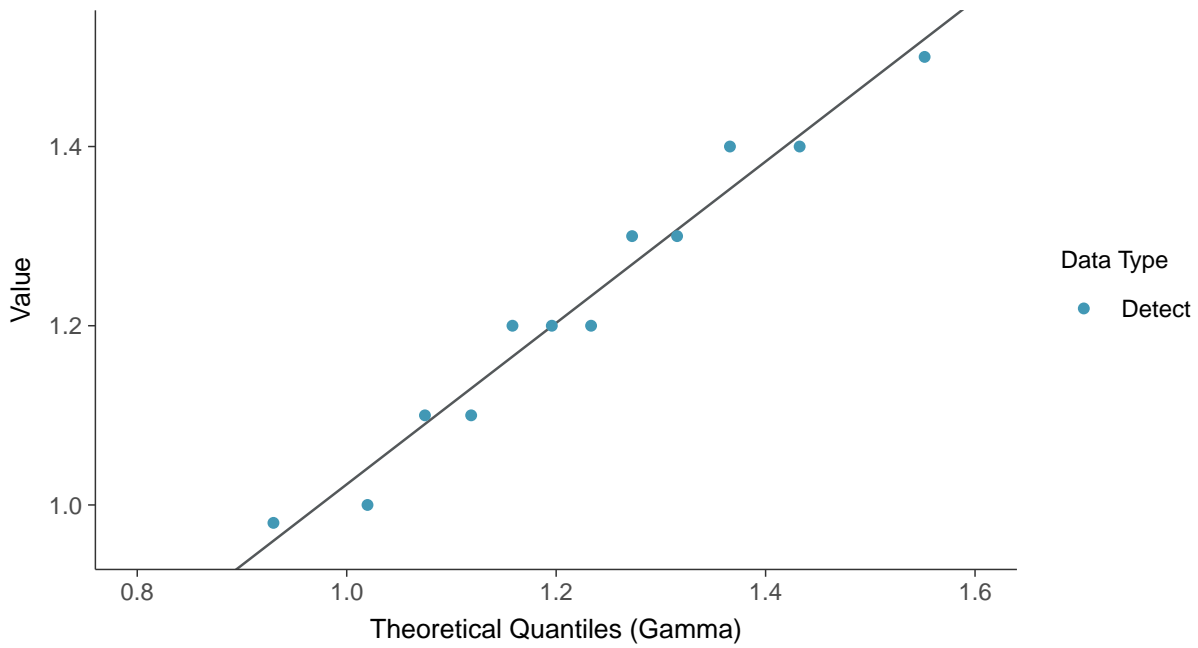


**Lognormal Q-Q plot**  
Barium, MW-08 (mg/L)

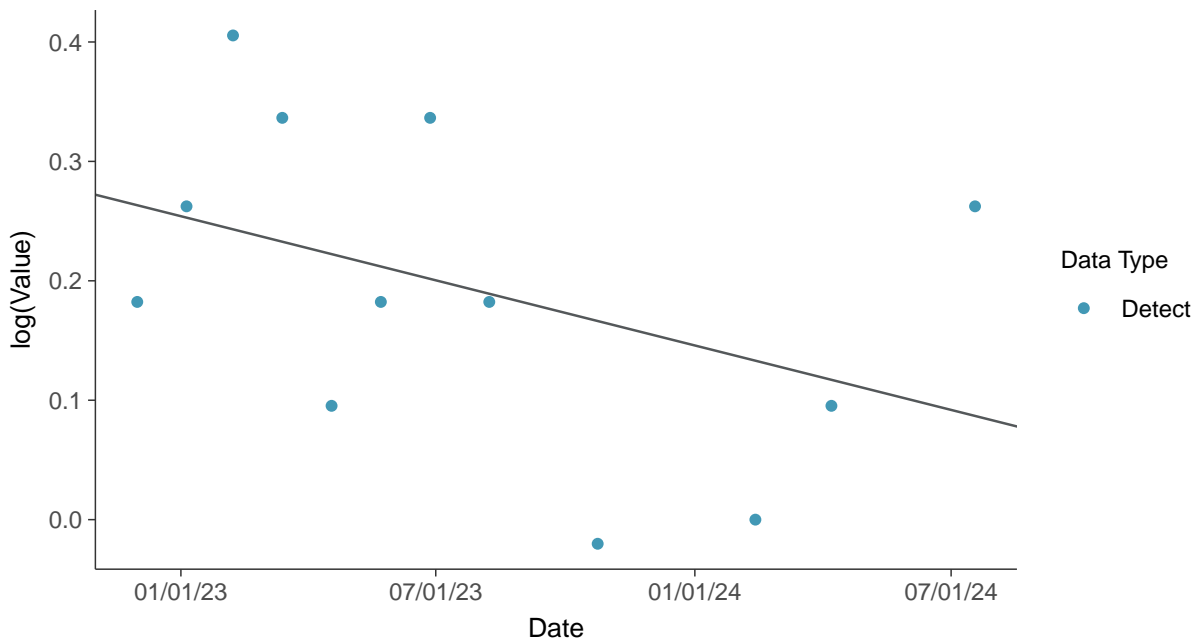




**Gamma Q-Q plot**  
Barium, MW-08 (mg/L)



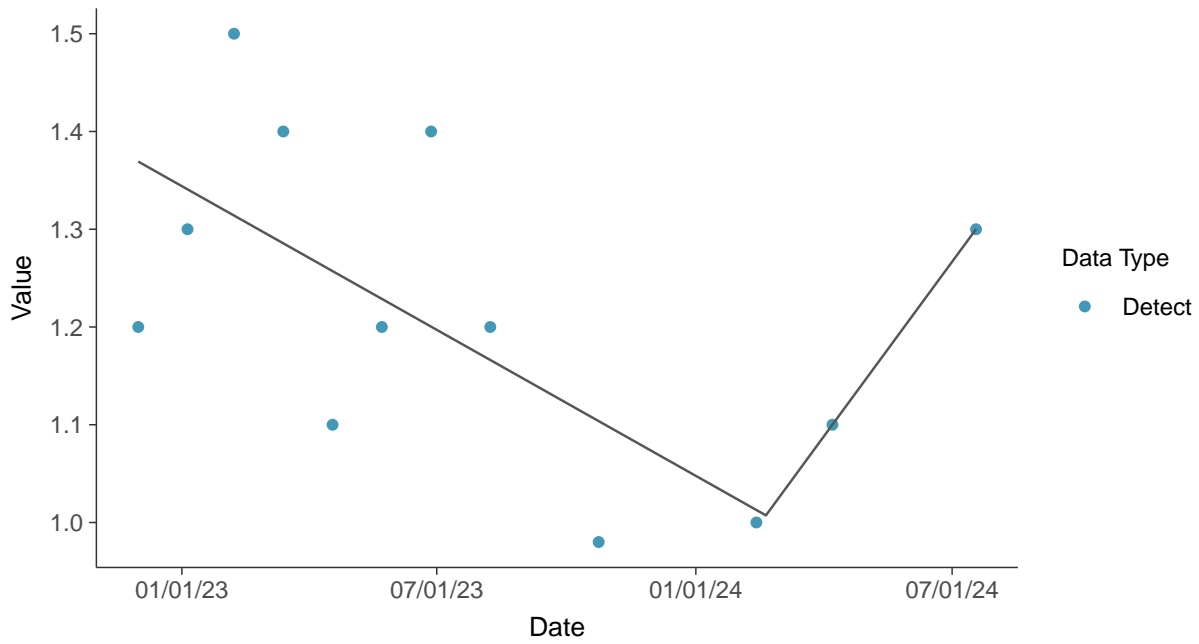
**Trend Regression: Lognormal MLE**  
Barium, MW-08 (mg/L)





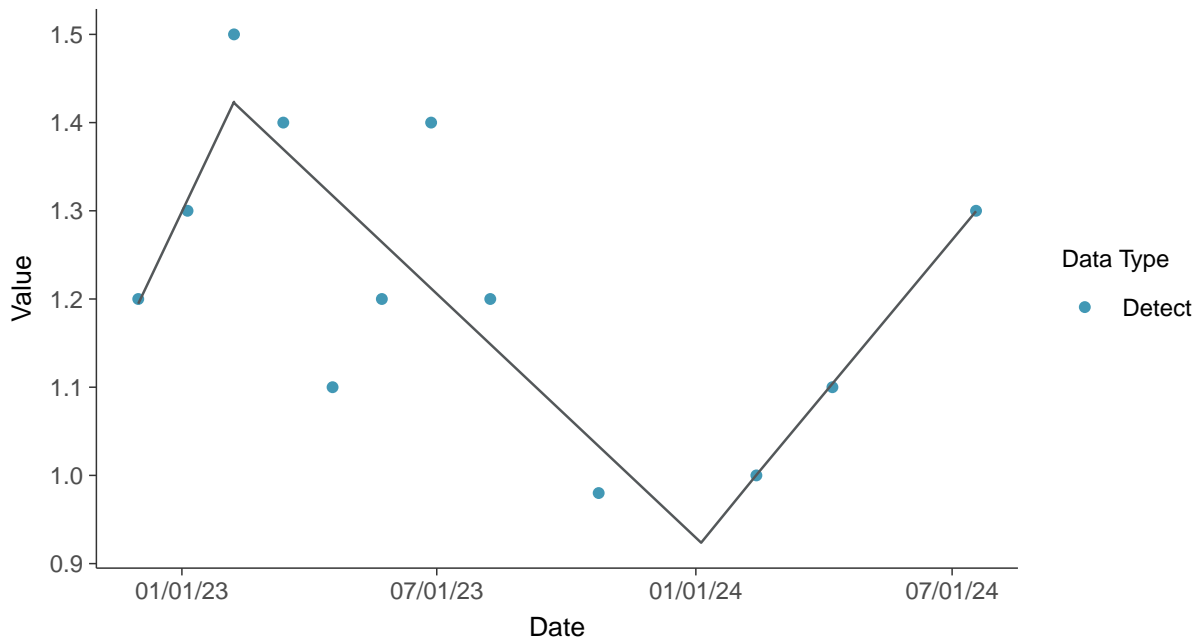
### Trend Regression: Piecewise Linear-Linear

Barium, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

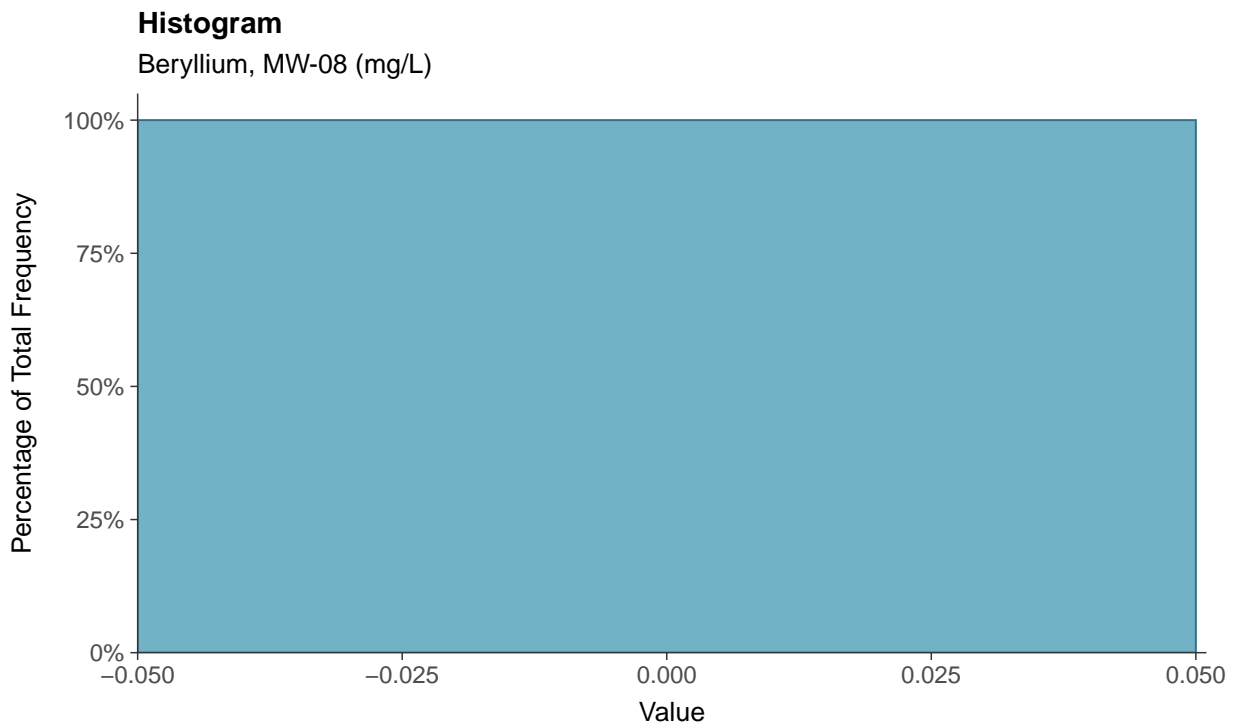
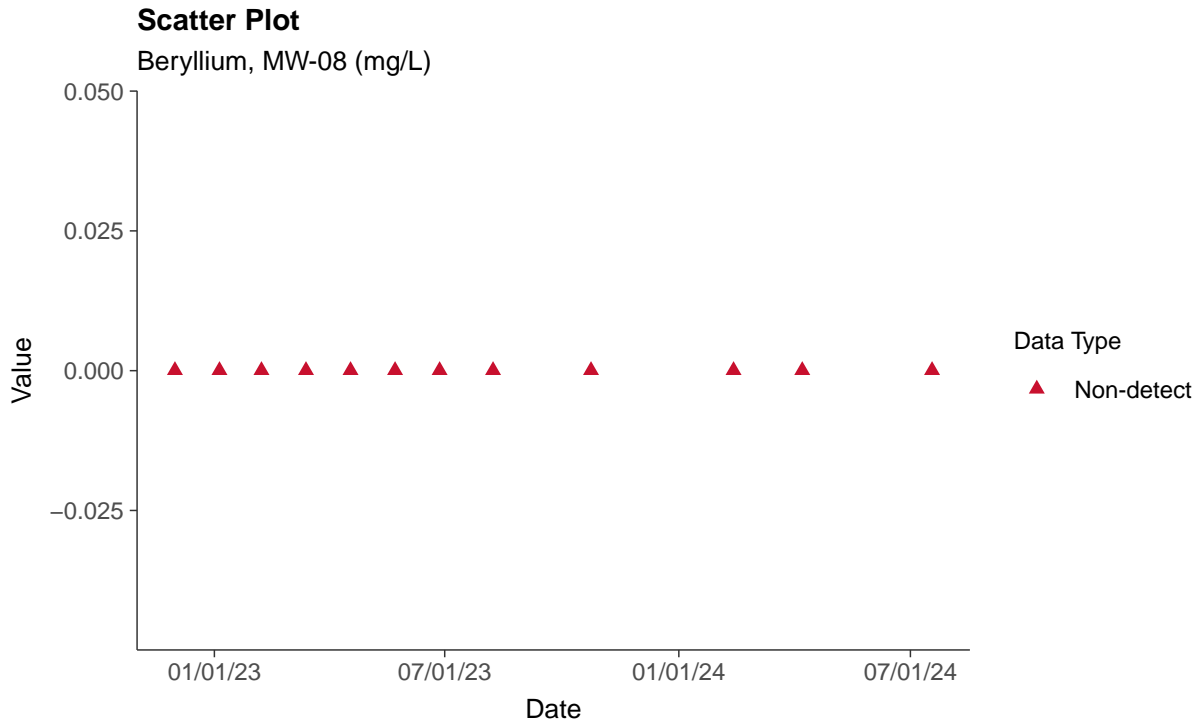
Barium, MW-08 (mg/L)





### Appendix IV: Beryllium, MW-08

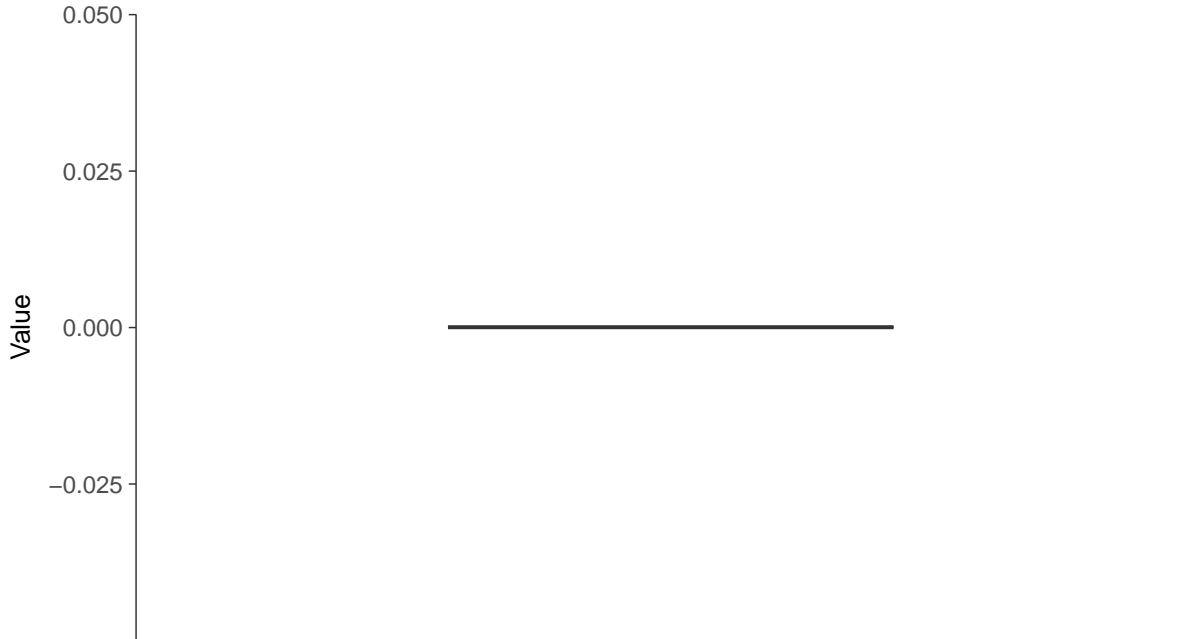
ID: 18\_1\_5\_104





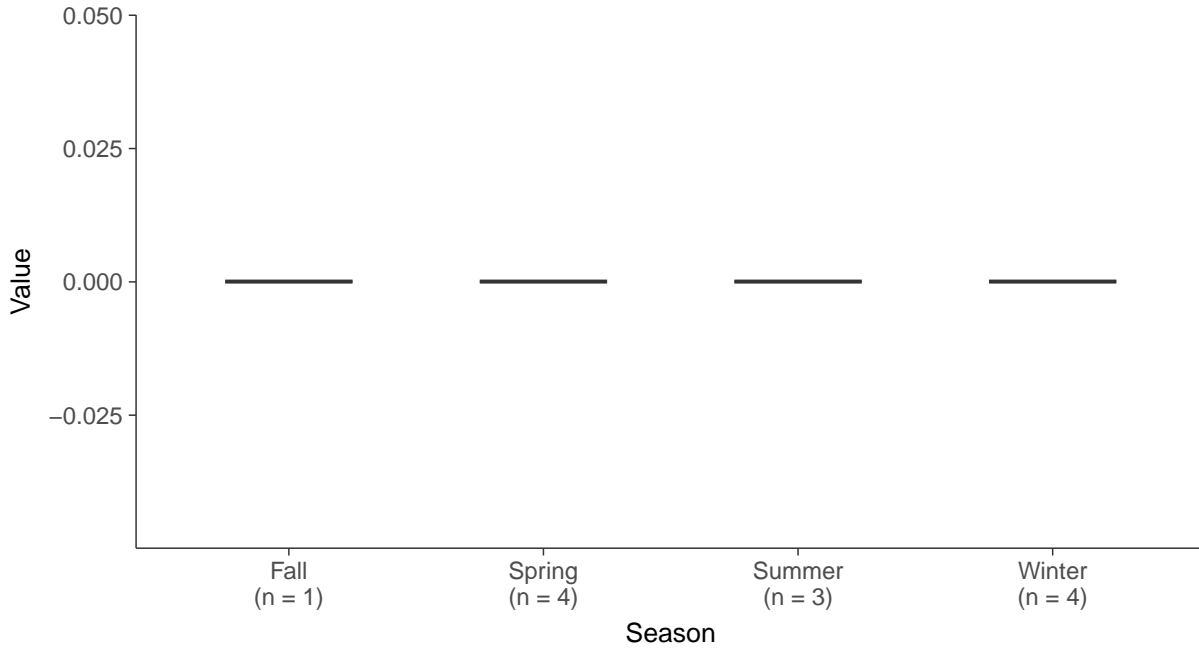
### Boxplot

Beryllium, MW-08 (mg/L)



### Boxplot by Season

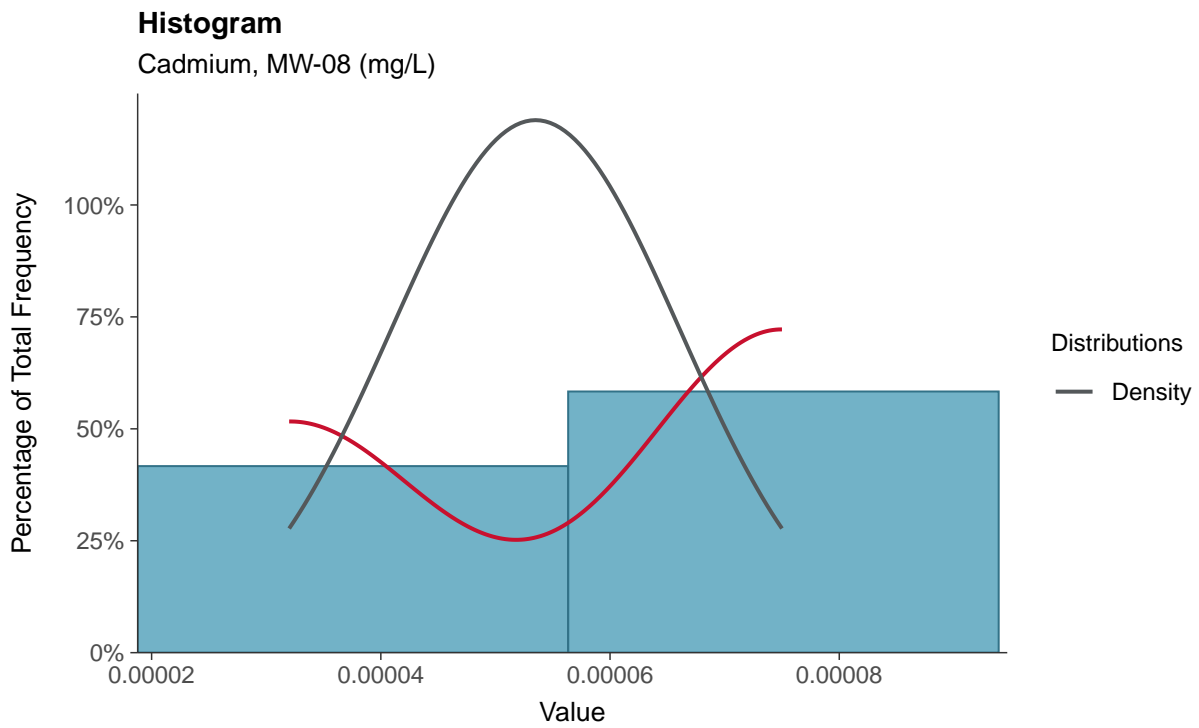
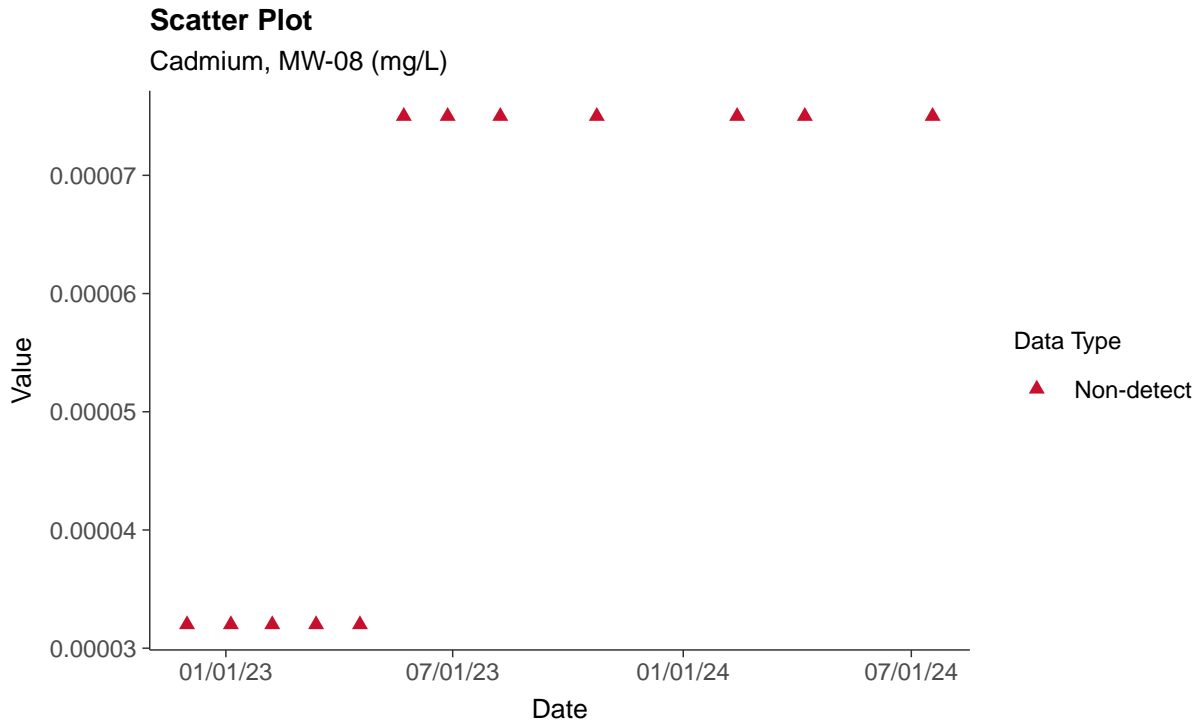
Beryllium, MW-08 (mg/L)





### Appendix IV: Cadmium, MW-08

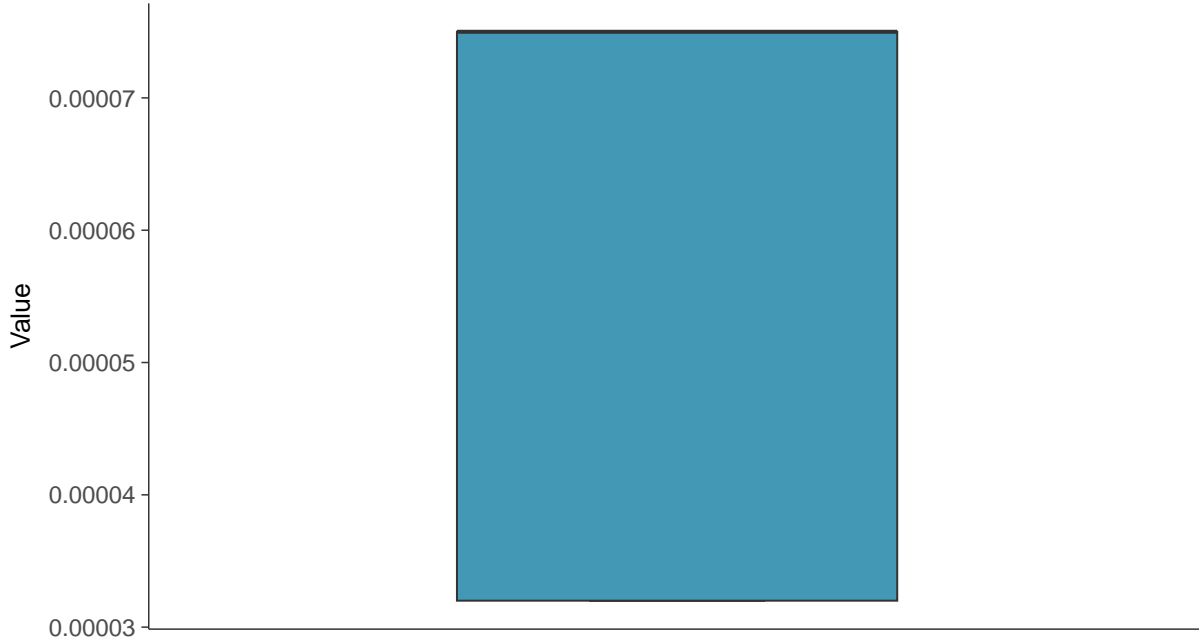
ID: 18\_1\_5\_106





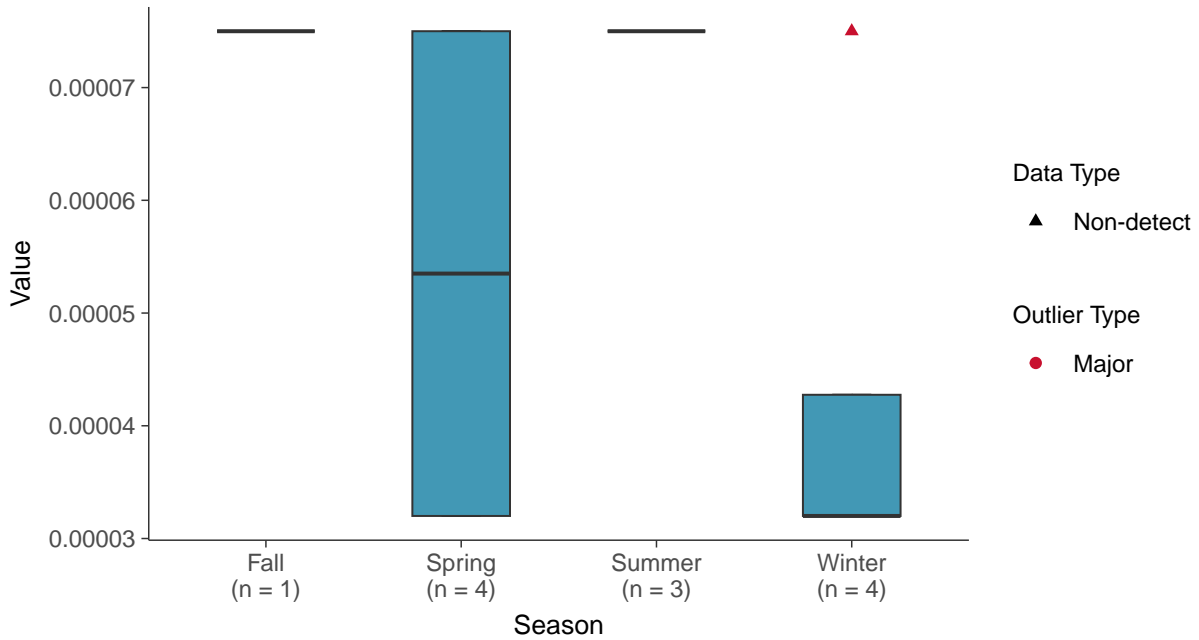
### Boxplot

Cadmium, MW-08 (mg/L)



### Boxplot by Season

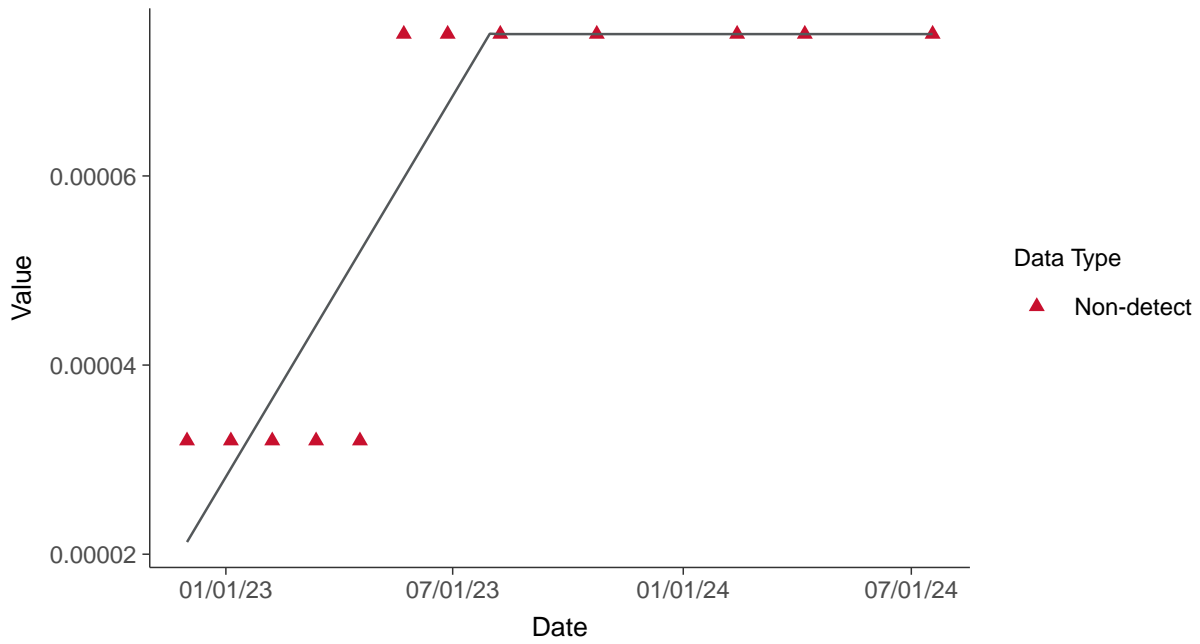
Cadmium, MW-08 (mg/L)





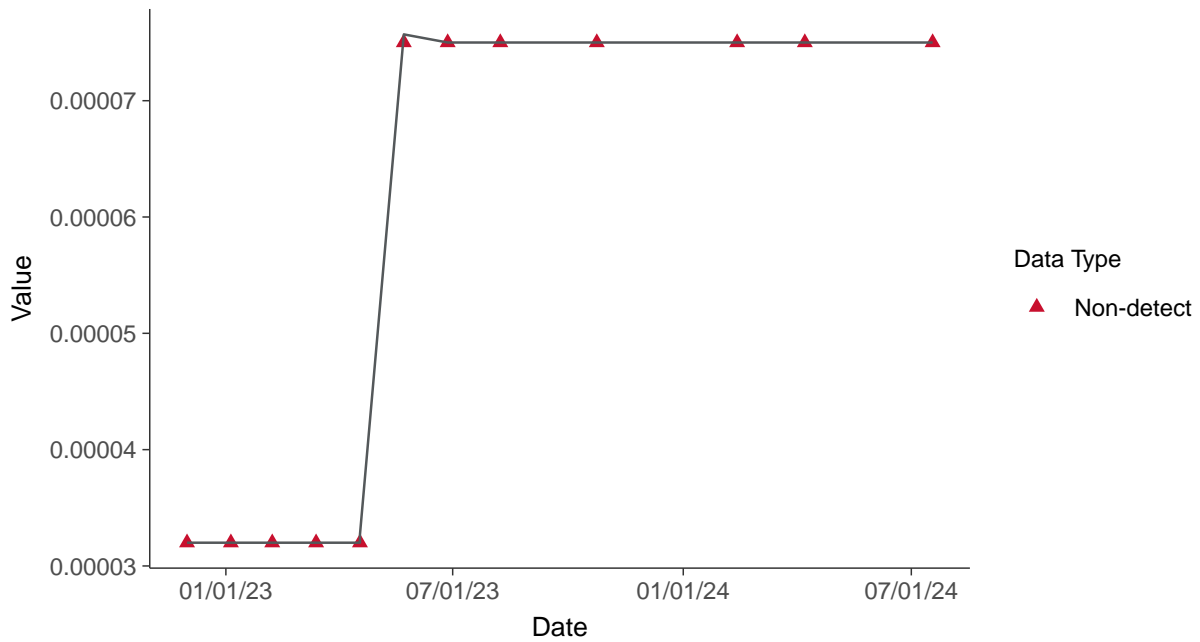
### Trend Regression: Piecewise Linear-Linear

Cadmium, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-08 (mg/L)





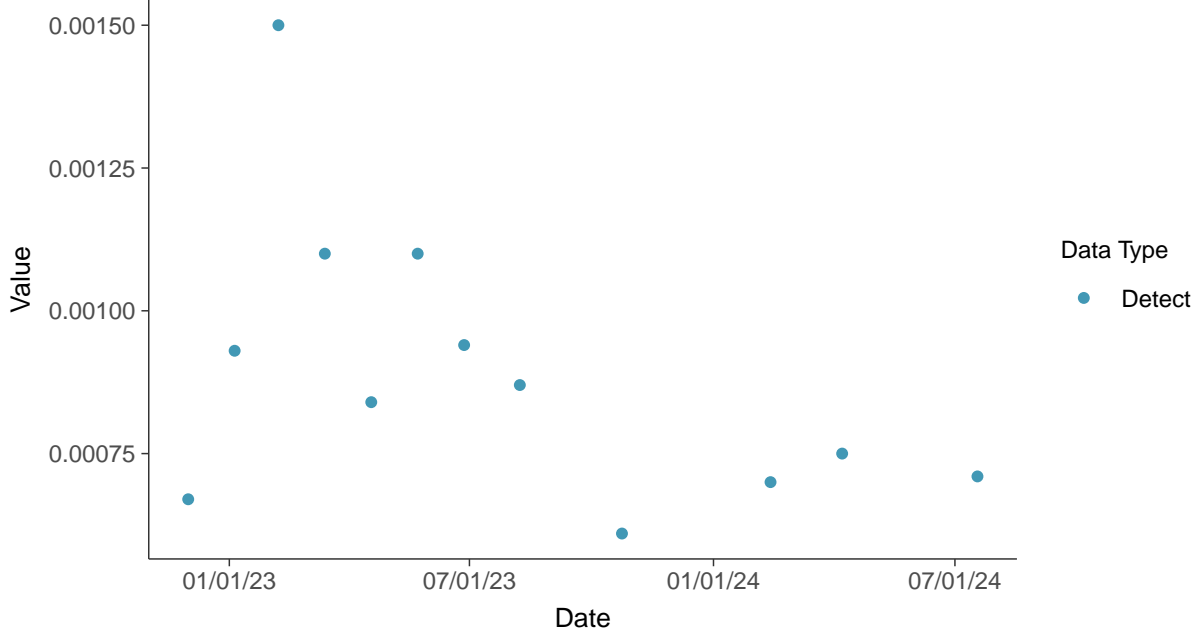


### Appendix IV: Chromium, Total, MW-08

ID: 18\_1\_5\_109

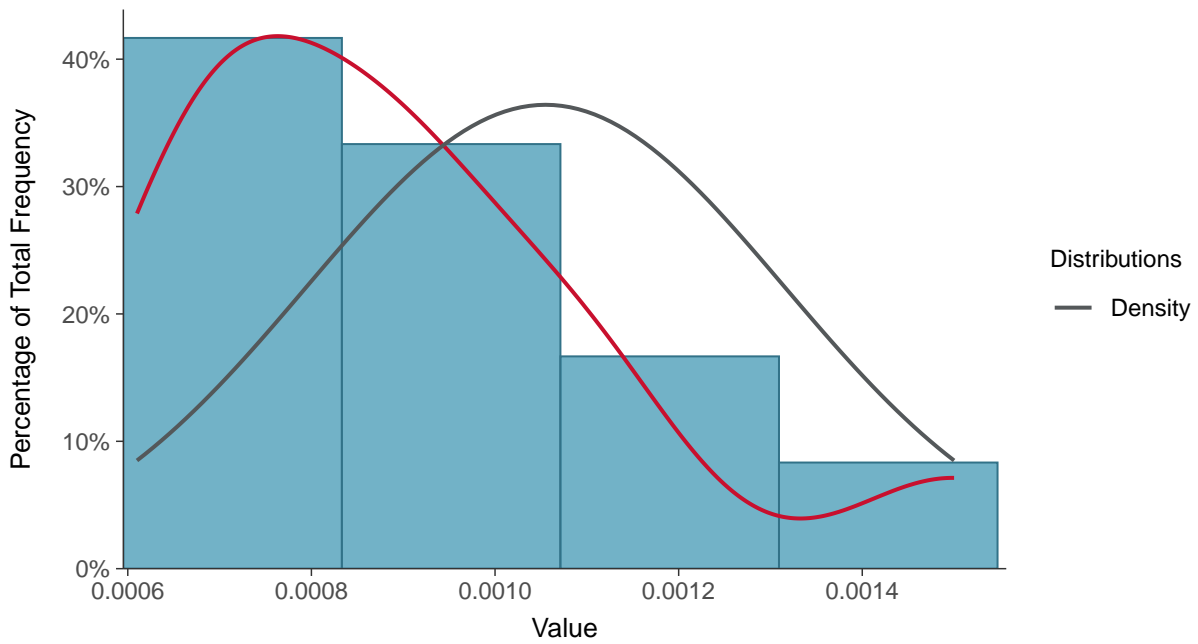
#### Scatter Plot

Chromium, Total, MW-08 (mg/L)



#### Histogram

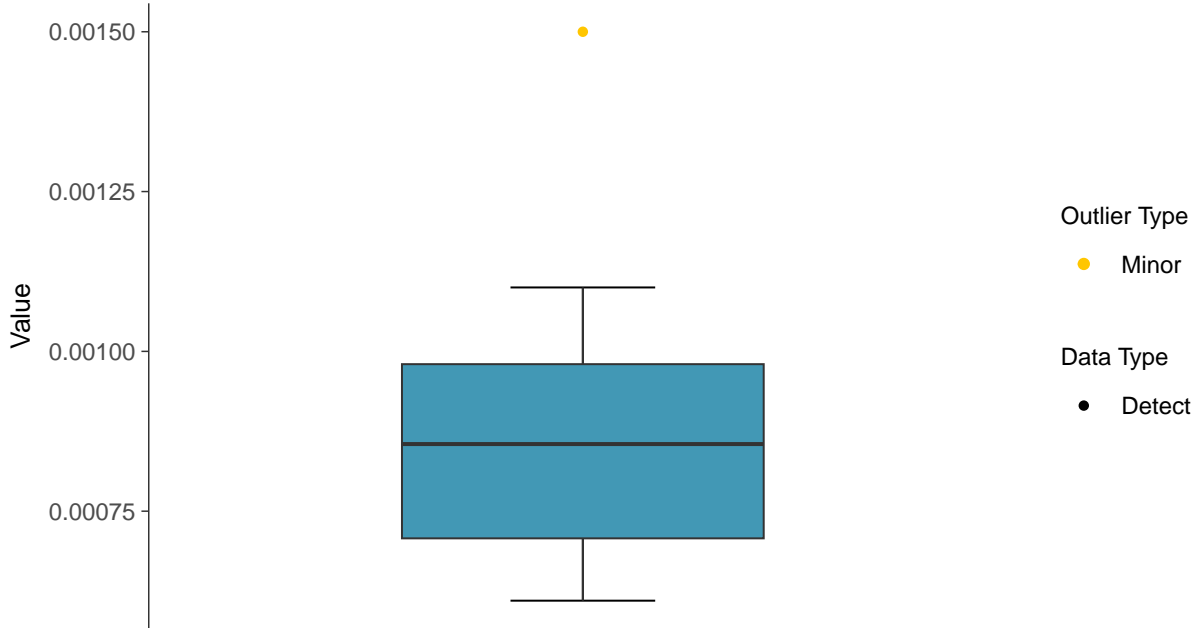
Chromium, Total, MW-08 (mg/L)





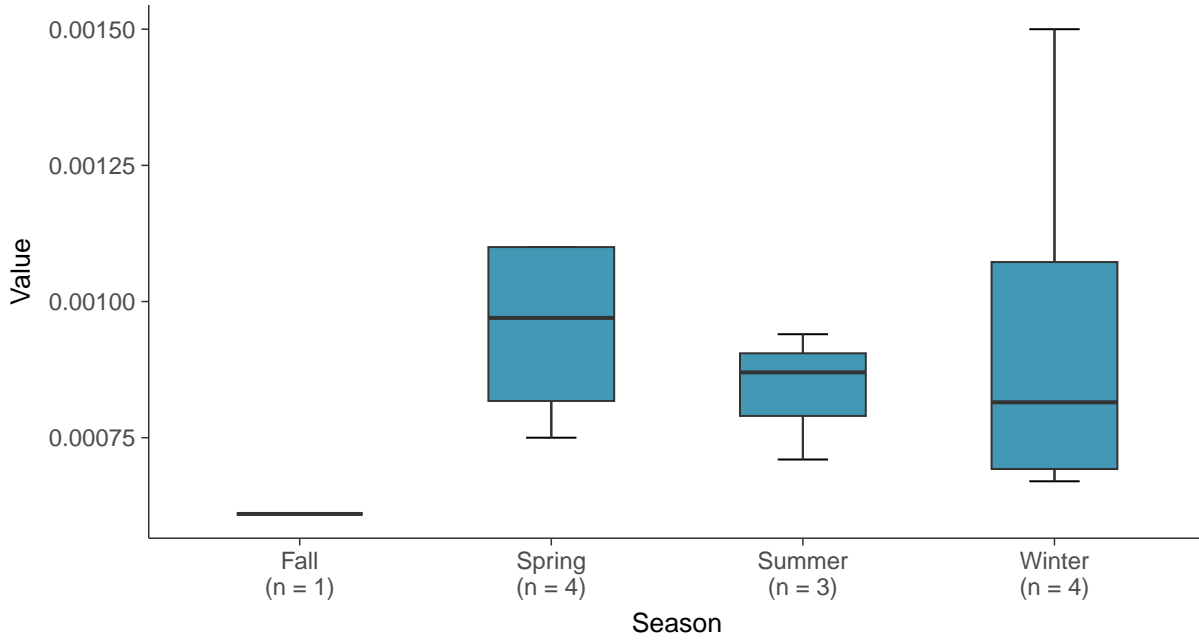
### Boxplot

Chromium, Total, MW-08 (mg/L)



### Boxplot by Season

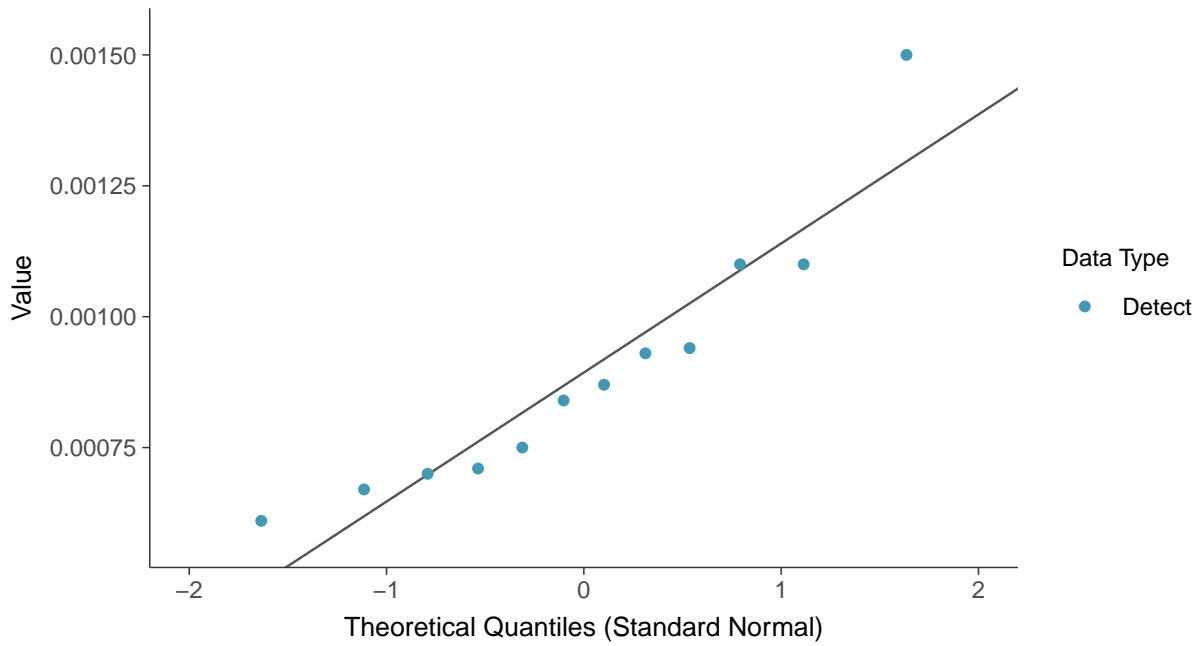
Chromium, Total, MW-08 (mg/L)





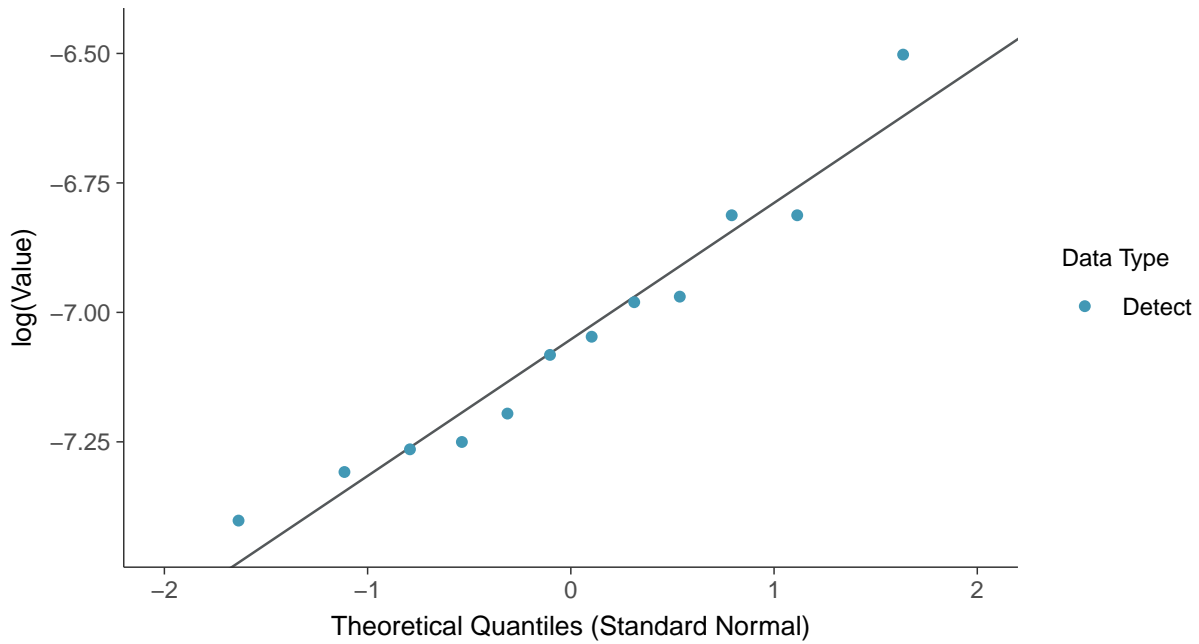
### Normal Q-Q plot

Chromium, Total, MW-08 (mg/L)



### Lognormal Q-Q plot

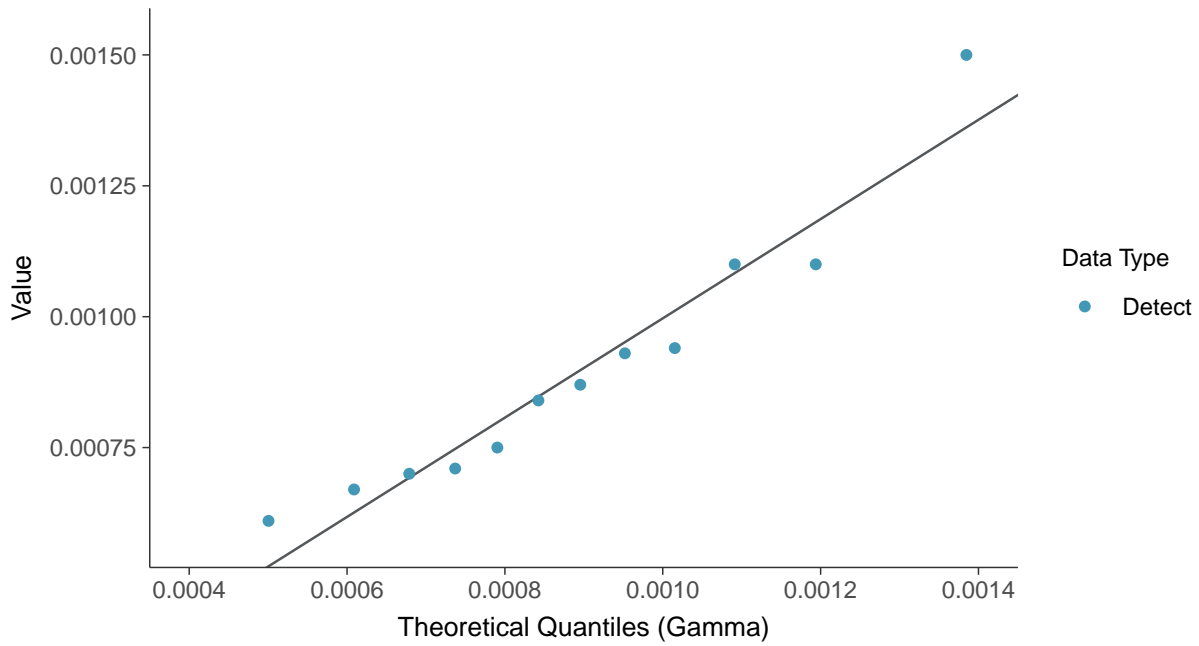
Chromium, Total, MW-08 (mg/L)





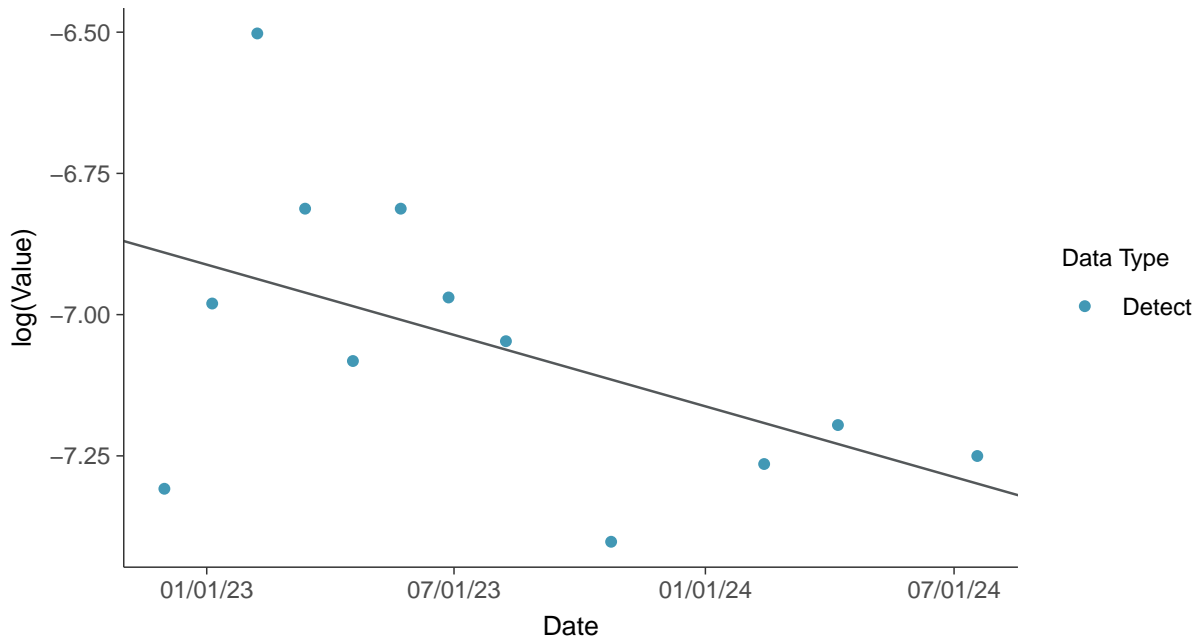
### Gamma Q-Q plot

Chromium, Total, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

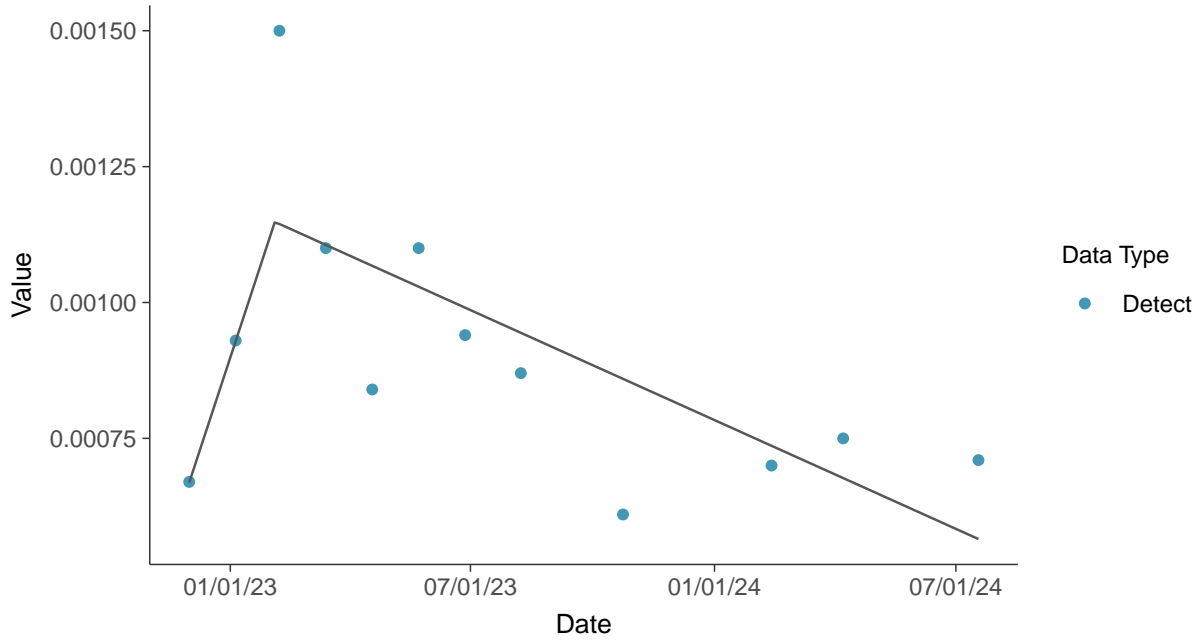
Chromium, Total, MW-08 (mg/L)





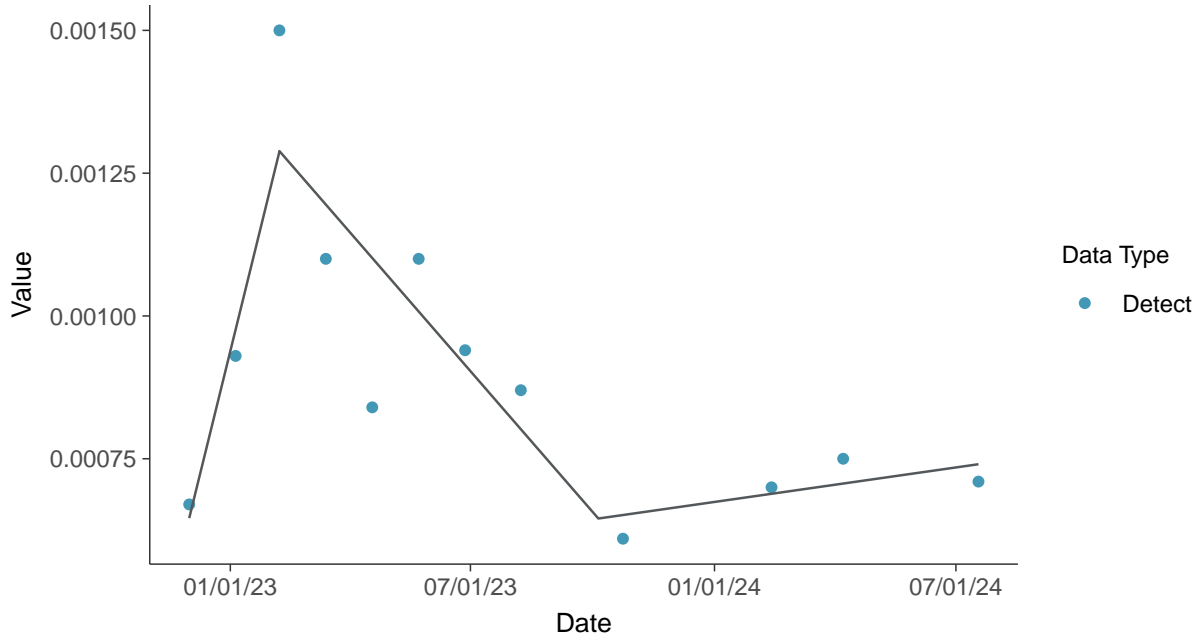
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-08 (mg/L)



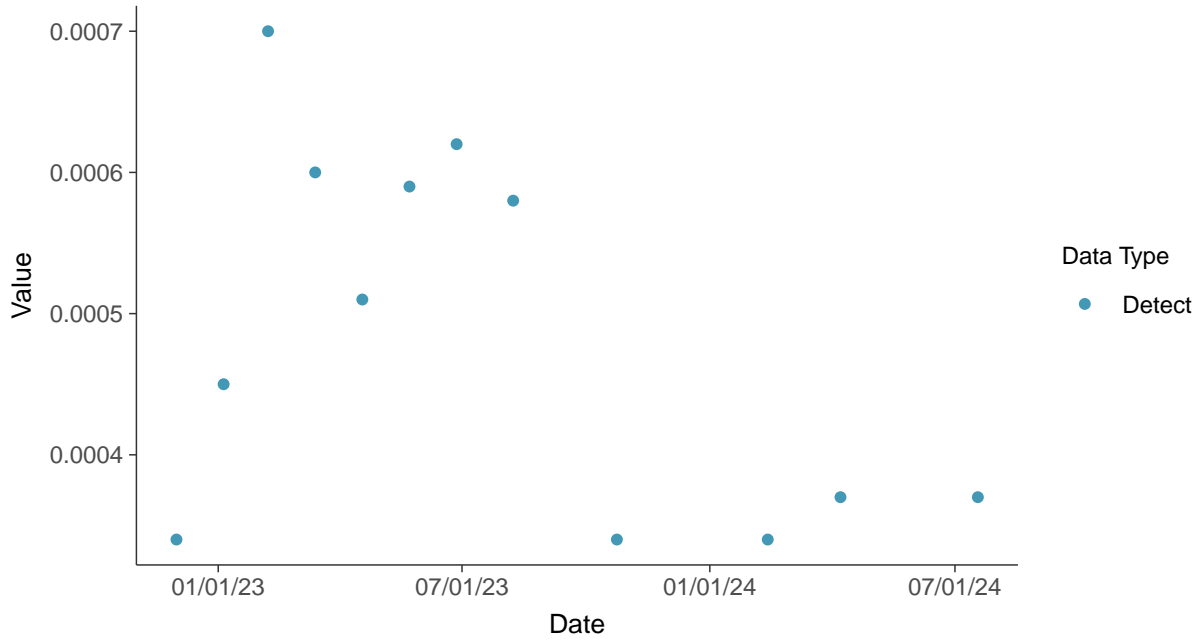


### Appendix IV: Cobalt, MW-08

ID: 18\_1\_5\_110

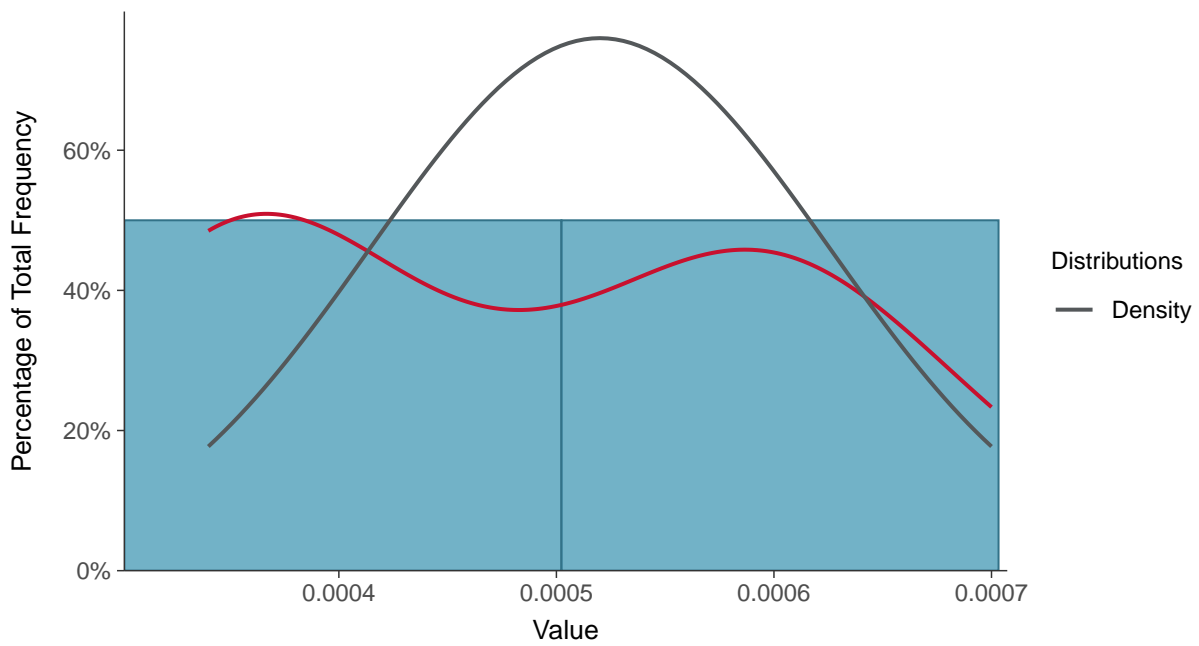
#### Scatter Plot

Cobalt, MW-08 (mg/L)



#### Histogram

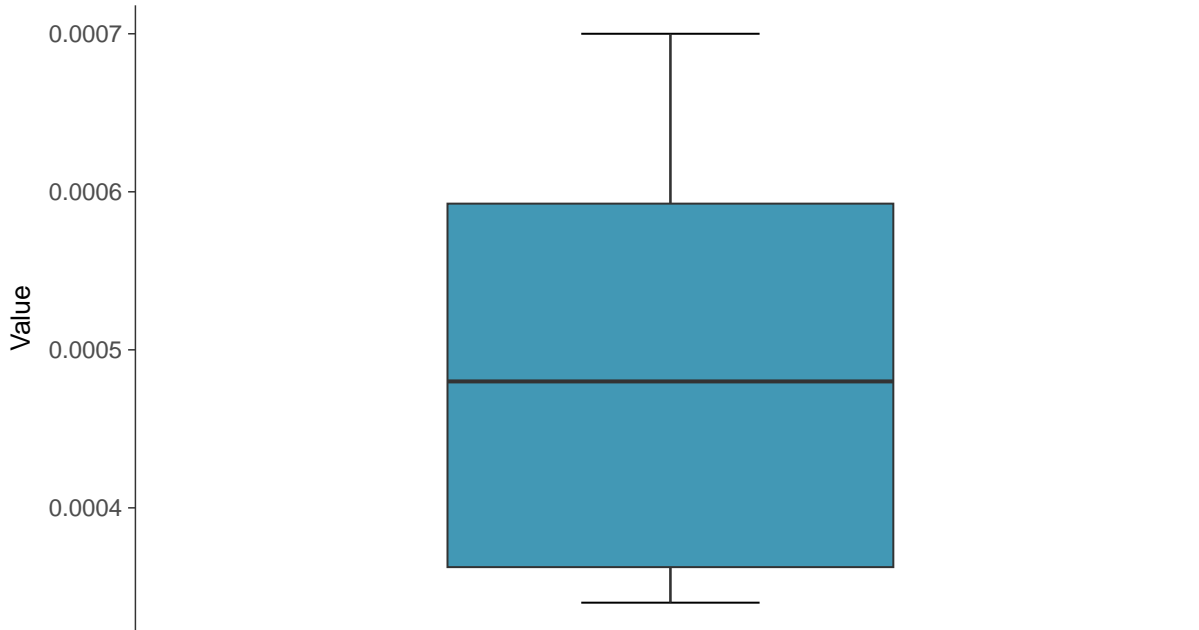
Cobalt, MW-08 (mg/L)





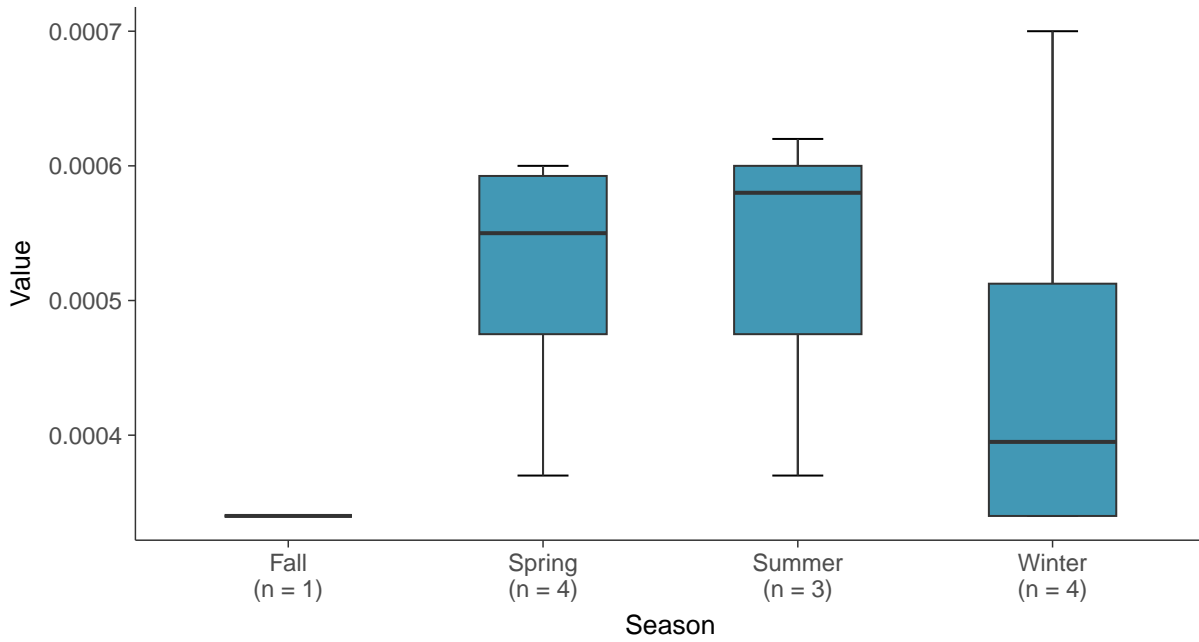
### Boxplot

Cobalt, MW-08 (mg/L)



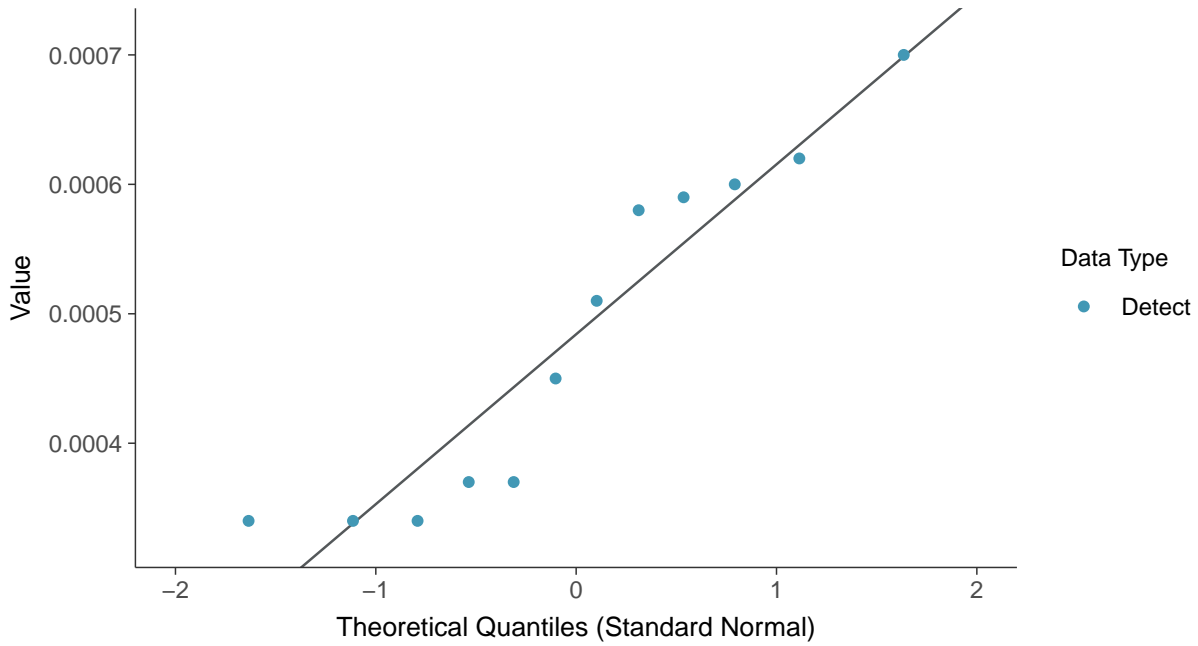
### Boxplot by Season

Cobalt, MW-08 (mg/L)

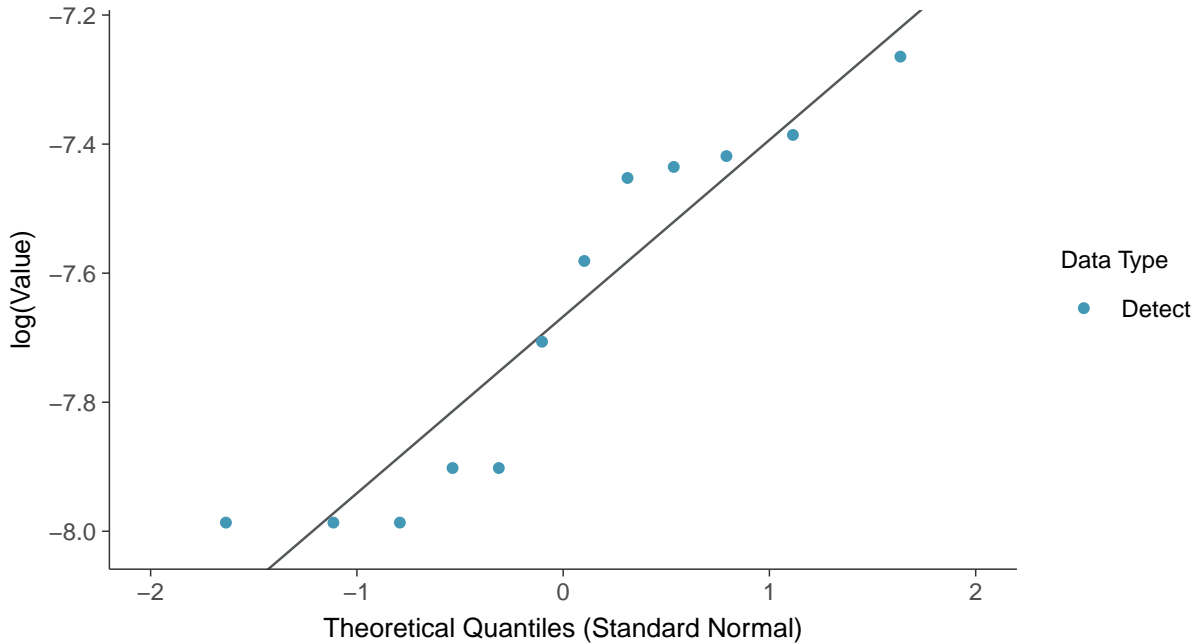




**Normal Q-Q plot**  
Cobalt, MW-08 (mg/L)



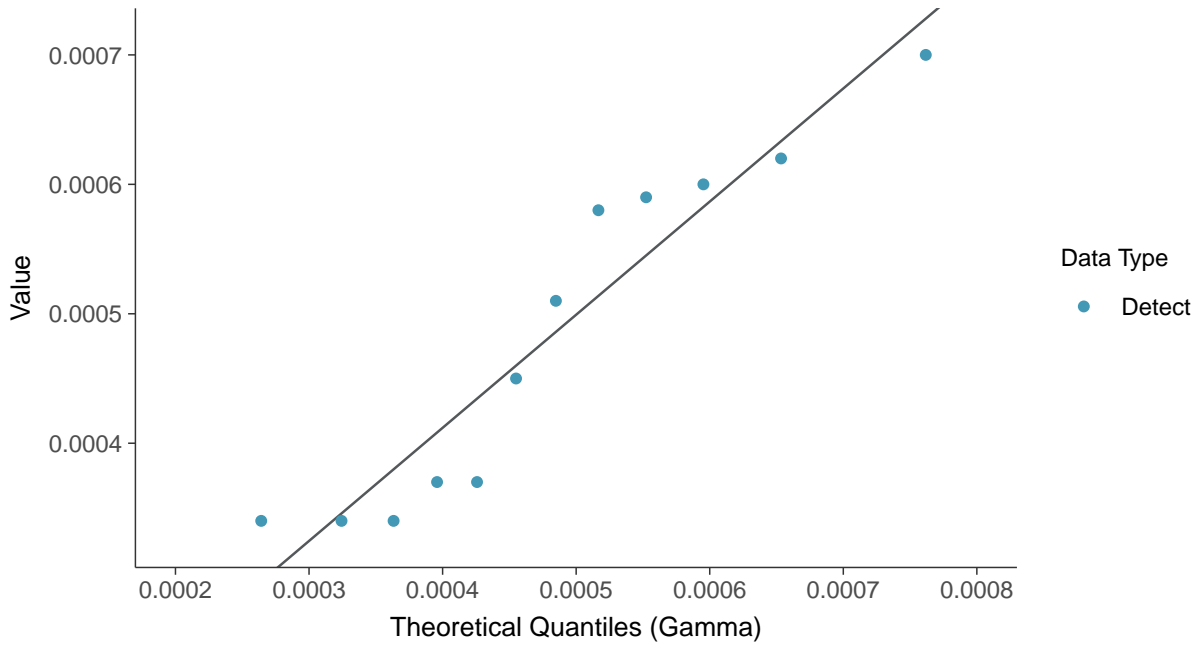
**Lognormal Q-Q plot**  
Cobalt, MW-08 (mg/L)



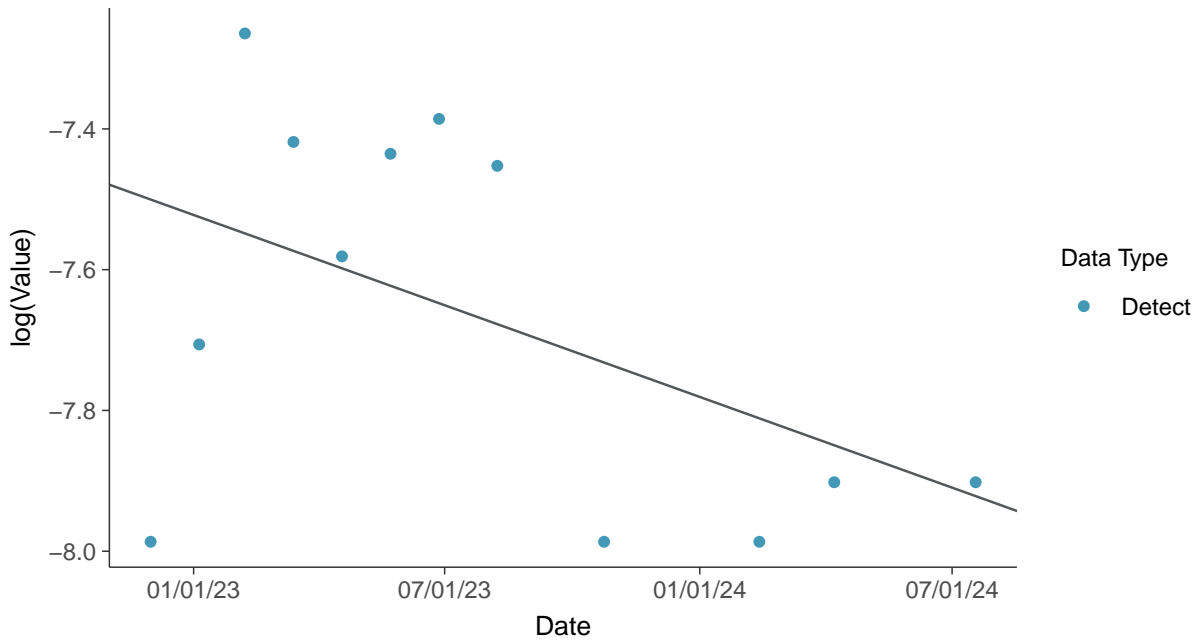




**Gamma Q-Q plot**  
Cobalt, MW-08 (mg/L)



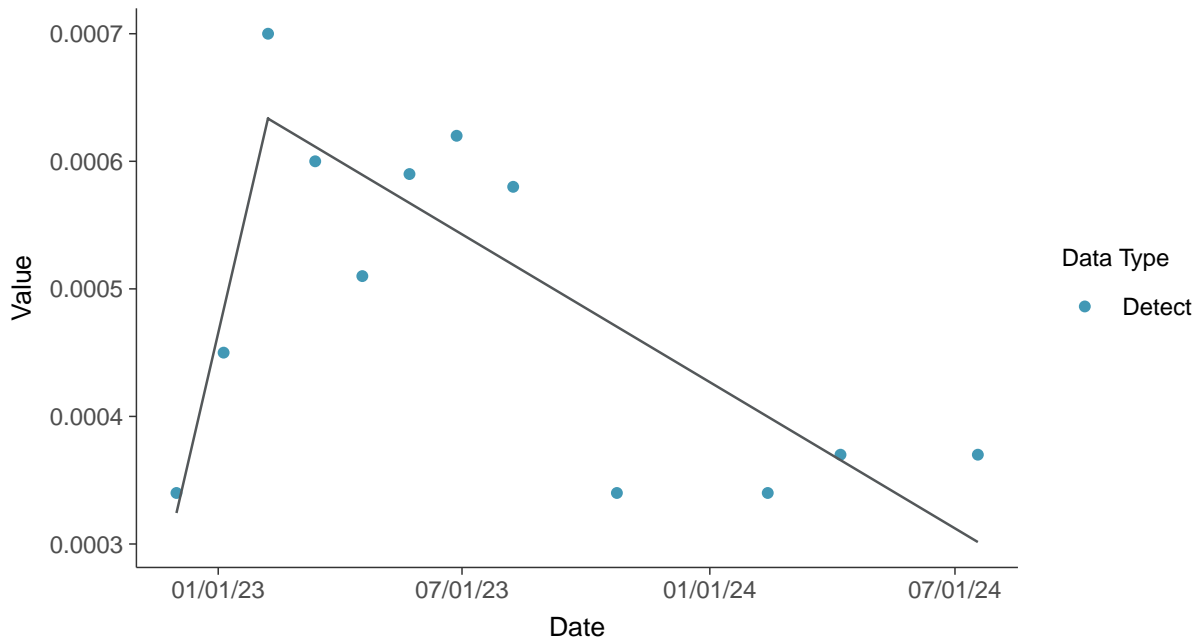
**Trend Regression: Lognormal MLE**  
Cobalt, MW-08 (mg/L)





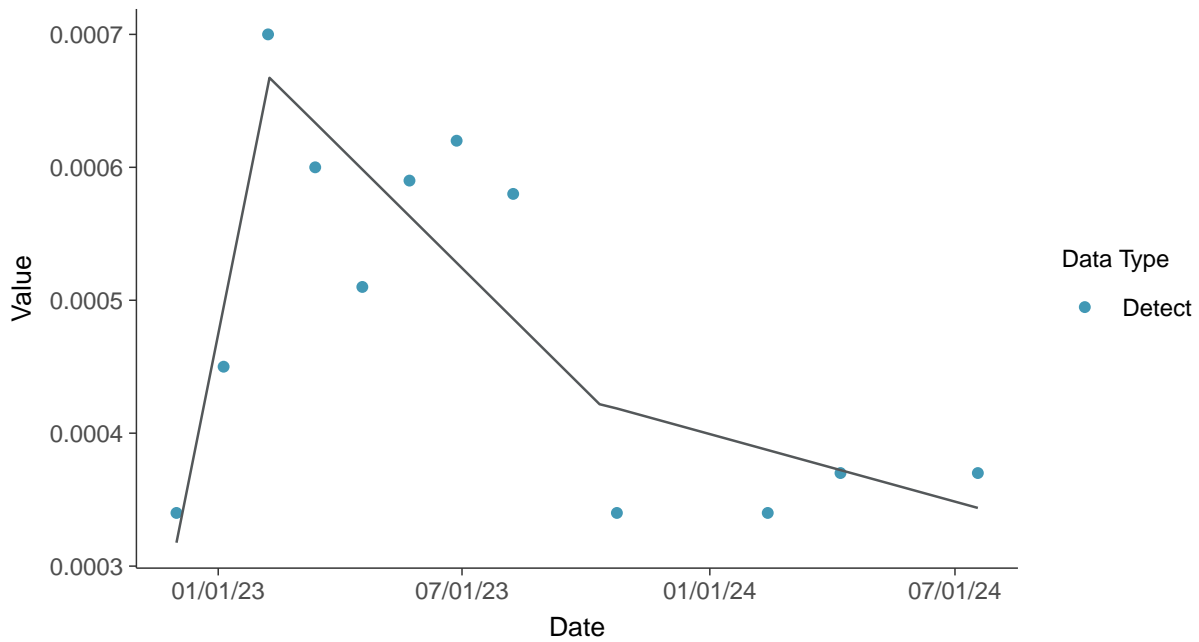
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-08 (mg/L)



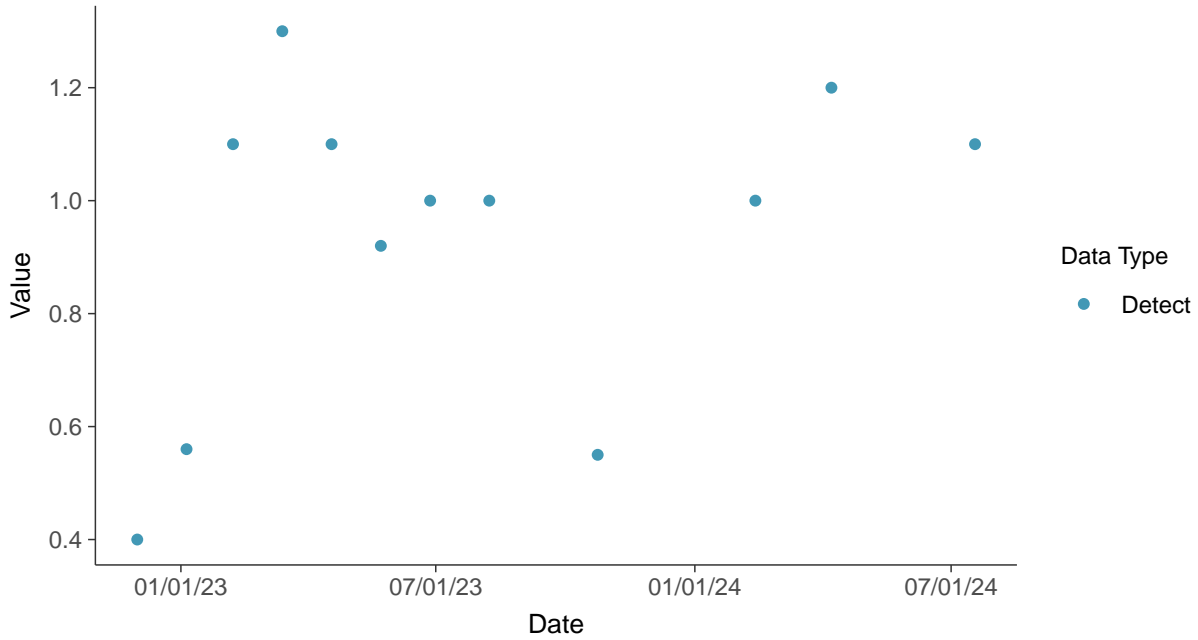


### Appendix IV: Fluoride (App IV), MW-08

ID: 18\_1\_5\_113

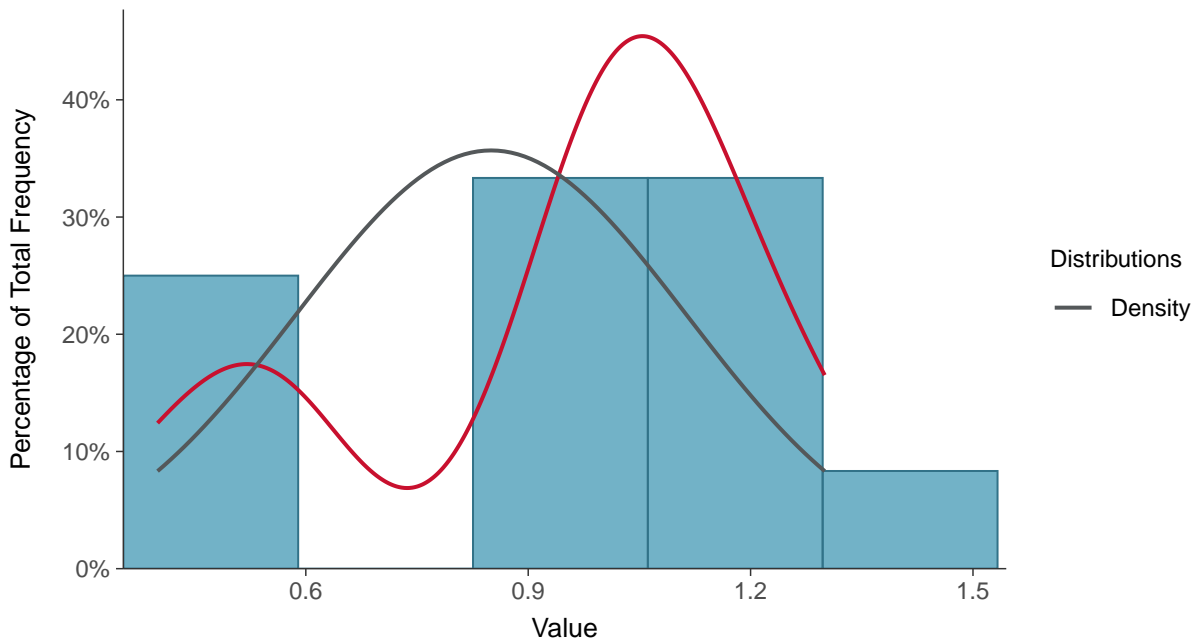
#### Scatter Plot

Fluoride (App IV), MW-08 (mg/L)



#### Histogram

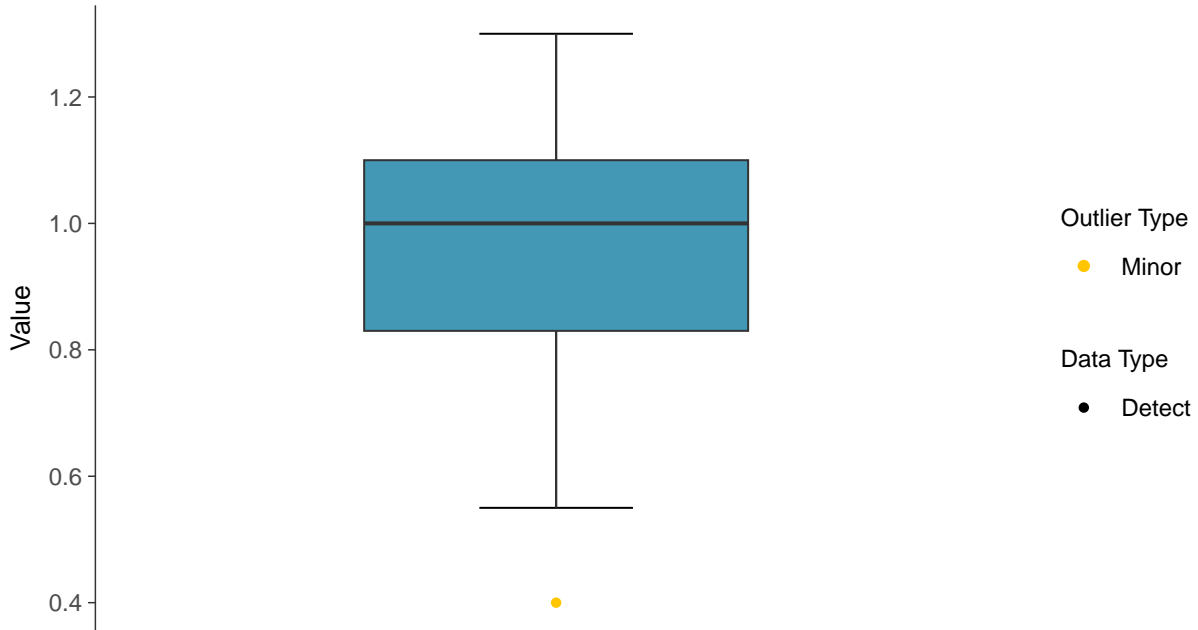
Fluoride (App IV), MW-08 (mg/L)





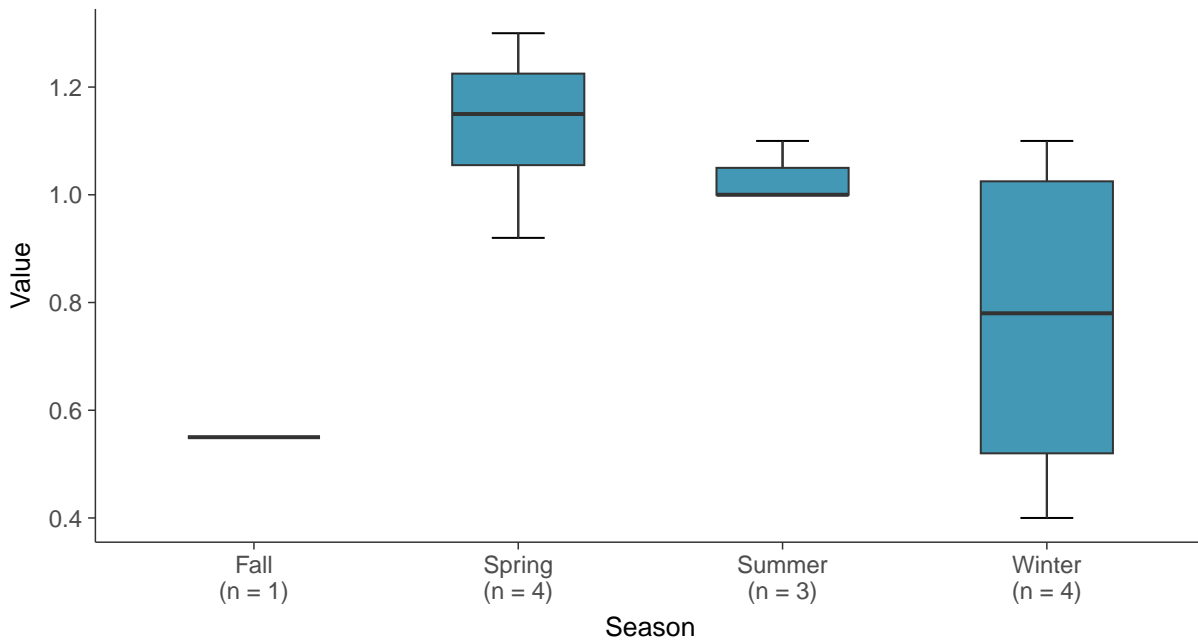
### Boxplot

Fluoride (App IV), MW-08 (mg/L)



### Boxplot by Season

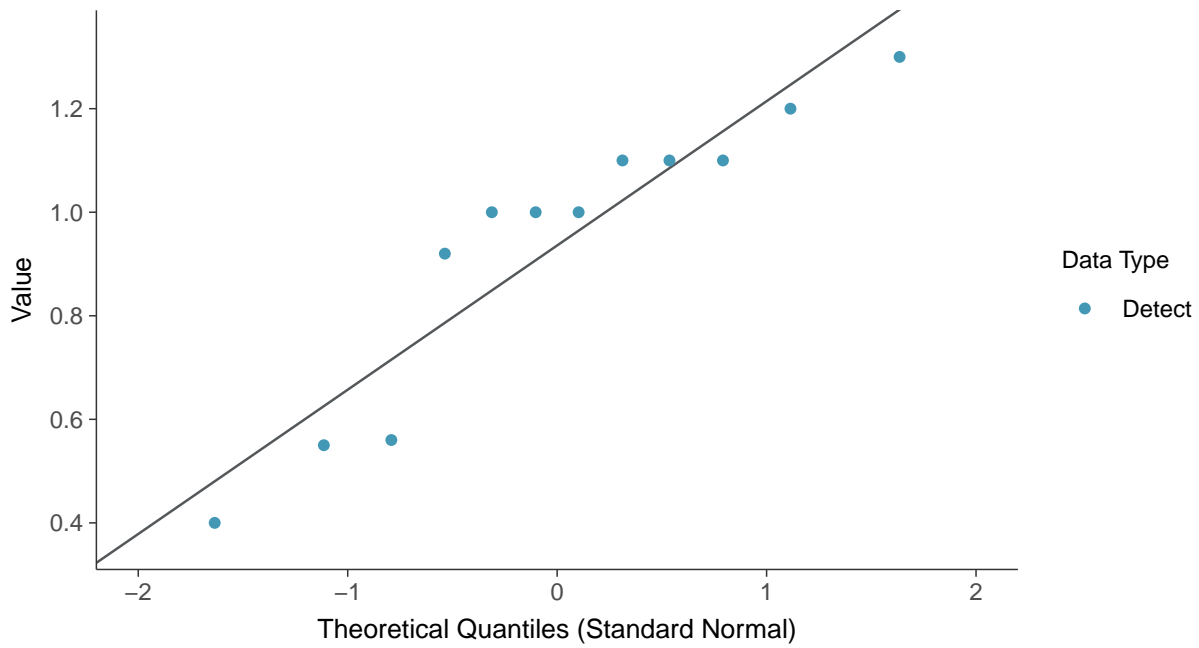
Fluoride (App IV), MW-08 (mg/L)





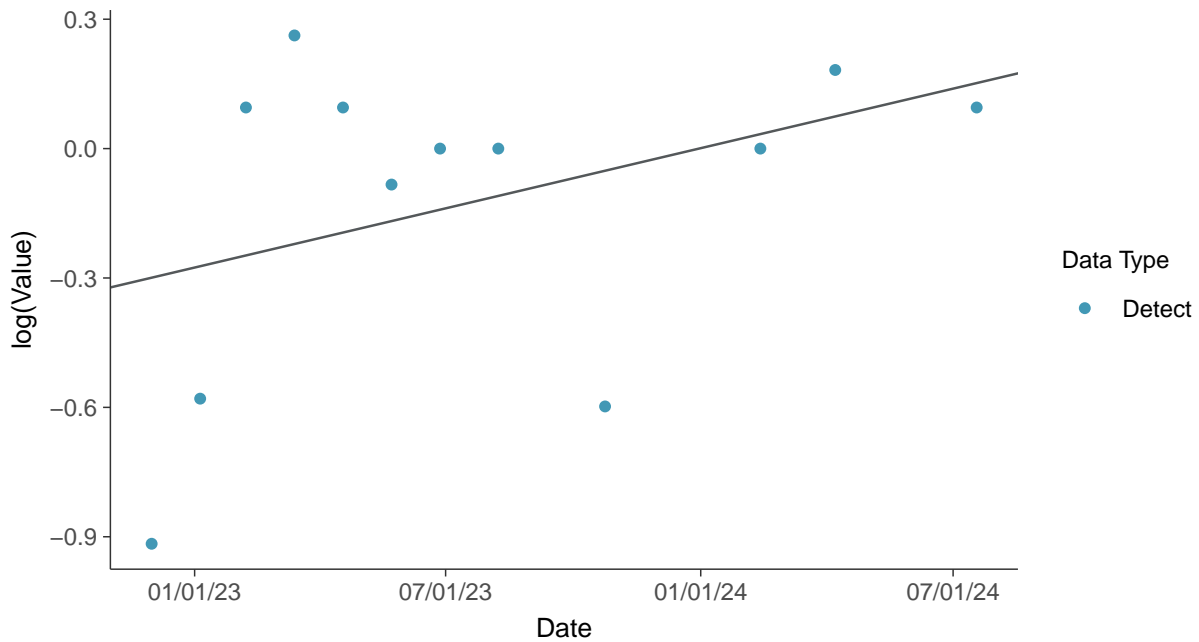
### Normal Q-Q plot

Fluoride (App IV), MW-08 (mg/L)



### Trend Regression: Lognormal MLE

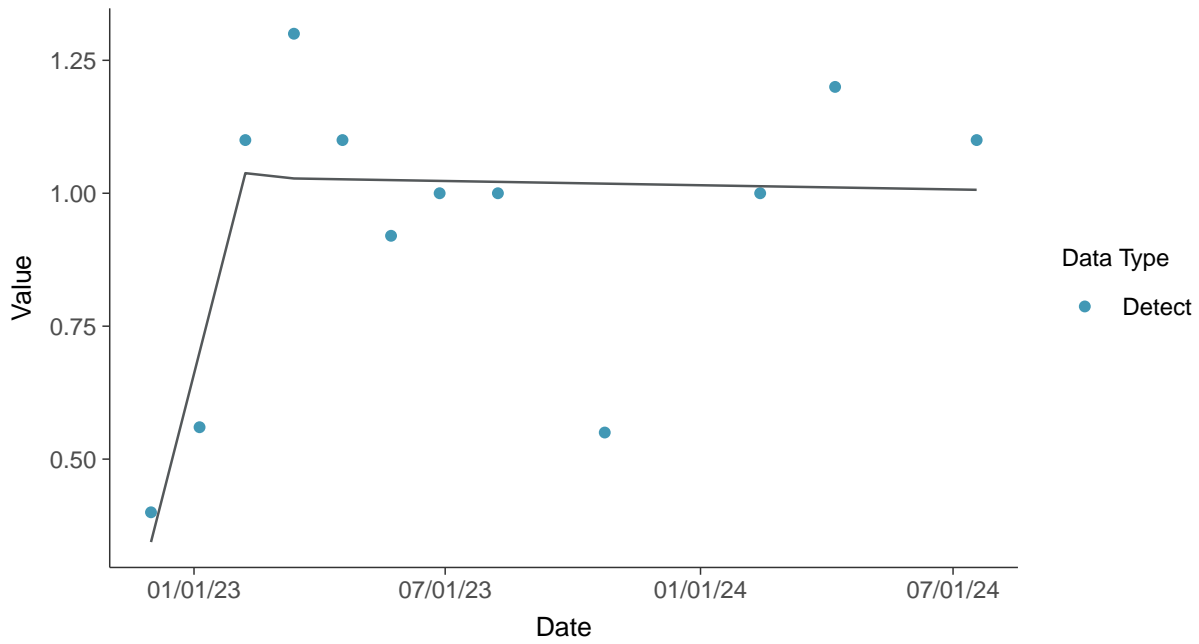
Fluoride (App IV), MW-08 (mg/L)





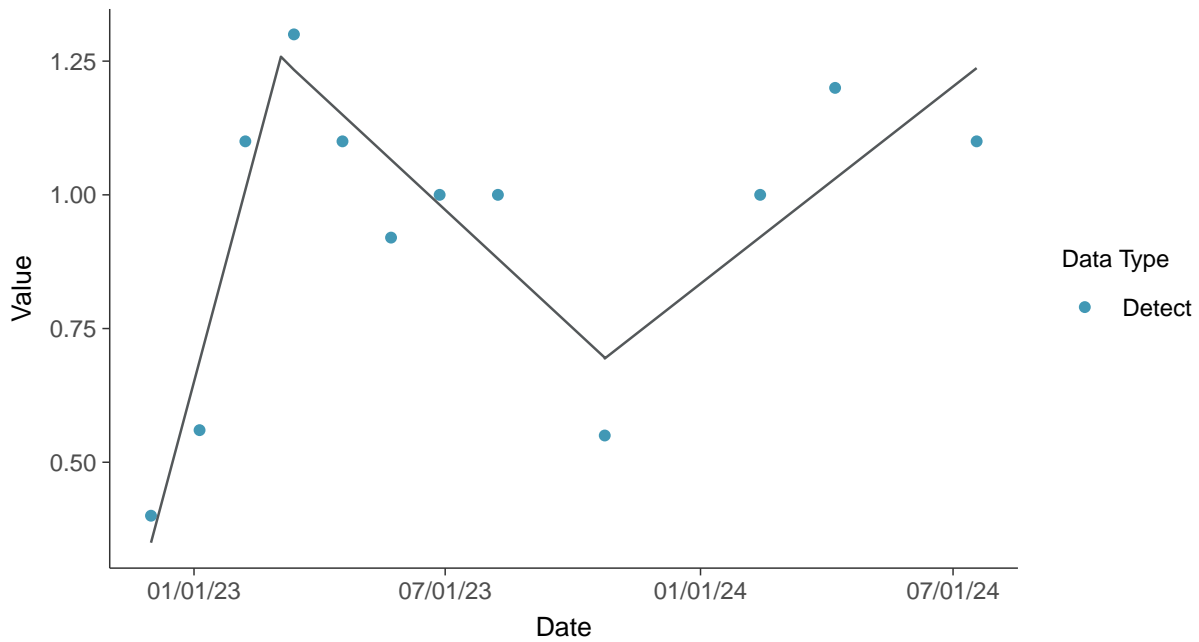
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

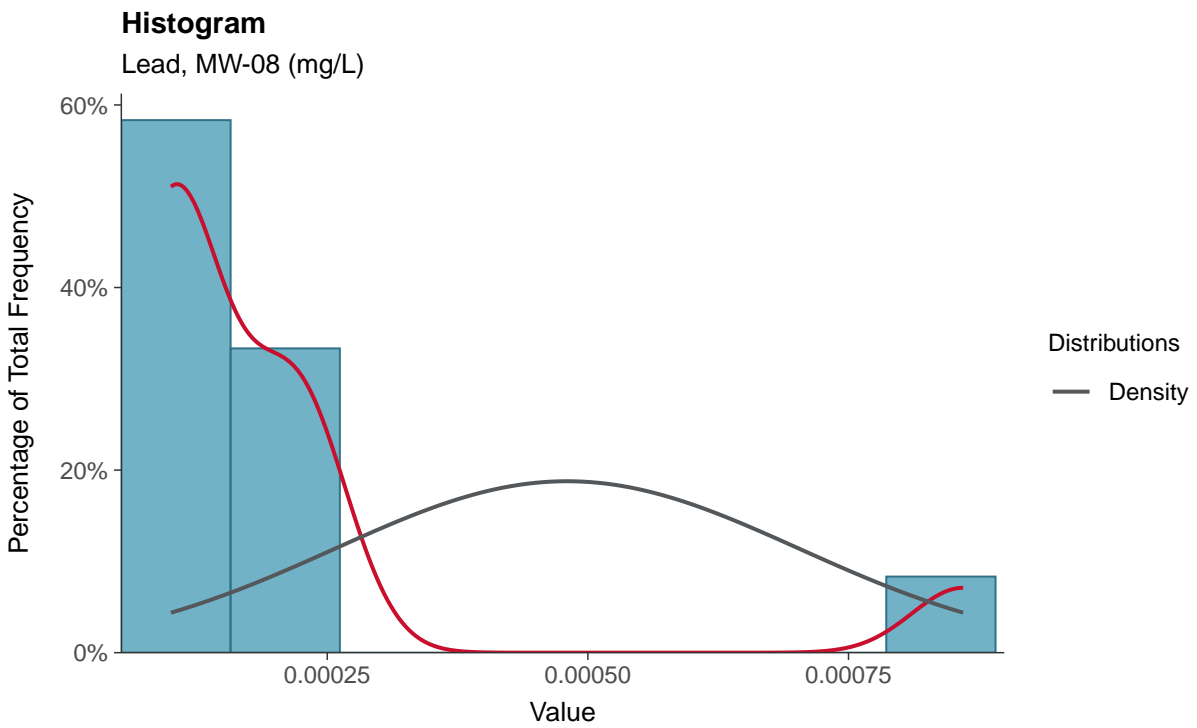
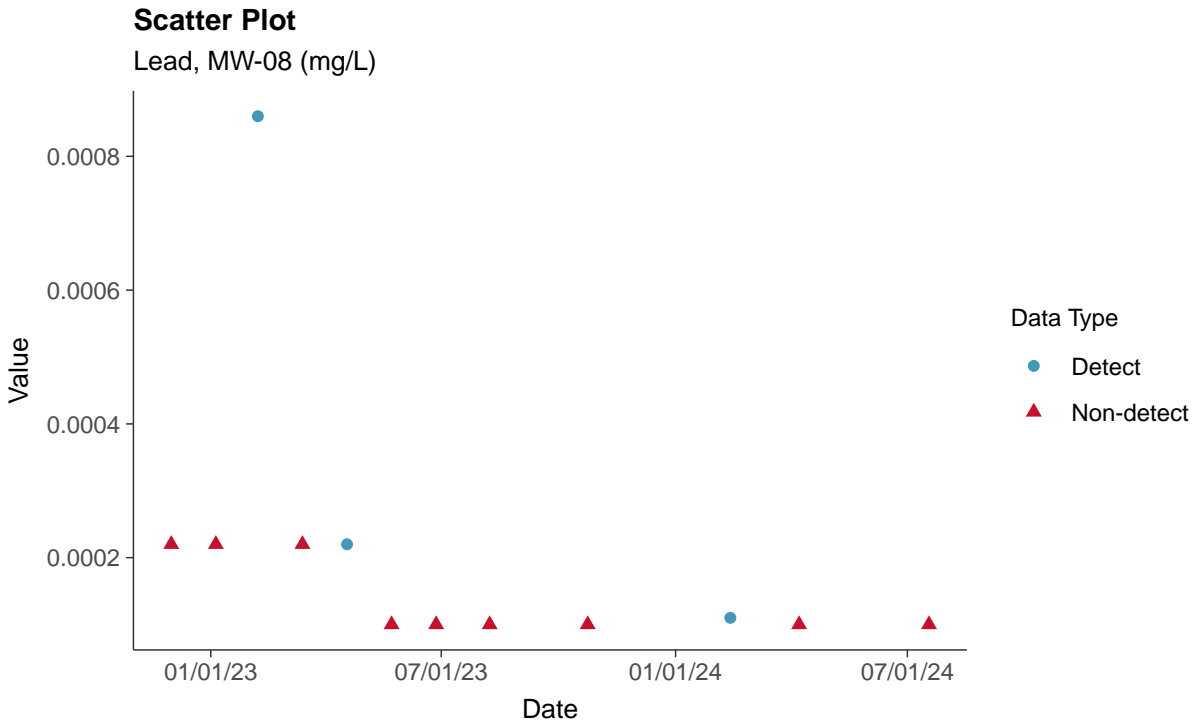
Fluoride (App IV), MW-08 (mg/L)





### Appendix IV: Lead, MW-08

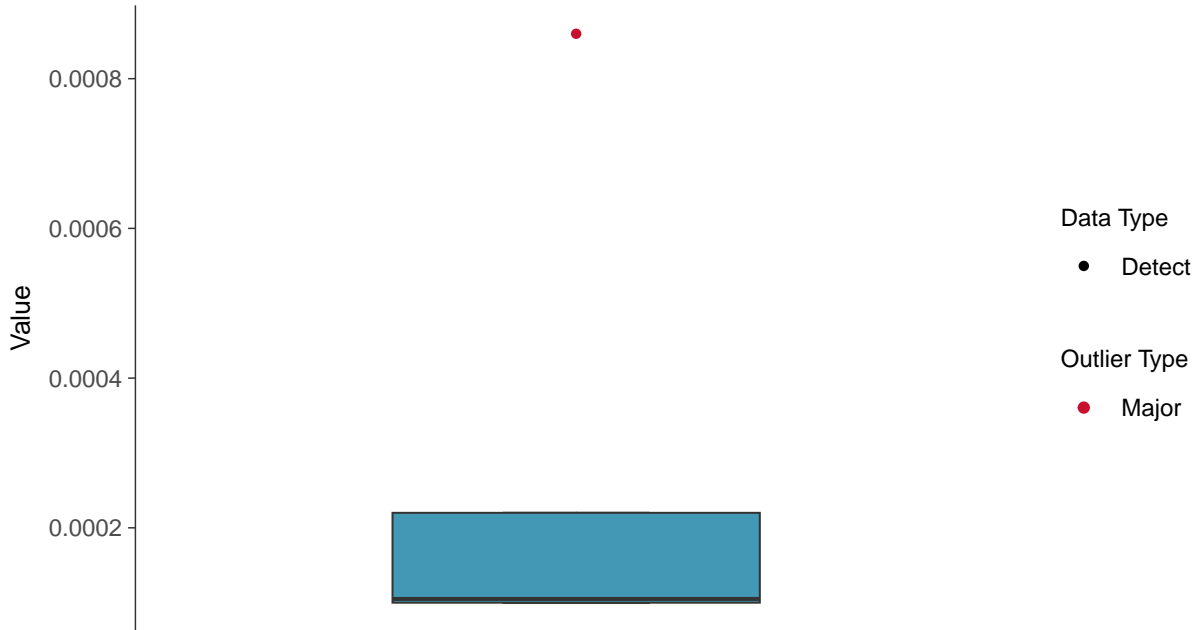
ID: 18\_1\_5\_115





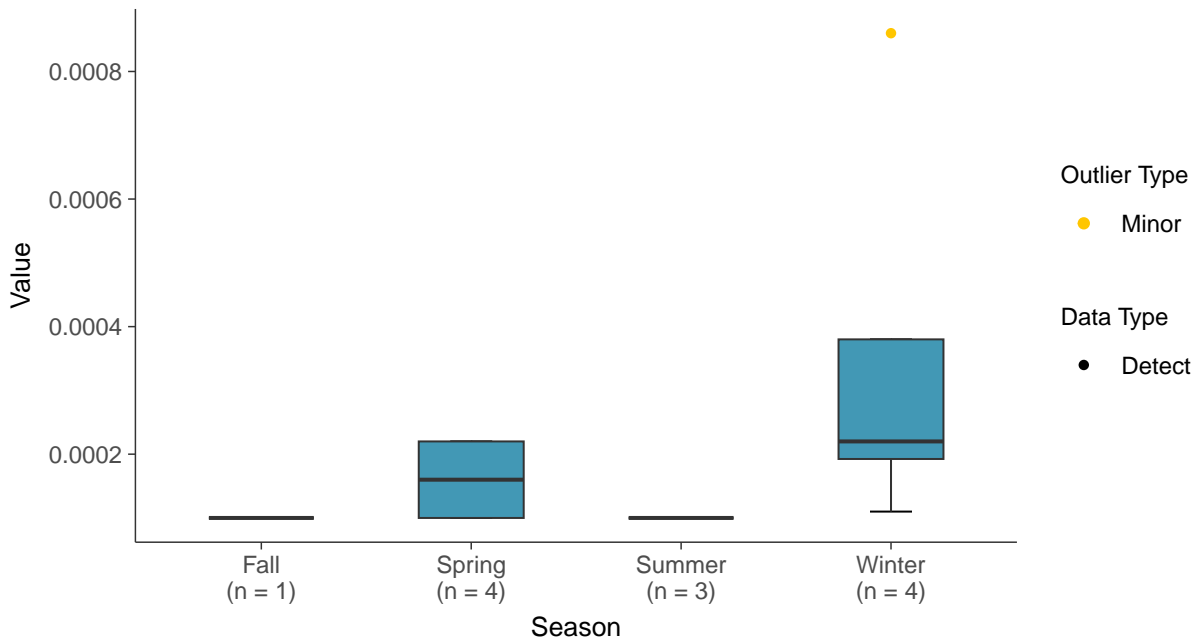
### Boxplot

Lead, MW-08 (mg/L)



### Boxplot by Season

Lead, MW-08 (mg/L)

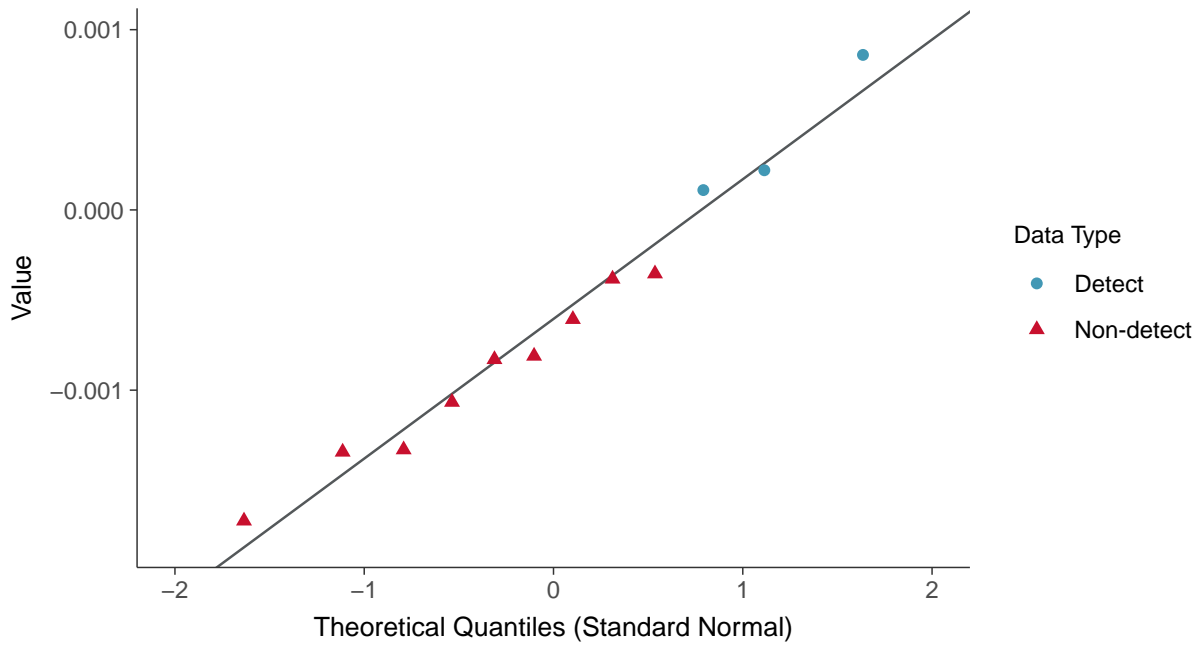






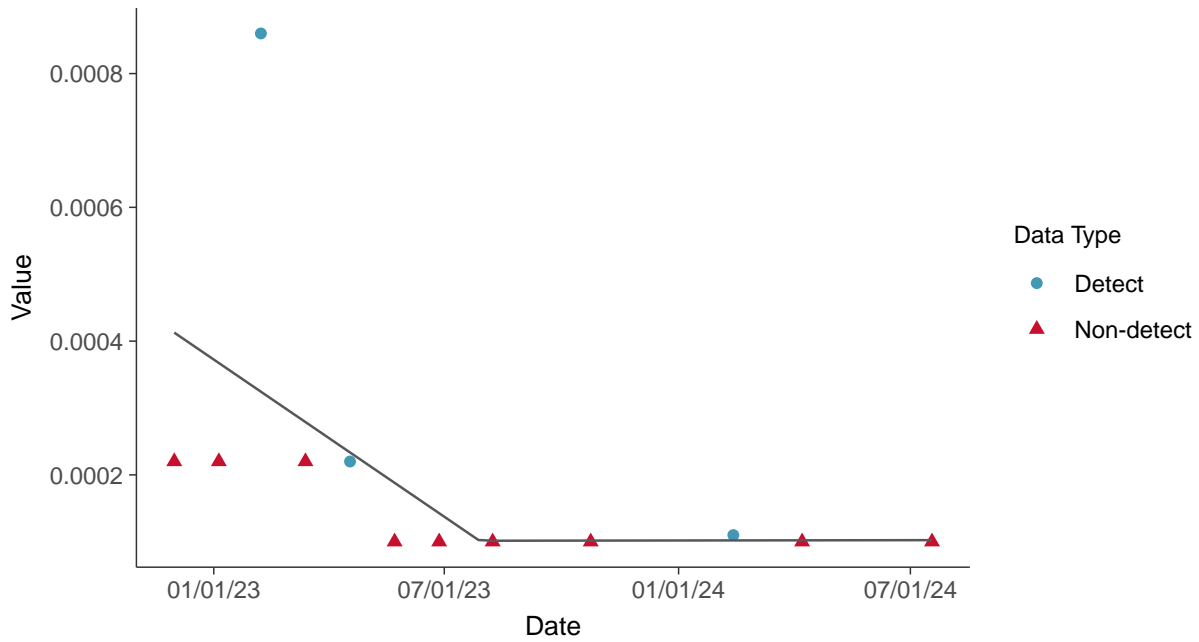
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear

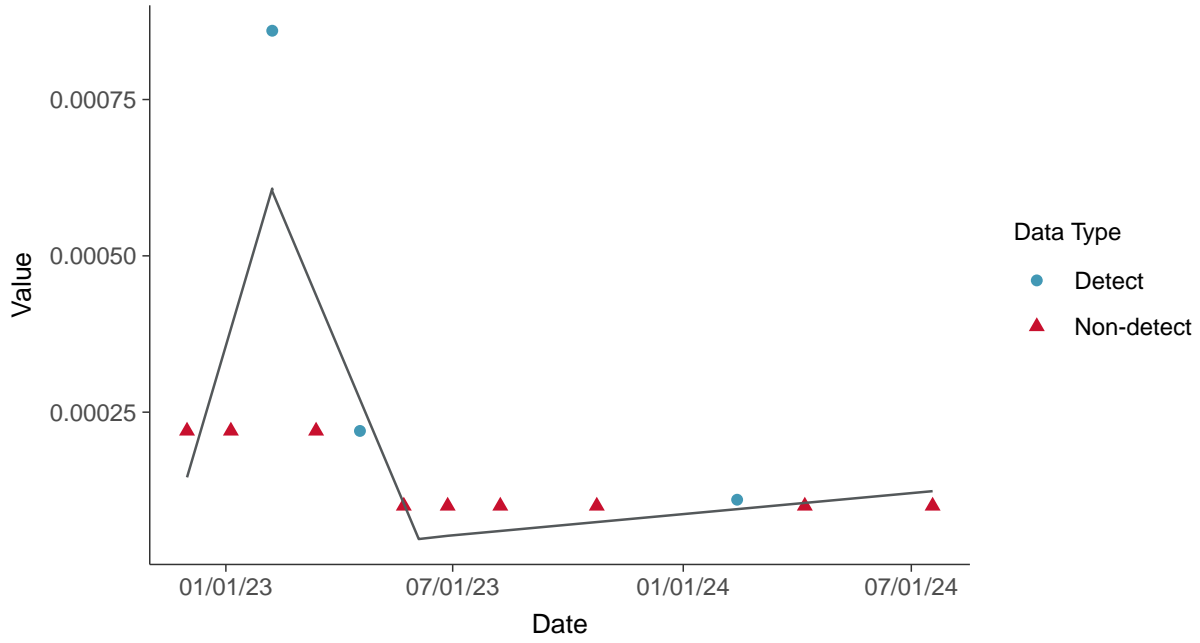
Lead, MW-08 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

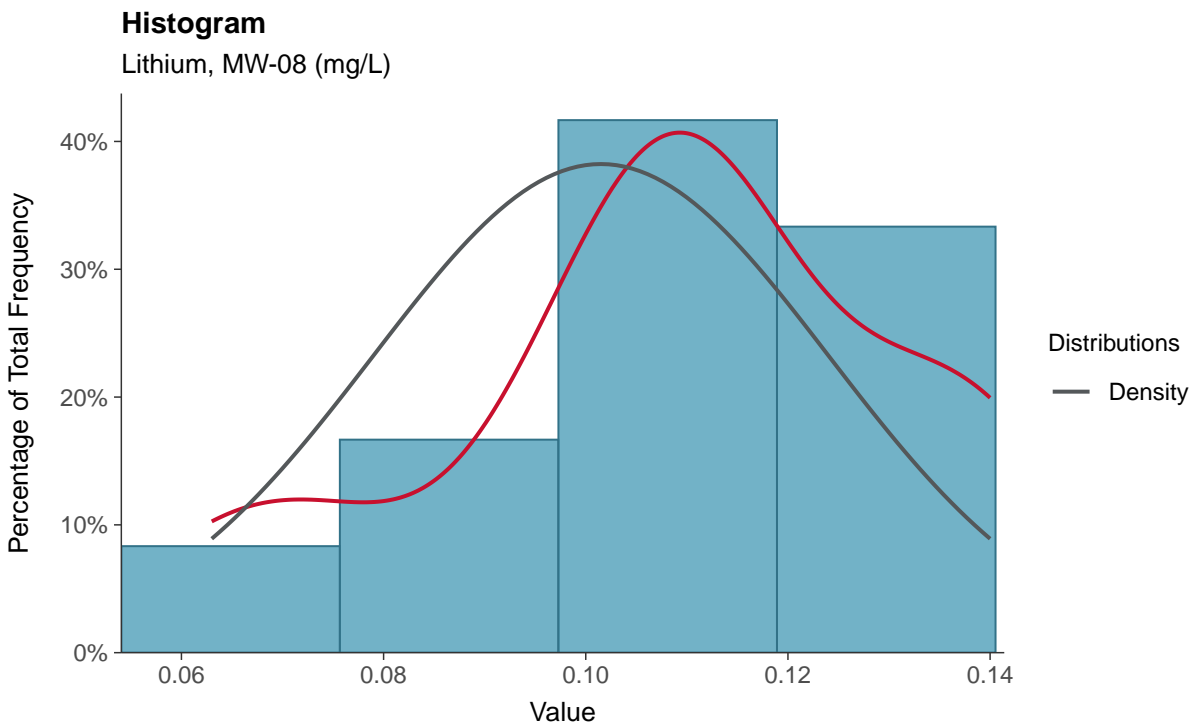
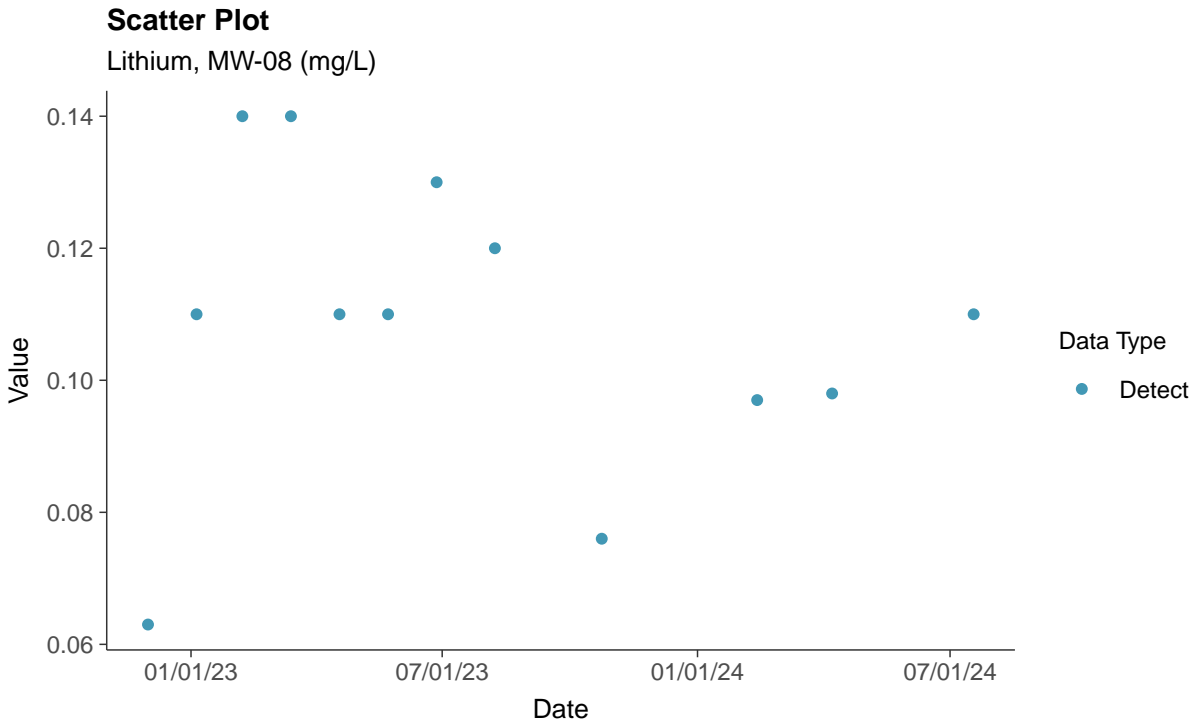
Lead, MW-08 (mg/L)





### Appendix IV: Lithium, MW-08

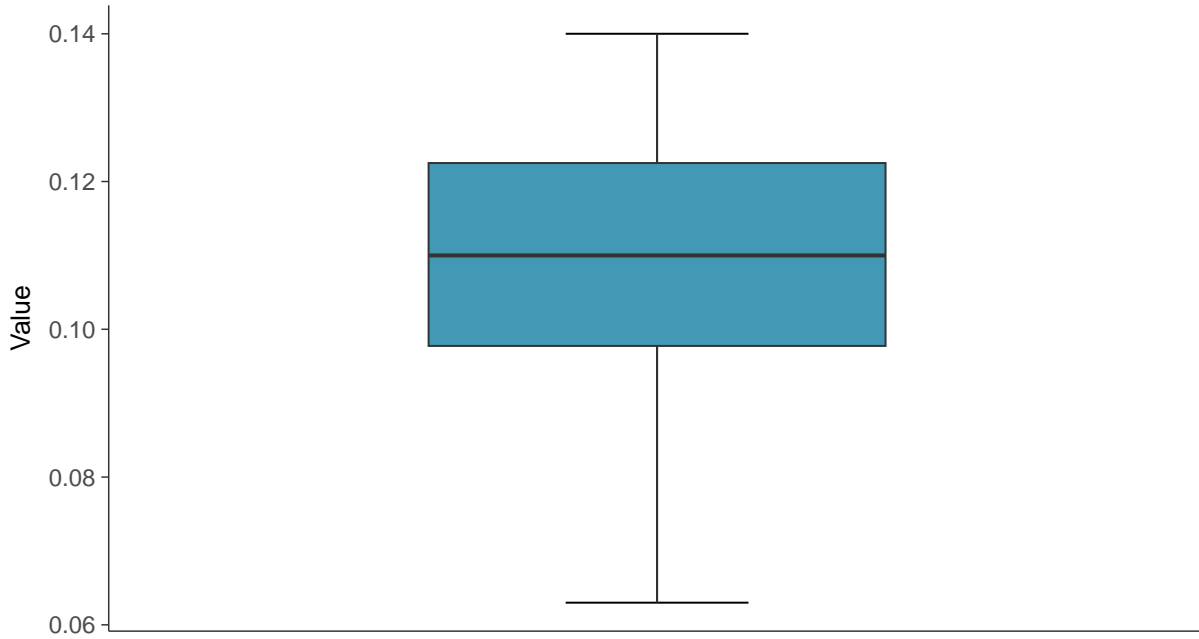
ID: 18\_1\_5\_116





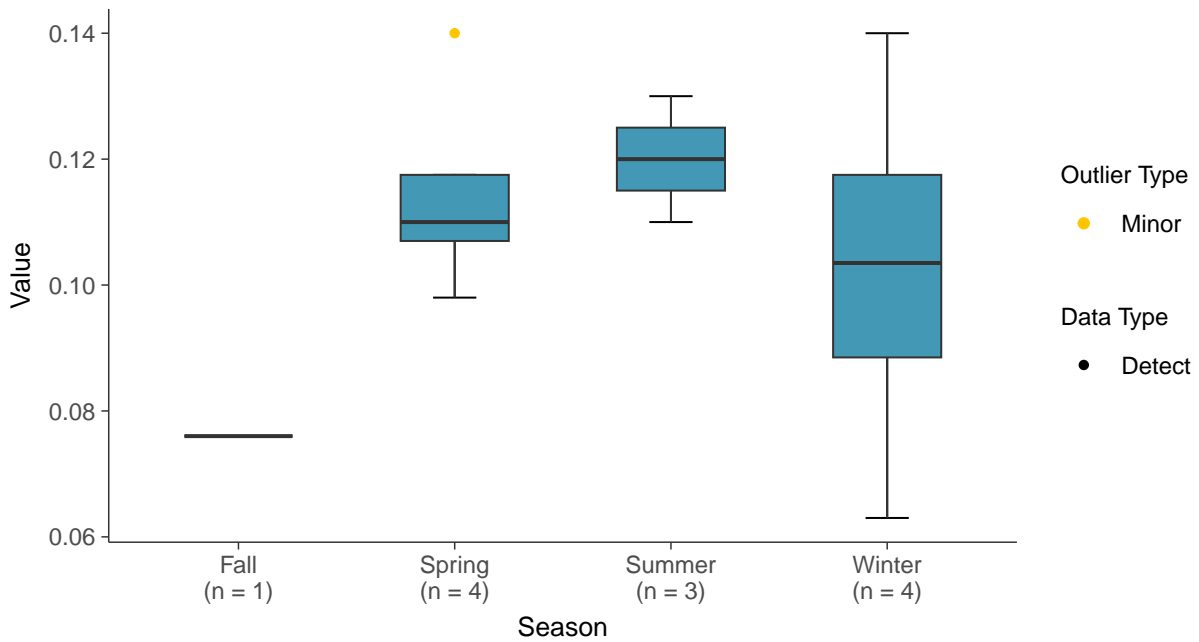
### Boxplot

Lithium, MW-08 (mg/L)



### Boxplot by Season

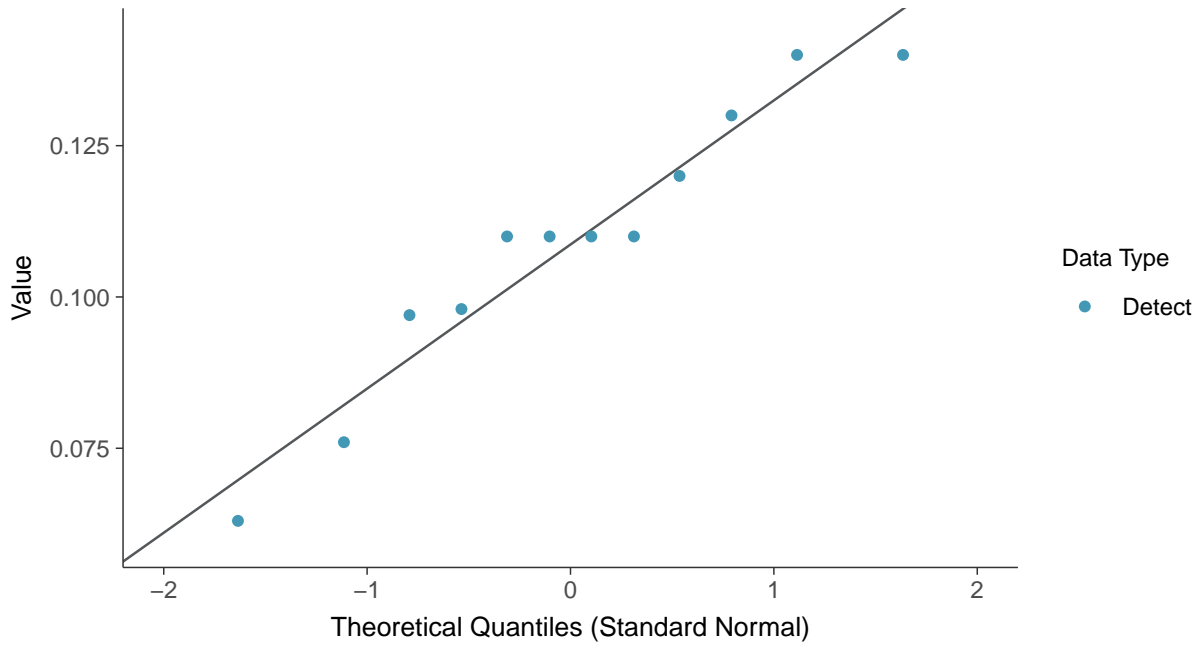
Lithium, MW-08 (mg/L)





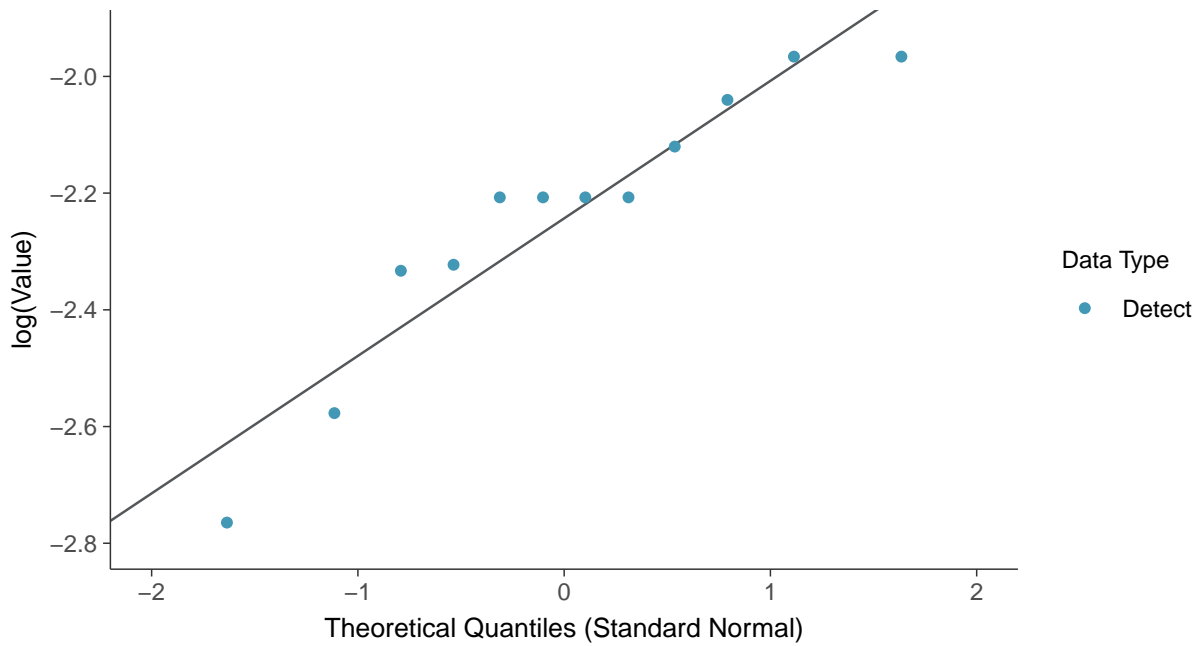
### Normal Q-Q plot

Lithium, MW-08 (mg/L)



### Lognormal Q-Q plot

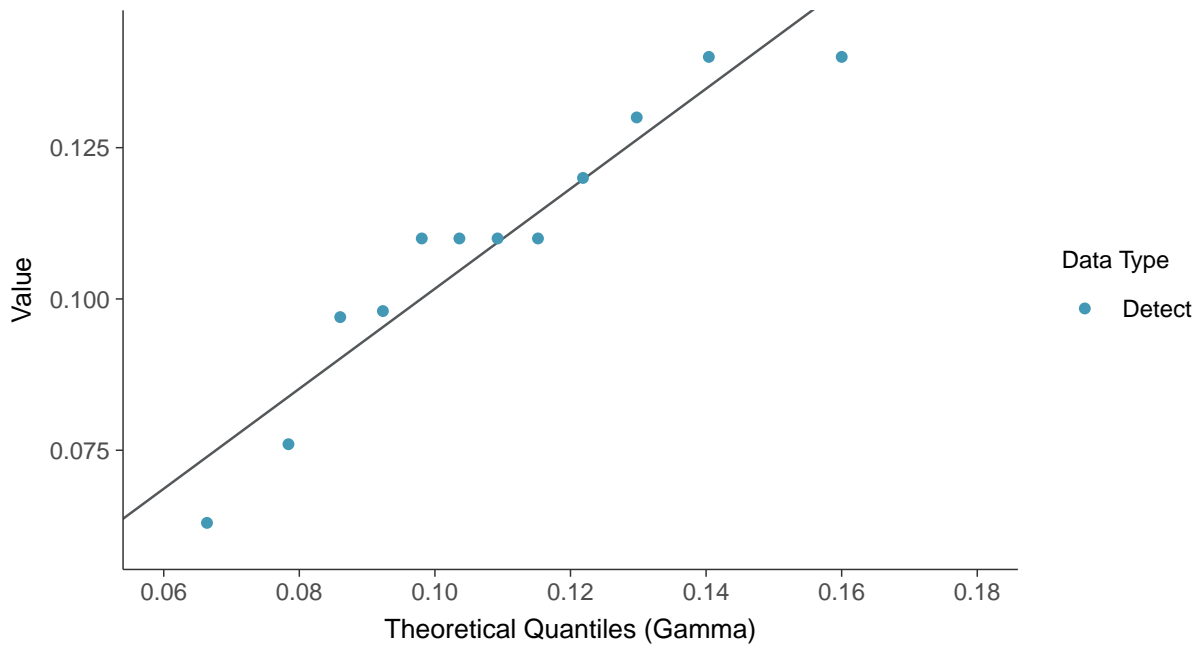
Lithium, MW-08 (mg/L)





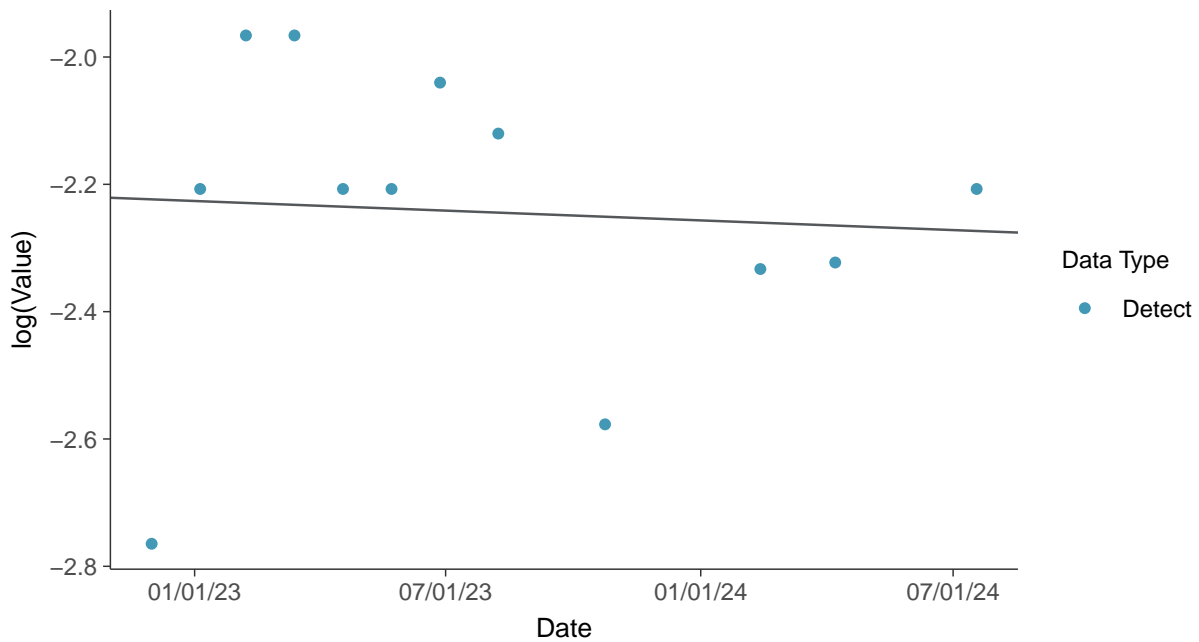
### Gamma Q-Q plot

Lithium, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

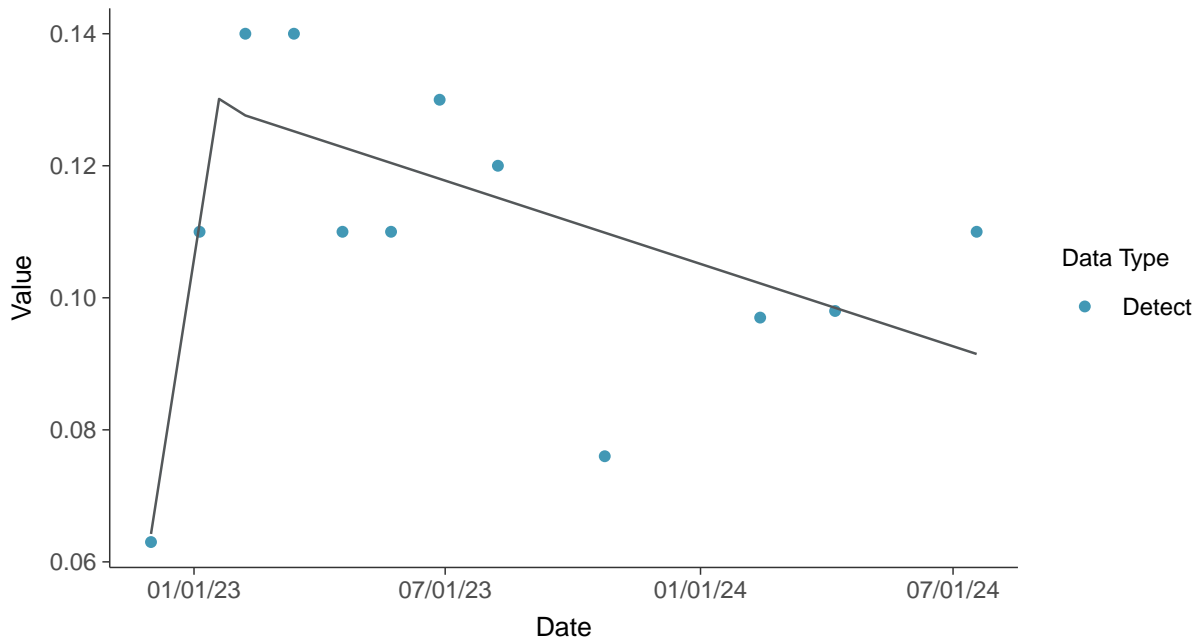
Lithium, MW-08 (mg/L)





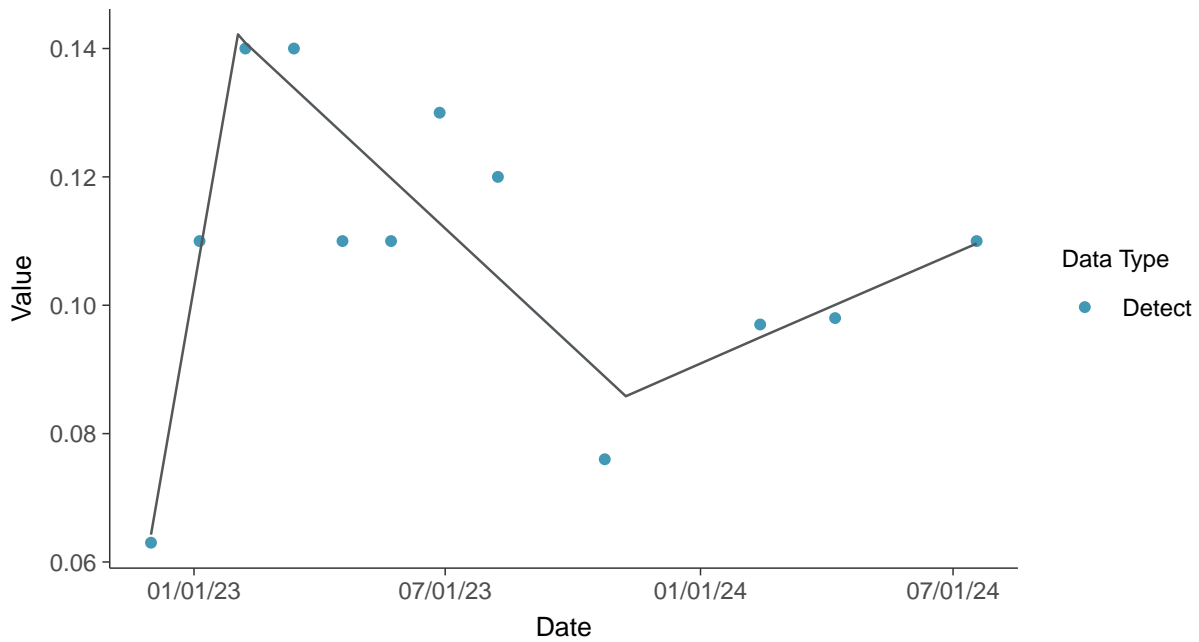
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

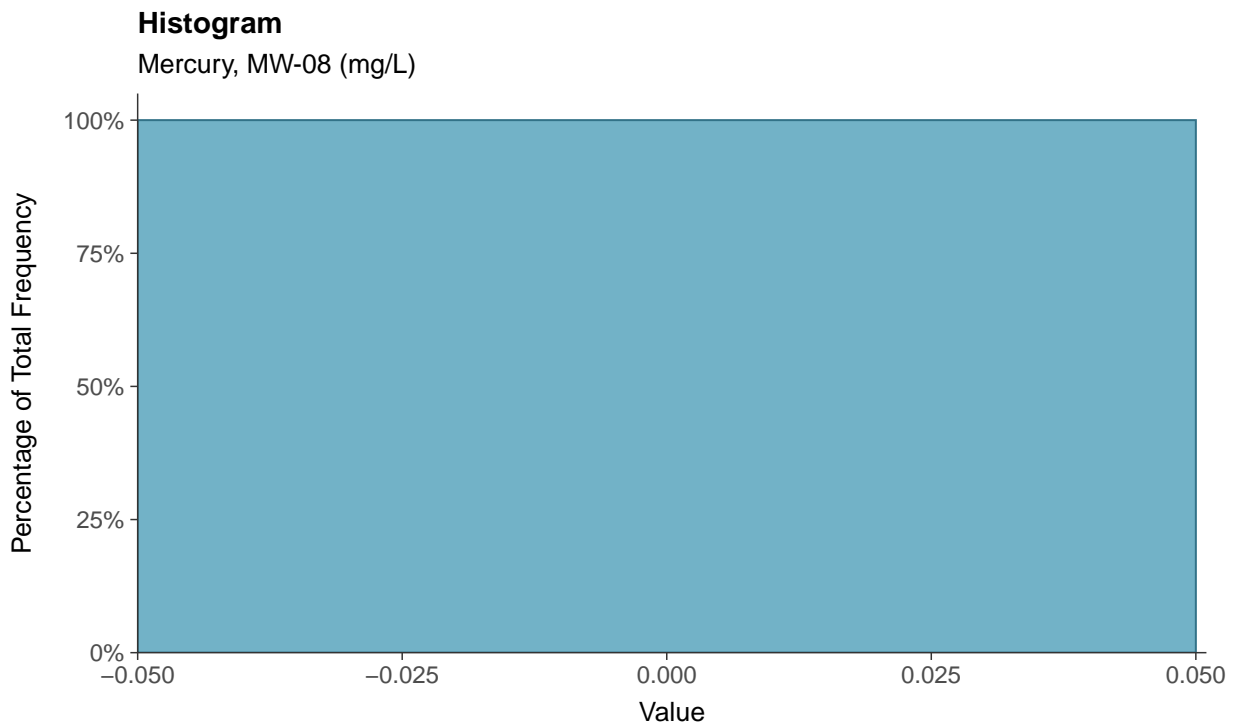
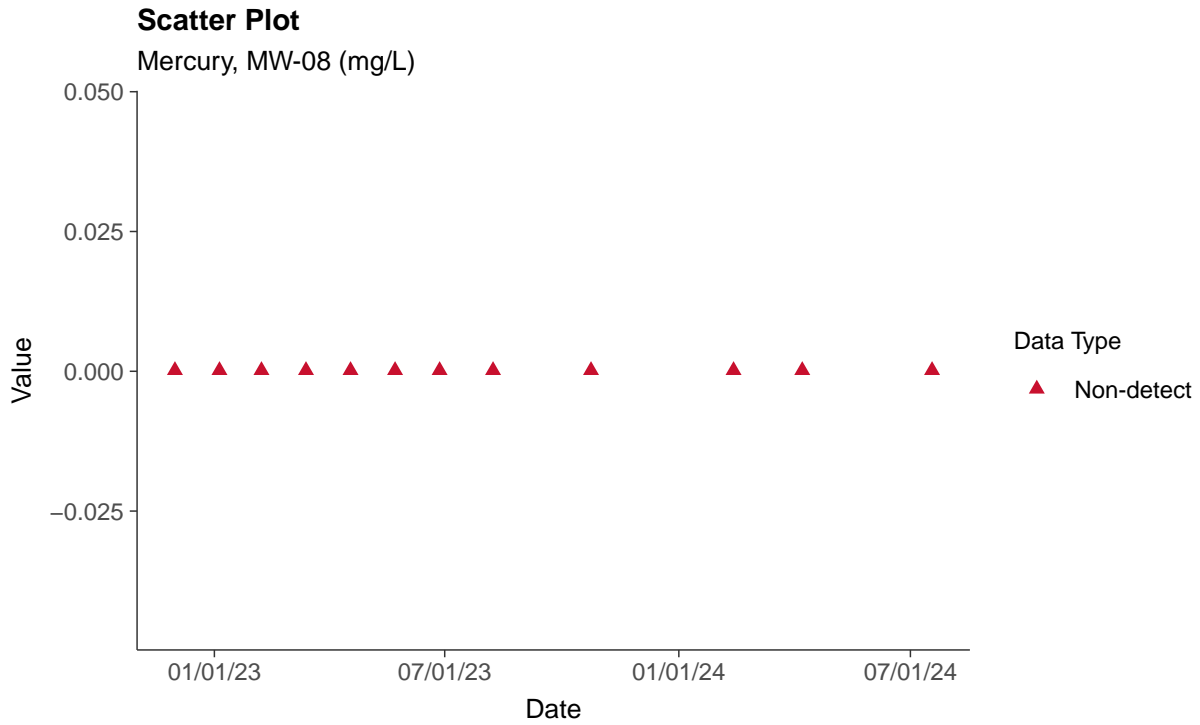
Lithium, MW-08 (mg/L)





### Appendix IV: Mercury, MW-08

ID: 18\_1\_5\_117

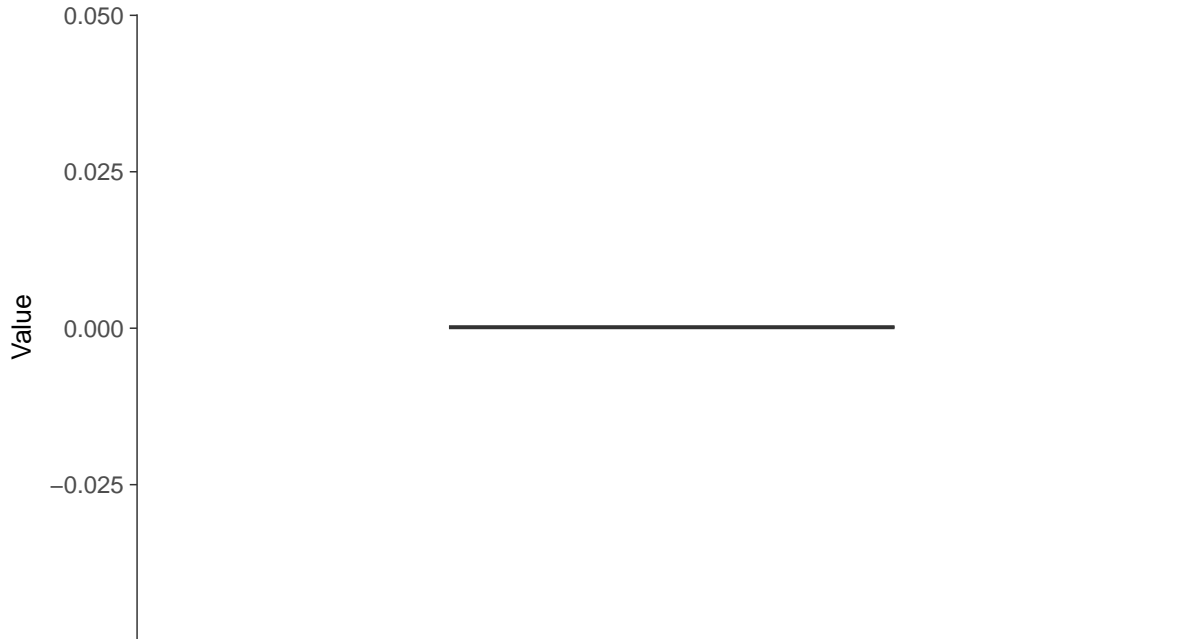






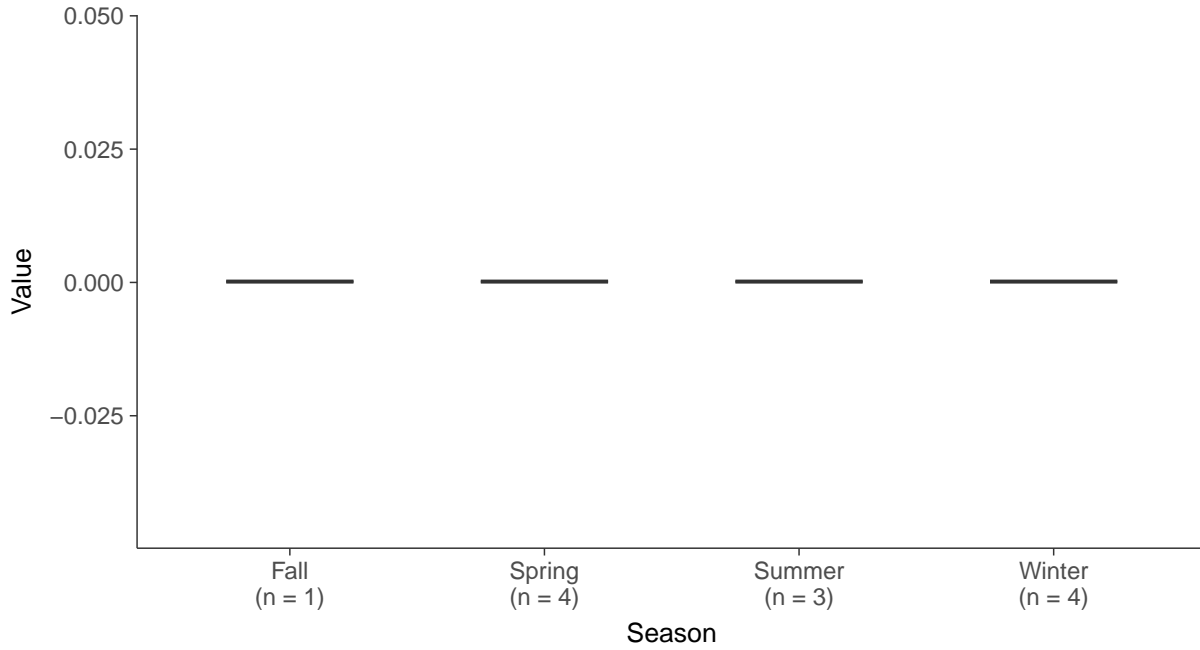
### Boxplot

Mercury, MW-08 (mg/L)



### Boxplot by Season

Mercury, MW-08 (mg/L)



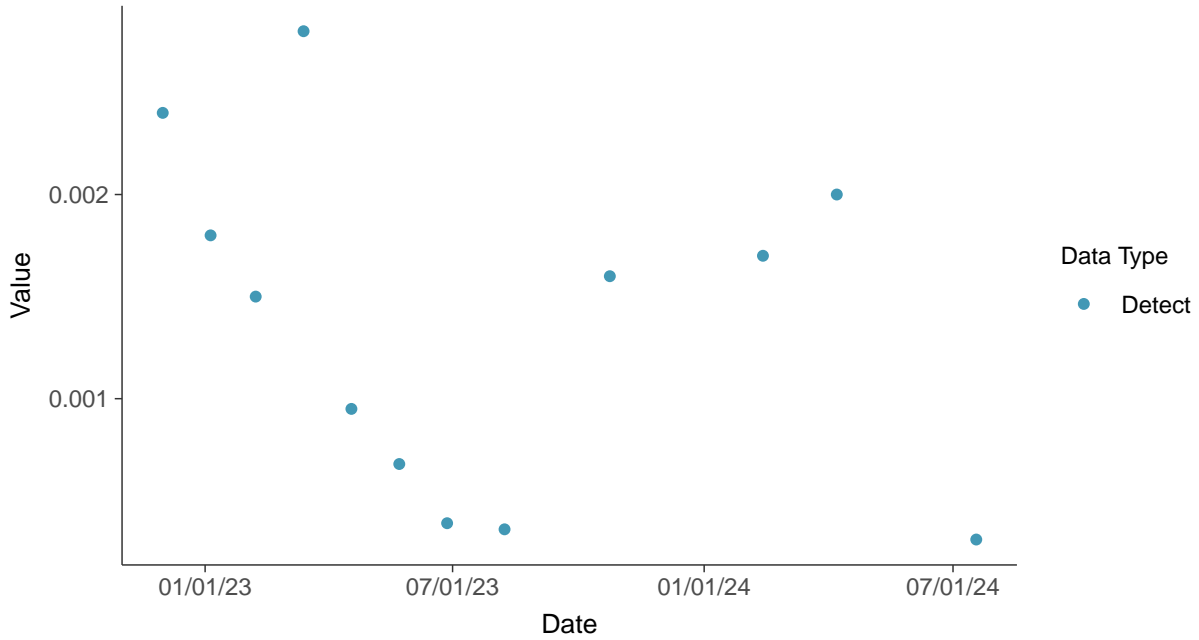


### Appendix IV: Molybdenum, MW-08

ID: 18\_1\_5\_118

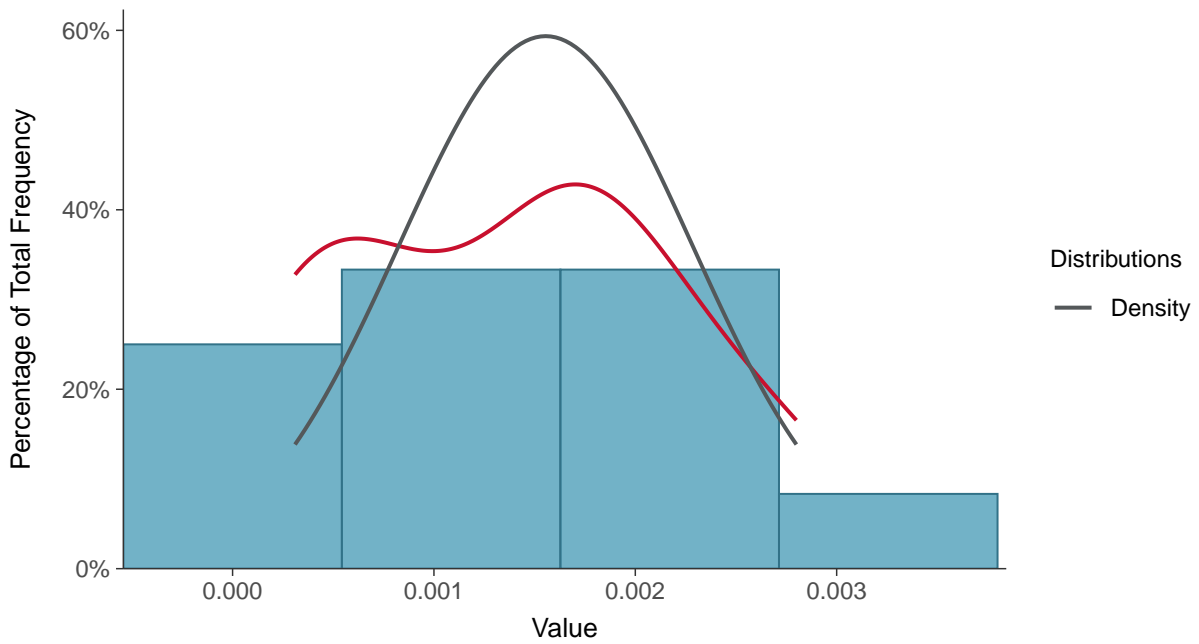
#### Scatter Plot

Molybdenum, MW-08 (mg/L)



#### Histogram

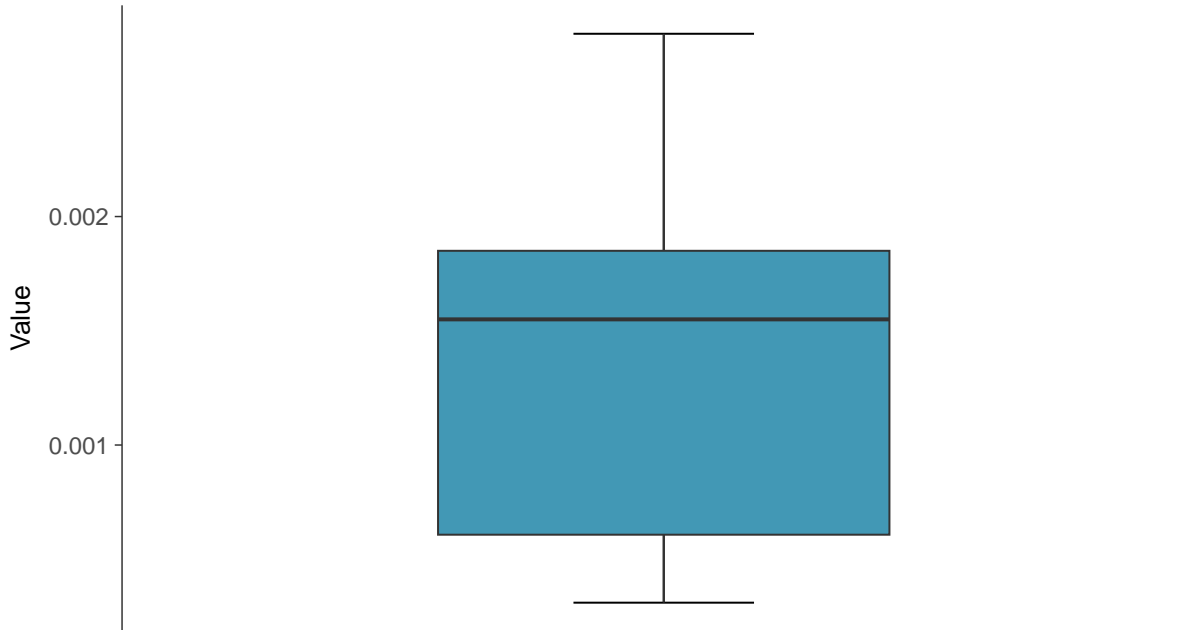
Molybdenum, MW-08 (mg/L)





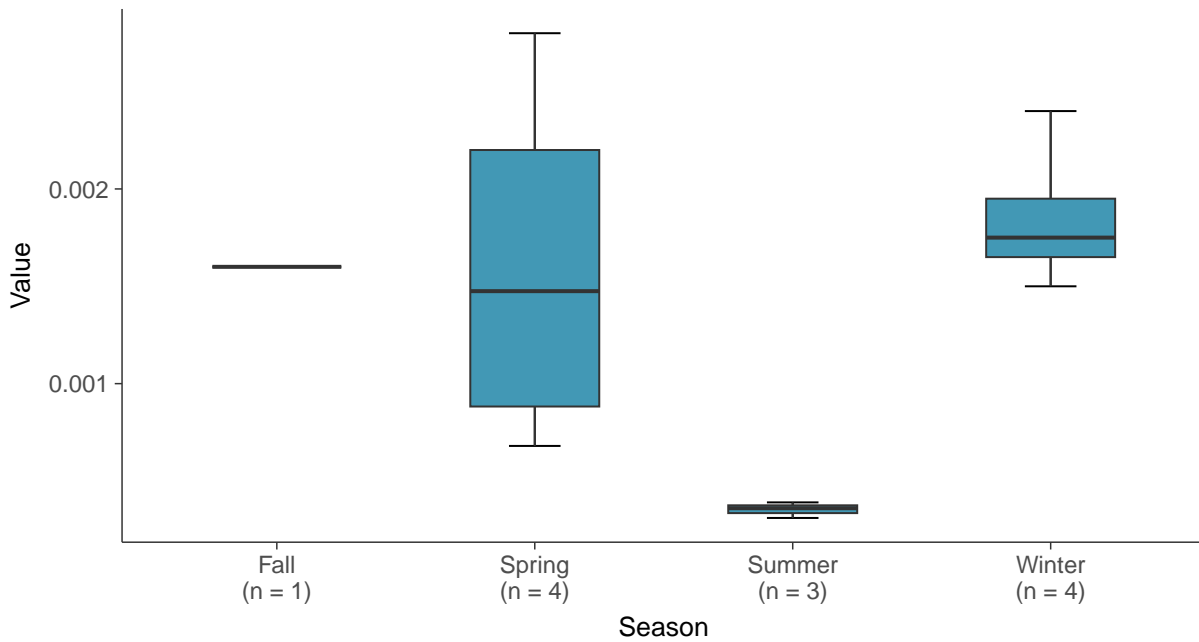
### Boxplot

Molybdenum, MW-08 (mg/L)



### Boxplot by Season

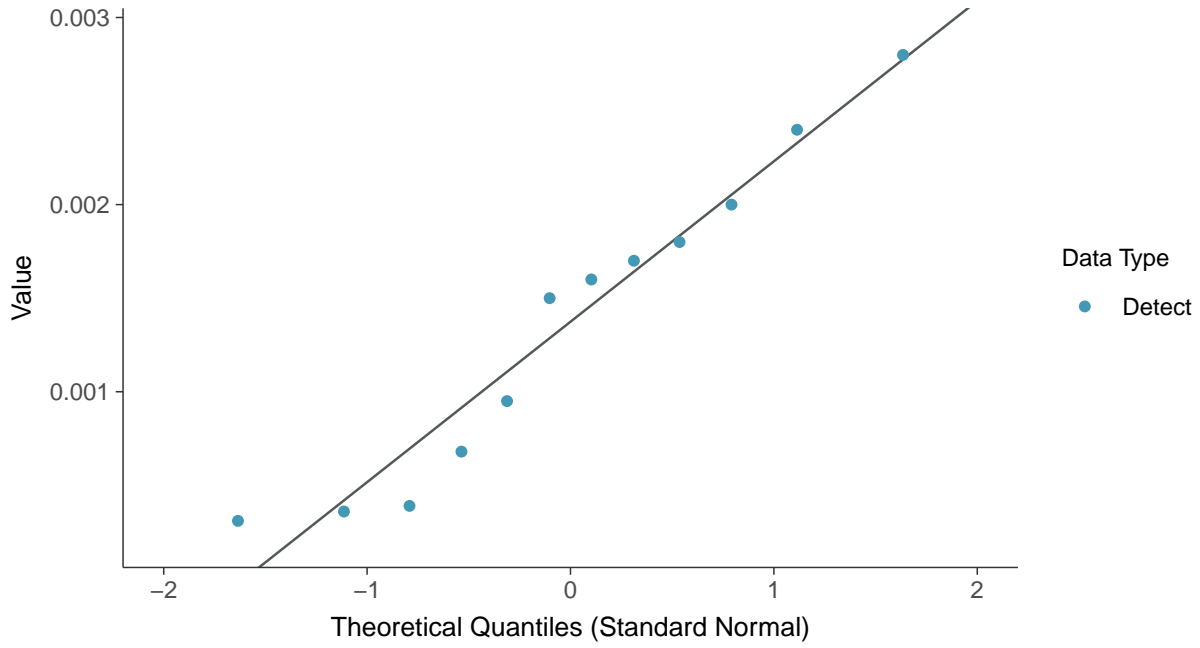
Molybdenum, MW-08 (mg/L)





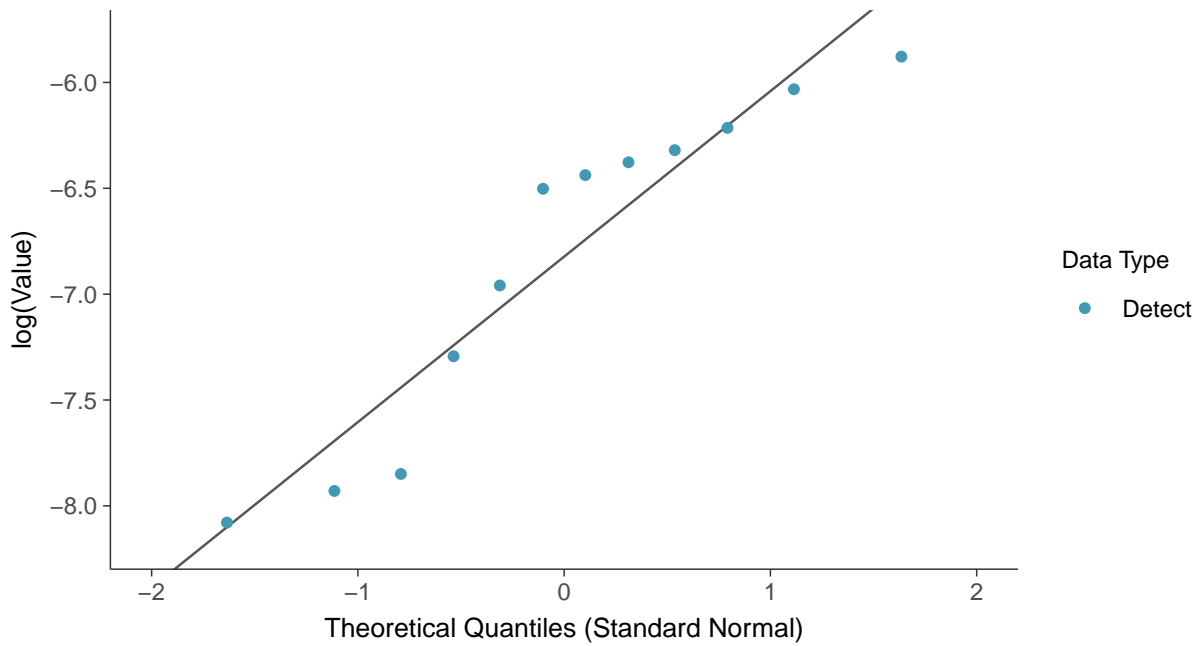
### Normal Q-Q plot

Molybdenum, MW-08 (mg/L)



### Lognormal Q-Q plot

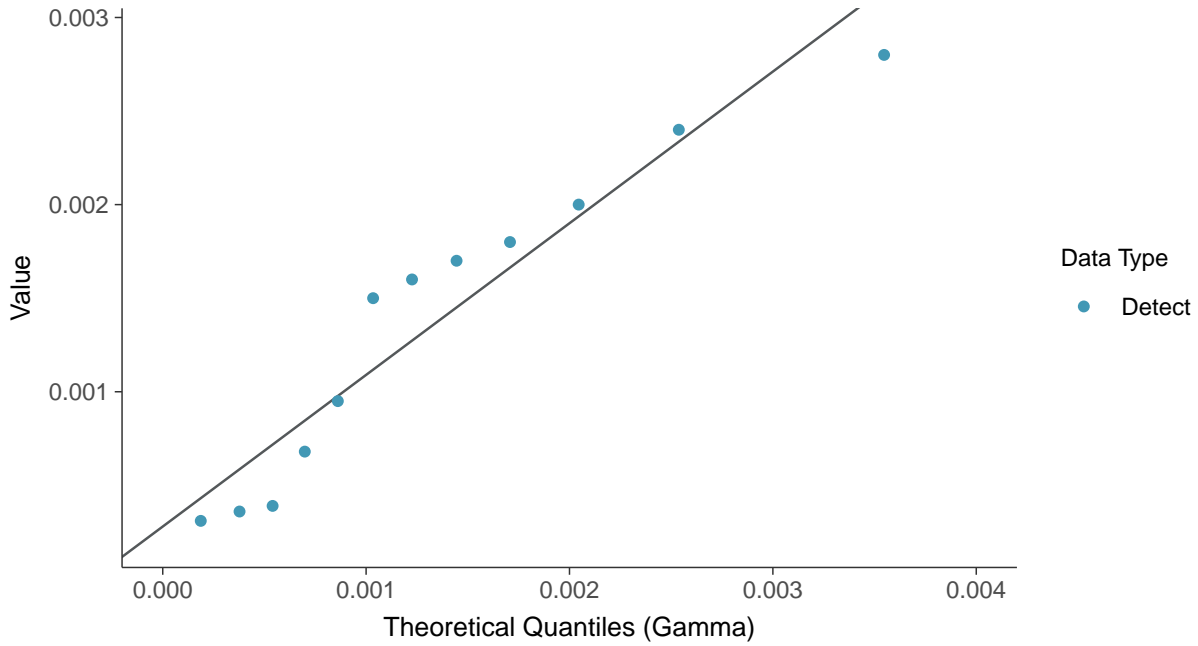
Molybdenum, MW-08 (mg/L)





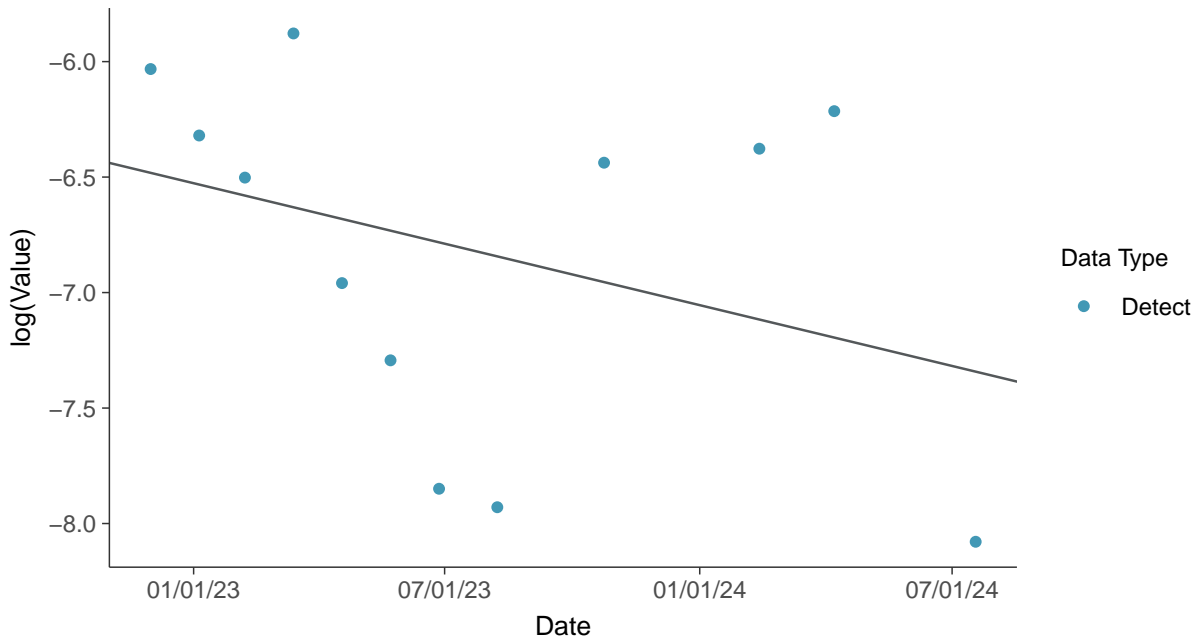
### Gamma Q-Q plot

Molybdenum, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

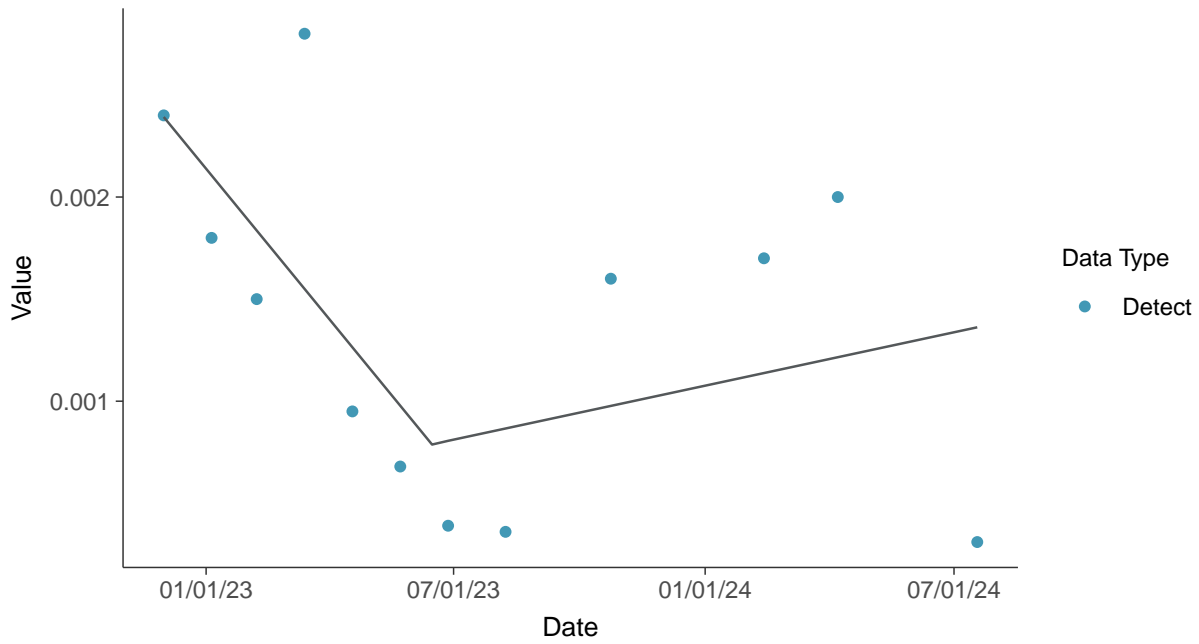
Molybdenum, MW-08 (mg/L)





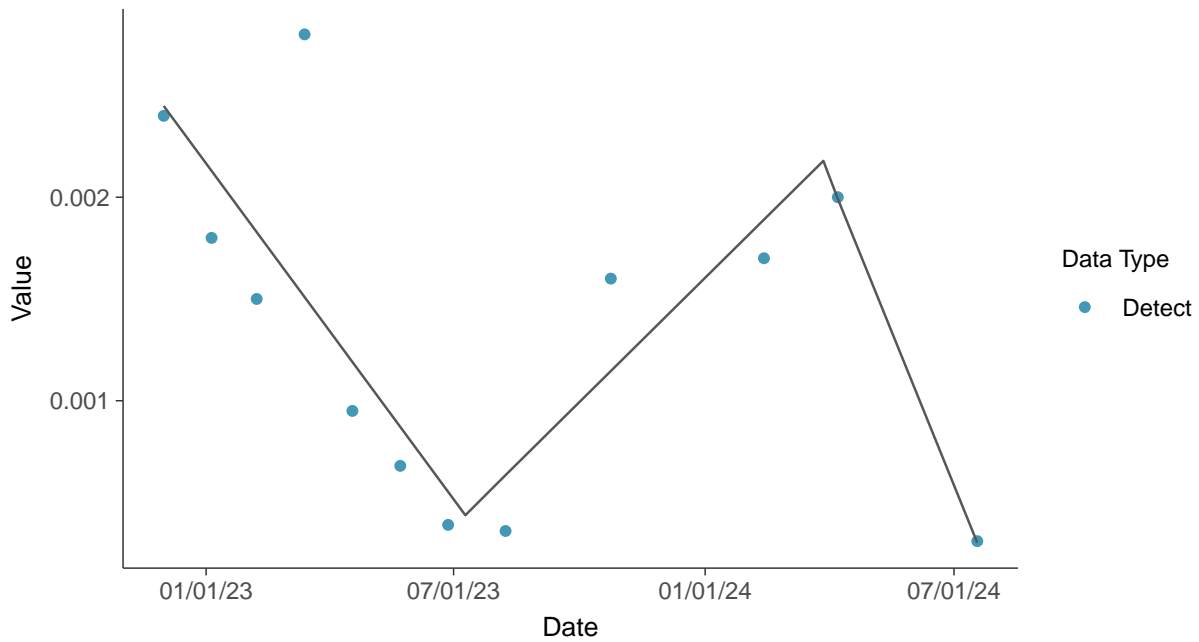
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-08 (mg/L)

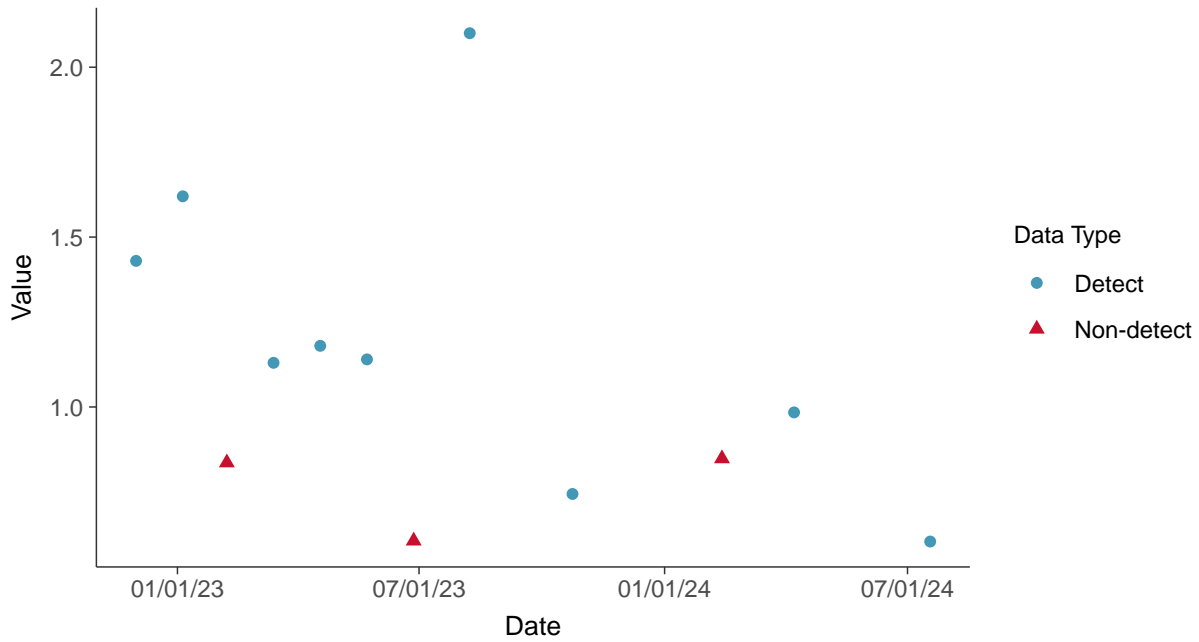


## Appendix IV: Radium 226 and 228, MW-08

ID: 18\_1\_5\_121

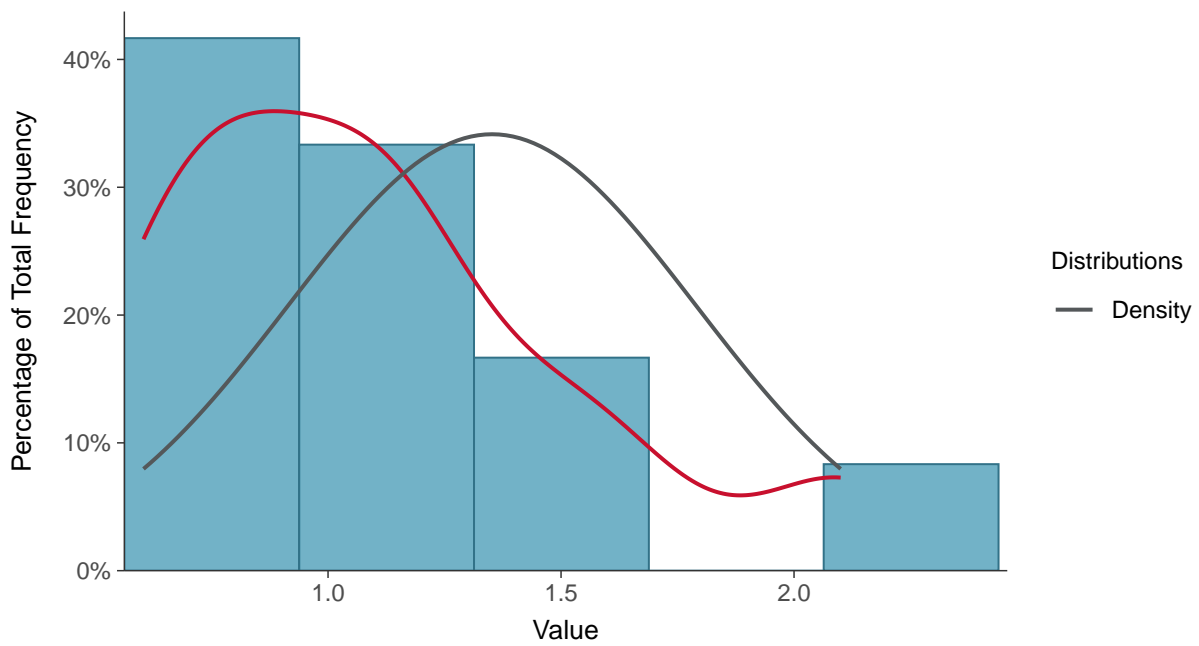
### Scatter Plot

Radium 226 and 228, MW-08 (pCi/L)



### Histogram

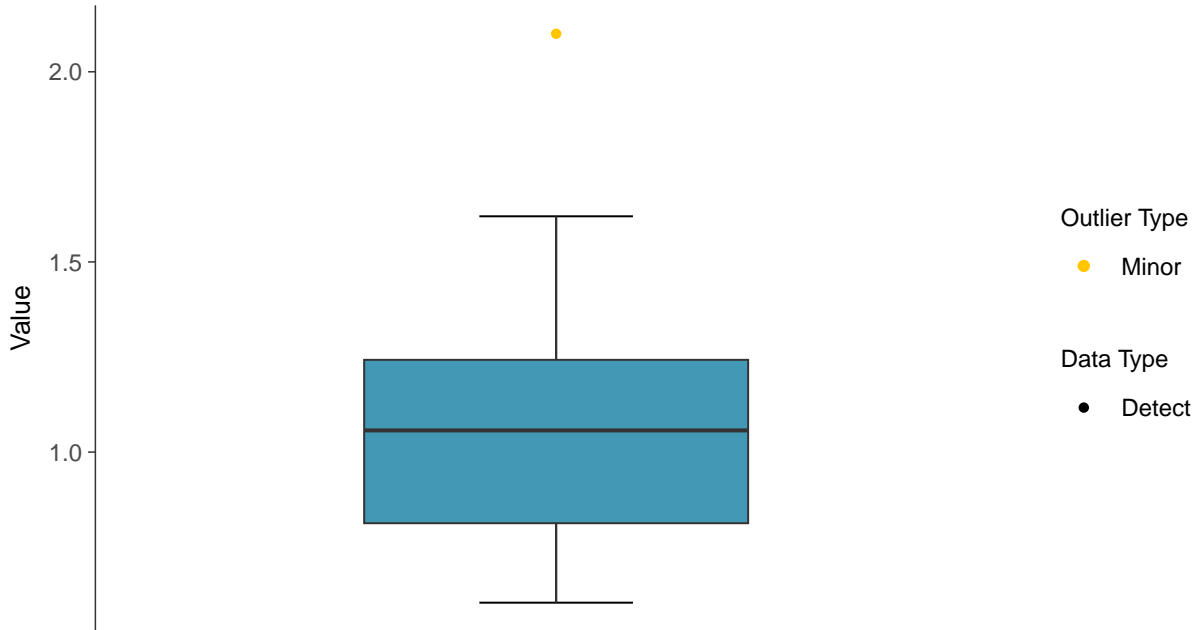
Radium 226 and 228, MW-08 (pCi/L)





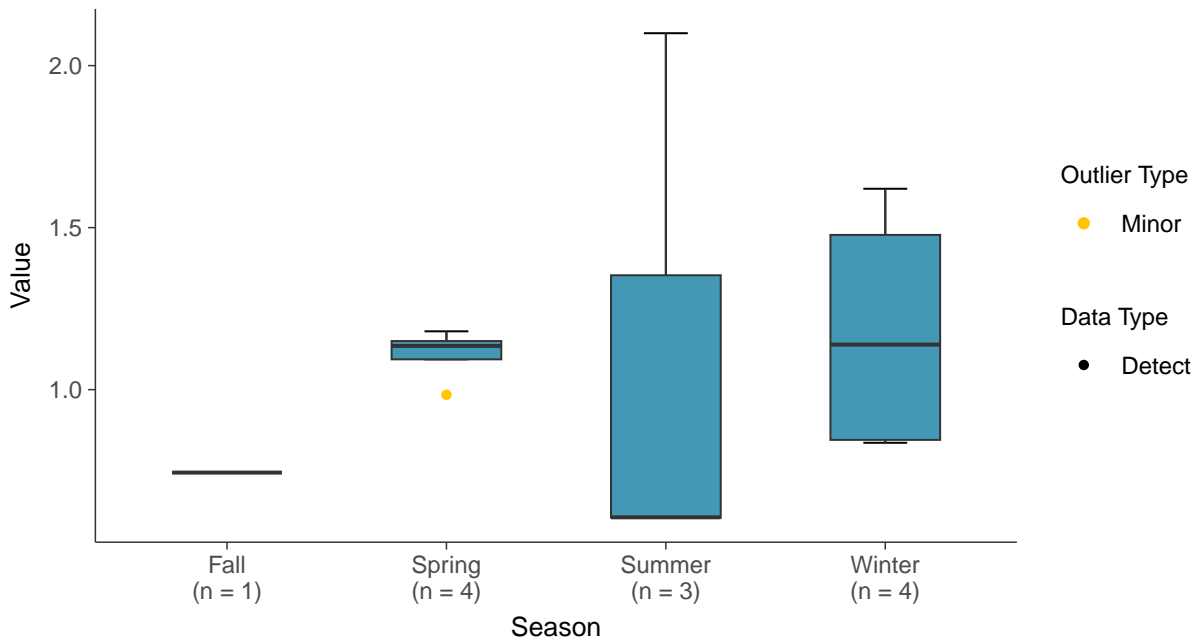
### Boxplot

Radium 226 and 228, MW-08 (pCi/L)



### Boxplot by Season

Radium 226 and 228, MW-08 (pCi/L)

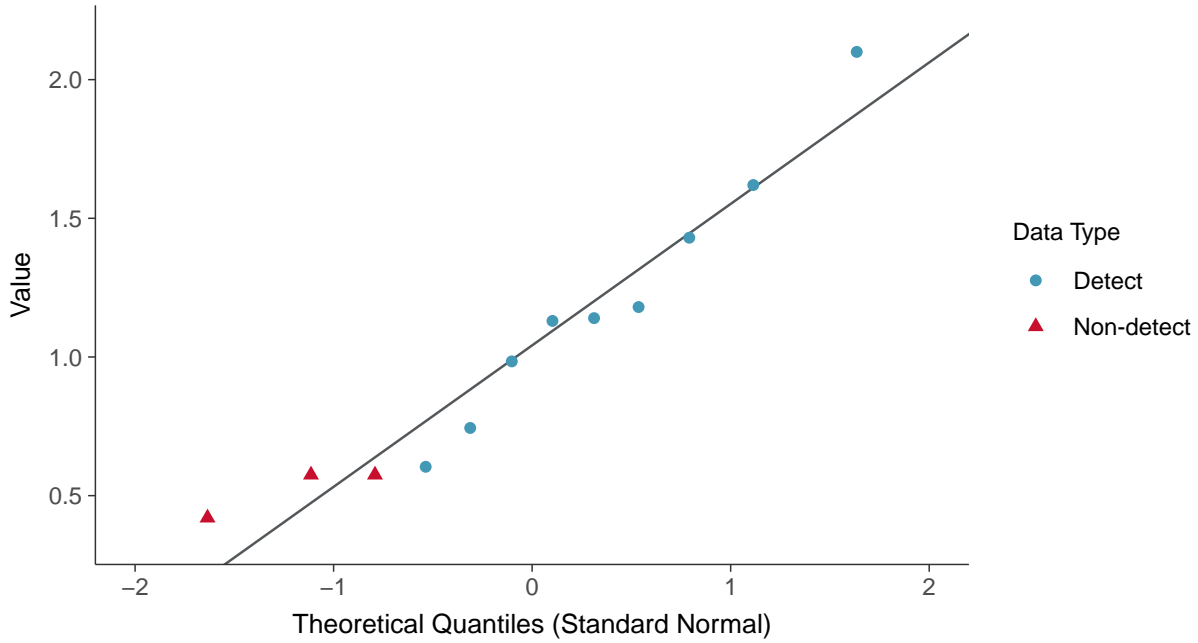






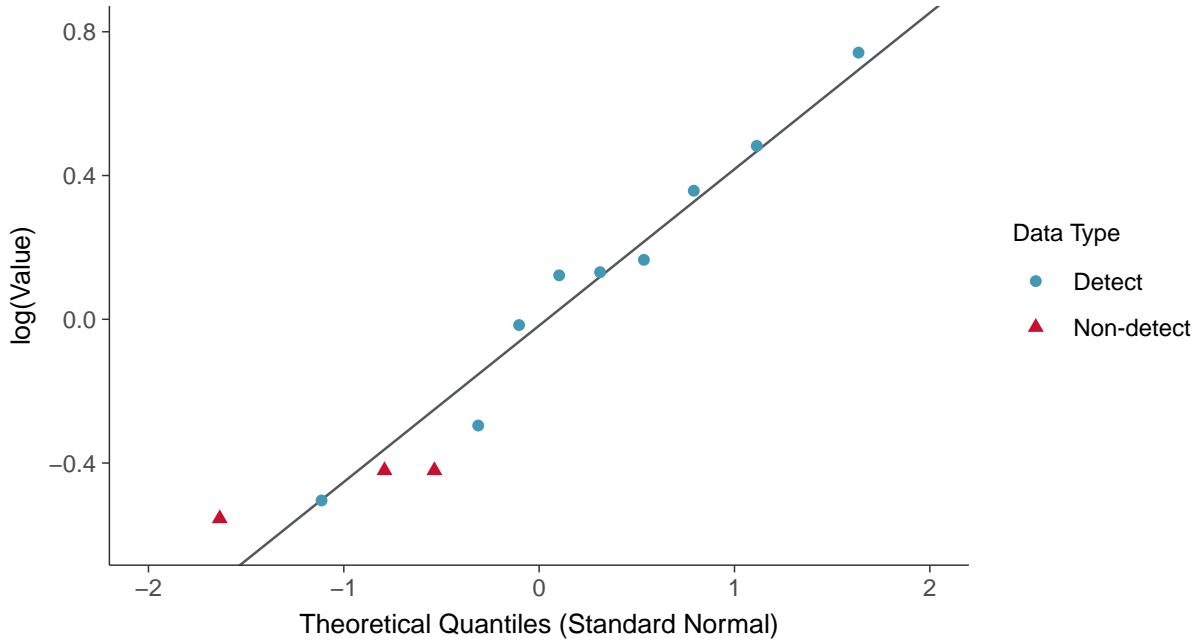
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

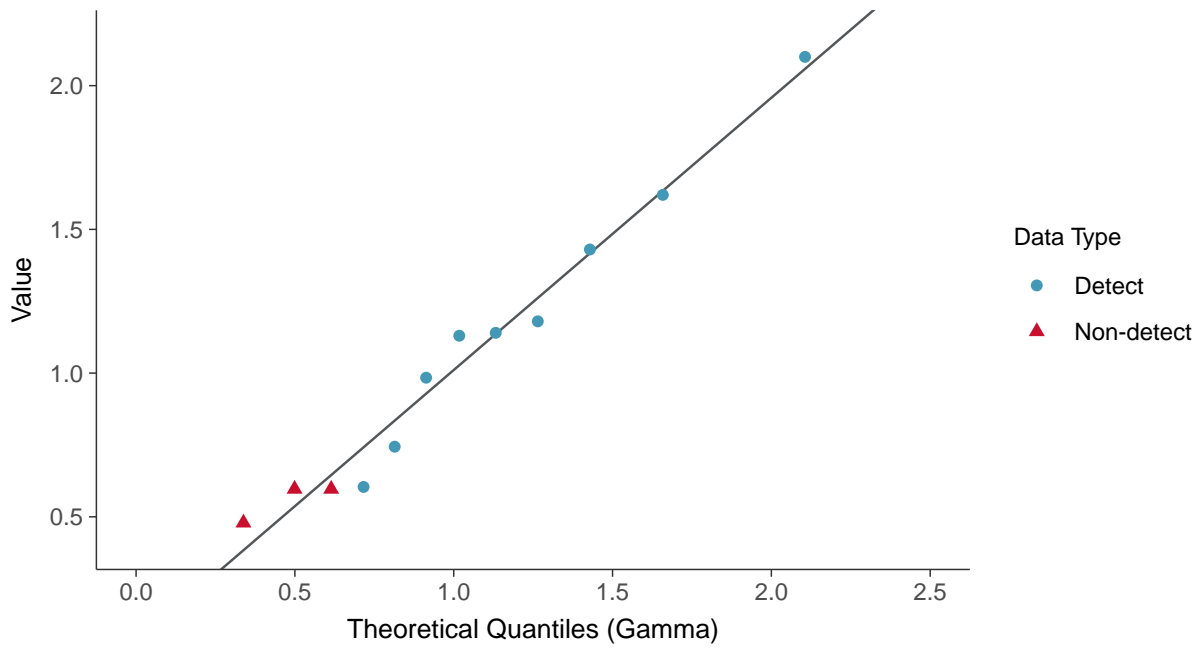
Radium 226 and 228, MW-08 (pCi/L)





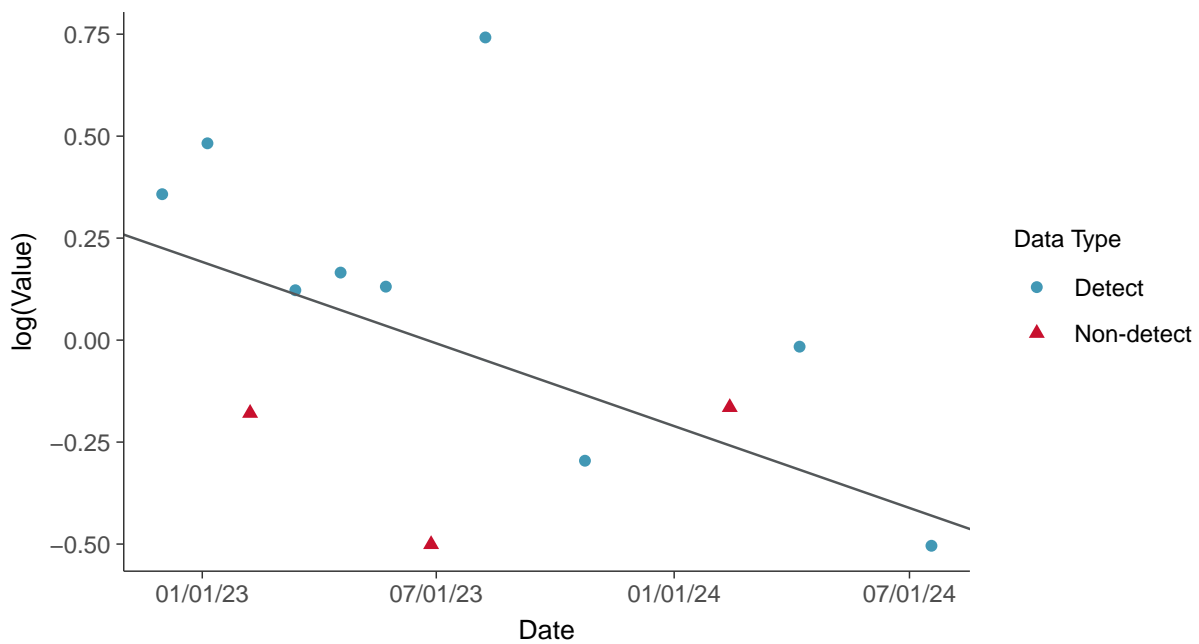
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-08 (pCi/L)



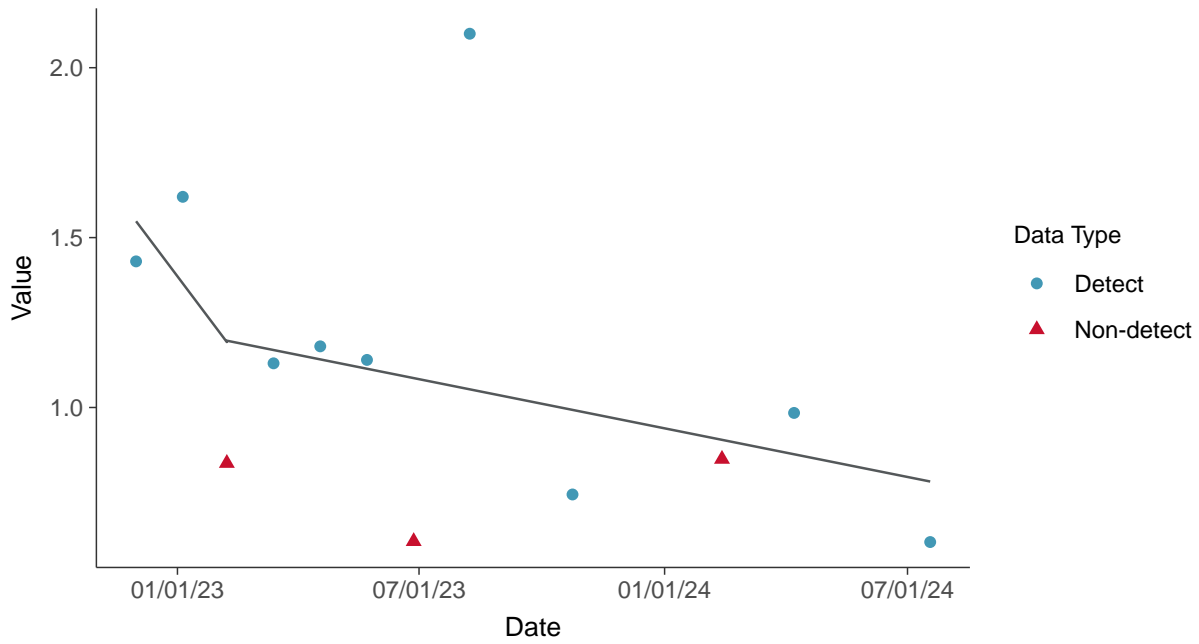
### Trend Regression: Lognormal MLE

Radium 226 and 228, MW-08 (pCi/L)

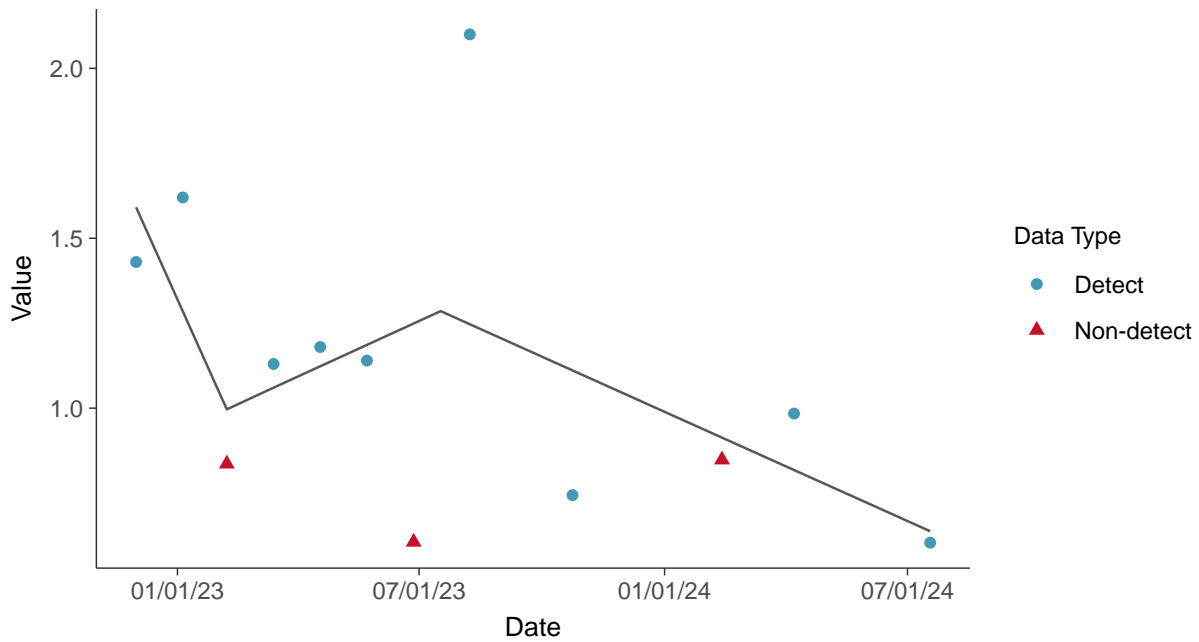




**Trend Regression: Piecewise Linear-Linear**  
Radium 226 and 228, MW-08 (pCi/L)



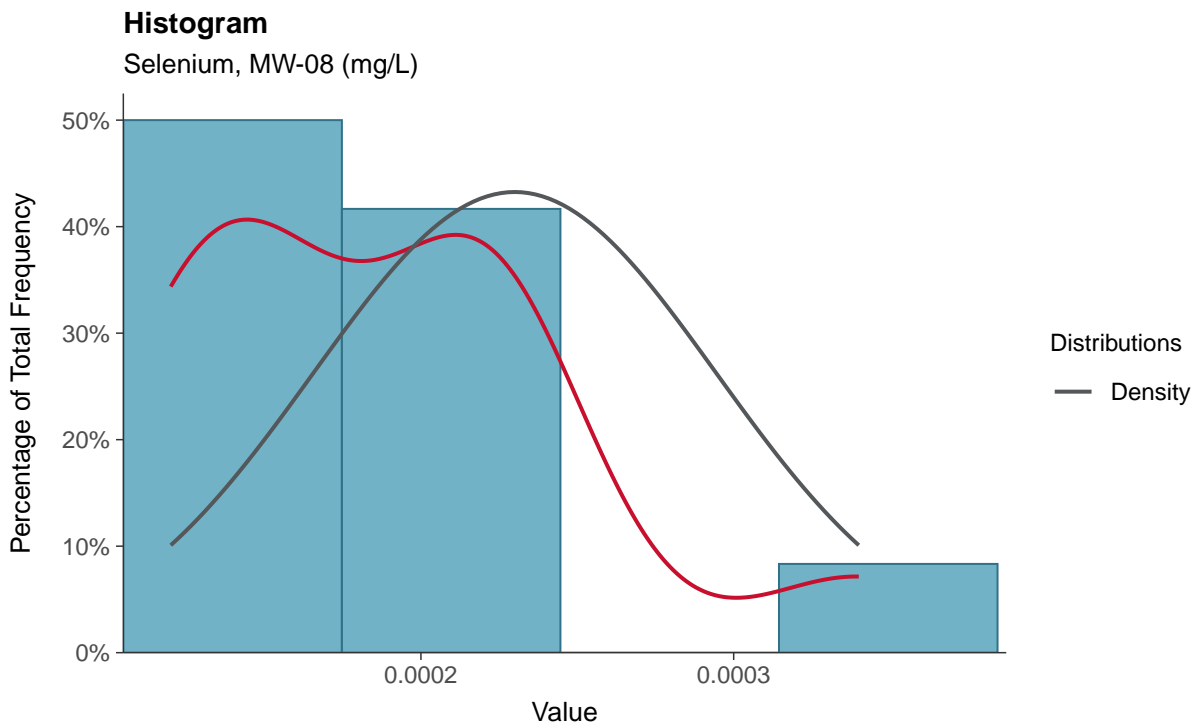
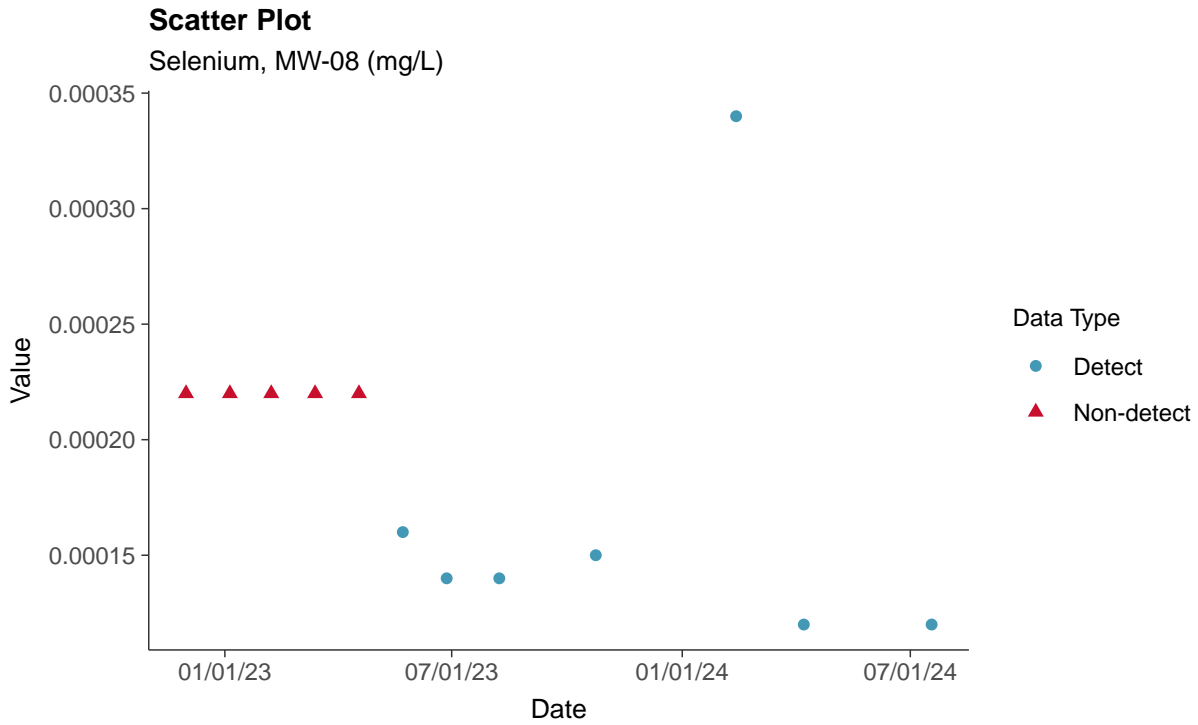
**Trend Regression: Piecewise Linear-Linear-Linear**  
Radium 226 and 228, MW-08 (pCi/L)





### Appendix IV: Selenium, MW-08

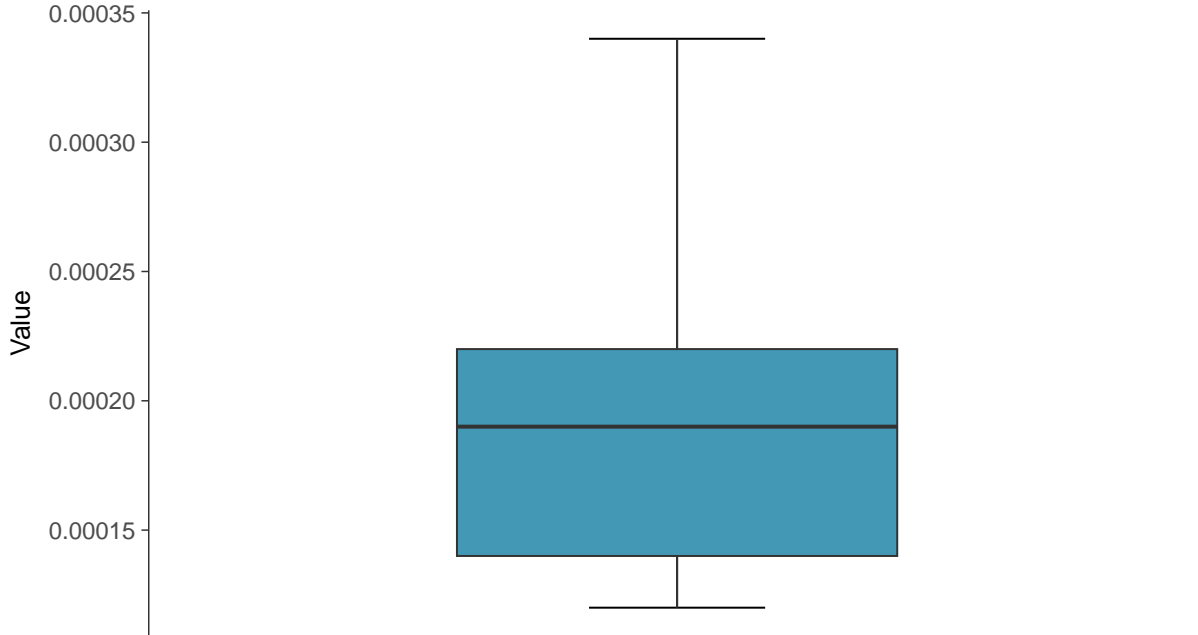
ID: 18\_1\_5\_122





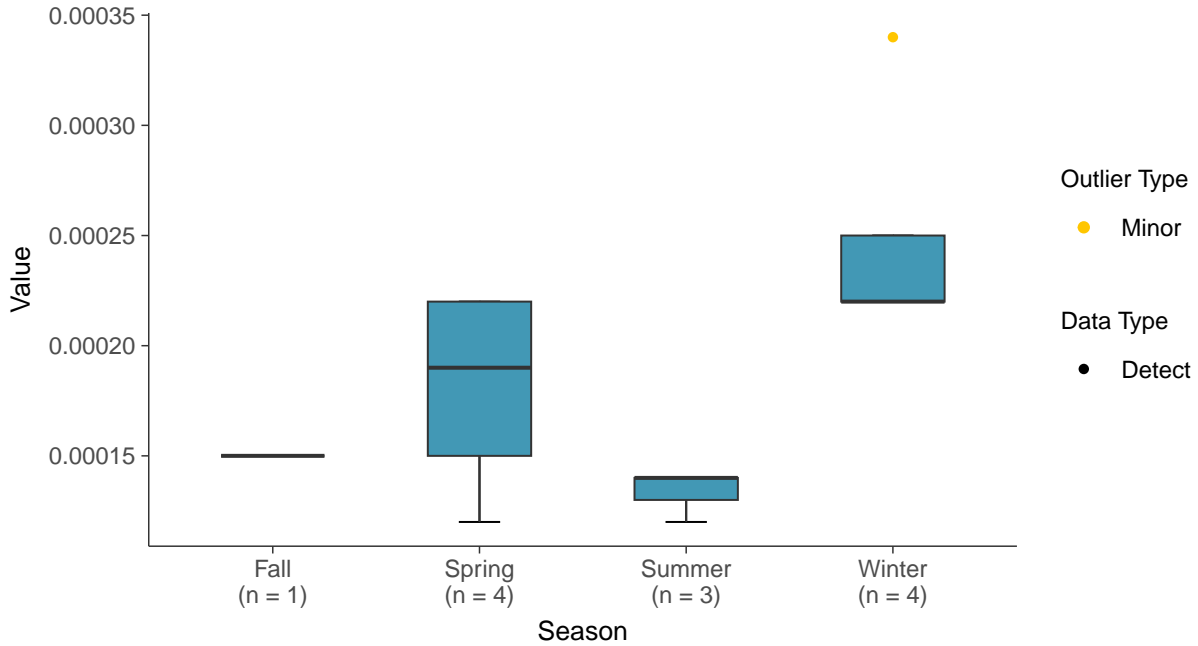
### Boxplot

Selenium, MW-08 (mg/L)



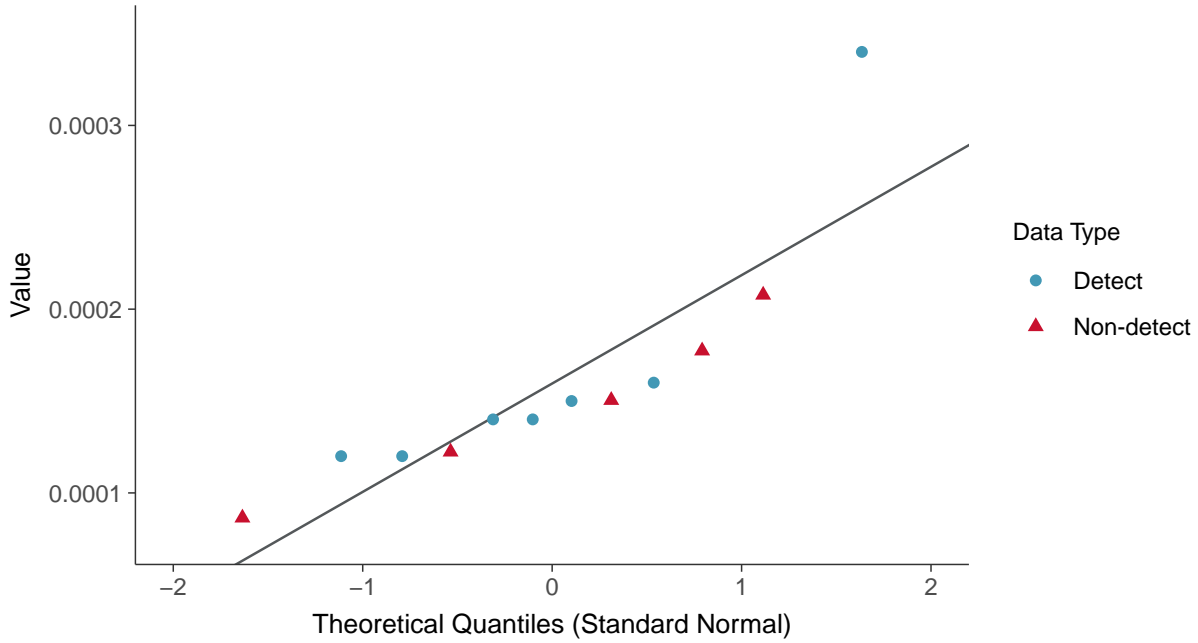
### Boxplot by Season

Selenium, MW-08 (mg/L)

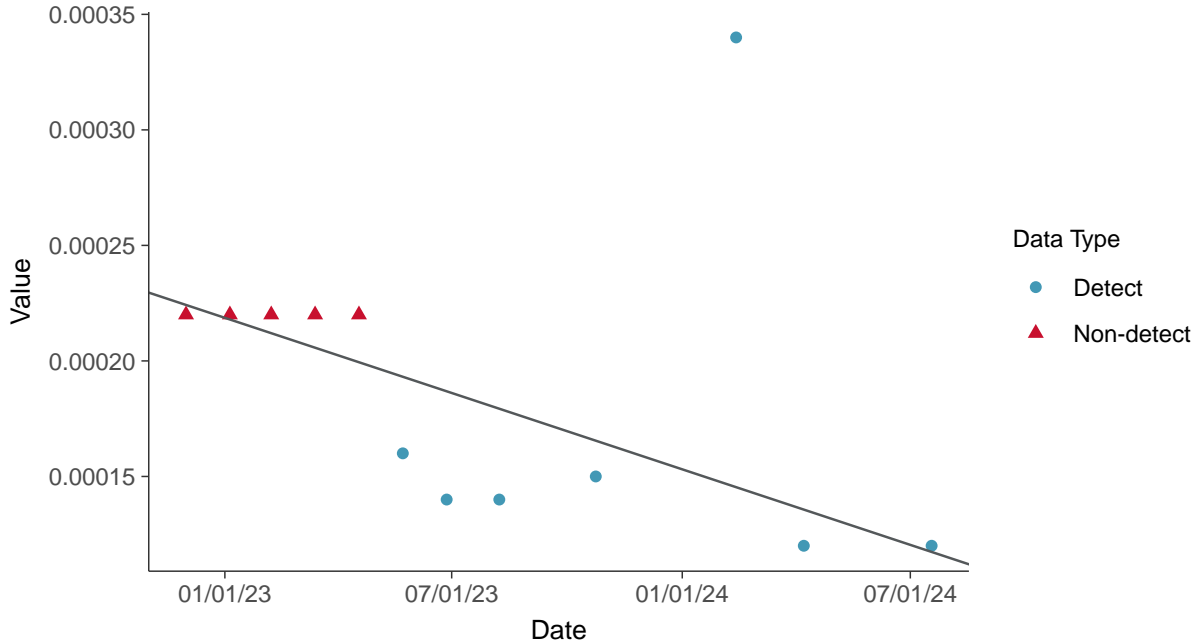




**Normal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-08 (mg/L)



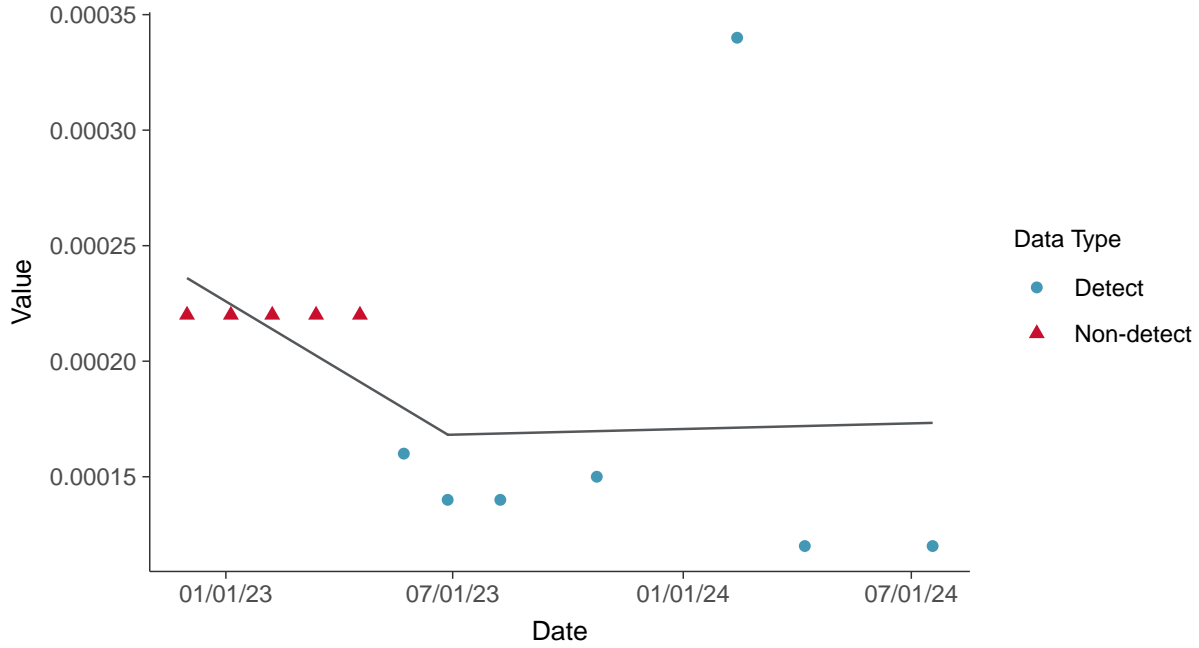
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Selenium, MW-08 (mg/L)





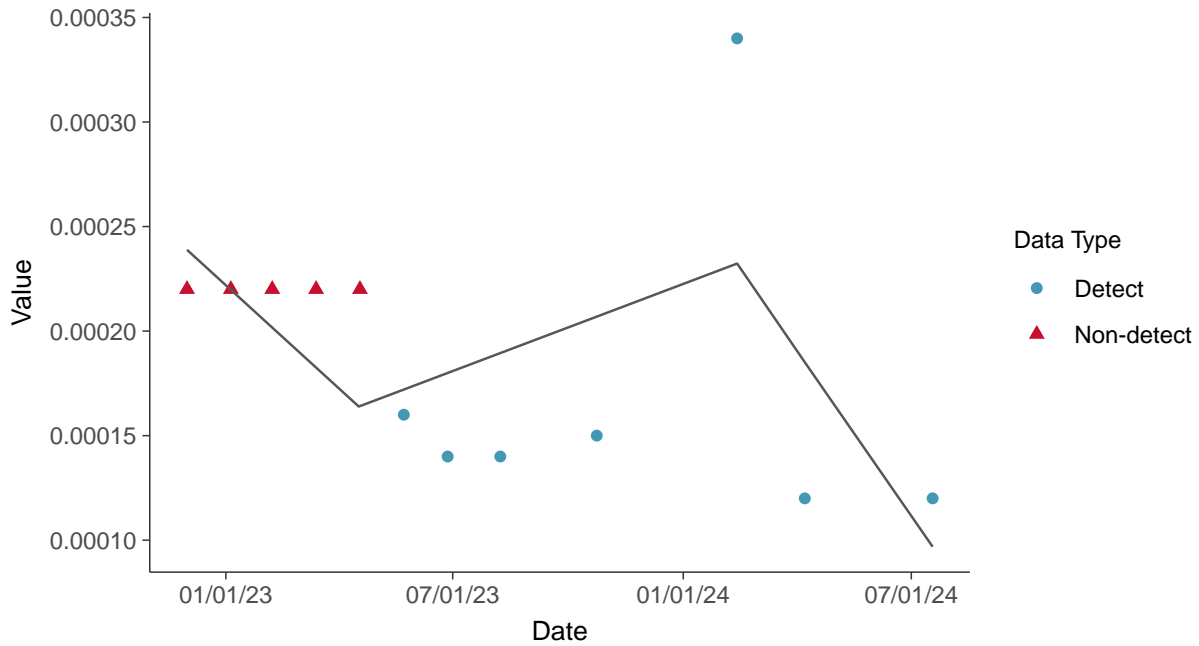
### Trend Regression: Piecewise Linear-Linear

Selenium, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

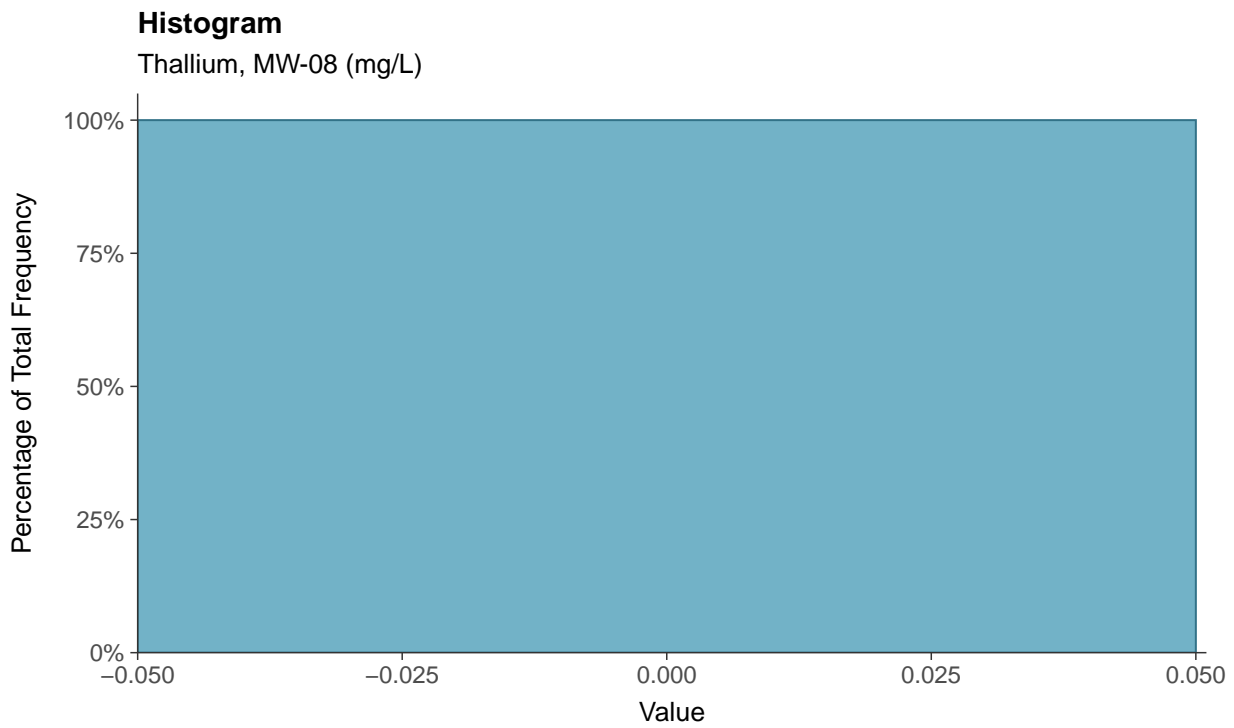
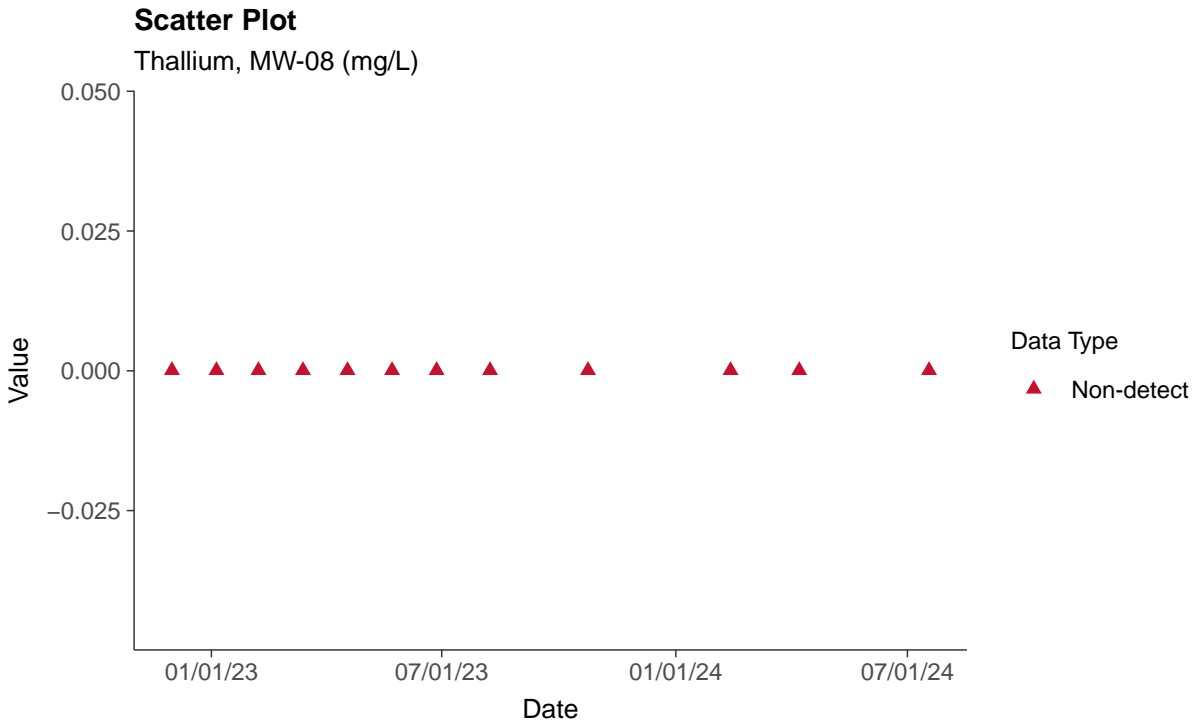
Selenium, MW-08 (mg/L)





### Appendix IV: Thallium, MW-08

ID: 18\_1\_5\_125

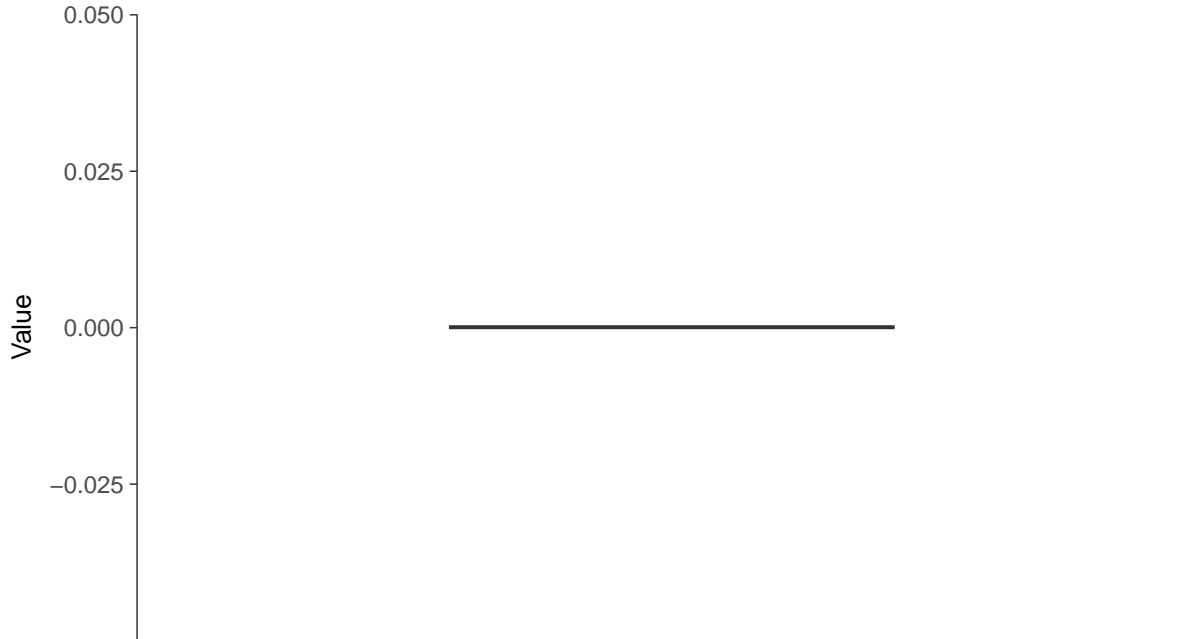






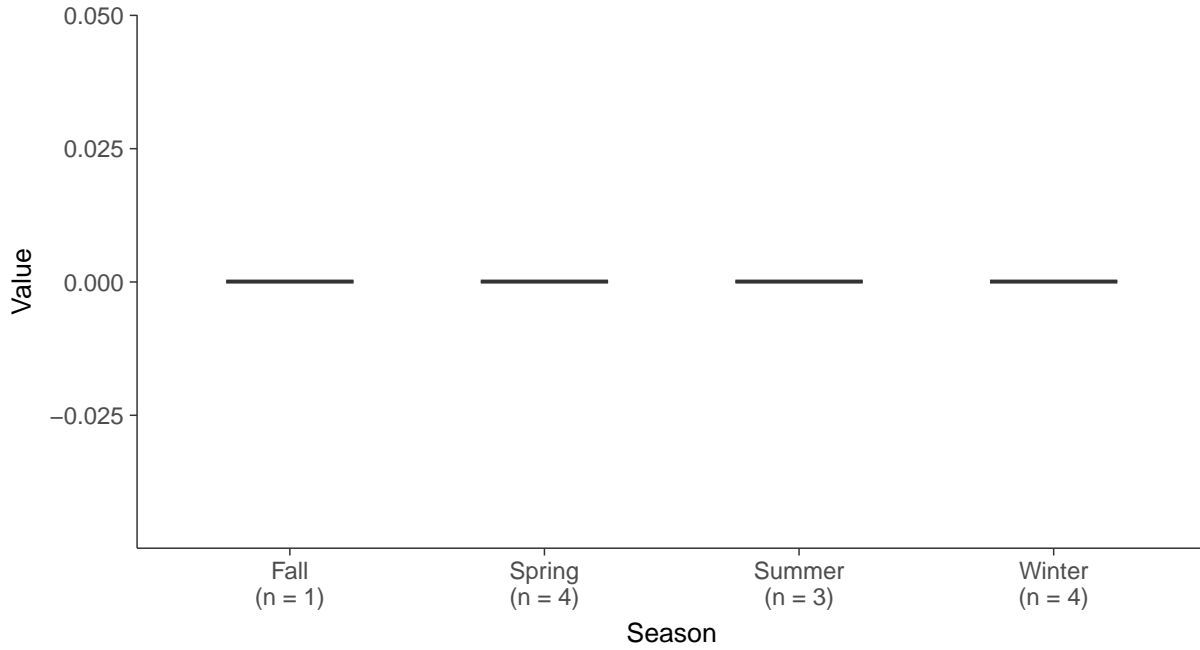
### Boxplot

Thallium, MW-08 (mg/L)



### Boxplot by Season

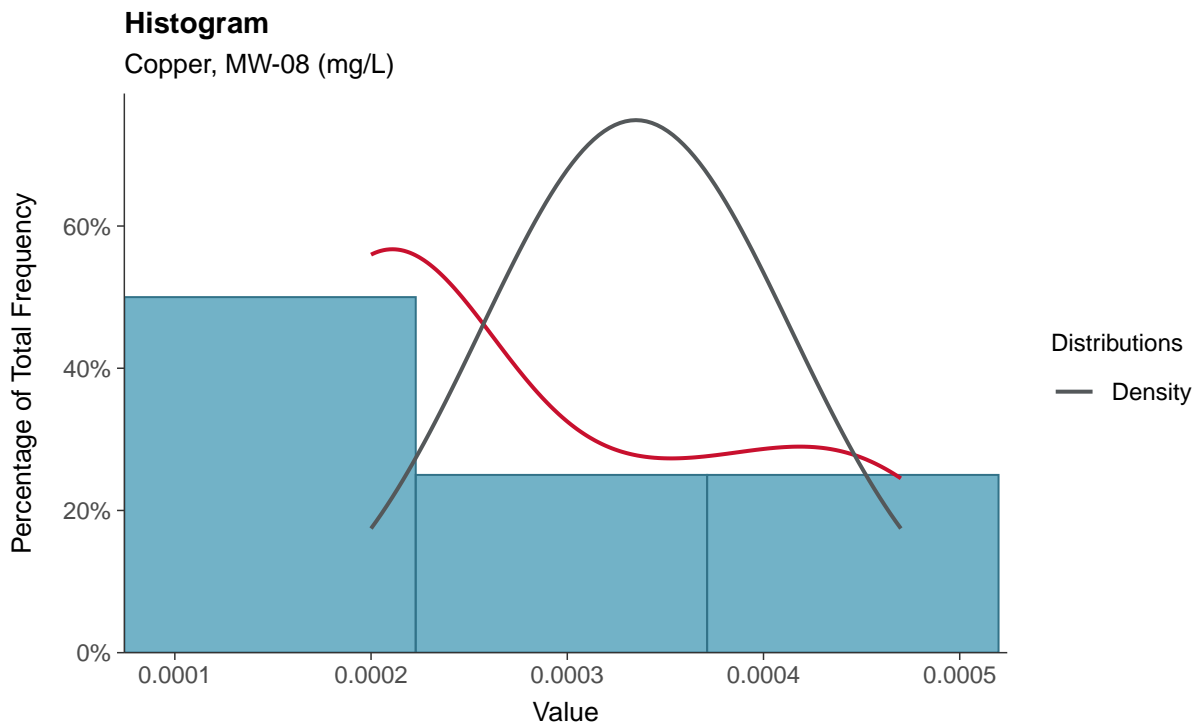
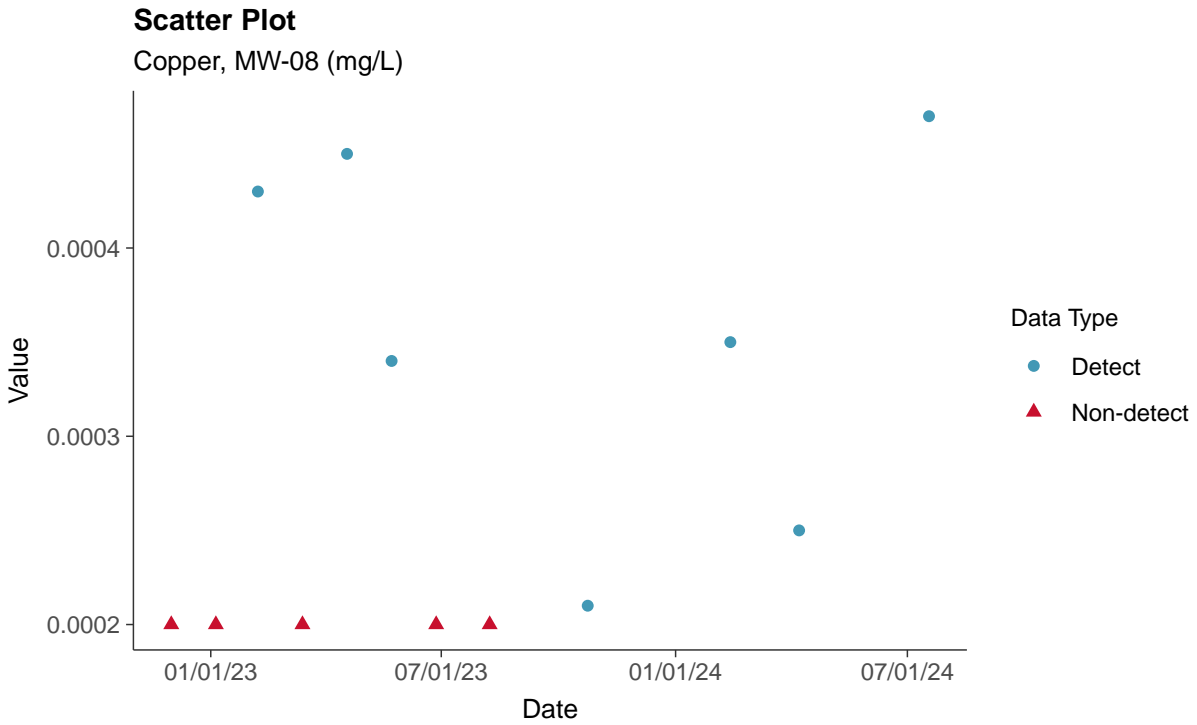
Thallium, MW-08 (mg/L)





### Part 115: Copper, MW-08

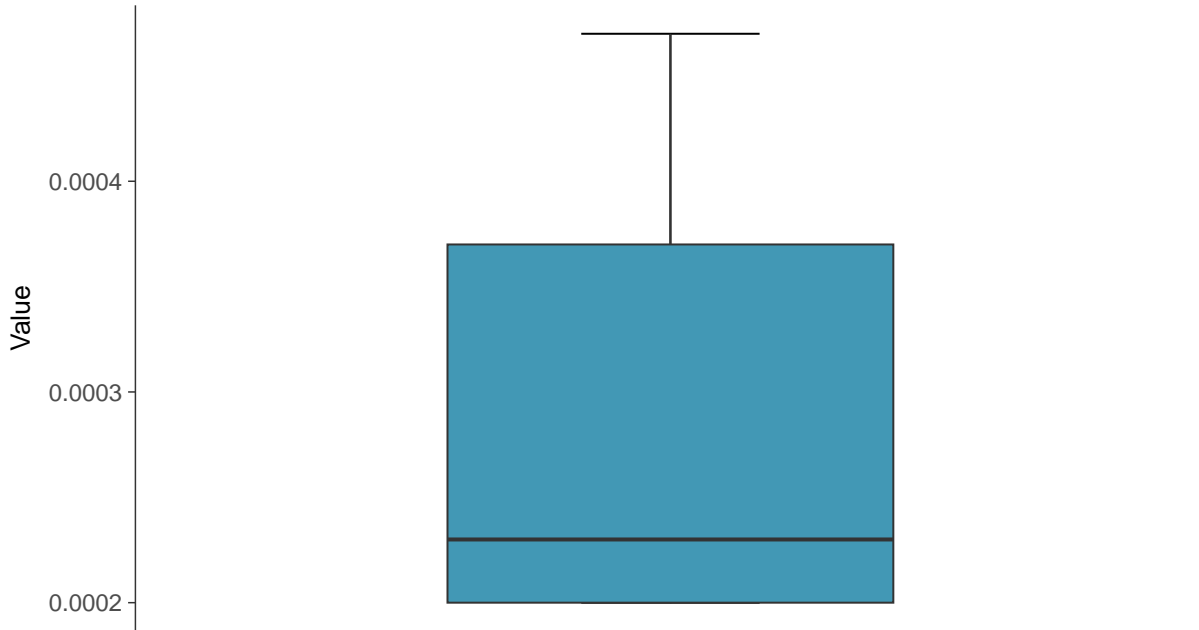
ID: 18\_1\_6\_111





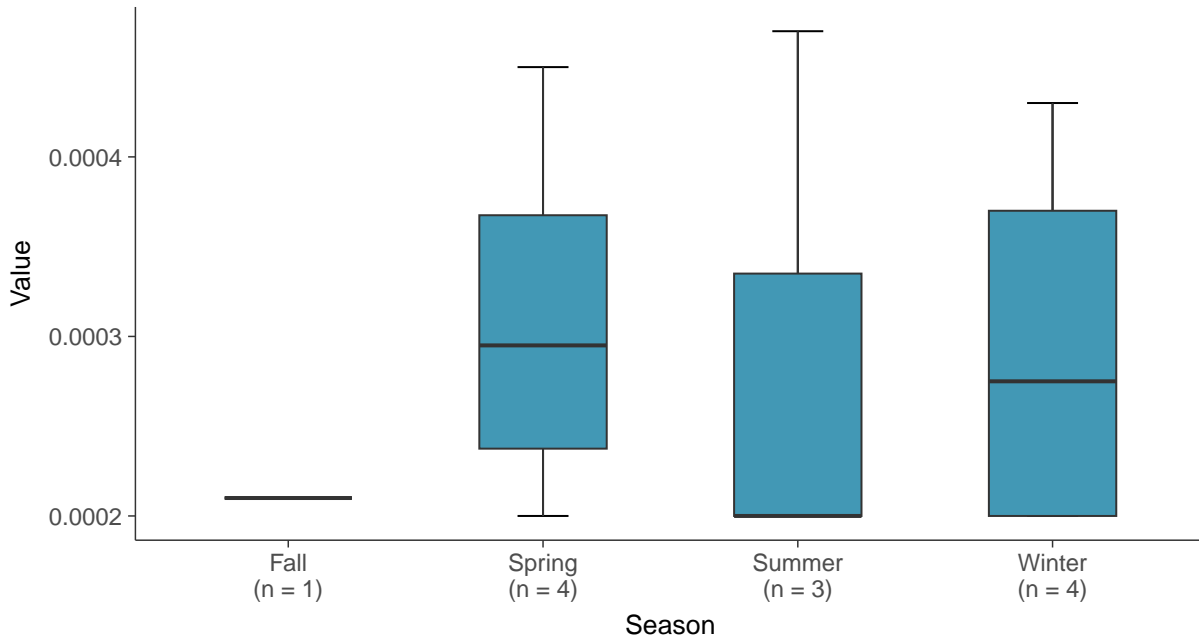
### Boxplot

Copper, MW-08 (mg/L)



### Boxplot by Season

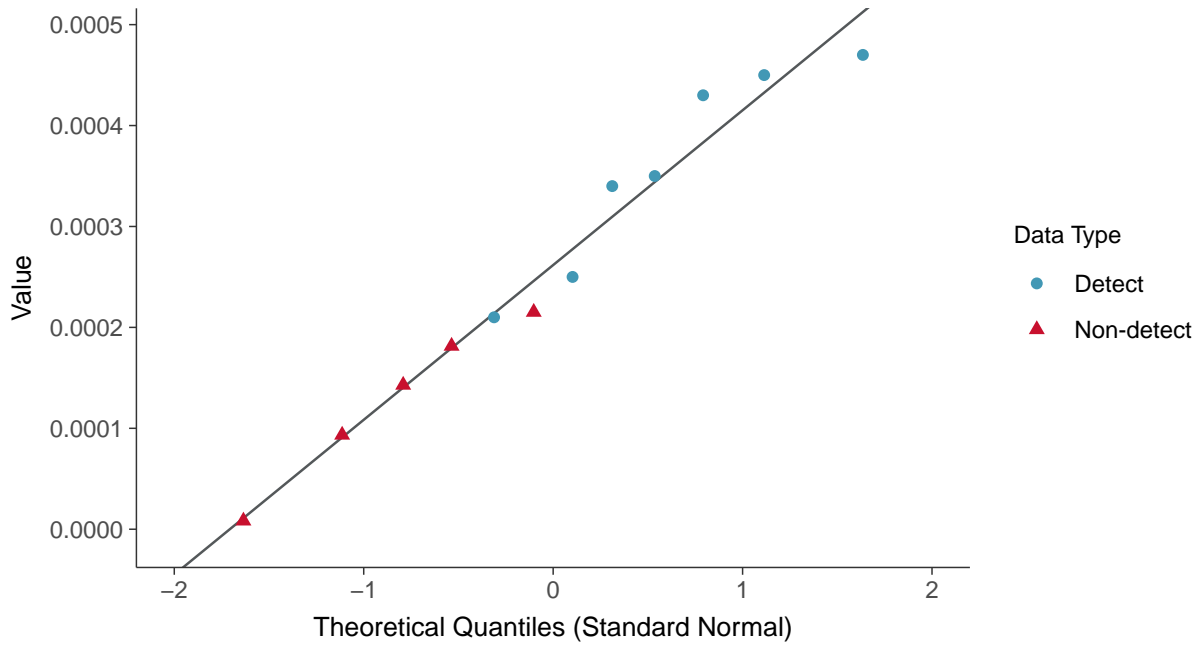
Copper, MW-08 (mg/L)





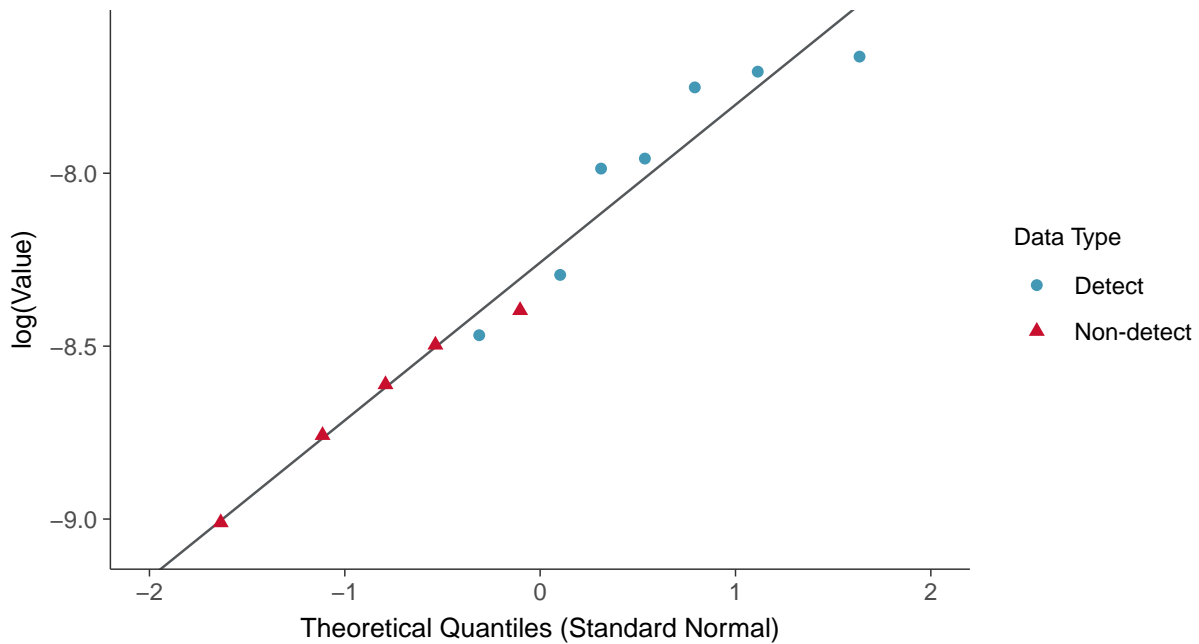
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-08 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

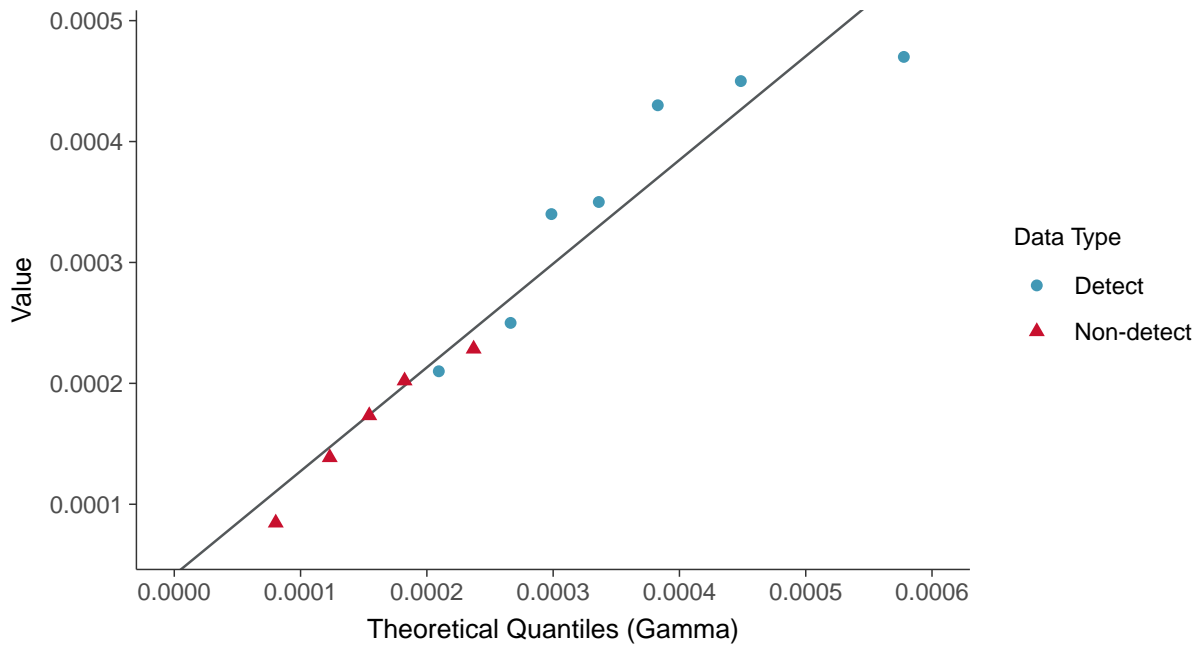
Copper, MW-08 (mg/L)





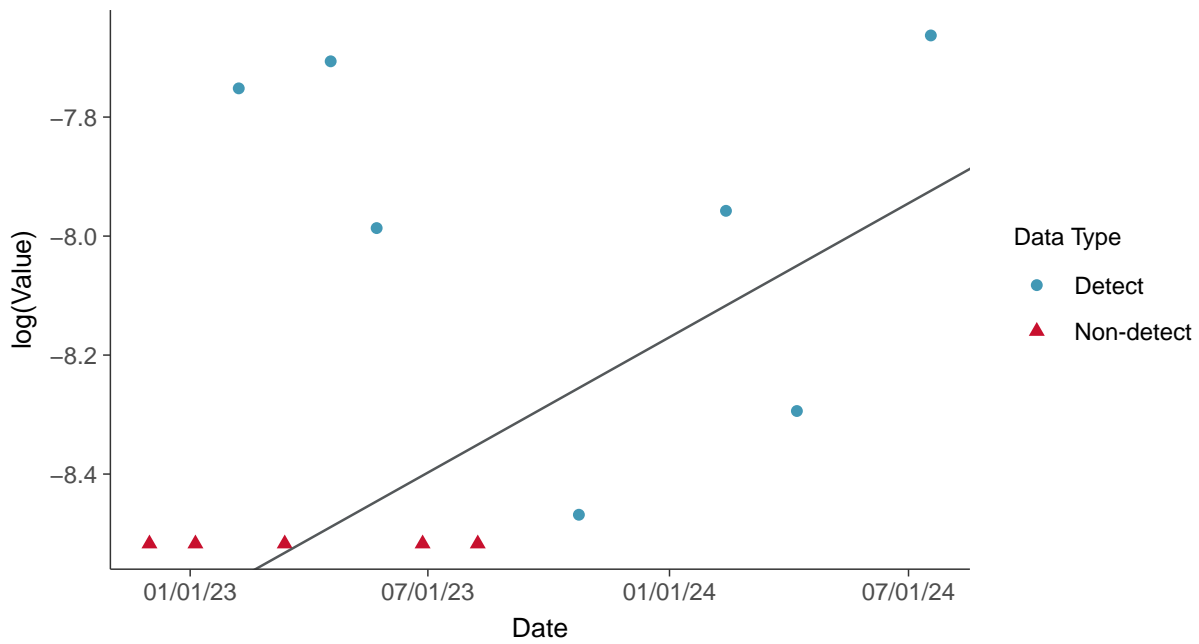
### Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-08 (mg/L)



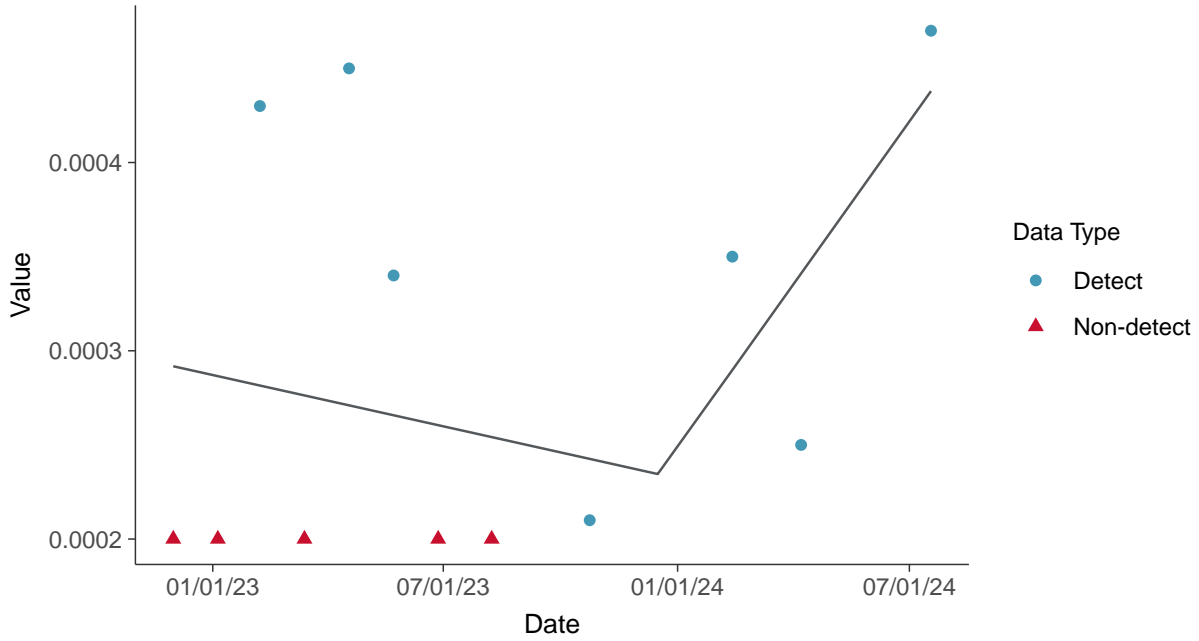
### Trend Regression: Lognormal MLE

Copper, MW-08 (mg/L)

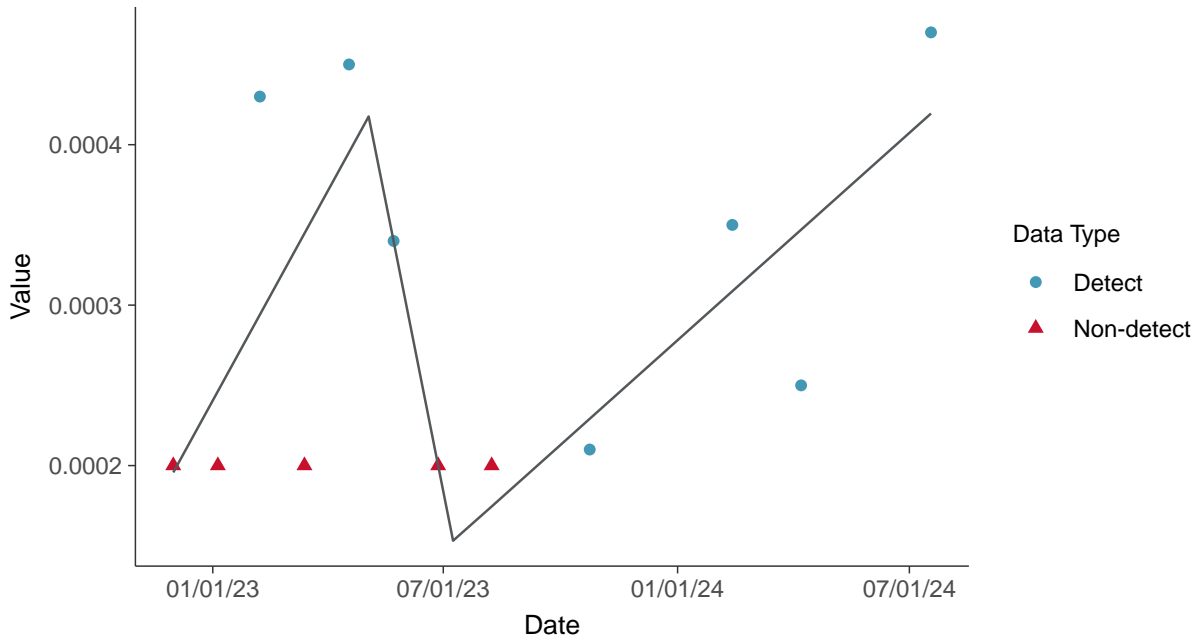




**Trend Regression: Piecewise Linear-Linear**  
Copper, MW-08 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Copper, MW-08 (mg/L)



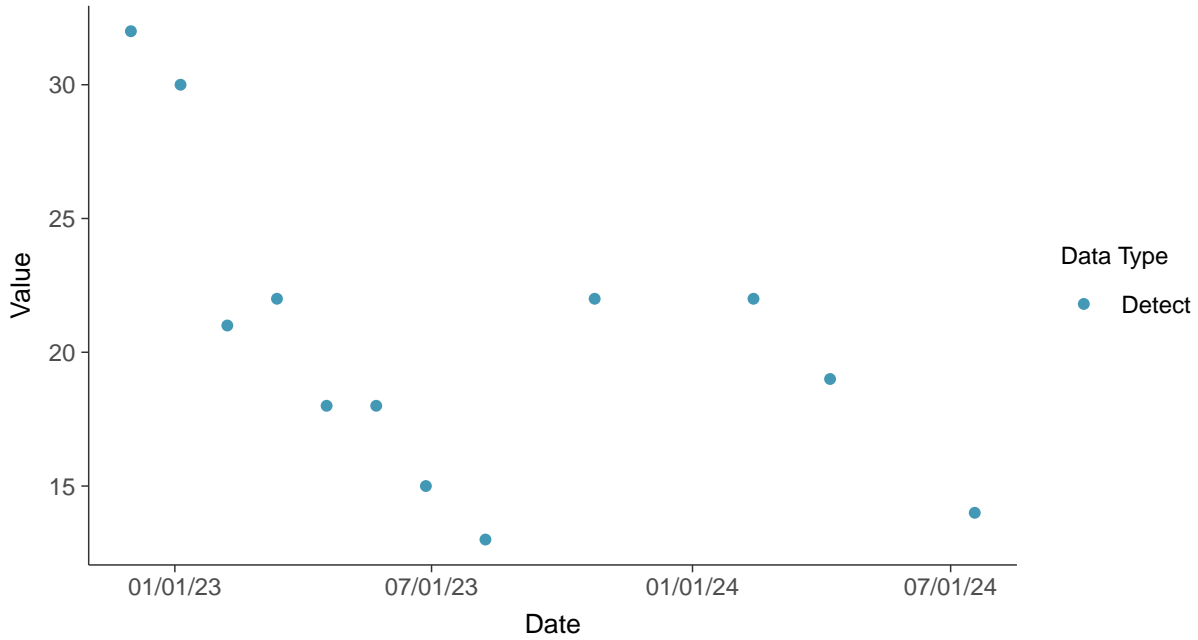


### Part 115: Iron, MW-08

ID: 18\_1\_6\_114

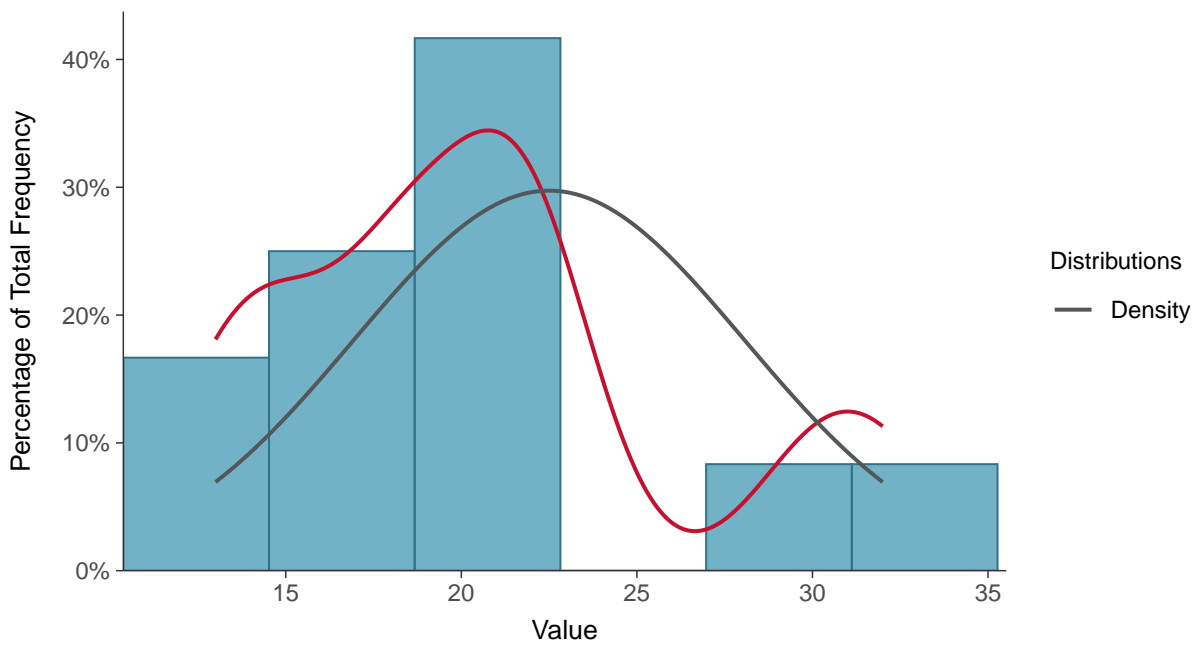
#### Scatter Plot

Iron, MW-08 (mg/L)



#### Histogram

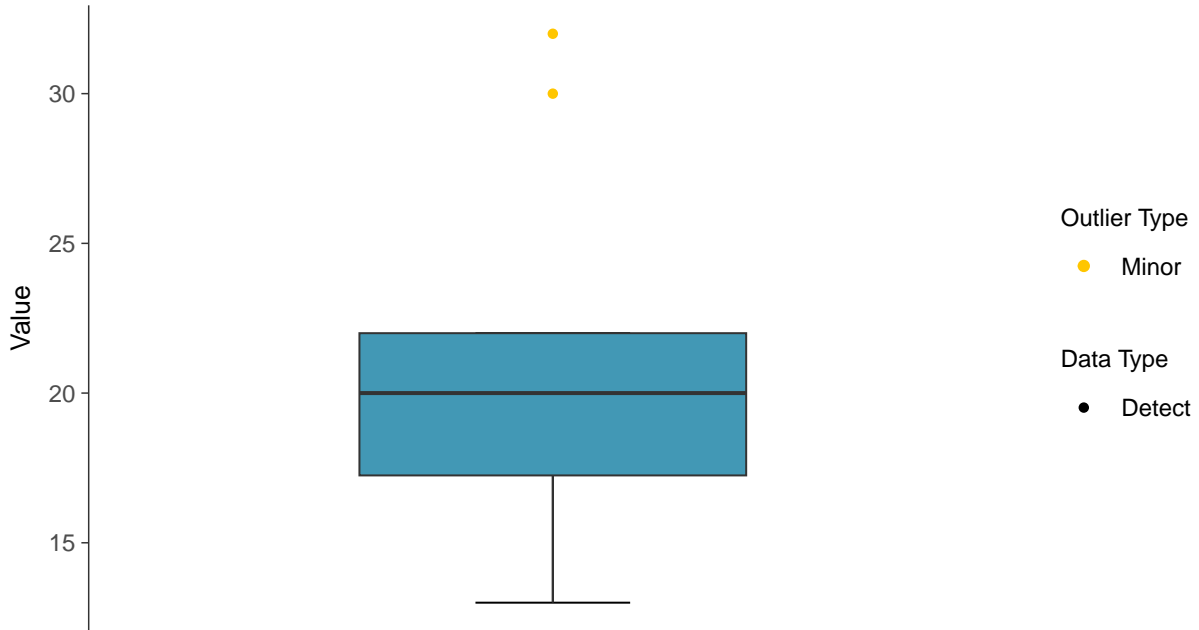
Iron, MW-08 (mg/L)





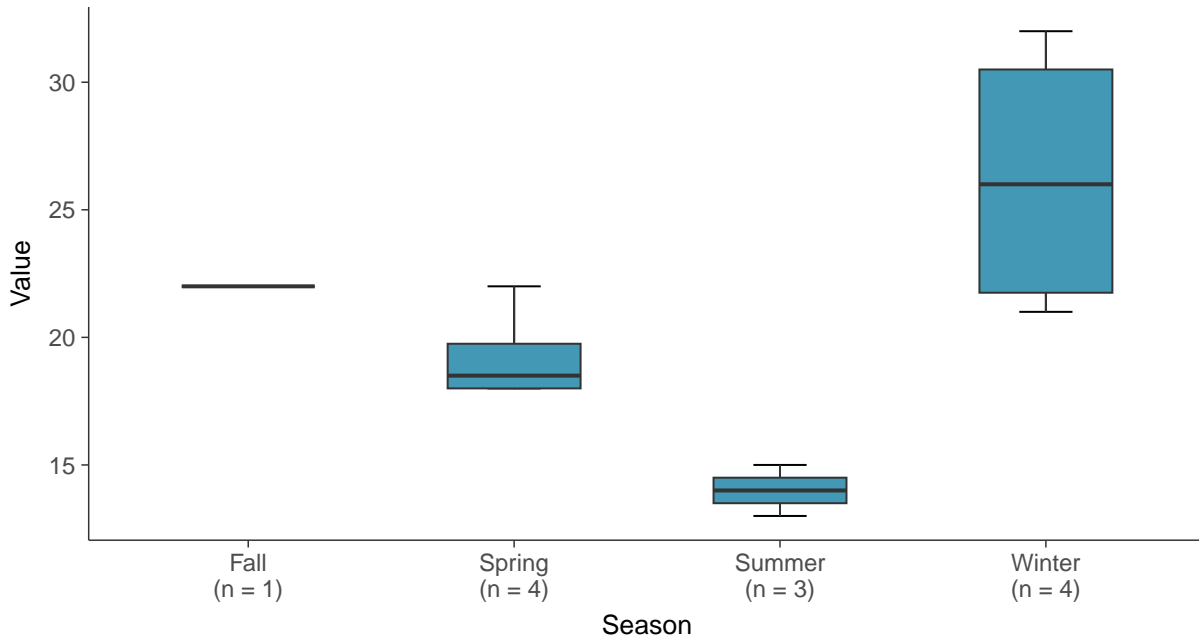
### Boxplot

Iron, MW-08 (mg/L)



### Boxplot by Season

Iron, MW-08 (mg/L)

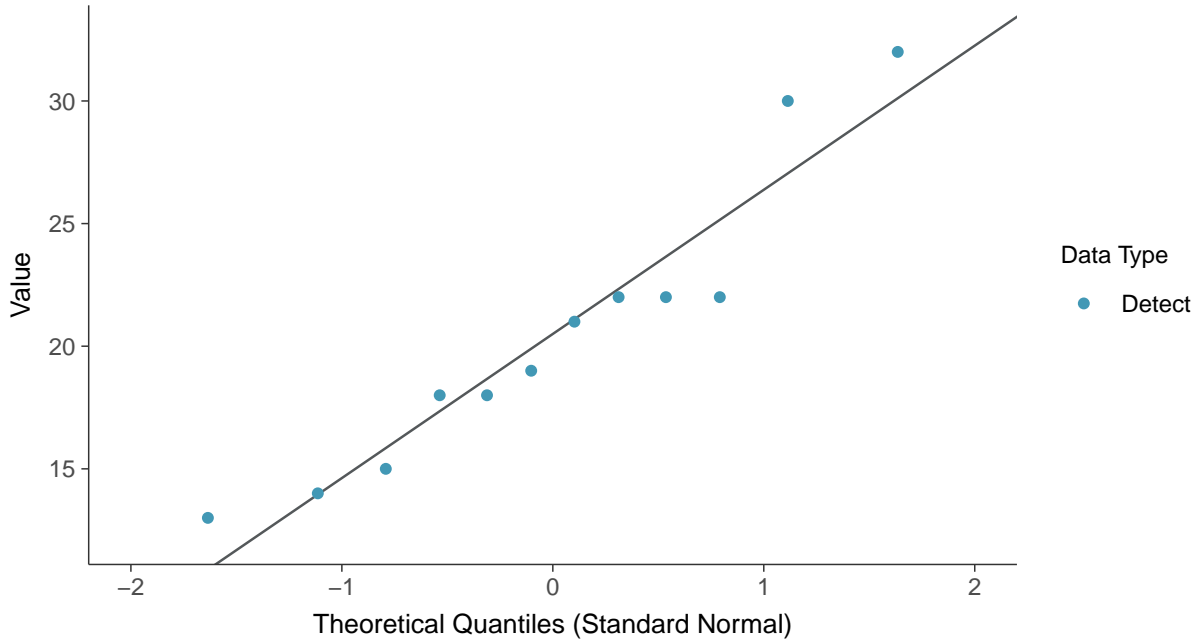






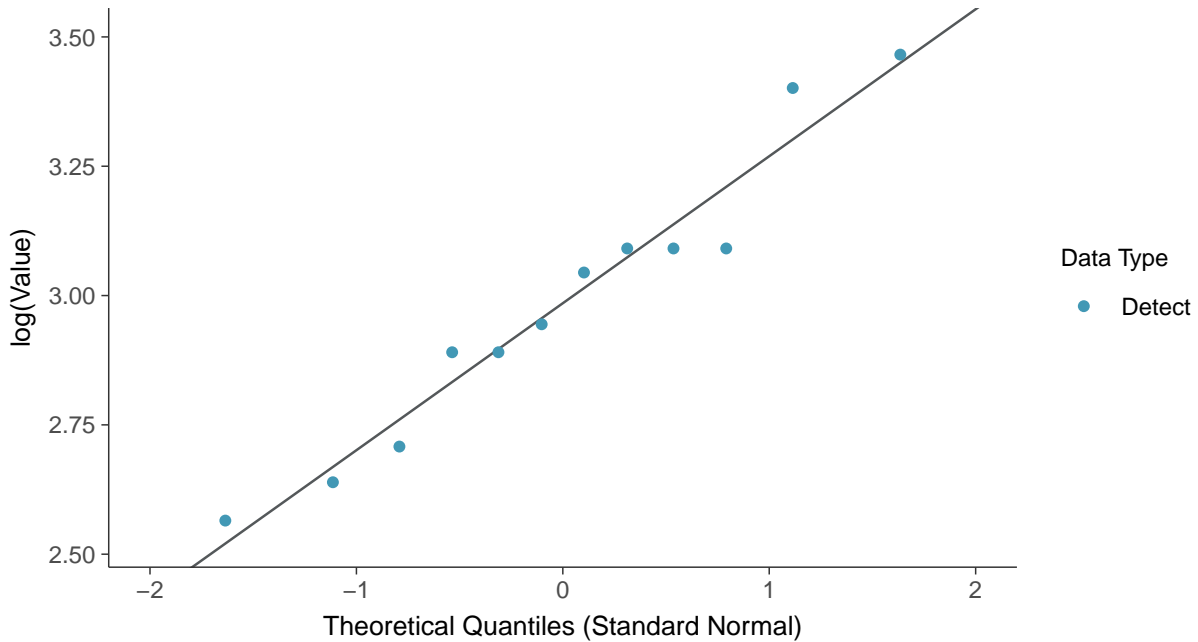
### Normal Q-Q plot

Iron, MW-08 (mg/L)



### Lognormal Q-Q plot

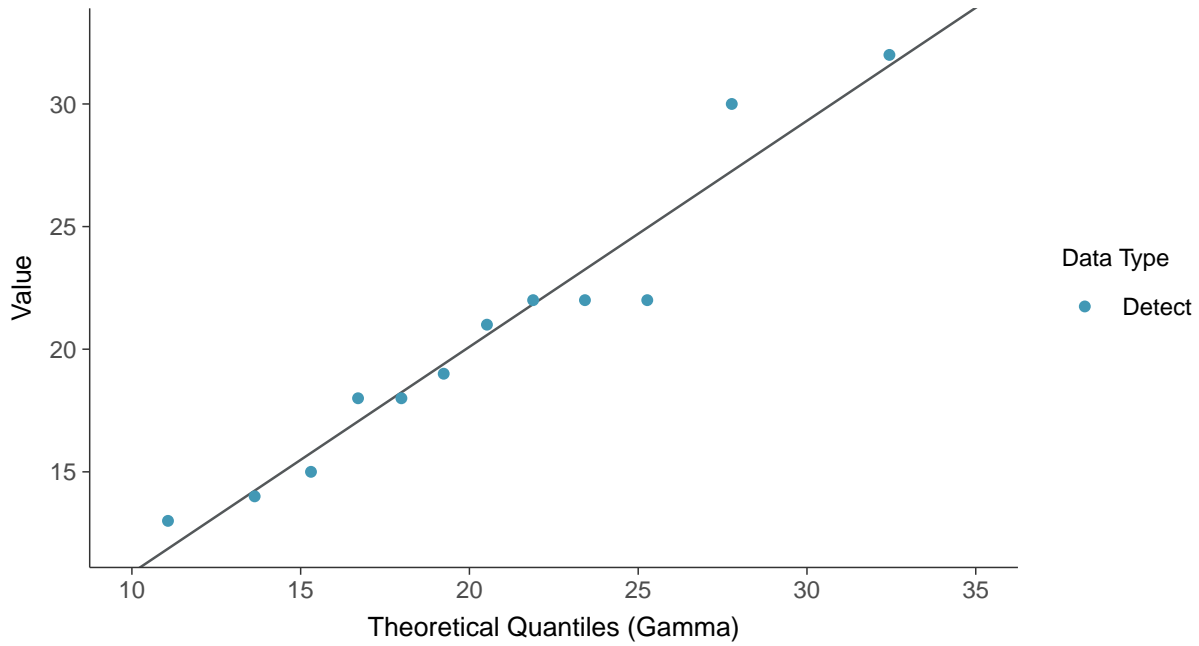
Iron, MW-08 (mg/L)





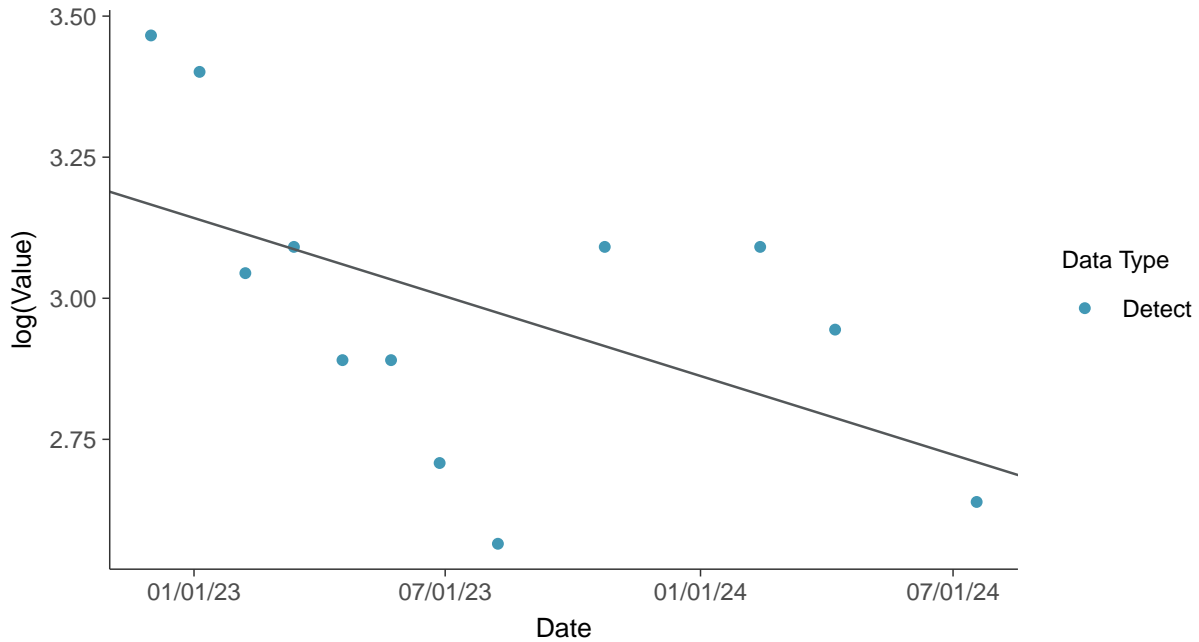
### Gamma Q-Q plot

Iron, MW-08 (mg/L)



### Trend Regression: Lognormal MLE

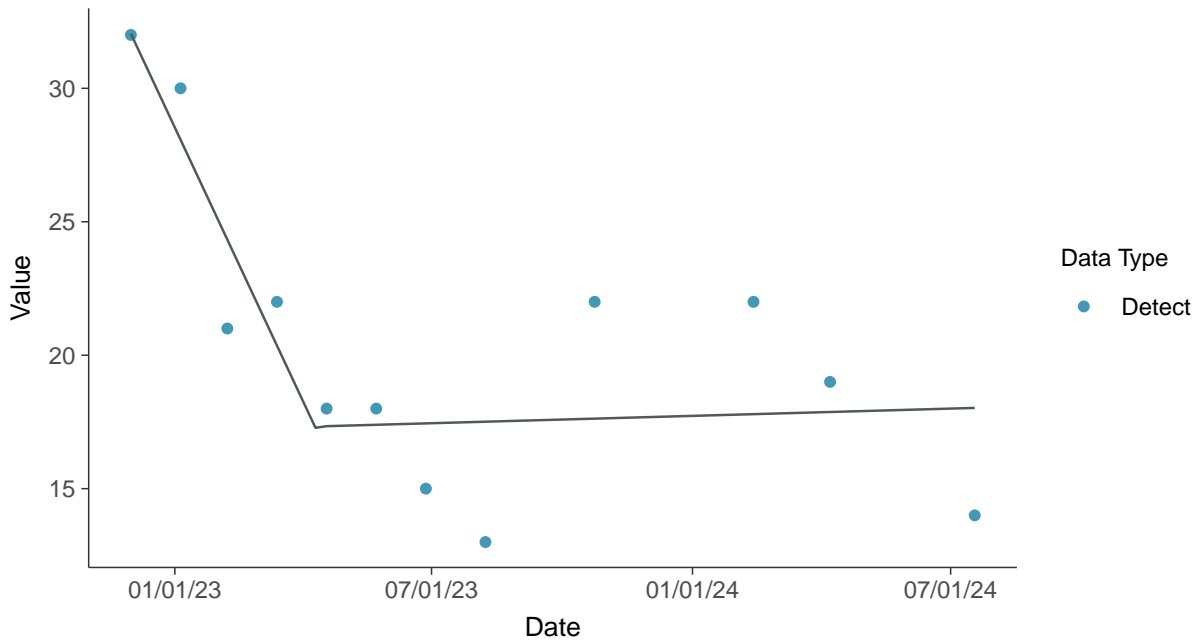
Iron, MW-08 (mg/L)





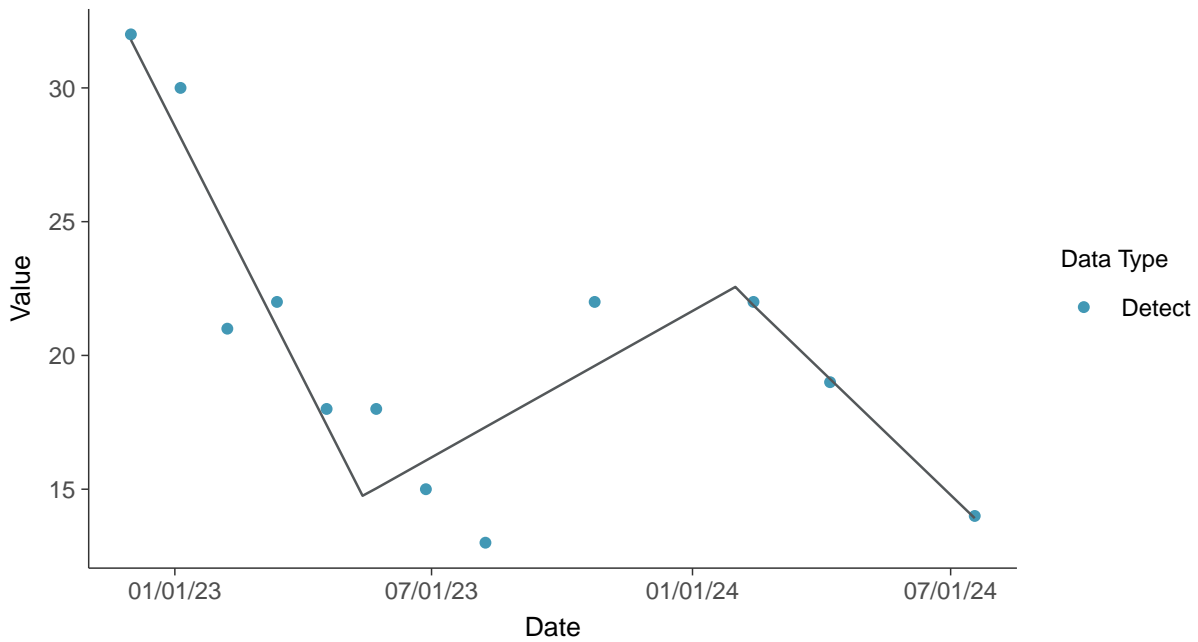
### Trend Regression: Piecewise Linear-Linear

Iron, MW-08 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-08 (mg/L)



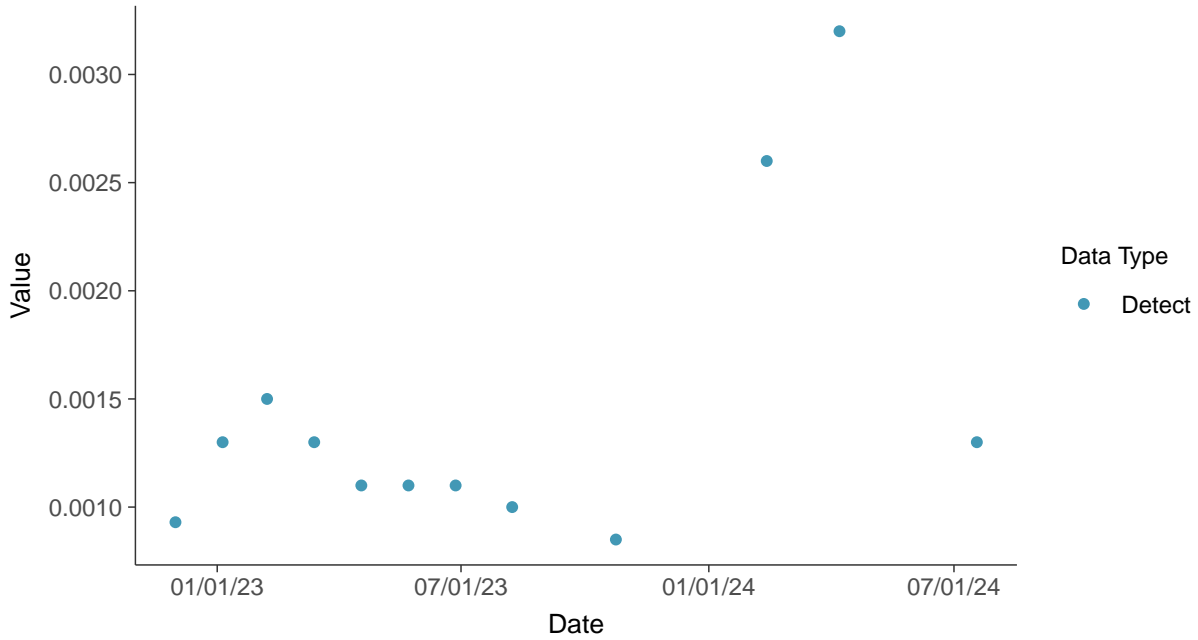


### Part 115: Nickel, MW-08

ID: 18\_1\_6\_119

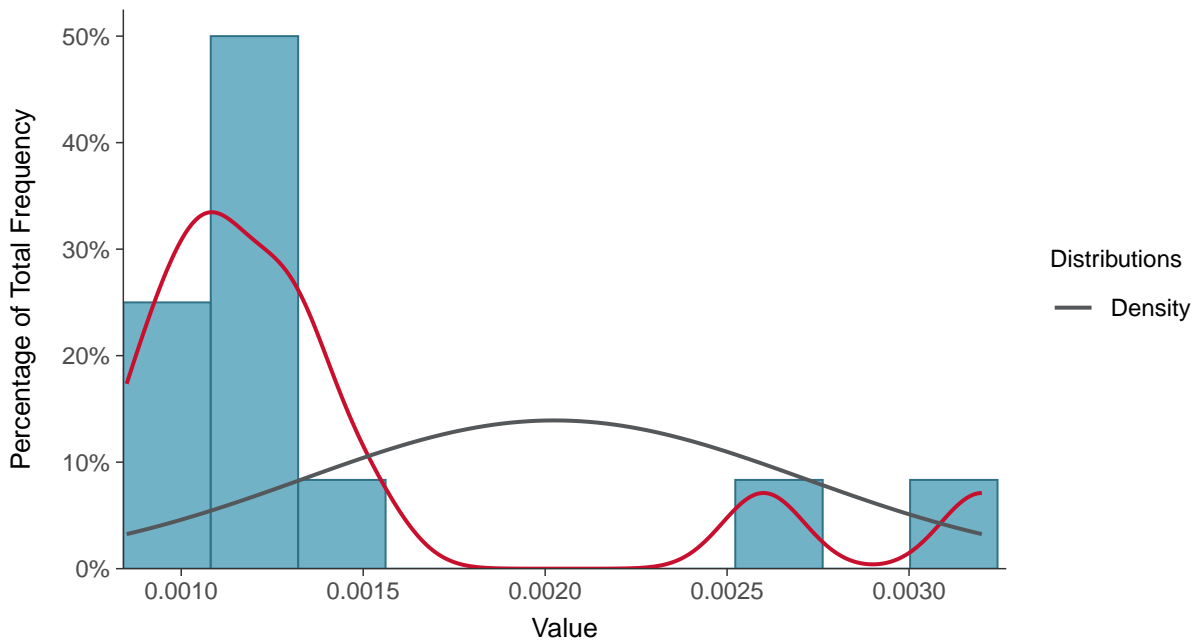
#### Scatter Plot

Nickel, MW-08 (mg/L)



#### Histogram

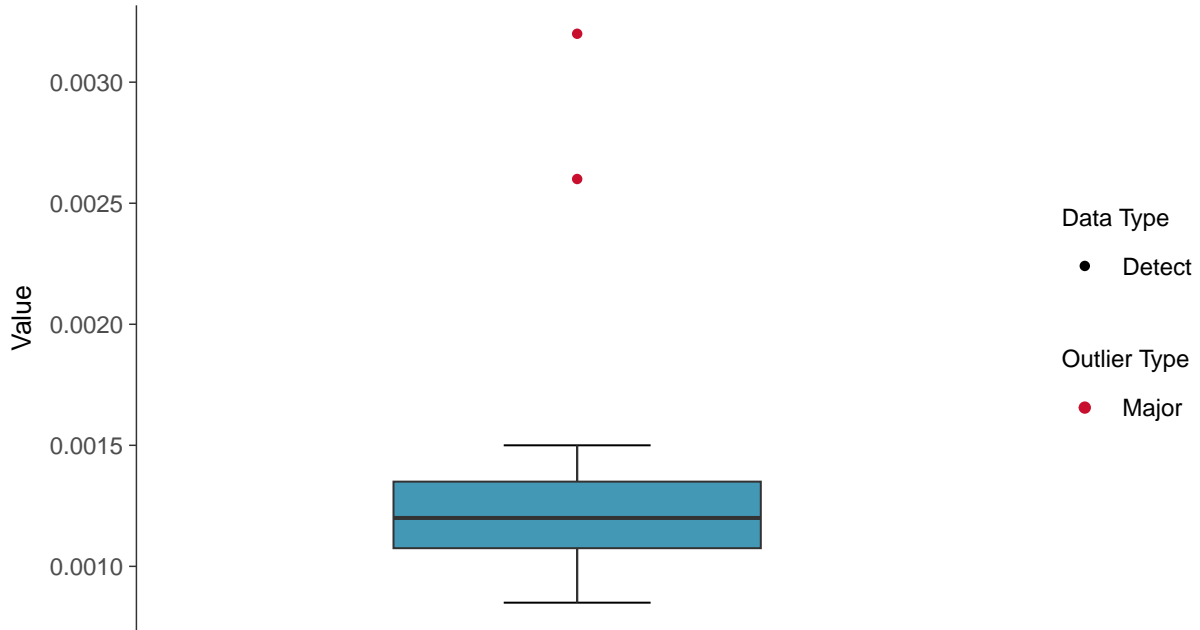
Nickel, MW-08 (mg/L)





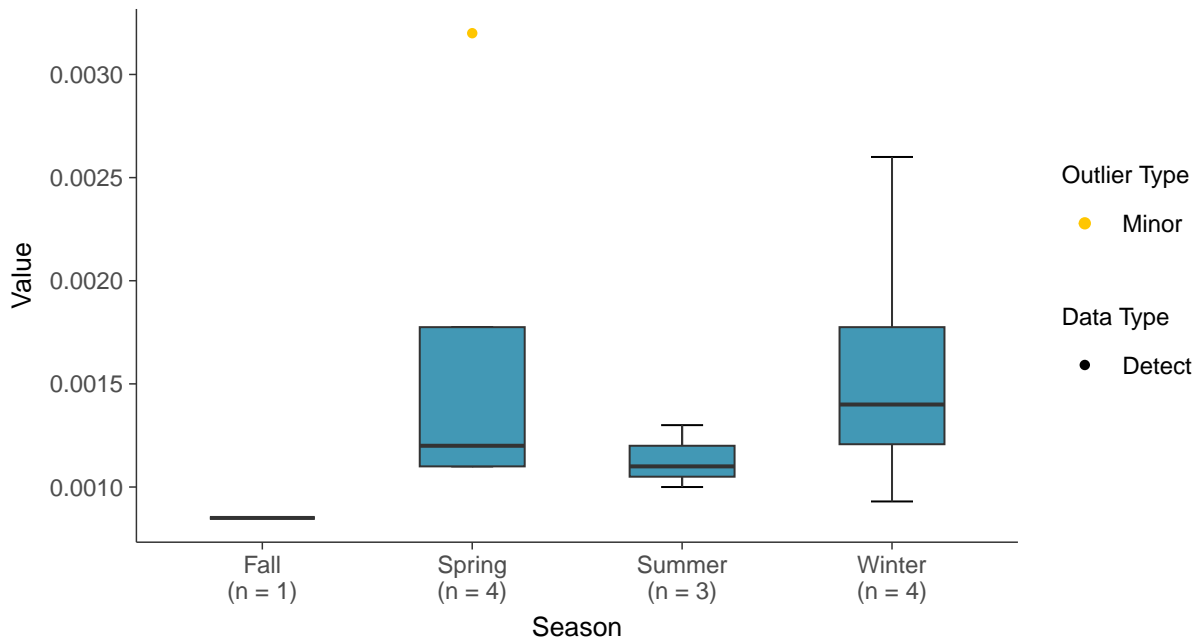
### Boxplot

Nickel, MW-08 (mg/L)



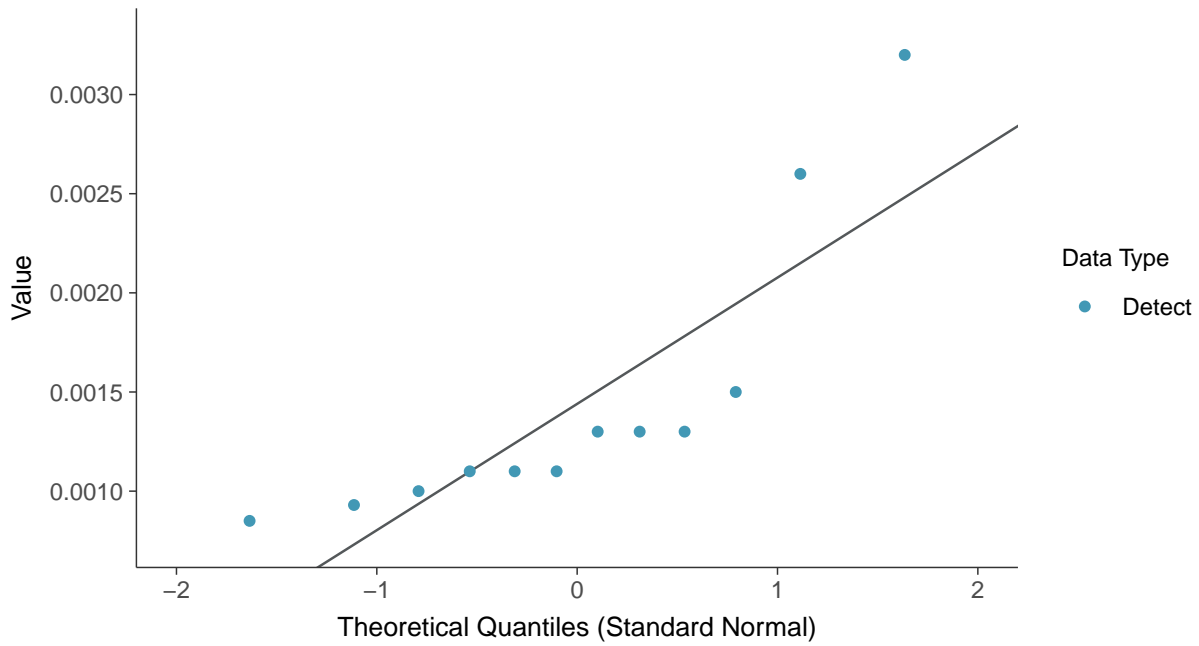
### Boxplot by Season

Nickel, MW-08 (mg/L)

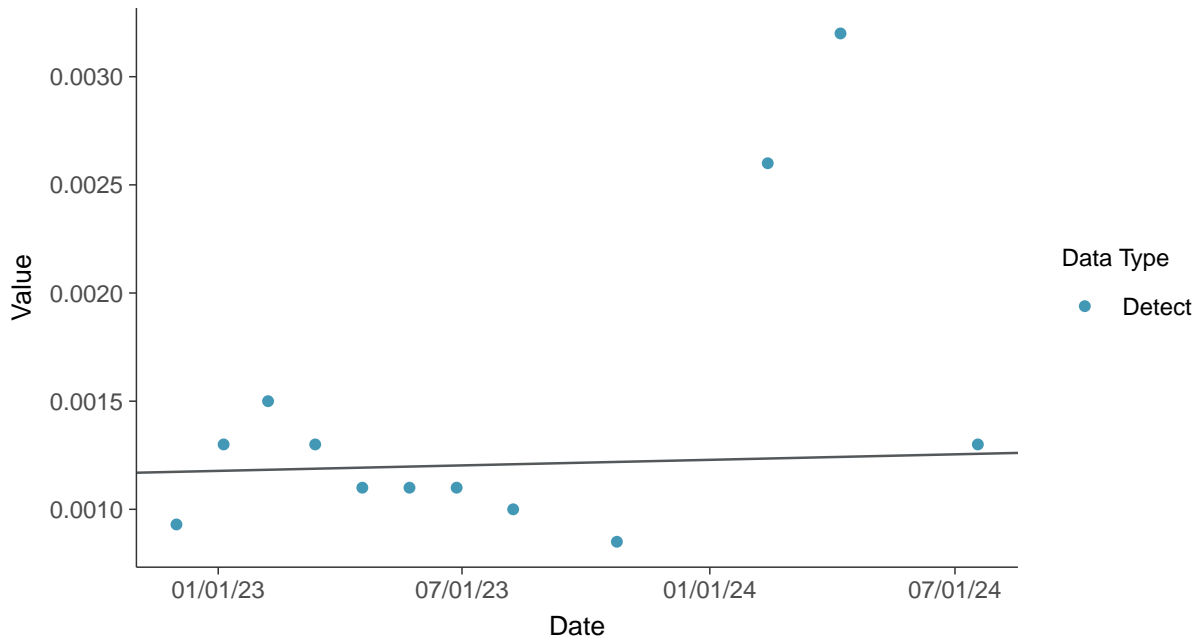




**Normal Q-Q plot**  
Nickel, MW-08 (mg/L)

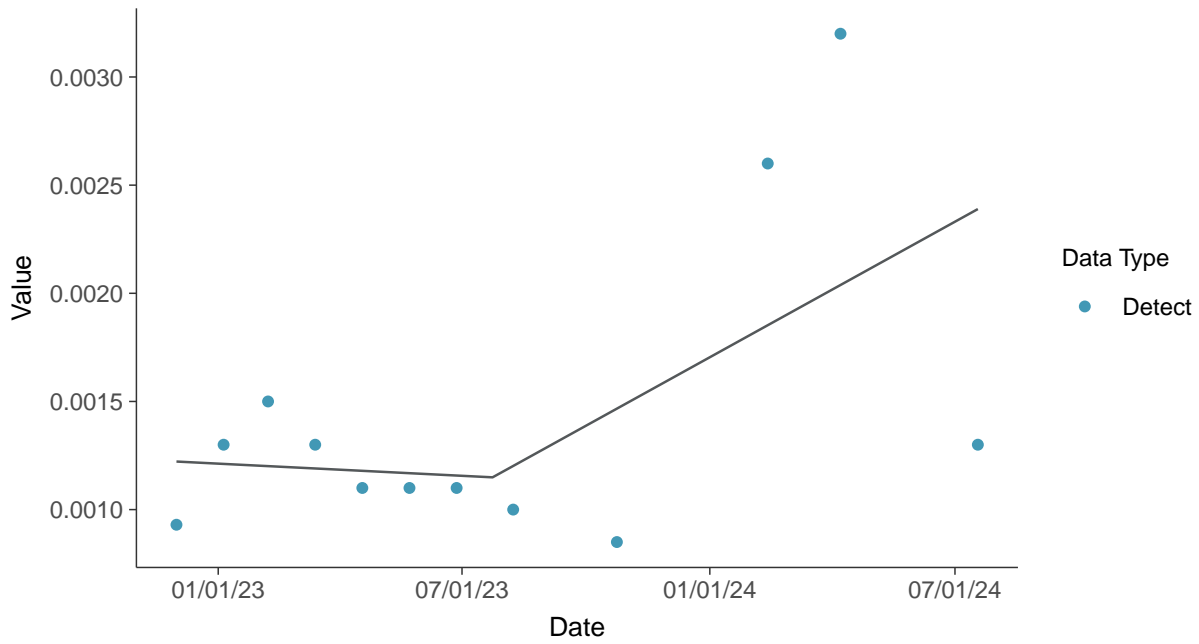


**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Nickel, MW-08 (mg/L)

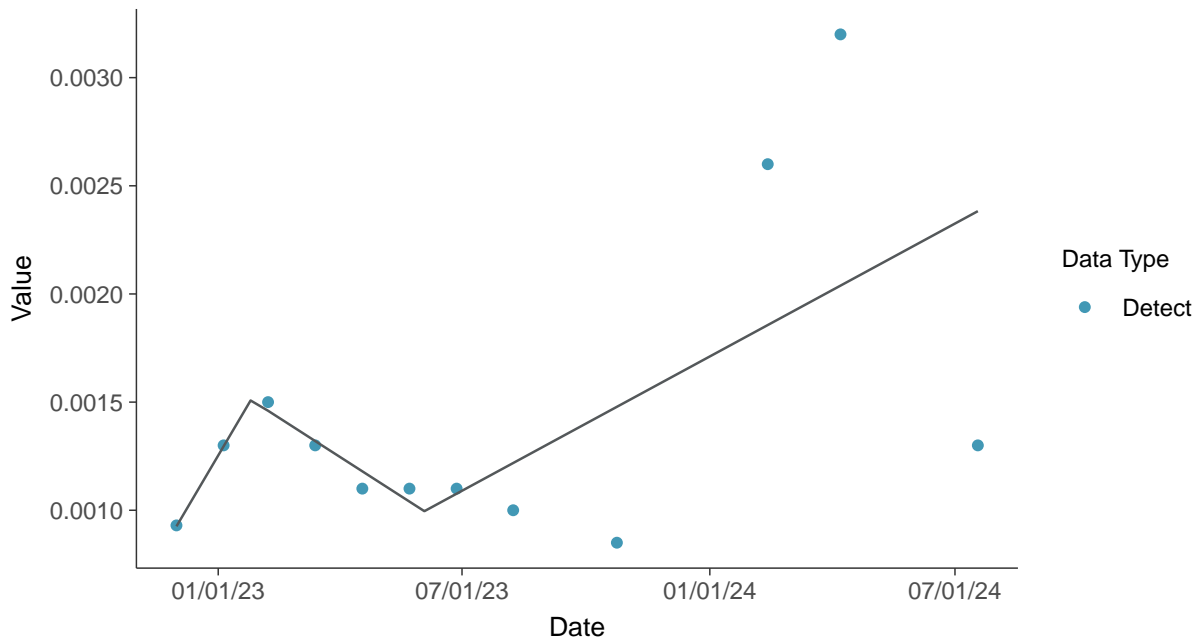




**Trend Regression: Piecewise Linear-Linear**  
Nickel, MW-08 (mg/L)



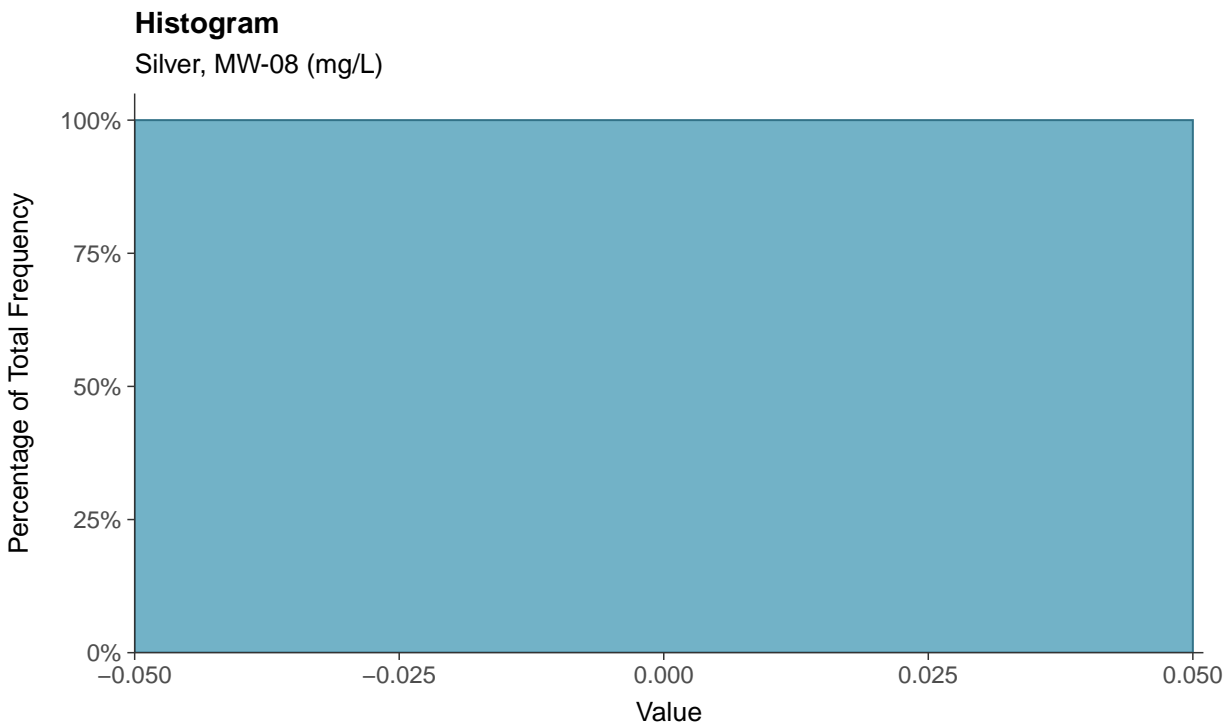
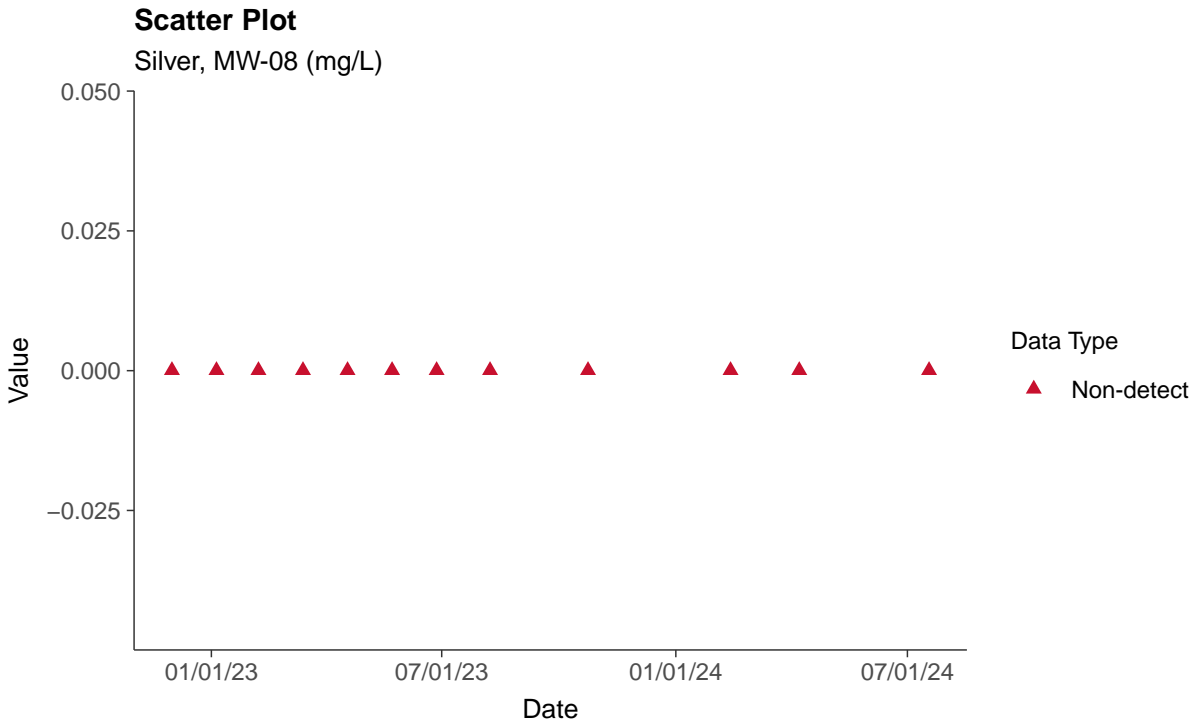
**Trend Regression: Piecewise Linear-Linear-Linear**  
Nickel, MW-08 (mg/L)





### Part 115: Silver, MW-08

ID: 18\_1\_6\_123

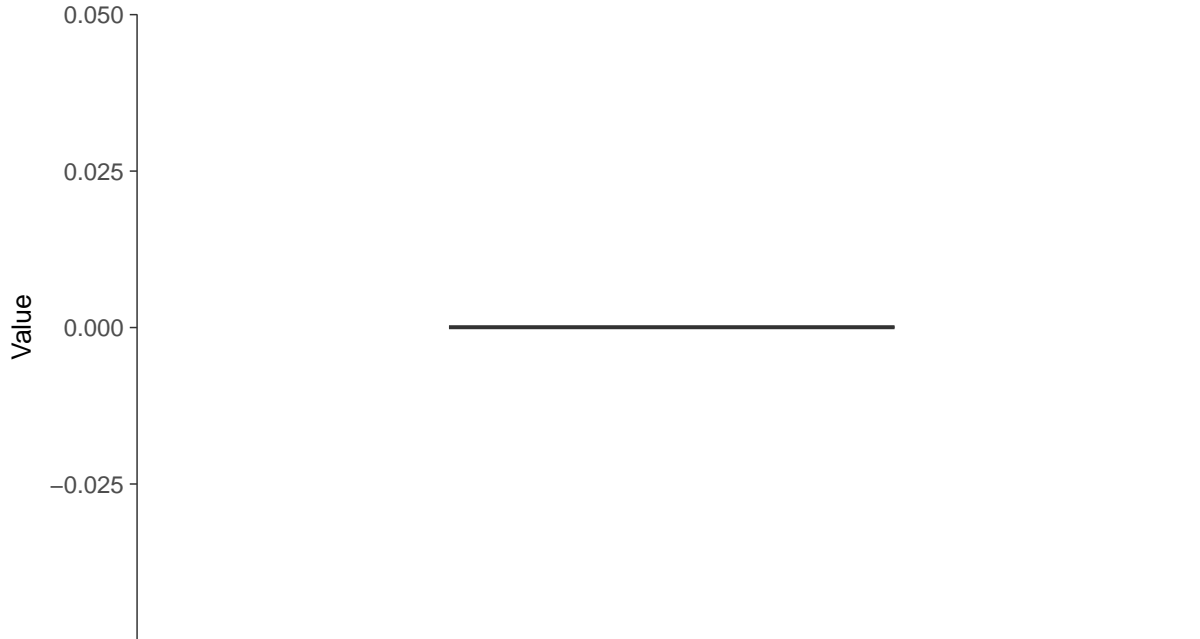






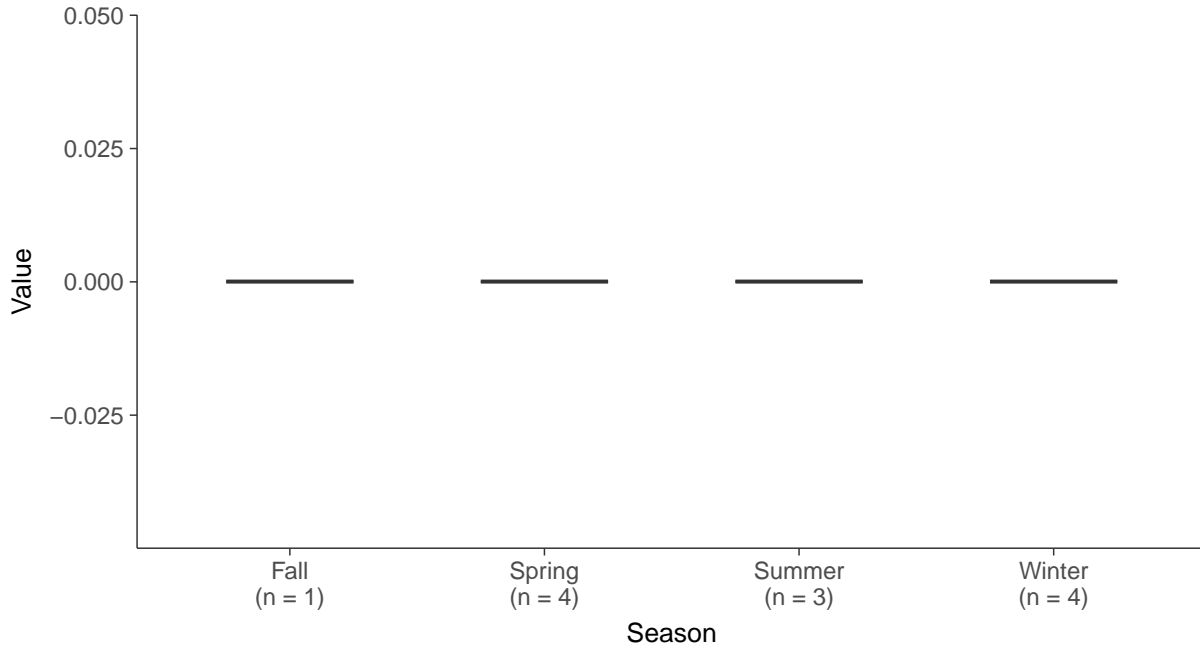
### Boxplot

Silver, MW-08 (mg/L)



### Boxplot by Season

Silver, MW-08 (mg/L)



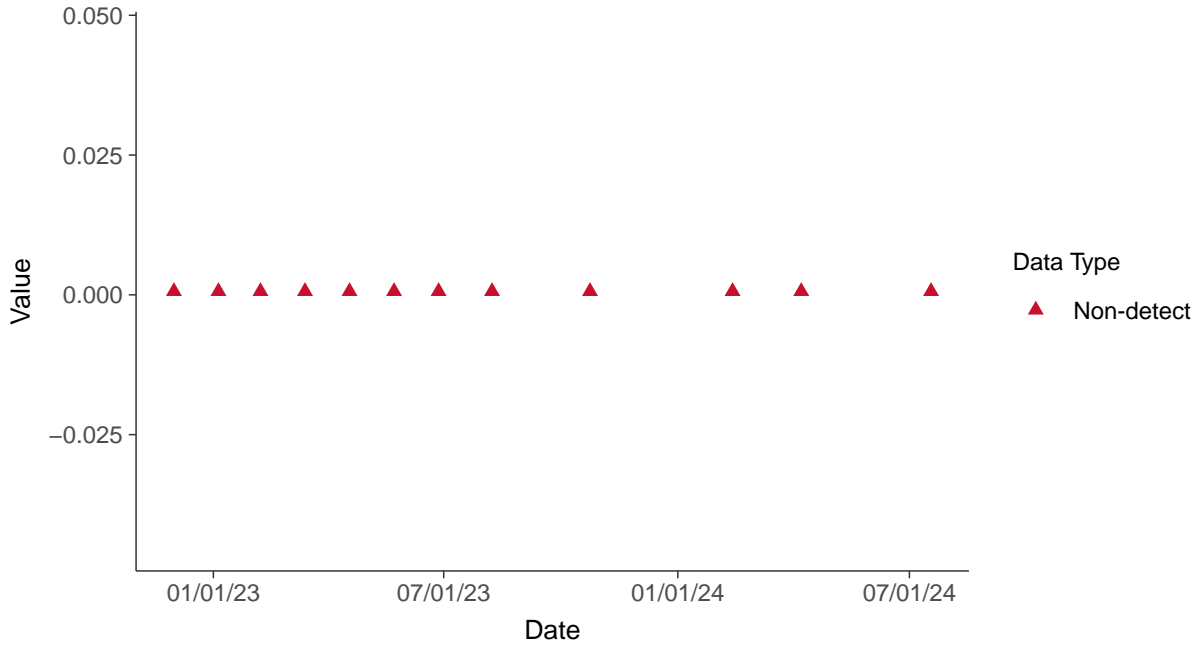


### Part 115: Vanadium, MW-08

ID: 18\_1\_6\_129

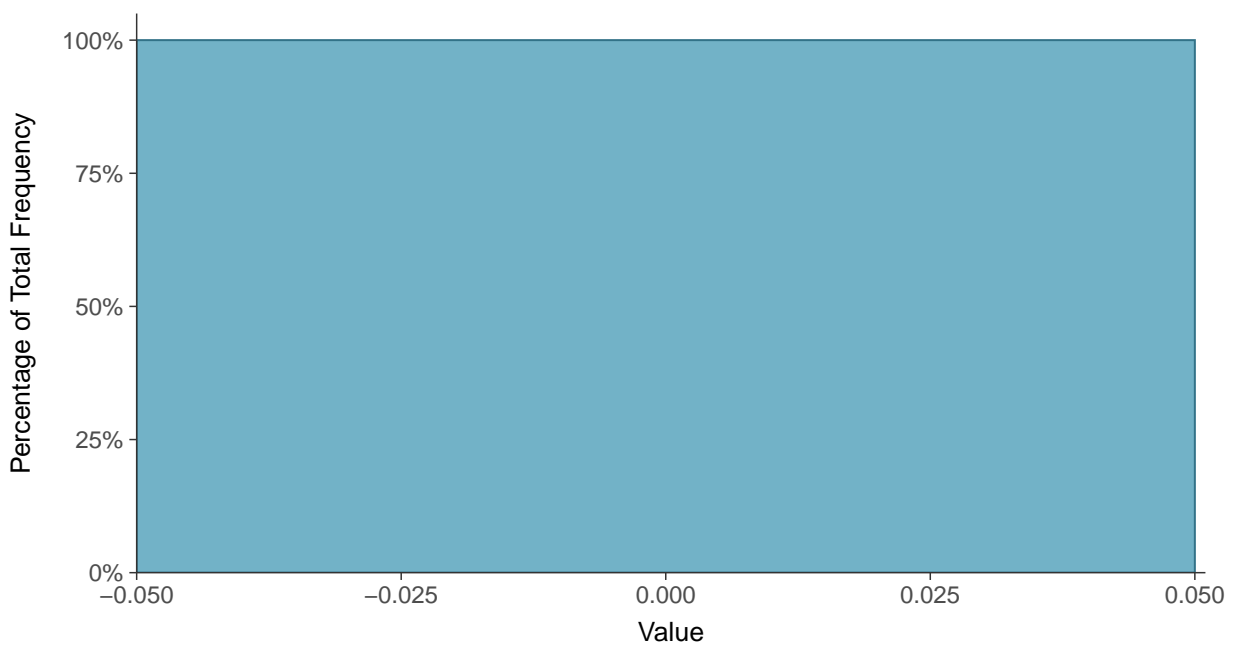
#### Scatter Plot

Vanadium, MW-08 (mg/L)



#### Histogram

Vanadium, MW-08 (mg/L)





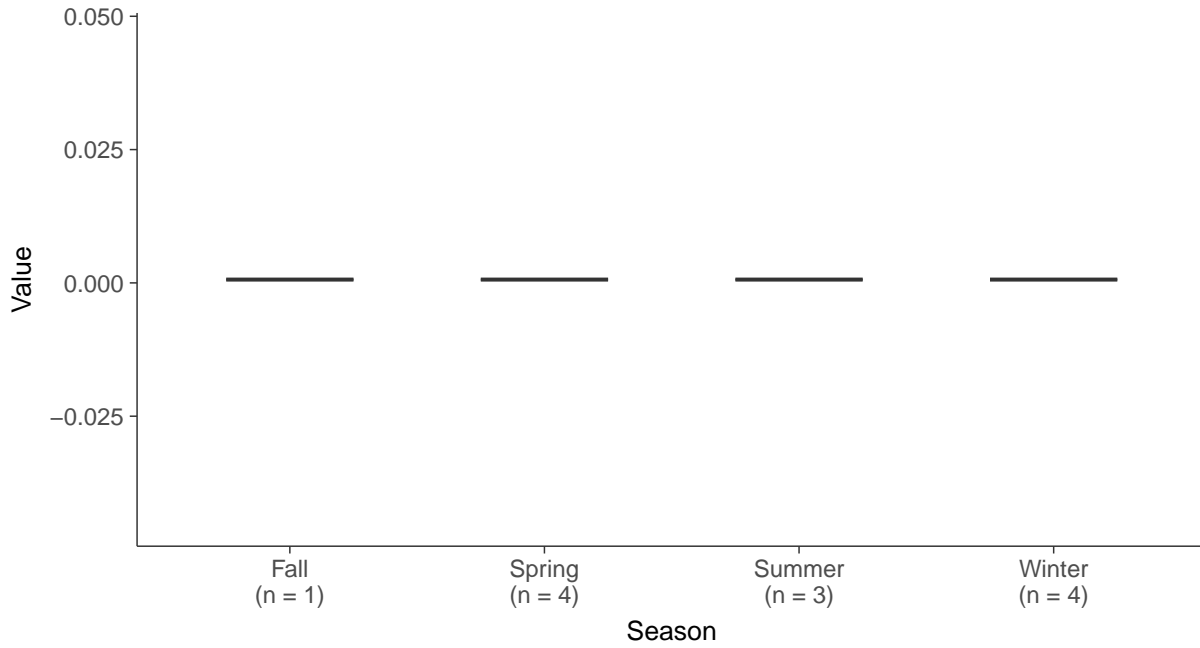
### Boxplot

Vanadium, MW-08 (mg/L)



### Boxplot by Season

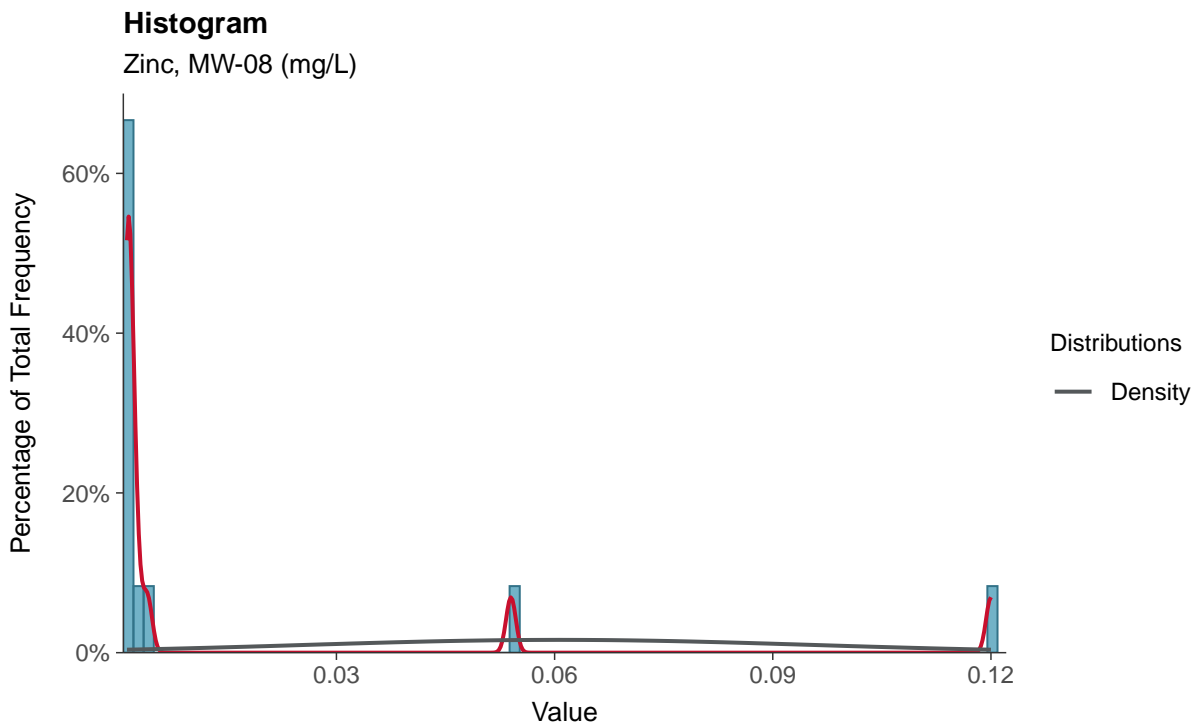
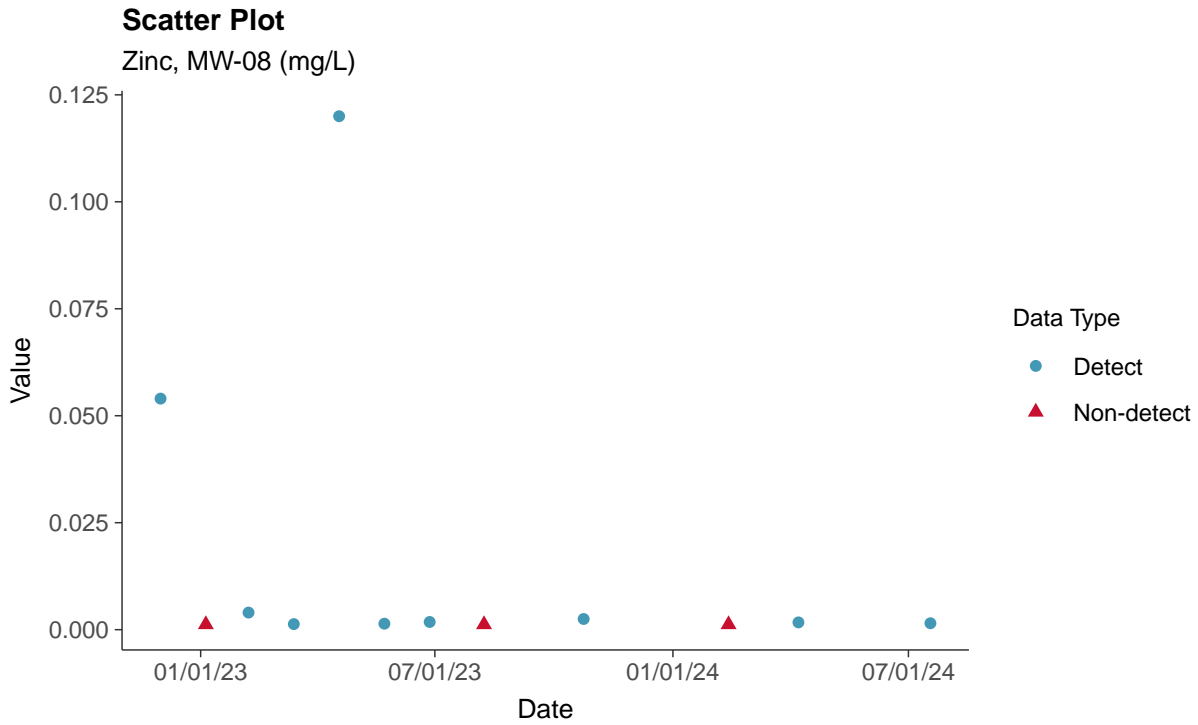
Vanadium, MW-08 (mg/L)





### Part 115: Zinc, MW-08

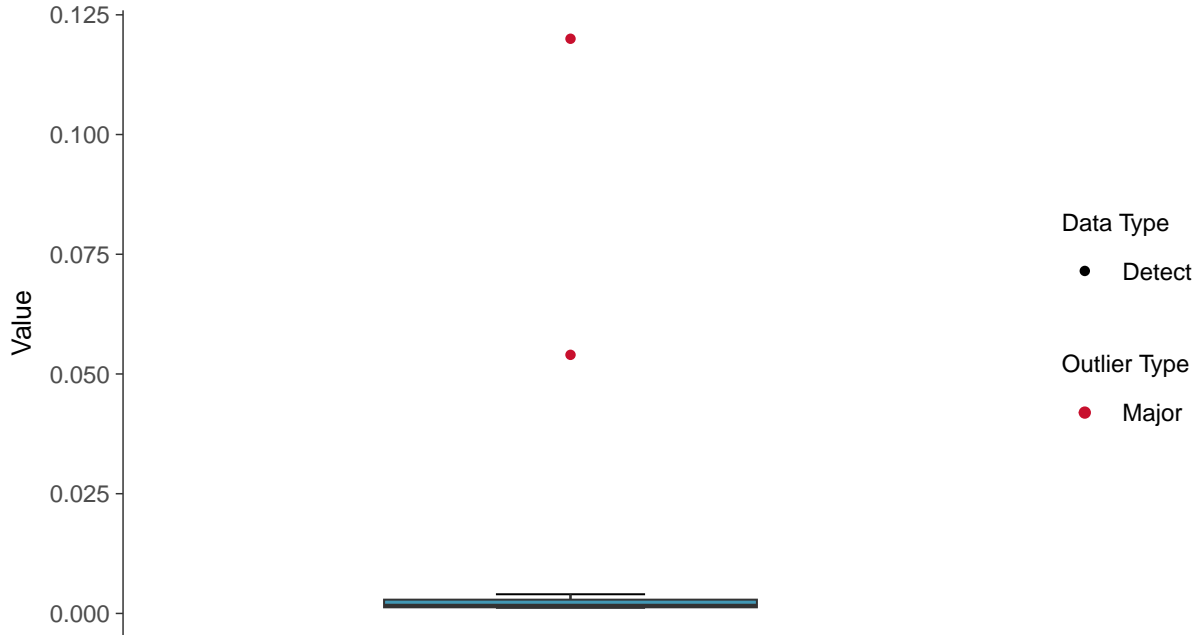
ID: 18\_1\_6\_130





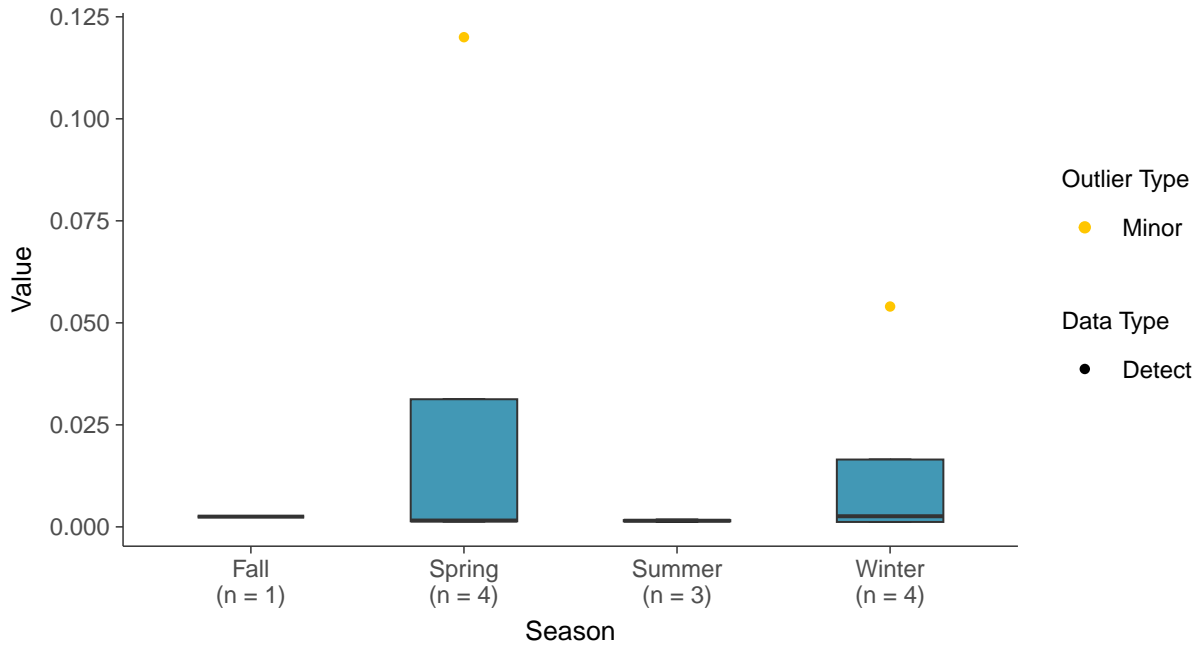
### Boxplot

Zinc, MW-08 (mg/L)



### Boxplot by Season

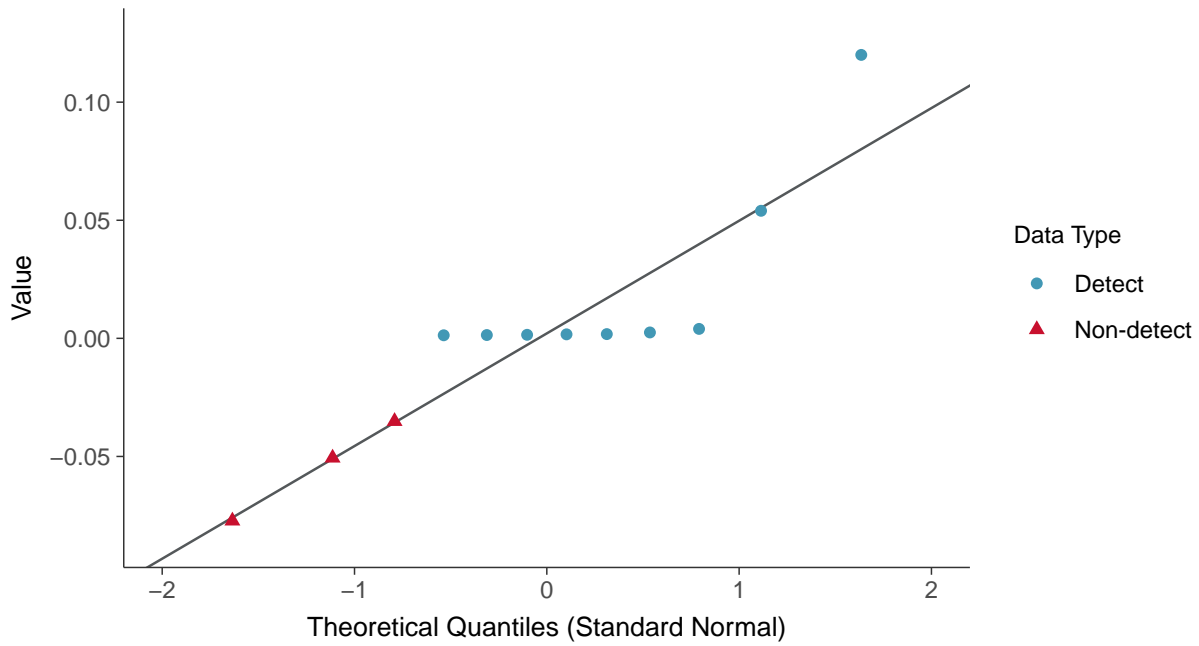
Zinc, MW-08 (mg/L)





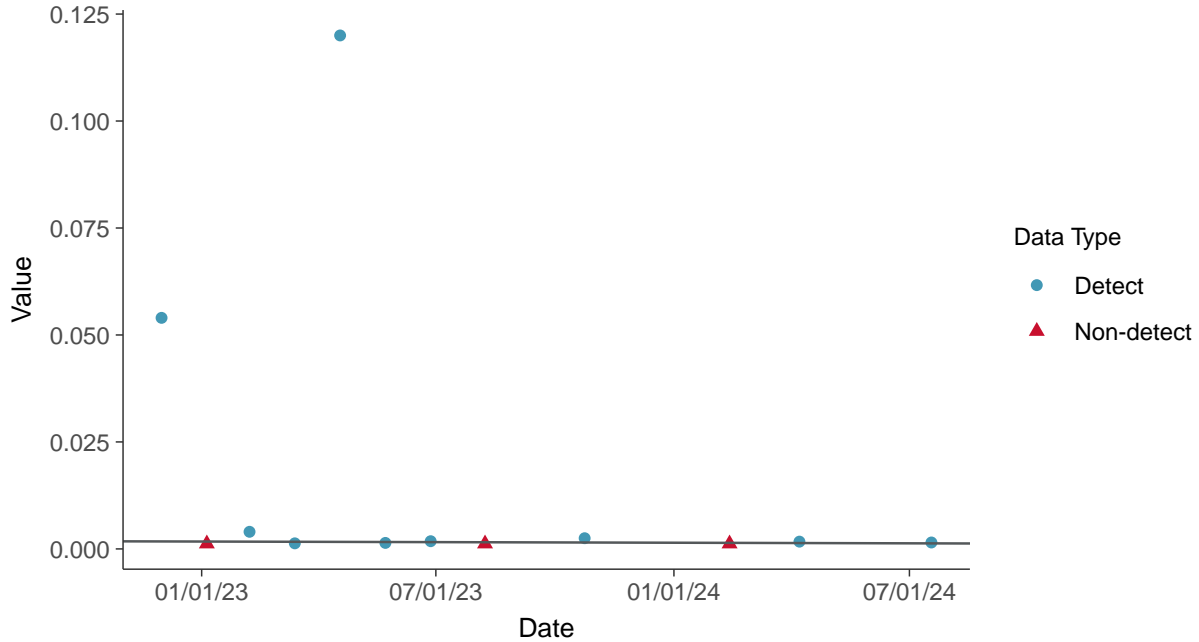
### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-08 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-08 (mg/L)



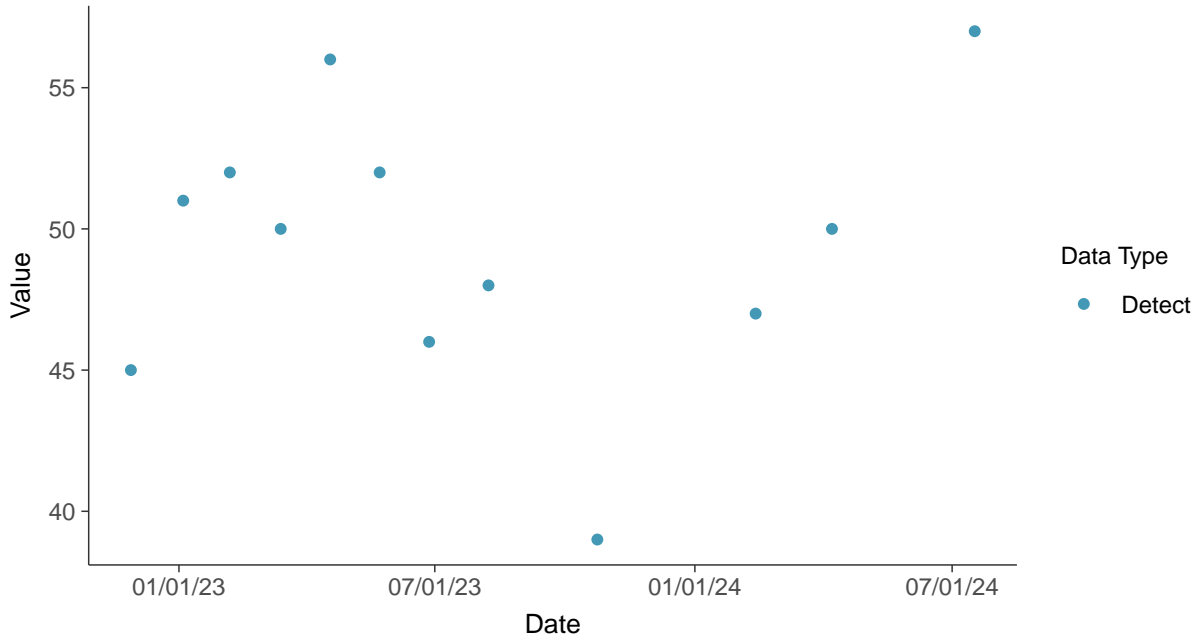


### Additional Parameters: Total Suspended Solids, MW-09

ID: 19\_2\_3\_127

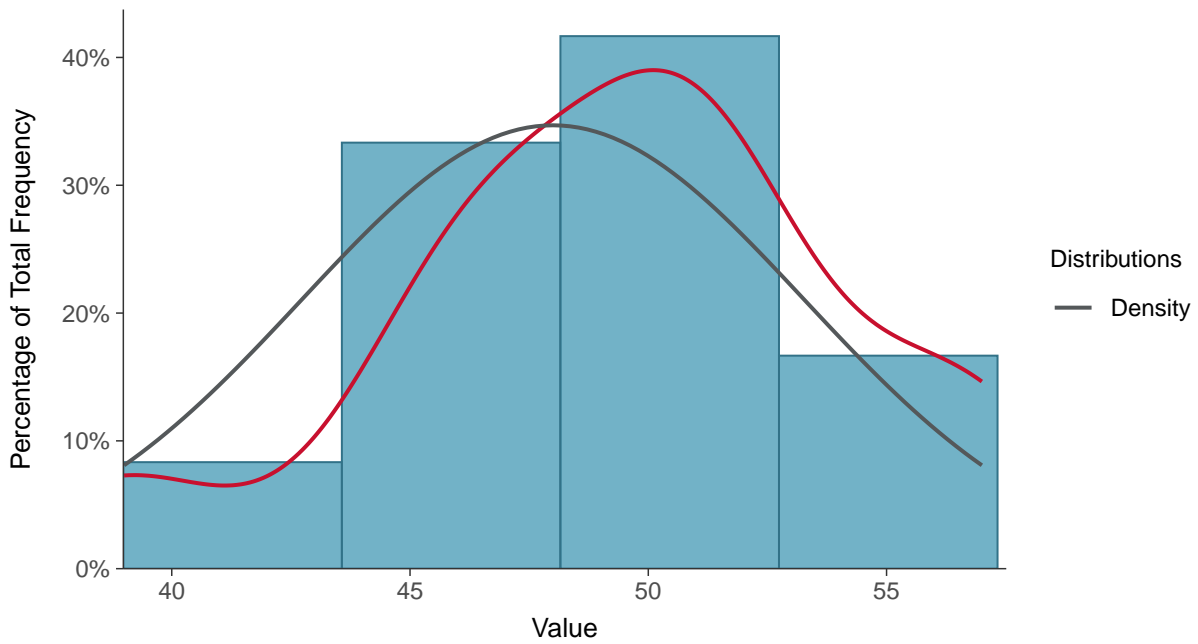
#### Scatter Plot

Total Suspended Solids, MW-09 (mg/L)



#### Histogram

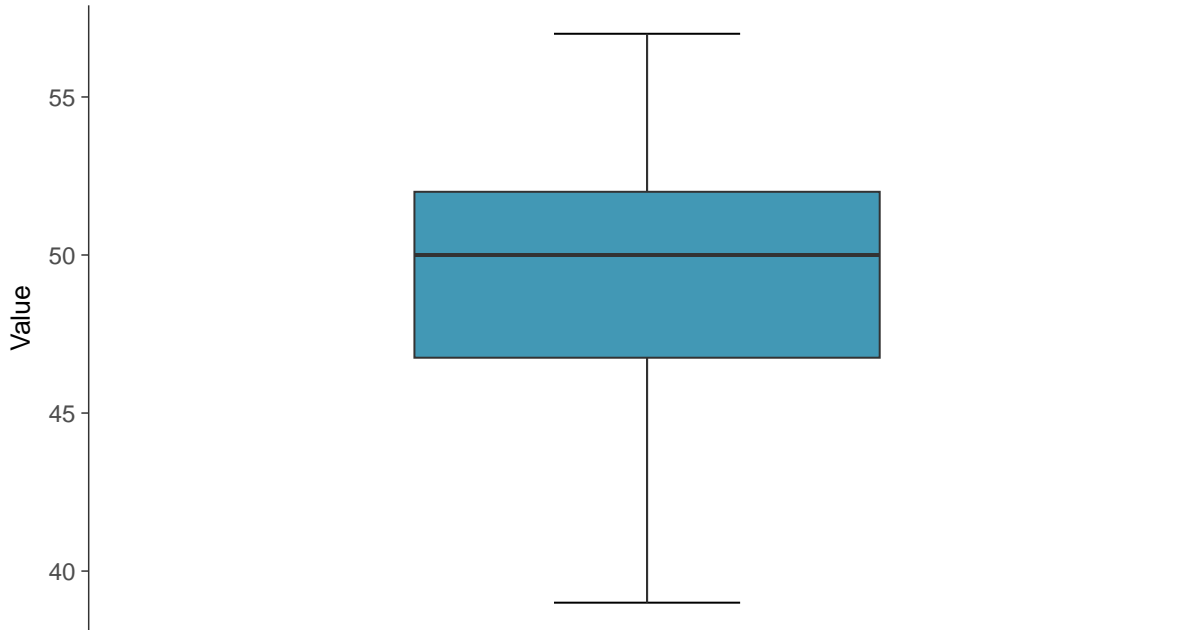
Total Suspended Solids, MW-09 (mg/L)





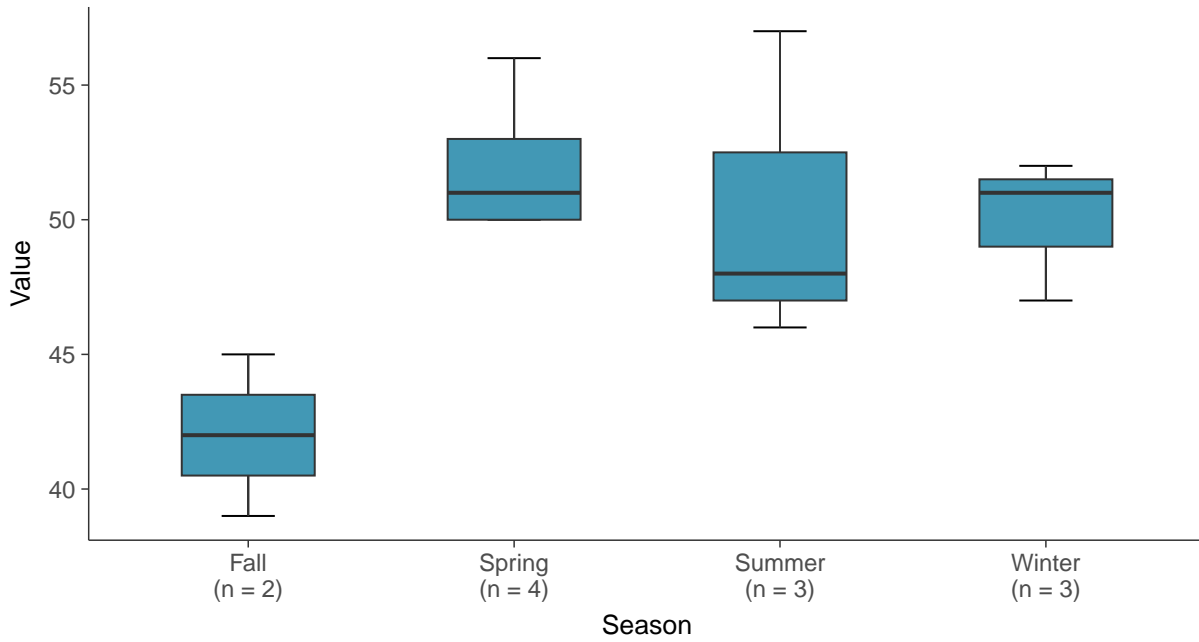
### Boxplot

Total Suspended Solids, MW-09 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-09 (mg/L)

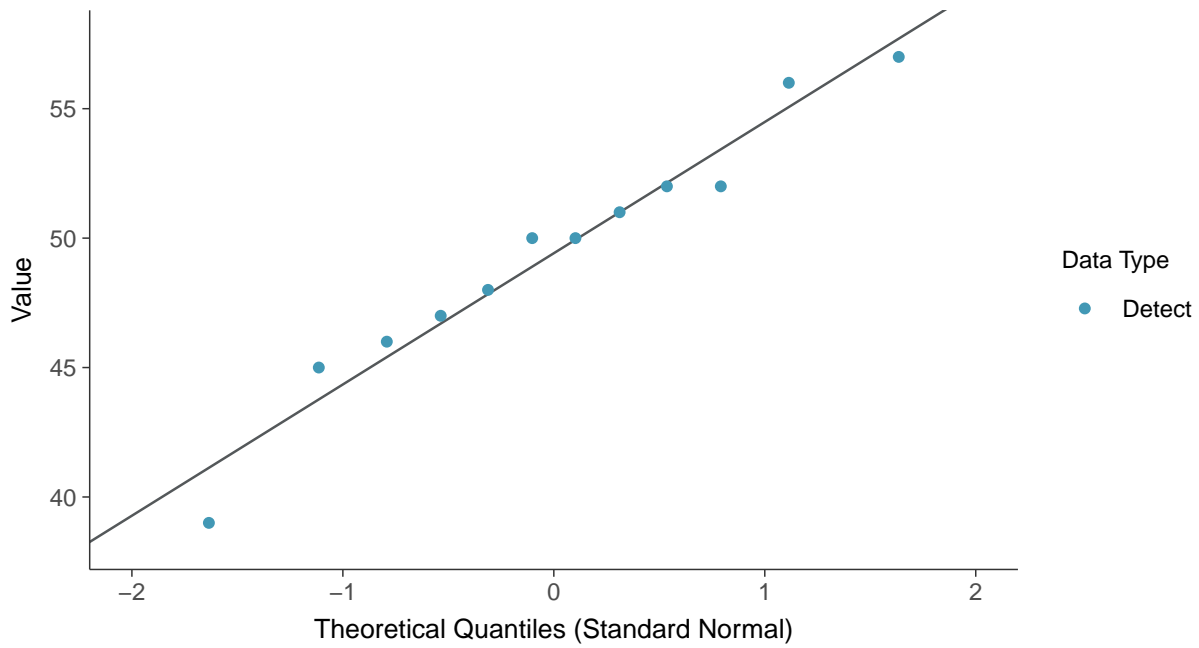






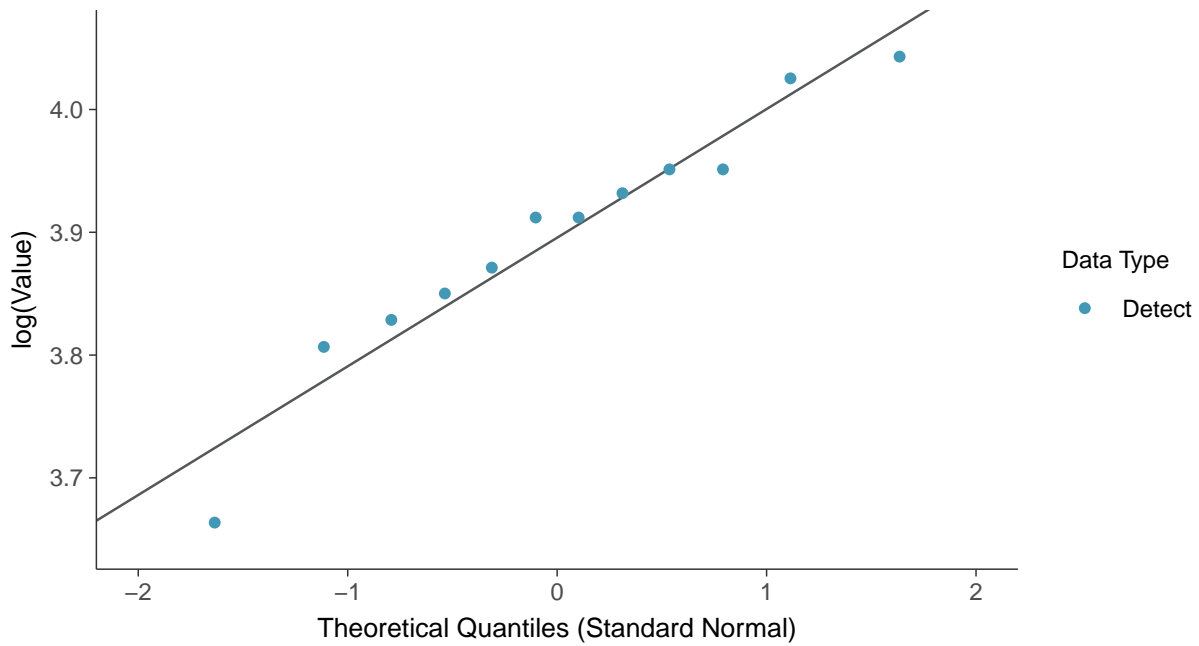
### Normal Q-Q plot

Total Suspended Solids, MW-09 (mg/L)



### Lognormal Q-Q plot

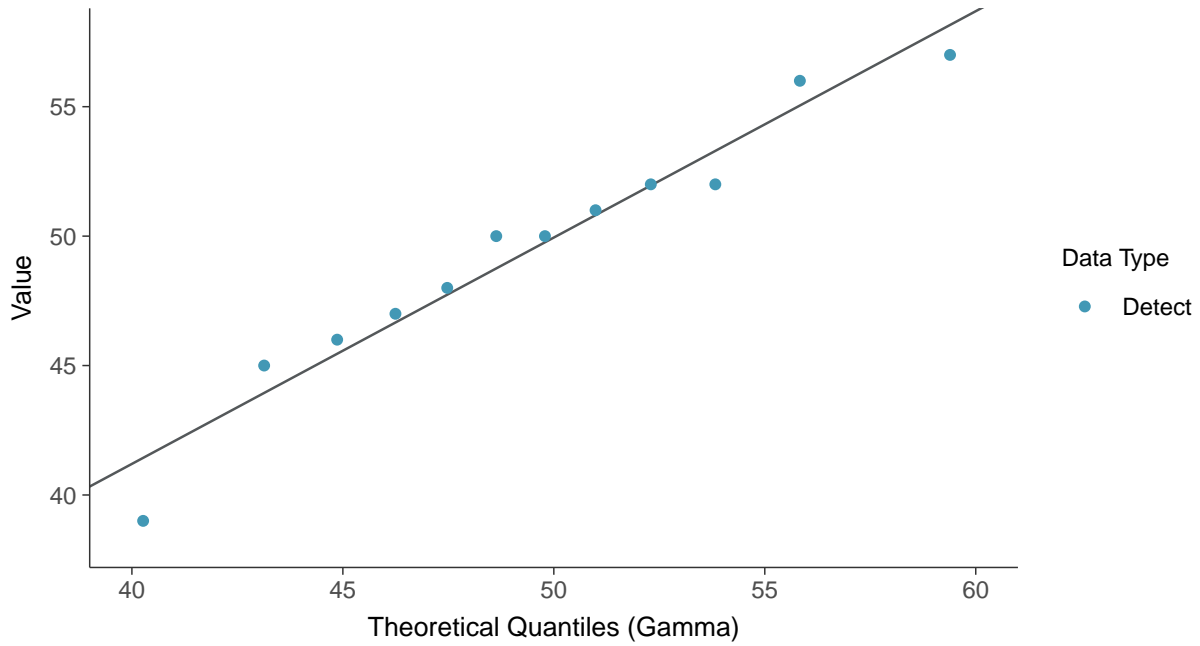
Total Suspended Solids, MW-09 (mg/L)





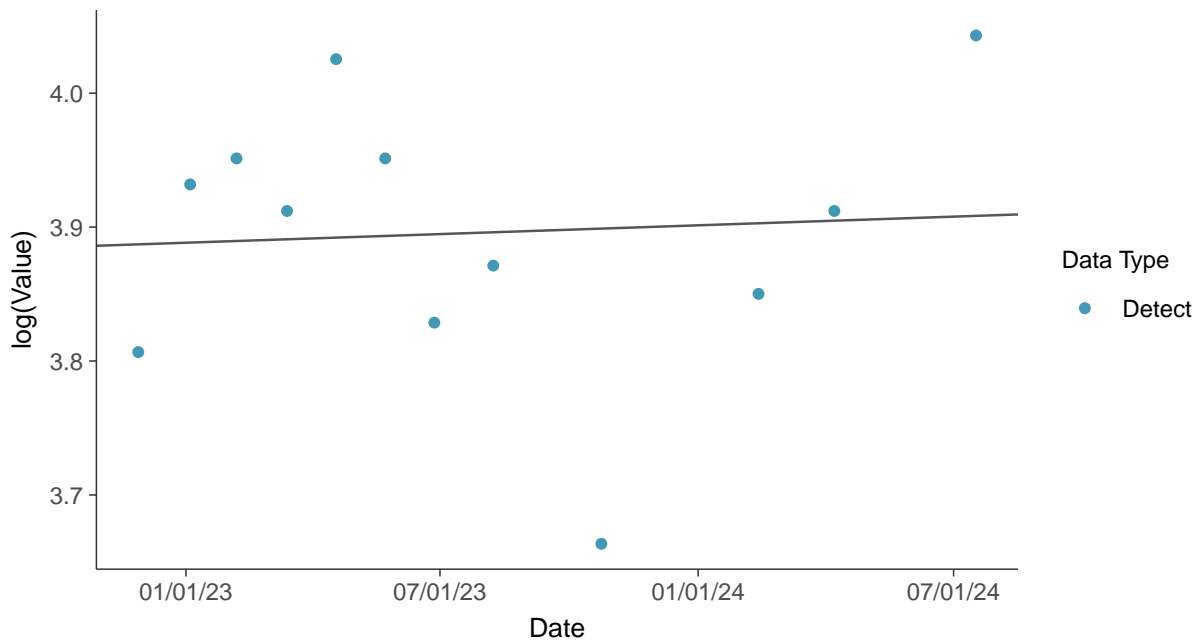
### Gamma Q-Q plot

Total Suspended Solids, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

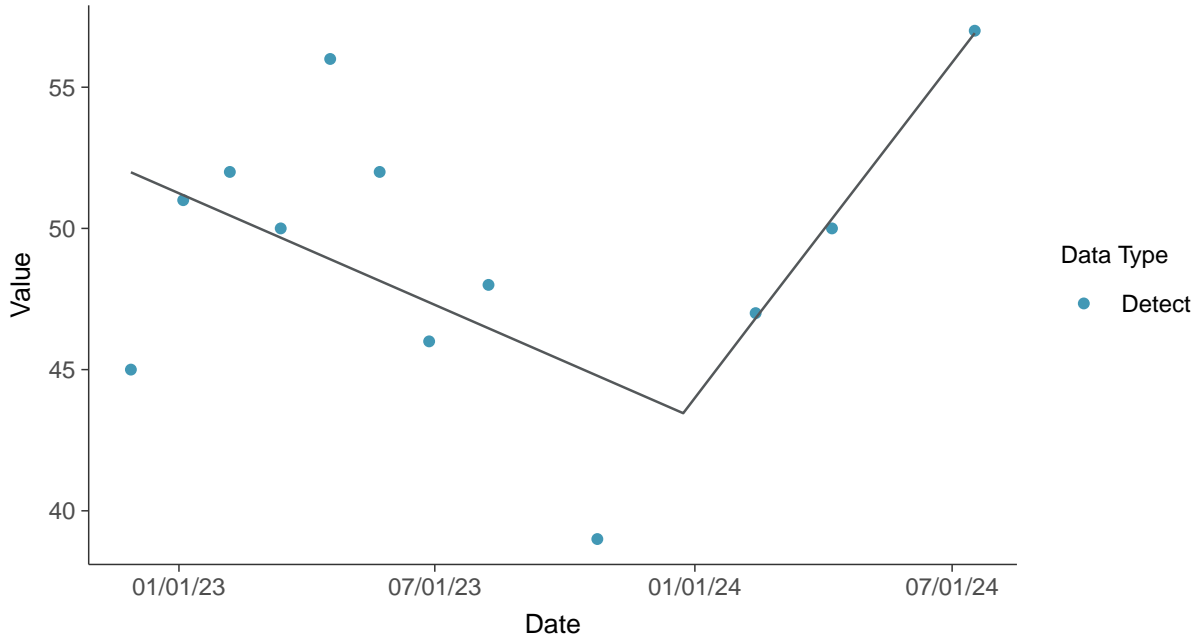
Total Suspended Solids, MW-09 (mg/L)





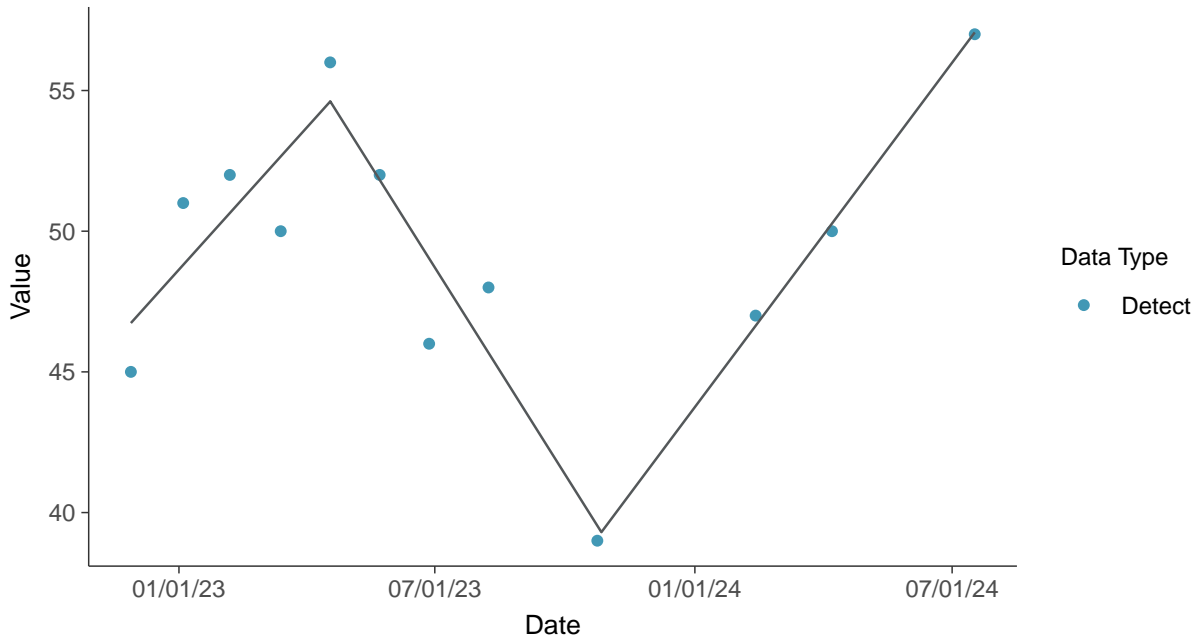
### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

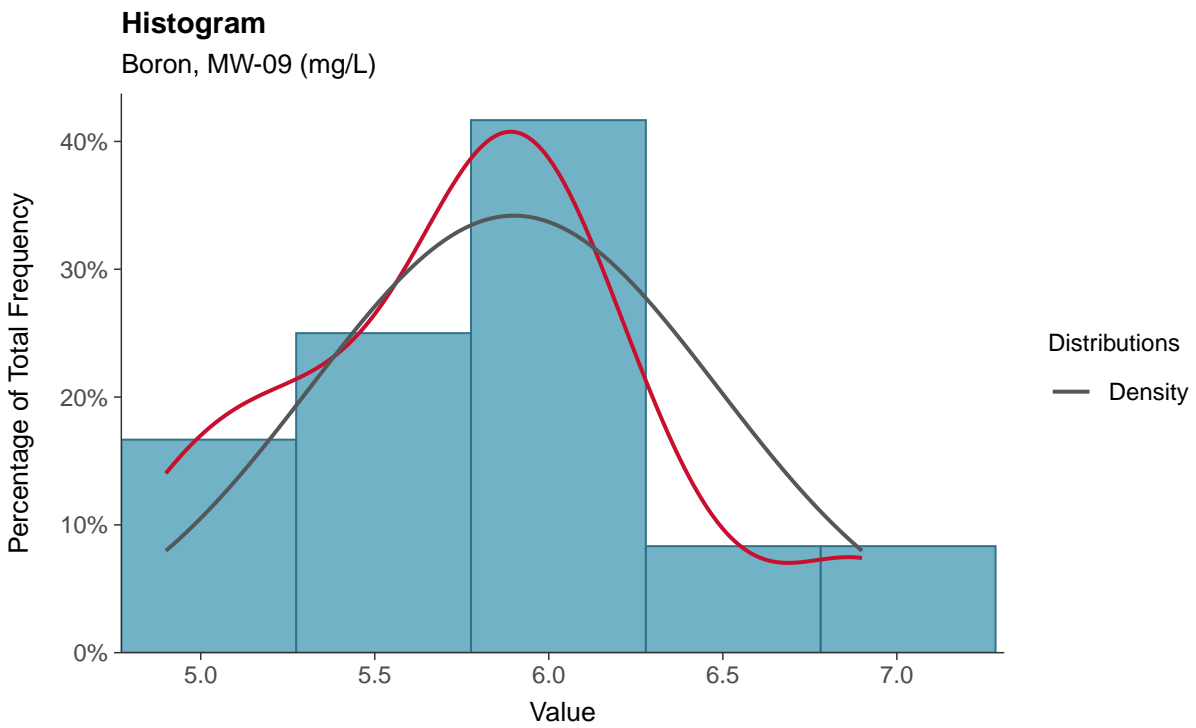
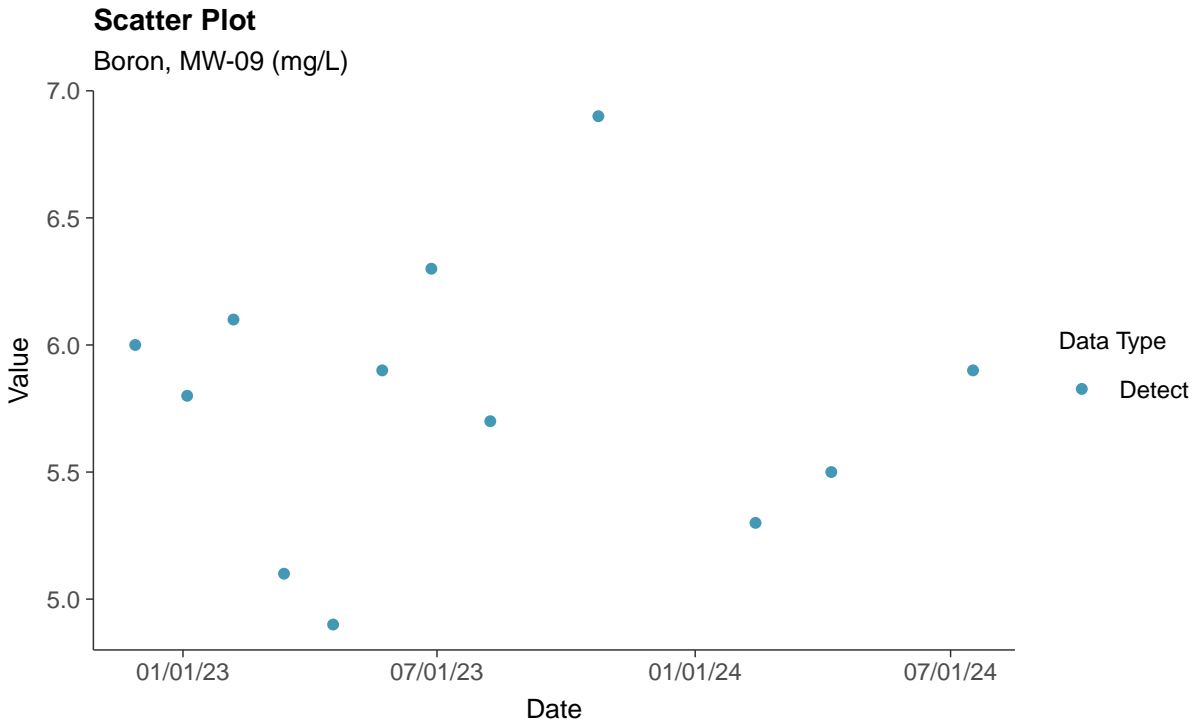
Total Suspended Solids, MW-09 (mg/L)





### Appendix III: Boron, MW-09

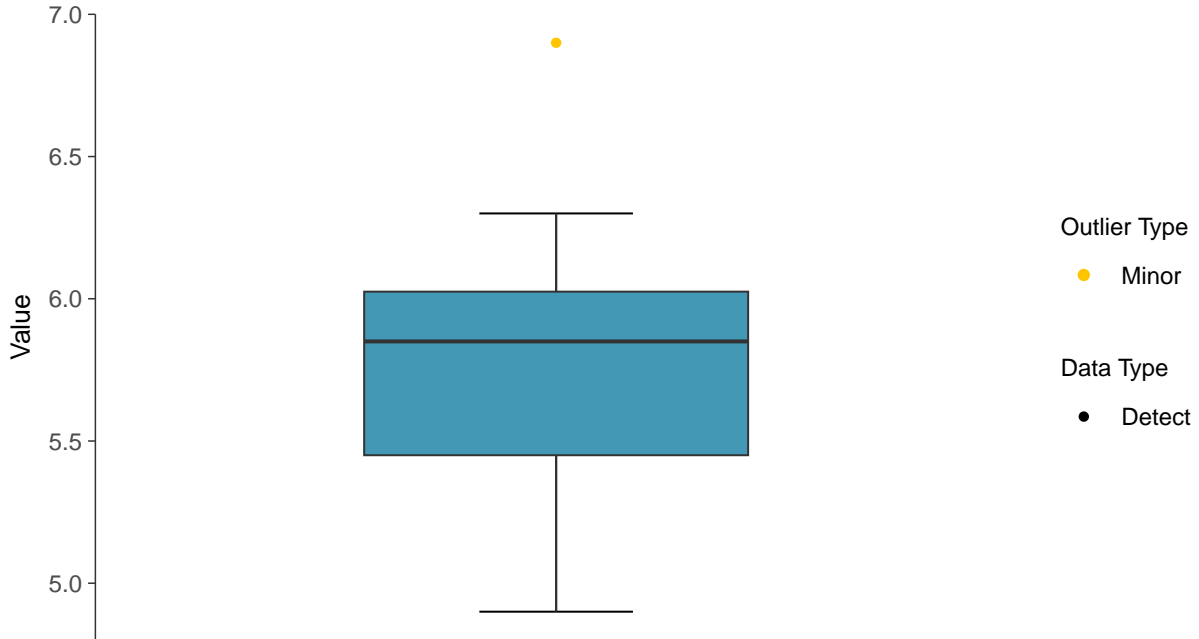
ID: 19\_2\_4\_105





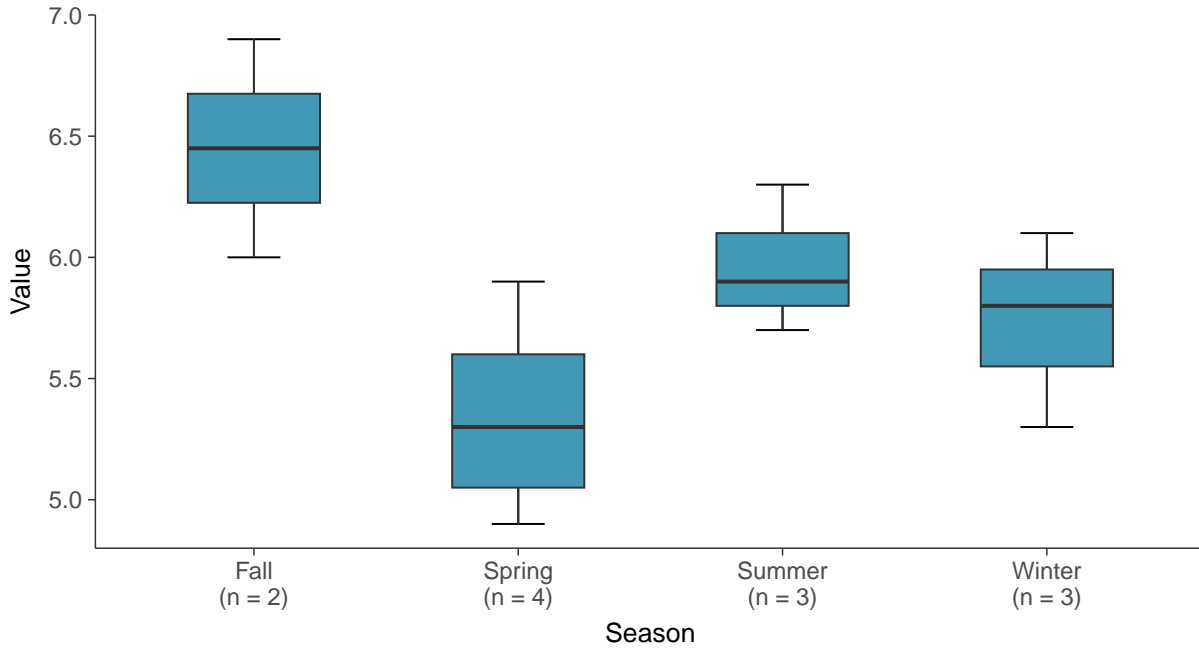
### Boxplot

Boron, MW-09 (mg/L)



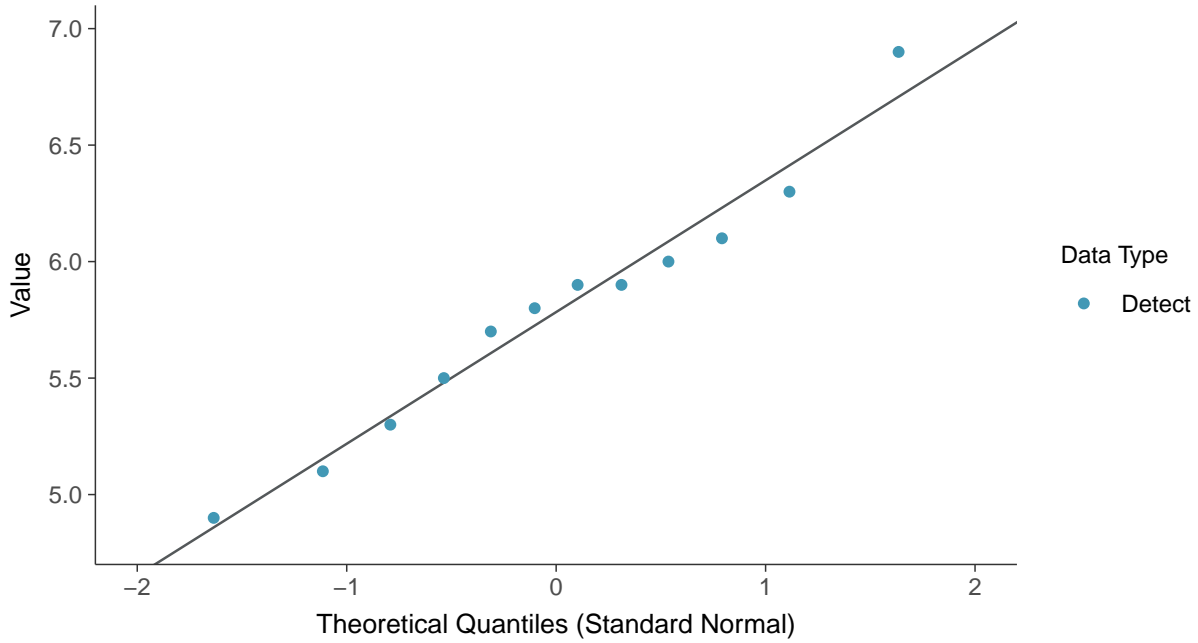
### Boxplot by Season

Boron, MW-09 (mg/L)

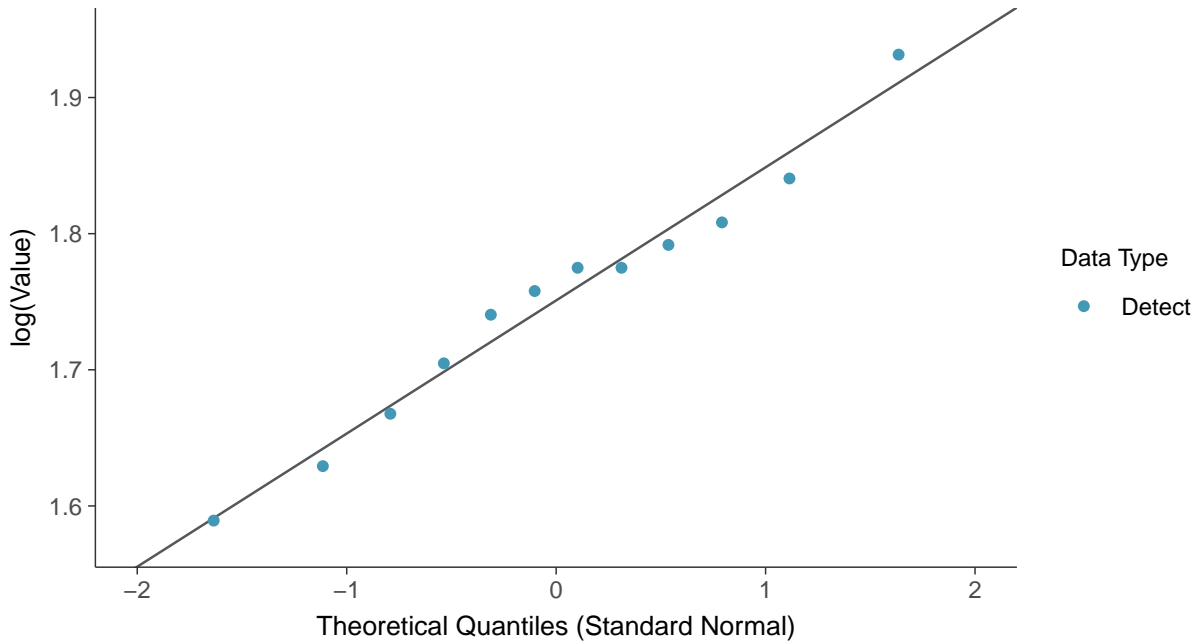




**Normal Q-Q plot**  
Boron, MW-09 (mg/L)



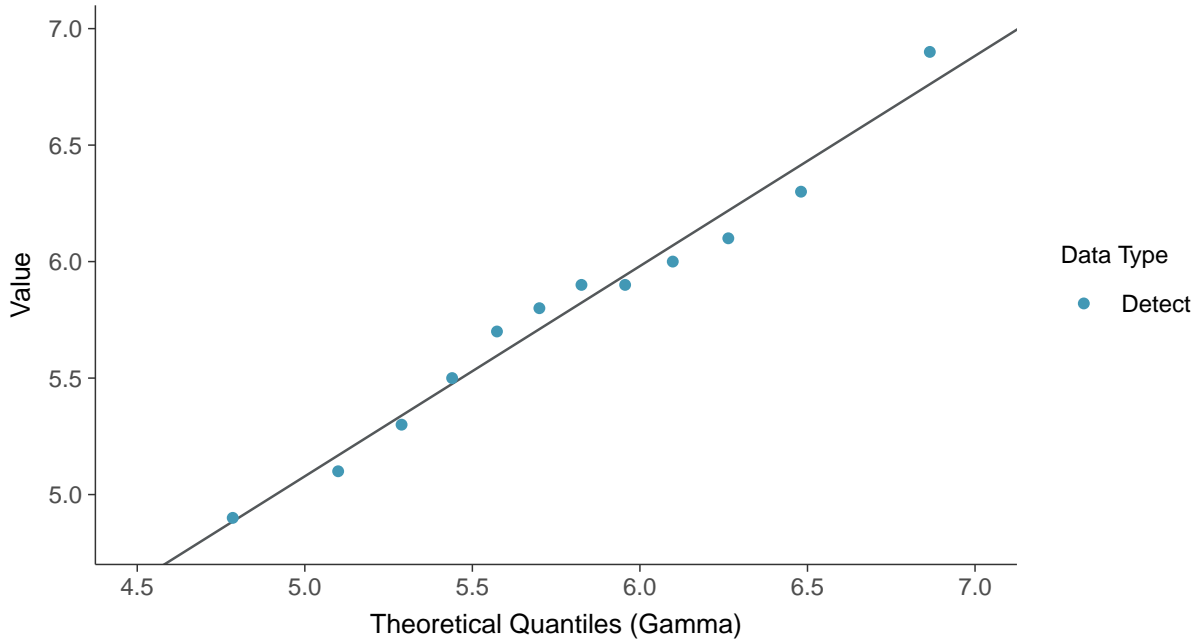
**Lognormal Q-Q plot**  
Boron, MW-09 (mg/L)





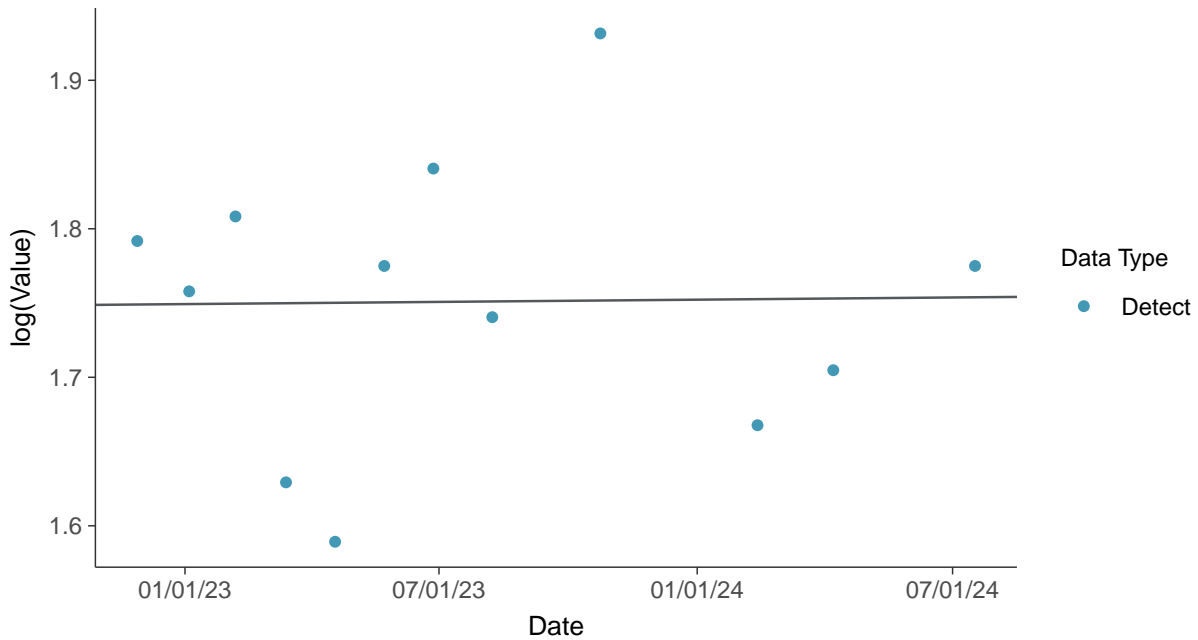
### Gamma Q-Q plot

Boron, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

Boron, MW-09 (mg/L)



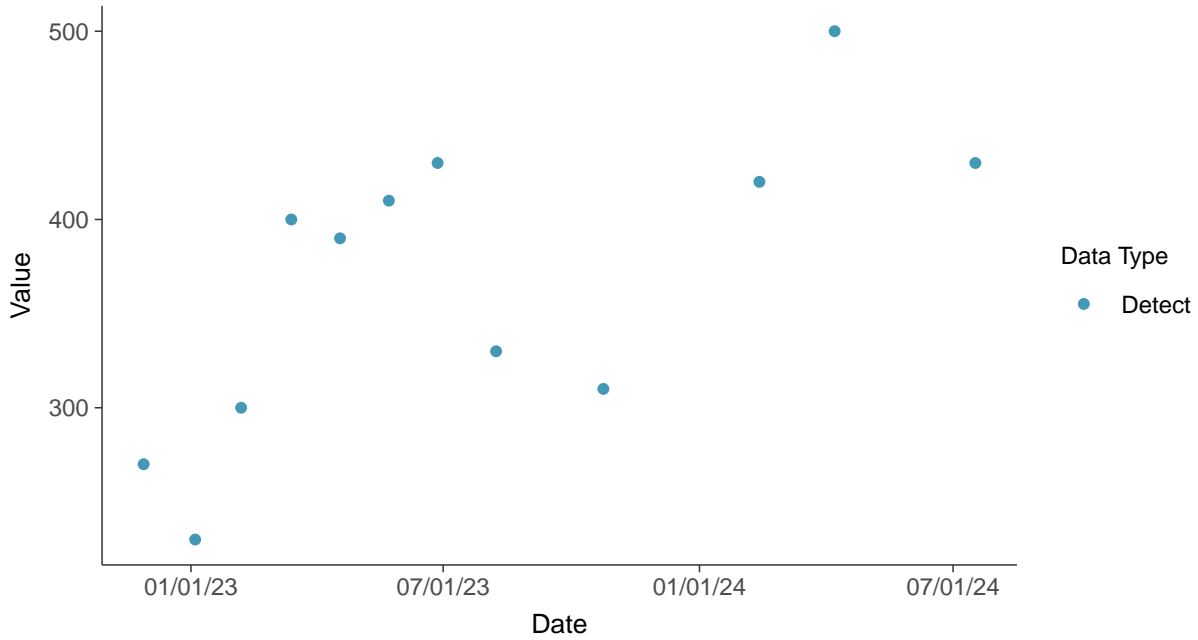


### Appendix III: Calcium, MW-09

ID: 19\_2\_4\_107

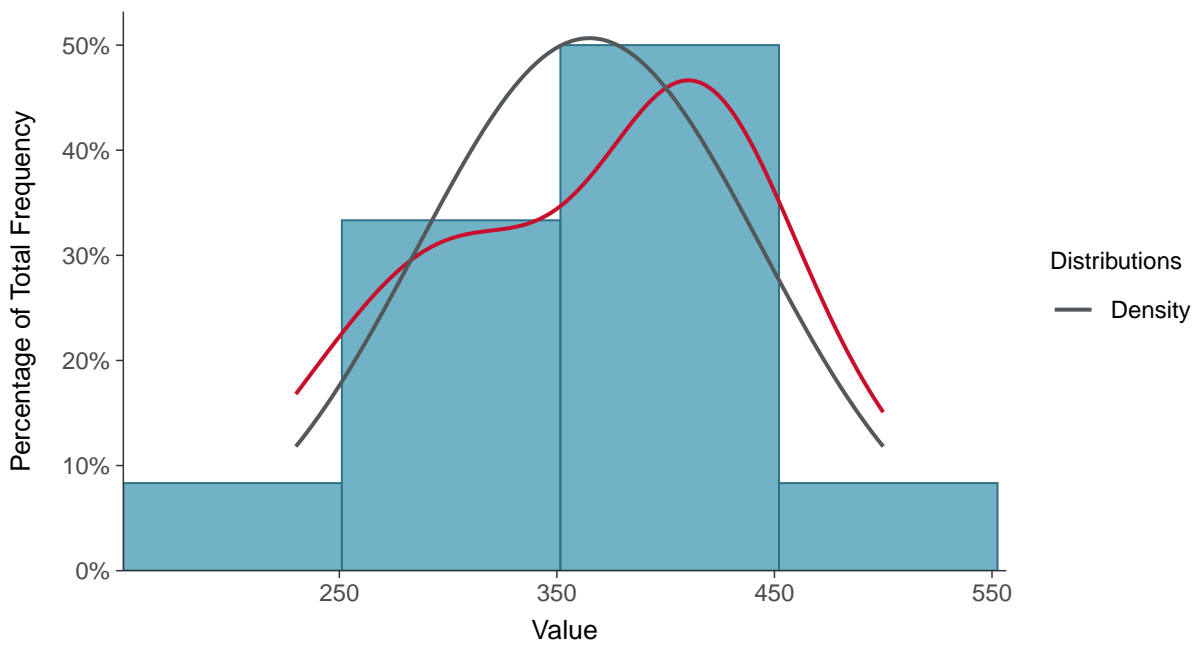
#### Scatter Plot

Calcium, MW-09 (mg/L)



#### Histogram

Calcium, MW-09 (mg/L)

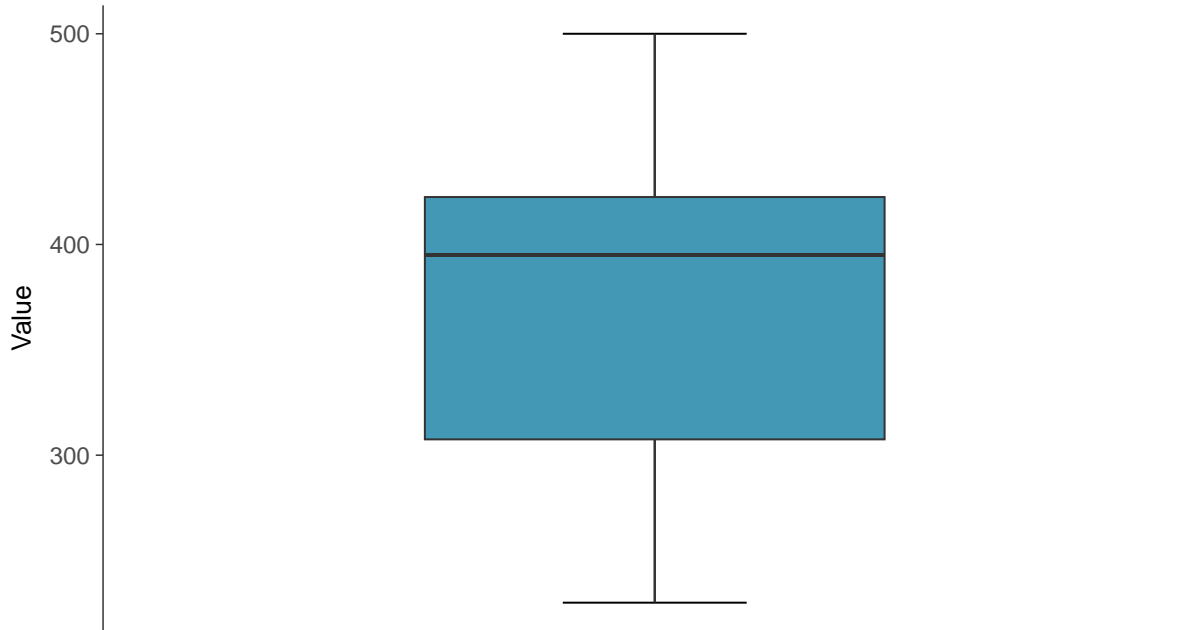






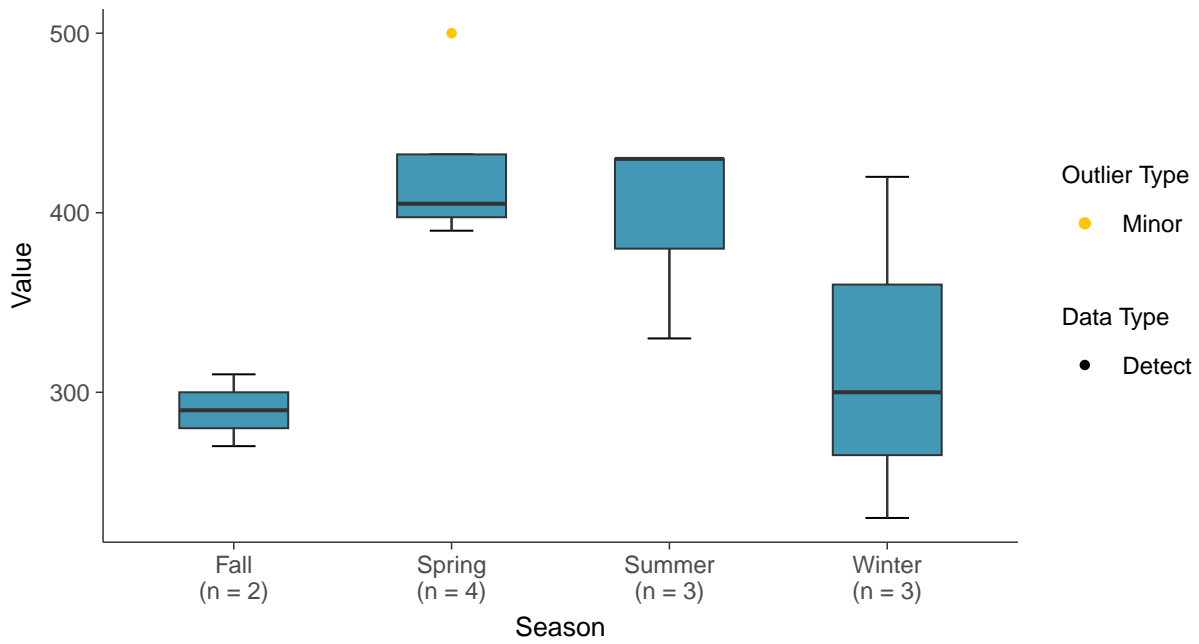
### Boxplot

Calcium, MW-09 (mg/L)



### Boxplot by Season

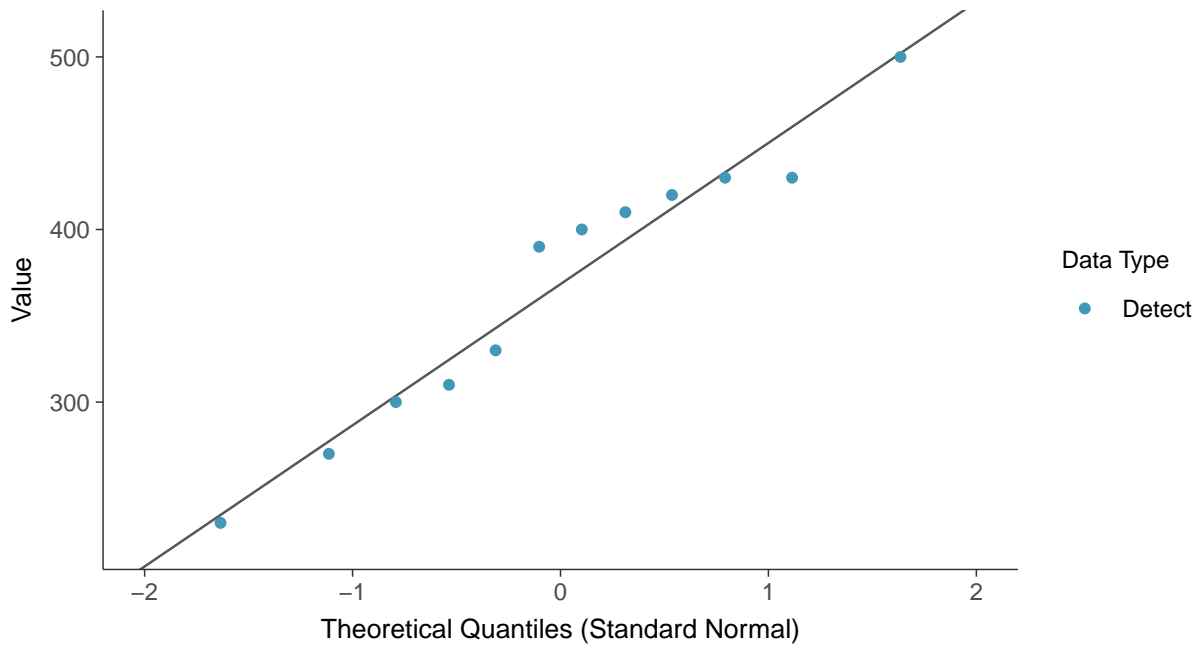
Calcium, MW-09 (mg/L)





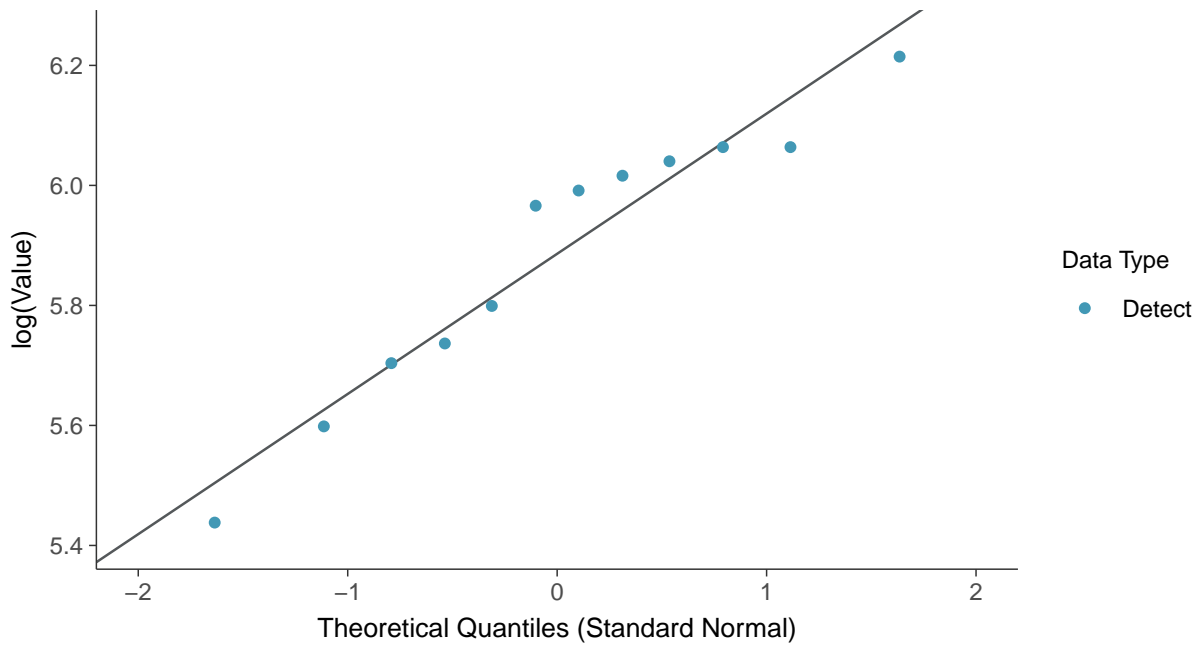
### Normal Q-Q plot

Calcium, MW-09 (mg/L)



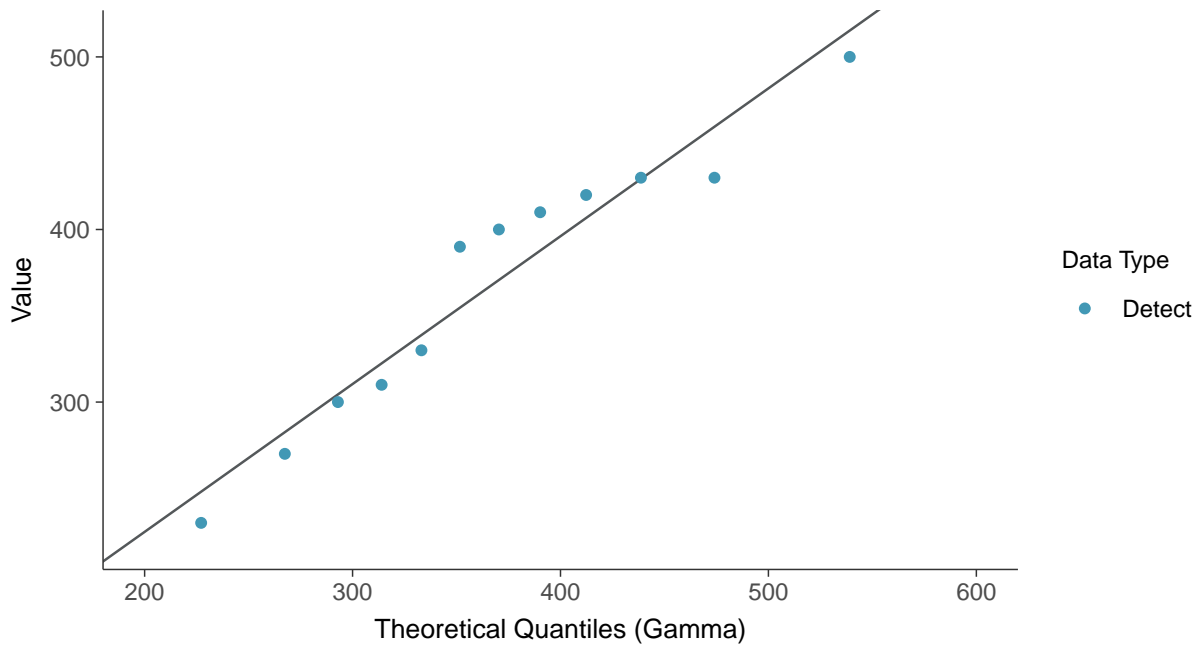
### Lognormal Q-Q plot

Calcium, MW-09 (mg/L)

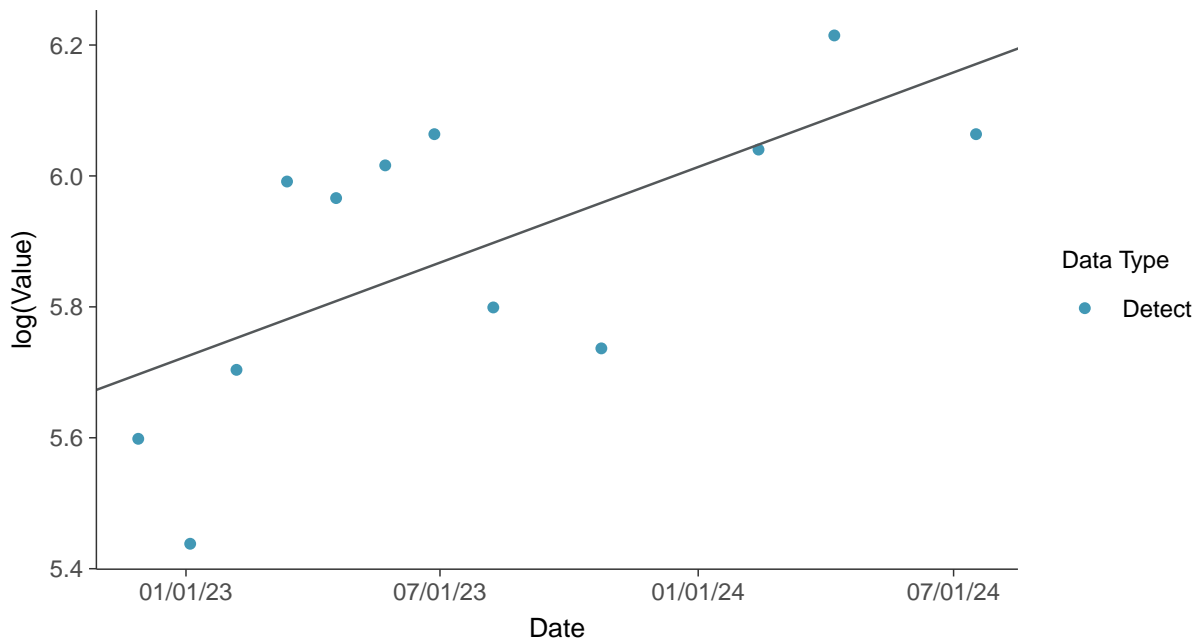




**Gamma Q-Q plot**  
Calcium, MW-09 (mg/L)



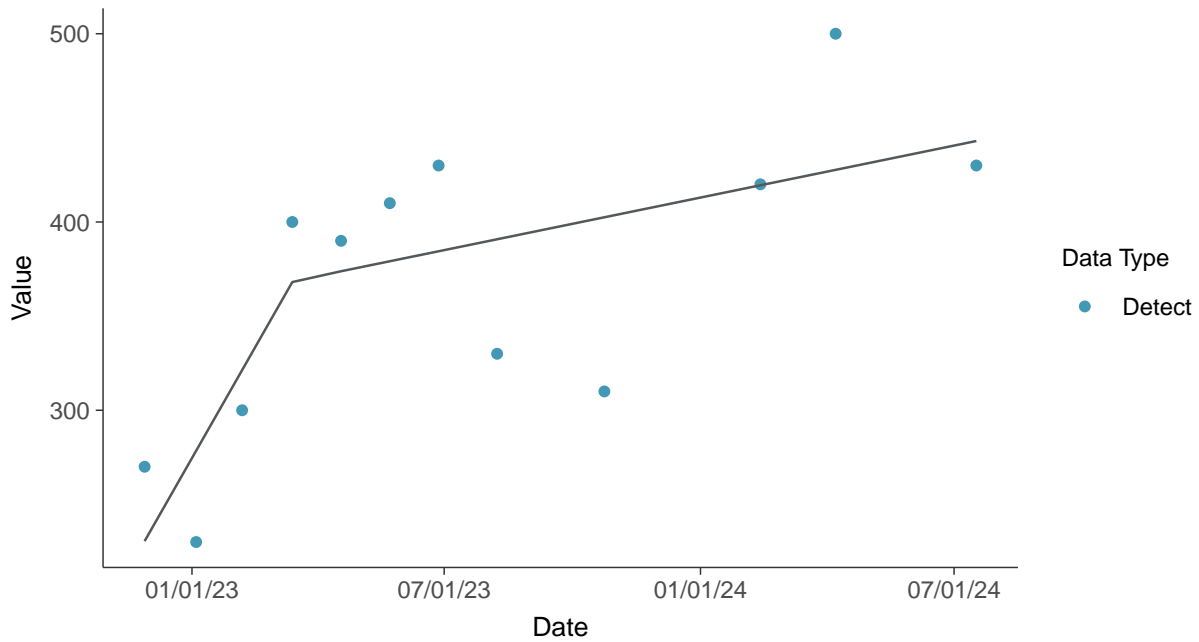
**Trend Regression: Lognormal MLE**  
Calcium, MW-09 (mg/L)





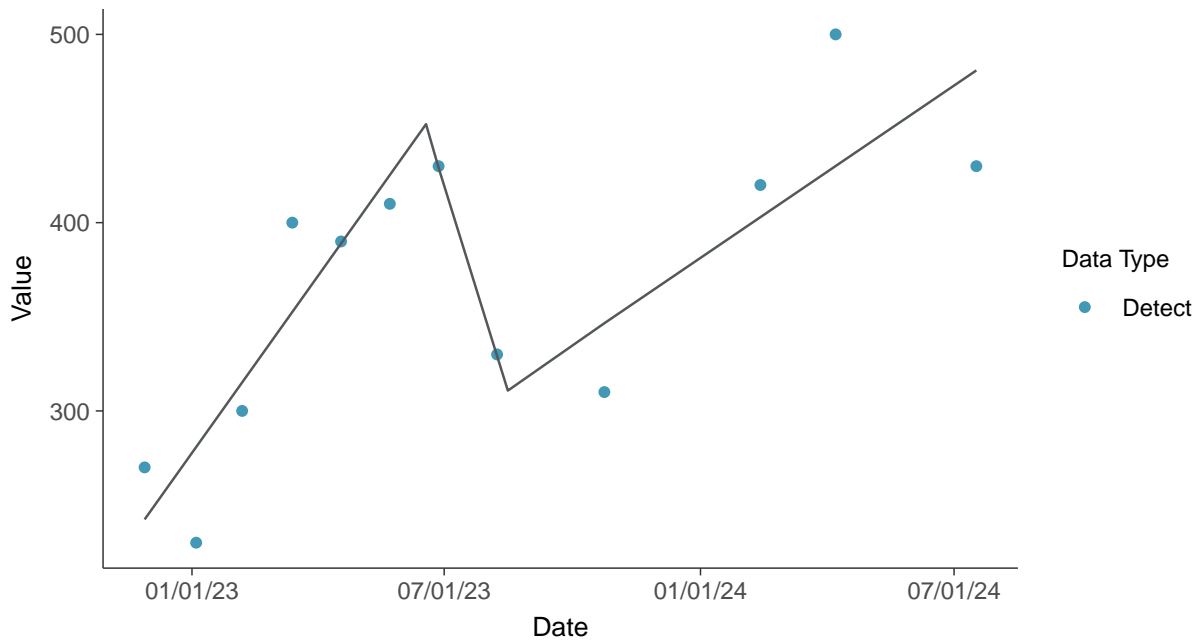
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-09 (mg/L)



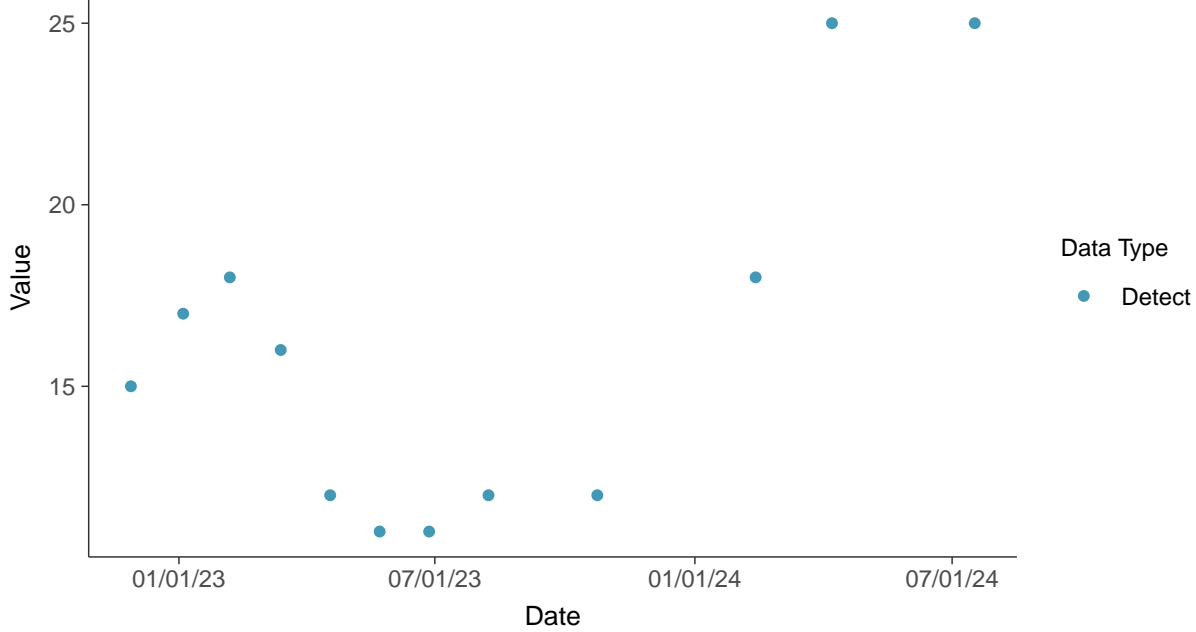


### Appendix III: Chloride (as Cl), MW-09

ID: 19\_2\_4\_108

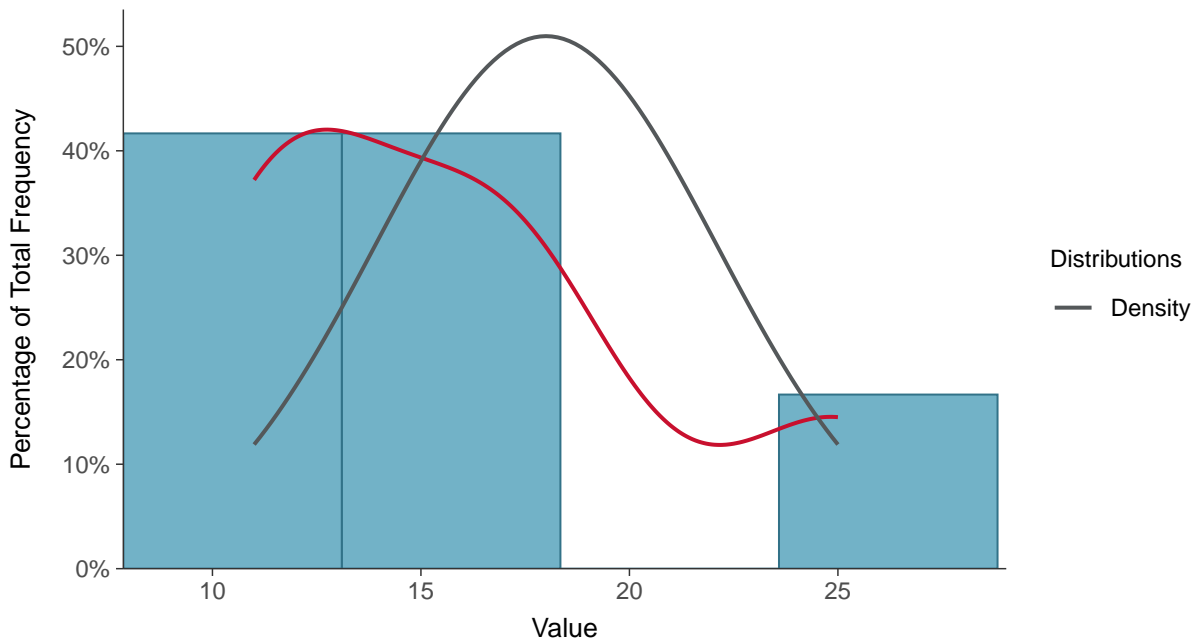
#### Scatter Plot

Chloride (as Cl), MW-09 (mg/L)



#### Histogram

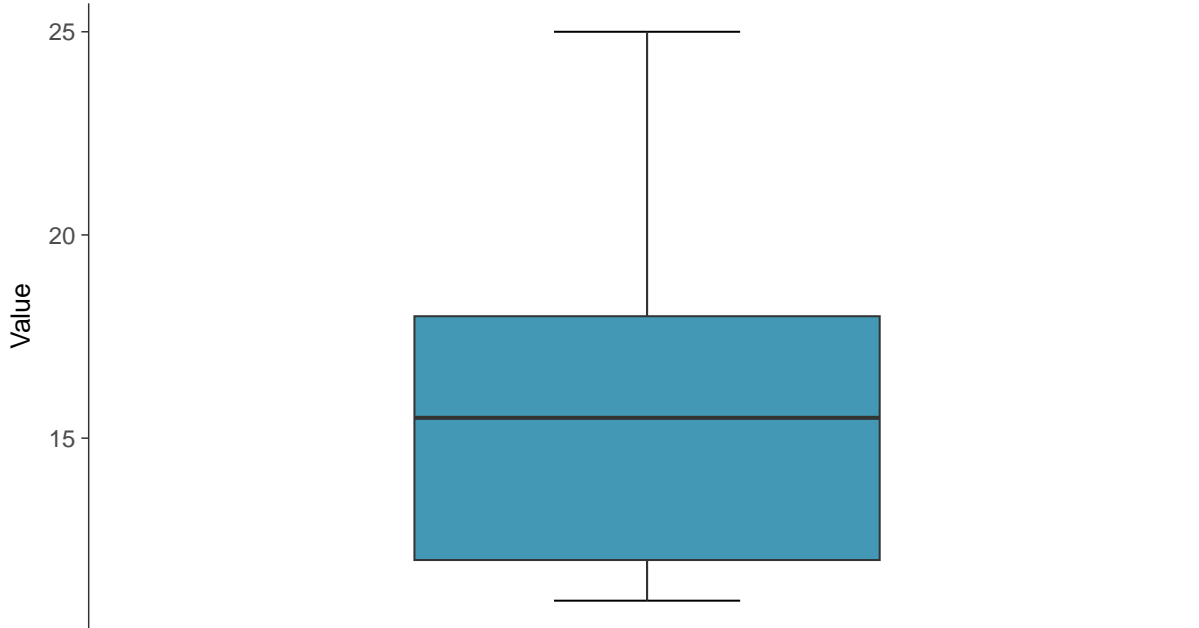
Chloride (as Cl), MW-09 (mg/L)





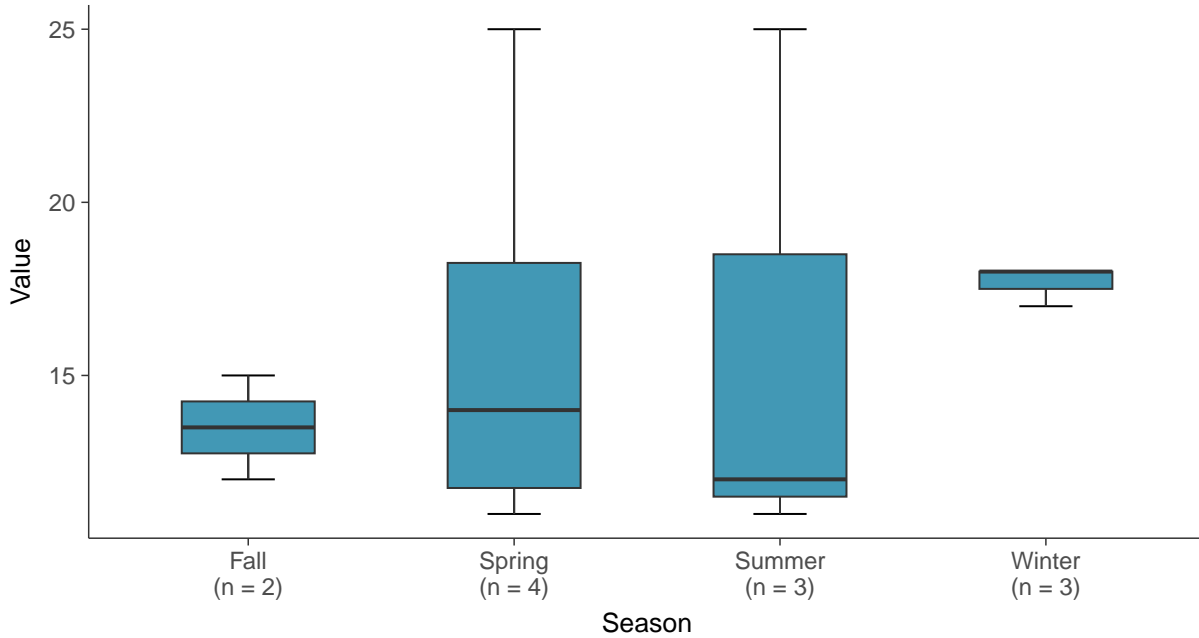
### Boxplot

Chloride (as Cl), MW-09 (mg/L)



### Boxplot by Season

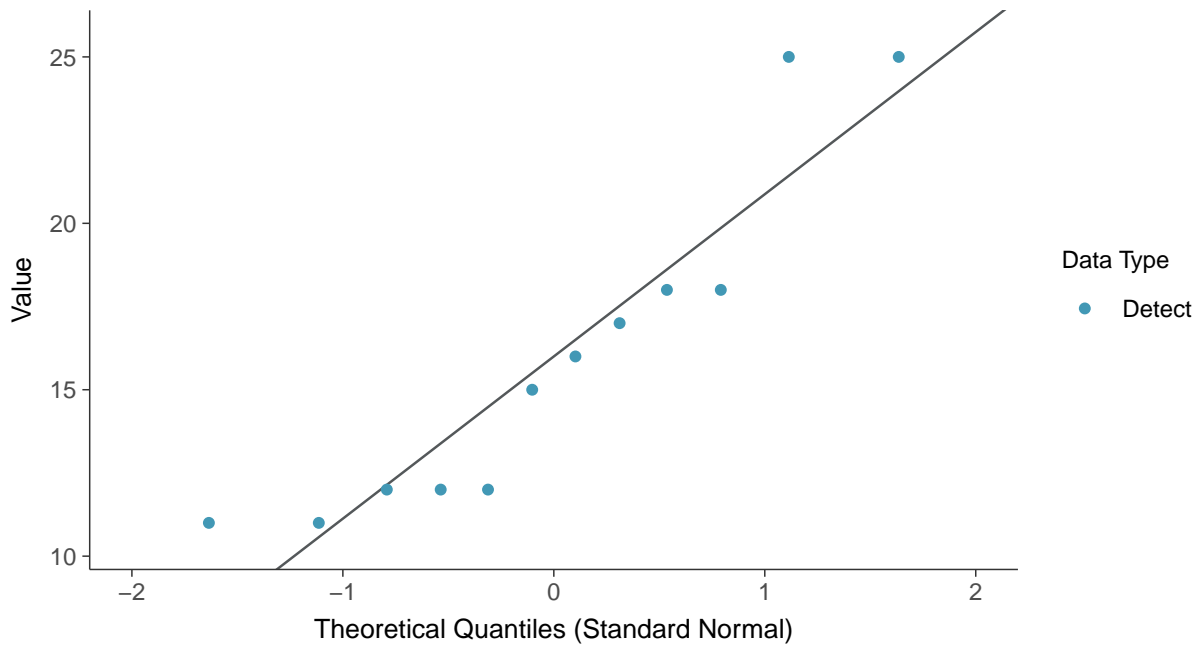
Chloride (as Cl), MW-09 (mg/L)





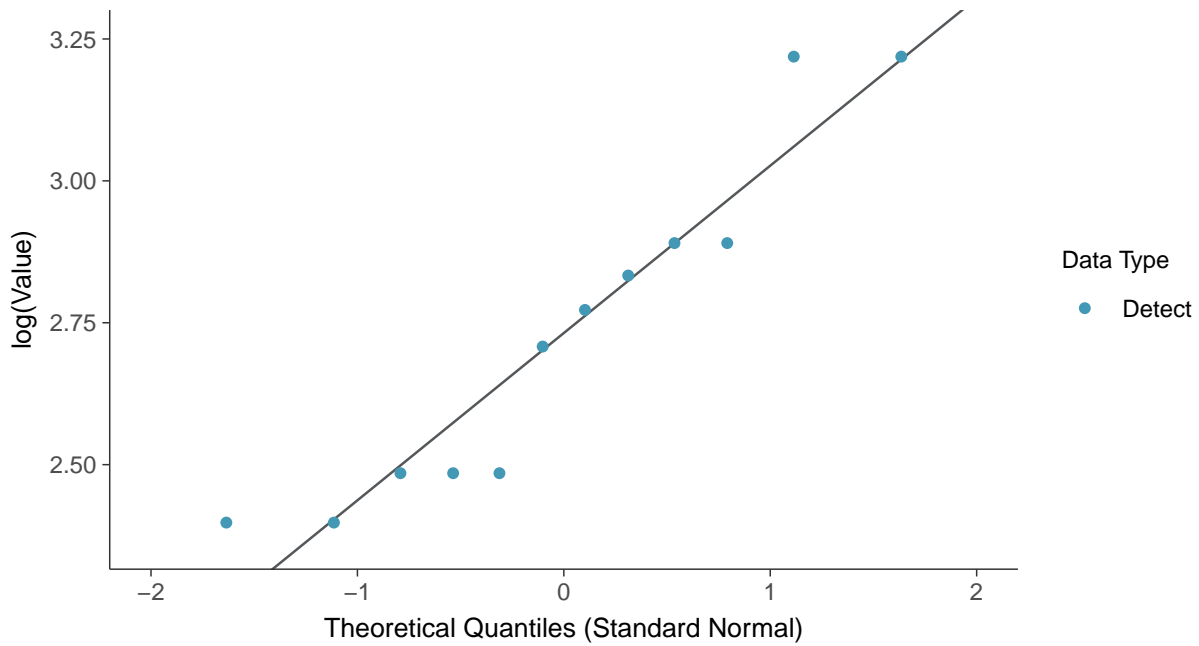
### Normal Q-Q plot

Chloride (as Cl), MW-09 (mg/L)



### Lognormal Q-Q plot

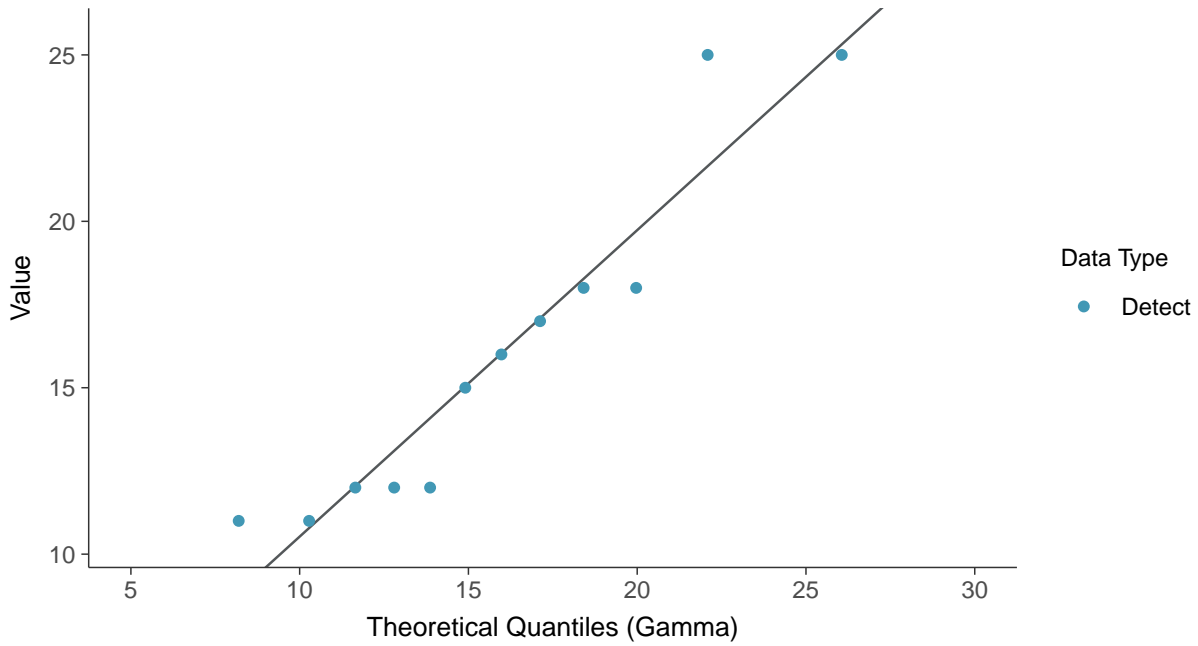
Chloride (as Cl), MW-09 (mg/L)





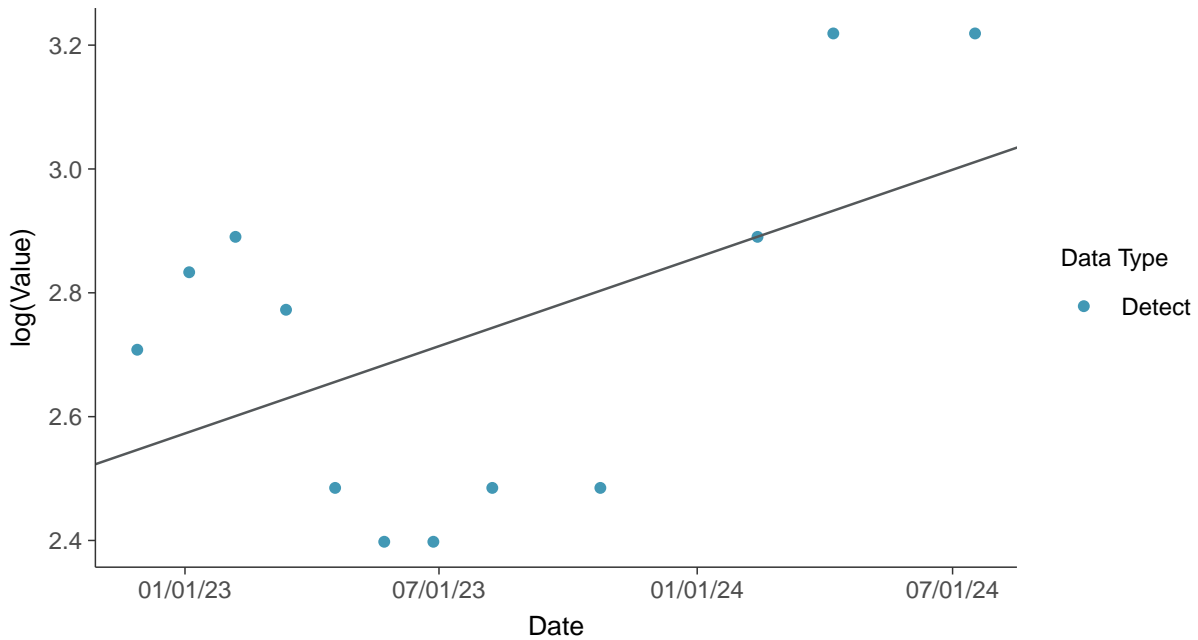
### Gamma Q-Q plot

Chloride (as Cl), MW-09 (mg/L)



### Trend Regression: Lognormal MLE

Chloride (as Cl), MW-09 (mg/L)

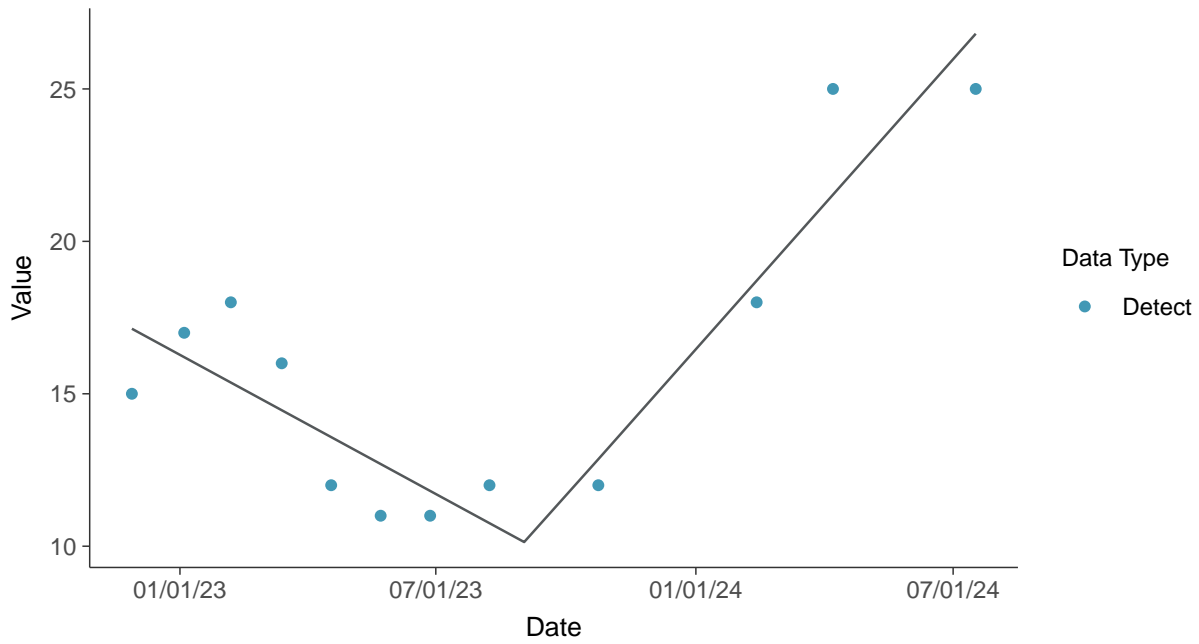






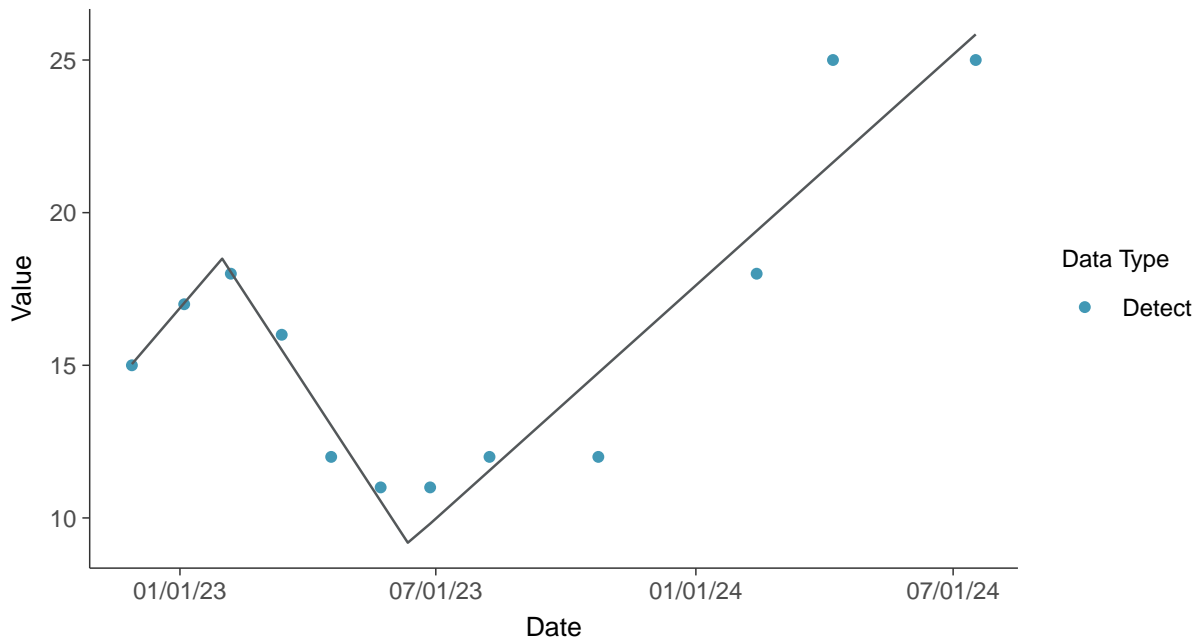
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

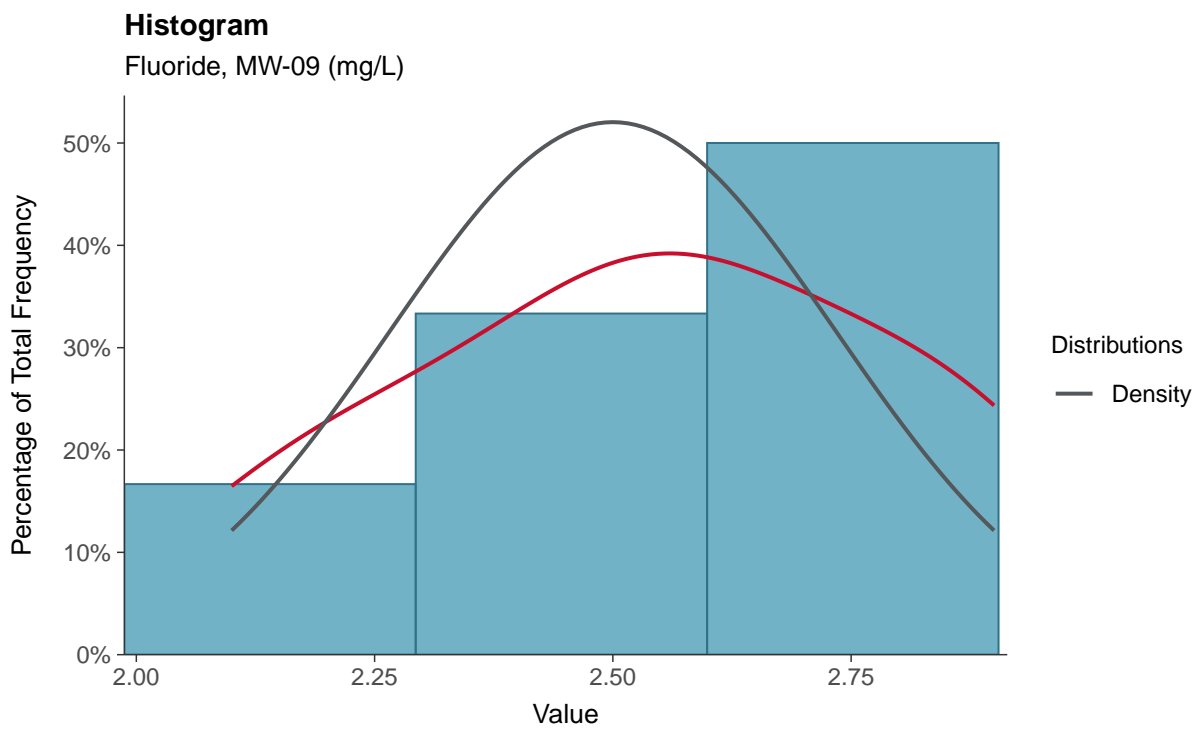
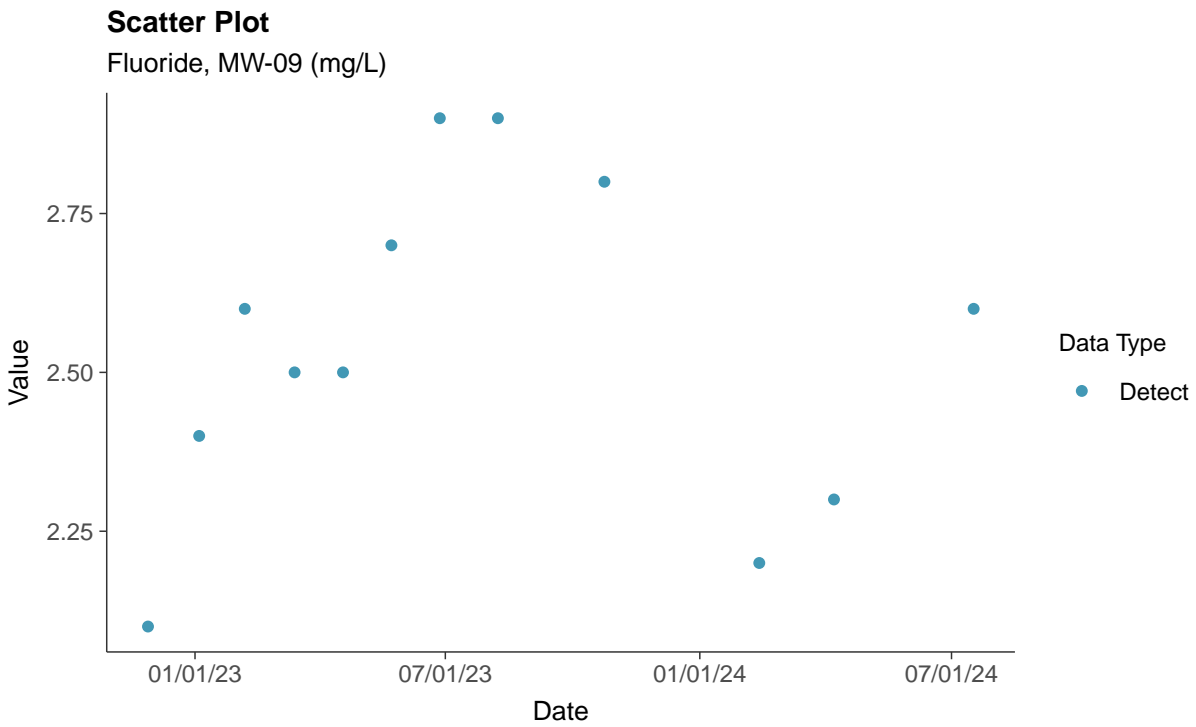
Chloride (as Cl), MW-09 (mg/L)





### Appendix III: Fluoride, MW-09

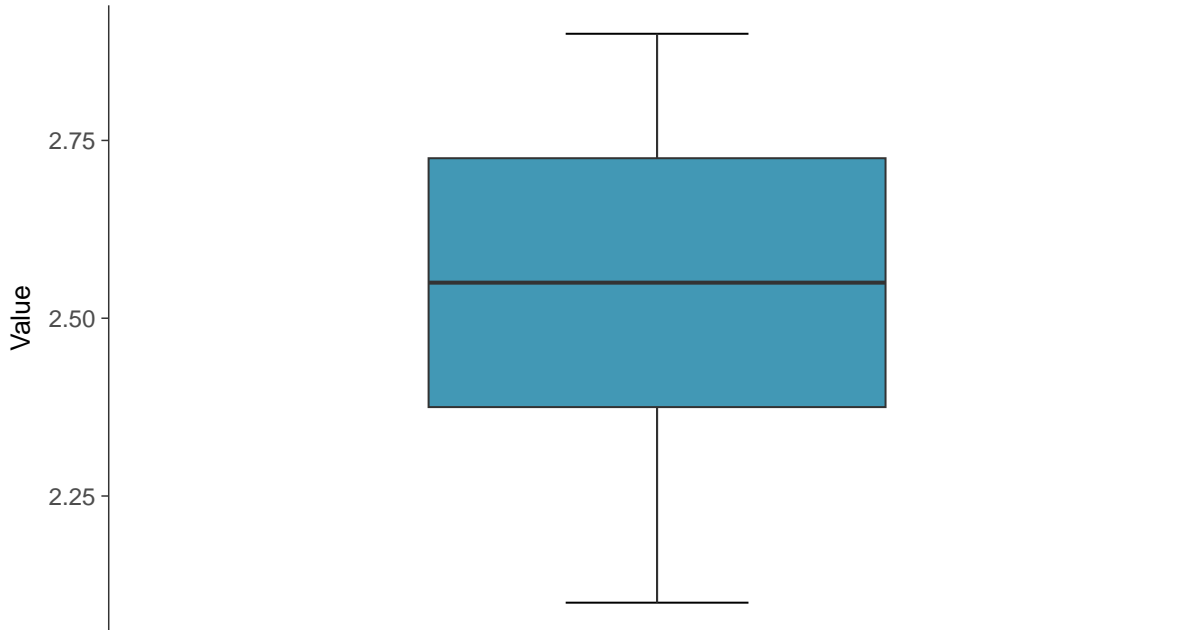
ID: 19\_2\_4\_112





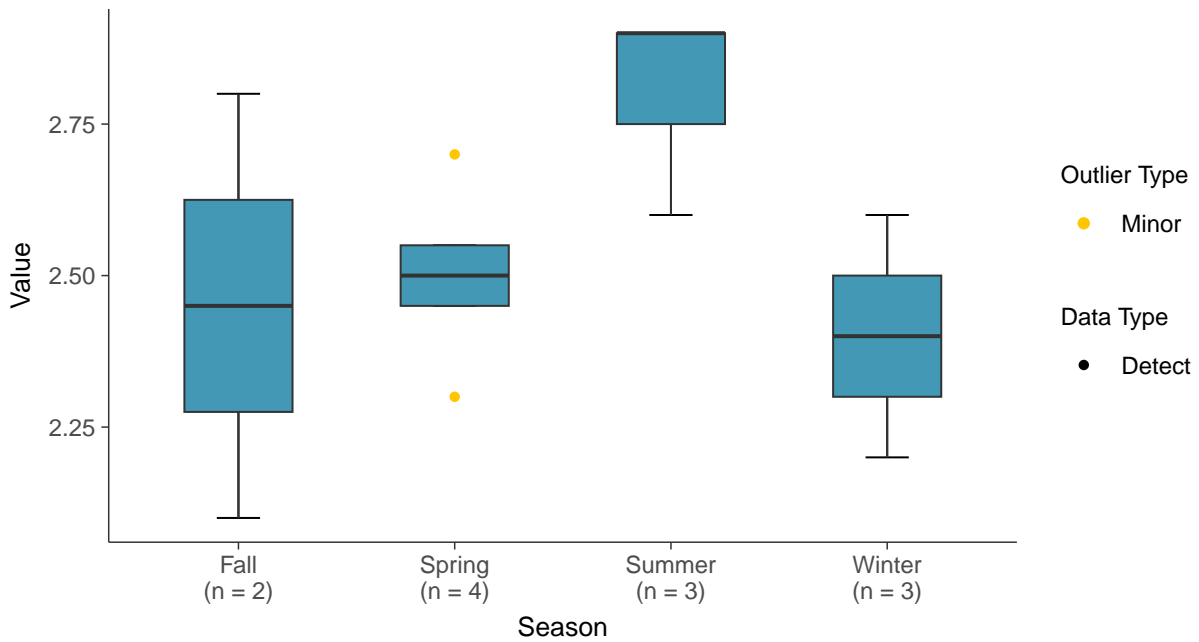
### Boxplot

Fluoride, MW-09 (mg/L)



### Boxplot by Season

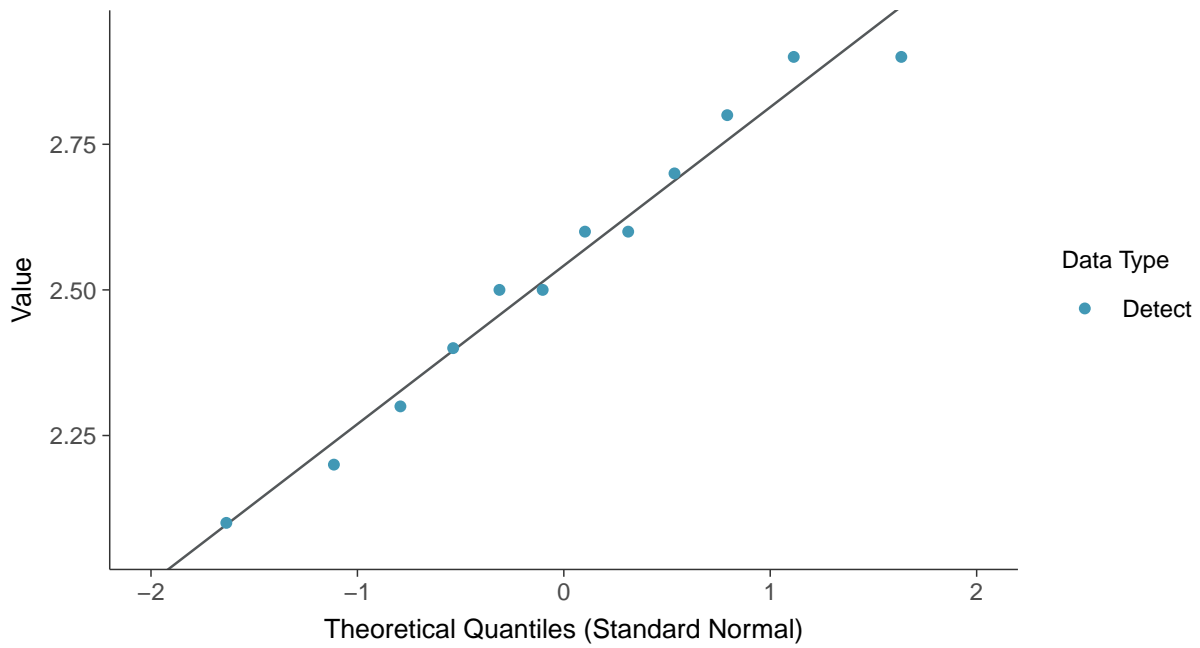
Fluoride, MW-09 (mg/L)





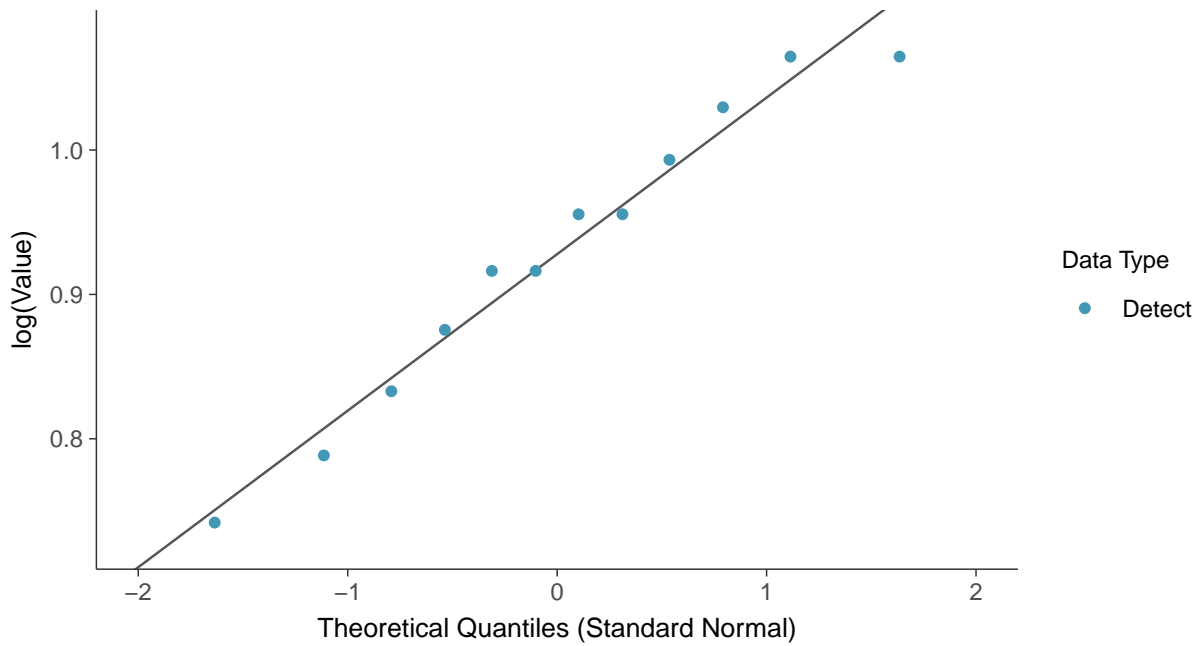
### Normal Q-Q plot

Fluoride, MW-09 (mg/L)



### Lognormal Q-Q plot

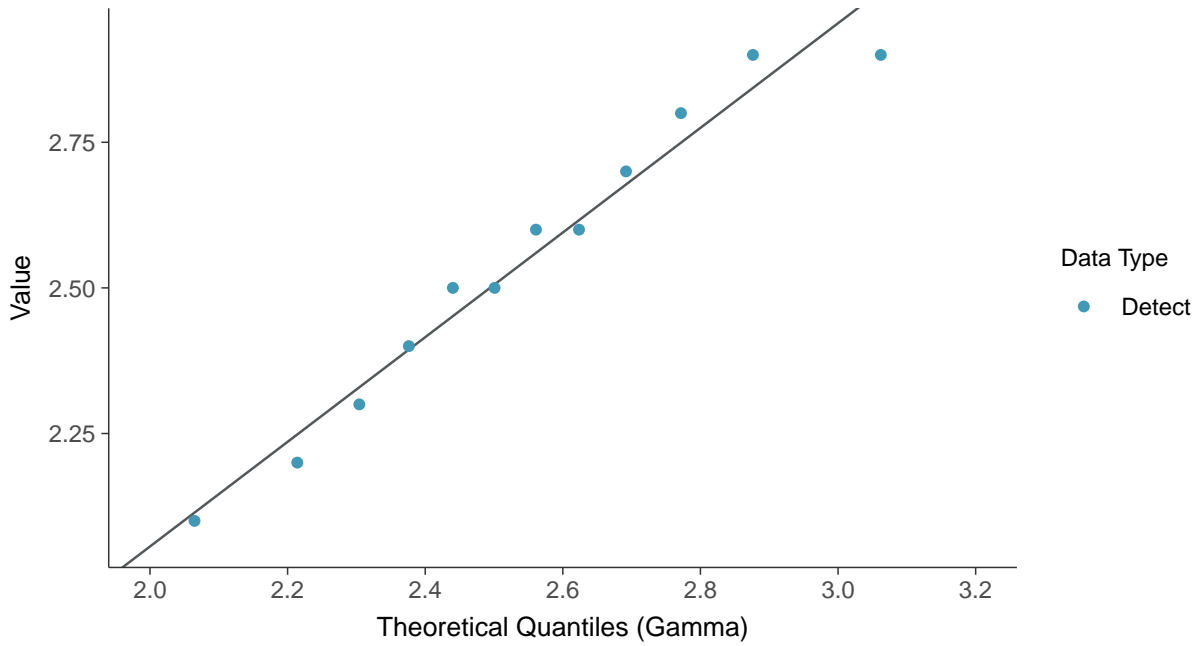
Fluoride, MW-09 (mg/L)





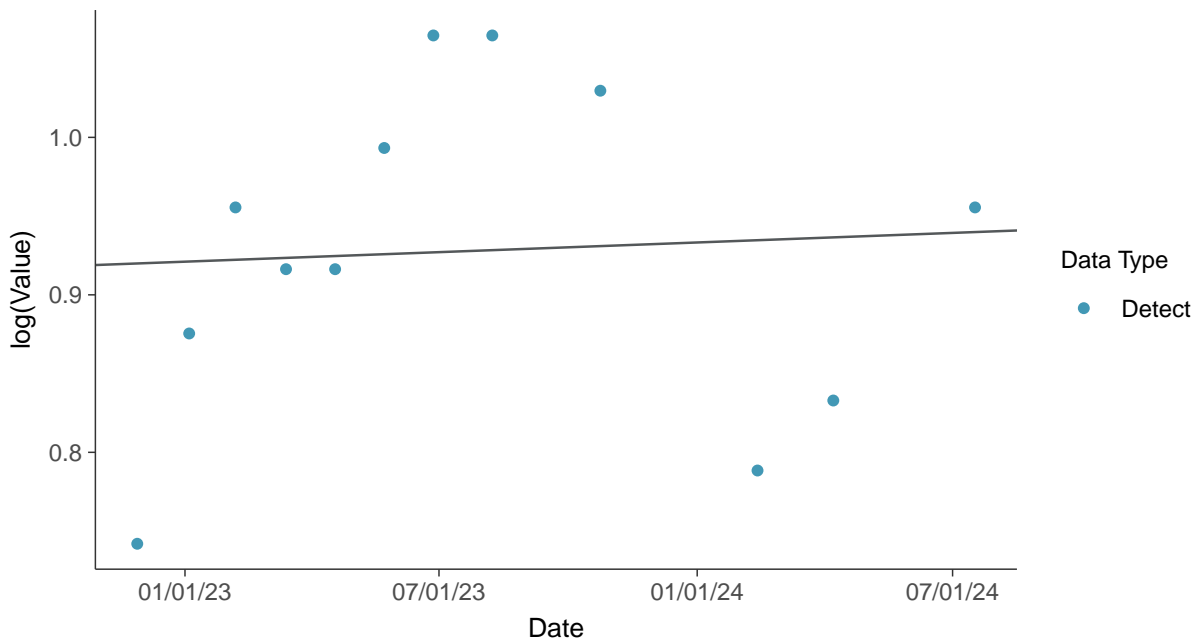
### Gamma Q-Q plot

Fluoride, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

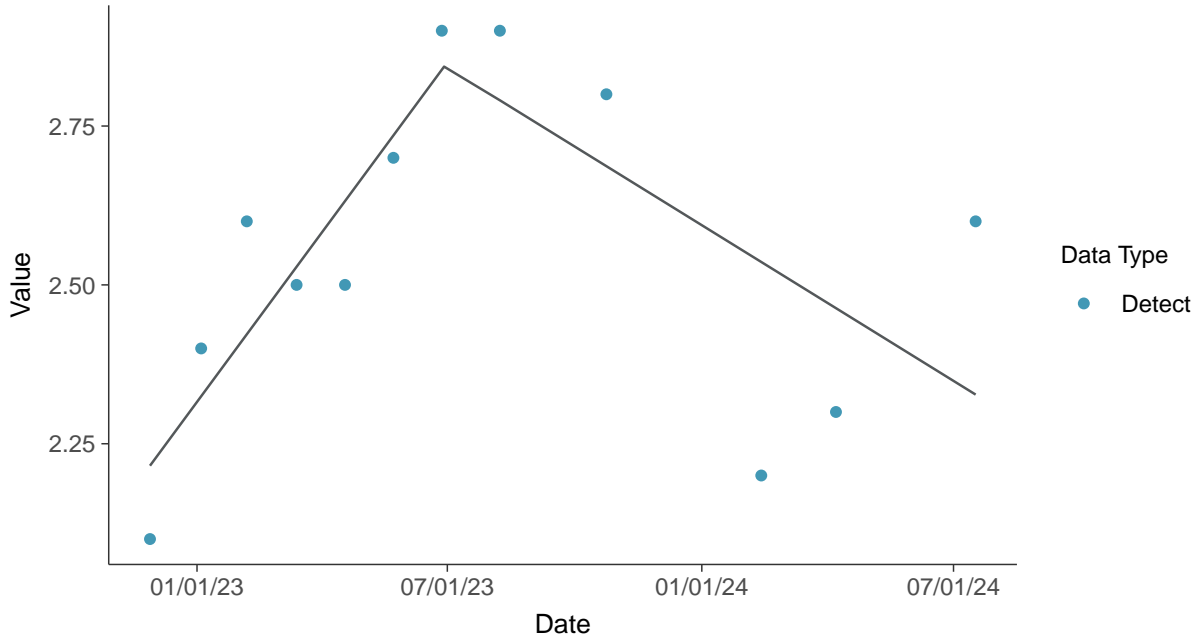
Fluoride, MW-09 (mg/L)





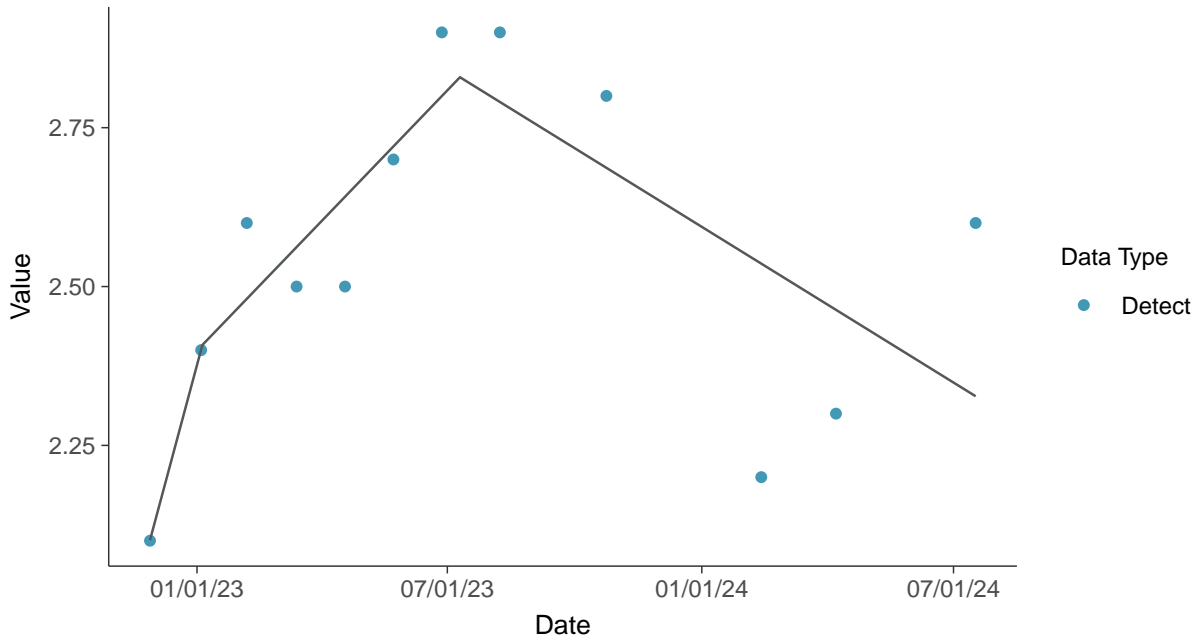
**Trend Regression: Piecewise Linear-Linear**

Fluoride, MW-09 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**

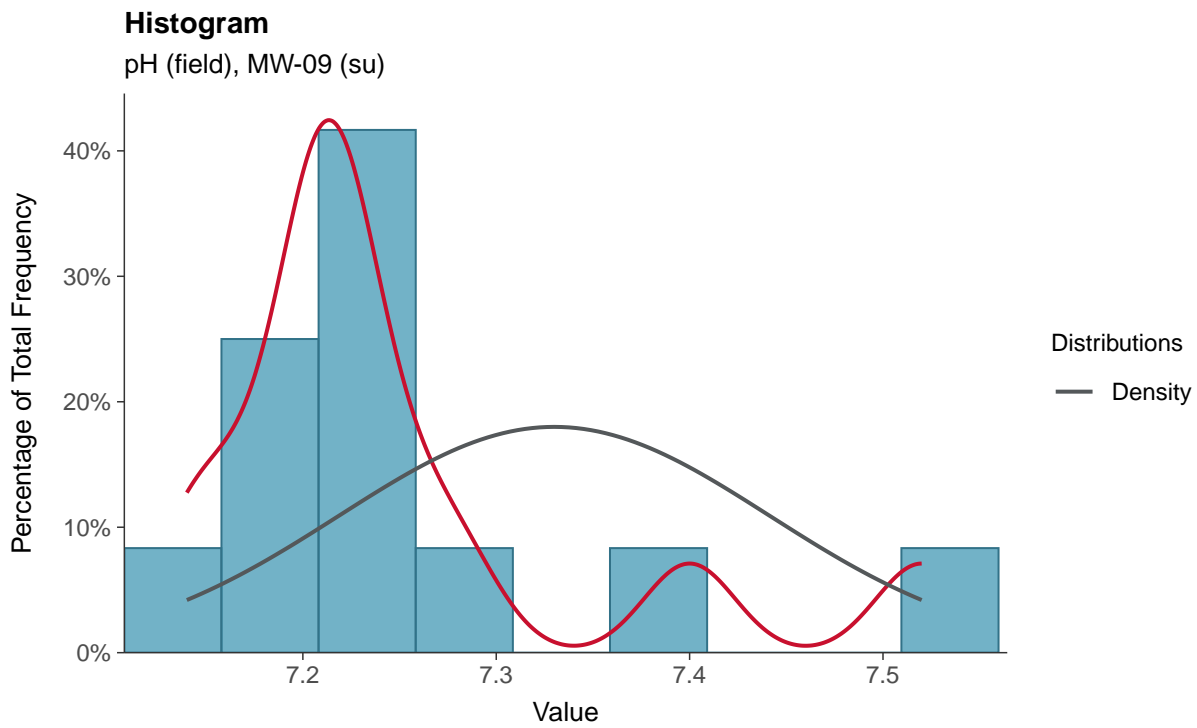
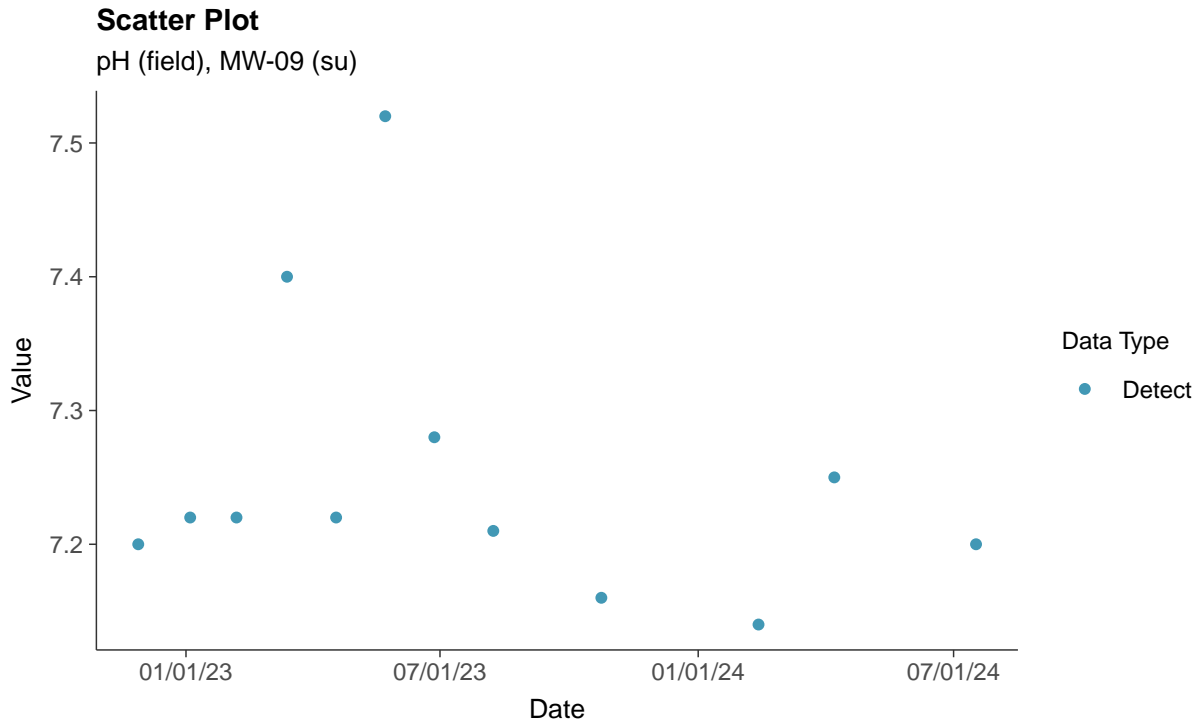
Fluoride, MW-09 (mg/L)





### Appendix III: pH (field), MW-09

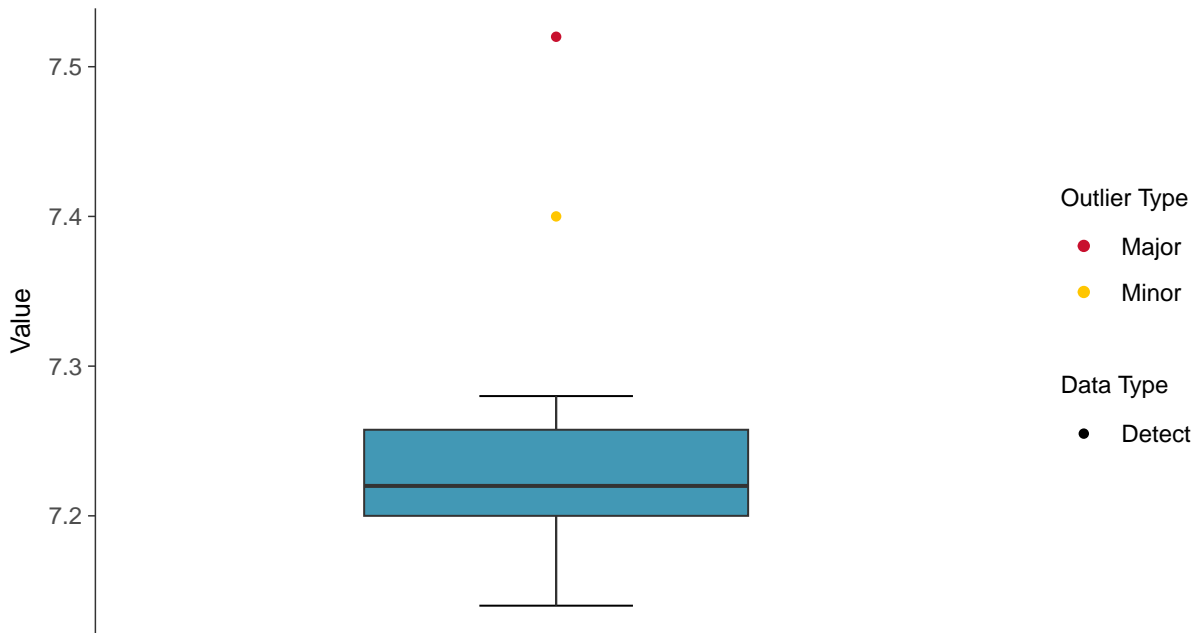
ID: 19\_2\_4\_120





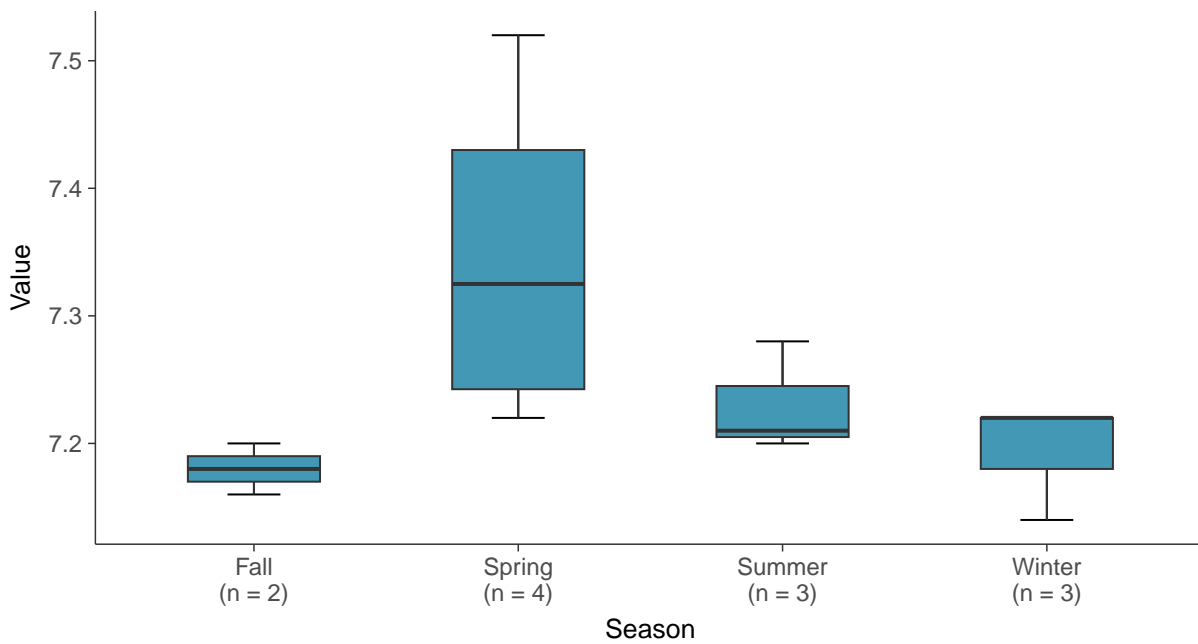
### Boxplot

pH (field), MW-09 (su)



### Boxplot by Season

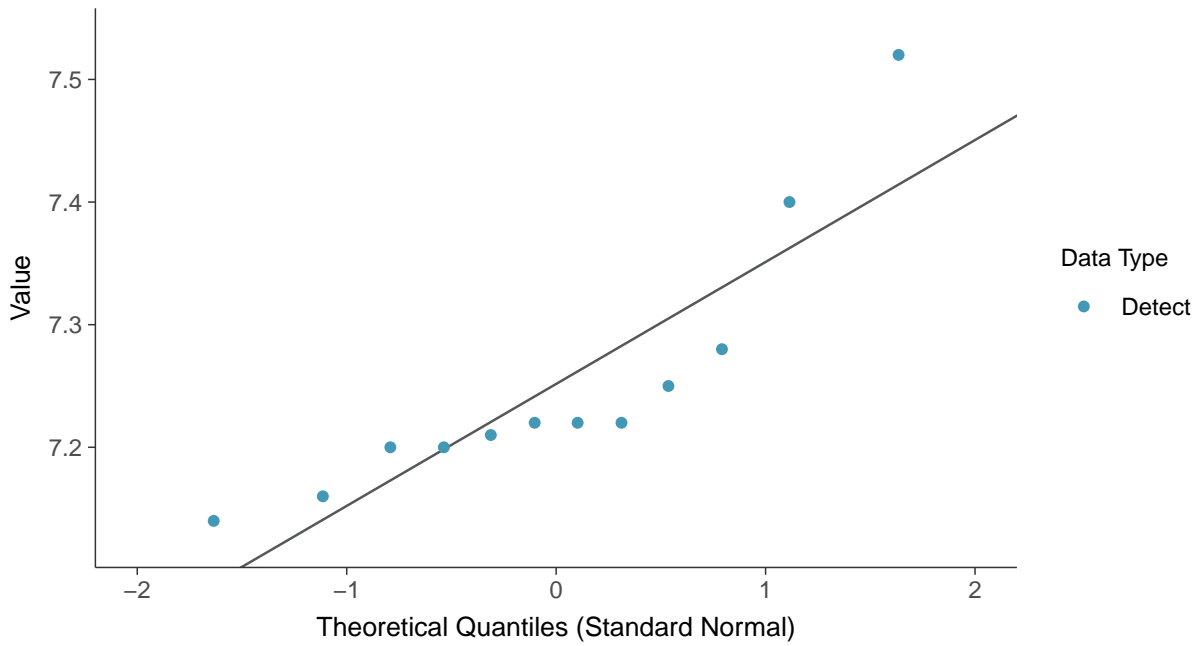
pH (field), MW-09 (su)



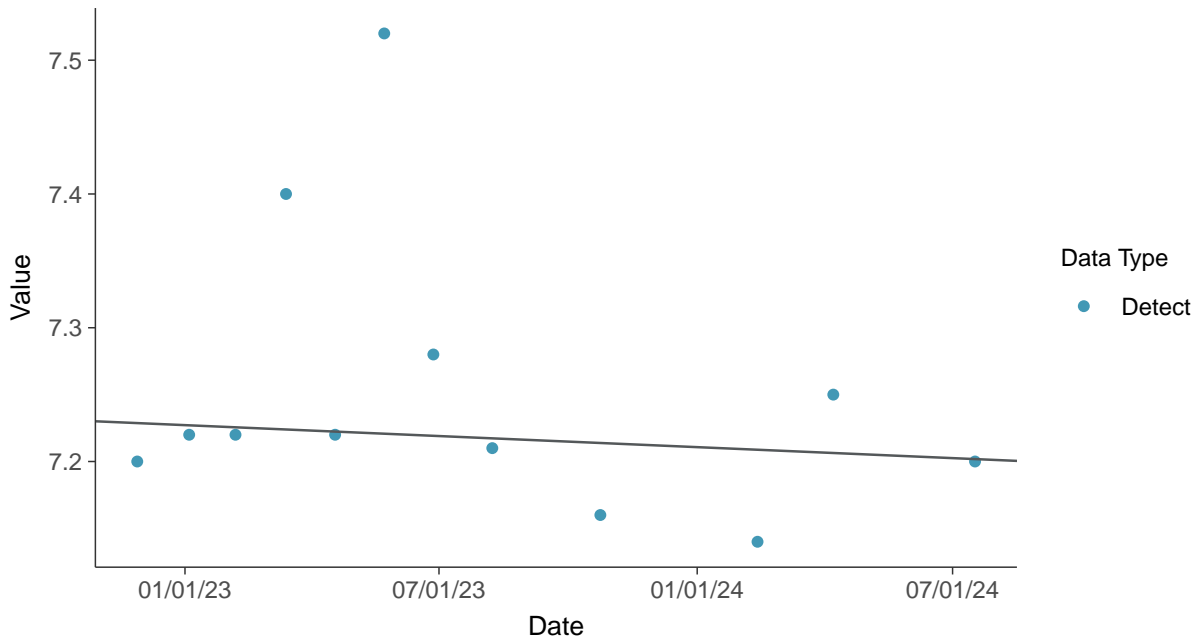




**Normal Q-Q plot**  
pH (field), MW-09 (su)



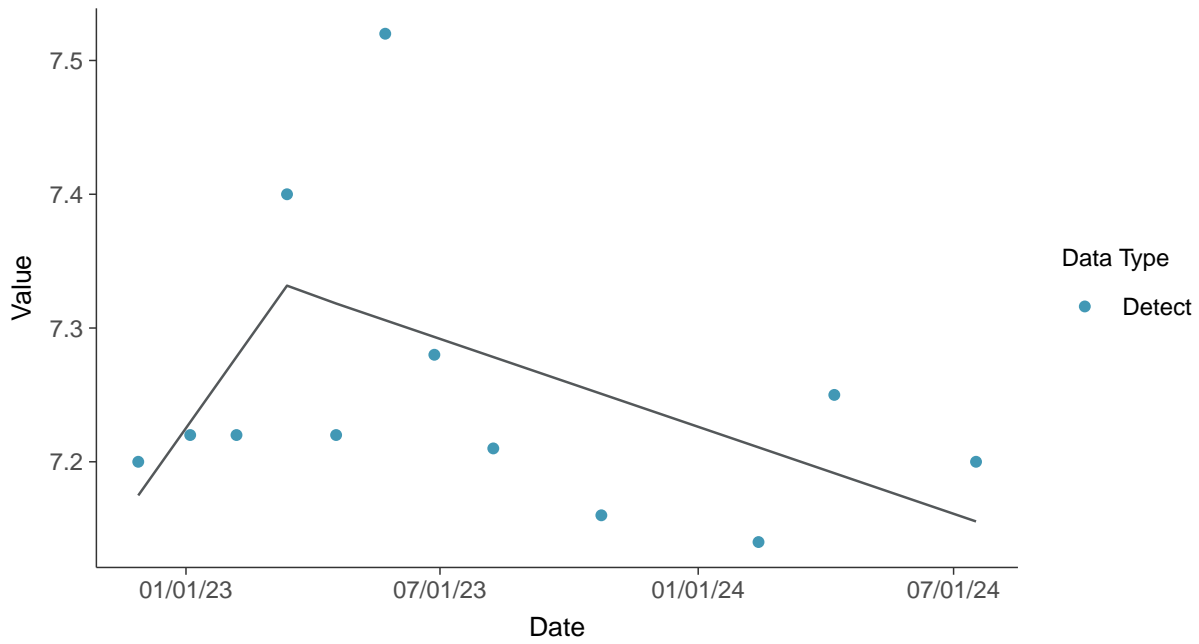
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
pH (field), MW-09 (su)





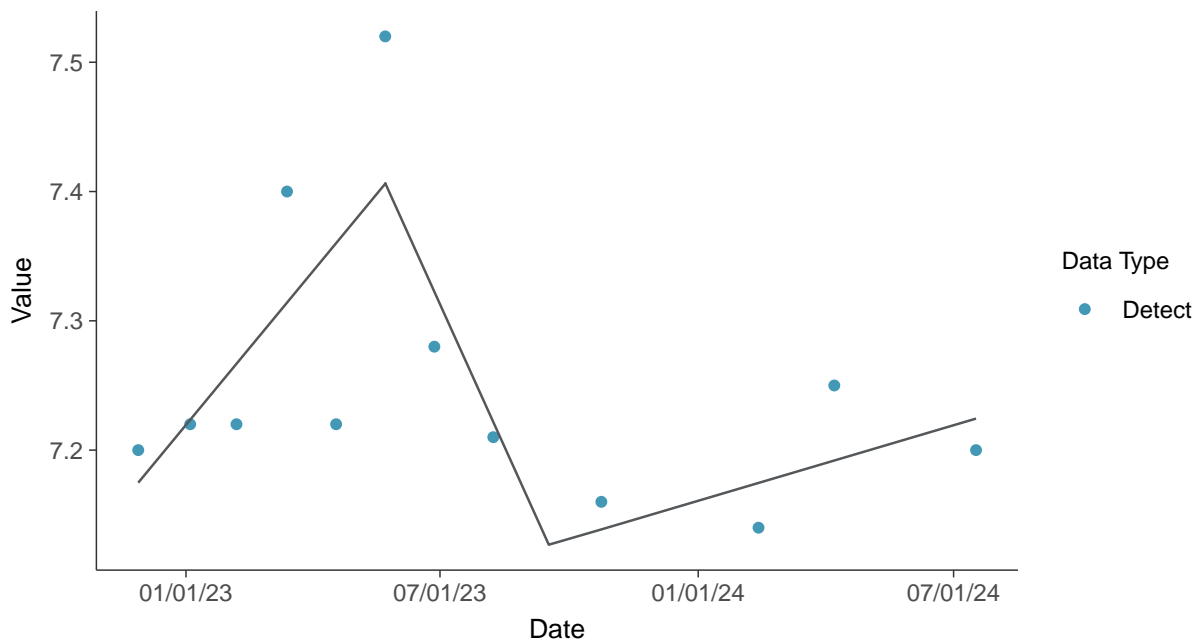
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-09 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-09 (su)



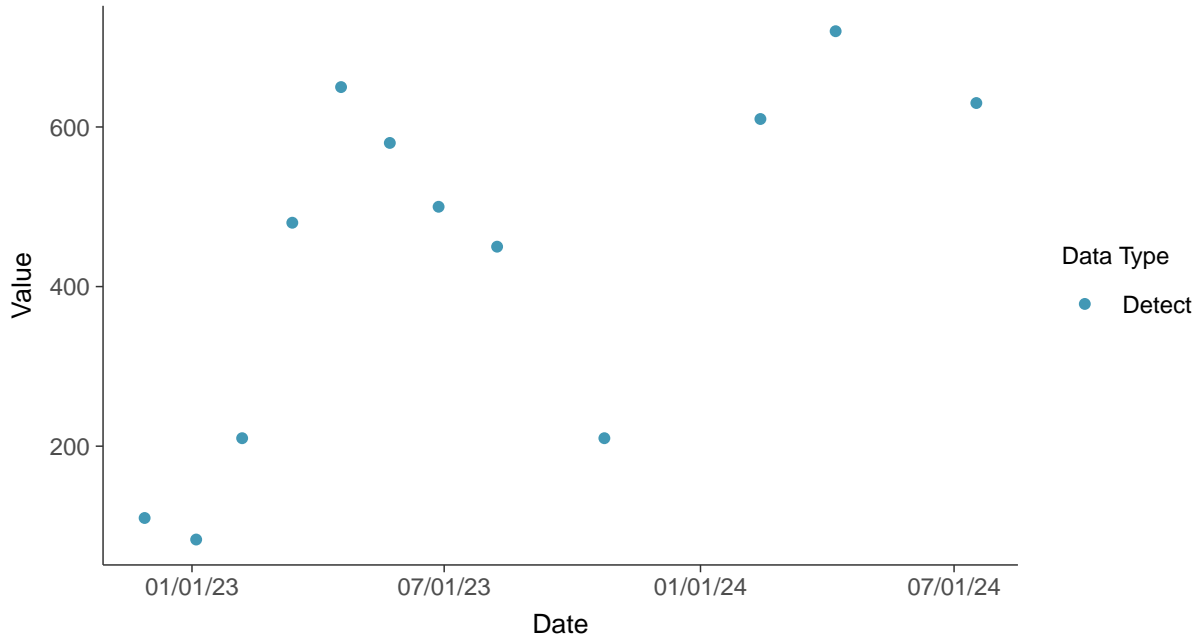


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-09

ID: 19\_2\_4\_124

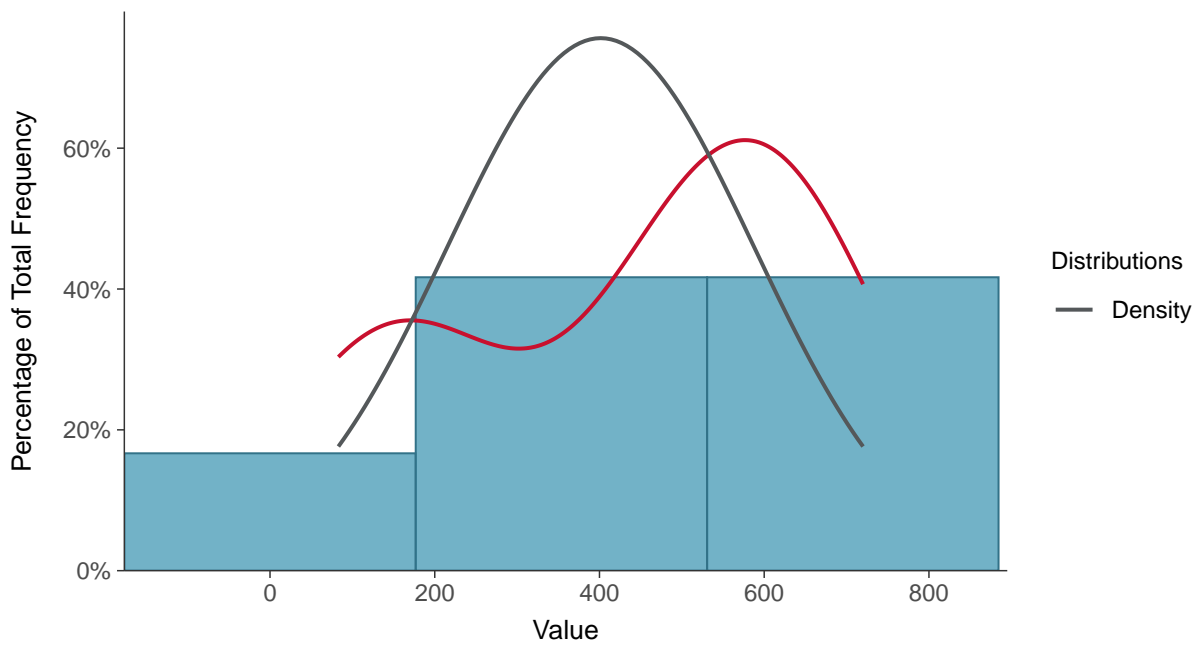
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)



#### Histogram

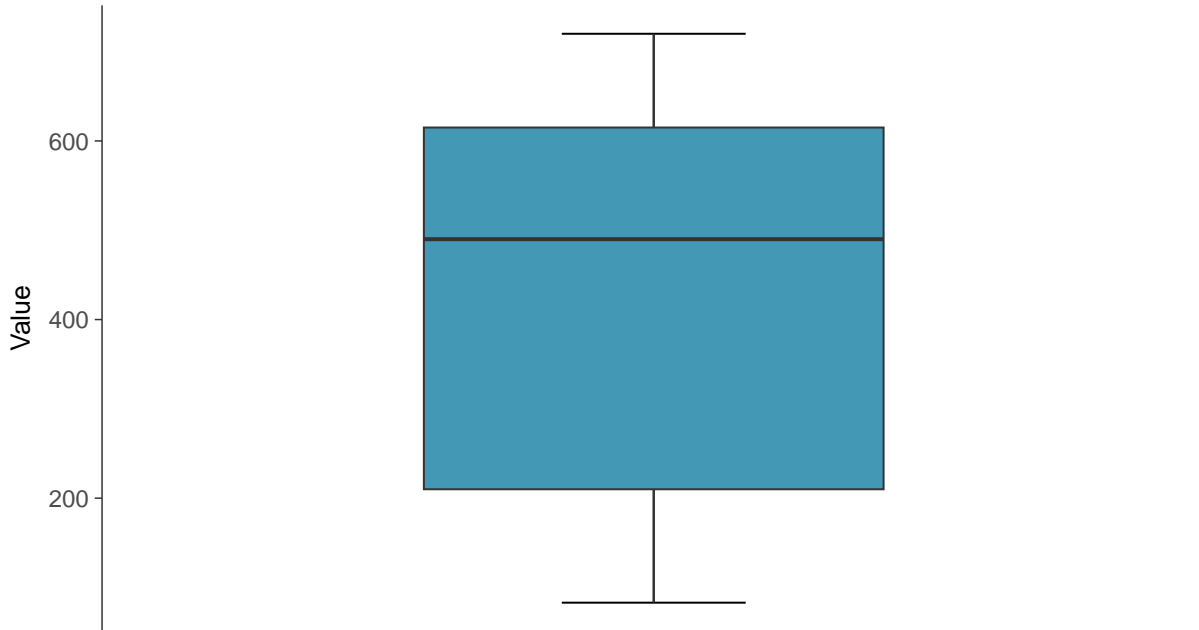
Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)





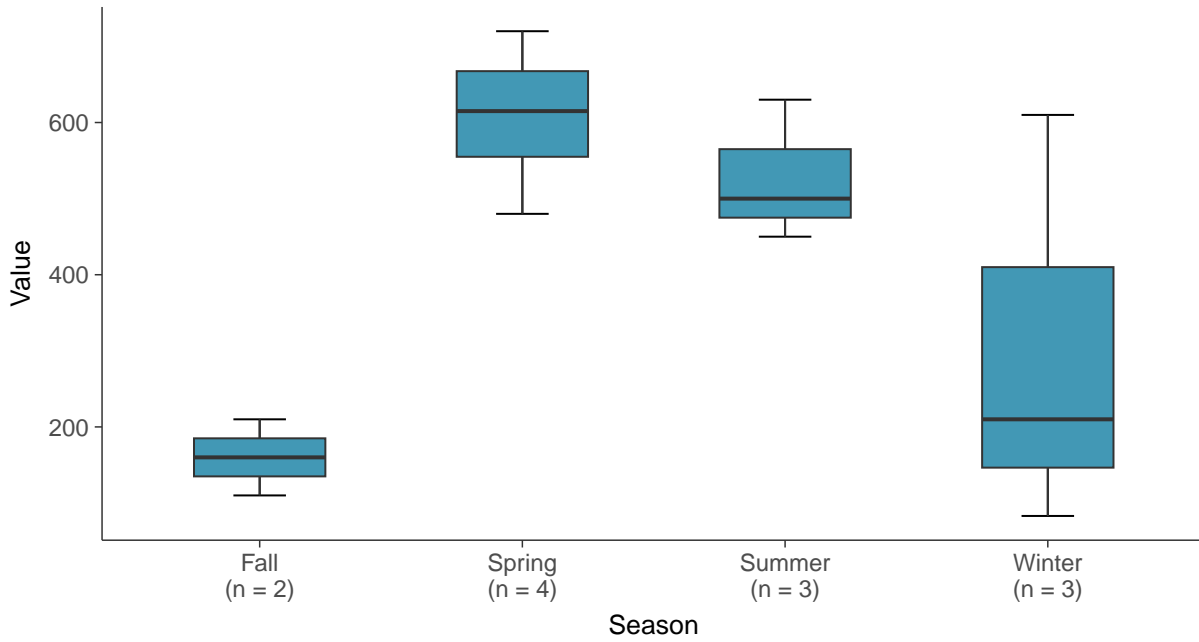
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)



### Boxplot by Season

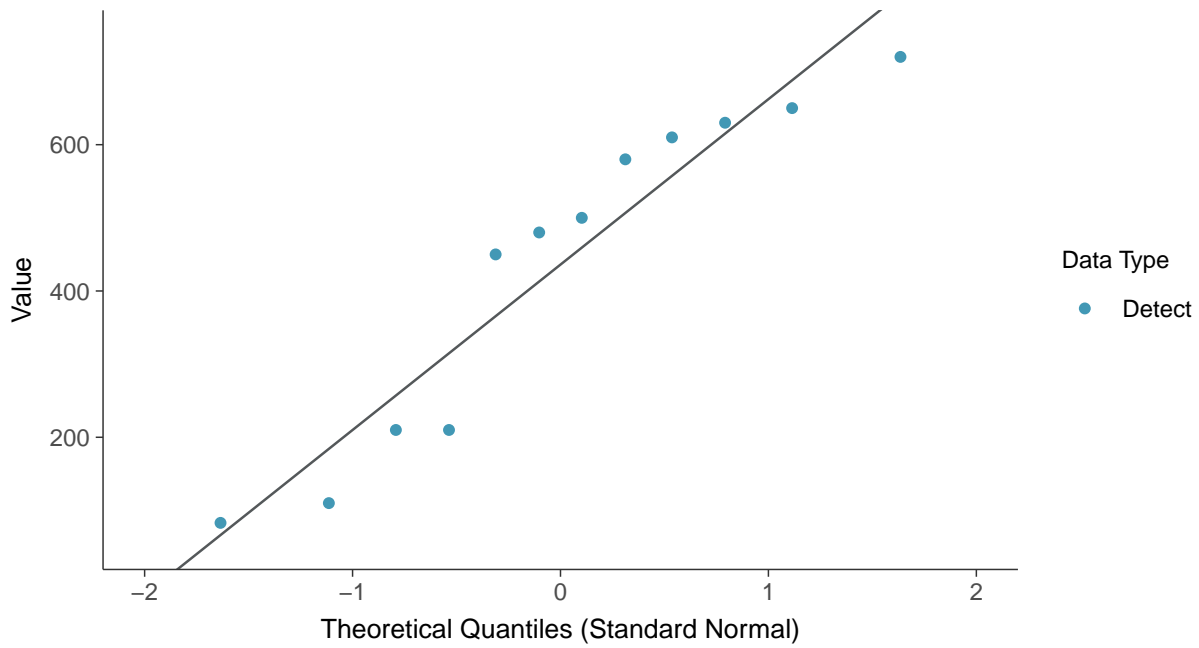
Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)





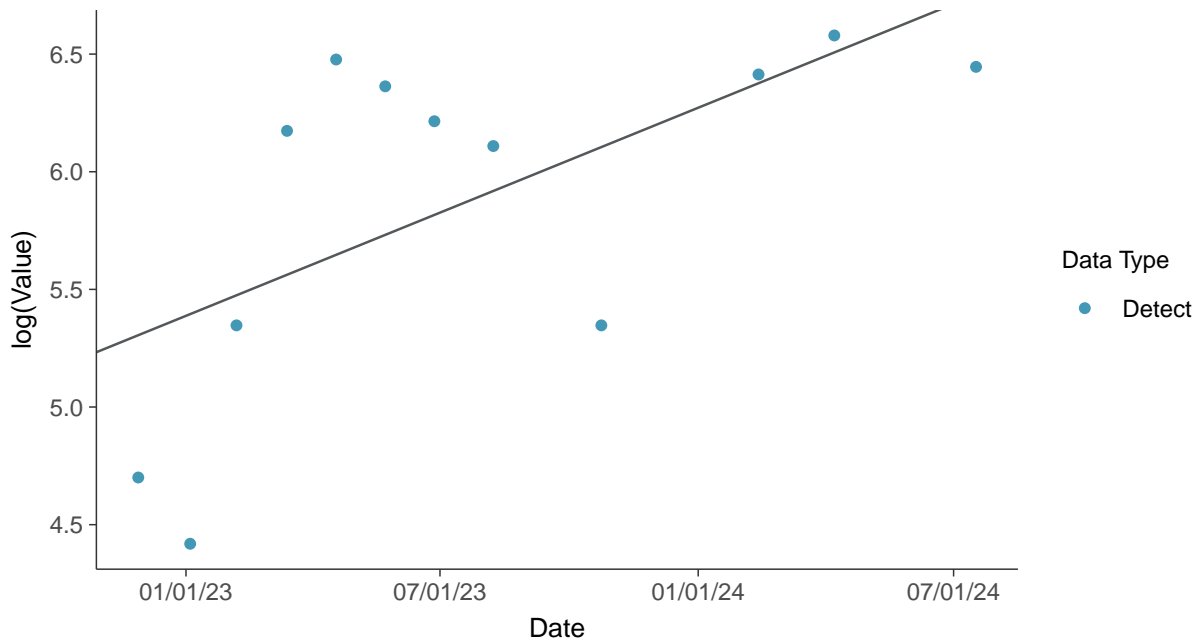
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)



### Trend Regression: Lognormal MLE

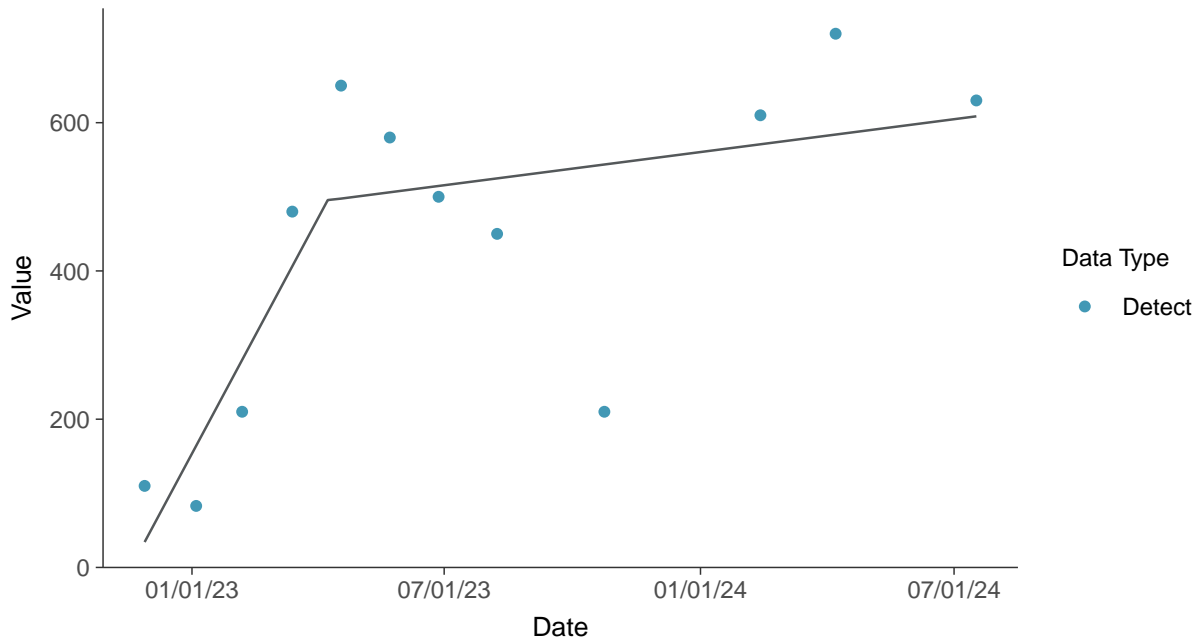
Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)





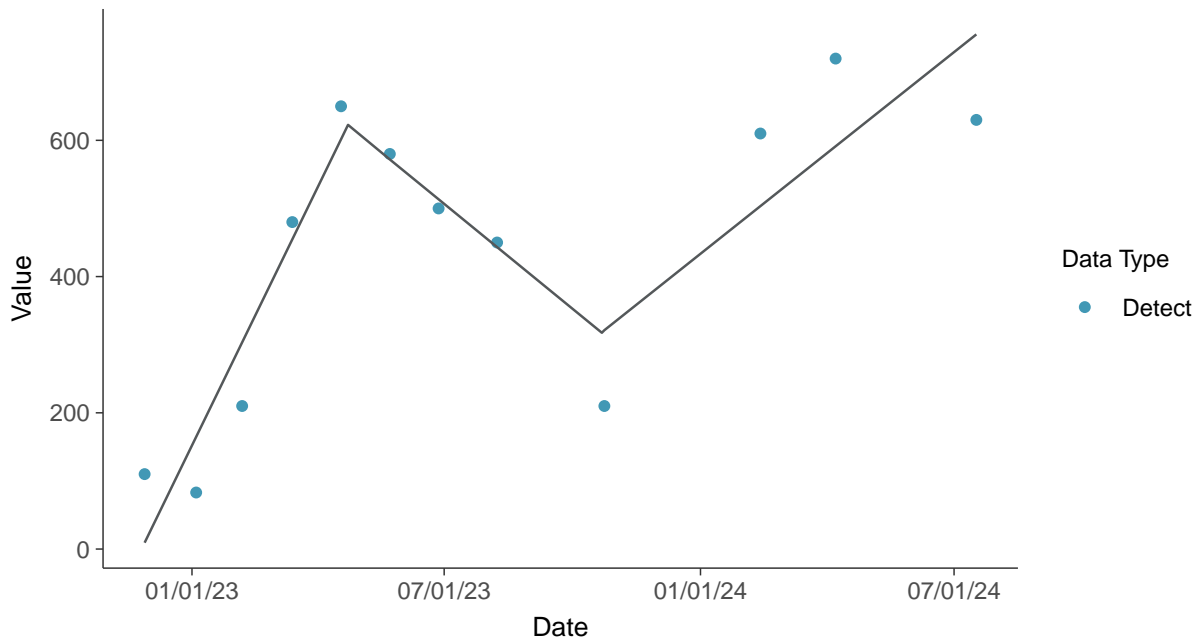
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-09 (mg/L)



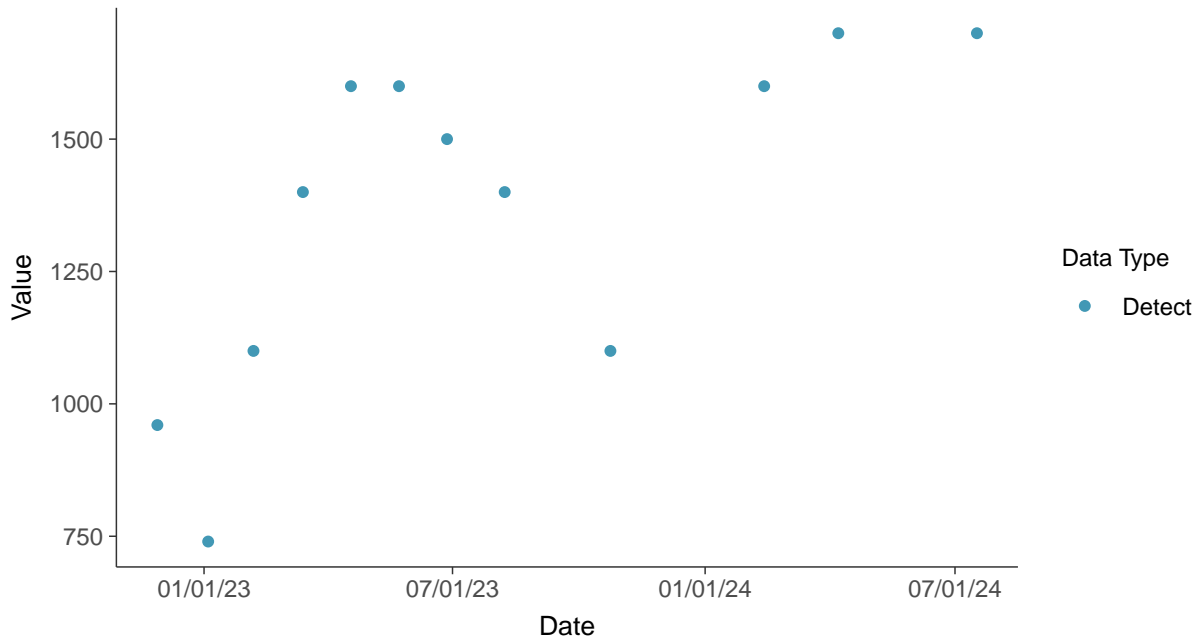


### Appendix III: Total Dissolved Solids, MW-09

ID: 19\_2\_4\_126

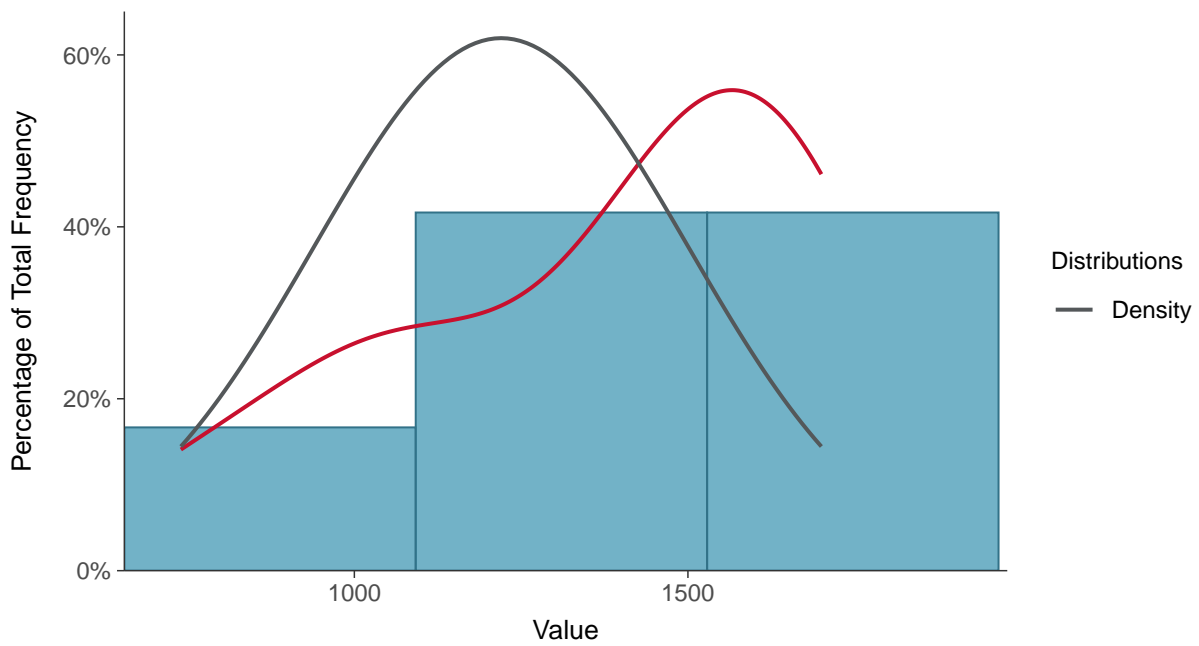
#### Scatter Plot

Total Dissolved Solids, MW-09 (mg/L)



#### Histogram

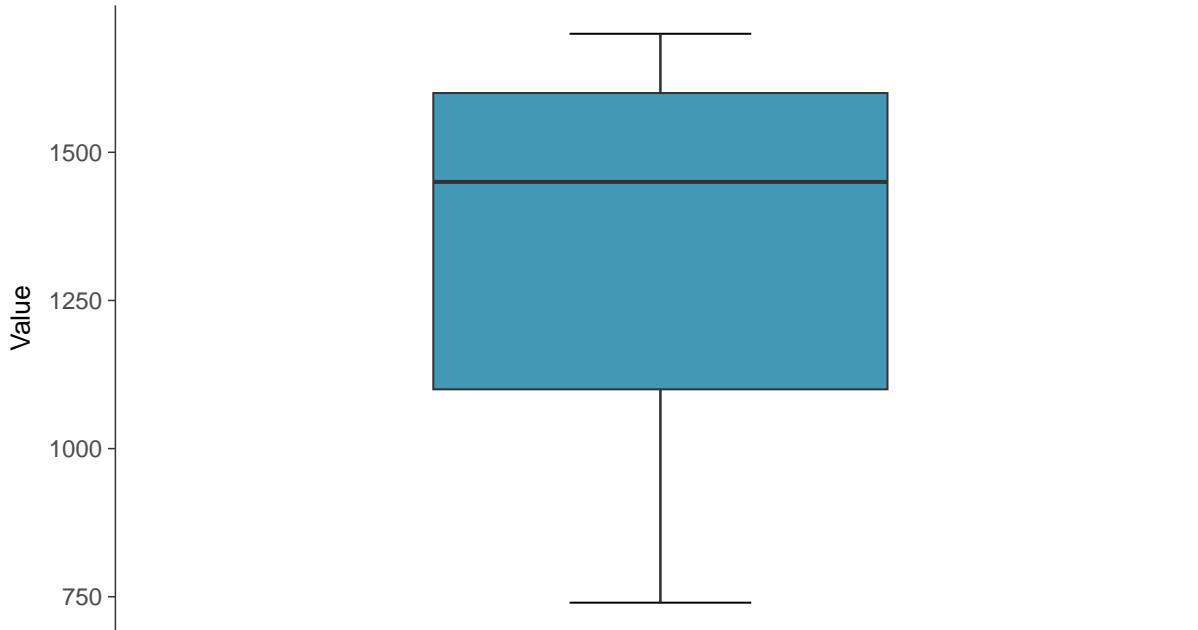
Total Dissolved Solids, MW-09 (mg/L)





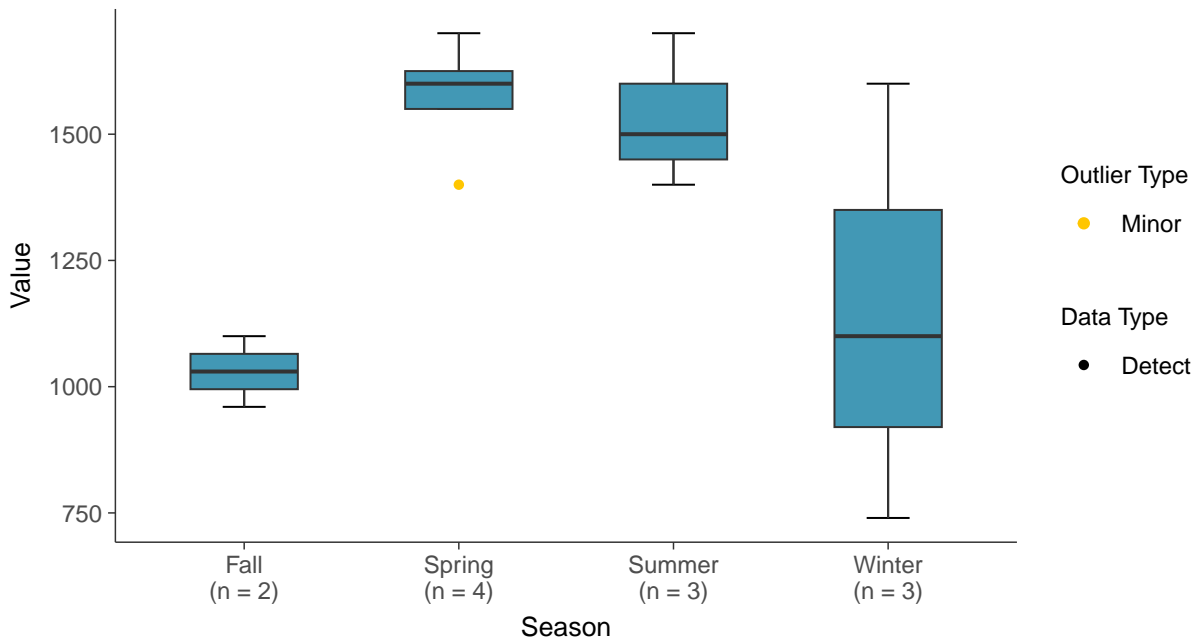
### Boxplot

Total Dissolved Solids, MW-09 (mg/L)



### Boxplot by Season

Total Dissolved Solids, MW-09 (mg/L)

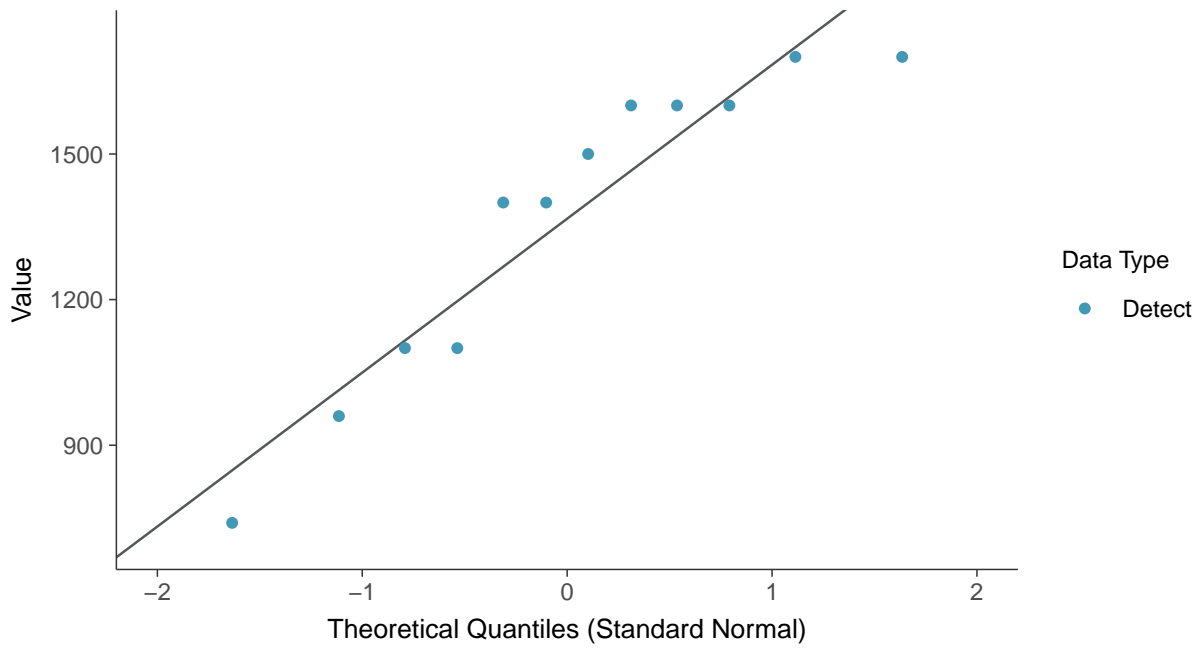






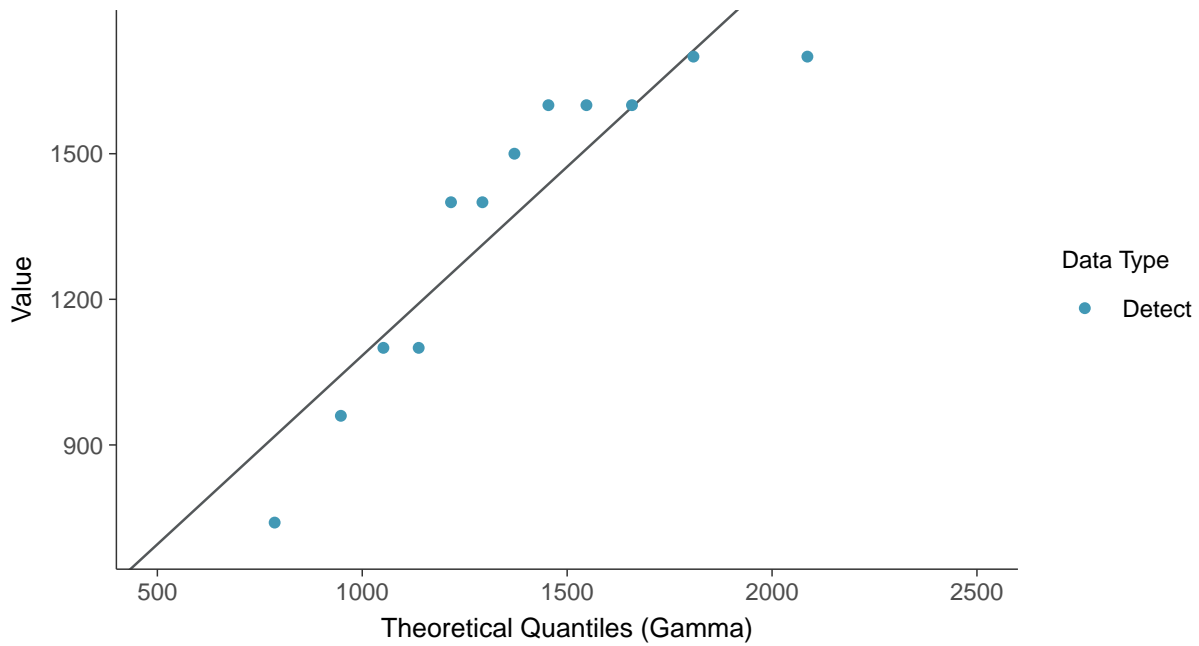
### Normal Q-Q plot

Total Dissolved Solids, MW-09 (mg/L)



### Gamma Q-Q plot

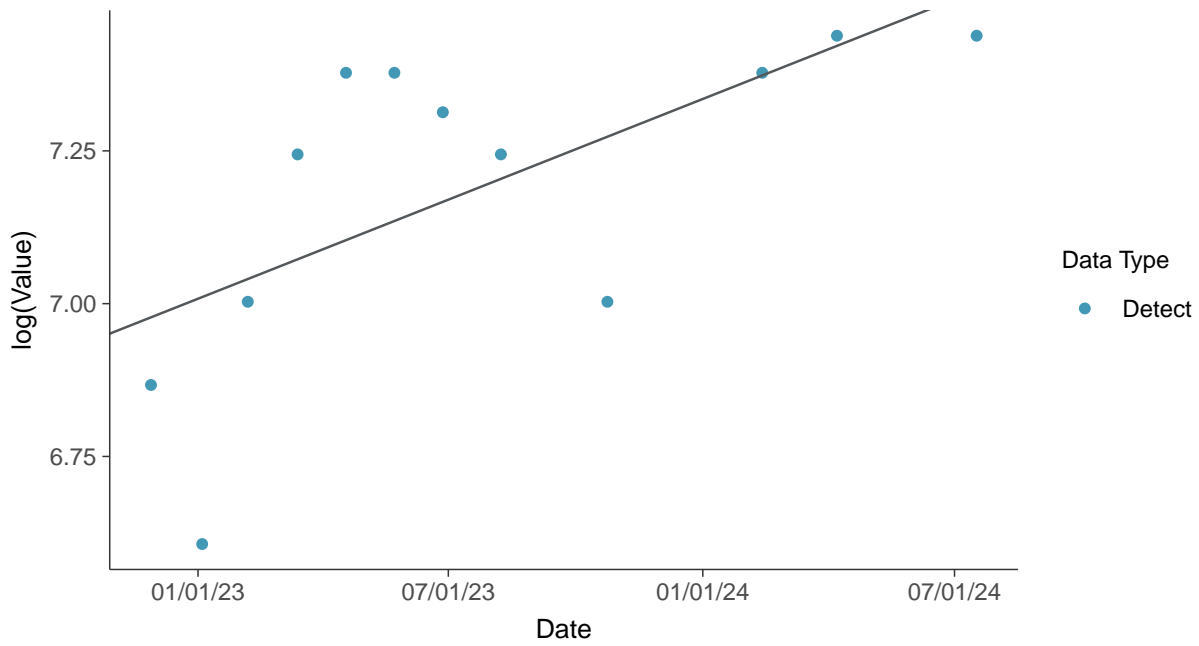
Total Dissolved Solids, MW-09 (mg/L)





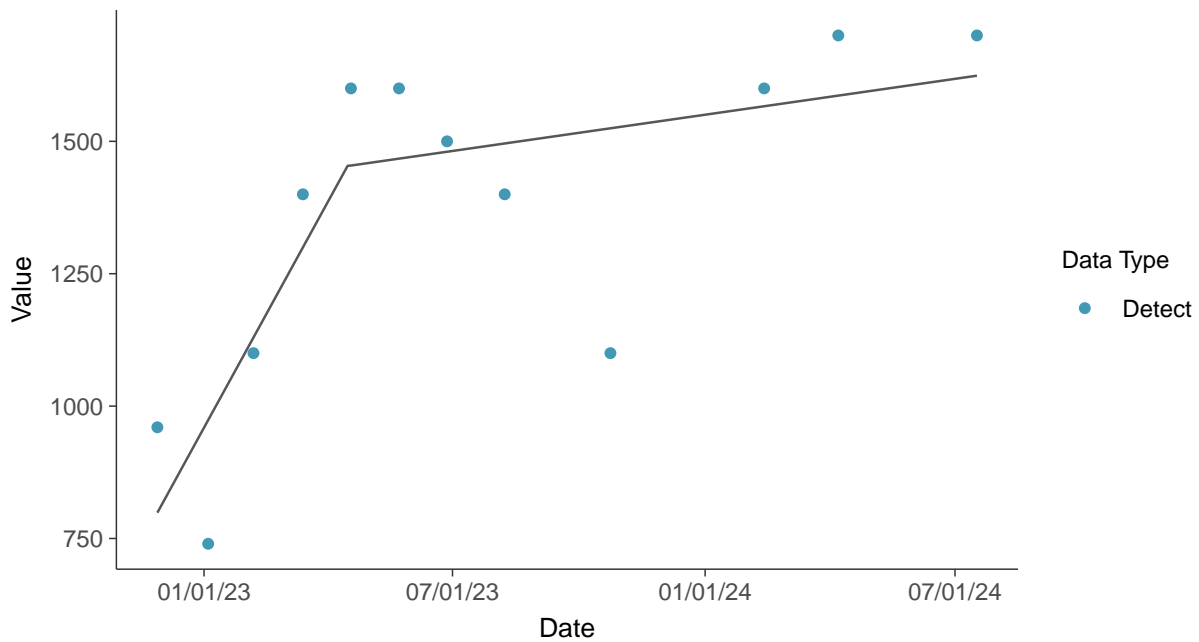
### Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

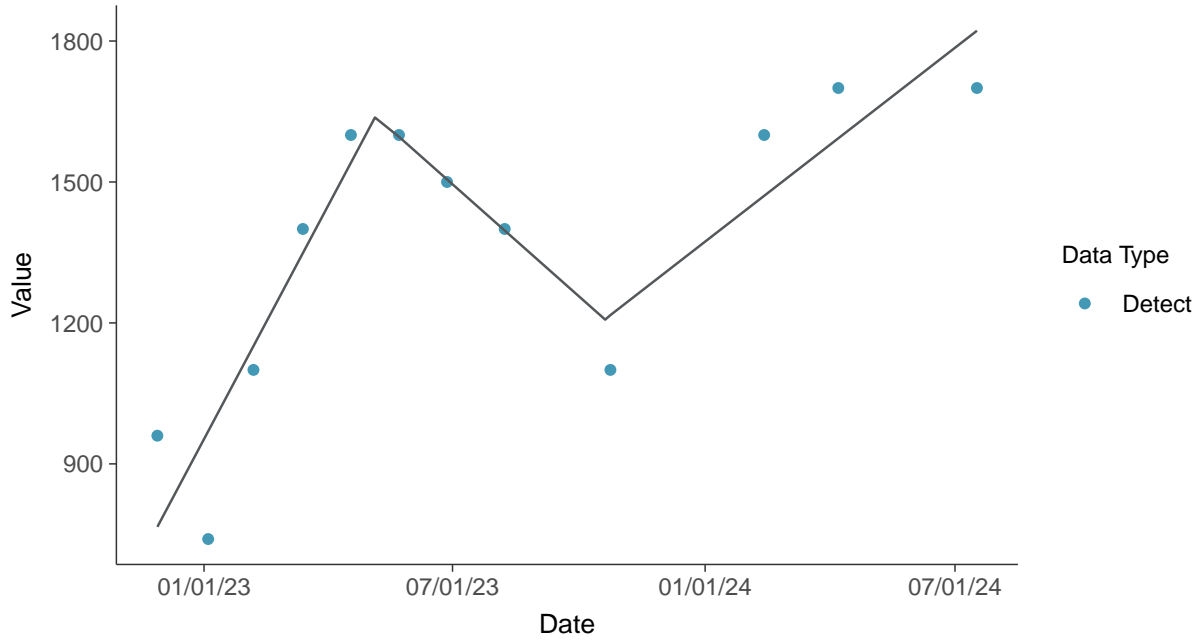
Total Dissolved Solids, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

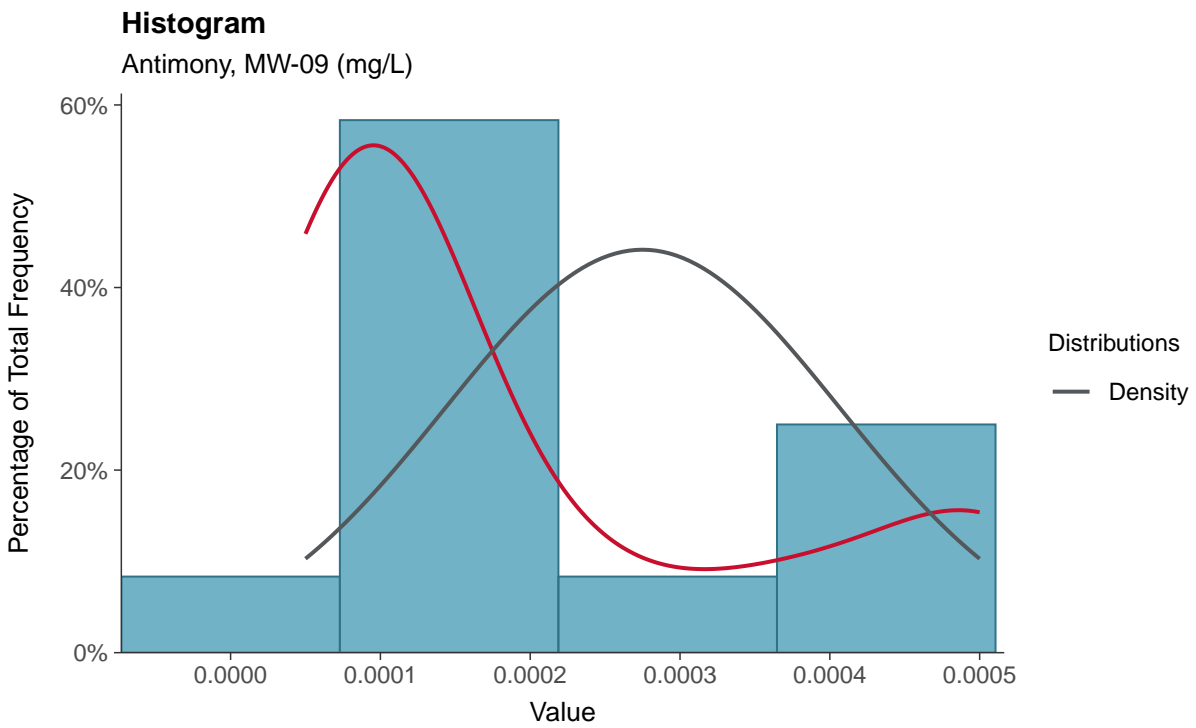
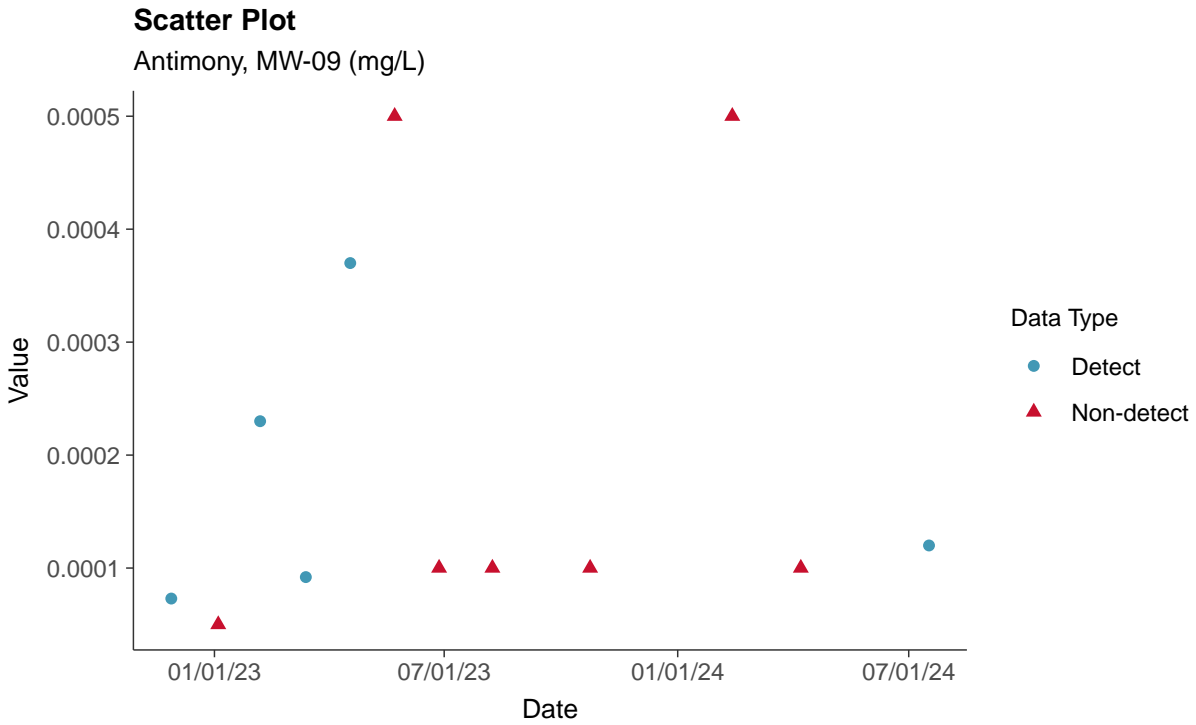
Total Dissolved Solids, MW-09 (mg/L)





### Appendix IV: Antimony, MW-09

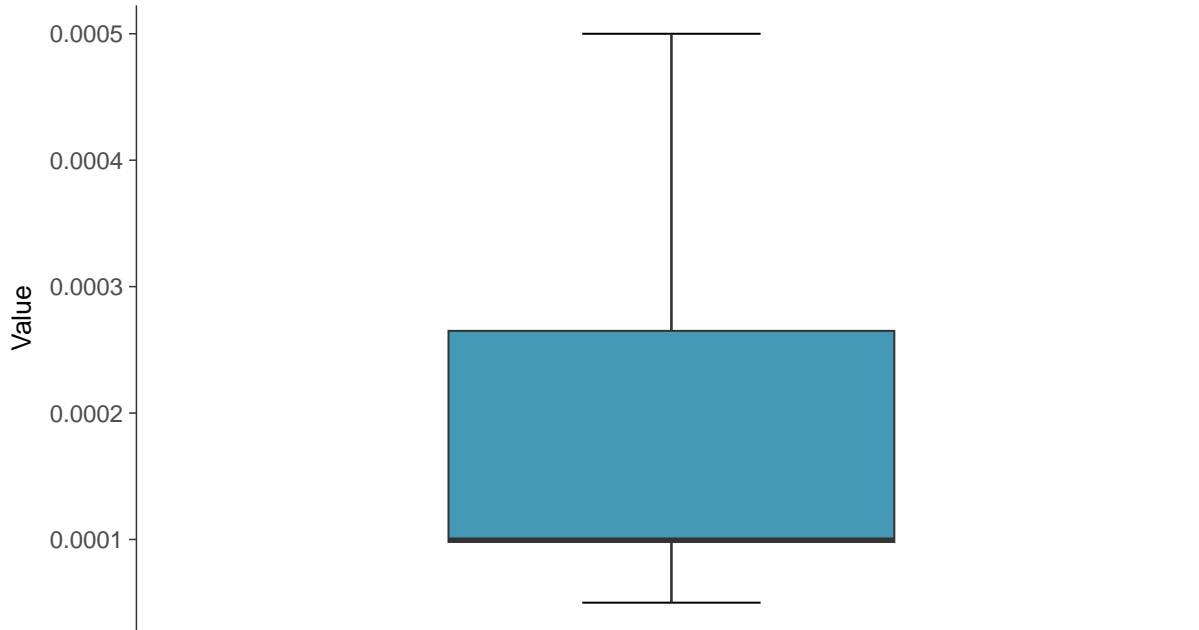
ID: 19\_2\_5\_101





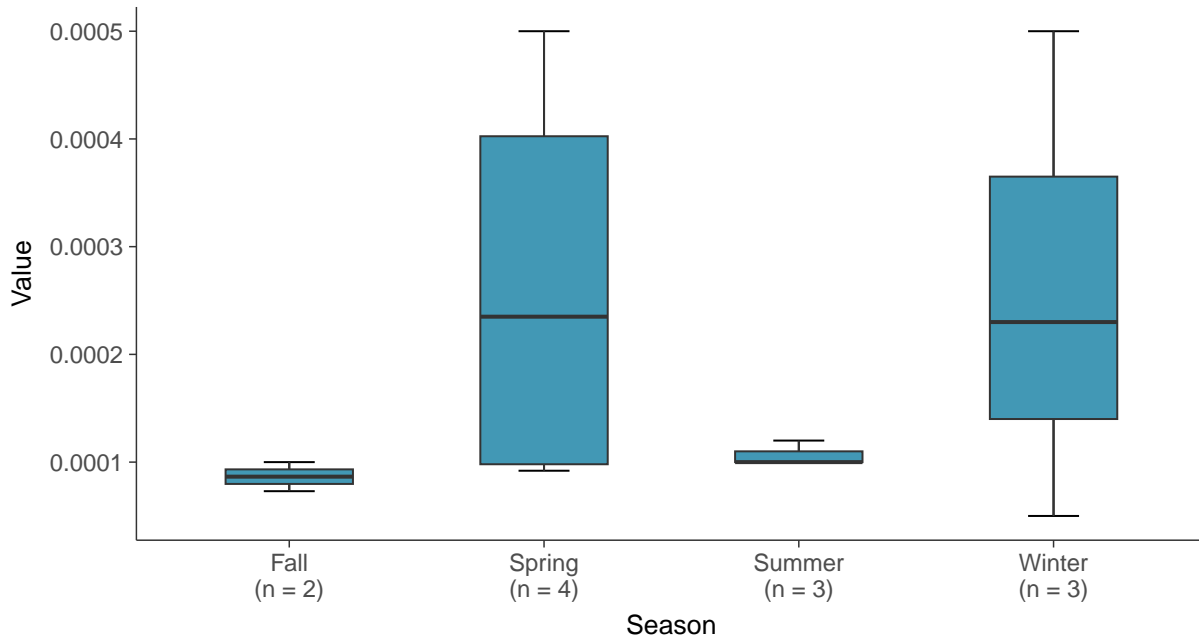
### Boxplot

Antimony, MW-09 (mg/L)



### Boxplot by Season

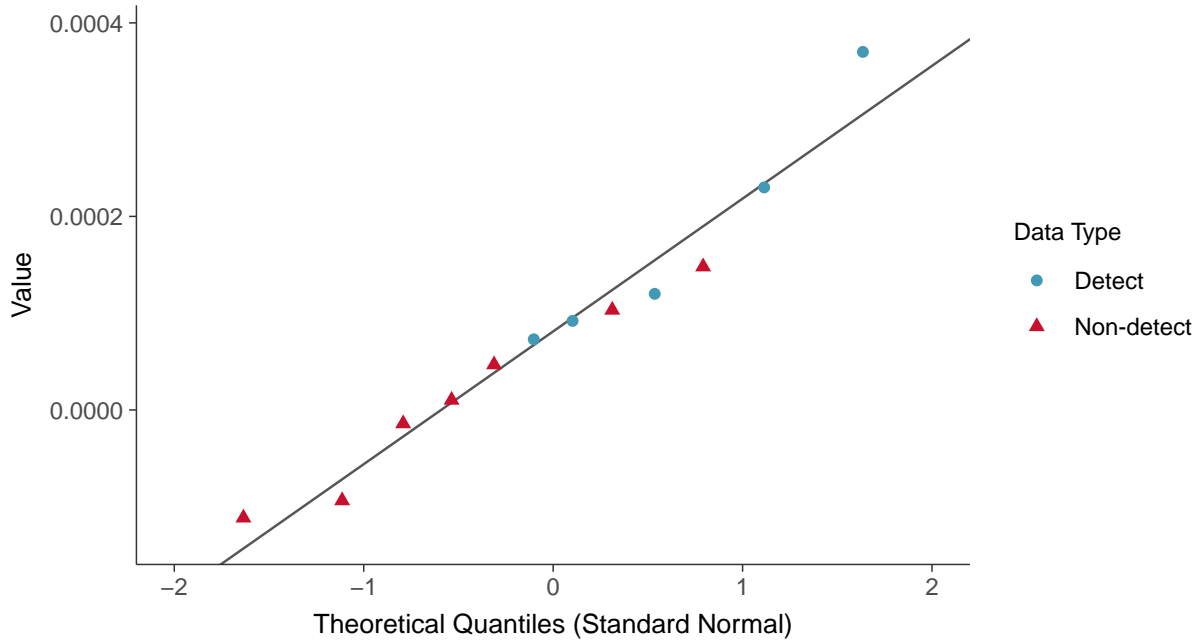
Antimony, MW-09 (mg/L)





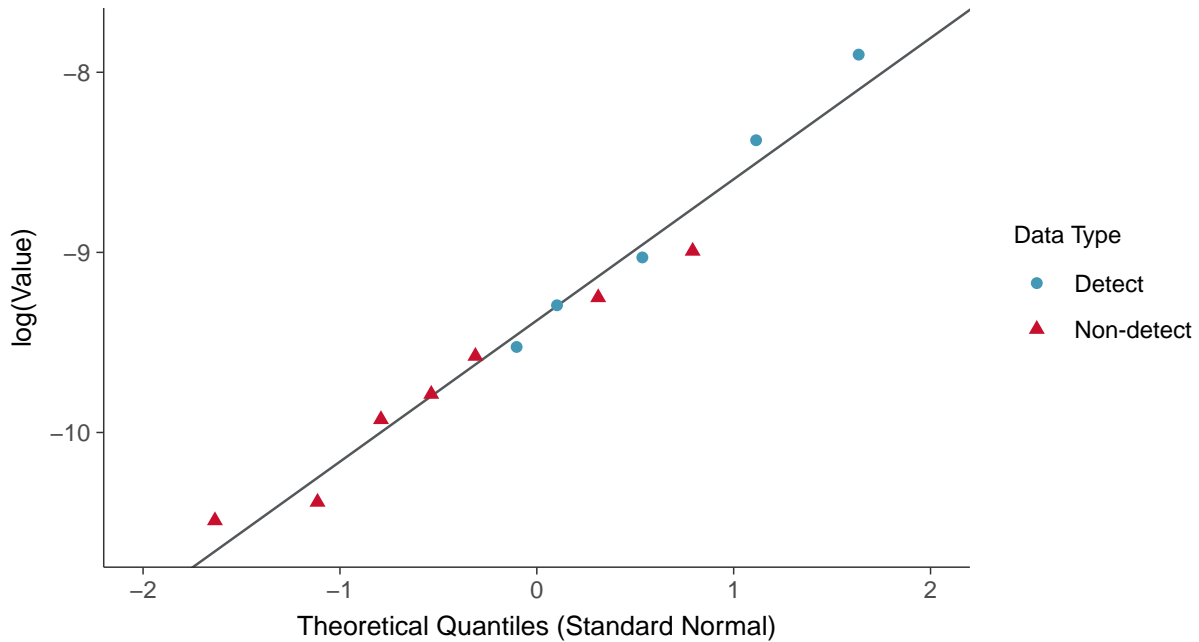
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-09 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

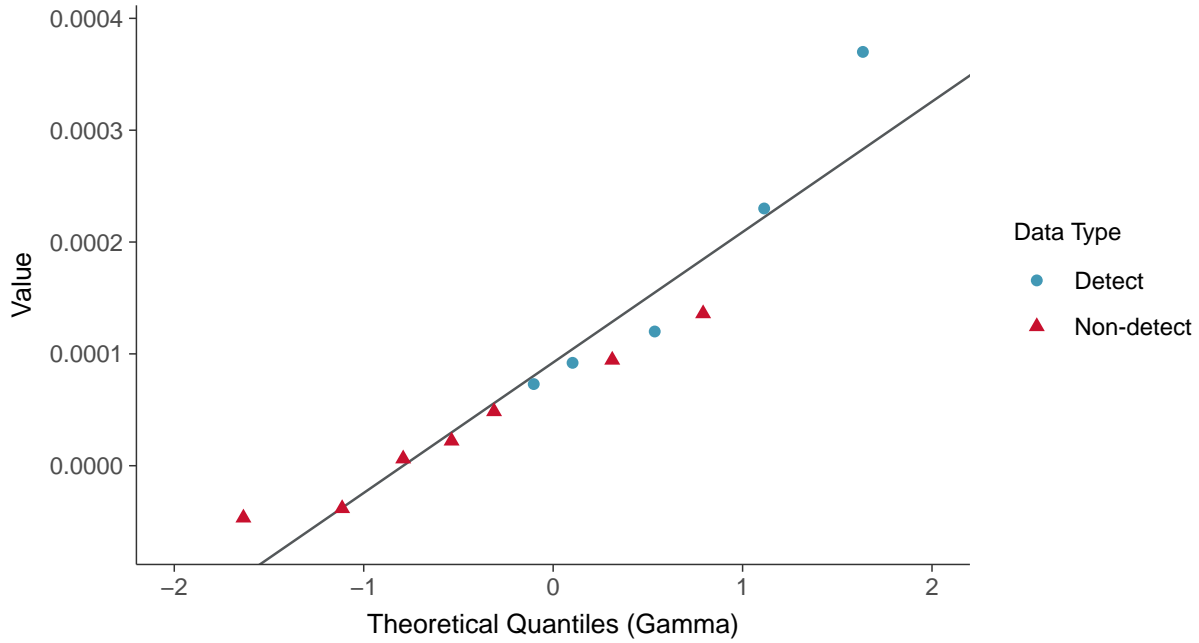
Antimony, MW-09 (mg/L)





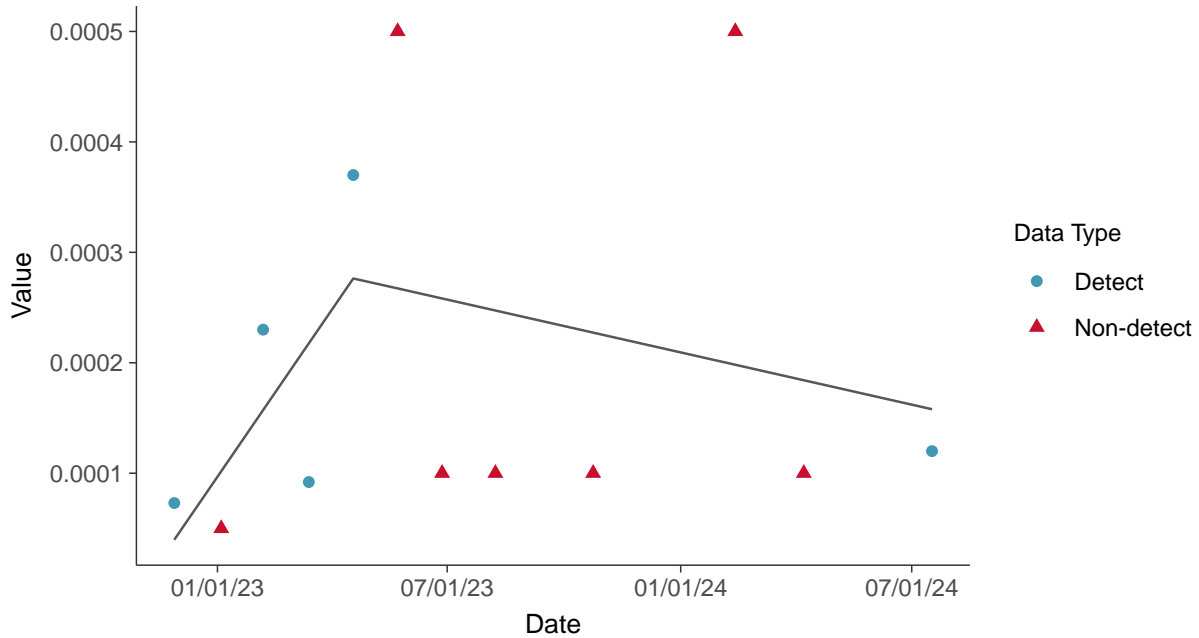
### Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

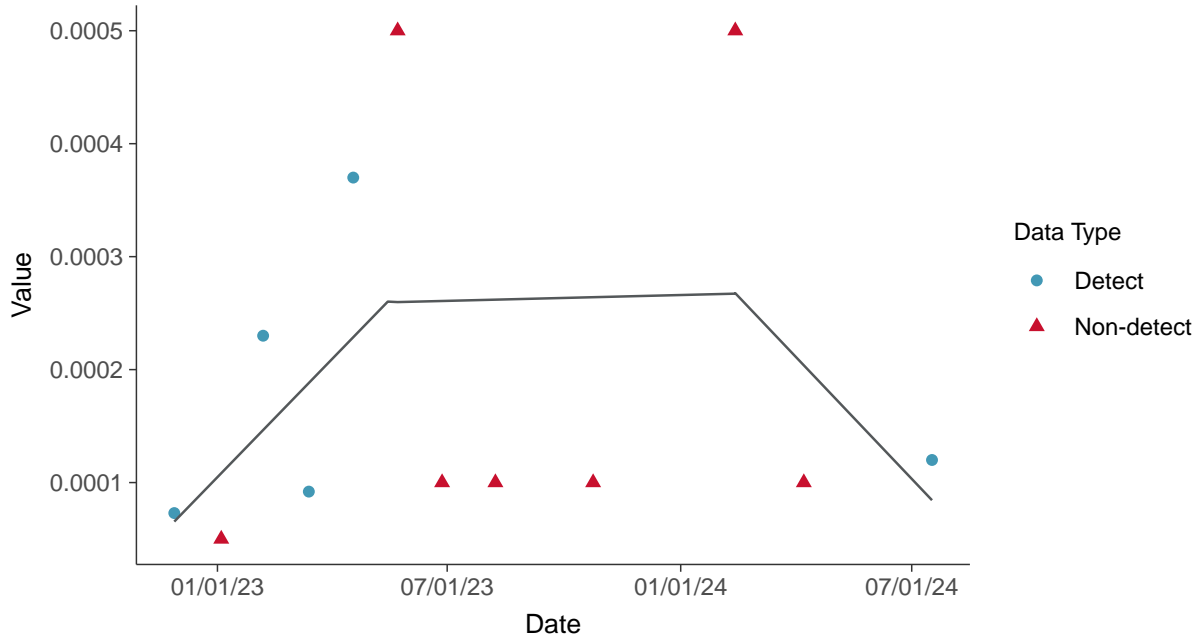
Antimony, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-09 (mg/L)





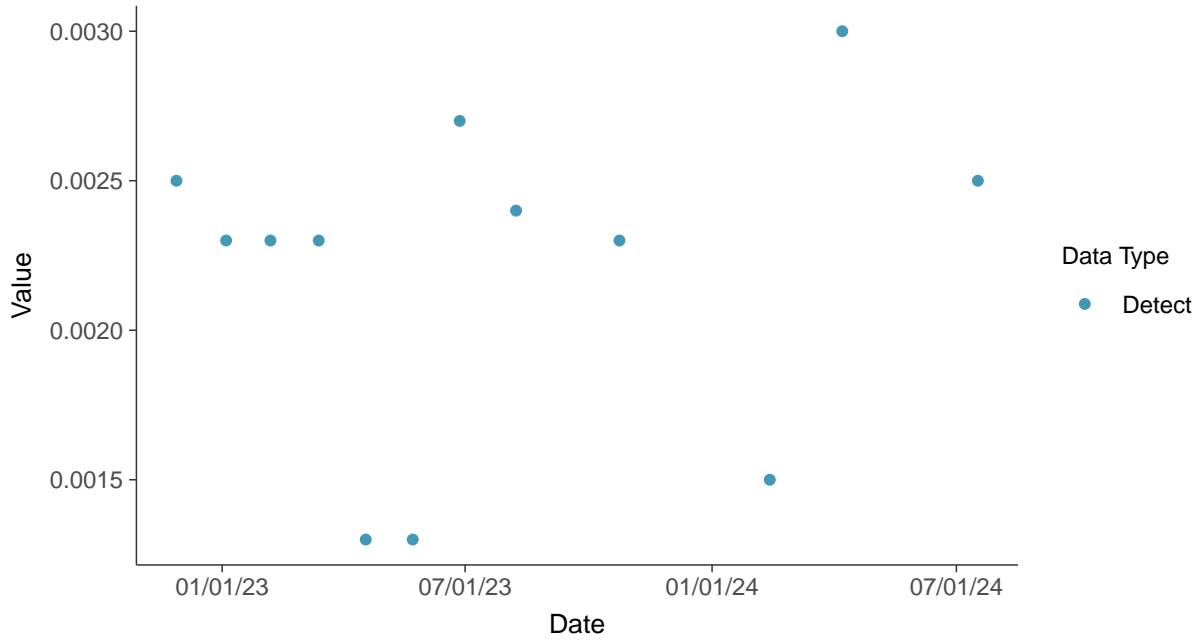


### Appendix IV: Arsenic, MW-09

ID: 19\_2\_5\_102

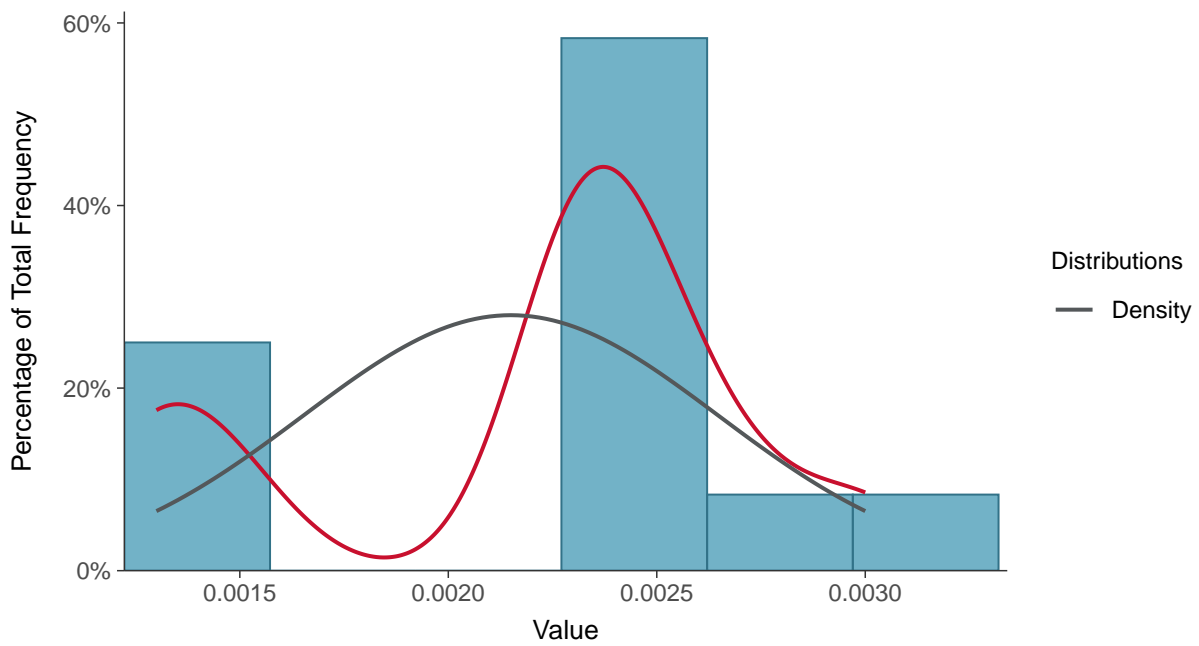
#### Scatter Plot

Arsenic, MW-09 (mg/L)



#### Histogram

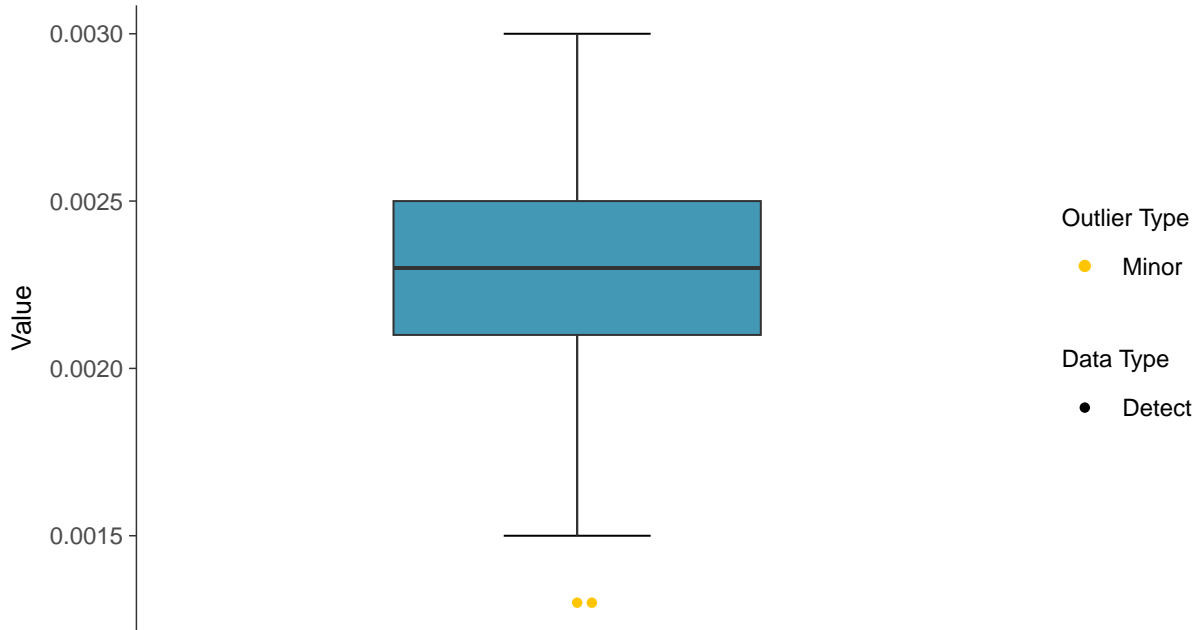
Arsenic, MW-09 (mg/L)





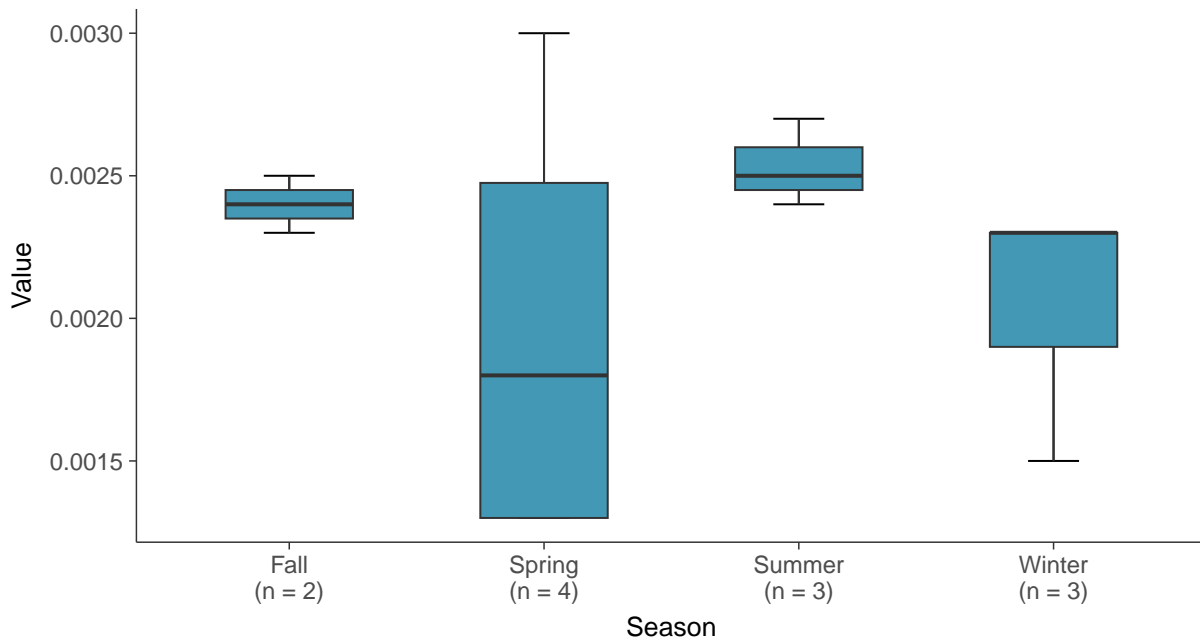
### Boxplot

Arsenic, MW-09 (mg/L)



### Boxplot by Season

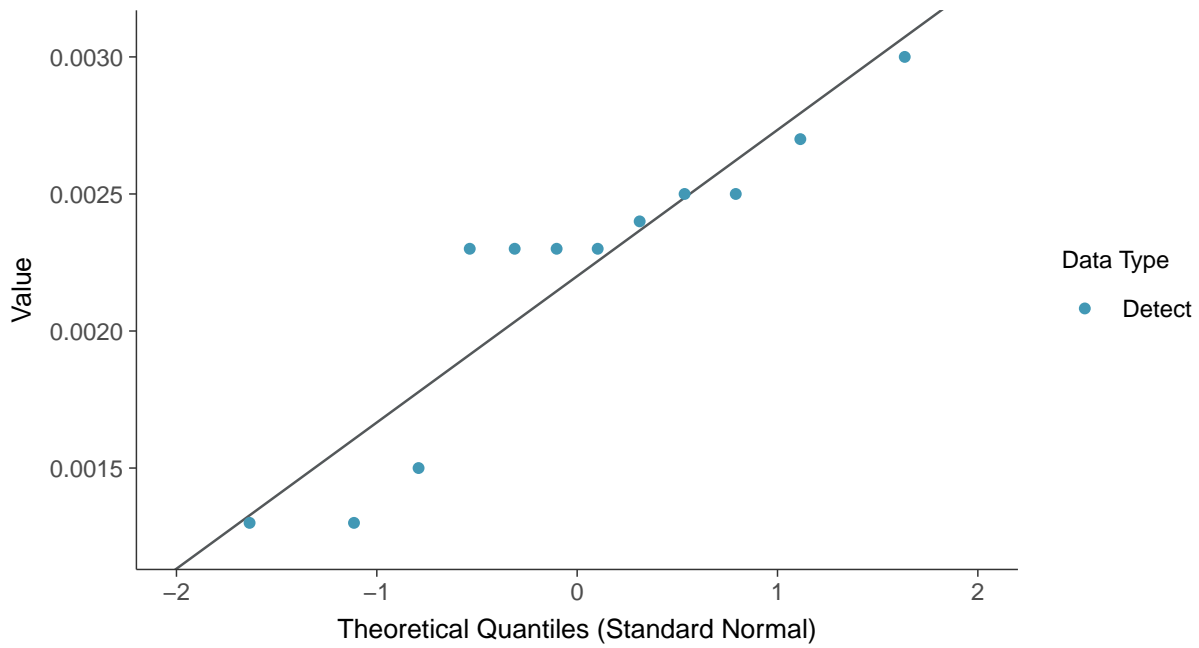
Arsenic, MW-09 (mg/L)





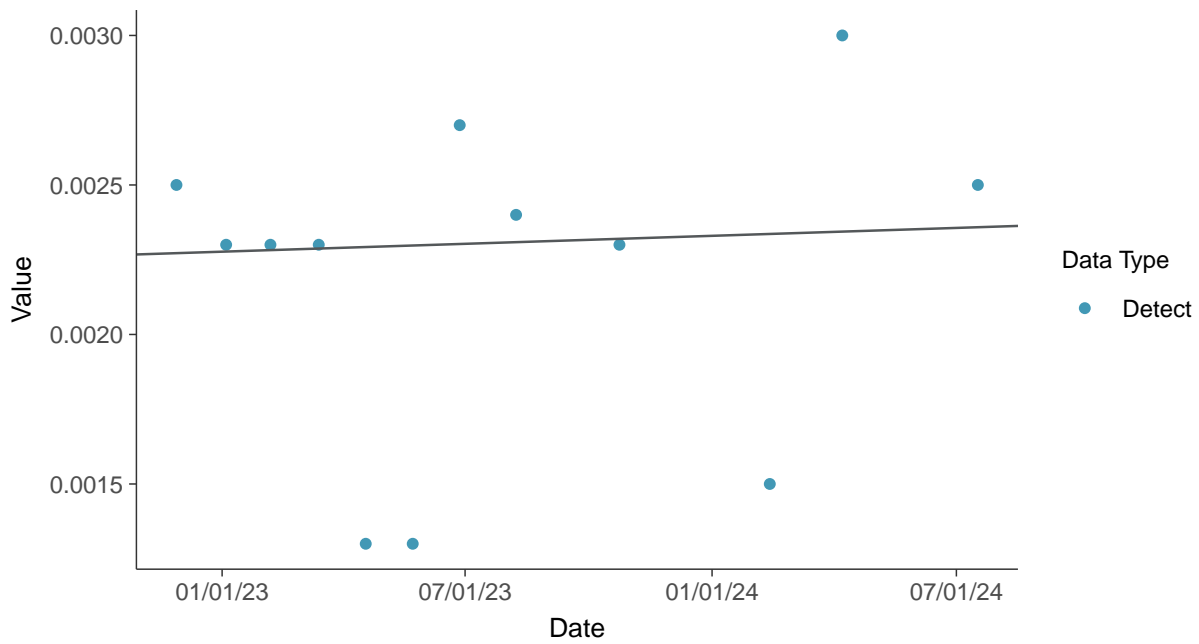
### Normal Q-Q plot

Arsenic, MW-09 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

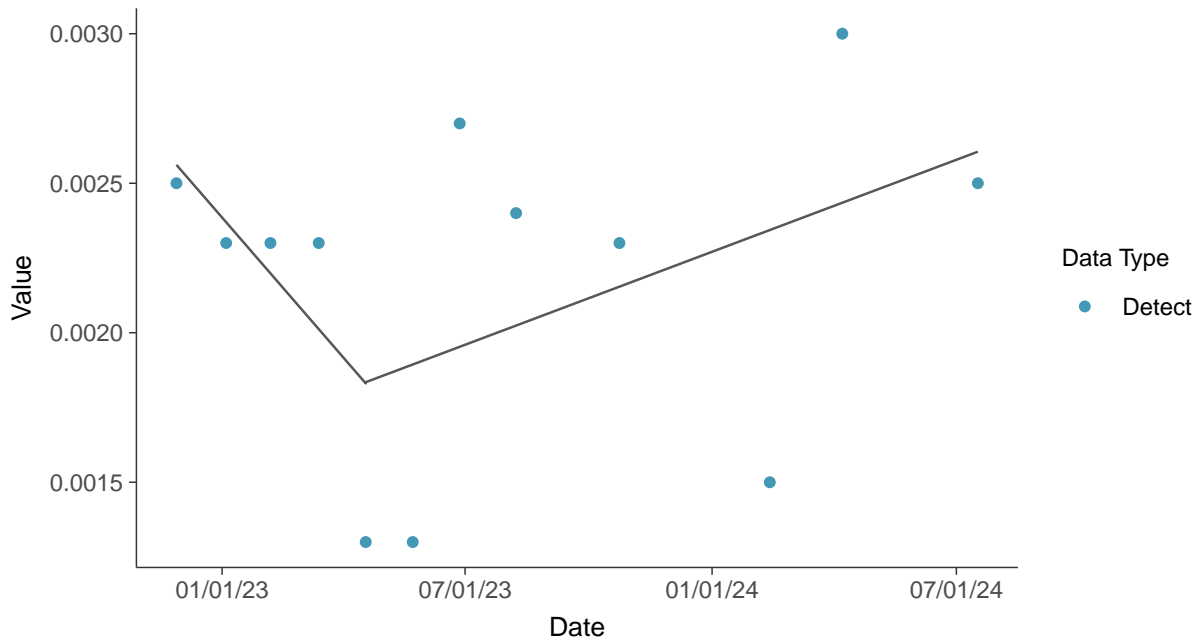
Arsenic, MW-09 (mg/L)





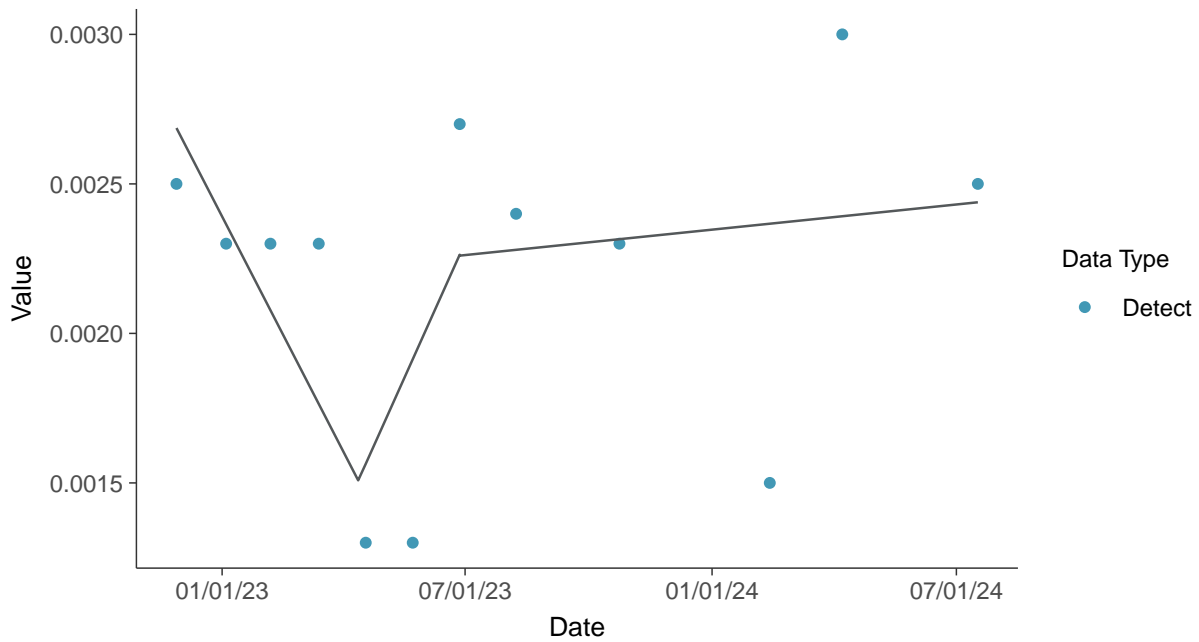
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

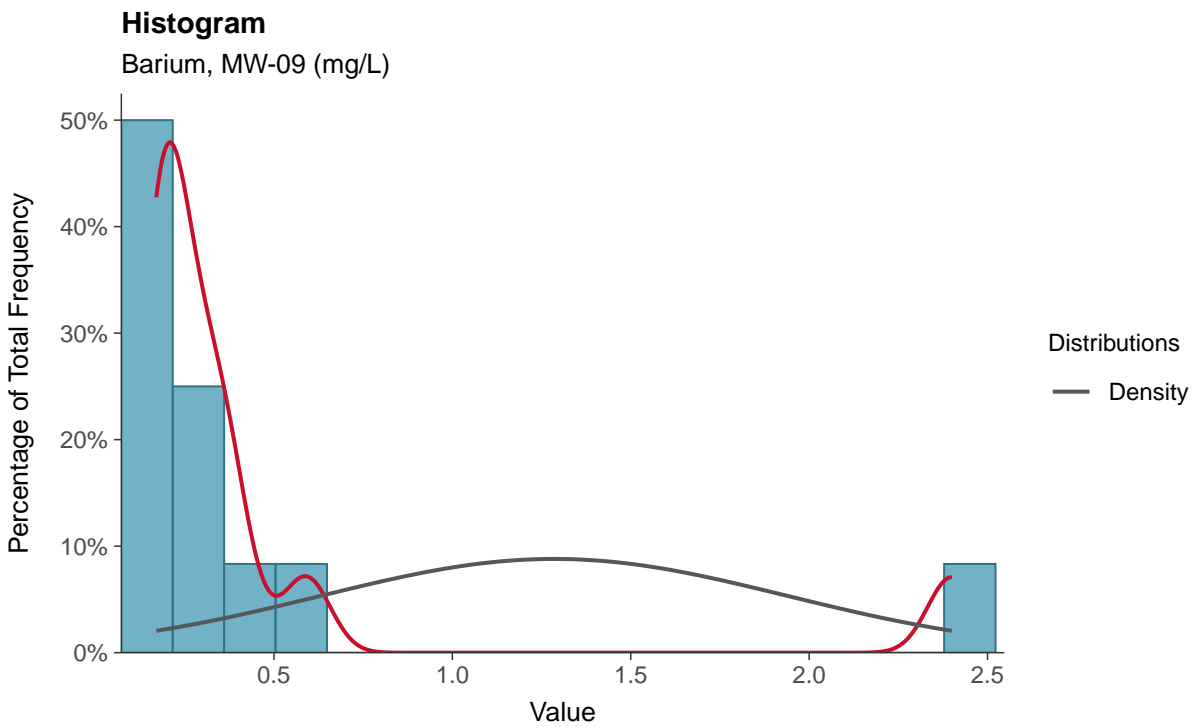
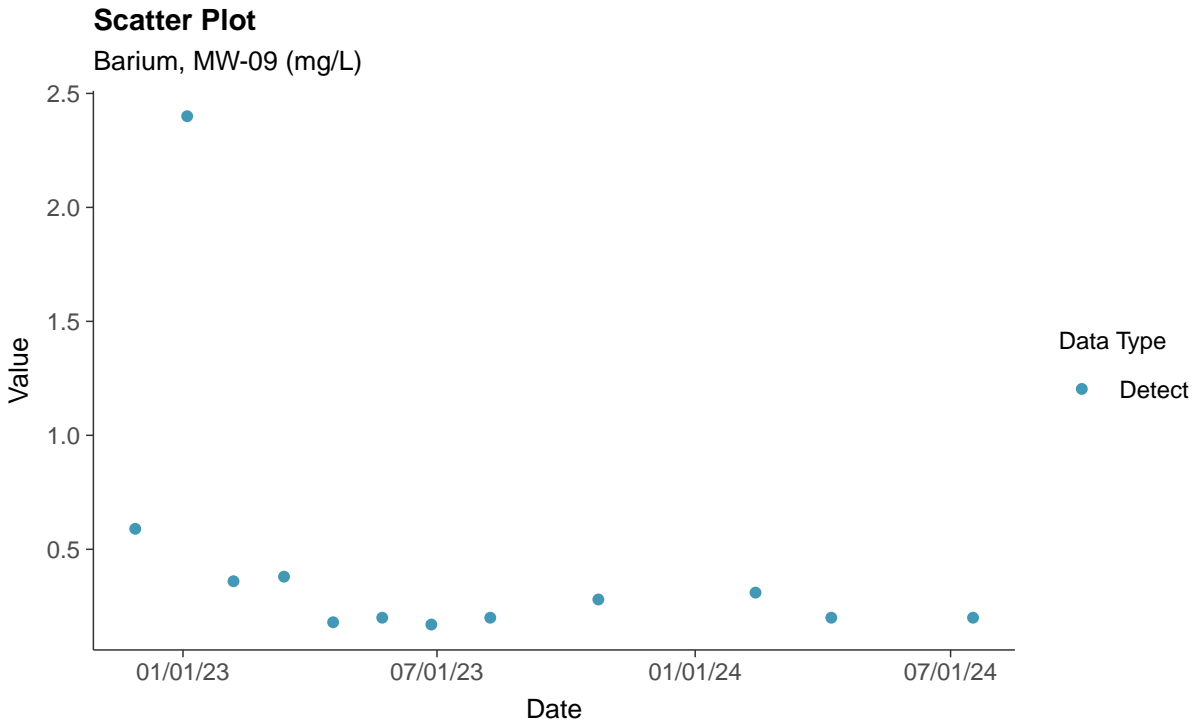
Arsenic, MW-09 (mg/L)





### Appendix IV: Barium, MW-09

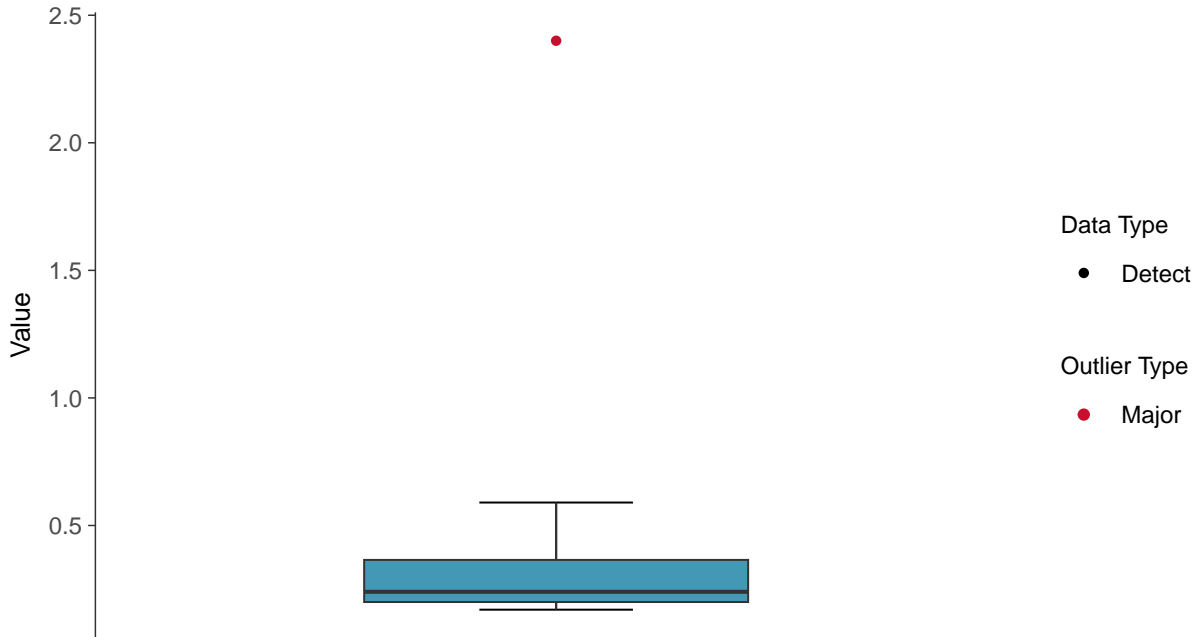
ID: 19\_2\_5\_103





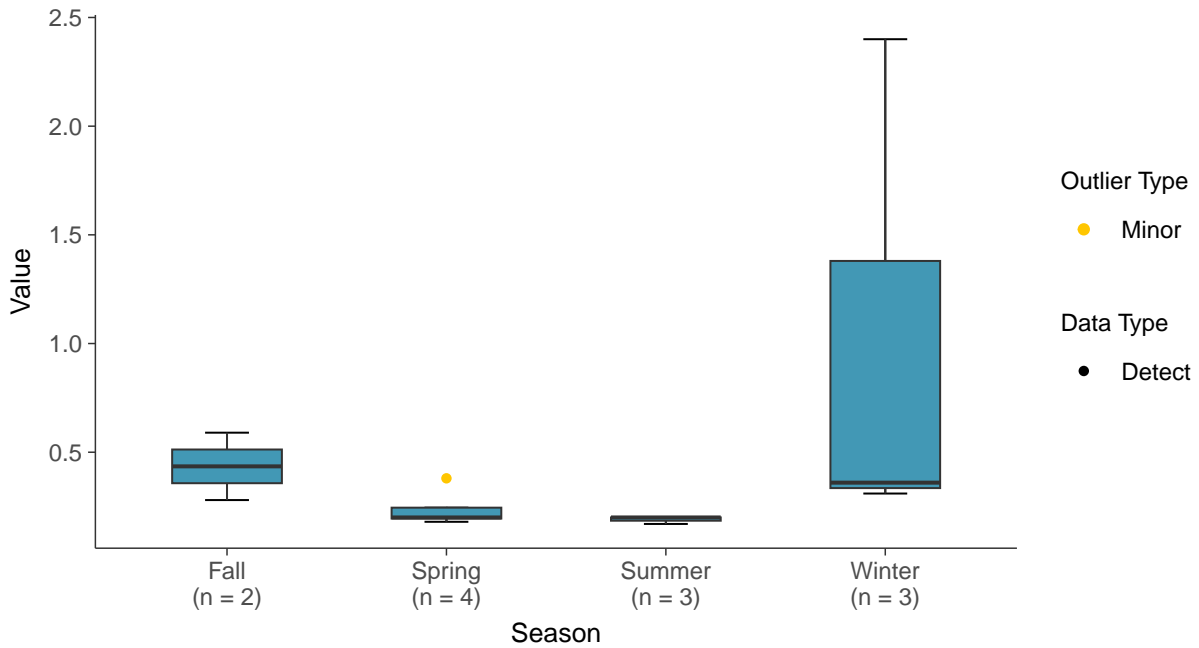
### Boxplot

Barium, MW-09 (mg/L)



### Boxplot by Season

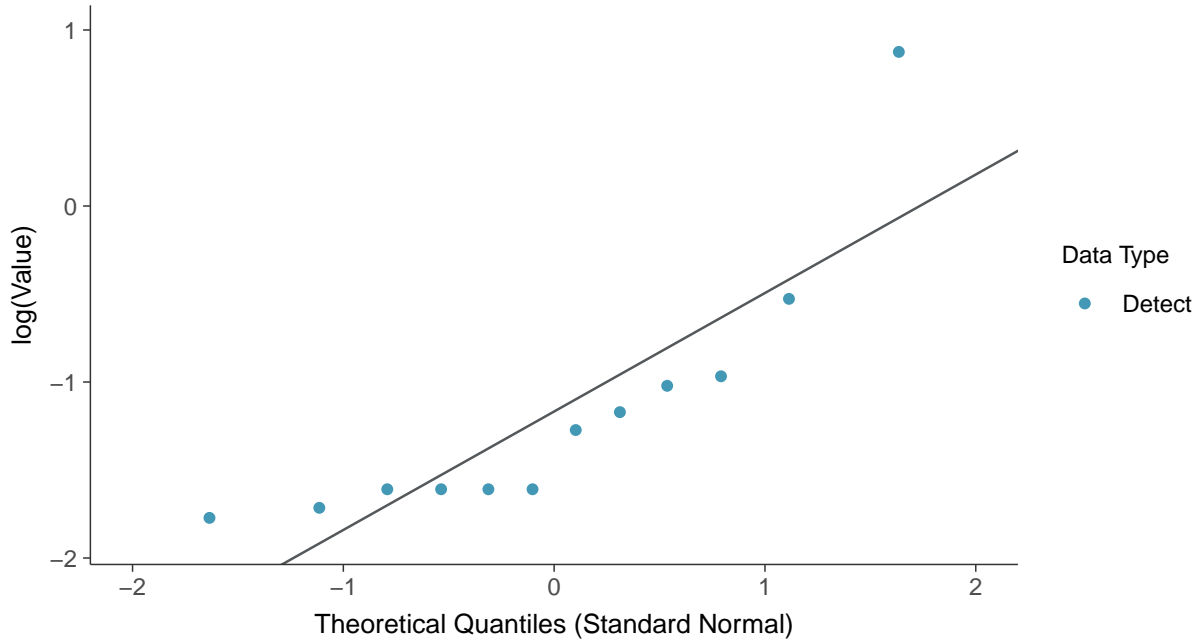
Barium, MW-09 (mg/L)





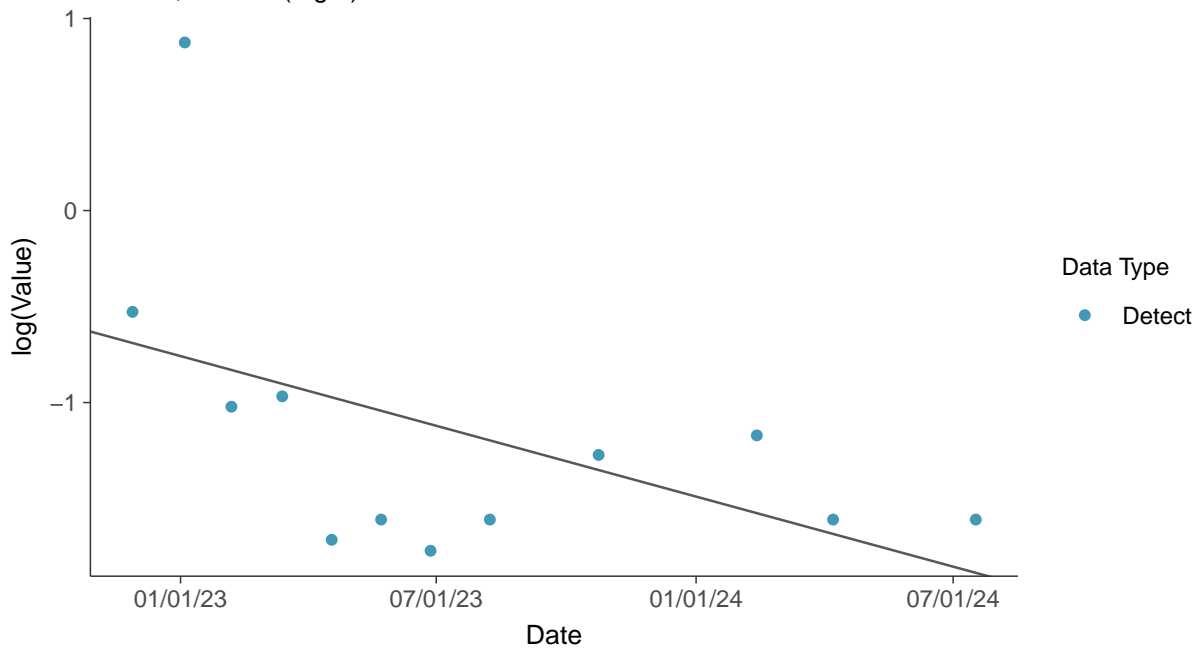
### Lognormal Q-Q plot

Barium, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

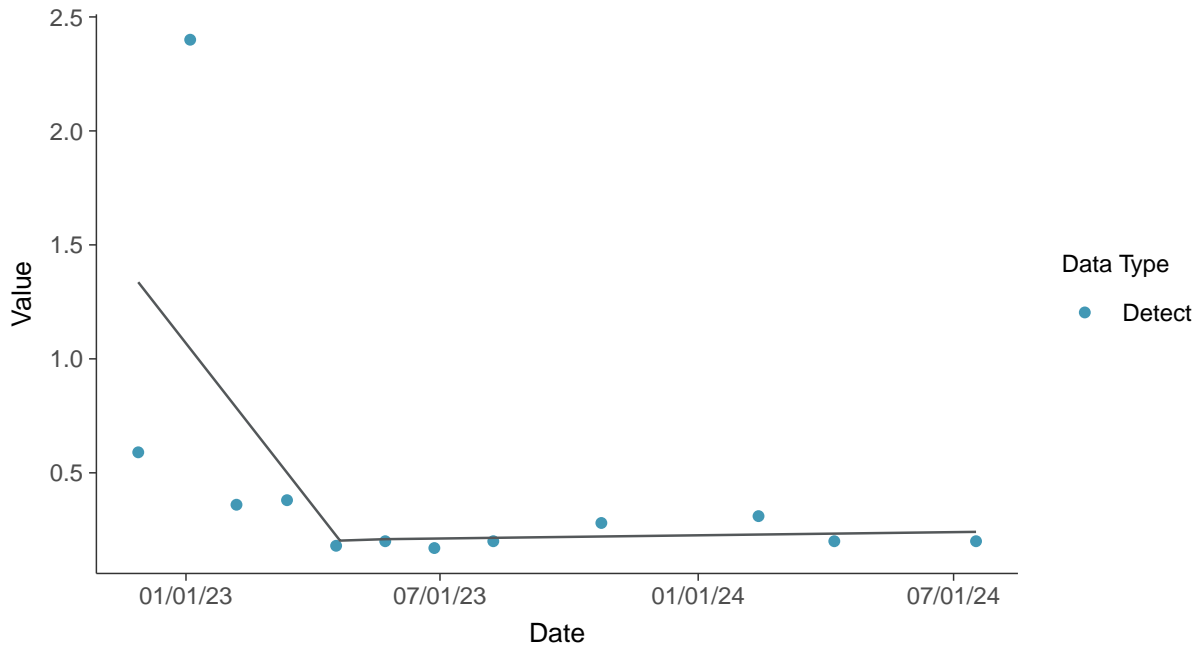
Barium, MW-09 (mg/L)





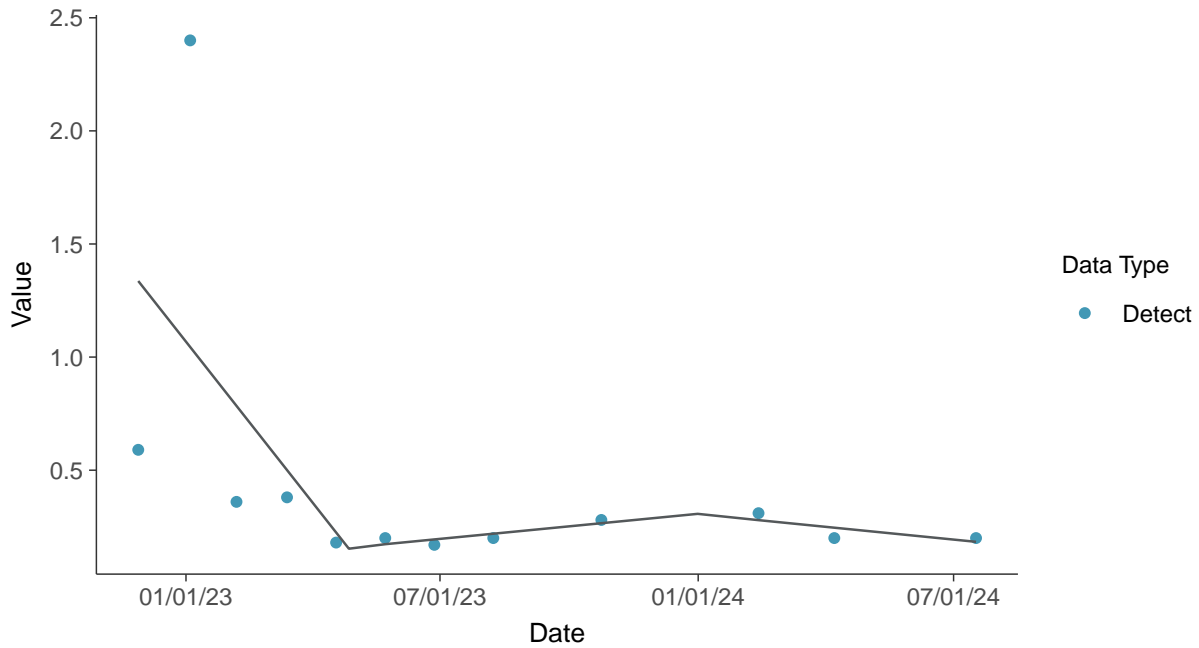
### Trend Regression: Piecewise Linear-Linear

Barium, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-09 (mg/L)

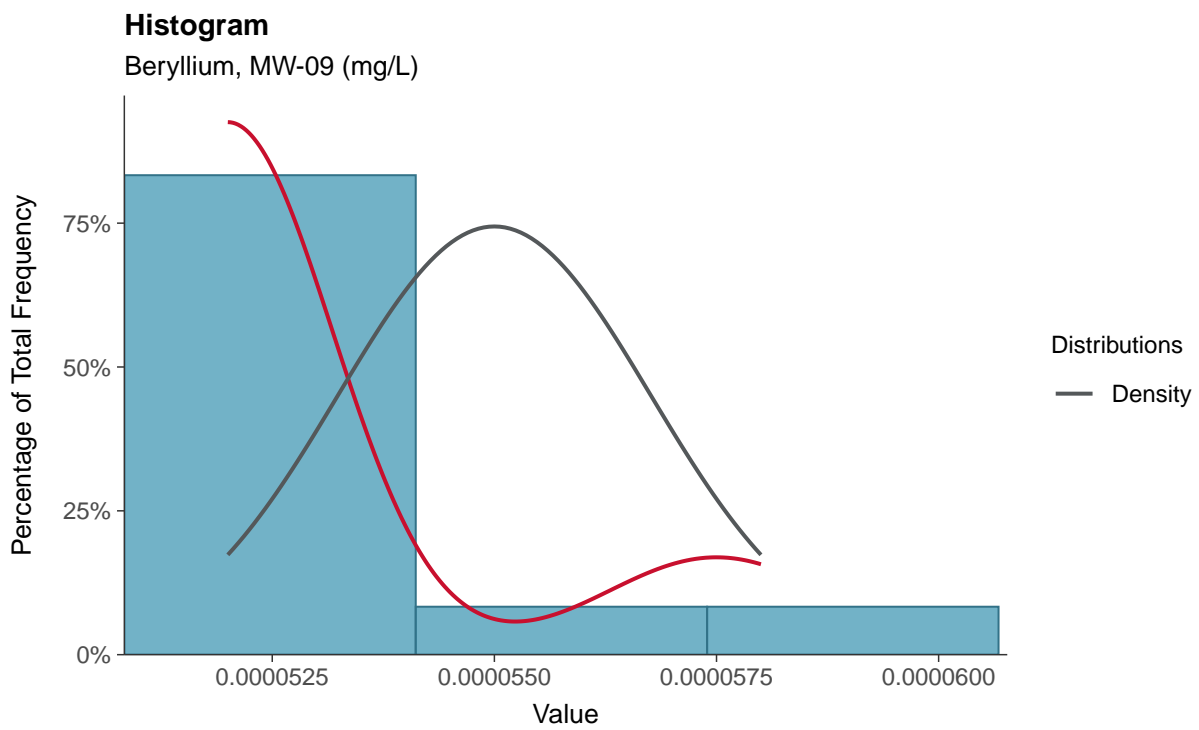
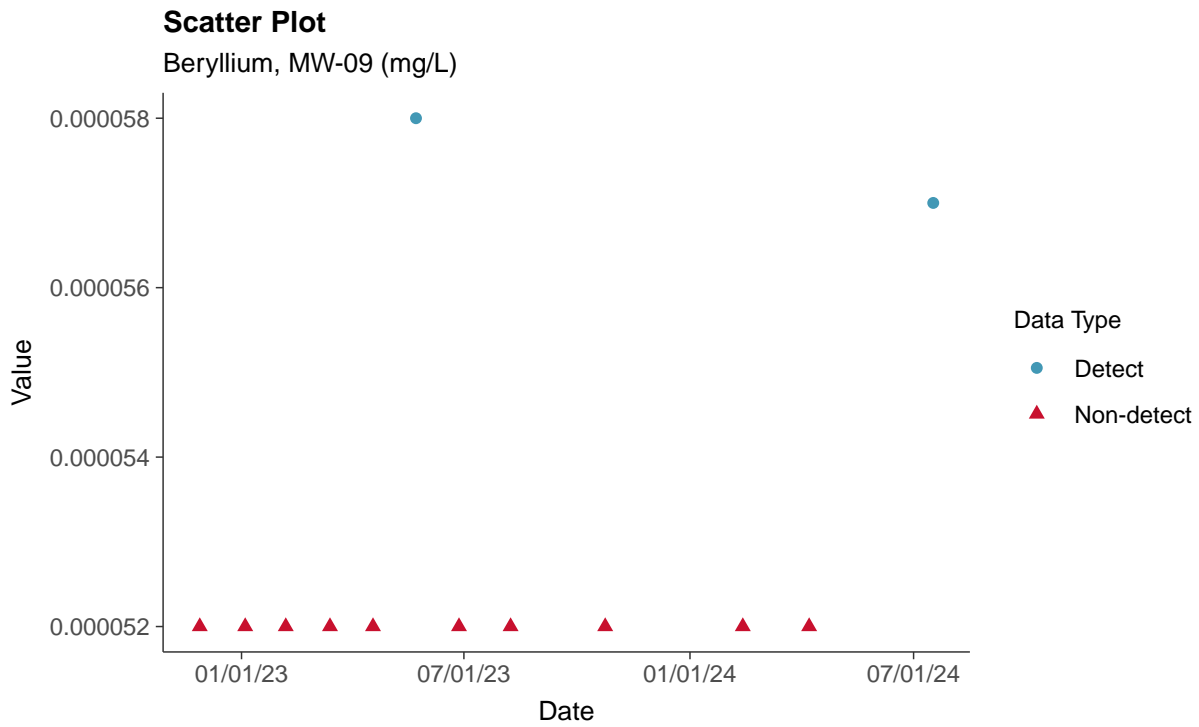






### Appendix IV: Beryllium, MW-09

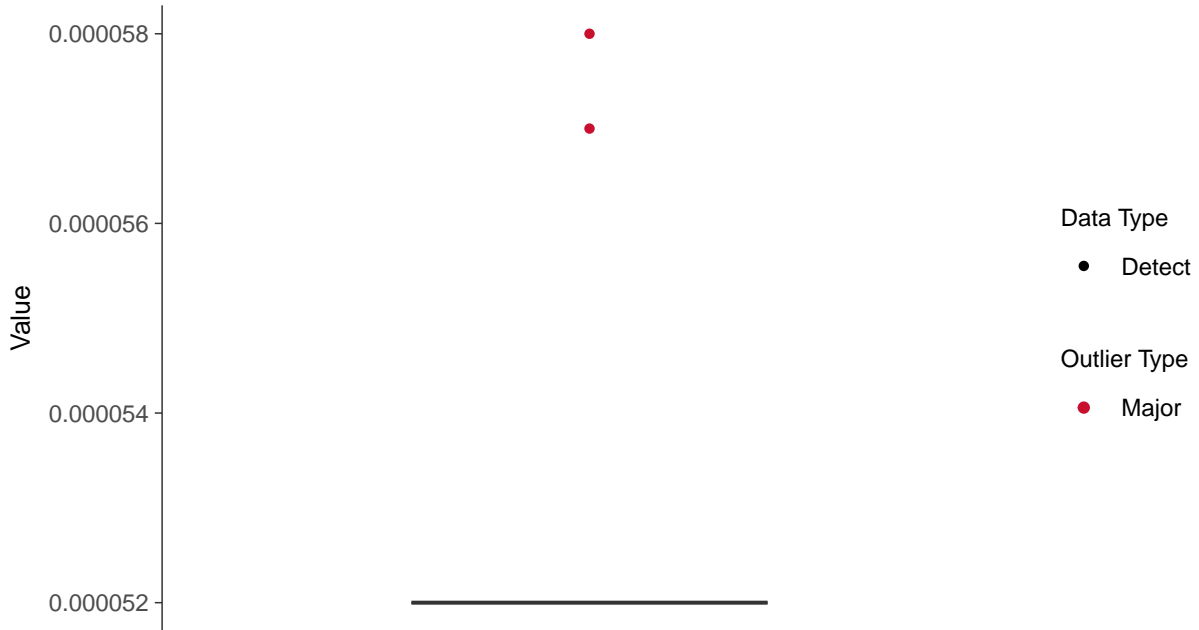
ID: 19\_2\_5\_104





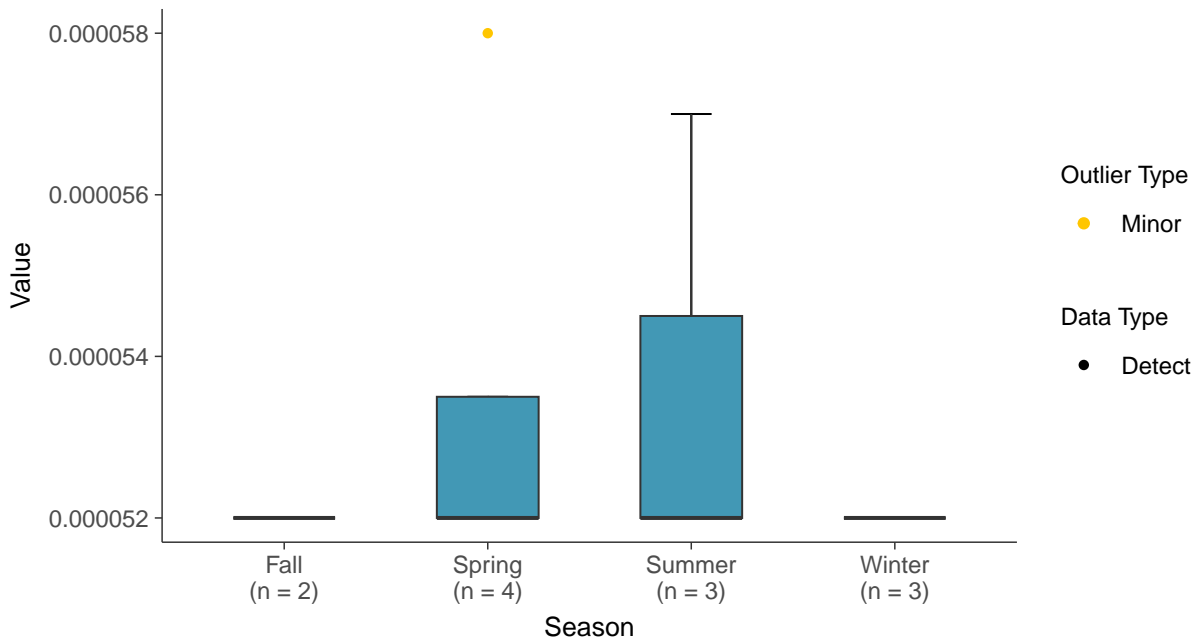
### Boxplot

Beryllium, MW-09 (mg/L)



### Boxplot by Season

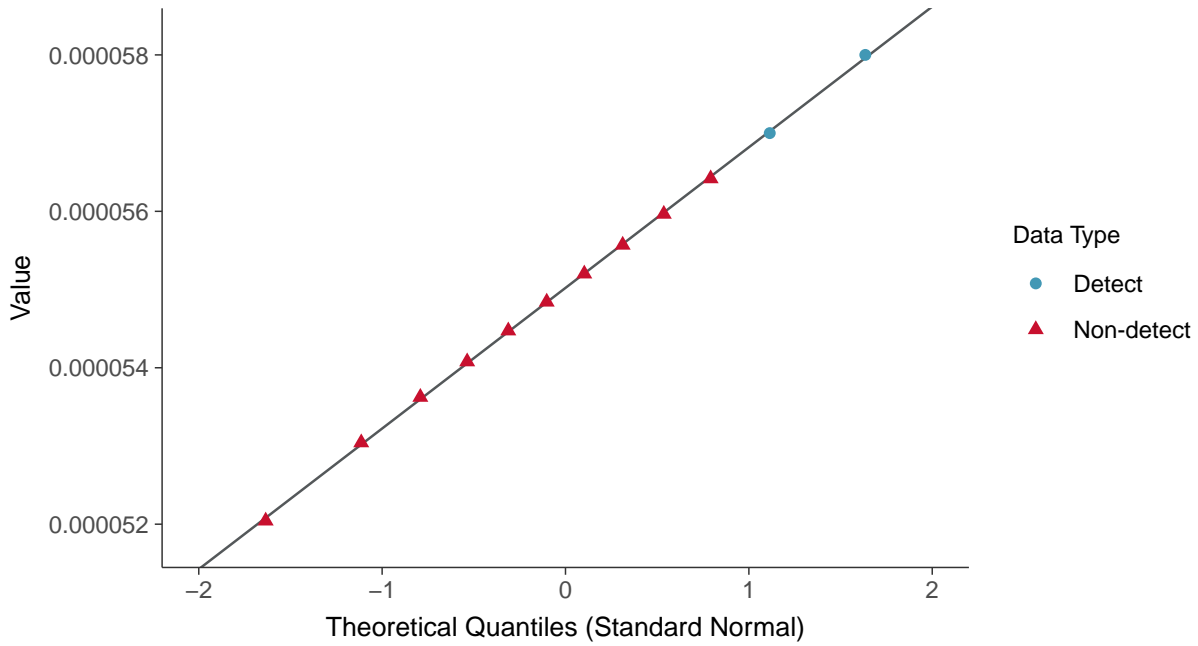
Beryllium, MW-09 (mg/L)





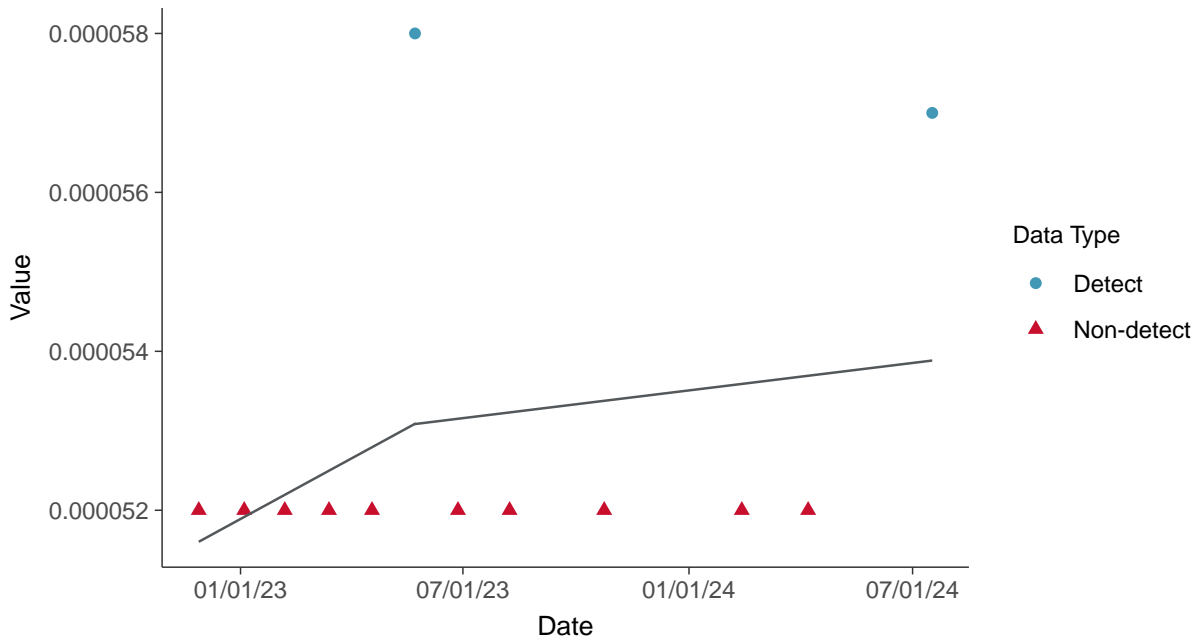
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

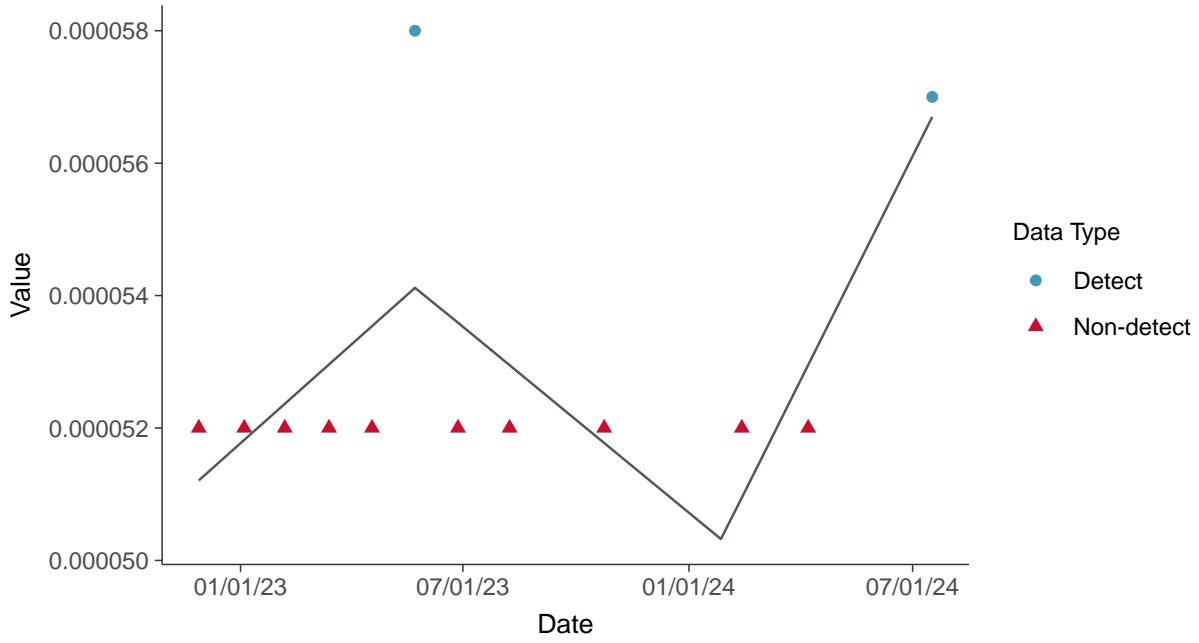
Beryllium, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-09 (mg/L)



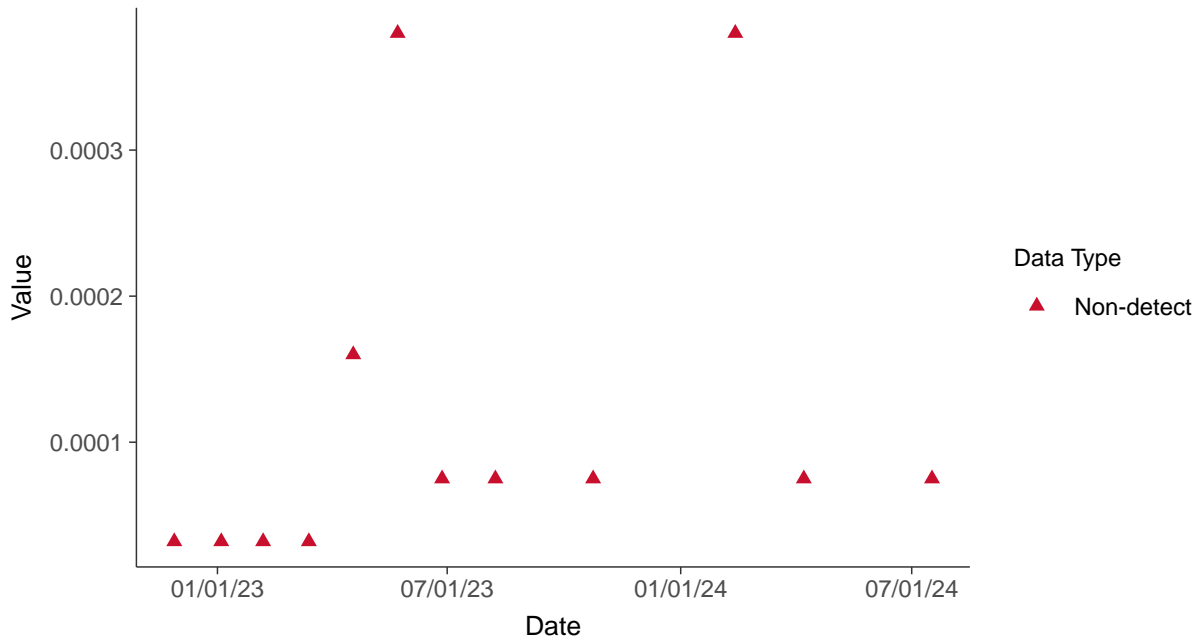


### Appendix IV: Cadmium, MW-09

ID: 19\_2\_5\_106

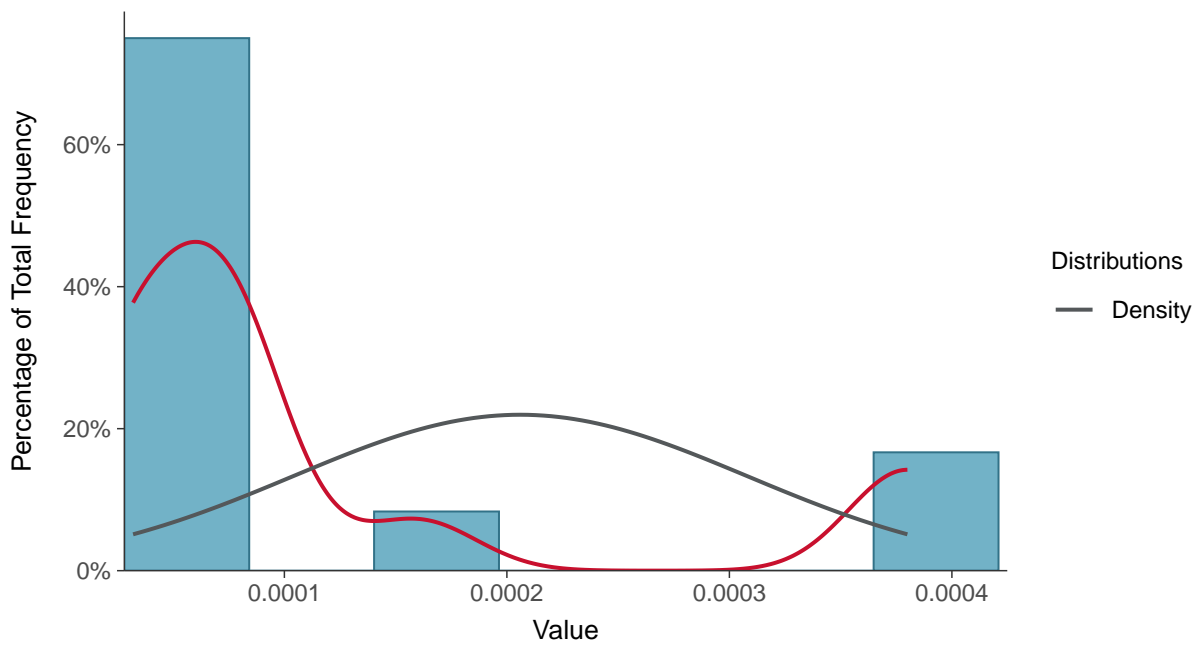
#### Scatter Plot

Cadmium, MW-09 (mg/L)



#### Histogram

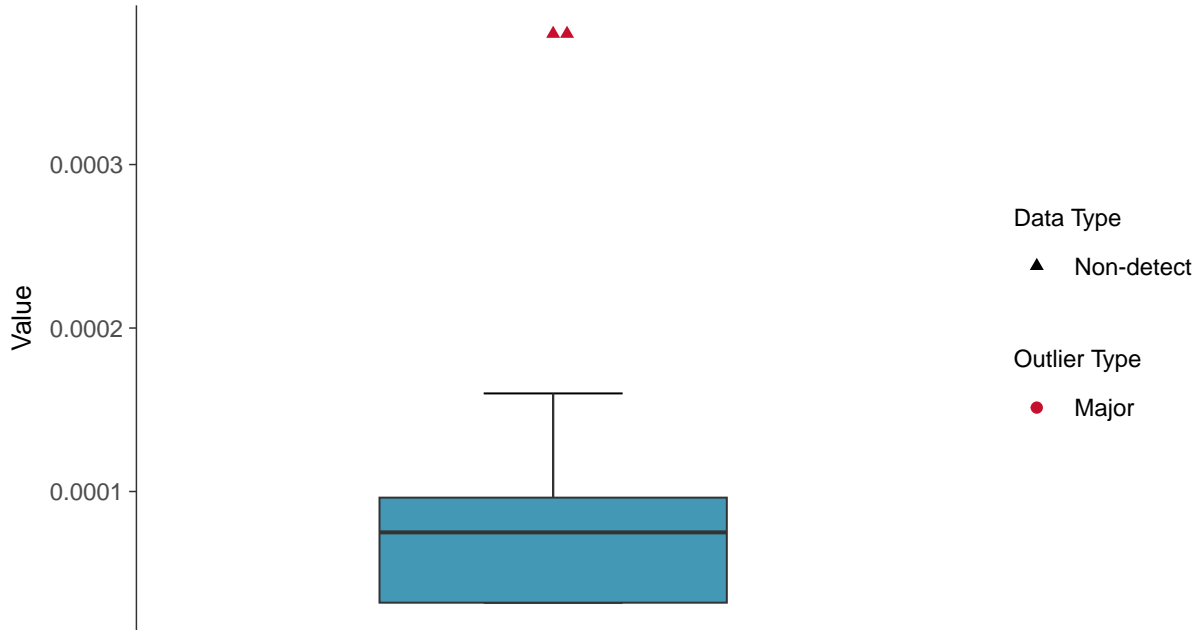
Cadmium, MW-09 (mg/L)





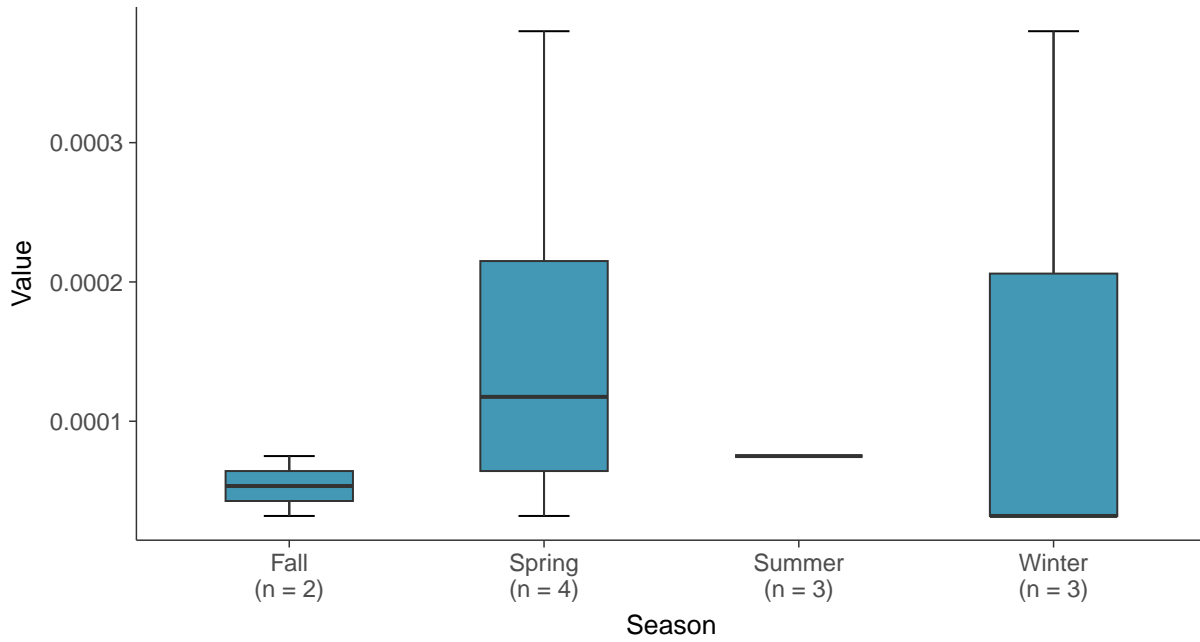
### Boxplot

Cadmium, MW-09 (mg/L)



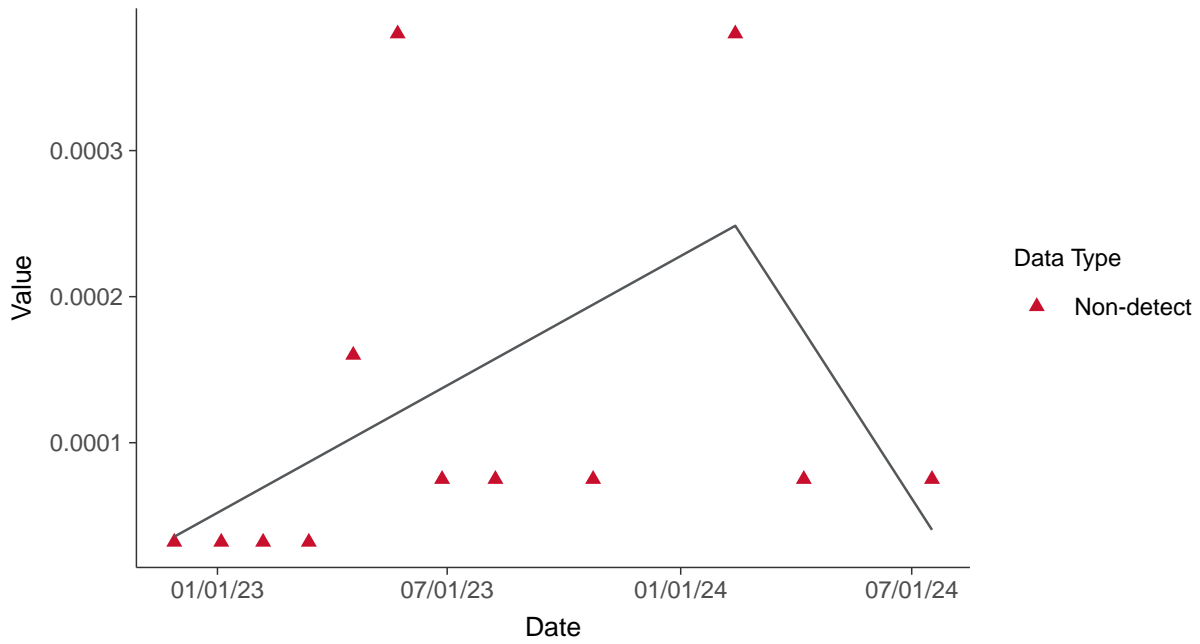
### Boxplot by Season

Cadmium, MW-09 (mg/L)

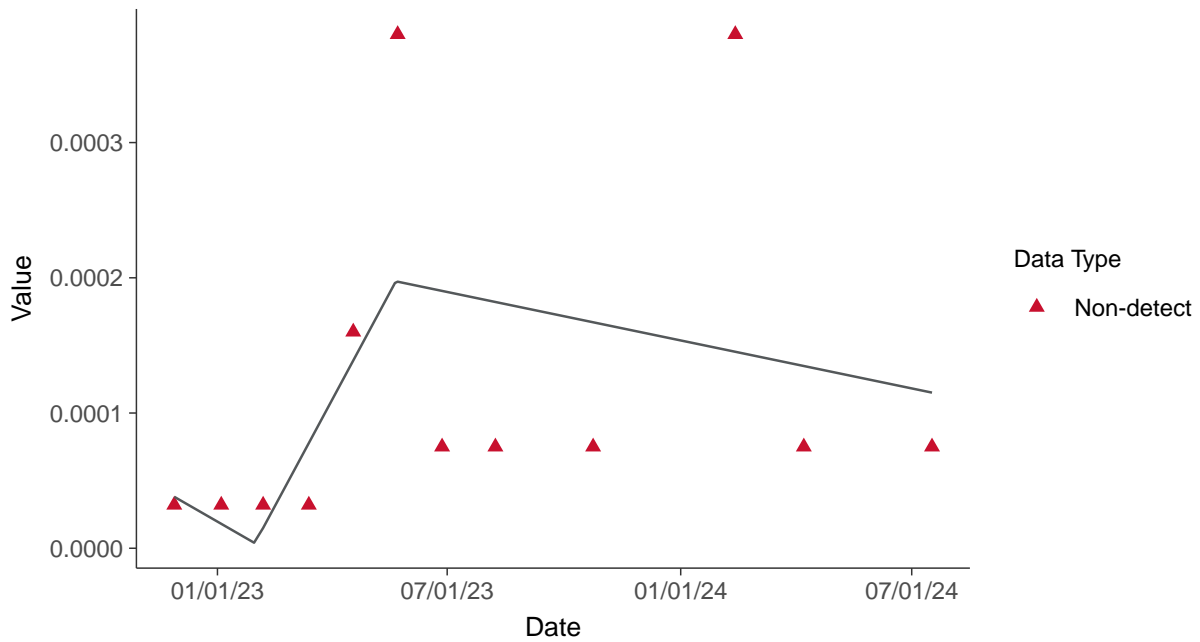




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-09 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-09 (mg/L)



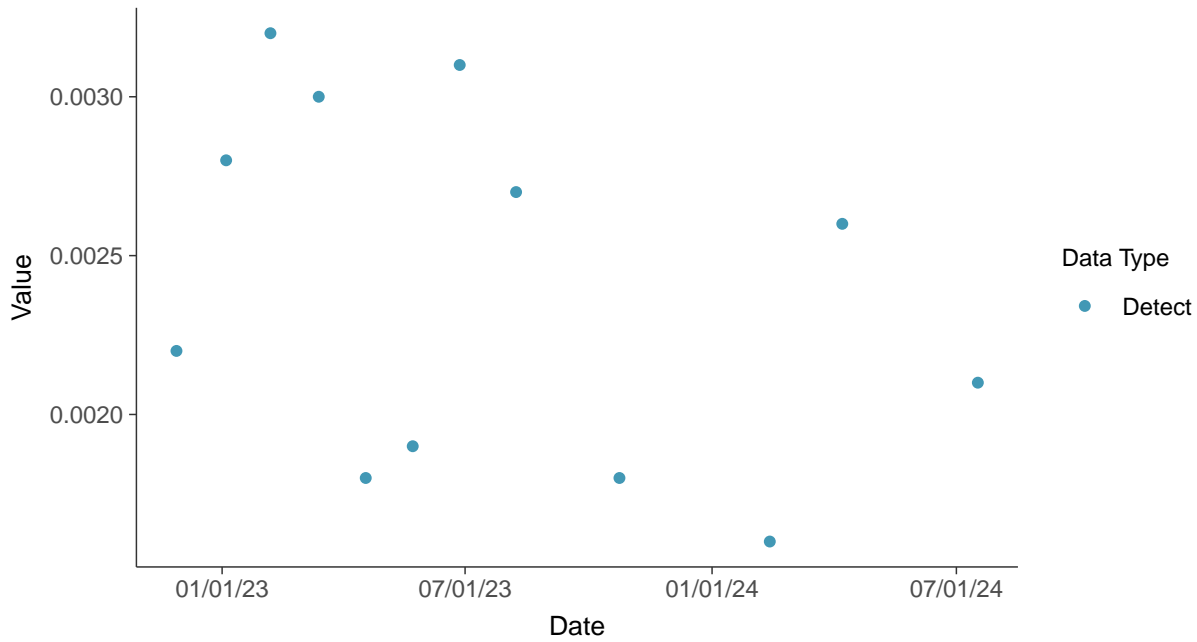


### Appendix IV: Chromium, Total, MW-09

ID: 19\_2\_5\_109

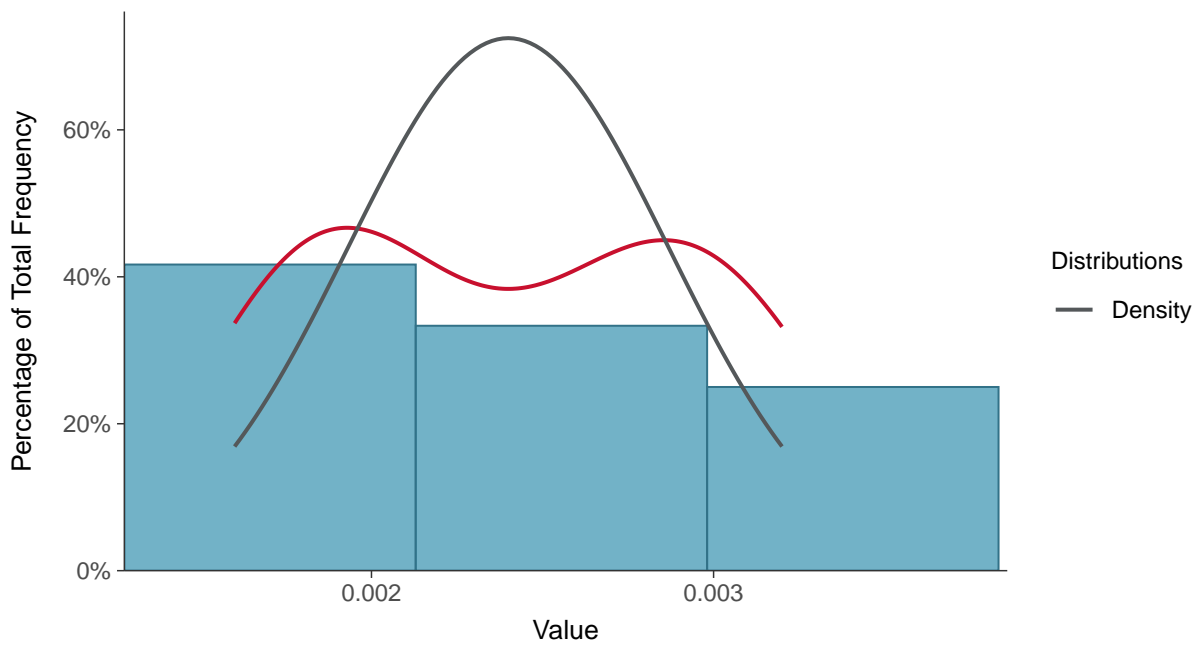
#### Scatter Plot

Chromium, Total, MW-09 (mg/L)



#### Histogram

Chromium, Total, MW-09 (mg/L)

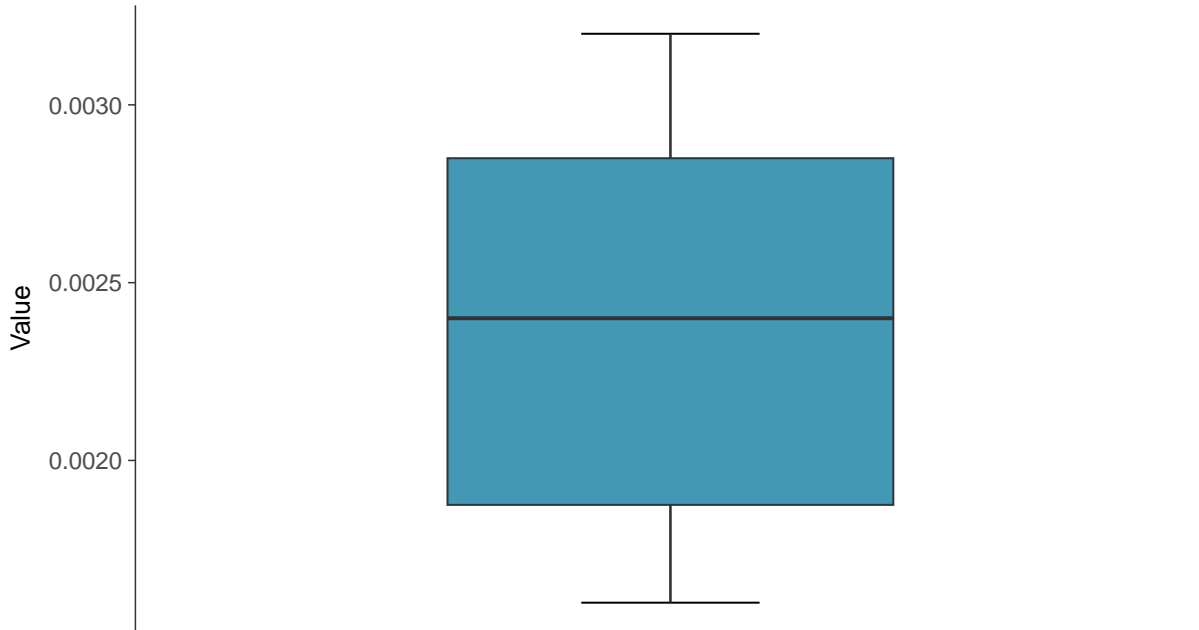






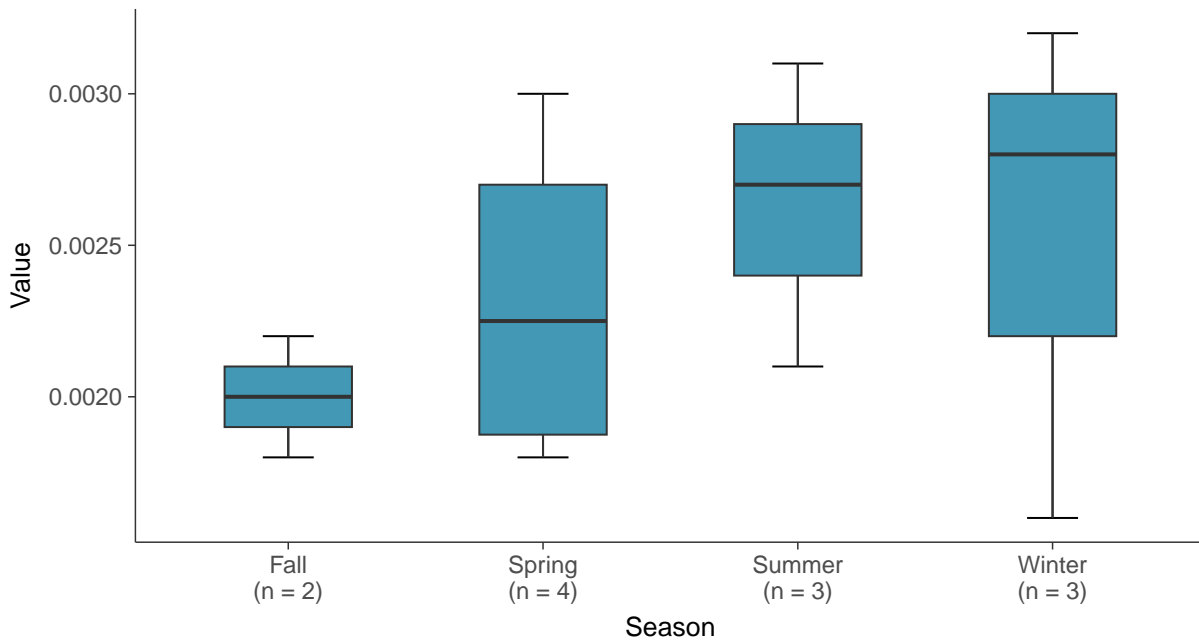
### Boxplot

Chromium, Total, MW-09 (mg/L)



### Boxplot by Season

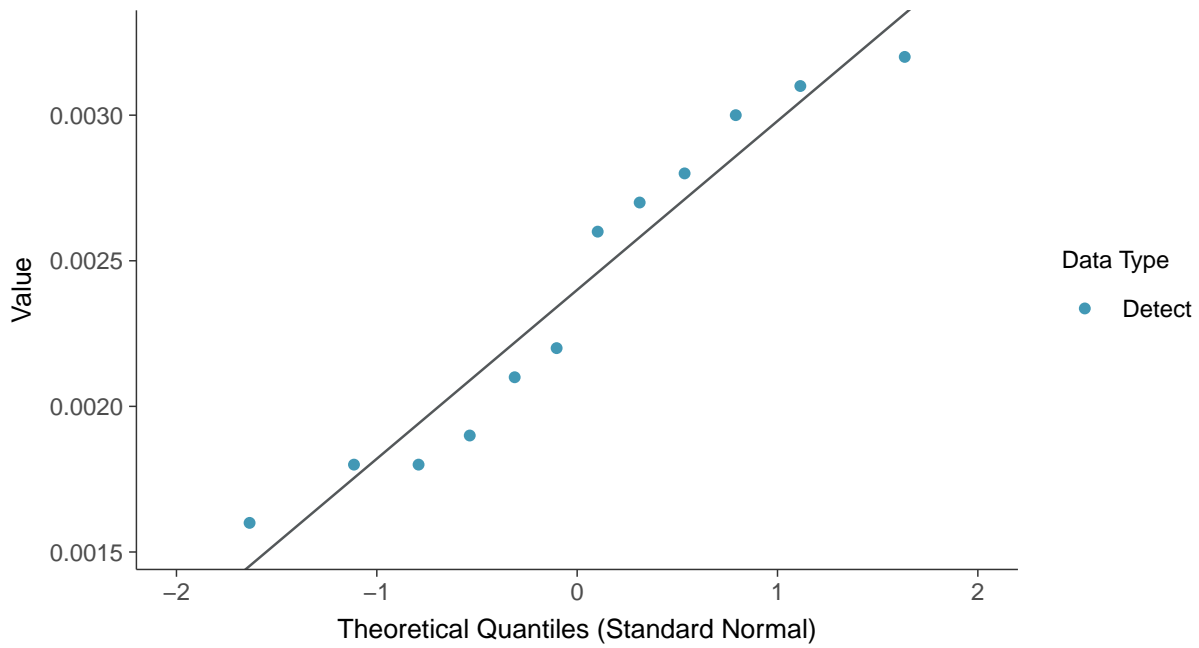
Chromium, Total, MW-09 (mg/L)





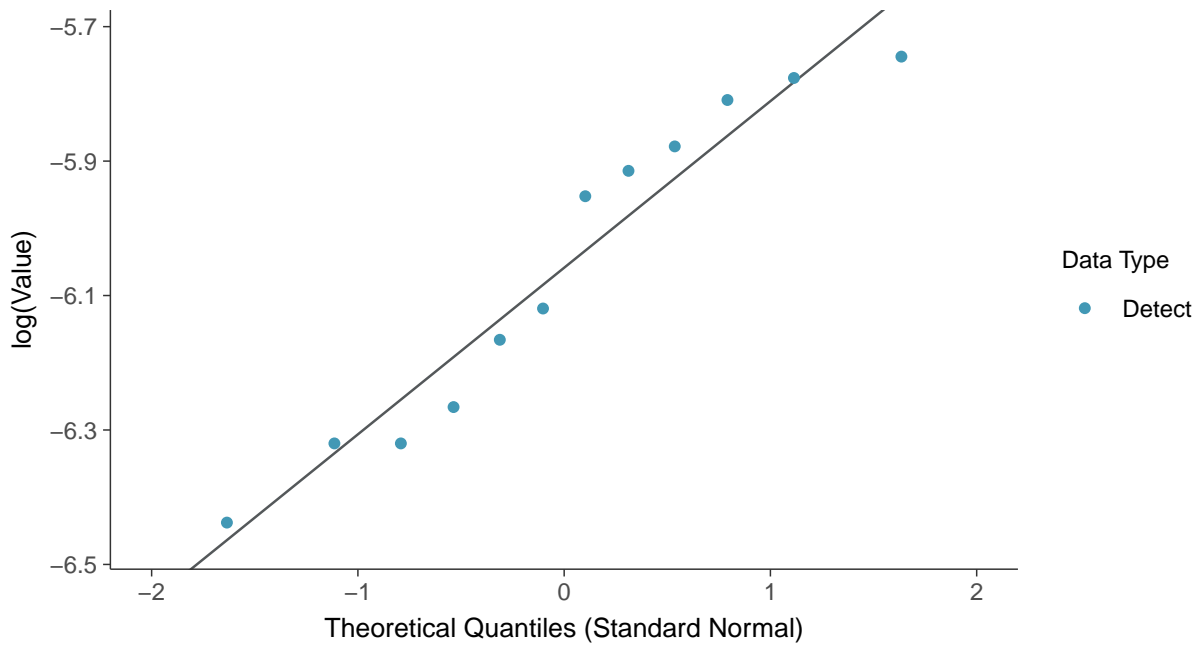
### Normal Q-Q plot

Chromium, Total, MW-09 (mg/L)



### Lognormal Q-Q plot

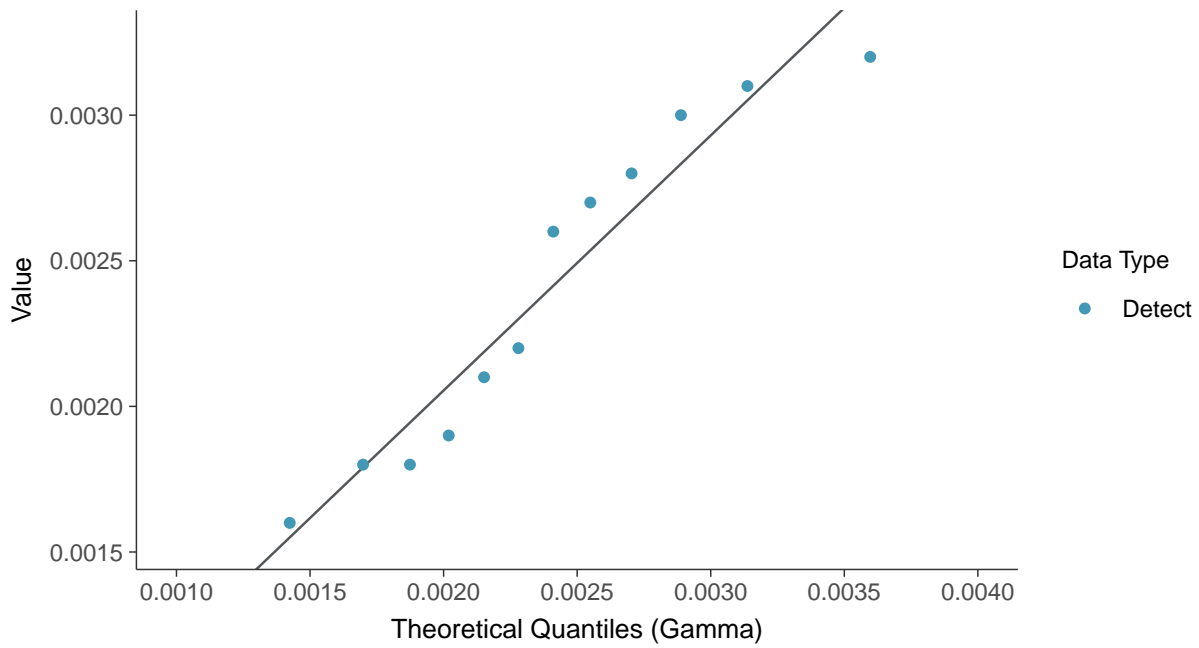
Chromium, Total, MW-09 (mg/L)





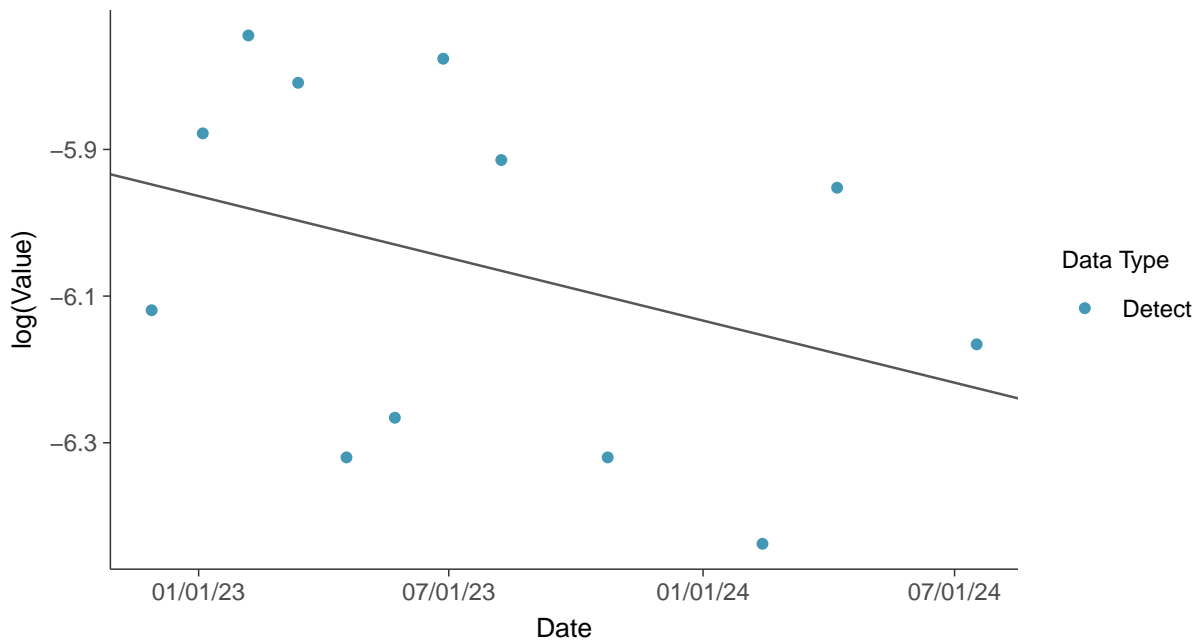
### Gamma Q-Q plot

Chromium, Total, MW-09 (mg/L)



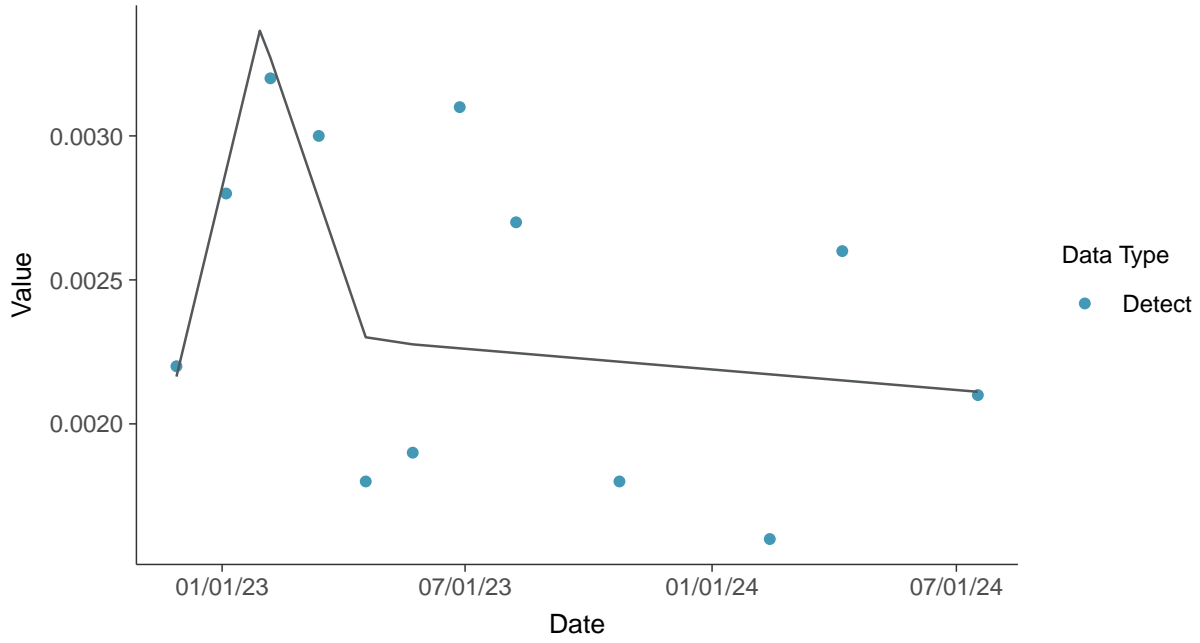
### Trend Regression: Lognormal MLE

Chromium, Total, MW-09 (mg/L)





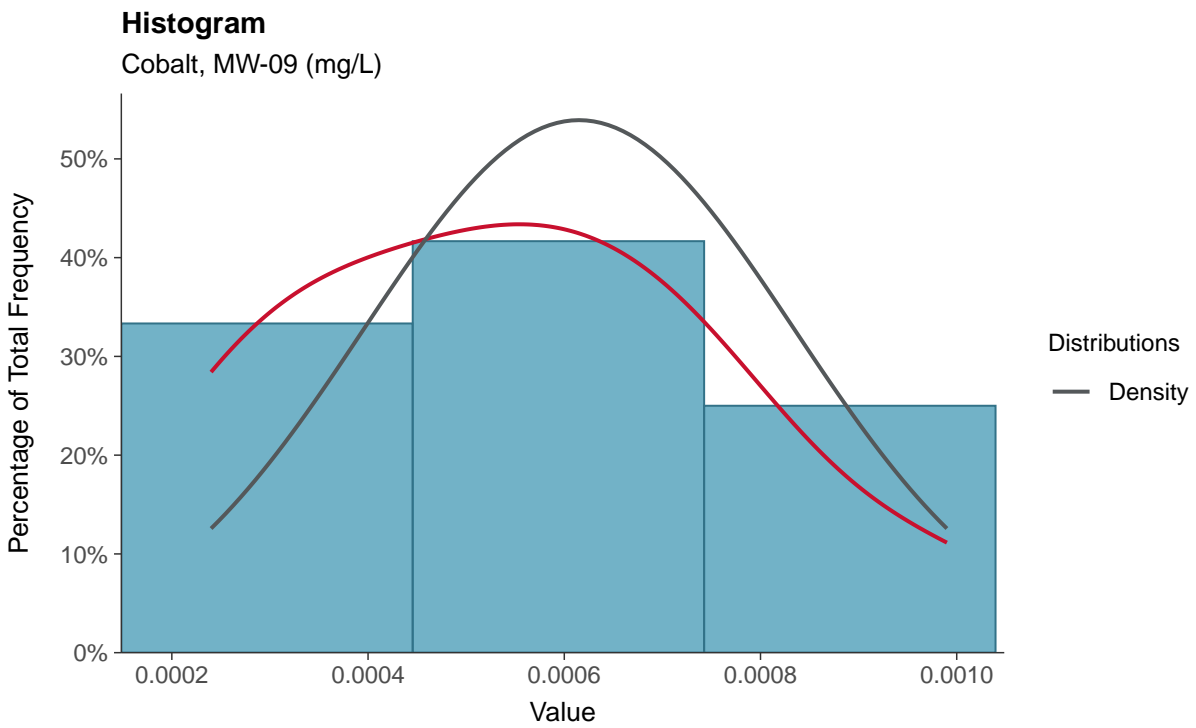
**Trend Regression: Piecewise Linear-Linear-Linear**  
Chromium, Total, MW-09 (mg/L)





### Appendix IV: Cobalt, MW-09

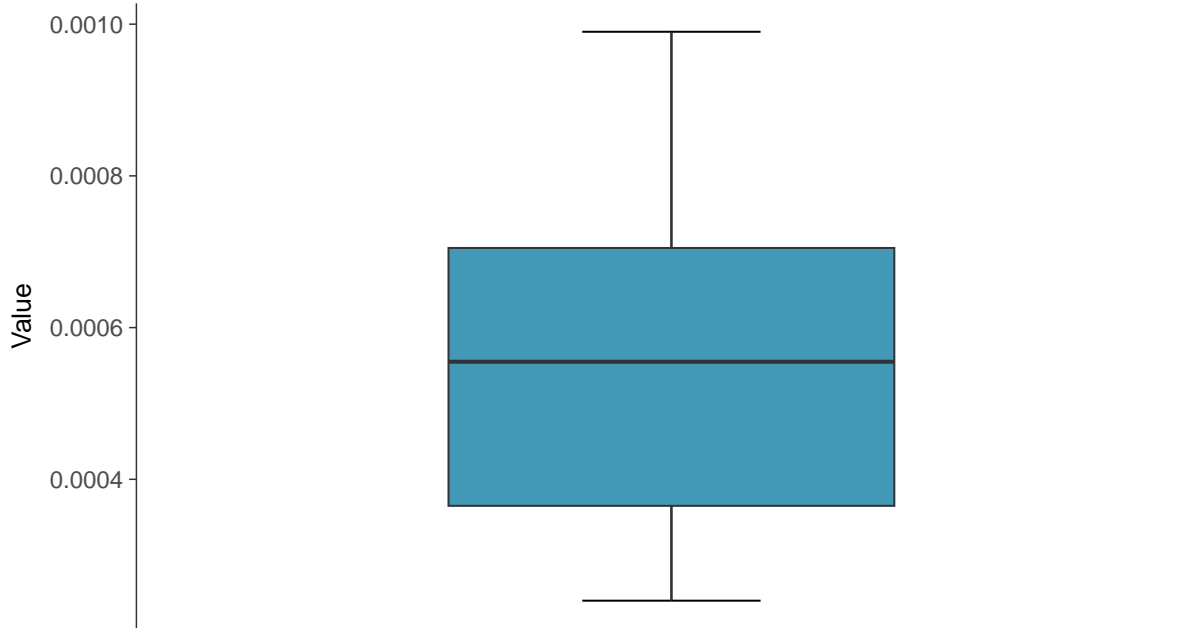
ID: 19\_2\_5\_110





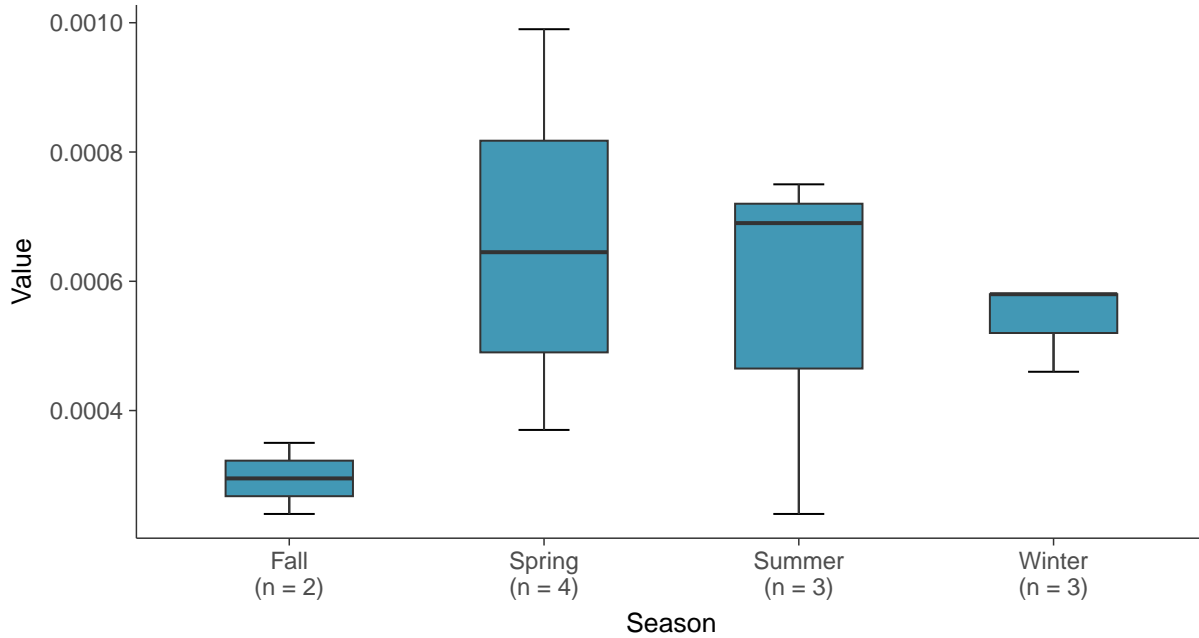
### Boxplot

Cobalt, MW-09 (mg/L)



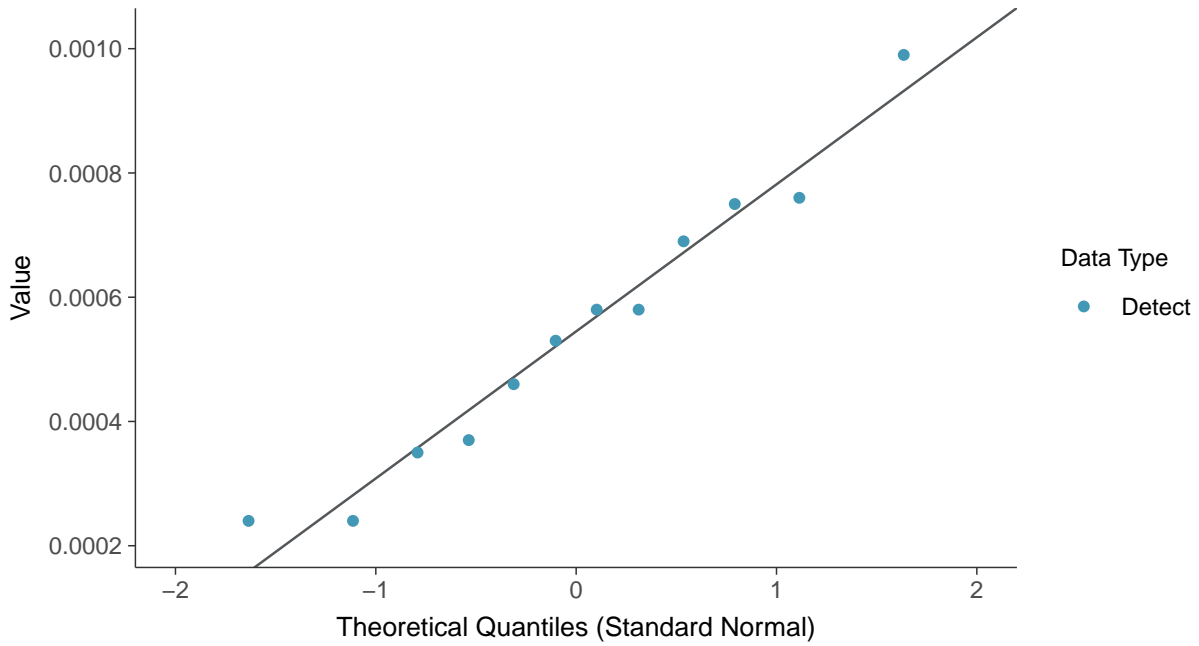
### Boxplot by Season

Cobalt, MW-09 (mg/L)

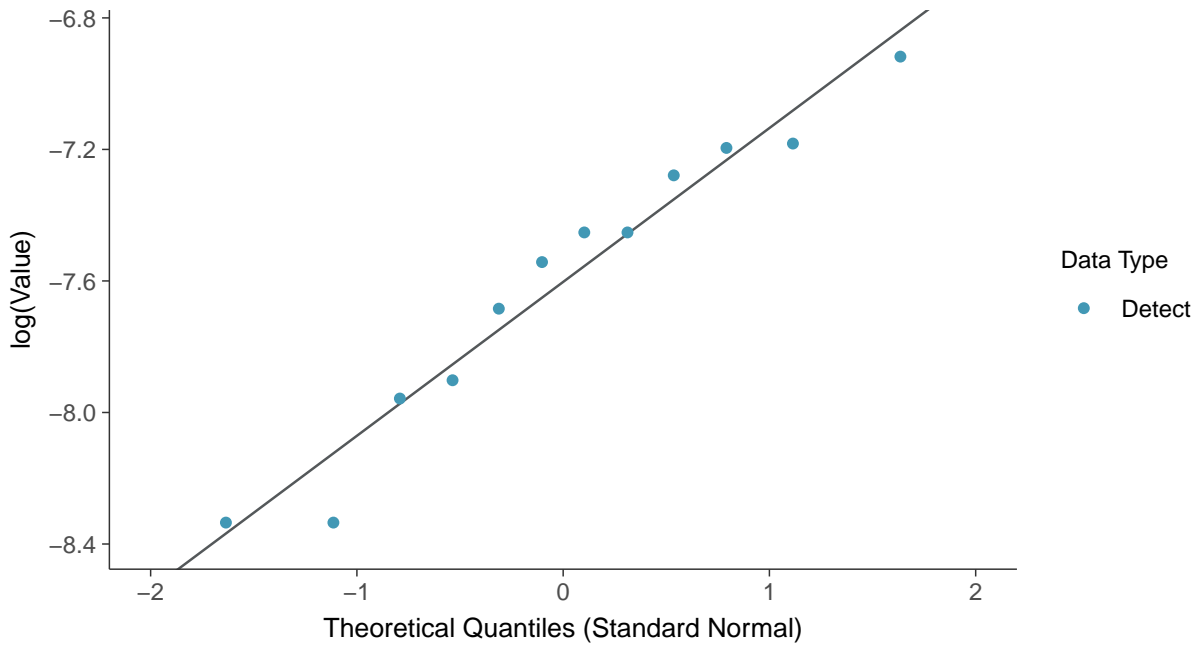




**Normal Q-Q plot**  
Cobalt, MW-09 (mg/L)

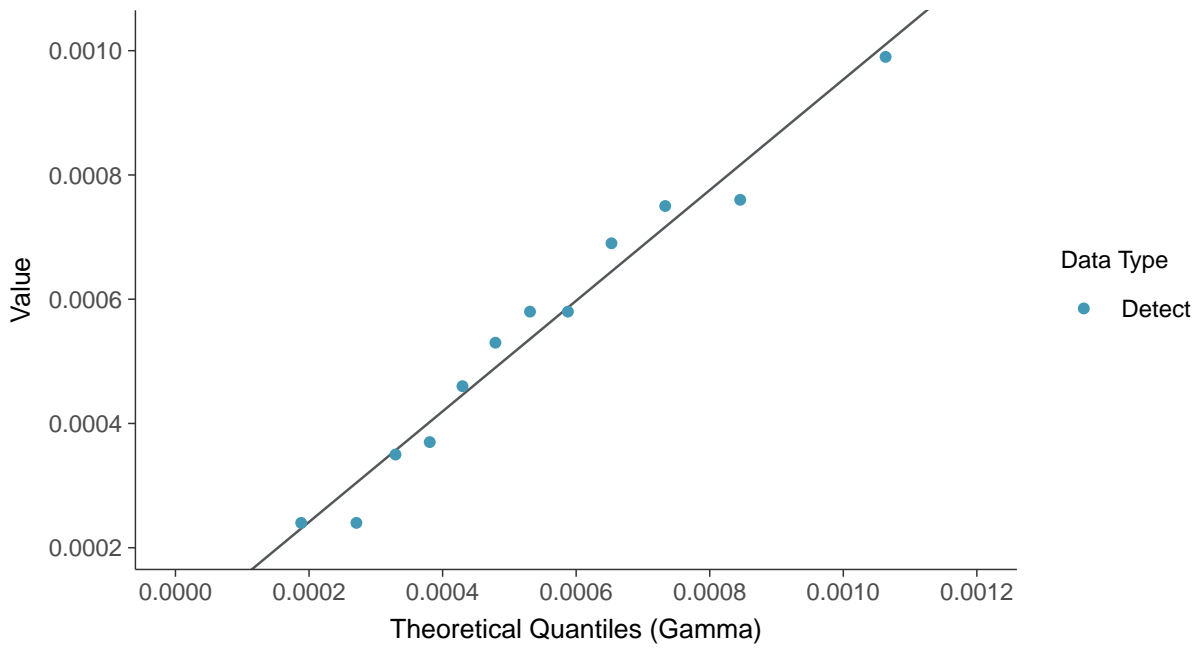


**Lognormal Q-Q plot**  
Cobalt, MW-09 (mg/L)

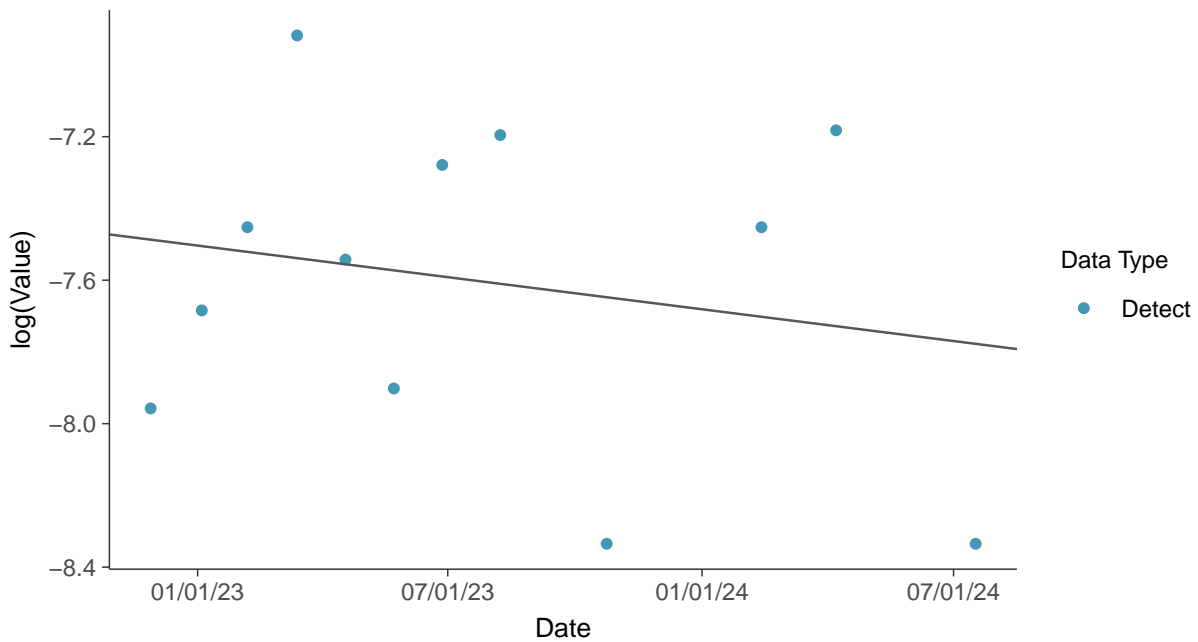




**Gamma Q-Q plot**  
Cobalt, MW-09 (mg/L)



**Trend Regression: Lognormal MLE**  
Cobalt, MW-09 (mg/L)

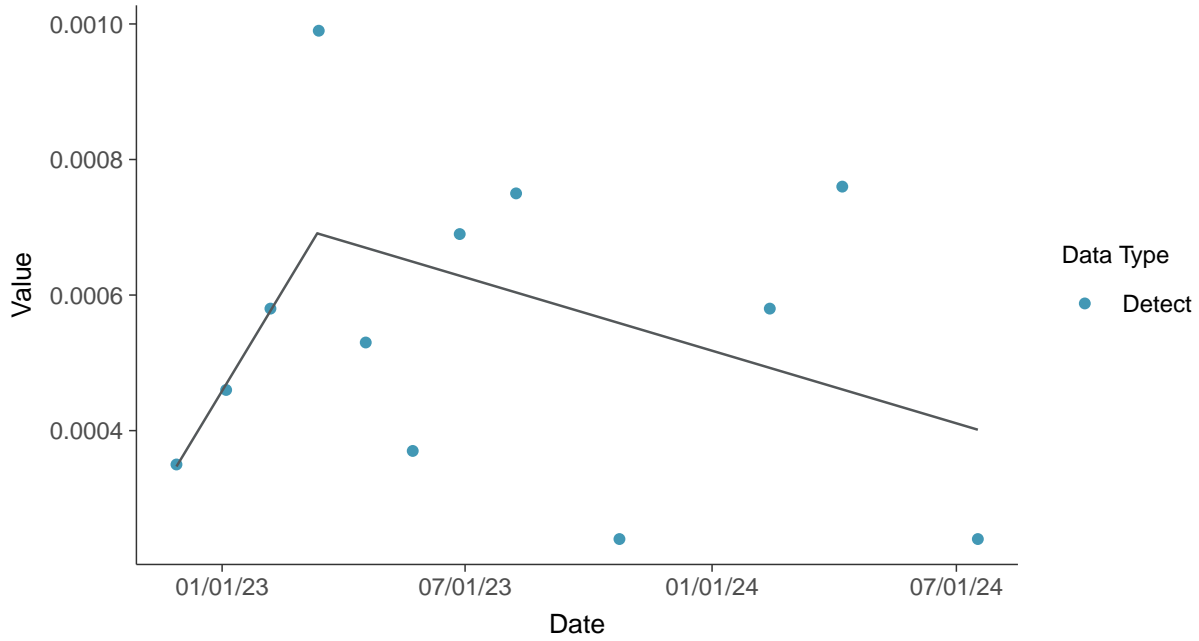






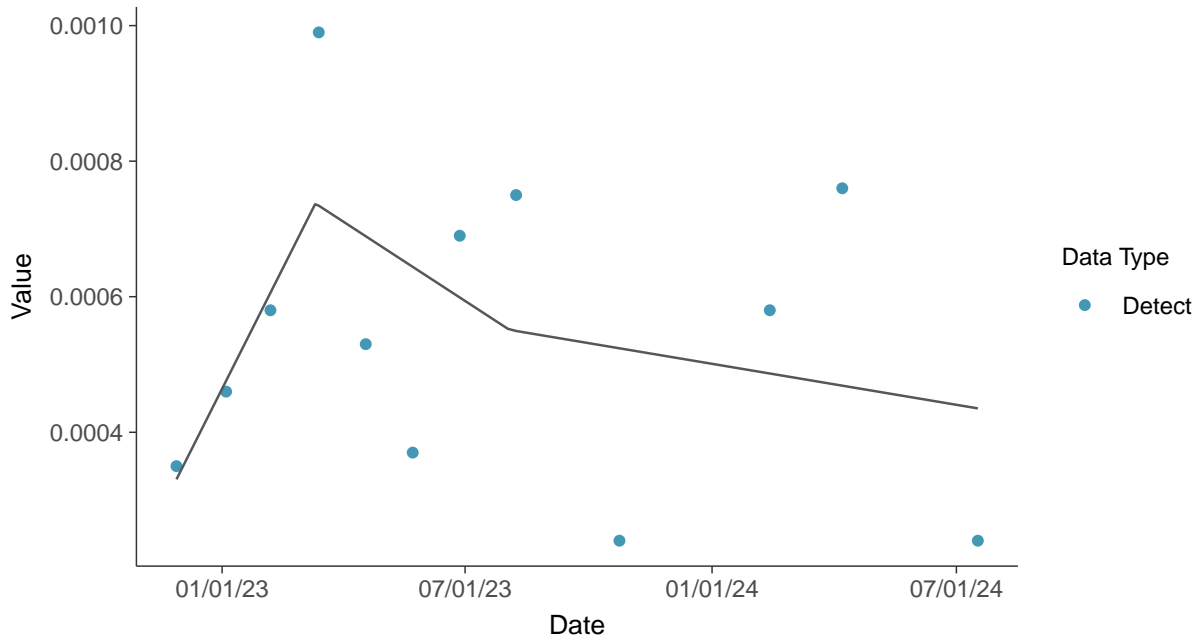
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

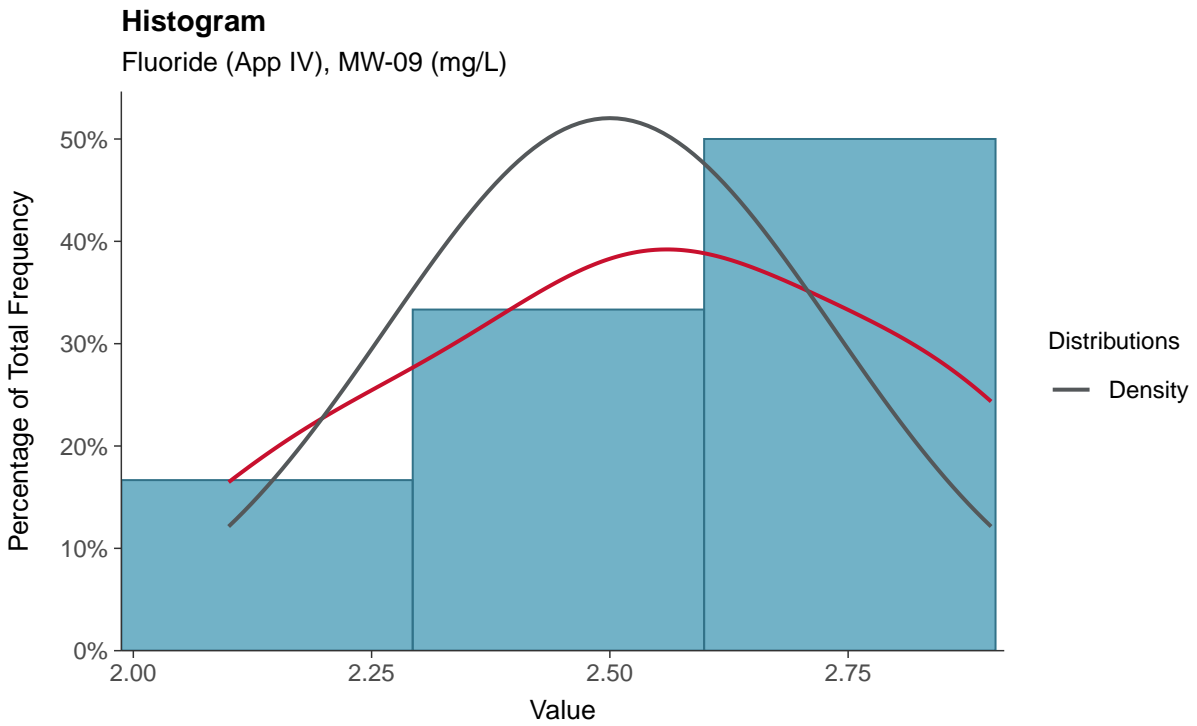
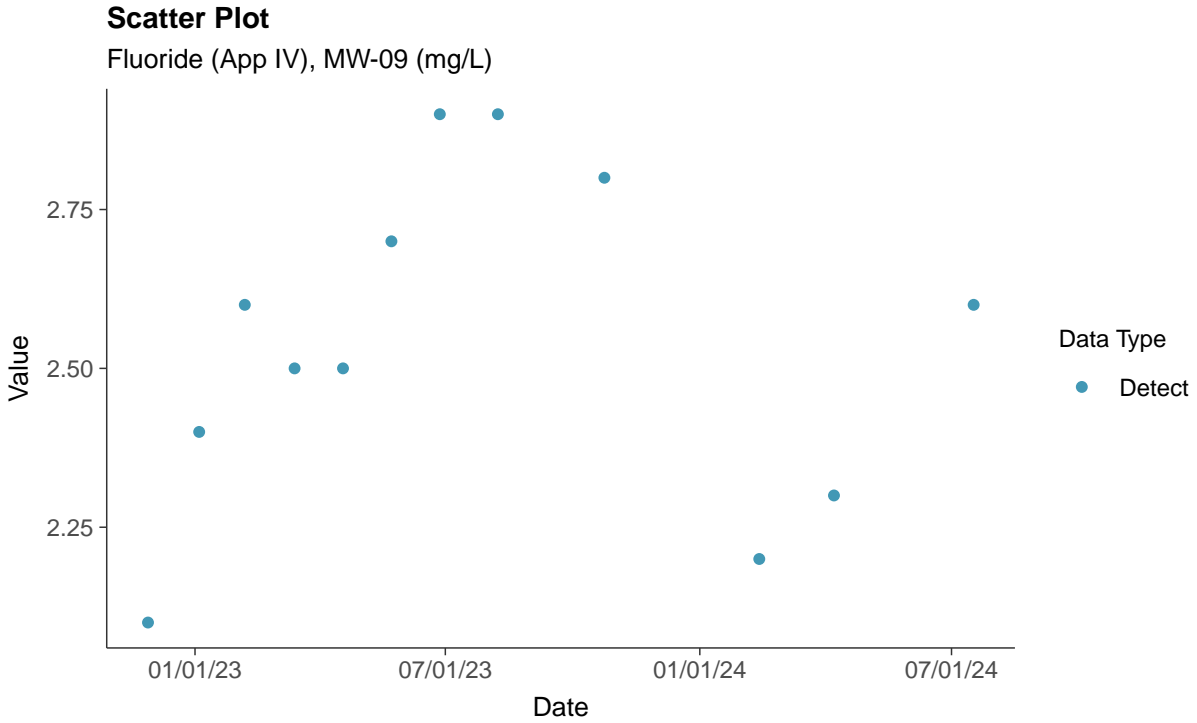
Cobalt, MW-09 (mg/L)





### Appendix IV: Fluoride (App IV), MW-09

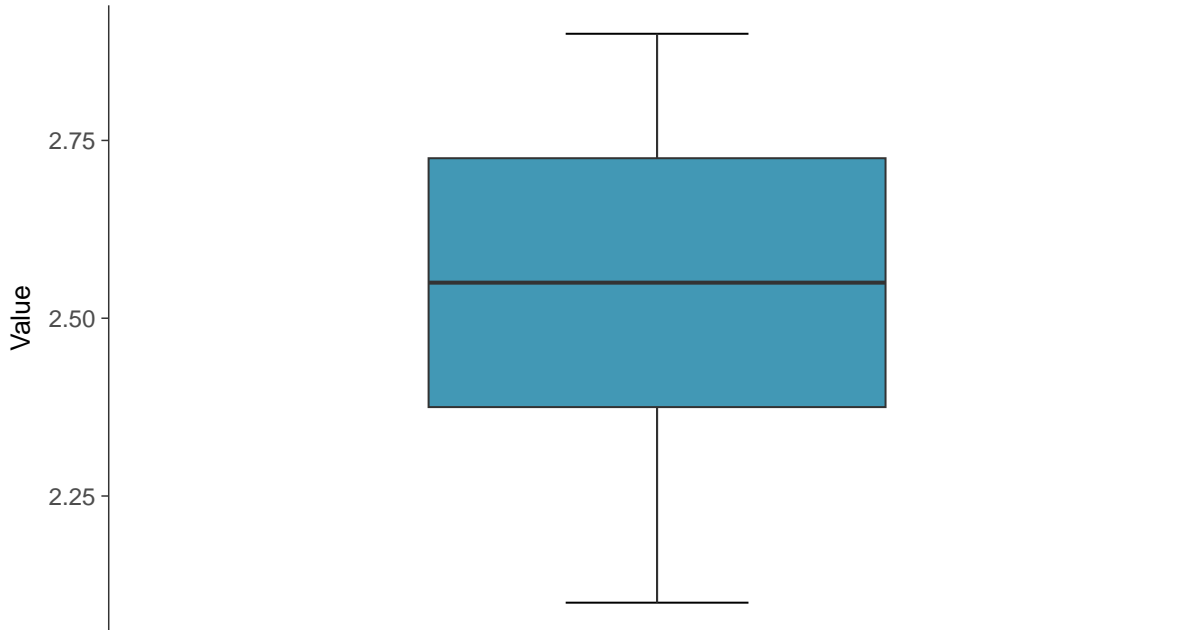
ID: 19\_2\_5\_113





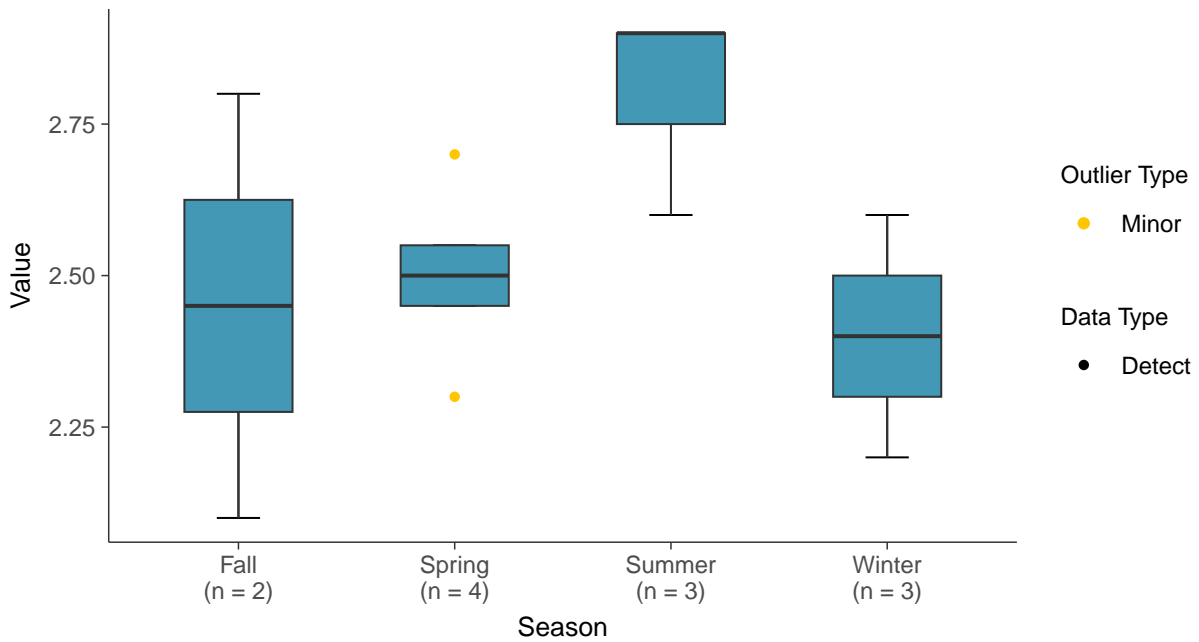
### Boxplot

Fluoride (App IV), MW-09 (mg/L)



### Boxplot by Season

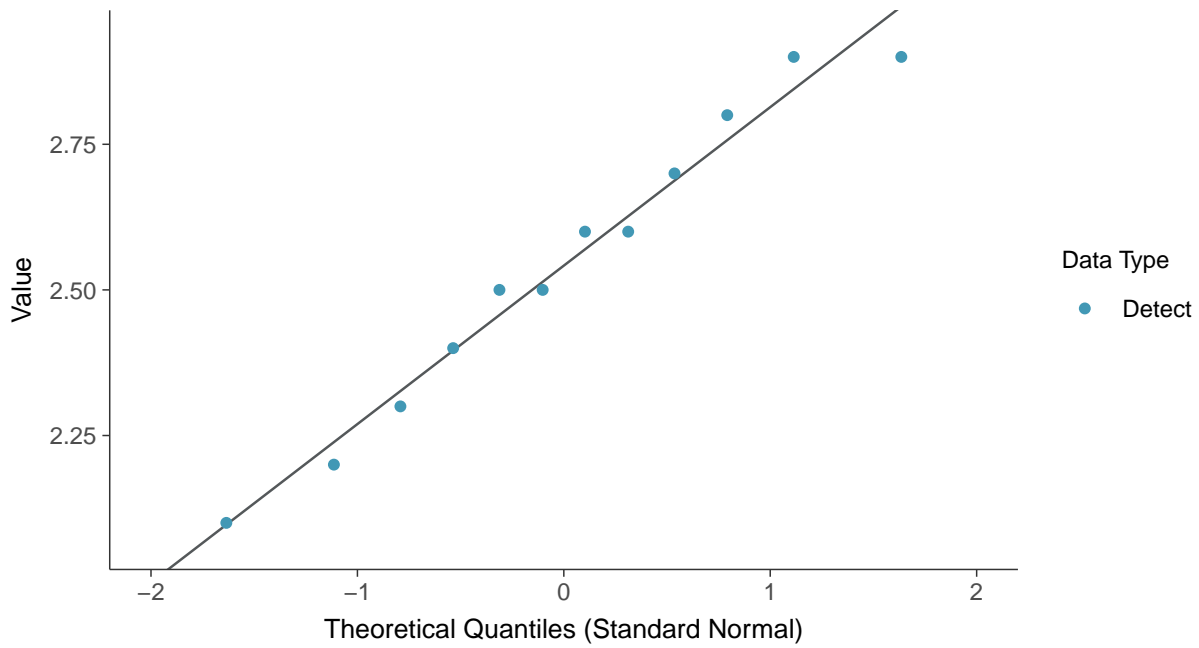
Fluoride (App IV), MW-09 (mg/L)





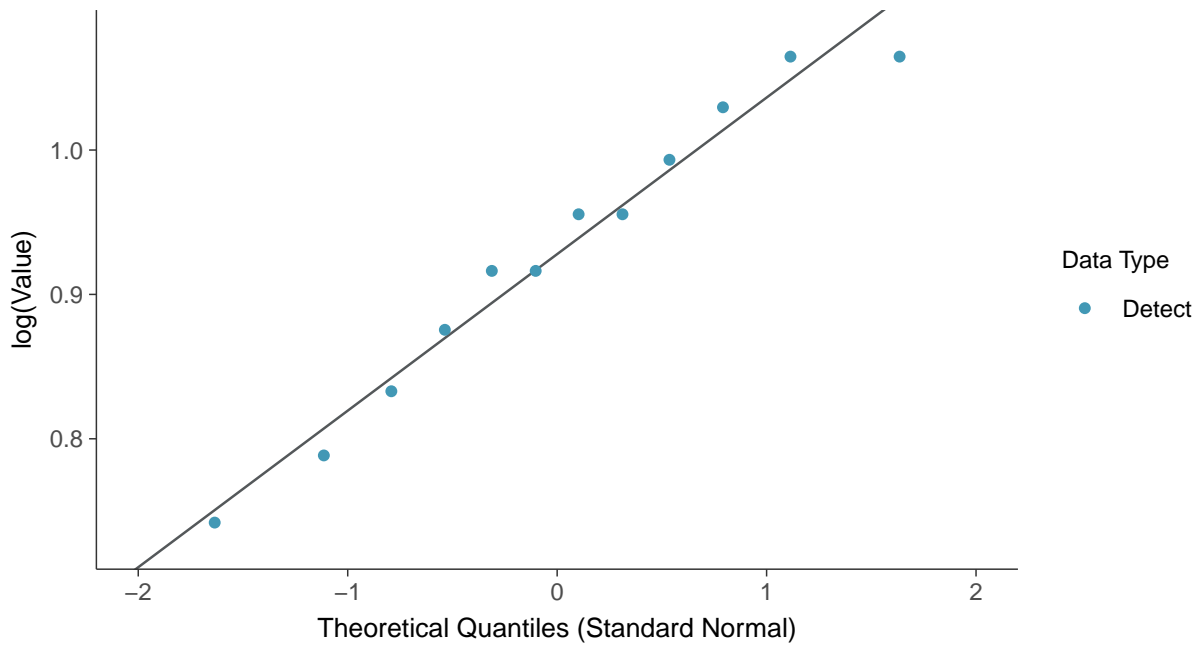
### Normal Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



### Lognormal Q-Q plot

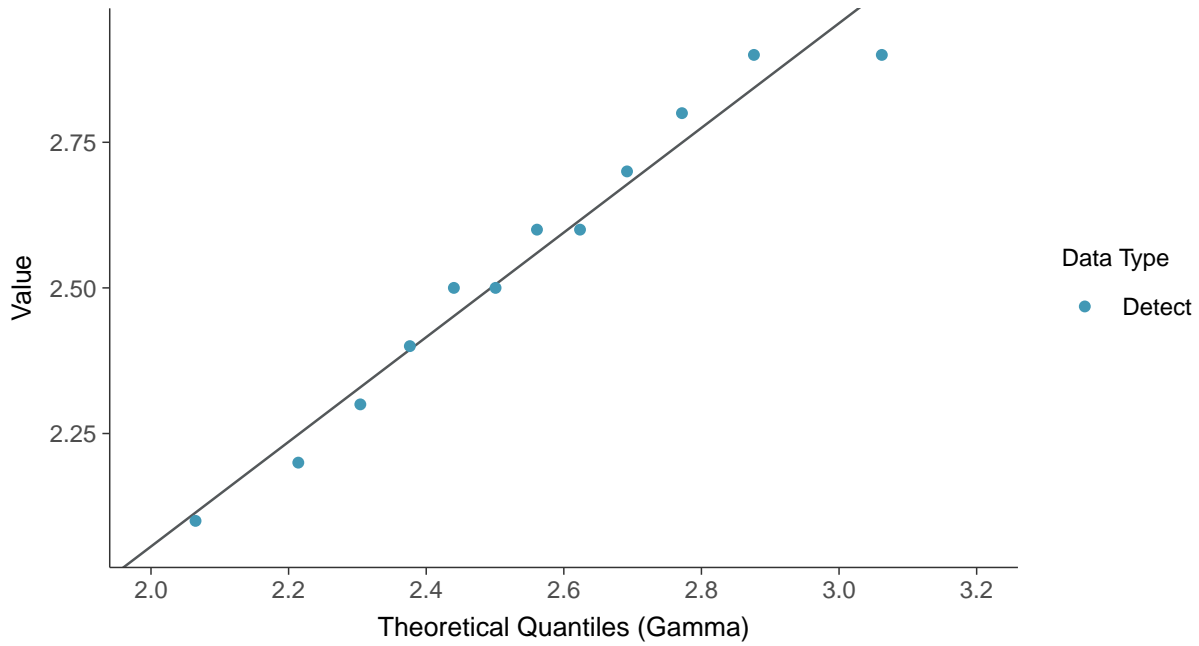
Fluoride (App IV), MW-09 (mg/L)





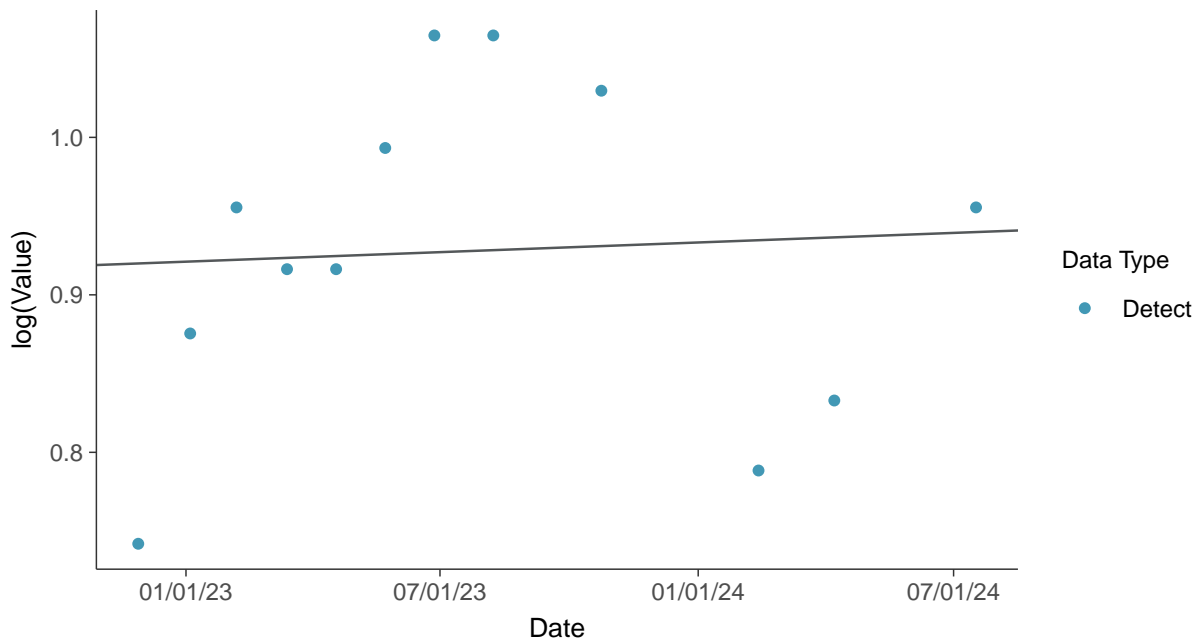
### Gamma Q-Q plot

Fluoride (App IV), MW-09 (mg/L)



### Trend Regression: Lognormal MLE

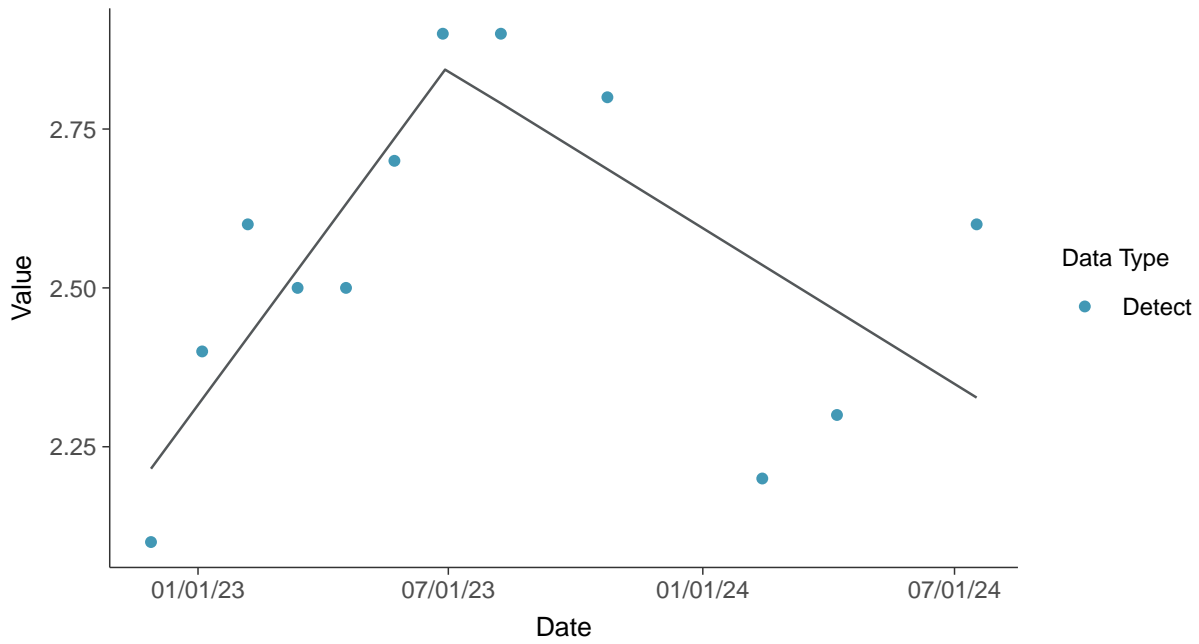
Fluoride (App IV), MW-09 (mg/L)





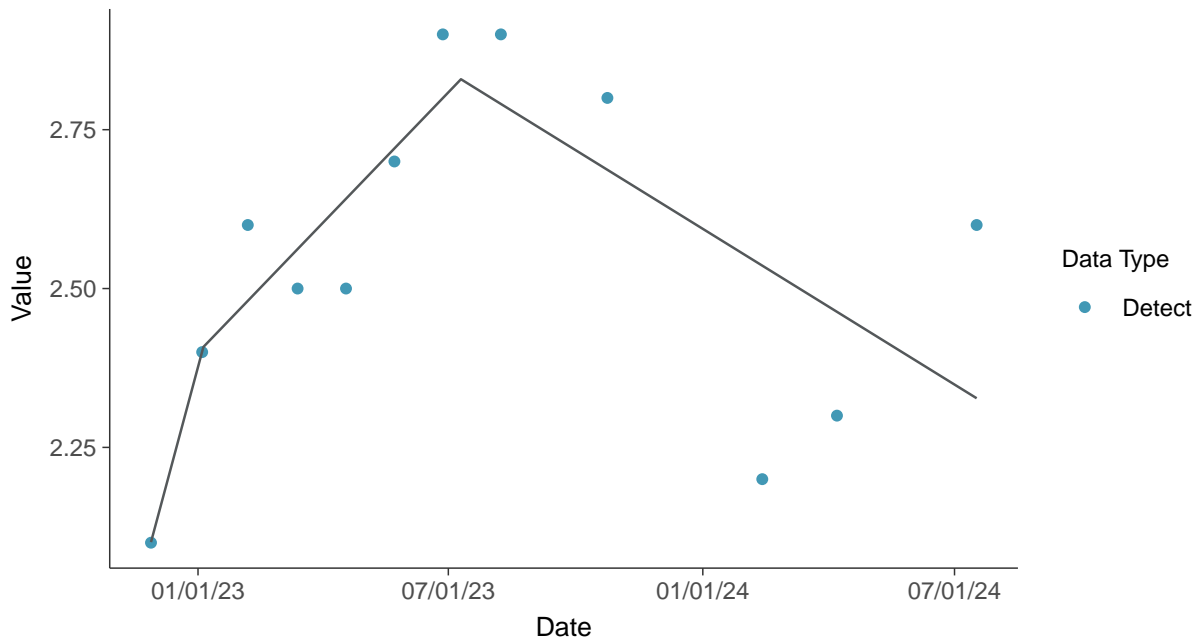
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

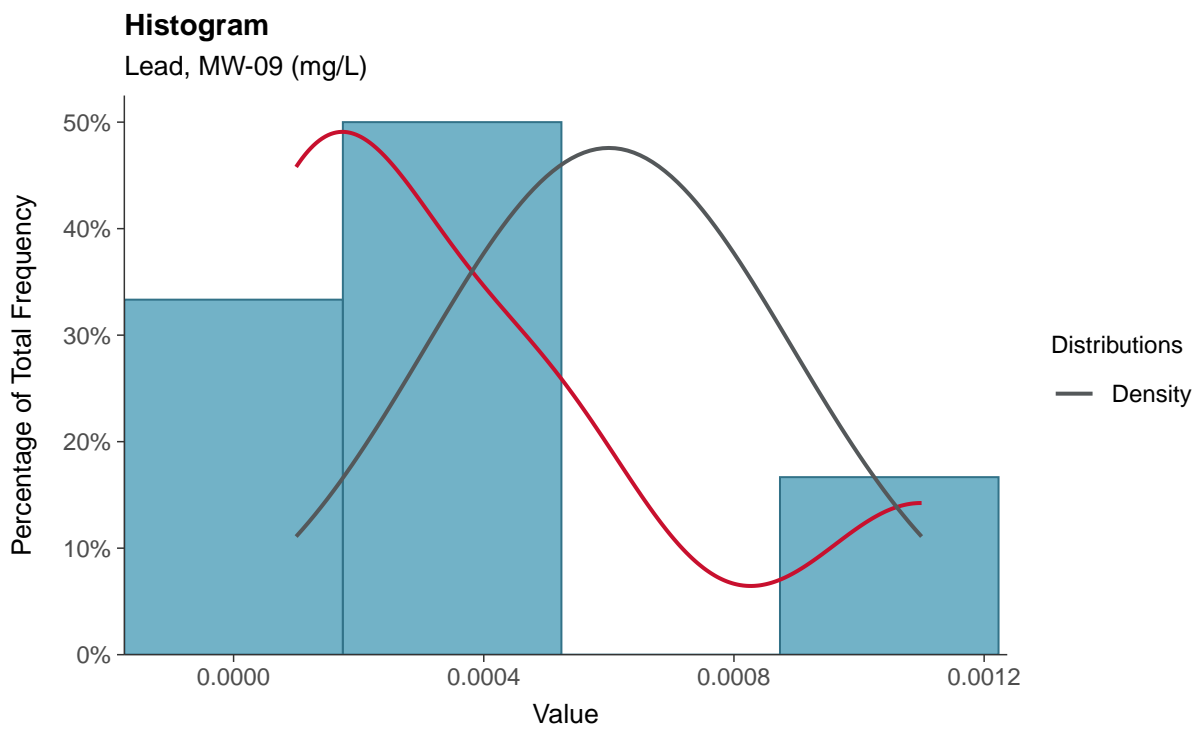
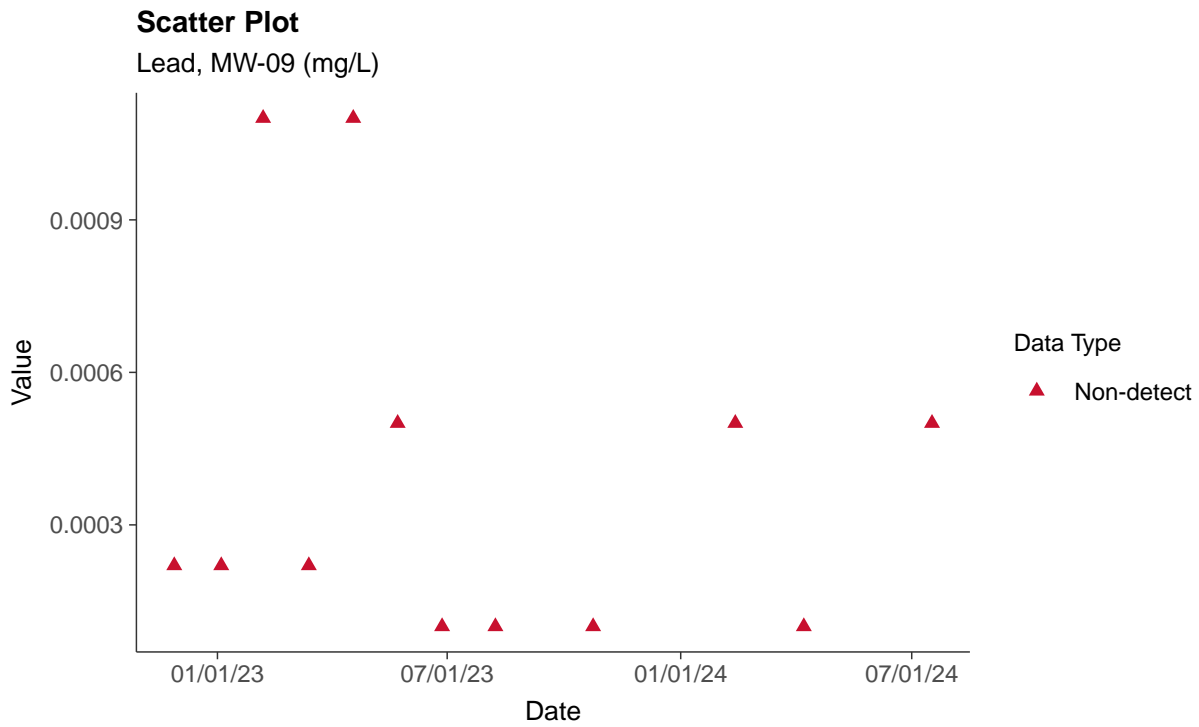
Fluoride (App IV), MW-09 (mg/L)





### Appendix IV: Lead, MW-09

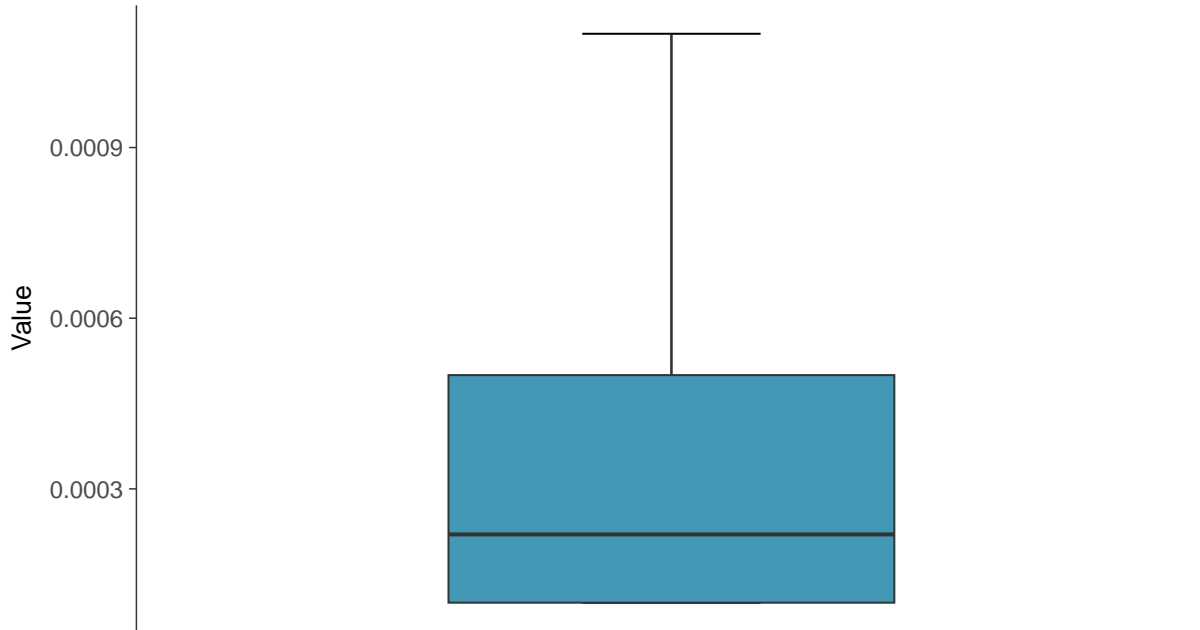
ID: 19\_2\_5\_115





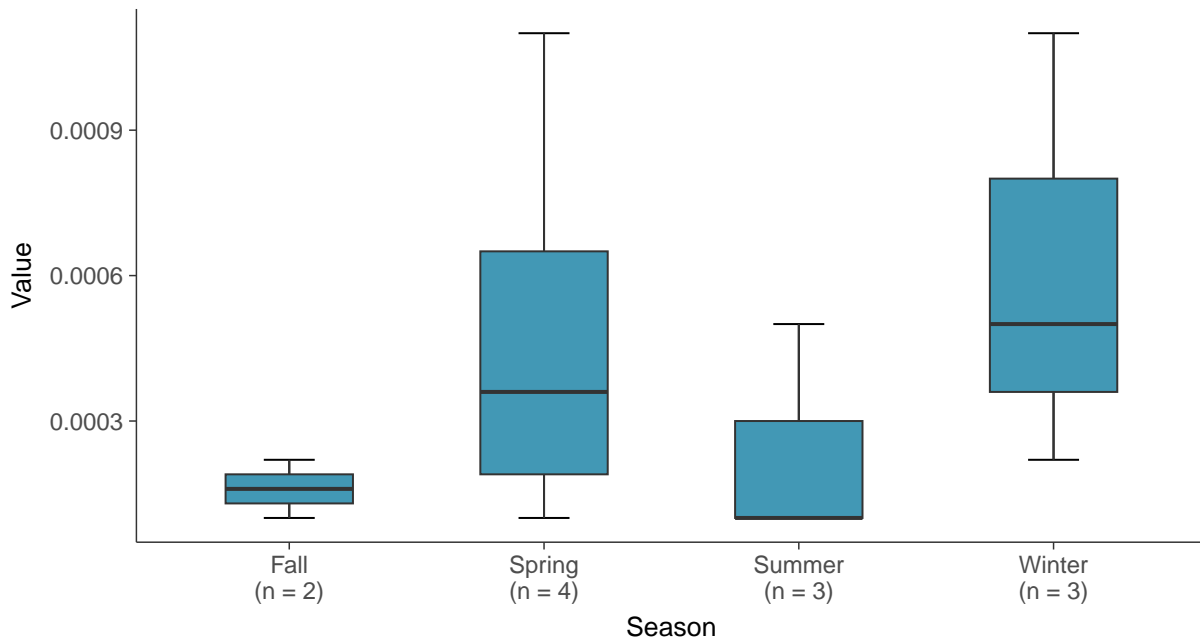
### Boxplot

Lead, MW-09 (mg/L)



### Boxplot by Season

Lead, MW-09 (mg/L)

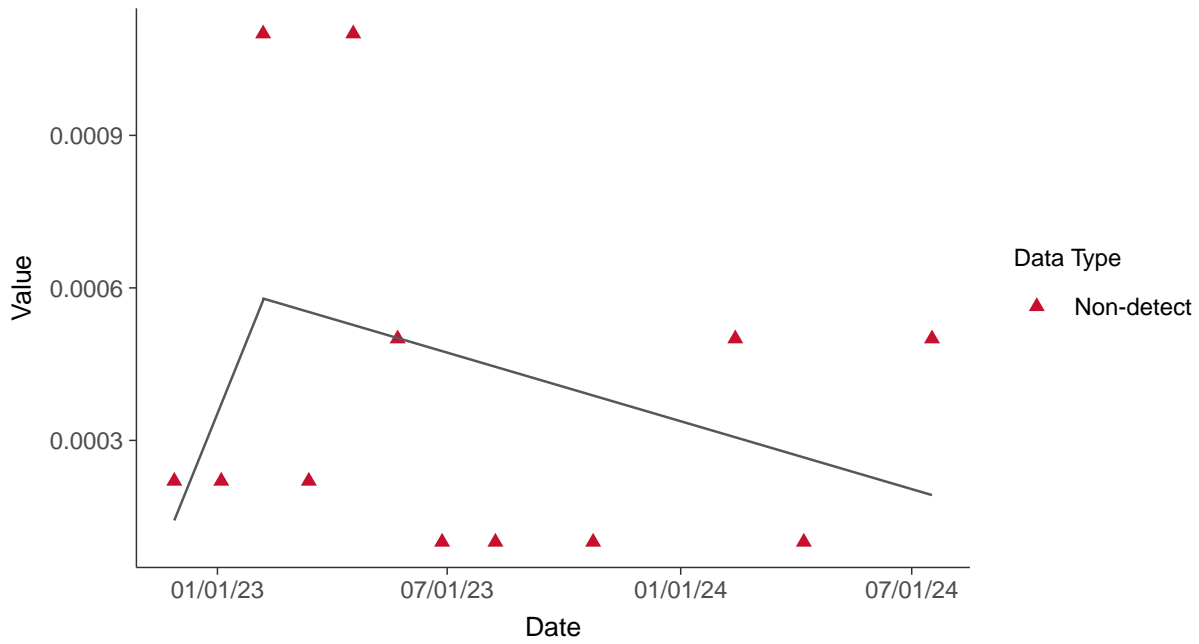






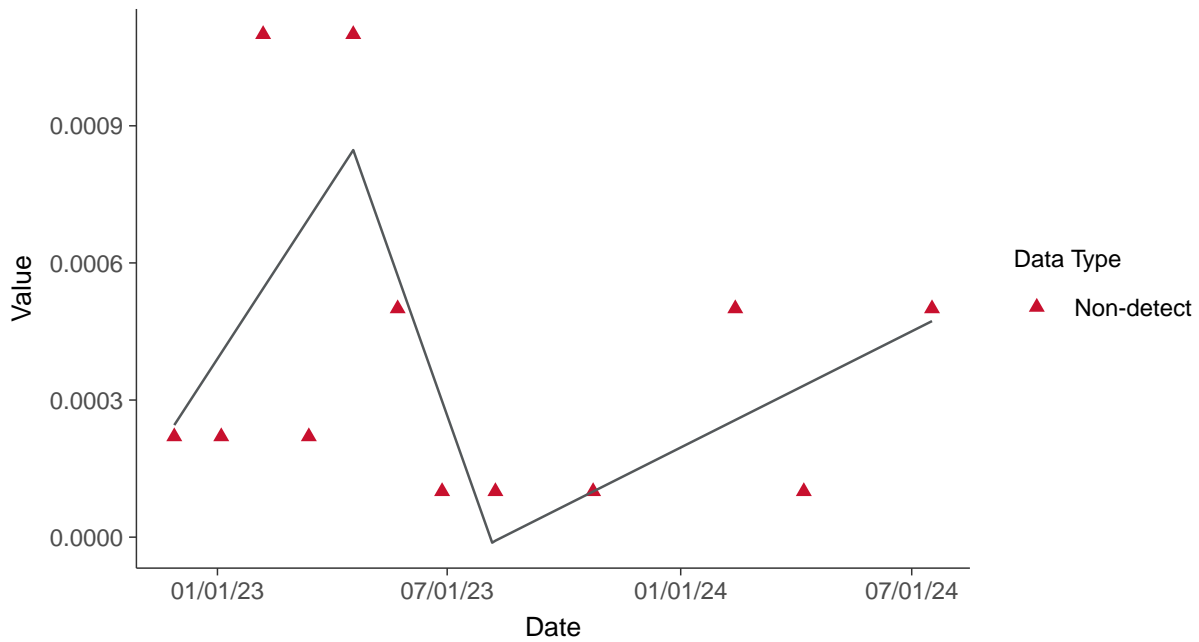
### Trend Regression: Piecewise Linear-Linear

Lead, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

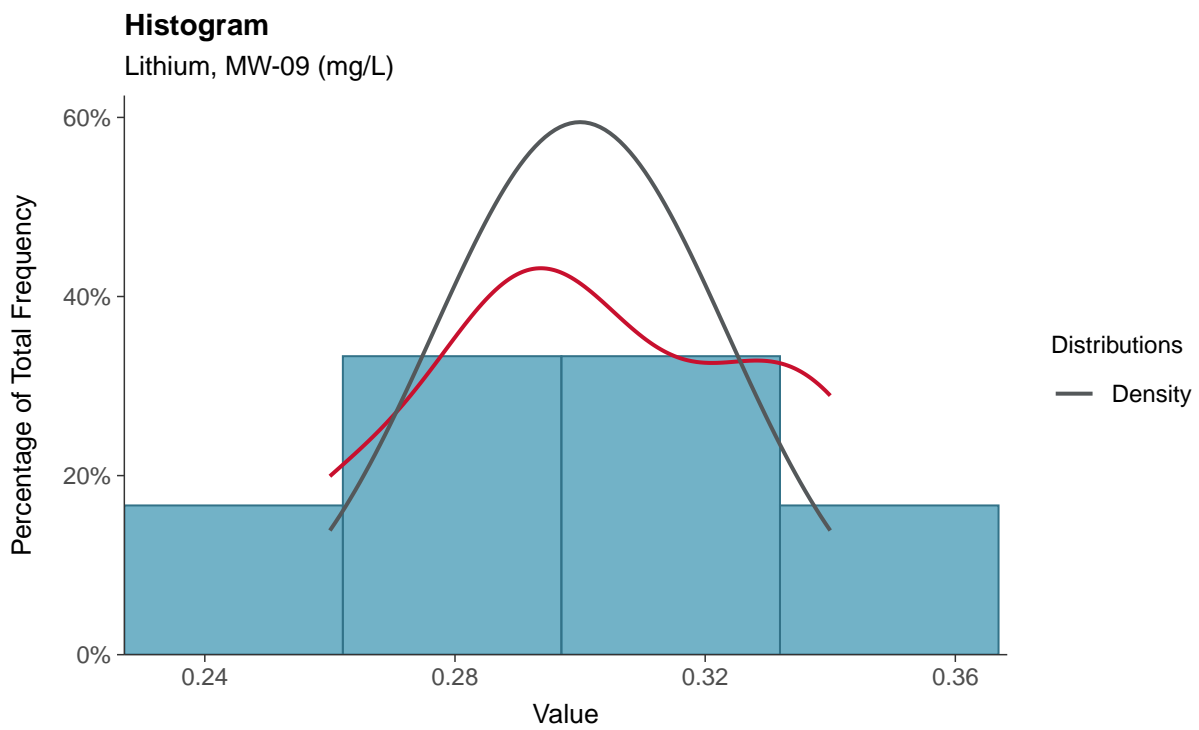
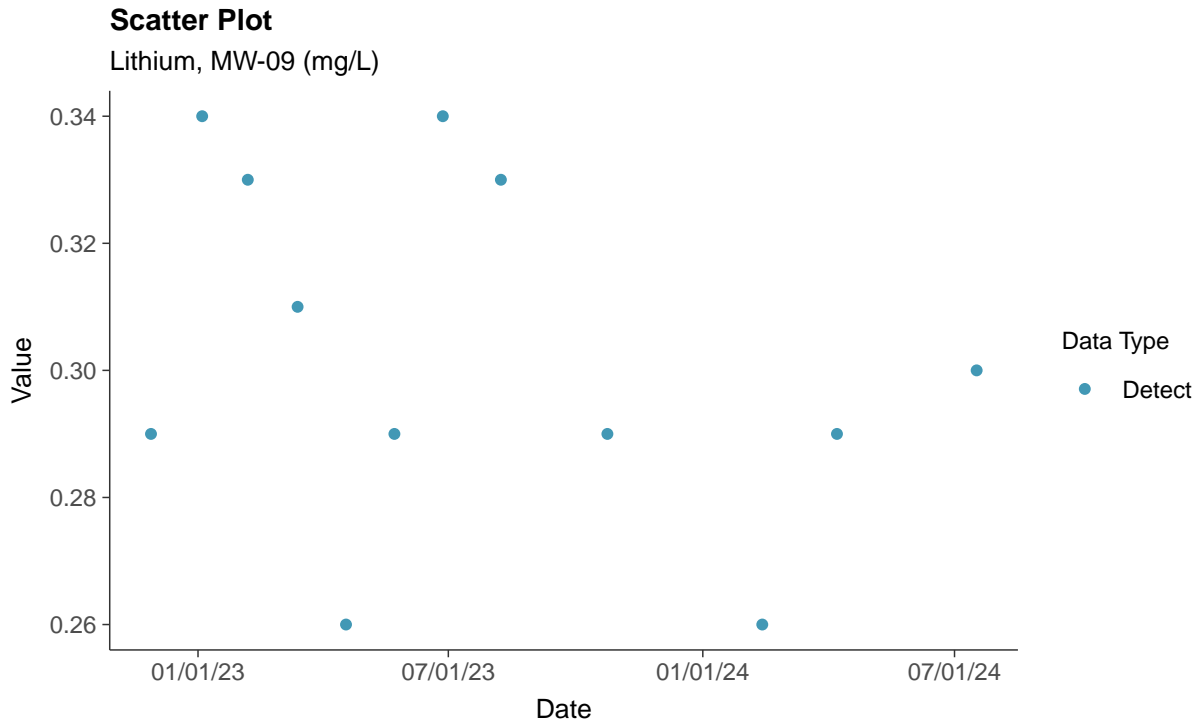
Lead, MW-09 (mg/L)





### Appendix IV: Lithium, MW-09

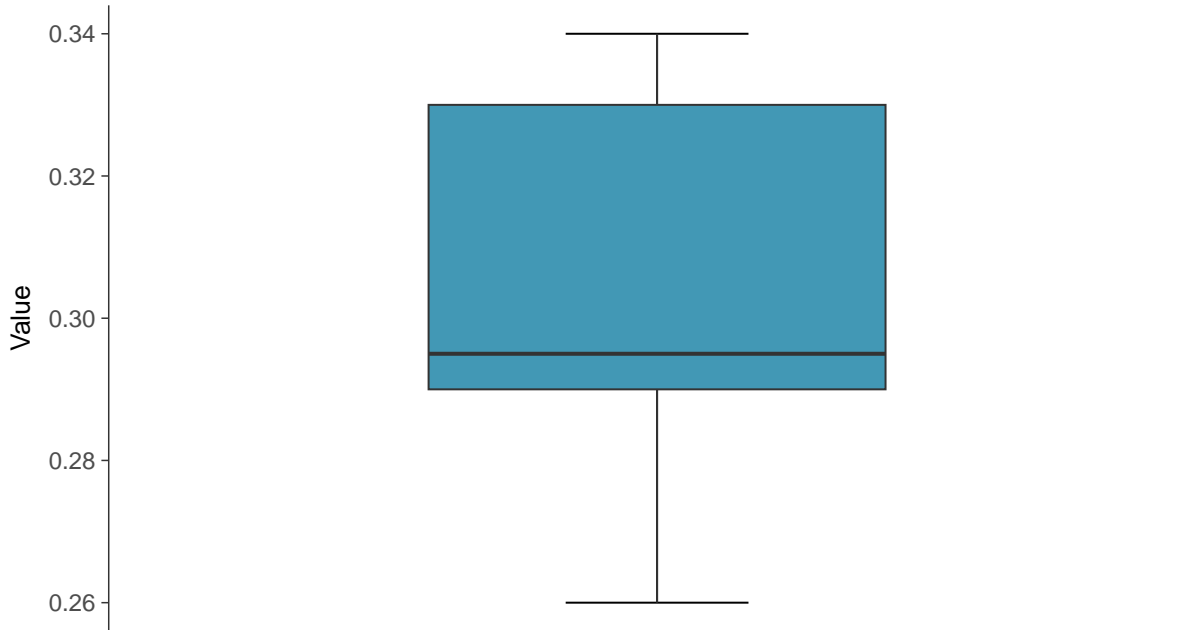
ID: 19\_2\_5\_116





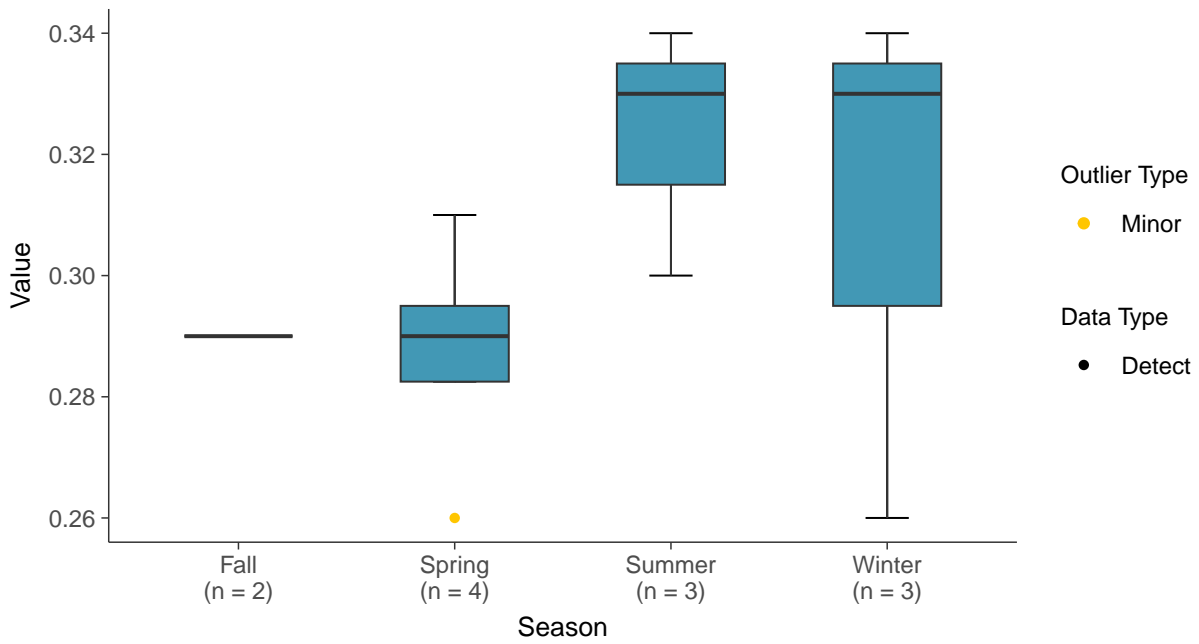
### Boxplot

Lithium, MW-09 (mg/L)



### Boxplot by Season

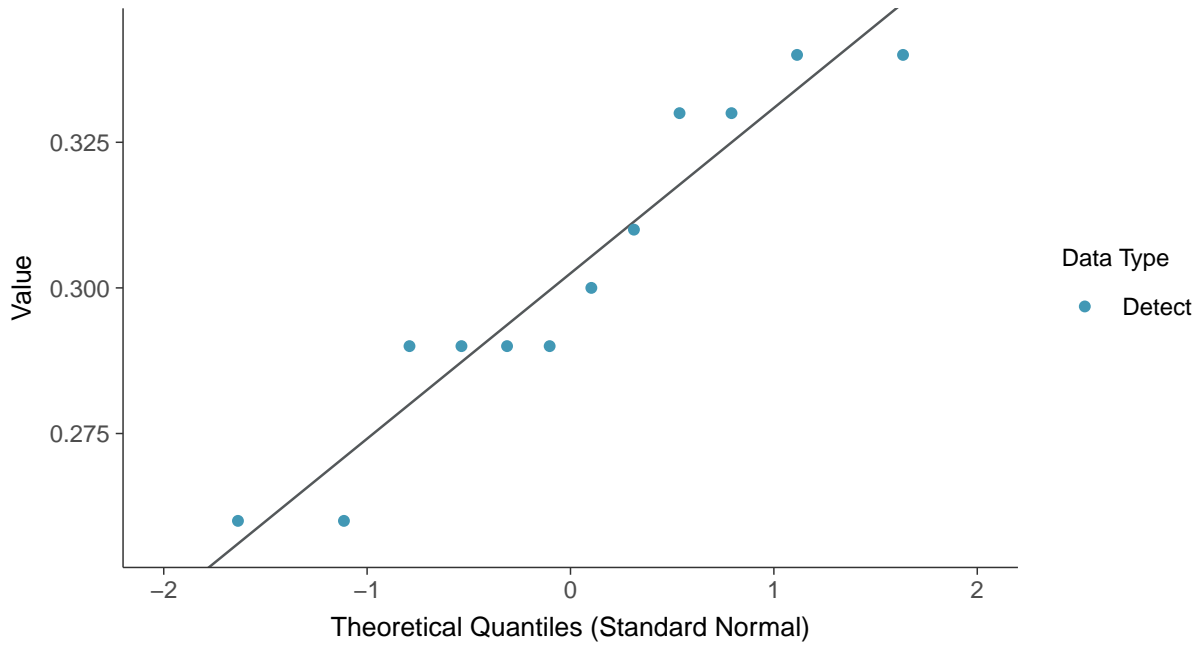
Lithium, MW-09 (mg/L)





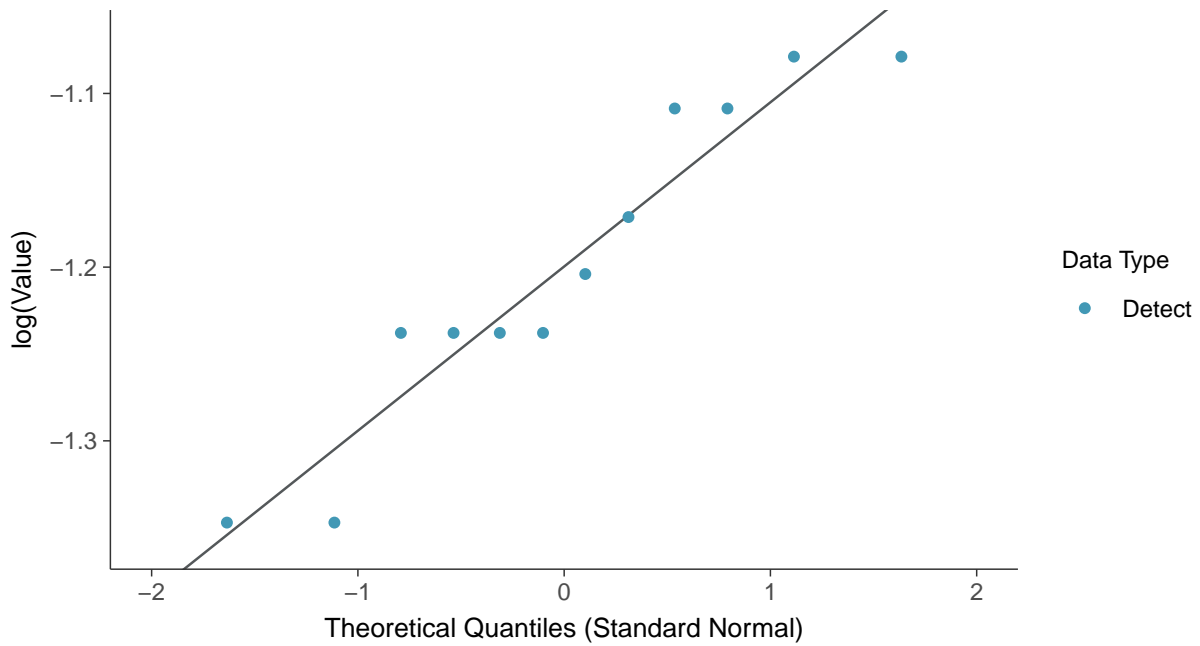
### Normal Q-Q plot

Lithium, MW-09 (mg/L)



### Lognormal Q-Q plot

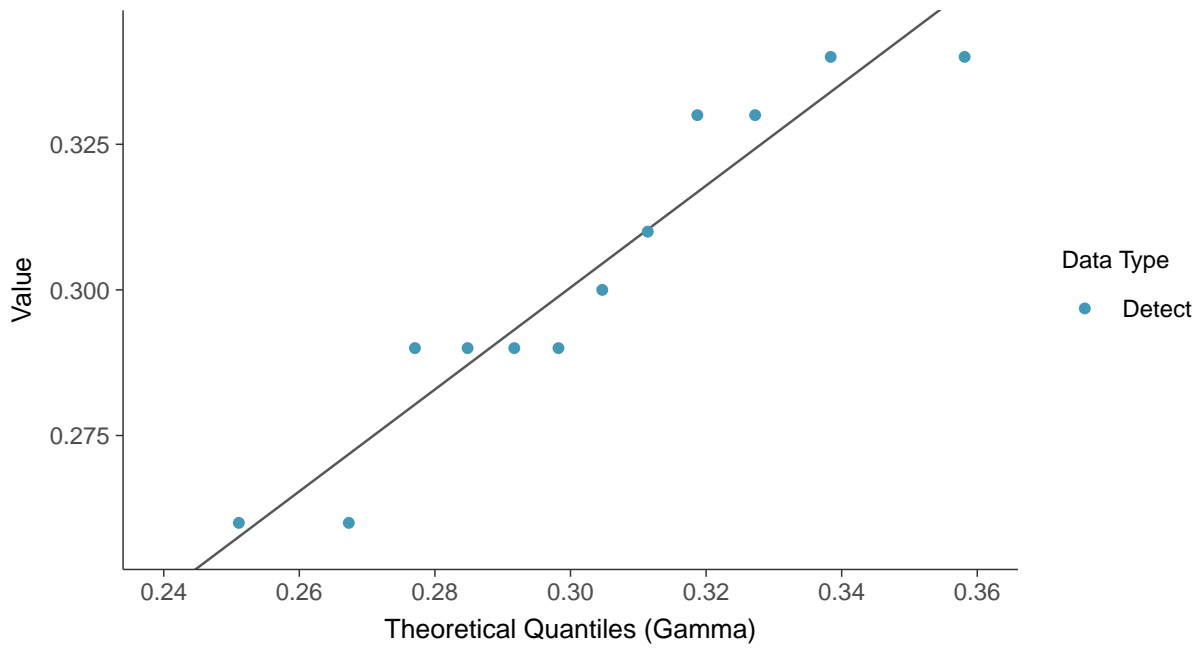
Lithium, MW-09 (mg/L)





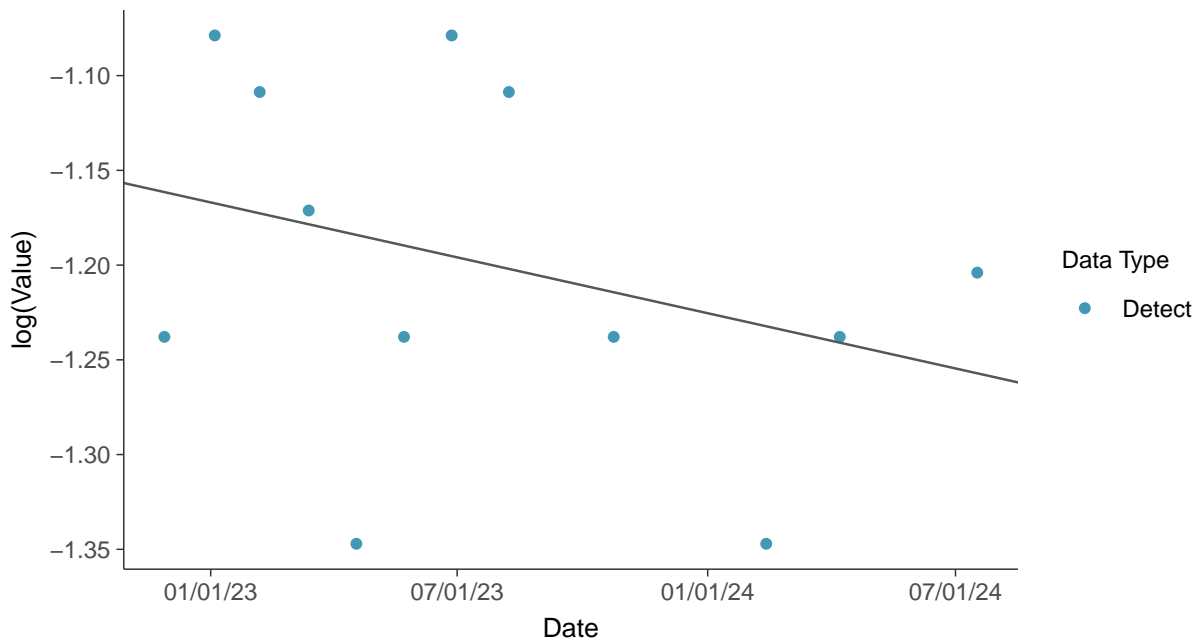
### Gamma Q-Q plot

Lithium, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

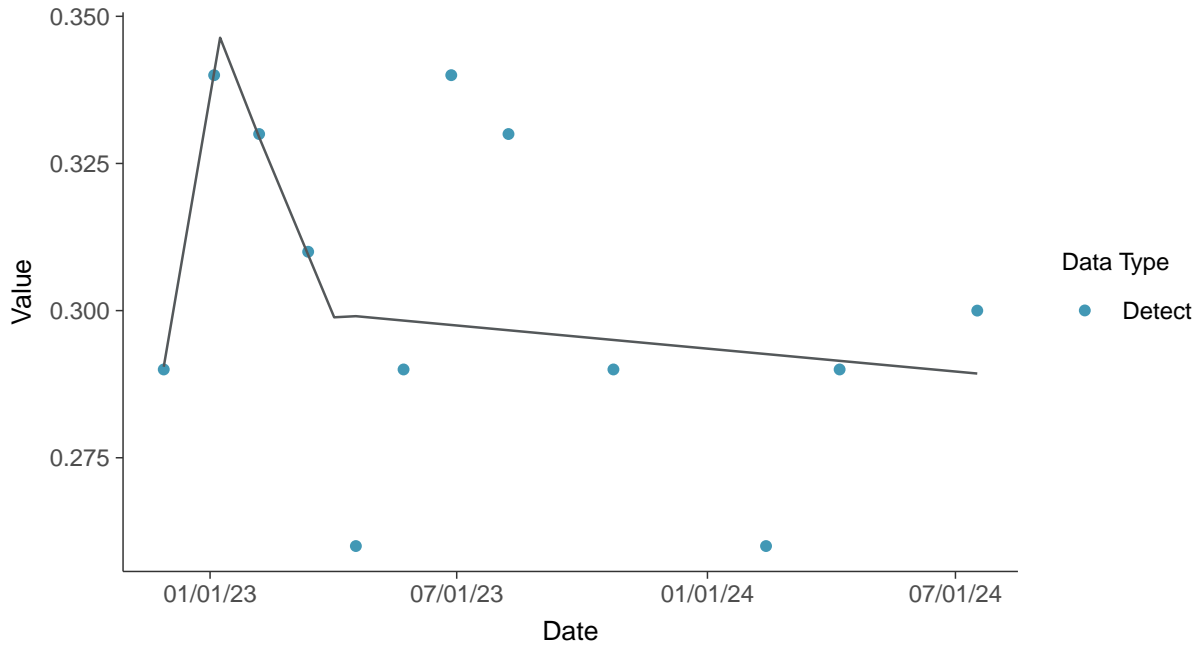
Lithium, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

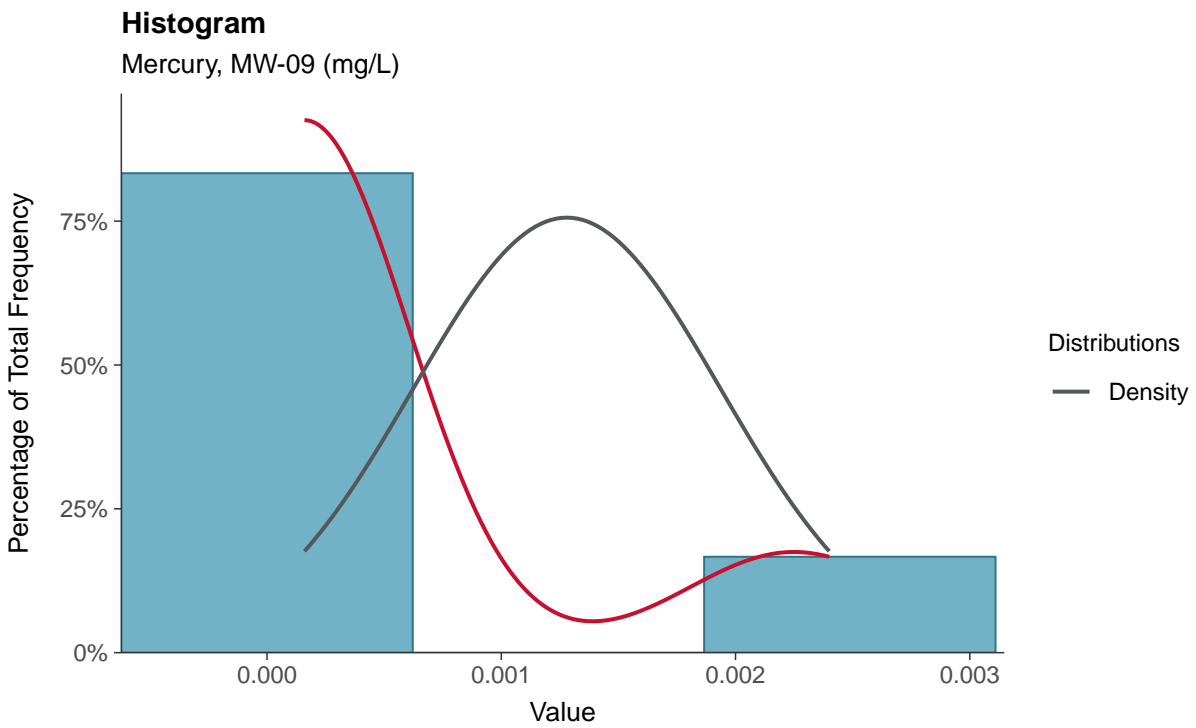
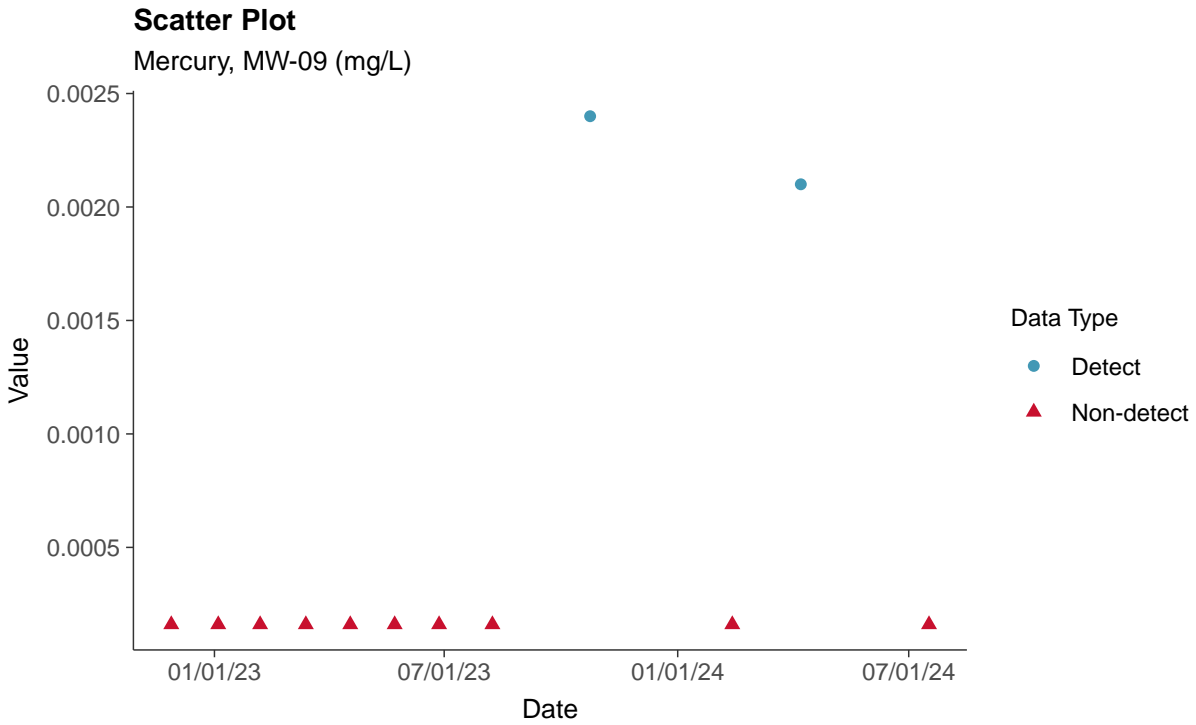
Lithium, MW-09 (mg/L)





### Appendix IV: Mercury, MW-09

ID: 19\_2\_5\_117



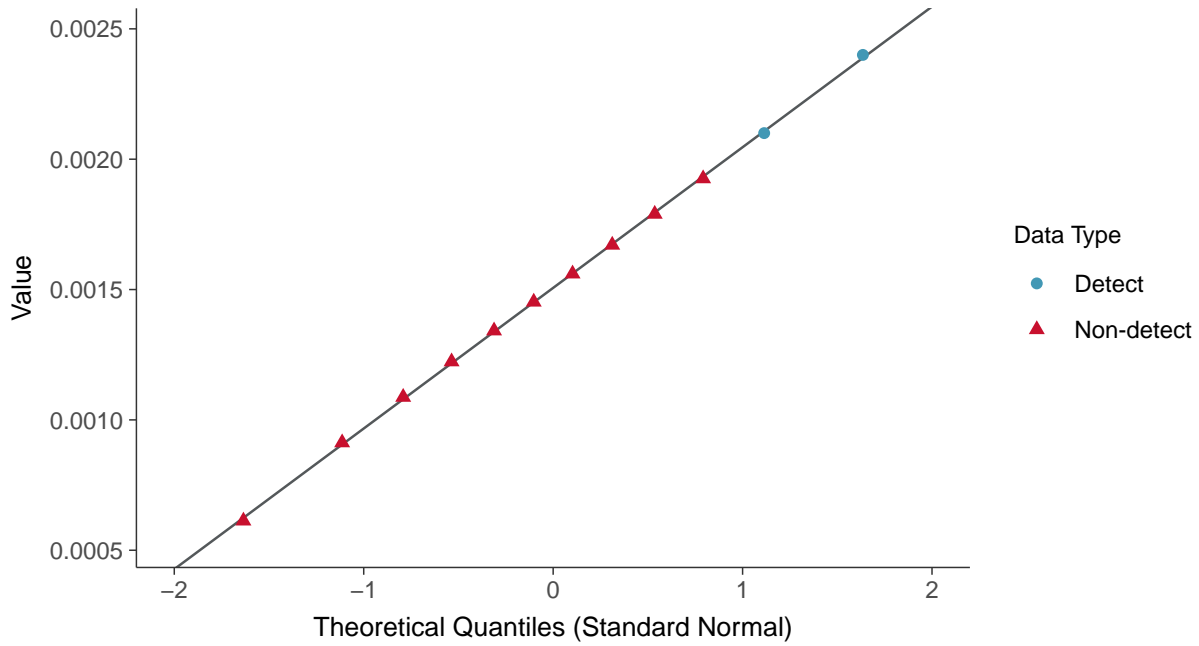






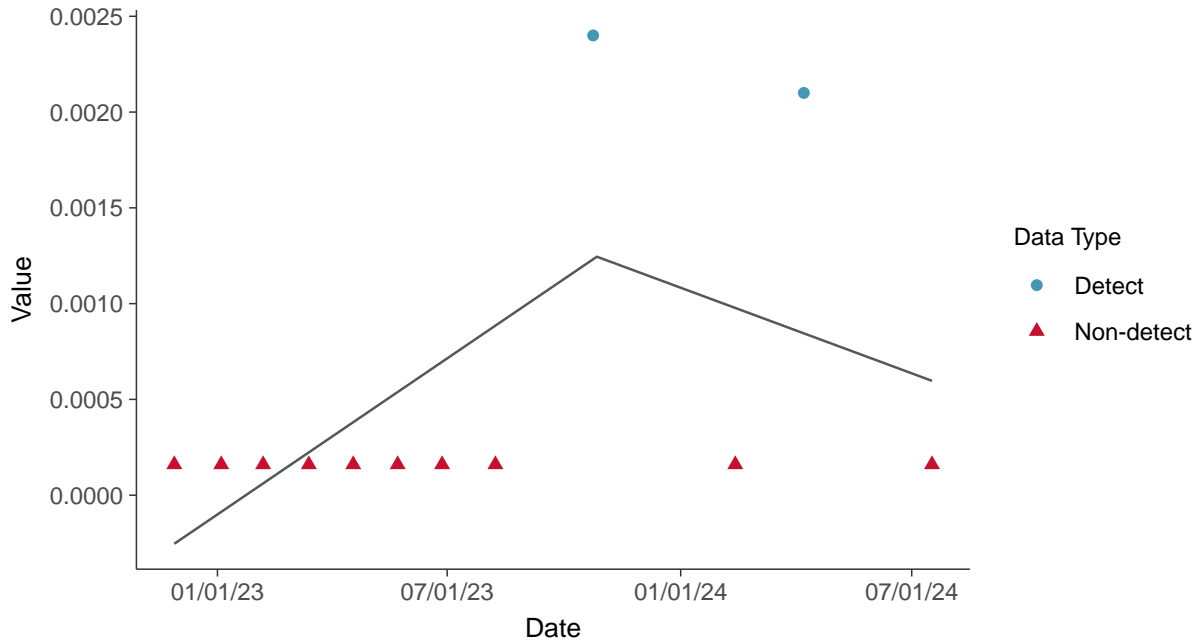
### Normal Q-Q plot using ROS Imputed Estimates

Mercury, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Mercury, MW-09 (mg/L)



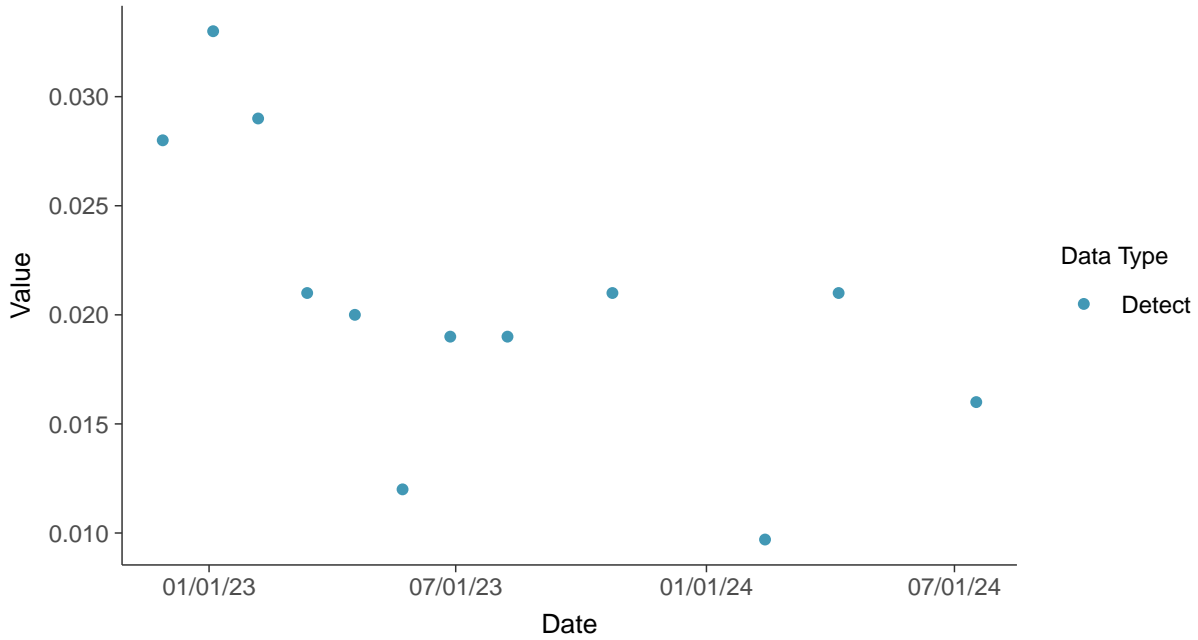


## Appendix IV: Molybdenum, MW-09

ID: 19\_2\_5\_118

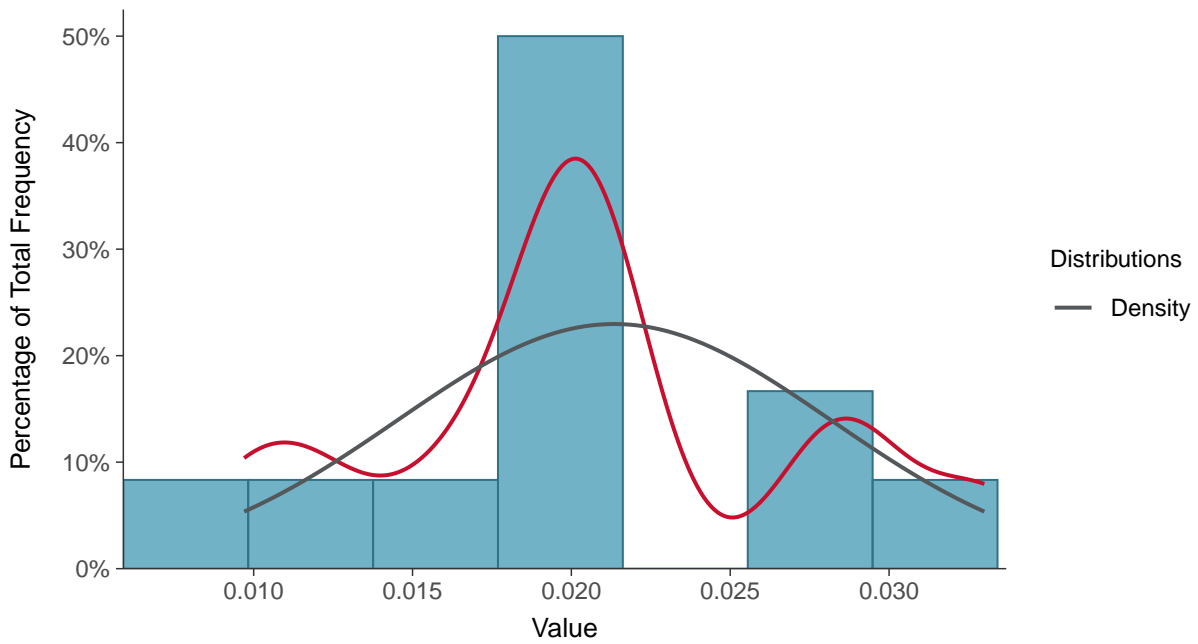
### Scatter Plot

Molybdenum, MW-09 (mg/L)



### Histogram

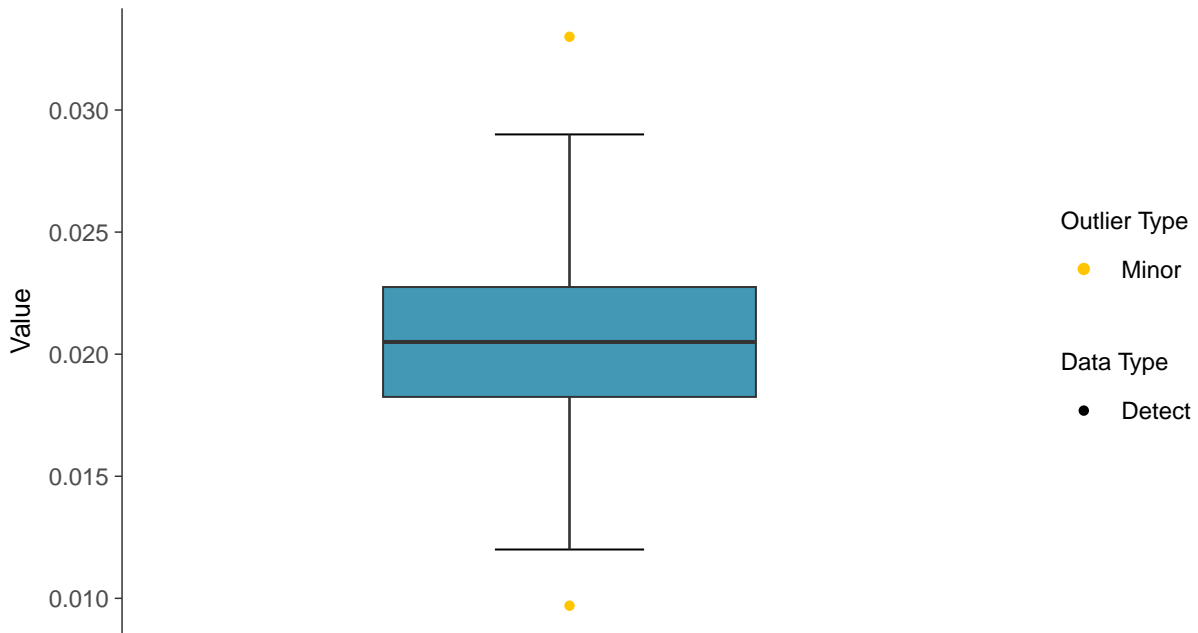
Molybdenum, MW-09 (mg/L)





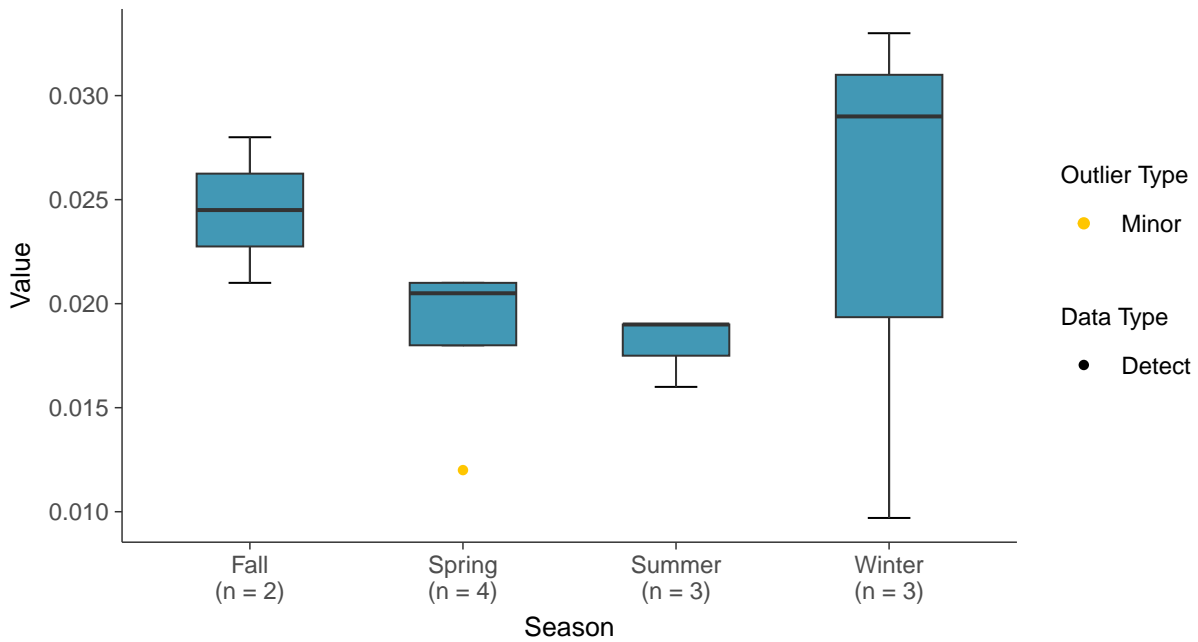
### Boxplot

Molybdenum, MW-09 (mg/L)



### Boxplot by Season

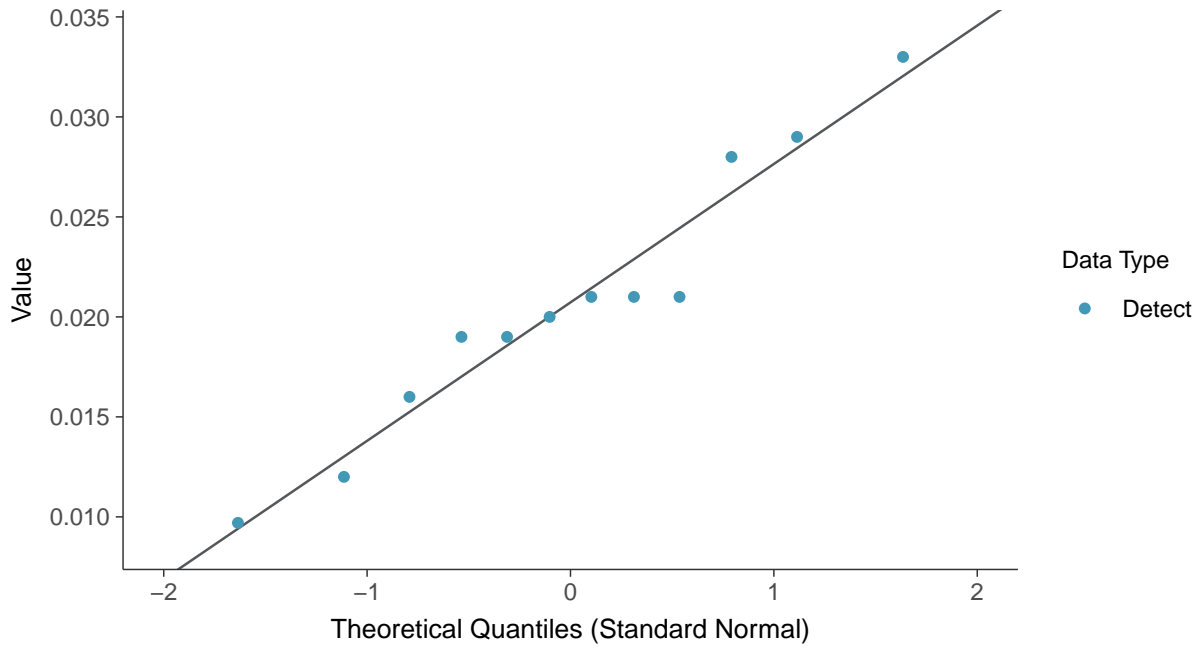
Molybdenum, MW-09 (mg/L)





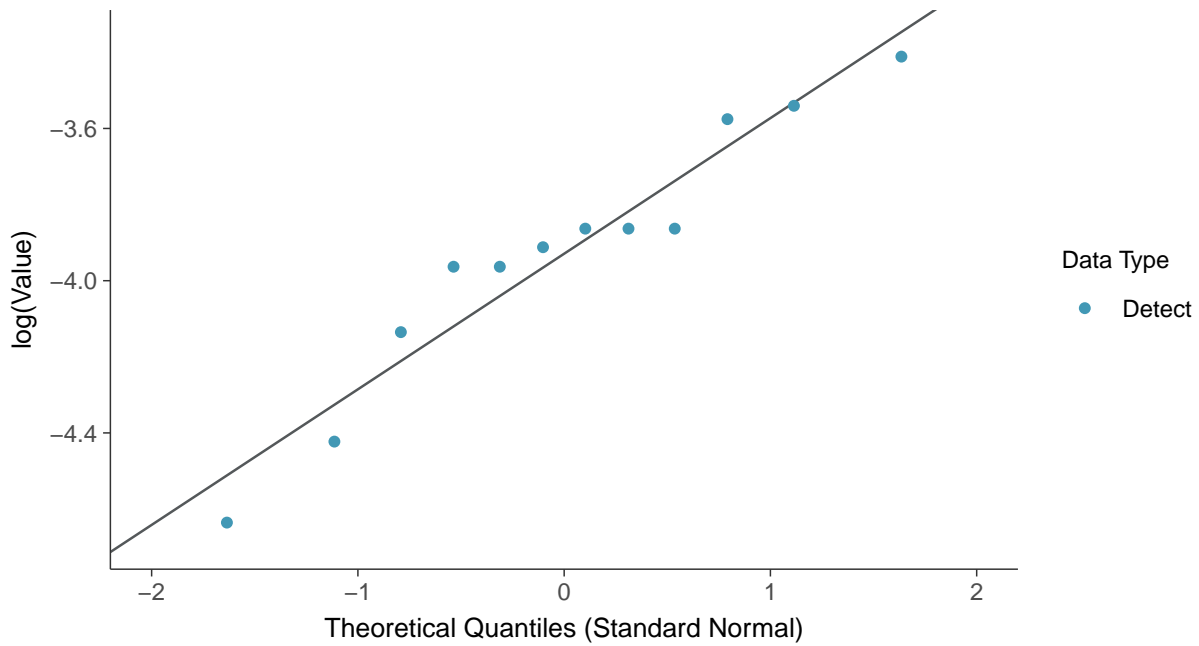
### Normal Q-Q plot

Molybdenum, MW-09 (mg/L)



### Lognormal Q-Q plot

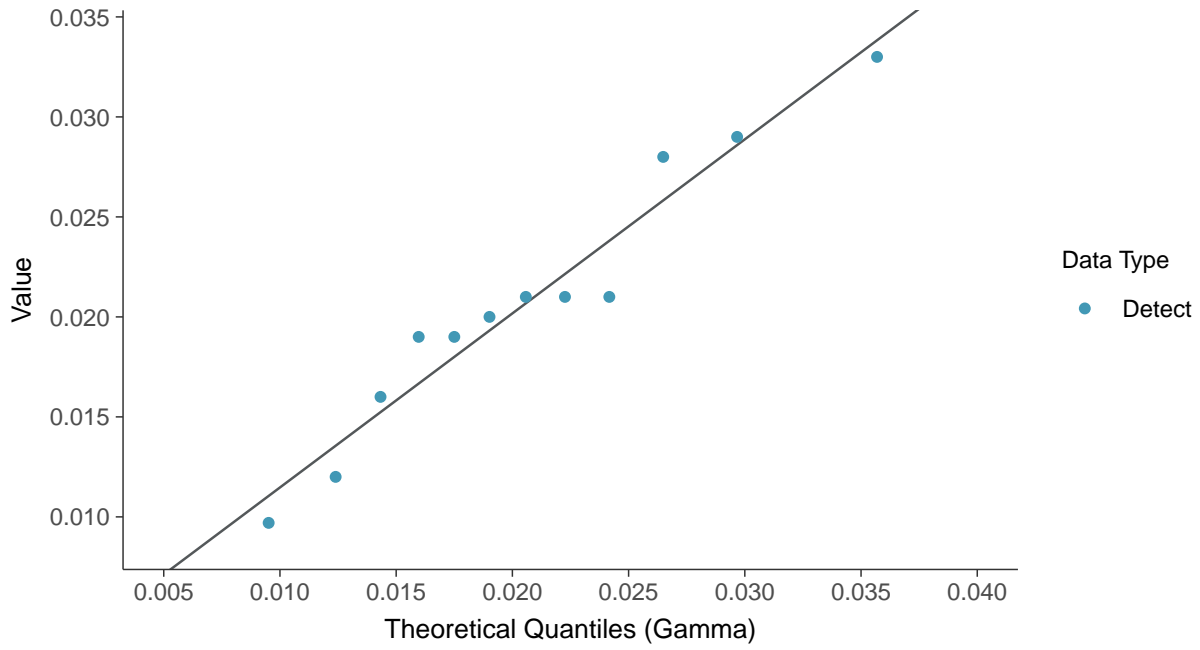
Molybdenum, MW-09 (mg/L)





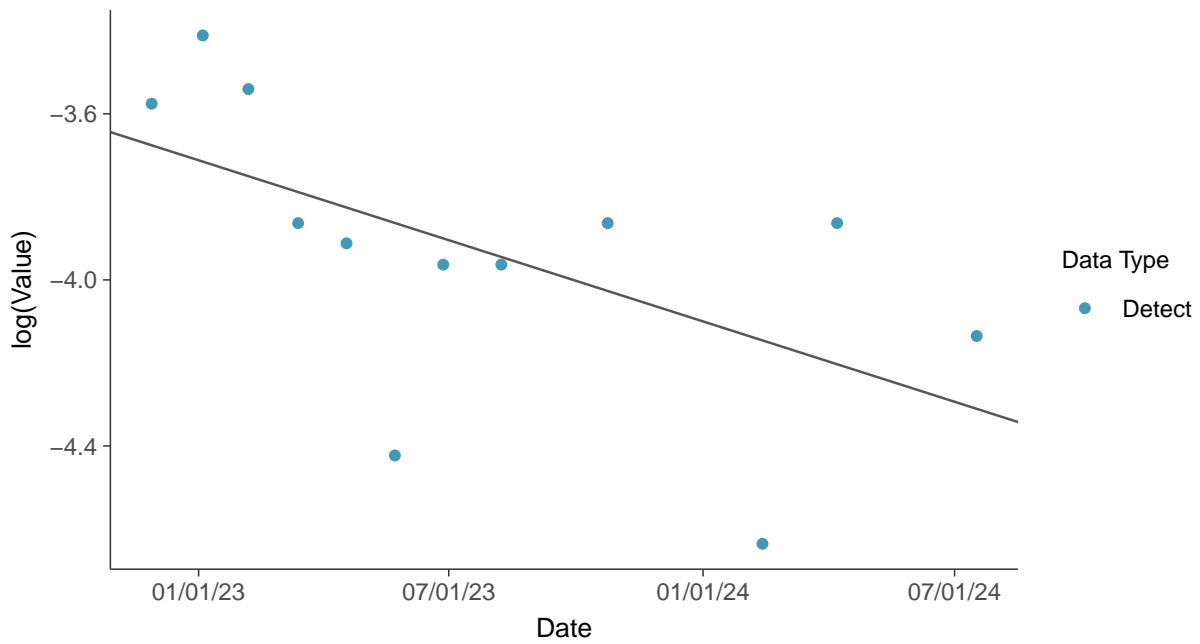
### Gamma Q-Q plot

Molybdenum, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

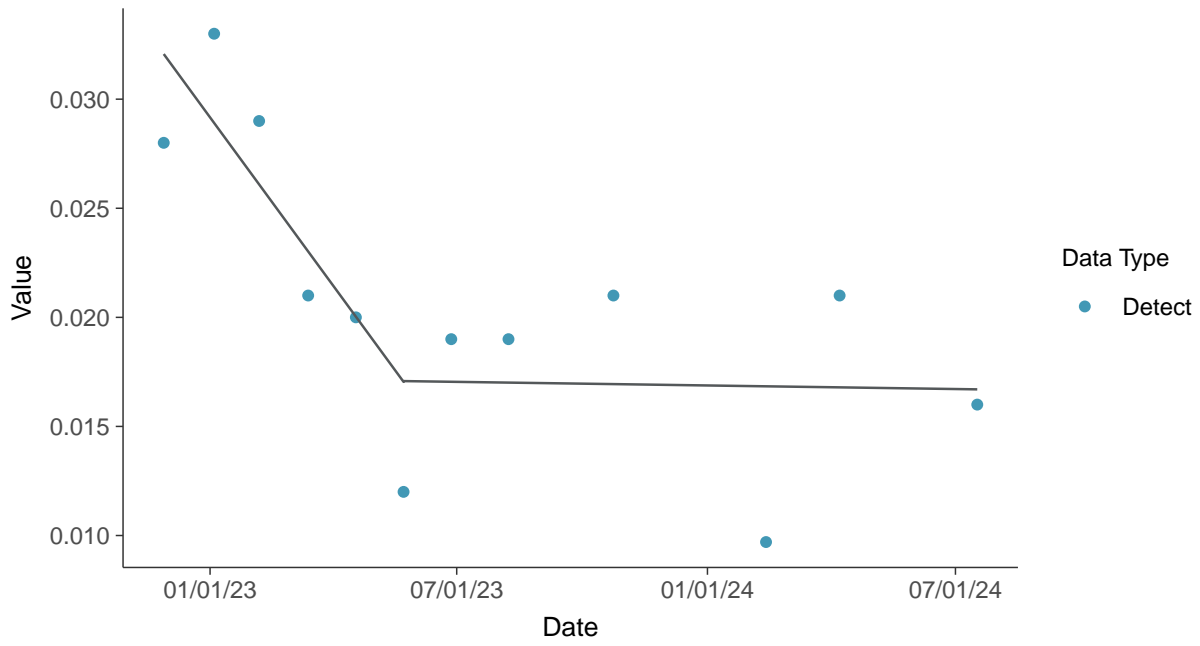
Molybdenum, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-09 (mg/L)



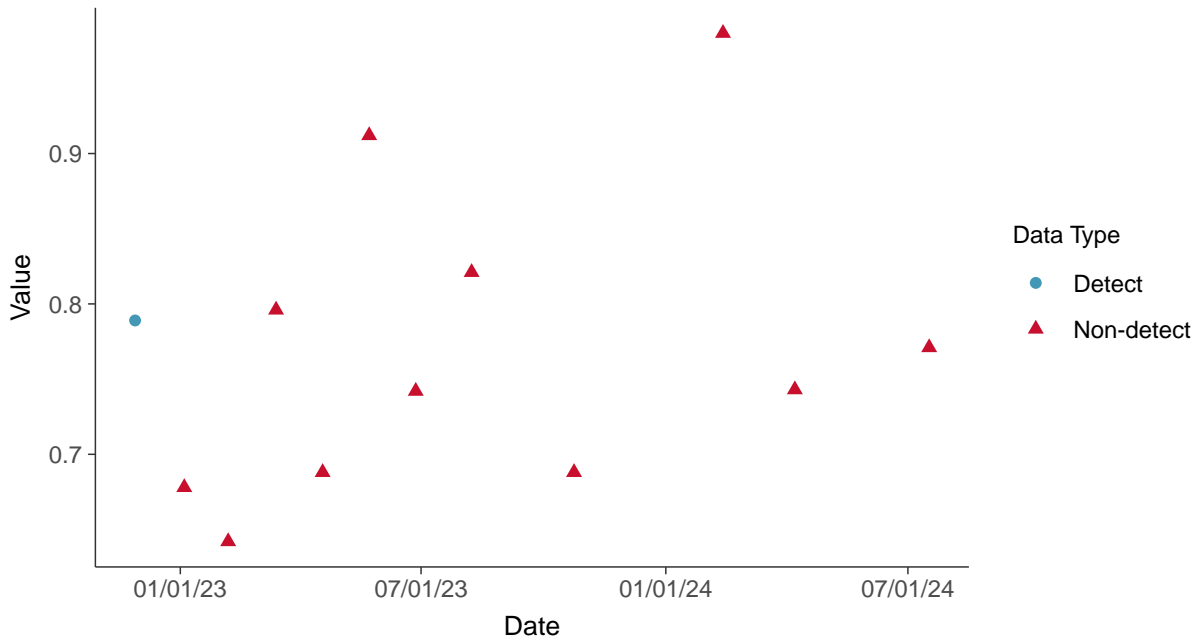


### Appendix IV: Radium 226 and 228, MW-09

ID: 19\_2\_5\_121

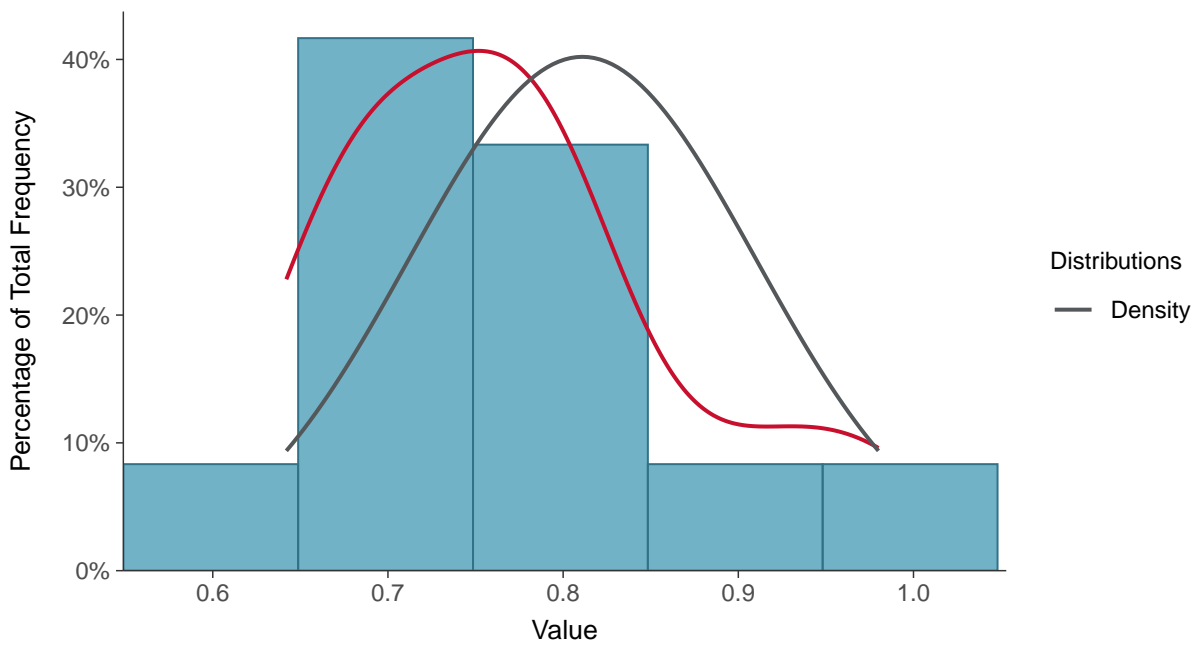
#### Scatter Plot

Radium 226 and 228, MW-09 (pCi/L)



#### Histogram

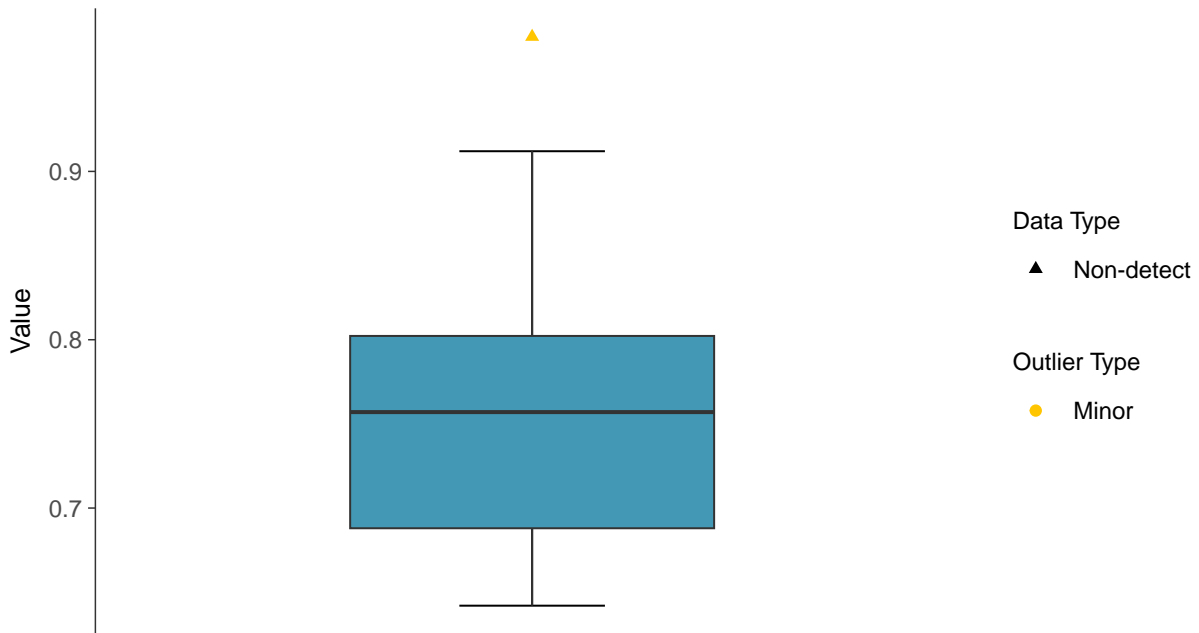
Radium 226 and 228, MW-09 (pCi/L)





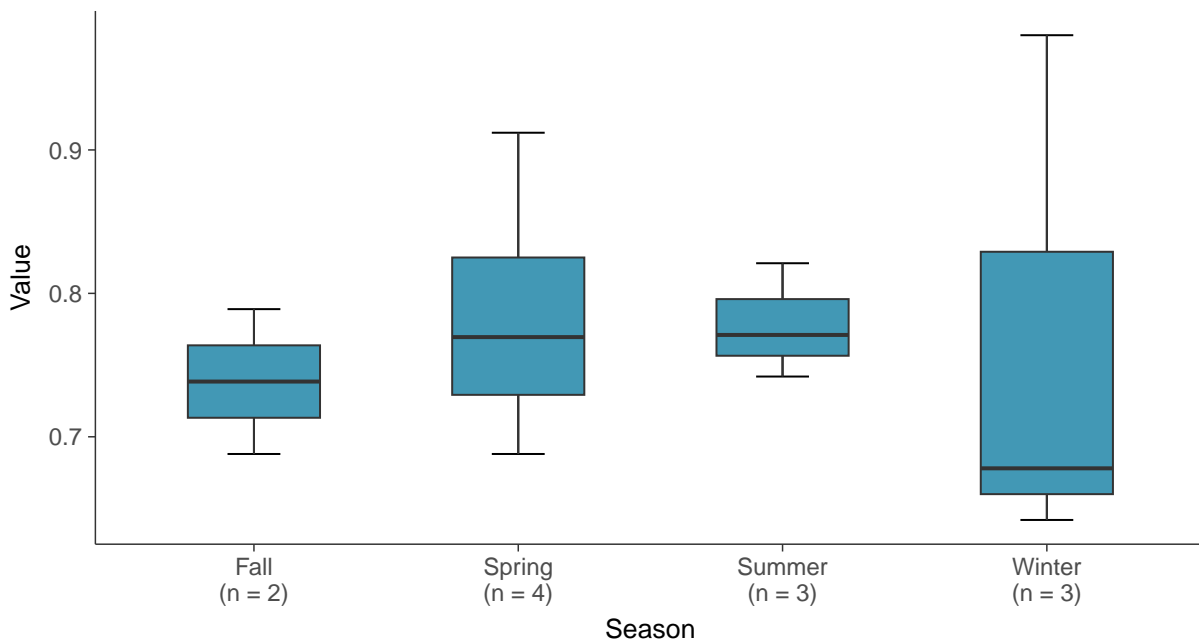
### Boxplot

Radium 226 and 228, MW-09 (pCi/L)



### Boxplot by Season

Radium 226 and 228, MW-09 (pCi/L)

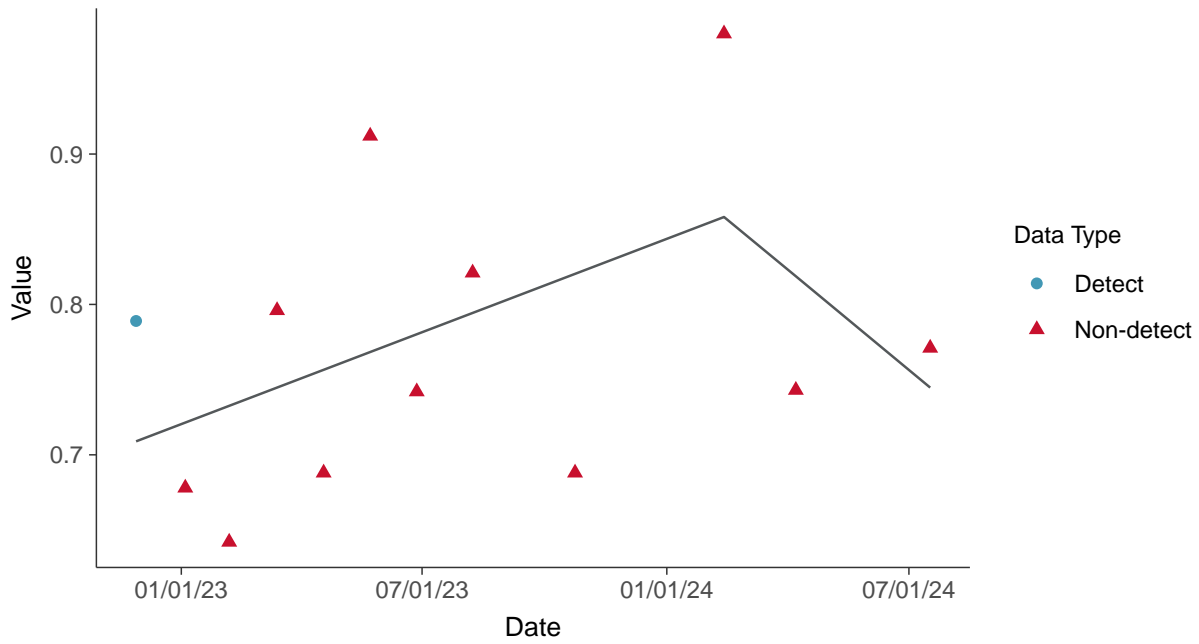






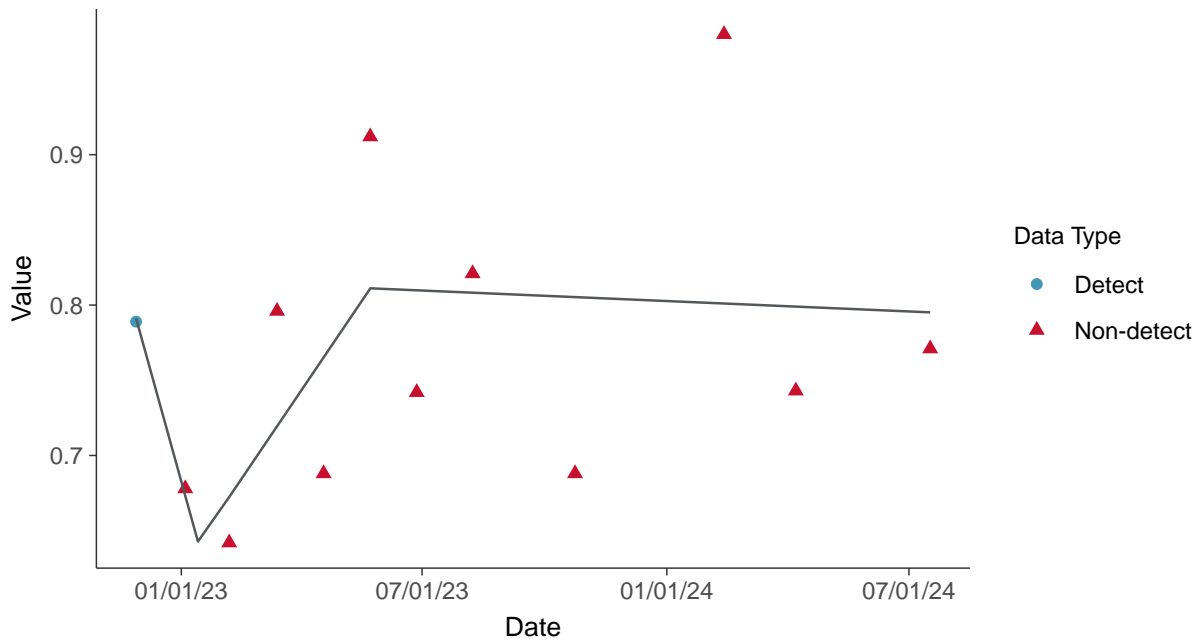
### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-09 (pCi/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-09 (pCi/L)

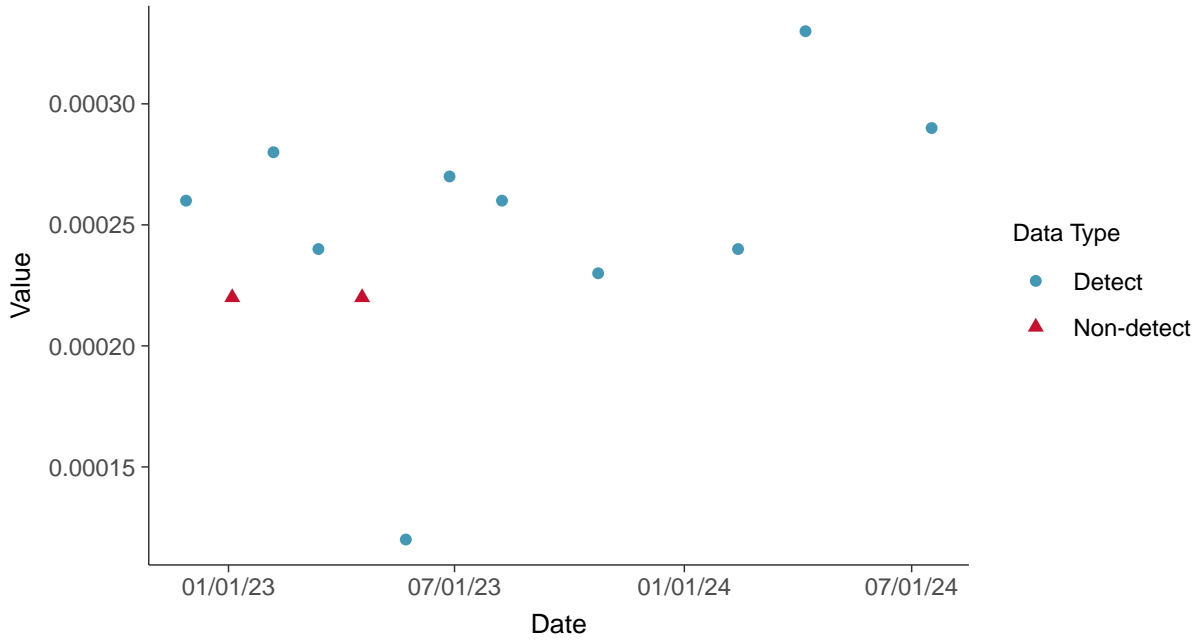




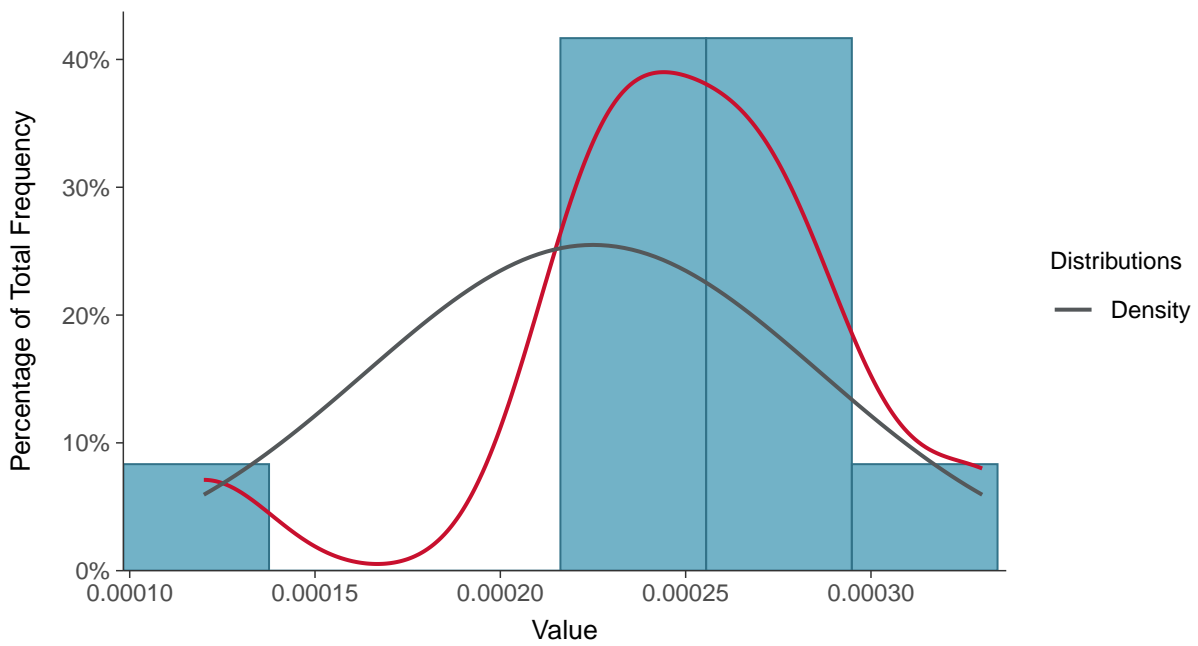
### Appendix IV: Selenium, MW-09

ID: 19\_2\_5\_122

**Scatter Plot**  
Selenium, MW-09 (mg/L)



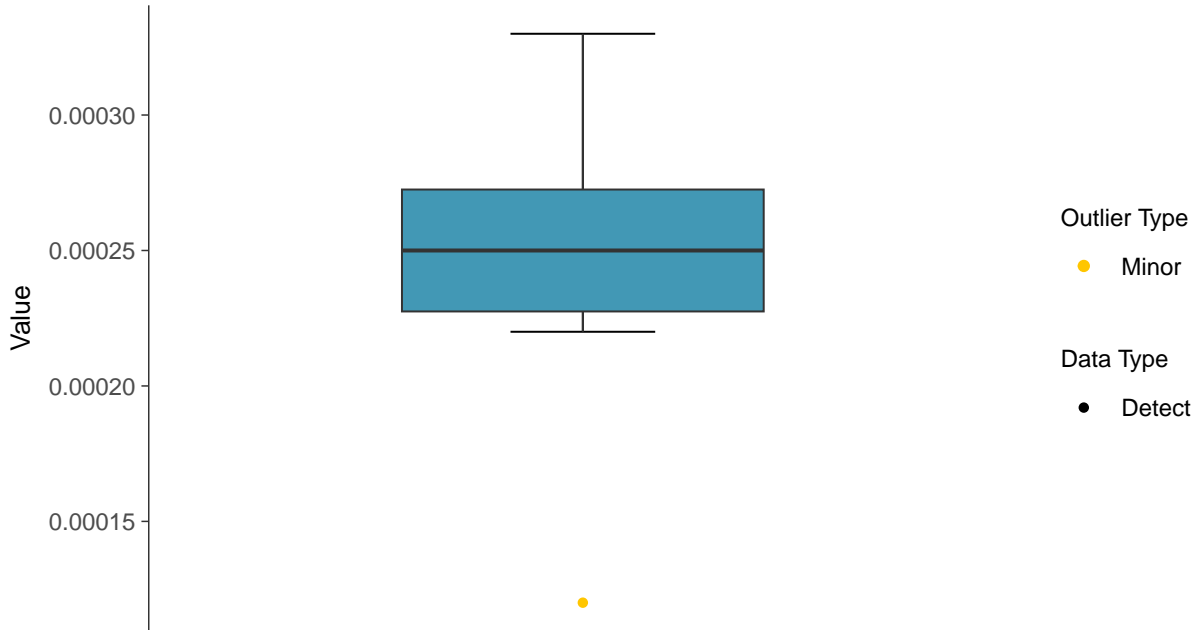
**Histogram**  
Selenium, MW-09 (mg/L)





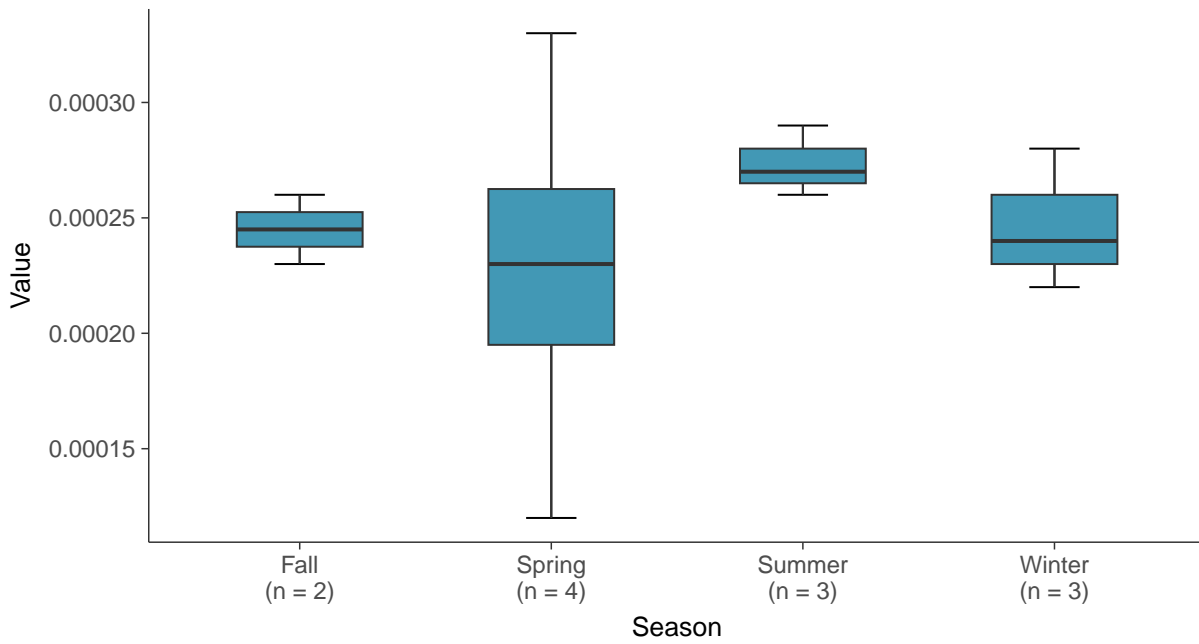
### Boxplot

Selenium, MW-09 (mg/L)



### Boxplot by Season

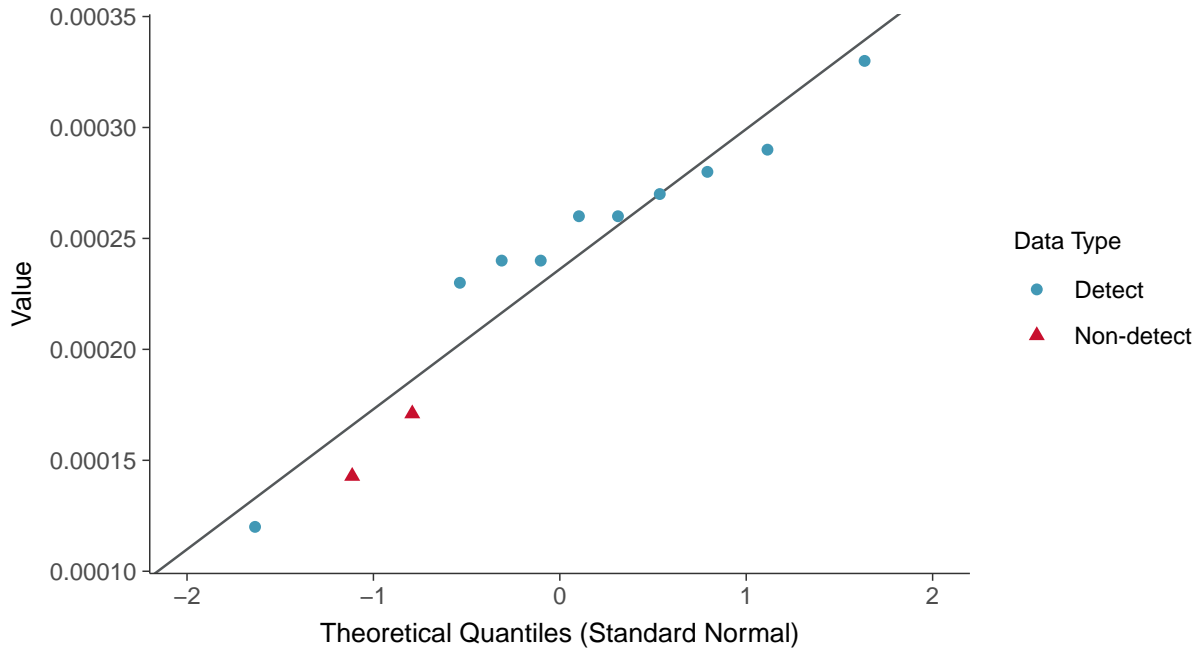
Selenium, MW-09 (mg/L)





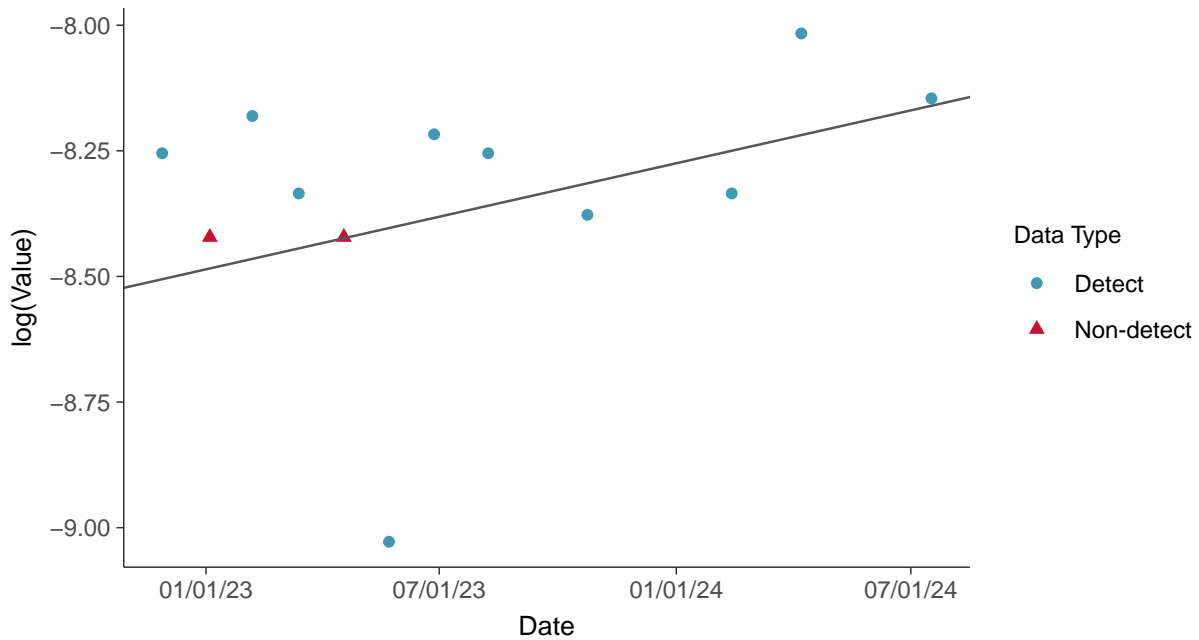
### Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

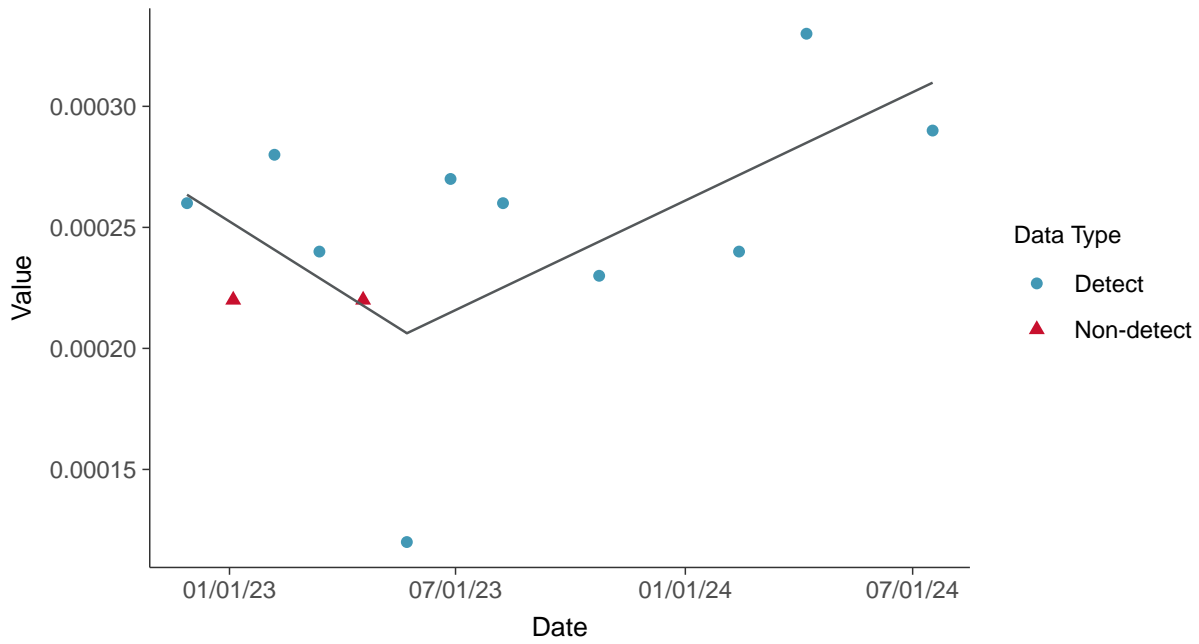
Selenium, MW-09 (mg/L)





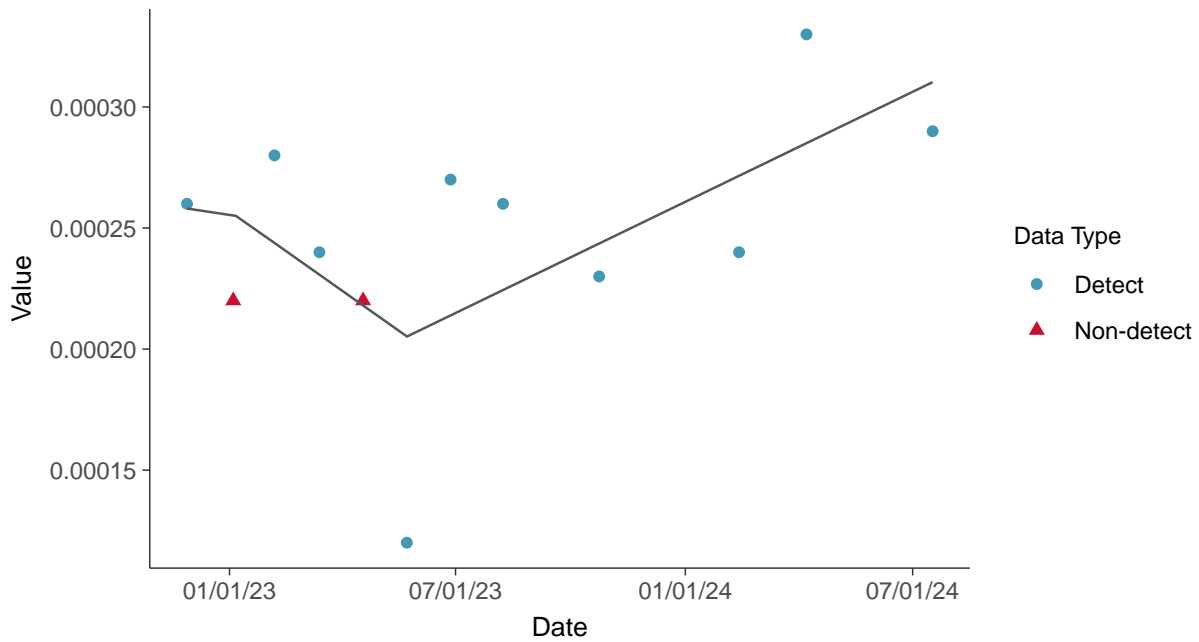
### Trend Regression: Piecewise Linear-Linear

Selenium, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-09 (mg/L)



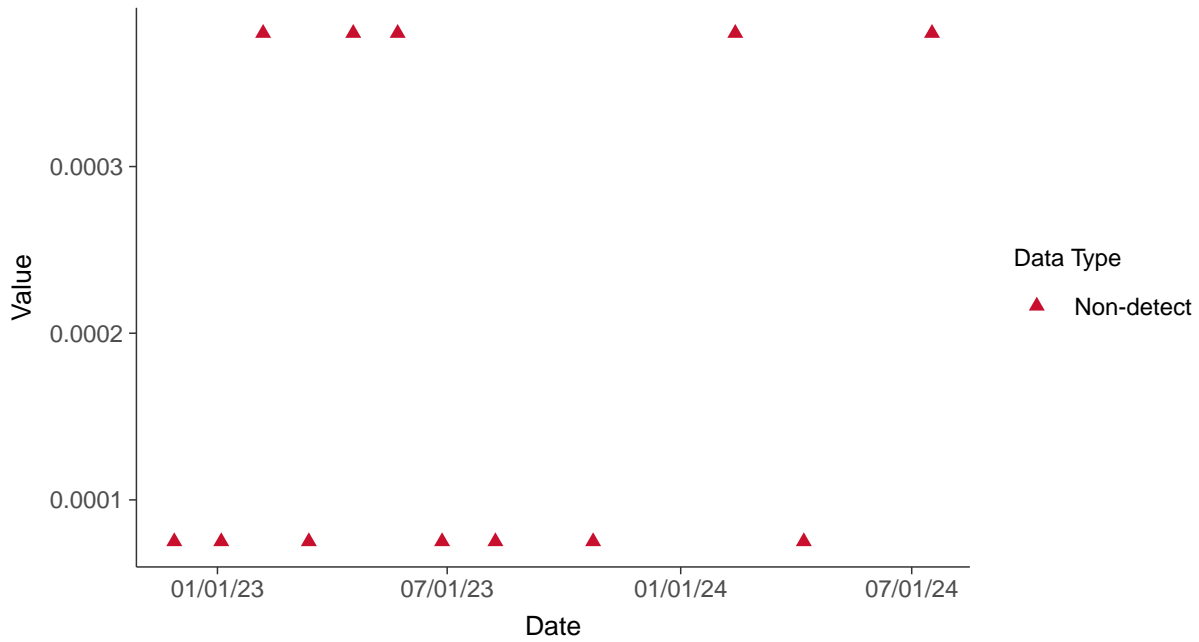


### Appendix IV: Thallium, MW-09

ID: 19\_2\_5\_125

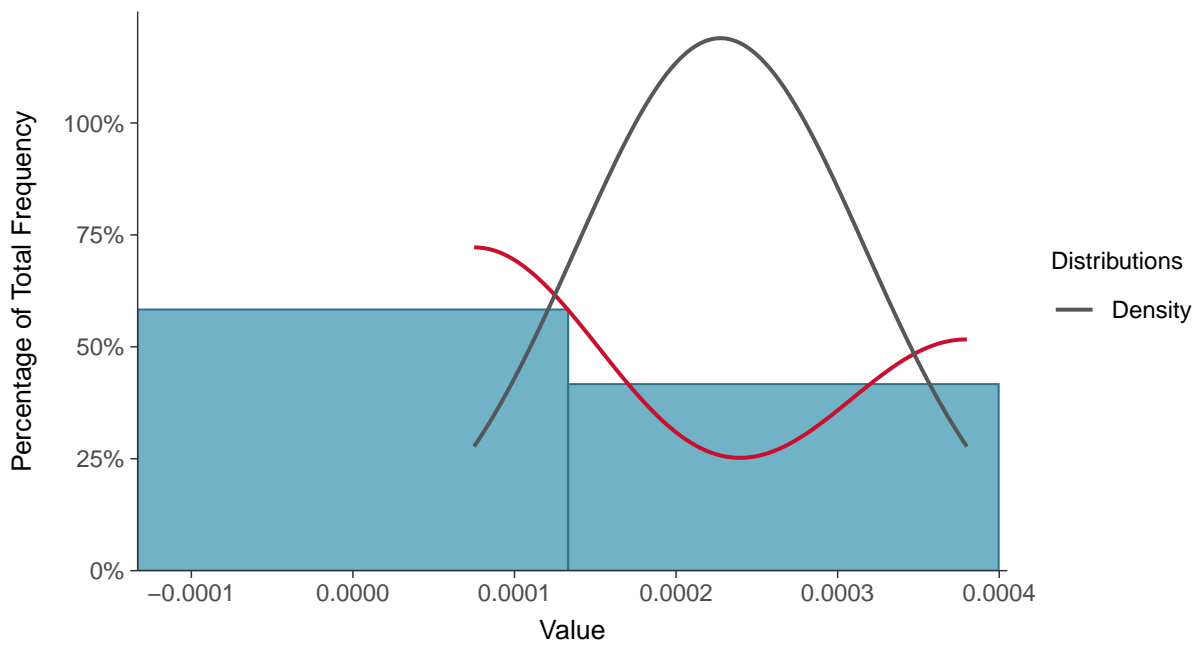
#### Scatter Plot

Thallium, MW-09 (mg/L)



#### Histogram

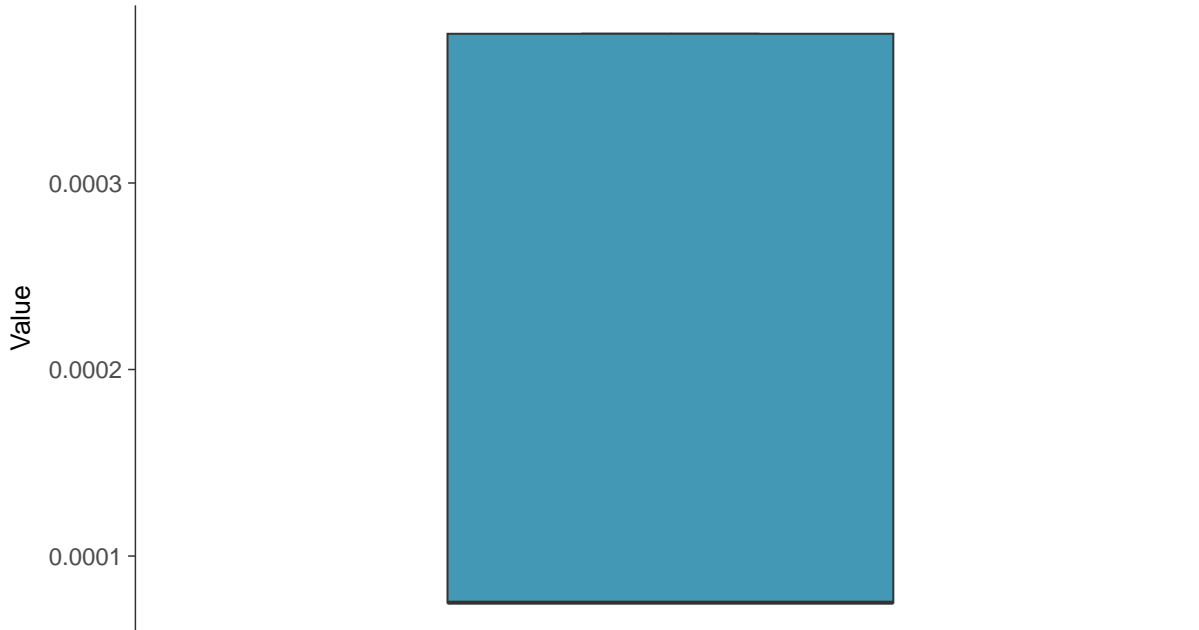
Thallium, MW-09 (mg/L)





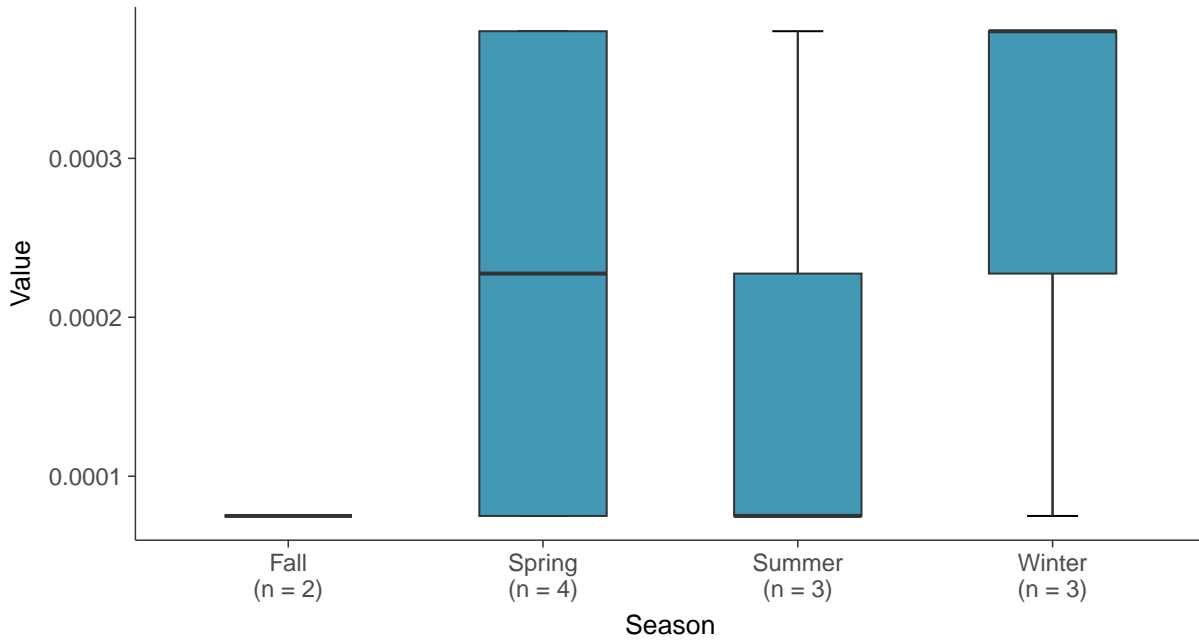
### Boxplot

Thallium, MW-09 (mg/L)



### Boxplot by Season

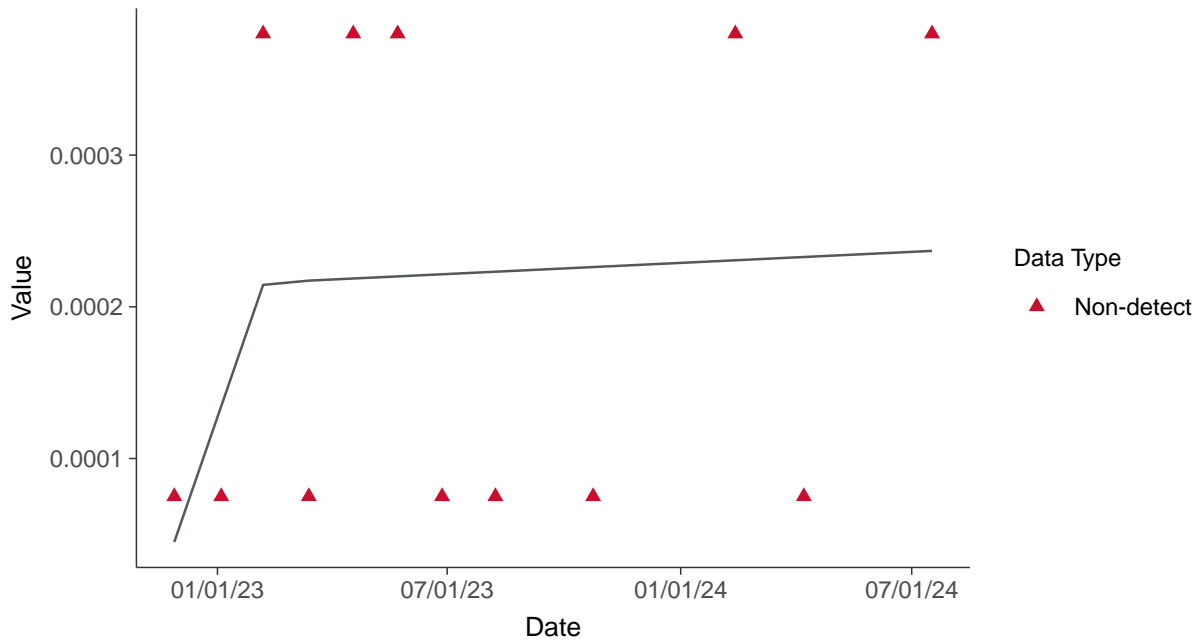
Thallium, MW-09 (mg/L)





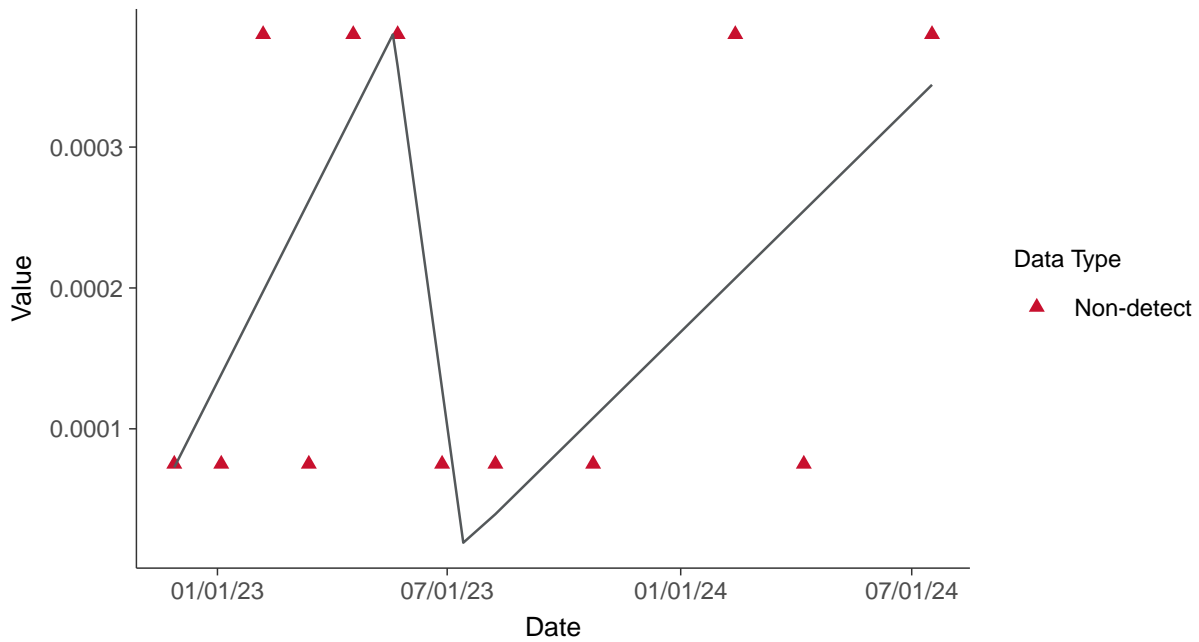
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-09 (mg/L)





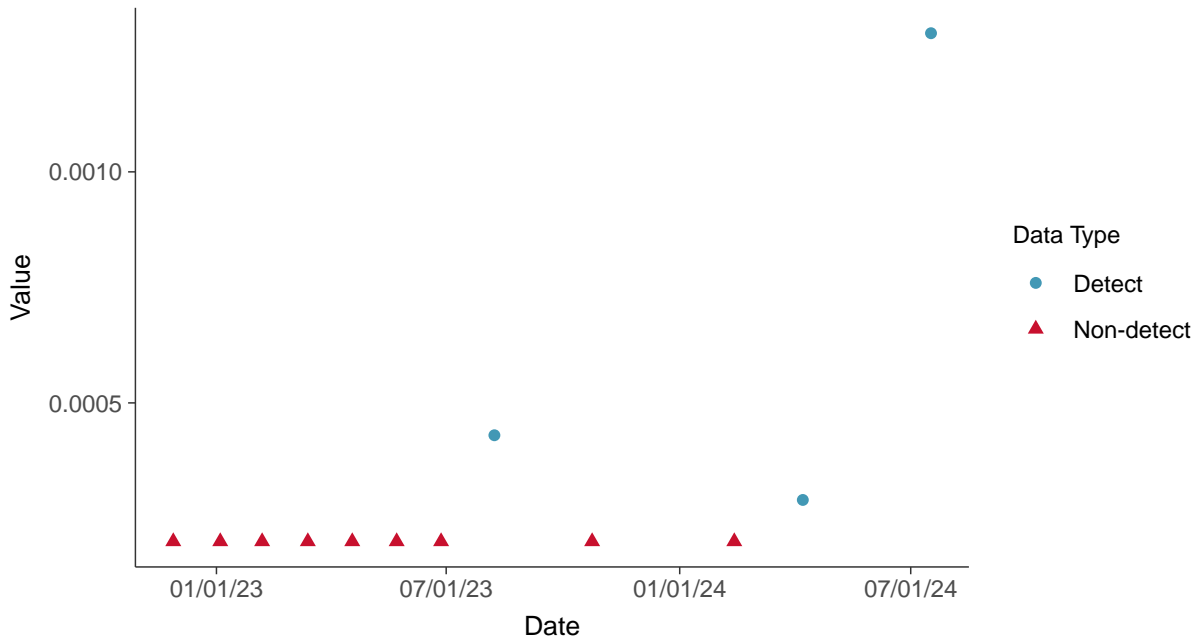


### Part 115: Copper, MW-09

ID: 19\_2\_6\_111

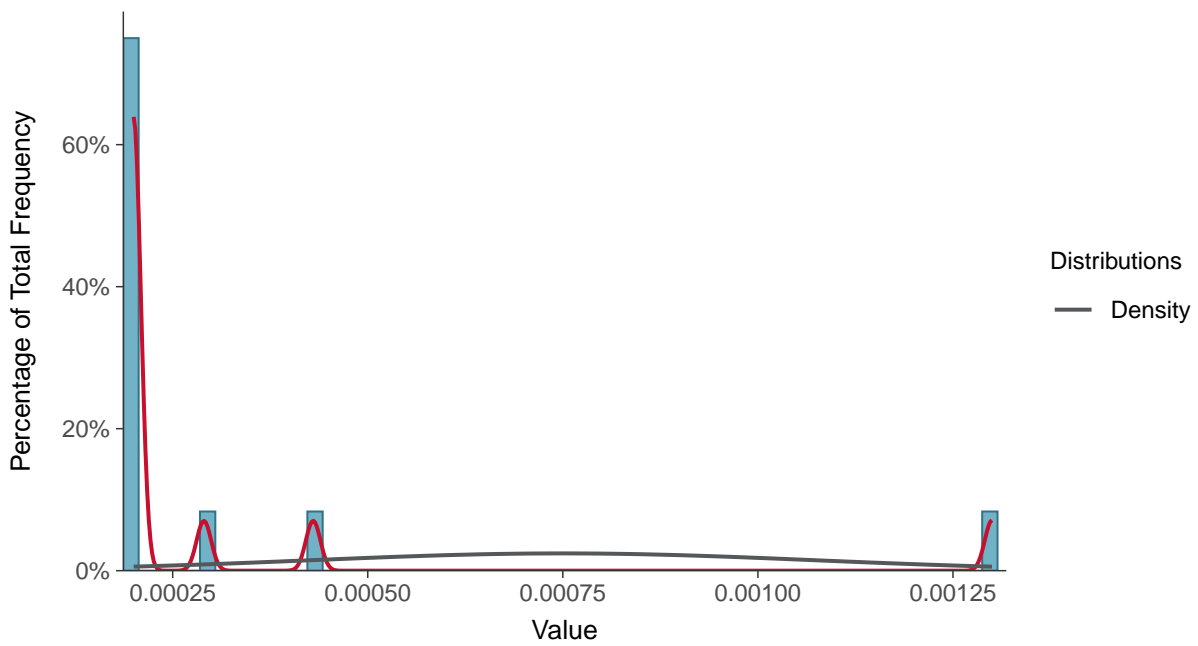
#### Scatter Plot

Copper, MW-09 (mg/L)



#### Histogram

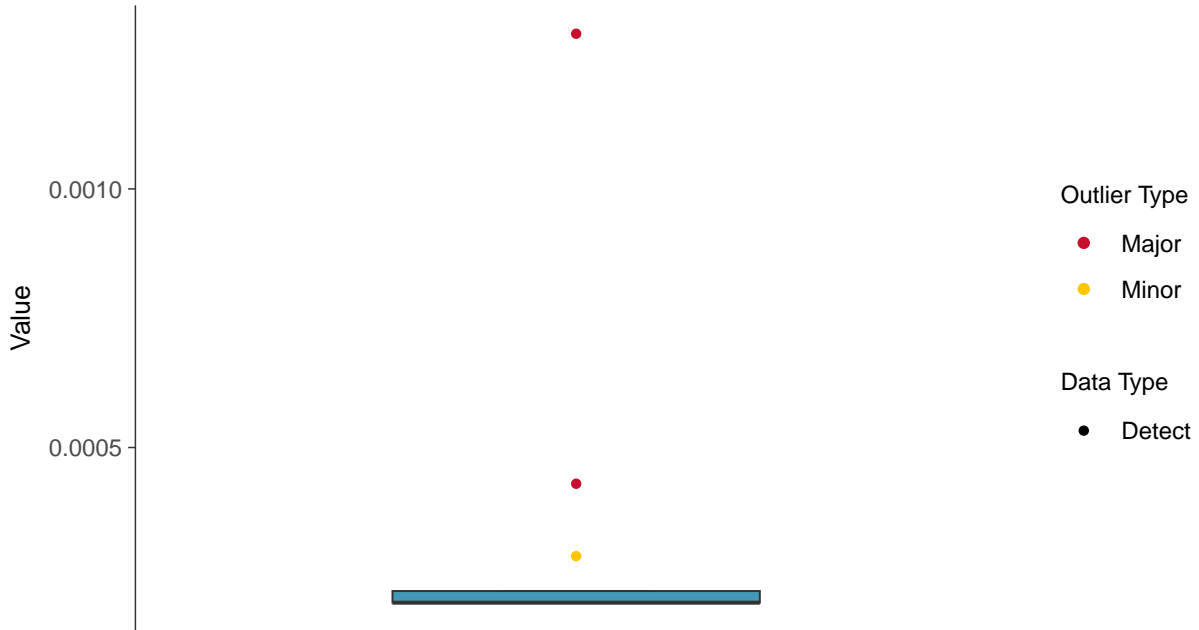
Copper, MW-09 (mg/L)





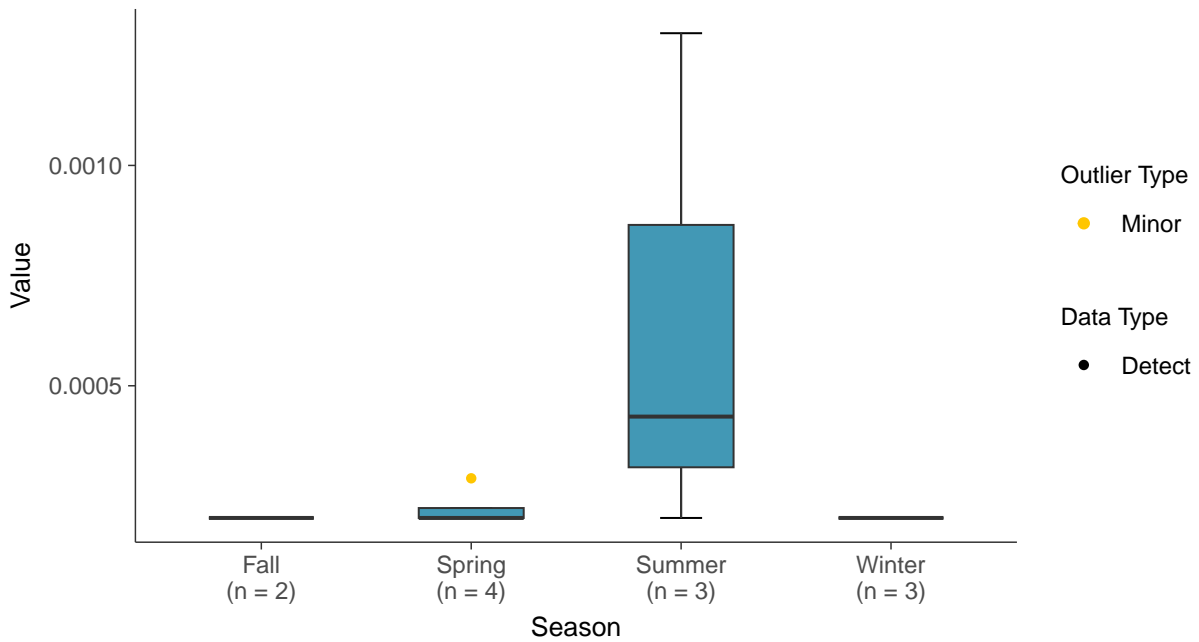
### Boxplot

Copper, MW-09 (mg/L)



### Boxplot by Season

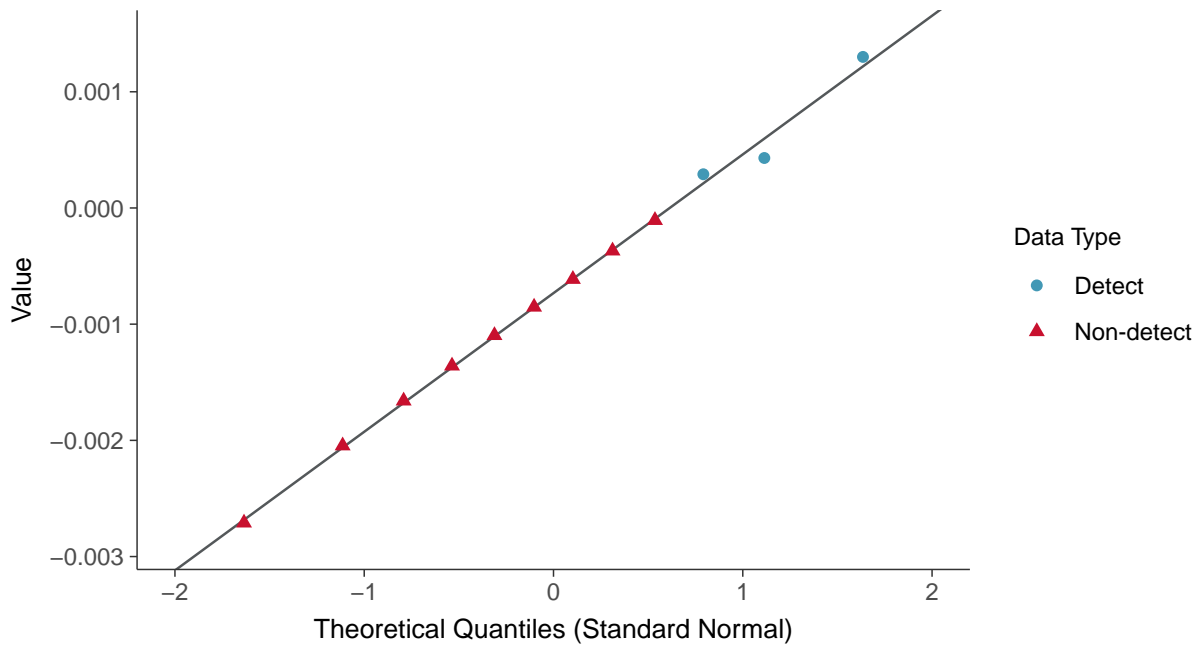
Copper, MW-09 (mg/L)





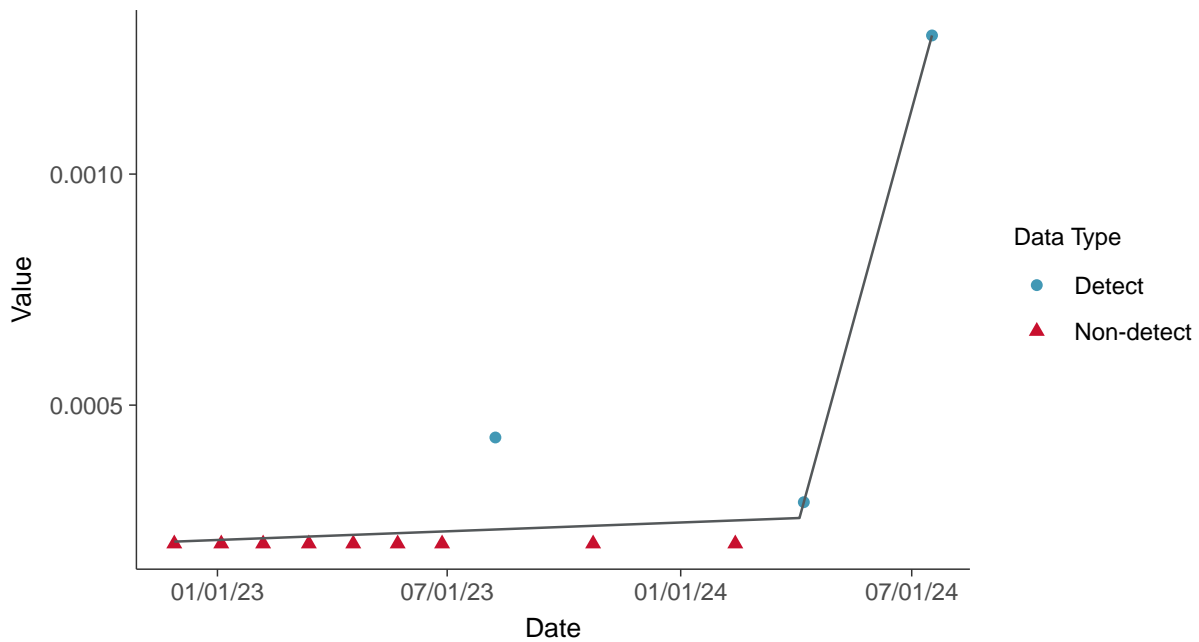
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

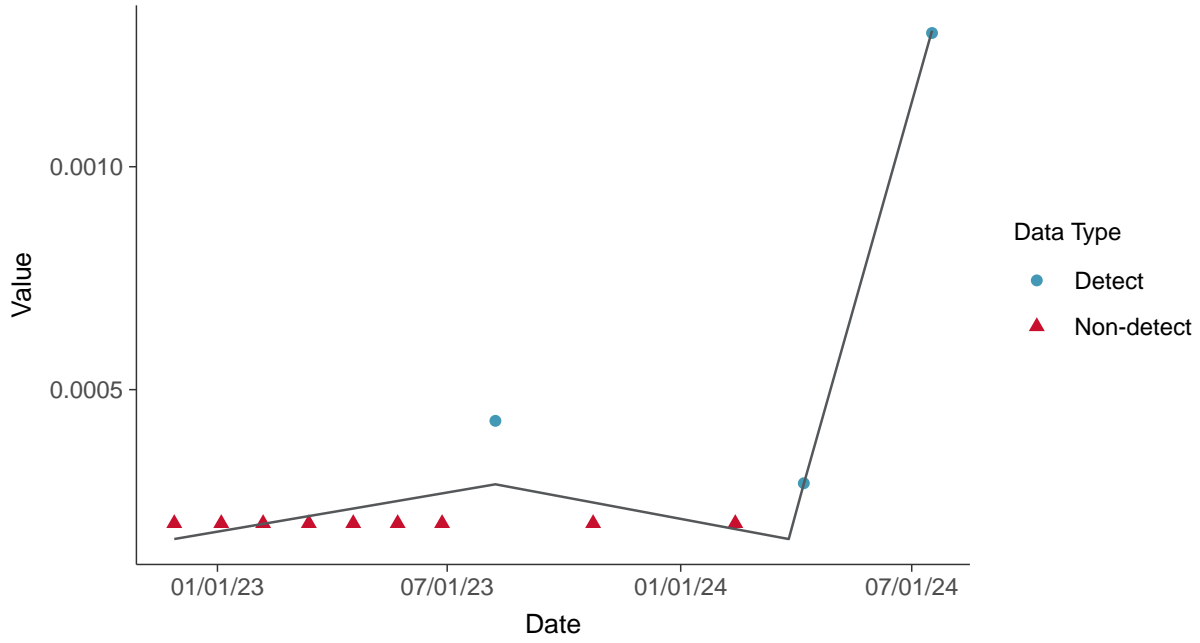
Copper, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-09 (mg/L)



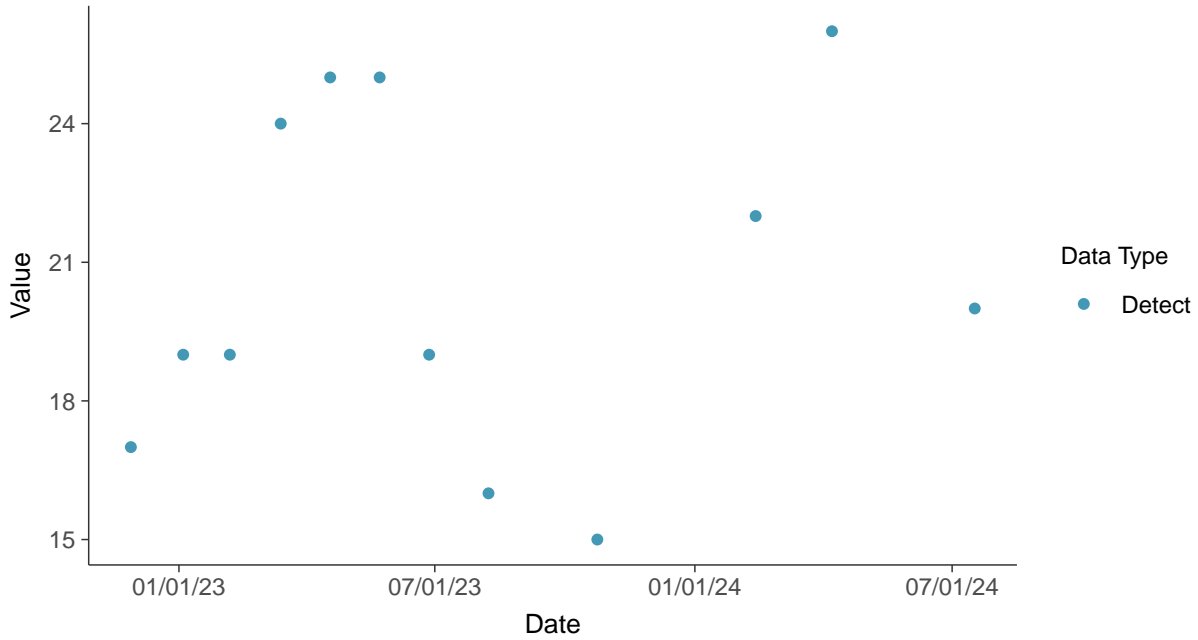


### Part 115: Iron, MW-09

ID: 19\_2\_6\_114

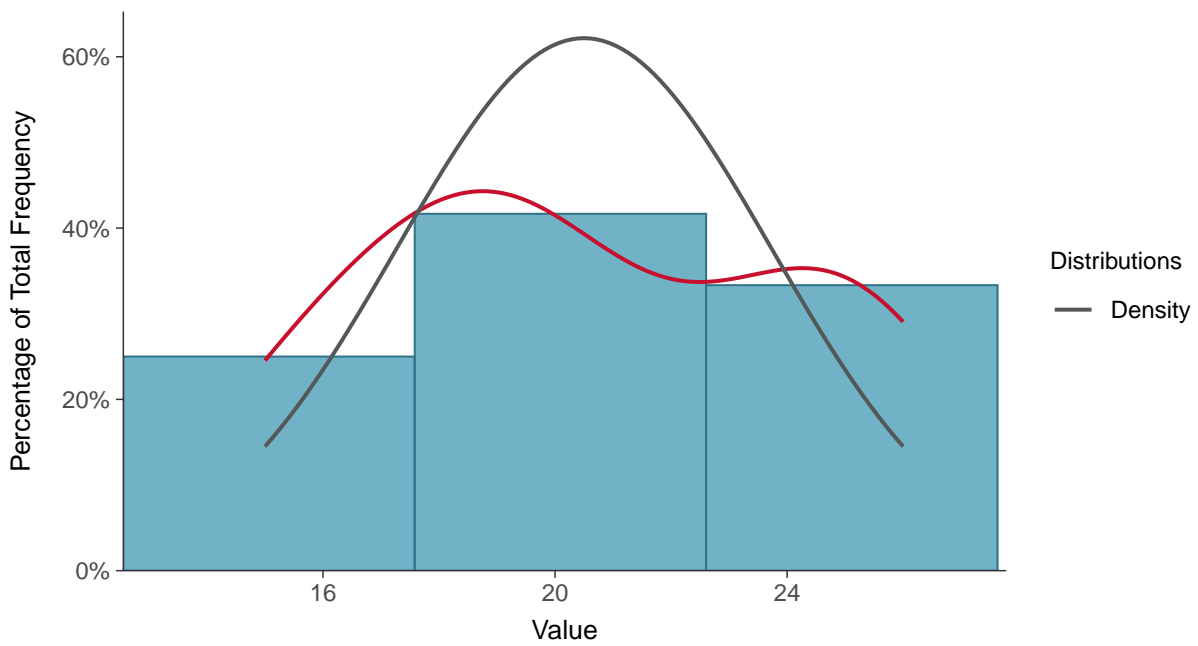
#### Scatter Plot

Iron, MW-09 (mg/L)



#### Histogram

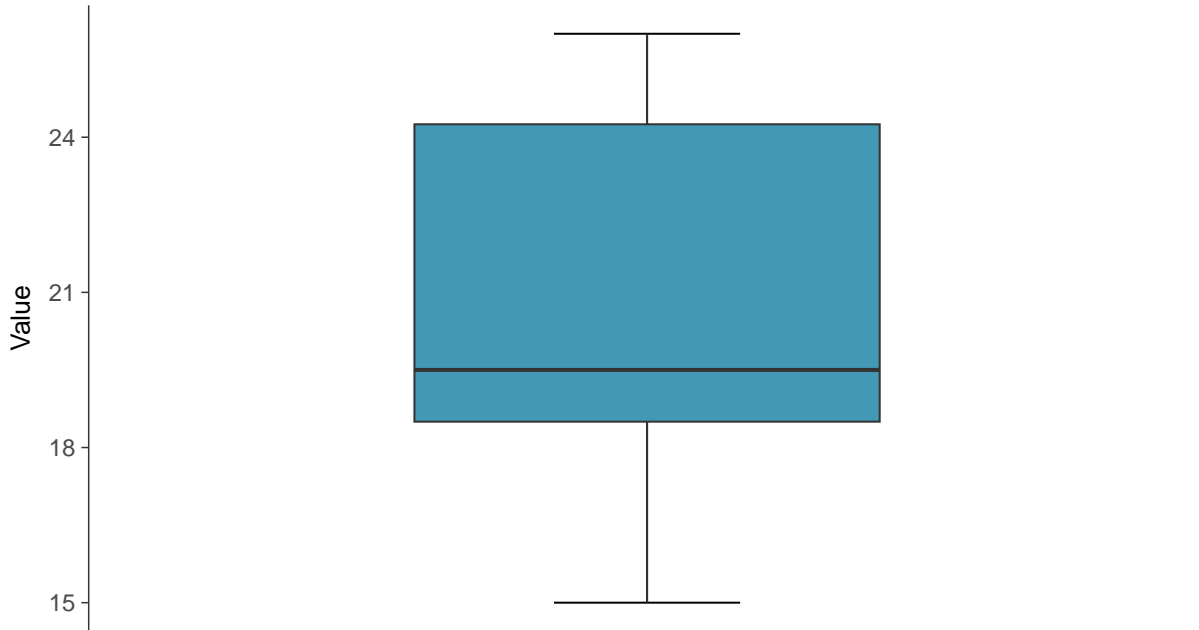
Iron, MW-09 (mg/L)





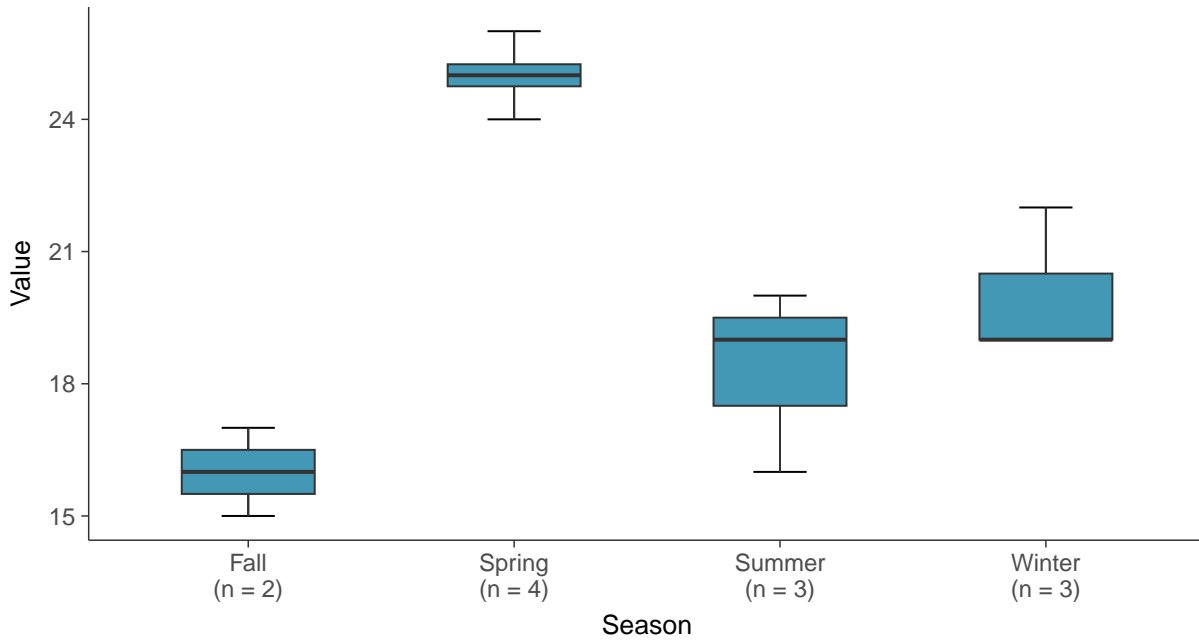
### Boxplot

Iron, MW-09 (mg/L)



### Boxplot by Season

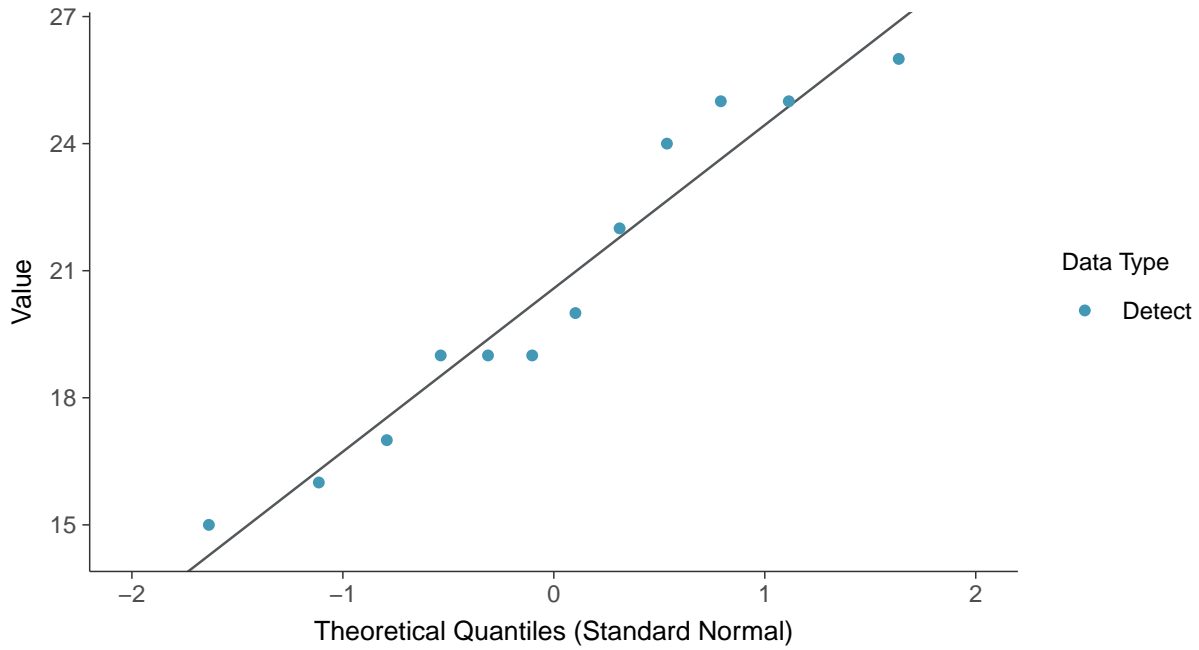
Iron, MW-09 (mg/L)





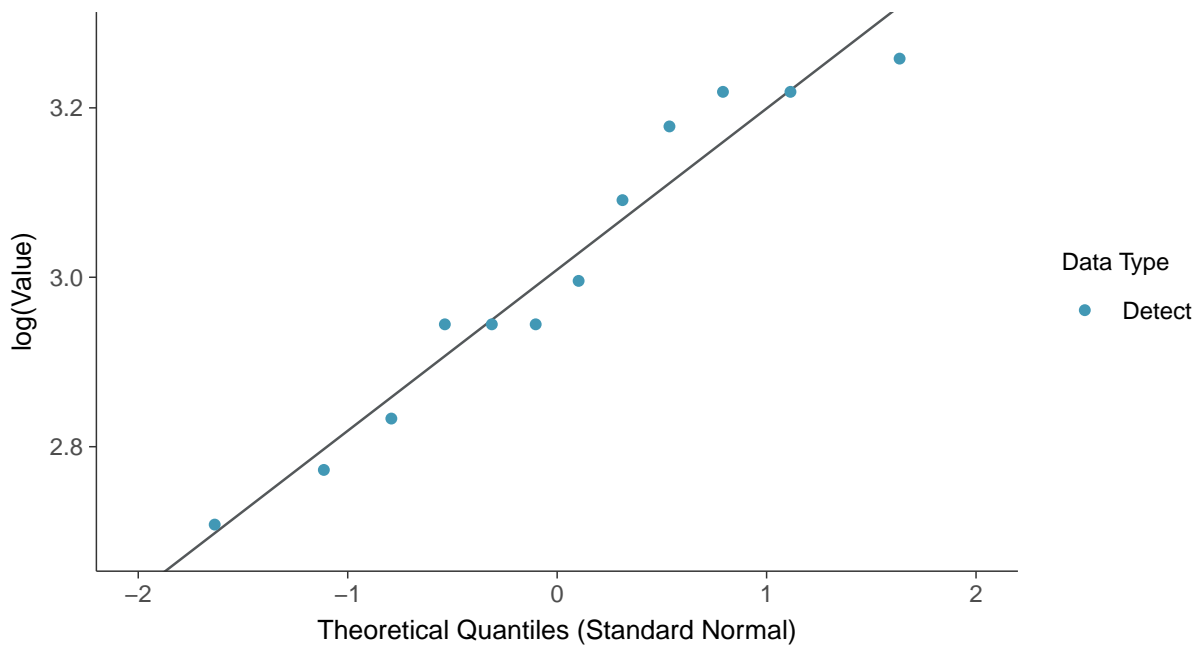
### Normal Q-Q plot

Iron, MW-09 (mg/L)



### Lognormal Q-Q plot

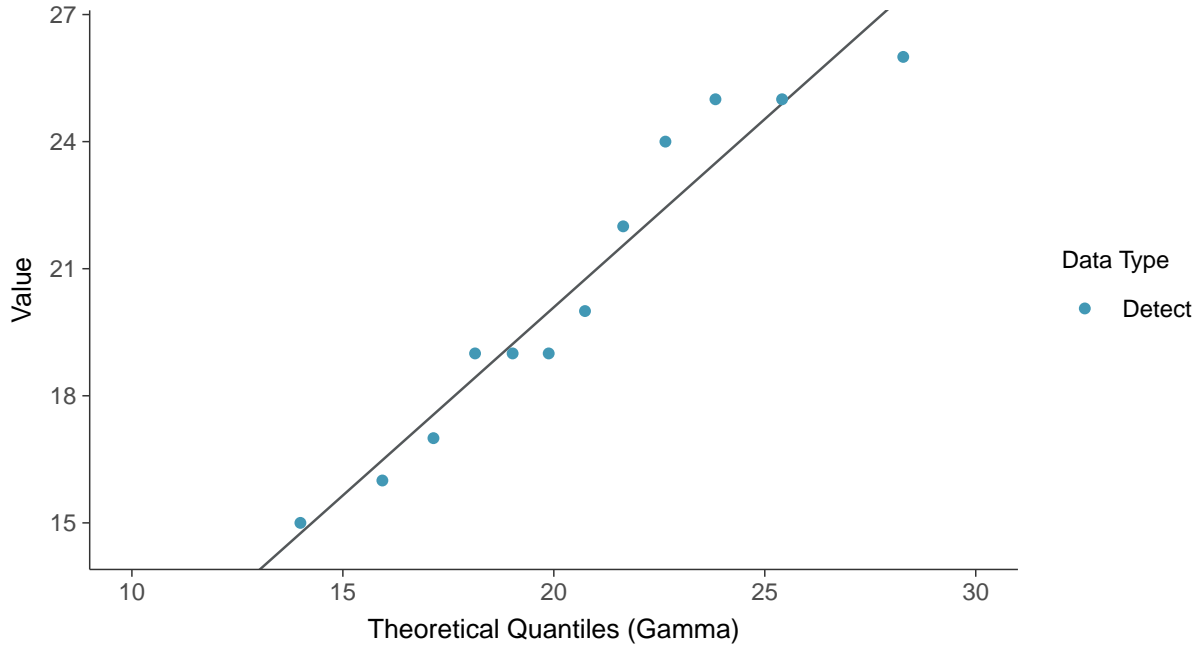
Iron, MW-09 (mg/L)





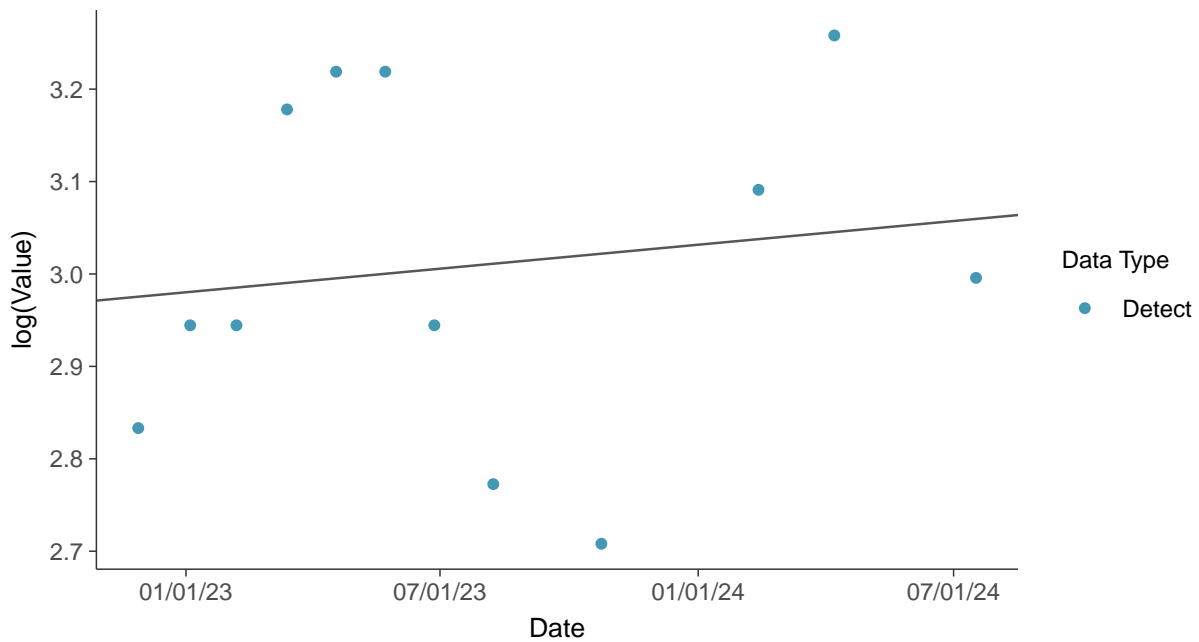
### Gamma Q-Q plot

Iron, MW-09 (mg/L)



### Trend Regression: Lognormal MLE

Iron, MW-09 (mg/L)

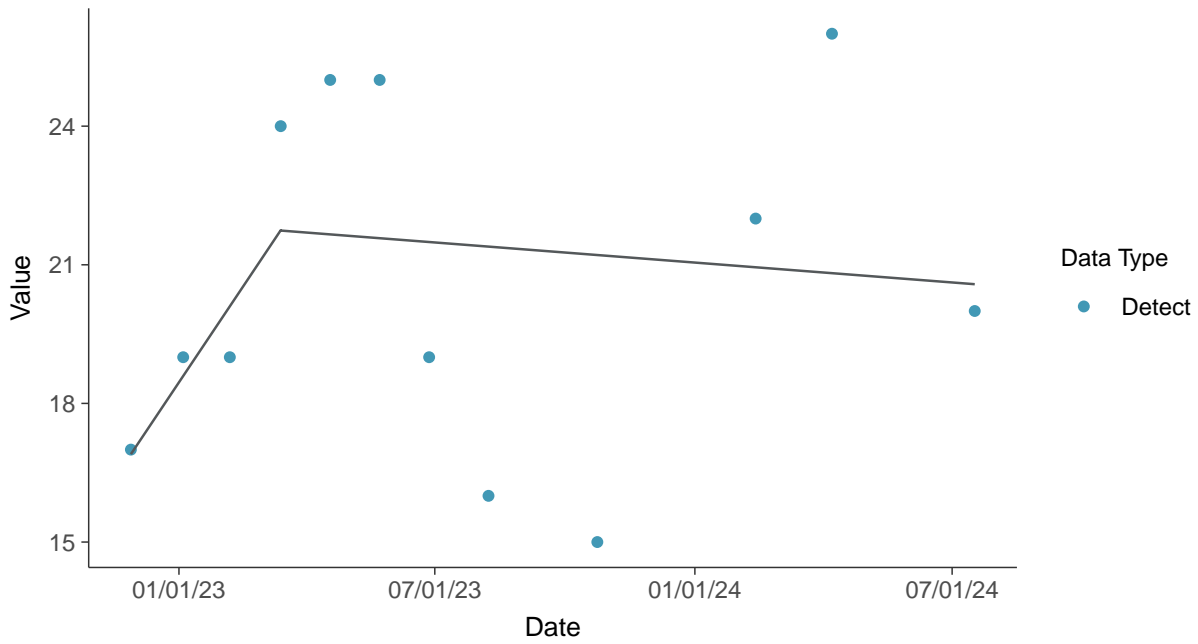






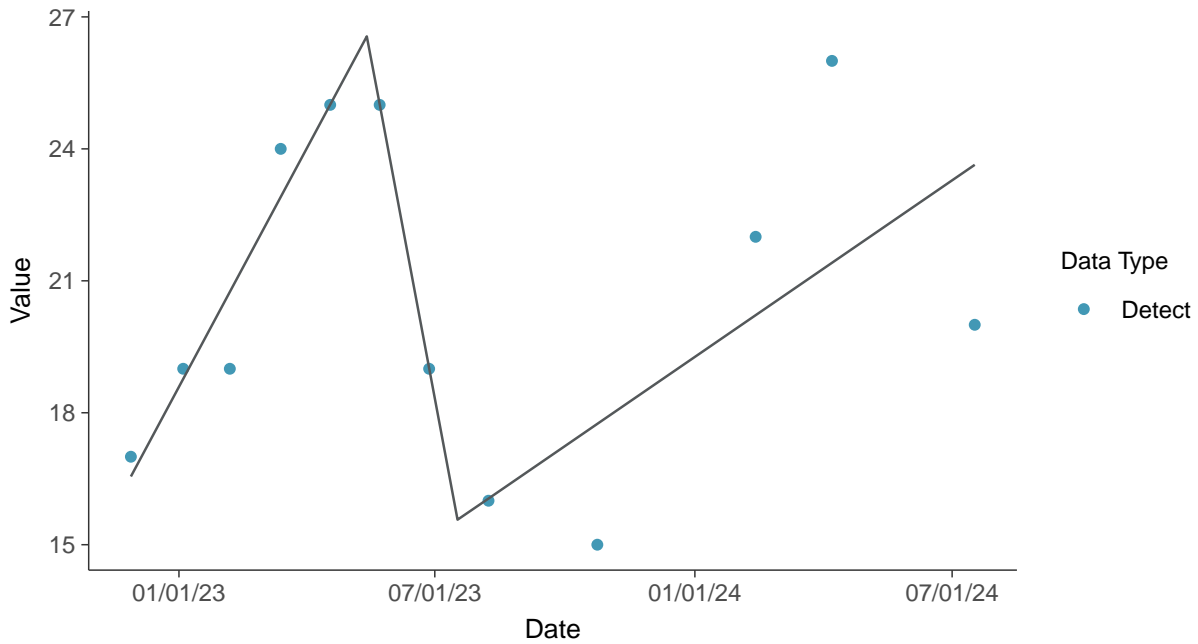
### Trend Regression: Piecewise Linear-Linear

Iron, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-09 (mg/L)



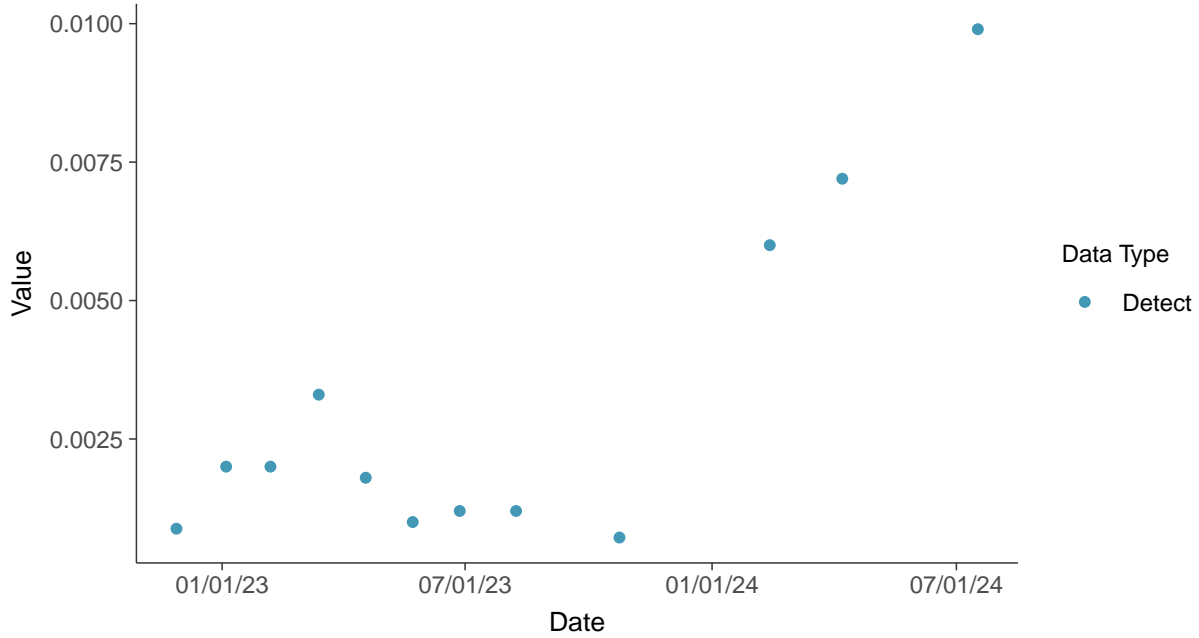


### Part 115: Nickel, MW-09

ID: 19\_2\_6\_119

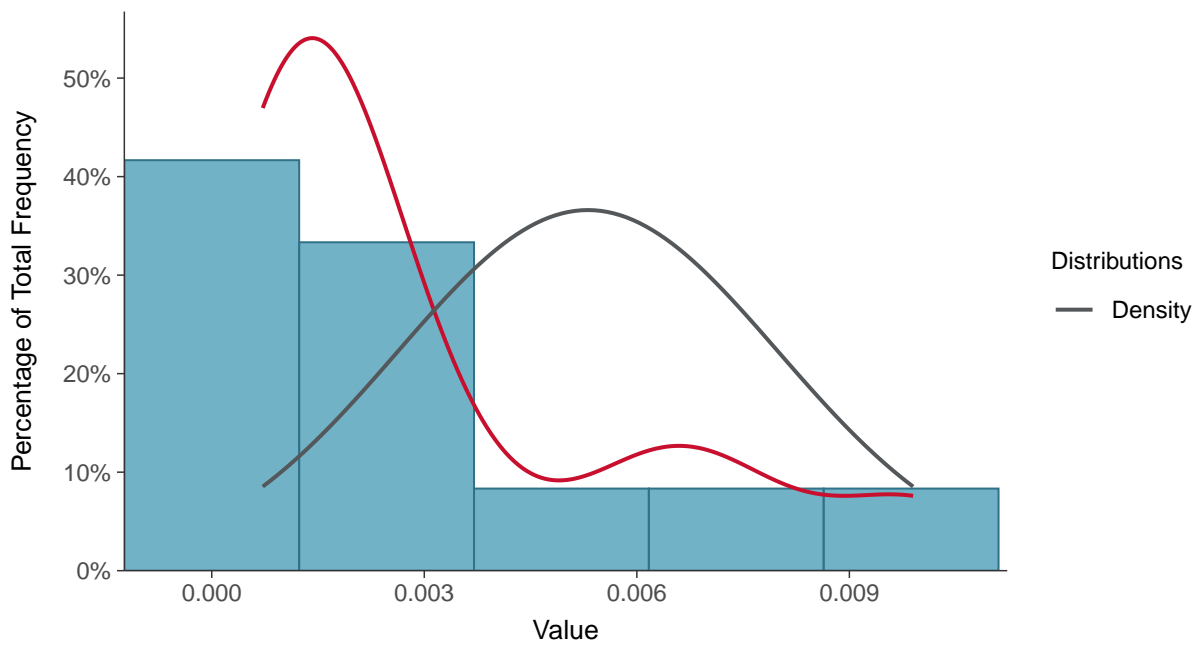
#### Scatter Plot

Nickel, MW-09 (mg/L)



#### Histogram

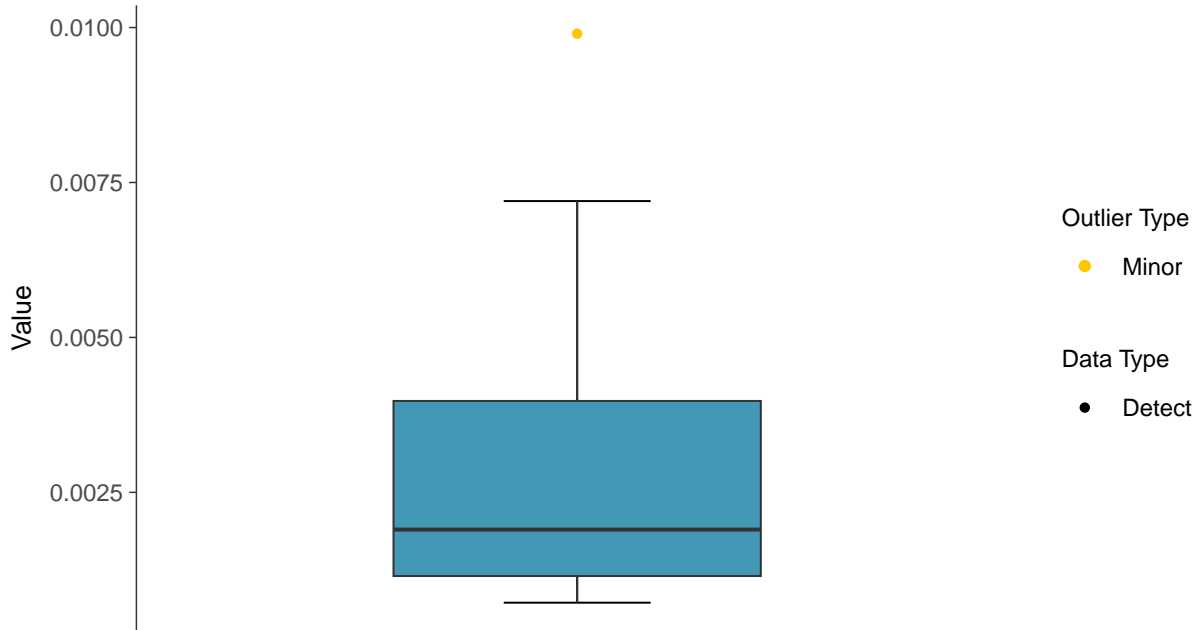
Nickel, MW-09 (mg/L)





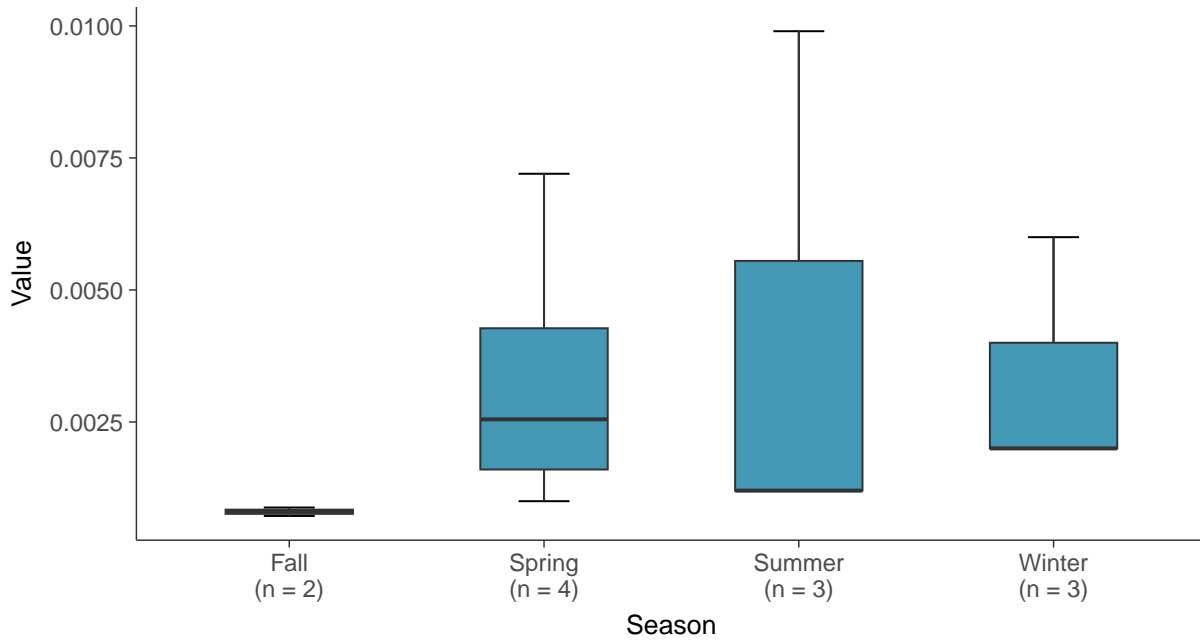
### Boxplot

Nickel, MW-09 (mg/L)



### Boxplot by Season

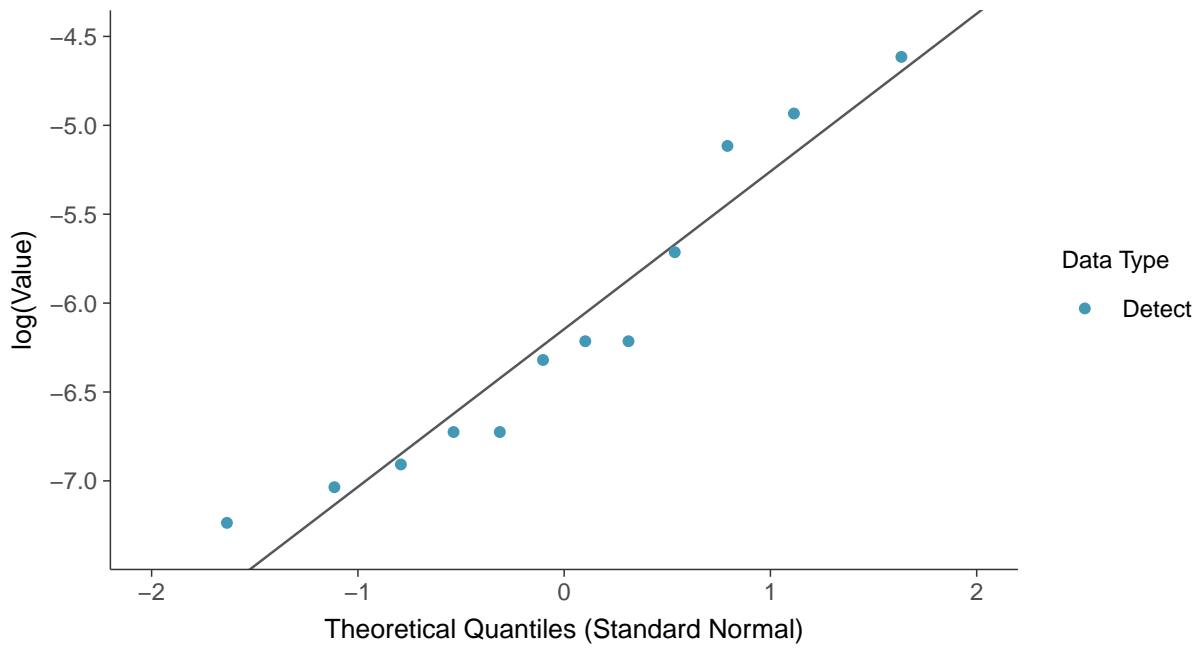
Nickel, MW-09 (mg/L)





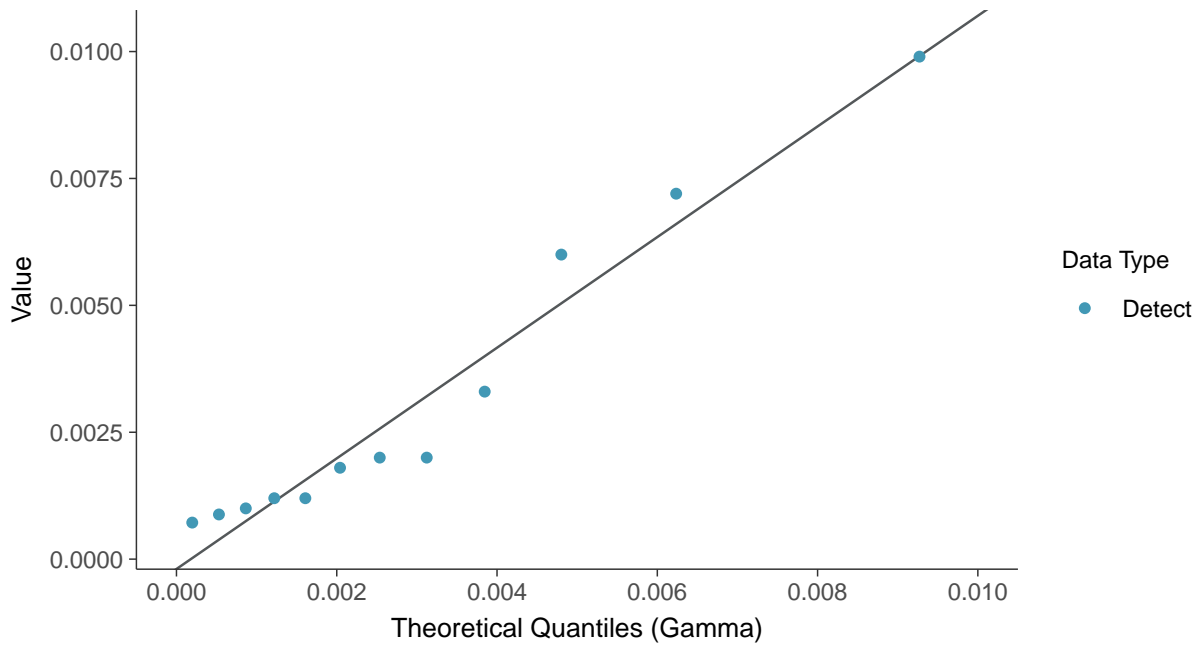
### Lognormal Q-Q plot

Nickel, MW-09 (mg/L)



### Gamma Q-Q plot

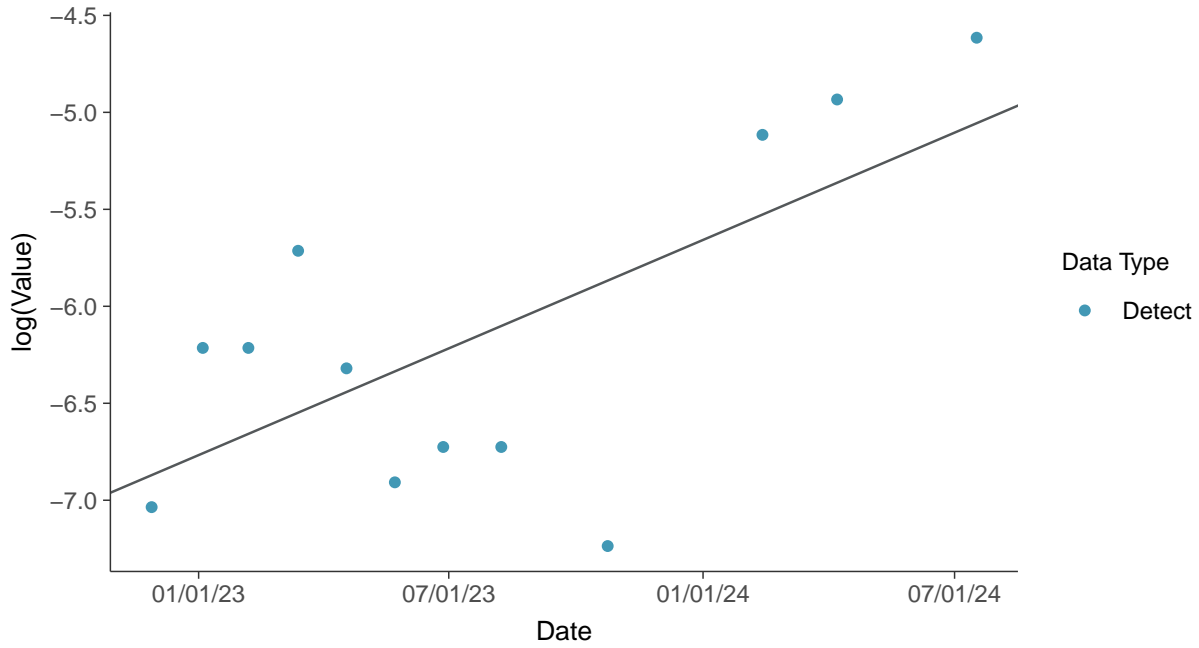
Nickel, MW-09 (mg/L)





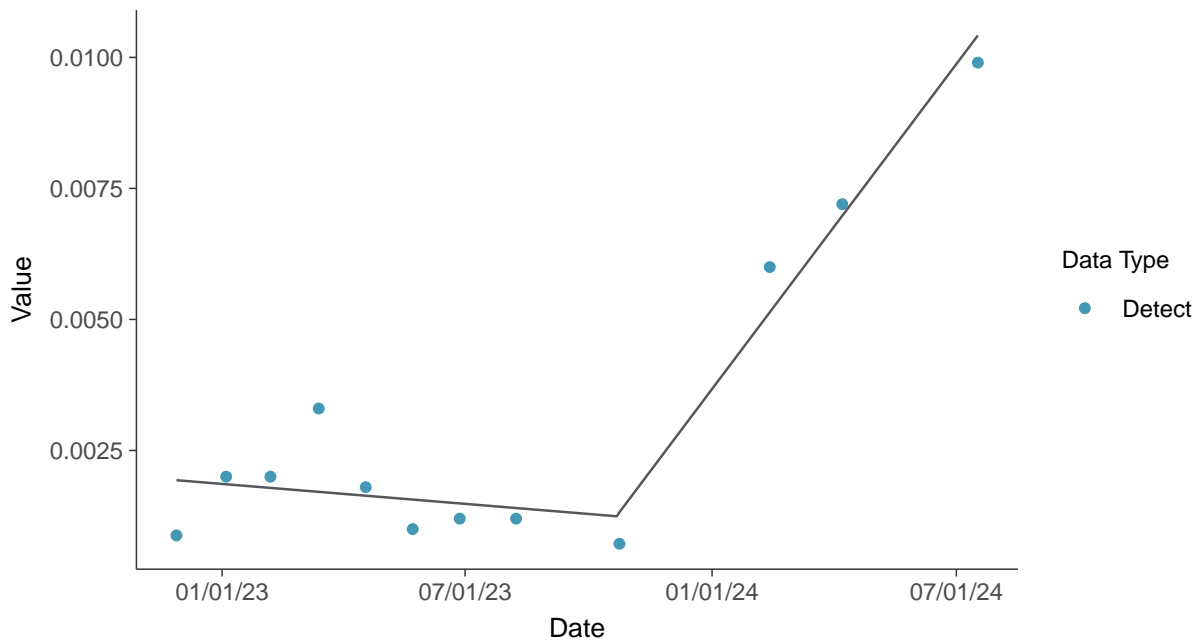
### Trend Regression: Lognormal MLE

Nickel, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear

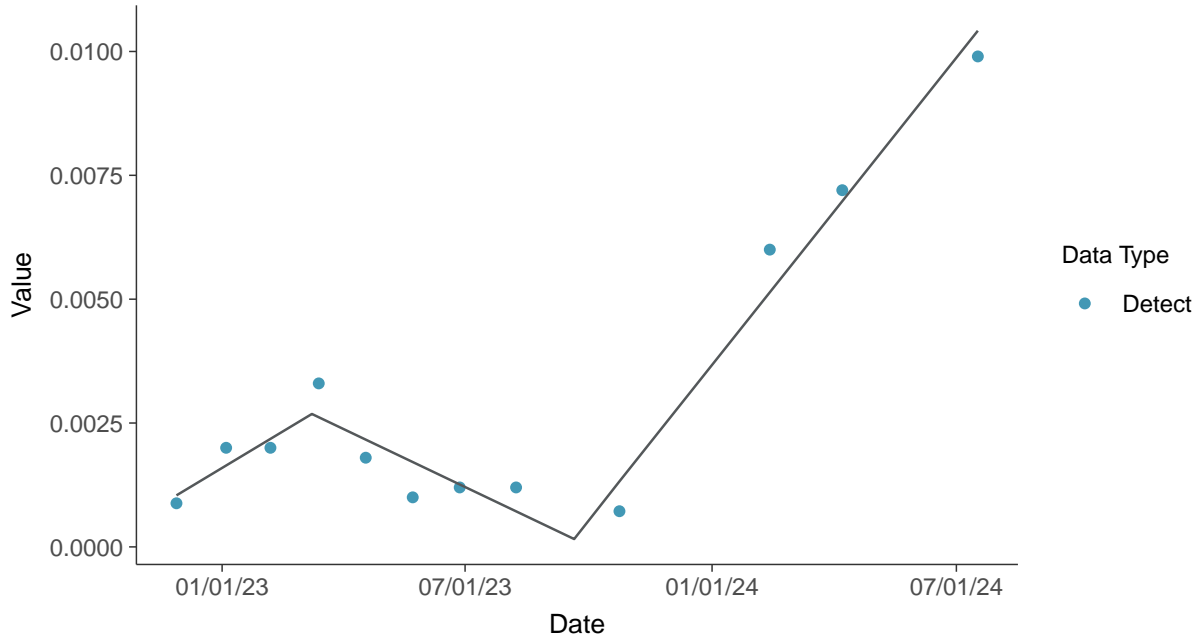
Nickel, MW-09 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

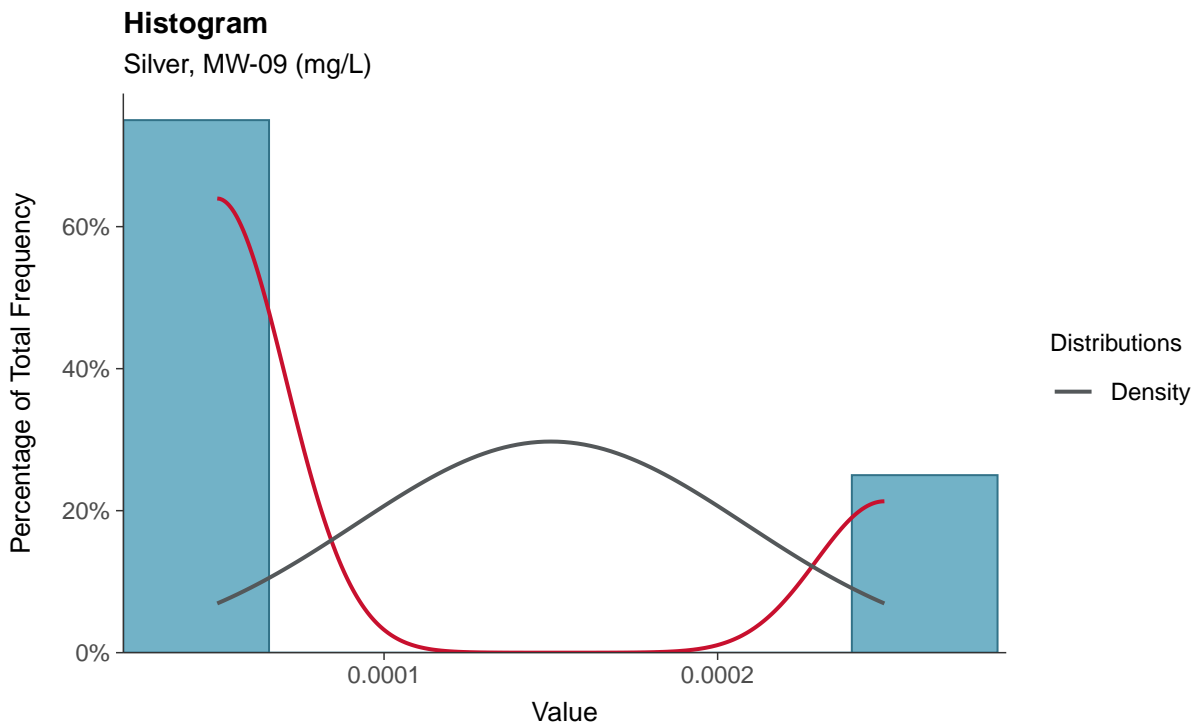
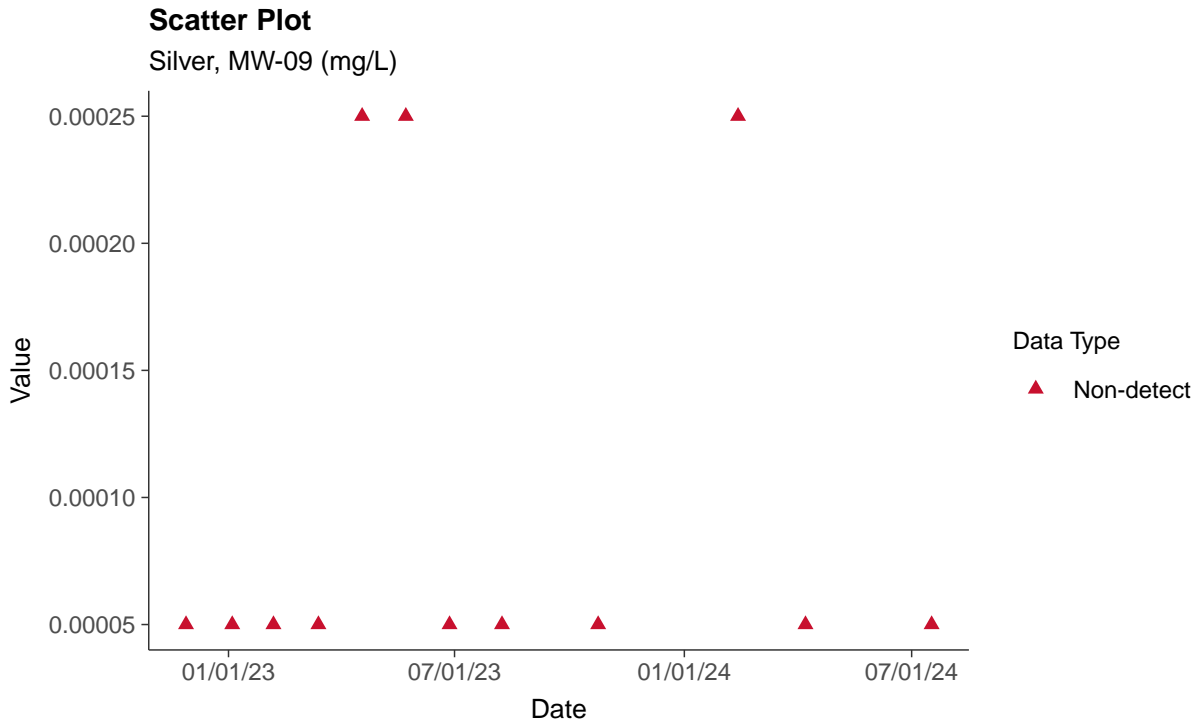
Nickel, MW-09 (mg/L)





### Part 115: Silver, MW-09

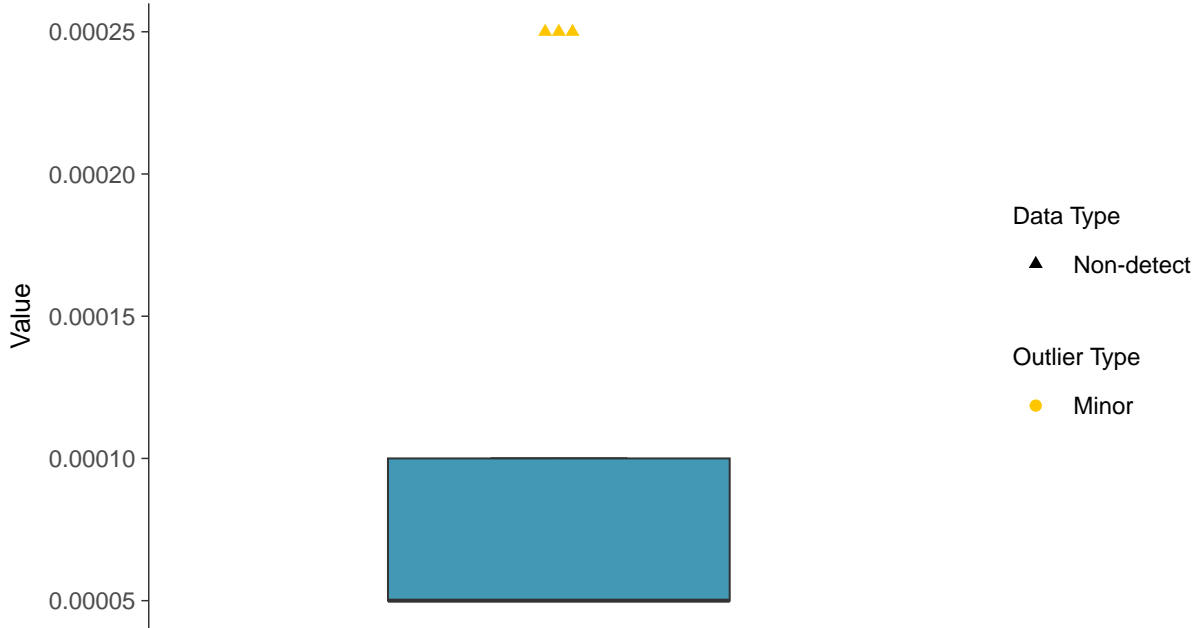
ID: 19\_2\_6\_123





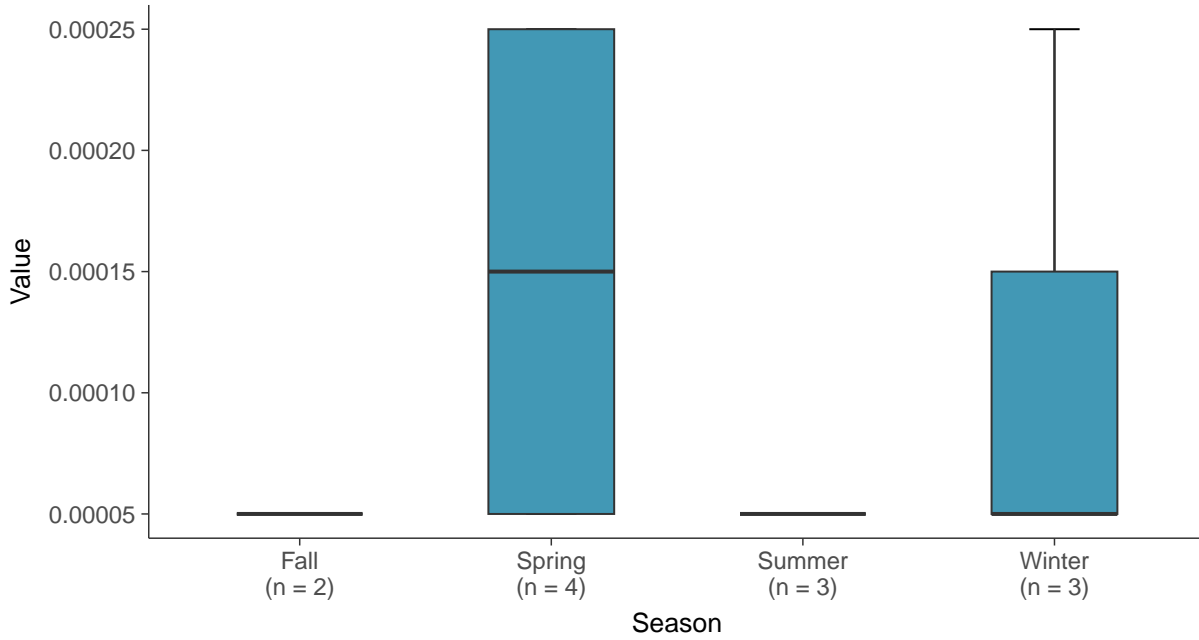
### Boxplot

Silver, MW-09 (mg/L)



### Boxplot by Season

Silver, MW-09 (mg/L)

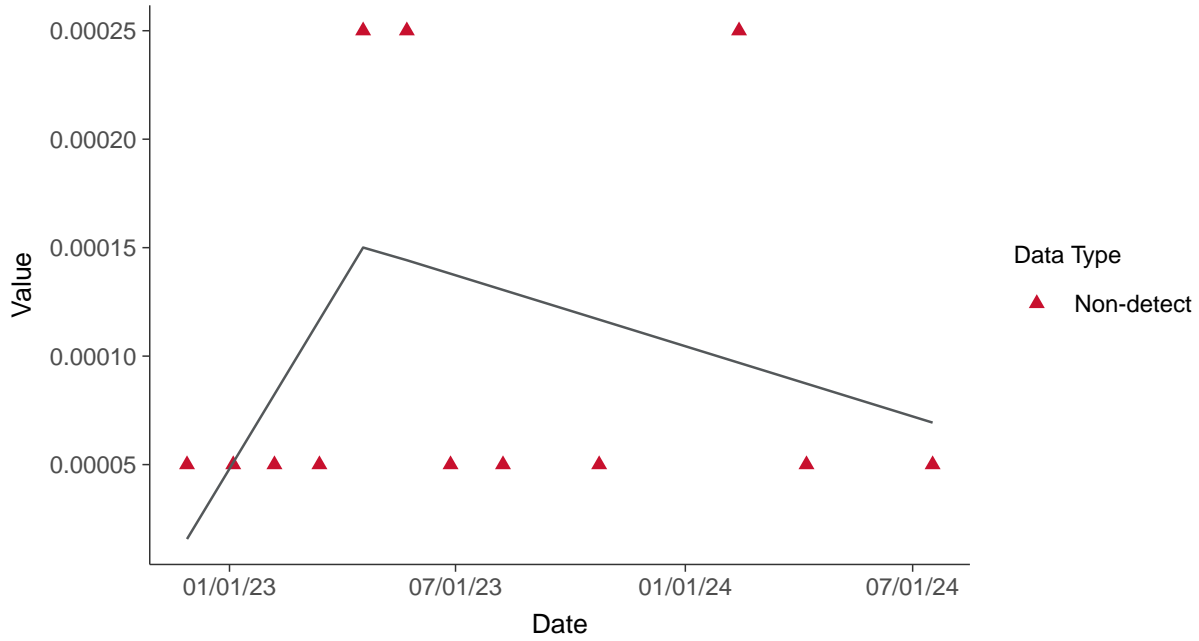






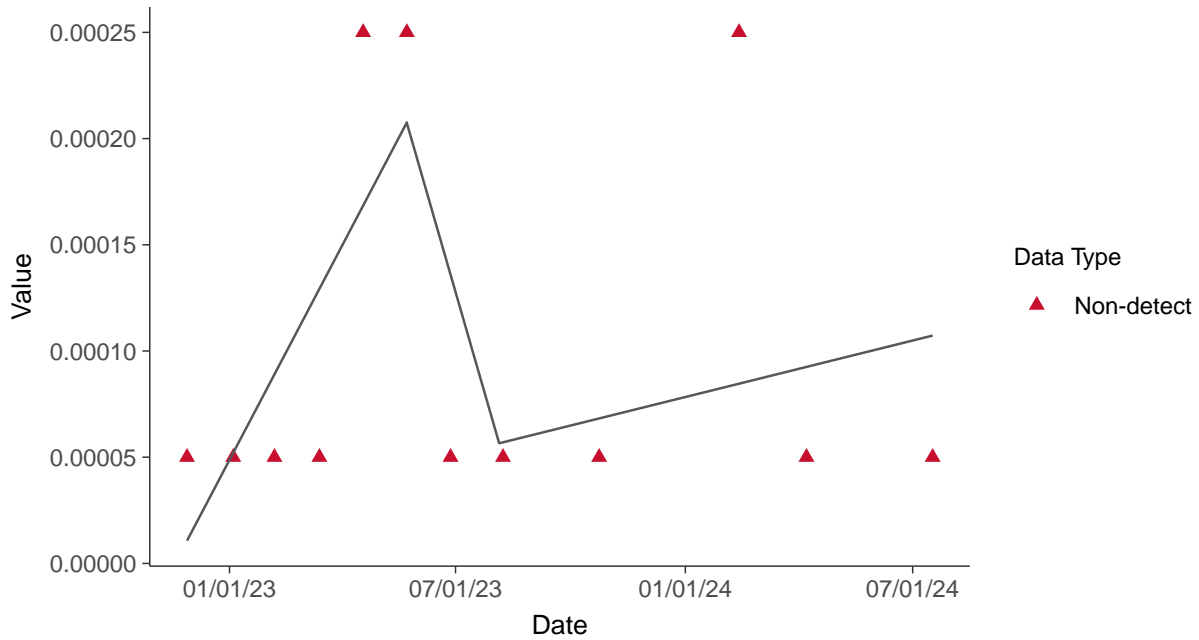
### Trend Regression: Piecewise Linear-Linear

Silver, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-09 (mg/L)



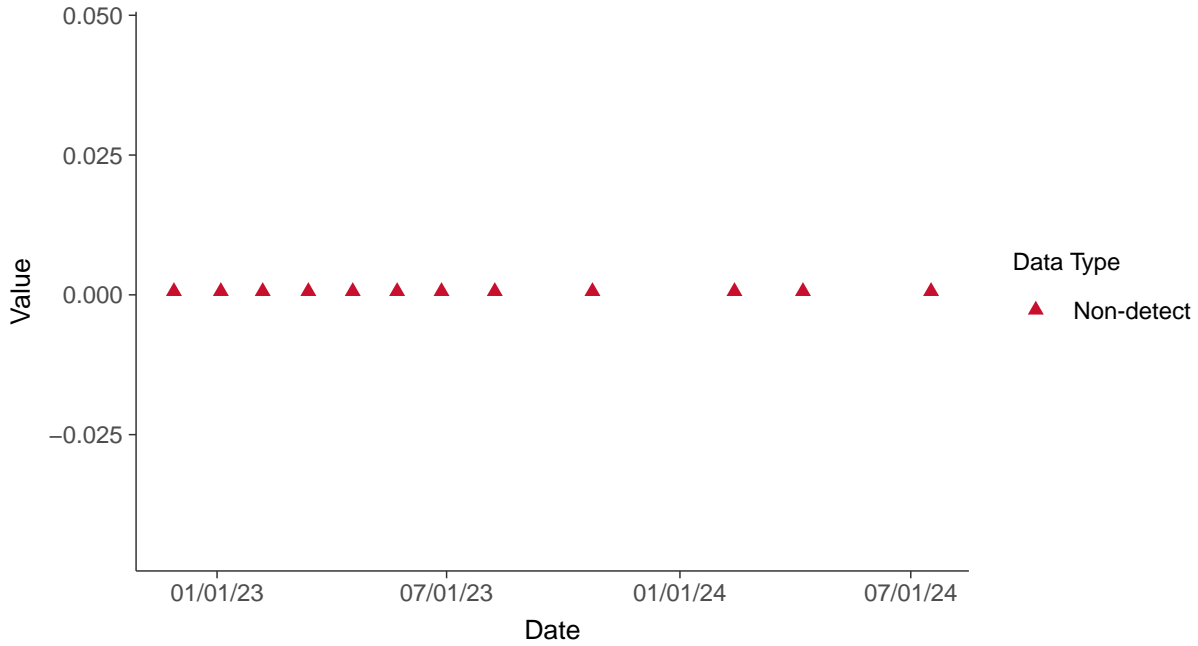


### Part 115: Vanadium, MW-09

ID: 19\_2\_6\_129

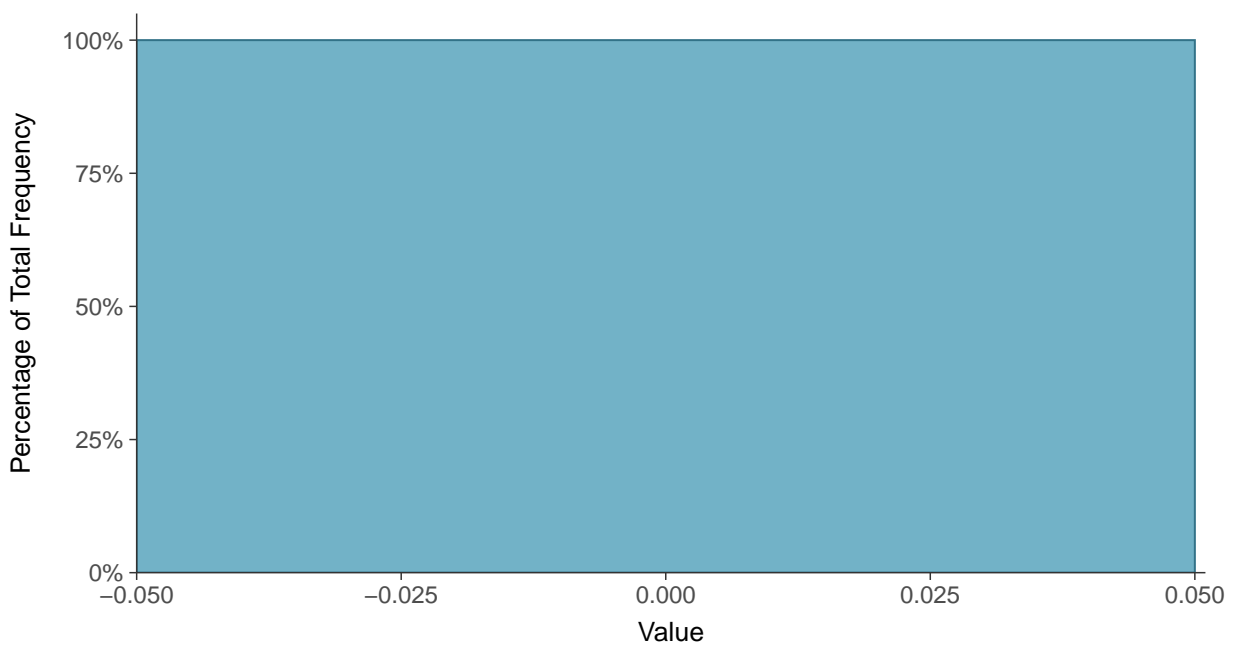
#### Scatter Plot

Vanadium, MW-09 (mg/L)



#### Histogram

Vanadium, MW-09 (mg/L)





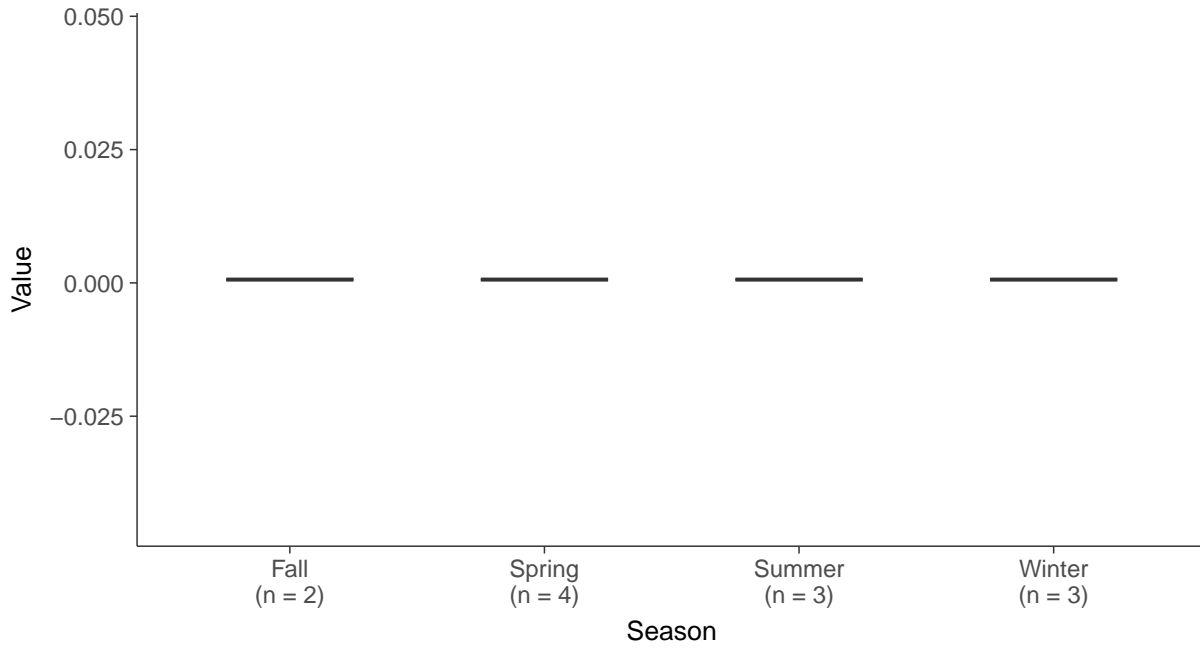
### Boxplot

Vanadium, MW-09 (mg/L)



### Boxplot by Season

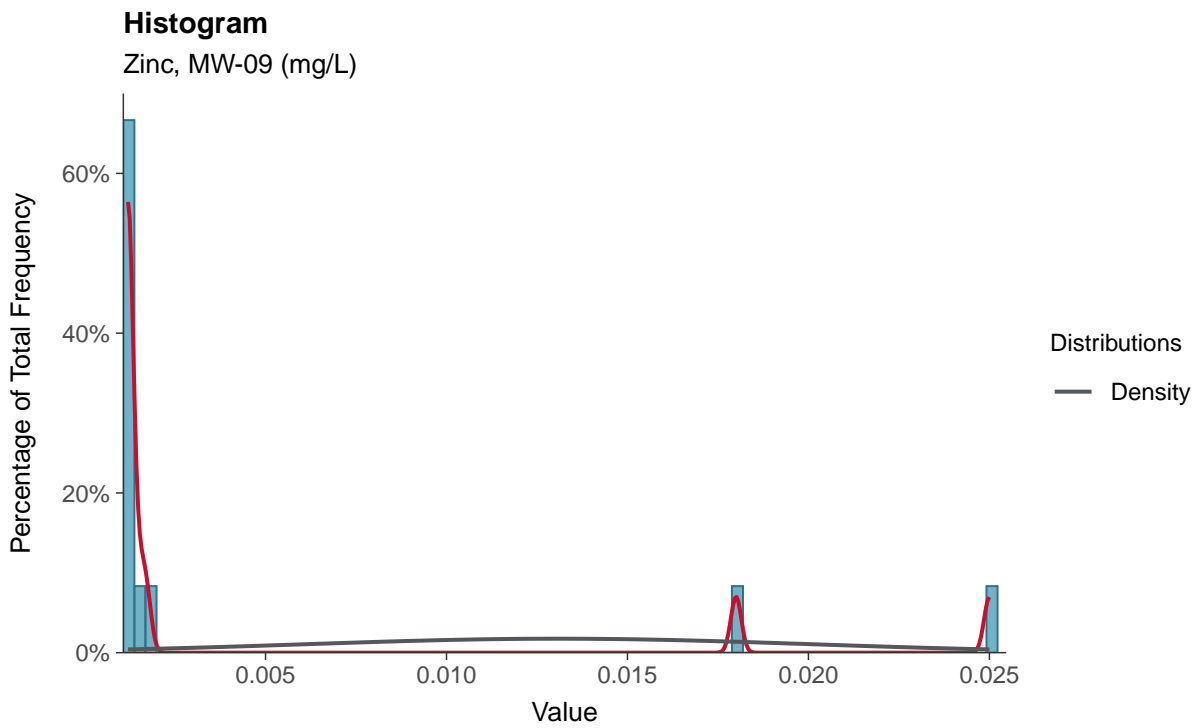
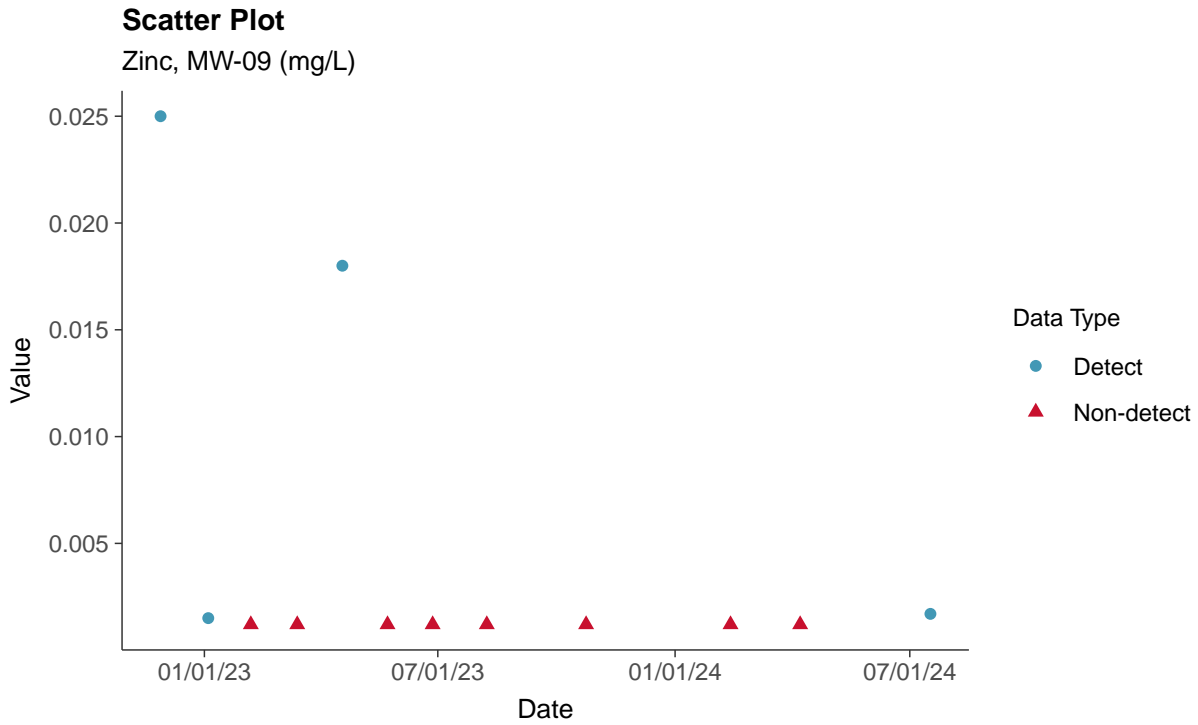
Vanadium, MW-09 (mg/L)





### Part 115: Zinc, MW-09

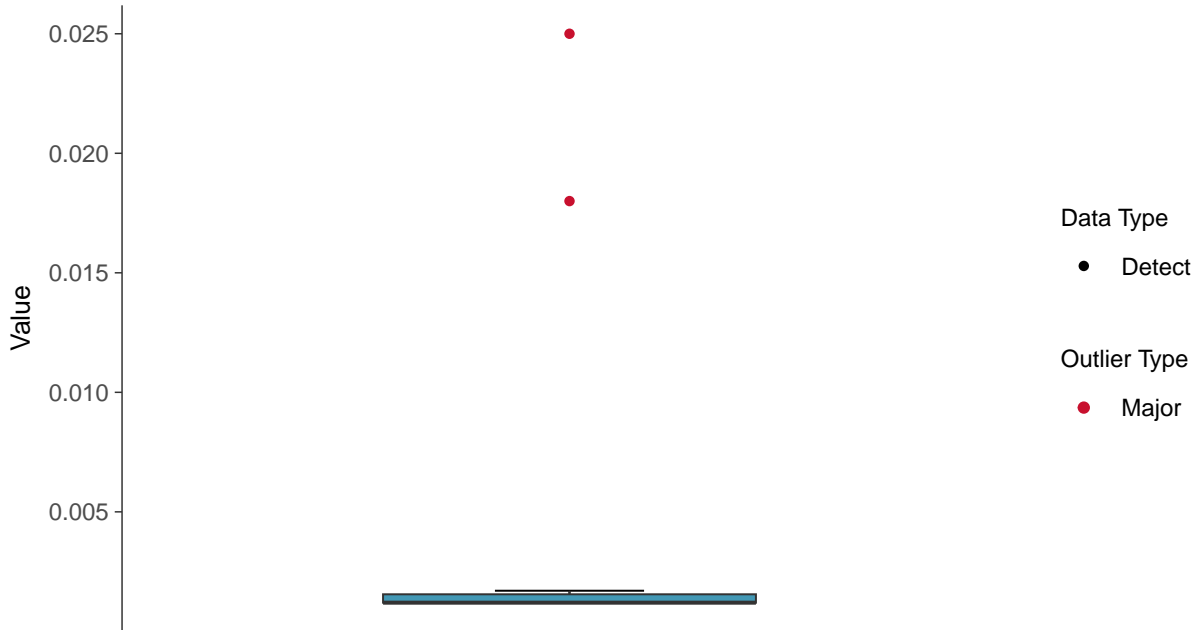
ID: 19\_2\_6\_130





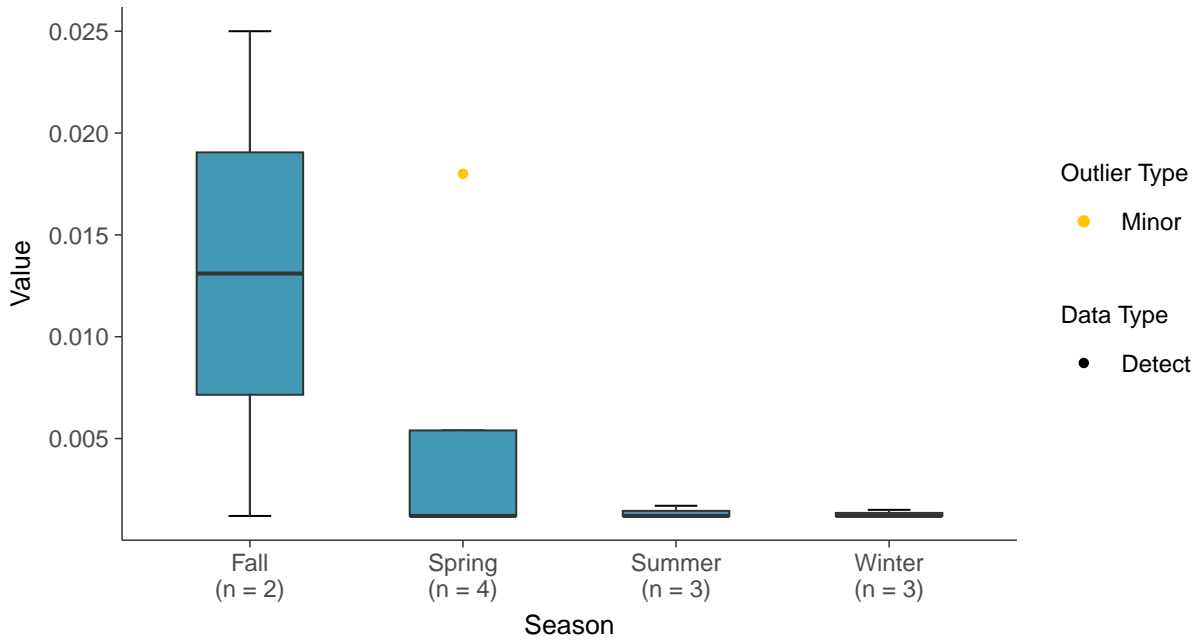
### Boxplot

Zinc, MW-09 (mg/L)



### Boxplot by Season

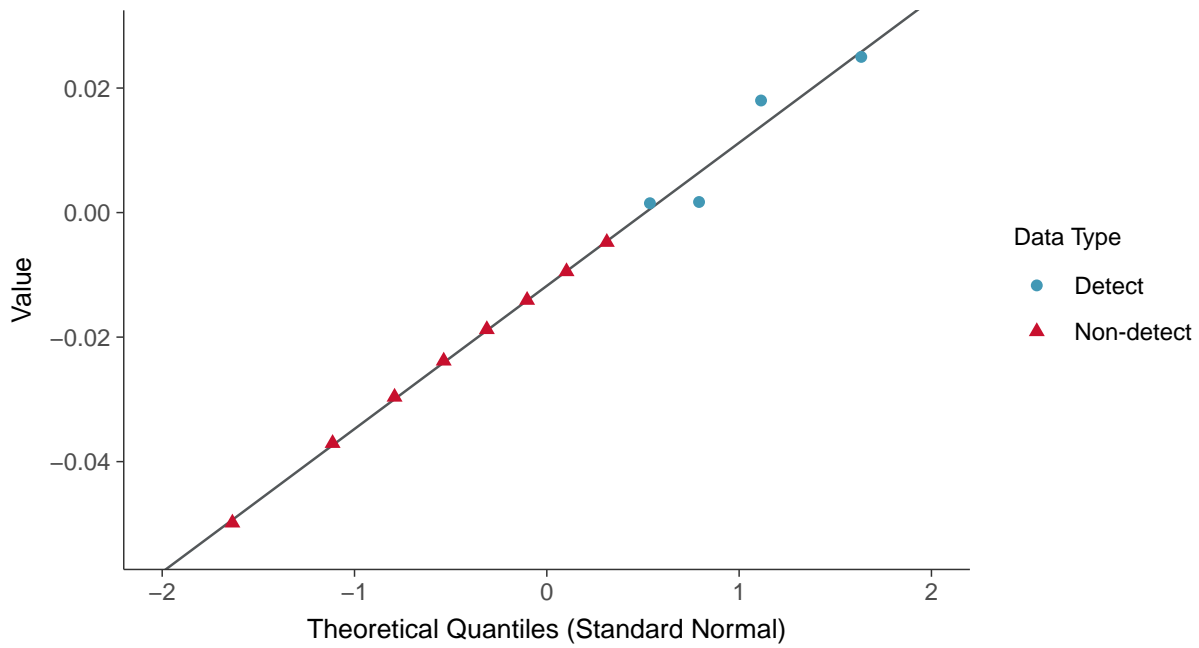
Zinc, MW-09 (mg/L)





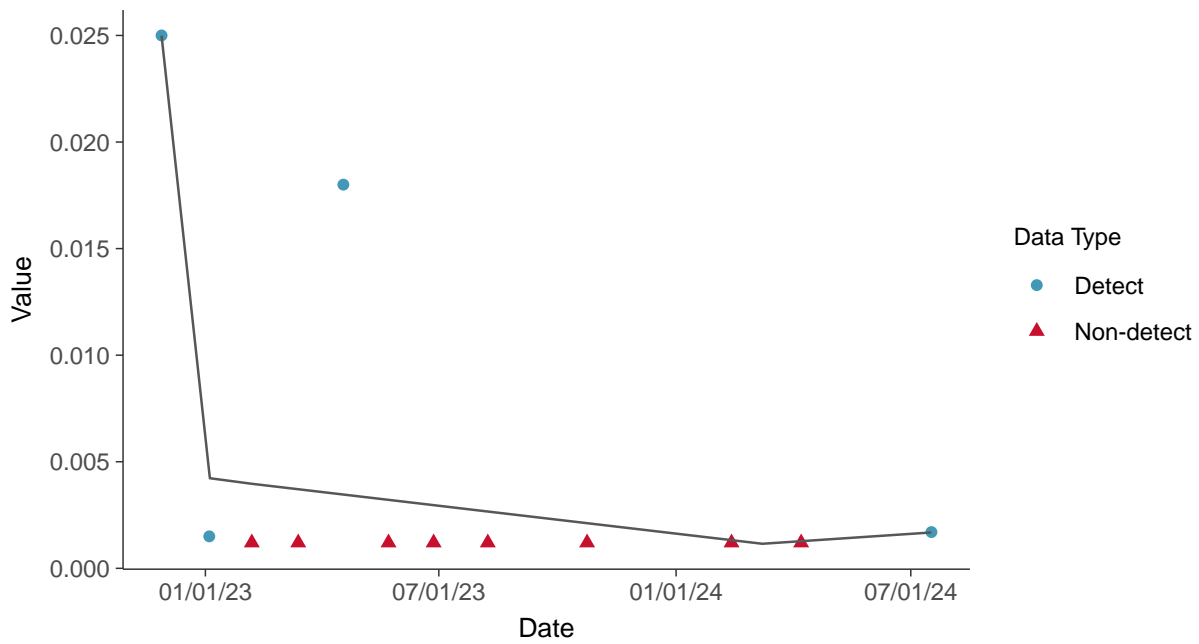
### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-09 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-09 (mg/L)



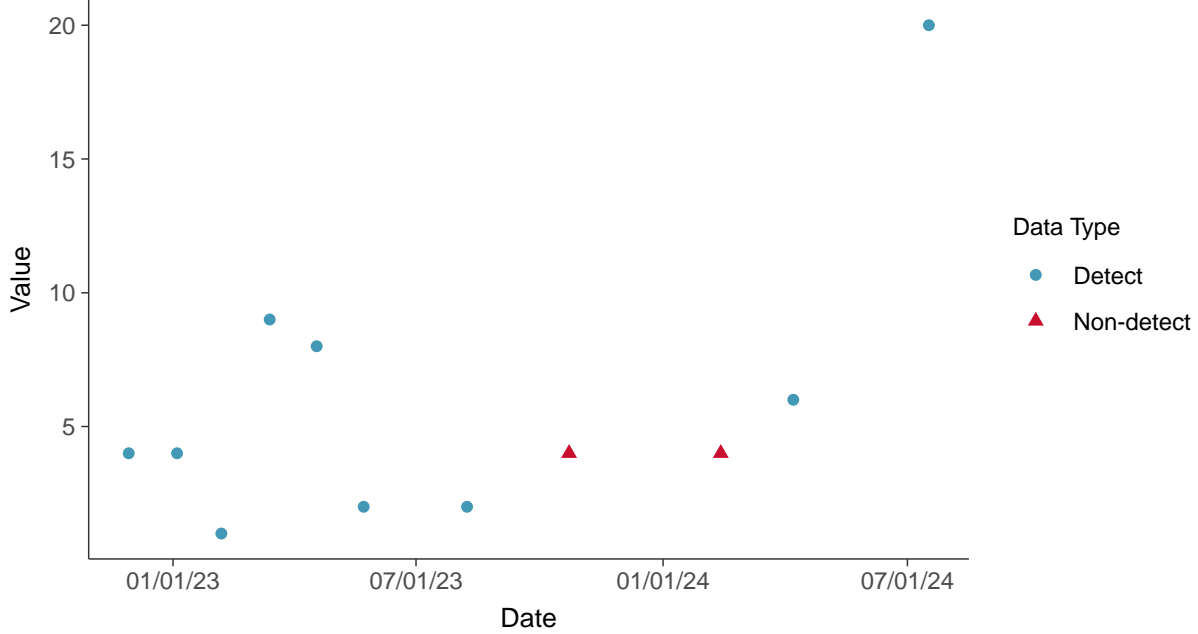


### Additional Parameters: Total Suspended Solids, MW-10

ID: 20\_3\_3\_127

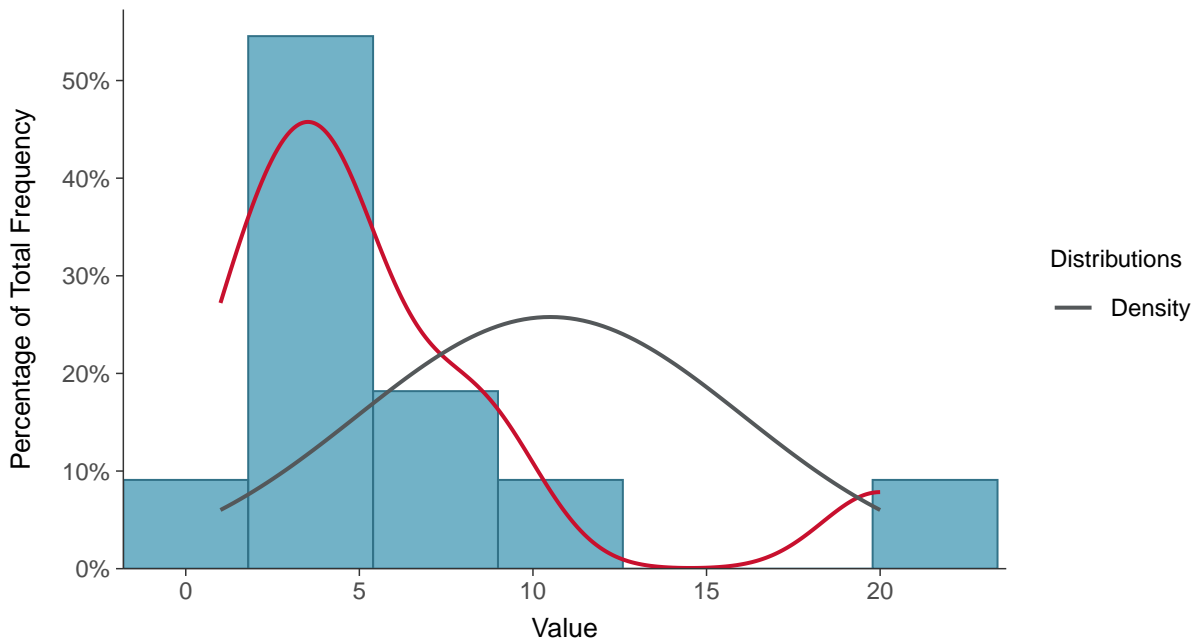
#### Scatter Plot

Total Suspended Solids, MW-10 (mg/L)



#### Histogram

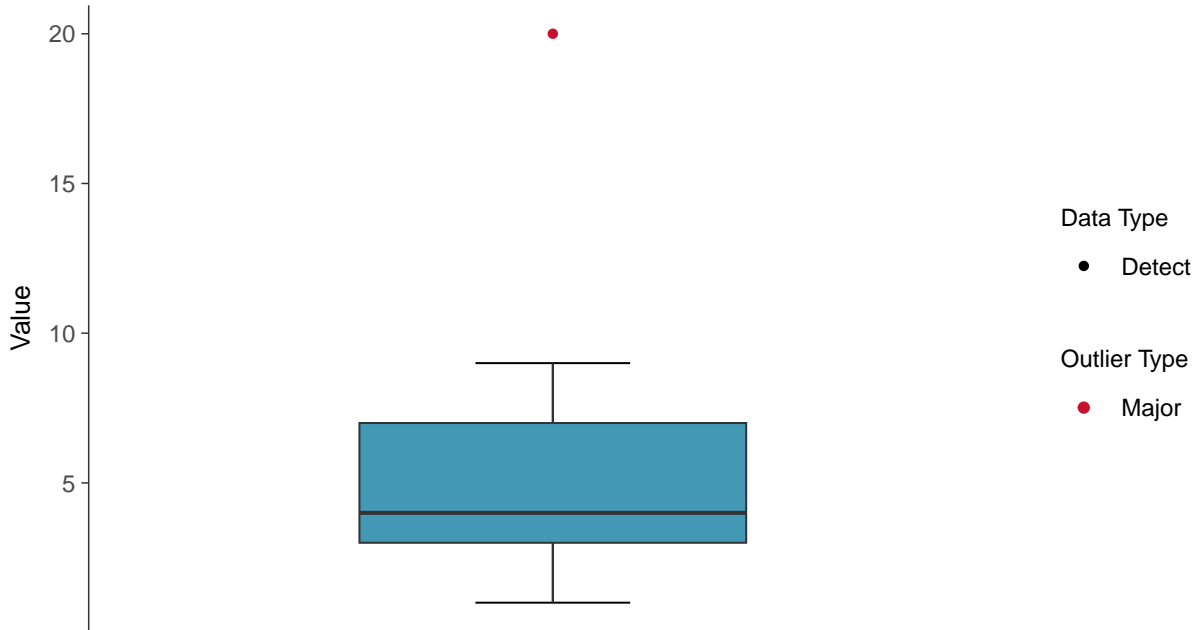
Total Suspended Solids, MW-10 (mg/L)





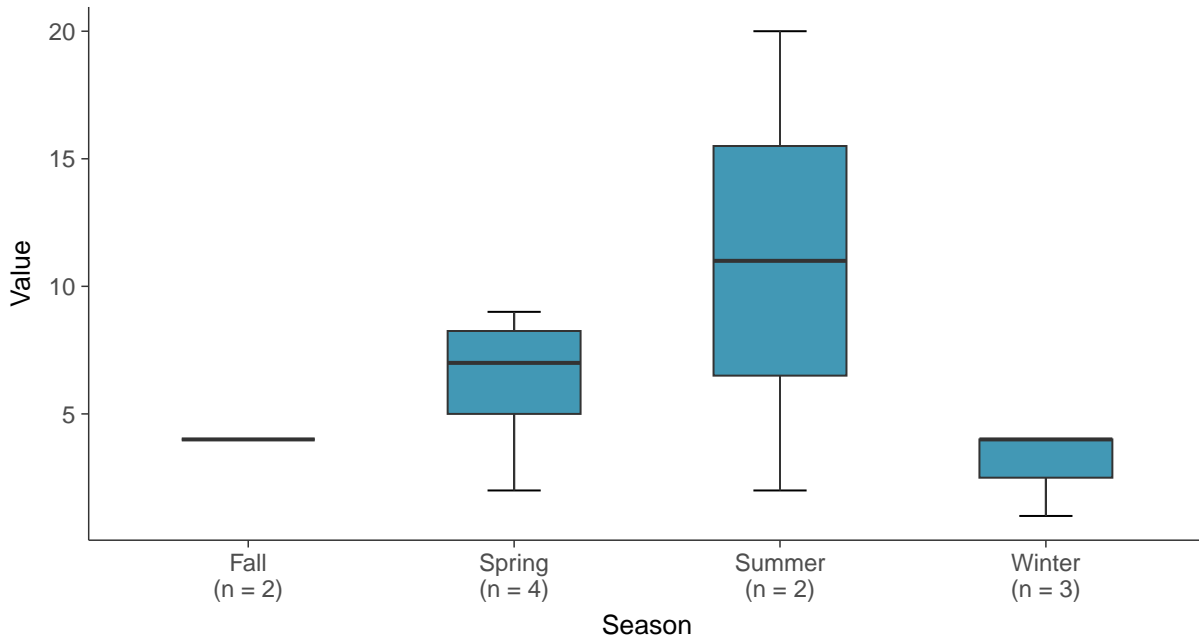
### Boxplot

Total Suspended Solids, MW-10 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-10 (mg/L)

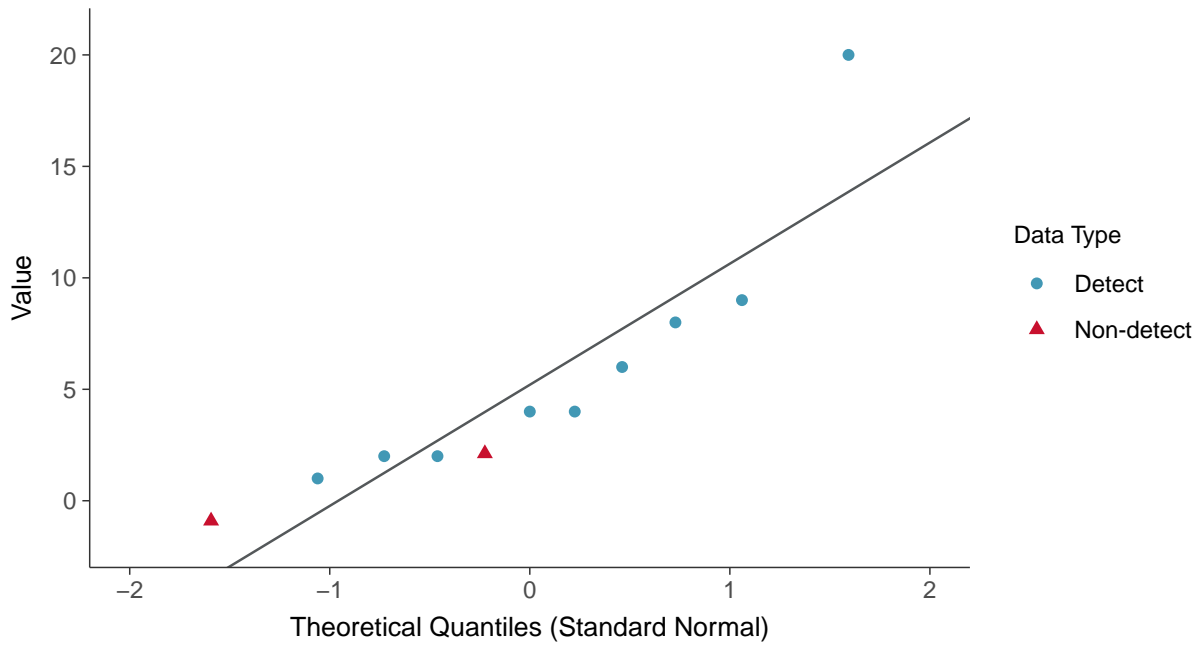






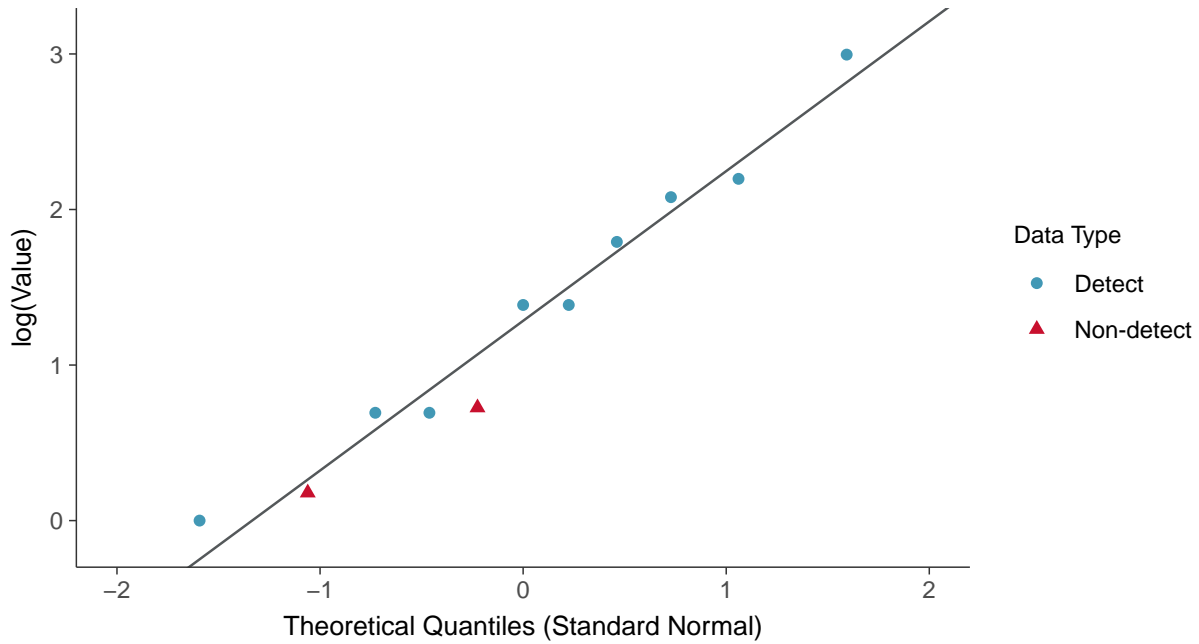
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-10 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

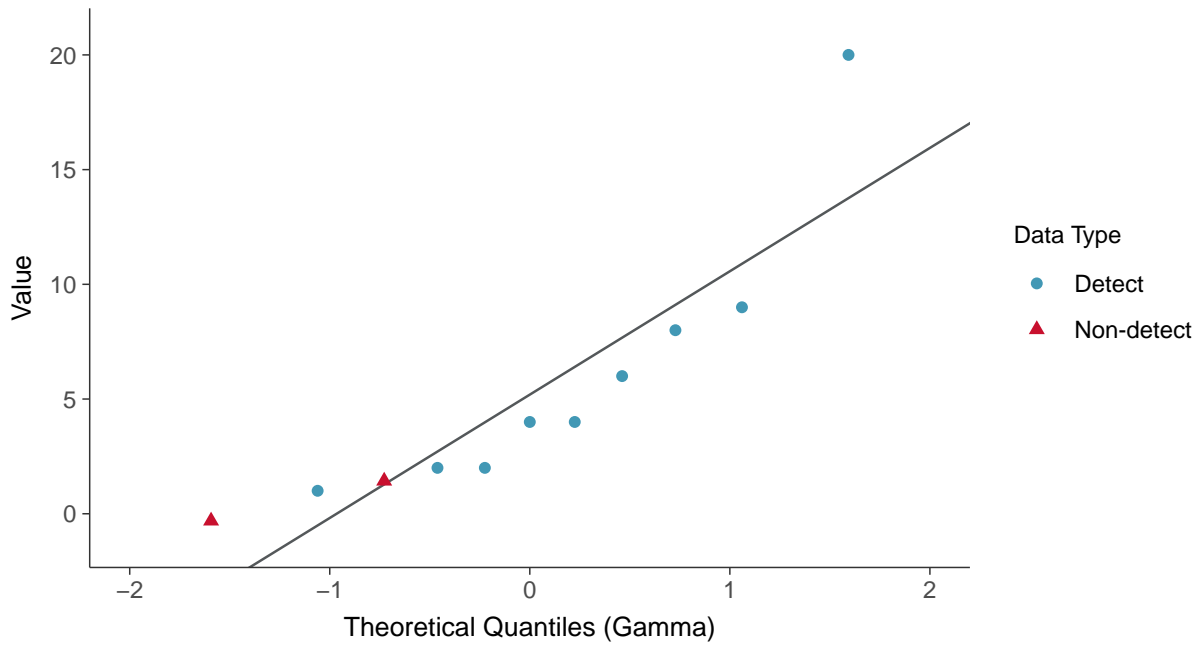
Total Suspended Solids, MW-10 (mg/L)





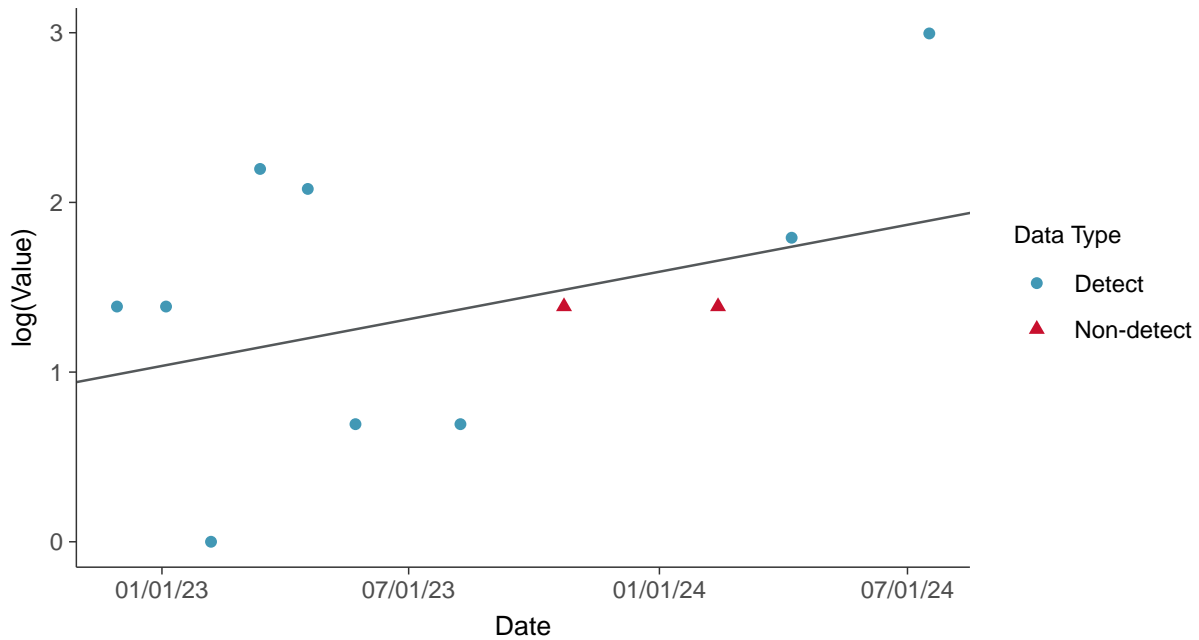
### Gamma Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-10 (mg/L)



### Trend Regression: Lognormal MLE

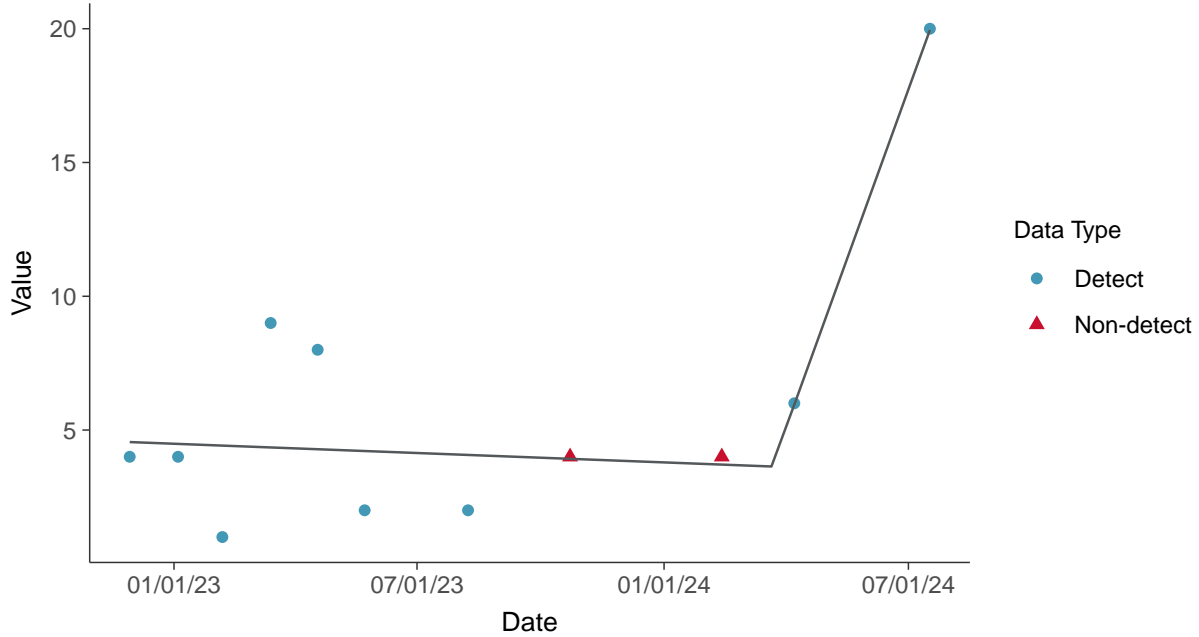
Total Suspended Solids, MW-10 (mg/L)





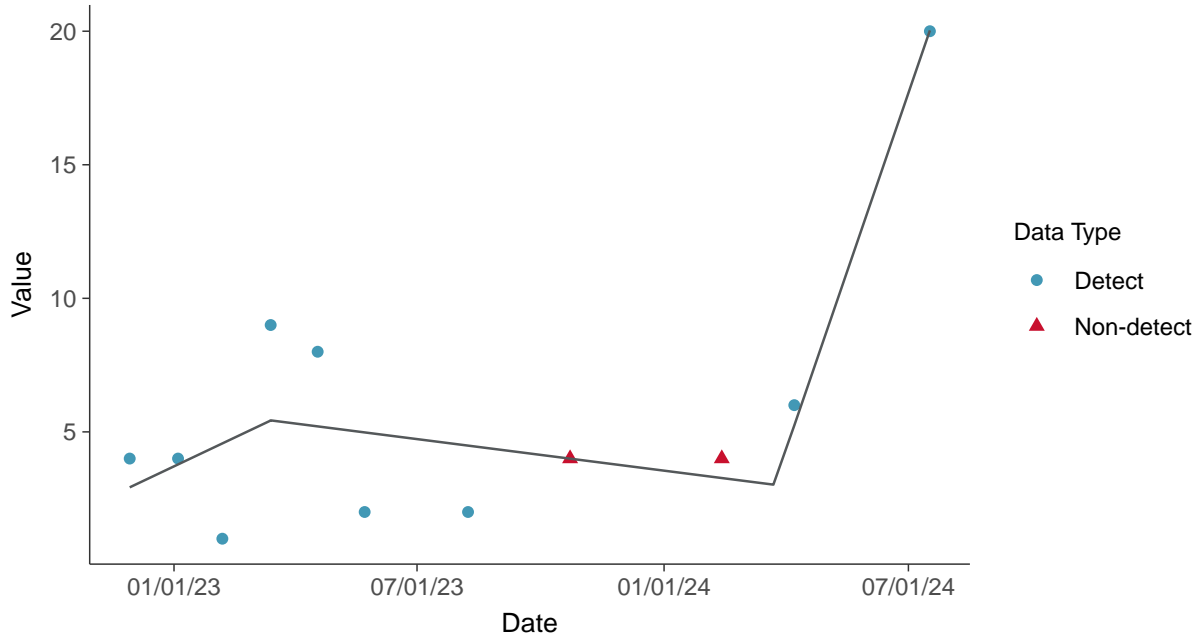
### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Total Suspended Solids, MW-10 (mg/L)



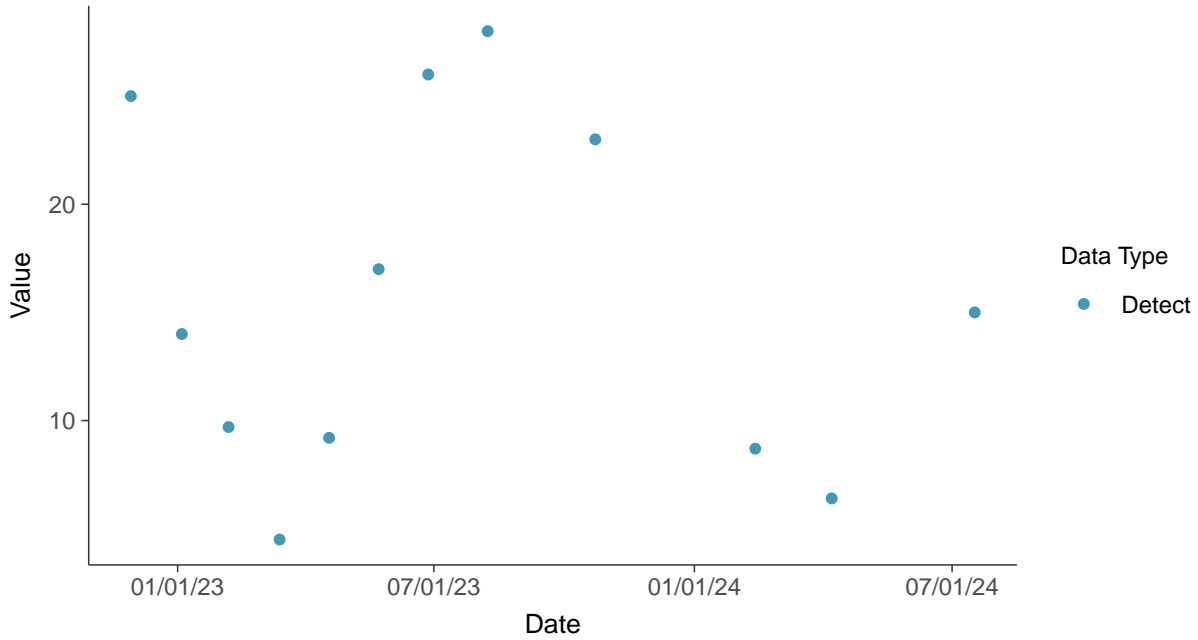


### Appendix III: Boron, MW-10

ID: 20\_3\_4\_105

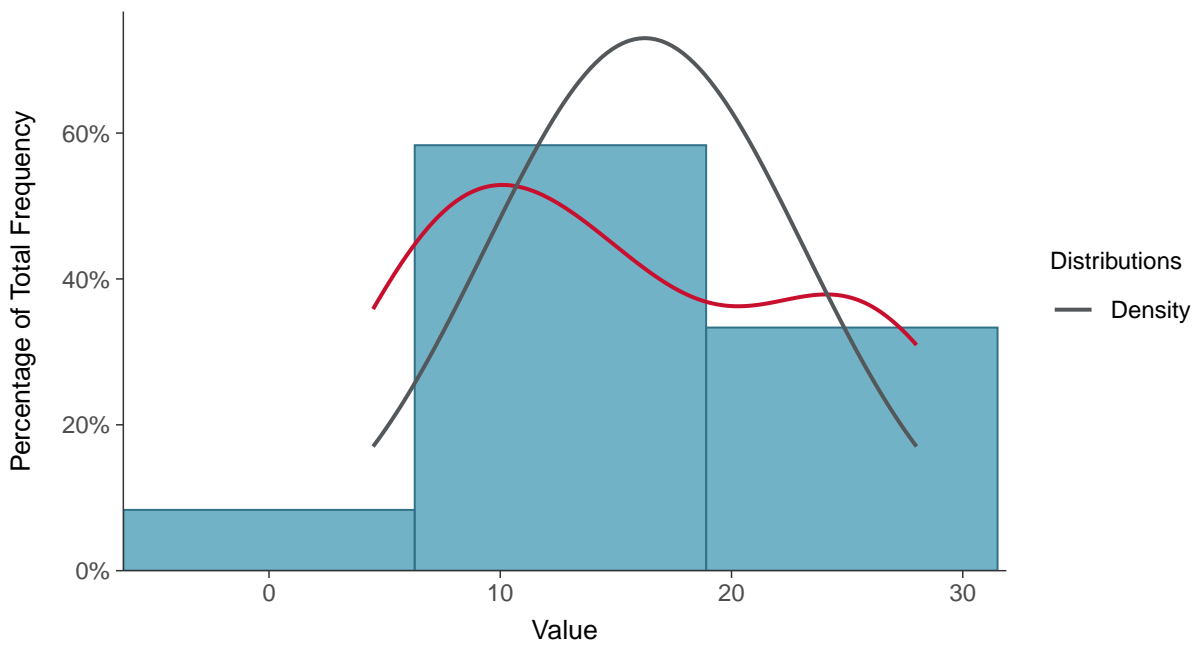
#### Scatter Plot

Boron, MW-10 (mg/L)



#### Histogram

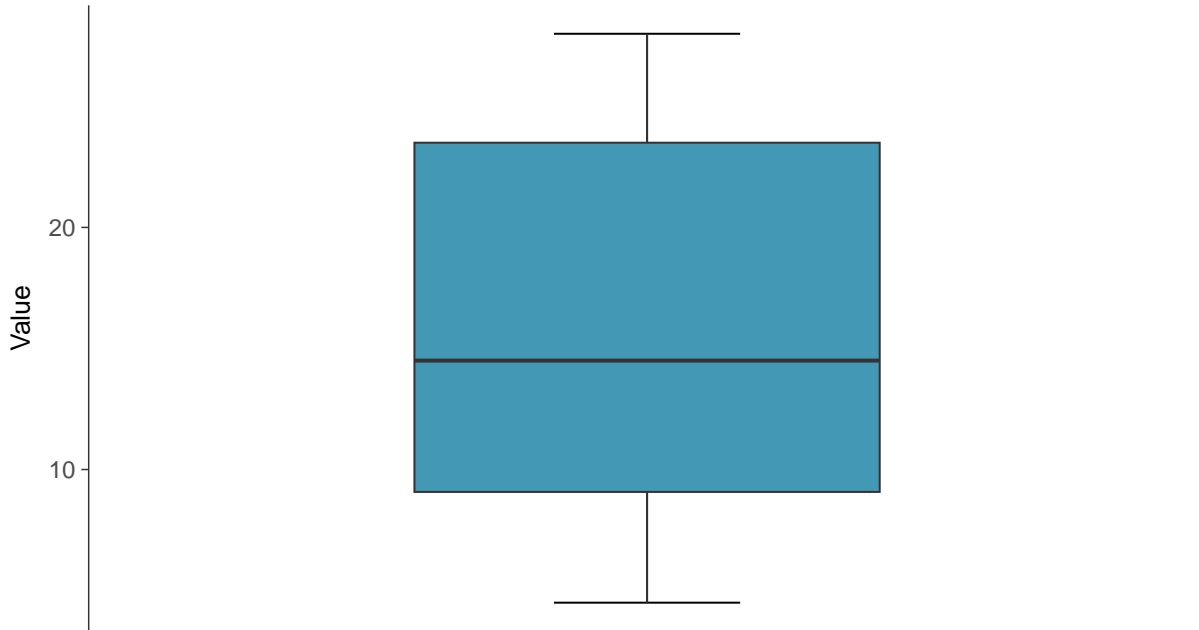
Boron, MW-10 (mg/L)





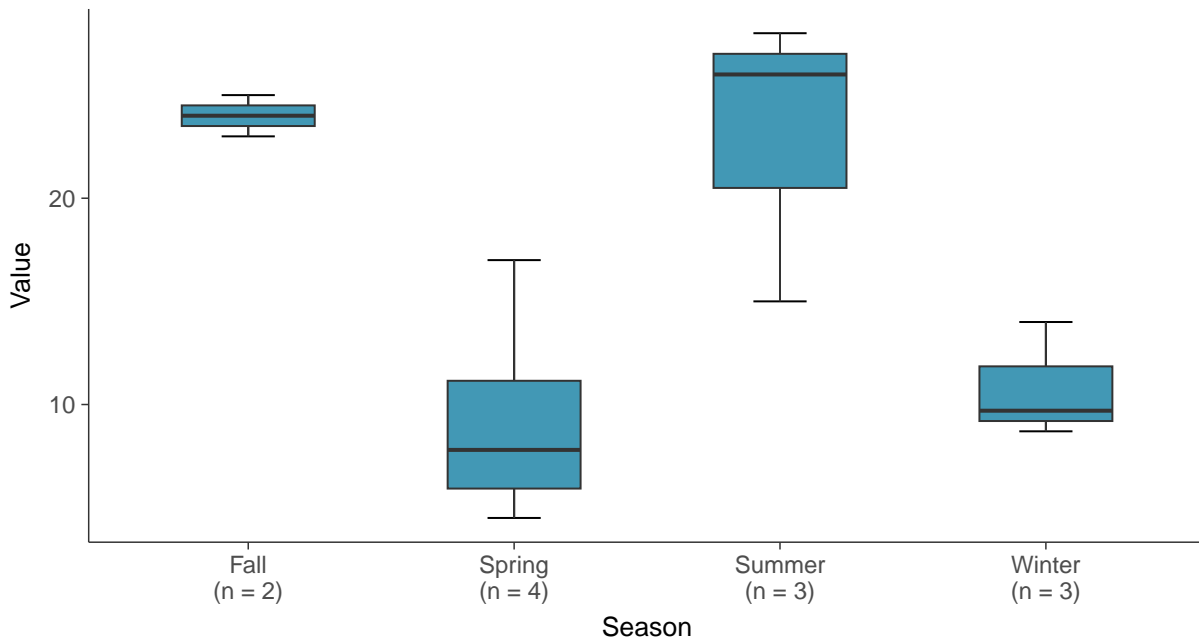
### Boxplot

Boron, MW-10 (mg/L)



### Boxplot by Season

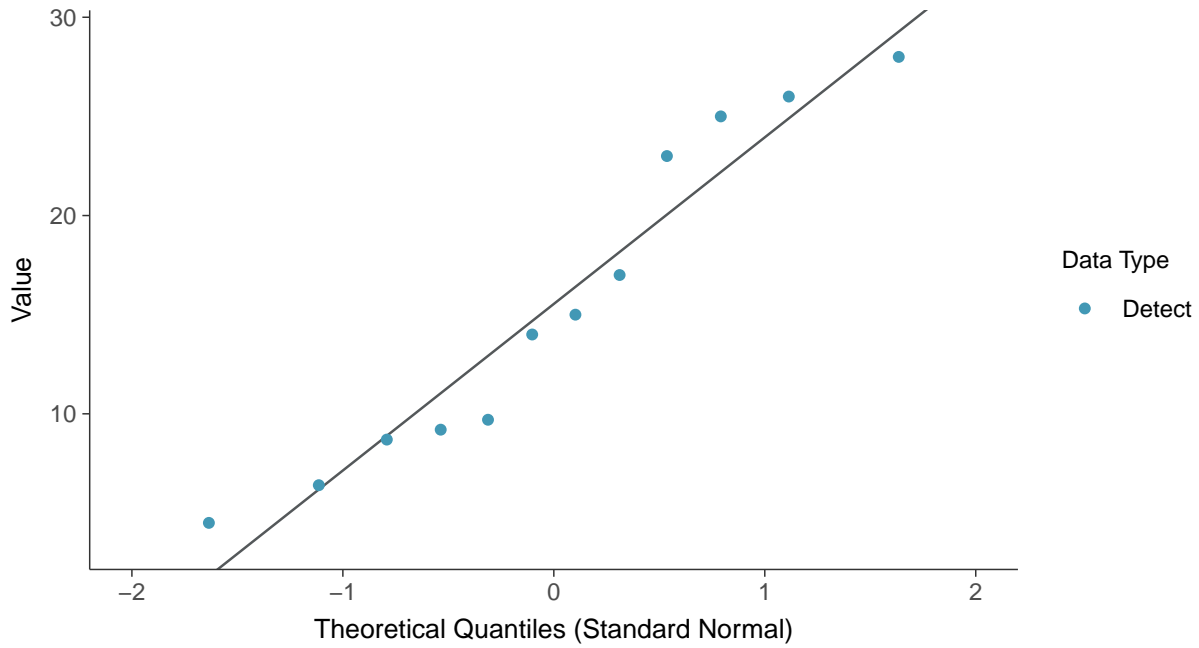
Boron, MW-10 (mg/L)





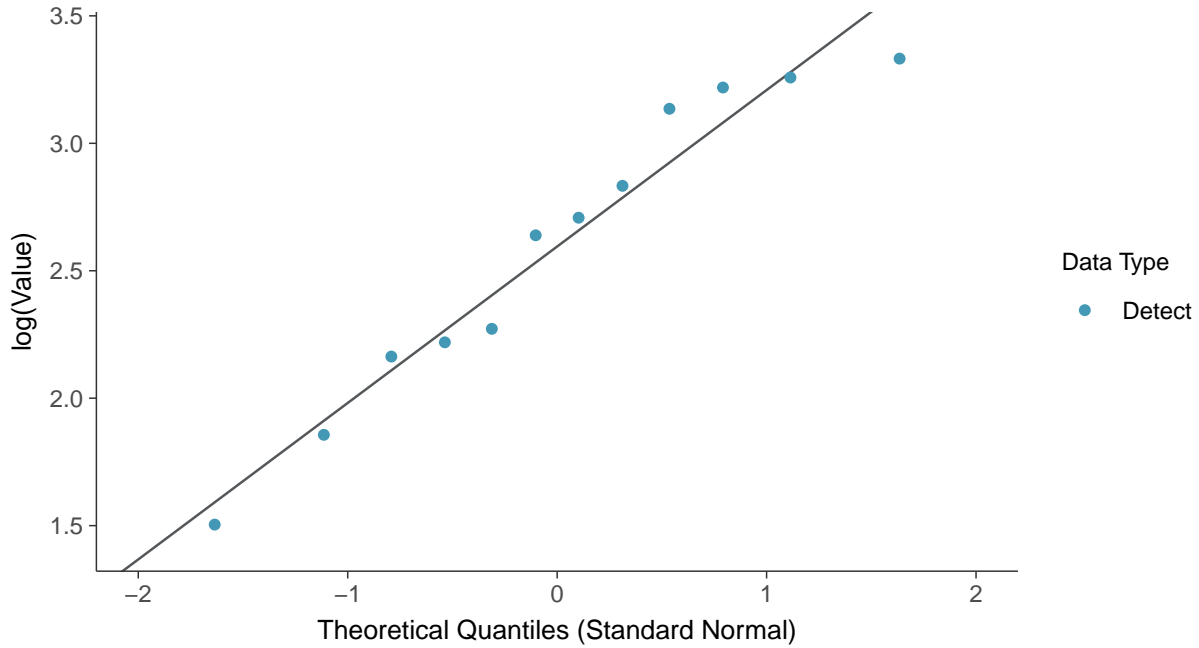
### Normal Q-Q plot

Boron, MW-10 (mg/L)



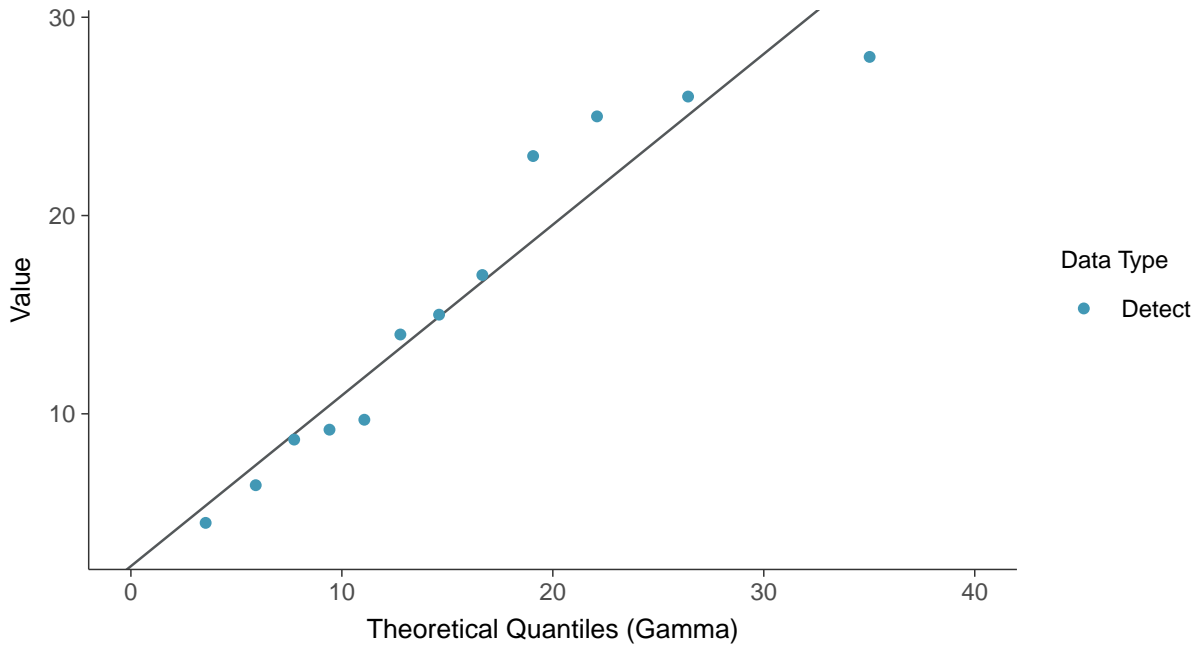
### Lognormal Q-Q plot

Boron, MW-10 (mg/L)



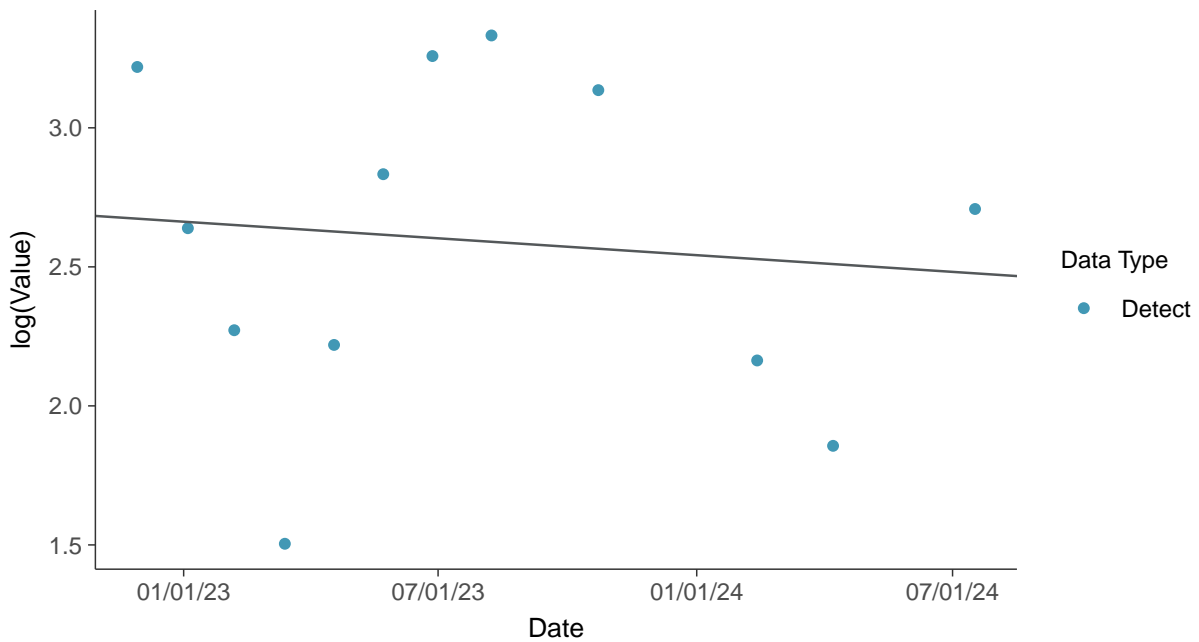


**Gamma Q-Q plot**  
Boron, MW-10 (mg/L)



**Trend Regression: Lognormal MLE**

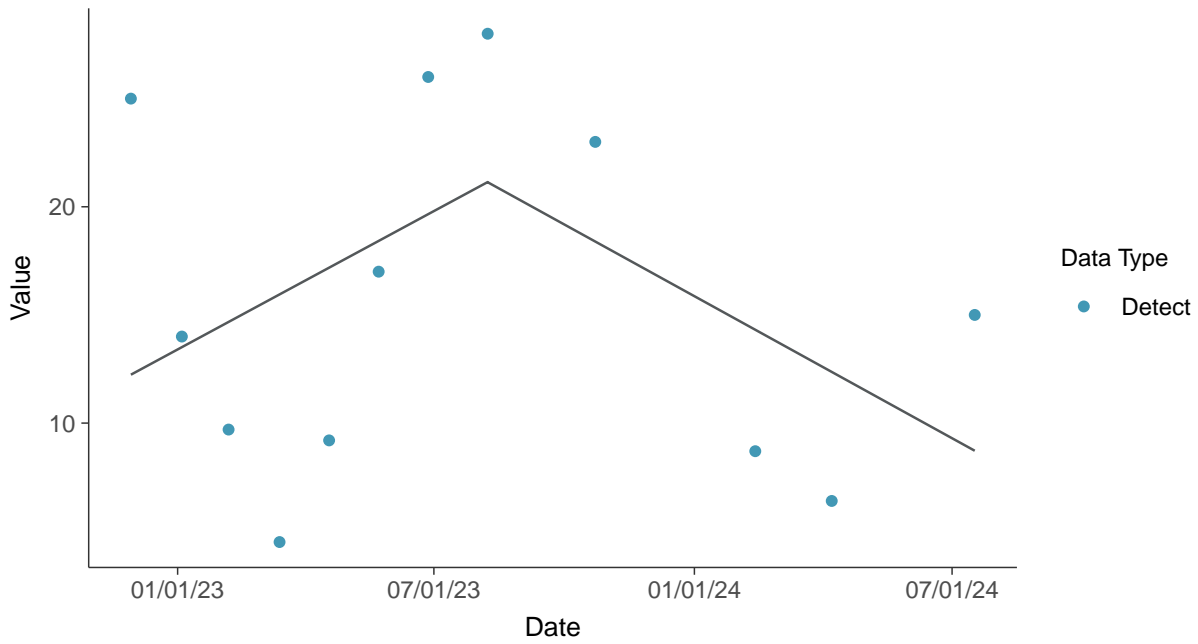
Boron, MW-10 (mg/L)





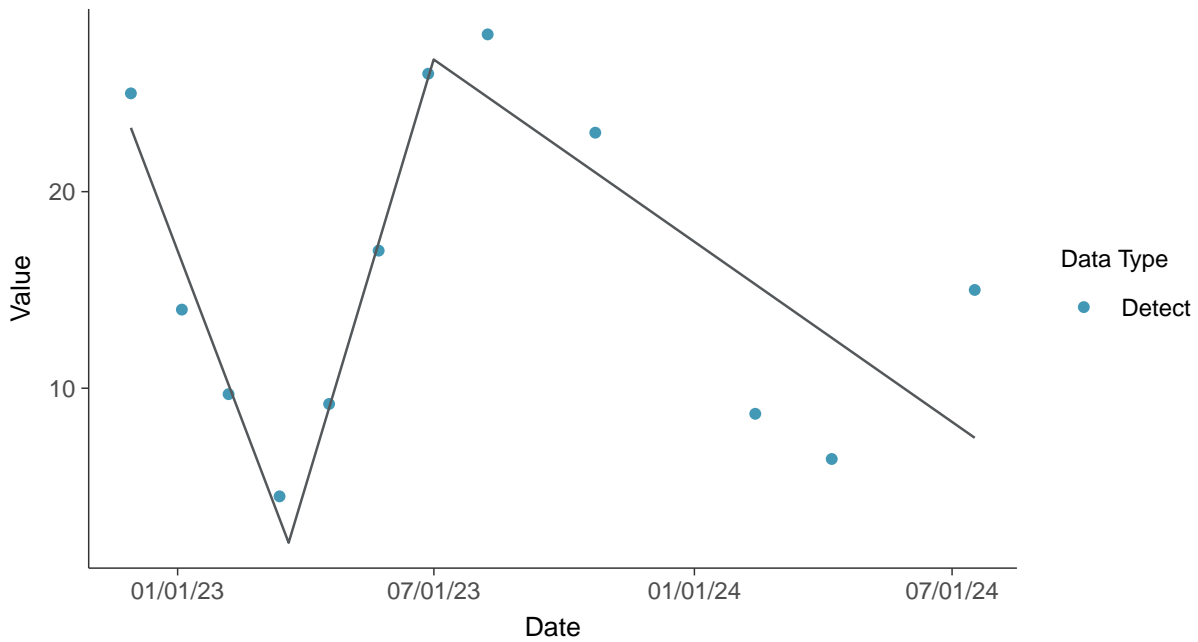
### Trend Regression: Piecewise Linear-Linear

Boron, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-10 (mg/L)





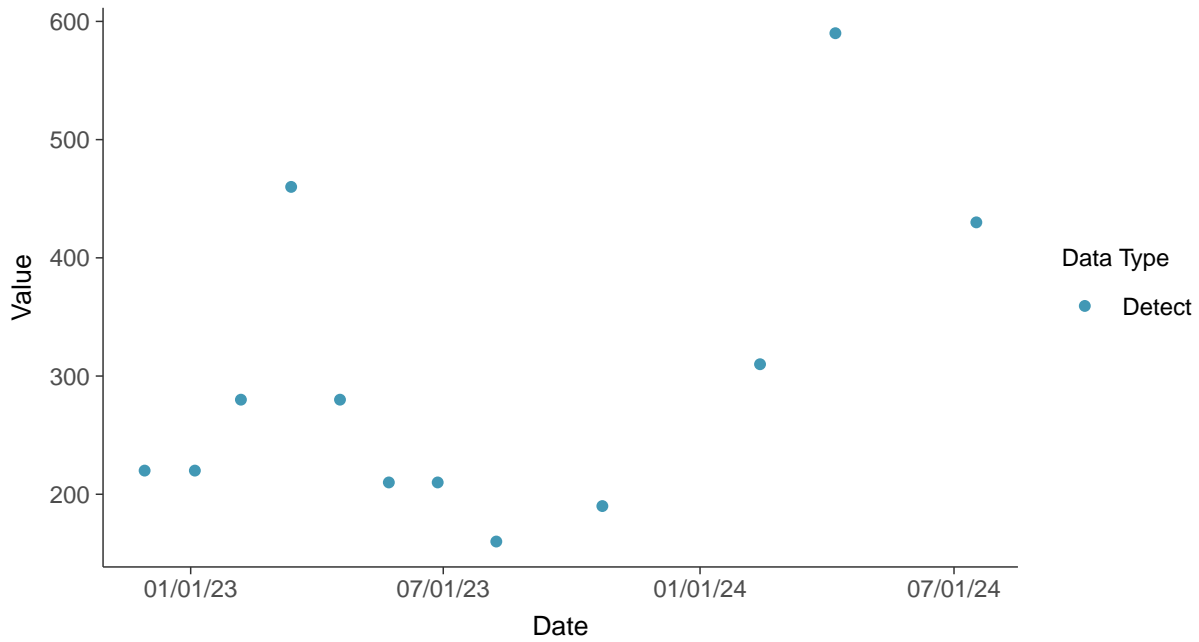


### Appendix III: Calcium, MW-10

ID: 20\_3\_4\_107

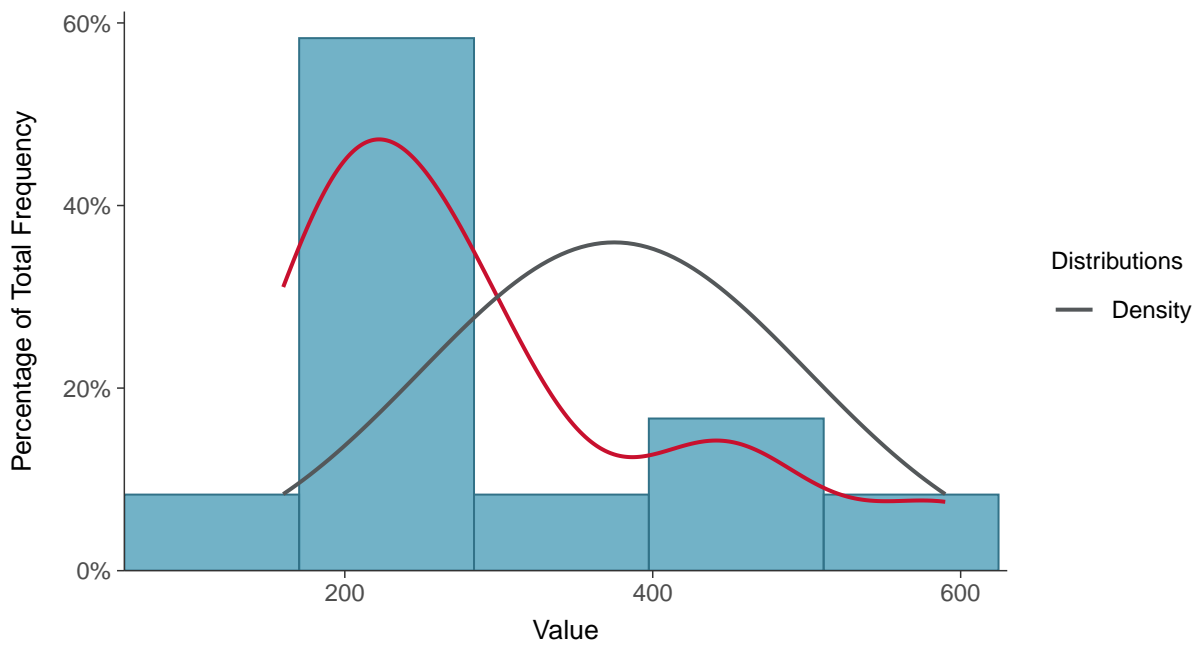
#### Scatter Plot

Calcium, MW-10 (mg/L)



#### Histogram

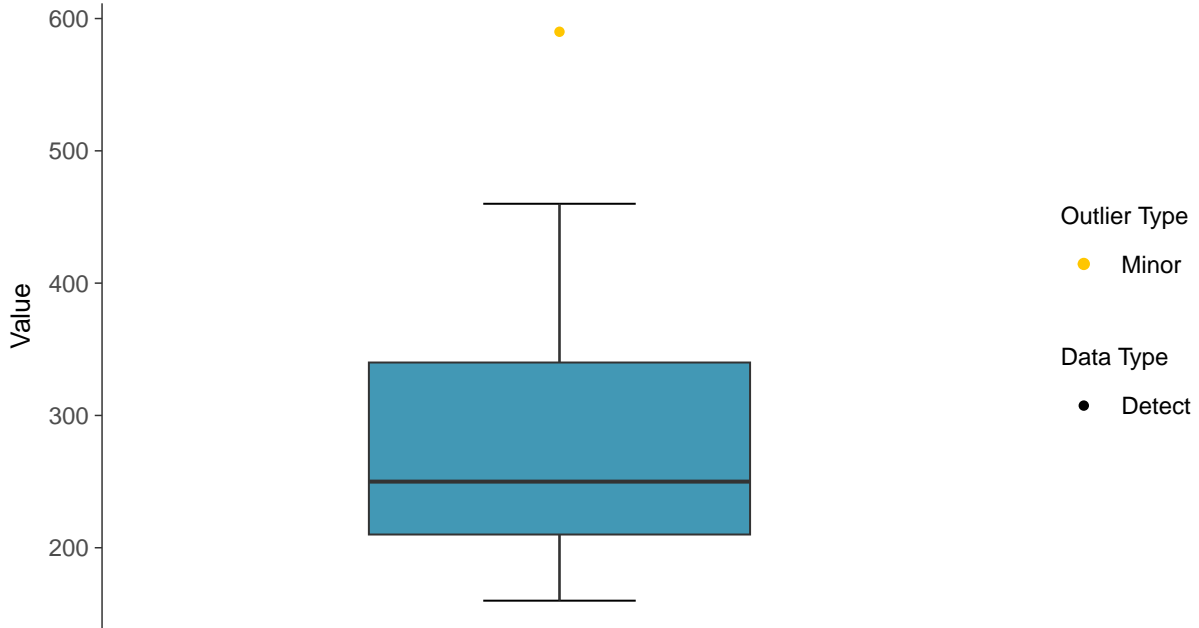
Calcium, MW-10 (mg/L)





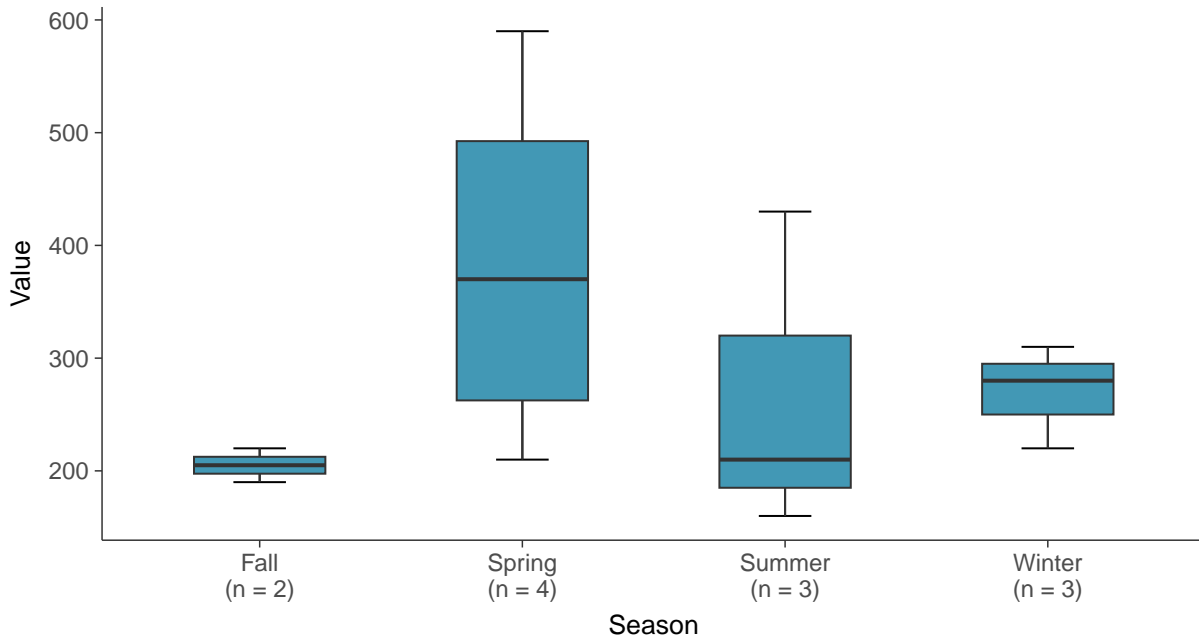
### Boxplot

Calcium, MW-10 (mg/L)



### Boxplot by Season

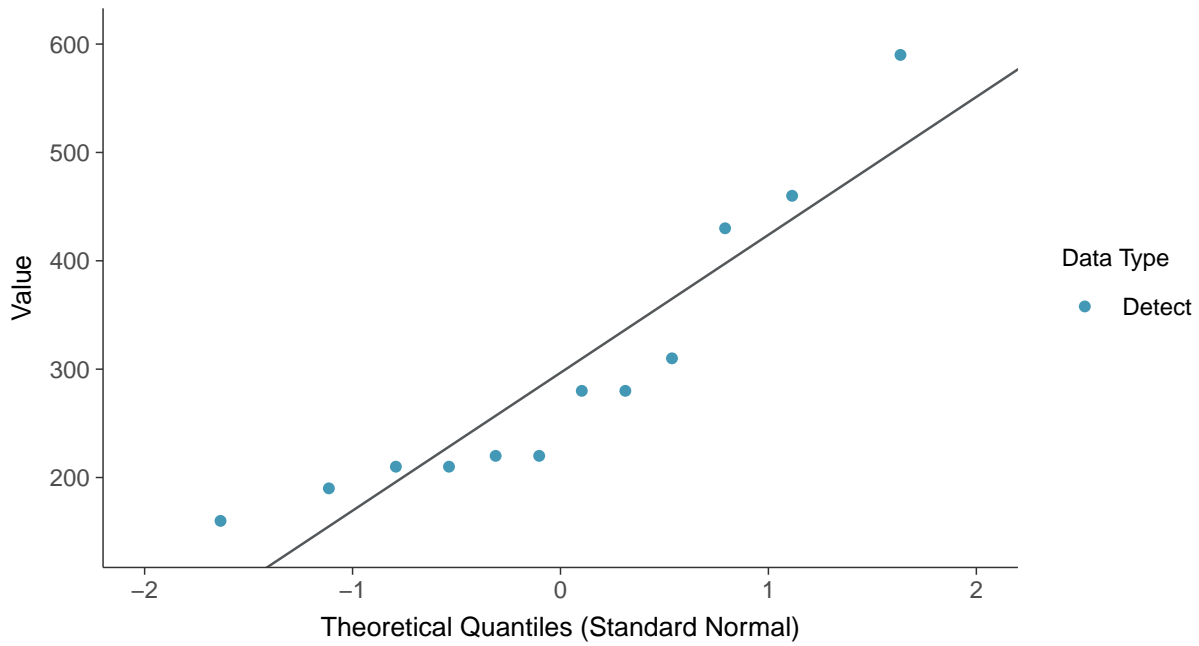
Calcium, MW-10 (mg/L)





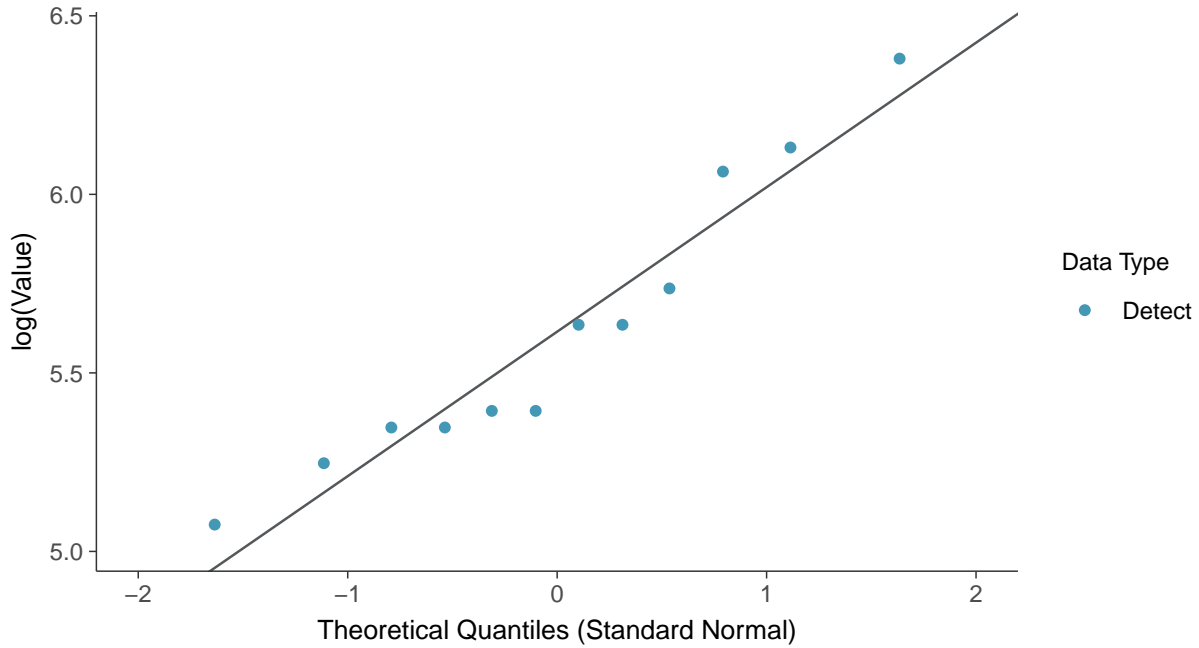
### Normal Q-Q plot

Calcium, MW-10 (mg/L)



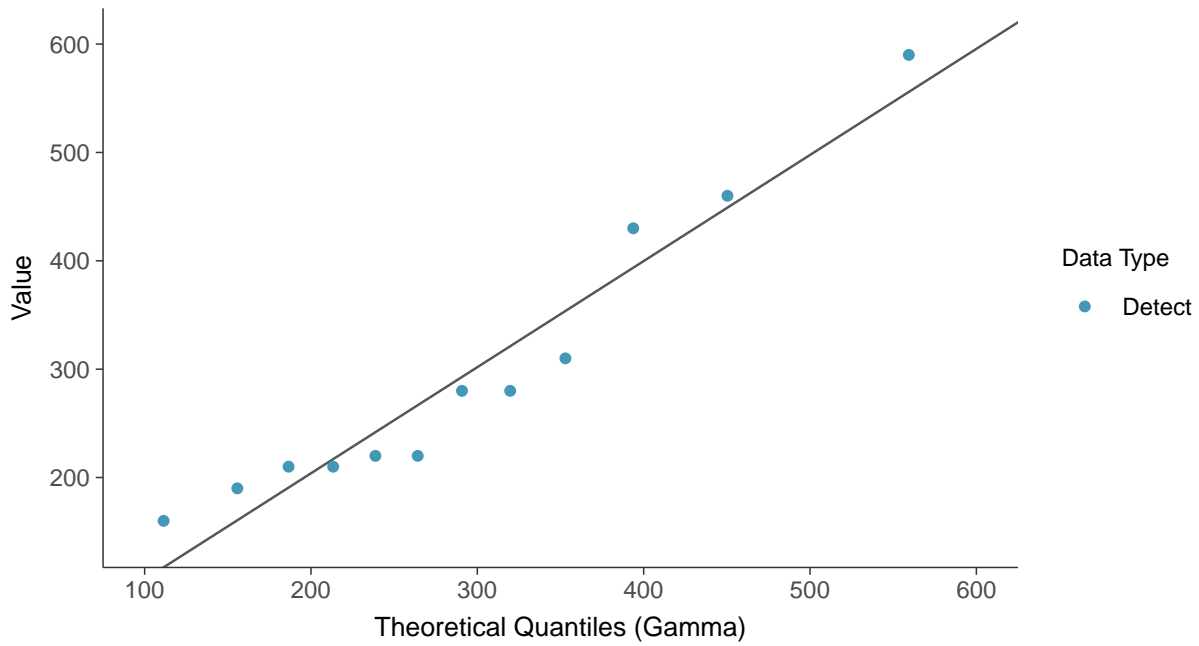
### Lognormal Q-Q plot

Calcium, MW-10 (mg/L)

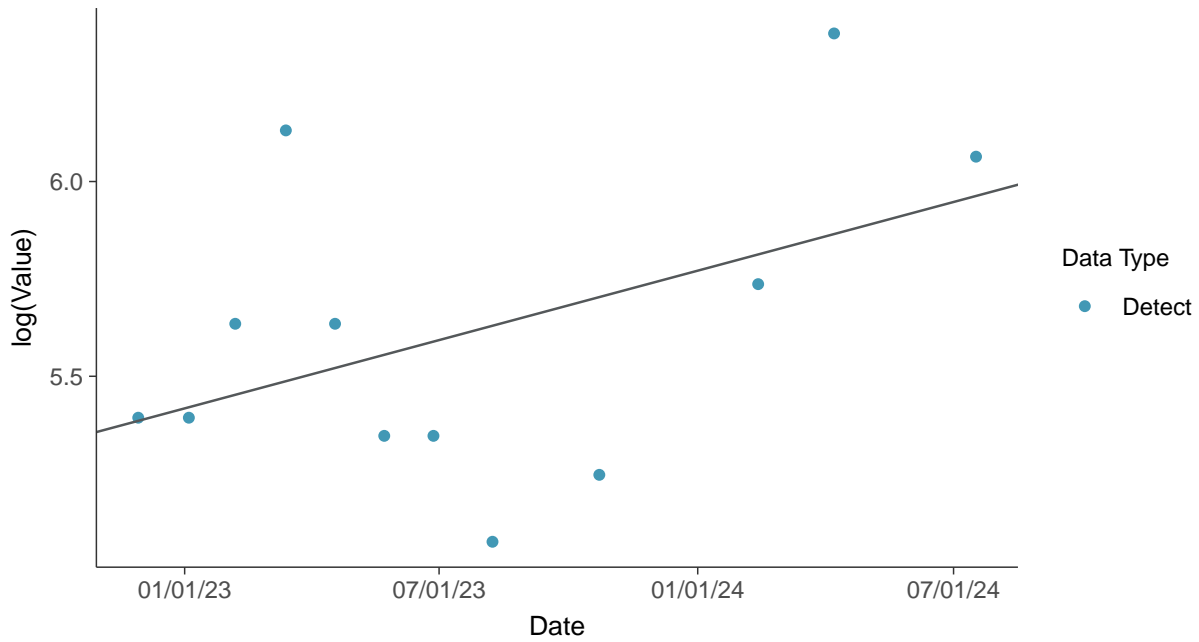




**Gamma Q-Q plot**  
Calcium, MW-10 (mg/L)



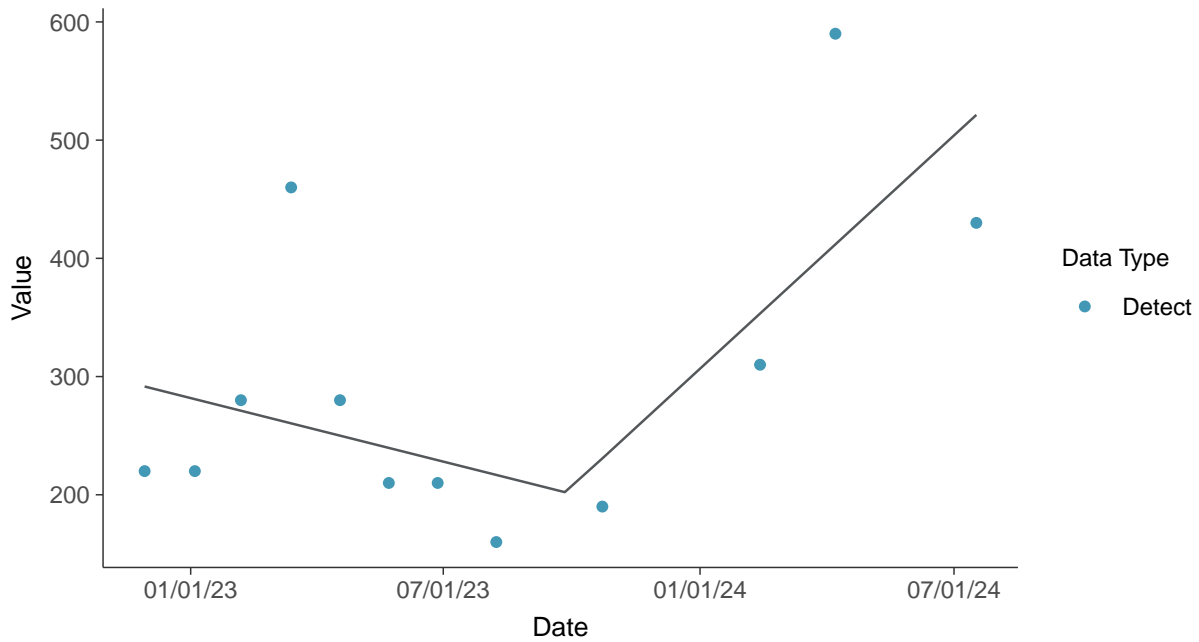
**Trend Regression: Lognormal MLE**  
Calcium, MW-10 (mg/L)





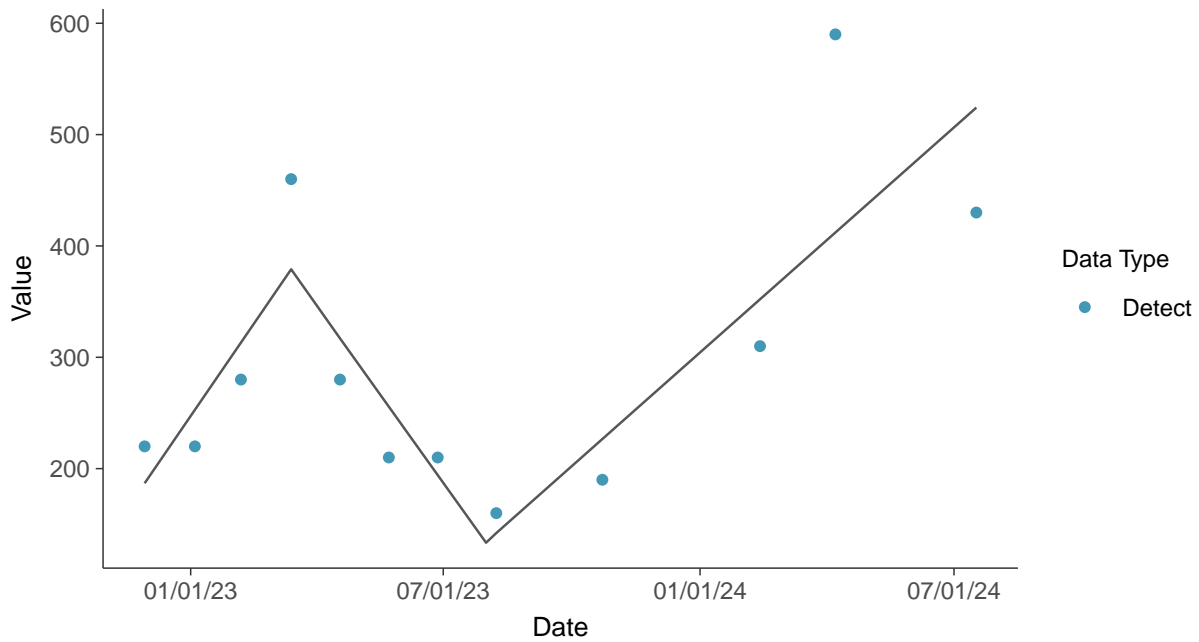
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-10 (mg/L)



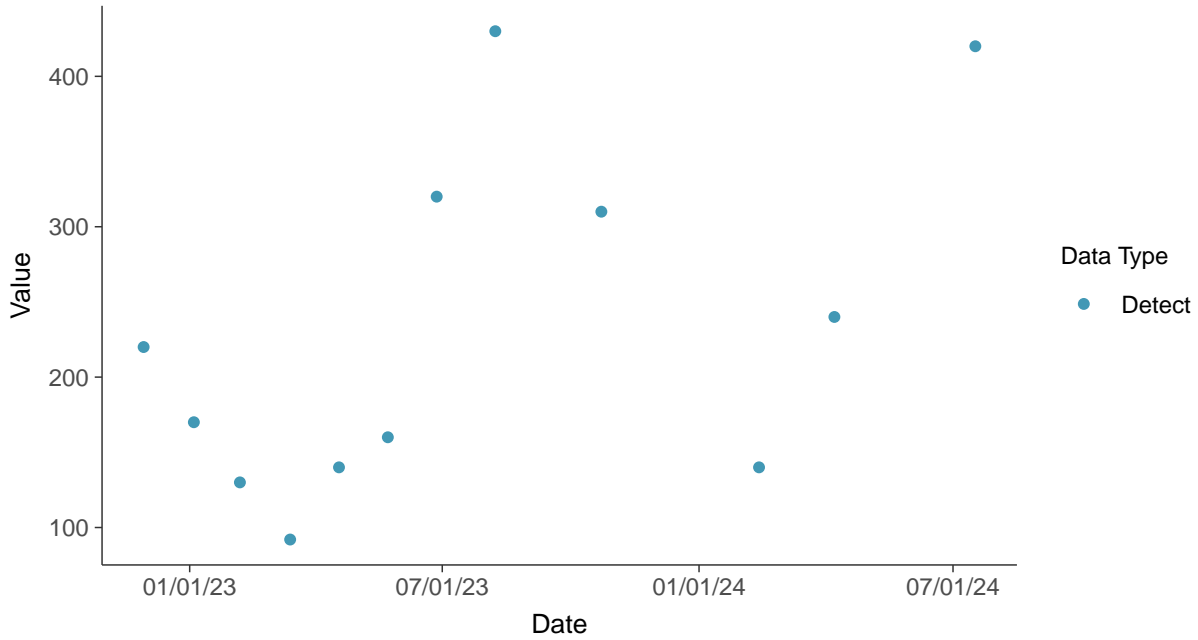


### Appendix III: Chloride (as Cl), MW-10

ID: 20\_3\_4\_108

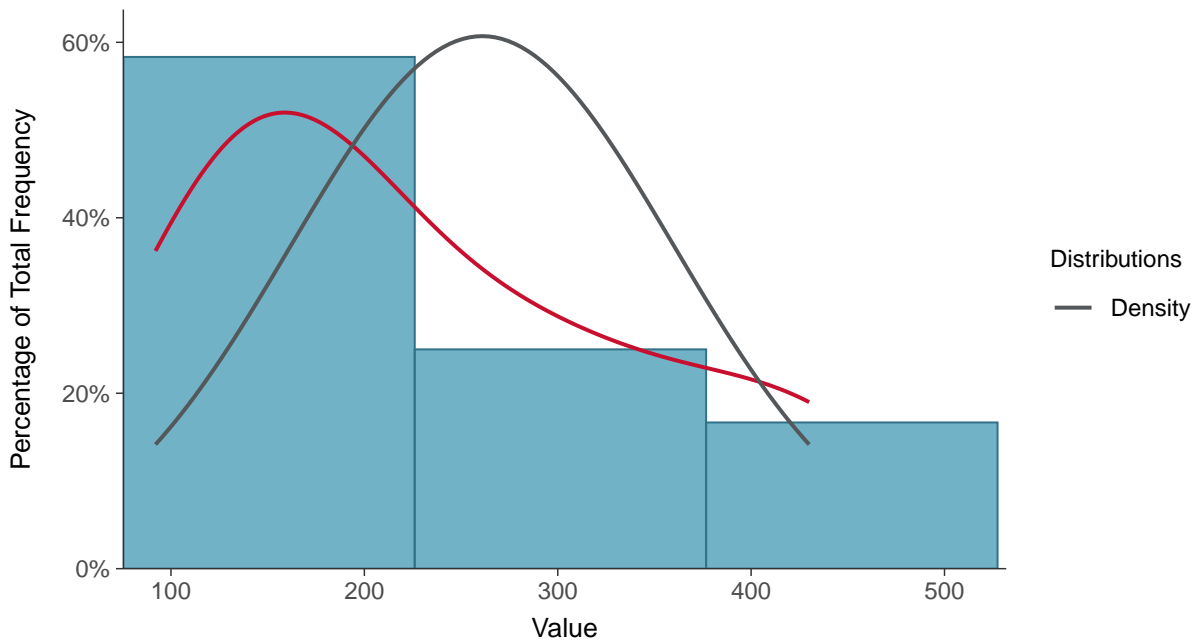
#### Scatter Plot

Chloride (as Cl), MW-10 (mg/L)



#### Histogram

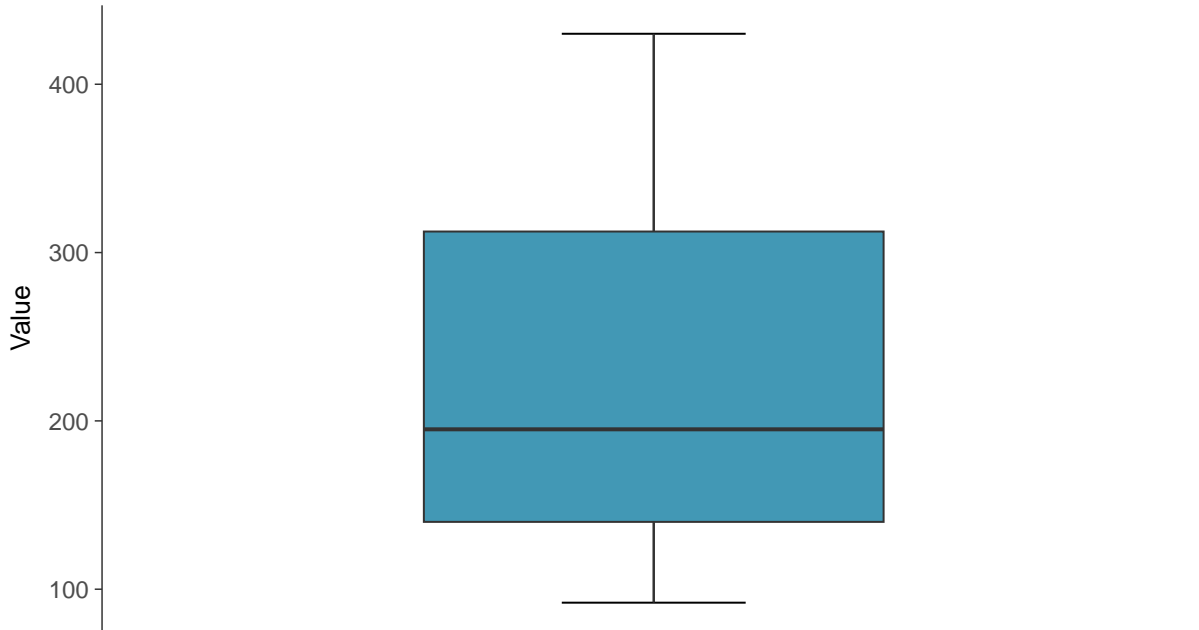
Chloride (as Cl), MW-10 (mg/L)





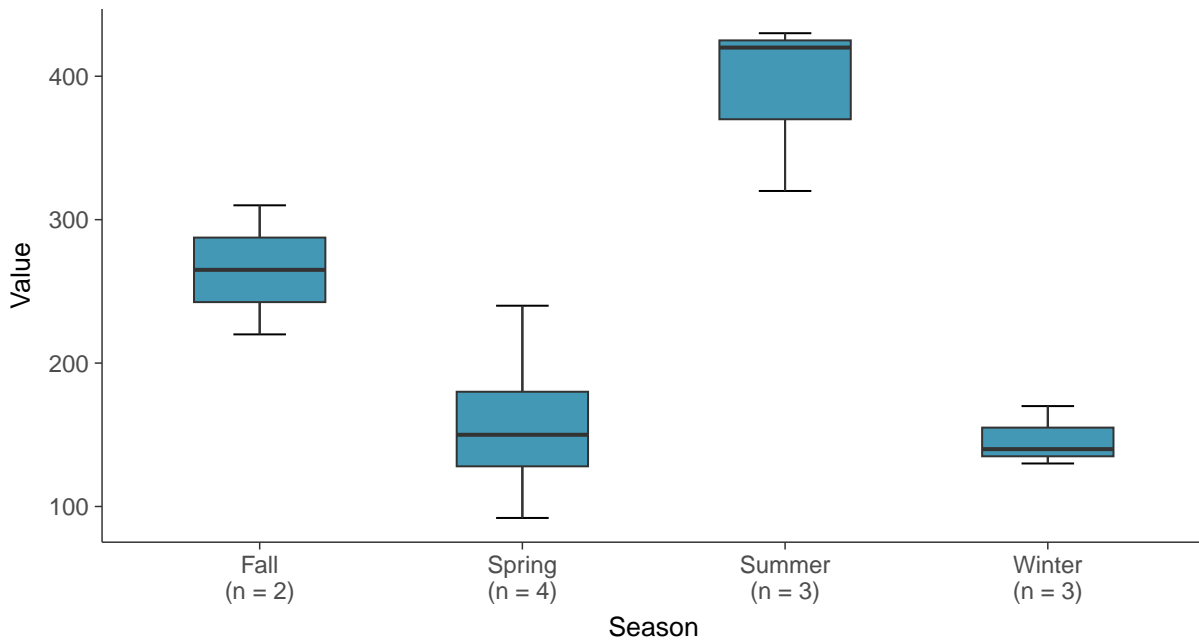
### Boxplot

Chloride (as Cl), MW-10 (mg/L)



### Boxplot by Season

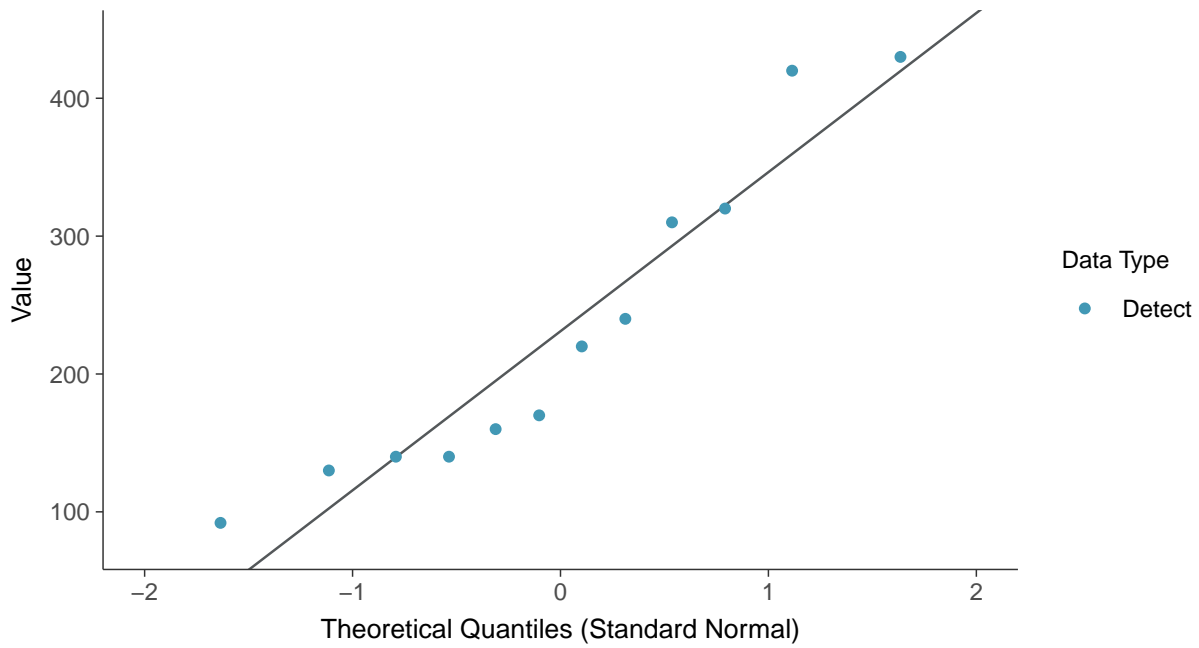
Chloride (as Cl), MW-10 (mg/L)





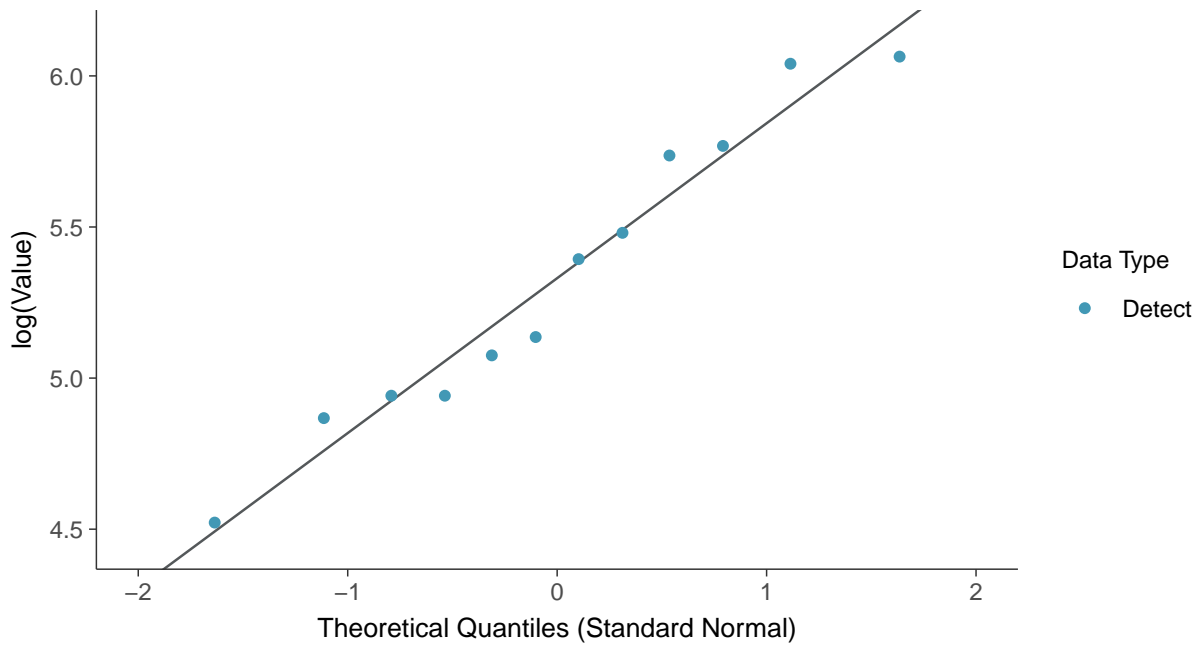
### Normal Q-Q plot

Chloride (as Cl), MW-10 (mg/L)



### Lognormal Q-Q plot

Chloride (as Cl), MW-10 (mg/L)

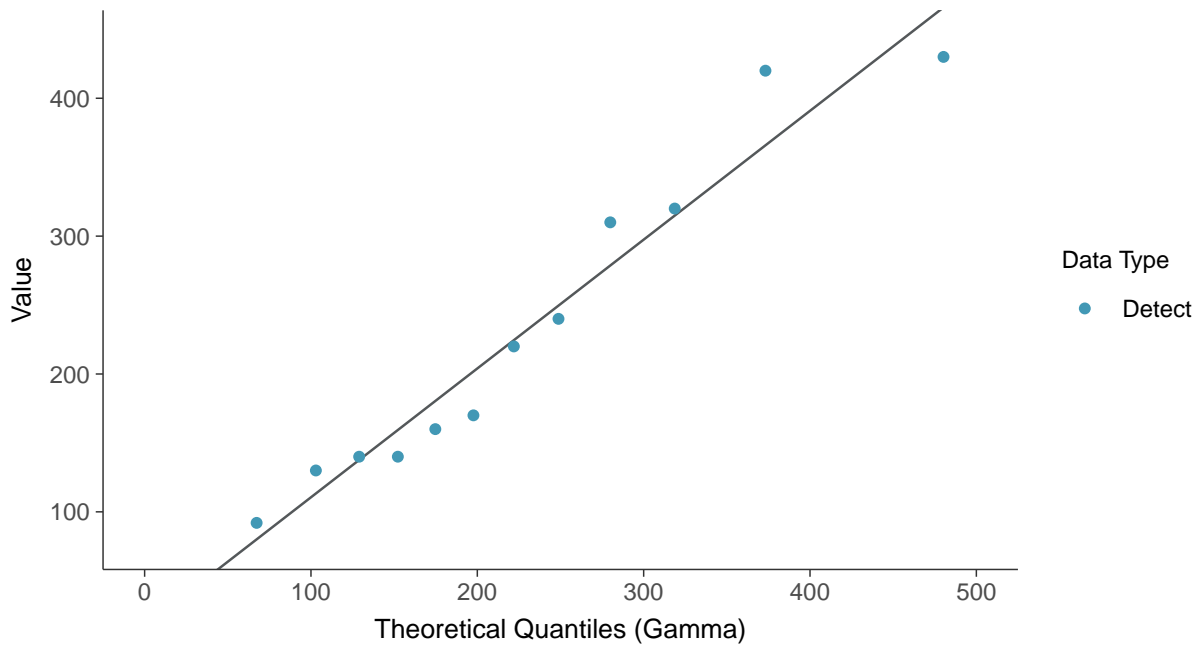






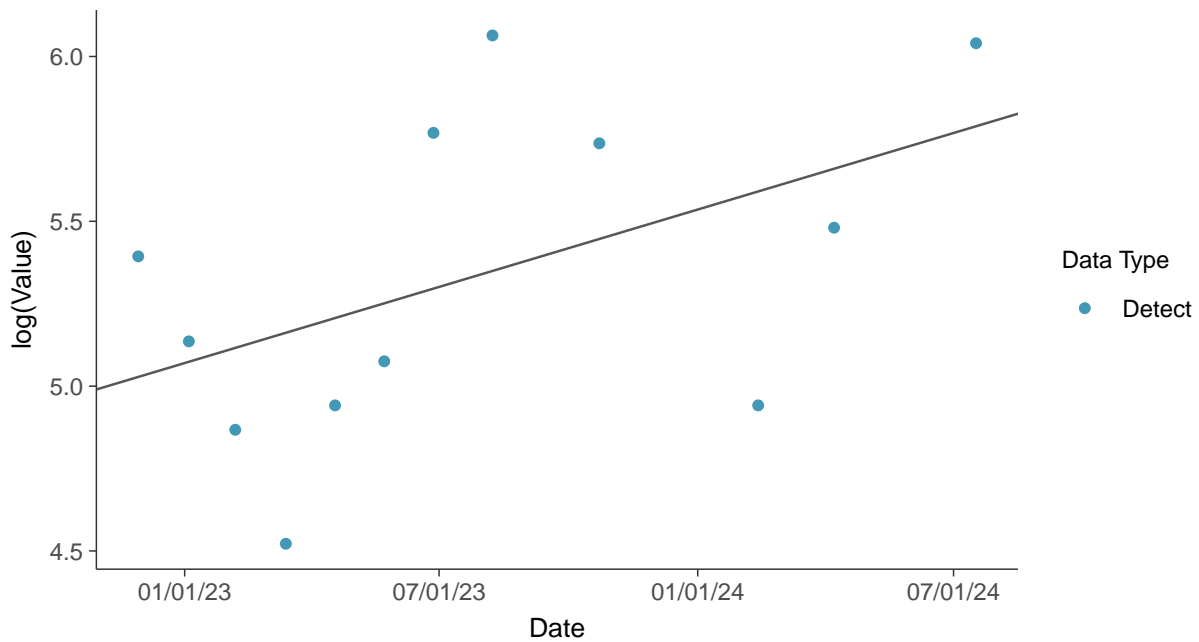
### Gamma Q-Q plot

Chloride (as Cl), MW-10 (mg/L)



### Trend Regression: Lognormal MLE

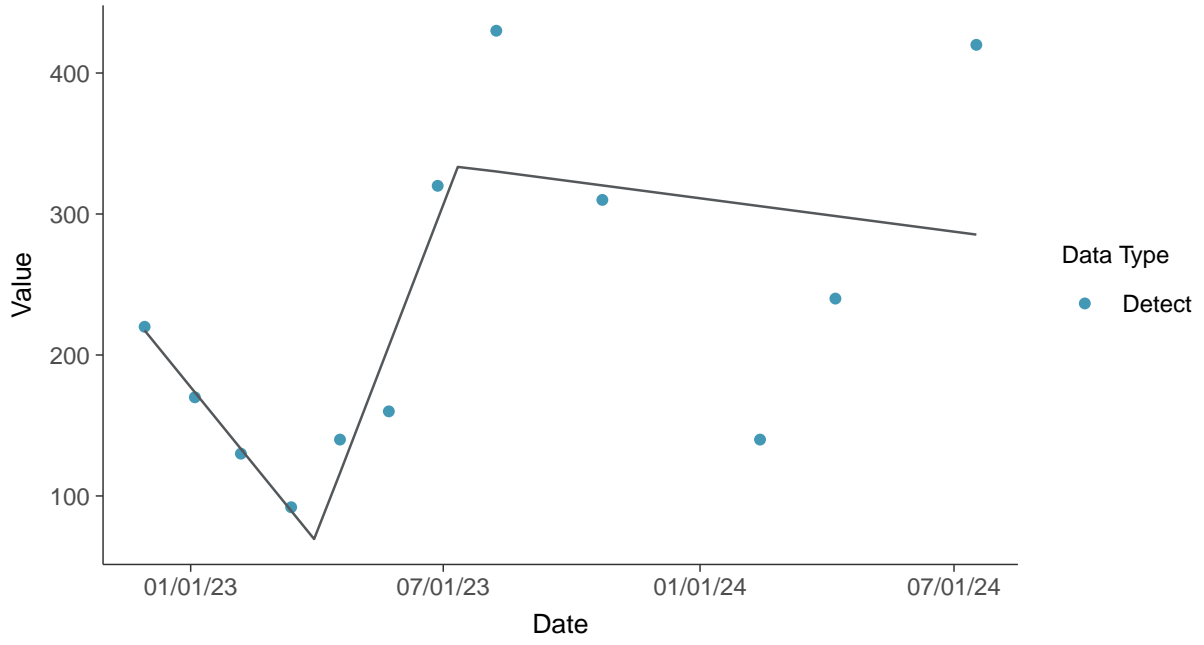
Chloride (as Cl), MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

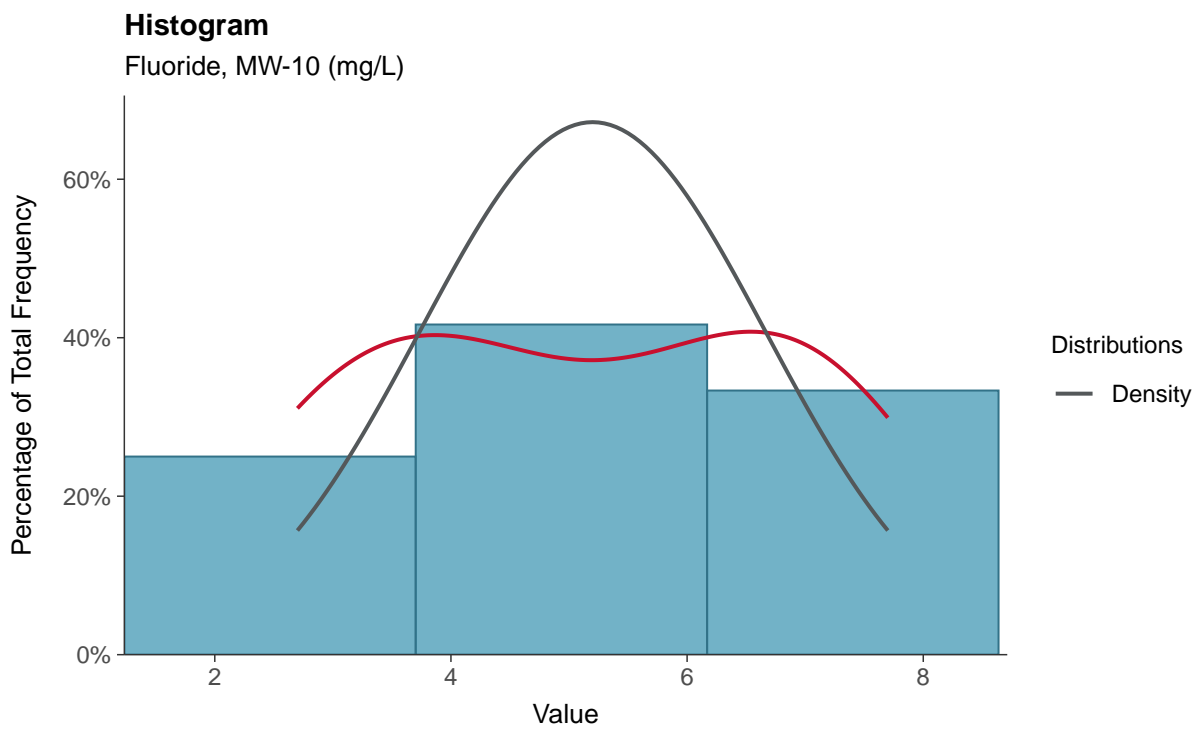
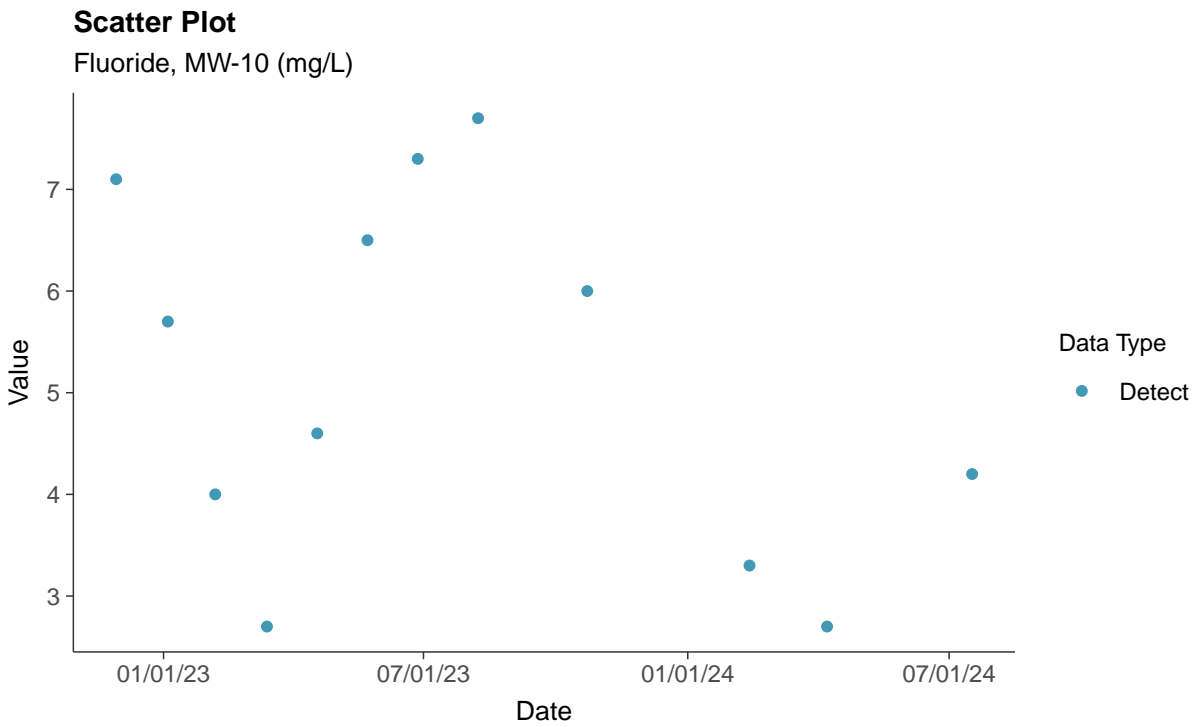
Chloride (as Cl), MW-10 (mg/L)





### Appendix III: Fluoride, MW-10

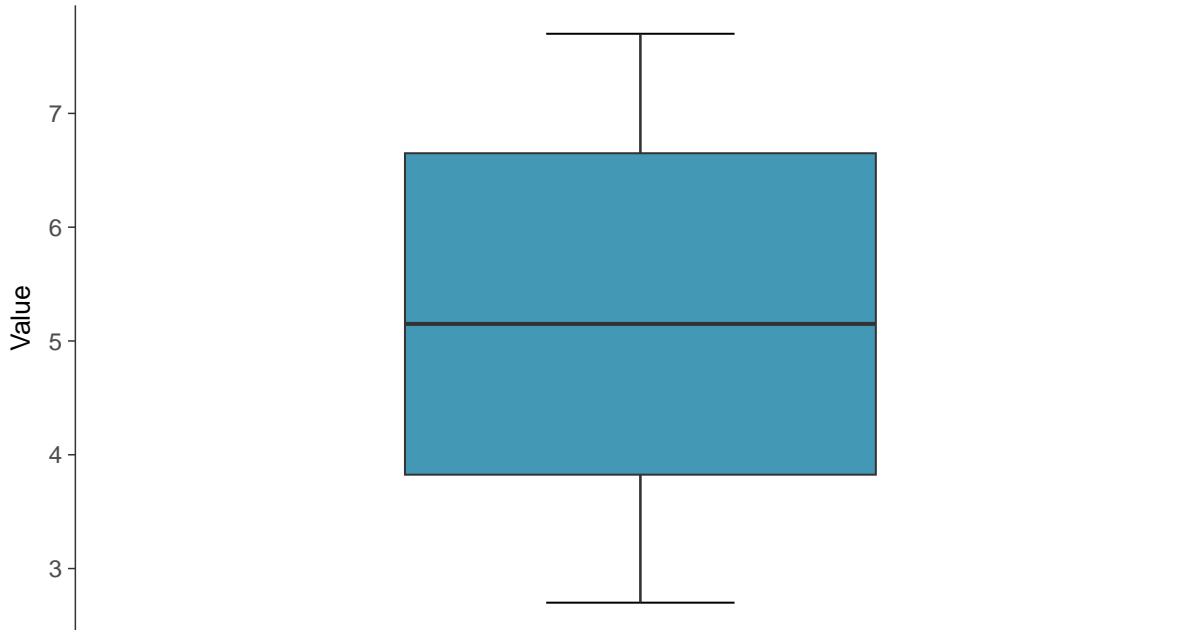
ID: 20\_3\_4\_112





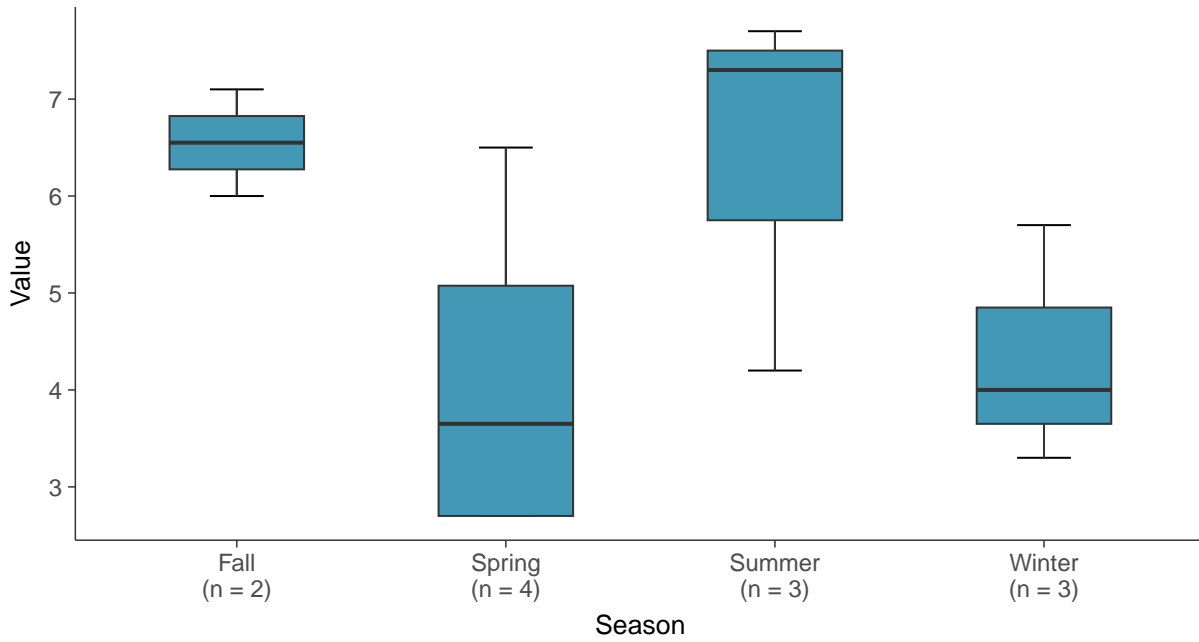
### Boxplot

Fluoride, MW-10 (mg/L)



### Boxplot by Season

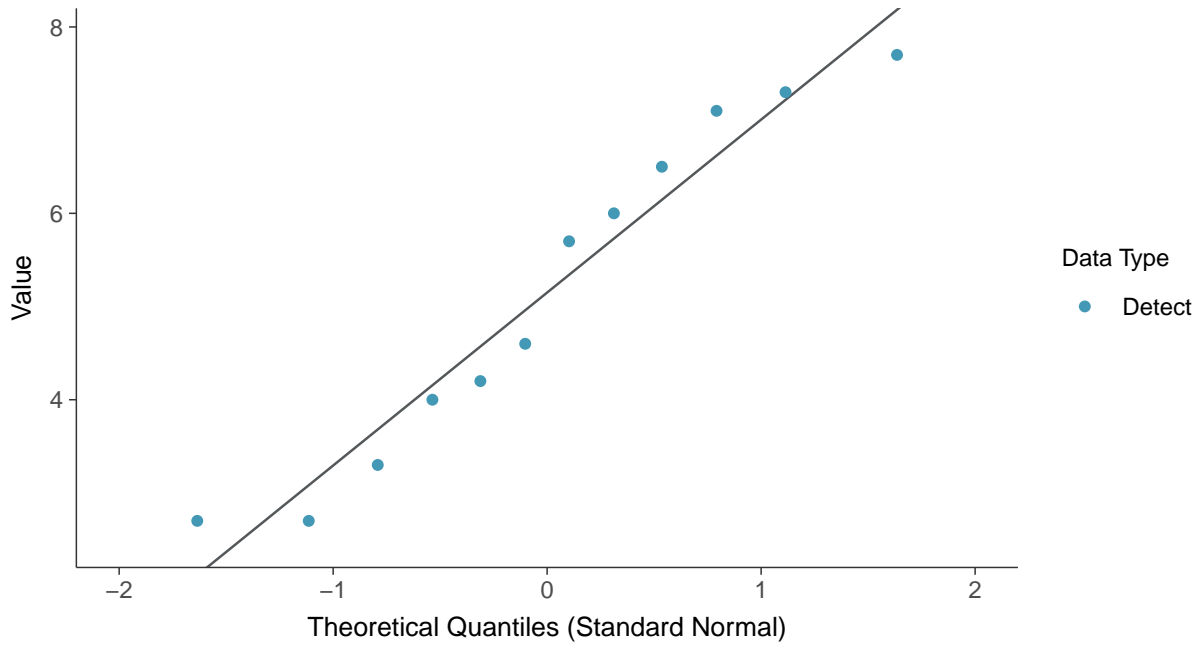
Fluoride, MW-10 (mg/L)





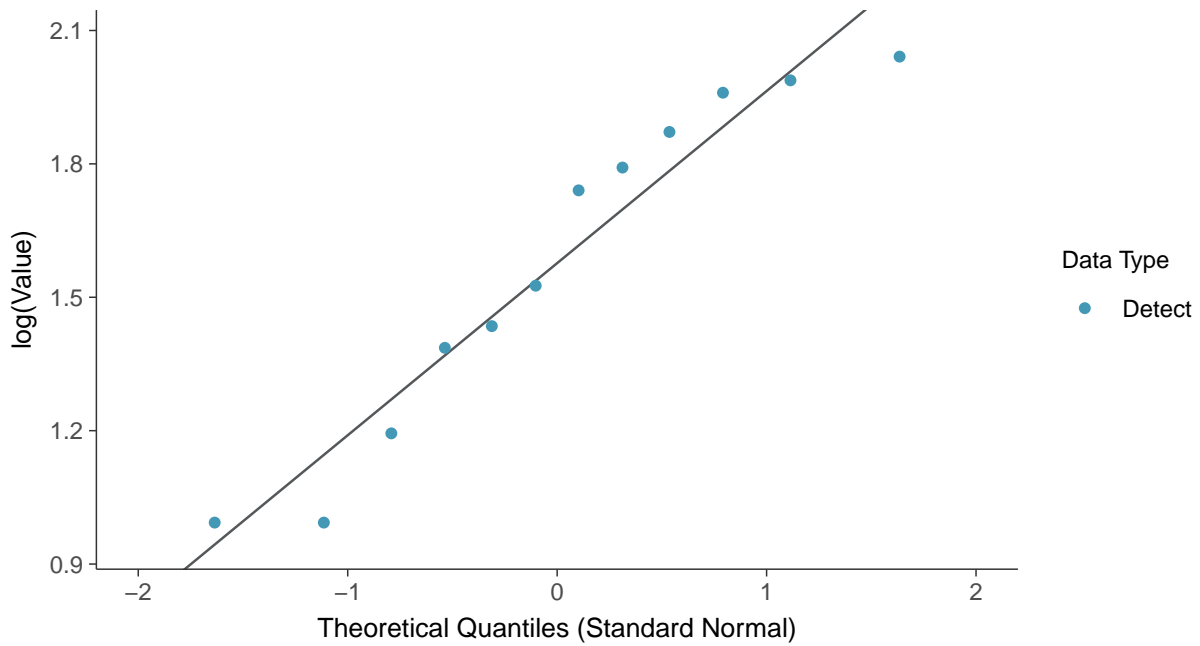
### Normal Q-Q plot

Fluoride, MW-10 (mg/L)



### Lognormal Q-Q plot

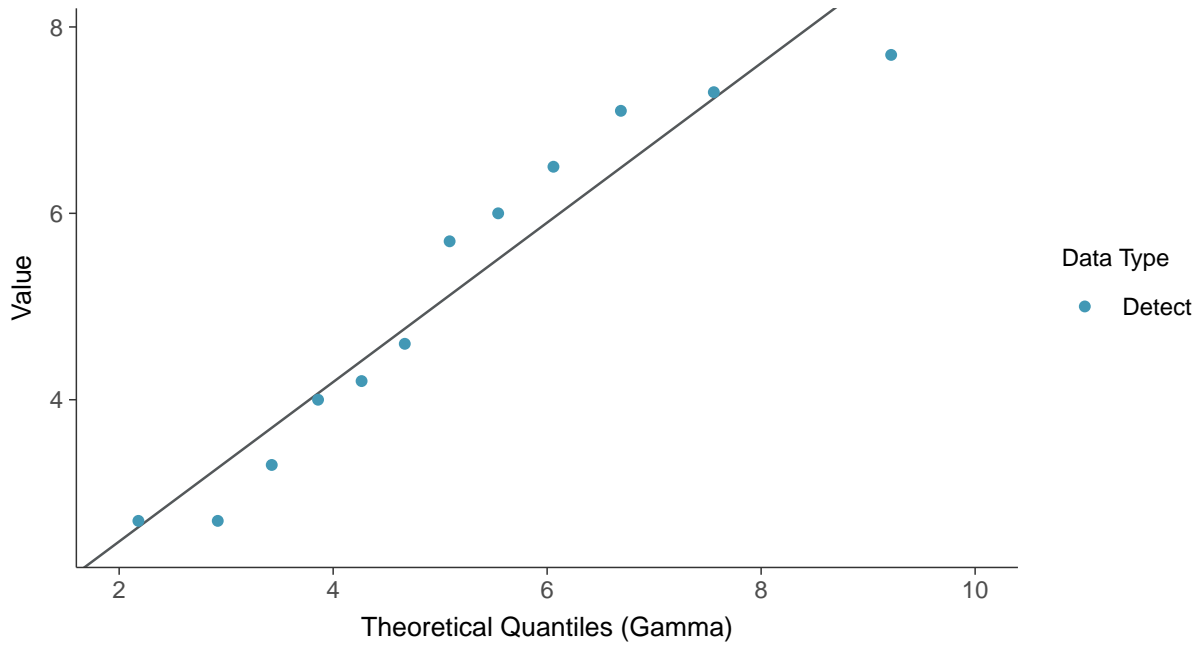
Fluoride, MW-10 (mg/L)





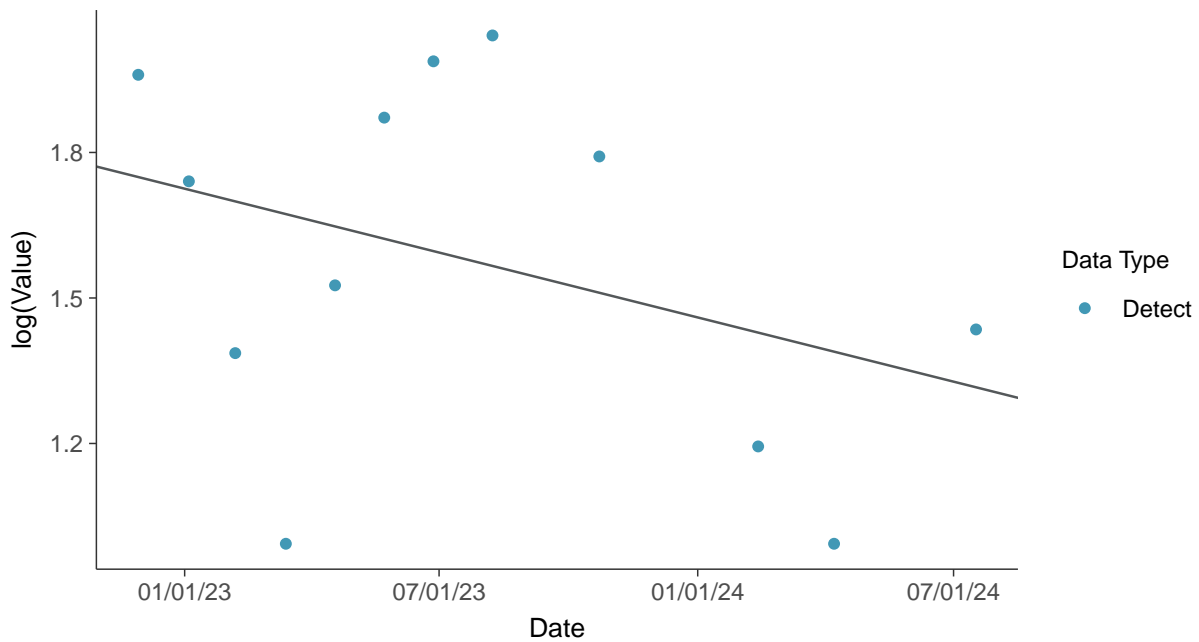
### Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



### Trend Regression: Lognormal MLE

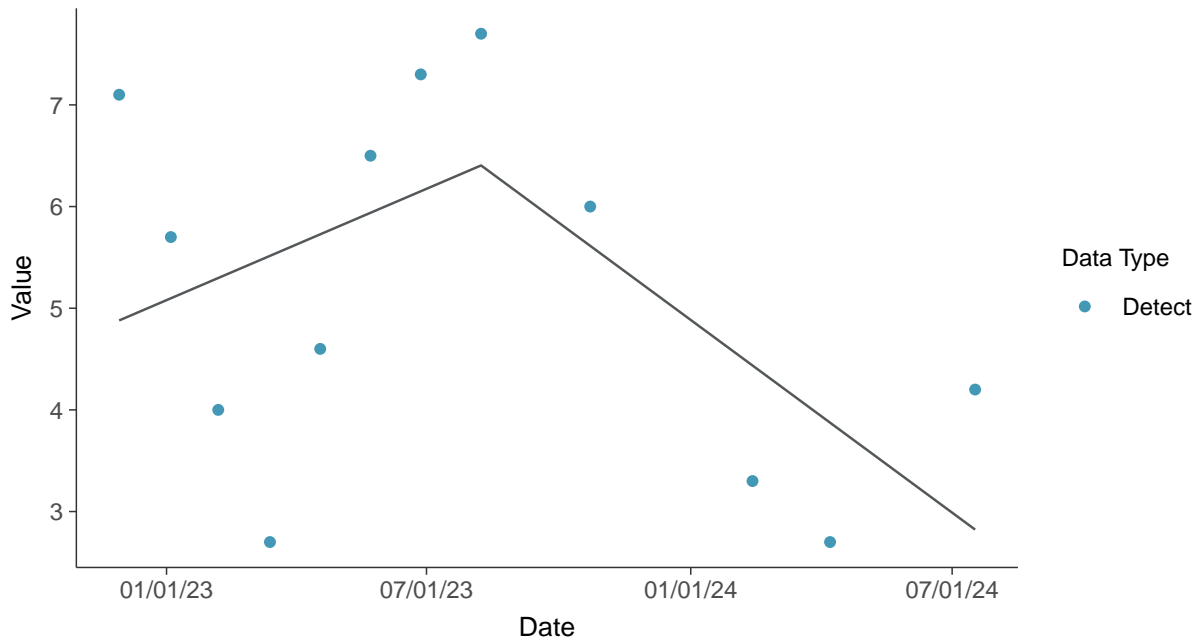
Fluoride, MW-10 (mg/L)





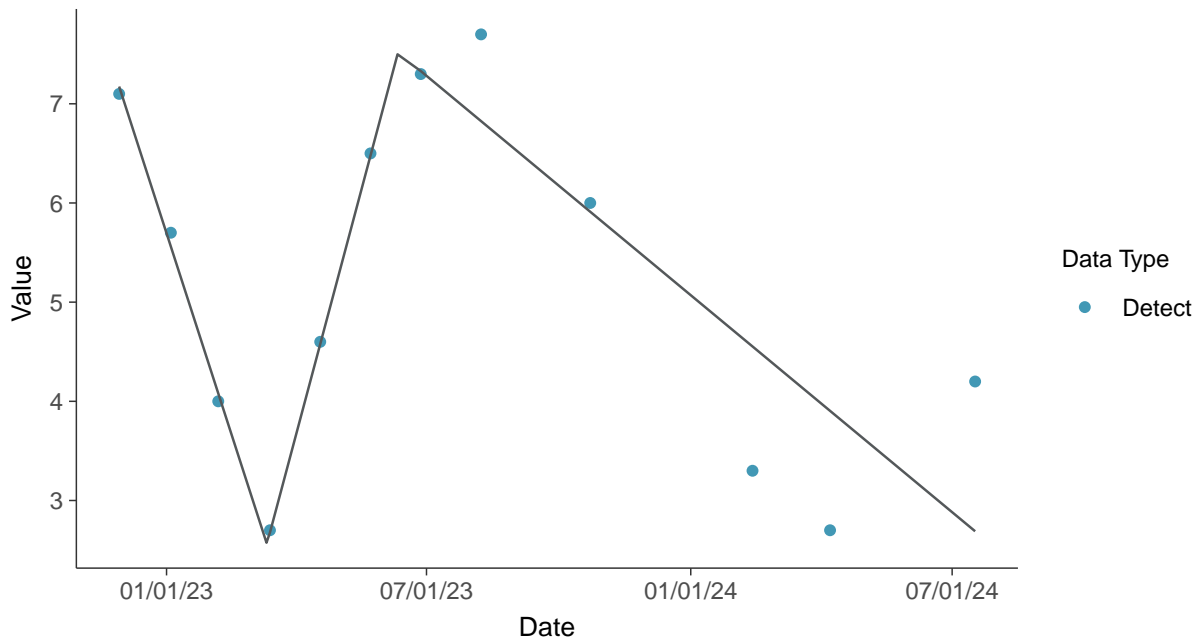
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

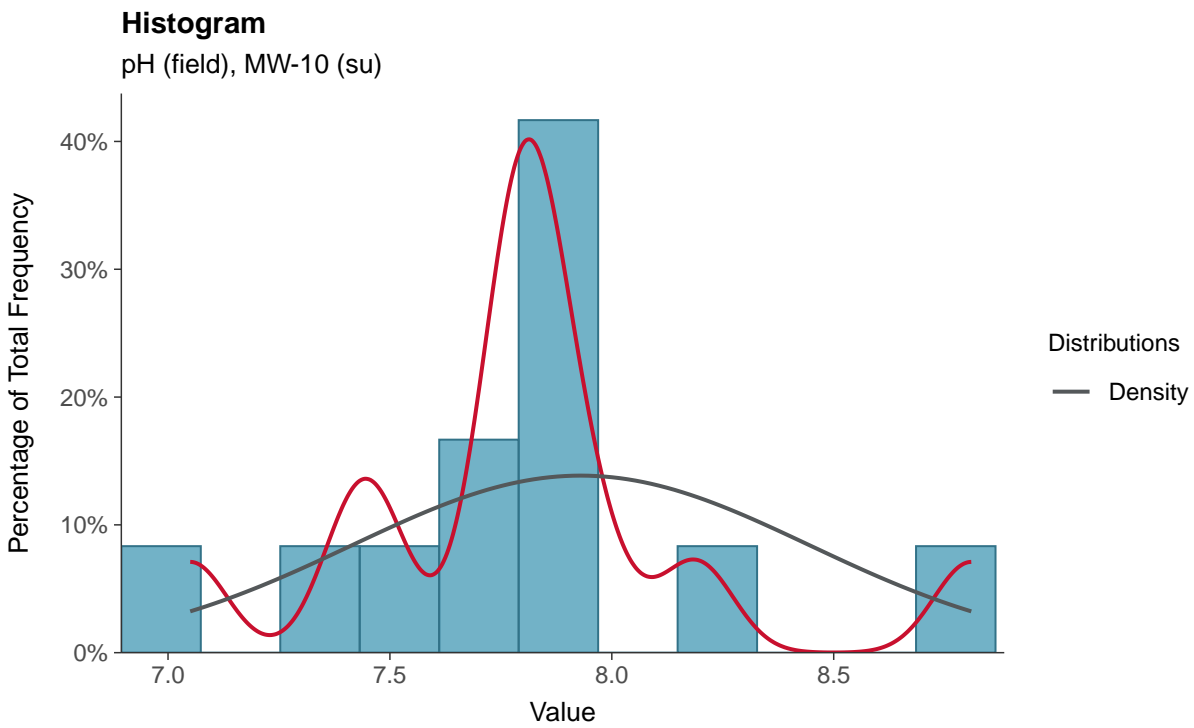
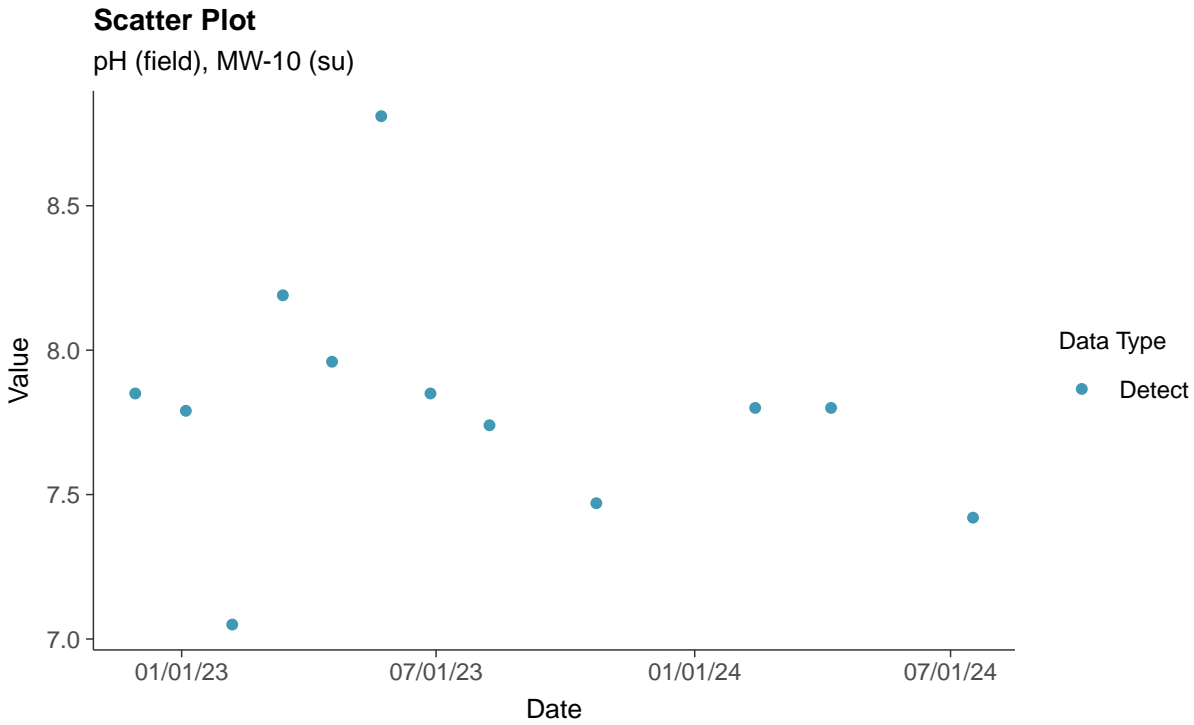
Fluoride, MW-10 (mg/L)





### Appendix III: pH (field), MW-10

ID: 20\_3\_4\_120

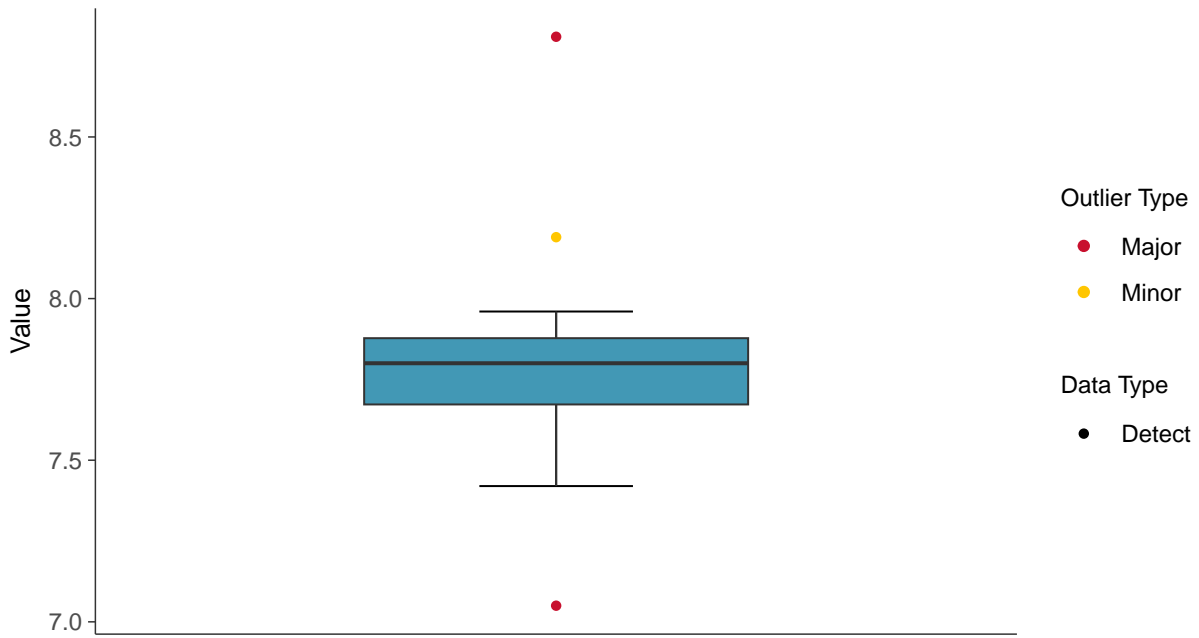






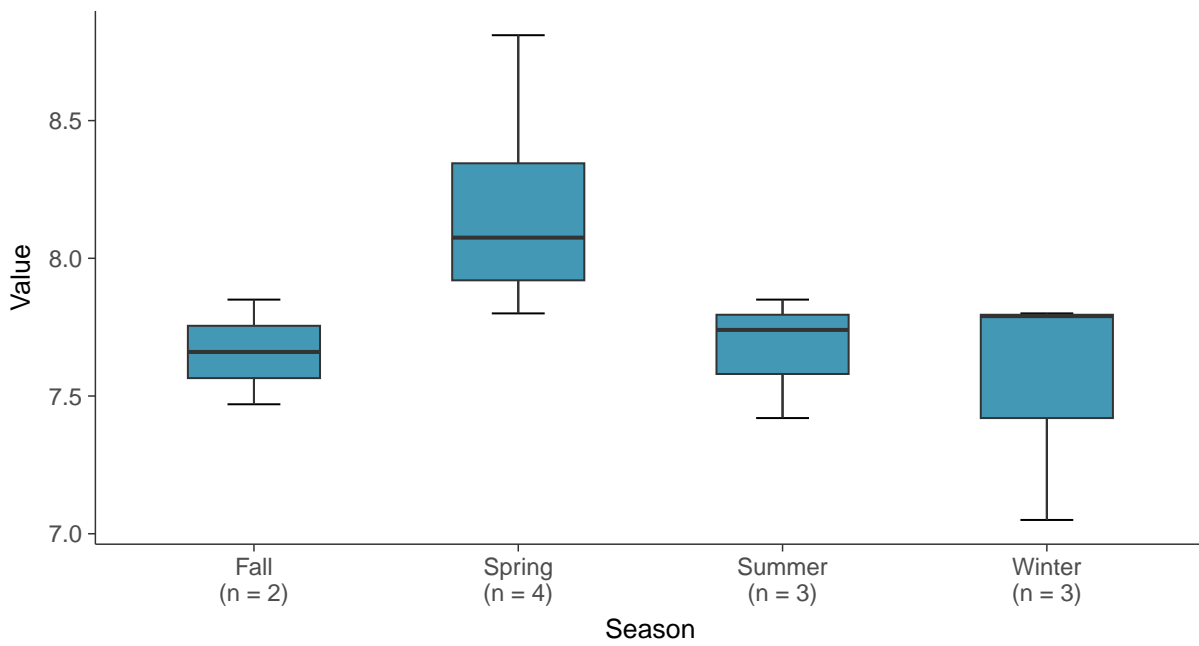
### Boxplot

pH (field), MW-10 (su)



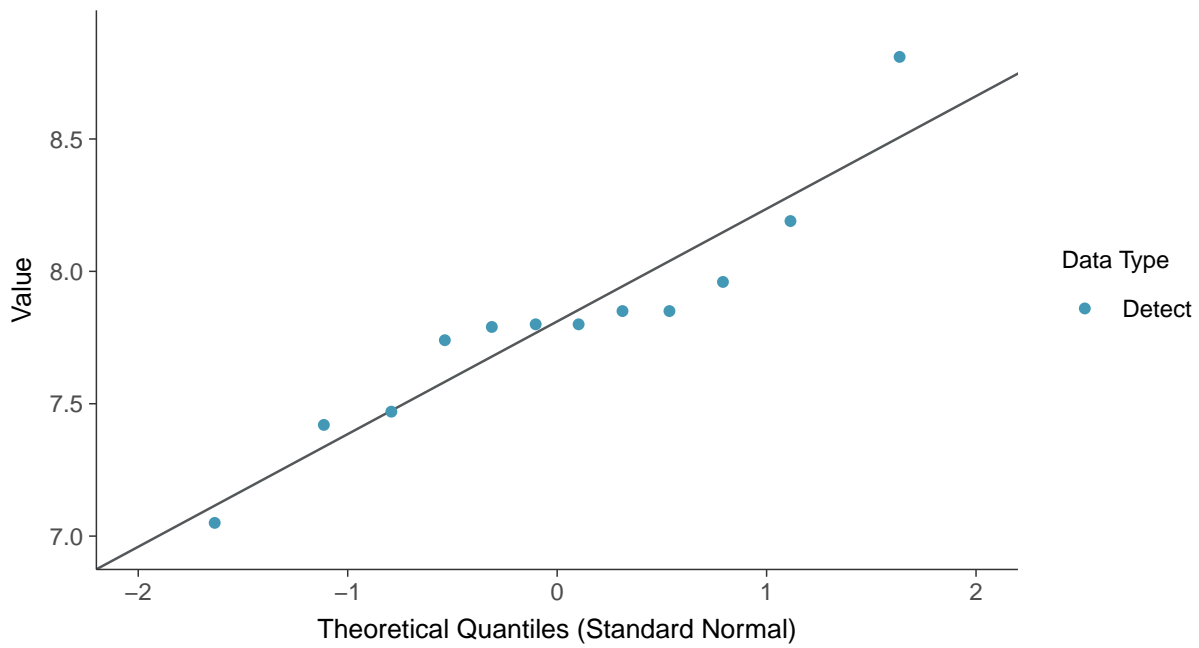
### Boxplot by Season

pH (field), MW-10 (su)

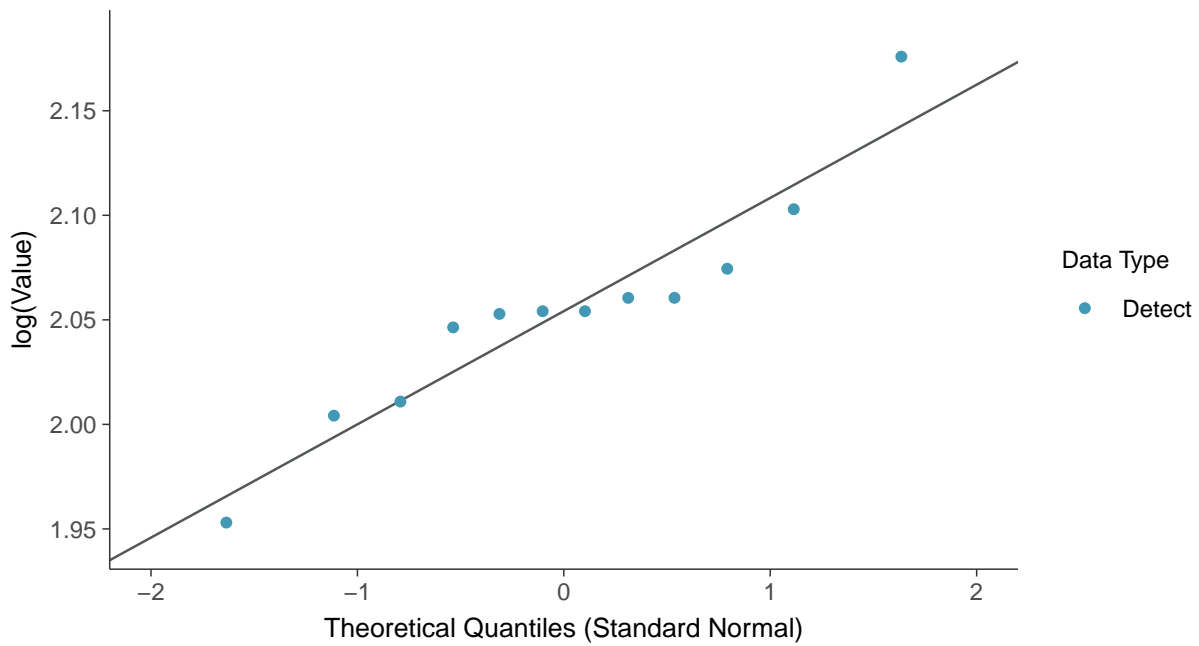




**Normal Q-Q plot**  
pH (field), MW-10 (su)



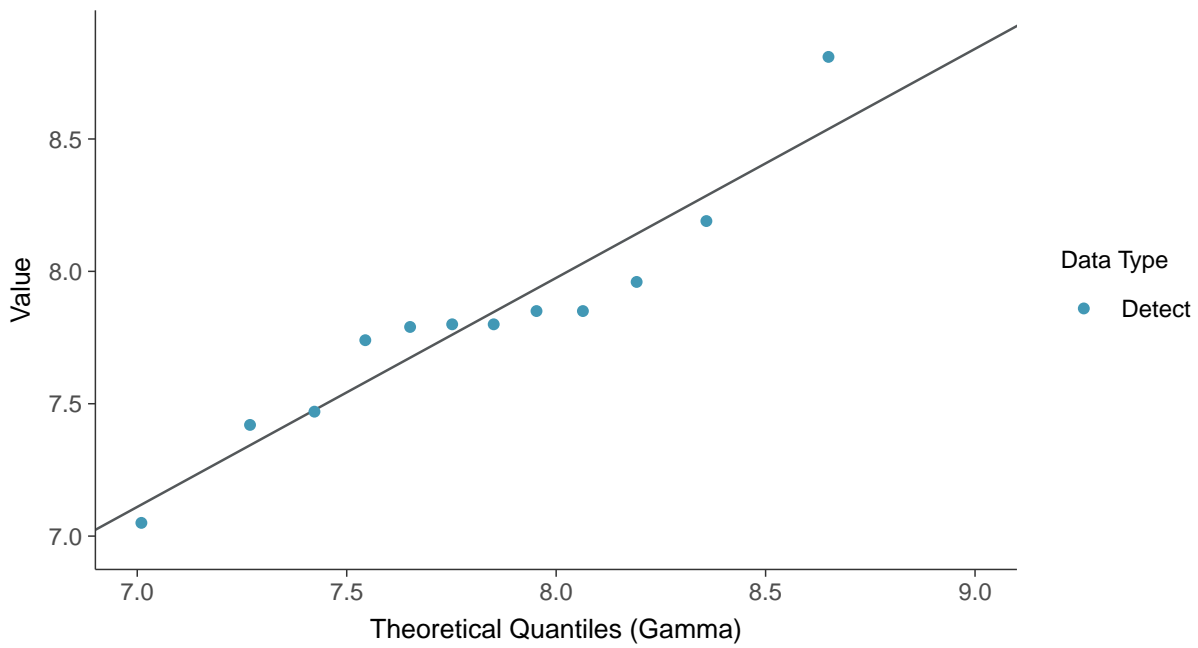
**Lognormal Q-Q plot**  
pH (field), MW-10 (su)





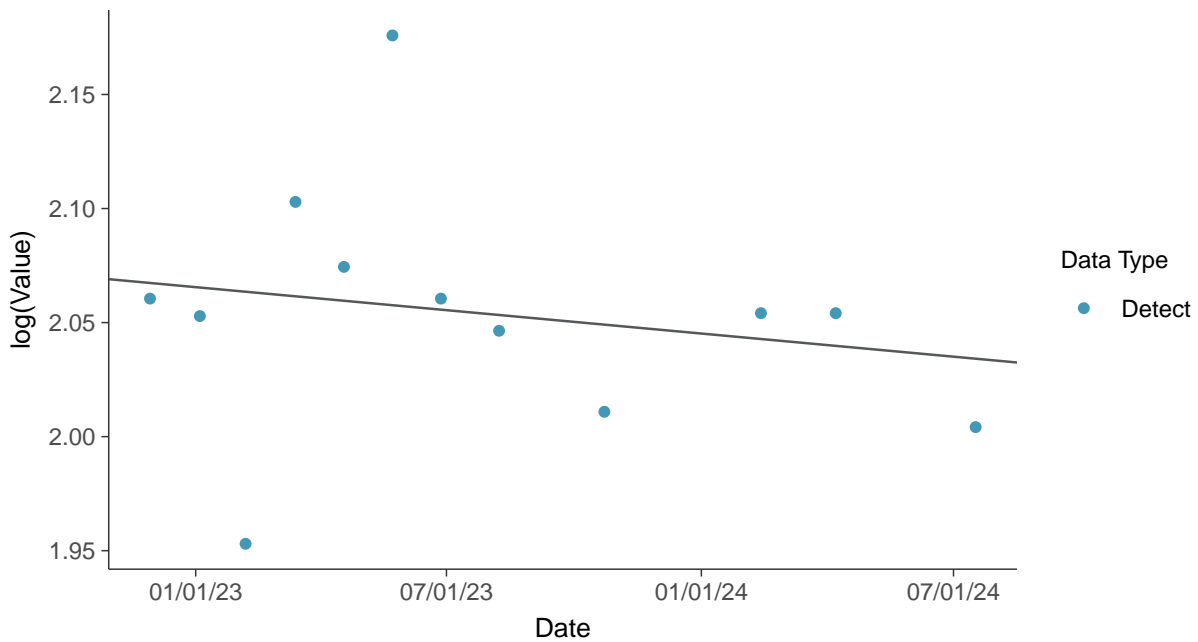
### Gamma Q-Q plot

pH (field), MW-10 (su)



### Trend Regression: Lognormal MLE

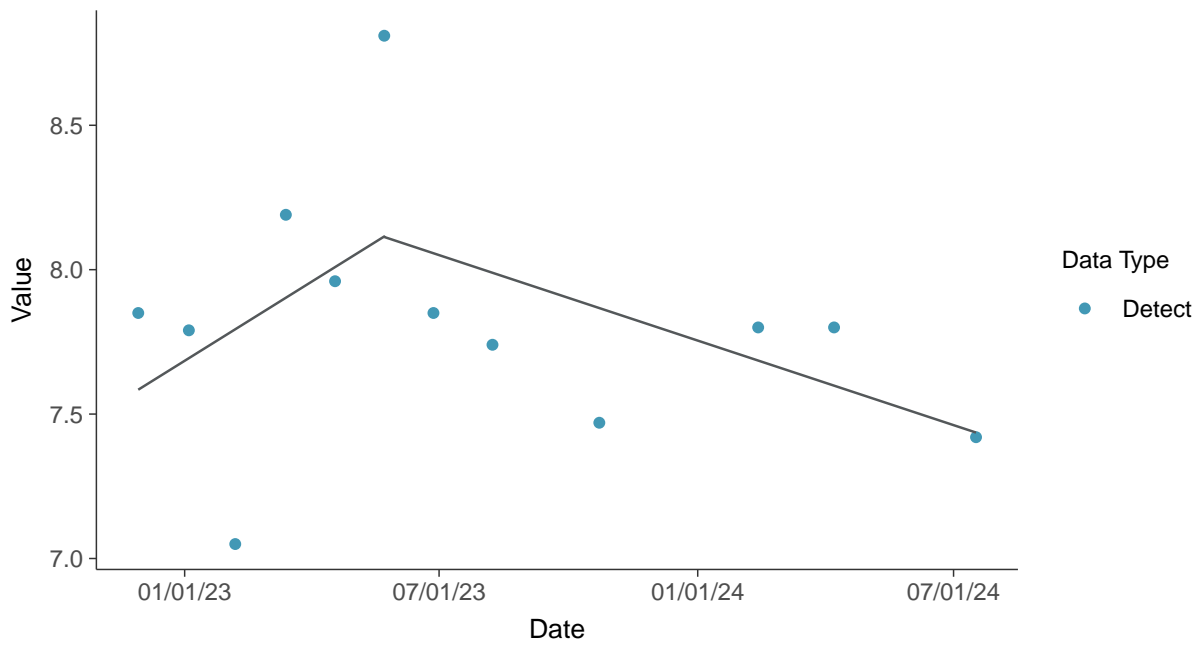
pH (field), MW-10 (su)





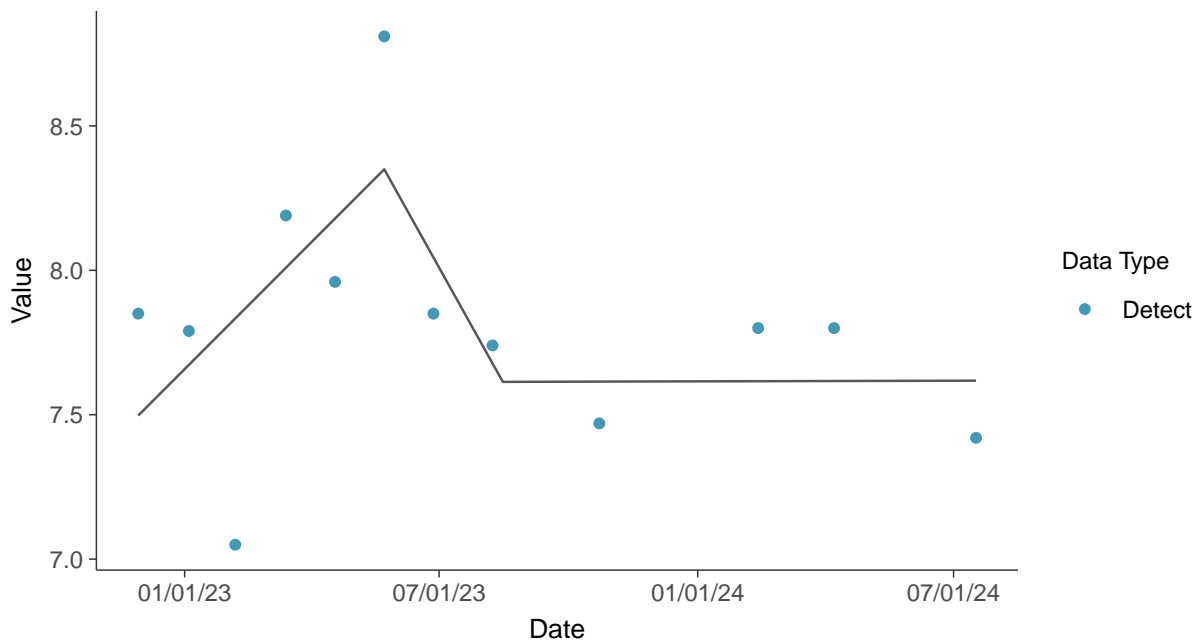
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-10 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-10 (su)



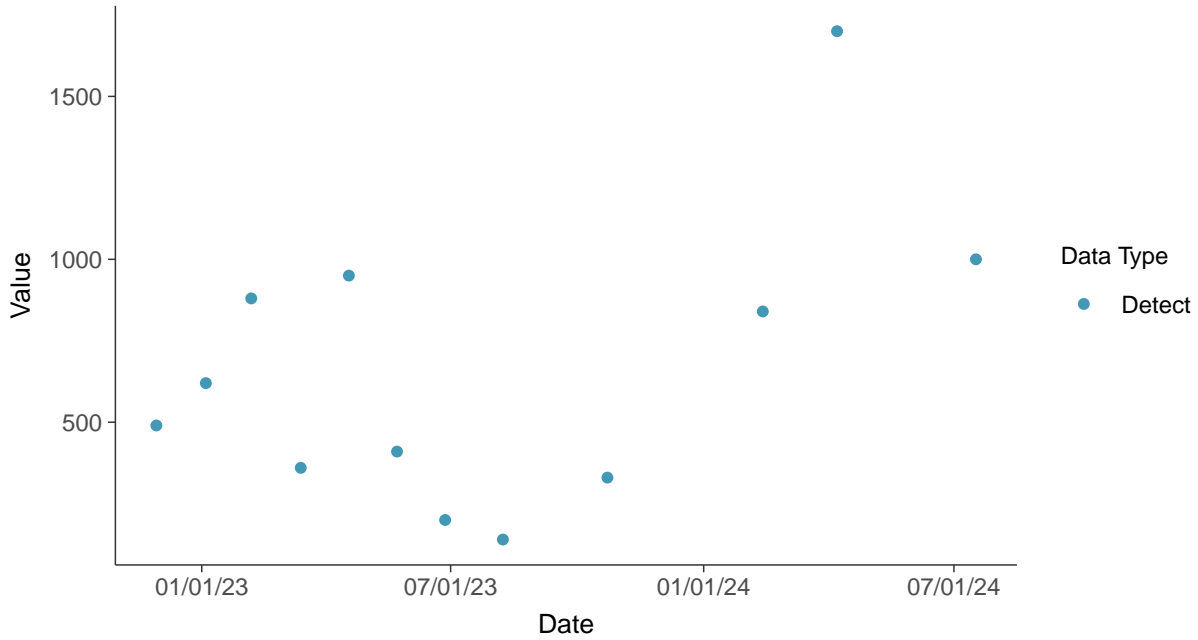


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-10

ID: 20\_3\_4\_124

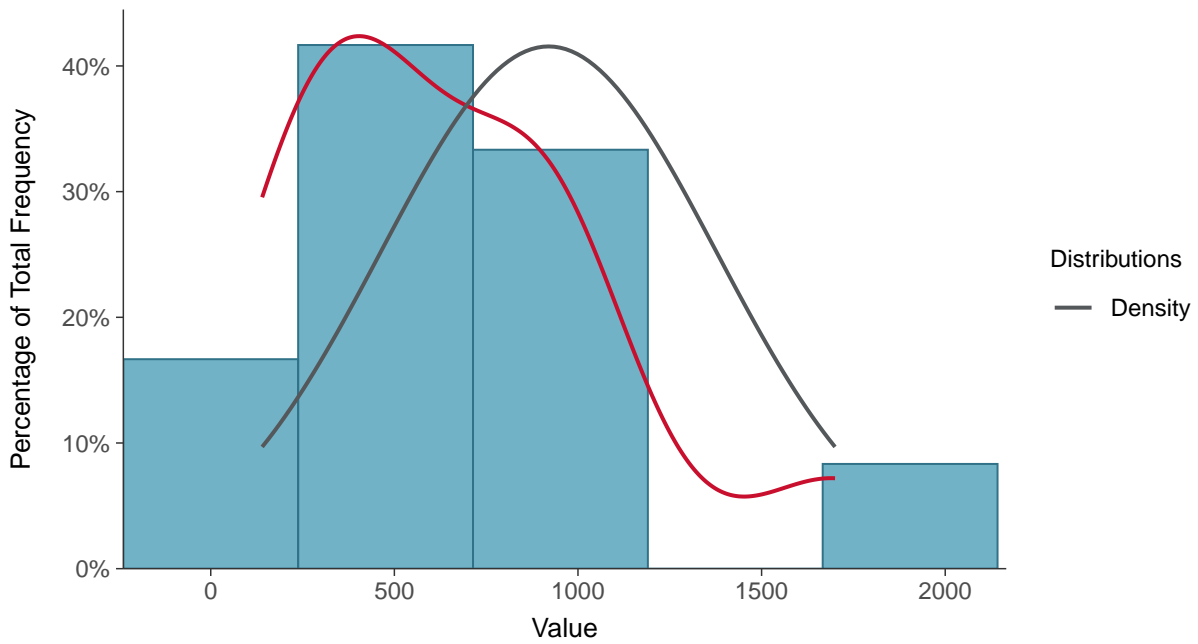
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)



#### Histogram

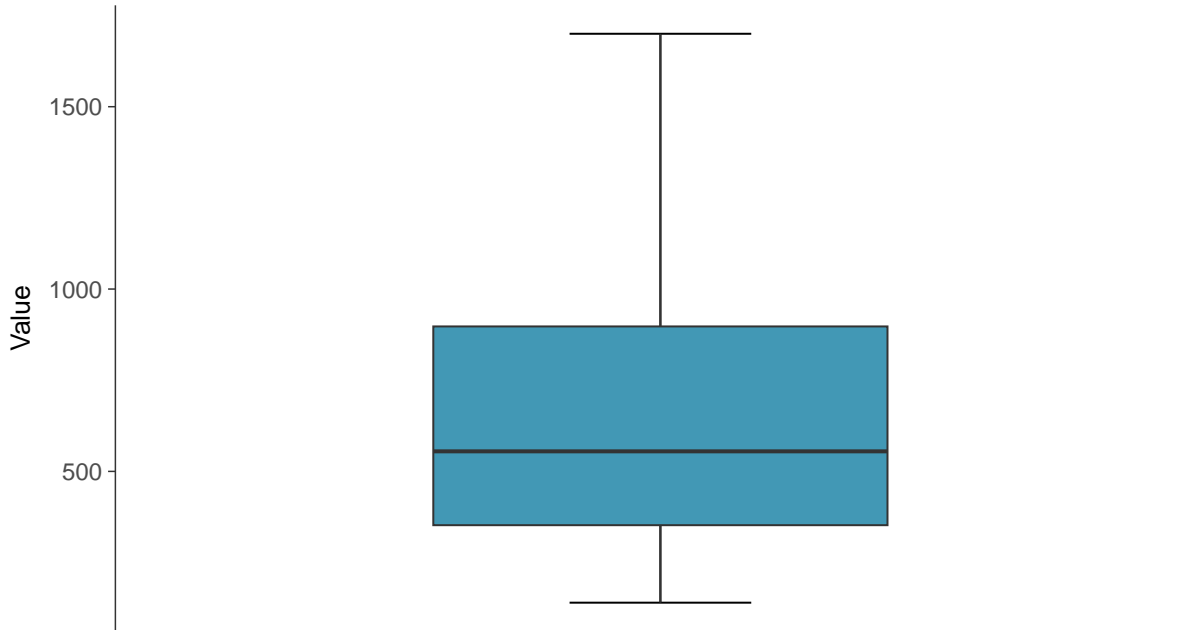
Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)





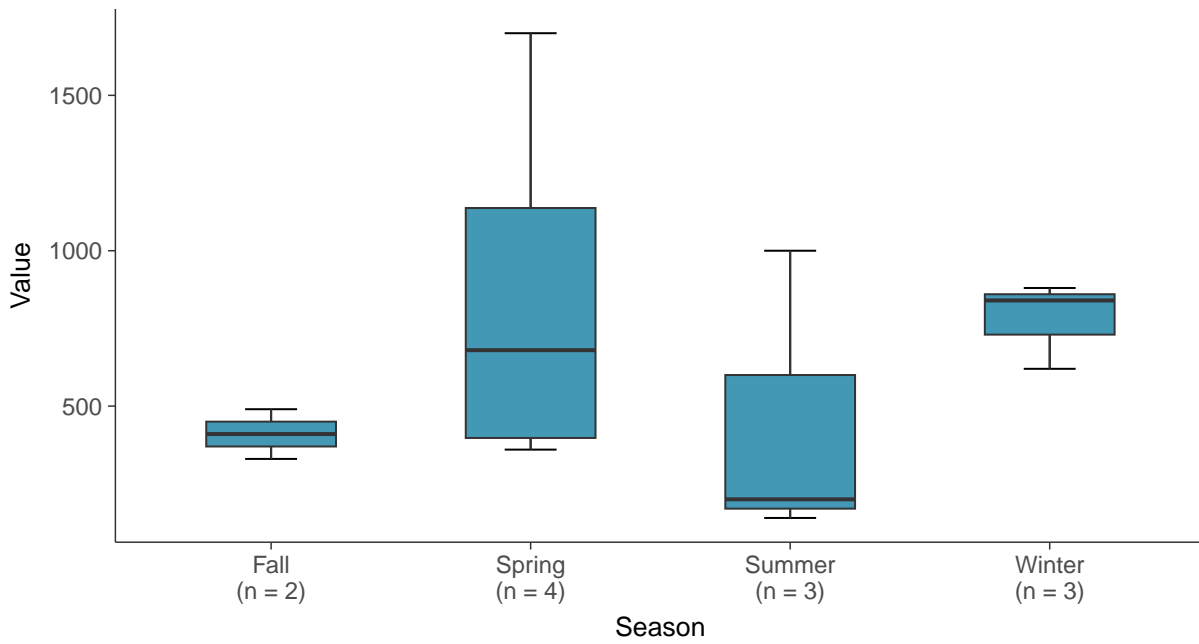
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)



### Boxplot by Season

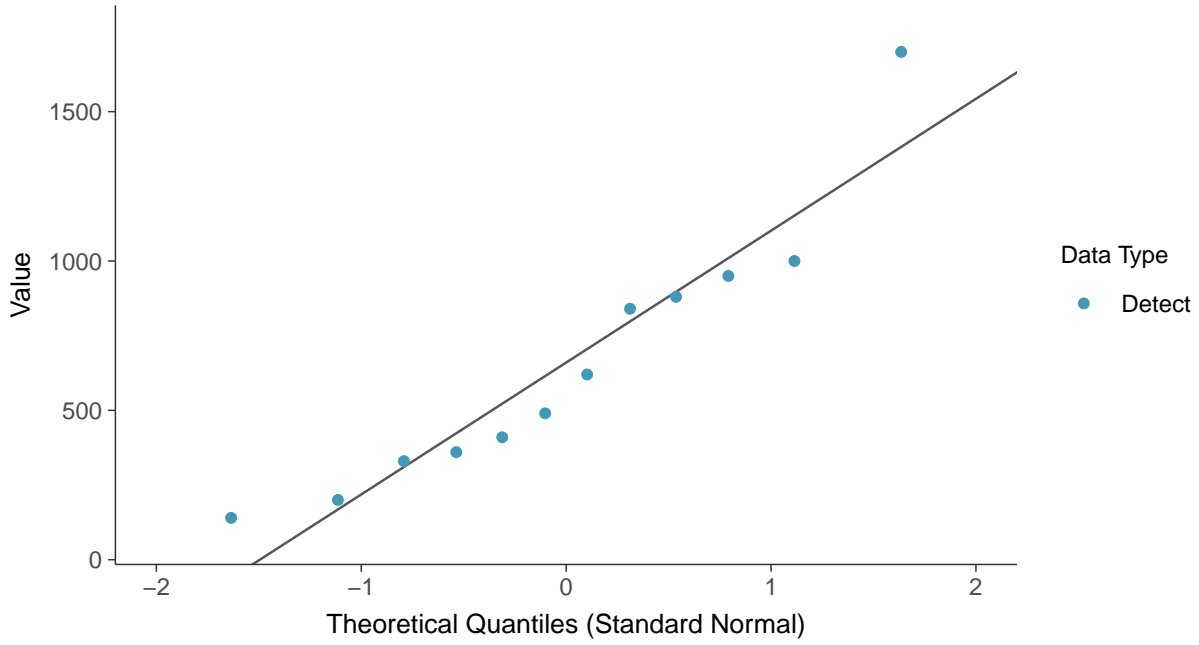
Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)





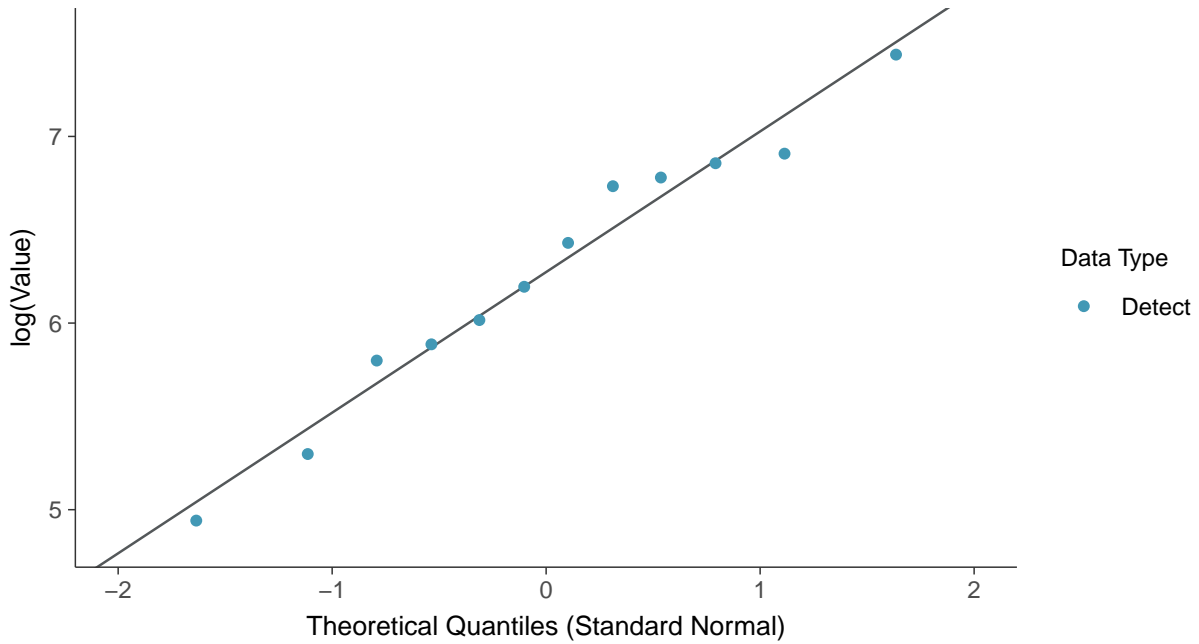
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)



### Lognormal Q-Q plot

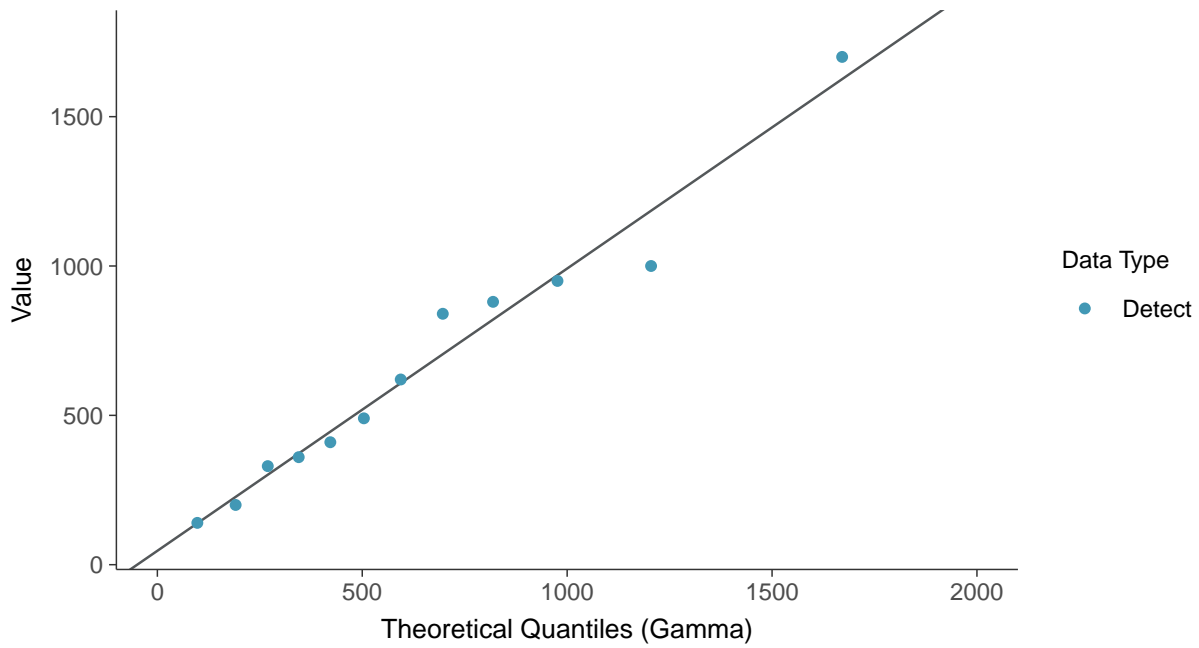
Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)





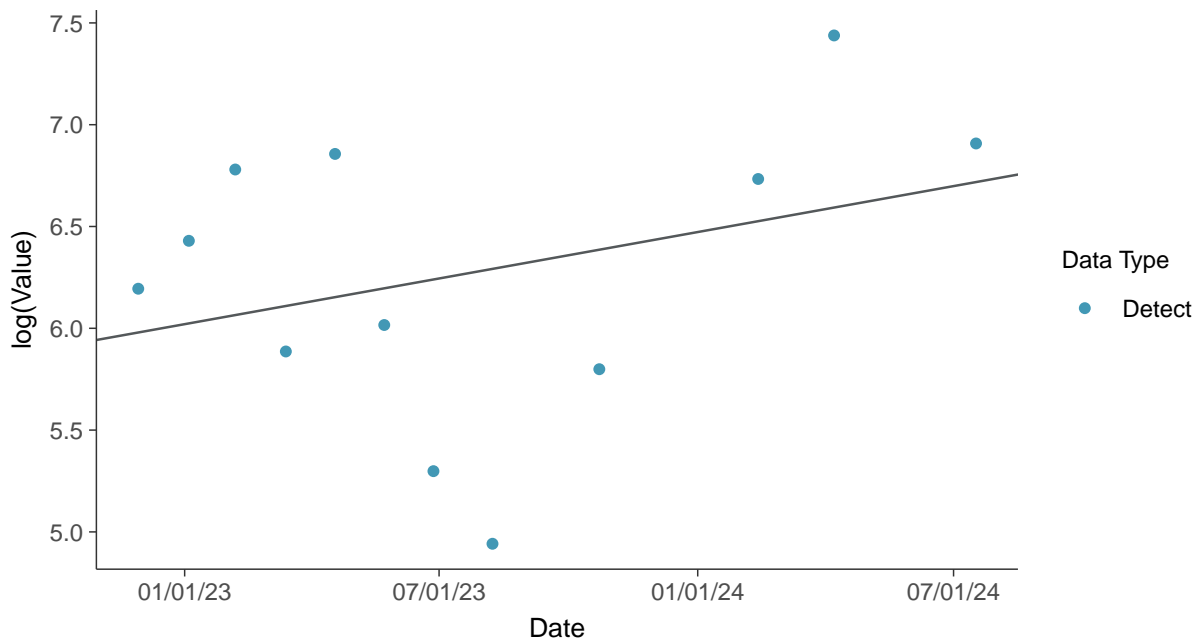
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)

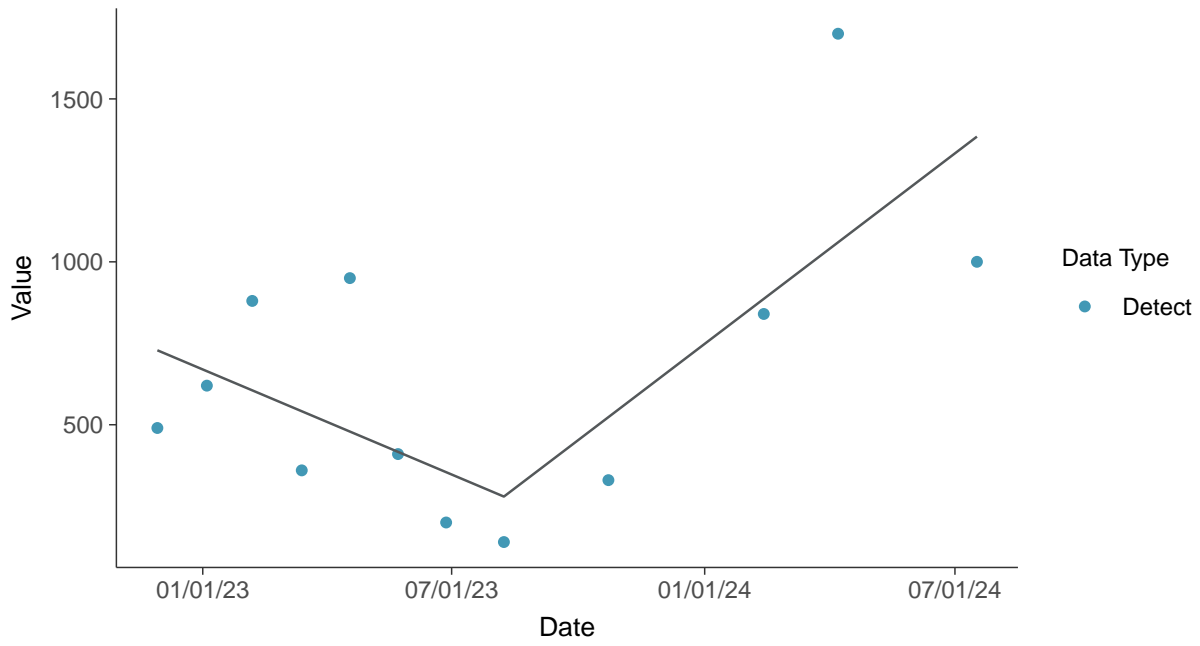






### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-10 (mg/L)



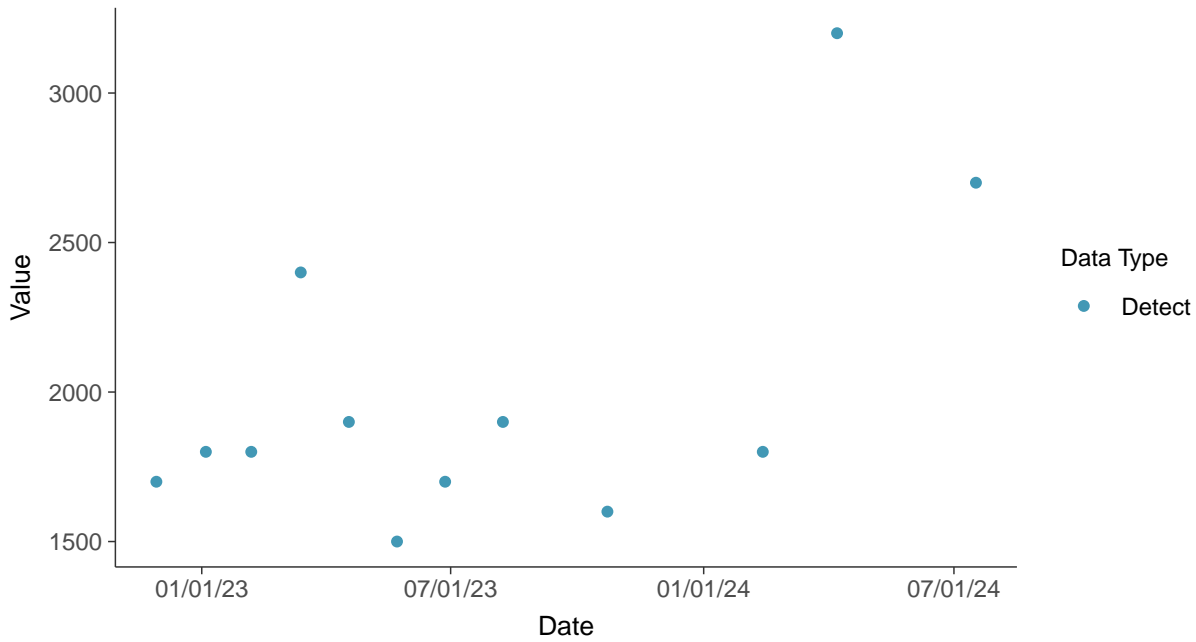


### Appendix III: Total Dissolved Solids, MW-10

ID: 20\_3\_4\_126

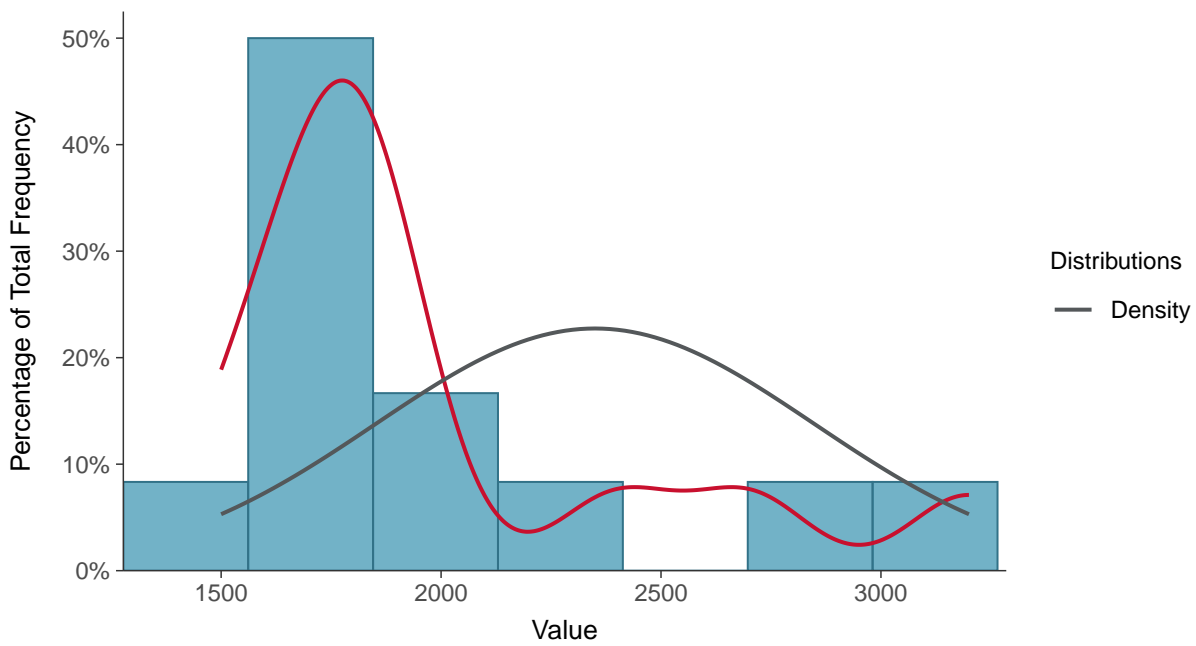
#### Scatter Plot

Total Dissolved Solids, MW-10 (mg/L)



#### Histogram

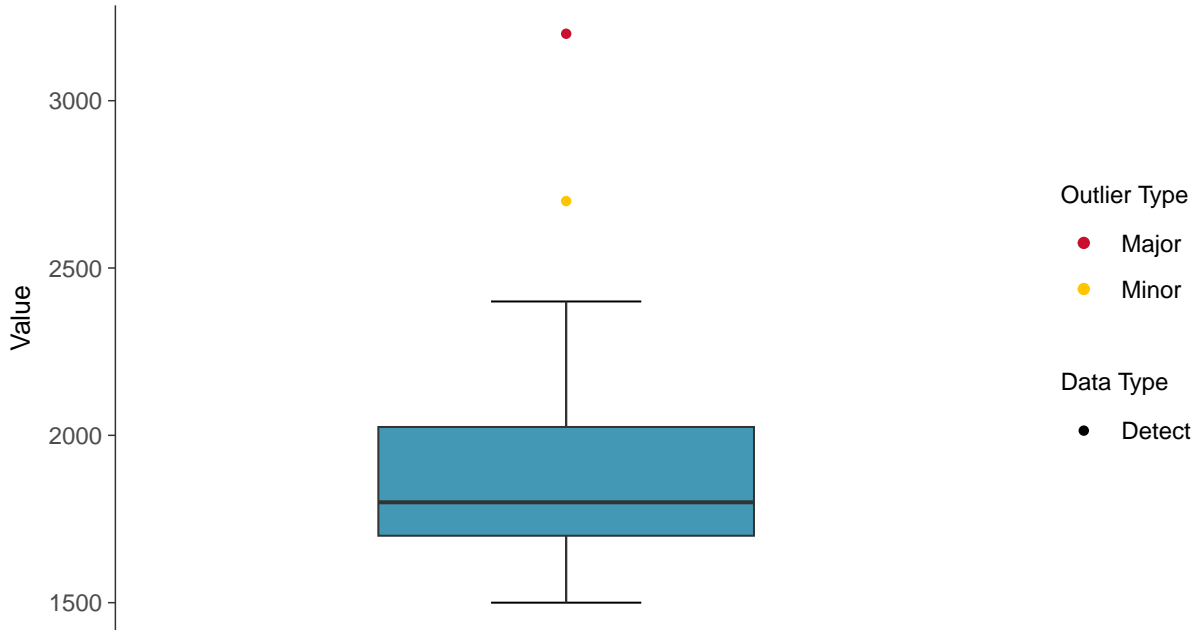
Total Dissolved Solids, MW-10 (mg/L)





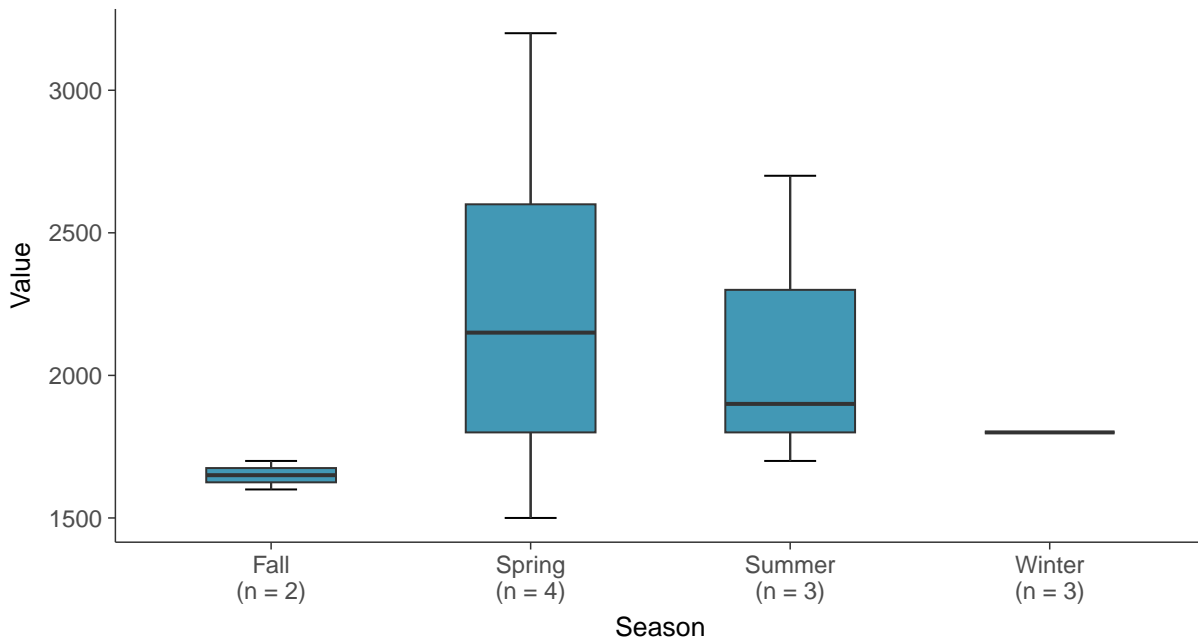
### Boxplot

Total Dissolved Solids, MW-10 (mg/L)



### Boxplot by Season

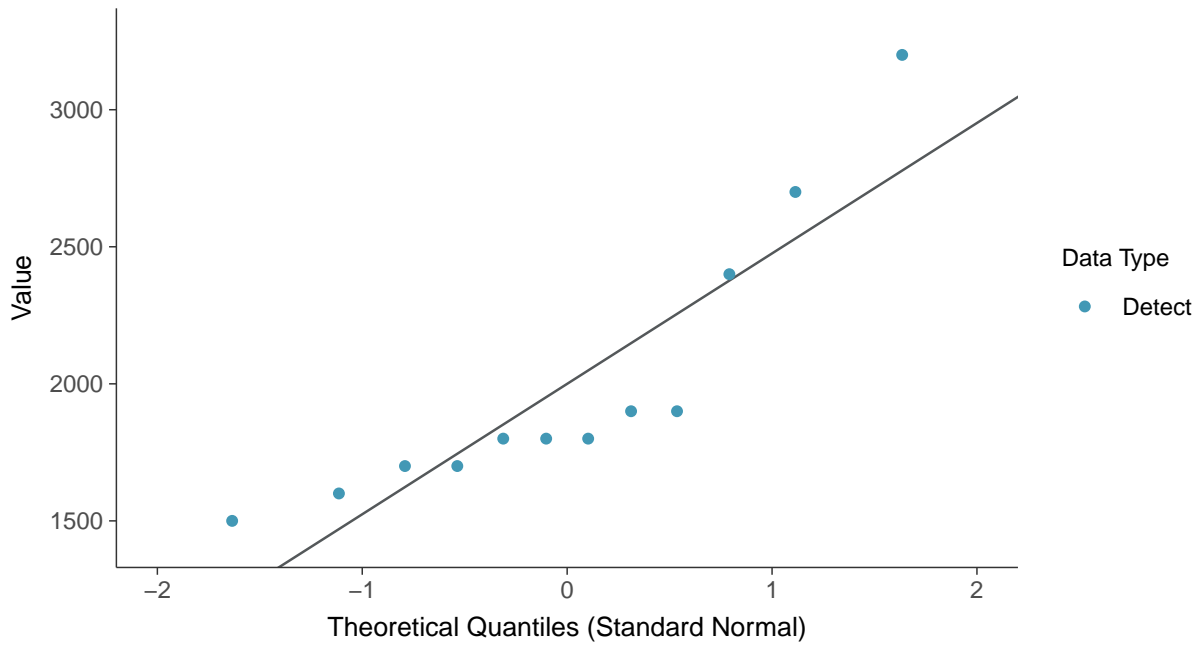
Total Dissolved Solids, MW-10 (mg/L)





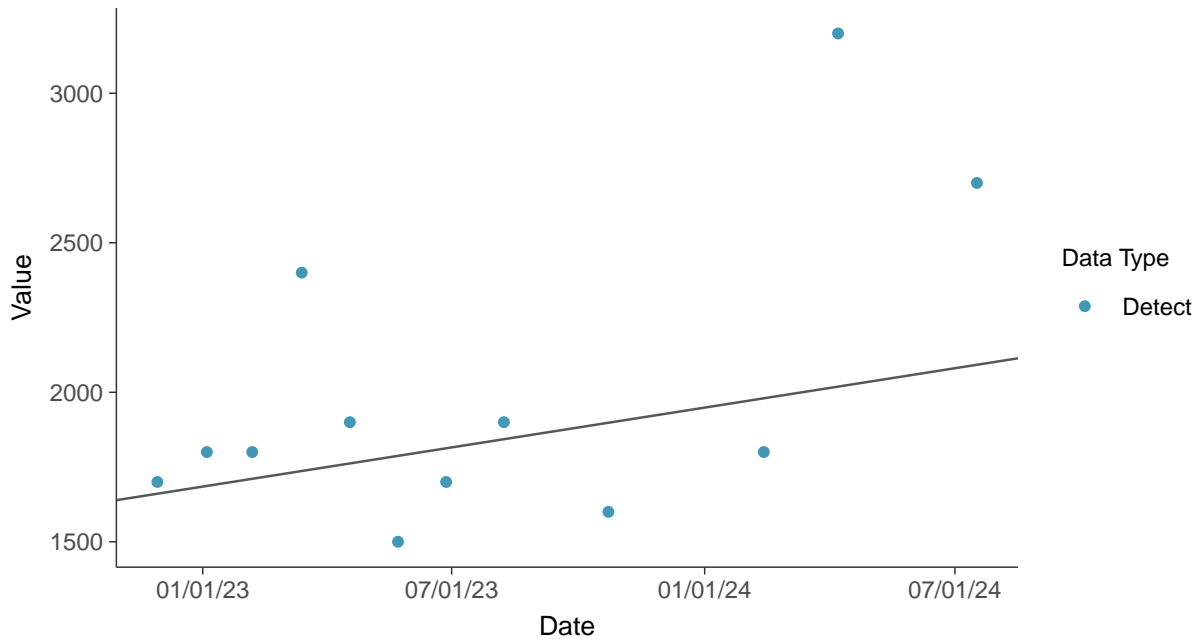
### Normal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

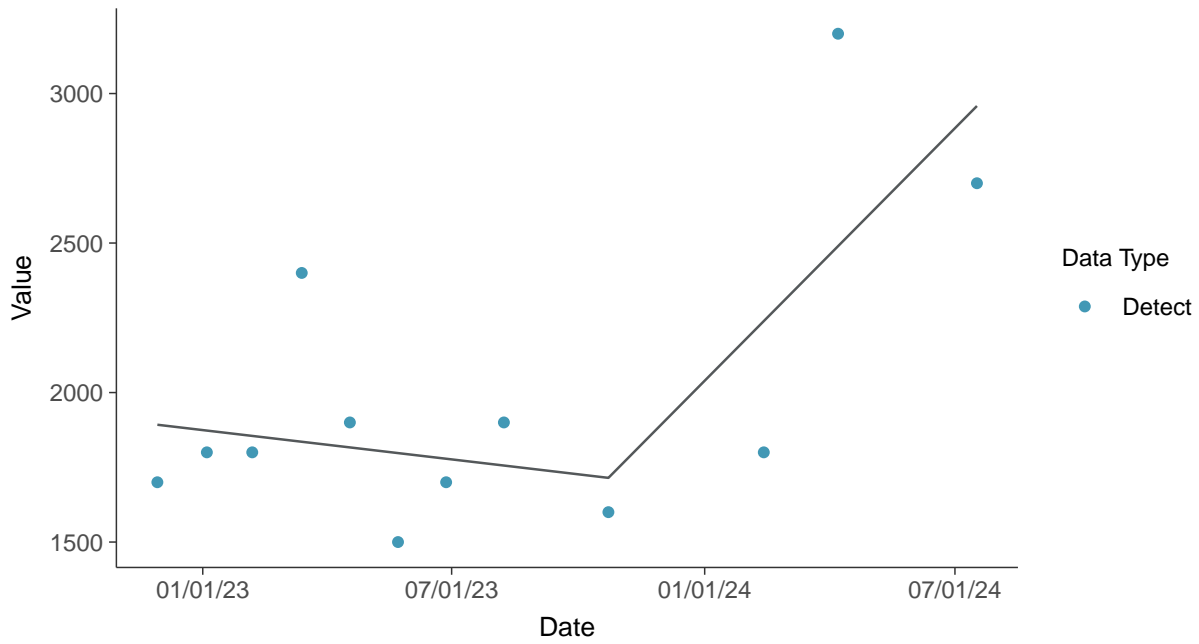
Total Dissolved Solids, MW-10 (mg/L)





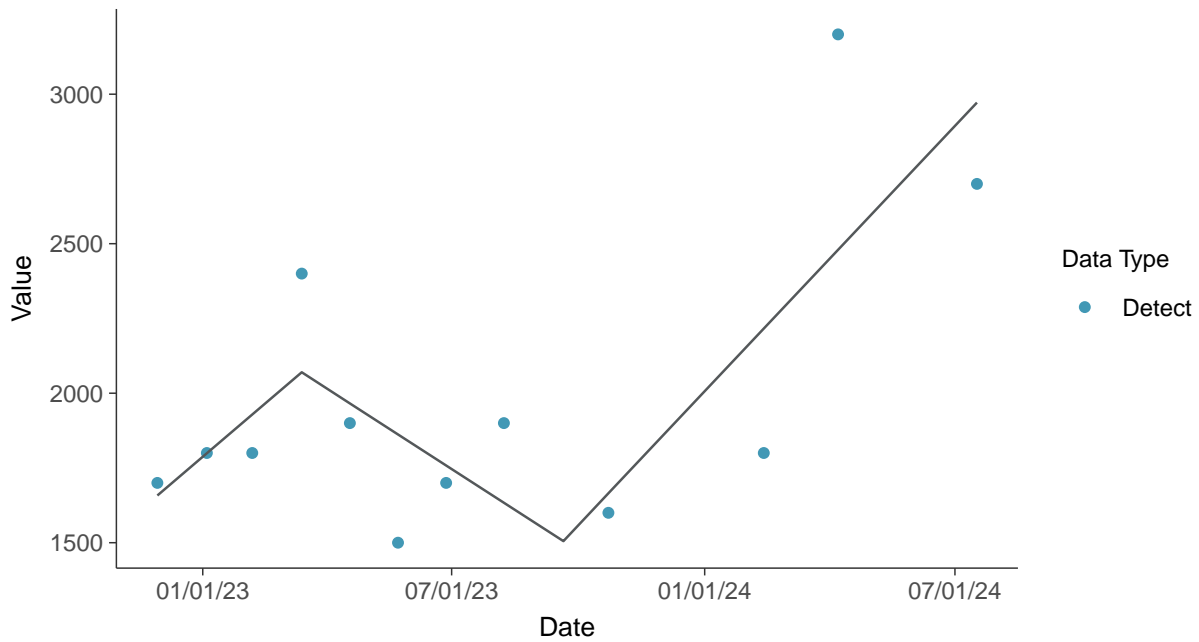
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

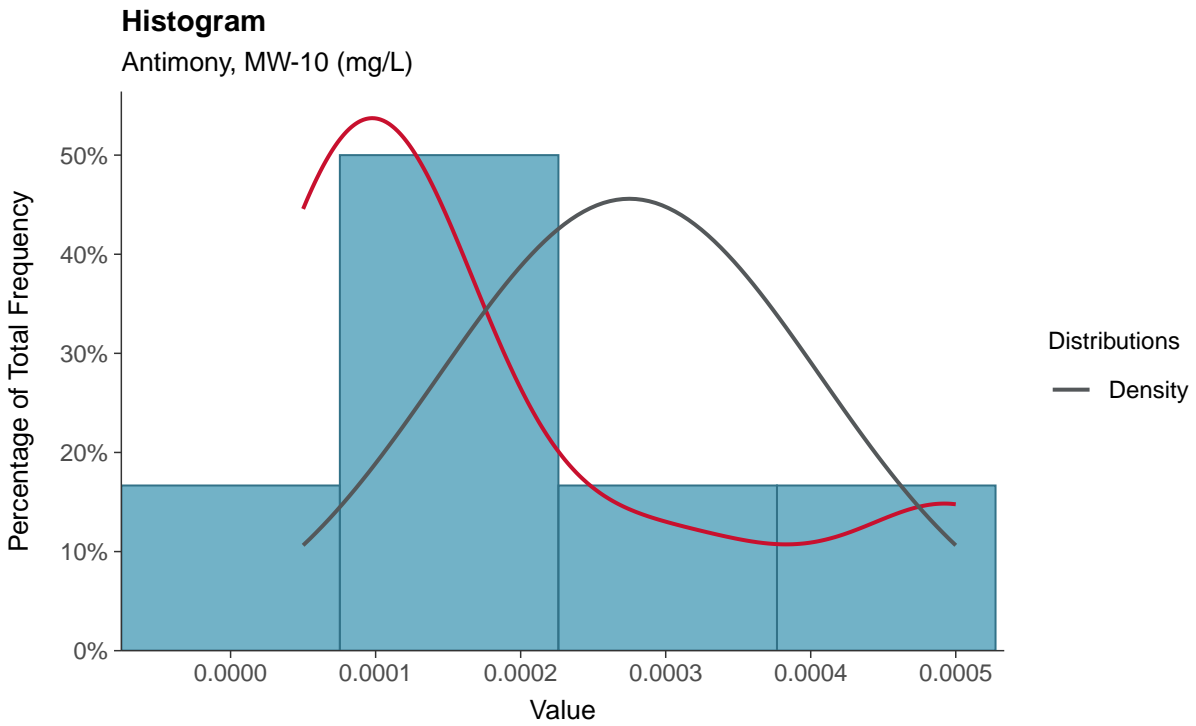
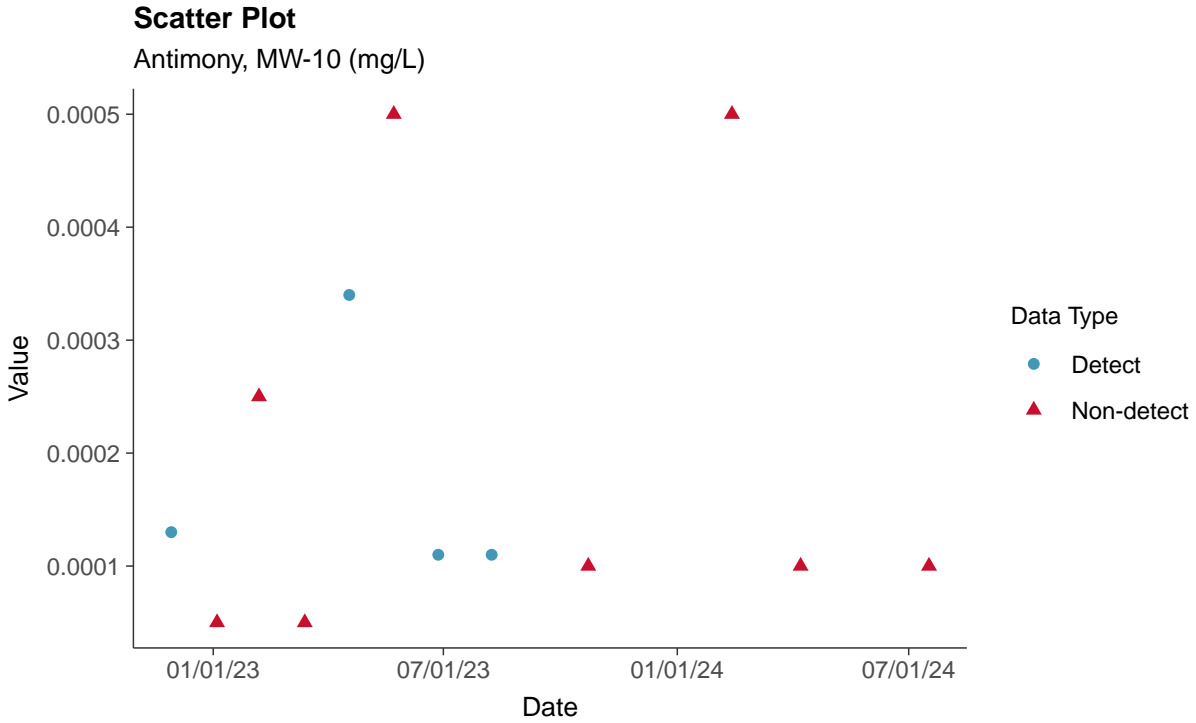
Total Dissolved Solids, MW-10 (mg/L)





### Appendix IV: Antimony, MW-10

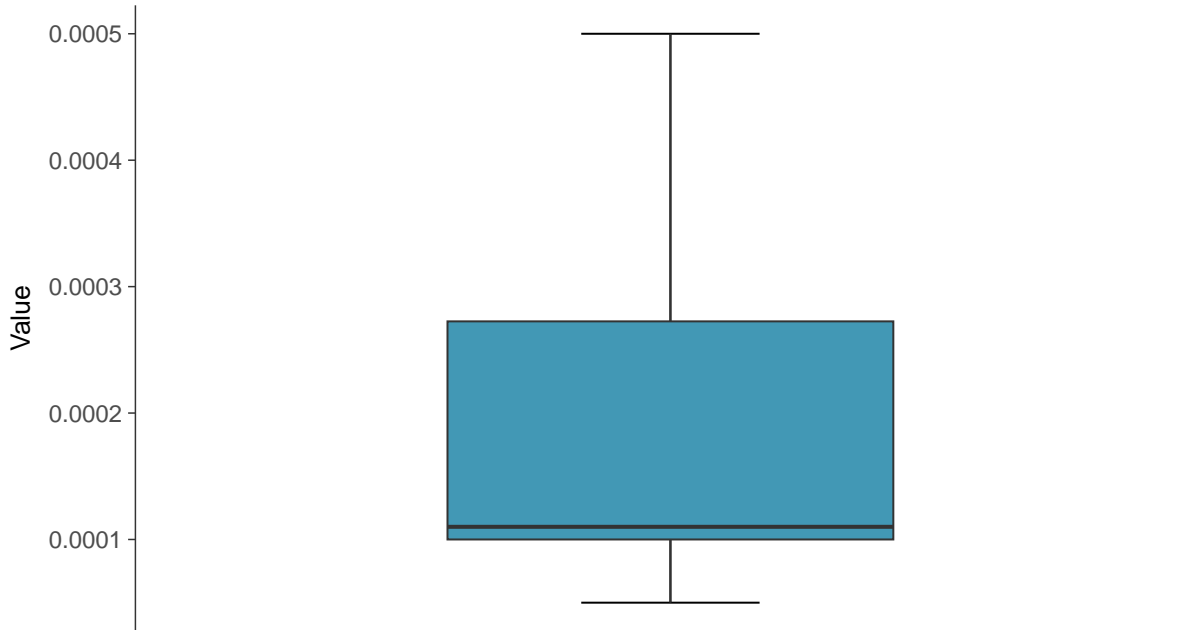
ID: 20\_3\_5\_101





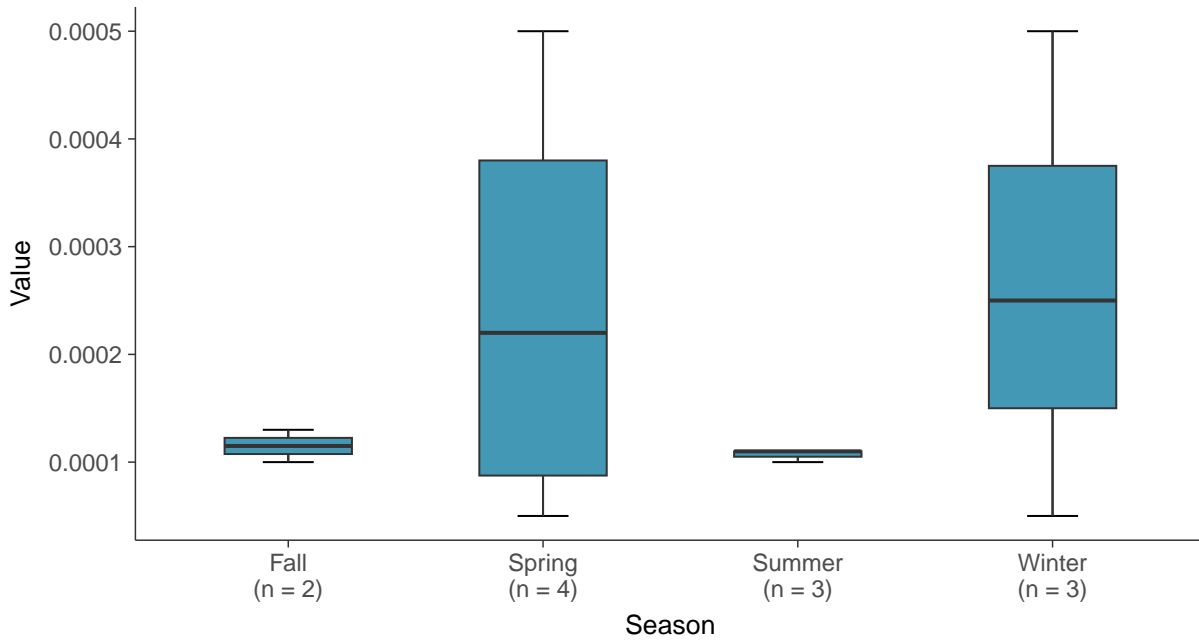
### Boxplot

Antimony, MW-10 (mg/L)



### Boxplot by Season

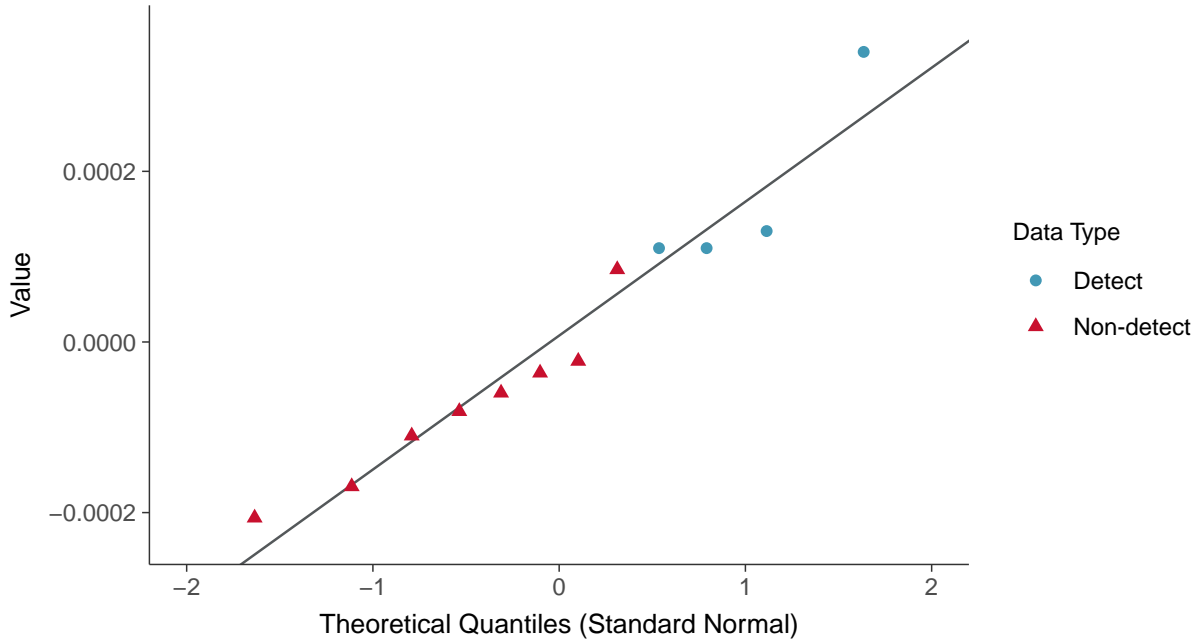
Antimony, MW-10 (mg/L)





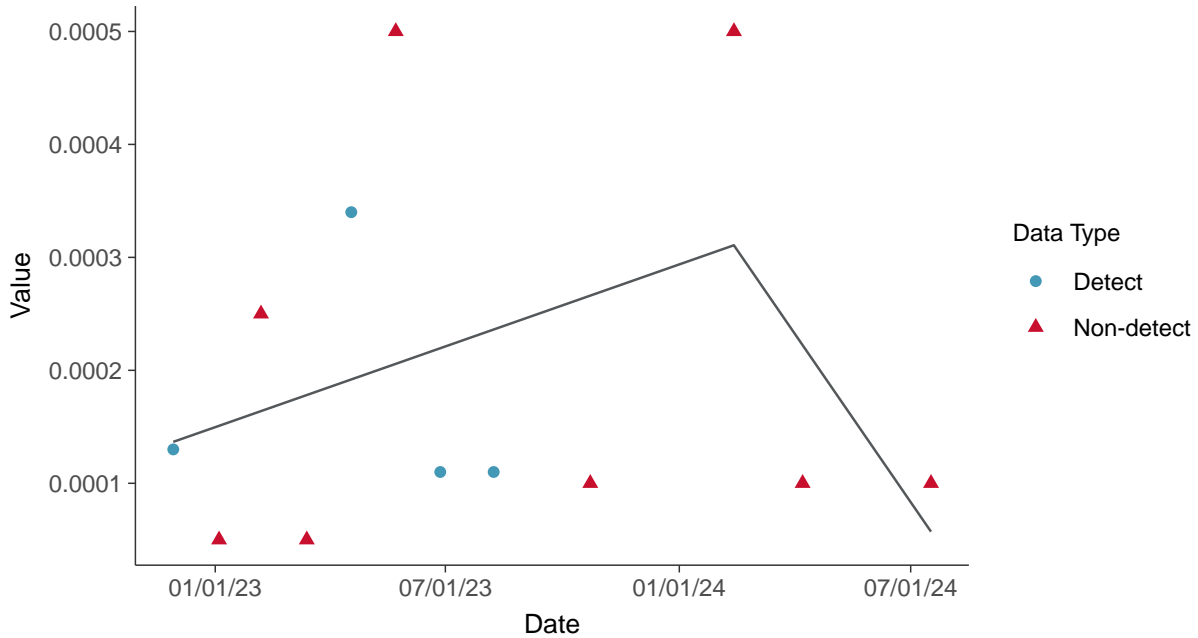
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Antimony, MW-10 (mg/L)

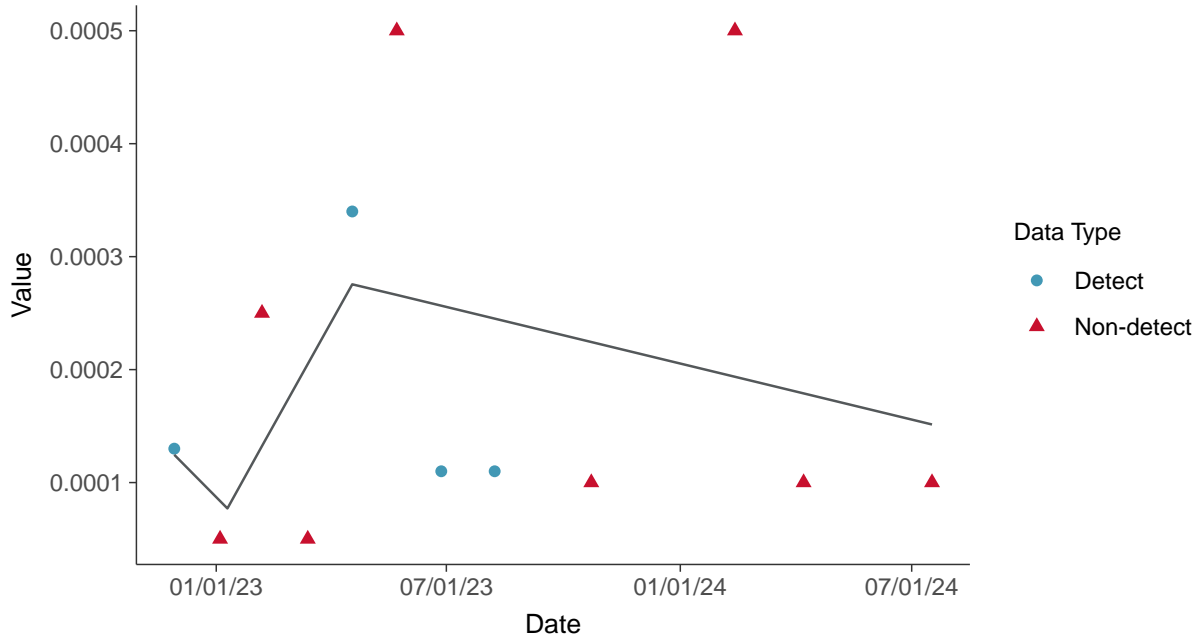






### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-10 (mg/L)



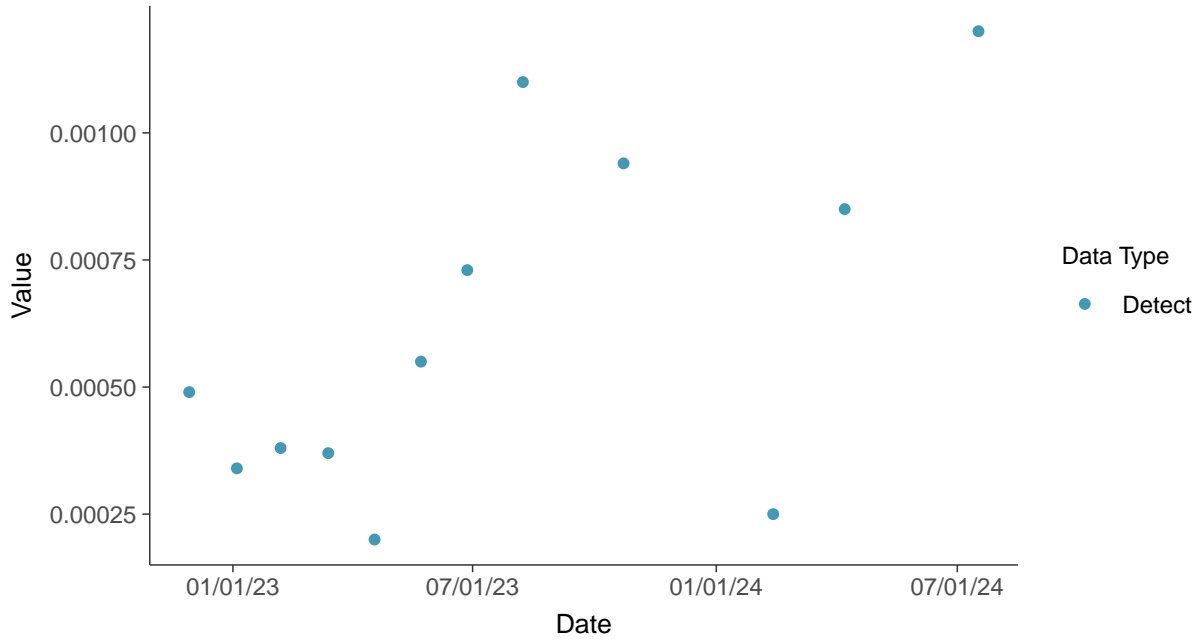


### Appendix IV: Arsenic, MW-10

ID: 20\_3\_5\_102

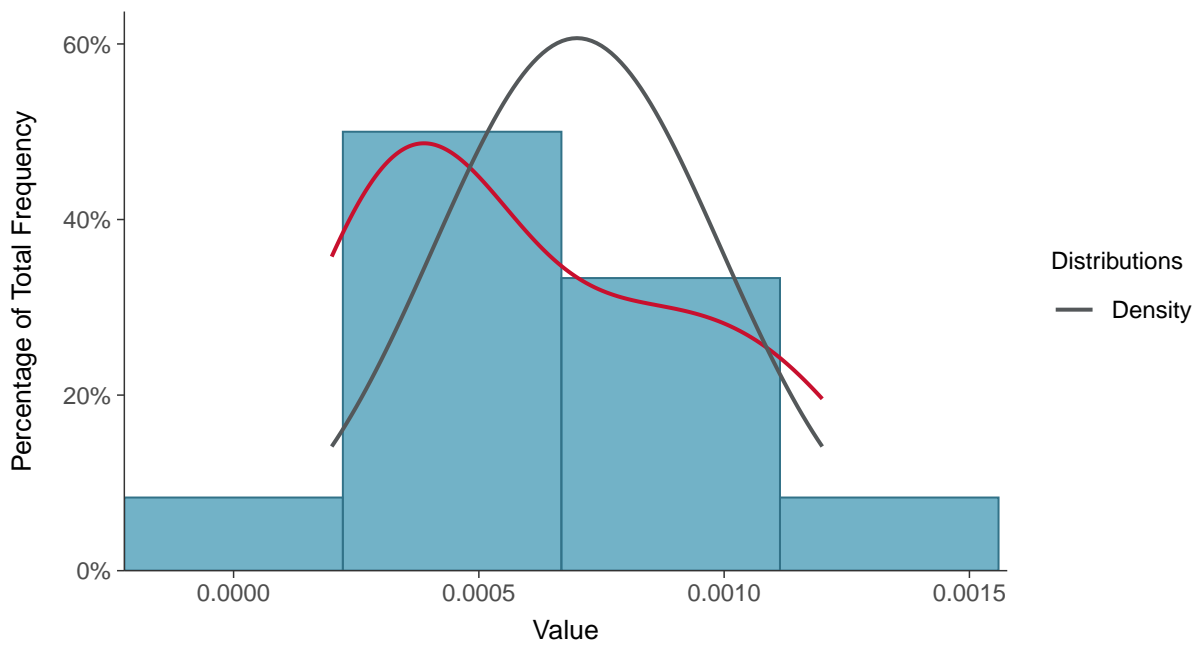
#### Scatter Plot

Arsenic, MW-10 (mg/L)



#### Histogram

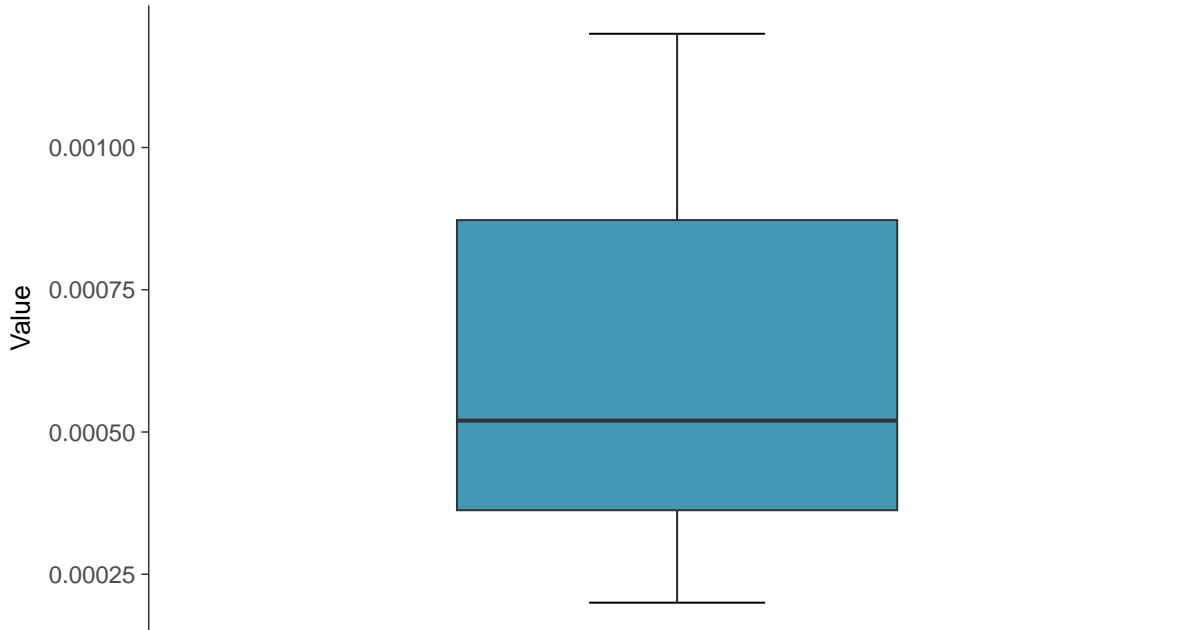
Arsenic, MW-10 (mg/L)





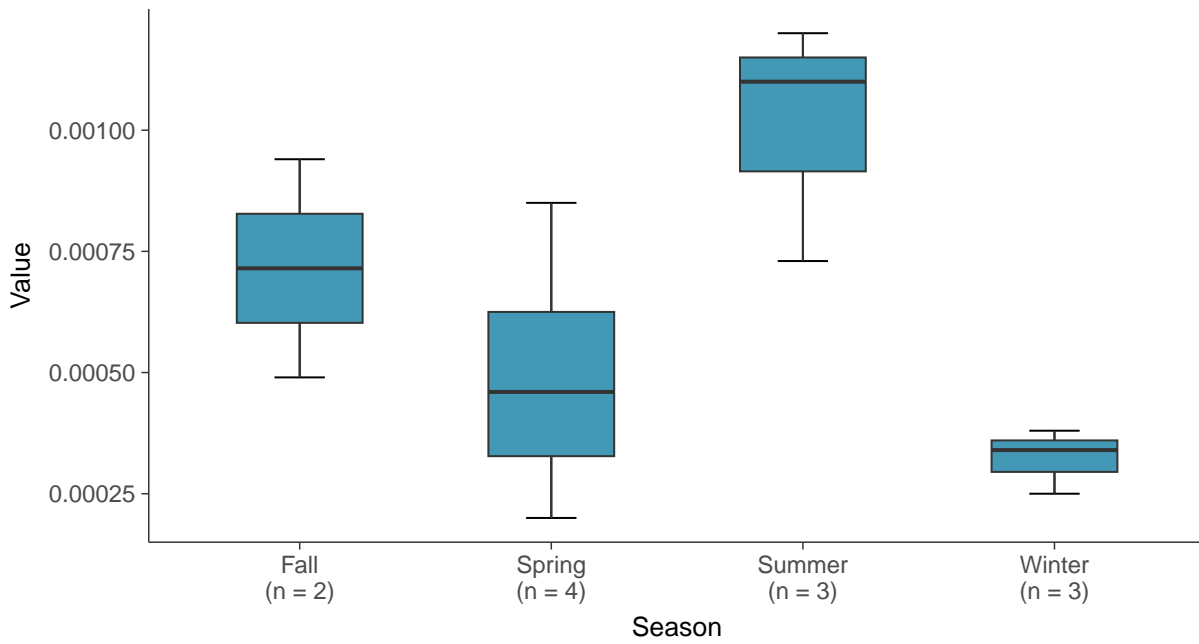
### Boxplot

Arsenic, MW-10 (mg/L)



### Boxplot by Season

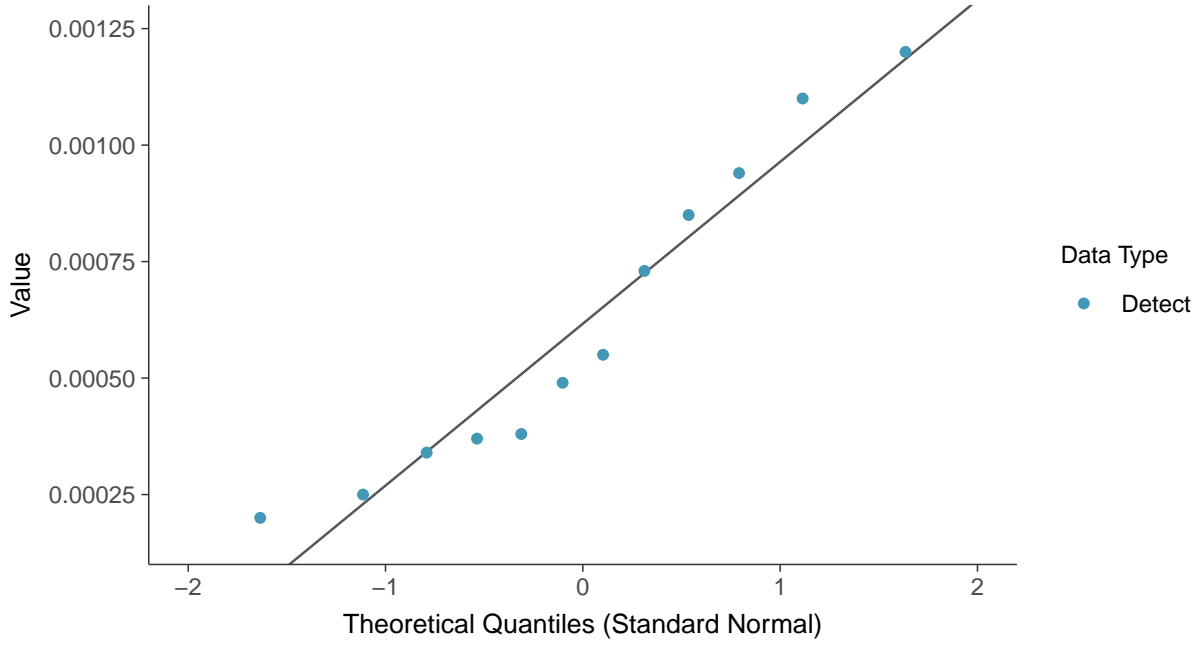
Arsenic, MW-10 (mg/L)





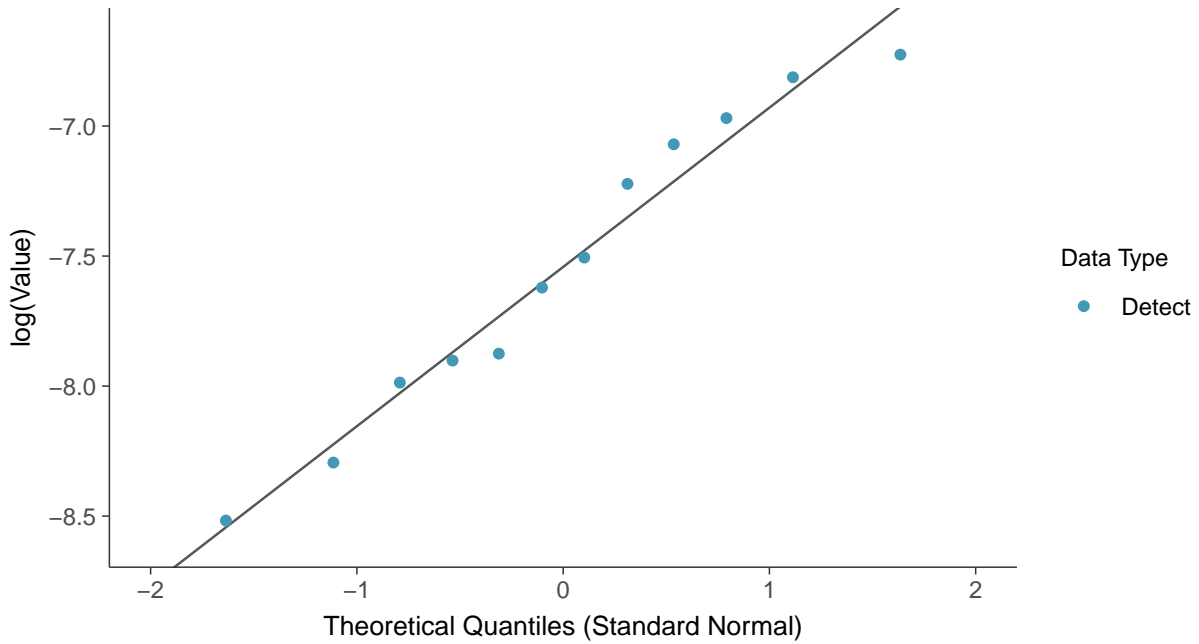
### Normal Q-Q plot

Arsenic, MW-10 (mg/L)



### Lognormal Q-Q plot

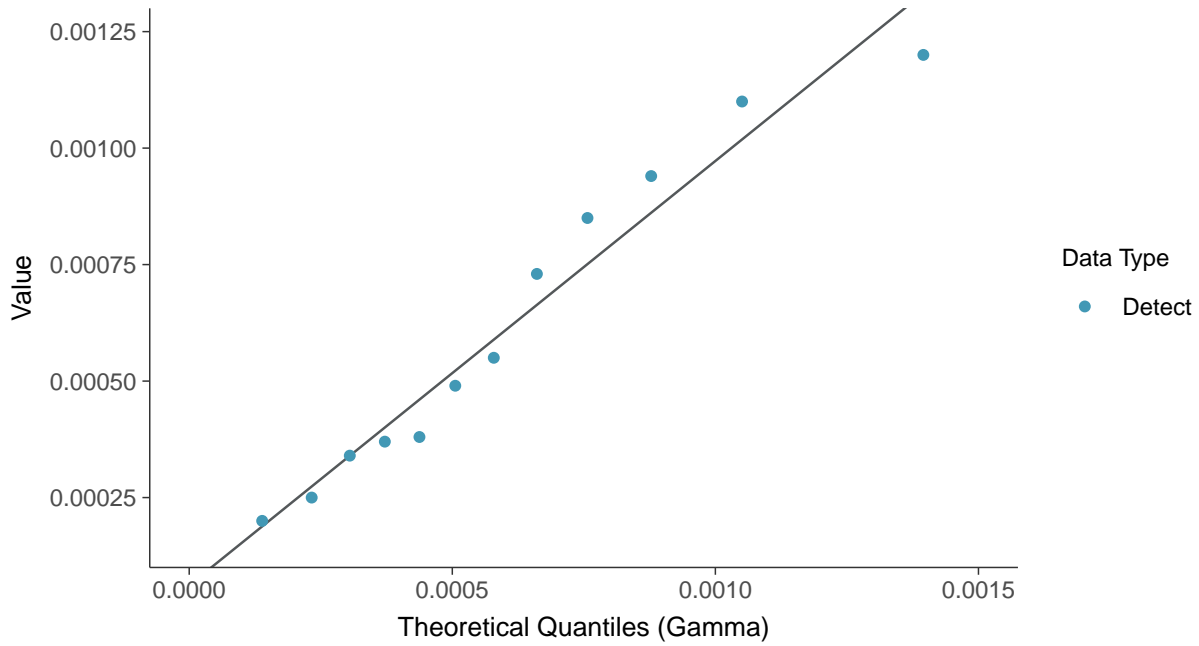
Arsenic, MW-10 (mg/L)





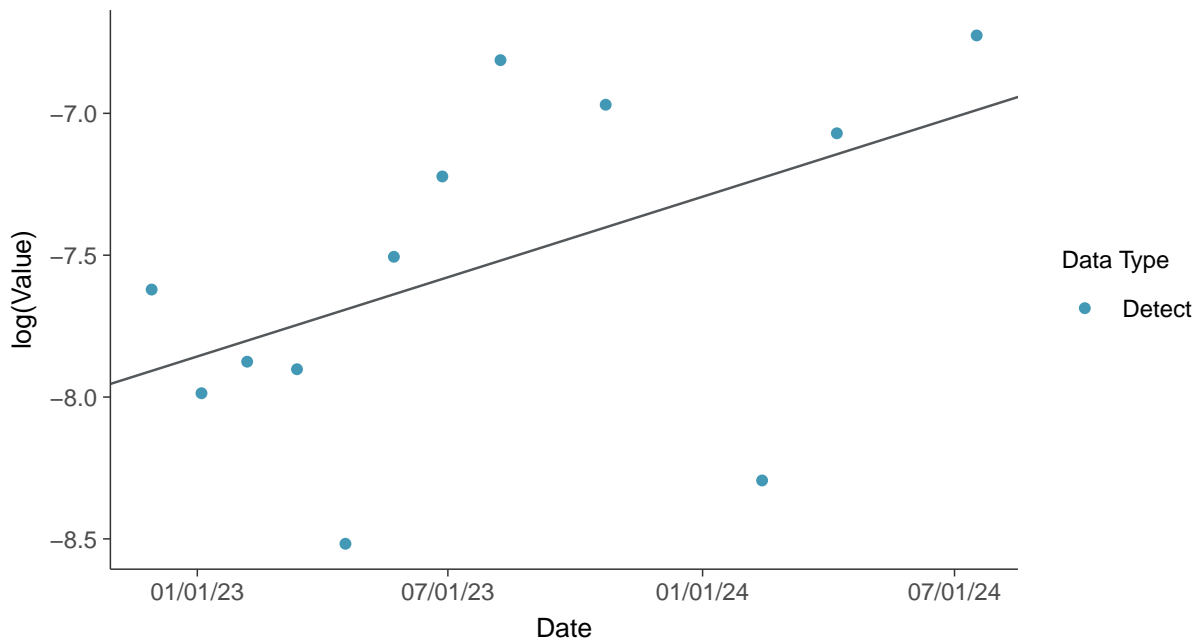
### Gamma Q-Q plot

Arsenic, MW-10 (mg/L)



### Trend Regression: Lognormal MLE

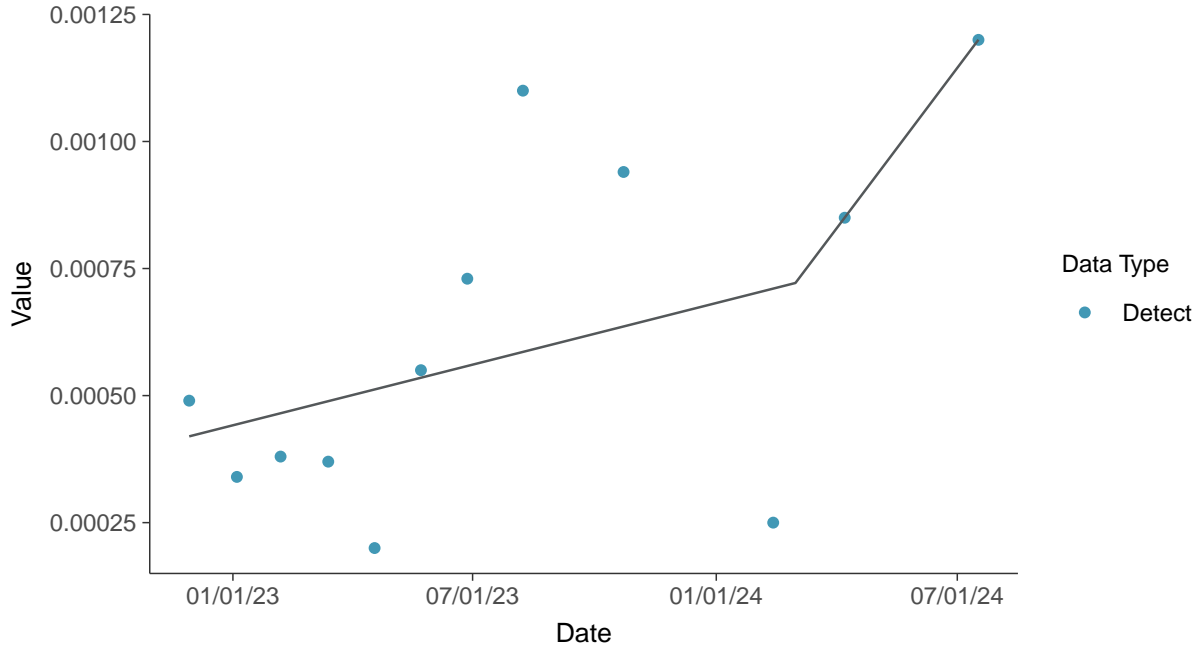
Arsenic, MW-10 (mg/L)





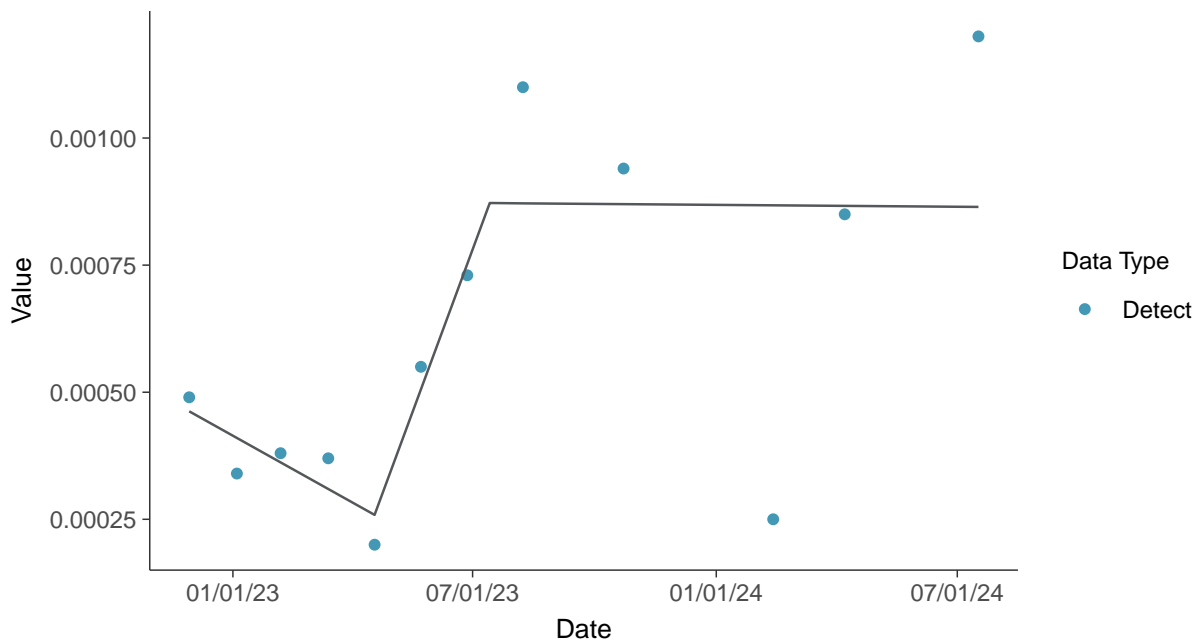
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

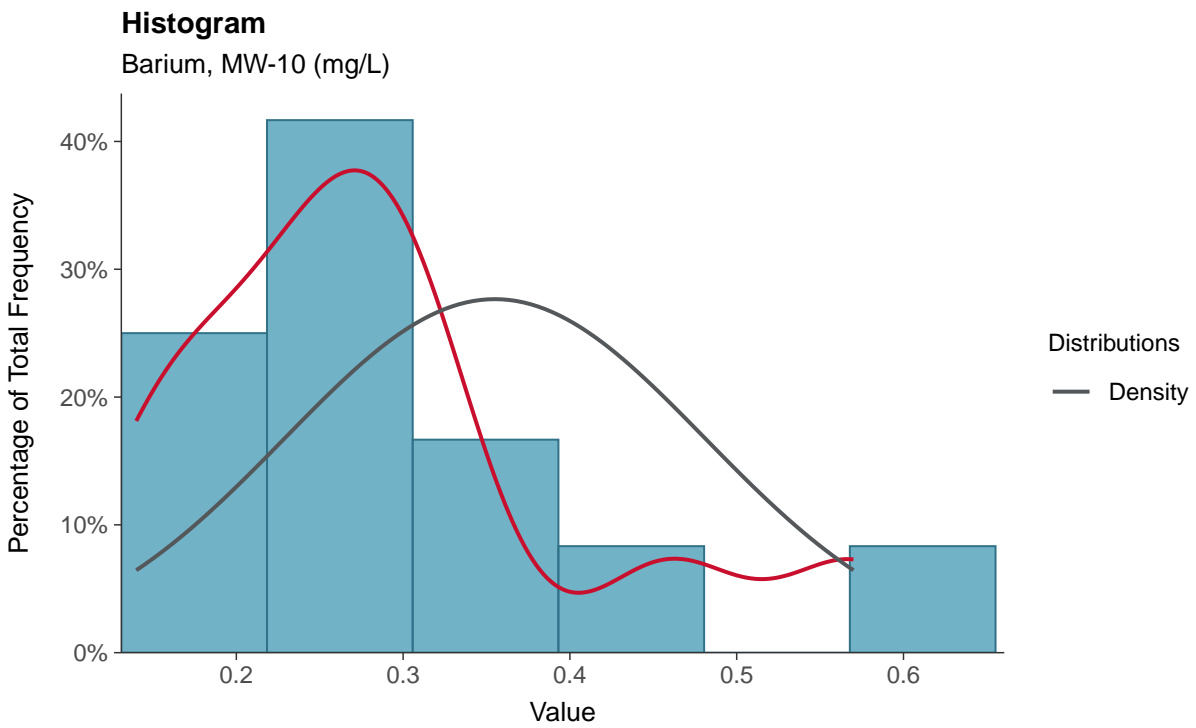
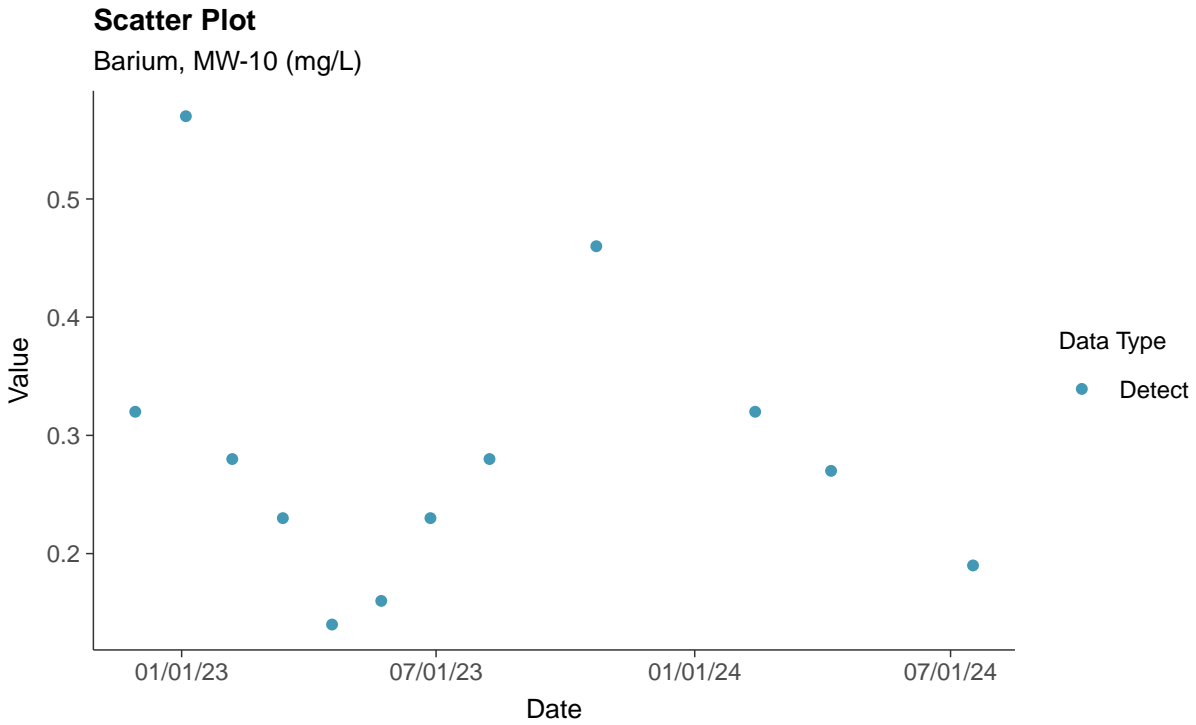
Arsenic, MW-10 (mg/L)





### Appendix IV: Barium, MW-10

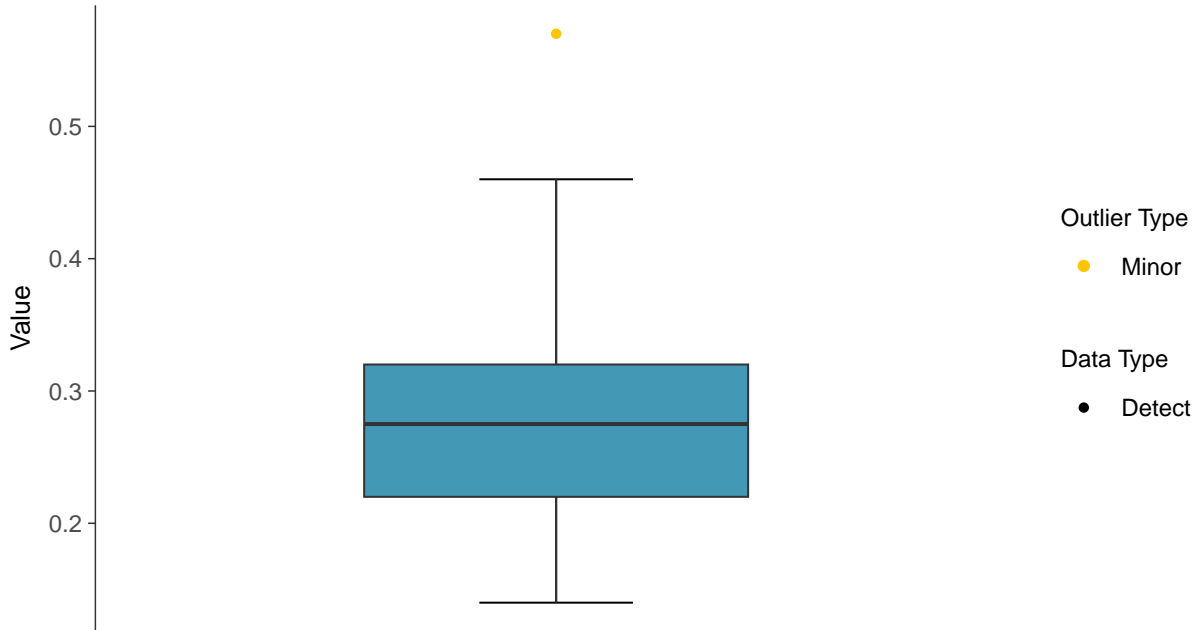
ID: 20\_3\_5\_103





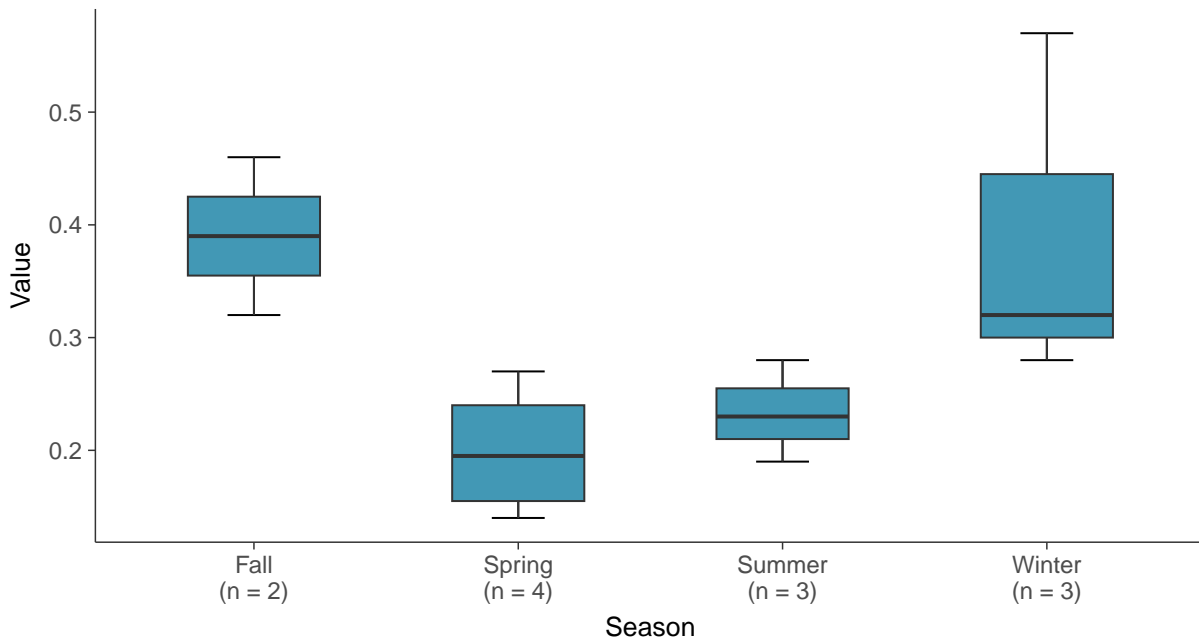
### Boxplot

Barium, MW-10 (mg/L)



### Boxplot by Season

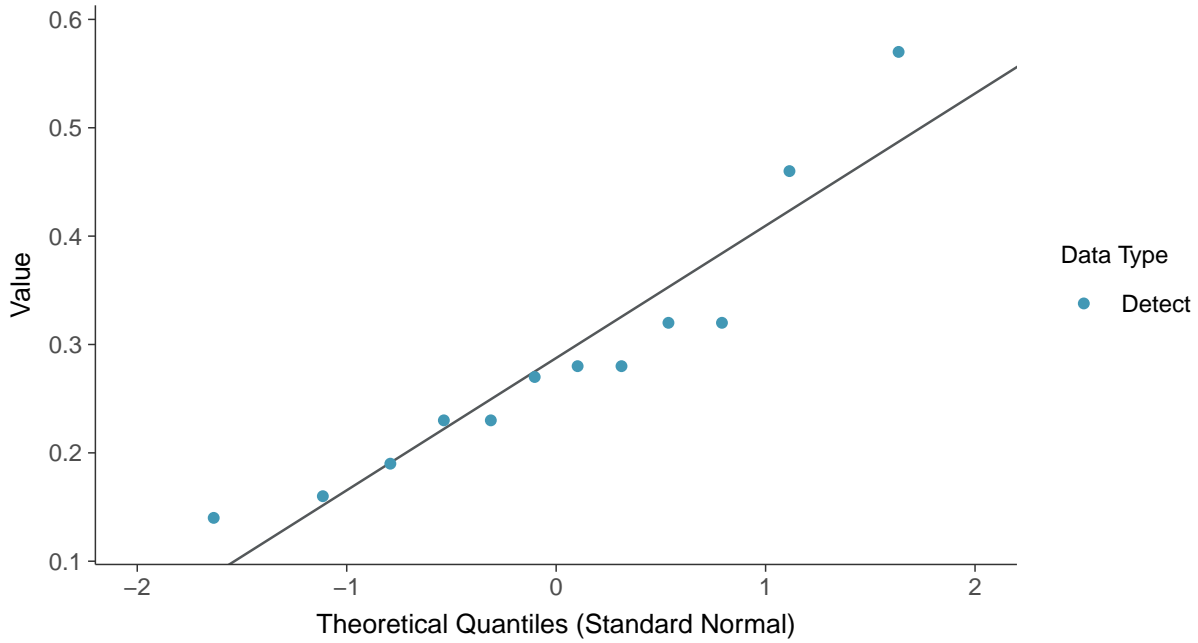
Barium, MW-10 (mg/L)



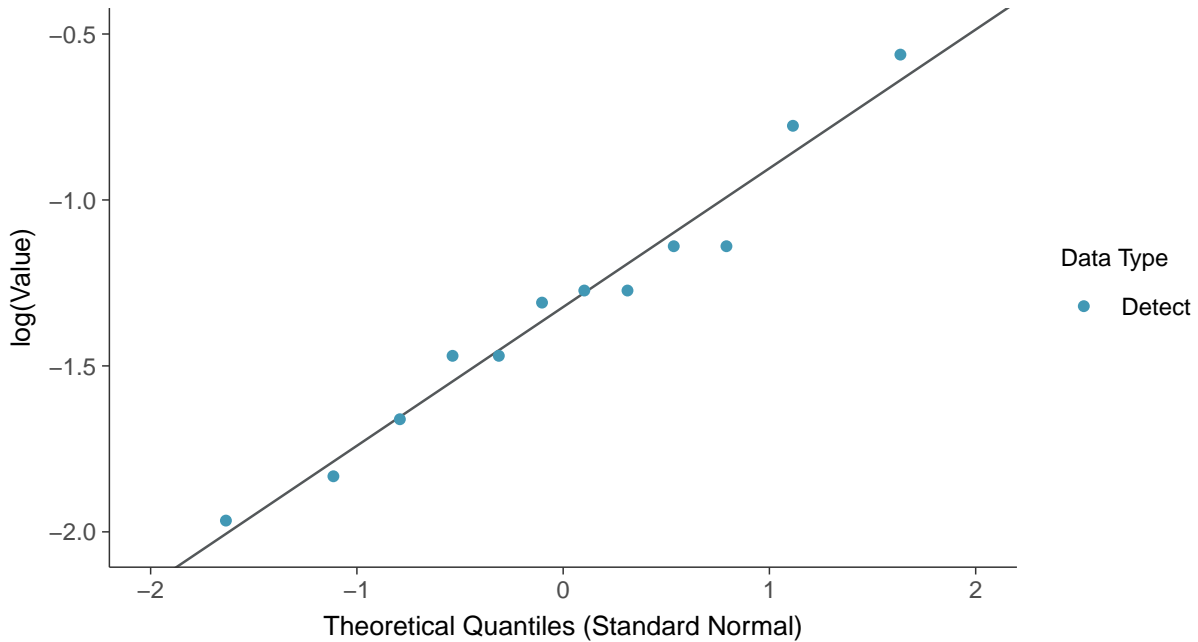




**Normal Q-Q plot**  
Barium, MW-10 (mg/L)



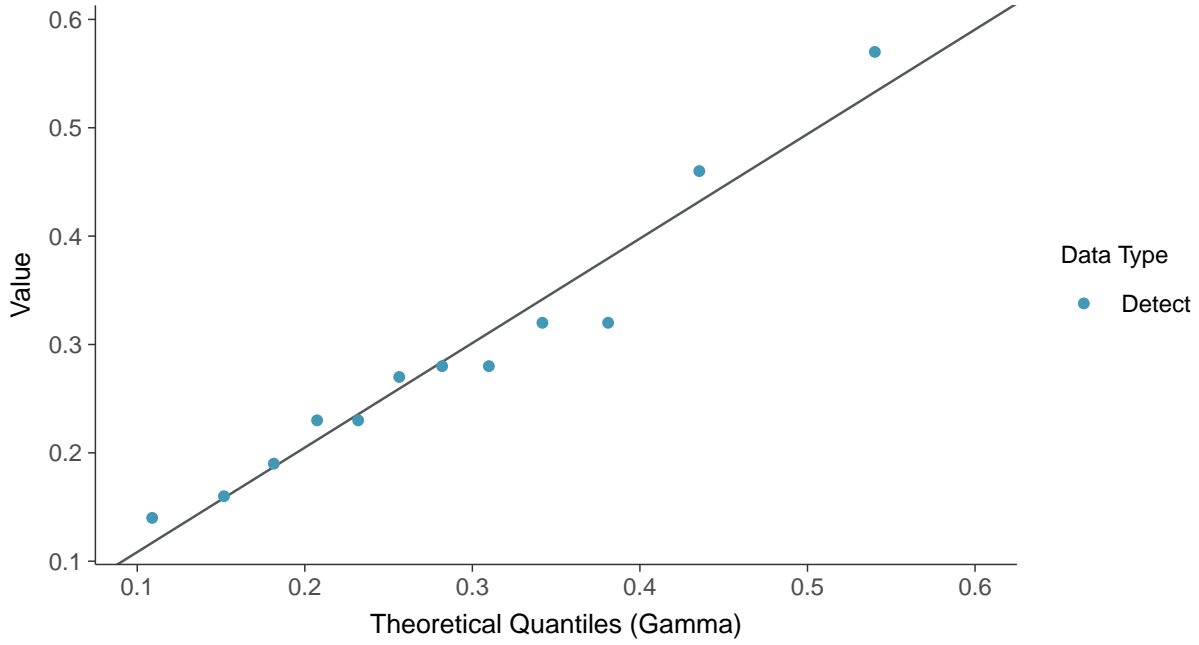
**Lognormal Q-Q plot**  
Barium, MW-10 (mg/L)





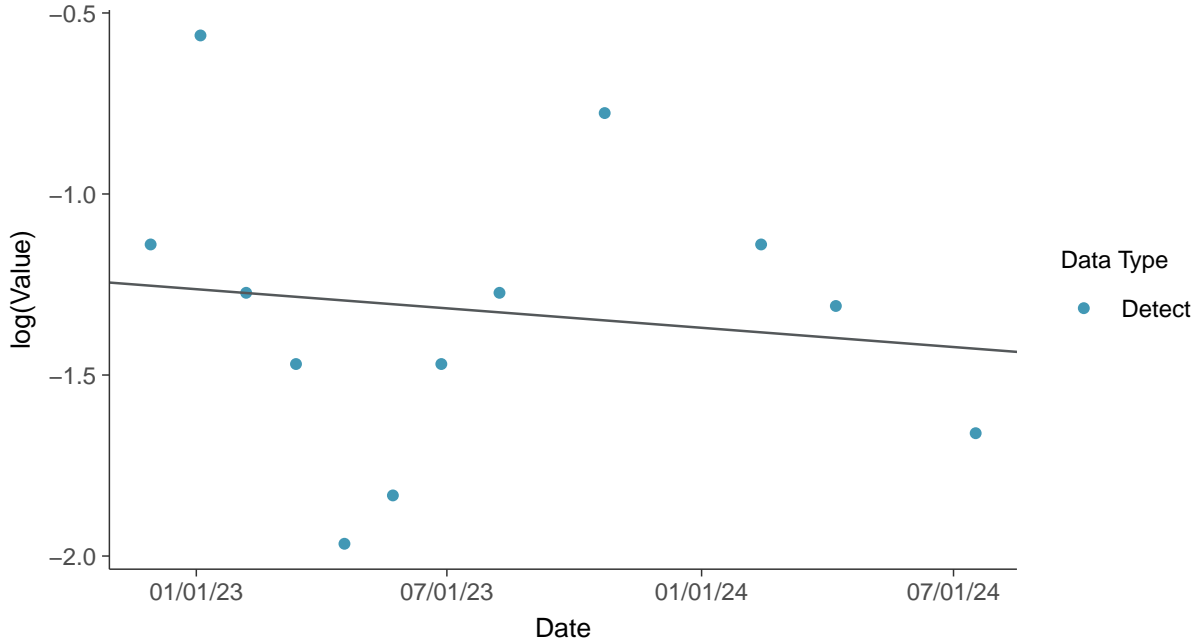
### Gamma Q-Q plot

Barium, MW-10 (mg/L)



### Trend Regression: Lognormal MLE

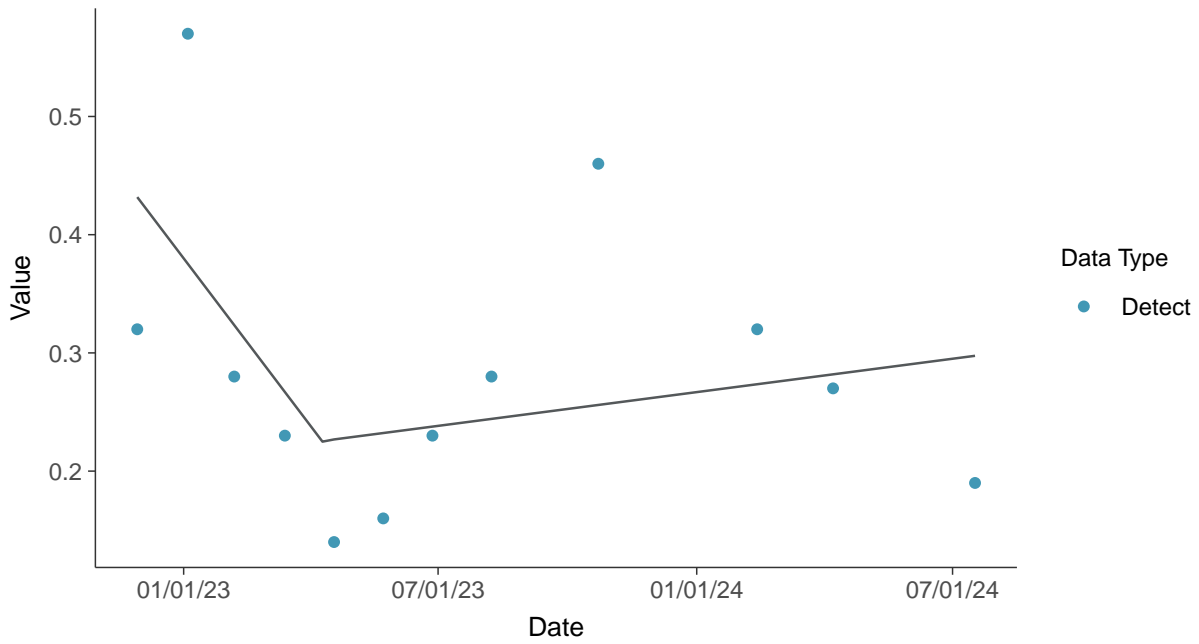
Barium, MW-10 (mg/L)





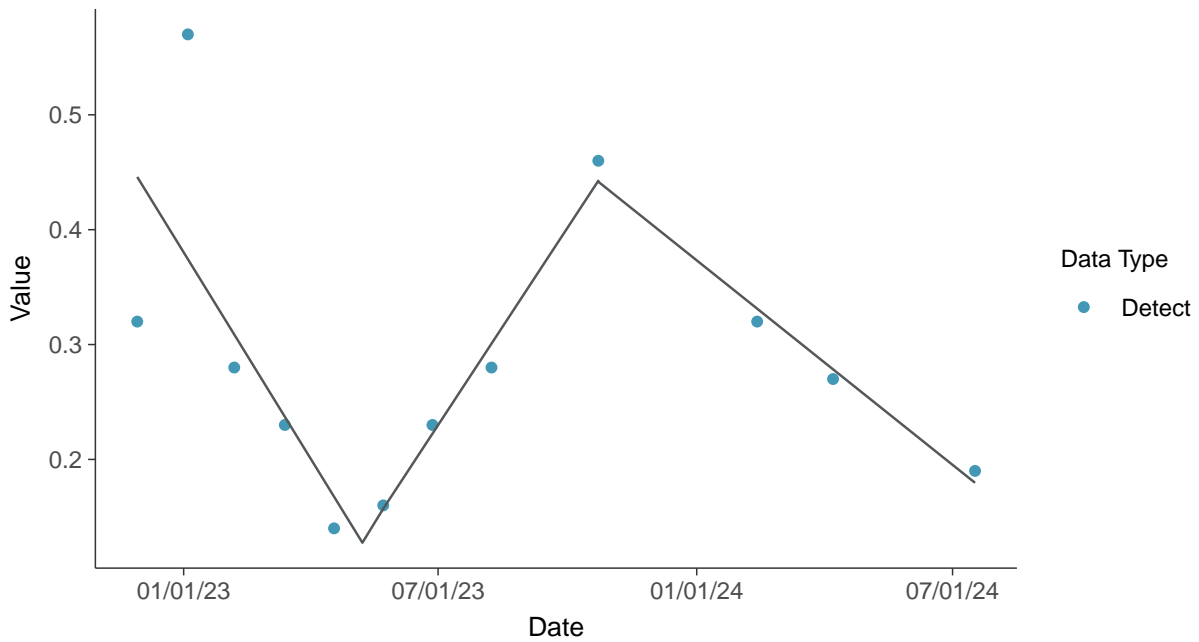
### Trend Regression: Piecewise Linear-Linear

Barium, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

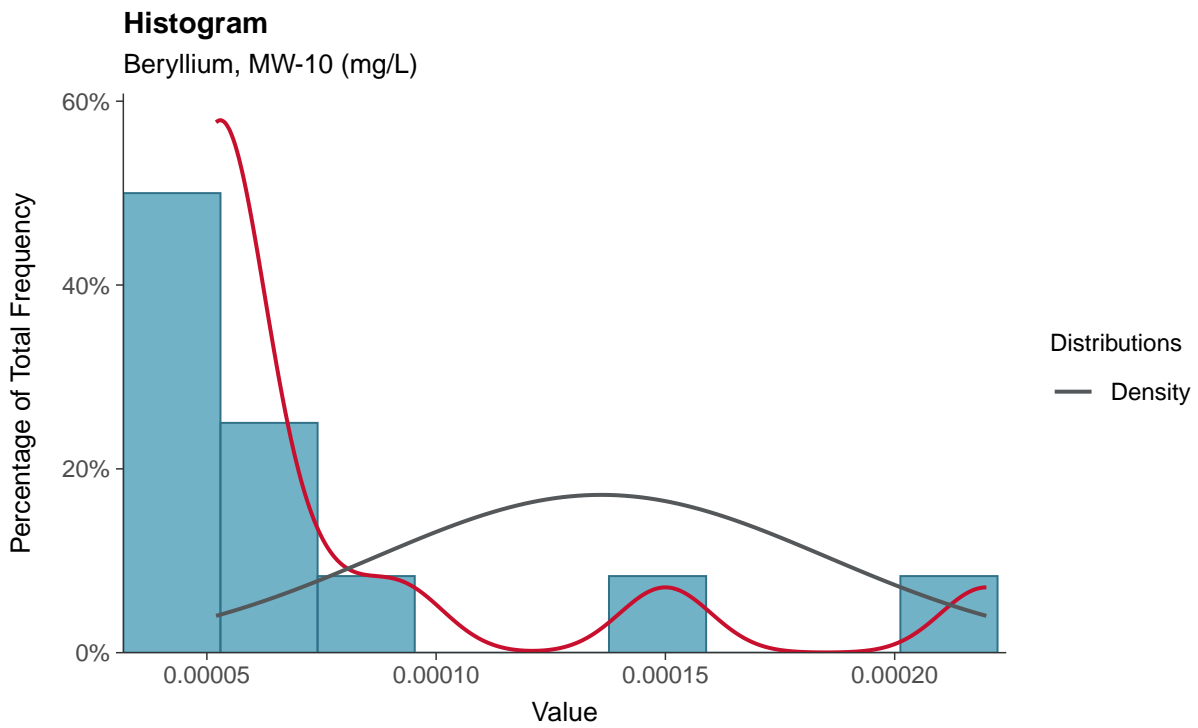
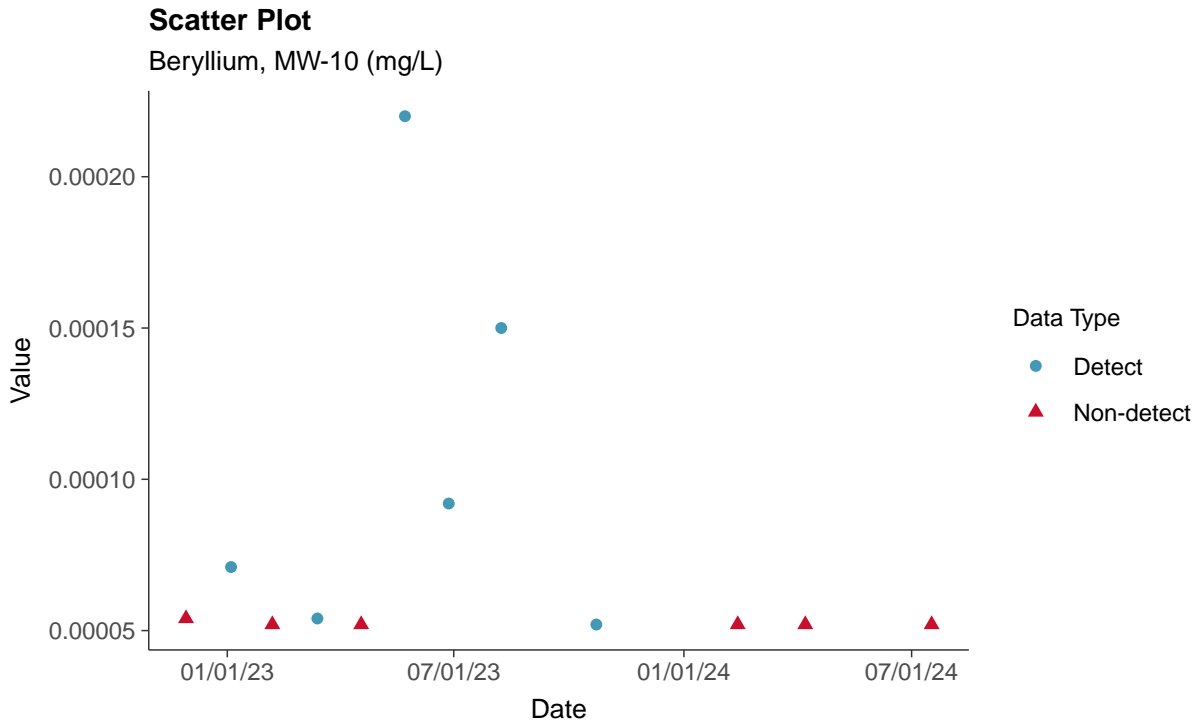
Barium, MW-10 (mg/L)





### Appendix IV: Beryllium, MW-10

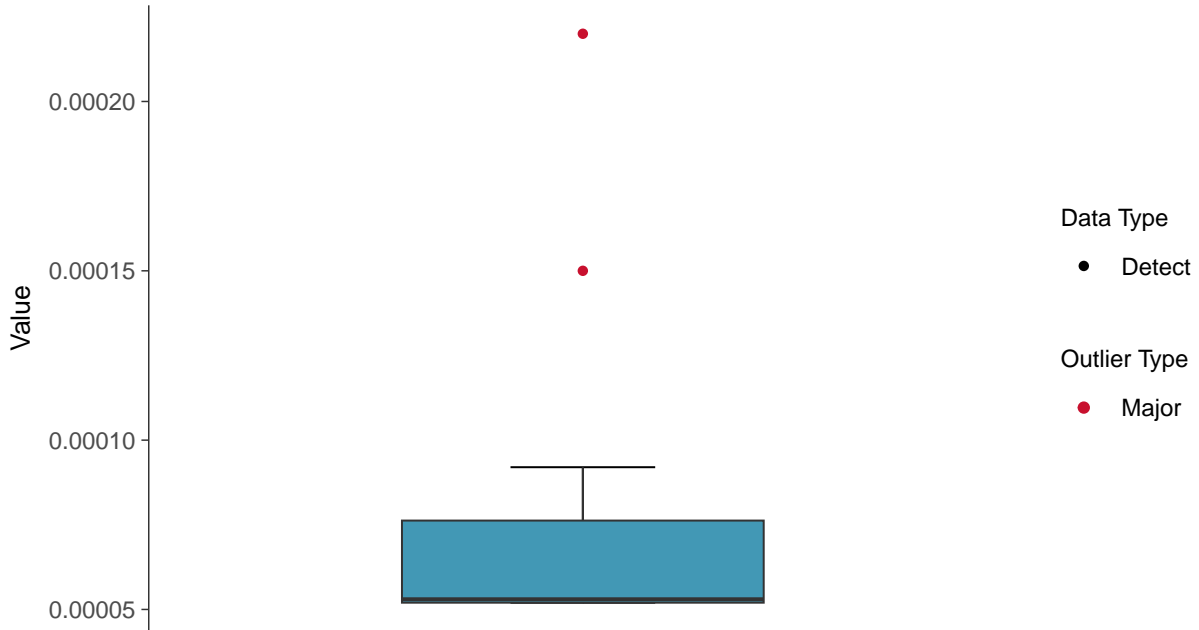
ID: 20\_3\_5\_104





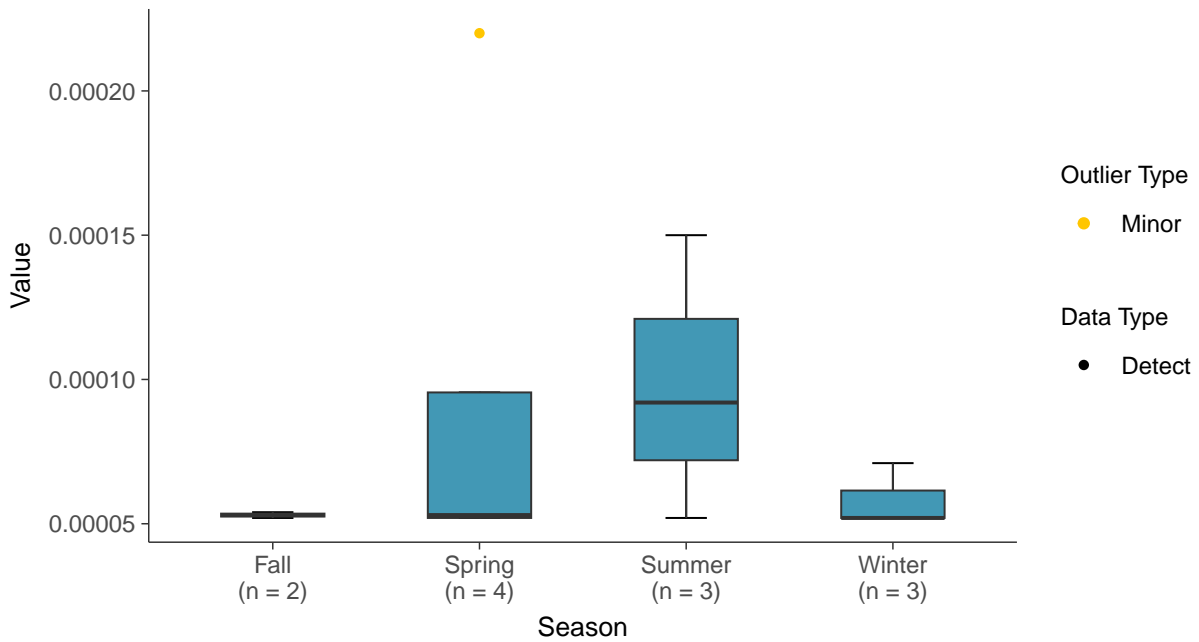
### Boxplot

Beryllium, MW-10 (mg/L)



### Boxplot by Season

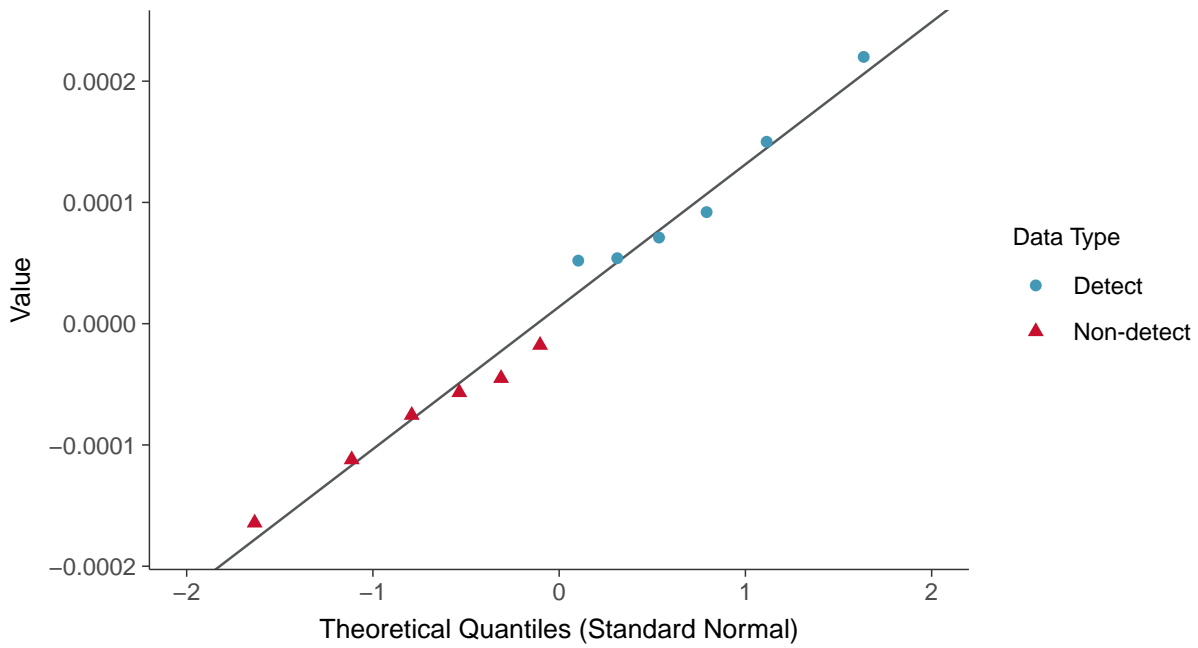
Beryllium, MW-10 (mg/L)





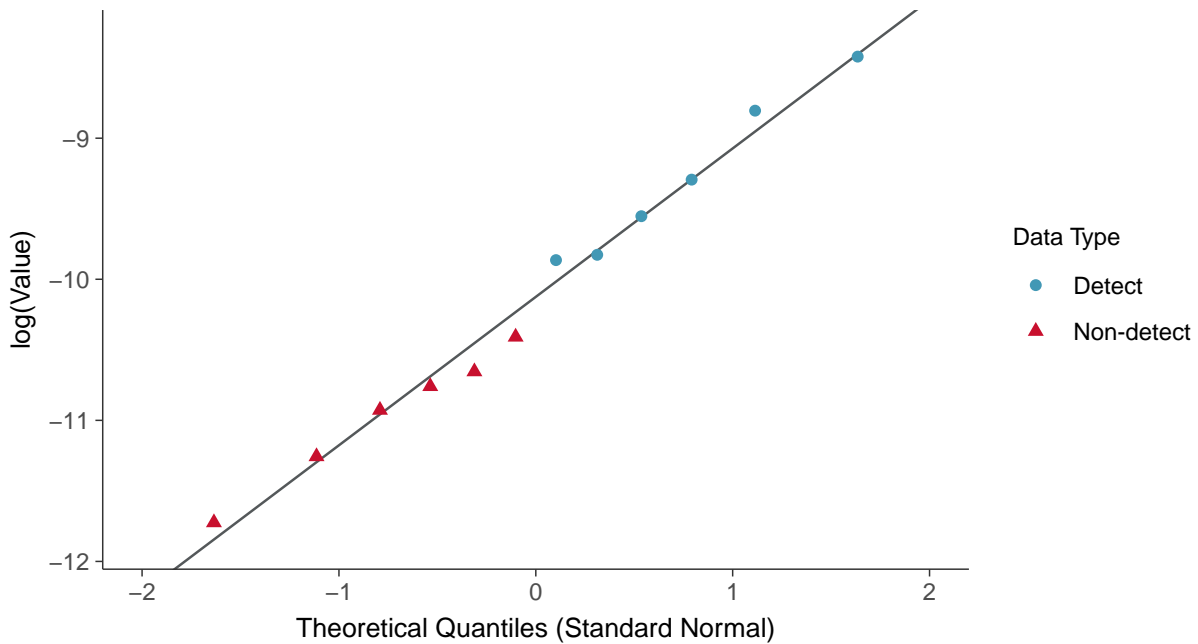
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)



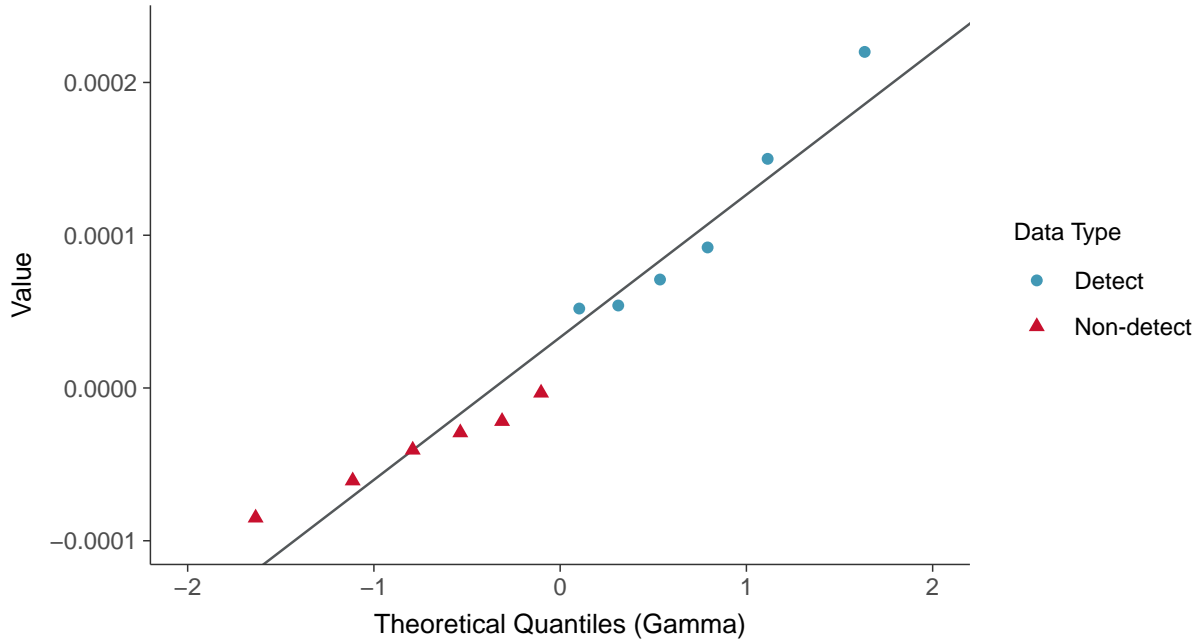
### Lognormal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-10 (mg/L)

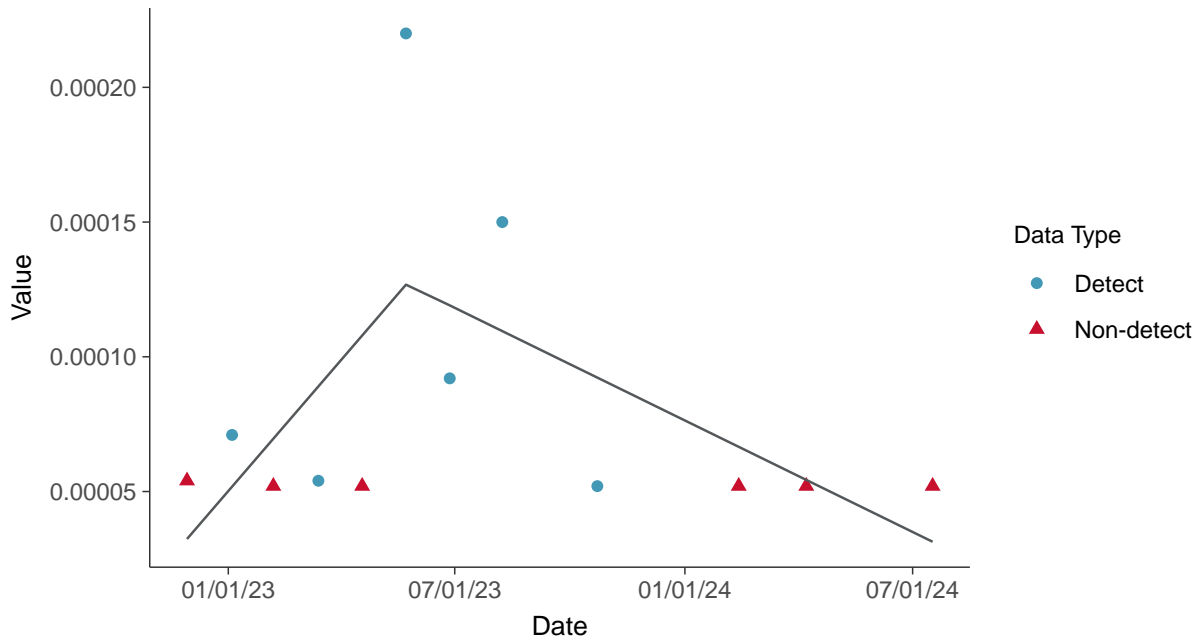




**Gamma Q-Q plot using ROS Imputed Estimates**  
Beryllium, MW-10 (mg/L)



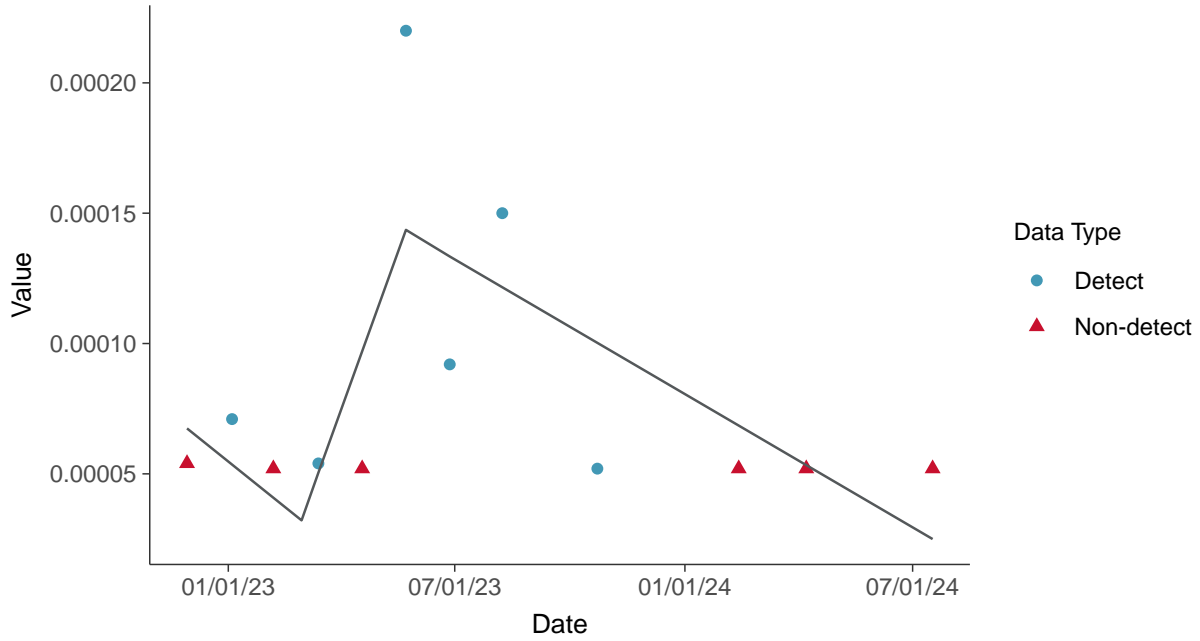
**Trend Regression: Piecewise Linear-Linear**  
Beryllium, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-10 (mg/L)

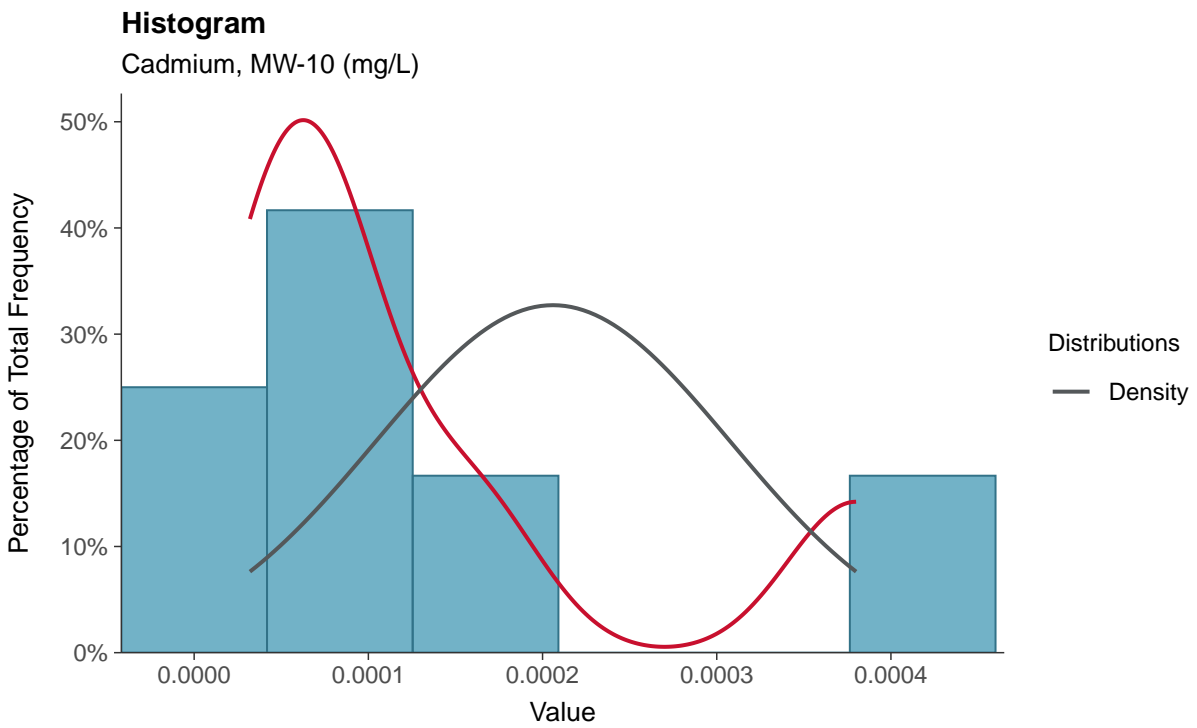
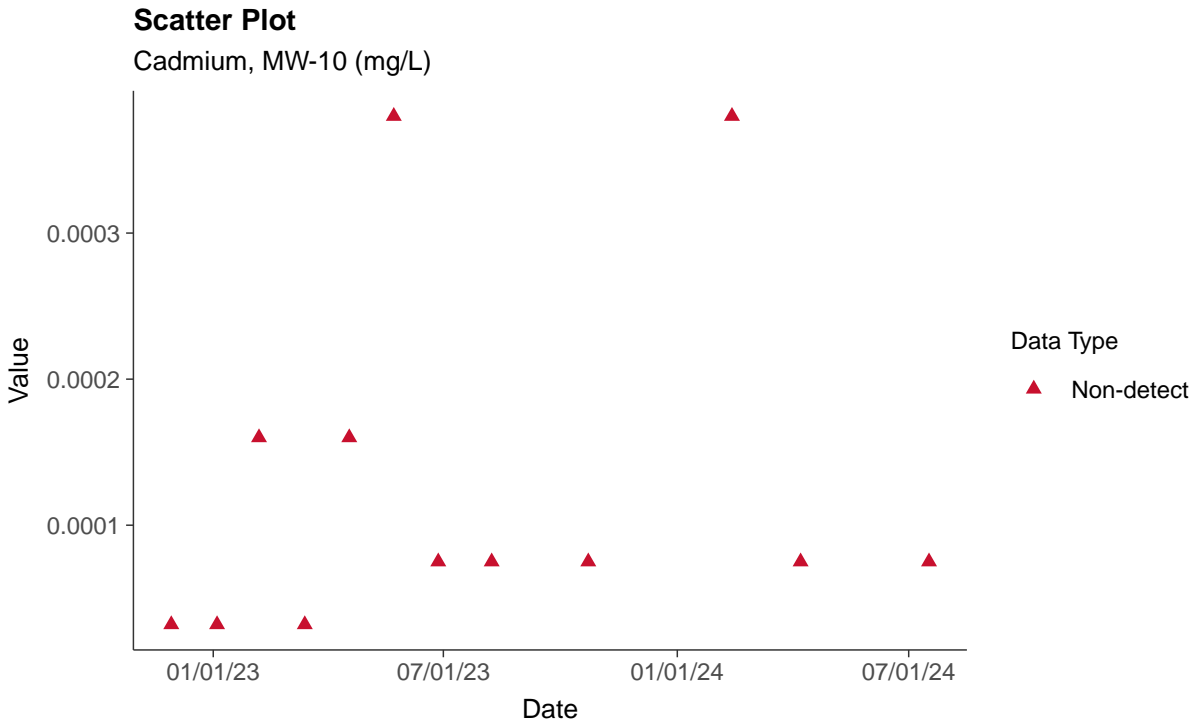






### Appendix IV: Cadmium, MW-10

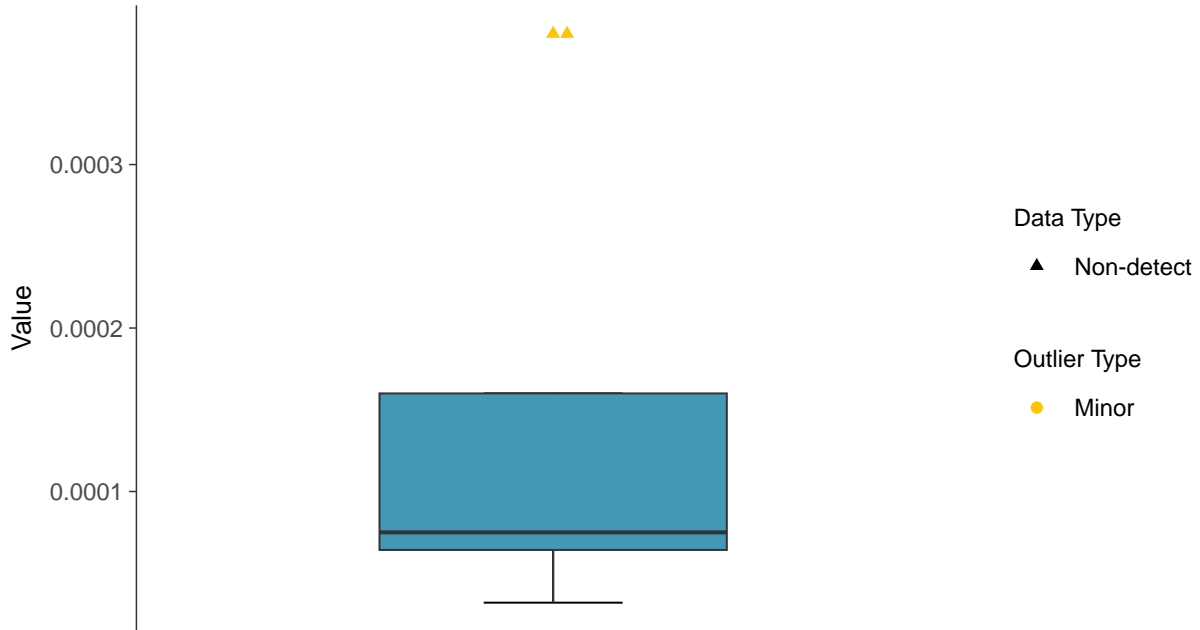
ID: 20\_3\_5\_106





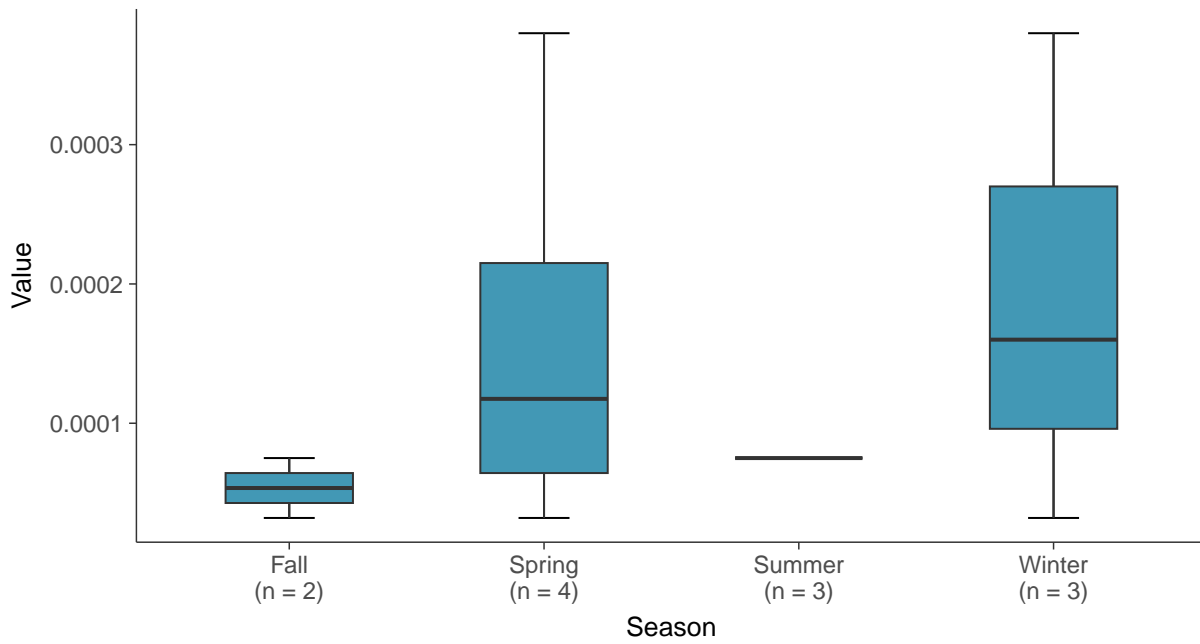
### Boxplot

Cadmium, MW-10 (mg/L)



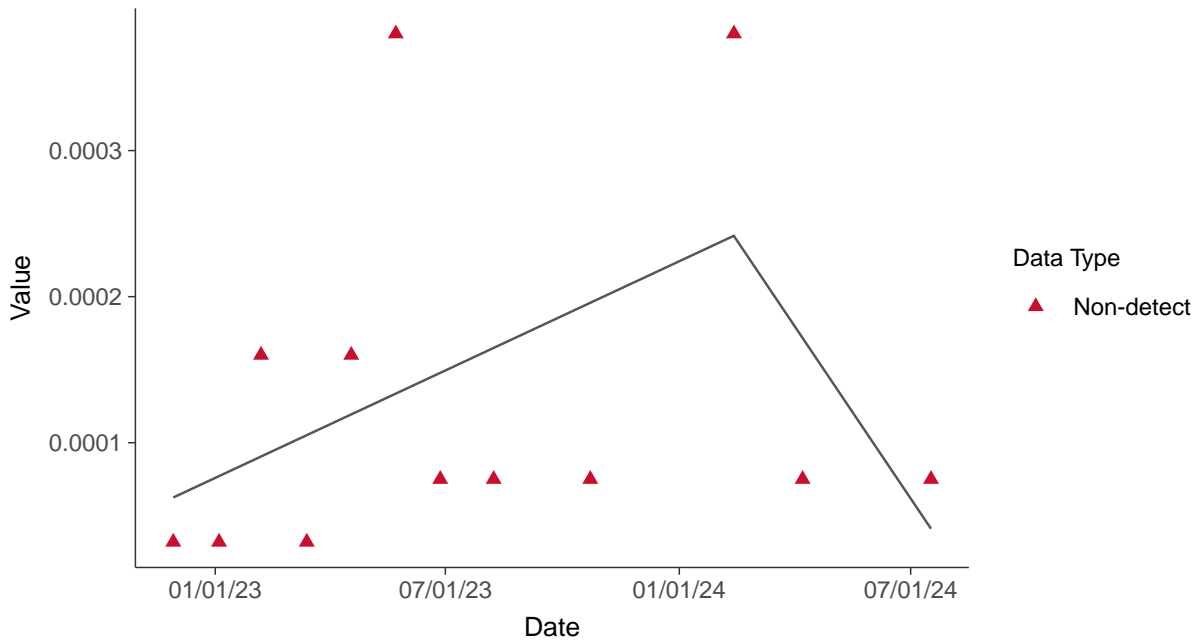
### Boxplot by Season

Cadmium, MW-10 (mg/L)

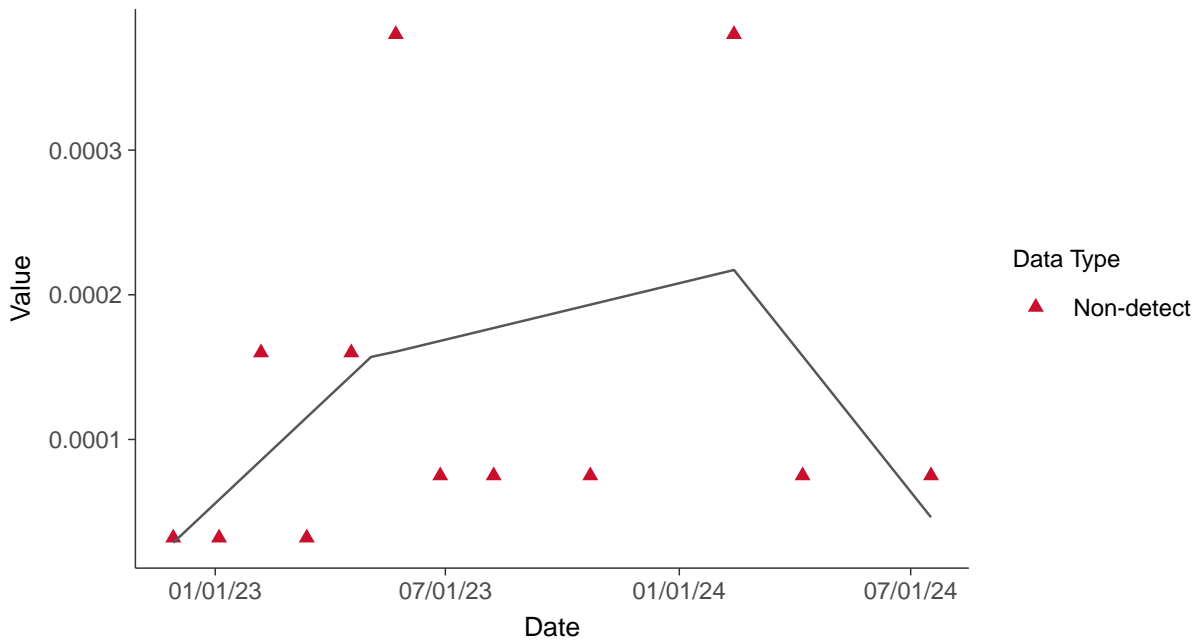




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-10 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-10 (mg/L)



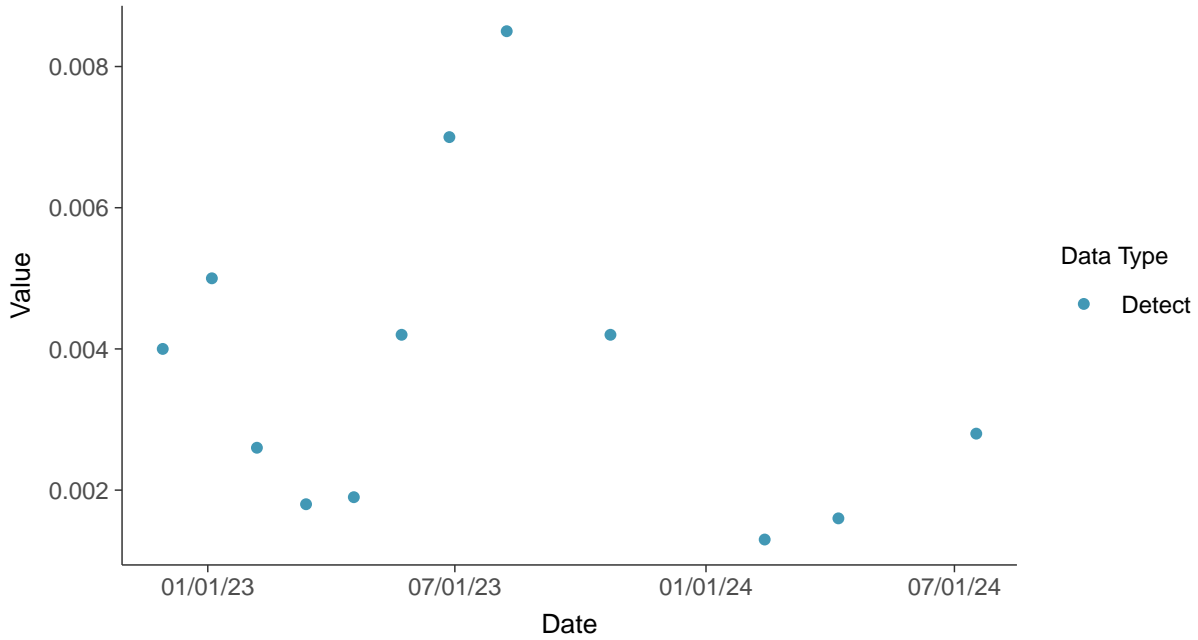


### Appendix IV: Chromium, Total, MW-10

ID: 20\_3\_5\_109

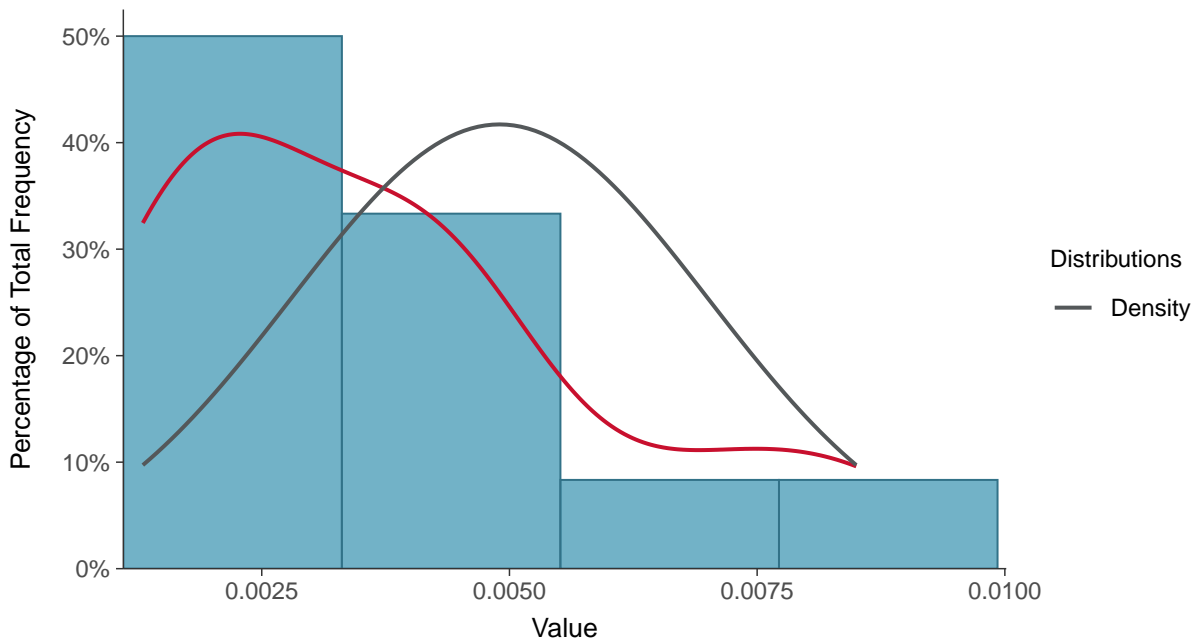
#### Scatter Plot

Chromium, Total, MW-10 (mg/L)



#### Histogram

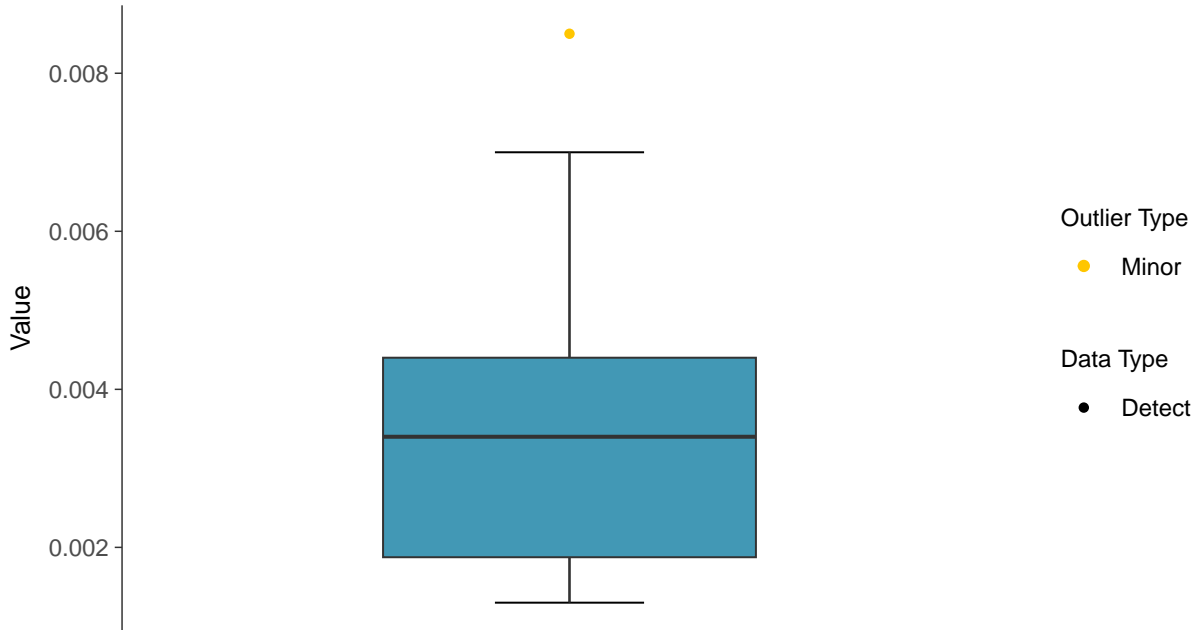
Chromium, Total, MW-10 (mg/L)





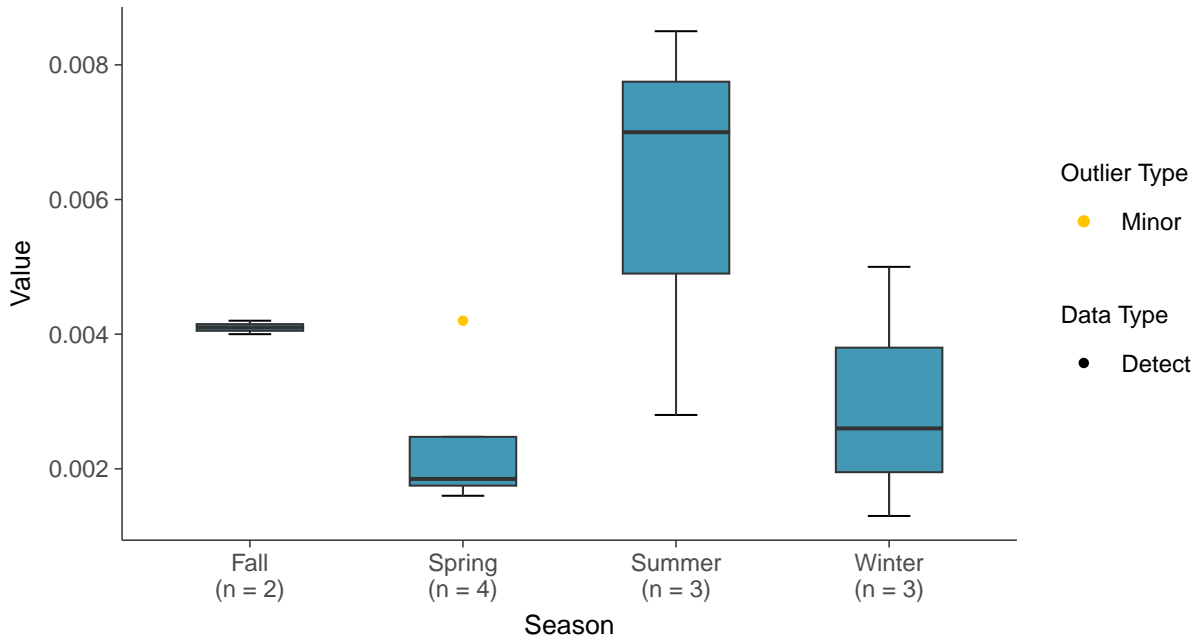
### Boxplot

Chromium, Total, MW-10 (mg/L)



### Boxplot by Season

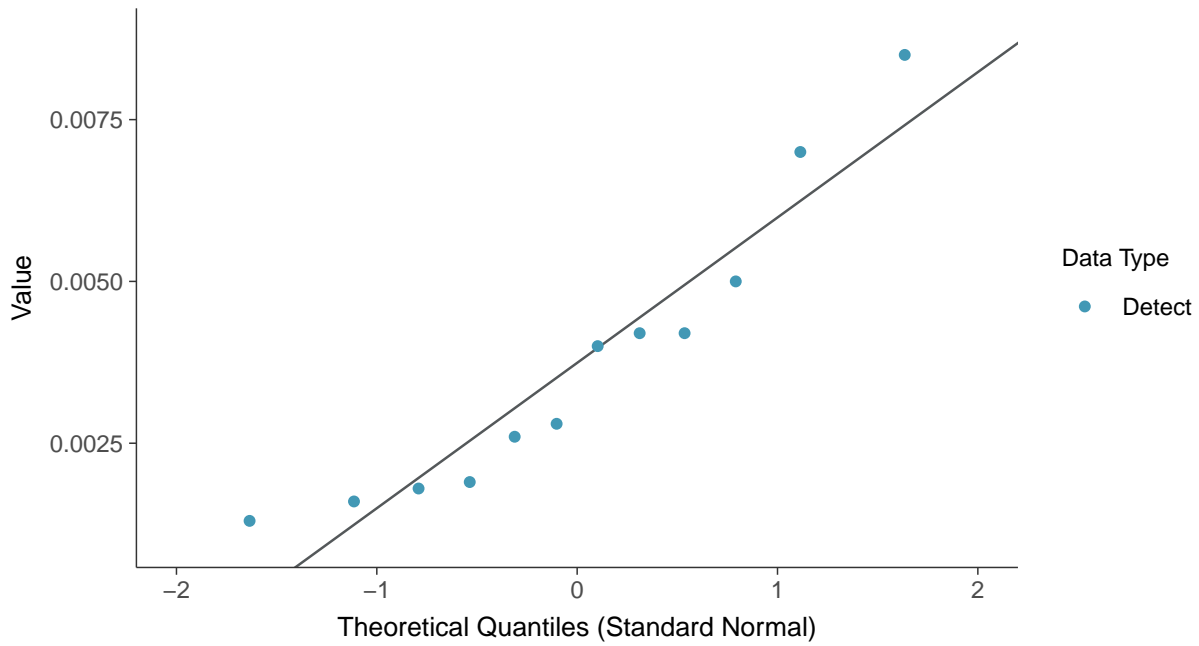
Chromium, Total, MW-10 (mg/L)





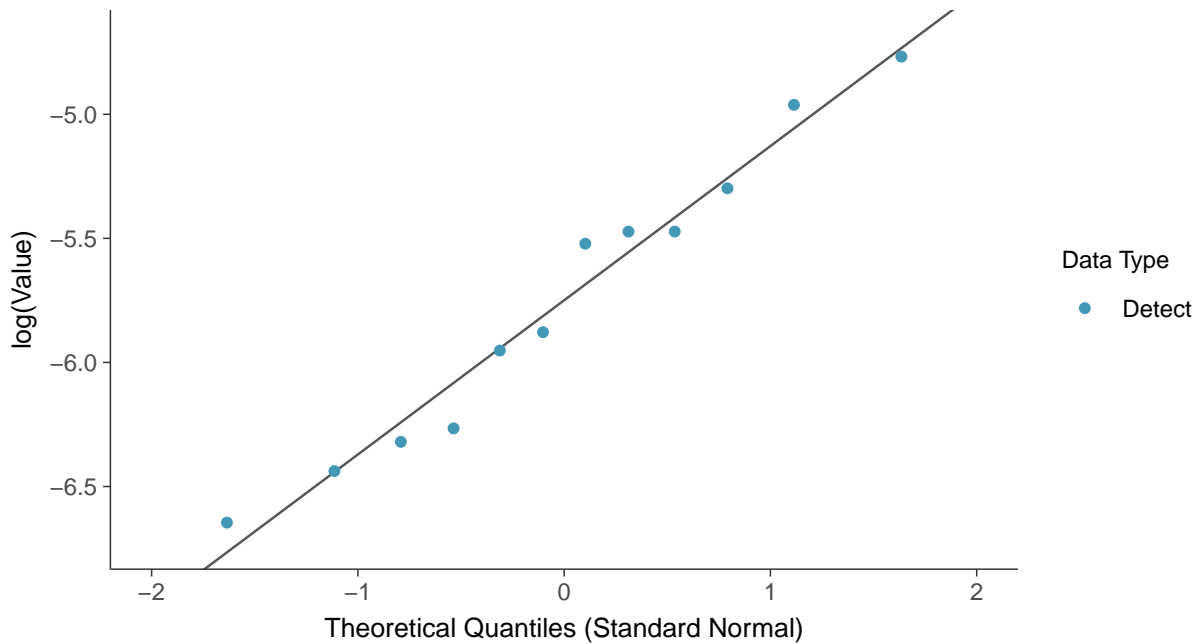
### Normal Q-Q plot

Chromium, Total, MW-10 (mg/L)



### Lognormal Q-Q plot

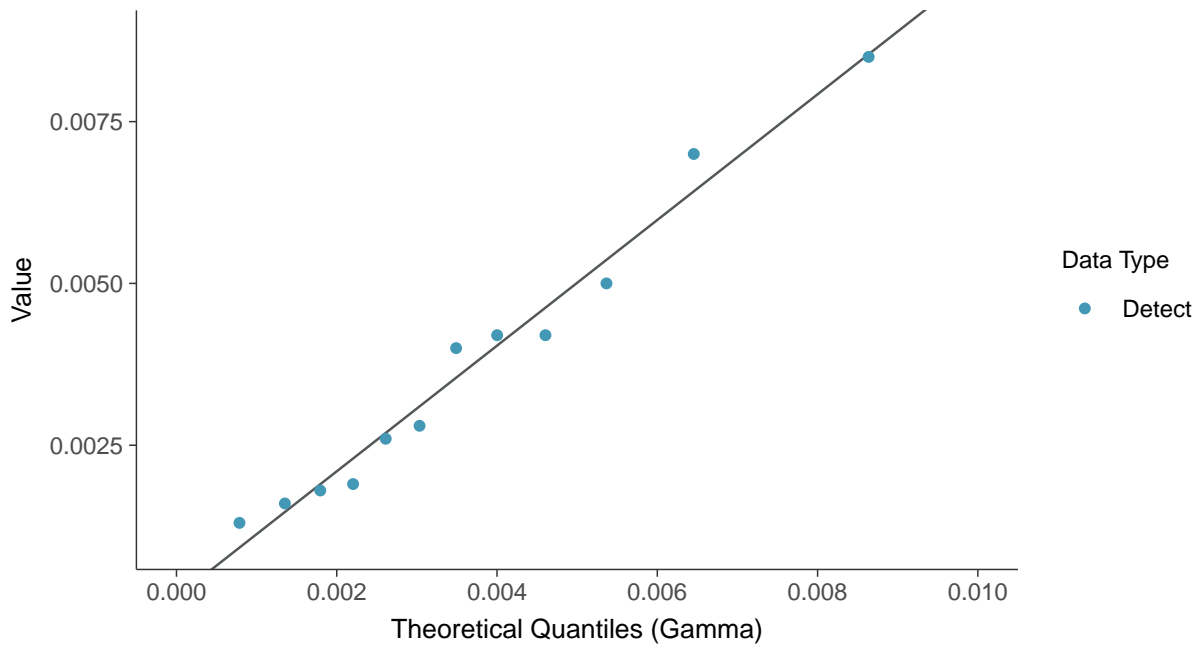
Chromium, Total, MW-10 (mg/L)





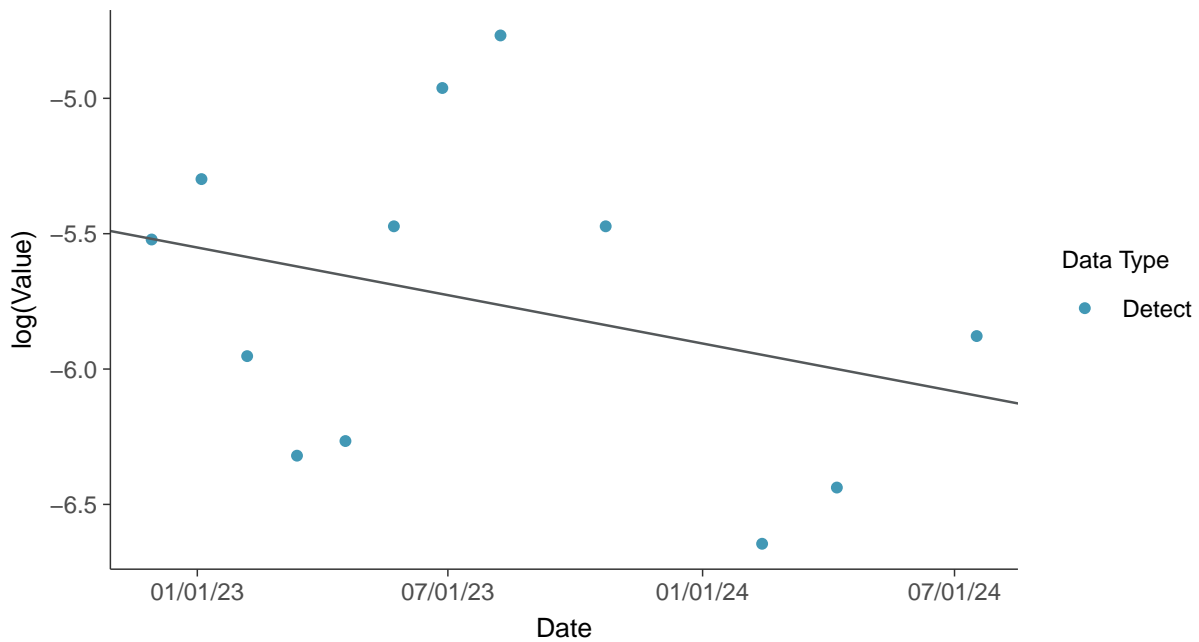
### Gamma Q-Q plot

Chromium, Total, MW-10 (mg/L)



### Trend Regression: Lognormal MLE

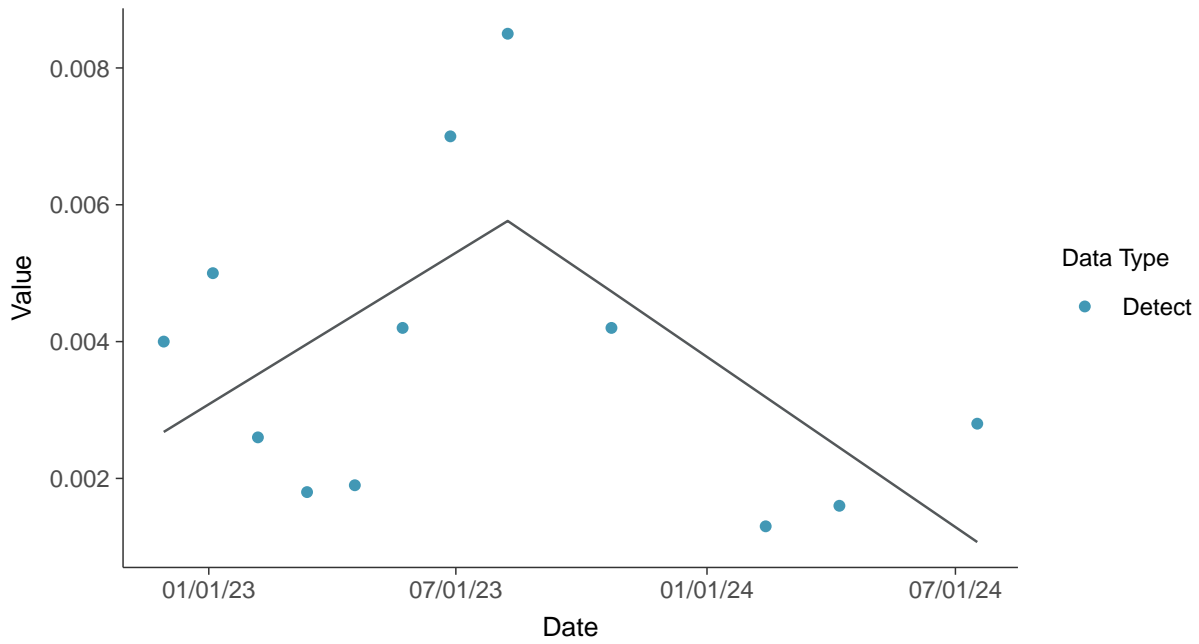
Chromium, Total, MW-10 (mg/L)





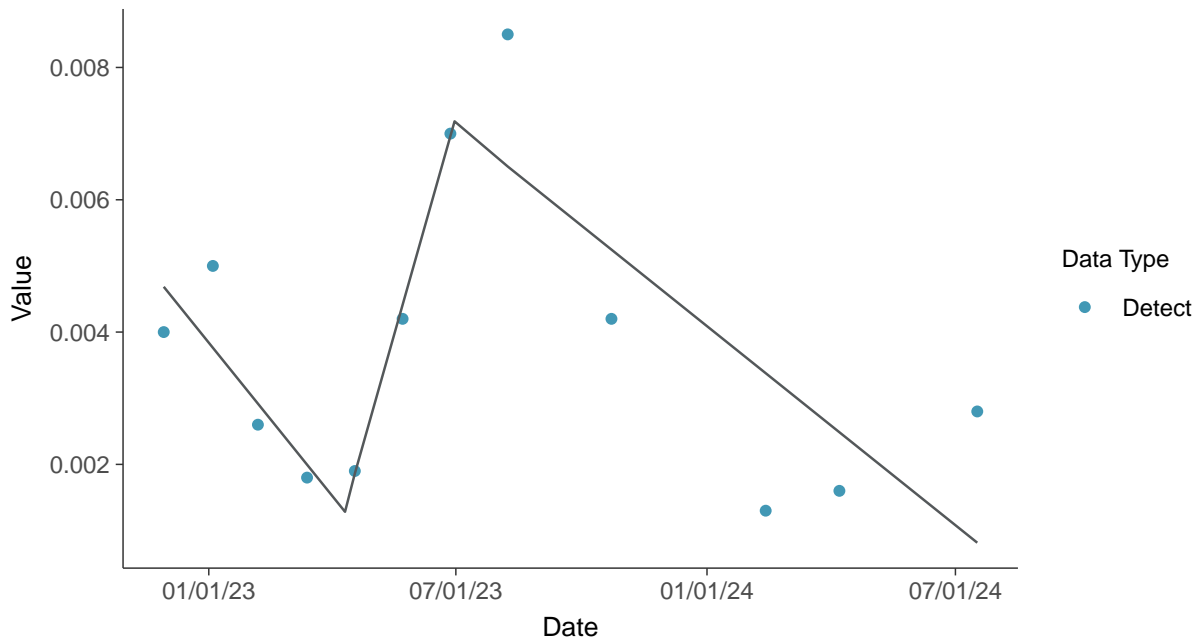
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-10 (mg/L)

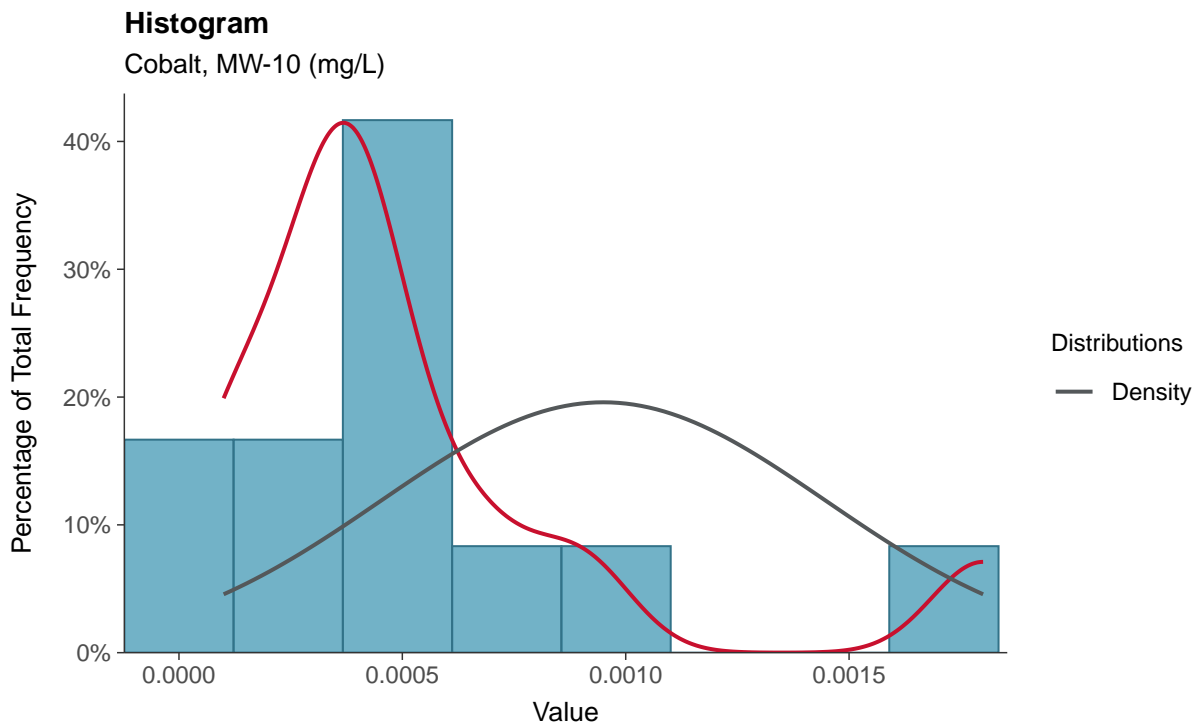
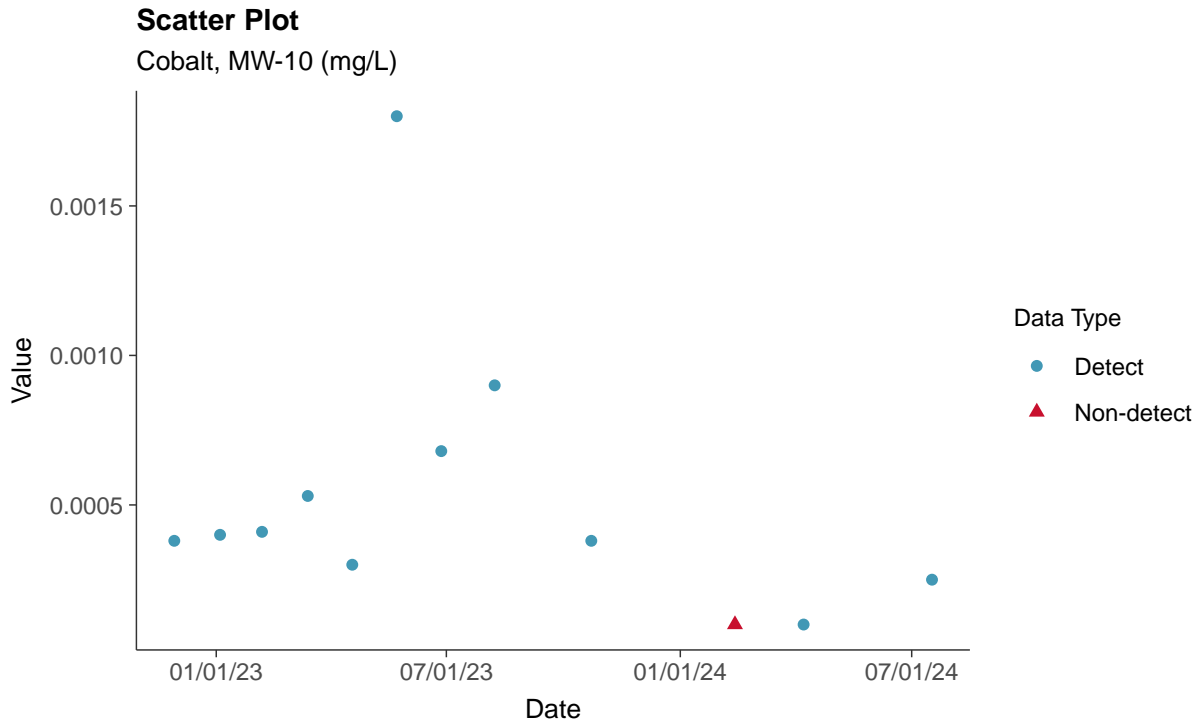






### Appendix IV: Cobalt, MW-10

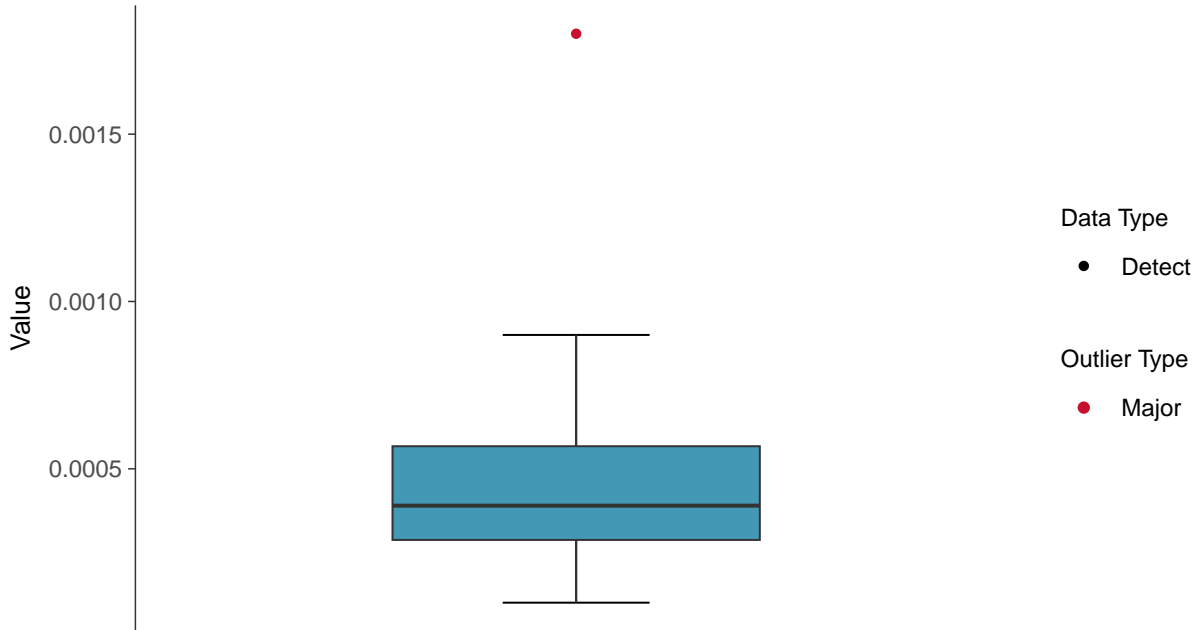
ID: 20\_3\_5\_110





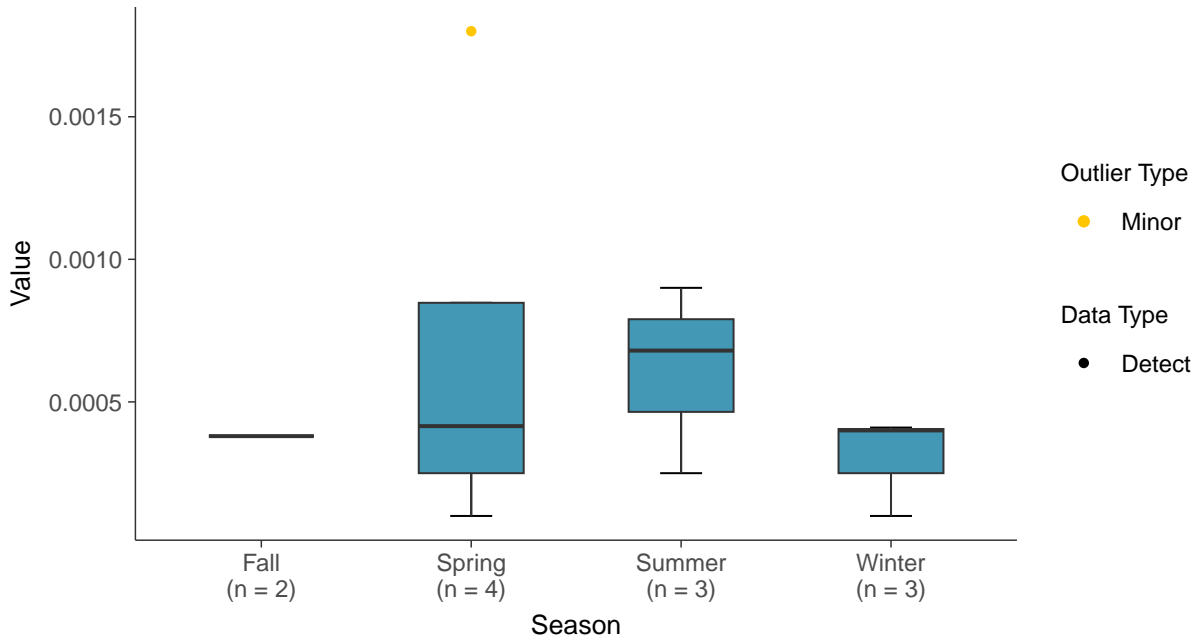
### Boxplot

Cobalt, MW-10 (mg/L)



### Boxplot by Season

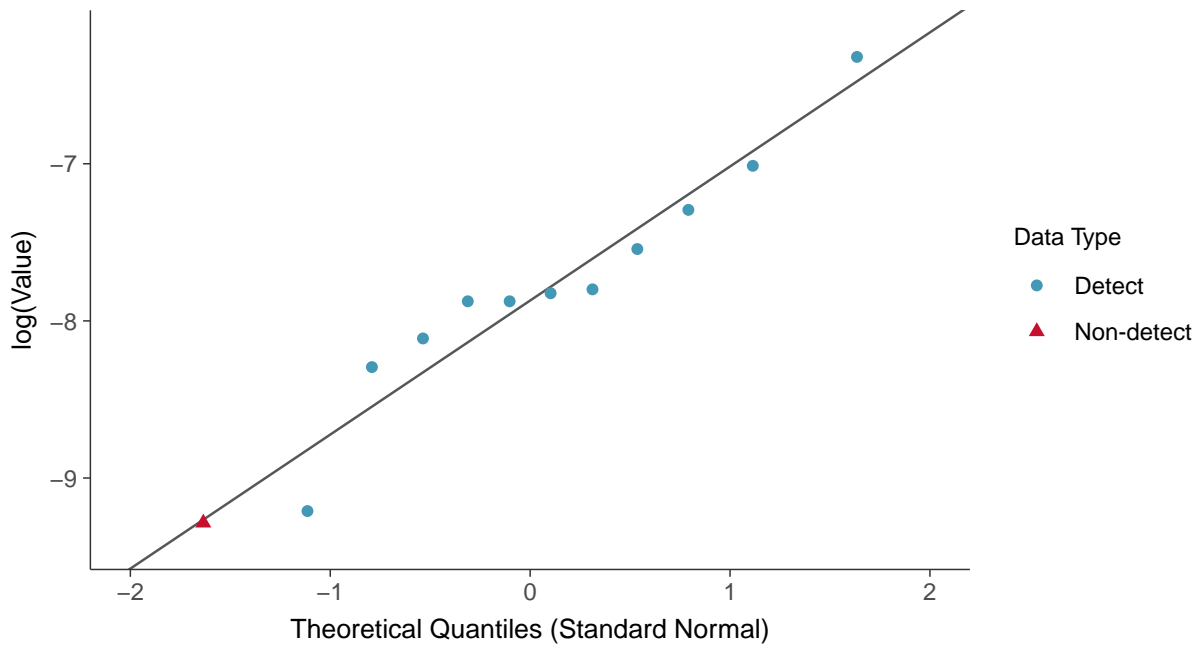
Cobalt, MW-10 (mg/L)





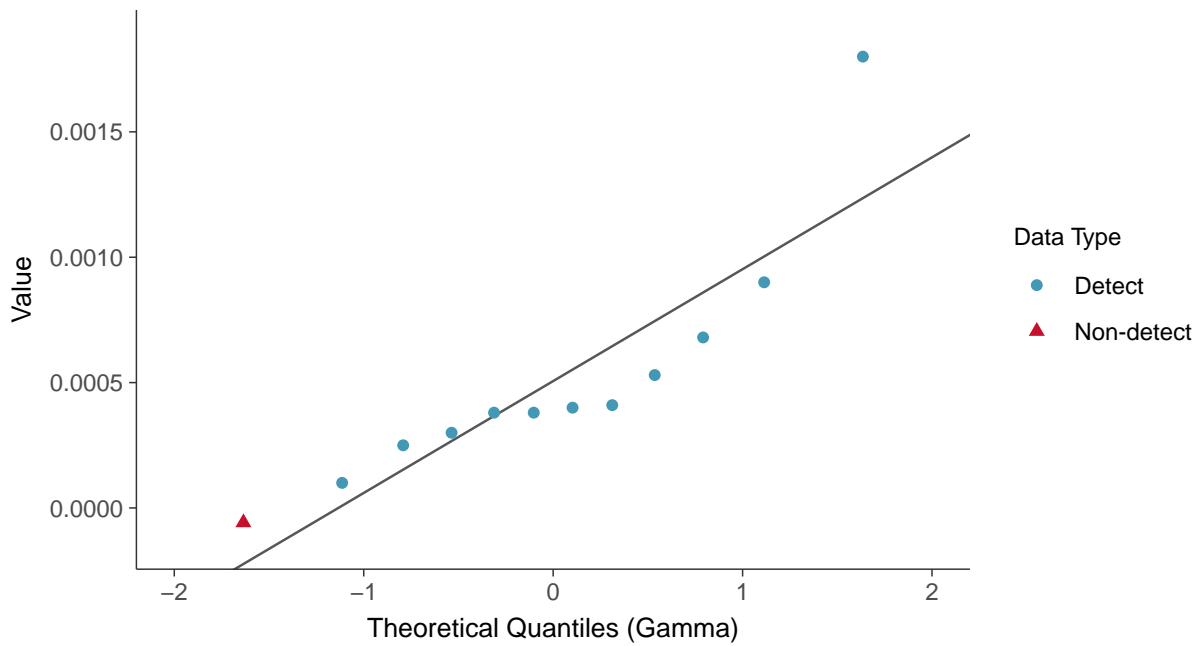
### Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-10 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

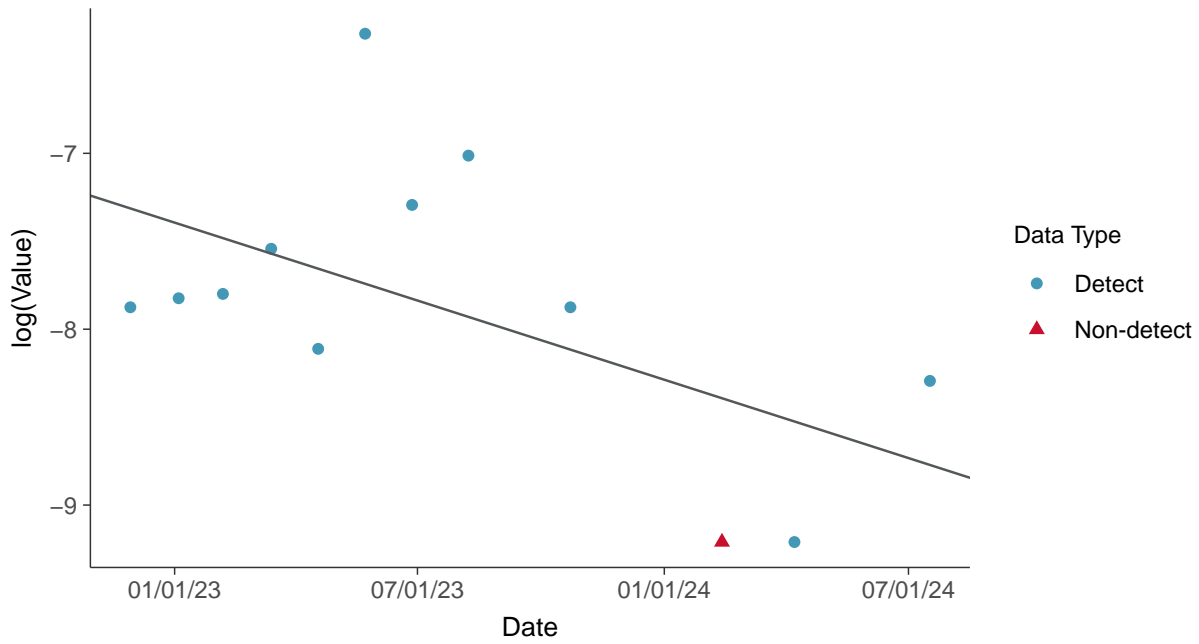
Cobalt, MW-10 (mg/L)





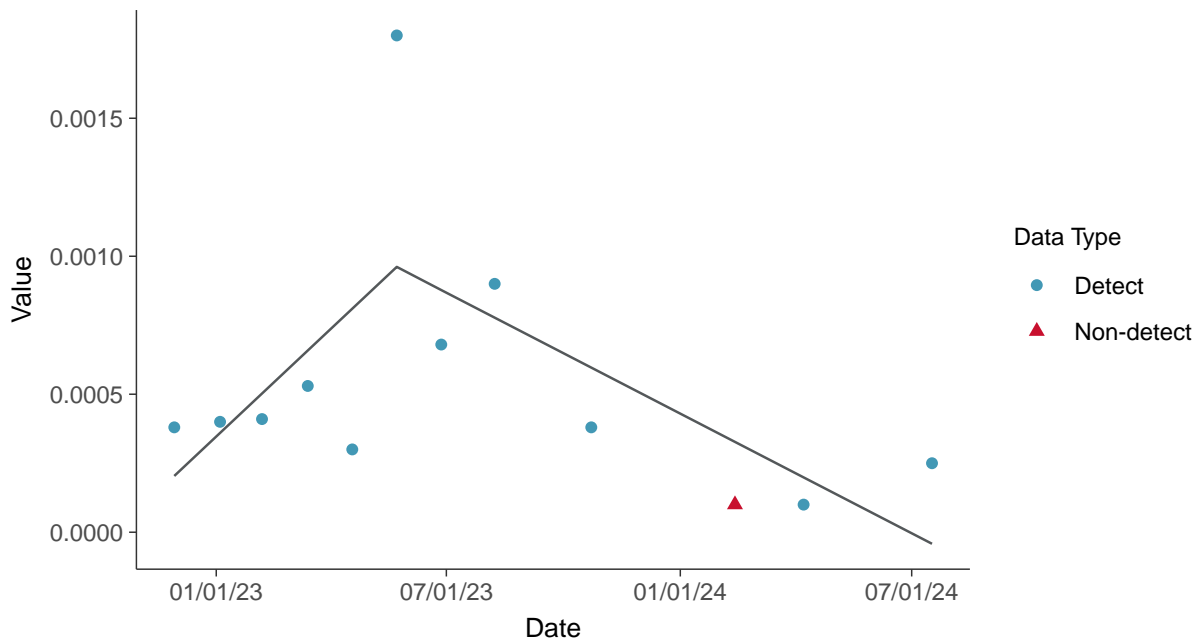
### Trend Regression: Lognormal MLE

Cobalt, MW-10 (mg/L)



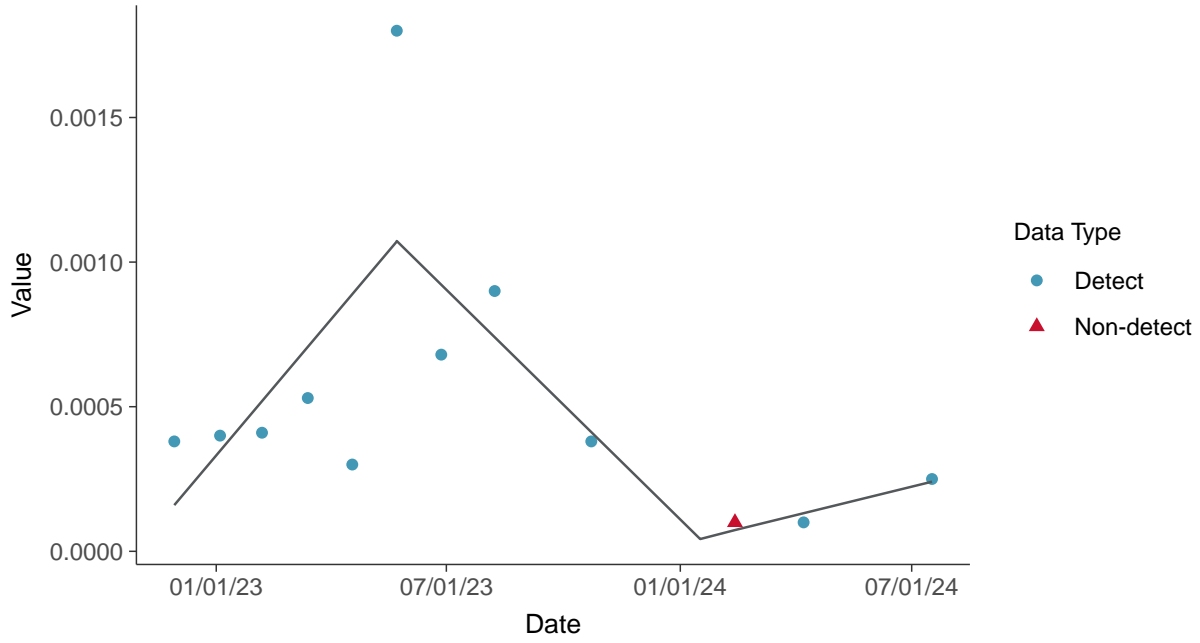
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (mg/L)





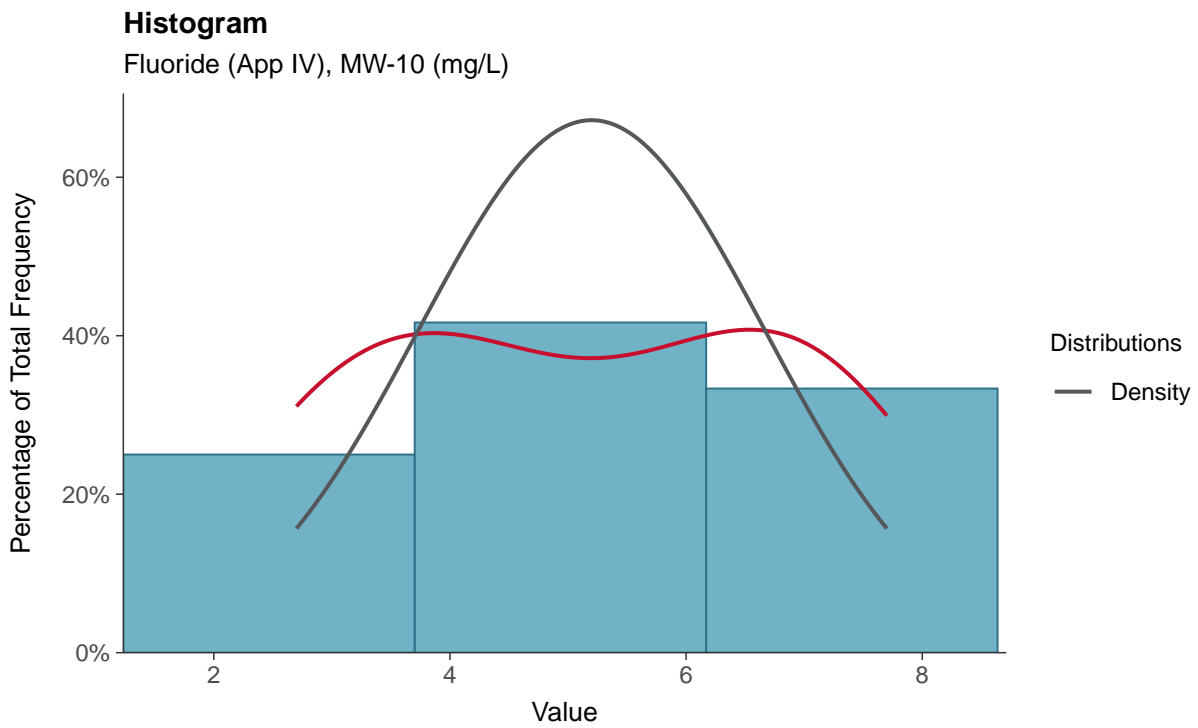
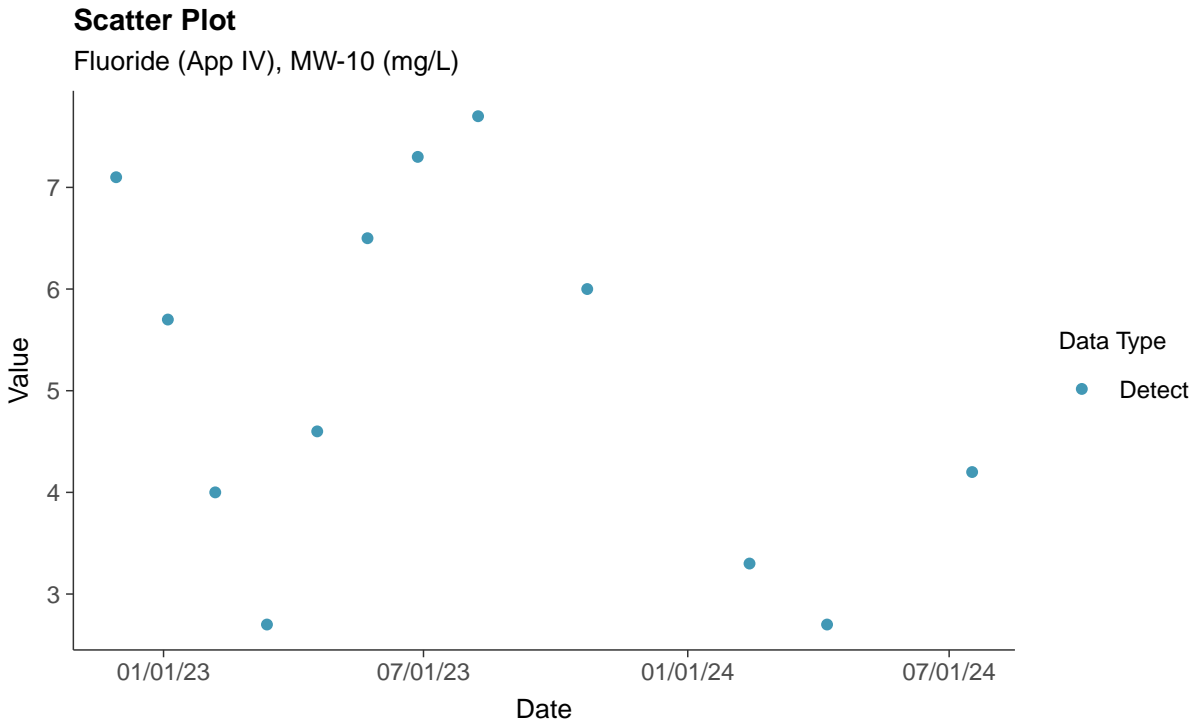
**Trend Regression: Piecewise Linear-Linear-Linear**  
Cobalt, MW-10 (mg/L)





## Appendix IV: Fluoride (App IV), MW-10

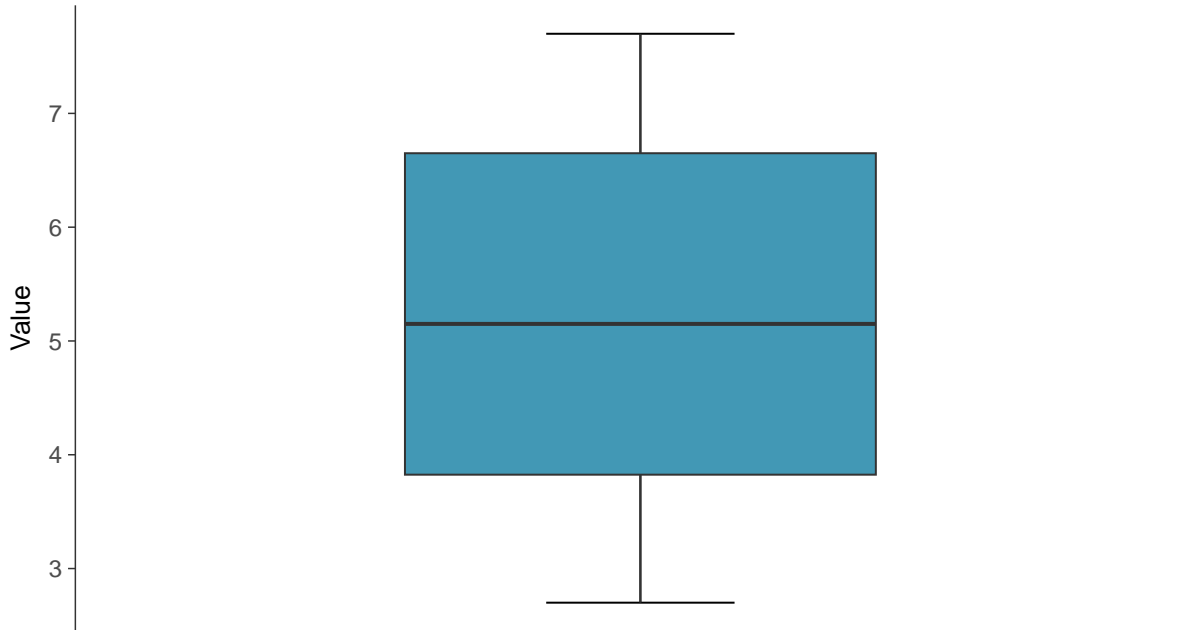
ID: 20\_3\_5\_113





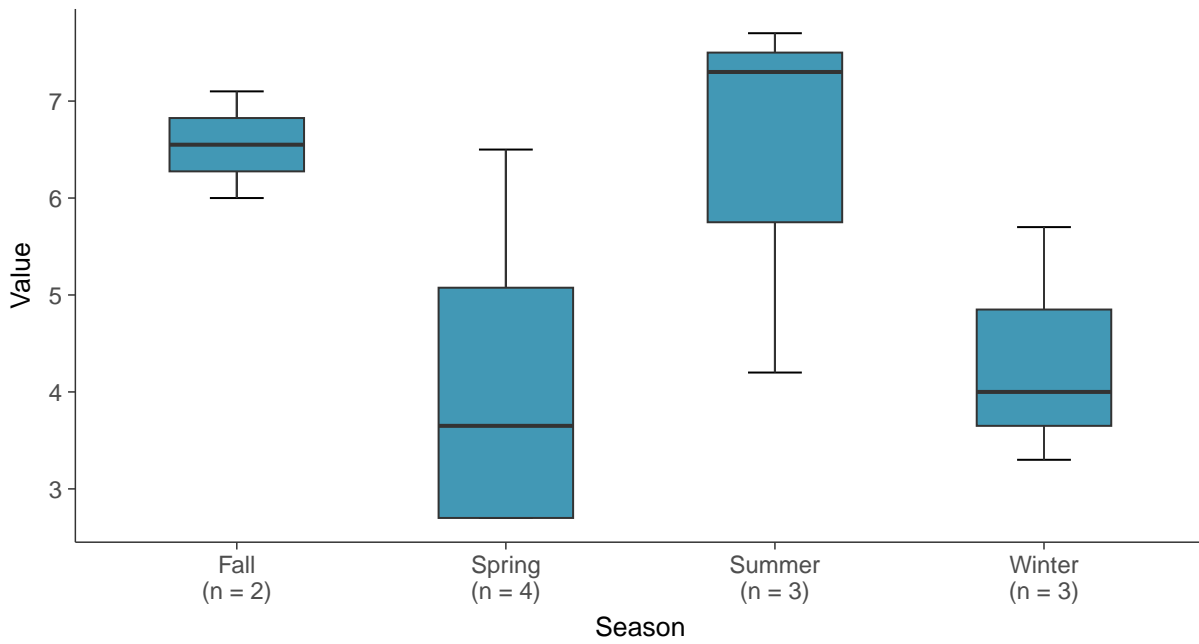
### Boxplot

Fluoride (App IV), MW-10 (mg/L)



### Boxplot by Season

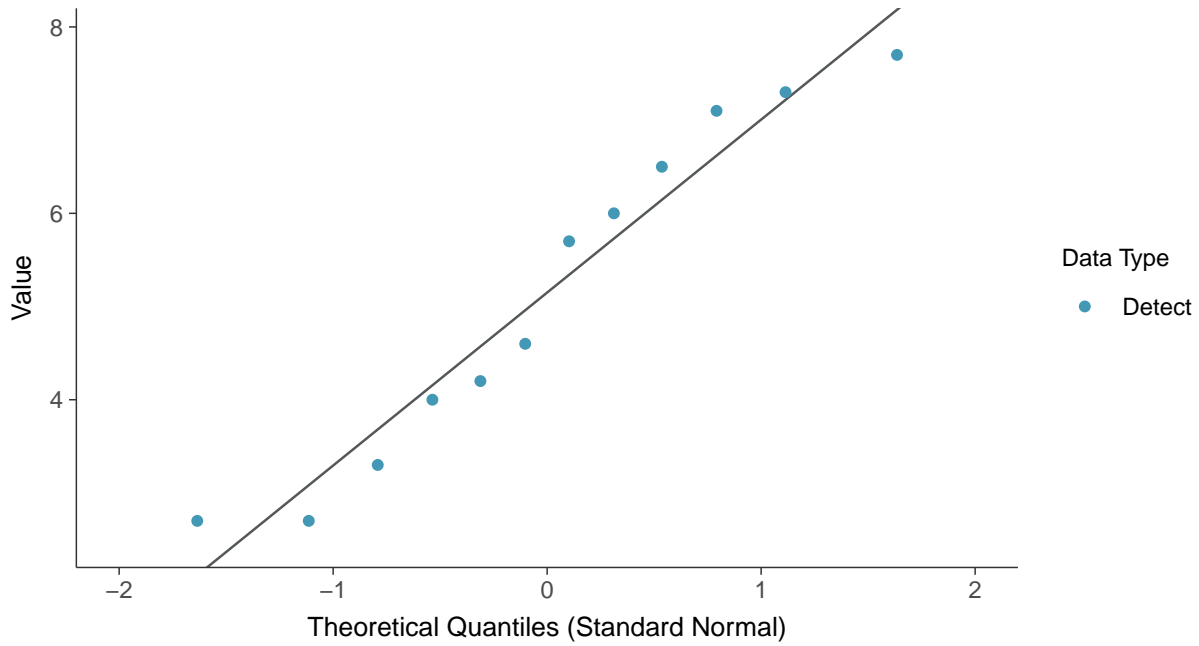
Fluoride (App IV), MW-10 (mg/L)





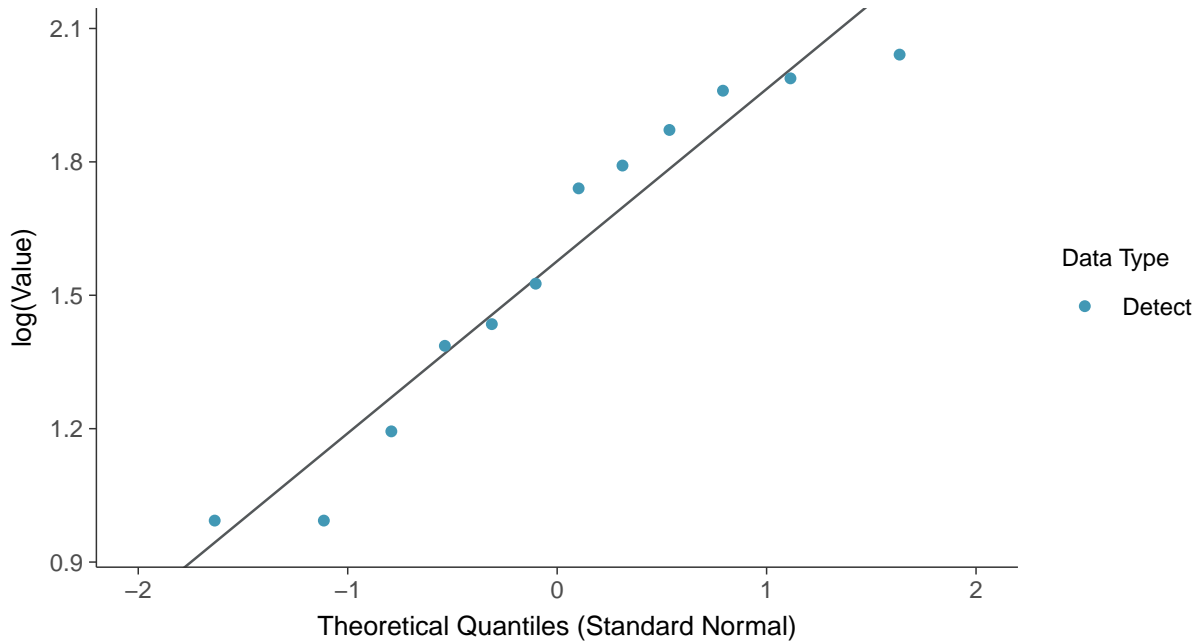
### Normal Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



### Lognormal Q-Q plot

Fluoride (App IV), MW-10 (mg/L)

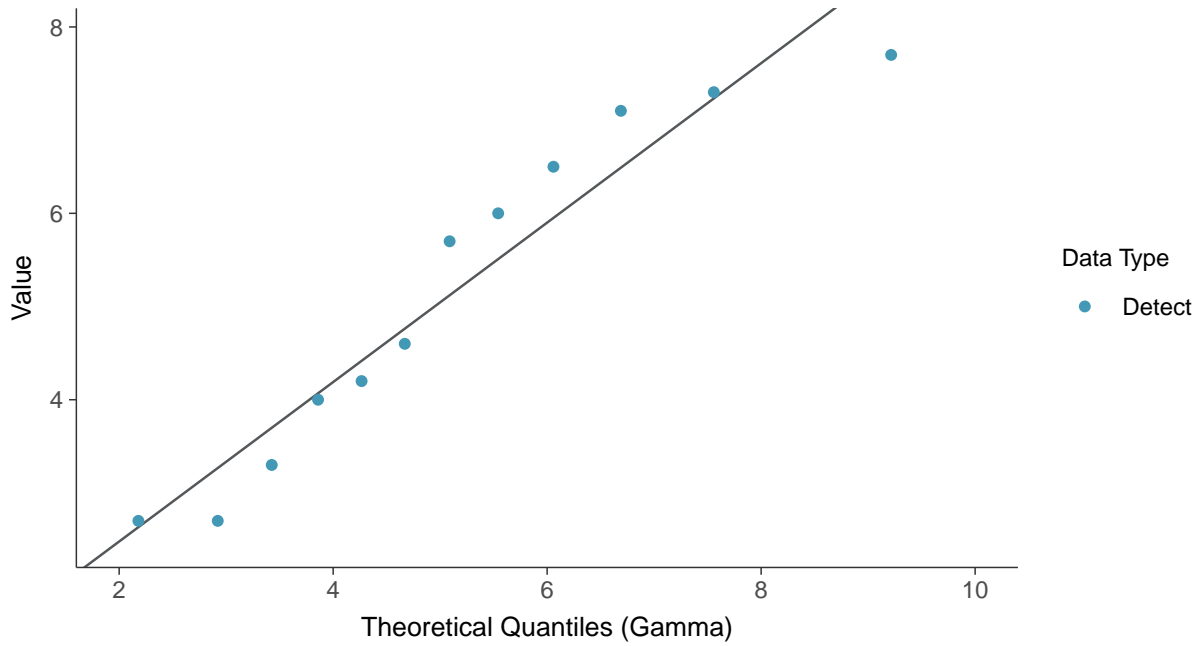






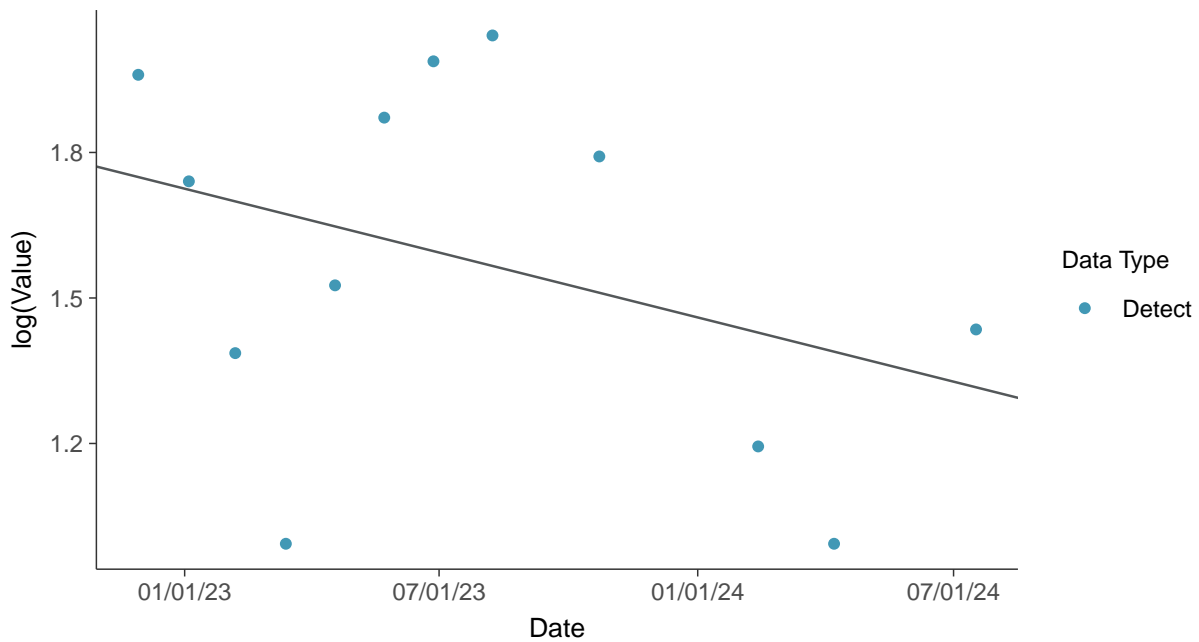
### Gamma Q-Q plot

Fluoride (App IV), MW-10 (mg/L)



### Trend Regression: Lognormal MLE

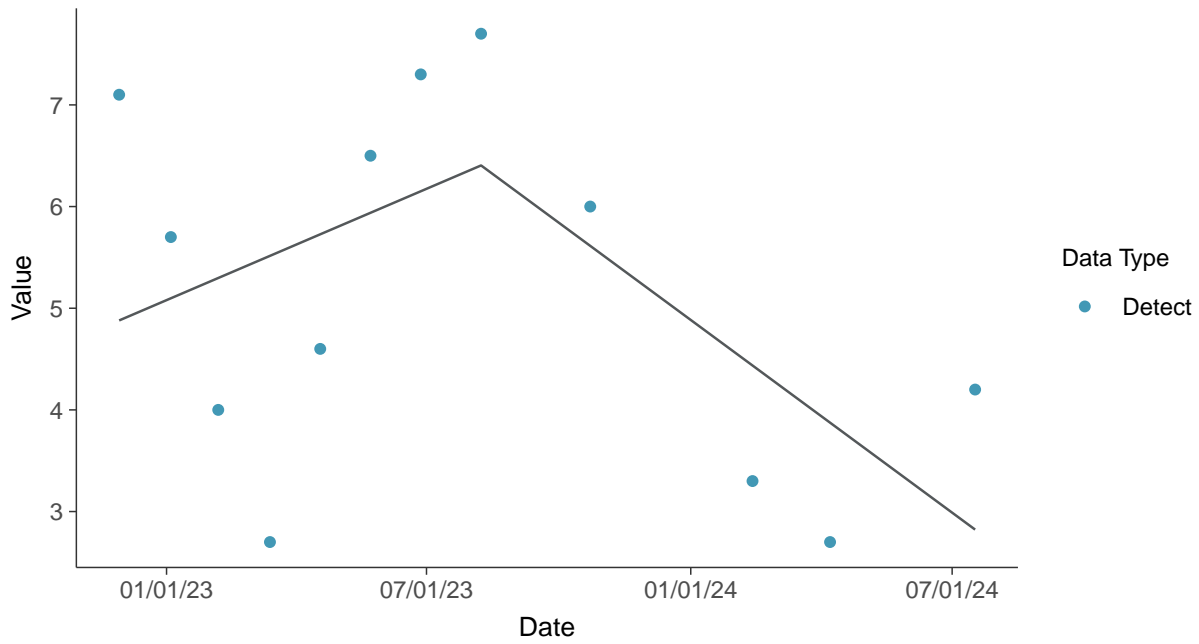
Fluoride (App IV), MW-10 (mg/L)





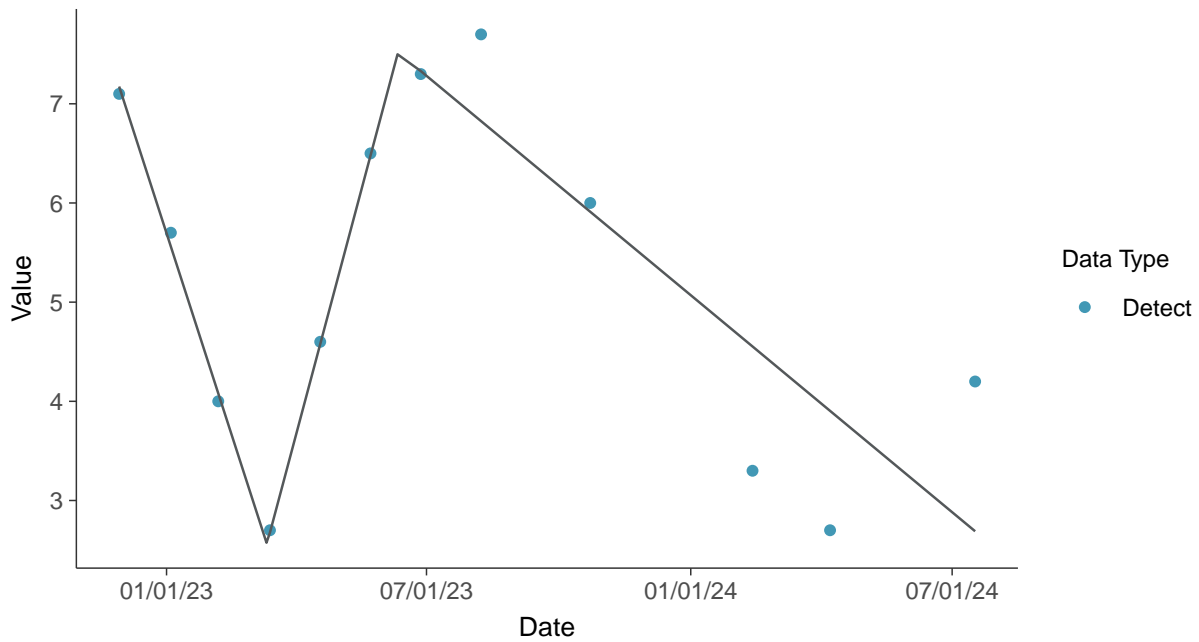
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

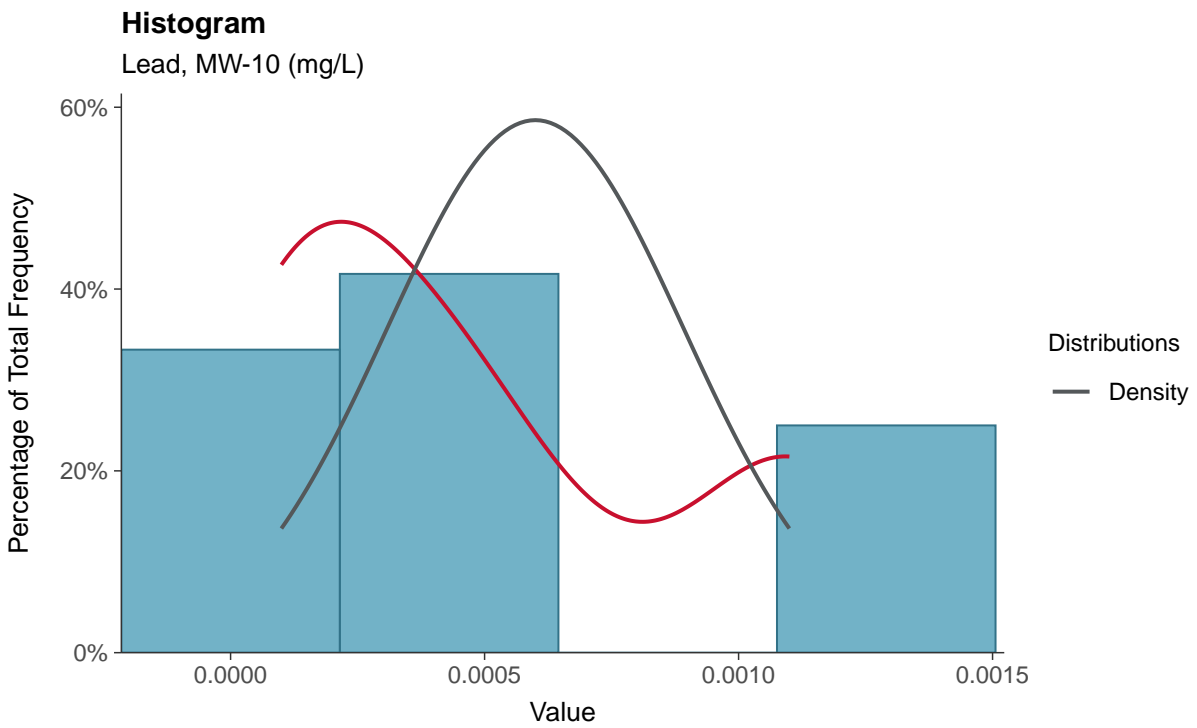
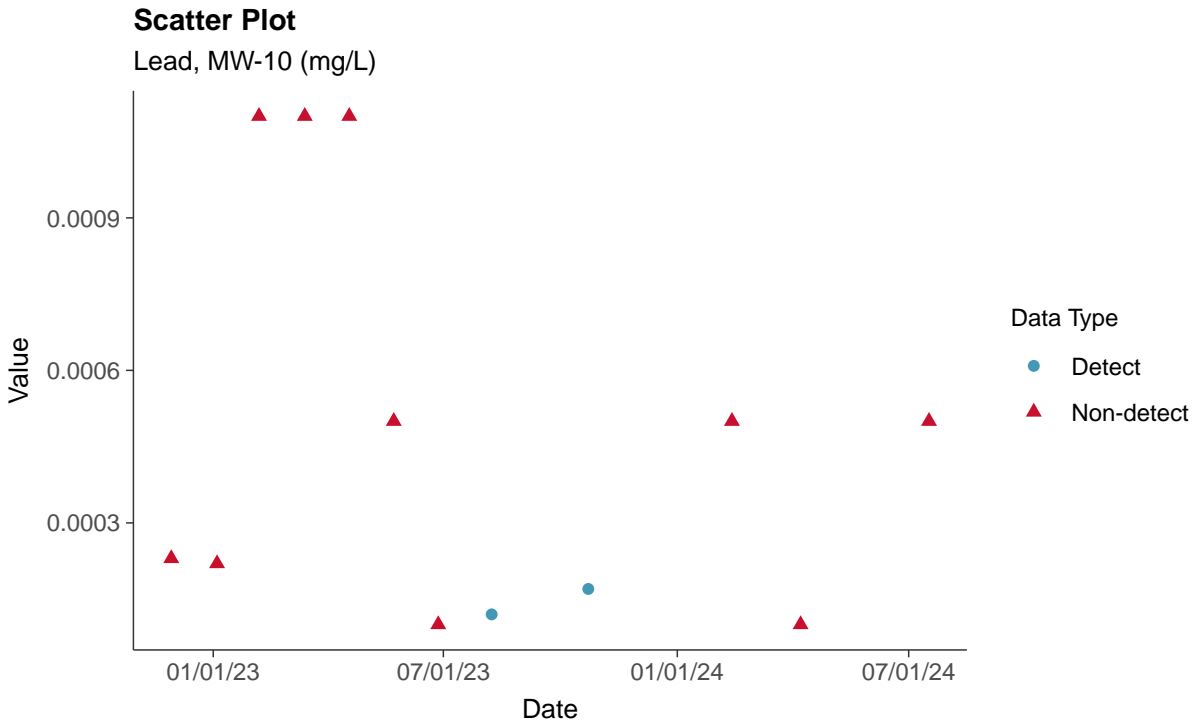
Fluoride (App IV), MW-10 (mg/L)





### Appendix IV: Lead, MW-10

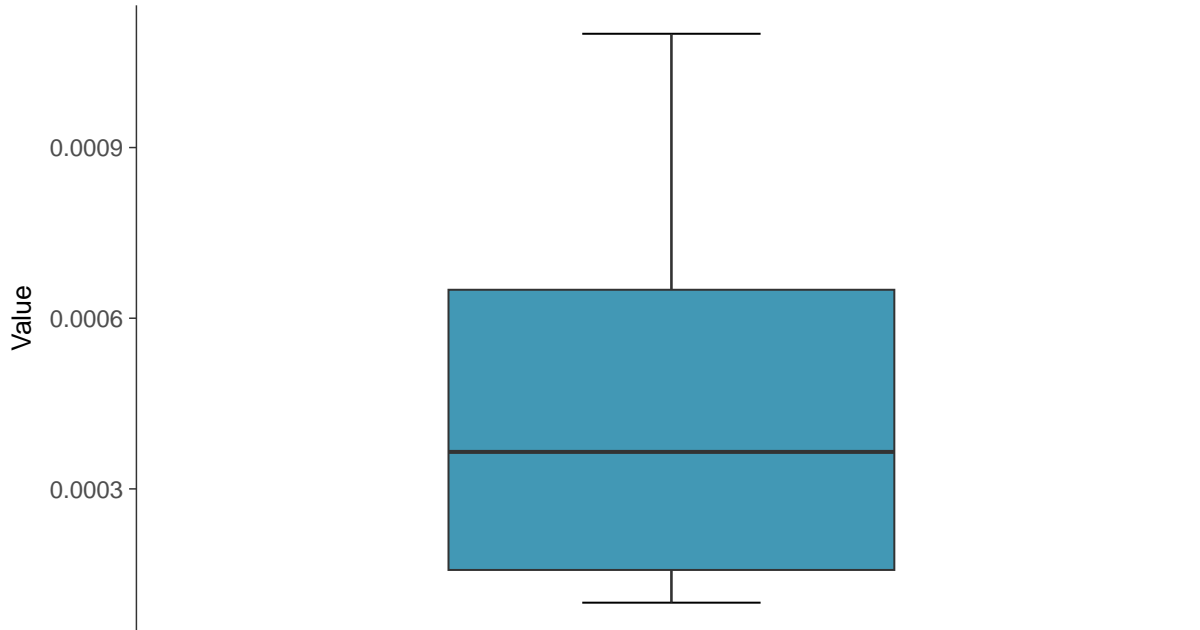
ID: 20\_3\_5\_115





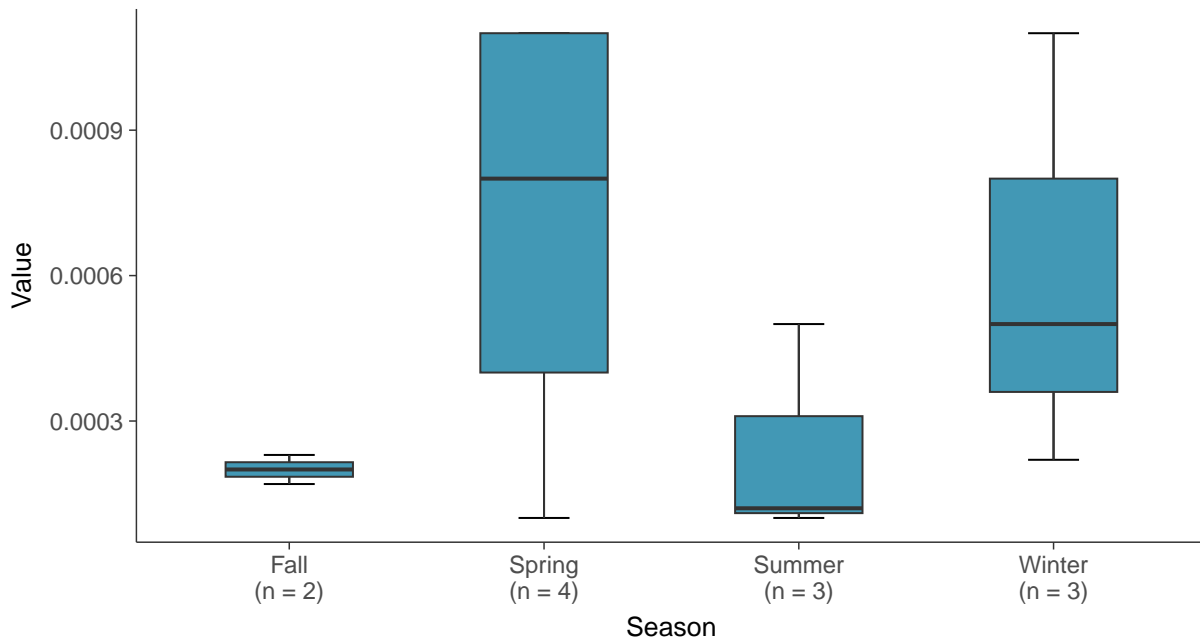
### Boxplot

Lead, MW-10 (mg/L)



### Boxplot by Season

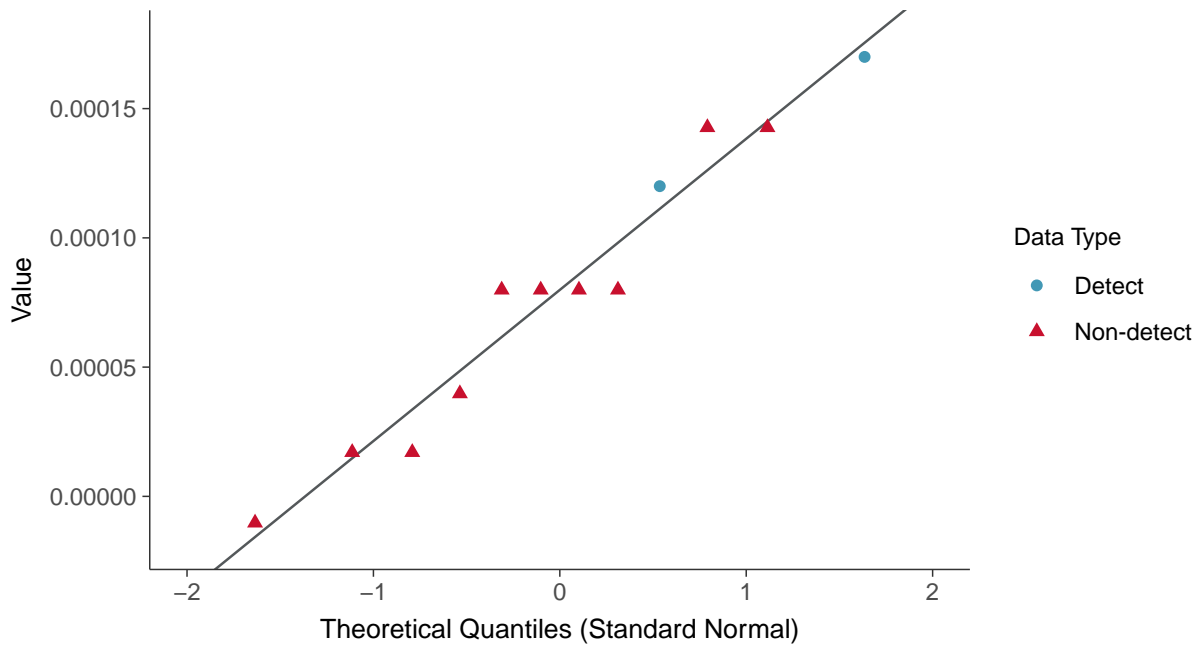
Lead, MW-10 (mg/L)





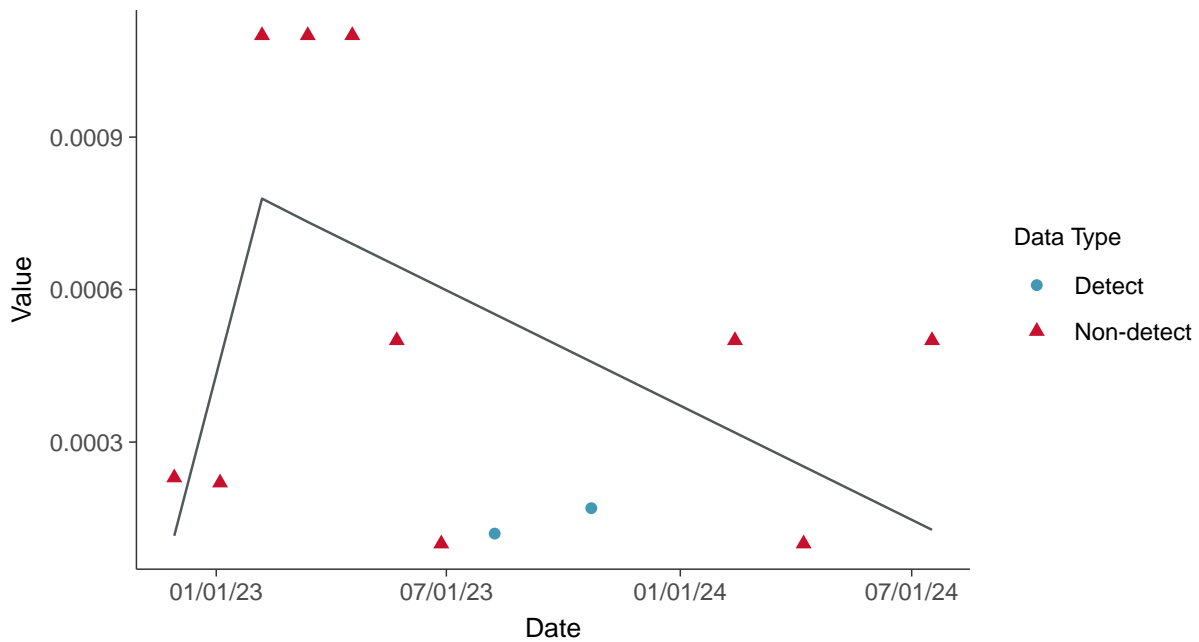
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear

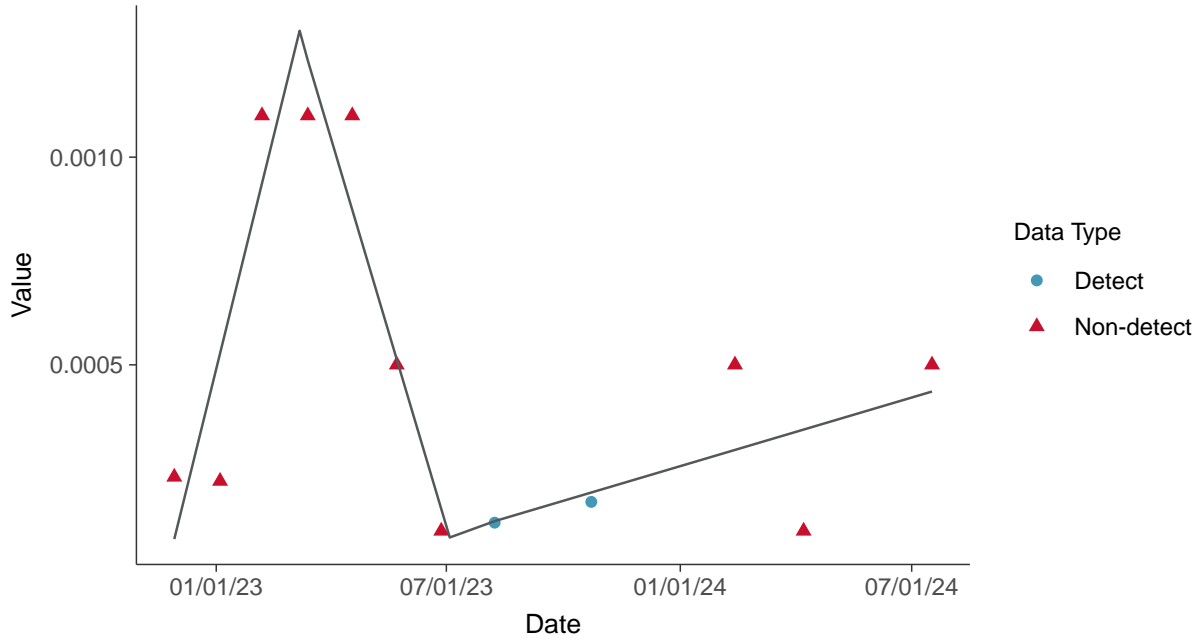
Lead, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

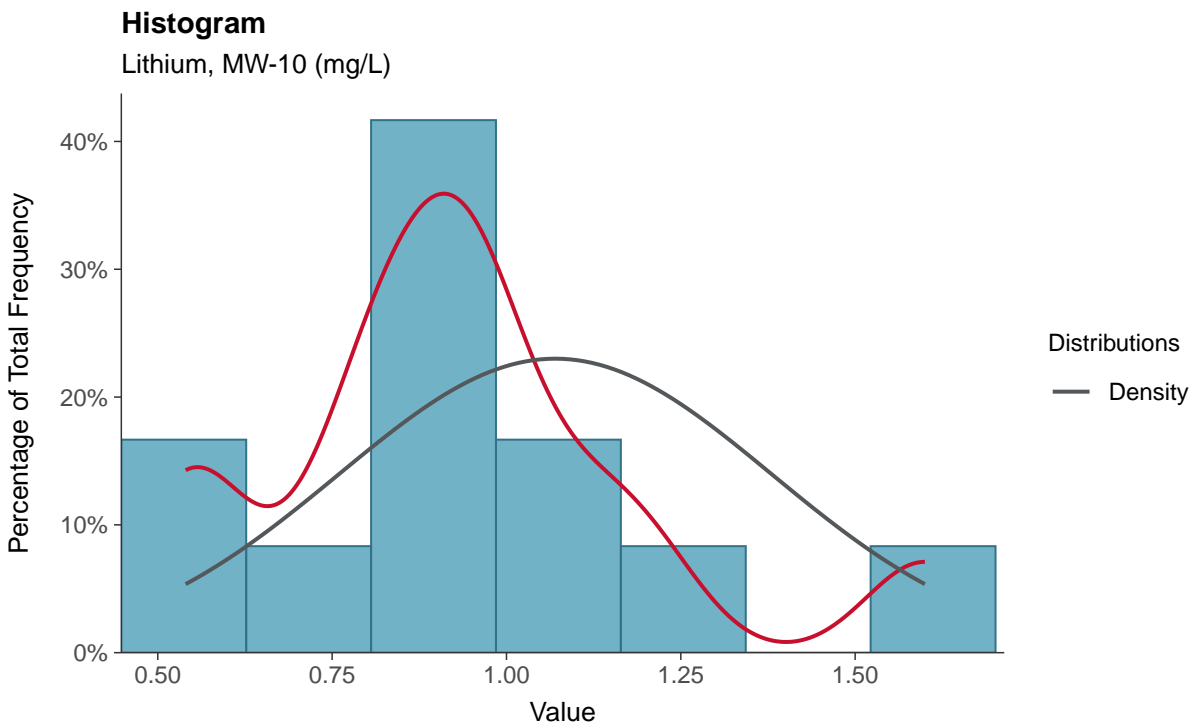
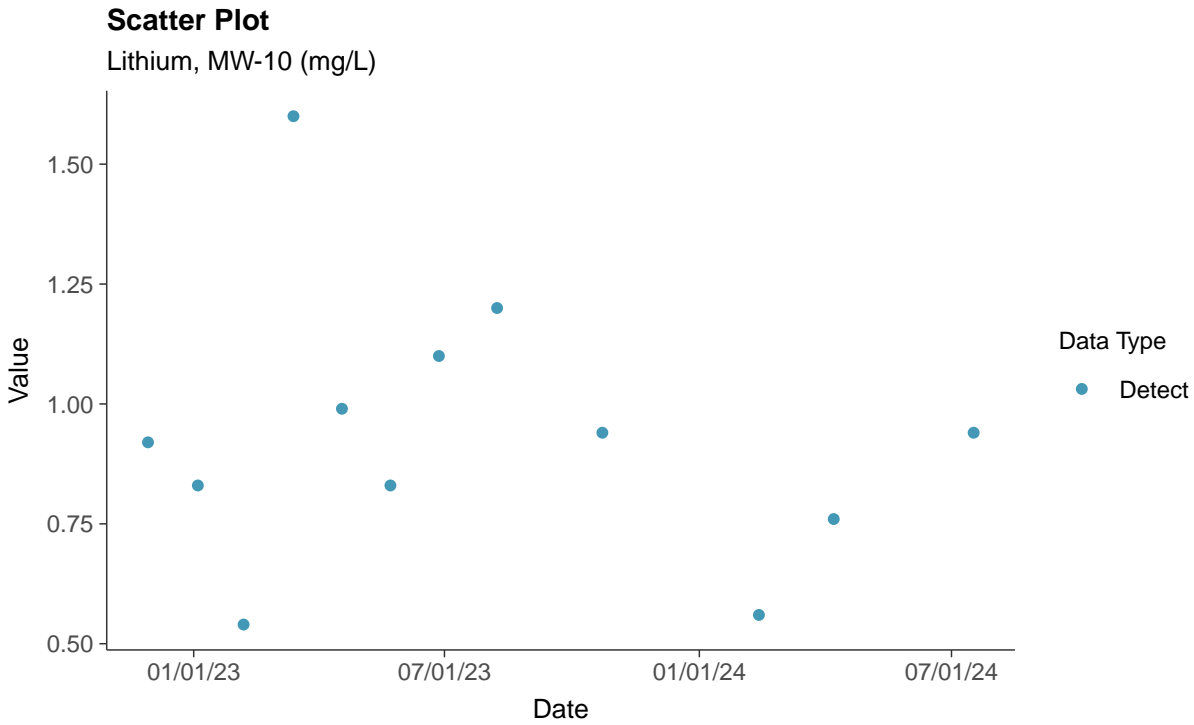
Lead, MW-10 (mg/L)





### Appendix IV: Lithium, MW-10

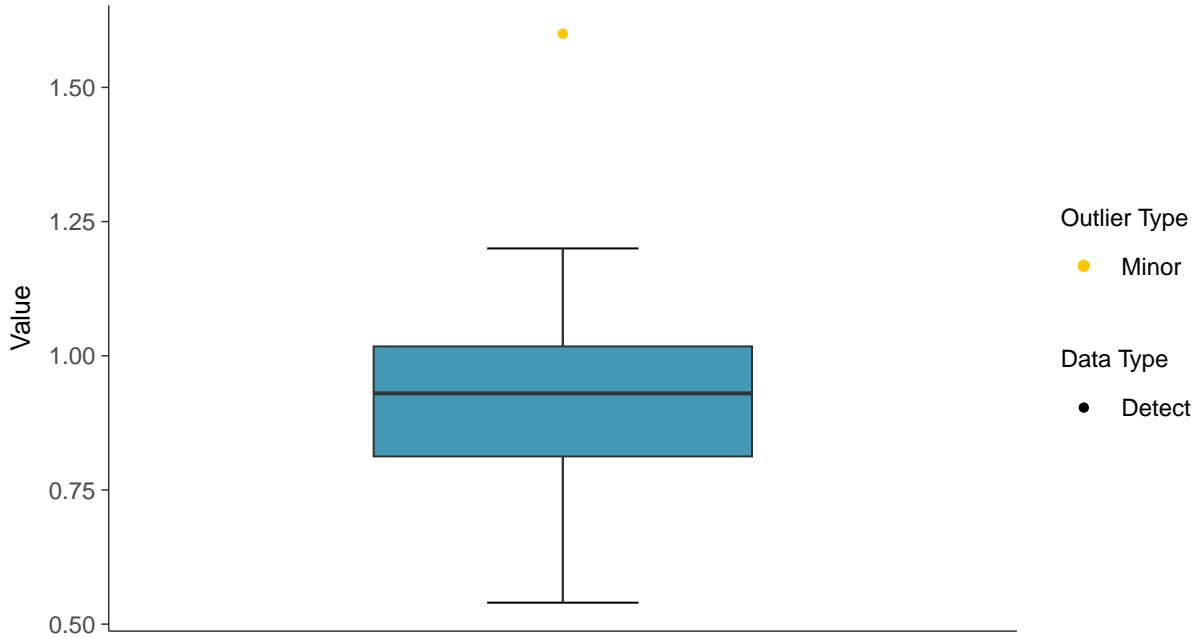
ID: 20\_3\_5\_116





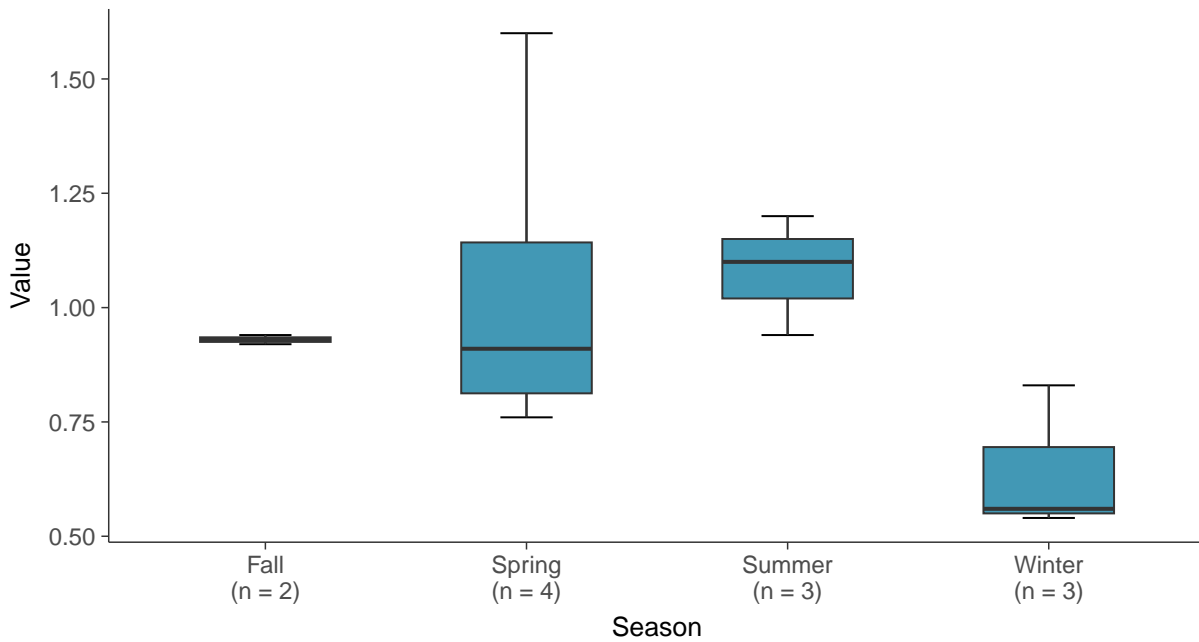
### Boxplot

Lithium, MW-10 (mg/L)



### Boxplot by Season

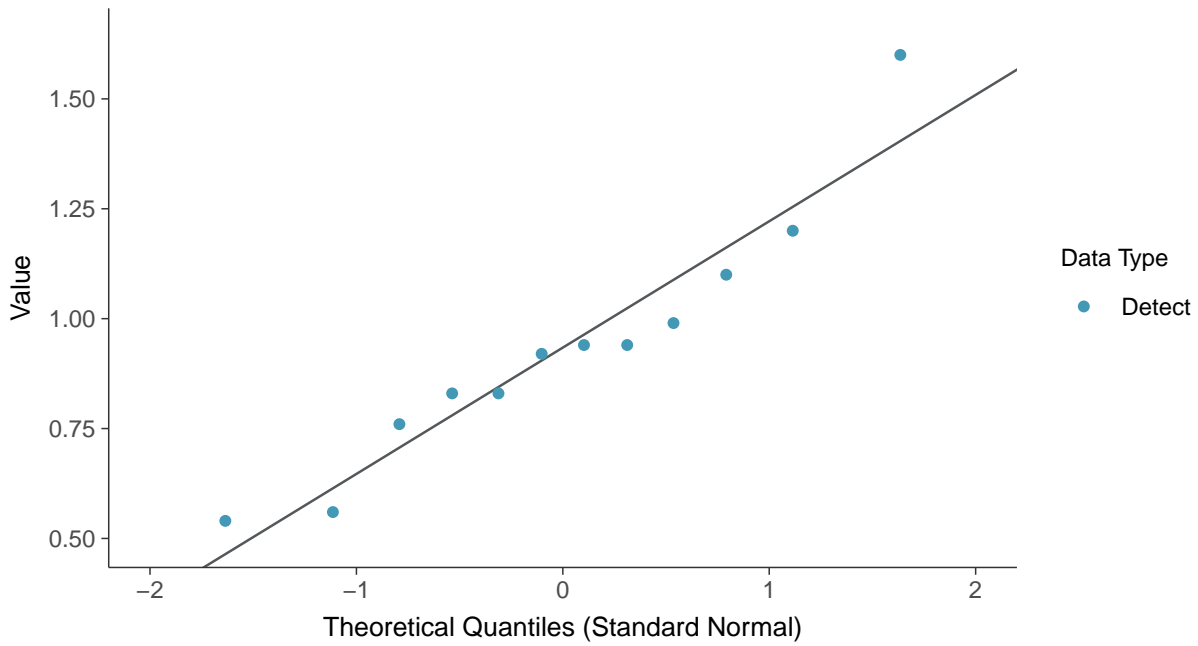
Lithium, MW-10 (mg/L)



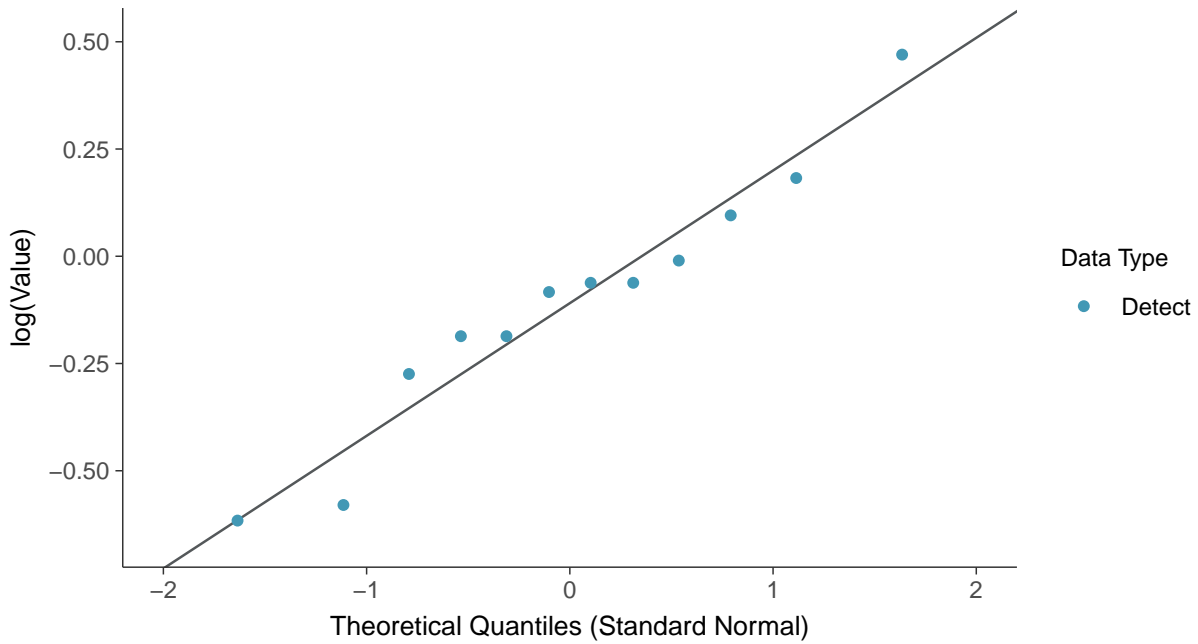




**Normal Q-Q plot**  
Lithium, MW-10 (mg/L)

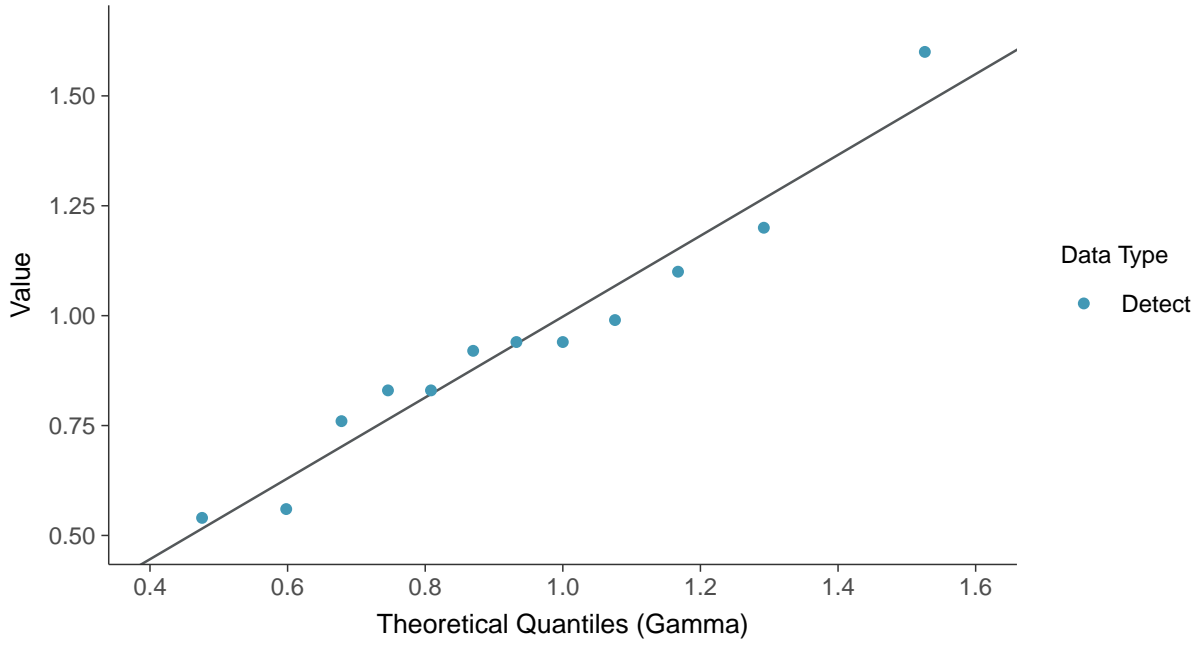


**Lognormal Q-Q plot**  
Lithium, MW-10 (mg/L)

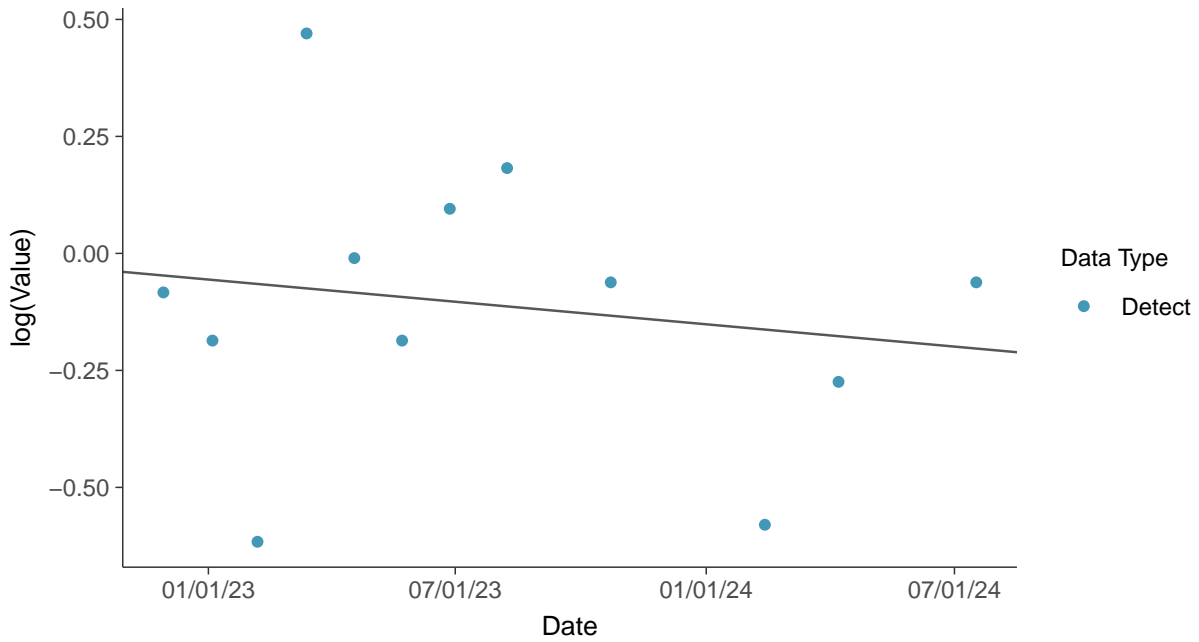




**Gamma Q-Q plot**  
Lithium, MW-10 (mg/L)



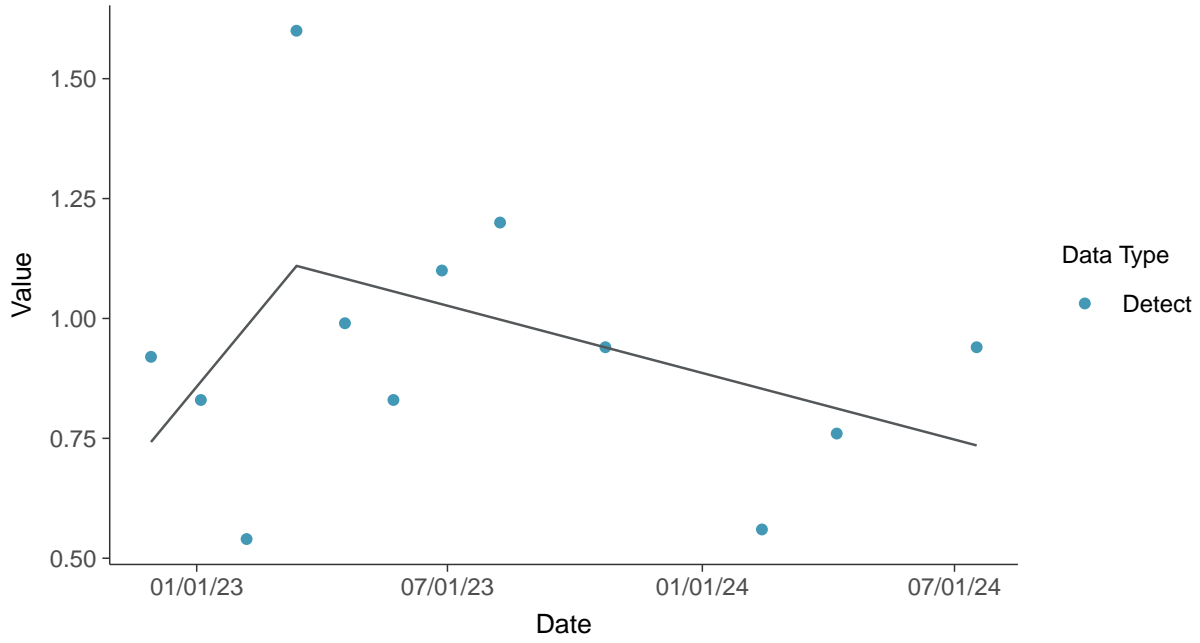
**Trend Regression: Lognormal MLE**  
Lithium, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear

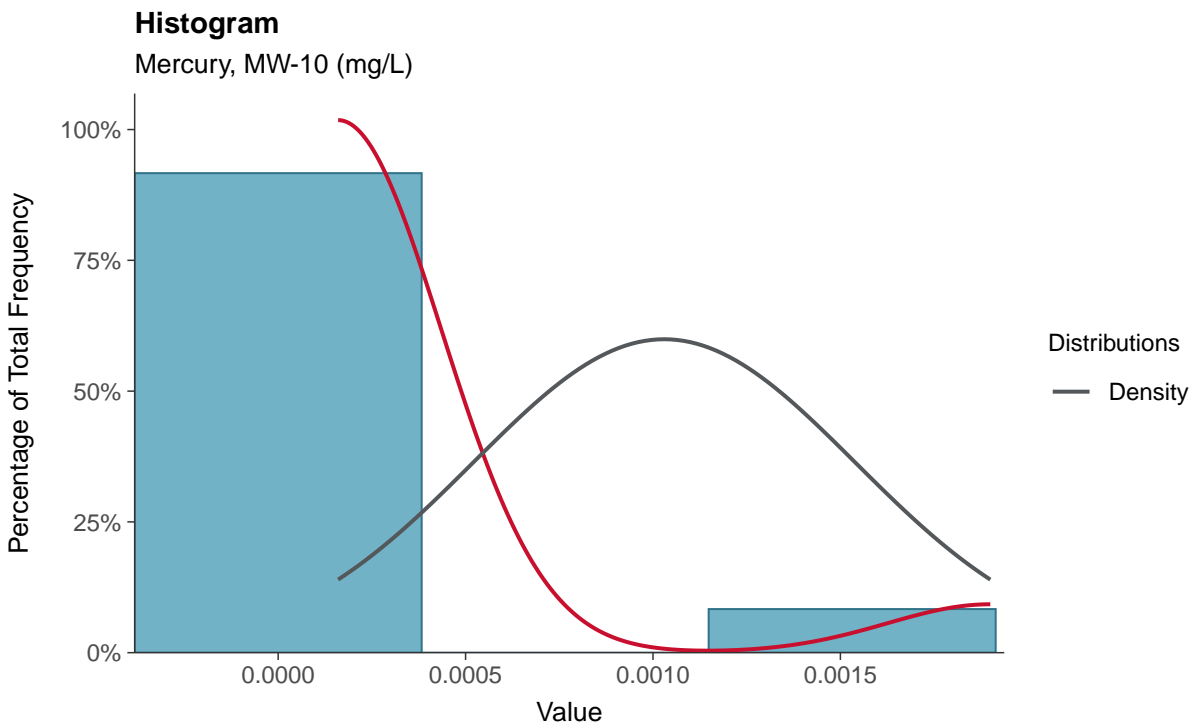
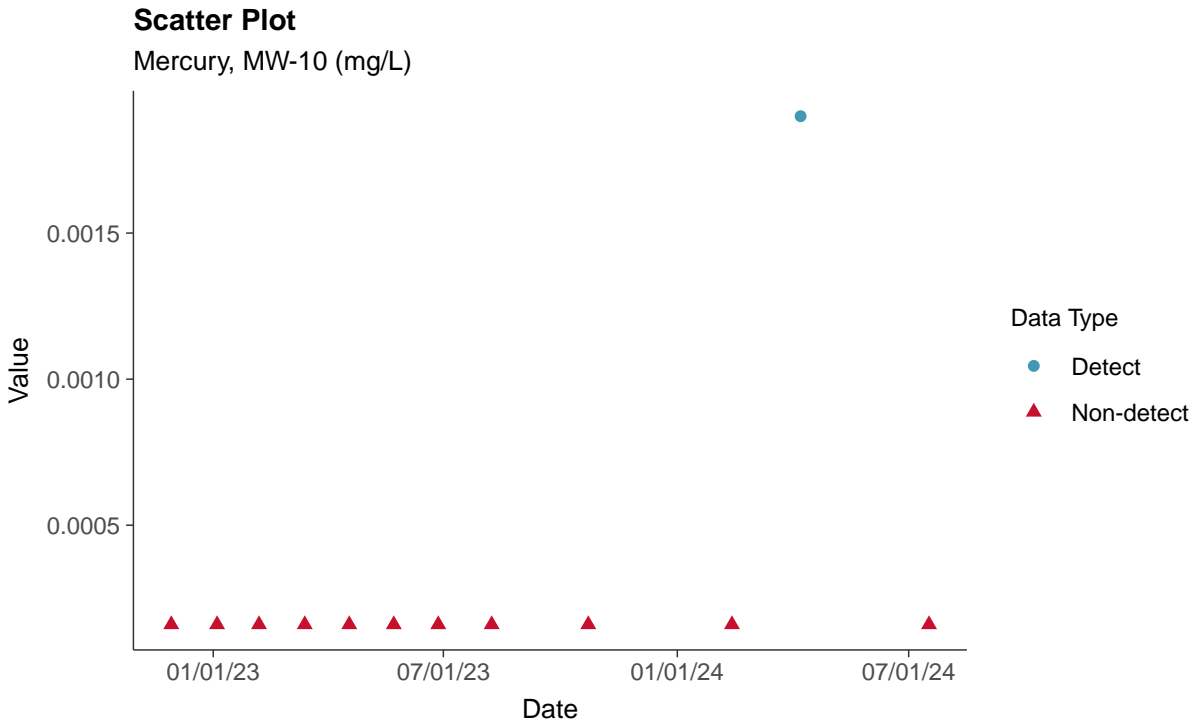
Lithium, MW-10 (mg/L)





### Appendix IV: Mercury, MW-10

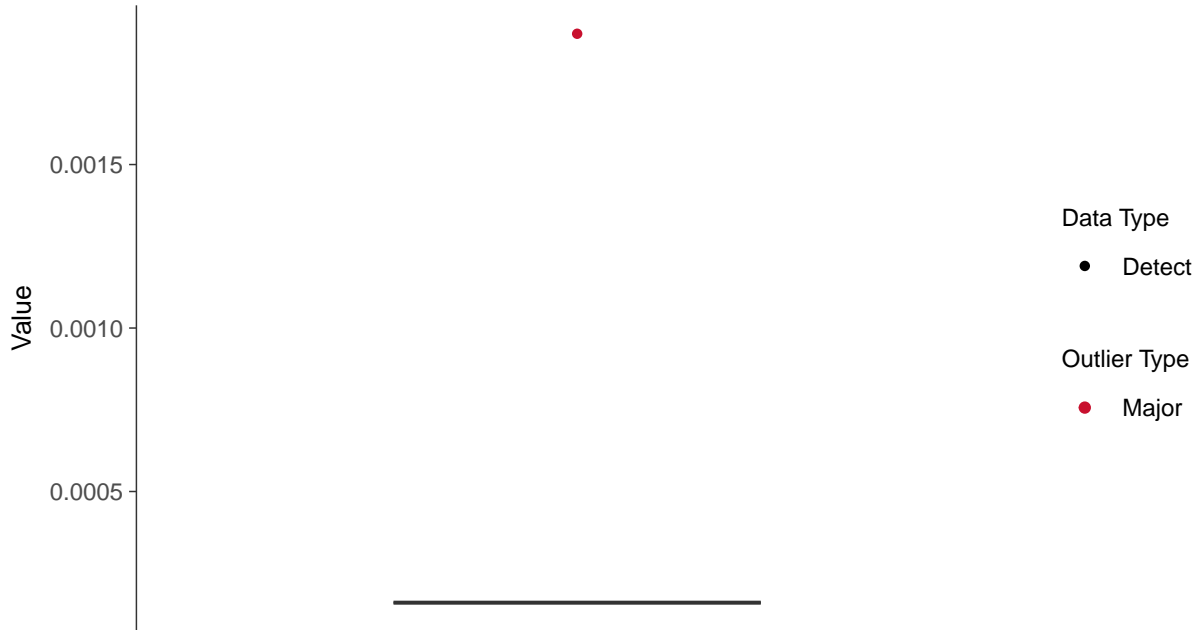
ID: 20\_3\_5\_117





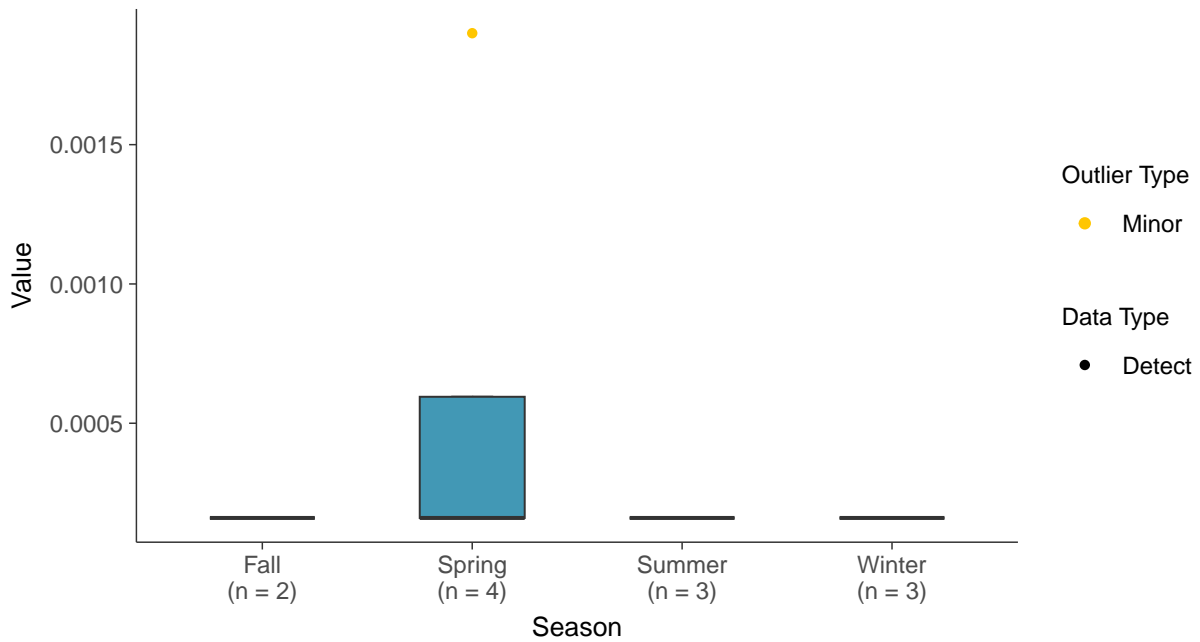
### Boxplot

Mercury, MW-10 (mg/L)



### Boxplot by Season

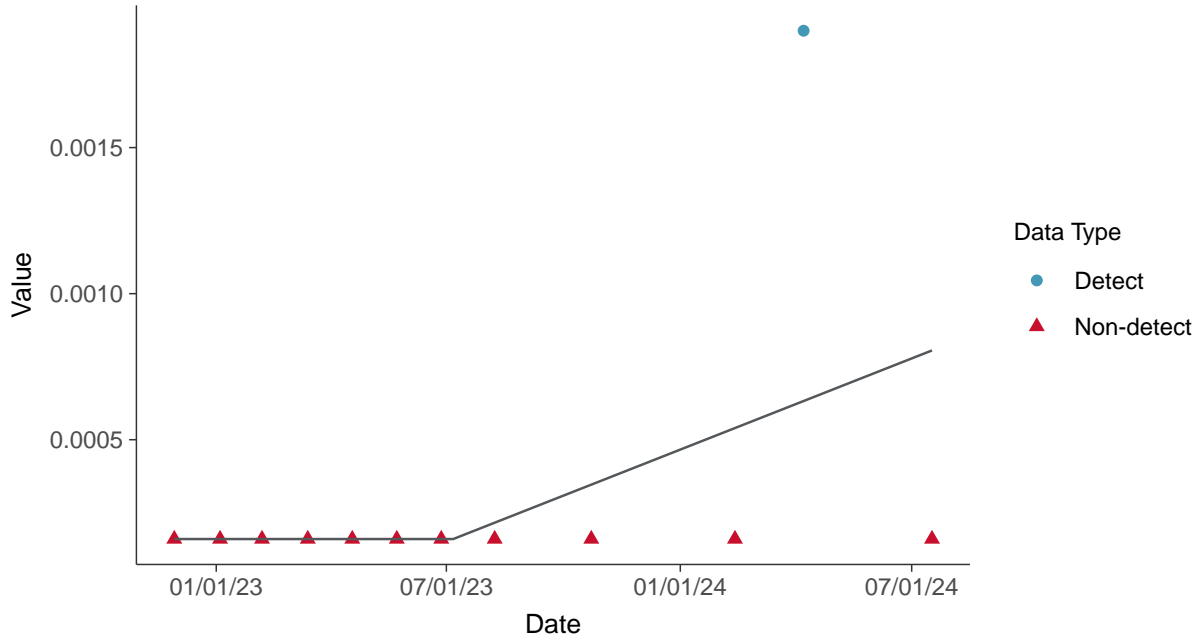
Mercury, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Mercury, MW-10 (mg/L)



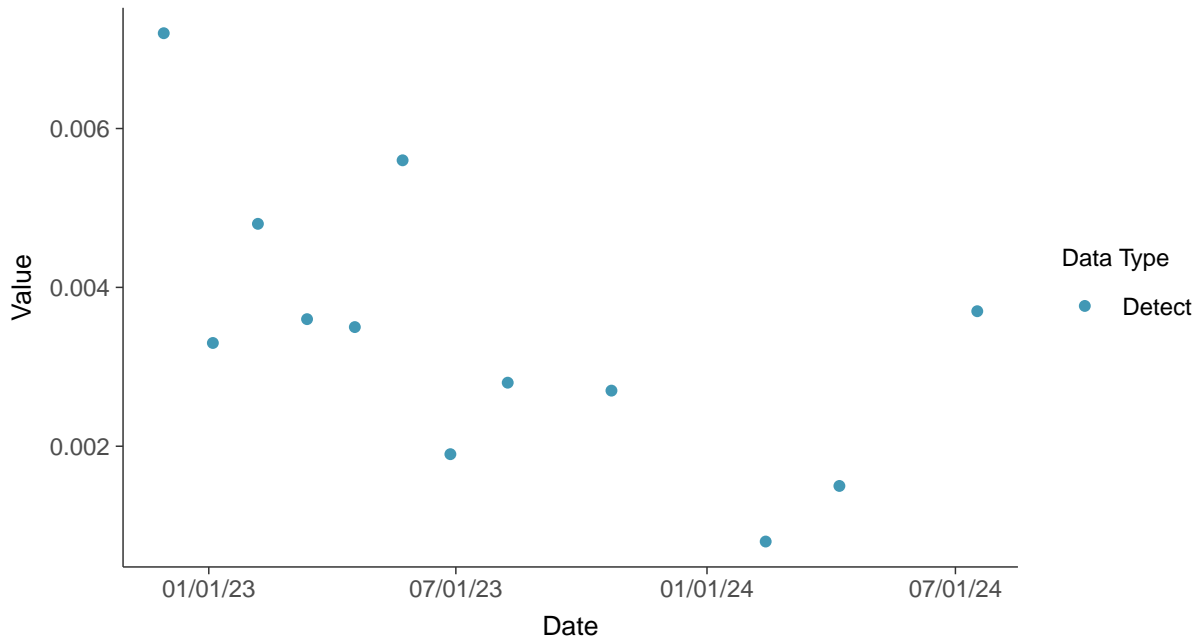


### Appendix IV: Molybdenum, MW-10

ID: 20\_3\_5\_118

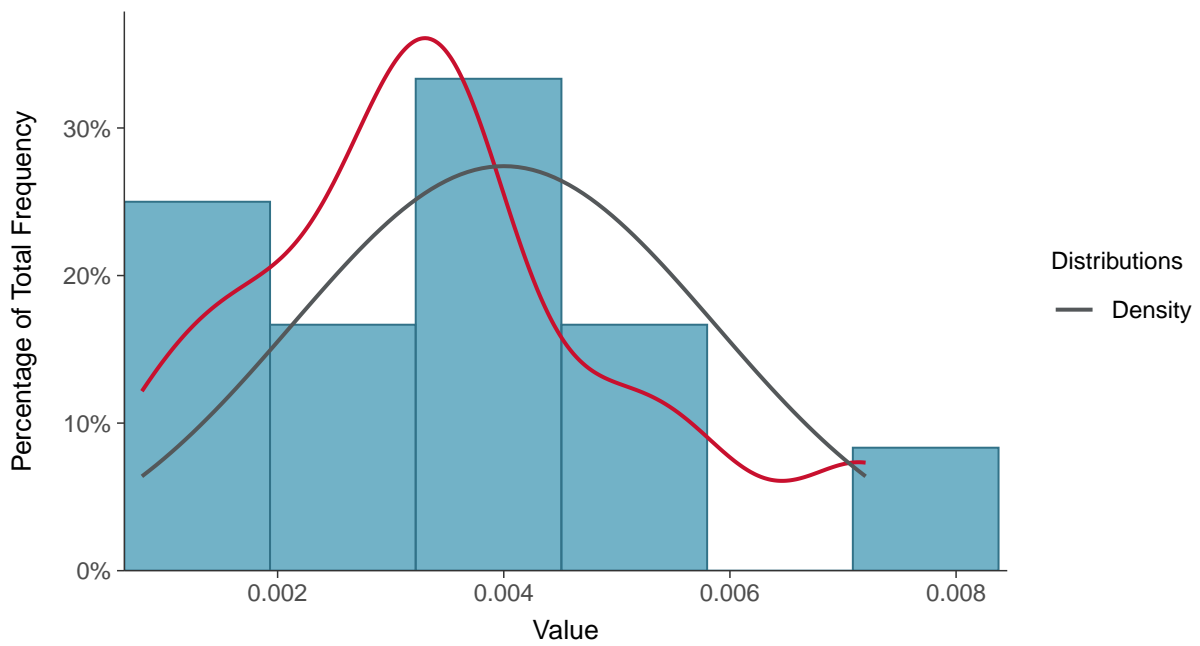
#### Scatter Plot

Molybdenum, MW-10 (mg/L)



#### Histogram

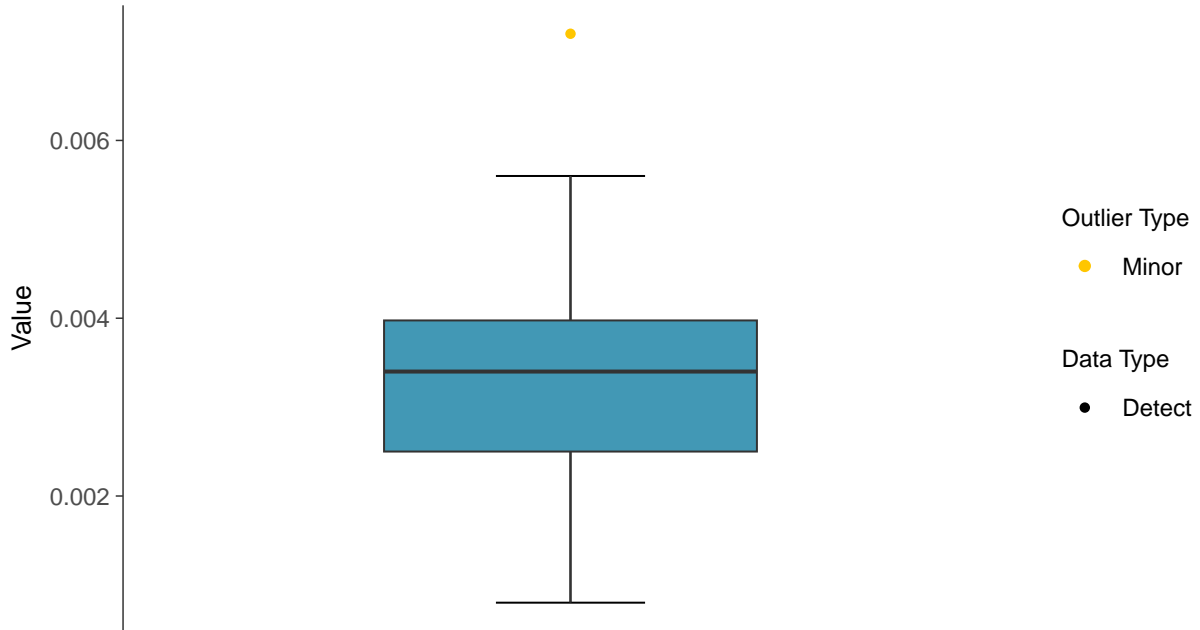
Molybdenum, MW-10 (mg/L)





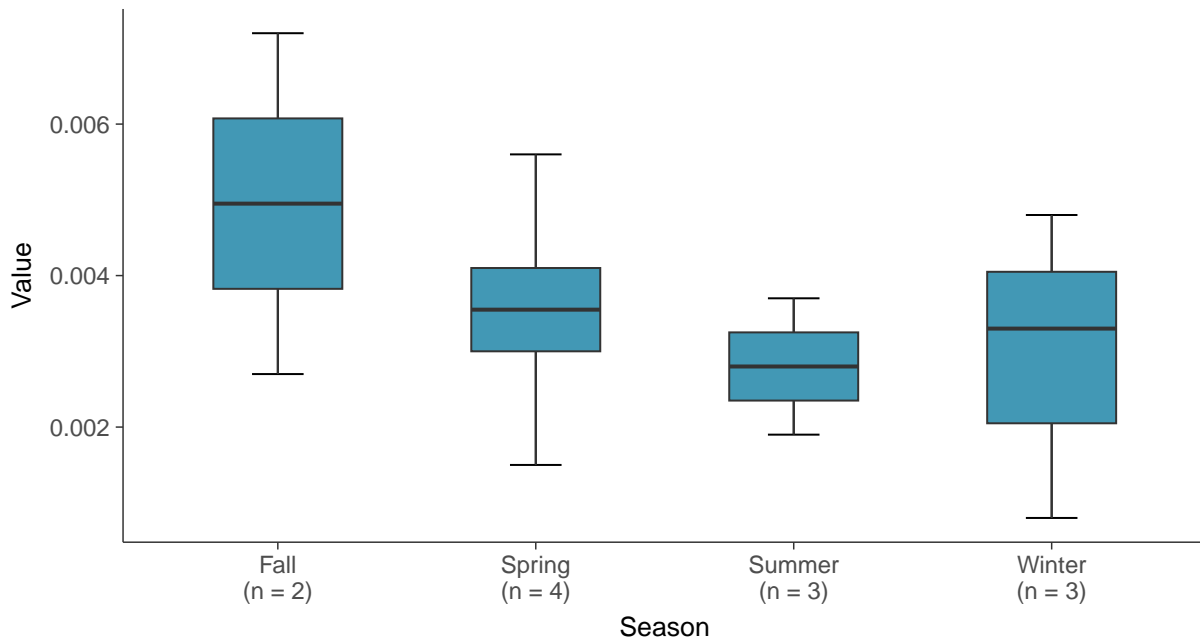
### Boxplot

Molybdenum, MW-10 (mg/L)



### Boxplot by Season

Molybdenum, MW-10 (mg/L)

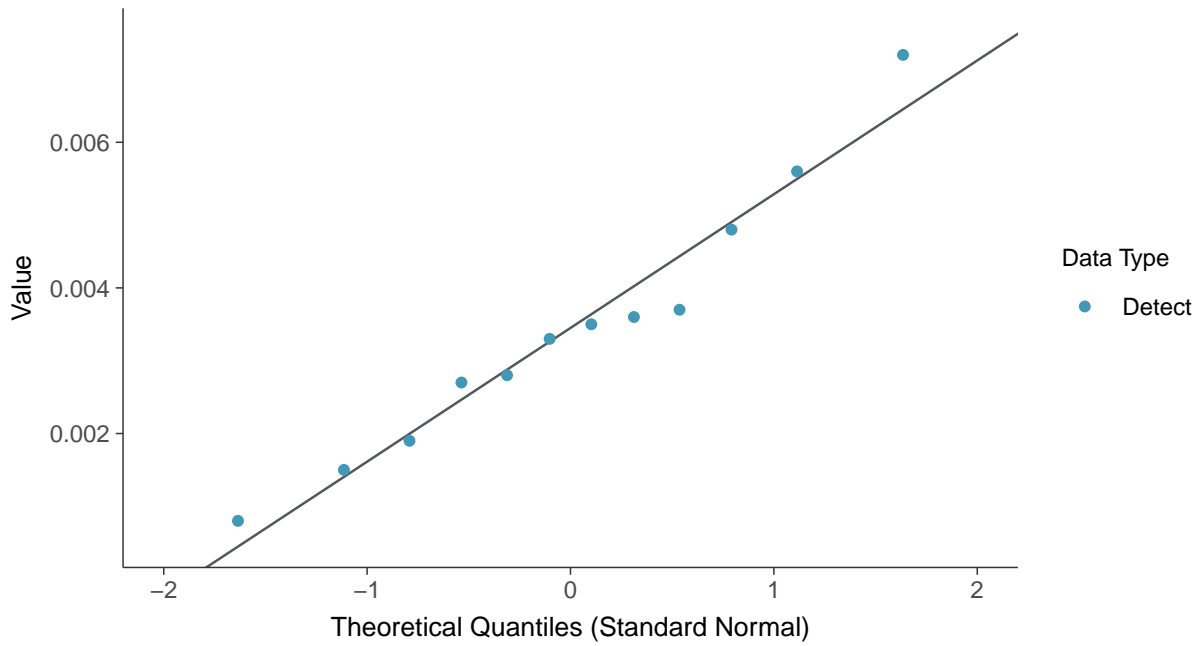






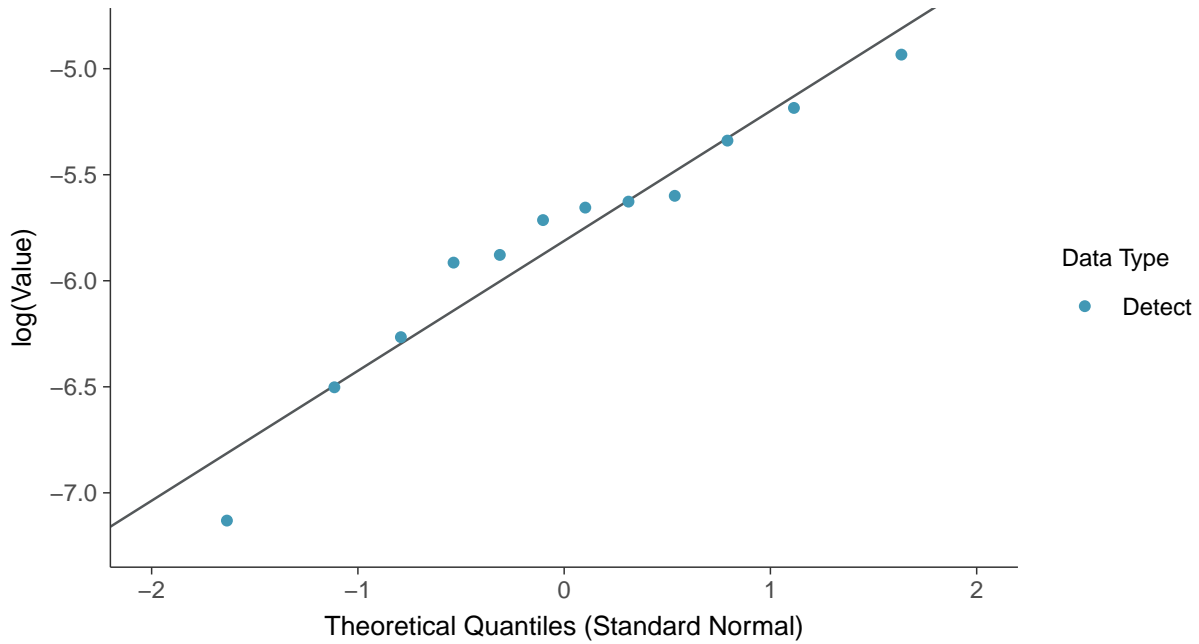
### Normal Q-Q plot

Molybdenum, MW-10 (mg/L)



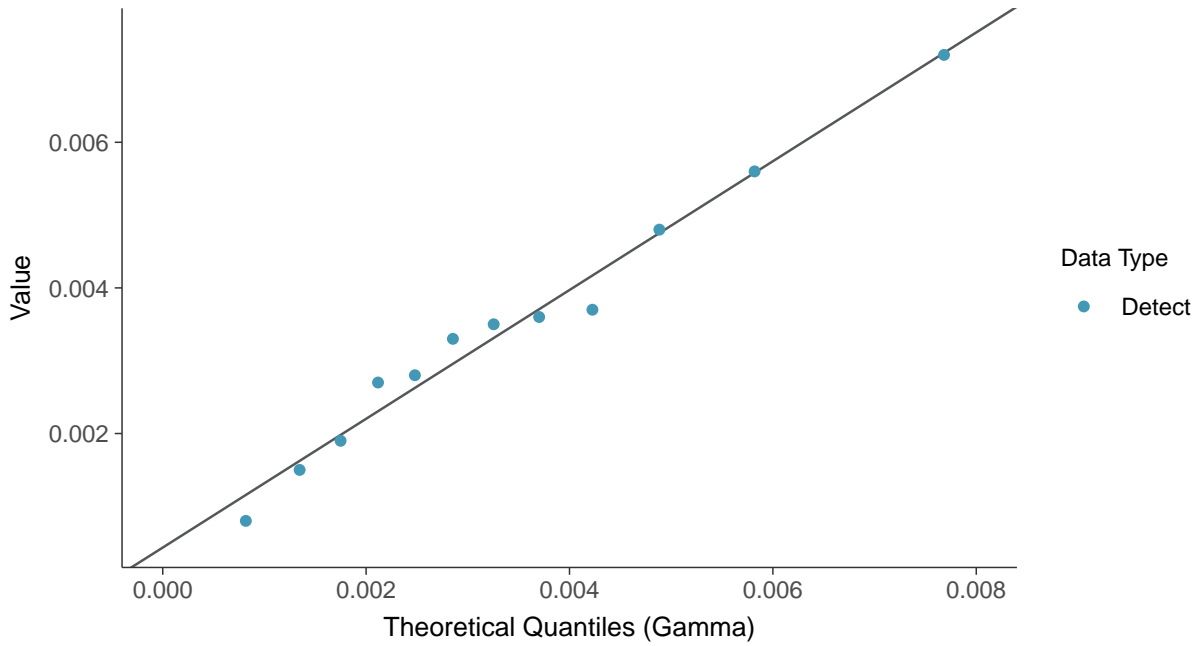
### Lognormal Q-Q plot

Molybdenum, MW-10 (mg/L)

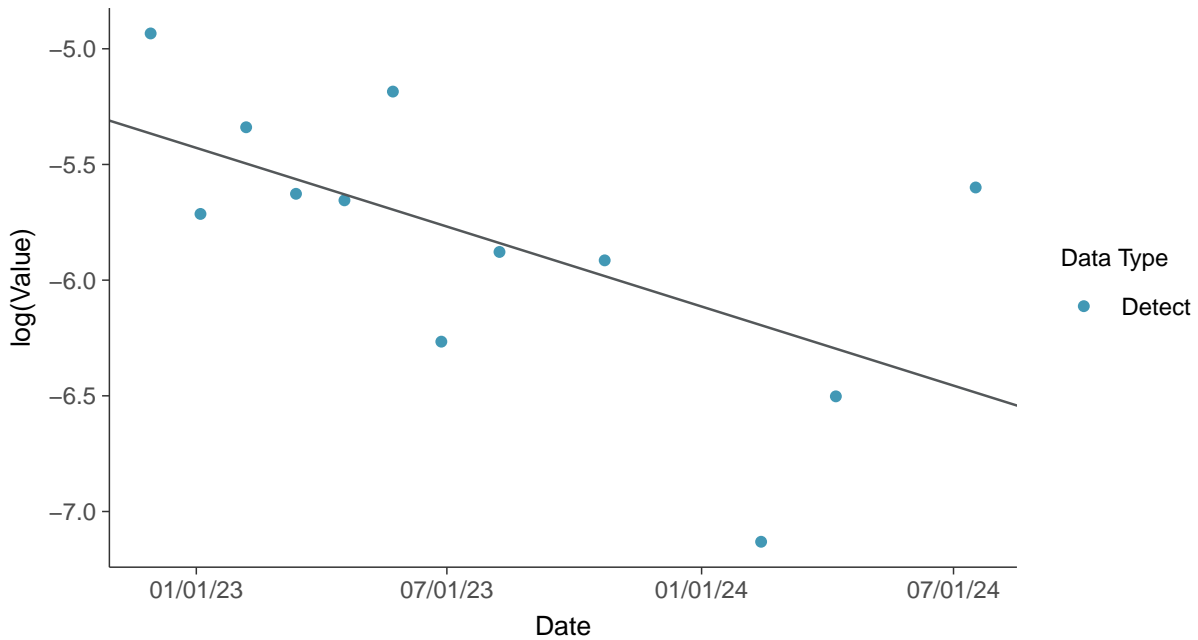




**Gamma Q-Q plot**  
Molybdenum, MW-10 (mg/L)

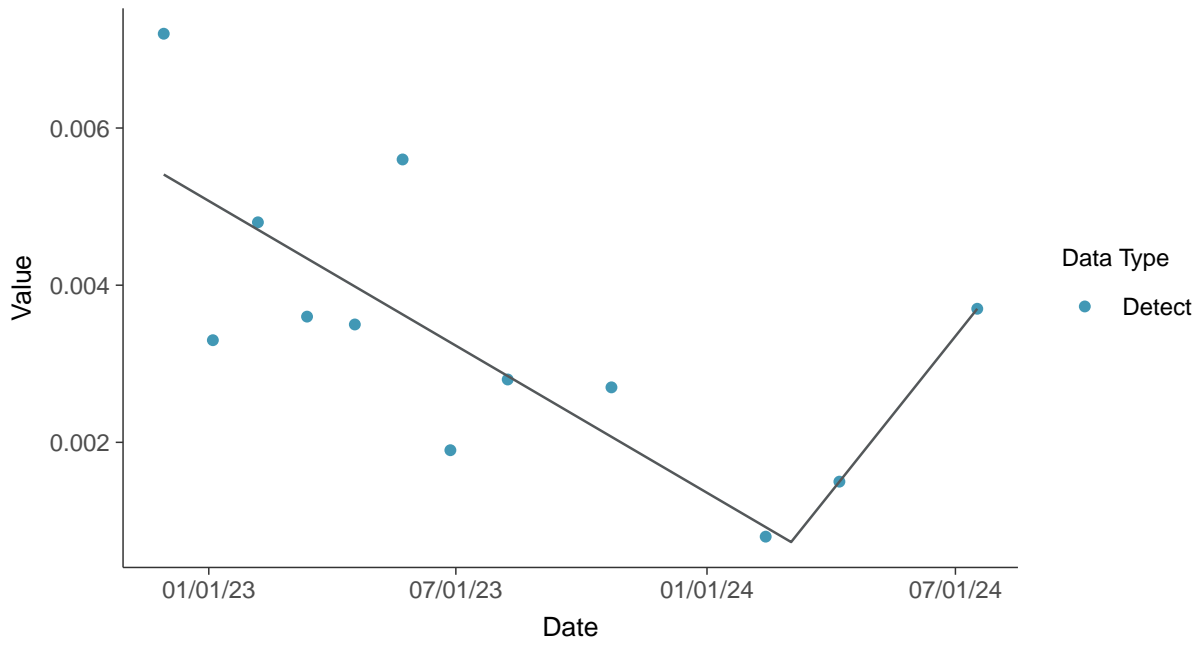


**Trend Regression: Lognormal MLE**  
Molybdenum, MW-10 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Molybdenum, MW-10 (mg/L)



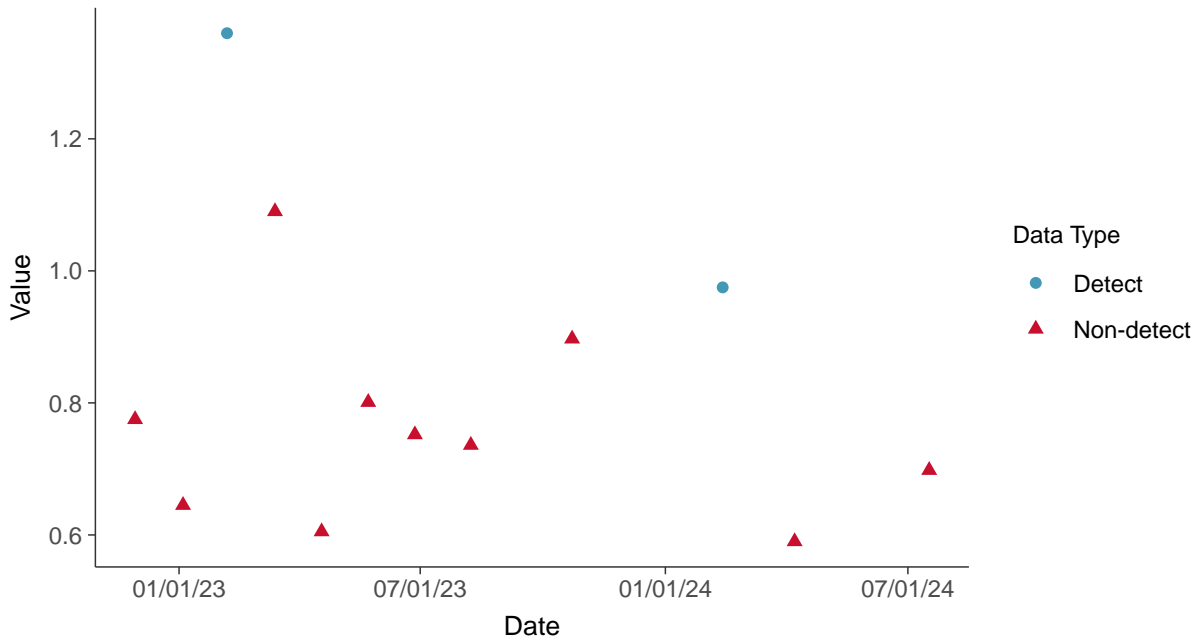


## Appendix IV: Radium 226 and 228, MW-10

ID: 20\_3\_5\_121

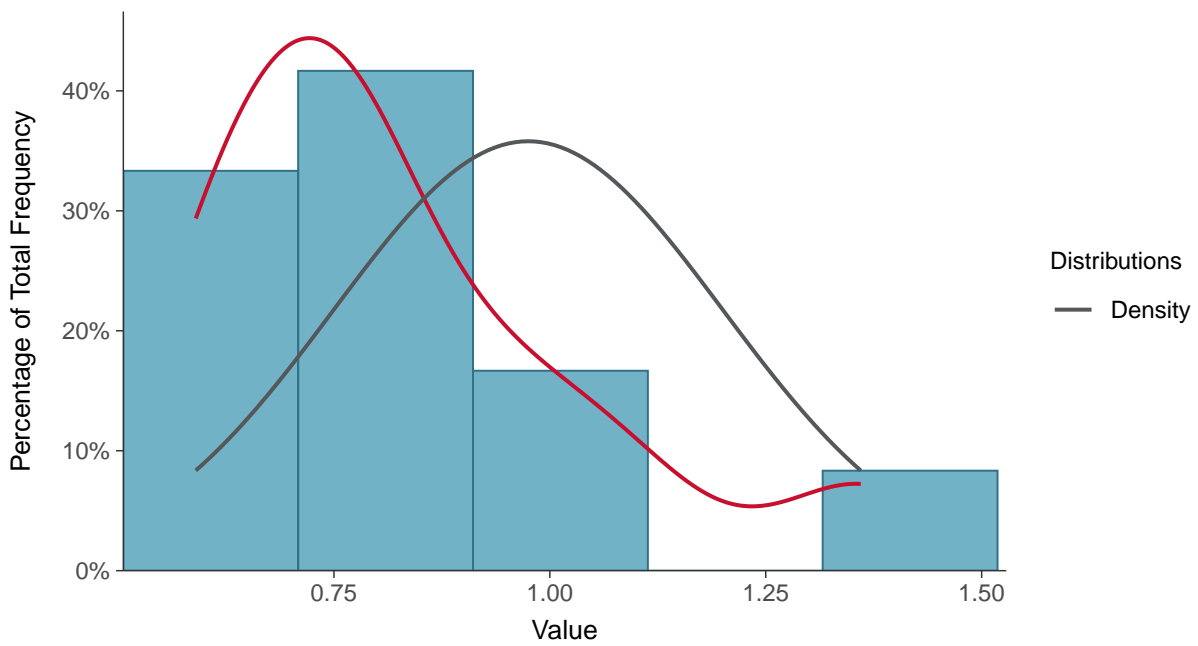
### Scatter Plot

Radium 226 and 228, MW-10 (pCi/L)



### Histogram

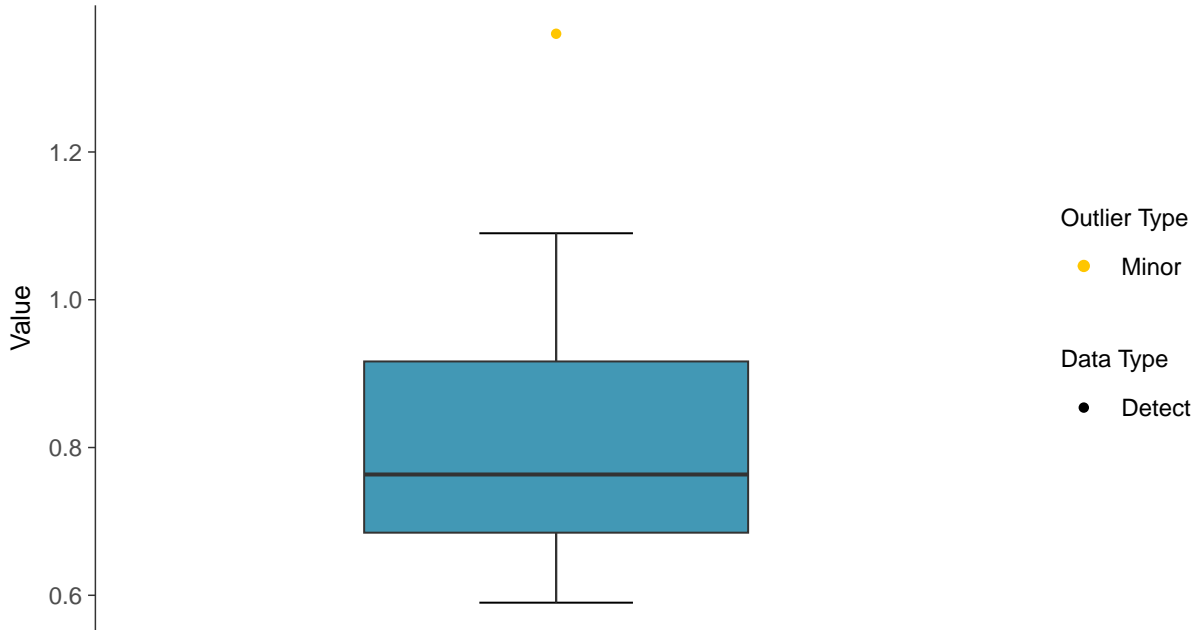
Radium 226 and 228, MW-10 (pCi/L)





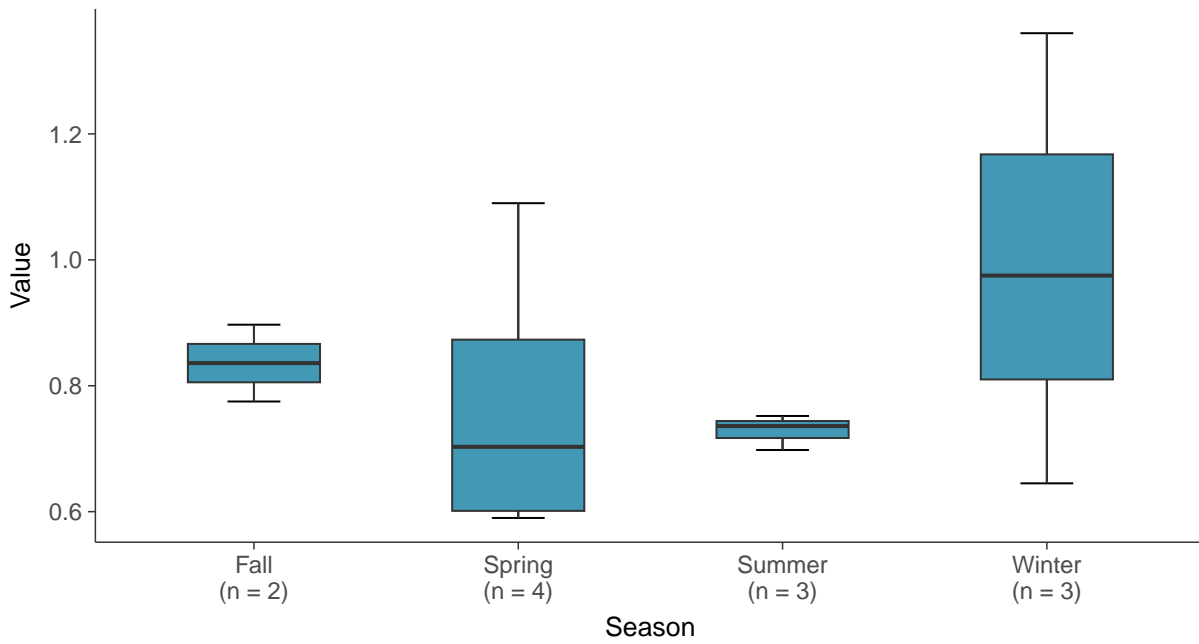
### Boxplot

Radium 226 and 228, MW-10 (pCi/L)



### Boxplot by Season

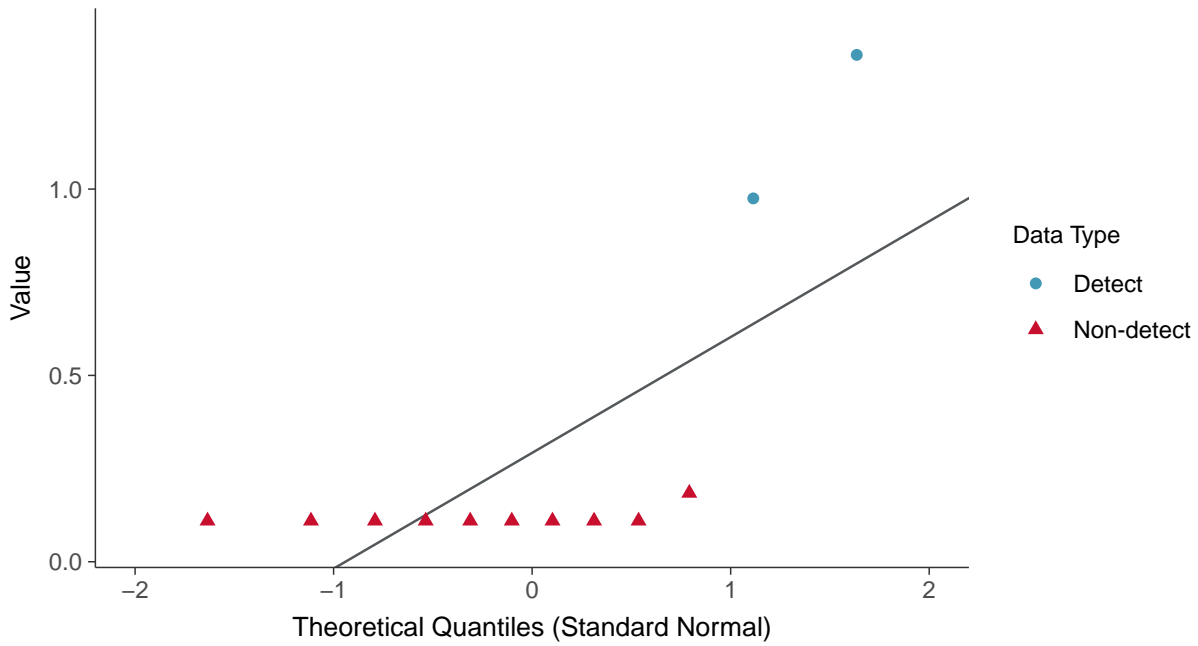
Radium 226 and 228, MW-10 (pCi/L)





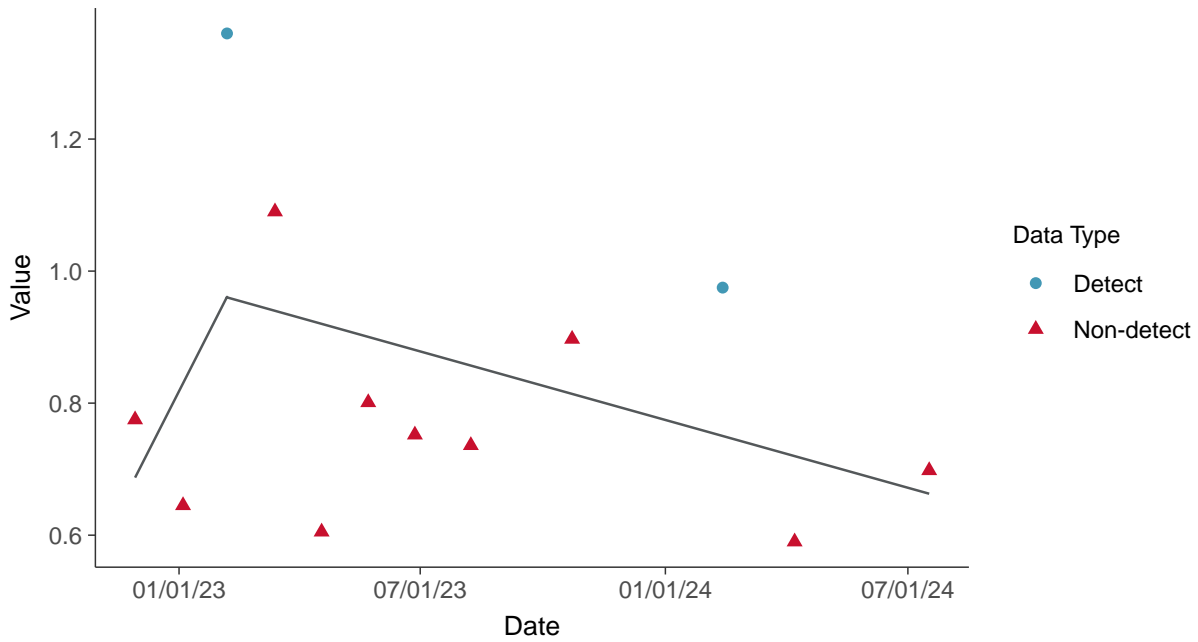
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-10 (pCi/L)



### Trend Regression: Piecewise Linear-Linear

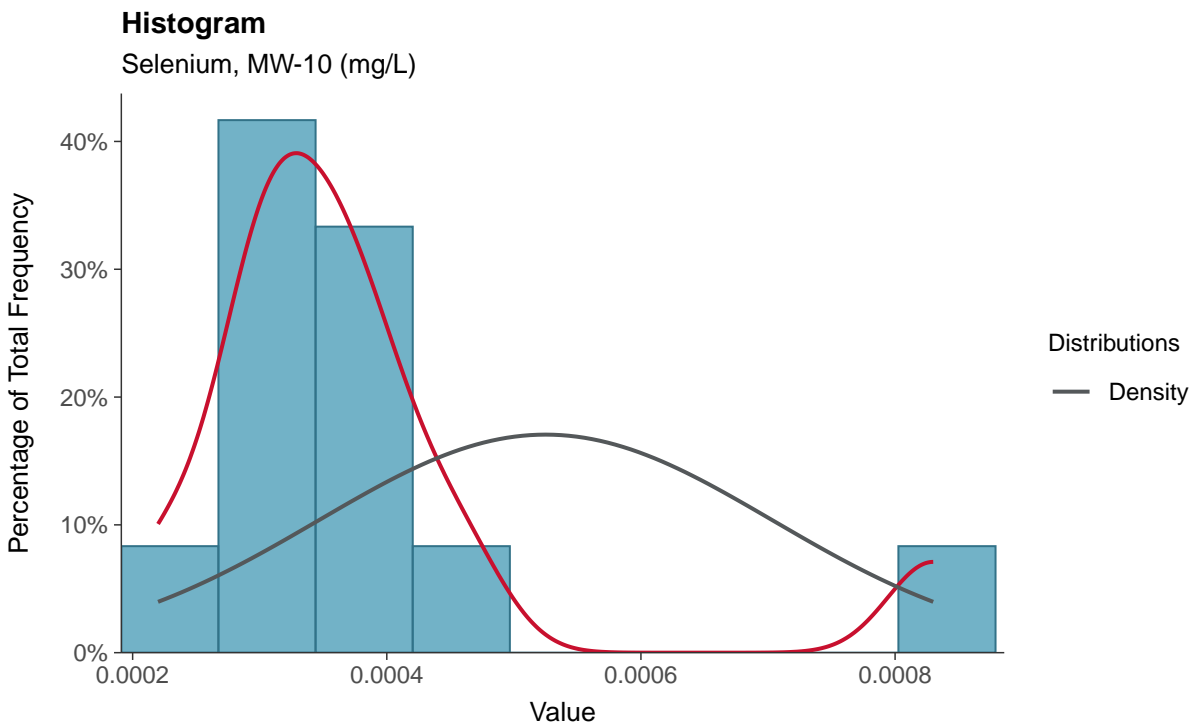
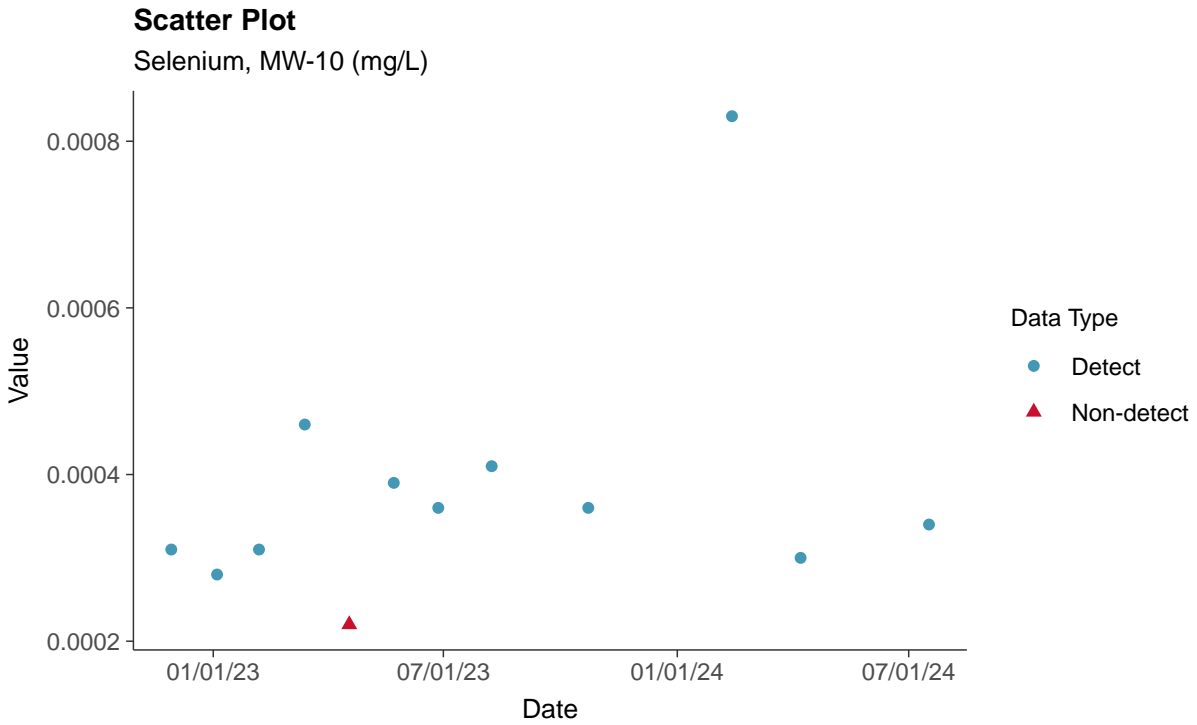
Radium 226 and 228, MW-10 (pCi/L)





### Appendix IV: Selenium, MW-10

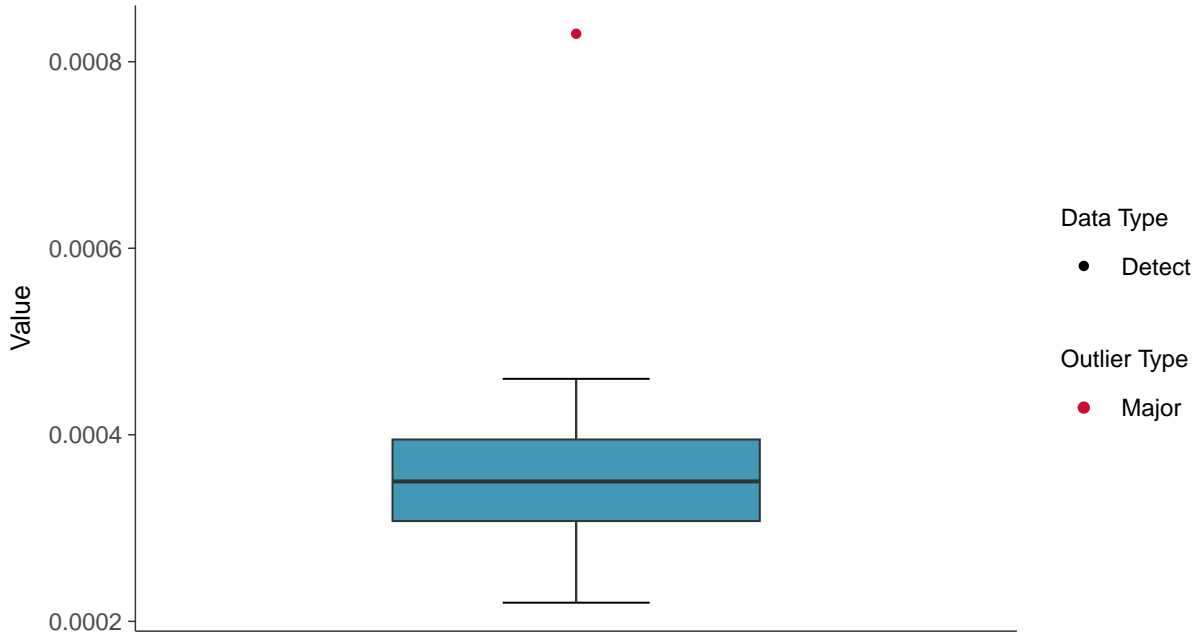
ID: 20\_3\_5\_122





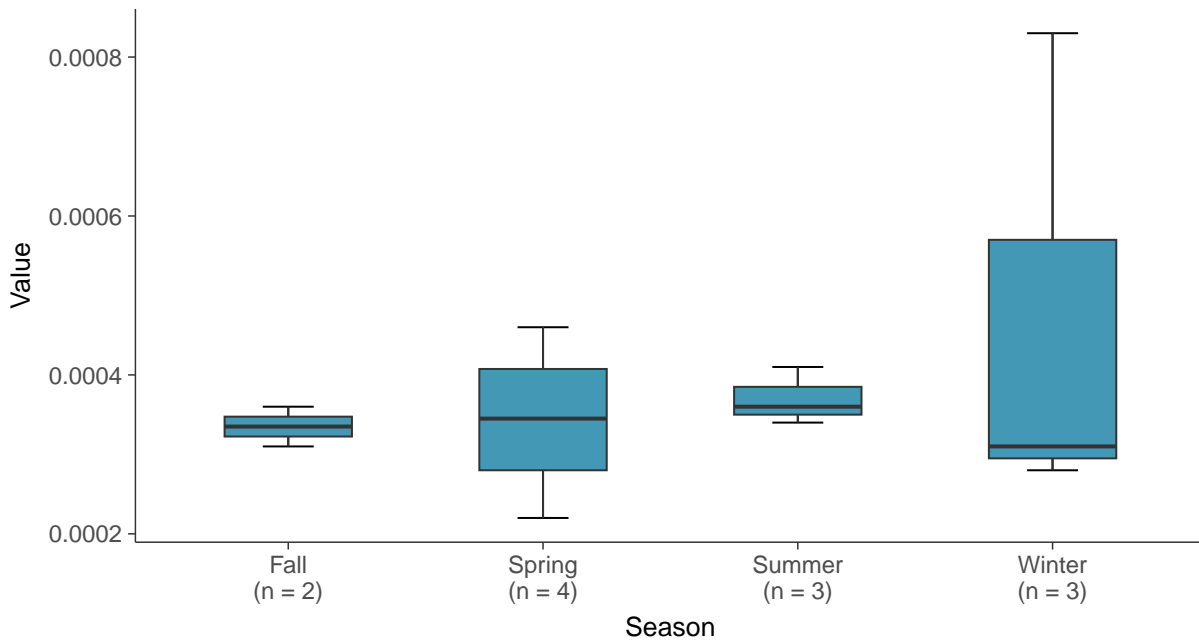
### Boxplot

Selenium, MW-10 (mg/L)



### Boxplot by Season

Selenium, MW-10 (mg/L)

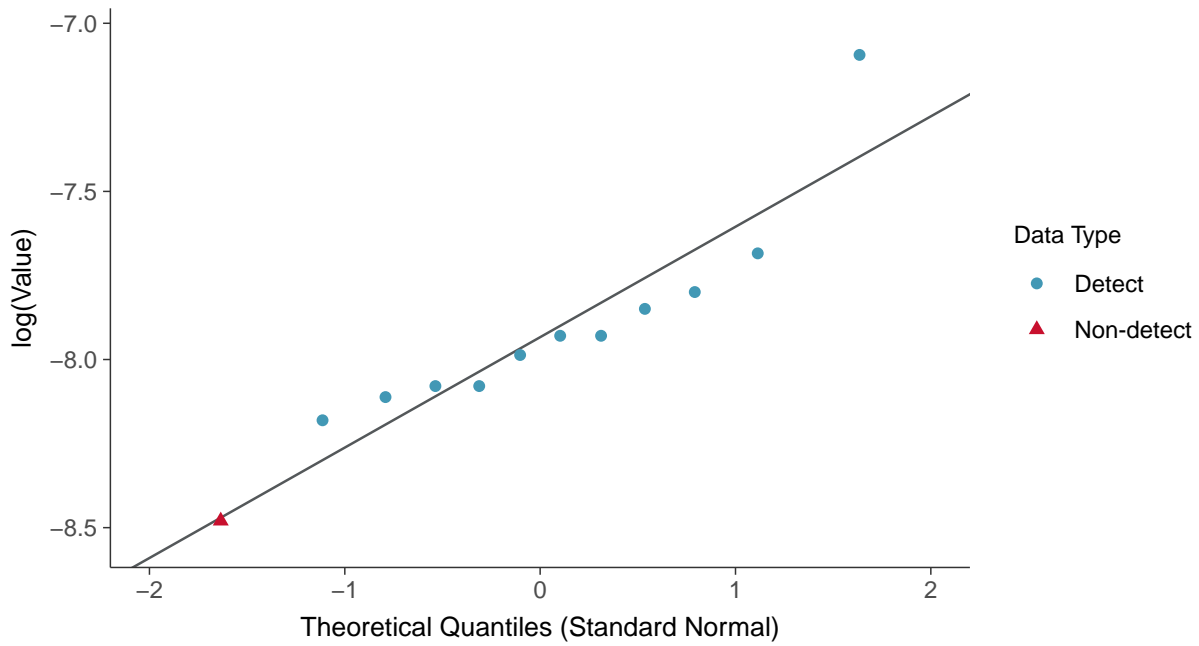






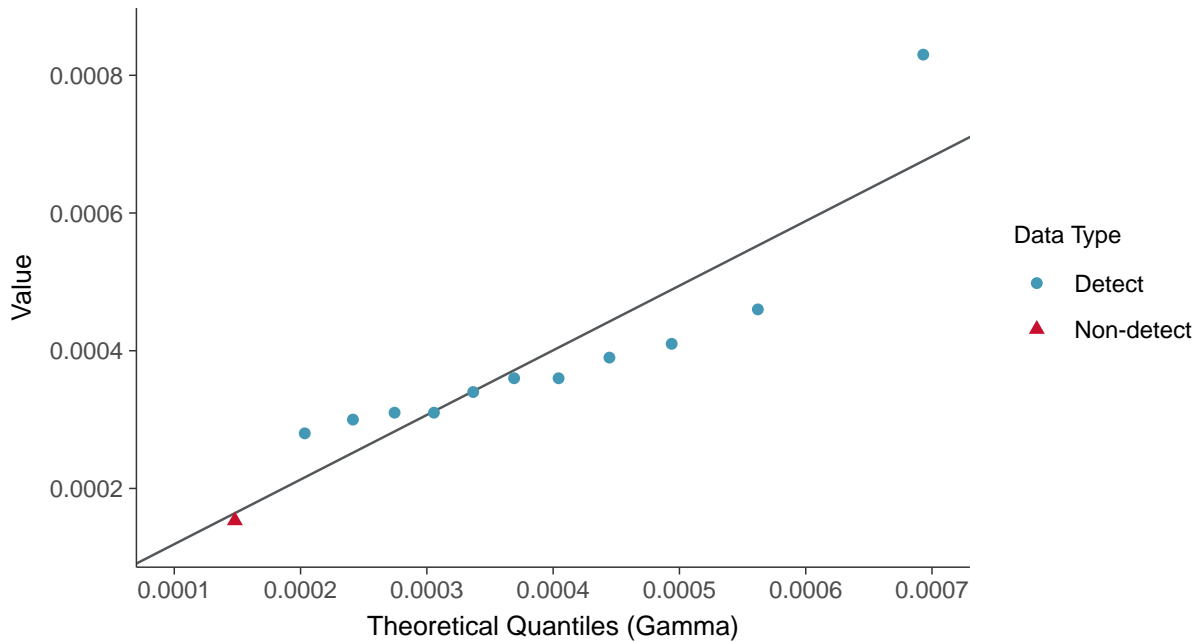
### Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

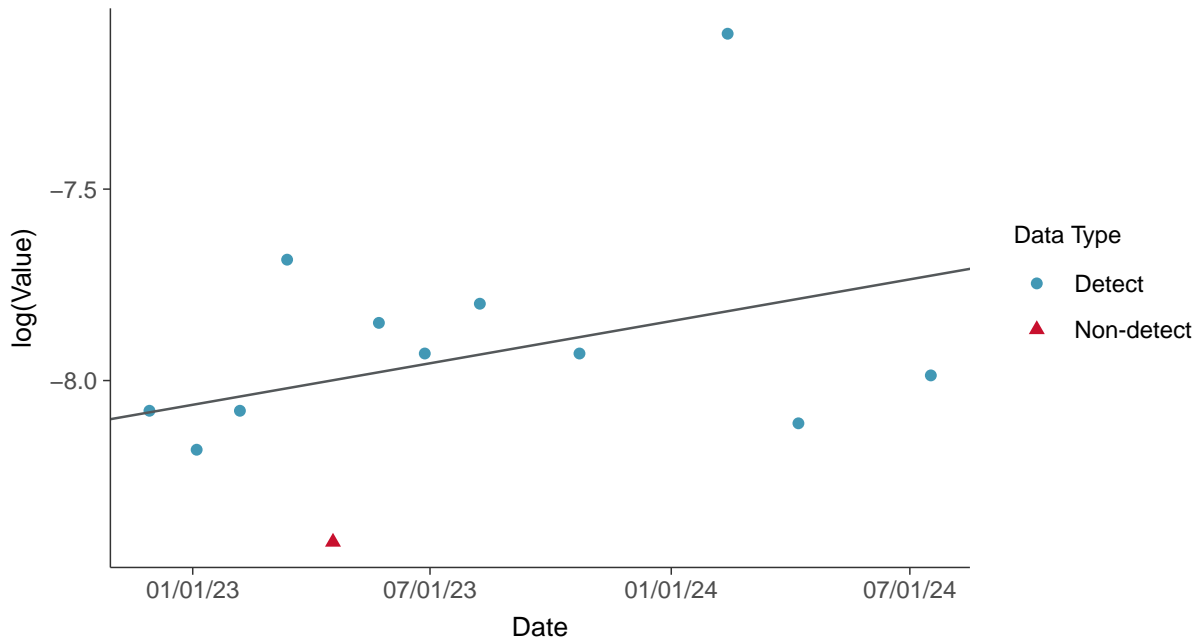
Selenium, MW-10 (mg/L)





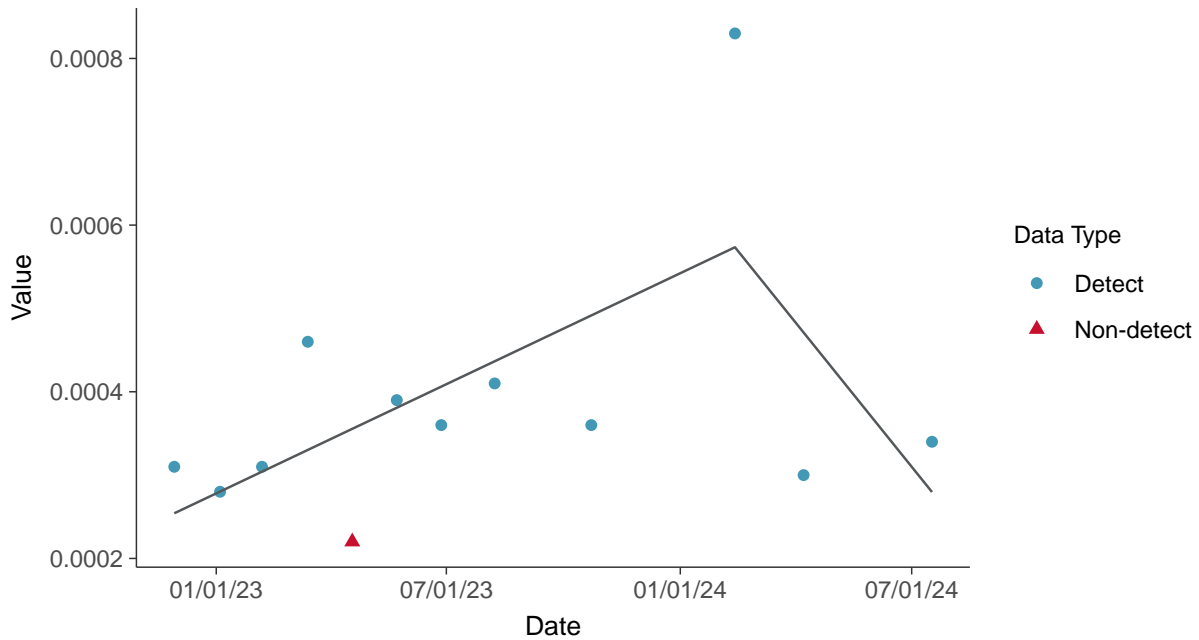
### Trend Regression: Lognormal MLE

Selenium, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear

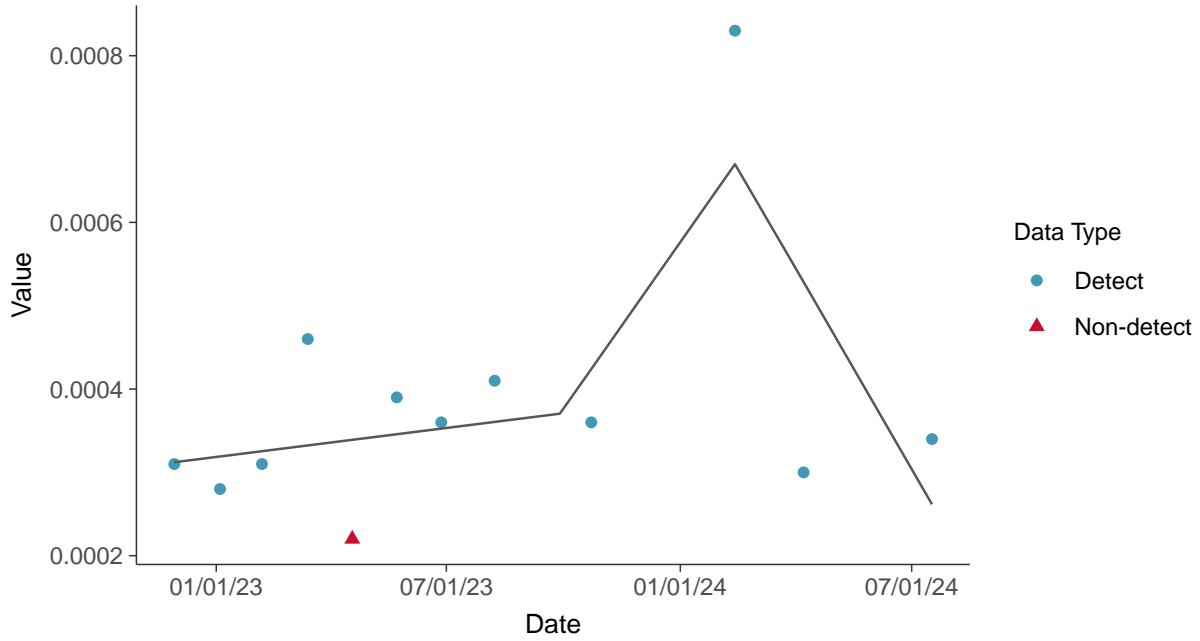
Selenium, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-10 (mg/L)



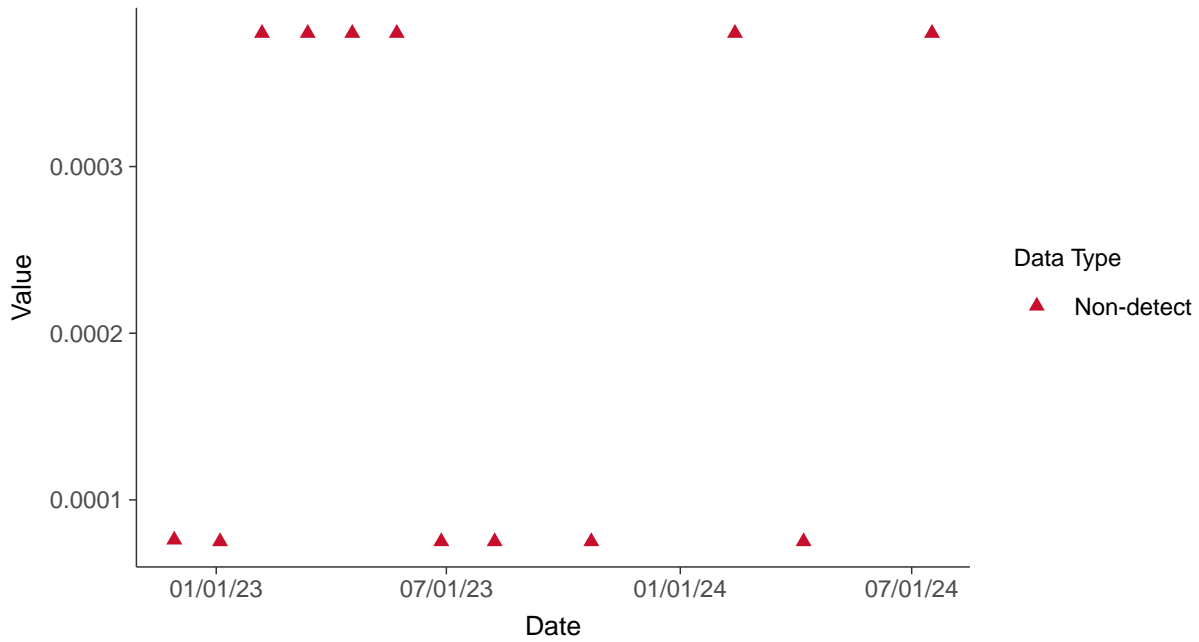


### Appendix IV: Thallium, MW-10

ID: 20\_3\_5\_125

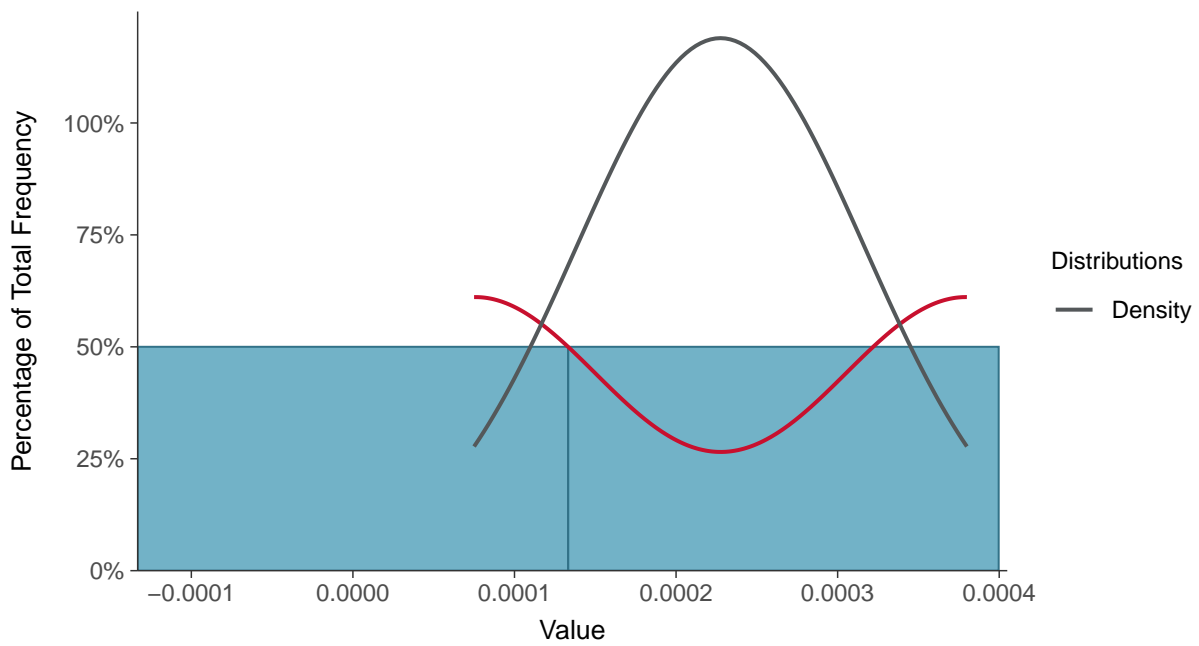
#### Scatter Plot

Thallium, MW-10 (mg/L)



#### Histogram

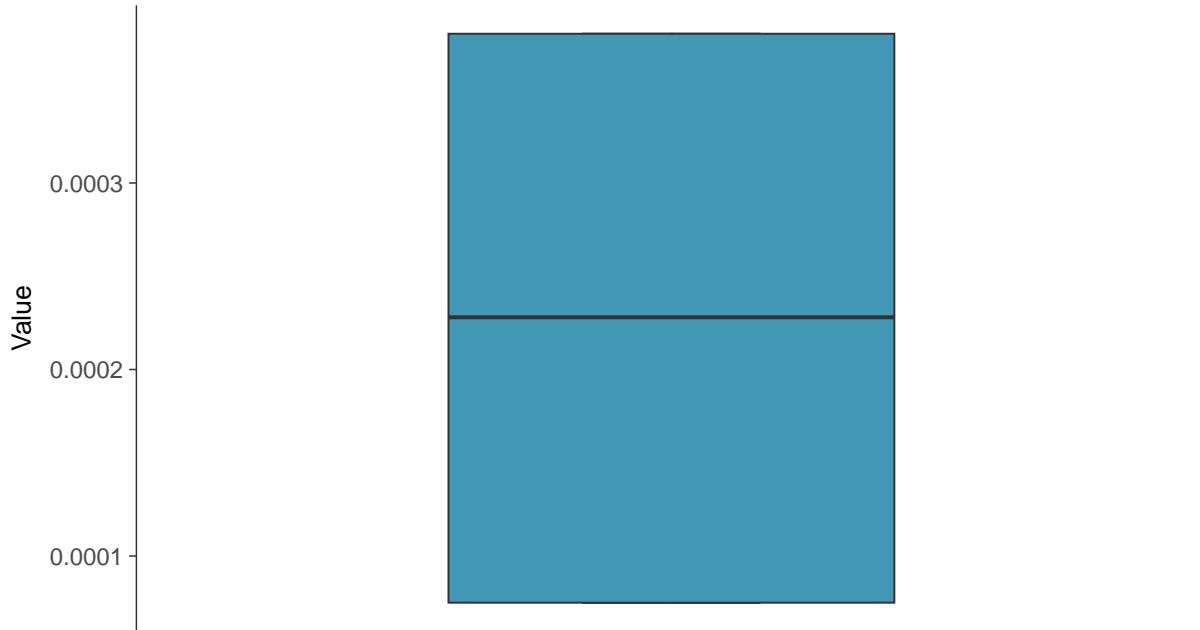
Thallium, MW-10 (mg/L)





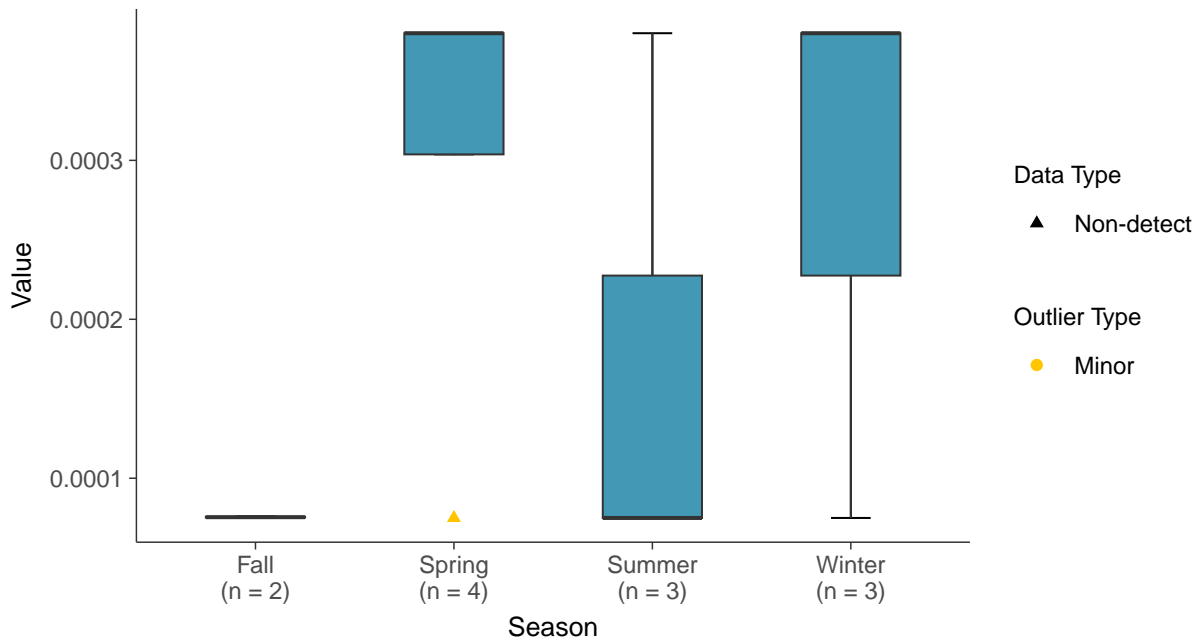
### Boxplot

Thallium, MW-10 (mg/L)



### Boxplot by Season

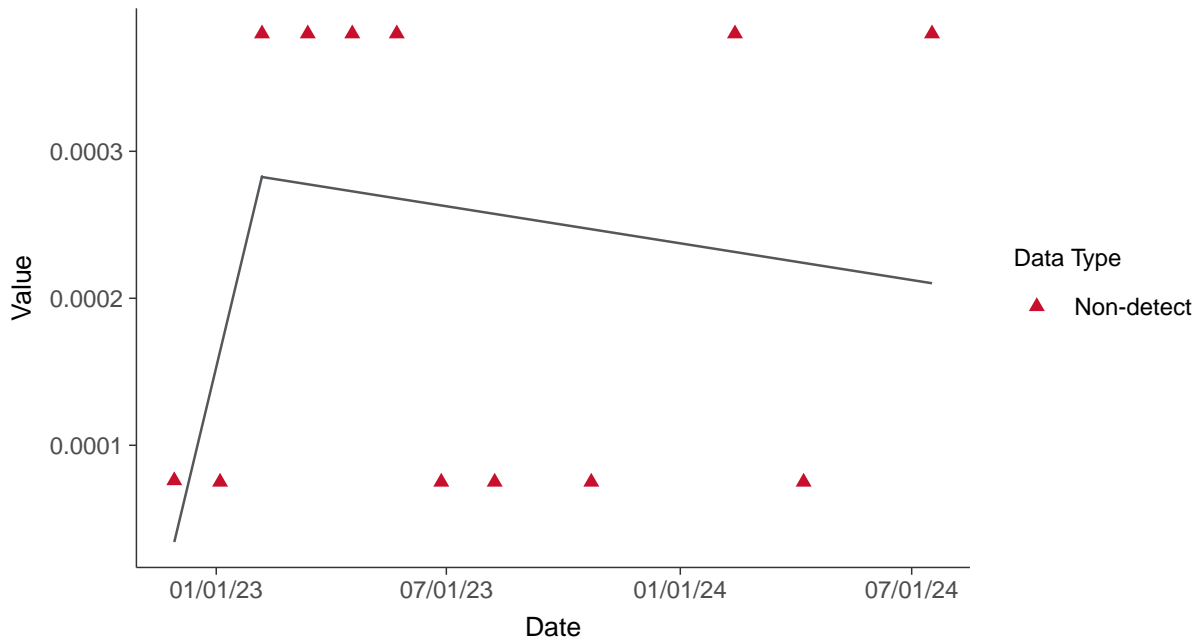
Thallium, MW-10 (mg/L)





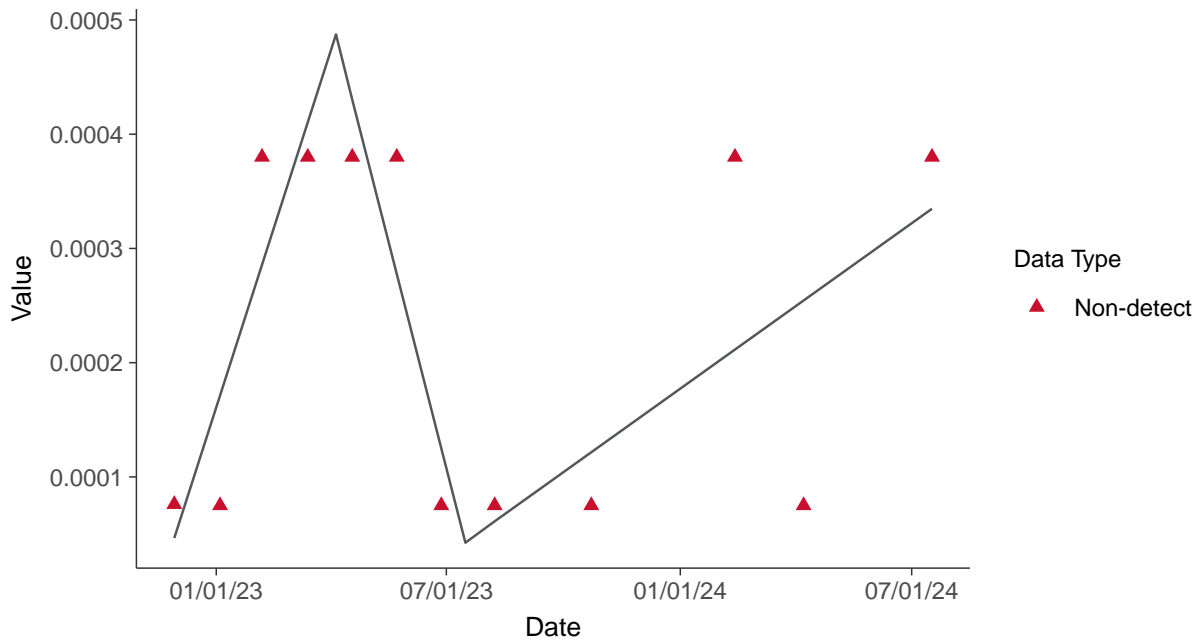
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-10 (mg/L)



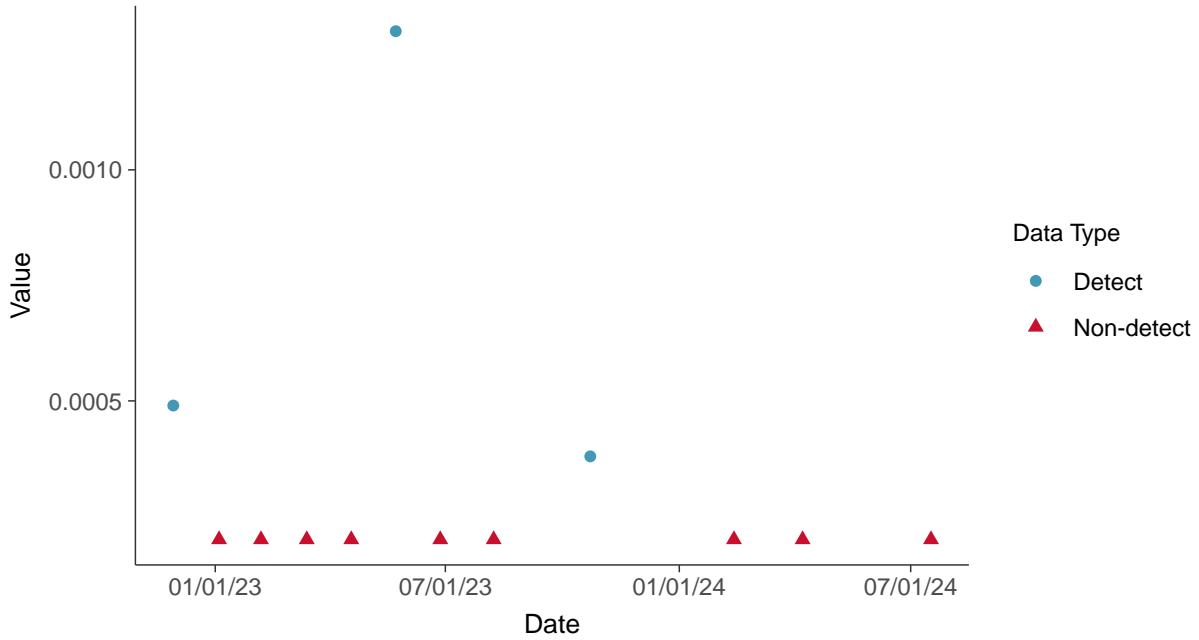


### Part 115: Copper, MW-10

ID: 20\_3\_6\_111

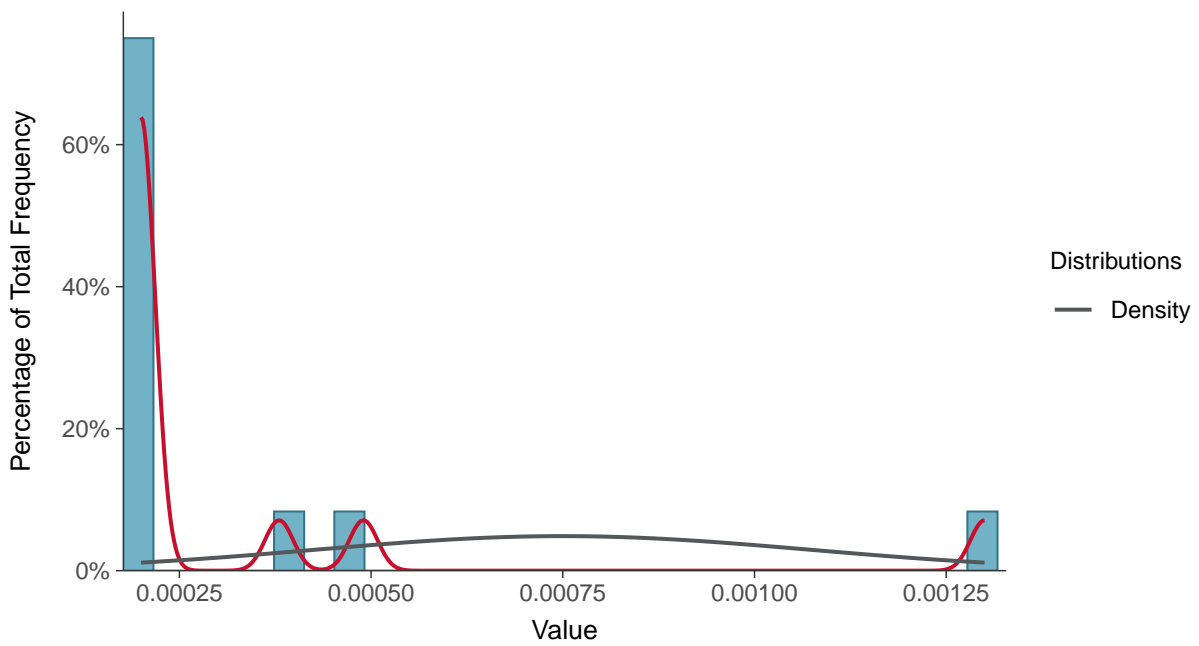
#### Scatter Plot

Copper, MW-10 (mg/L)



#### Histogram

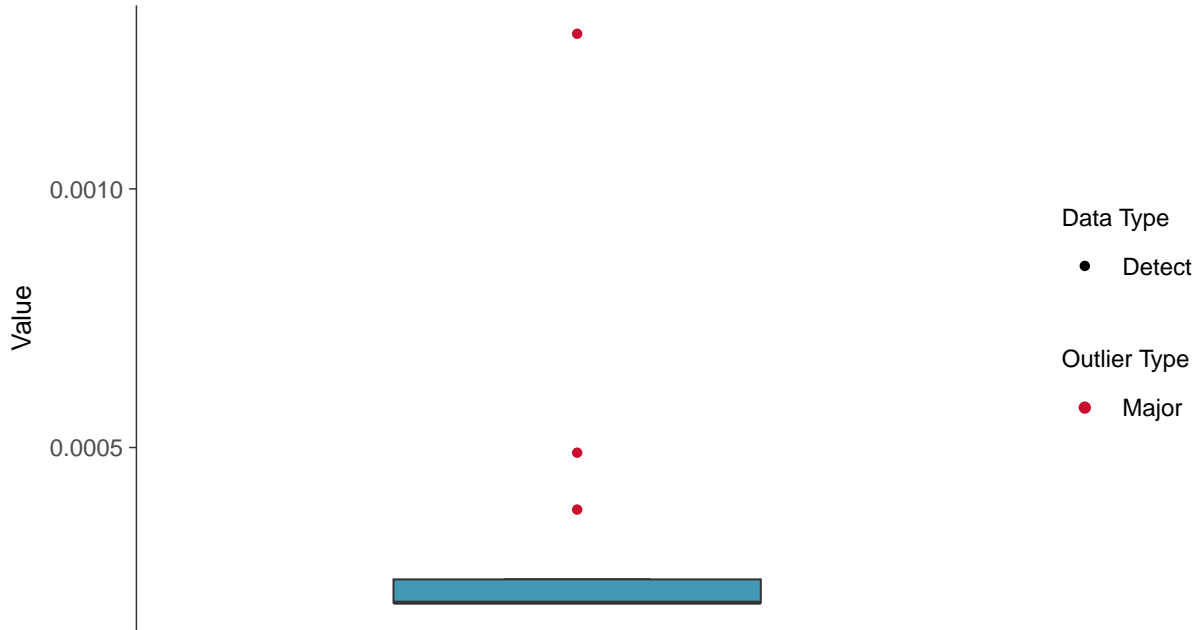
Copper, MW-10 (mg/L)





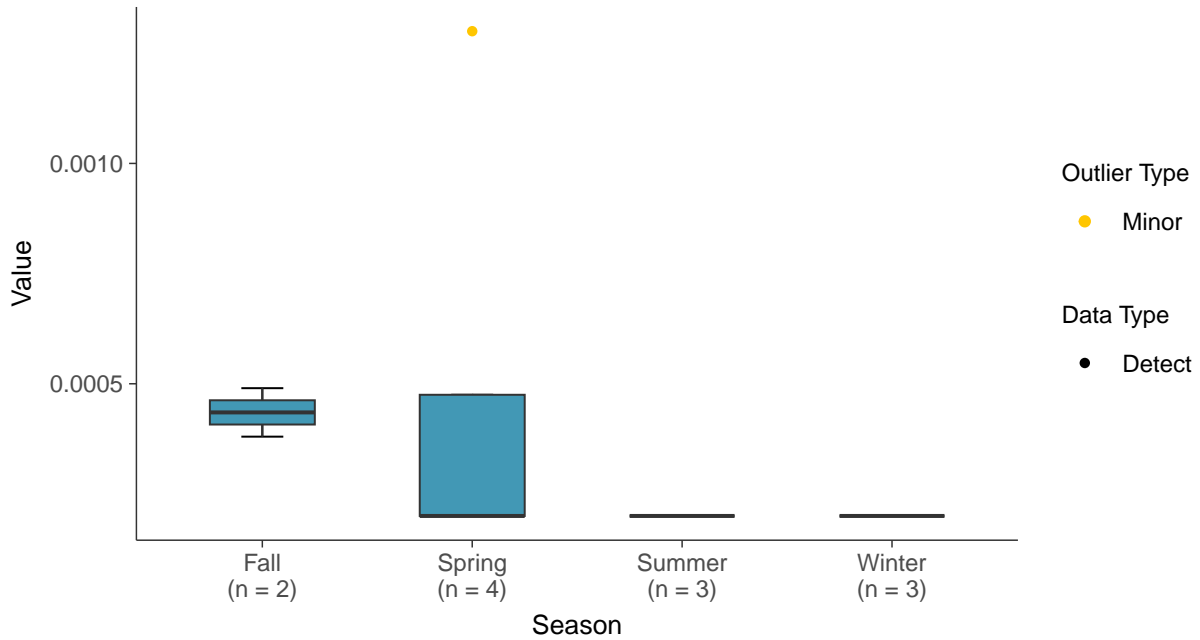
### Boxplot

Copper, MW-10 (mg/L)



### Boxplot by Season

Copper, MW-10 (mg/L)

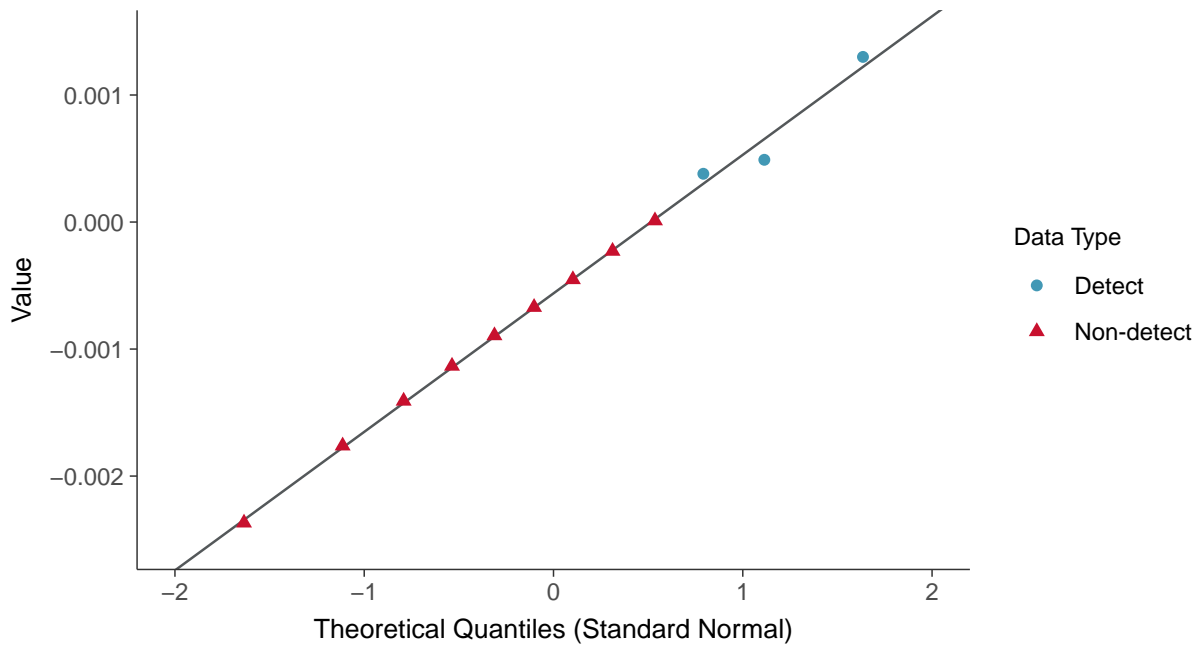






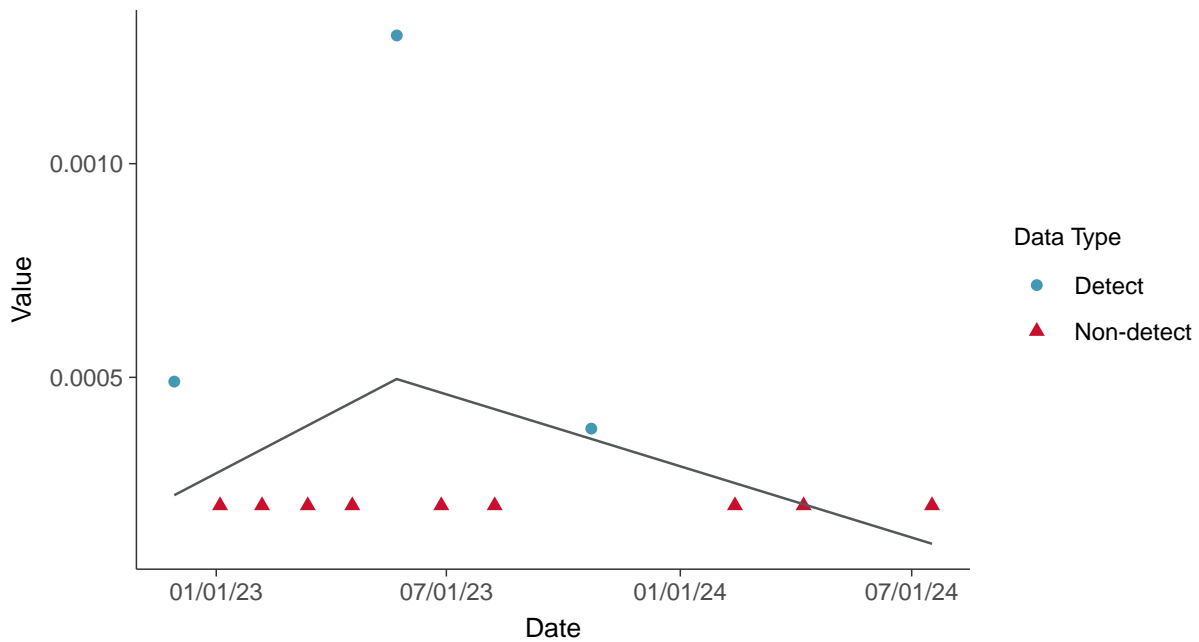
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (mg/L)



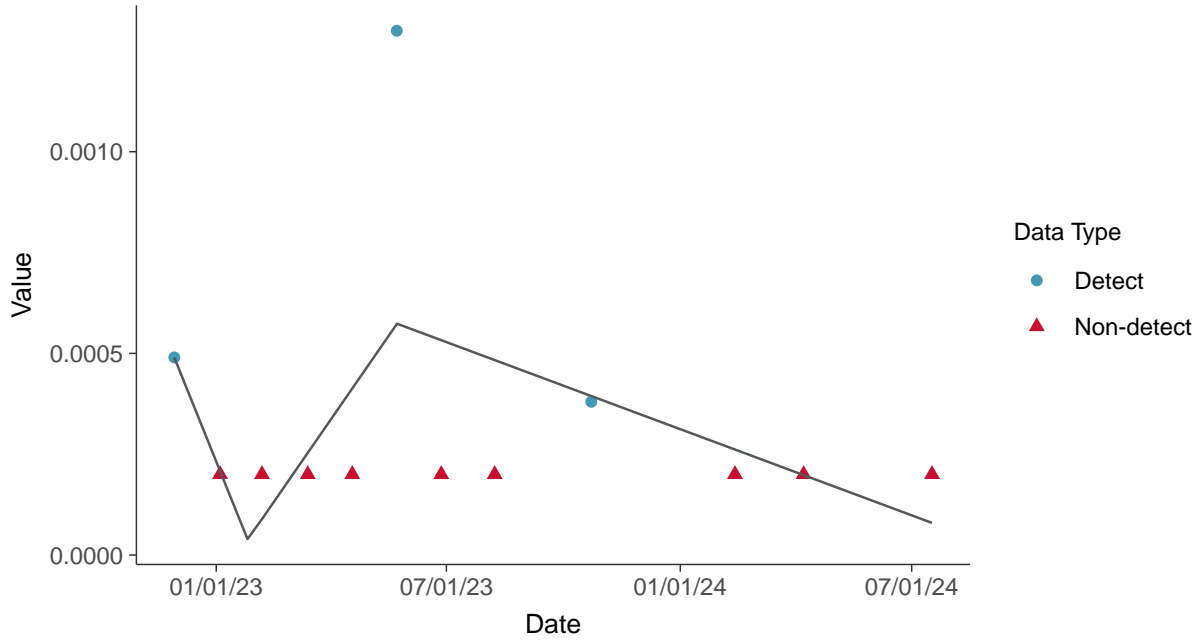
### Trend Regression: Piecewise Linear-Linear

Copper, MW-10 (mg/L)





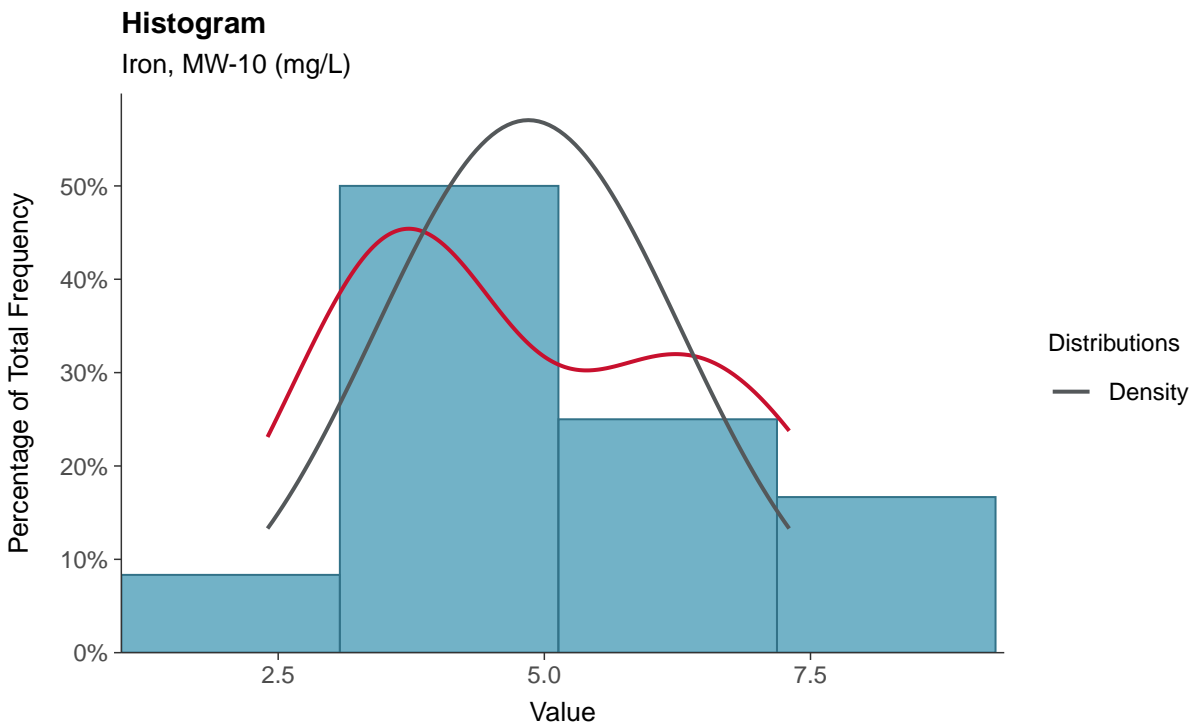
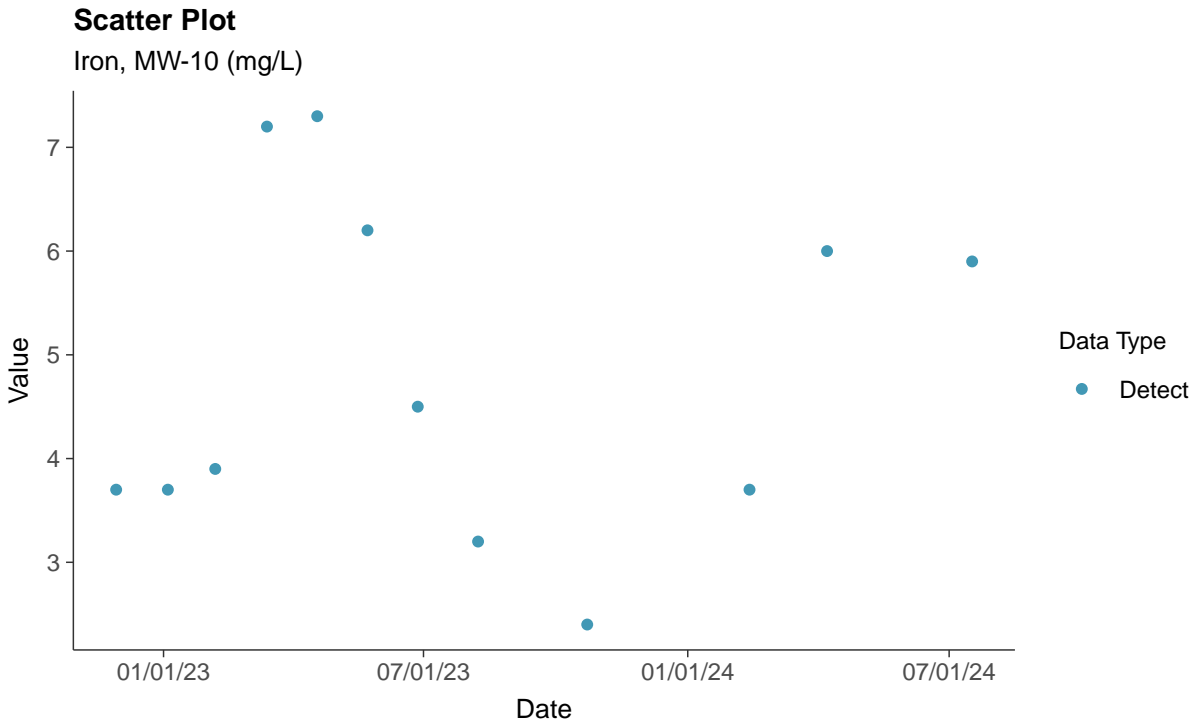
**Trend Regression: Piecewise Linear-Linear-Linear**  
Copper, MW-10 (mg/L)





### Part 115: Iron, MW-10

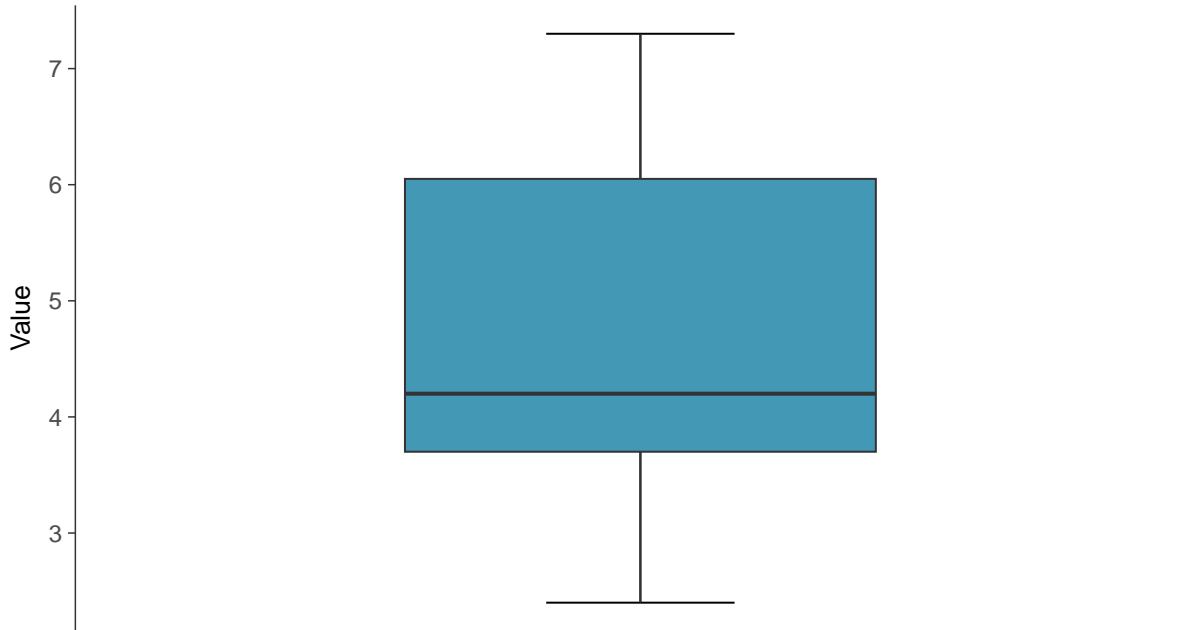
ID: 20\_3\_6\_114





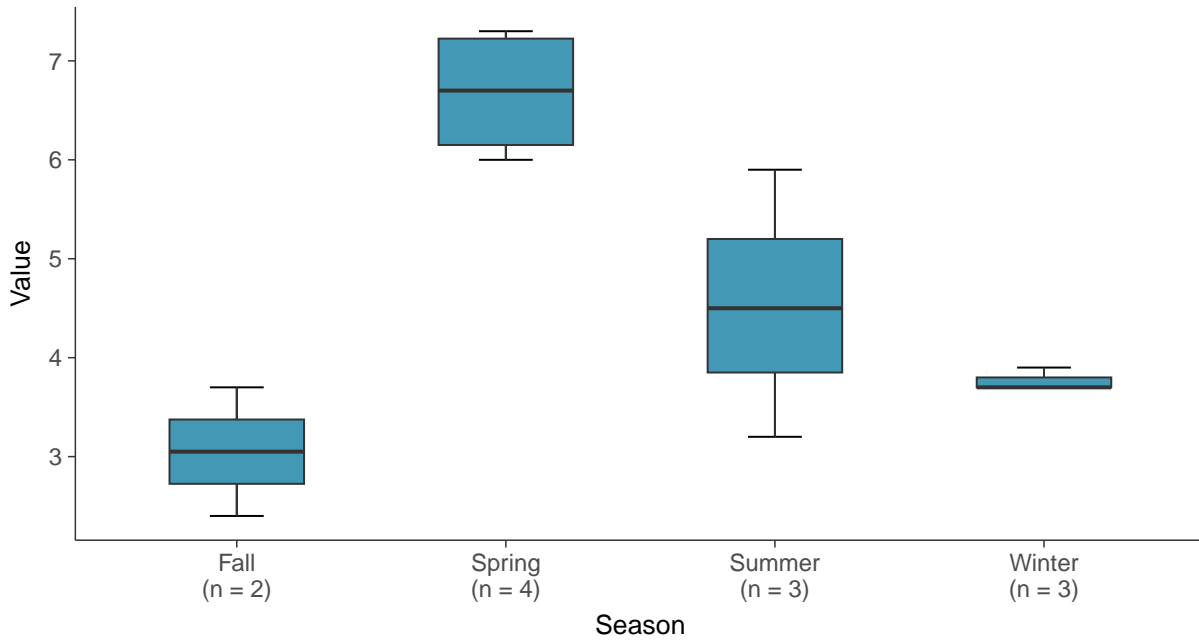
### Boxplot

Iron, MW-10 (mg/L)



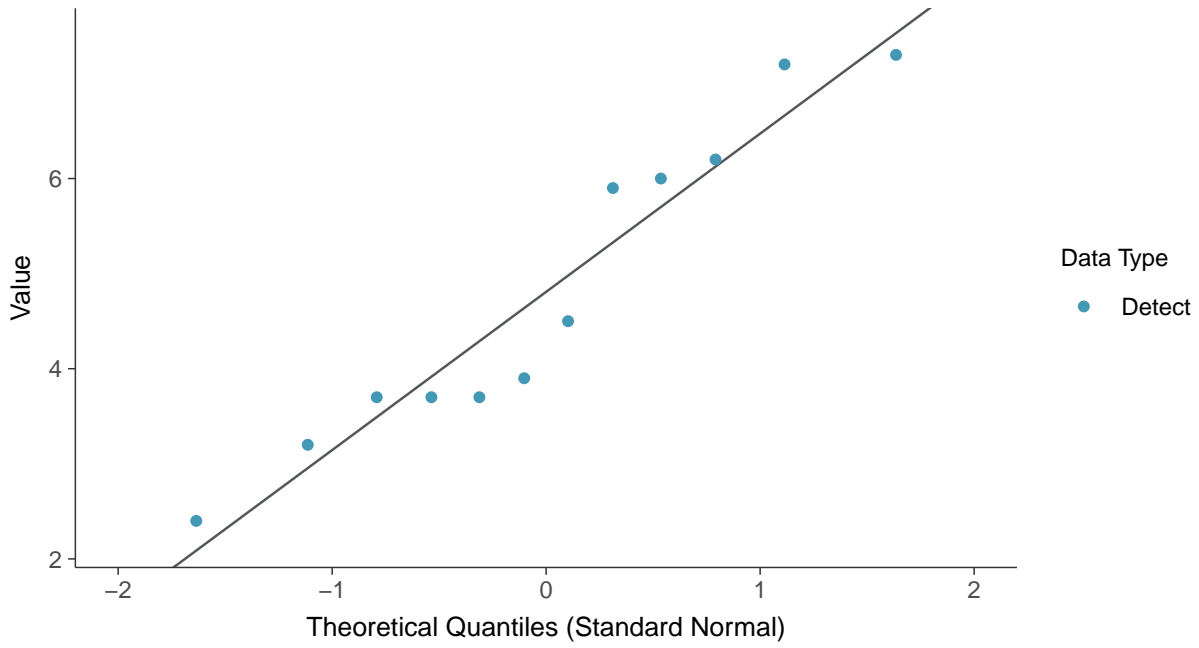
### Boxplot by Season

Iron, MW-10 (mg/L)

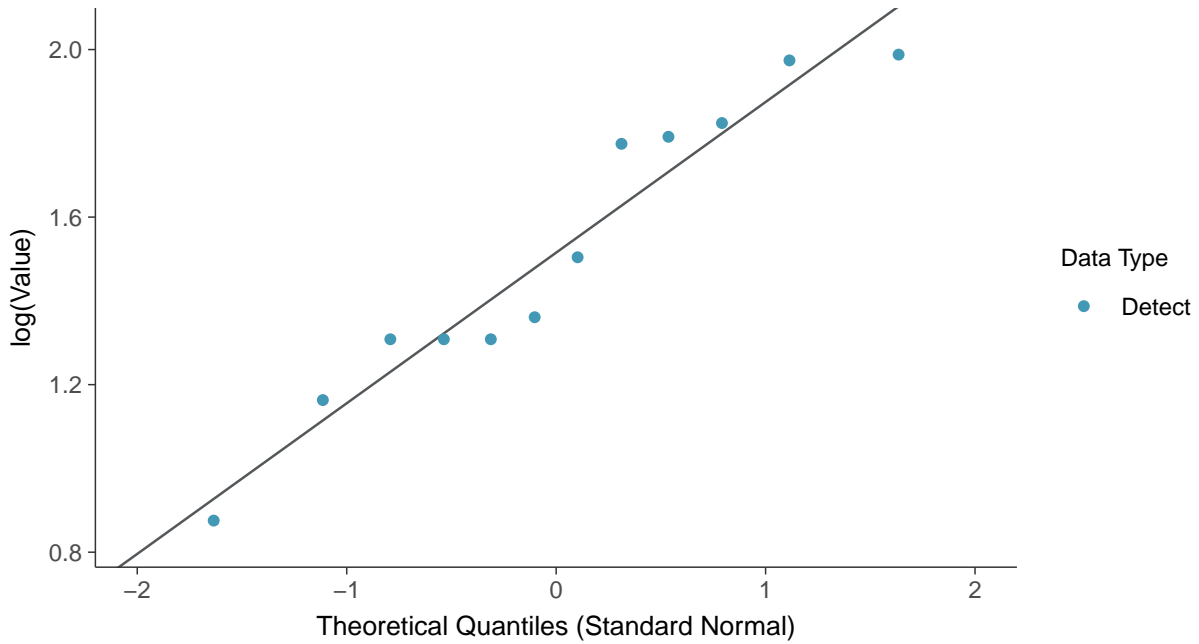


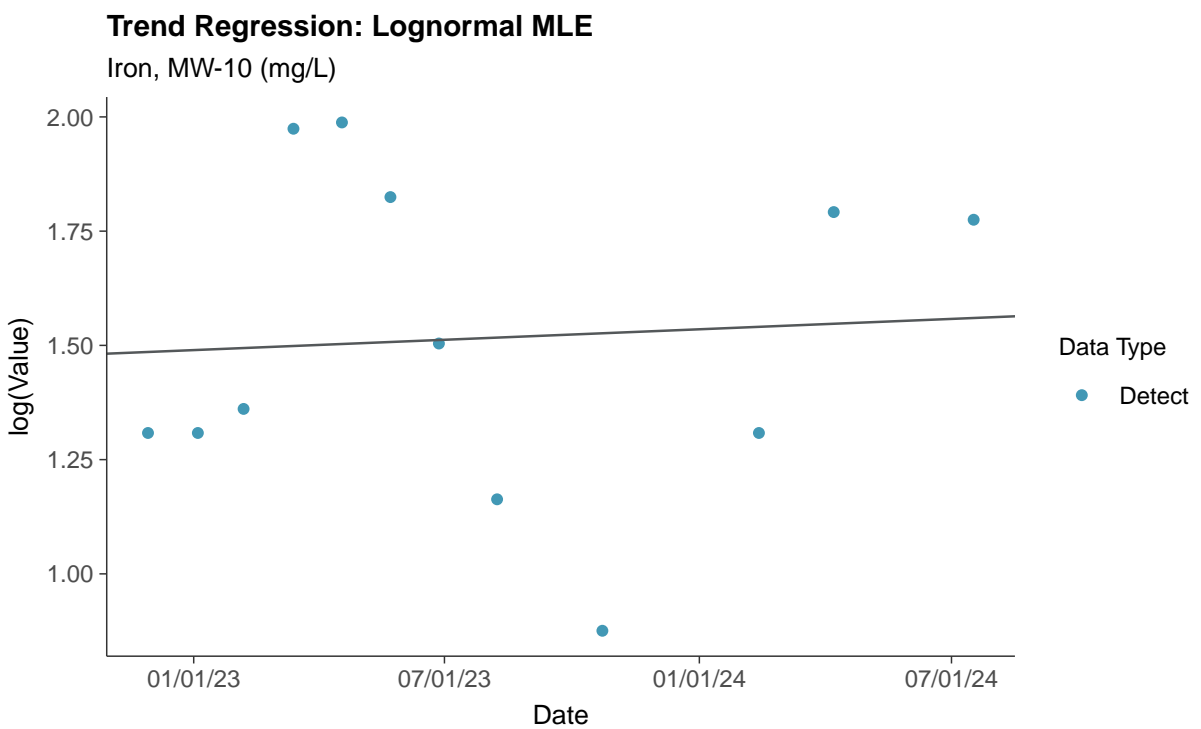
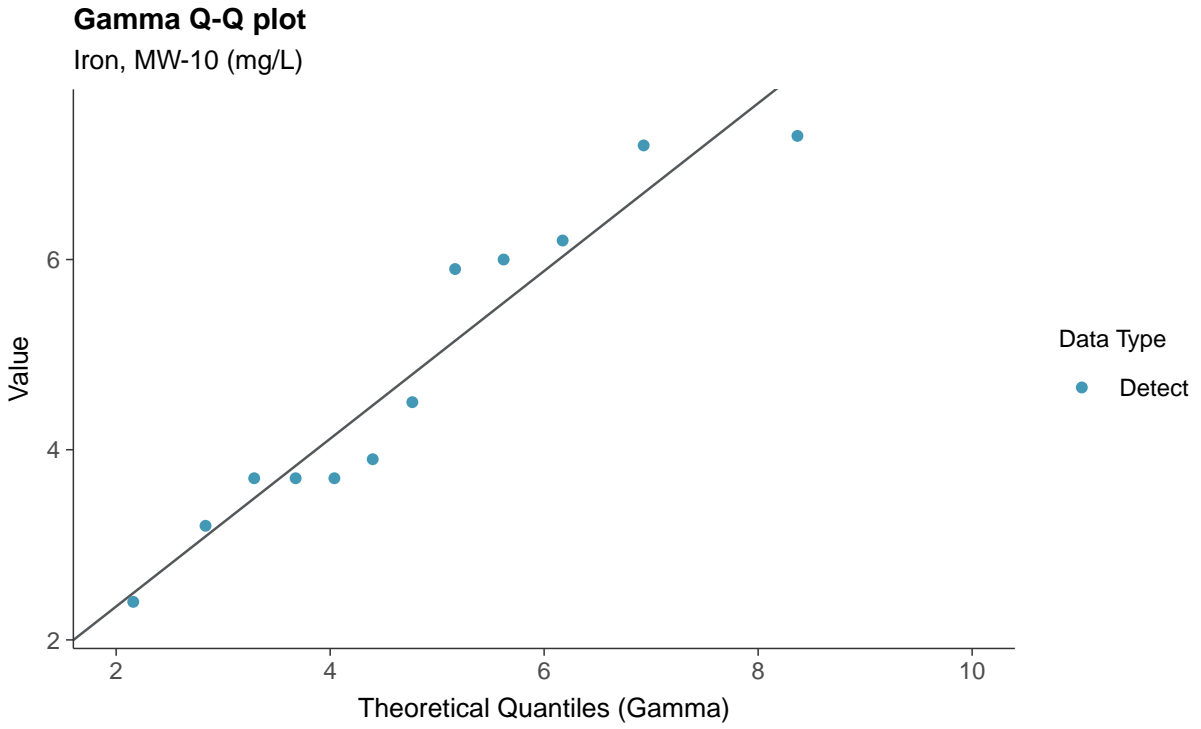


**Normal Q-Q plot**  
Iron, MW-10 (mg/L)



**Lognormal Q-Q plot**  
Iron, MW-10 (mg/L)

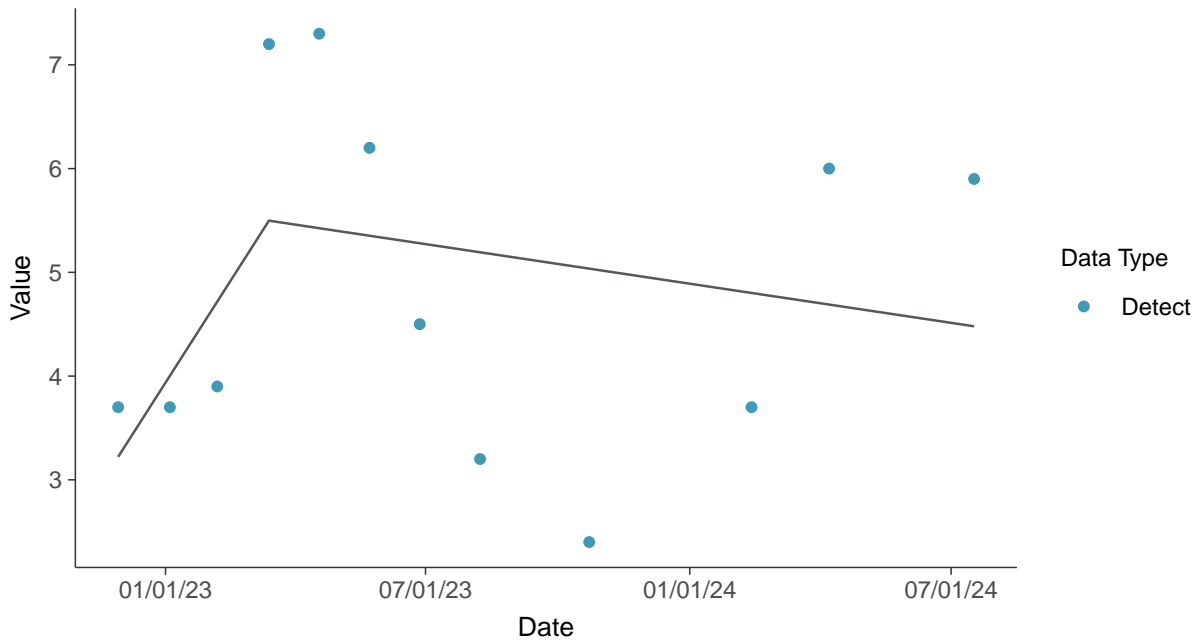






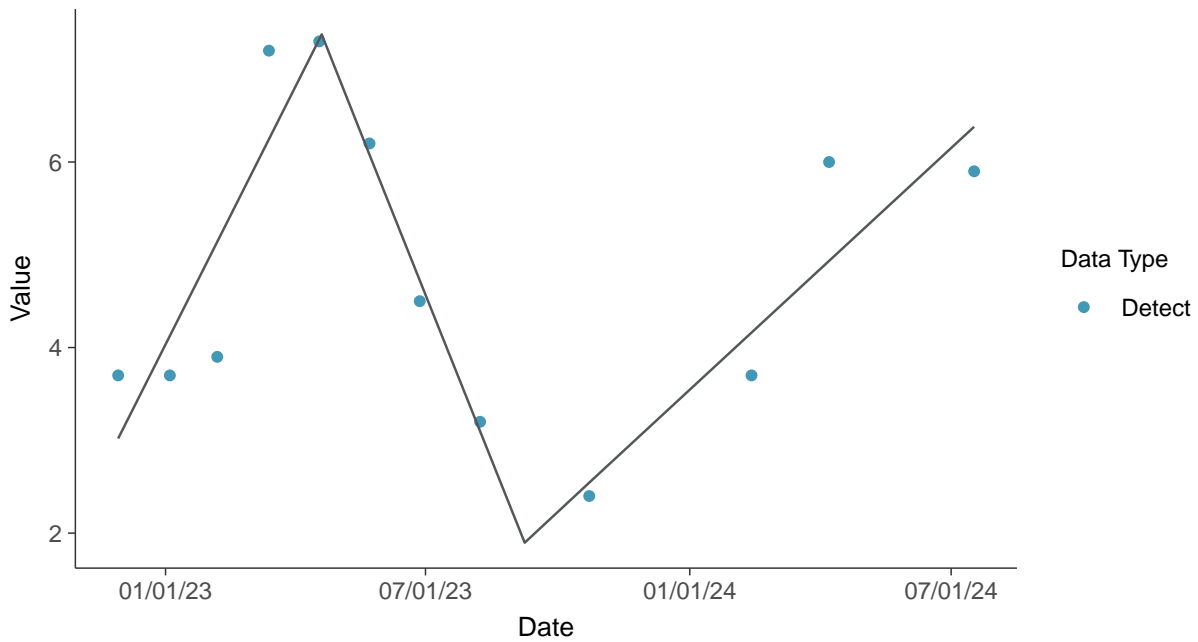
### Trend Regression: Piecewise Linear-Linear

Iron, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

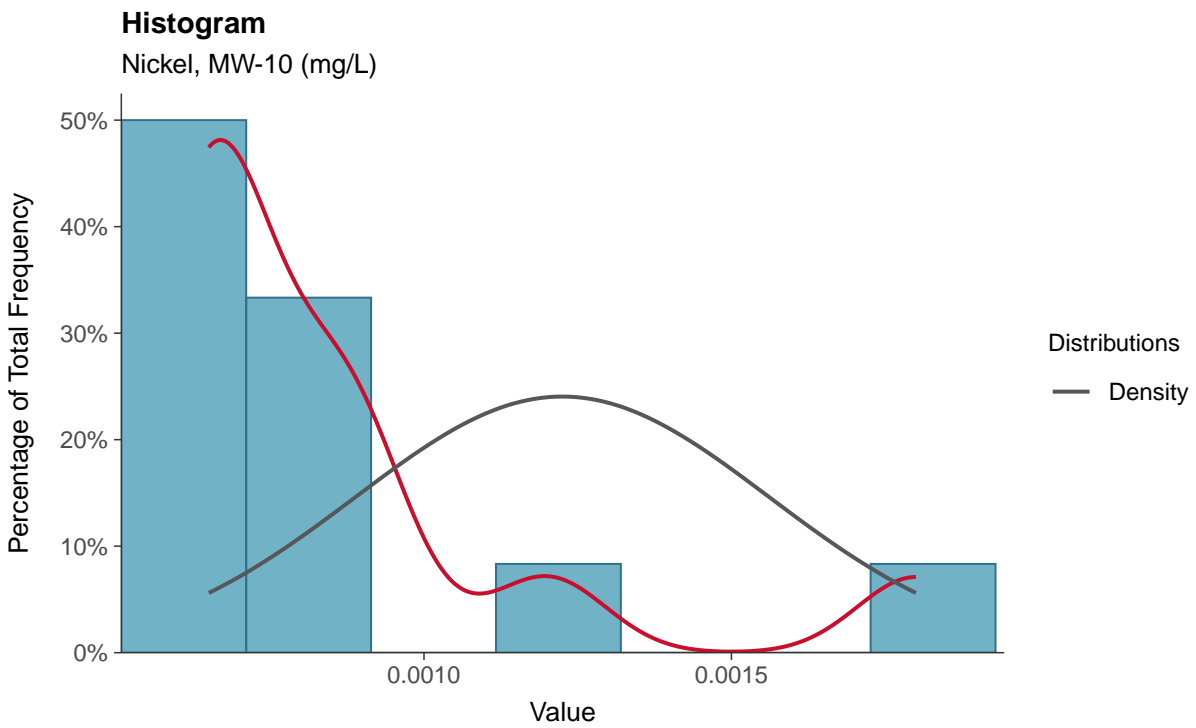
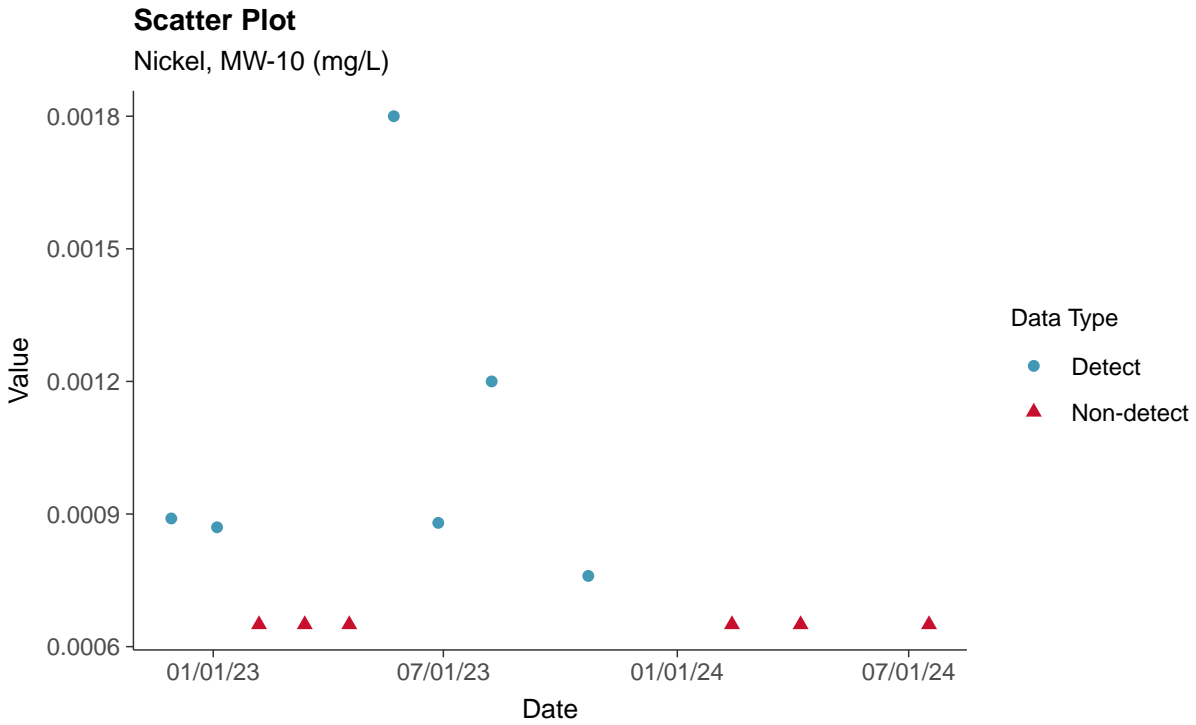
Iron, MW-10 (mg/L)





### Part 115: Nickel, MW-10

ID: 20\_3\_6\_119

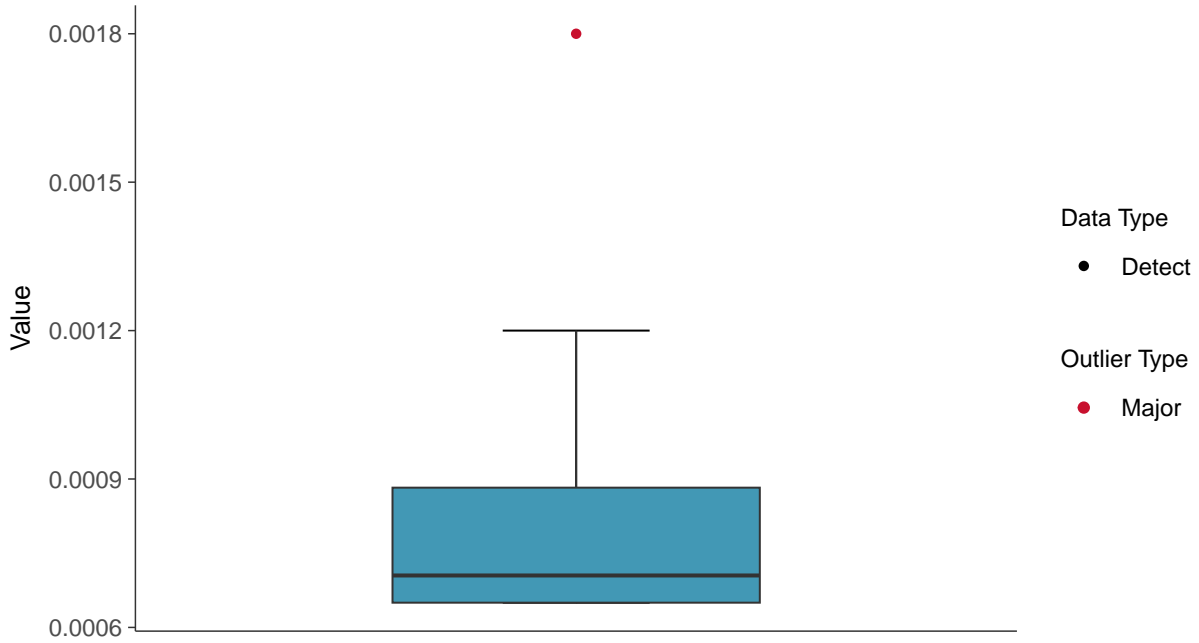






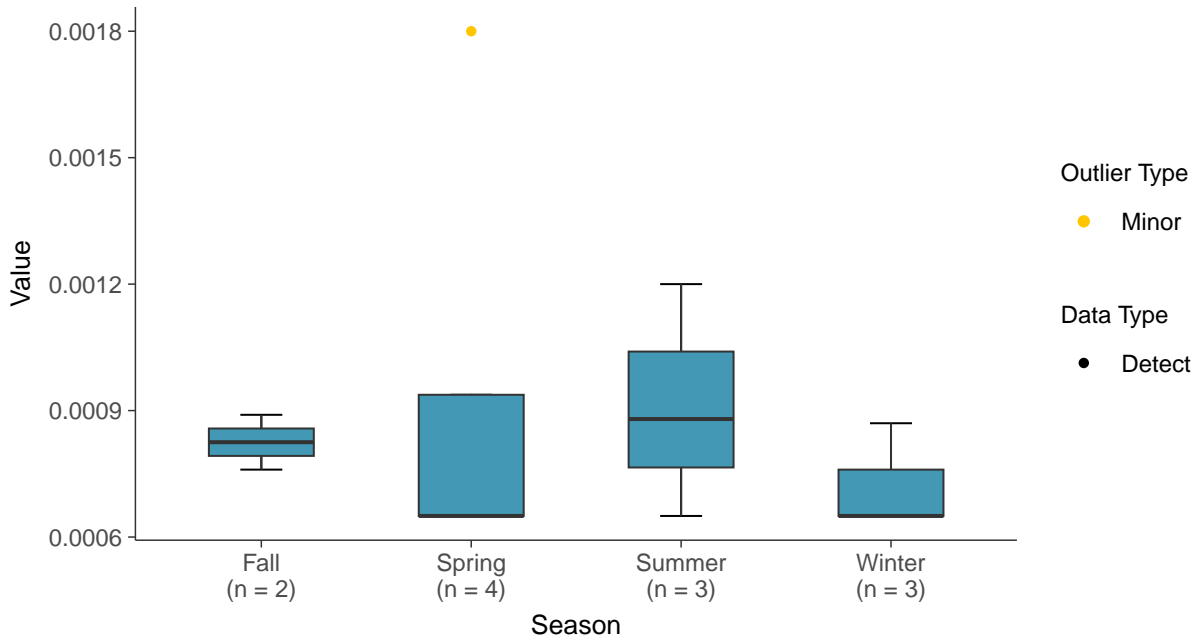
### Boxplot

Nickel, MW-10 (mg/L)



### Boxplot by Season

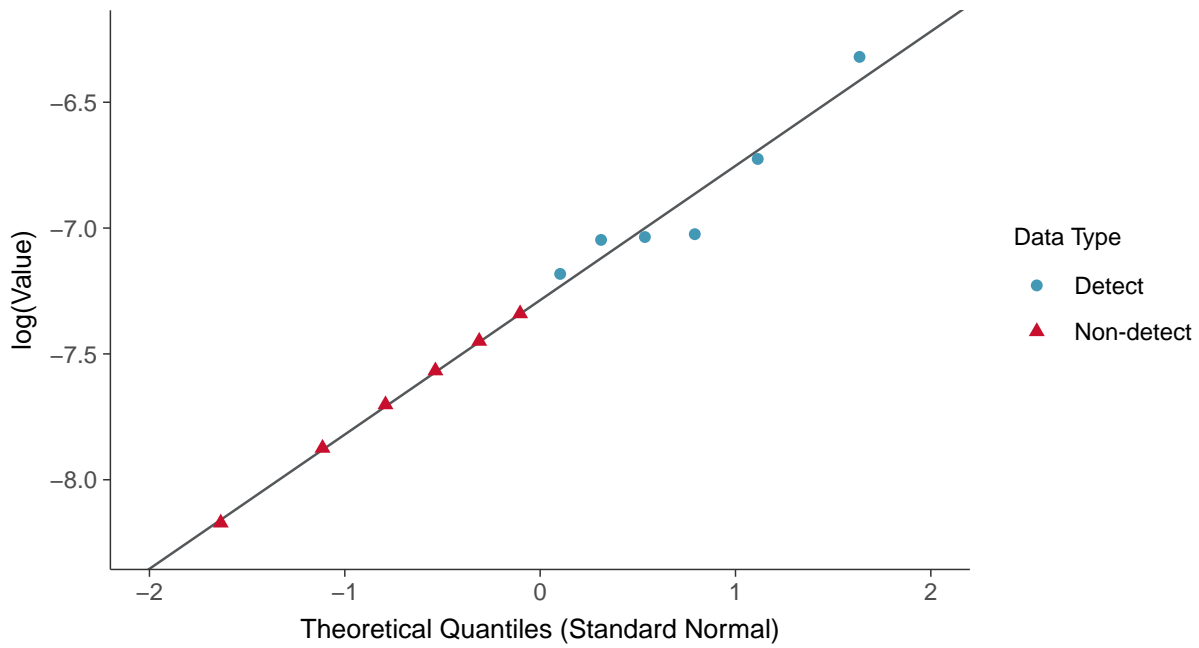
Nickel, MW-10 (mg/L)





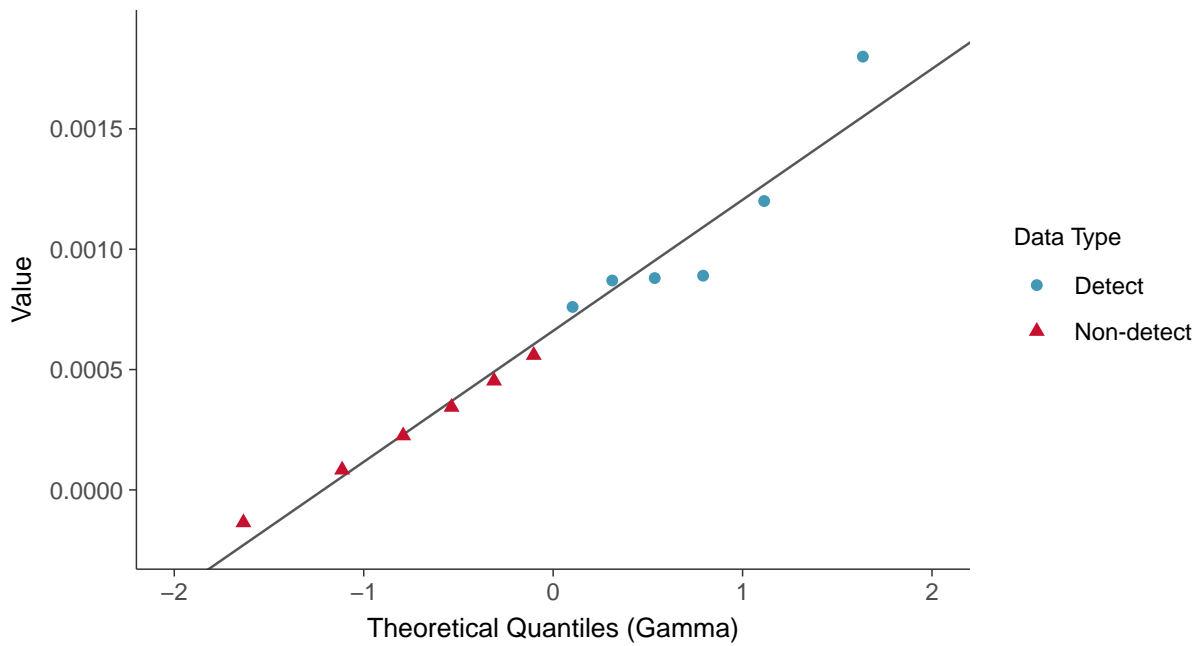
### Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-10 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

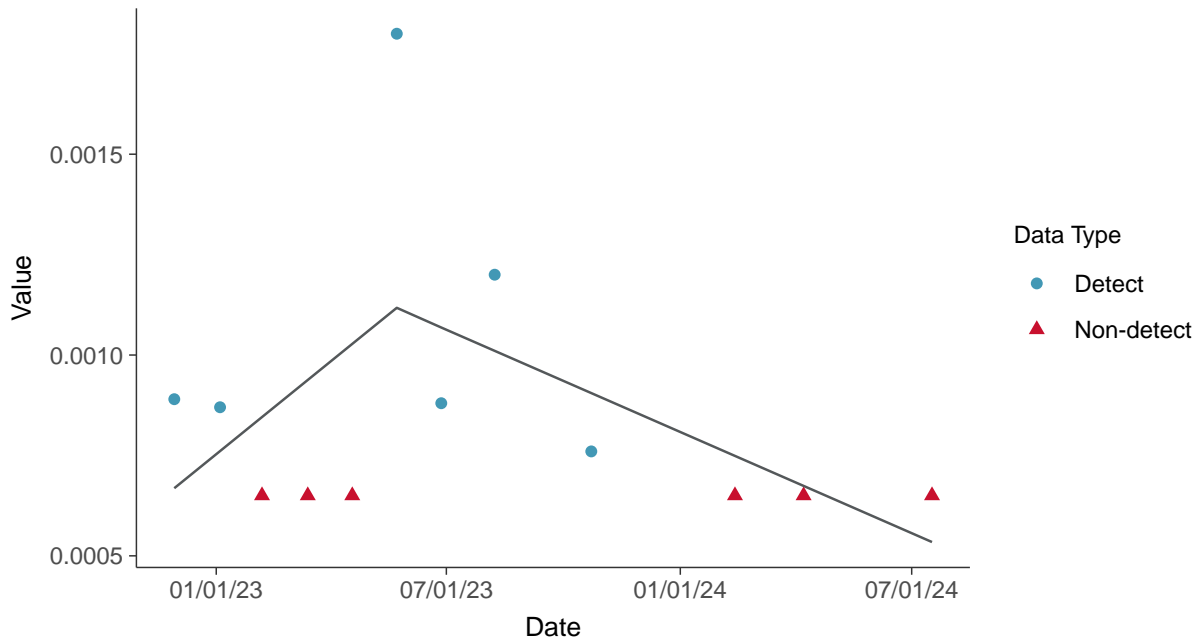
Nickel, MW-10 (mg/L)





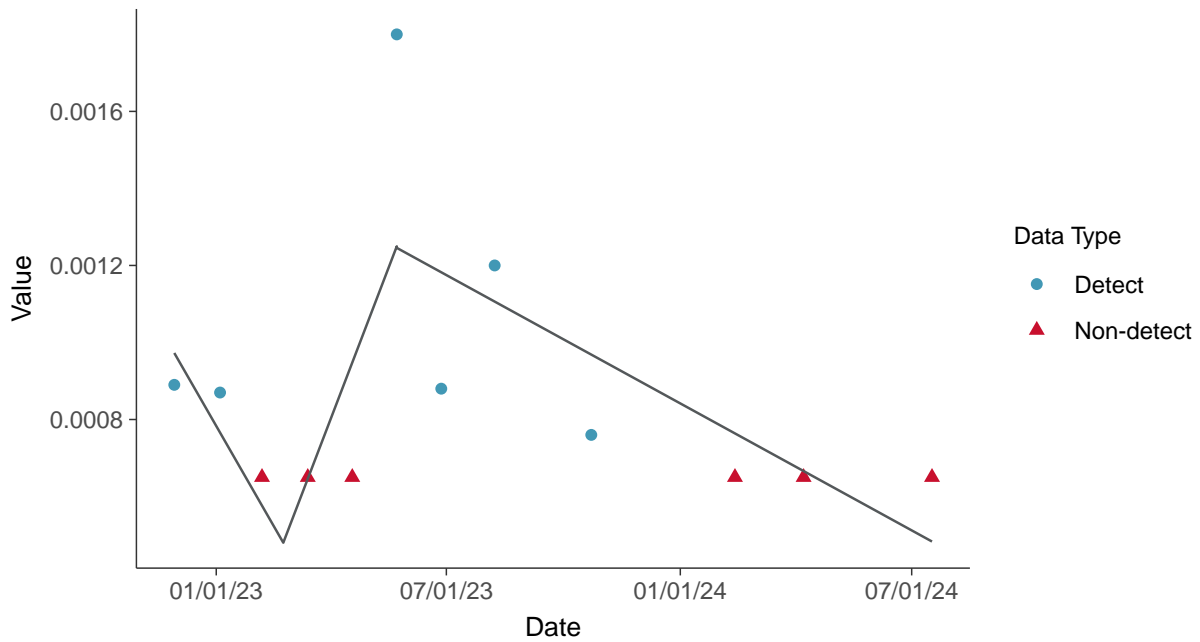
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

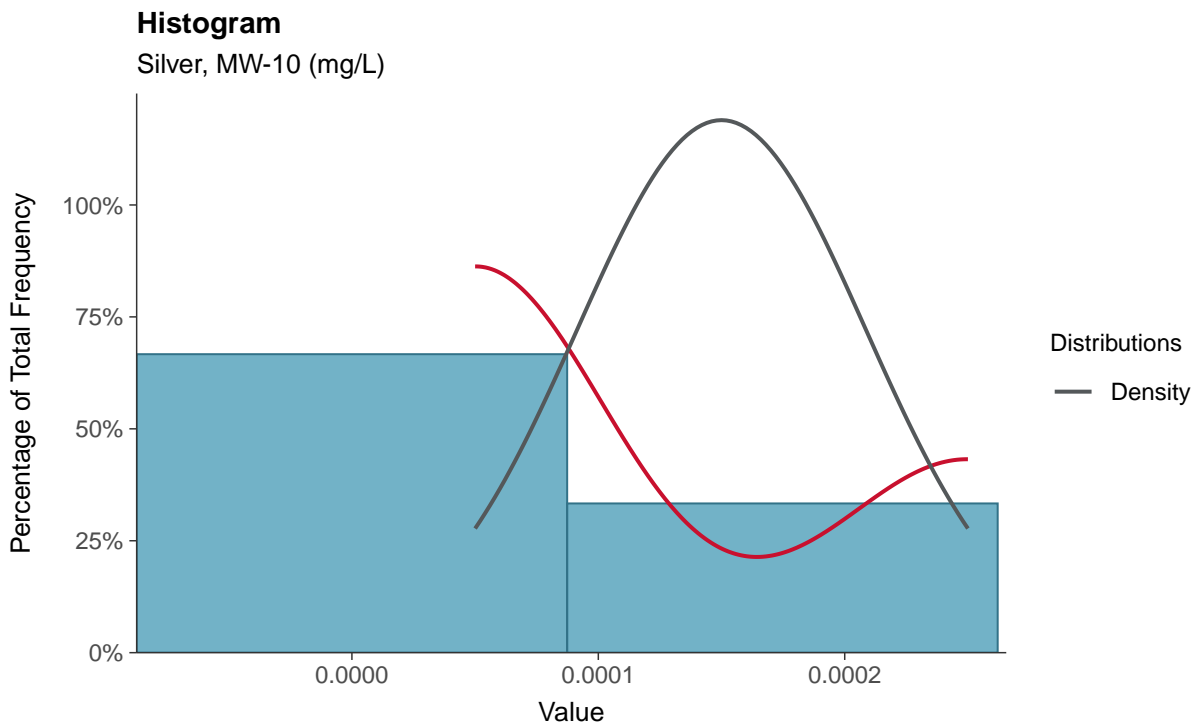
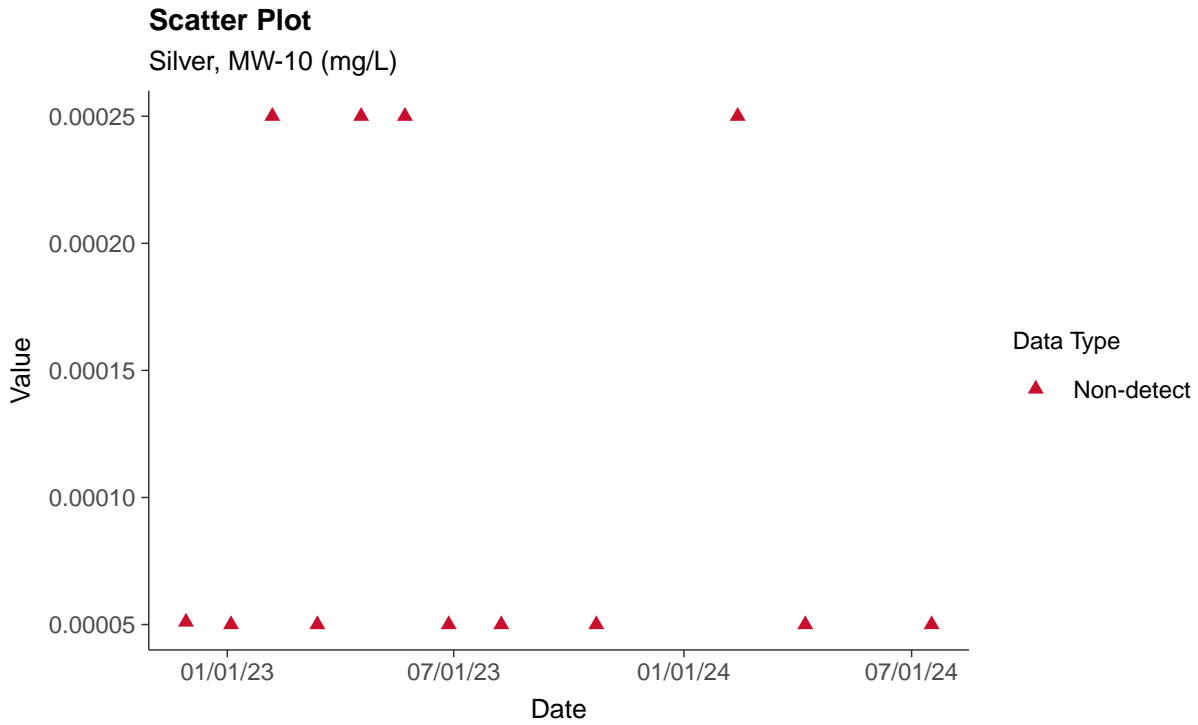
Nickel, MW-10 (mg/L)





### Part 115: Silver, MW-10

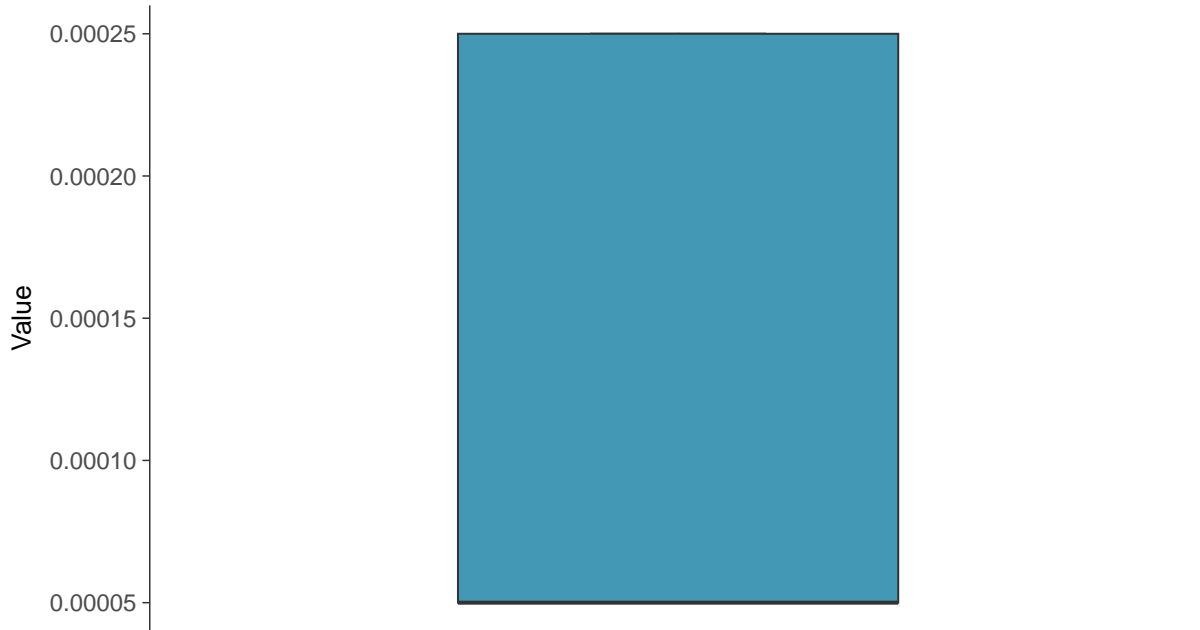
ID: 20\_3\_6\_123





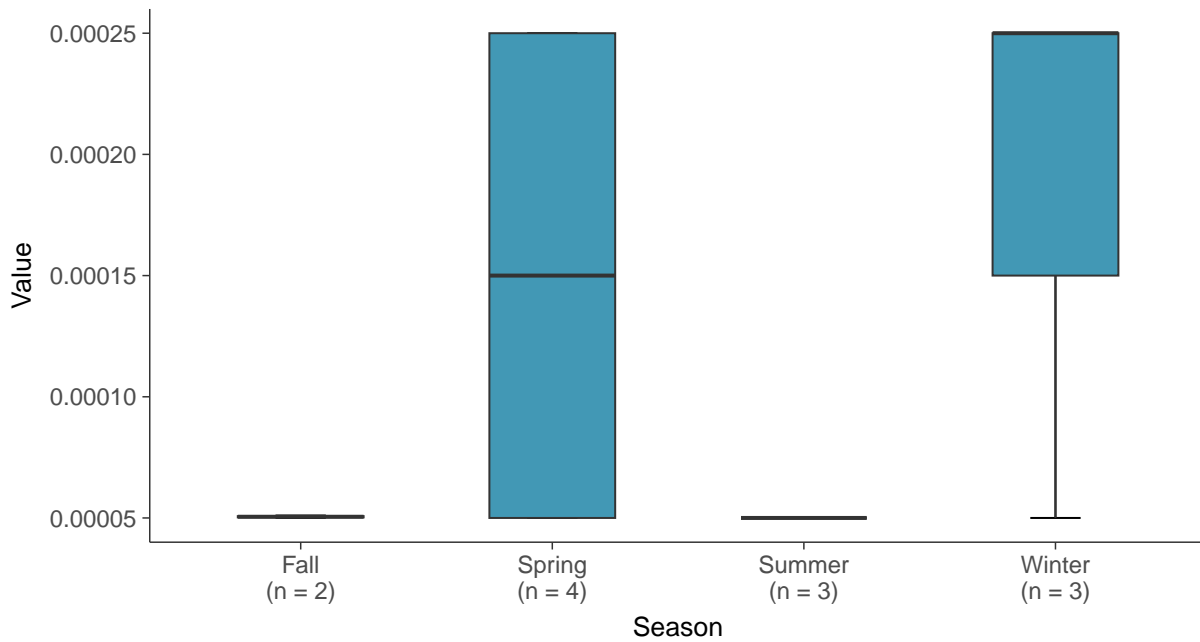
### Boxplot

Silver, MW-10 (mg/L)



### Boxplot by Season

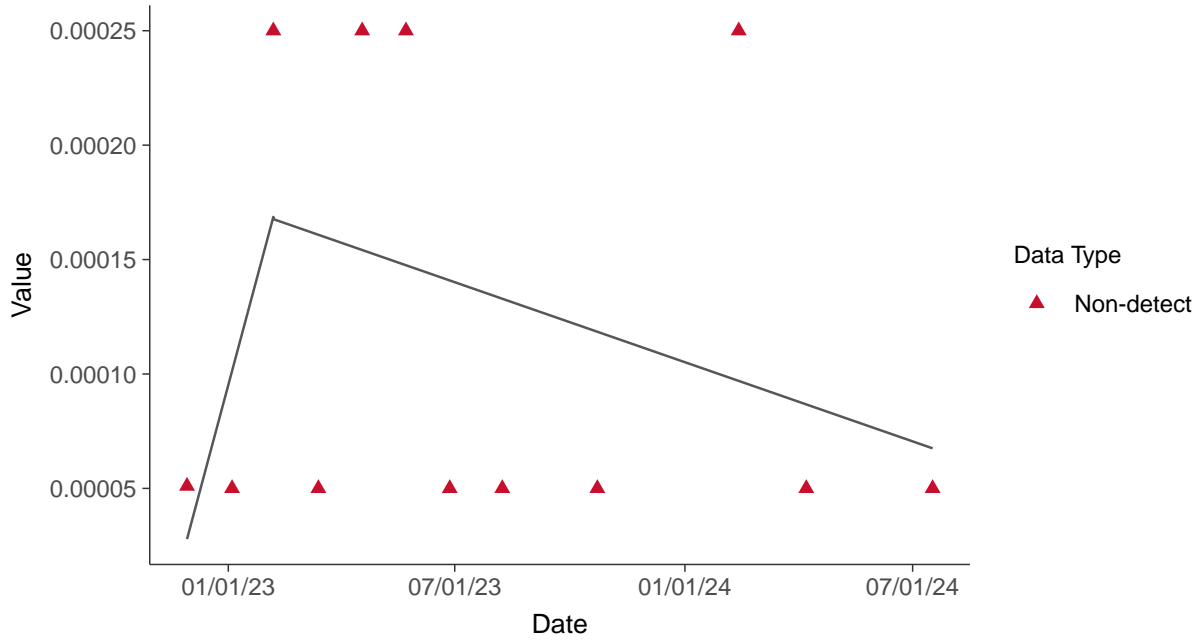
Silver, MW-10 (mg/L)





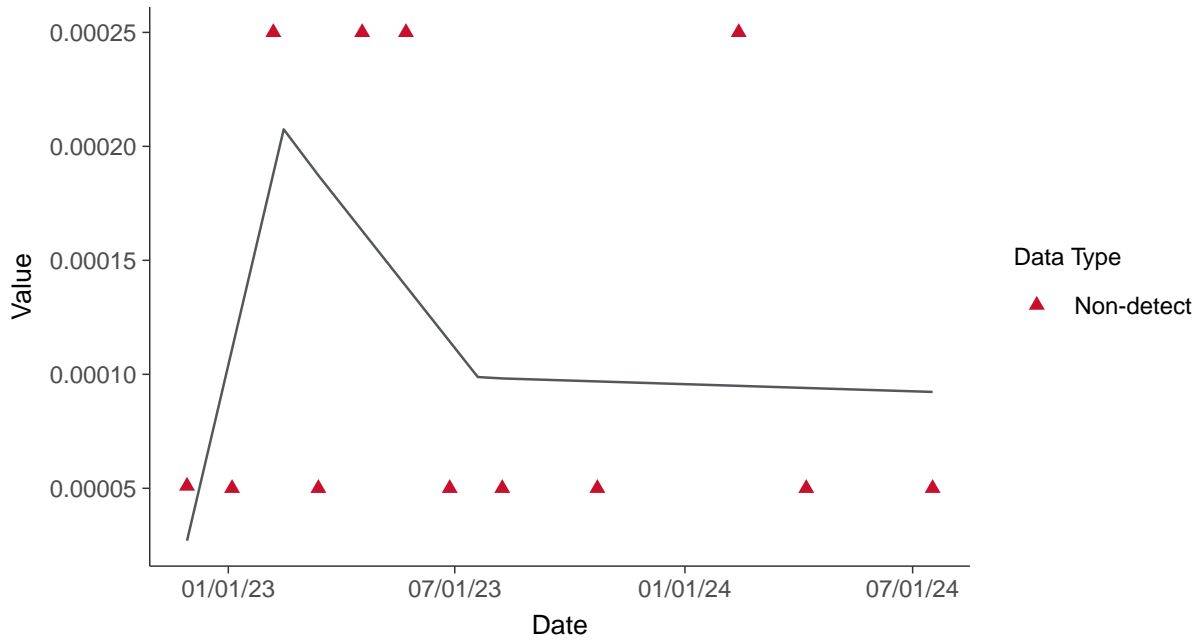
### Trend Regression: Piecewise Linear-Linear

Silver, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

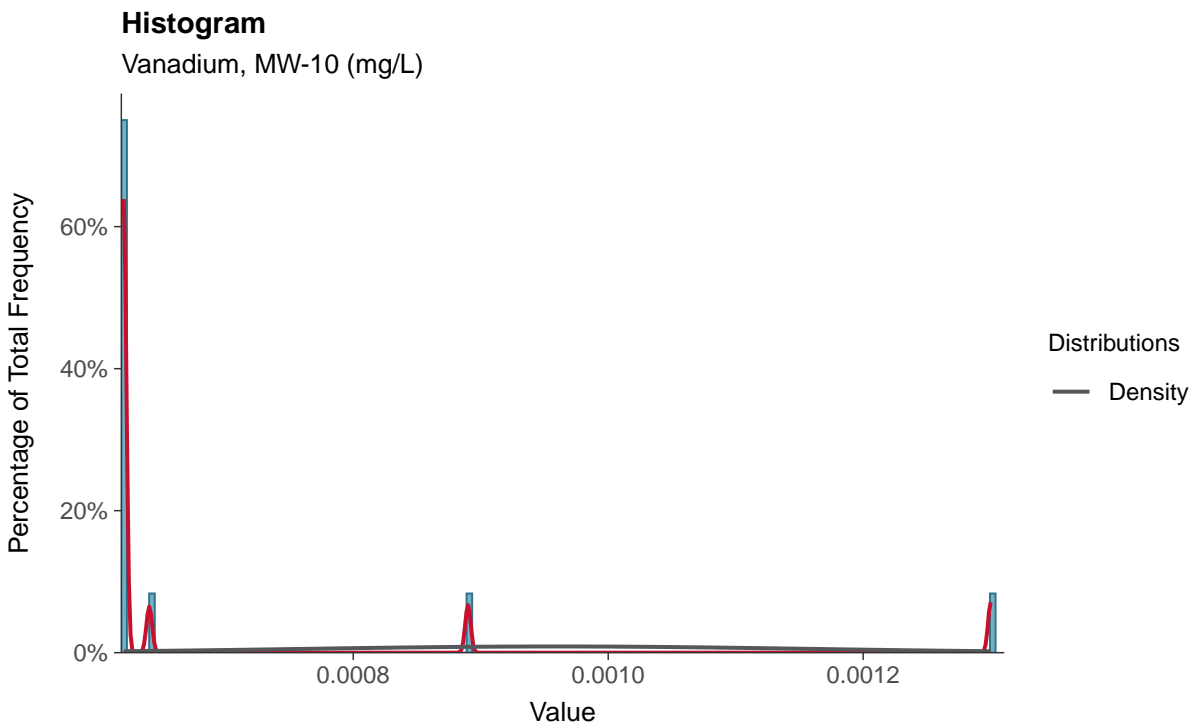
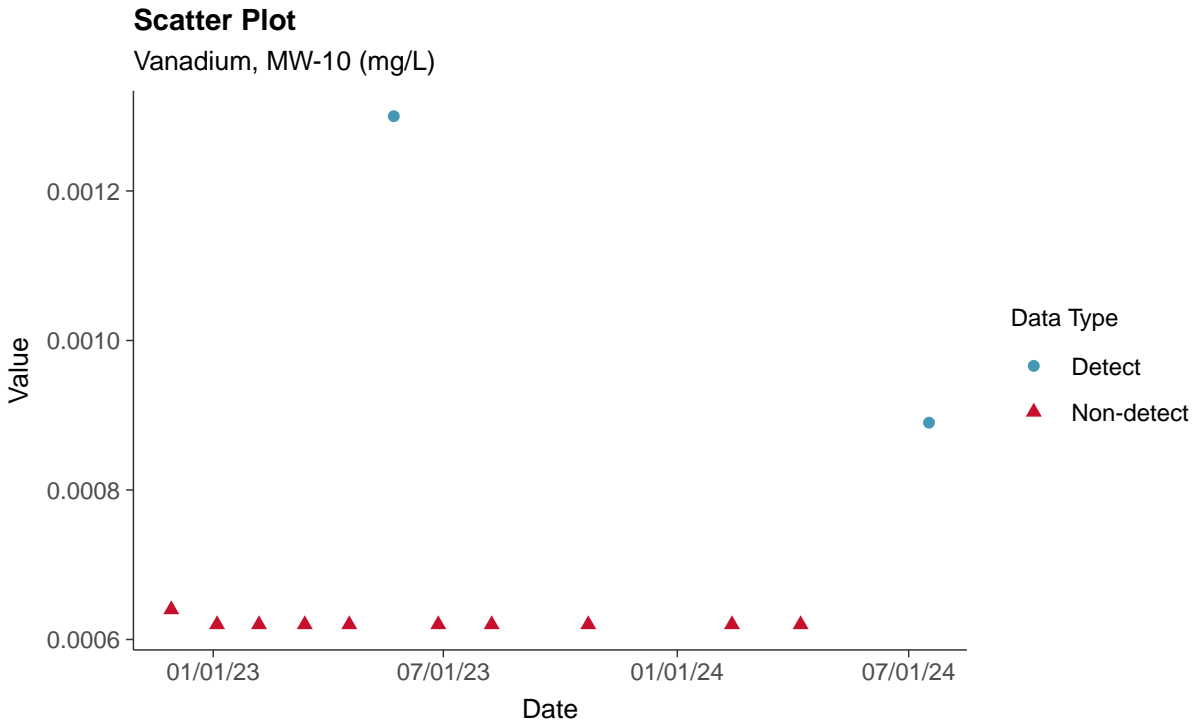
Silver, MW-10 (mg/L)





### Part 115: Vanadium, MW-10

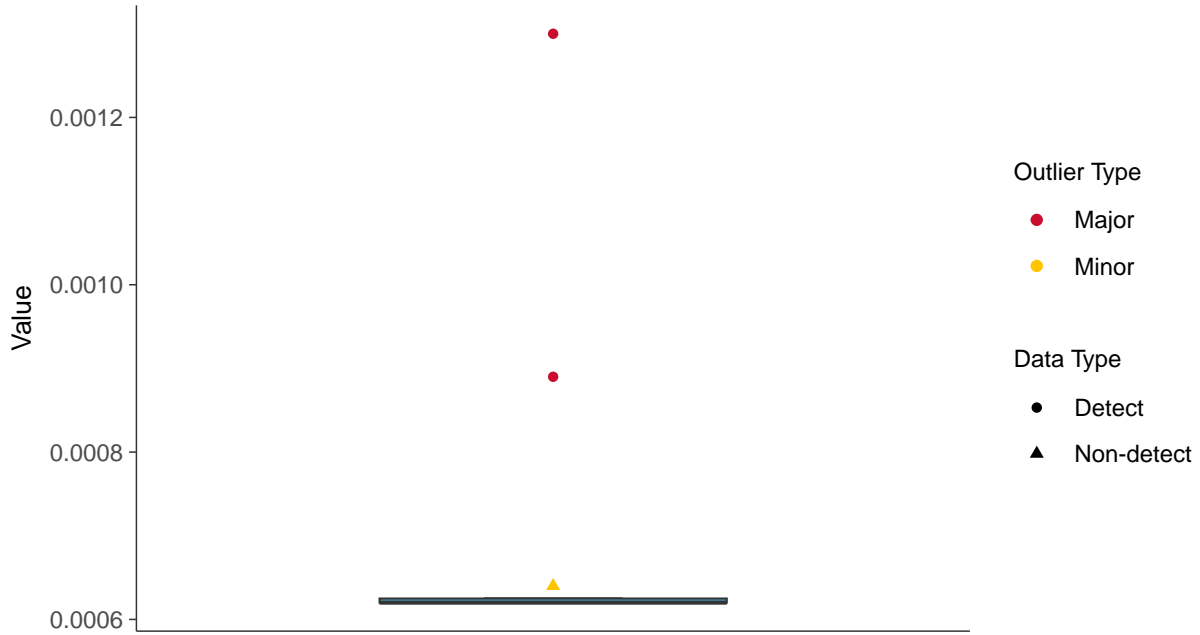
ID: 20\_3\_6\_129





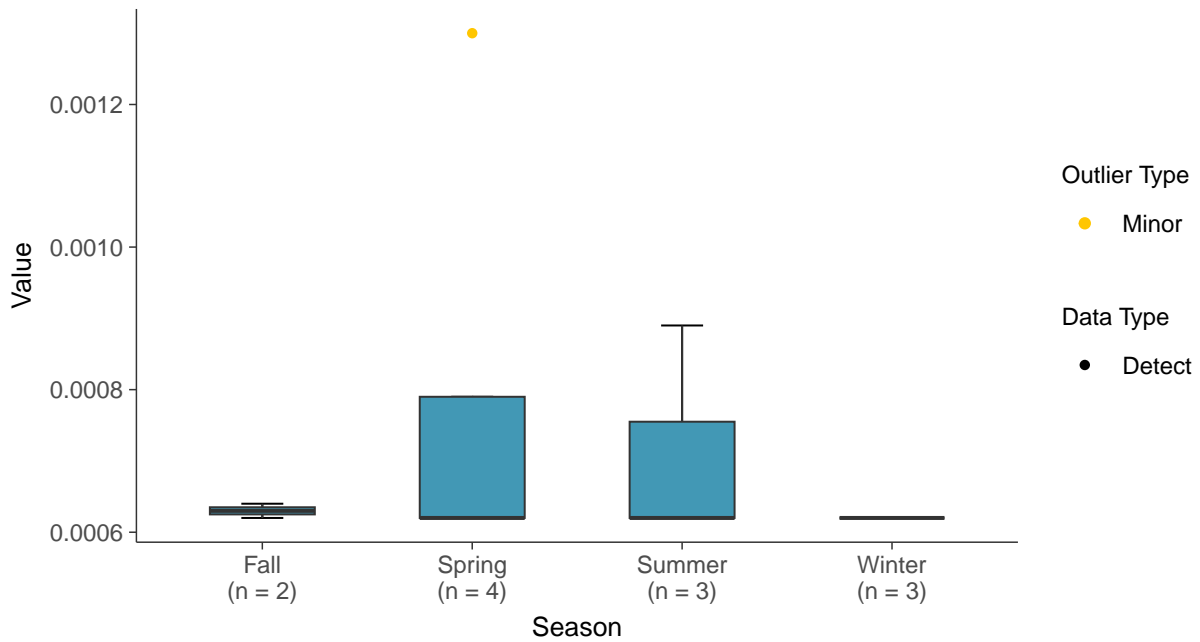
### Boxplot

Vanadium, MW-10 (mg/L)



### Boxplot by Season

Vanadium, MW-10 (mg/L)

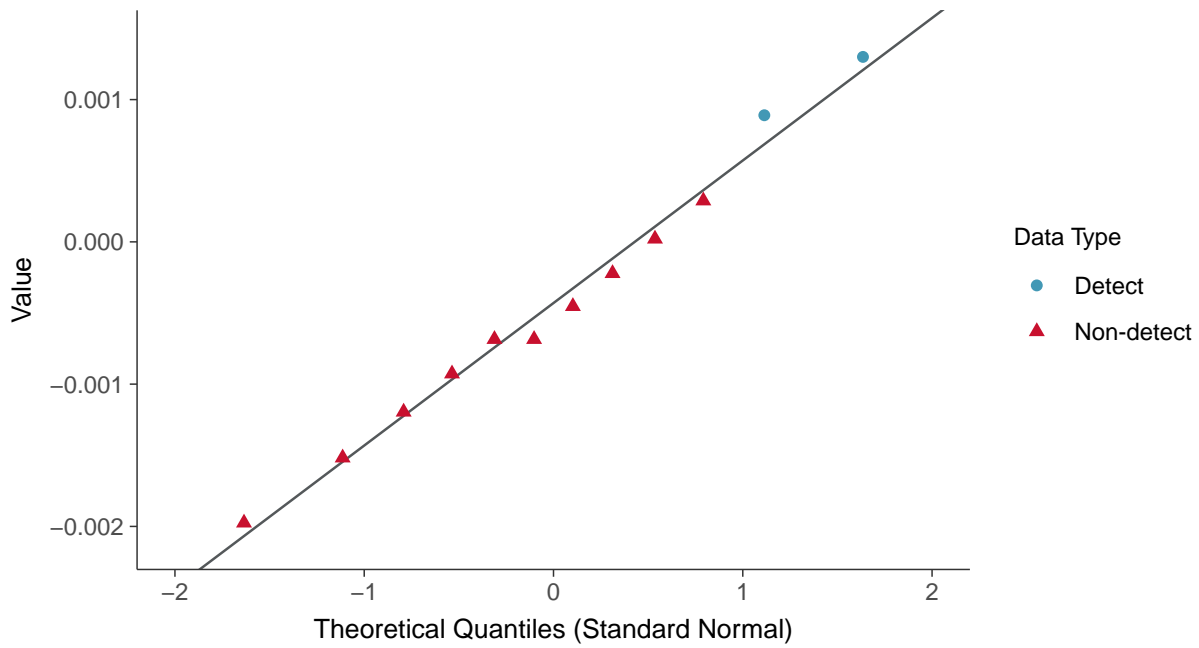






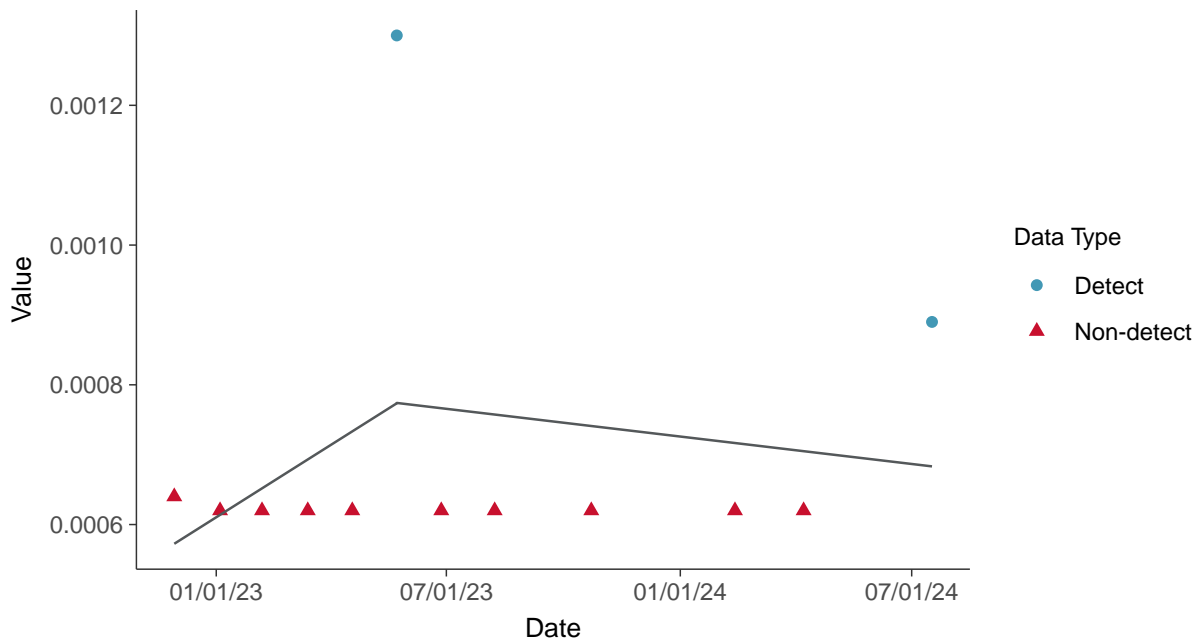
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-10 (mg/L)



### Trend Regression: Piecewise Linear-Linear

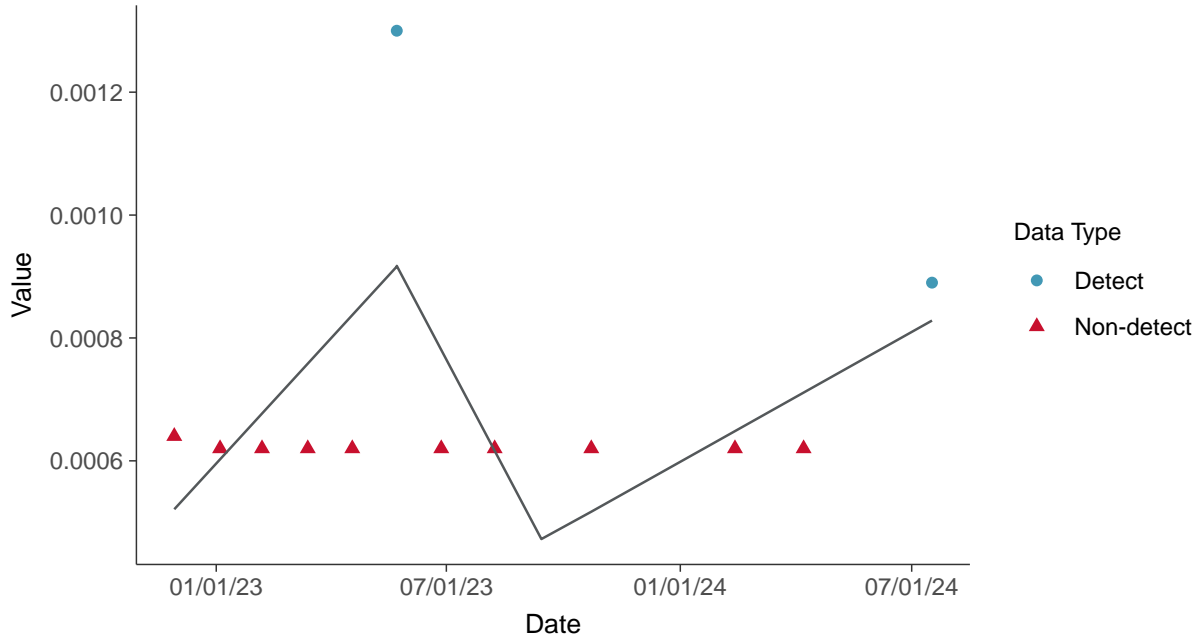
Vanadium, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

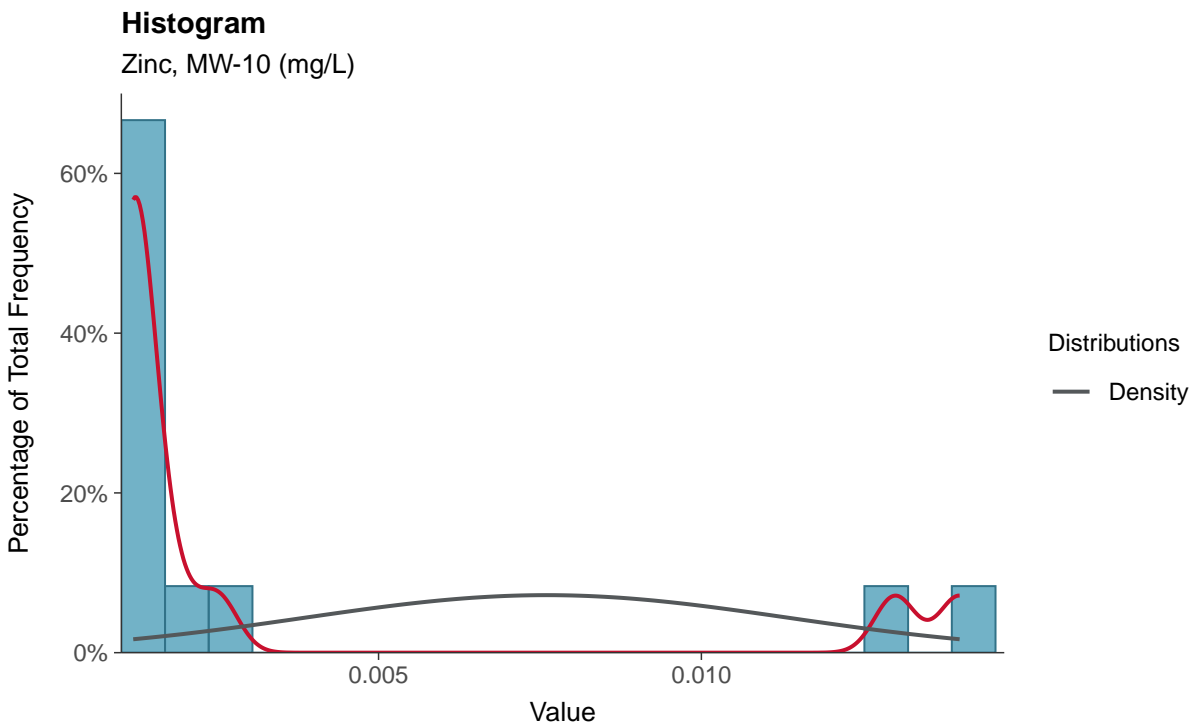
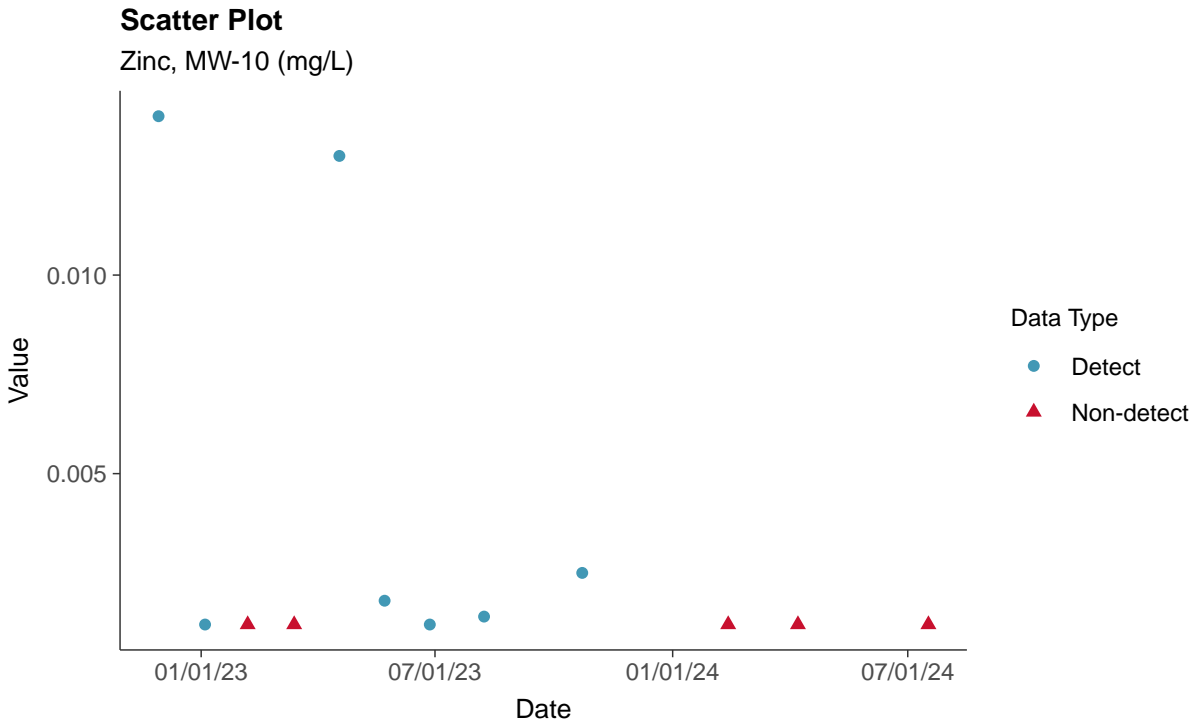
Vanadium, MW-10 (mg/L)





### Part 115: Zinc, MW-10

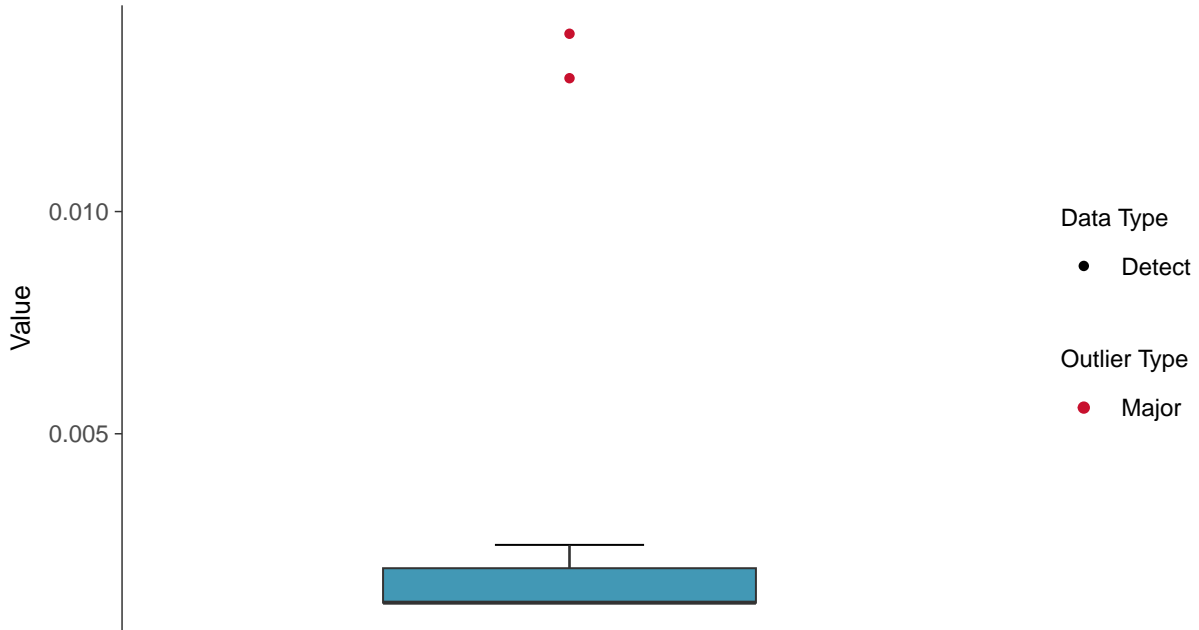
ID: 20\_3\_6\_130





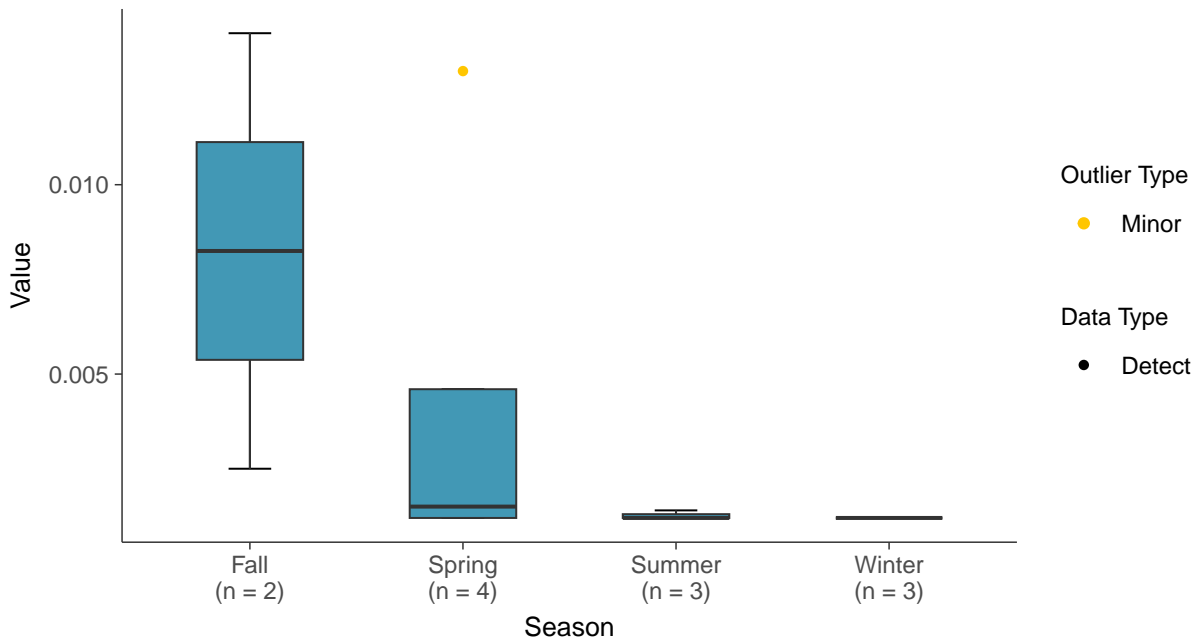
### Boxplot

Zinc, MW-10 (mg/L)



### Boxplot by Season

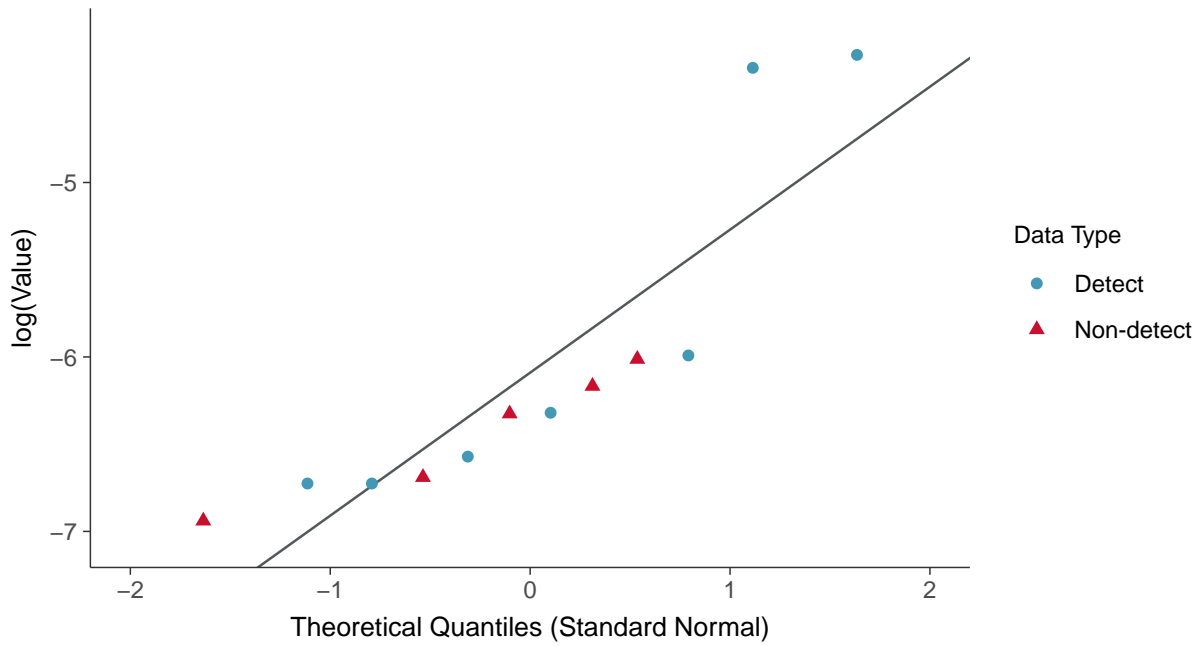
Zinc, MW-10 (mg/L)





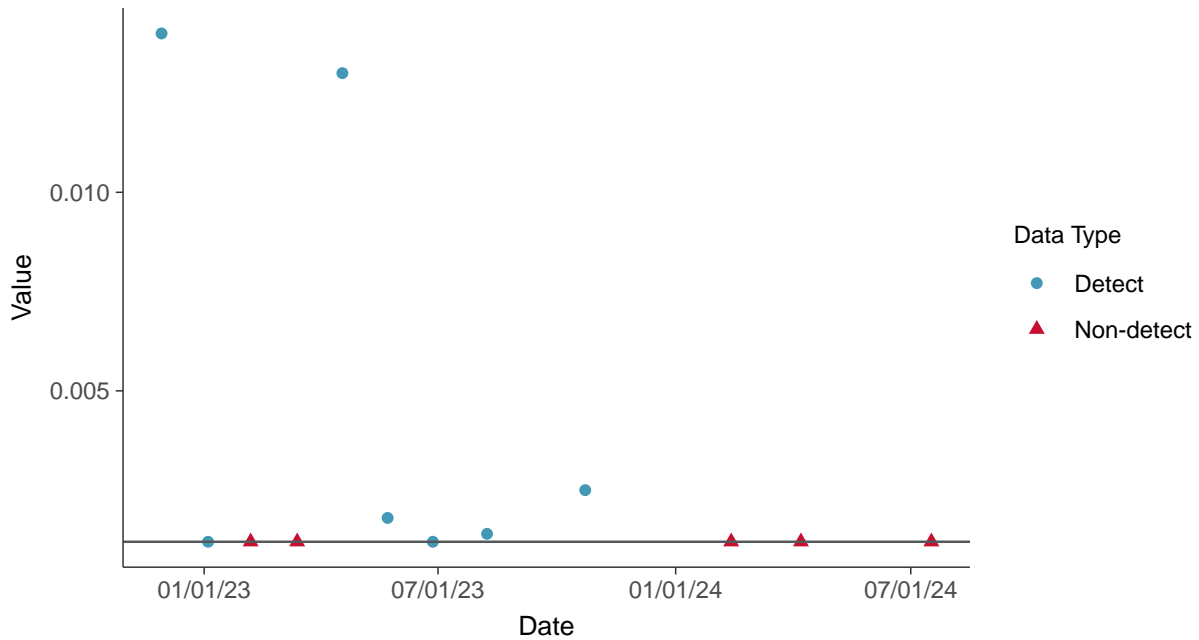
### Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-10 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

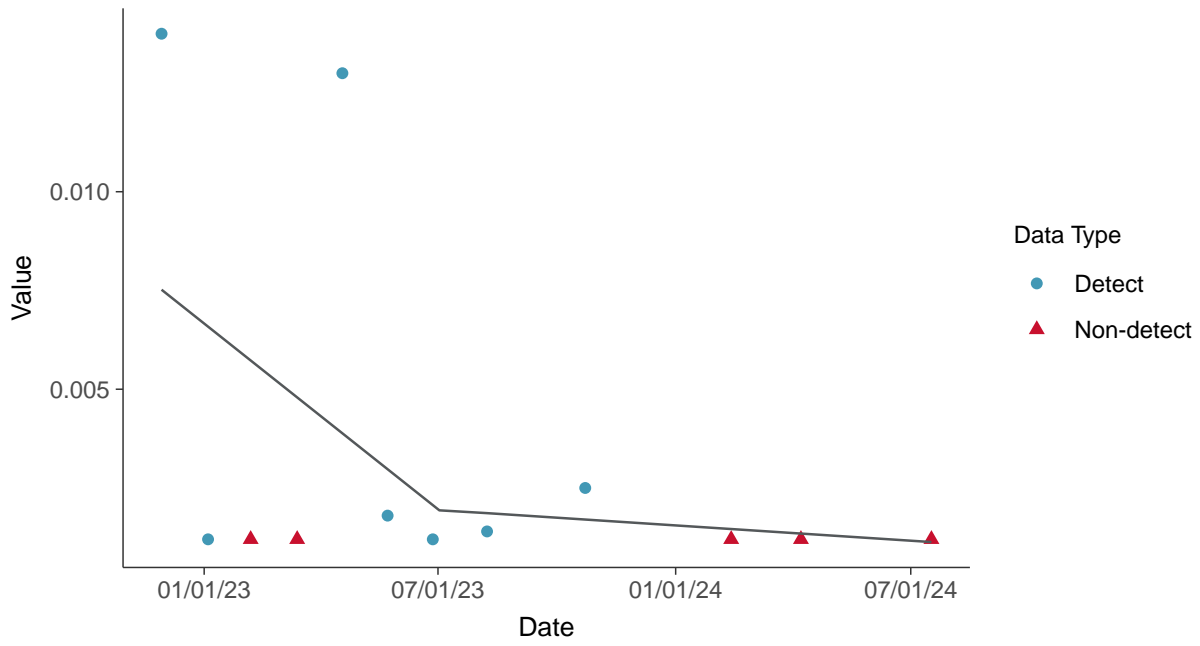
Zinc, MW-10 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Zinc, MW-10 (mg/L)



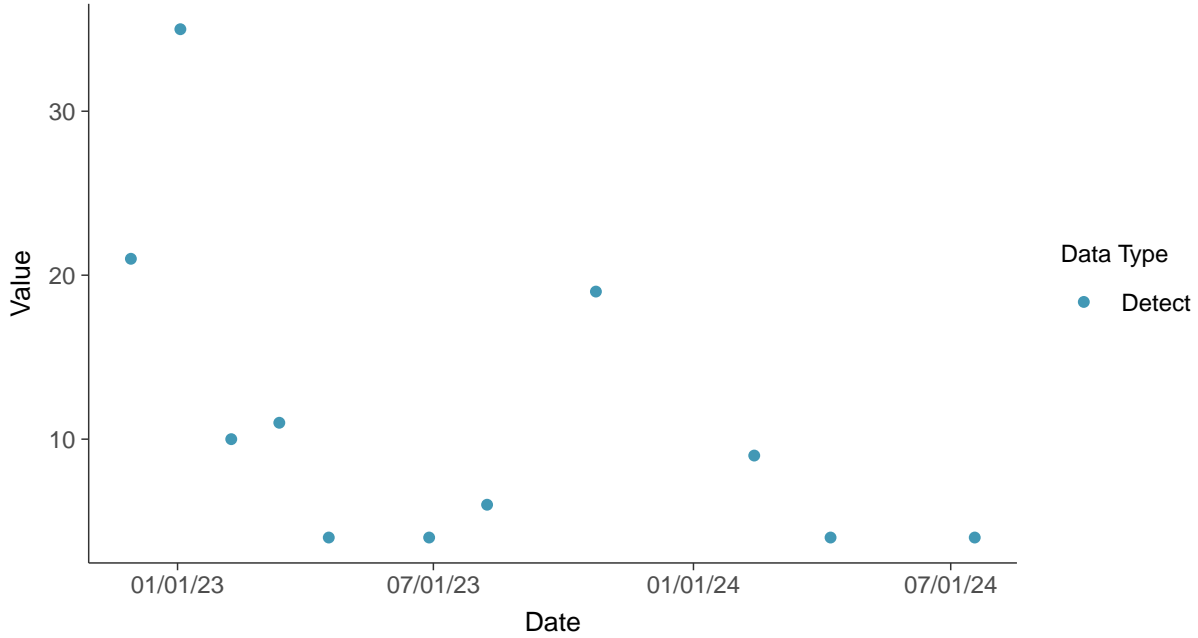


### Additional Parameters: Total Suspended Solids, MW-11

ID: 21\_2\_3\_127

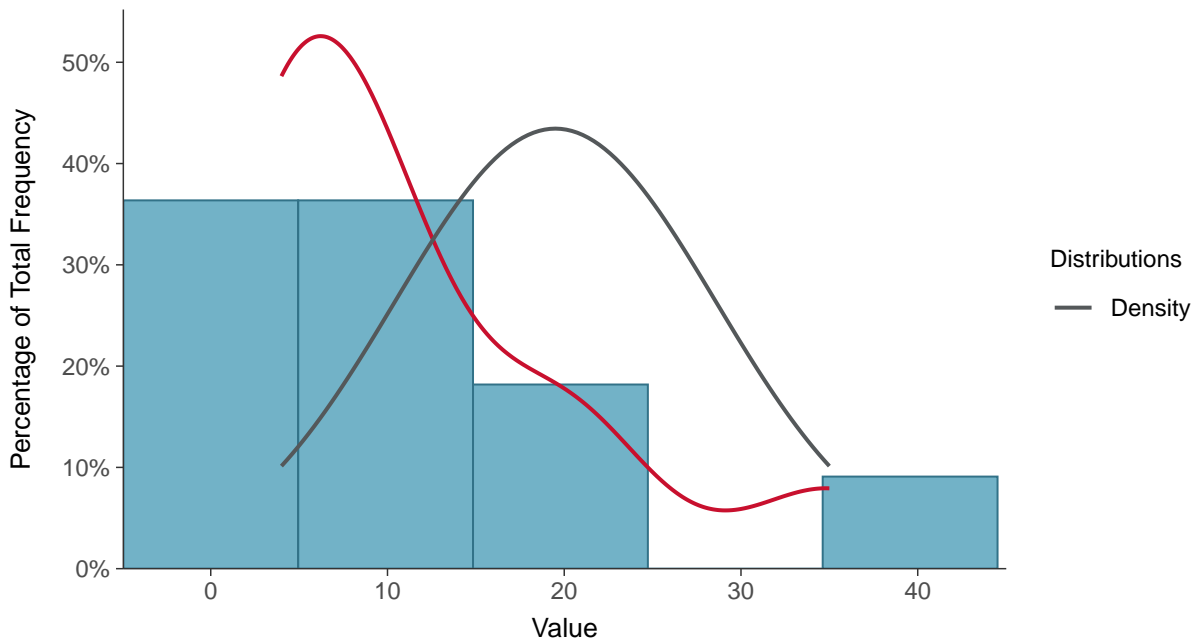
#### Scatter Plot

Total Suspended Solids, MW-11 (mg/L)



#### Histogram

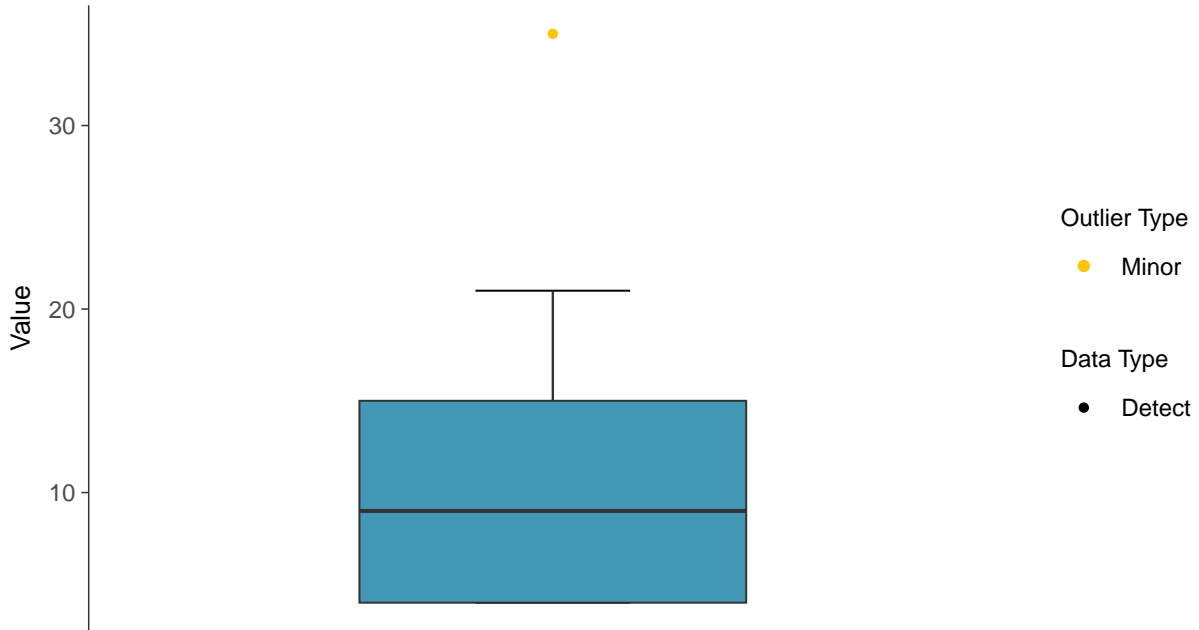
Total Suspended Solids, MW-11 (mg/L)





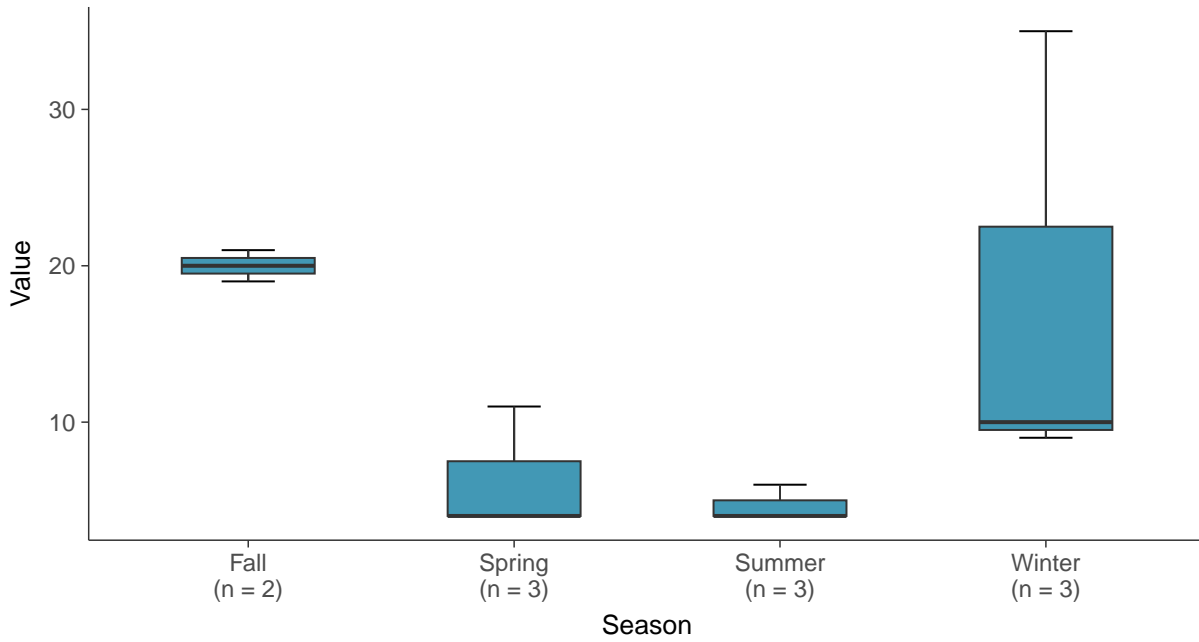
### Boxplot

Total Suspended Solids, MW-11 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-11 (mg/L)

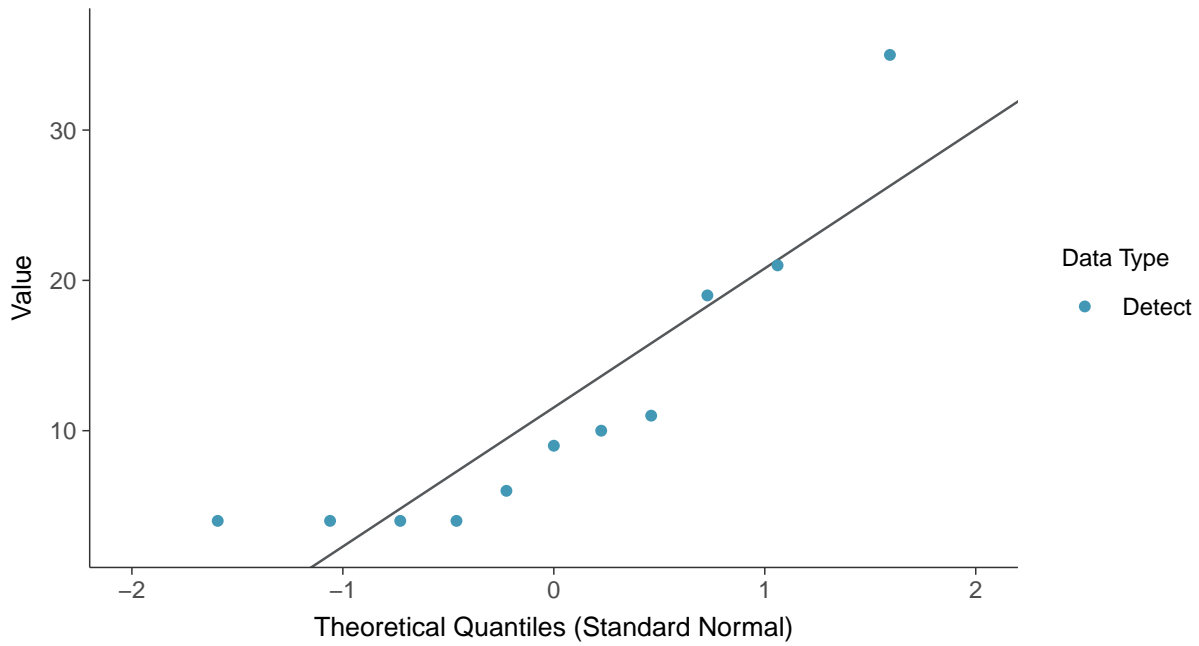






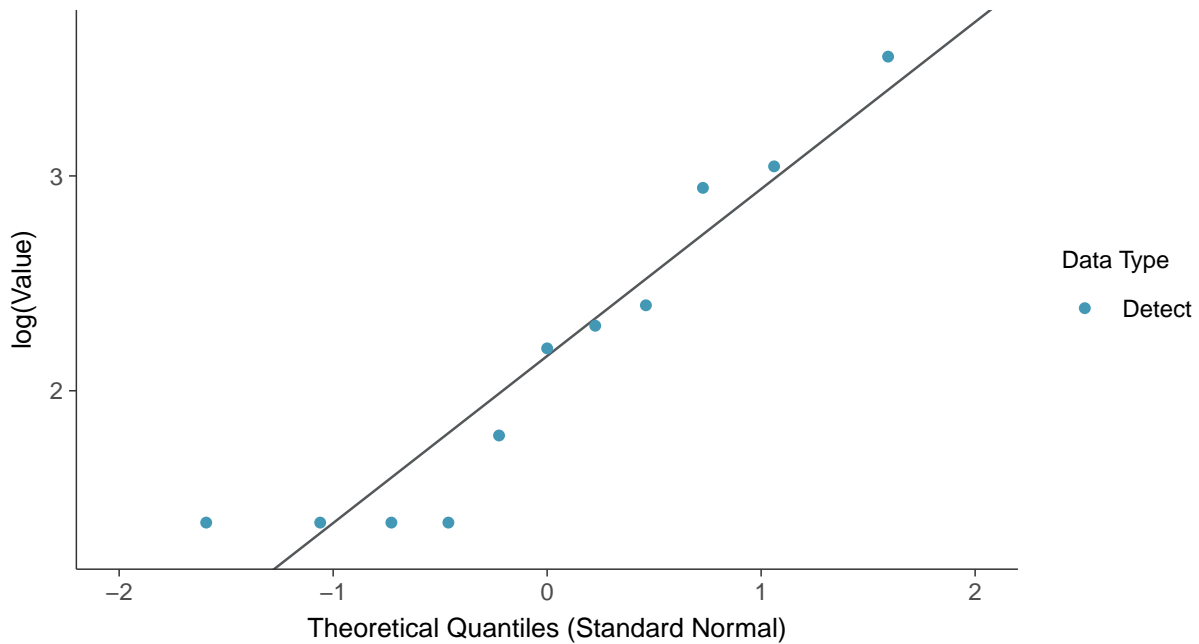
### Normal Q-Q plot

Total Suspended Solids, MW-11 (mg/L)



### Lognormal Q-Q plot

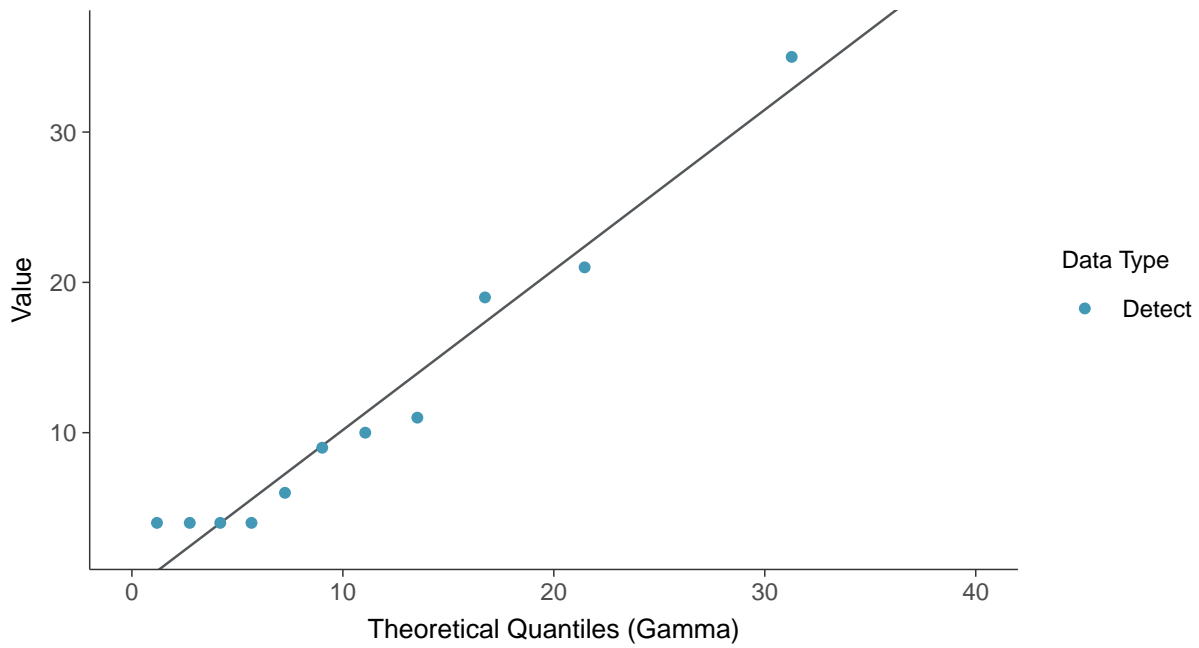
Total Suspended Solids, MW-11 (mg/L)





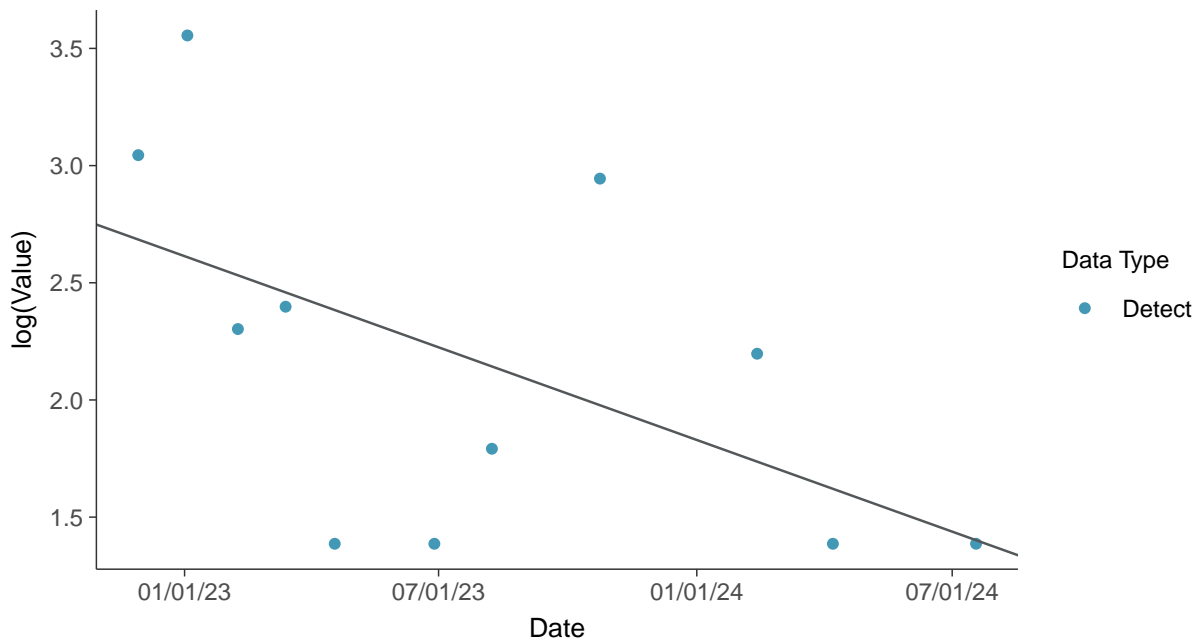
### Gamma Q-Q plot

Total Suspended Solids, MW-11 (mg/L)



### Trend Regression: Lognormal MLE

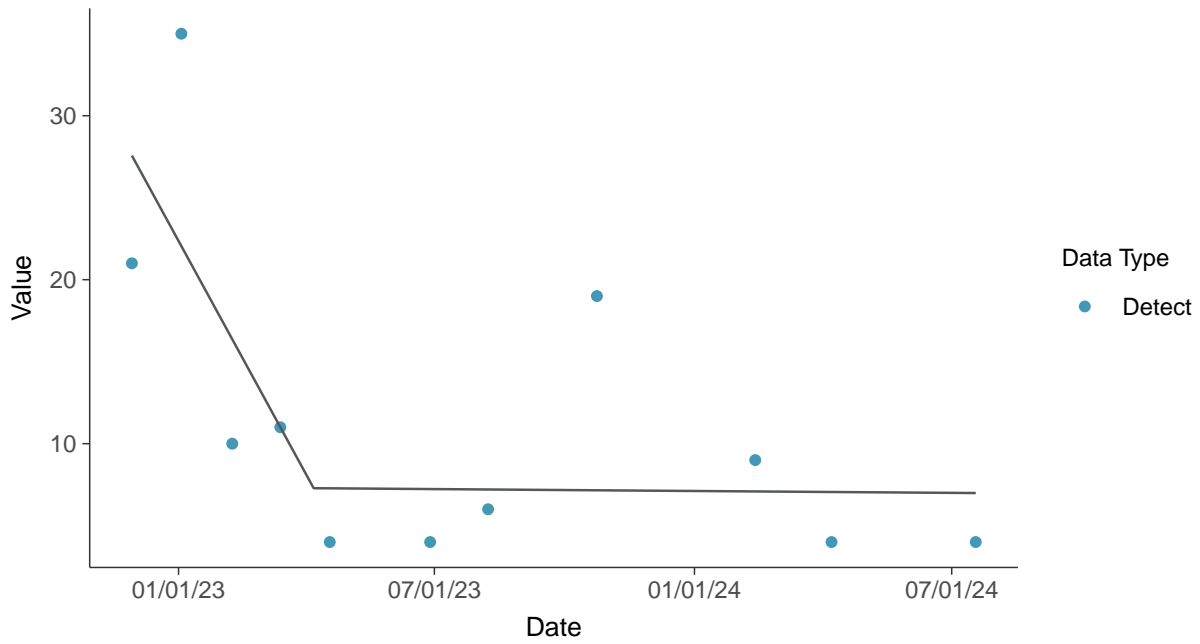
Total Suspended Solids, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-11 (mg/L)



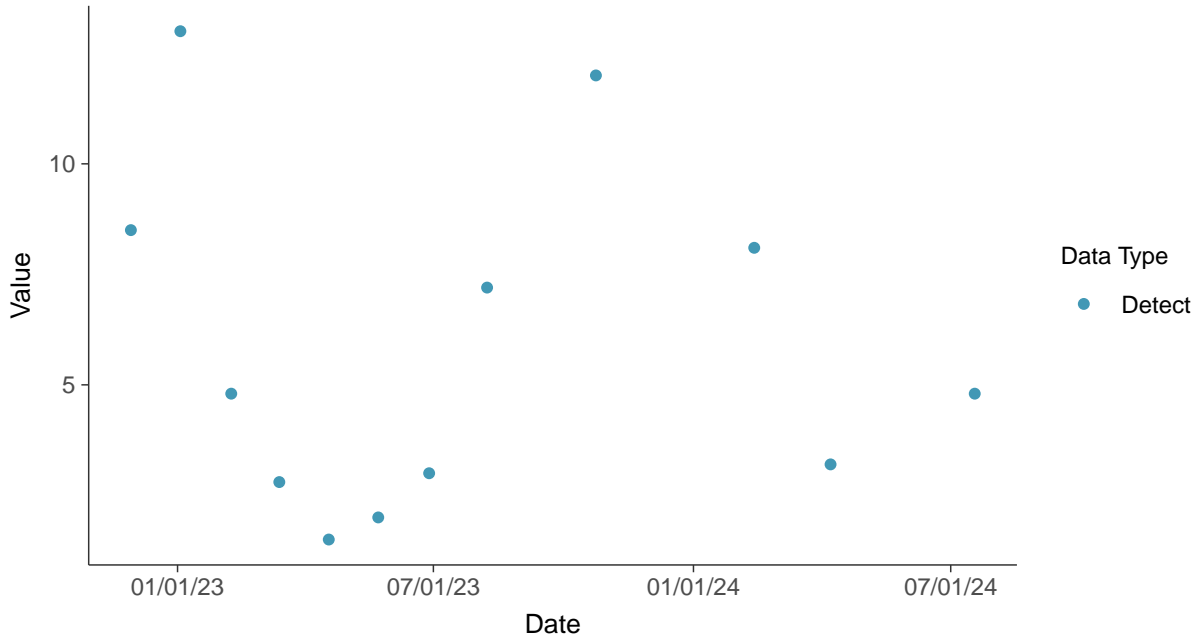


### Appendix III: Boron, MW-11

ID: 21\_2\_4\_105

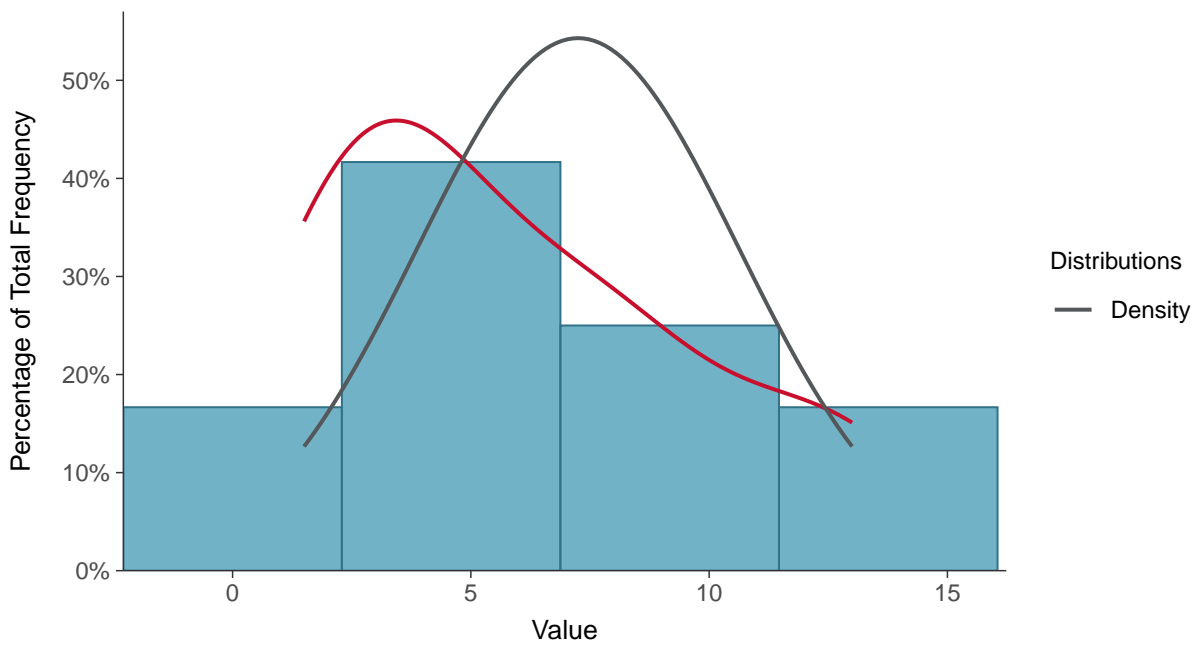
#### Scatter Plot

Boron, MW-11 (mg/L)



#### Histogram

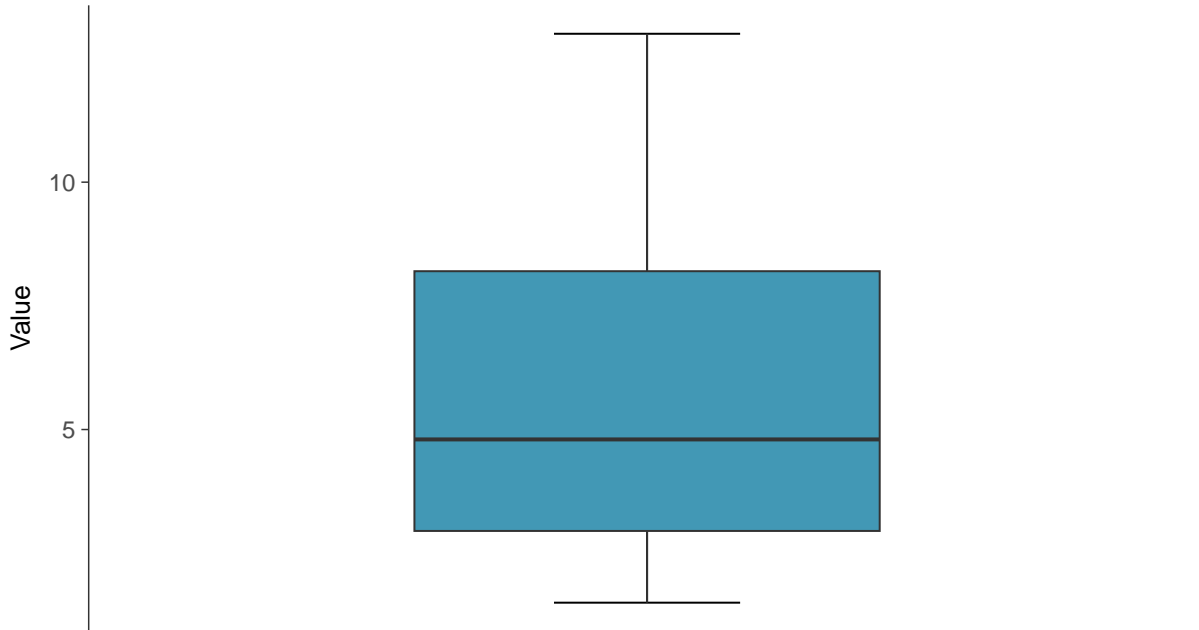
Boron, MW-11 (mg/L)





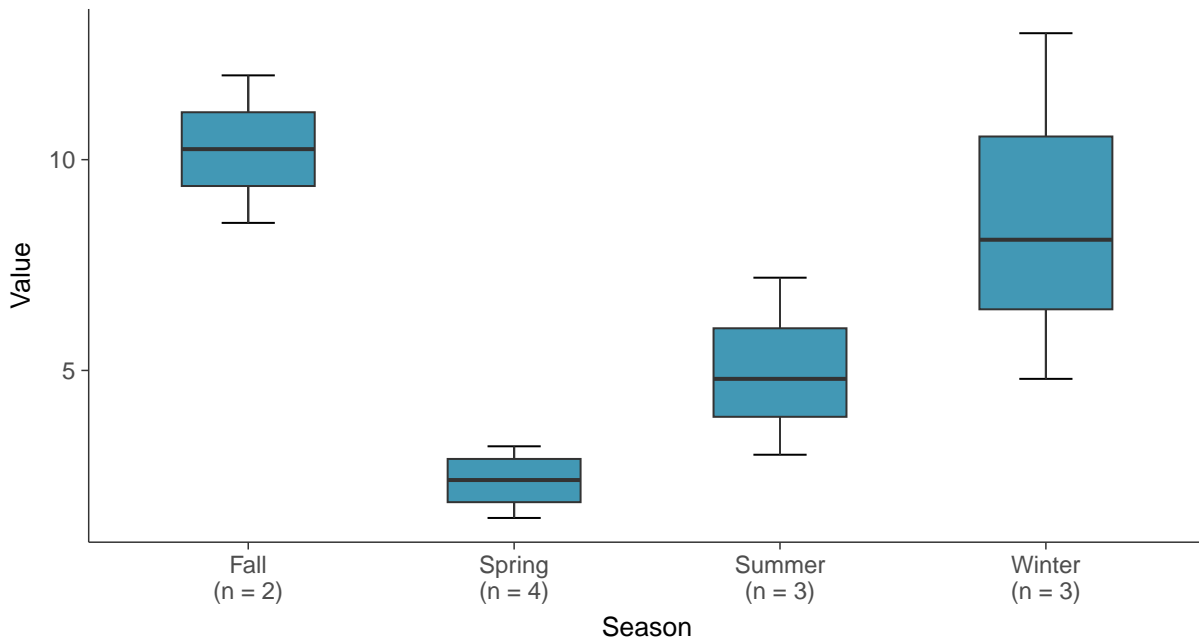
### Boxplot

Boron, MW-11 (mg/L)



### Boxplot by Season

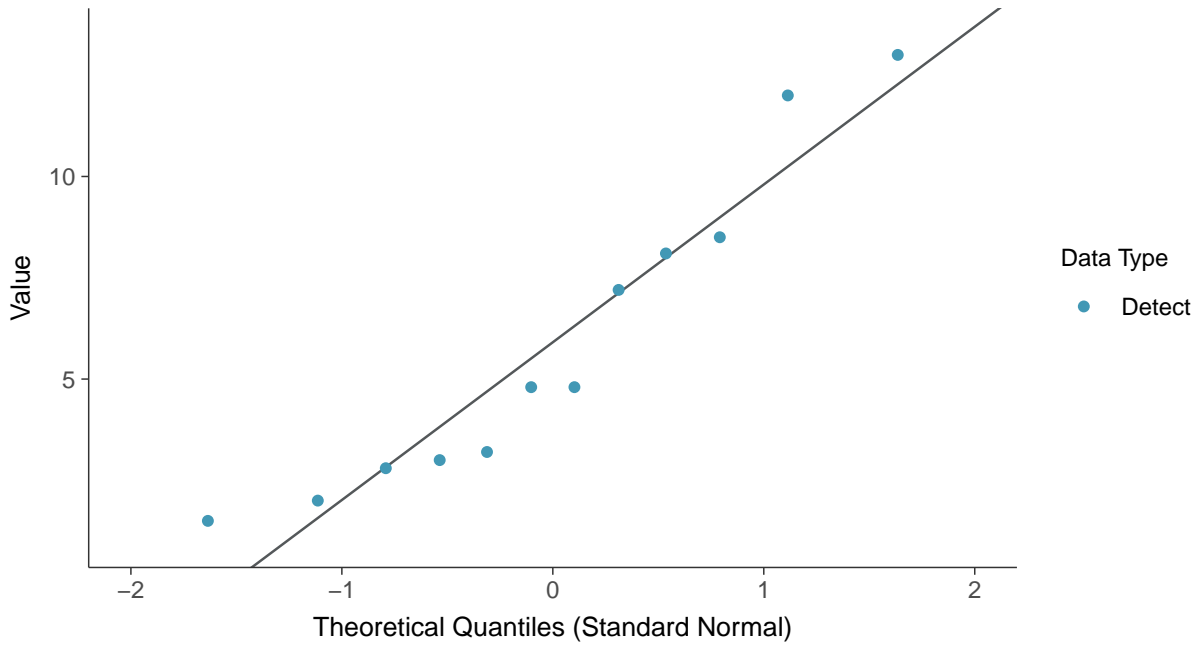
Boron, MW-11 (mg/L)





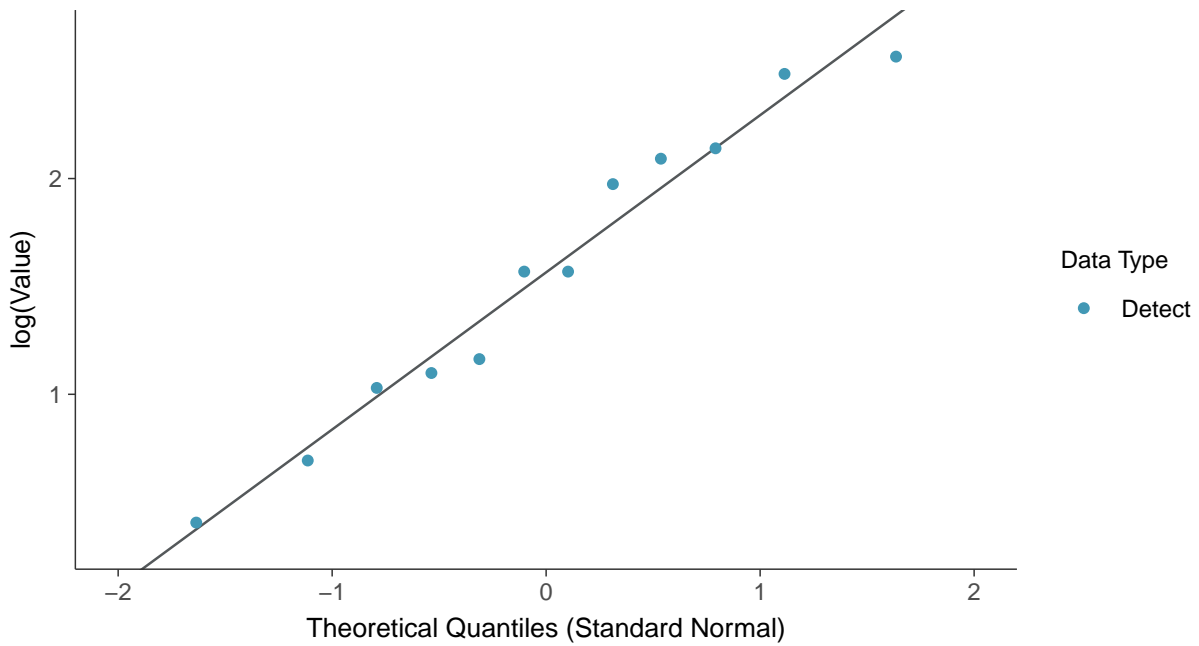
### Normal Q-Q plot

Boron, MW-11 (mg/L)



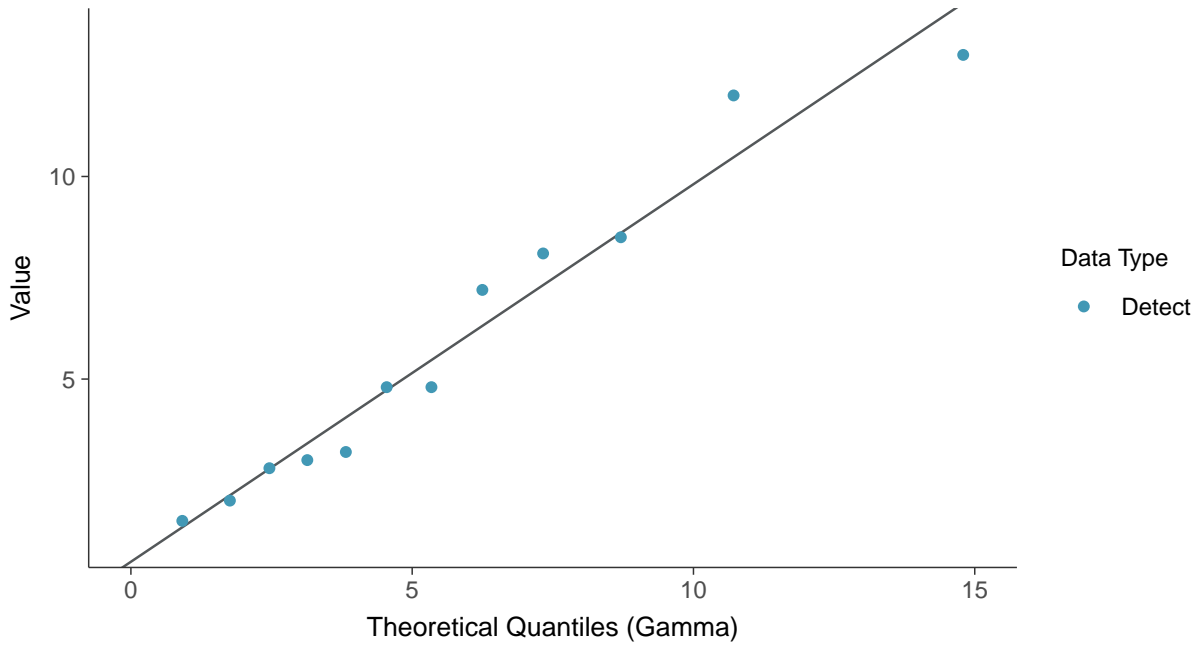
### Lognormal Q-Q plot

Boron, MW-11 (mg/L)

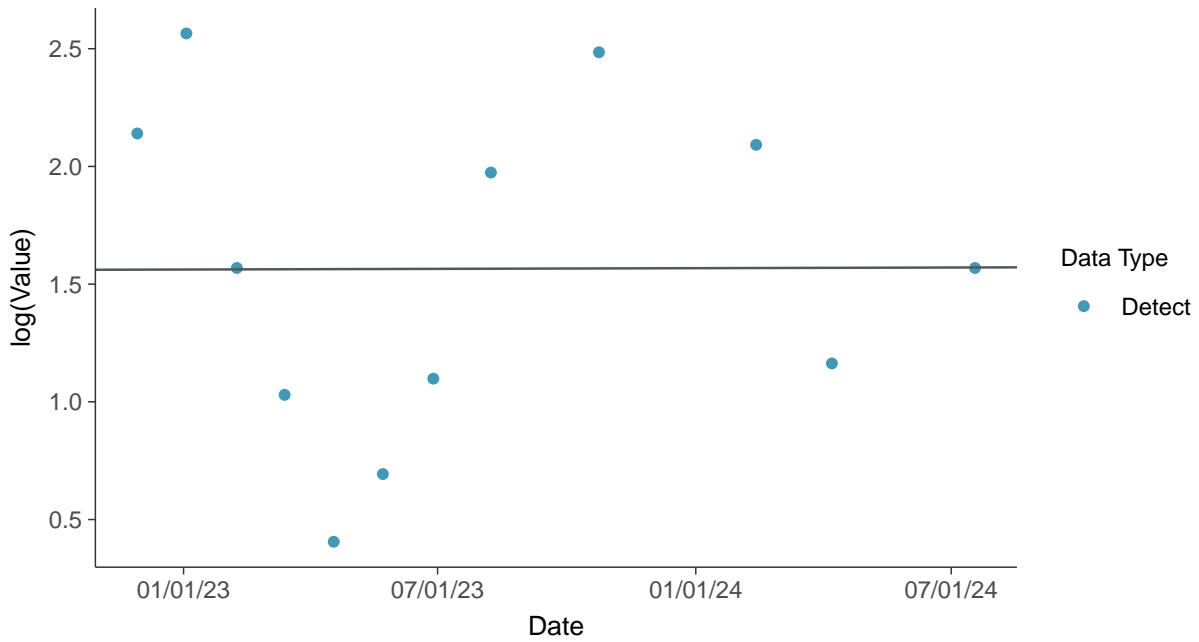




**Gamma Q-Q plot**  
Boron, MW-11 (mg/L)



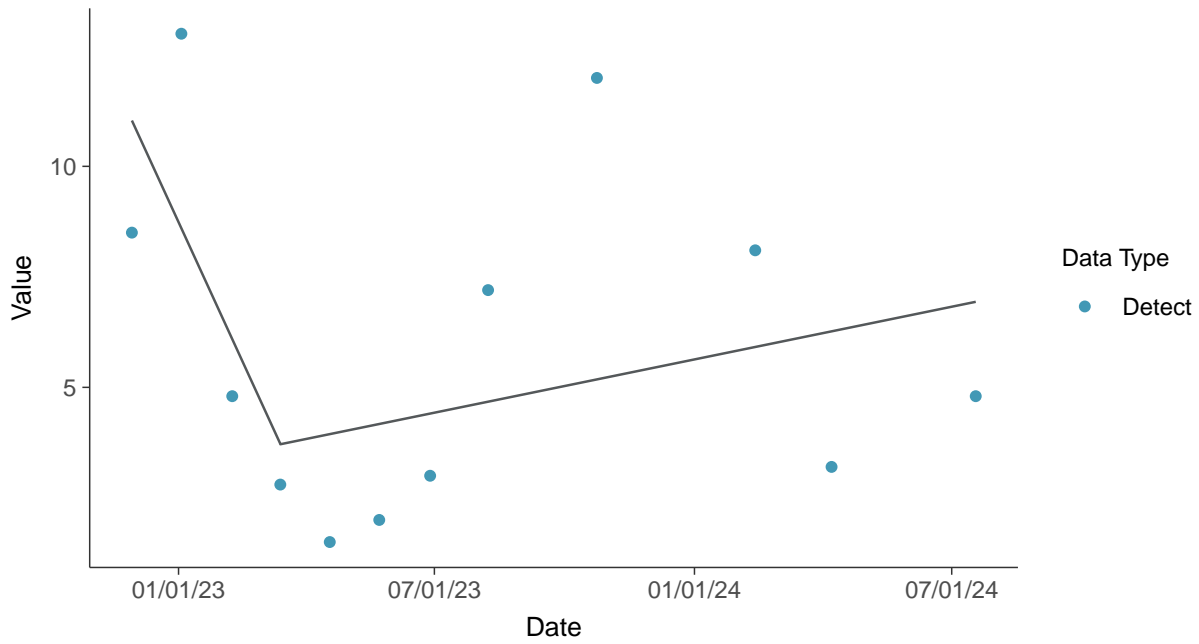
**Trend Regression: Lognormal MLE**  
Boron, MW-11 (mg/L)





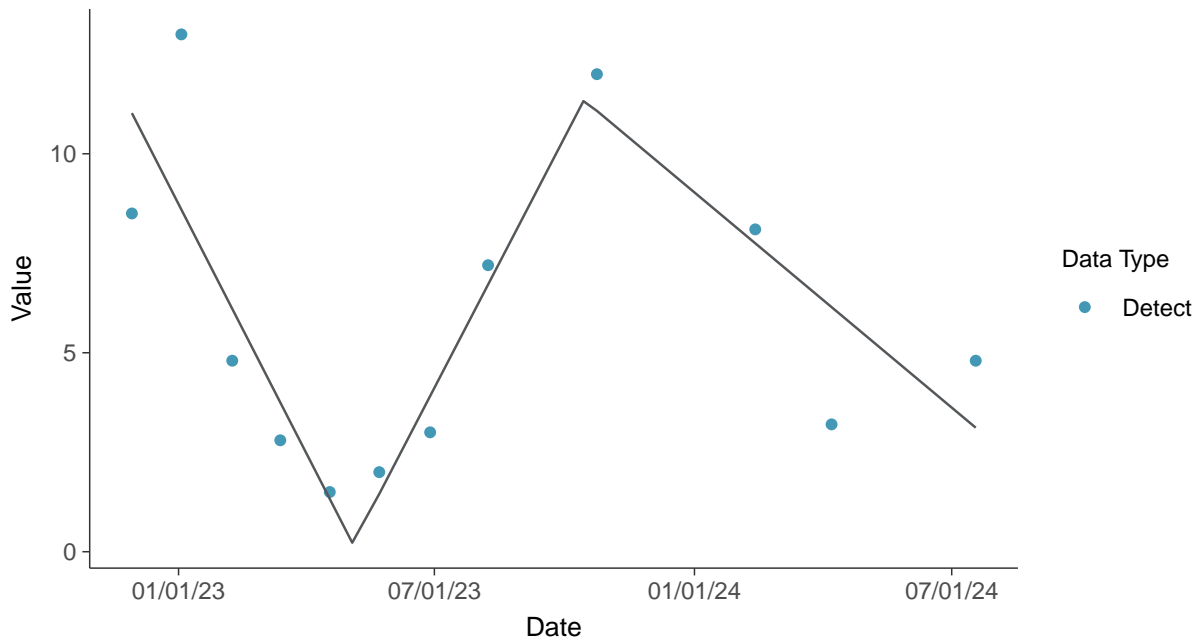
### Trend Regression: Piecewise Linear-Linear

Boron, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-11 (mg/L)





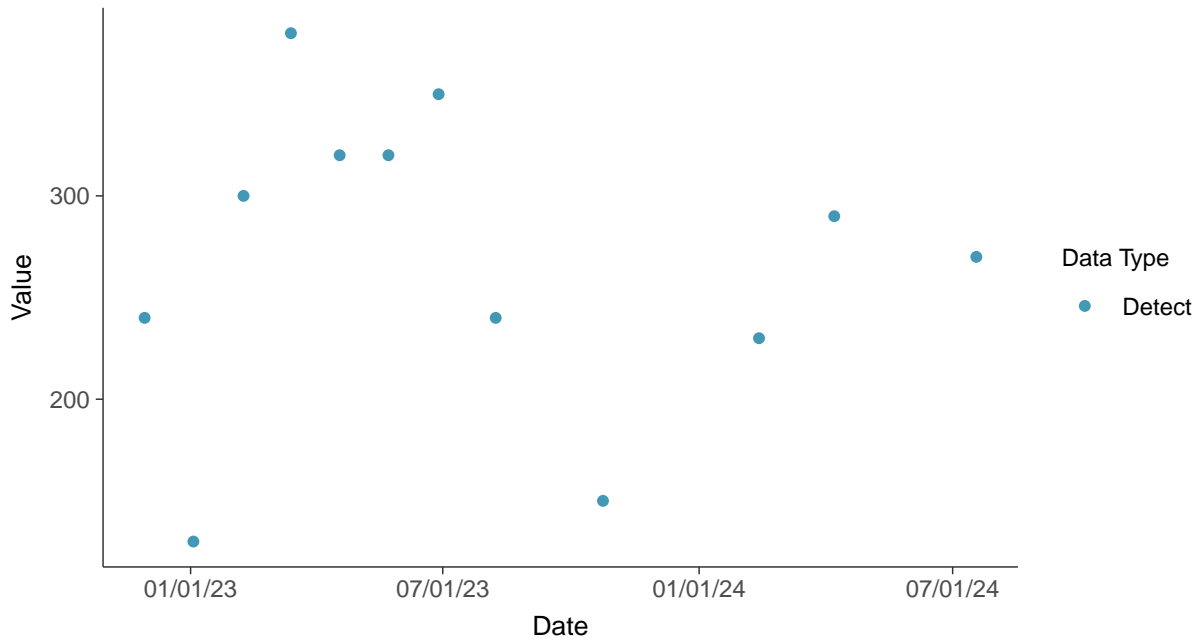


### Appendix III: Calcium, MW-11

ID: 21\_2\_4\_107

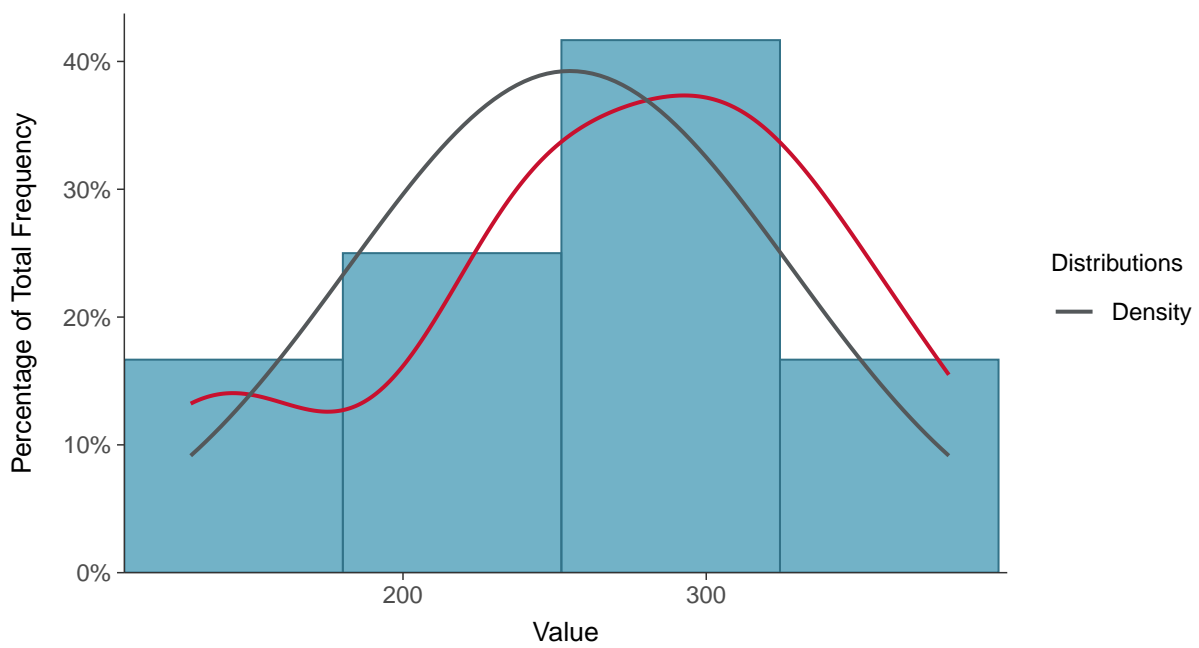
#### Scatter Plot

Calcium, MW-11 (mg/L)



#### Histogram

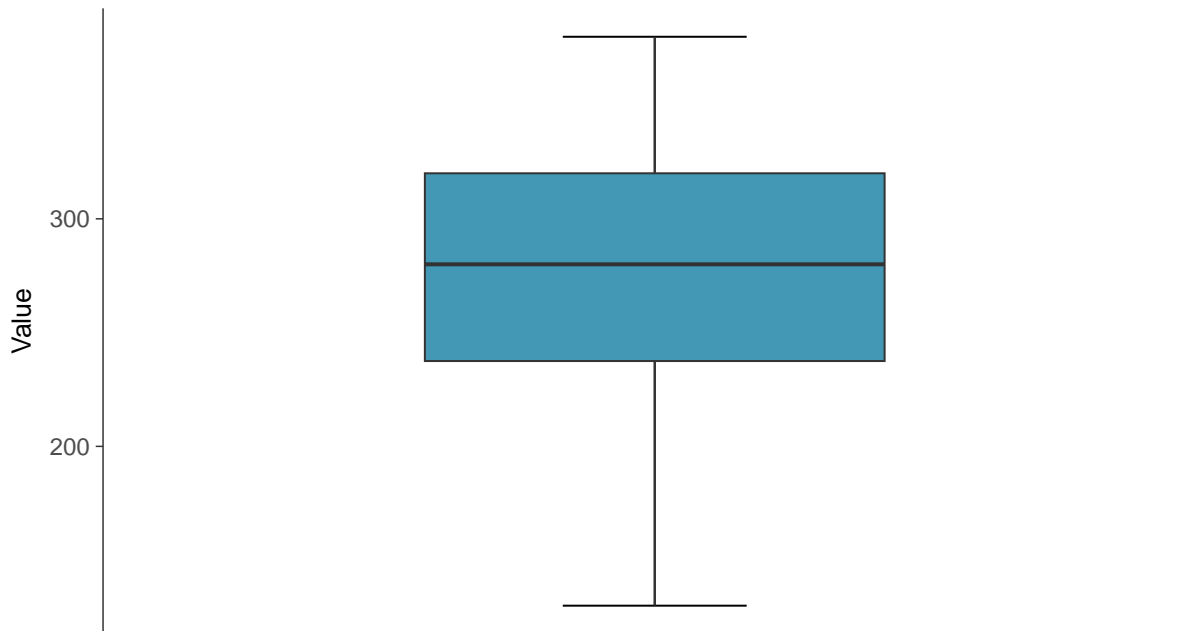
Calcium, MW-11 (mg/L)





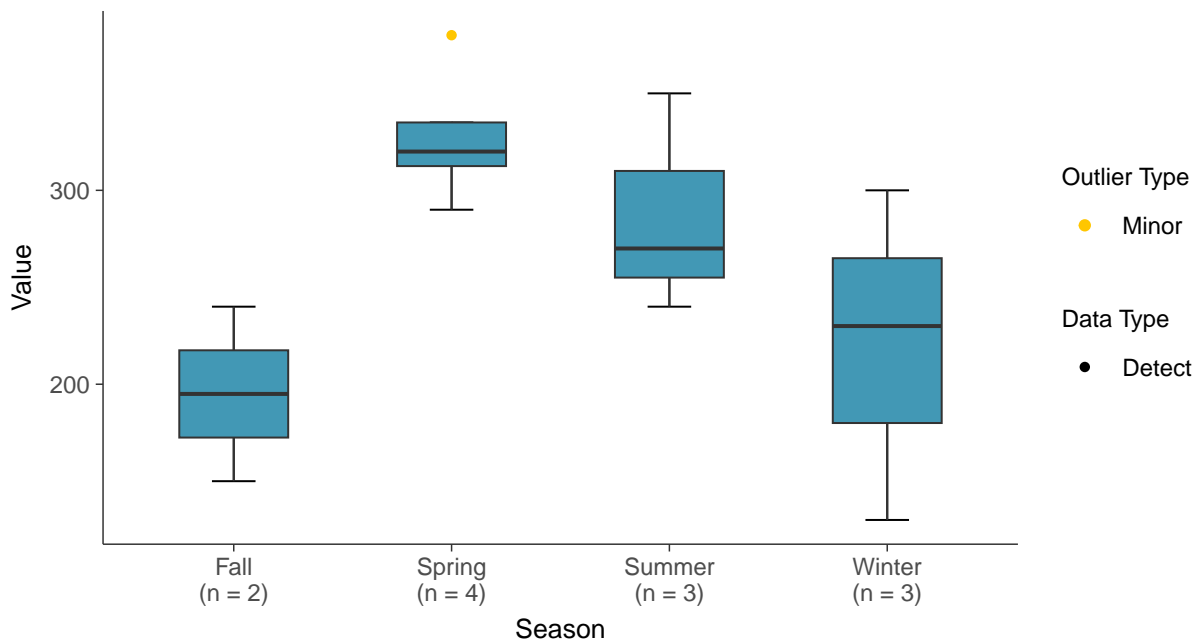
### Boxplot

Calcium, MW-11 (mg/L)



### Boxplot by Season

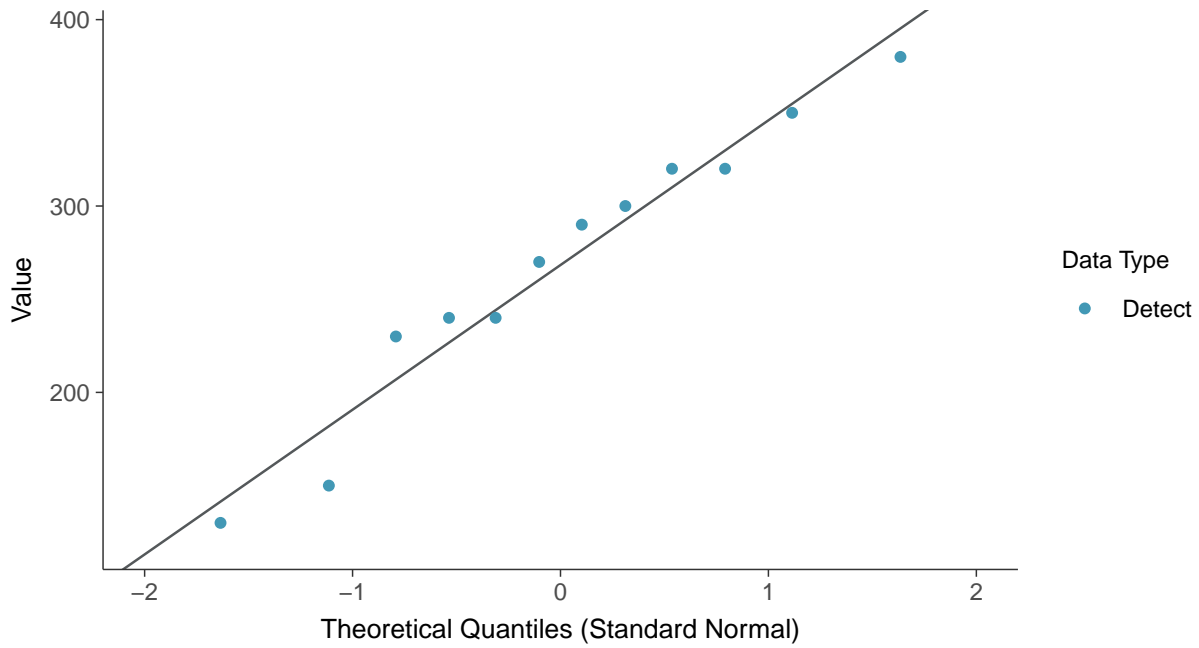
Calcium, MW-11 (mg/L)





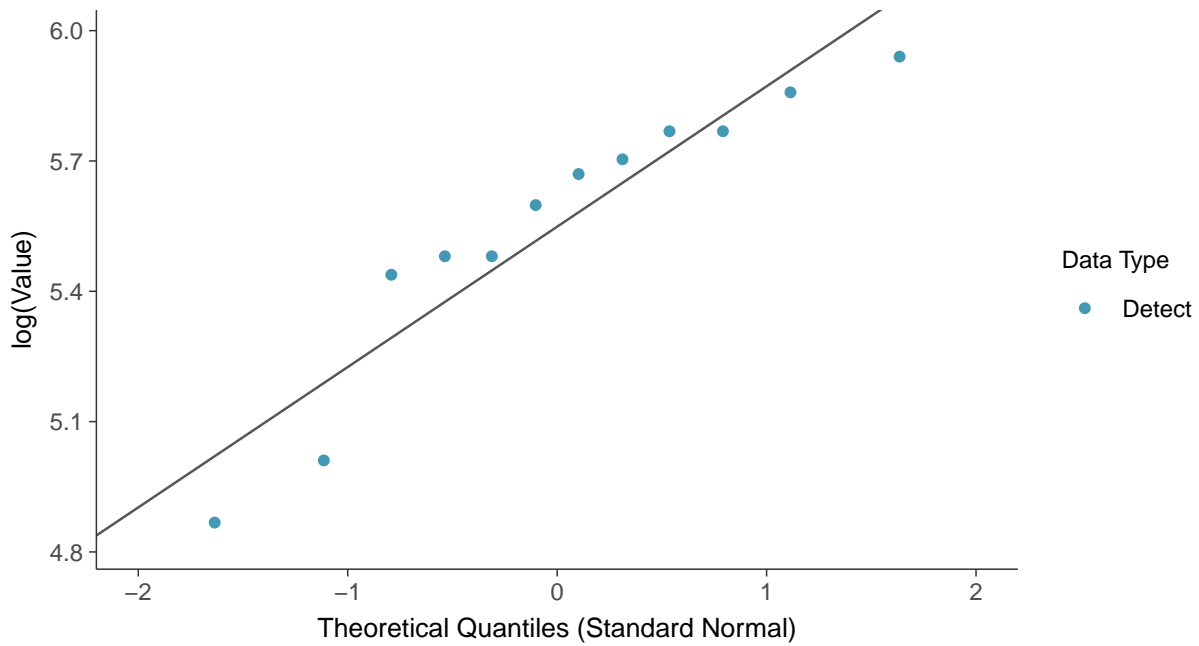
### Normal Q-Q plot

Calcium, MW-11 (mg/L)



### Lognormal Q-Q plot

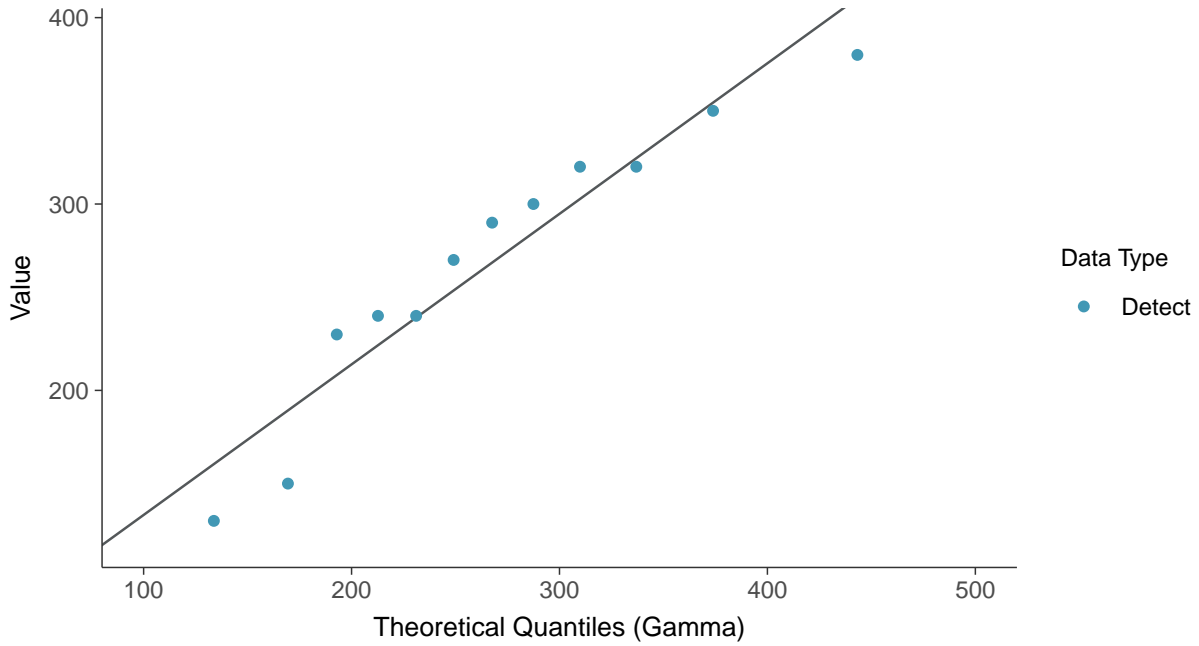
Calcium, MW-11 (mg/L)





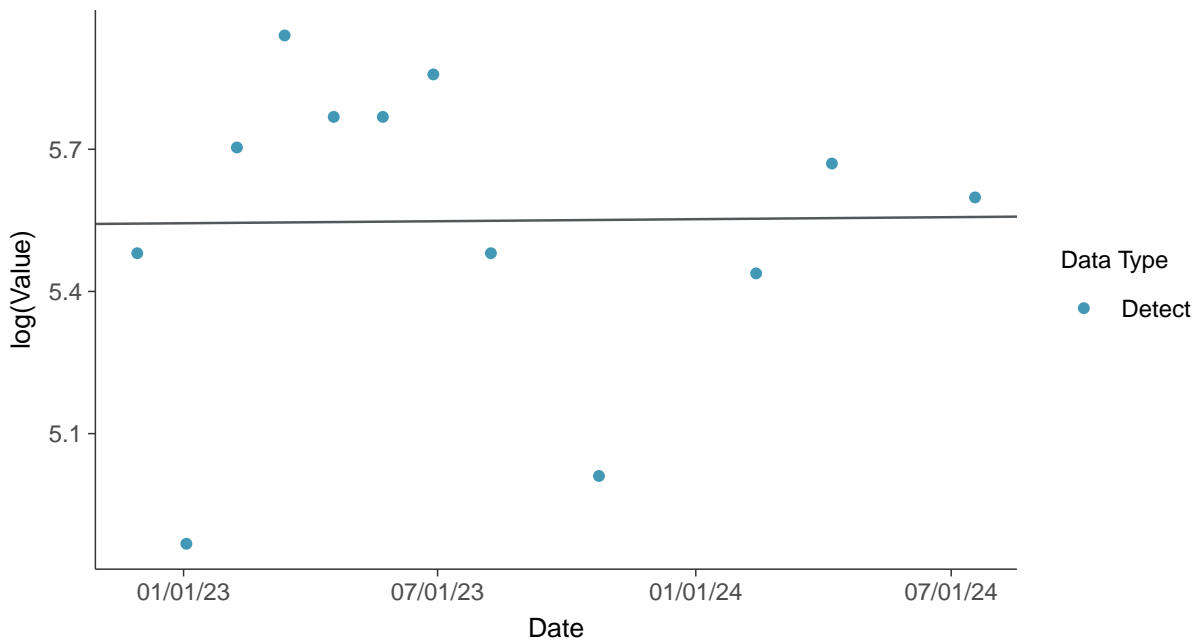
### Gamma Q-Q plot

Calcium, MW-11 (mg/L)



### Trend Regression: Lognormal MLE

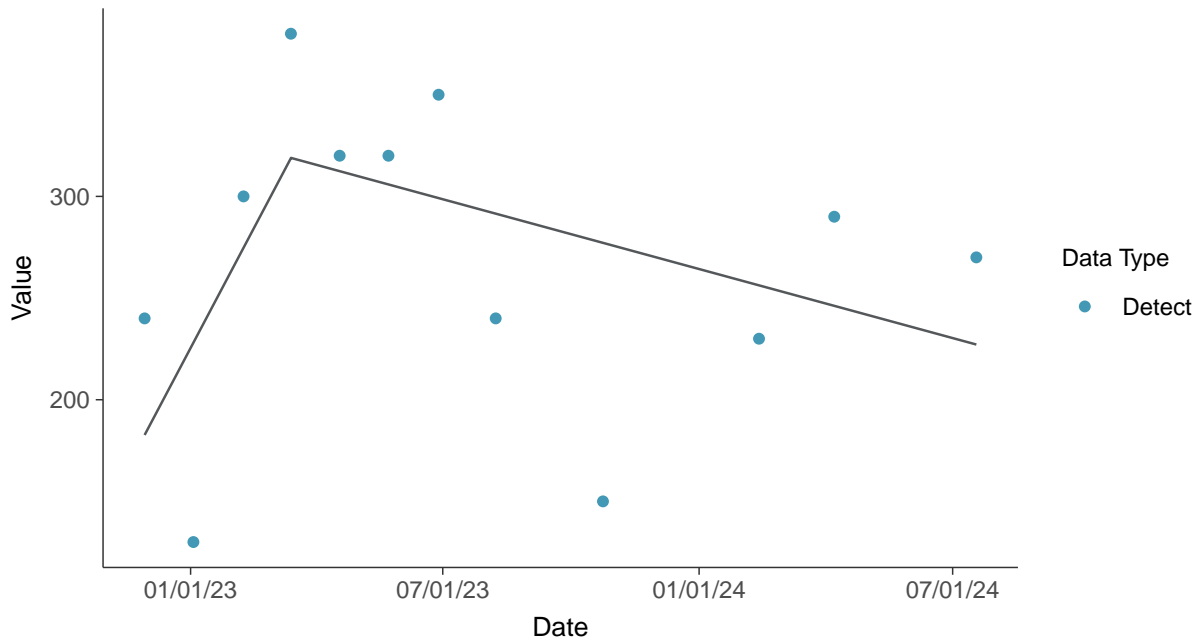
Calcium, MW-11 (mg/L)





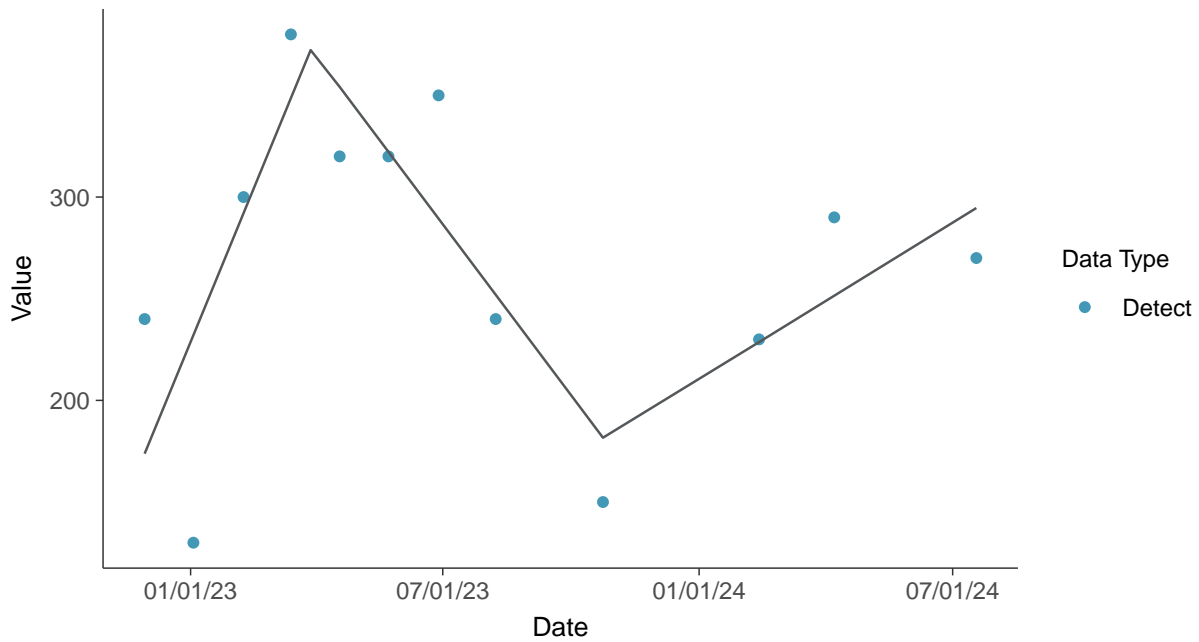
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-11 (mg/L)



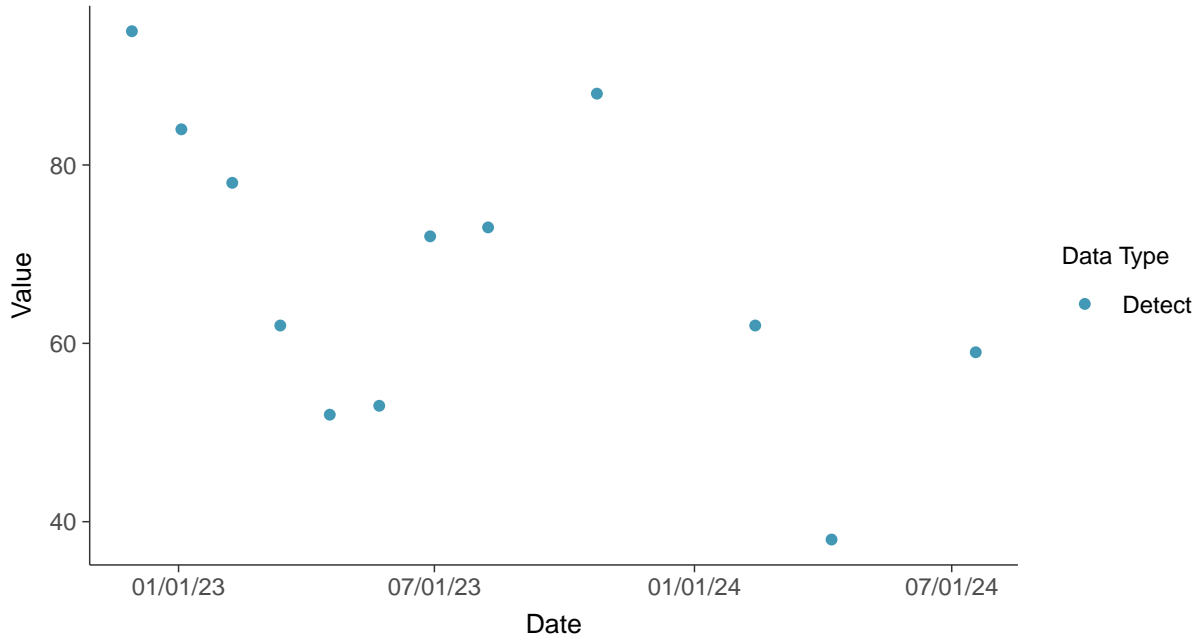


### Appendix III: Chloride (as Cl), MW-11

ID: 21\_2\_4\_108

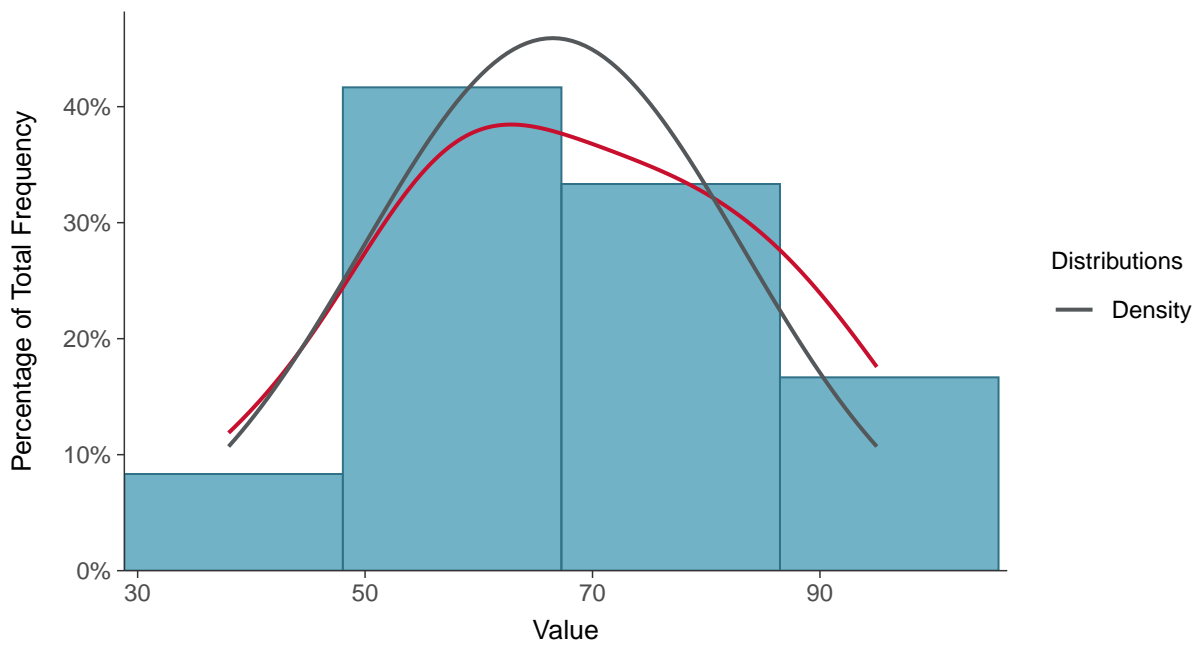
#### Scatter Plot

Chloride (as Cl), MW-11 (mg/L)



#### Histogram

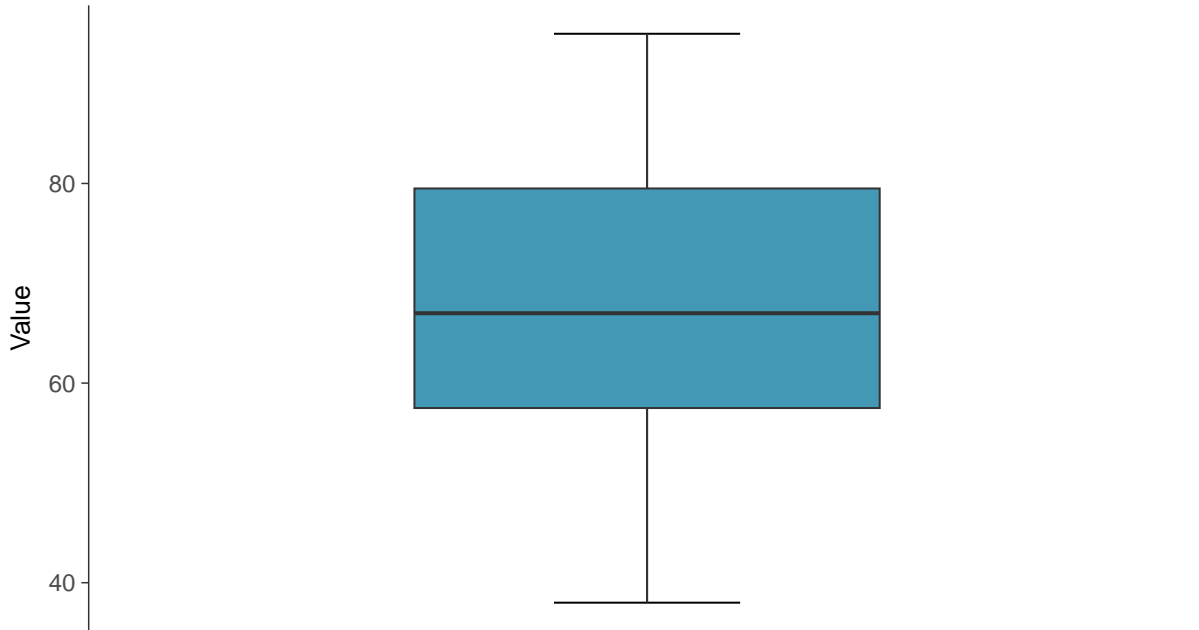
Chloride (as Cl), MW-11 (mg/L)





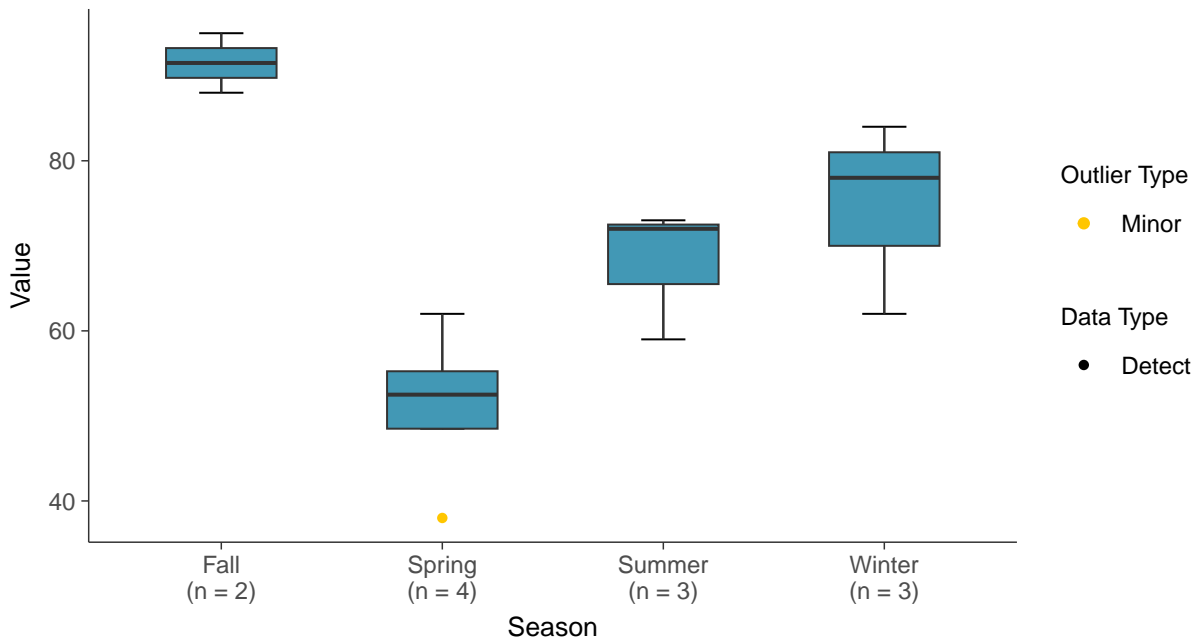
### Boxplot

Chloride (as Cl), MW-11 (mg/L)



### Boxplot by Season

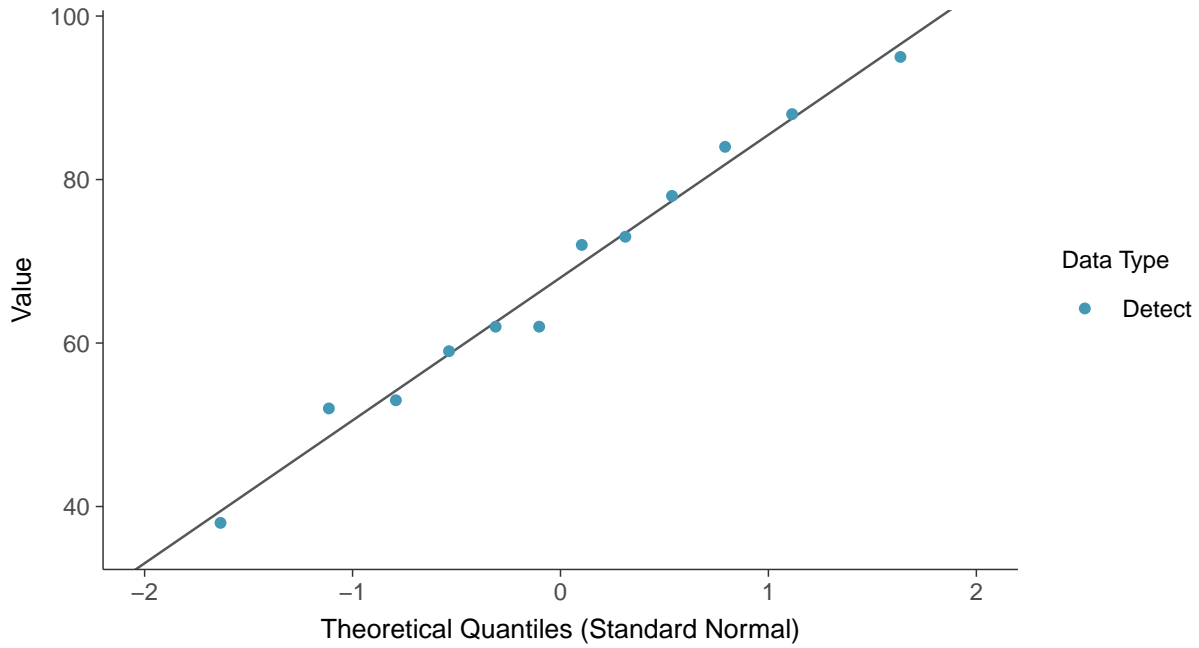
Chloride (as Cl), MW-11 (mg/L)





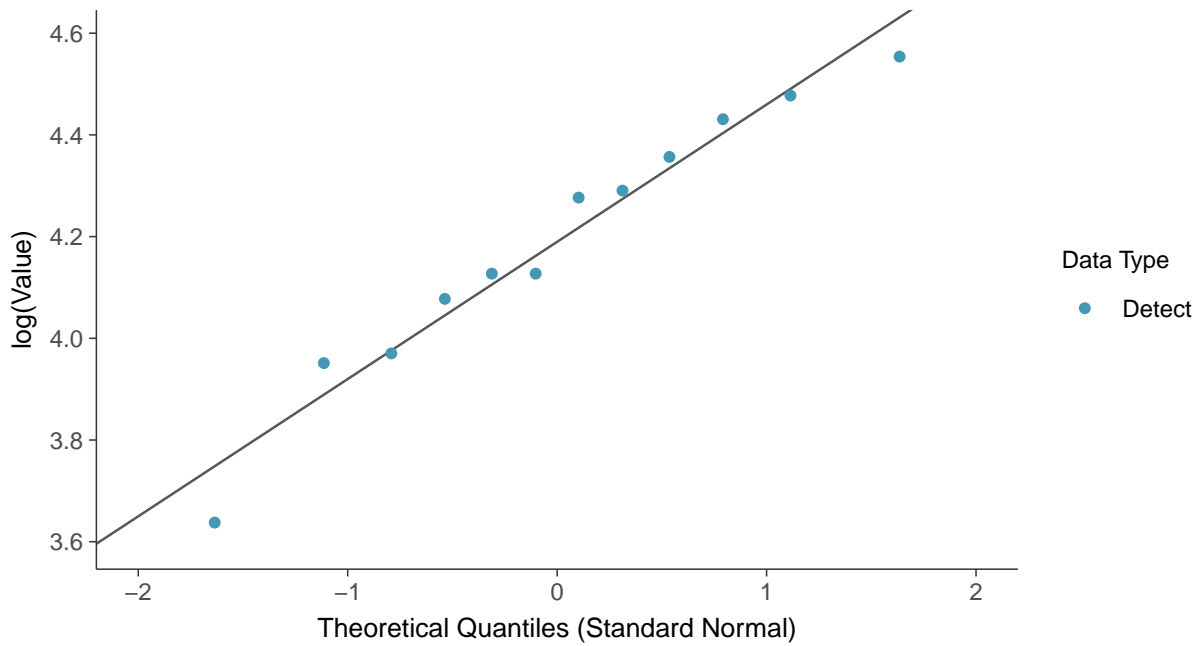
### Normal Q-Q plot

Chloride (as Cl), MW-11 (mg/L)



### Lognormal Q-Q plot

Chloride (as Cl), MW-11 (mg/L)

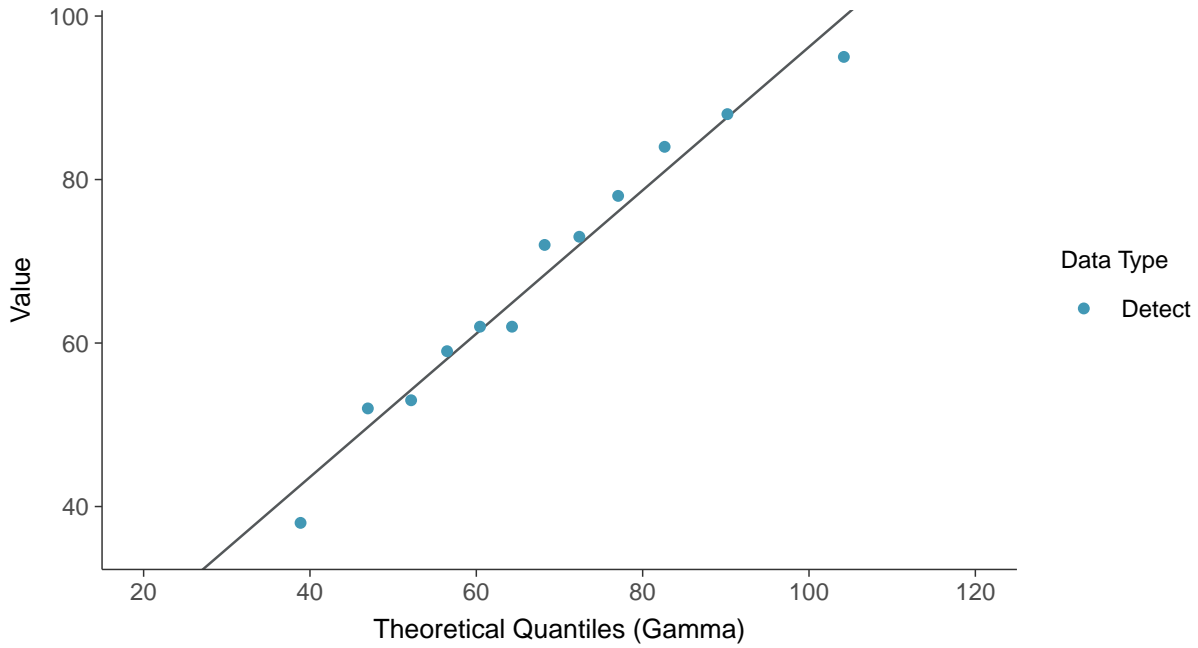






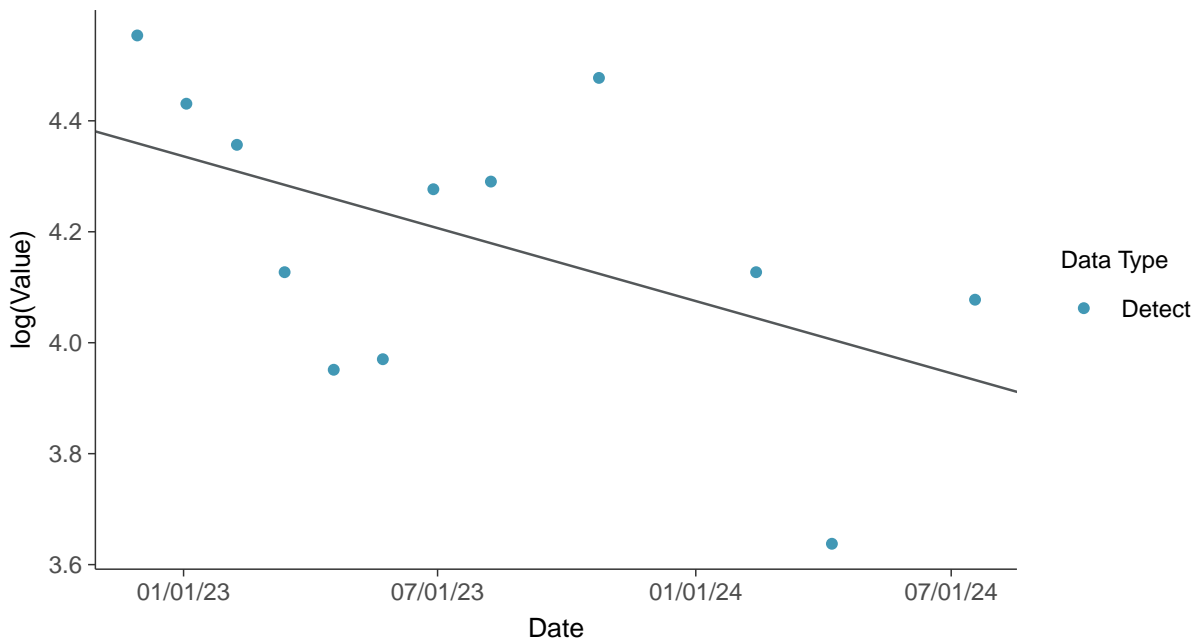
### Gamma Q-Q plot

Chloride (as Cl), MW-11 (mg/L)



### Trend Regression: Lognormal MLE

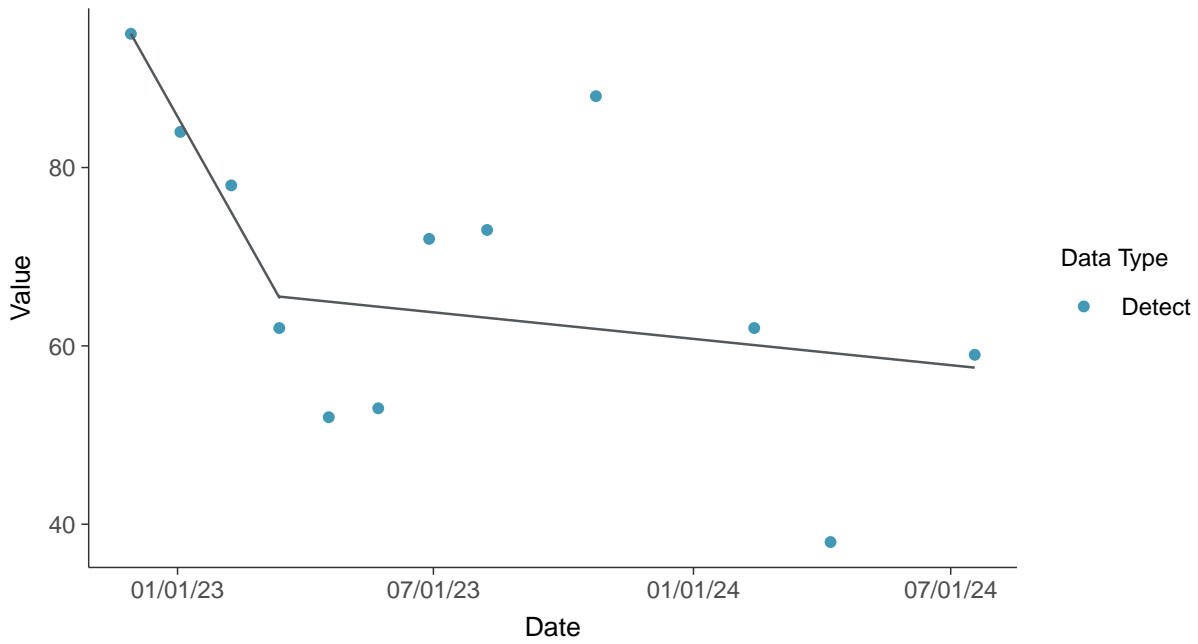
Chloride (as Cl), MW-11 (mg/L)





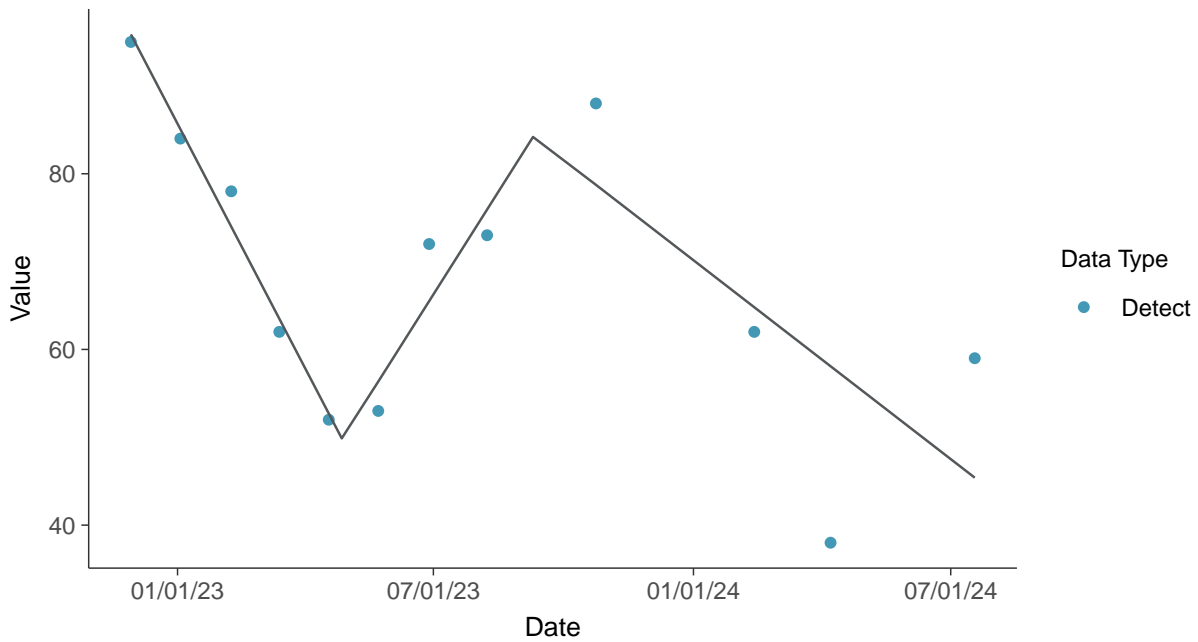
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-11 (mg/L)



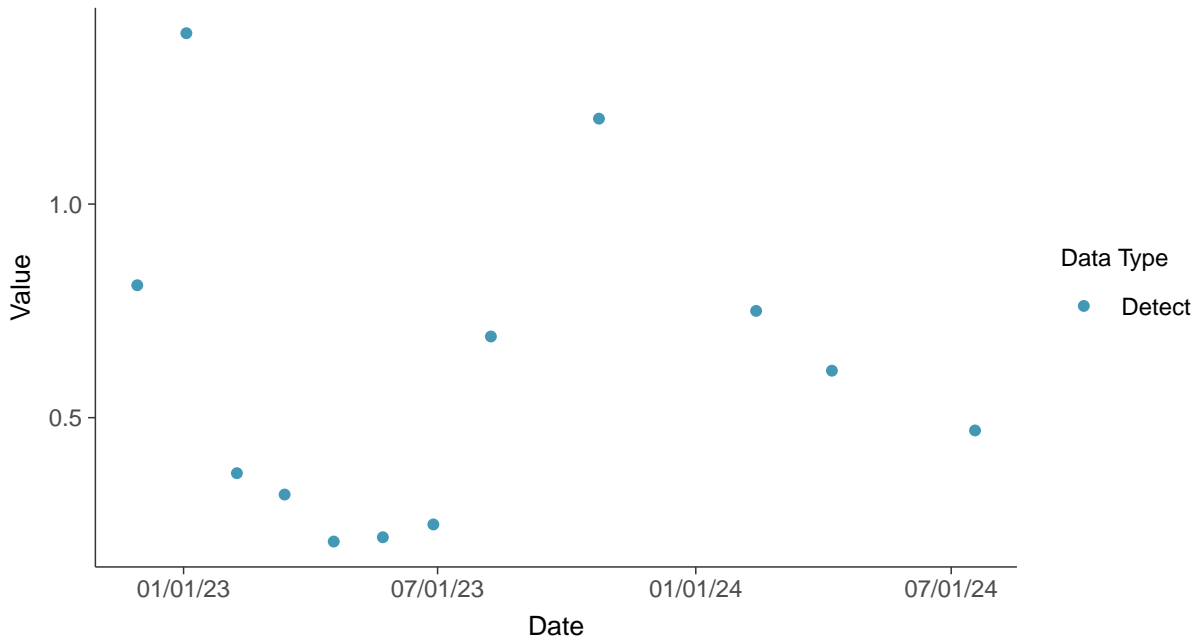


### Appendix III: Fluoride, MW-11

ID: 21\_2\_4\_112

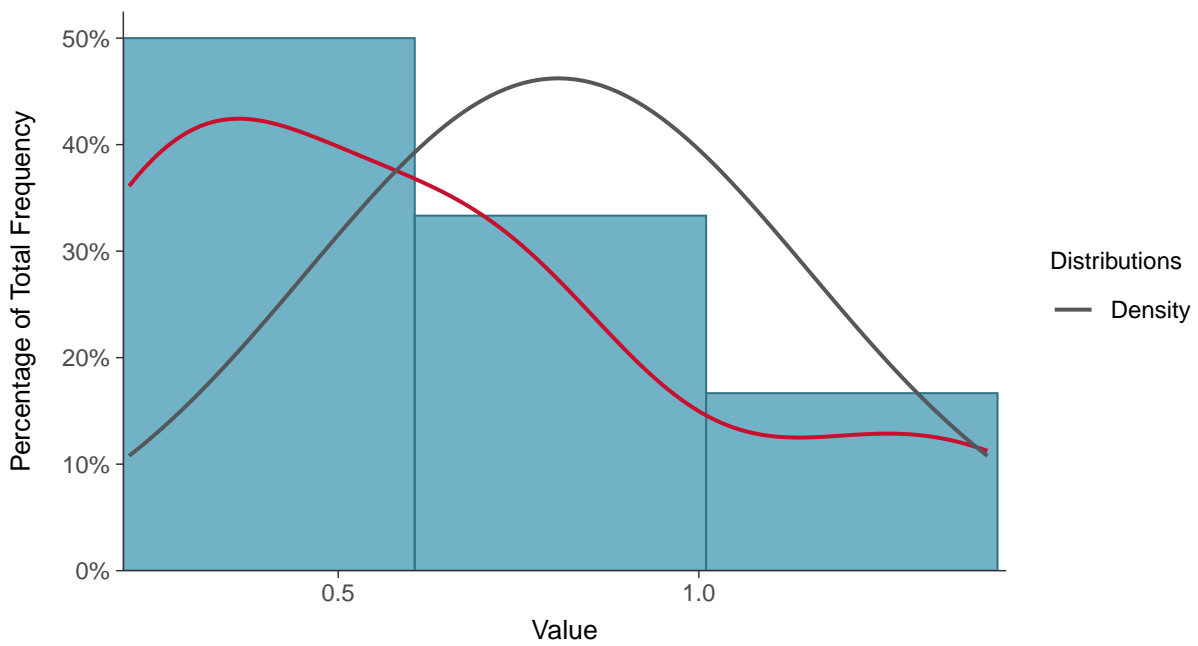
#### Scatter Plot

Fluoride, MW-11 (mg/L)



#### Histogram

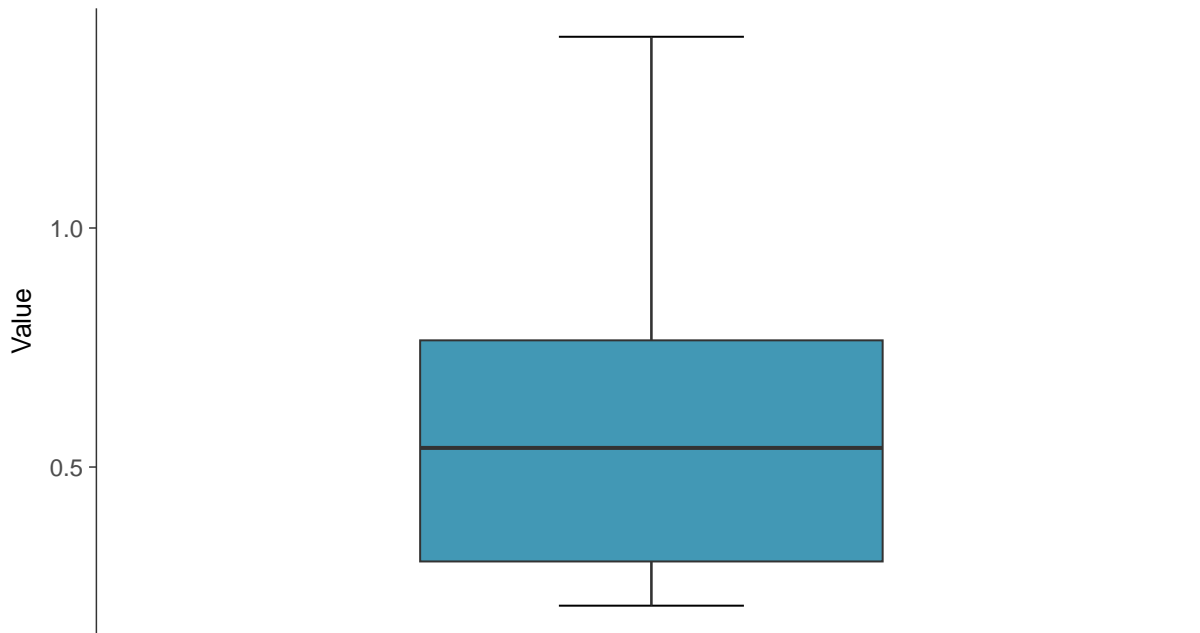
Fluoride, MW-11 (mg/L)





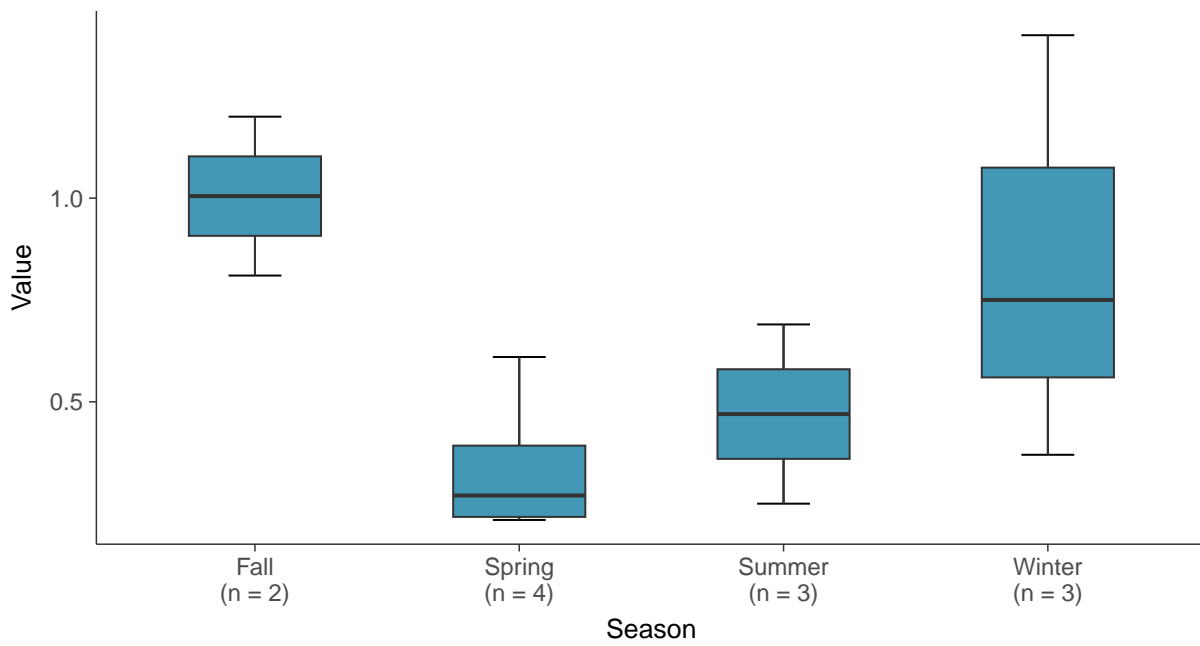
### Boxplot

Fluoride, MW-11 (mg/L)



### Boxplot by Season

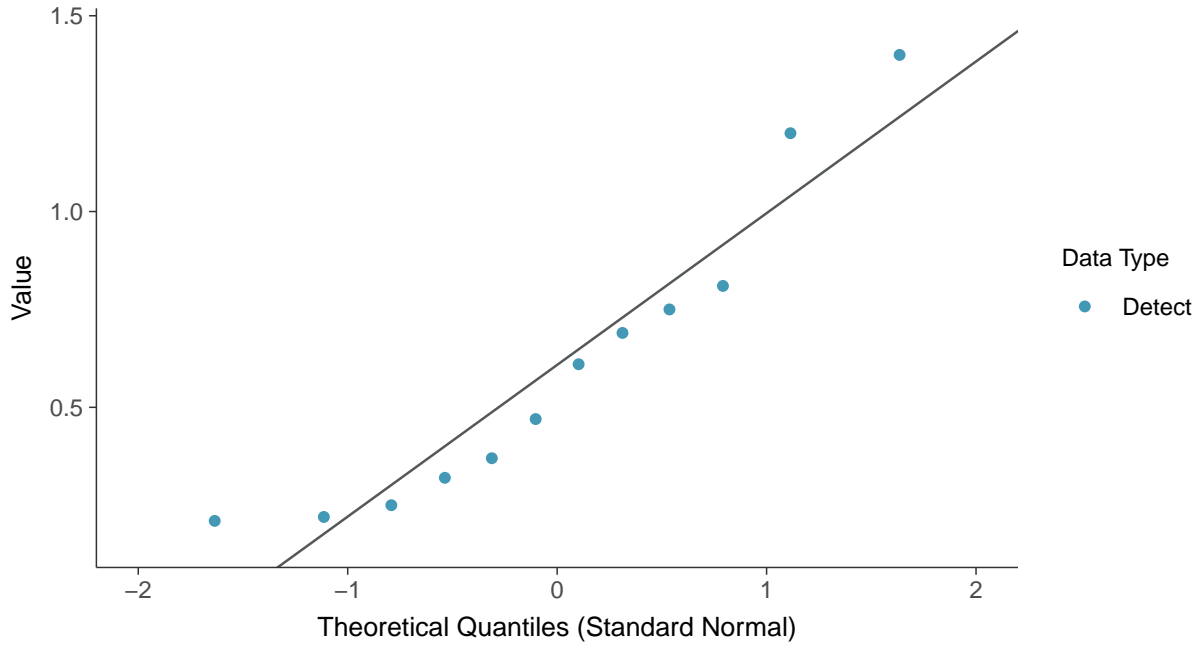
Fluoride, MW-11 (mg/L)





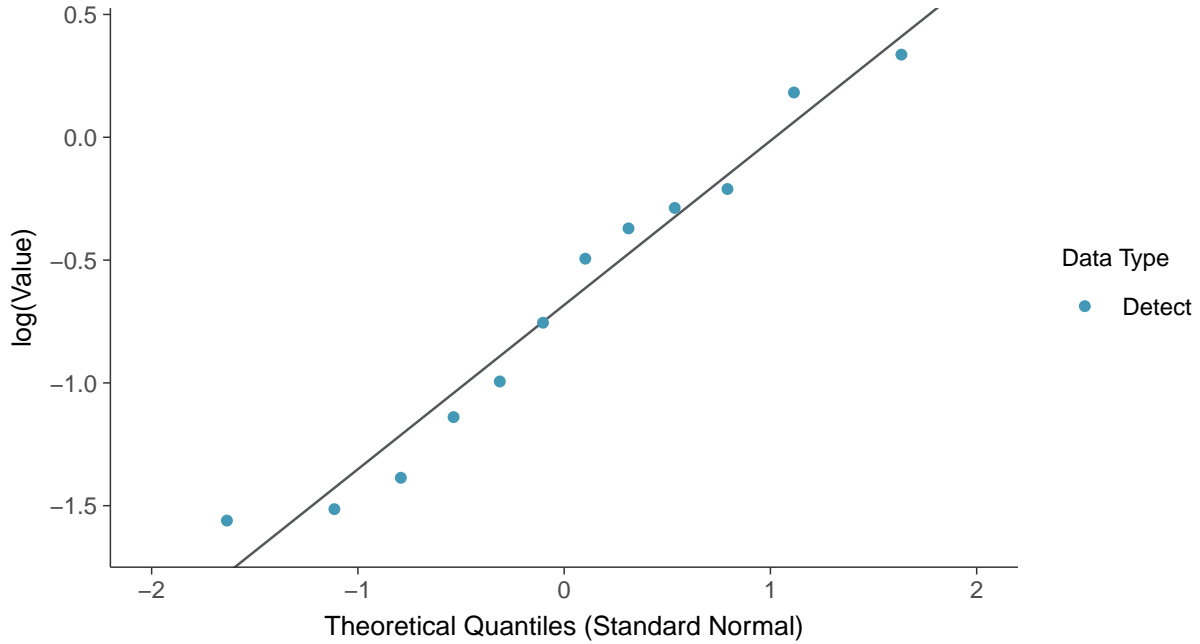
### Normal Q-Q plot

Fluoride, MW-11 (mg/L)



### Lognormal Q-Q plot

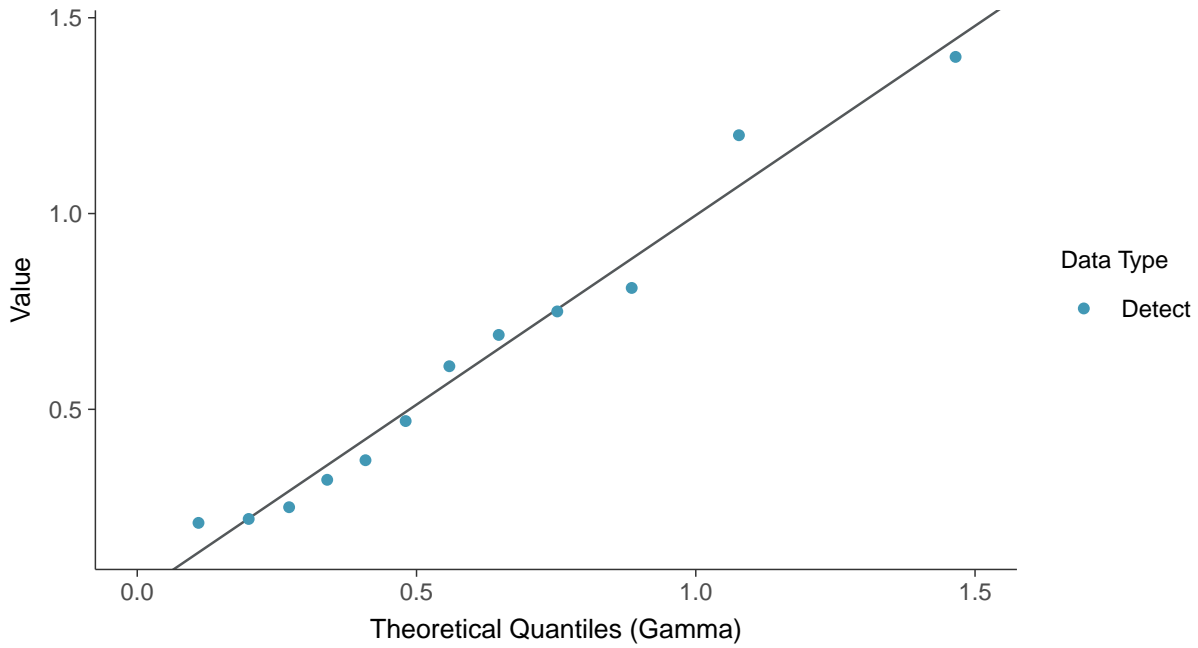
Fluoride, MW-11 (mg/L)





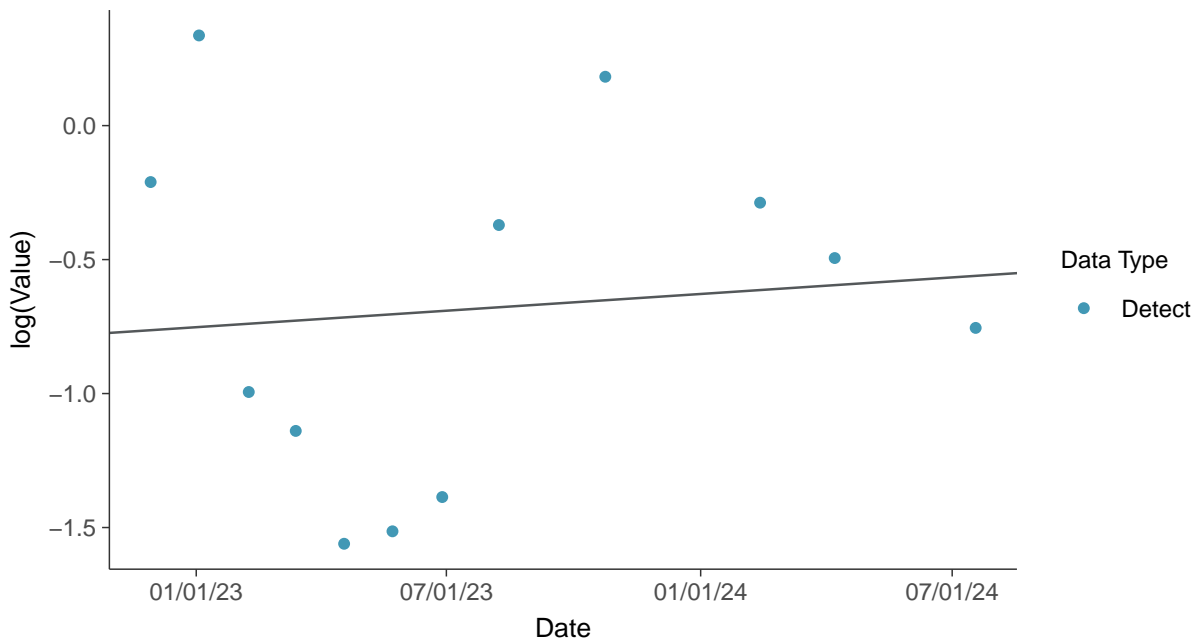
### Gamma Q-Q plot

Fluoride, MW-11 (mg/L)



### Trend Regression: Lognormal MLE

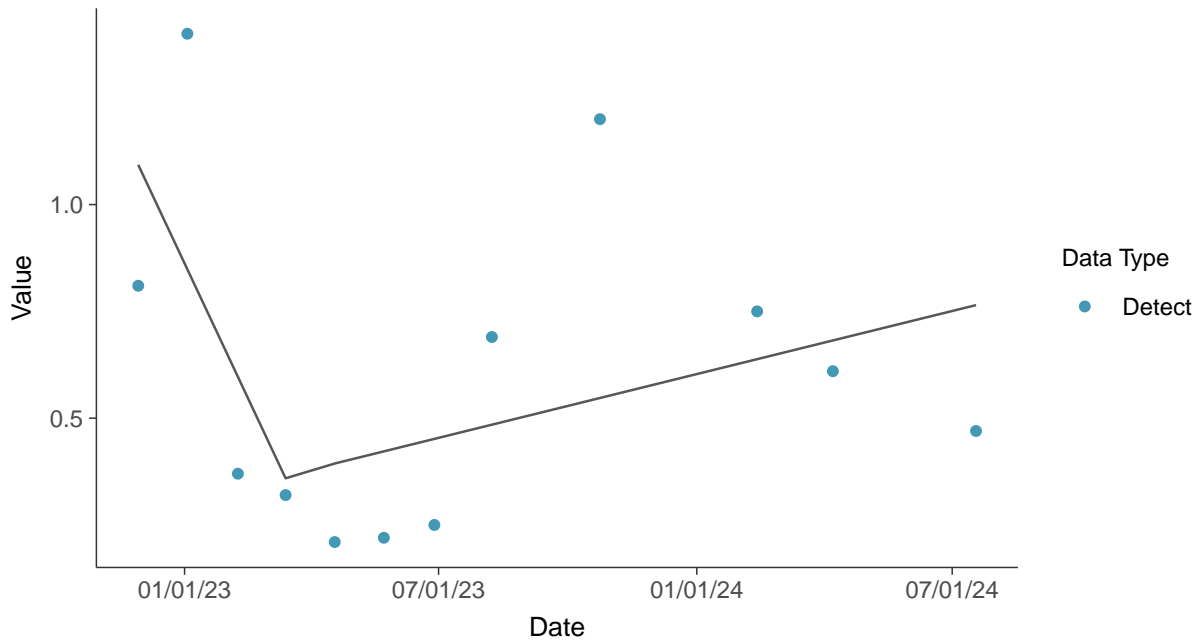
Fluoride, MW-11 (mg/L)





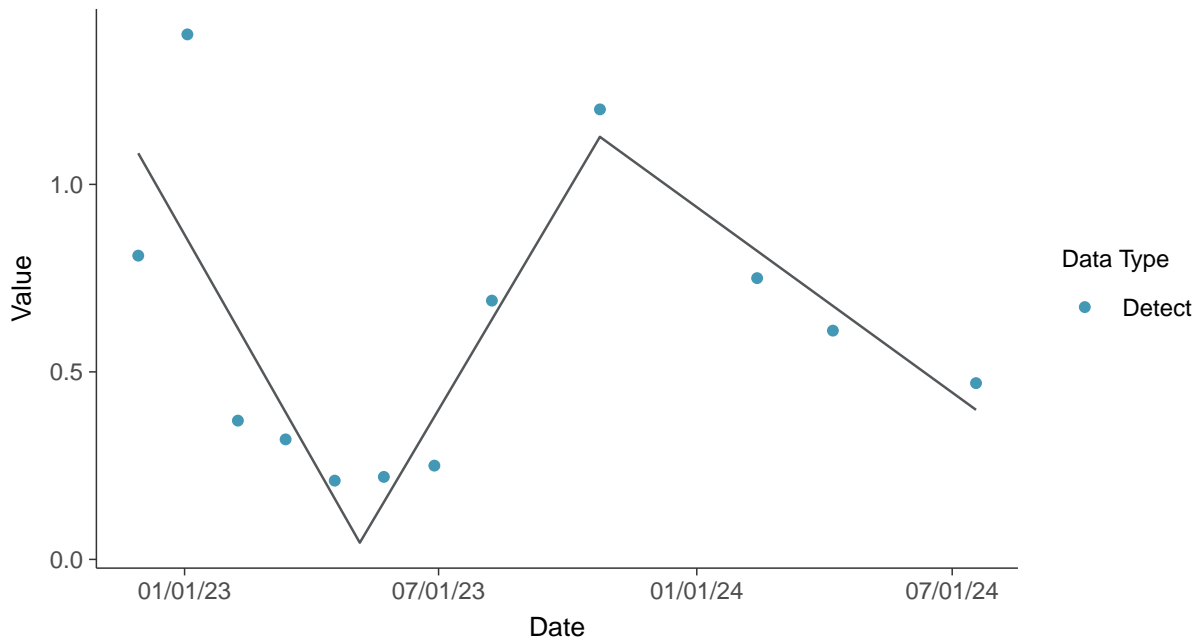
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

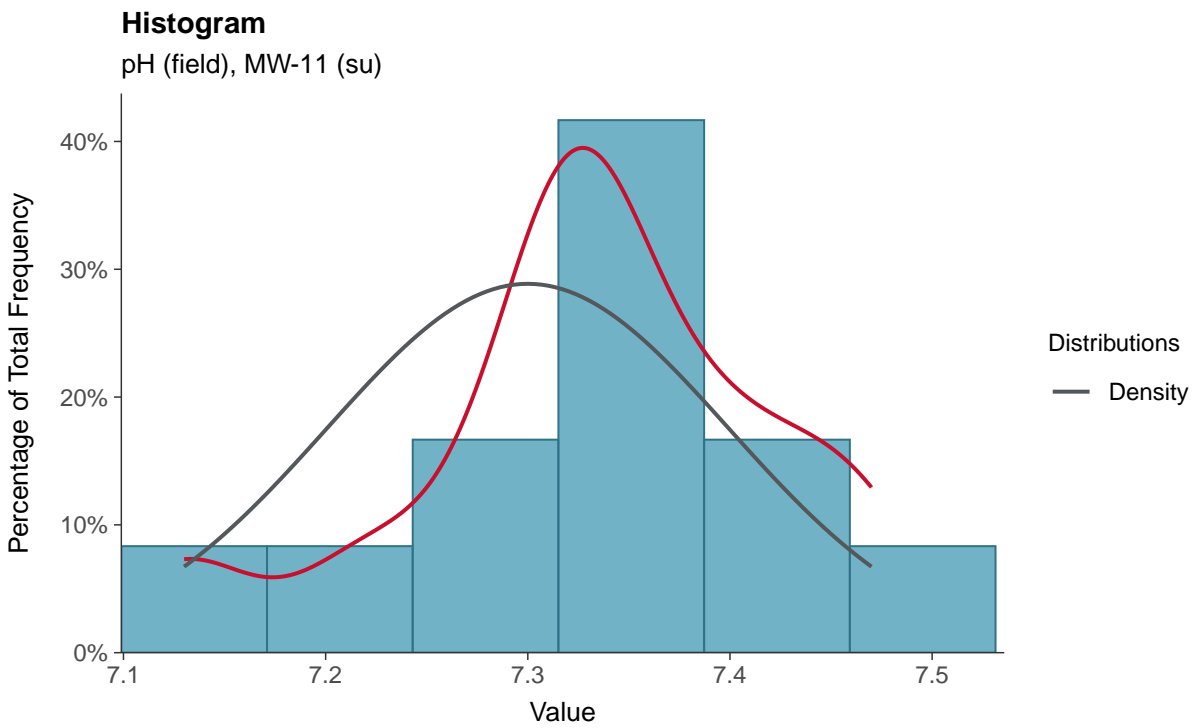
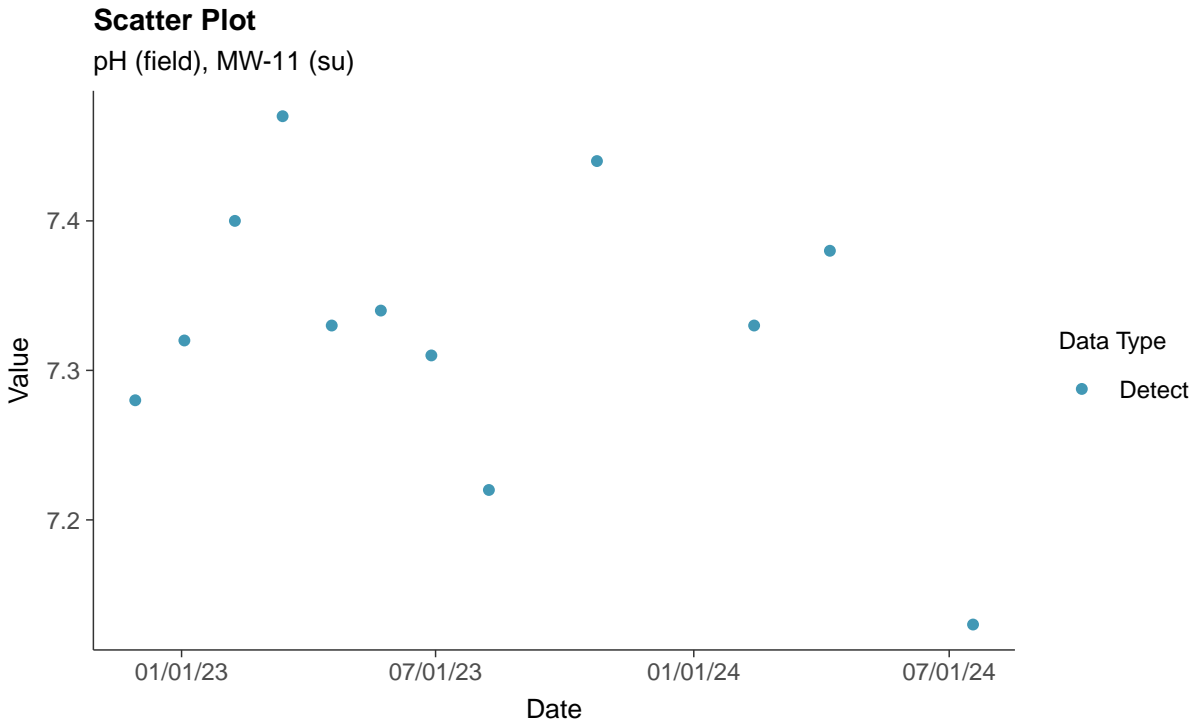
Fluoride, MW-11 (mg/L)





### Appendix III: pH (field), MW-11

ID: 21\_2\_4\_120

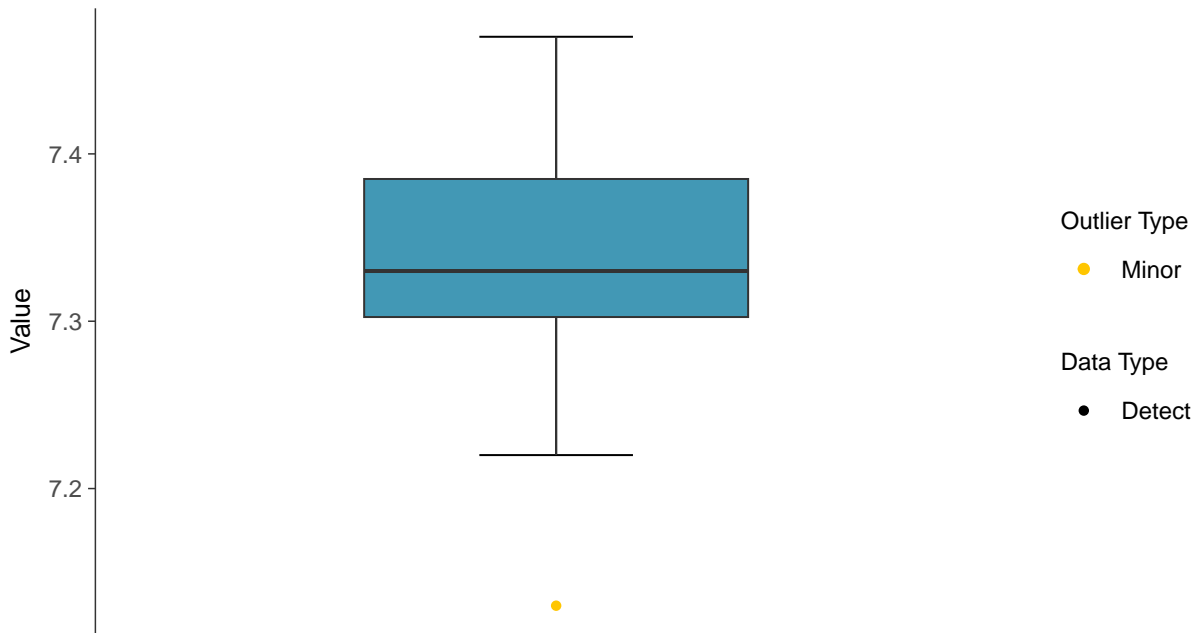






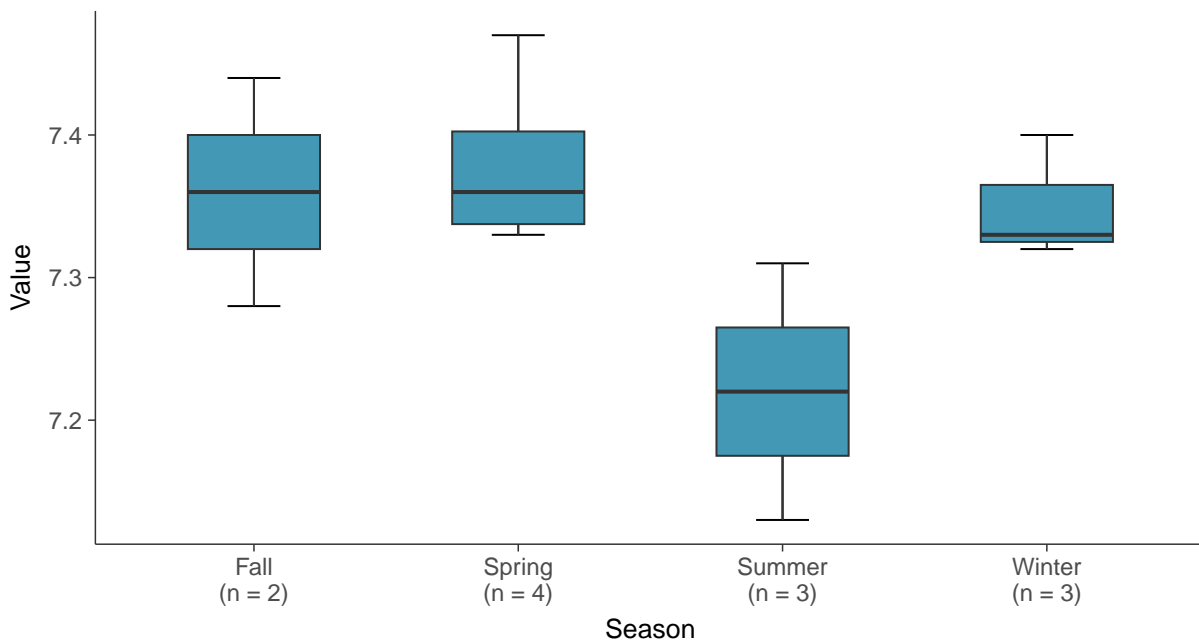
### Boxplot

pH (field), MW-11 (su)



### Boxplot by Season

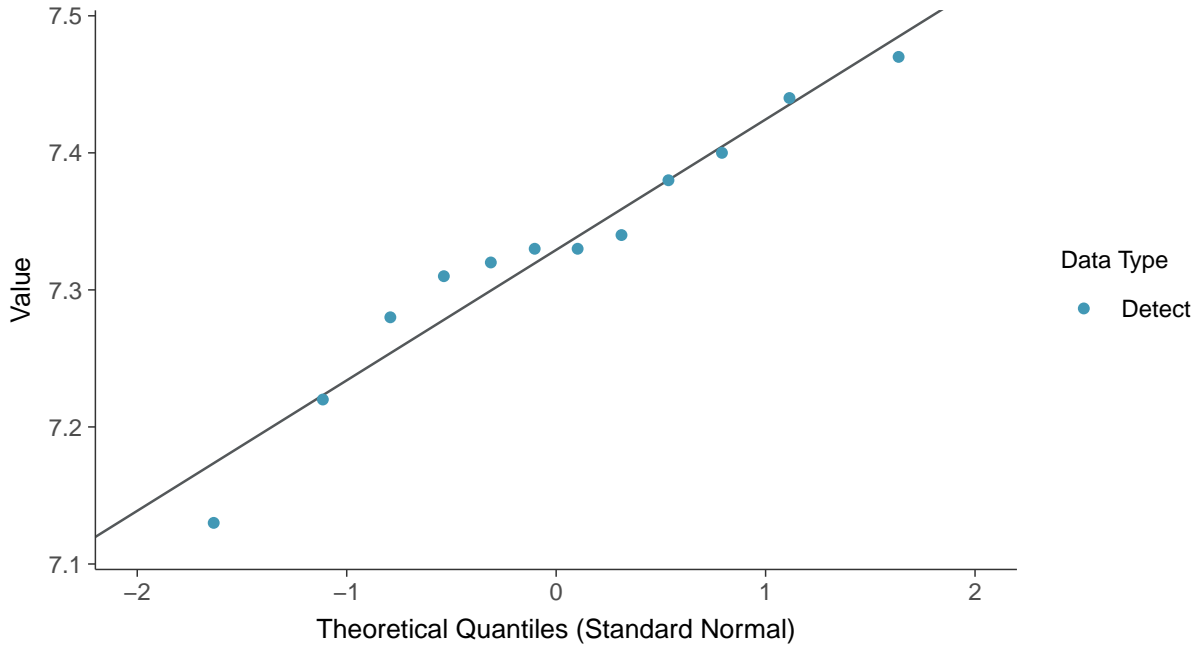
pH (field), MW-11 (su)





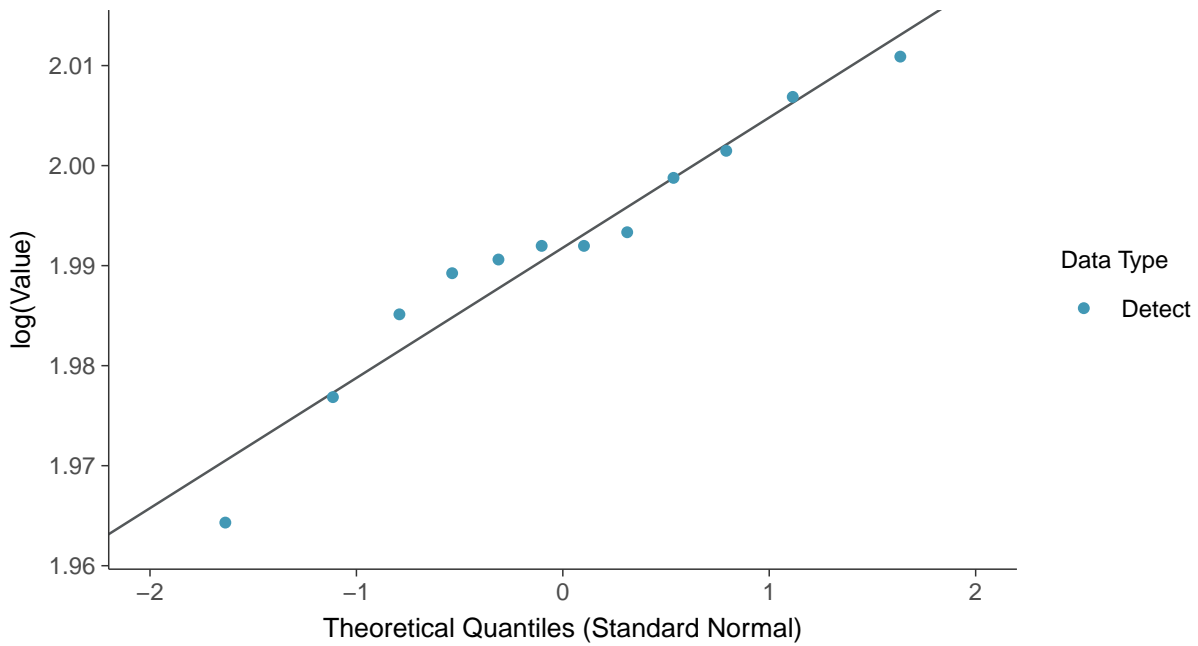
### Normal Q-Q plot

pH (field), MW-11 (su)



### Lognormal Q-Q plot

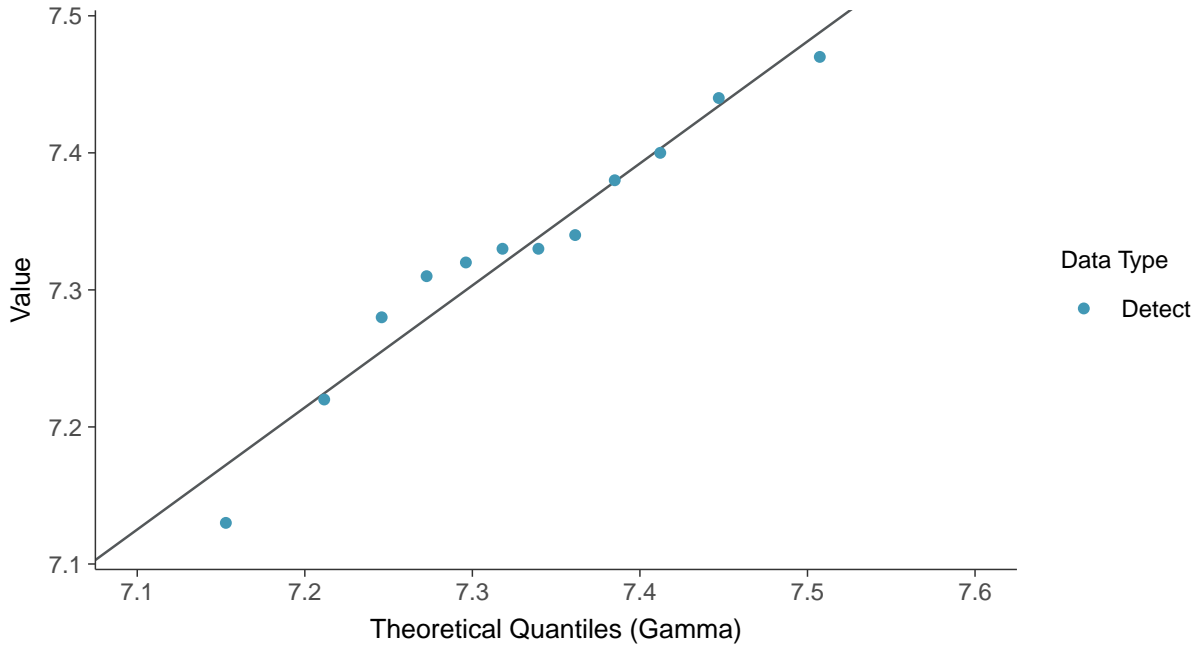
pH (field), MW-11 (su)





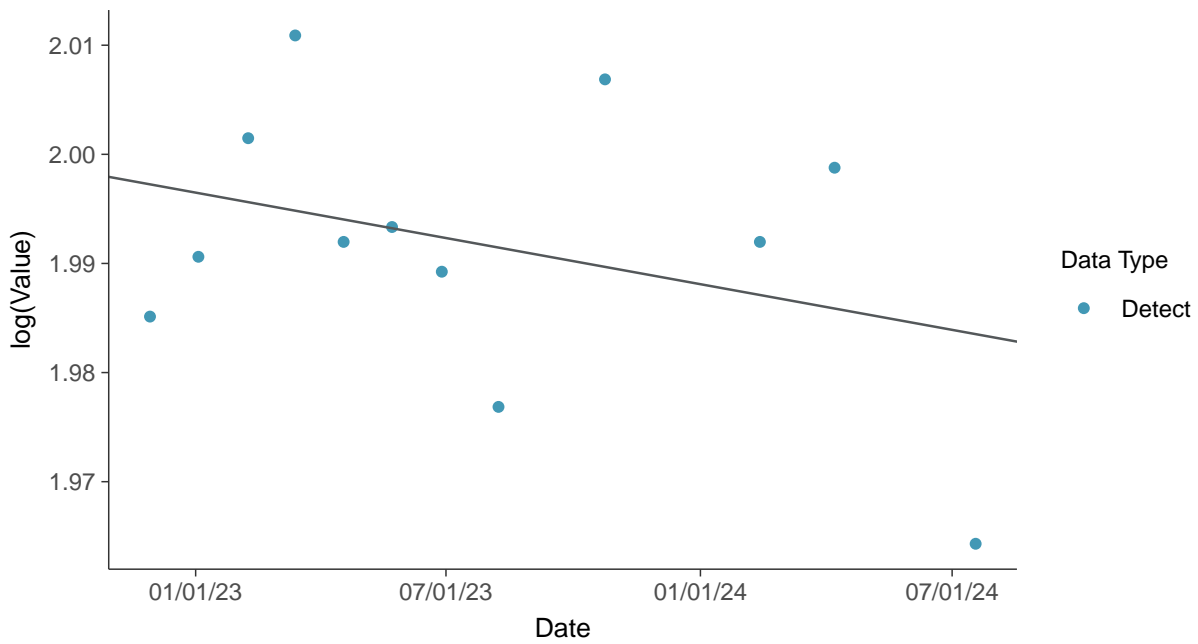
### Gamma Q-Q plot

pH (field), MW-11 (su)



### Trend Regression: Lognormal MLE

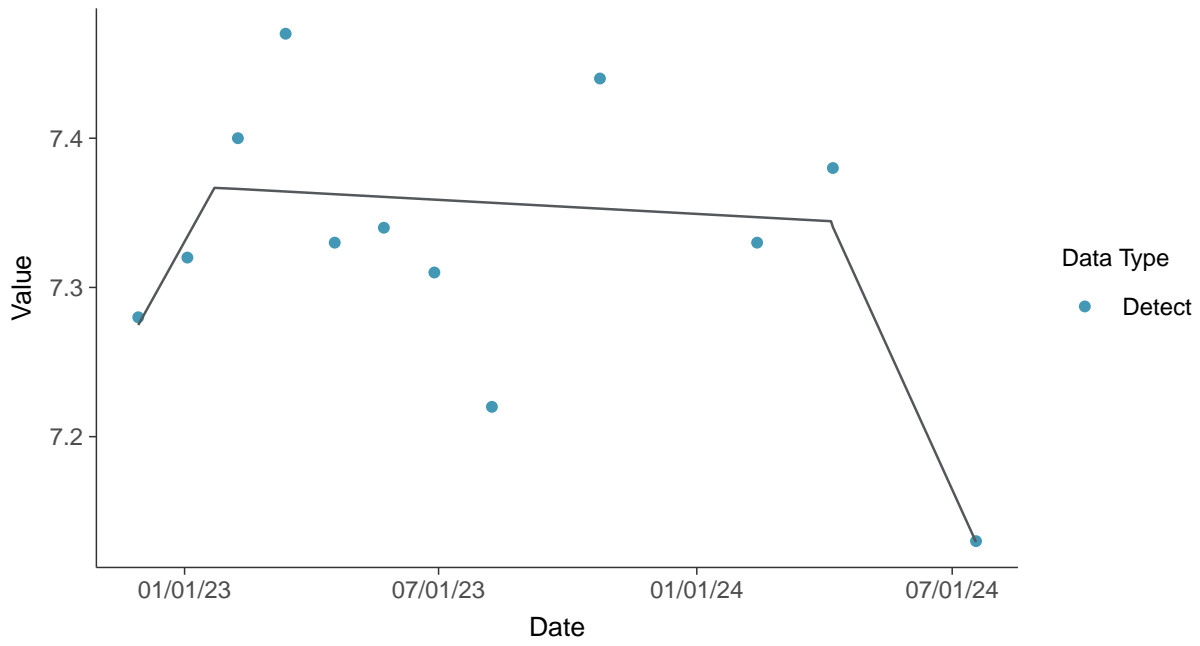
pH (field), MW-11 (su)





### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-11 (su)



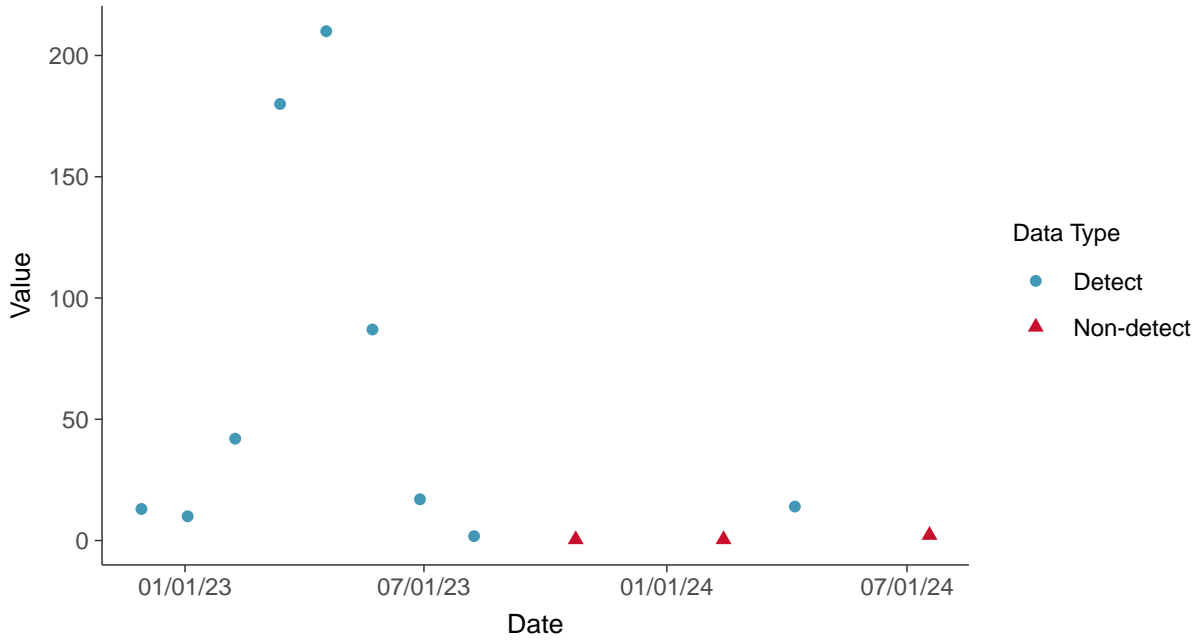


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-11

ID: 21\_2\_4\_124

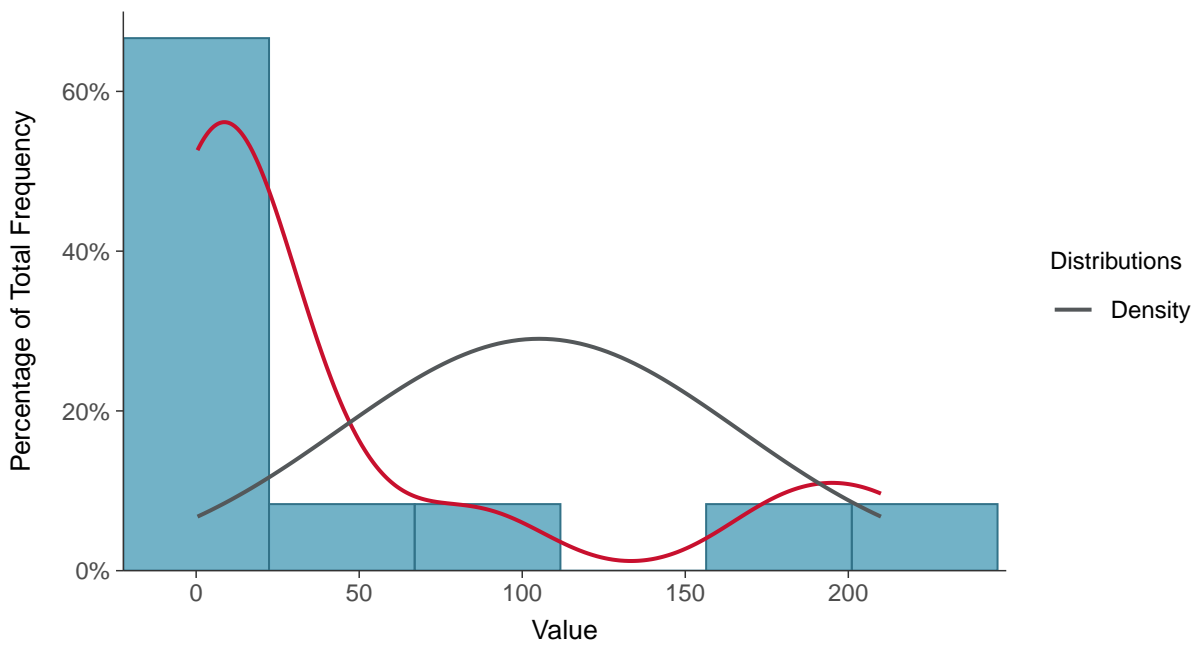
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)



#### Histogram

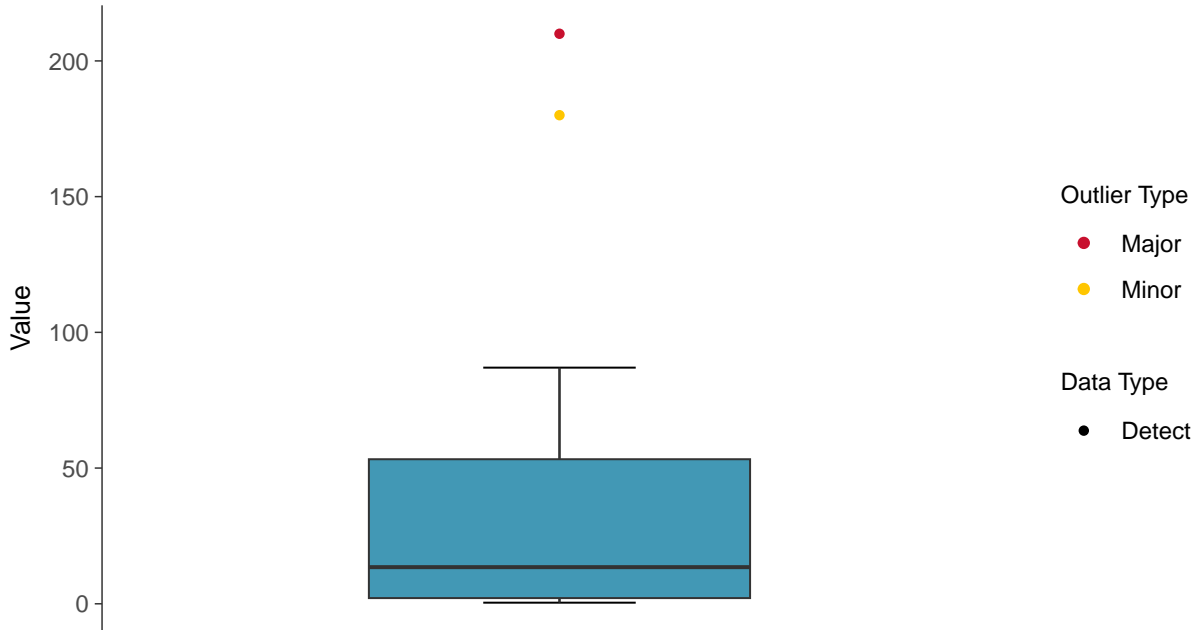
Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)





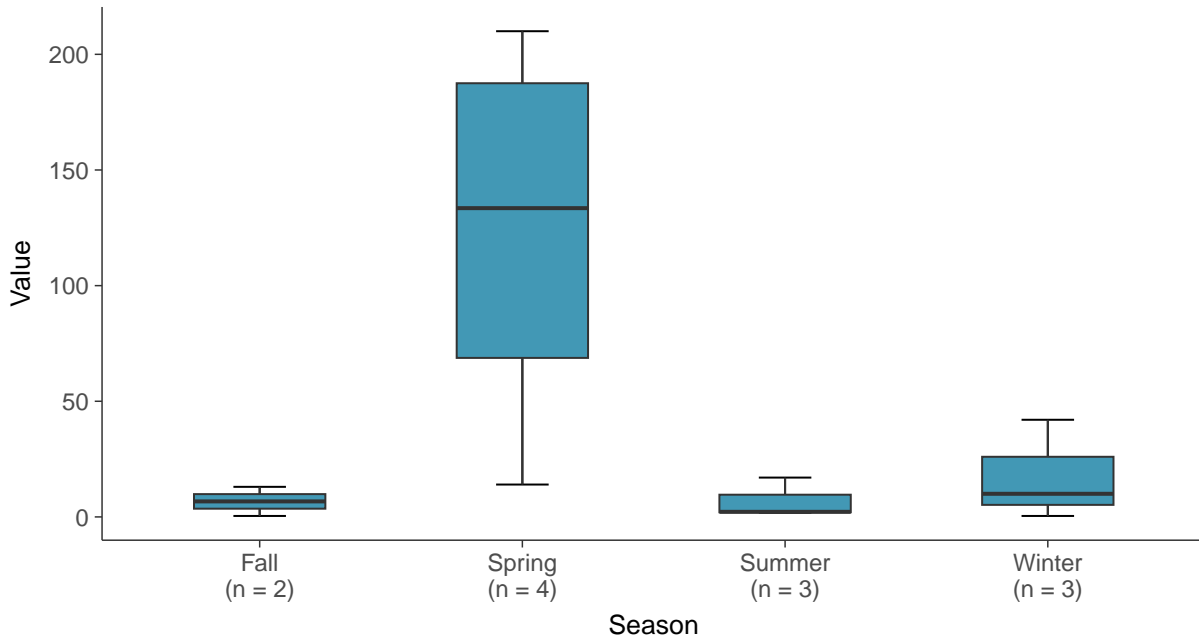
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)



### Boxplot by Season

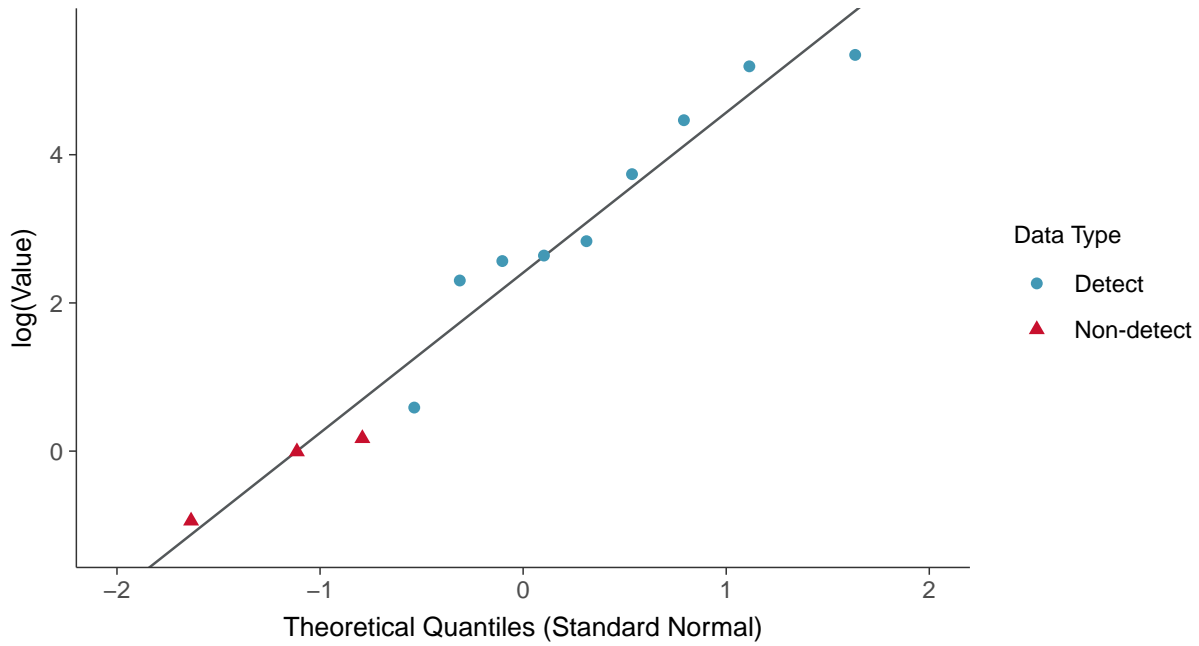
Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)





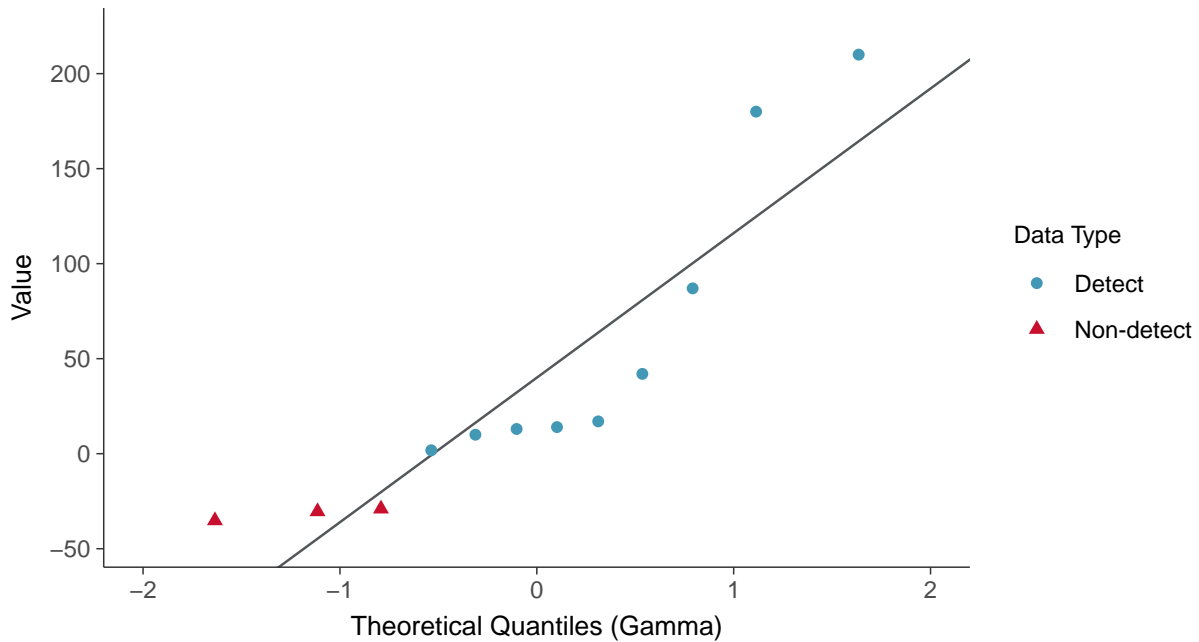
### Lognormal Q-Q plot using ROS Imputed Estimates

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

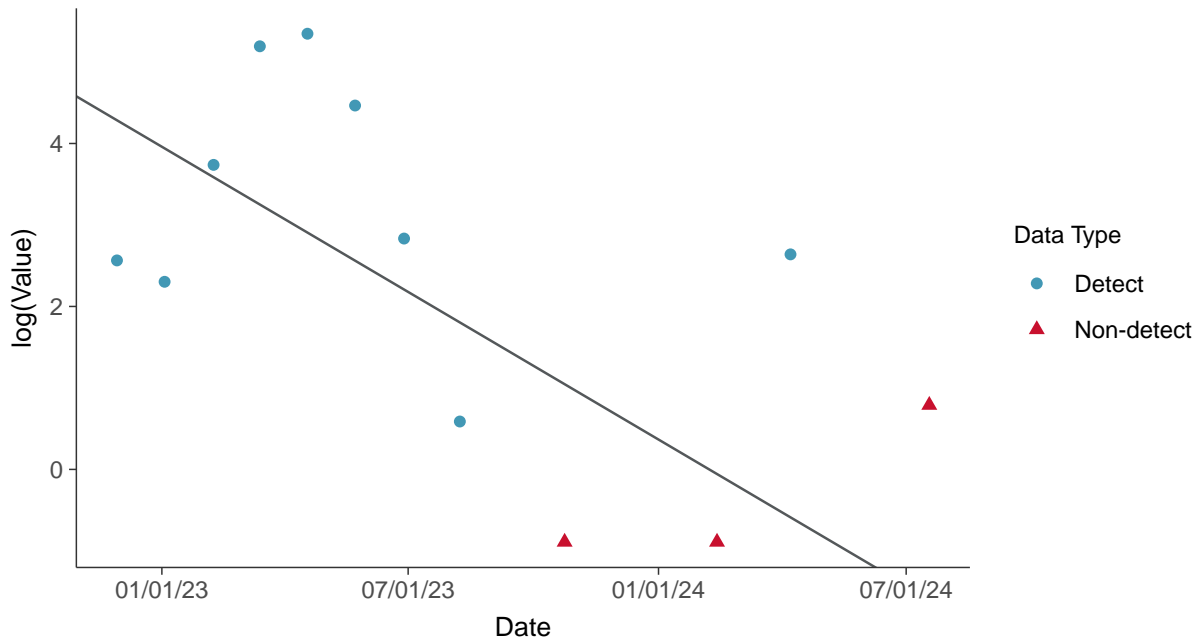
Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)





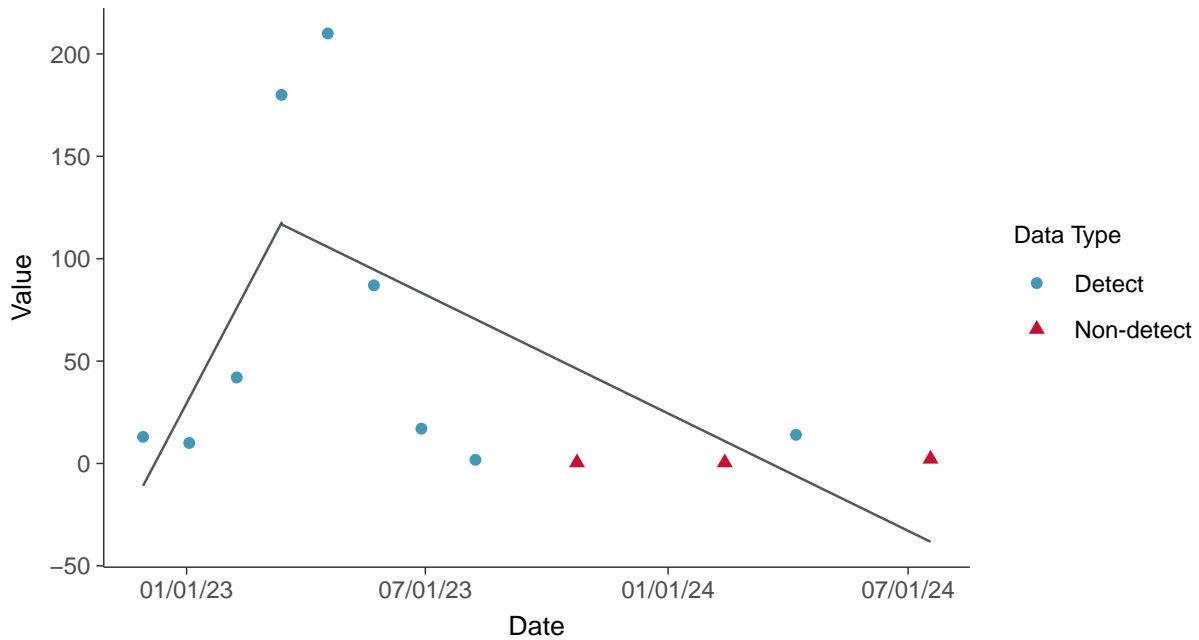
### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)

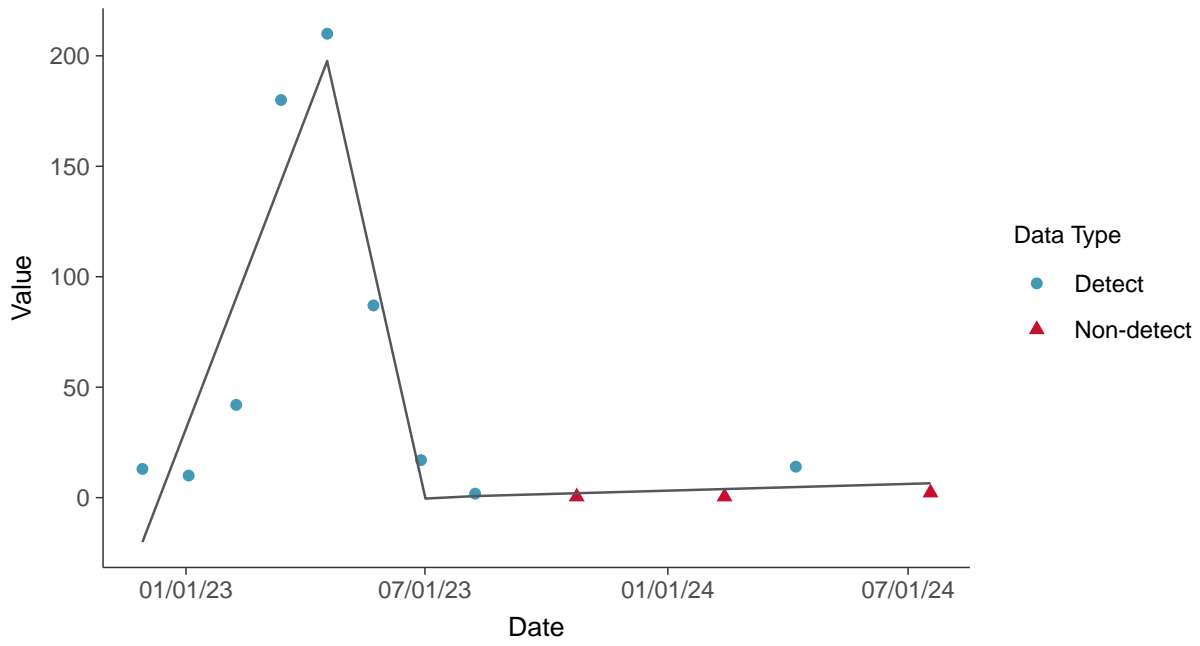






### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-11 (mg/L)



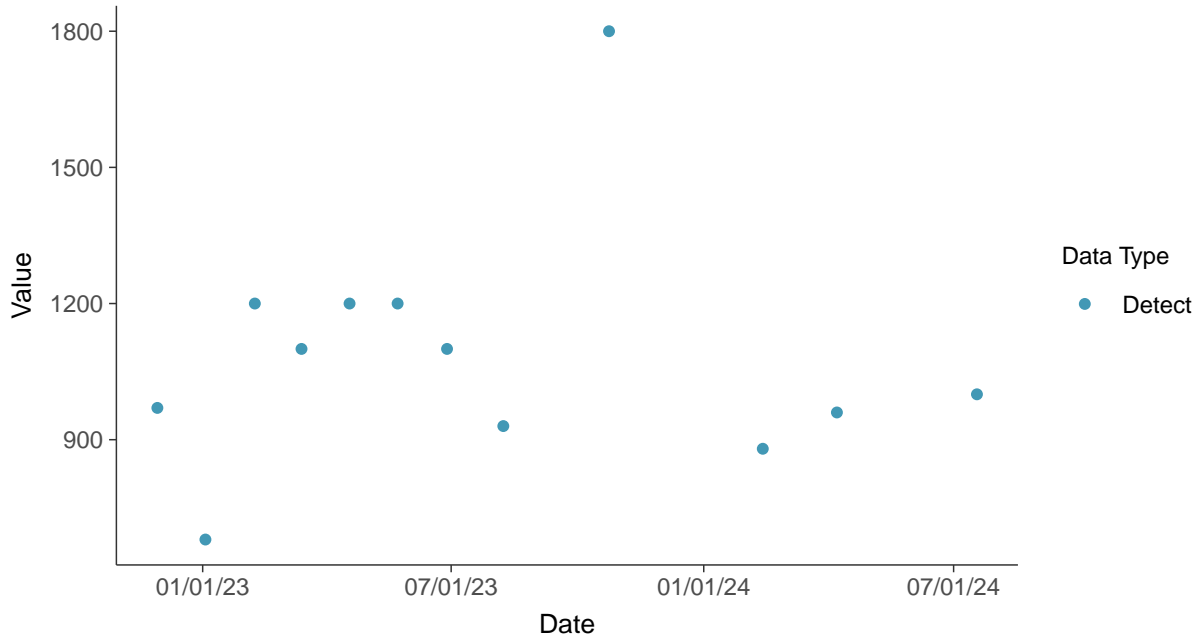


### Appendix III: Total Dissolved Solids, MW-11

ID: 21\_2\_4\_126

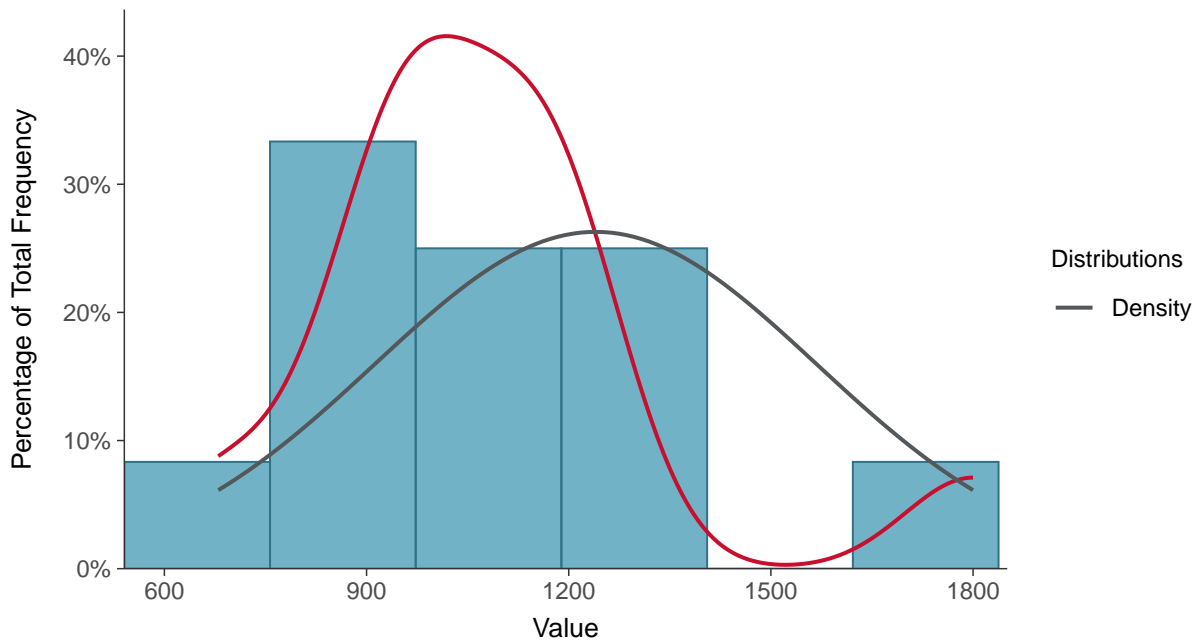
#### Scatter Plot

Total Dissolved Solids, MW-11 (mg/L)



#### Histogram

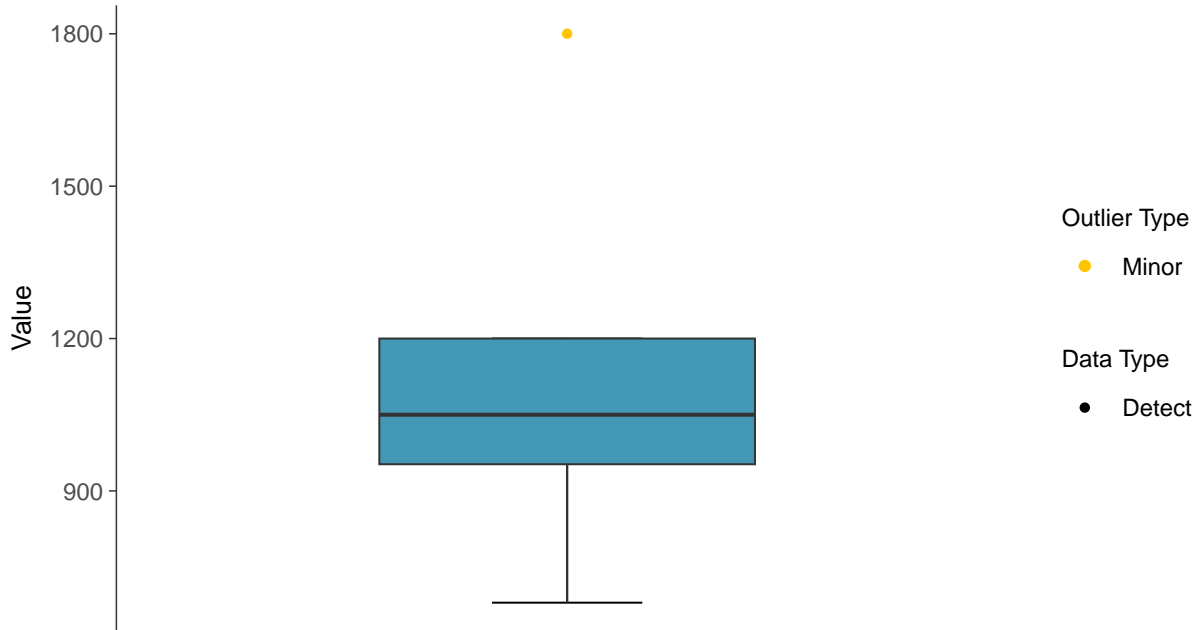
Total Dissolved Solids, MW-11 (mg/L)





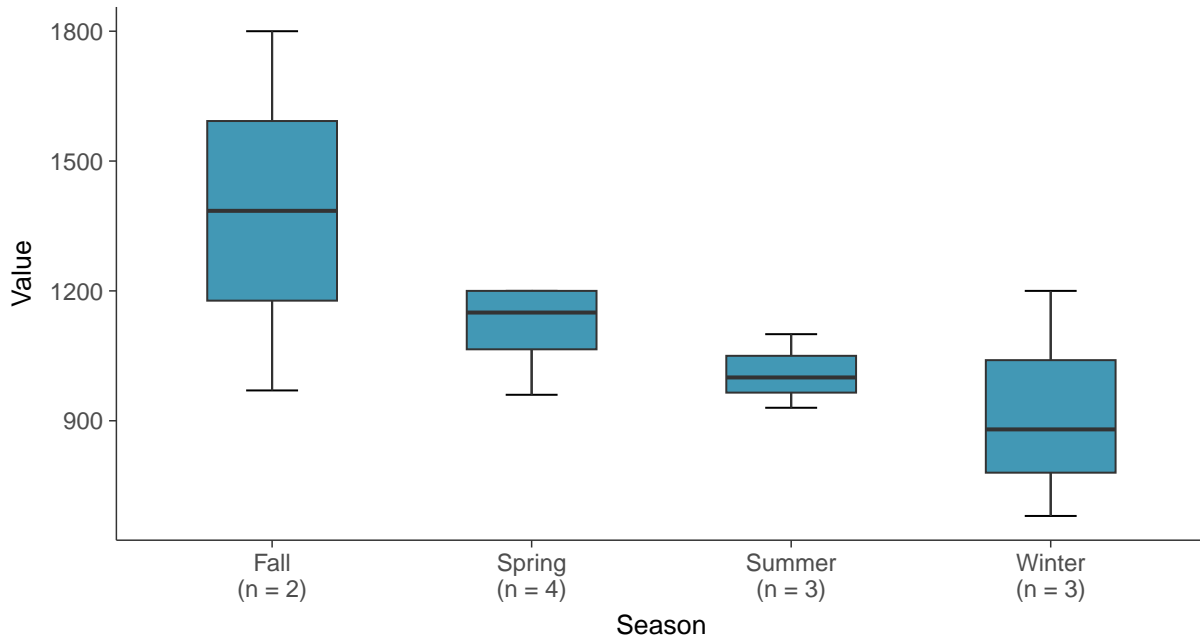
### Boxplot

Total Dissolved Solids, MW-11 (mg/L)



### Boxplot by Season

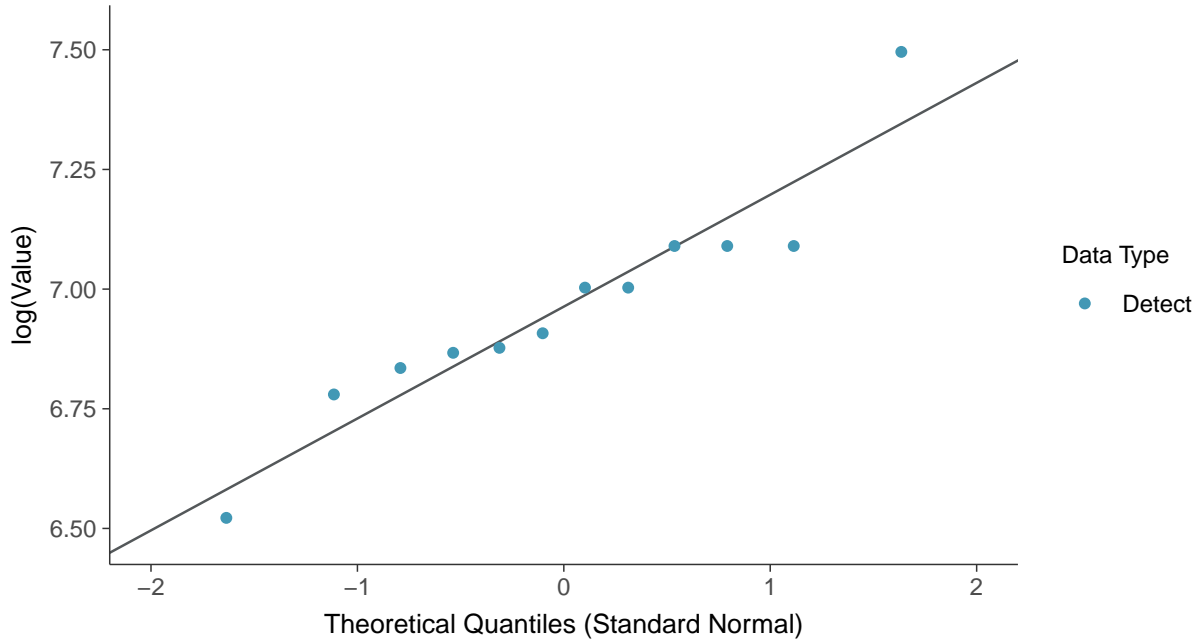
Total Dissolved Solids, MW-11 (mg/L)





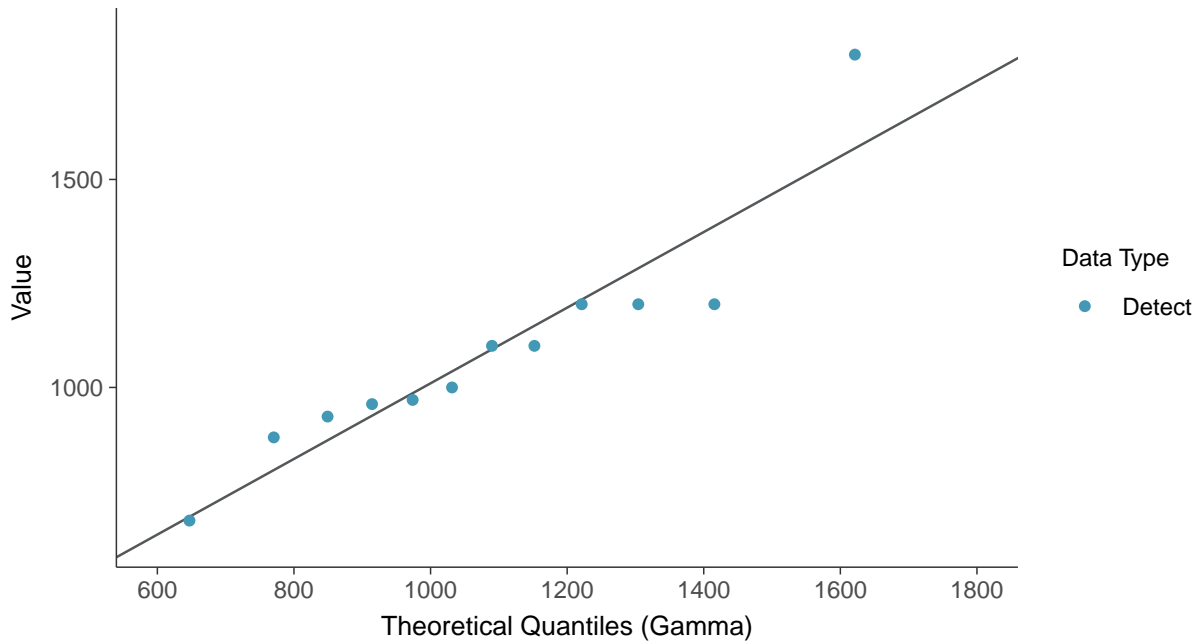
### Lognormal Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



### Gamma Q-Q plot

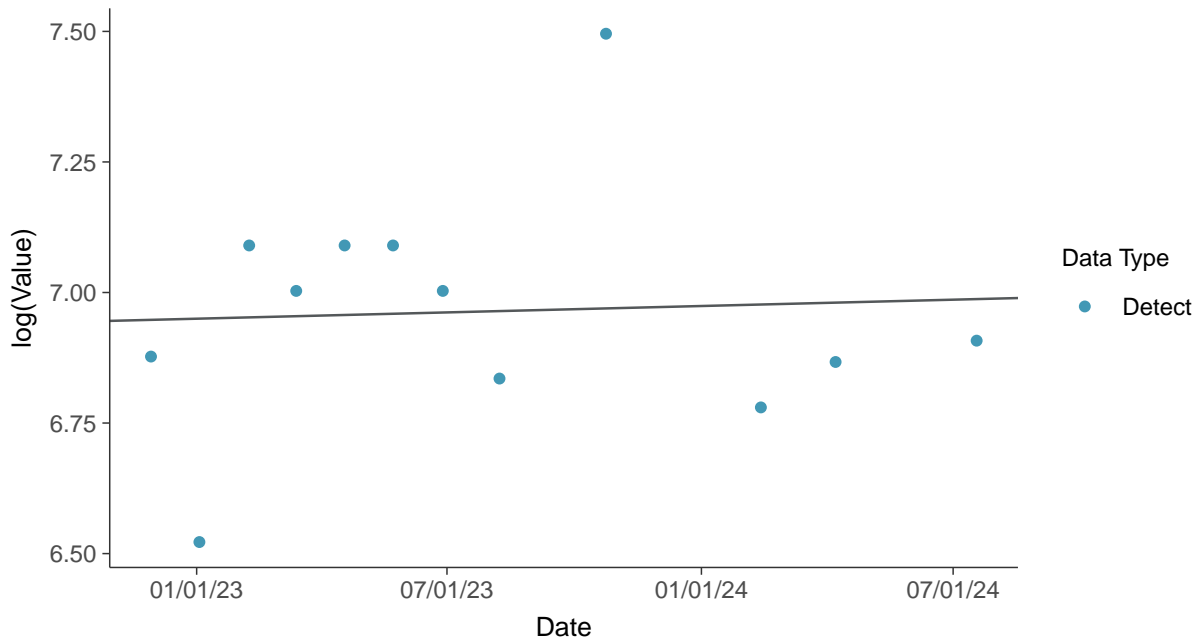
Total Dissolved Solids, MW-11 (mg/L)





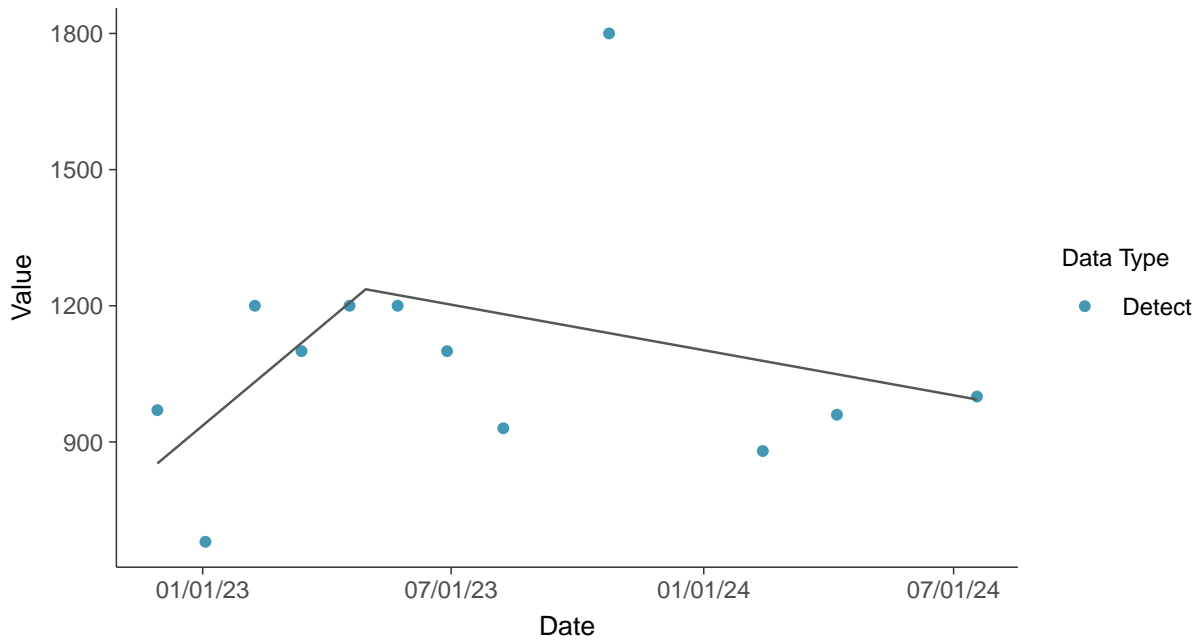
### Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

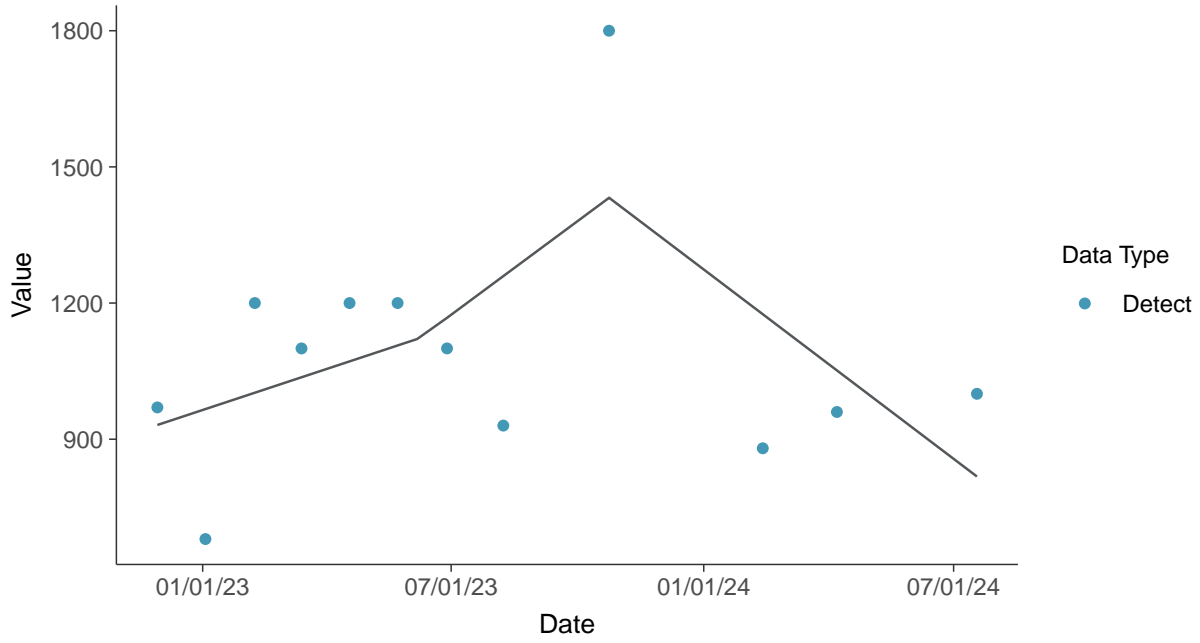
Total Dissolved Solids, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)



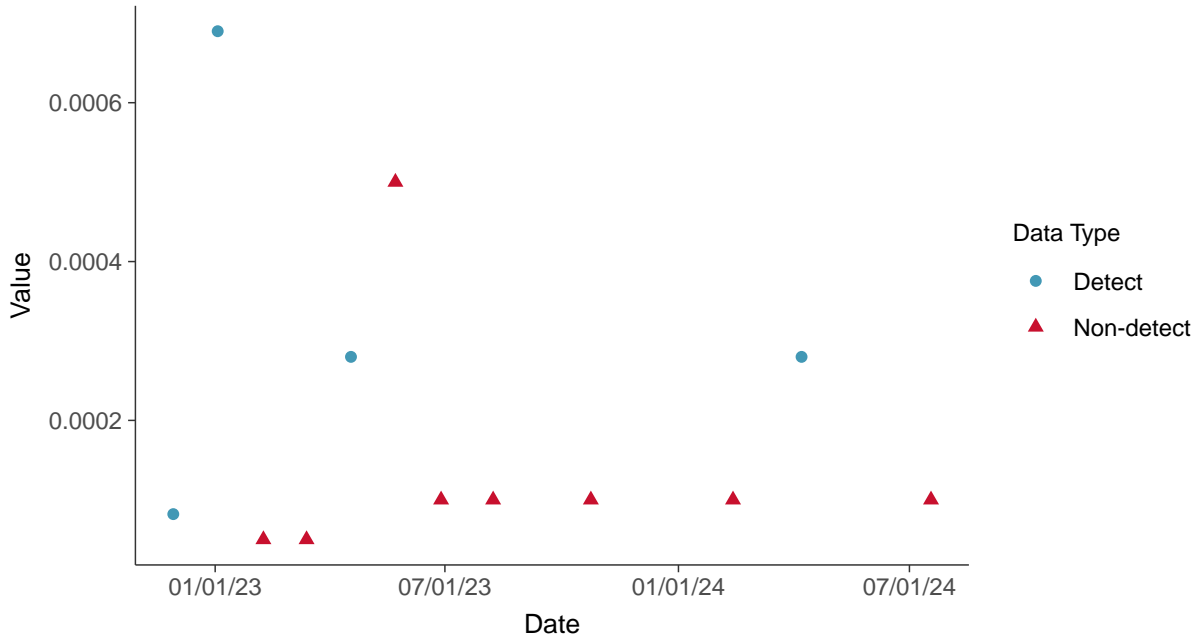


### Appendix IV: Antimony, MW-11

ID: 21\_2\_5\_101

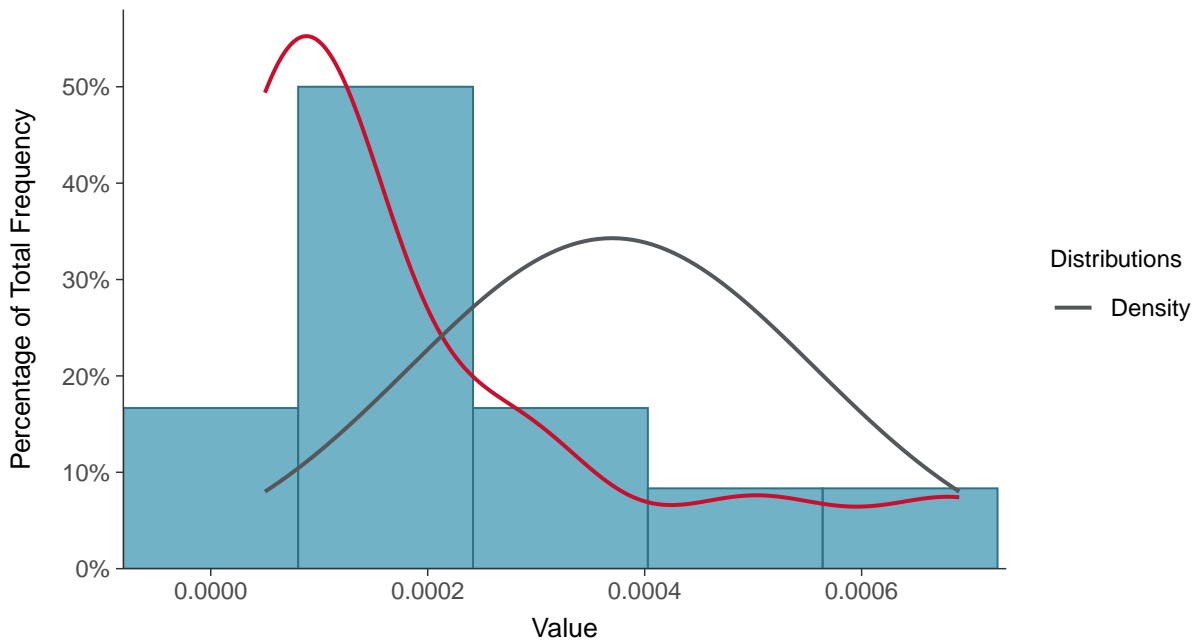
#### Scatter Plot

Antimony, MW-11 (mg/L)



#### Histogram

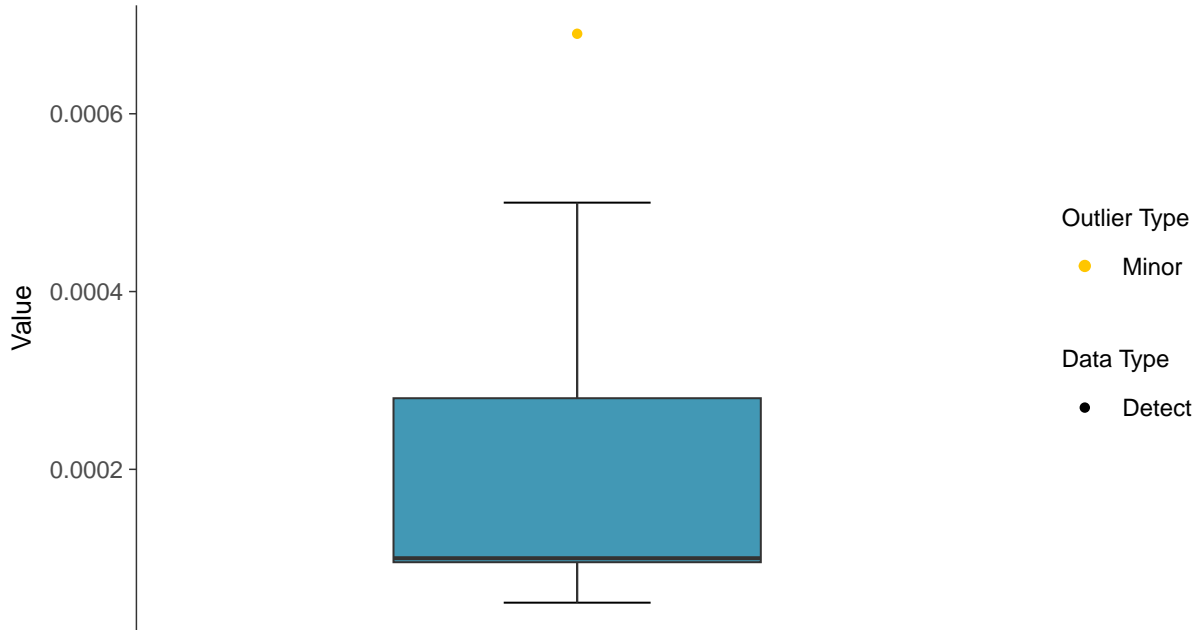
Antimony, MW-11 (mg/L)





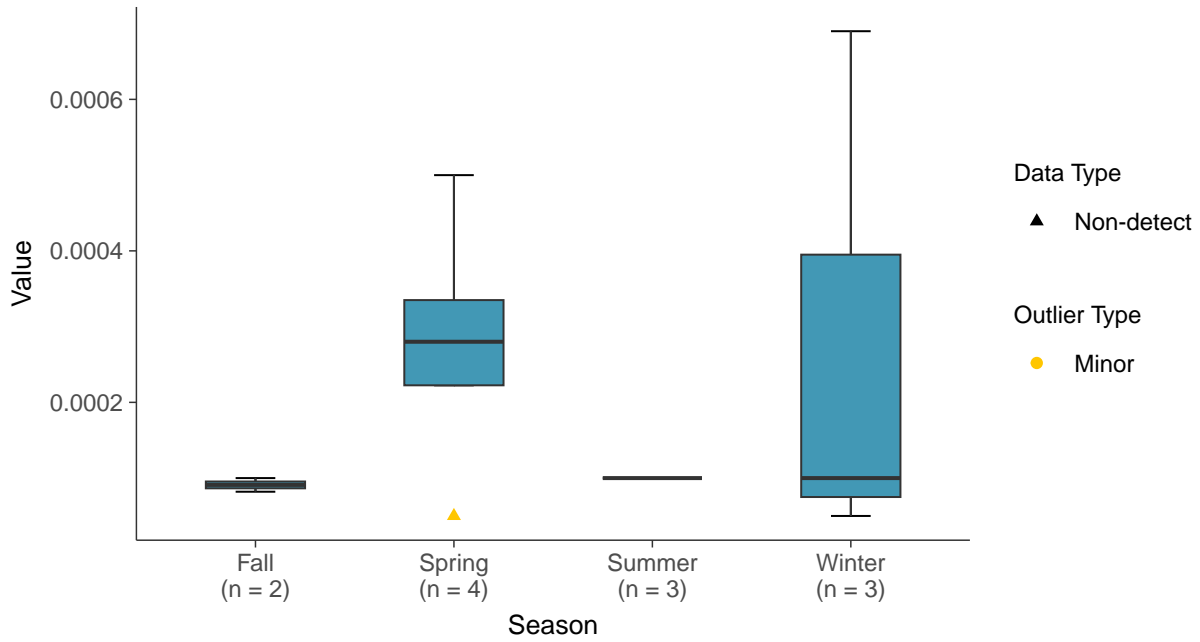
### Boxplot

Antimony, MW-11 (mg/L)



### Boxplot by Season

Antimony, MW-11 (mg/L)

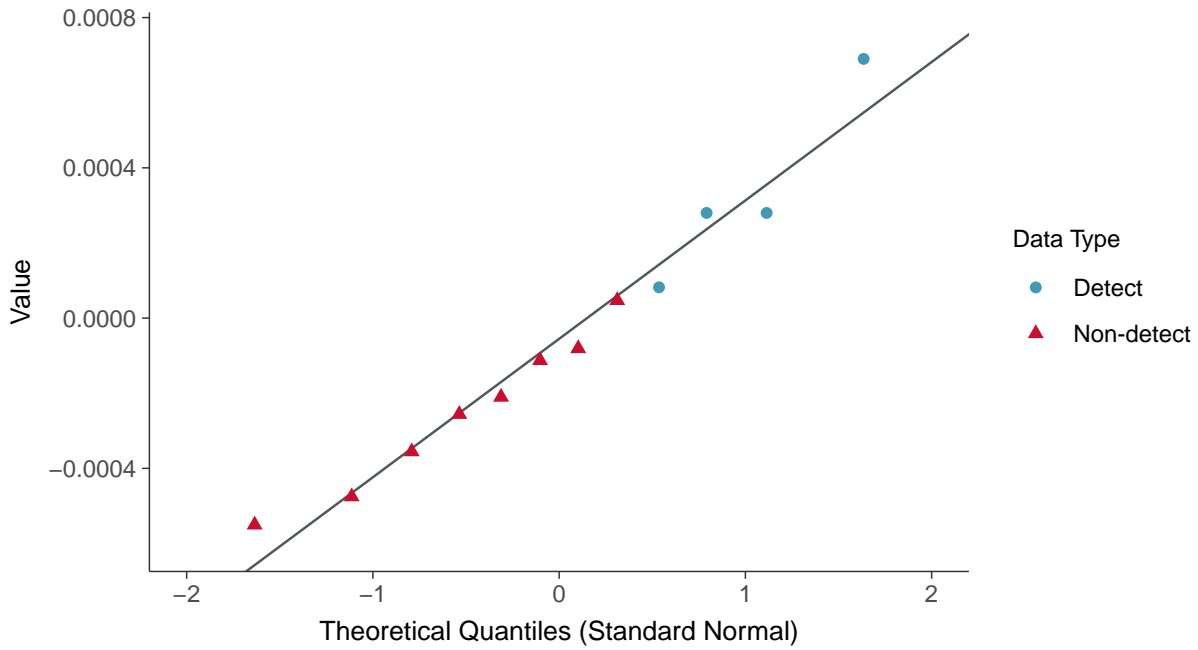






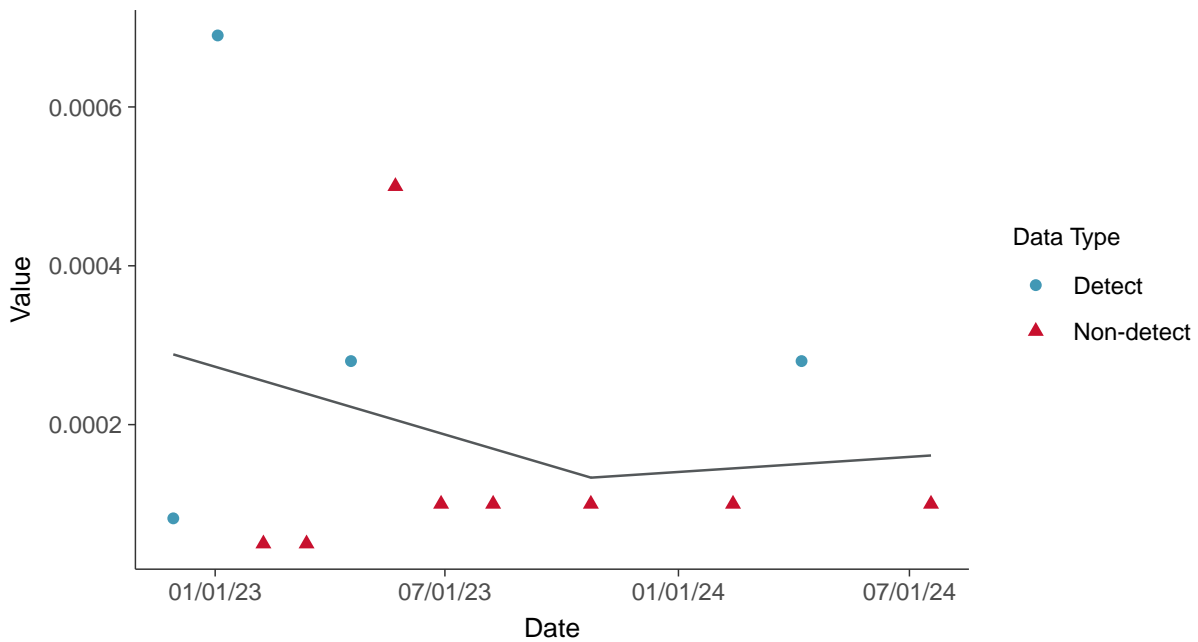
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

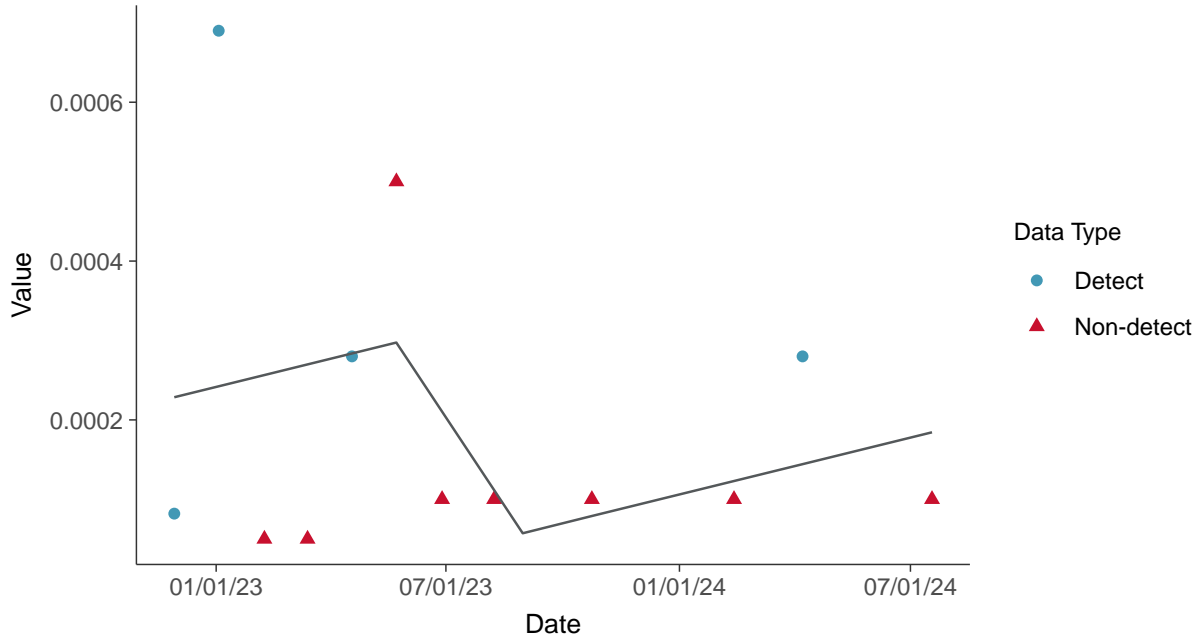
Antimony, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-11 (mg/L)



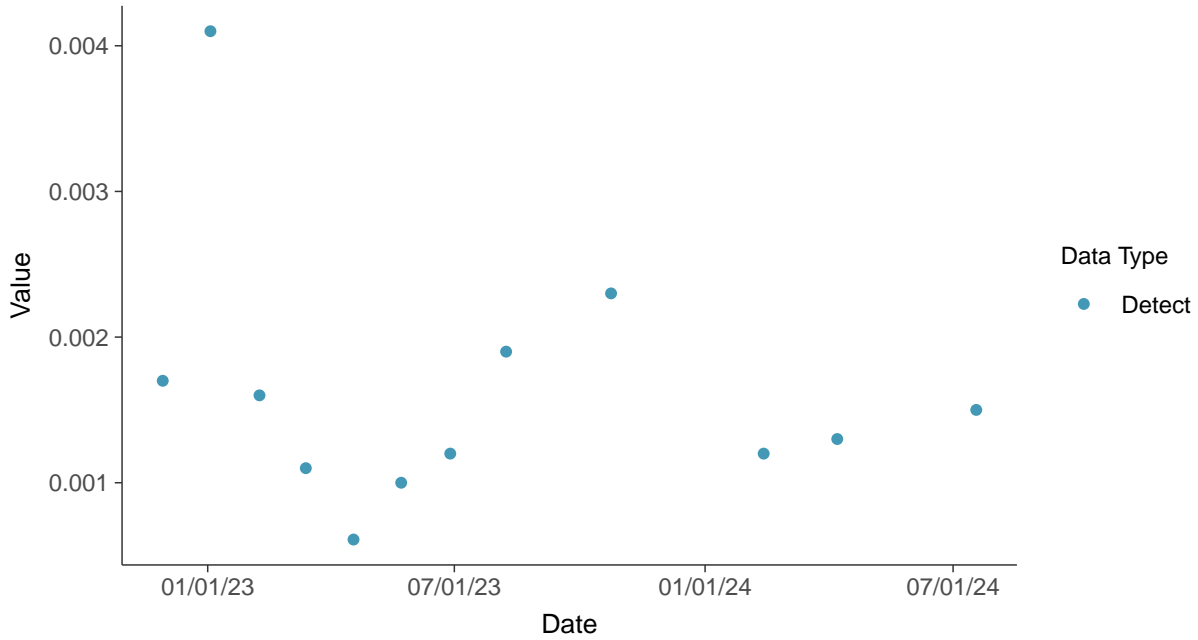


### Appendix IV: Arsenic, MW-11

ID: 21\_2\_5\_102

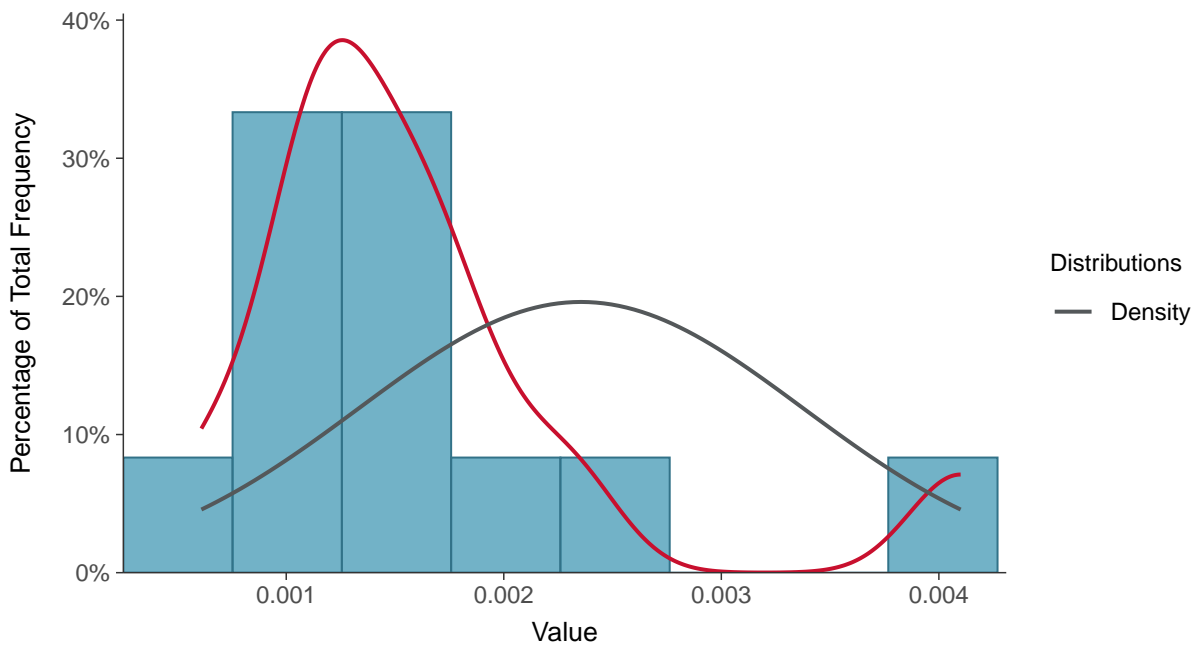
#### Scatter Plot

Arsenic, MW-11 (mg/L)



#### Histogram

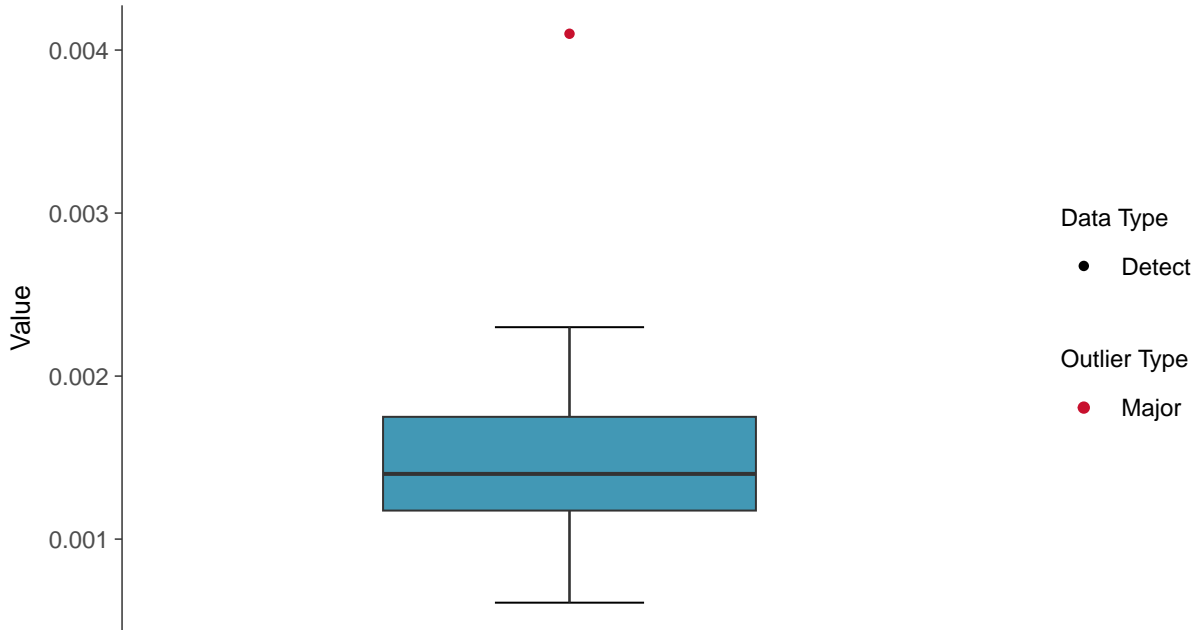
Arsenic, MW-11 (mg/L)





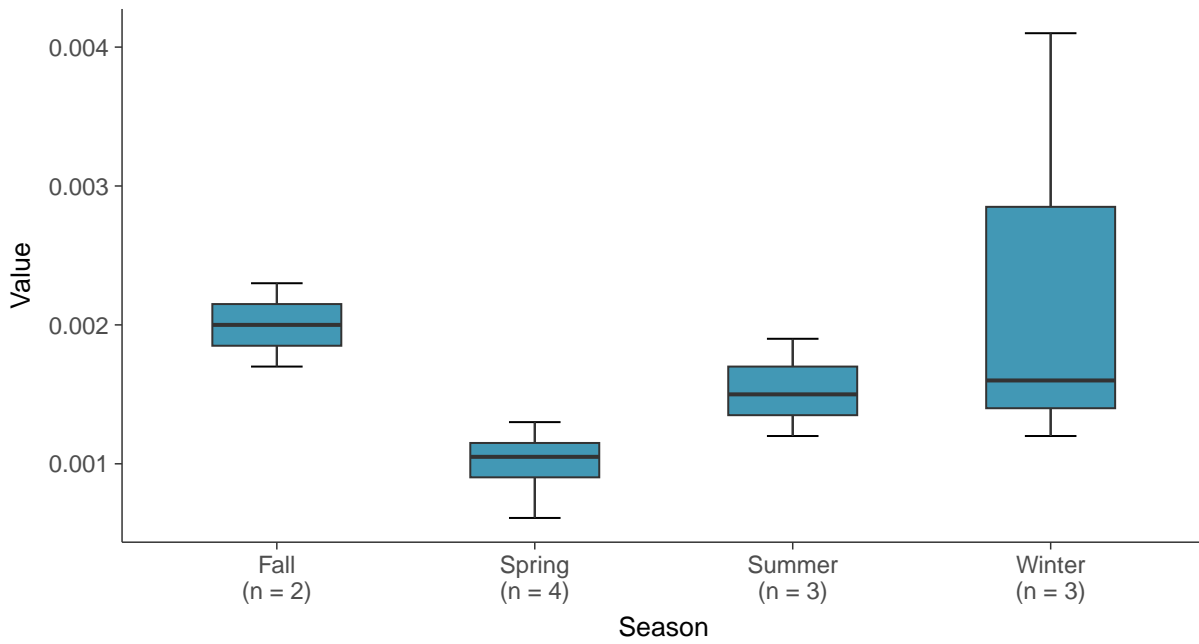
### Boxplot

Arsenic, MW-11 (mg/L)



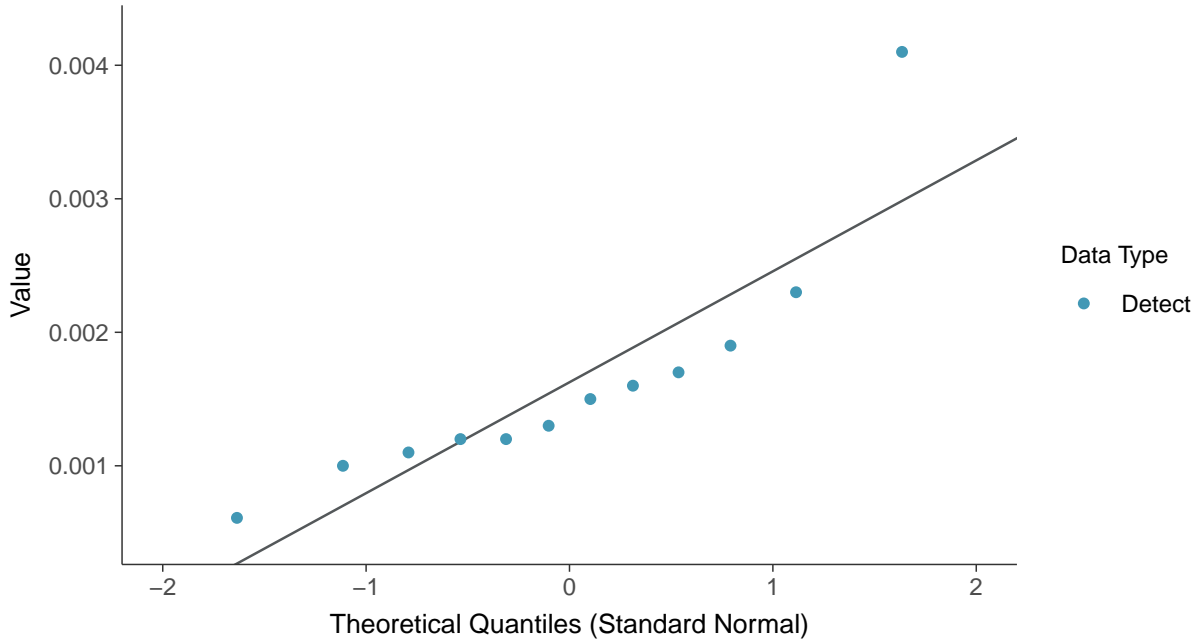
### Boxplot by Season

Arsenic, MW-11 (mg/L)

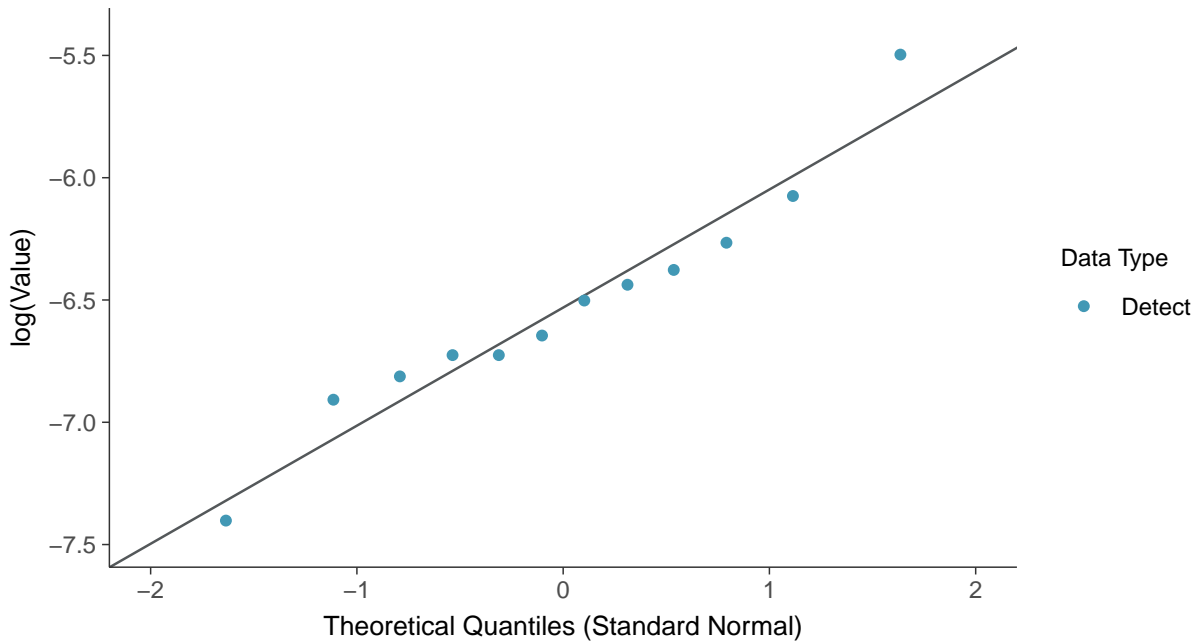




**Normal Q-Q plot**  
Arsenic, MW-11 (mg/L)

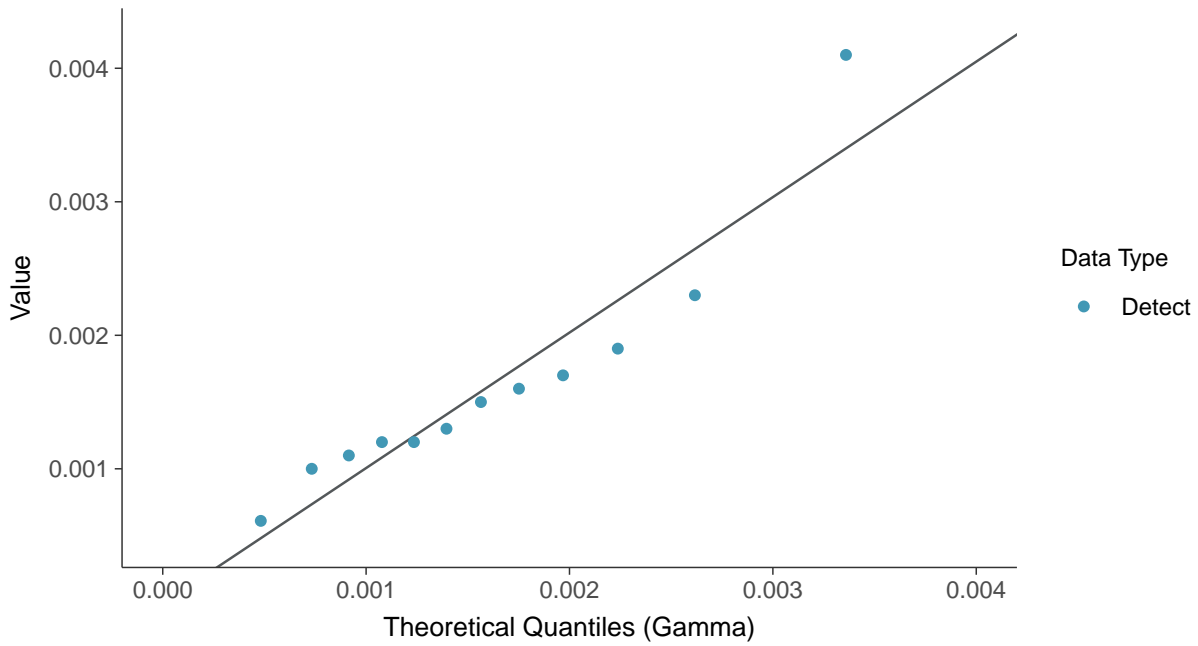


**Lognormal Q-Q plot**  
Arsenic, MW-11 (mg/L)

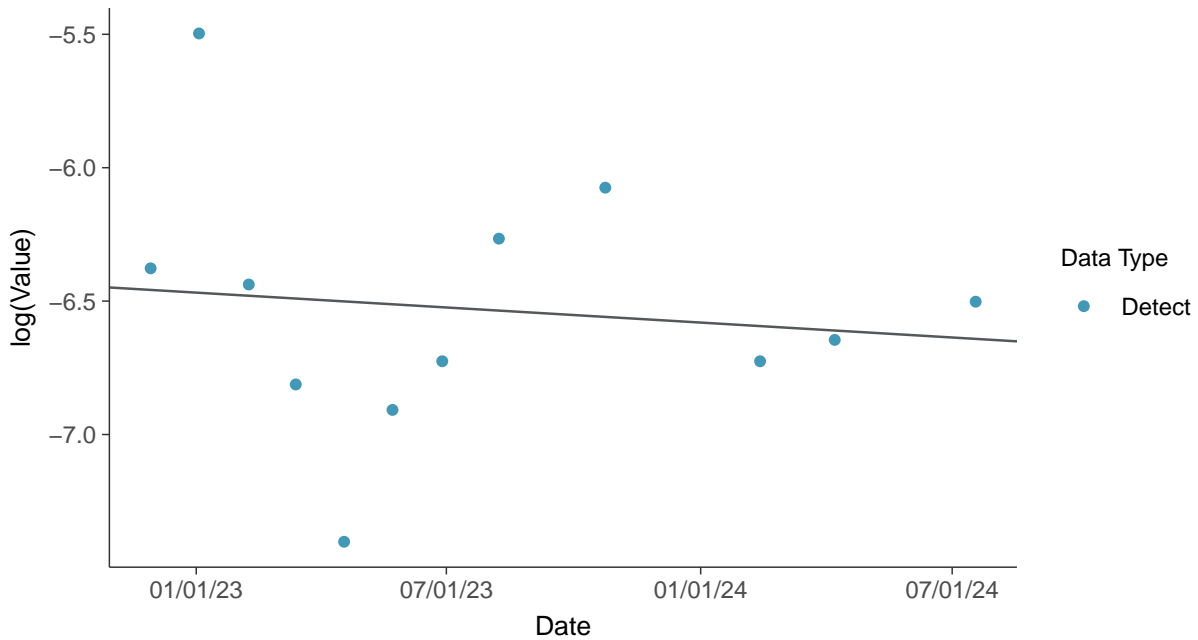




**Gamma Q-Q plot**  
Arsenic, MW-11 (mg/L)



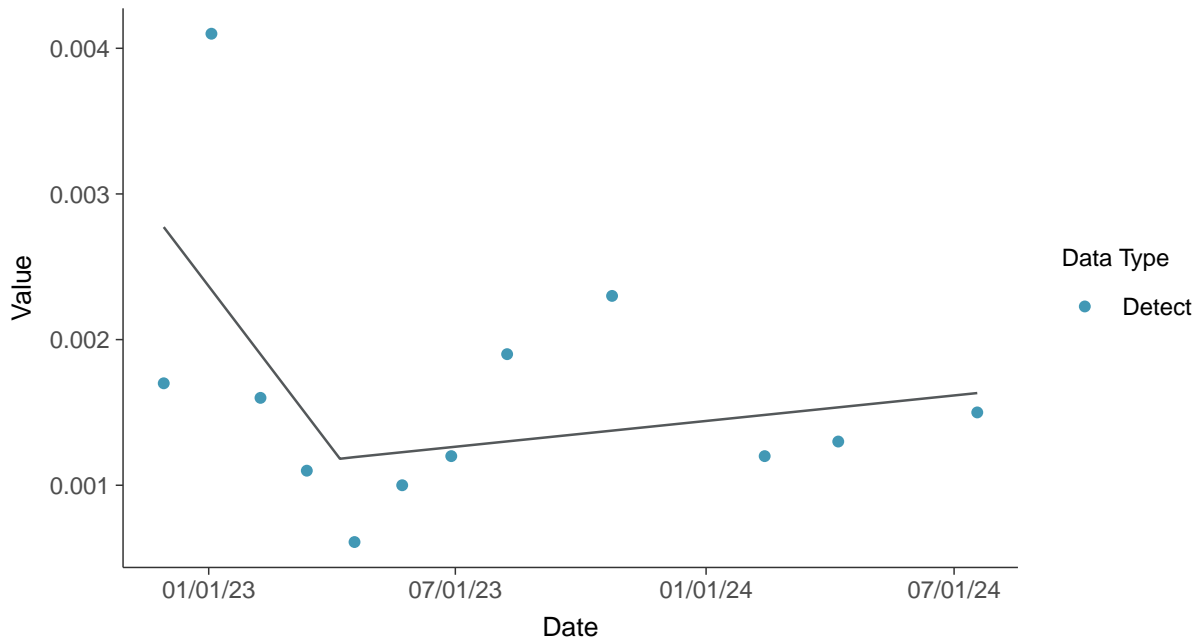
**Trend Regression: Lognormal MLE**  
Arsenic, MW-11 (mg/L)





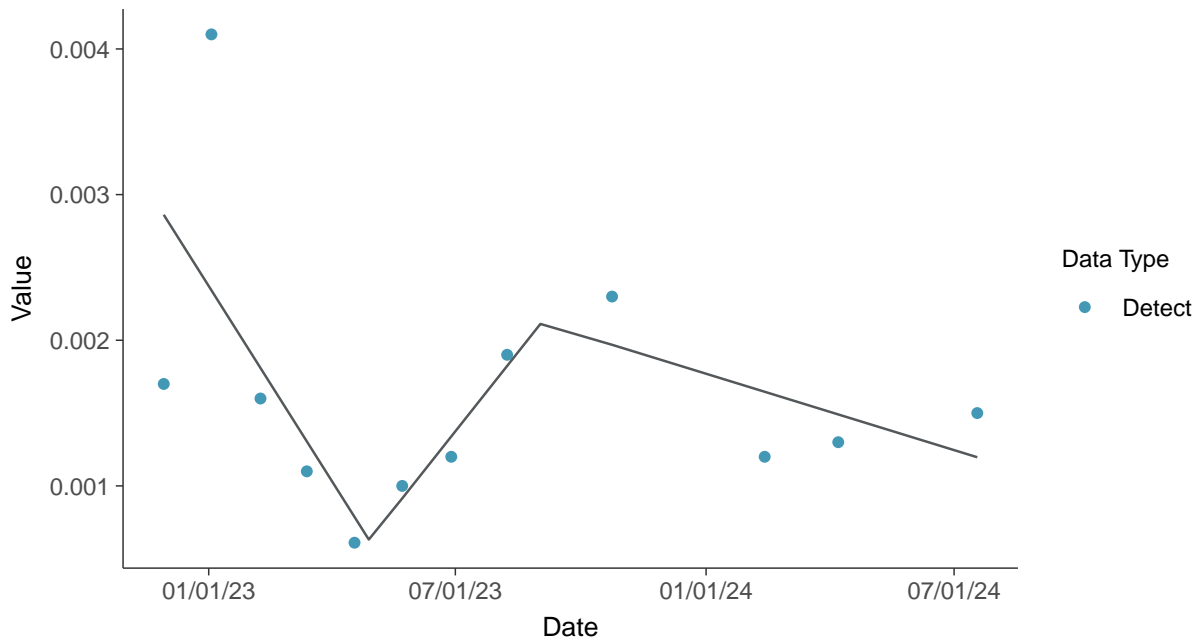
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-11 (mg/L)



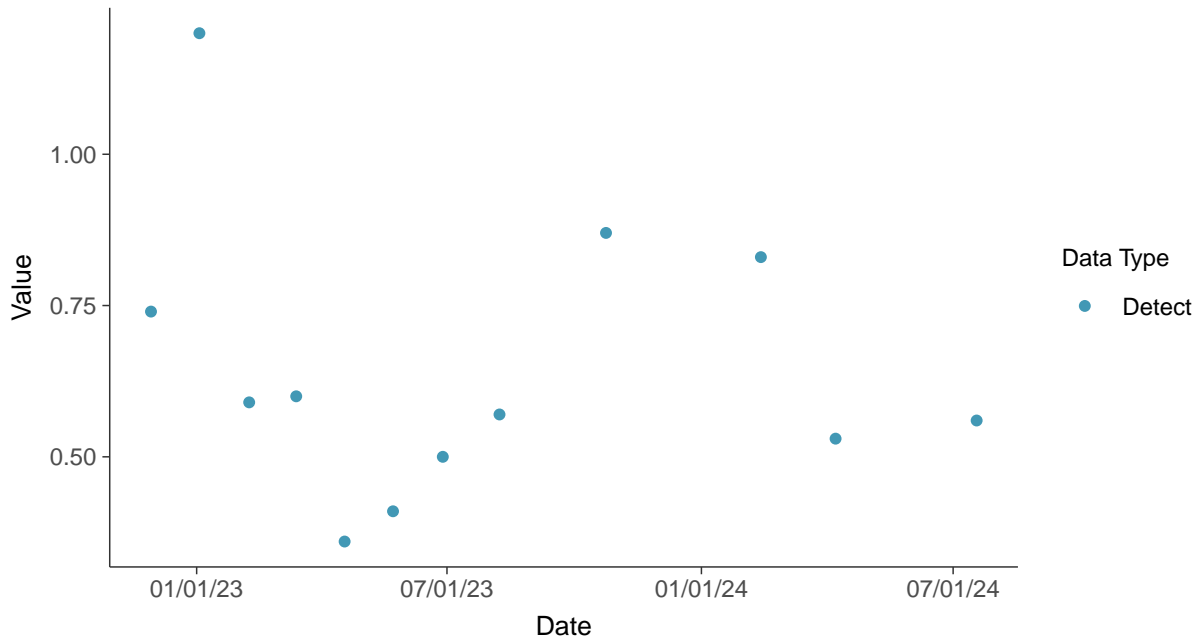


### Appendix IV: Barium, MW-11

ID: 21\_2\_5\_103

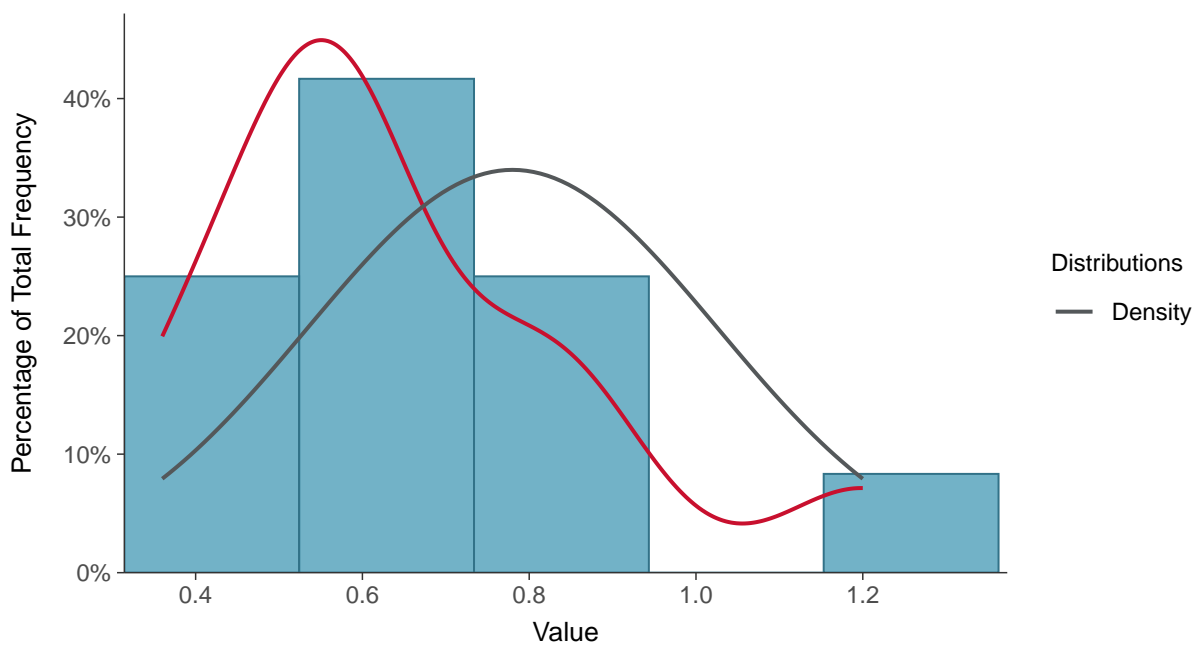
#### Scatter Plot

Barium, MW-11 (mg/L)



#### Histogram

Barium, MW-11 (mg/L)

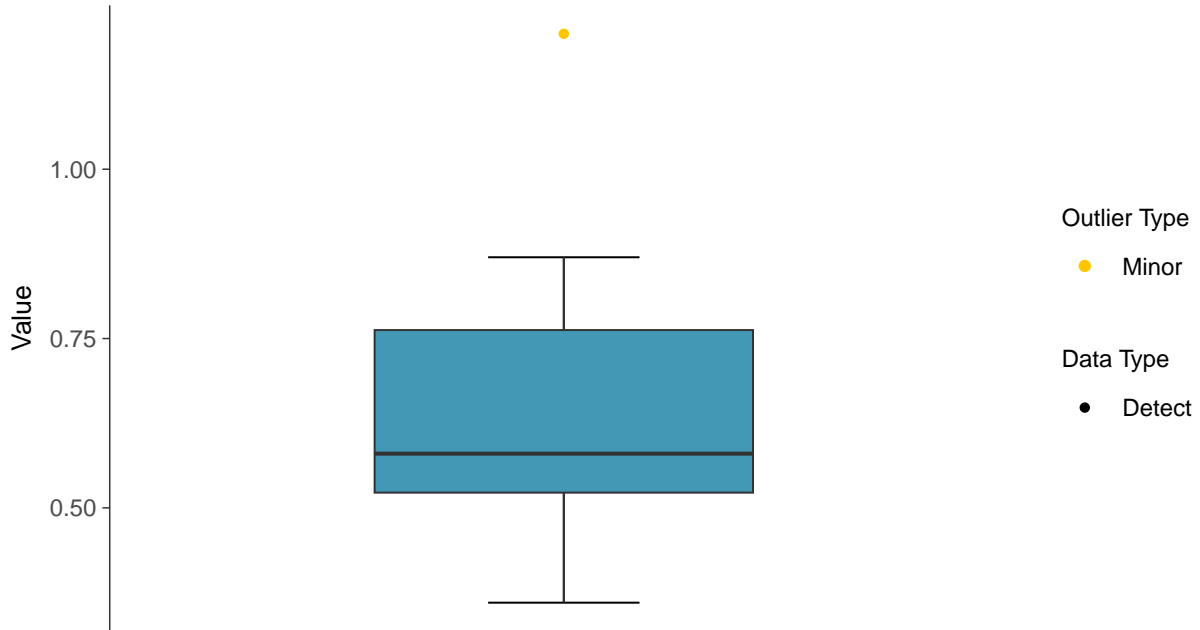






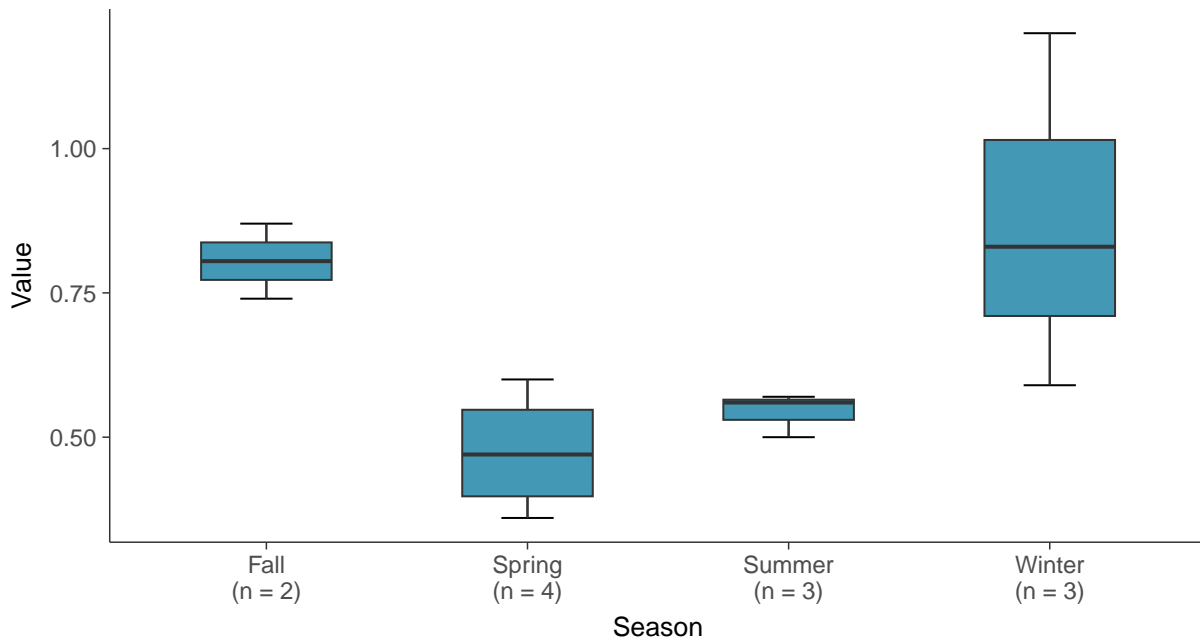
### Boxplot

Barium, MW-11 (mg/L)



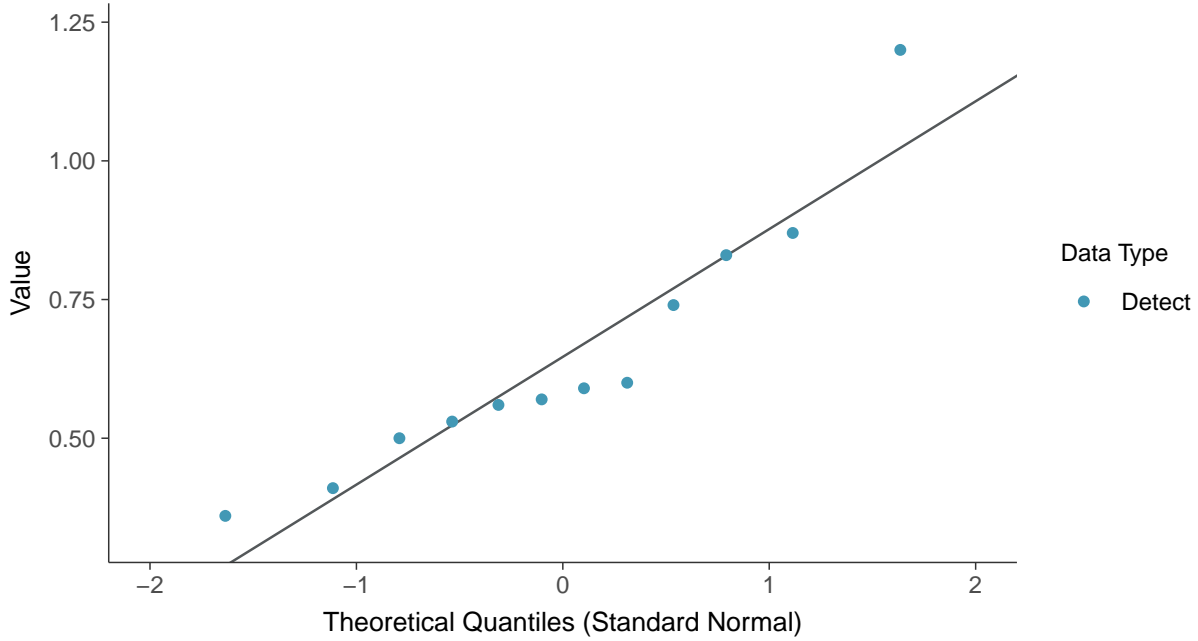
### Boxplot by Season

Barium, MW-11 (mg/L)

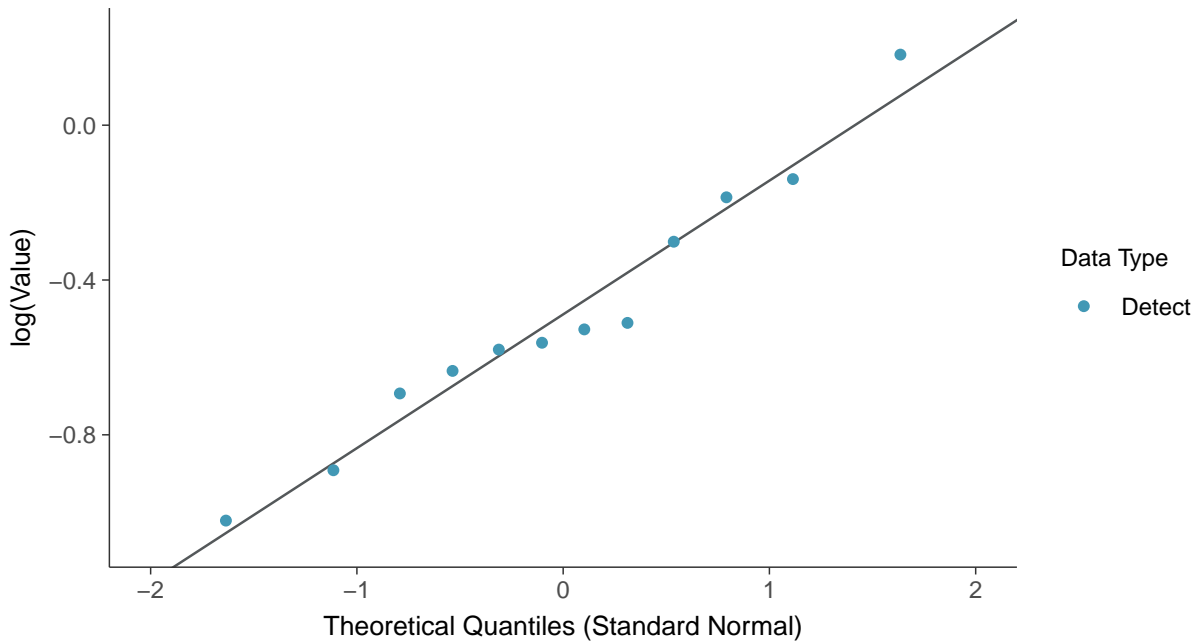




**Normal Q-Q plot**  
Barium, MW-11 (mg/L)



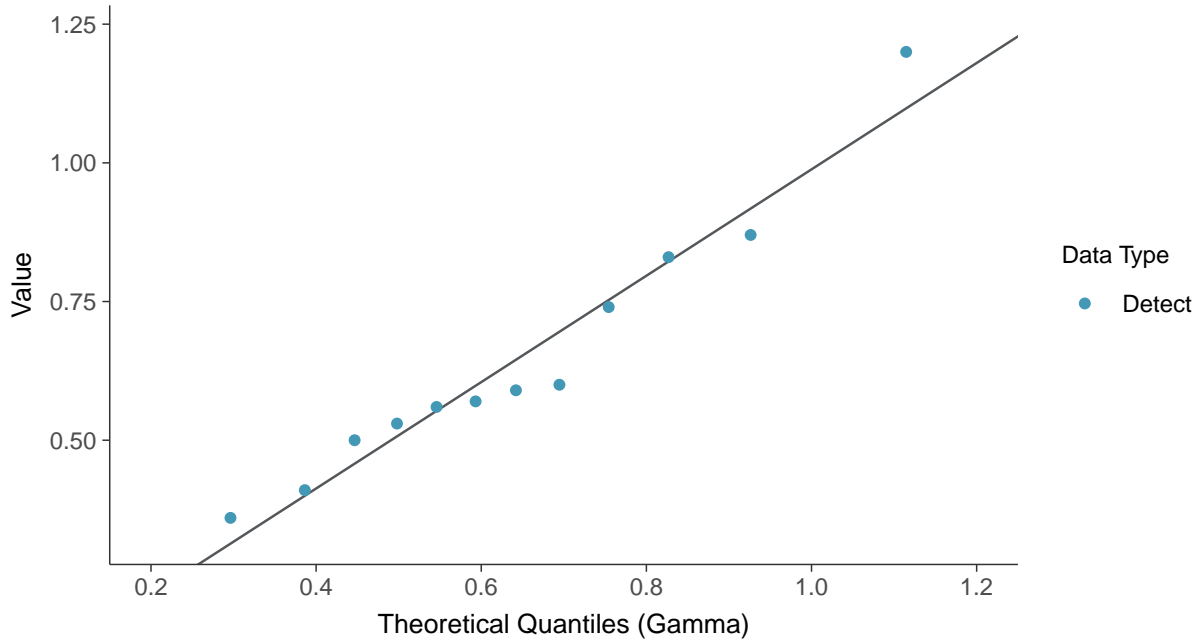
**Lognormal Q-Q plot**  
Barium, MW-11 (mg/L)





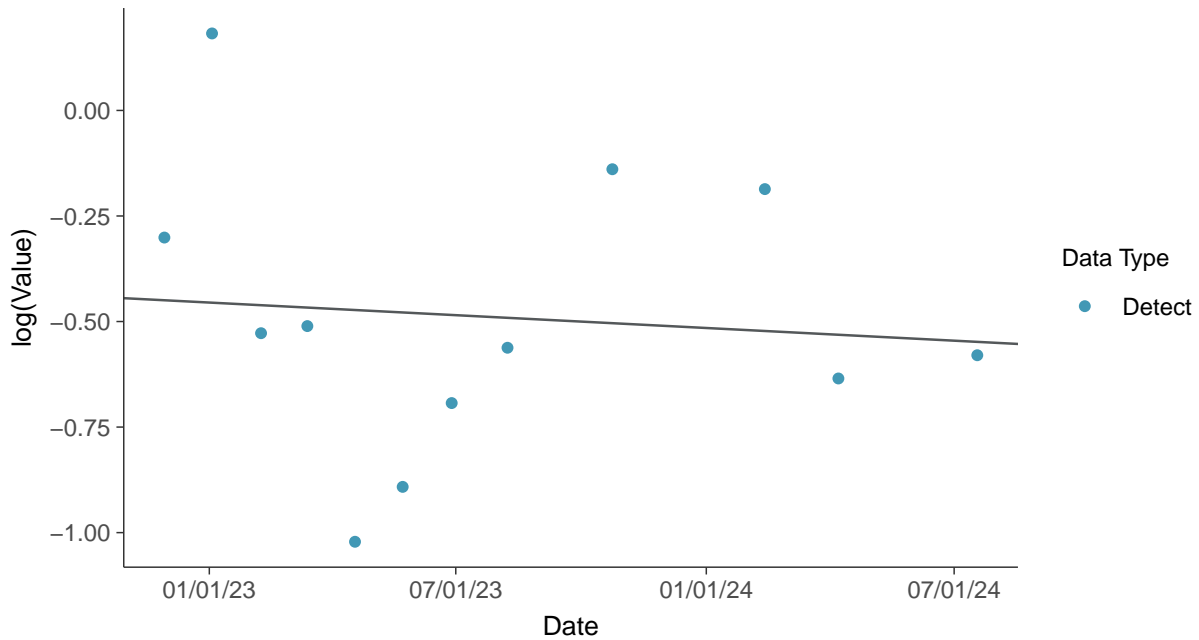
### Gamma Q-Q plot

Barium, MW-11 (mg/L)



### Trend Regression: Lognormal MLE

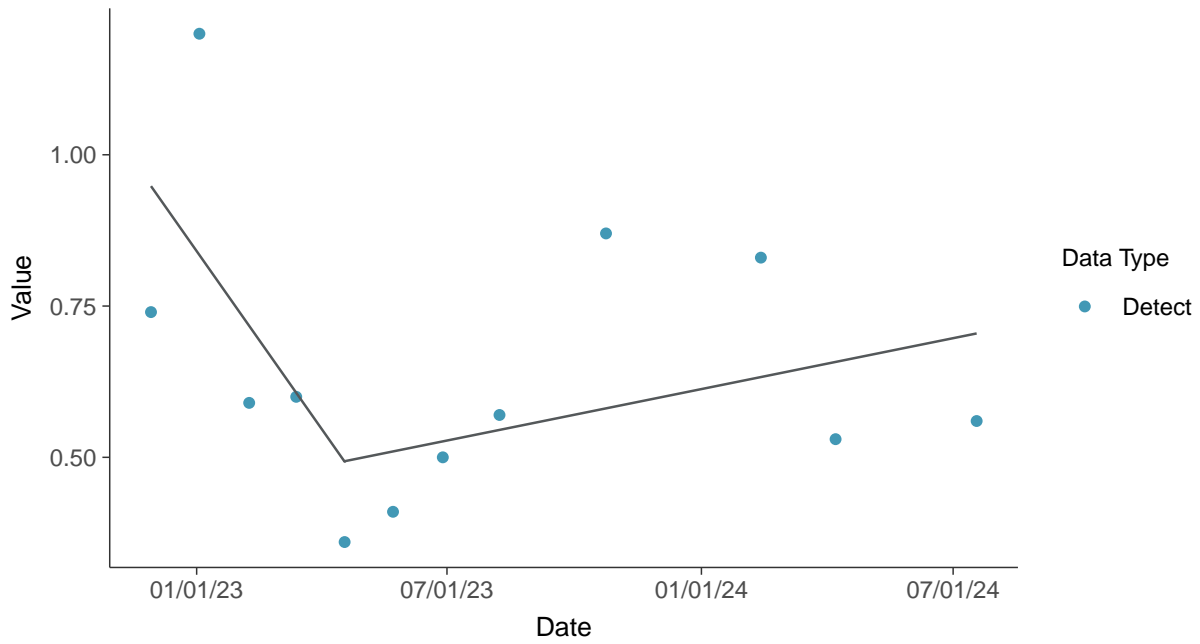
Barium, MW-11 (mg/L)





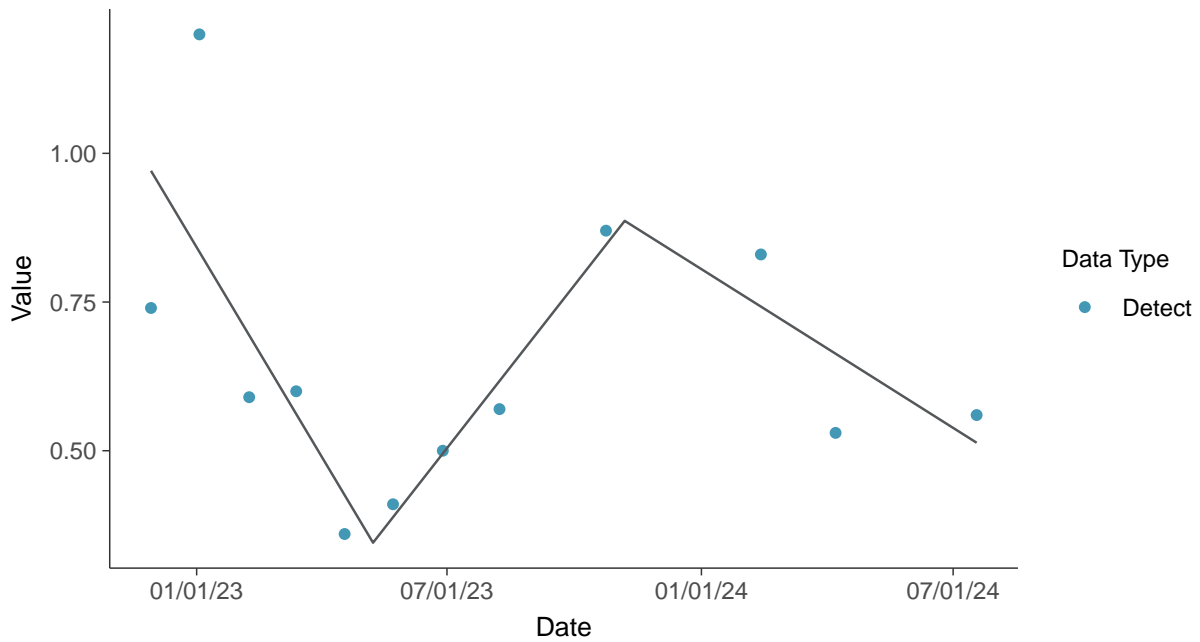
### Trend Regression: Piecewise Linear-Linear

Barium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-11 (mg/L)



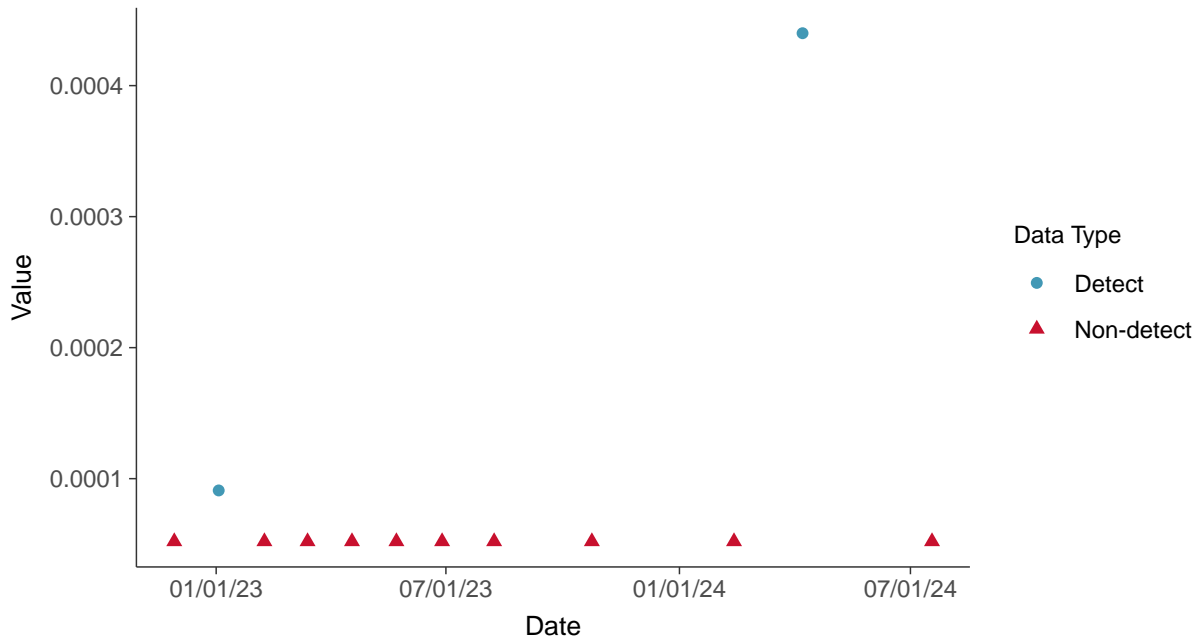


### Appendix IV: Beryllium, MW-11

ID: 21\_2\_5\_104

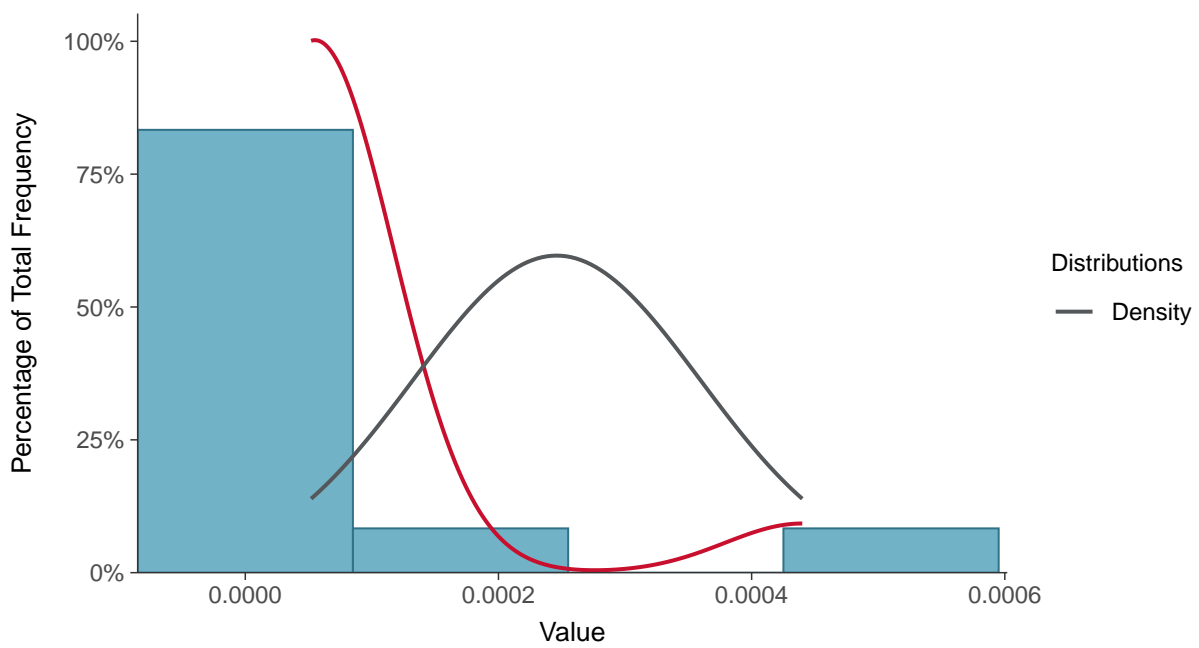
#### Scatter Plot

Beryllium, MW-11 (mg/L)



#### Histogram

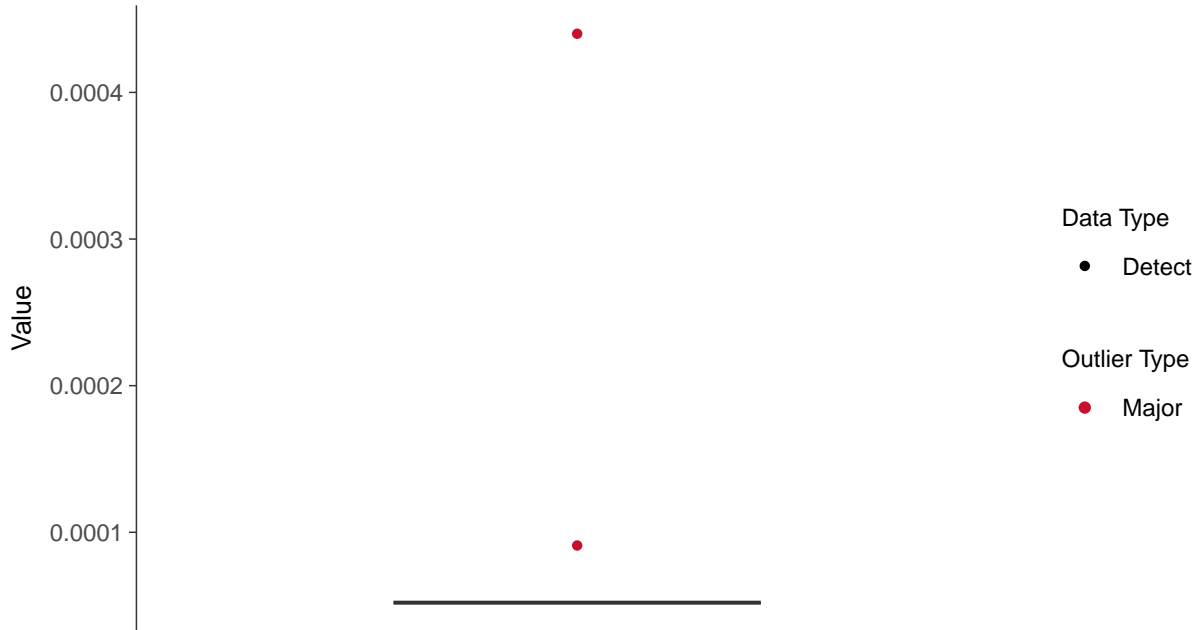
Beryllium, MW-11 (mg/L)





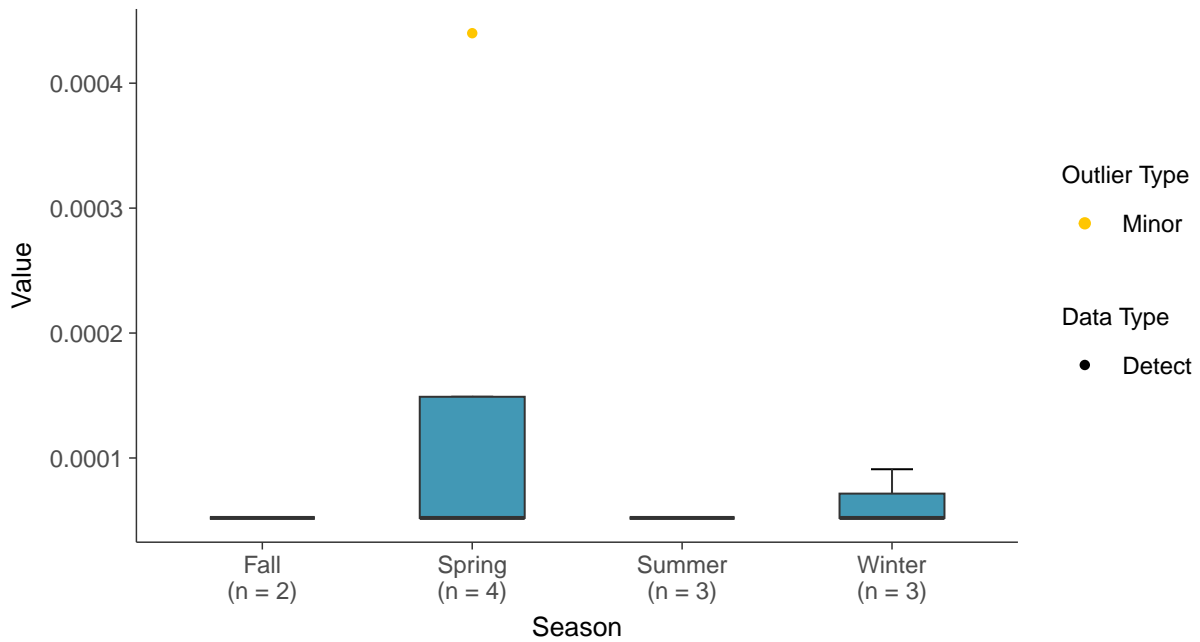
### Boxplot

Beryllium, MW-11 (mg/L)



### Boxplot by Season

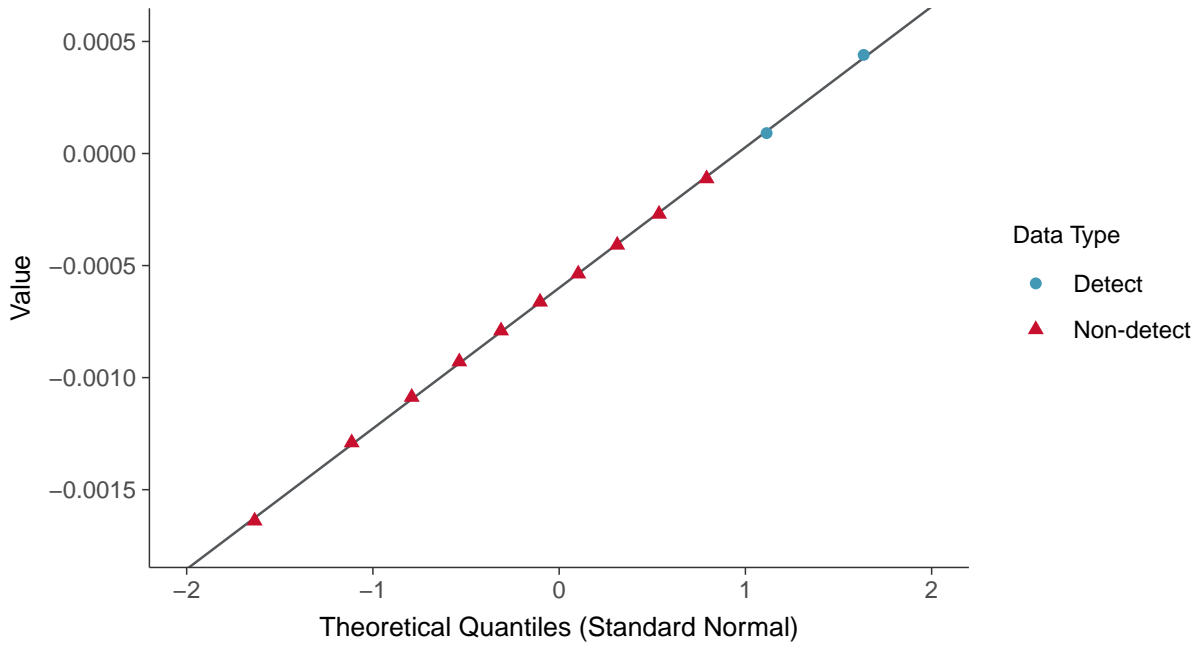
Beryllium, MW-11 (mg/L)





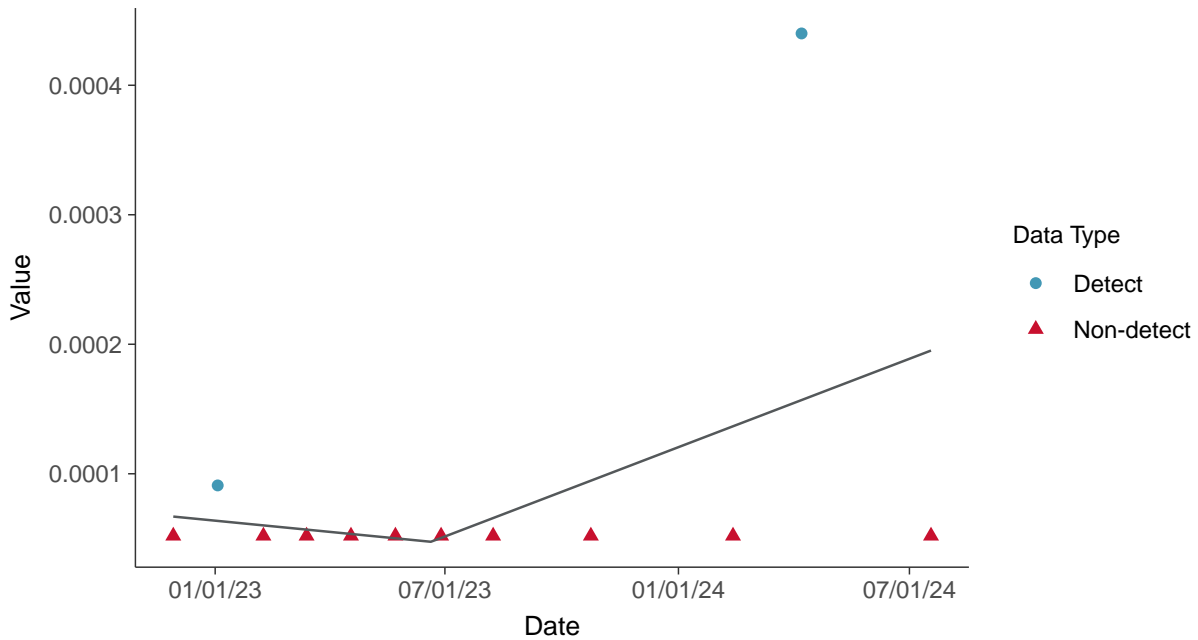
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

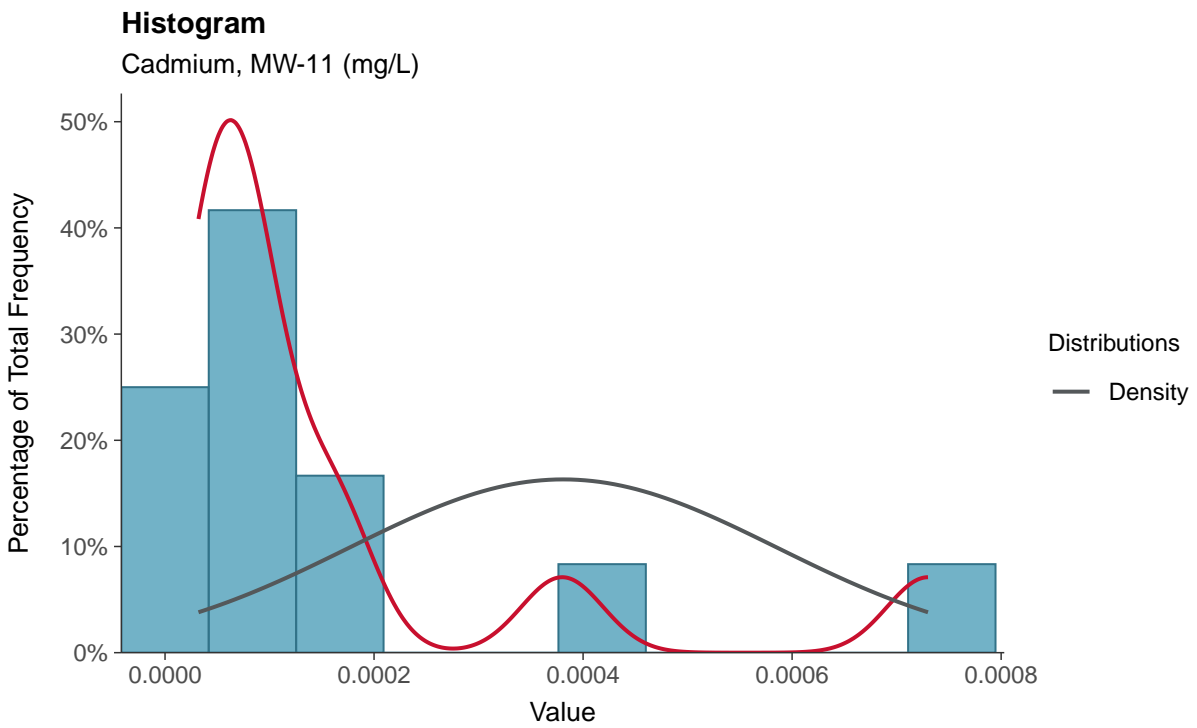
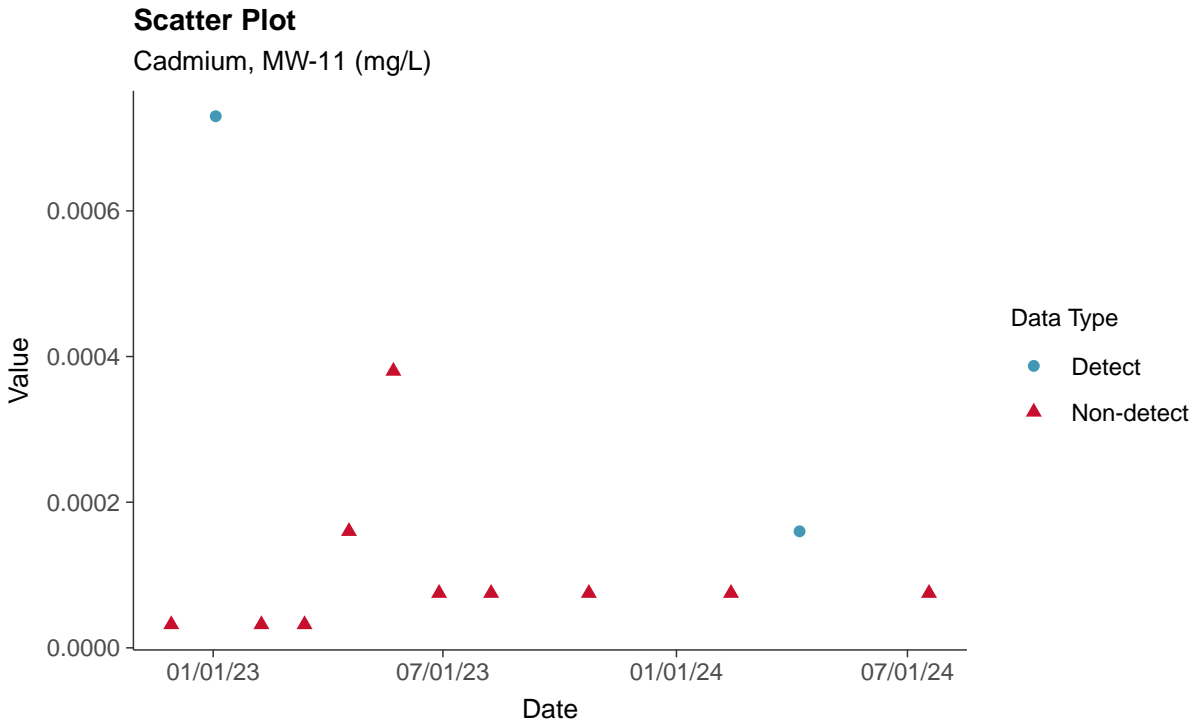
Beryllium, MW-11 (mg/L)





### Appendix IV: Cadmium, MW-11

ID: 21\_2\_5\_106

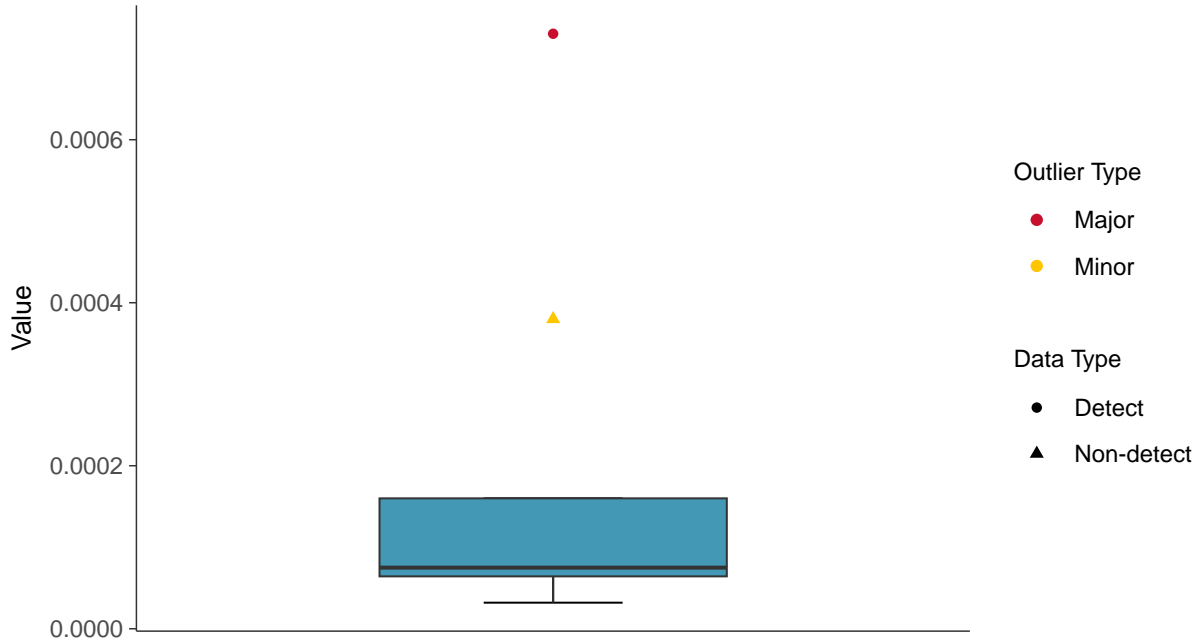






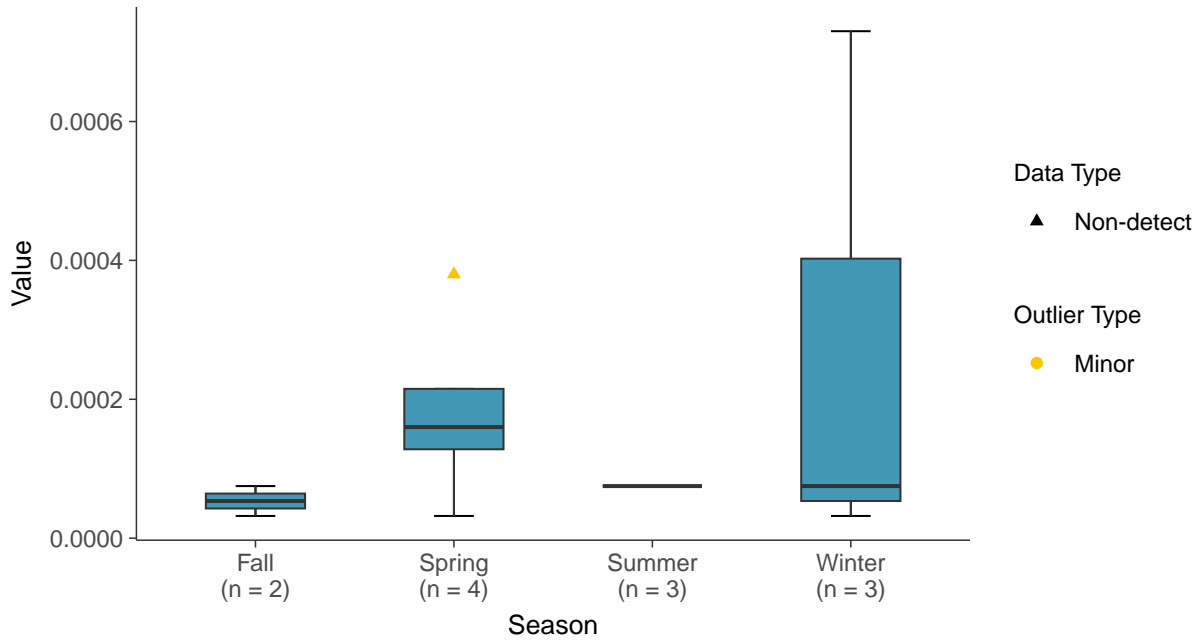
### Boxplot

Cadmium, MW-11 (mg/L)



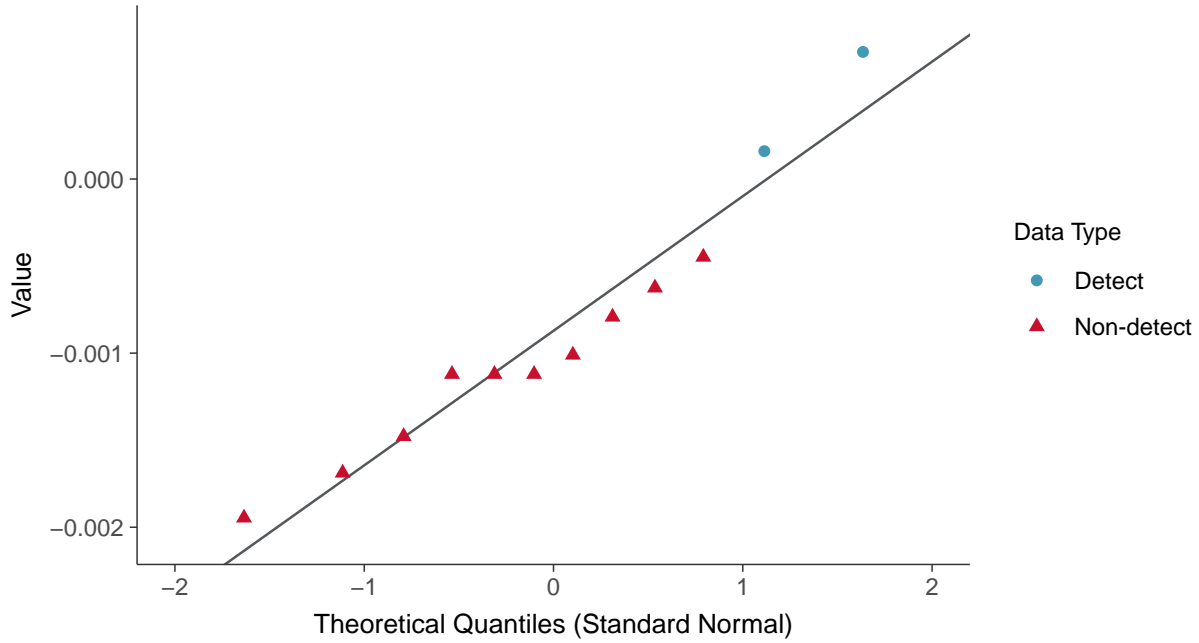
### Boxplot by Season

Cadmium, MW-11 (mg/L)

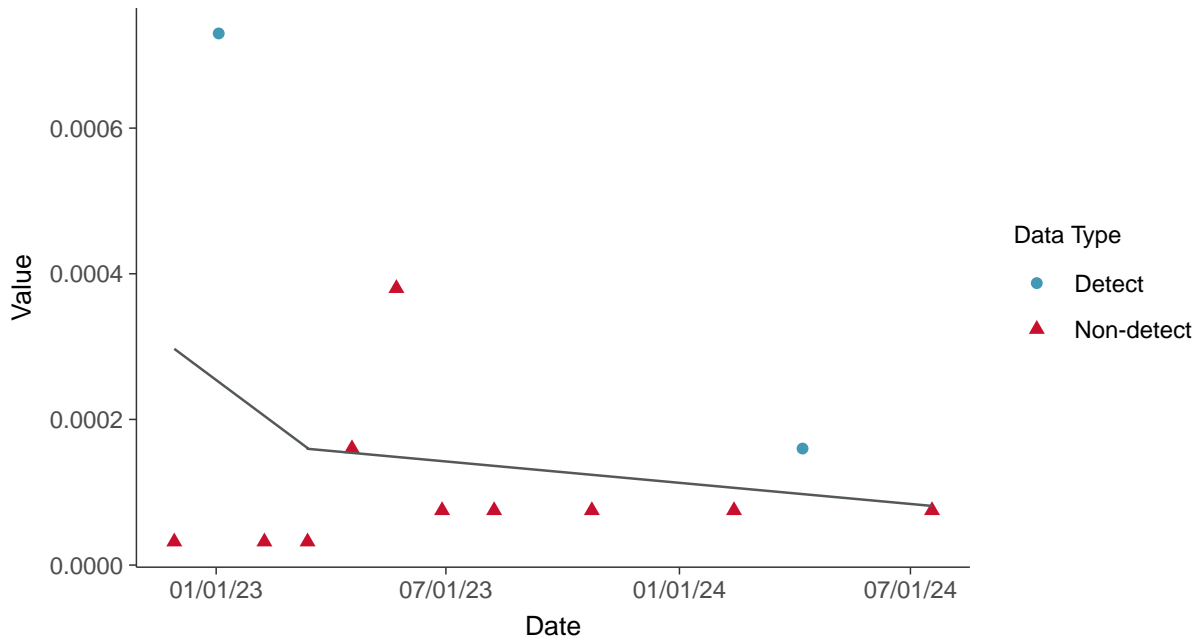




**Normal Q-Q plot using ROS Imputed Estimates**  
Cadmium, MW-11 (mg/L)



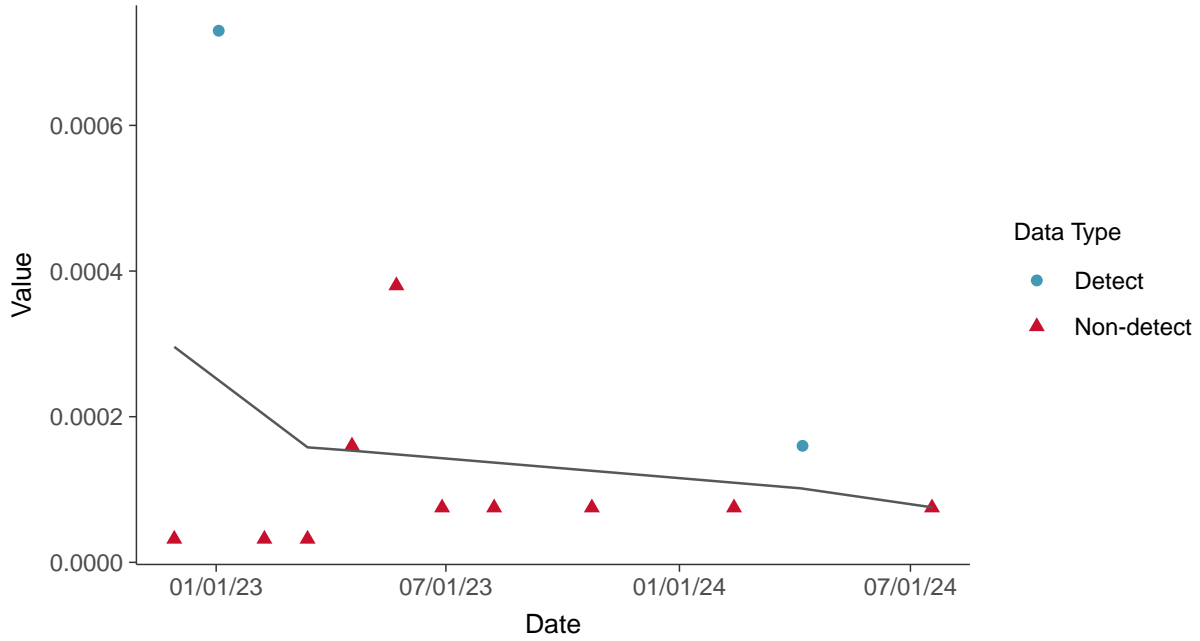
**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-11 (mg/L)



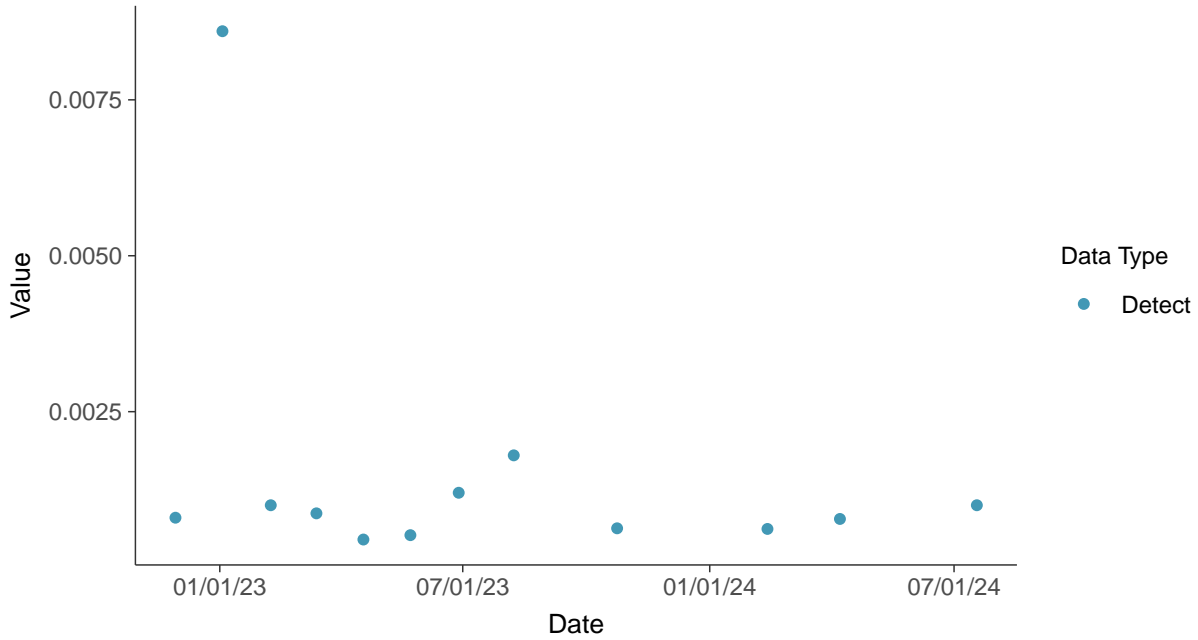


## Appendix IV: Chromium, Total, MW-11

ID: 21\_2\_5\_109

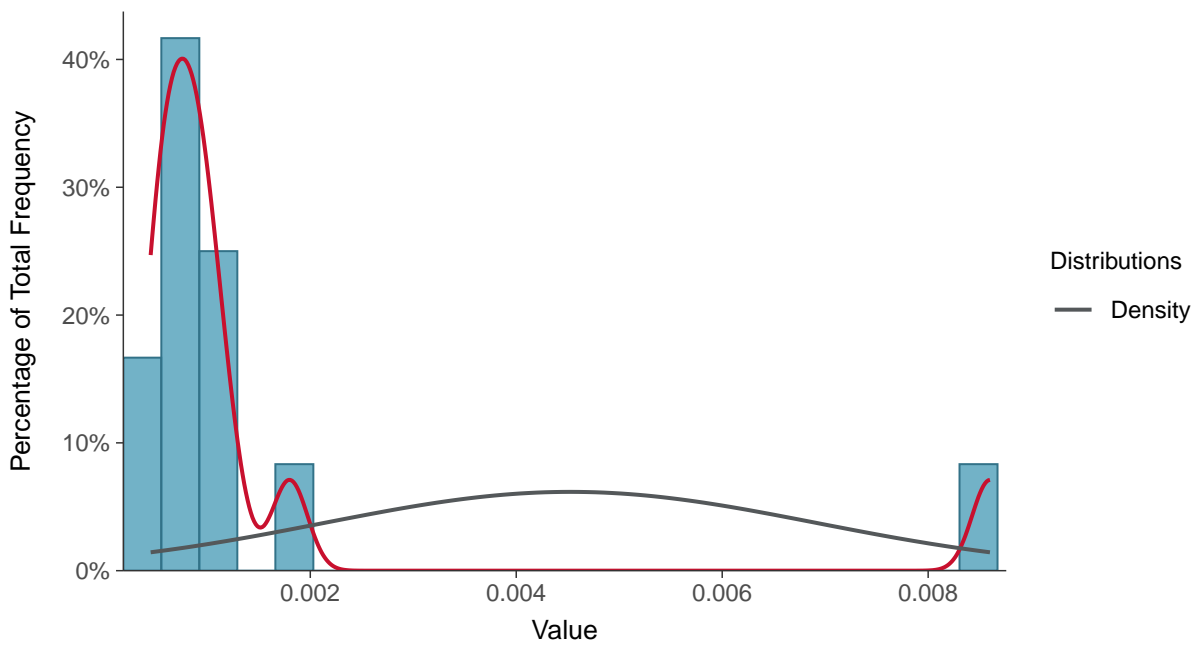
### Scatter Plot

Chromium, Total, MW-11 (mg/L)



### Histogram

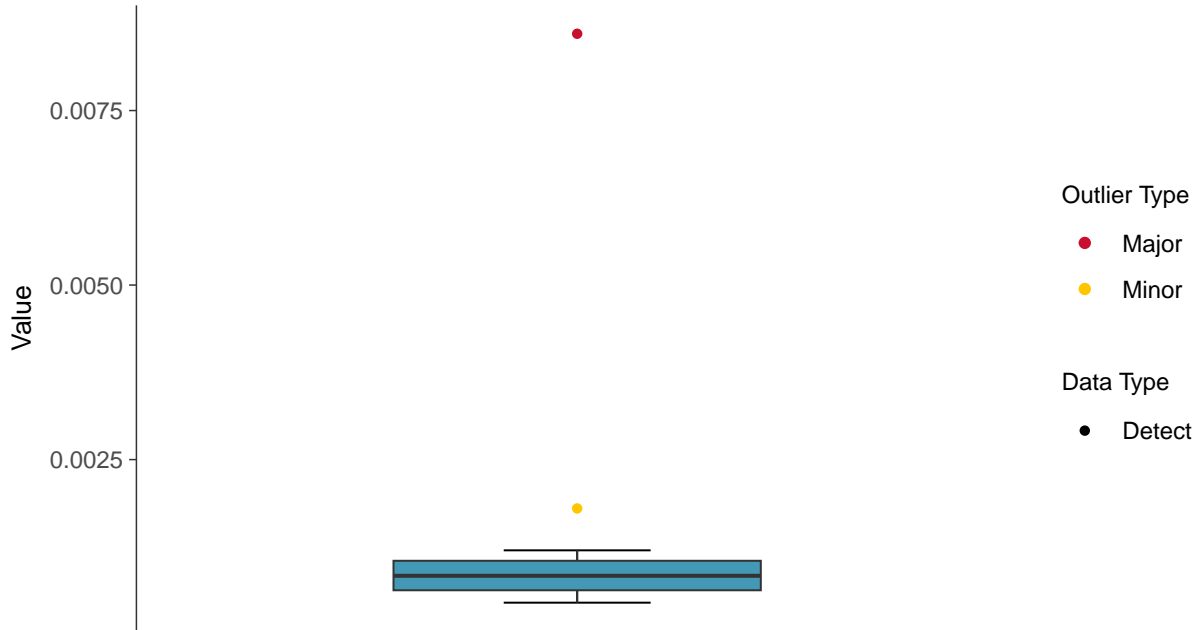
Chromium, Total, MW-11 (mg/L)





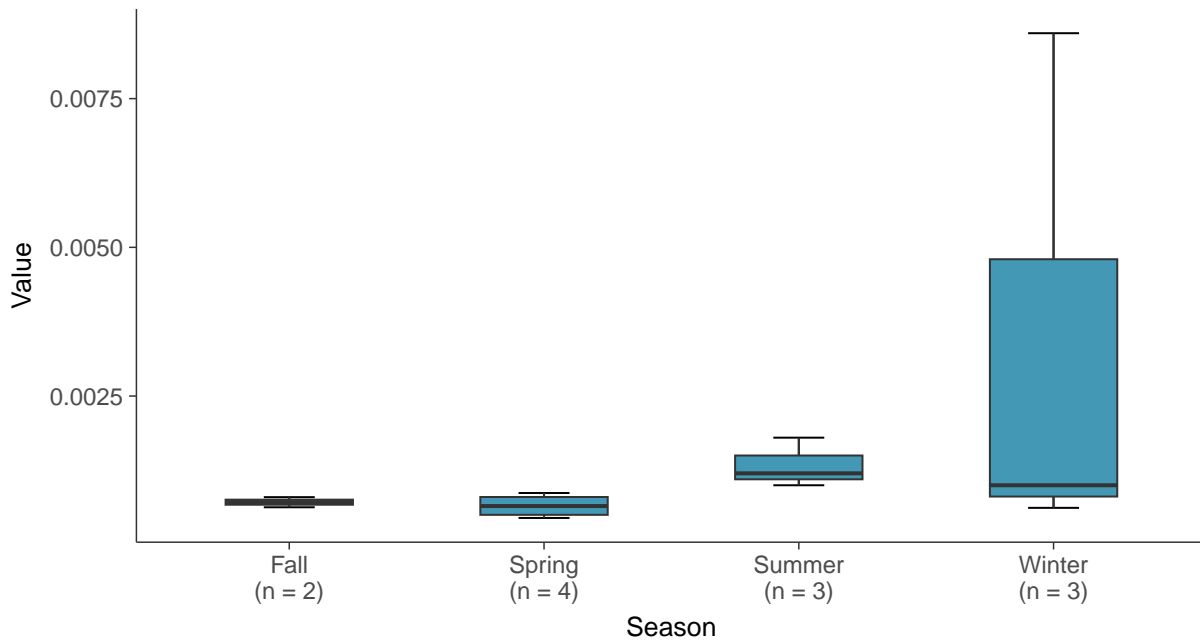
### Boxplot

Chromium, Total, MW-11 (mg/L)



### Boxplot by Season

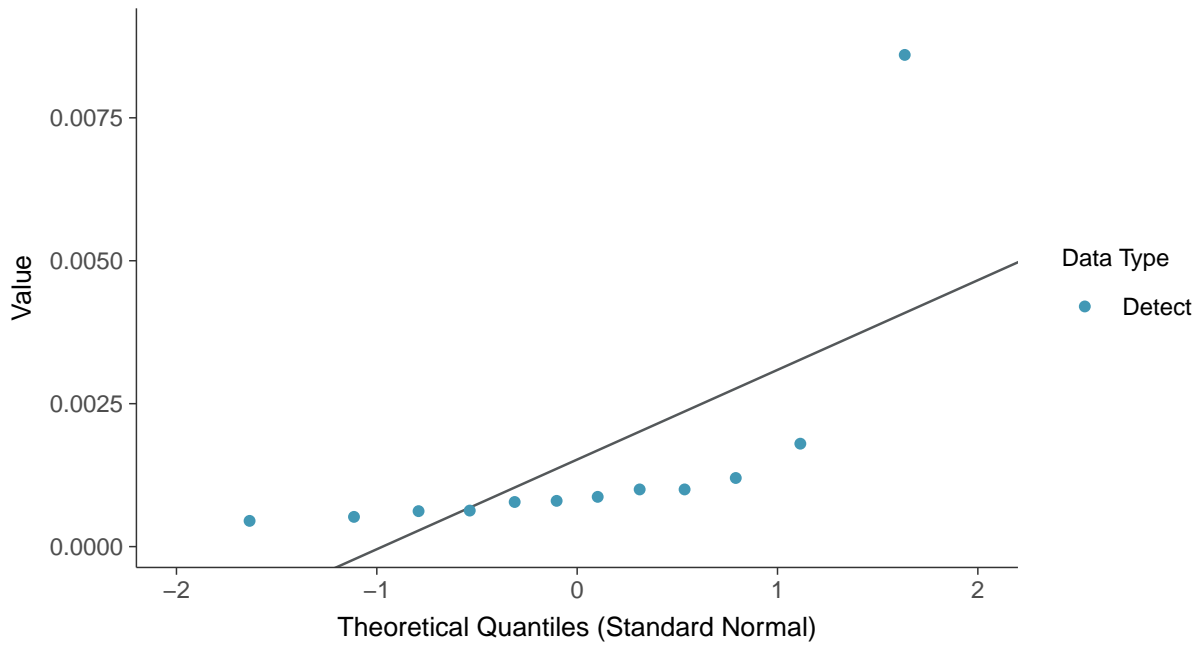
Chromium, Total, MW-11 (mg/L)





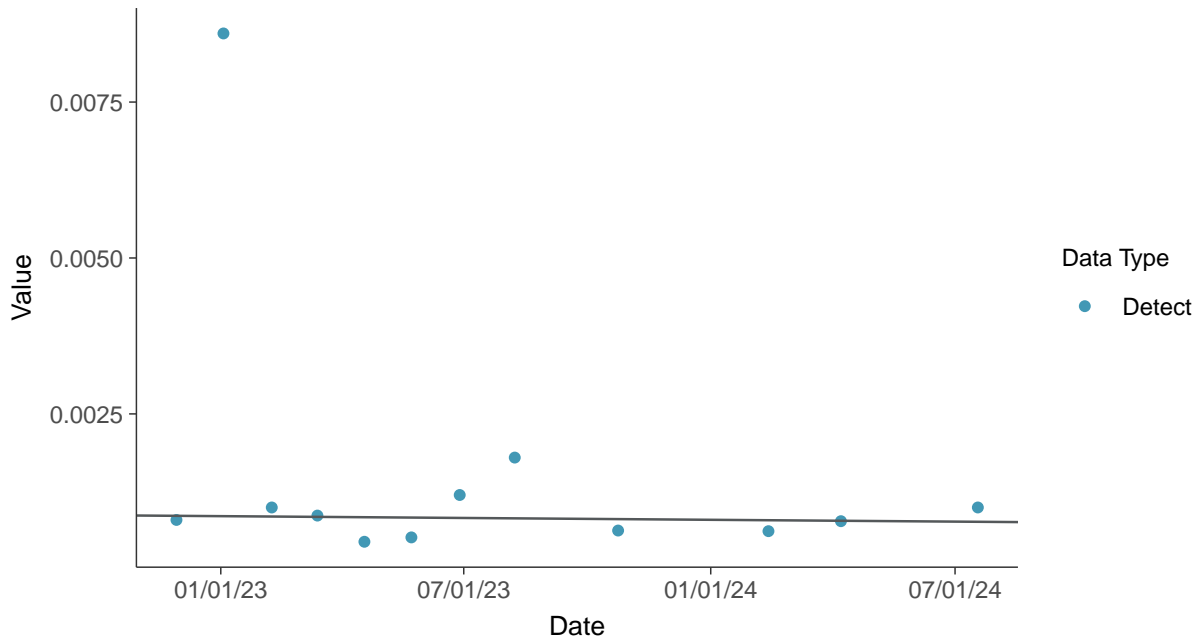
### Normal Q-Q plot

Chromium, Total, MW-11 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

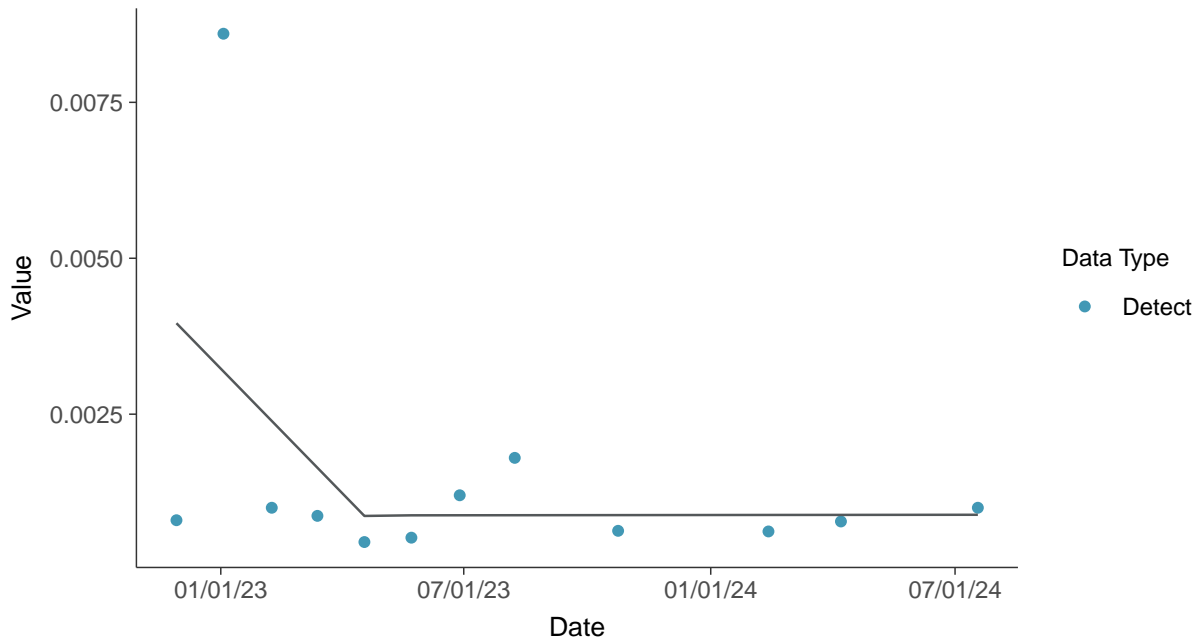
Chromium, Total, MW-11 (mg/L)





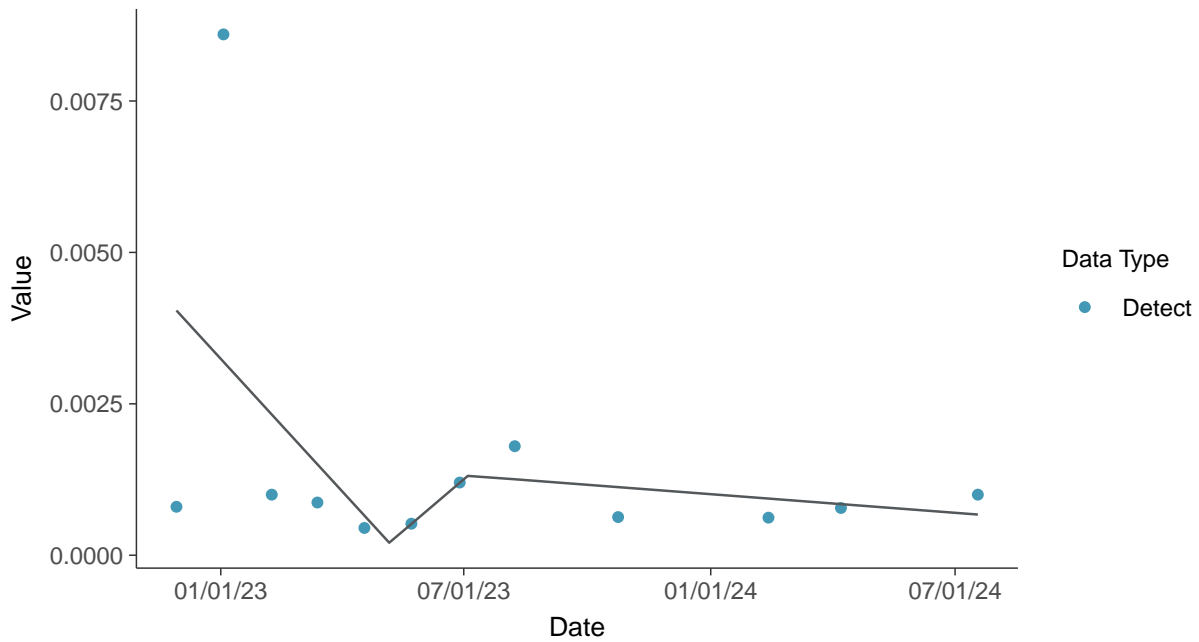
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

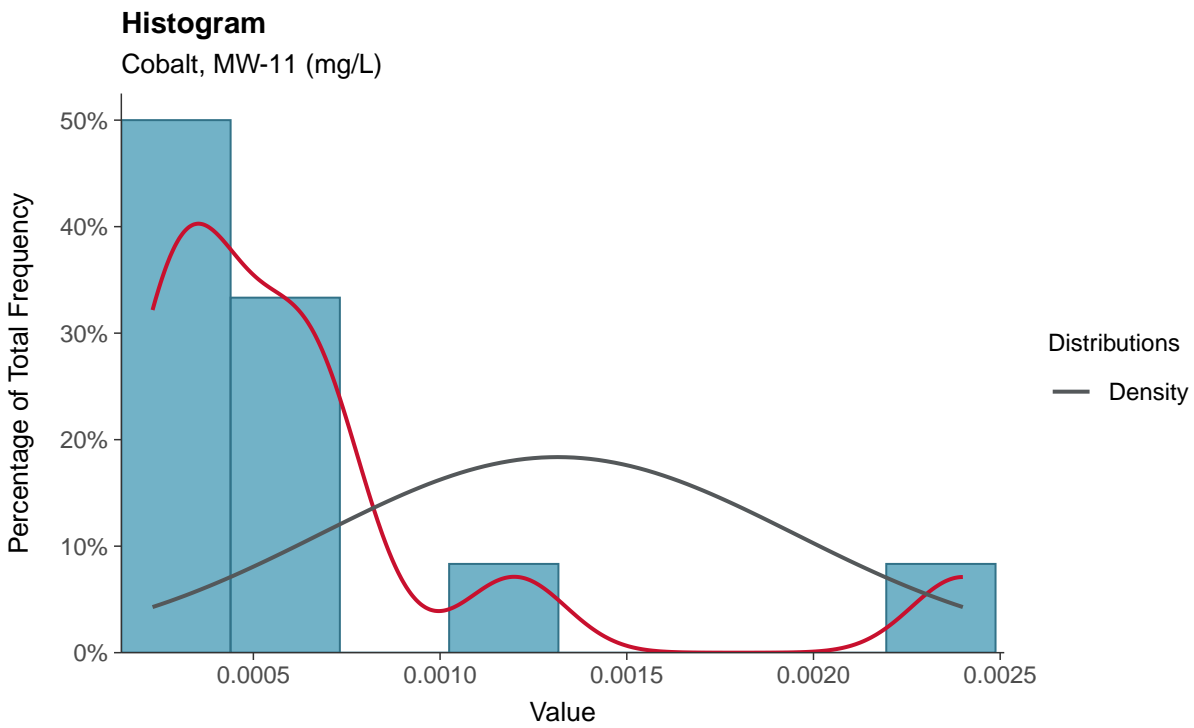
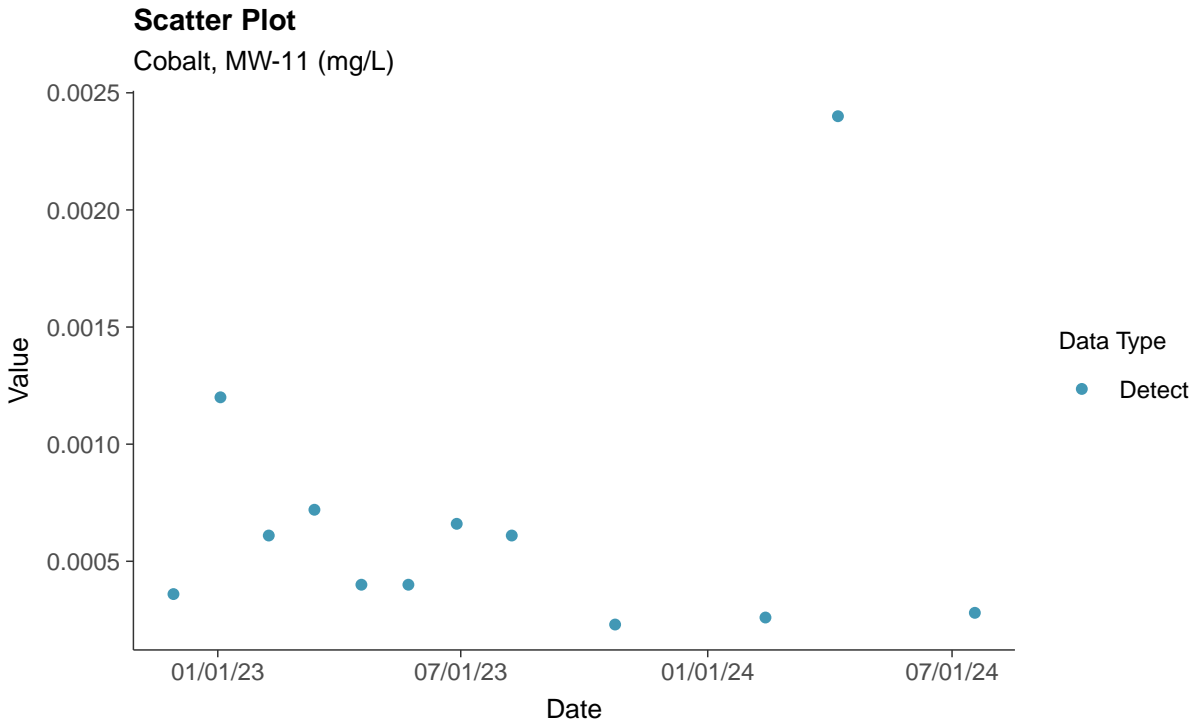
Chromium, Total, MW-11 (mg/L)





### Appendix IV: Cobalt, MW-11

ID: 21\_2\_5\_110

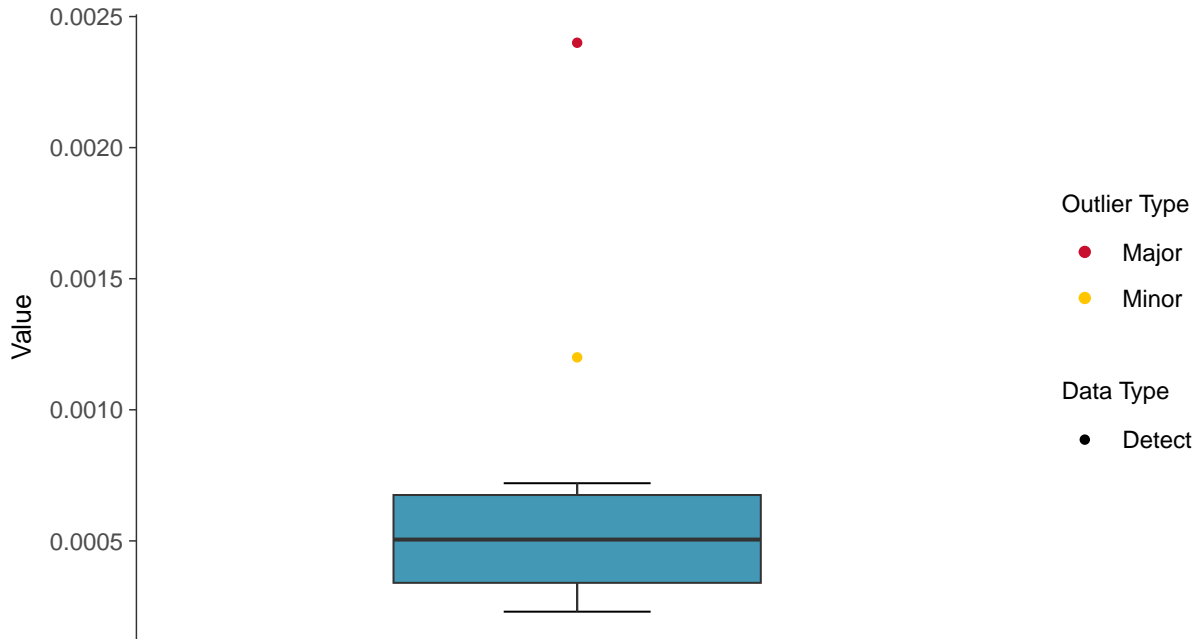






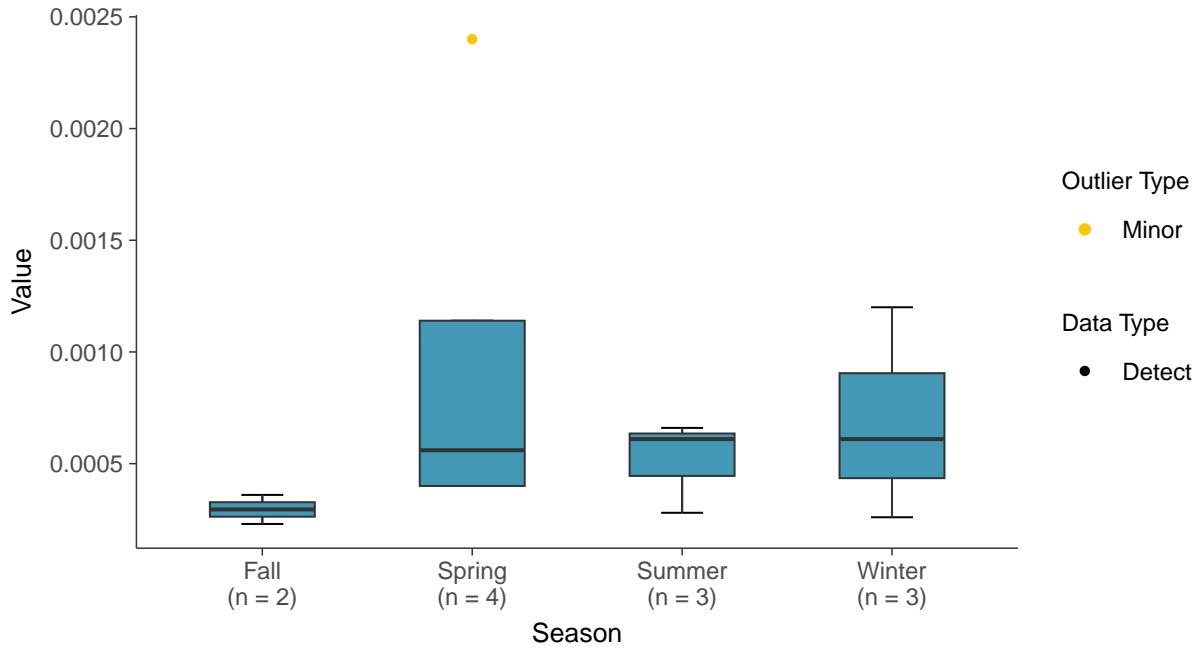
### Boxplot

Cobalt, MW-11 (mg/L)



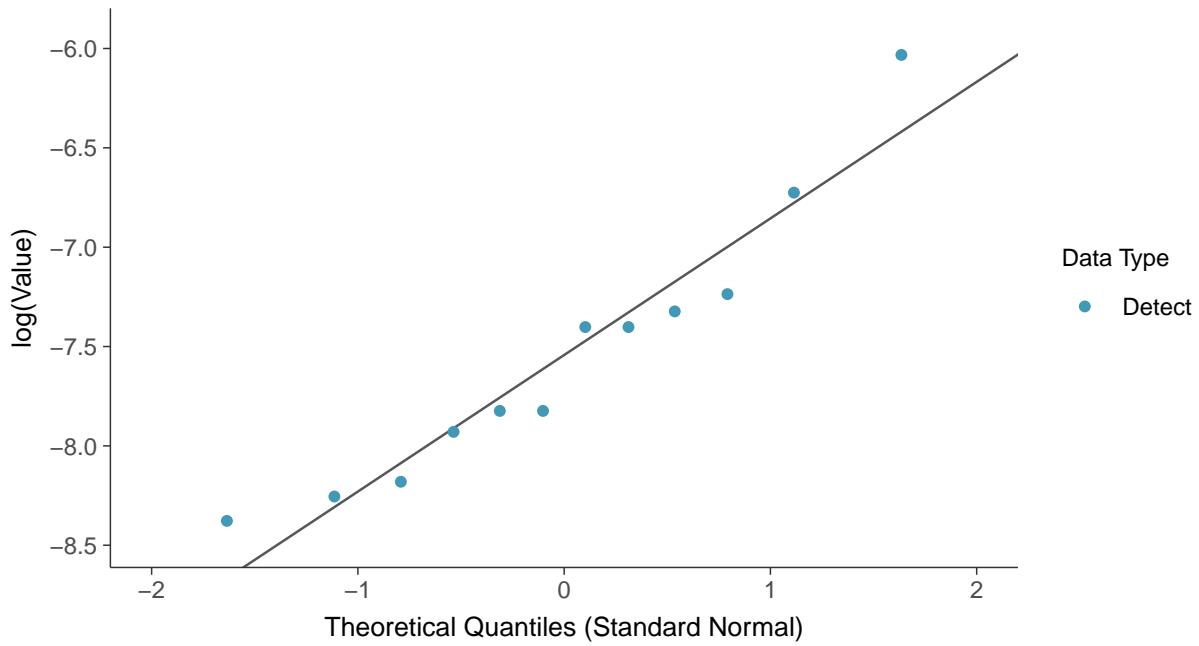
### Boxplot by Season

Cobalt, MW-11 (mg/L)

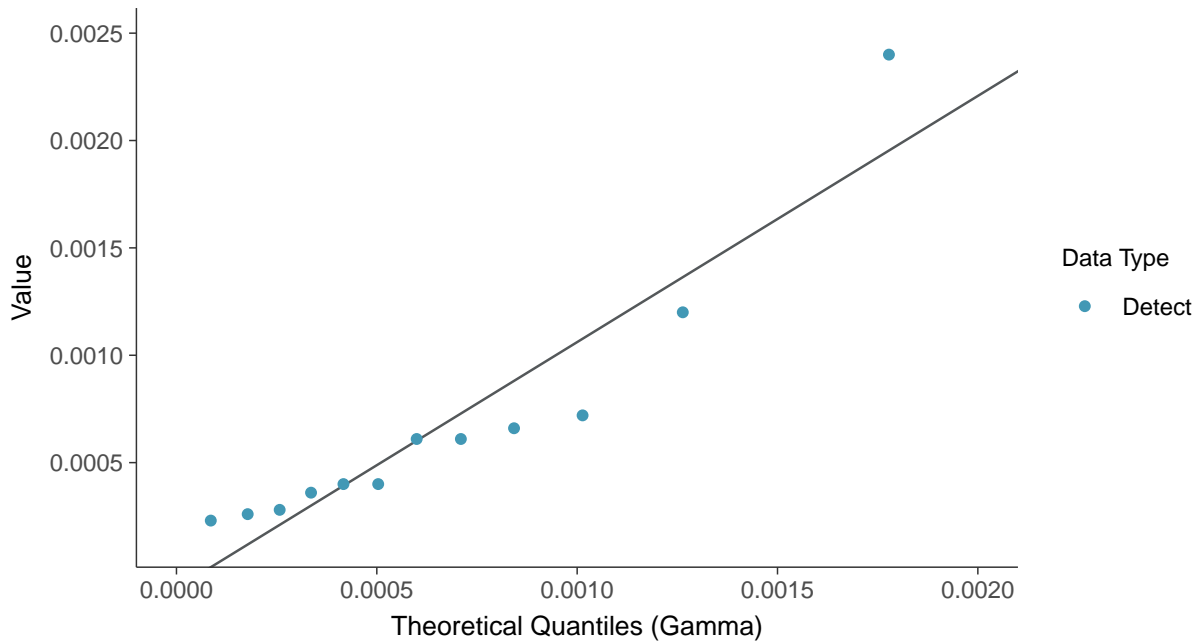




**Lognormal Q-Q plot**  
Cobalt, MW-11 (mg/L)



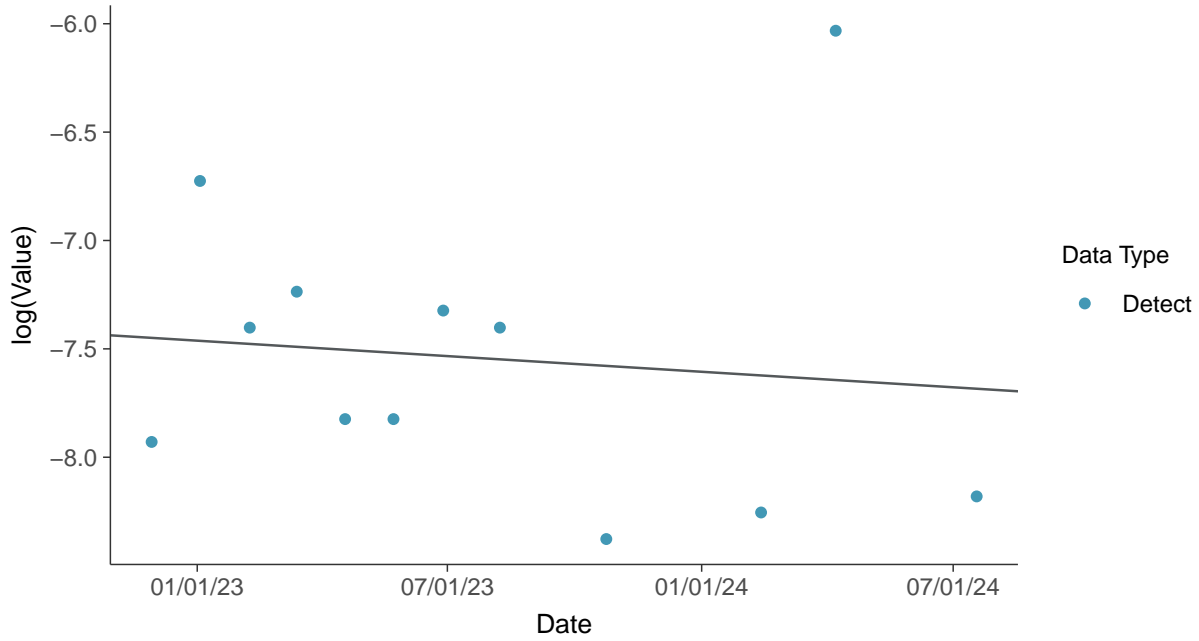
**Gamma Q-Q plot**  
Cobalt, MW-11 (mg/L)





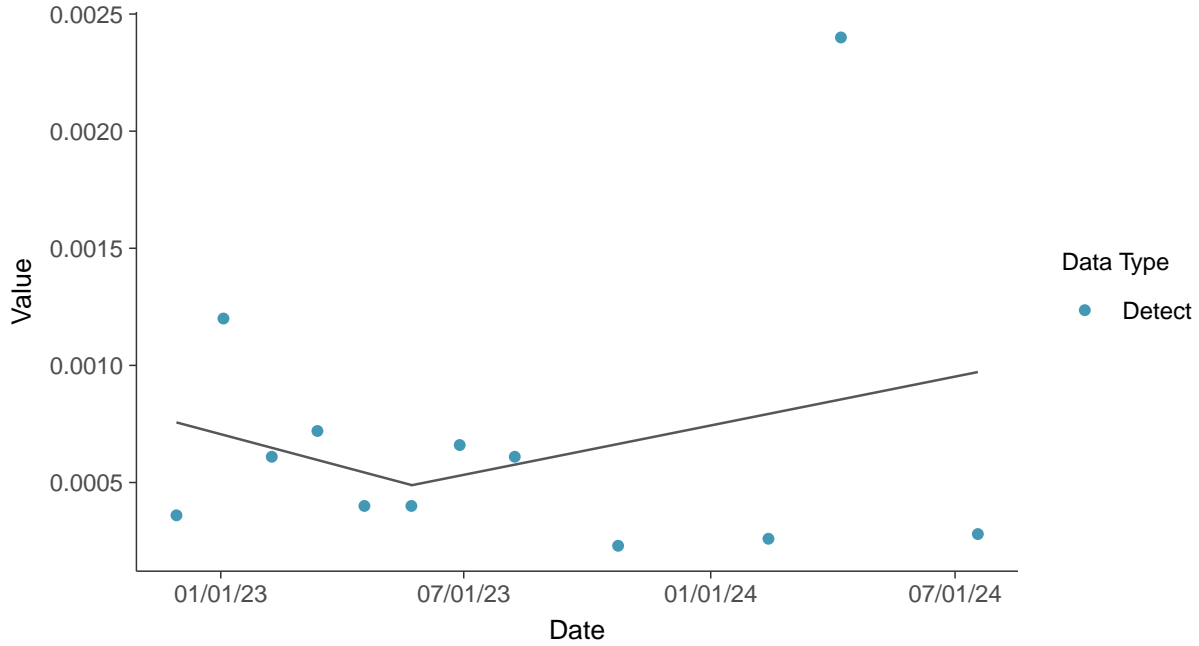
### Trend Regression: Lognormal MLE

Cobalt, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

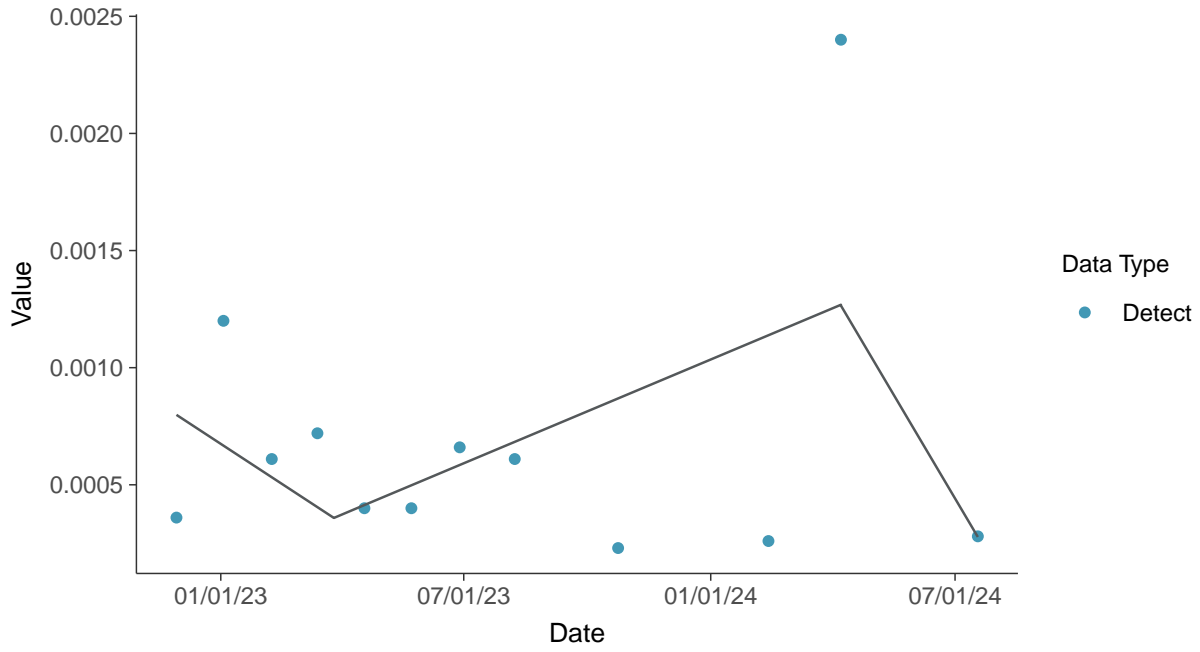
Cobalt, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-11 (mg/L)



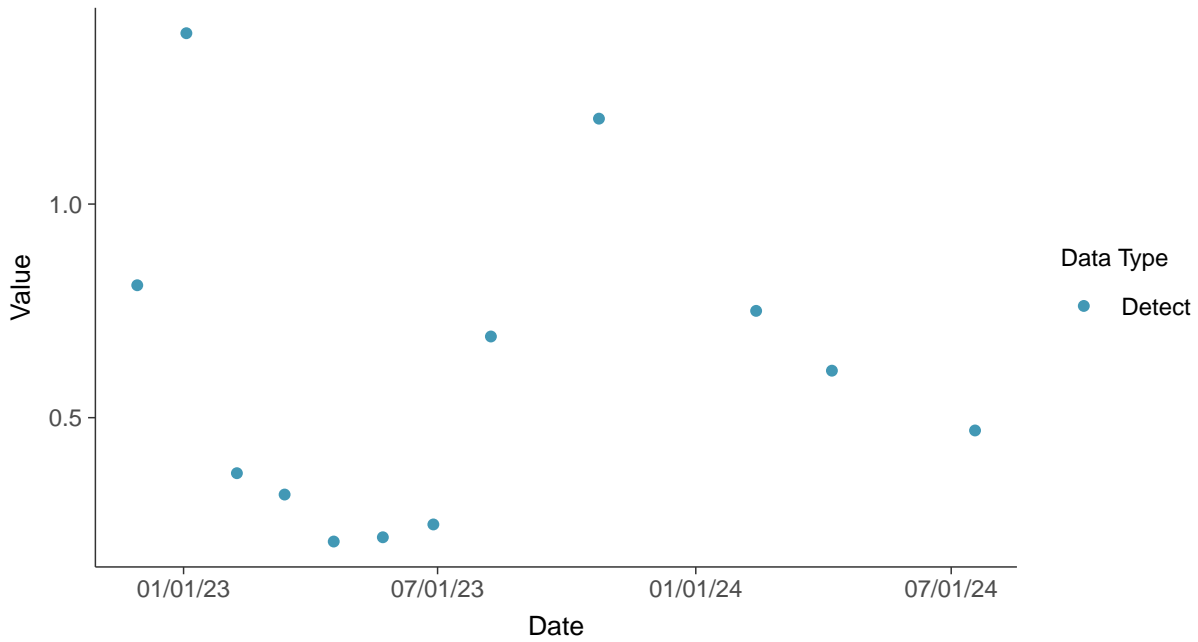


### Appendix IV: Fluoride (App IV), MW-11

ID: 21\_2\_5\_113

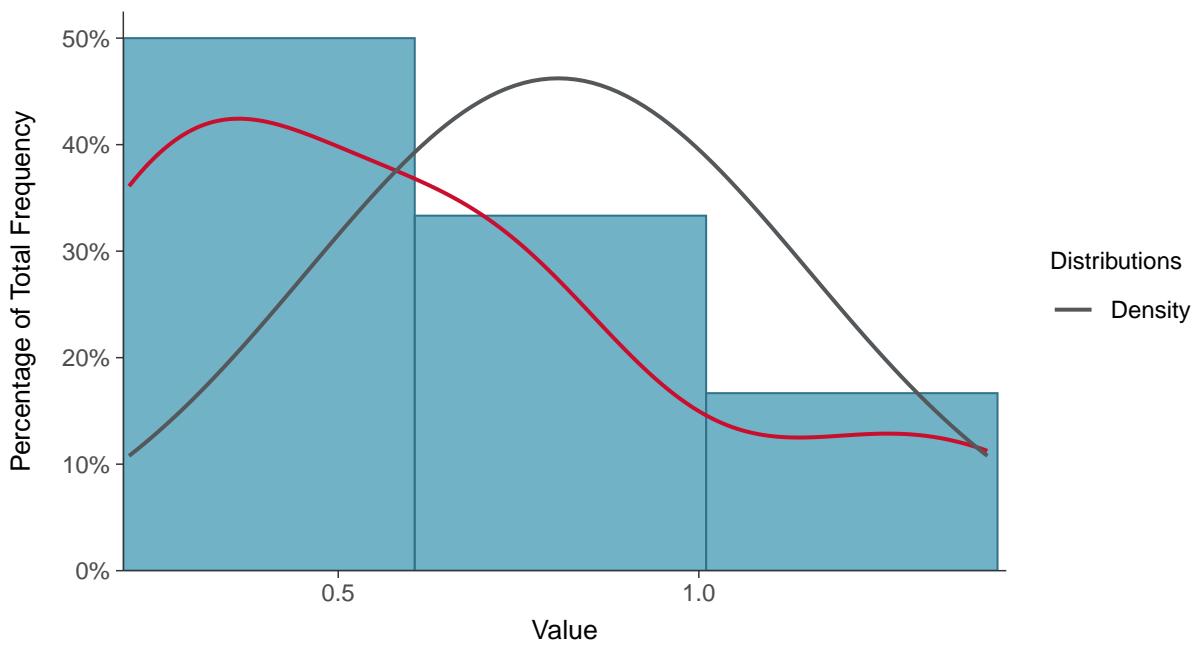
#### Scatter Plot

Fluoride (App IV), MW-11 (mg/L)



#### Histogram

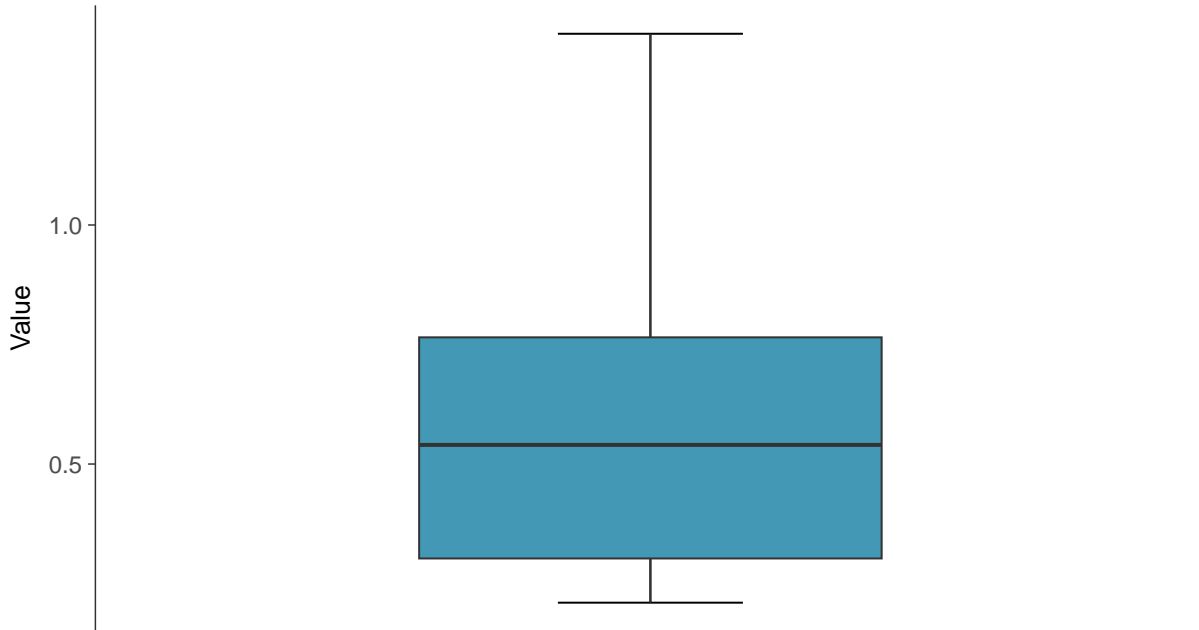
Fluoride (App IV), MW-11 (mg/L)





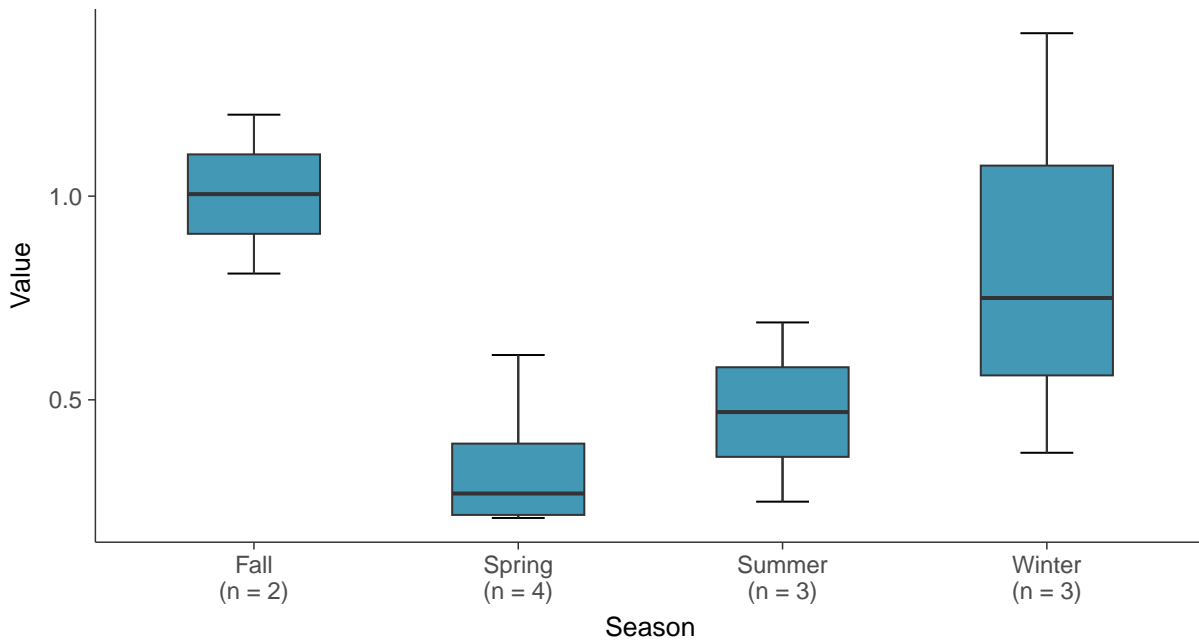
### Boxplot

Fluoride (App IV), MW-11 (mg/L)



### Boxplot by Season

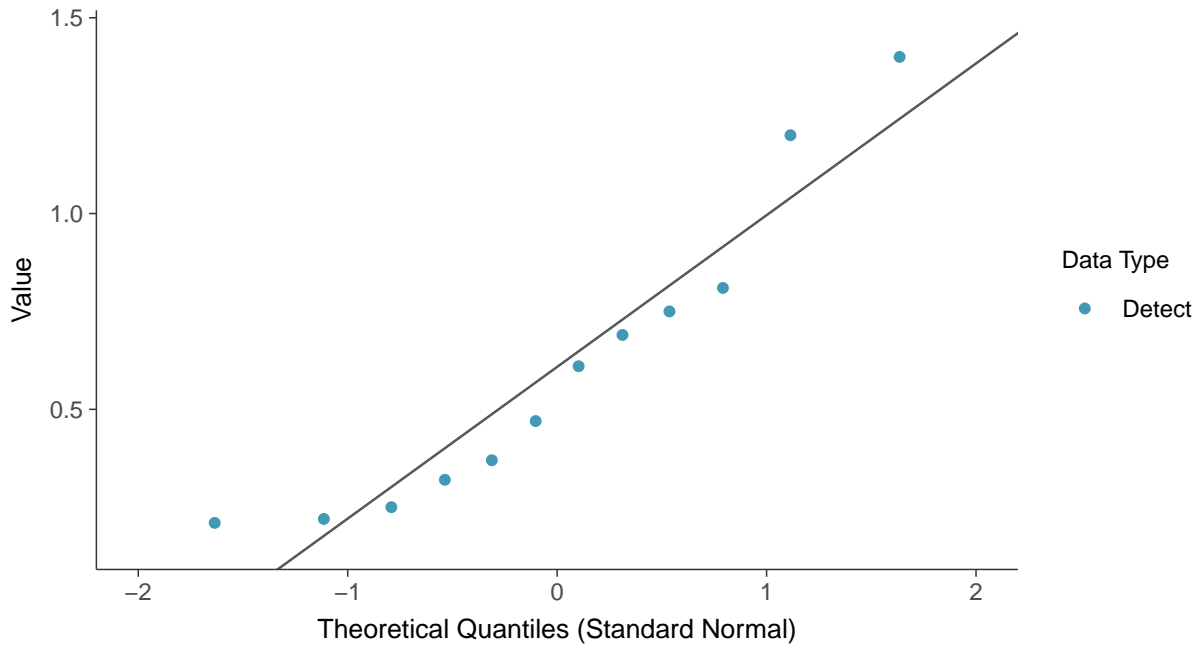
Fluoride (App IV), MW-11 (mg/L)





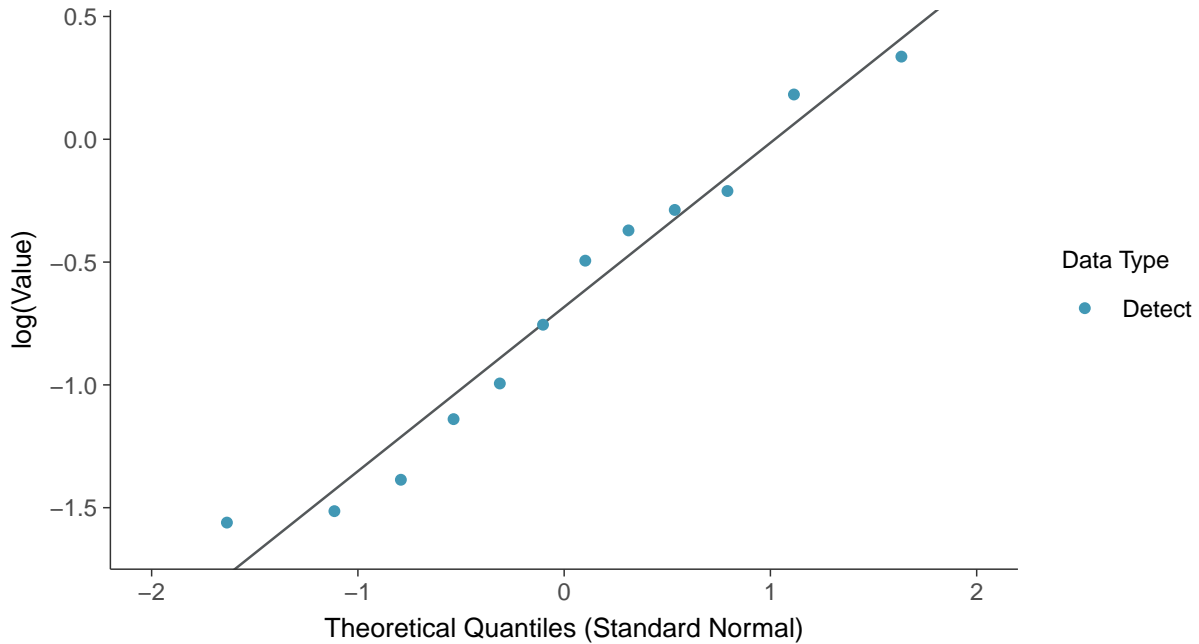
### Normal Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



### Lognormal Q-Q plot

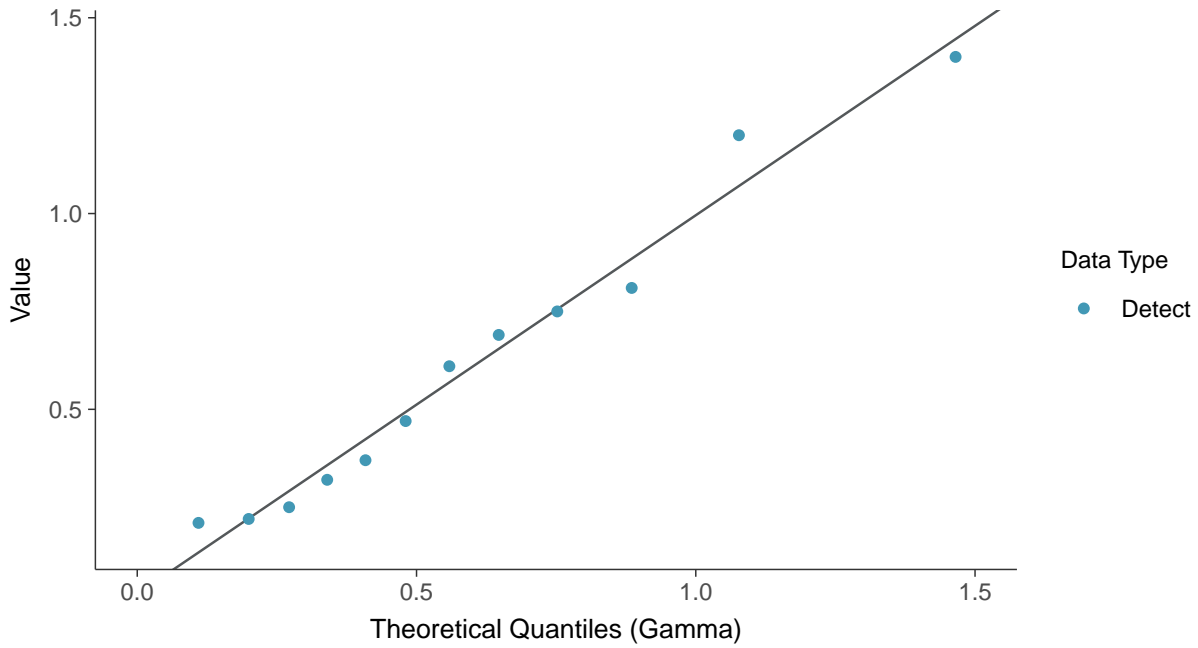
Fluoride (App IV), MW-11 (mg/L)





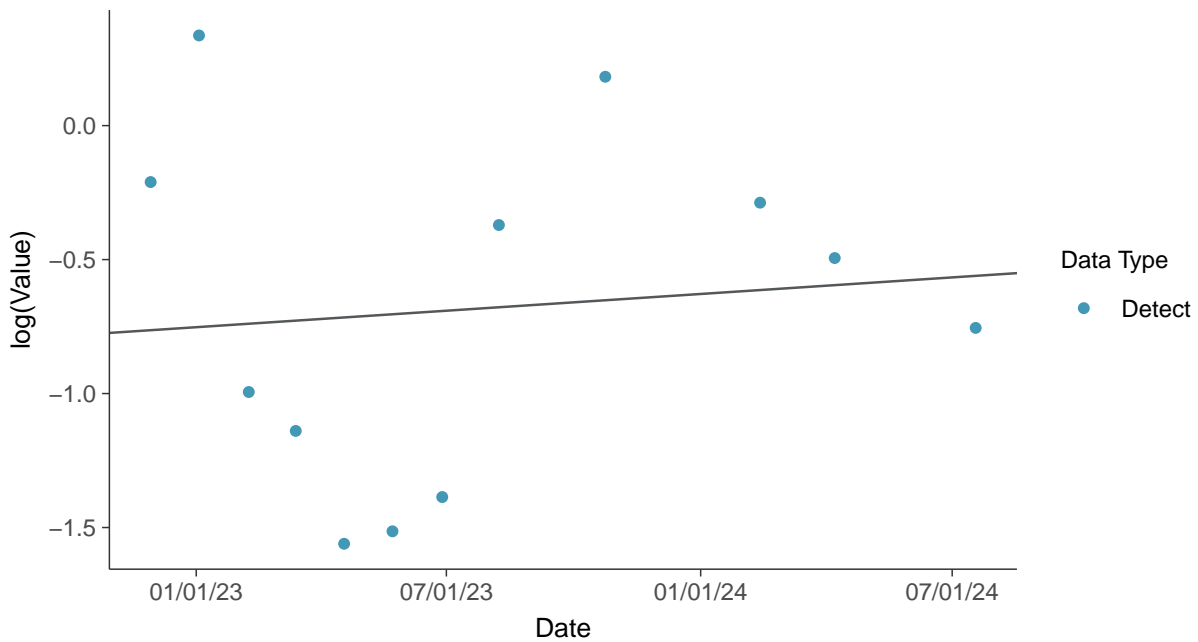
### Gamma Q-Q plot

Fluoride (App IV), MW-11 (mg/L)



### Trend Regression: Lognormal MLE

Fluoride (App IV), MW-11 (mg/L)

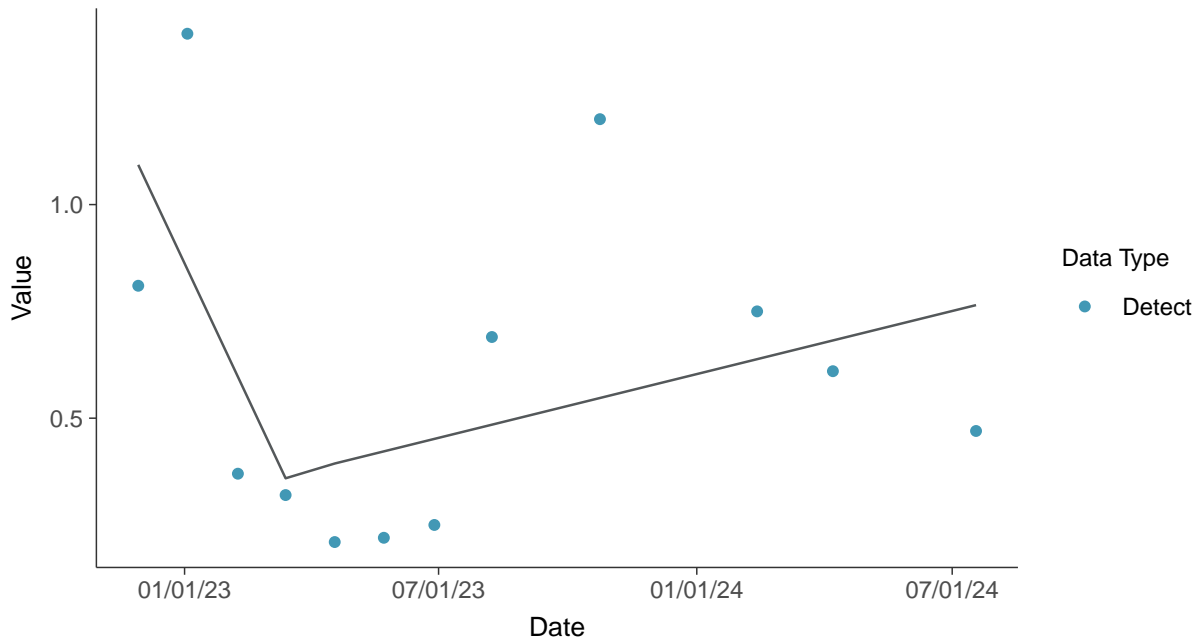






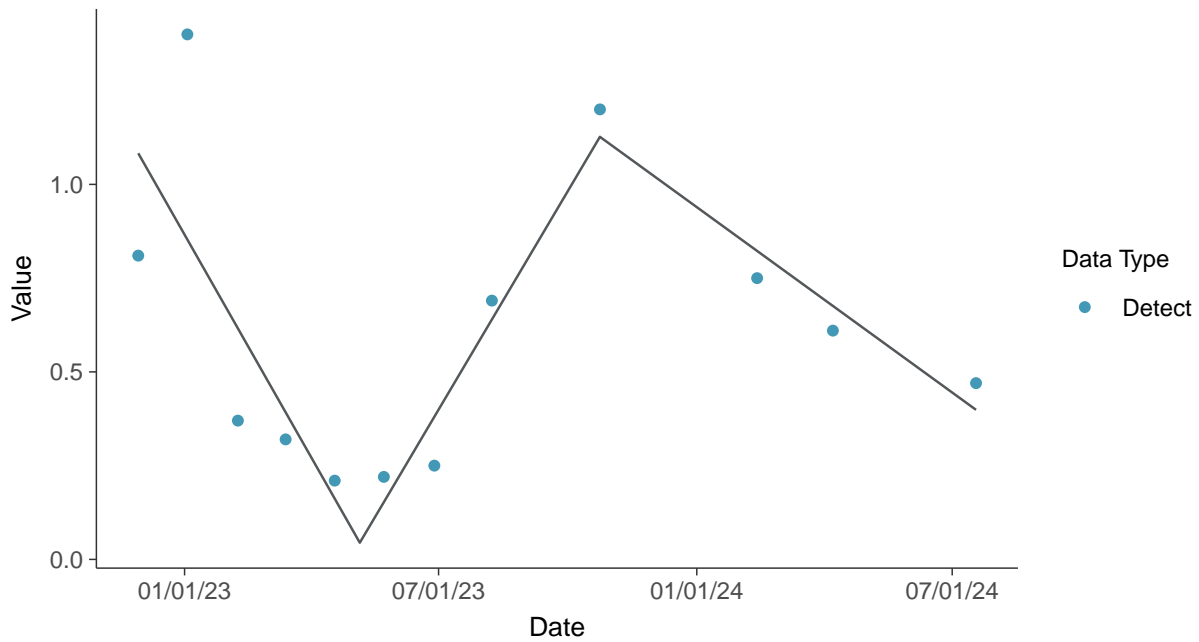
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

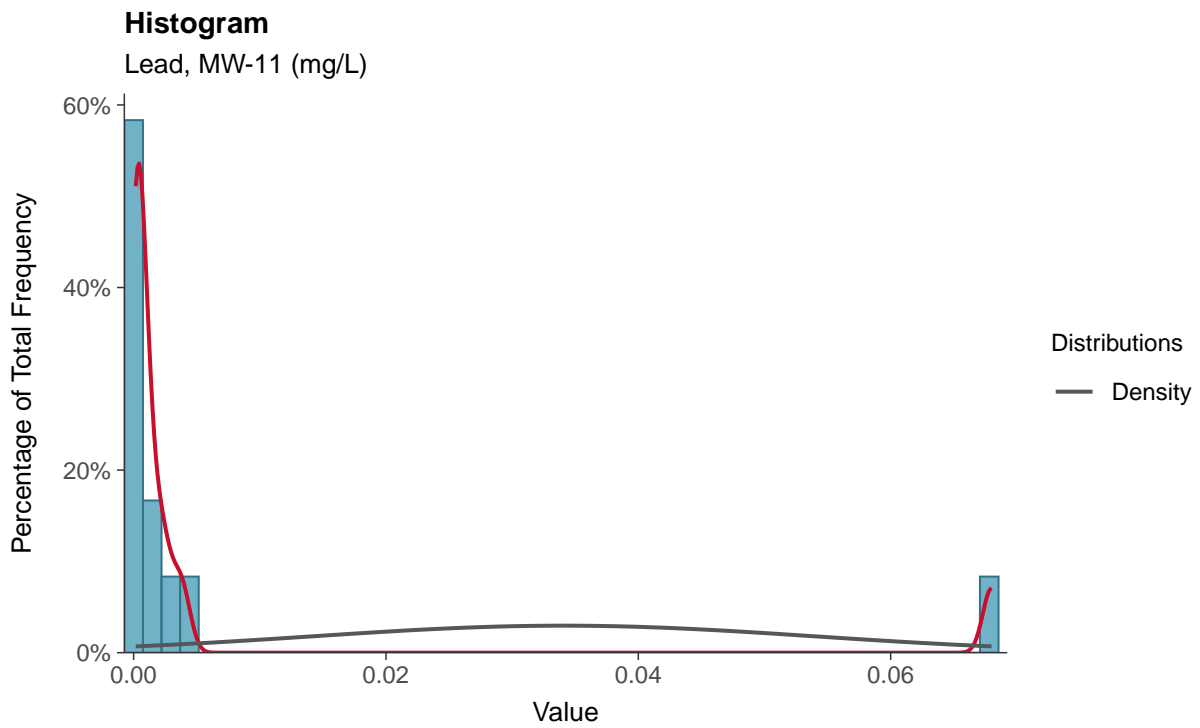
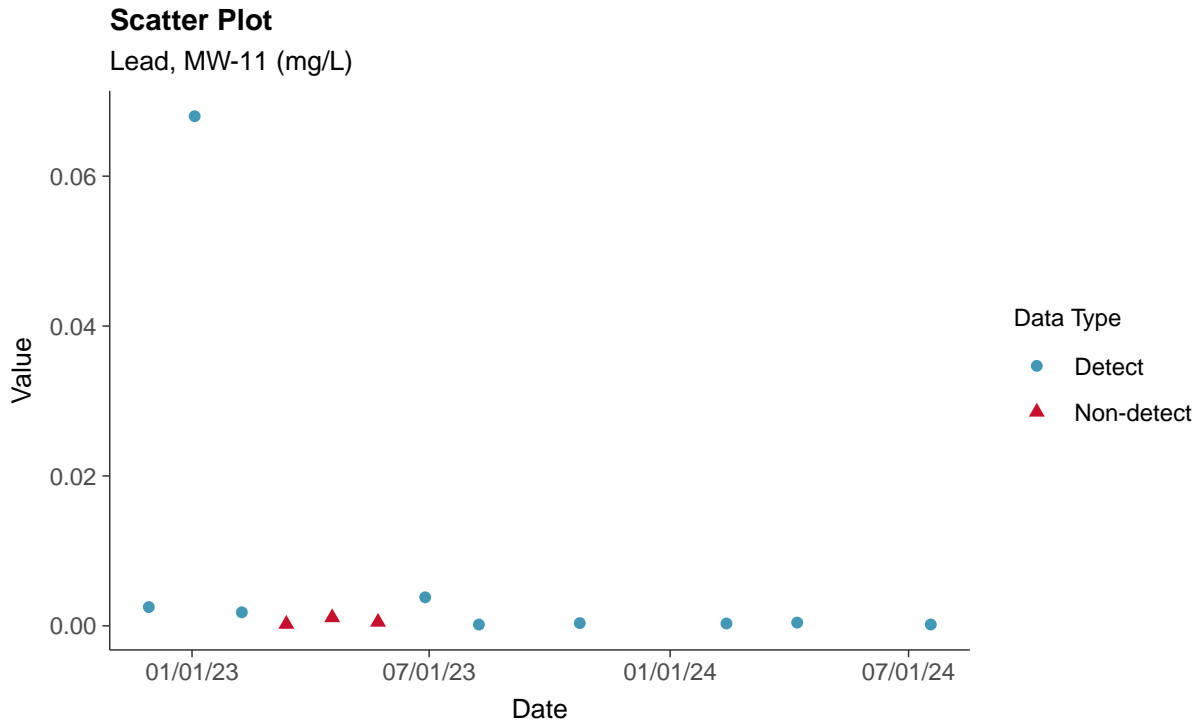
Fluoride (App IV), MW-11 (mg/L)





### Appendix IV: Lead, MW-11

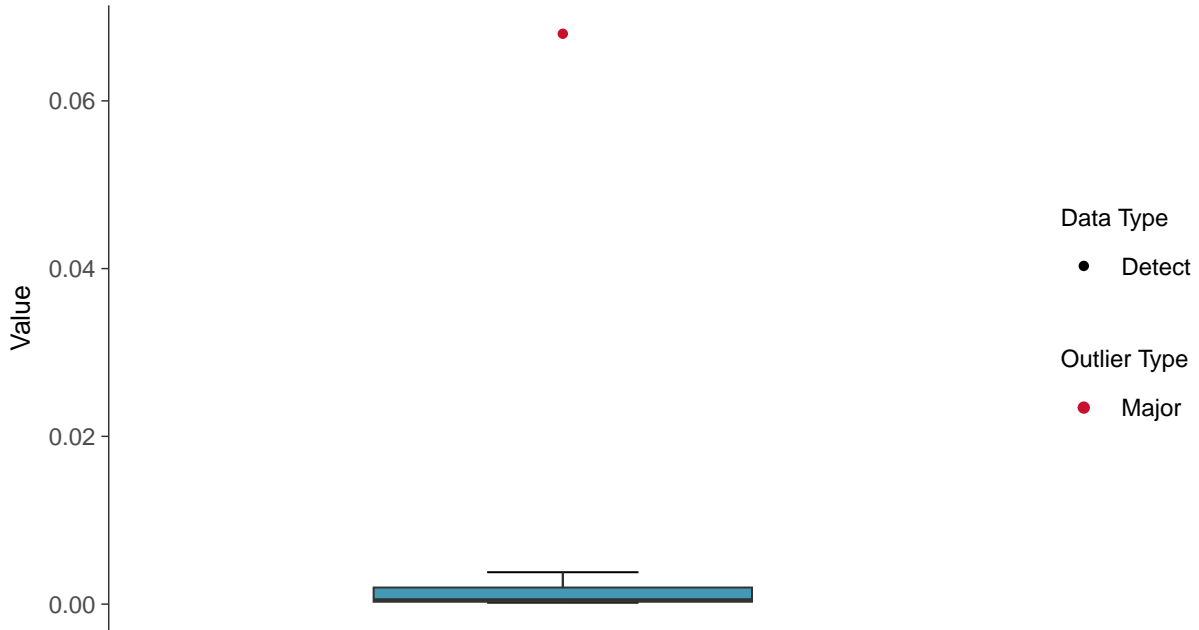
ID: 21\_2\_5\_115





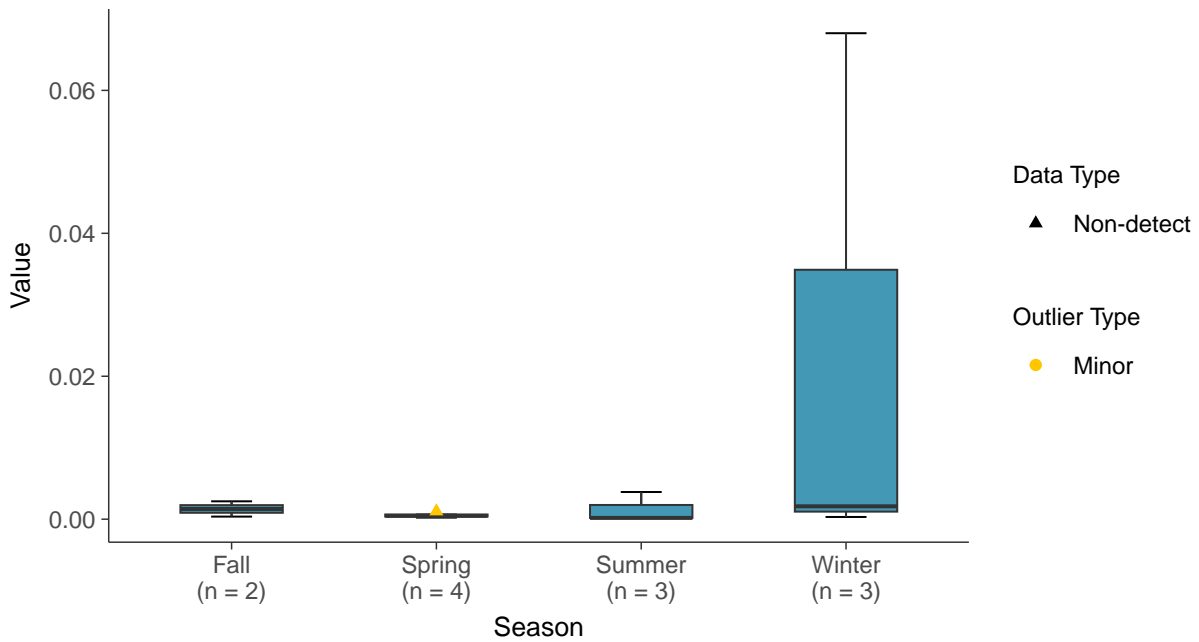
### Boxplot

Lead, MW-11 (mg/L)



### Boxplot by Season

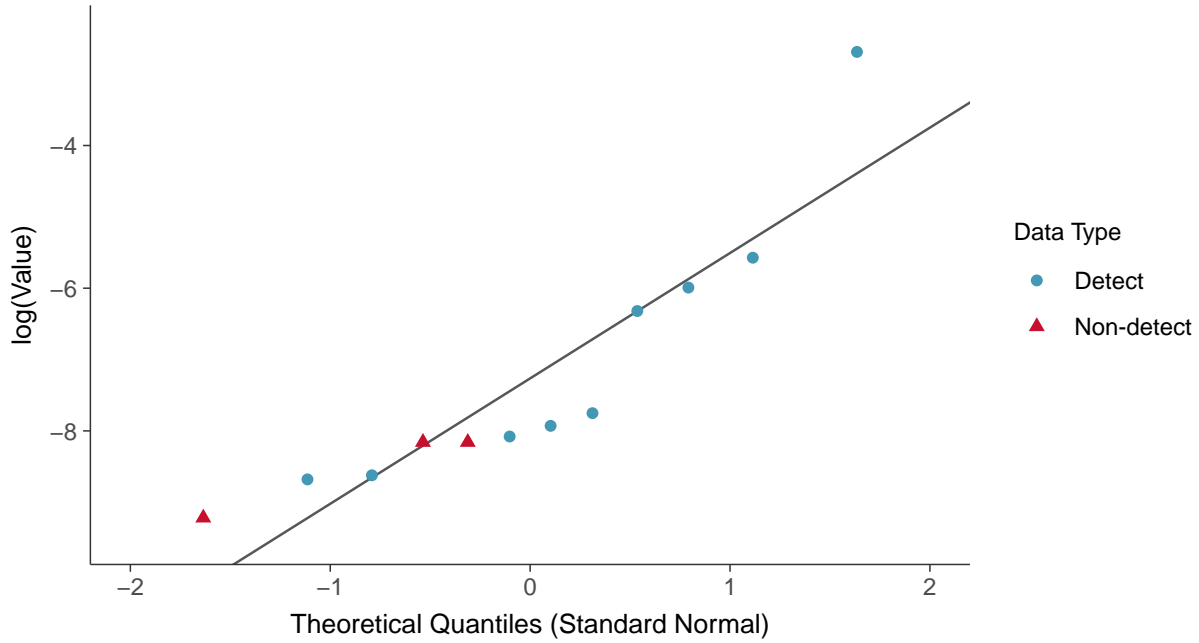
Lead, MW-11 (mg/L)





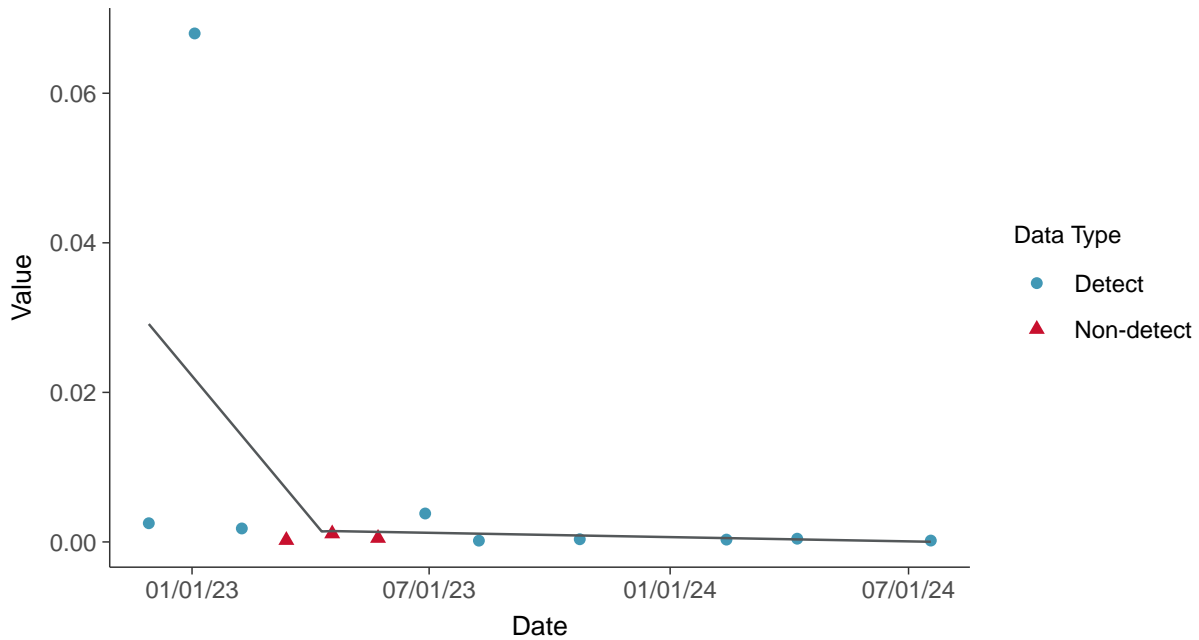
### Lognormal Q-Q plot using ROS Imputed Estimates

Lead, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

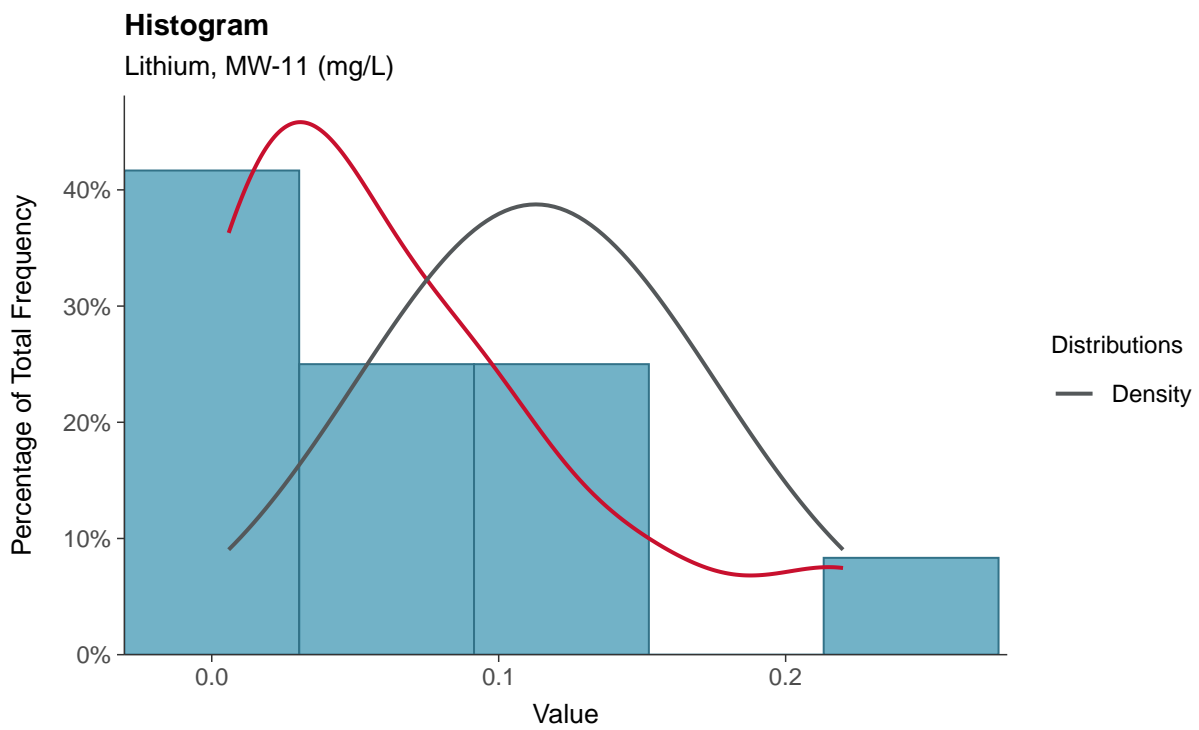
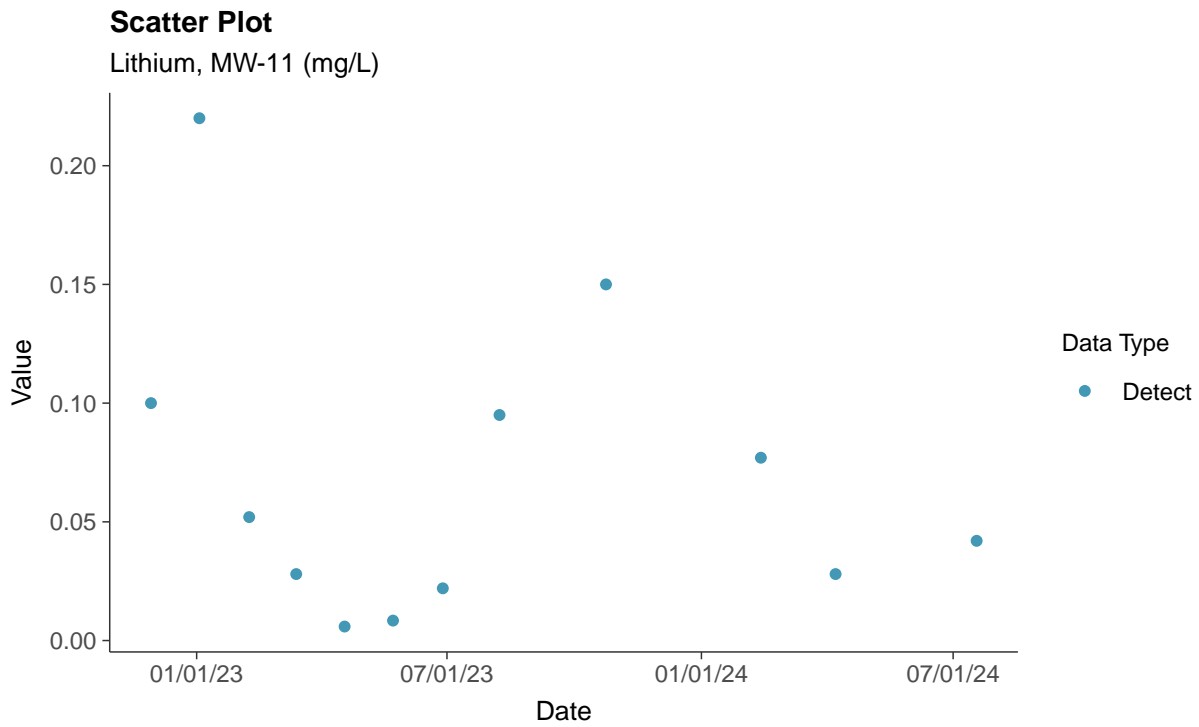
Lead, MW-11 (mg/L)





### Appendix IV: Lithium, MW-11

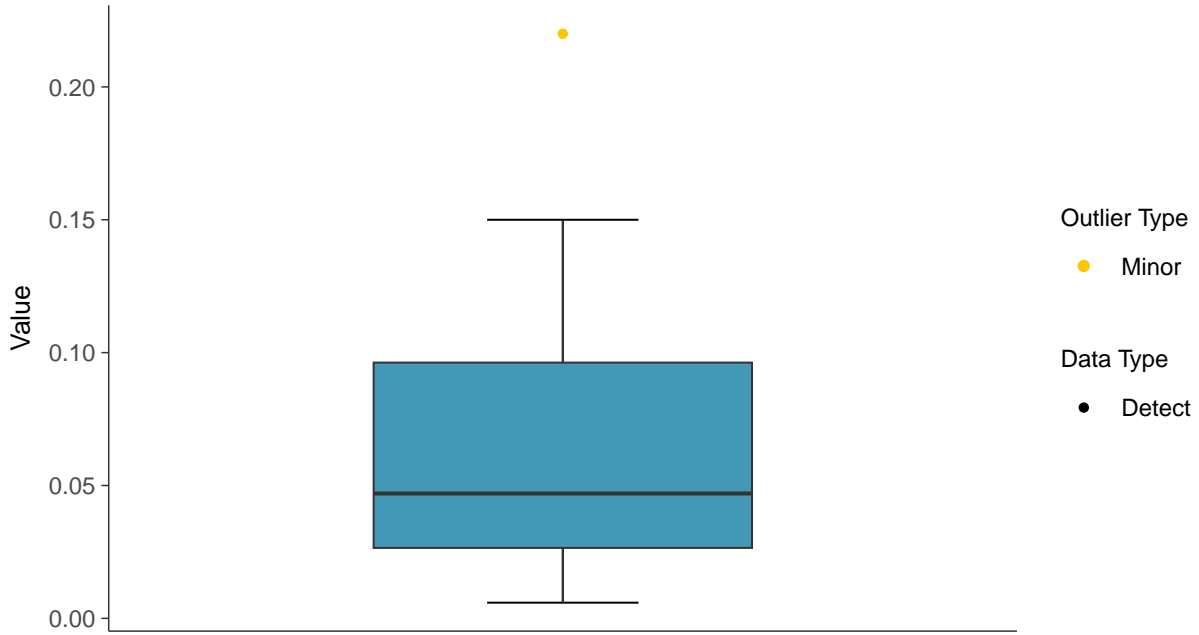
ID: 21\_2\_5\_116





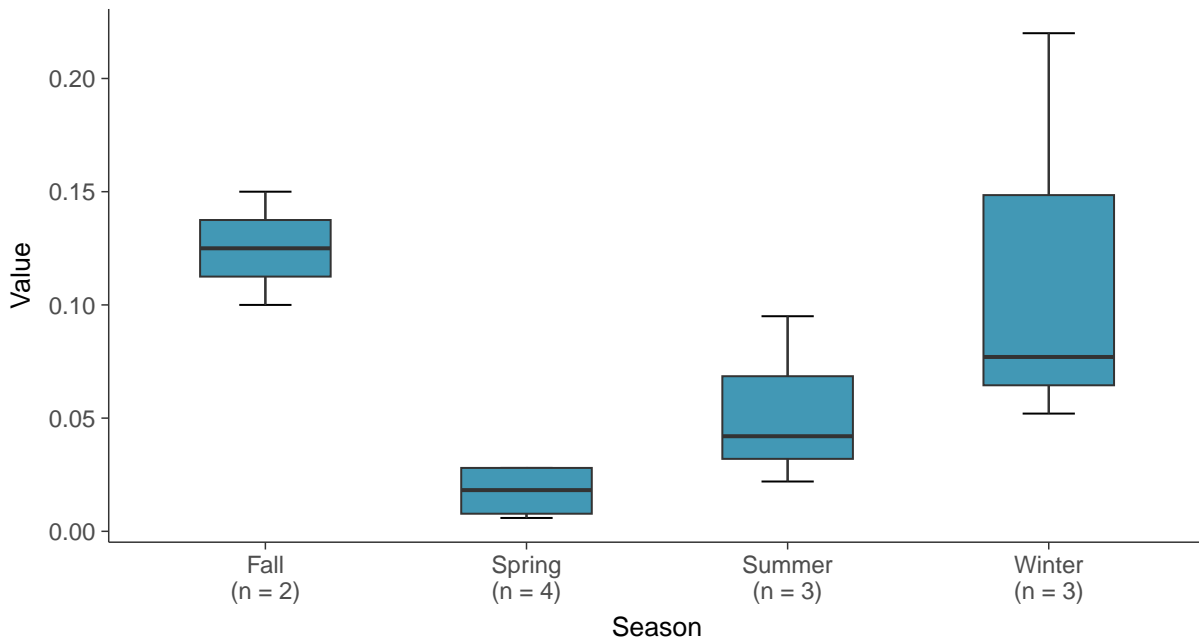
### Boxplot

Lithium, MW-11 (mg/L)



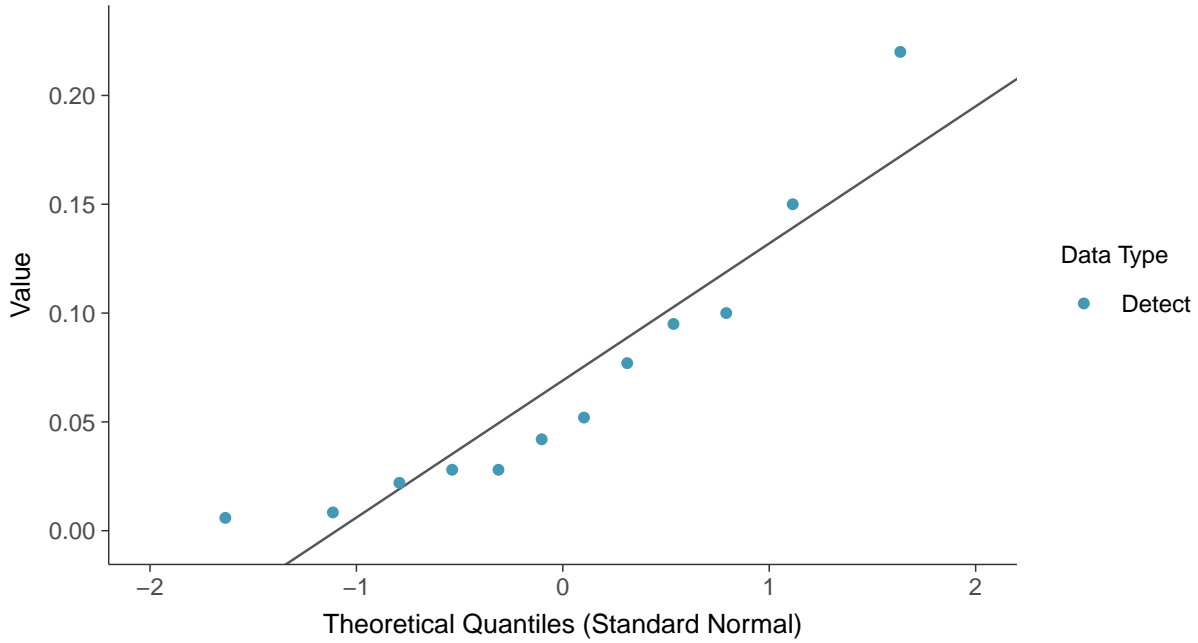
### Boxplot by Season

Lithium, MW-11 (mg/L)

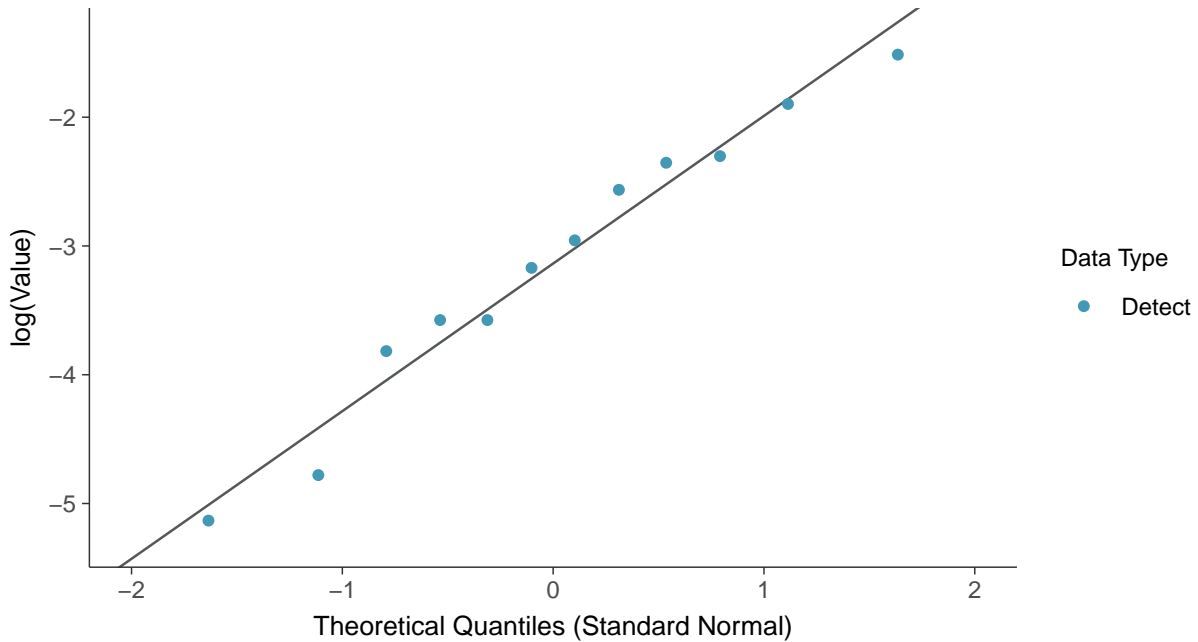




**Normal Q-Q plot**  
Lithium, MW-11 (mg/L)

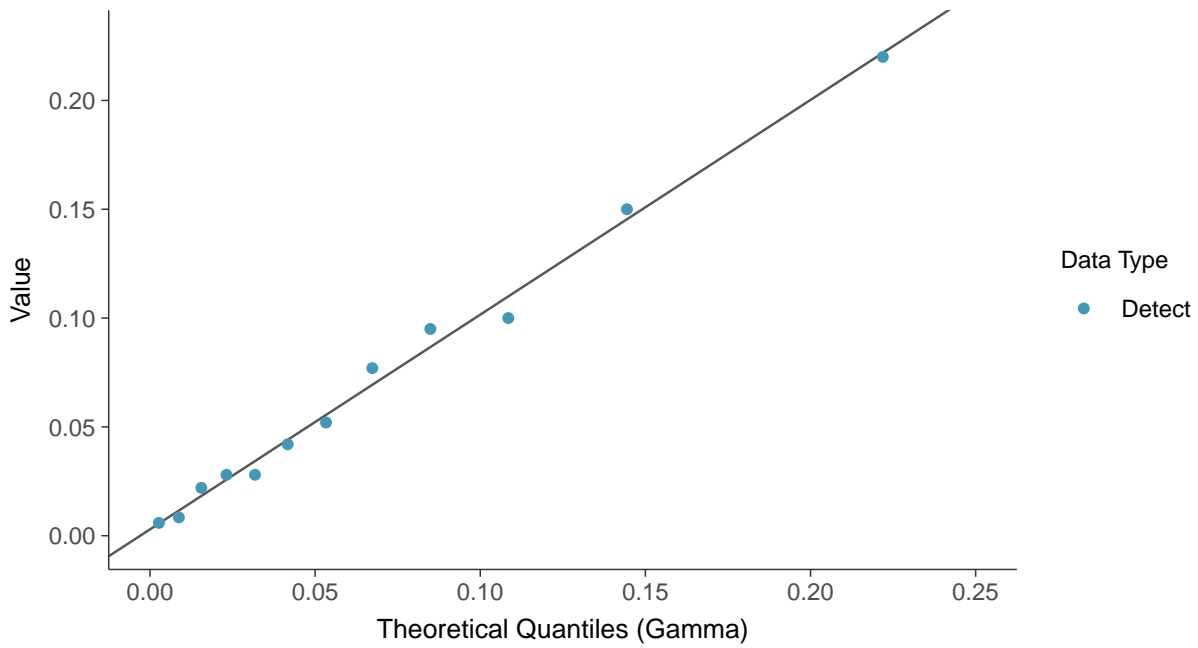


**Lognormal Q-Q plot**  
Lithium, MW-11 (mg/L)

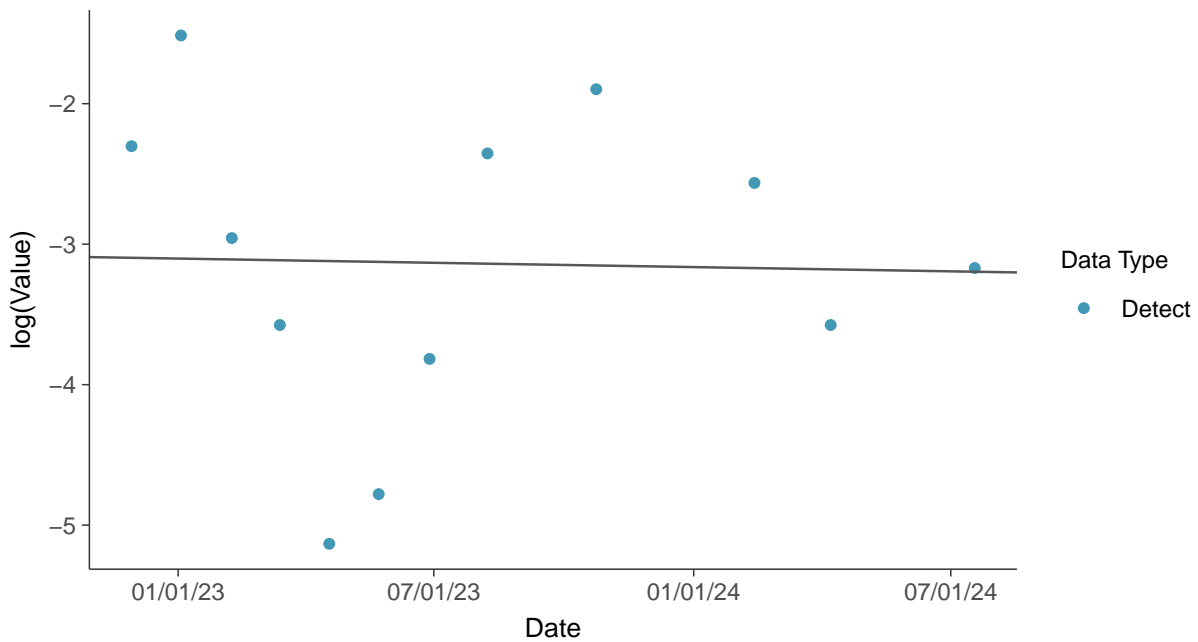




**Gamma Q-Q plot**  
Lithium, MW-11 (mg/L)



**Trend Regression: Lognormal MLE**  
Lithium, MW-11 (mg/L)

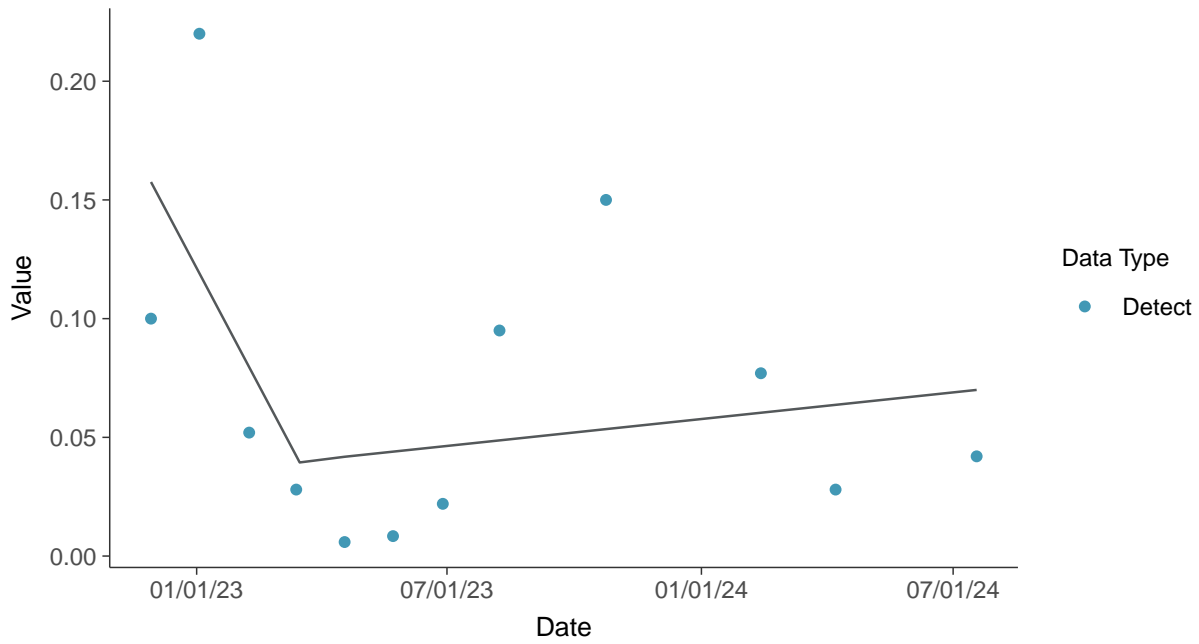






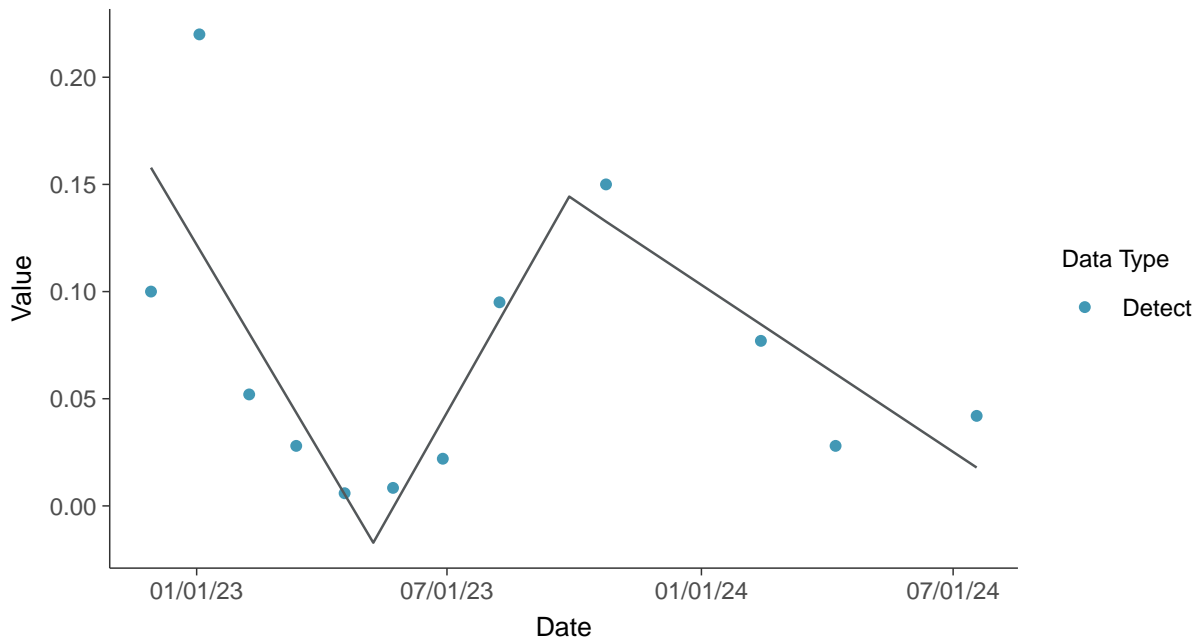
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

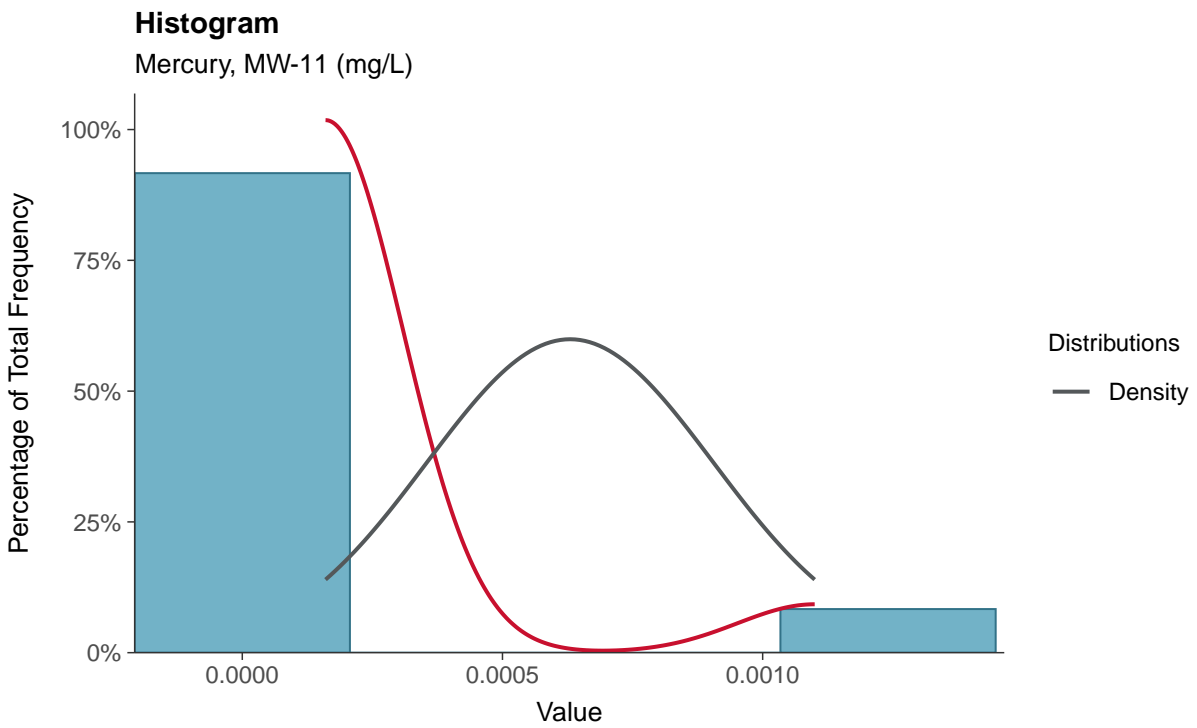
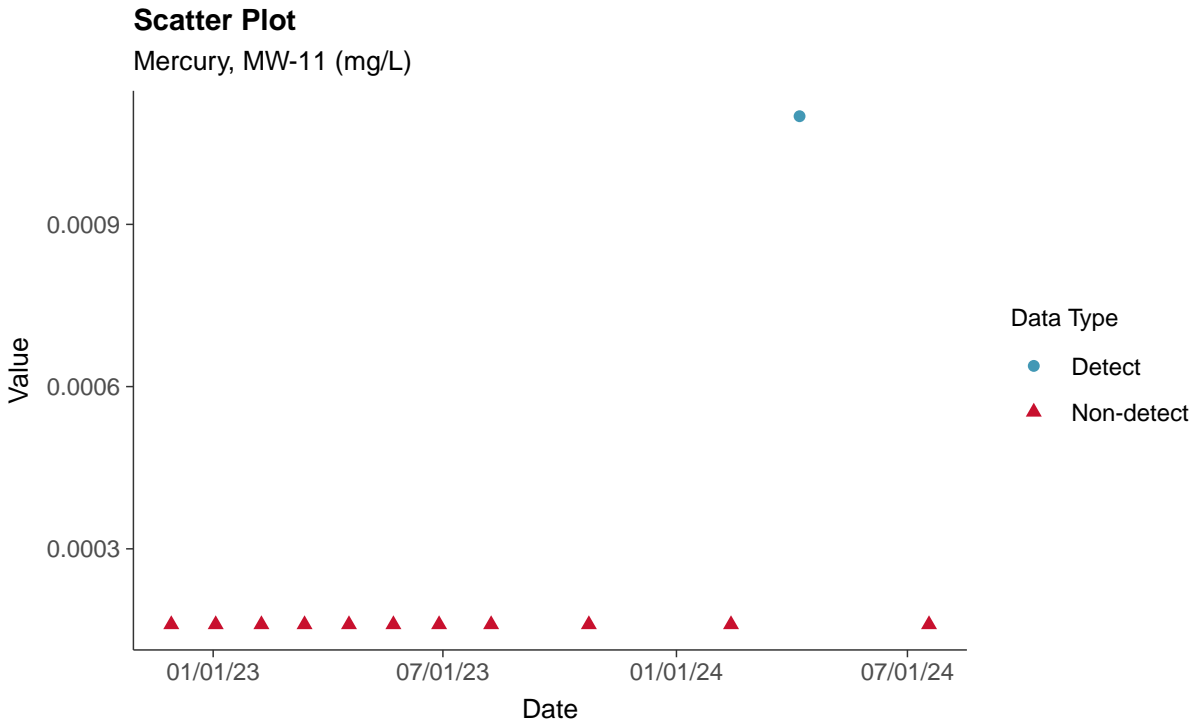
Lithium, MW-11 (mg/L)





### Appendix IV: Mercury, MW-11

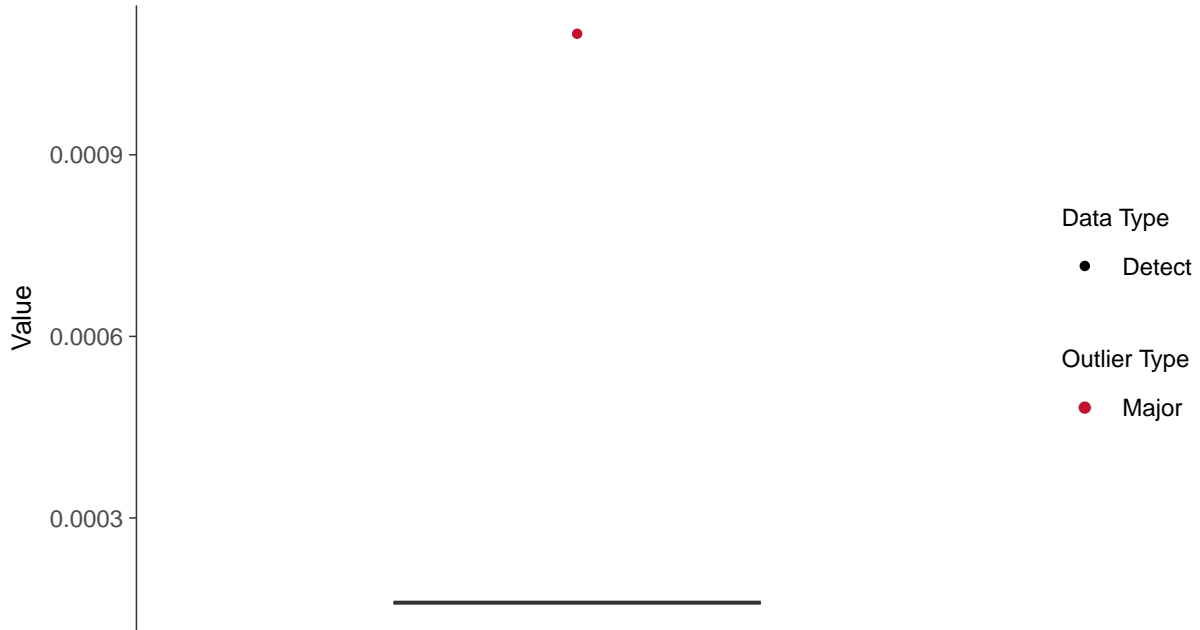
ID: 21\_2\_5\_117





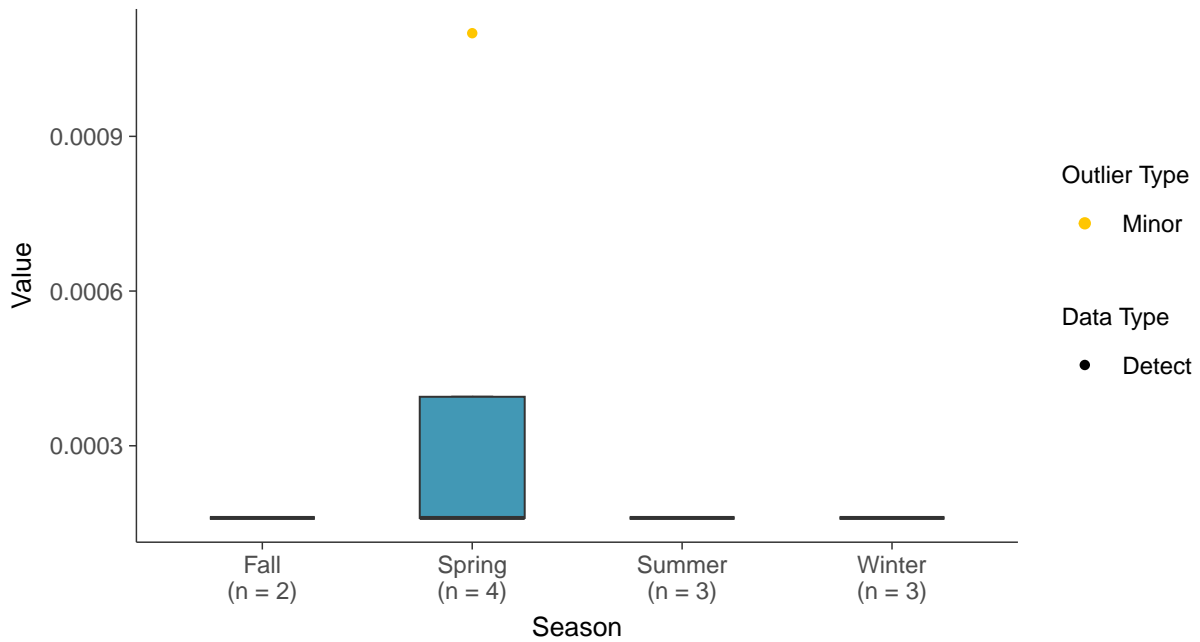
### Boxplot

Mercury, MW-11 (mg/L)



### Boxplot by Season

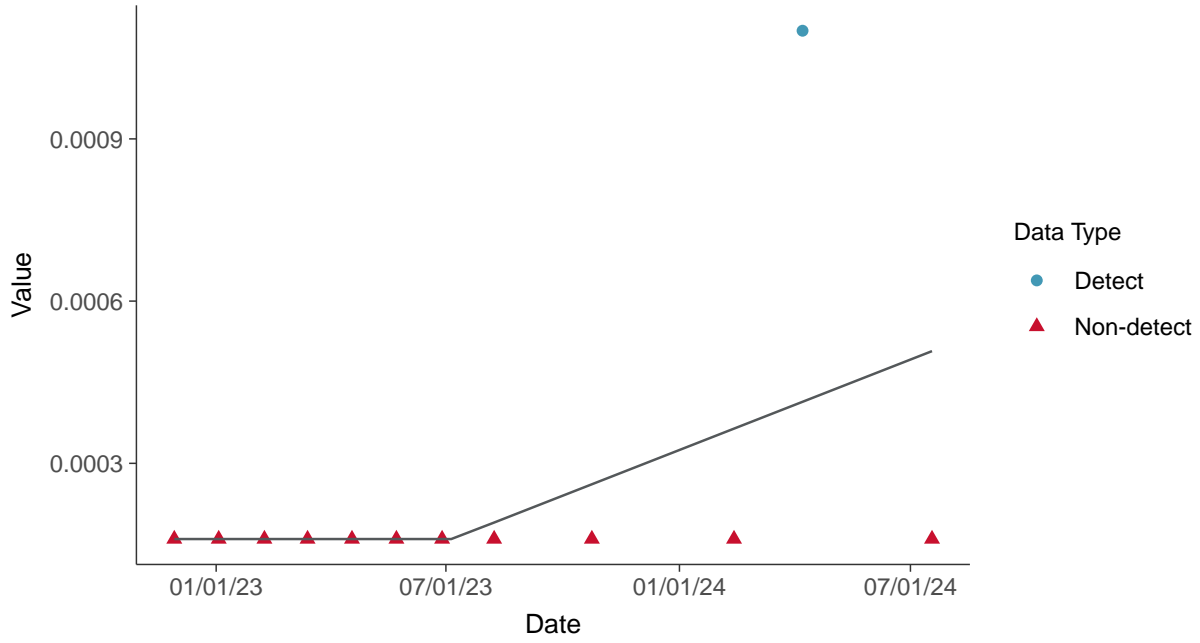
Mercury, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear

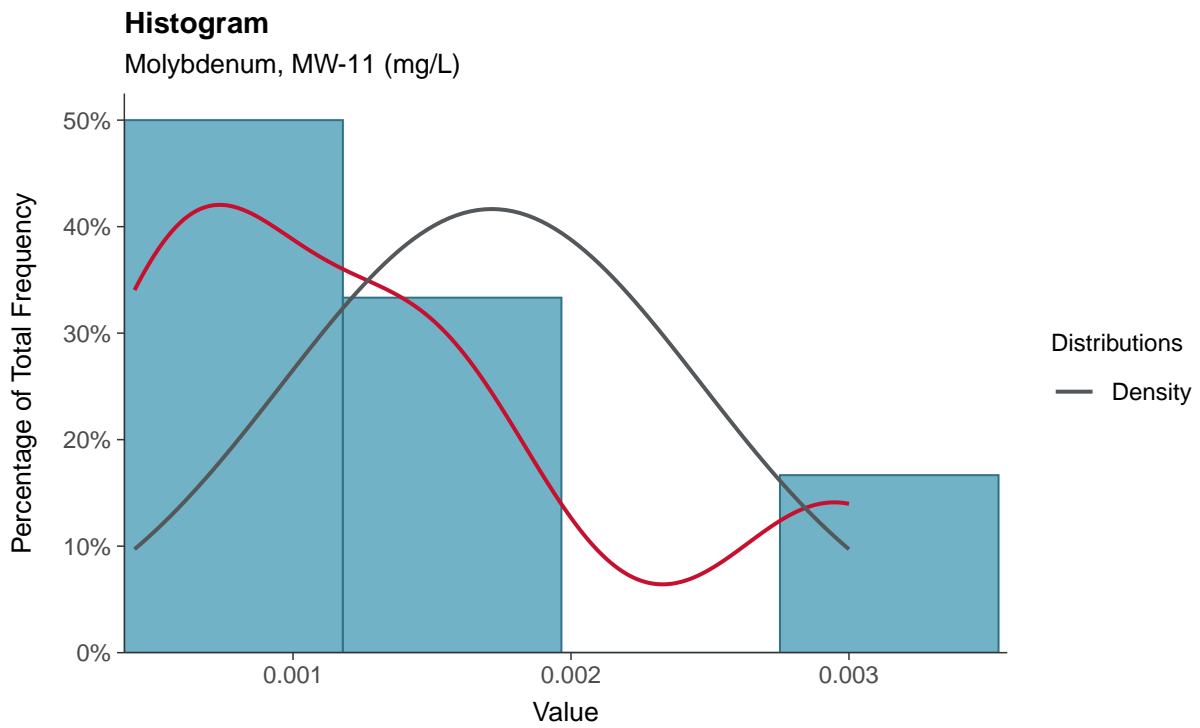
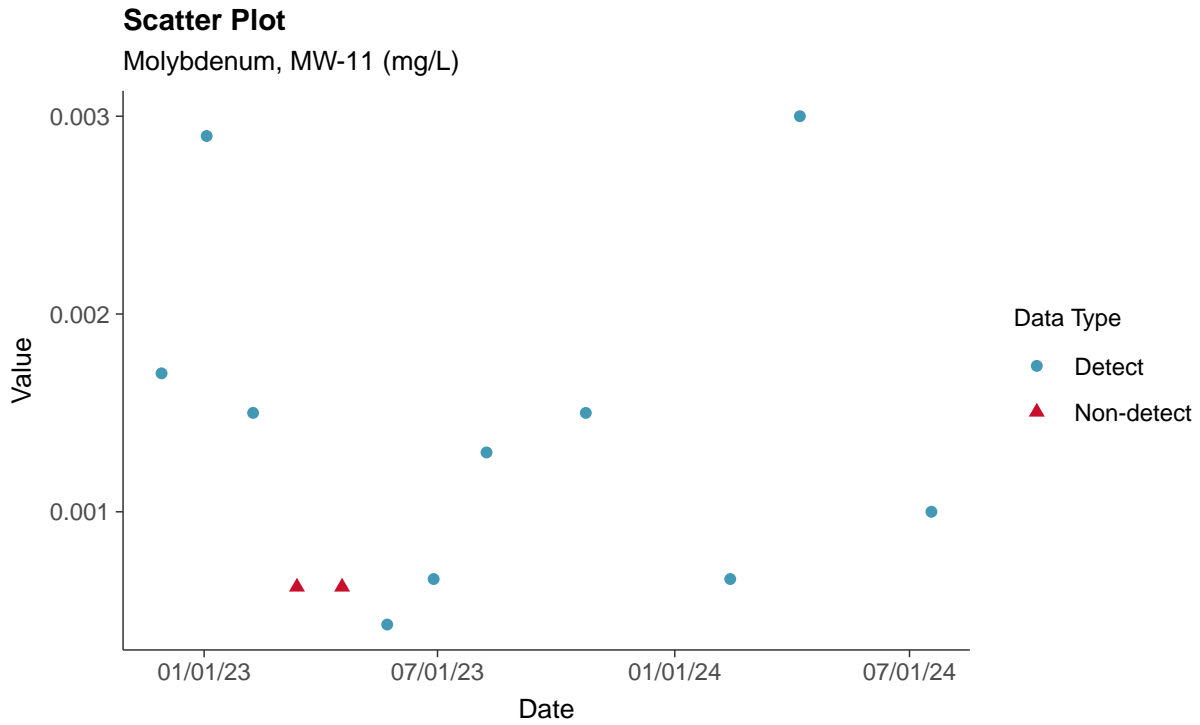
Mercury, MW-11 (mg/L)





## Appendix IV: Molybdenum, MW-11

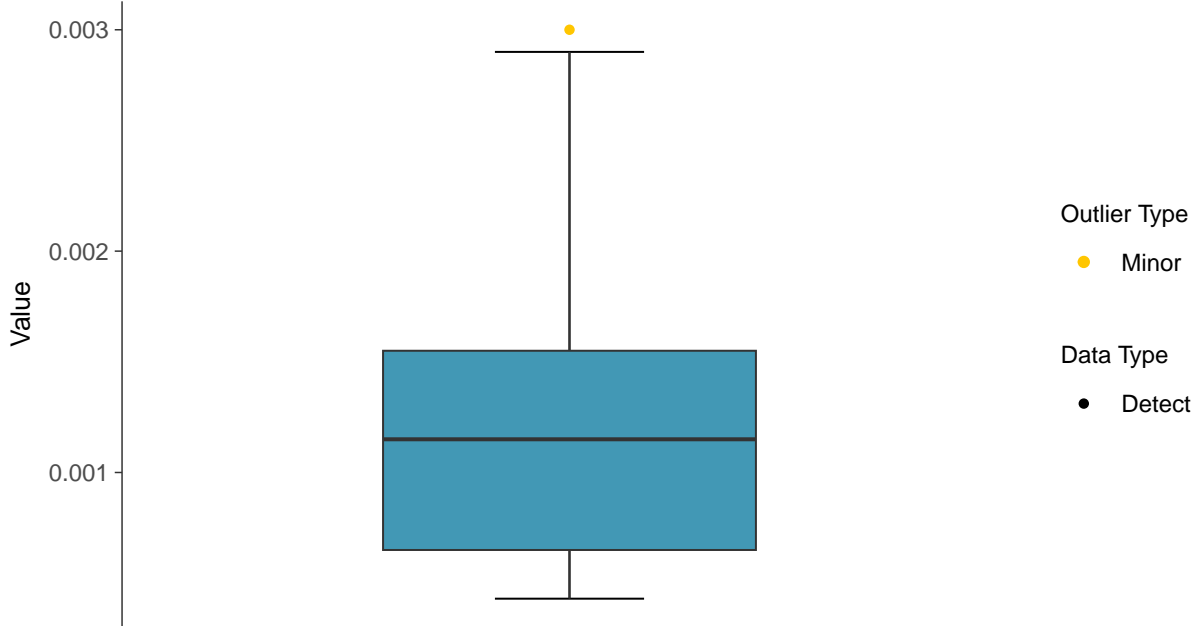
ID: 21\_2\_5\_118





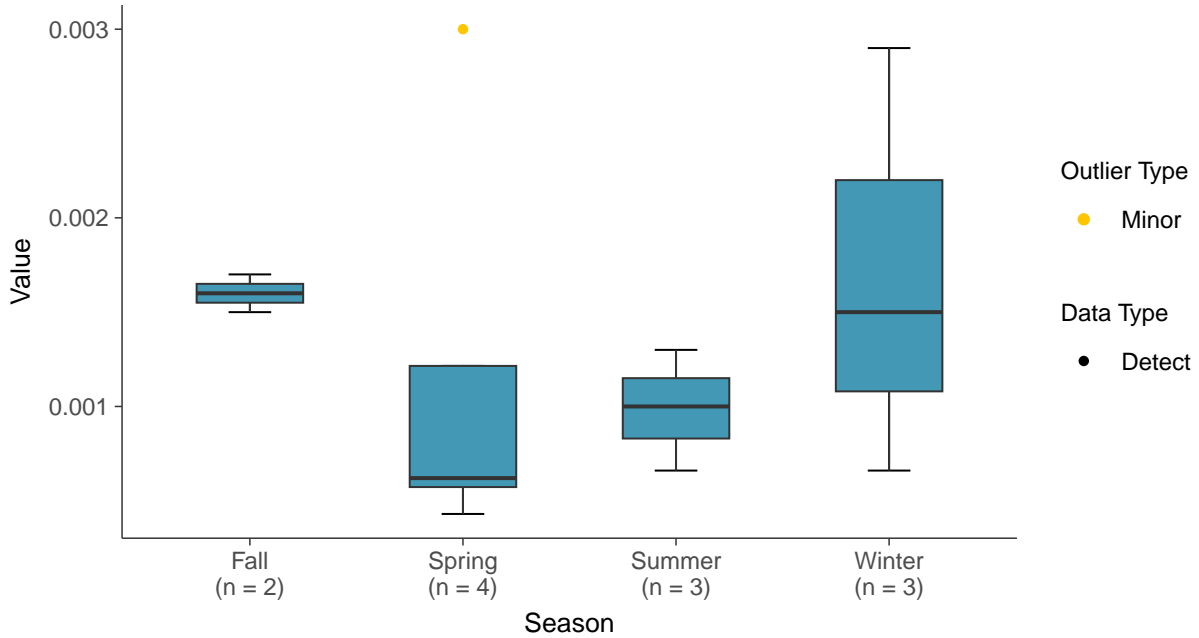
### Boxplot

Molybdenum, MW-11 (mg/L)



### Boxplot by Season

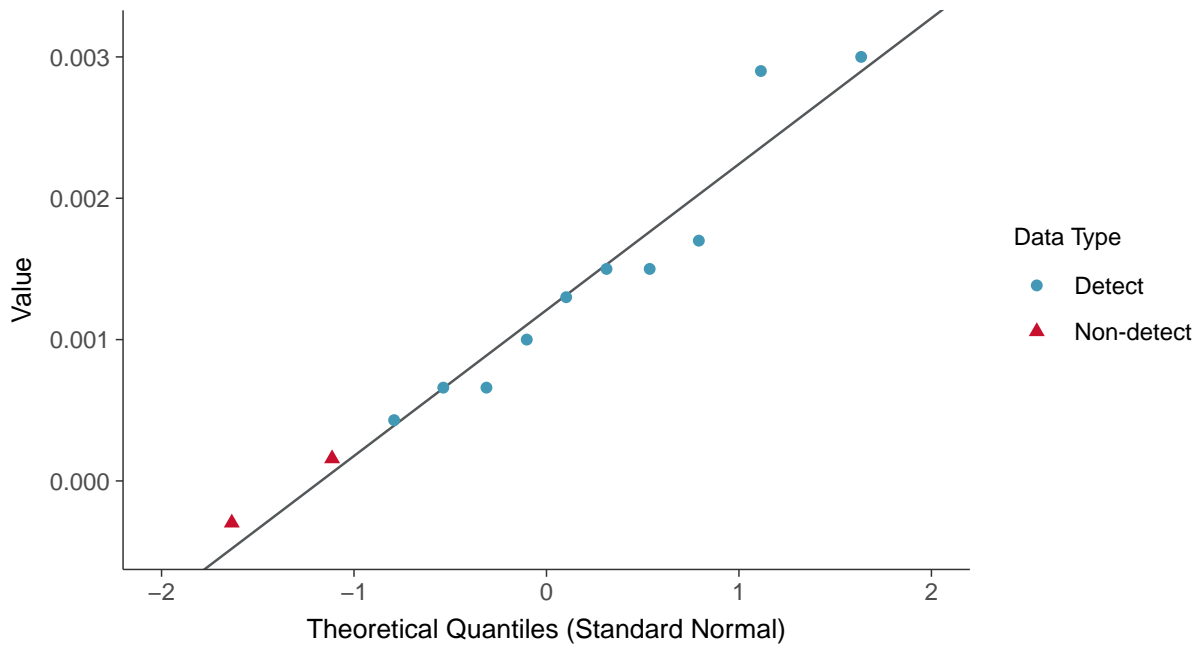
Molybdenum, MW-11 (mg/L)





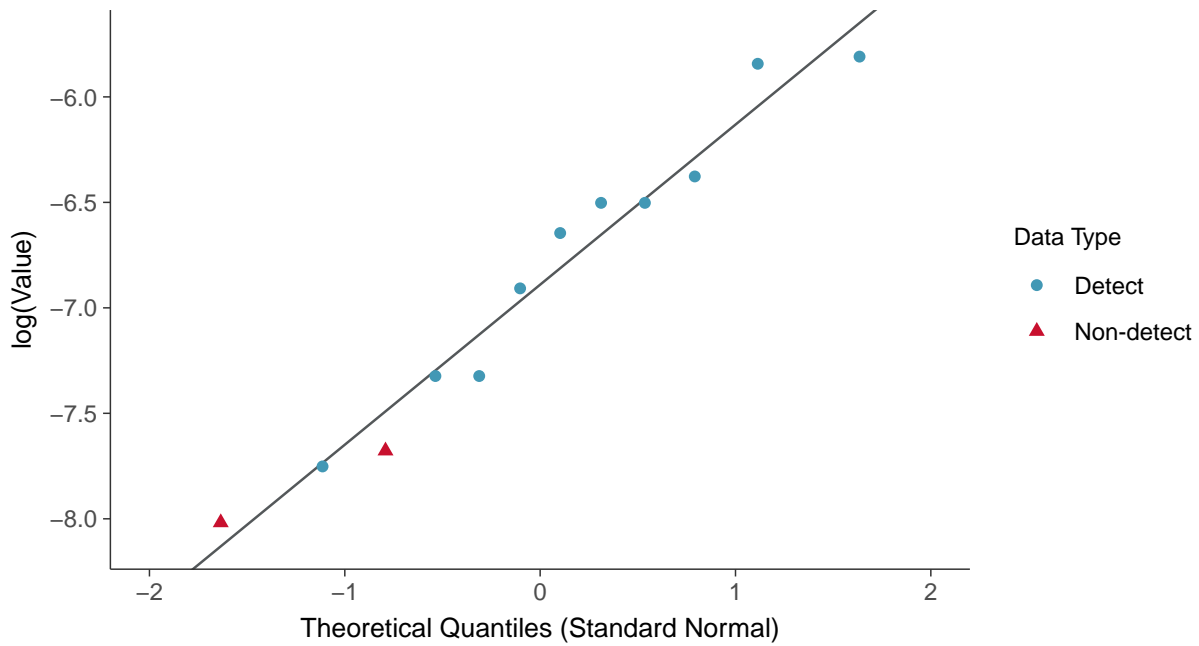
### Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)



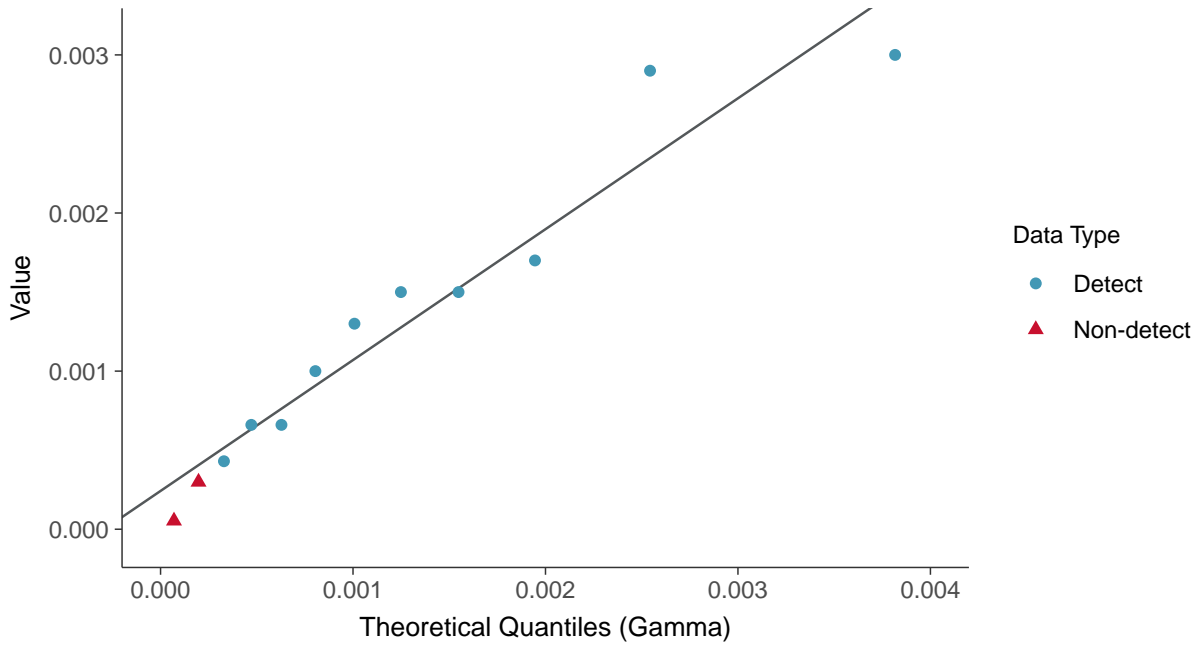
### Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (mg/L)

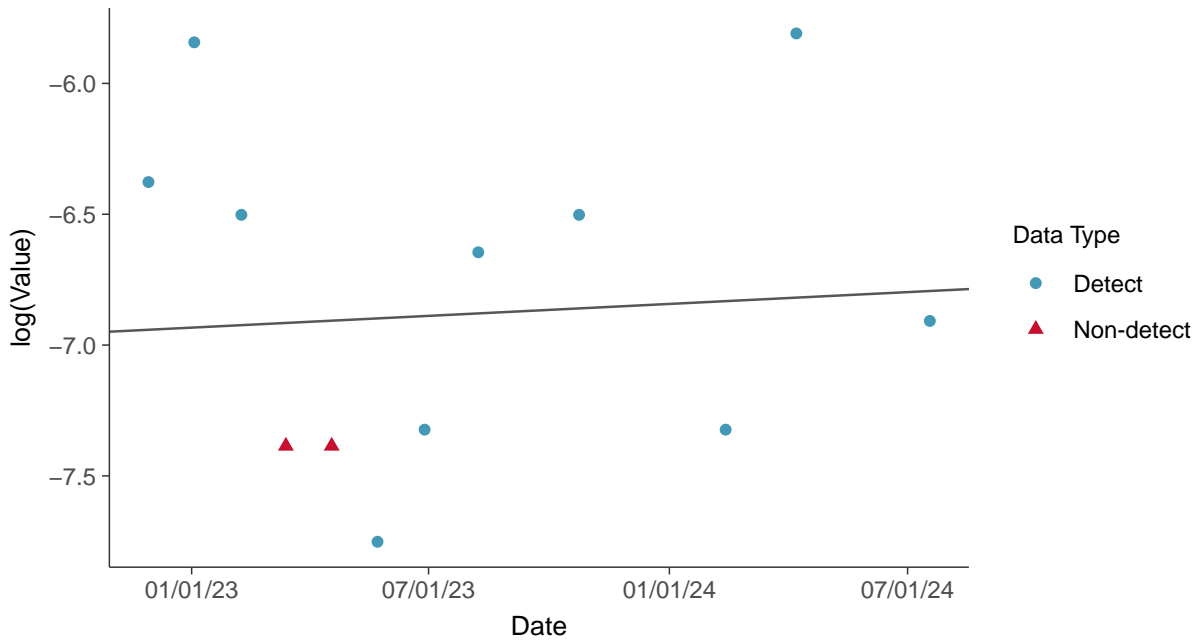




**Gamma Q-Q plot using ROS Imputed Estimates**  
Molybdenum, MW-11 (mg/L)



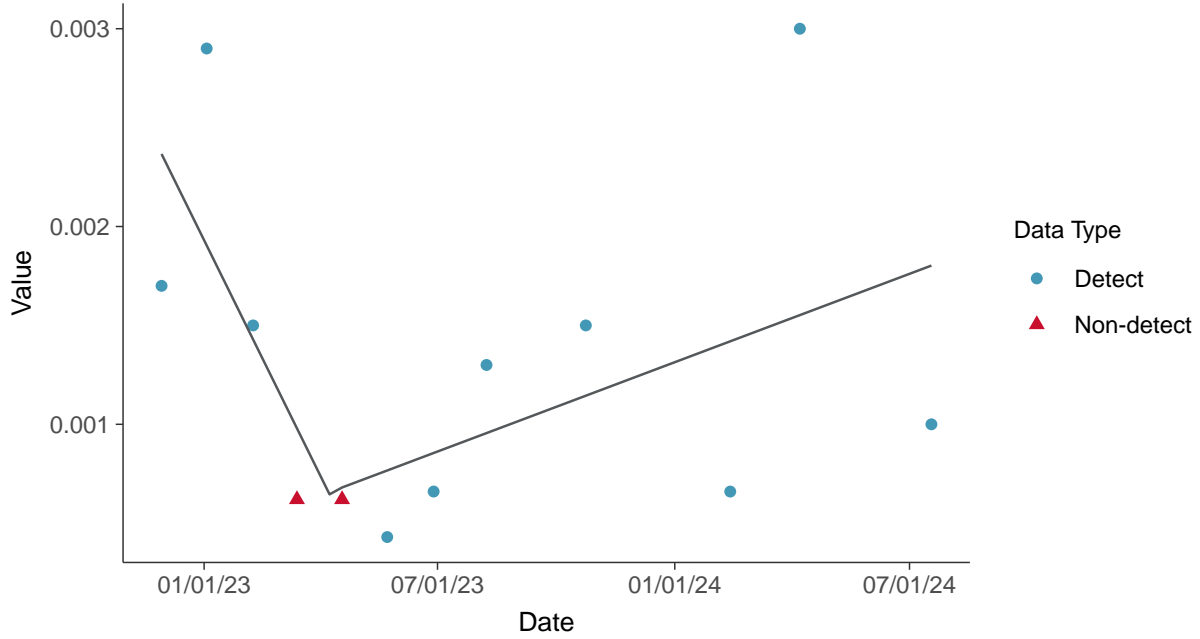
**Trend Regression: Lognormal MLE**  
Molybdenum, MW-11 (mg/L)







**Trend Regression: Piecewise Linear-Linear**  
Molybdenum, MW-11 (mg/L)



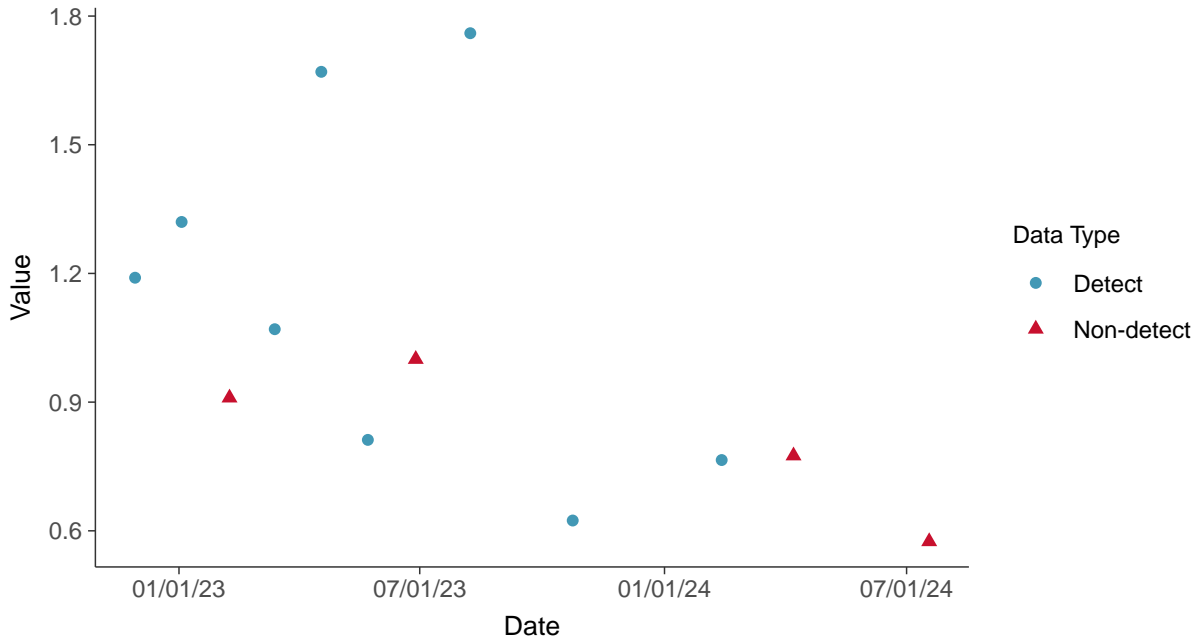


## Appendix IV: Radium 226 and 228, MW-11

ID: 21\_2\_5\_121

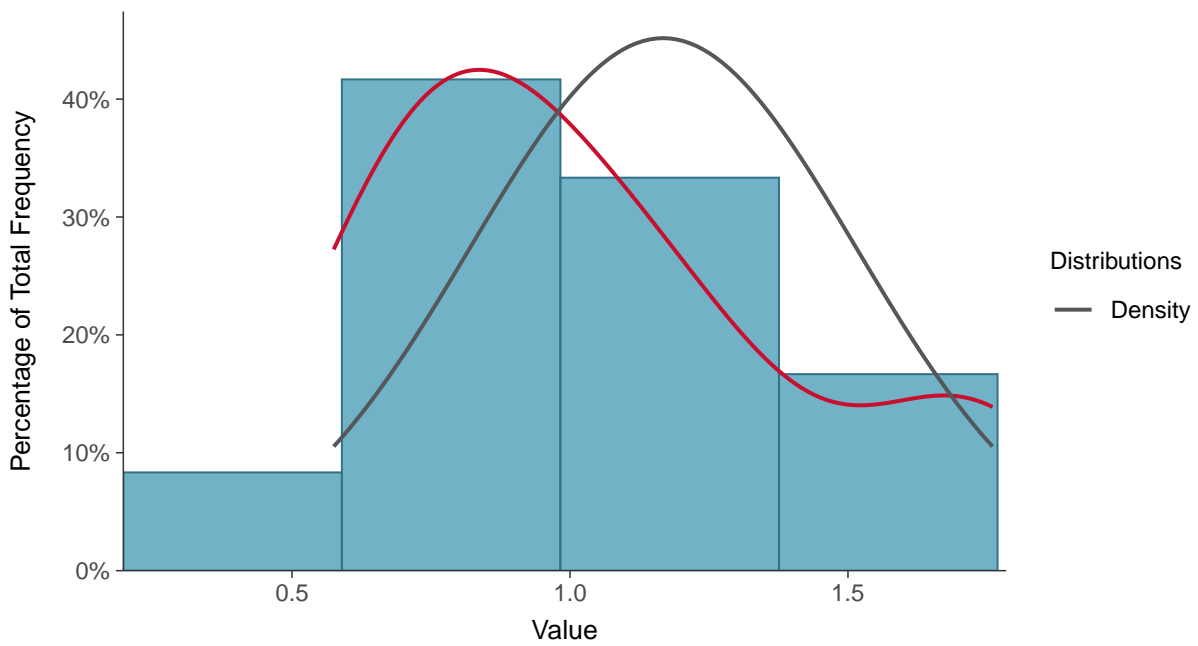
### Scatter Plot

Radium 226 and 228, MW-11 (pCi/L)



### Histogram

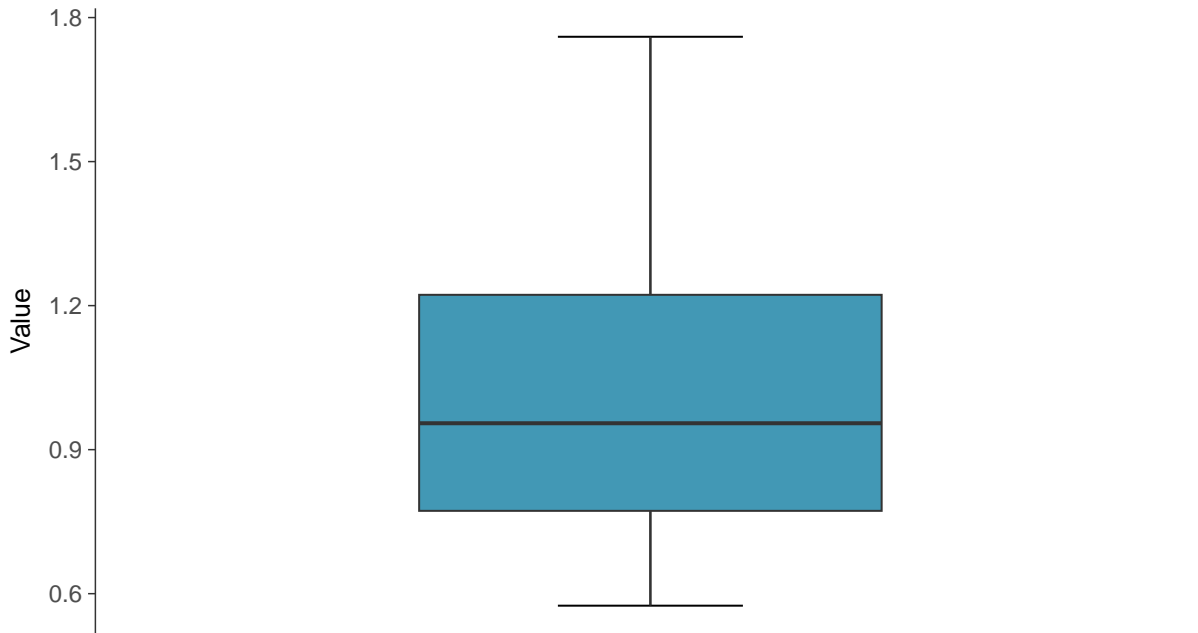
Radium 226 and 228, MW-11 (pCi/L)





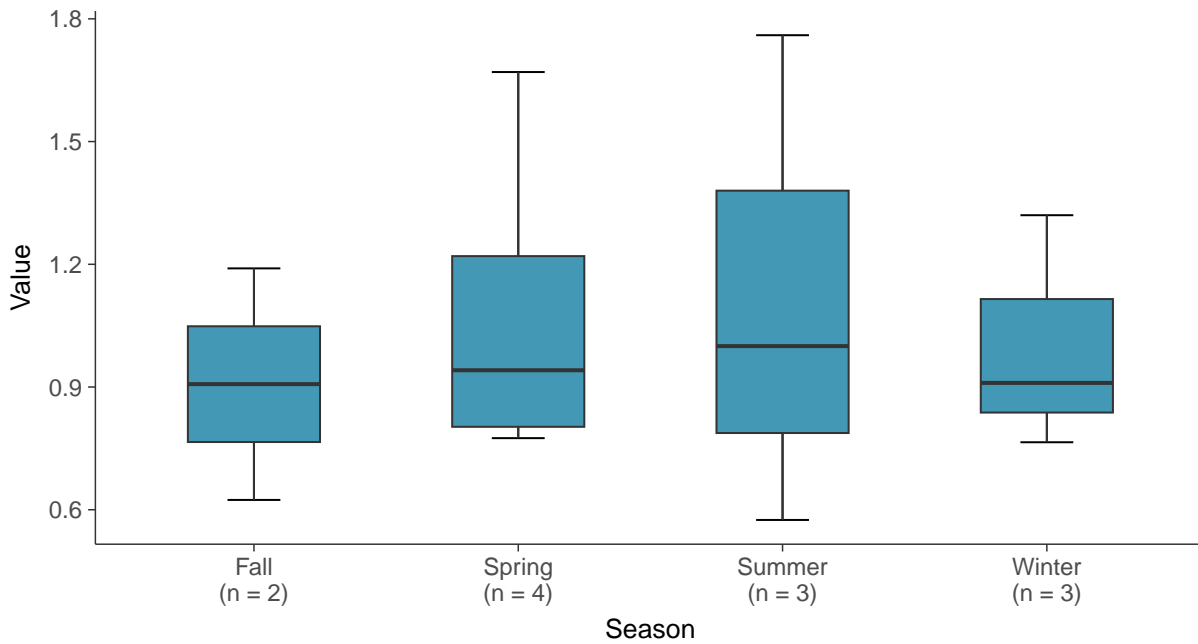
### Boxplot

Radium 226 and 228, MW-11 (pCi/L)



### Boxplot by Season

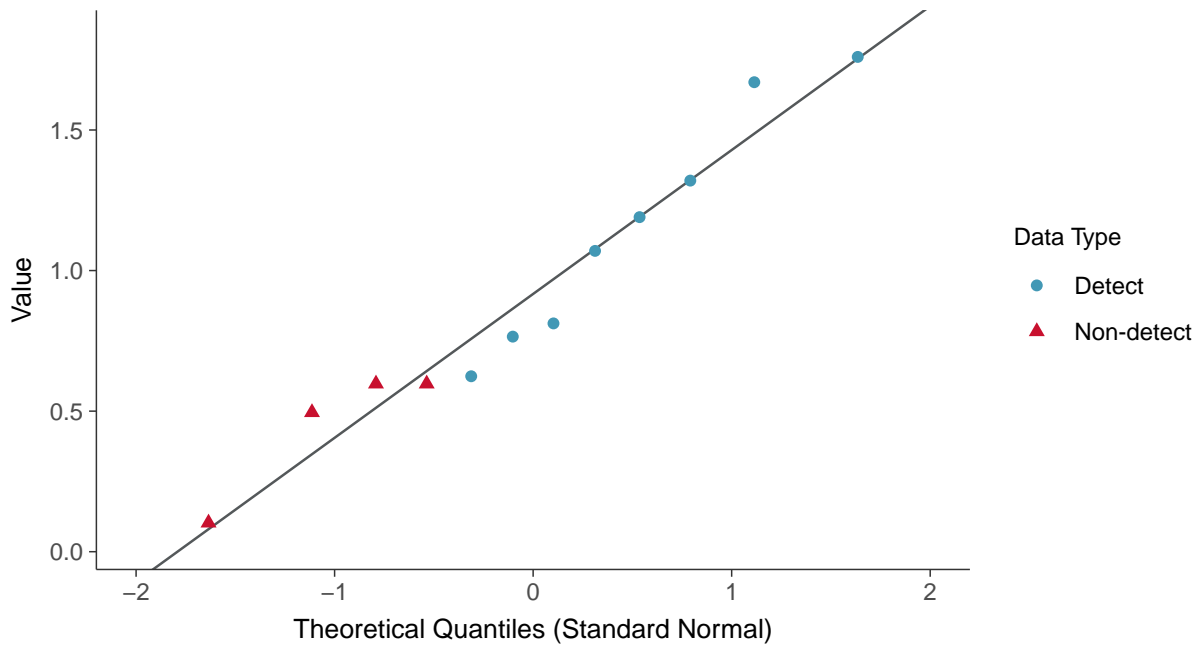
Radium 226 and 228, MW-11 (pCi/L)





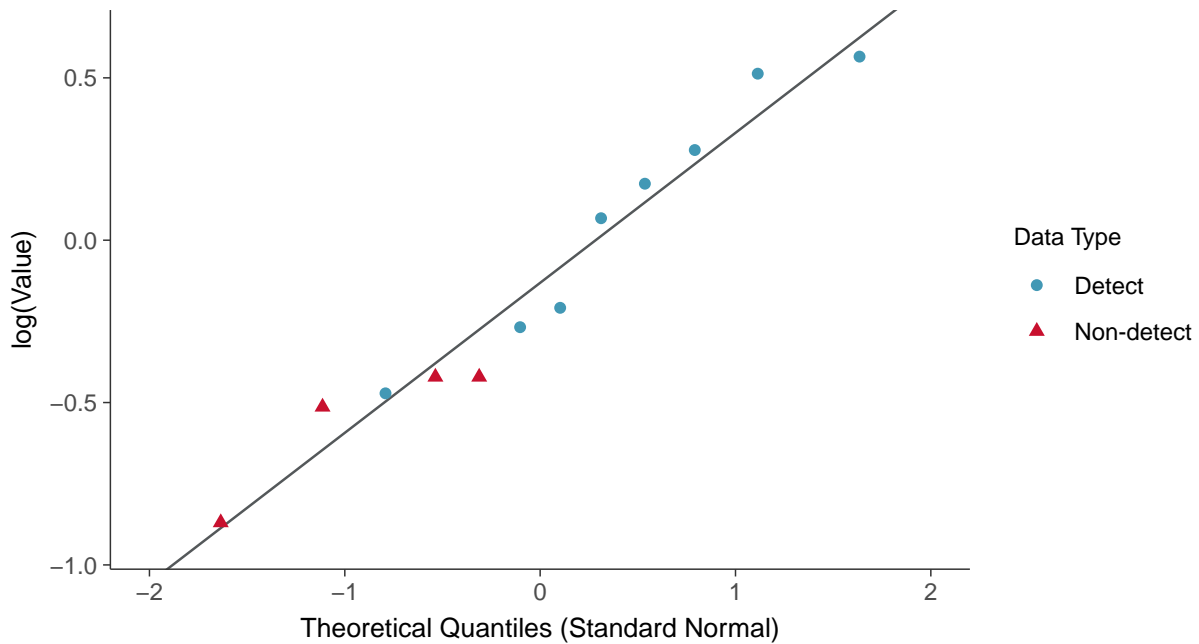
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

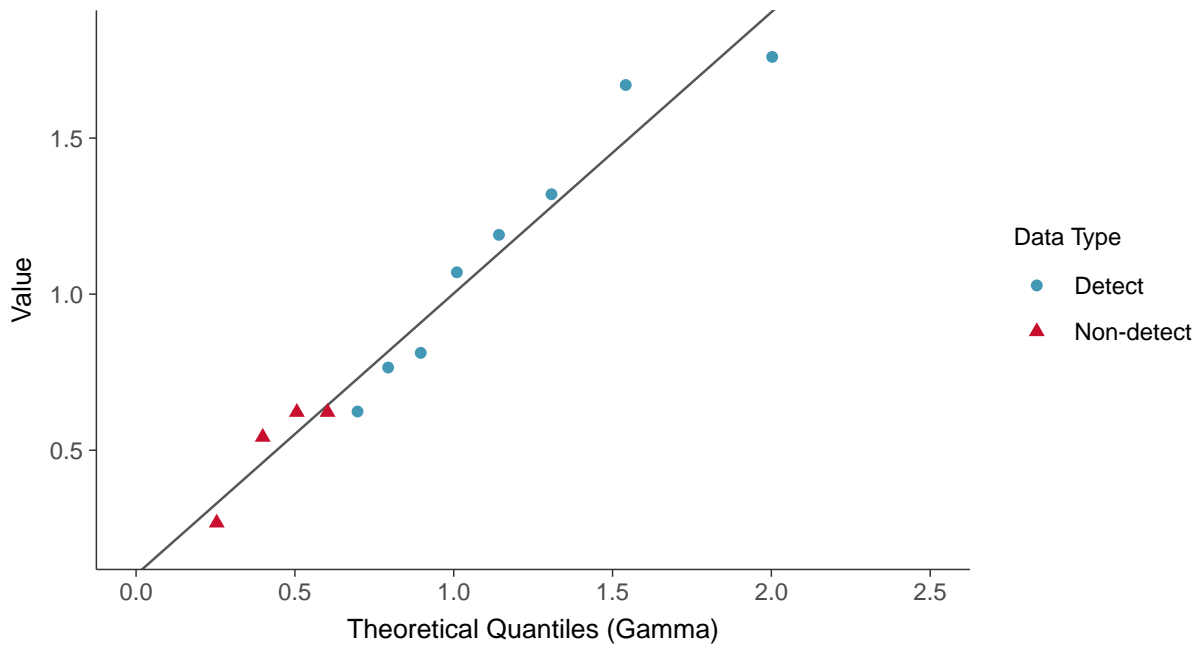
Radium 226 and 228, MW-11 (pCi/L)





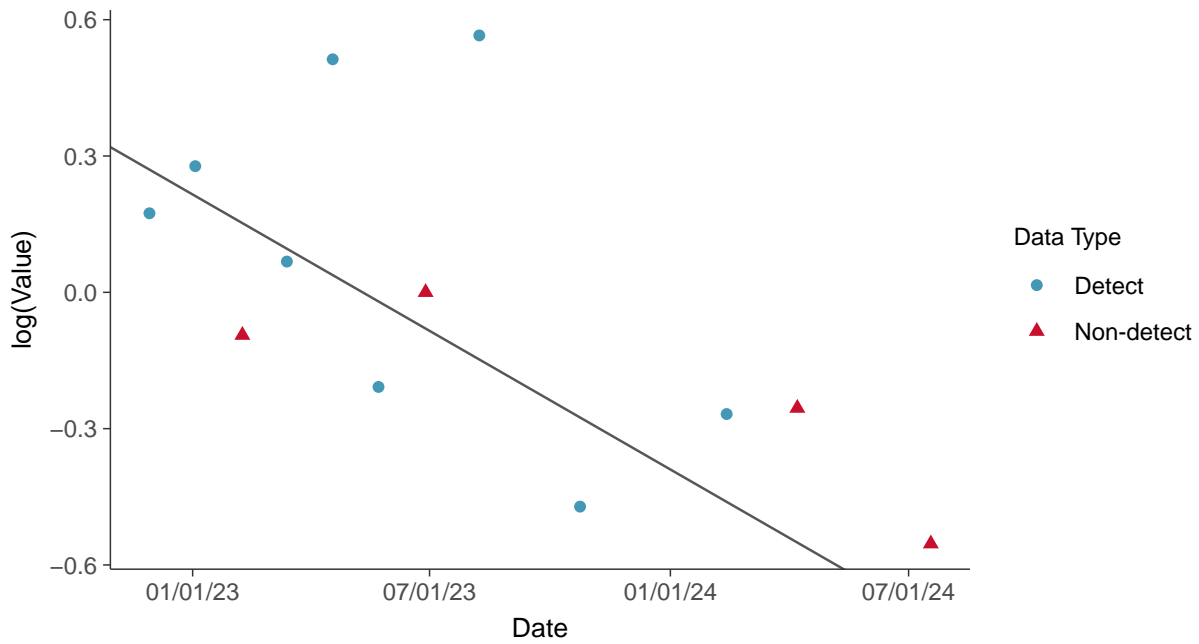
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-11 (pCi/L)



### Trend Regression: Lognormal MLE

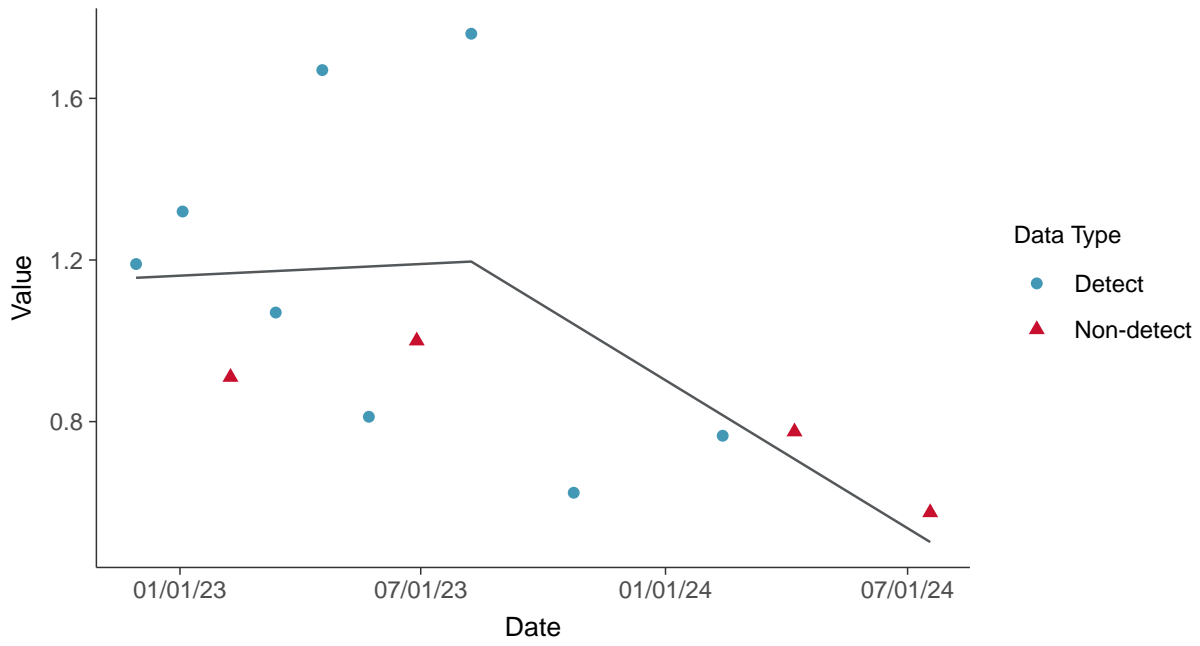
Radium 226 and 228, MW-11 (pCi/L)





### Trend Regression: Piecewise Linear-Linear

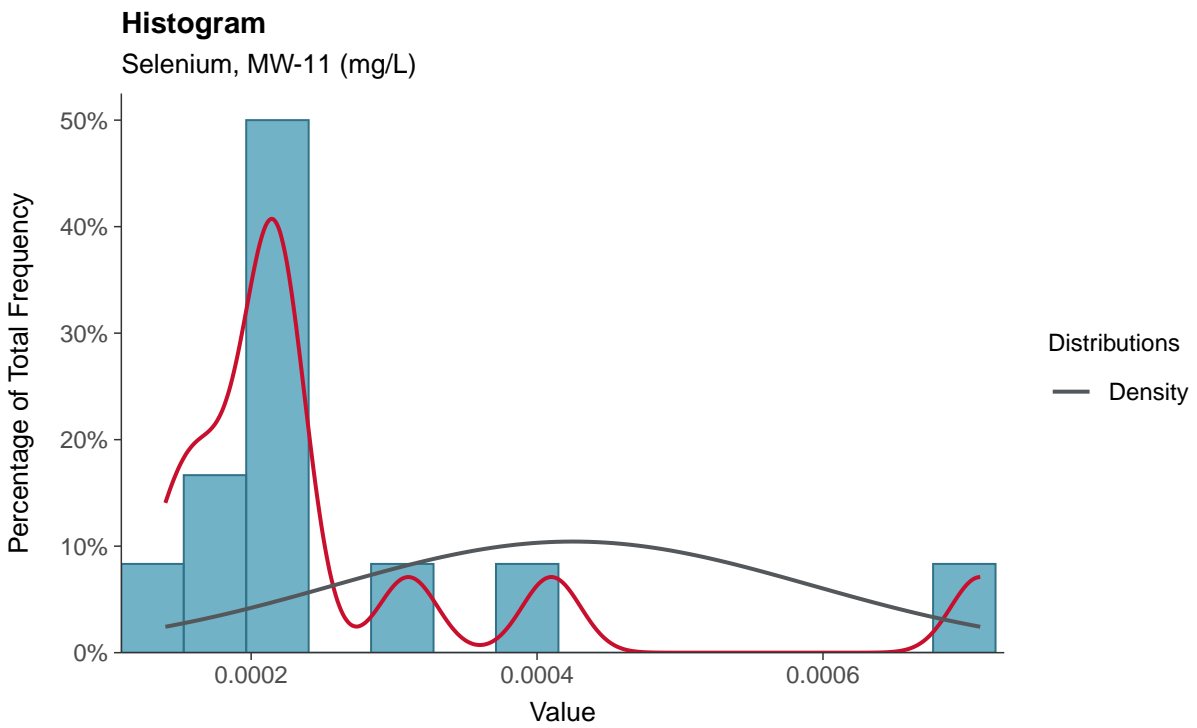
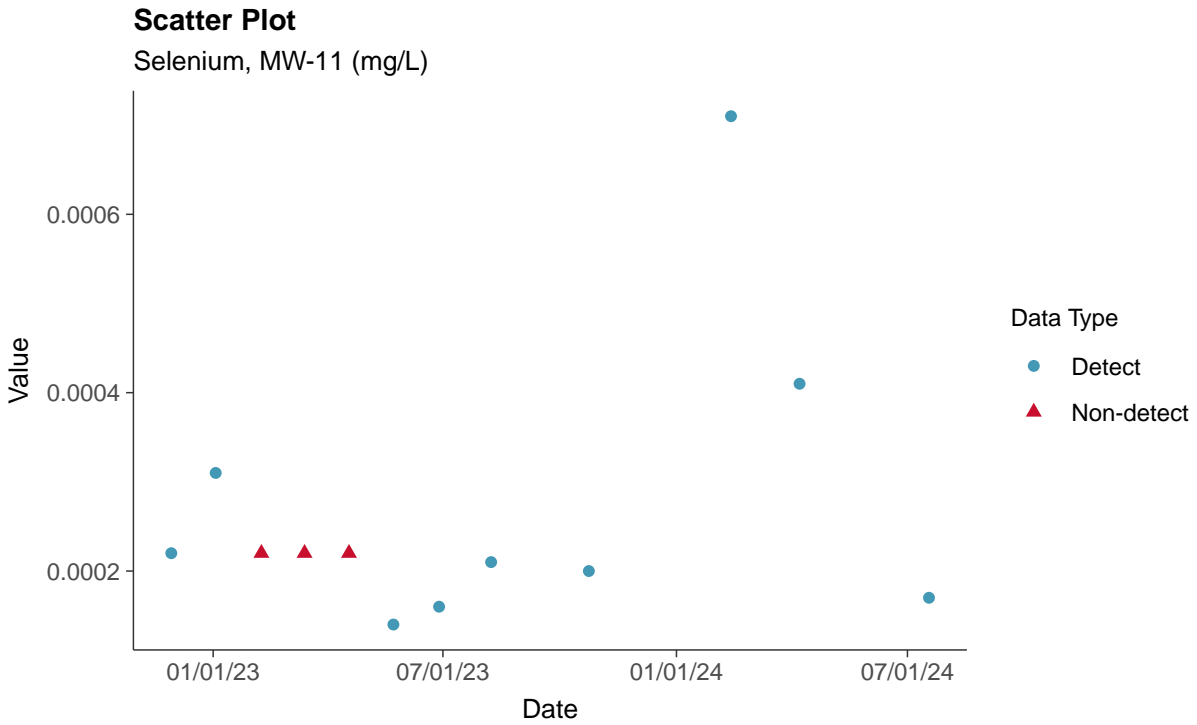
Radium 226 and 228, MW-11 (pCi/L)





### Appendix IV: Selenium, MW-11

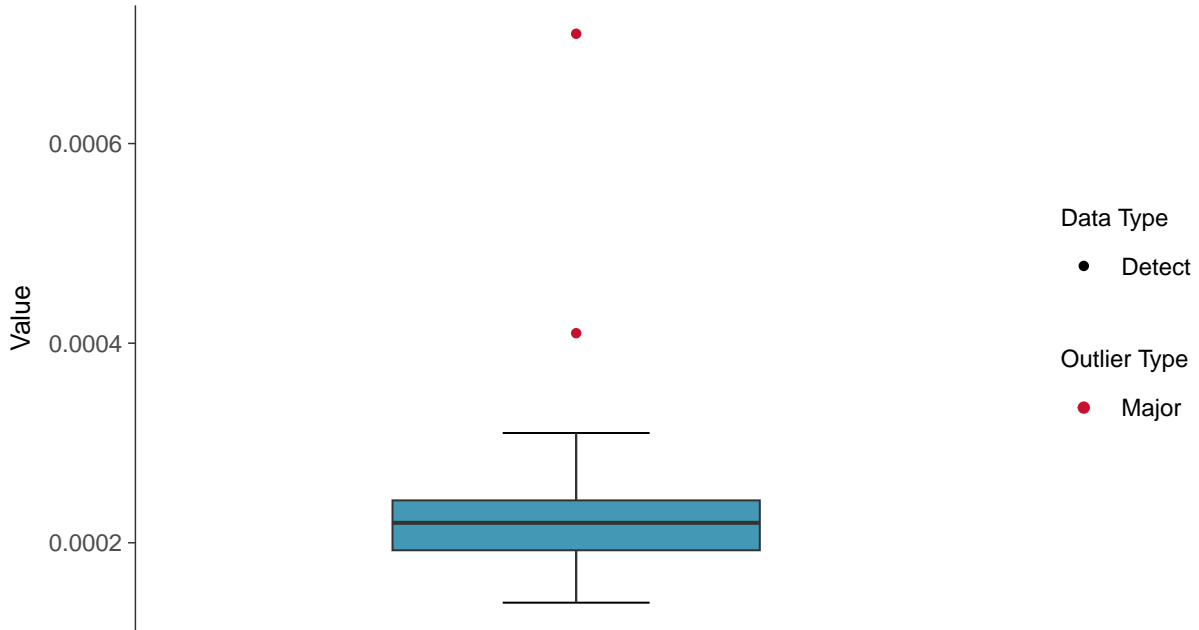
ID: 21\_2\_5\_122





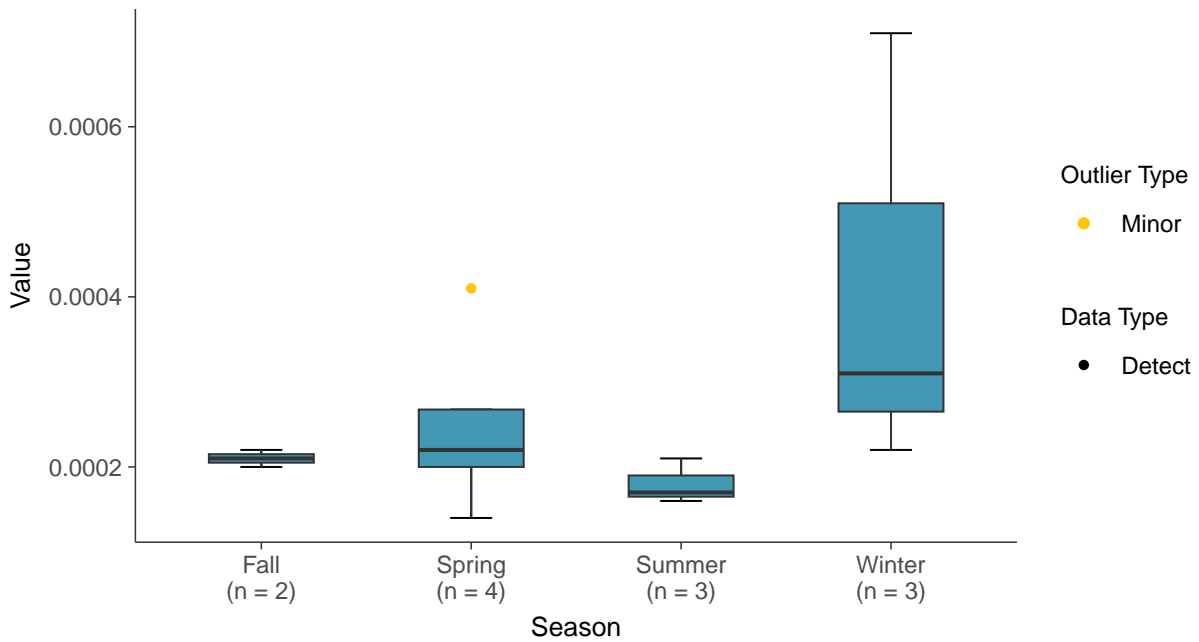
### Boxplot

Selenium, MW-11 (mg/L)



### Boxplot by Season

Selenium, MW-11 (mg/L)

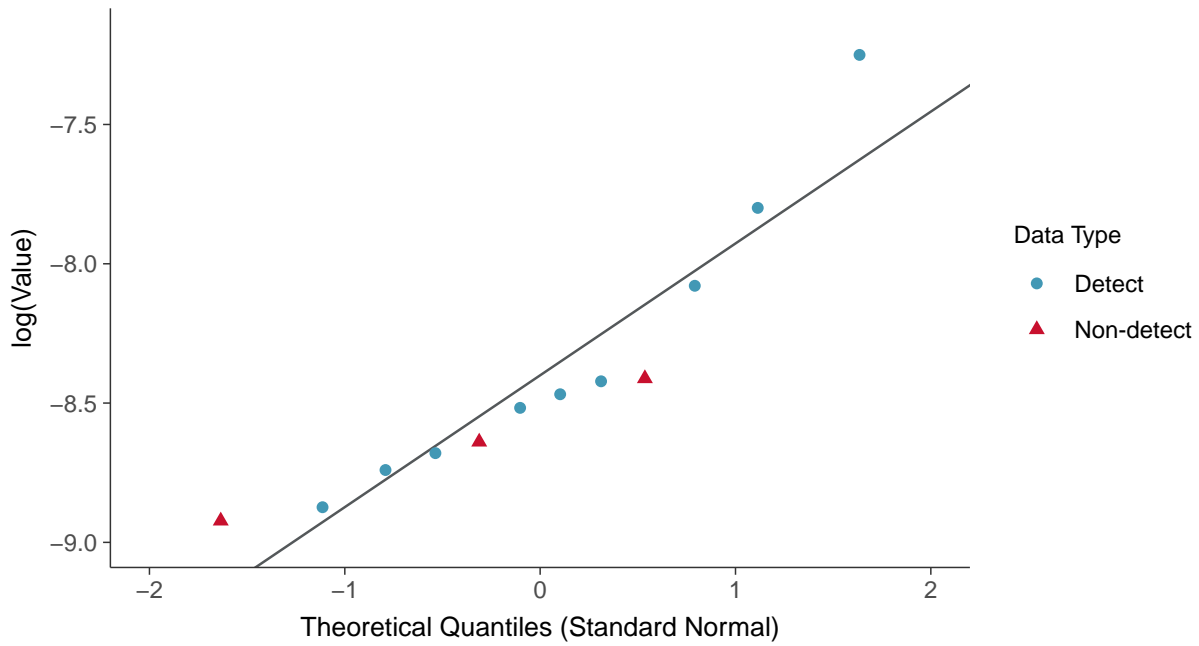






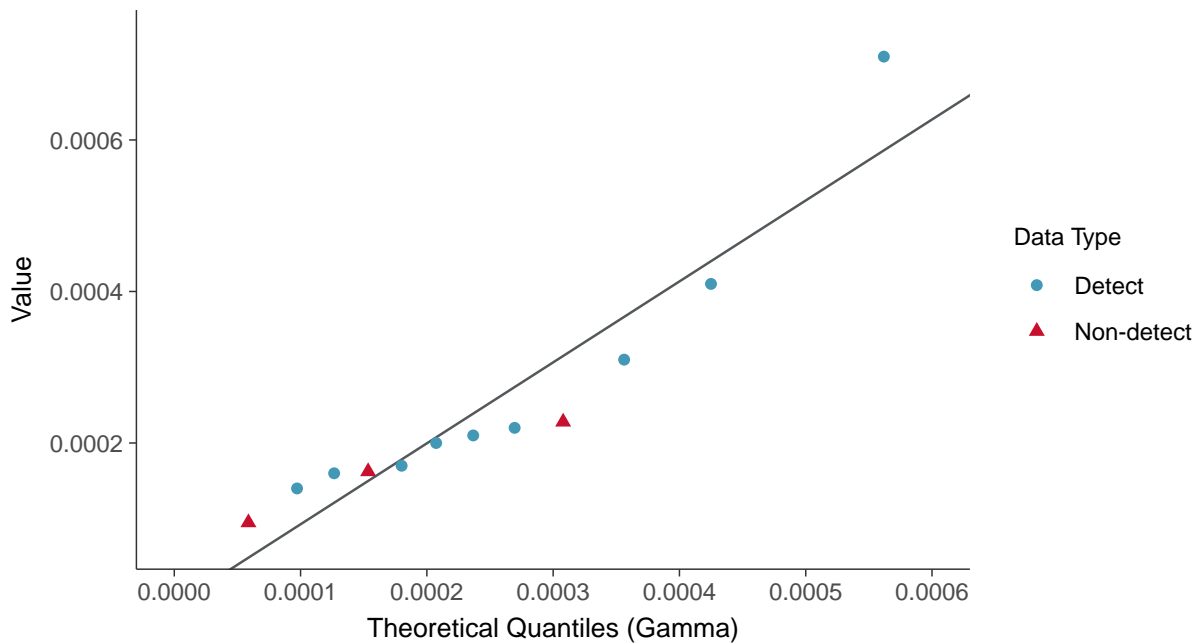
### Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-11 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

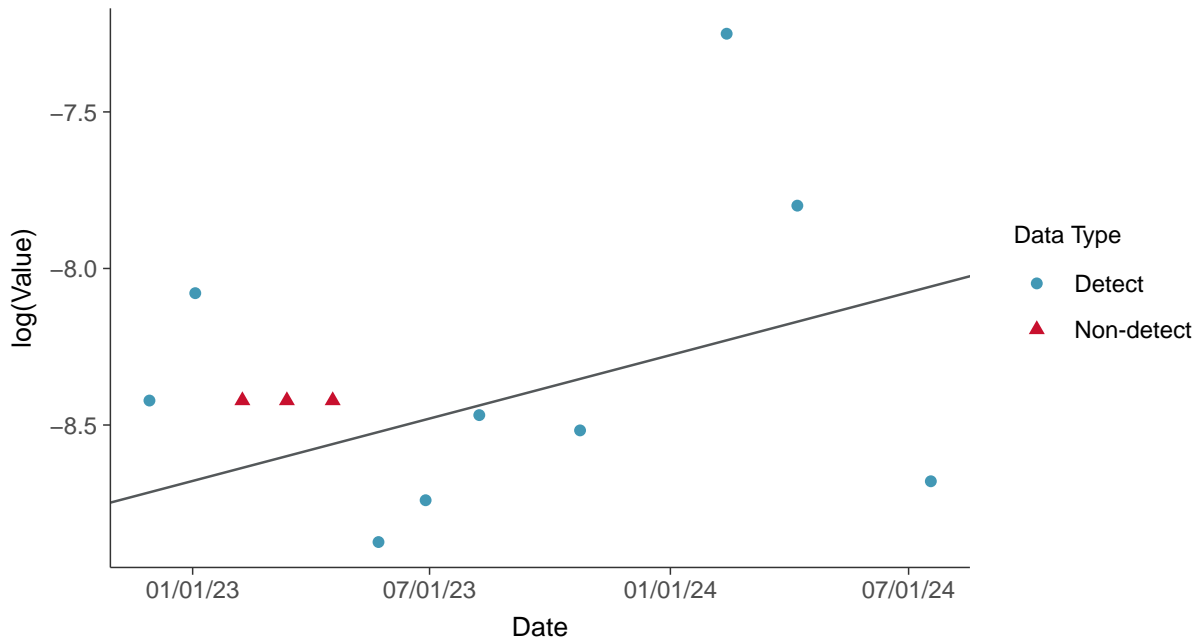
Selenium, MW-11 (mg/L)





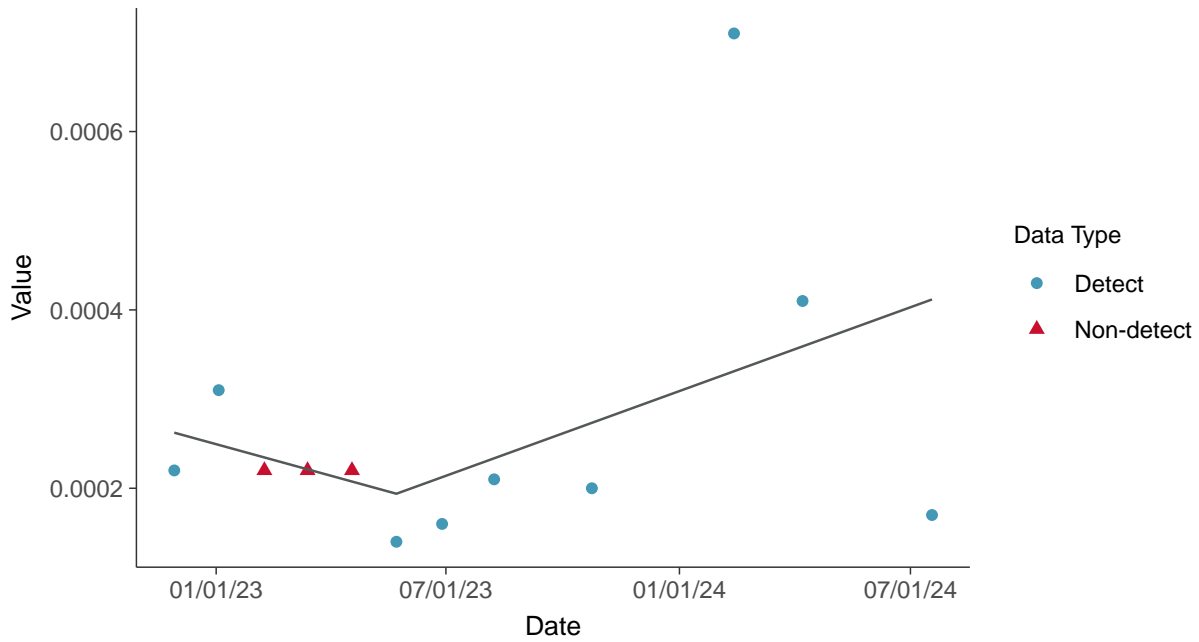
### Trend Regression: Lognormal MLE

Selenium, MW-11 (mg/L)



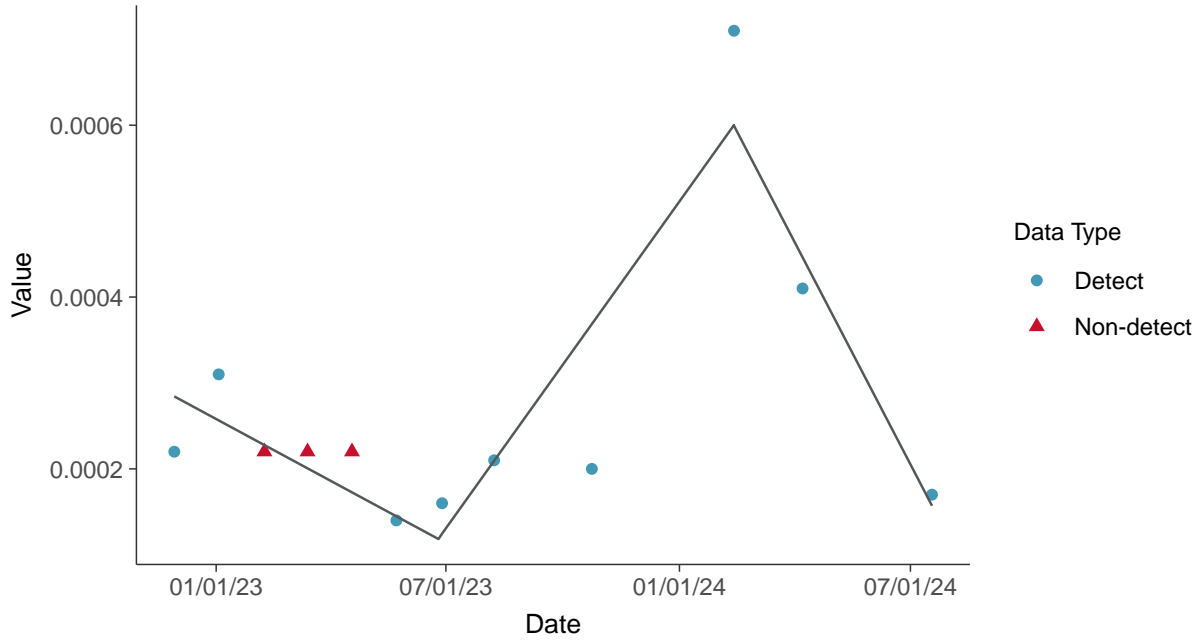
### Trend Regression: Piecewise Linear-Linear

Selenium, MW-11 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-11 (mg/L)



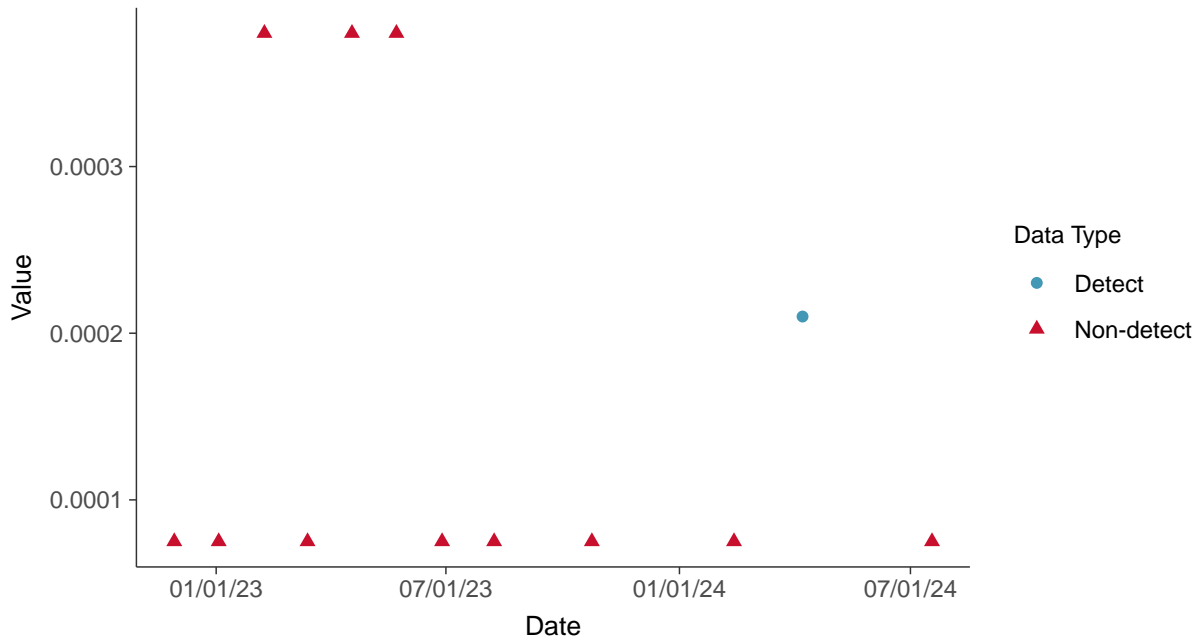


### Appendix IV: Thallium, MW-11

ID: 21\_2\_5\_125

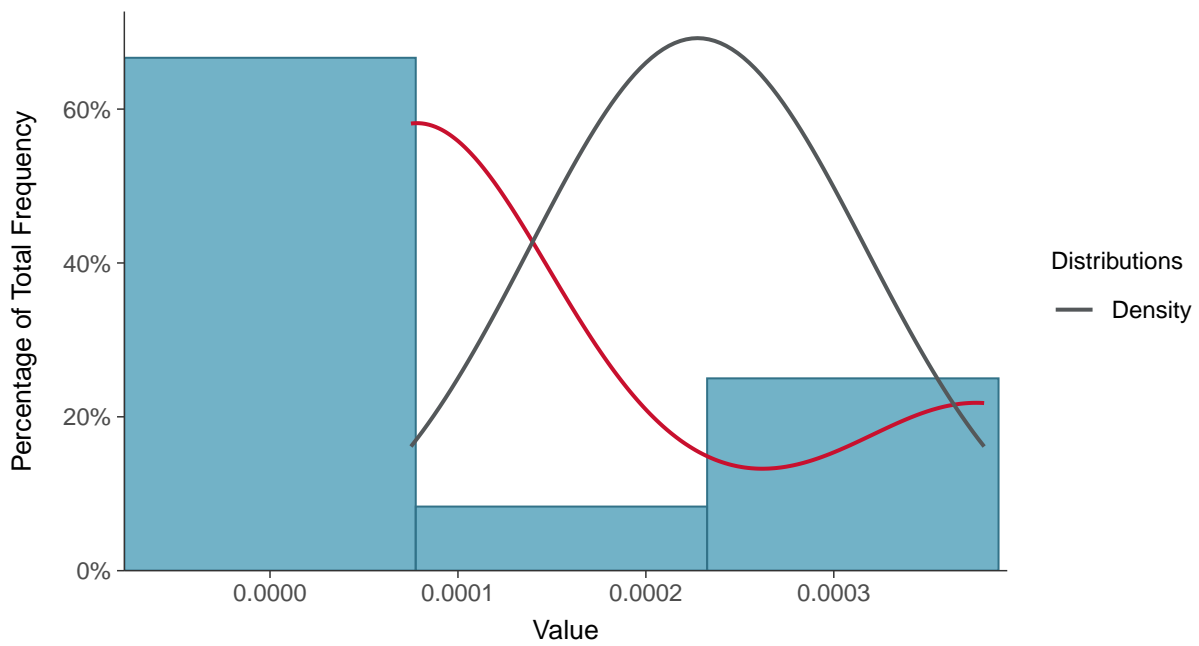
#### Scatter Plot

Thallium, MW-11 (mg/L)



#### Histogram

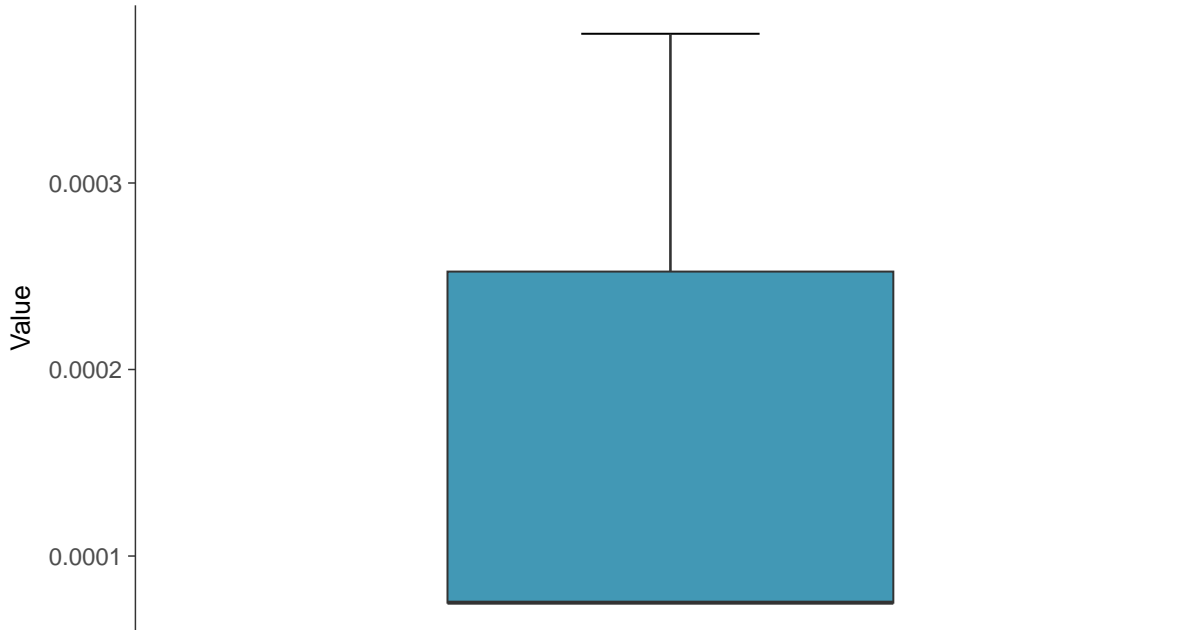
Thallium, MW-11 (mg/L)





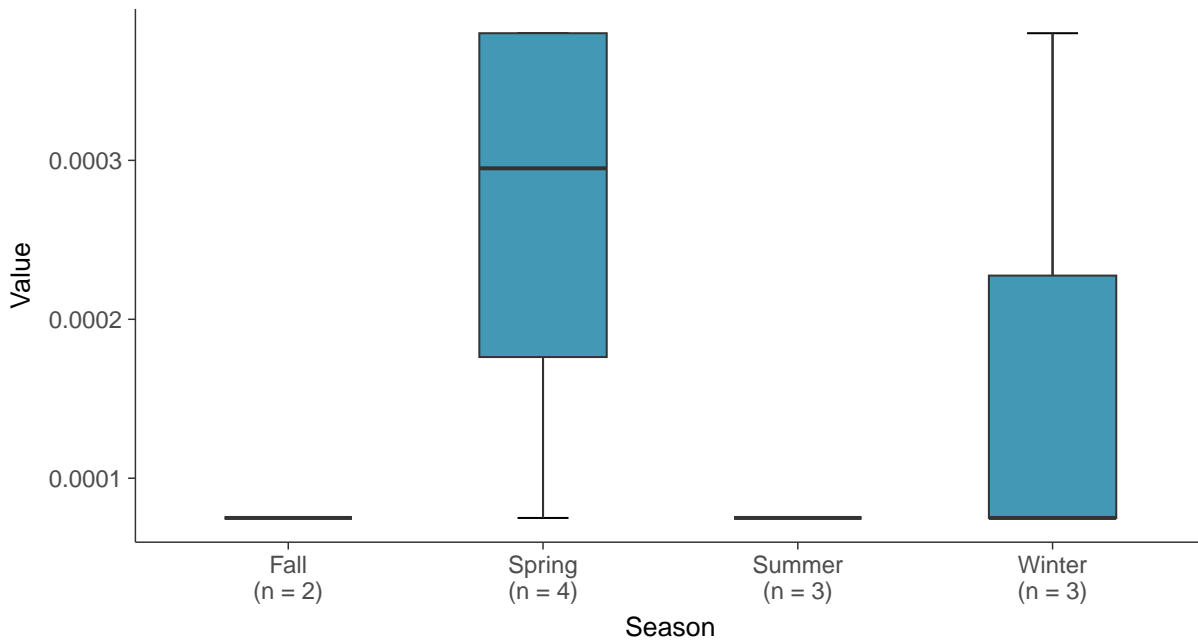
### Boxplot

Thallium, MW-11 (mg/L)



### Boxplot by Season

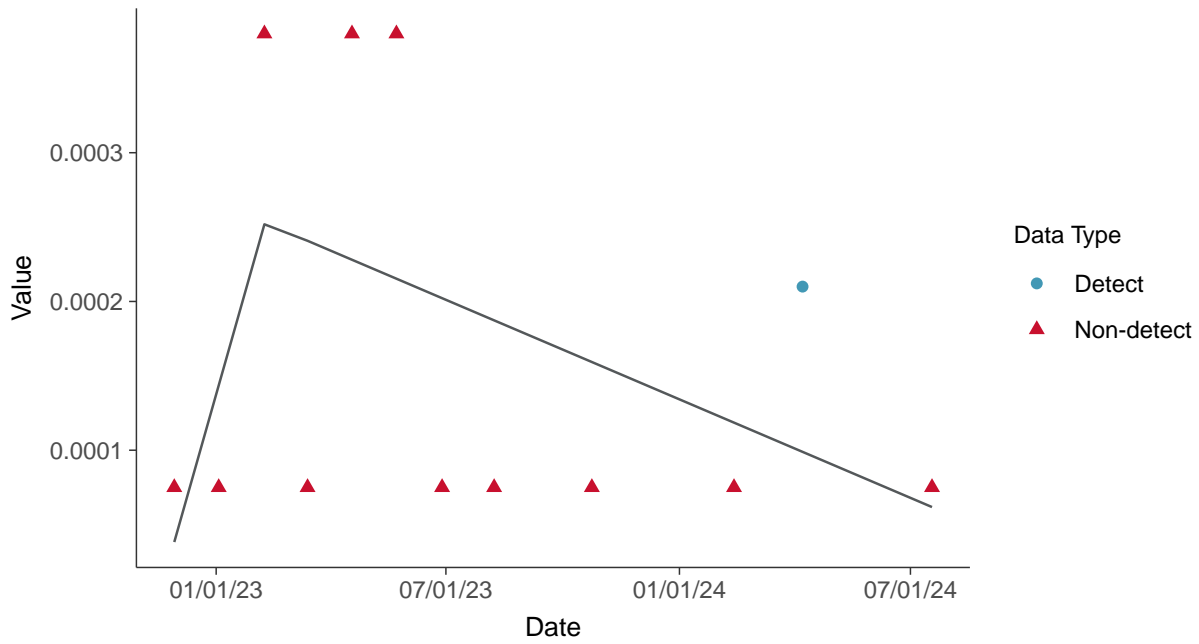
Thallium, MW-11 (mg/L)





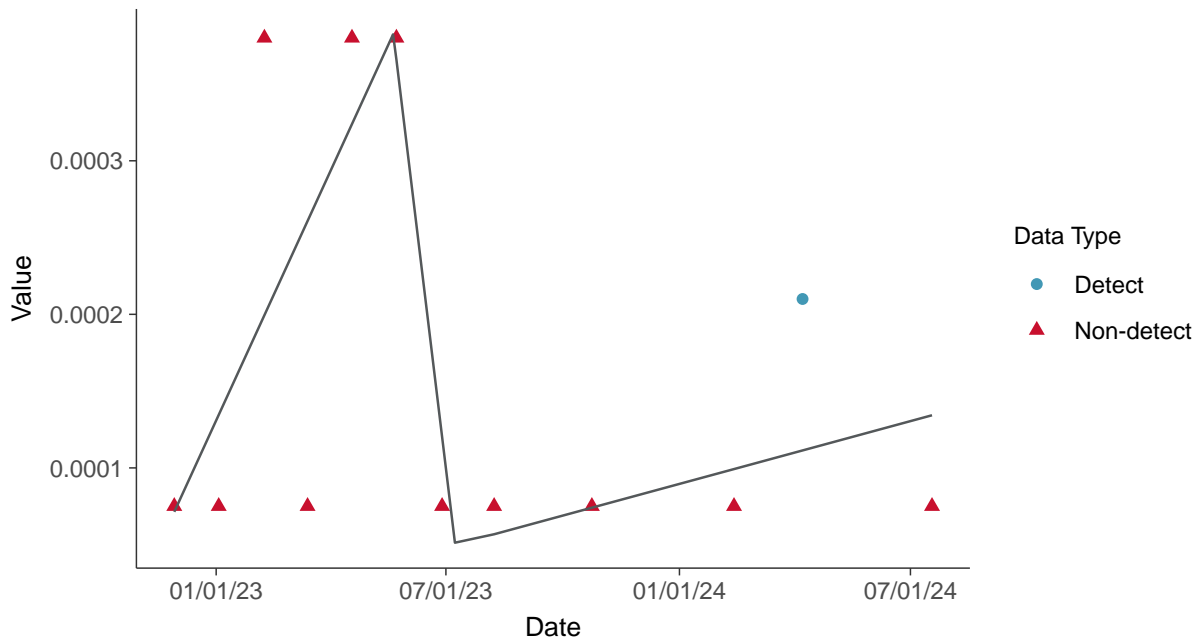
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

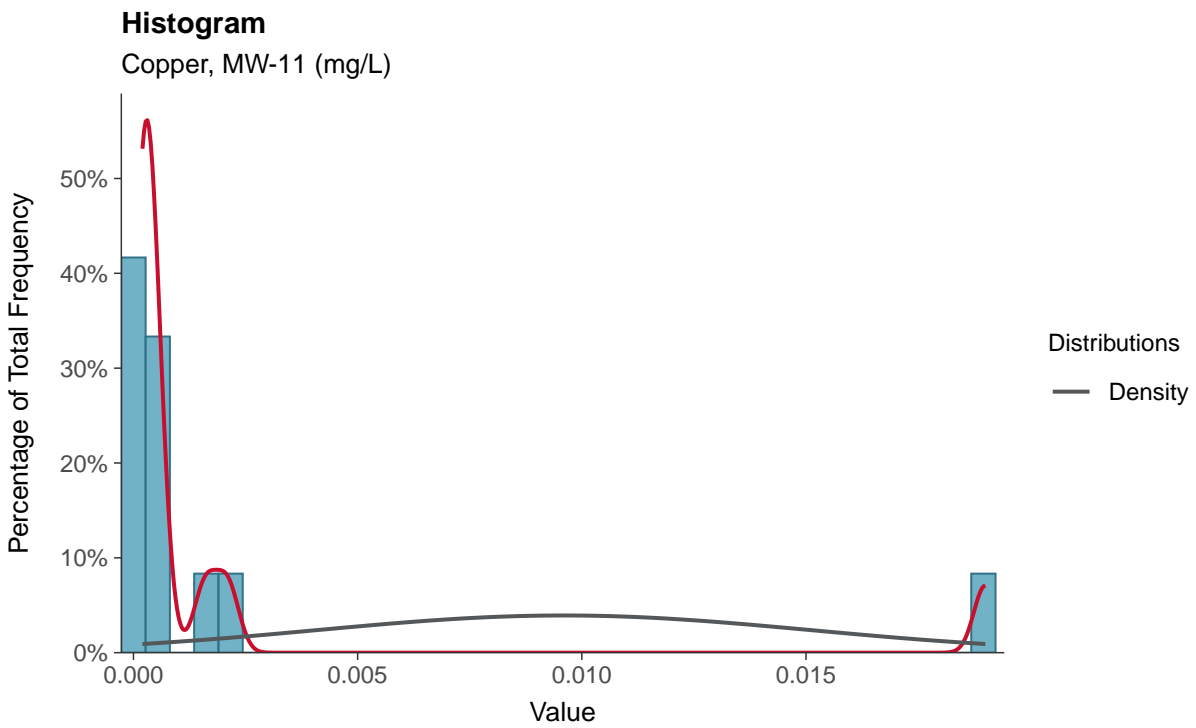
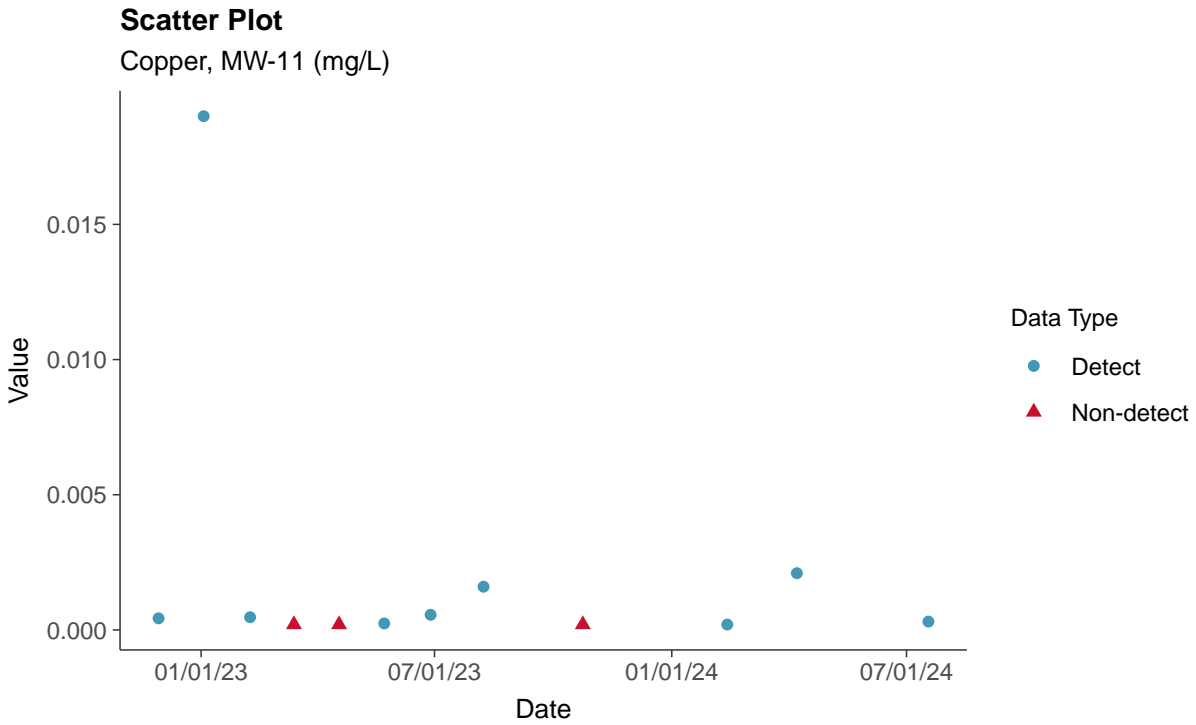
Thallium, MW-11 (mg/L)





### Part 115: Copper, MW-11

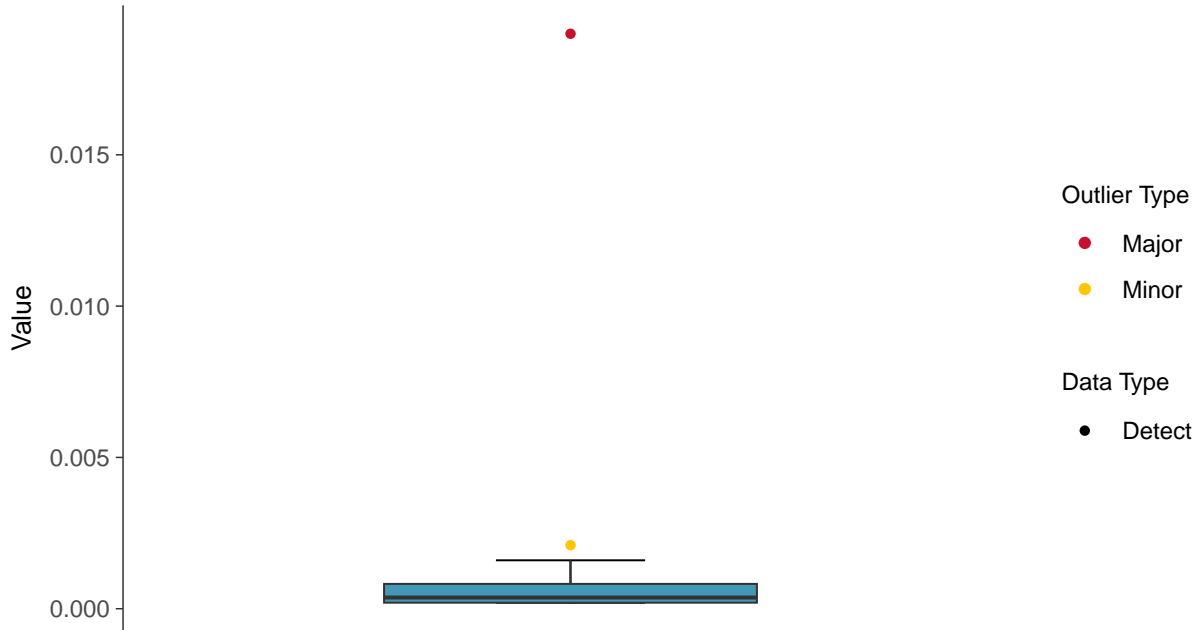
ID: 21\_2\_6\_111





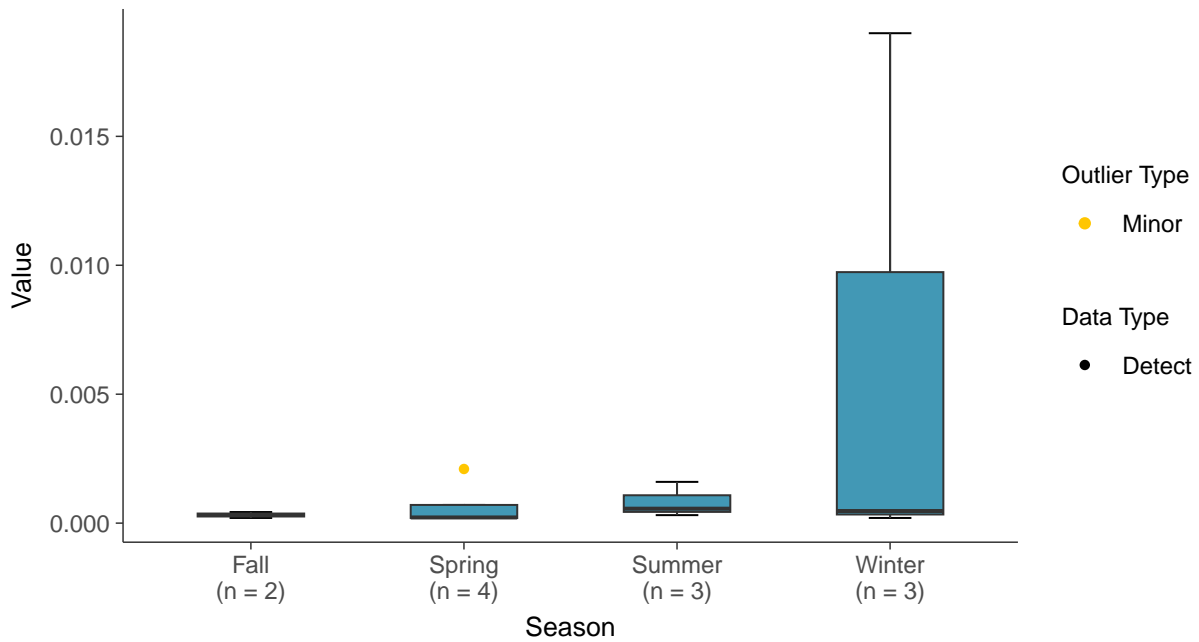
### Boxplot

Copper, MW-11 (mg/L)



### Boxplot by Season

Copper, MW-11 (mg/L)

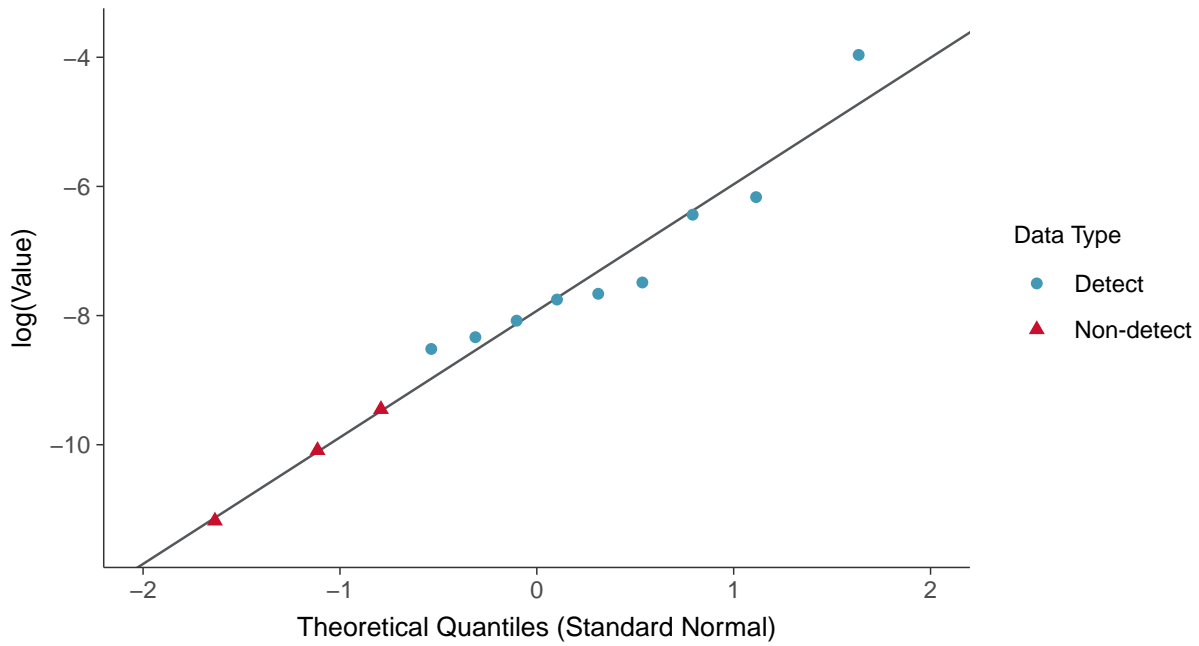






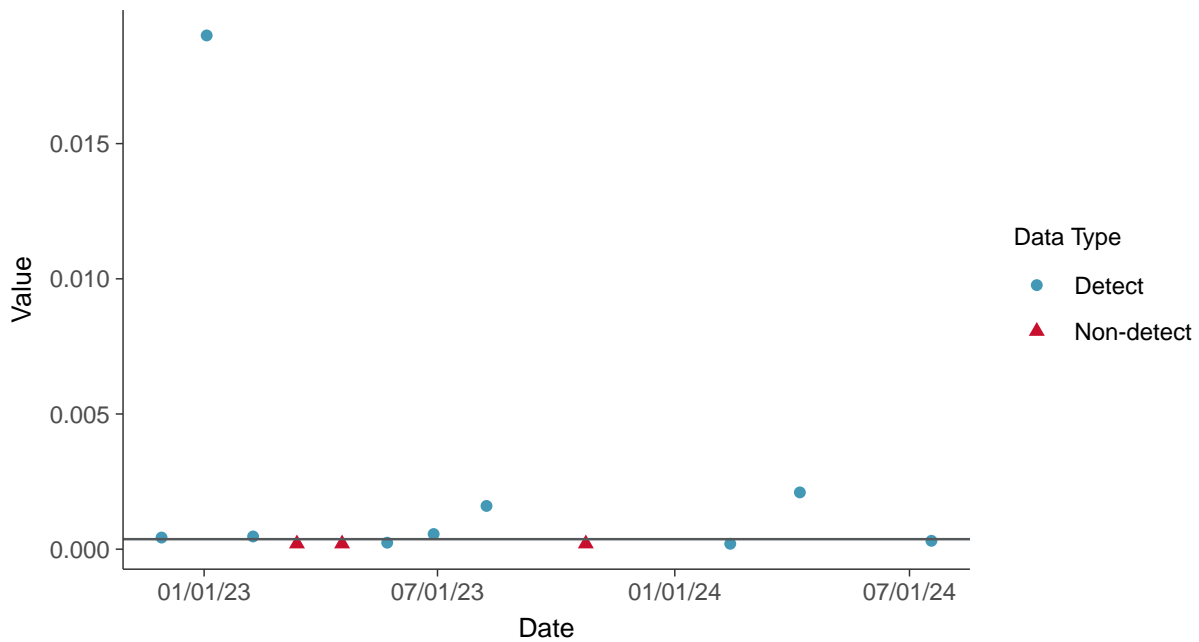
### Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

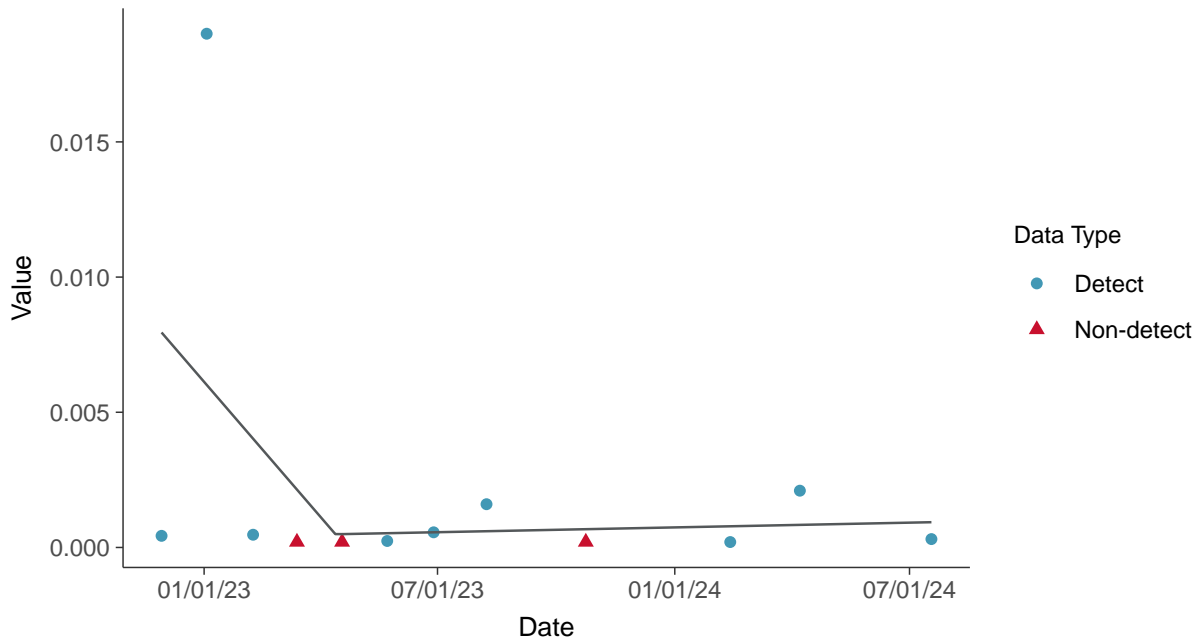
Copper, MW-11 (mg/L)





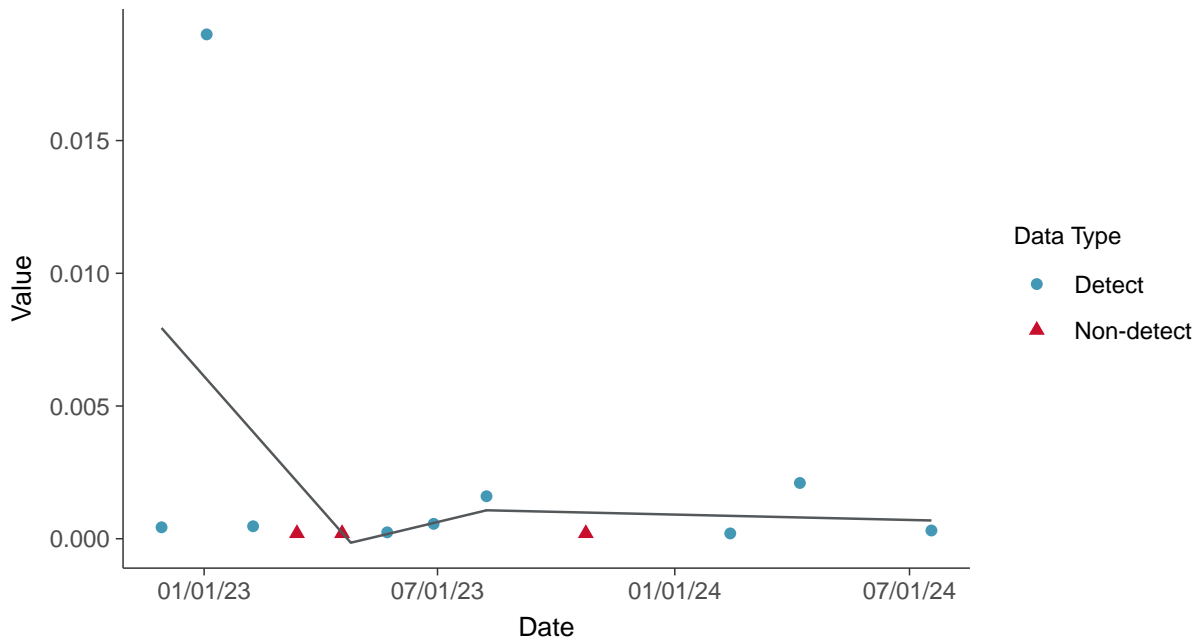
### Trend Regression: Piecewise Linear-Linear

Copper, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-11 (mg/L)



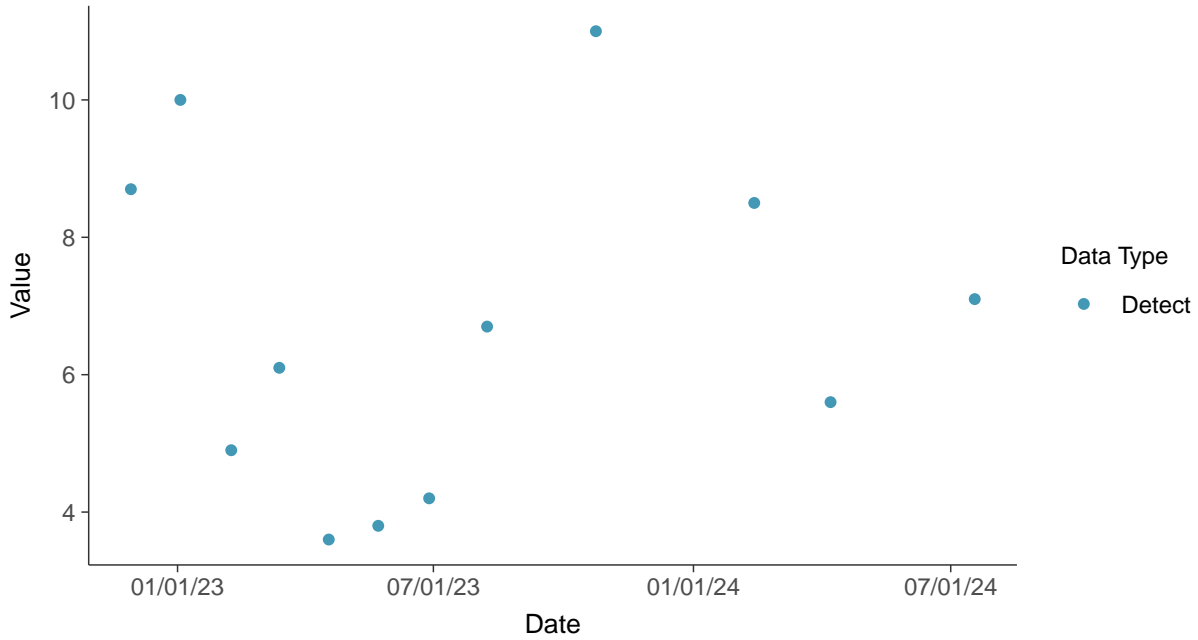


### Part 115: Iron, MW-11

ID: 21\_2\_6\_114

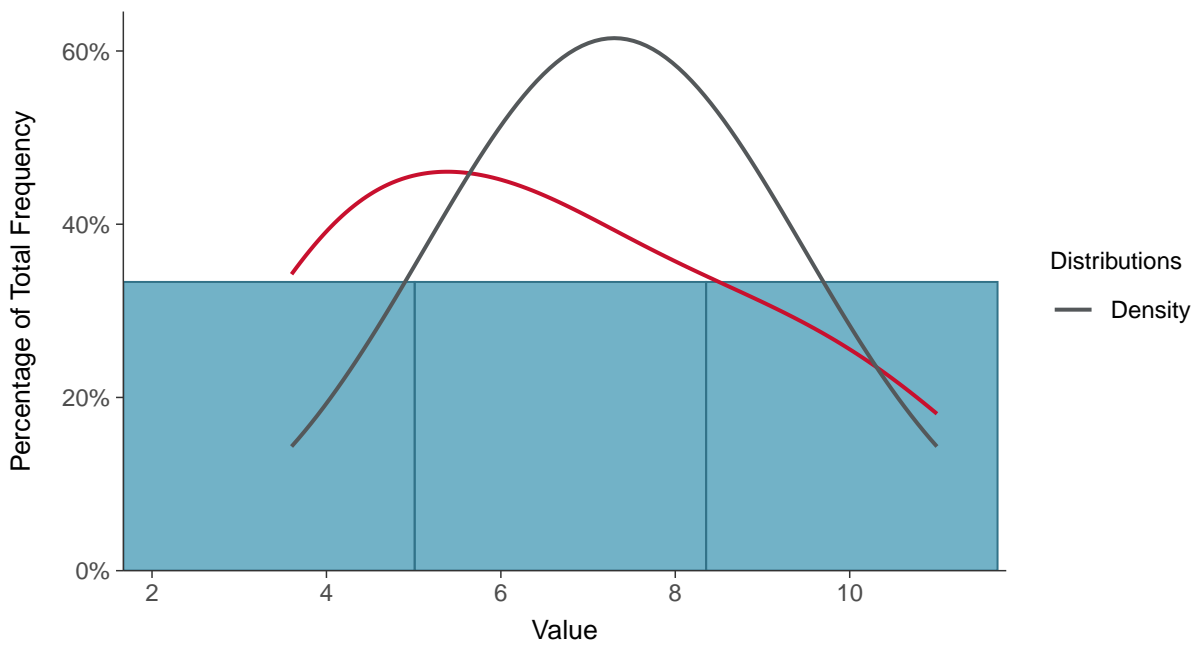
#### Scatter Plot

Iron, MW-11 (mg/L)



#### Histogram

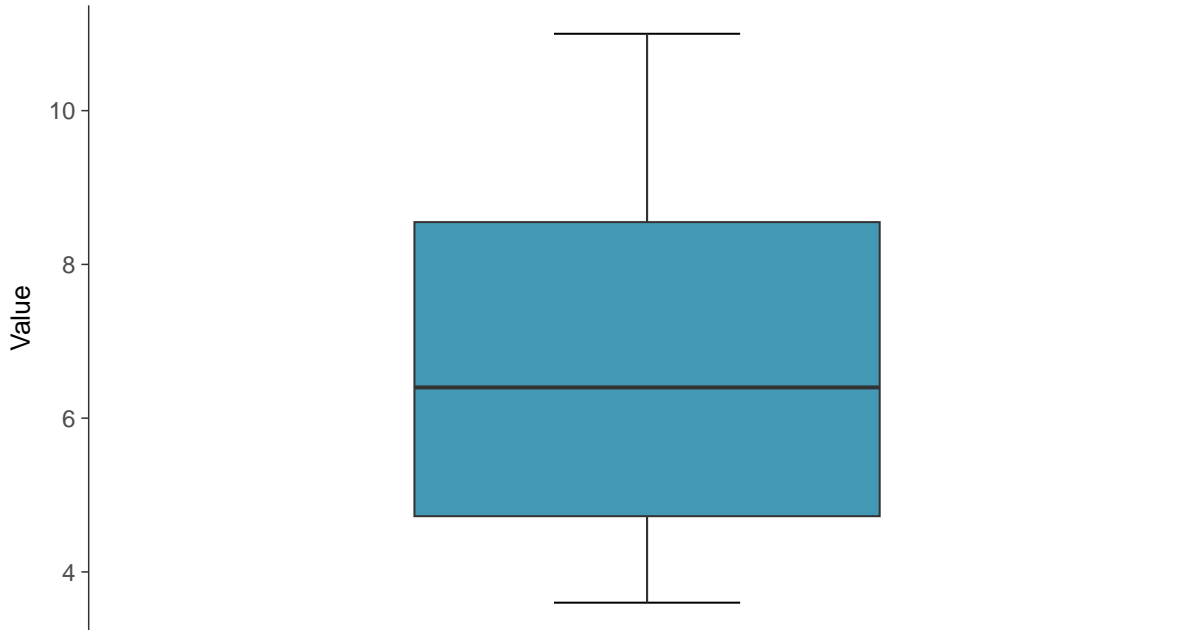
Iron, MW-11 (mg/L)





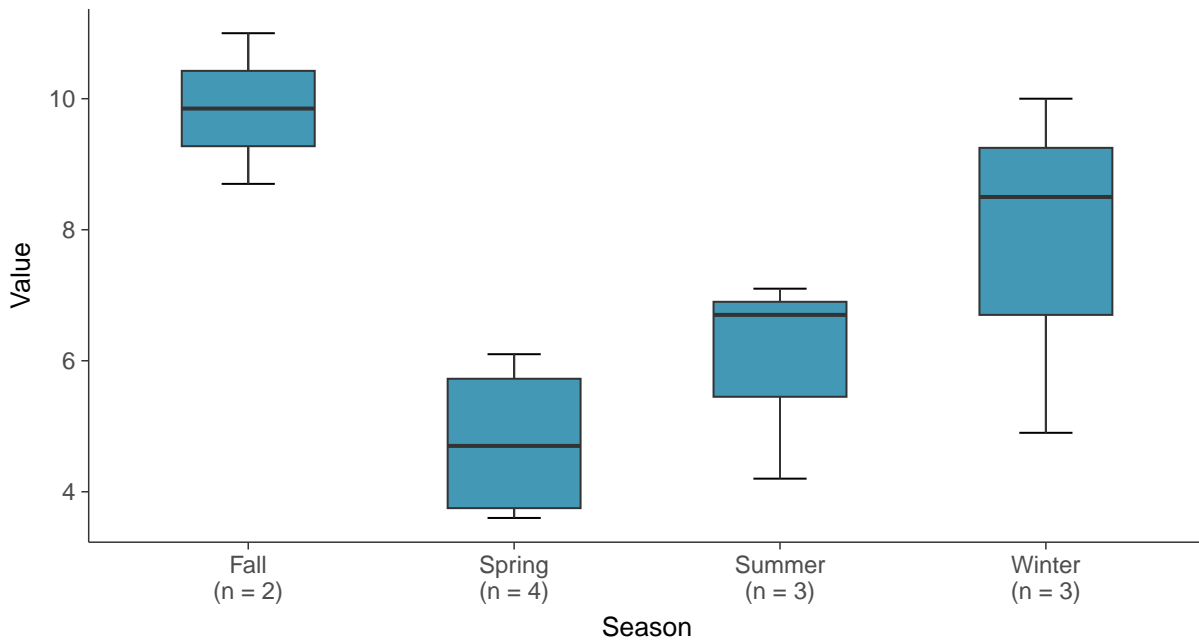
### Boxplot

Iron, MW-11 (mg/L)



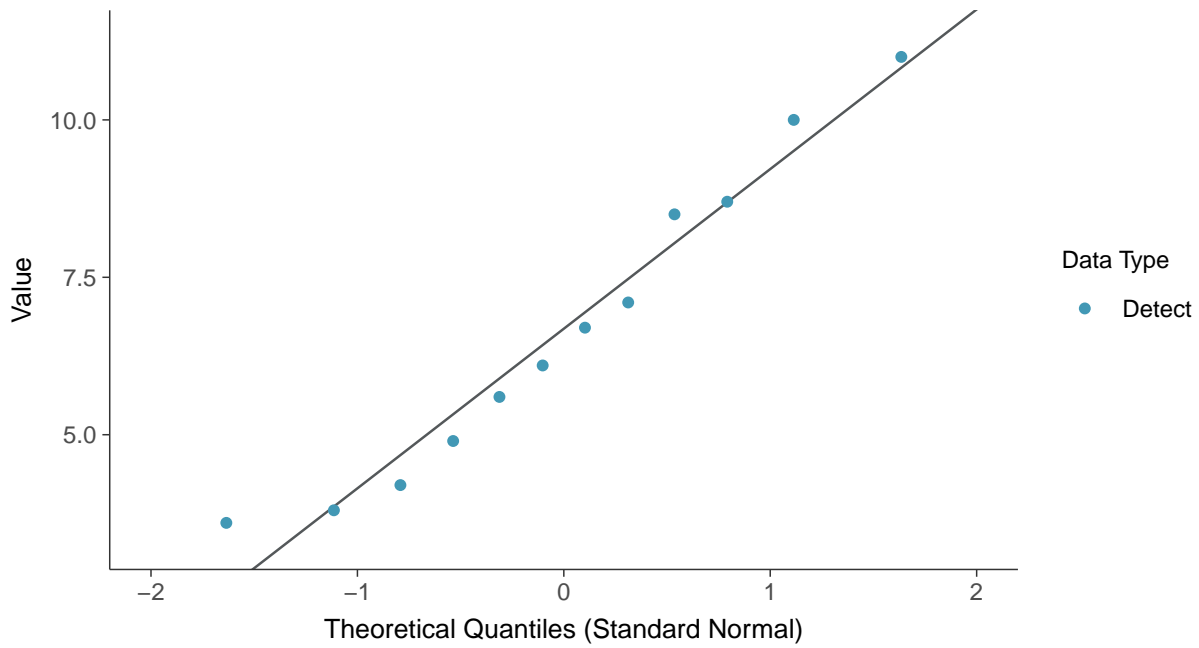
### Boxplot by Season

Iron, MW-11 (mg/L)

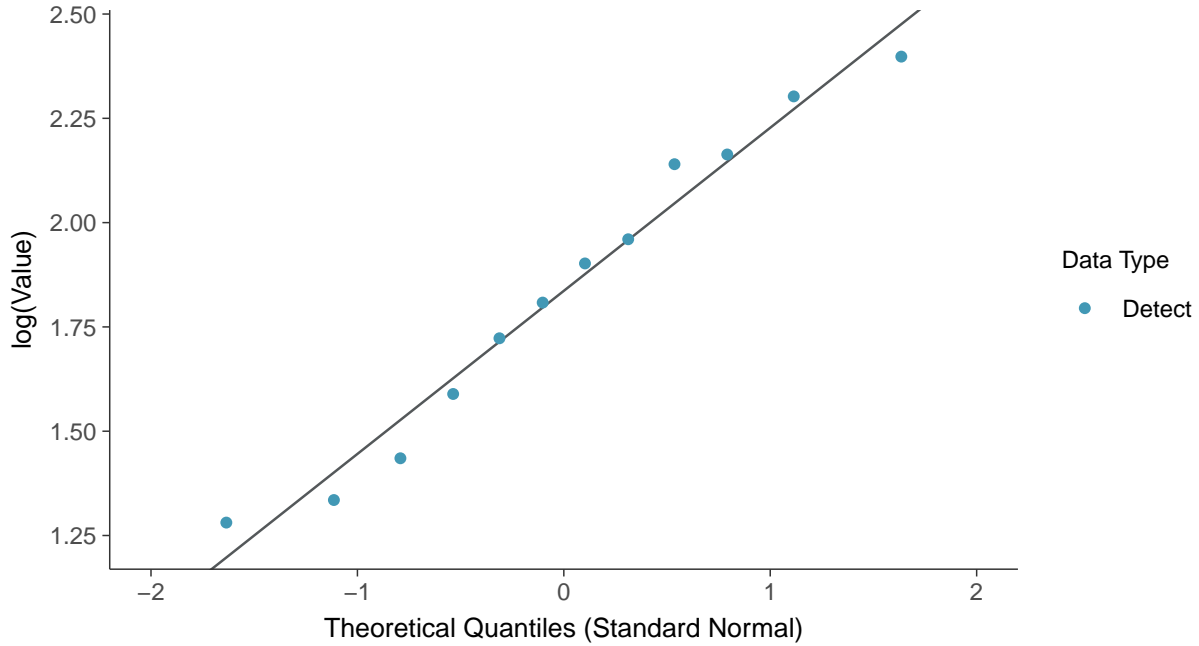


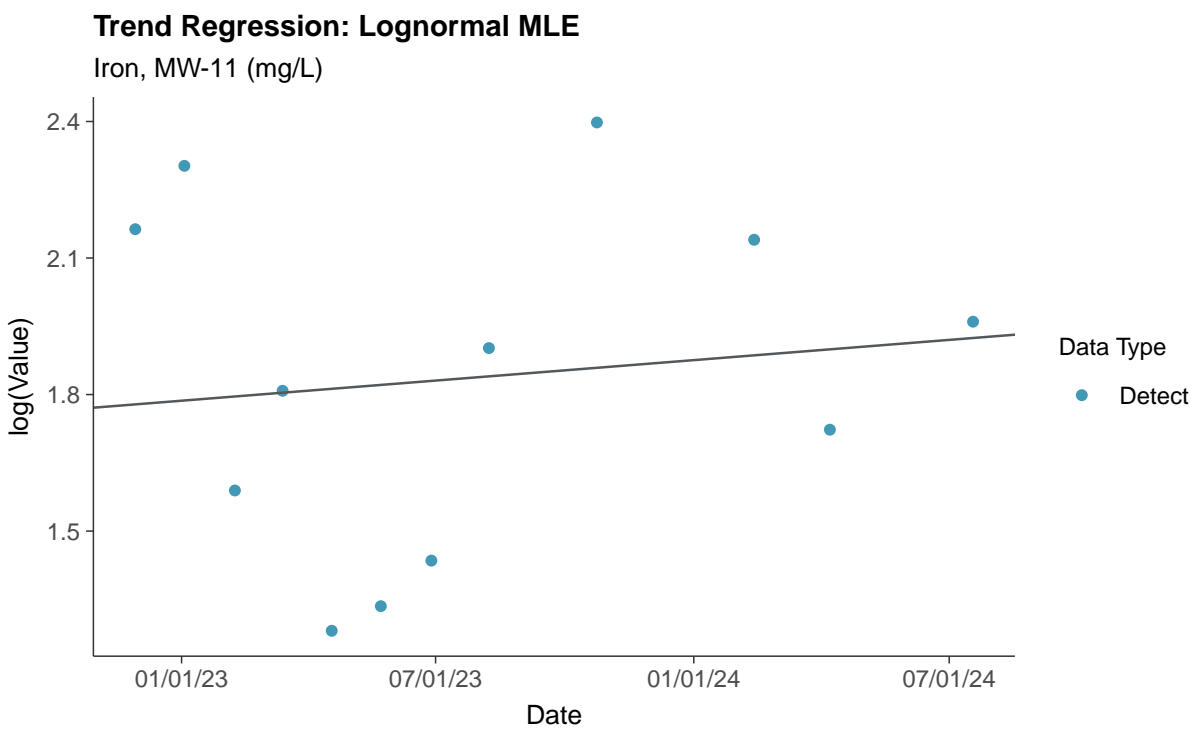
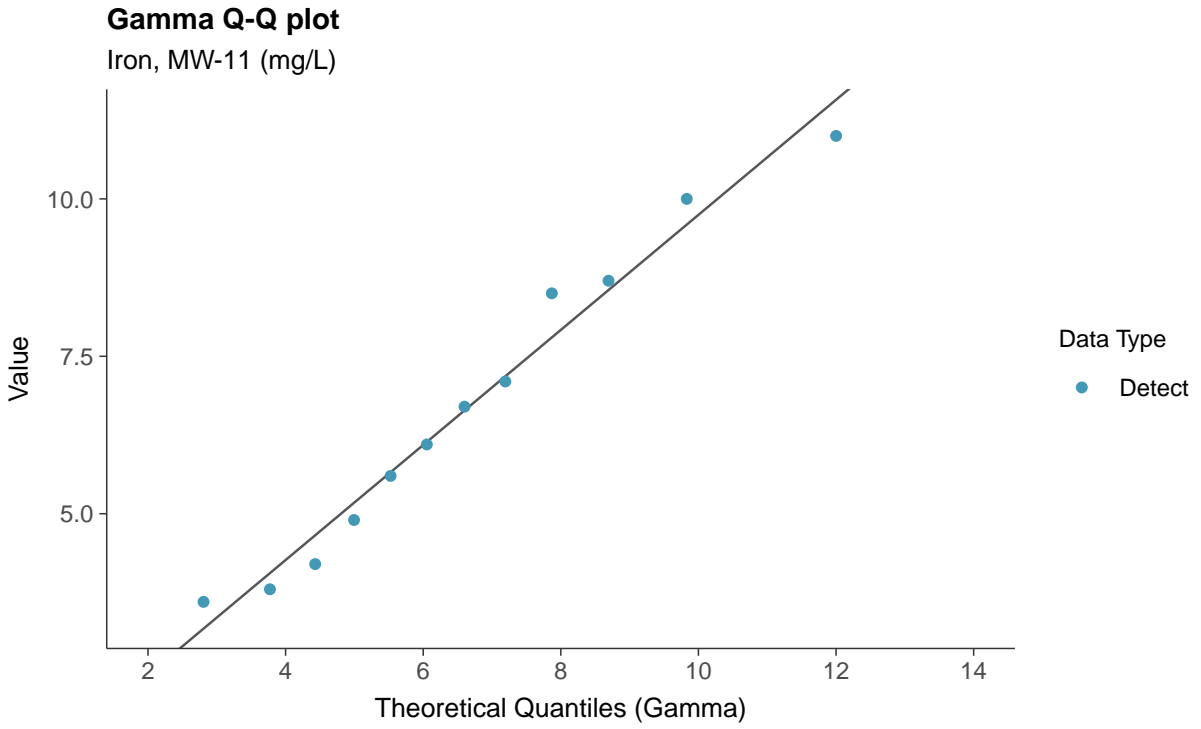


**Normal Q-Q plot**  
Iron, MW-11 (mg/L)



**Lognormal Q-Q plot**  
Iron, MW-11 (mg/L)

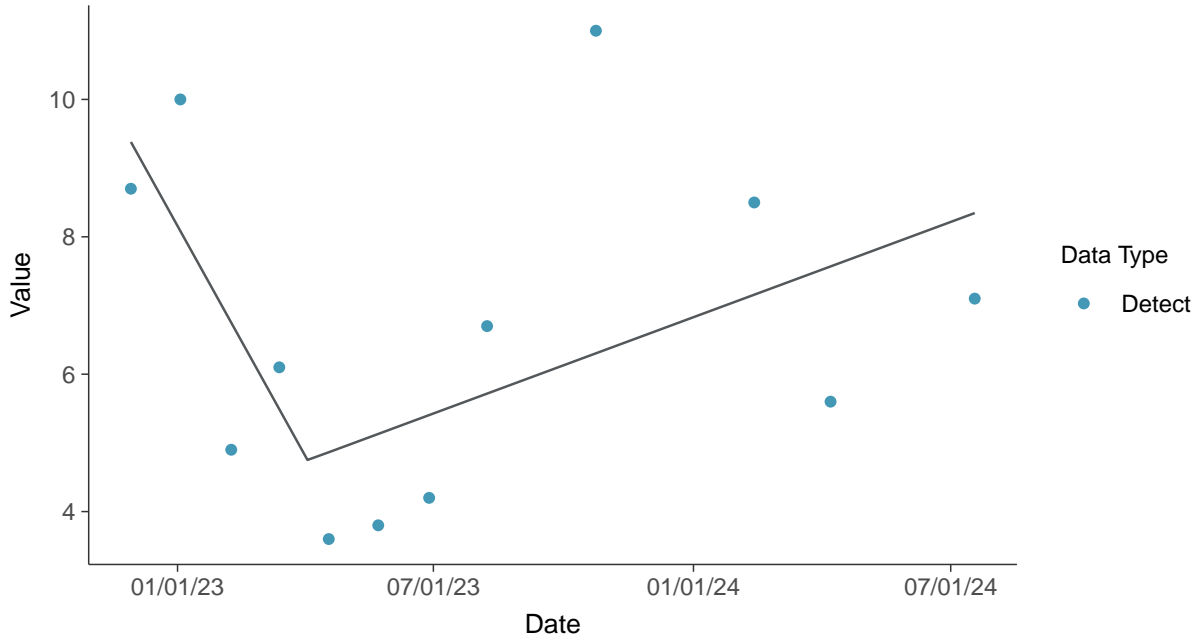






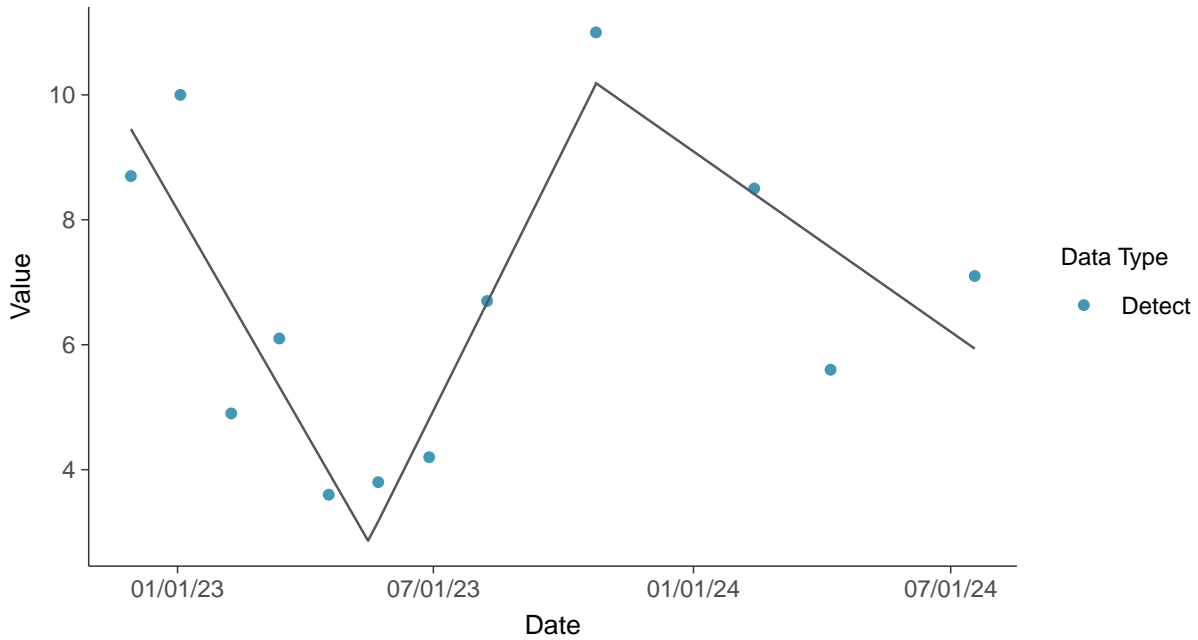
### Trend Regression: Piecewise Linear-Linear

Iron, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-11 (mg/L)



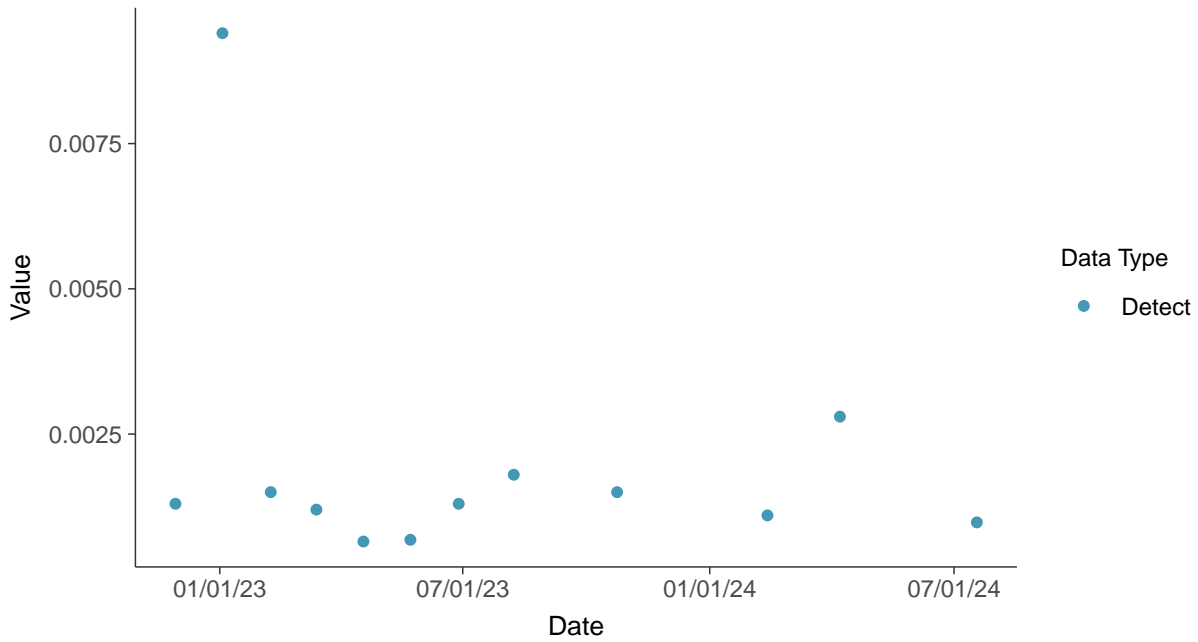


### Part 115: Nickel, MW-11

ID: 21\_2\_6\_119

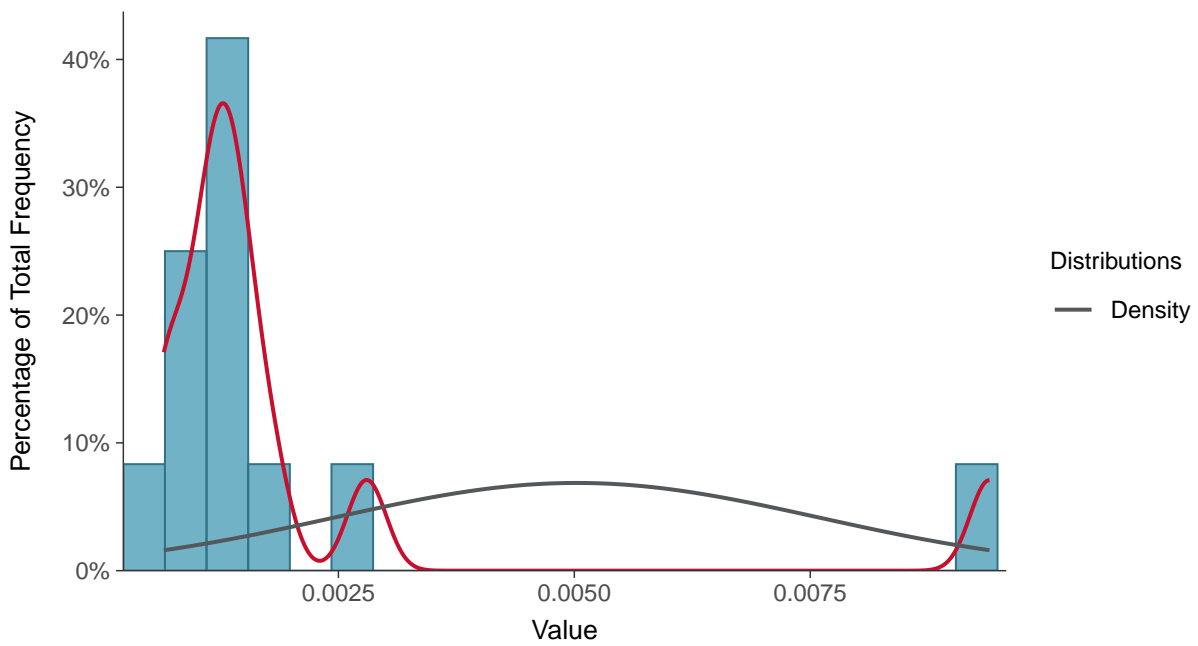
#### Scatter Plot

Nickel, MW-11 (mg/L)



#### Histogram

Nickel, MW-11 (mg/L)

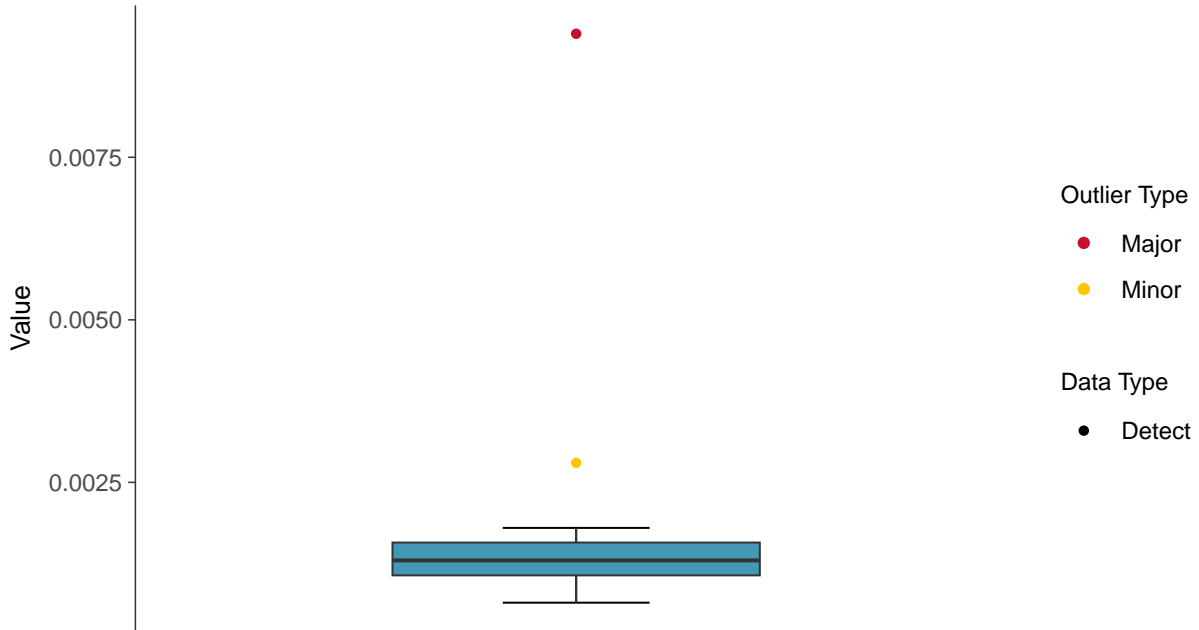






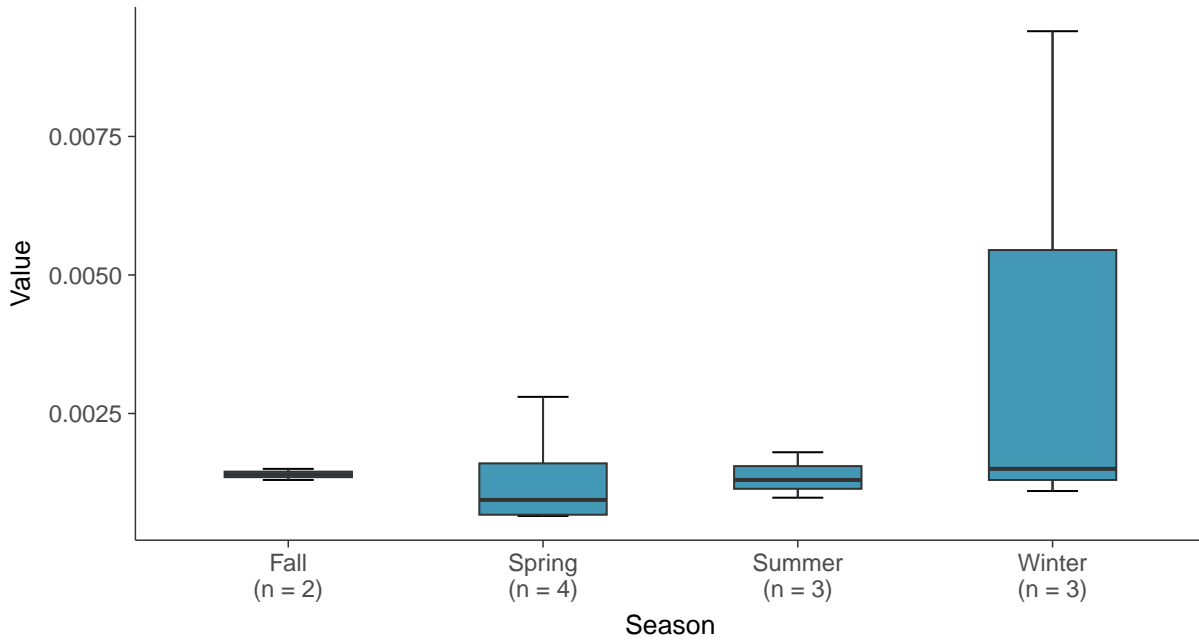
### Boxplot

Nickel, MW-11 (mg/L)



### Boxplot by Season

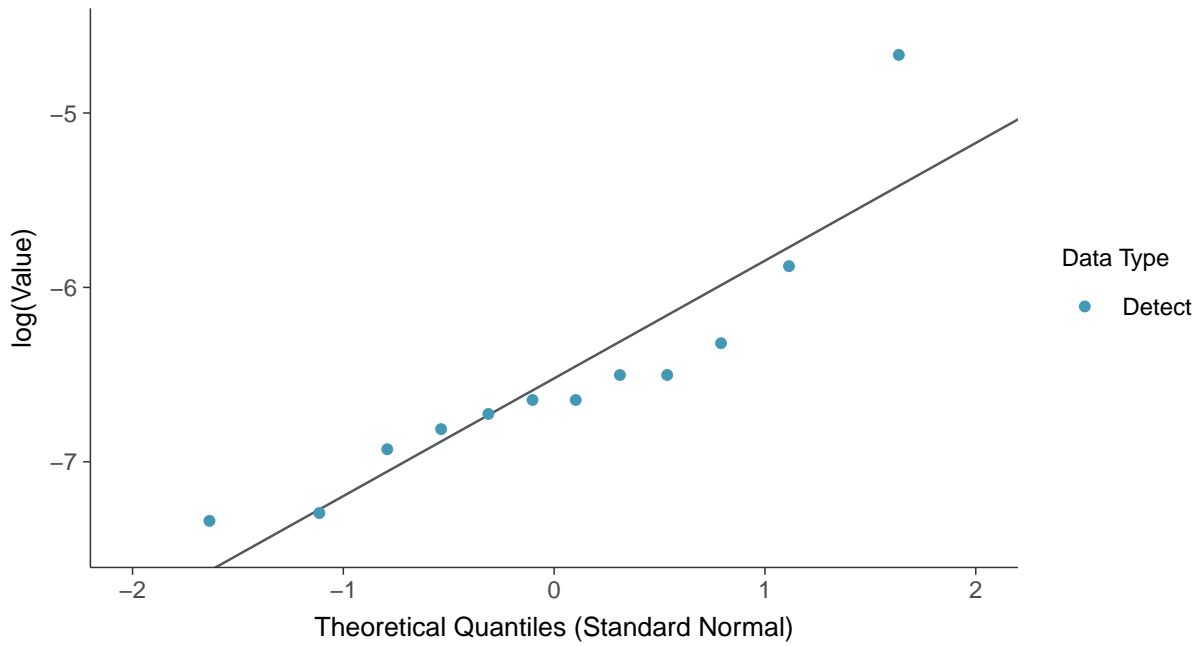
Nickel, MW-11 (mg/L)





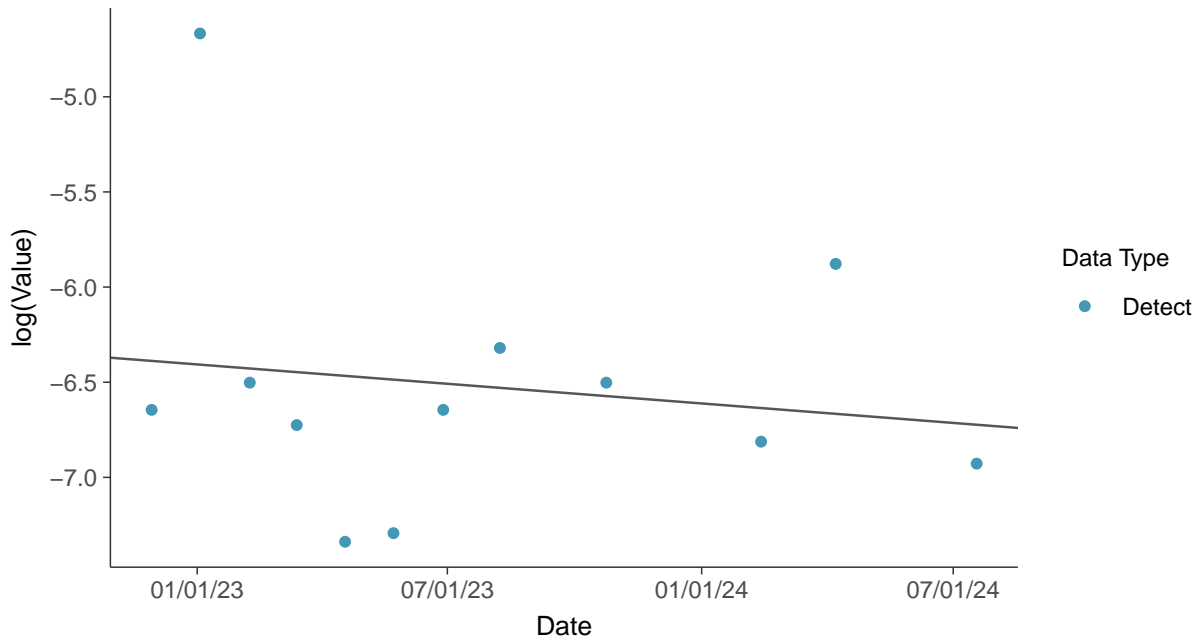
### Lognormal Q-Q plot

Nickel, MW-11 (mg/L)



### Trend Regression: Lognormal MLE

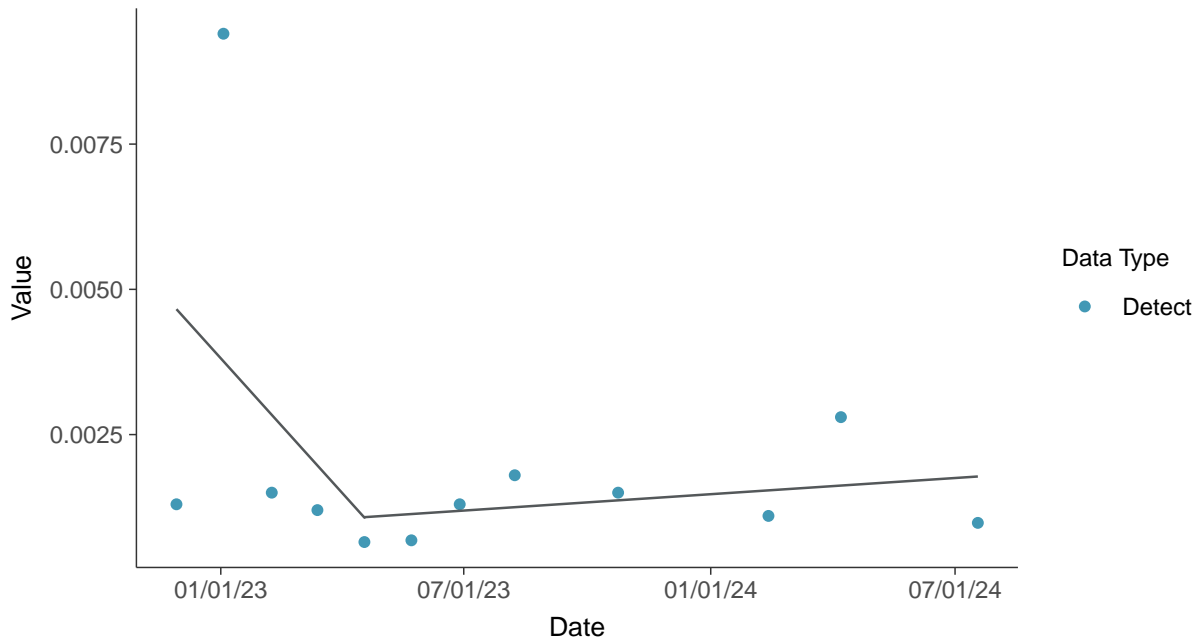
Nickel, MW-11 (mg/L)





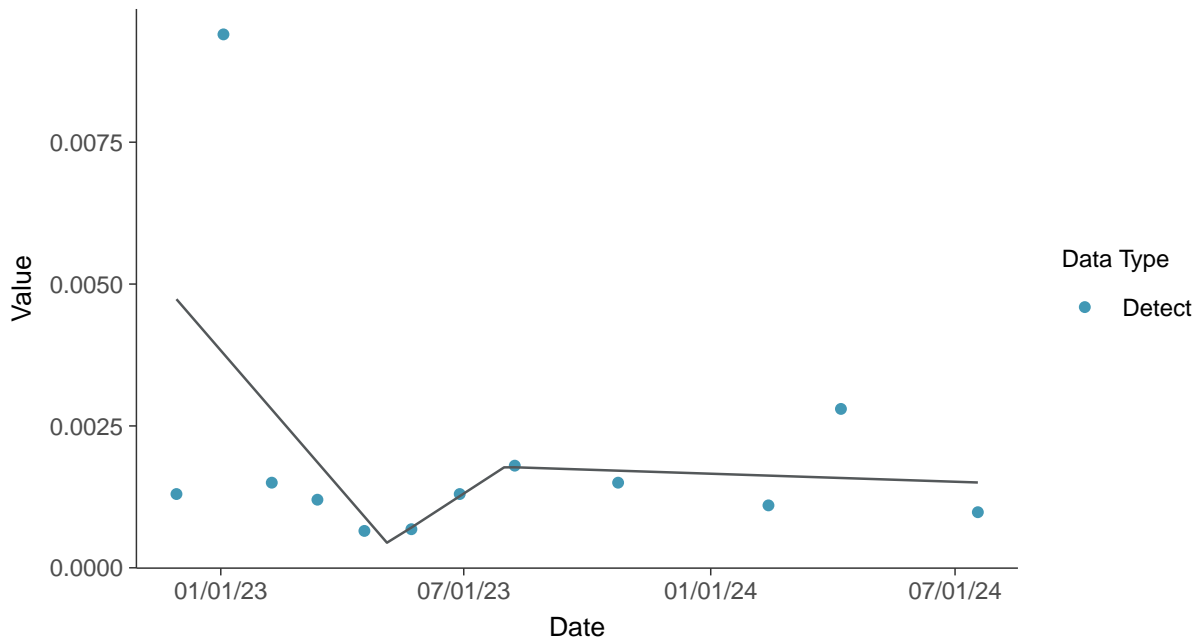
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

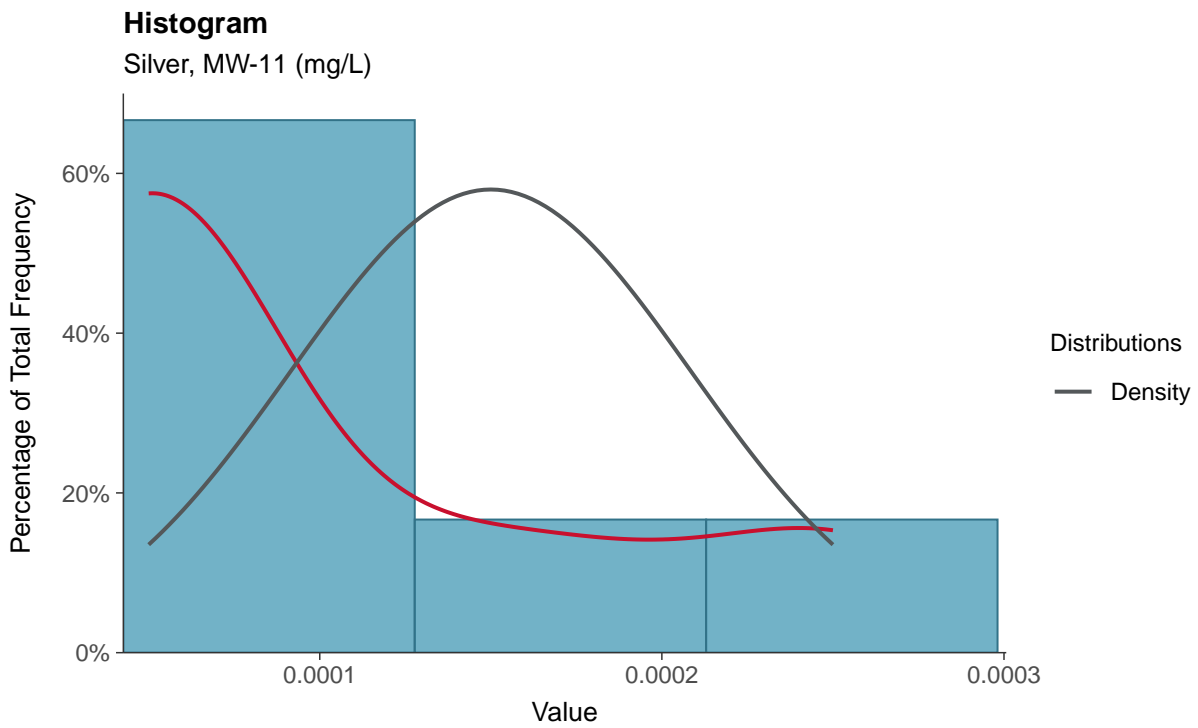
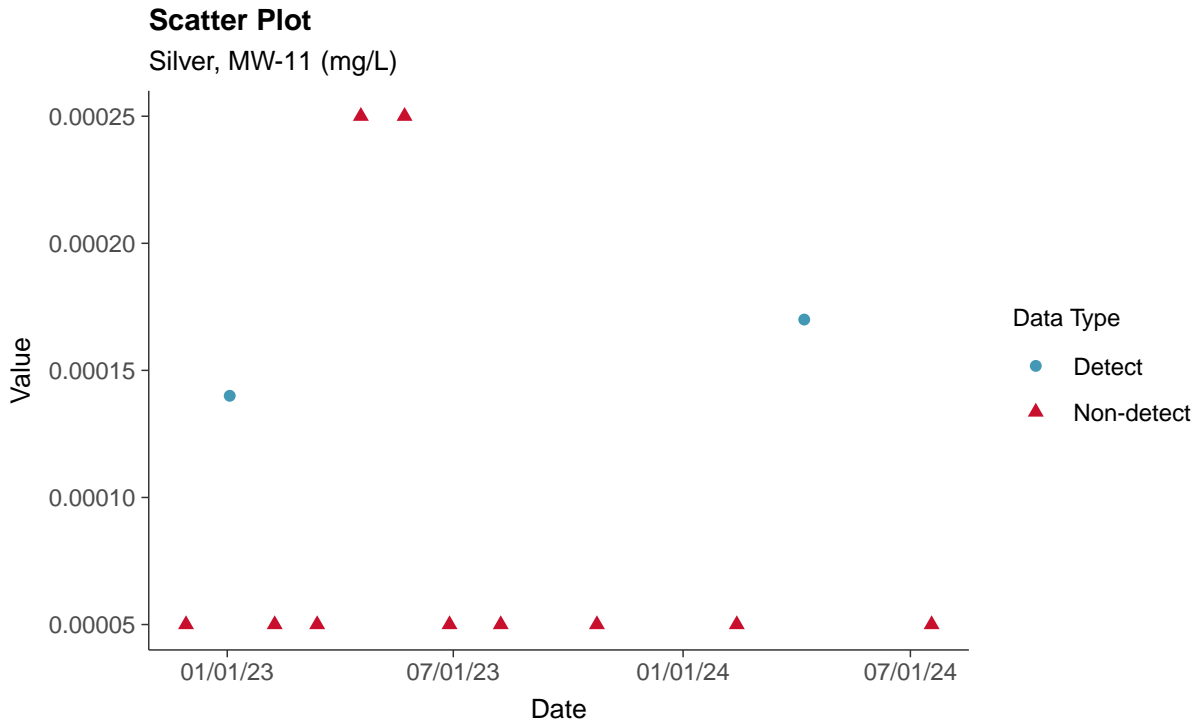
Nickel, MW-11 (mg/L)





### Part 115: Silver, MW-11

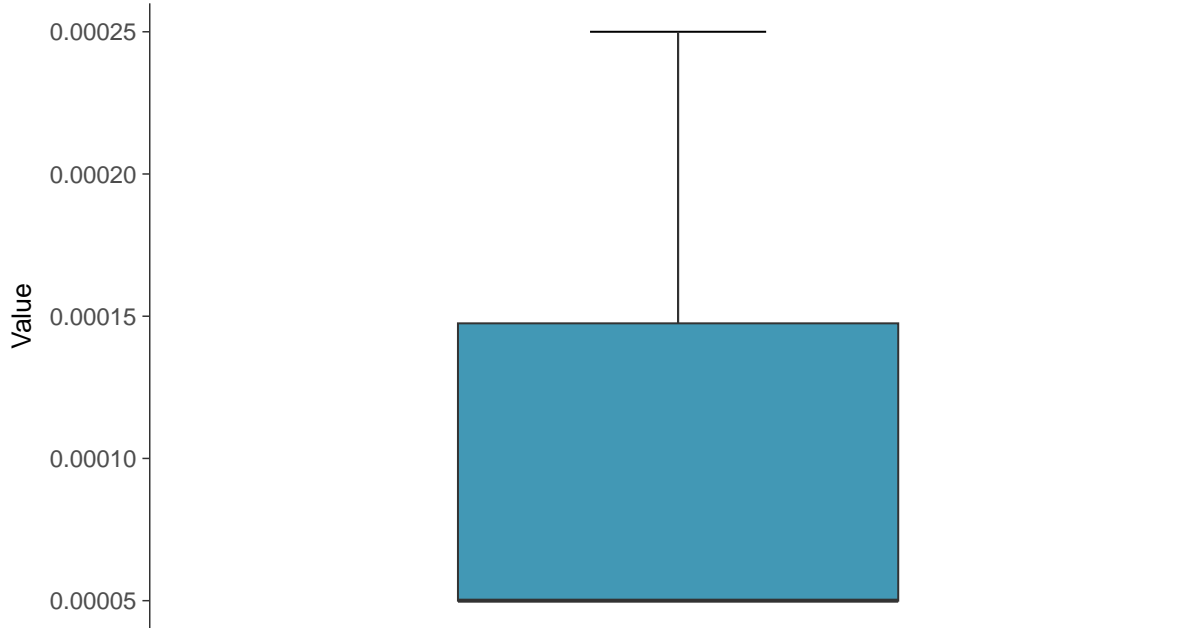
ID: 21\_2\_6\_123





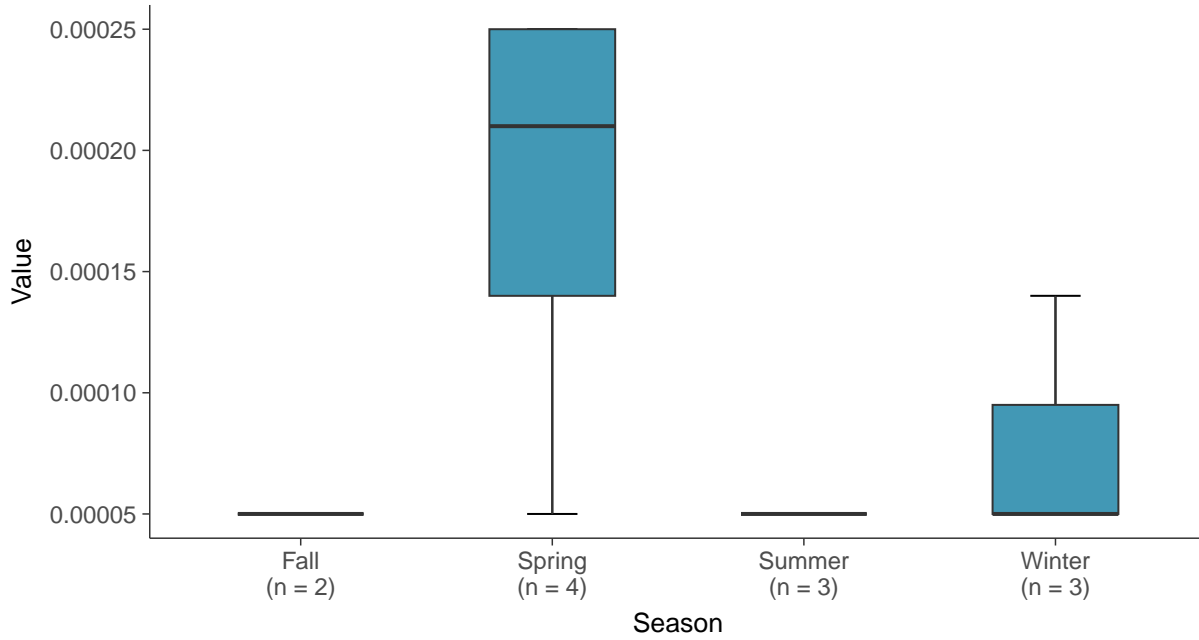
### Boxplot

Silver, MW-11 (mg/L)



### Boxplot by Season

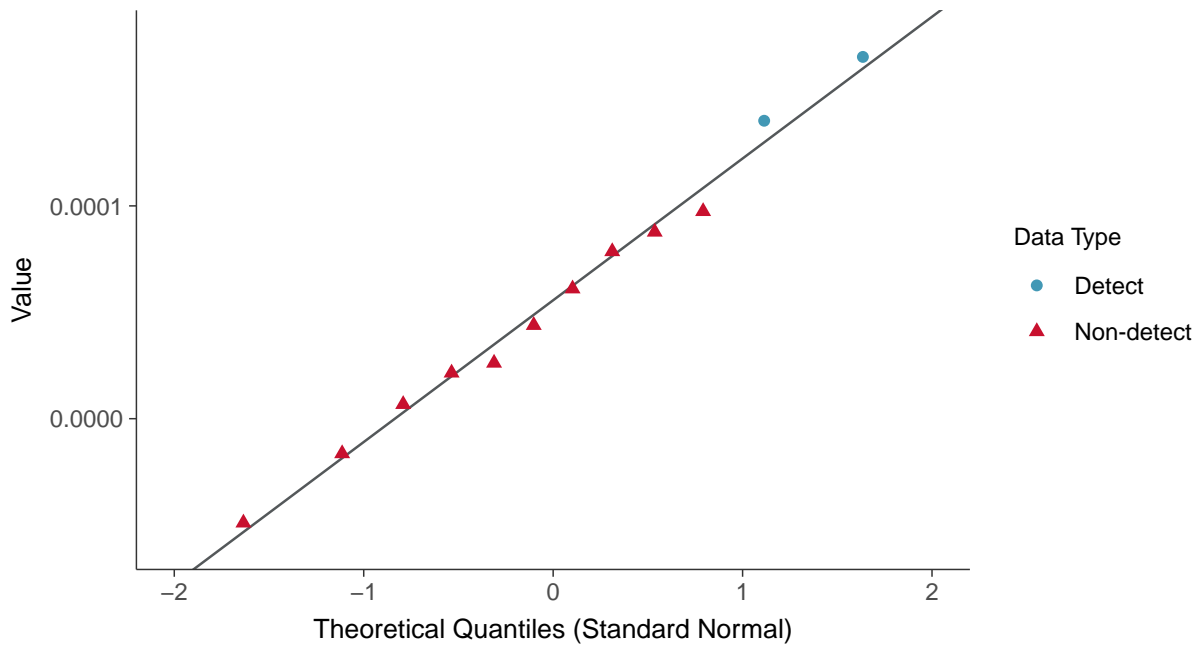
Silver, MW-11 (mg/L)





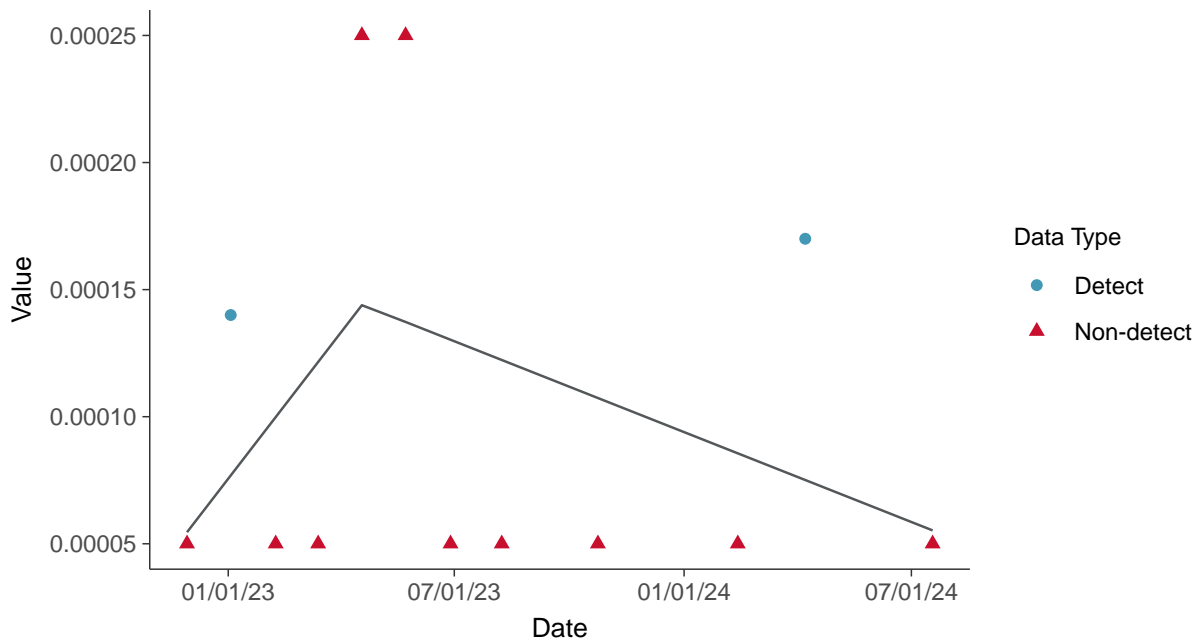
### Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

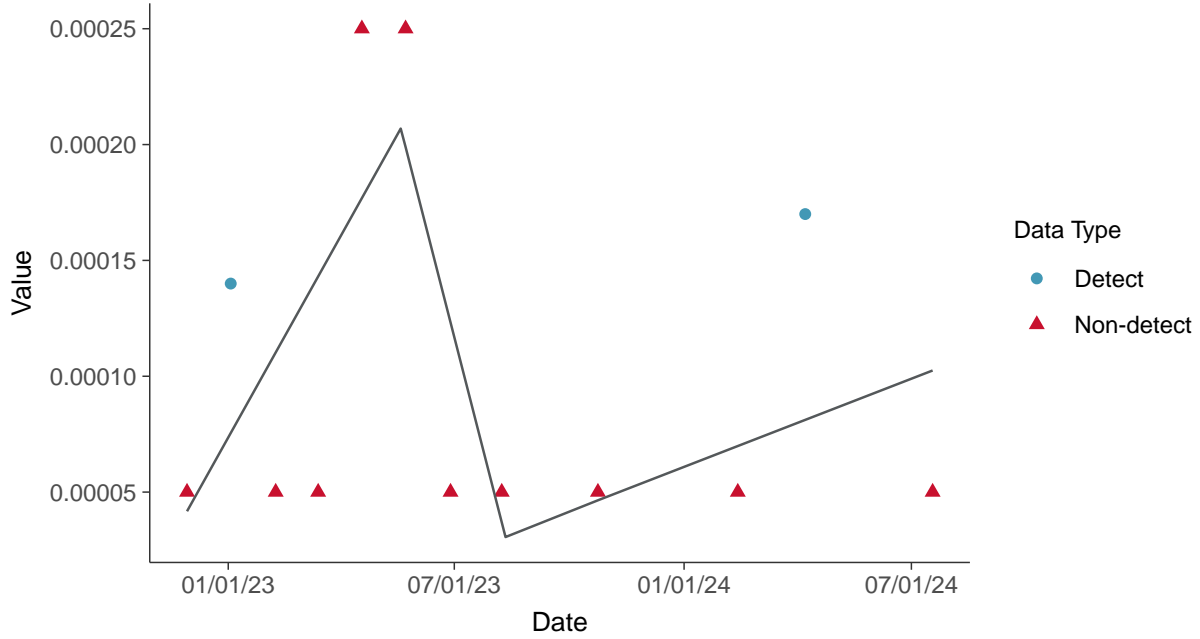
Silver, MW-11 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-11 (mg/L)



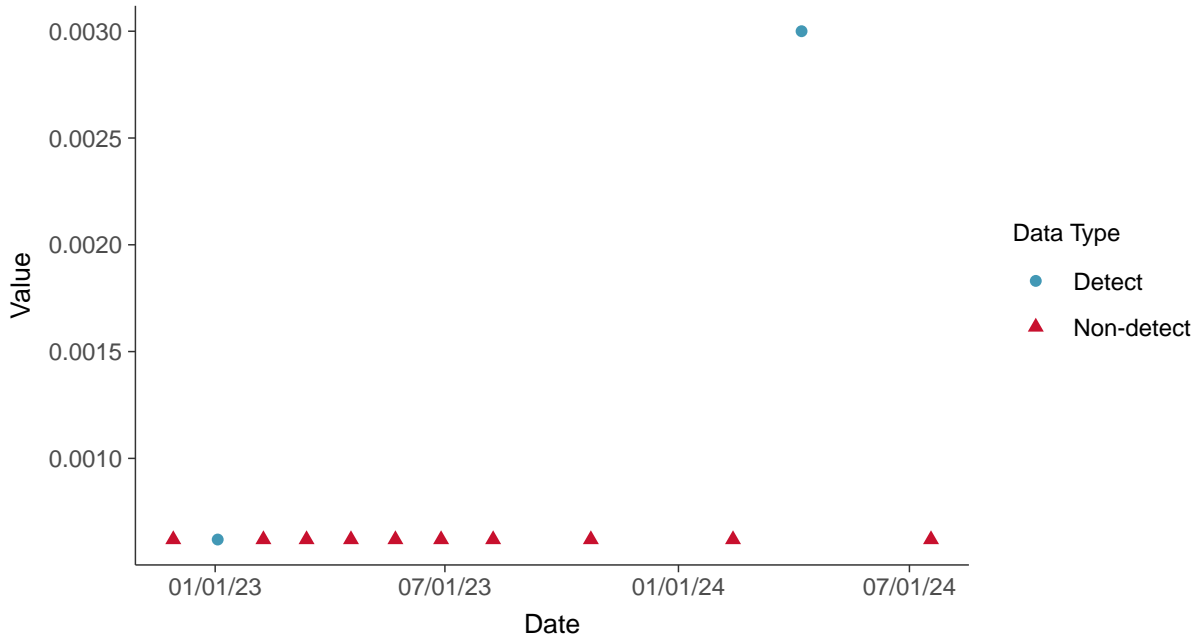


### Part 115: Vanadium, MW-11

ID: 21\_2\_6\_129

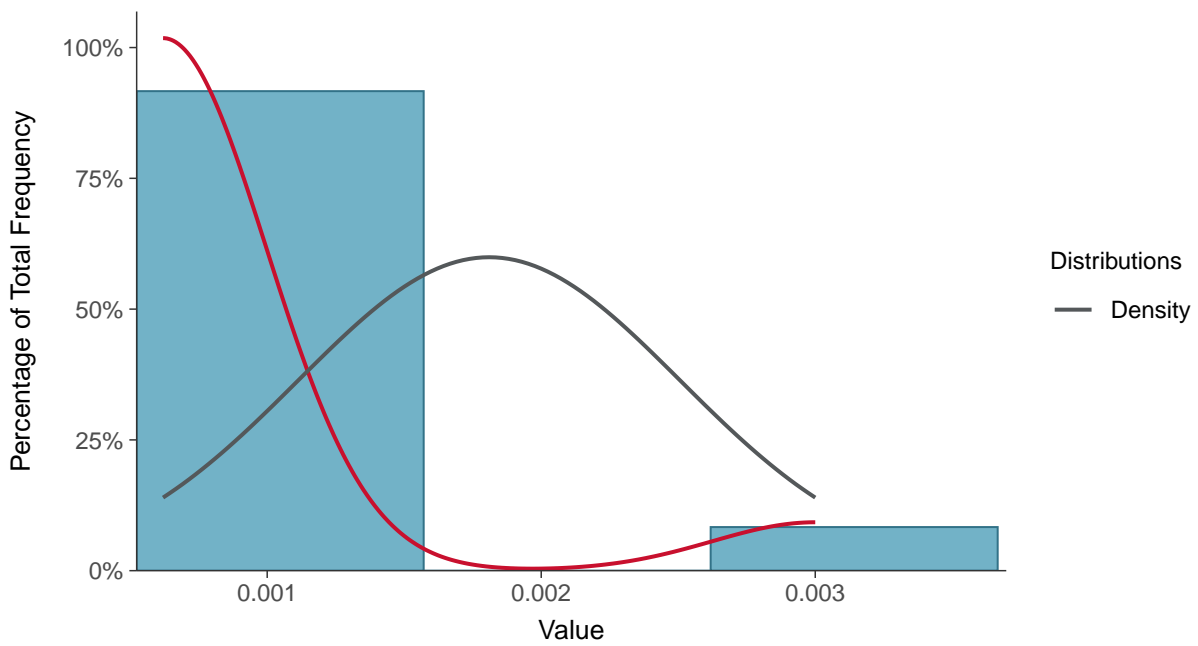
#### Scatter Plot

Vanadium, MW-11 (mg/L)



#### Histogram

Vanadium, MW-11 (mg/L)

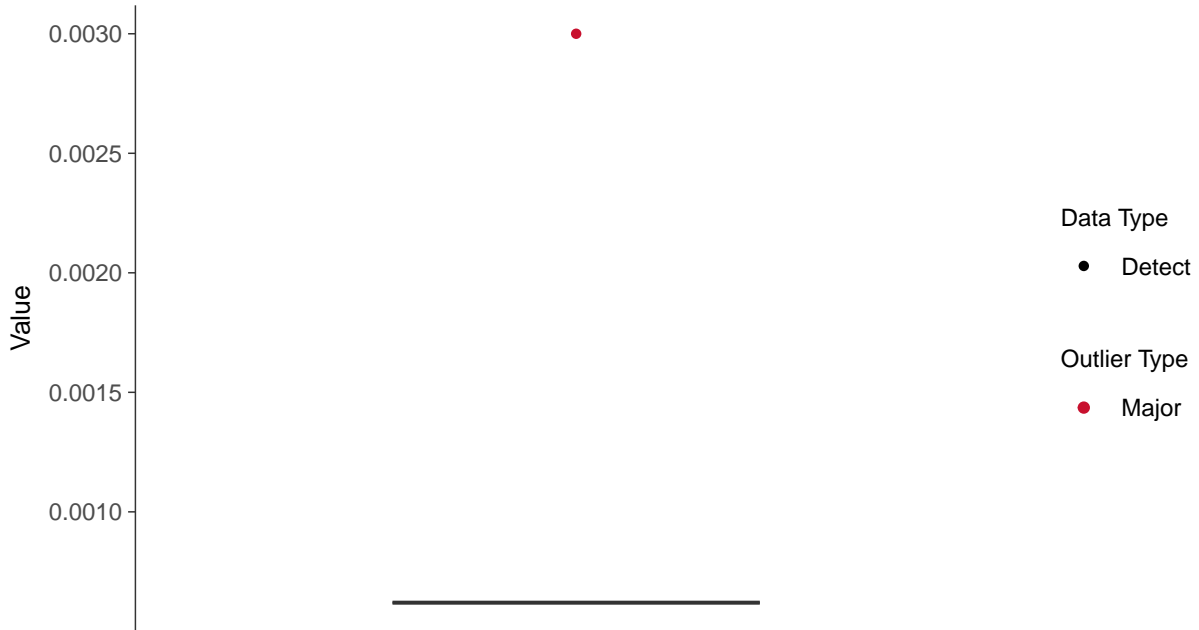






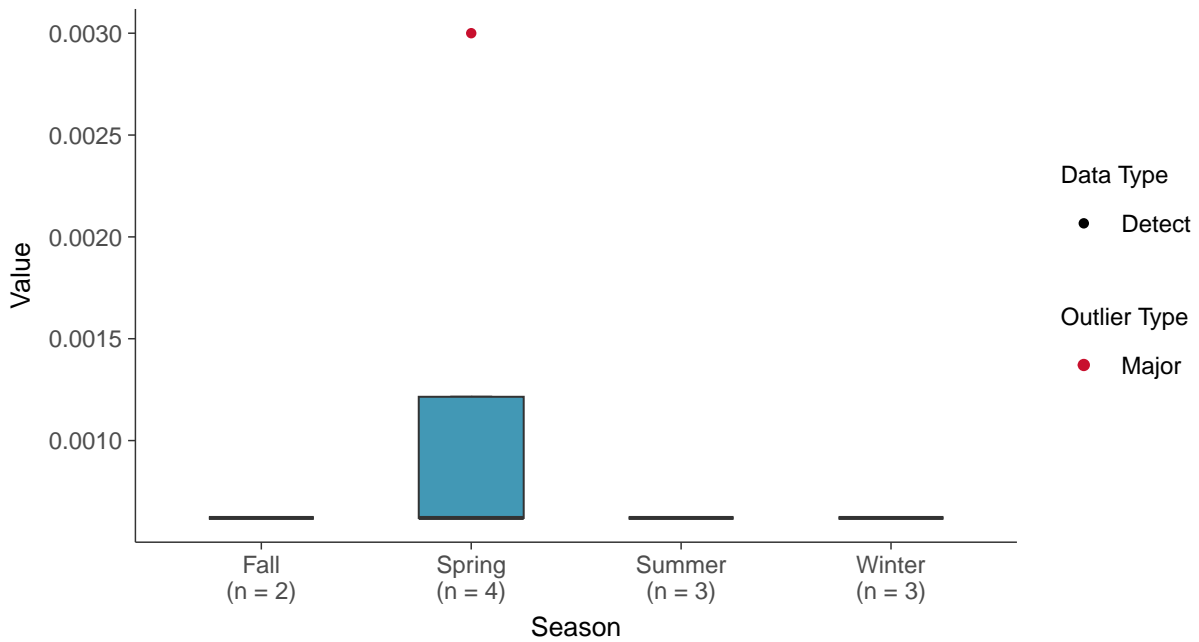
### Boxplot

Vanadium, MW-11 (mg/L)



### Boxplot by Season

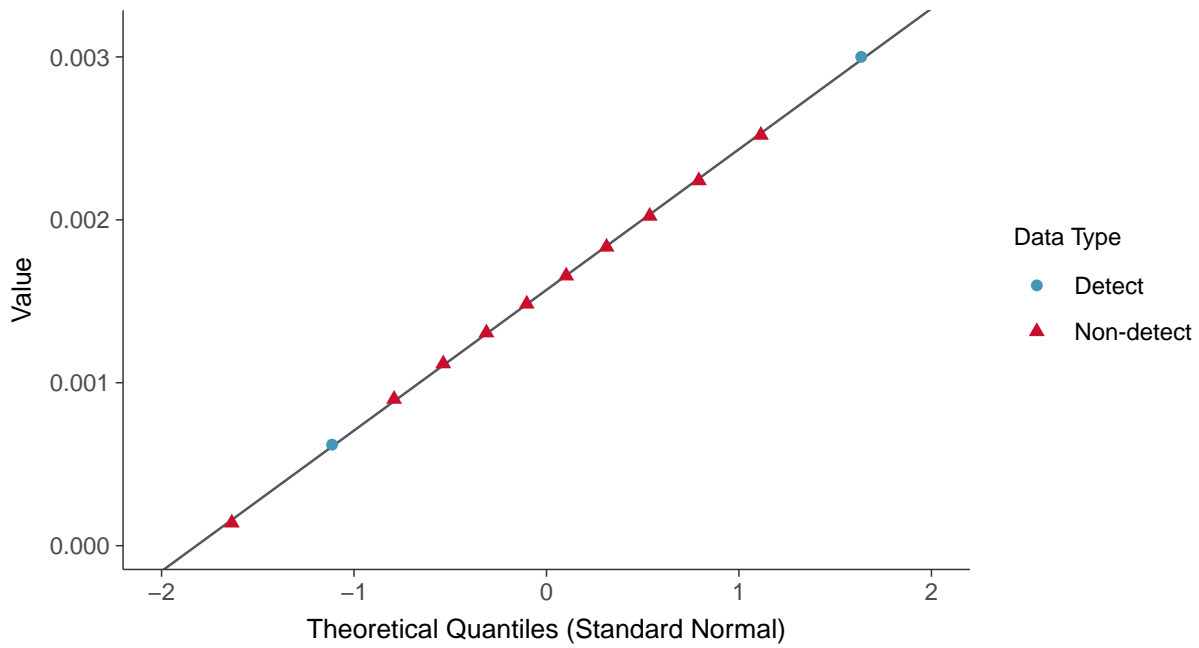
Vanadium, MW-11 (mg/L)





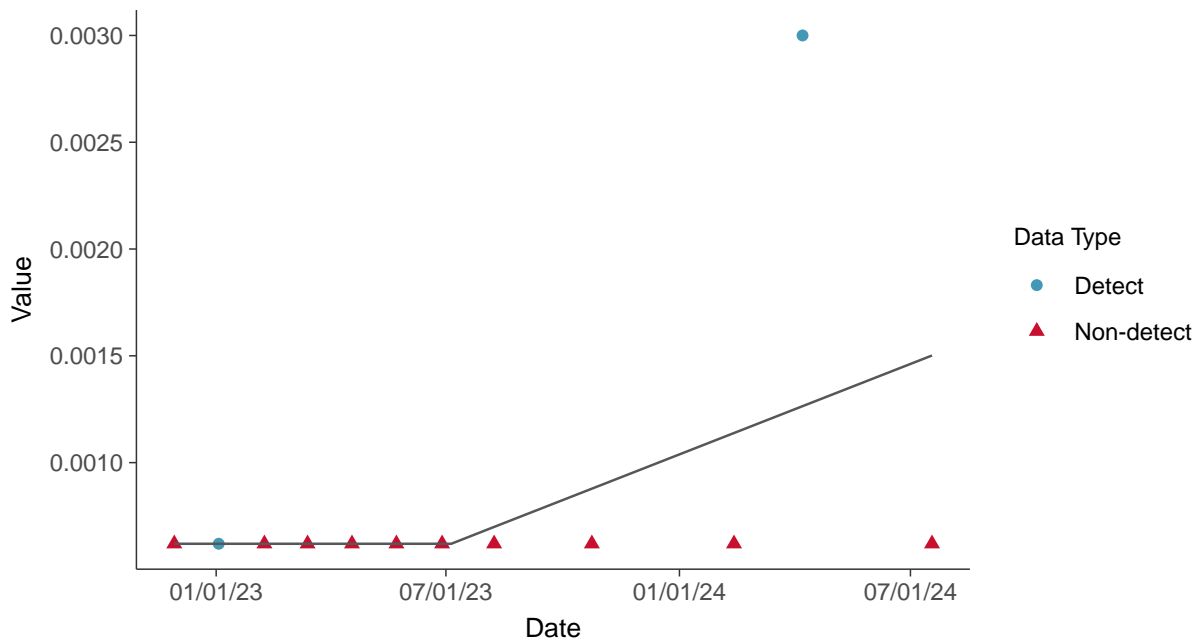
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

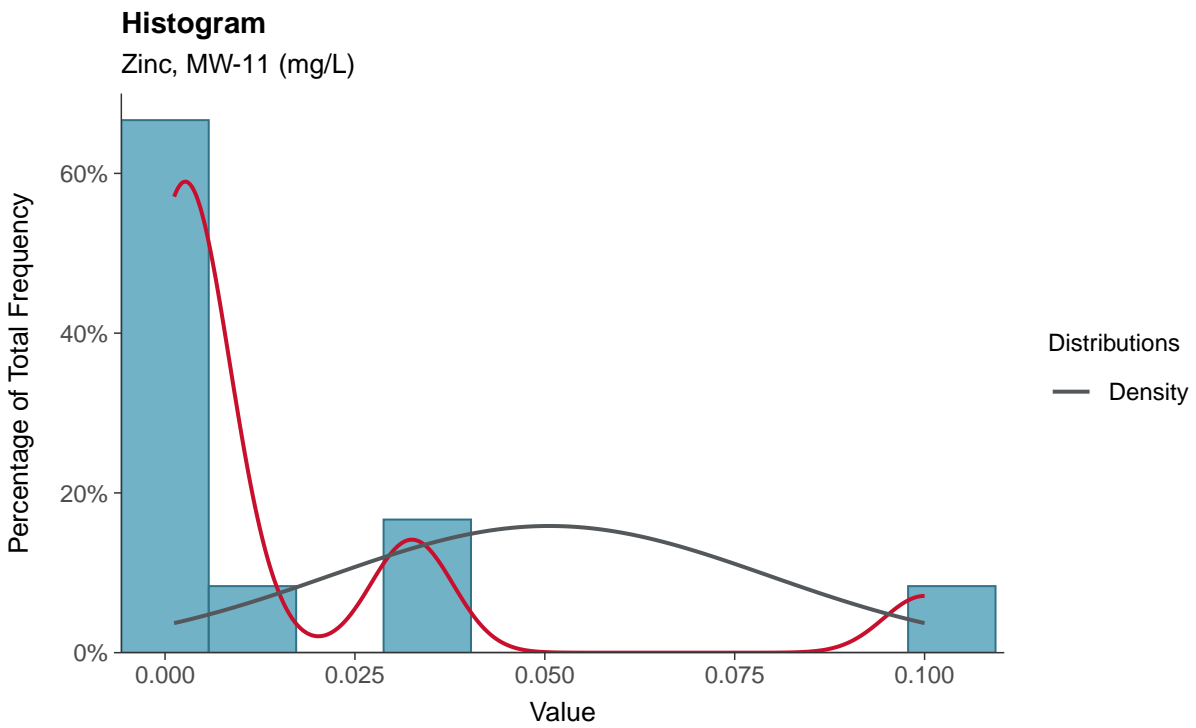
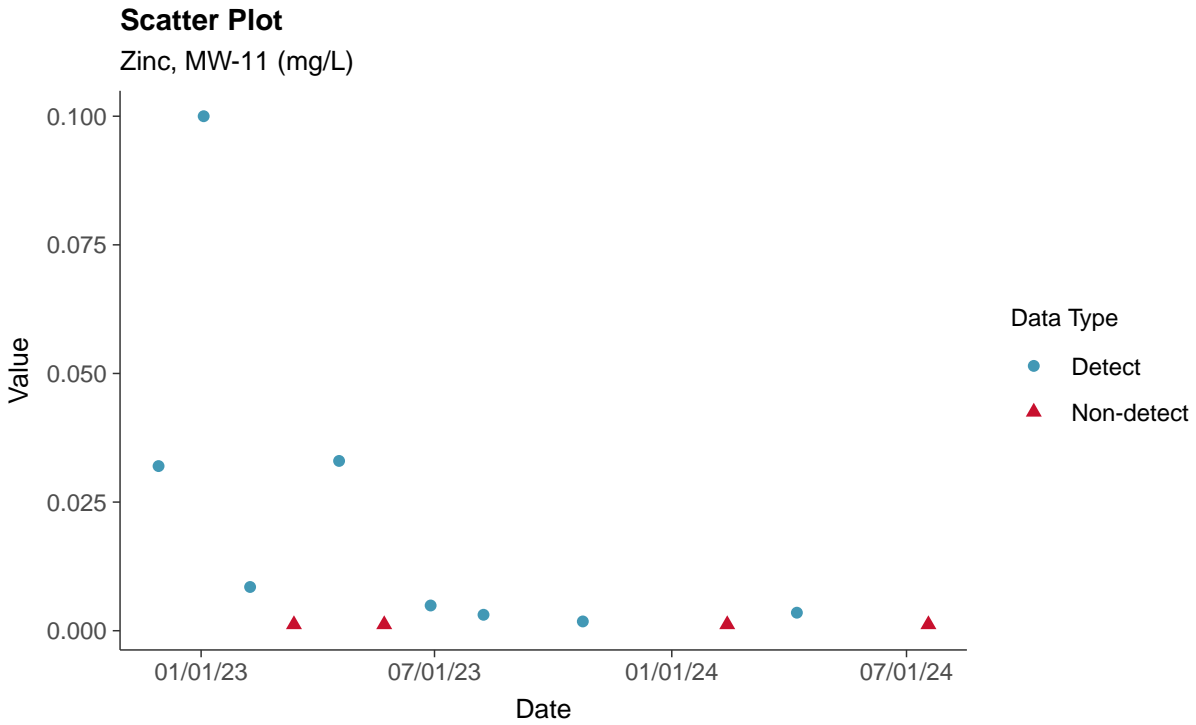
Vanadium, MW-11 (mg/L)





### Part 115: Zinc, MW-11

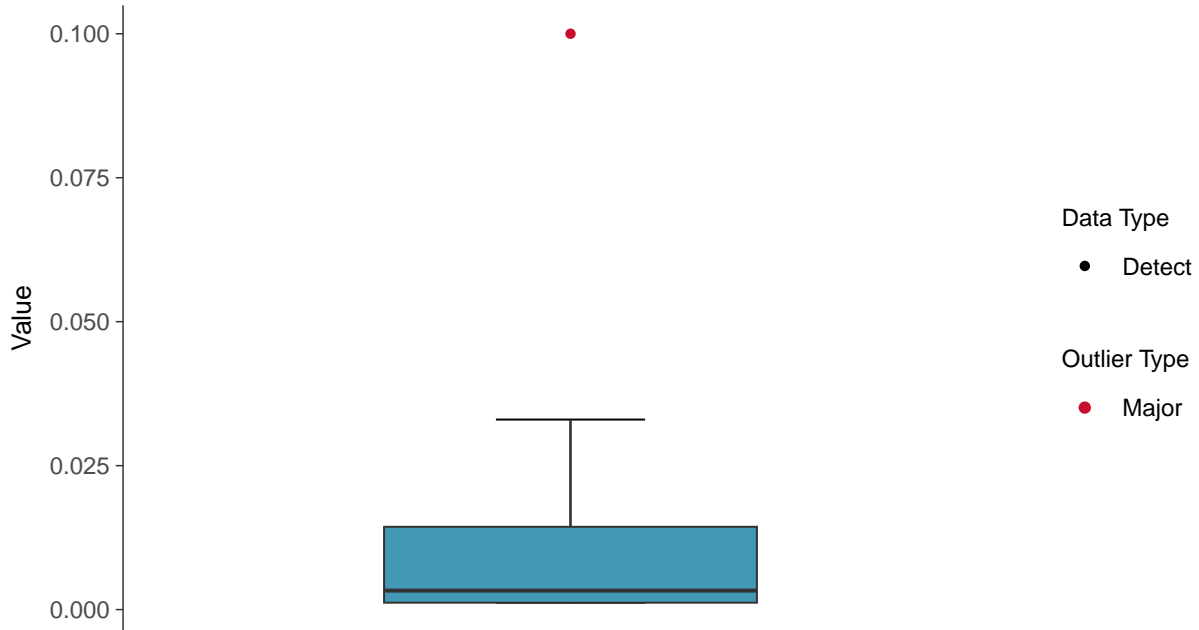
ID: 21\_2\_6\_130





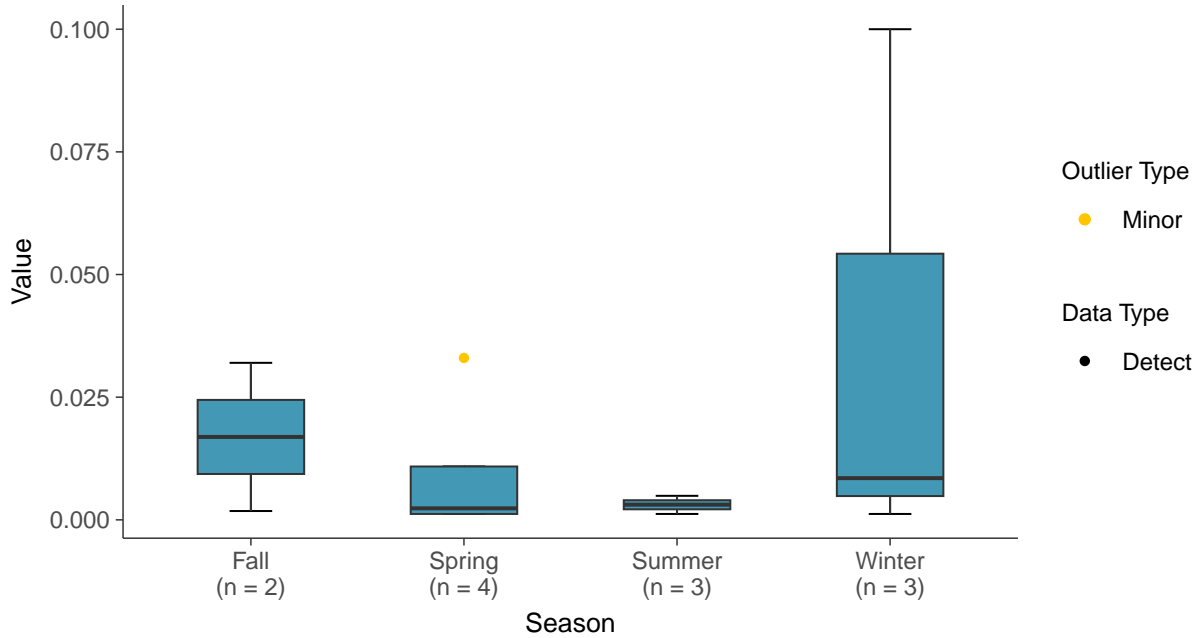
### Boxplot

Zinc, MW-11 (mg/L)



### Boxplot by Season

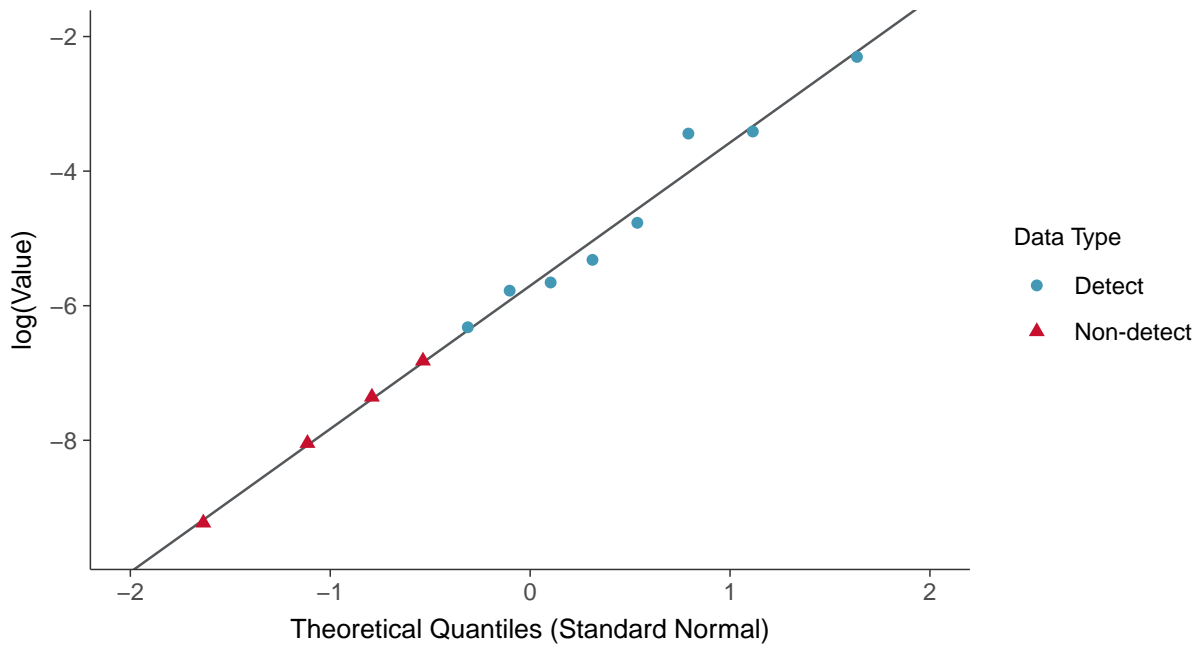
Zinc, MW-11 (mg/L)





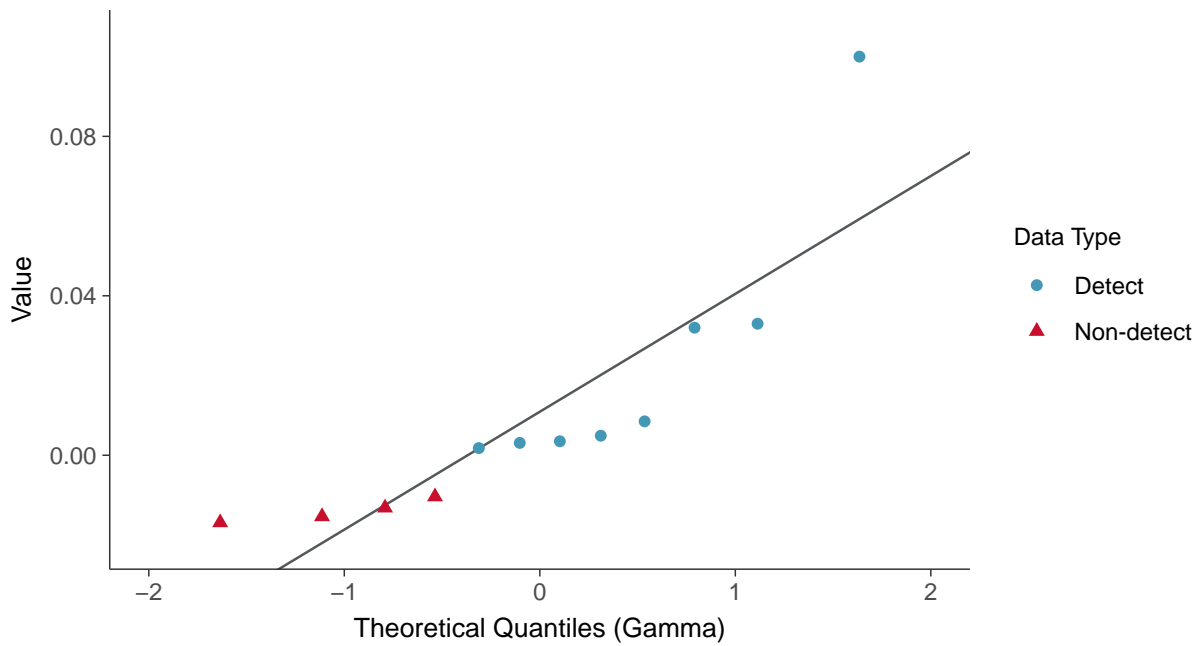
### Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

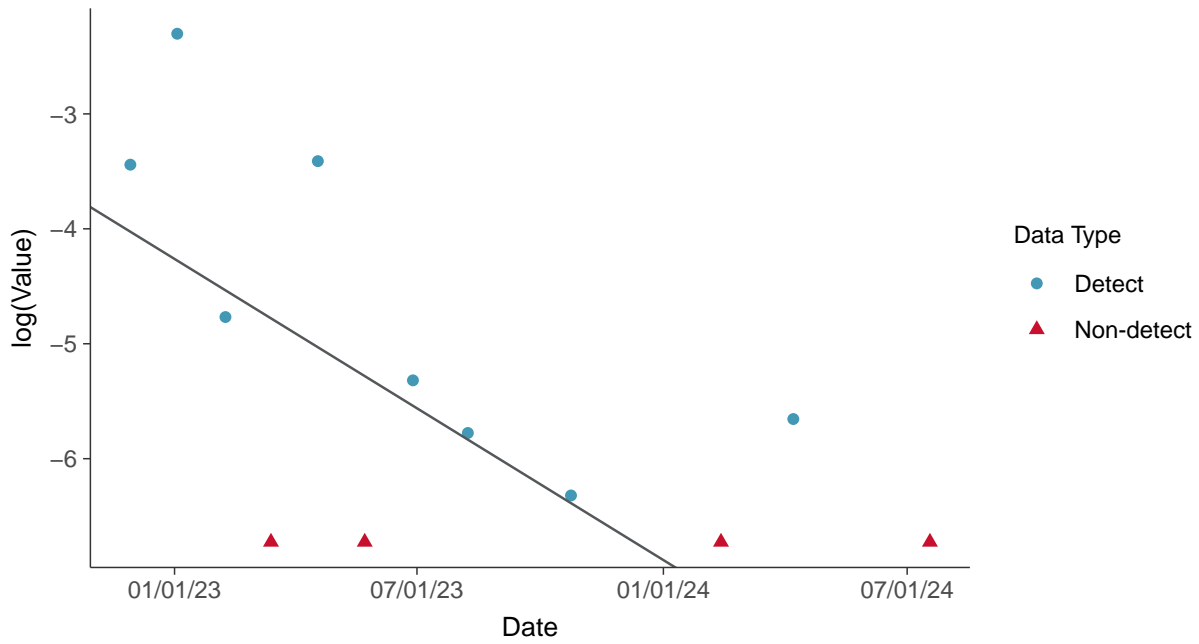
Zinc, MW-11 (mg/L)





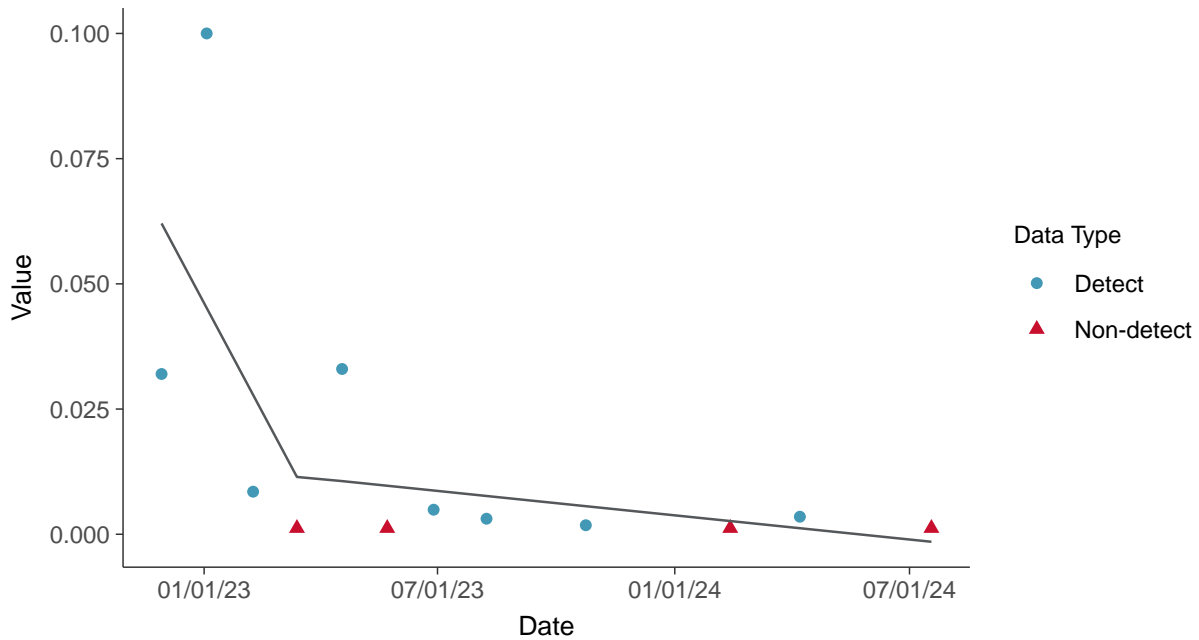
### Trend Regression: Lognormal MLE

Zinc, MW-11 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Zinc, MW-11 (mg/L)



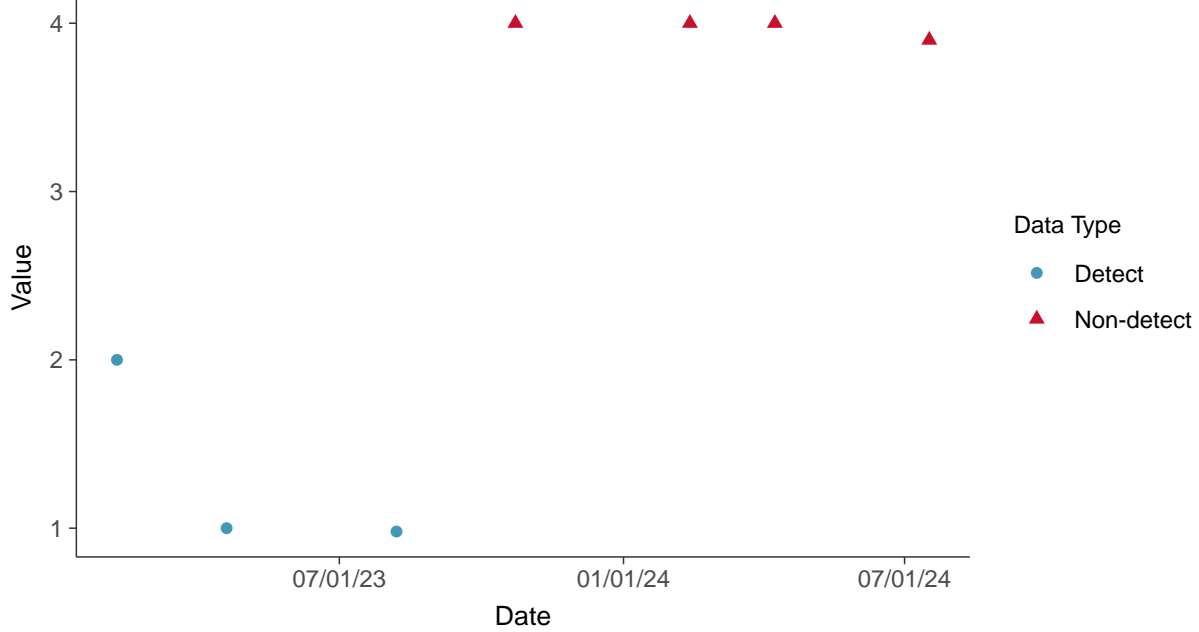


### Additional Parameters: Total Suspended Solids, MW-12

ID: 22\_2\_3\_127

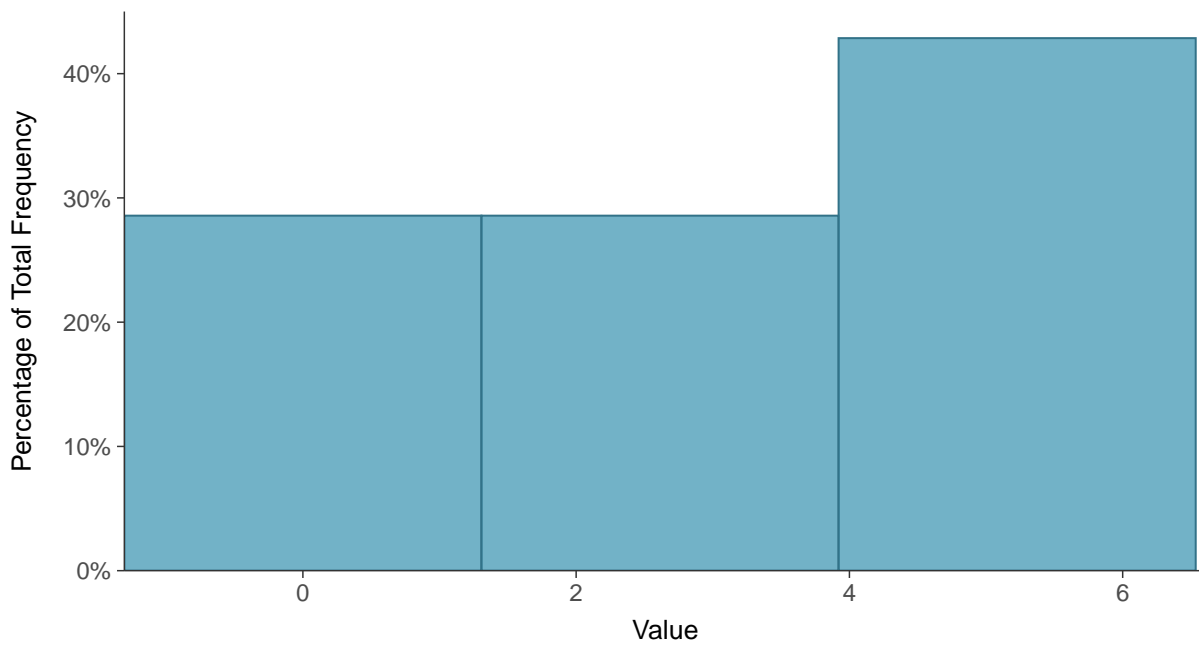
#### Scatter Plot

Total Suspended Solids, MW-12 (mg/L)



#### Histogram

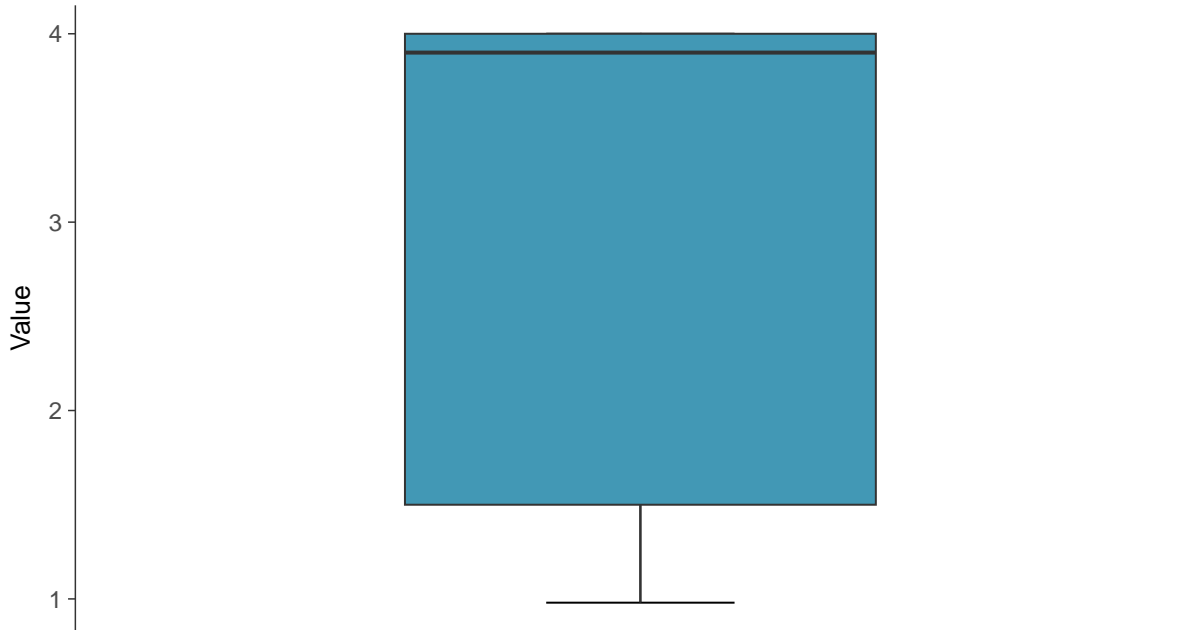
Total Suspended Solids, MW-12 (mg/L)





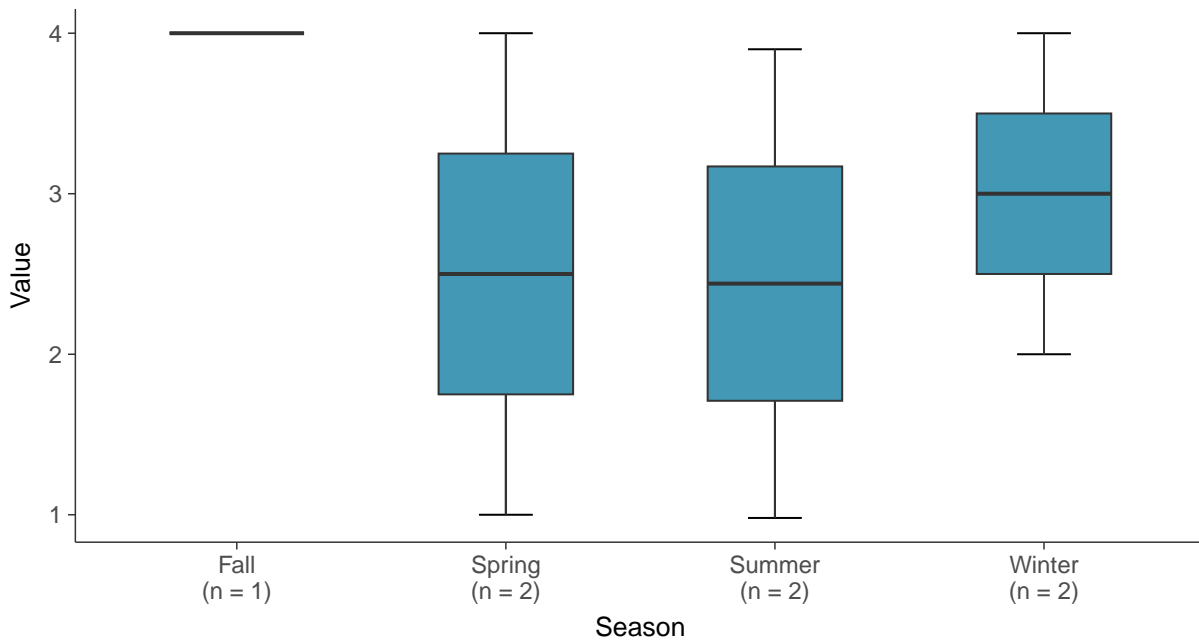
### Boxplot

Total Suspended Solids, MW-12 (mg/L)



### Boxplot by Season

Total Suspended Solids, MW-12 (mg/L)

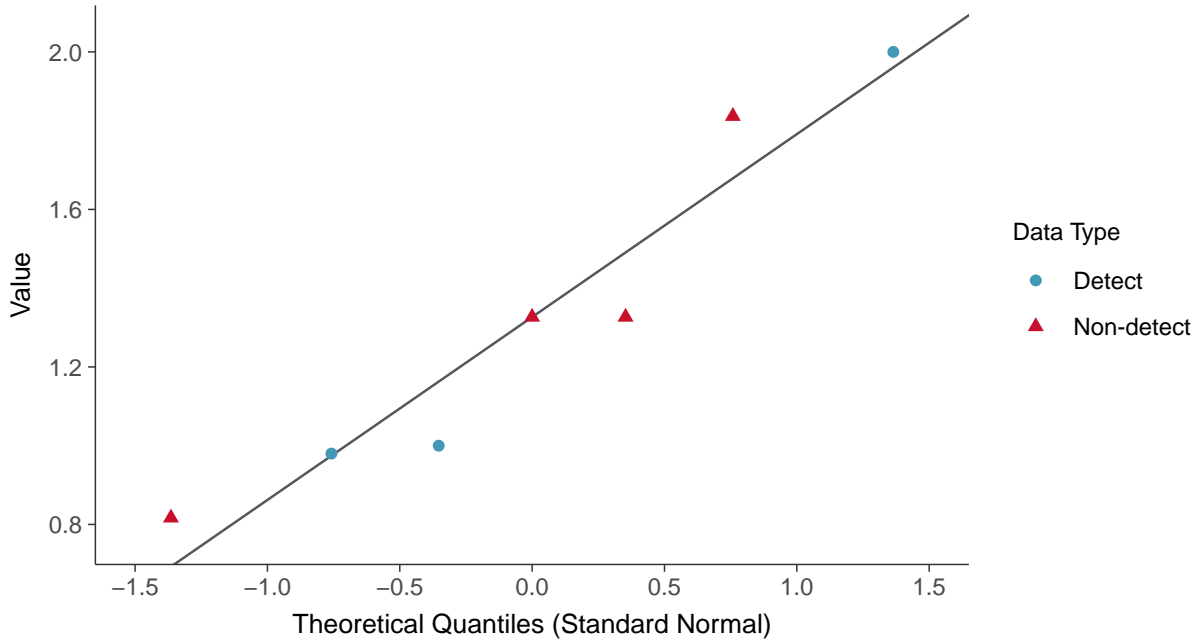






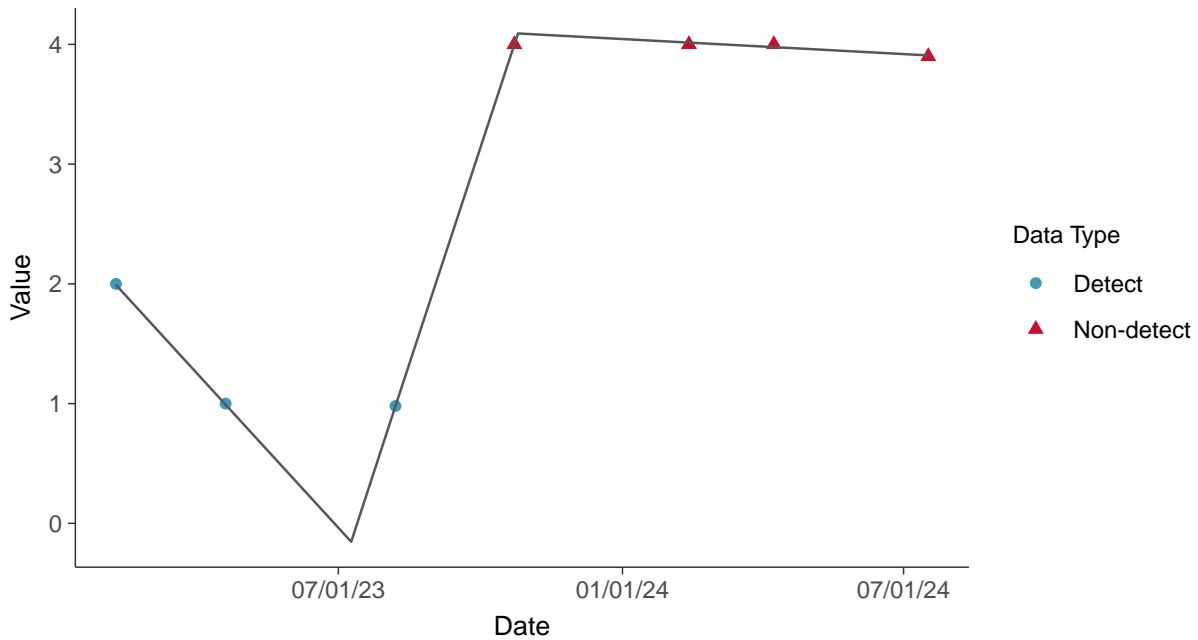
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

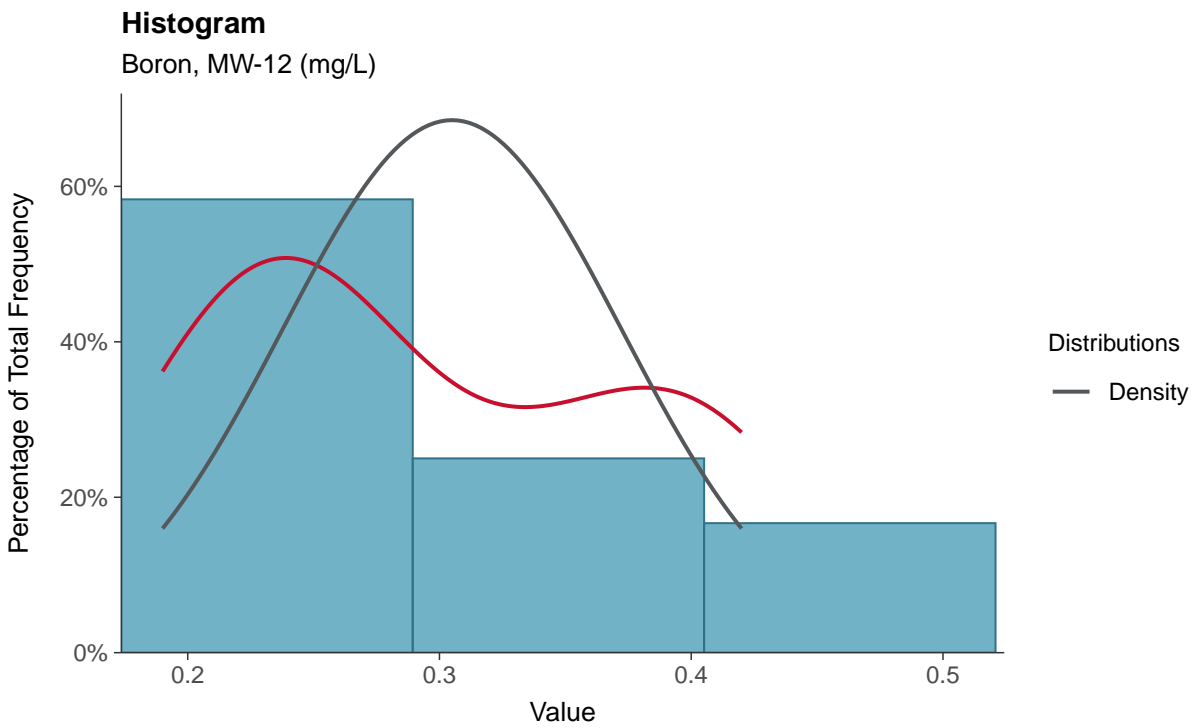
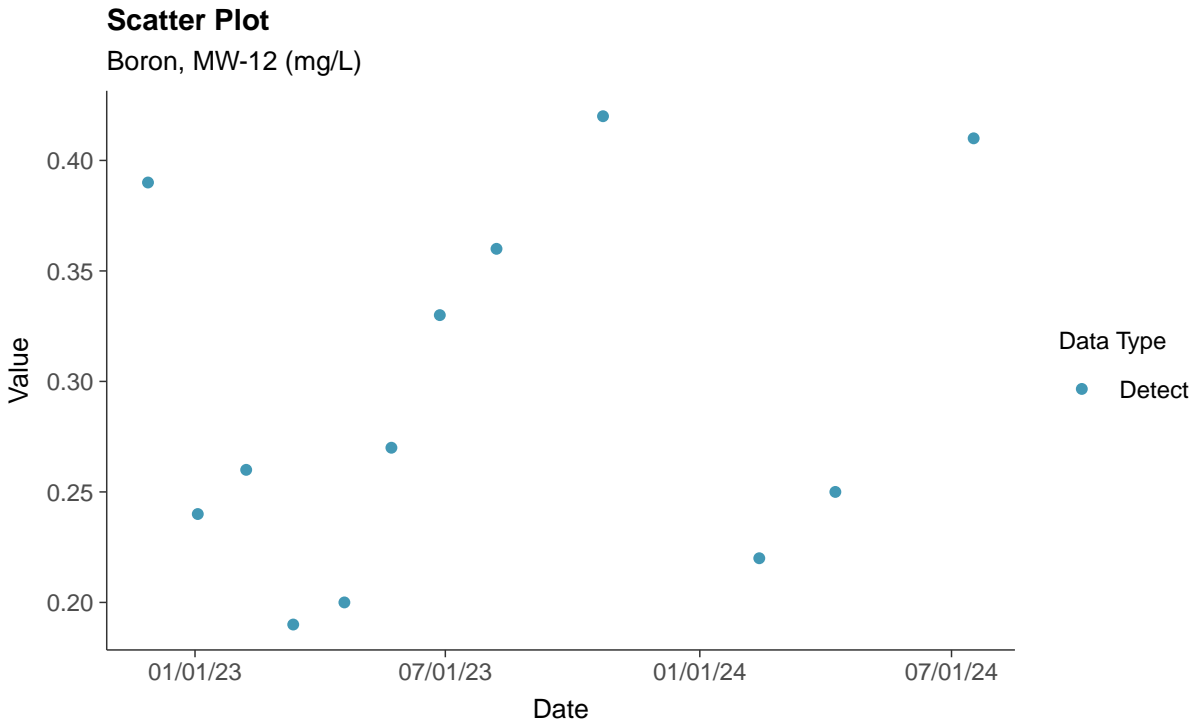
Total Suspended Solids, MW-12 (mg/L)





### Appendix III: Boron, MW-12

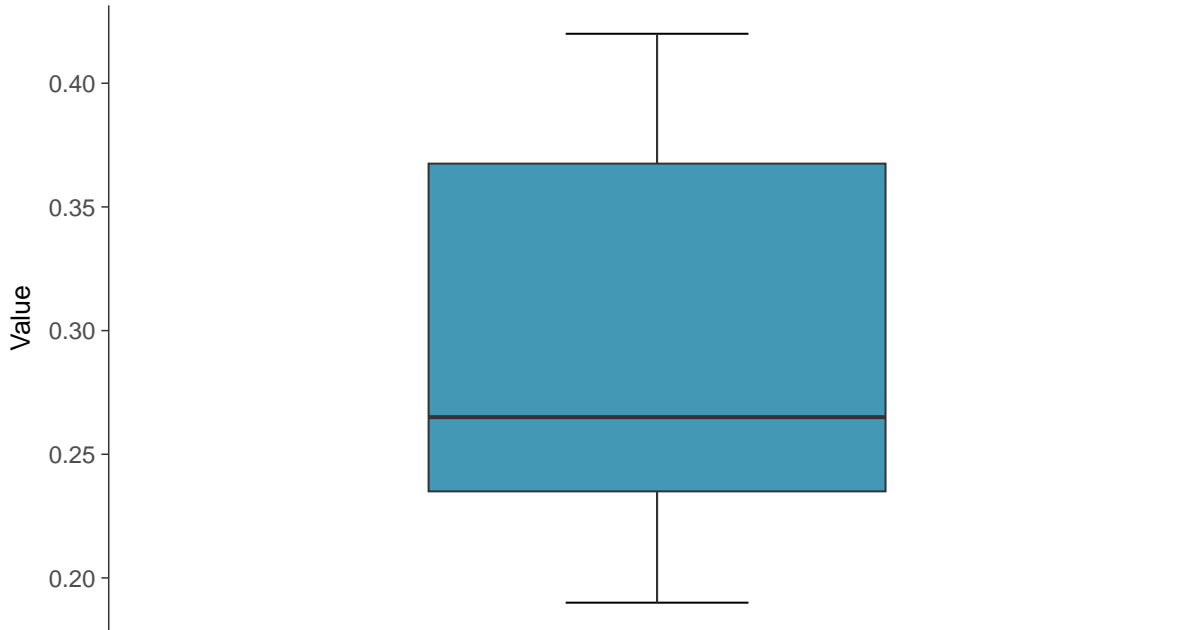
ID: 22\_2\_4\_105





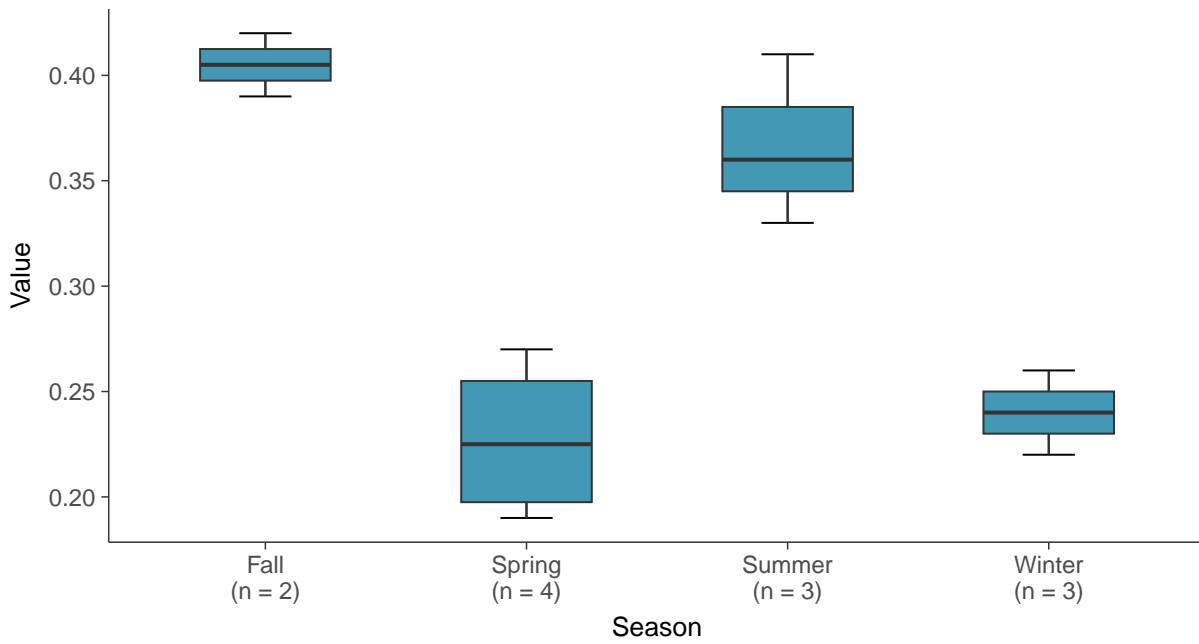
### Boxplot

Boron, MW-12 (mg/L)



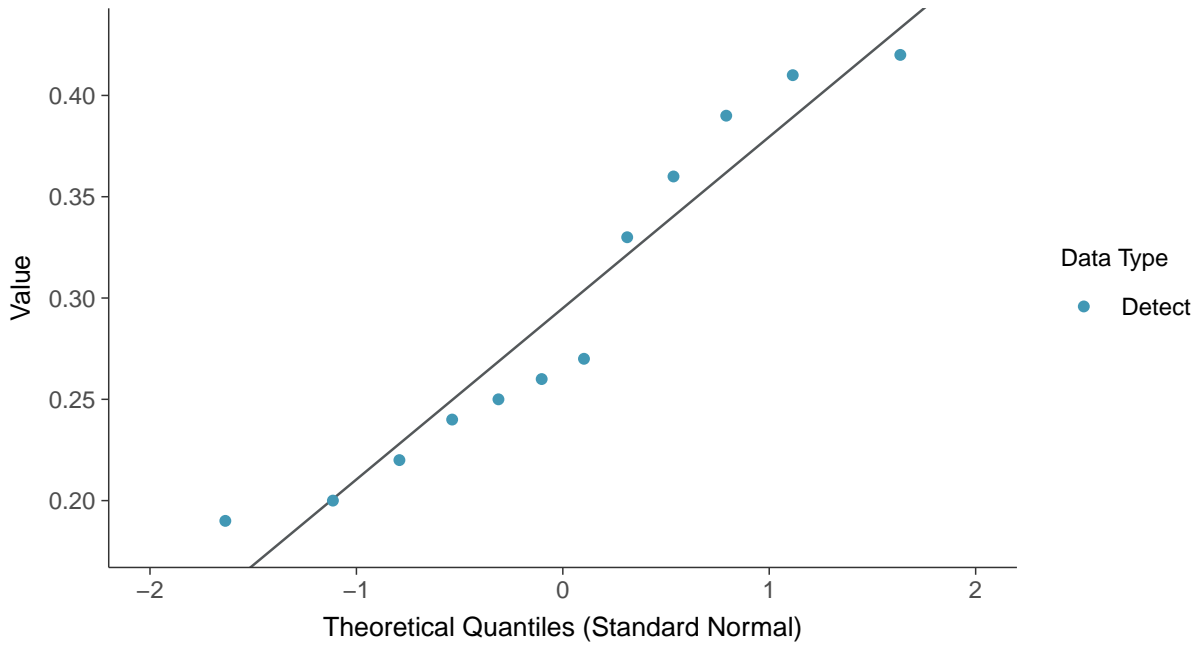
### Boxplot by Season

Boron, MW-12 (mg/L)

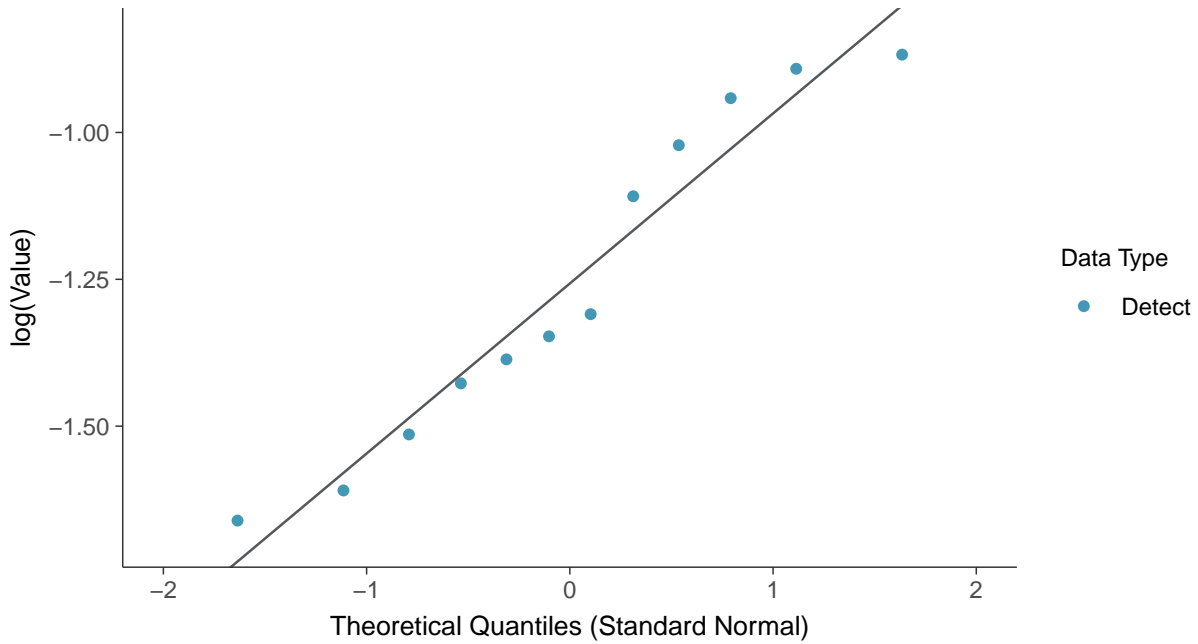


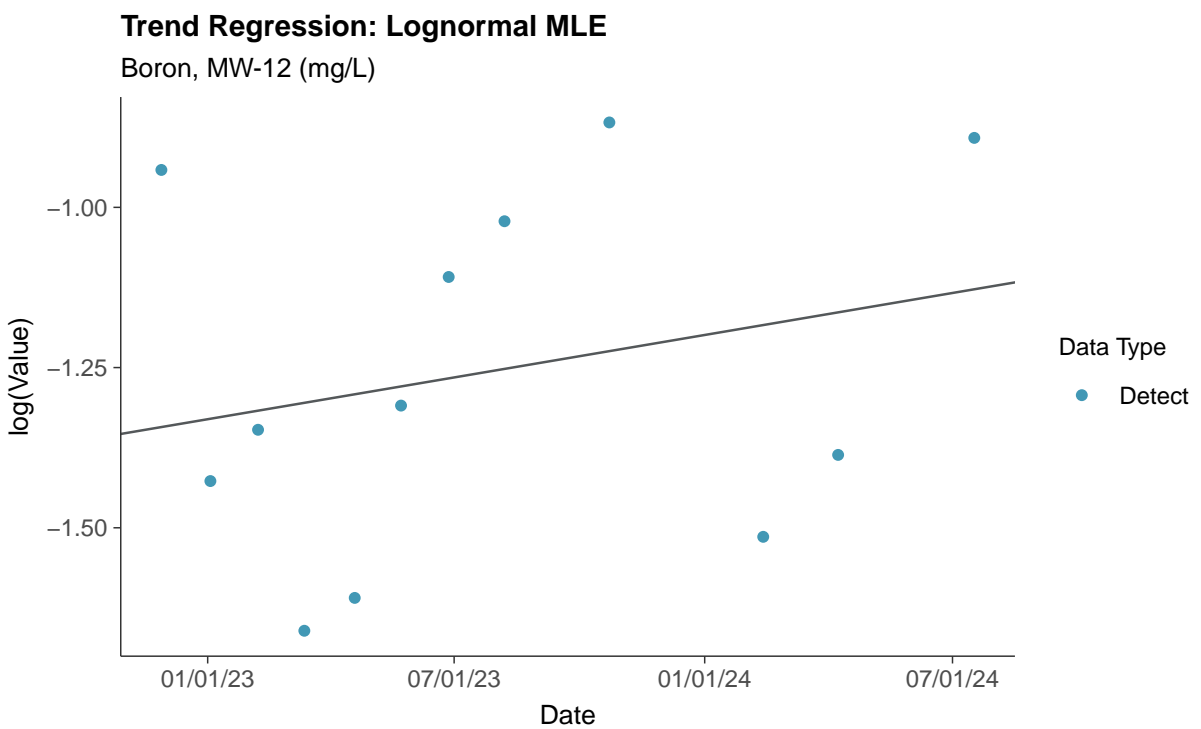
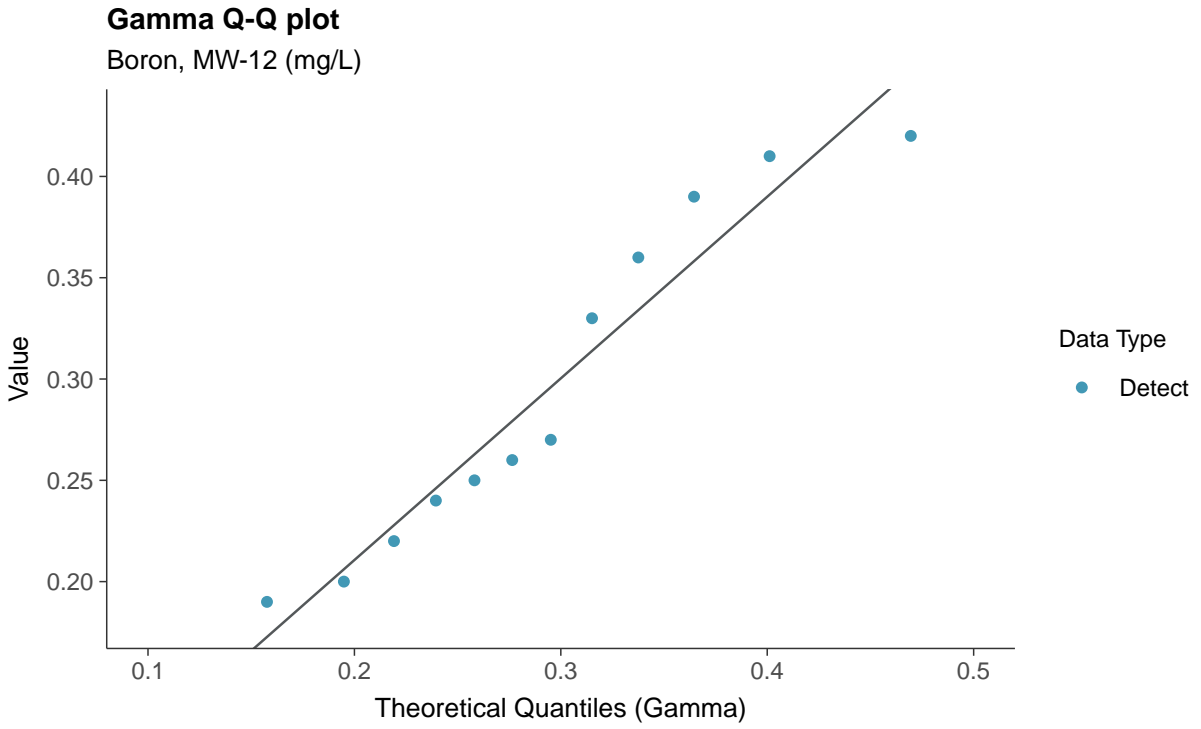


**Normal Q-Q plot**  
Boron, MW-12 (mg/L)



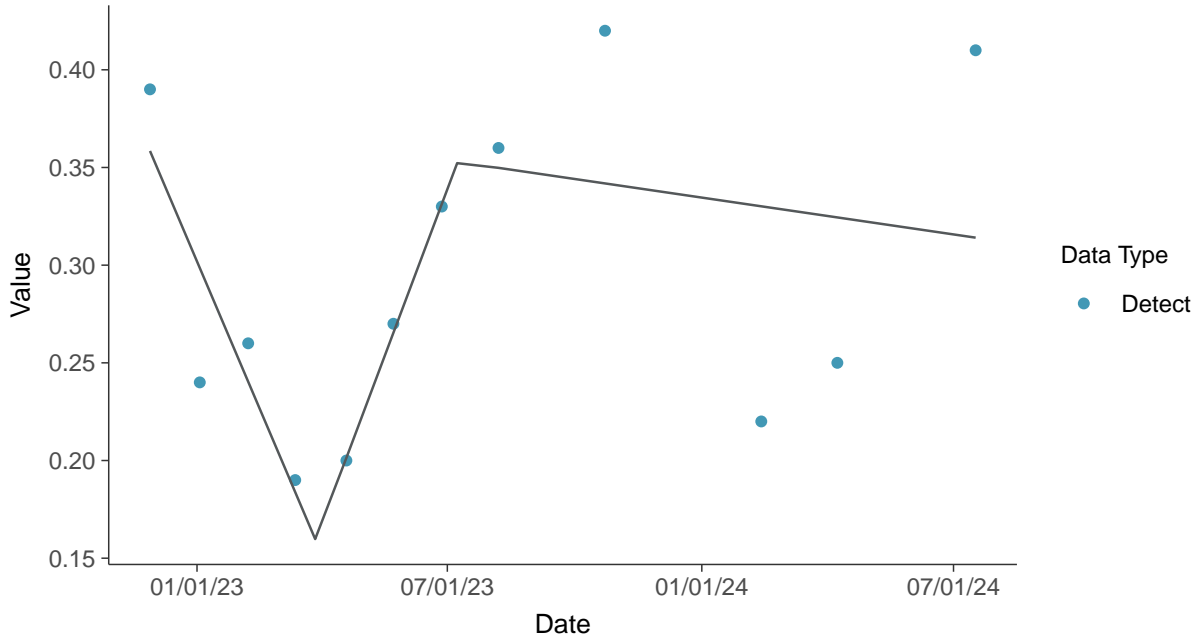
**Lognormal Q-Q plot**  
Boron, MW-12 (mg/L)







**Trend Regression: Piecewise Linear-Linear-Linear**  
Boron, MW-12 (mg/L)



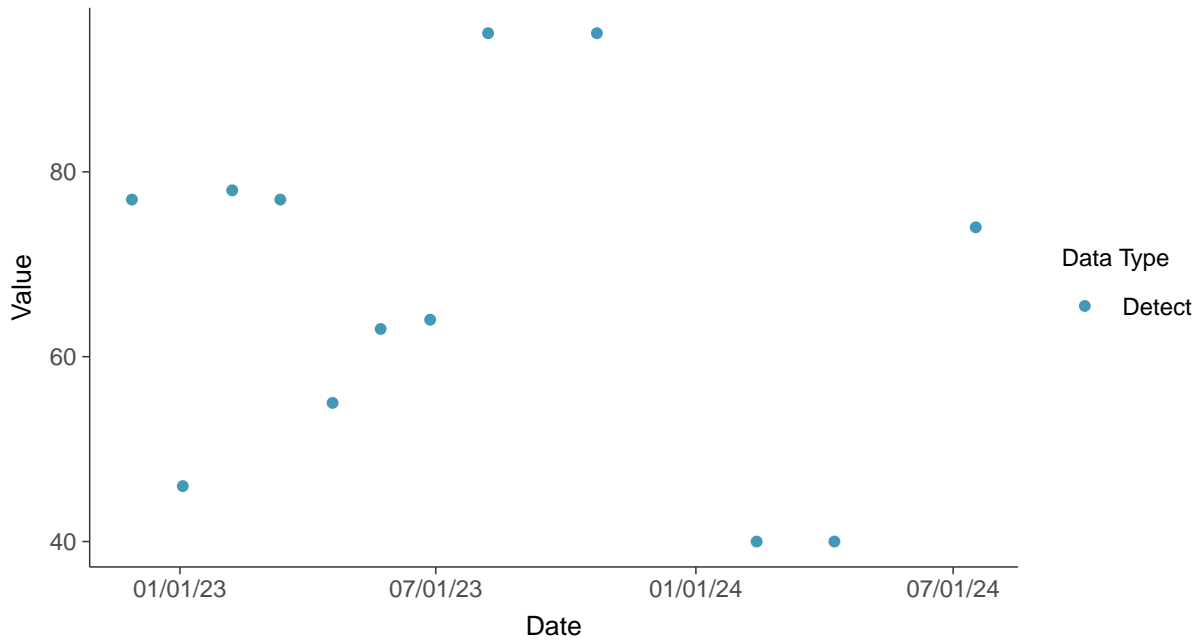


### Appendix III: Calcium, MW-12

ID: 22\_2\_4\_107

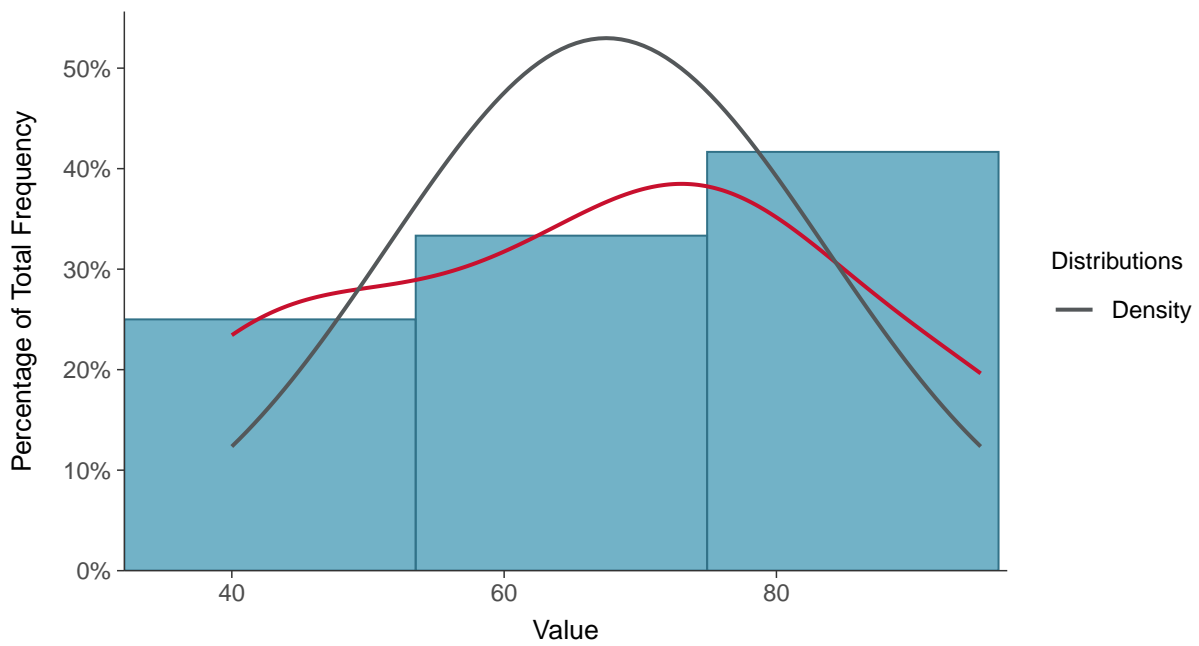
#### Scatter Plot

Calcium, MW-12 (mg/L)



#### Histogram

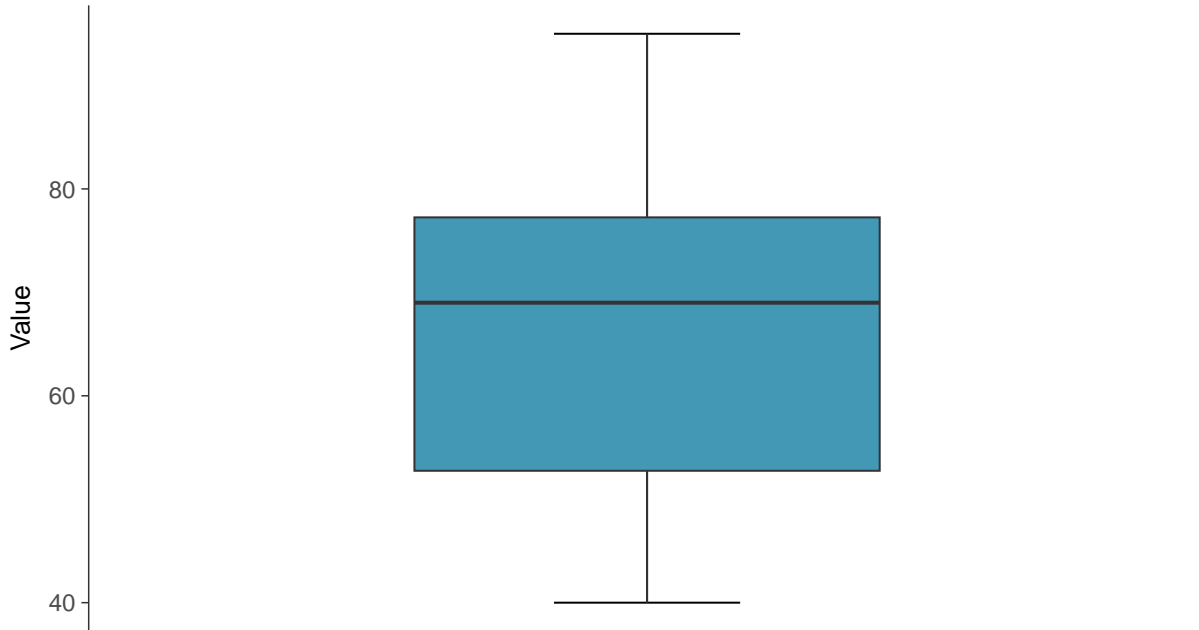
Calcium, MW-12 (mg/L)





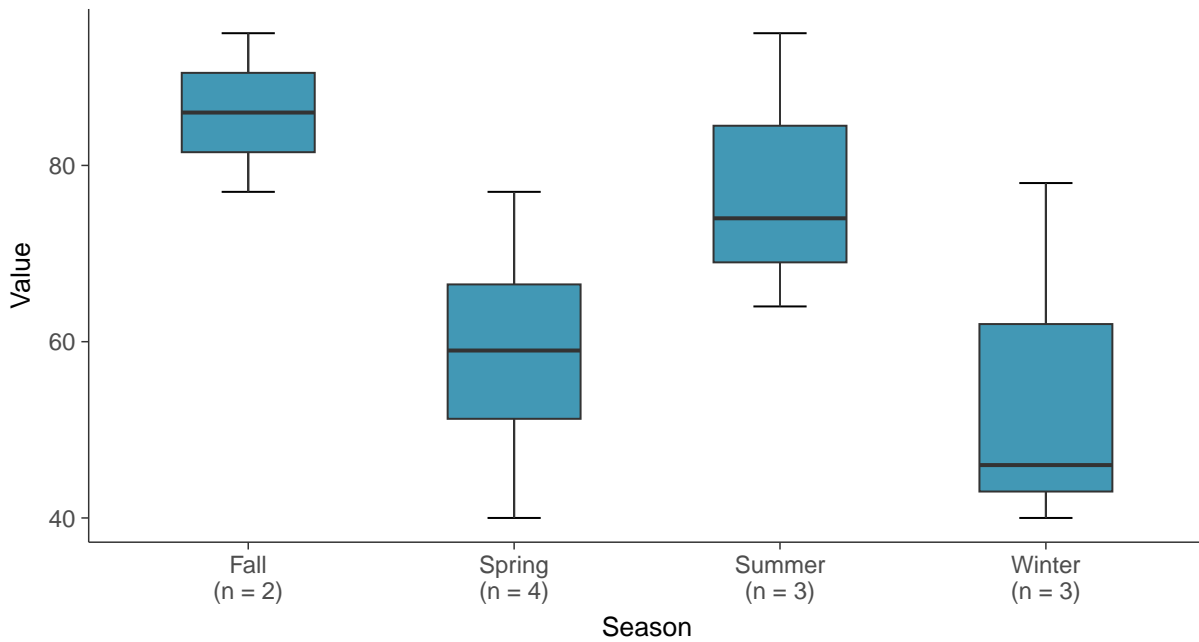
### Boxplot

Calcium, MW-12 (mg/L)



### Boxplot by Season

Calcium, MW-12 (mg/L)

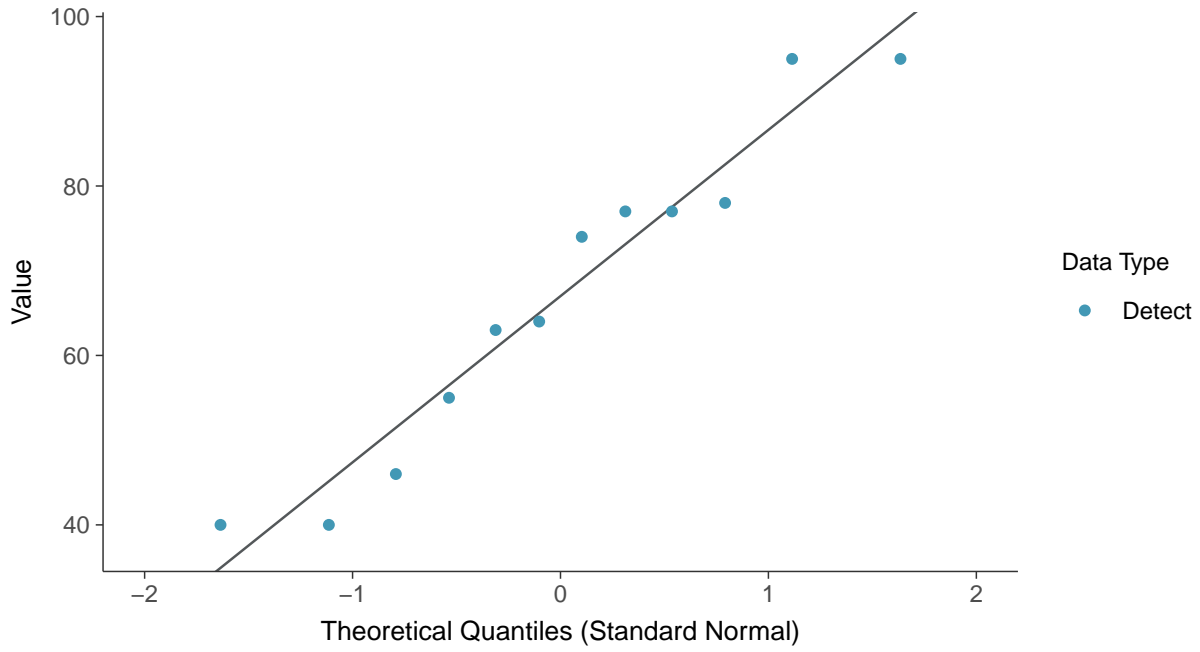






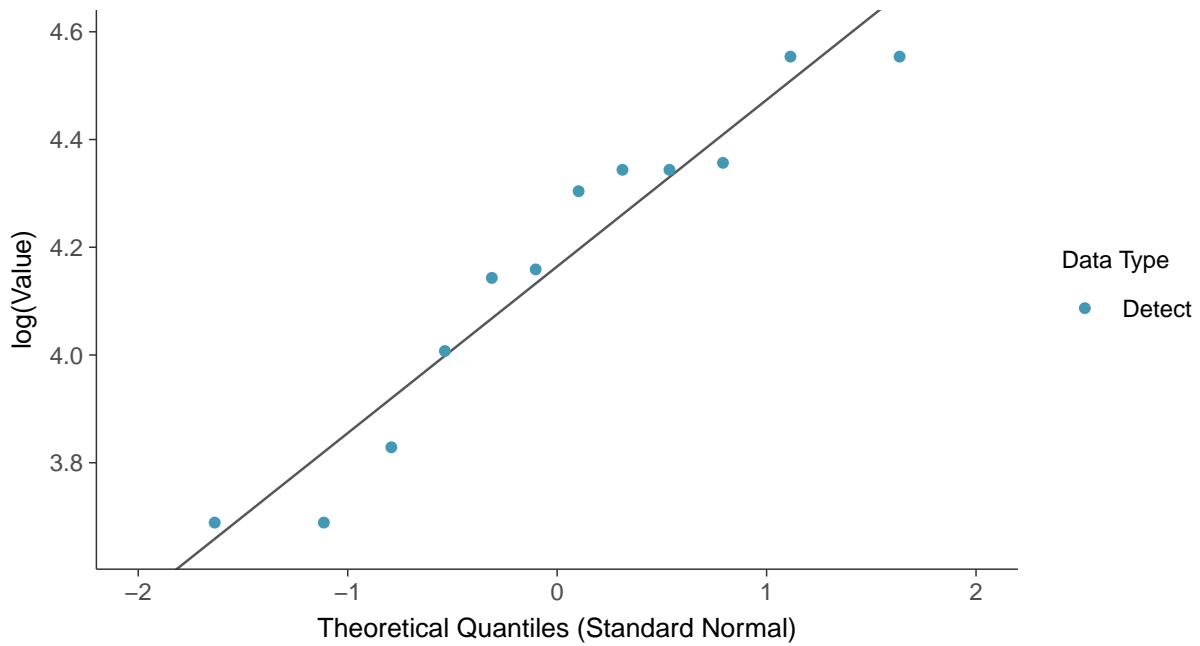
### Normal Q-Q plot

Calcium, MW-12 (mg/L)



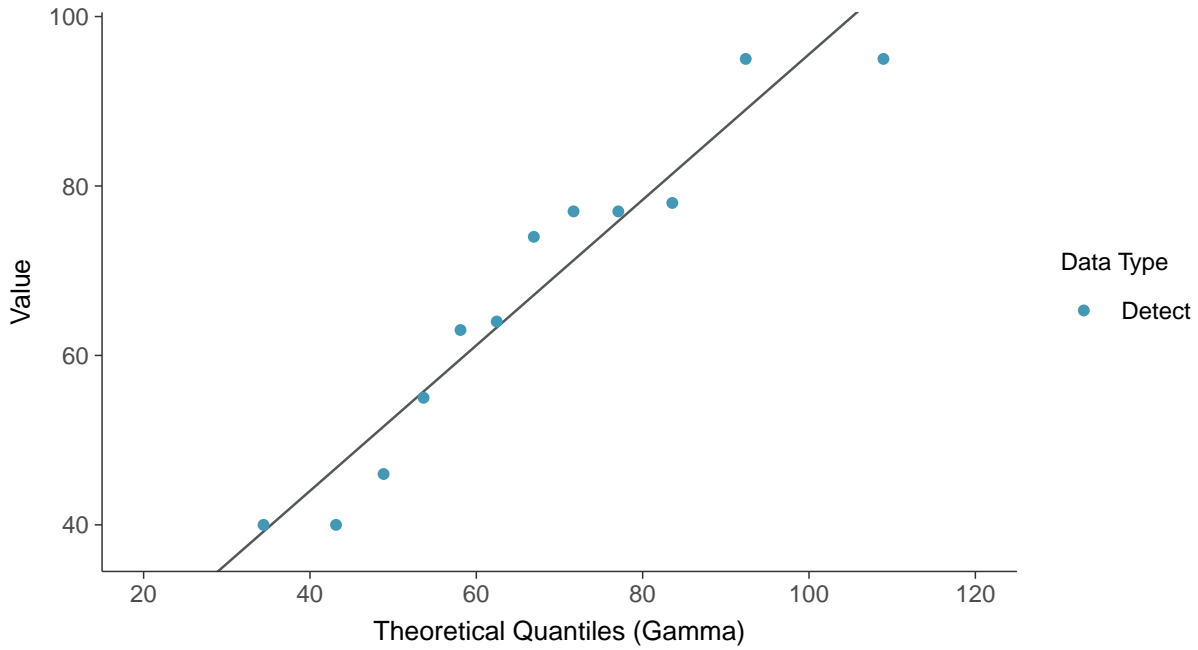
### Lognormal Q-Q plot

Calcium, MW-12 (mg/L)

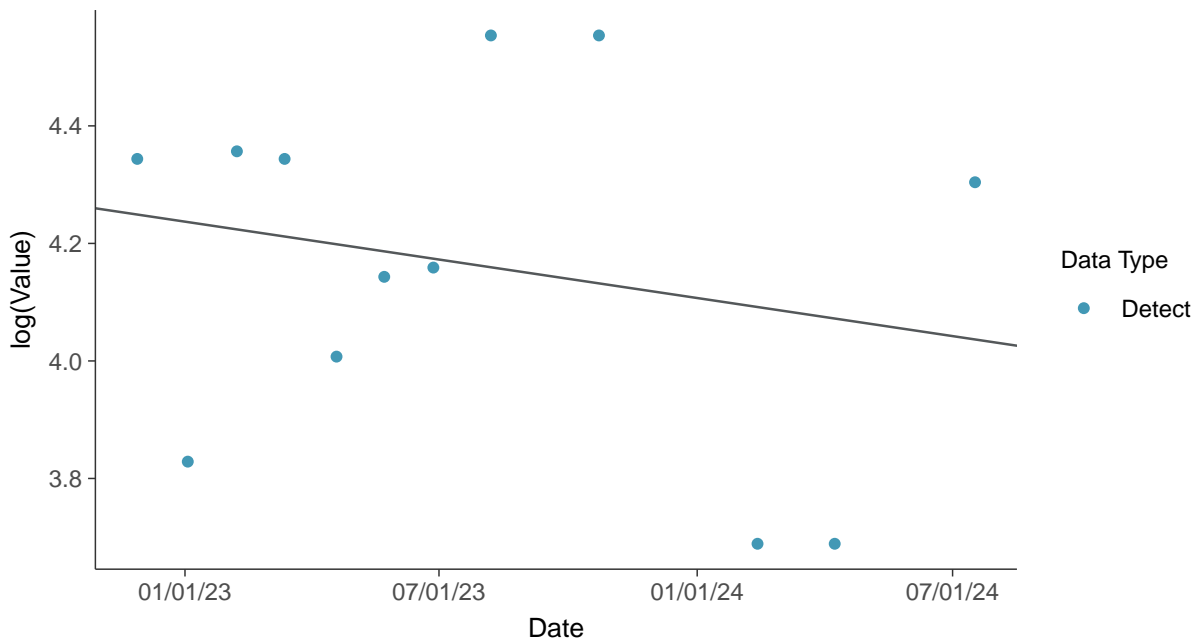




**Gamma Q-Q plot**  
Calcium, MW-12 (mg/L)



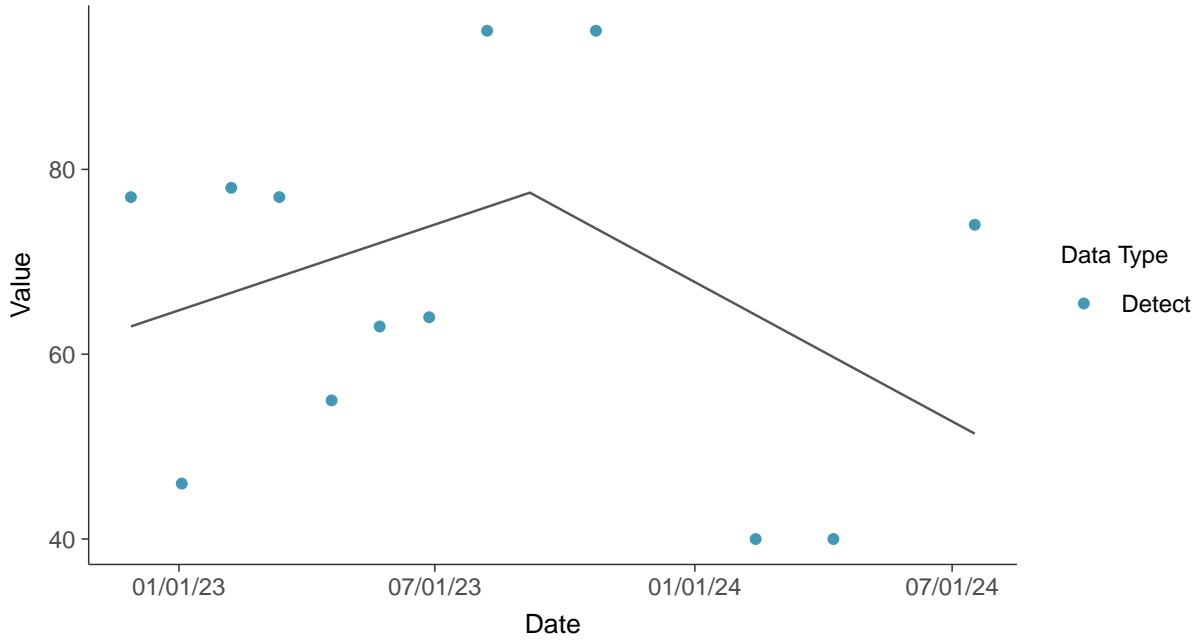
**Trend Regression: Lognormal MLE**  
Calcium, MW-12 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Calcium, MW-12 (mg/L)



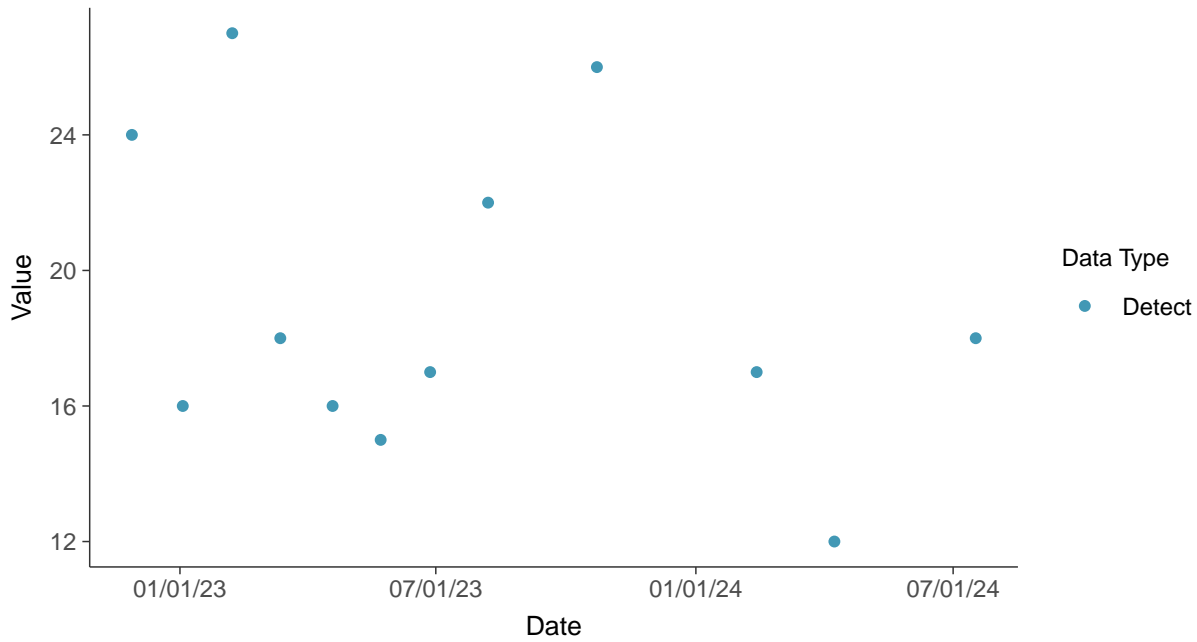


### Appendix III: Chloride (as Cl), MW-12

ID: 22\_2\_4\_108

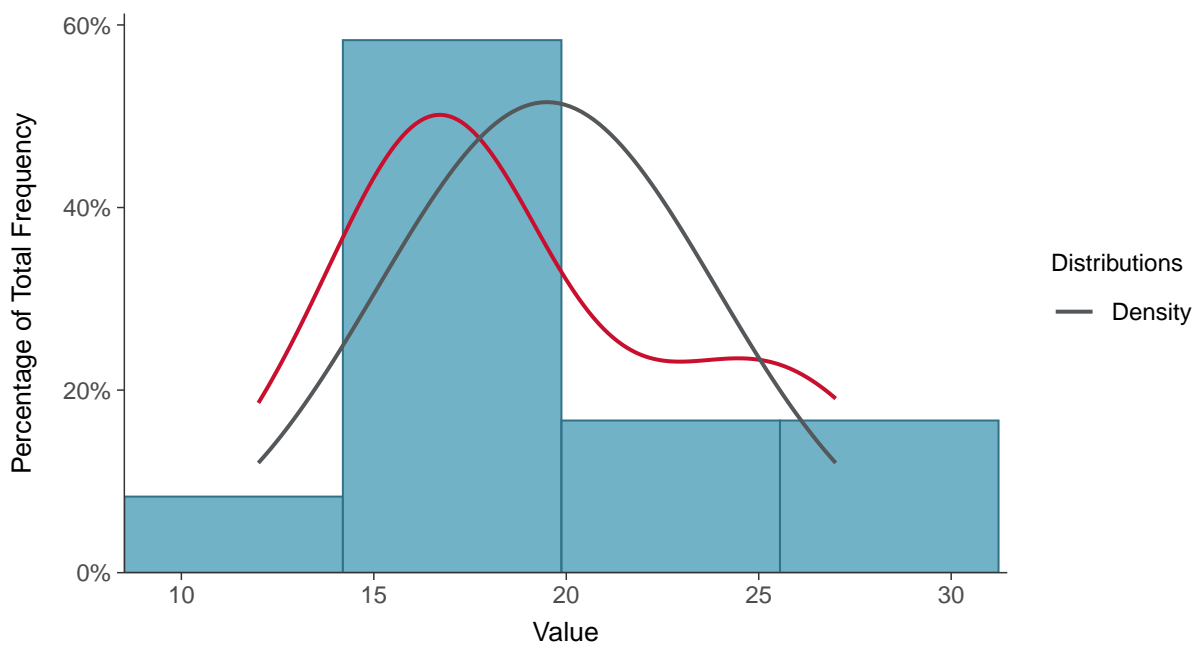
#### Scatter Plot

Chloride (as Cl), MW-12 (mg/L)



#### Histogram

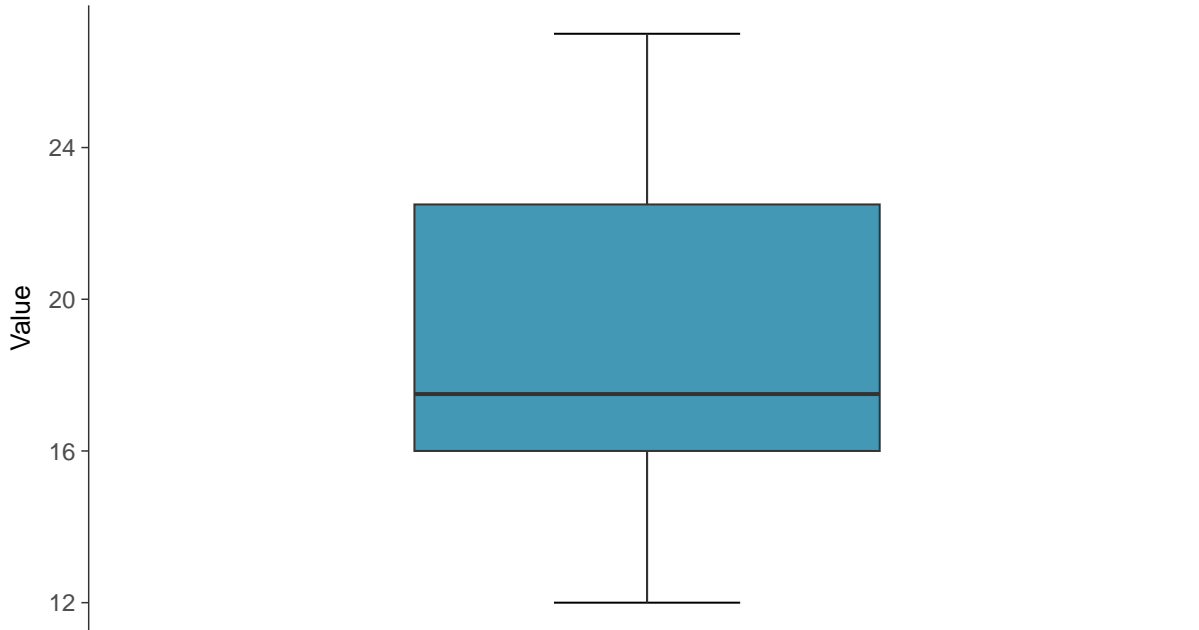
Chloride (as Cl), MW-12 (mg/L)





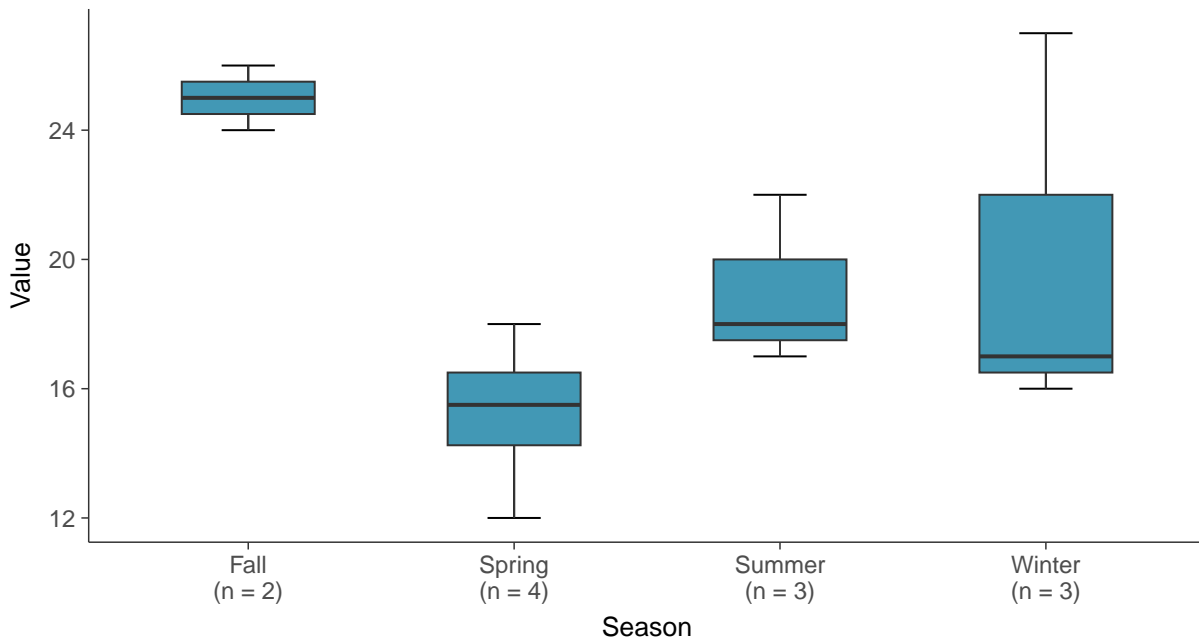
### Boxplot

Chloride (as Cl), MW-12 (mg/L)



### Boxplot by Season

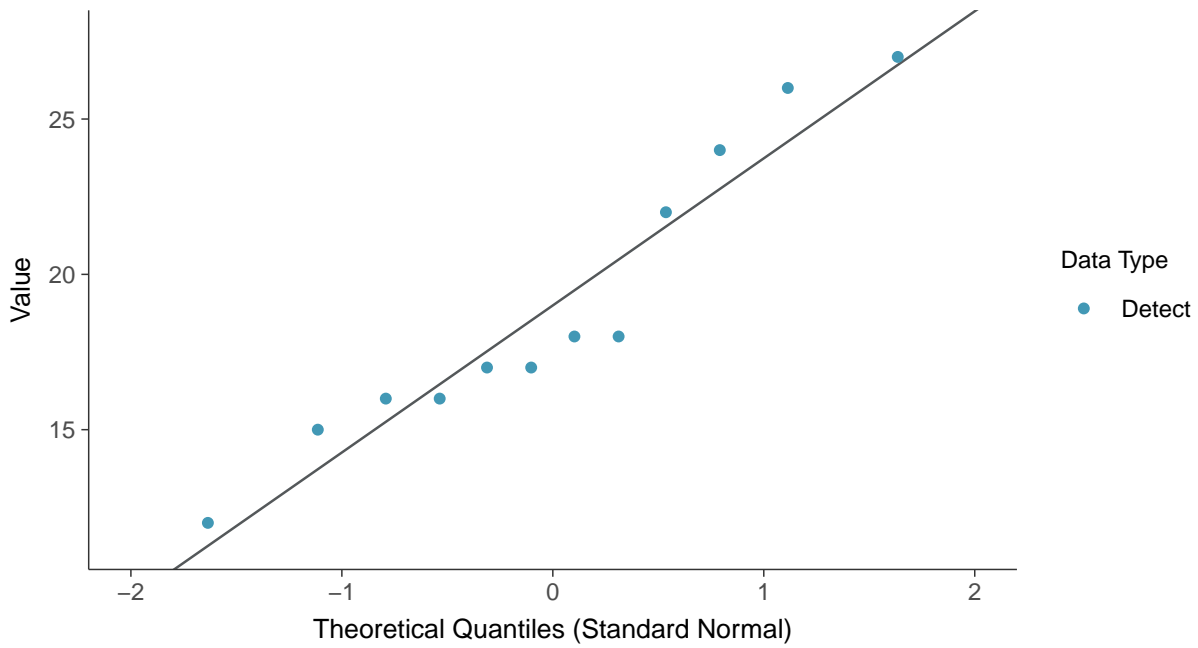
Chloride (as Cl), MW-12 (mg/L)





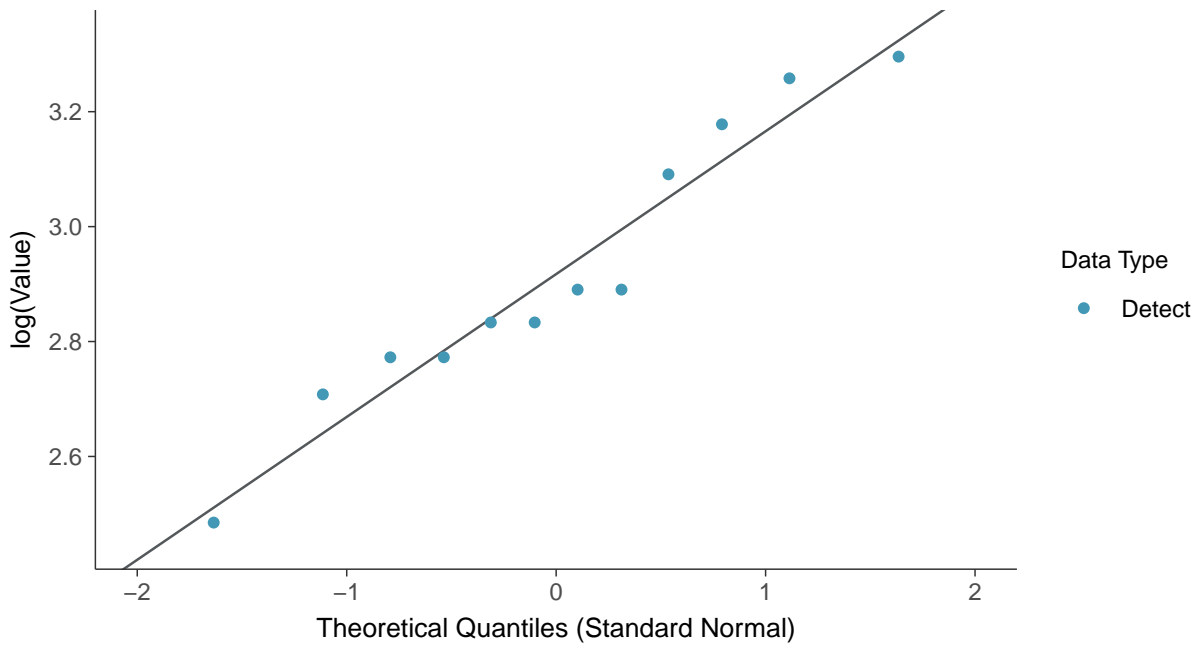
### Normal Q-Q plot

Chloride (as Cl), MW-12 (mg/L)



### Lognormal Q-Q plot

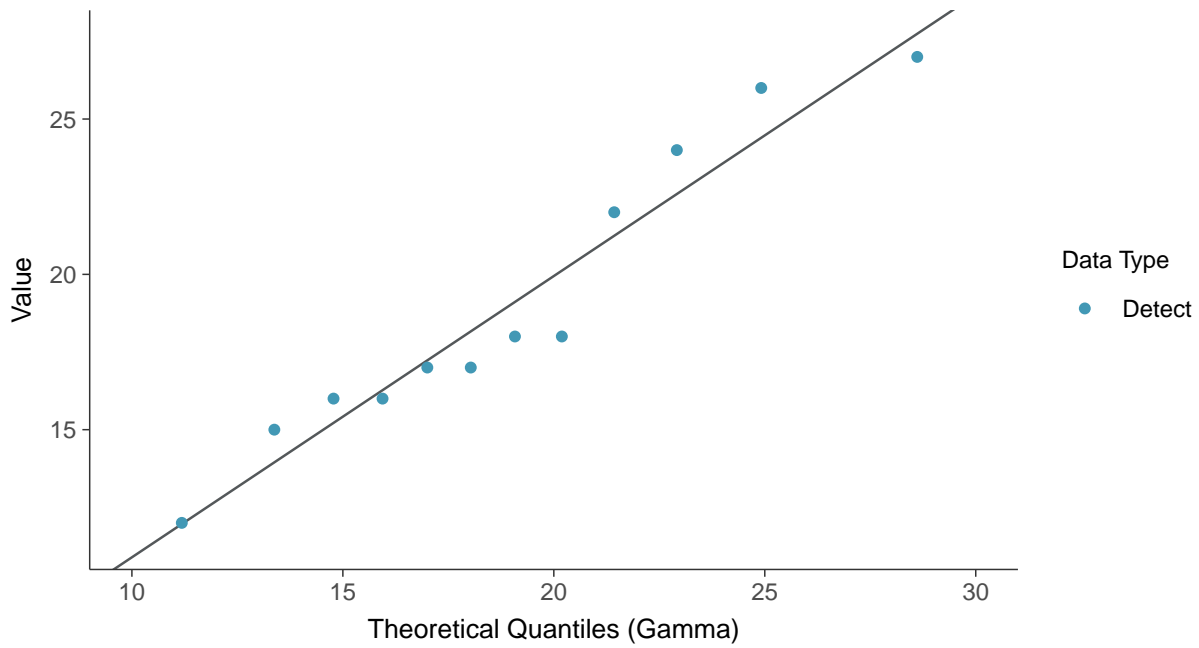
Chloride (as Cl), MW-12 (mg/L)





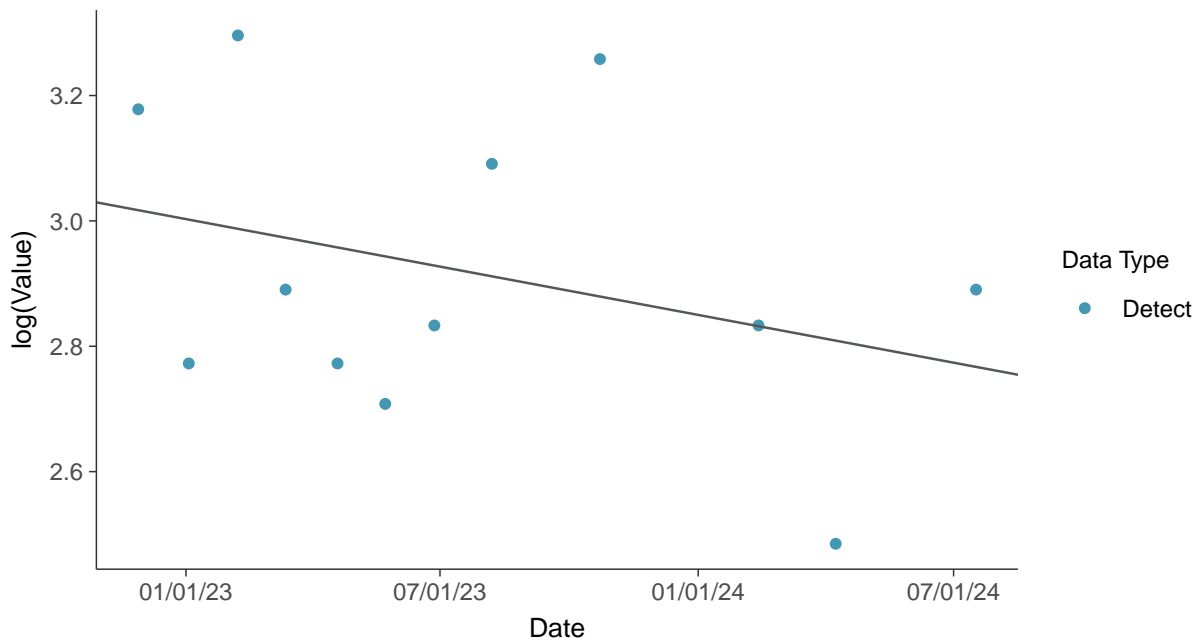
### Gamma Q-Q plot

Chloride (as Cl), MW-12 (mg/L)



### Trend Regression: Lognormal MLE

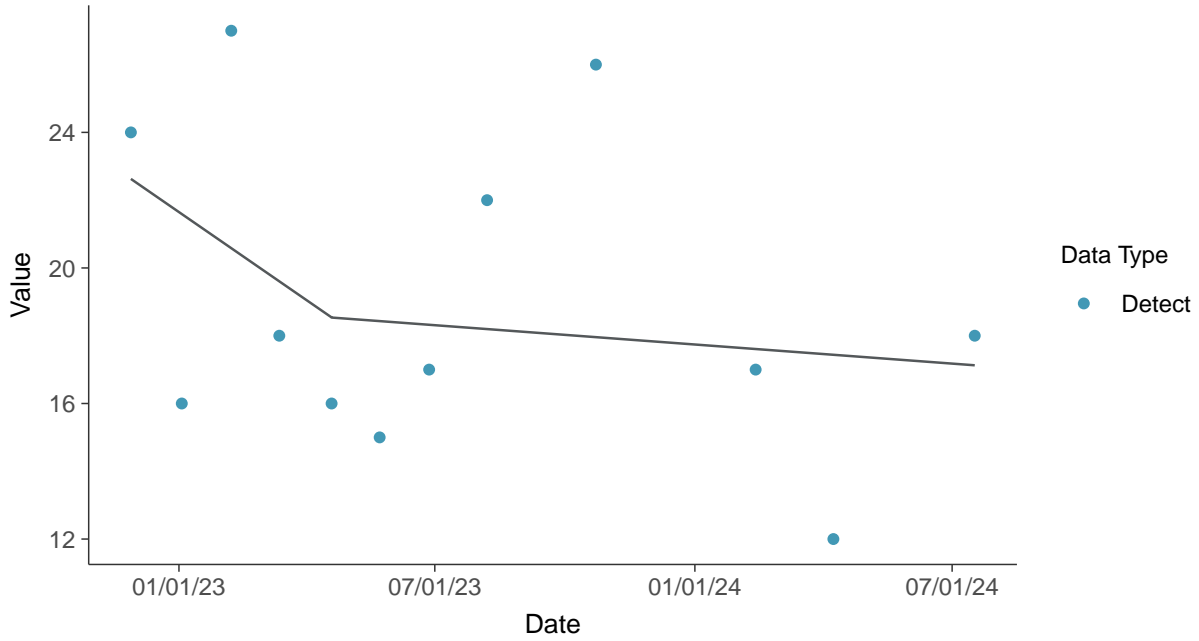
Chloride (as Cl), MW-12 (mg/L)





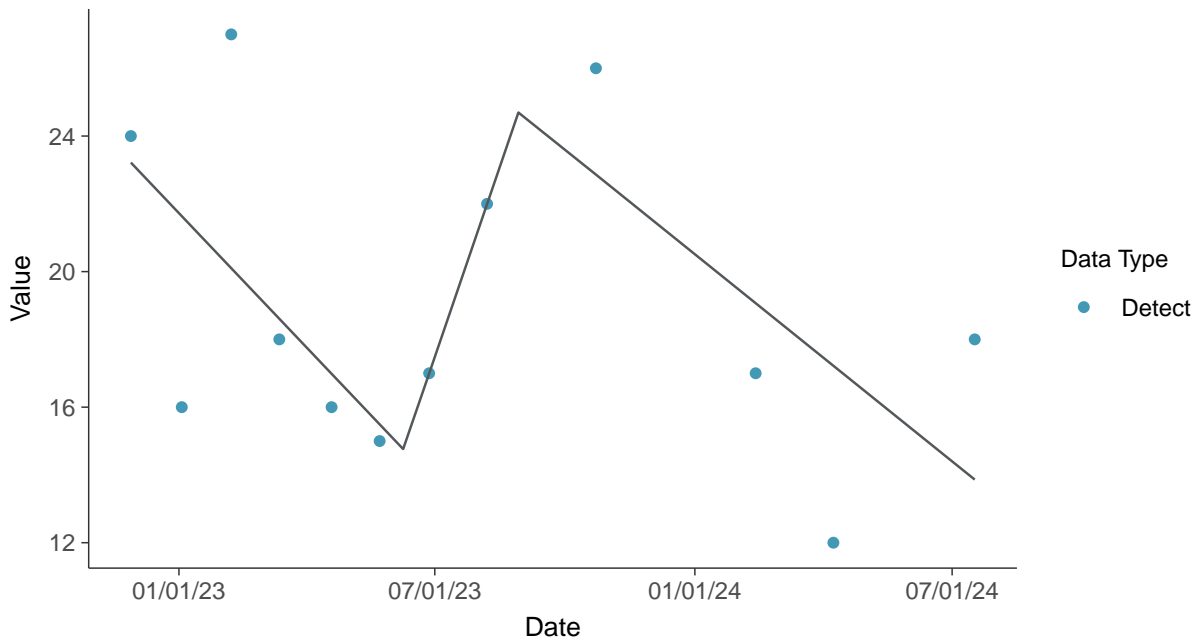
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-12 (mg/L)





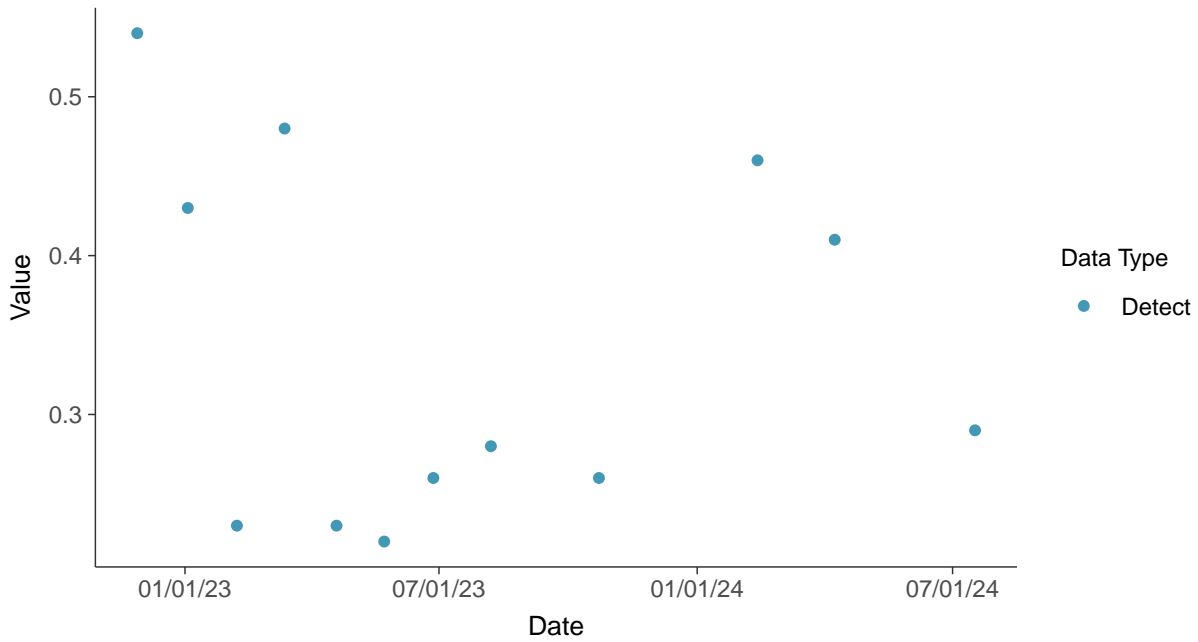


### Appendix III: Fluoride, MW-12

ID: 22\_2\_4\_112

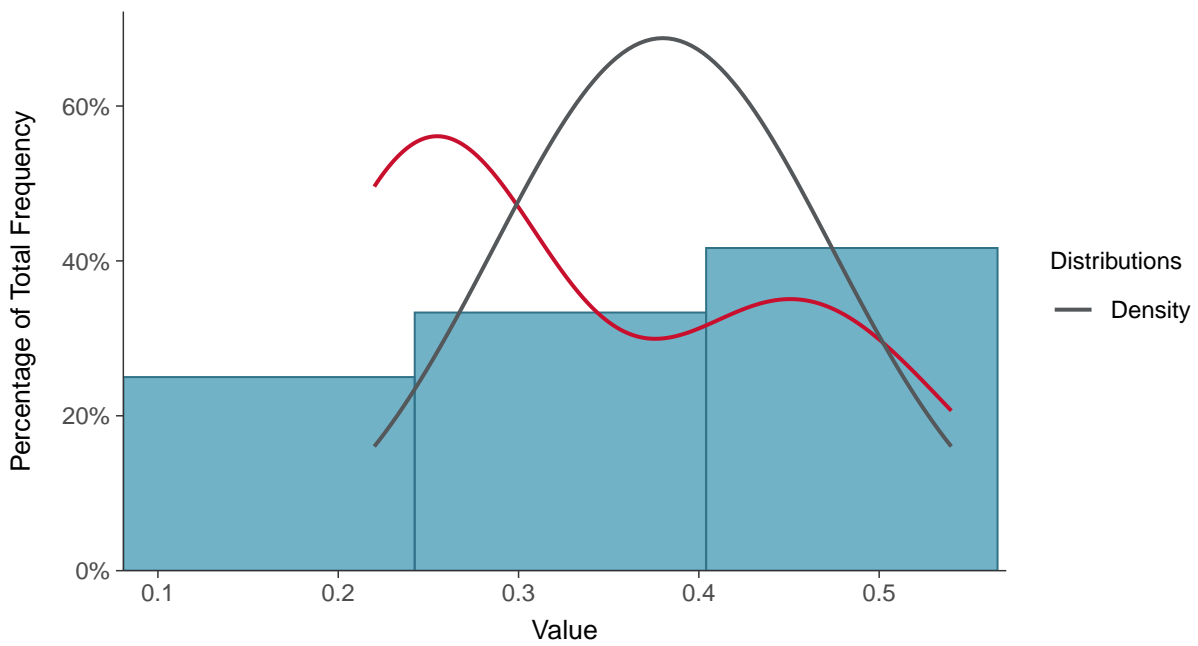
#### Scatter Plot

Fluoride, MW-12 (mg/L)



#### Histogram

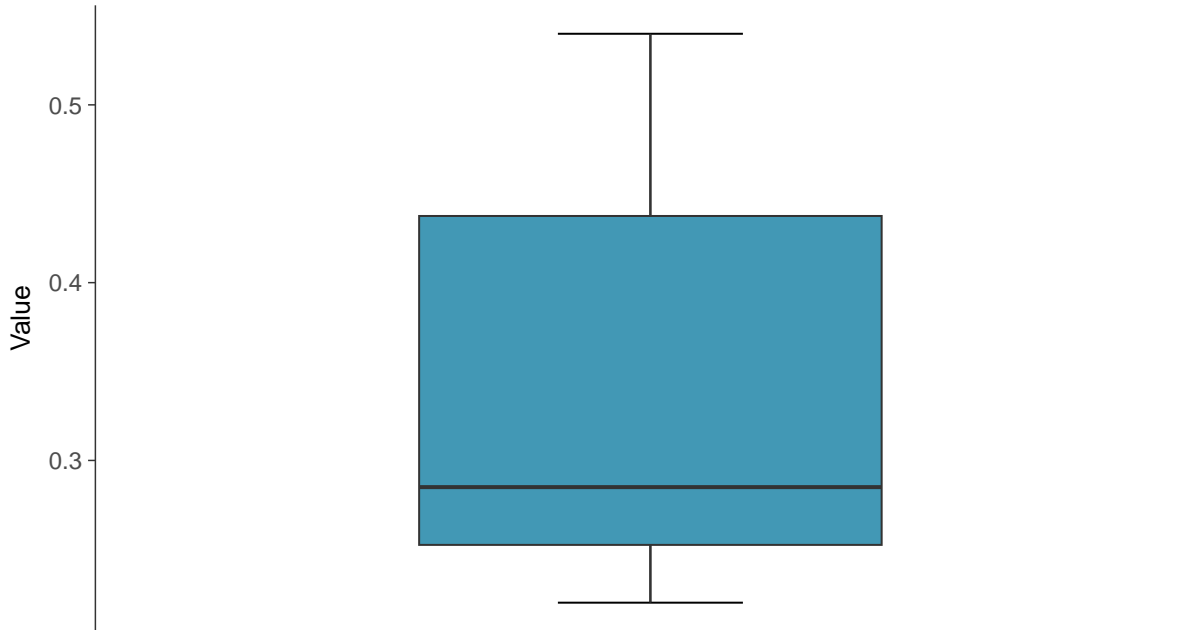
Fluoride, MW-12 (mg/L)





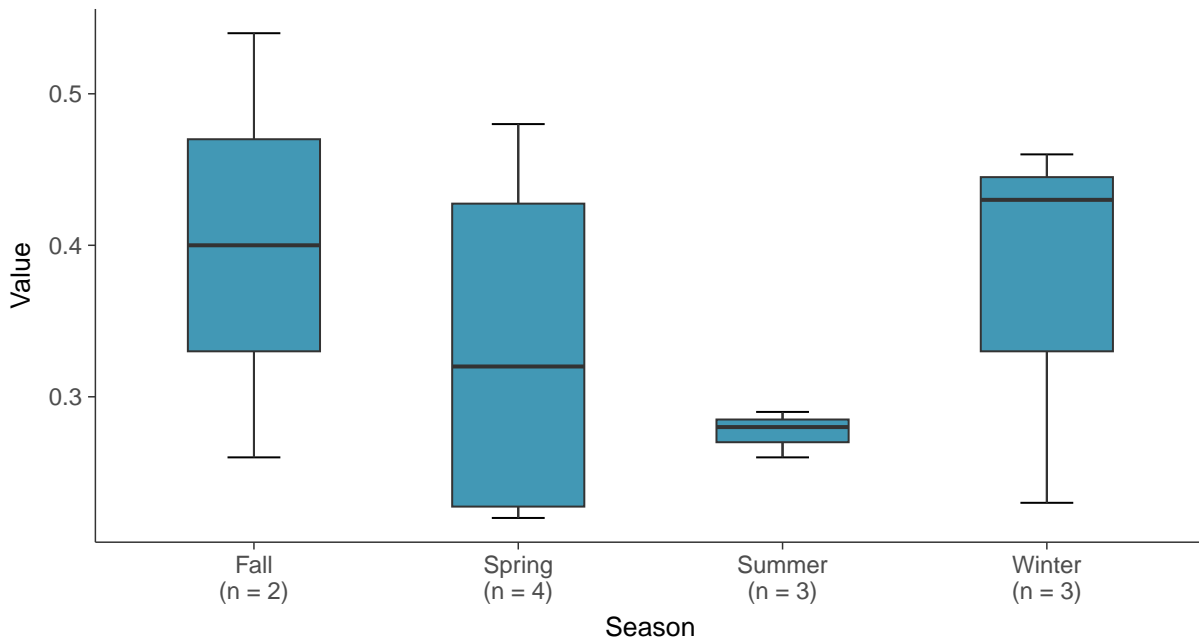
### Boxplot

Fluoride, MW-12 (mg/L)



### Boxplot by Season

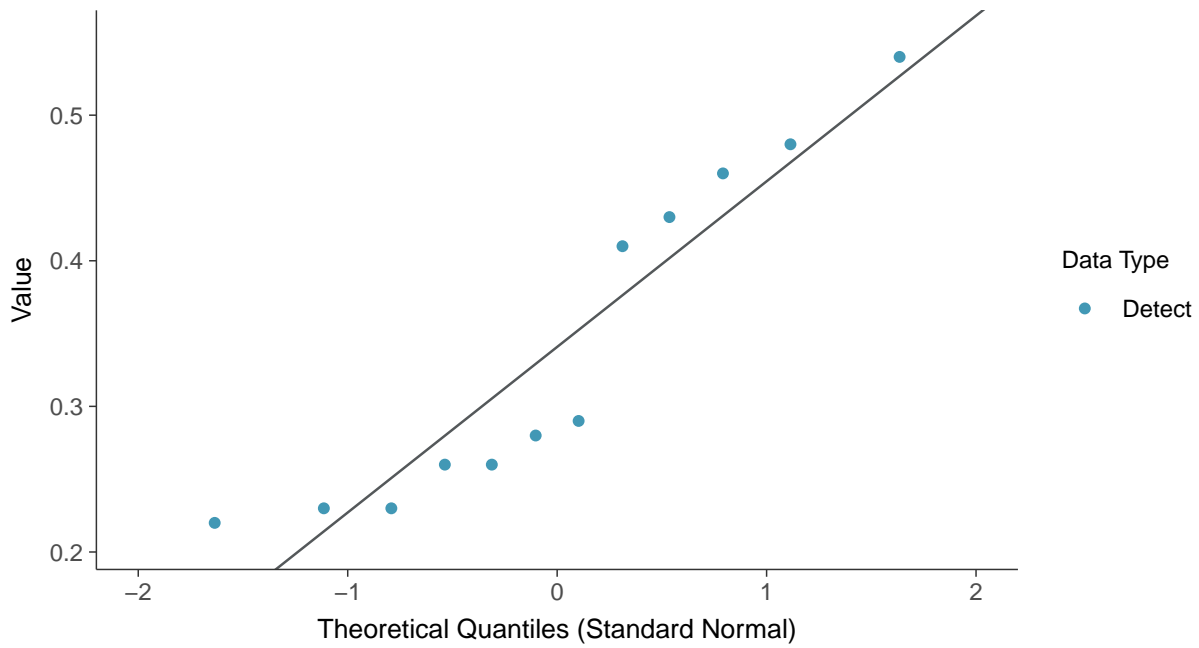
Fluoride, MW-12 (mg/L)





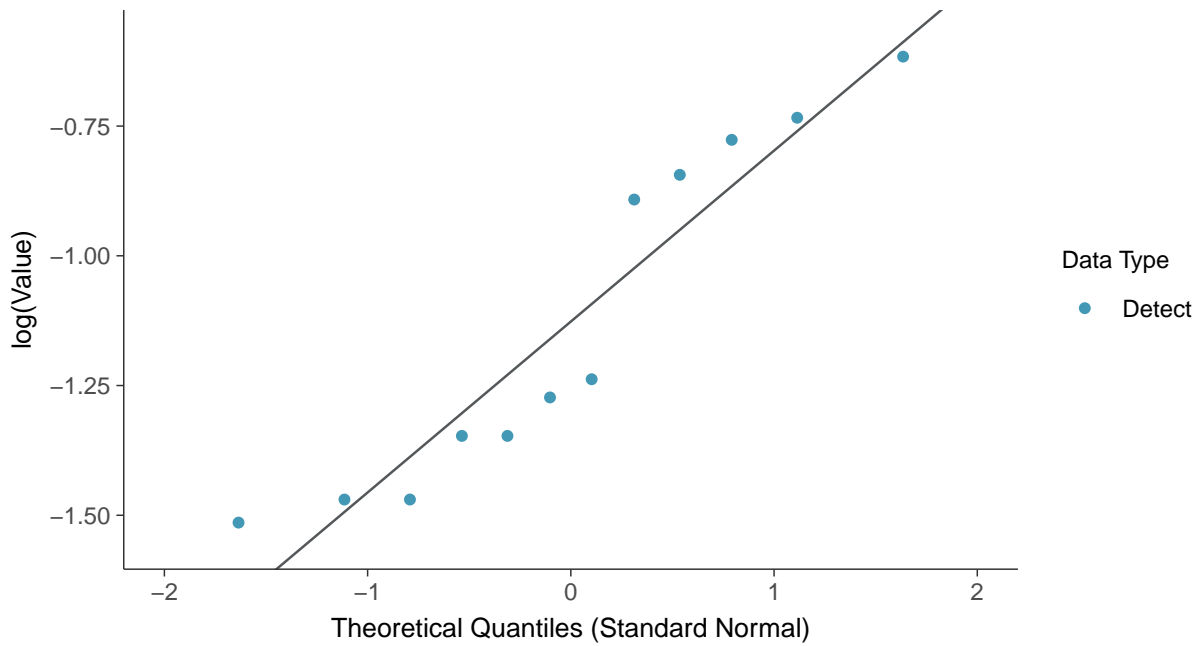
### Normal Q-Q plot

Fluoride, MW-12 (mg/L)



### Lognormal Q-Q plot

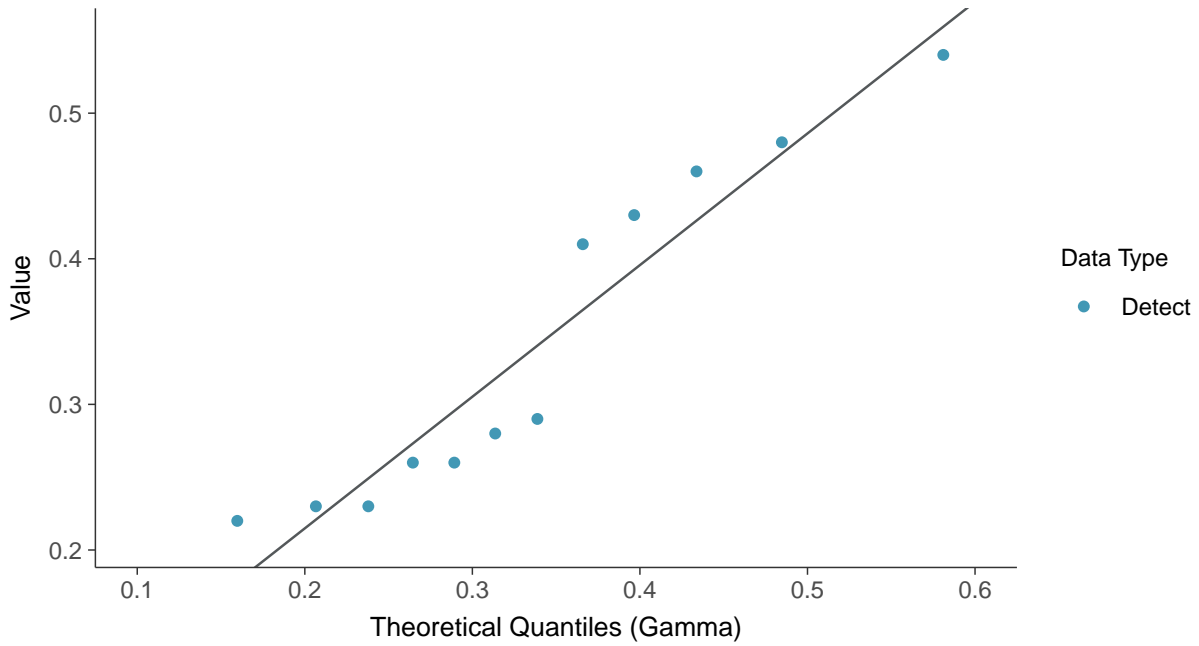
Fluoride, MW-12 (mg/L)





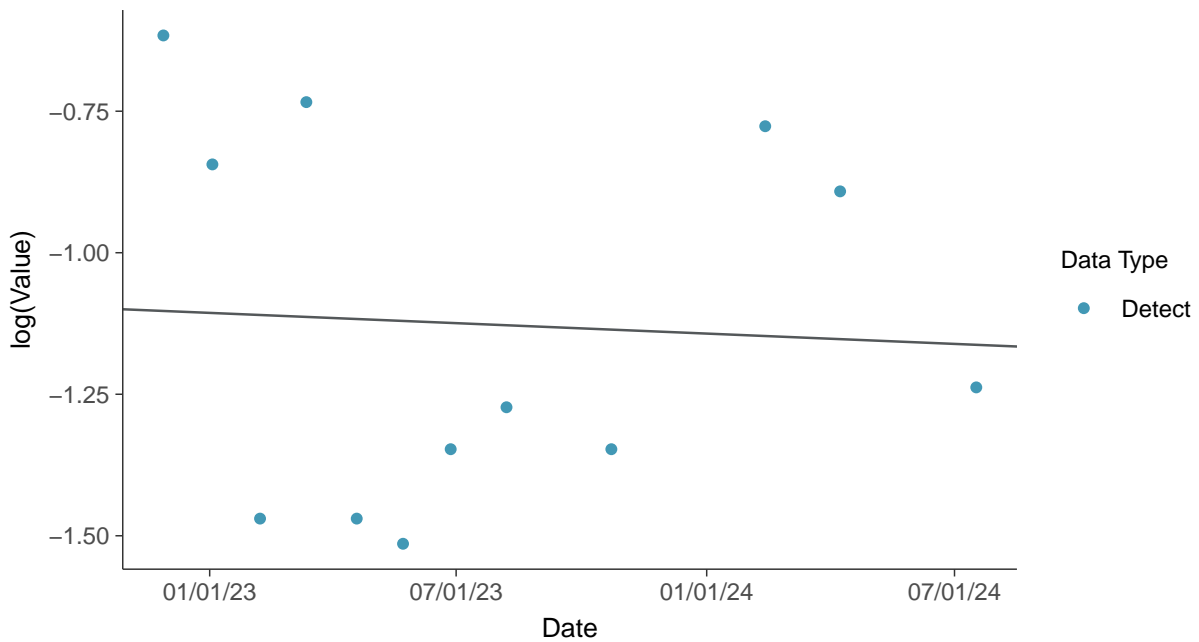
### Gamma Q-Q plot

Fluoride, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

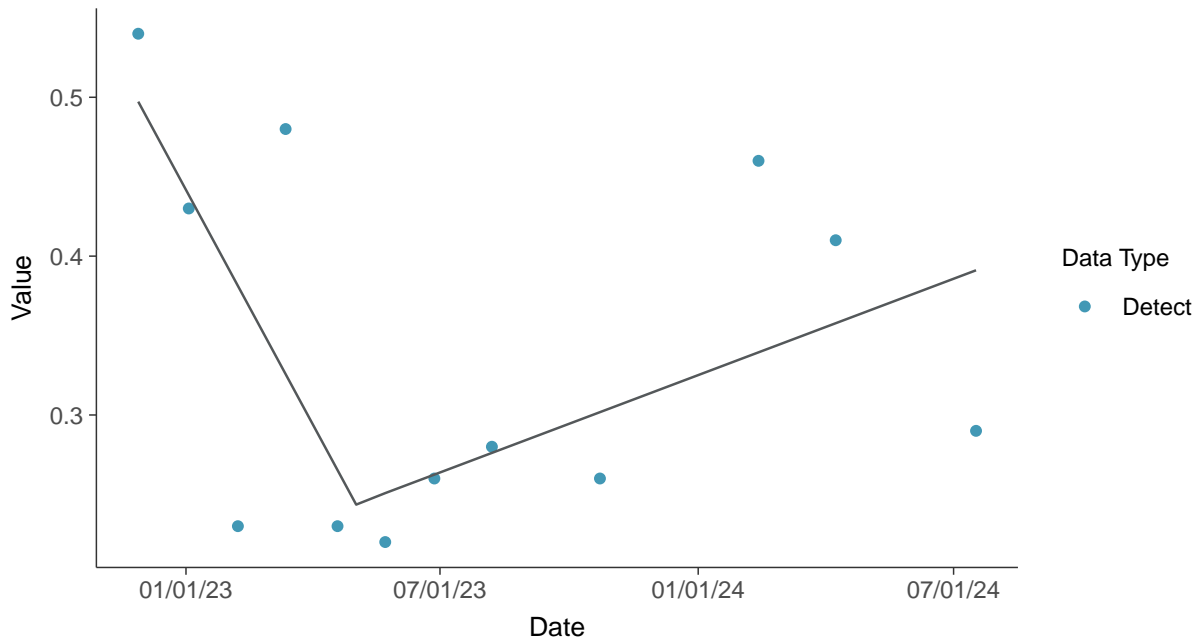
Fluoride, MW-12 (mg/L)





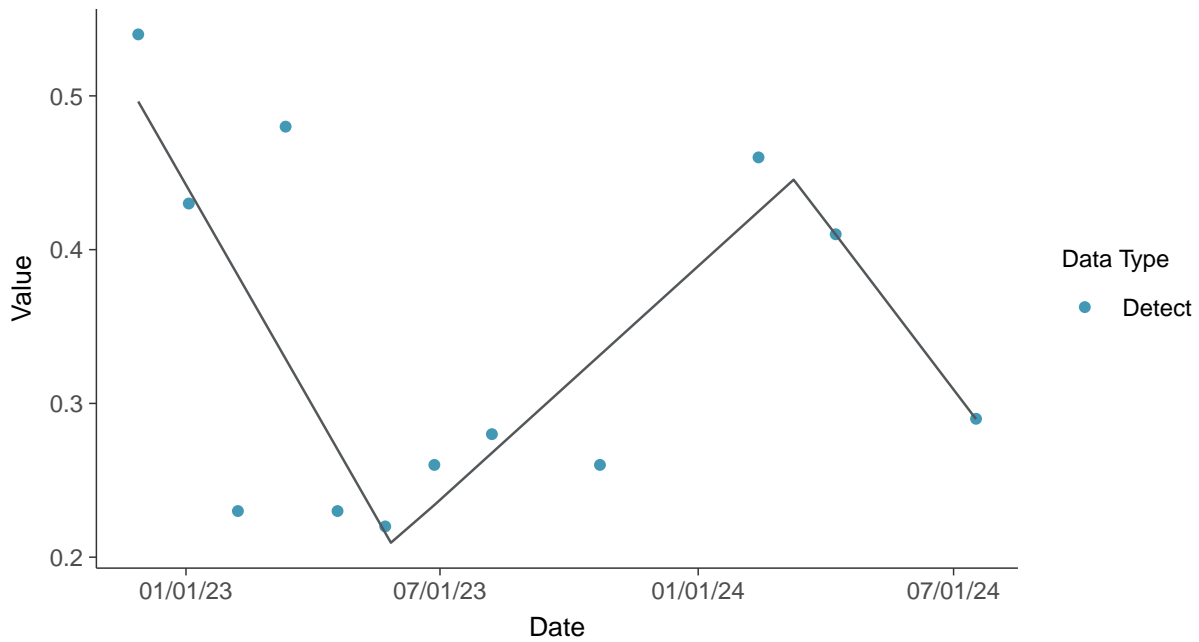
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

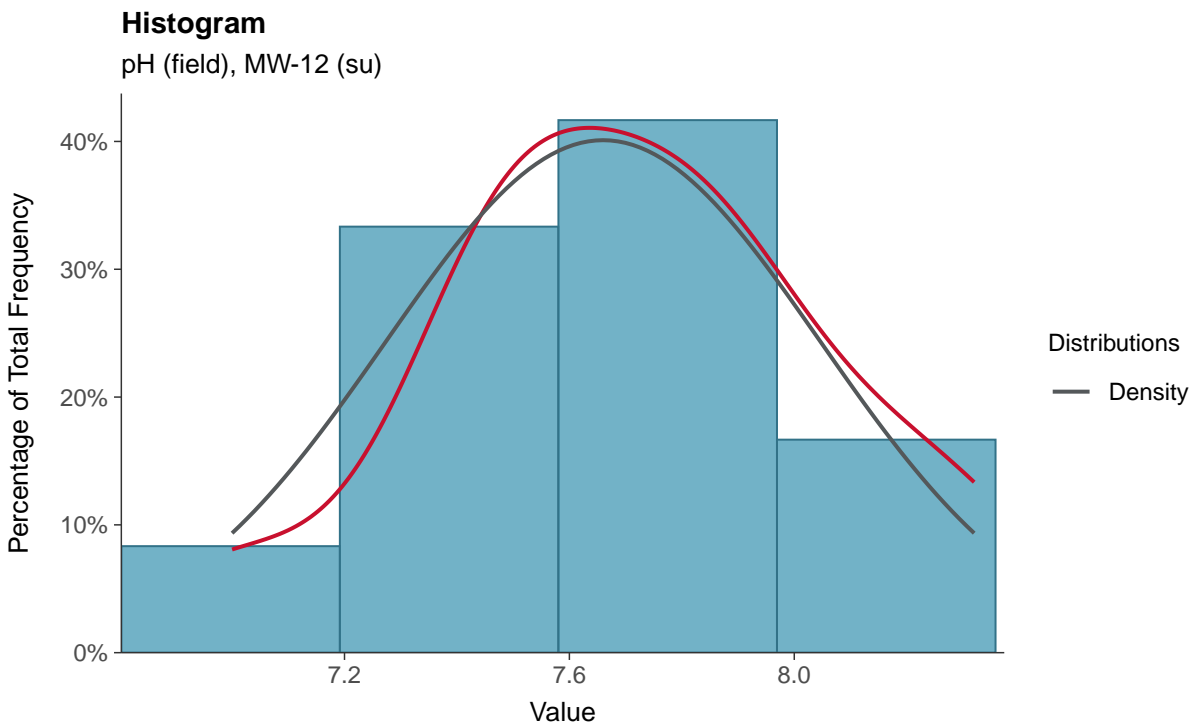
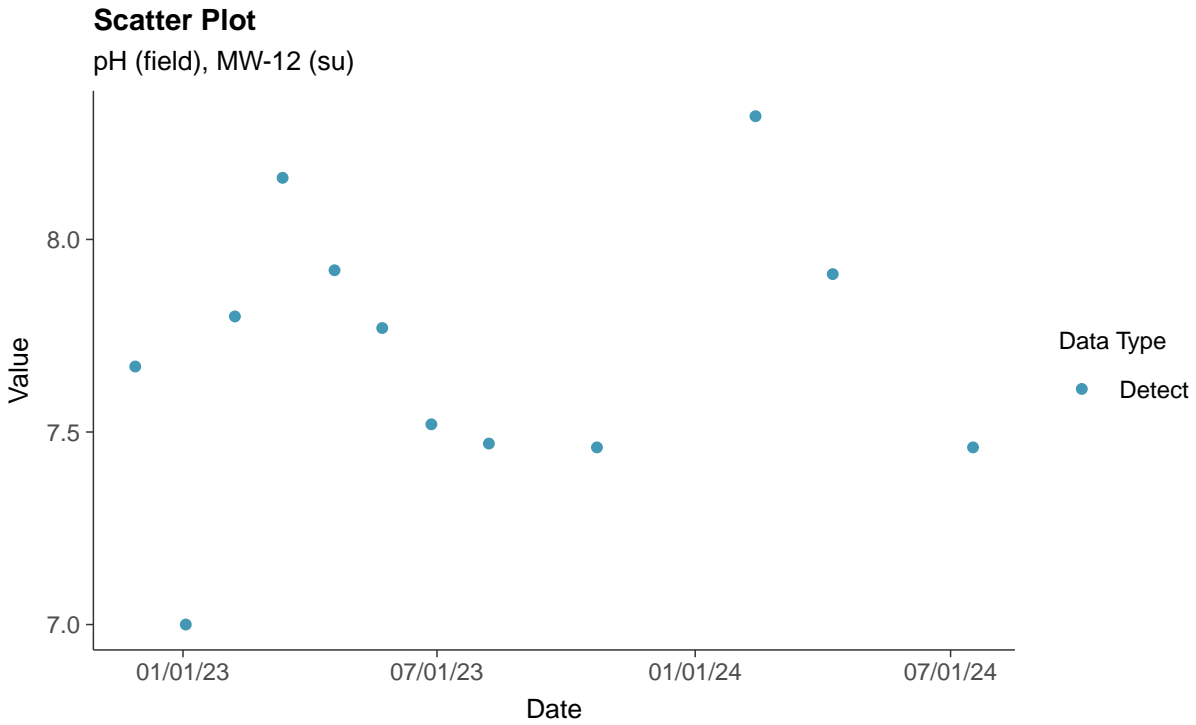
Fluoride, MW-12 (mg/L)





### Appendix III: pH (field), MW-12

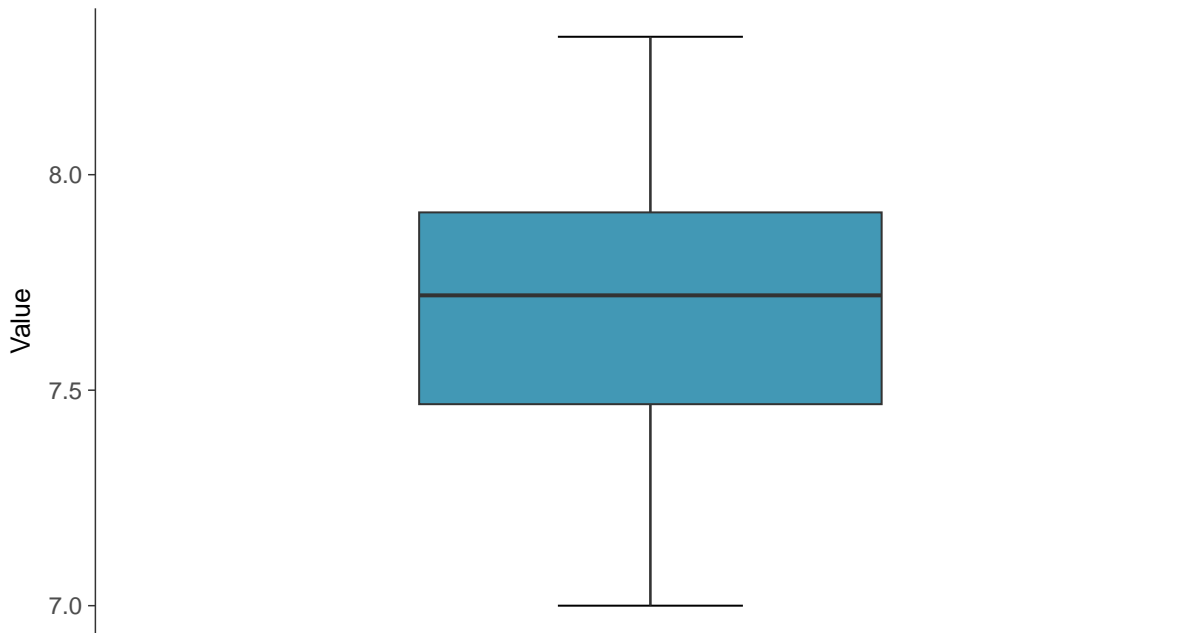
ID: 22\_2\_4\_120





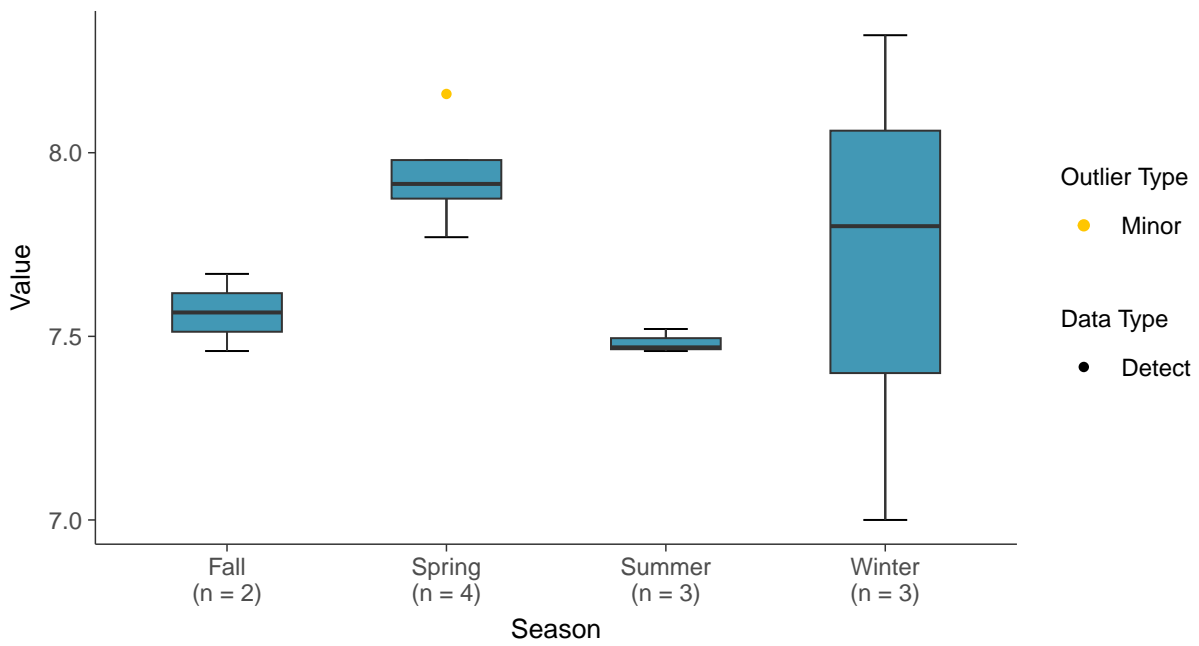
### Boxplot

pH (field), MW-12 (su)



### Boxplot by Season

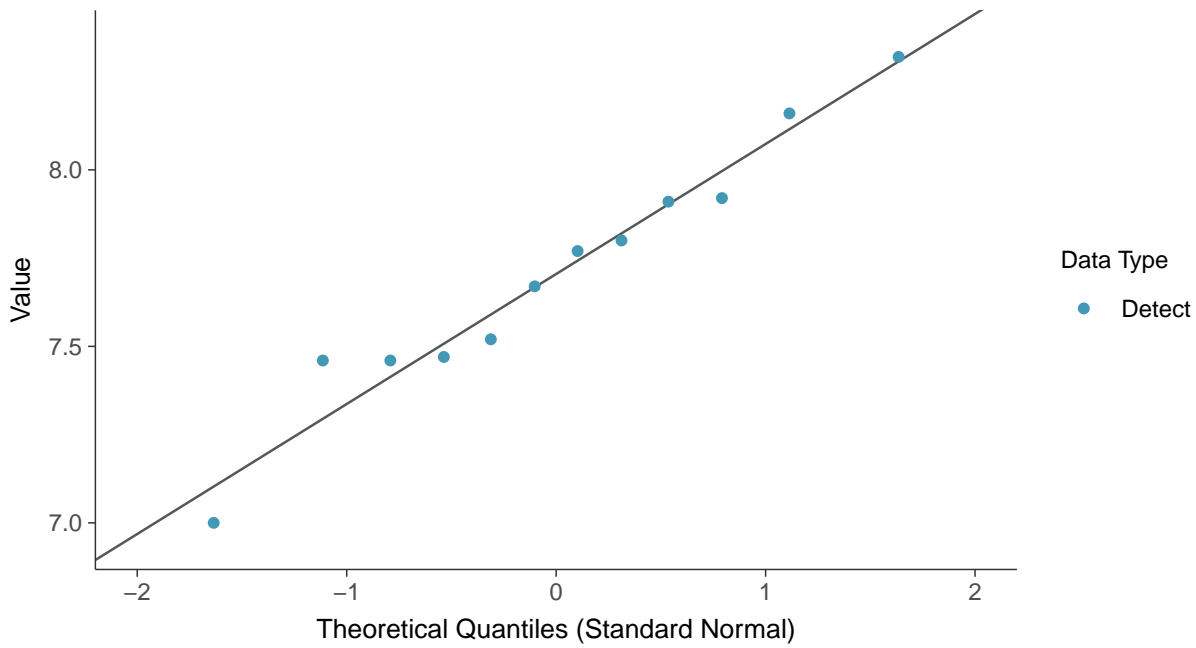
pH (field), MW-12 (su)





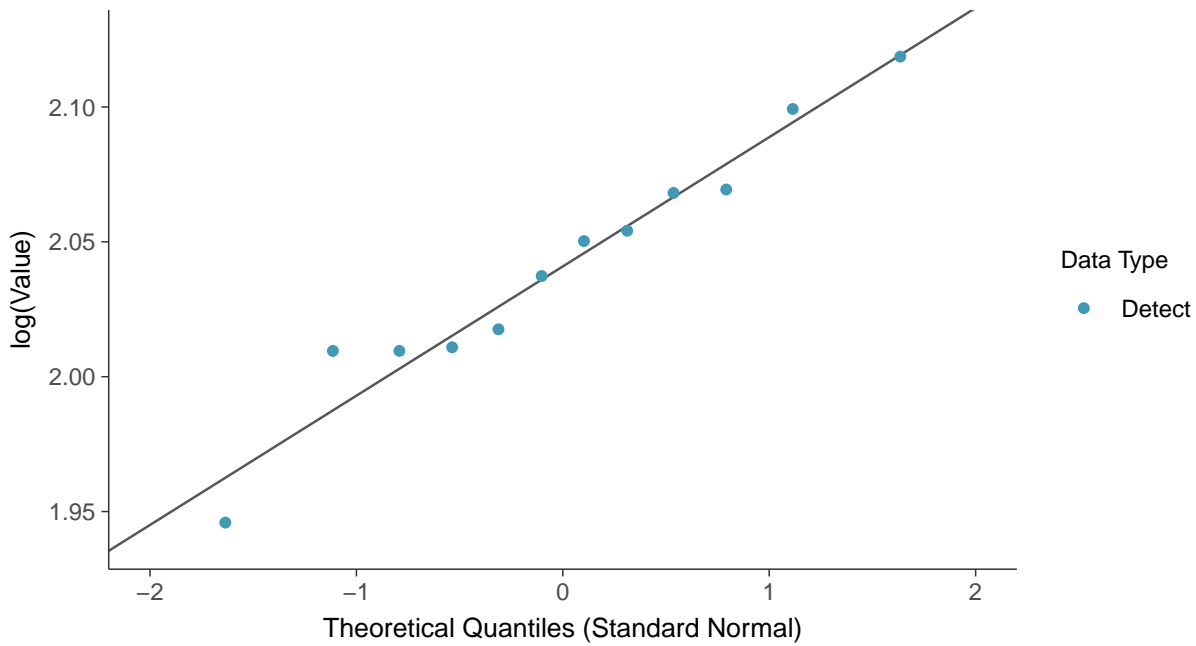
### Normal Q-Q plot

pH (field), MW-12 (su)



### Lognormal Q-Q plot

pH (field), MW-12 (su)

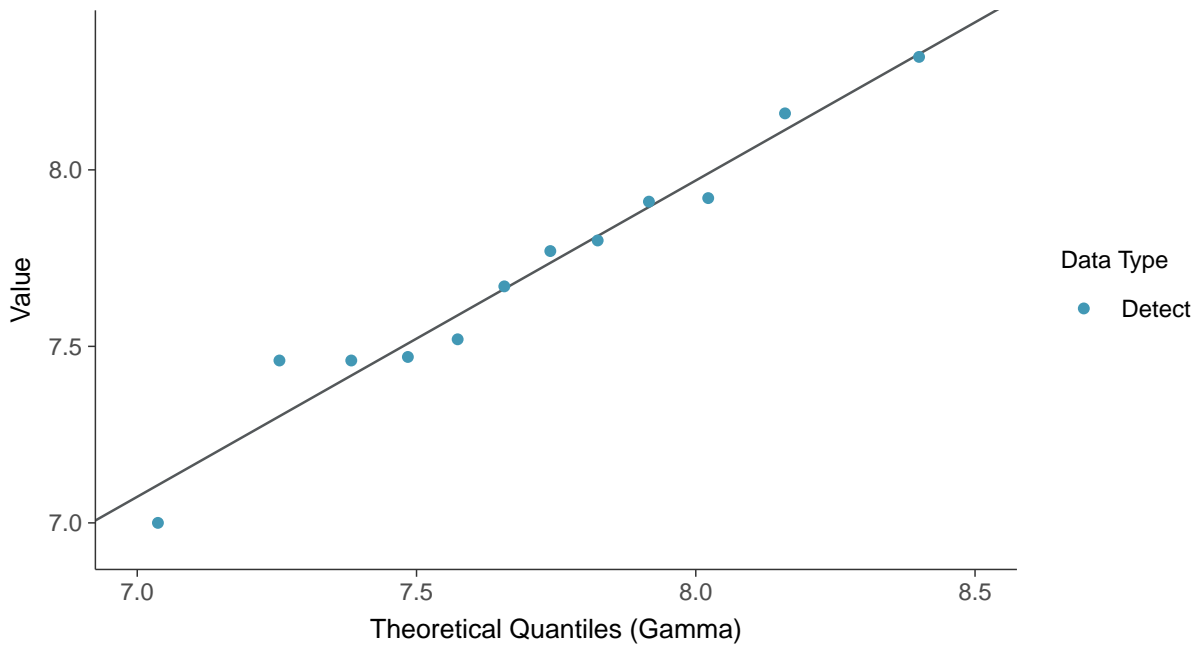






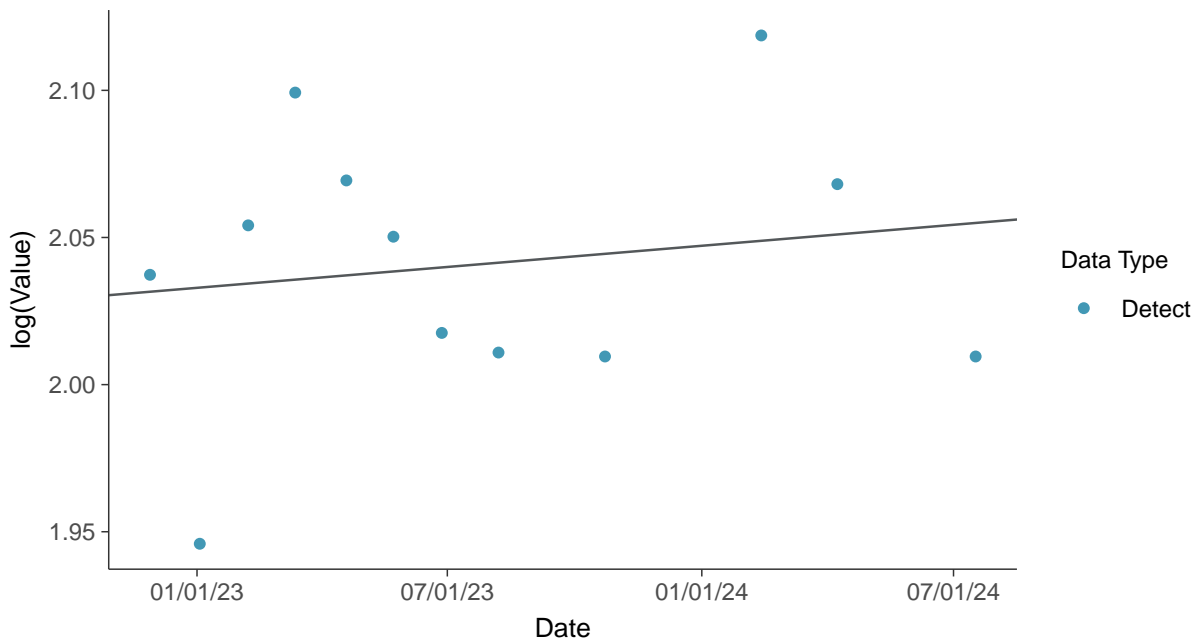
### Gamma Q-Q plot

pH (field), MW-12 (su)



### Trend Regression: Lognormal MLE

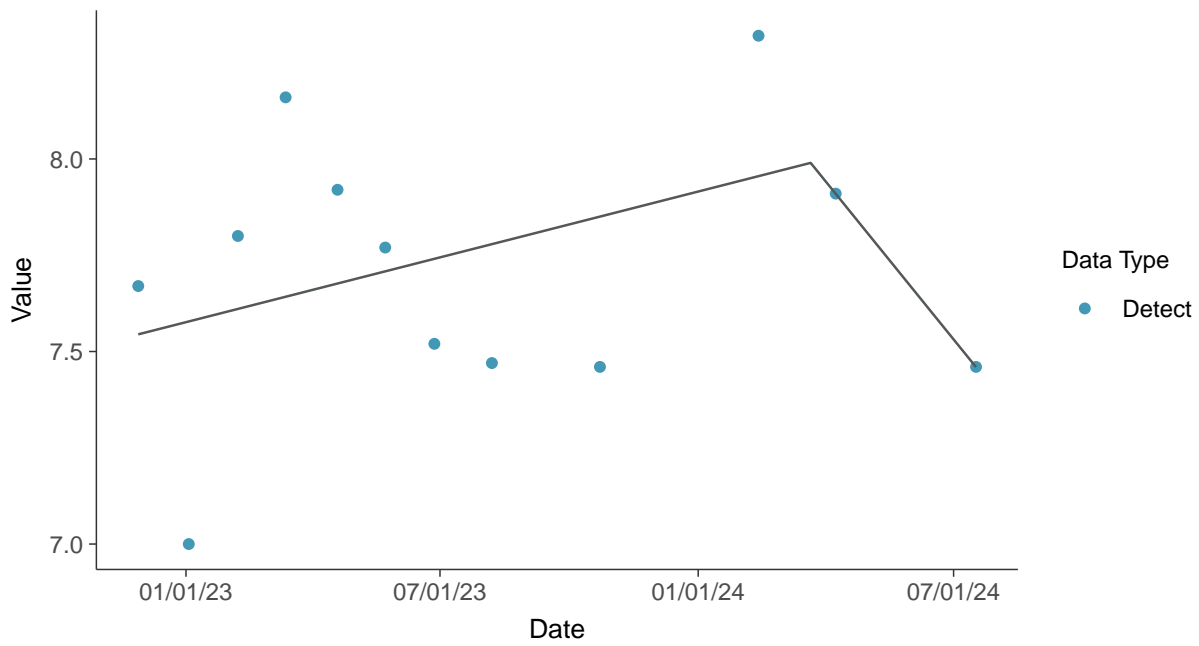
pH (field), MW-12 (su)





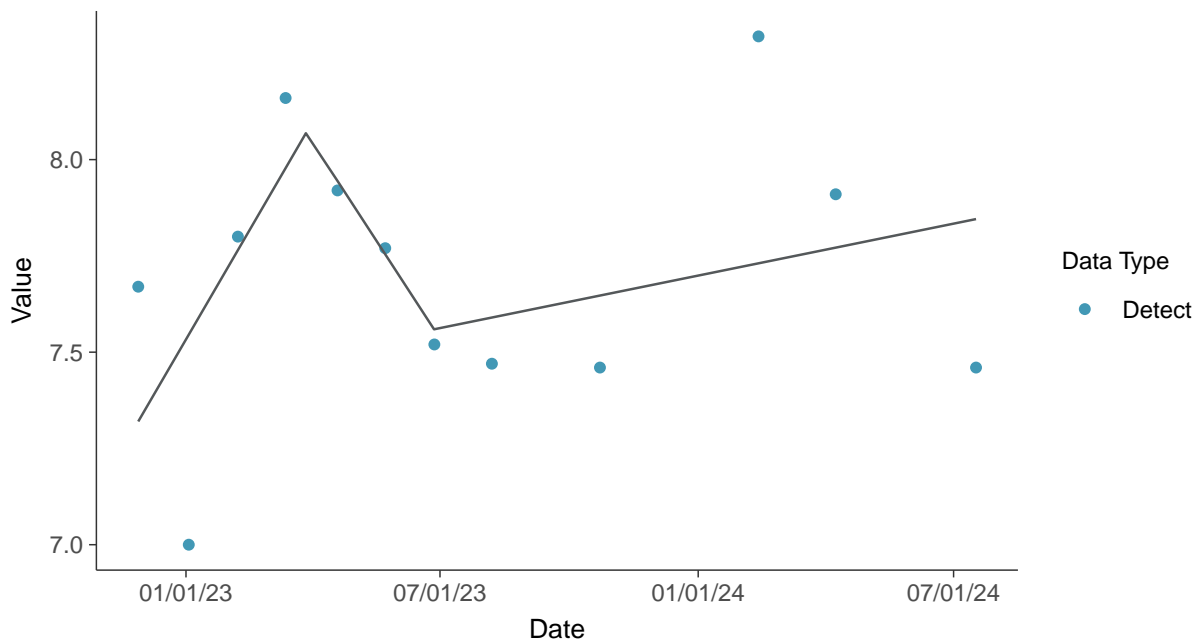
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-12 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-12 (su)



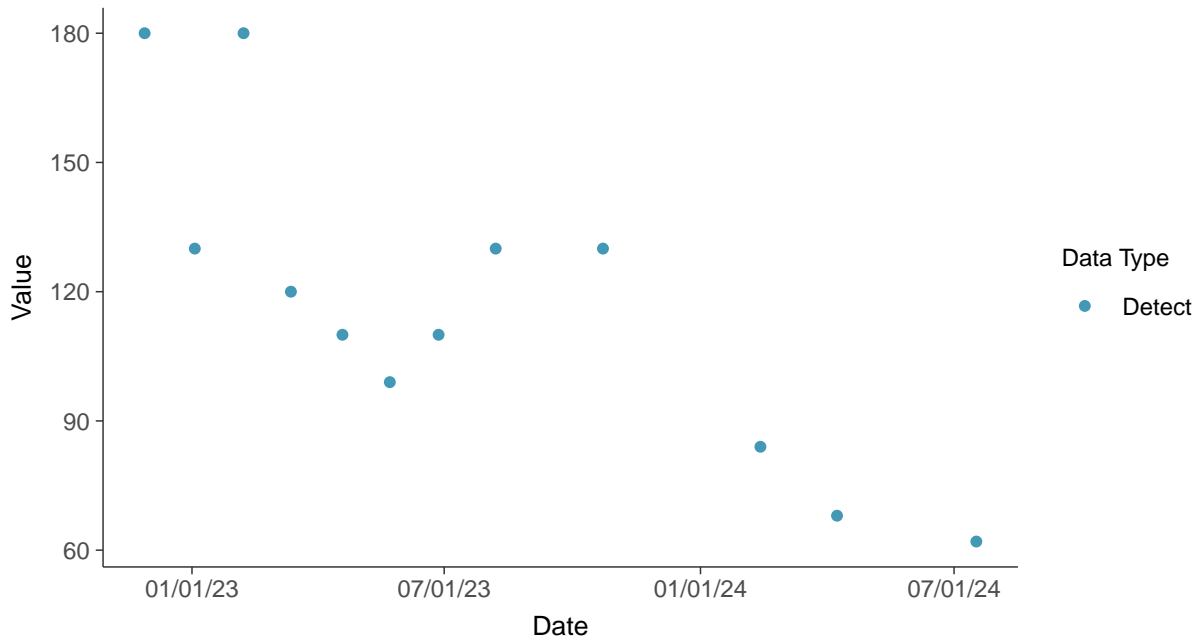


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-12

ID: 22\_2\_4\_124

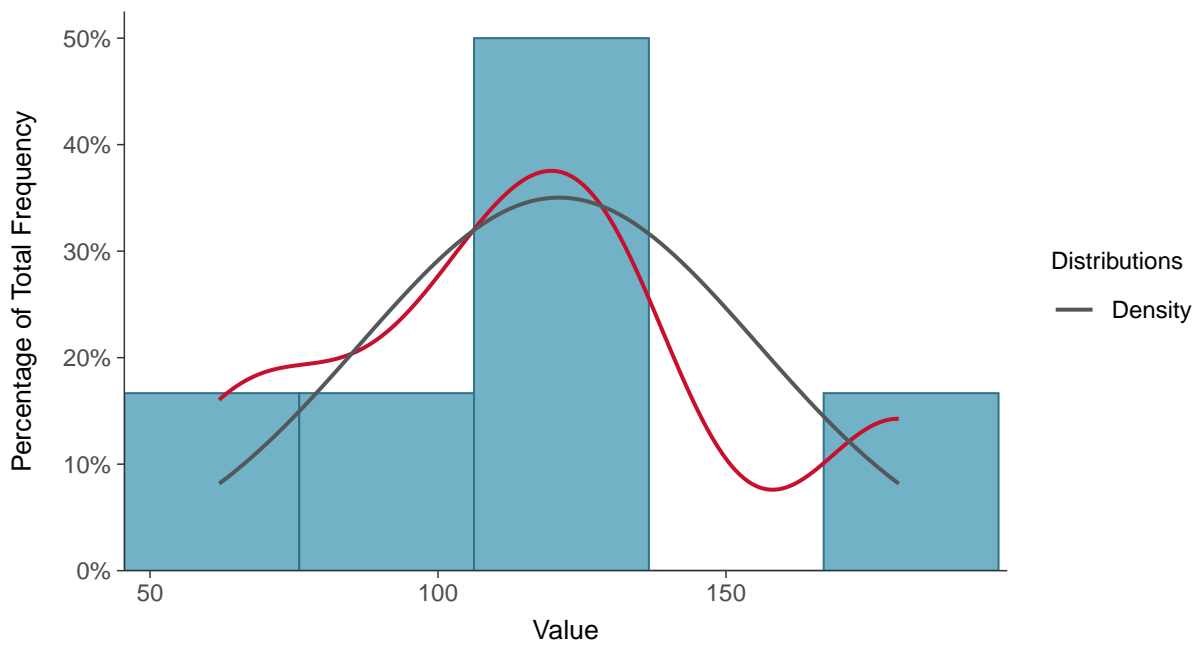
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



#### Histogram

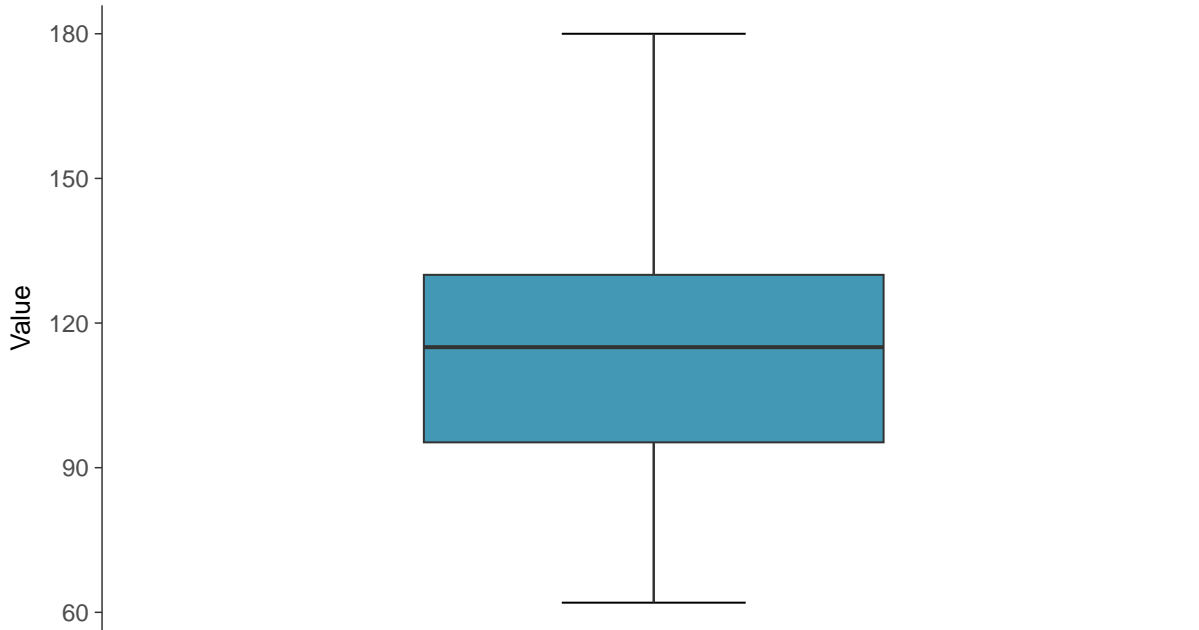
Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)





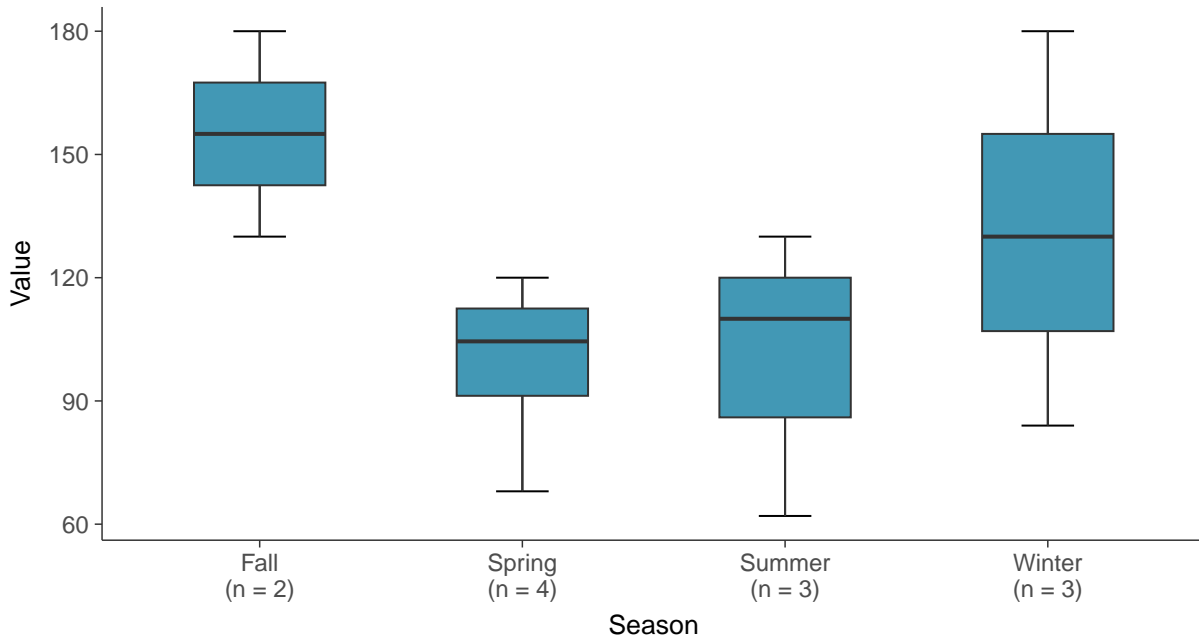
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



### Boxplot by Season

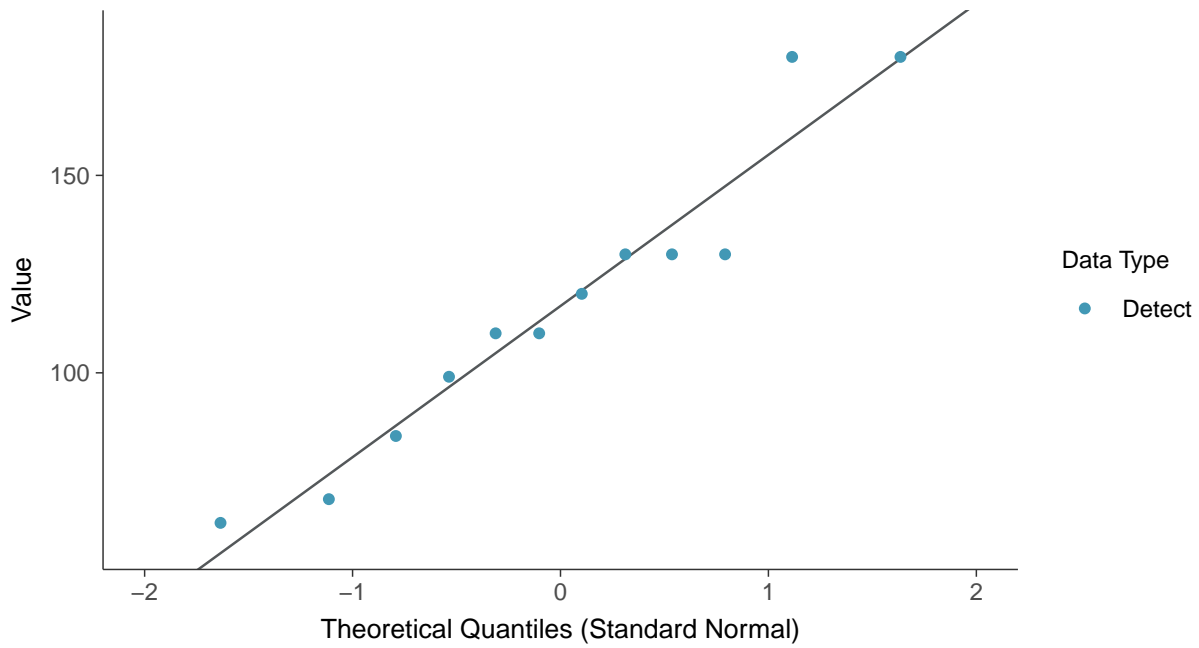
Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)





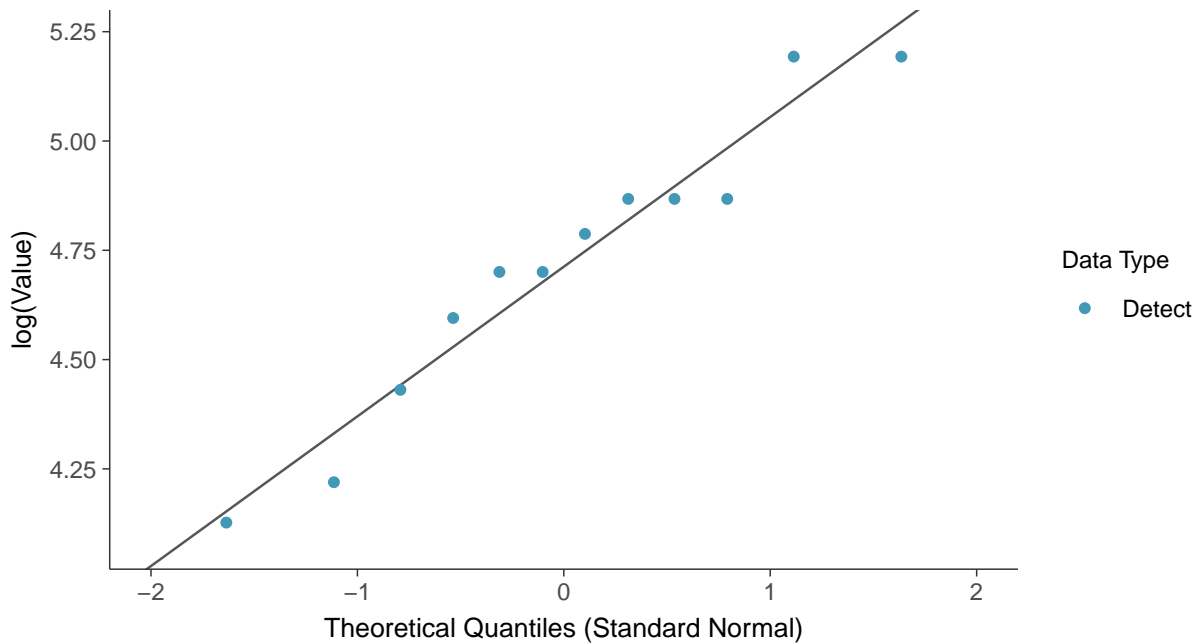
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



### Lognormal Q-Q plot

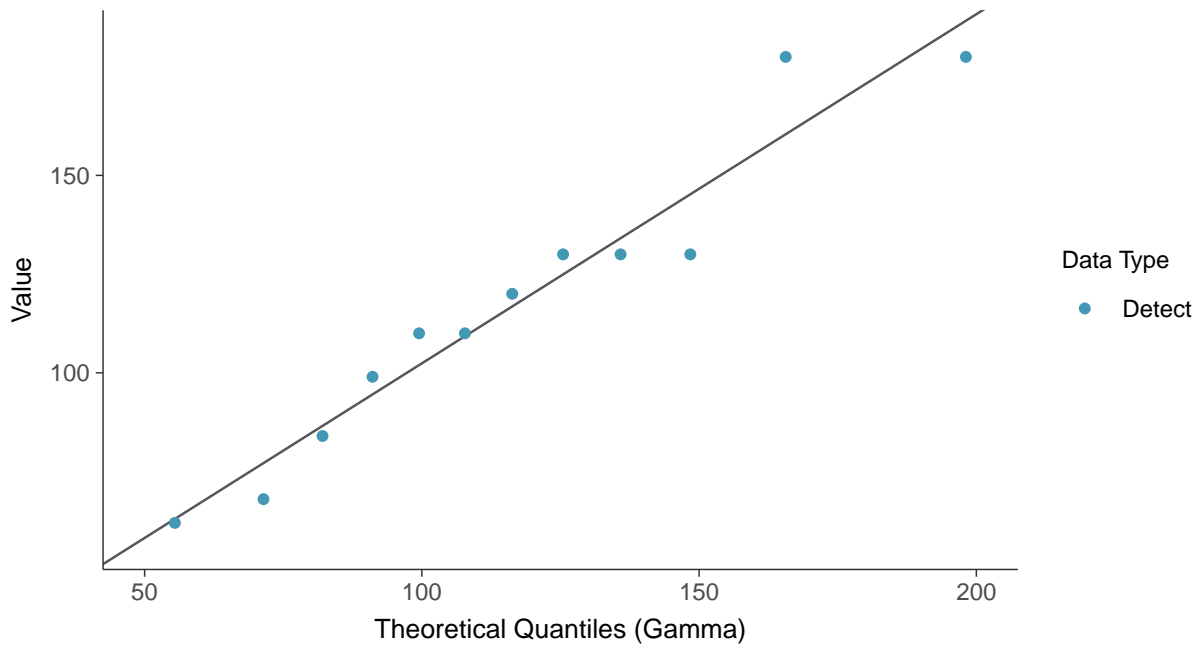
Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)





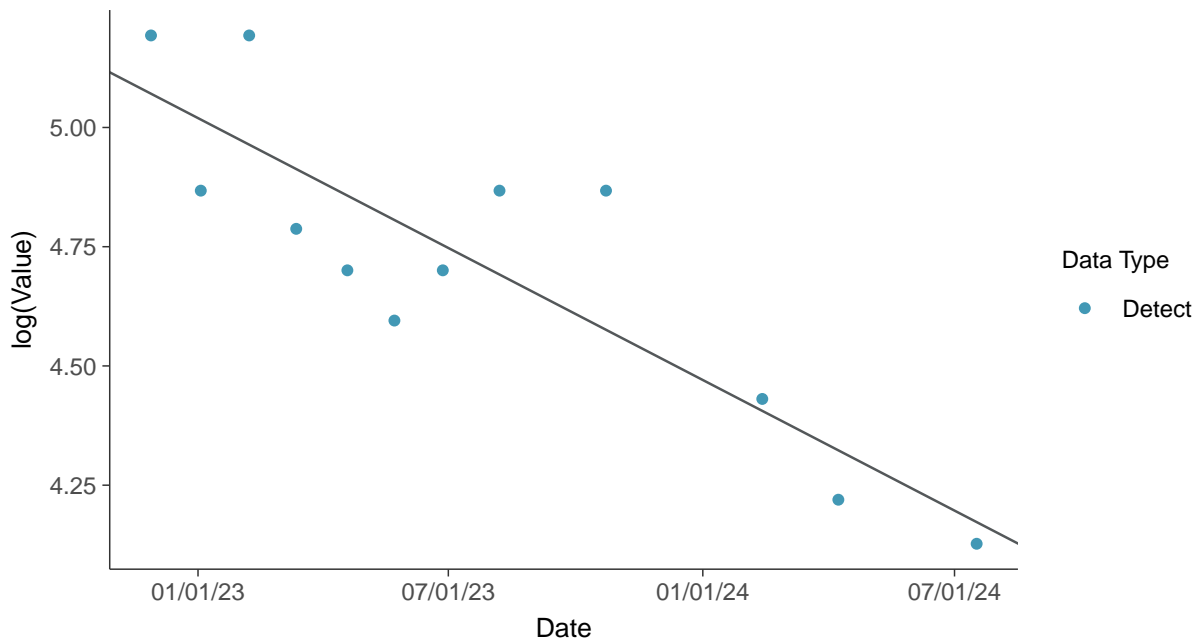
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



### Trend Regression: Lognormal MLE

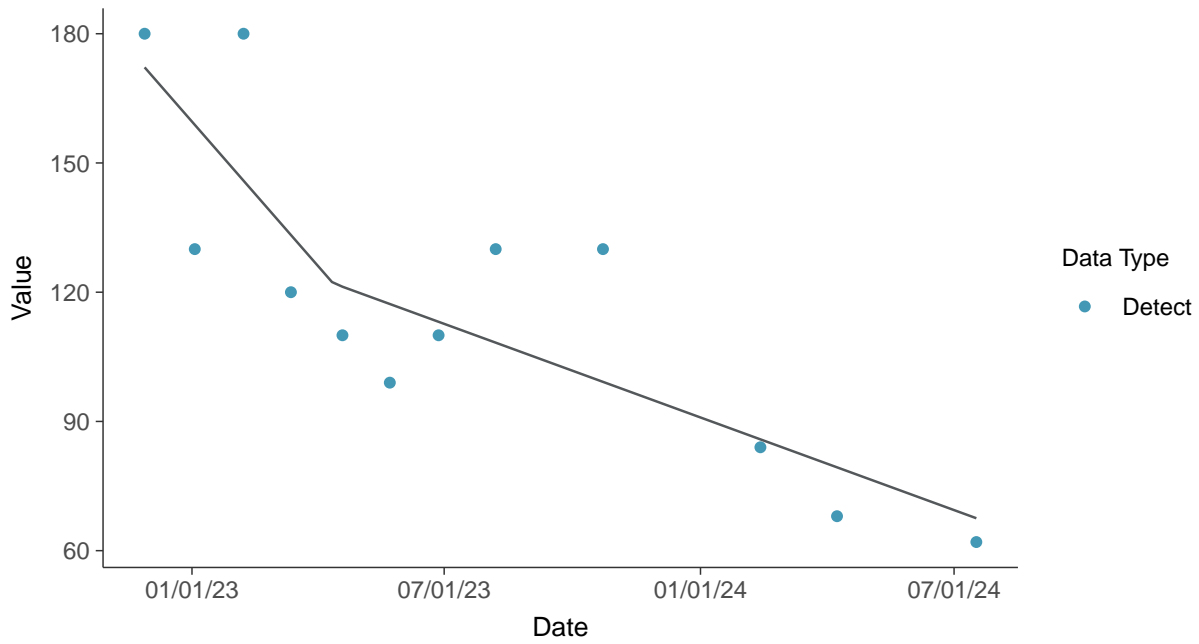
Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)





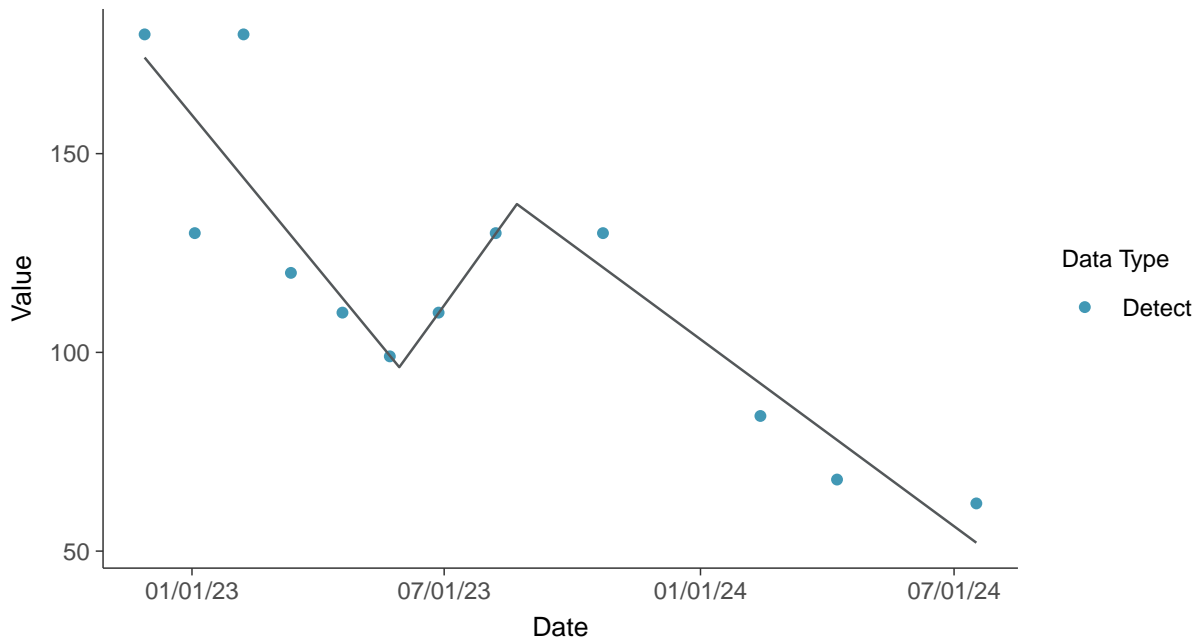
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-12 (mg/L)



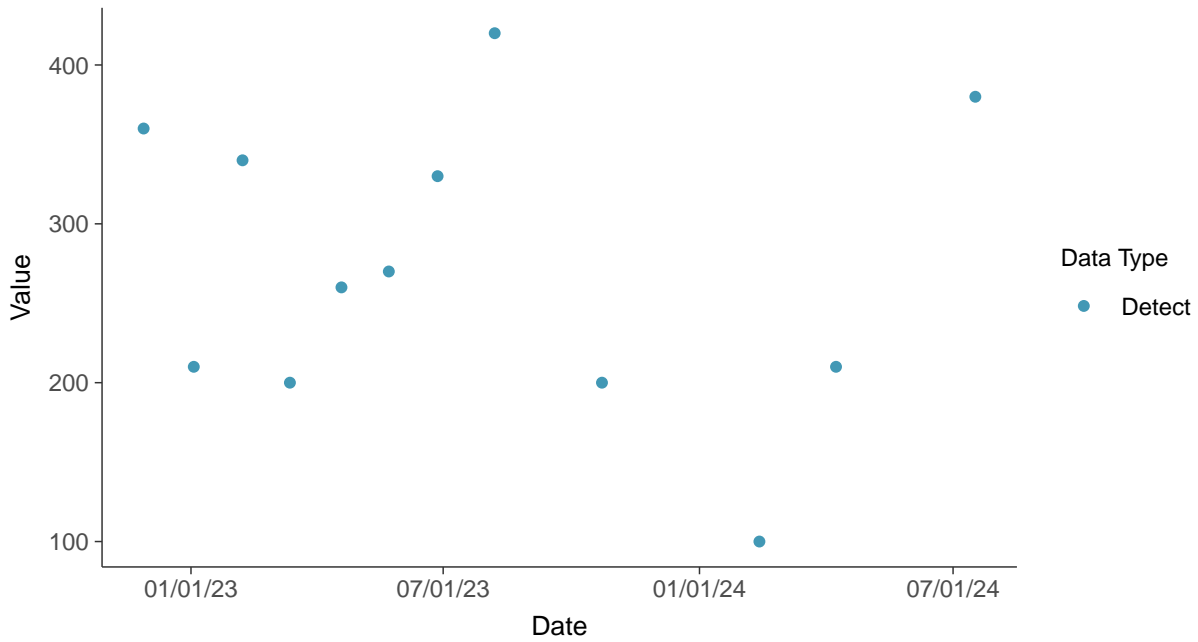


### Appendix III: Total Dissolved Solids, MW-12

ID: 22\_2\_4\_126

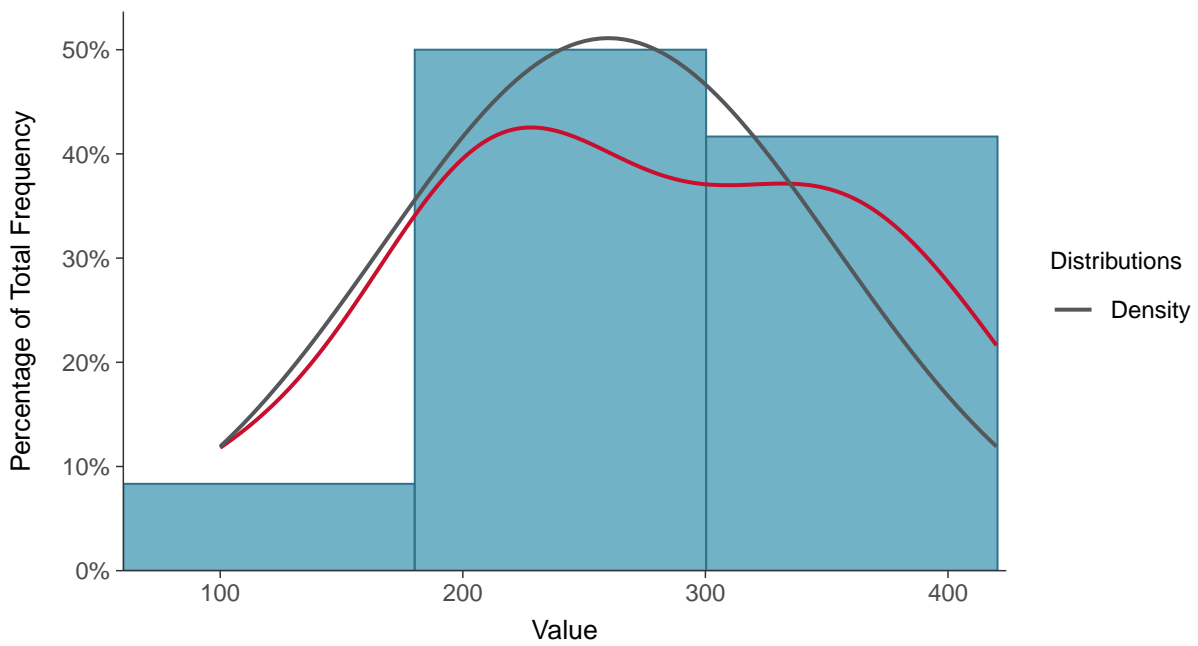
#### Scatter Plot

Total Dissolved Solids, MW-12 (mg/L)



#### Histogram

Total Dissolved Solids, MW-12 (mg/L)

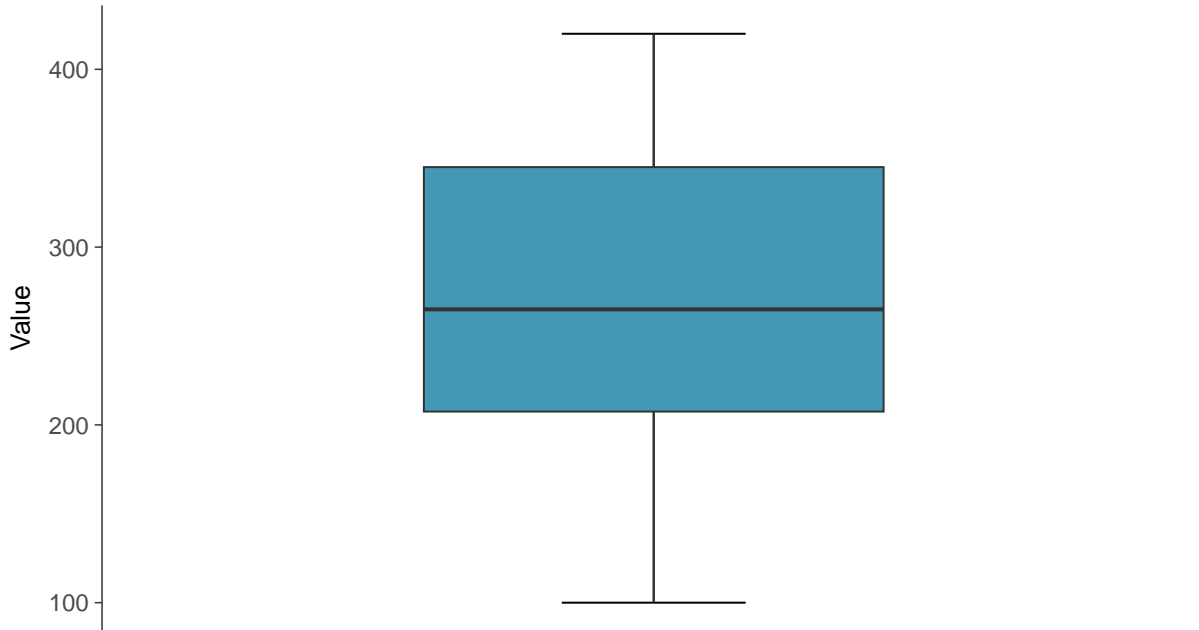






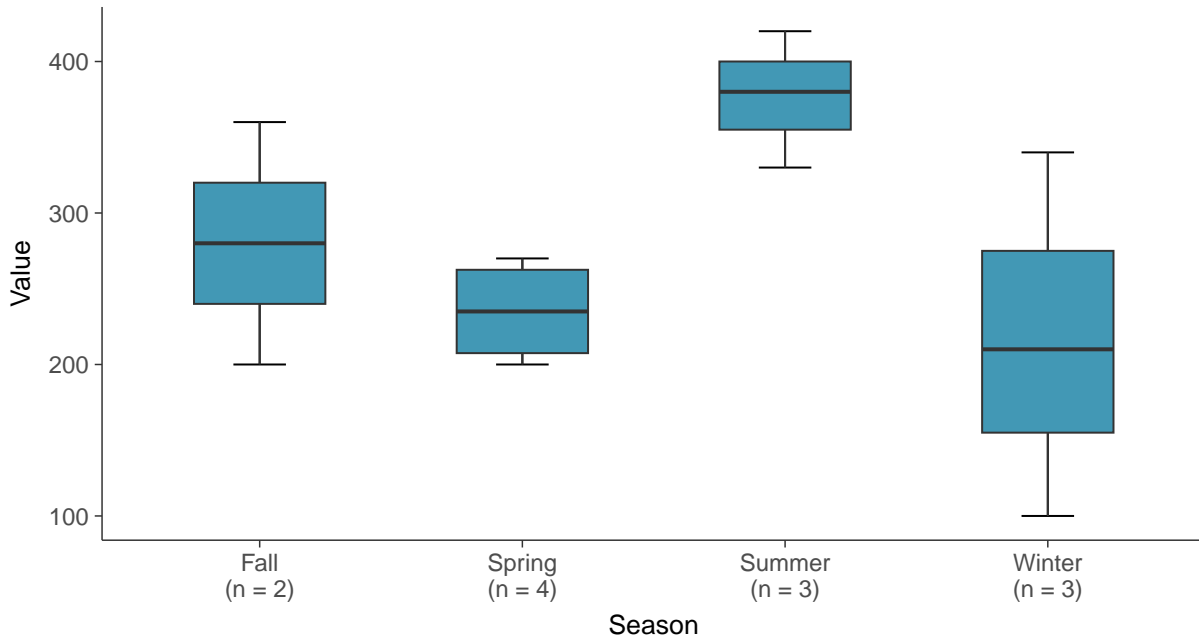
### Boxplot

Total Dissolved Solids, MW-12 (mg/L)



### Boxplot by Season

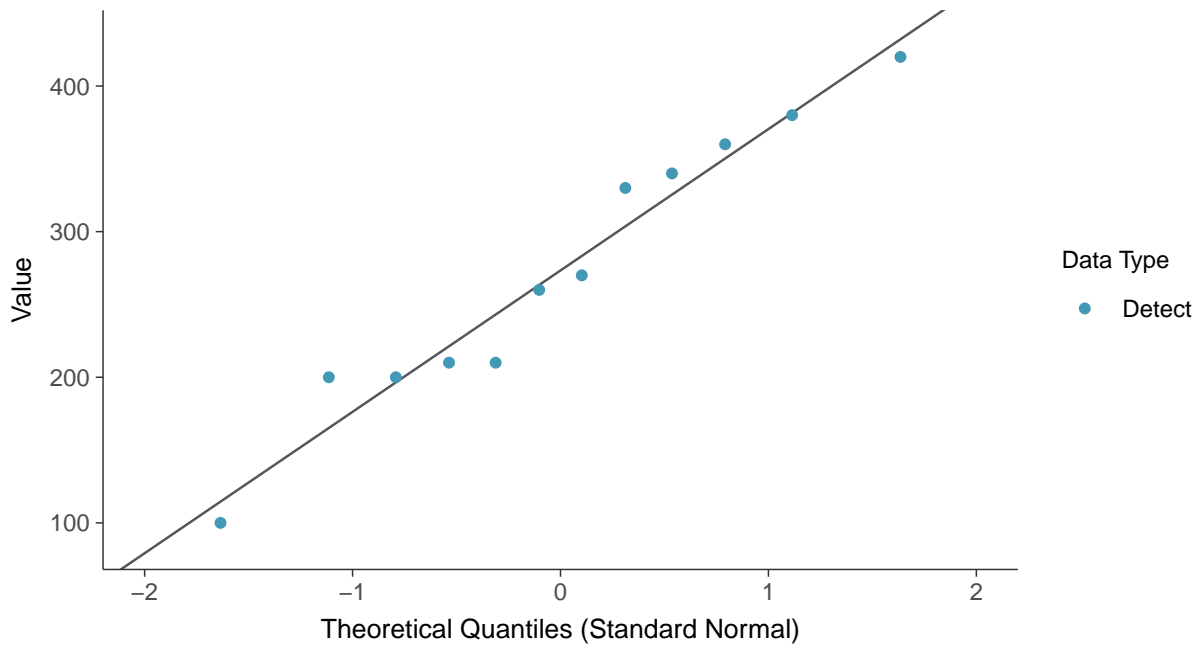
Total Dissolved Solids, MW-12 (mg/L)





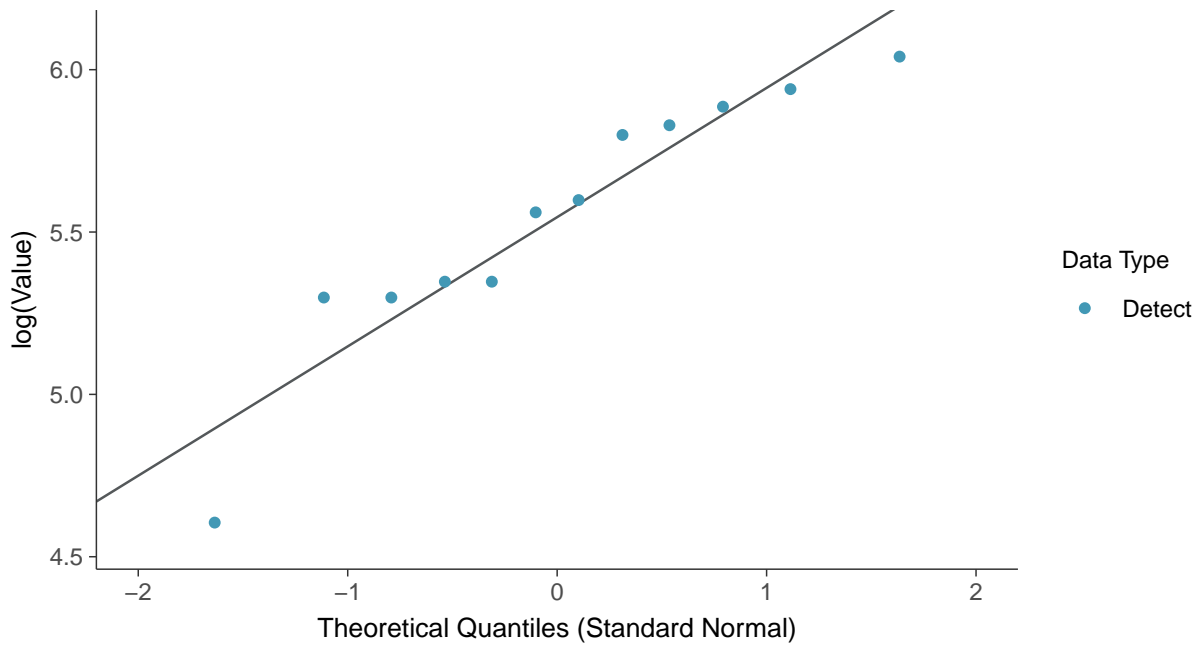
### Normal Q-Q plot

Total Dissolved Solids, MW-12 (mg/L)



### Lognormal Q-Q plot

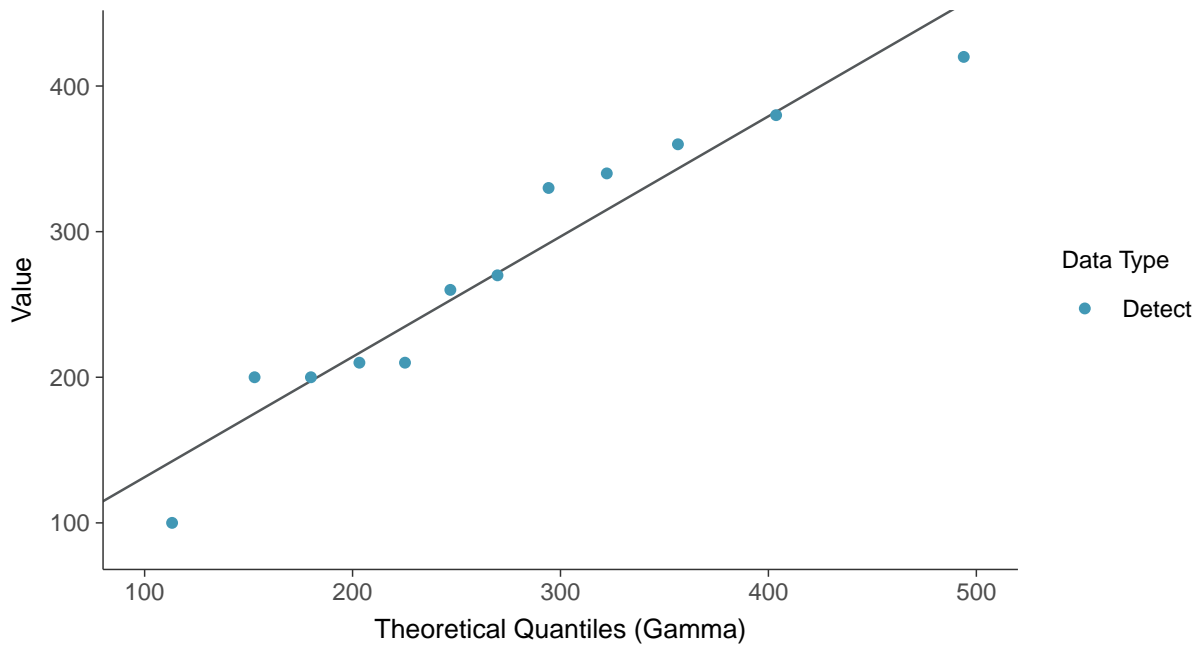
Total Dissolved Solids, MW-12 (mg/L)





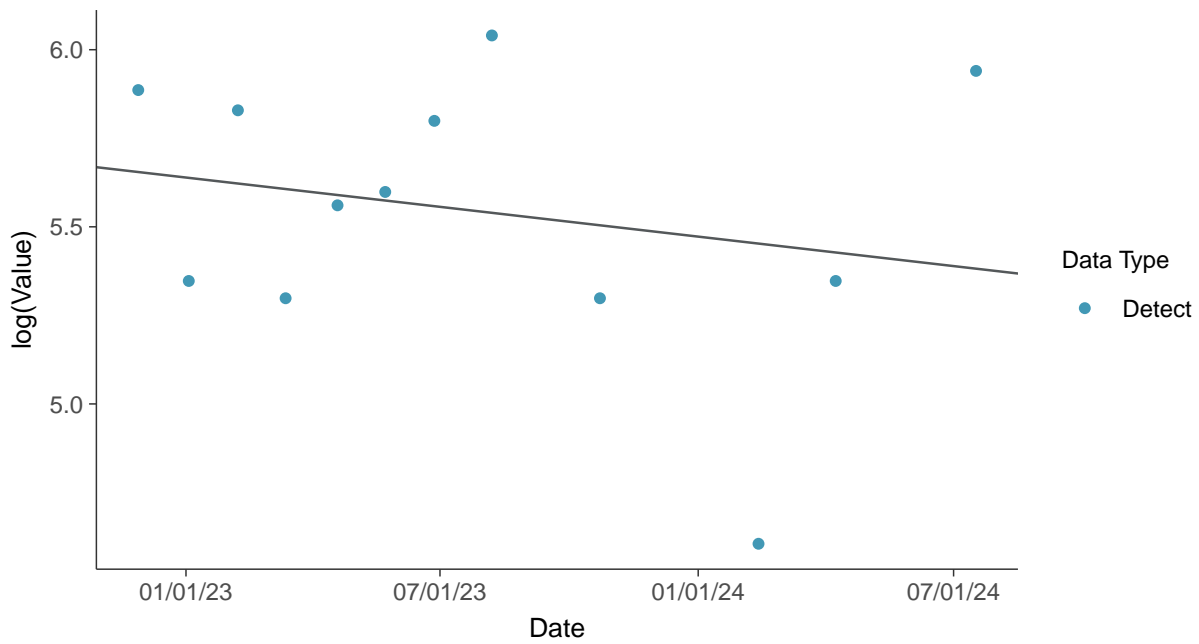
### Gamma Q-Q plot

Total Dissolved Solids, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

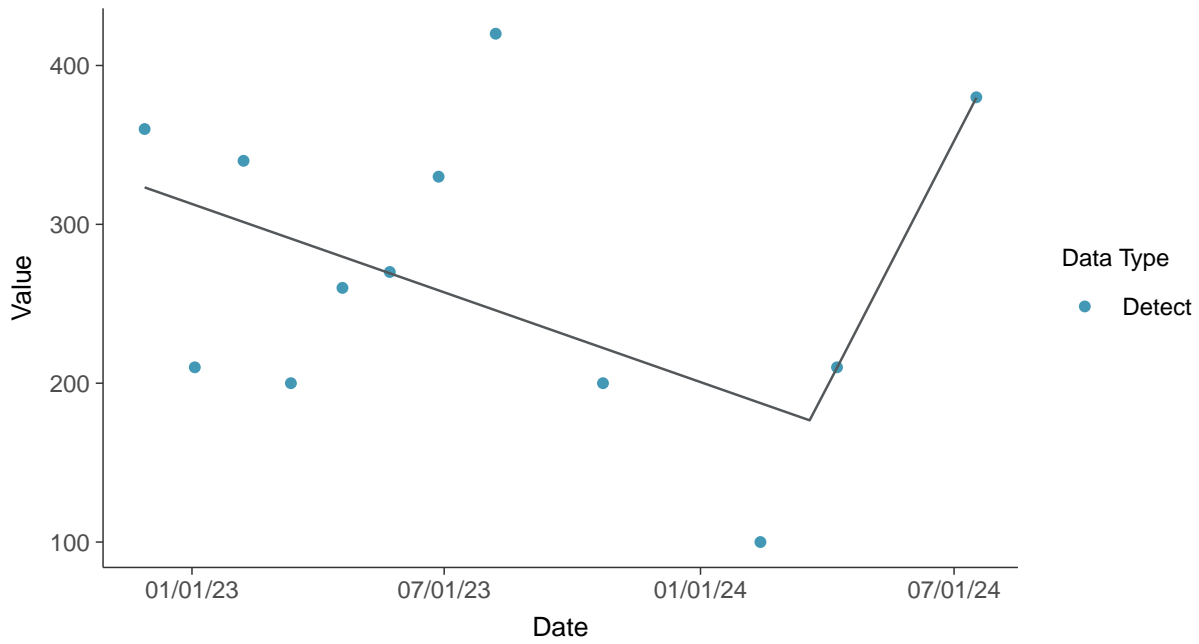
Total Dissolved Solids, MW-12 (mg/L)





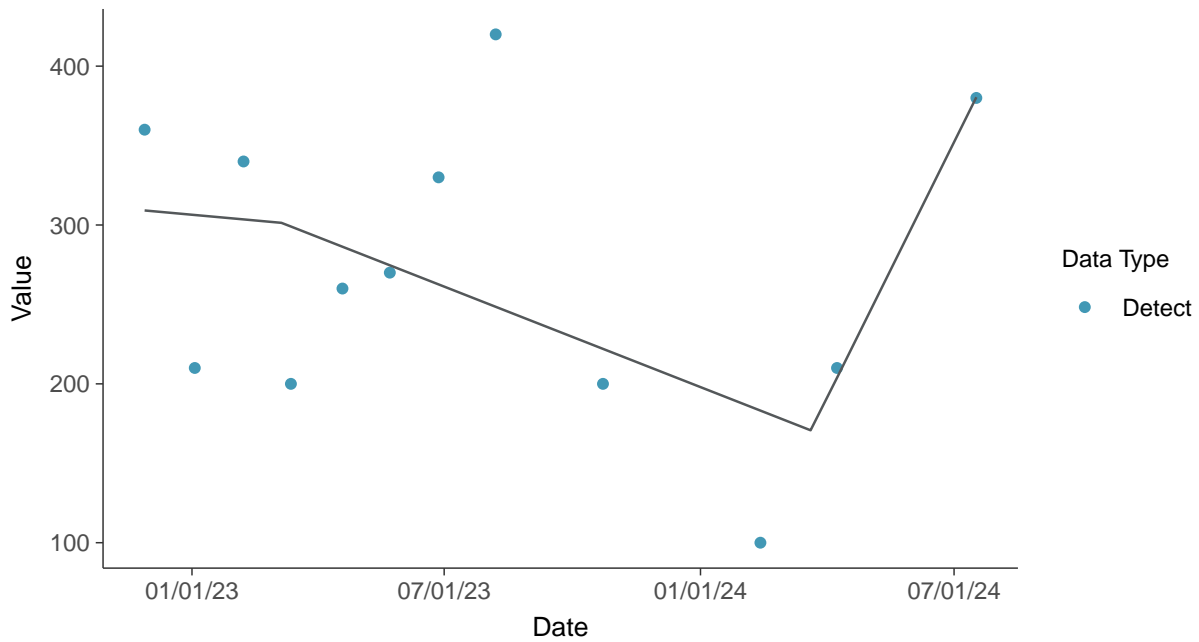
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

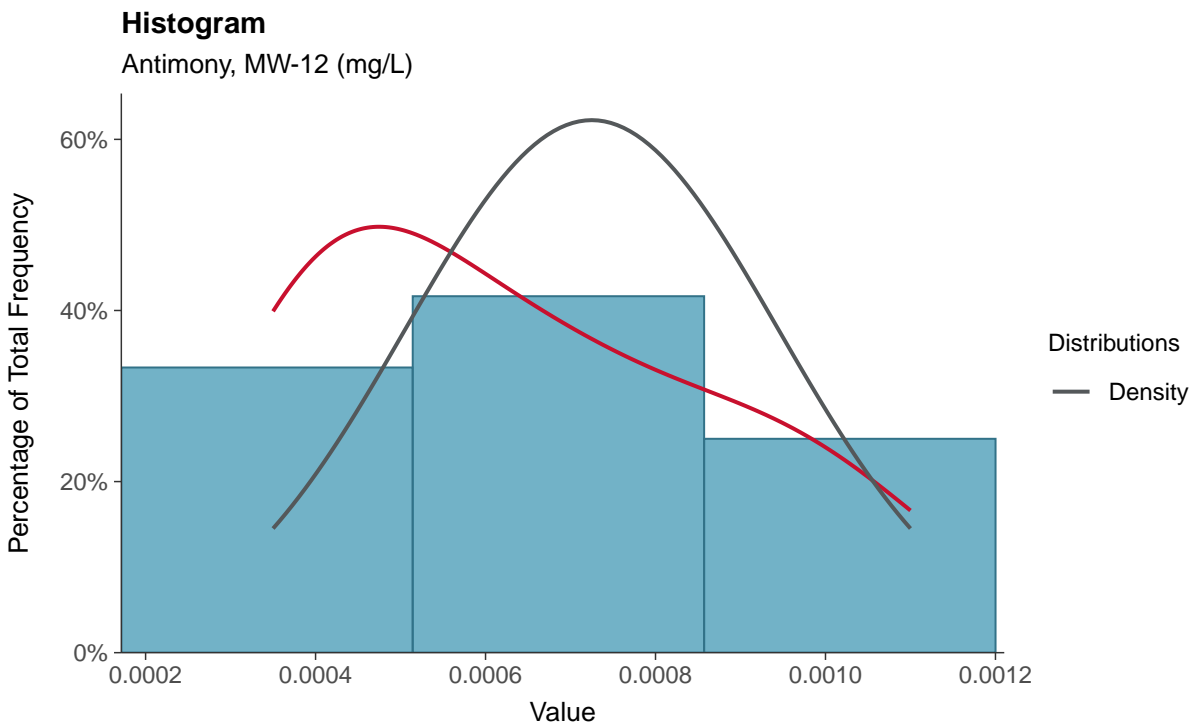
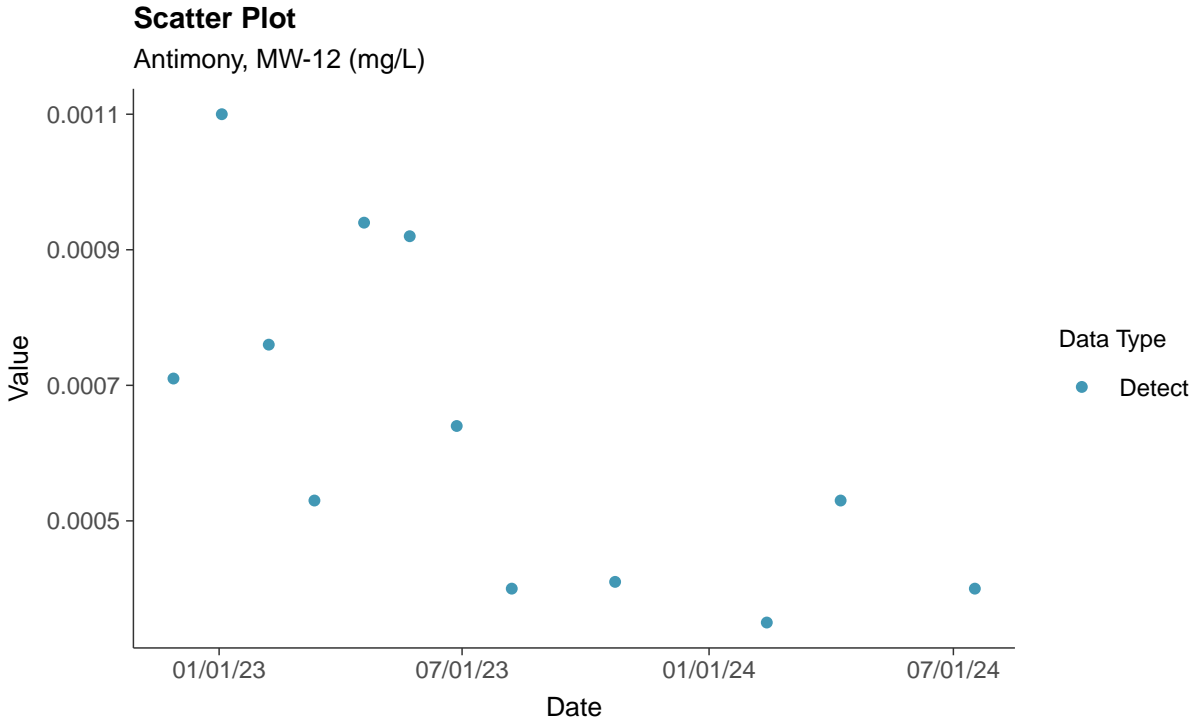
Total Dissolved Solids, MW-12 (mg/L)





### Appendix IV: Antimony, MW-12

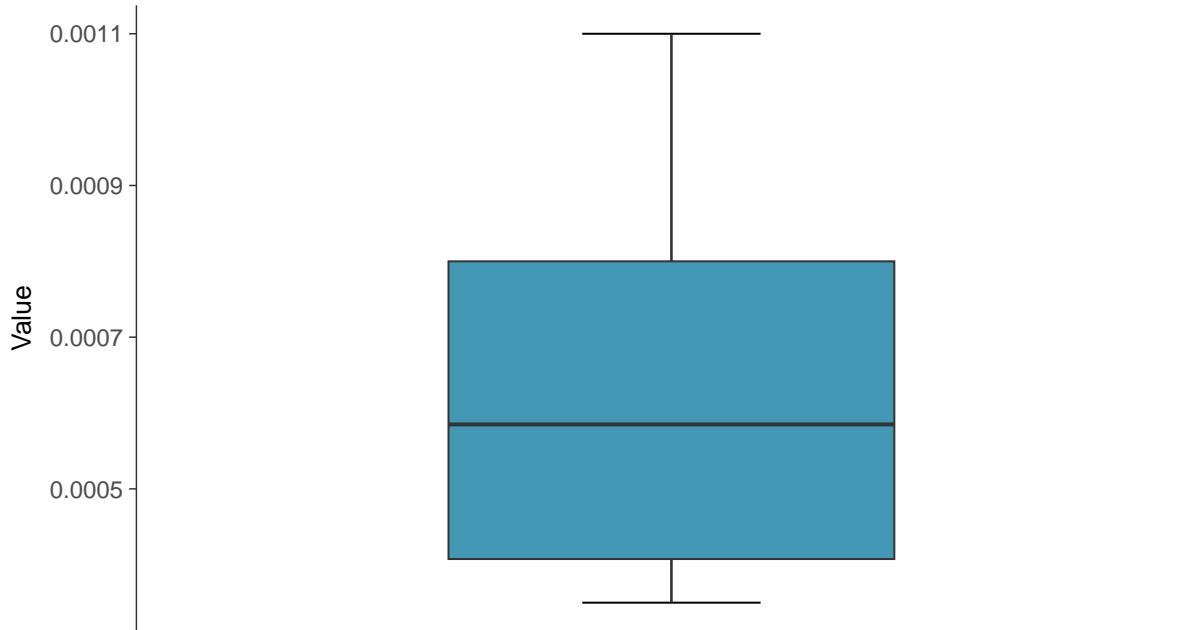
ID: 22\_2\_5\_101





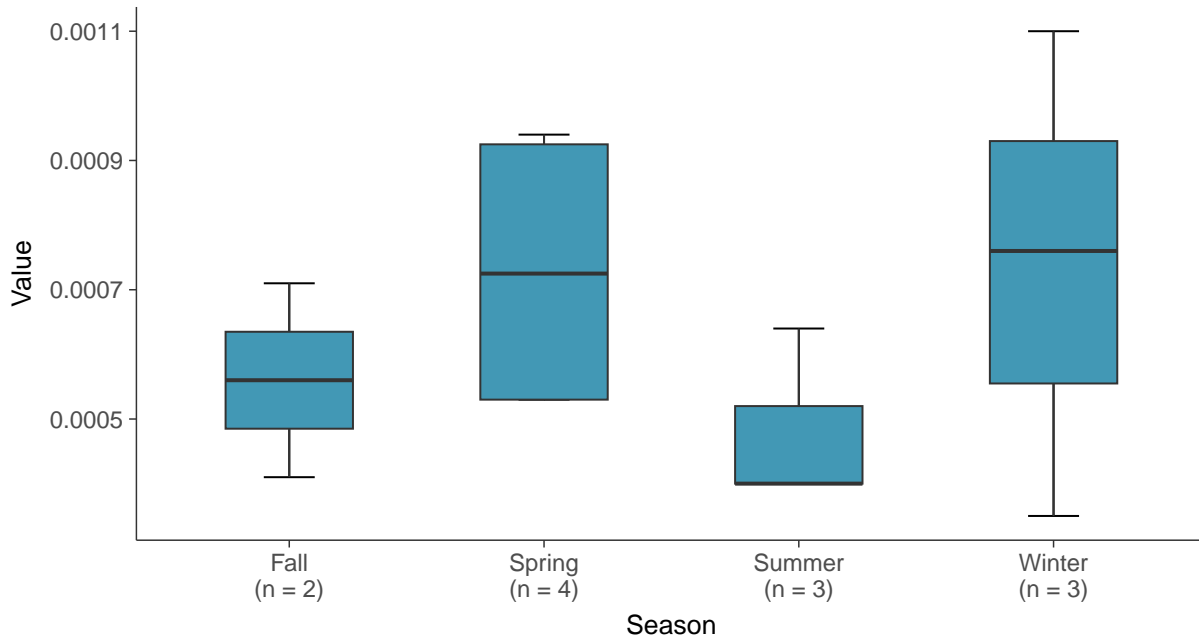
### Boxplot

Antimony, MW-12 (mg/L)



### Boxplot by Season

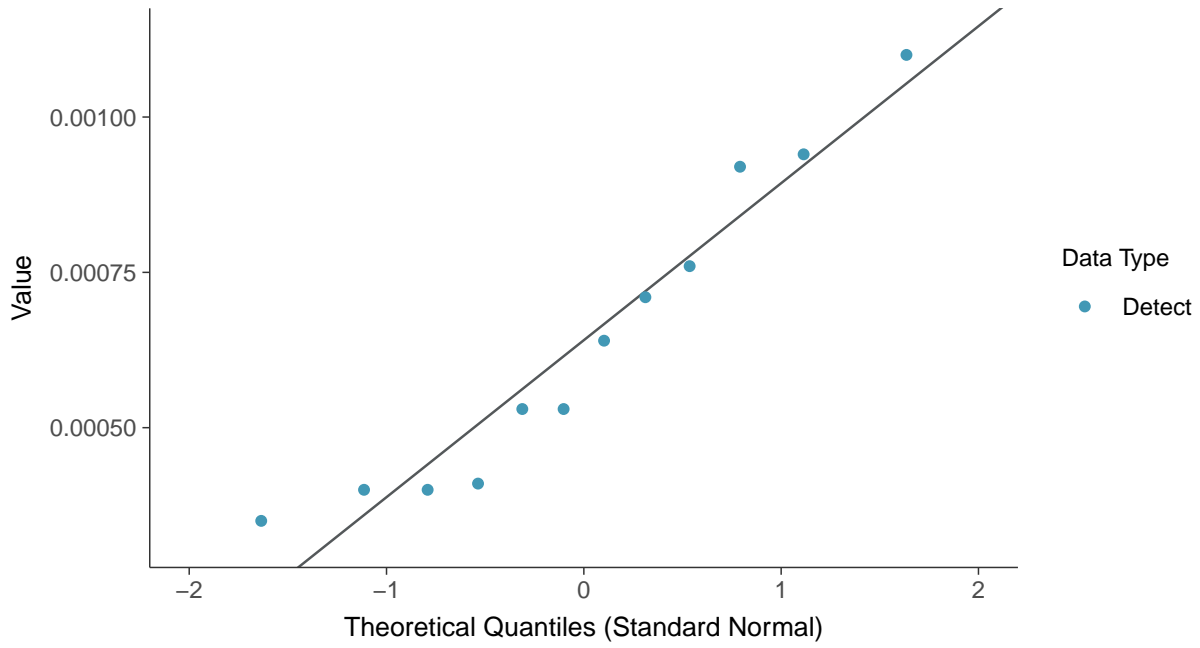
Antimony, MW-12 (mg/L)





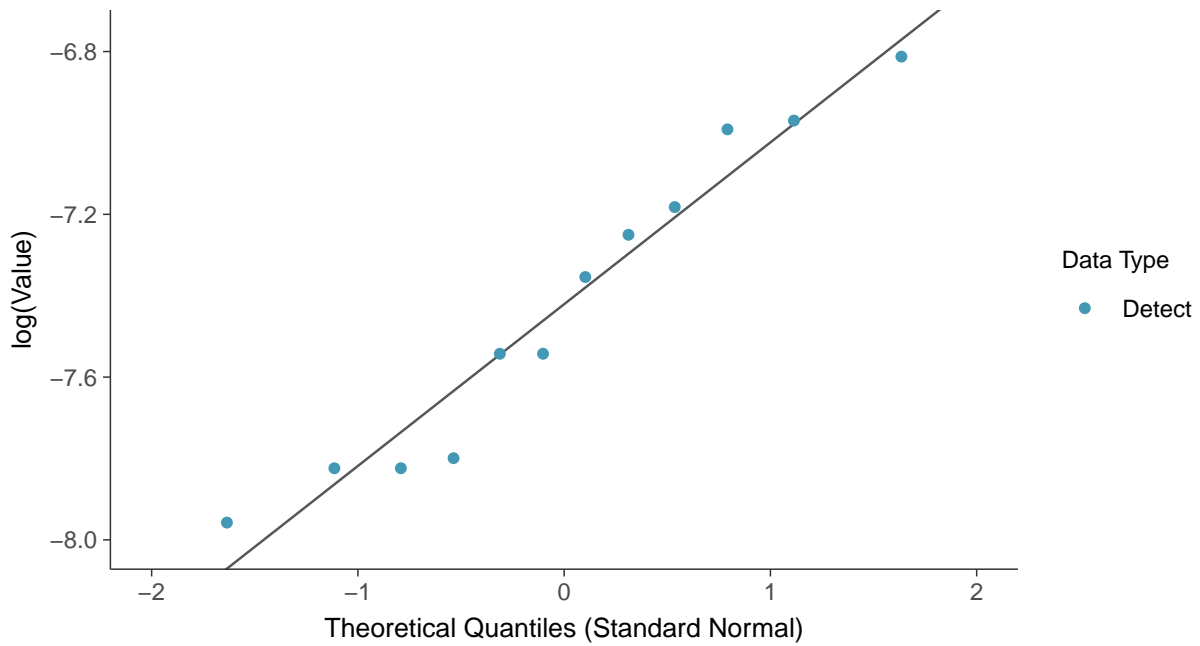
### Normal Q-Q plot

Antimony, MW-12 (mg/L)



### Lognormal Q-Q plot

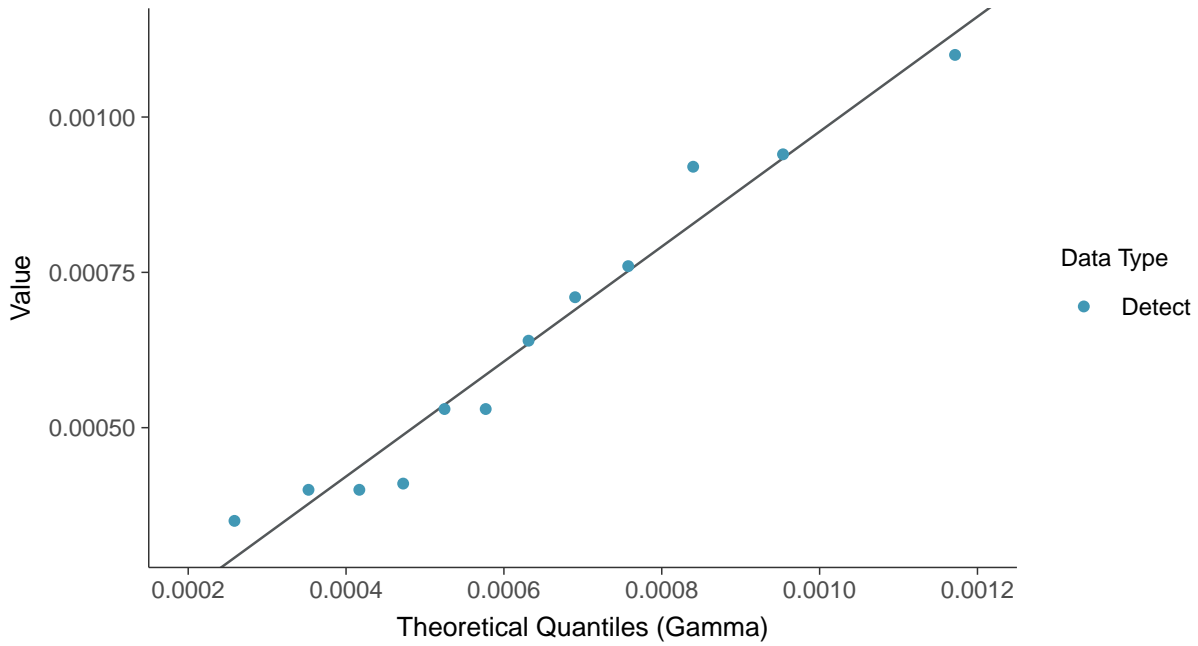
Antimony, MW-12 (mg/L)





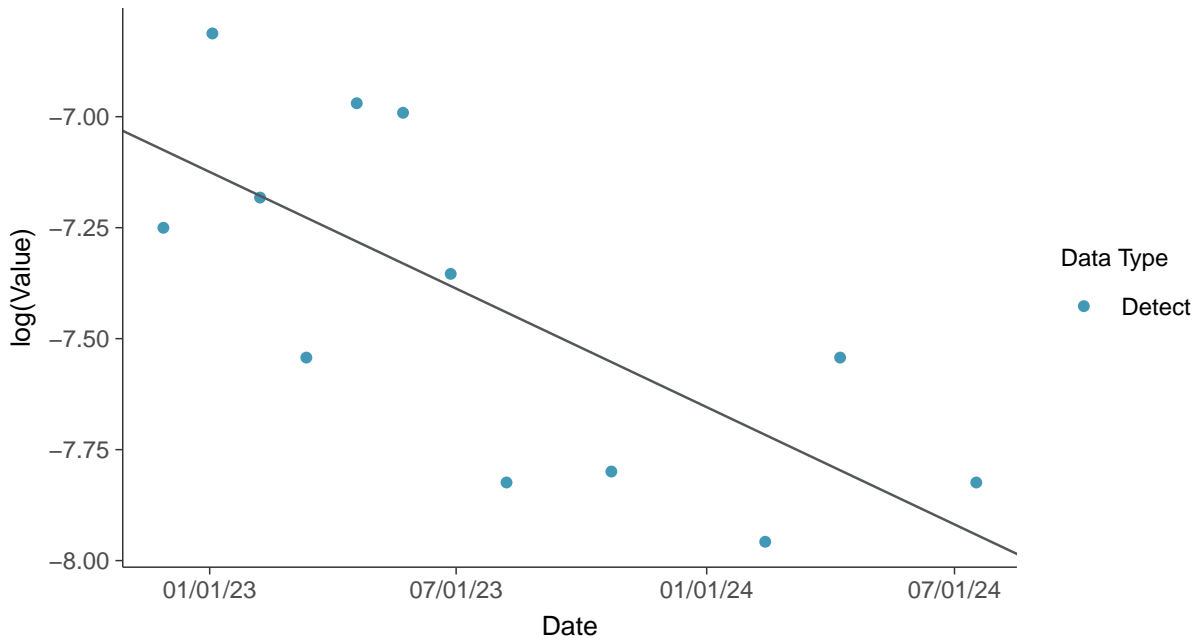
### Gamma Q-Q plot

Antimony, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

Antimony, MW-12 (mg/L)

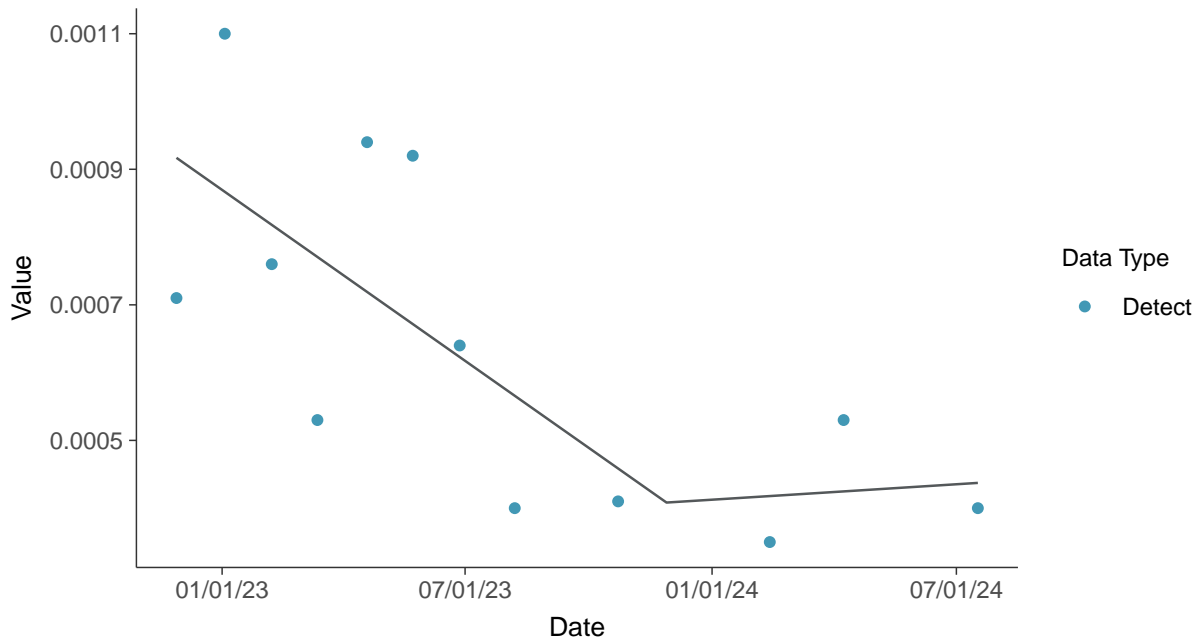






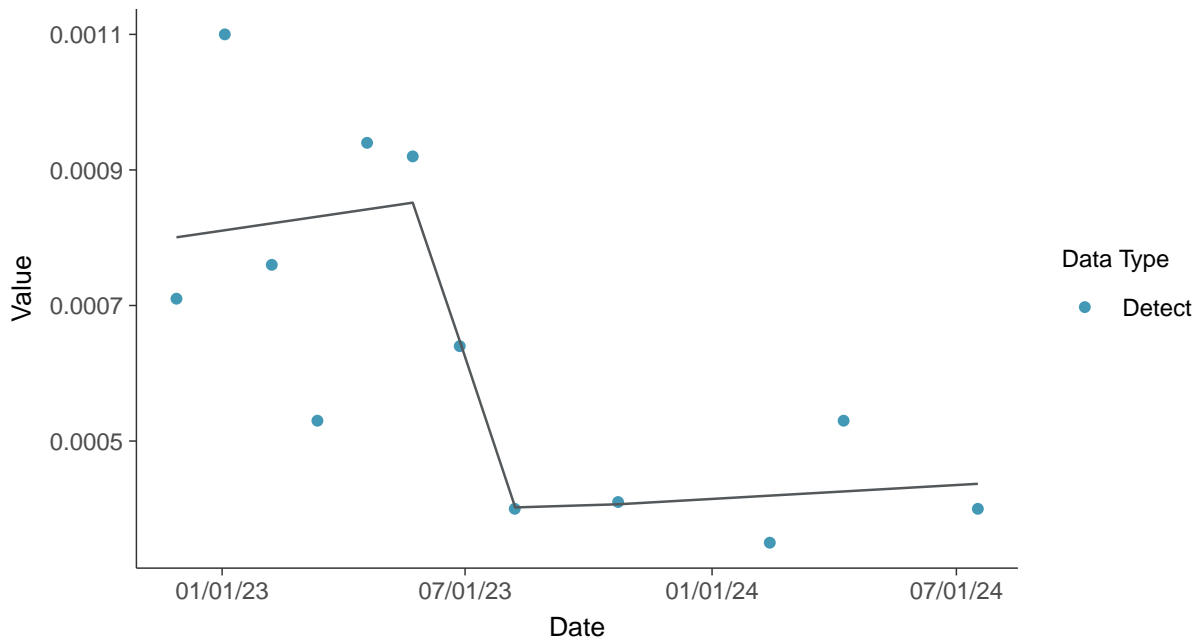
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-12 (mg/L)



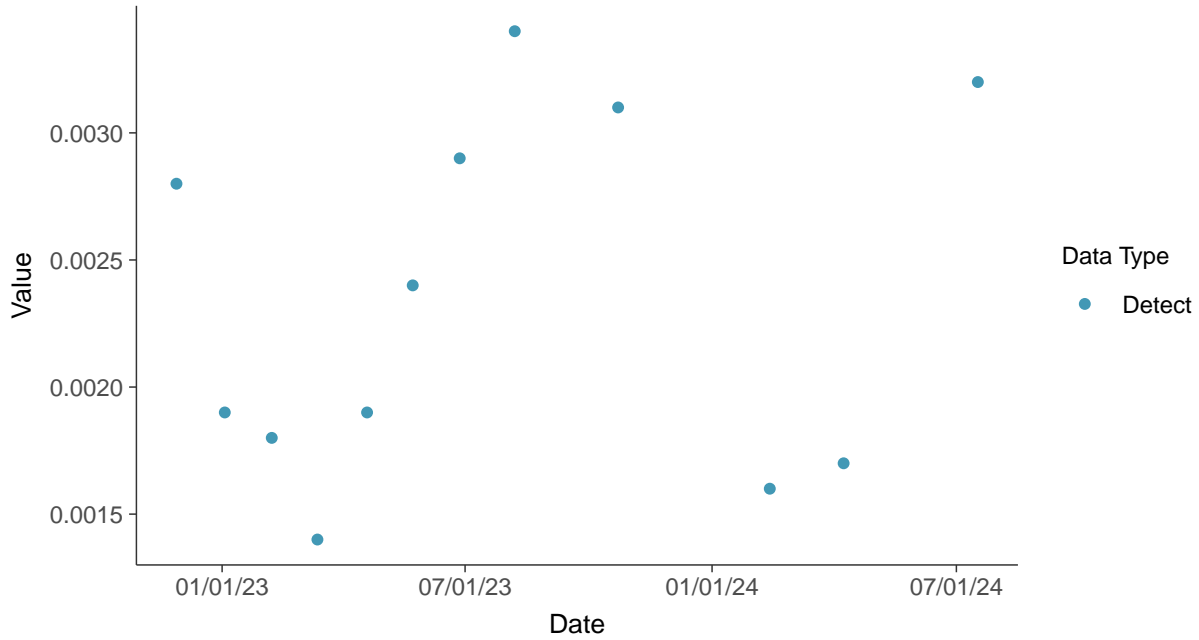


### Appendix IV: Arsenic, MW-12

ID: 22\_2\_5\_102

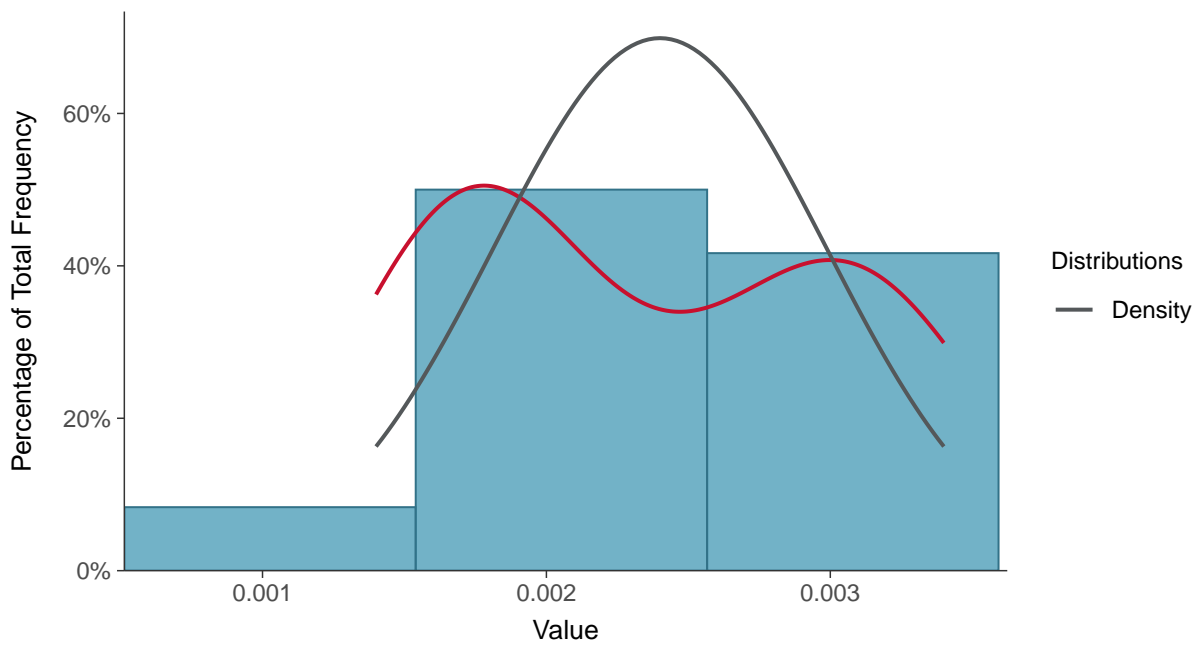
#### Scatter Plot

Arsenic, MW-12 (mg/L)



#### Histogram

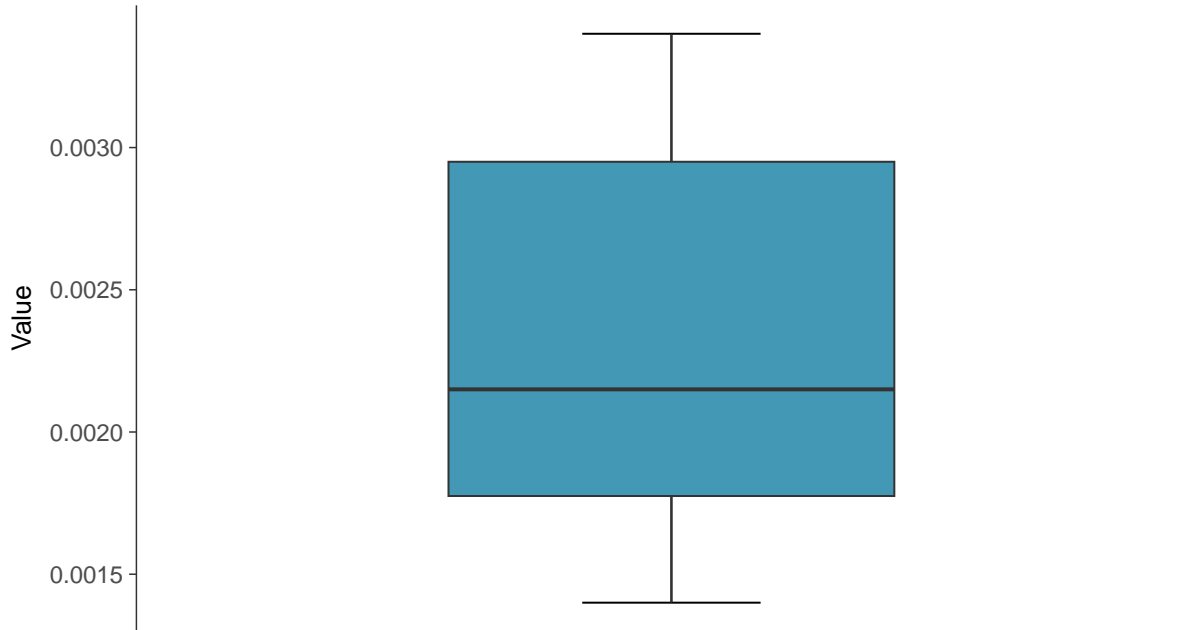
Arsenic, MW-12 (mg/L)





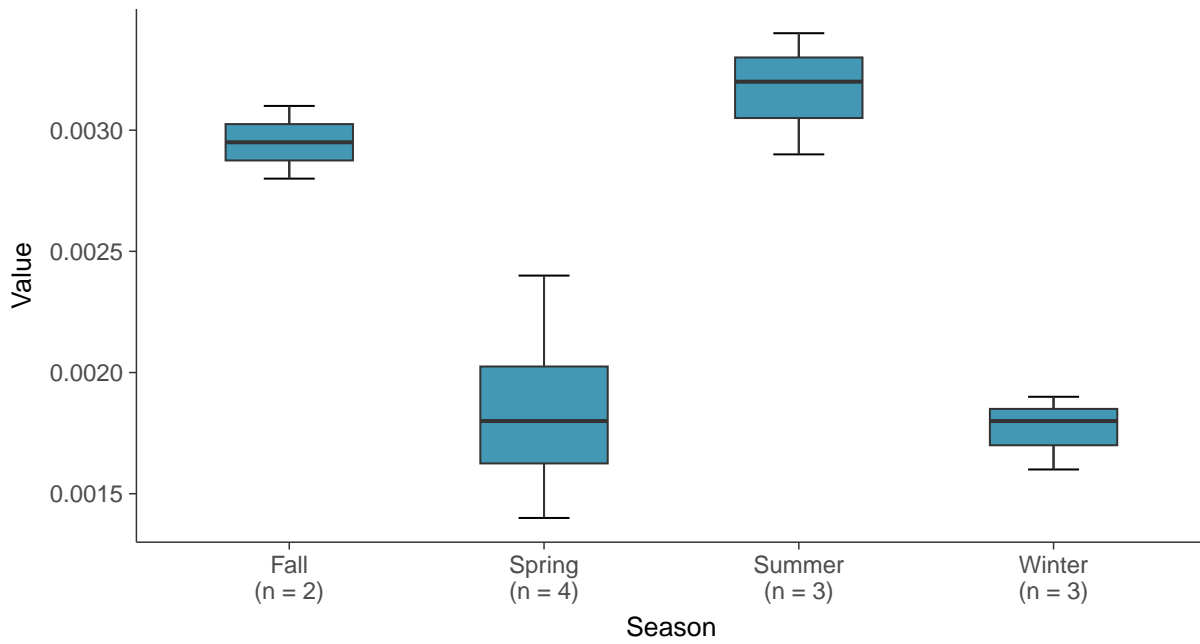
### Boxplot

Arsenic, MW-12 (mg/L)



### Boxplot by Season

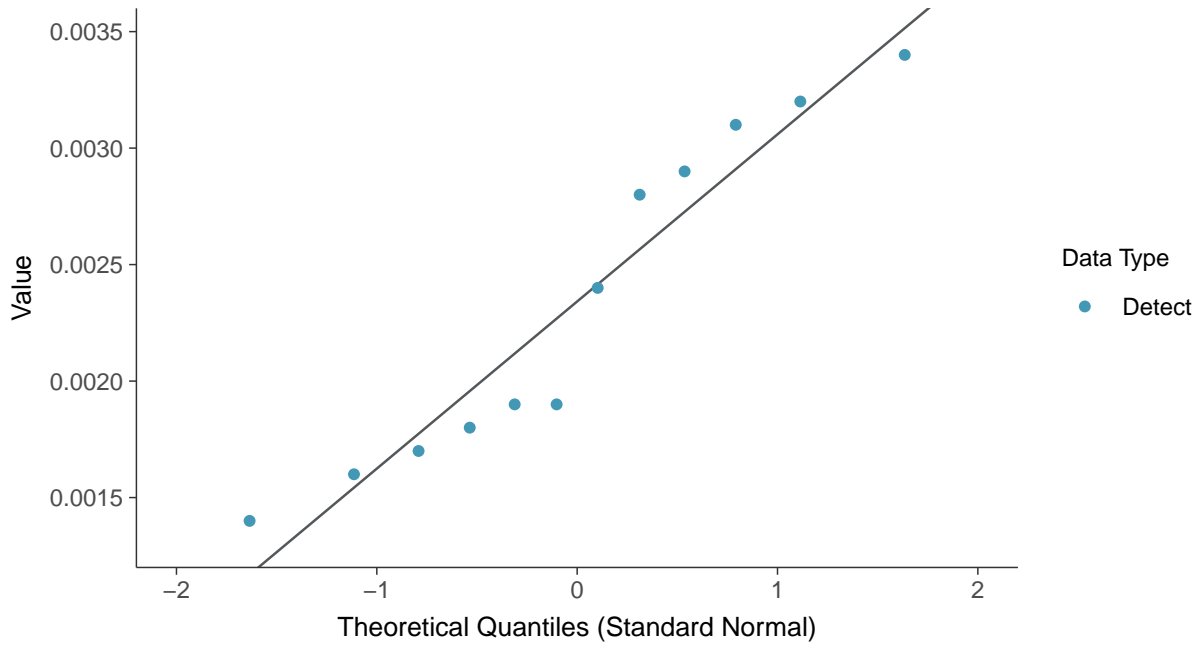
Arsenic, MW-12 (mg/L)





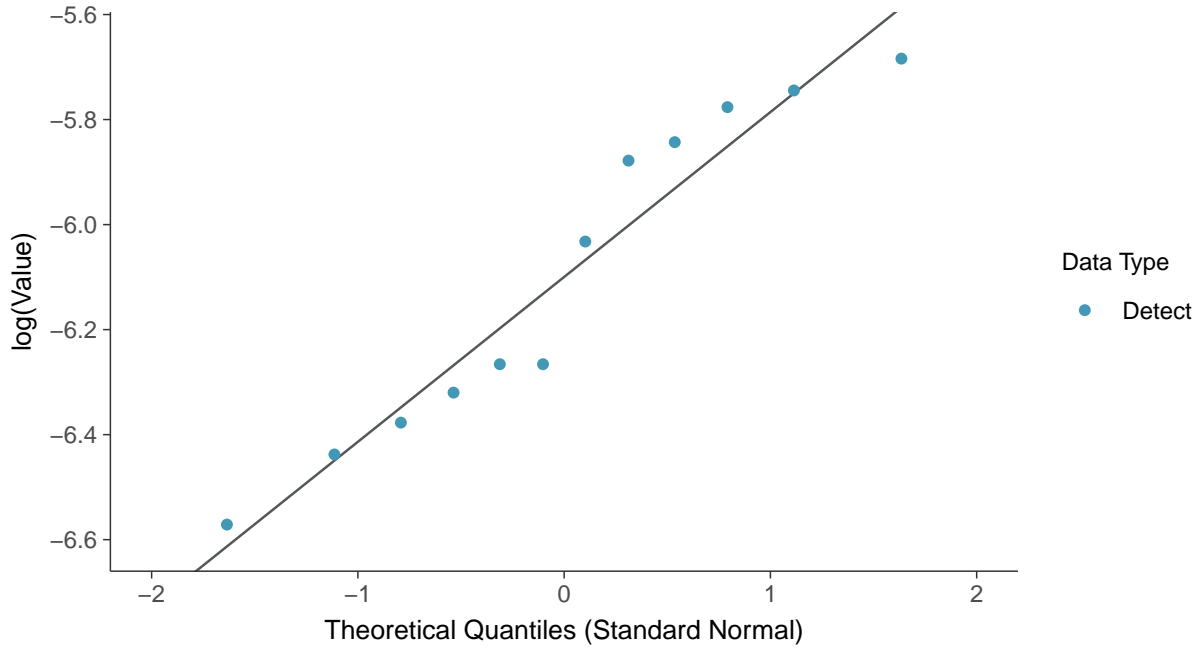
### Normal Q-Q plot

Arsenic, MW-12 (mg/L)



### Lognormal Q-Q plot

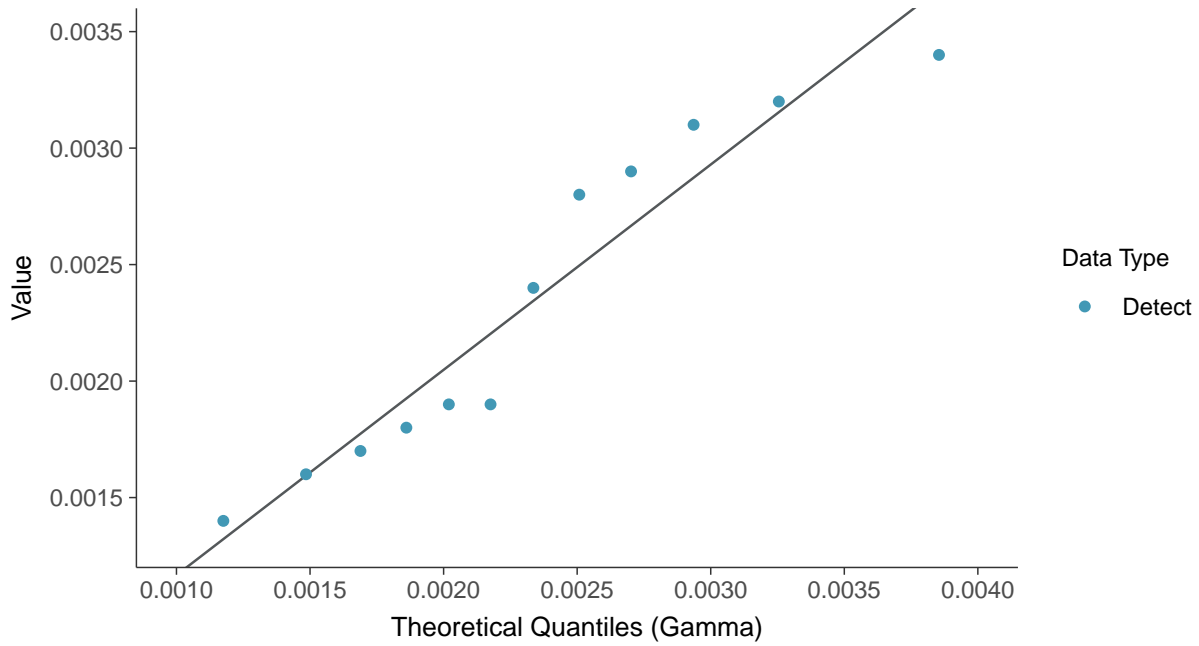
Arsenic, MW-12 (mg/L)





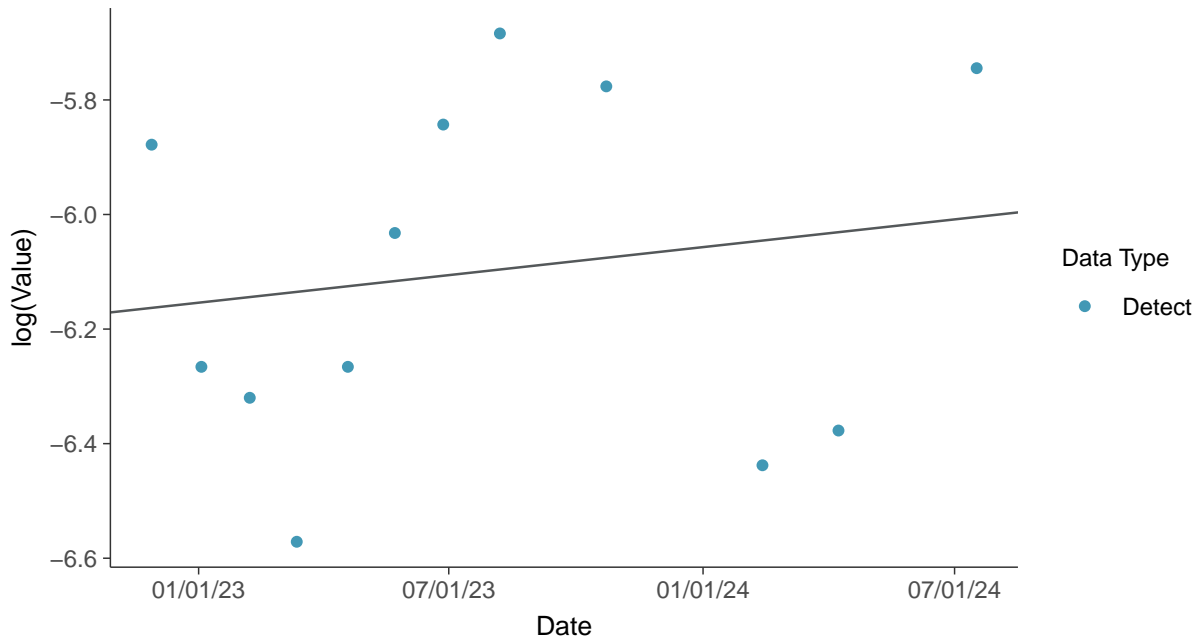
### Gamma Q-Q plot

Arsenic, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

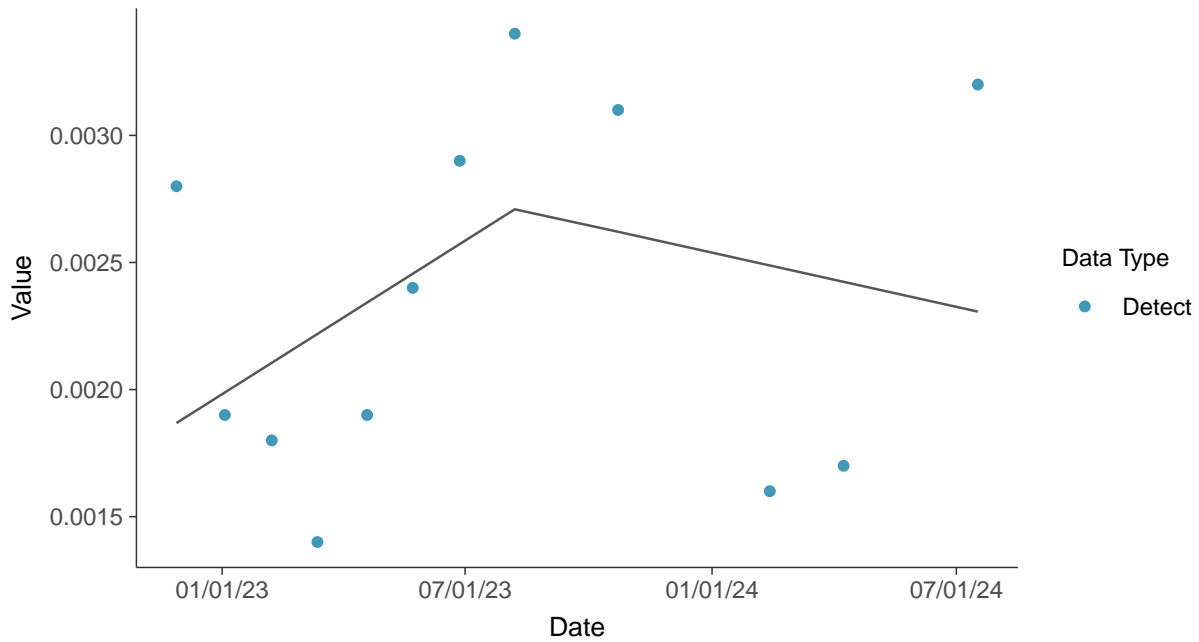
Arsenic, MW-12 (mg/L)





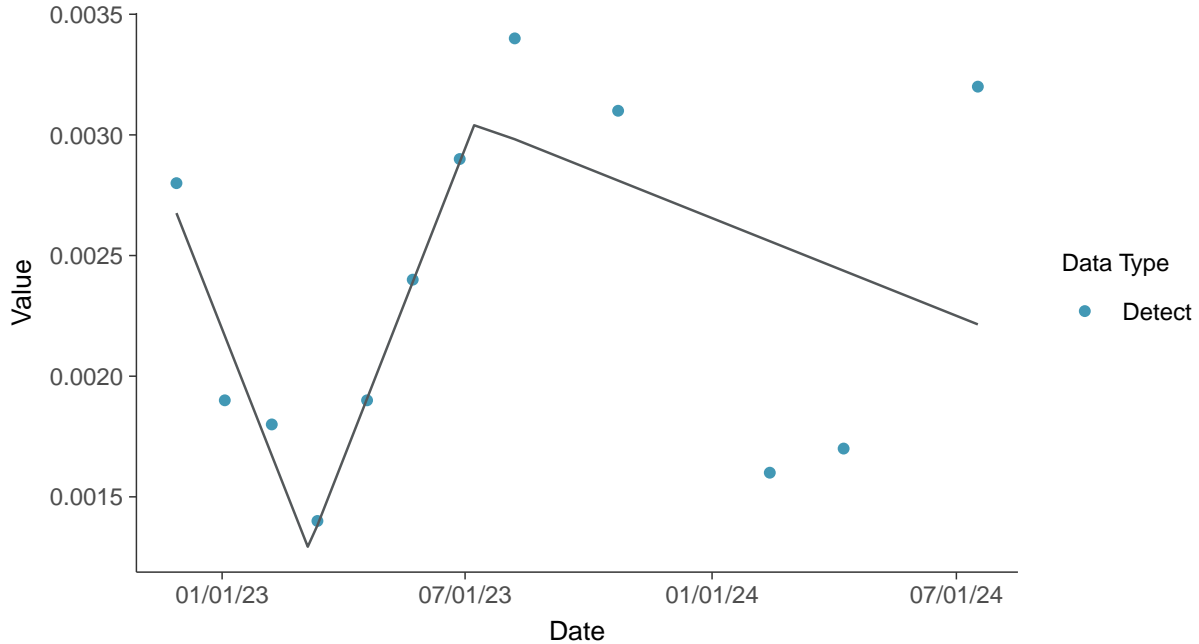
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

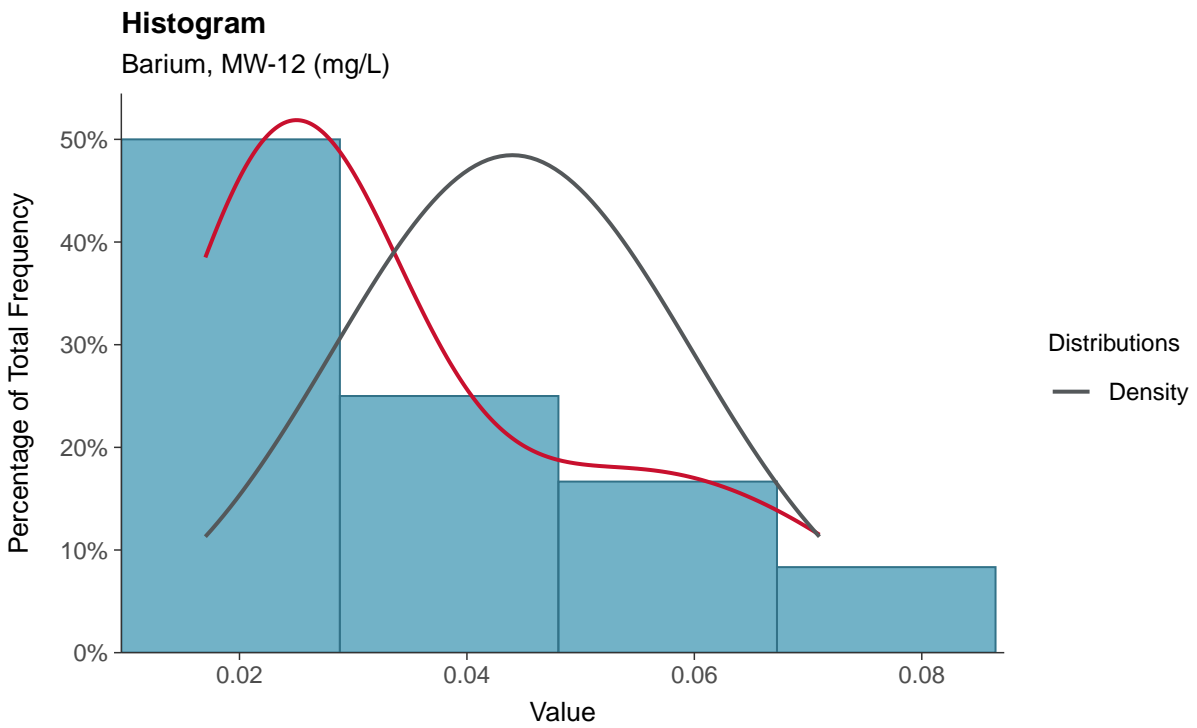
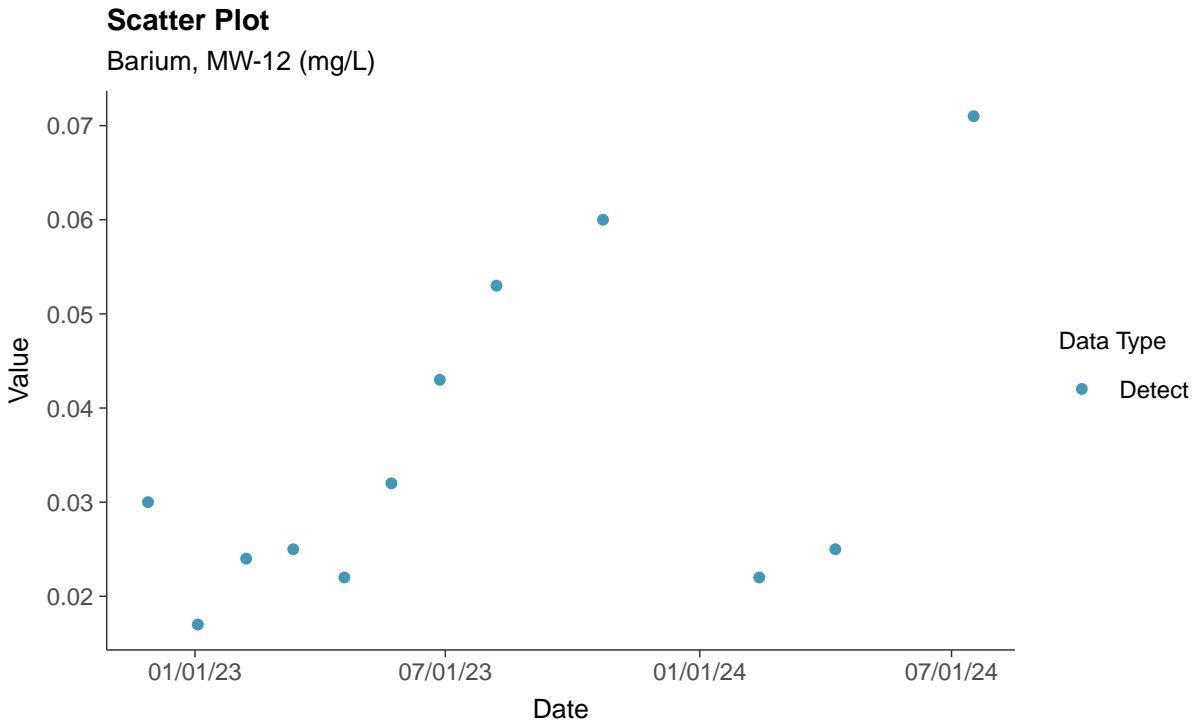
Arsenic, MW-12 (mg/L)





### Appendix IV: Barium, MW-12

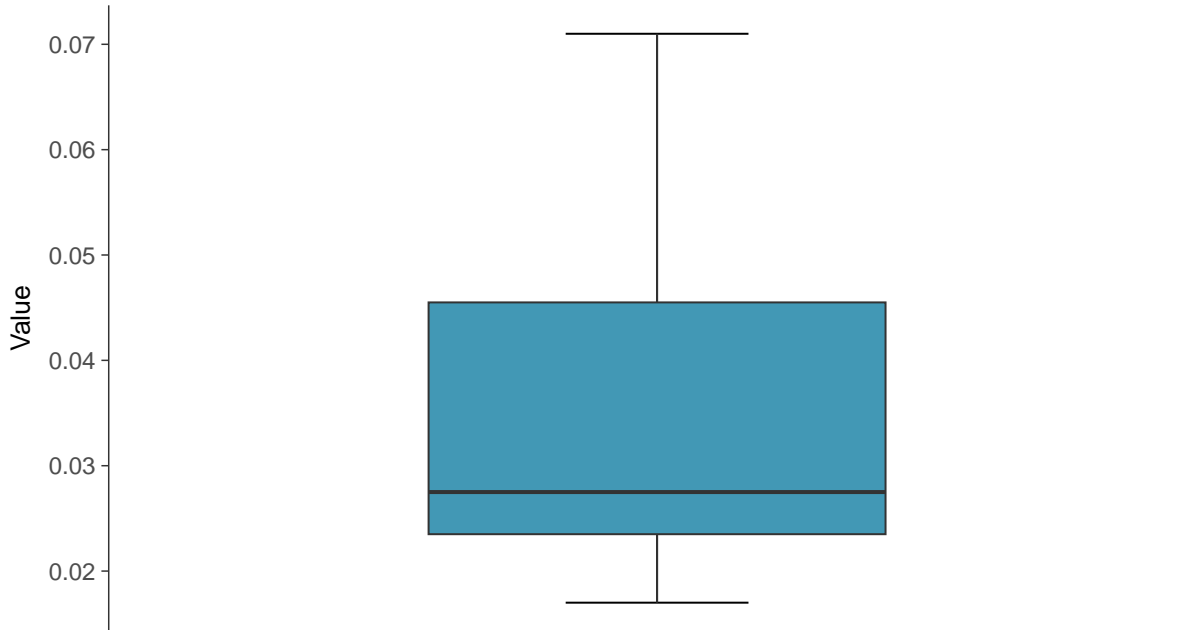
ID: 22\_2\_5\_103





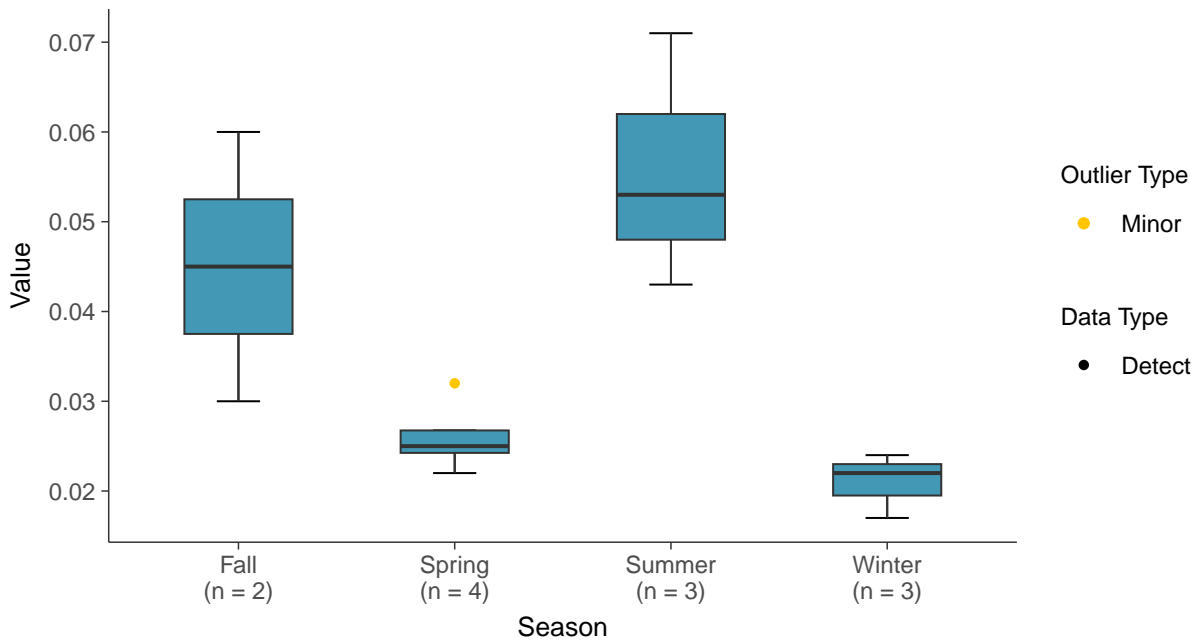
### Boxplot

Barium, MW-12 (mg/L)



### Boxplot by Season

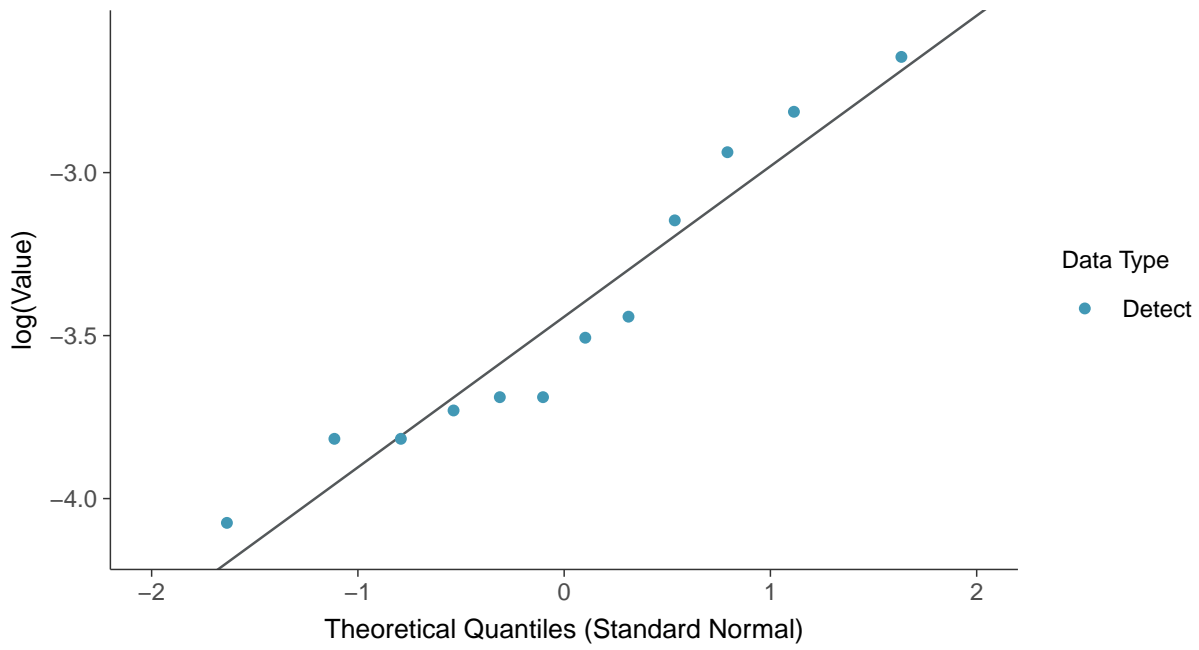
Barium, MW-12 (mg/L)



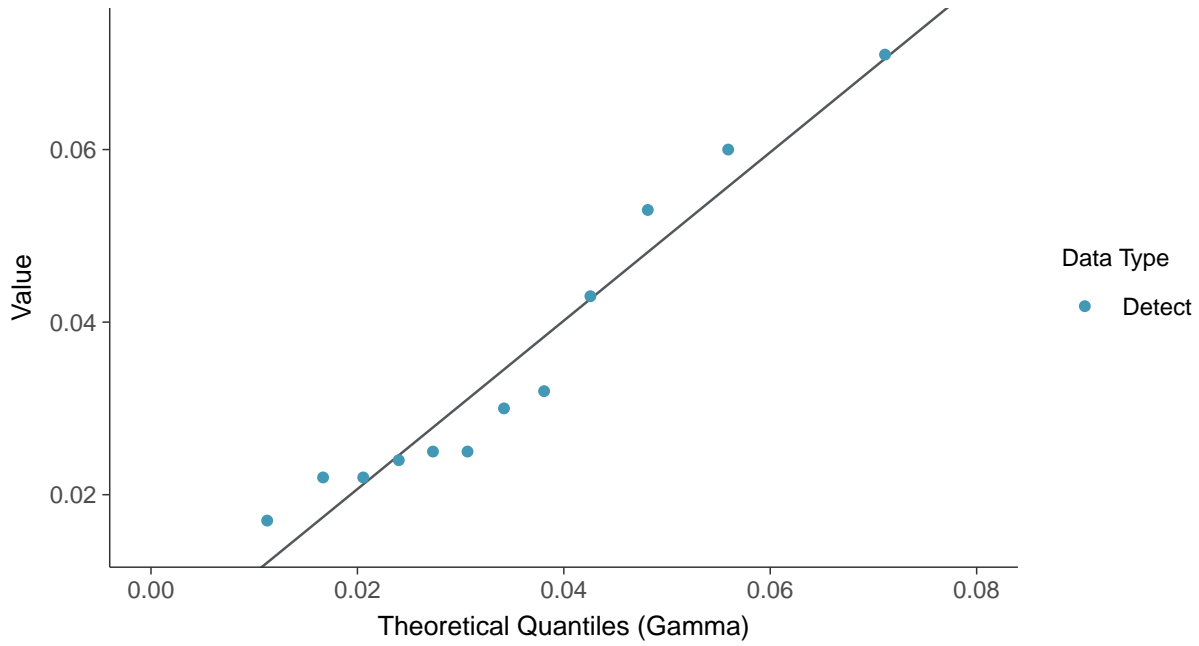




**Lognormal Q-Q plot**  
Barium, MW-12 (mg/L)



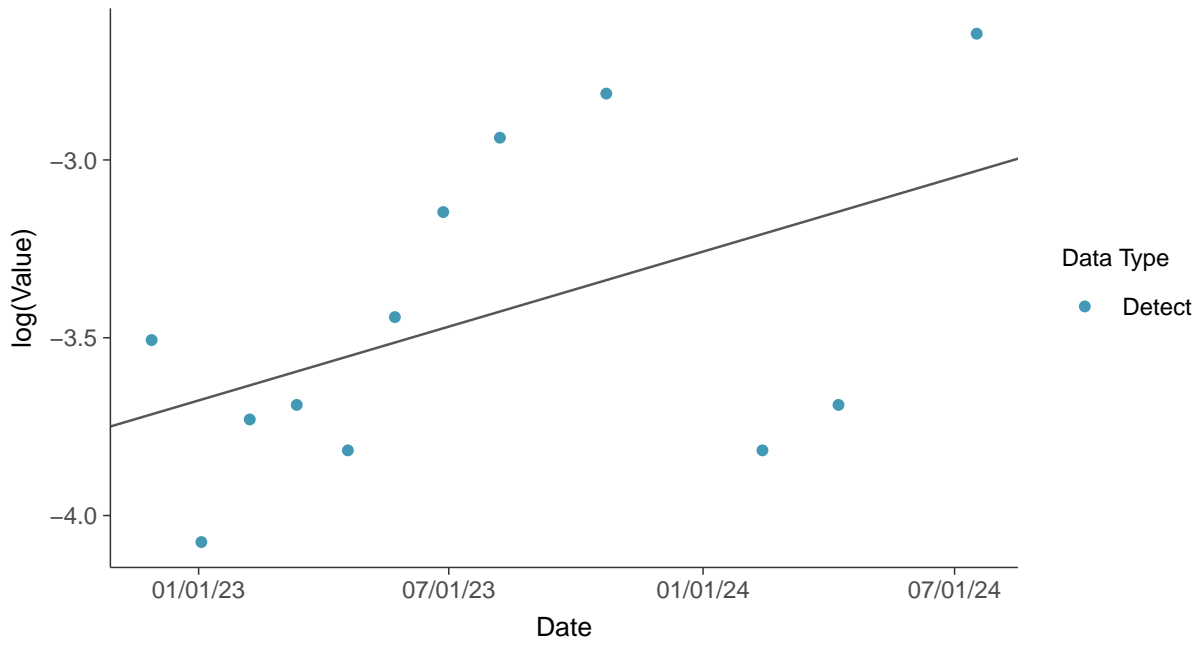
**Gamma Q-Q plot**  
Barium, MW-12 (mg/L)





### Trend Regression: Lognormal MLE

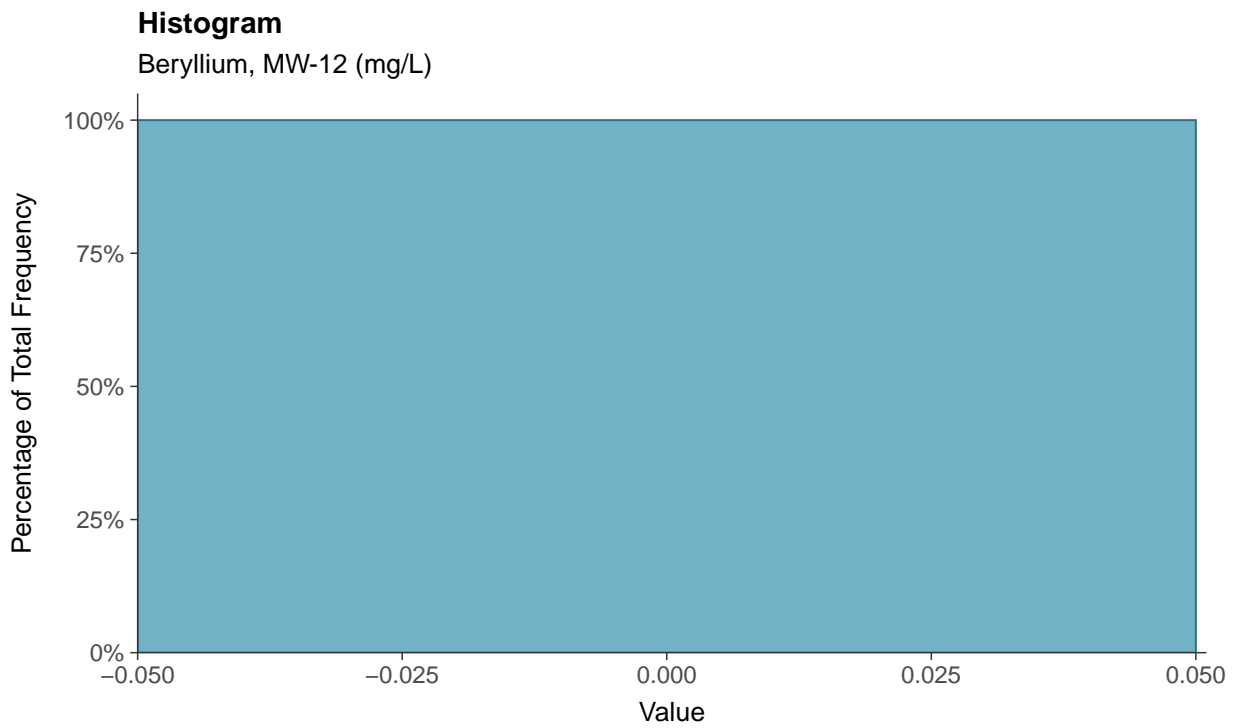
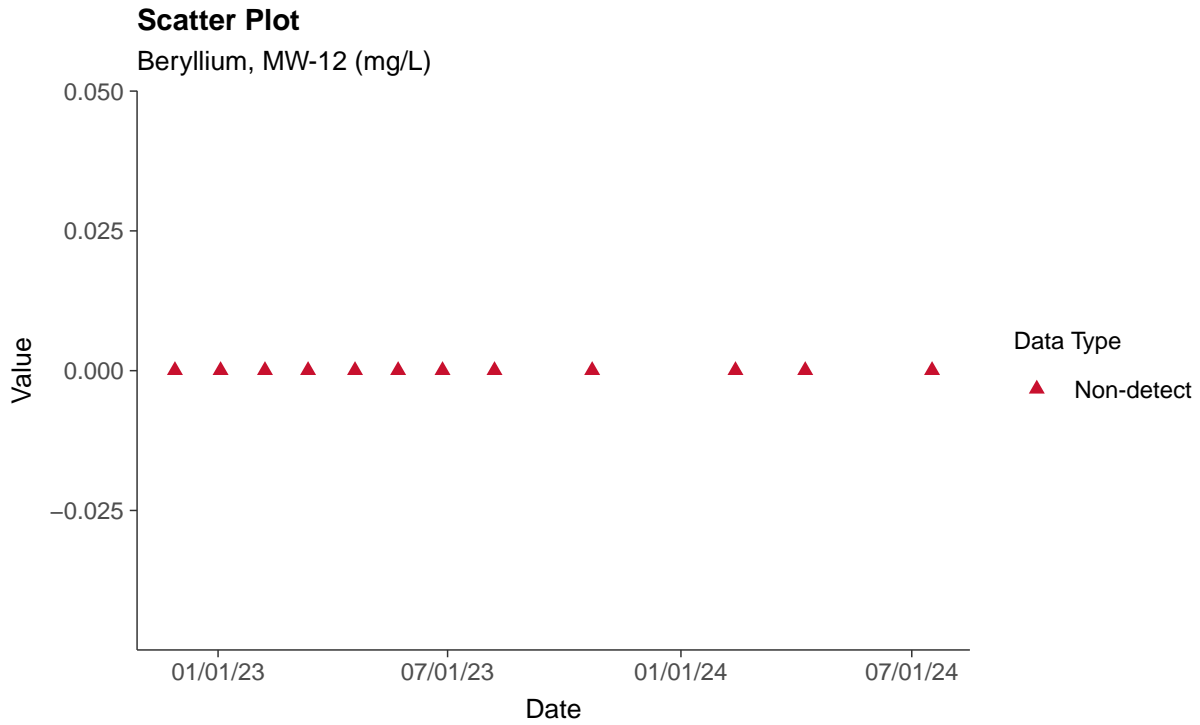
Barium, MW-12 (mg/L)





## Appendix IV: Beryllium, MW-12

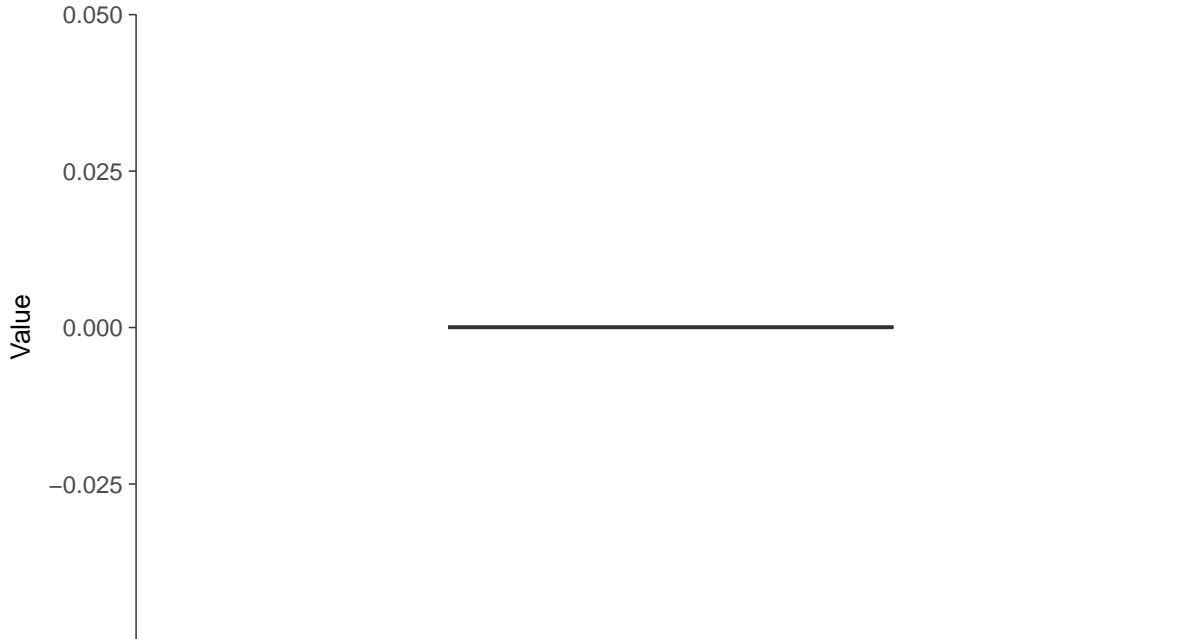
ID: 22\_2\_5\_104





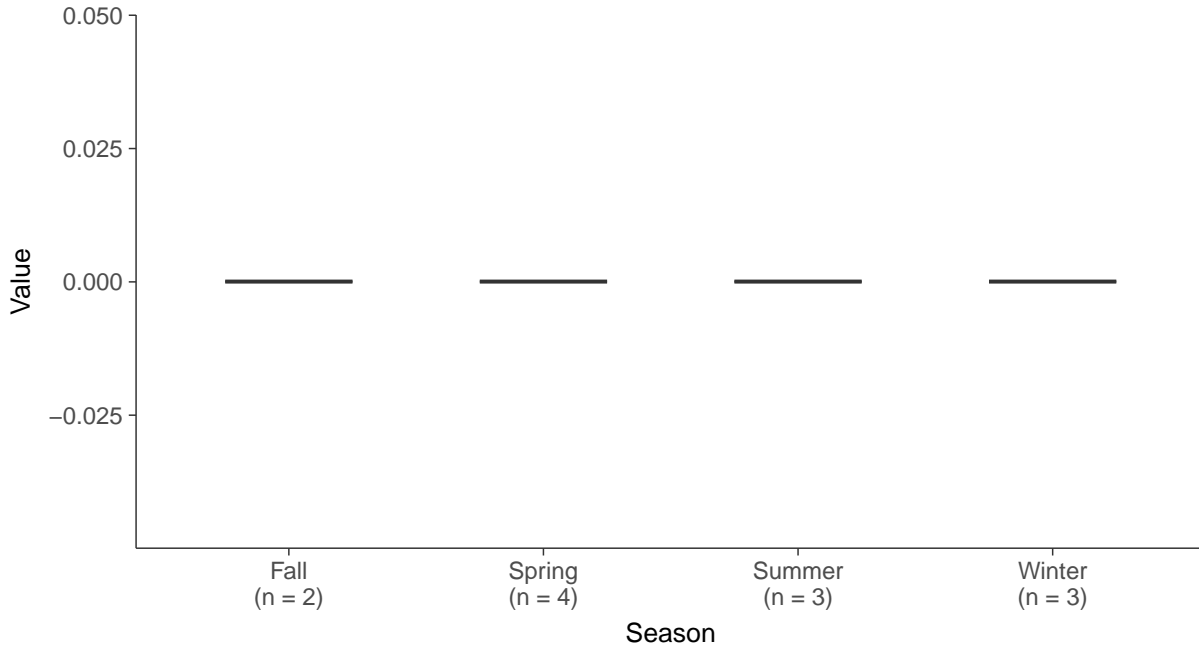
### Boxplot

Beryllium, MW-12 (mg/L)



### Boxplot by Season

Beryllium, MW-12 (mg/L)



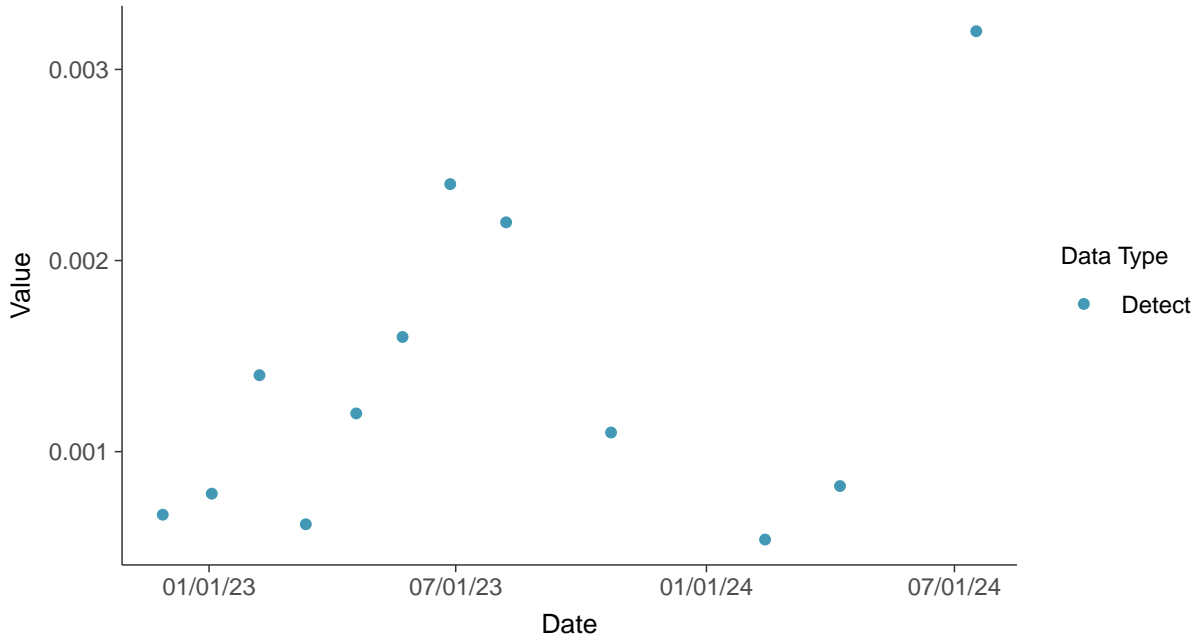


### Appendix IV: Cadmium, MW-12

ID: 22\_2\_5\_106

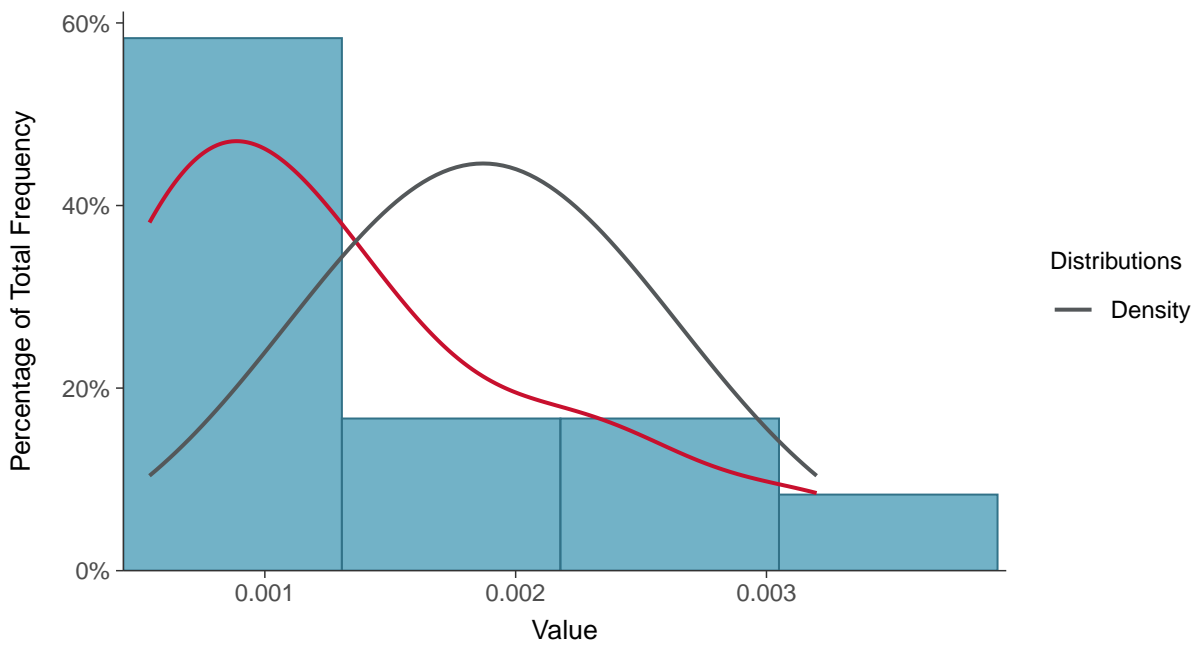
#### Scatter Plot

Cadmium, MW-12 (mg/L)



#### Histogram

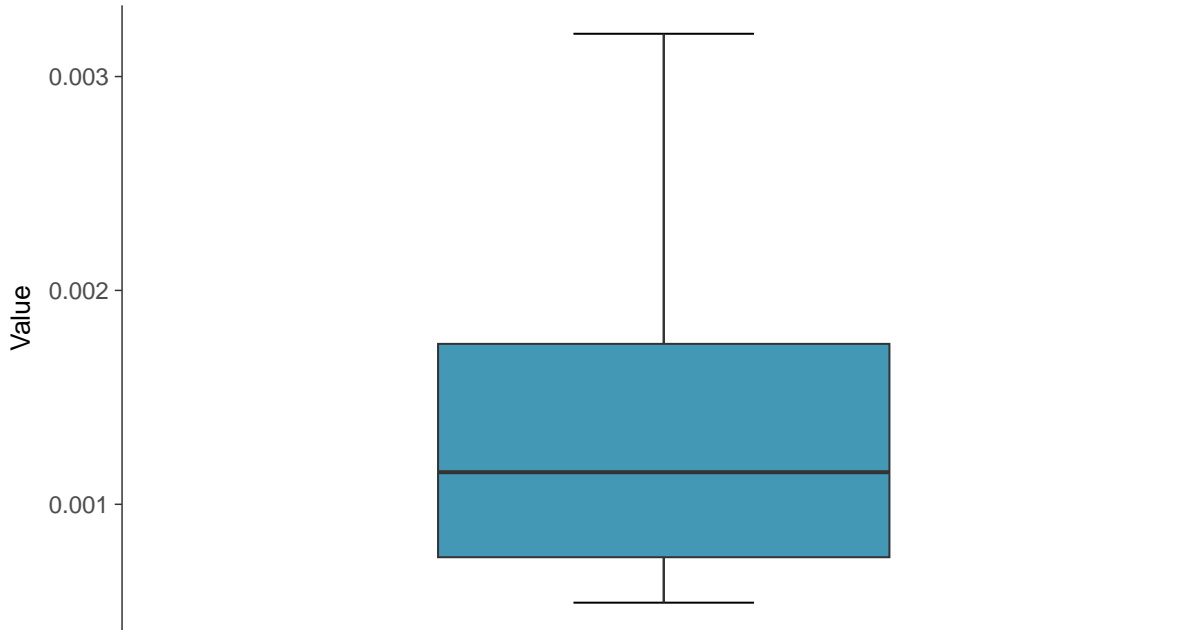
Cadmium, MW-12 (mg/L)





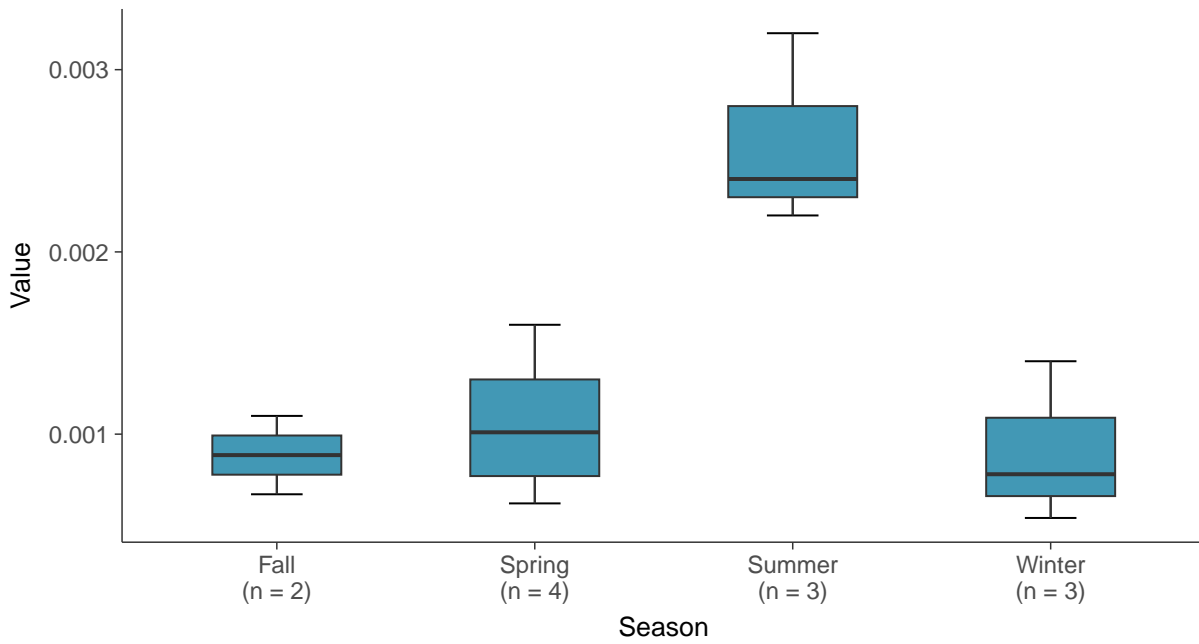
### Boxplot

Cadmium, MW-12 (mg/L)



### Boxplot by Season

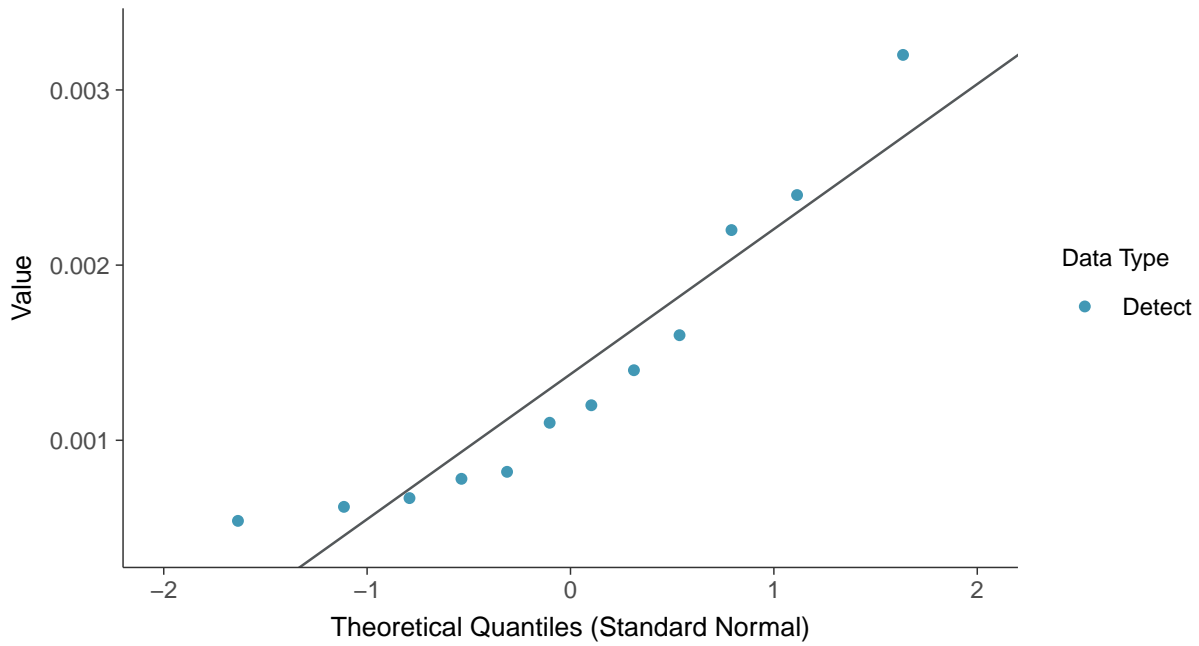
Cadmium, MW-12 (mg/L)





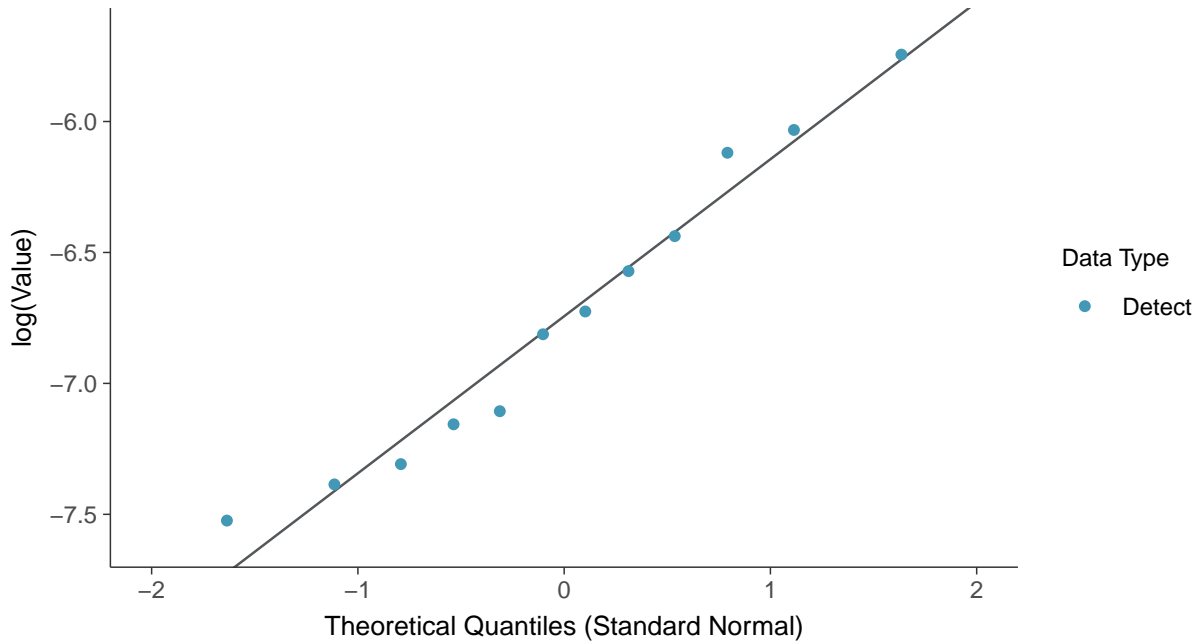
### Normal Q-Q plot

Cadmium, MW-12 (mg/L)



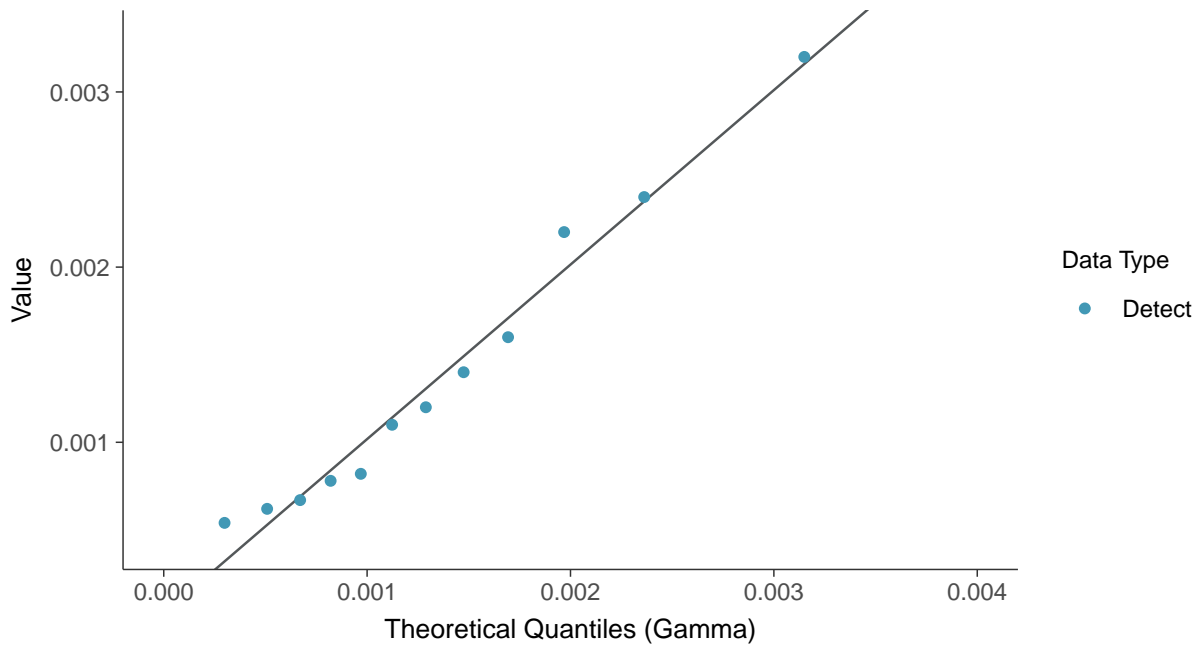
### Lognormal Q-Q plot

Cadmium, MW-12 (mg/L)

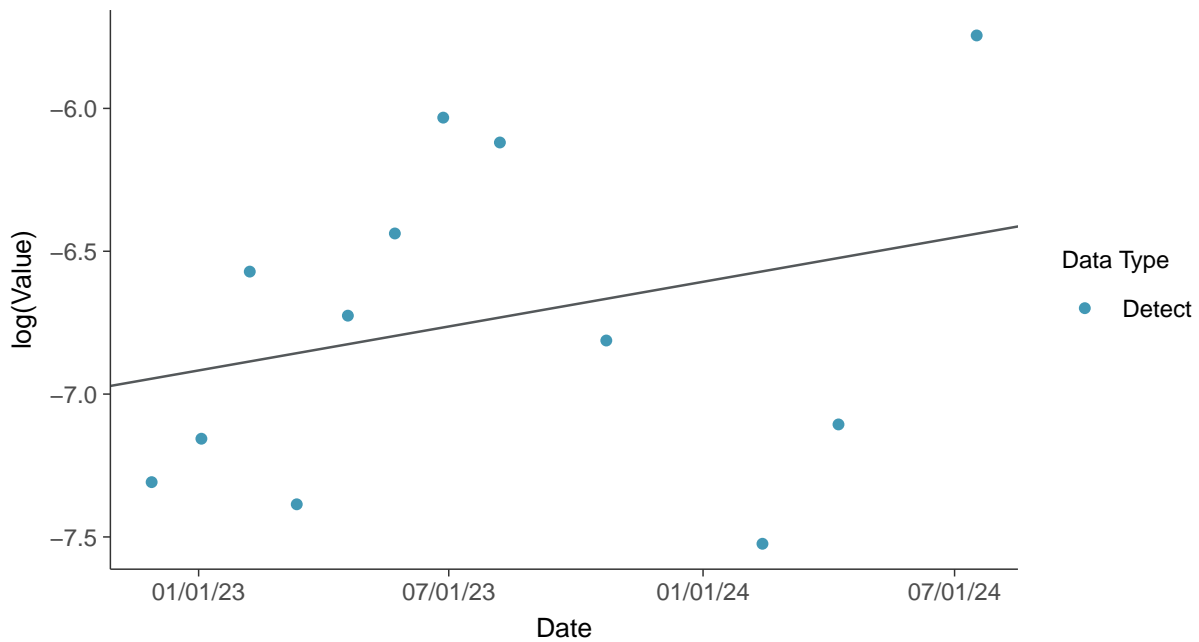




**Gamma Q-Q plot**  
Cadmium, MW-12 (mg/L)



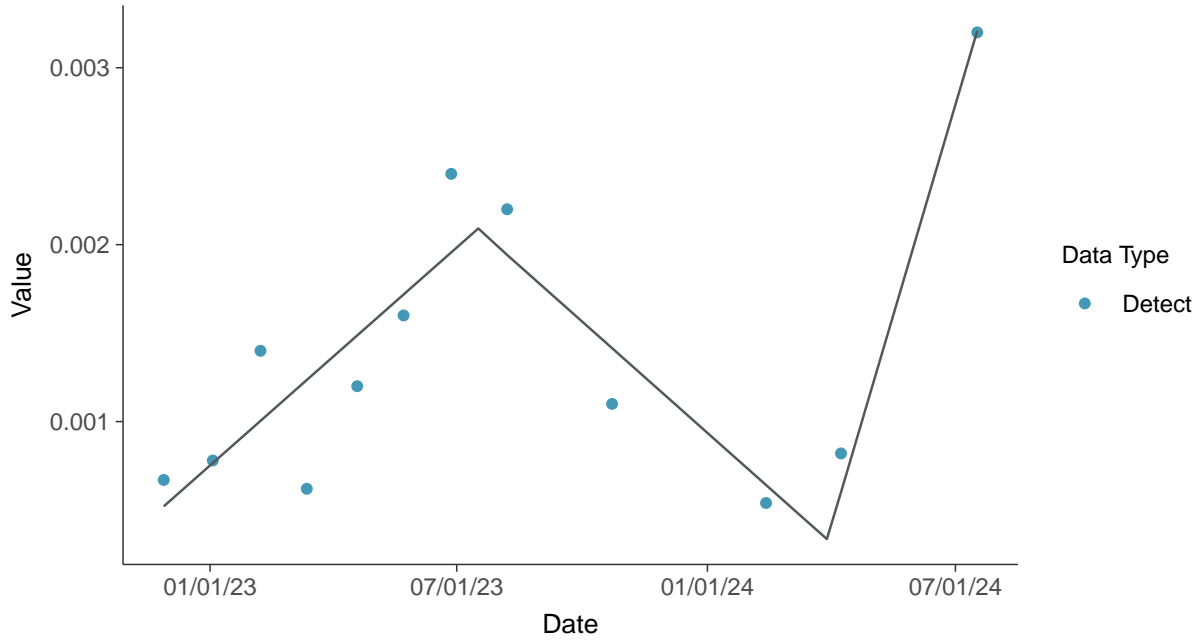
**Trend Regression: Lognormal MLE**  
Cadmium, MW-12 (mg/L)







**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-12 (mg/L)



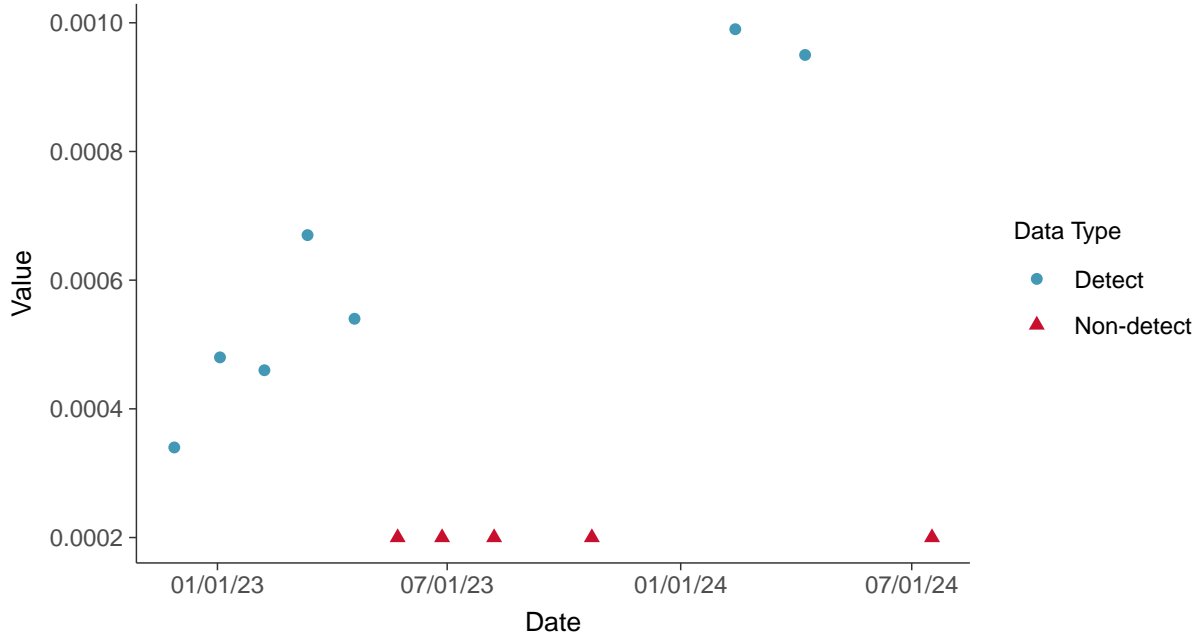


## Appendix IV: Chromium, Total, MW-12

ID: 22\_2\_5\_109

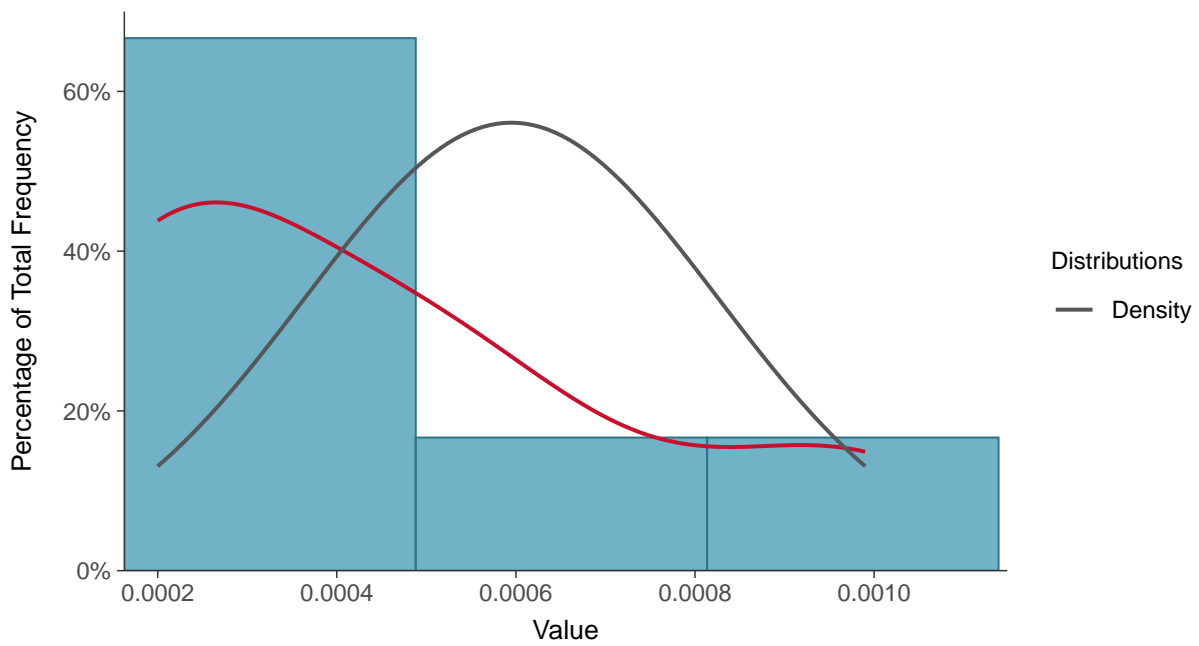
### Scatter Plot

Chromium, Total, MW-12 (mg/L)



### Histogram

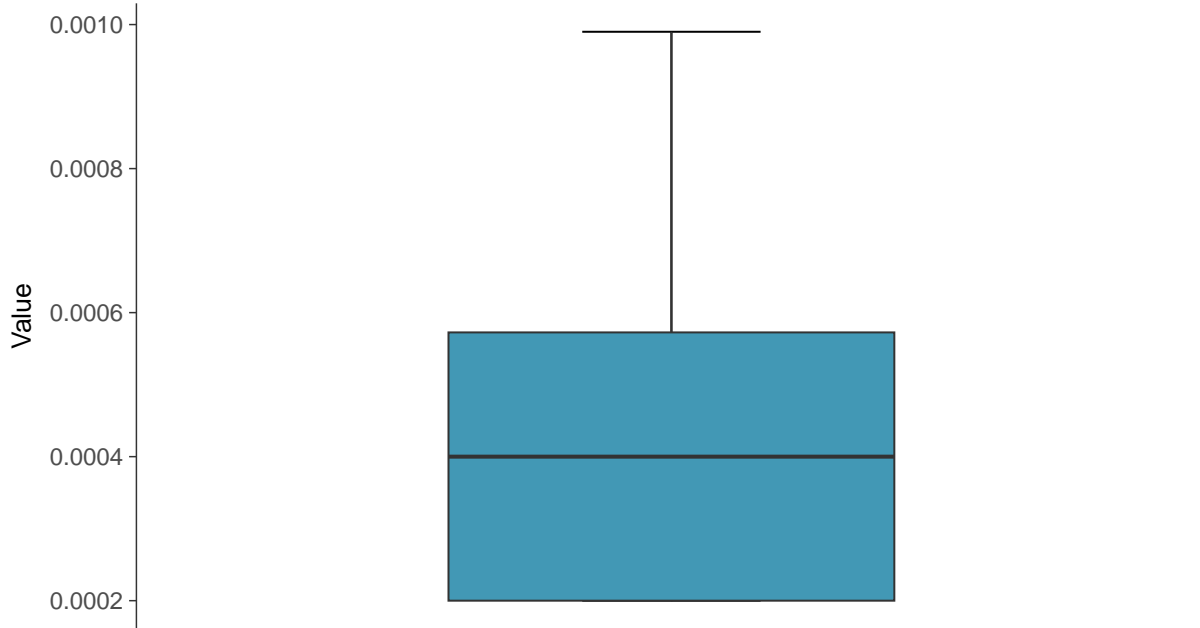
Chromium, Total, MW-12 (mg/L)





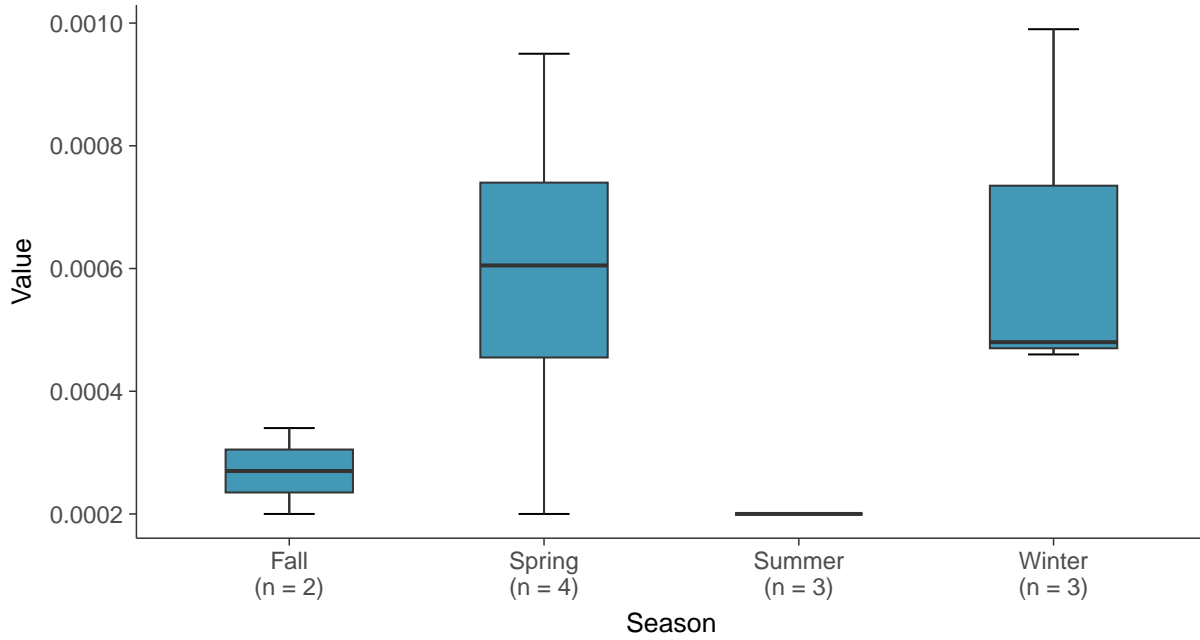
### Boxplot

Chromium, Total, MW-12 (mg/L)



### Boxplot by Season

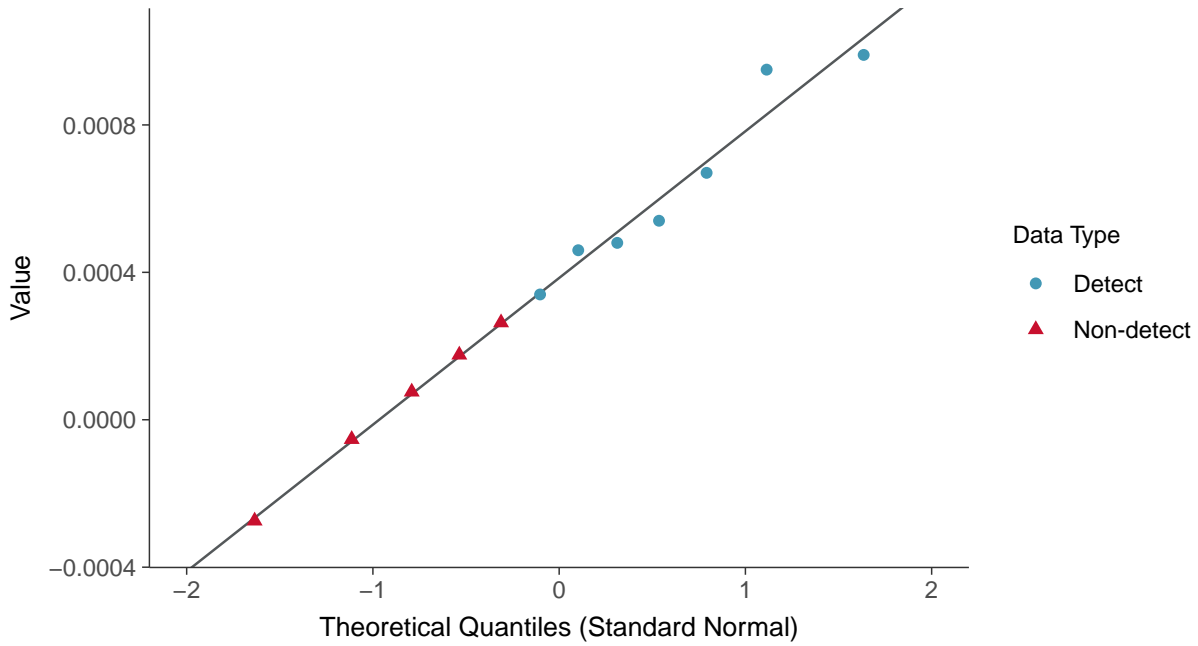
Chromium, Total, MW-12 (mg/L)





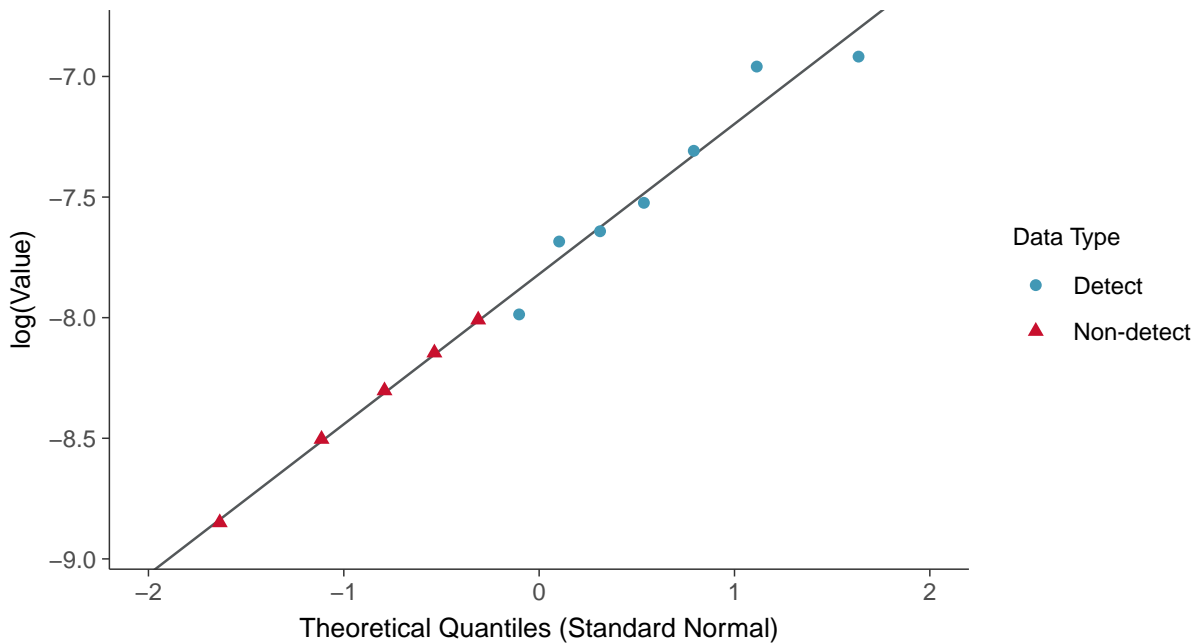
### Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

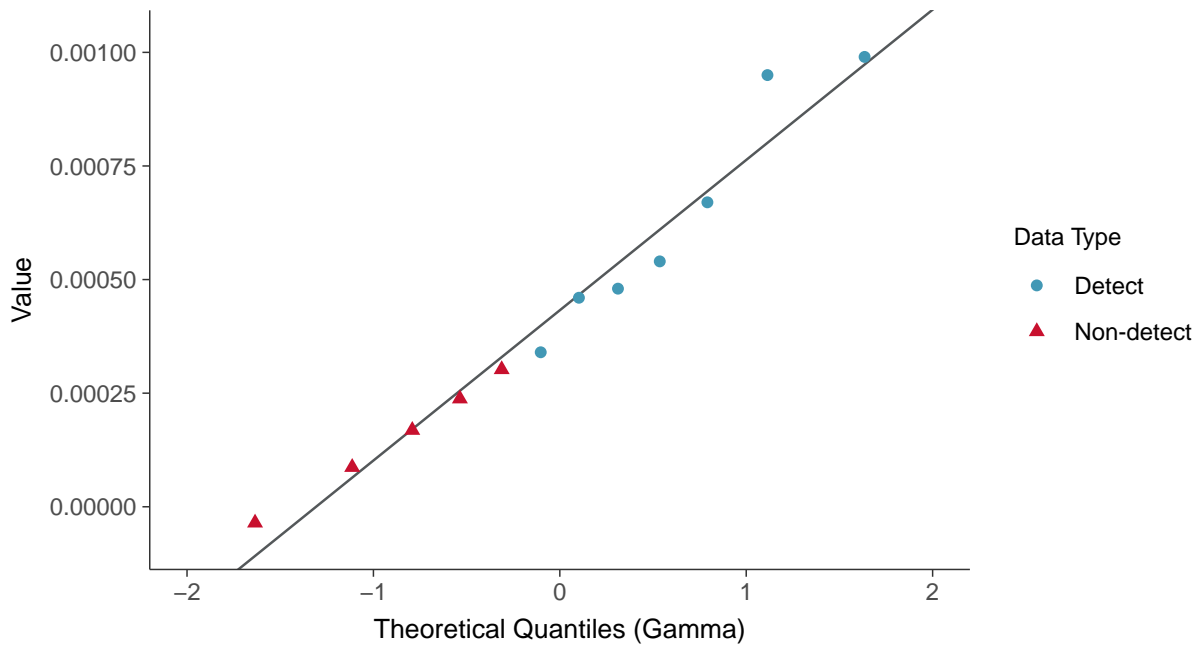
Chromium, Total, MW-12 (mg/L)





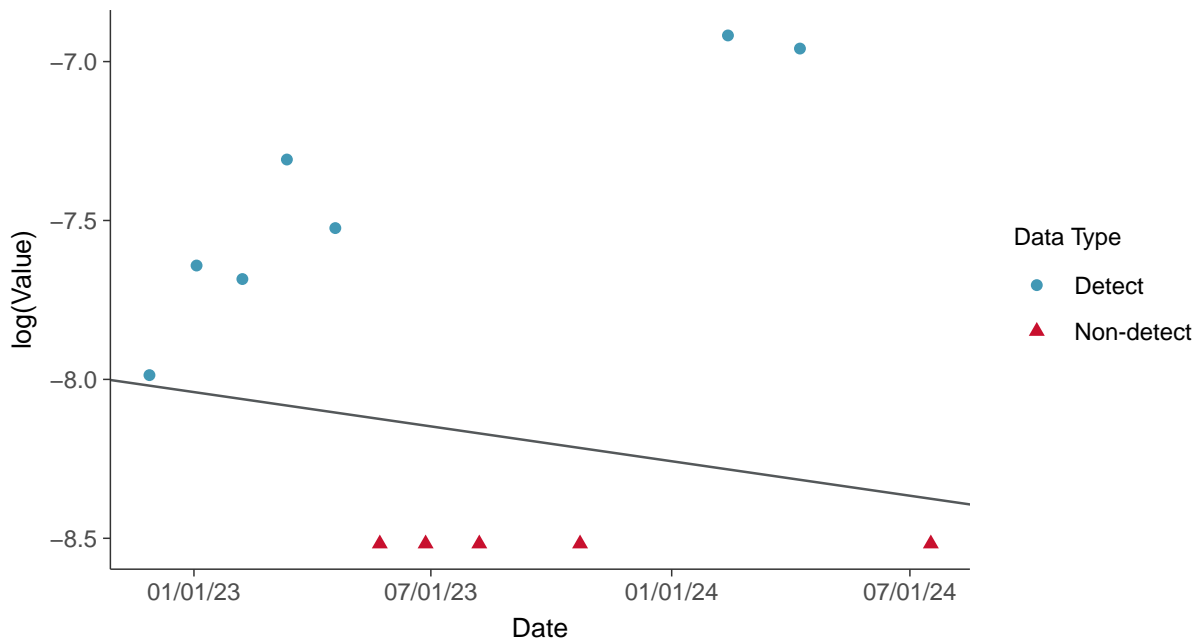
### Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

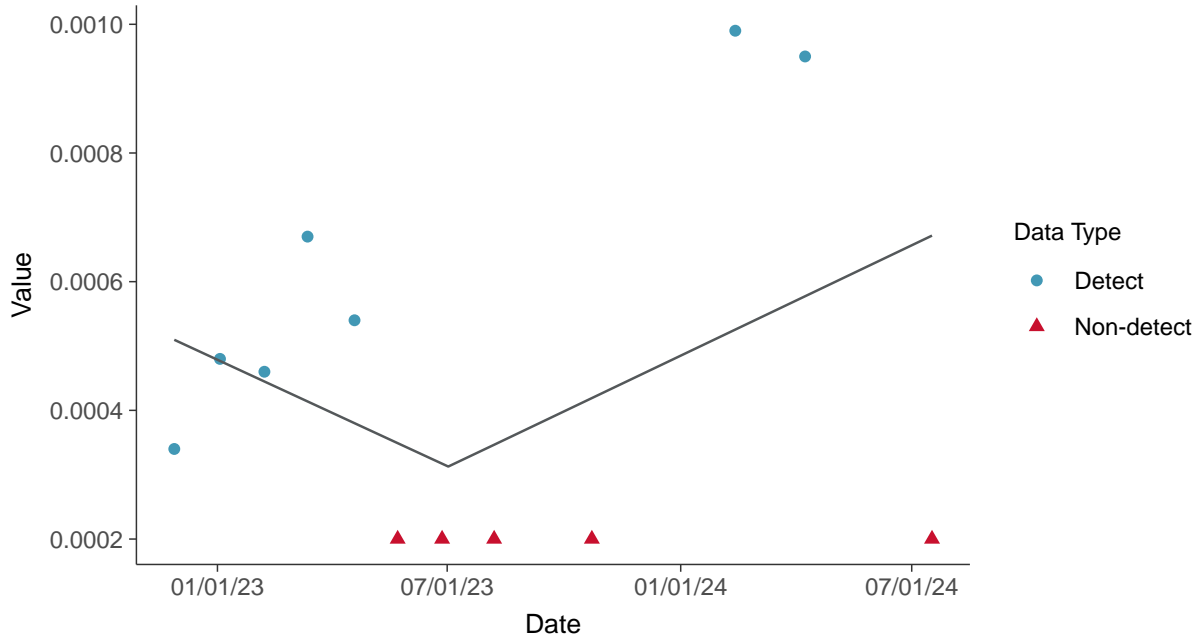
Chromium, Total, MW-12 (mg/L)





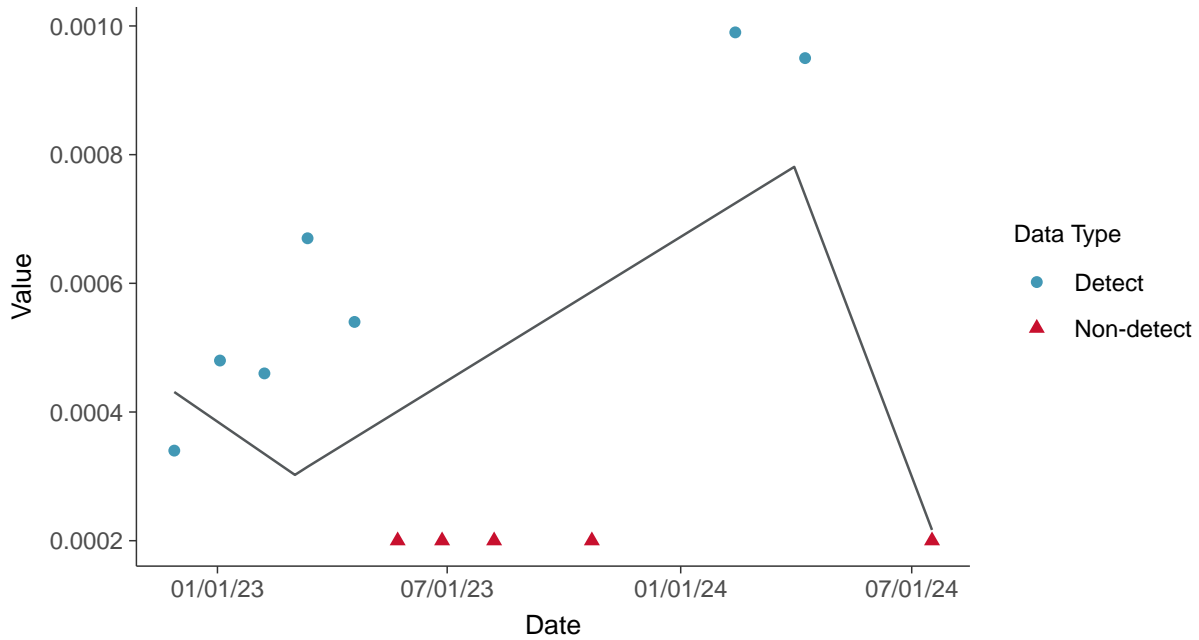
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

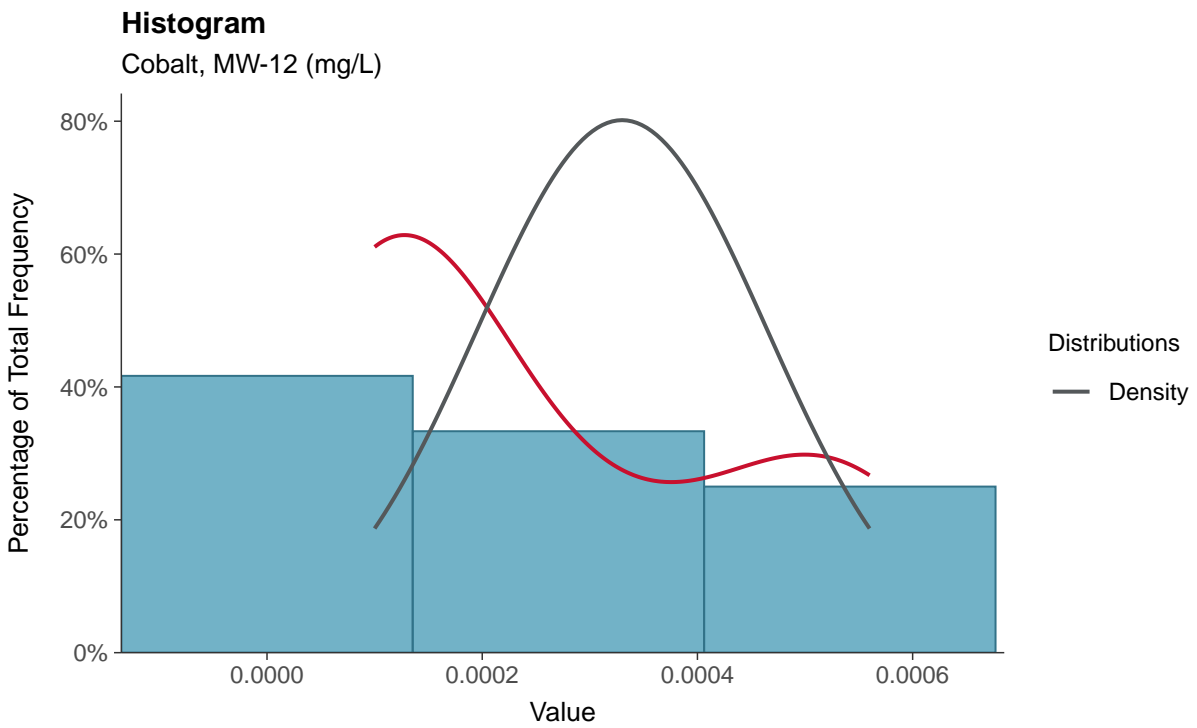
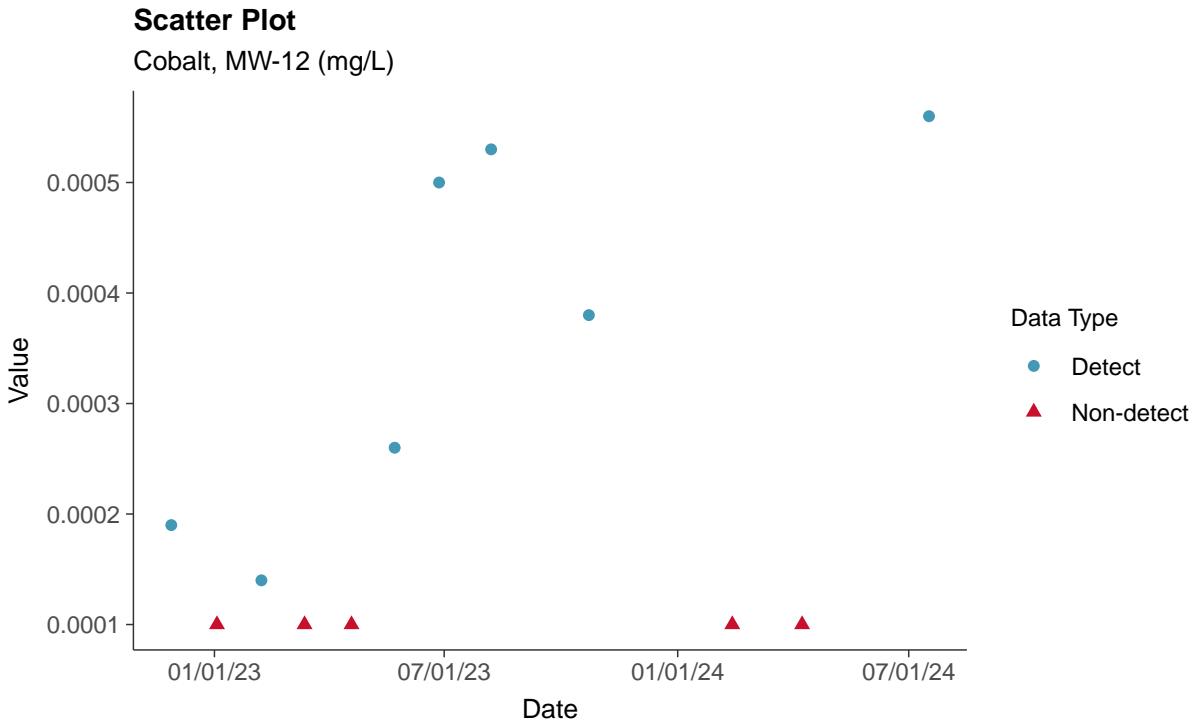
Chromium, Total, MW-12 (mg/L)





### Appendix IV: Cobalt, MW-12

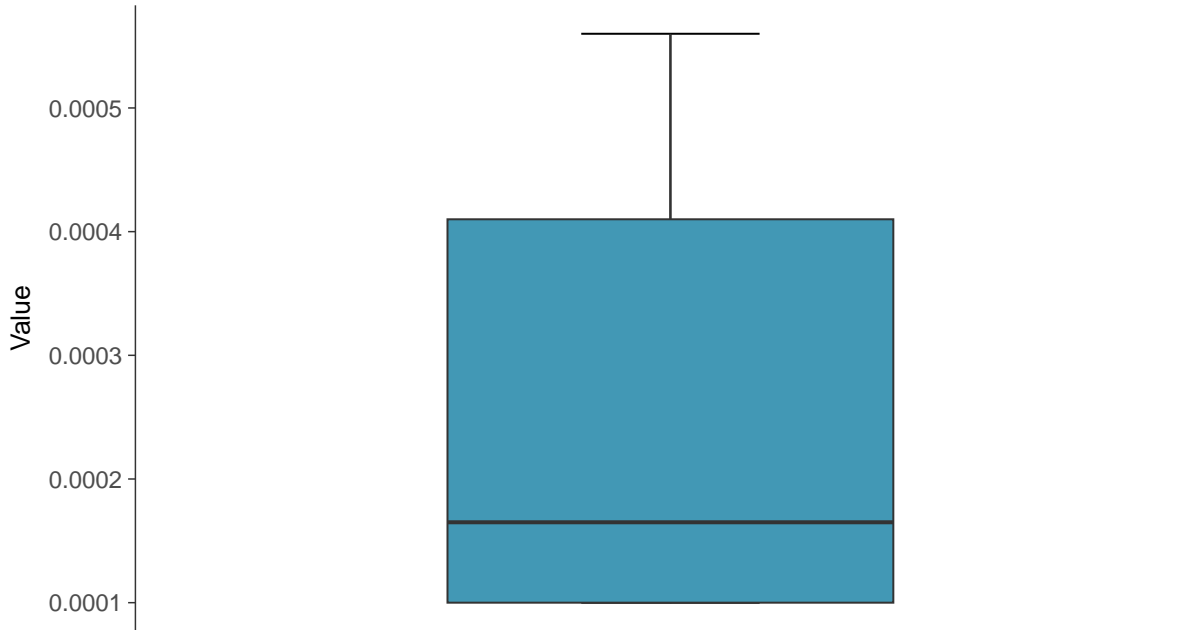
ID: 22\_2\_5\_110





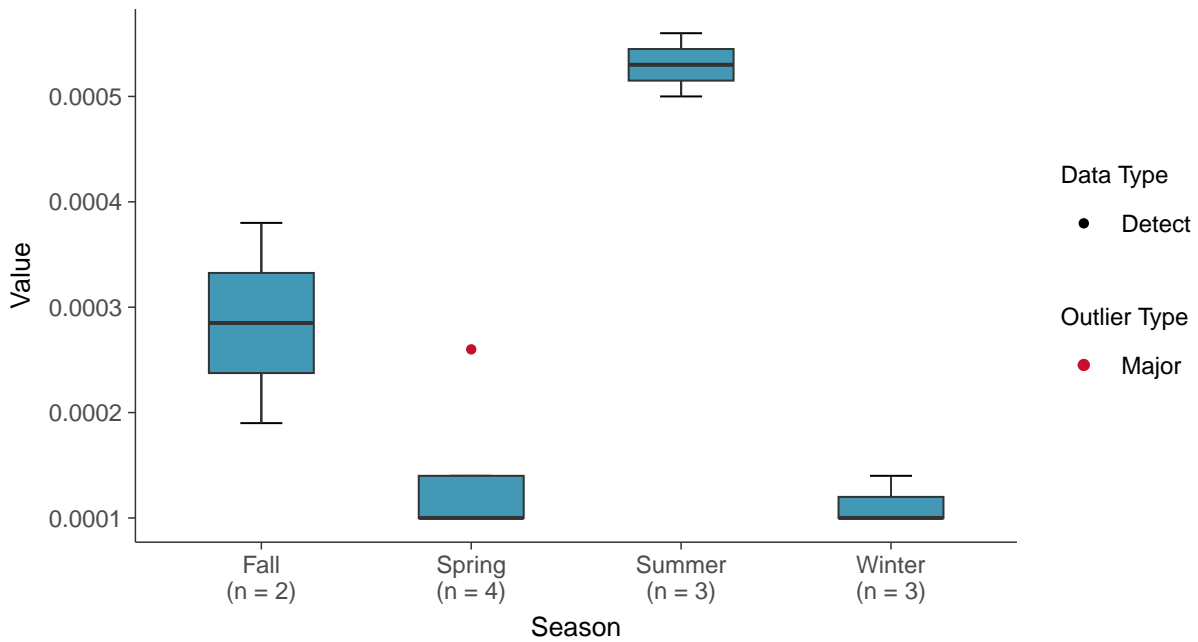
### Boxplot

Cobalt, MW-12 (mg/L)



### Boxplot by Season

Cobalt, MW-12 (mg/L)

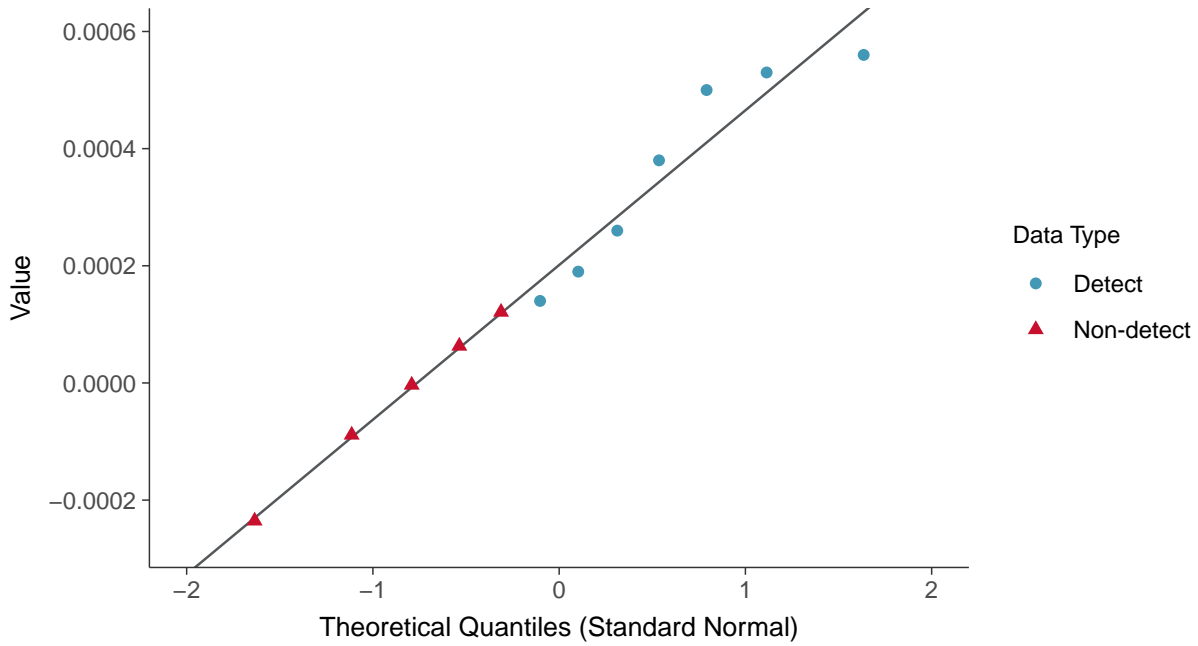






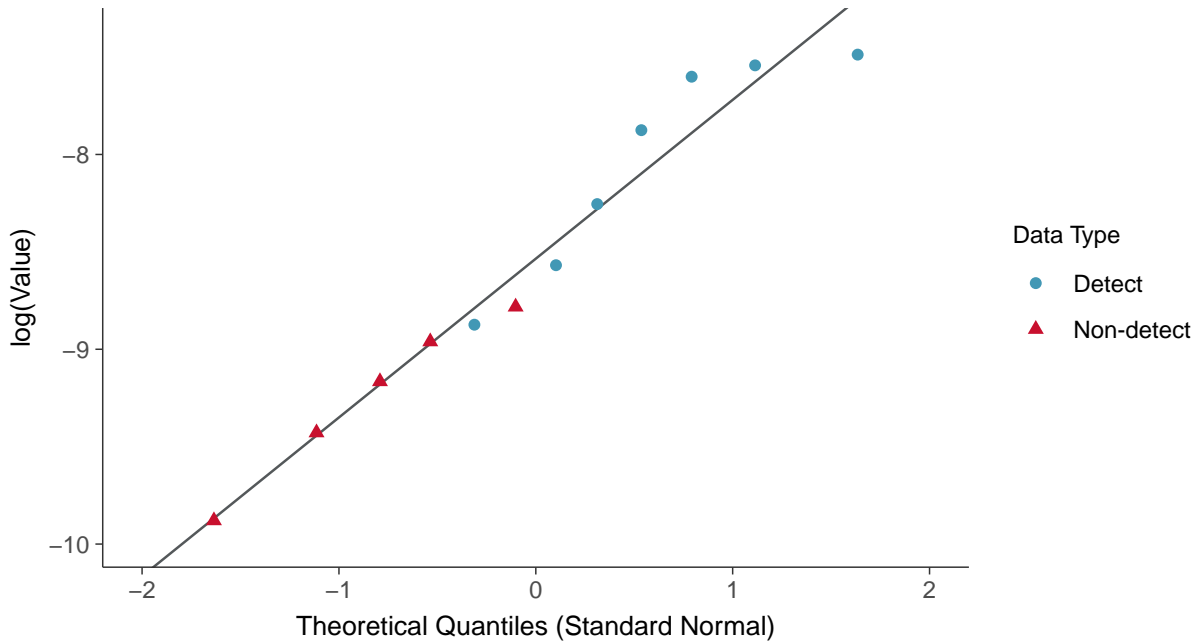
### Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

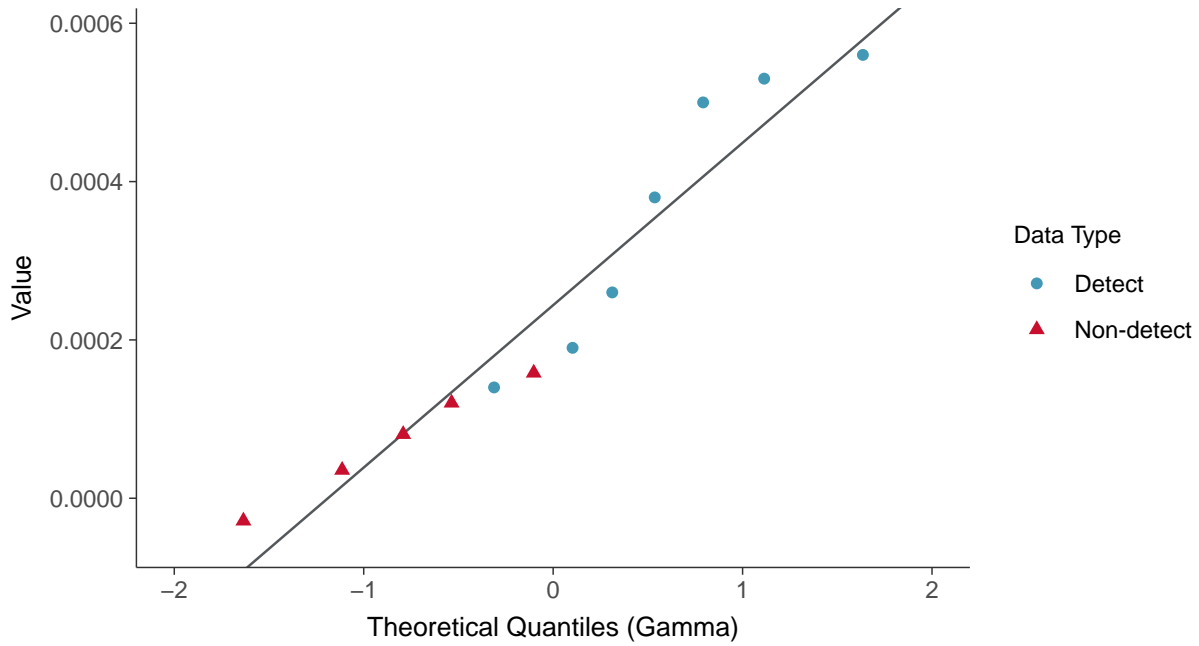
Cobalt, MW-12 (mg/L)





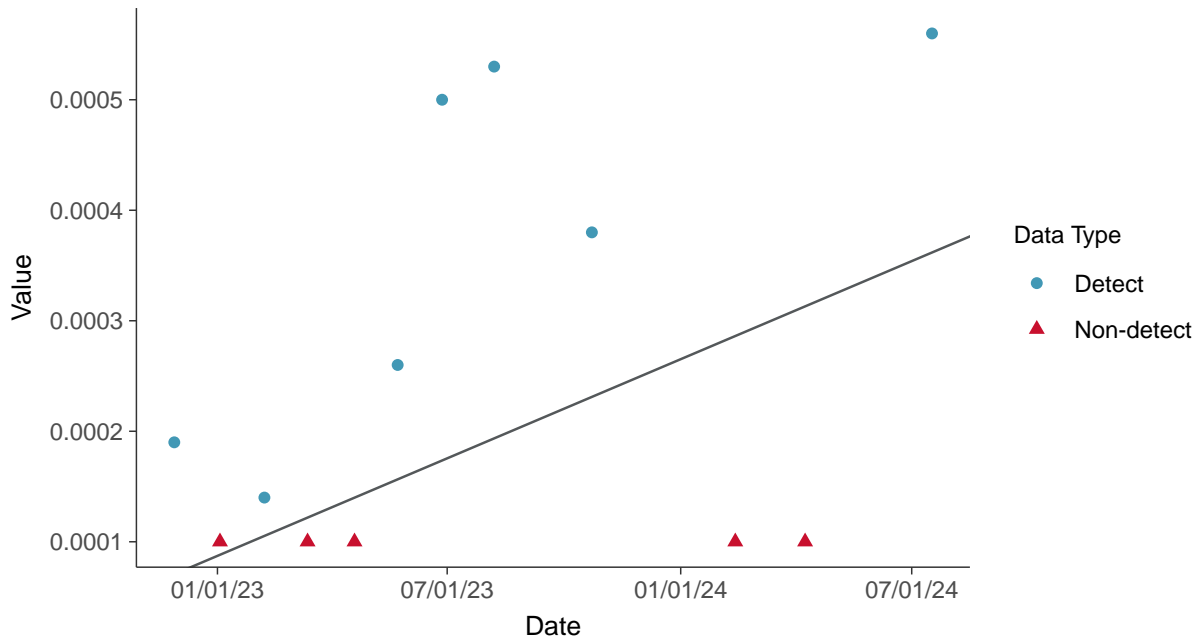
### Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-12 (mg/L)



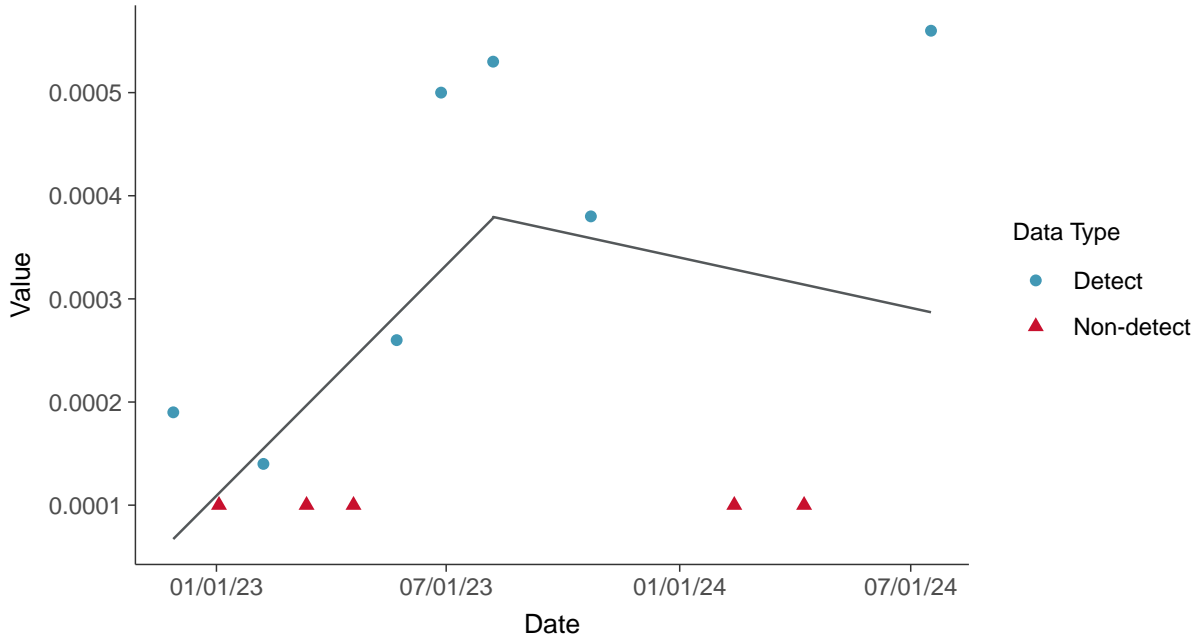
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Cobalt, MW-12 (mg/L)

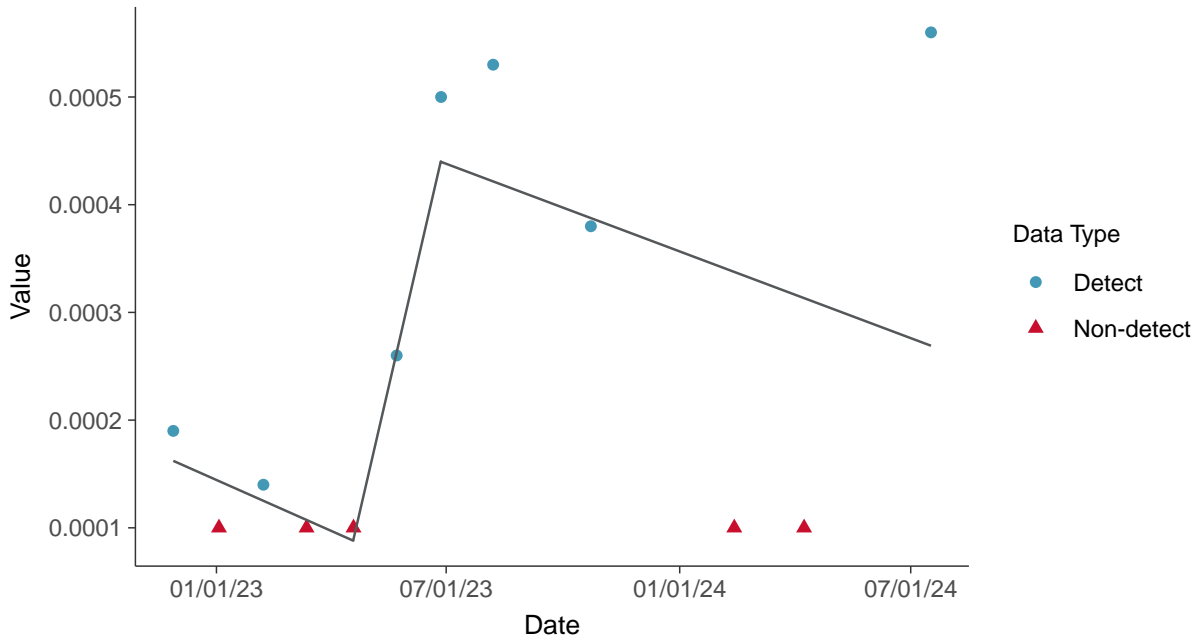




**Trend Regression: Piecewise Linear-Linear**  
Cobalt, MW-12 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cobalt, MW-12 (mg/L)



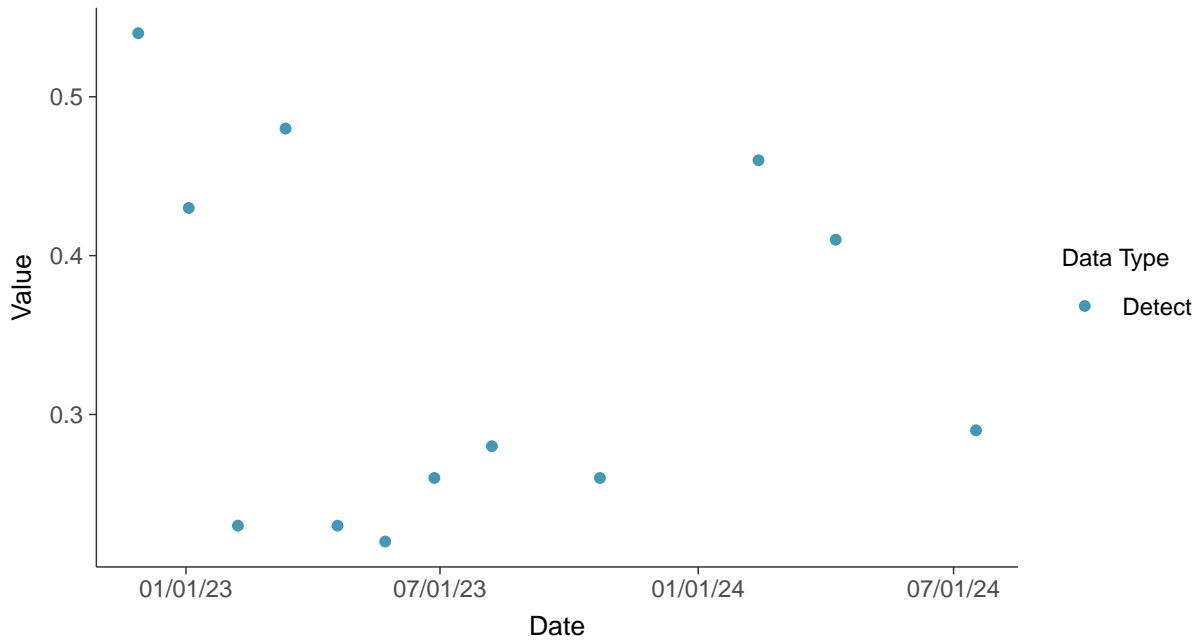


### Appendix IV: Fluoride (App IV), MW-12

ID: 22\_2\_5\_113

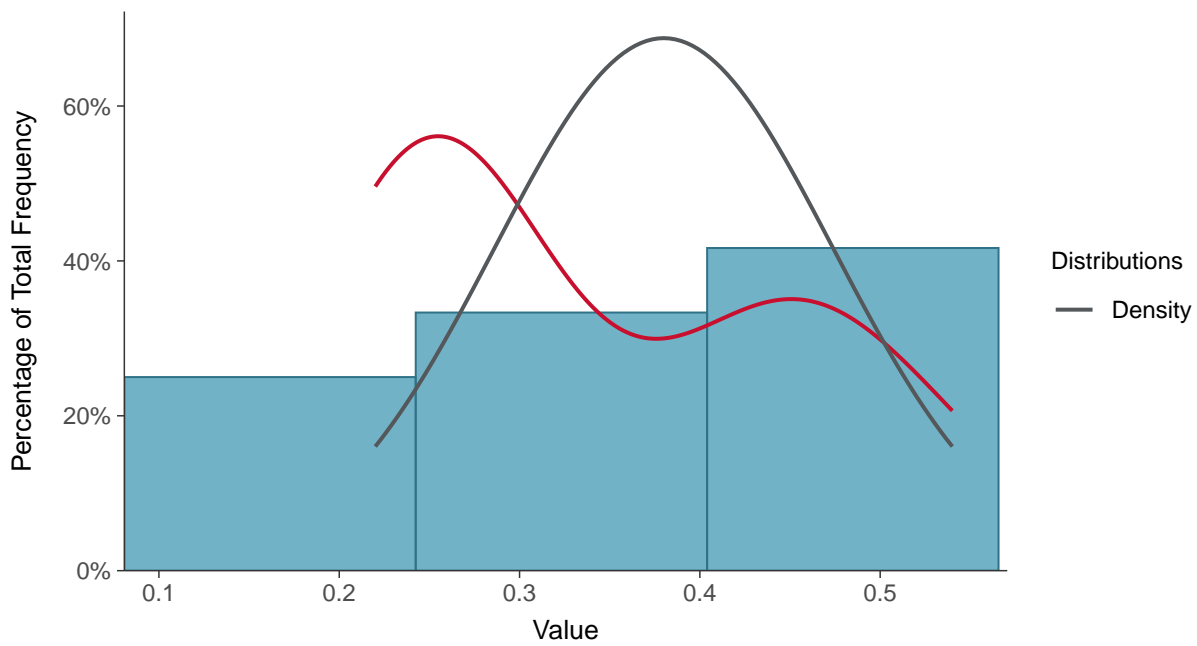
#### Scatter Plot

Fluoride (App IV), MW-12 (mg/L)



#### Histogram

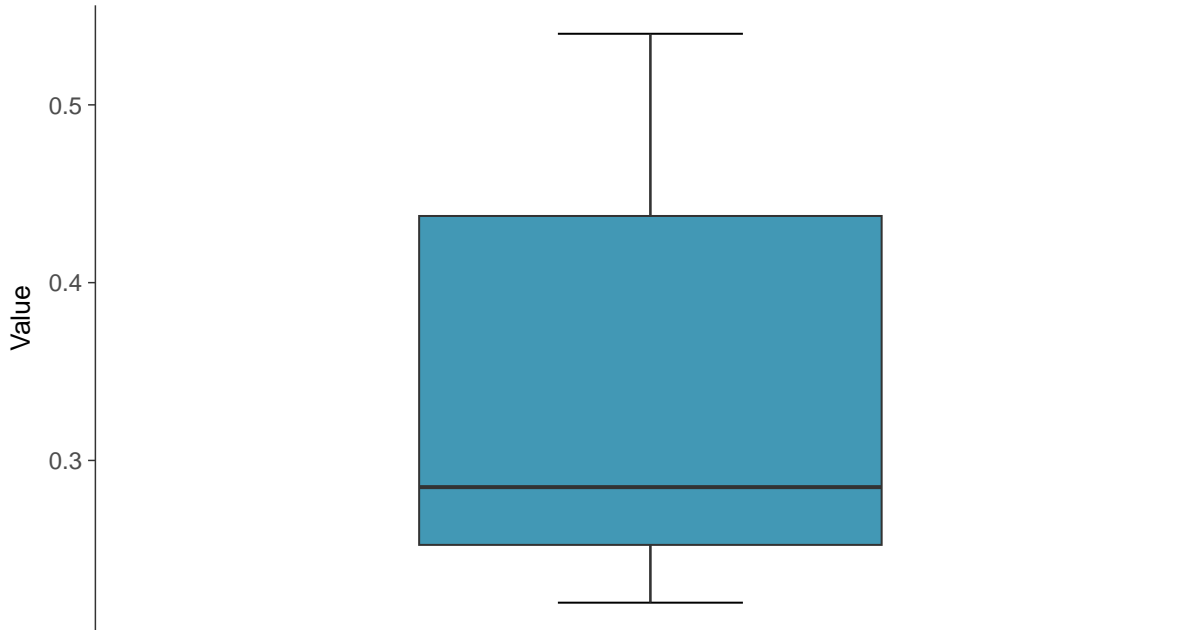
Fluoride (App IV), MW-12 (mg/L)





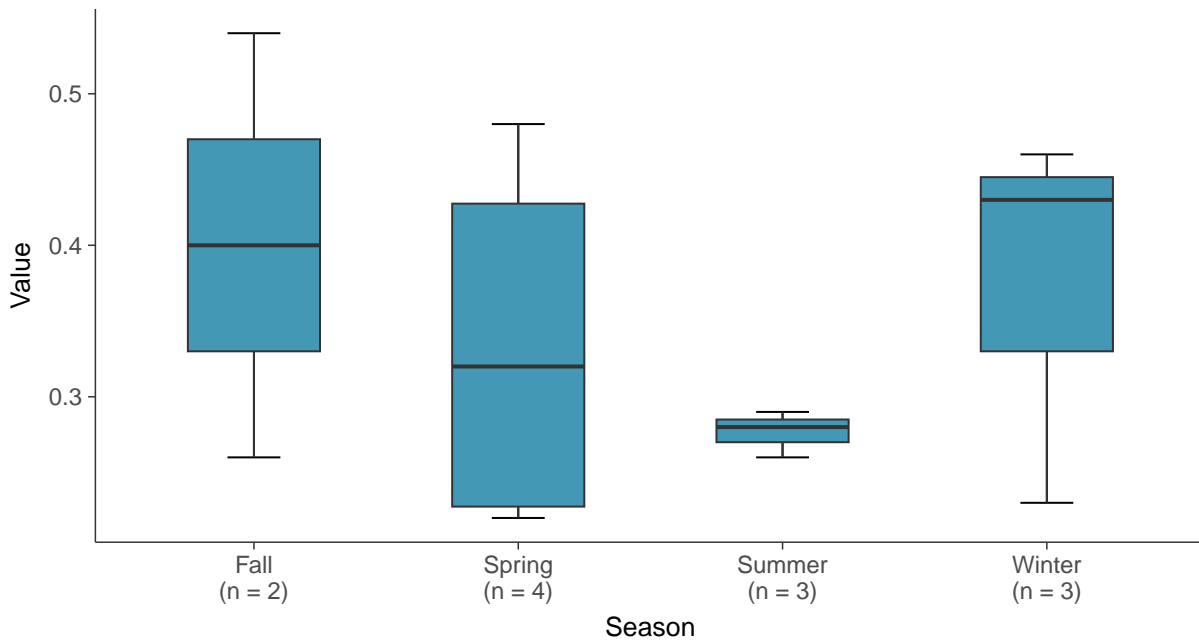
### Boxplot

Fluoride (App IV), MW-12 (mg/L)



### Boxplot by Season

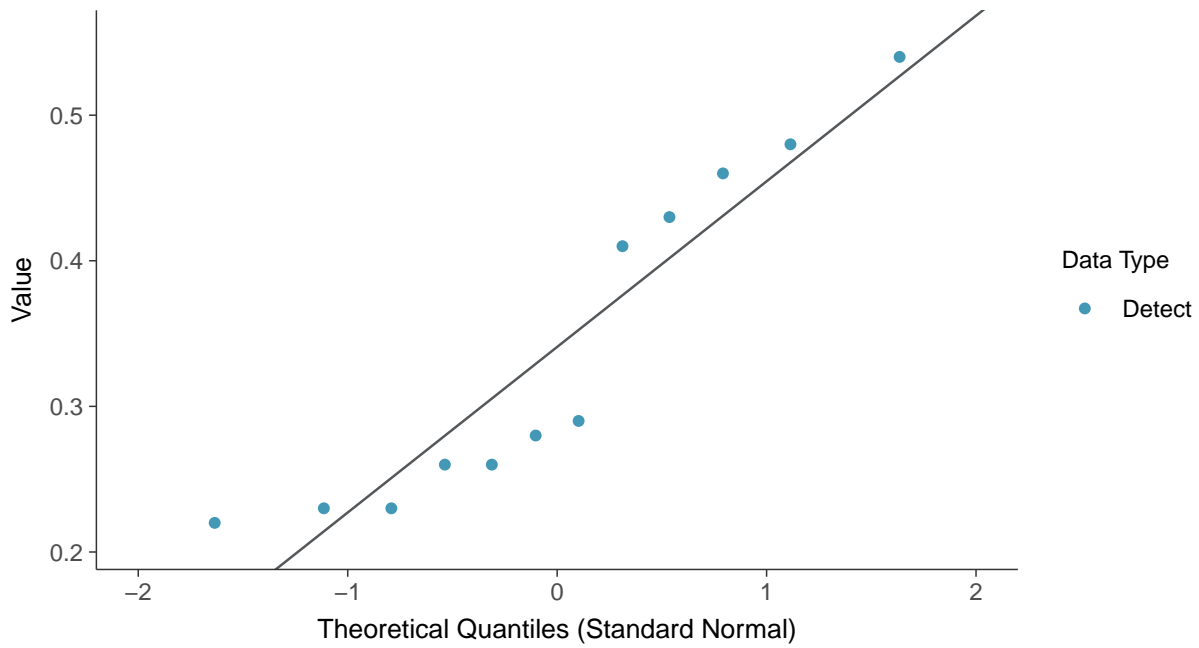
Fluoride (App IV), MW-12 (mg/L)





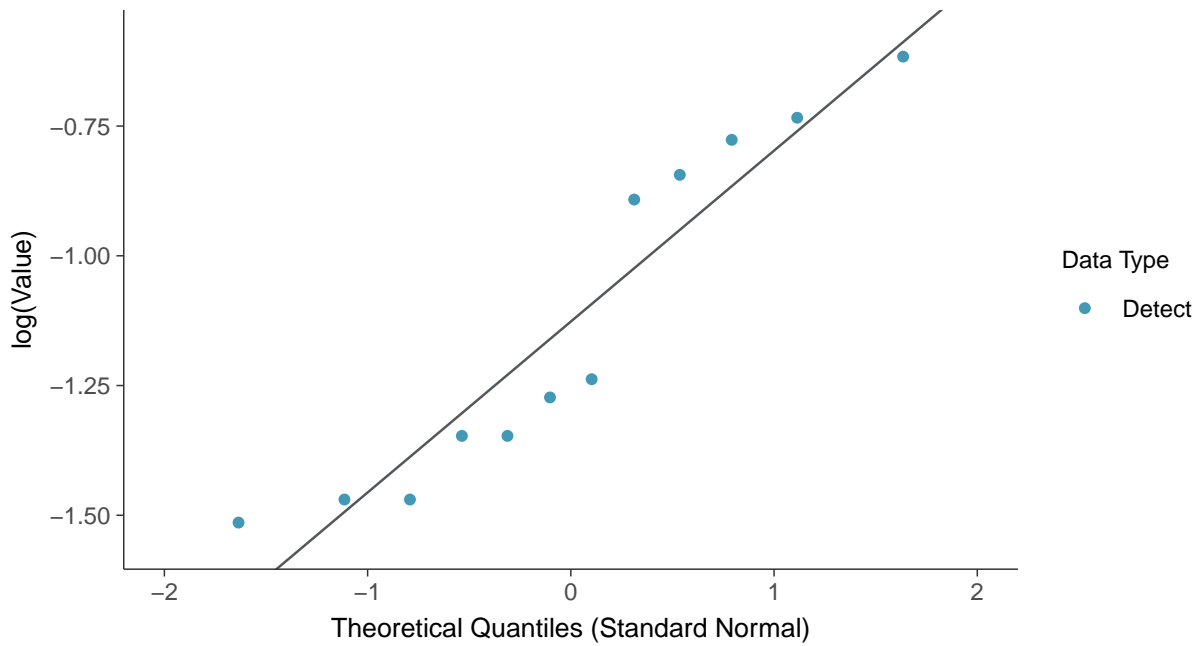
### Normal Q-Q plot

Fluoride (App IV), MW-12 (mg/L)



### Lognormal Q-Q plot

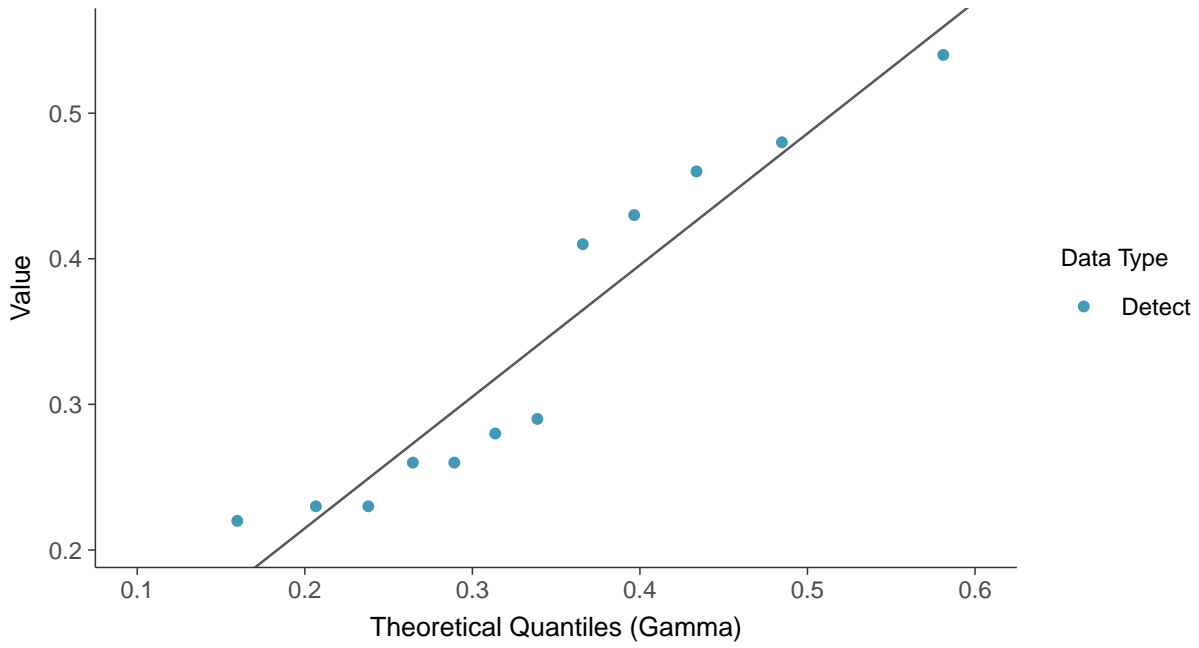
Fluoride (App IV), MW-12 (mg/L)





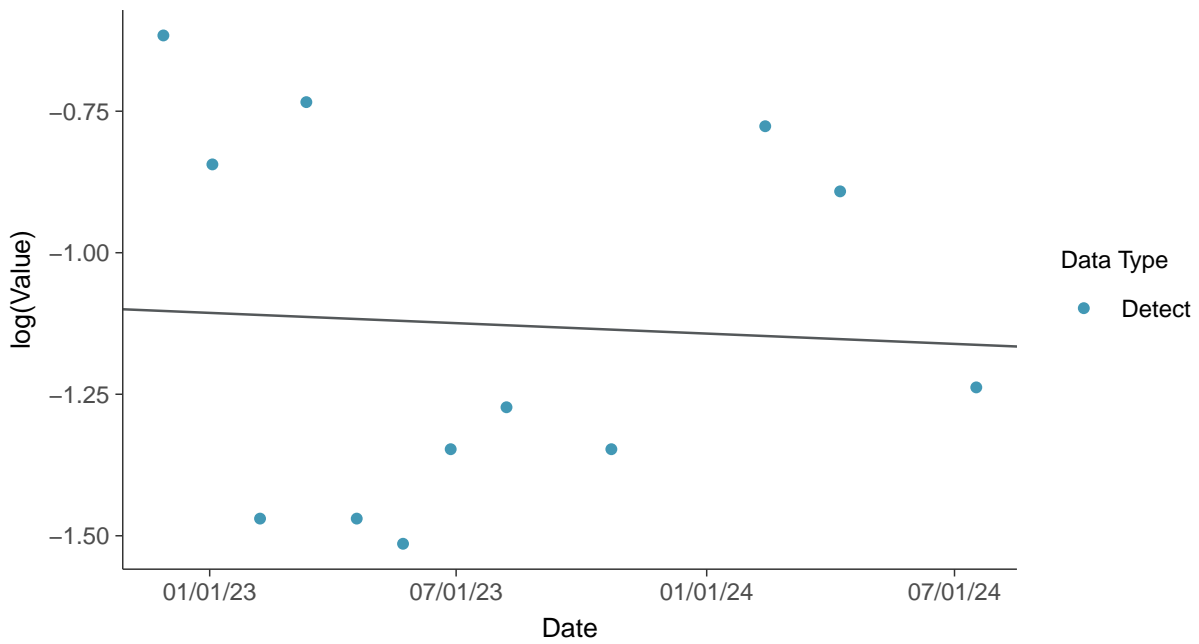
### Gamma Q-Q plot

Fluoride (App IV), MW-12 (mg/L)



### Trend Regression: Lognormal MLE

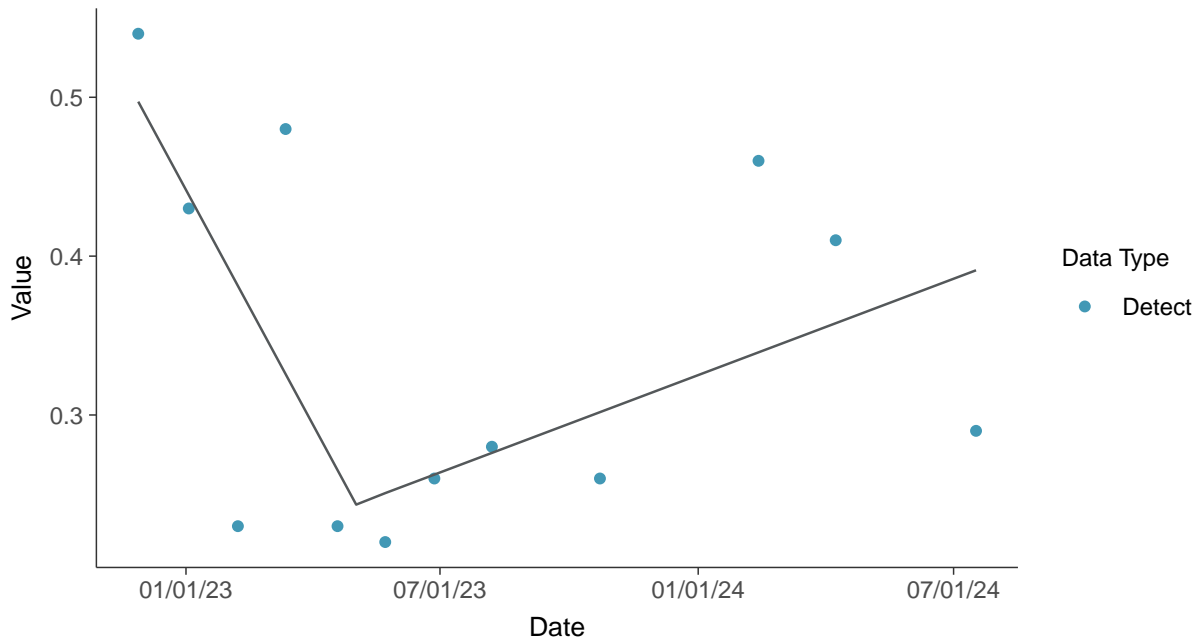
Fluoride (App IV), MW-12 (mg/L)





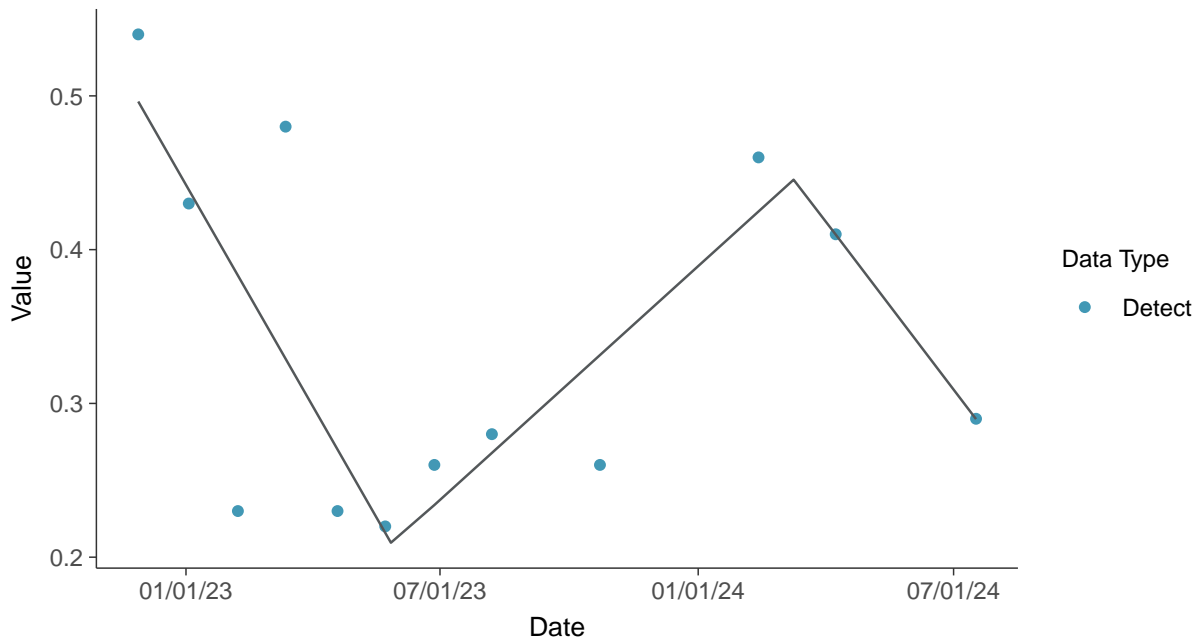
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Fluoride (App IV), MW-12 (mg/L)

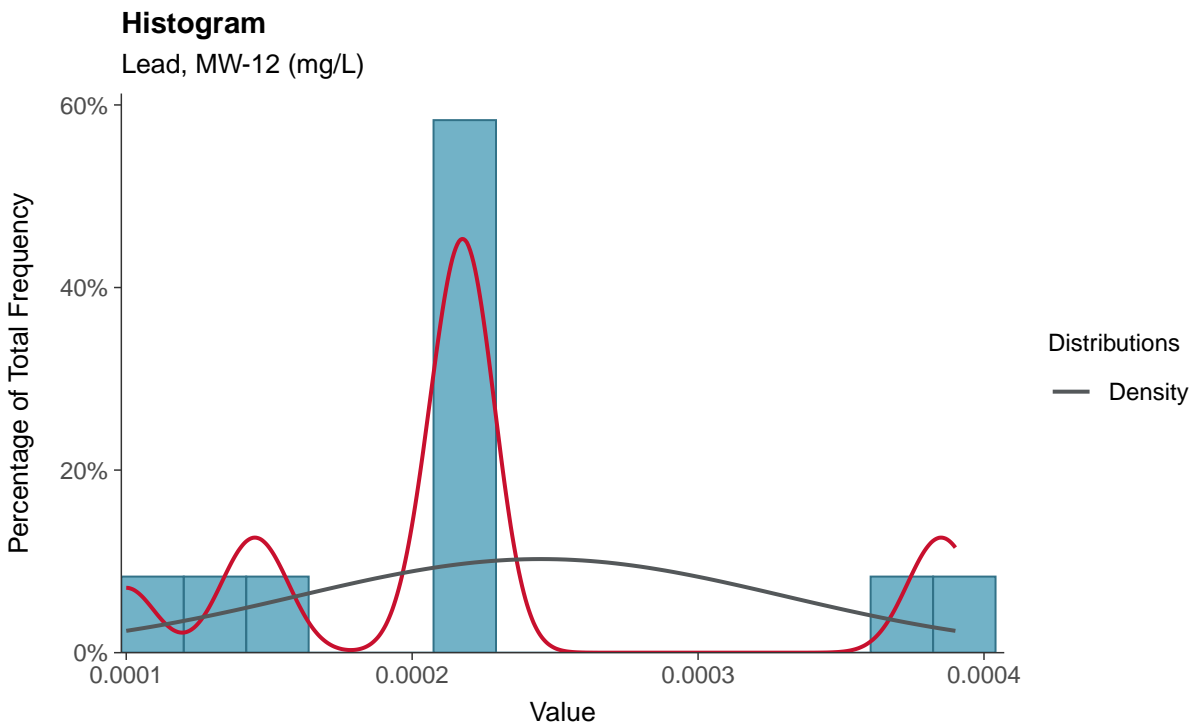
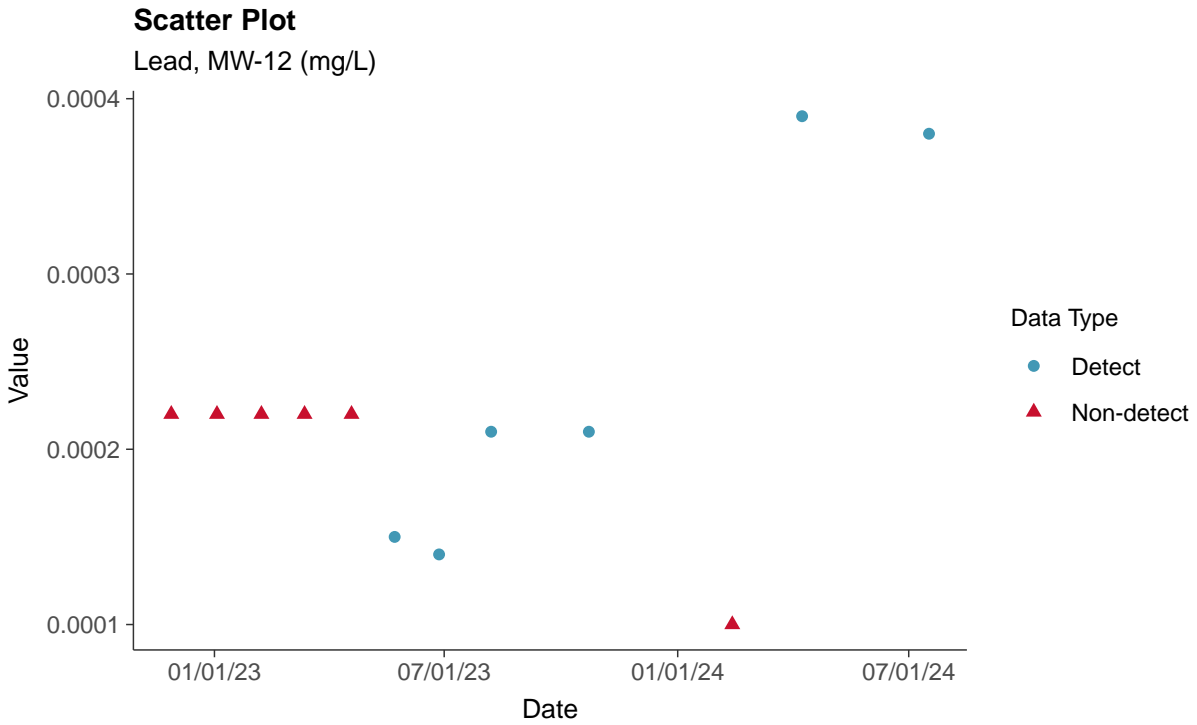






### Appendix IV: Lead, MW-12

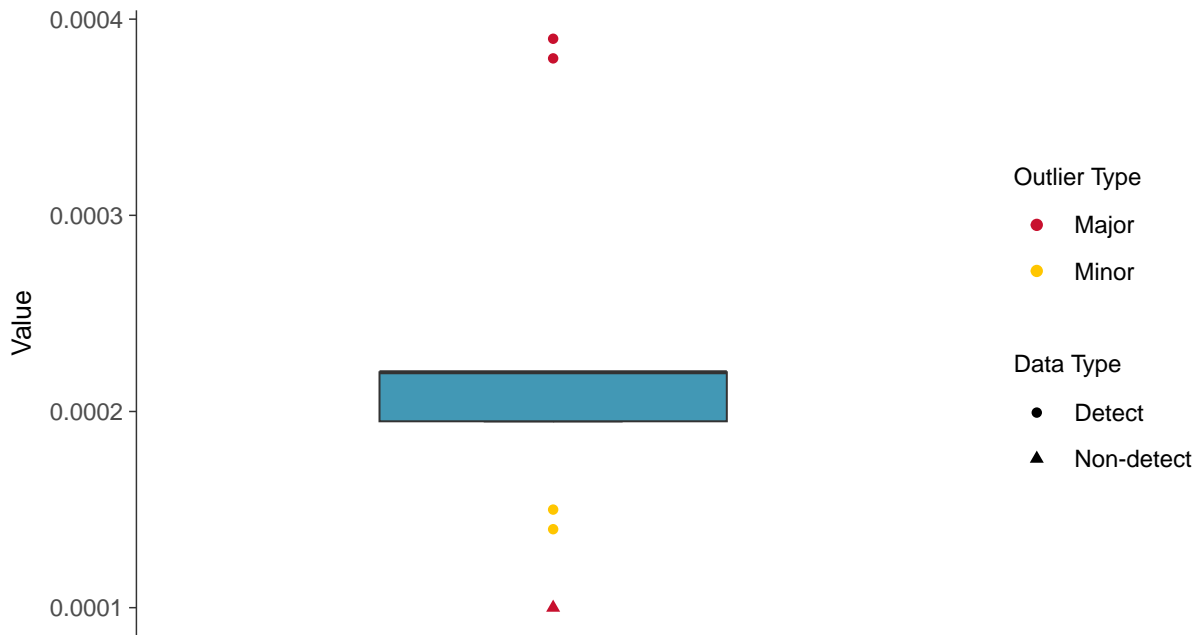
ID: 22\_2\_5\_115





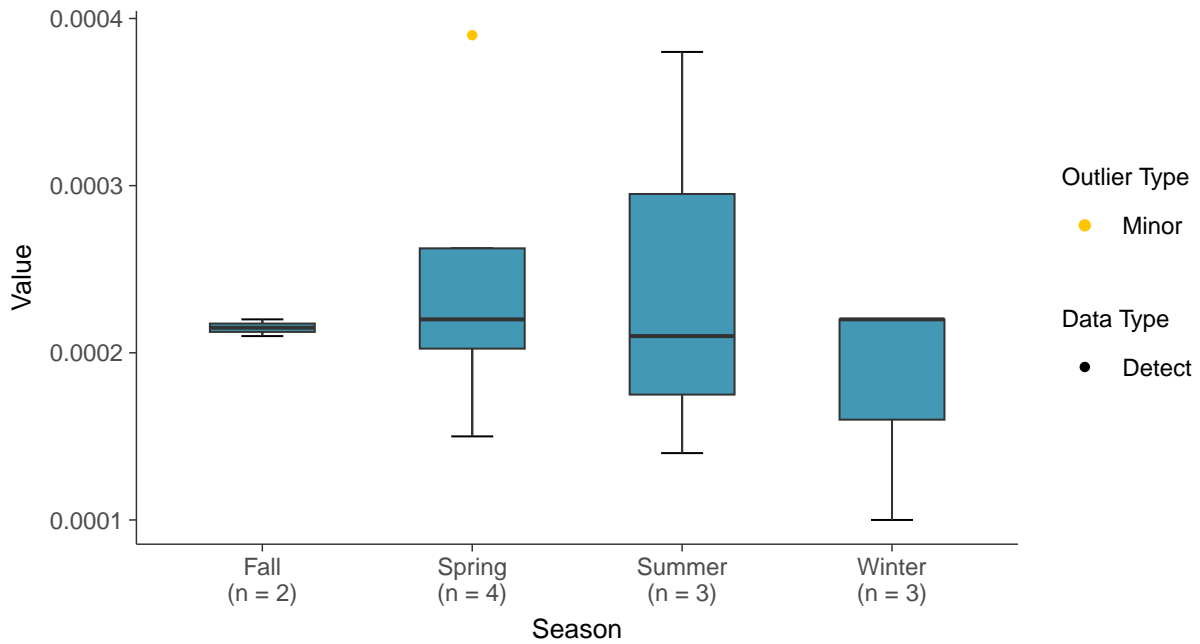
### Boxplot

Lead, MW-12 (mg/L)



### Boxplot by Season

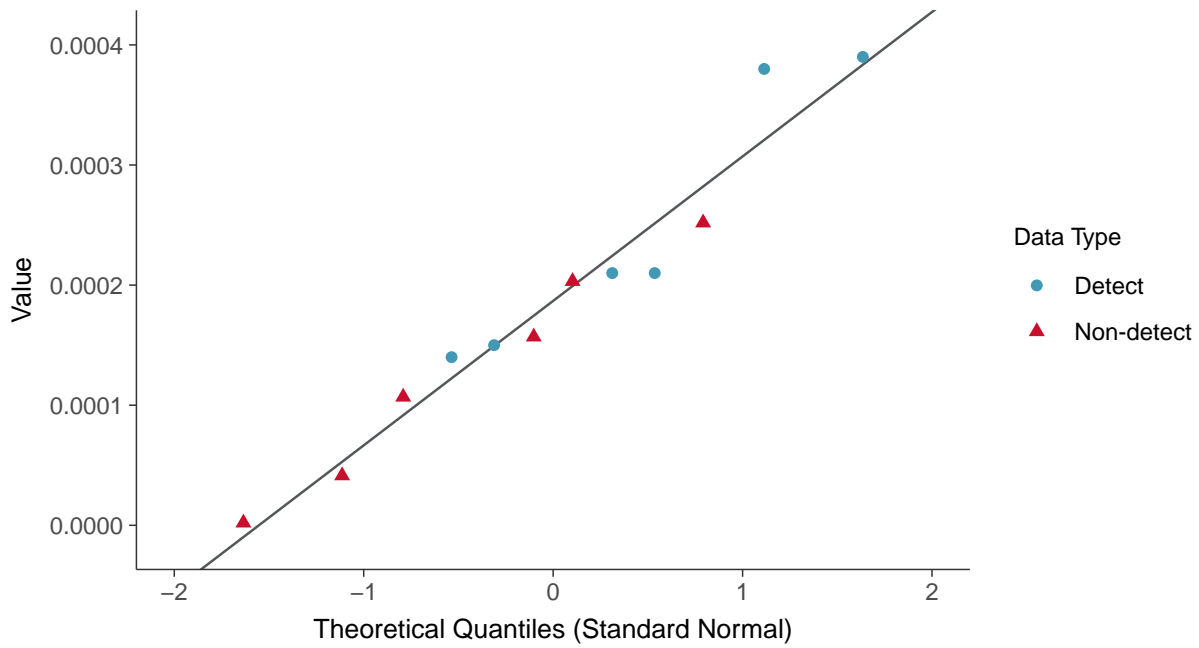
Lead, MW-12 (mg/L)





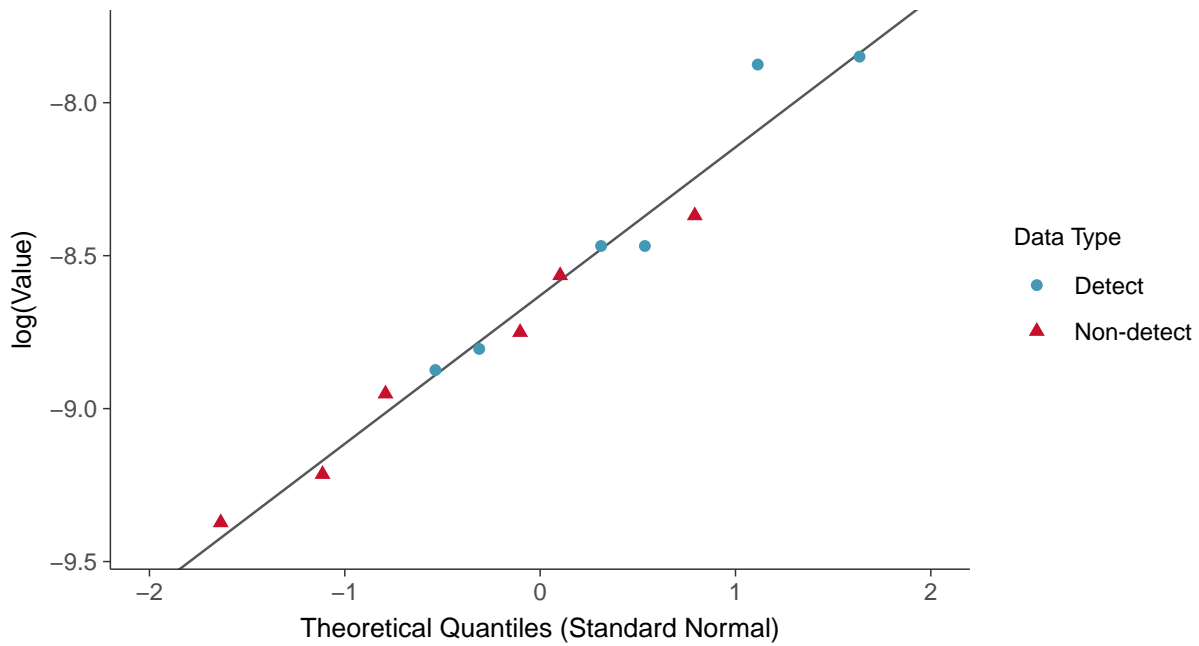
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-12 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

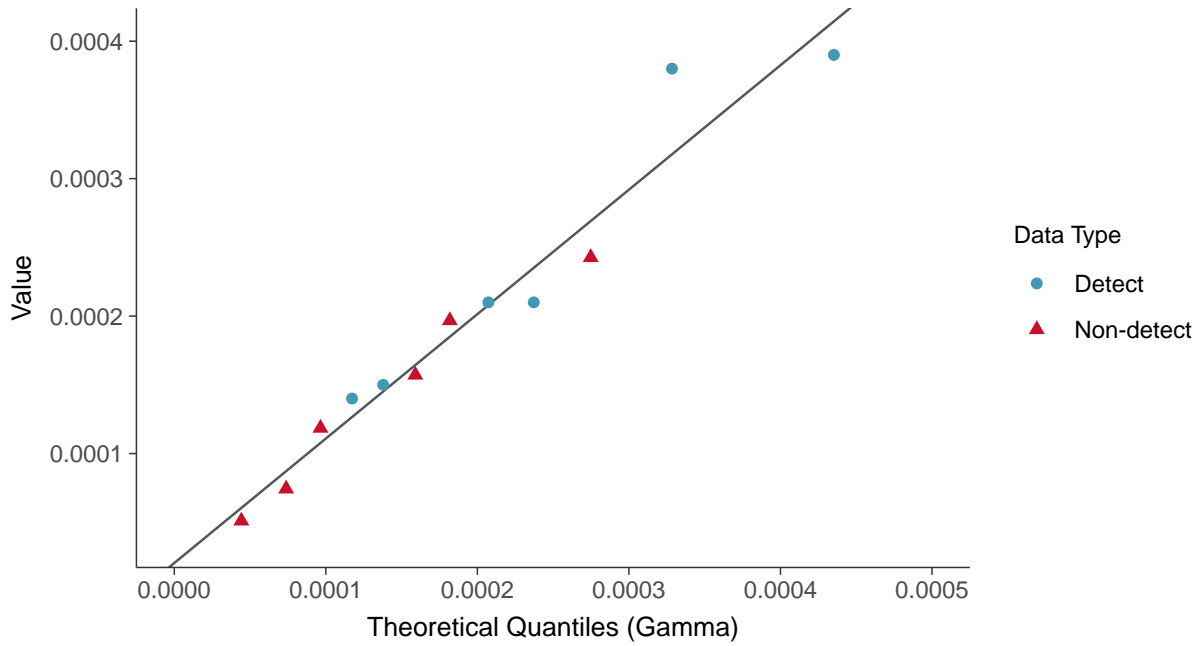
Lead, MW-12 (mg/L)





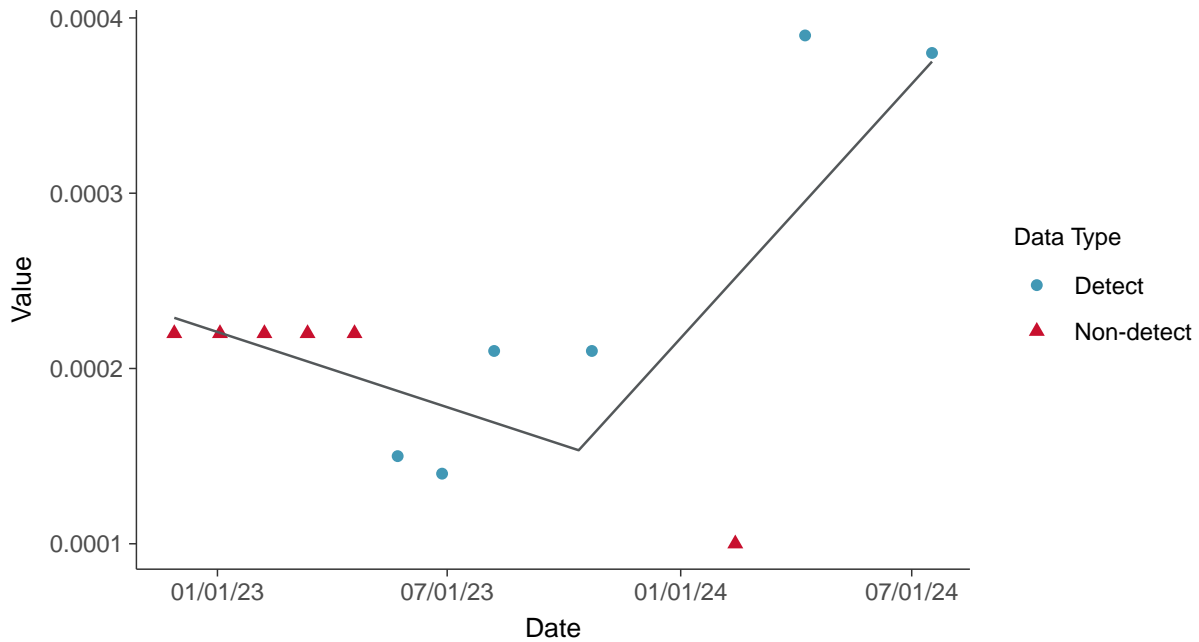
### Gamma Q-Q plot using ROS Imputed Estimates

Lead, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear

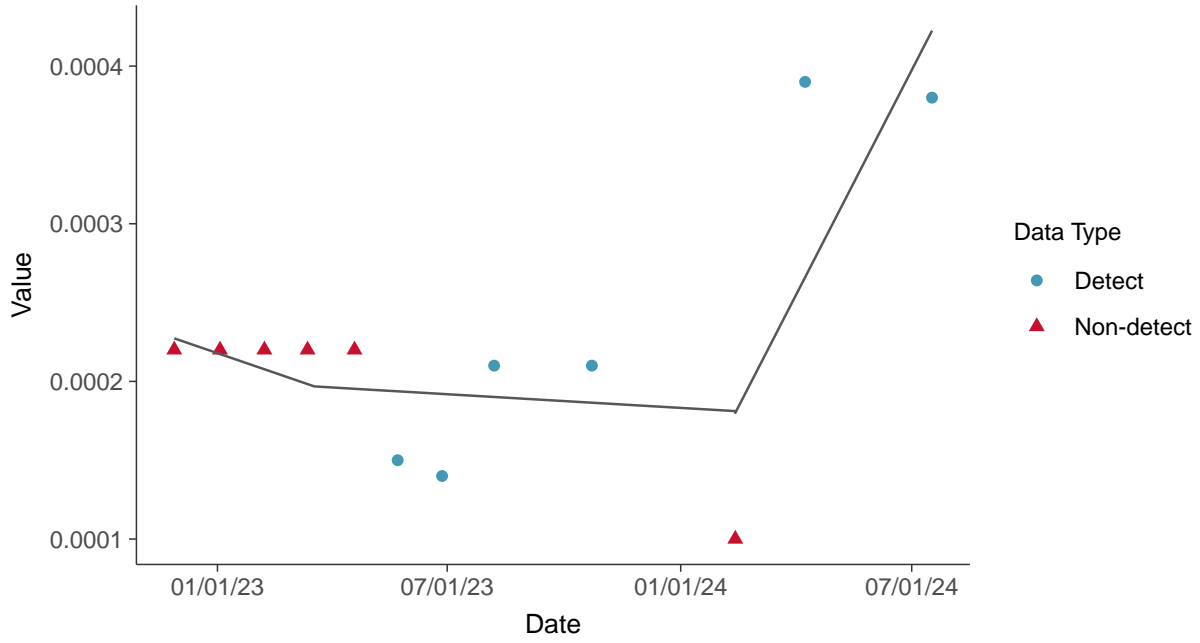
Lead, MW-12 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-12 (mg/L)



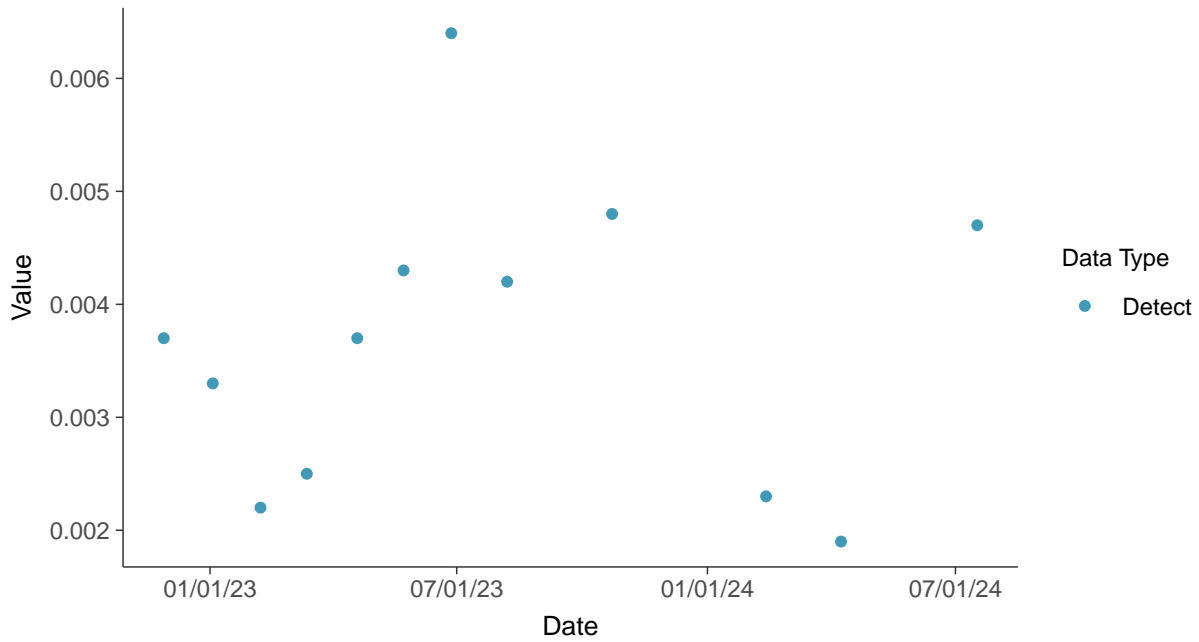


## Appendix IV: Lithium, MW-12

ID: 22\_2\_5\_116

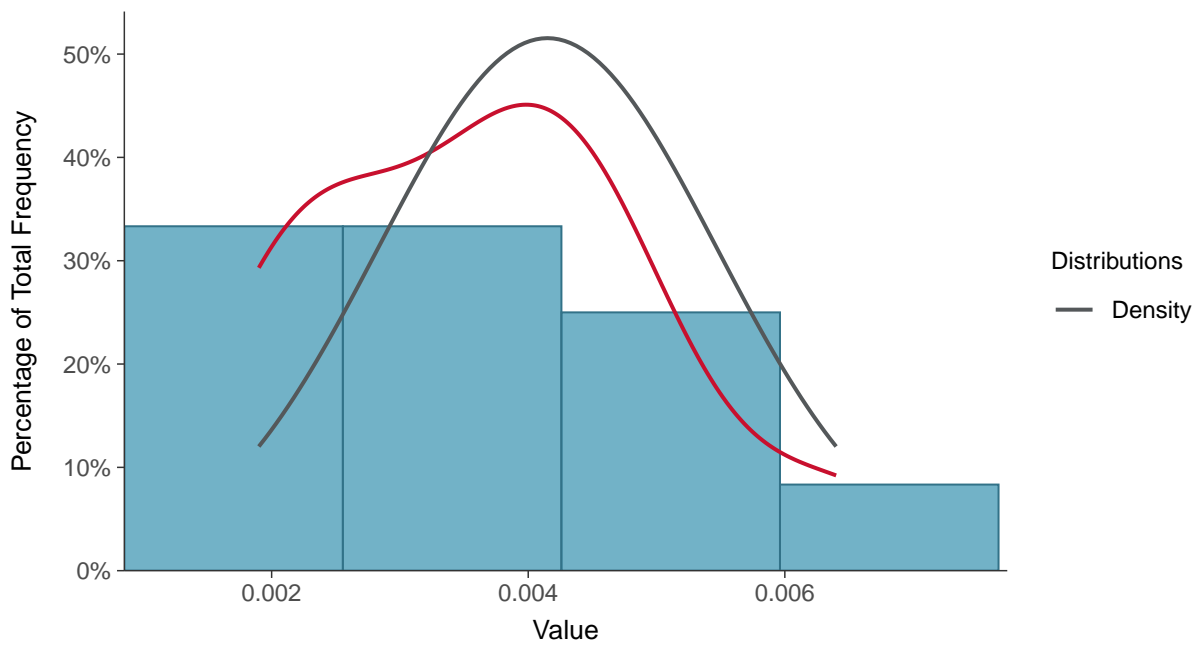
### Scatter Plot

Lithium, MW-12 (mg/L)



### Histogram

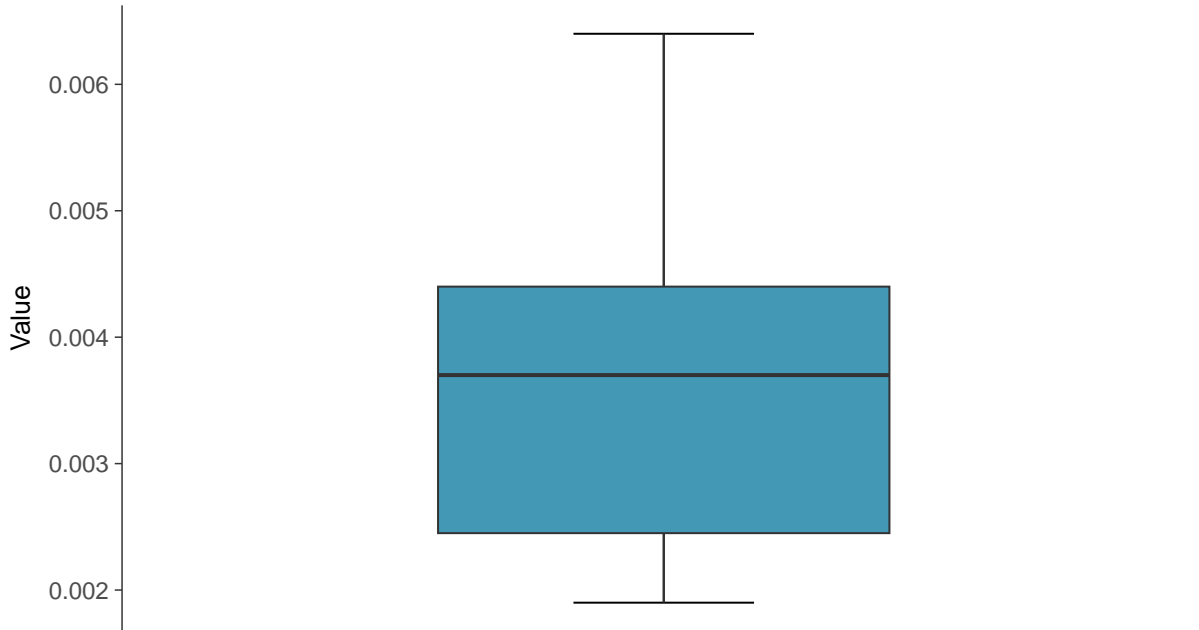
Lithium, MW-12 (mg/L)





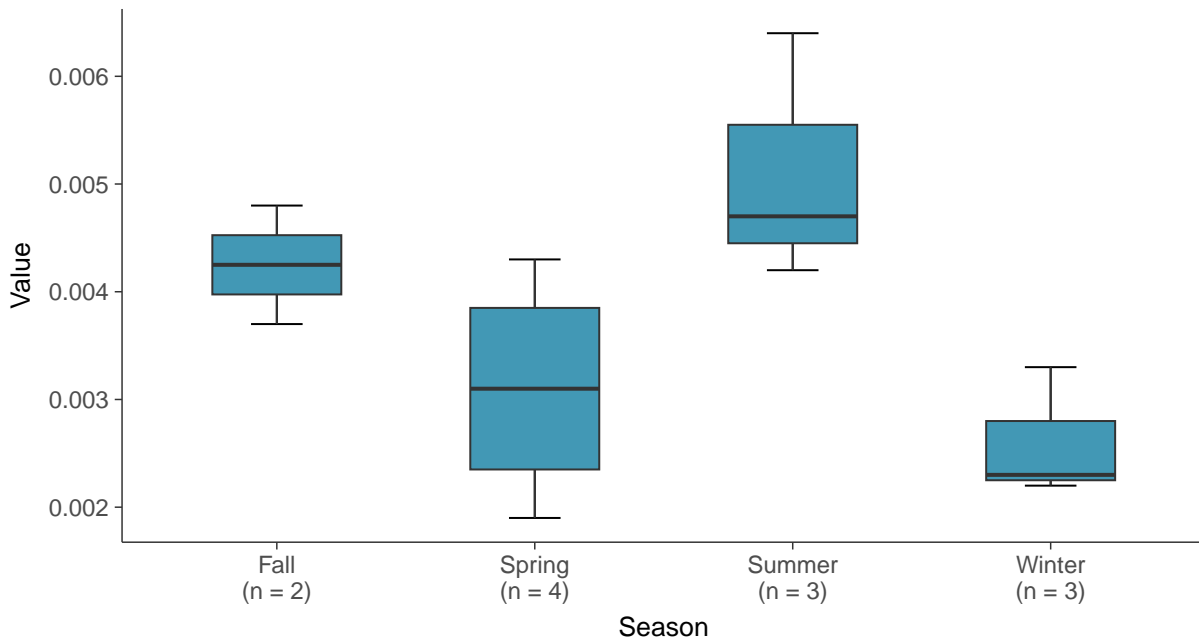
### Boxplot

Lithium, MW-12 (mg/L)



### Boxplot by Season

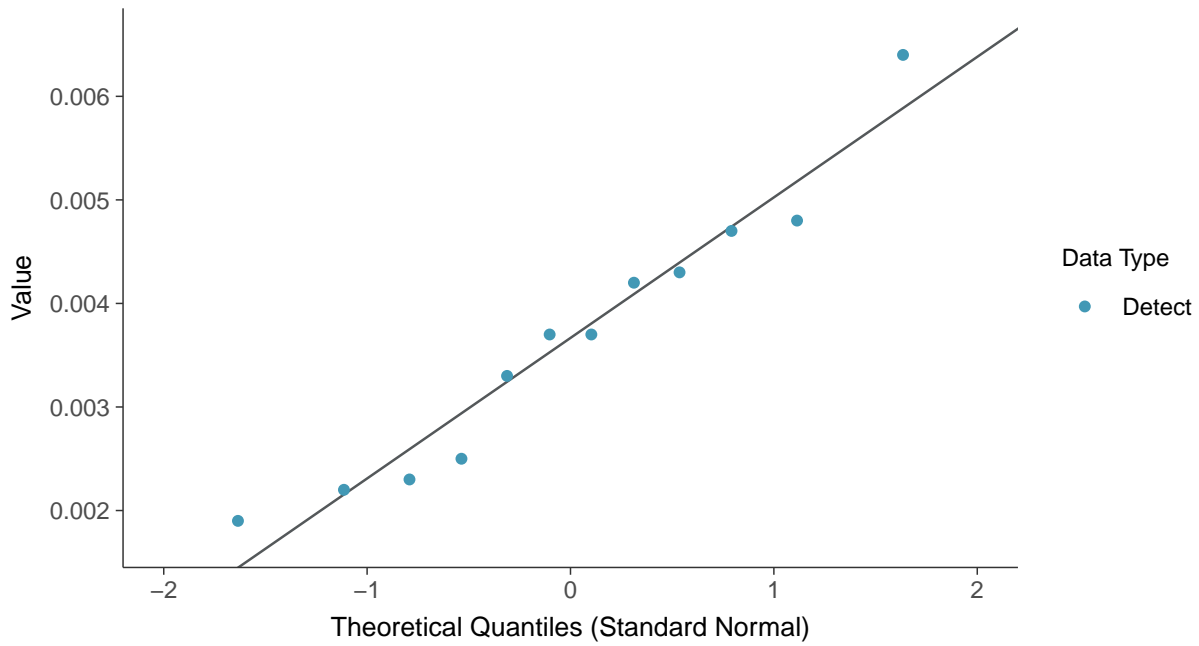
Lithium, MW-12 (mg/L)





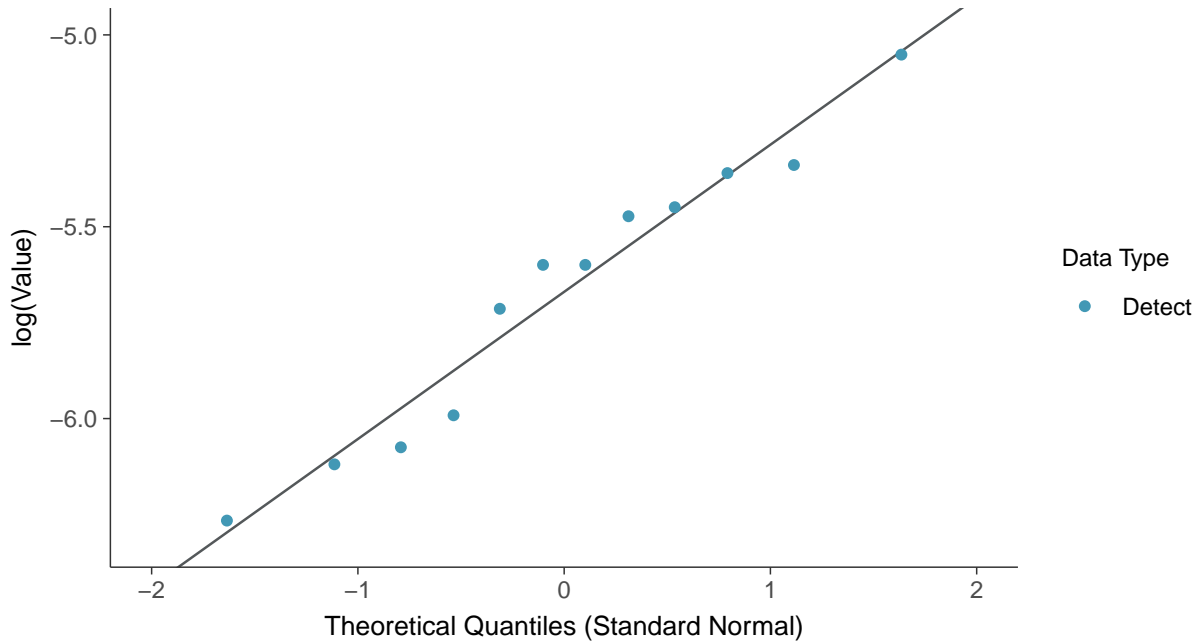
### Normal Q-Q plot

Lithium, MW-12 (mg/L)



### Lognormal Q-Q plot

Lithium, MW-12 (mg/L)

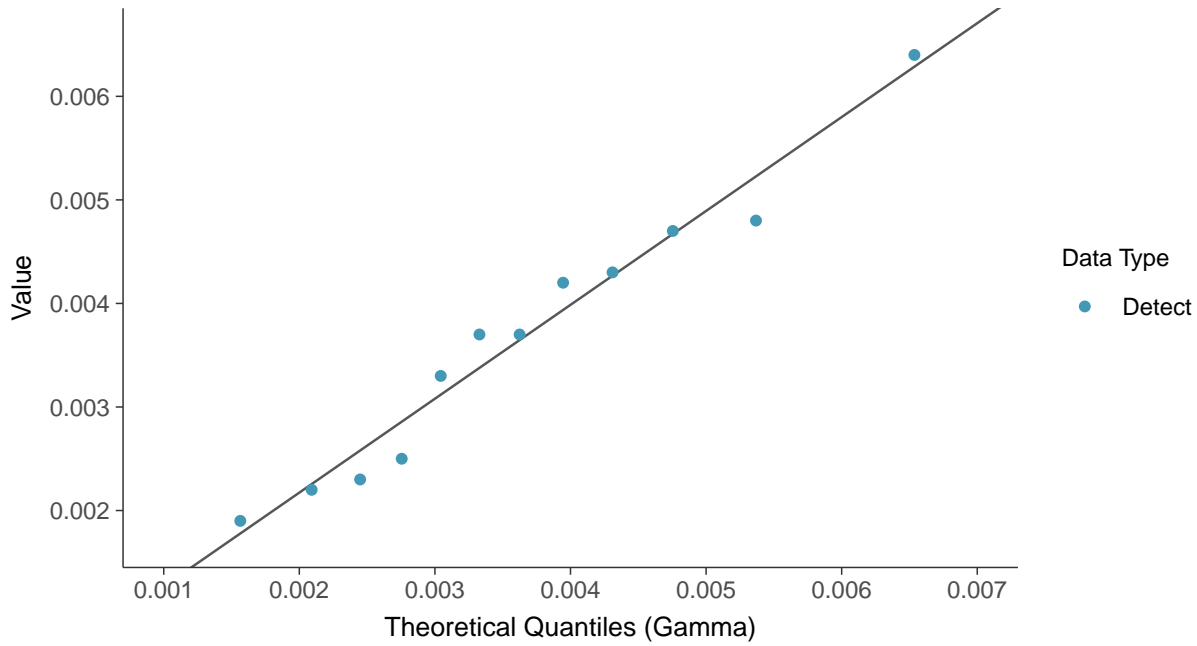






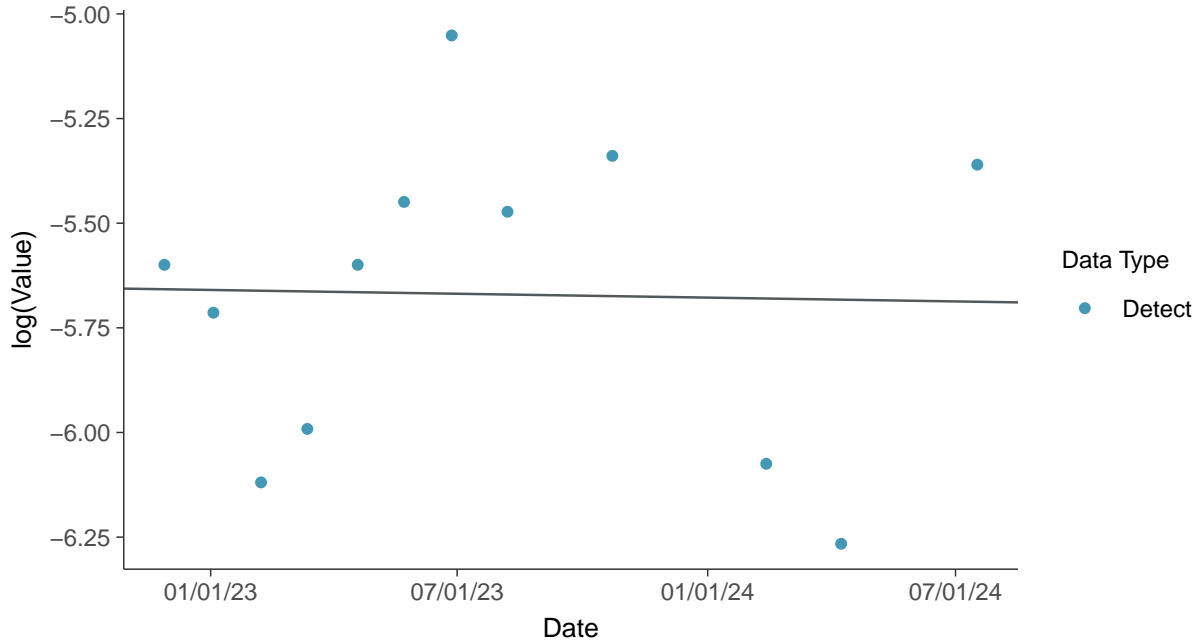
### Gamma Q-Q plot

Lithium, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

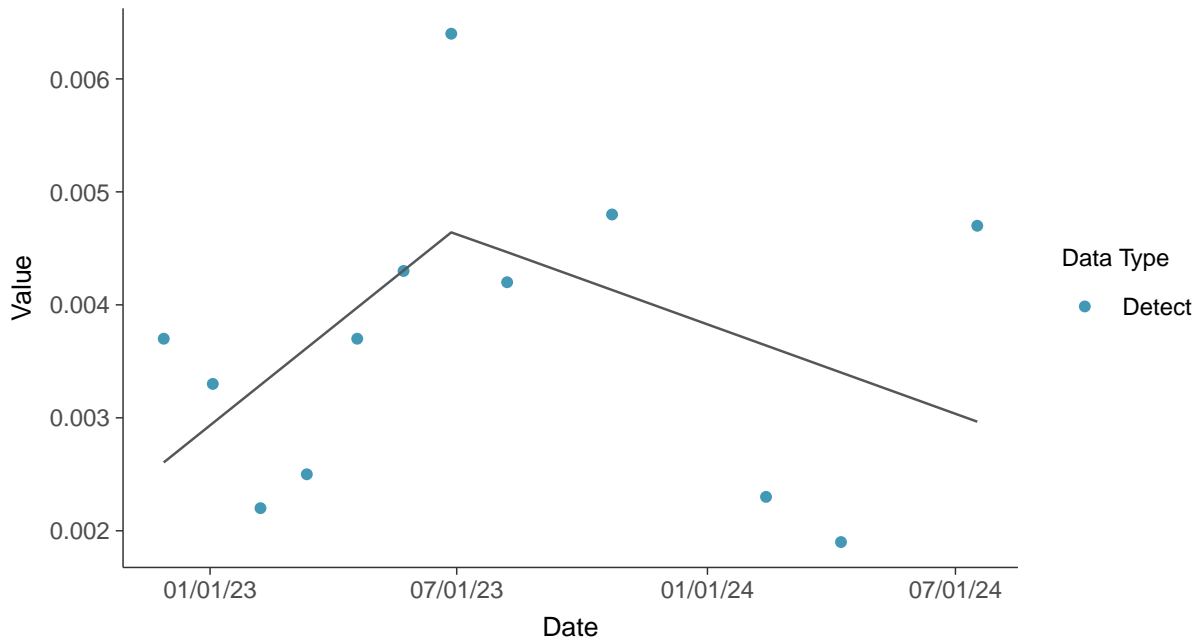
Lithium, MW-12 (mg/L)





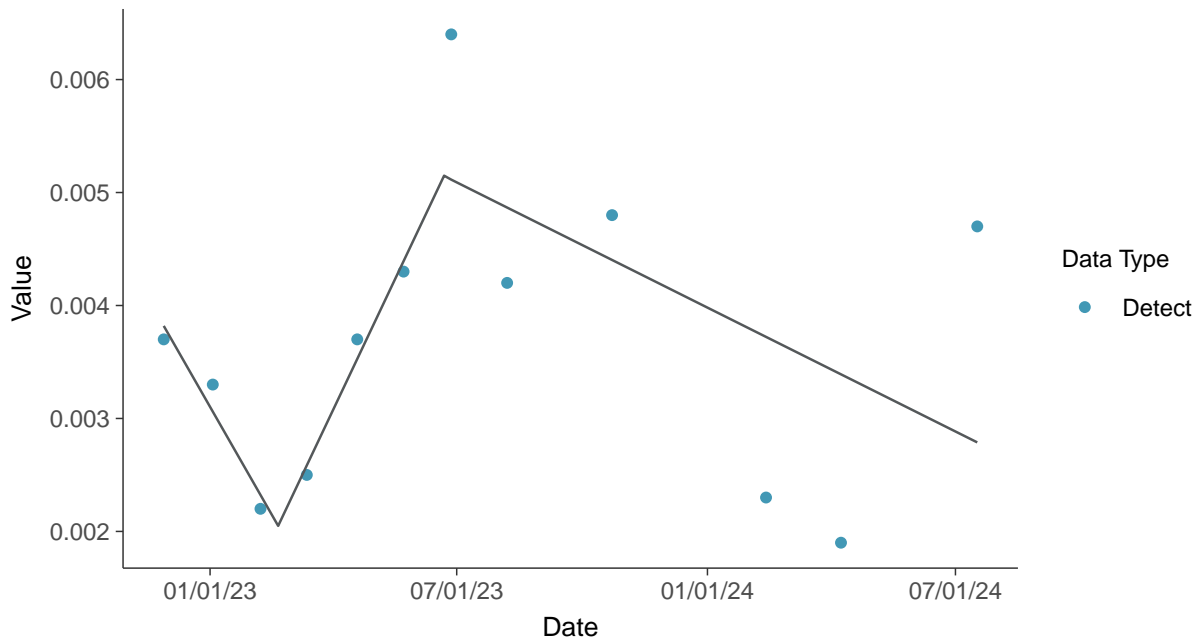
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Lithium, MW-12 (mg/L)



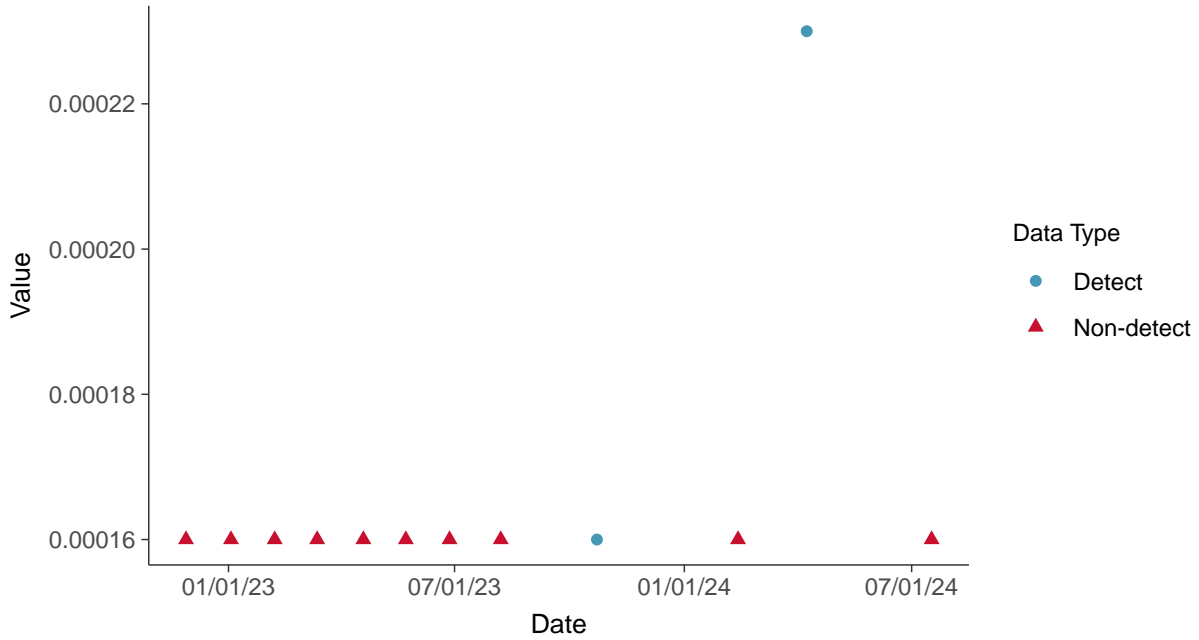


### Appendix IV: Mercury, MW-12

ID: 22\_2\_5\_117

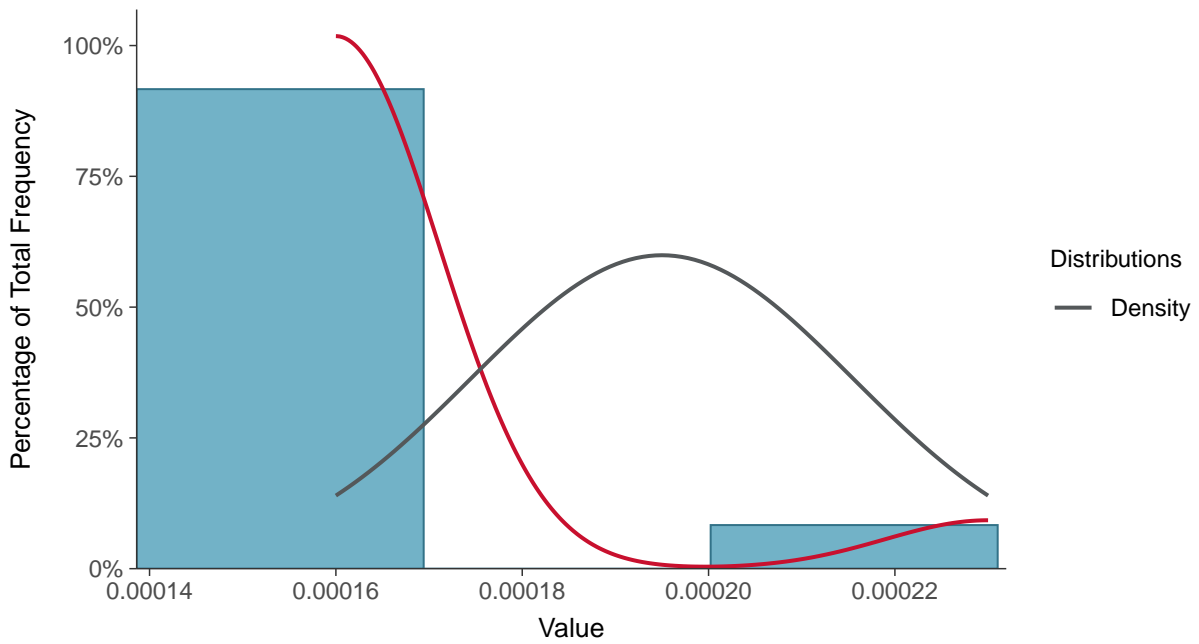
#### Scatter Plot

Mercury, MW-12 (mg/L)



#### Histogram

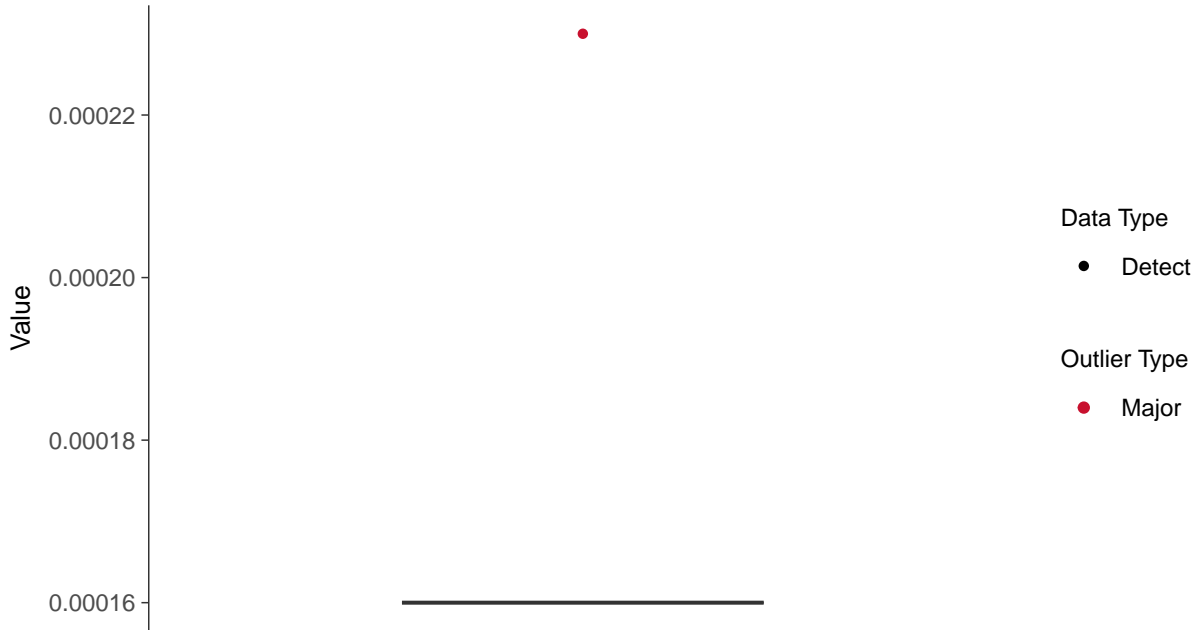
Mercury, MW-12 (mg/L)





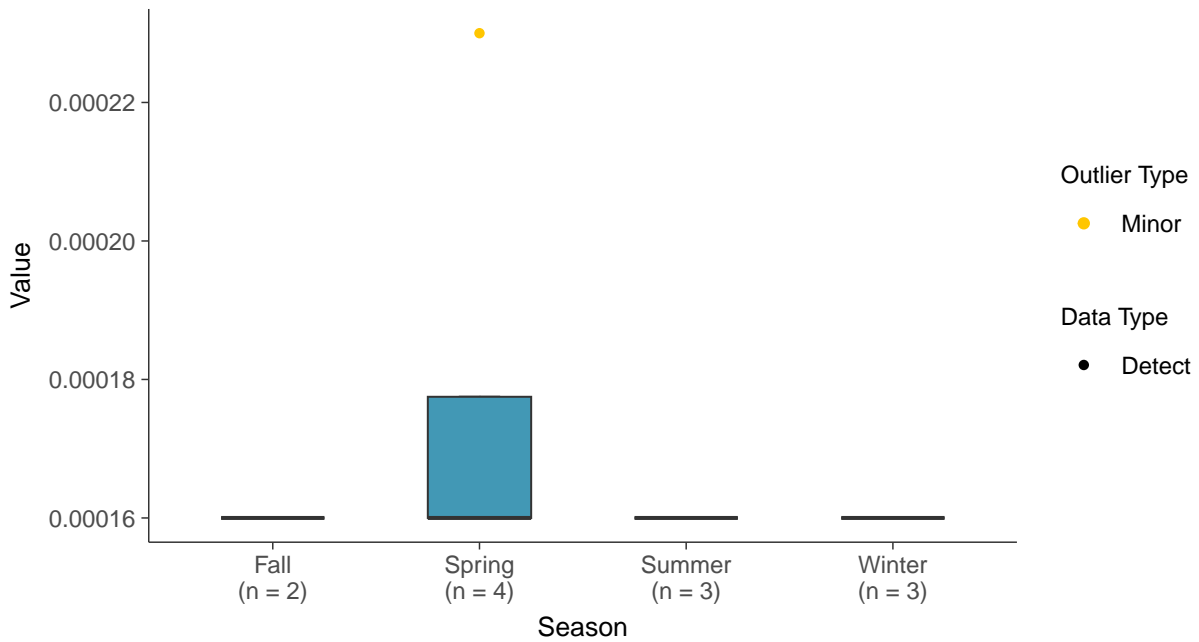
### Boxplot

Mercury, MW-12 (mg/L)



### Boxplot by Season

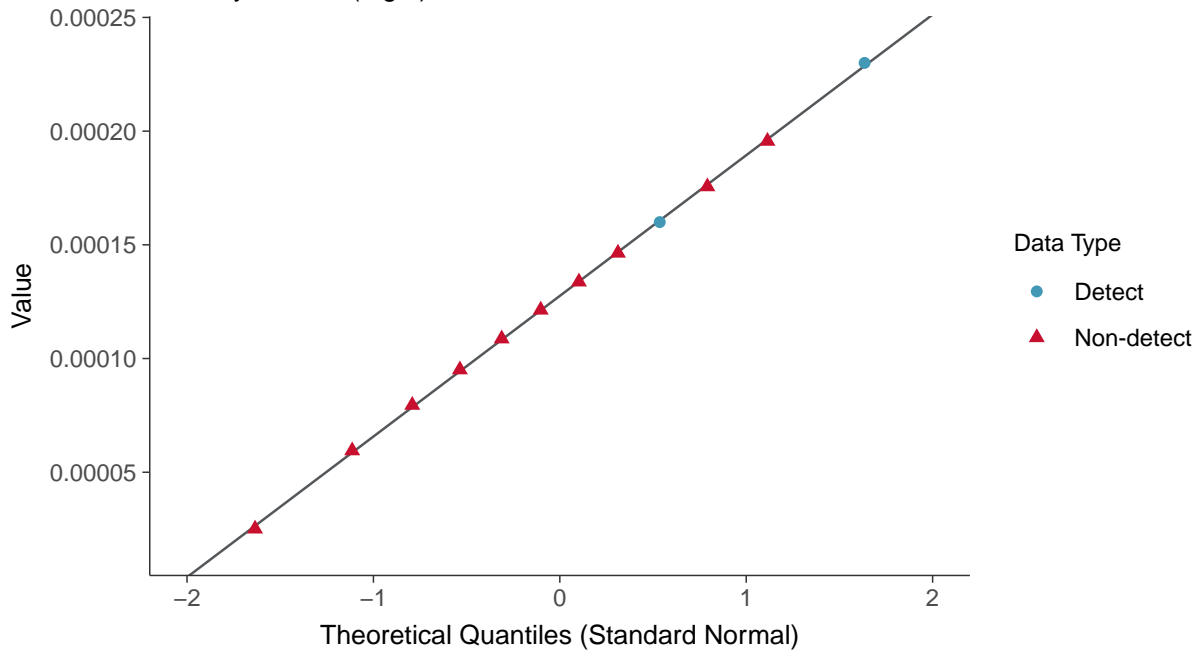
Mercury, MW-12 (mg/L)





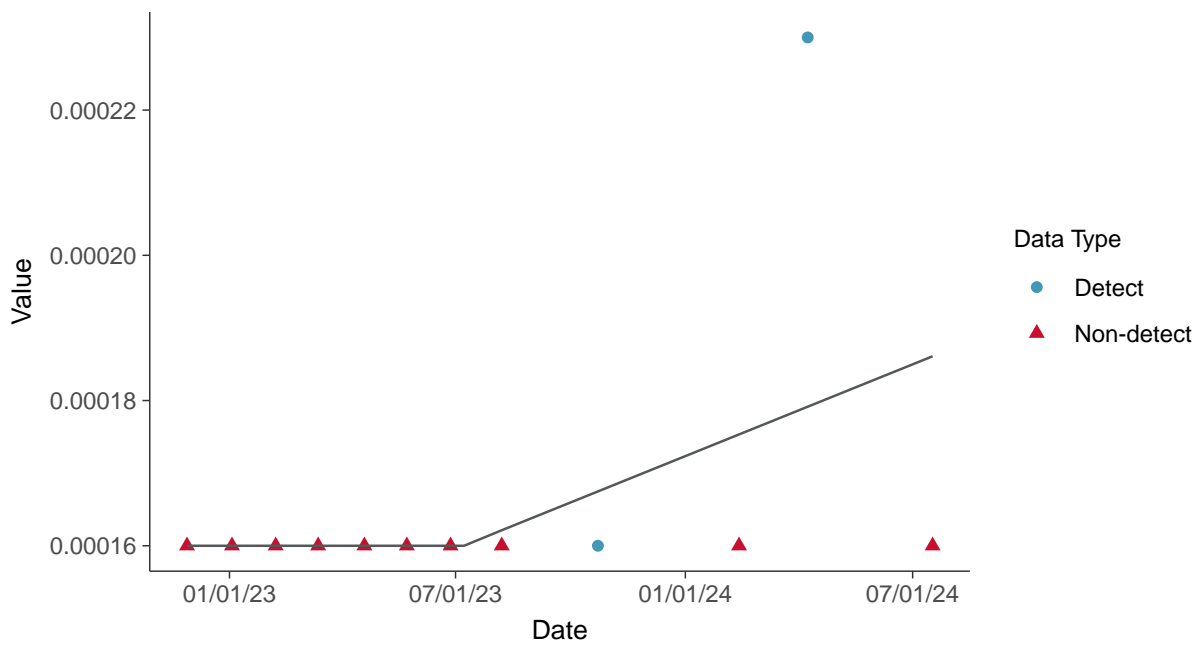
### Normal Q-Q plot using ROS Imputed Estimates

Mercury, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Mercury, MW-12 (mg/L)





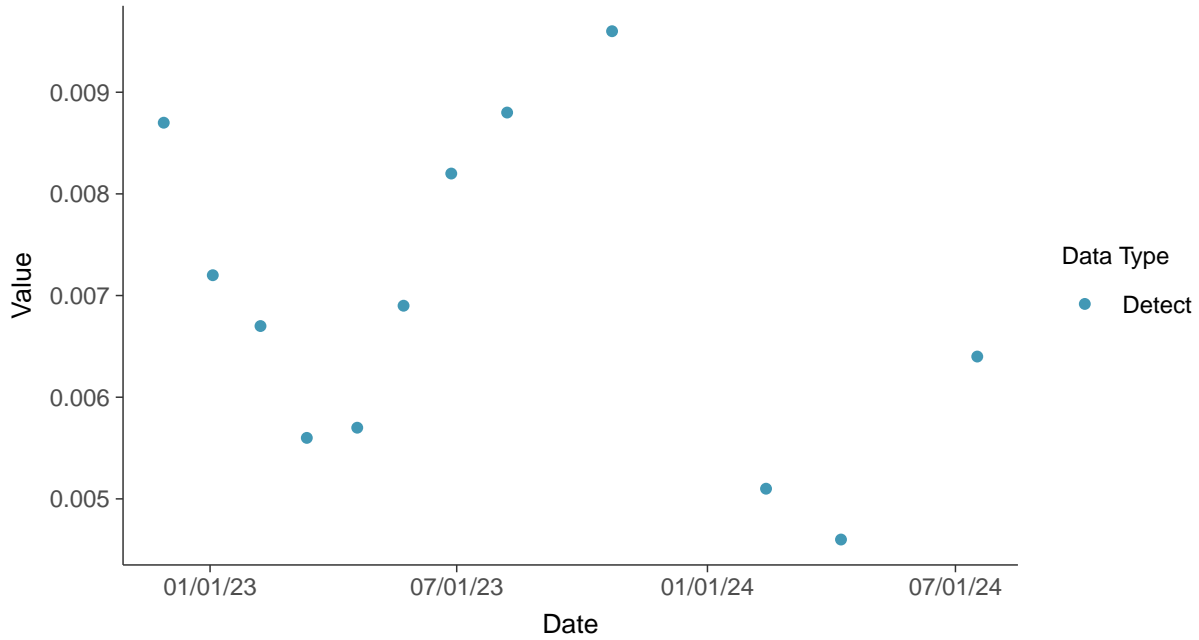


## Appendix IV: Molybdenum, MW-12

ID: 22\_2\_5\_118

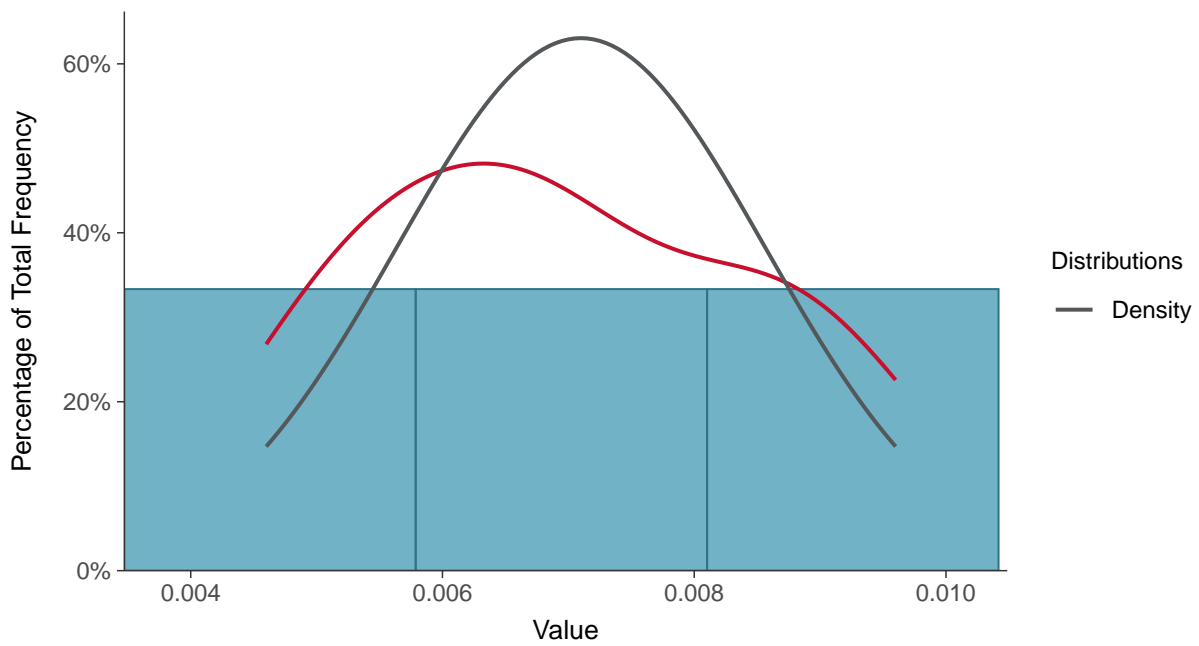
### Scatter Plot

Molybdenum, MW-12 (mg/L)



### Histogram

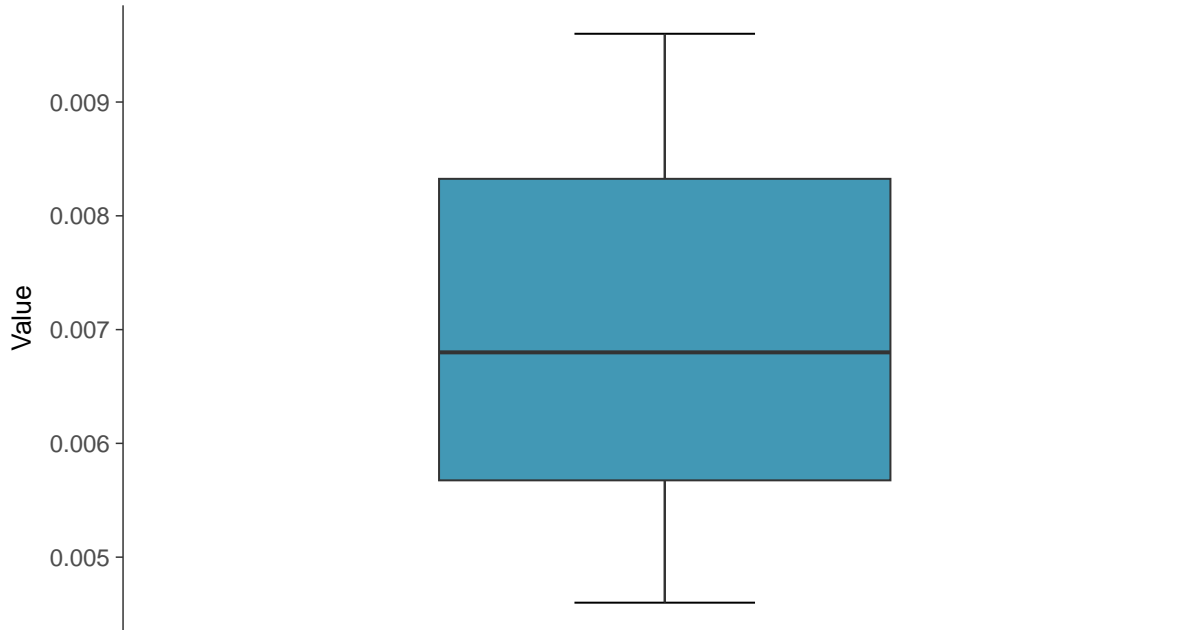
Molybdenum, MW-12 (mg/L)





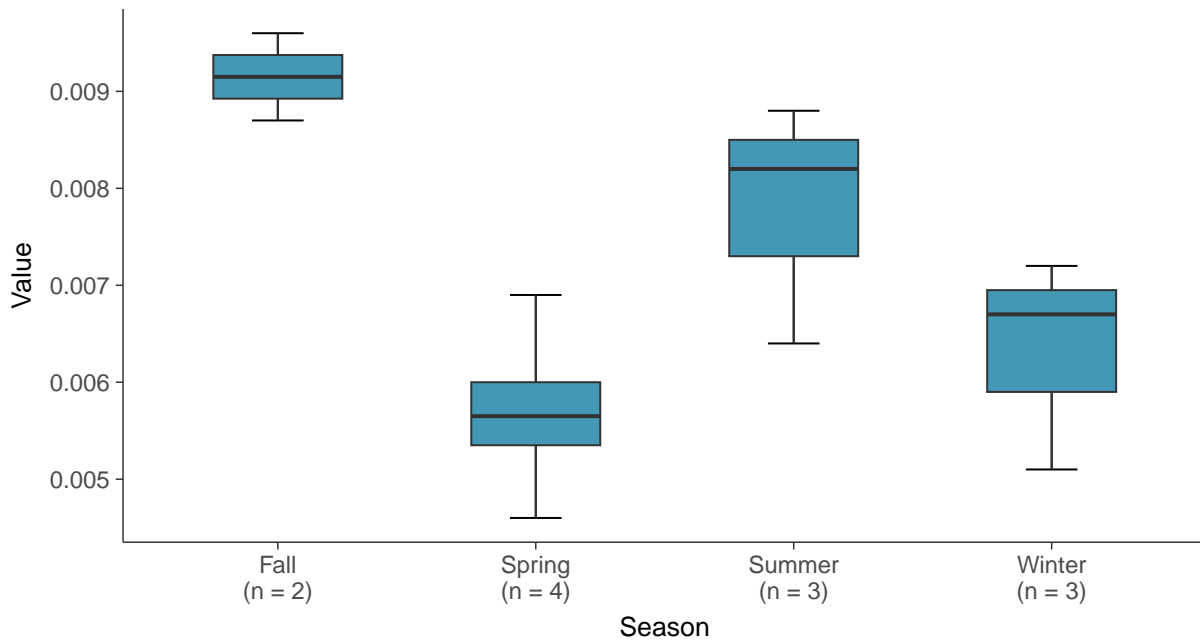
### Boxplot

Molybdenum, MW-12 (mg/L)



### Boxplot by Season

Molybdenum, MW-12 (mg/L)

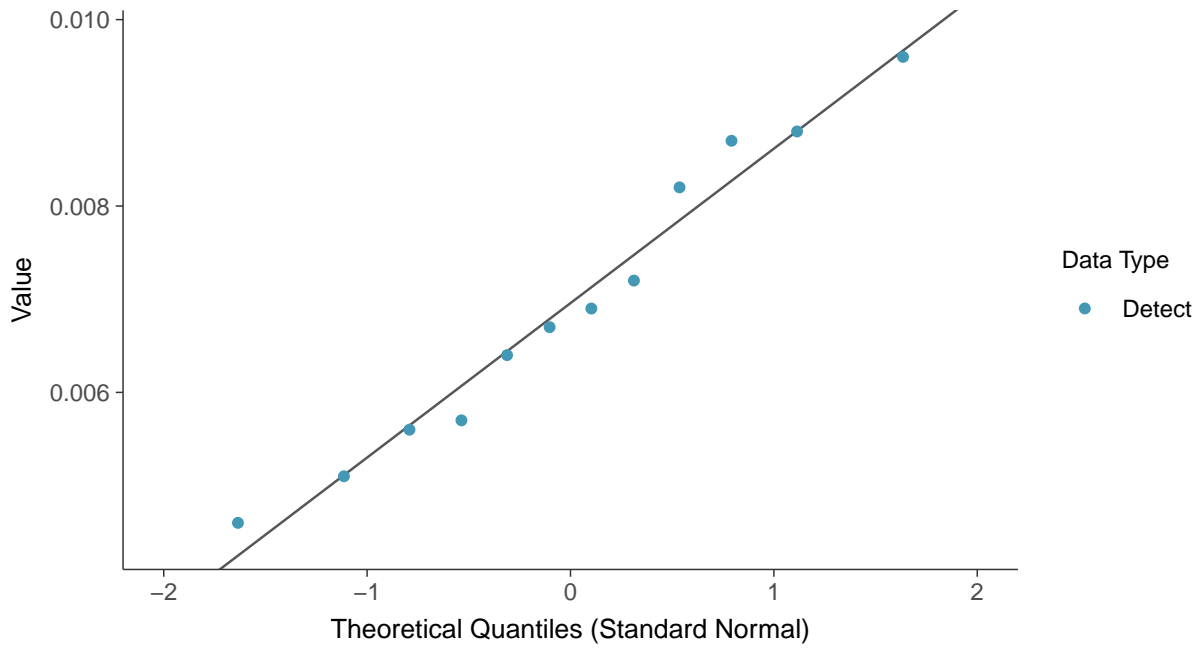






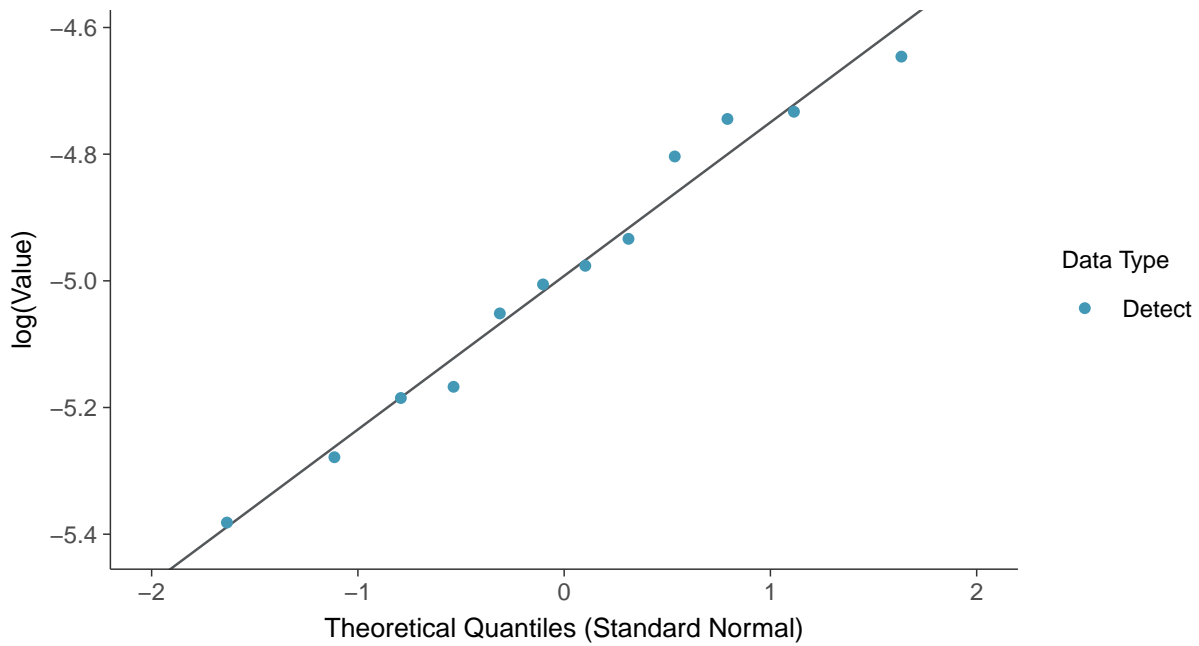
### Normal Q-Q plot

Molybdenum, MW-12 (mg/L)



### Lognormal Q-Q plot

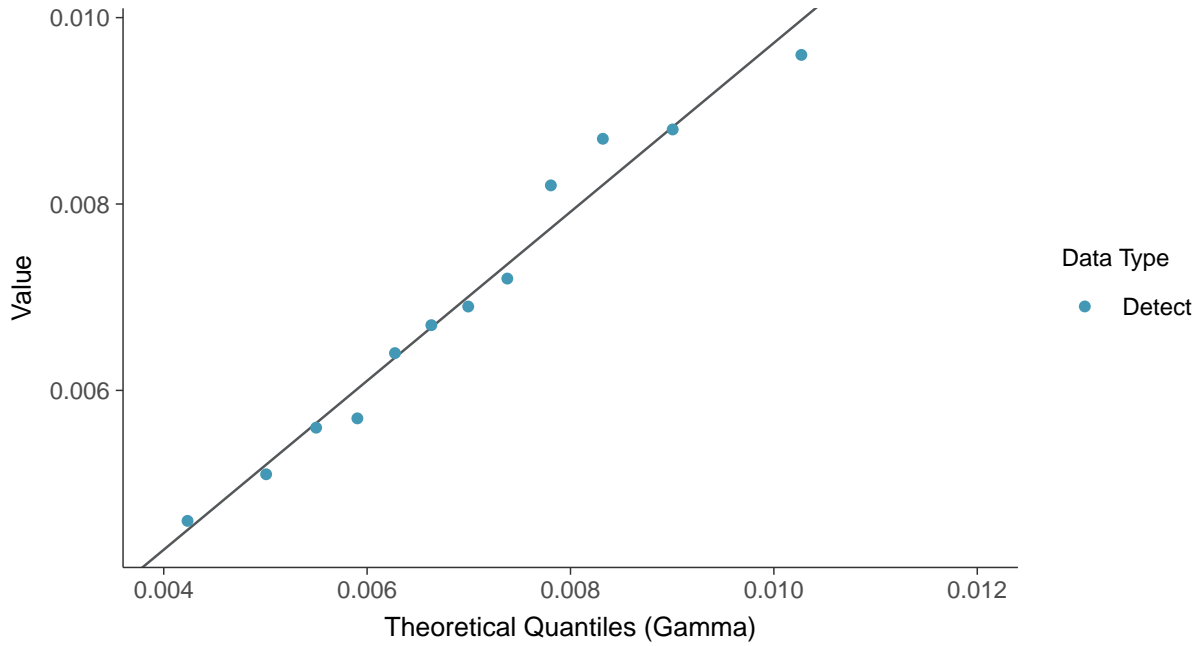
Molybdenum, MW-12 (mg/L)





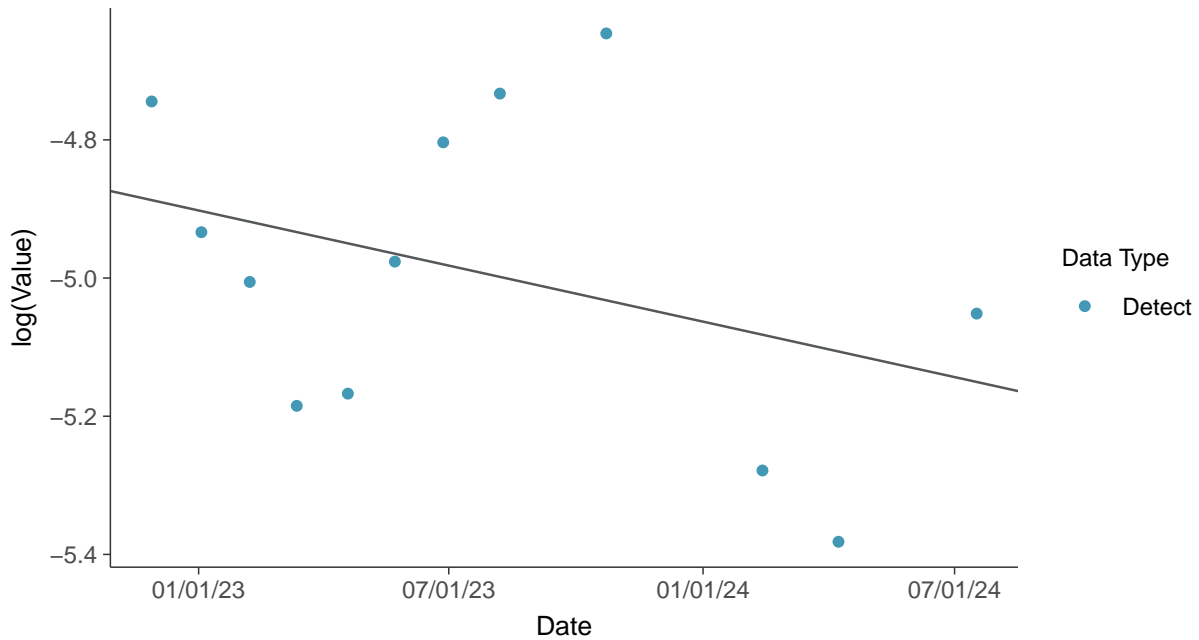
### Gamma Q-Q plot

Molybdenum, MW-12 (mg/L)



### Trend Regression: Lognormal MLE

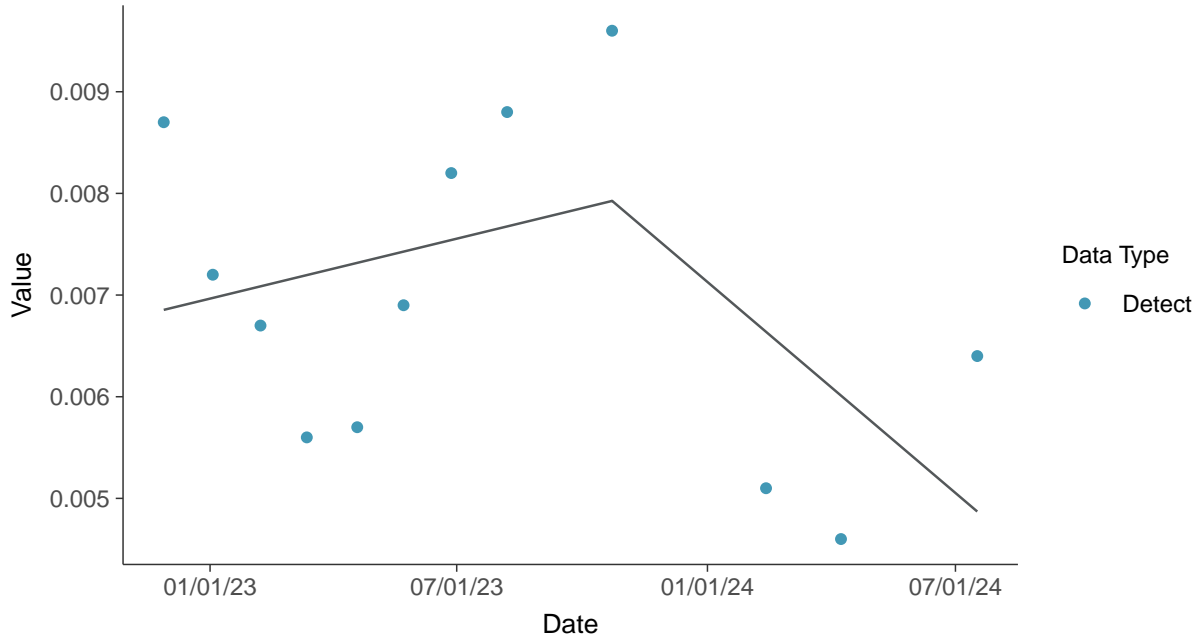
Molybdenum, MW-12 (mg/L)





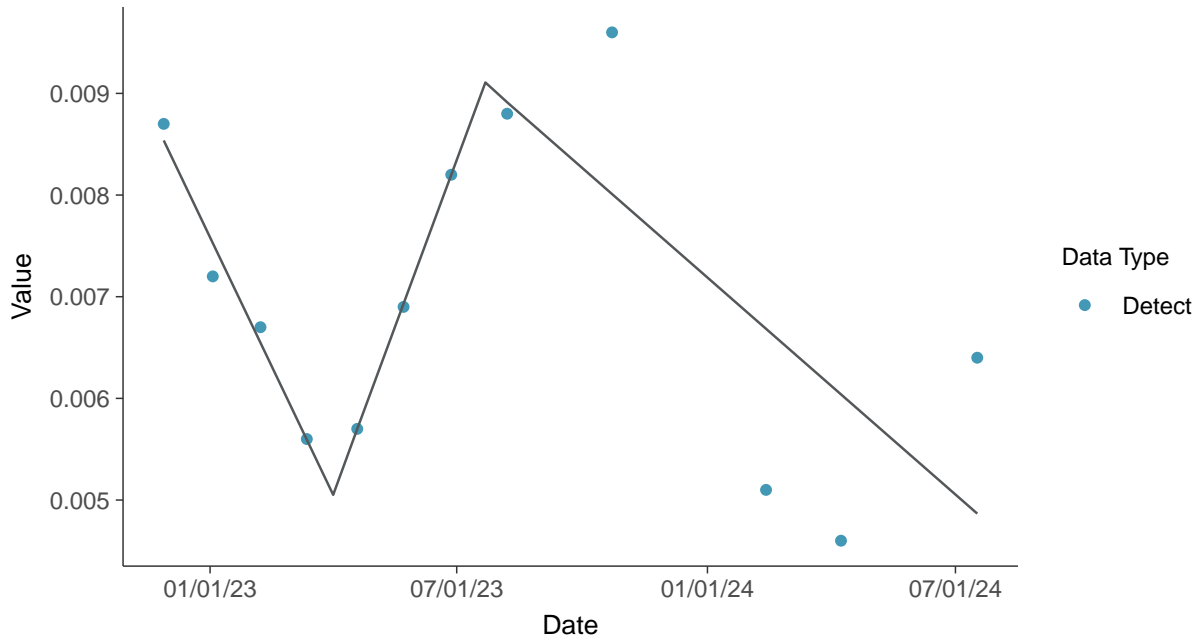
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-12 (mg/L)



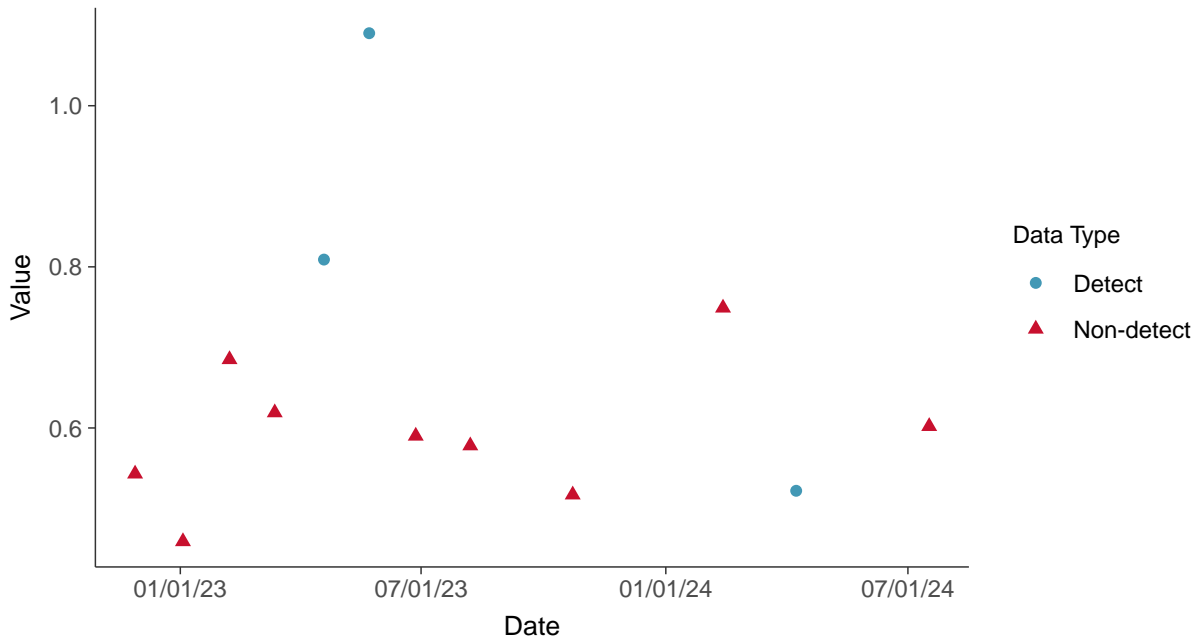


### Appendix IV: Radium 226 and 228, MW-12

ID: 22\_2\_5\_121

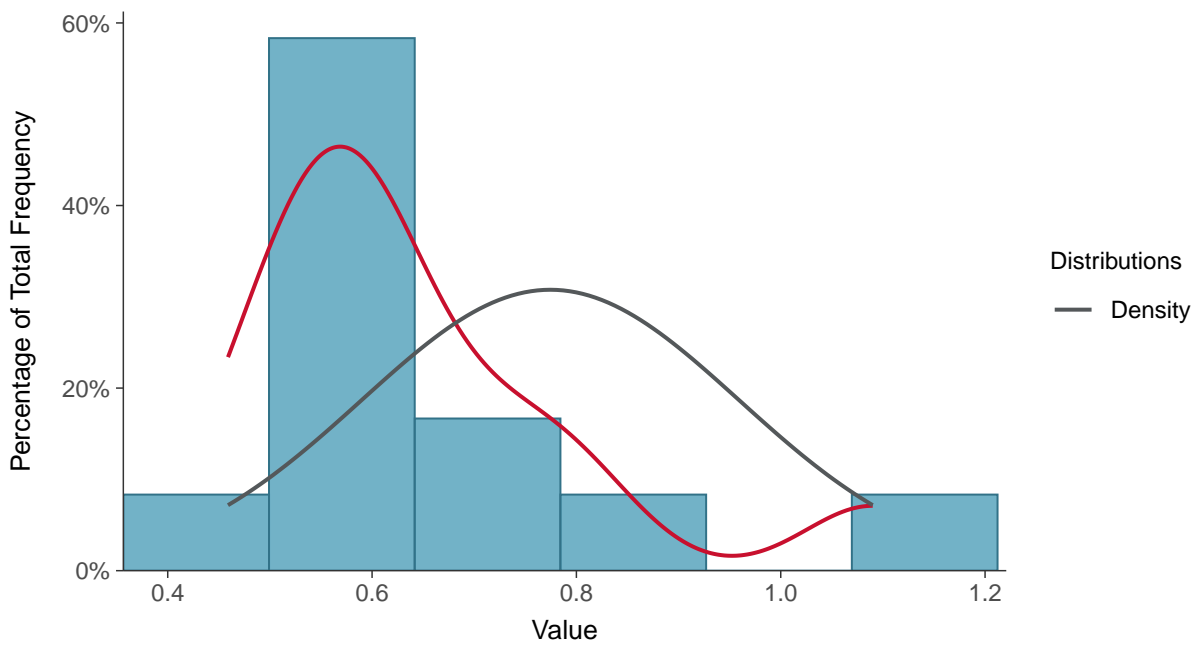
#### Scatter Plot

Radium 226 and 228, MW-12 (pCi/L)



#### Histogram

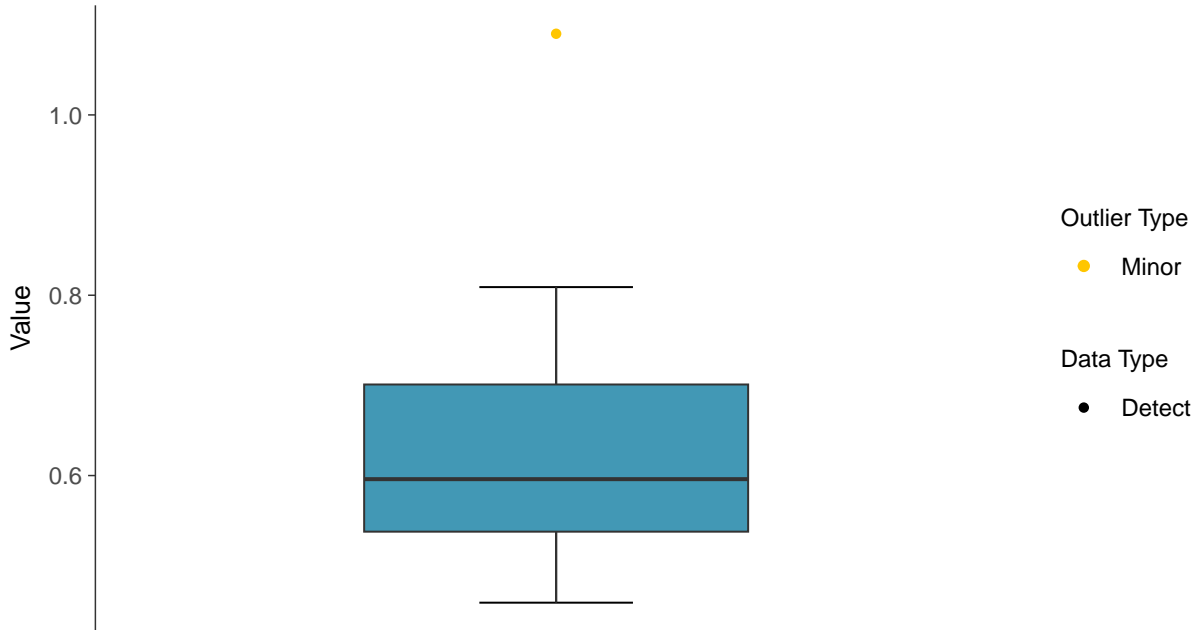
Radium 226 and 228, MW-12 (pCi/L)





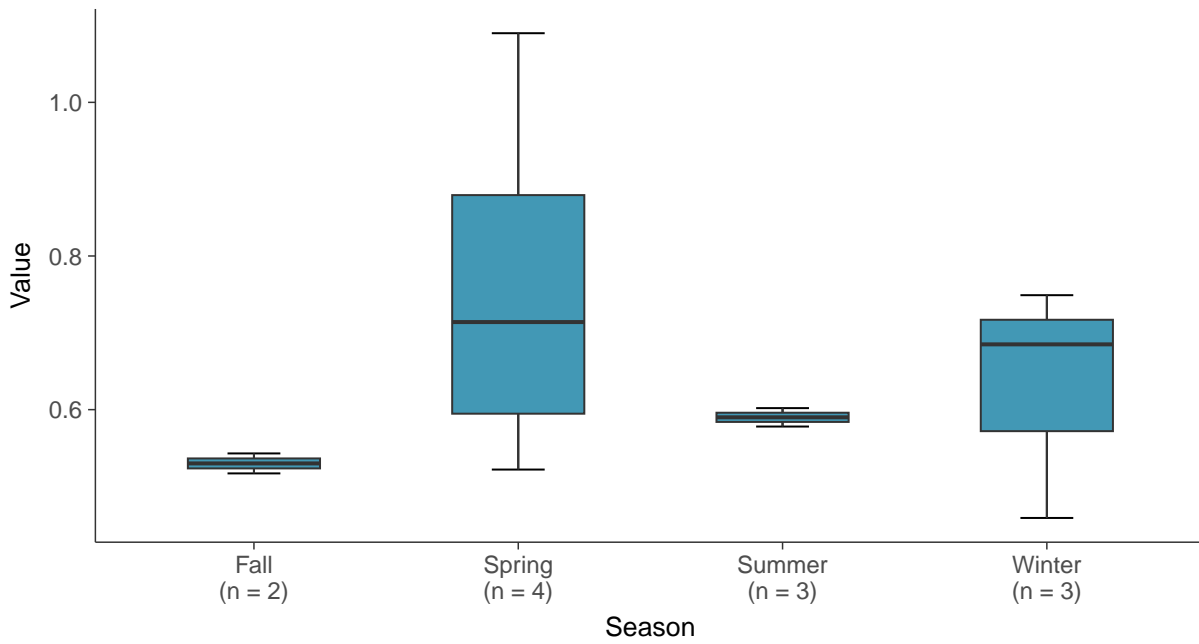
### Boxplot

Radium 226 and 228, MW-12 (pCi/L)



### Boxplot by Season

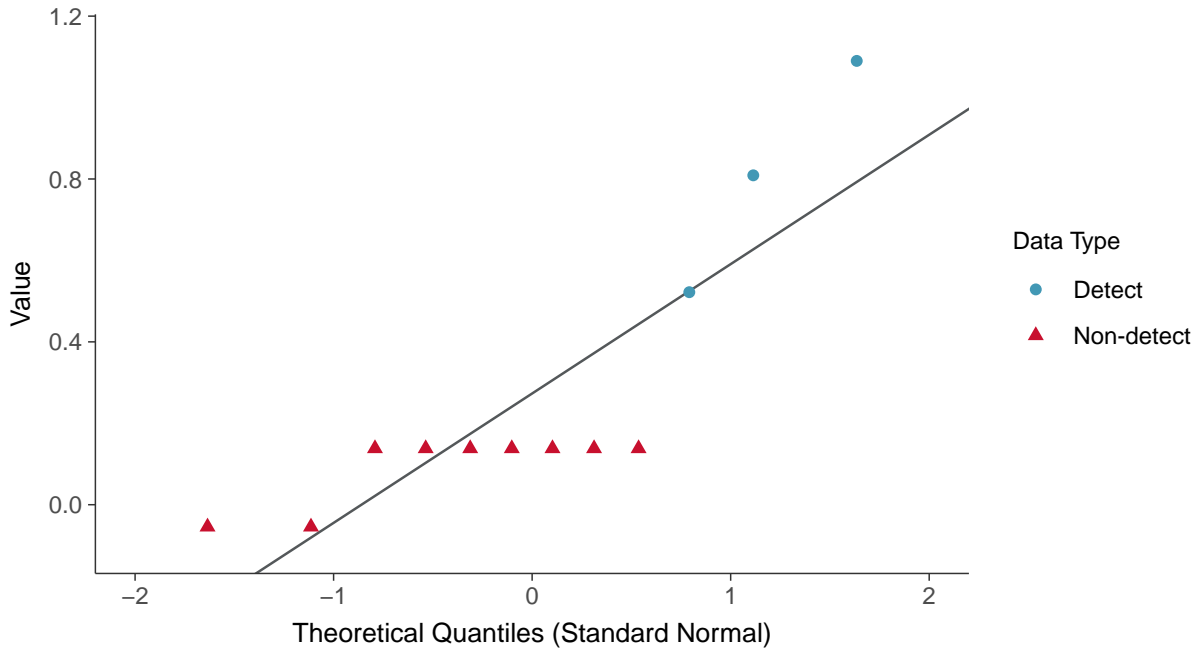
Radium 226 and 228, MW-12 (pCi/L)





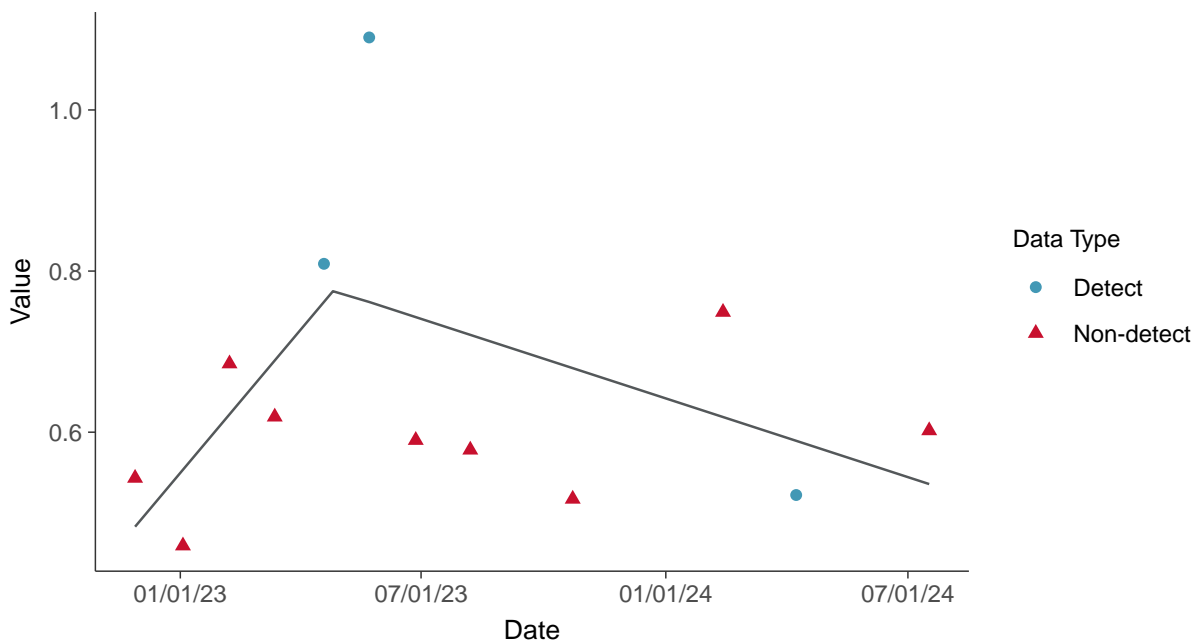
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-12 (pCi/L)



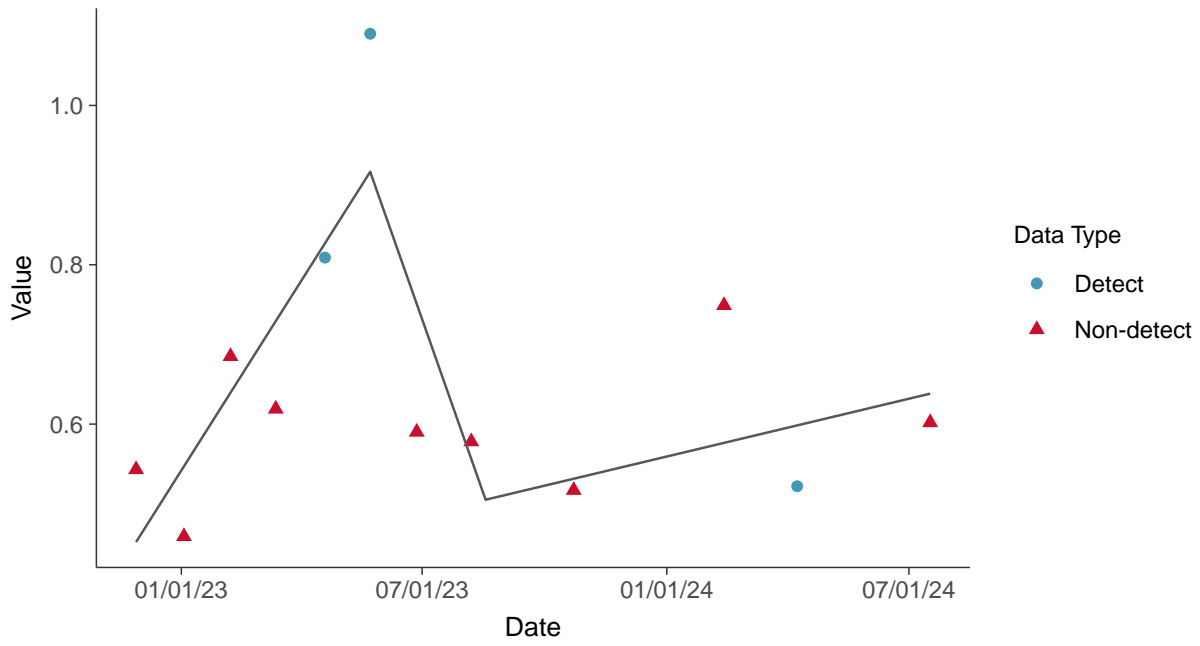
### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-12 (pCi/L)





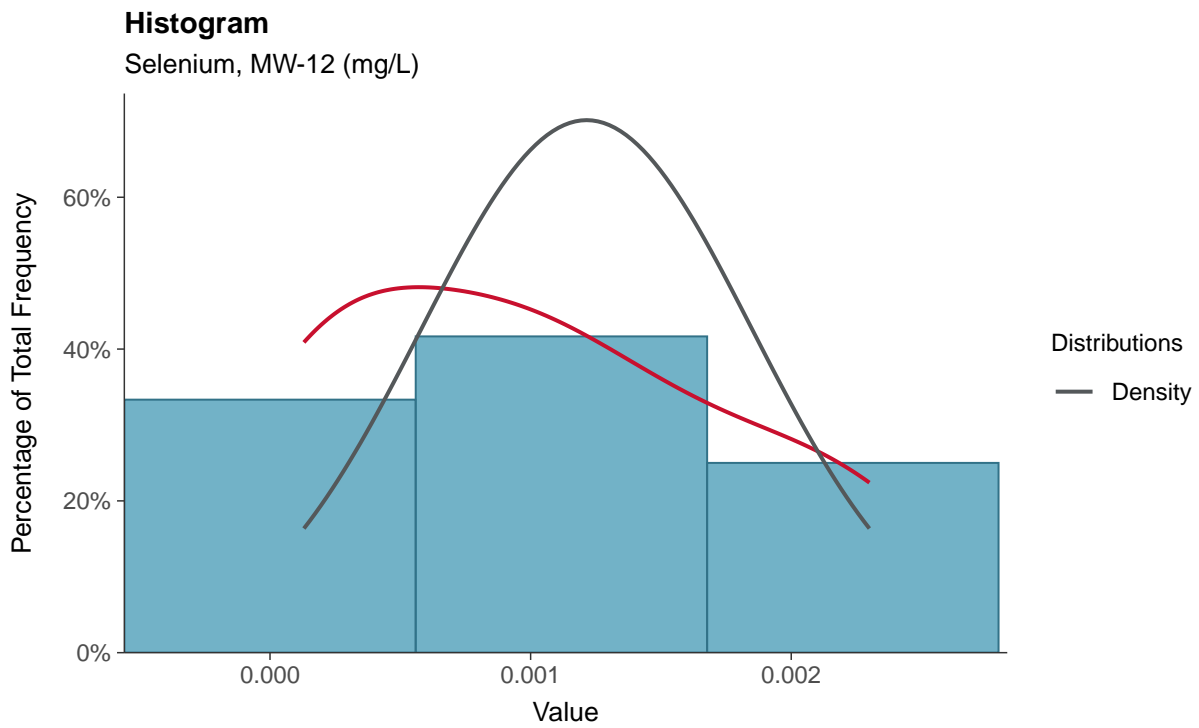
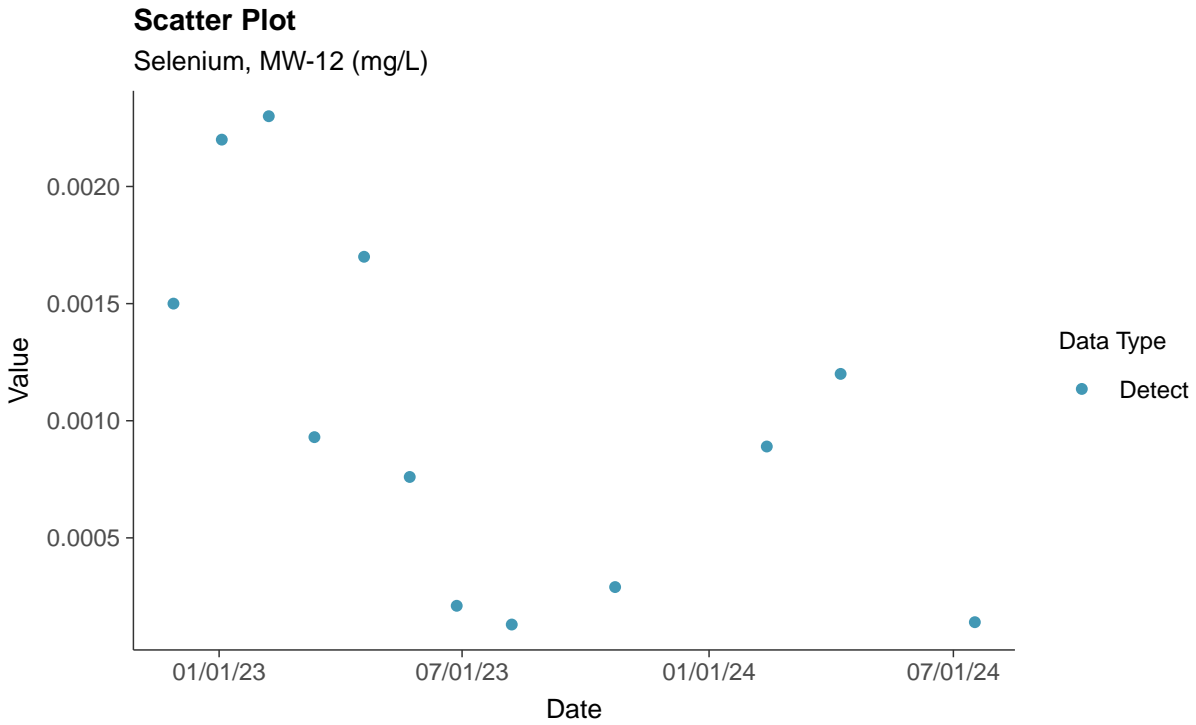
**Trend Regression: Piecewise Linear-Linear-Linear**  
Radium 226 and 228, MW-12 (pCi/L)





### Appendix IV: Selenium, MW-12

ID: 22\_2\_5\_122

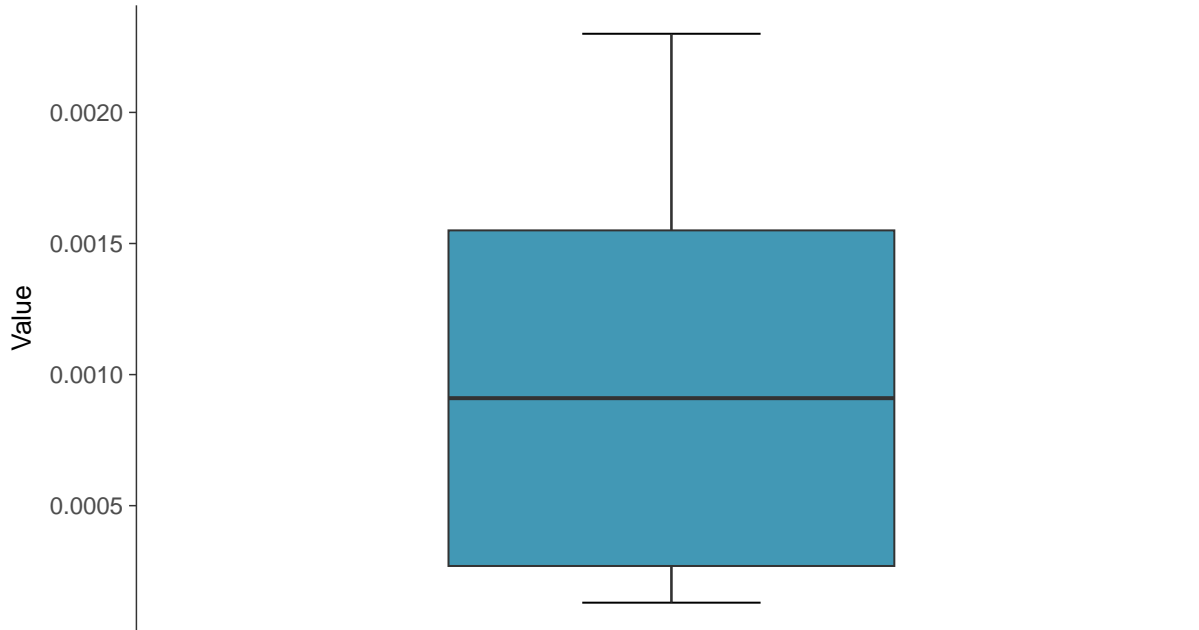






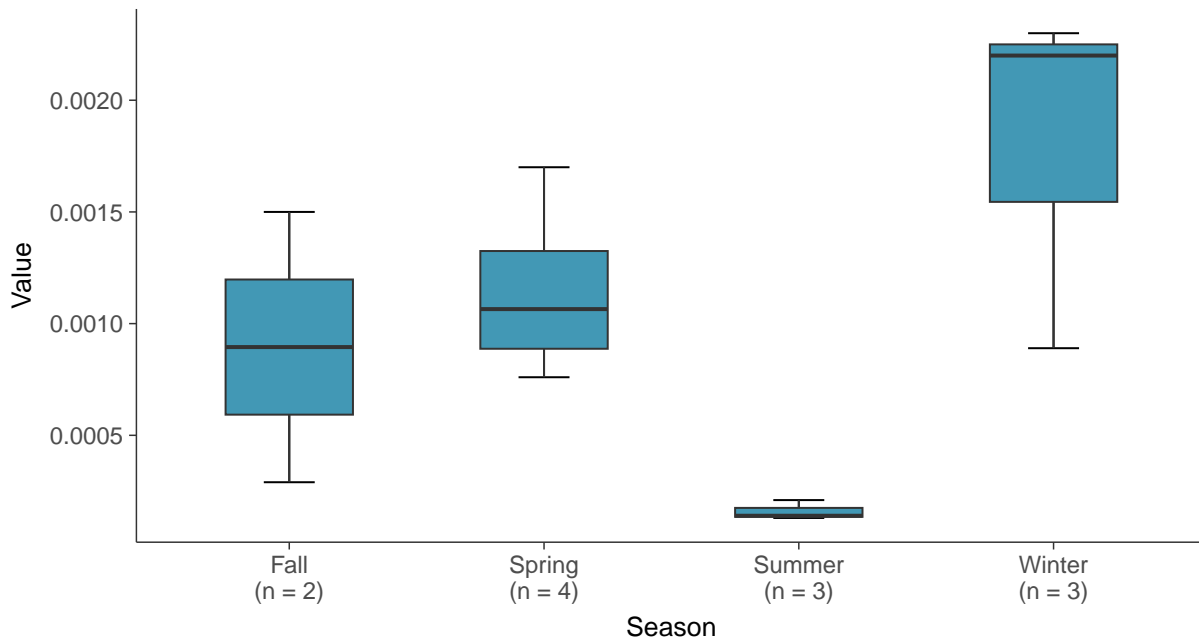
### Boxplot

Selenium, MW-12 (mg/L)



### Boxplot by Season

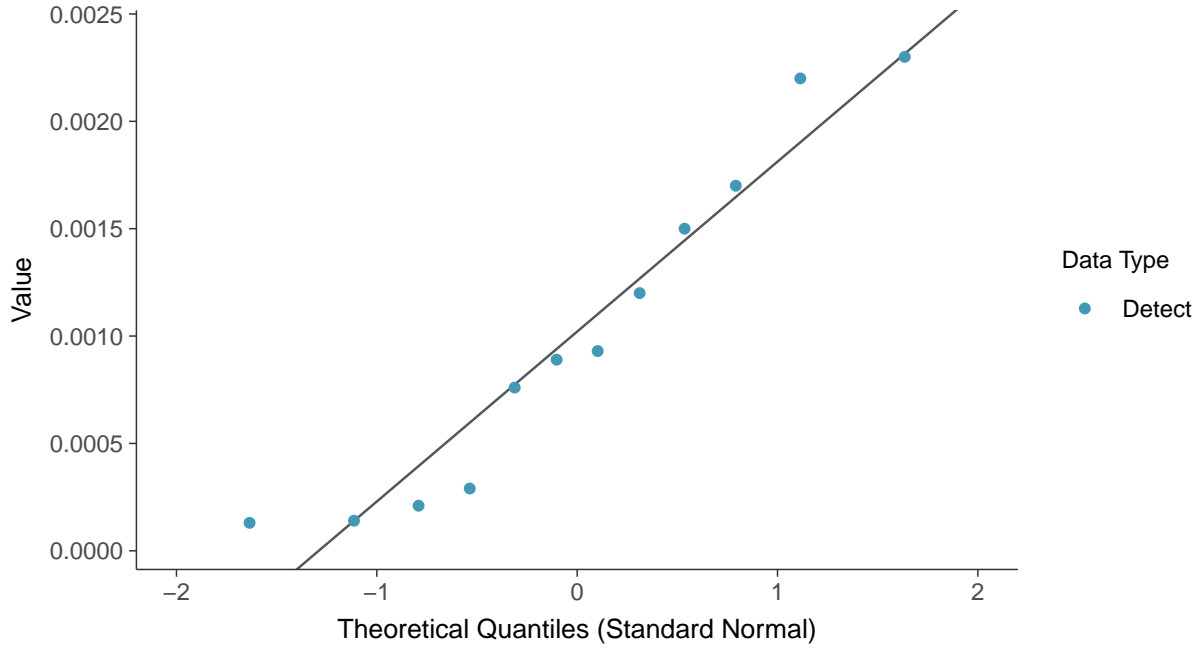
Selenium, MW-12 (mg/L)





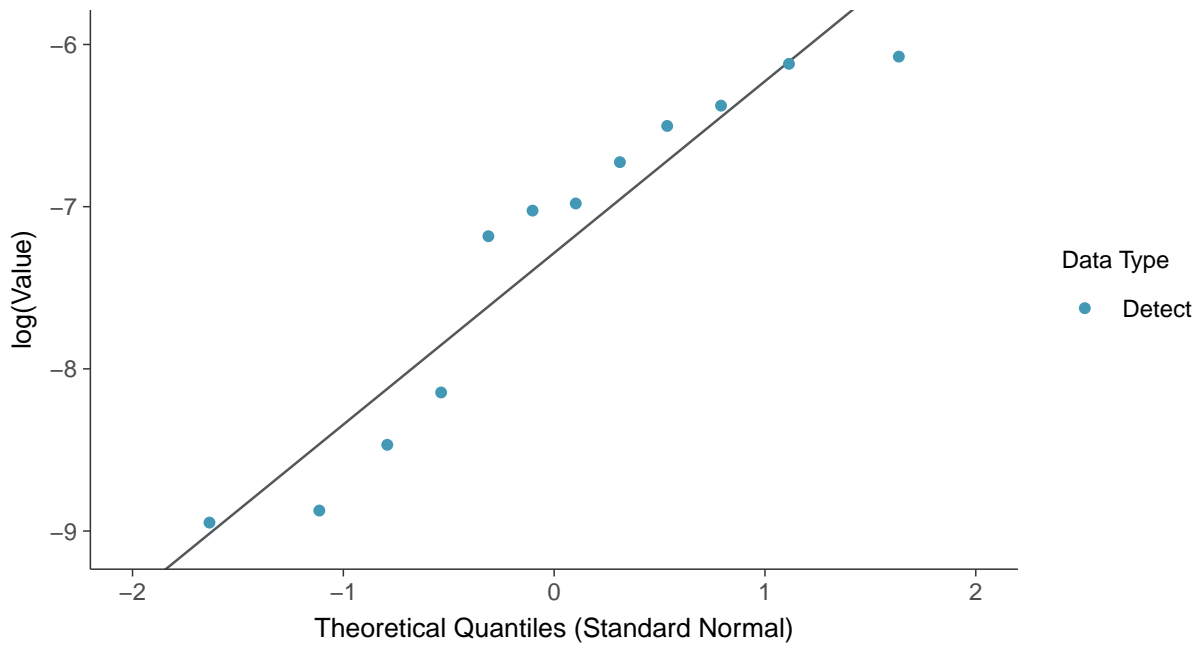
### Normal Q-Q plot

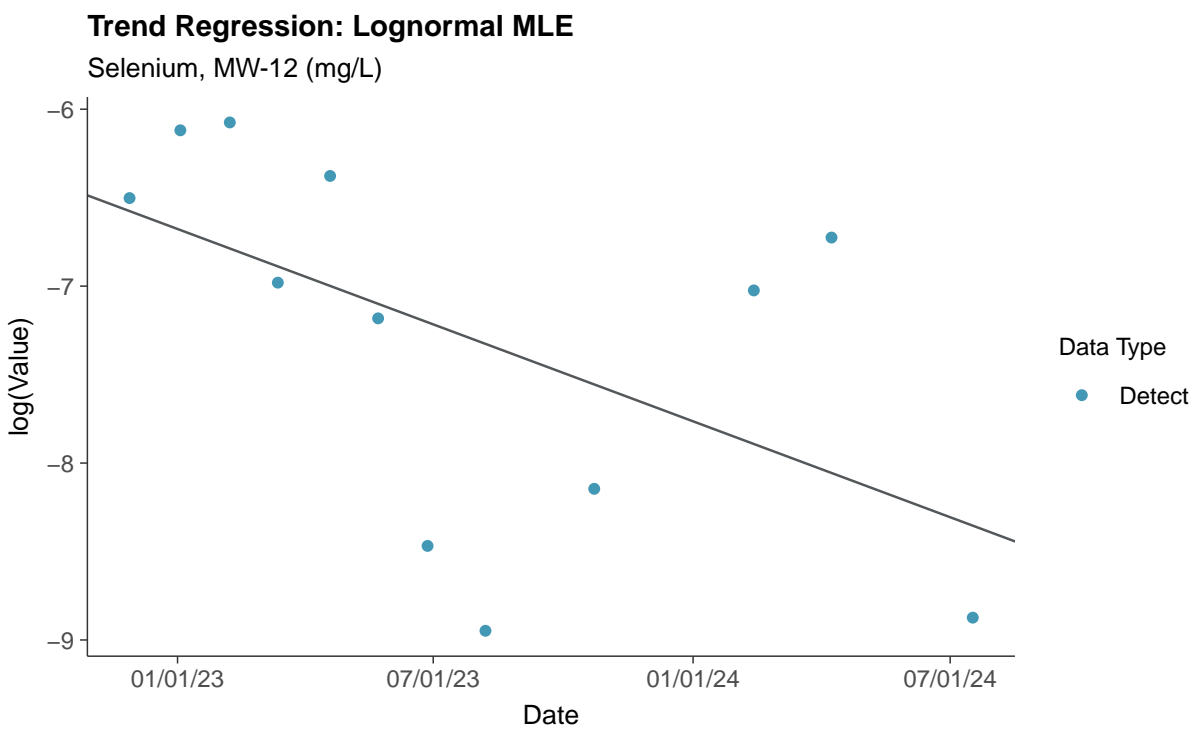
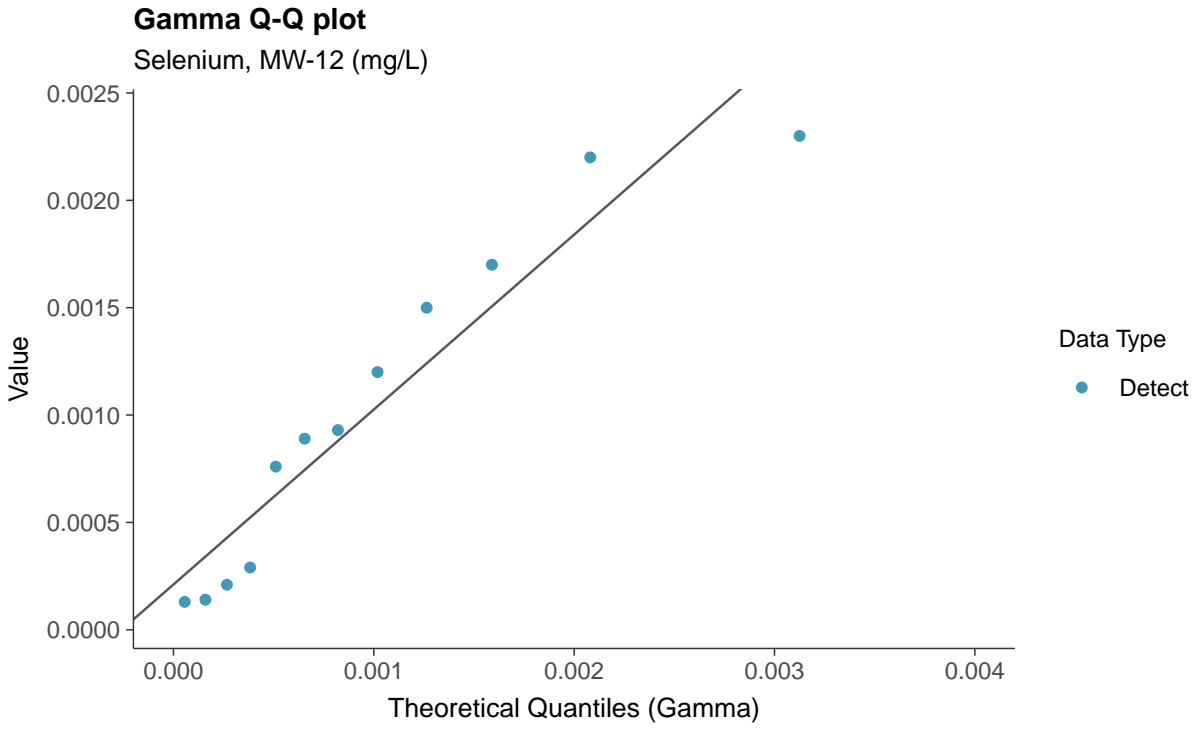
Selenium, MW-12 (mg/L)



### Lognormal Q-Q plot

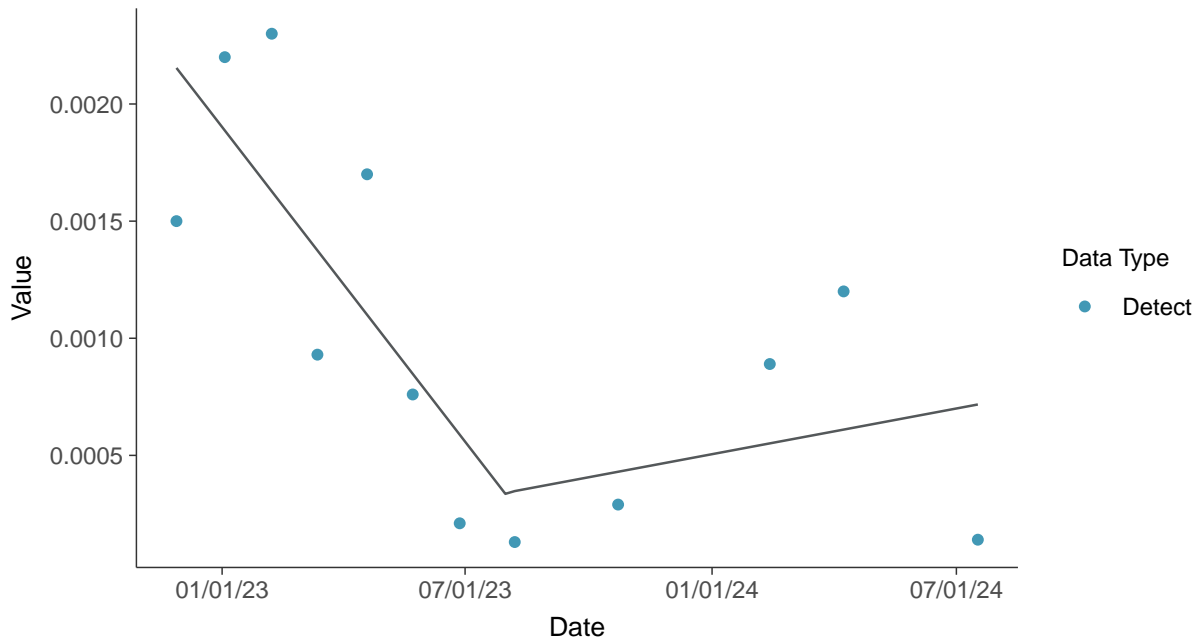
Selenium, MW-12 (mg/L)



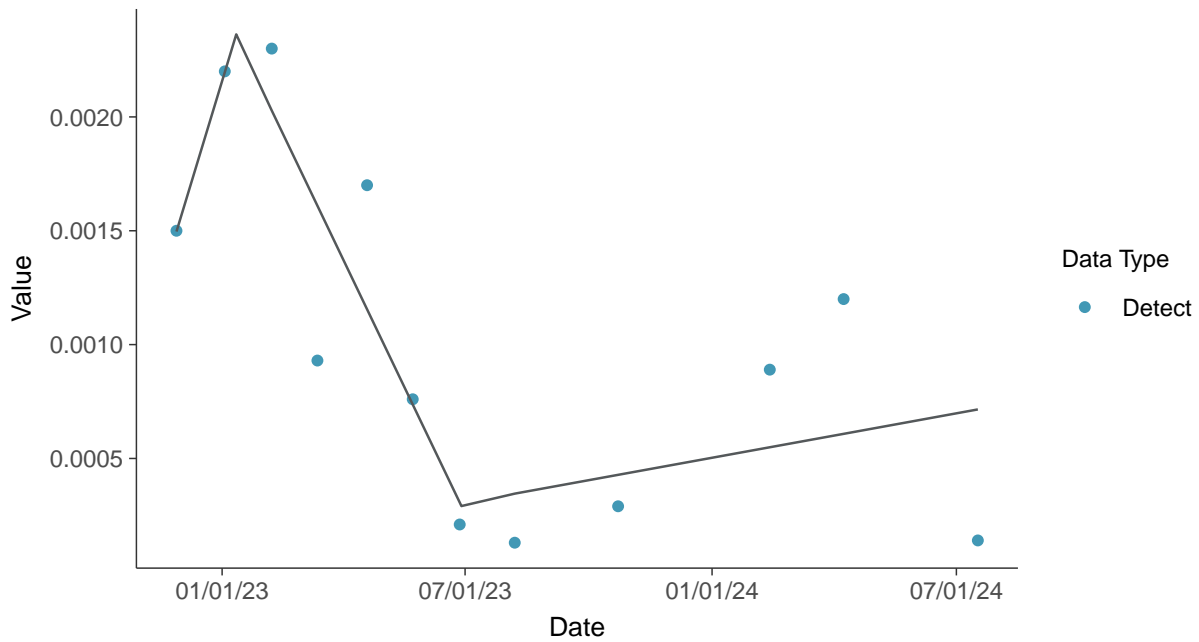




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-12 (mg/L)



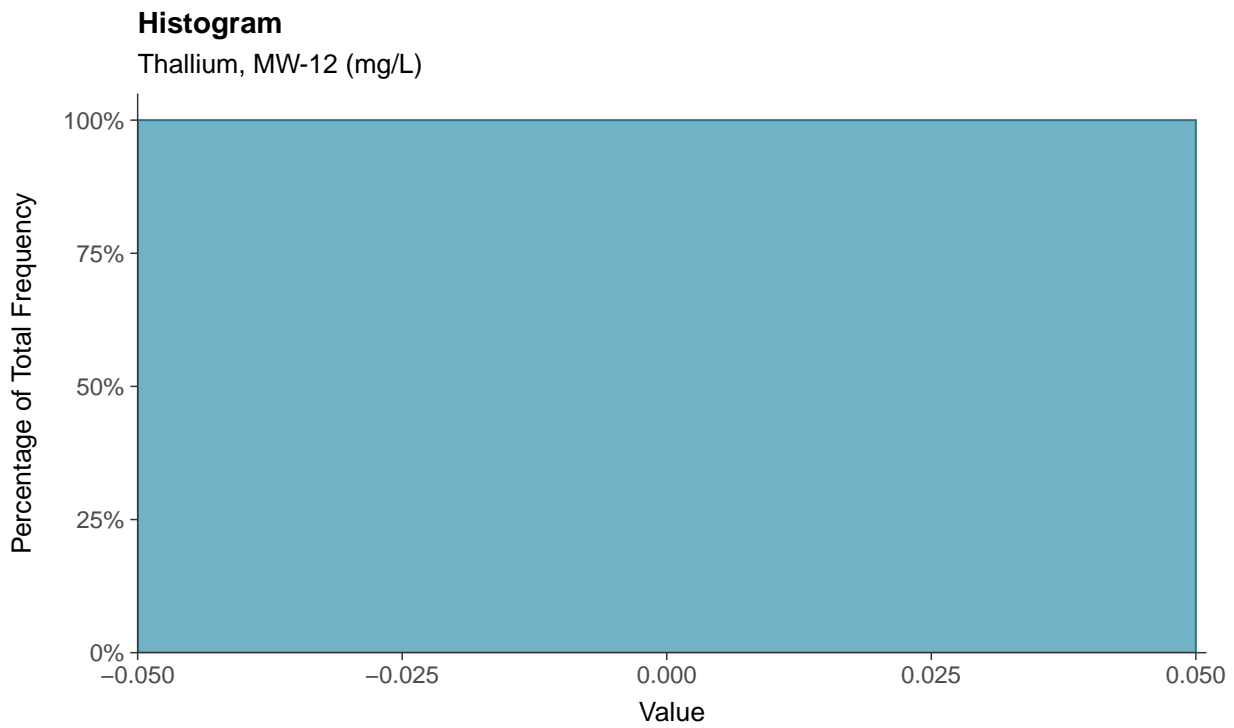
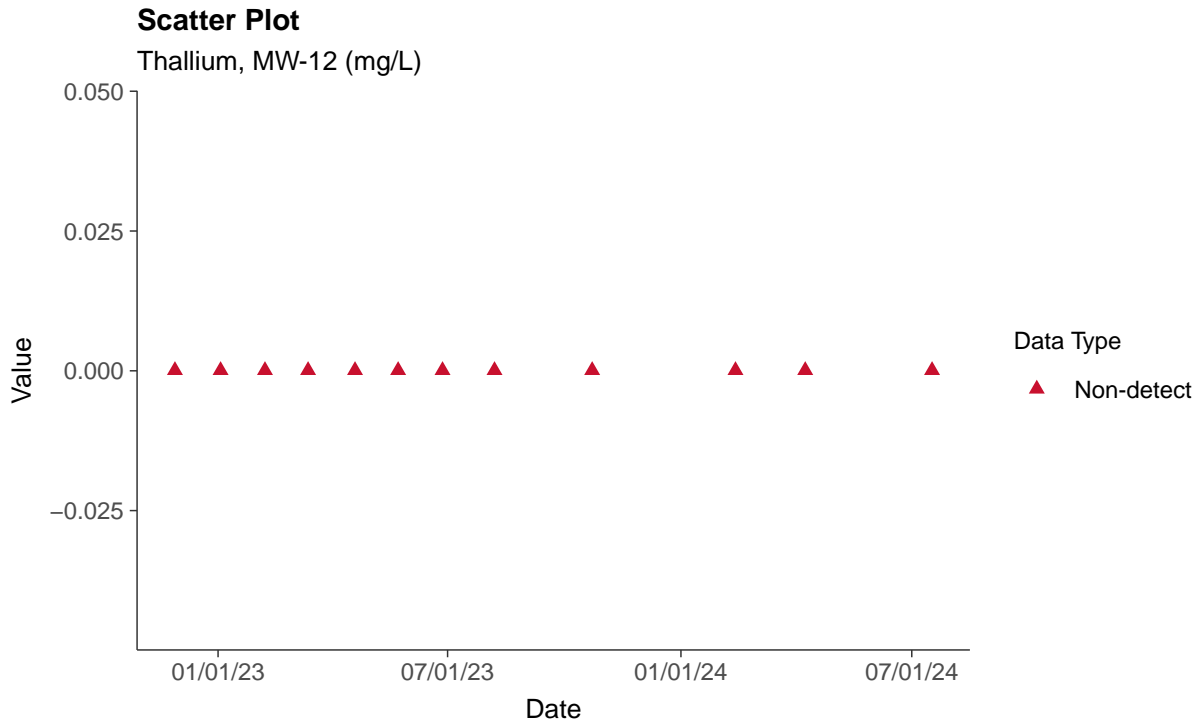
**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-12 (mg/L)





## Appendix IV: Thallium, MW-12

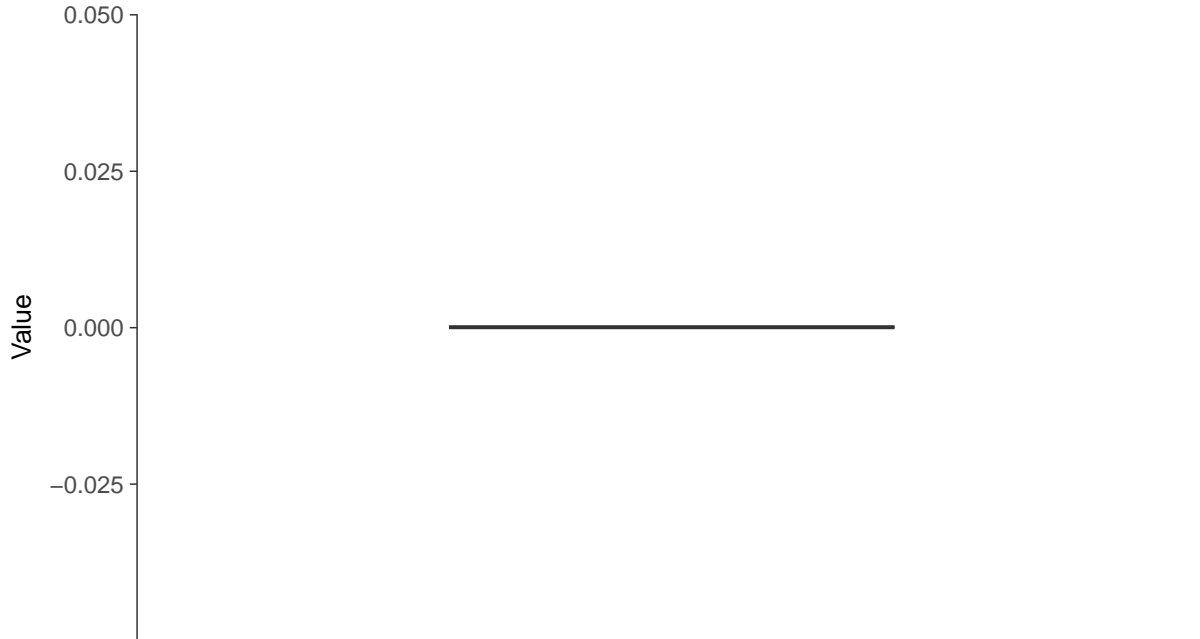
ID: 22\_2\_5\_125





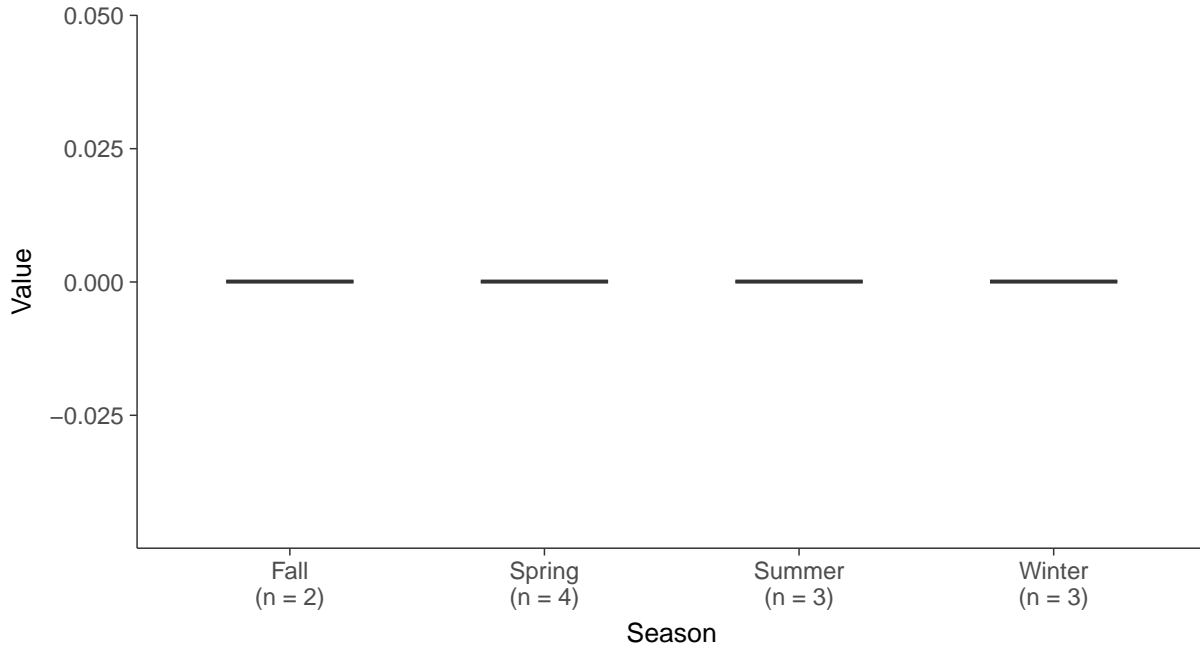
### Boxplot

Thallium, MW-12 (mg/L)



### Boxplot by Season

Thallium, MW-12 (mg/L)



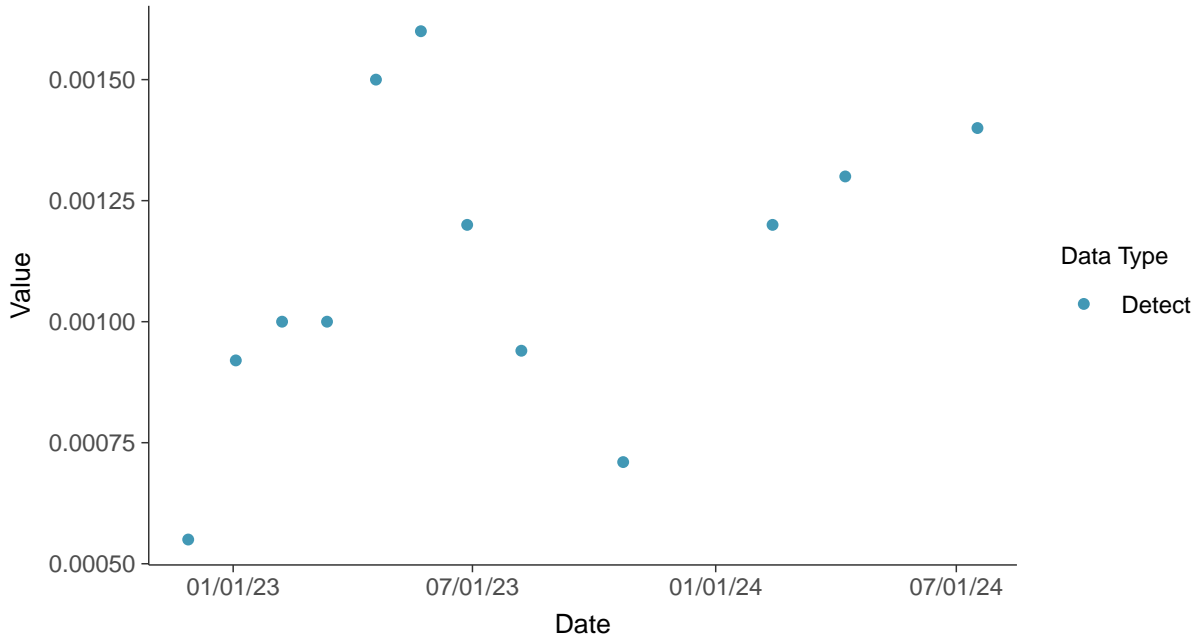


### Part 115: Copper, MW-12

ID: 22\_2\_6\_111

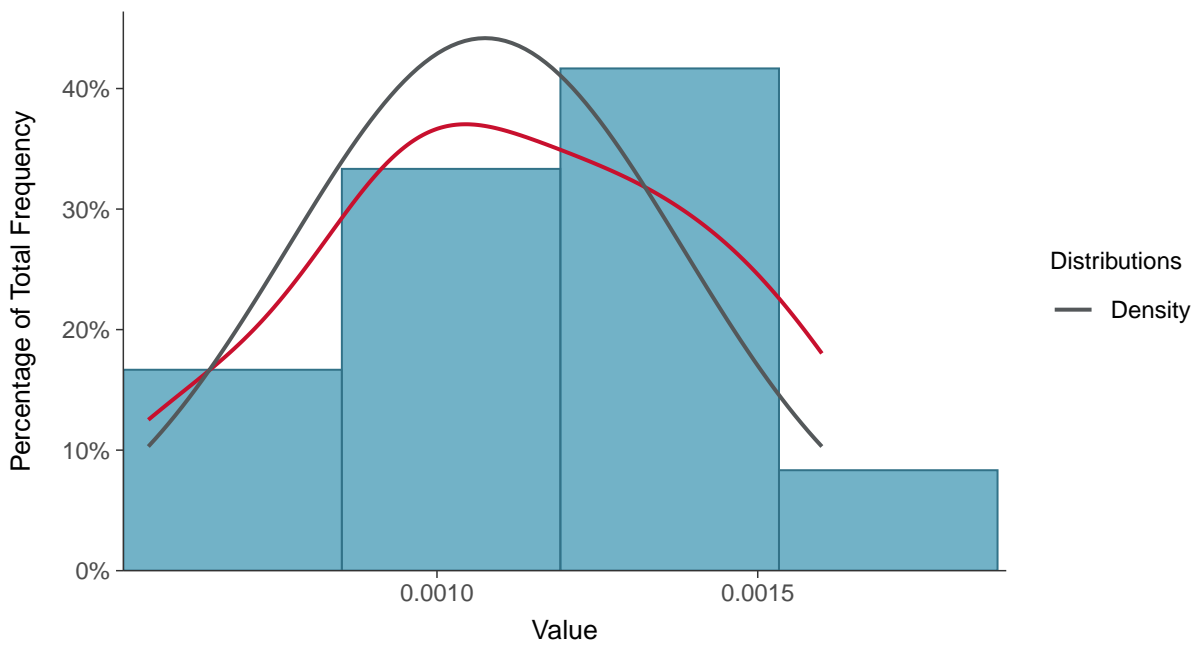
#### Scatter Plot

Copper, MW-12 (mg/L)



#### Histogram

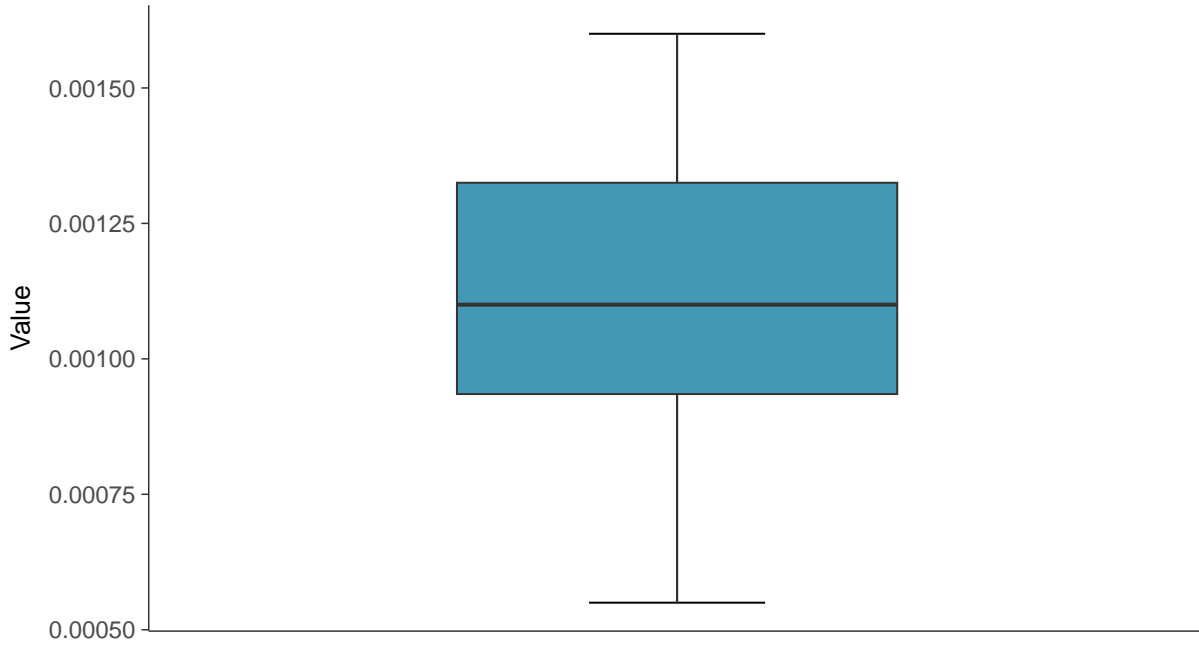
Copper, MW-12 (mg/L)





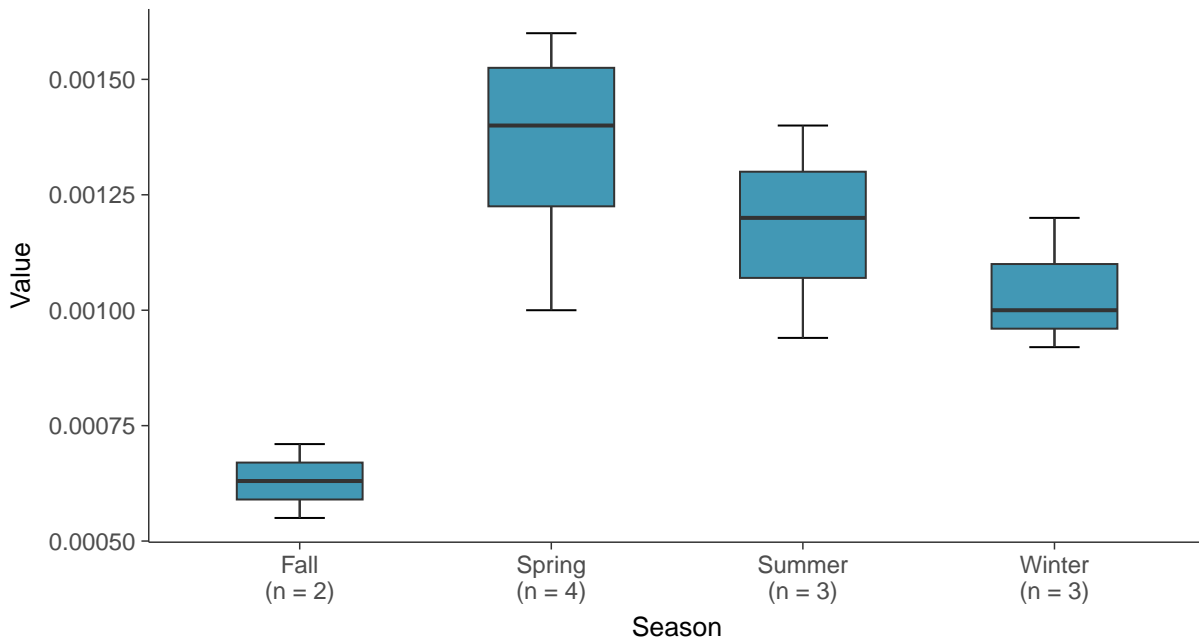
### Boxplot

Copper, MW-12 (mg/L)



### Boxplot by Season

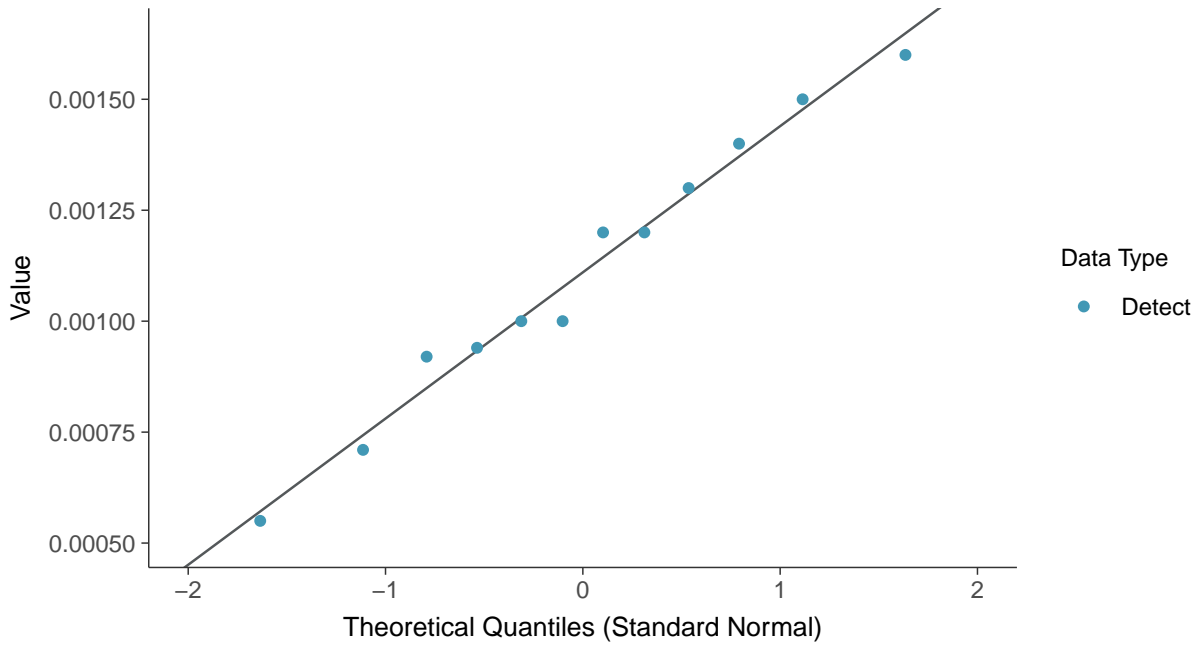
Copper, MW-12 (mg/L)



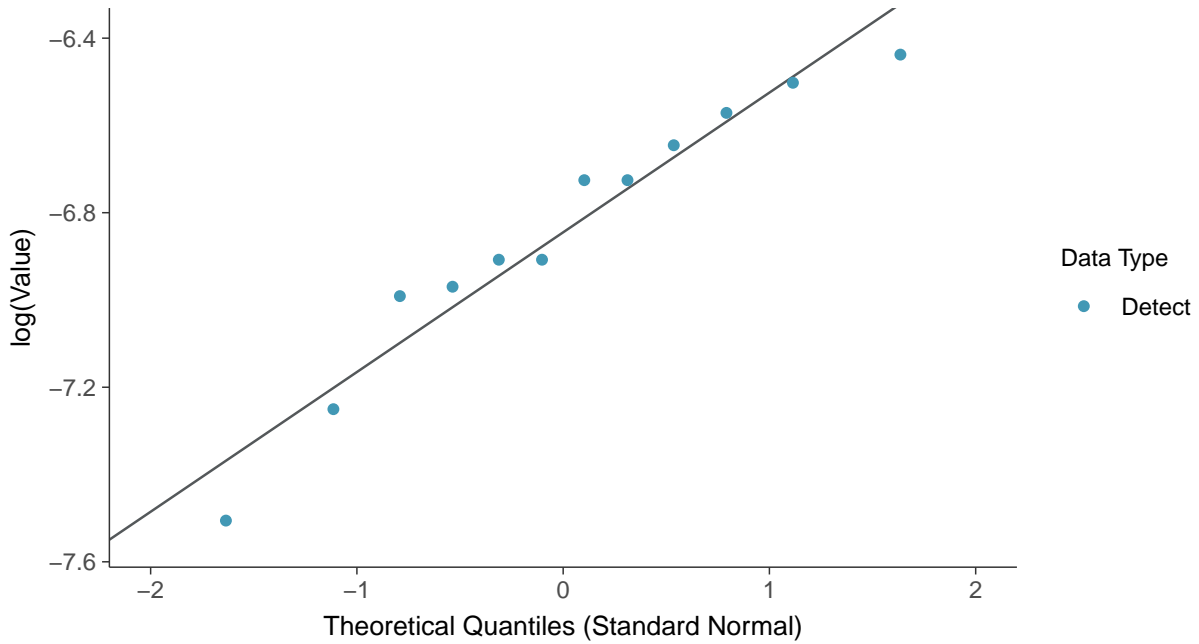




**Normal Q-Q plot**  
Copper, MW-12 (mg/L)

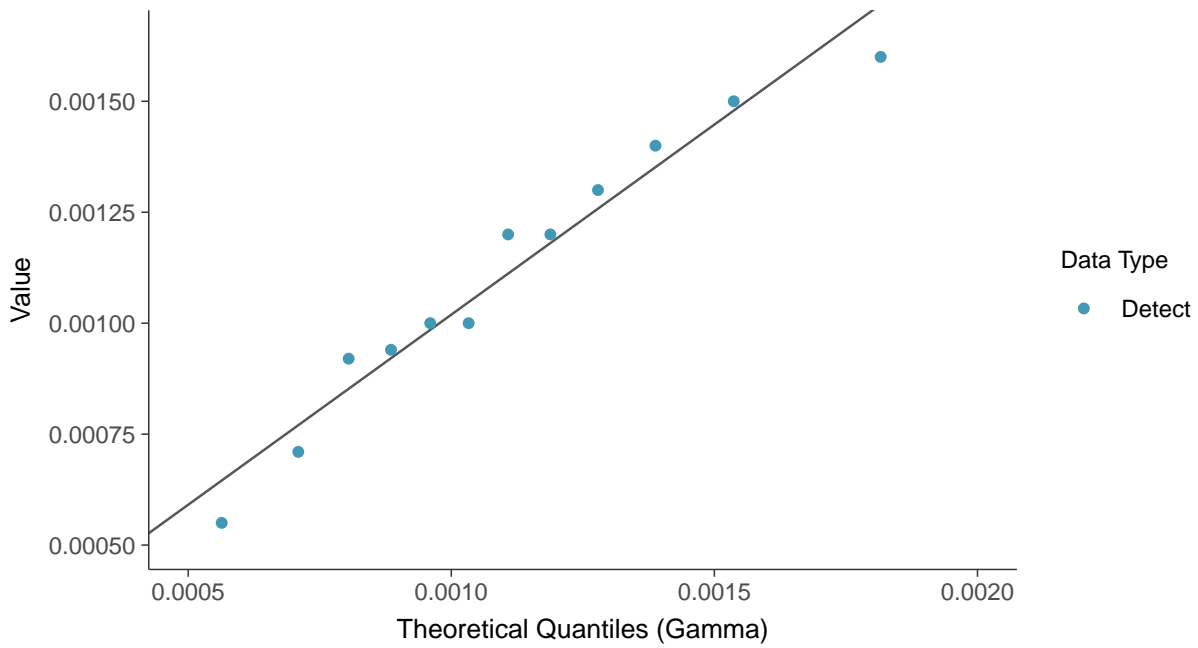


**Lognormal Q-Q plot**  
Copper, MW-12 (mg/L)

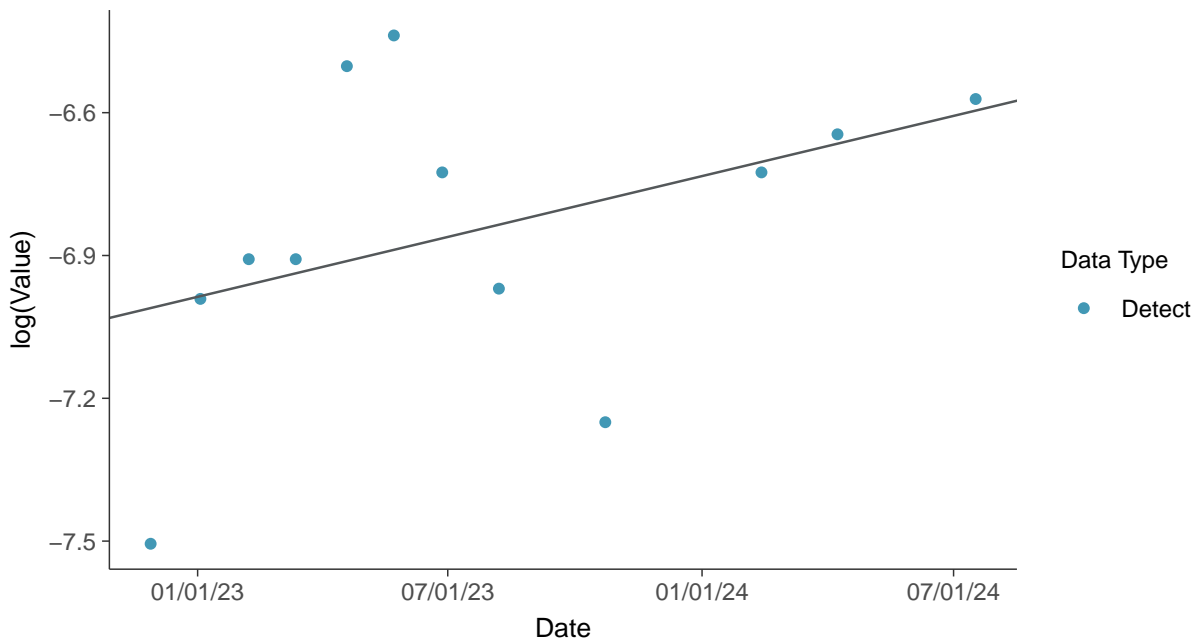




**Gamma Q-Q plot**  
Copper, MW-12 (mg/L)



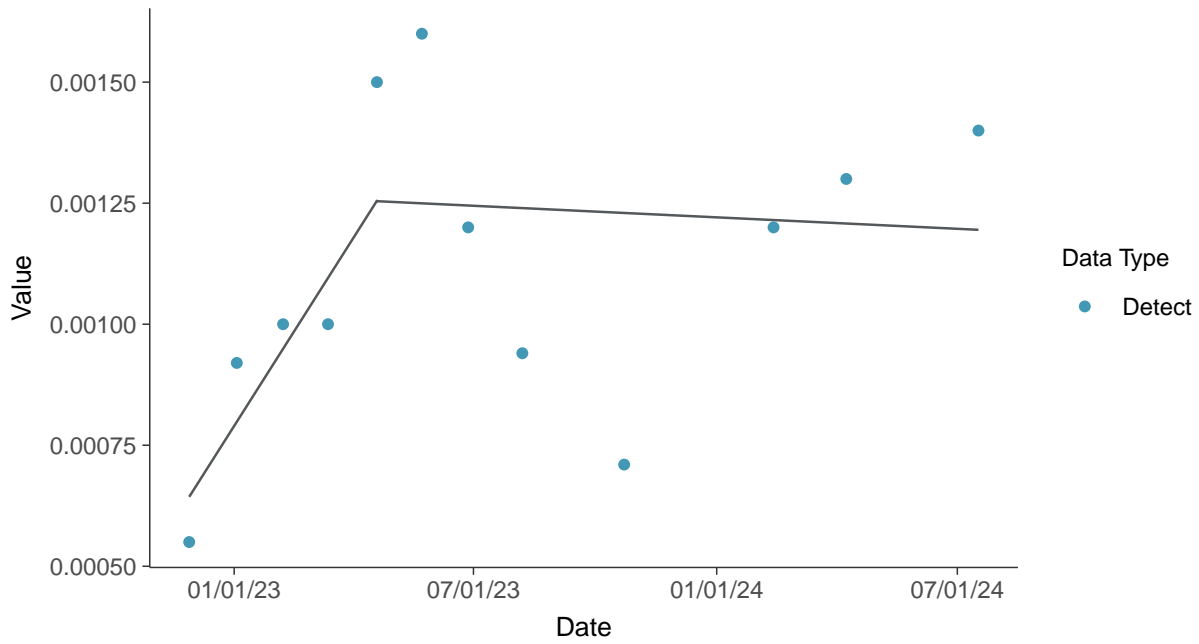
**Trend Regression: Lognormal MLE**  
Copper, MW-12 (mg/L)





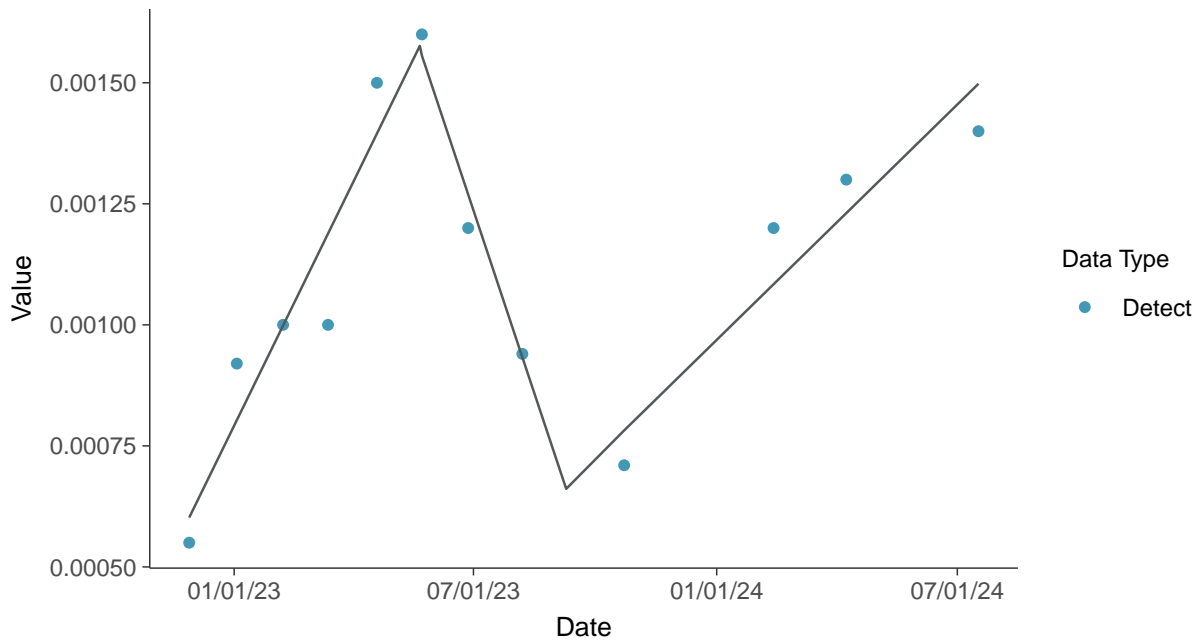
### Trend Regression: Piecewise Linear-Linear

Copper, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-12 (mg/L)



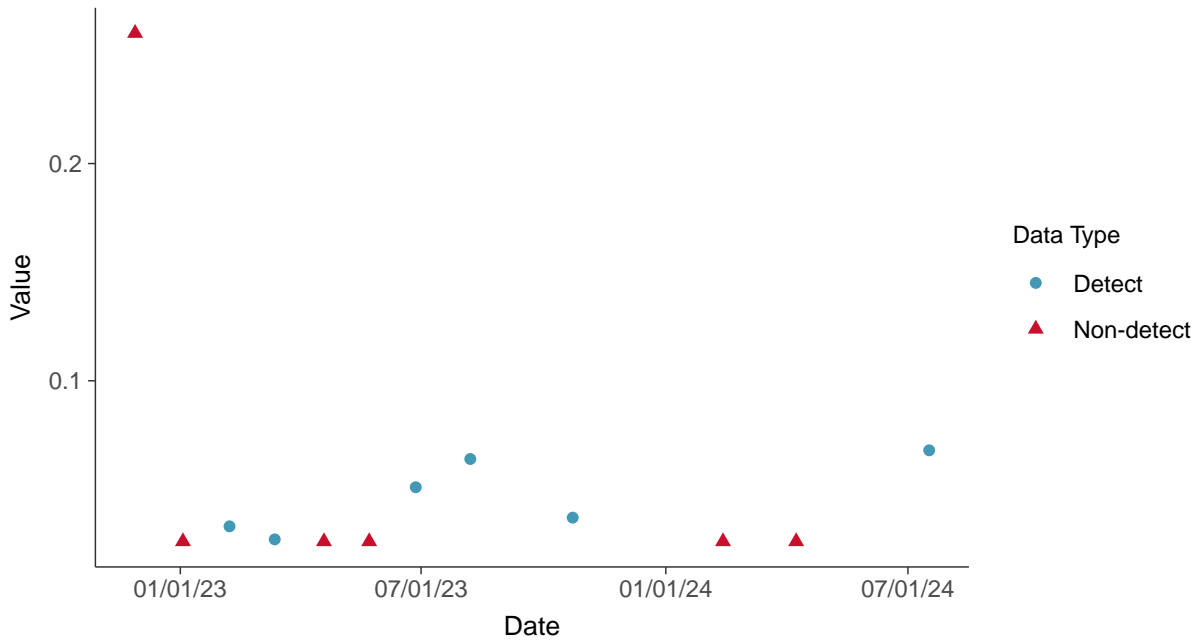


### Part 115: Iron, MW-12

ID: 22\_2\_6\_114

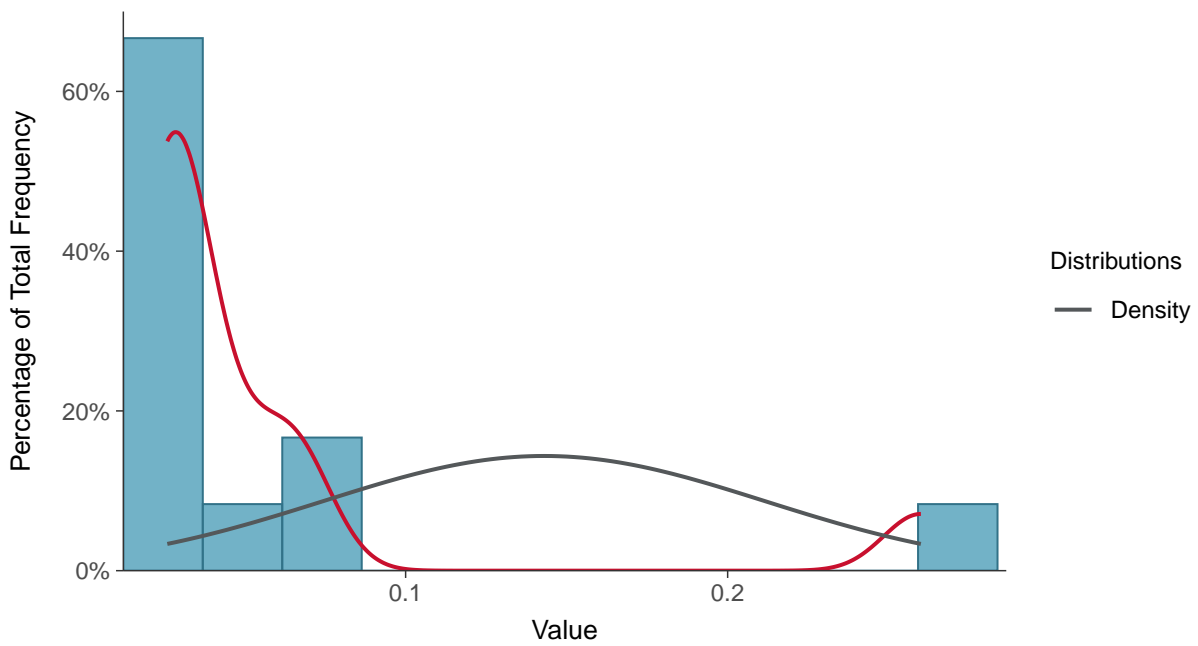
#### Scatter Plot

Iron, MW-12 (mg/L)



#### Histogram

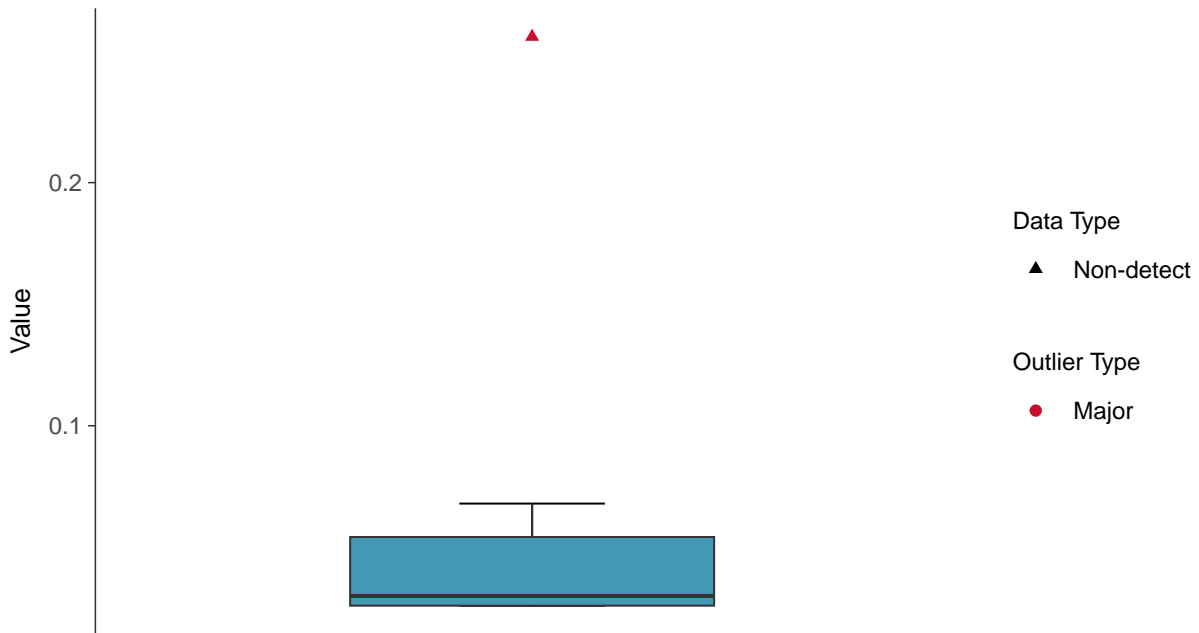
Iron, MW-12 (mg/L)





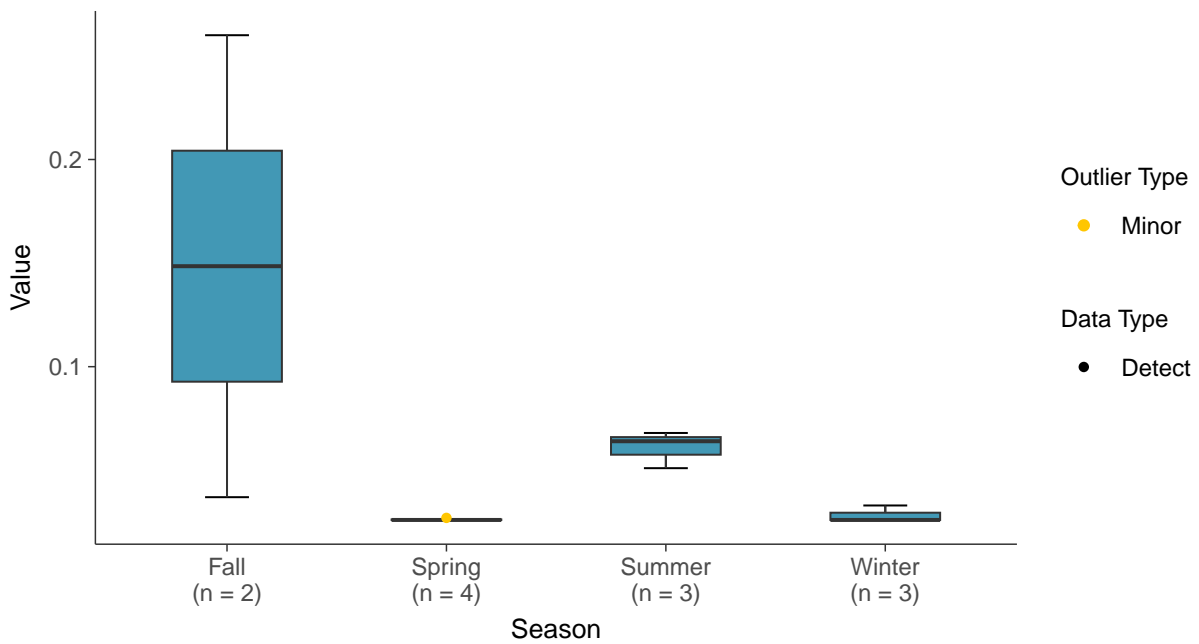
### Boxplot

Iron, MW-12 (mg/L)



### Boxplot by Season

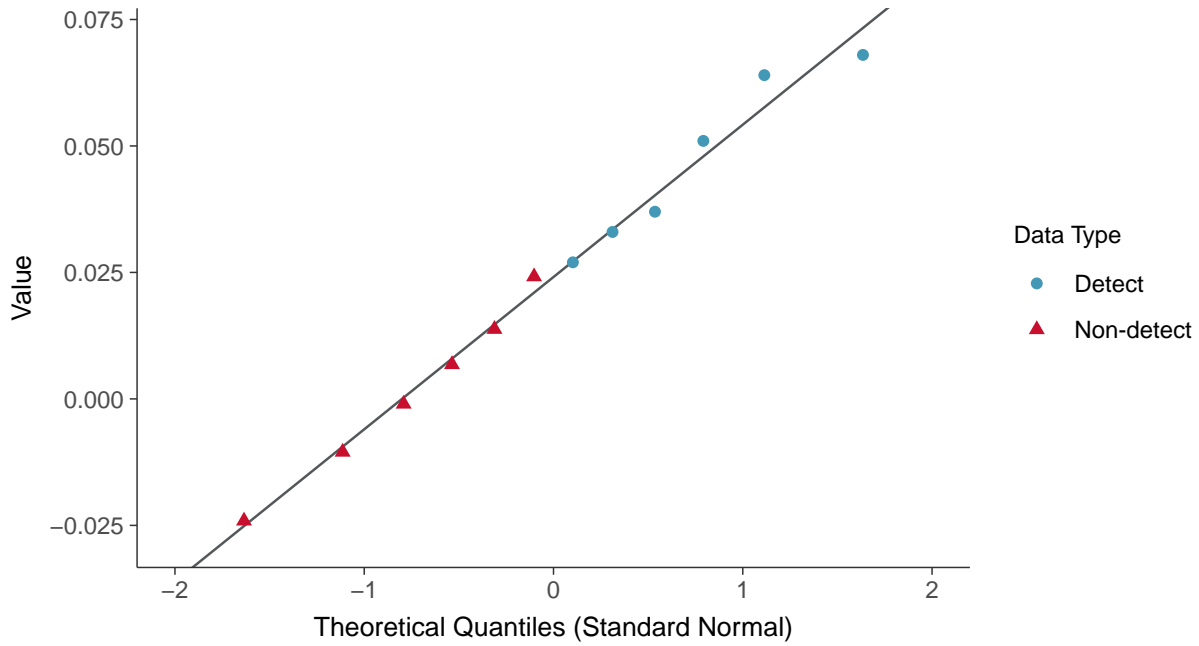
Iron, MW-12 (mg/L)





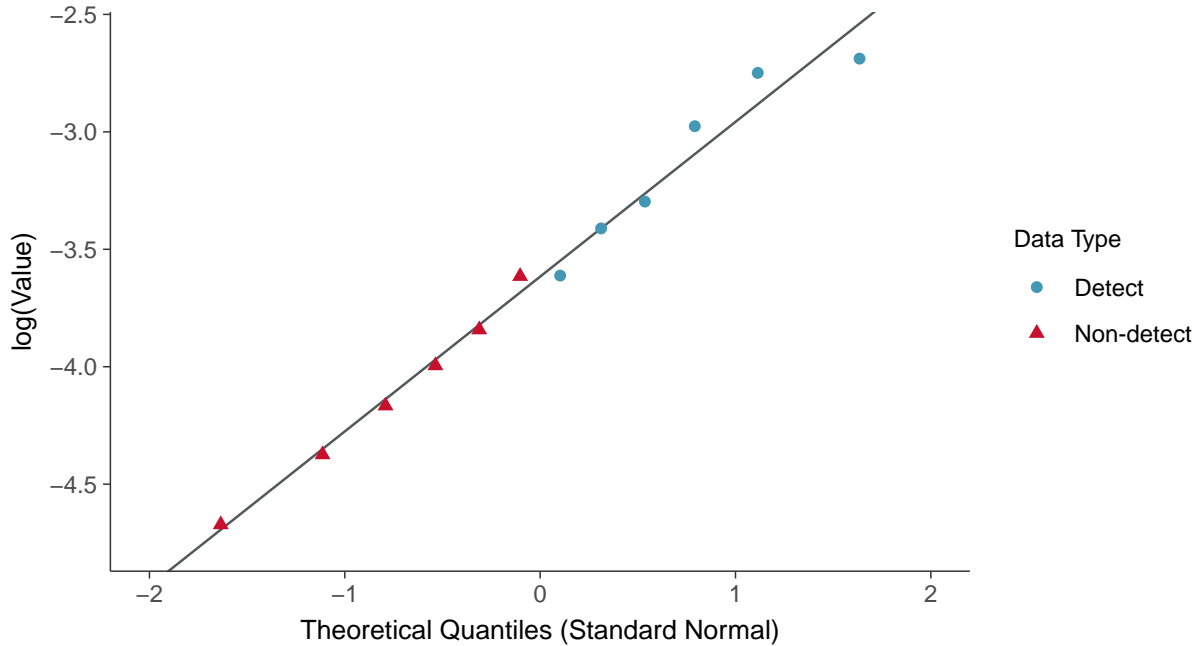
### Normal Q-Q plot using ROS Imputed Estimates

Iron, MW-12 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

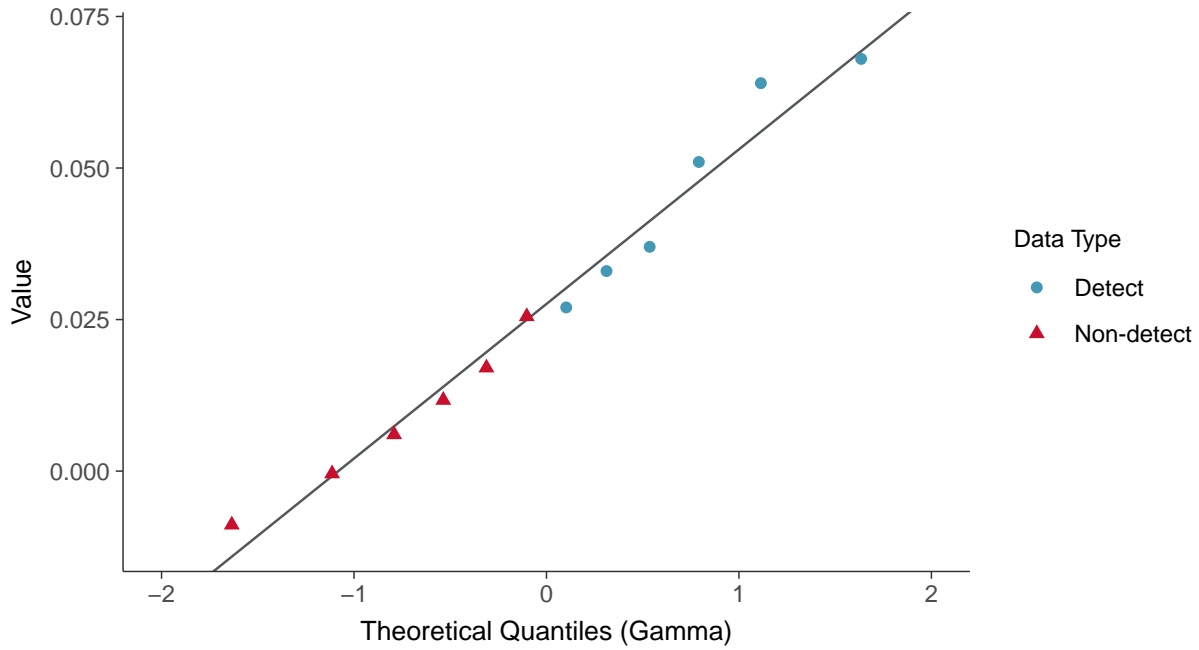
Iron, MW-12 (mg/L)





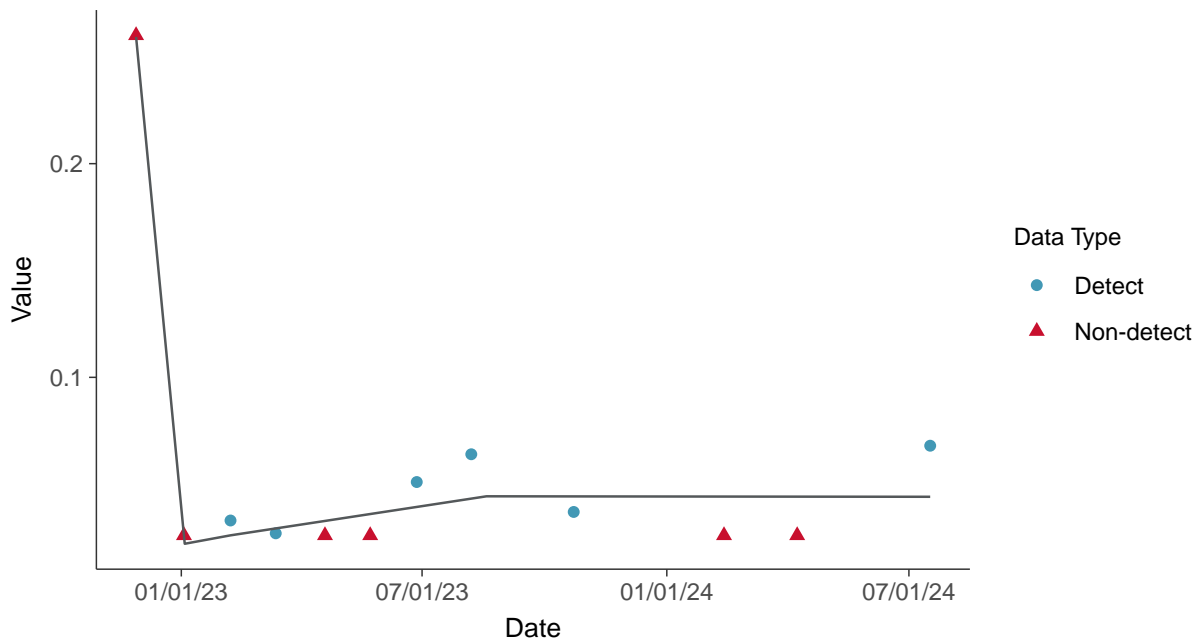
### Gamma Q-Q plot using ROS Imputed Estimates

Iron, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

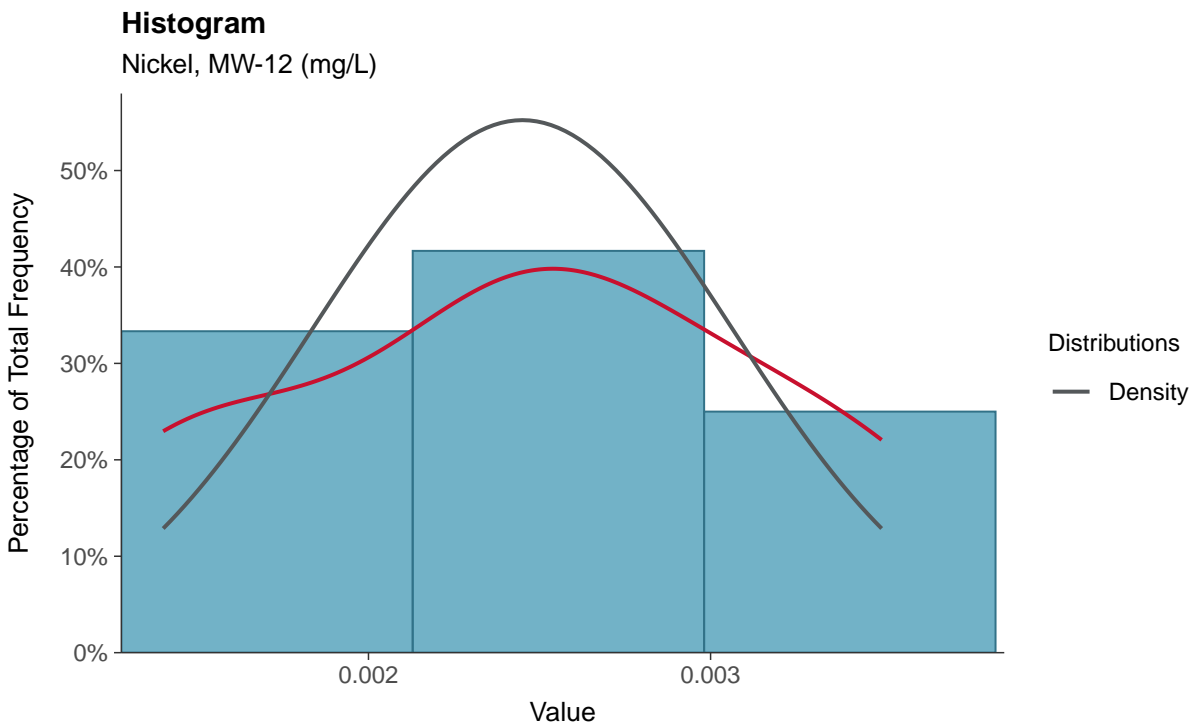
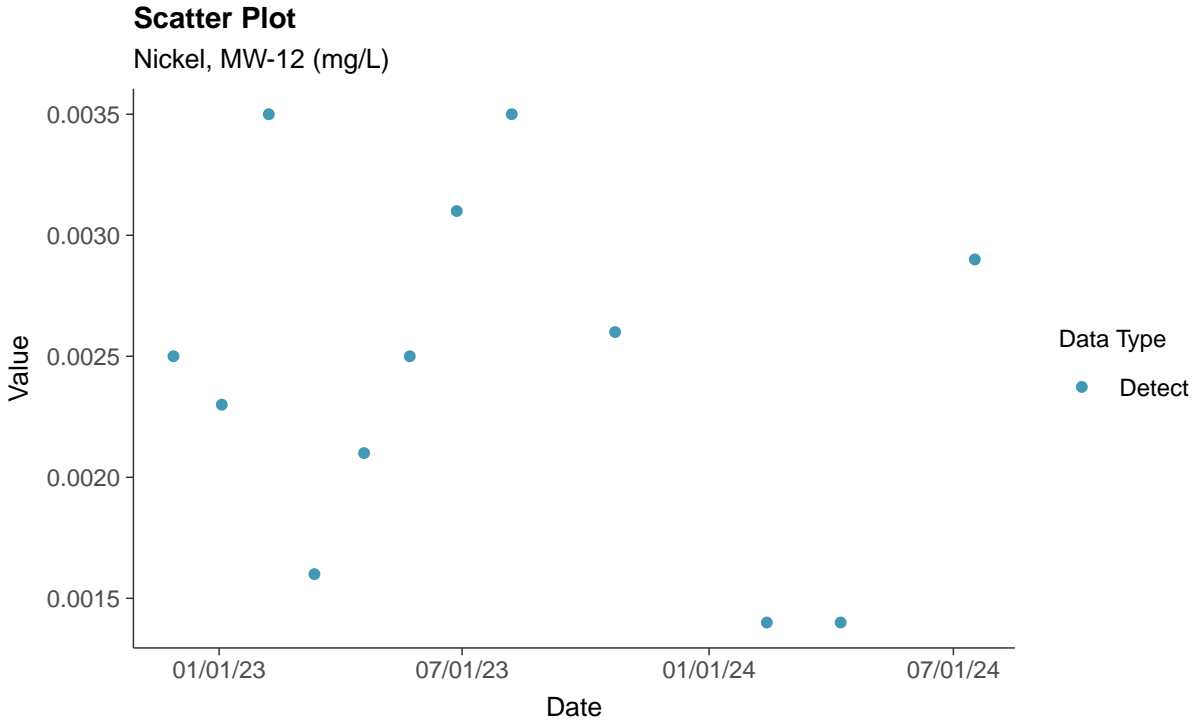
Iron, MW-12 (mg/L)





### Part 115: Nickel, MW-12

ID: 22\_2\_6\_119

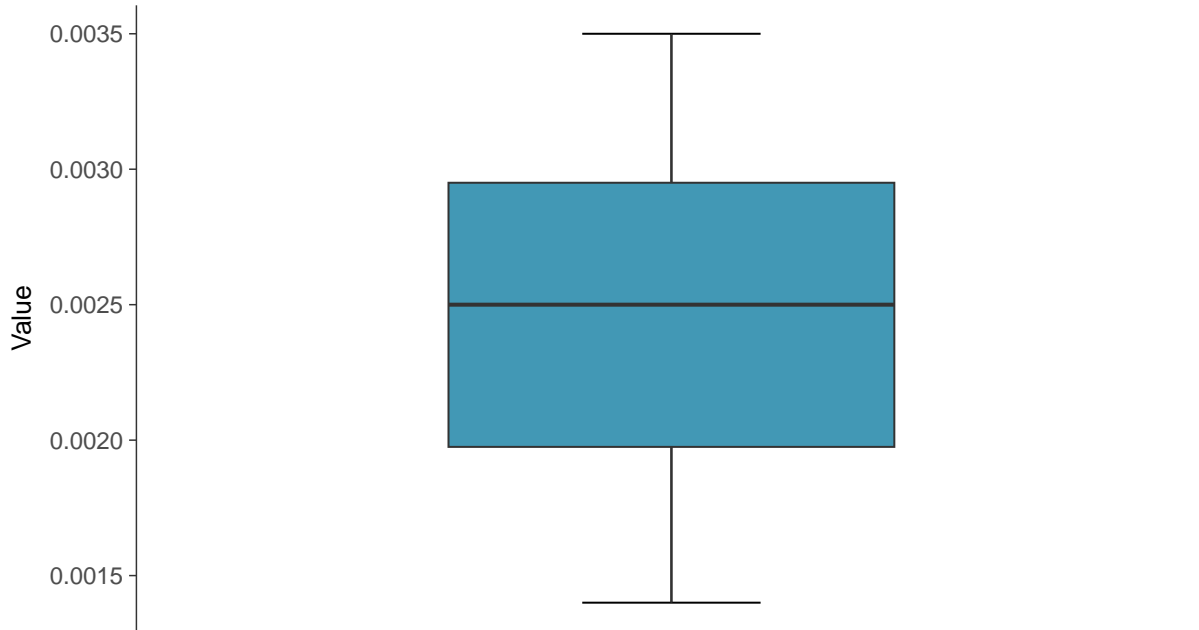






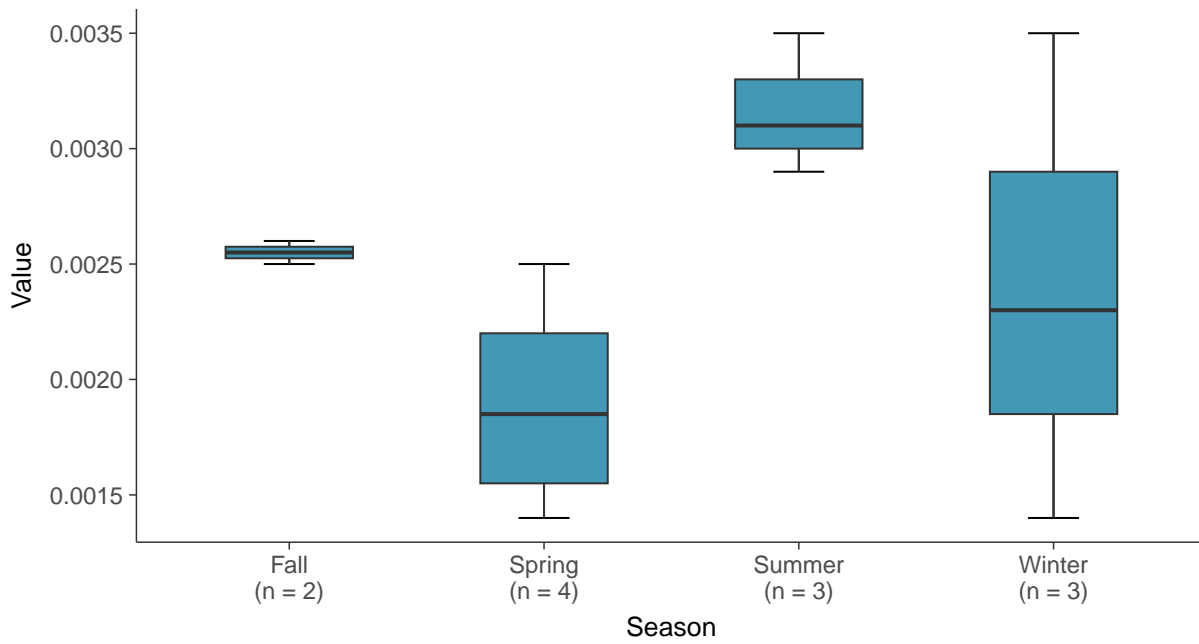
### Boxplot

Nickel, MW-12 (mg/L)



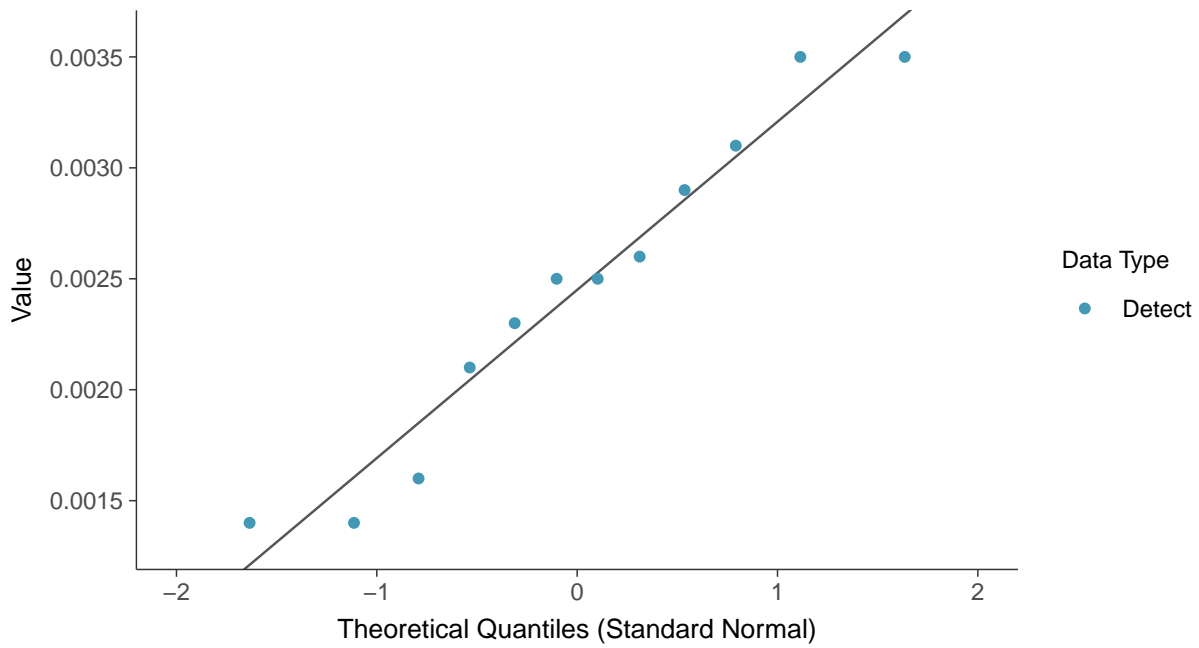
### Boxplot by Season

Nickel, MW-12 (mg/L)

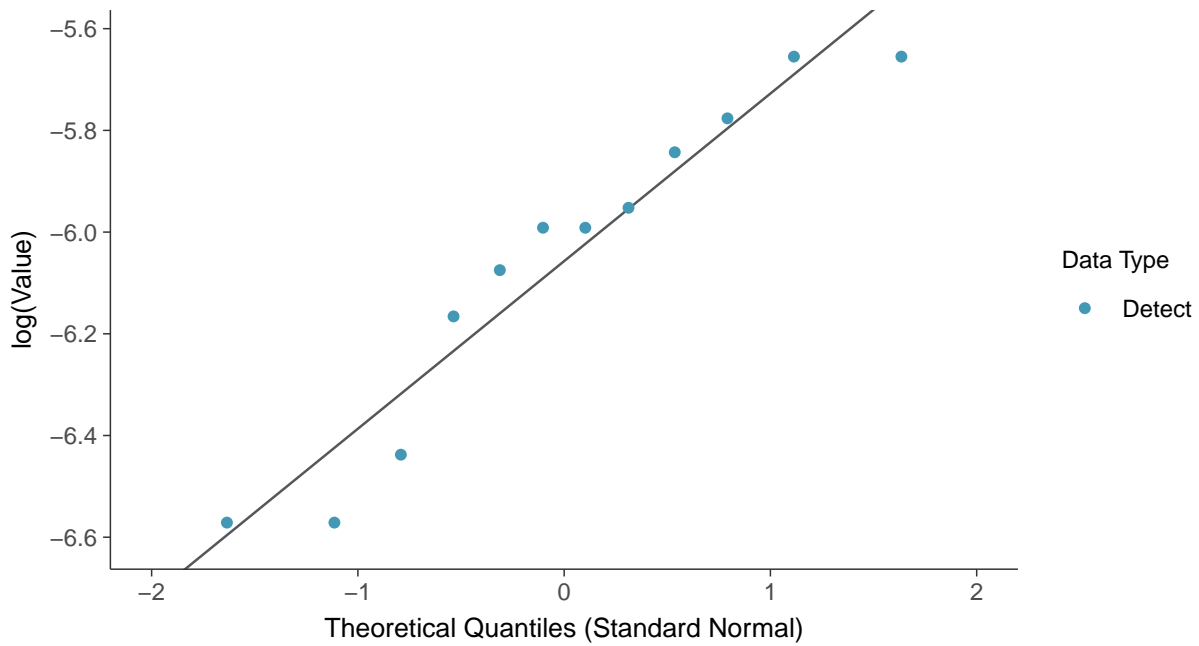




**Normal Q-Q plot**  
Nickel, MW-12 (mg/L)

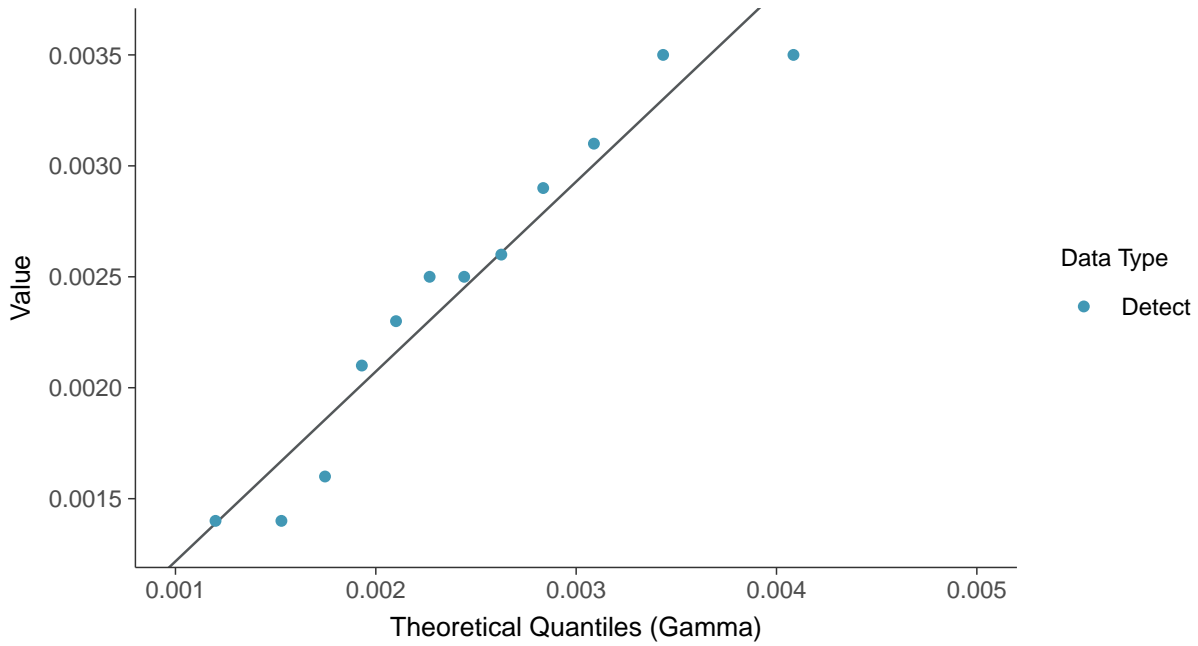


**Lognormal Q-Q plot**  
Nickel, MW-12 (mg/L)

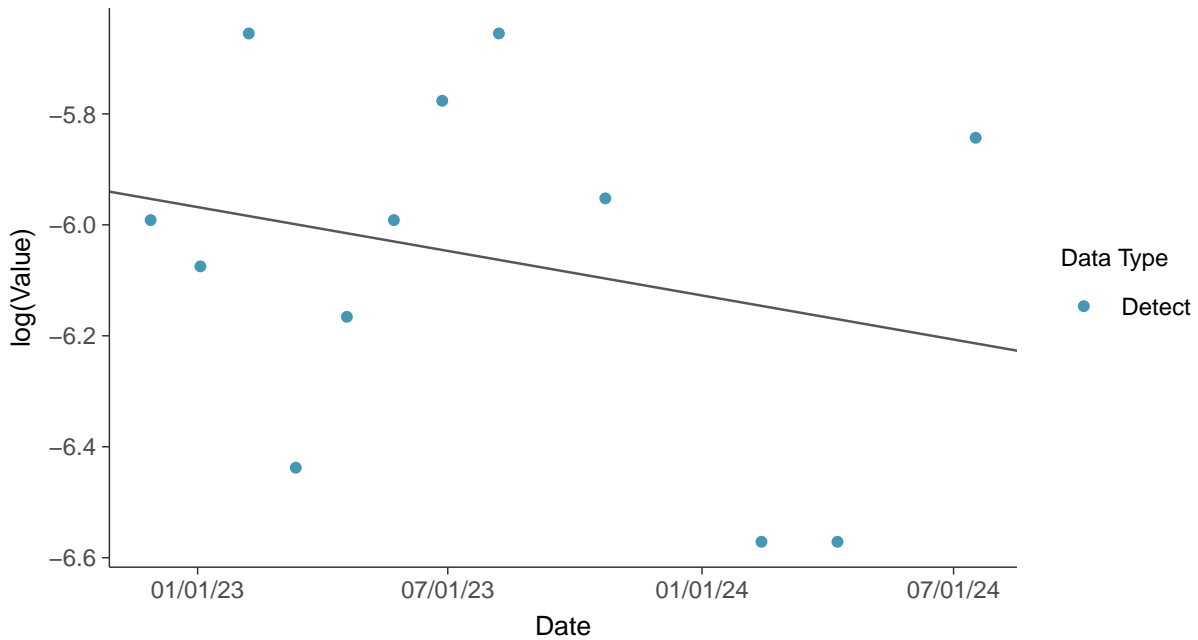




**Gamma Q-Q plot**  
Nickel, MW-12 (mg/L)



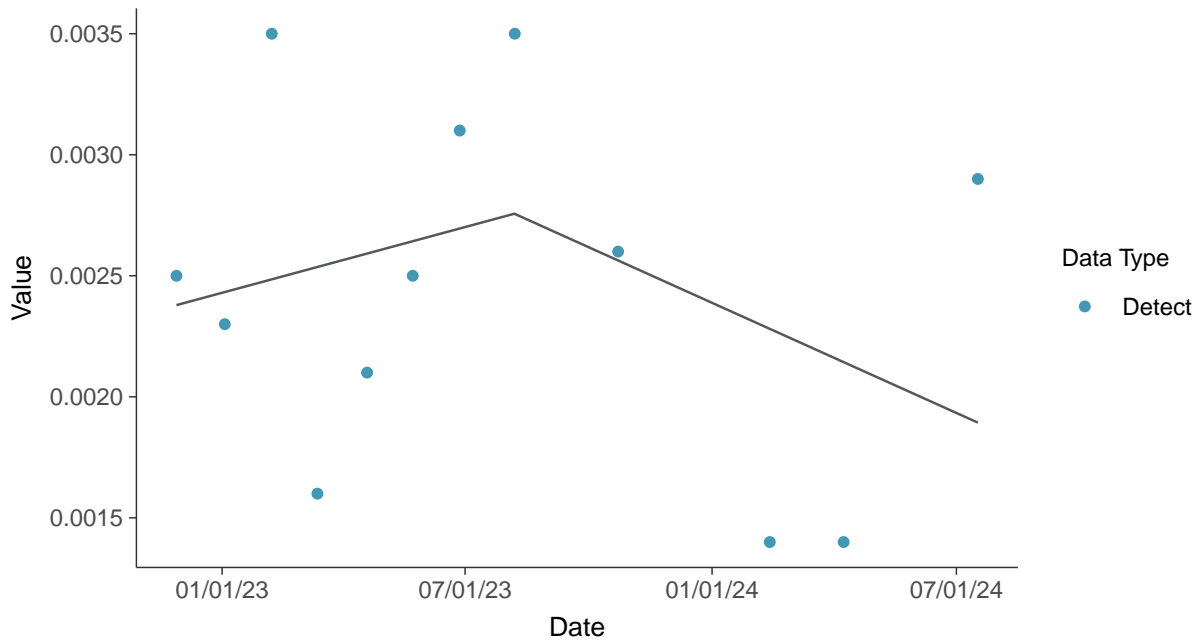
**Trend Regression: Lognormal MLE**  
Nickel, MW-12 (mg/L)





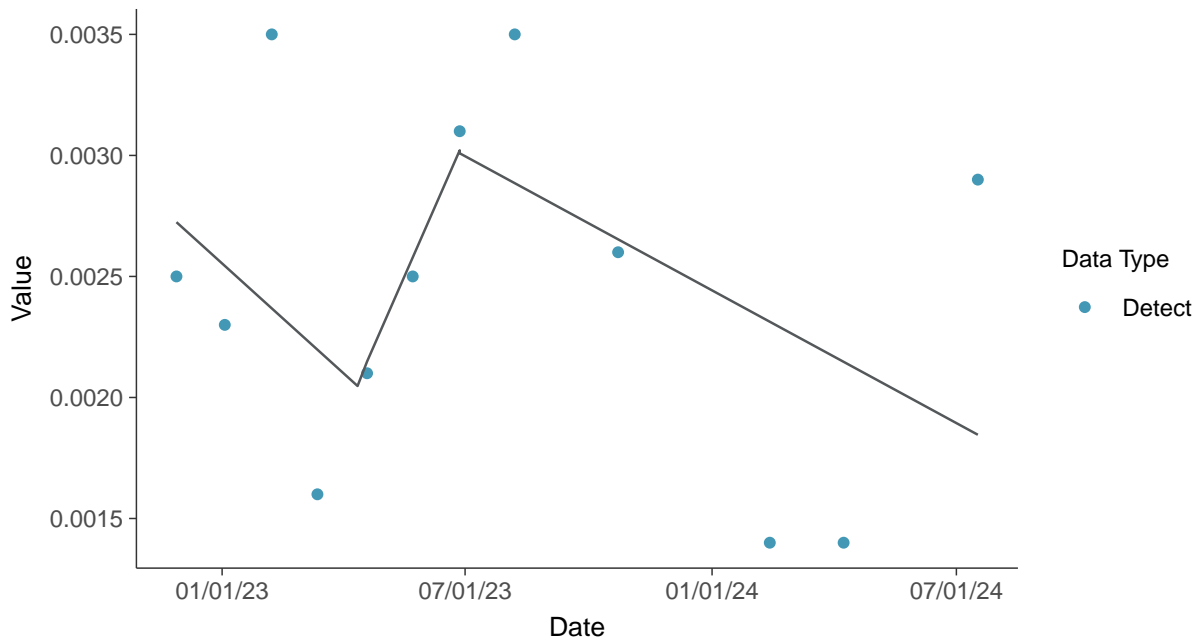
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

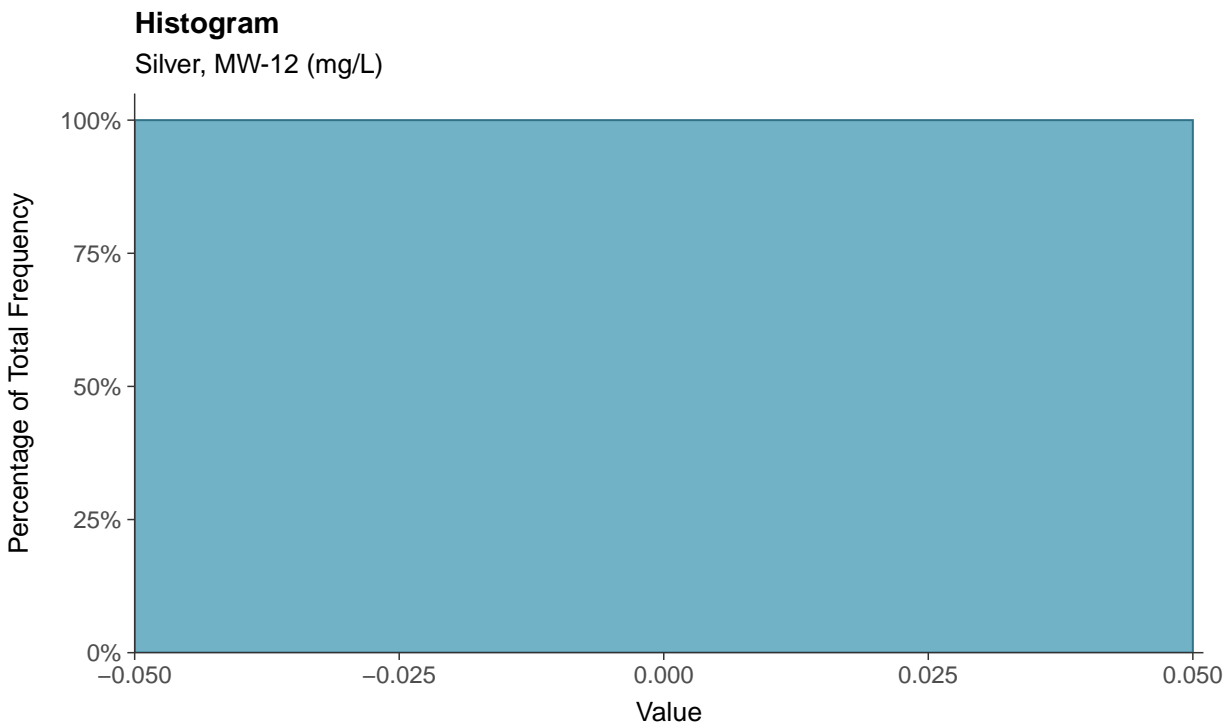
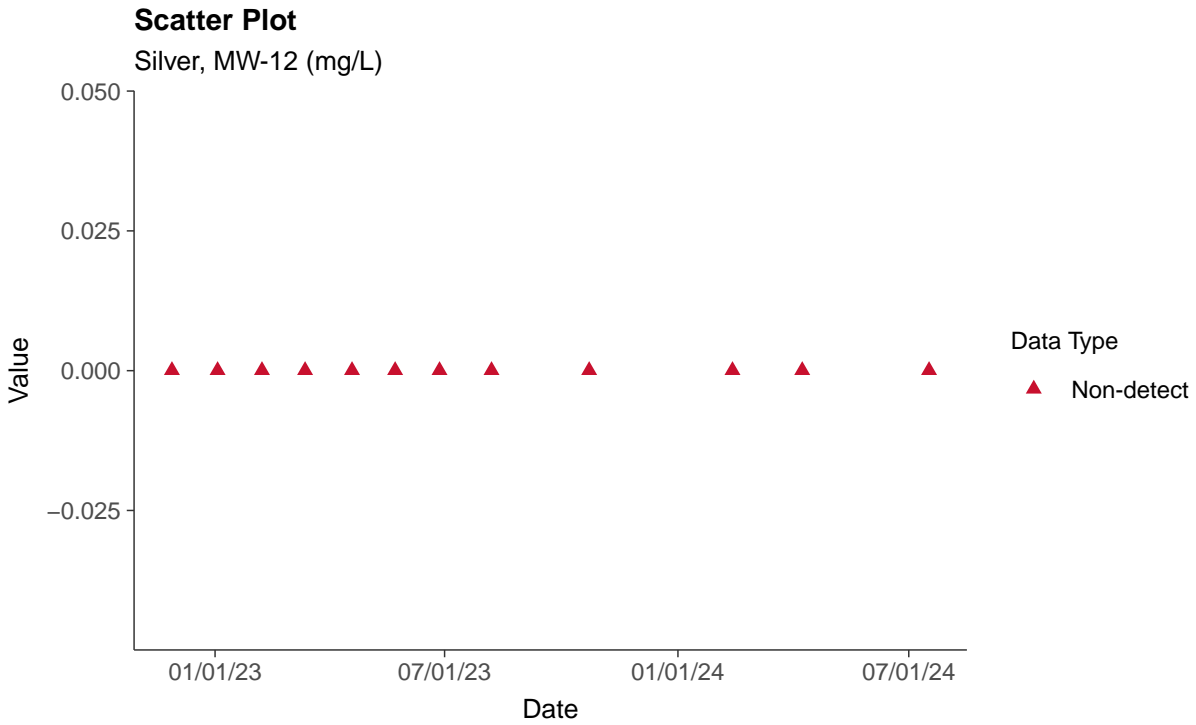
Nickel, MW-12 (mg/L)





### Part 115: Silver, MW-12

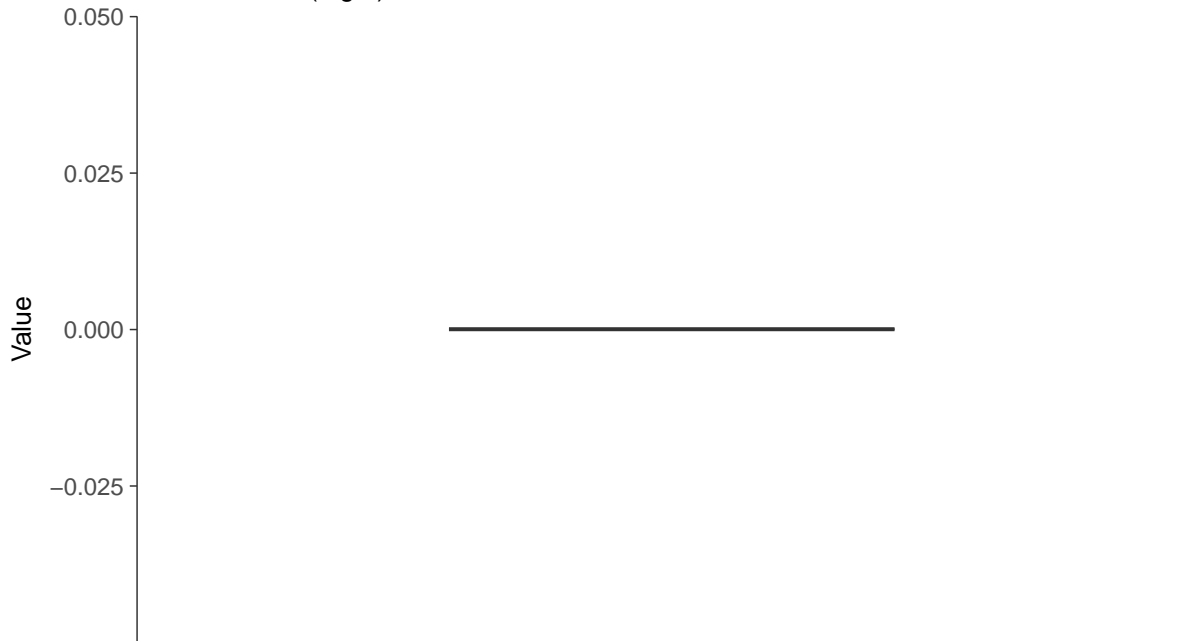
ID: 22\_2\_6\_123





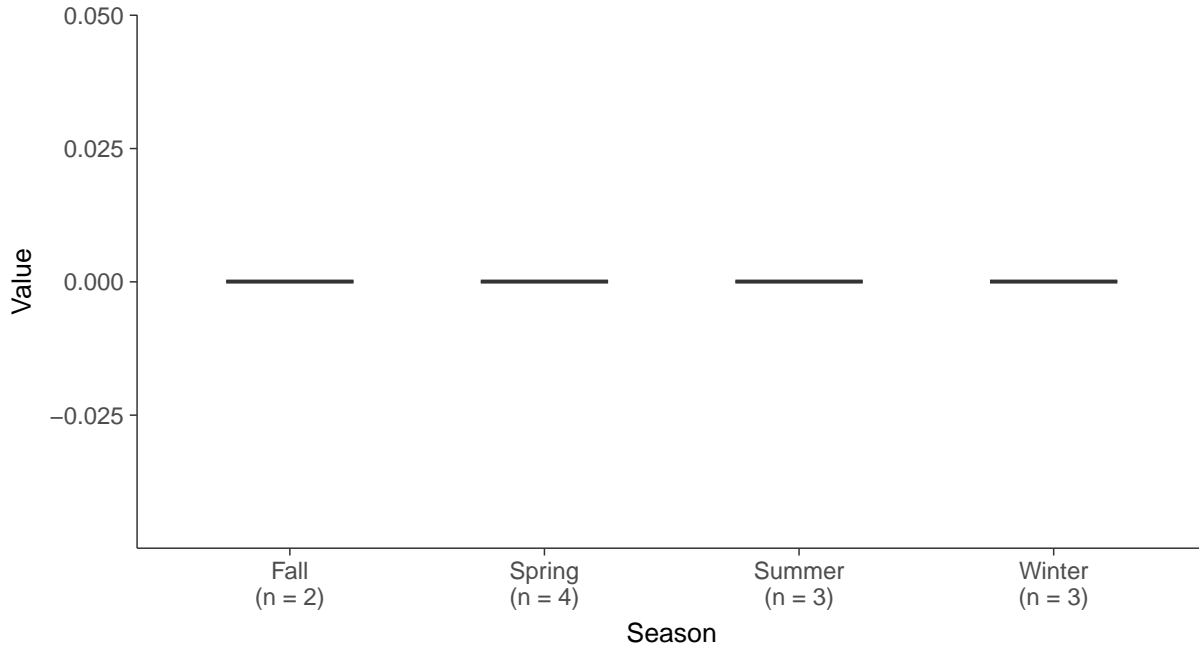
### Boxplot

Silver, MW-12 (mg/L)



### Boxplot by Season

Silver, MW-12 (mg/L)



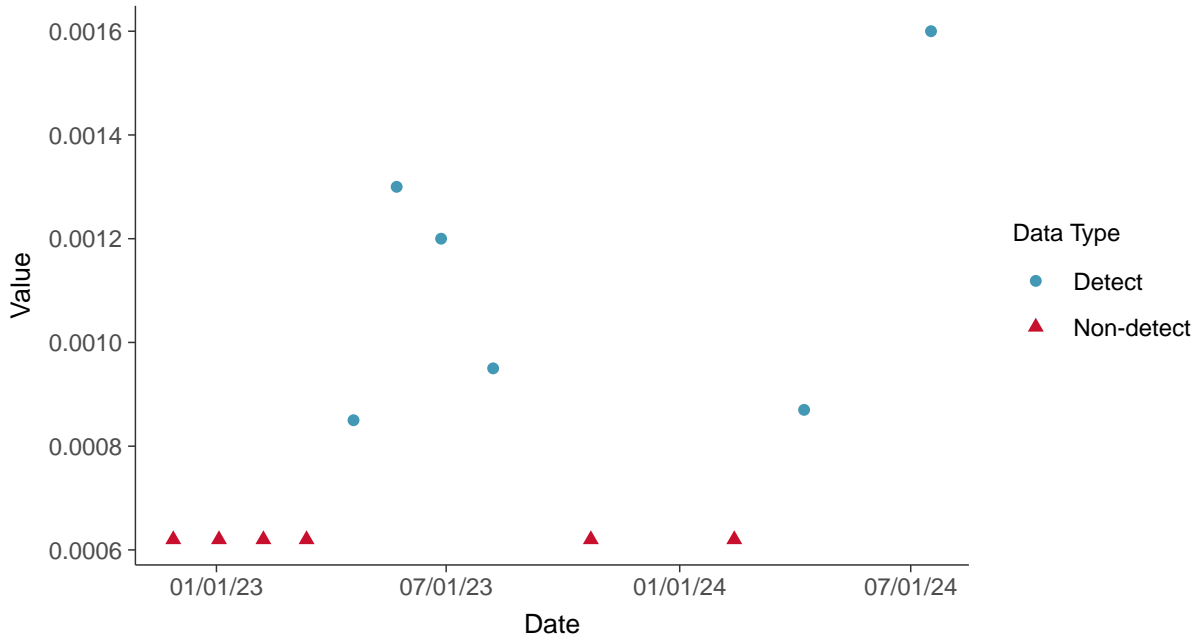


### Part 115: Vanadium, MW-12

ID: 22\_2\_6\_129

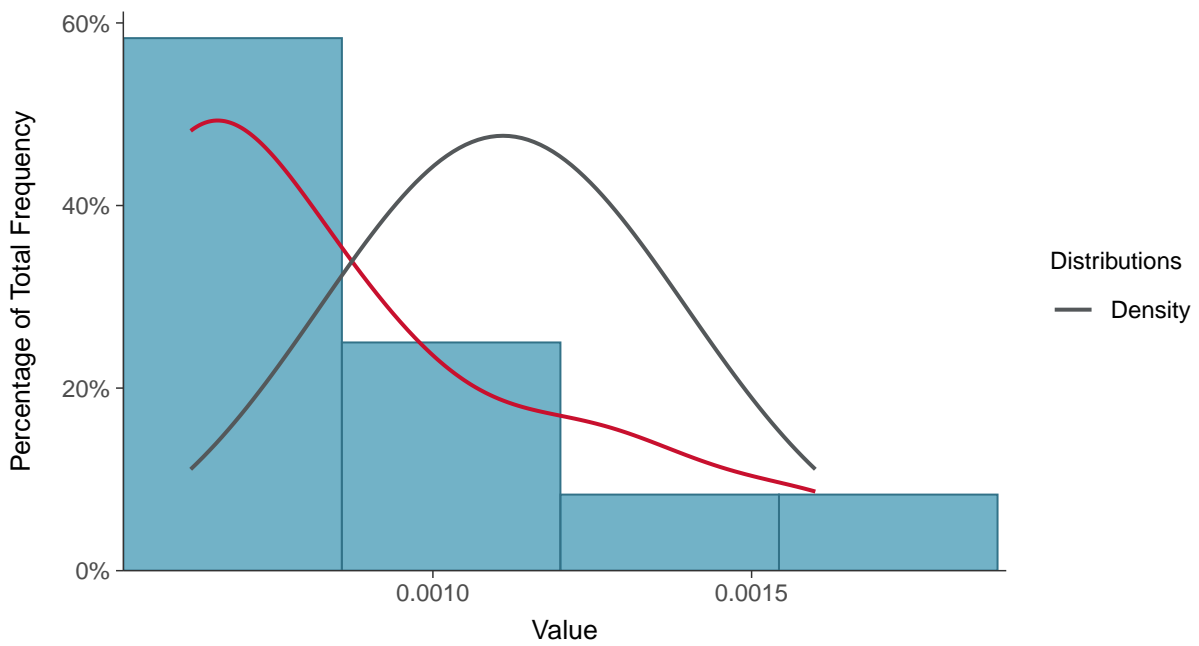
#### Scatter Plot

Vanadium, MW-12 (mg/L)



#### Histogram

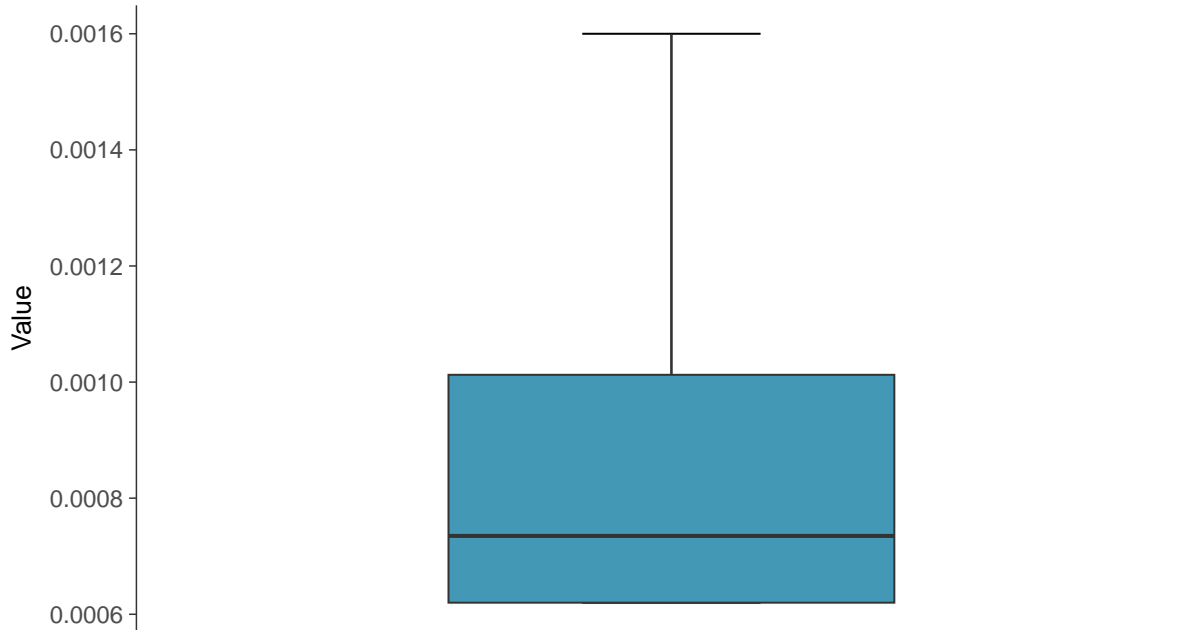
Vanadium, MW-12 (mg/L)





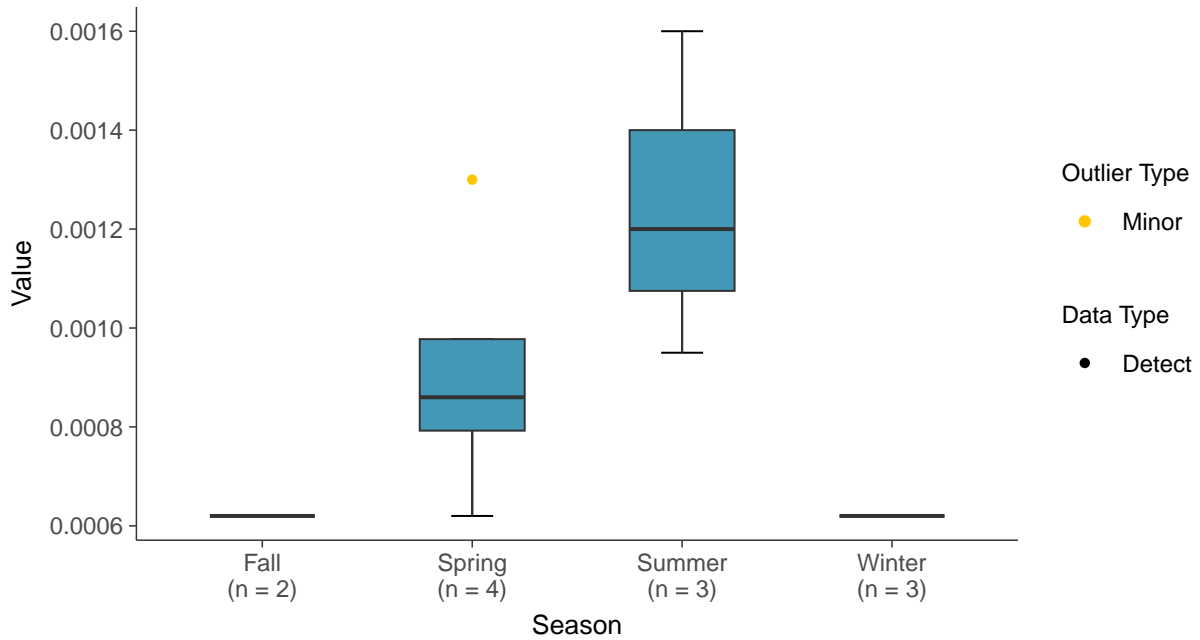
### Boxplot

Vanadium, MW-12 (mg/L)



### Boxplot by Season

Vanadium, MW-12 (mg/L)

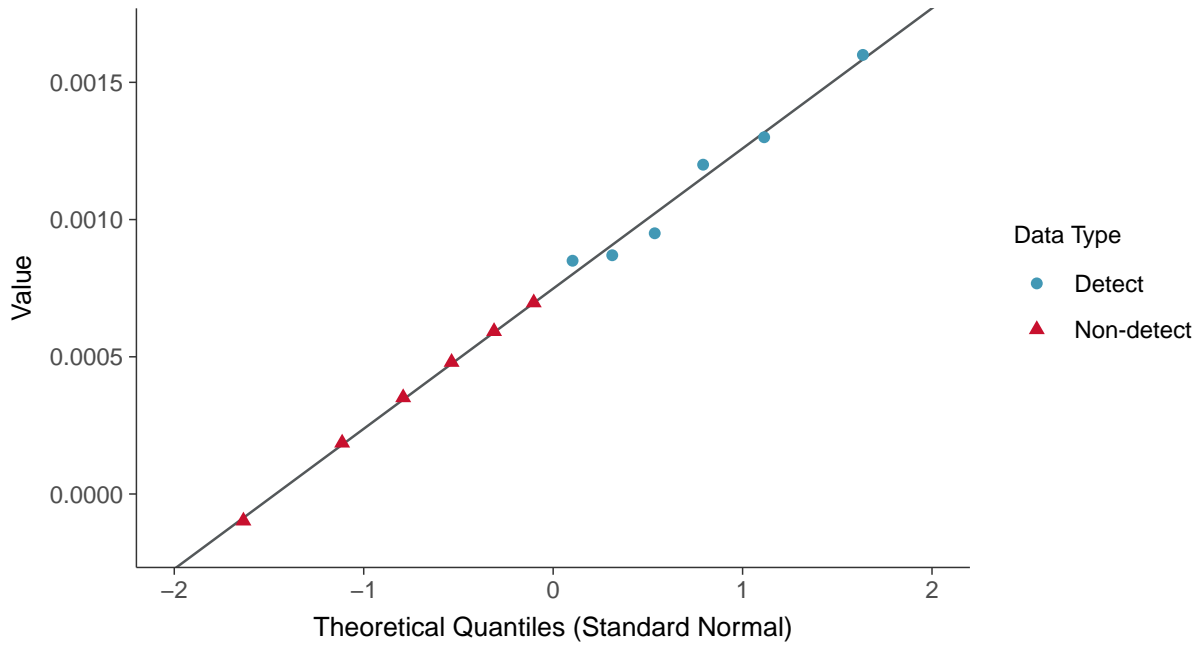






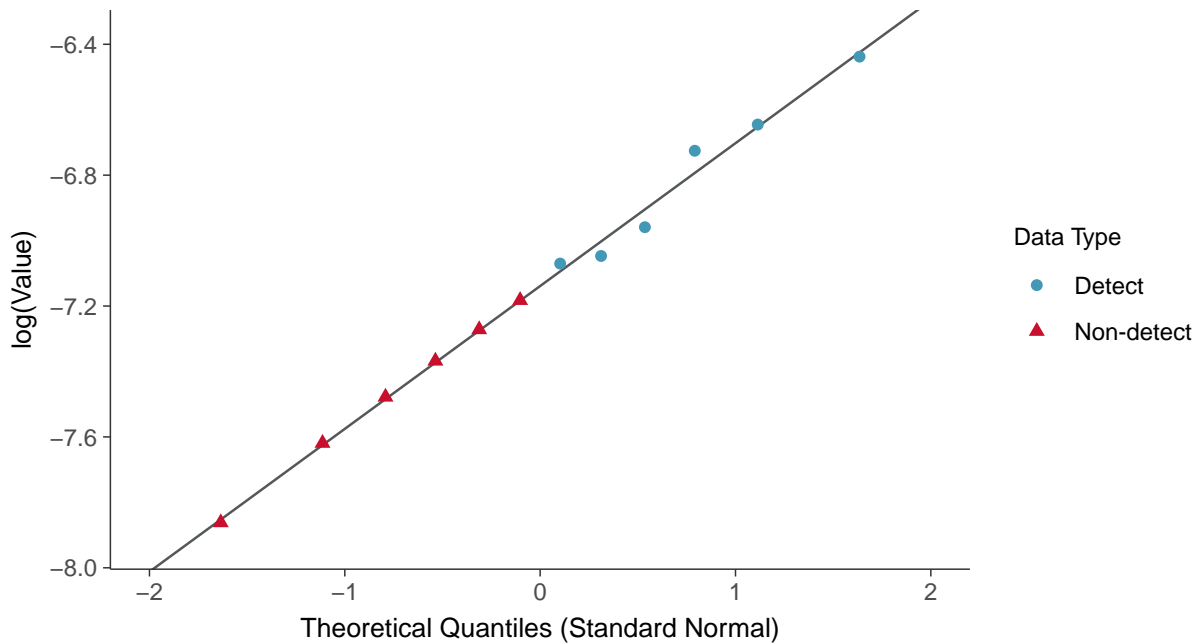
### Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-12 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

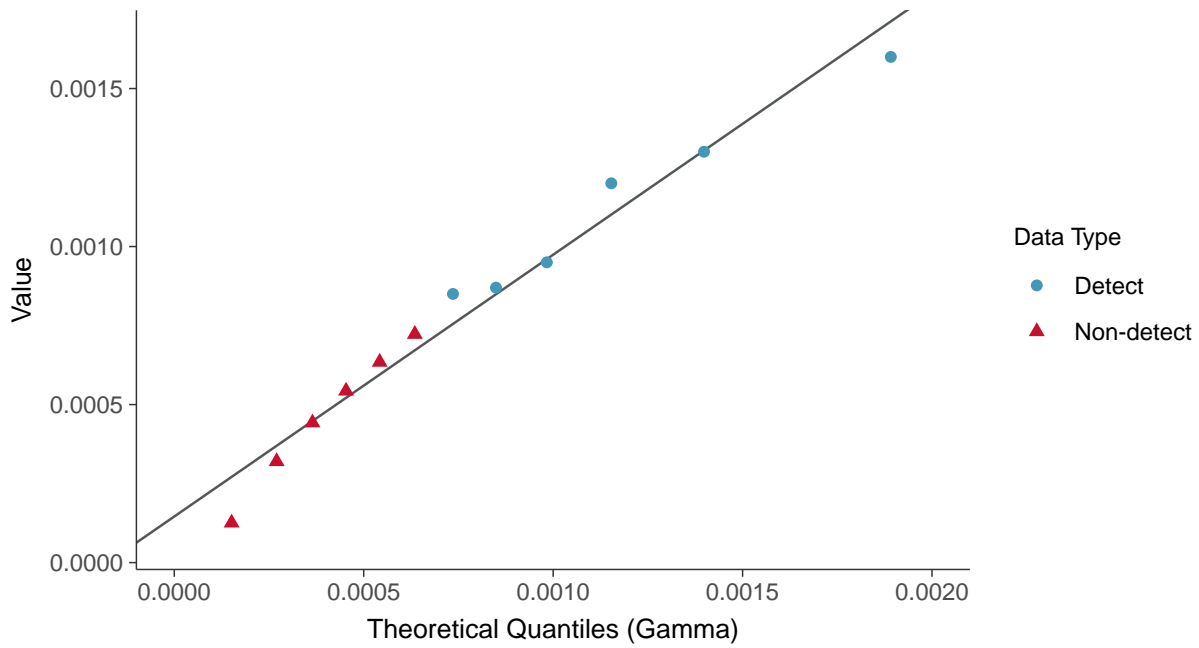
Vanadium, MW-12 (mg/L)





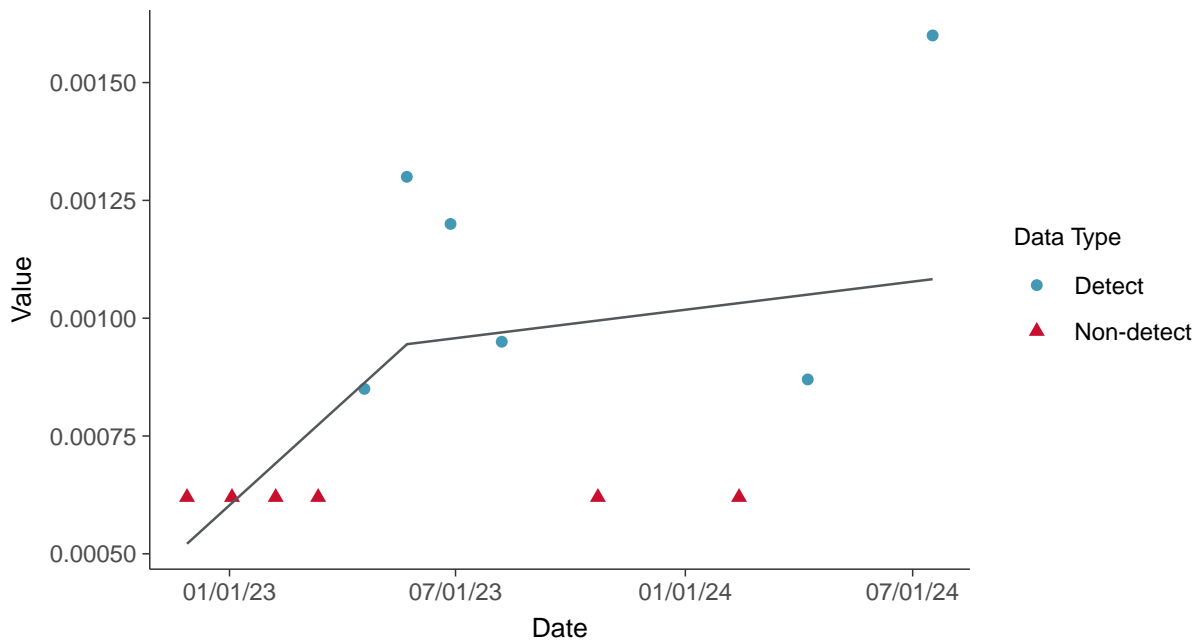
### Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-12 (mg/L)



### Trend Regression: Piecewise Linear-Linear

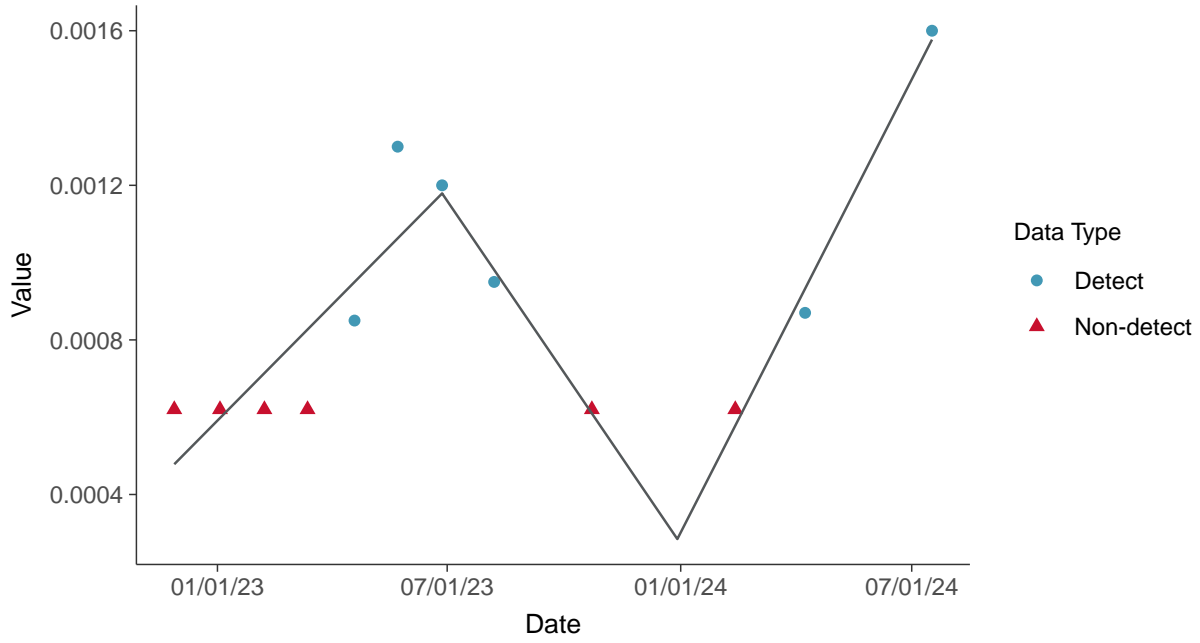
Vanadium, MW-12 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

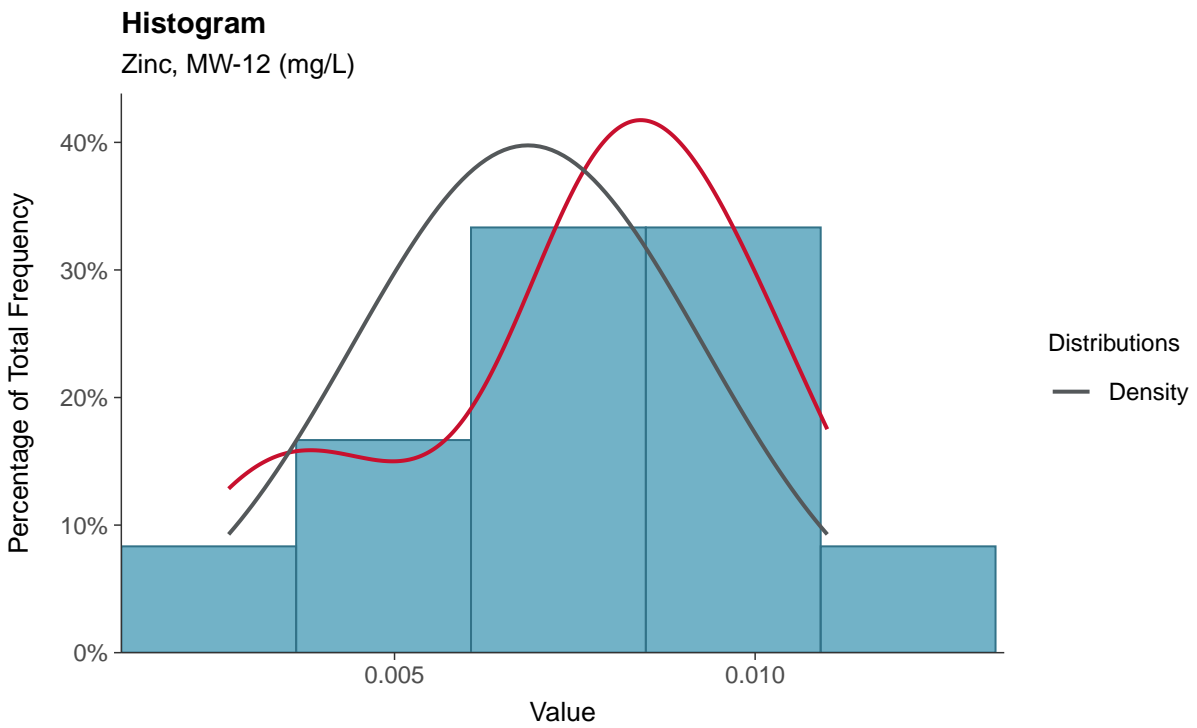
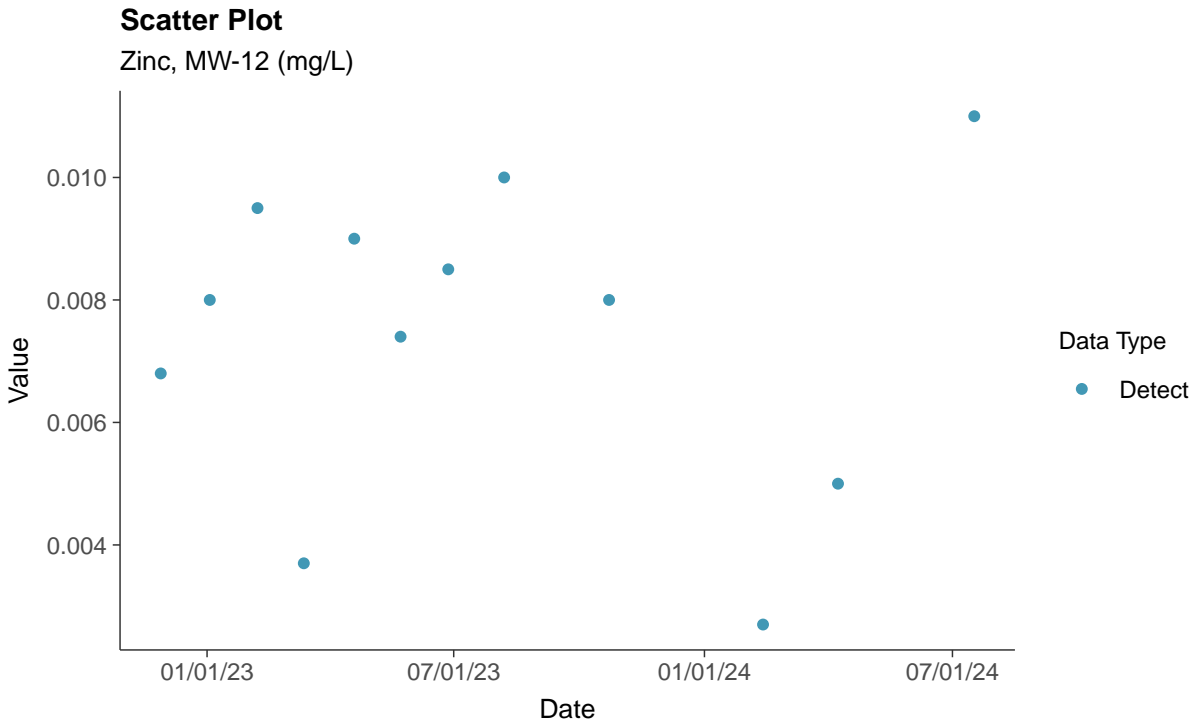
Vanadium, MW-12 (mg/L)





### Part 115: Zinc, MW-12

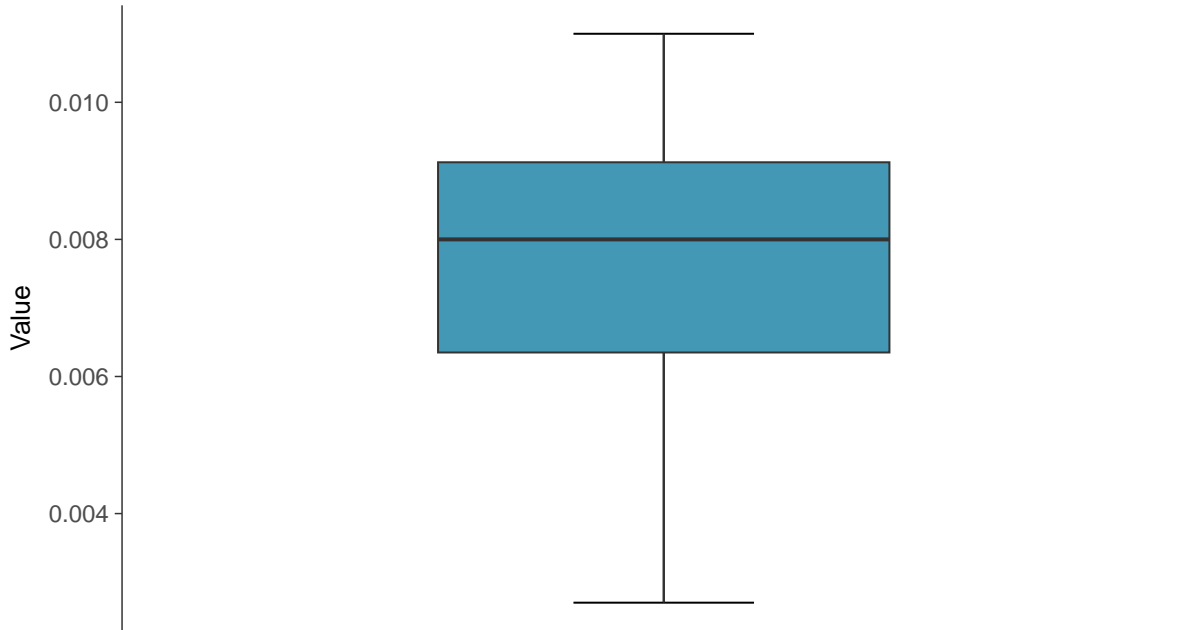
ID: 22\_2\_6\_130





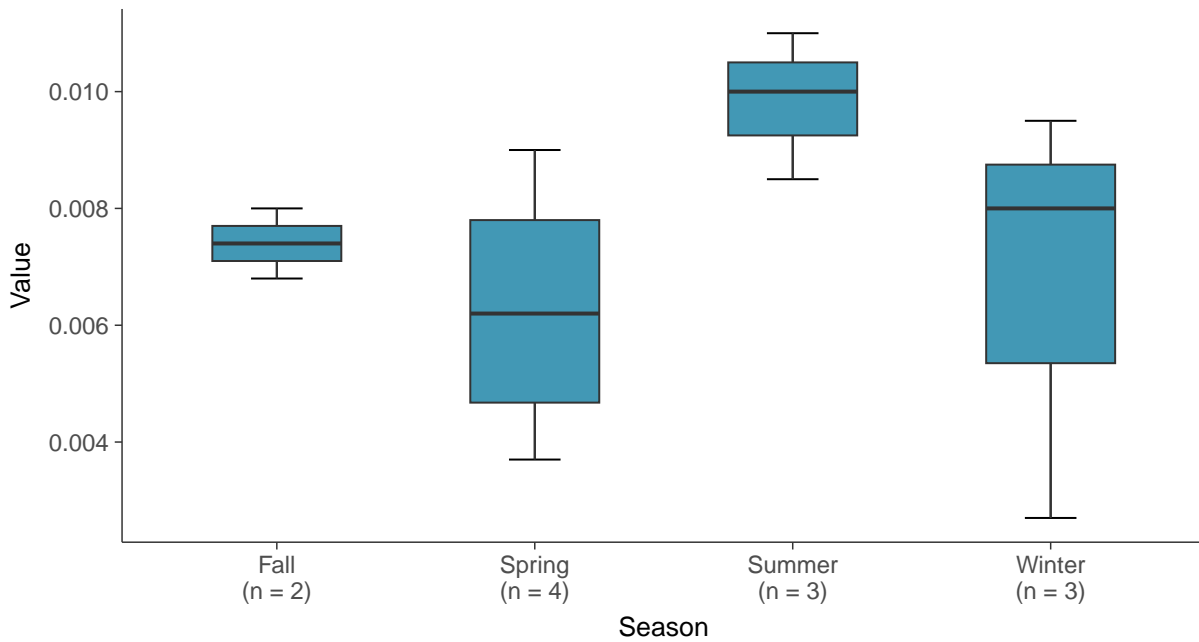
### Boxplot

Zinc, MW-12 (mg/L)



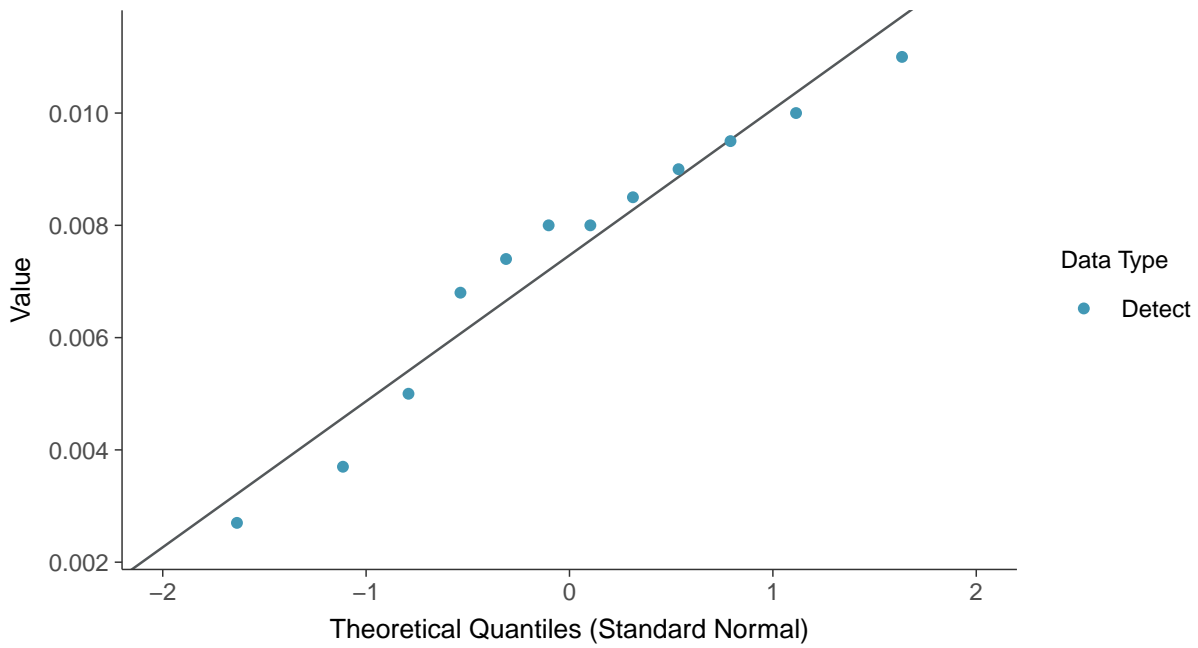
### Boxplot by Season

Zinc, MW-12 (mg/L)

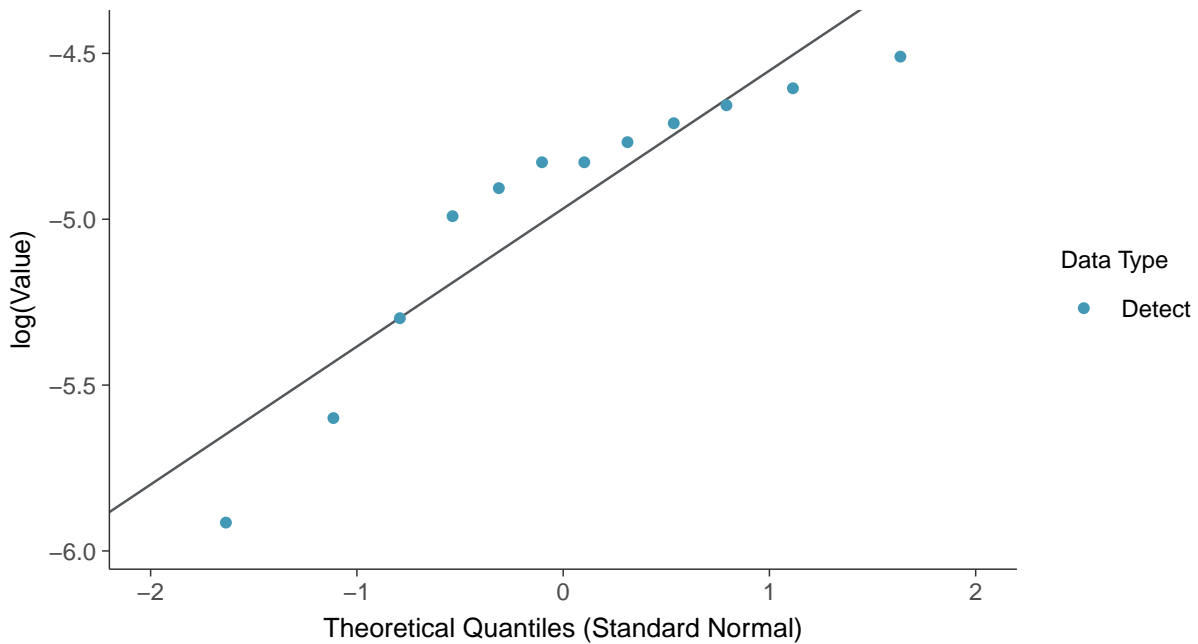




**Normal Q-Q plot**  
Zinc, MW-12 (mg/L)

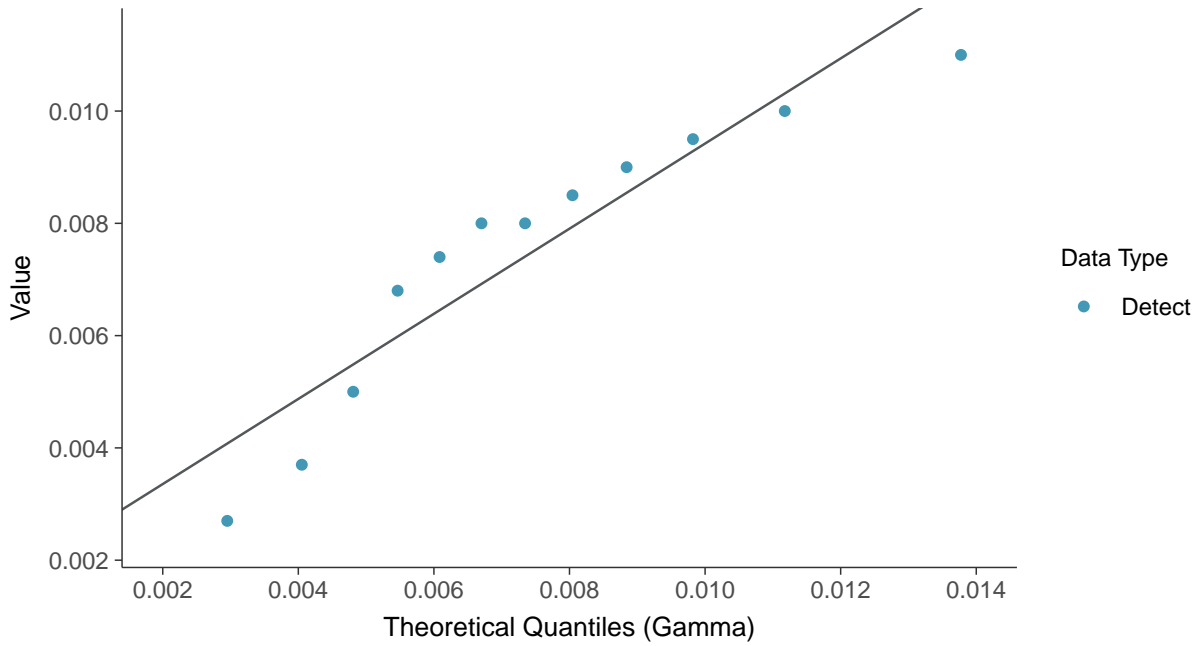


**Lognormal Q-Q plot**  
Zinc, MW-12 (mg/L)

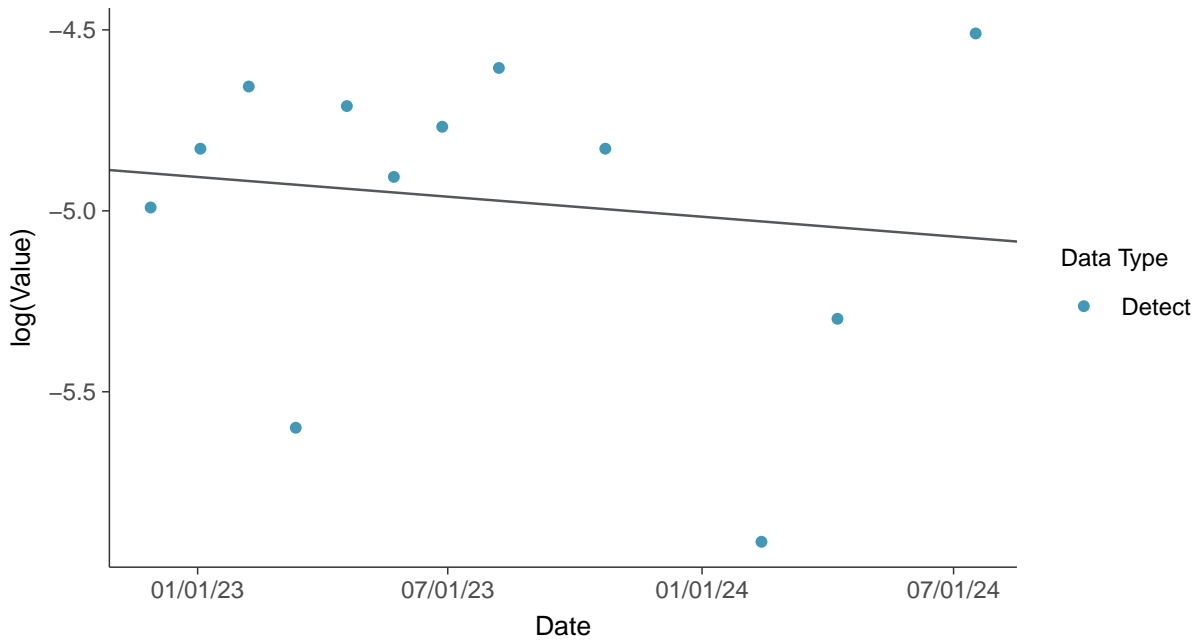




**Gamma Q-Q plot**  
Zinc, MW-12 (mg/L)

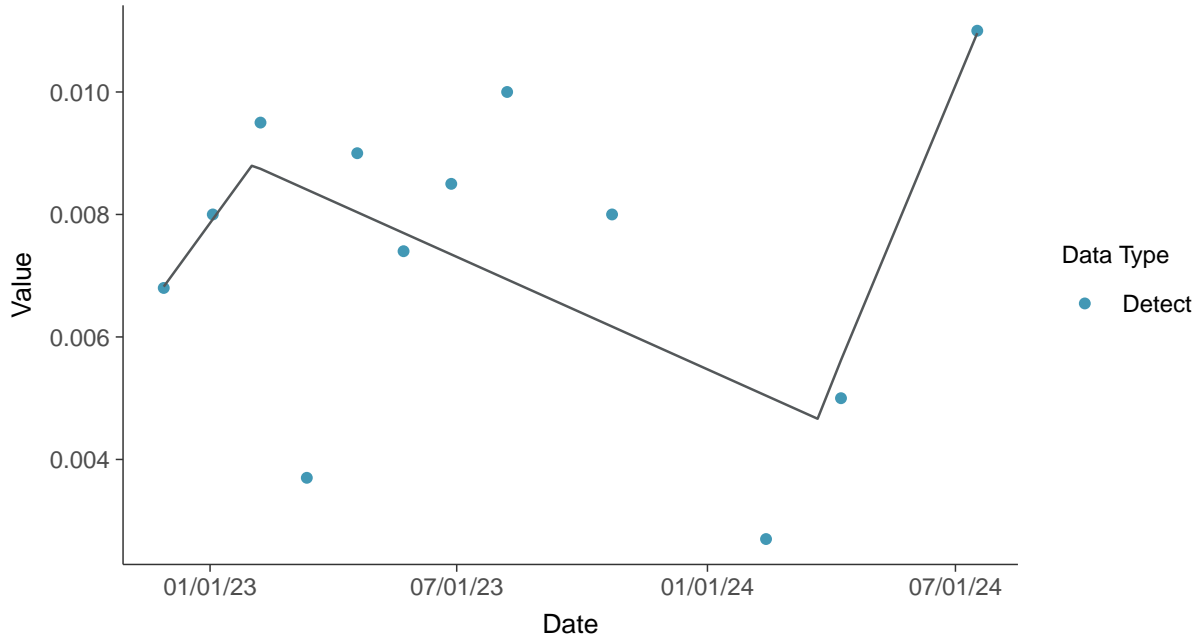


**Trend Regression: Lognormal MLE**  
Zinc, MW-12 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Zinc, MW-12 (mg/L)





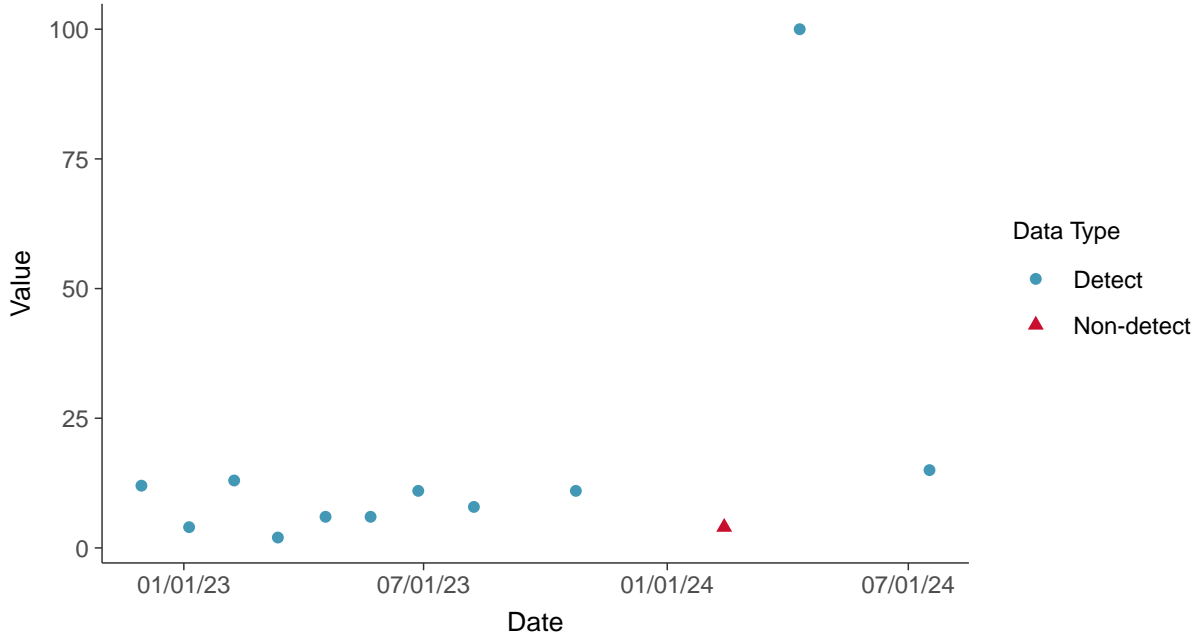


### Additional Parameters: Total Suspended Solids, MW-18

ID: 28\_1\_3\_127

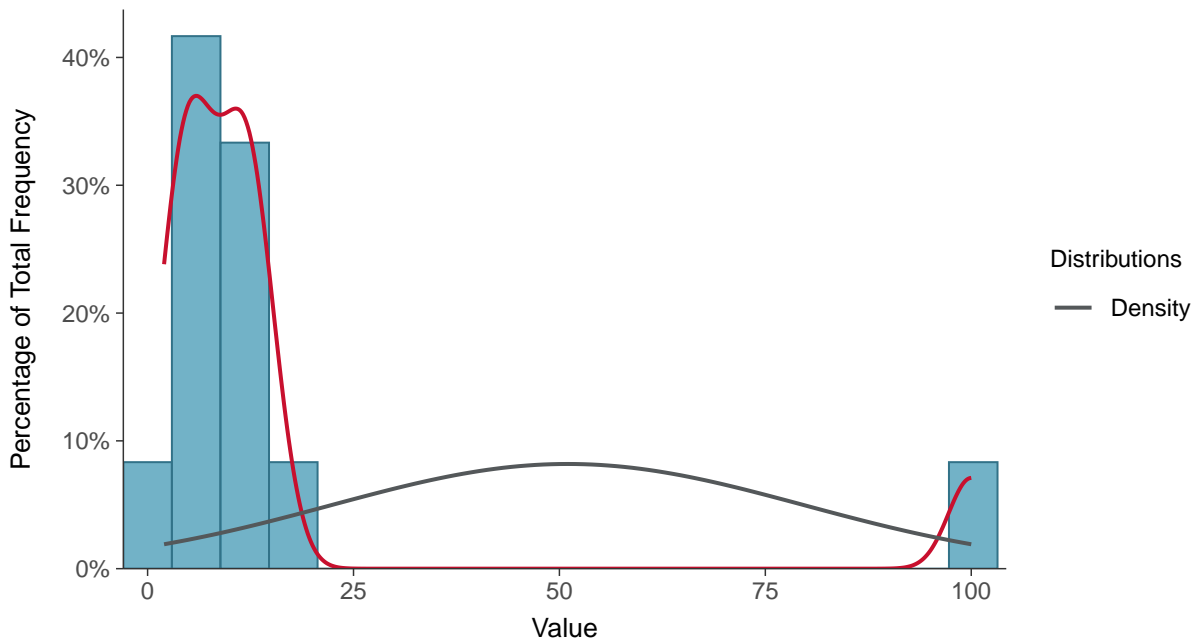
#### Scatter Plot

Total Suspended Solids, MW-18 (mg/L)



#### Histogram

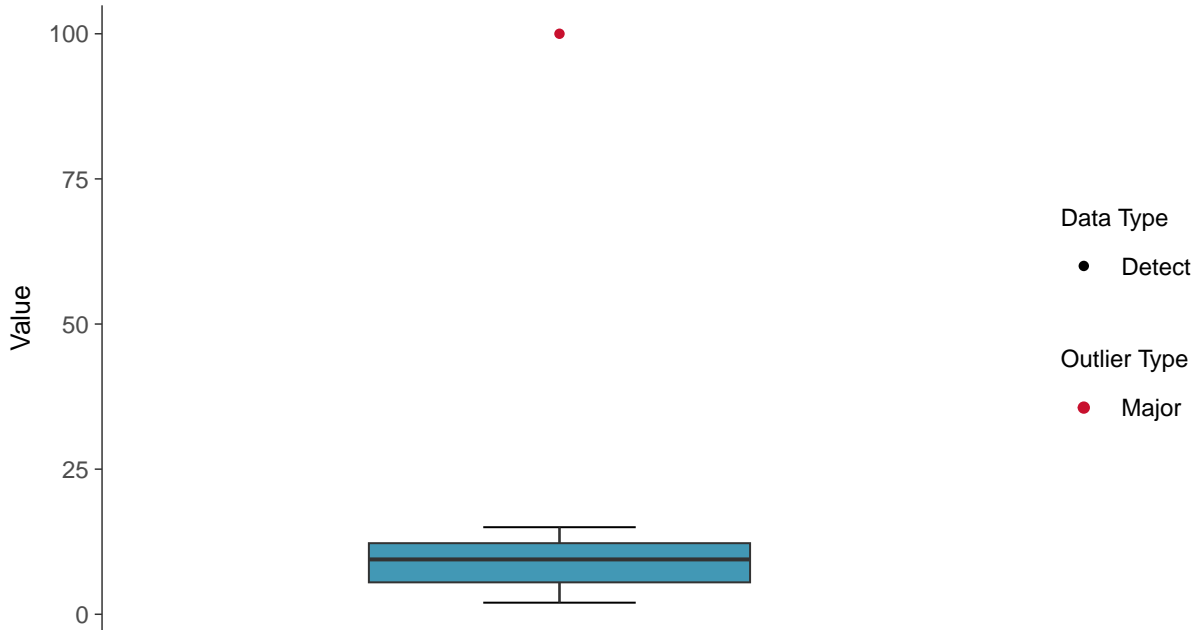
Total Suspended Solids, MW-18 (mg/L)





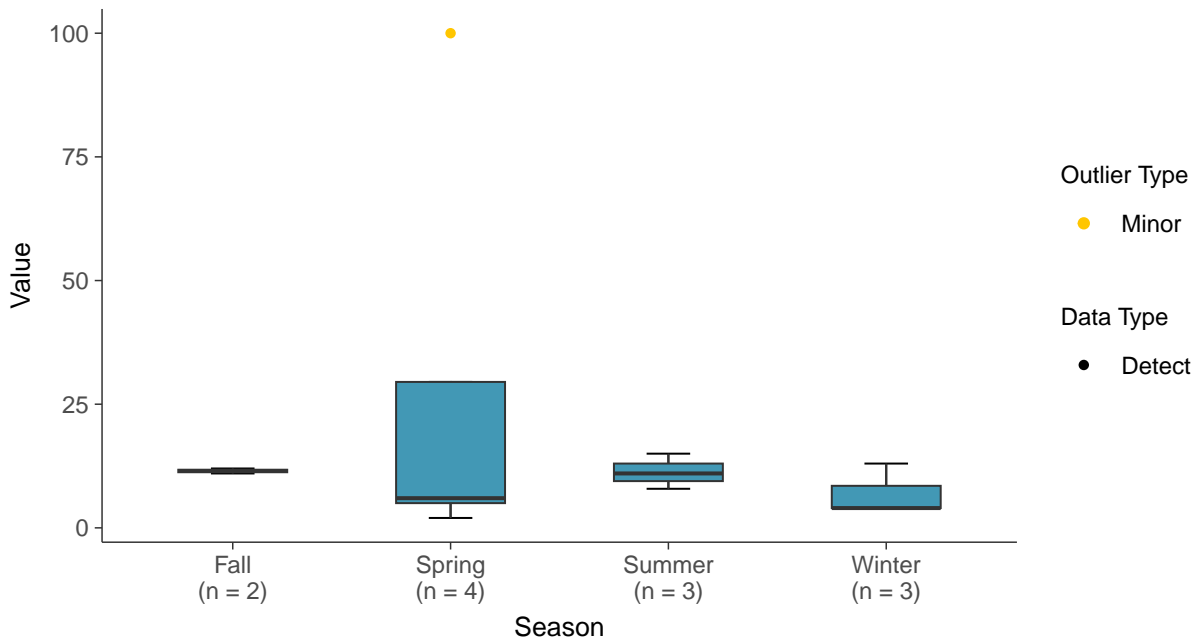
### Boxplot

Total Suspended Solids, MW-18 (mg/L)



### Boxplot by Season

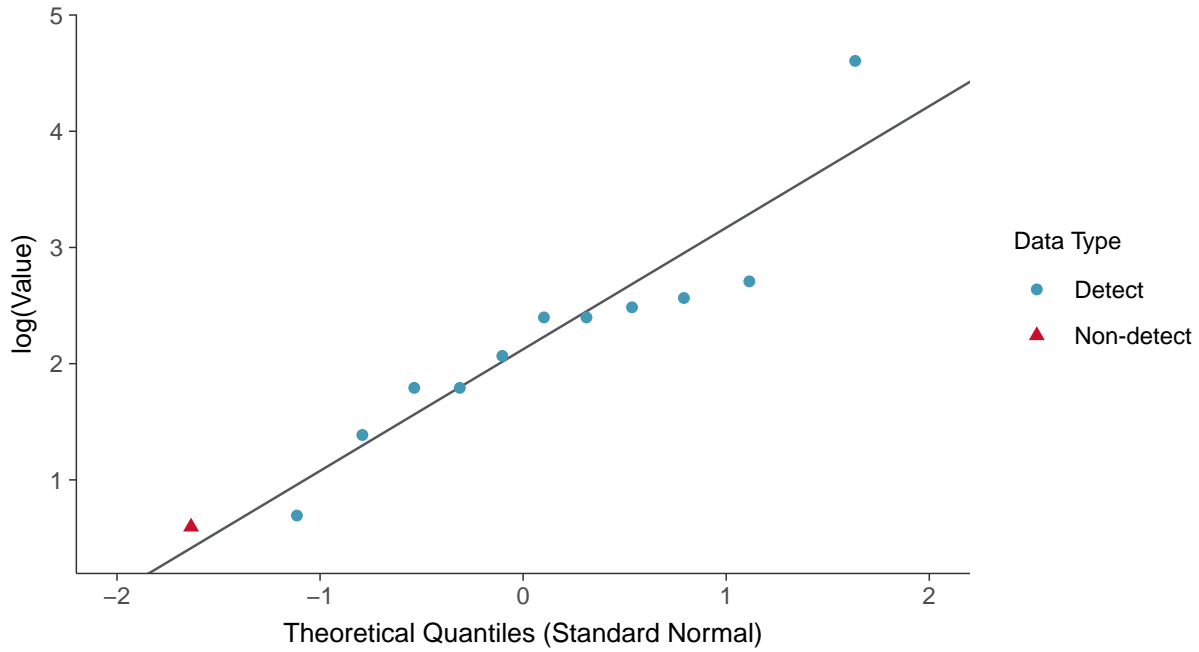
Total Suspended Solids, MW-18 (mg/L)





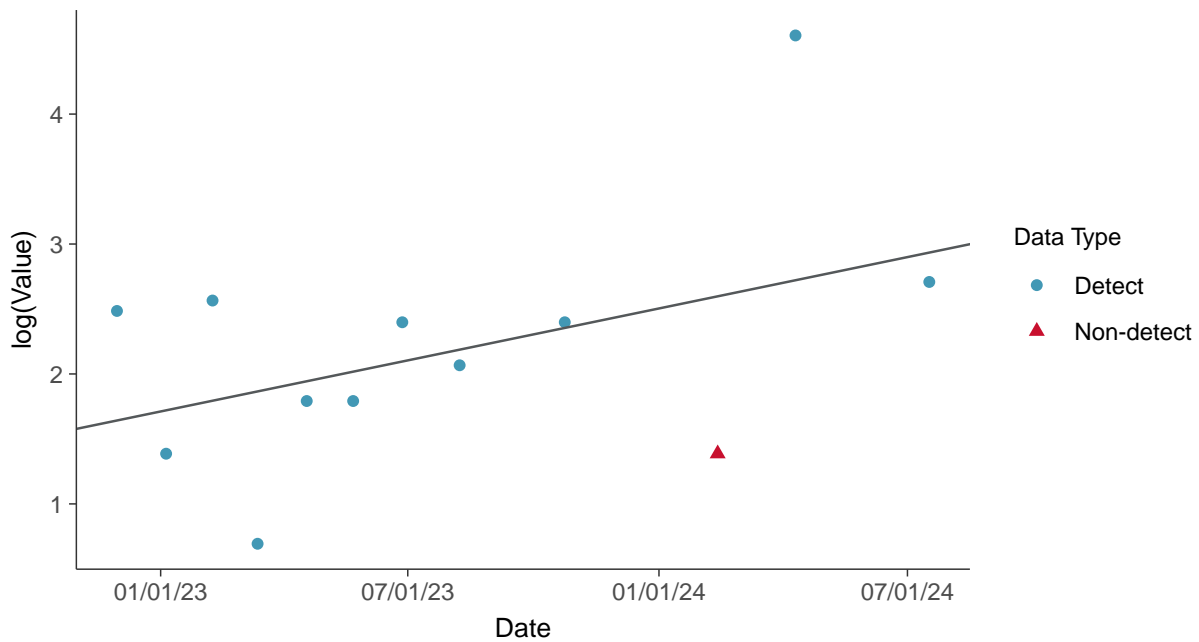
### Lognormal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-18 (mg/L)



### Trend Regression: Lognormal MLE

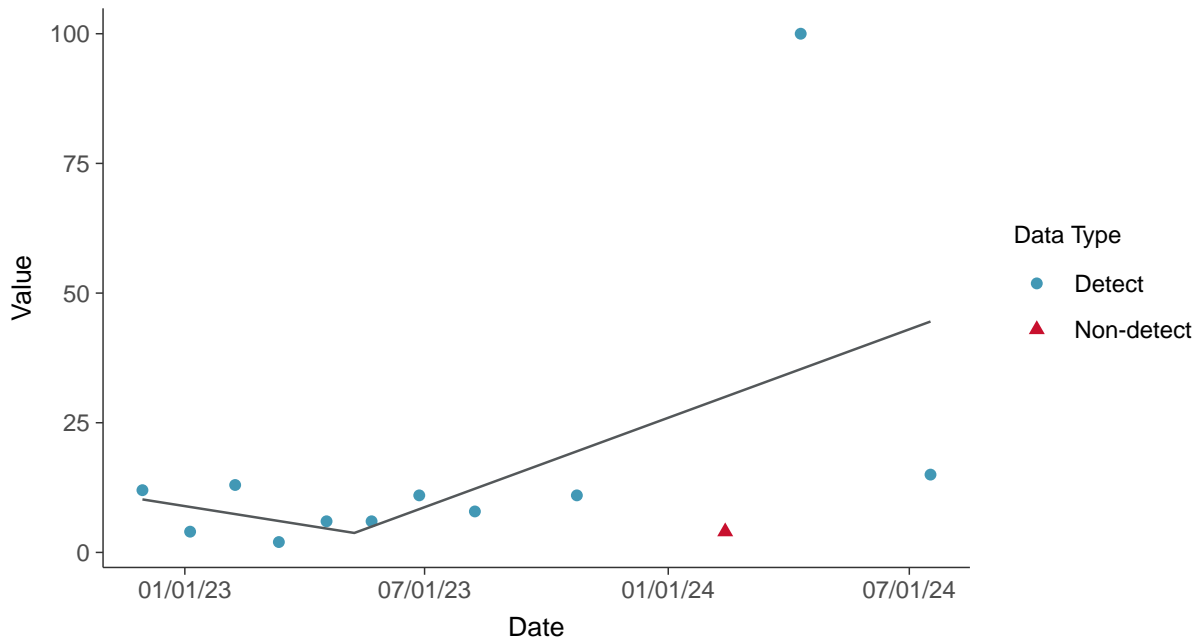
Total Suspended Solids, MW-18 (mg/L)





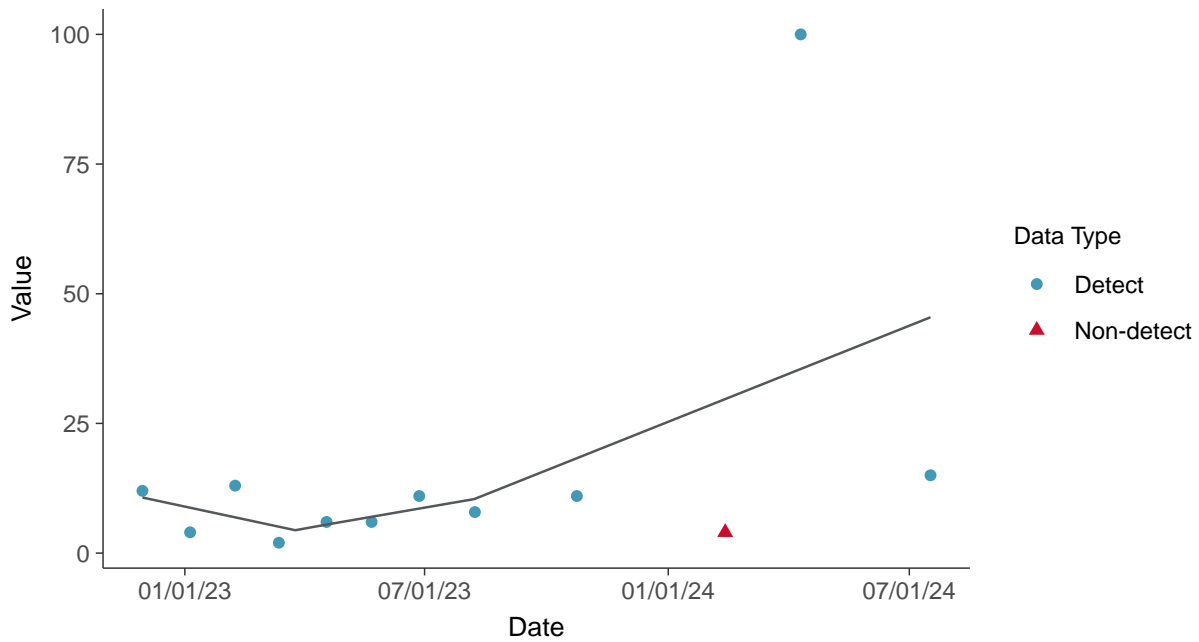
### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Total Suspended Solids, MW-18 (mg/L)



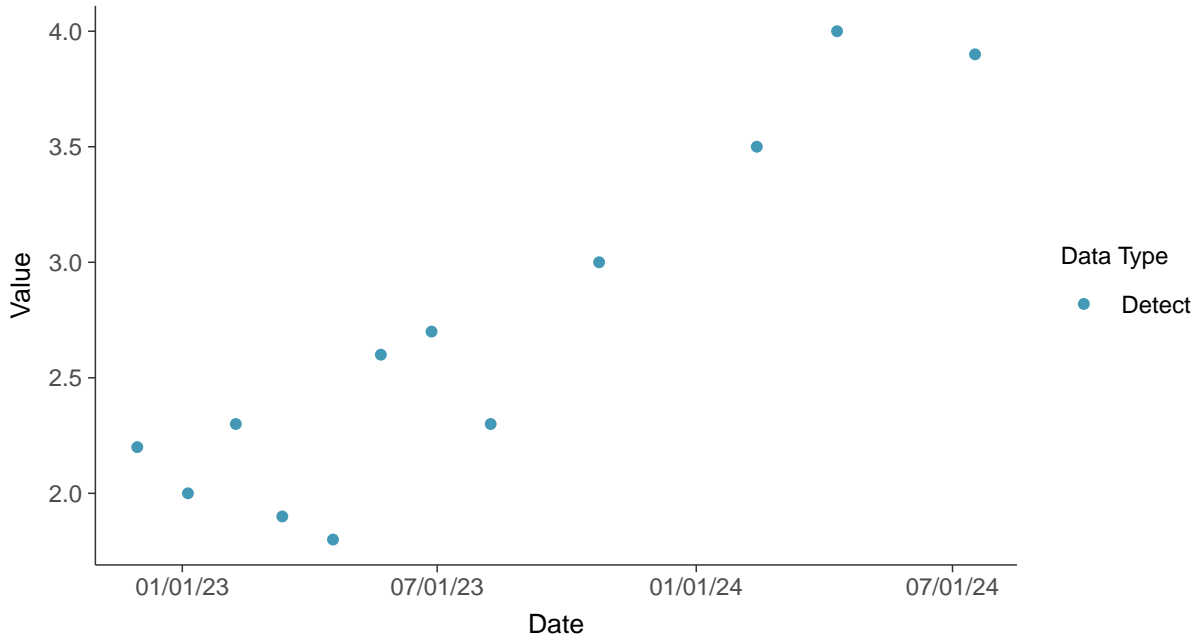


### Appendix III: Boron, MW-18

ID: 28\_1\_4\_105

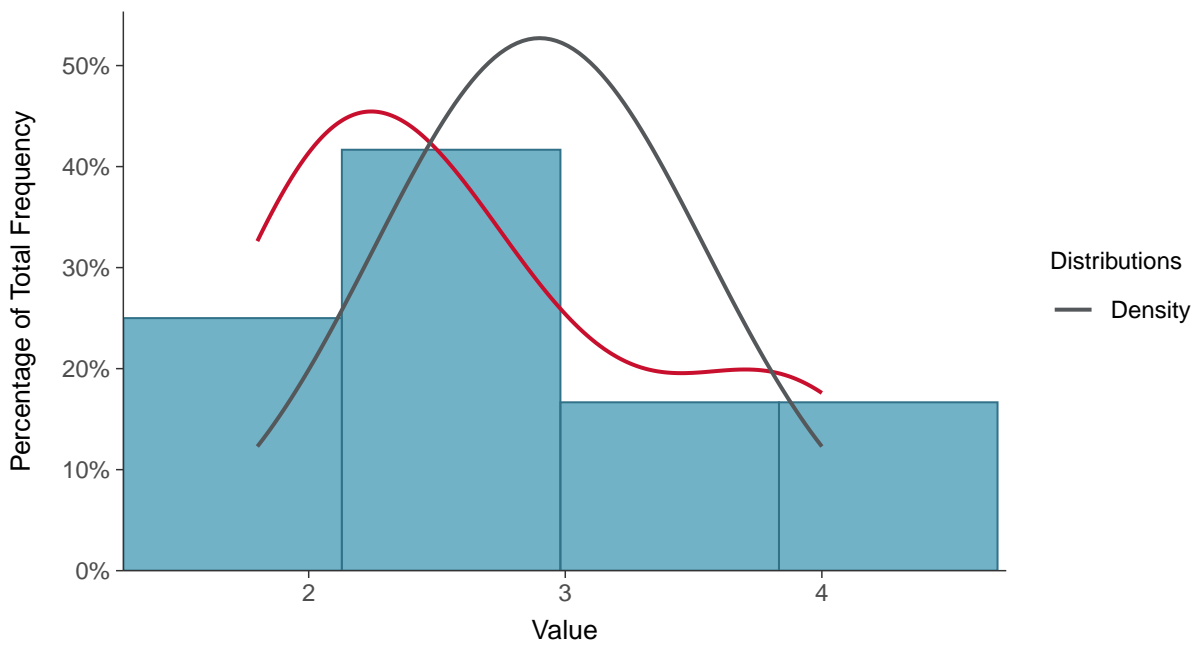
#### Scatter Plot

Boron, MW-18 (mg/L)



#### Histogram

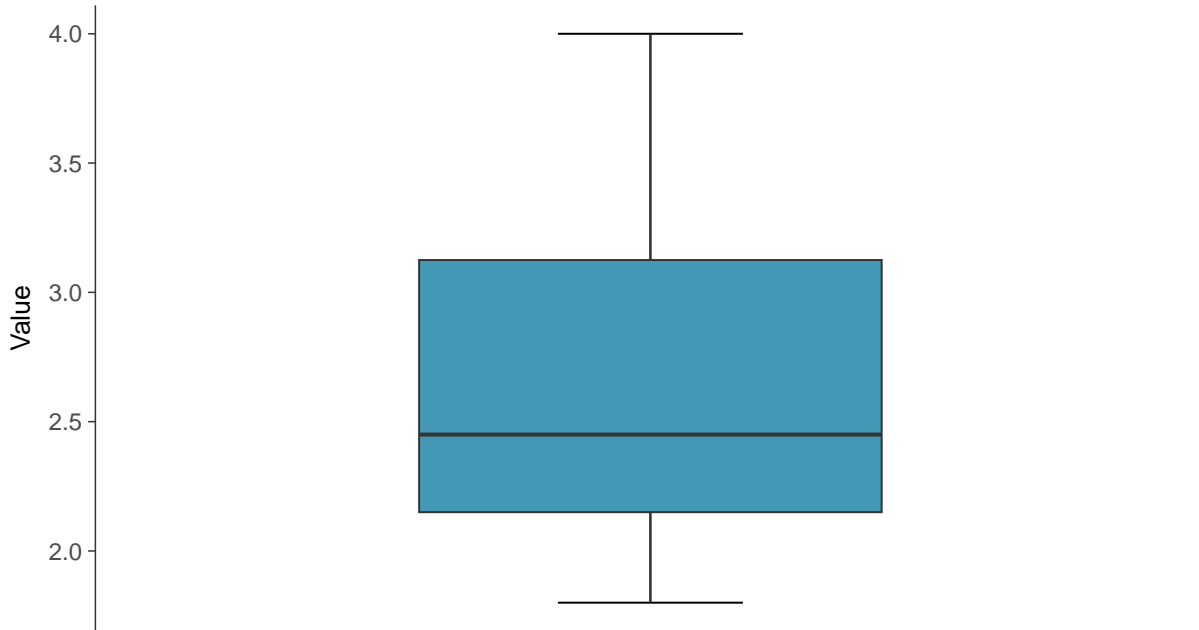
Boron, MW-18 (mg/L)





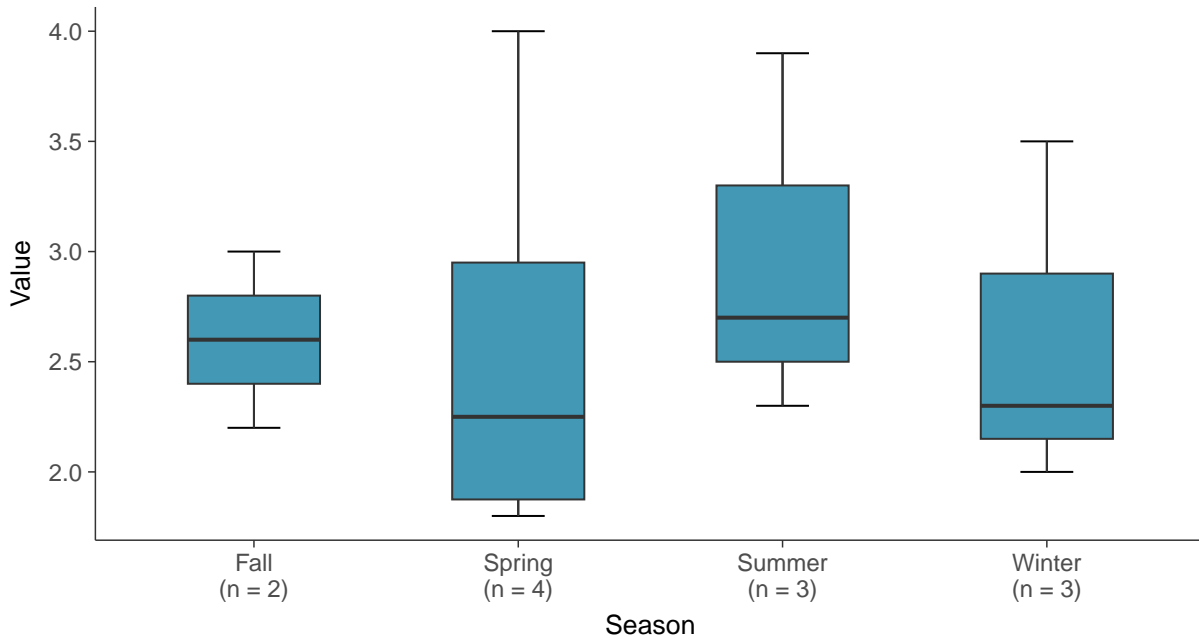
### Boxplot

Boron, MW-18 (mg/L)



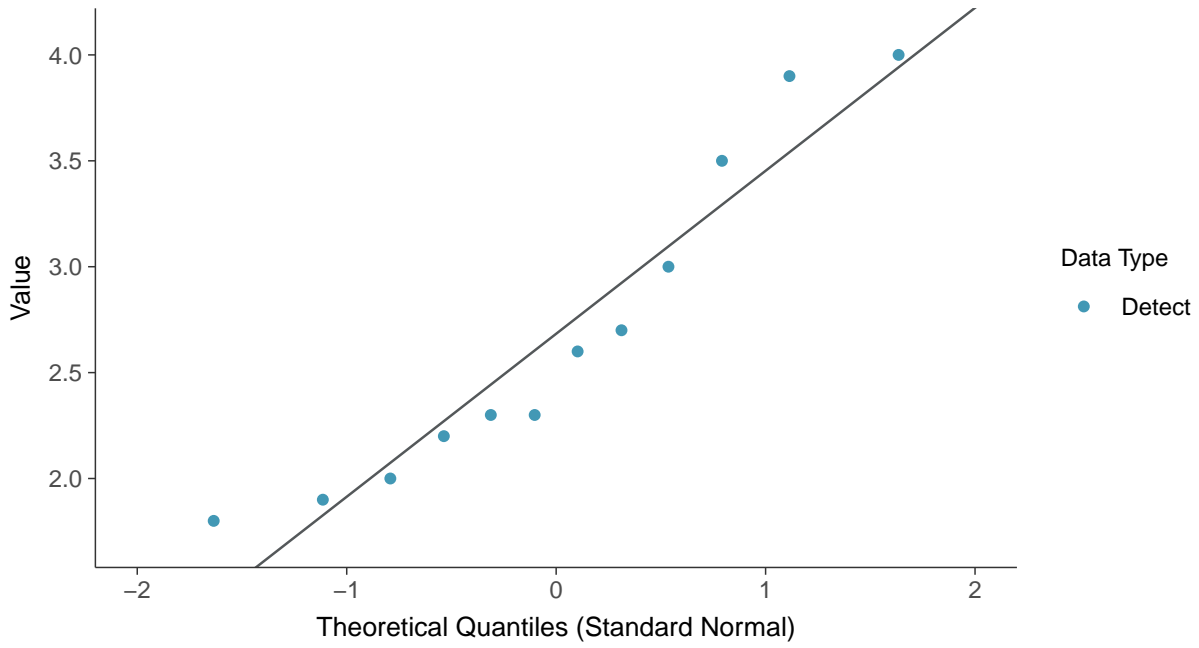
### Boxplot by Season

Boron, MW-18 (mg/L)

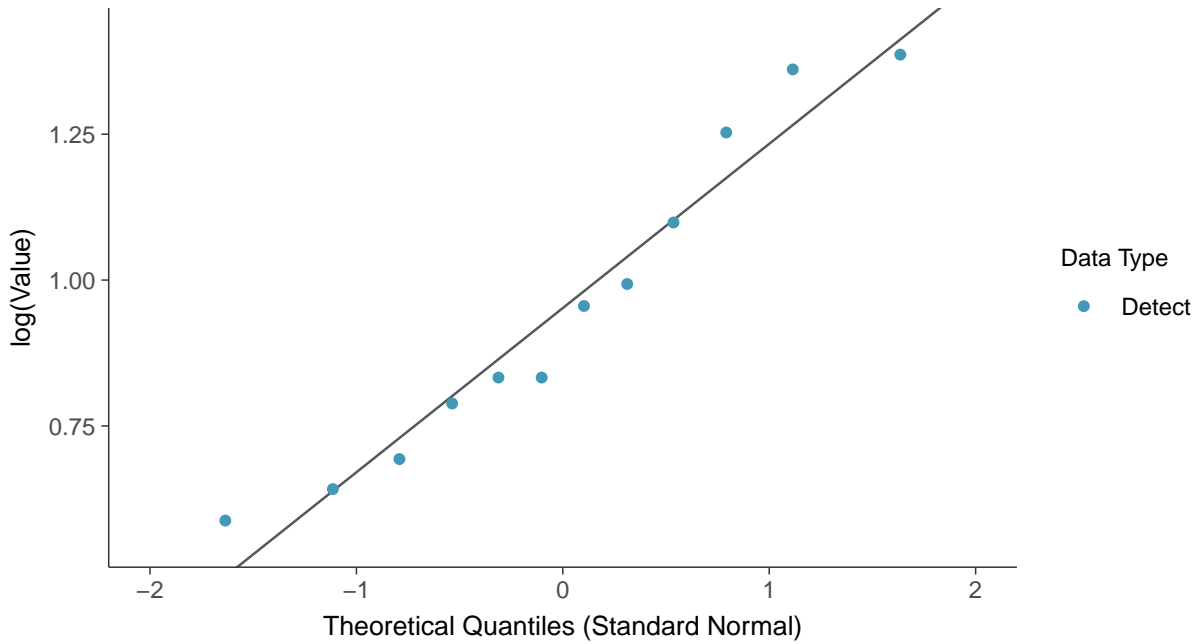




**Normal Q-Q plot**  
Boron, MW-18 (mg/L)

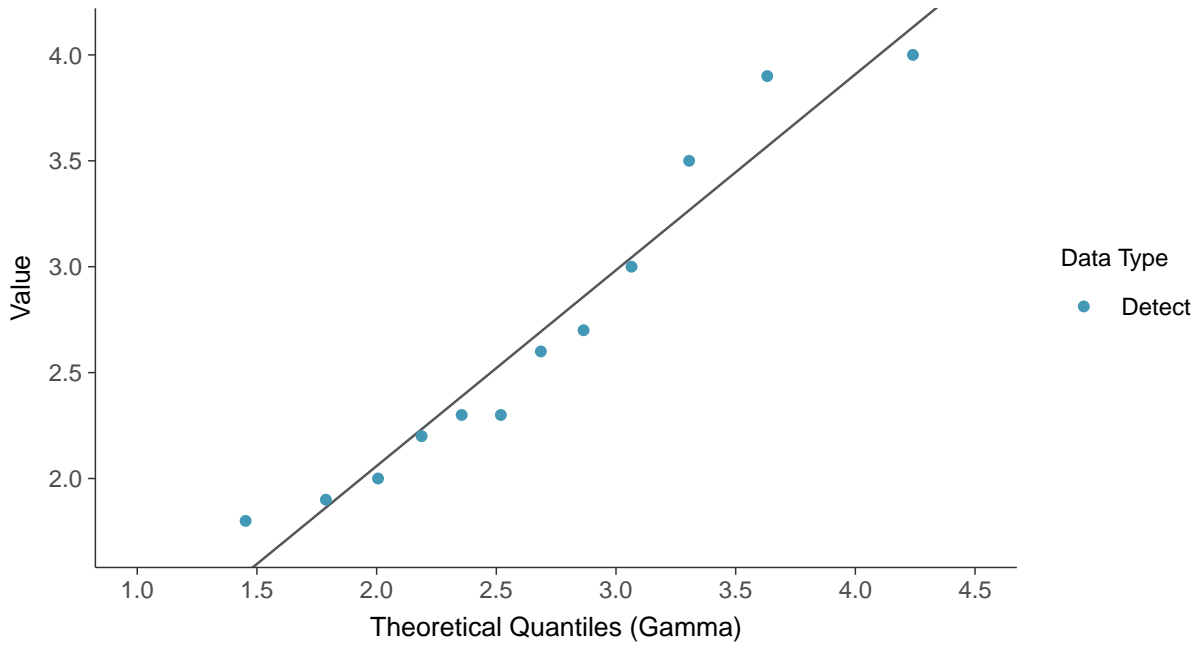


**Lognormal Q-Q plot**  
Boron, MW-18 (mg/L)

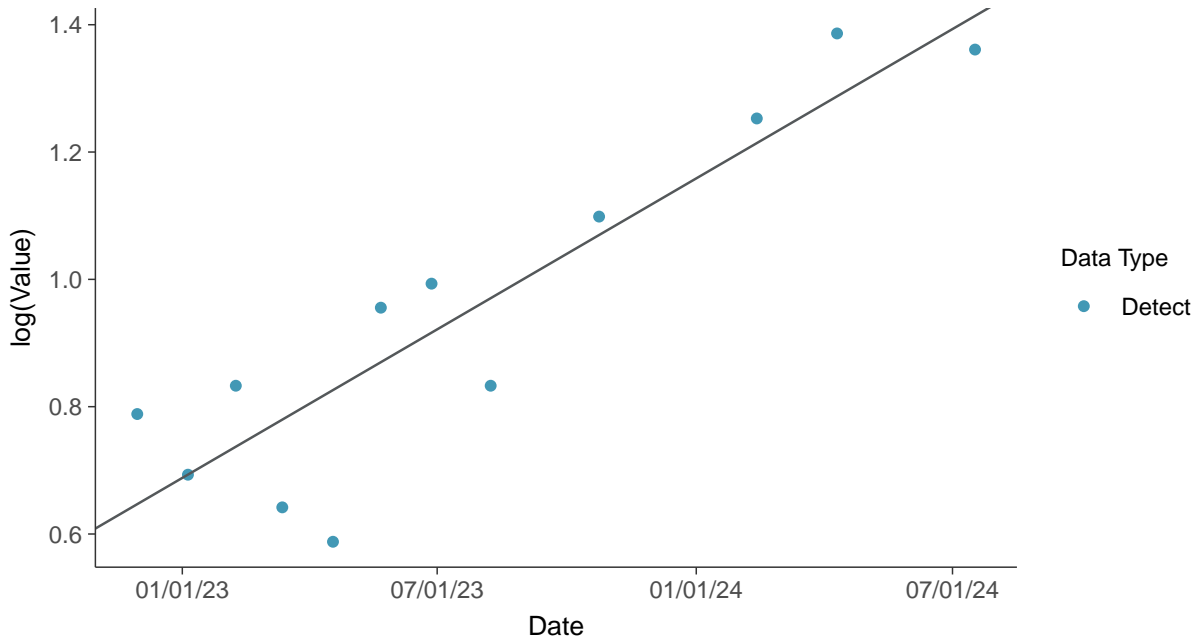




**Gamma Q-Q plot**  
Boron, MW-18 (mg/L)



**Trend Regression: Lognormal MLE**  
Boron, MW-18 (mg/L)

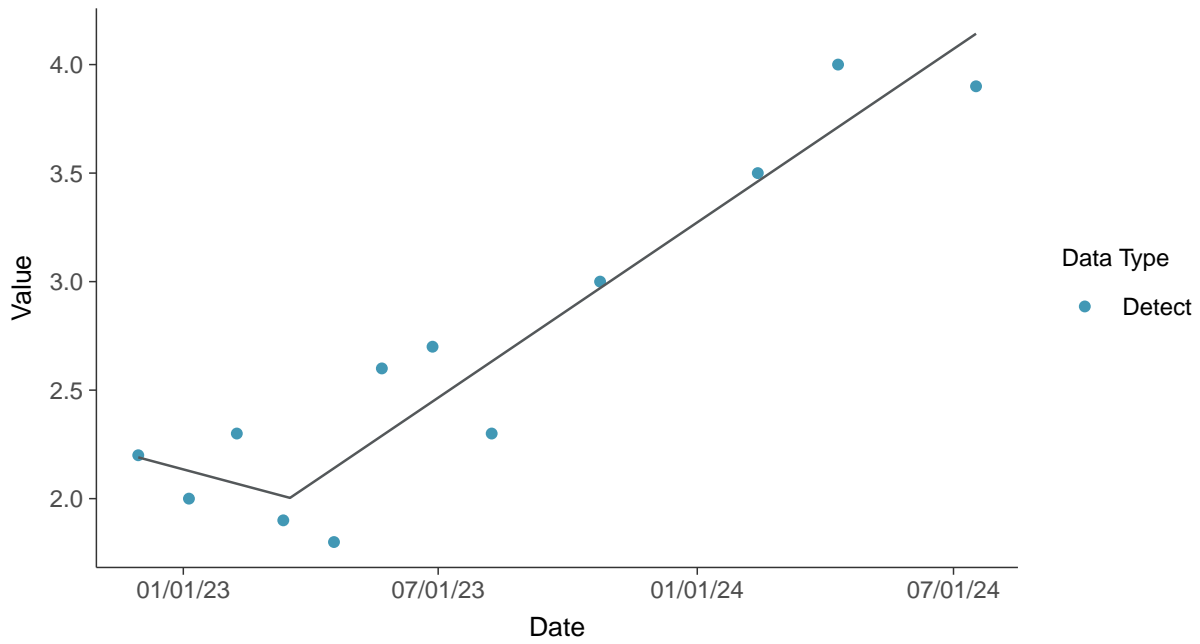






### Trend Regression: Piecewise Linear-Linear

Boron, MW-18 (mg/L)



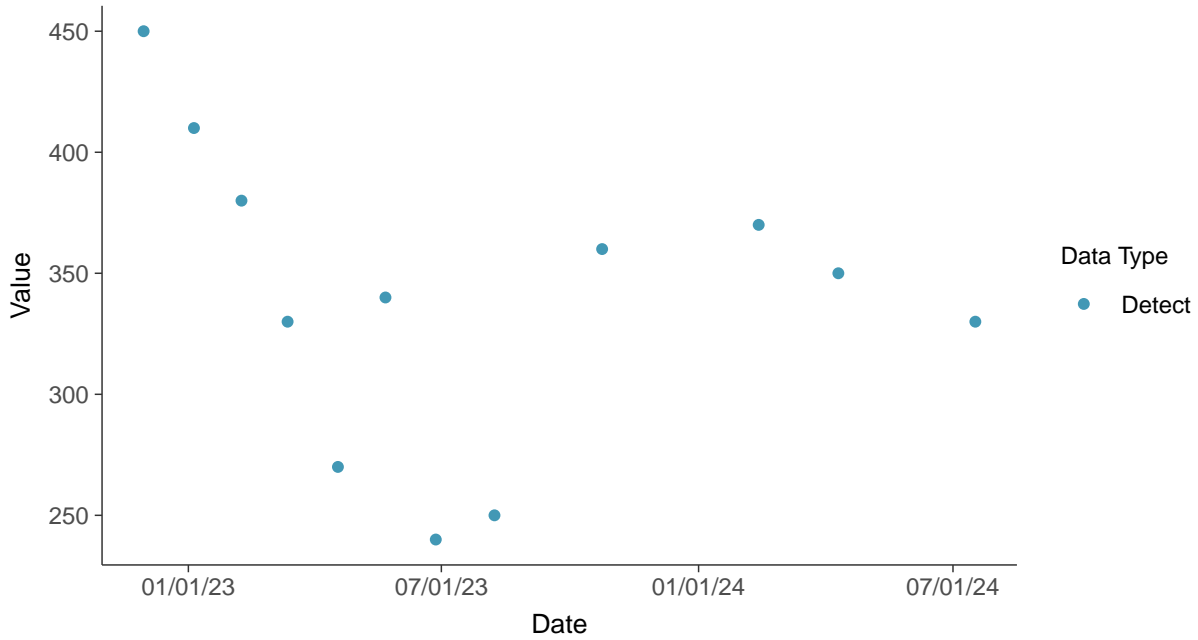


### Appendix III: Calcium, MW-18

ID: 28\_1\_4\_107

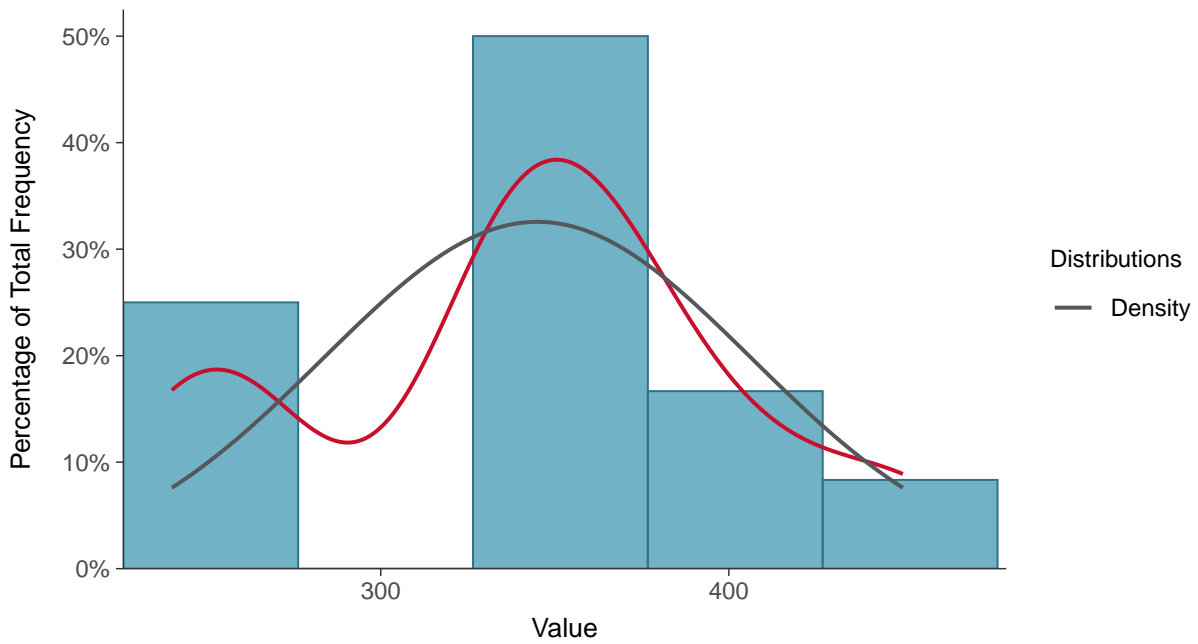
#### Scatter Plot

Calcium, MW-18 (mg/L)



#### Histogram

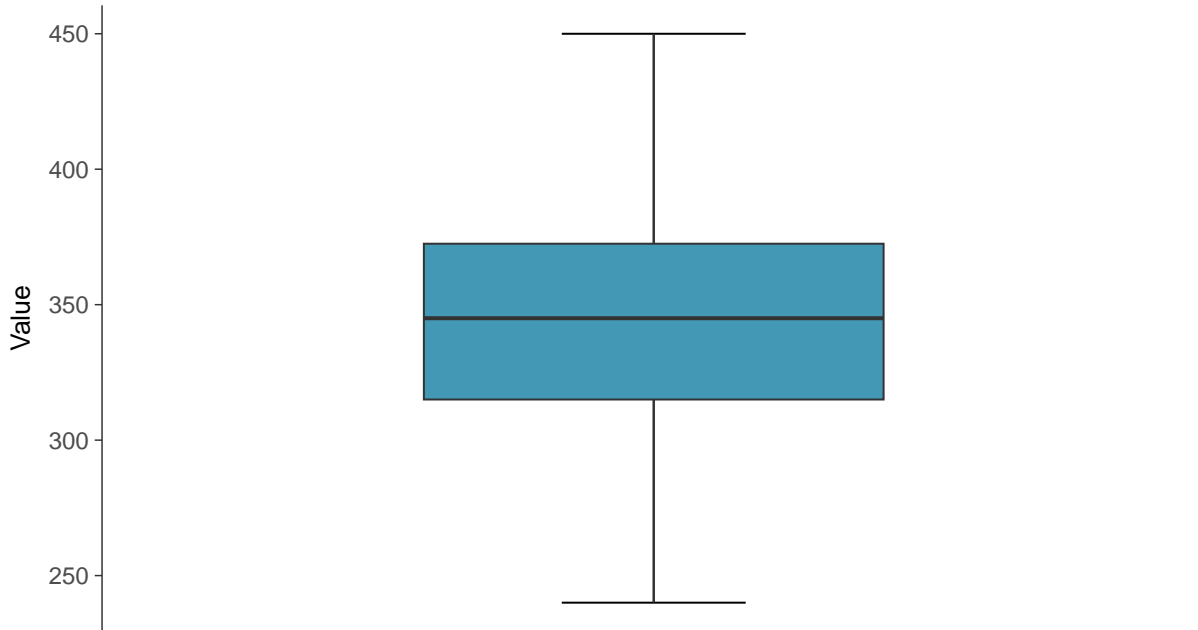
Calcium, MW-18 (mg/L)





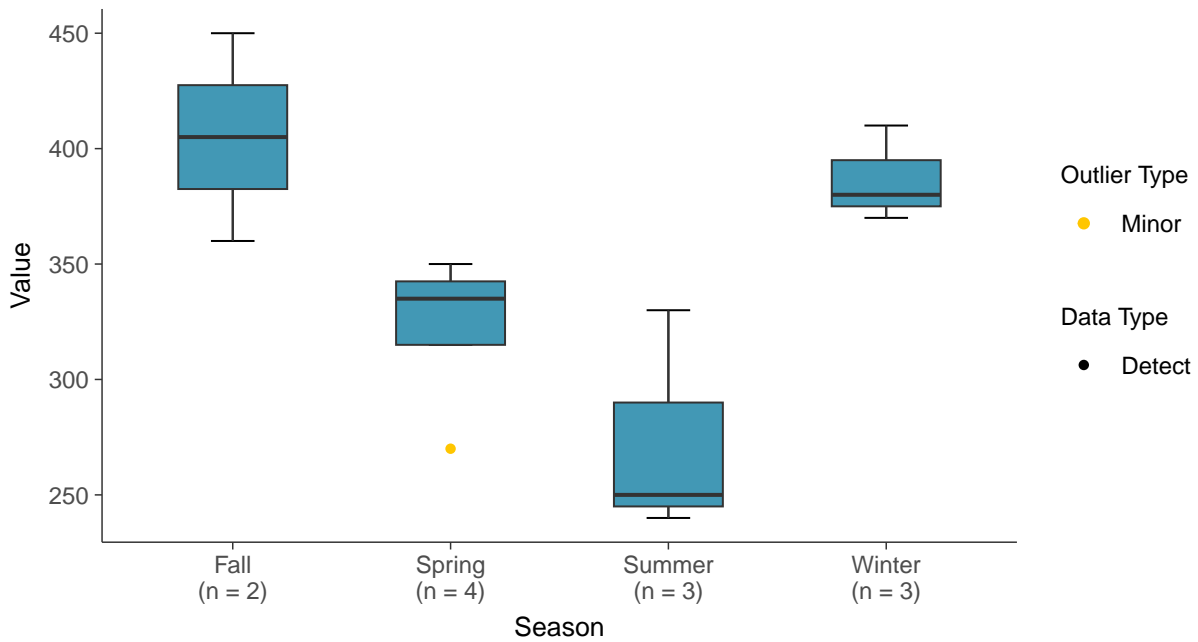
### Boxplot

Calcium, MW-18 (mg/L)



### Boxplot by Season

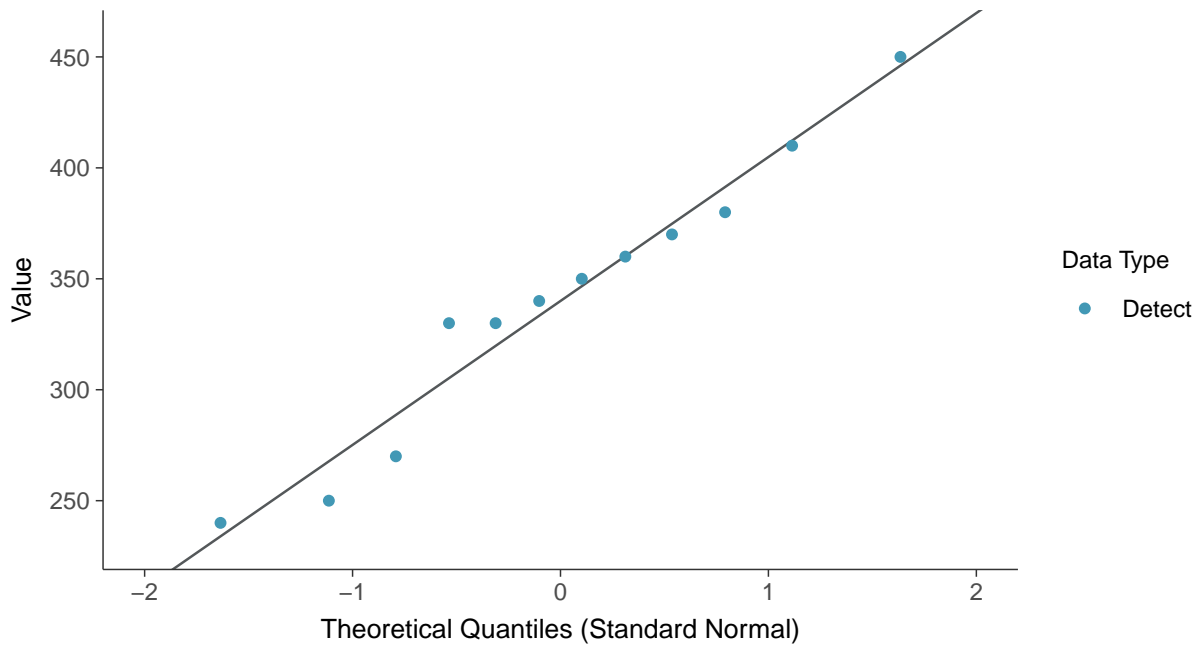
Calcium, MW-18 (mg/L)





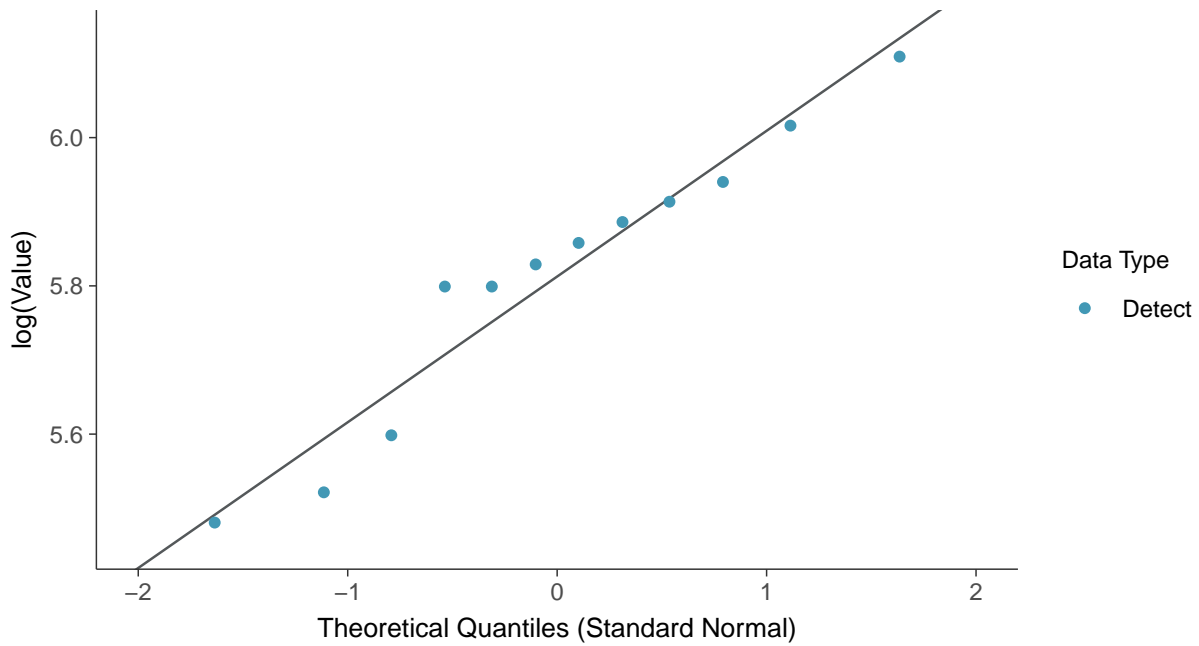
### Normal Q-Q plot

Calcium, MW-18 (mg/L)



### Lognormal Q-Q plot

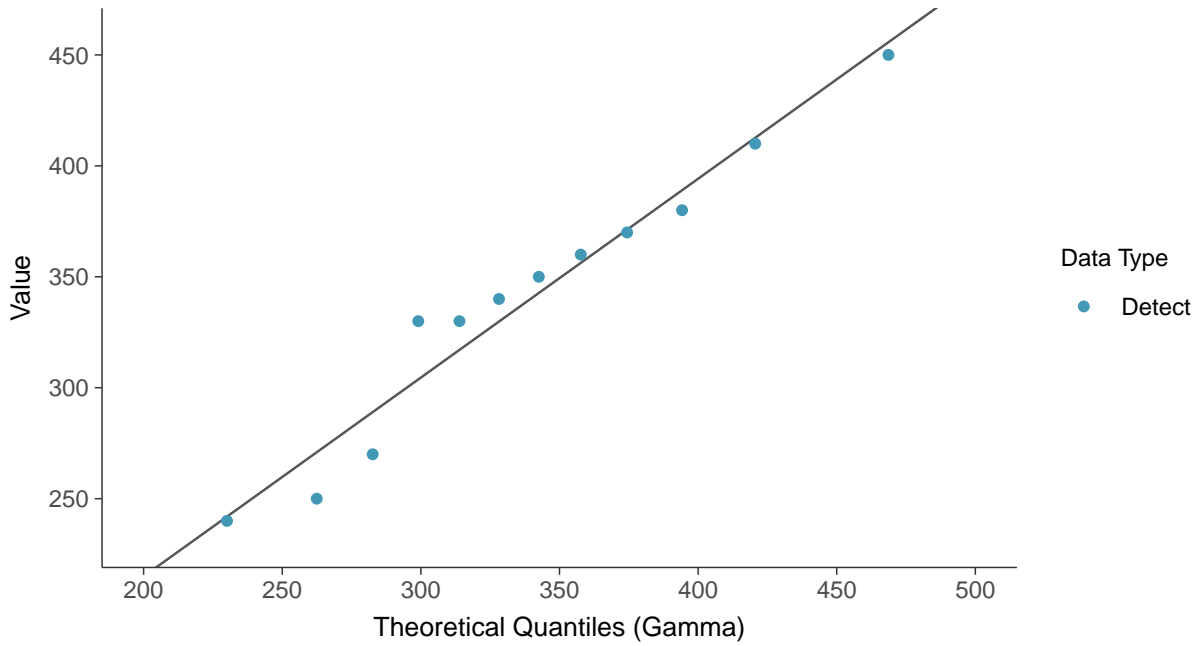
Calcium, MW-18 (mg/L)





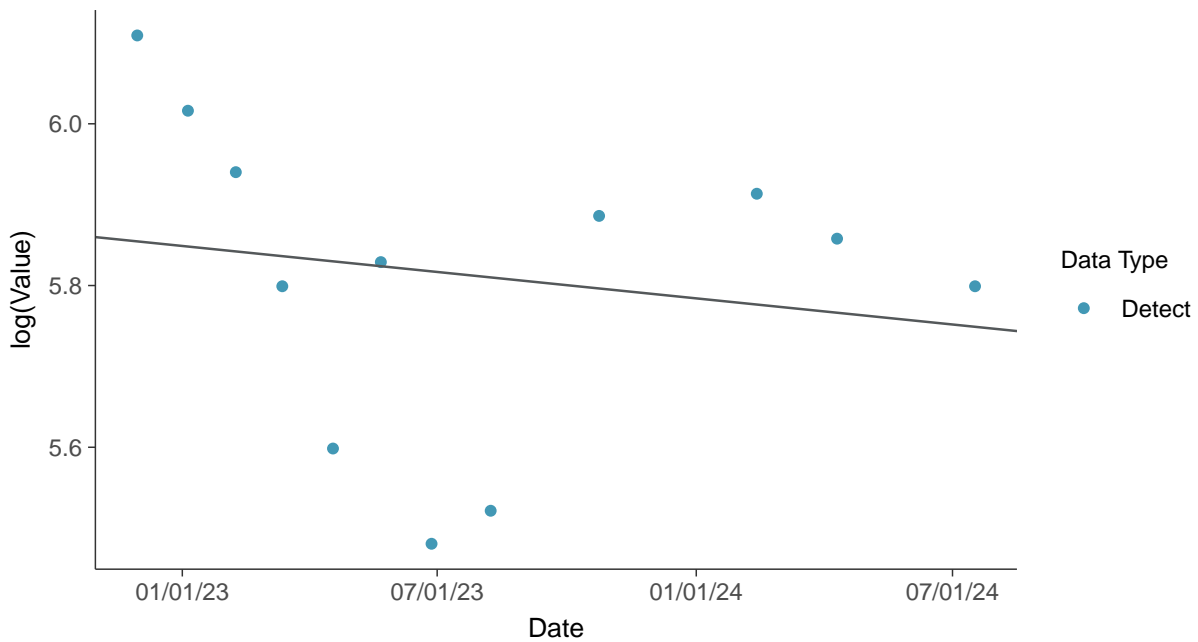
### Gamma Q-Q plot

Calcium, MW-18 (mg/L)



### Trend Regression: Lognormal MLE

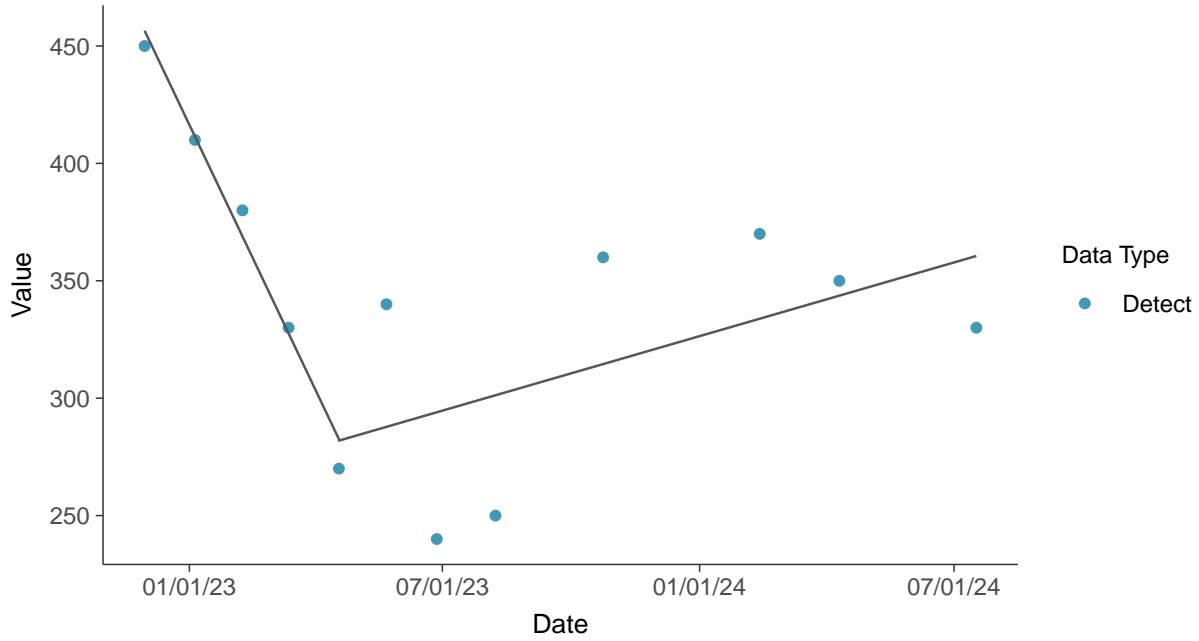
Calcium, MW-18 (mg/L)





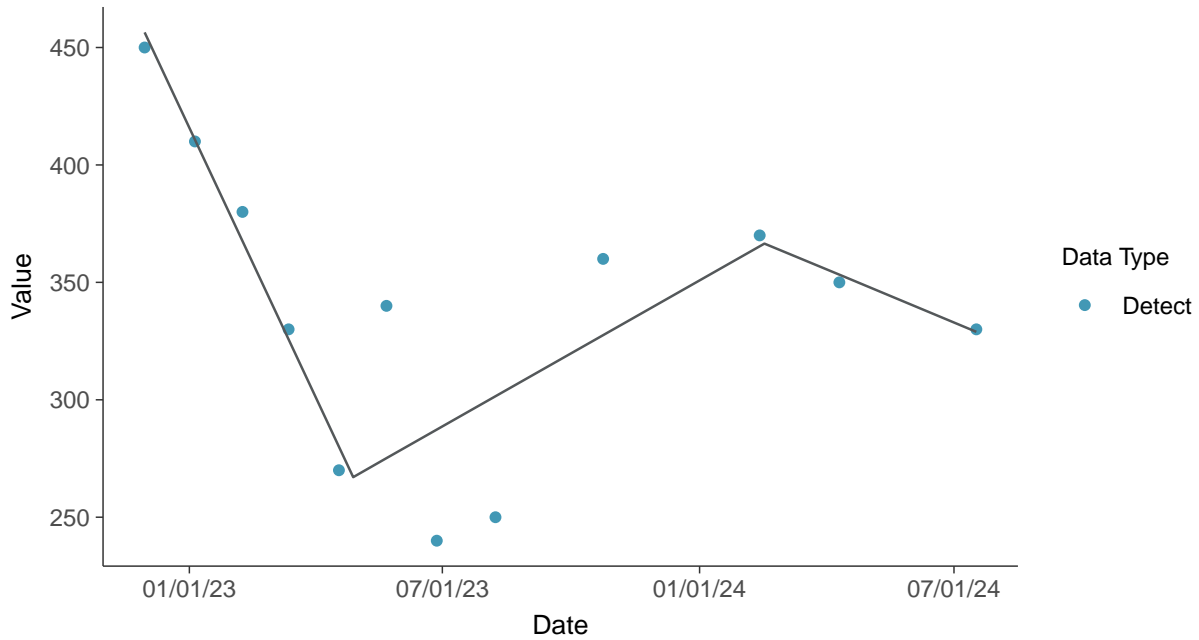
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-18 (mg/L)



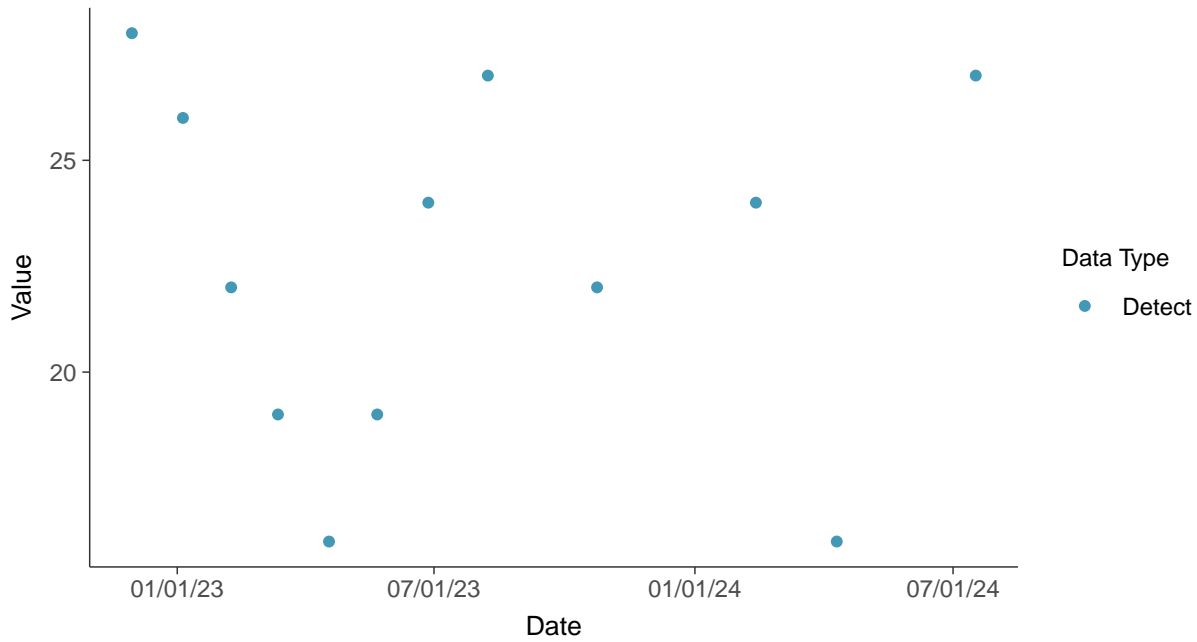


### Appendix III: Chloride (as Cl), MW-18

ID: 28\_1\_4\_108

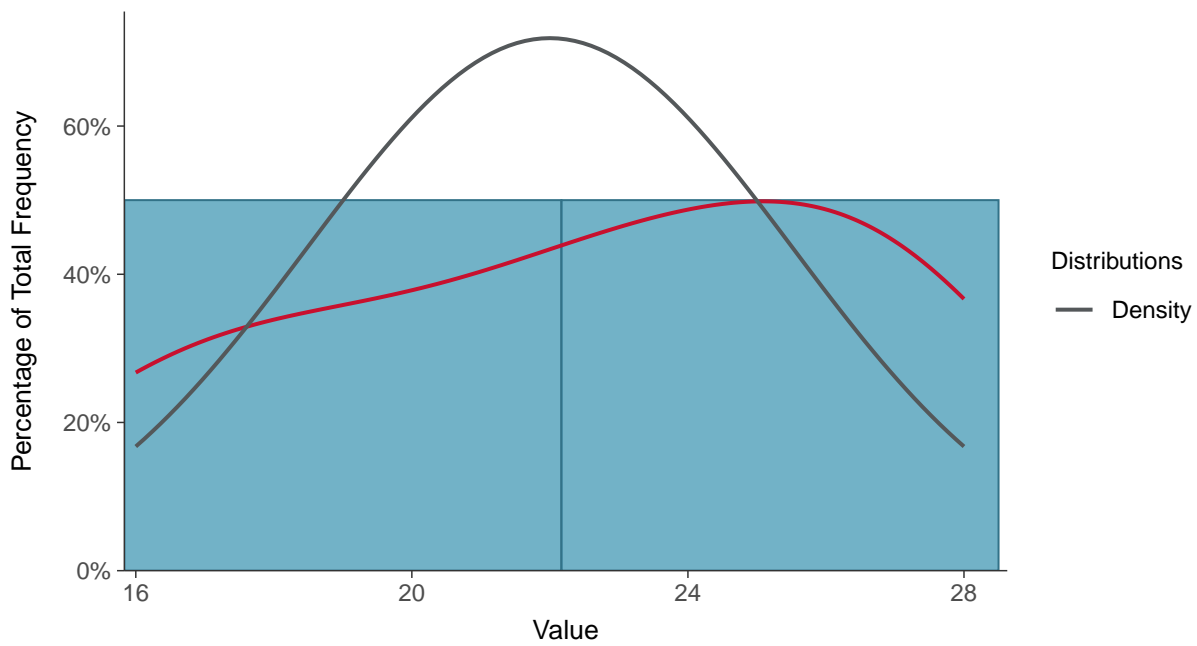
#### Scatter Plot

Chloride (as Cl), MW-18 (mg/L)



#### Histogram

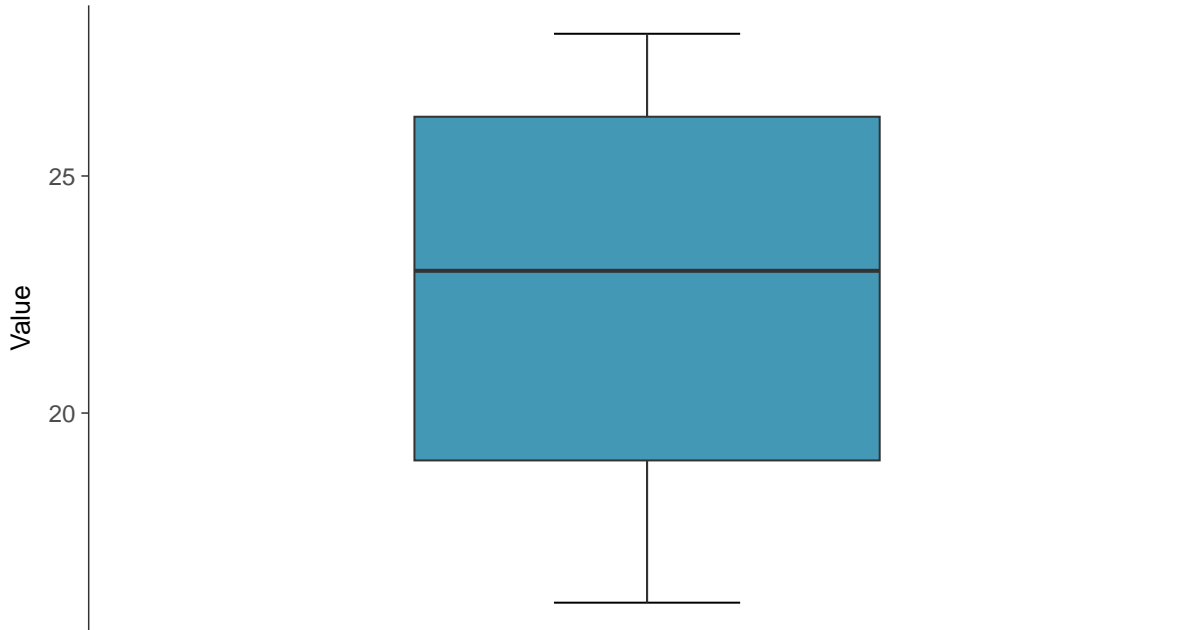
Chloride (as Cl), MW-18 (mg/L)





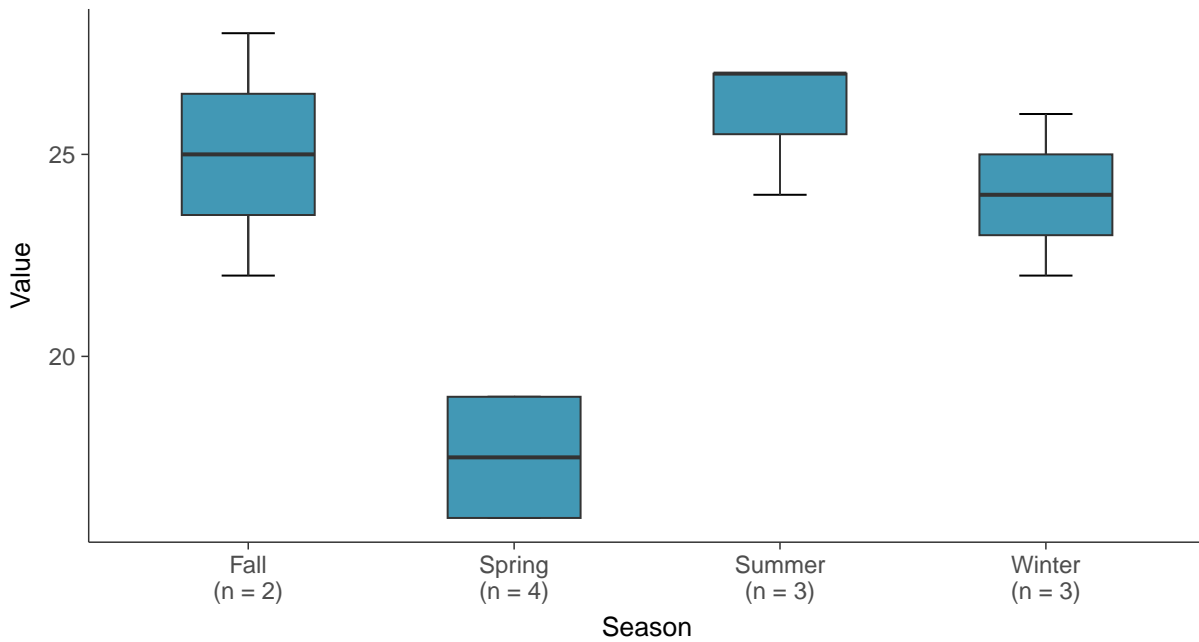
### Boxplot

Chloride (as Cl), MW-18 (mg/L)



### Boxplot by Season

Chloride (as Cl), MW-18 (mg/L)

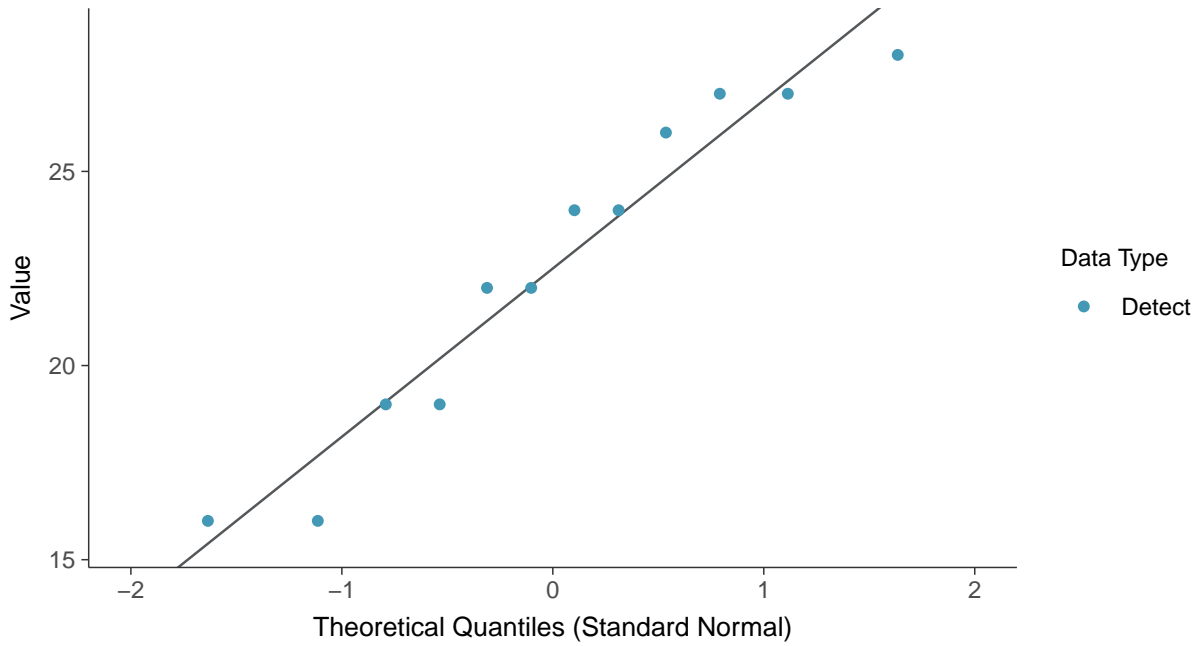






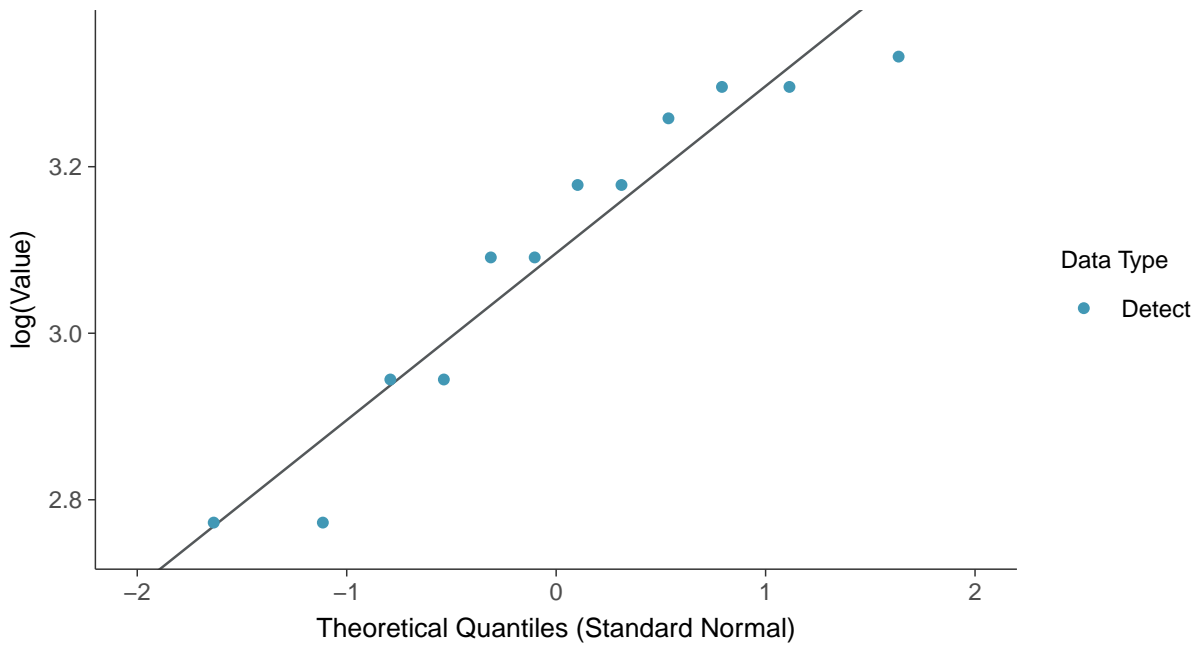
### Normal Q-Q plot

Chloride (as Cl), MW-18 (mg/L)



### Lognormal Q-Q plot

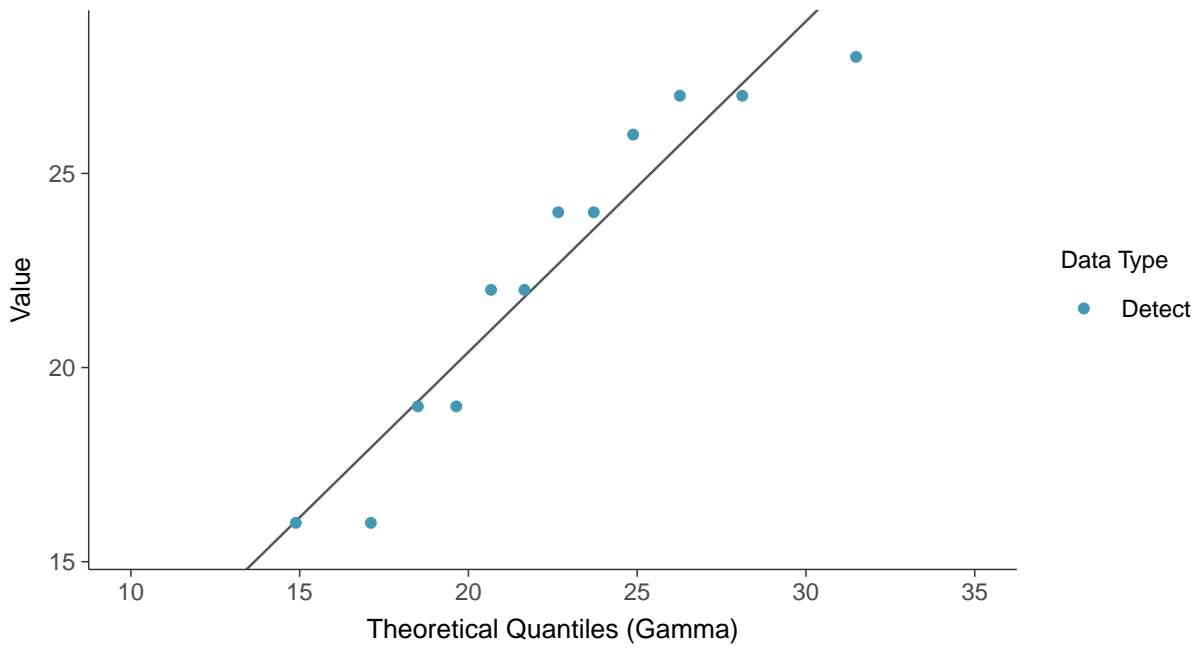
Chloride (as Cl), MW-18 (mg/L)





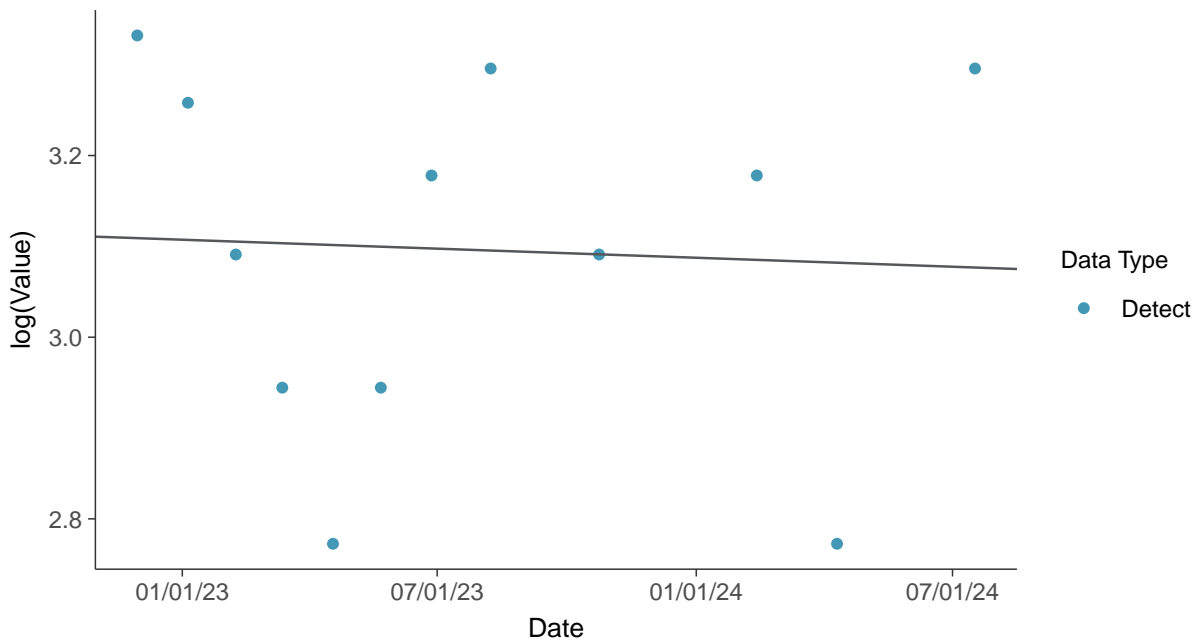
### Gamma Q-Q plot

Chloride (as Cl), MW-18 (mg/L)



### Trend Regression: Lognormal MLE

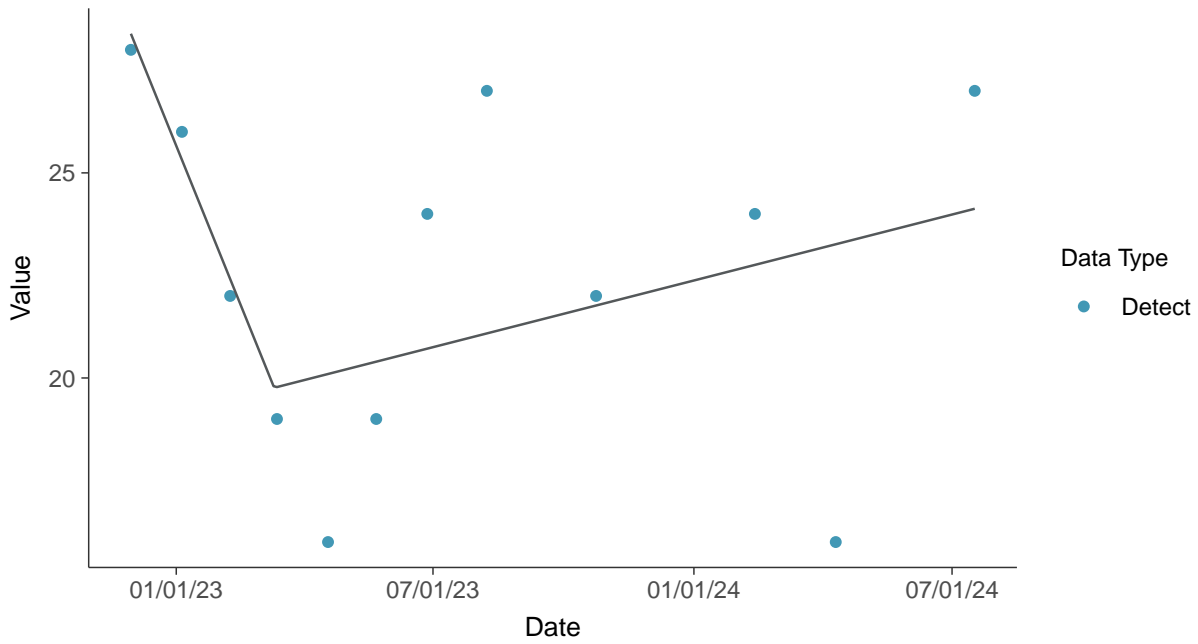
Chloride (as Cl), MW-18 (mg/L)





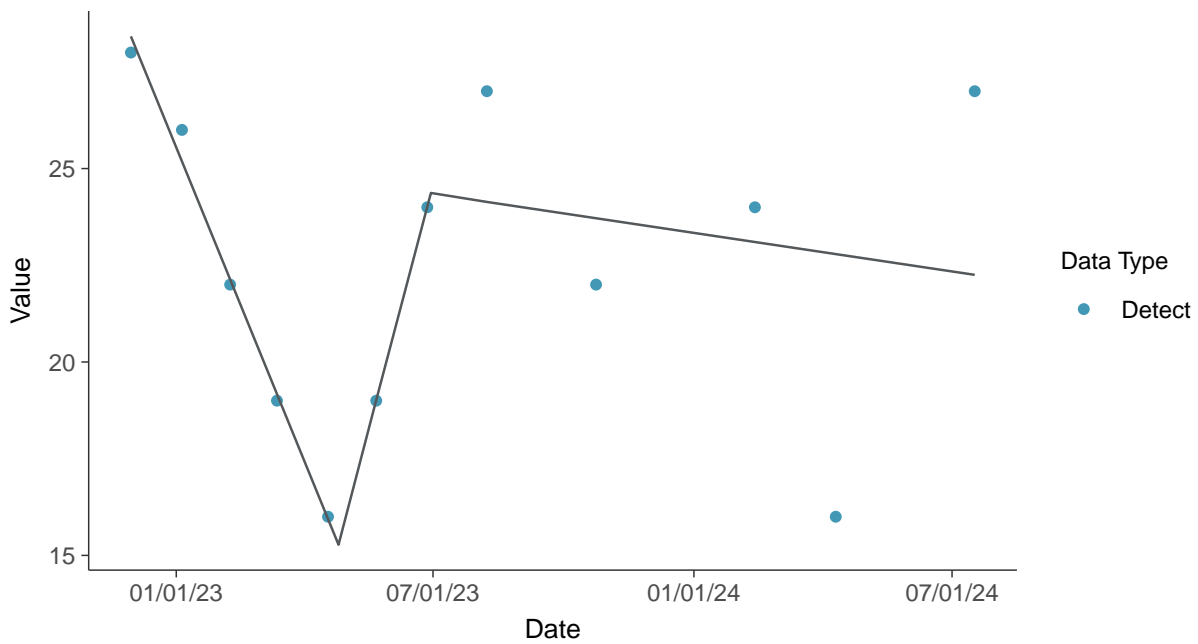
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-18 (mg/L)



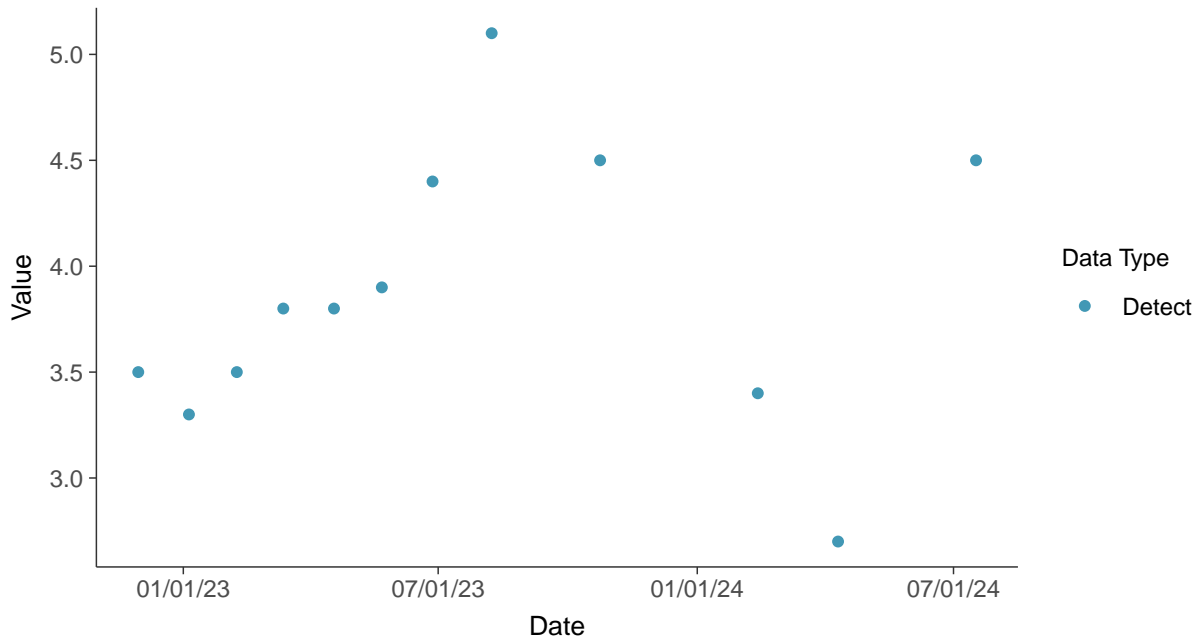


### Appendix III: Fluoride, MW-18

ID: 28\_1\_4\_112

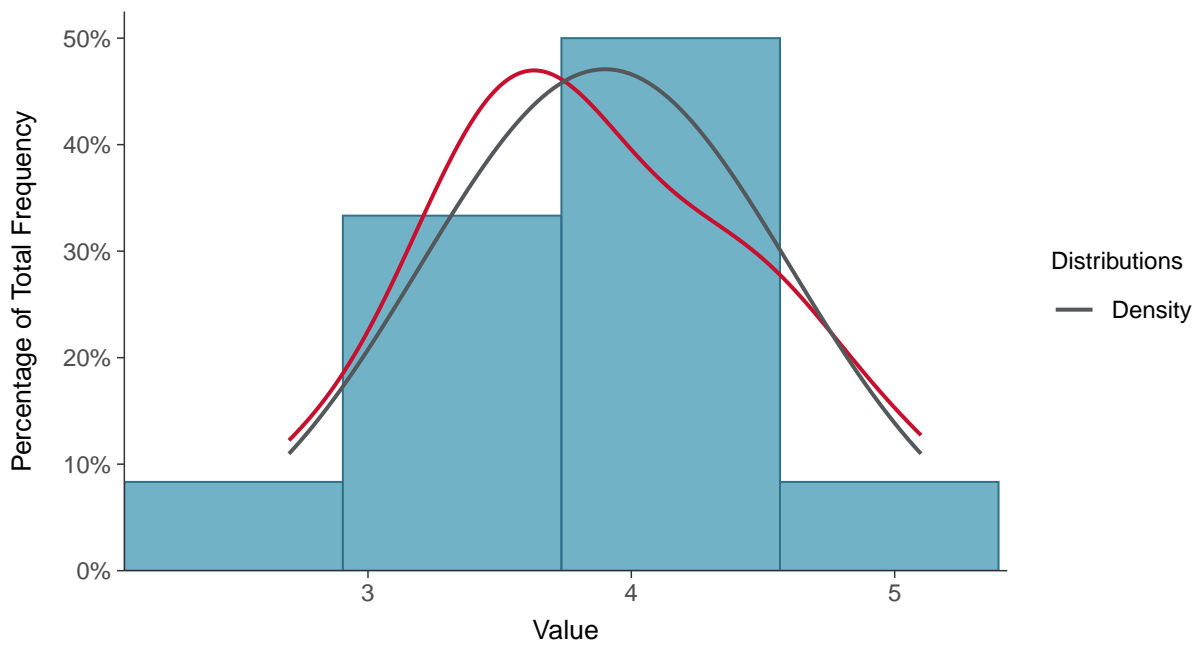
#### Scatter Plot

Fluoride, MW-18 (mg/L)



#### Histogram

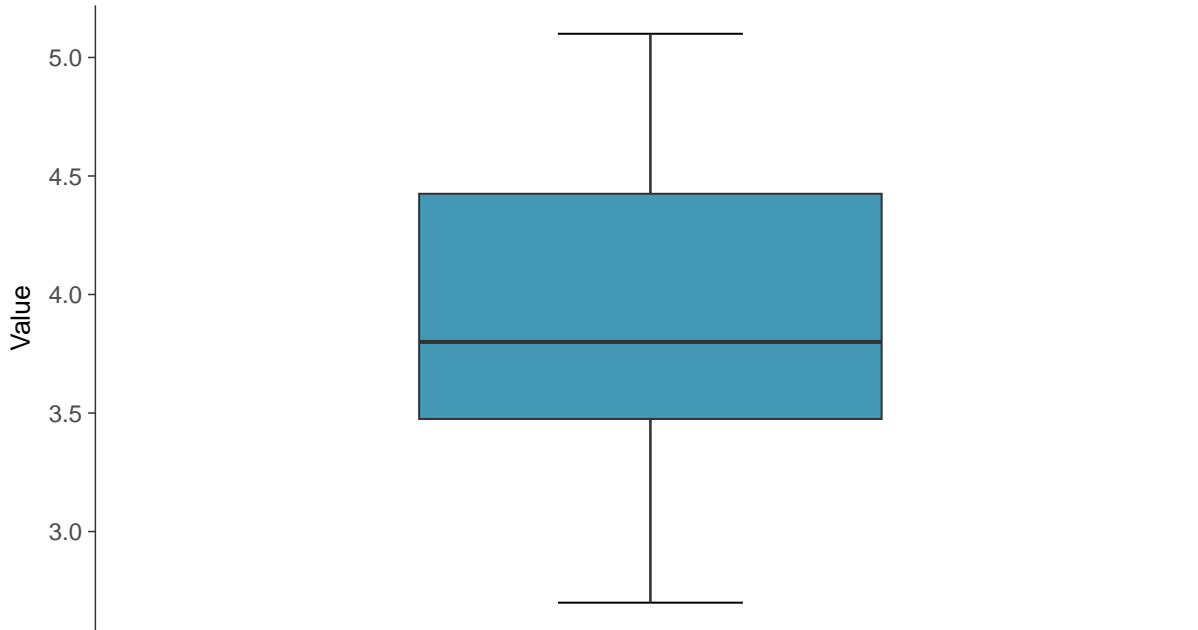
Fluoride, MW-18 (mg/L)





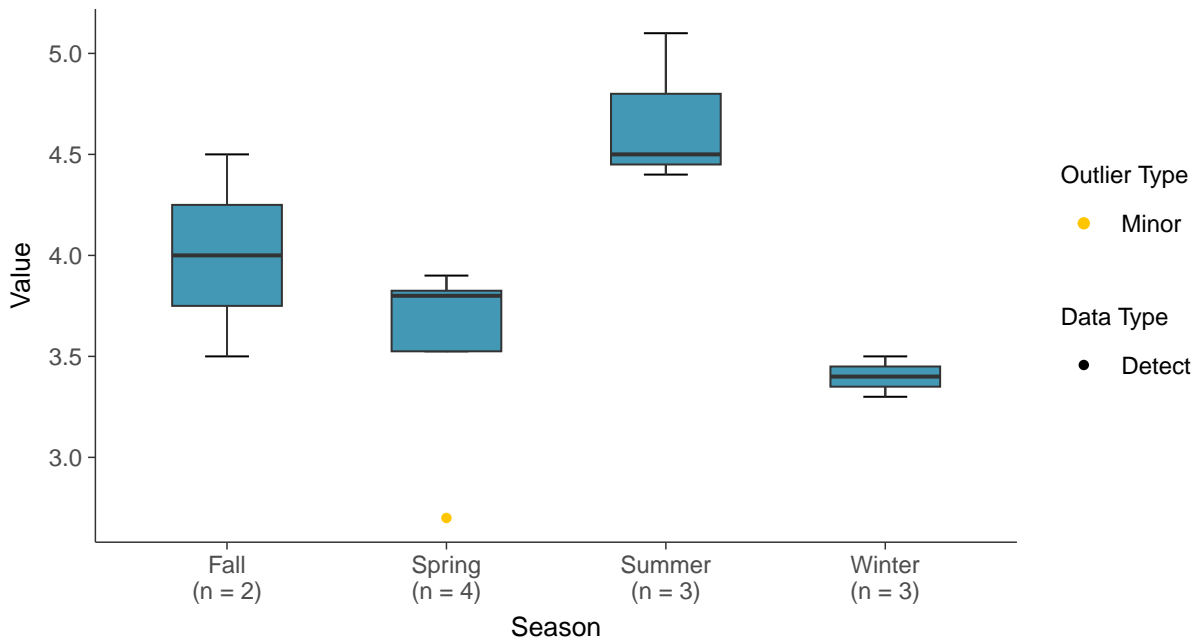
### Boxplot

Fluoride, MW-18 (mg/L)



### Boxplot by Season

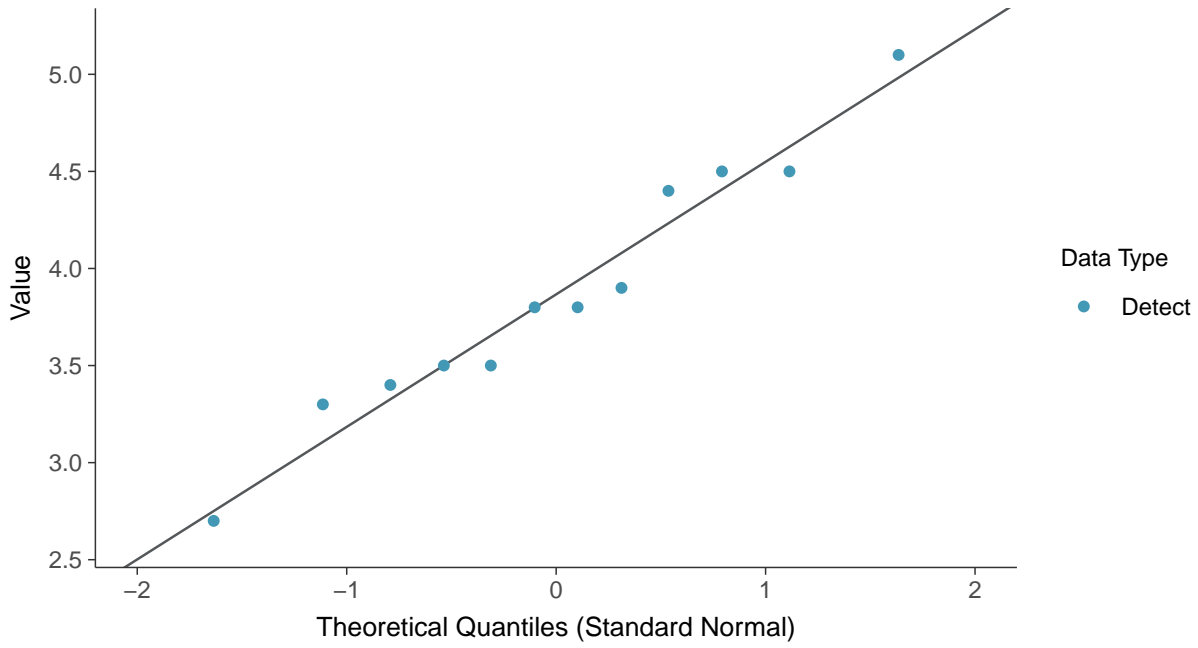
Fluoride, MW-18 (mg/L)





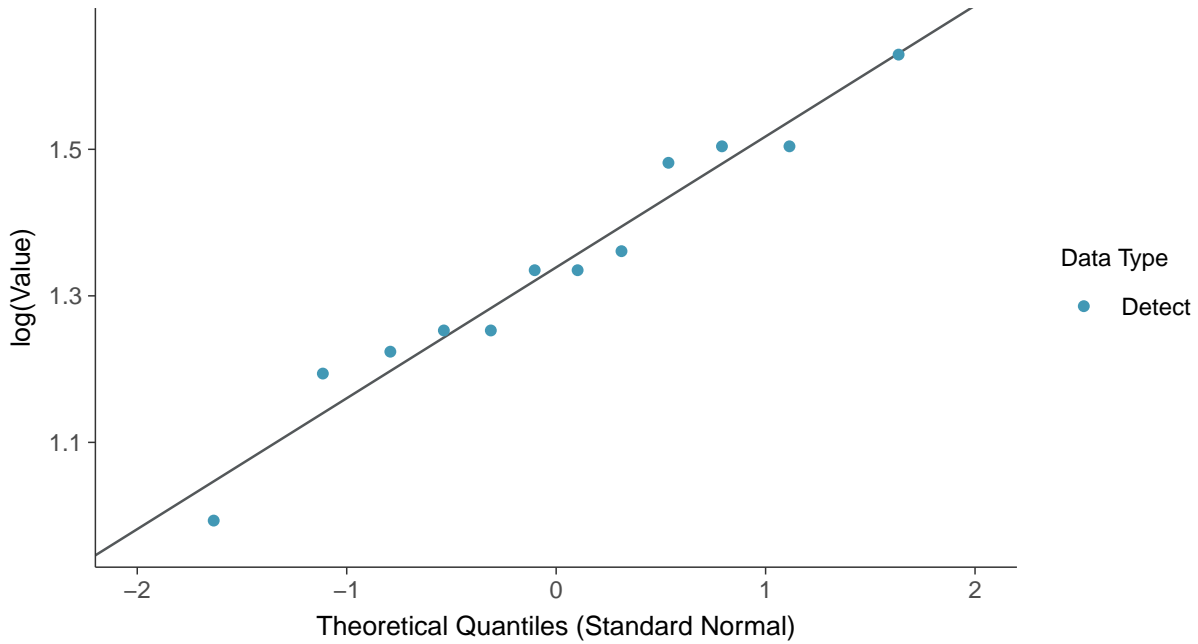
### Normal Q-Q plot

Fluoride, MW-18 (mg/L)



### Lognormal Q-Q plot

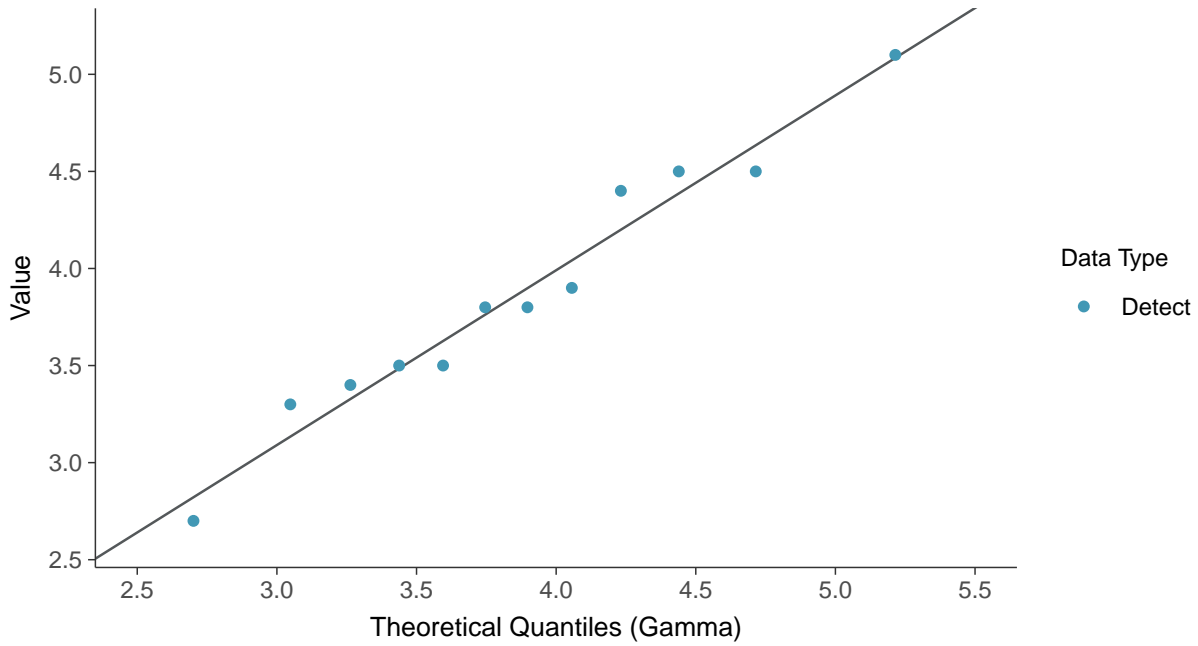
Fluoride, MW-18 (mg/L)





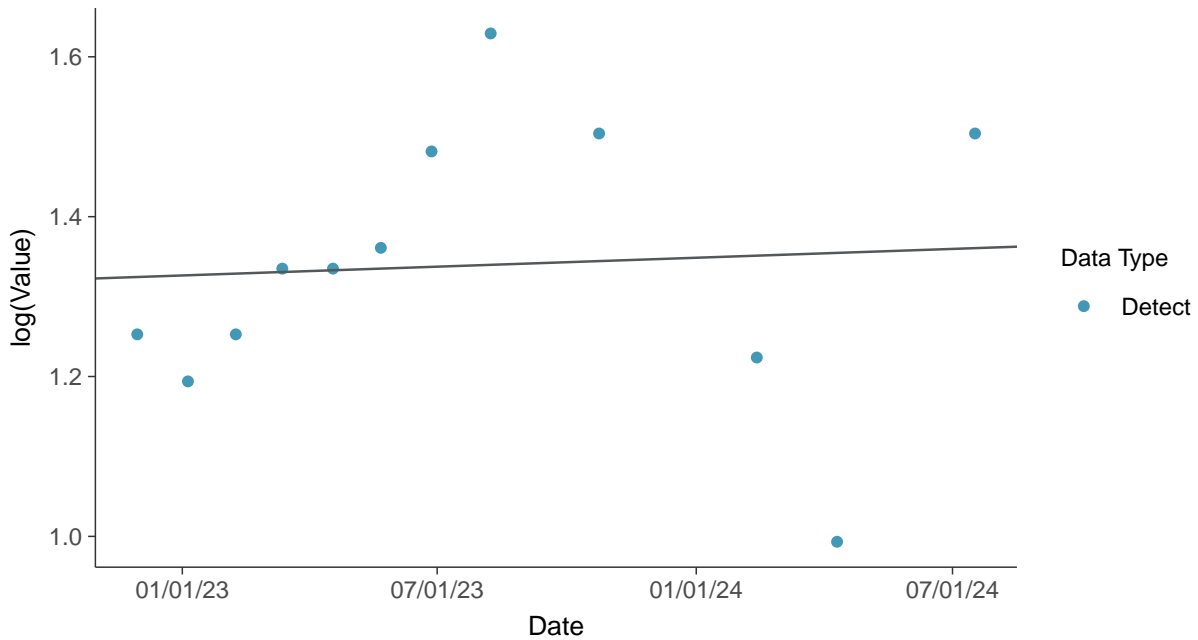
### Gamma Q-Q plot

Fluoride, MW-18 (mg/L)



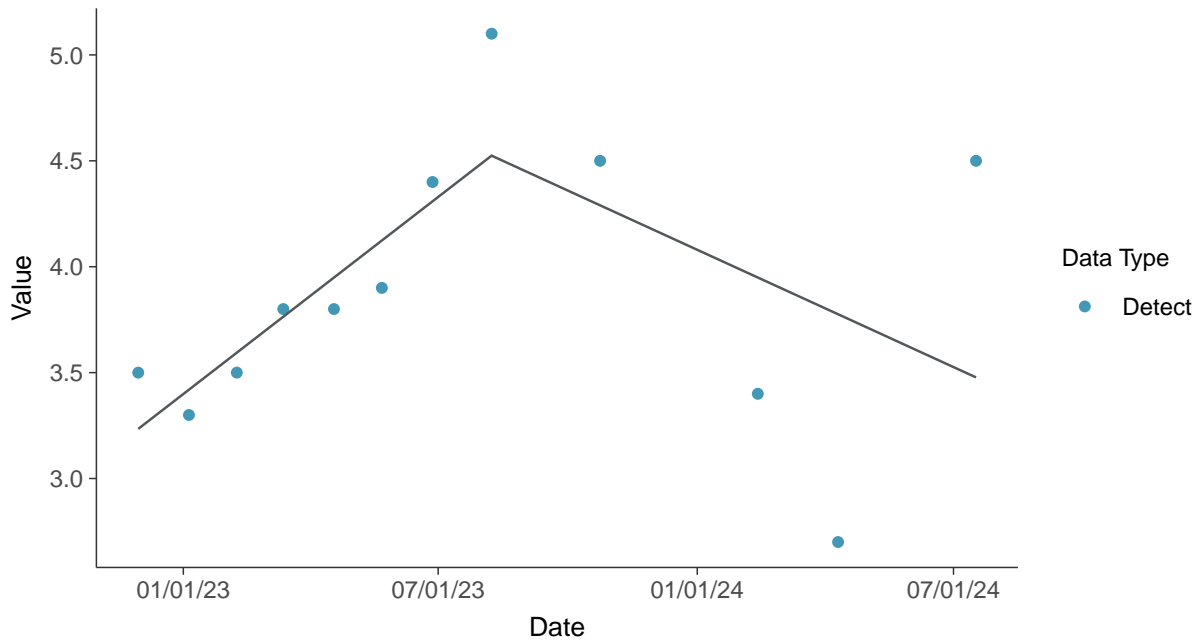
### Trend Regression: Lognormal MLE

Fluoride, MW-18 (mg/L)





**Trend Regression: Piecewise Linear-Linear**  
Fluoride, MW-18 (mg/L)

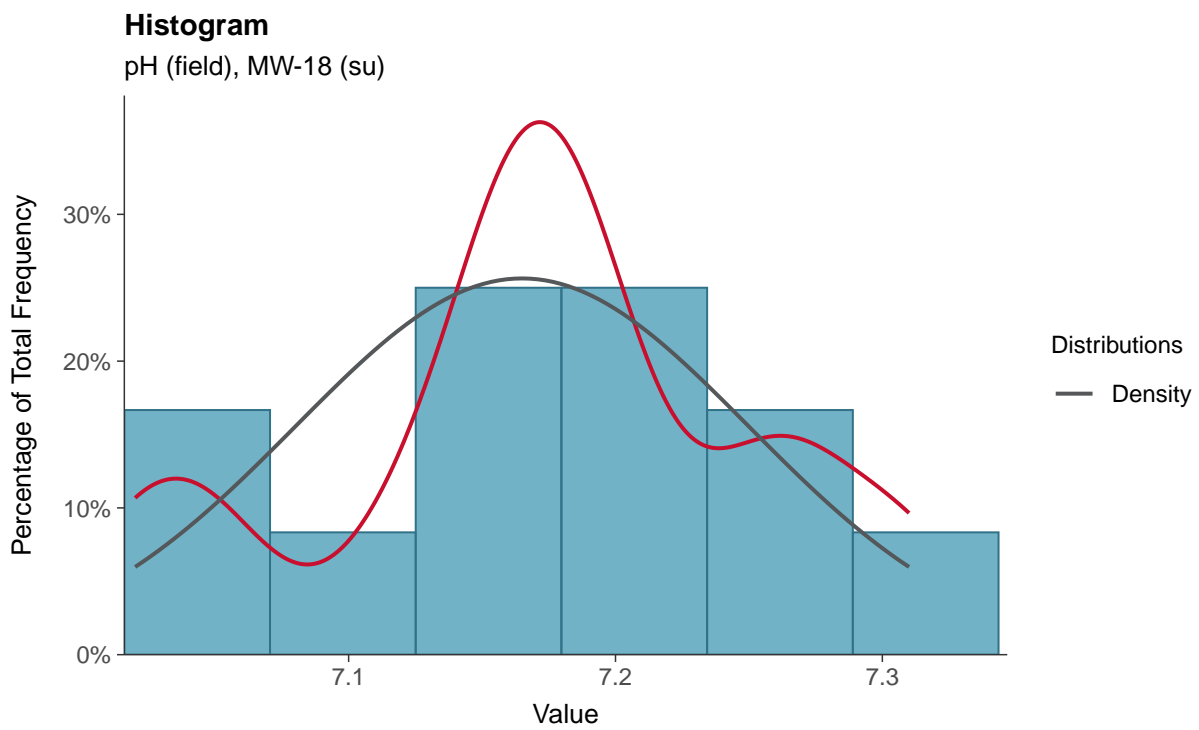
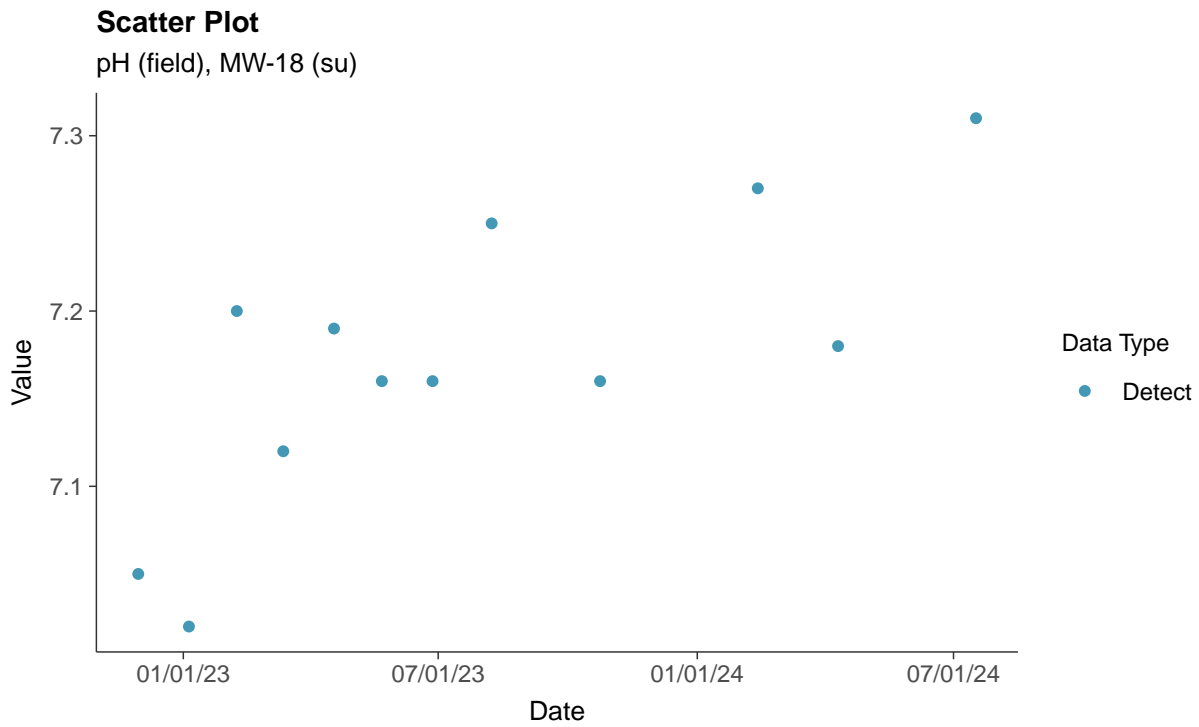






### Appendix III: pH (field), MW-18

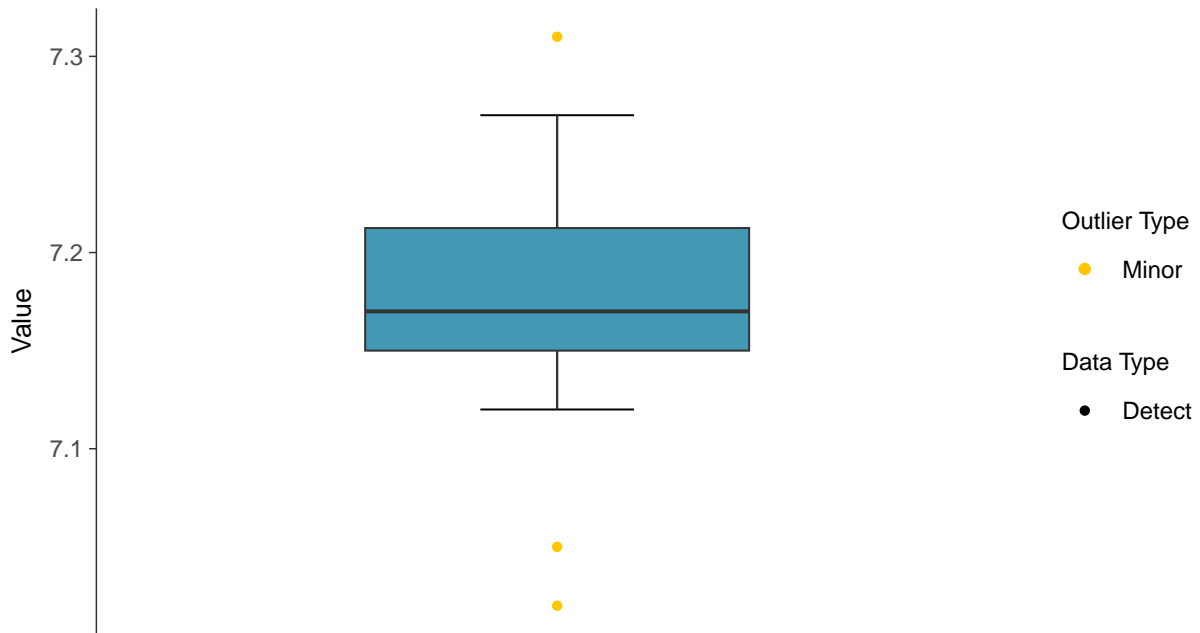
ID: 28\_1\_4\_120





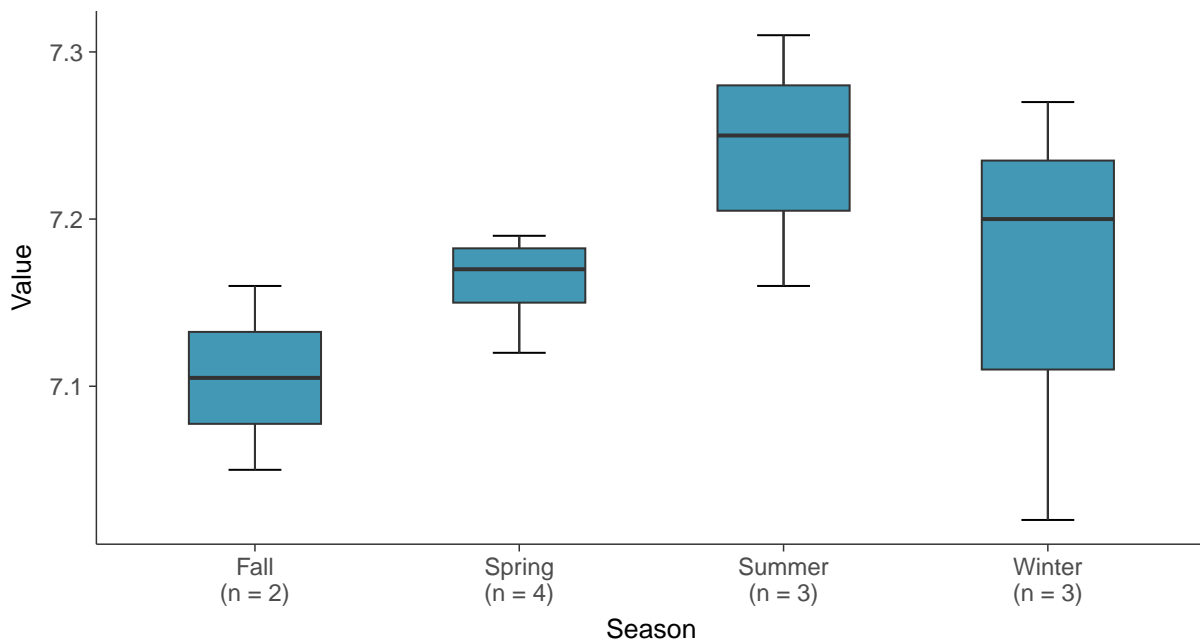
### Boxplot

pH (field), MW-18 (su)



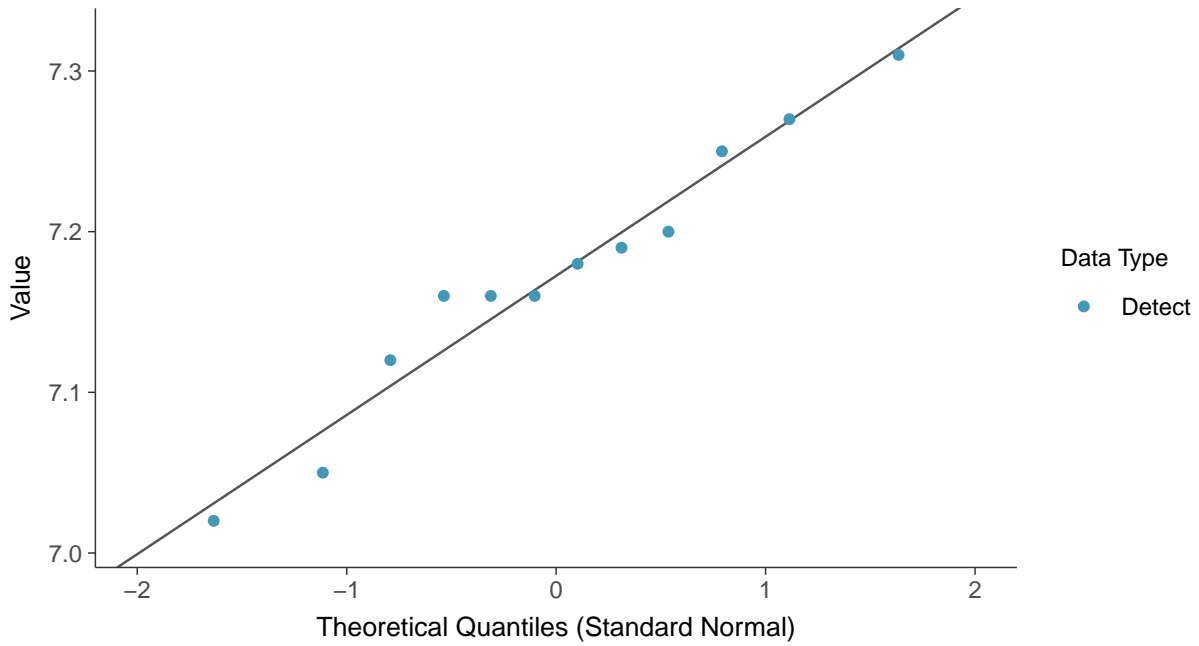
### Boxplot by Season

pH (field), MW-18 (su)

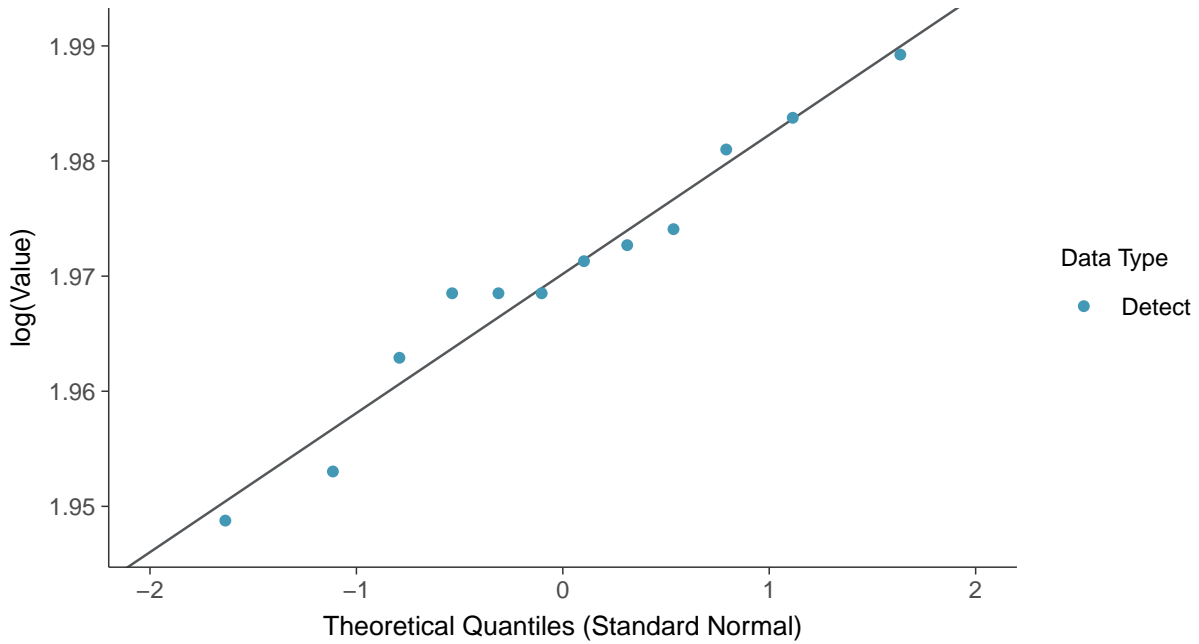




**Normal Q-Q plot**  
pH (field), MW-18 (su)



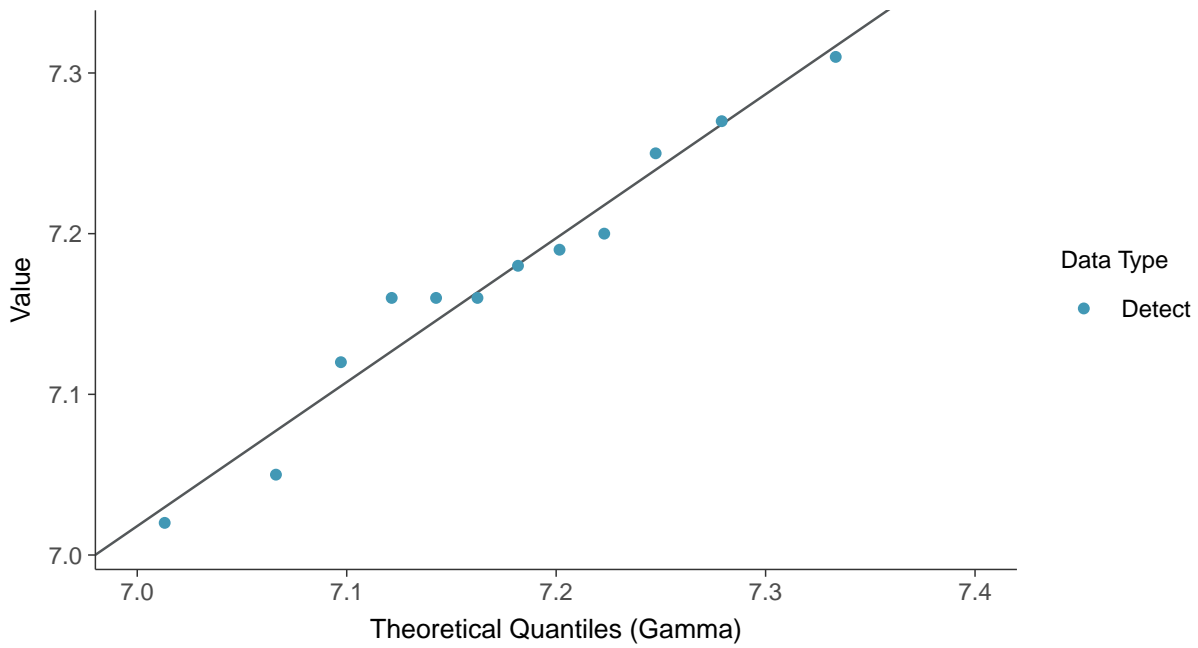
**Lognormal Q-Q plot**  
pH (field), MW-18 (su)





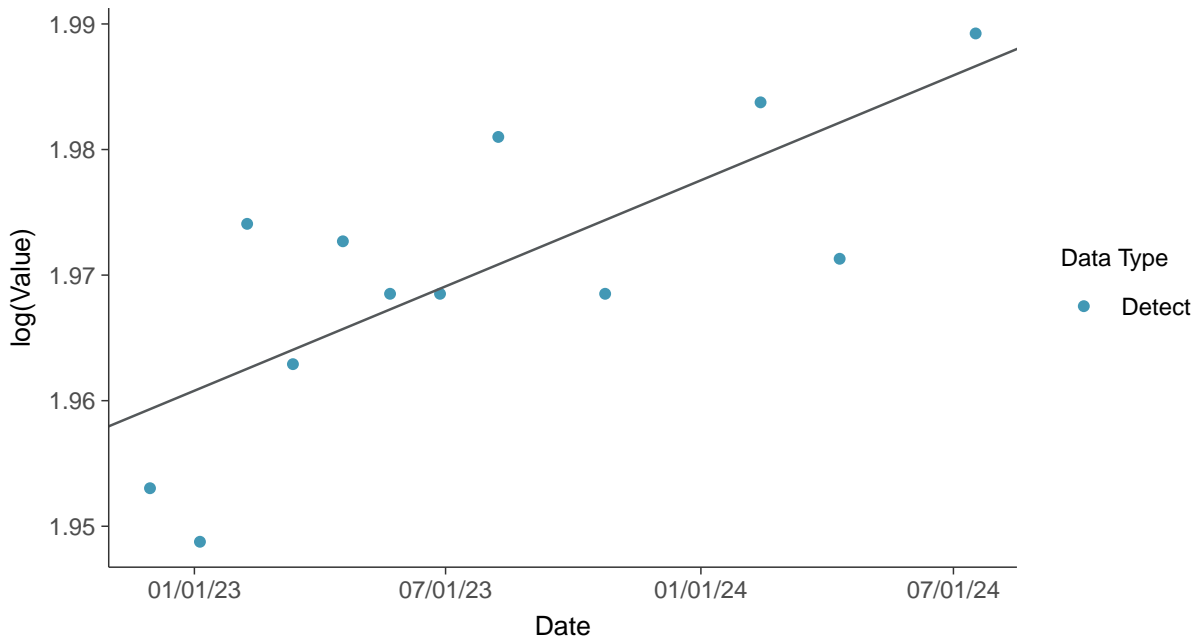
### Gamma Q-Q plot

pH (field), MW-18 (su)



### Trend Regression: Lognormal MLE

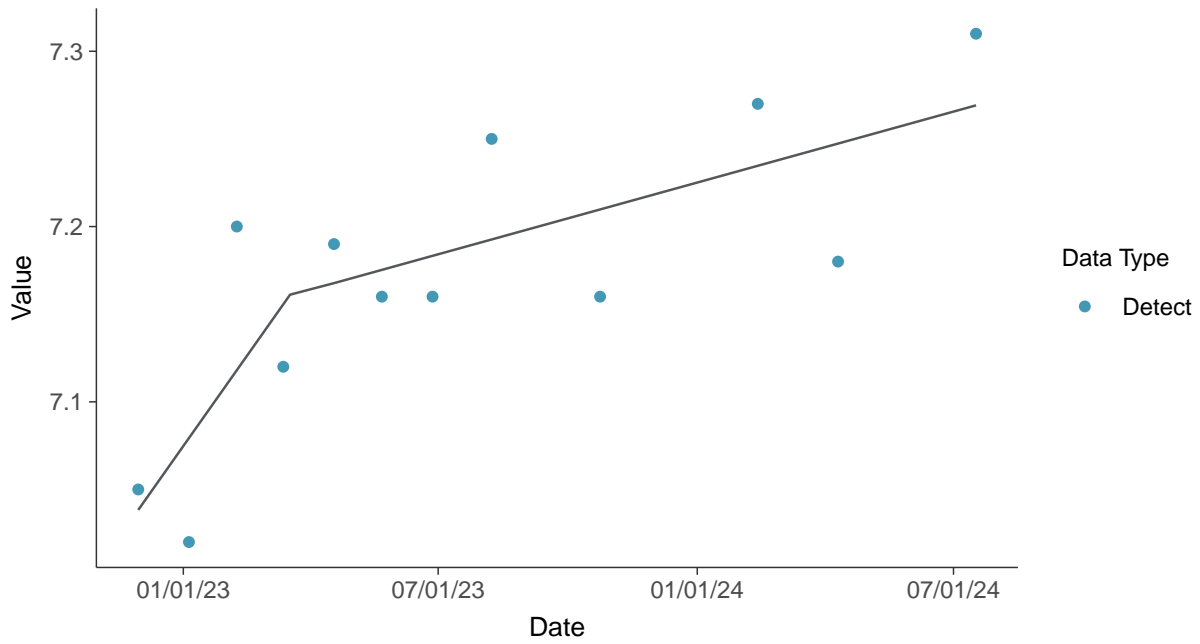
pH (field), MW-18 (su)





### Trend Regression: Piecewise Linear-Linear

pH (field), MW-18 (su)



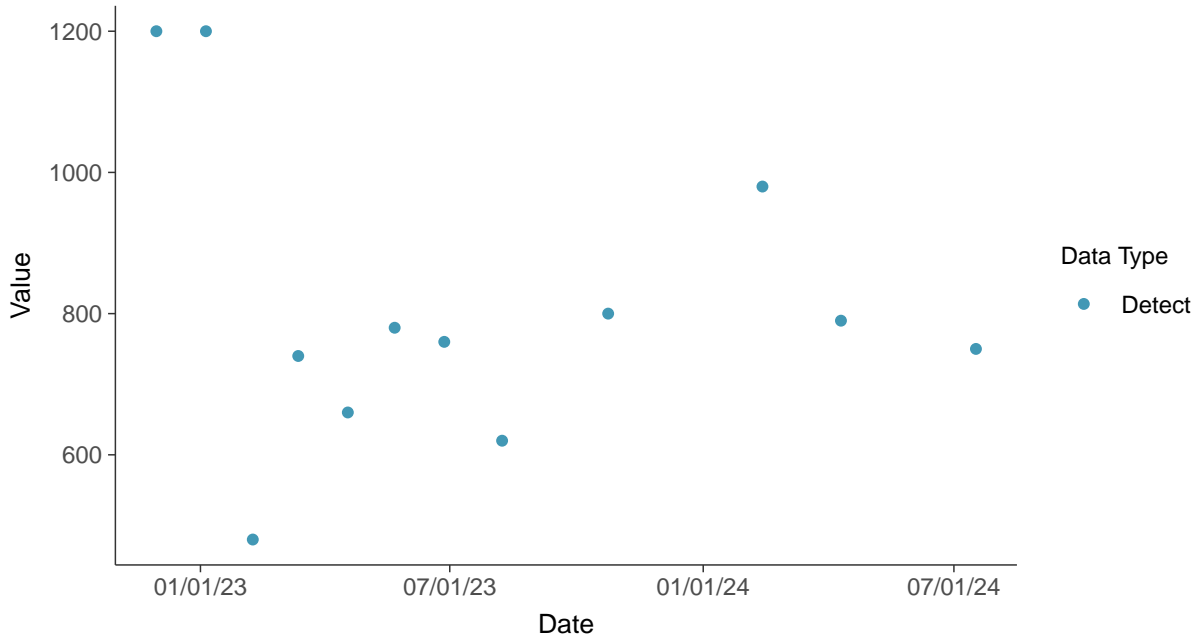


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-18

ID: 28\_1\_4\_124

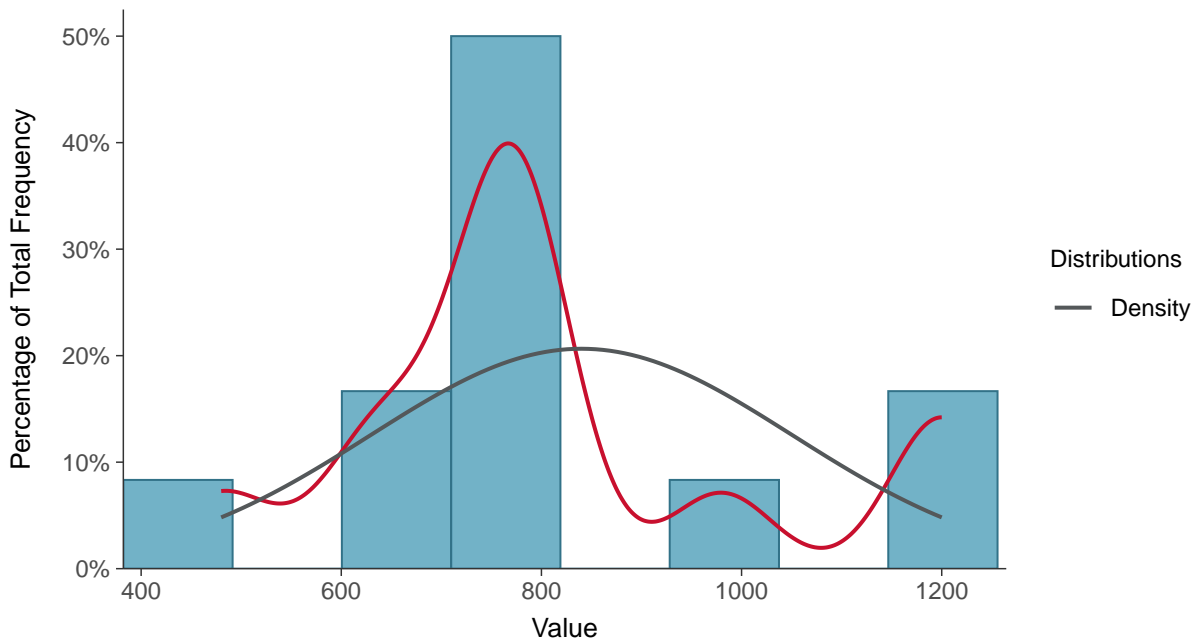
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)



#### Histogram

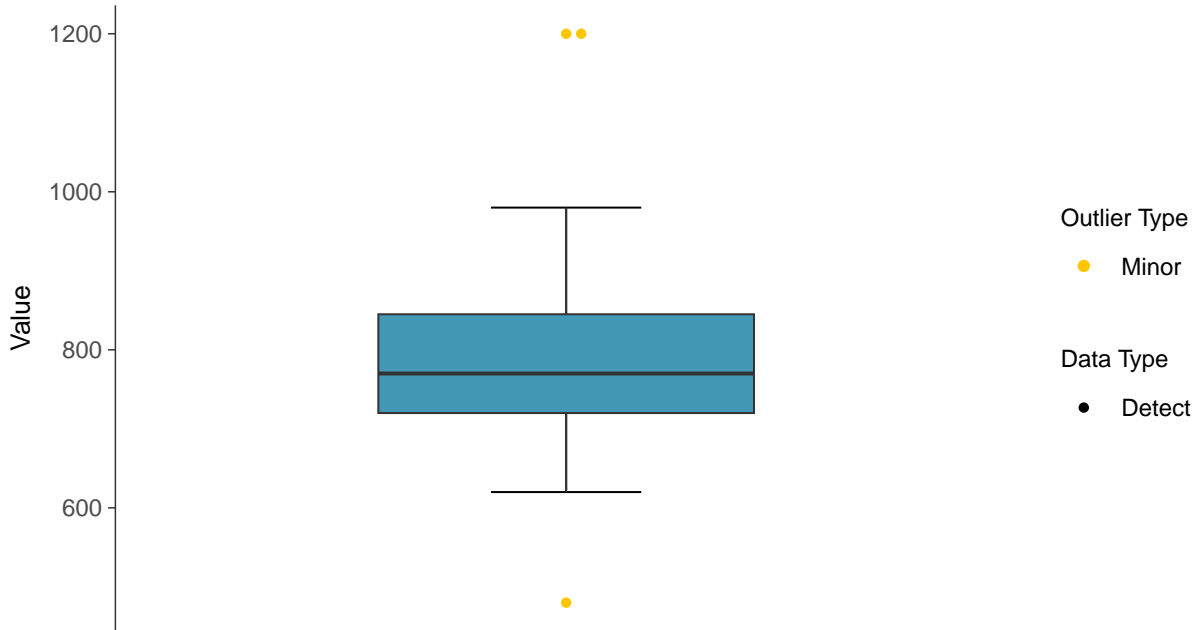
Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)





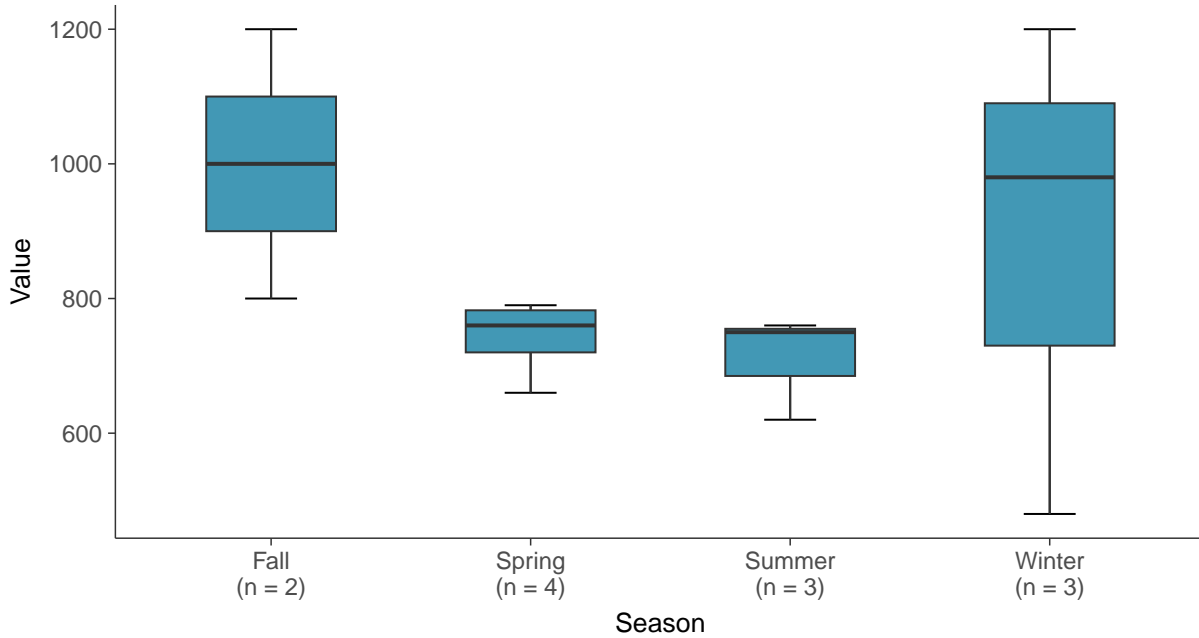
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)



### Boxplot by Season

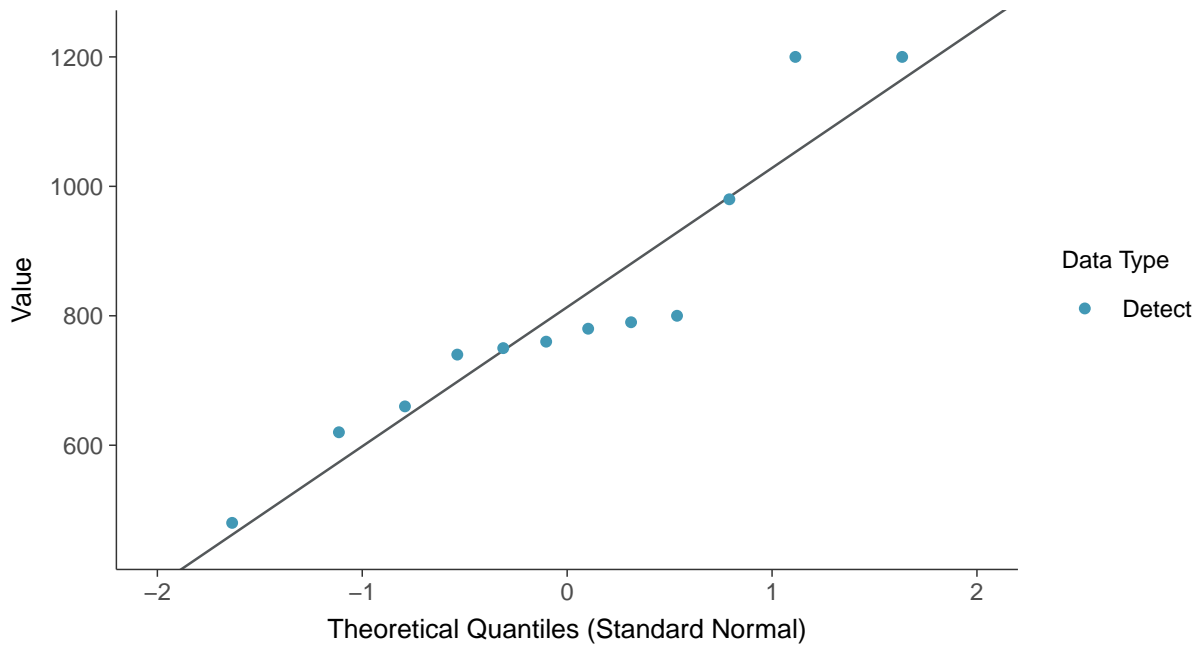
Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)





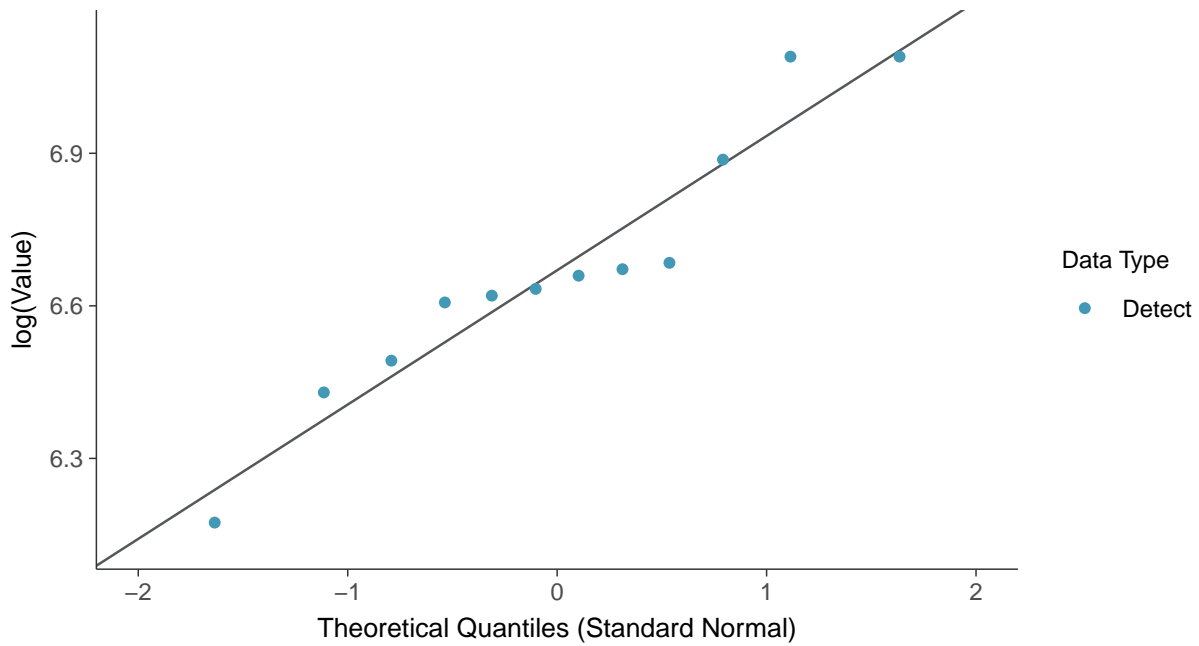
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)



### Lognormal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)

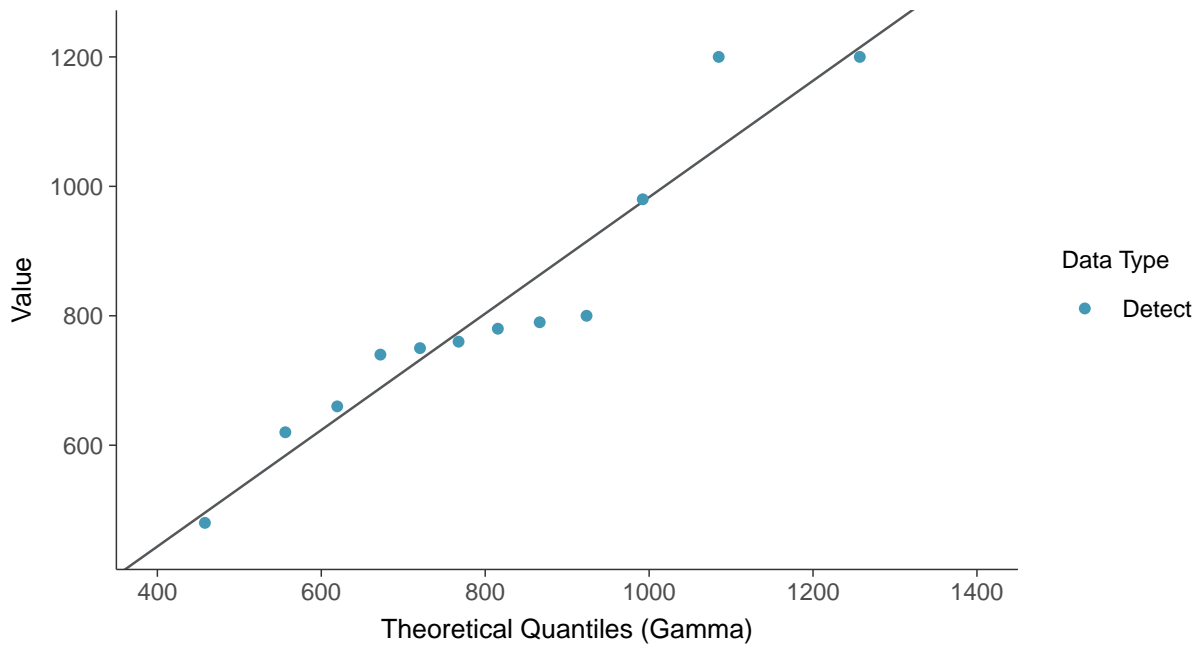






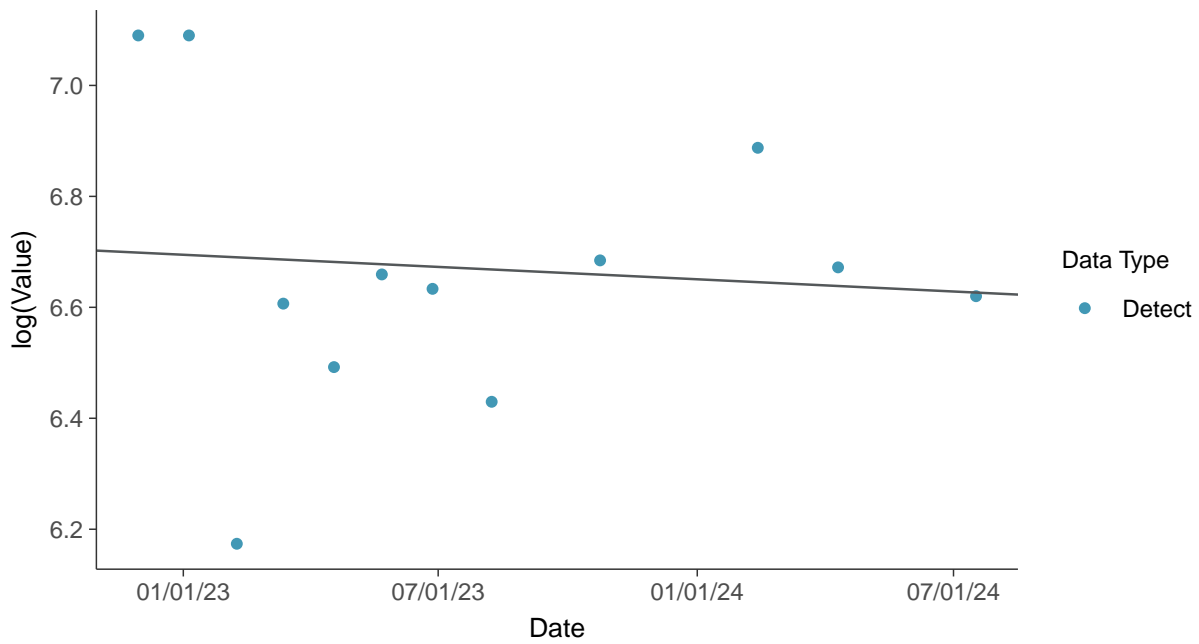
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)



### Trend Regression: Lognormal MLE

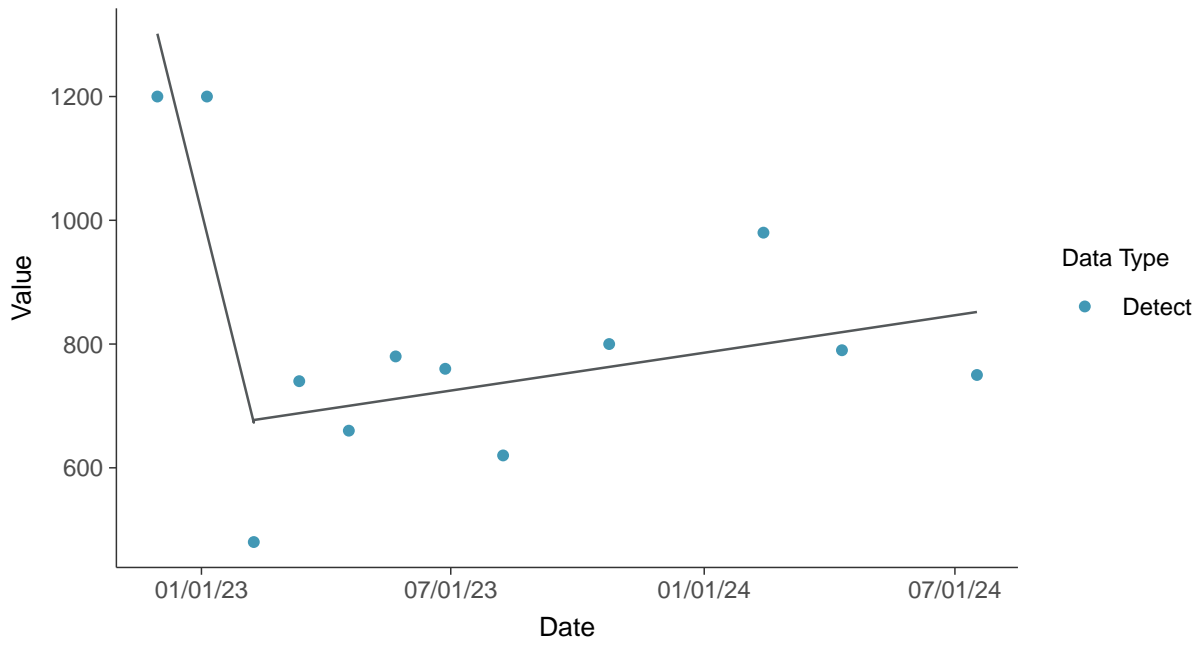
Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-18 (mg/L)



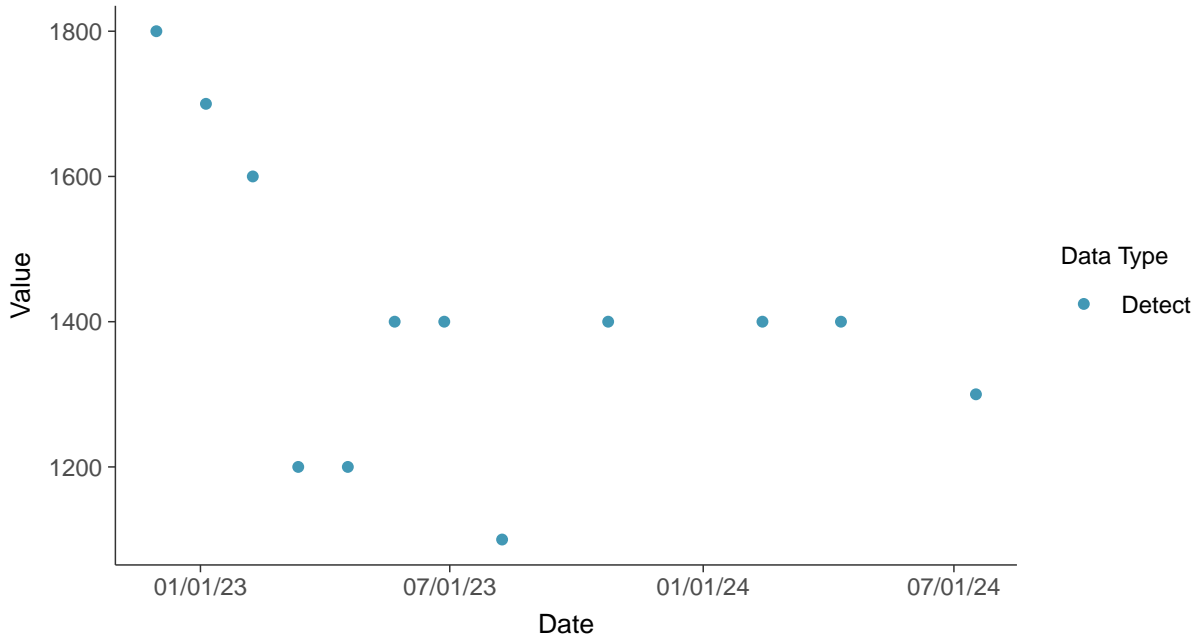


### Appendix III: Total Dissolved Solids, MW-18

ID: 28\_1\_4\_126

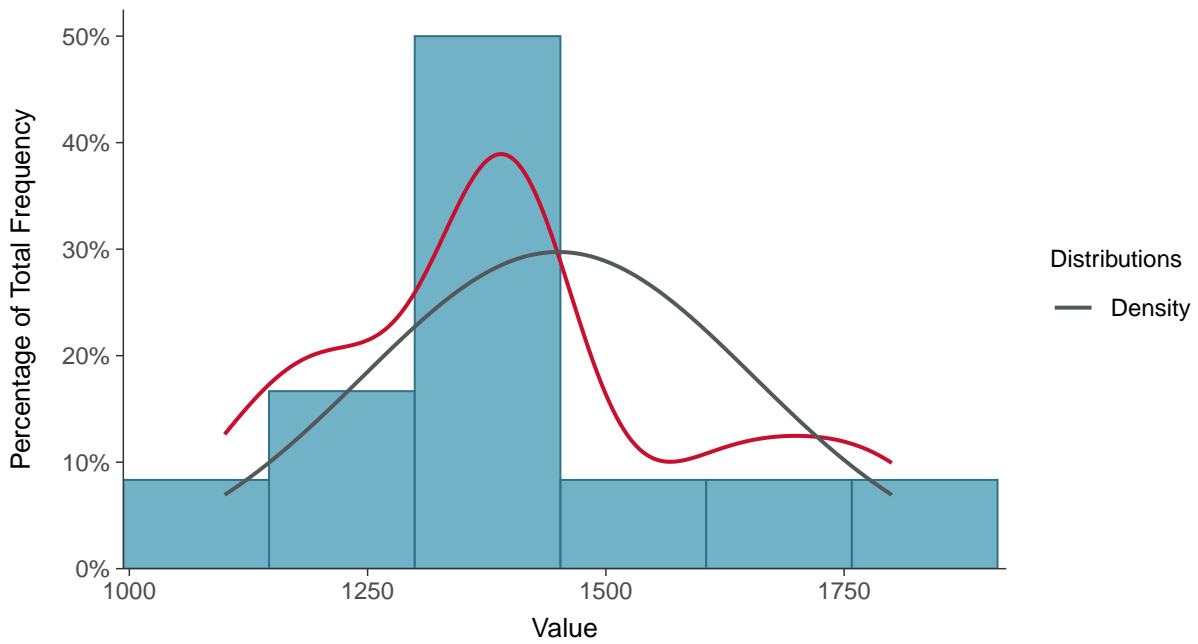
#### Scatter Plot

Total Dissolved Solids, MW-18 (mg/L)



#### Histogram

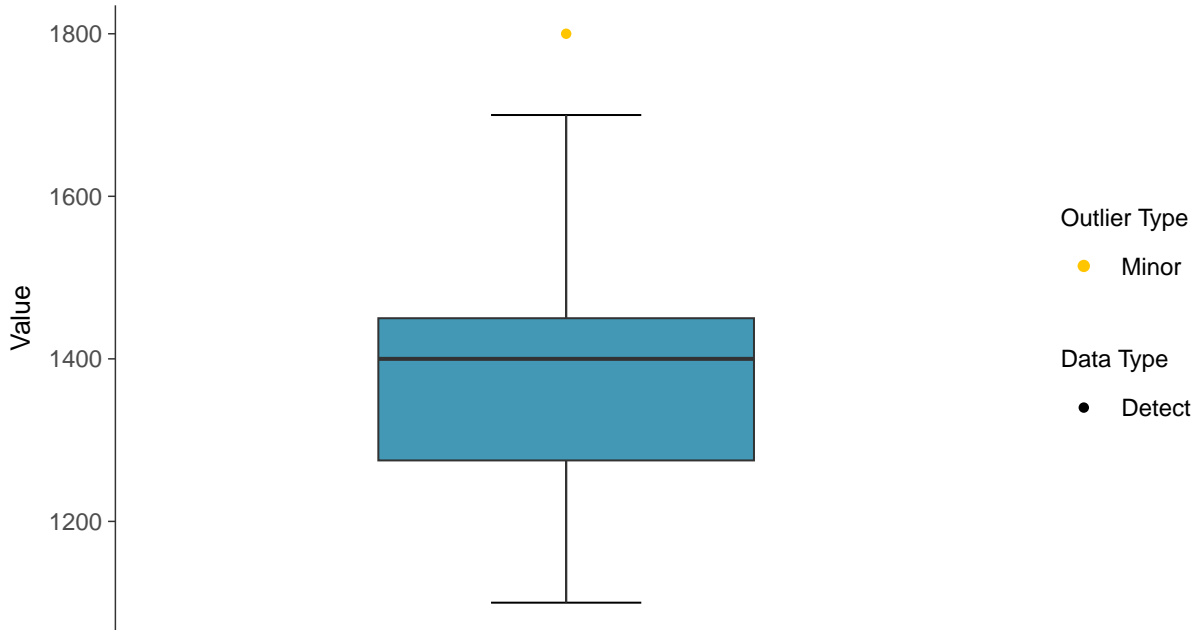
Total Dissolved Solids, MW-18 (mg/L)





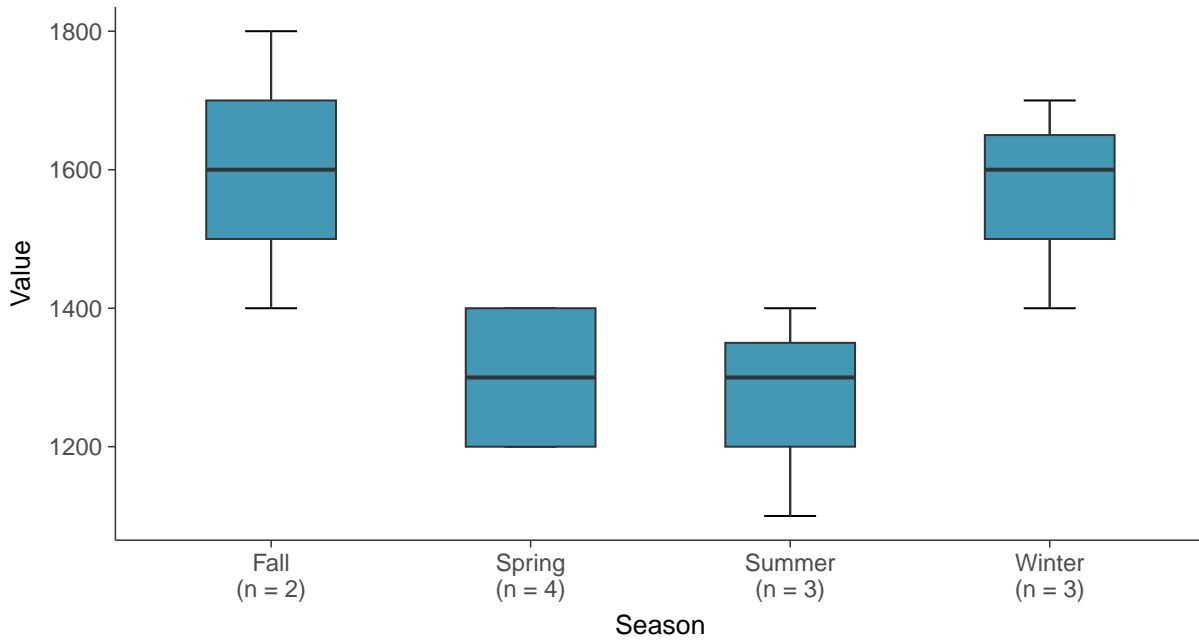
### Boxplot

Total Dissolved Solids, MW-18 (mg/L)



### Boxplot by Season

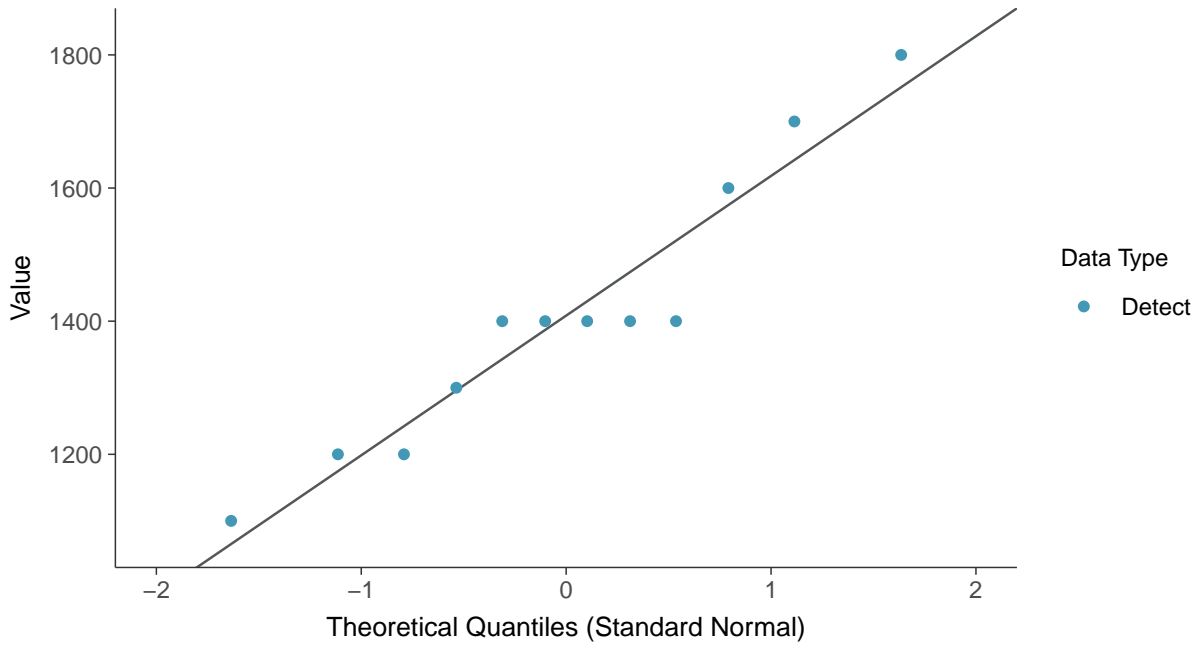
Total Dissolved Solids, MW-18 (mg/L)





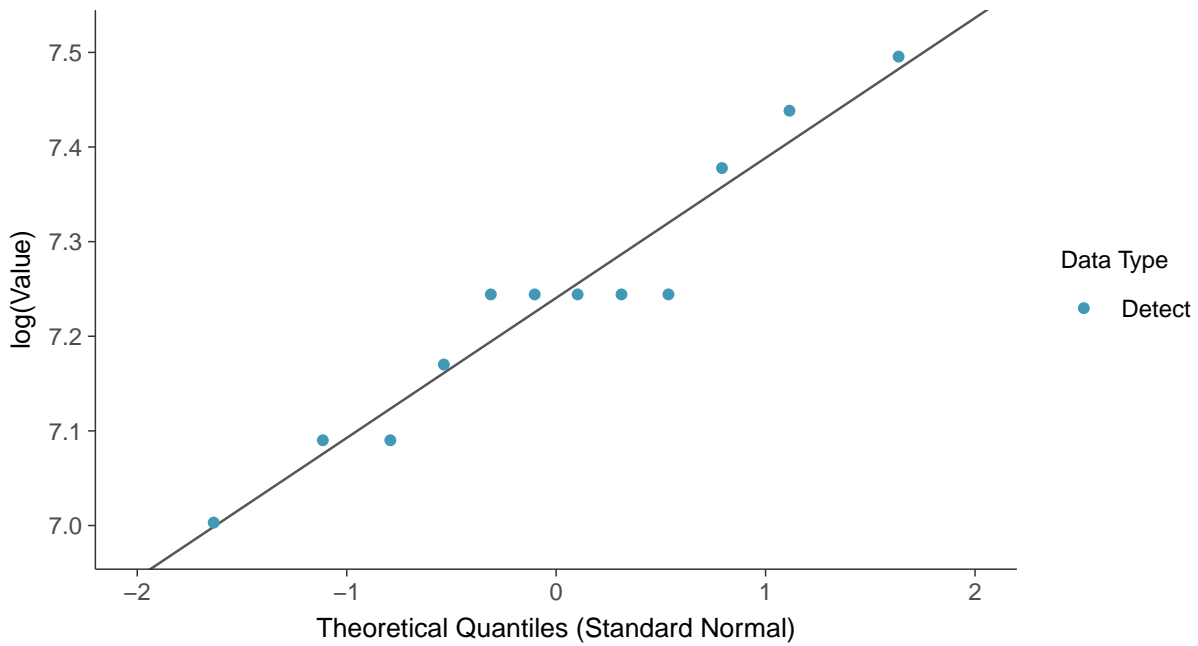
### Normal Q-Q plot

Total Dissolved Solids, MW-18 (mg/L)



### Lognormal Q-Q plot

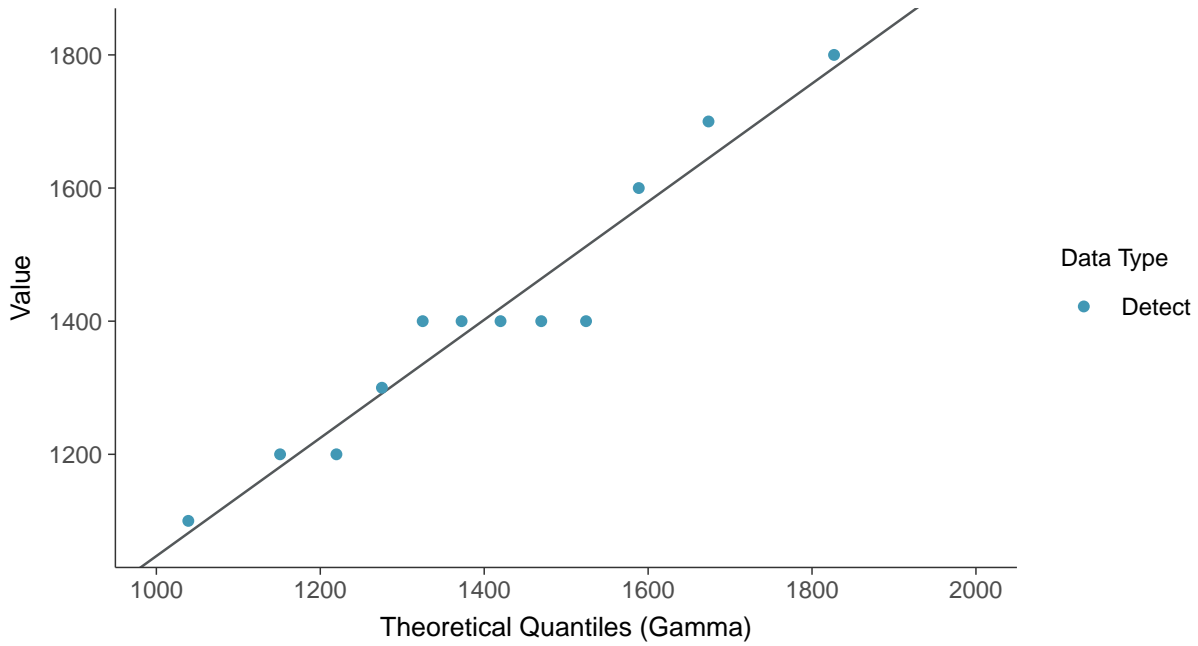
Total Dissolved Solids, MW-18 (mg/L)





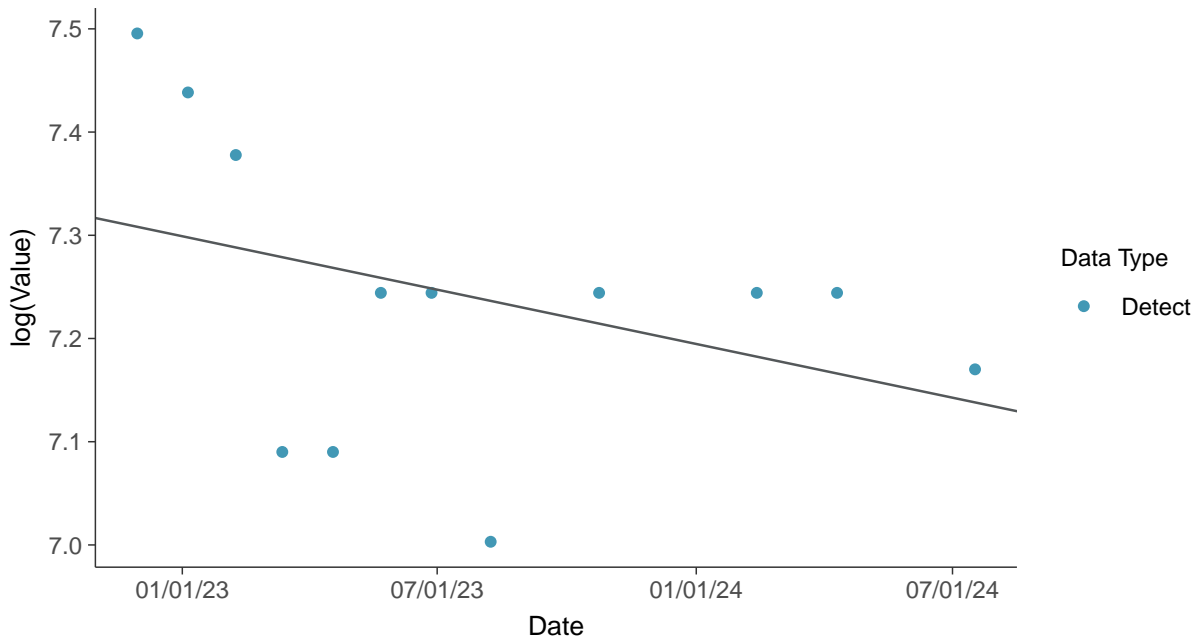
### Gamma Q-Q plot

Total Dissolved Solids, MW-18 (mg/L)



### Trend Regression: Lognormal MLE

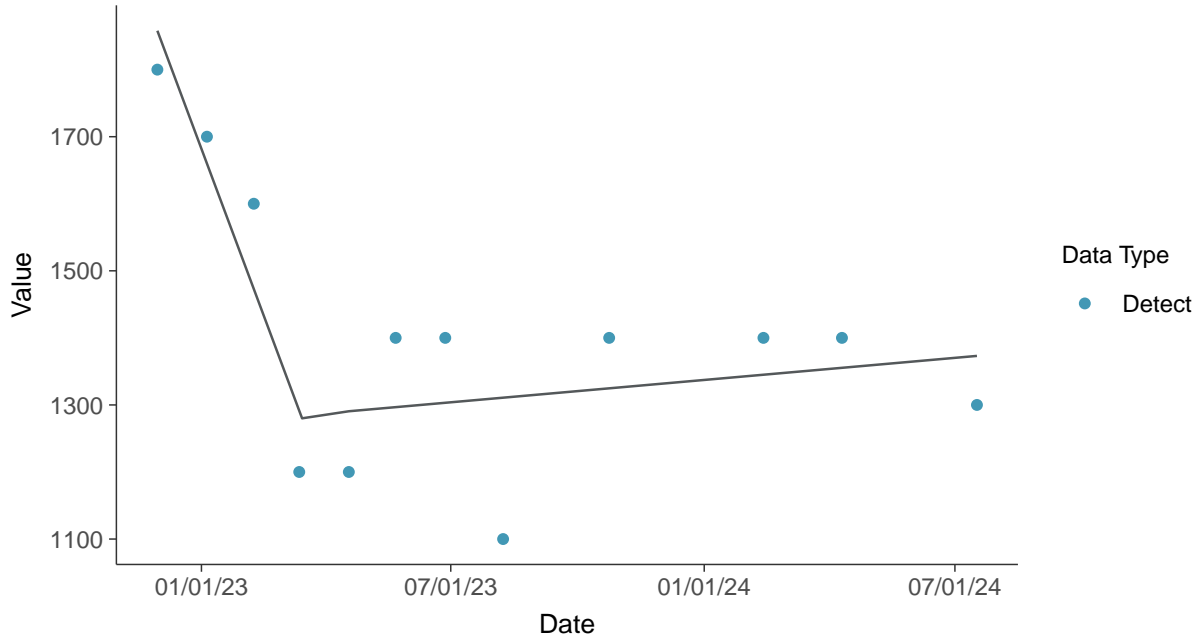
Total Dissolved Solids, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

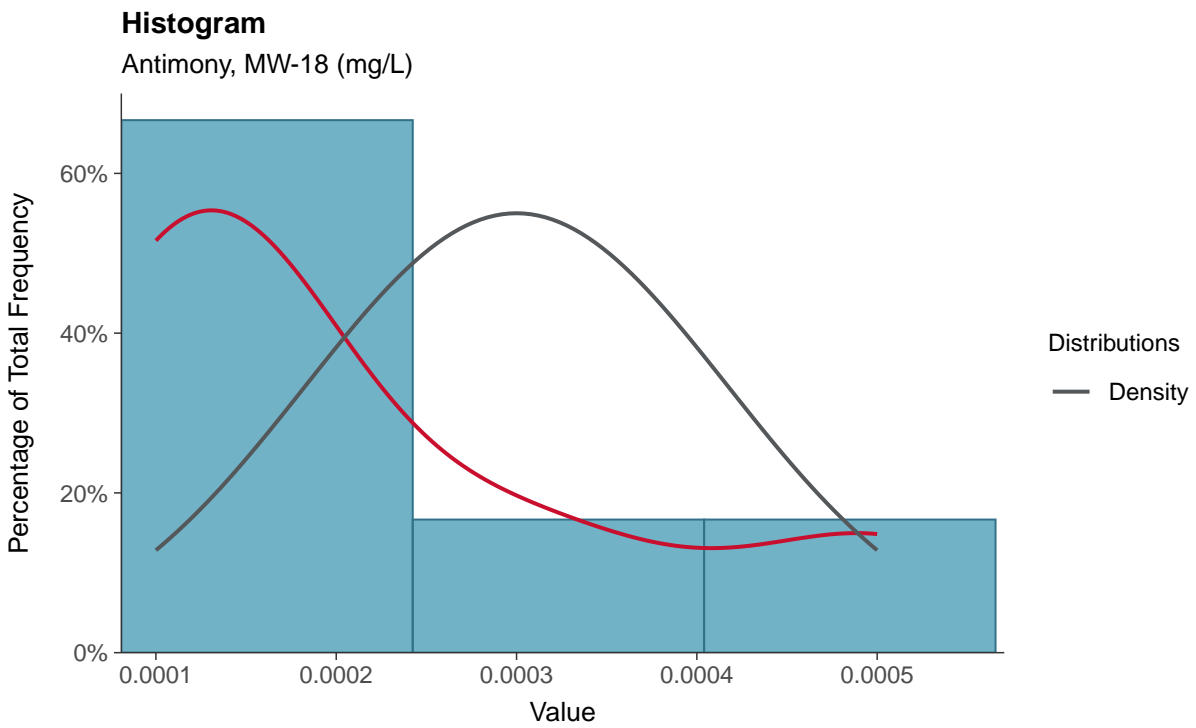
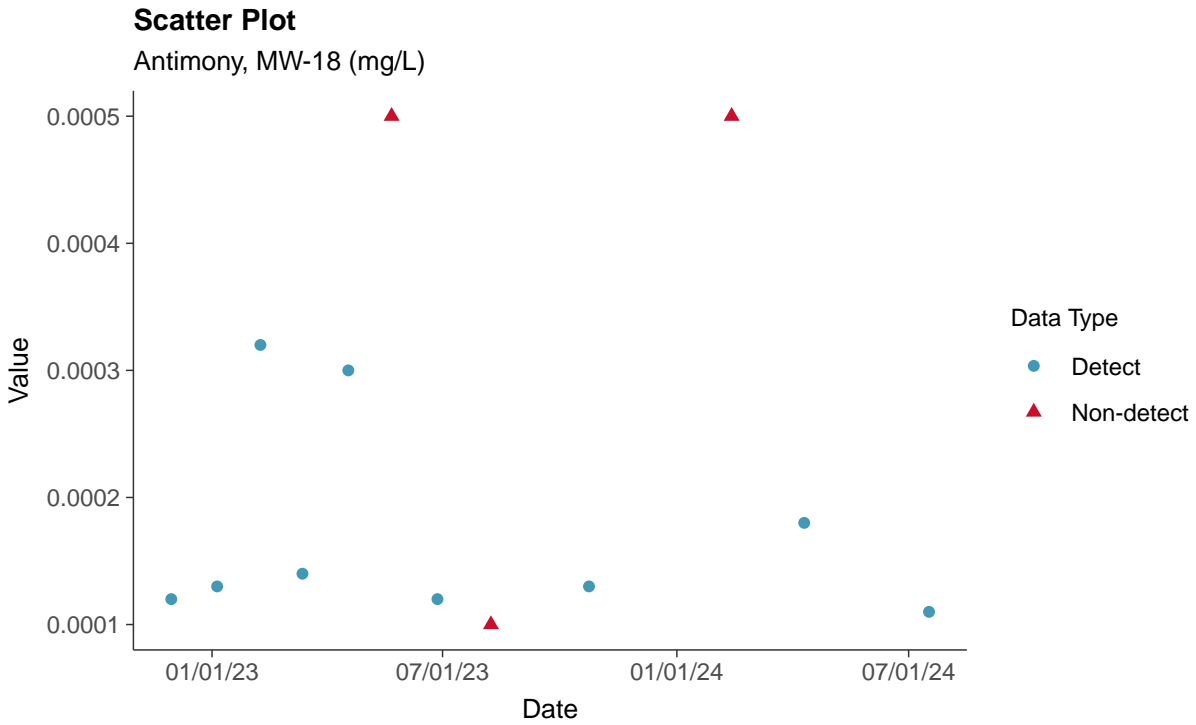
Total Dissolved Solids, MW-18 (mg/L)





### Appendix IV: Antimony, MW-18

ID: 28\_1\_5\_101

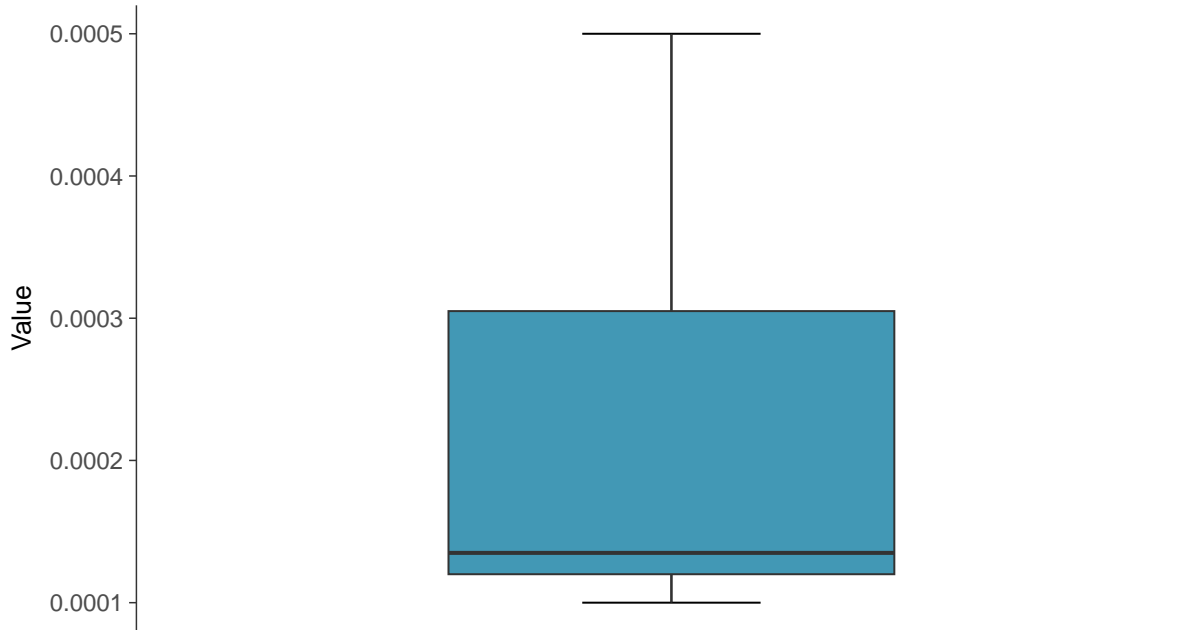






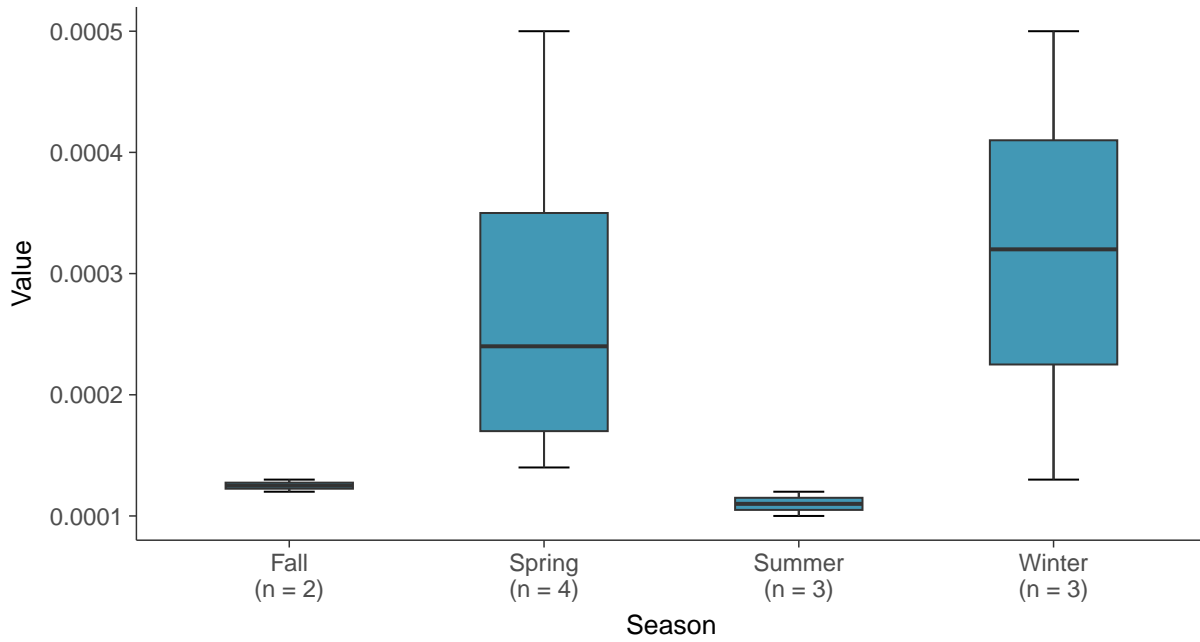
### Boxplot

Antimony, MW-18 (mg/L)



### Boxplot by Season

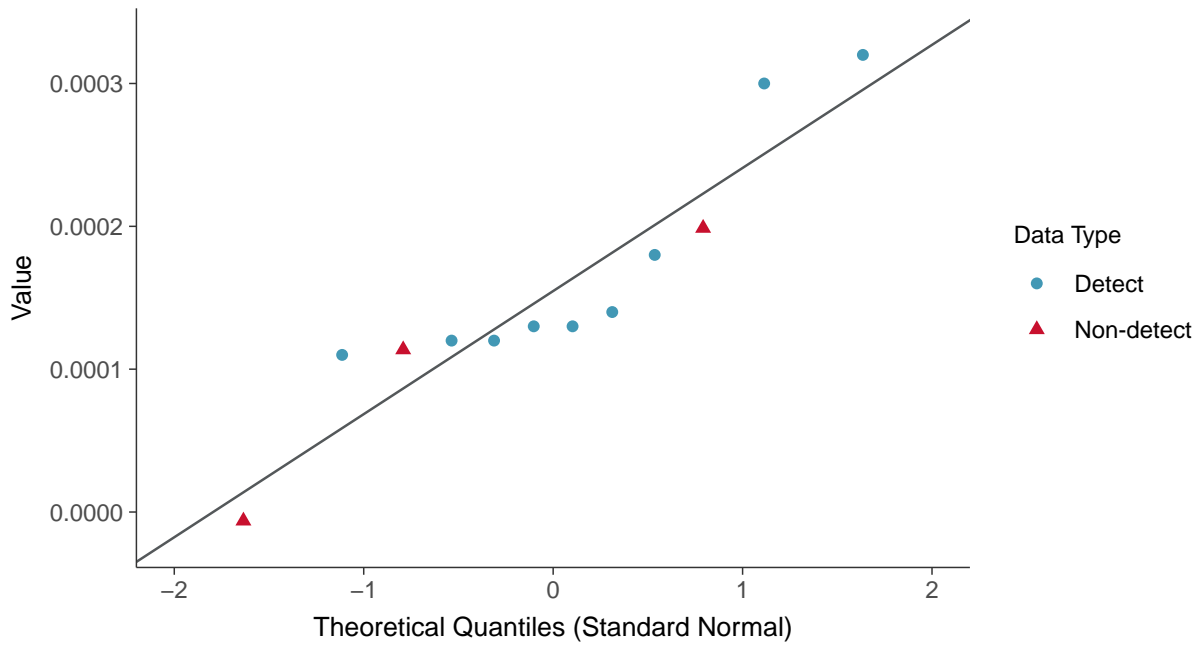
Antimony, MW-18 (mg/L)





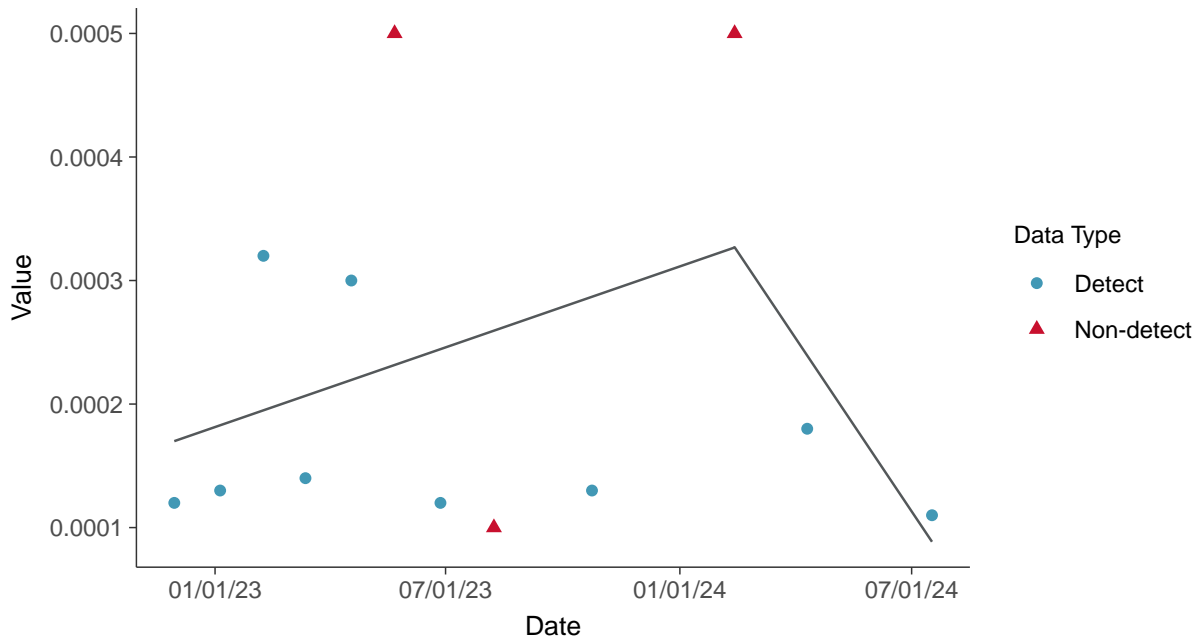
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear

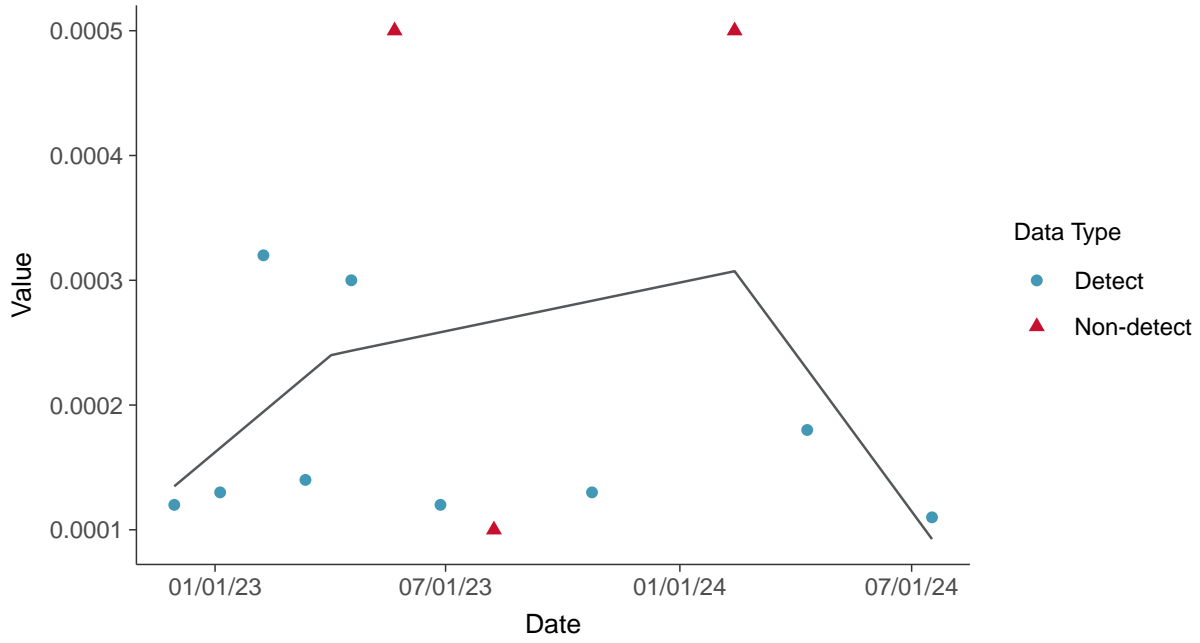
Antimony, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-18 (mg/L)



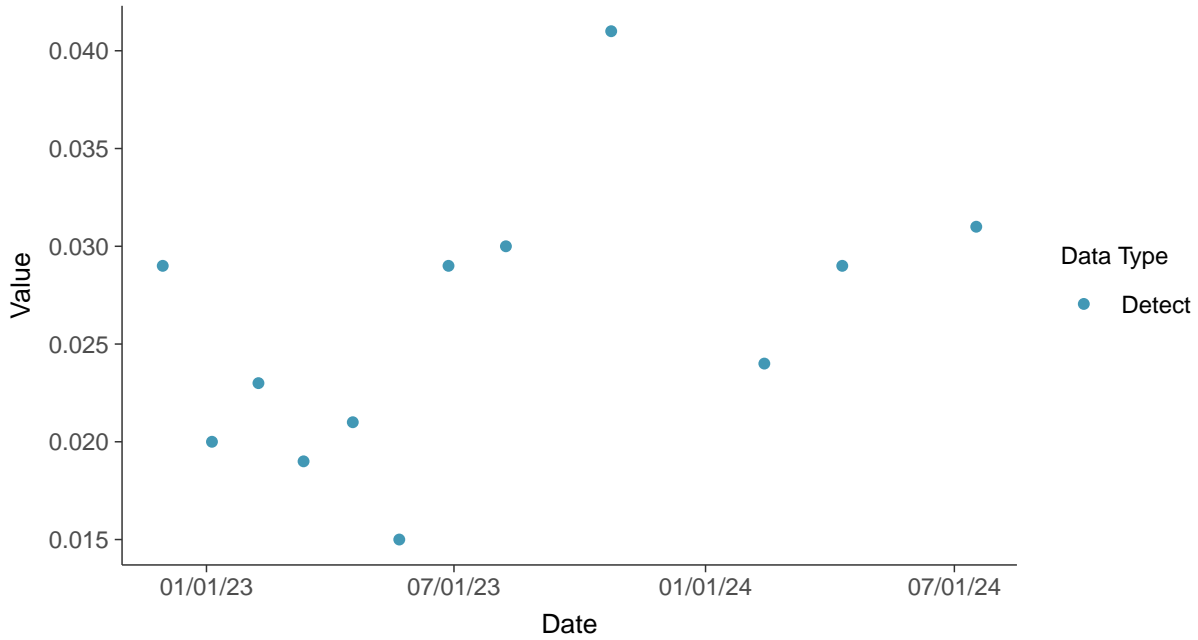


### Appendix IV: Arsenic, MW-18

ID: 28\_1\_5\_102

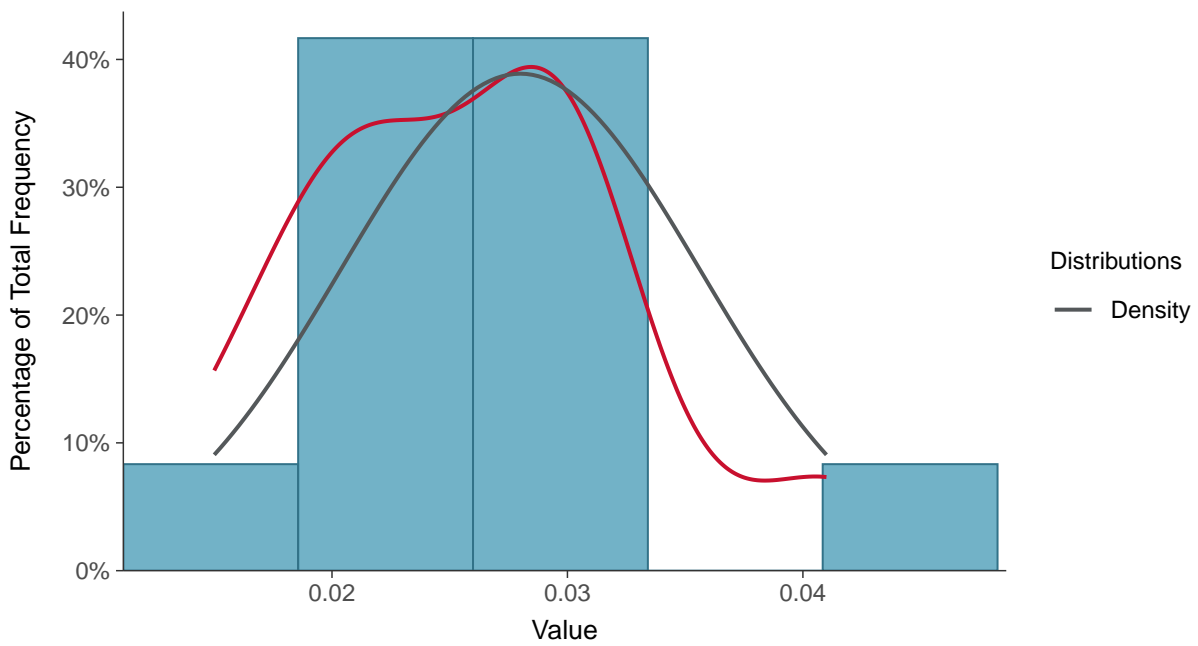
#### Scatter Plot

Arsenic, MW-18 (mg/L)



#### Histogram

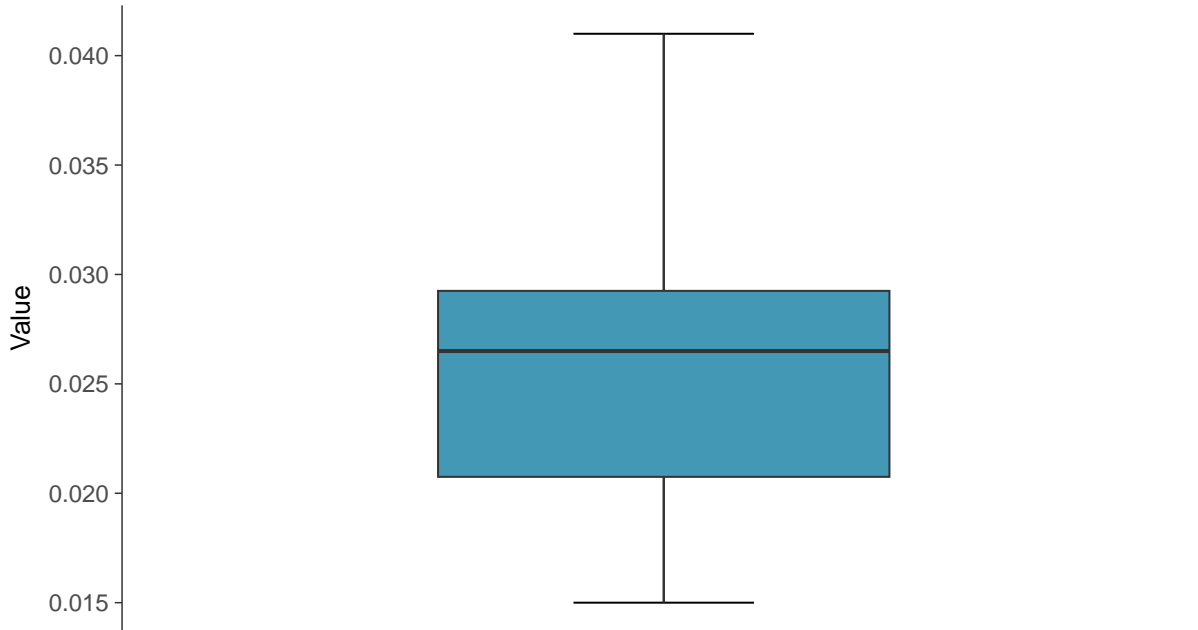
Arsenic, MW-18 (mg/L)





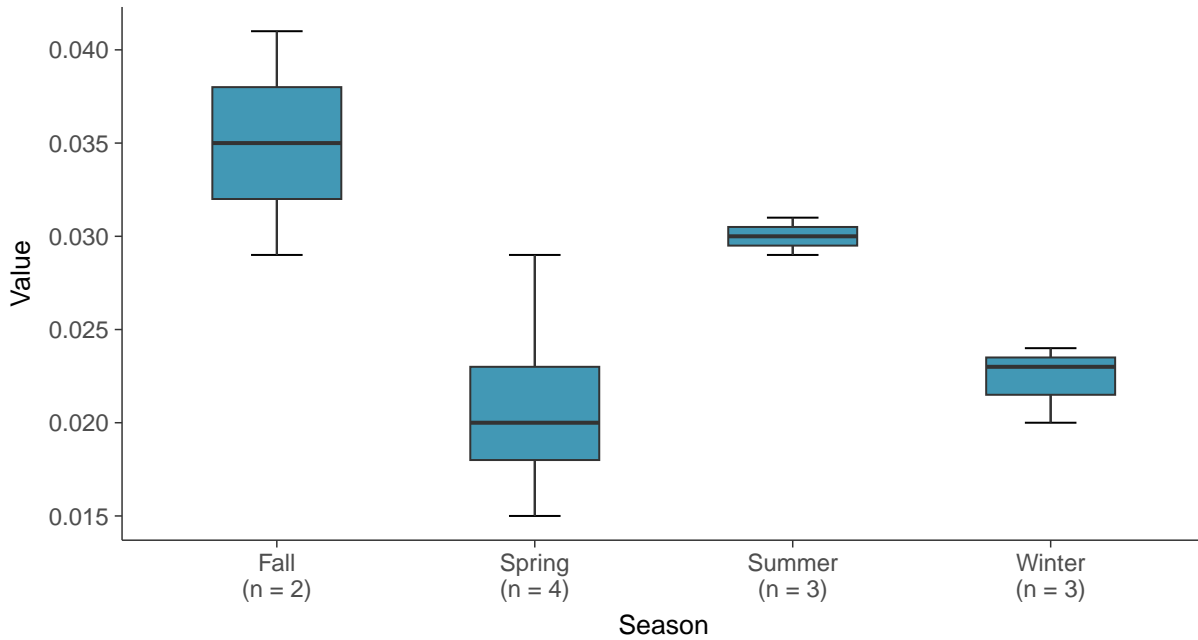
### Boxplot

Arsenic, MW-18 (mg/L)



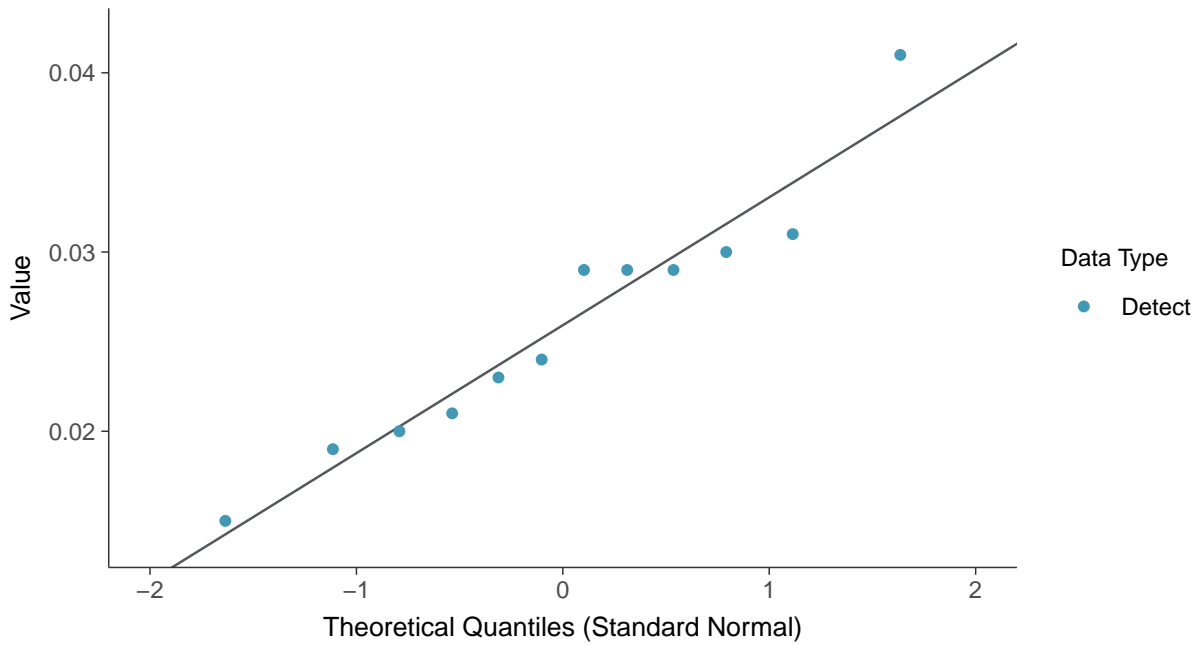
### Boxplot by Season

Arsenic, MW-18 (mg/L)

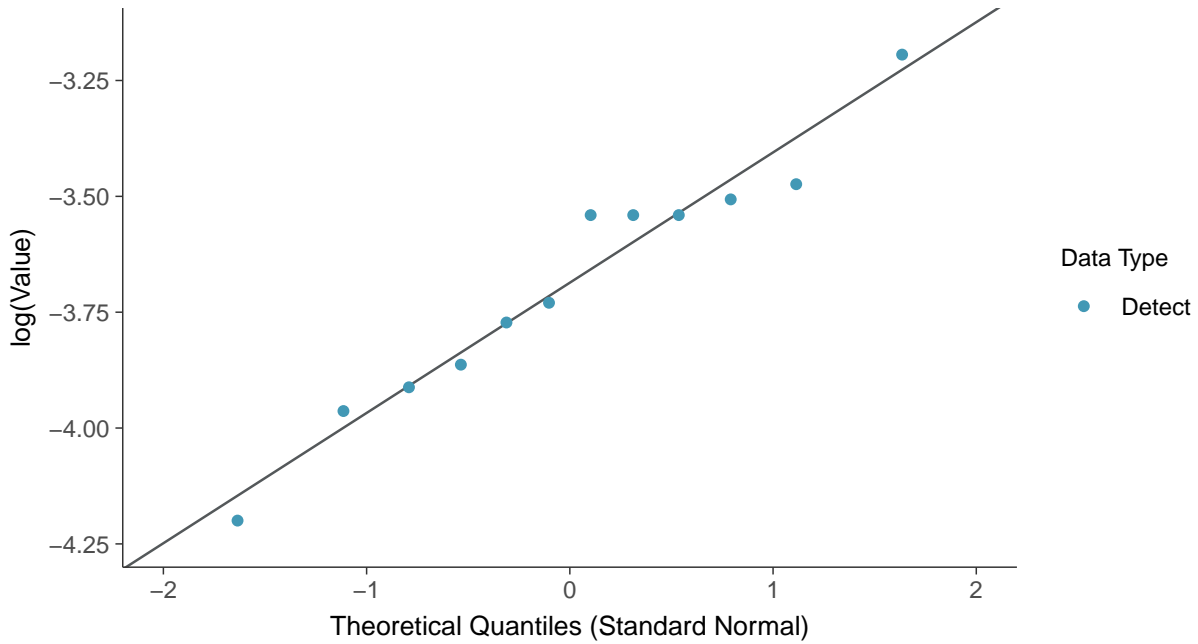




**Normal Q-Q plot**  
Arsenic, MW-18 (mg/L)

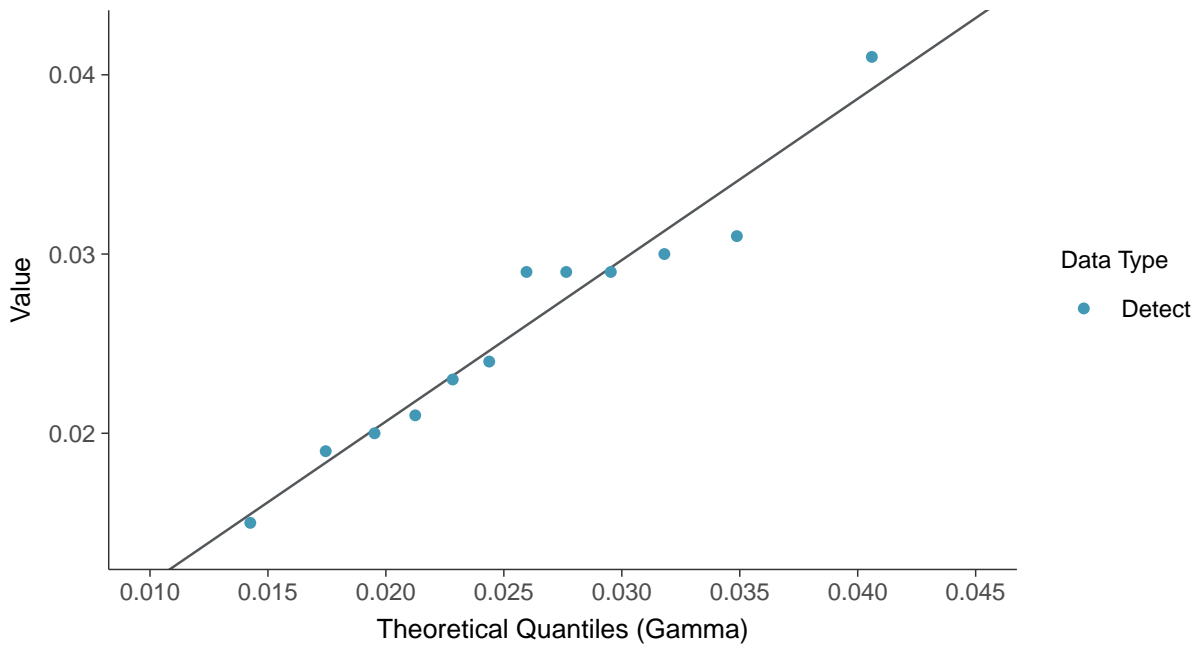


**Lognormal Q-Q plot**  
Arsenic, MW-18 (mg/L)

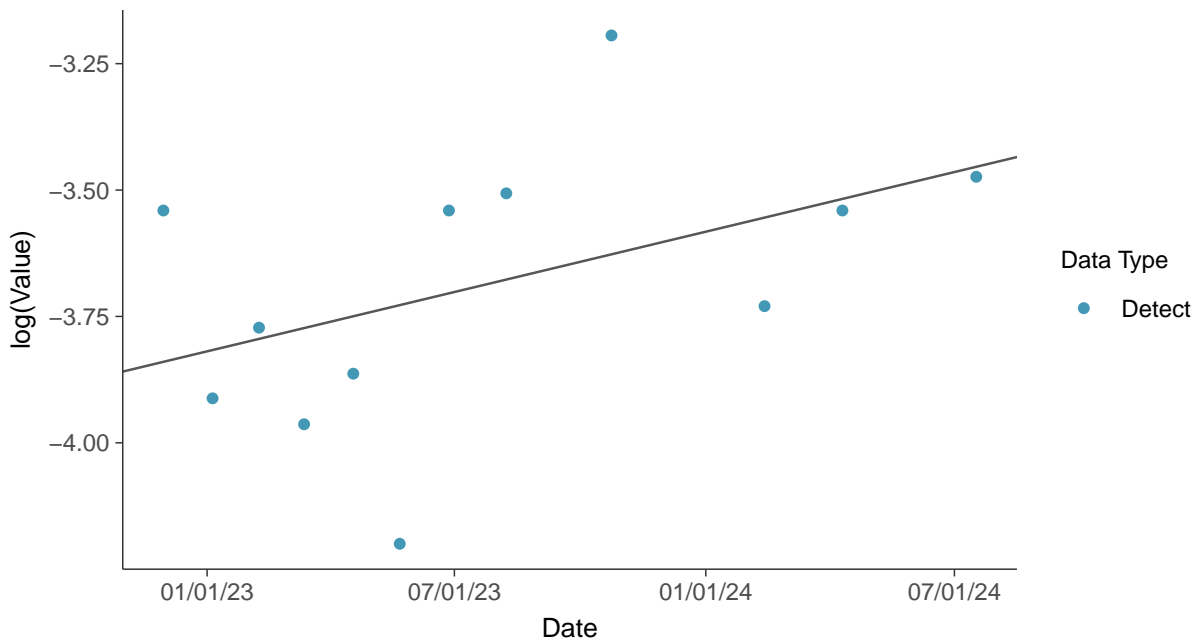




**Gamma Q-Q plot**  
Arsenic, MW-18 (mg/L)

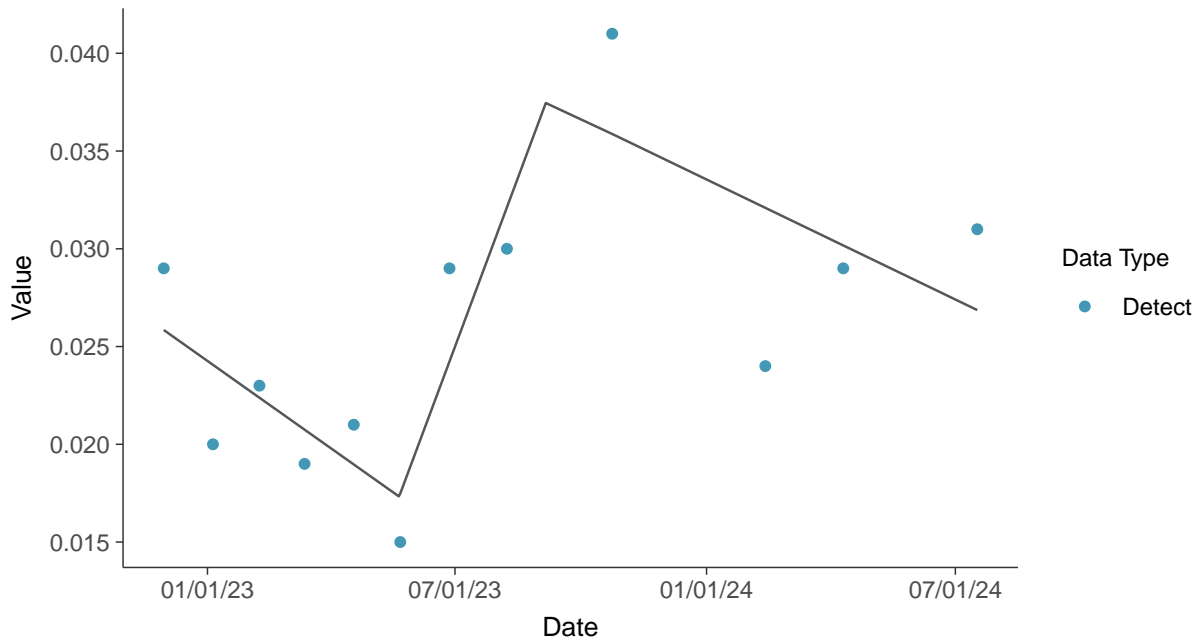


**Trend Regression: Lognormal MLE**  
Arsenic, MW-18 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Arsenic, MW-18 (mg/L)





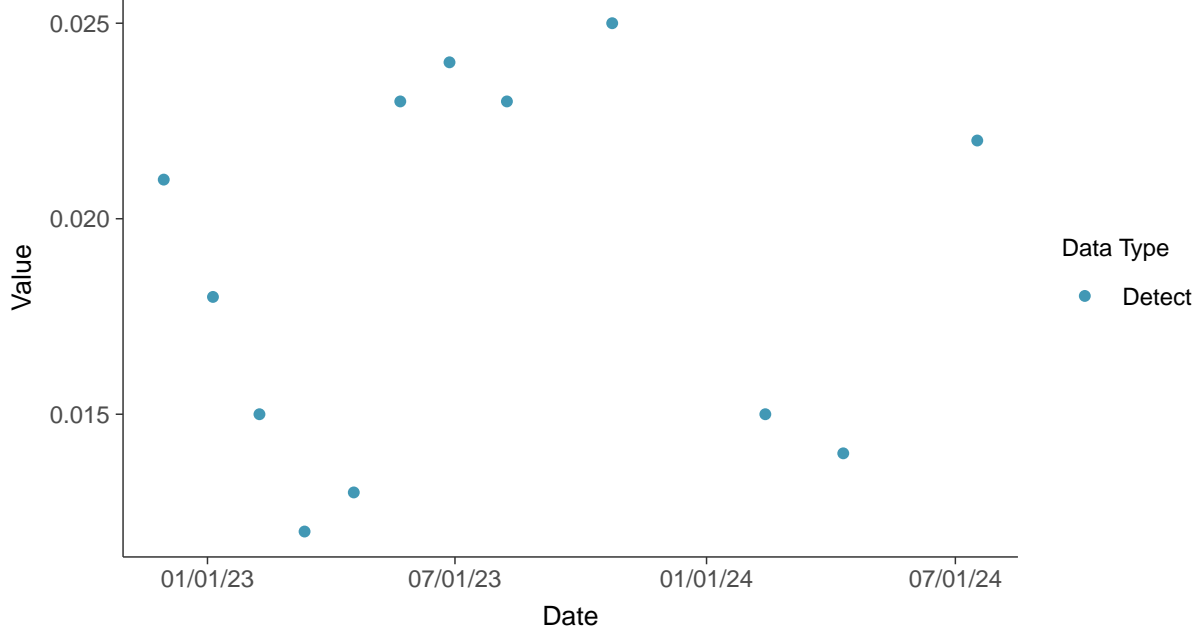


### Appendix IV: Barium, MW-18

ID: 28\_1\_5\_103

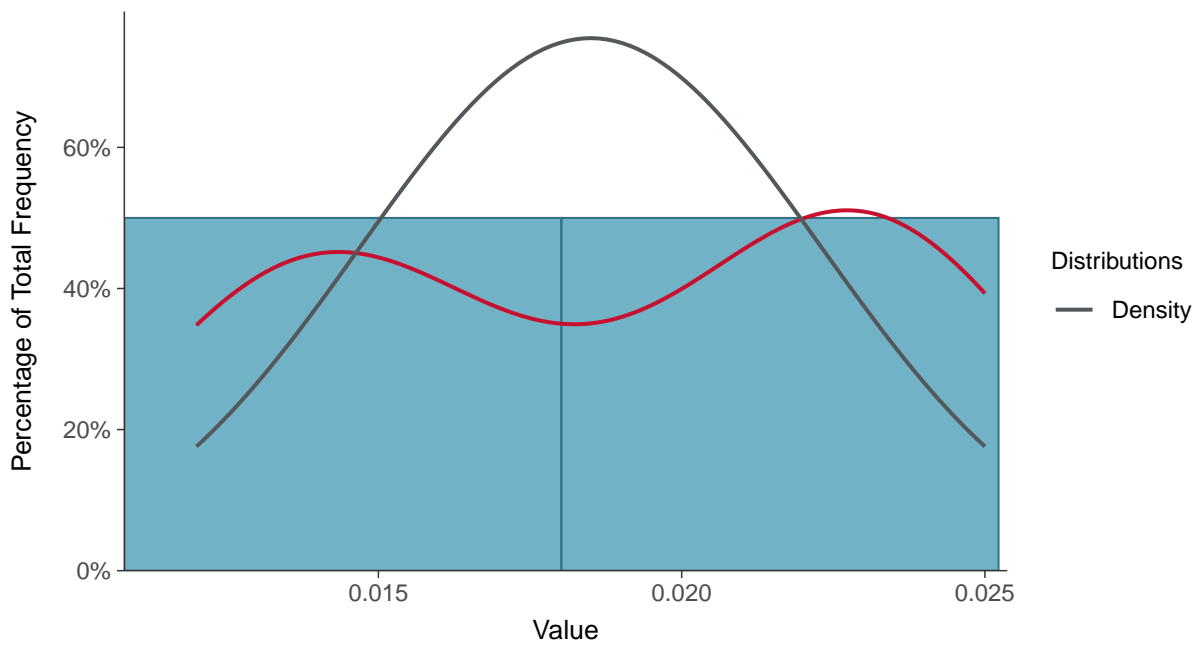
#### Scatter Plot

Barium, MW-18 (mg/L)



#### Histogram

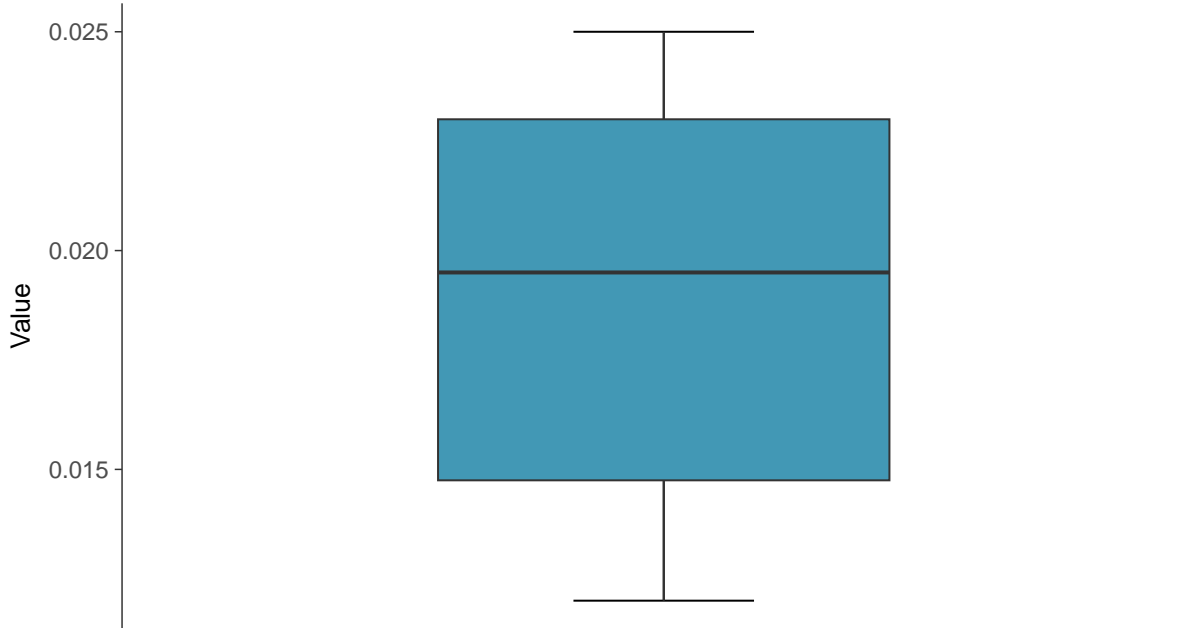
Barium, MW-18 (mg/L)





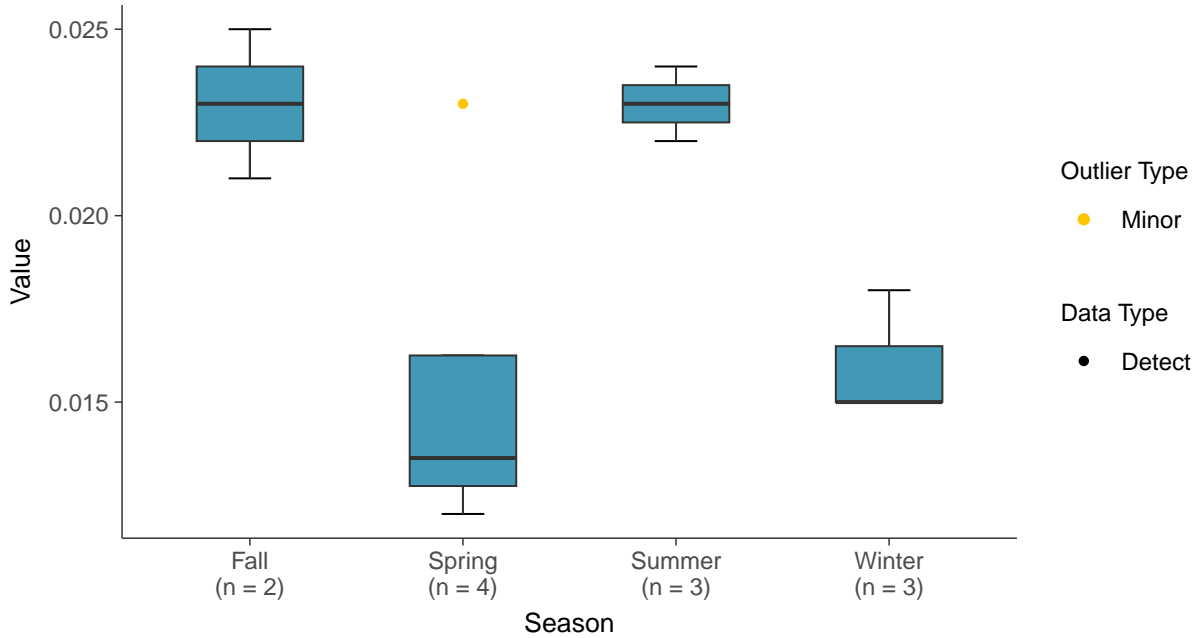
### Boxplot

Barium, MW-18 (mg/L)



### Boxplot by Season

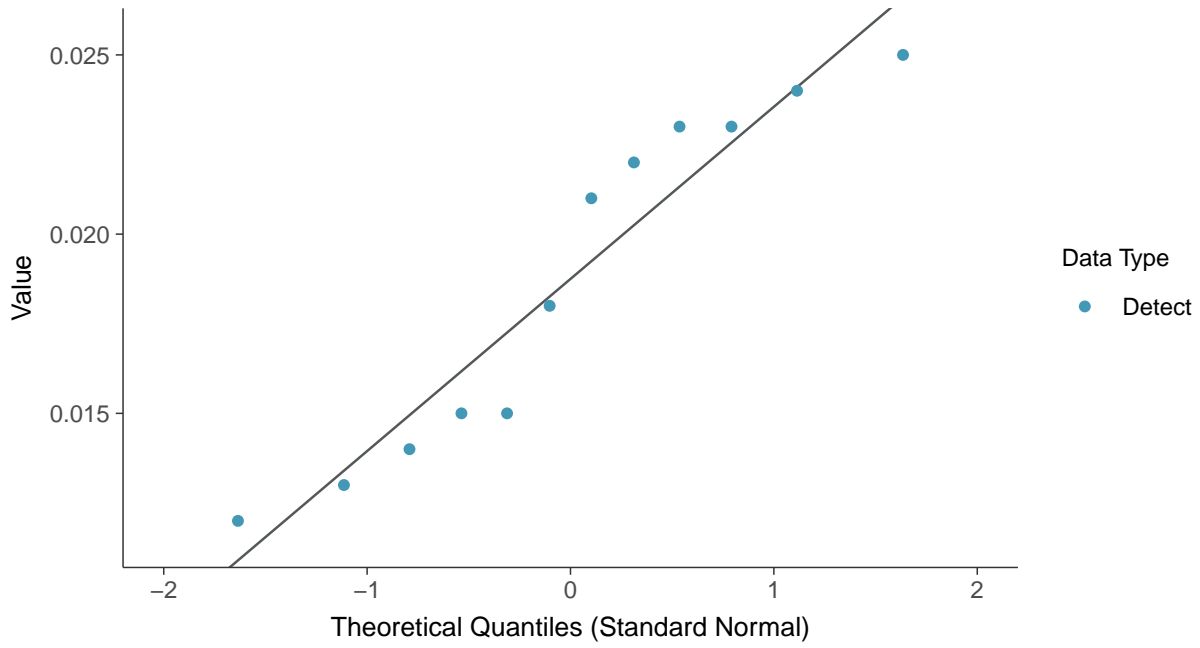
Barium, MW-18 (mg/L)





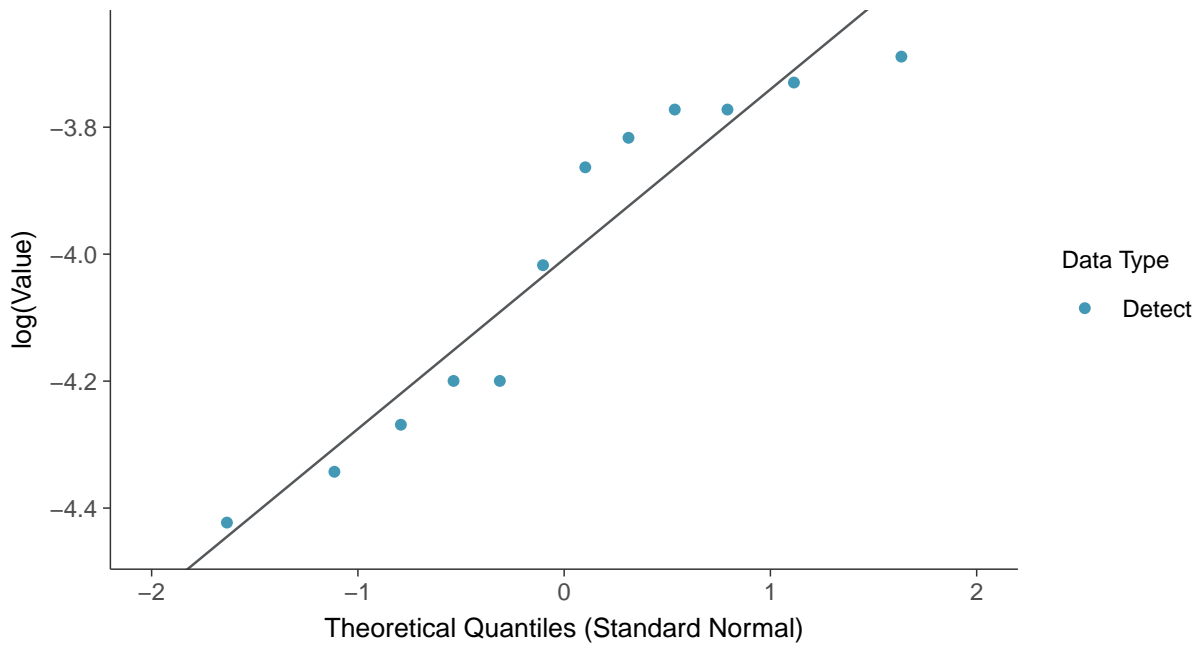
### Normal Q-Q plot

Barium, MW-18 (mg/L)



### Lognormal Q-Q plot

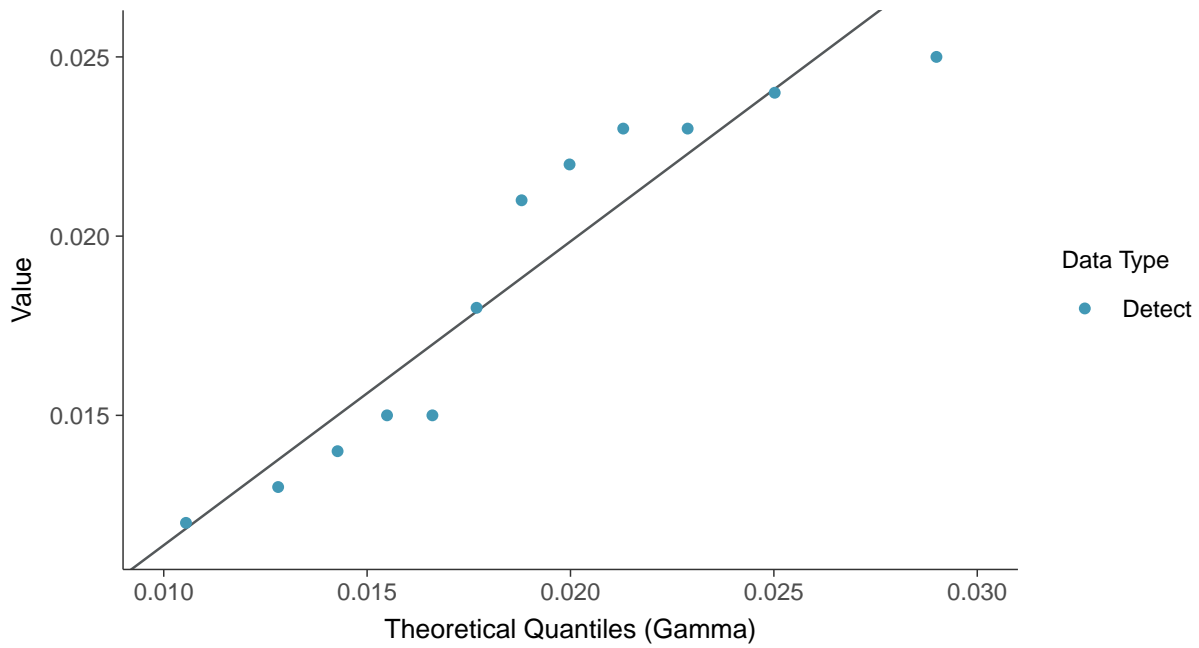
Barium, MW-18 (mg/L)





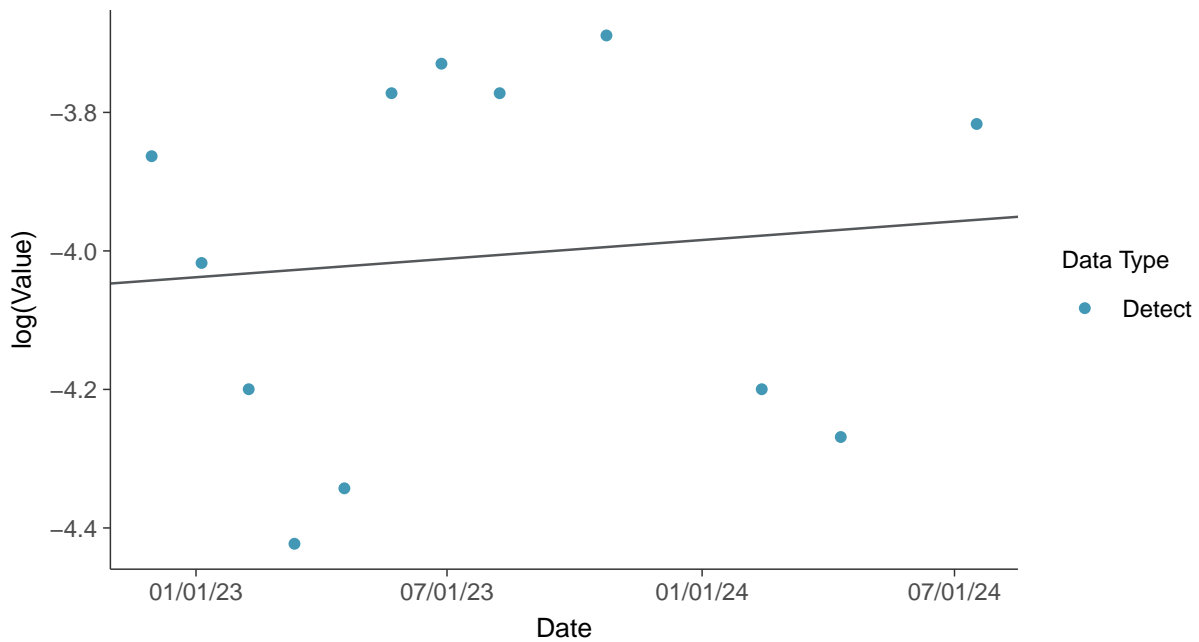
### Gamma Q-Q plot

Barium, MW-18 (mg/L)



### Trend Regression: Lognormal MLE

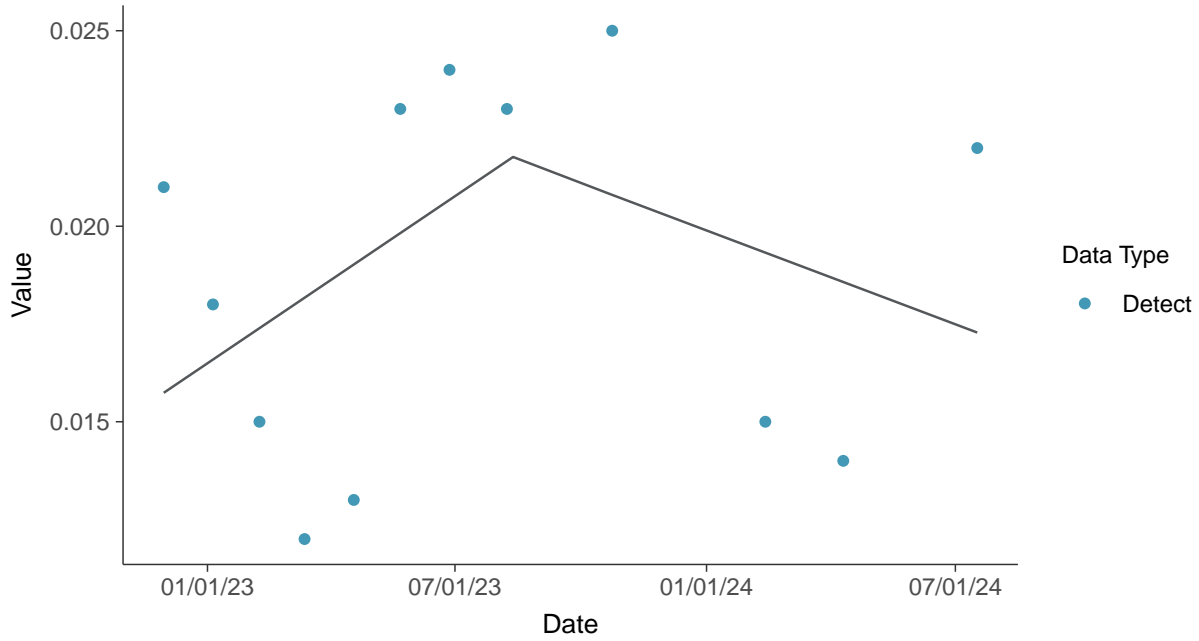
Barium, MW-18 (mg/L)





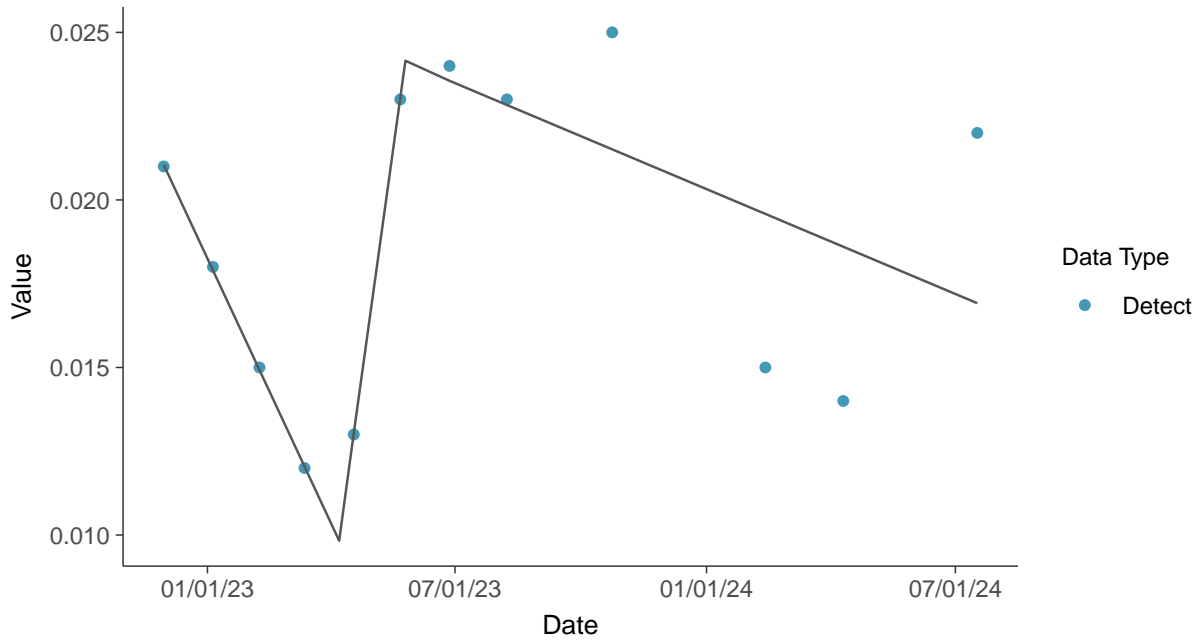
### Trend Regression: Piecewise Linear-Linear

Barium, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

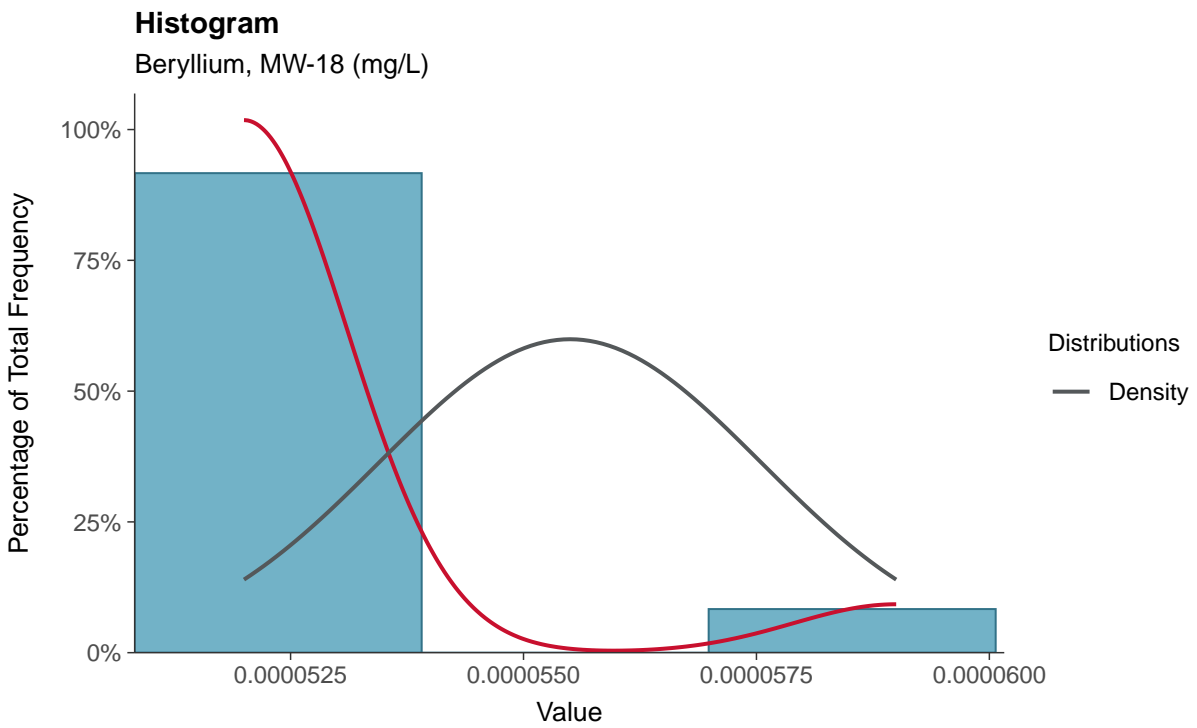
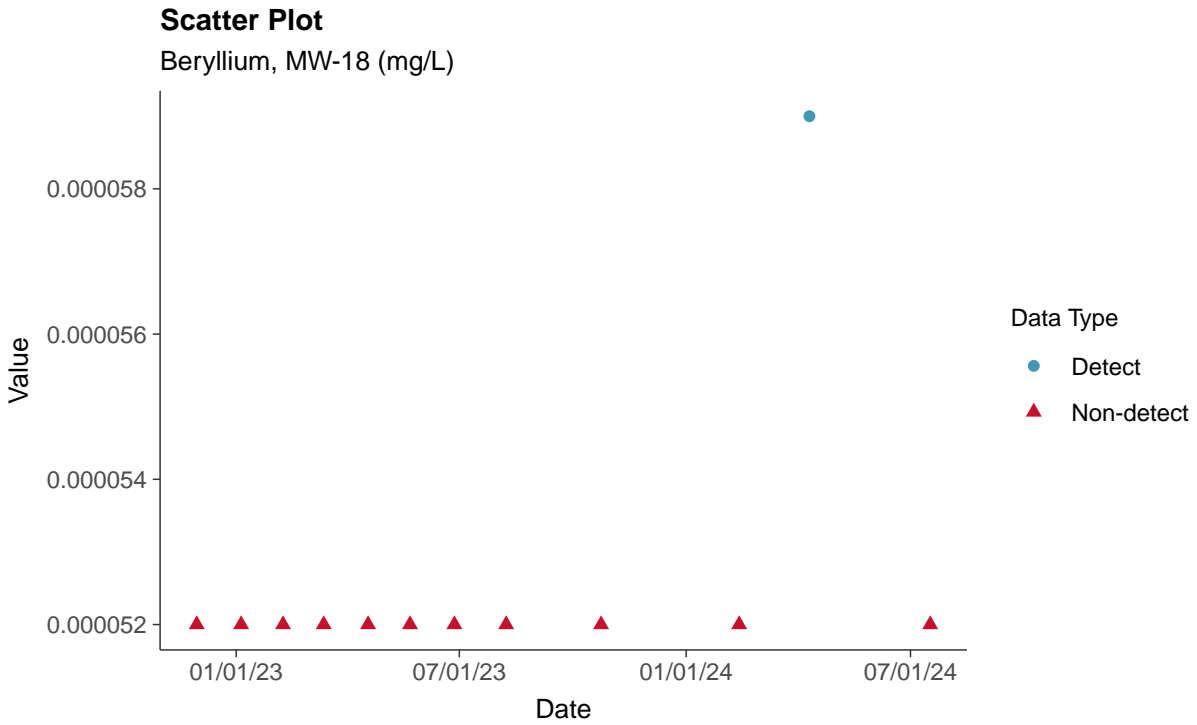
Barium, MW-18 (mg/L)





### Appendix IV: Beryllium, MW-18

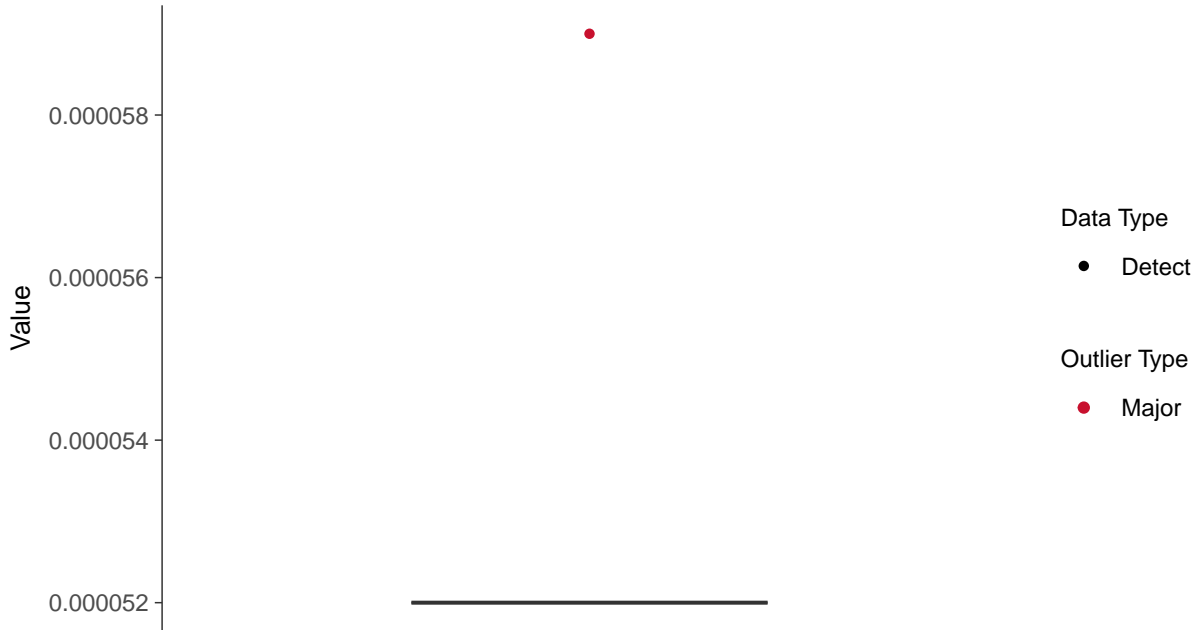
ID: 28\_1\_5\_104





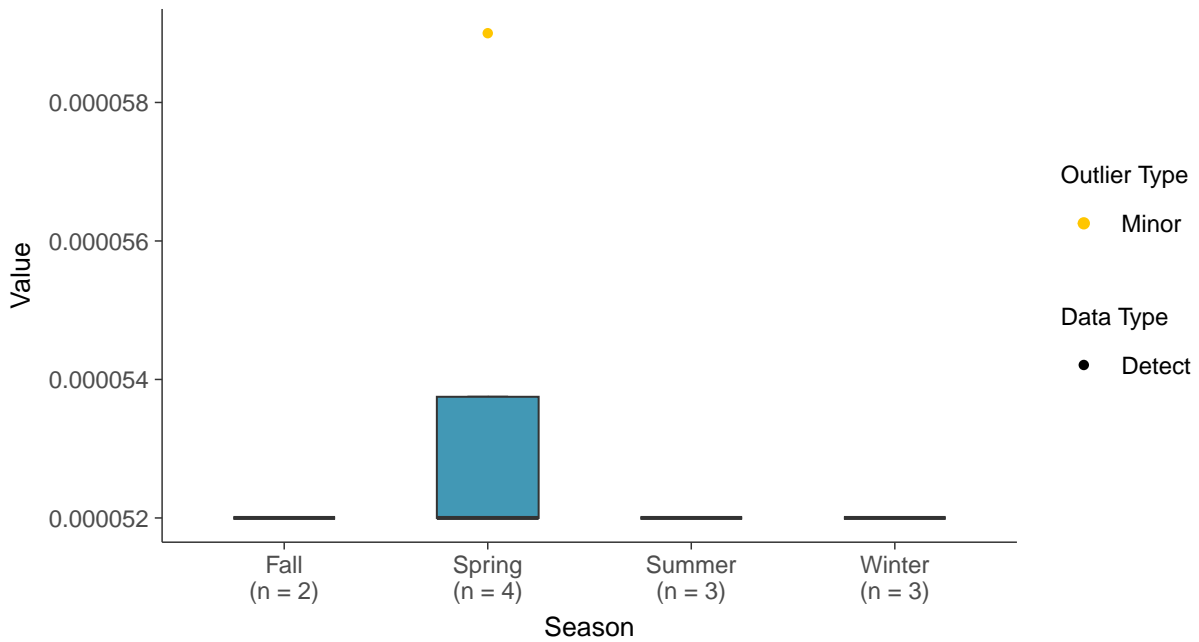
### Boxplot

Beryllium, MW-18 (mg/L)



### Boxplot by Season

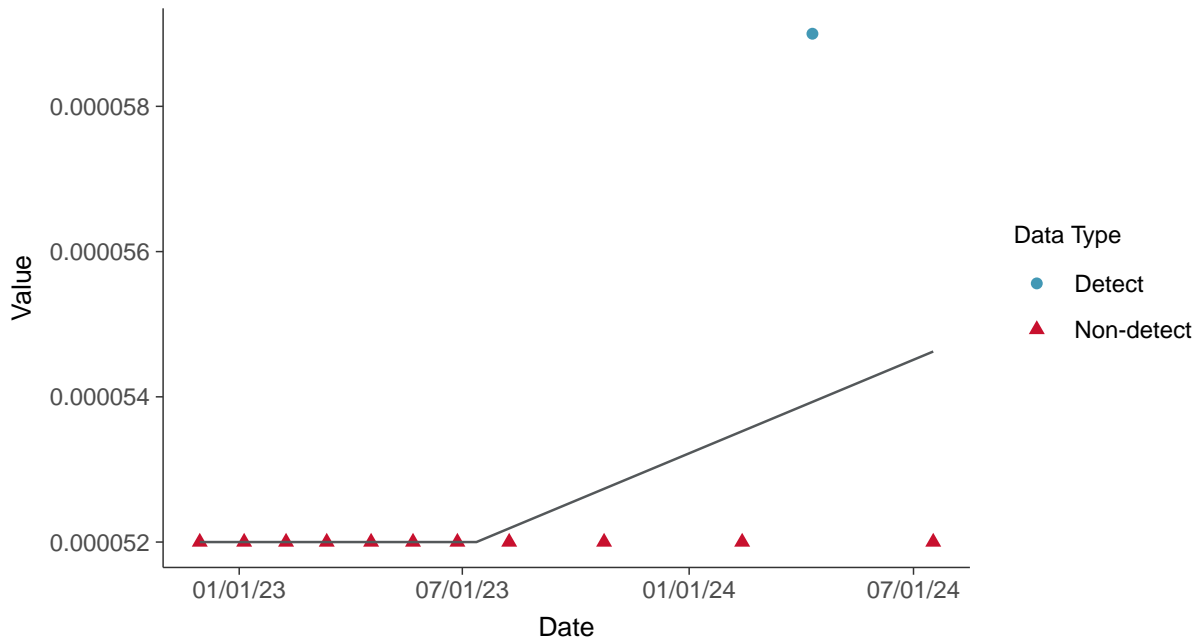
Beryllium, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-18 (mg/L)

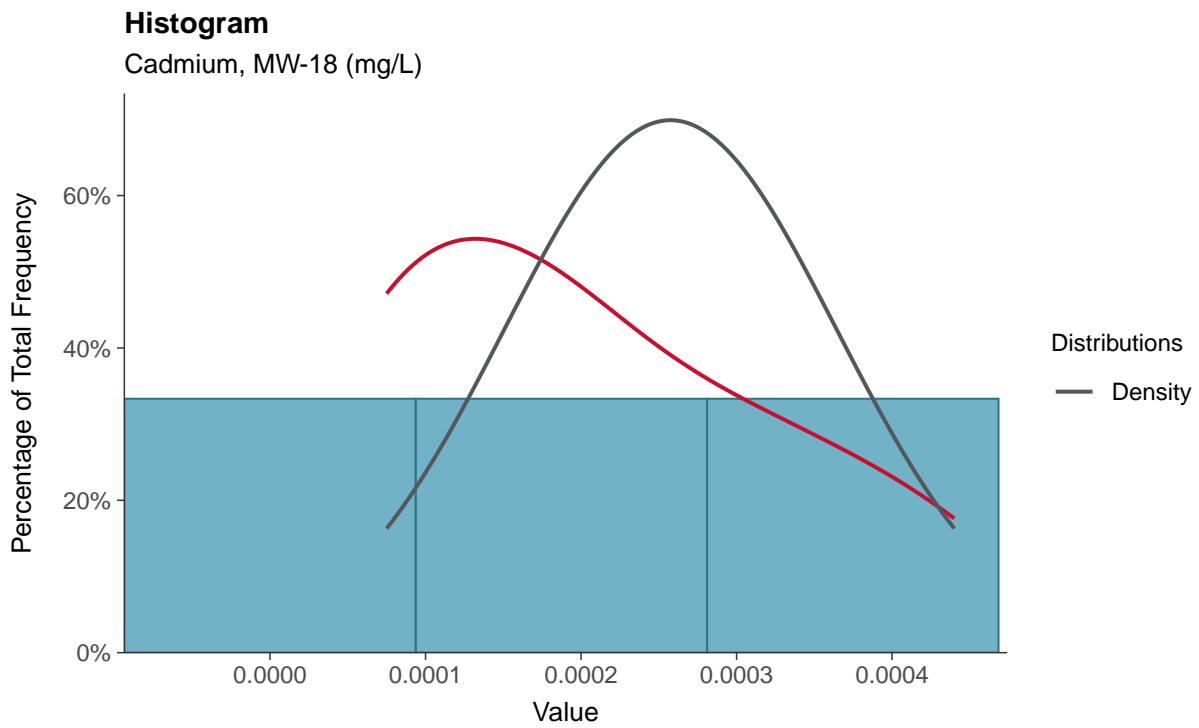
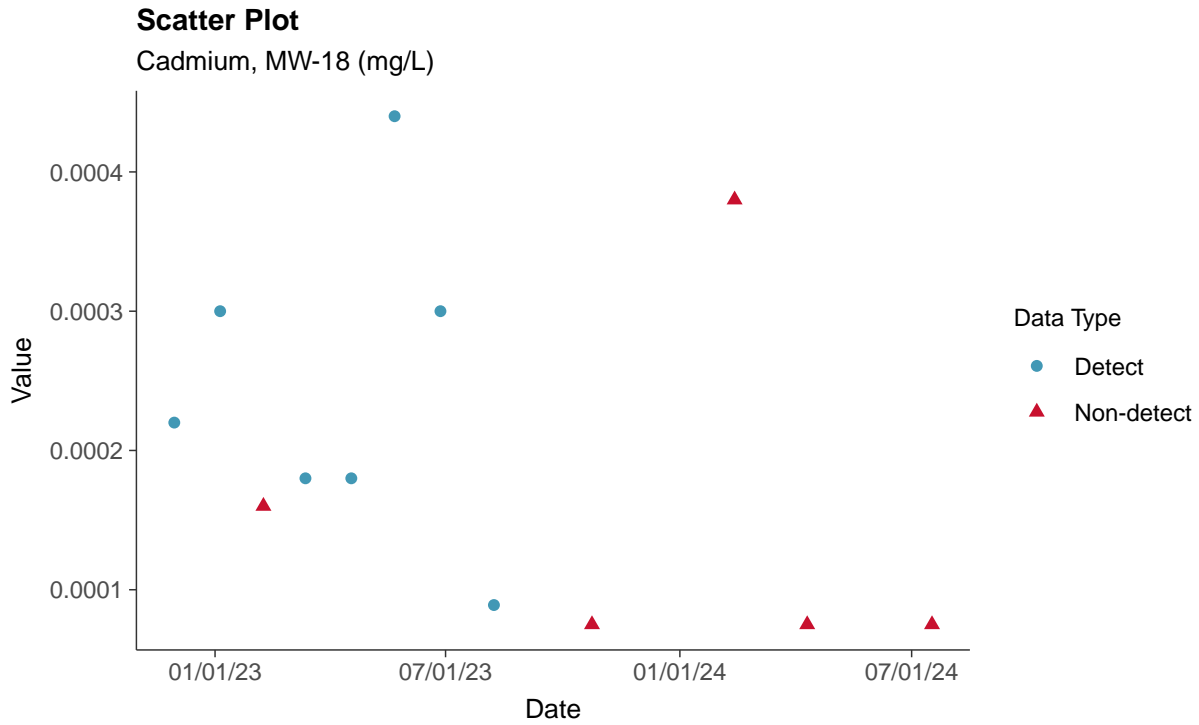






### Appendix IV: Cadmium, MW-18

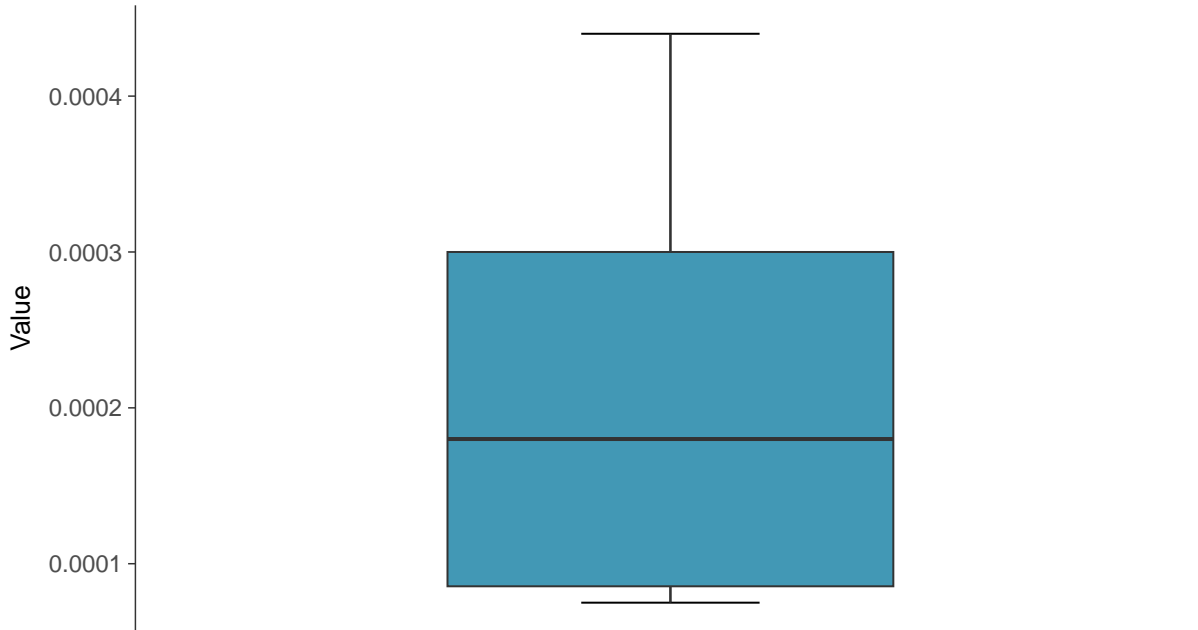
ID: 28\_1\_5\_106





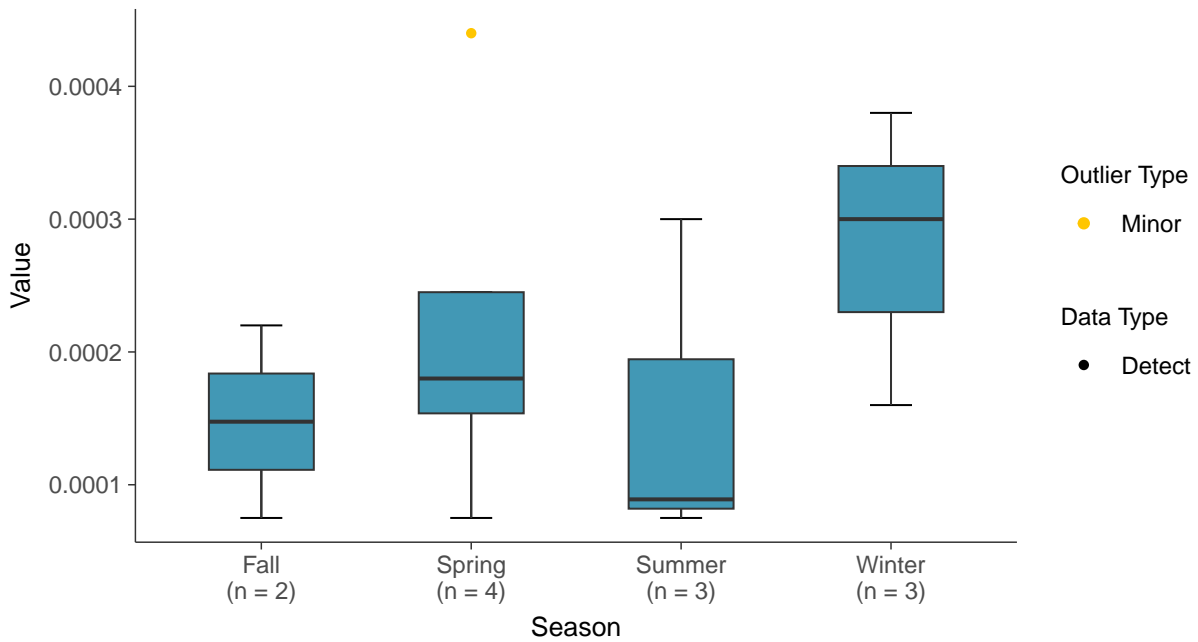
### Boxplot

Cadmium, MW-18 (mg/L)



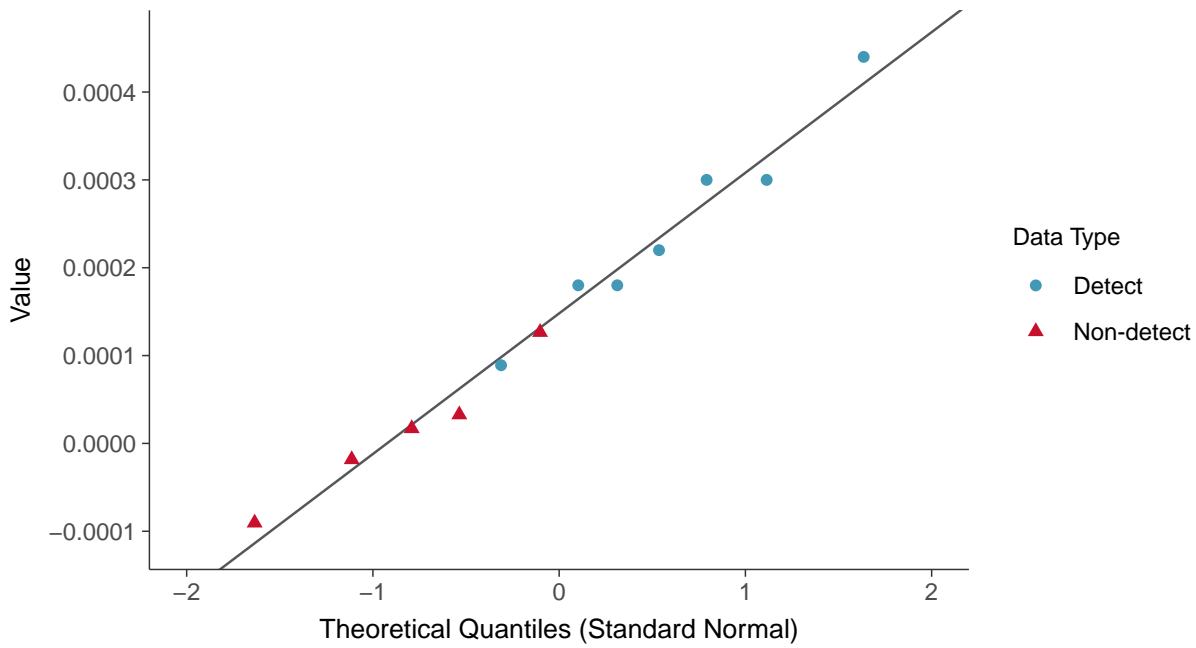
### Boxplot by Season

Cadmium, MW-18 (mg/L)

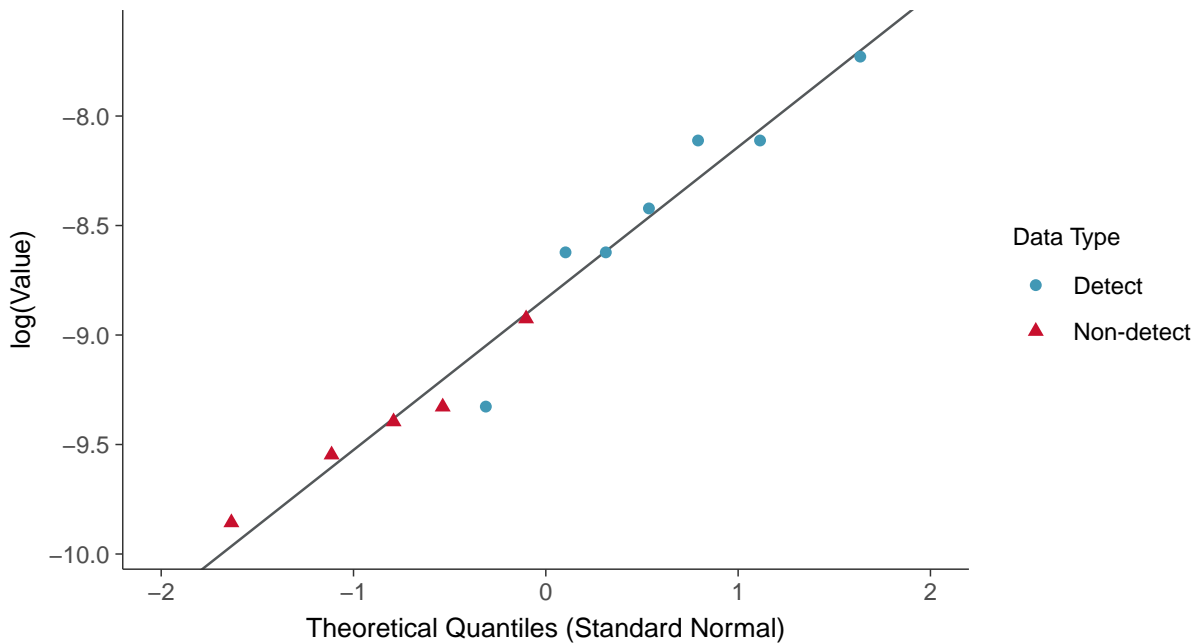




**Normal Q-Q plot using ROS Imputed Estimates**  
Cadmium, MW-18 (mg/L)

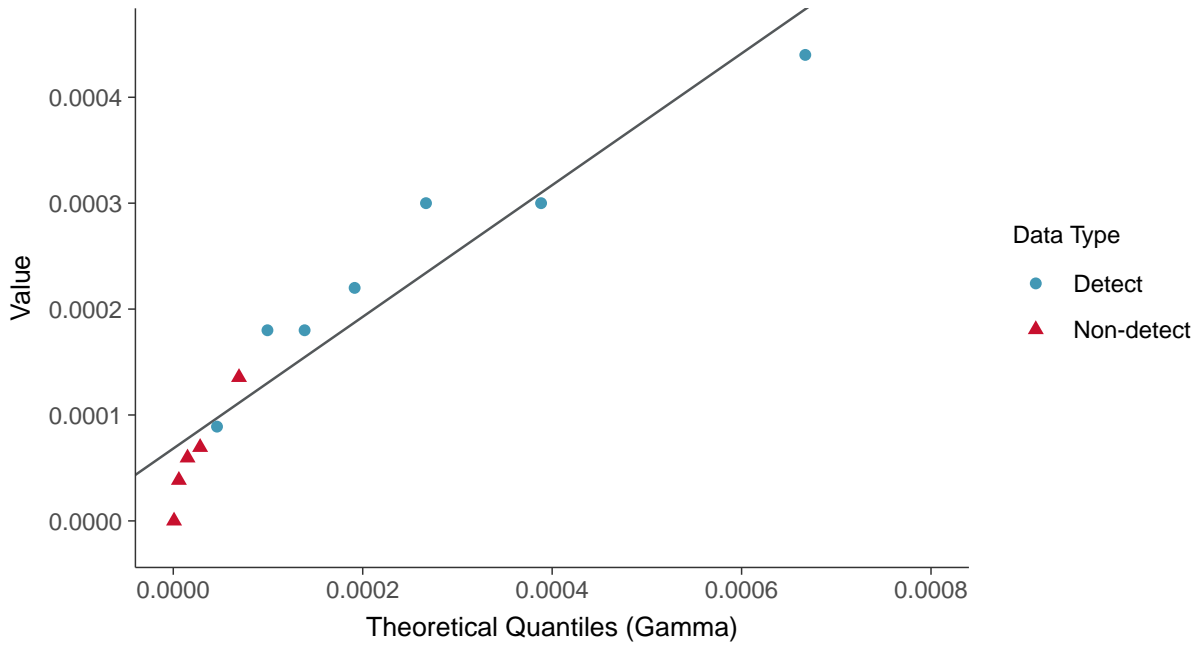


**Lognormal Q-Q plot using ROS Imputed Estimates**  
Cadmium, MW-18 (mg/L)

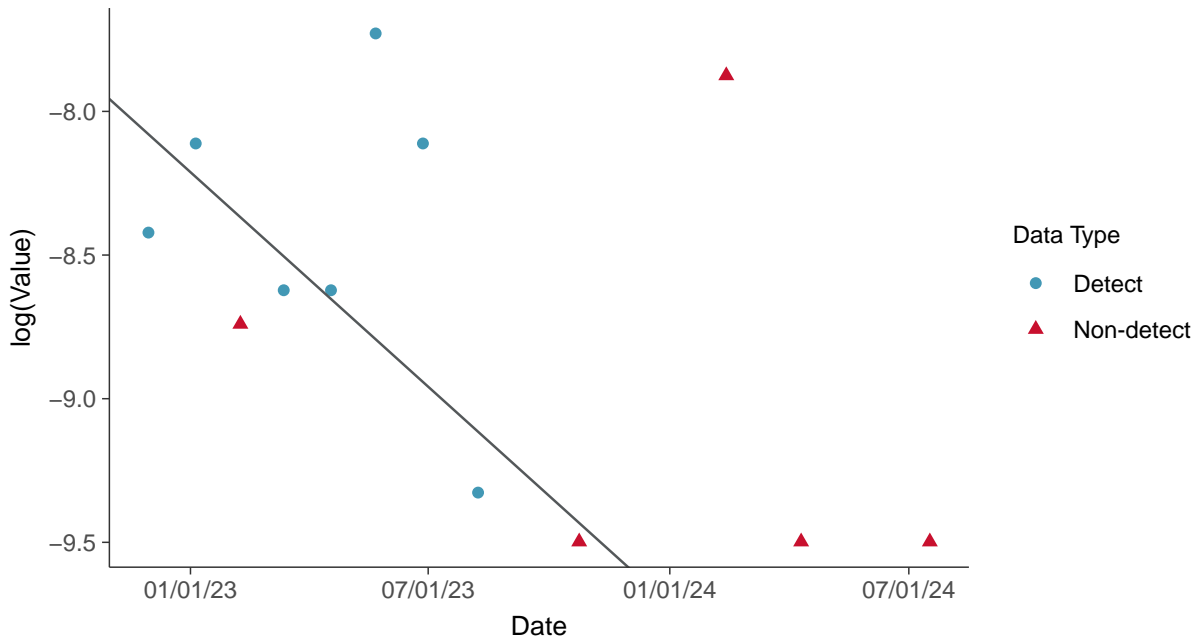




**Gamma Q-Q plot using ROS Imputed Estimates**  
Cadmium, MW-18 (mg/L)

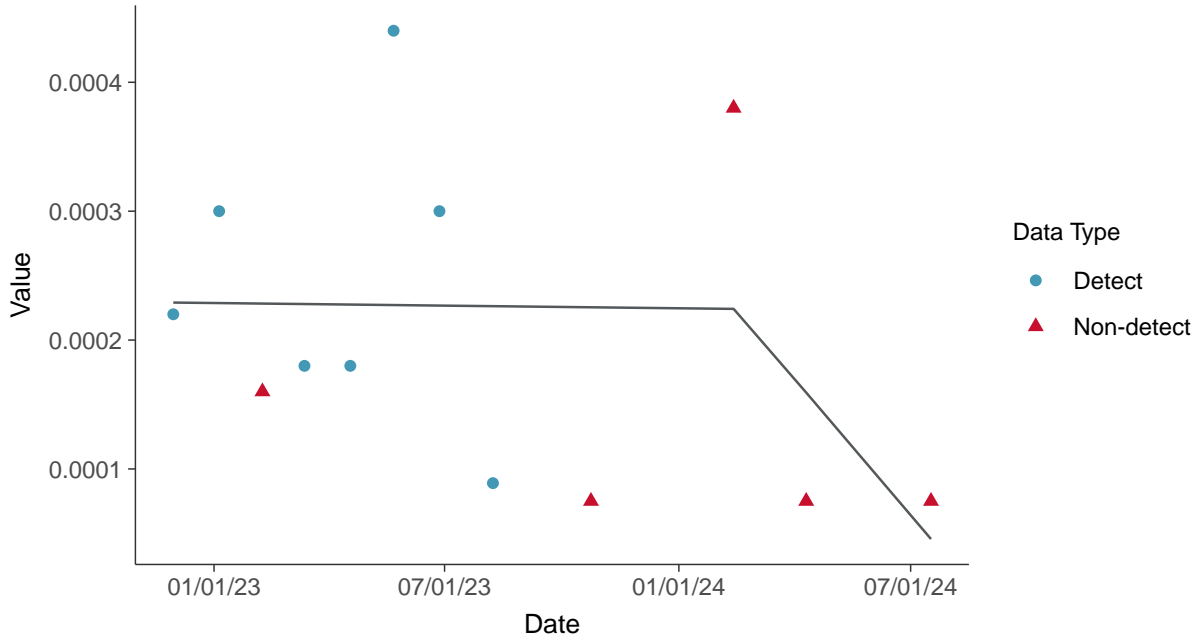


**Trend Regression: Lognormal MLE**  
Cadmium, MW-18 (mg/L)

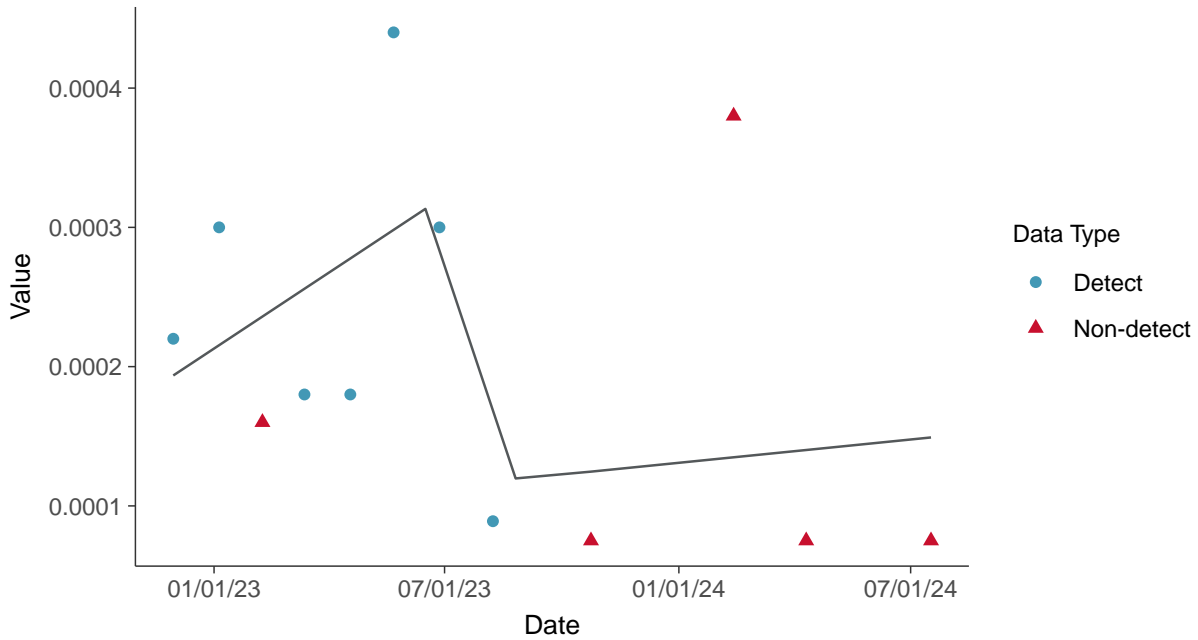




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-18 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-18 (mg/L)



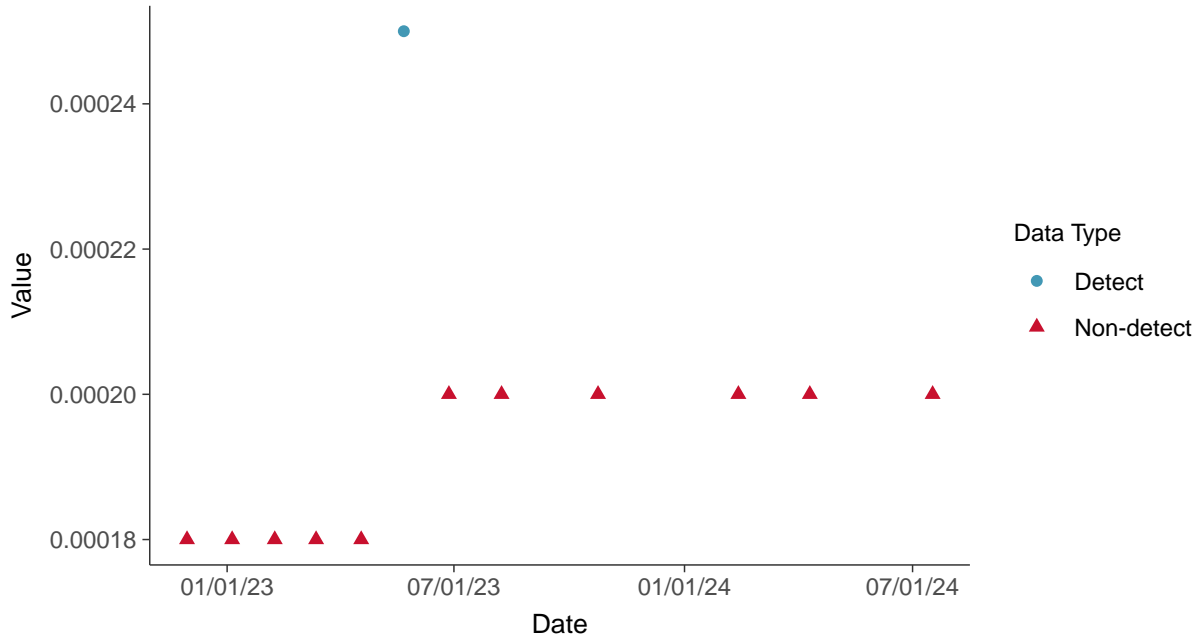


## Appendix IV: Chromium, Total, MW-18

ID: 28\_1\_5\_109

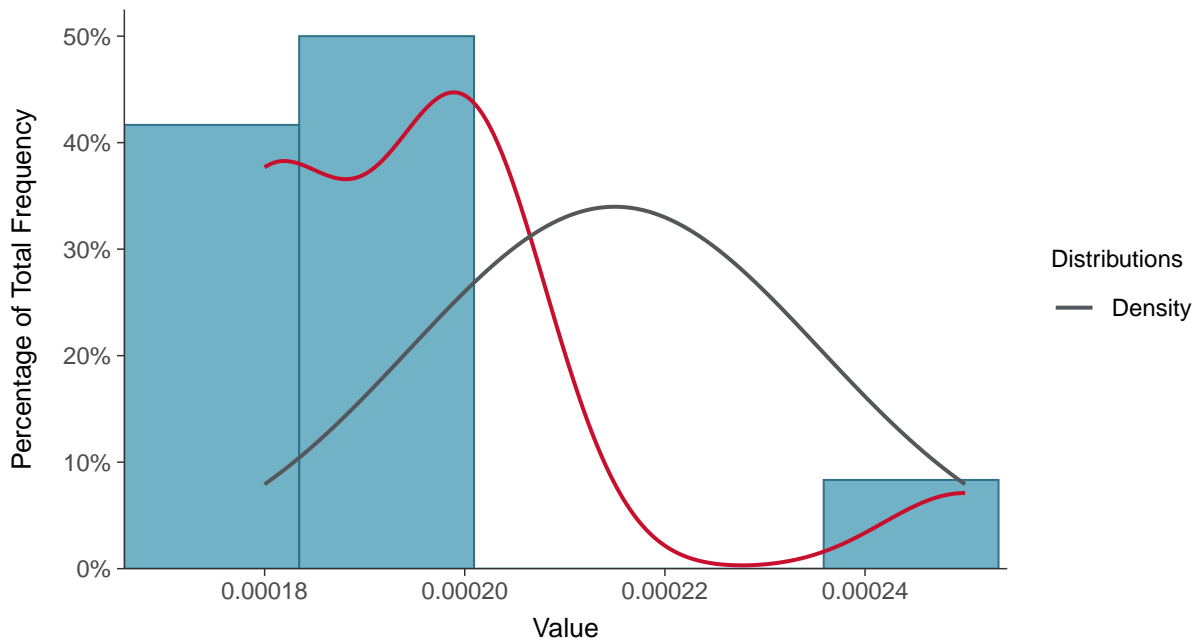
### Scatter Plot

Chromium, Total, MW-18 (mg/L)



### Histogram

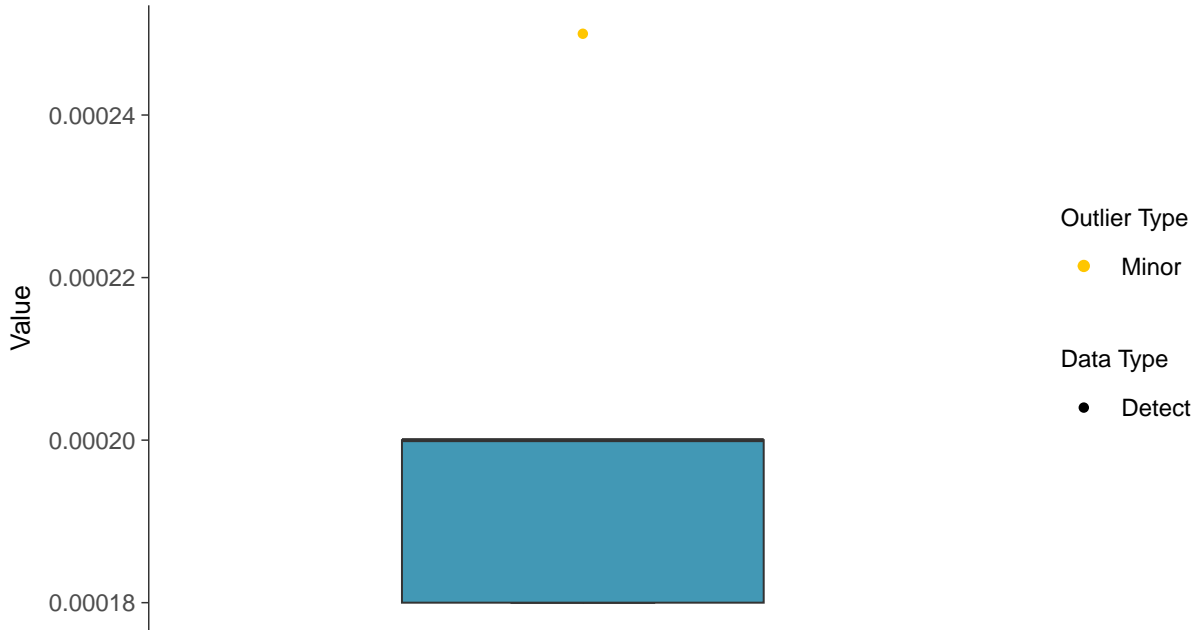
Chromium, Total, MW-18 (mg/L)





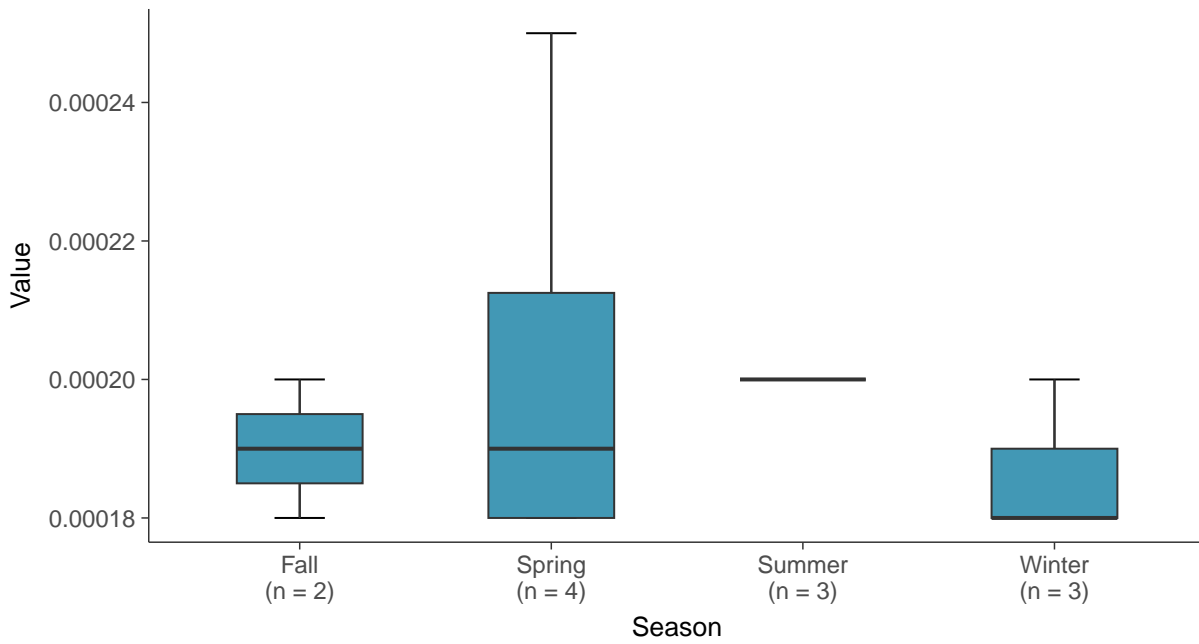
### Boxplot

Chromium, Total, MW-18 (mg/L)



### Boxplot by Season

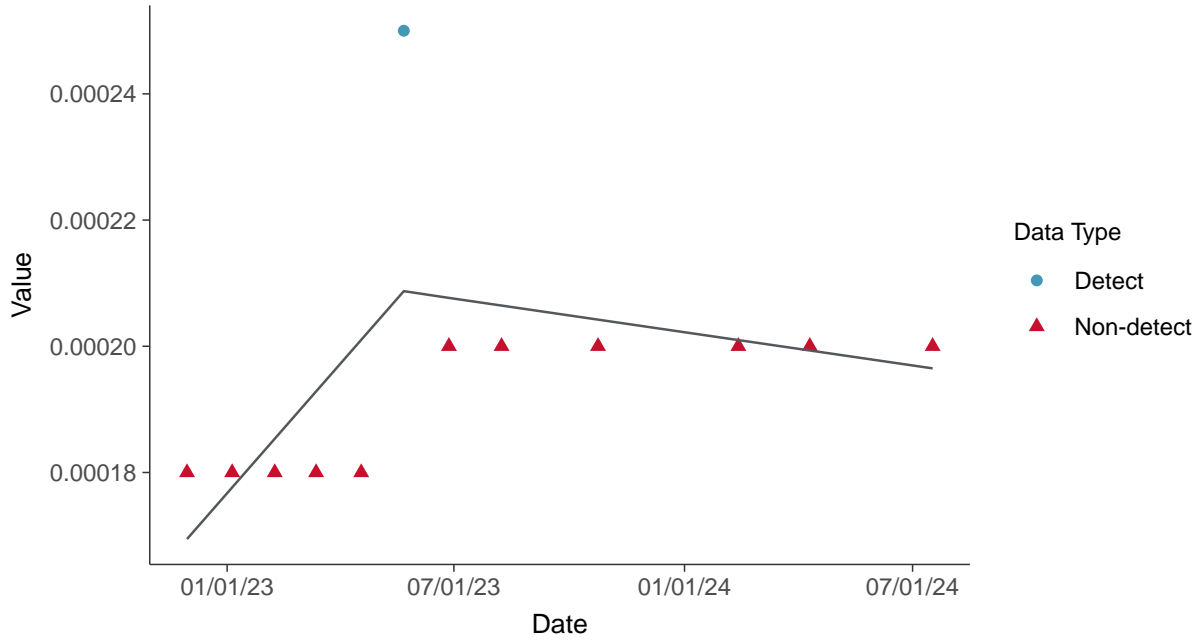
Chromium, Total, MW-18 (mg/L)





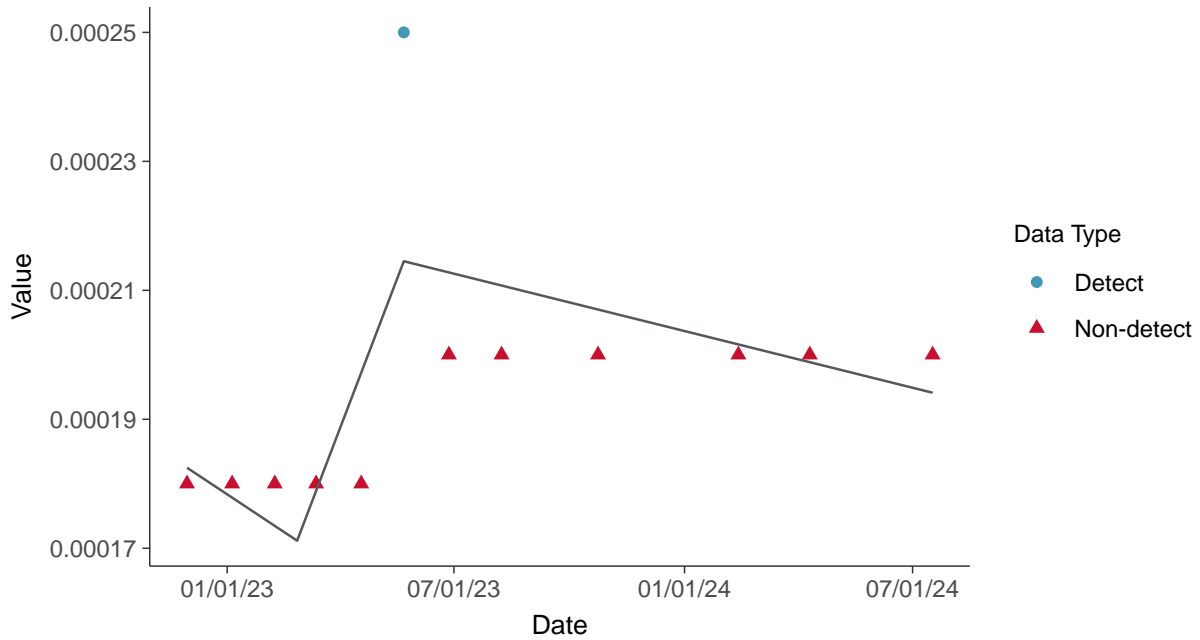
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-18 (mg/L)





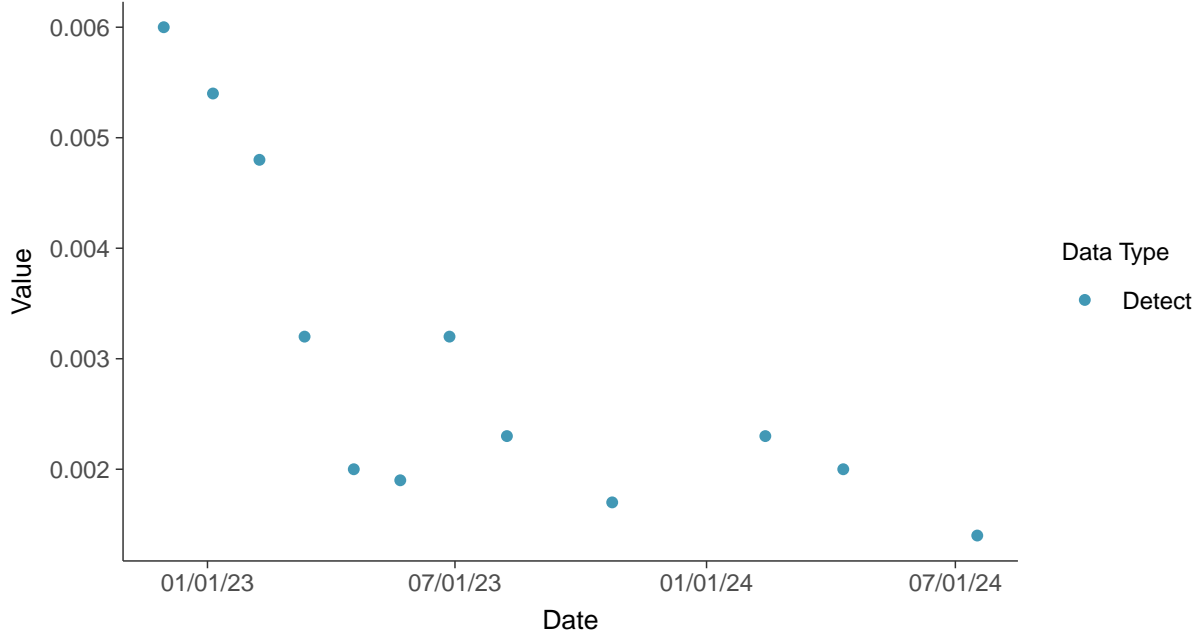


### Appendix IV: Cobalt, MW-18

ID: 28\_1\_5\_110

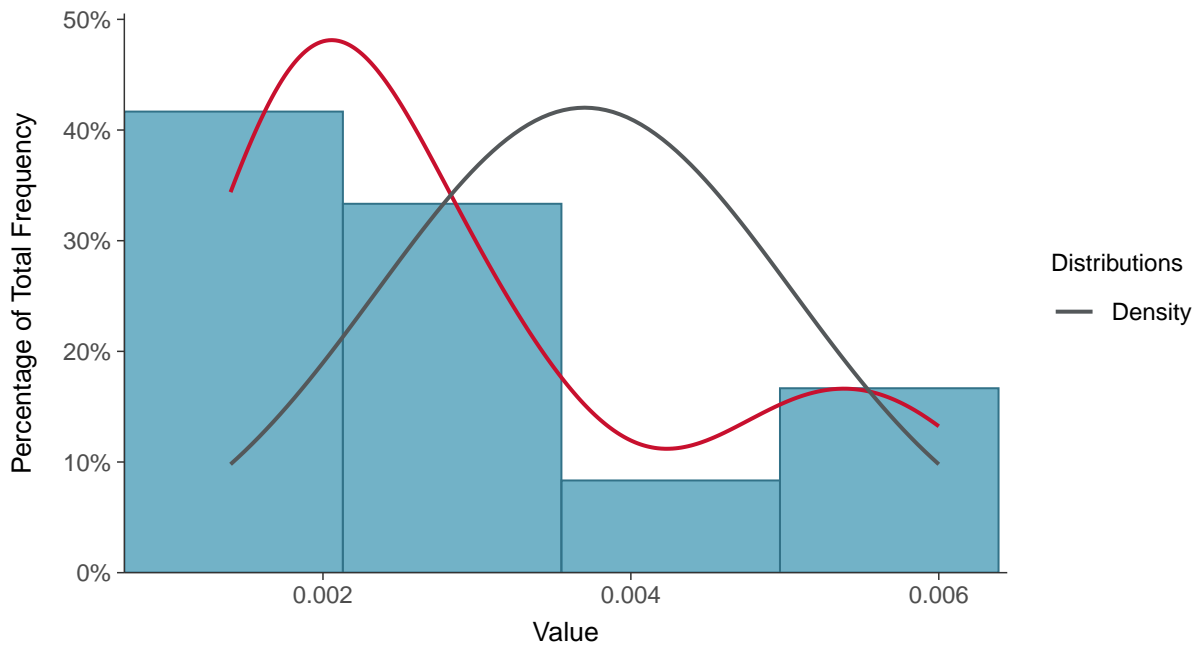
#### Scatter Plot

Cobalt, MW-18 (mg/L)



#### Histogram

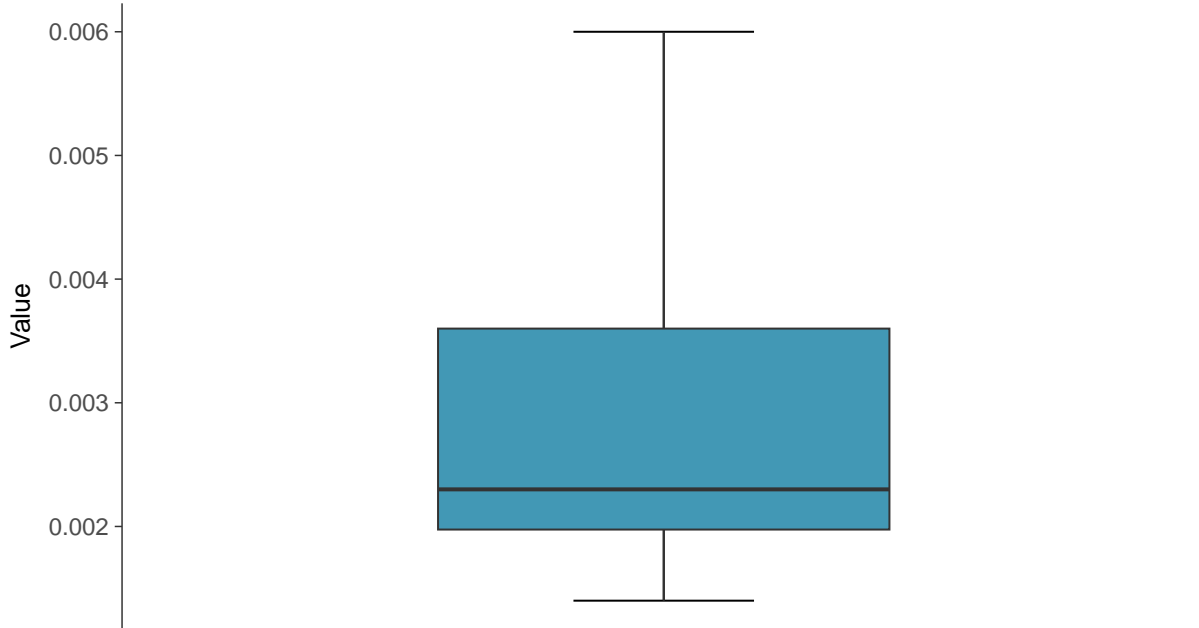
Cobalt, MW-18 (mg/L)





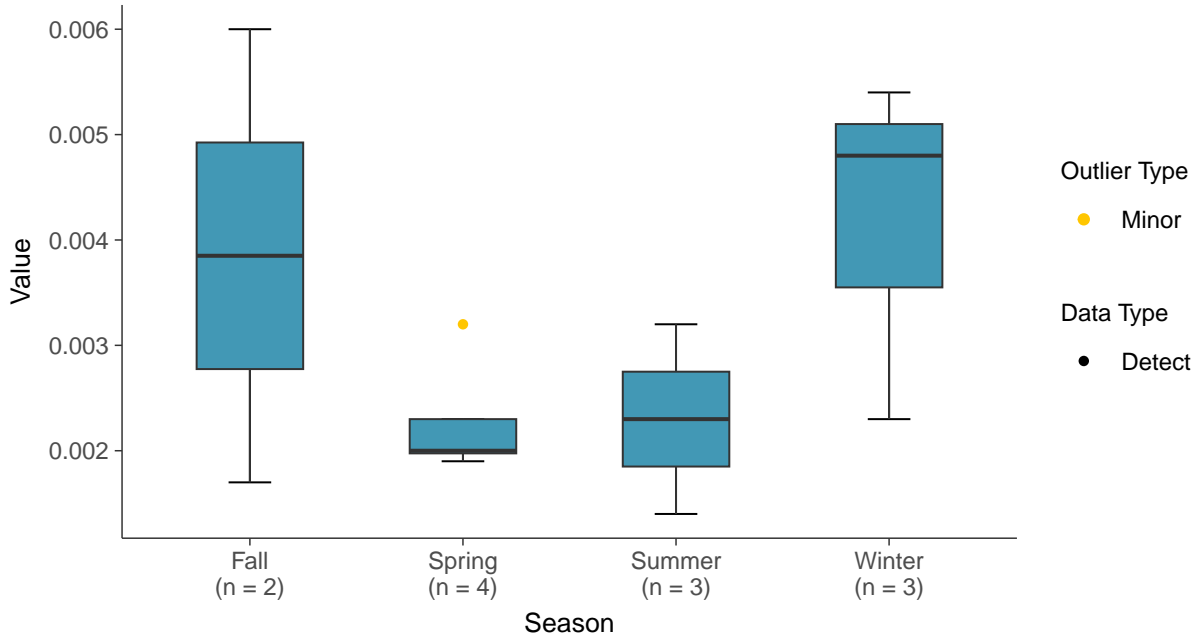
### Boxplot

Cobalt, MW-18 (mg/L)



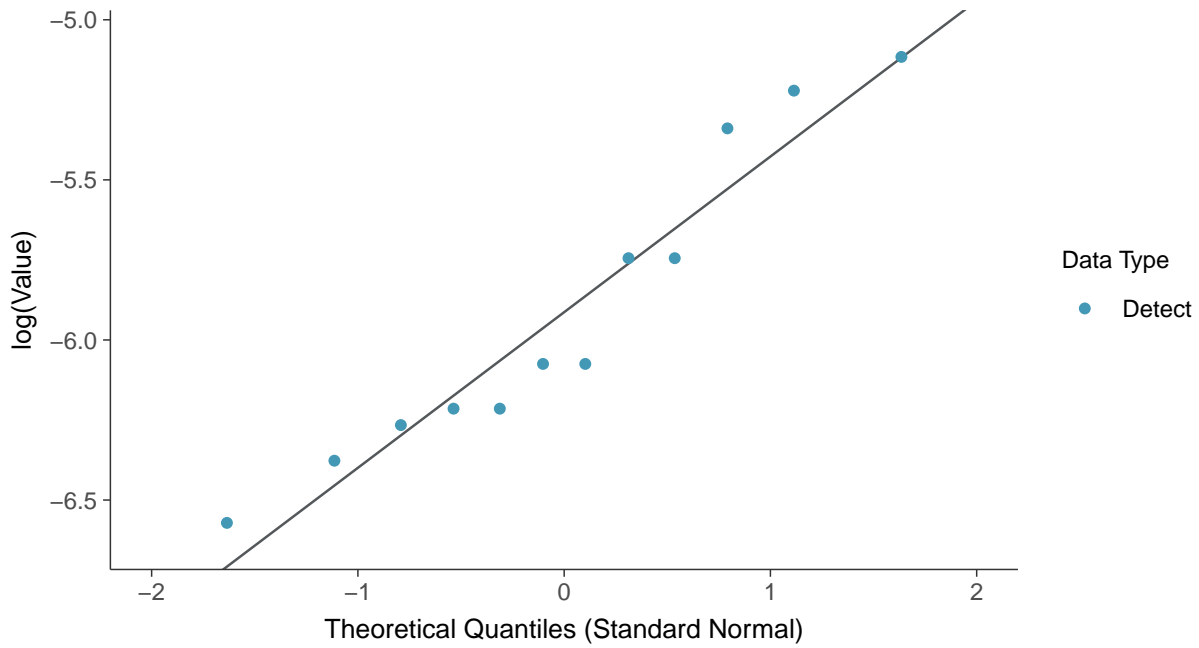
### Boxplot by Season

Cobalt, MW-18 (mg/L)

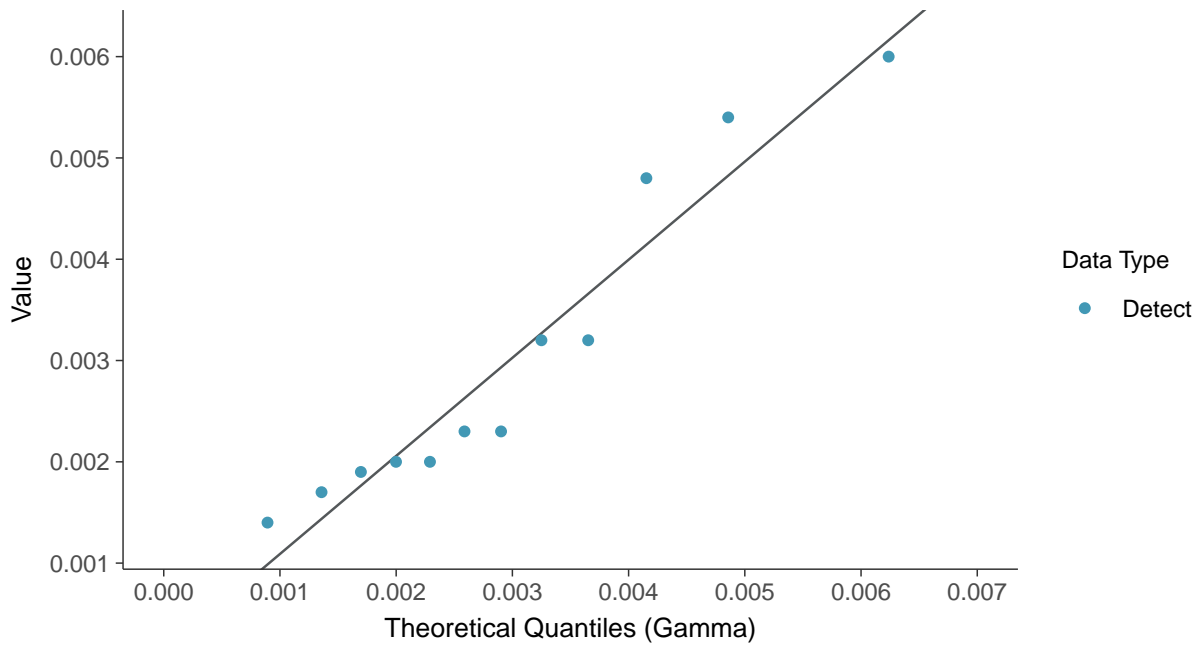




**Lognormal Q-Q plot**  
Cobalt, MW-18 (mg/L)



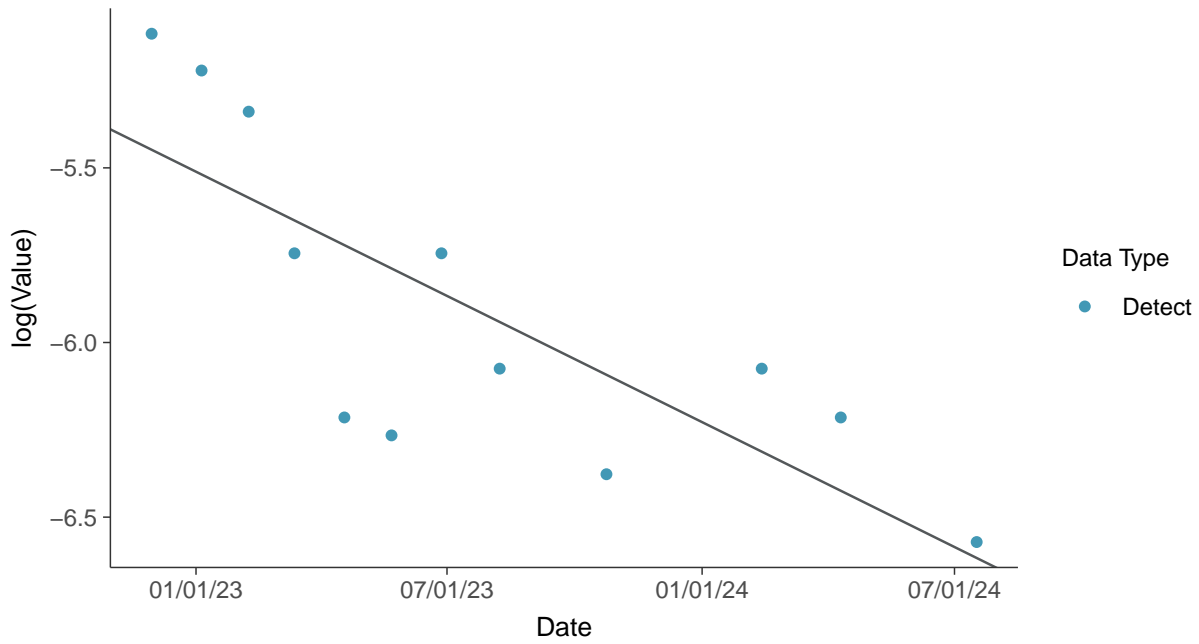
**Gamma Q-Q plot**  
Cobalt, MW-18 (mg/L)





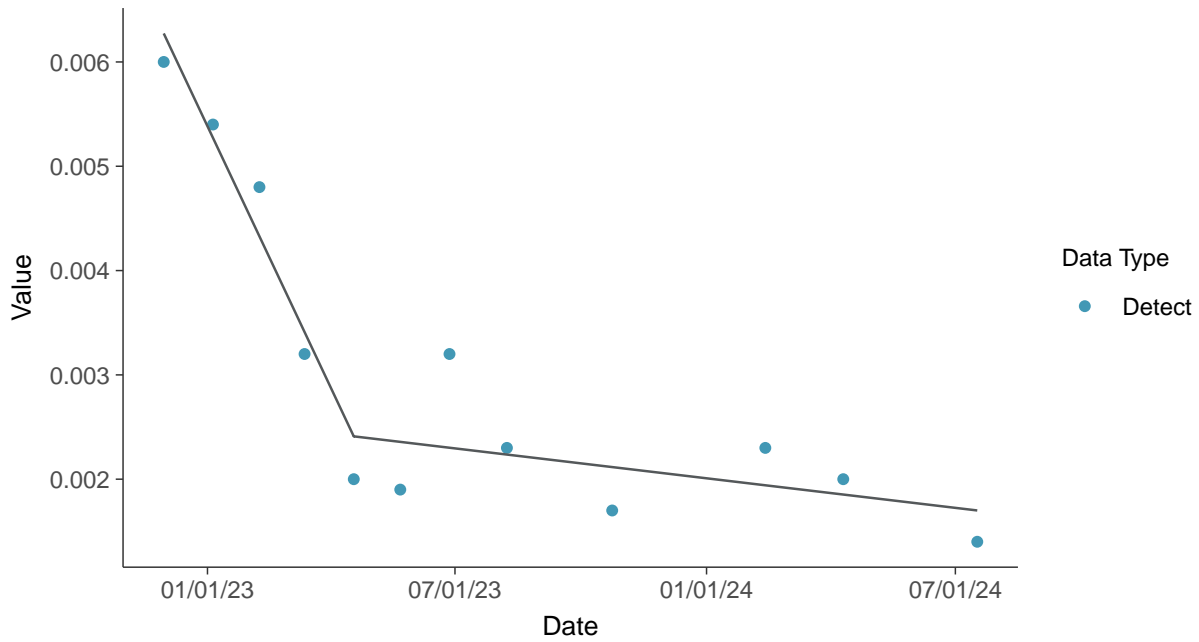
### Trend Regression: Lognormal MLE

Cobalt, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear

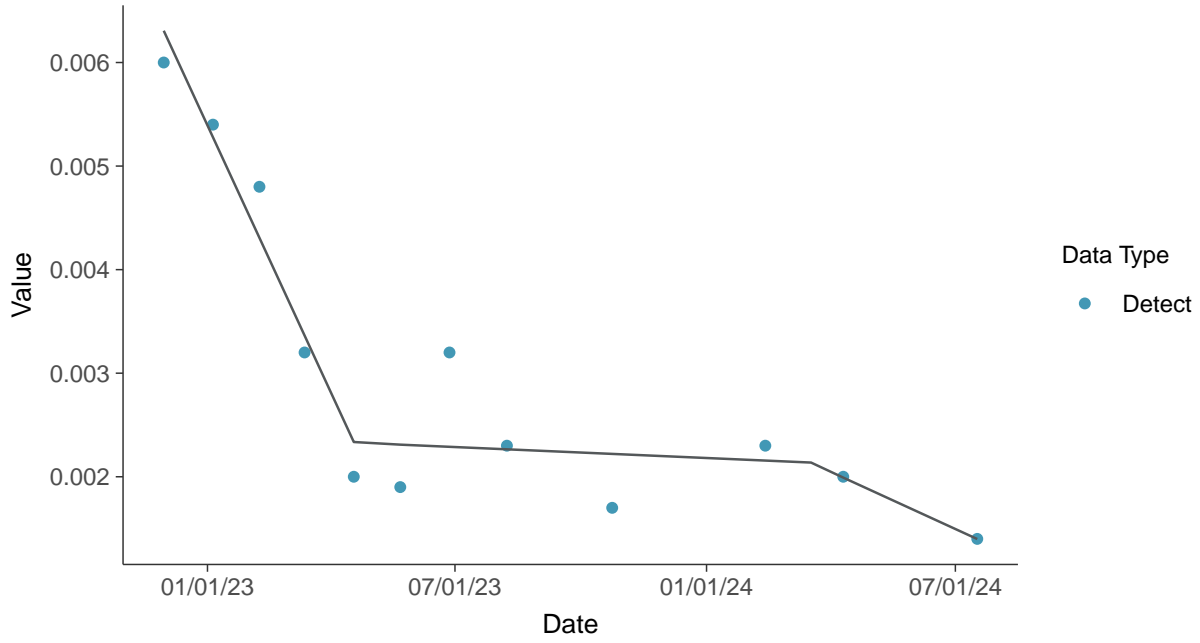
Cobalt, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-18 (mg/L)



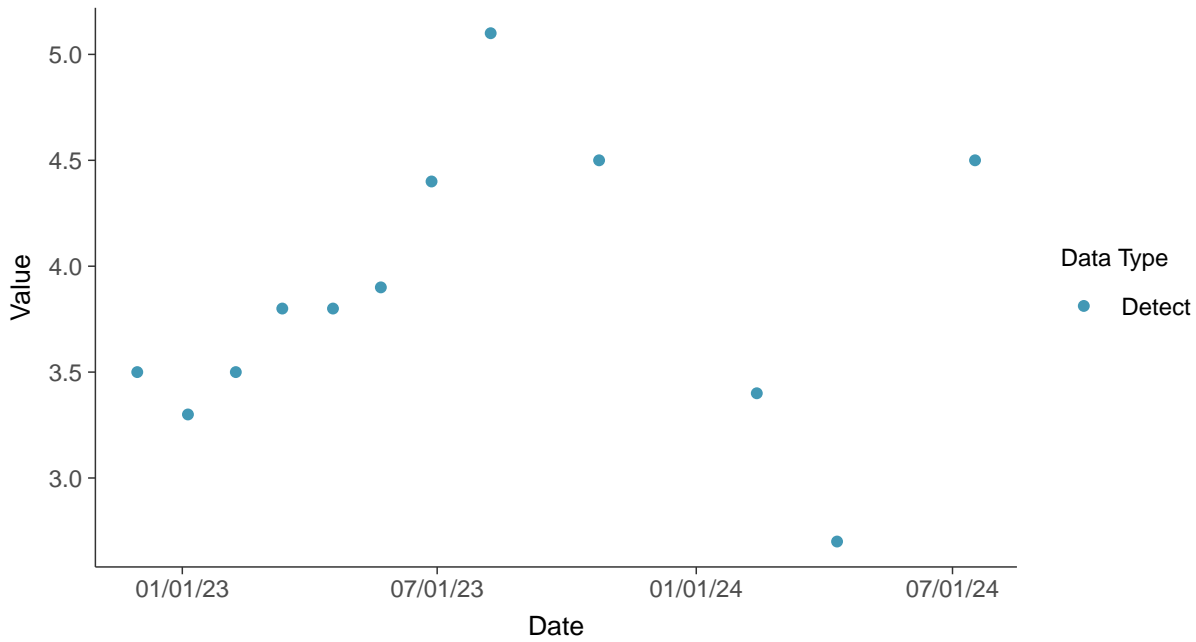


### Appendix IV: Fluoride (App IV), MW-18

ID: 28\_1\_5\_113

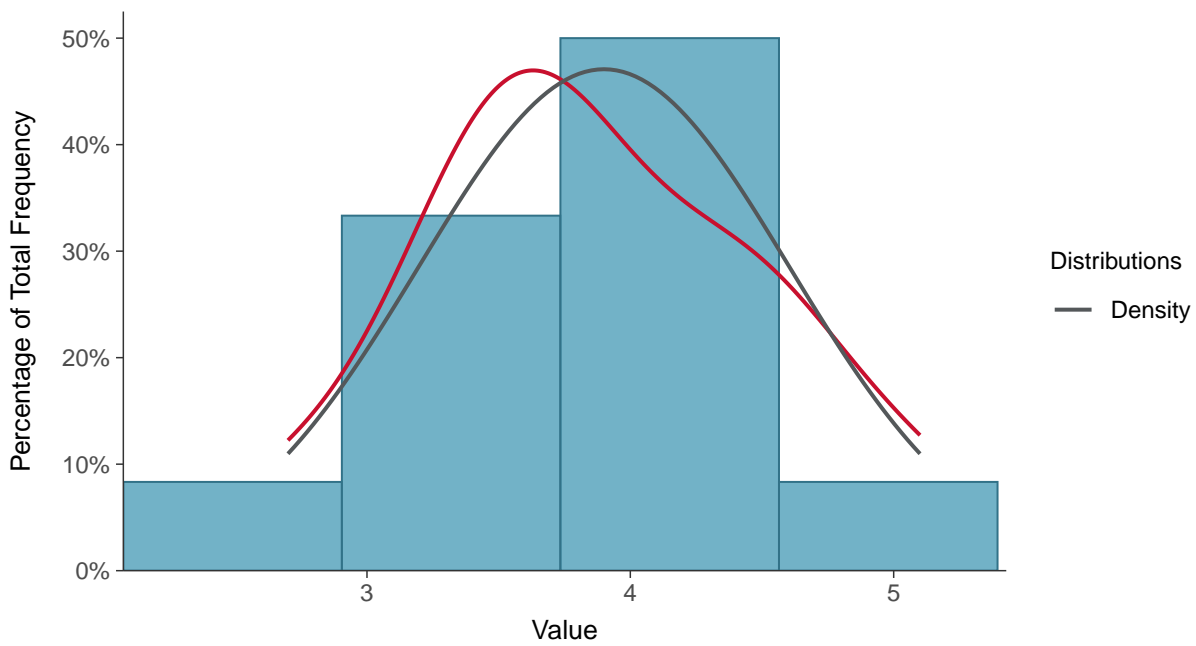
#### Scatter Plot

Fluoride (App IV), MW-18 (mg/L)



#### Histogram

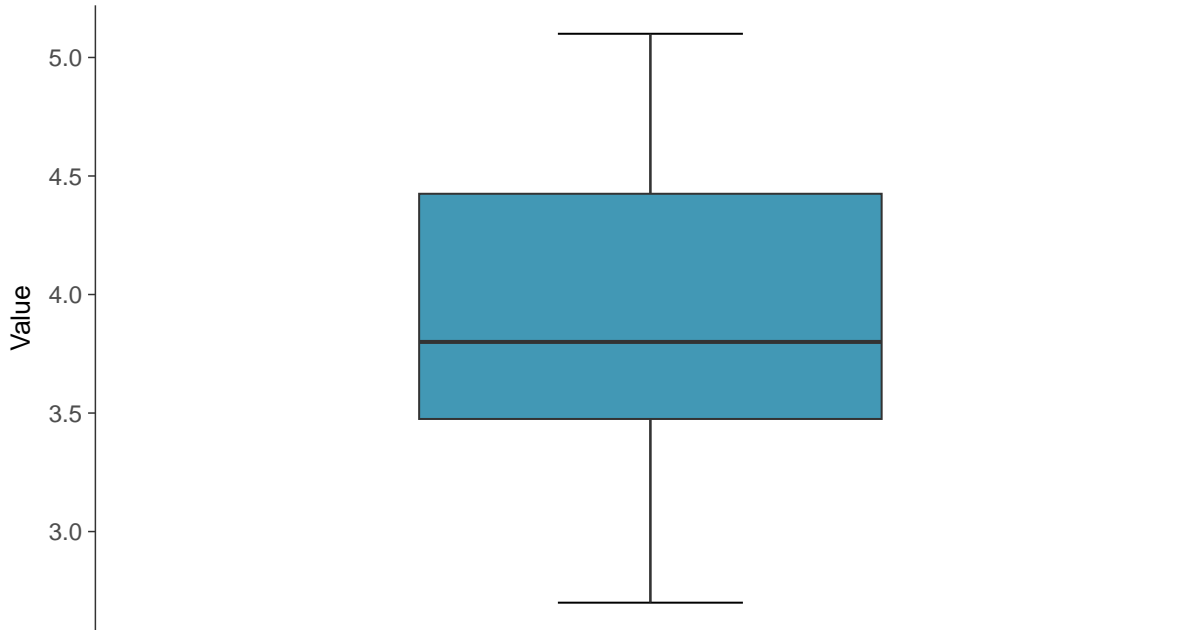
Fluoride (App IV), MW-18 (mg/L)





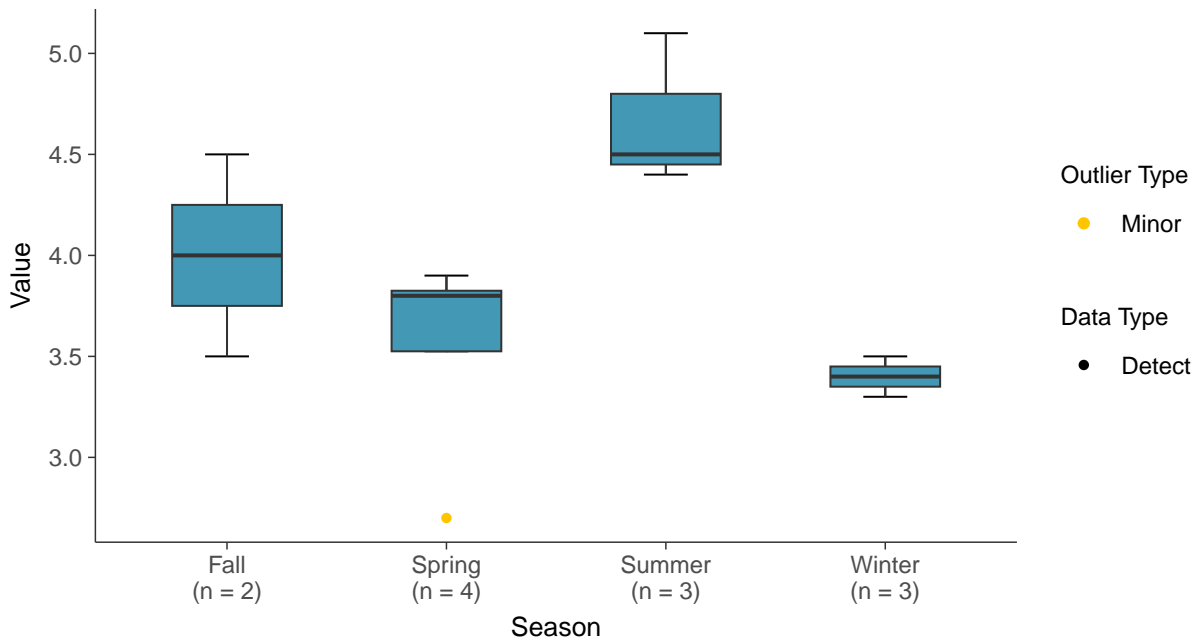
### Boxplot

Fluoride (App IV), MW-18 (mg/L)



### Boxplot by Season

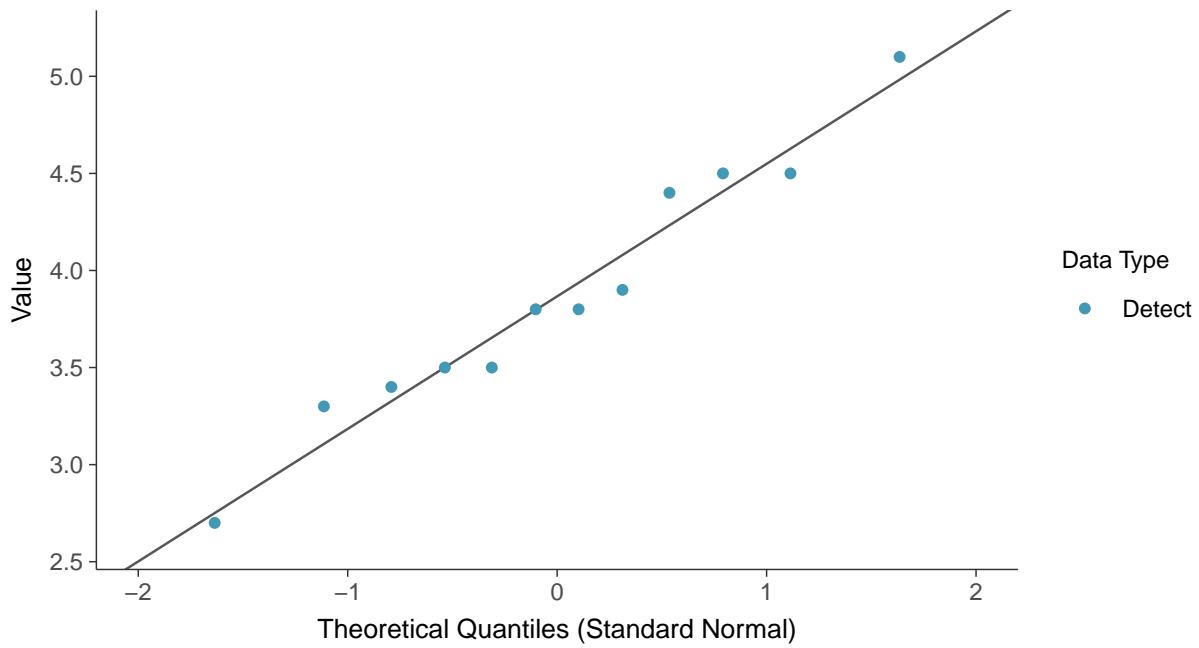
Fluoride (App IV), MW-18 (mg/L)





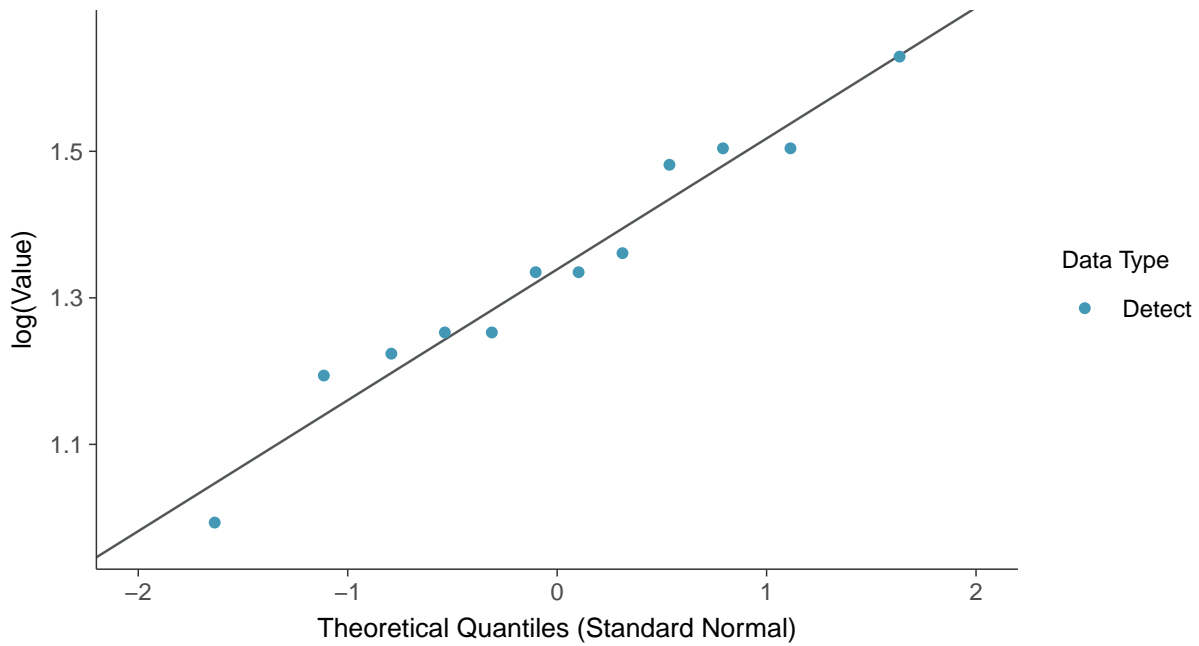
### Normal Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



### Lognormal Q-Q plot

Fluoride (App IV), MW-18 (mg/L)

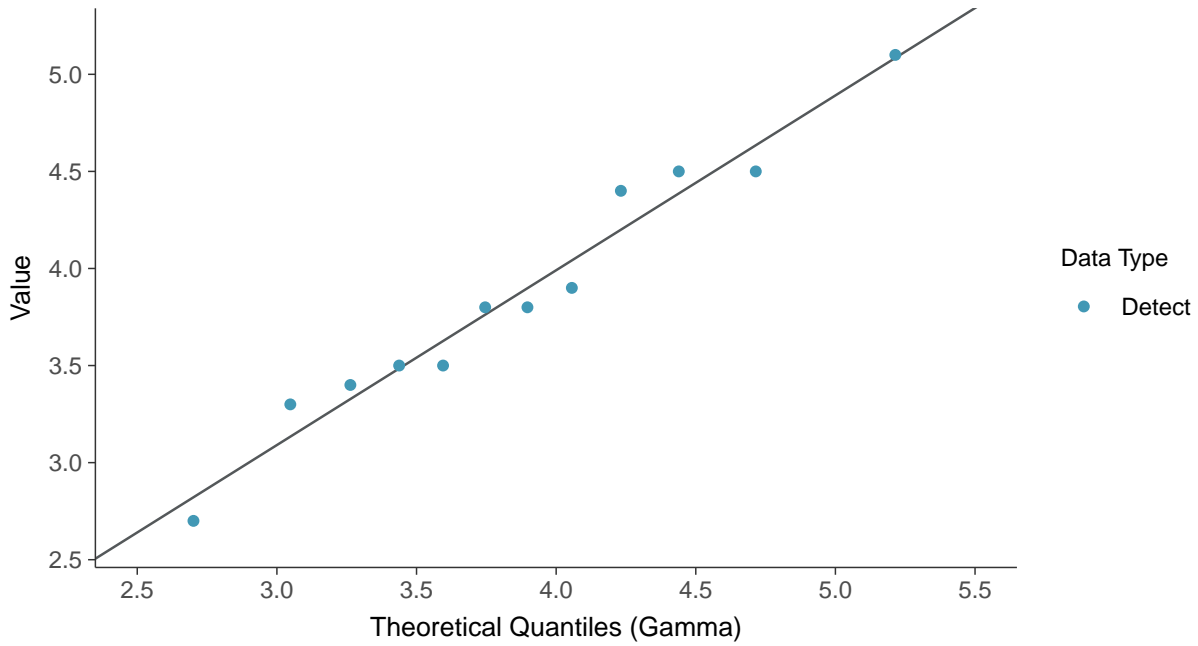






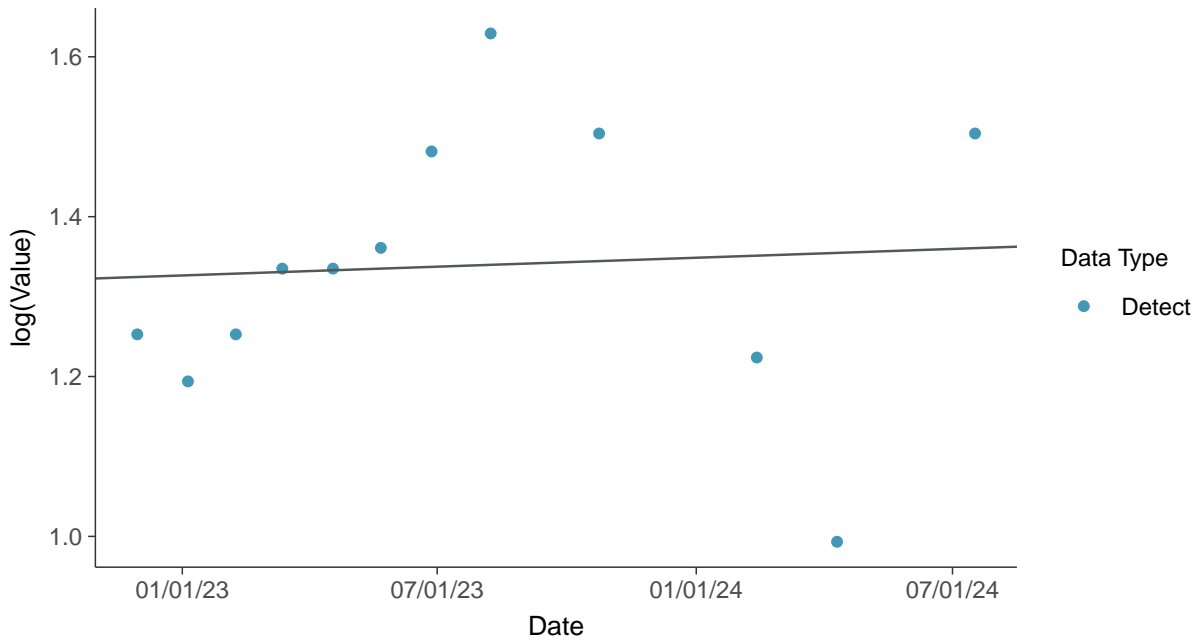
### Gamma Q-Q plot

Fluoride (App IV), MW-18 (mg/L)



### Trend Regression: Lognormal MLE

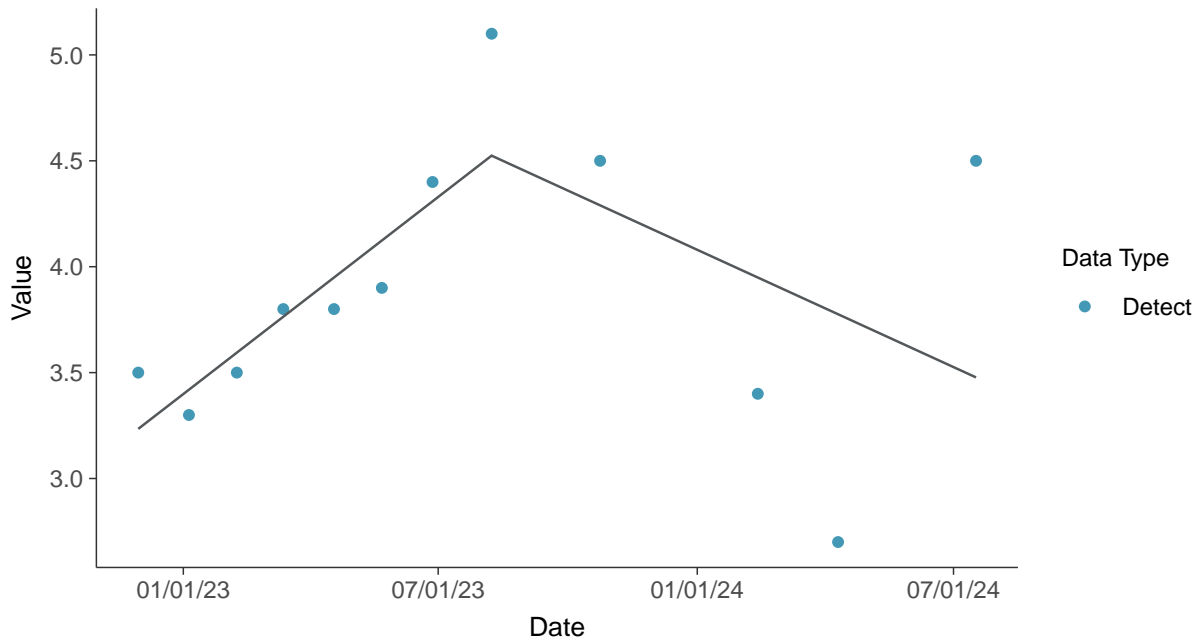
Fluoride (App IV), MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

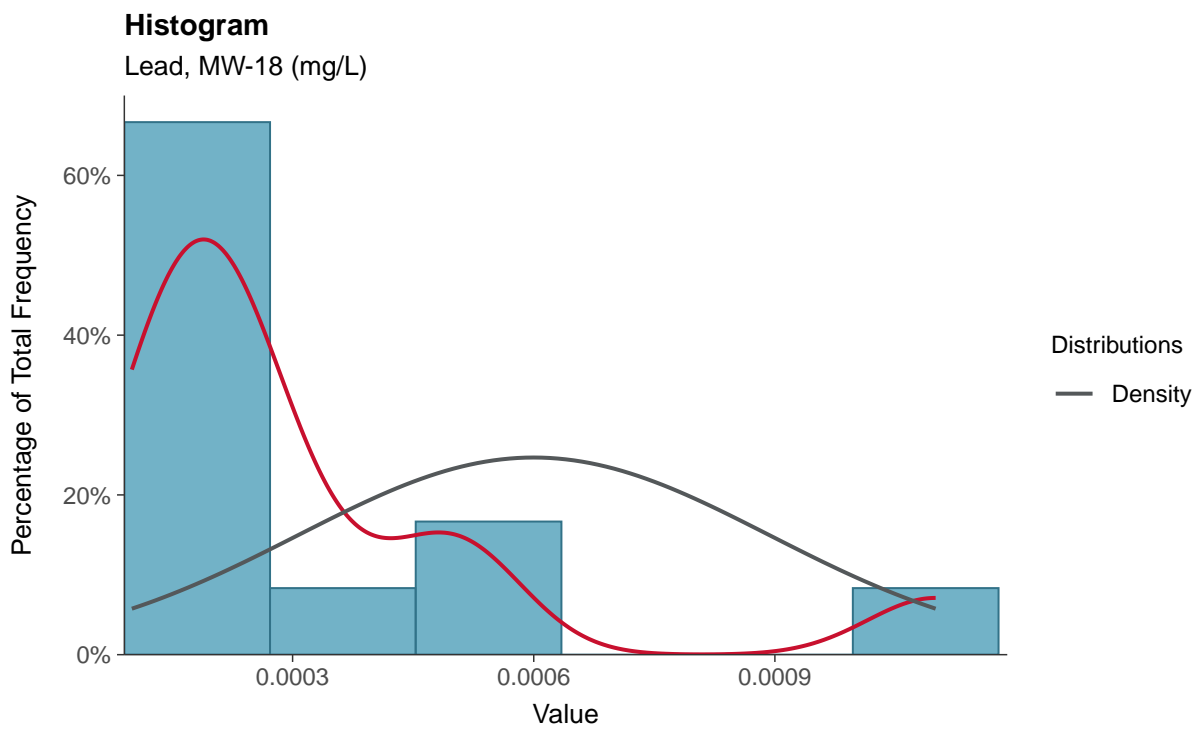
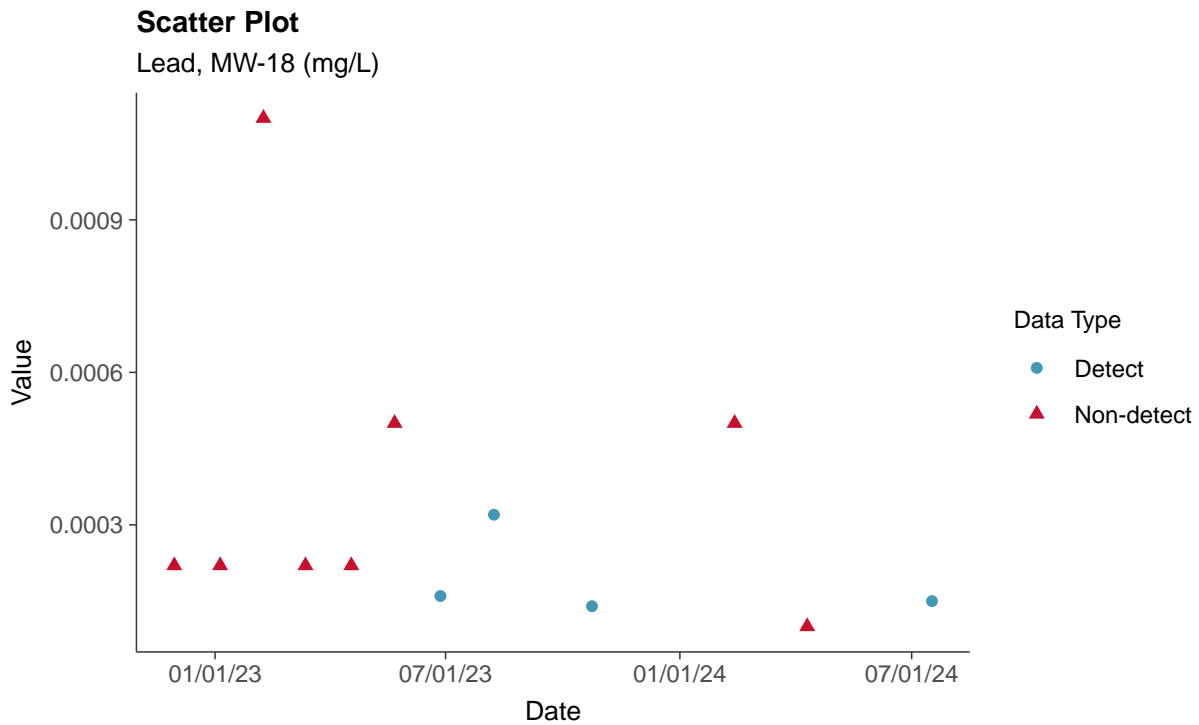
Fluoride (App IV), MW-18 (mg/L)





### Appendix IV: Lead, MW-18

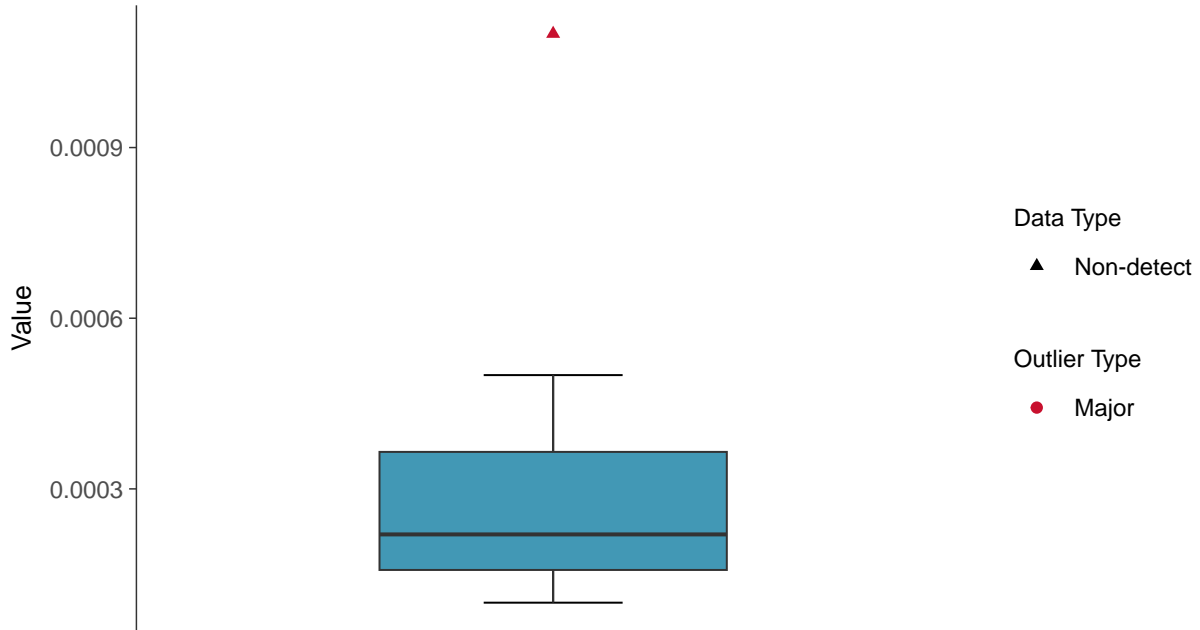
ID: 28\_1\_5\_115





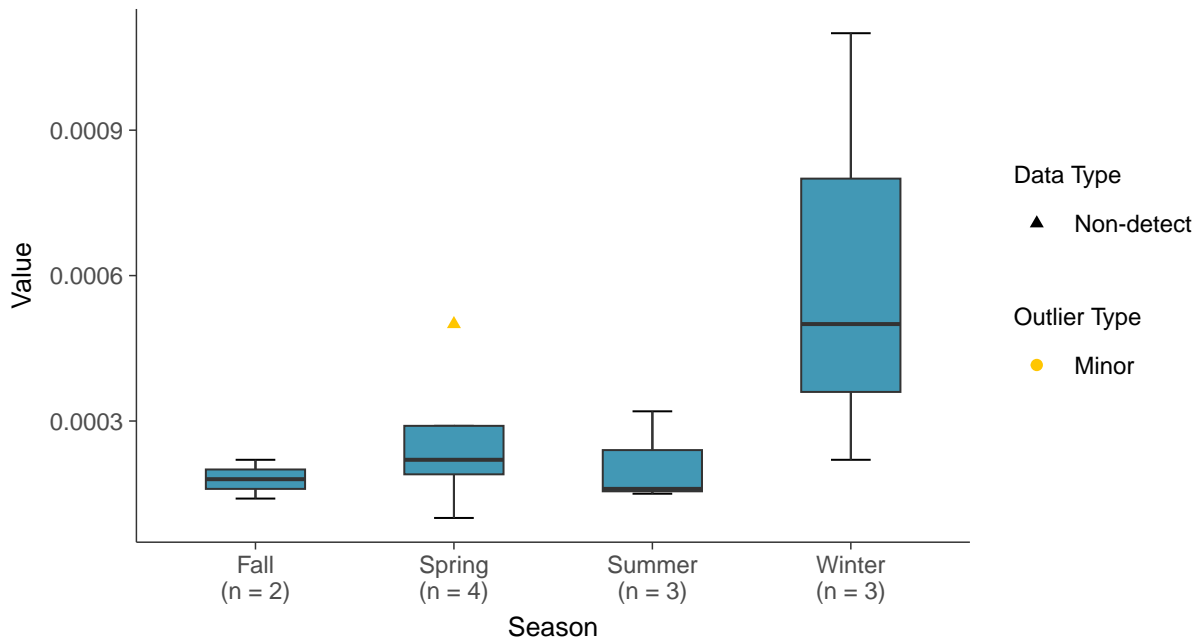
### Boxplot

Lead, MW-18 (mg/L)



### Boxplot by Season

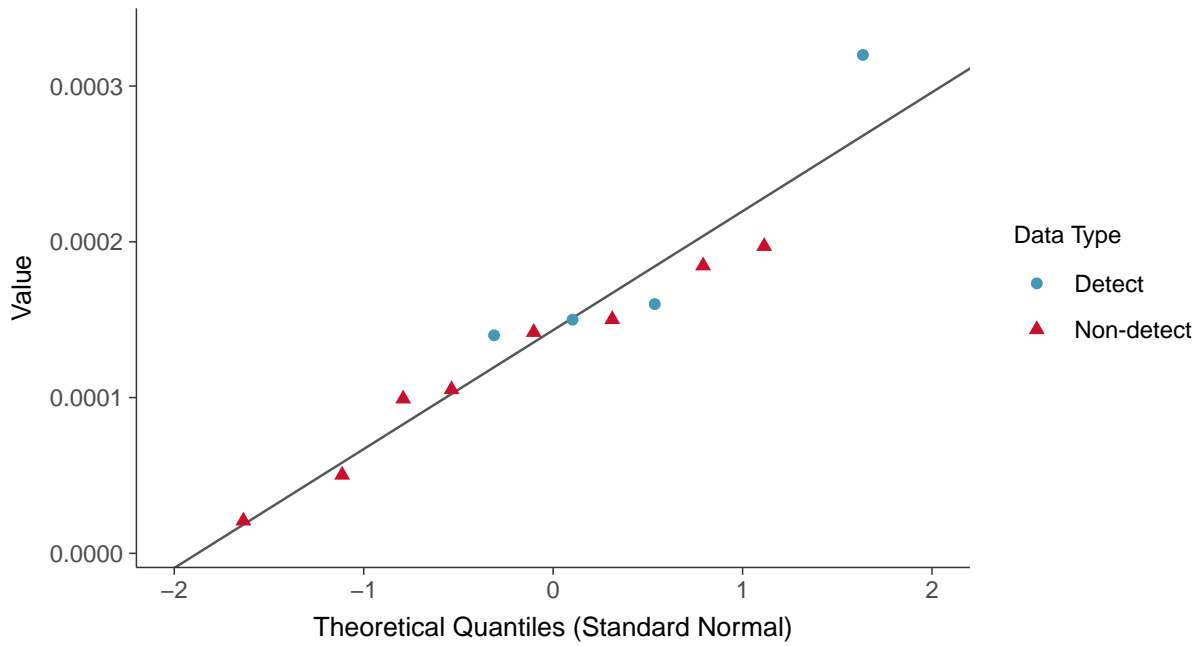
Lead, MW-18 (mg/L)





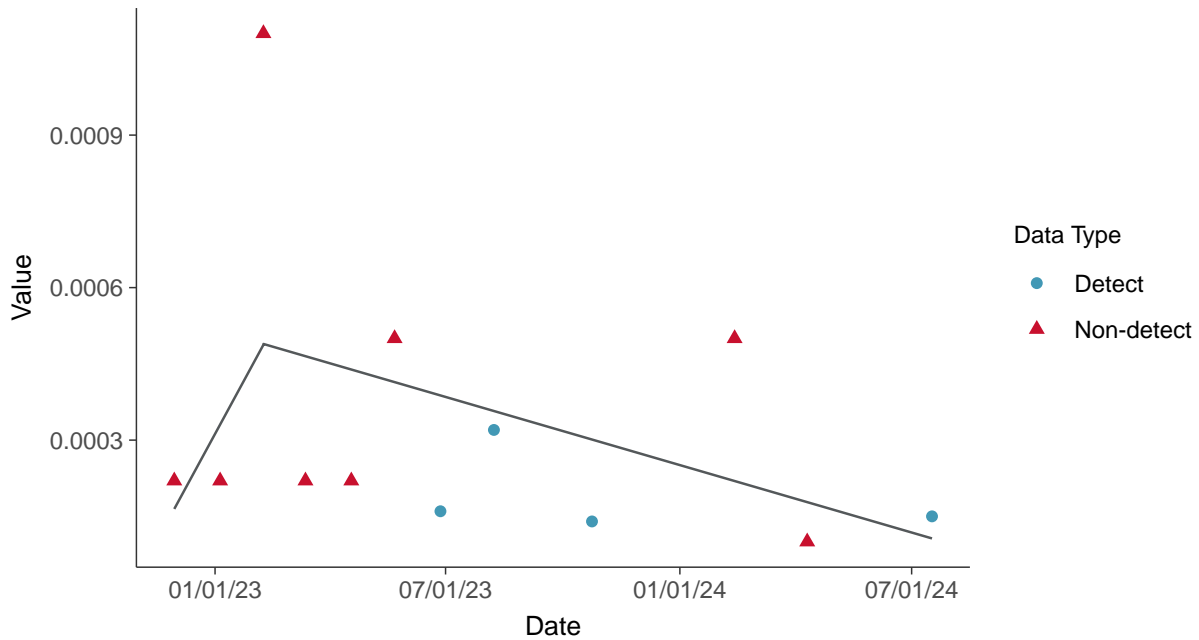
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear

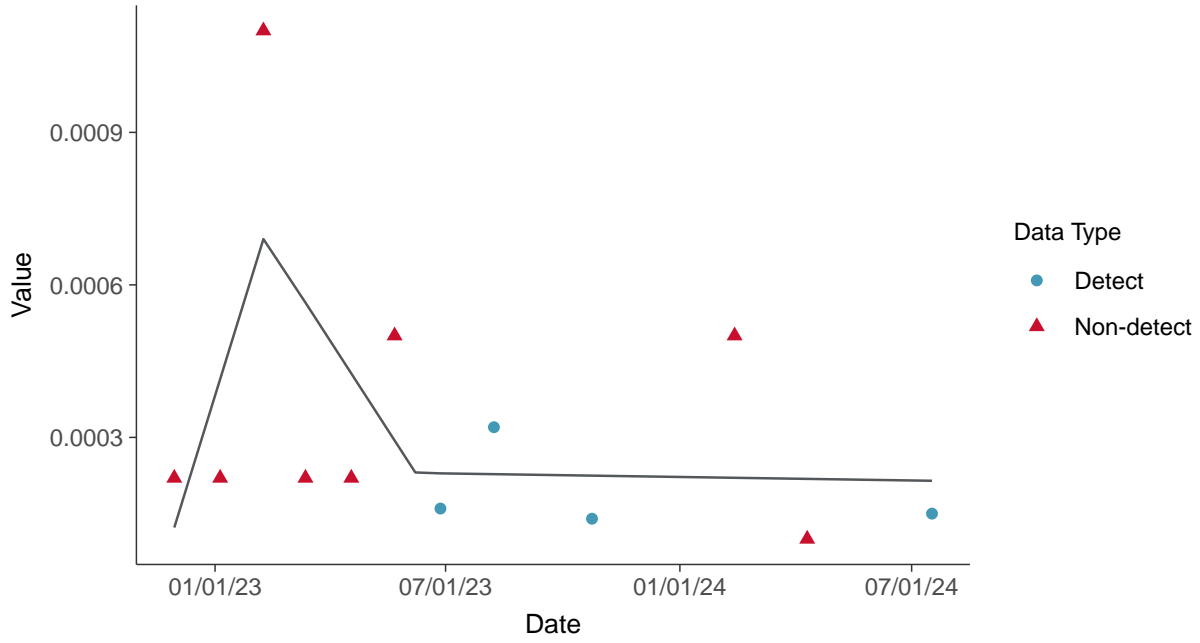
Lead, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

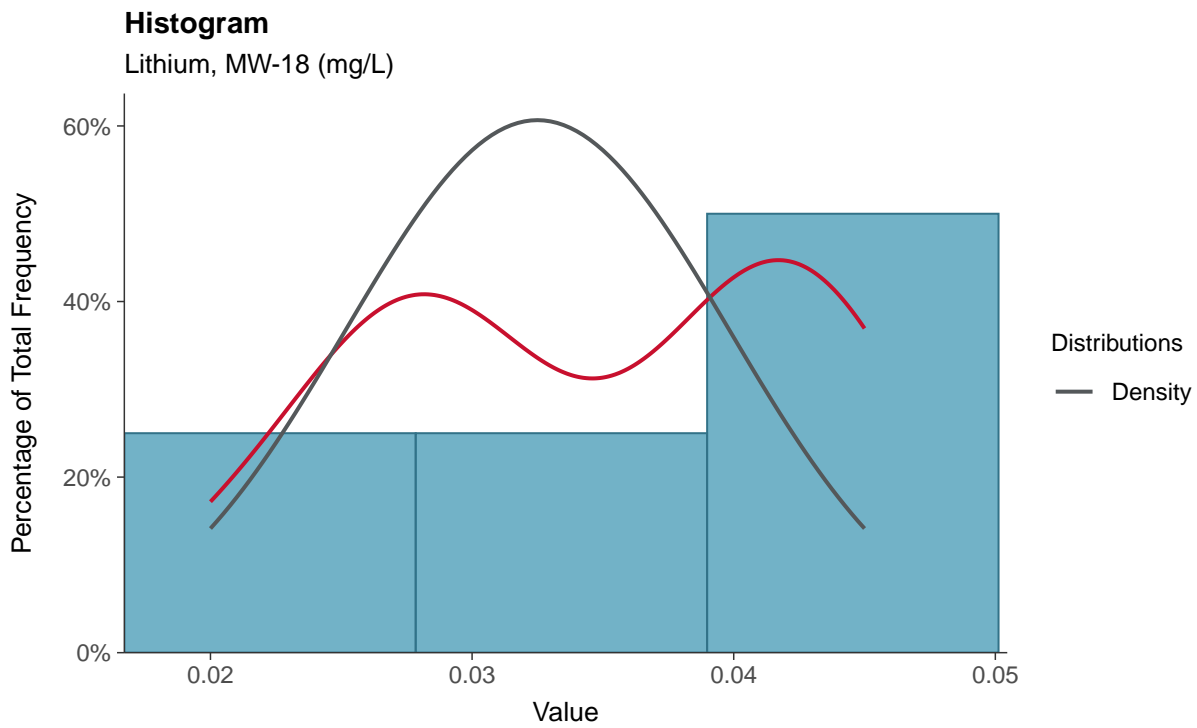
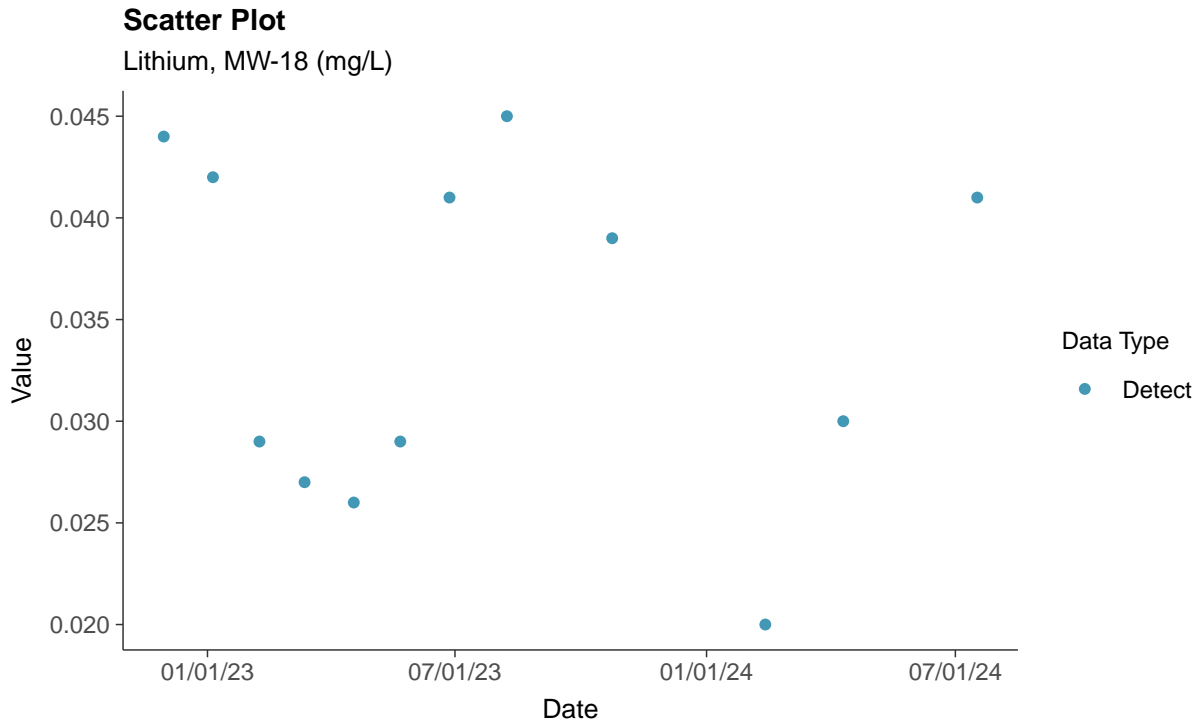
Lead, MW-18 (mg/L)





### Appendix IV: Lithium, MW-18

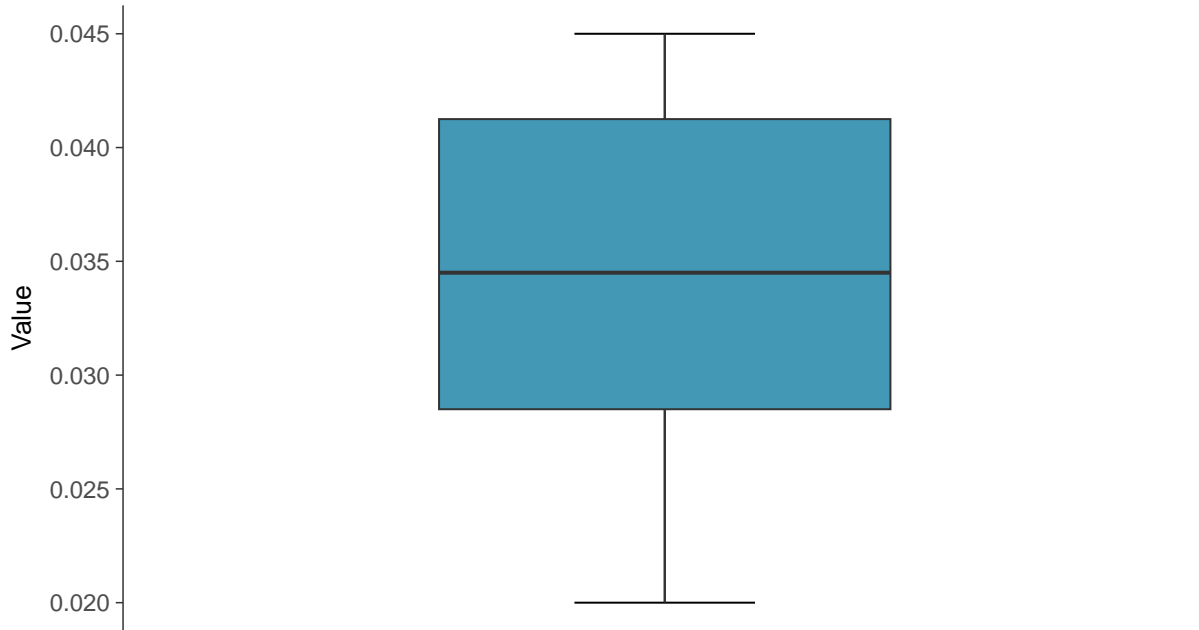
ID: 28\_1\_5\_116





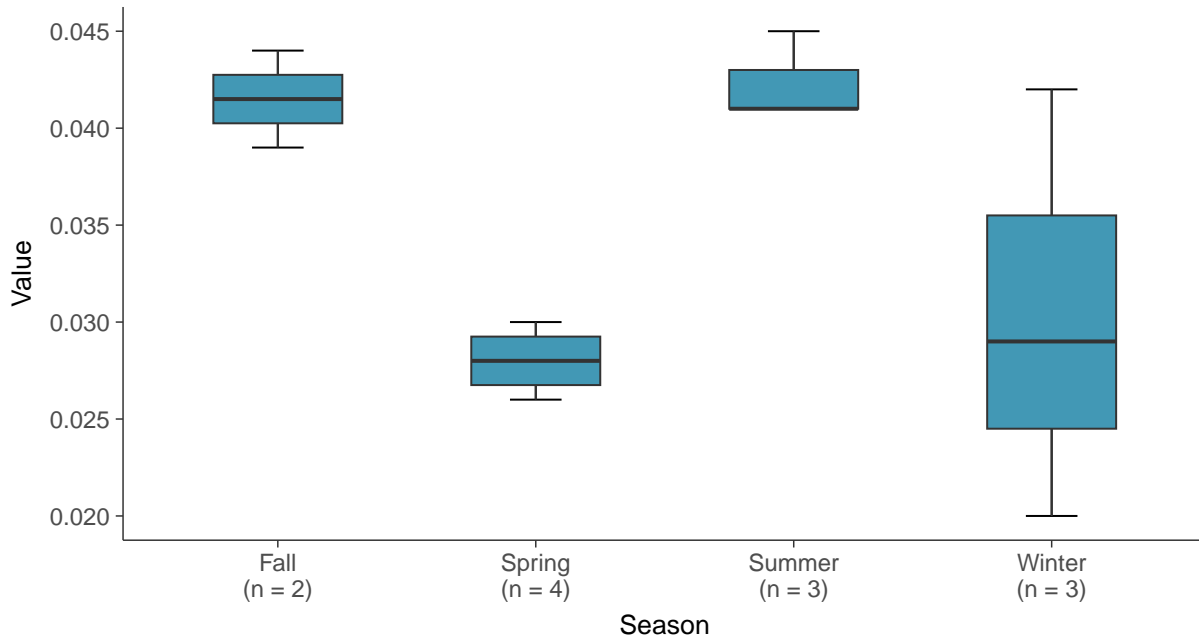
### Boxplot

Lithium, MW-18 (mg/L)



### Boxplot by Season

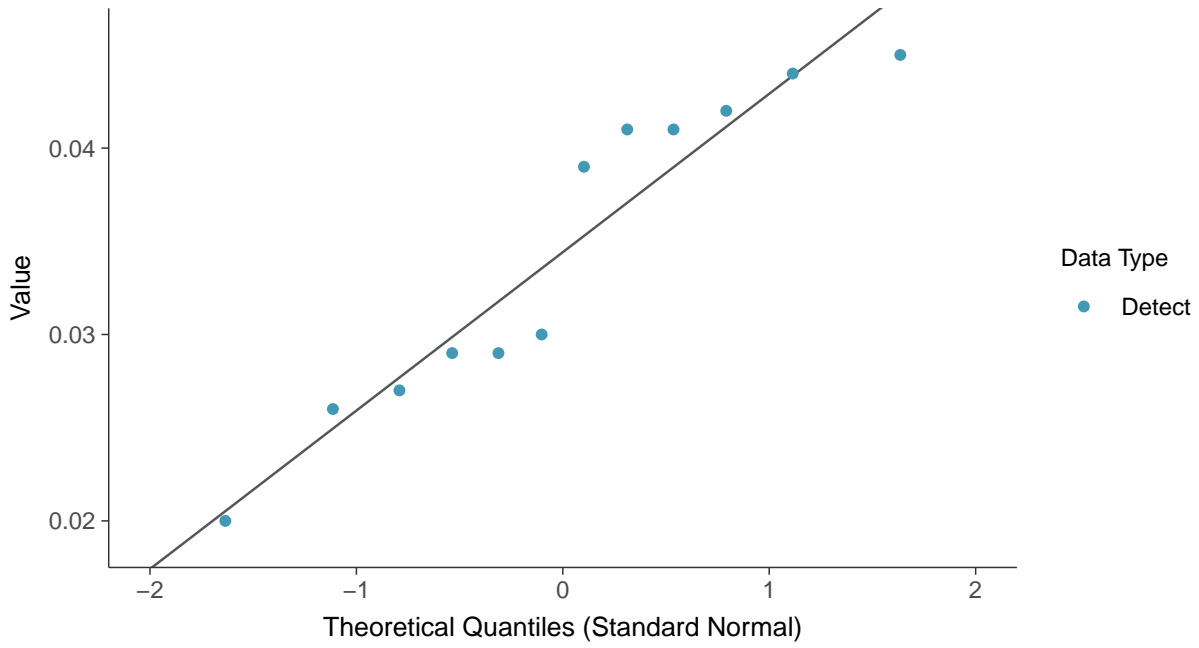
Lithium, MW-18 (mg/L)



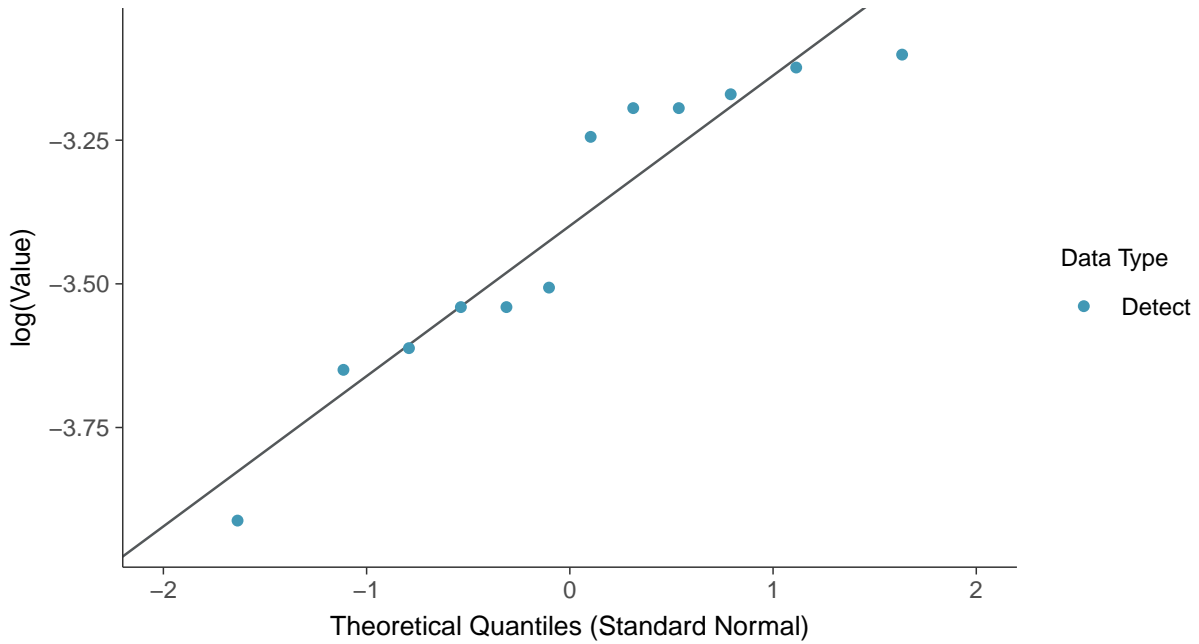




**Normal Q-Q plot**  
Lithium, MW-18 (mg/L)

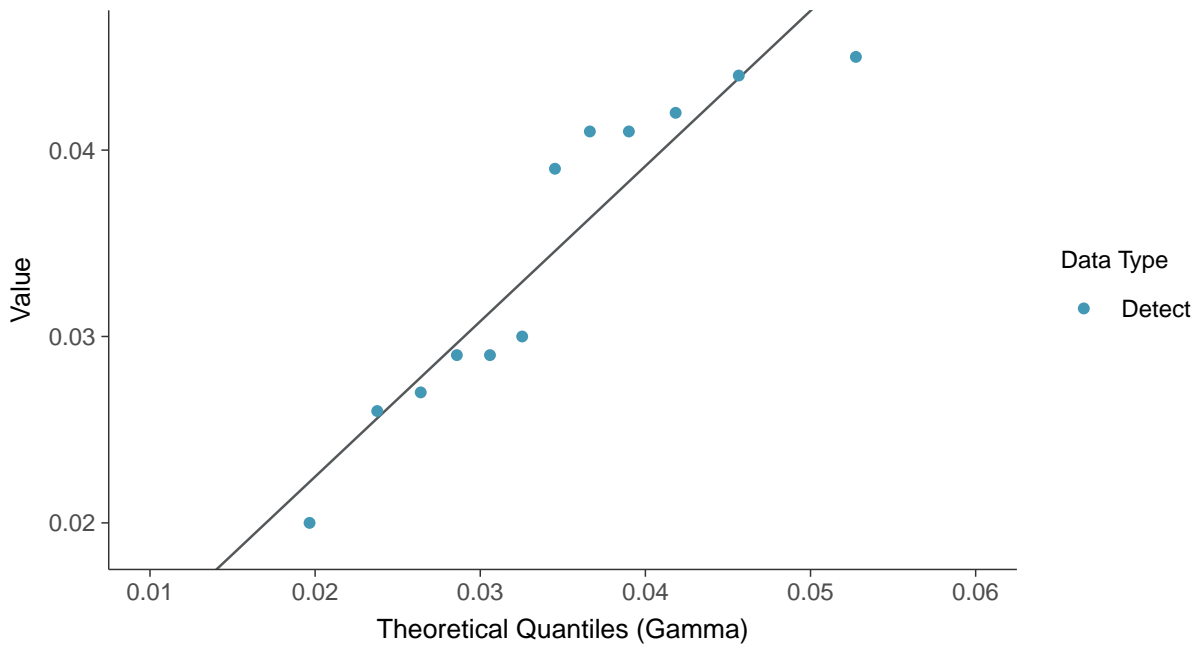


**Lognormal Q-Q plot**  
Lithium, MW-18 (mg/L)

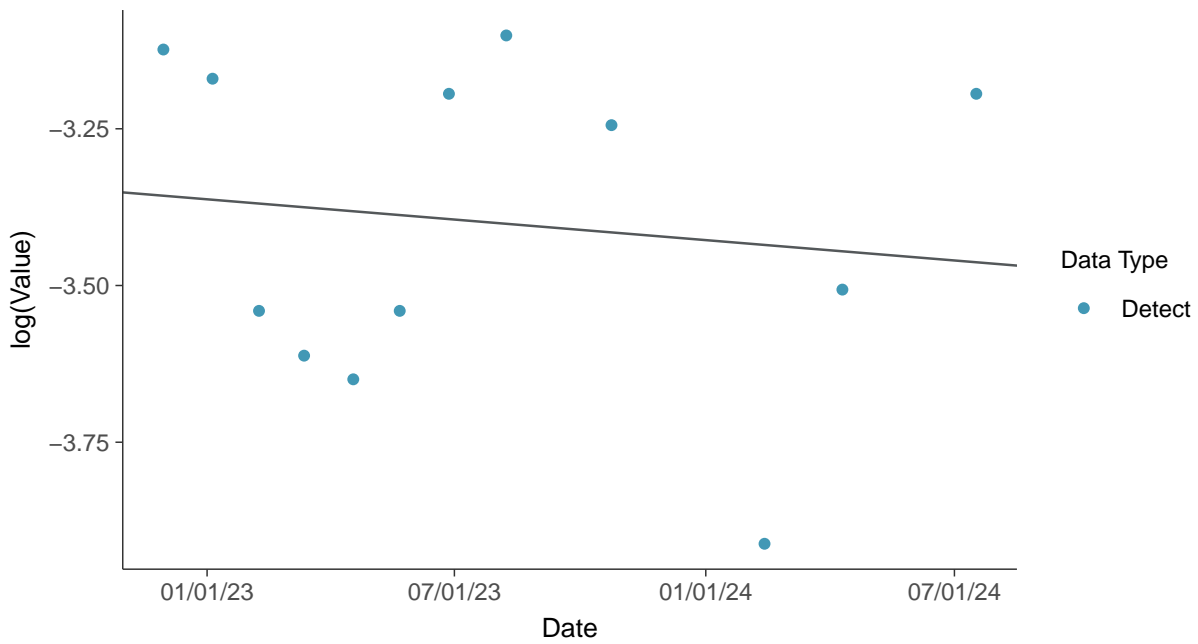




**Gamma Q-Q plot**  
Lithium, MW-18 (mg/L)



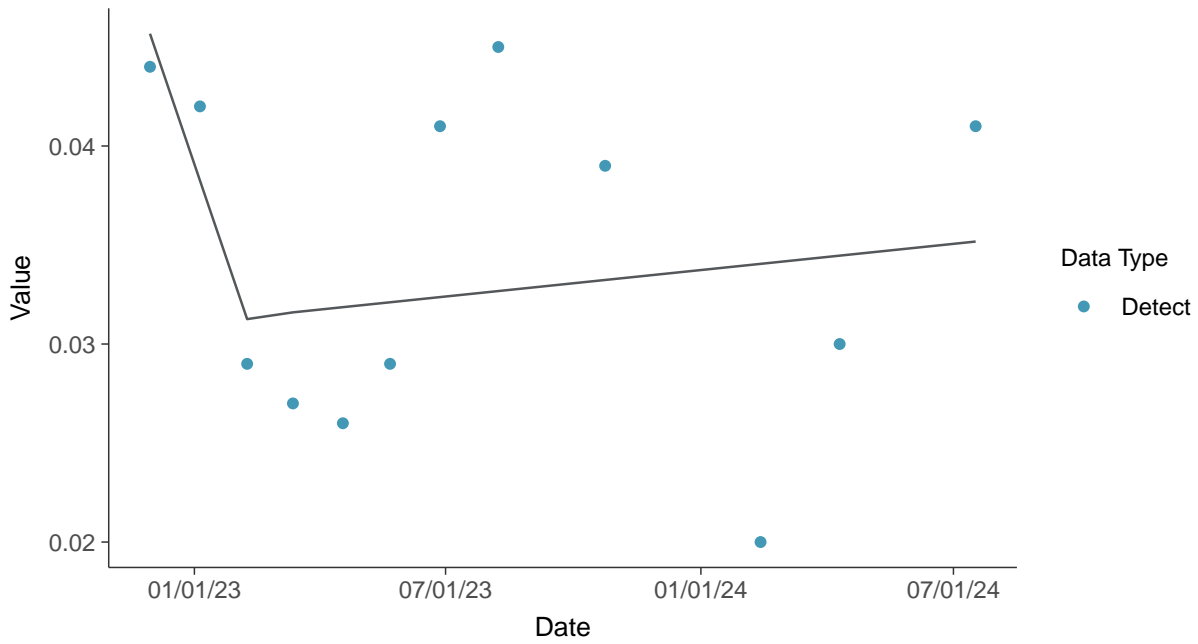
**Trend Regression: Lognormal MLE**  
Lithium, MW-18 (mg/L)





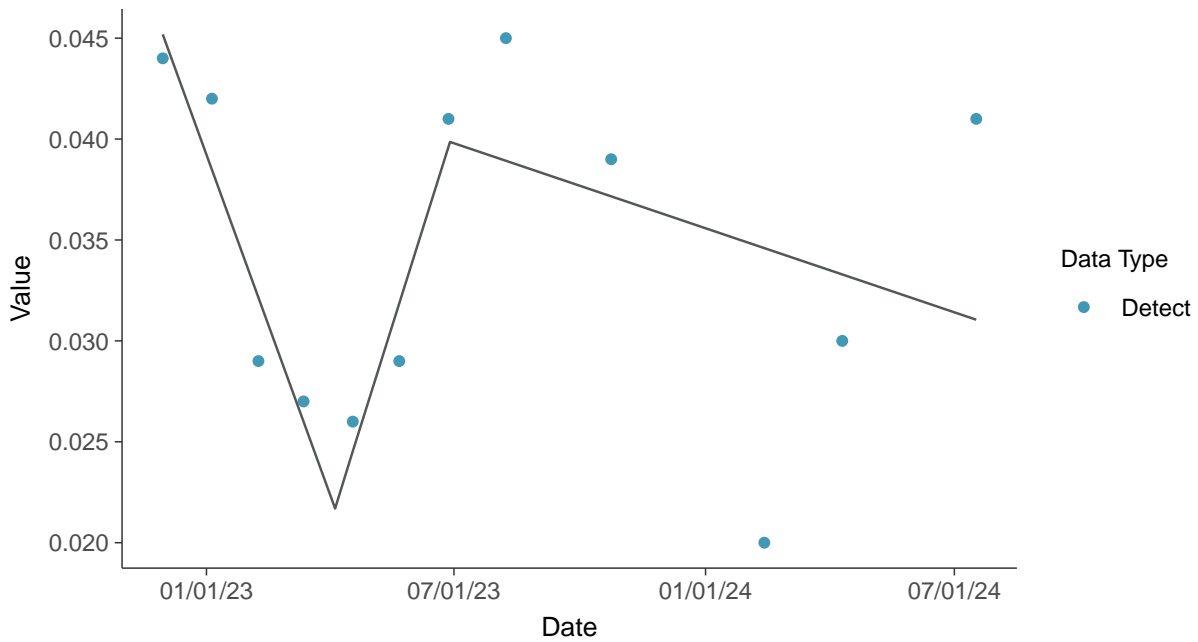
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

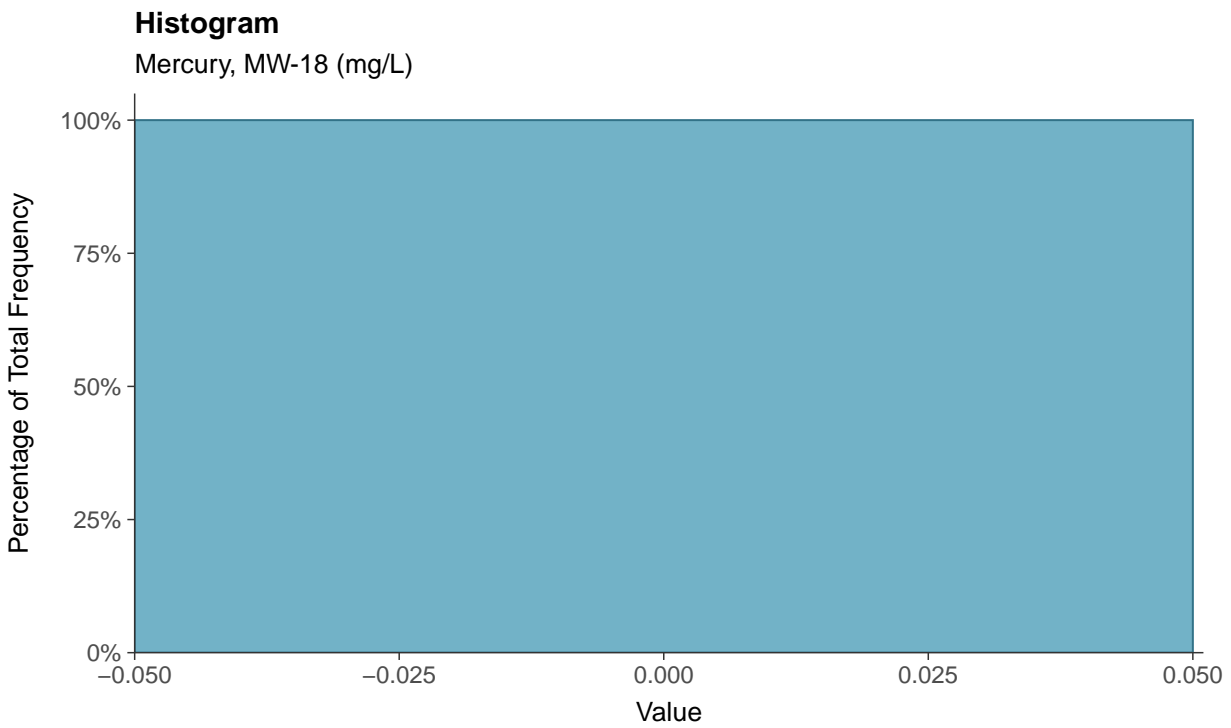
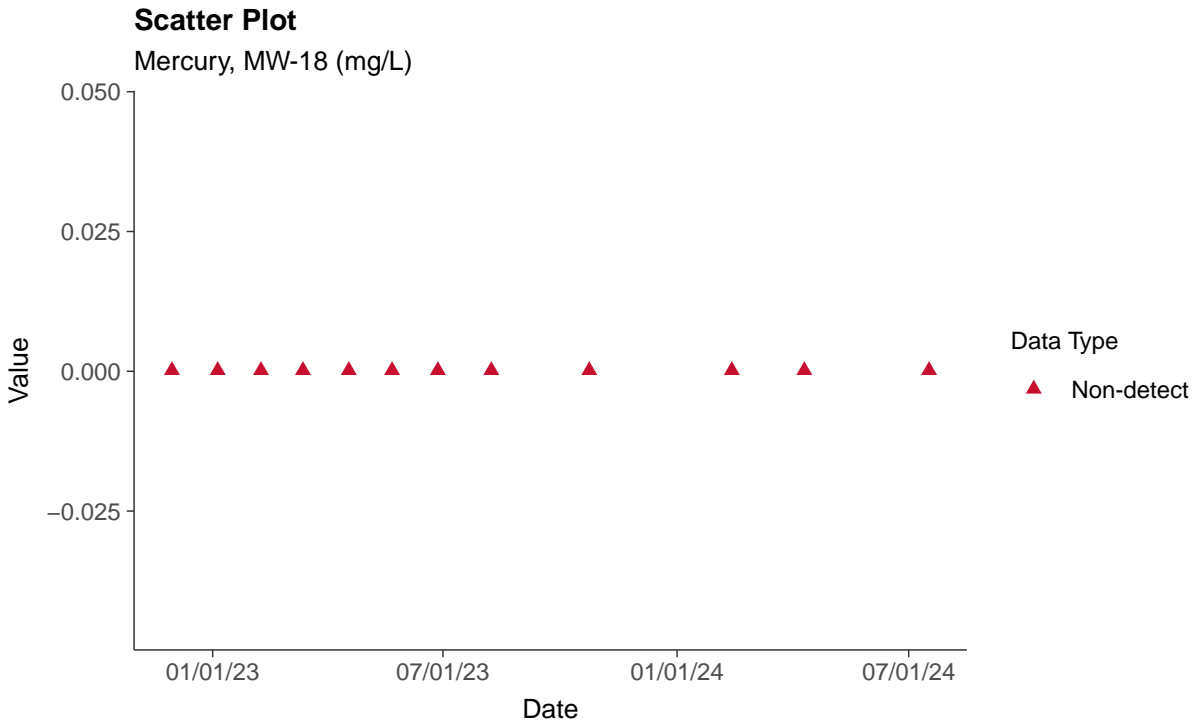
Lithium, MW-18 (mg/L)





### Appendix IV: Mercury, MW-18

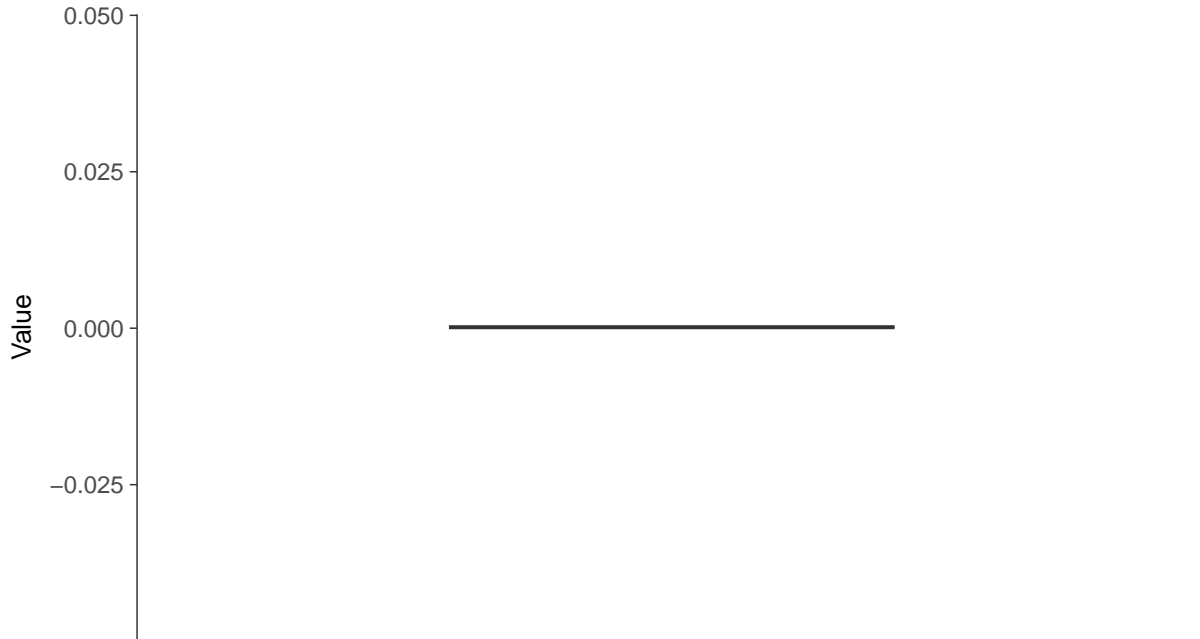
ID: 28\_1\_5\_117





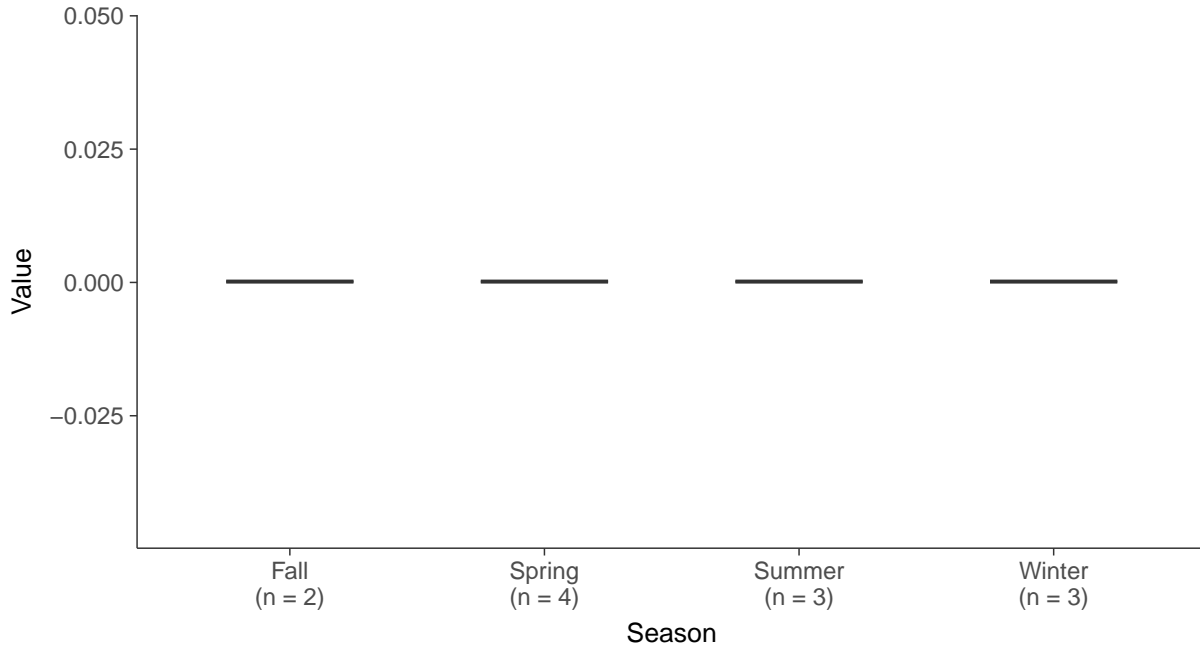
### Boxplot

Mercury, MW-18 (mg/L)



### Boxplot by Season

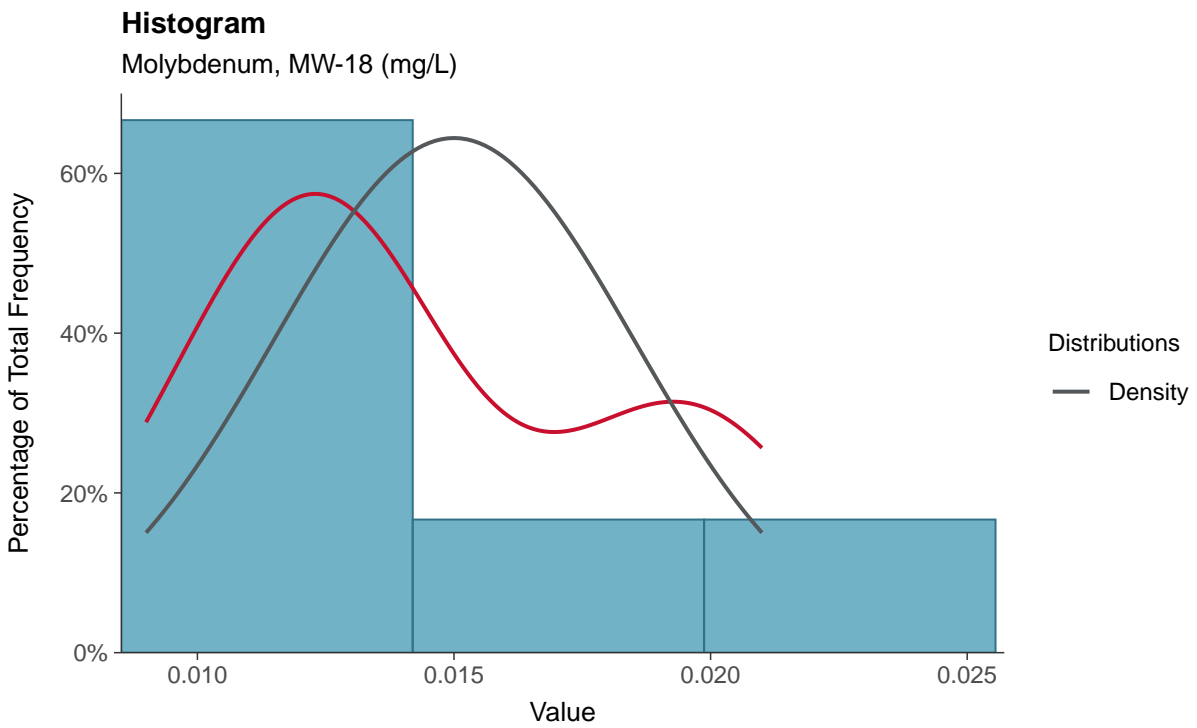
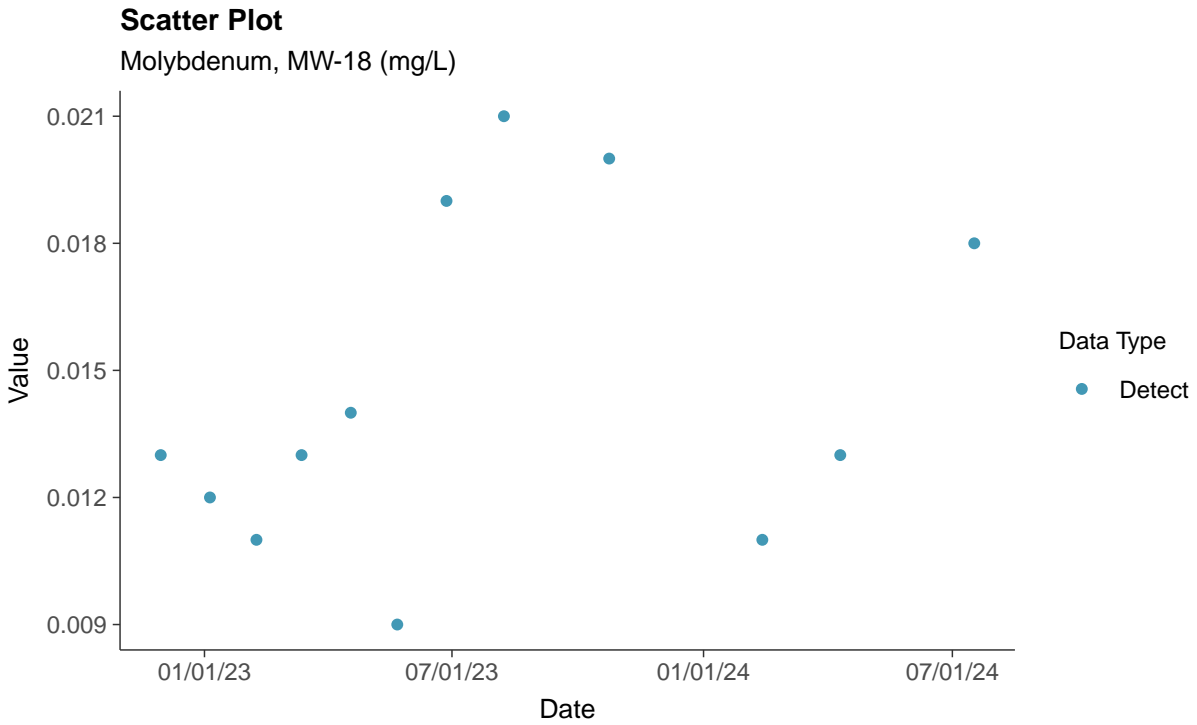
Mercury, MW-18 (mg/L)





### Appendix IV: Molybdenum, MW-18

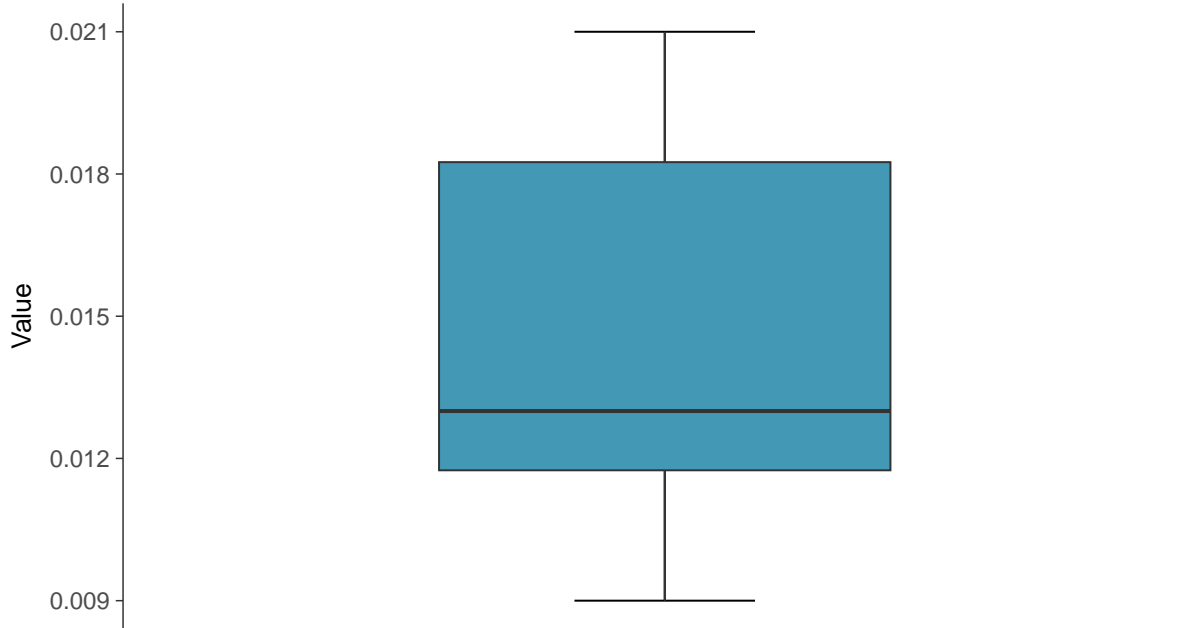
ID: 28\_1\_5\_118





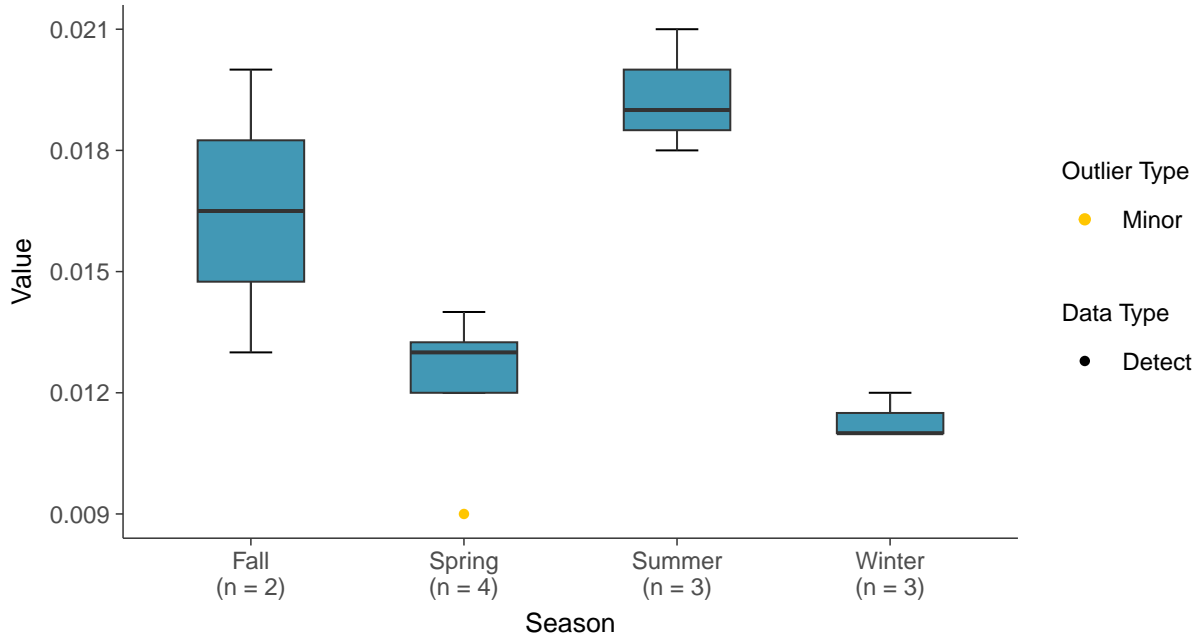
### Boxplot

Molybdenum, MW-18 (mg/L)



### Boxplot by Season

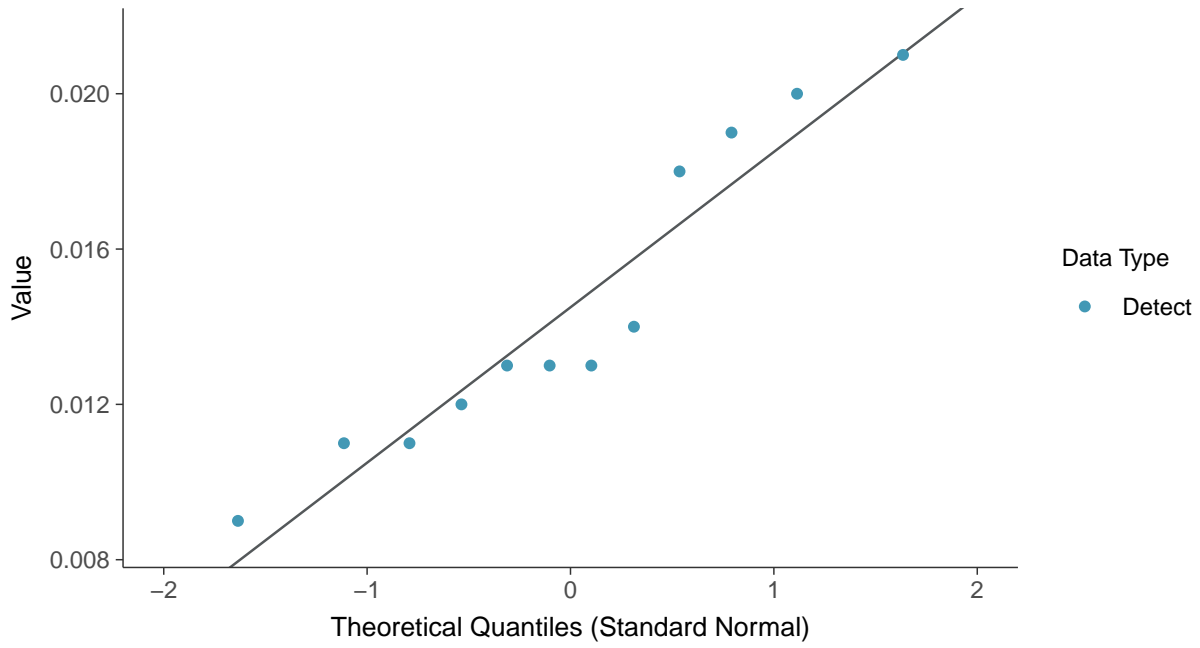
Molybdenum, MW-18 (mg/L)





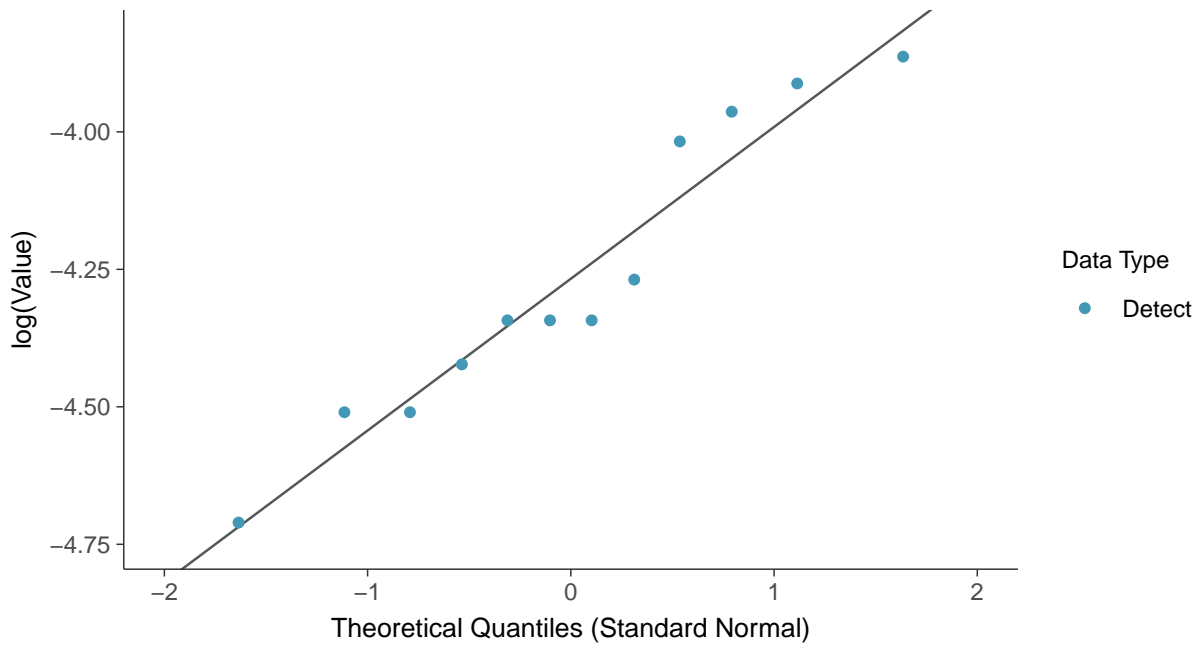
### Normal Q-Q plot

Molybdenum, MW-18 (mg/L)



### Lognormal Q-Q plot

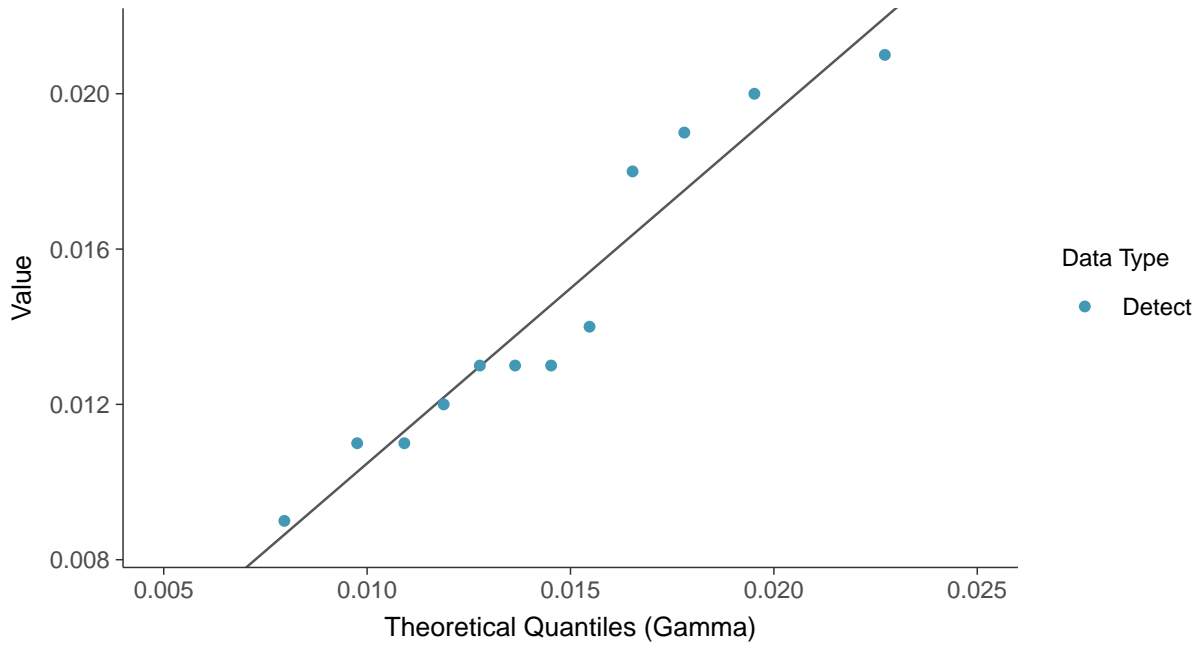
Molybdenum, MW-18 (mg/L)



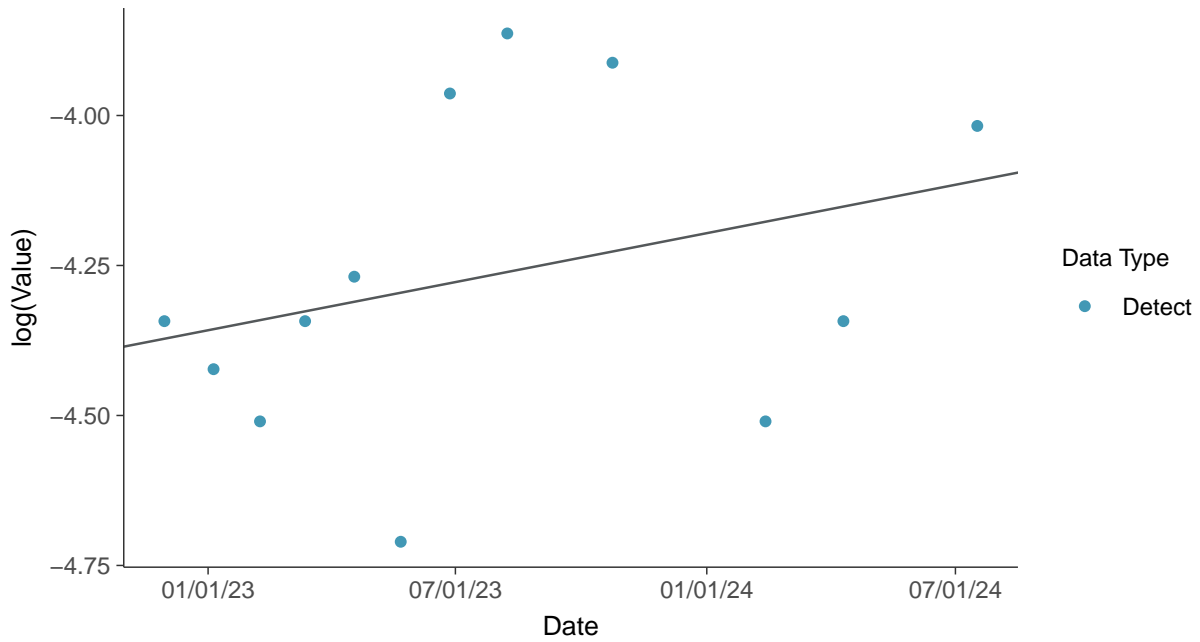




**Gamma Q-Q plot**  
Molybdenum, MW-18 (mg/L)



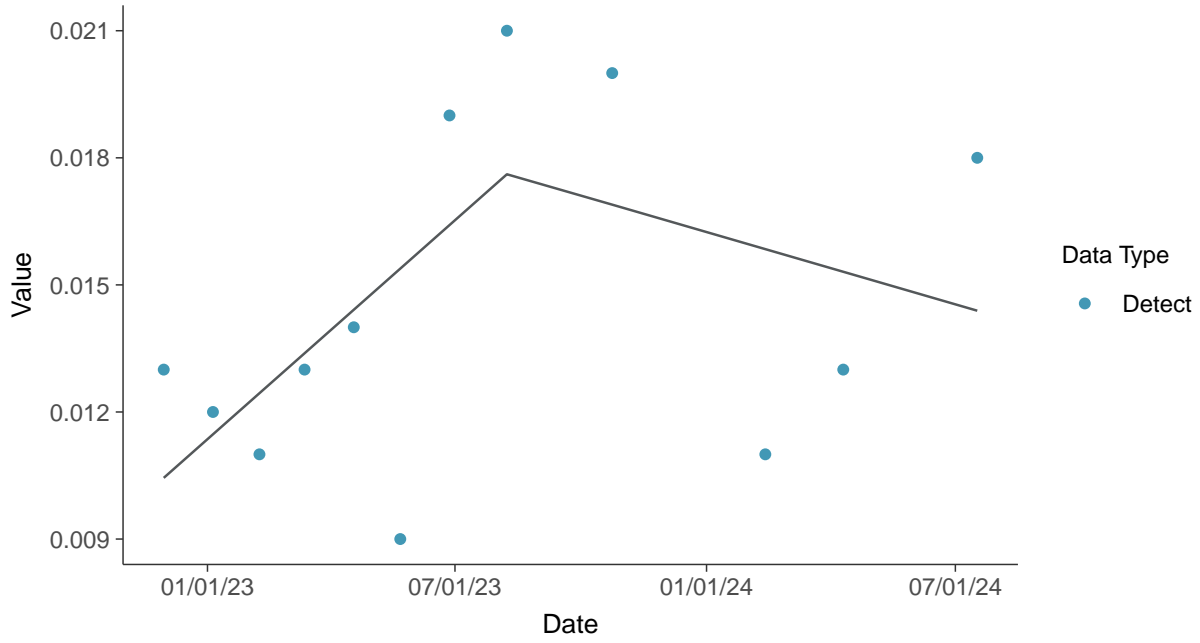
**Trend Regression: Lognormal MLE**  
Molybdenum, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-18 (mg/L)



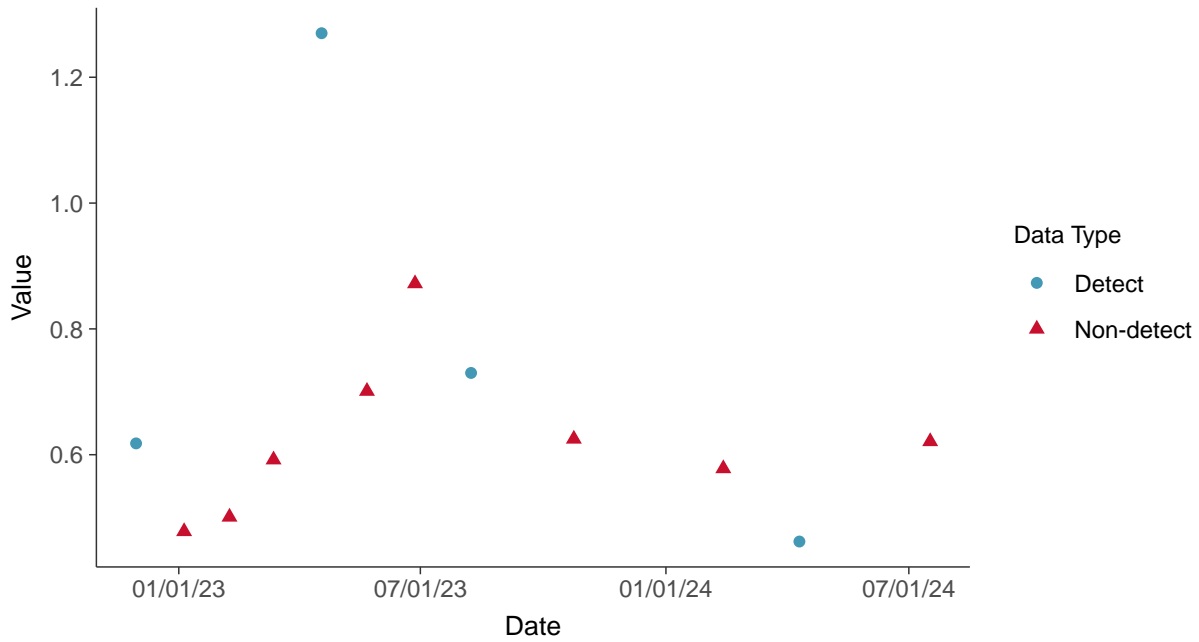


## Appendix IV: Radium 226 and 228, MW-18

ID: 28\_1\_5\_121

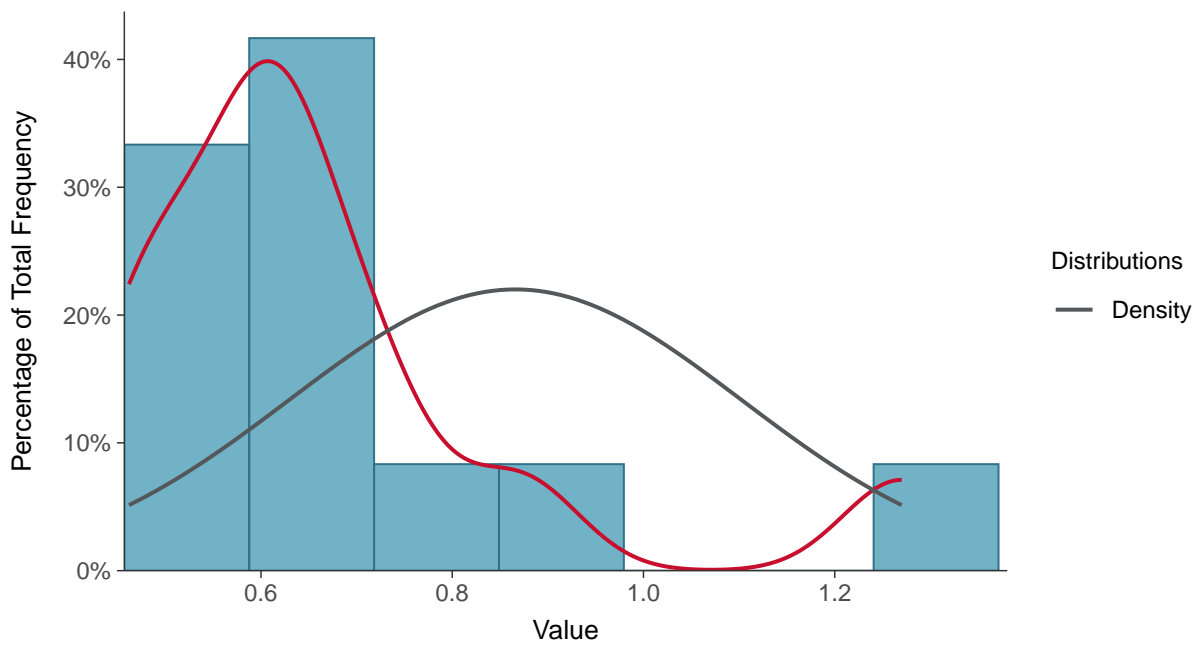
### Scatter Plot

Radium 226 and 228, MW-18 (pCi/L)



### Histogram

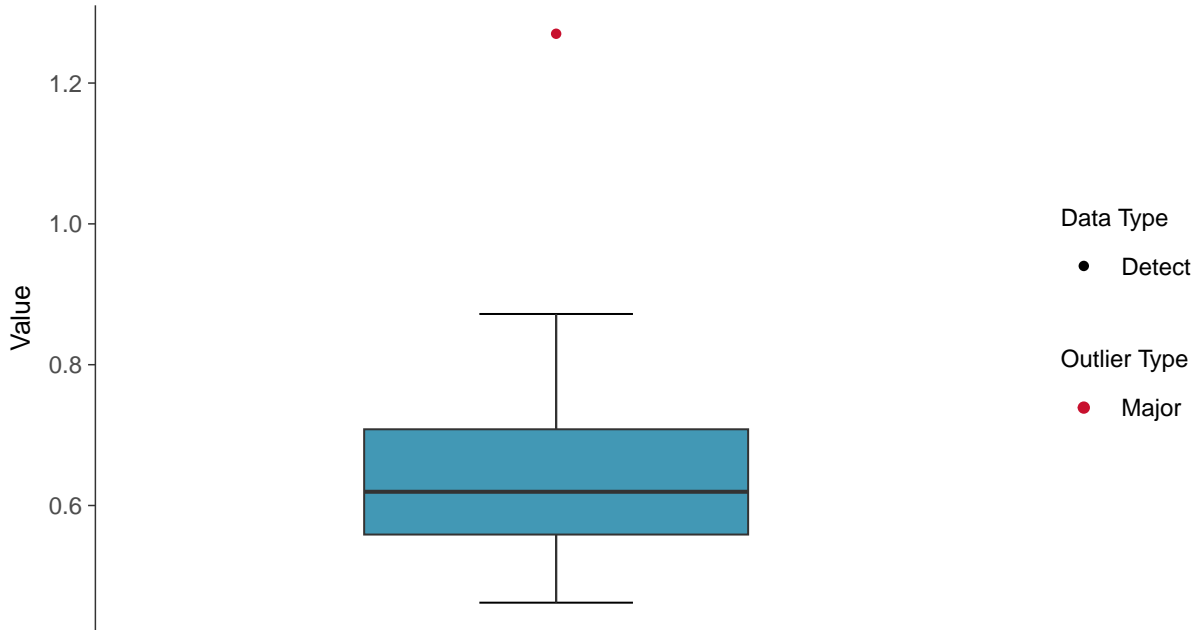
Radium 226 and 228, MW-18 (pCi/L)





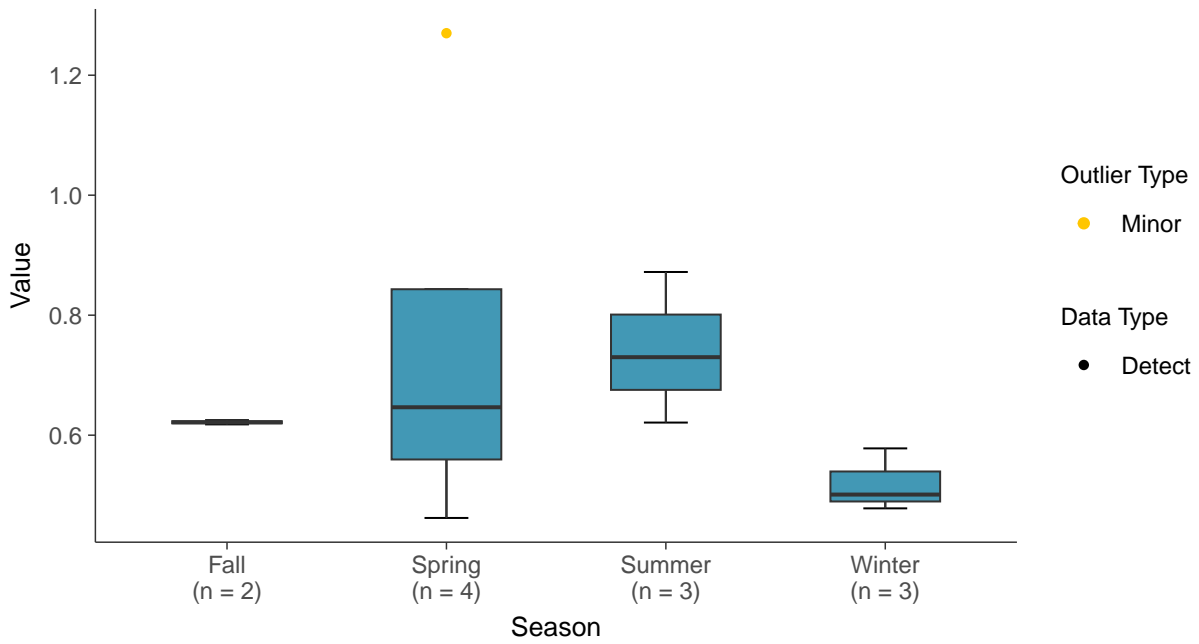
### Boxplot

Radium 226 and 228, MW-18 (pCi/L)



### Boxplot by Season

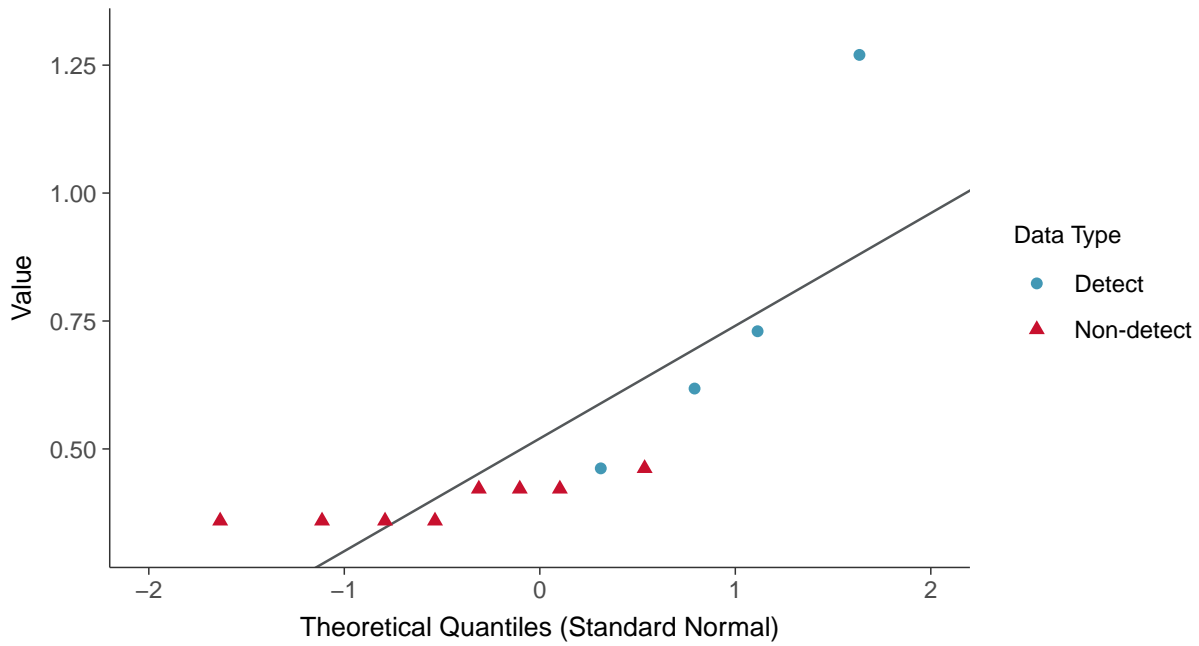
Radium 226 and 228, MW-18 (pCi/L)





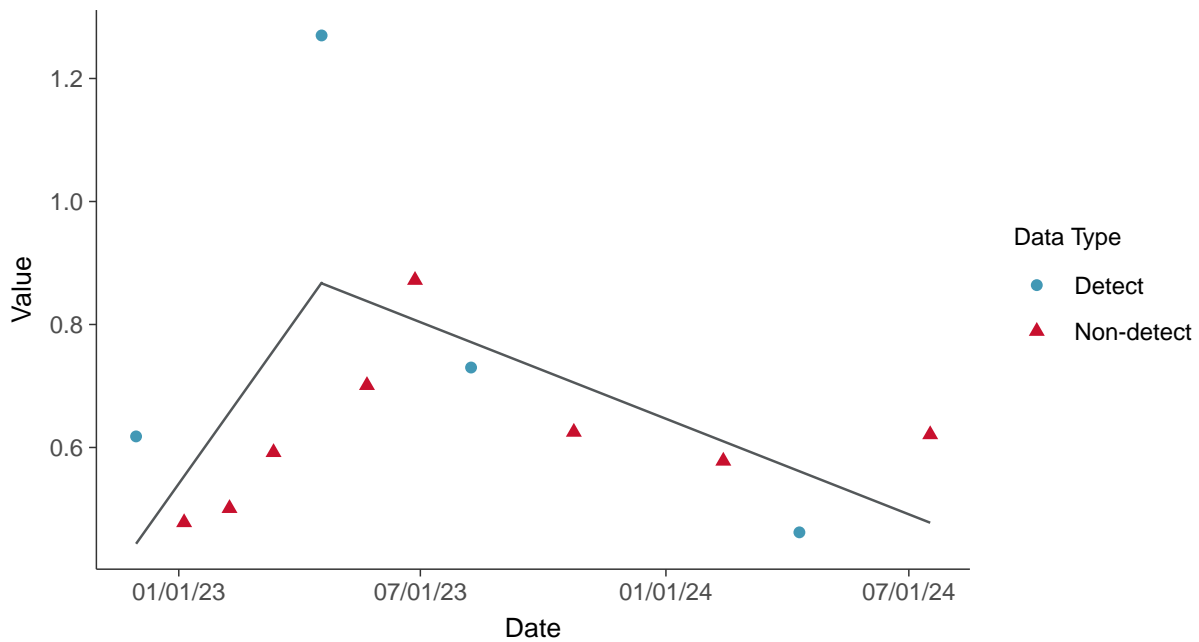
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-18 (pCi/L)



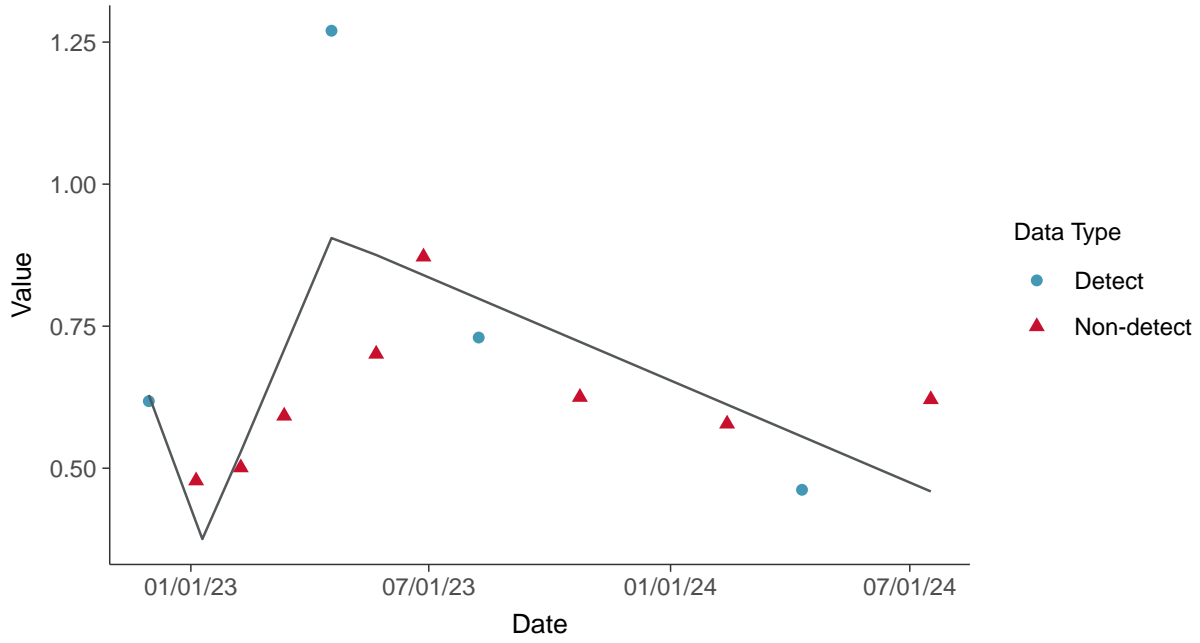
### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-18 (pCi/L)





### Trend Regression: Piecewise Linear-Linear-Linear Radium 226 and 228, MW-18 (pCi/L)



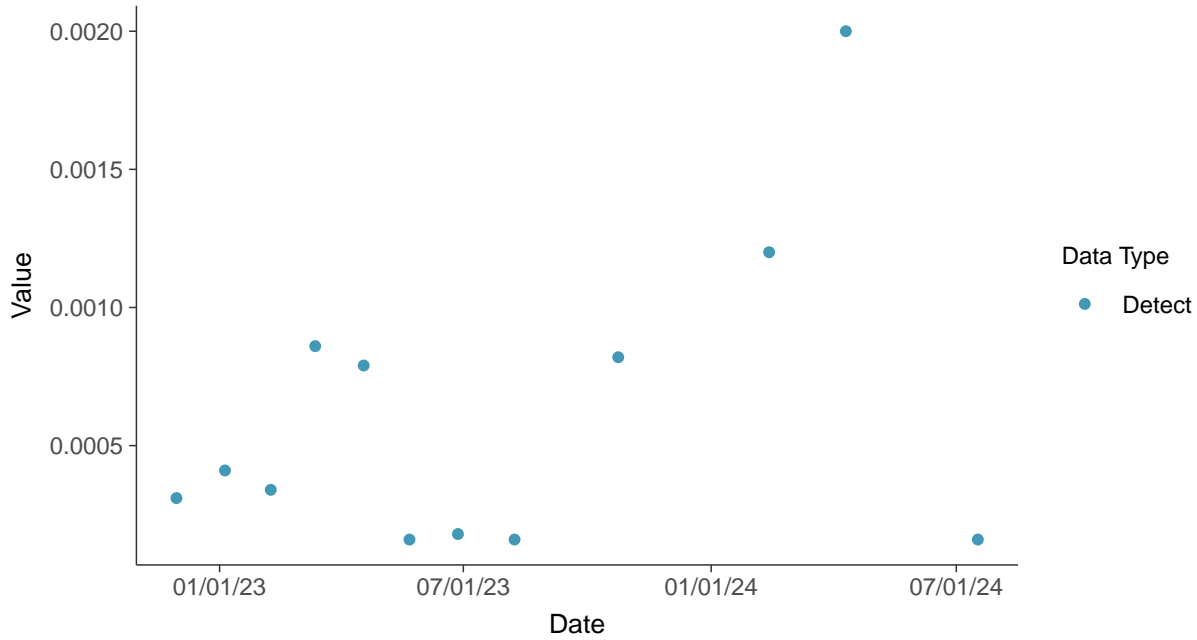


### Appendix IV: Selenium, MW-18

ID: 28\_1\_5\_122

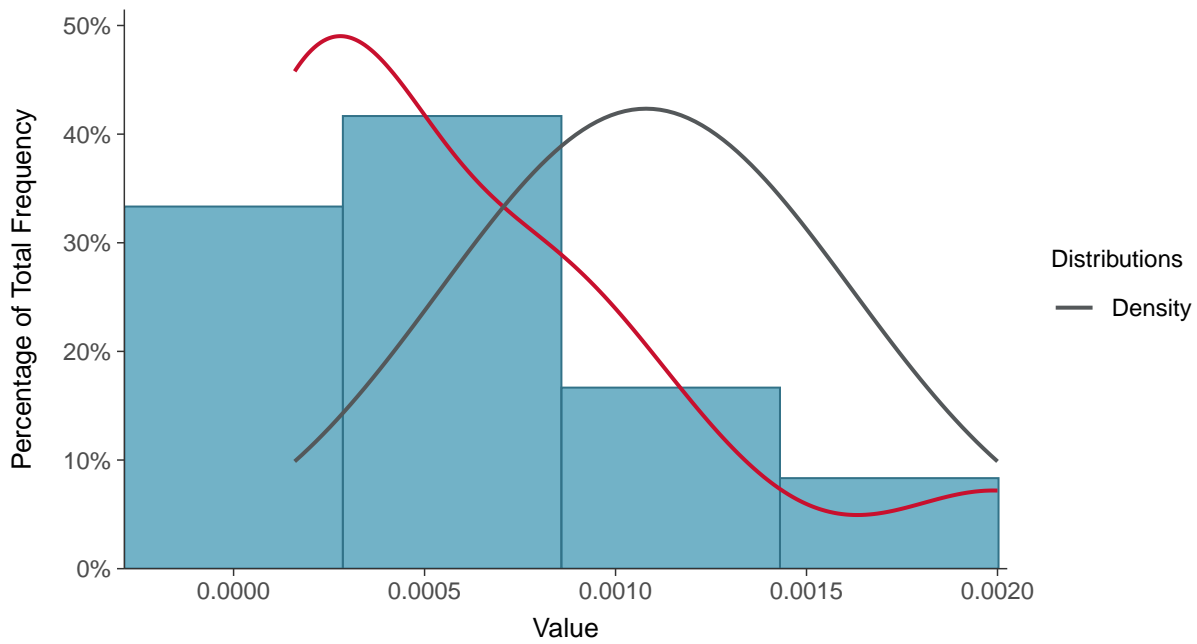
#### Scatter Plot

Selenium, MW-18 (mg/L)



#### Histogram

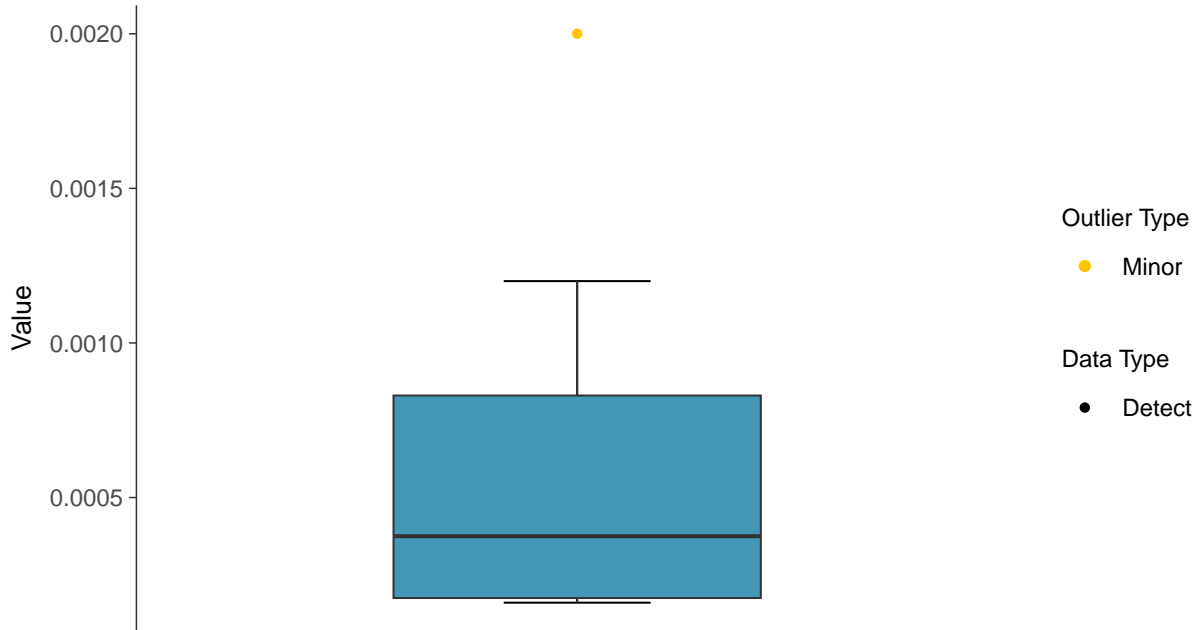
Selenium, MW-18 (mg/L)





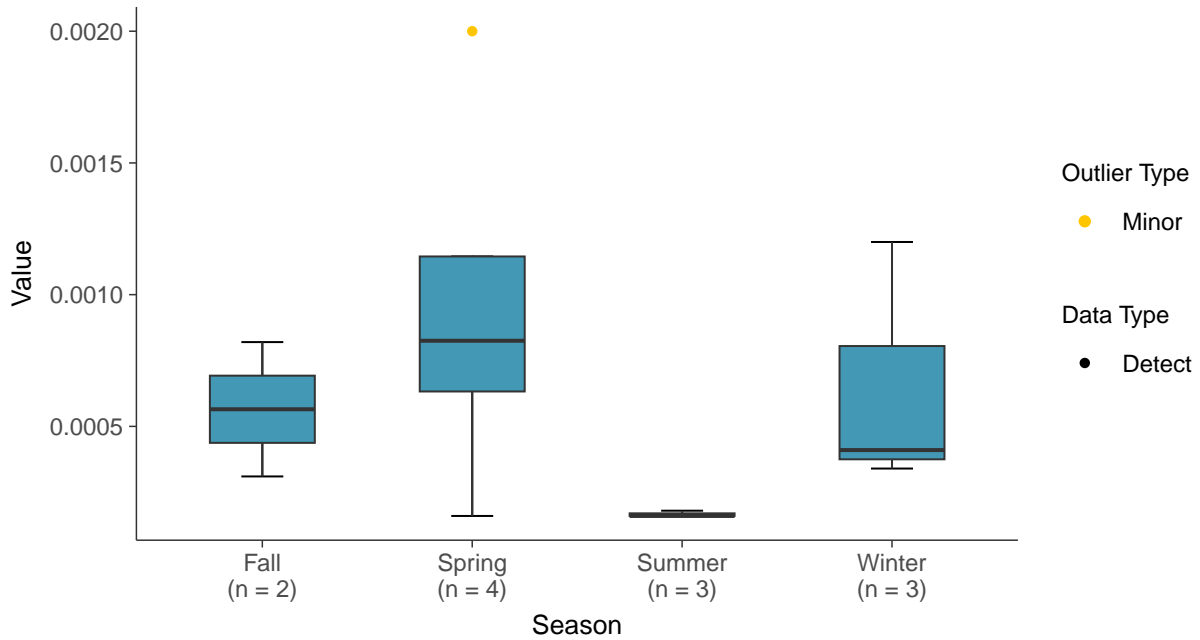
### Boxplot

Selenium, MW-18 (mg/L)



### Boxplot by Season

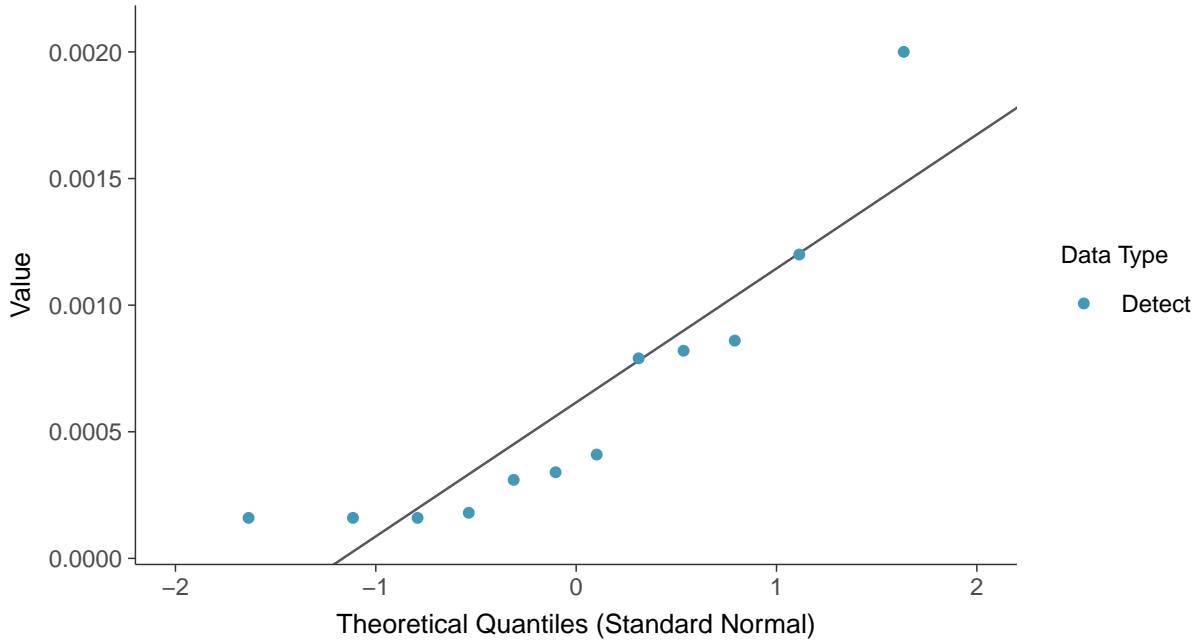
Selenium, MW-18 (mg/L)



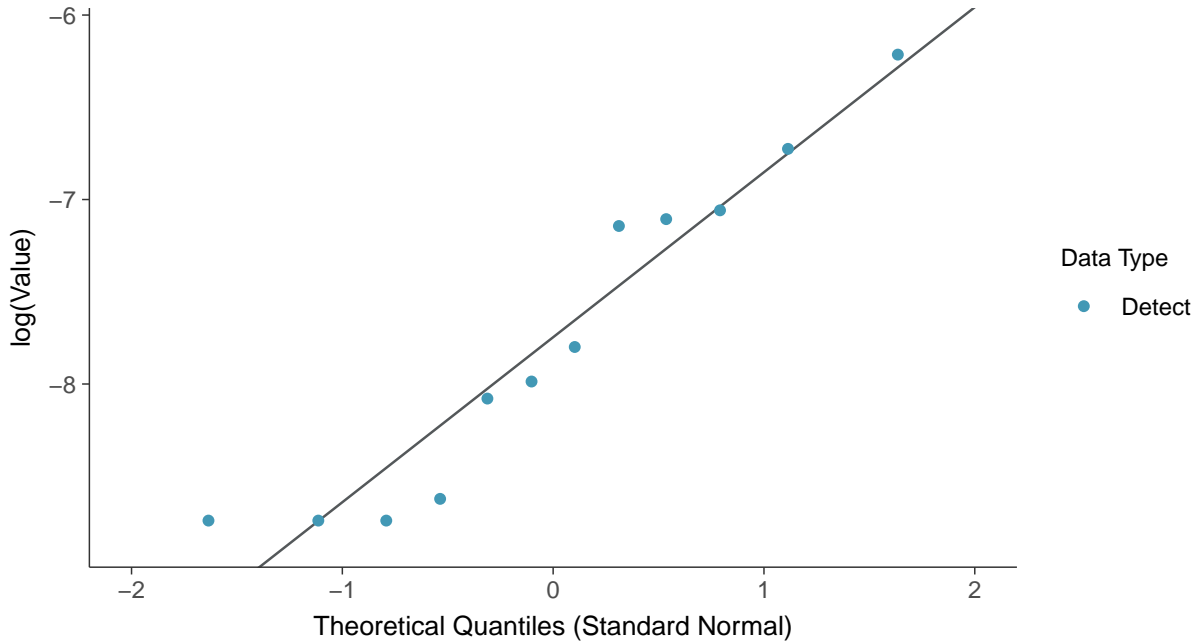




**Normal Q-Q plot**  
Selenium, MW-18 (mg/L)

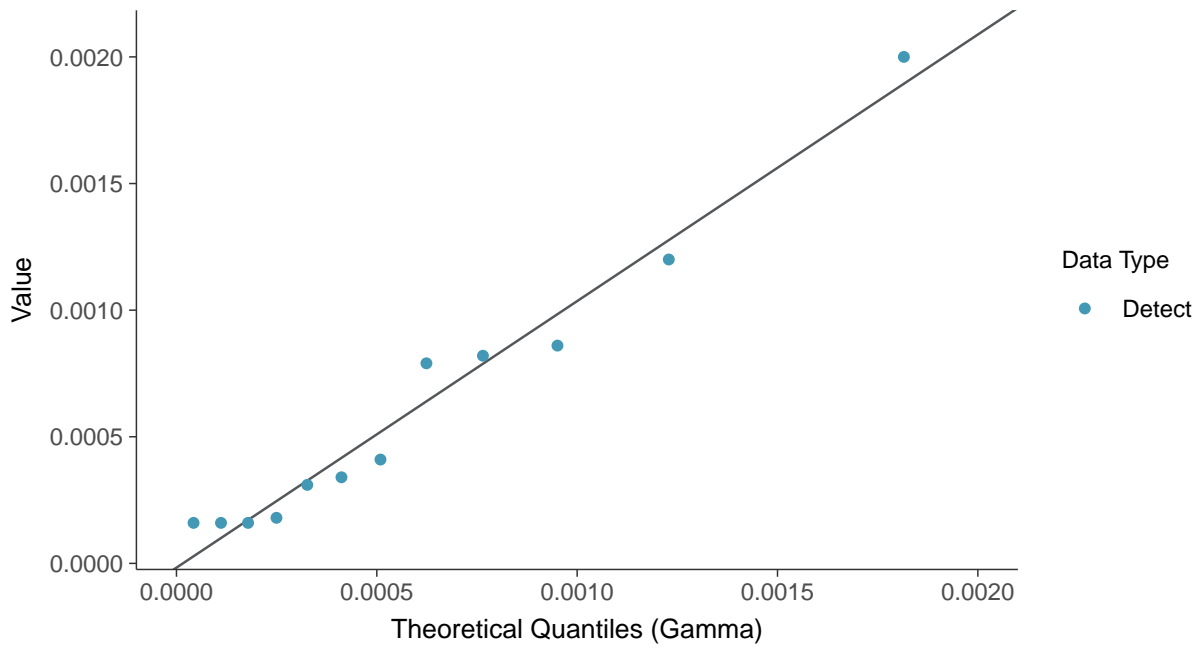


**Lognormal Q-Q plot**  
Selenium, MW-18 (mg/L)

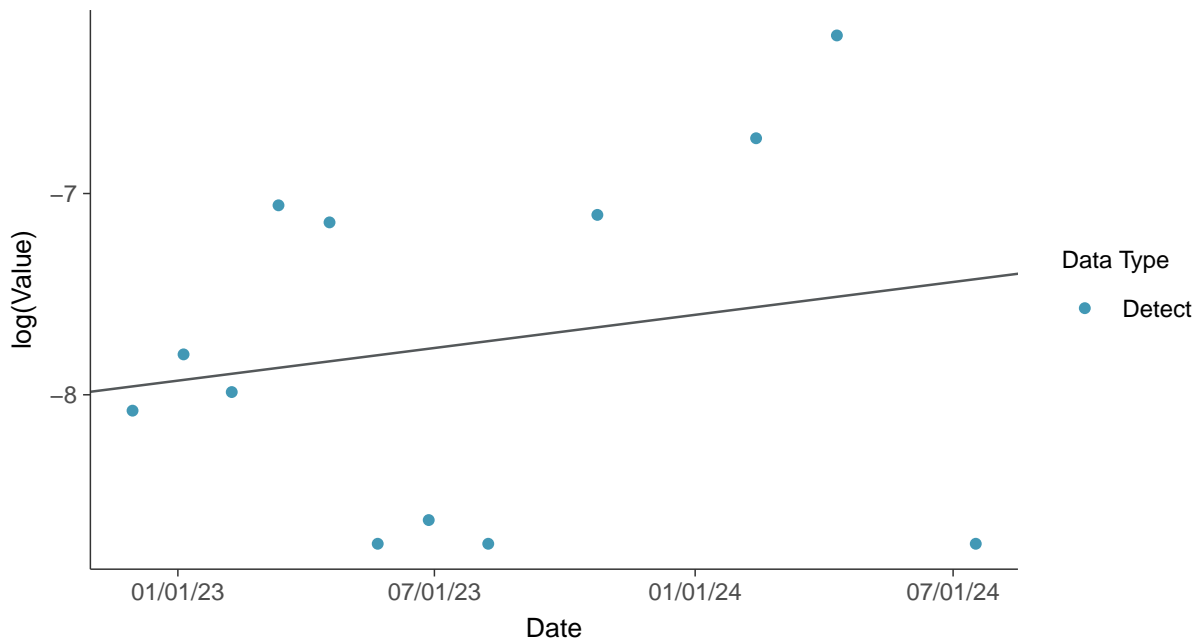




**Gamma Q-Q plot**  
Selenium, MW-18 (mg/L)

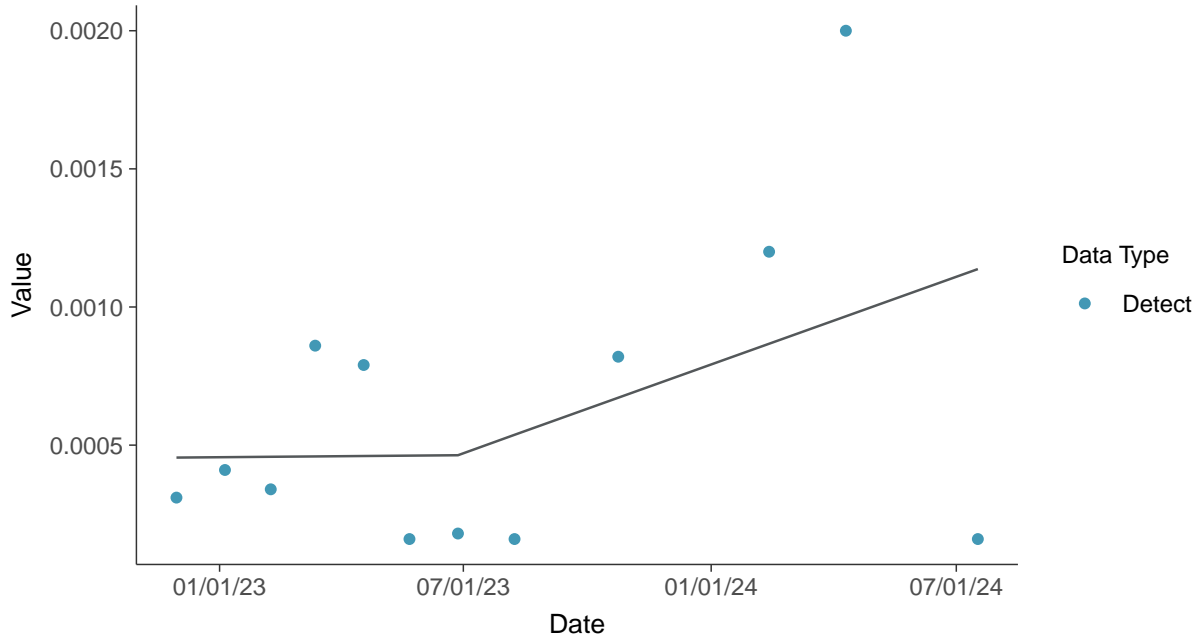


**Trend Regression: Lognormal MLE**  
Selenium, MW-18 (mg/L)

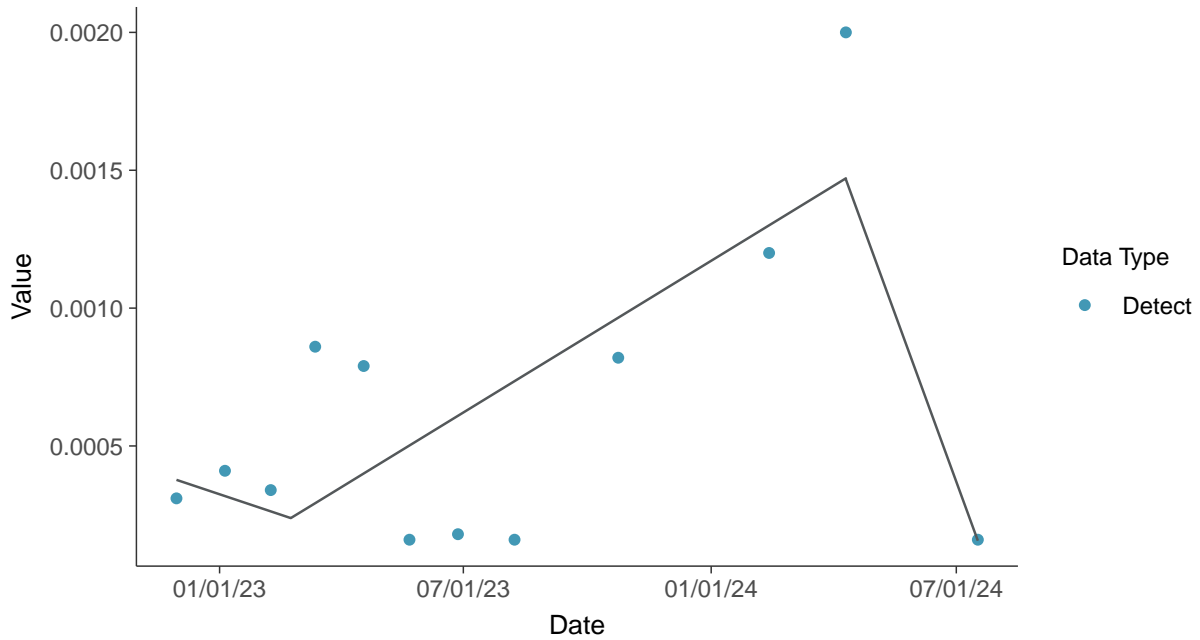




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-18 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-18 (mg/L)



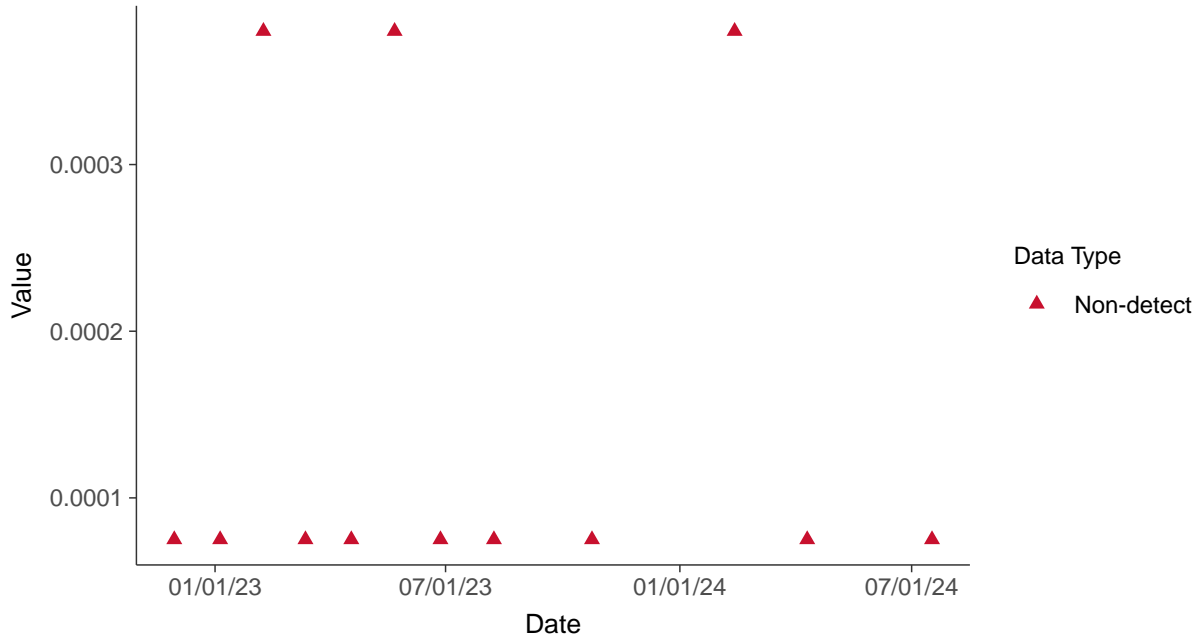


### Appendix IV: Thallium, MW-18

ID: 28\_1\_5\_125

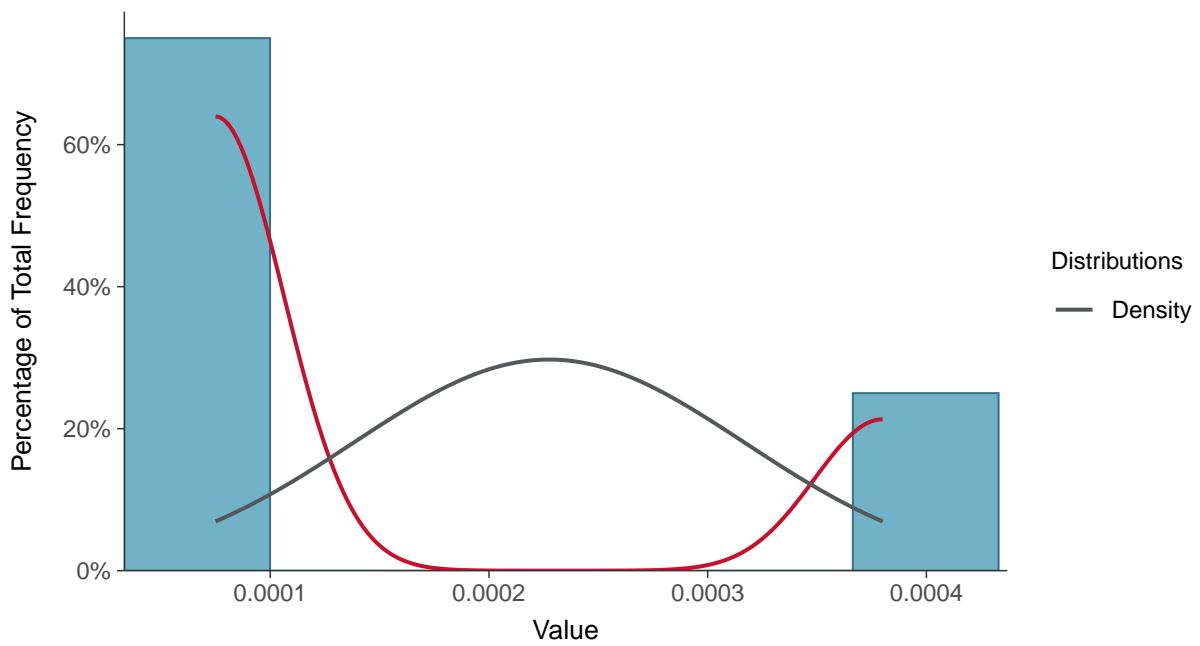
**Scatter Plot**

Thallium, MW-18 (mg/L)



**Histogram**

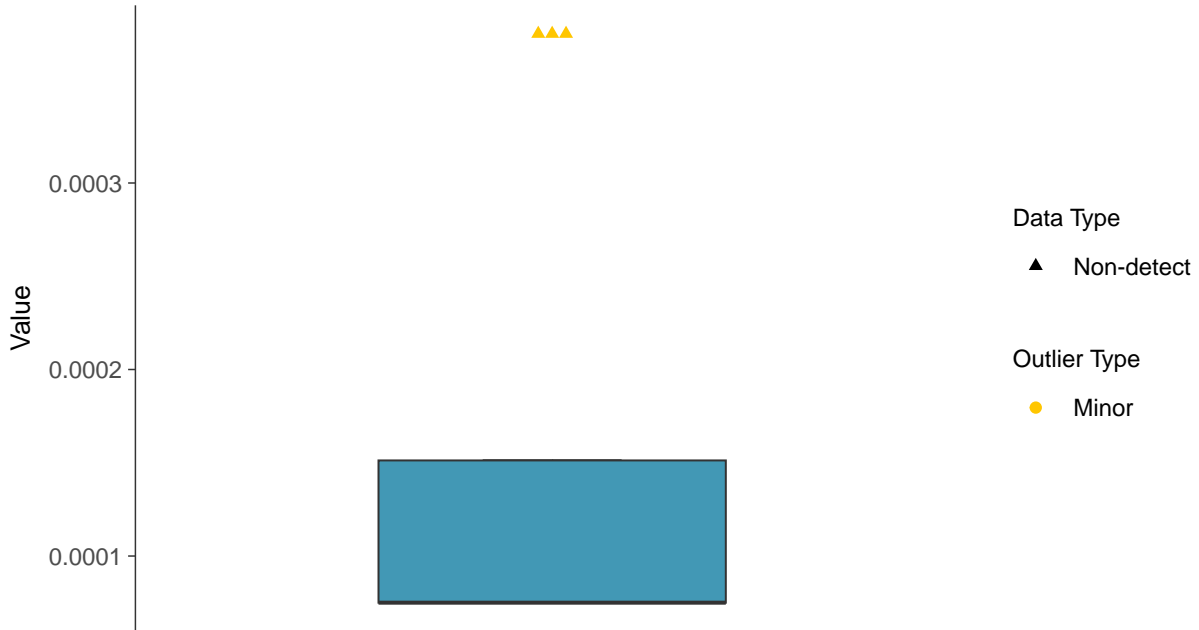
Thallium, MW-18 (mg/L)





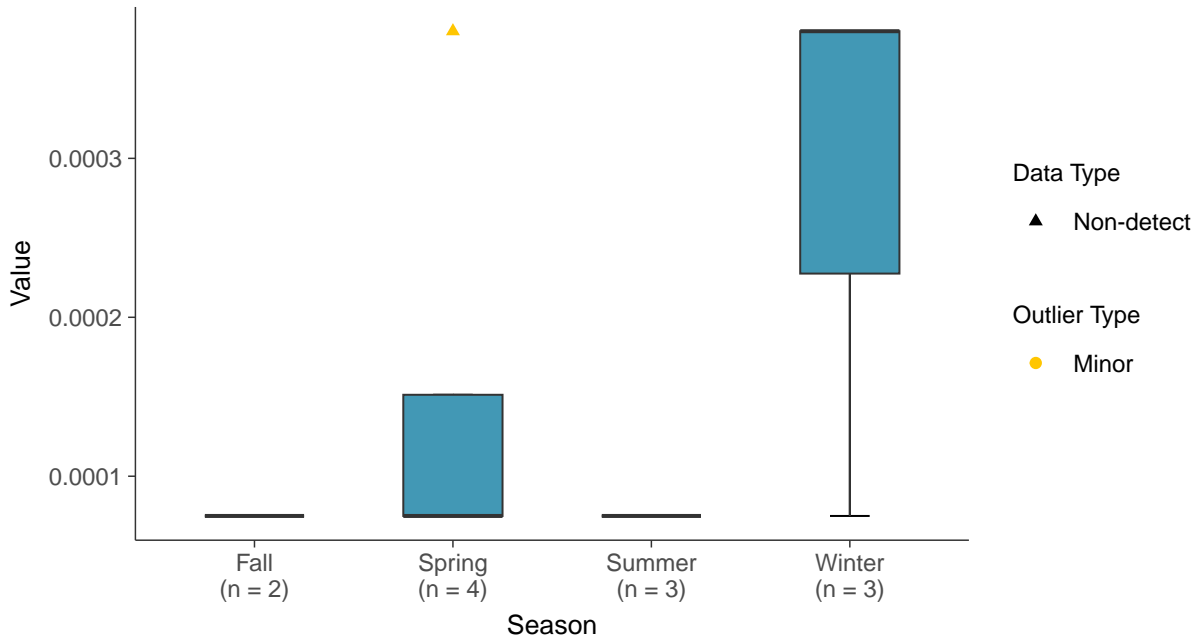
### Boxplot

Thallium, MW-18 (mg/L)



### Boxplot by Season

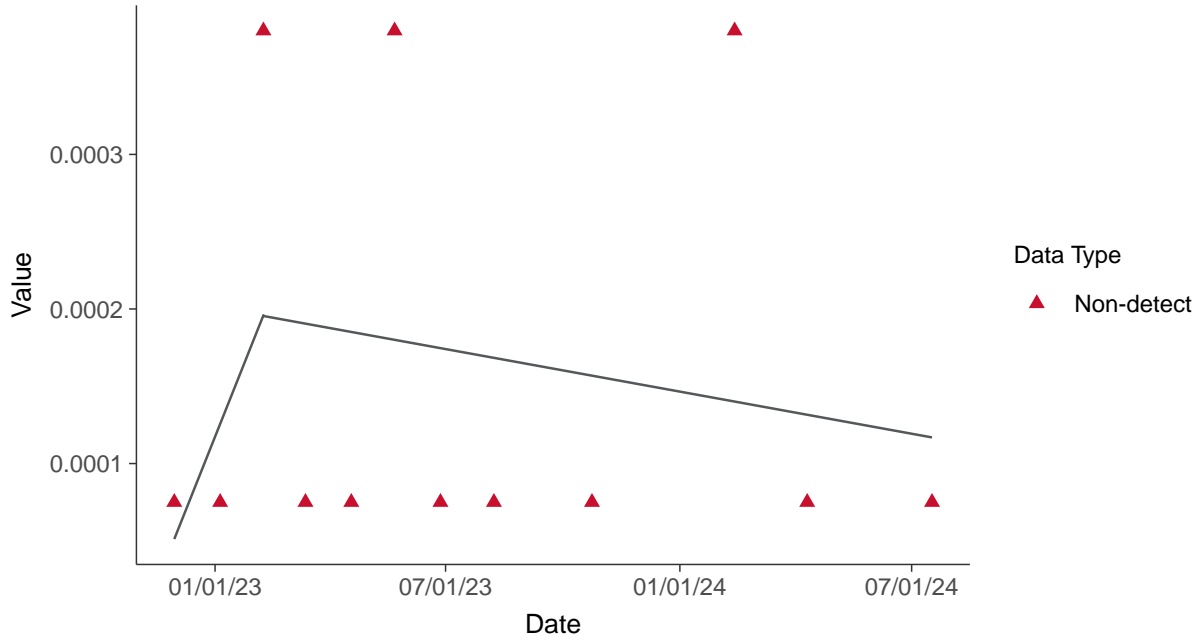
Thallium, MW-18 (mg/L)





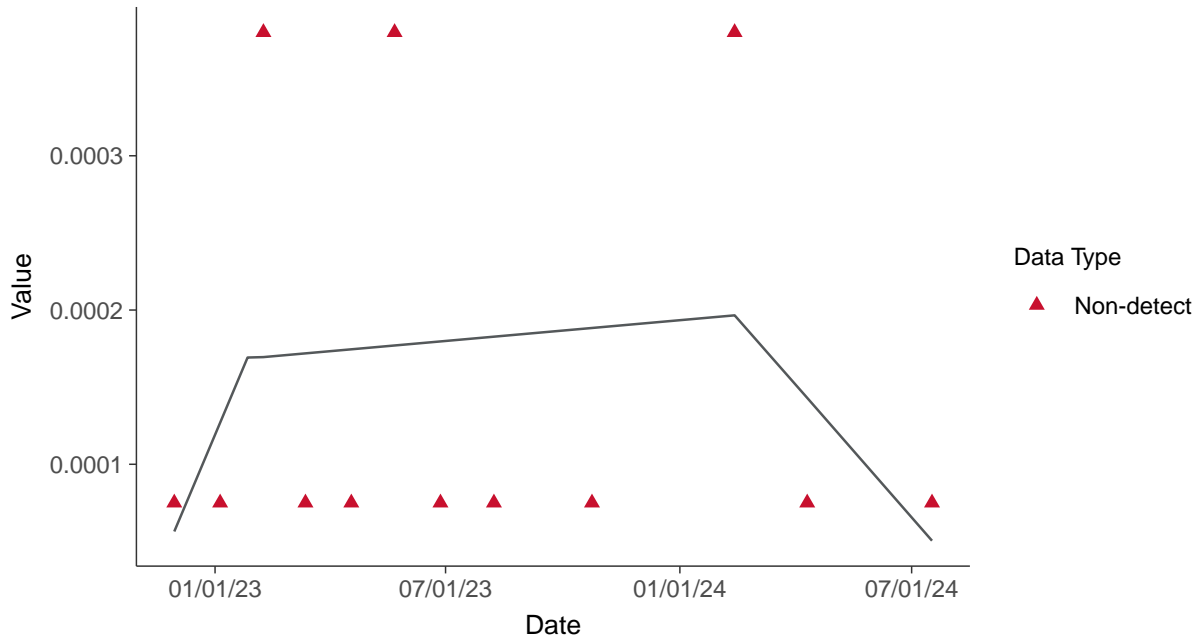
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-18 (mg/L)



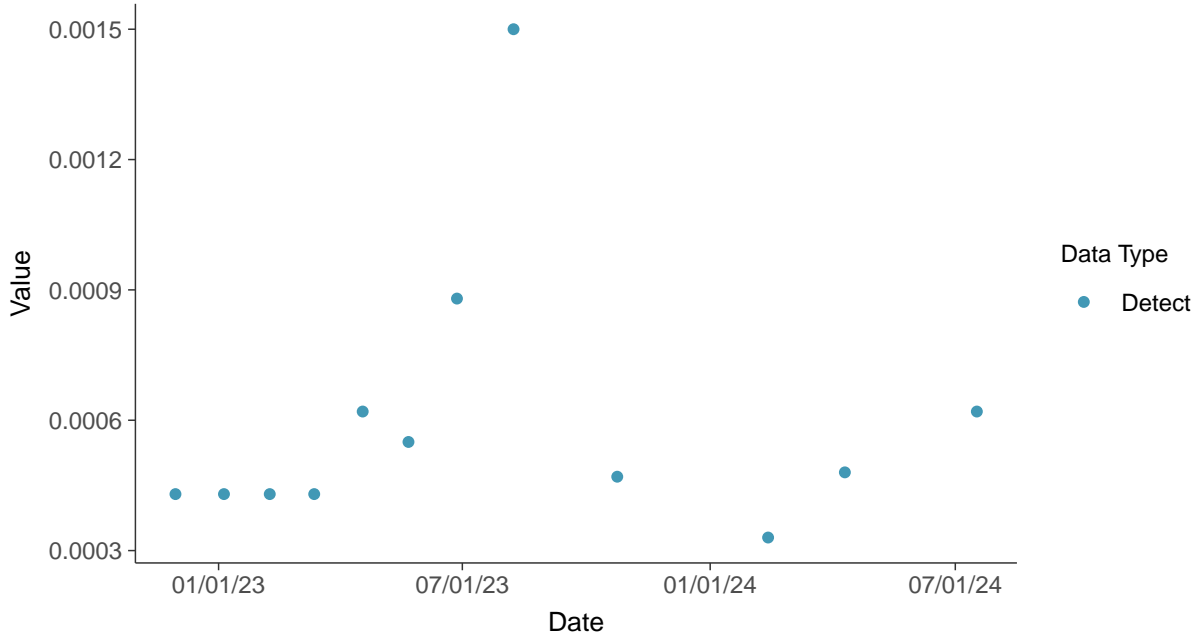


### Part 115: Copper, MW-18

ID: 28\_1\_6\_111

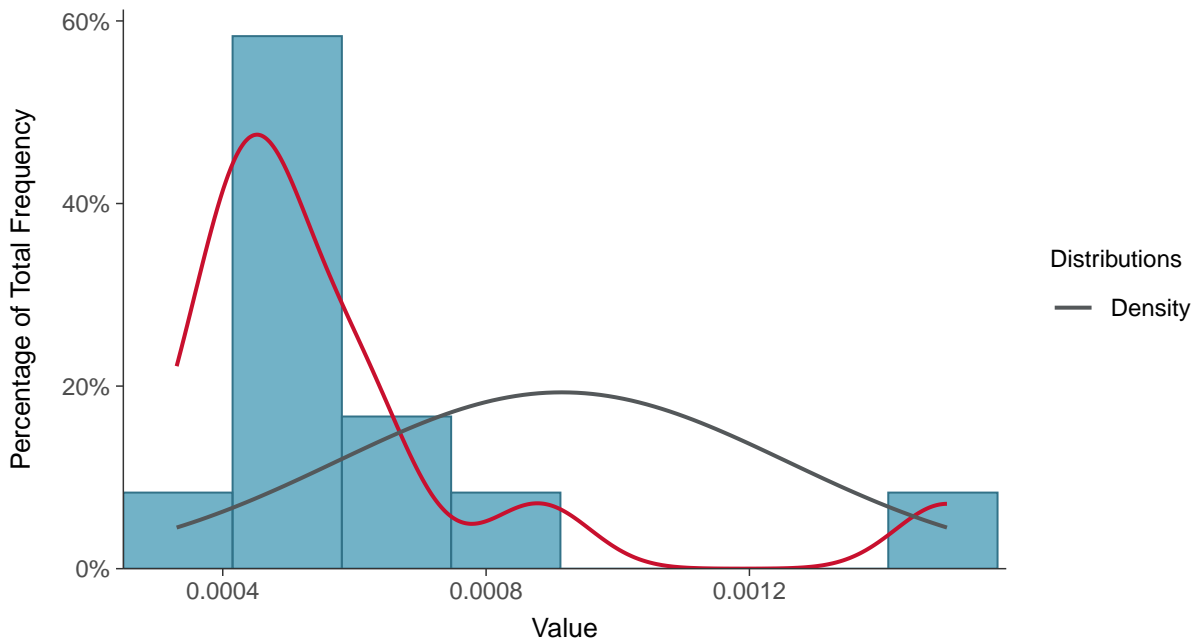
#### Scatter Plot

Copper, MW-18 (mg/L)



#### Histogram

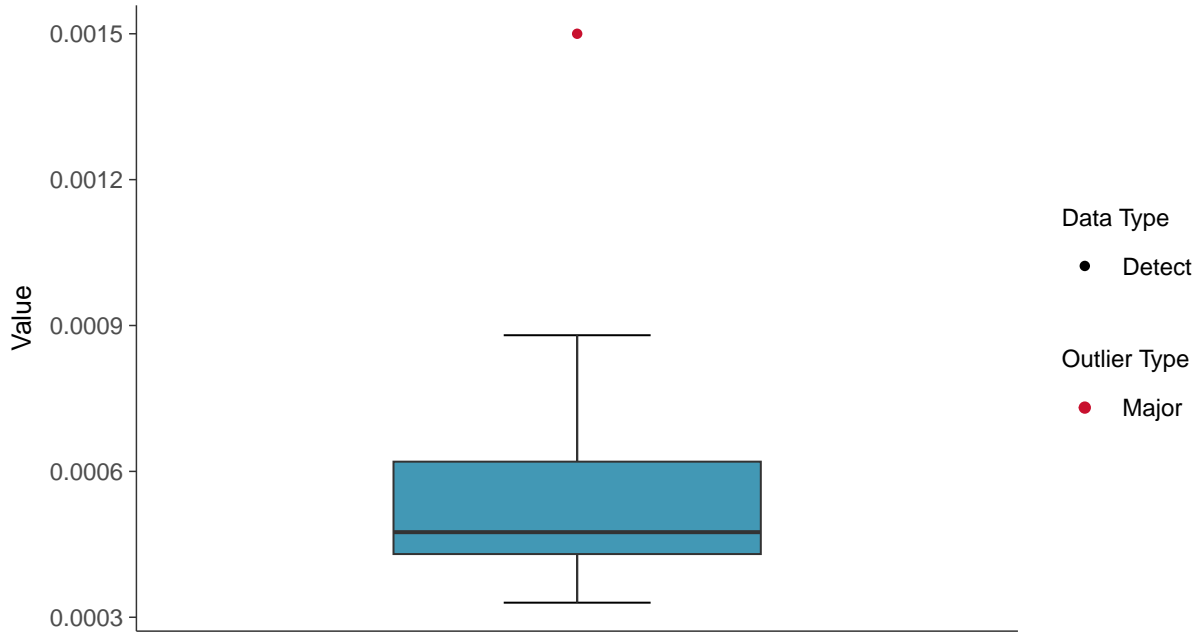
Copper, MW-18 (mg/L)





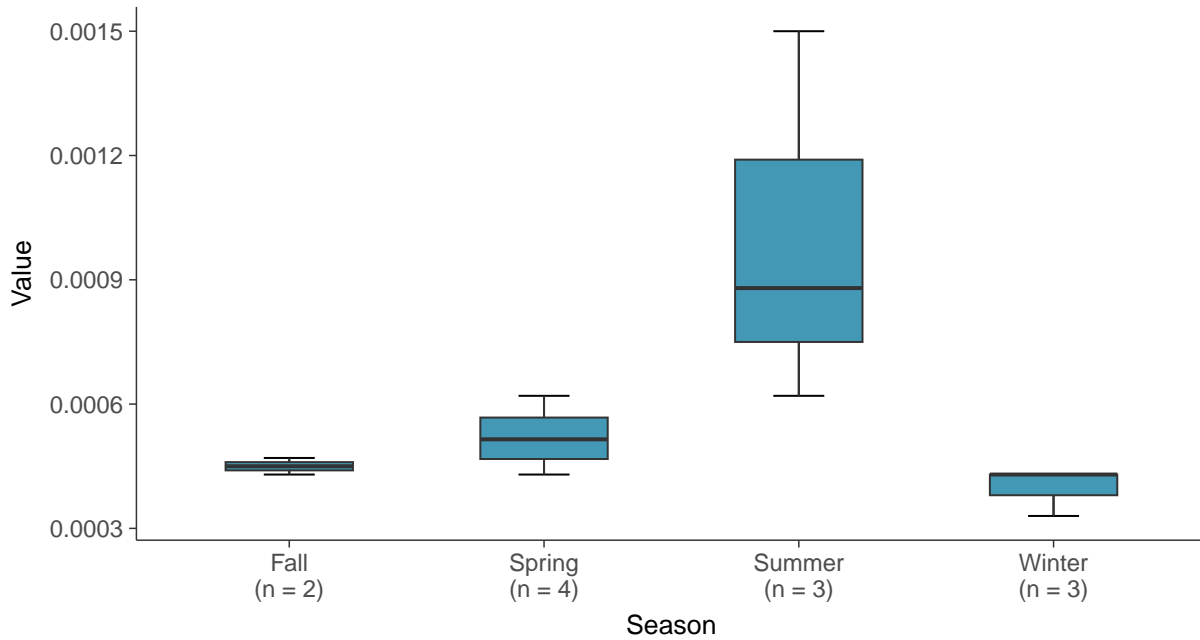
### Boxplot

Copper, MW-18 (mg/L)



### Boxplot by Season

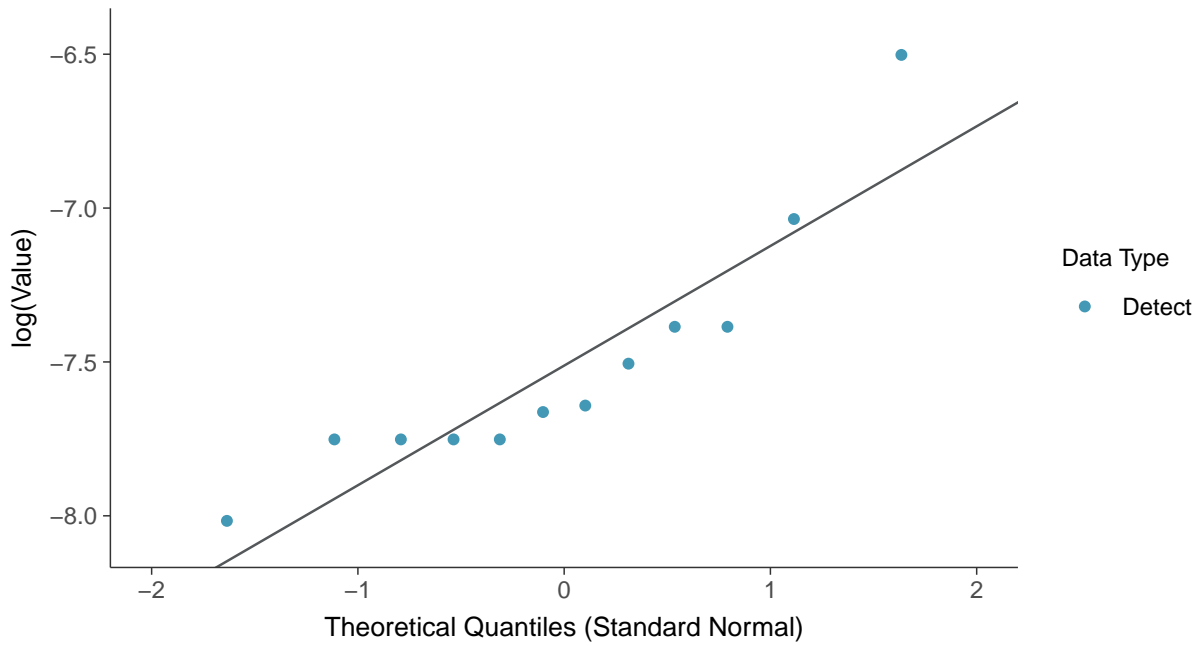
Copper, MW-18 (mg/L)



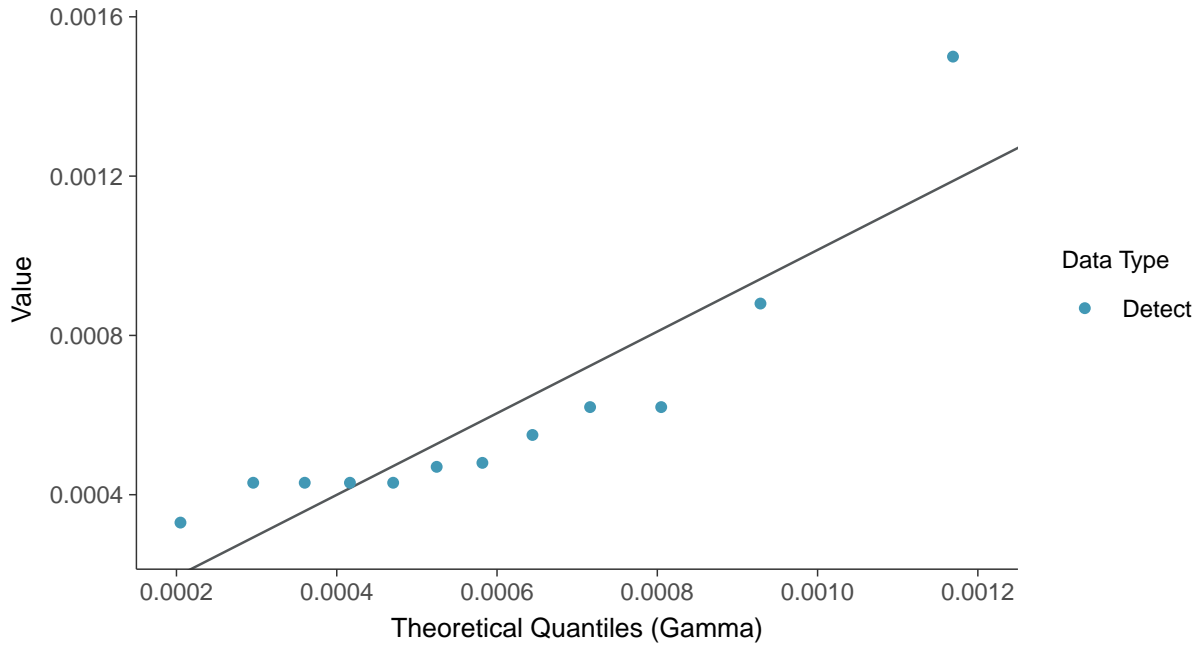




**Lognormal Q-Q plot**  
Copper, MW-18 (mg/L)



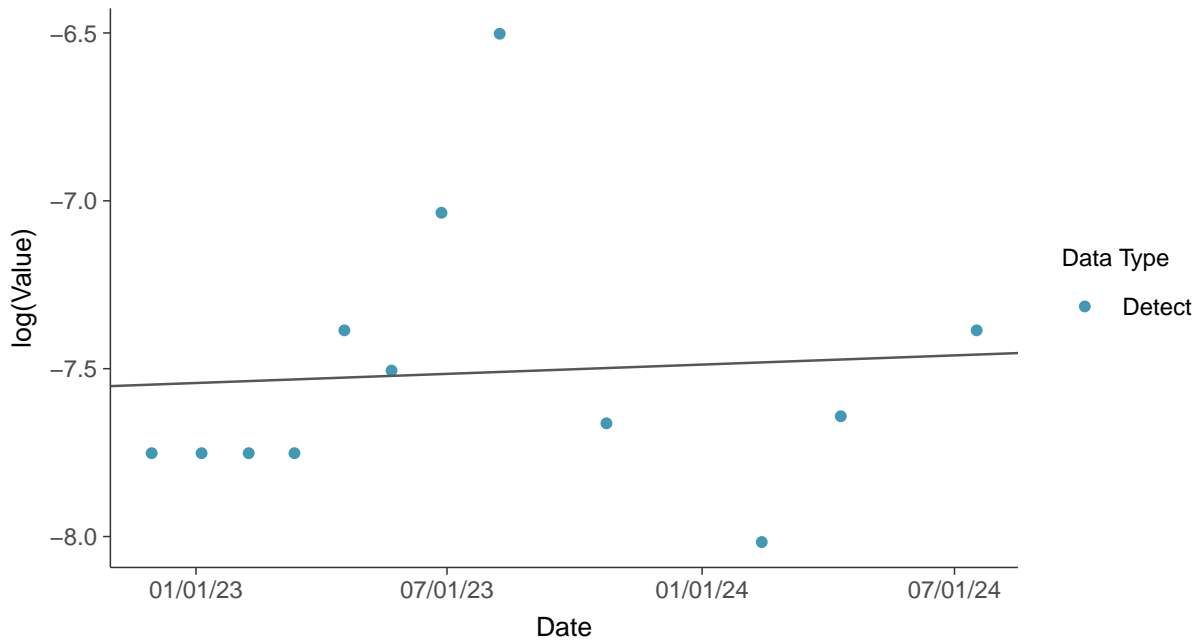
**Gamma Q-Q plot**  
Copper, MW-18 (mg/L)





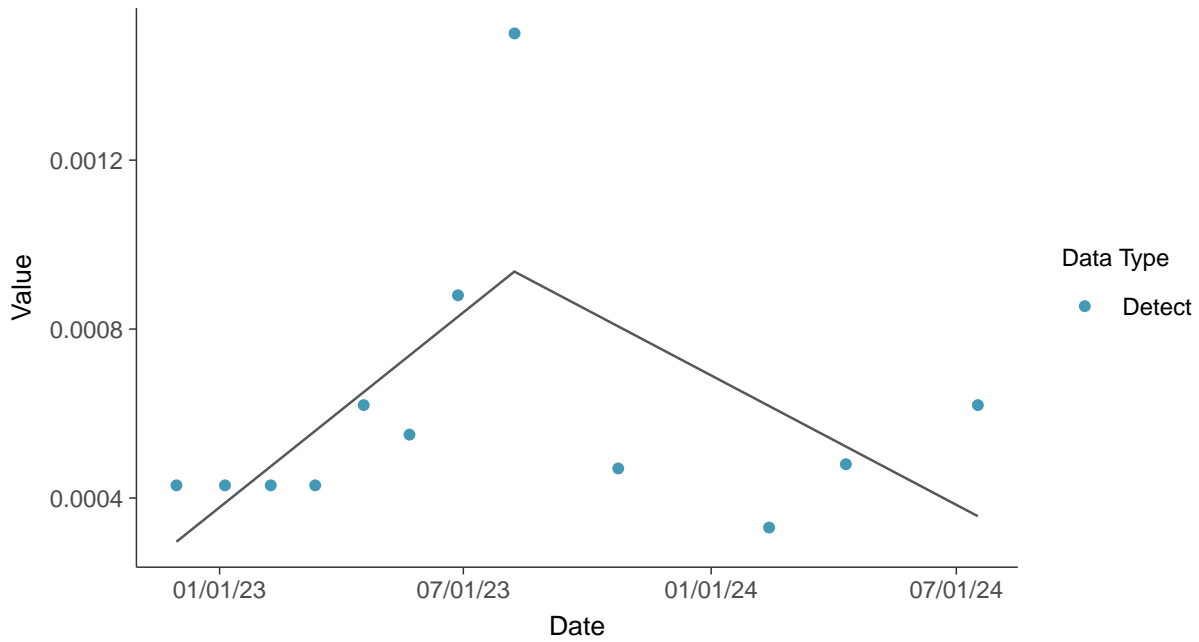
### Trend Regression: Lognormal MLE

Copper, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear

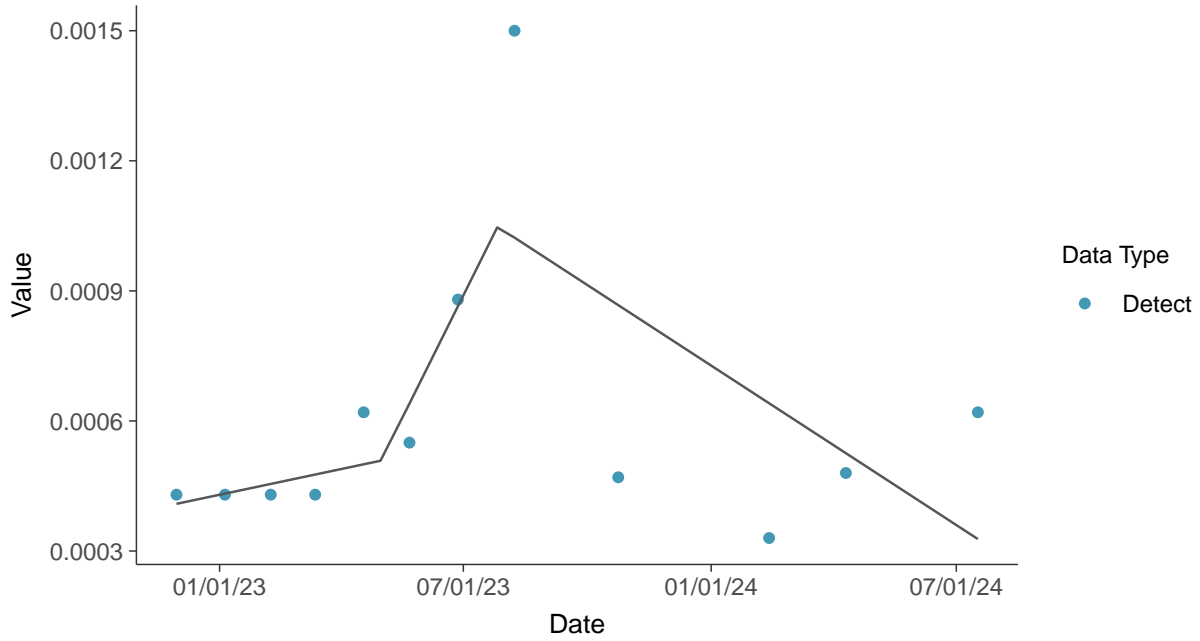
Copper, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-18 (mg/L)



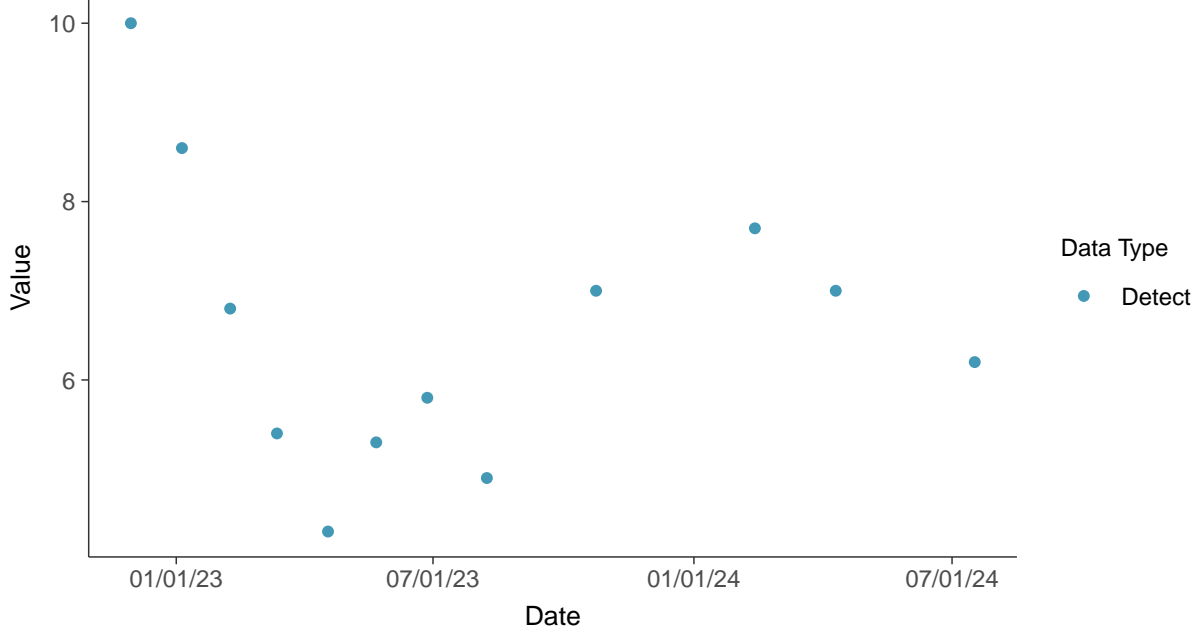


### Part 115: Iron, MW-18

ID: 28\_1\_6\_114

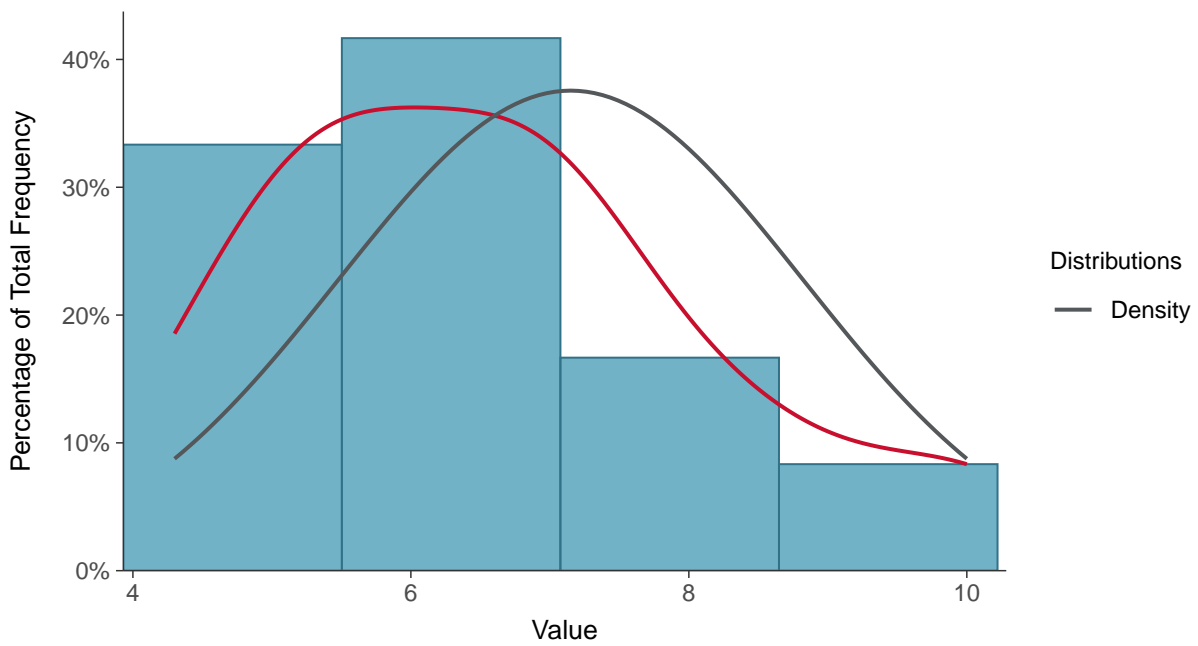
#### Scatter Plot

Iron, MW-18 (mg/L)



#### Histogram

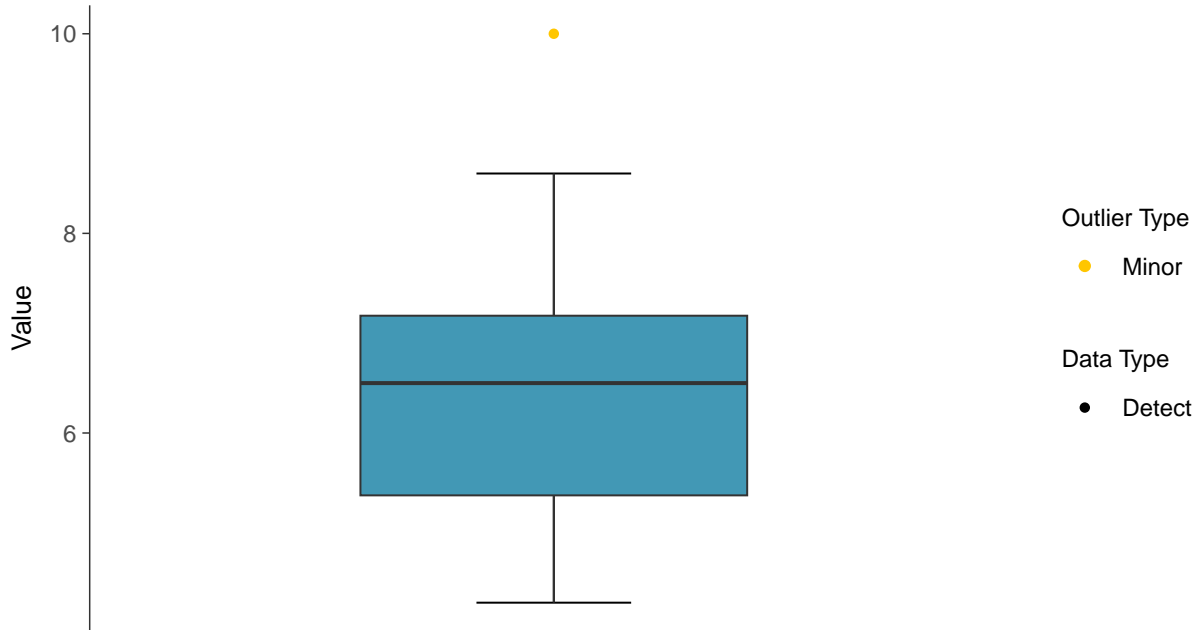
Iron, MW-18 (mg/L)





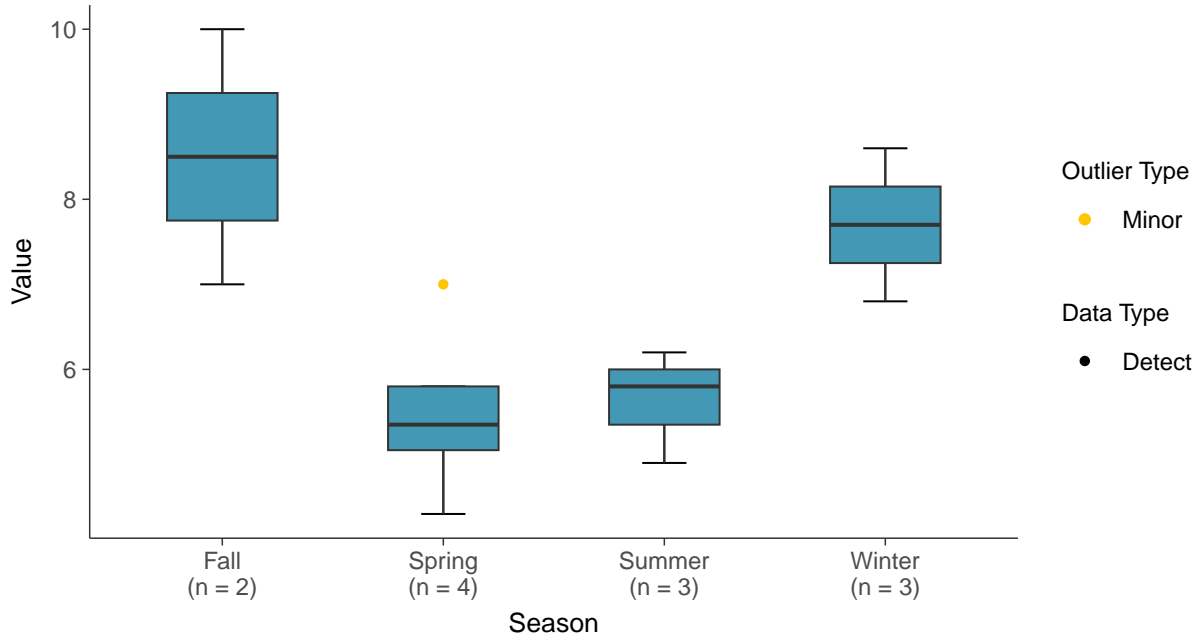
### Boxplot

Iron, MW-18 (mg/L)



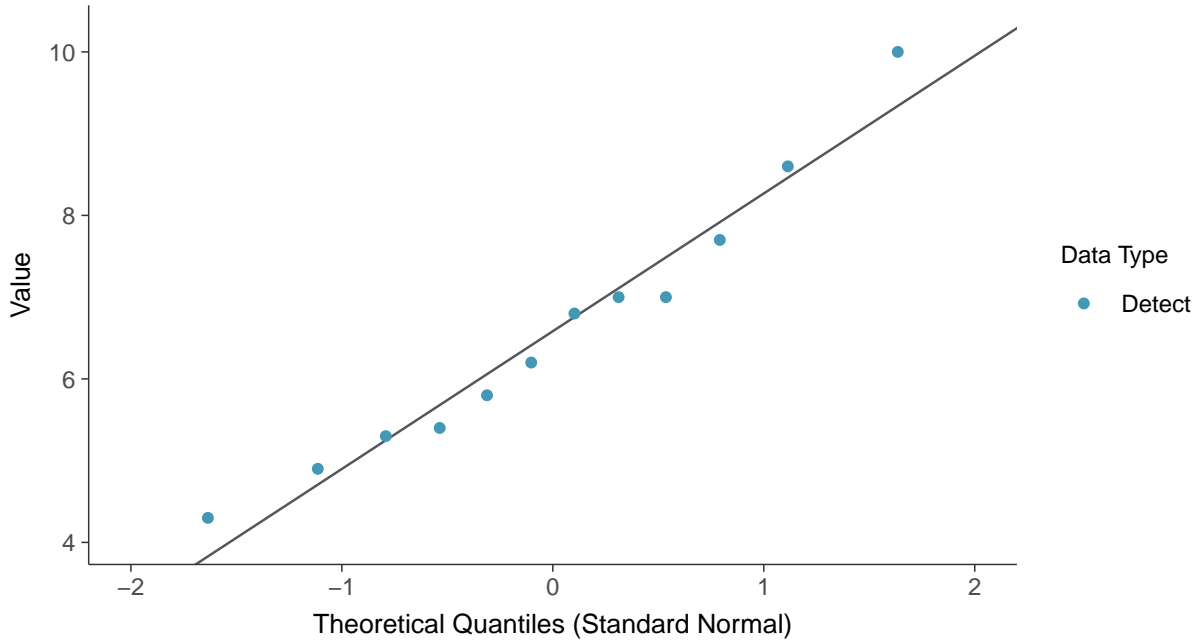
### Boxplot by Season

Iron, MW-18 (mg/L)

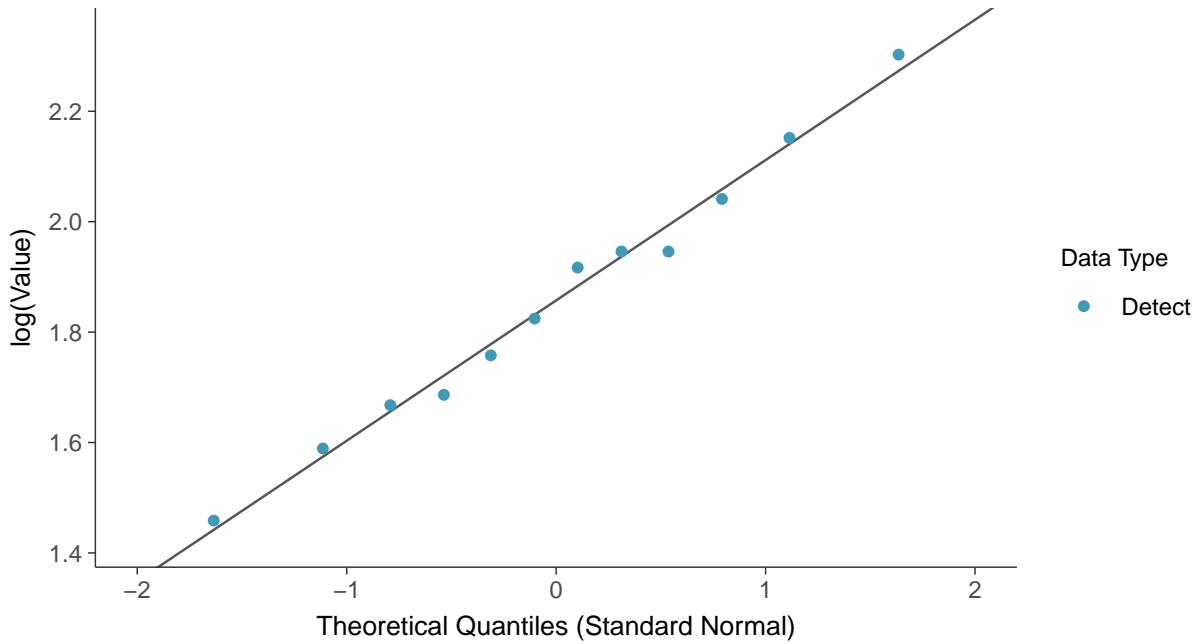




**Normal Q-Q plot**  
Iron, MW-18 (mg/L)

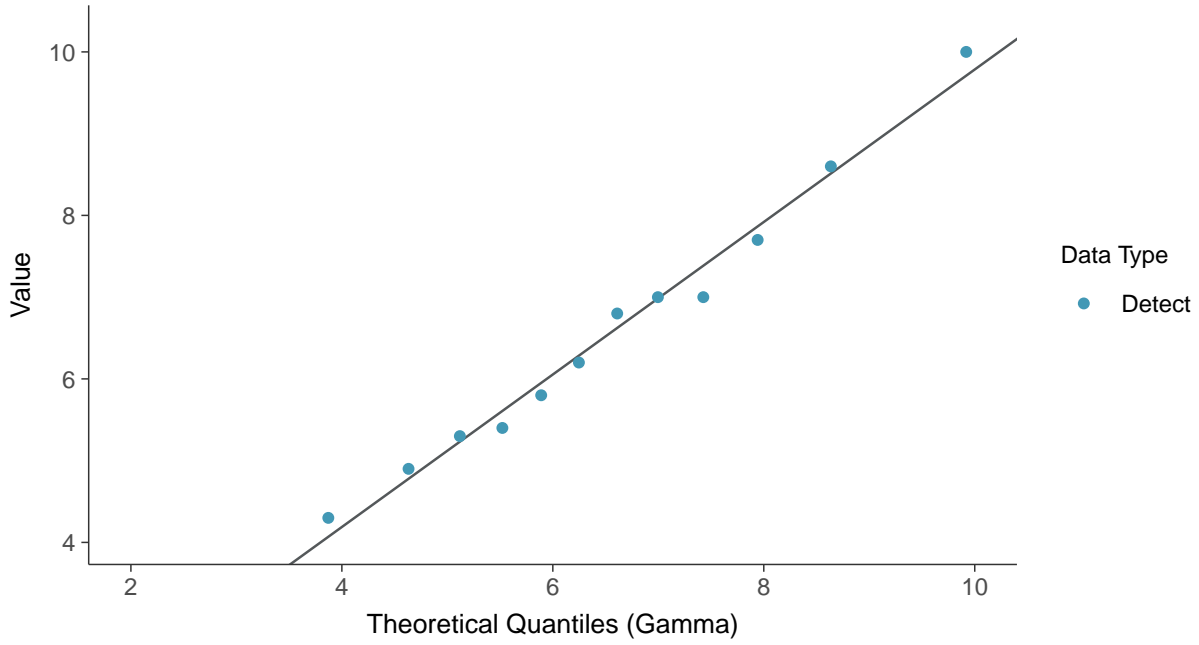


**Lognormal Q-Q plot**  
Iron, MW-18 (mg/L)

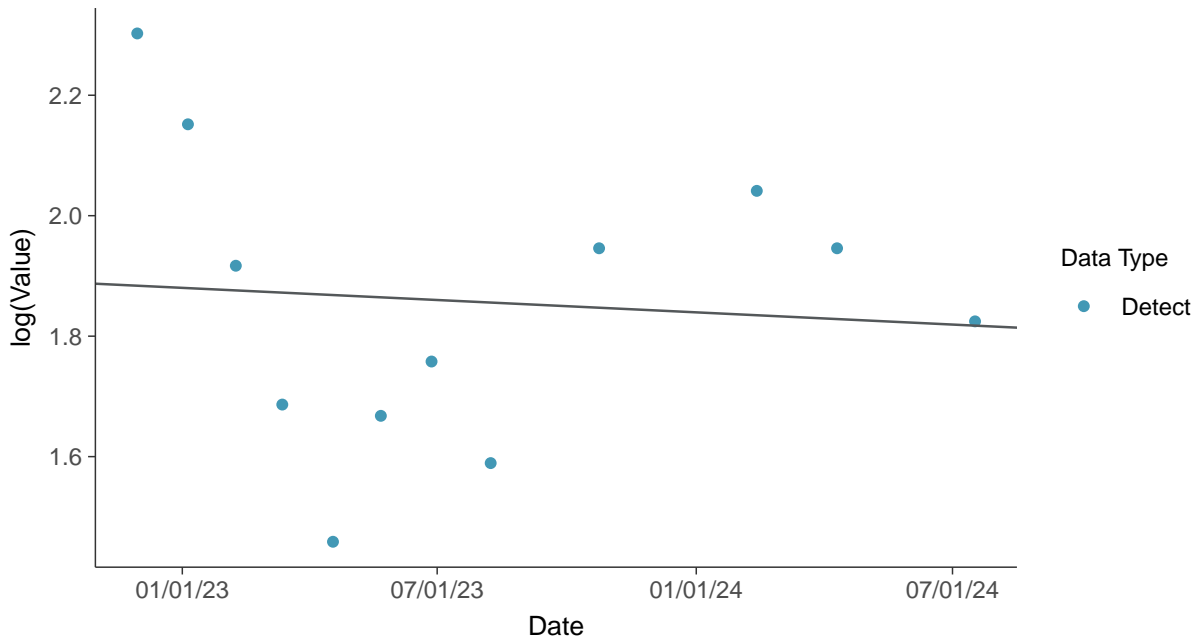




**Gamma Q-Q plot**  
Iron, MW-18 (mg/L)



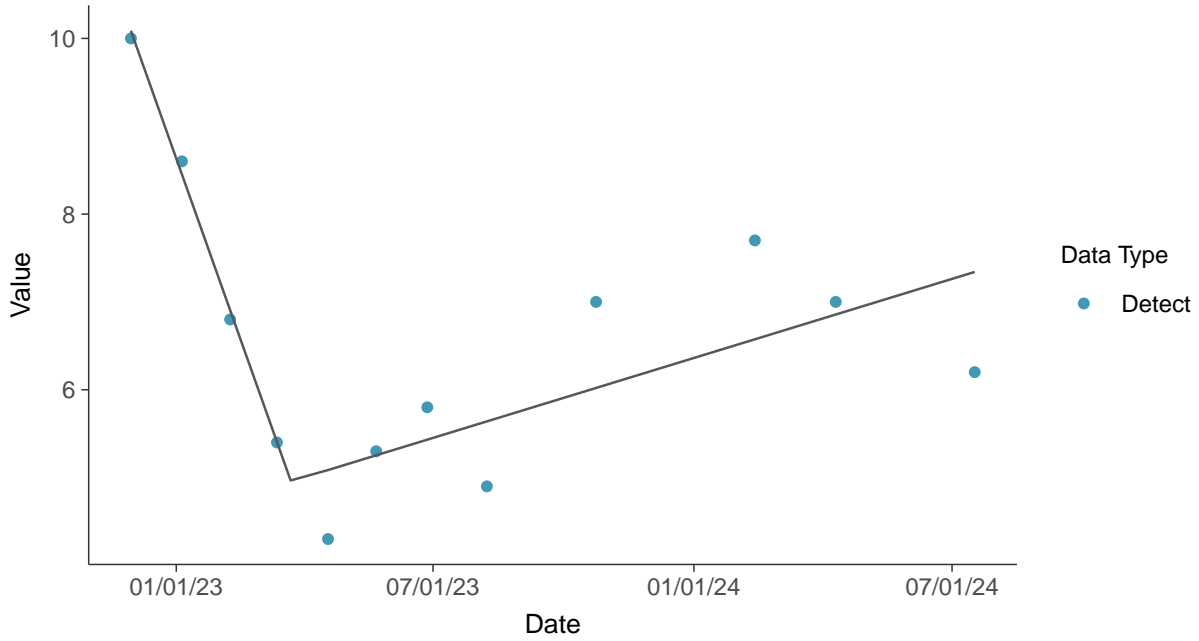
**Trend Regression: Lognormal MLE**  
Iron, MW-18 (mg/L)





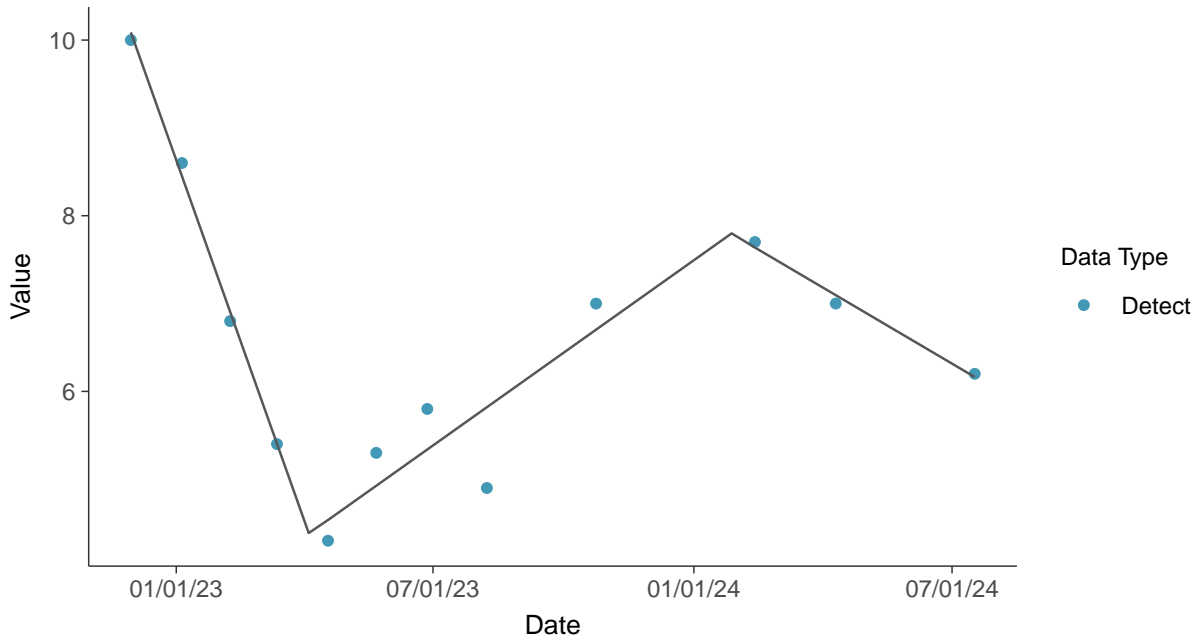
### Trend Regression: Piecewise Linear-Linear

Iron, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-18 (mg/L)

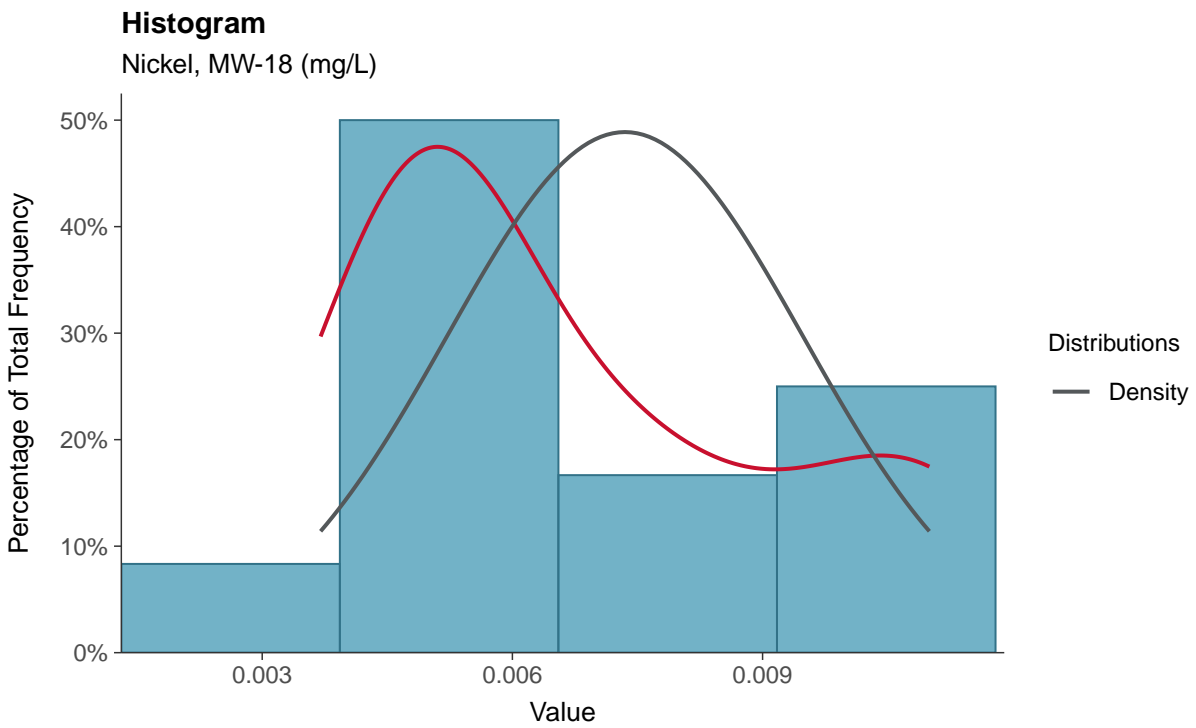
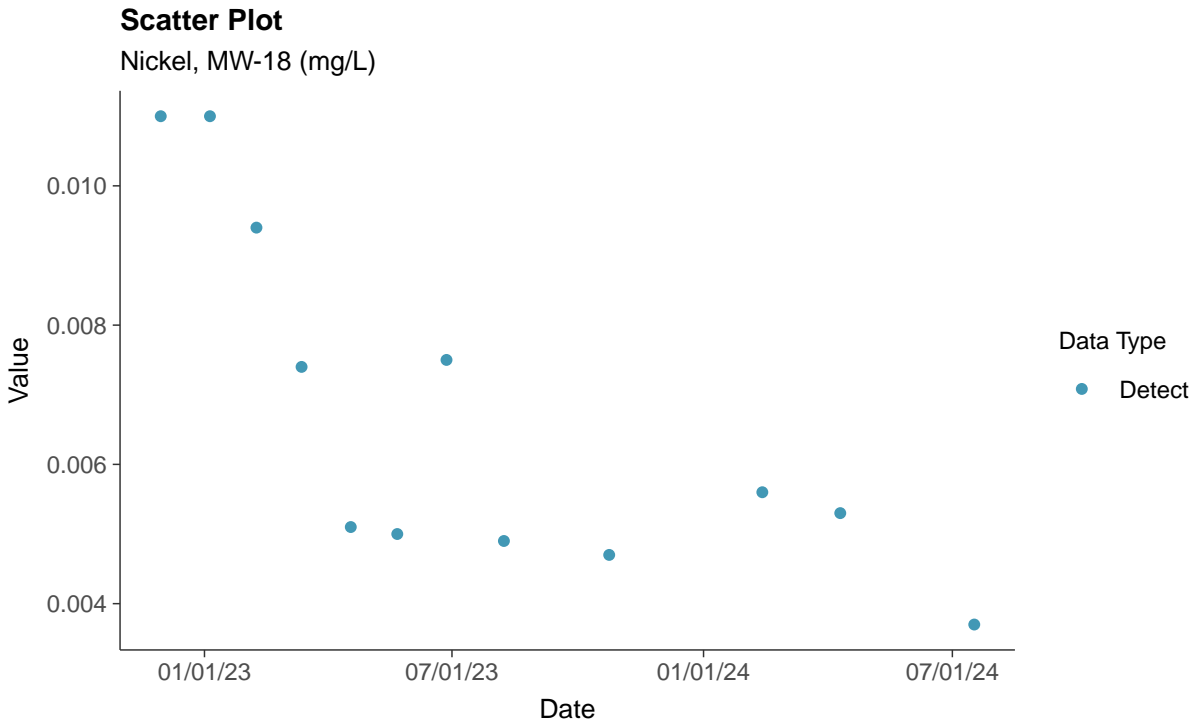






### Part 115: Nickel, MW-18

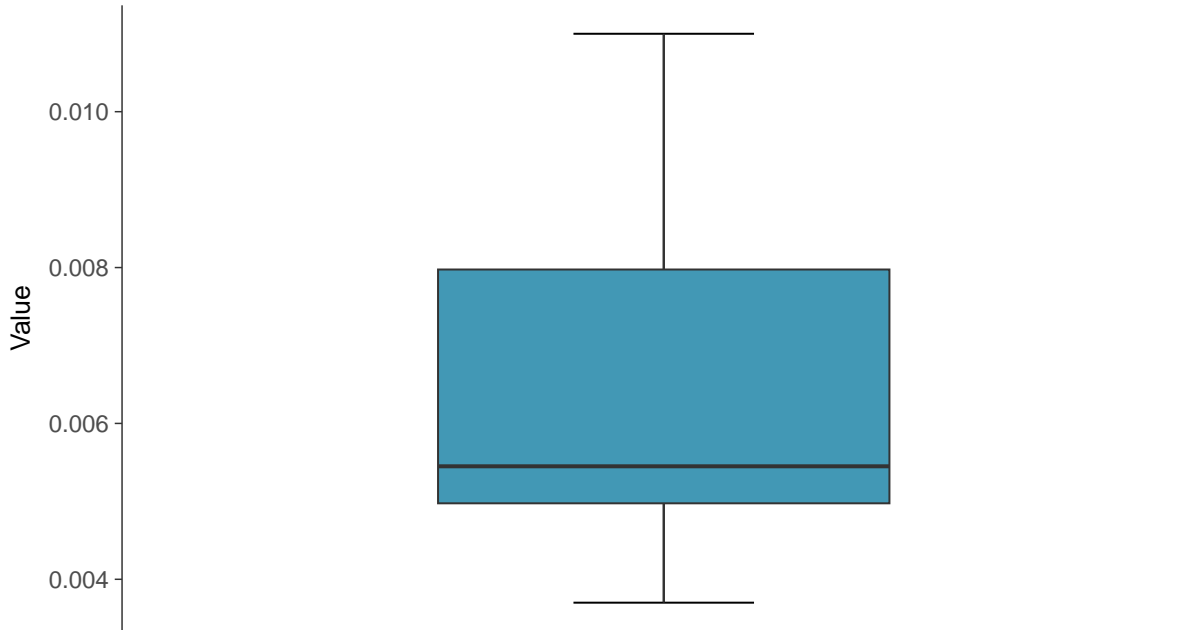
ID: 28\_1\_6\_119





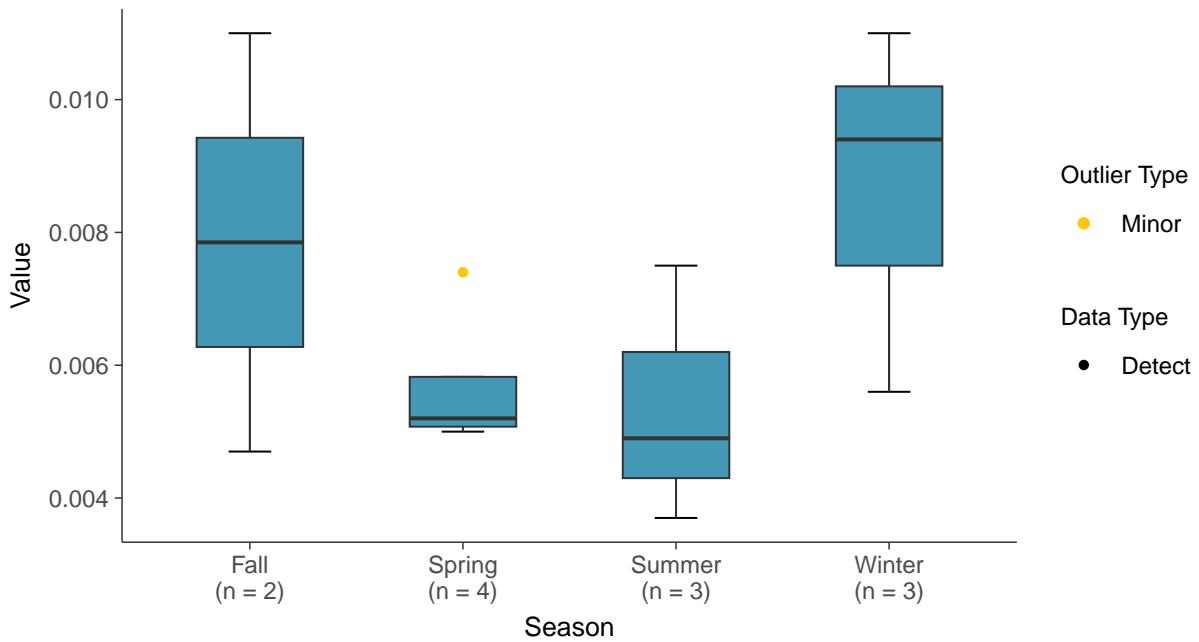
### Boxplot

Nickel, MW-18 (mg/L)



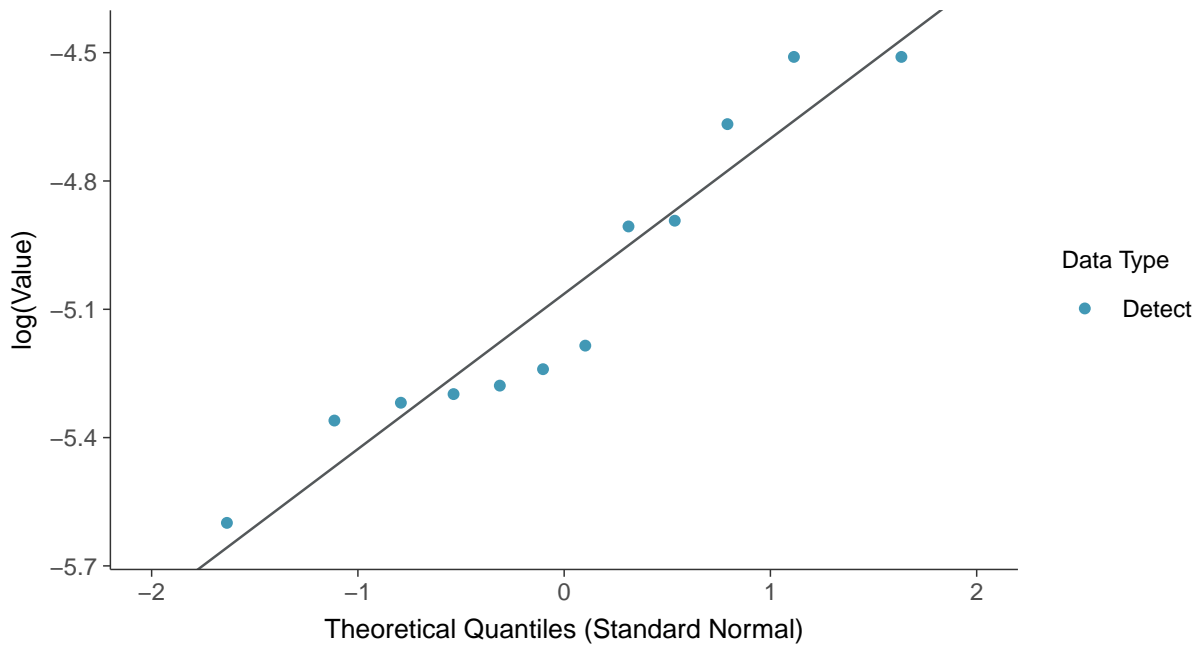
### Boxplot by Season

Nickel, MW-18 (mg/L)

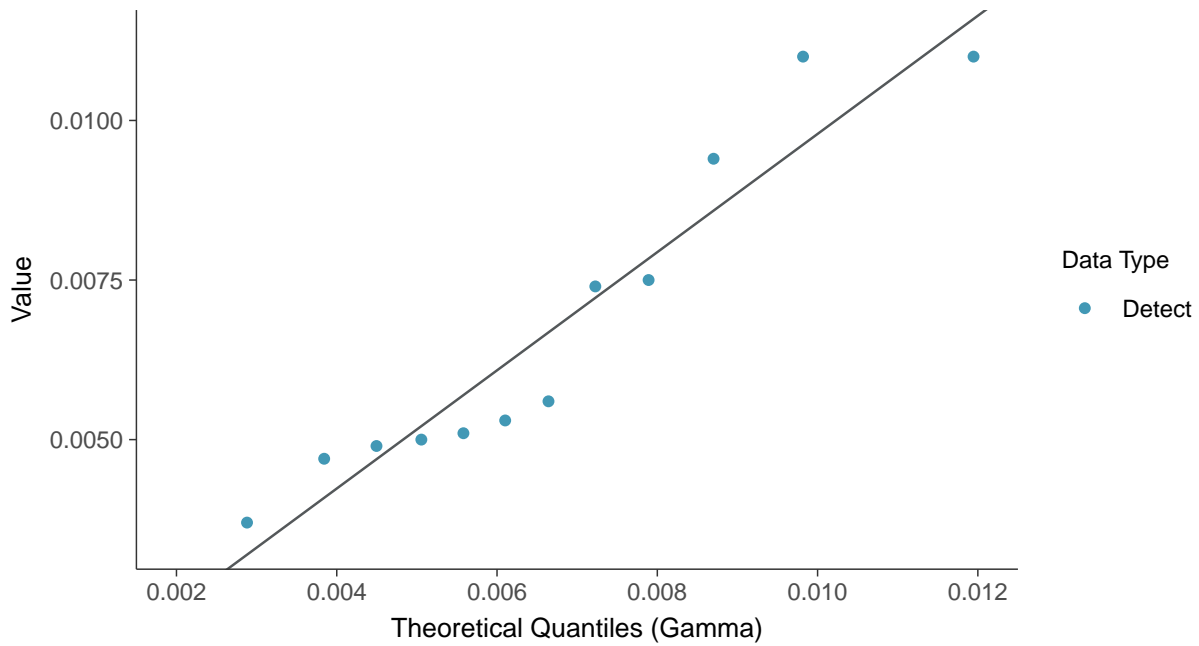




**Lognormal Q-Q plot**  
Nickel, MW-18 (mg/L)



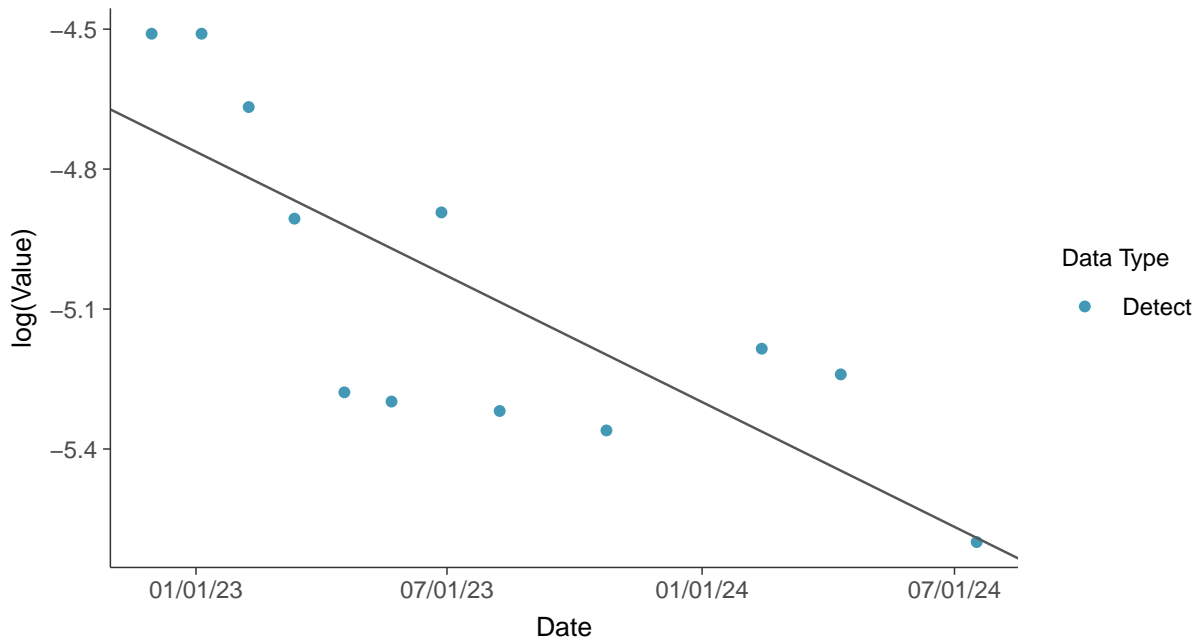
**Gamma Q-Q plot**  
Nickel, MW-18 (mg/L)





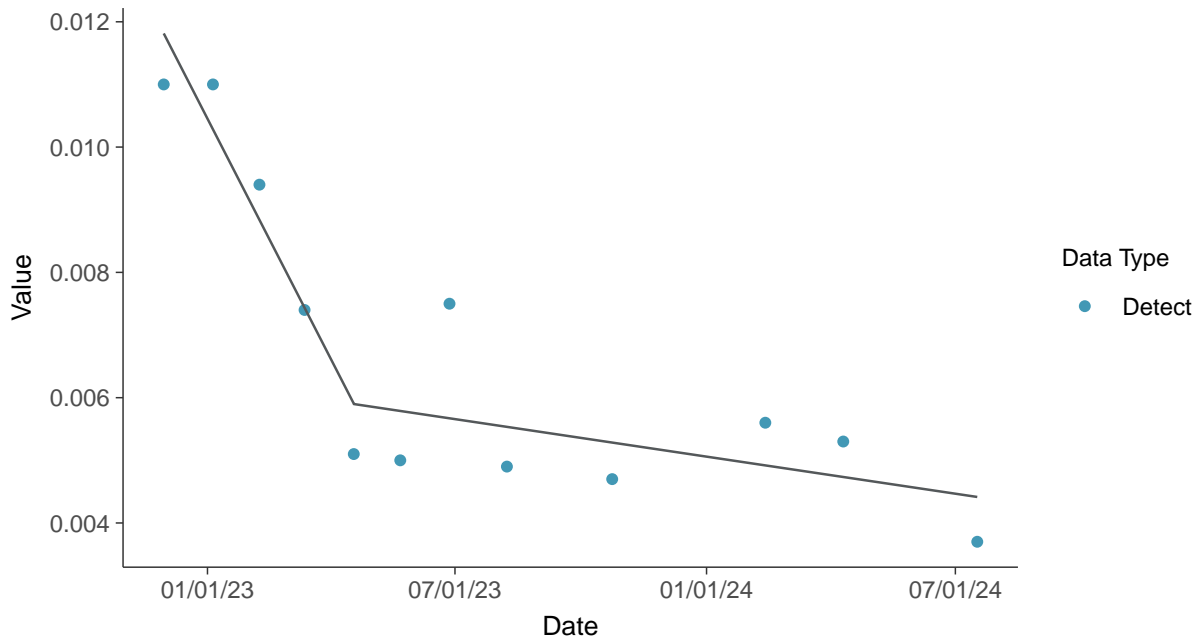
### Trend Regression: Lognormal MLE

Nickel, MW-18 (mg/L)



### Trend Regression: Piecewise Linear-Linear

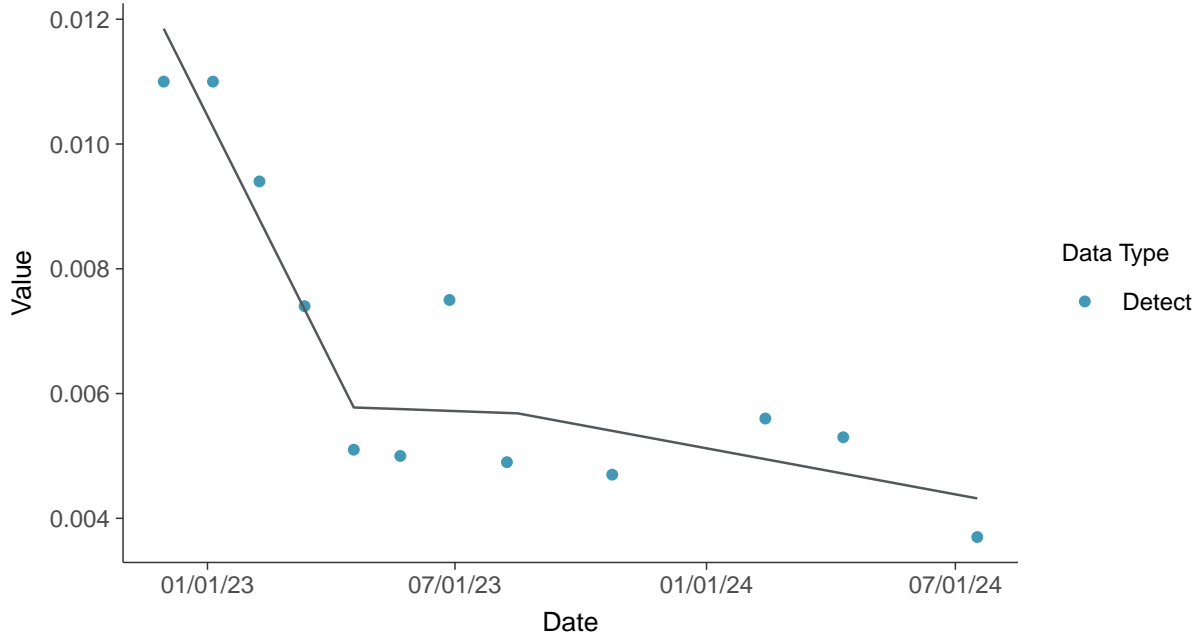
Nickel, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

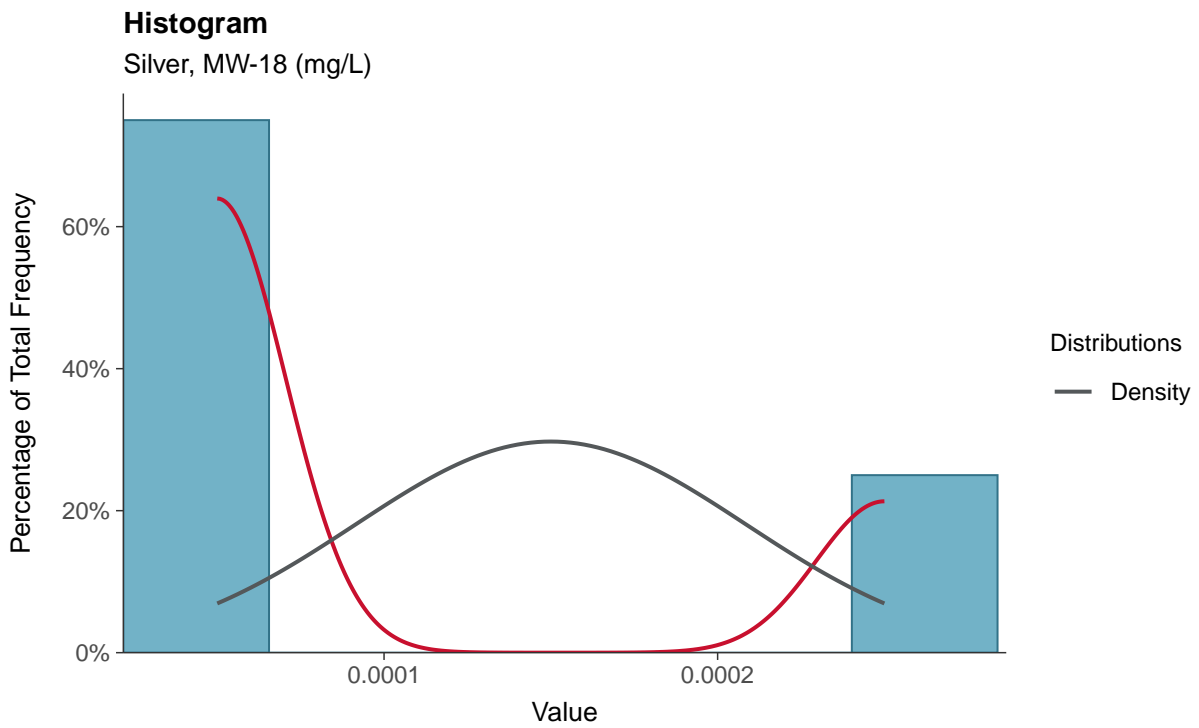
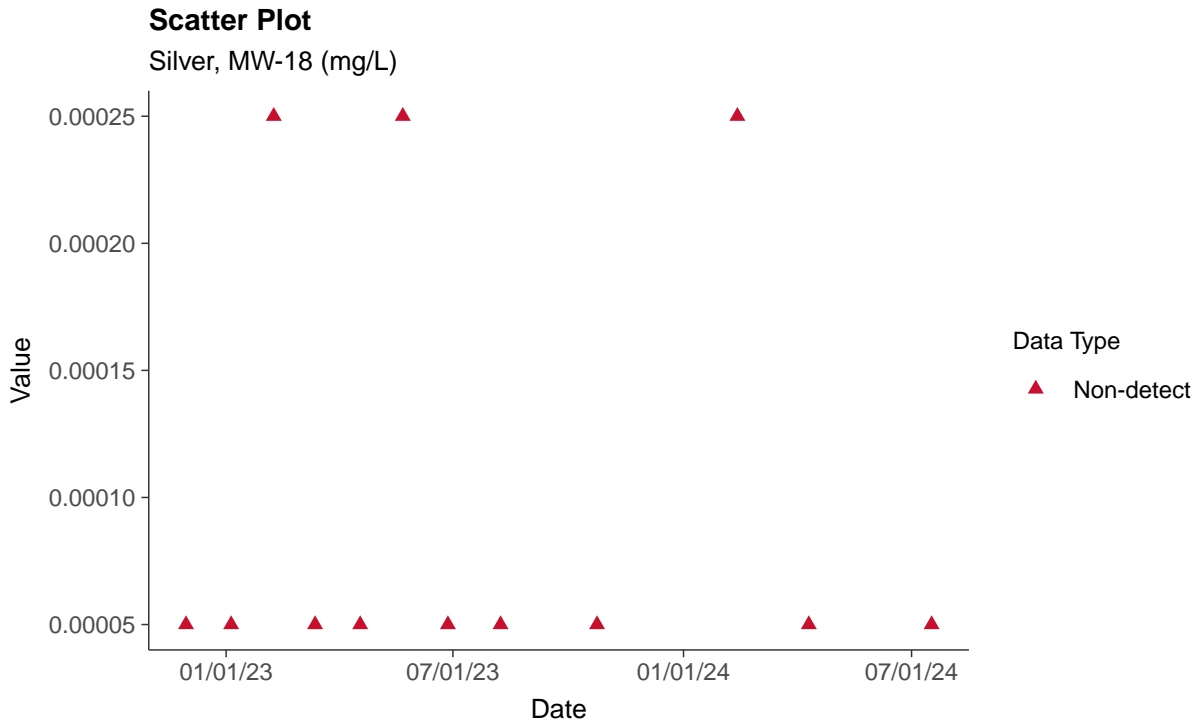
Nickel, MW-18 (mg/L)





### Part 115: Silver, MW-18

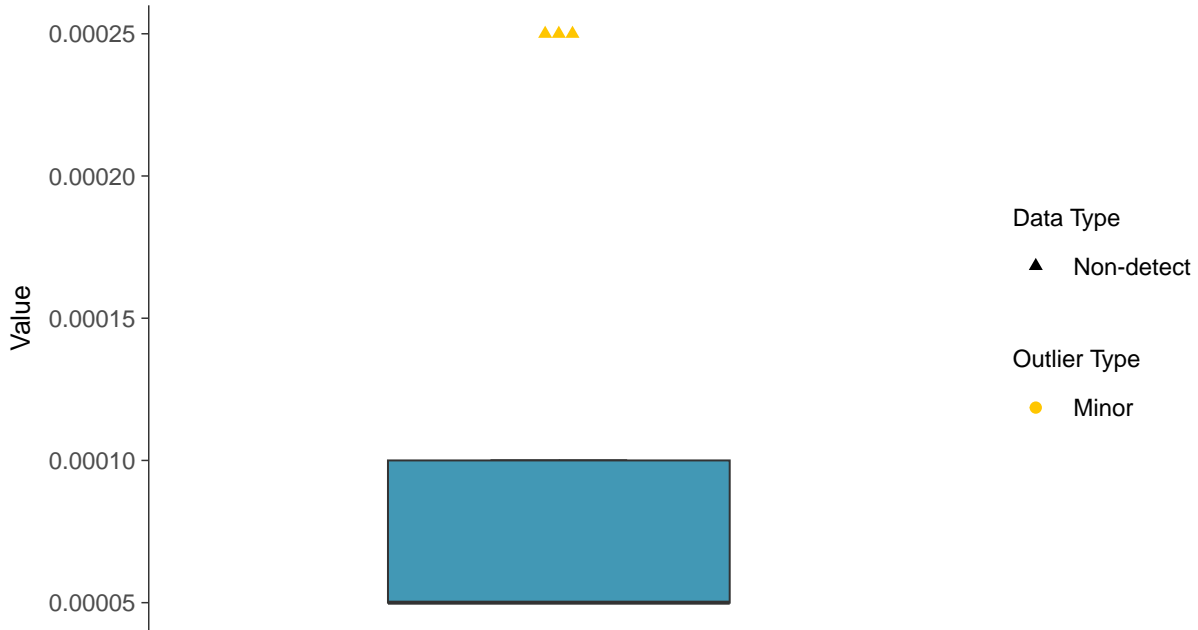
ID: 28\_1\_6\_123





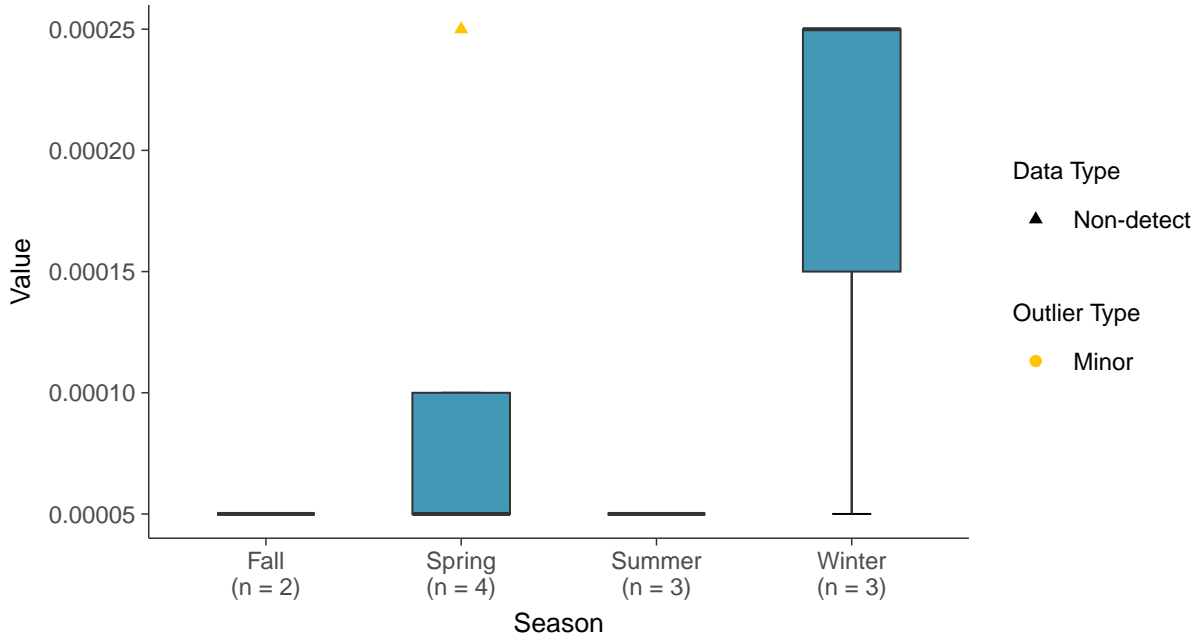
### Boxplot

Silver, MW-18 (mg/L)



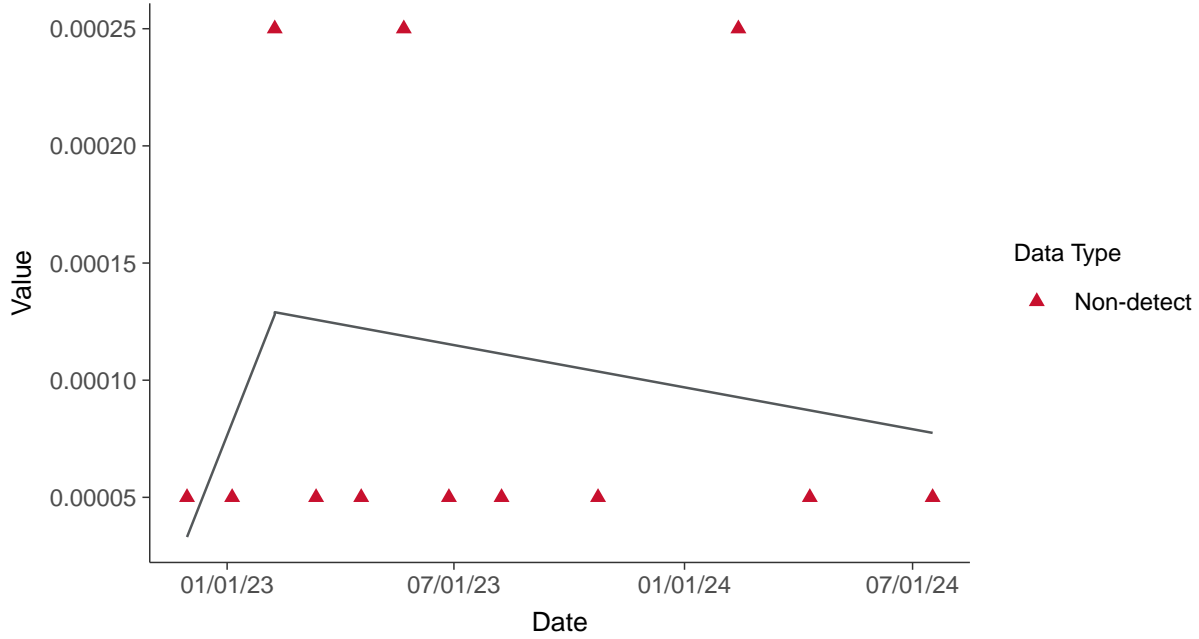
### Boxplot by Season

Silver, MW-18 (mg/L)

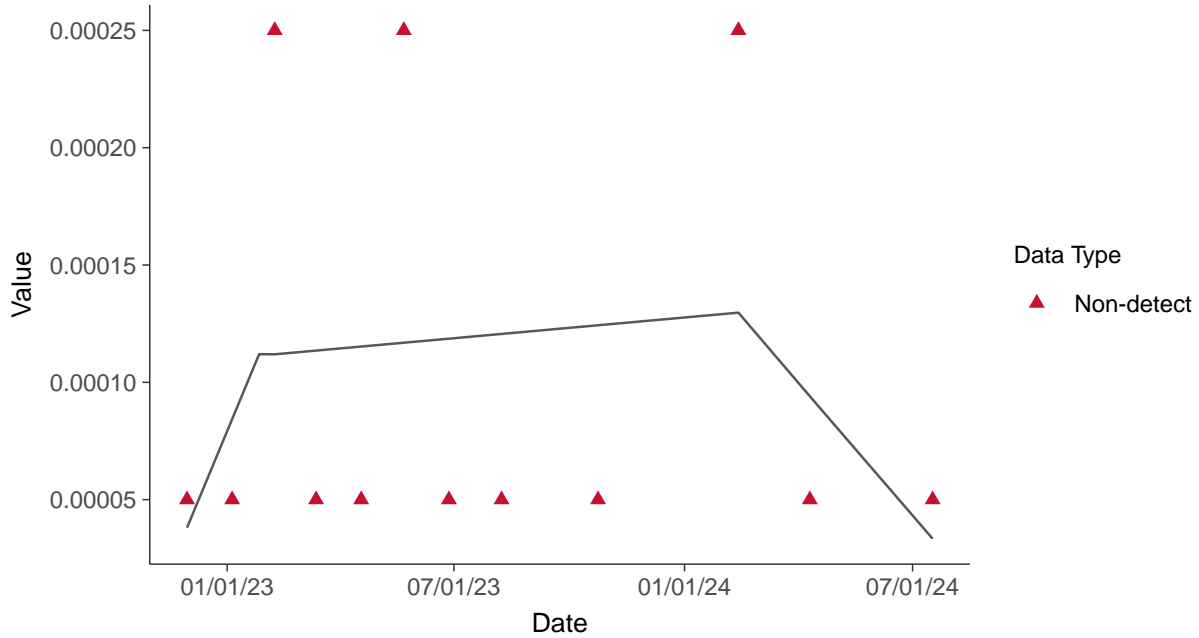




**Trend Regression: Piecewise Linear-Linear**  
Silver, MW-18 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Silver, MW-18 (mg/L)





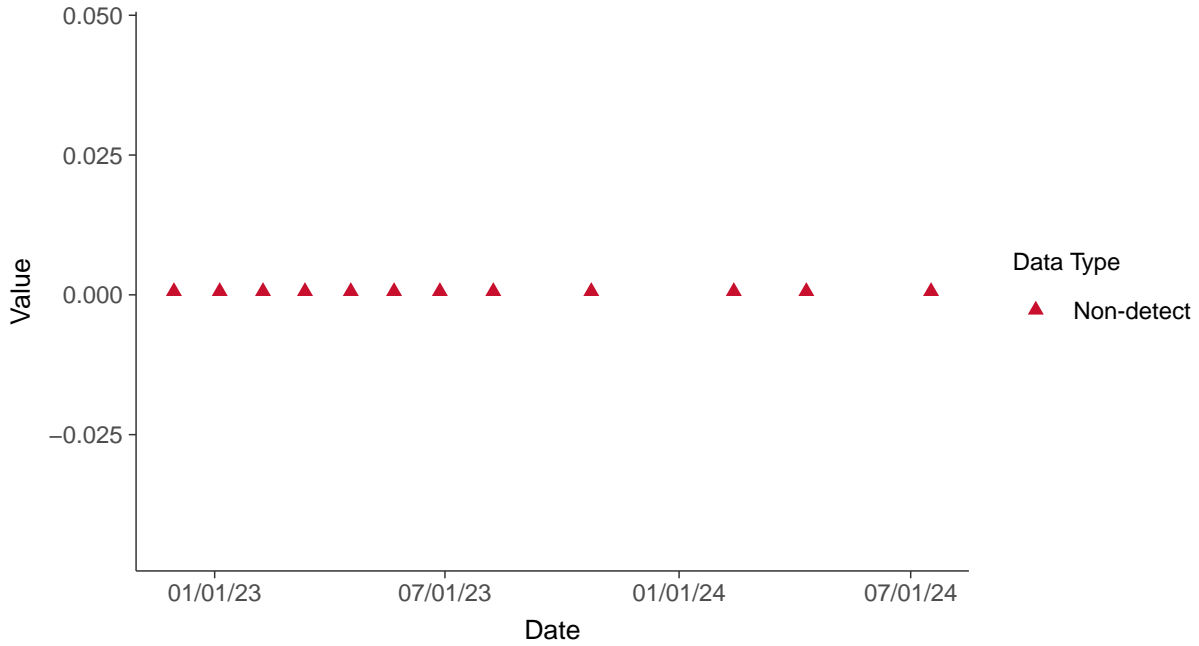


### Part 115: Vanadium, MW-18

ID: 28\_1\_6\_129

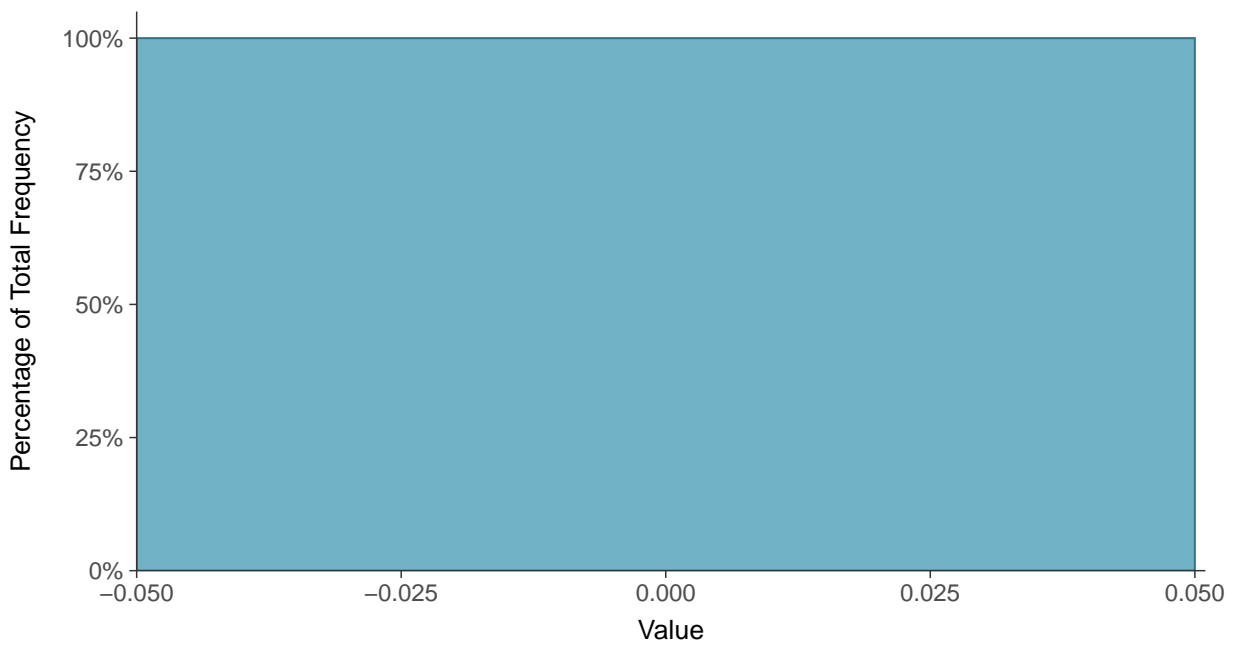
#### Scatter Plot

Vanadium, MW-18 (mg/L)



#### Histogram

Vanadium, MW-18 (mg/L)





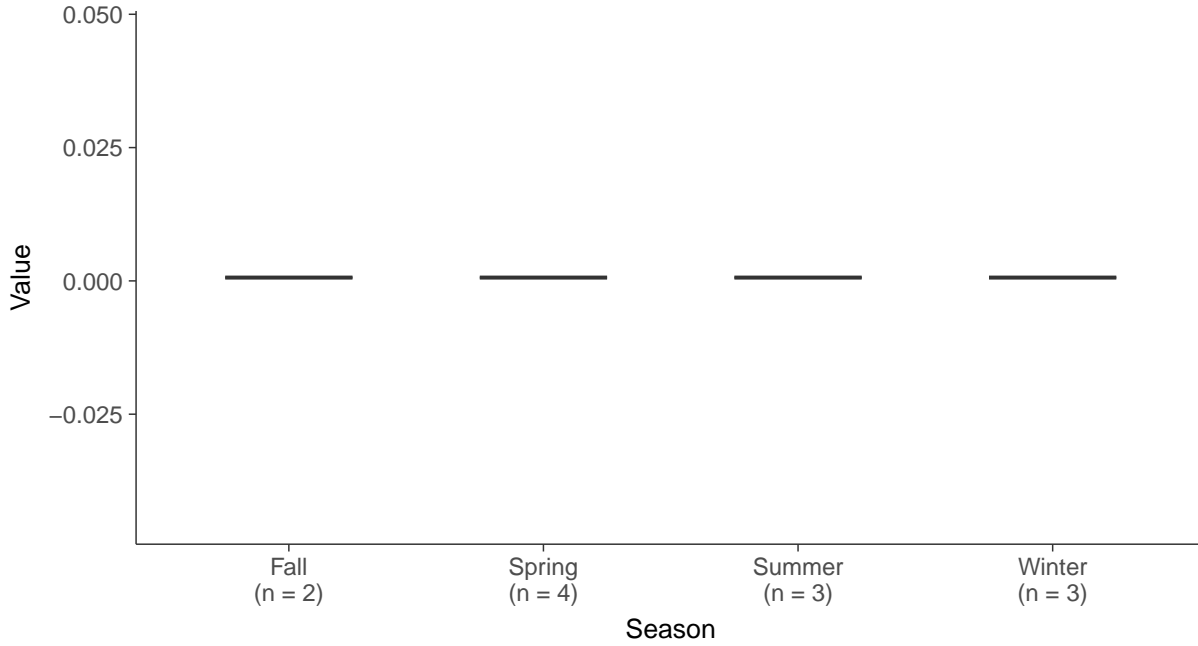
### Boxplot

Vanadium, MW-18 (mg/L)



### Boxplot by Season

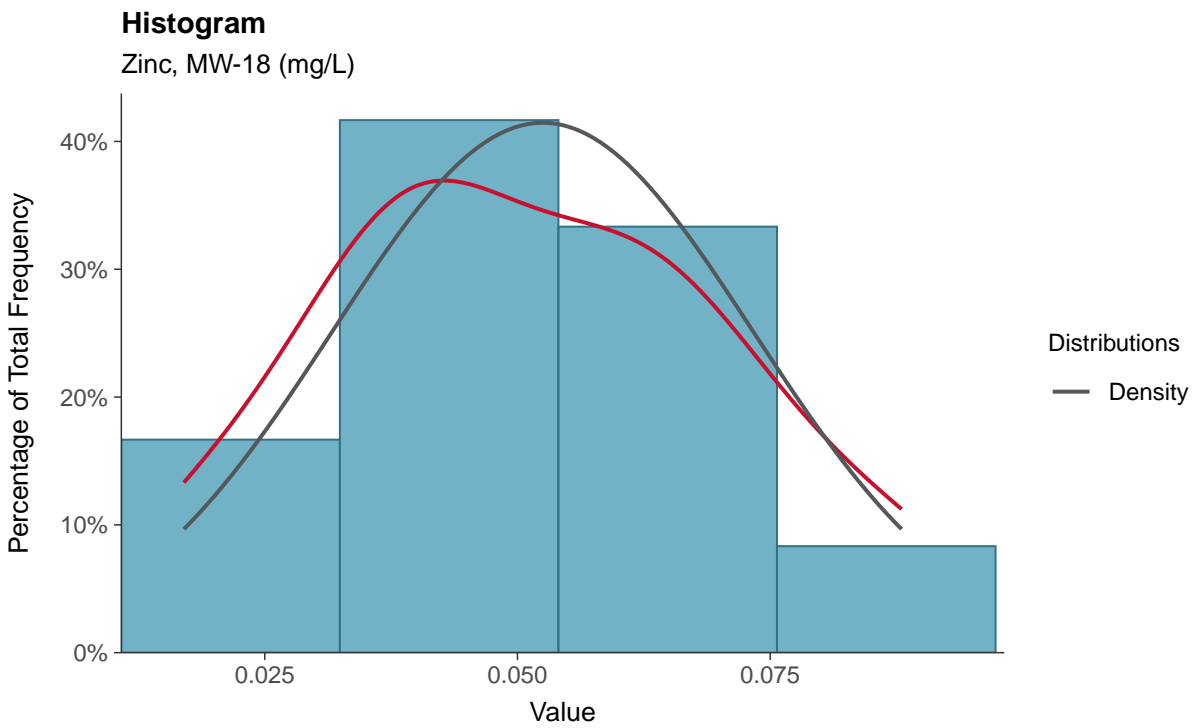
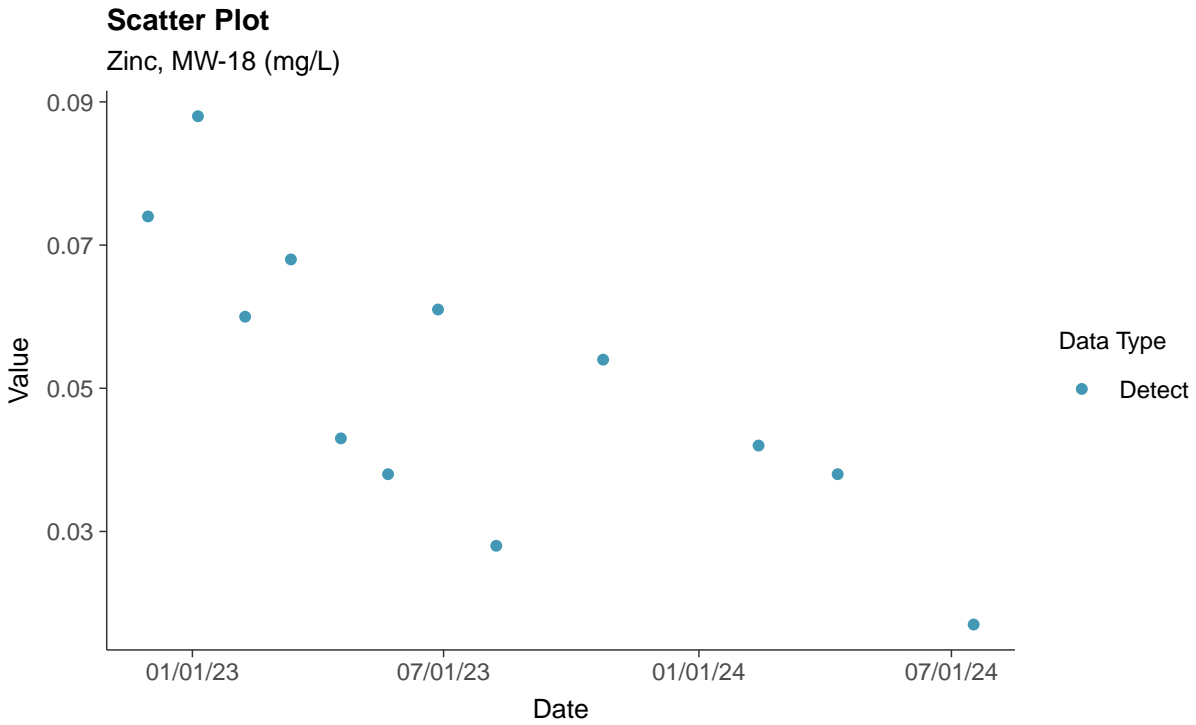
Vanadium, MW-18 (mg/L)





### Part 115: Zinc, MW-18

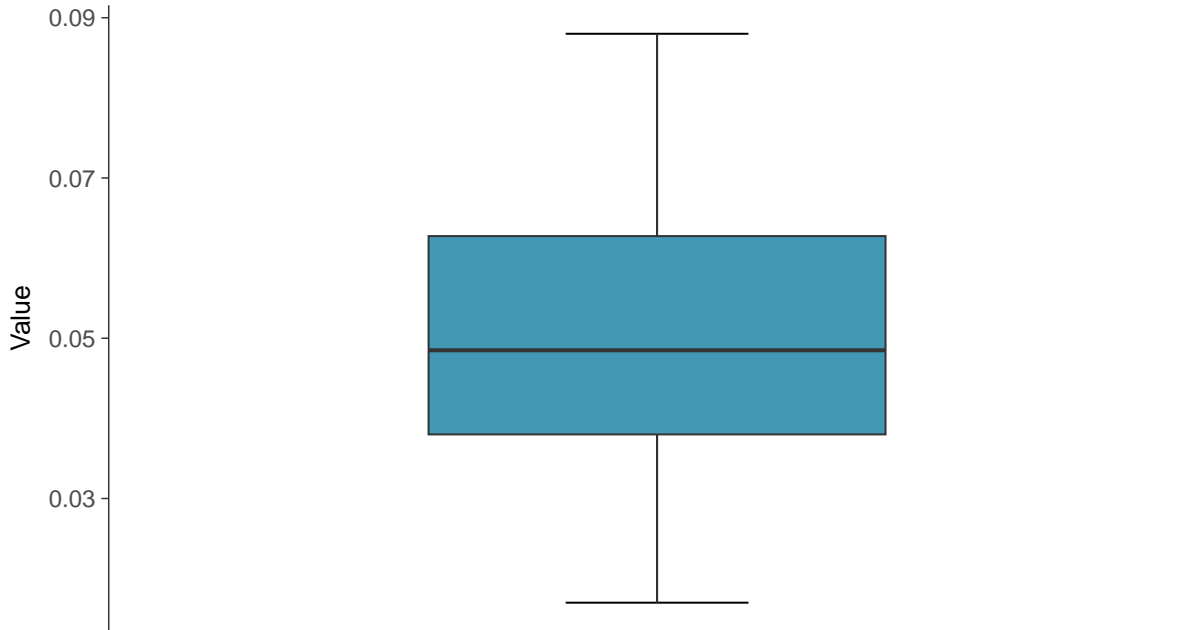
ID: 28\_1\_6\_130





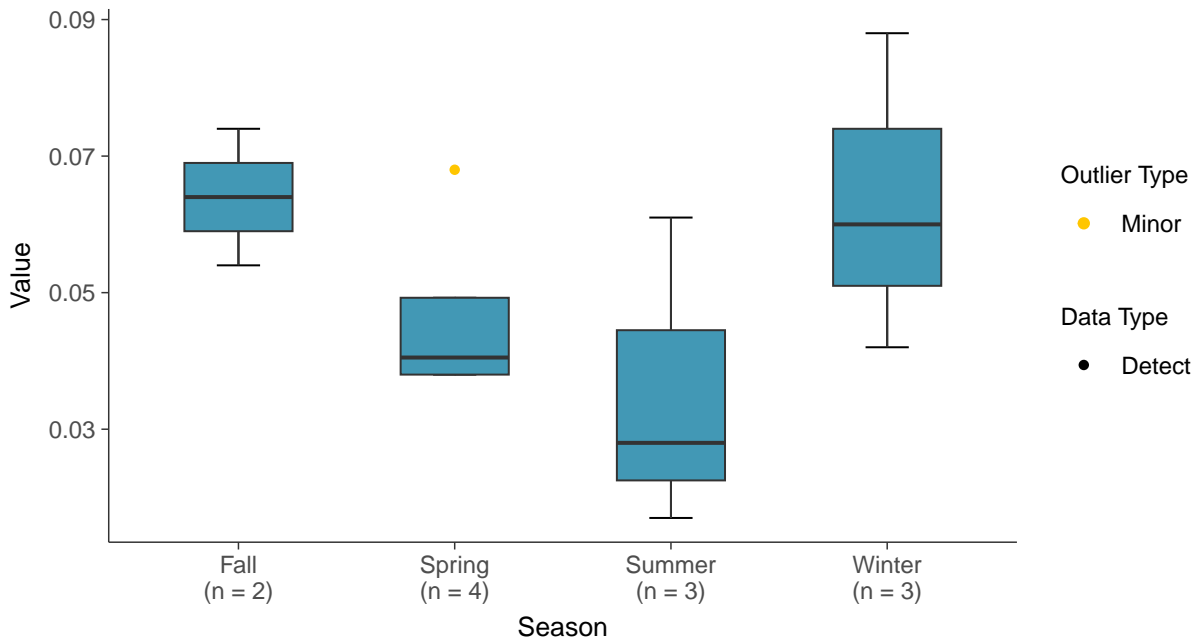
### Boxplot

Zinc, MW-18 (mg/L)



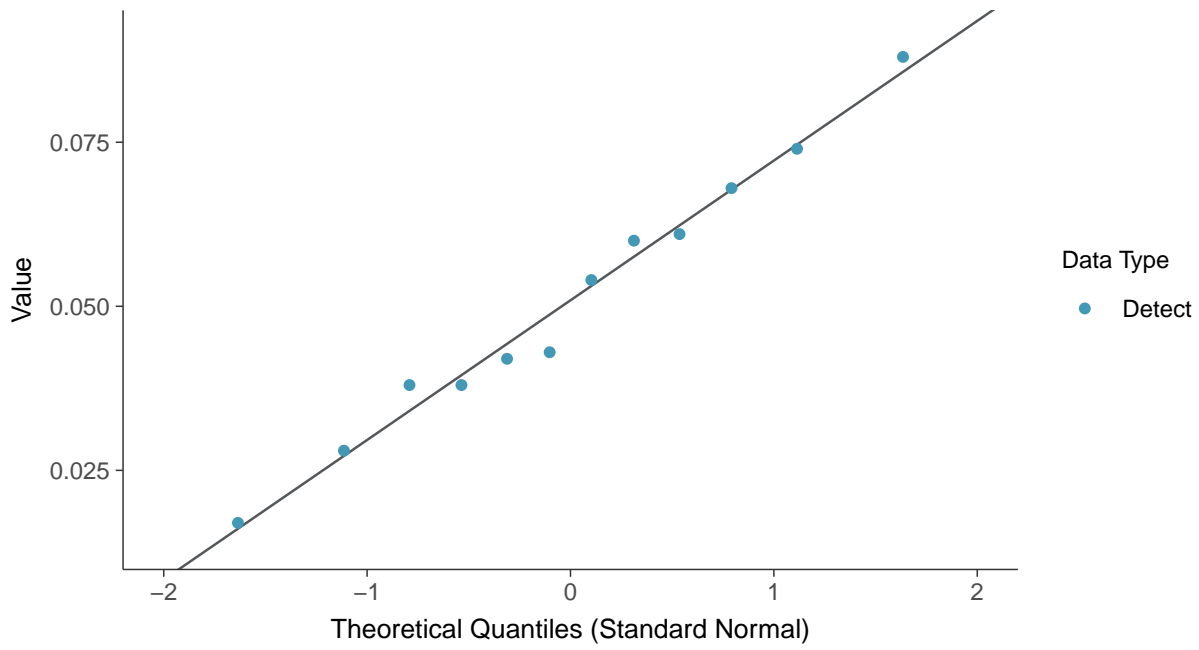
### Boxplot by Season

Zinc, MW-18 (mg/L)

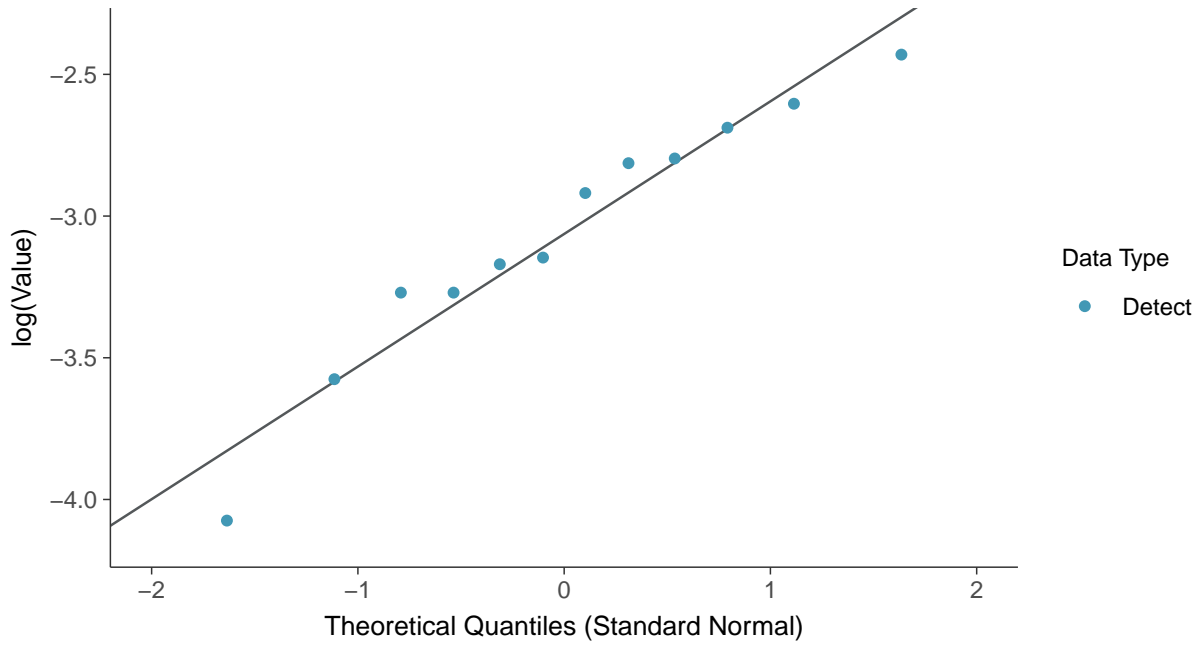




**Normal Q-Q plot**  
Zinc, MW-18 (mg/L)

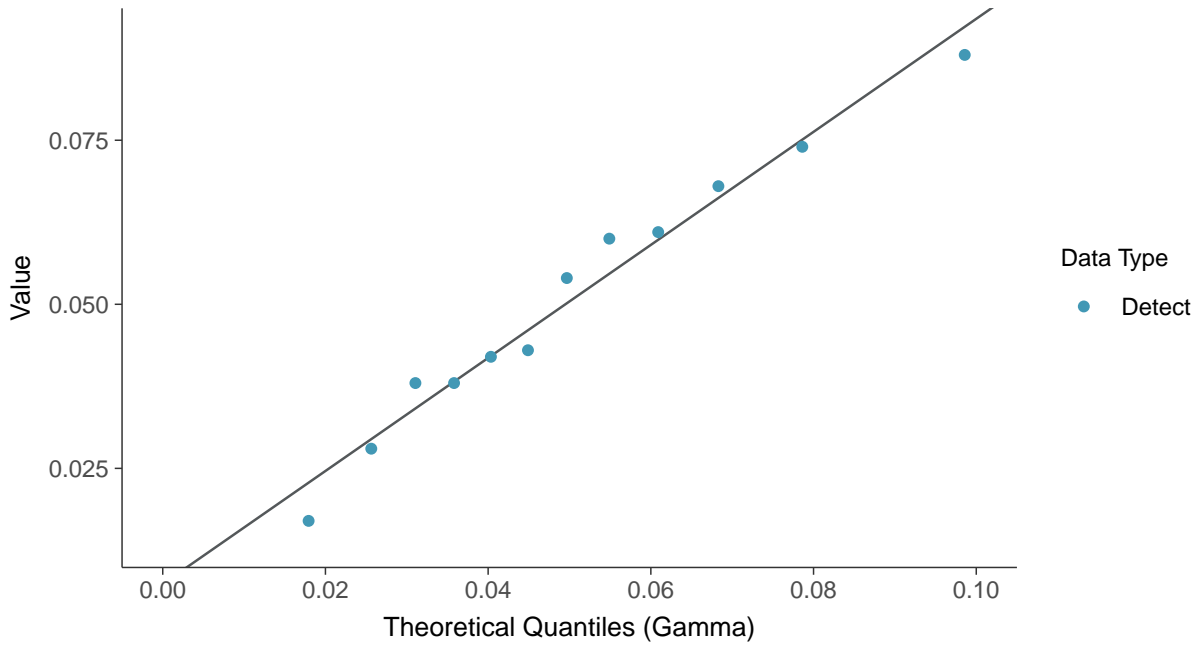


**Lognormal Q-Q plot**  
Zinc, MW-18 (mg/L)

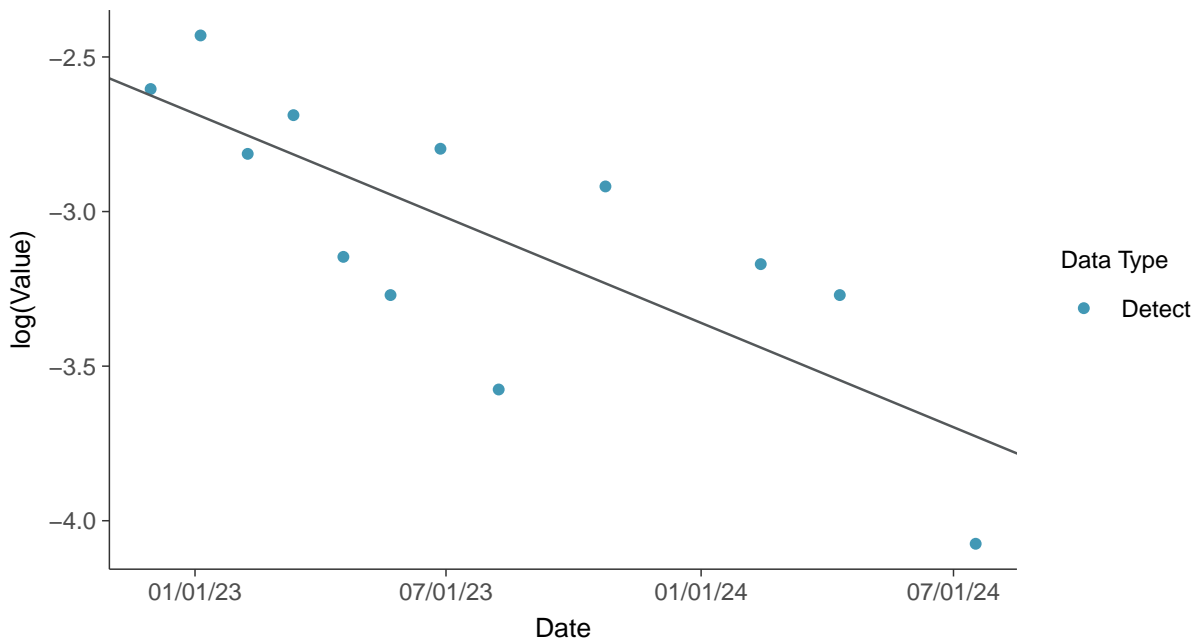




**Gamma Q-Q plot**  
Zinc, MW-18 (mg/L)



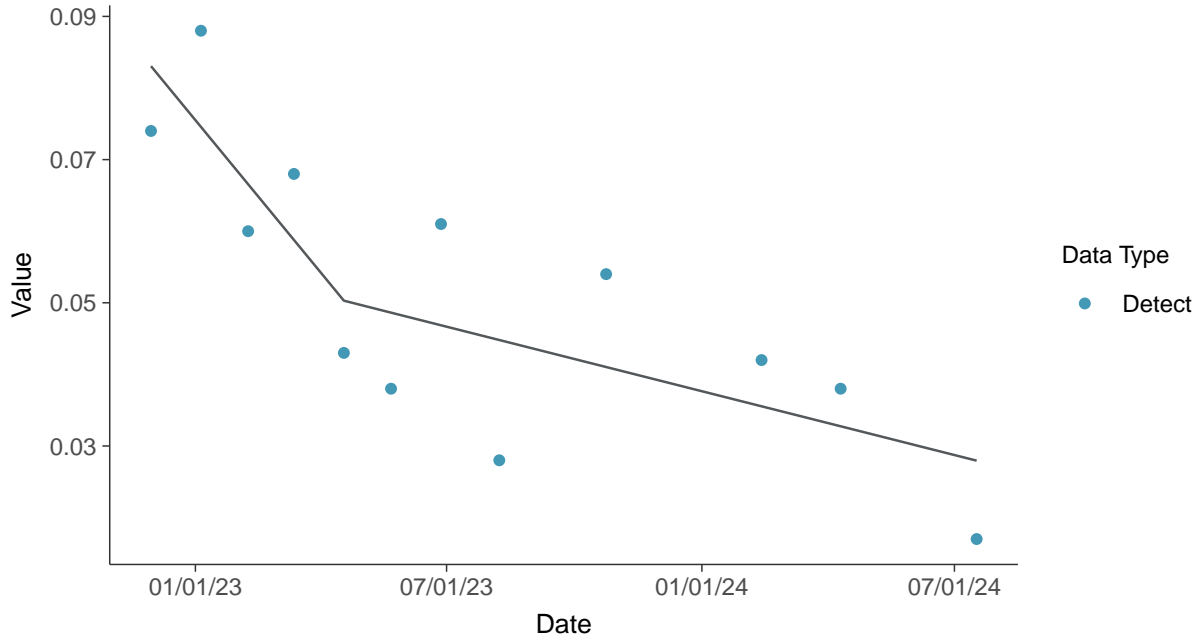
**Trend Regression: Lognormal MLE**  
Zinc, MW-18 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Zinc, MW-18 (mg/L)



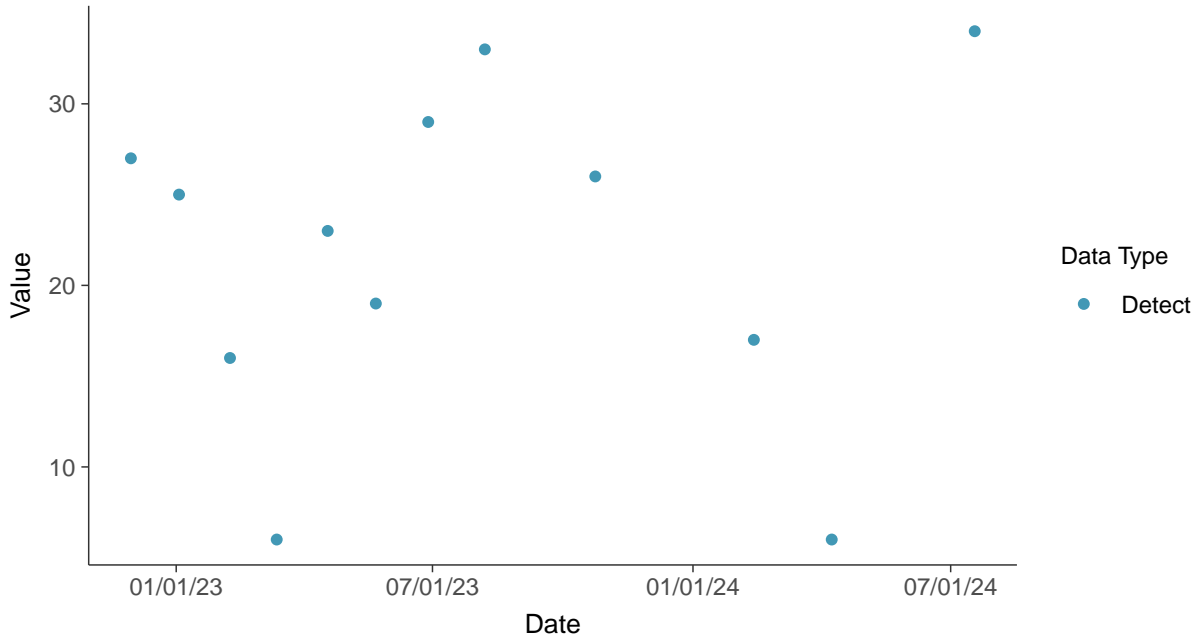


### Additional Parameters: Total Suspended Solids, MW-19

ID: 29\_1\_3\_127

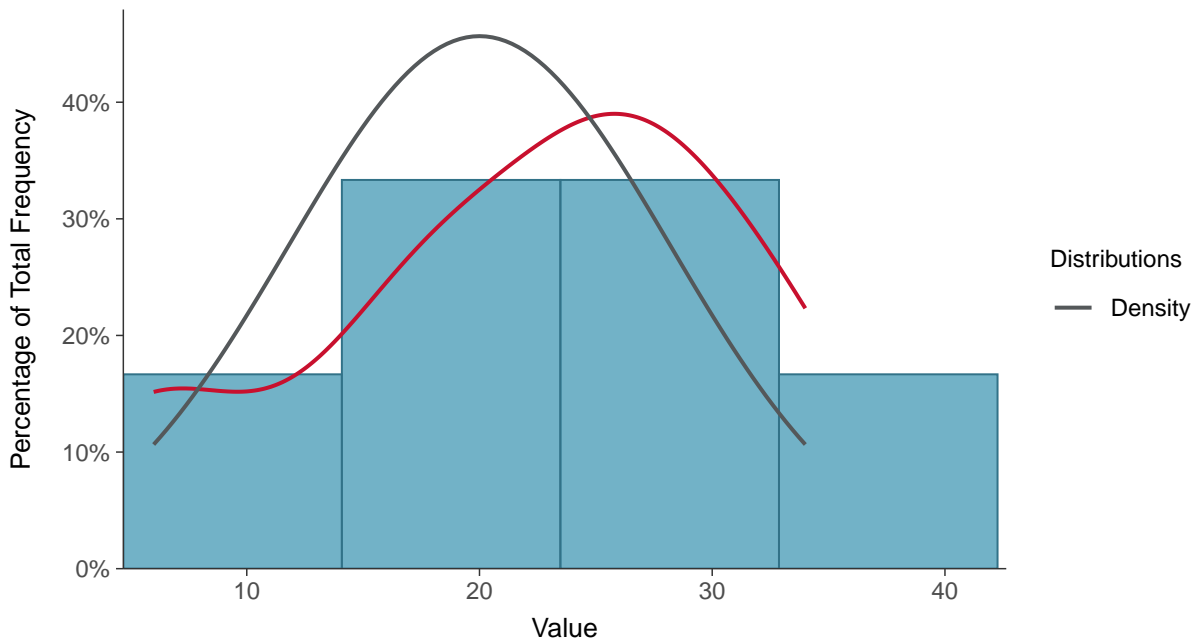
#### Scatter Plot

Total Suspended Solids, MW-19 (mg/L)



#### Histogram

Total Suspended Solids, MW-19 (mg/L)

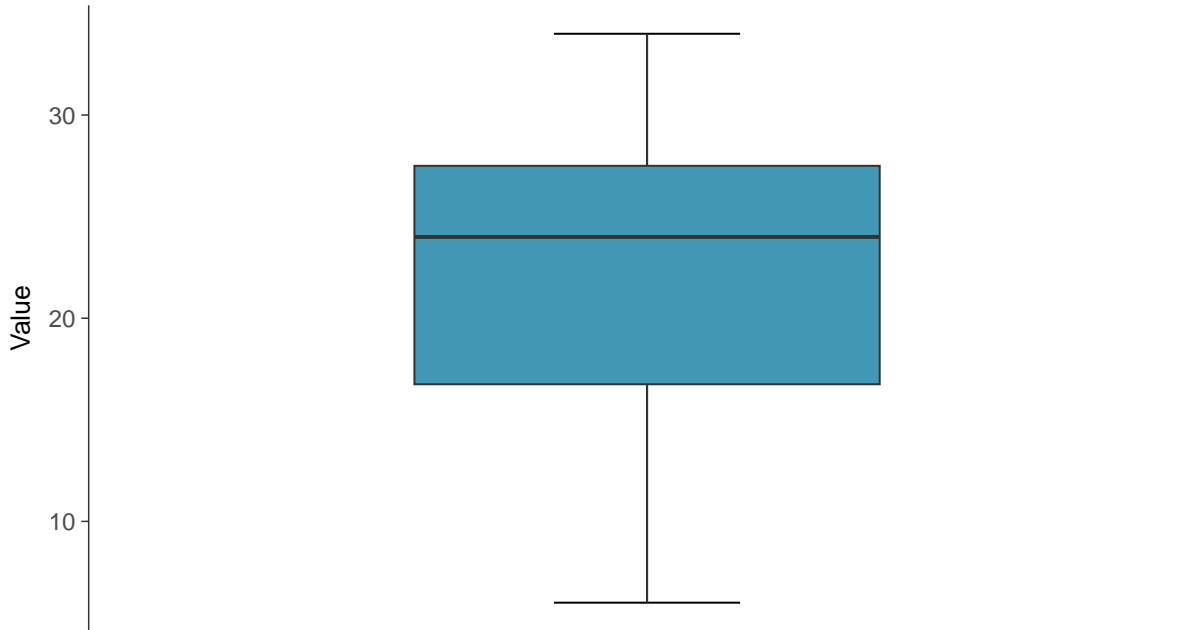






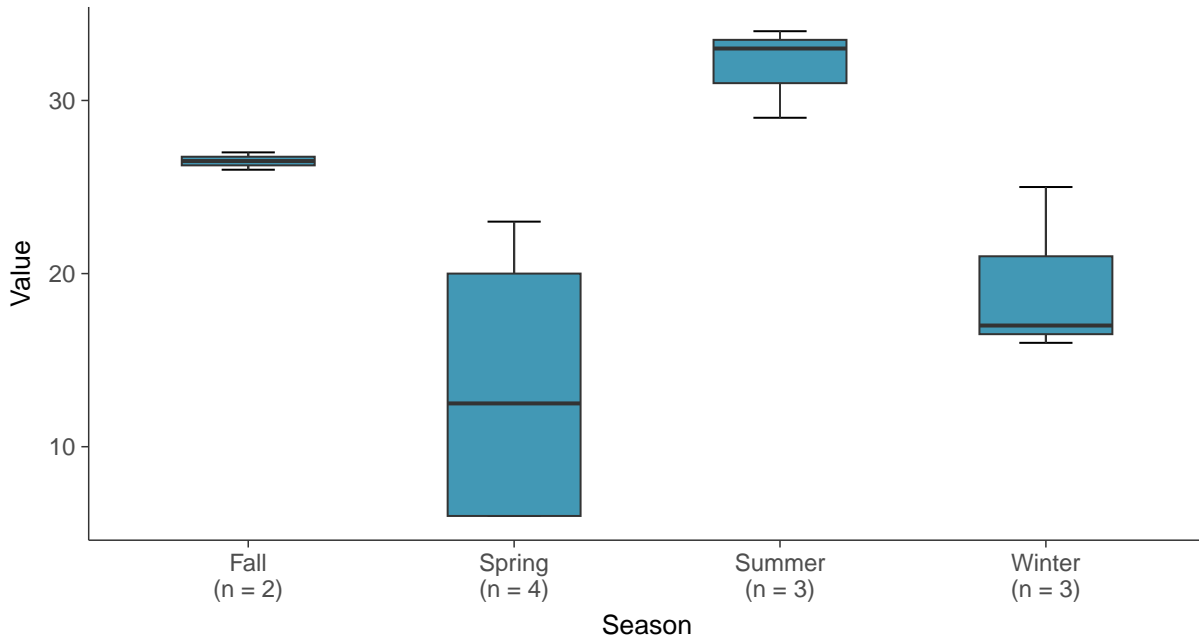
### Boxplot

Total Suspended Solids, MW-19 (mg/L)



### Boxplot by Season

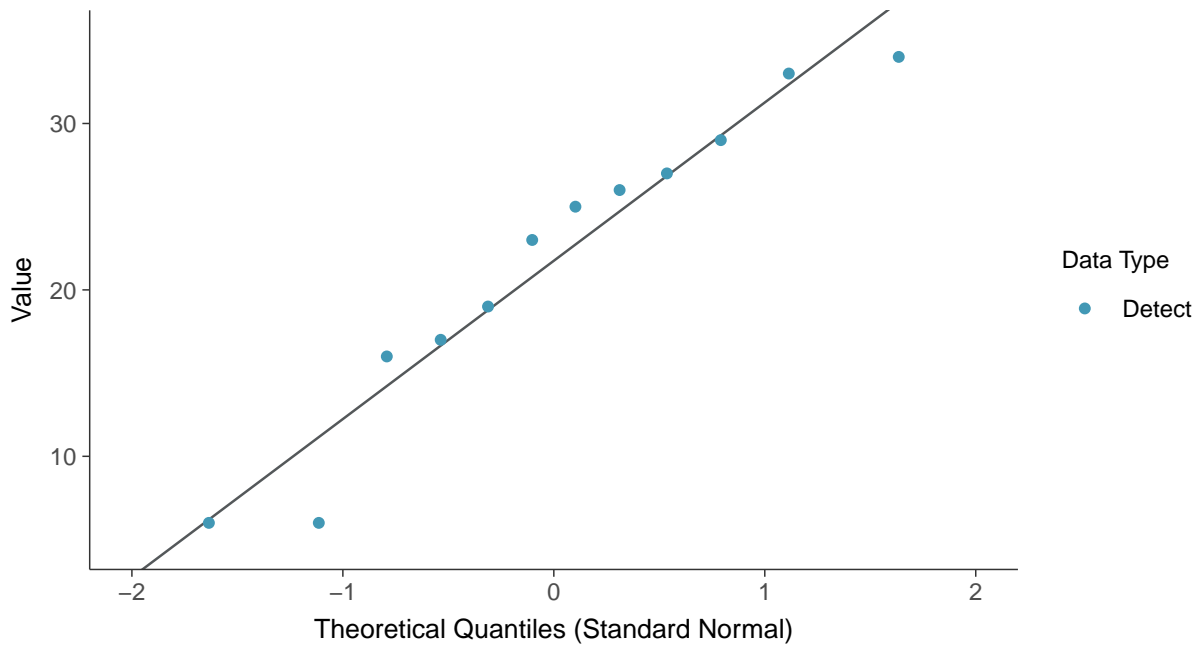
Total Suspended Solids, MW-19 (mg/L)





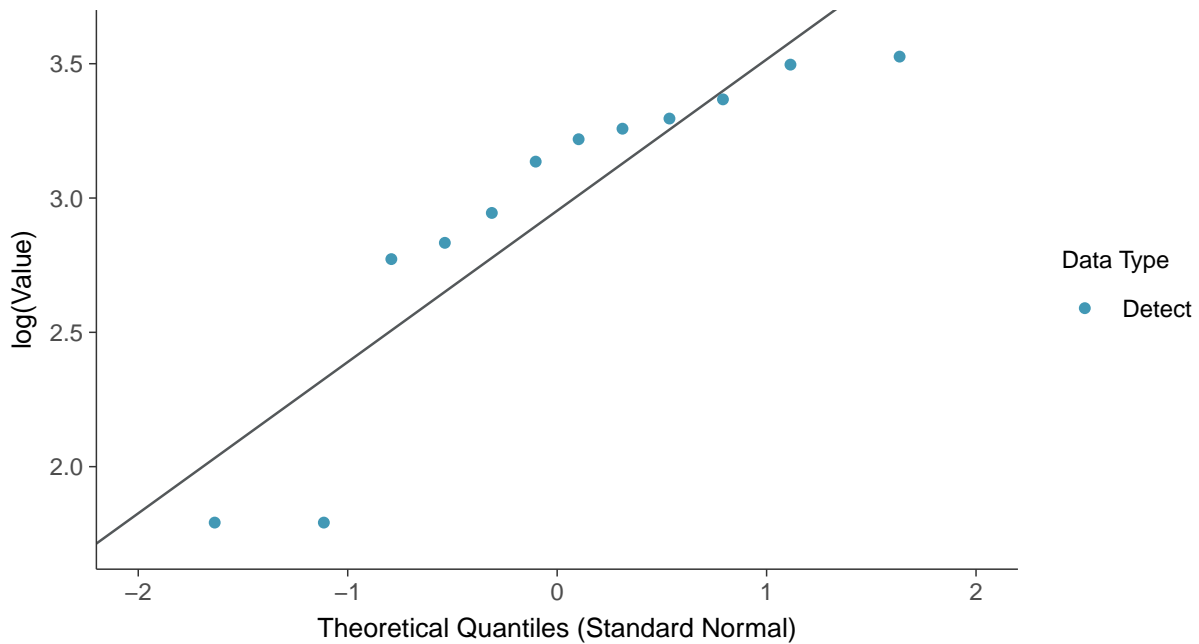
### Normal Q-Q plot

Total Suspended Solids, MW-19 (mg/L)



### Lognormal Q-Q plot

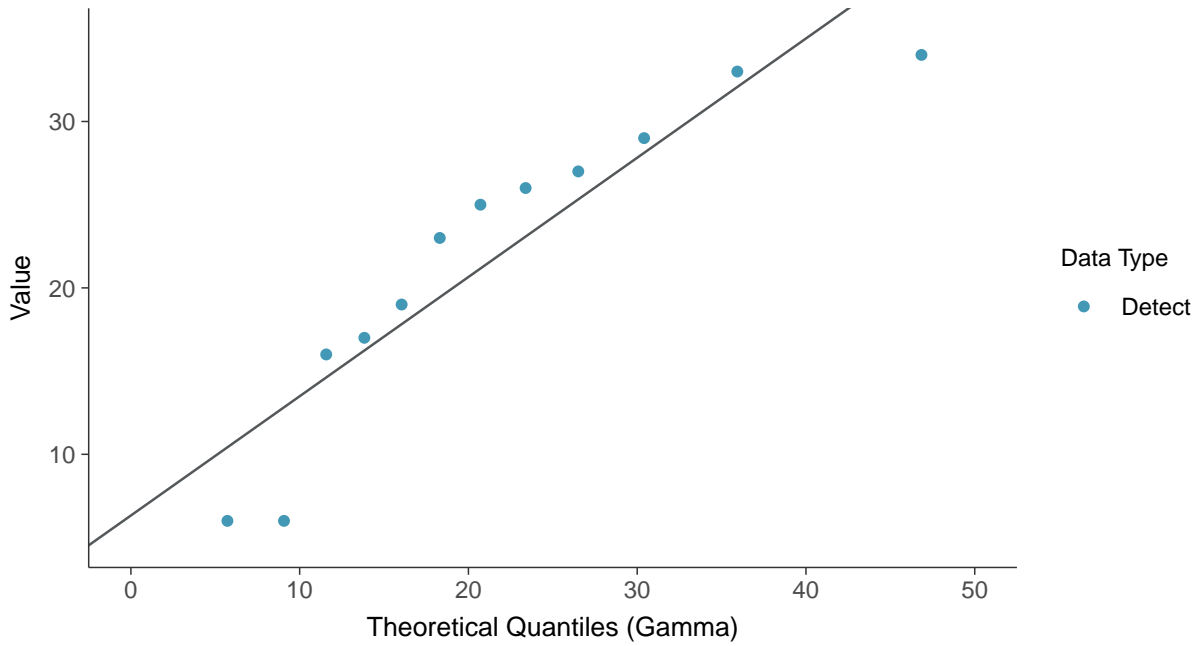
Total Suspended Solids, MW-19 (mg/L)





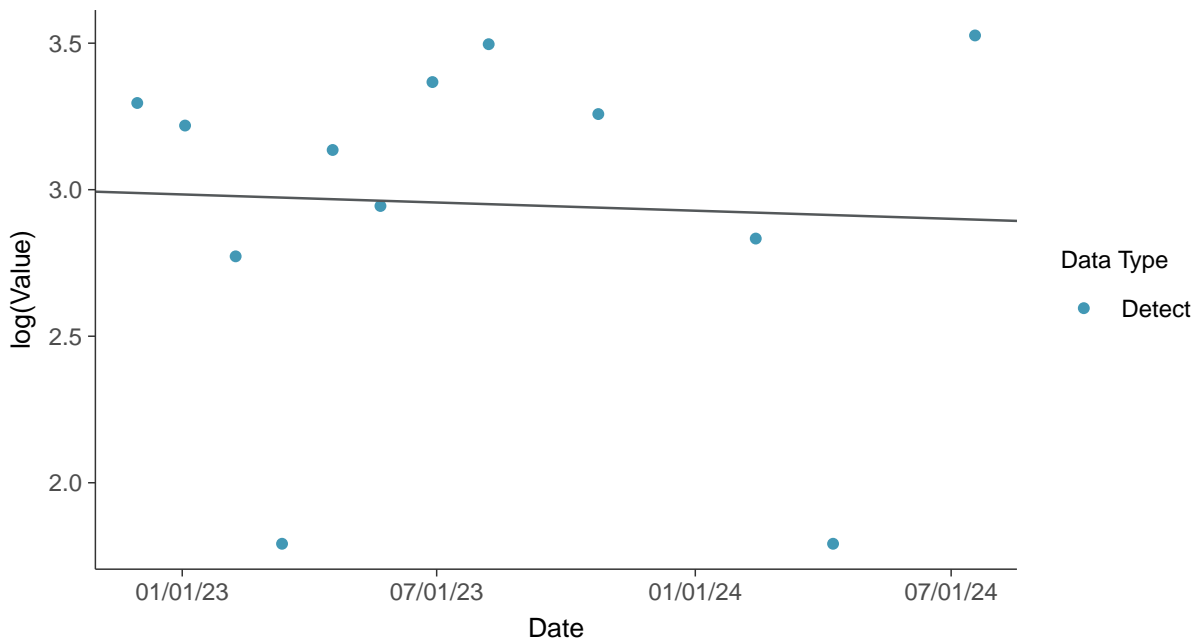
### Gamma Q-Q plot

Total Suspended Solids, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

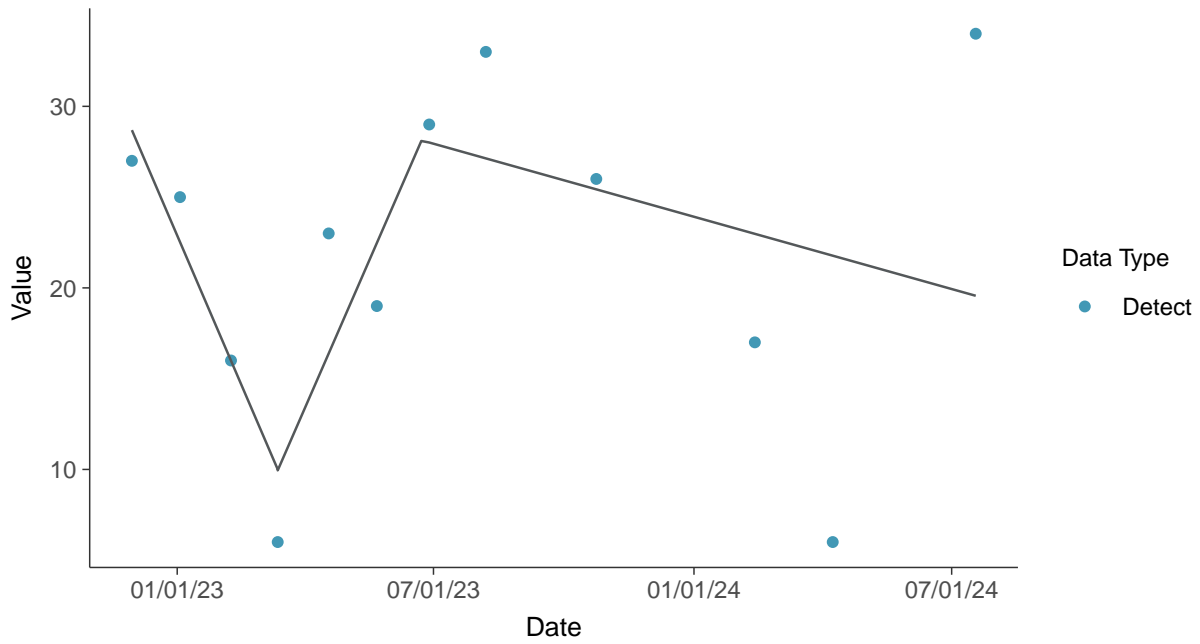
Total Suspended Solids, MW-19 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

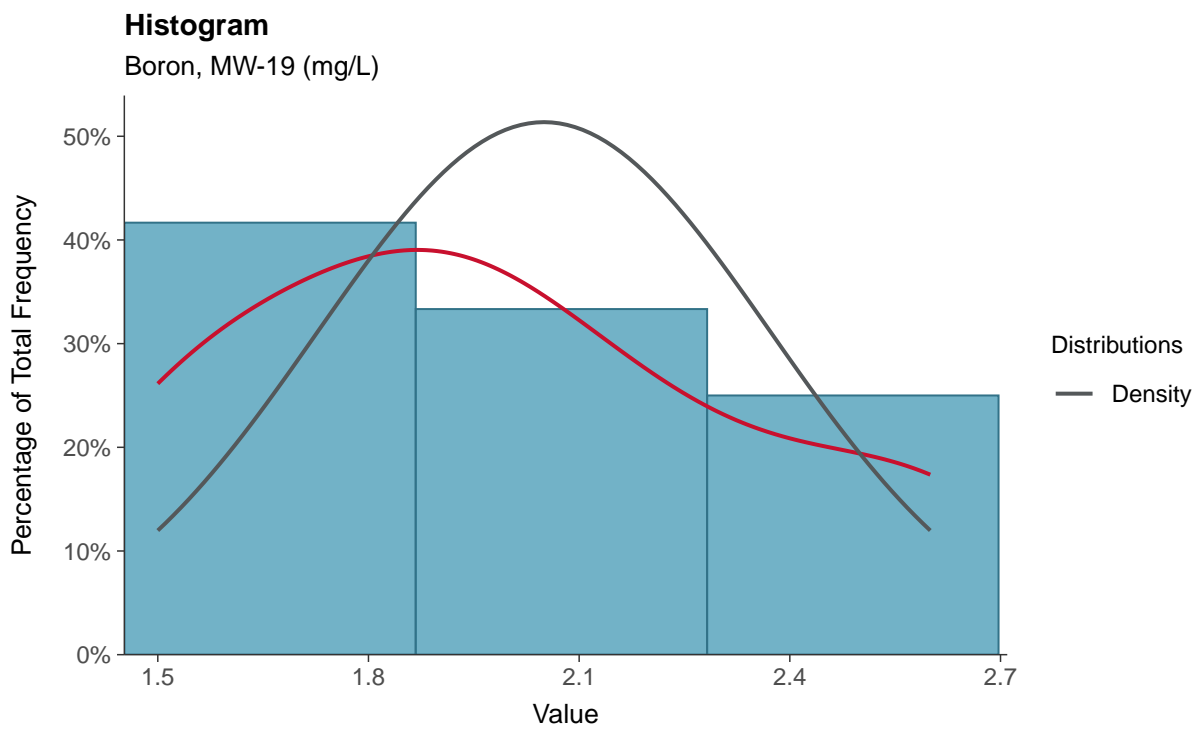
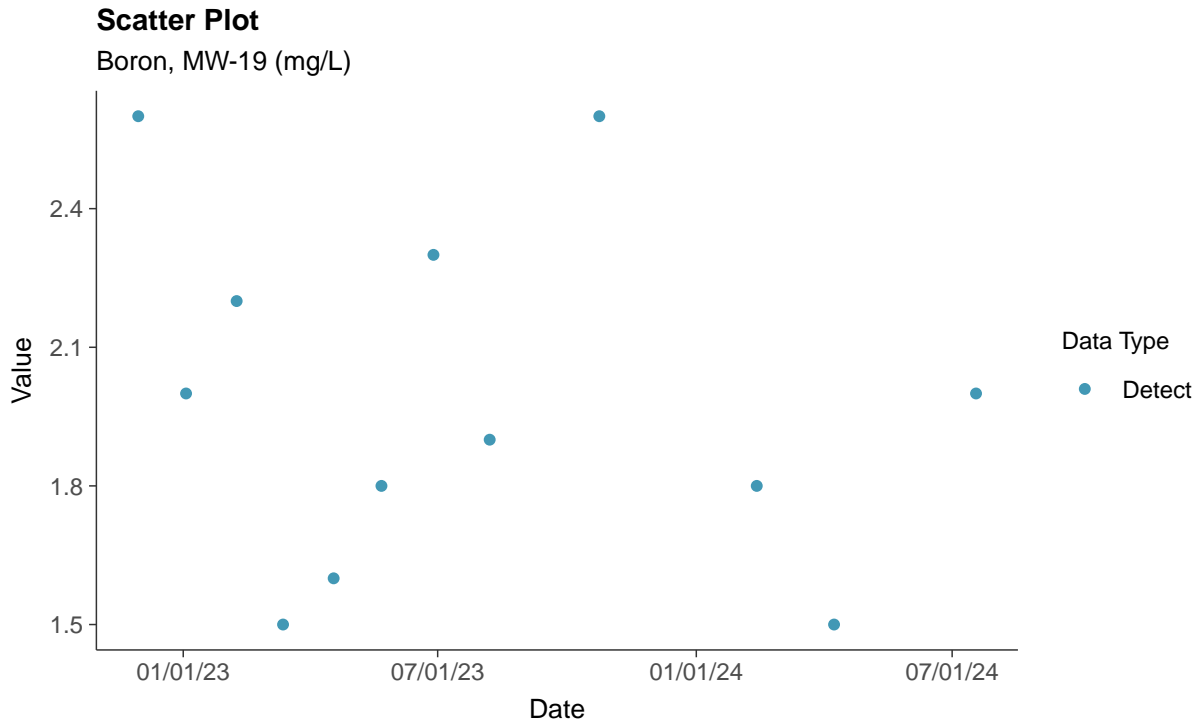
Total Suspended Solids, MW-19 (mg/L)





### Appendix III: Boron, MW-19

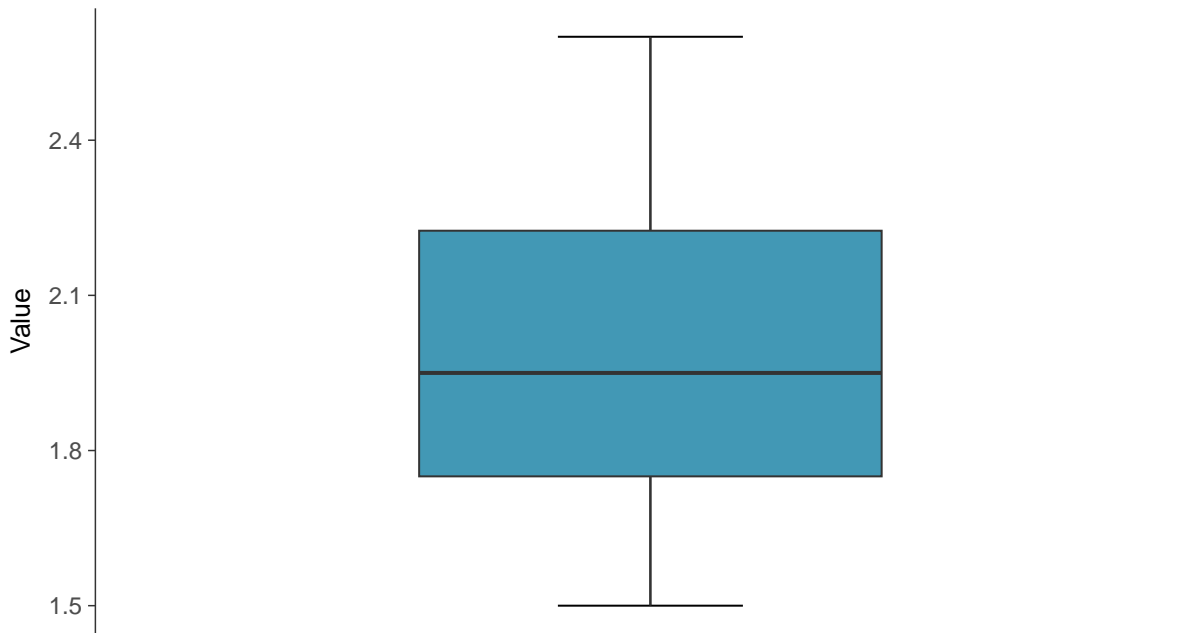
ID: 29\_1\_4\_105





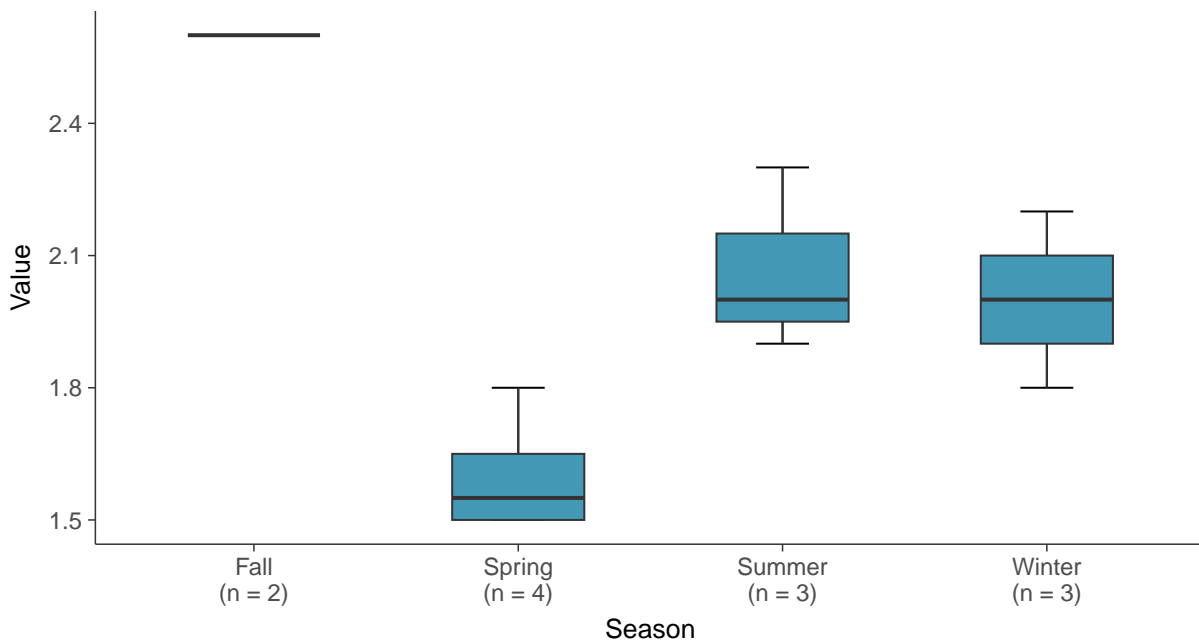
### Boxplot

Boron, MW-19 (mg/L)



### Boxplot by Season

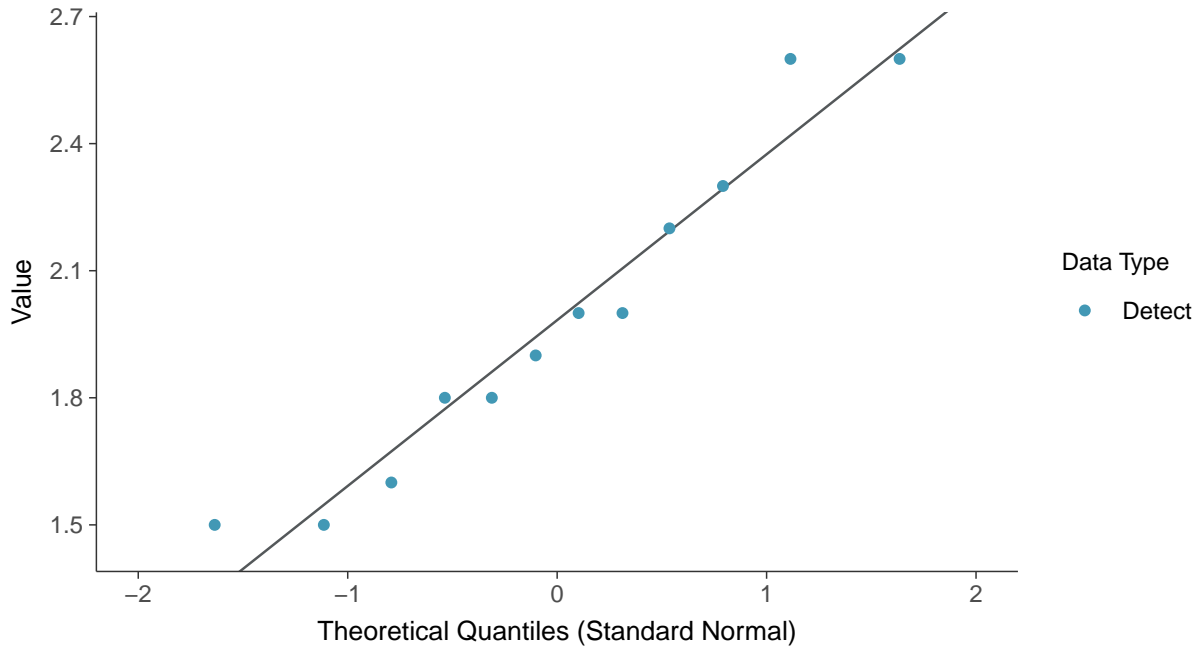
Boron, MW-19 (mg/L)





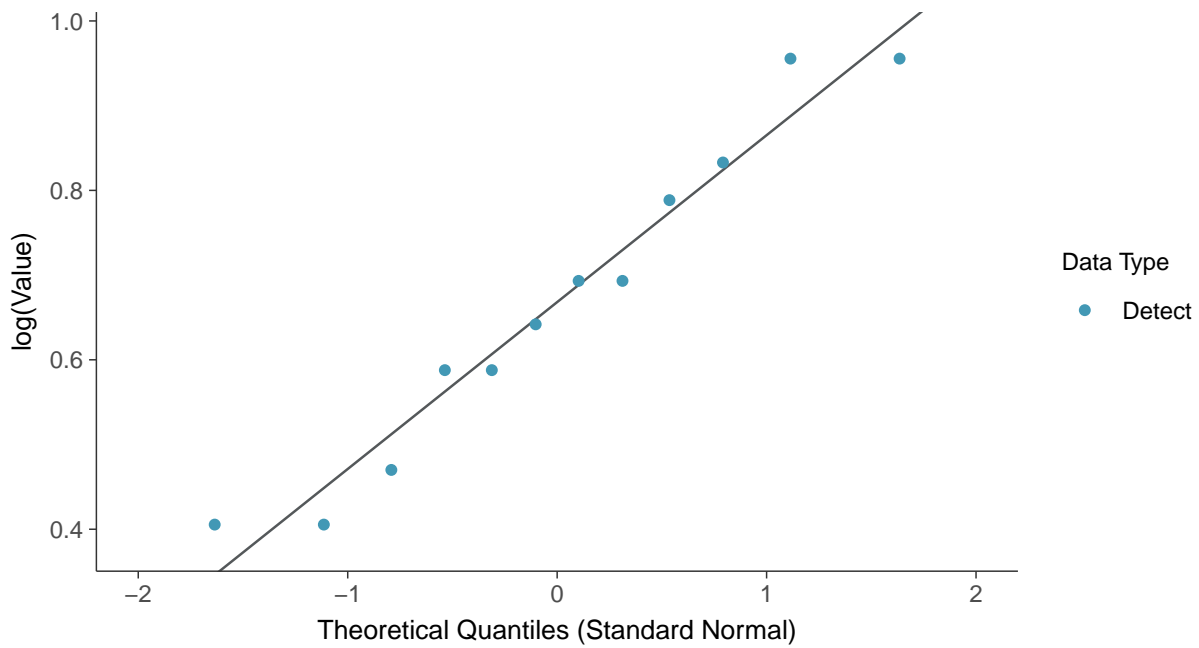
### Normal Q-Q plot

Boron, MW-19 (mg/L)



### Lognormal Q-Q plot

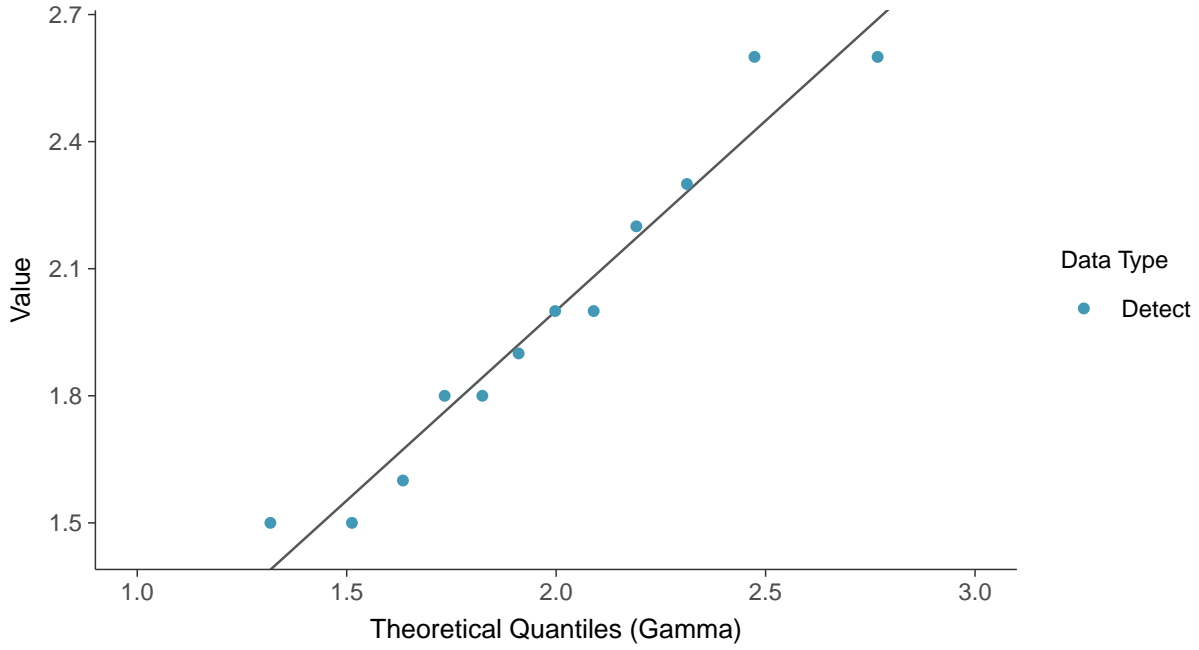
Boron, MW-19 (mg/L)





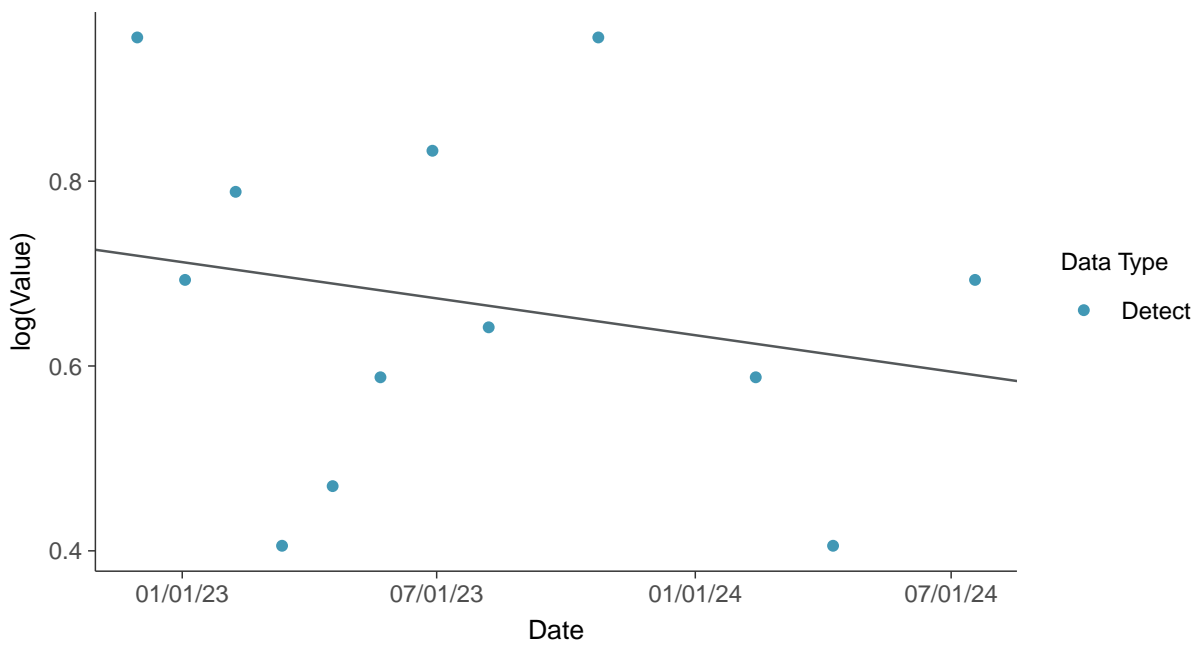
### Gamma Q-Q plot

Boron, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

Boron, MW-19 (mg/L)

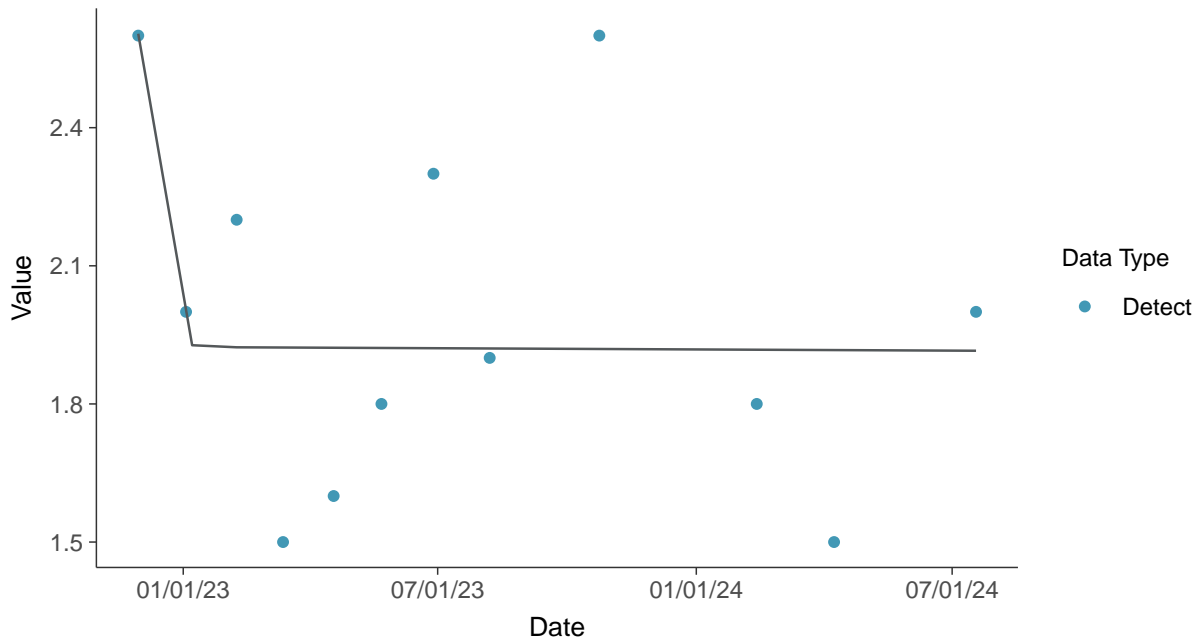






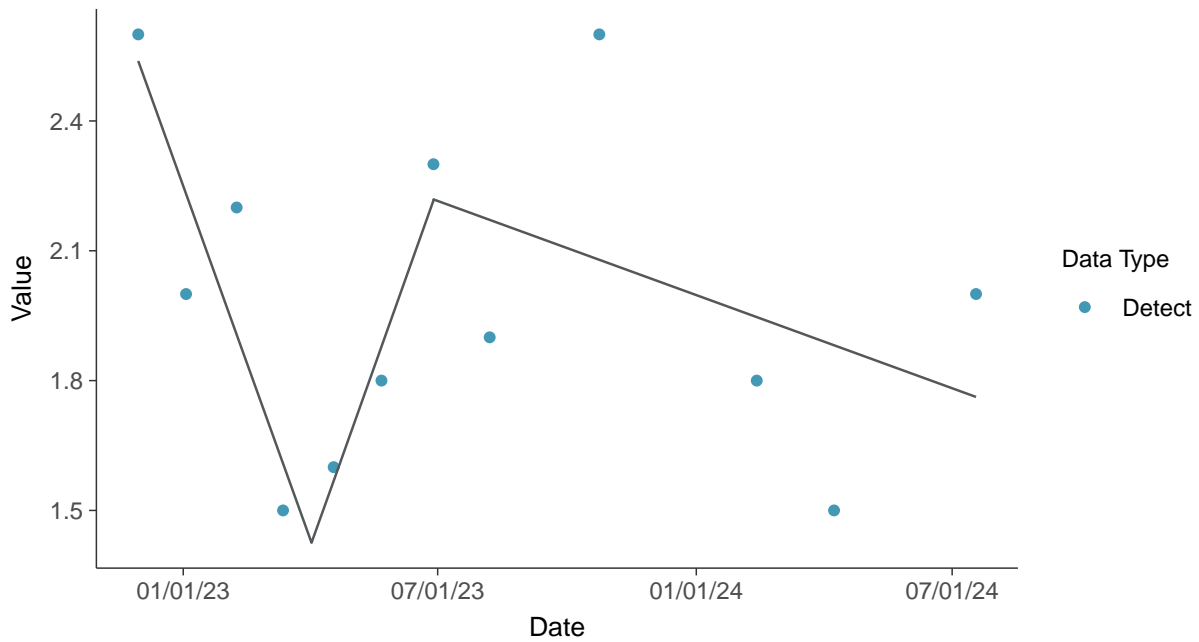
### Trend Regression: Piecewise Linear-Linear

Boron, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-19 (mg/L)



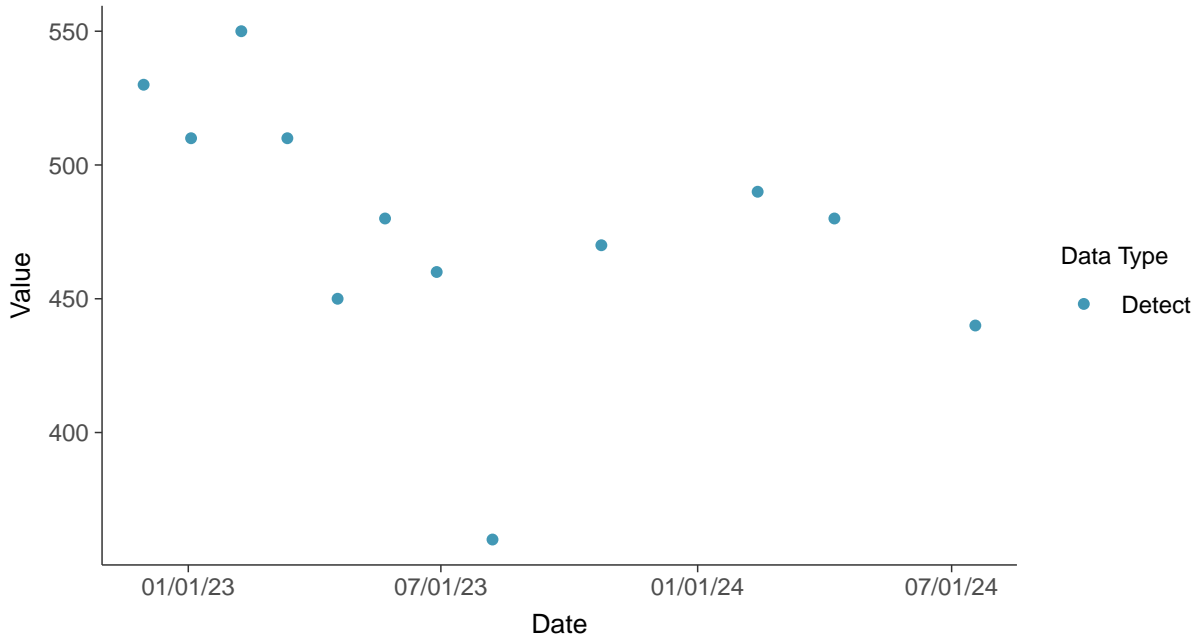


### Appendix III: Calcium, MW-19

ID: 29\_1\_4\_107

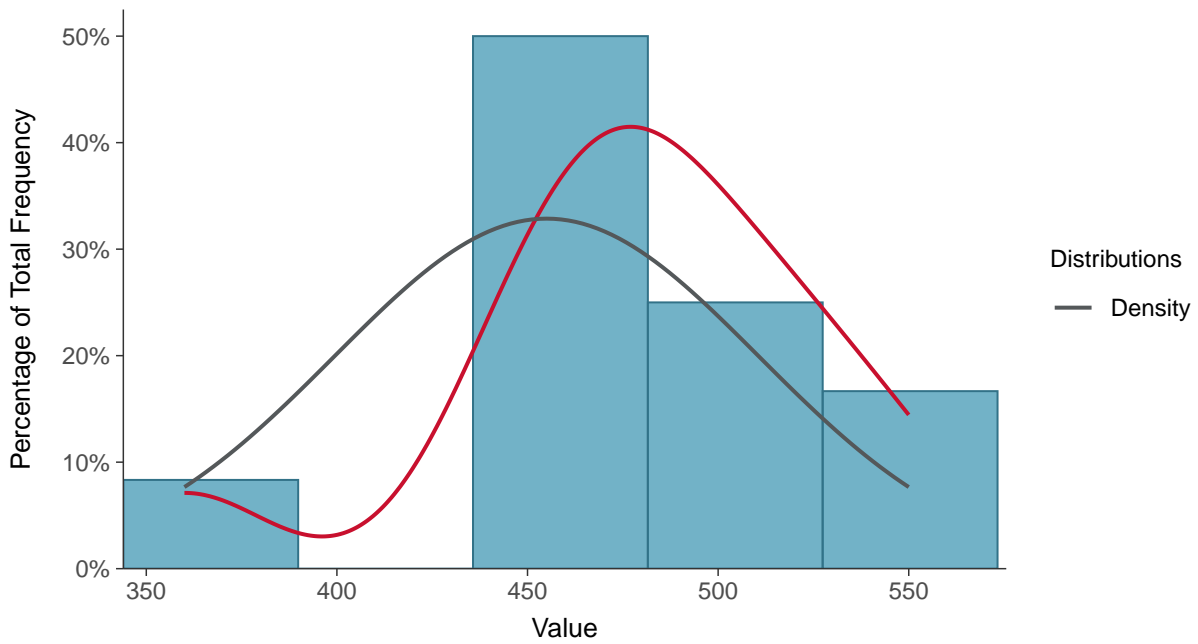
#### Scatter Plot

Calcium, MW-19 (mg/L)



#### Histogram

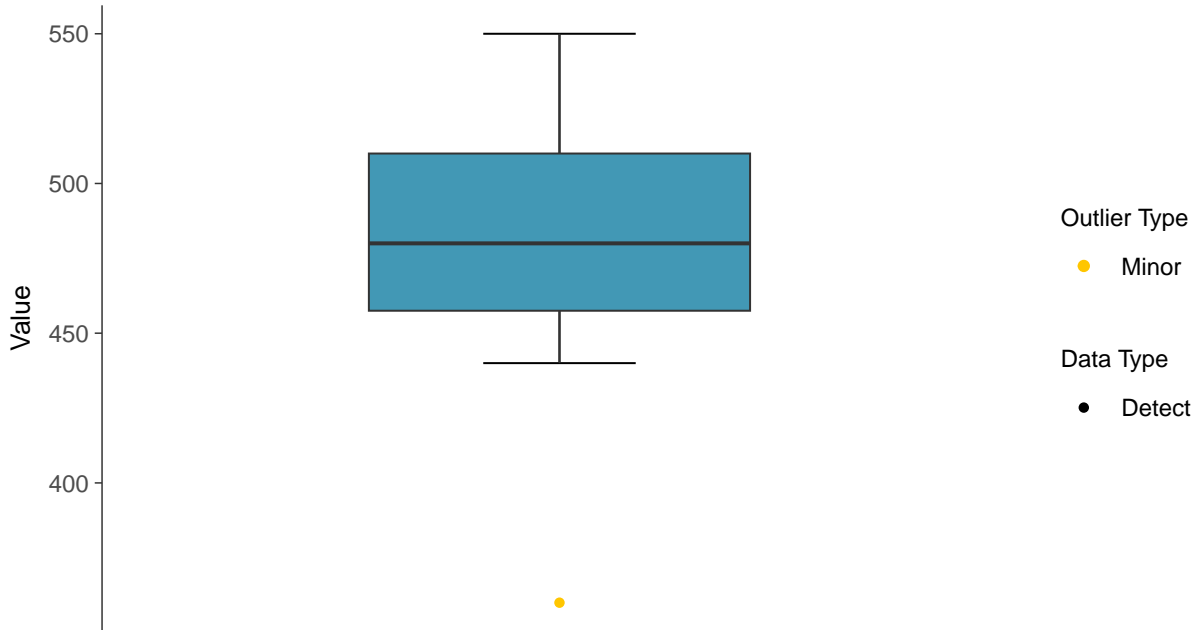
Calcium, MW-19 (mg/L)





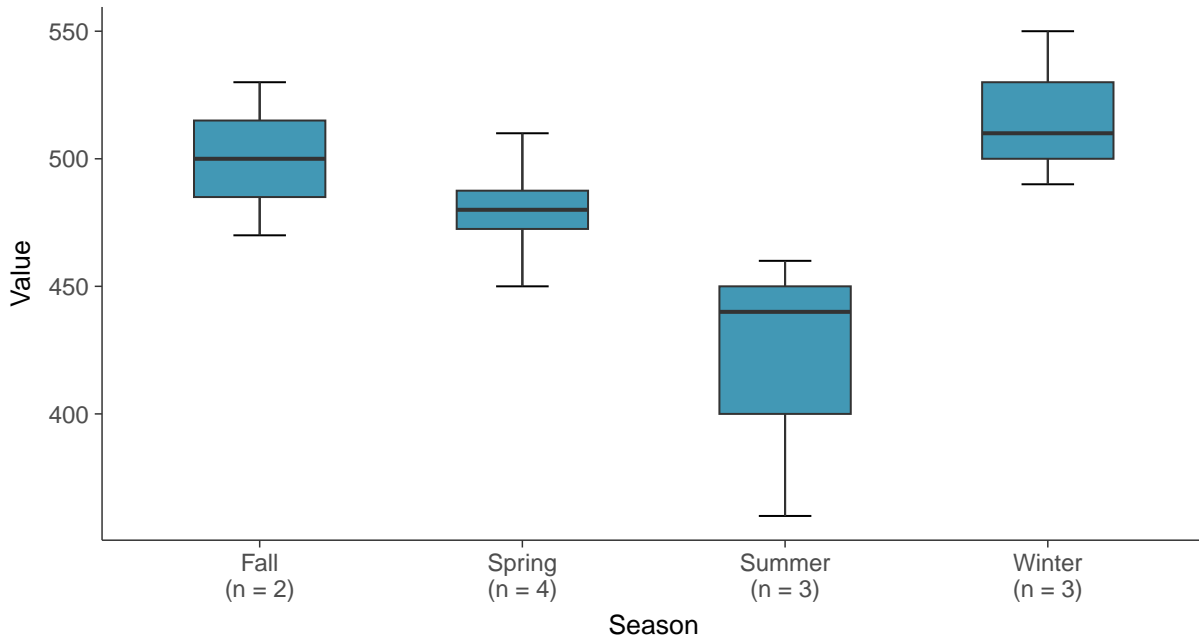
### Boxplot

Calcium, MW-19 (mg/L)



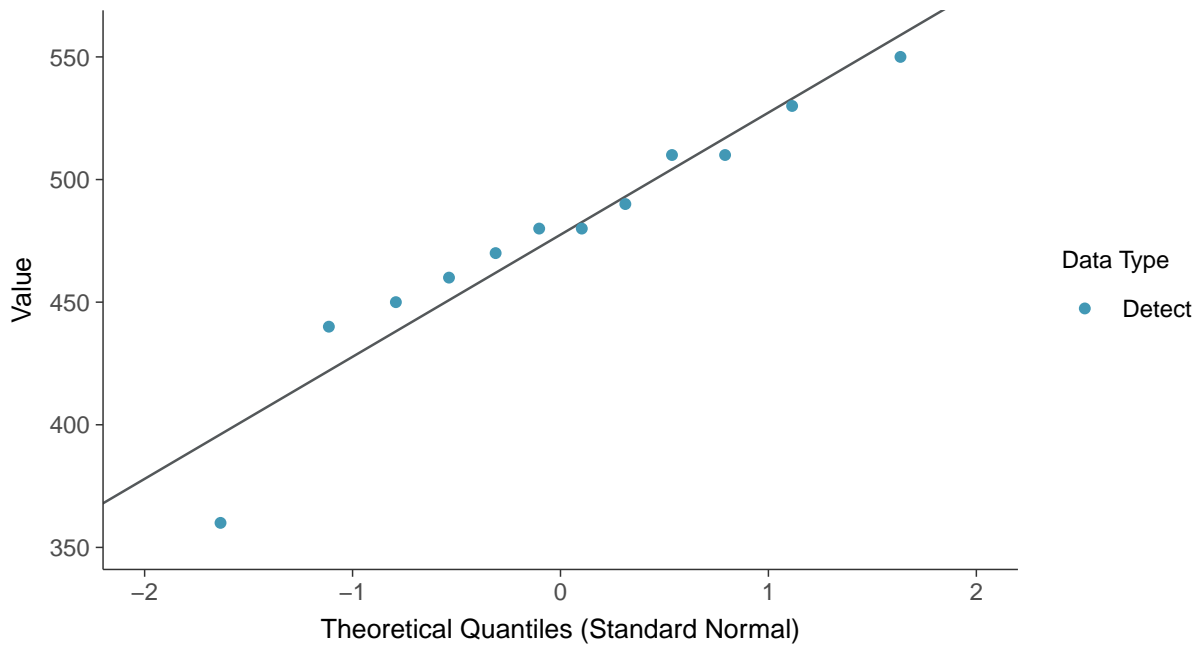
### Boxplot by Season

Calcium, MW-19 (mg/L)

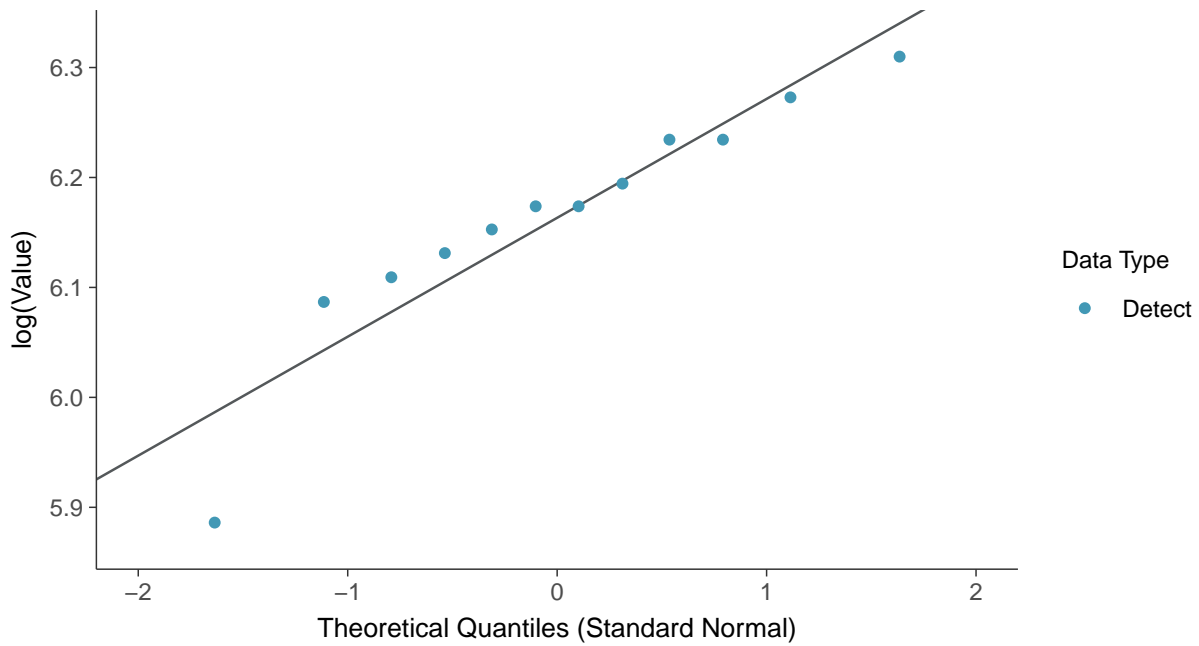




**Normal Q-Q plot**  
Calcium, MW-19 (mg/L)



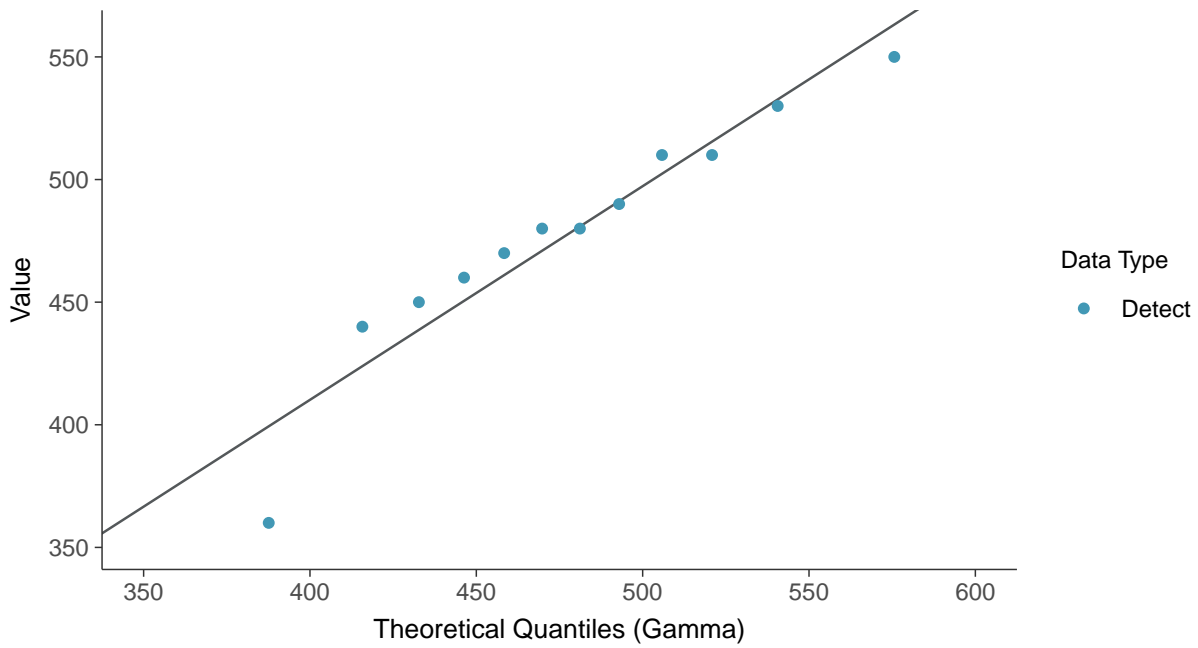
**Lognormal Q-Q plot**  
Calcium, MW-19 (mg/L)





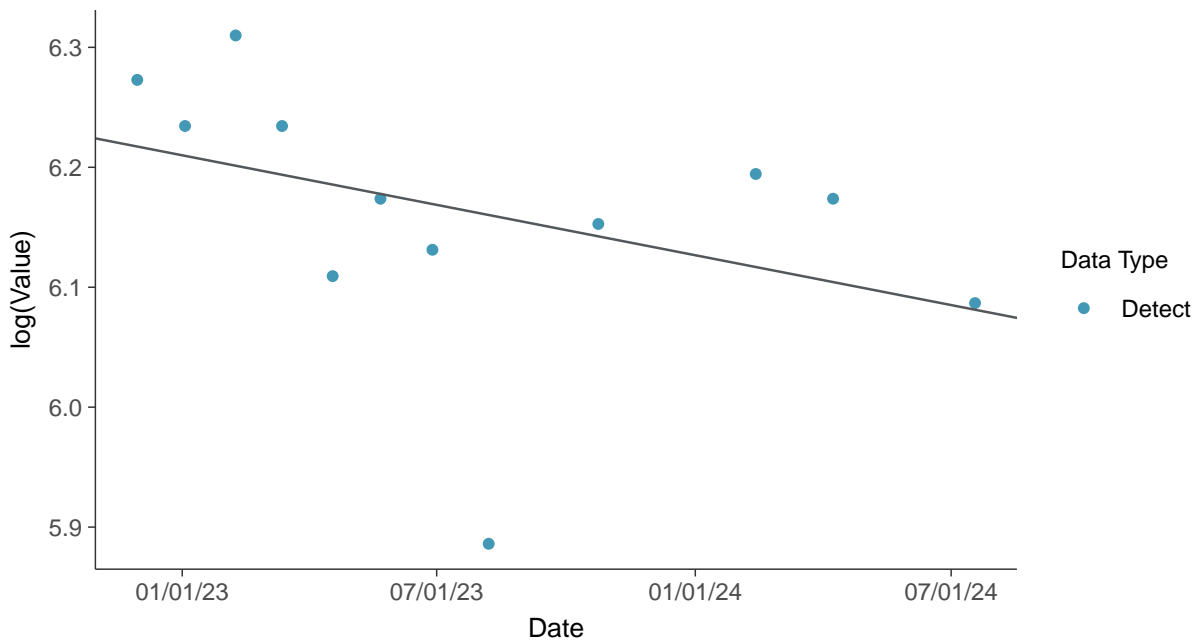
### Gamma Q-Q plot

Calcium, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

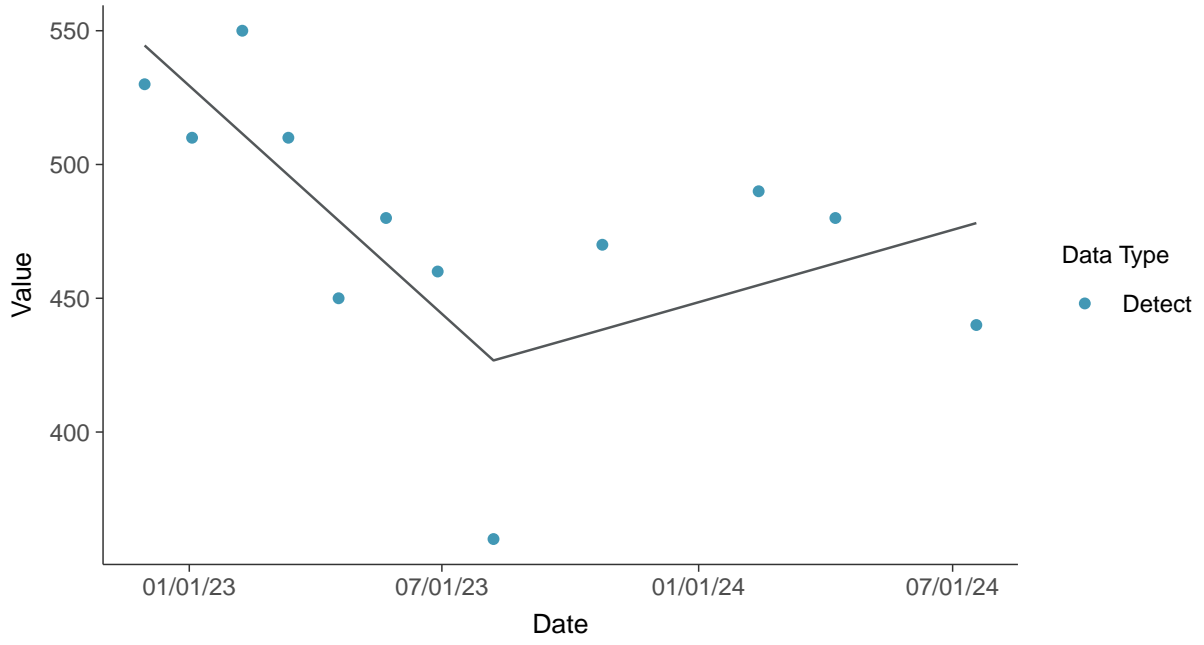
Calcium, MW-19 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Calcium, MW-19 (mg/L)



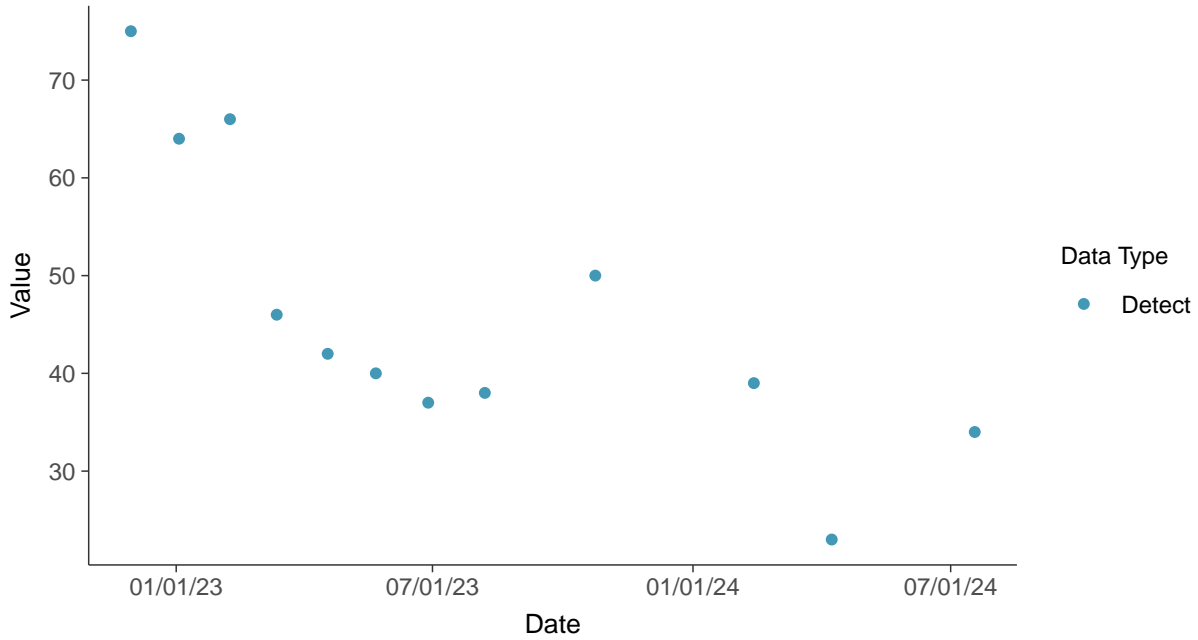


### Appendix III: Chloride (as Cl), MW-19

ID: 29\_1\_4\_108

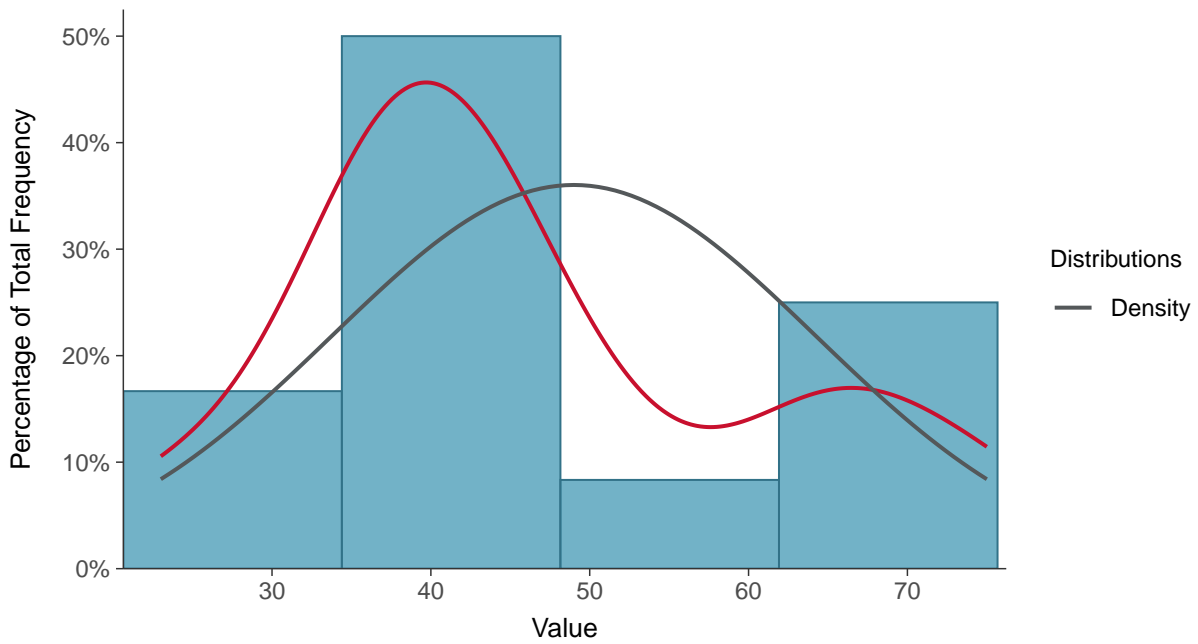
#### Scatter Plot

Chloride (as Cl), MW-19 (mg/L)



#### Histogram

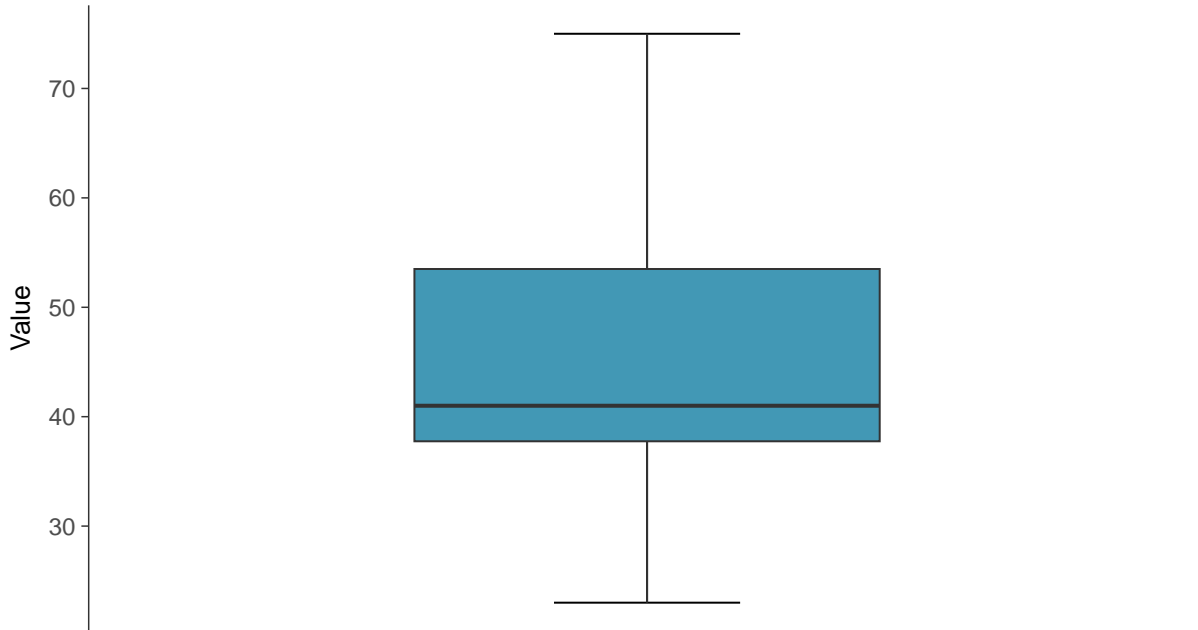
Chloride (as Cl), MW-19 (mg/L)





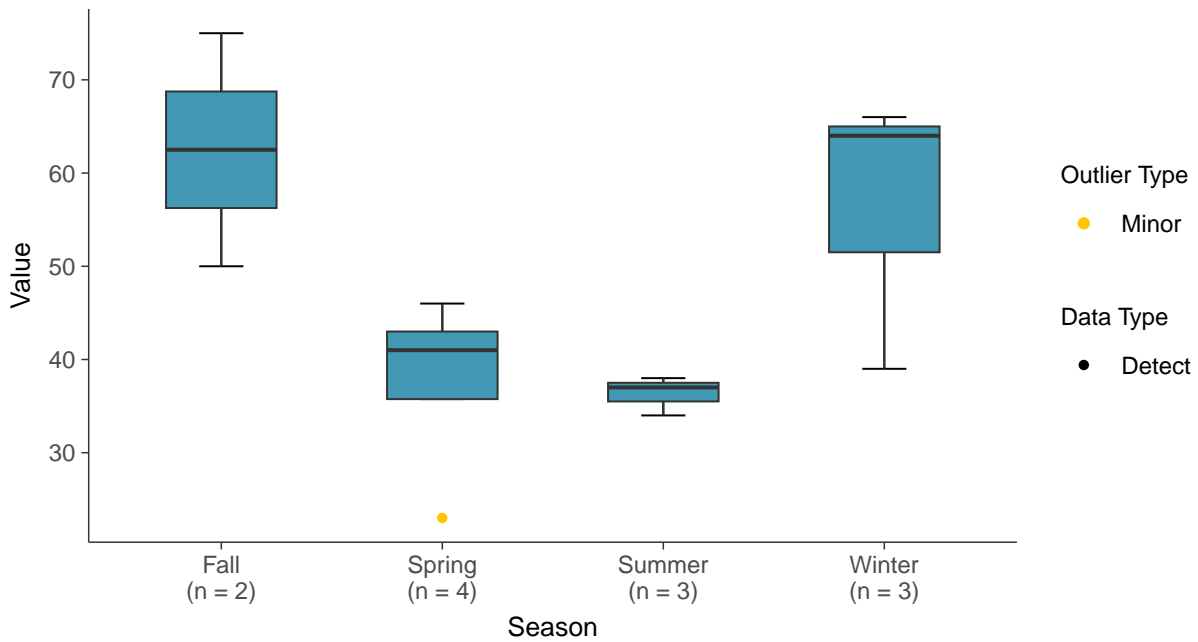
### Boxplot

Chloride (as Cl), MW-19 (mg/L)



### Boxplot by Season

Chloride (as Cl), MW-19 (mg/L)

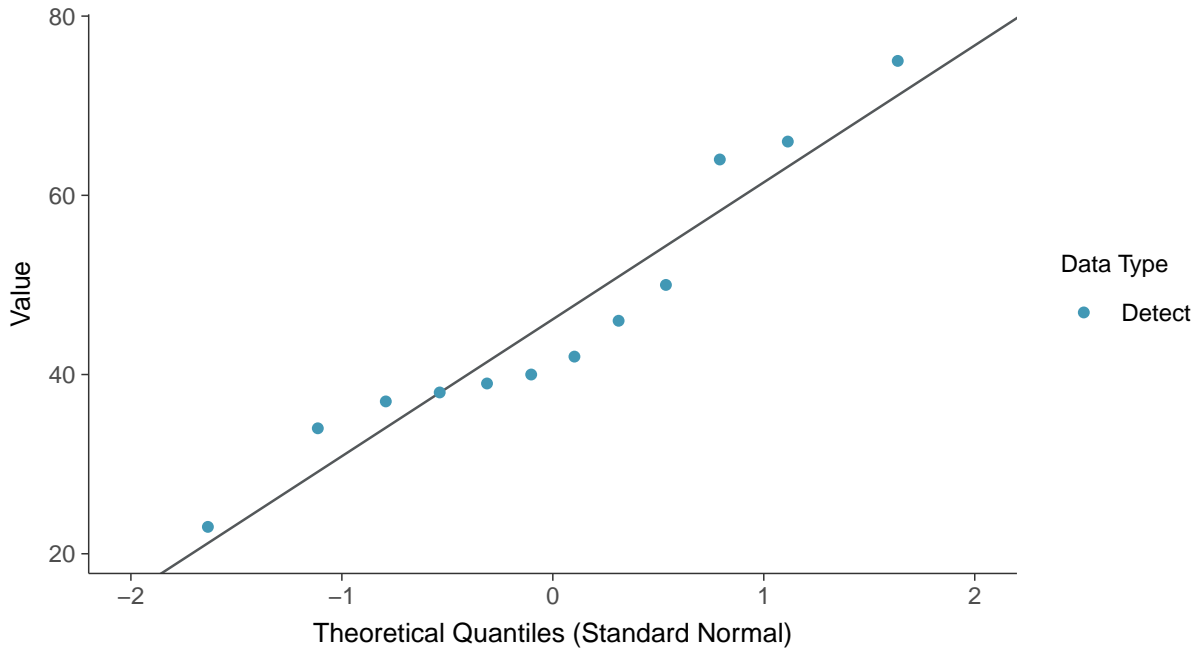






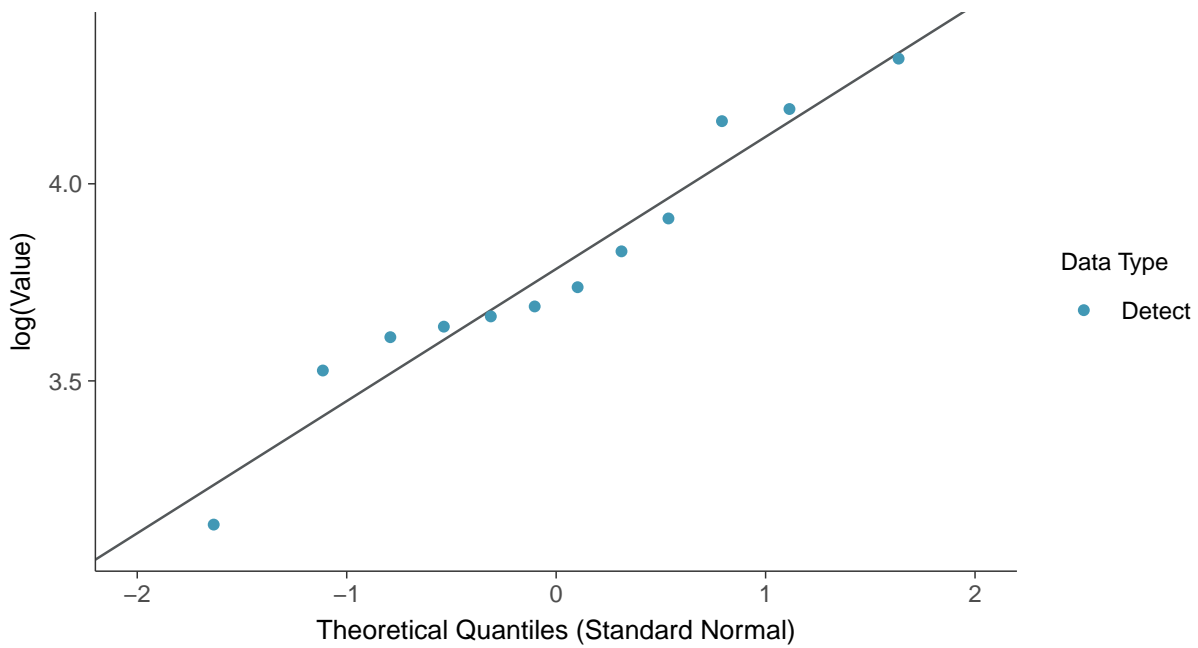
### Normal Q-Q plot

Chloride (as Cl), MW-19 (mg/L)



### Lognormal Q-Q plot

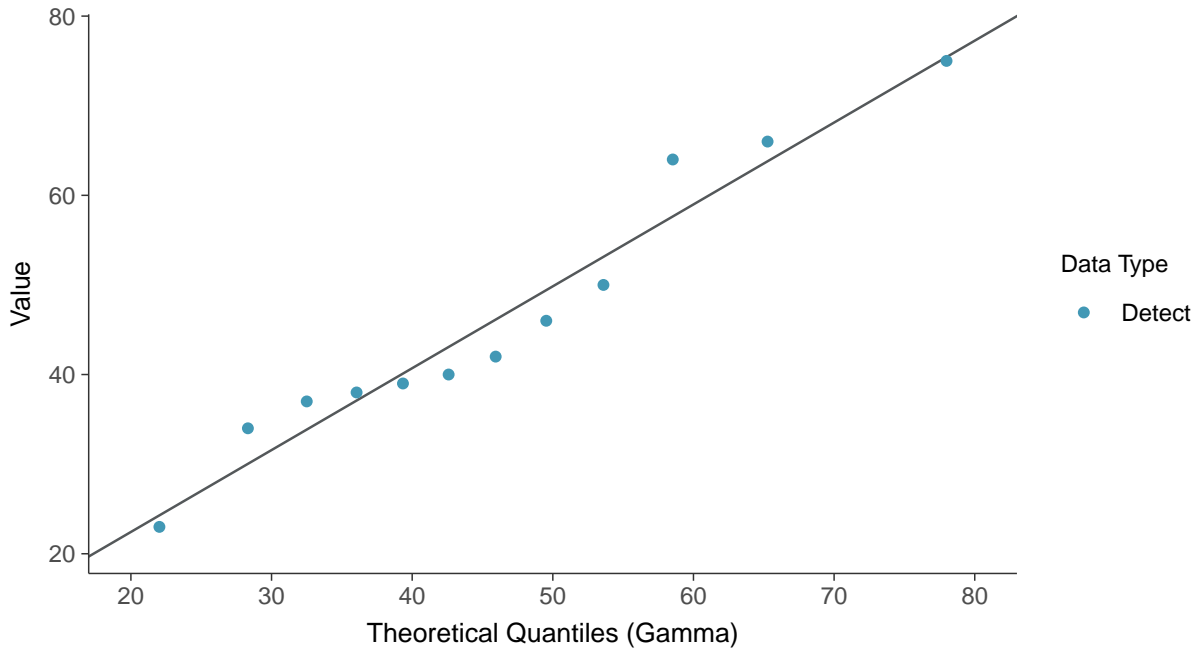
Chloride (as Cl), MW-19 (mg/L)





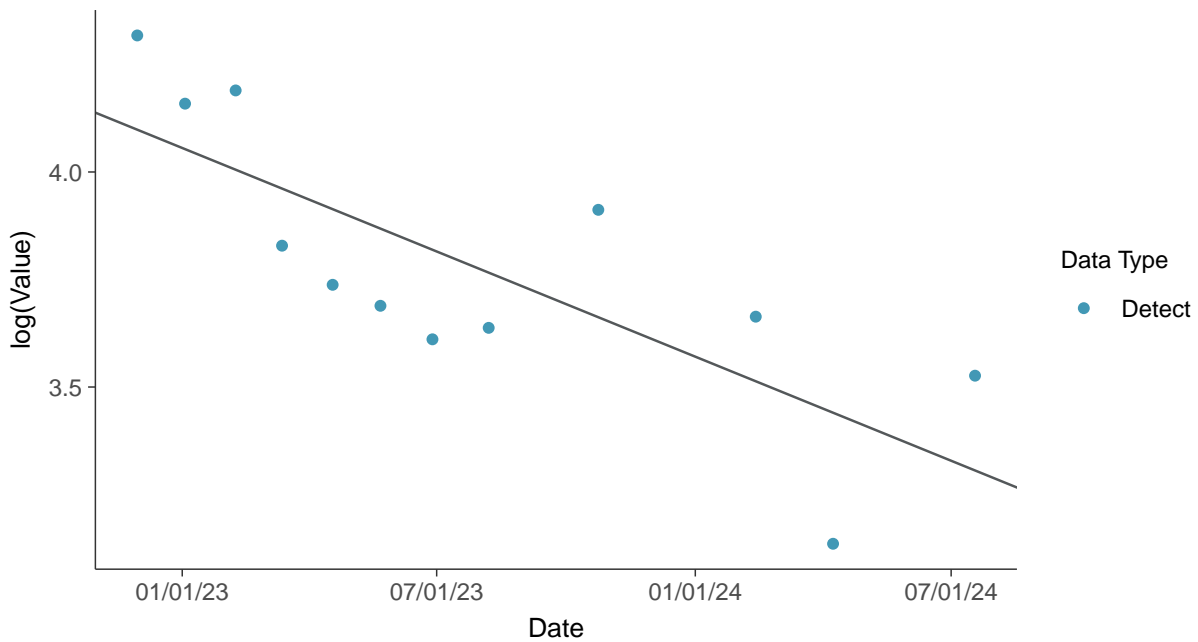
### Gamma Q-Q plot

Chloride (as Cl), MW-19 (mg/L)



### Trend Regression: Lognormal MLE

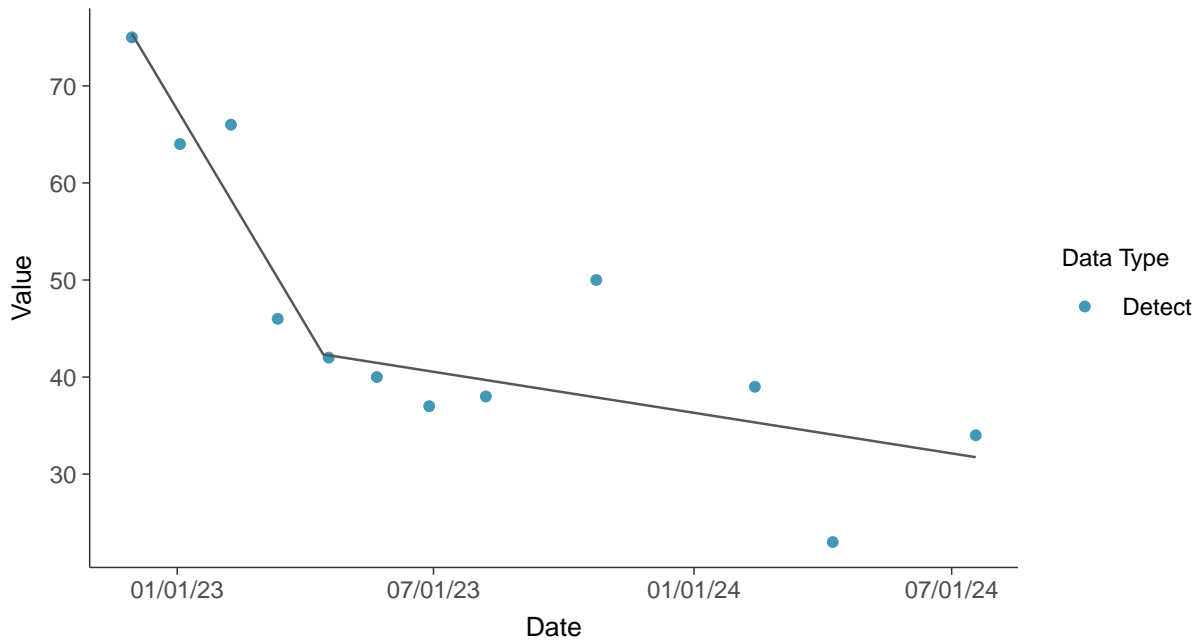
Chloride (as Cl), MW-19 (mg/L)





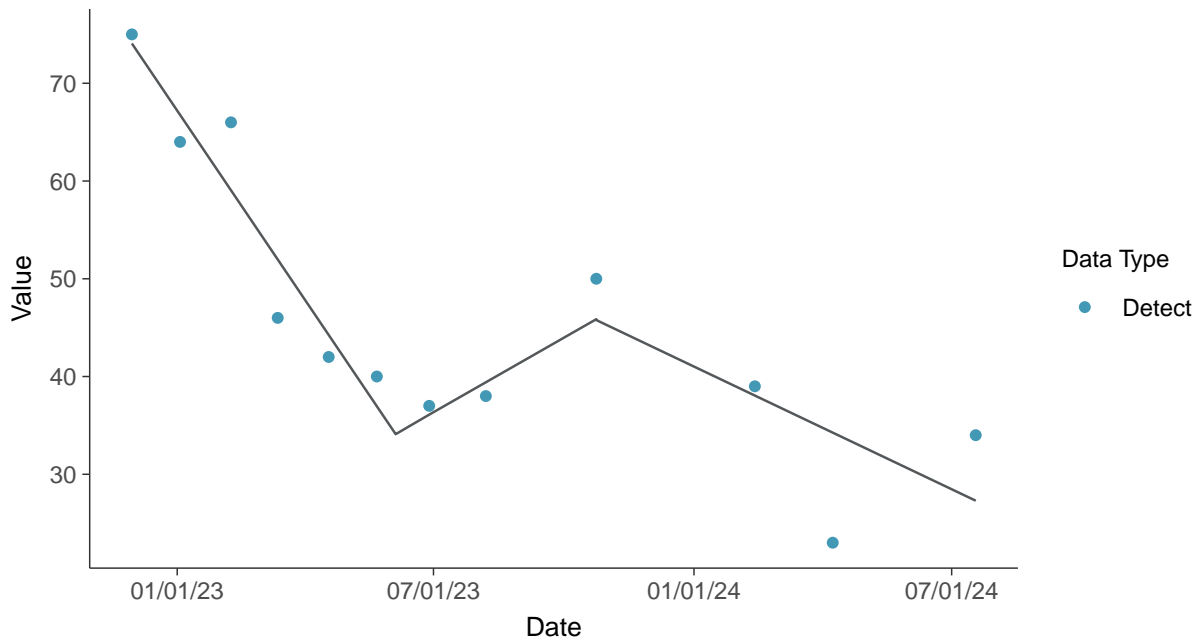
### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-19 (mg/L)



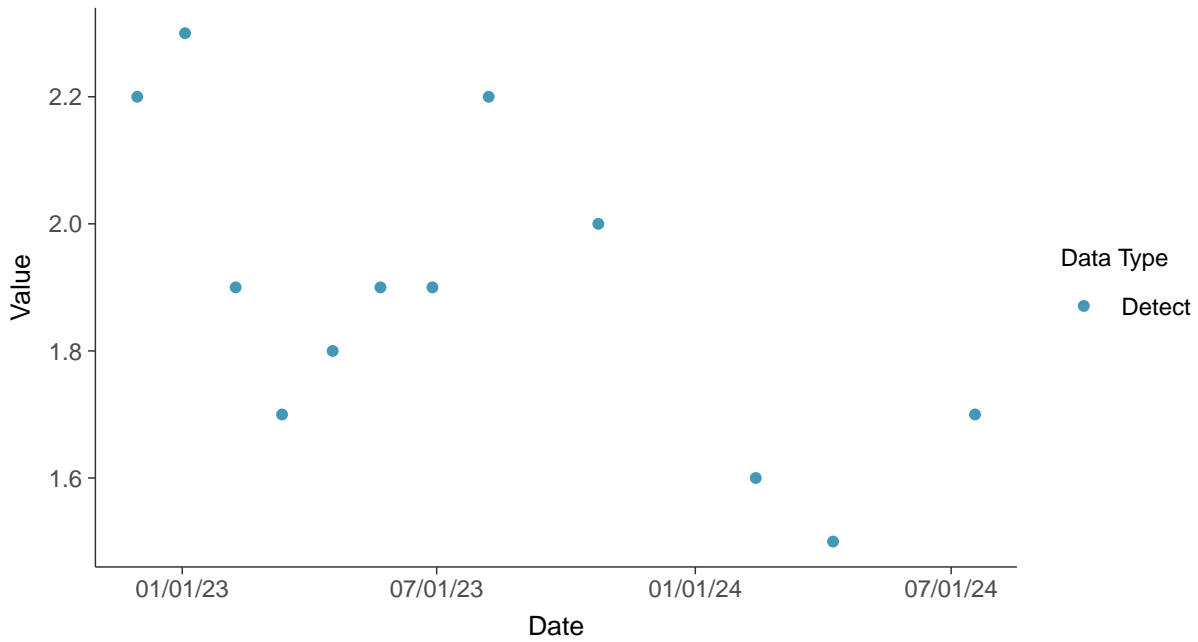


### Appendix III: Fluoride, MW-19

ID: 29\_1\_4\_112

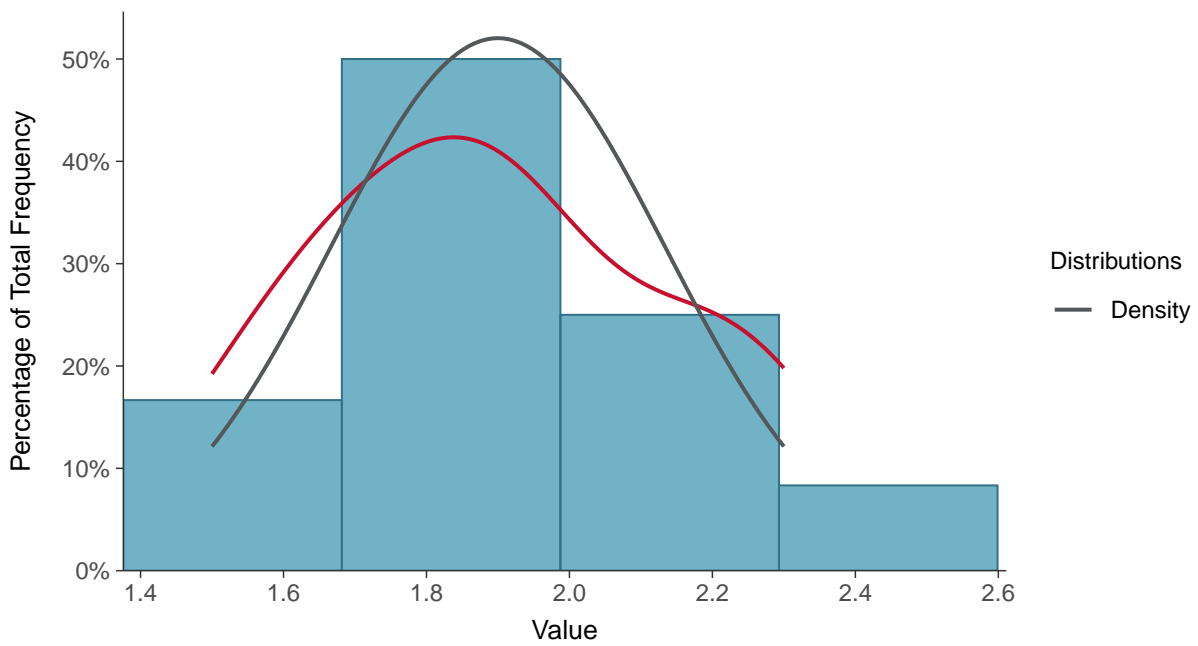
#### Scatter Plot

Fluoride, MW-19 (mg/L)



#### Histogram

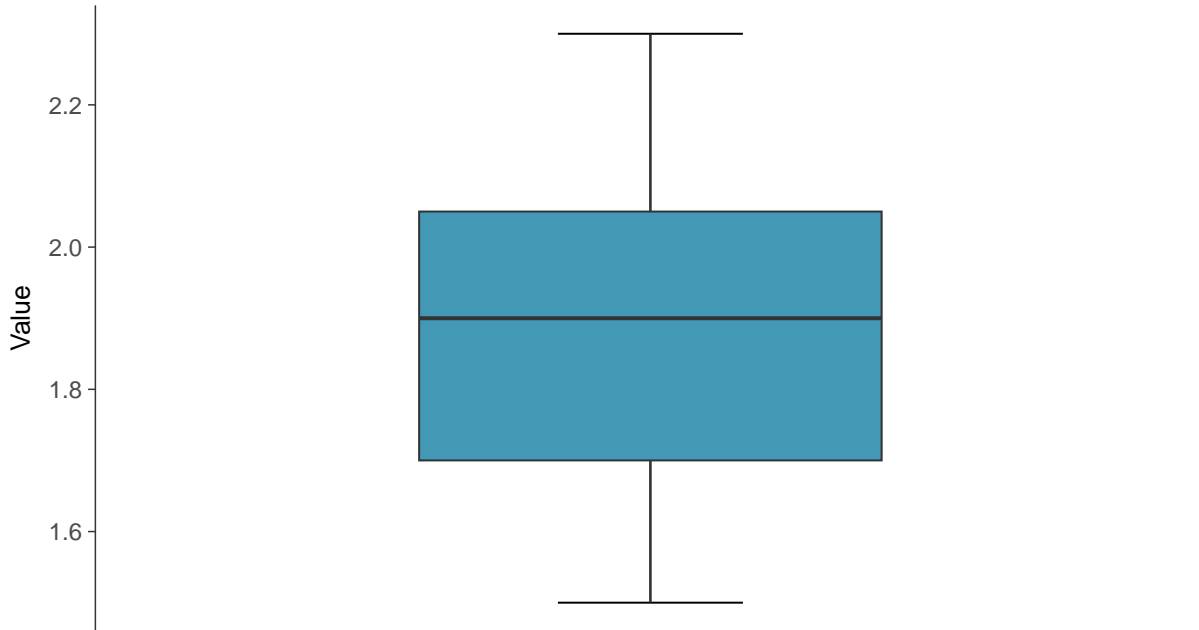
Fluoride, MW-19 (mg/L)





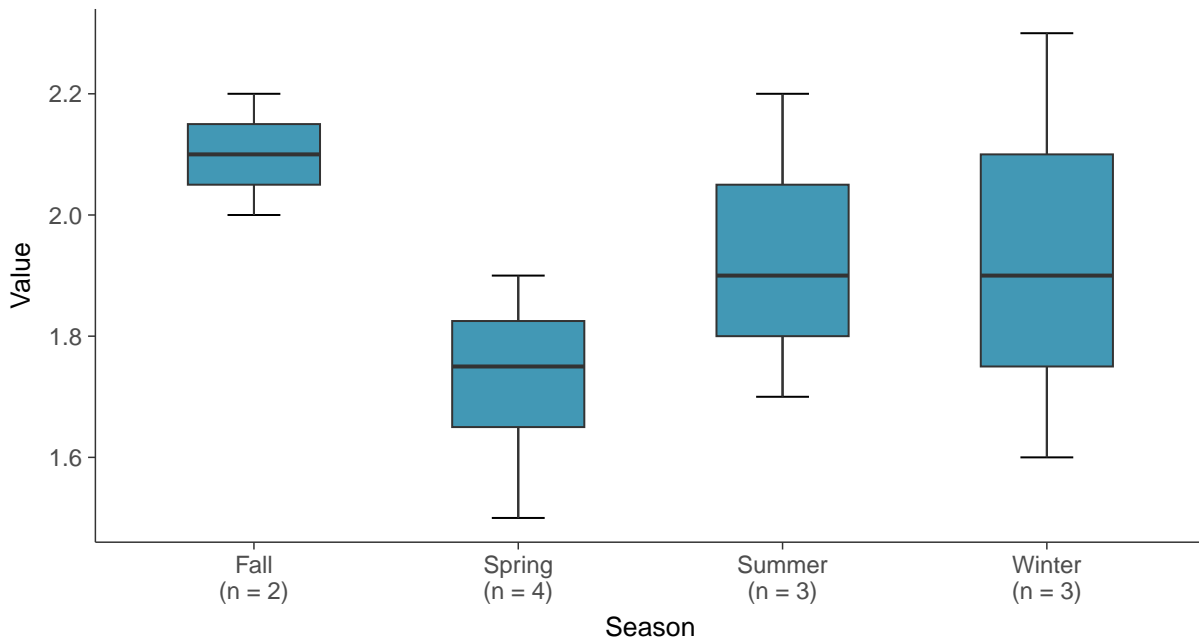
### Boxplot

Fluoride, MW-19 (mg/L)



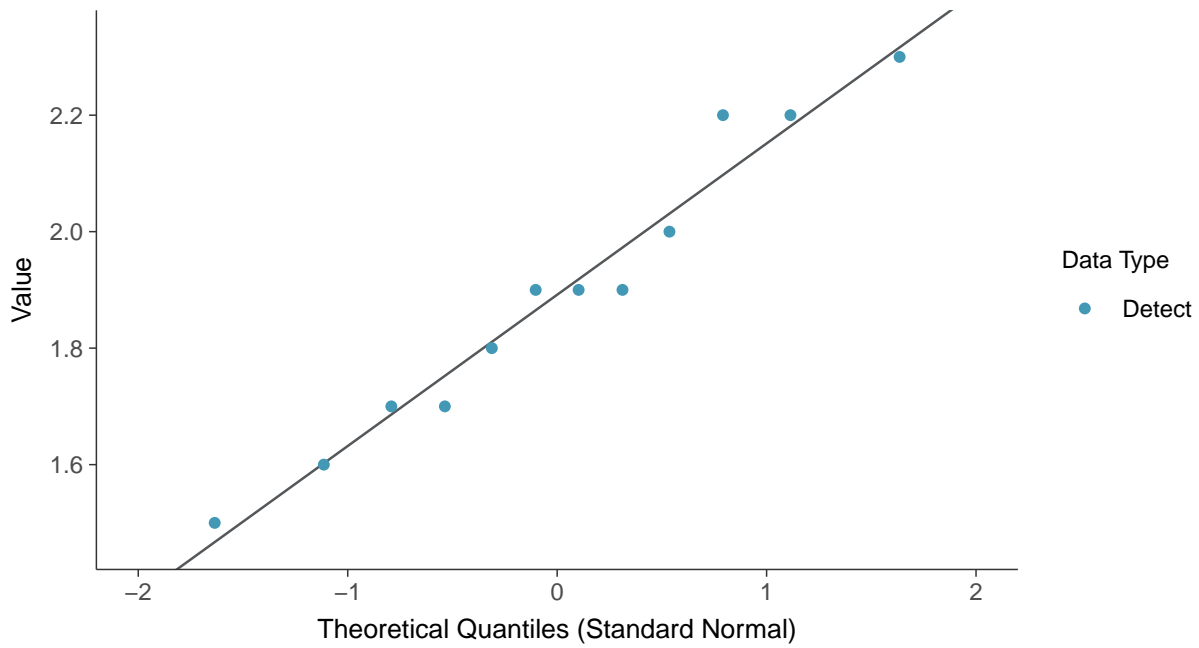
### Boxplot by Season

Fluoride, MW-19 (mg/L)

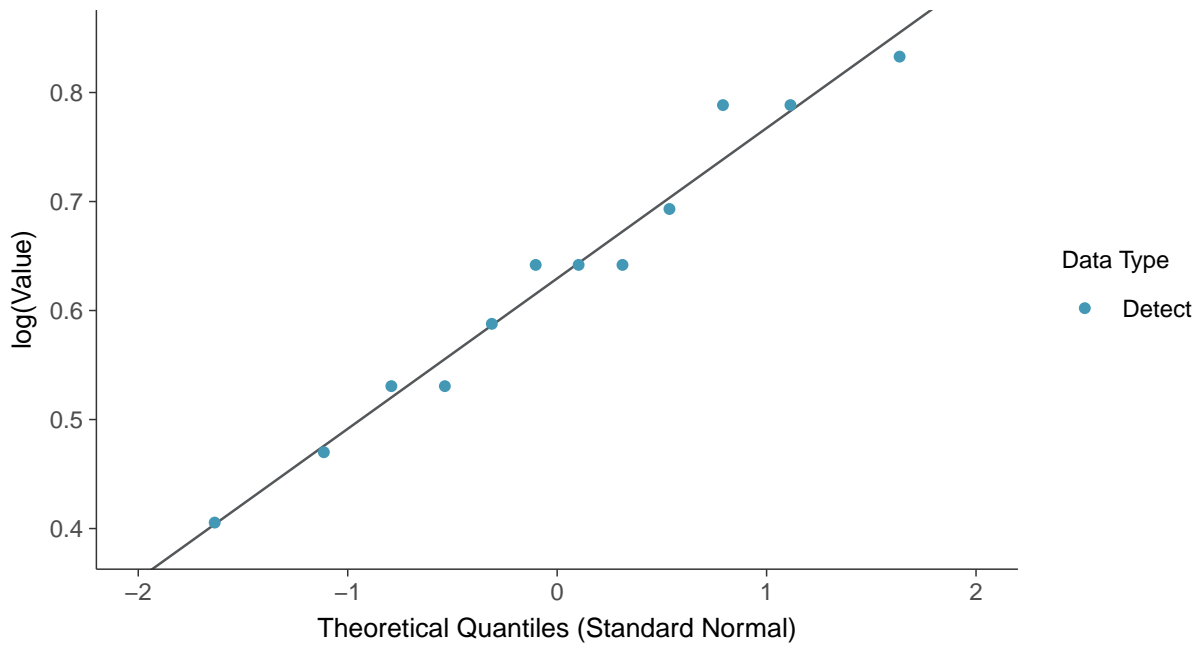




**Normal Q-Q plot**  
Fluoride, MW-19 (mg/L)



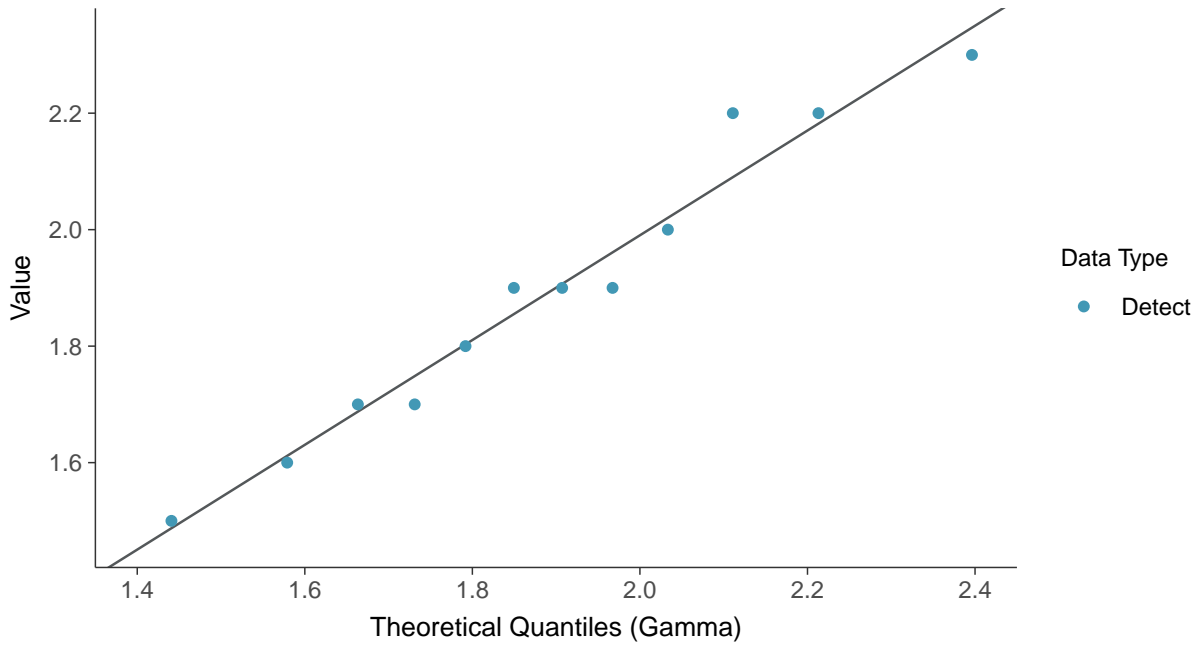
**Lognormal Q-Q plot**  
Fluoride, MW-19 (mg/L)





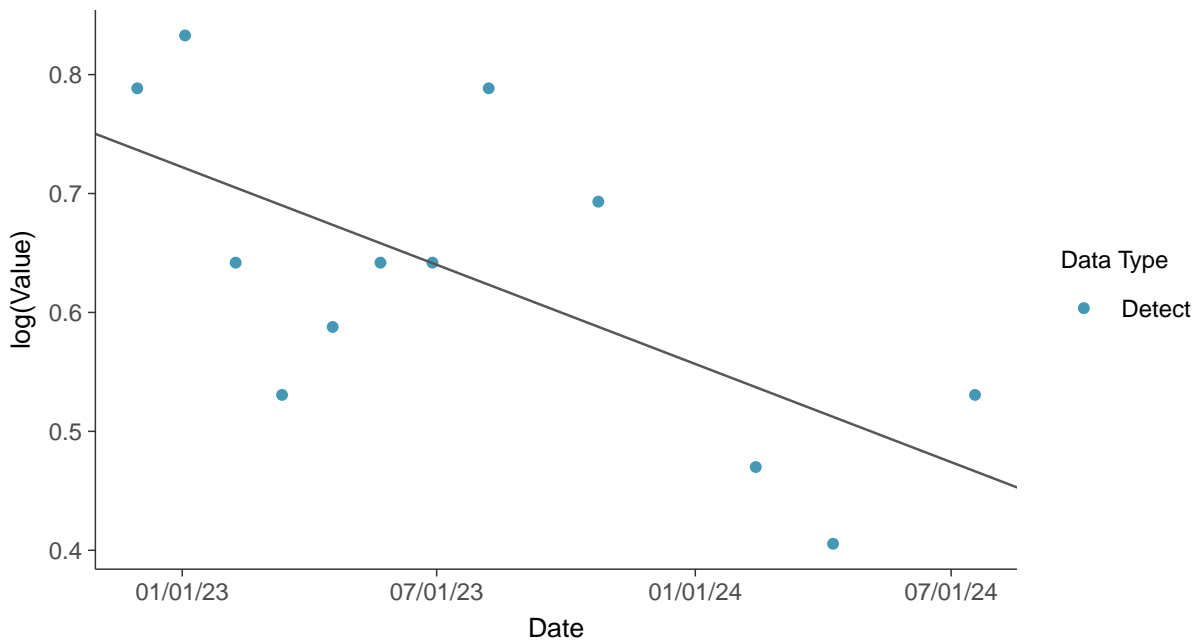
### Gamma Q-Q plot

Fluoride, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

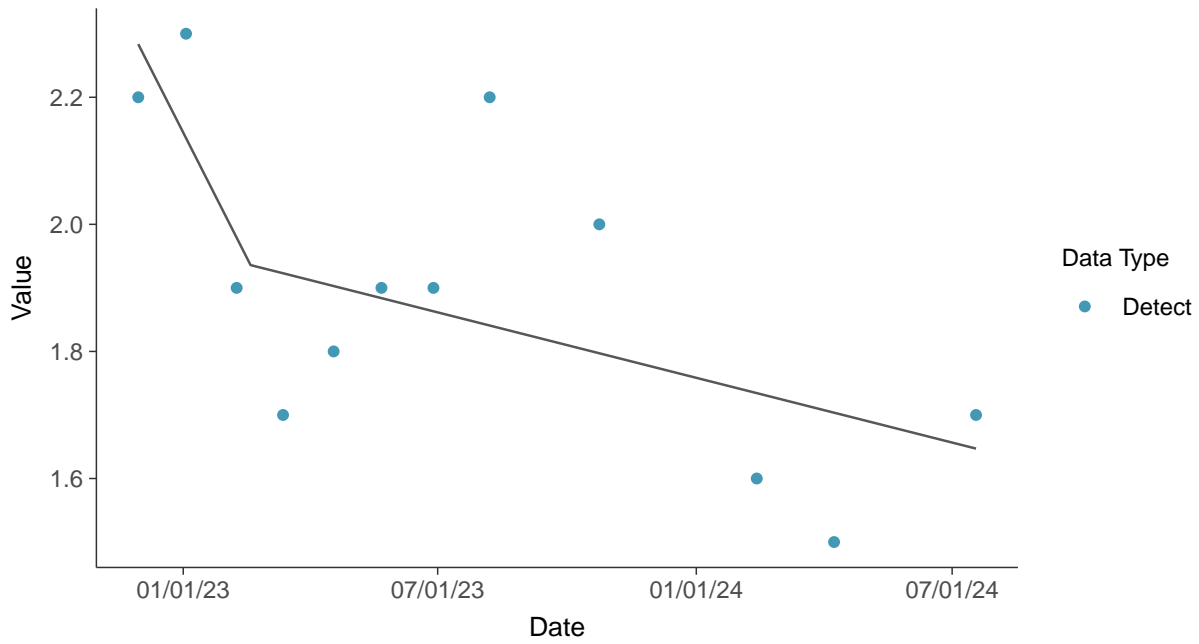
Fluoride, MW-19 (mg/L)





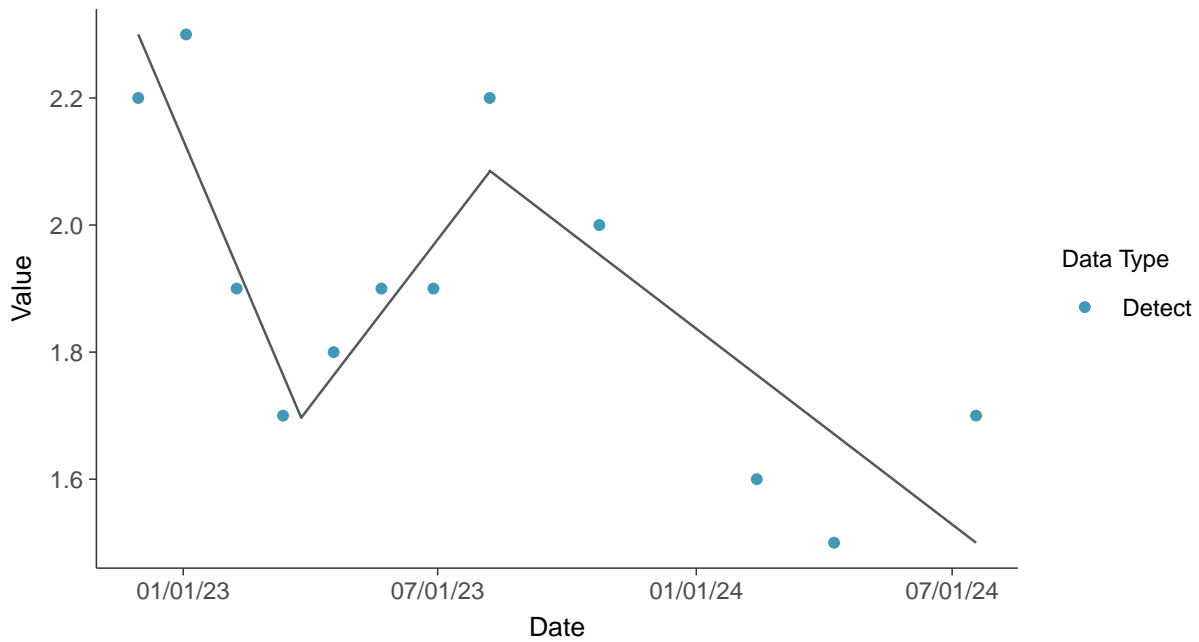
### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-19 (mg/L)

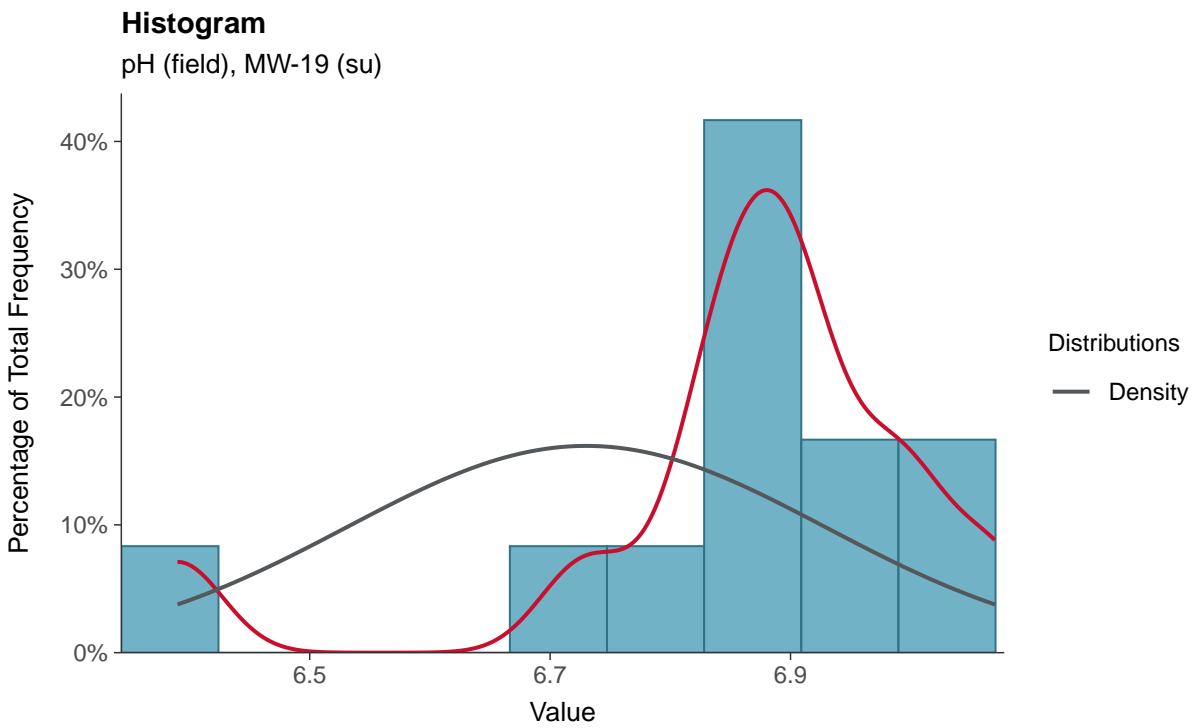
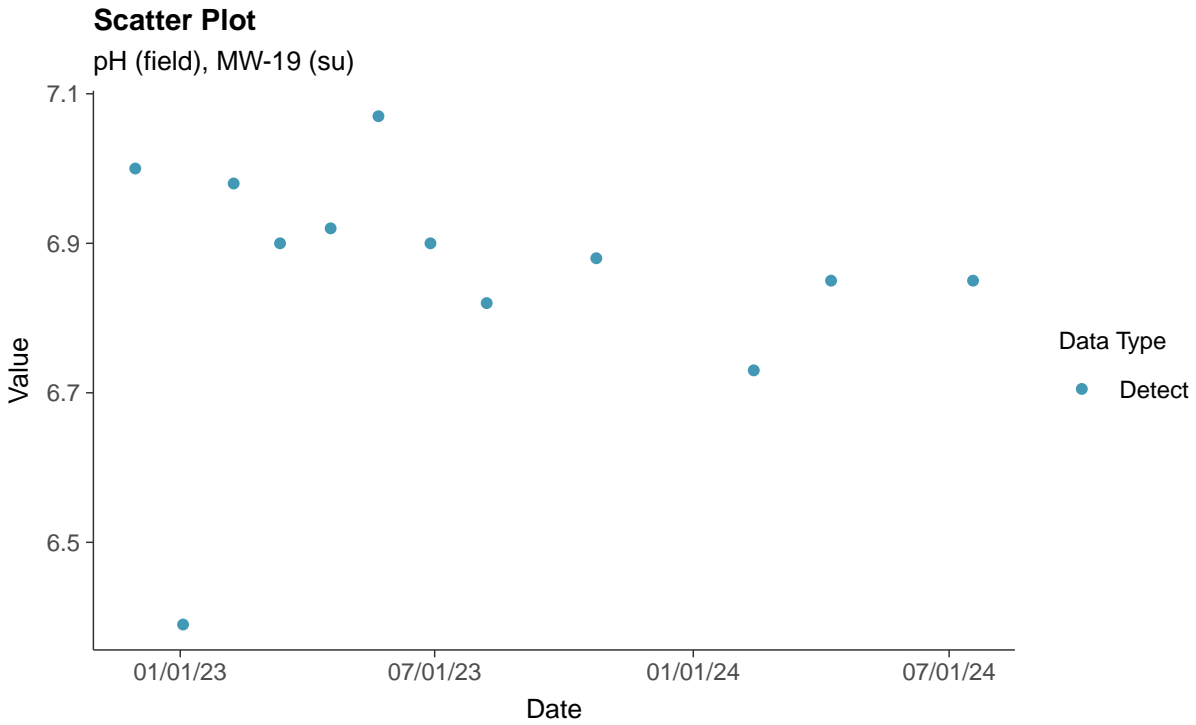






### Appendix III: pH (field), MW-19

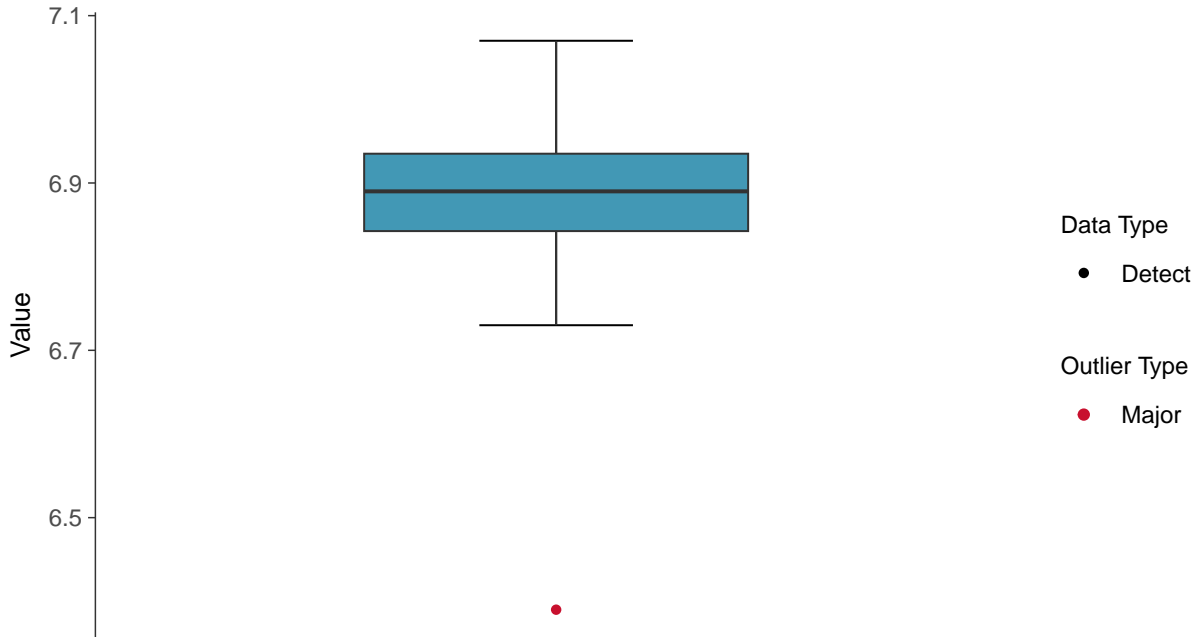
ID: 29\_1\_4\_120





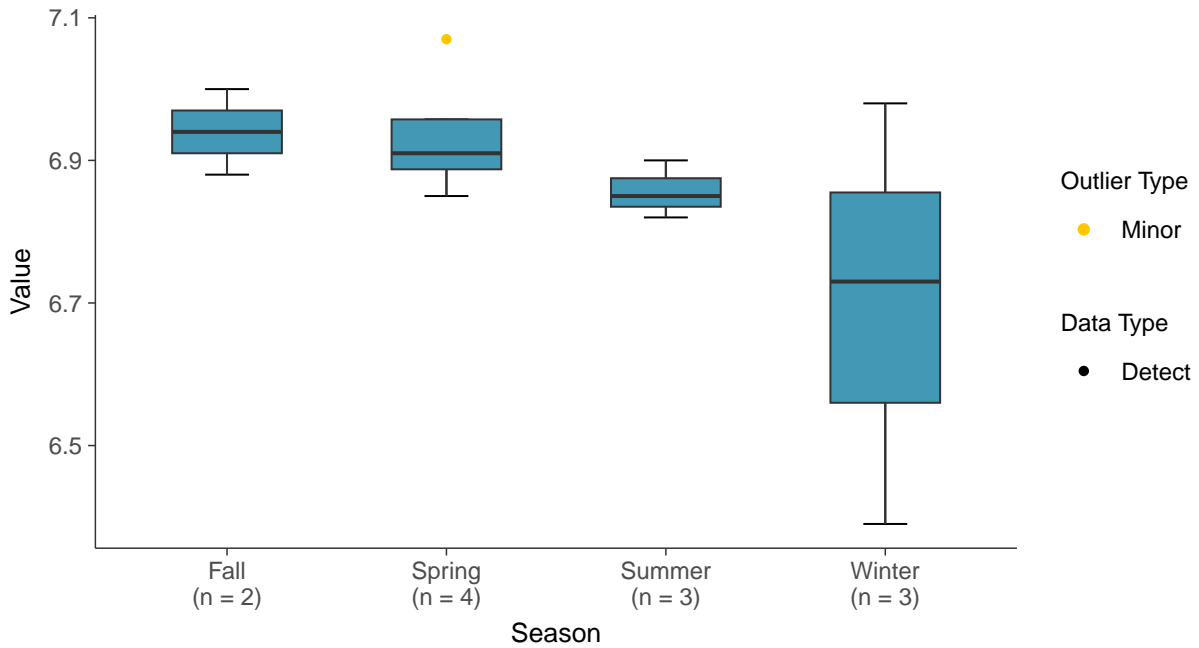
### Boxplot

pH (field), MW-19 (su)



### Boxplot by Season

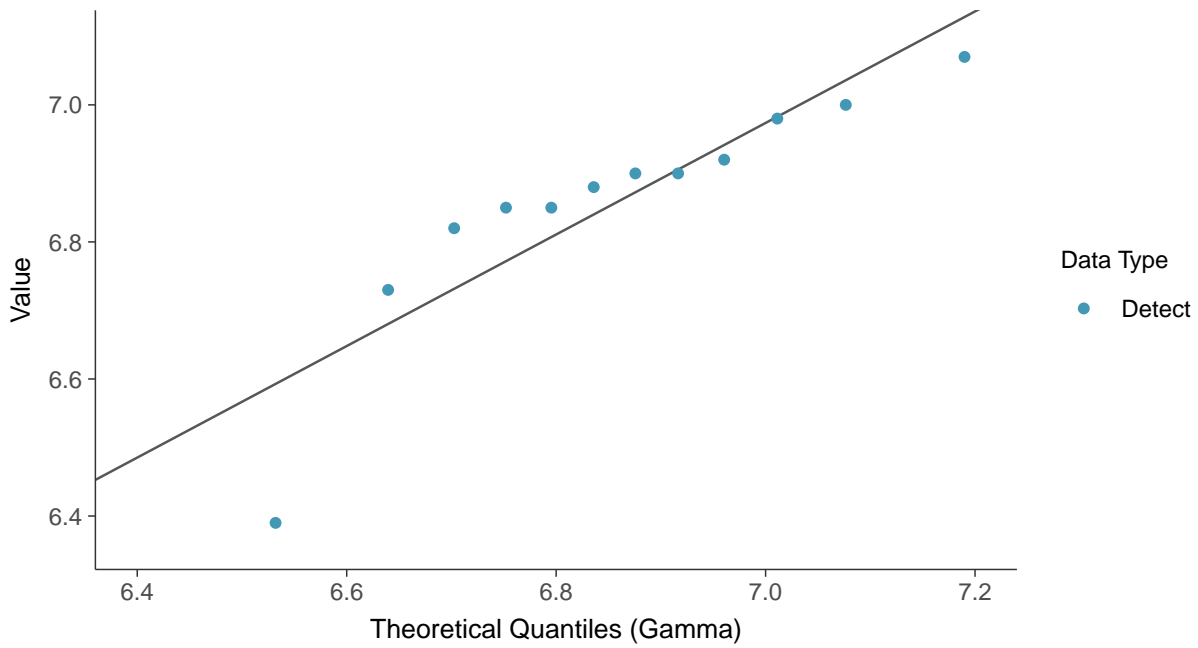
pH (field), MW-19 (su)





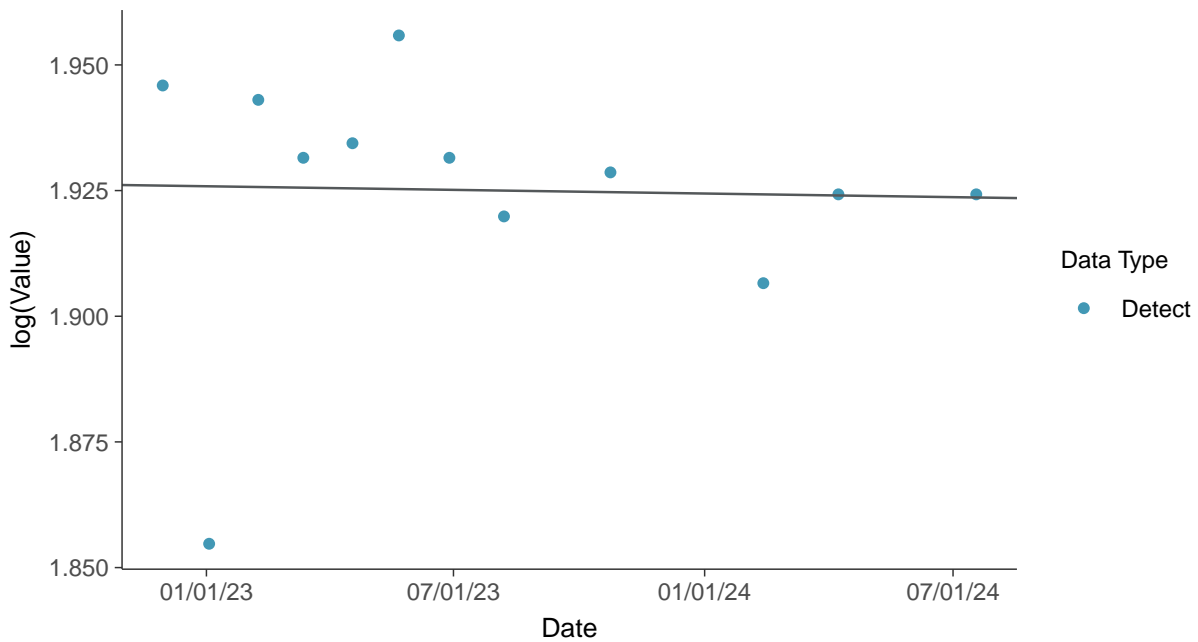
### Gamma Q-Q plot

pH (field), MW-19 (su)



### Trend Regression: Lognormal MLE

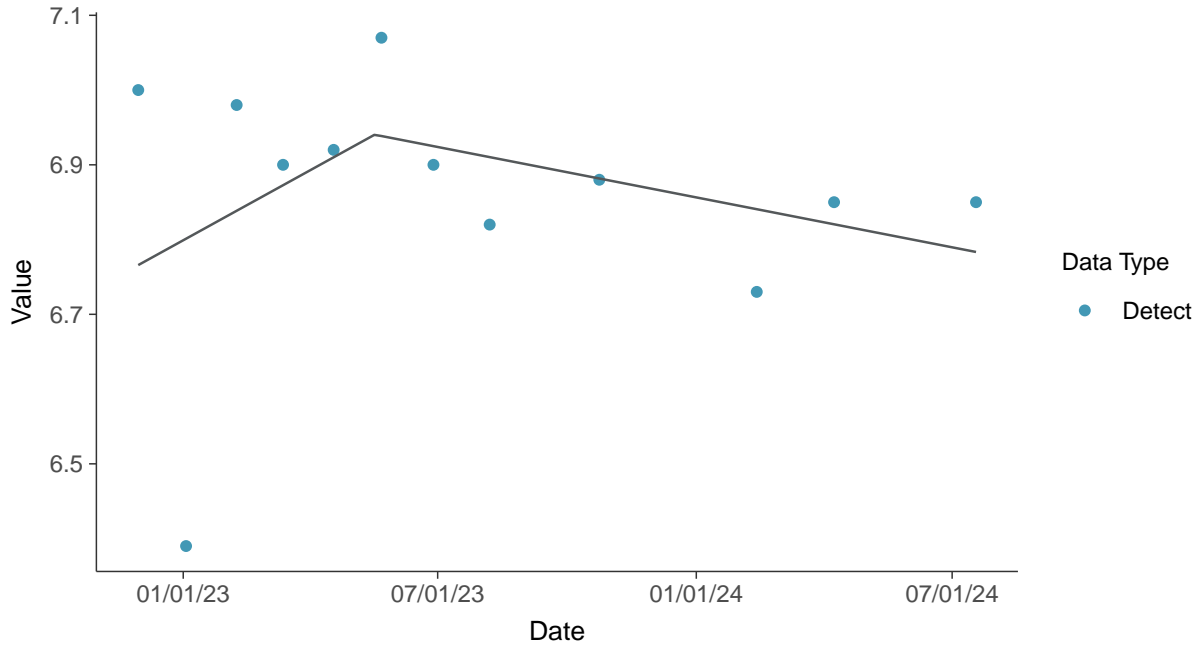
pH (field), MW-19 (su)





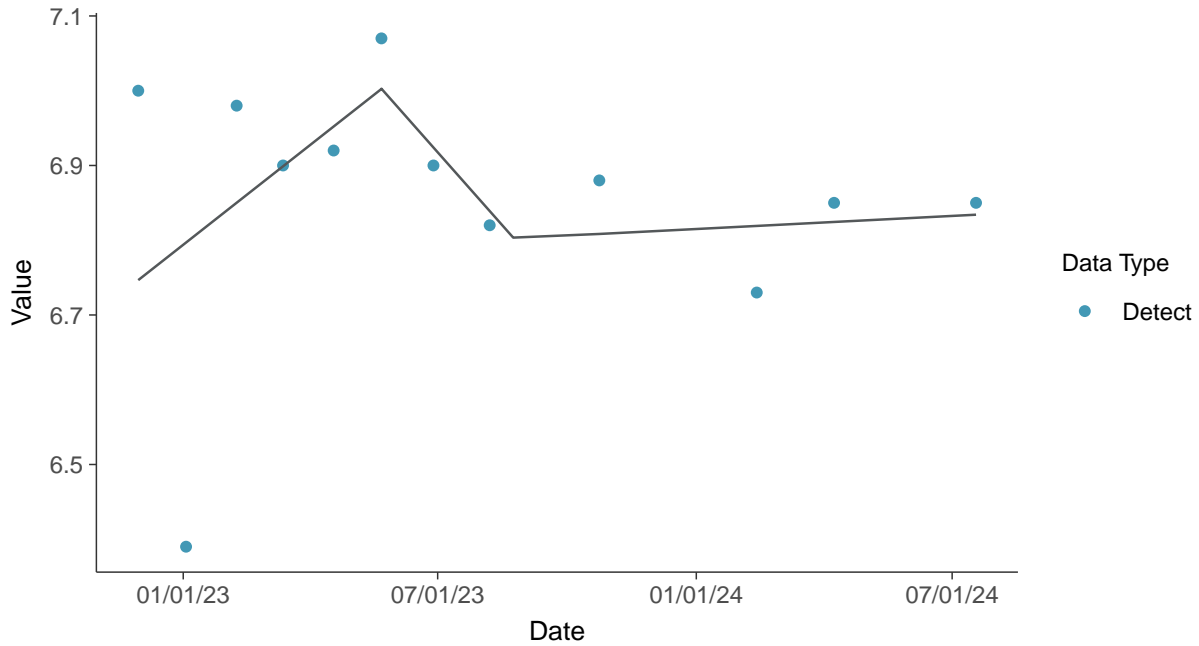
### Trend Regression: Piecewise Linear-Linear

pH (field), MW-19 (su)



### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-19 (su)



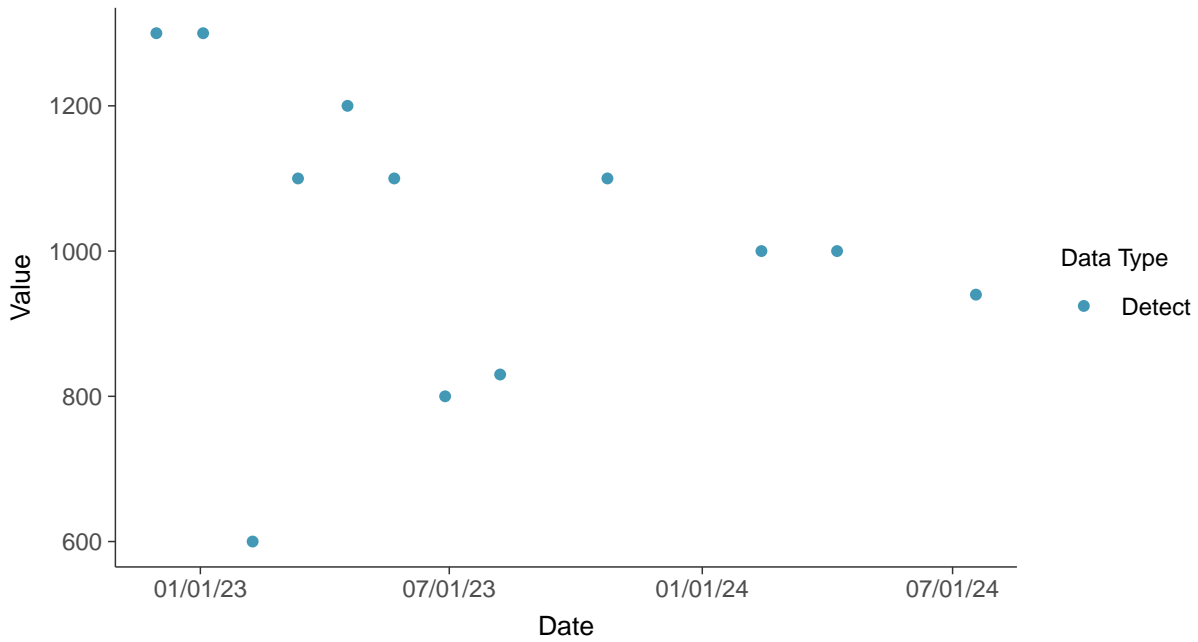


### Appendix III: Sulfate (as SO4), MW-19

ID: 29\_1\_4\_124

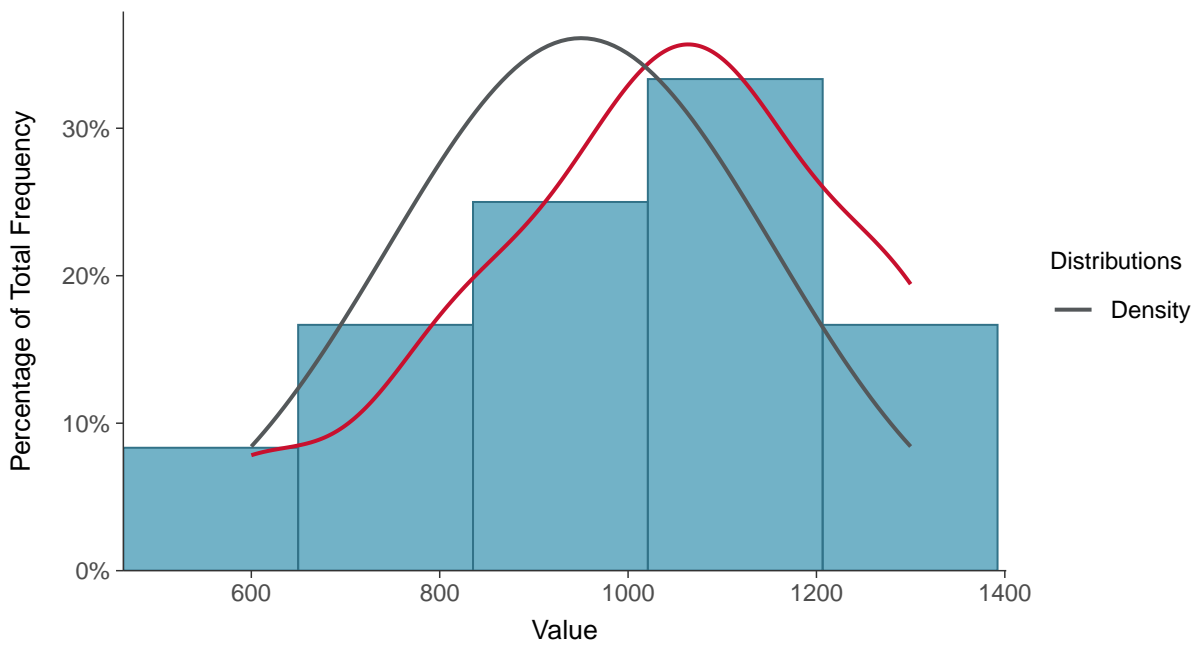
#### Scatter Plot

Sulfate (as SO4), MW-19 (mg/L)



#### Histogram

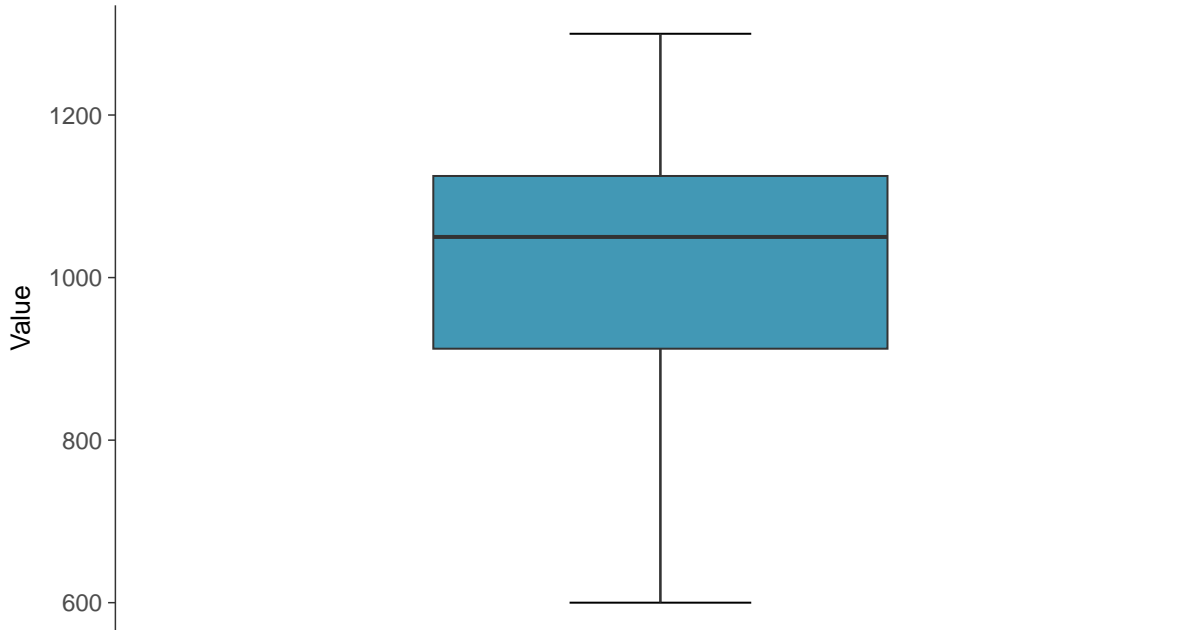
Sulfate (as SO4), MW-19 (mg/L)





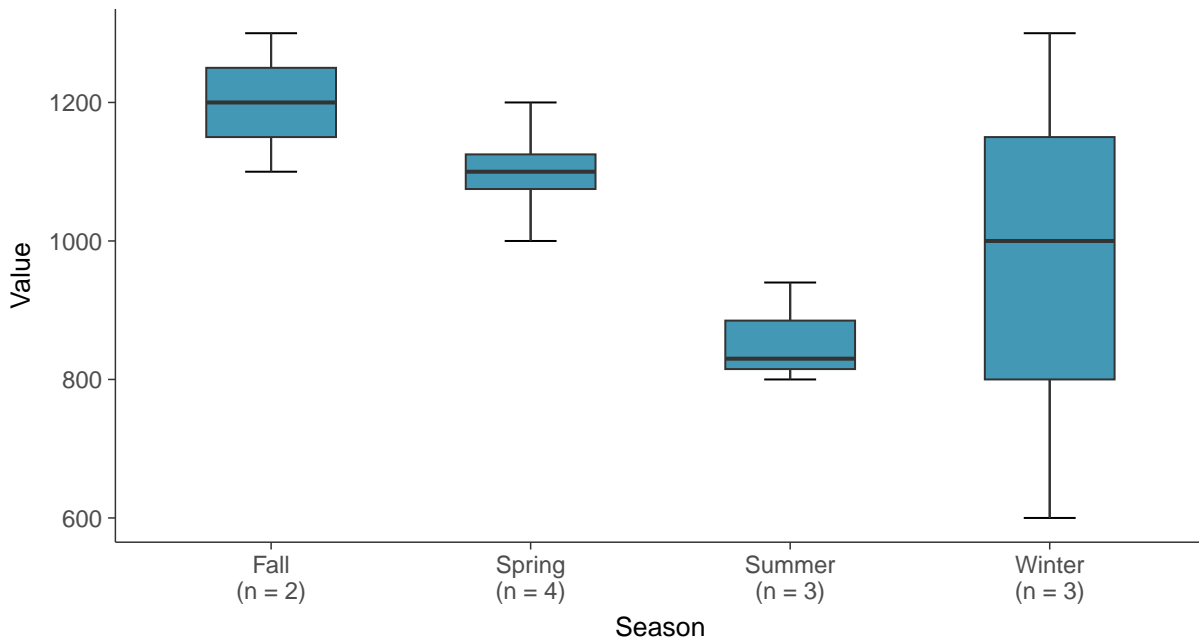
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)



### Boxplot by Season

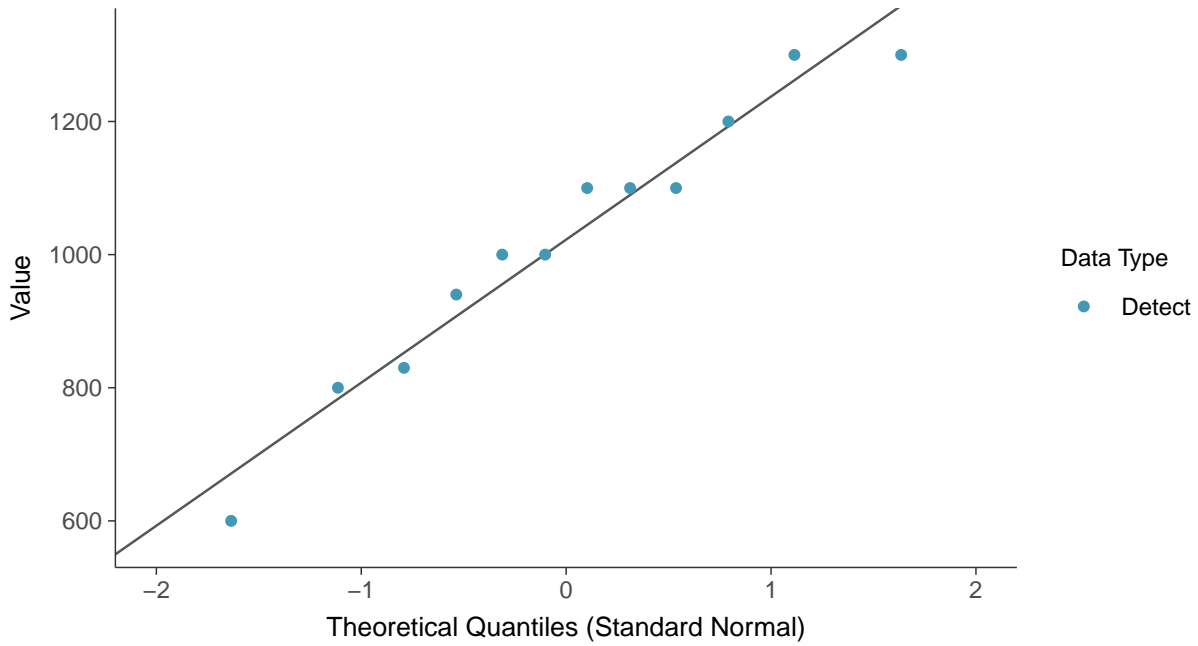
Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)





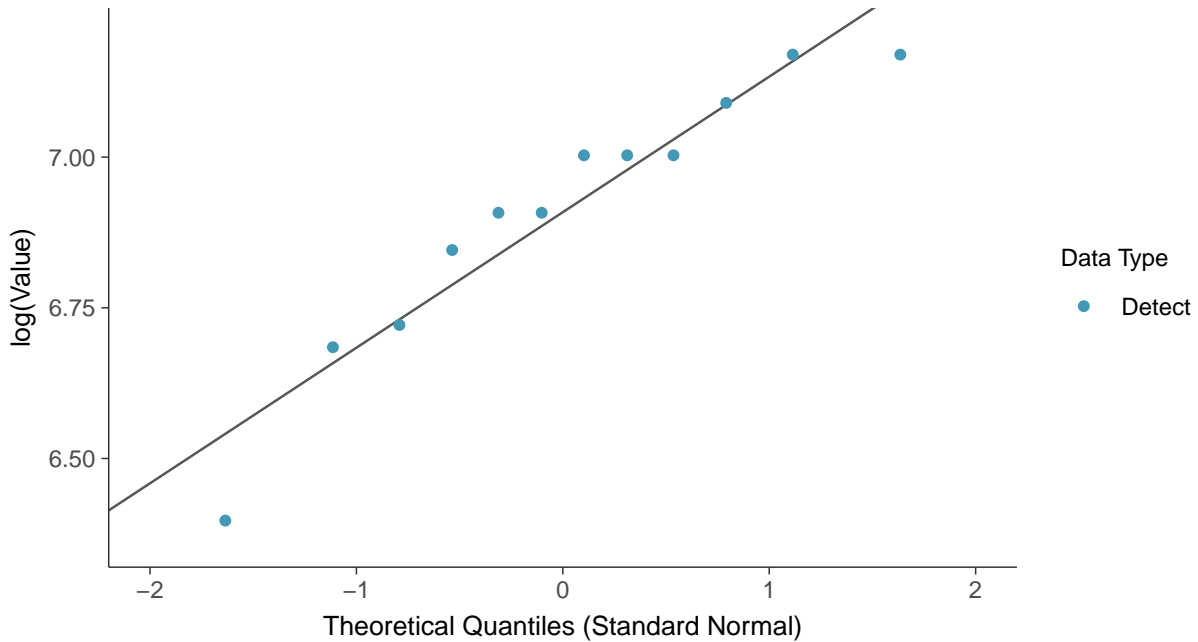
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)



### Lognormal Q-Q plot

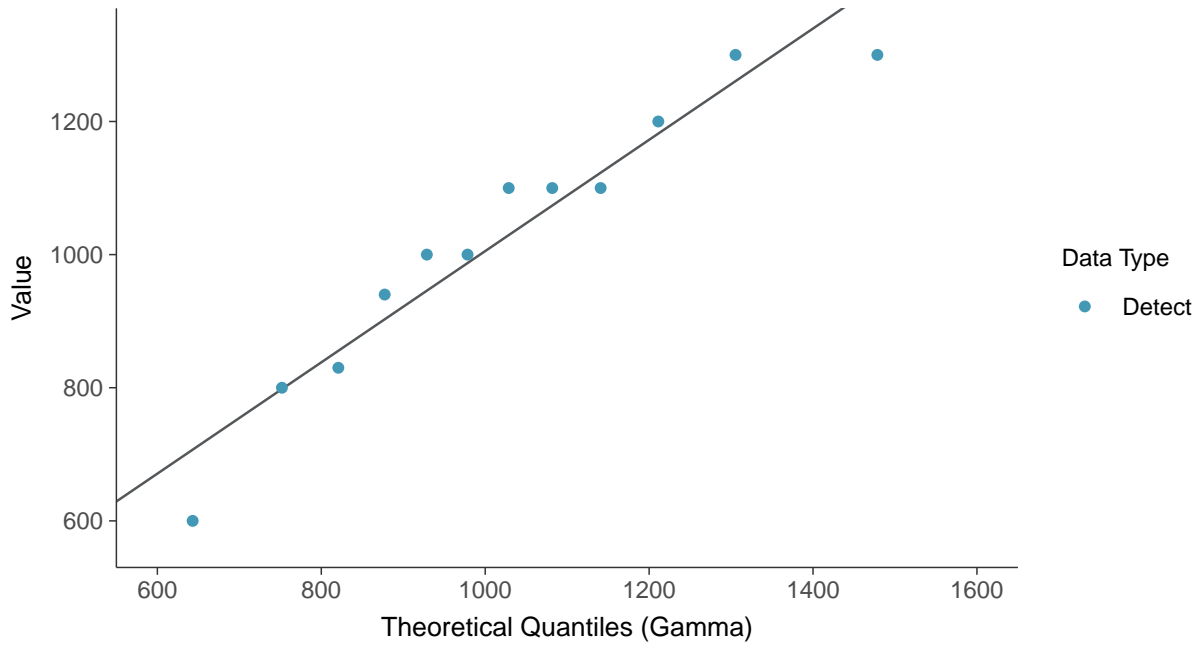
Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)





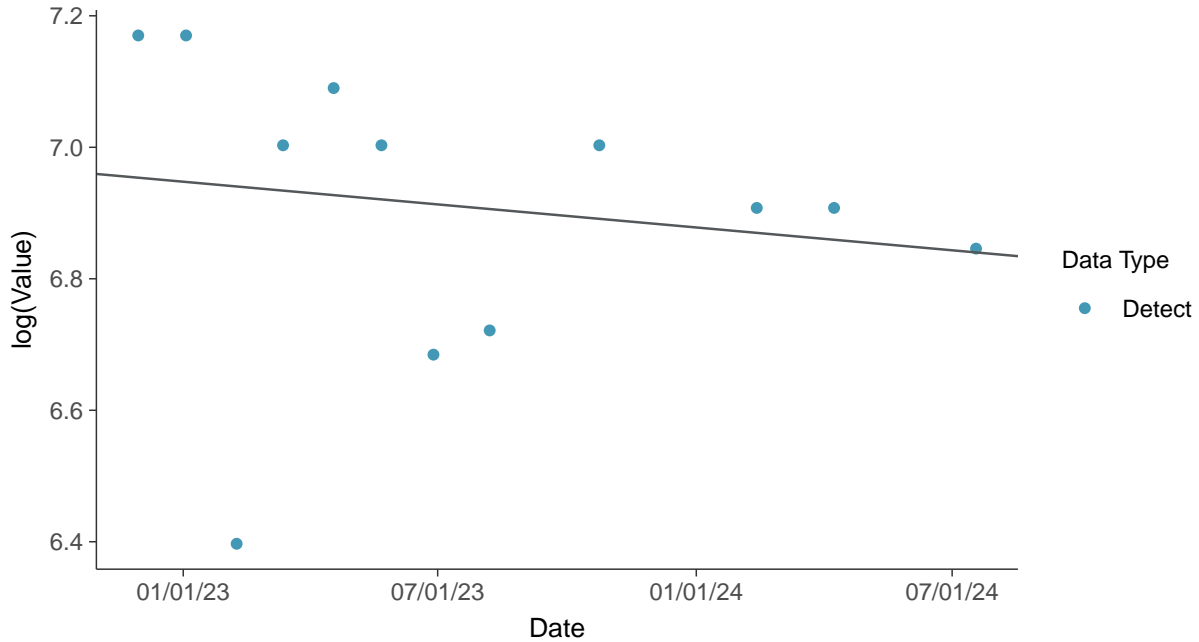
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)

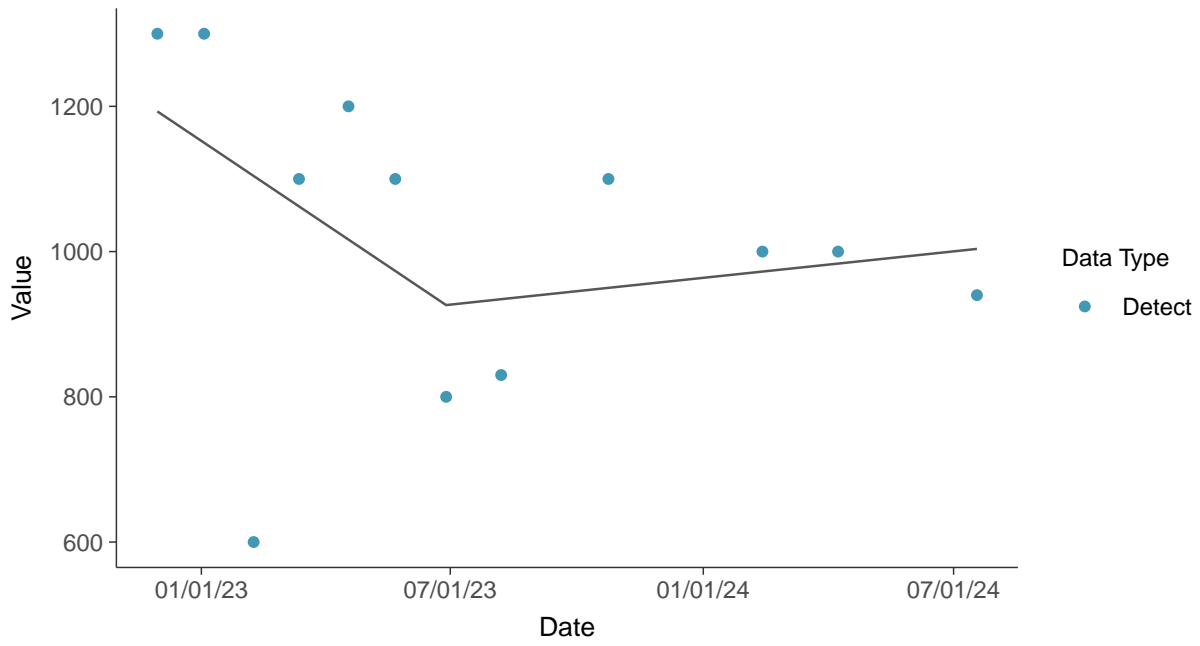






### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-19 (mg/L)



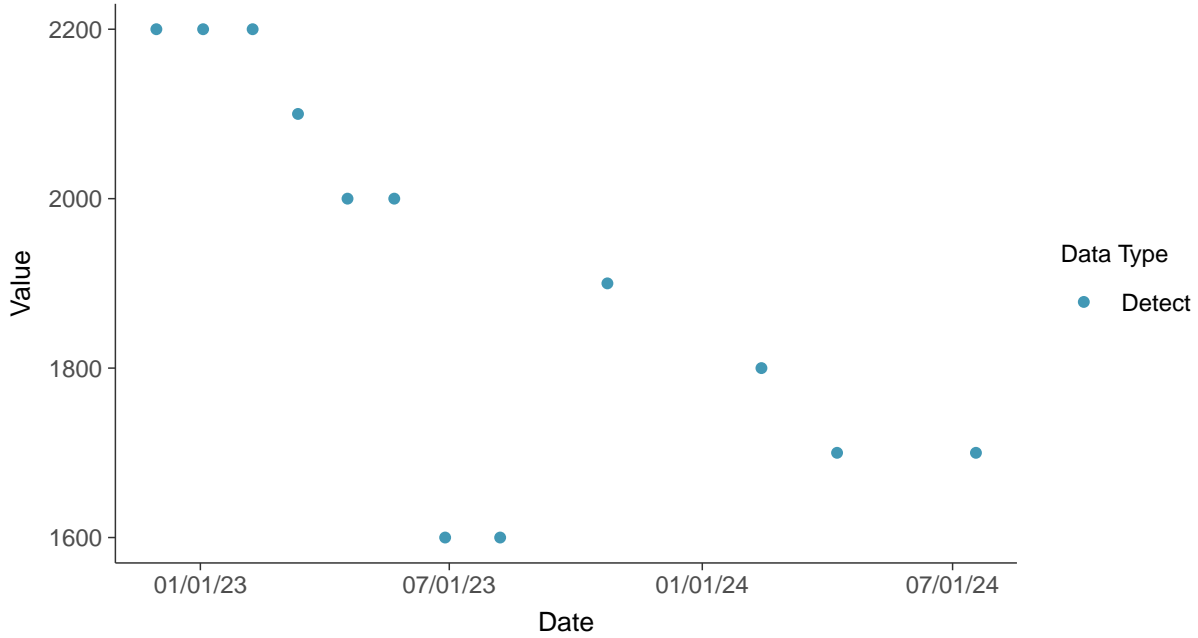


### Appendix III: Total Dissolved Solids, MW-19

ID: 29\_1\_4\_126

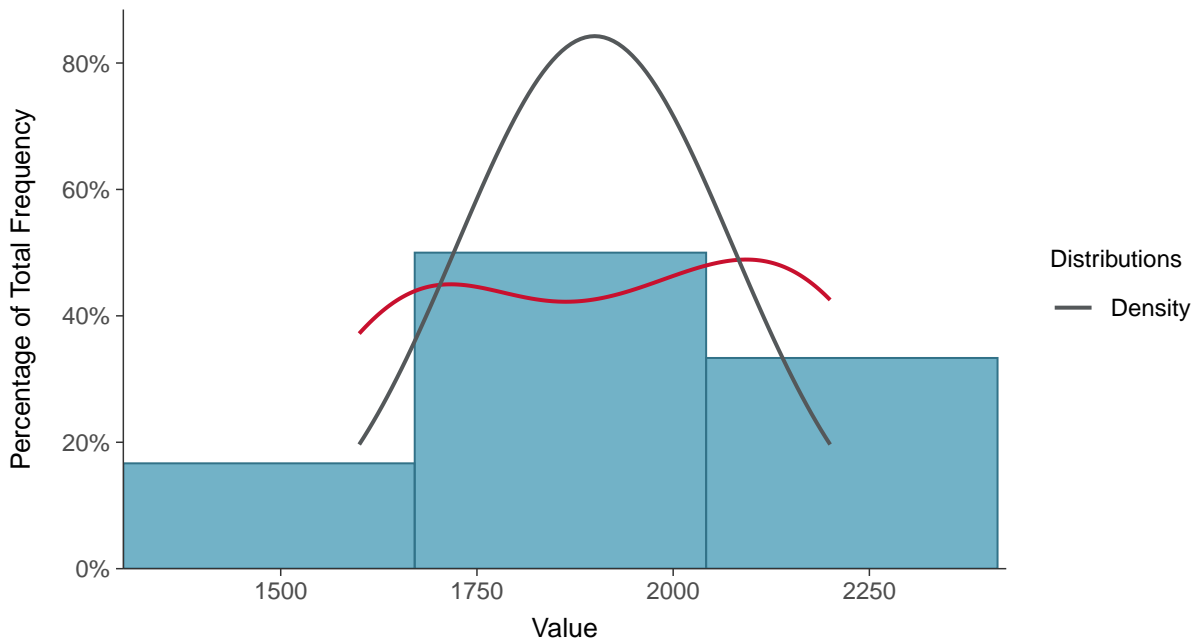
#### Scatter Plot

Total Dissolved Solids, MW-19 (mg/L)



#### Histogram

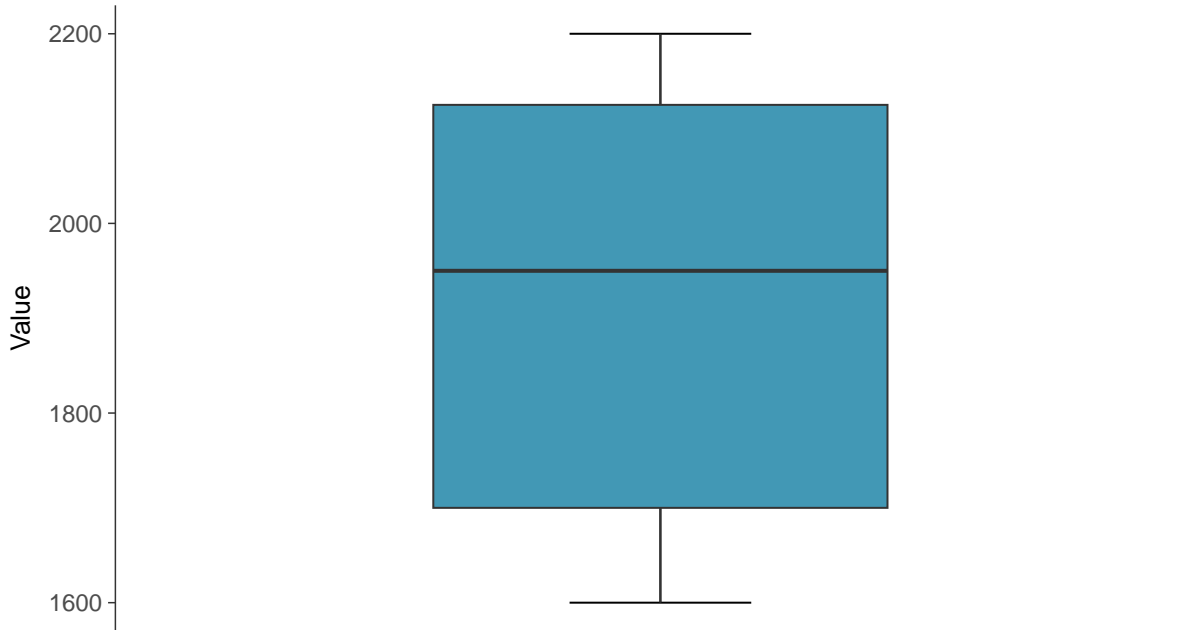
Total Dissolved Solids, MW-19 (mg/L)





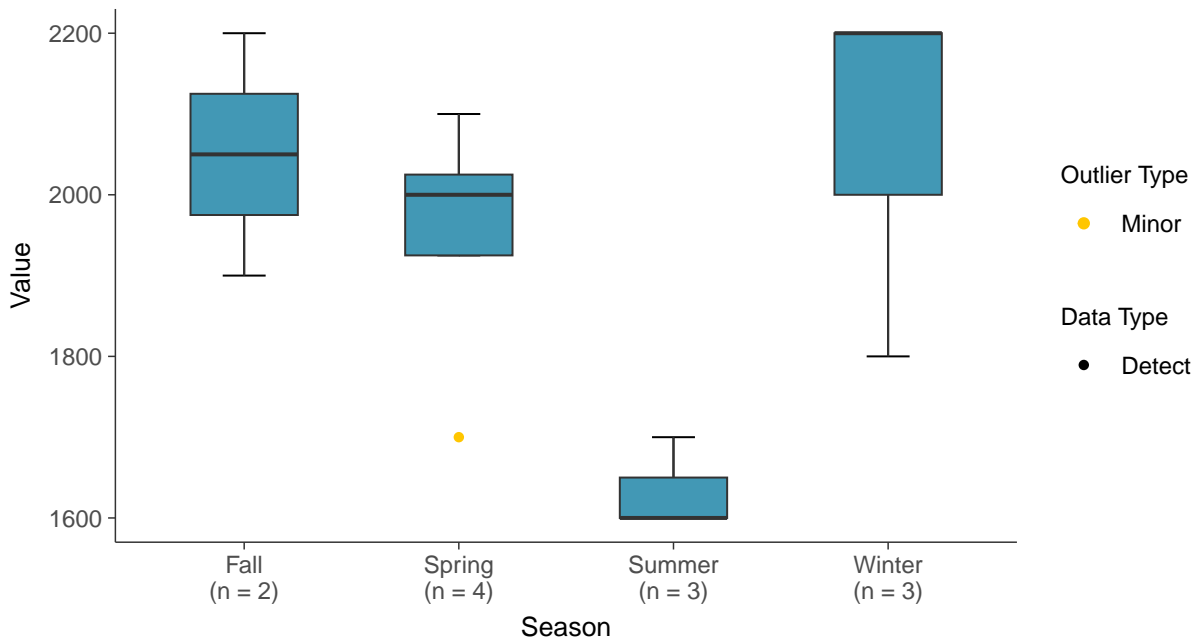
### Boxplot

Total Dissolved Solids, MW-19 (mg/L)



### Boxplot by Season

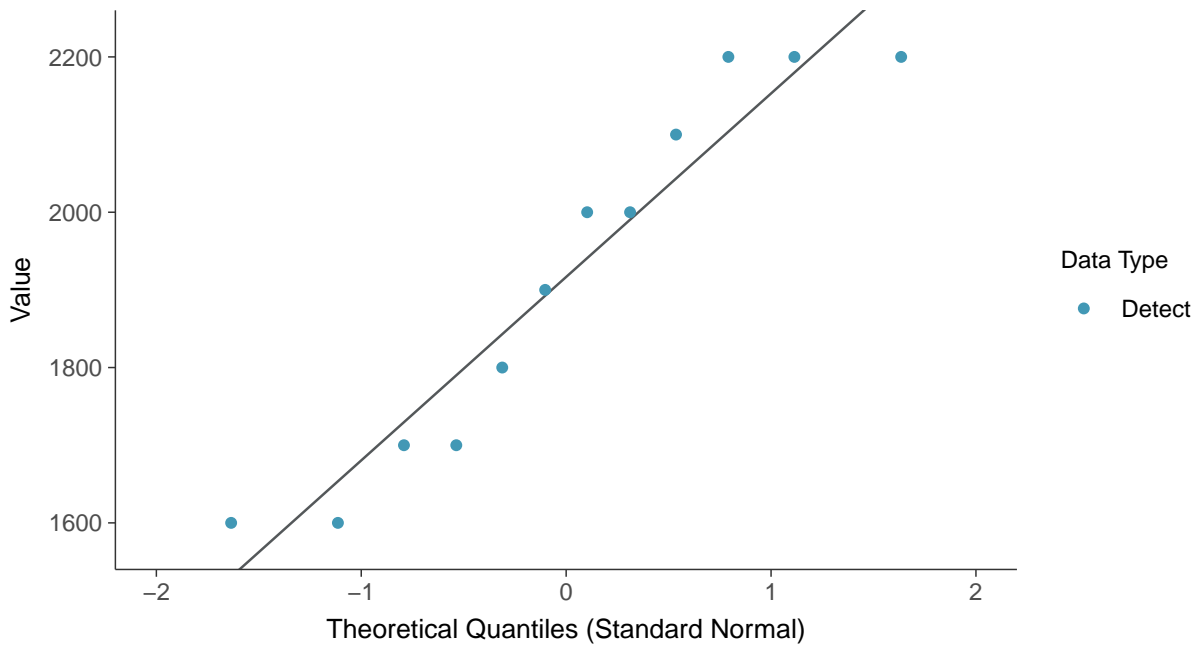
Total Dissolved Solids, MW-19 (mg/L)





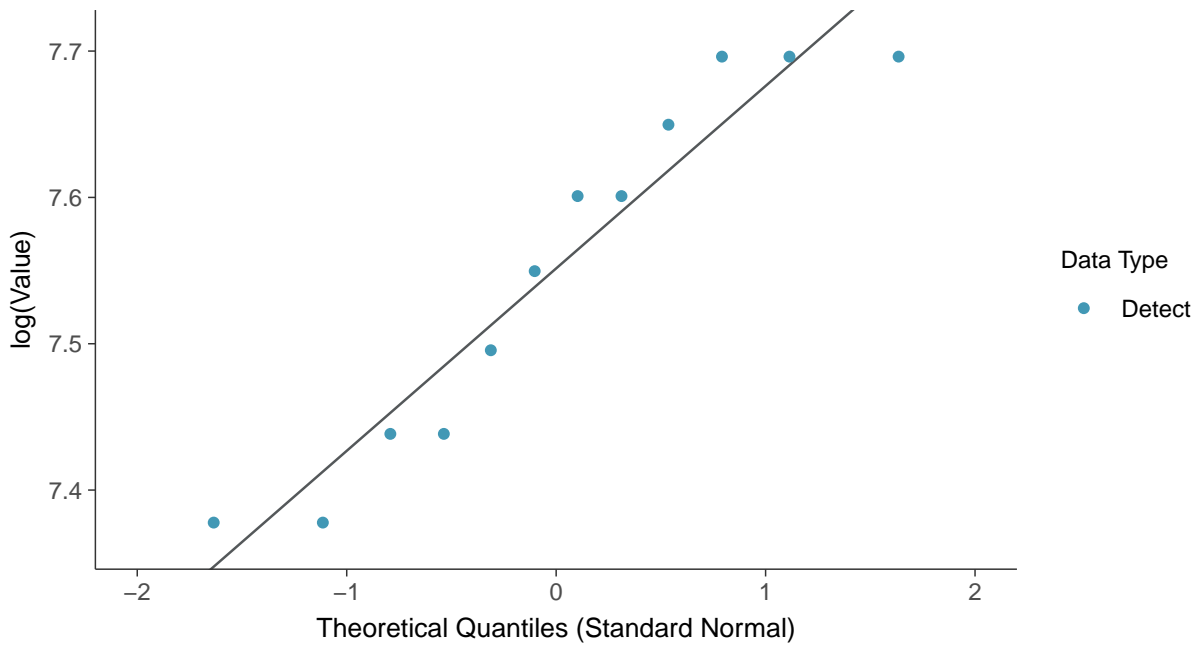
### Normal Q-Q plot

Total Dissolved Solids, MW-19 (mg/L)



### Lognormal Q-Q plot

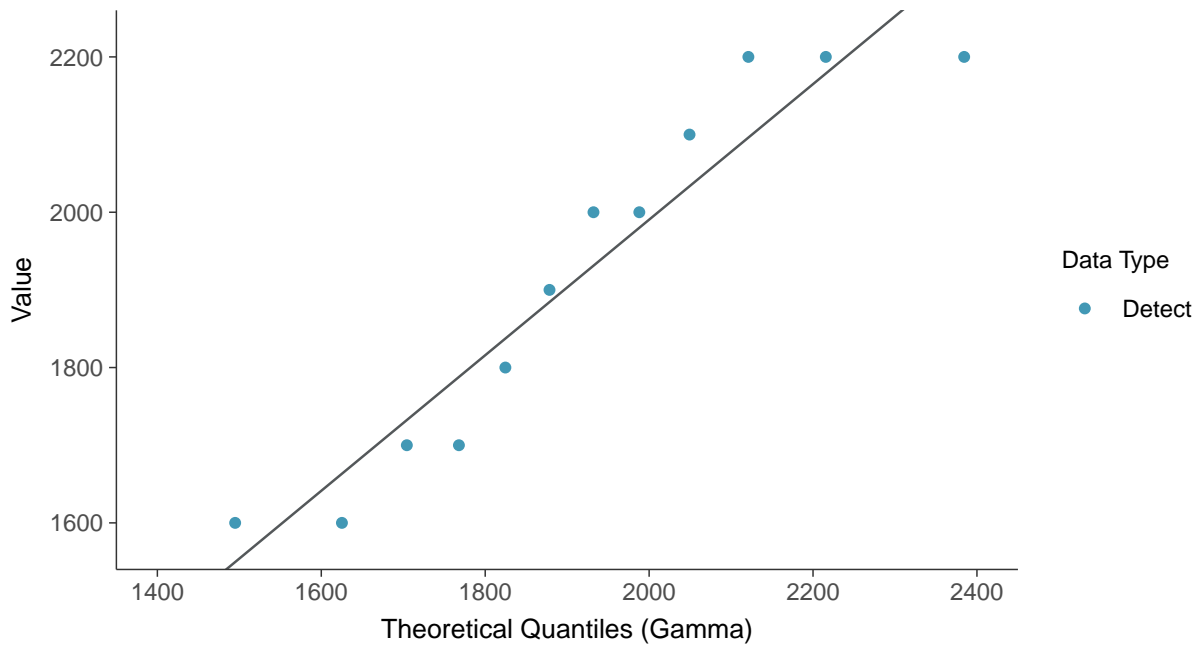
Total Dissolved Solids, MW-19 (mg/L)





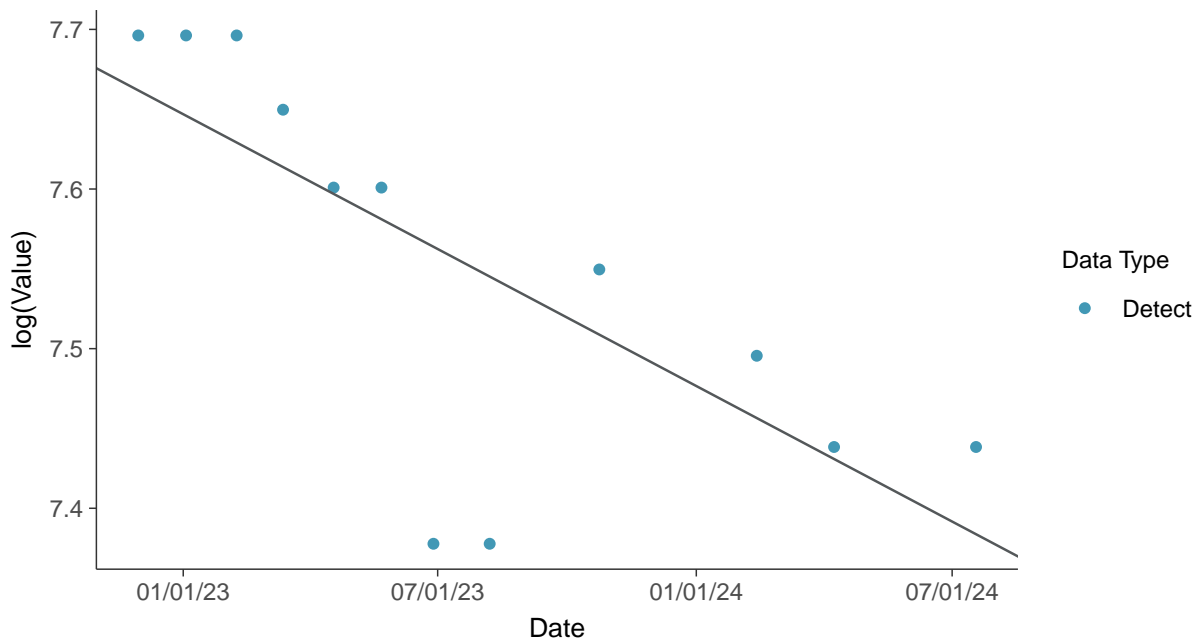
### Gamma Q-Q plot

Total Dissolved Solids, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

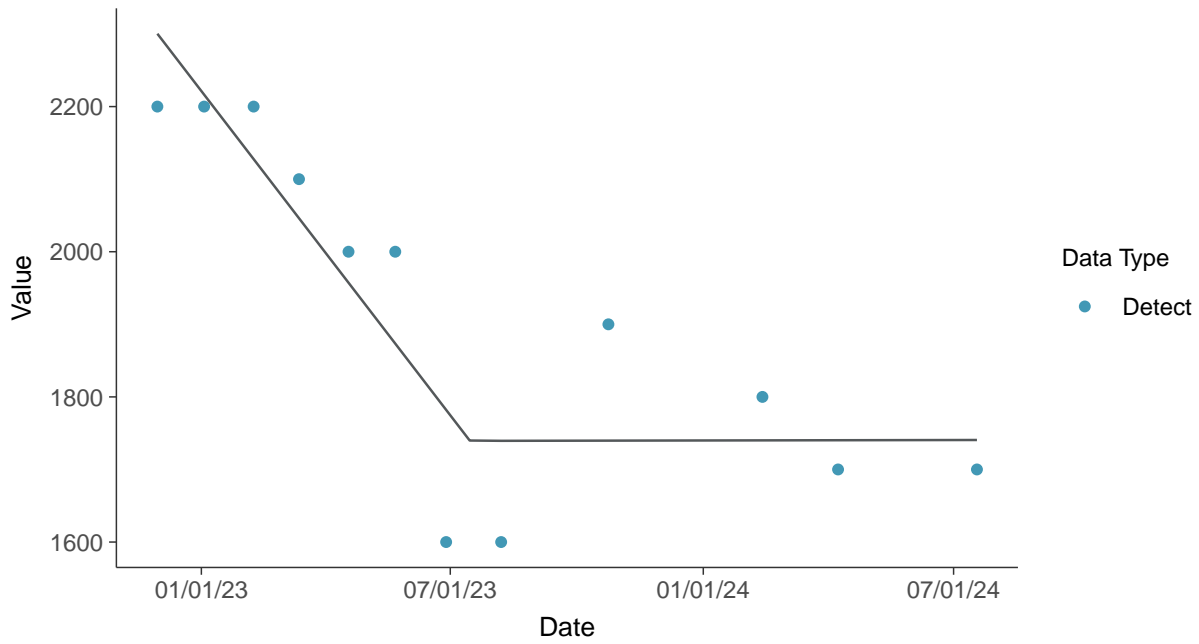
Total Dissolved Solids, MW-19 (mg/L)





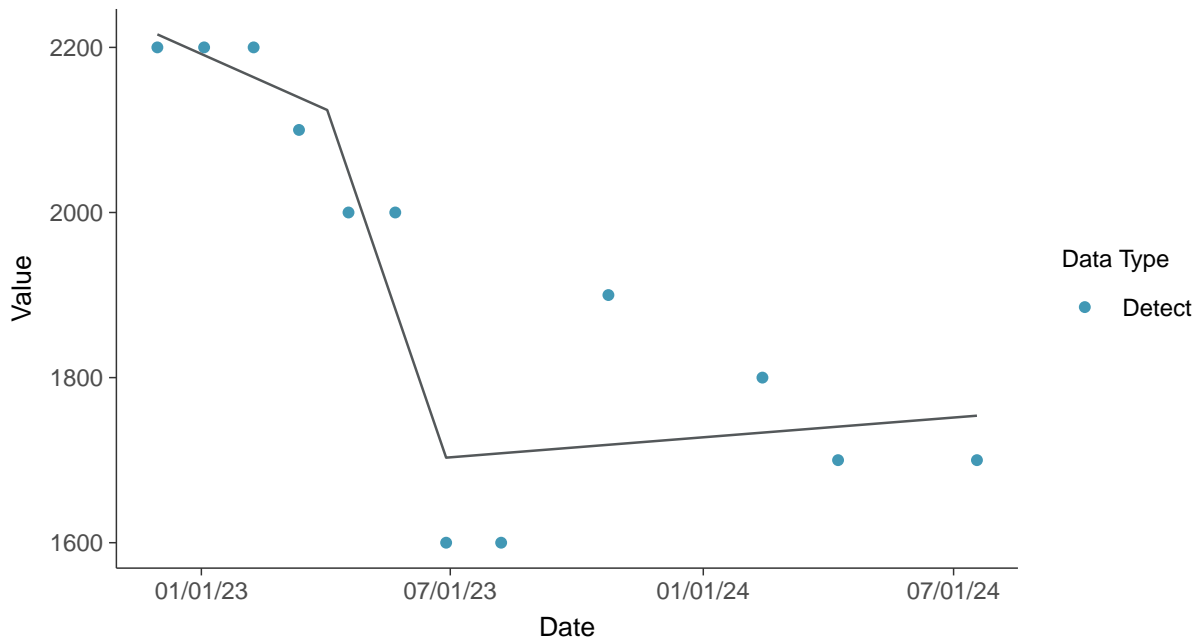
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-19 (mg/L)



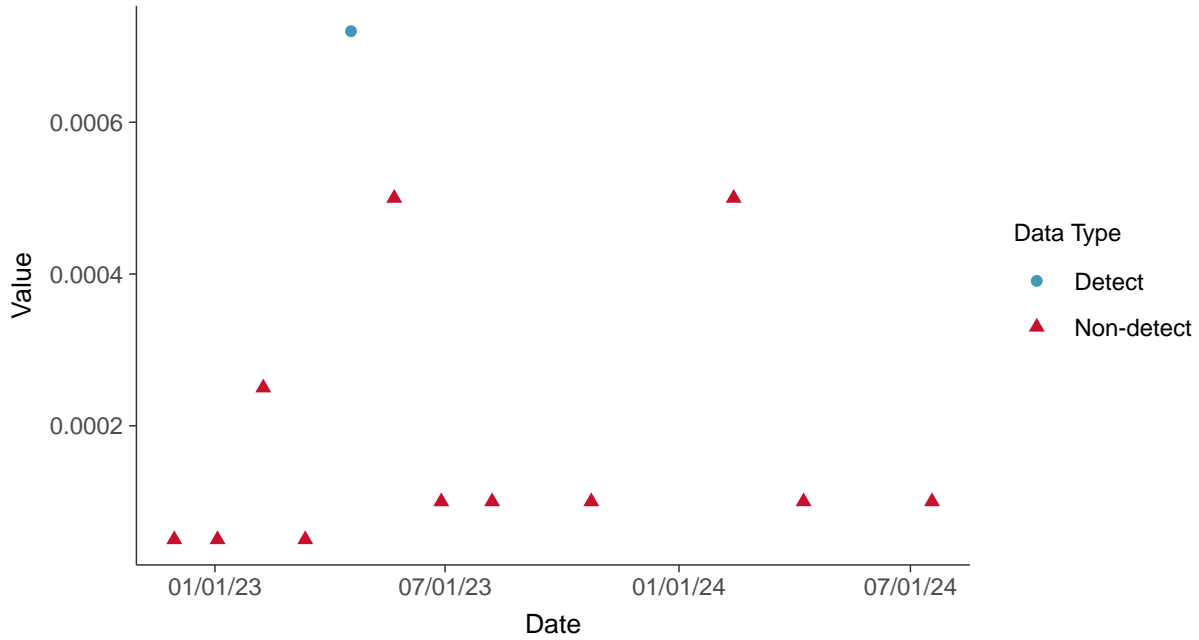


### Appendix IV: Antimony, MW-19

ID: 29\_1\_5\_101

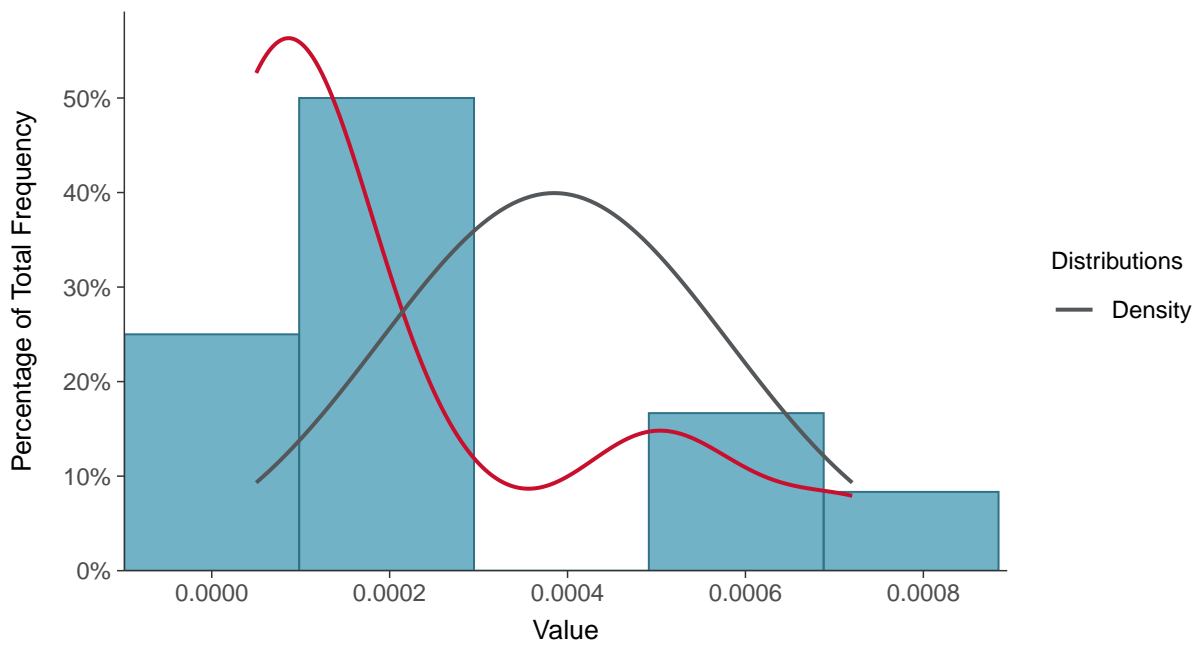
#### Scatter Plot

Antimony, MW-19 (mg/L)



#### Histogram

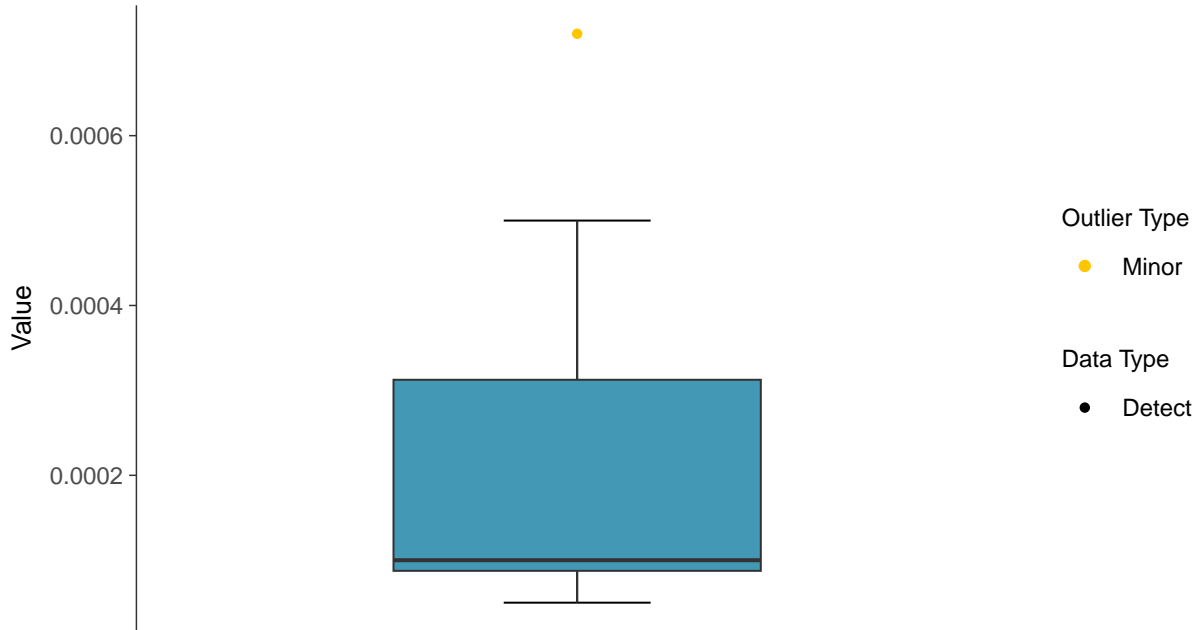
Antimony, MW-19 (mg/L)





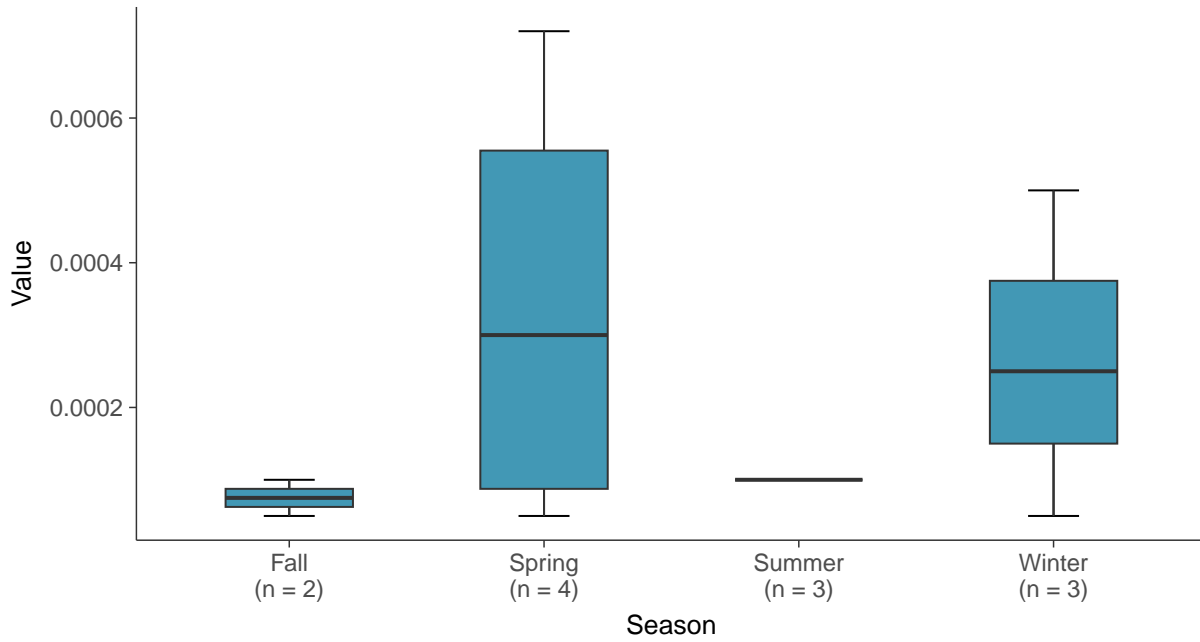
### Boxplot

Antimony, MW-19 (mg/L)



### Boxplot by Season

Antimony, MW-19 (mg/L)

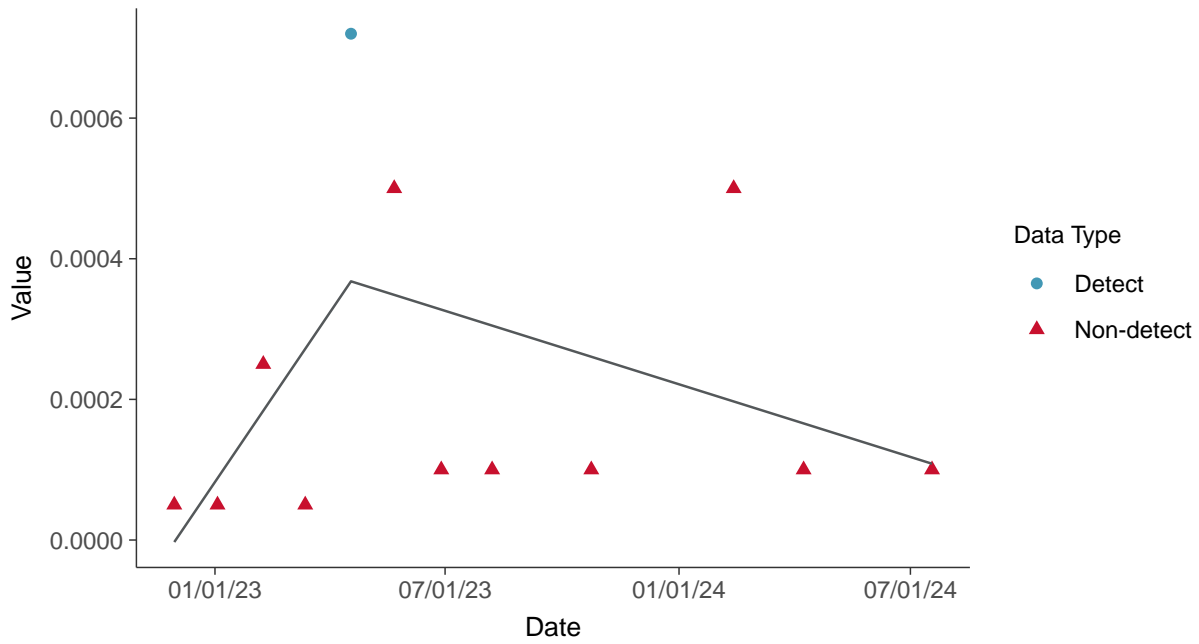






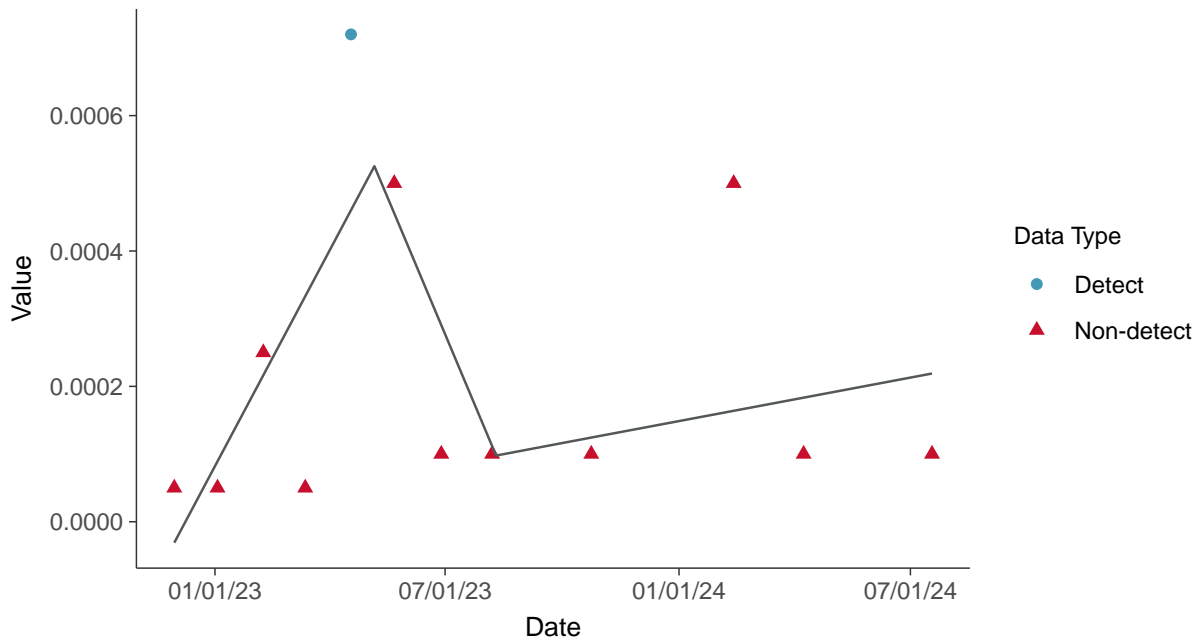
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-19 (mg/L)



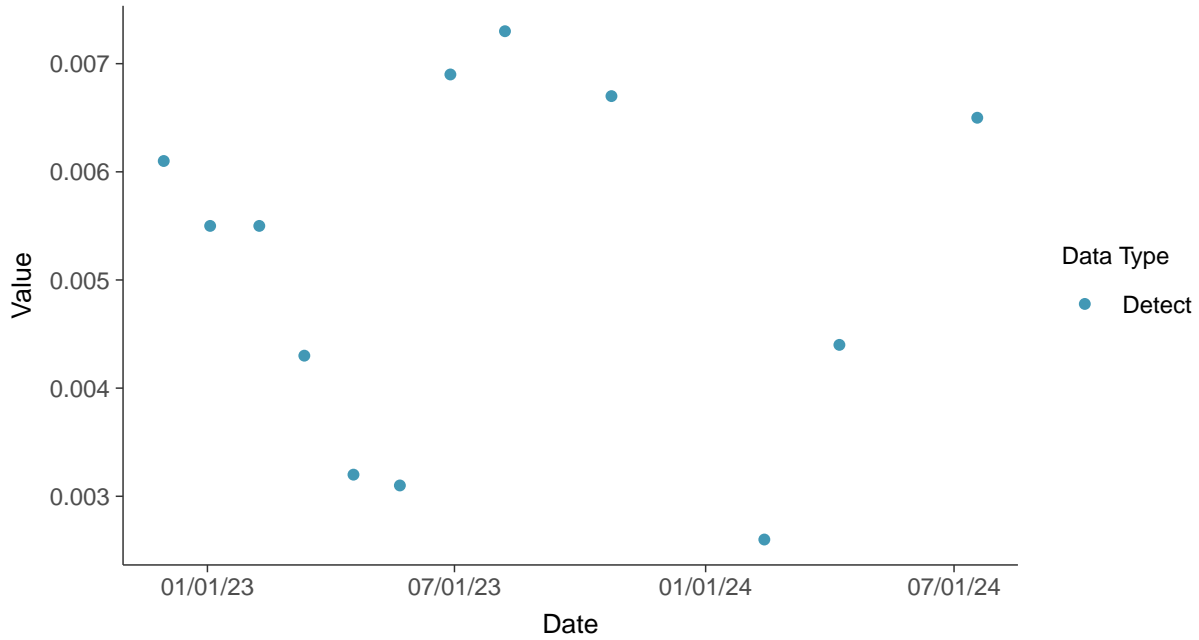


### Appendix IV: Arsenic, MW-19

ID: 29\_1\_5\_102

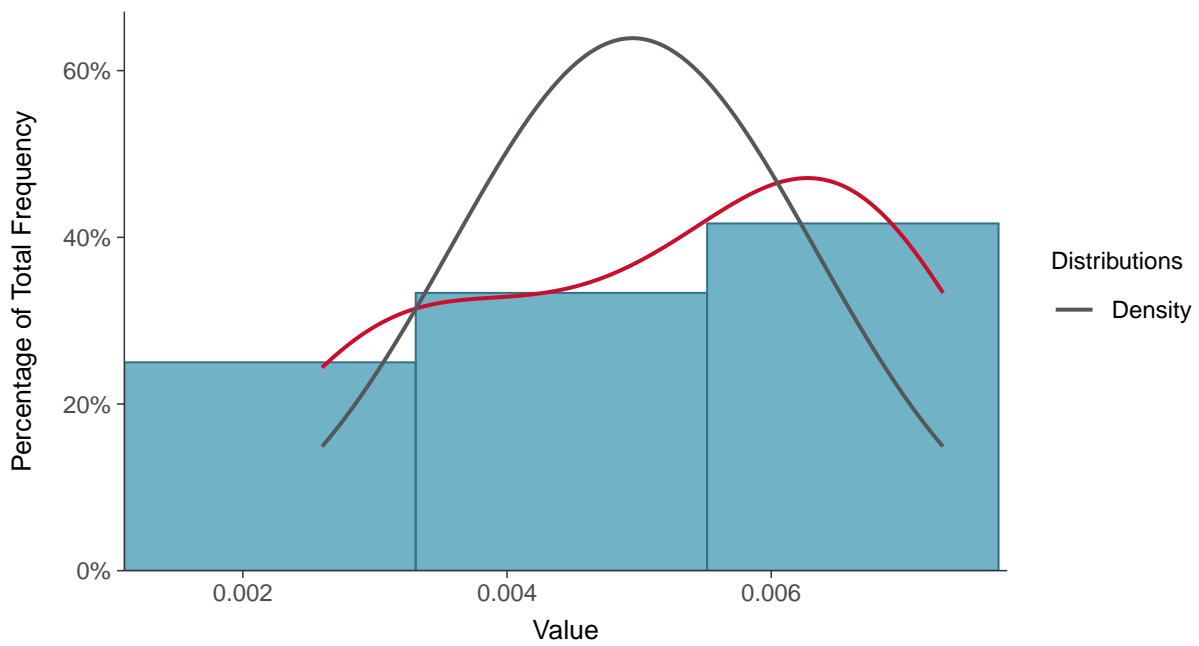
#### Scatter Plot

Arsenic, MW-19 (mg/L)



#### Histogram

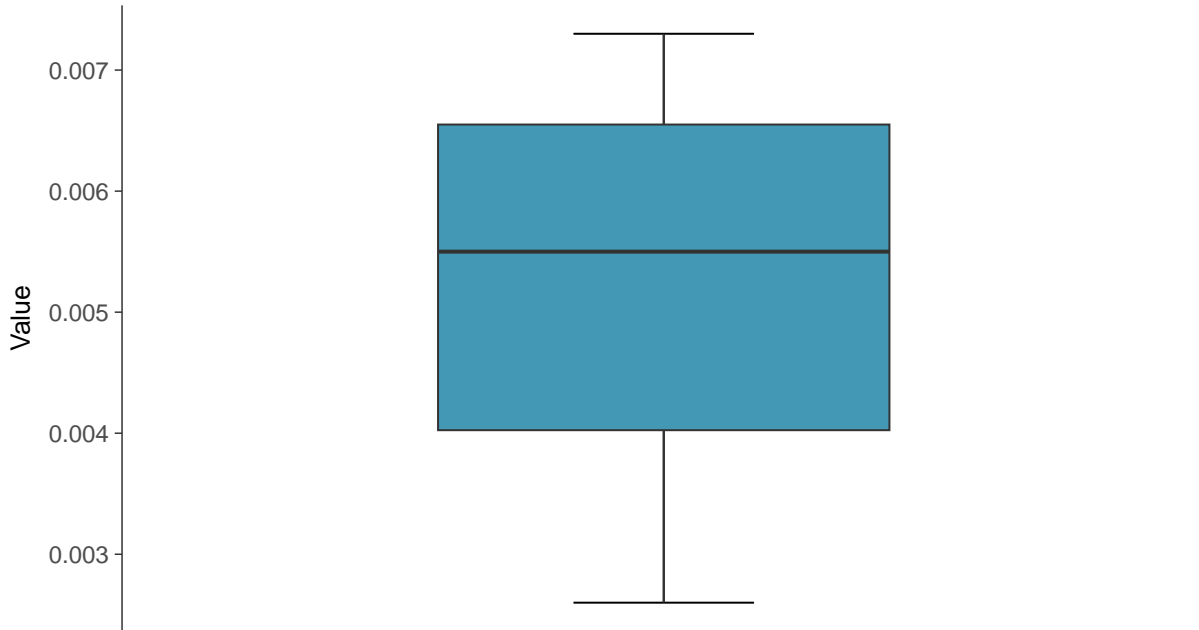
Arsenic, MW-19 (mg/L)





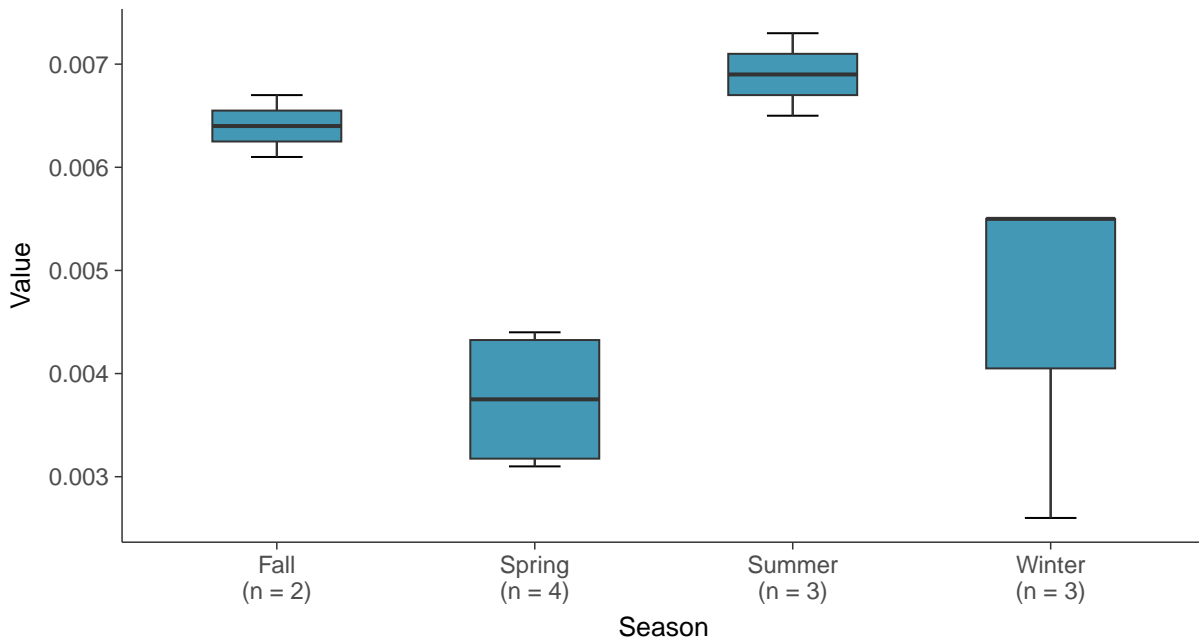
### Boxplot

Arsenic, MW-19 (mg/L)



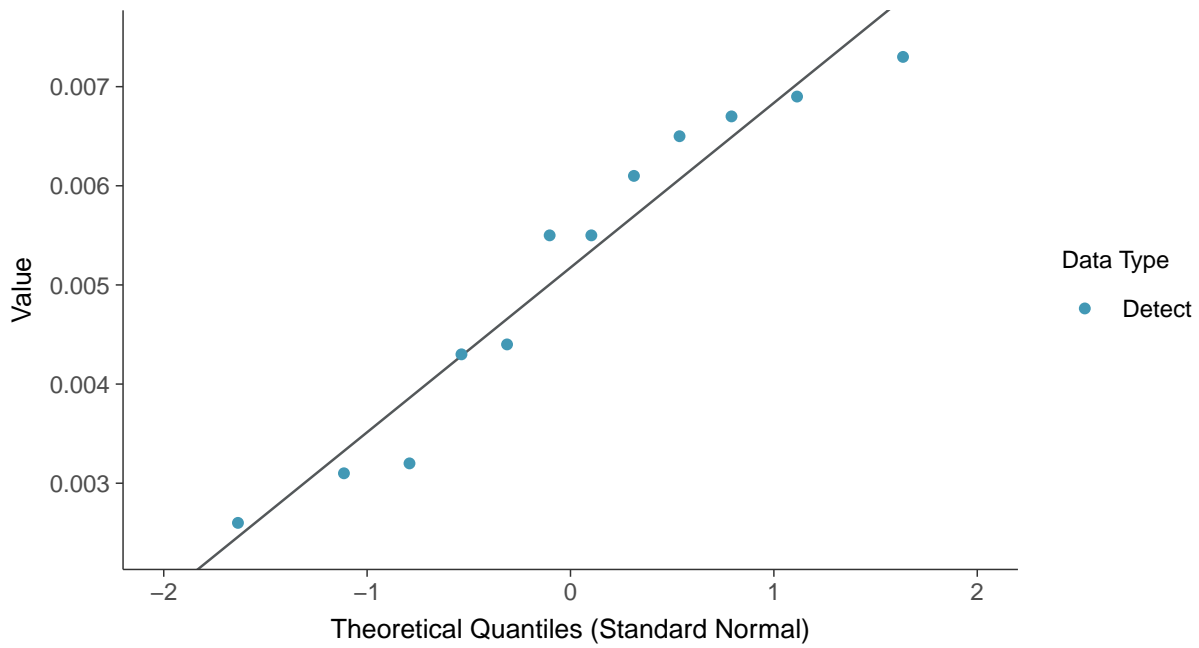
### Boxplot by Season

Arsenic, MW-19 (mg/L)

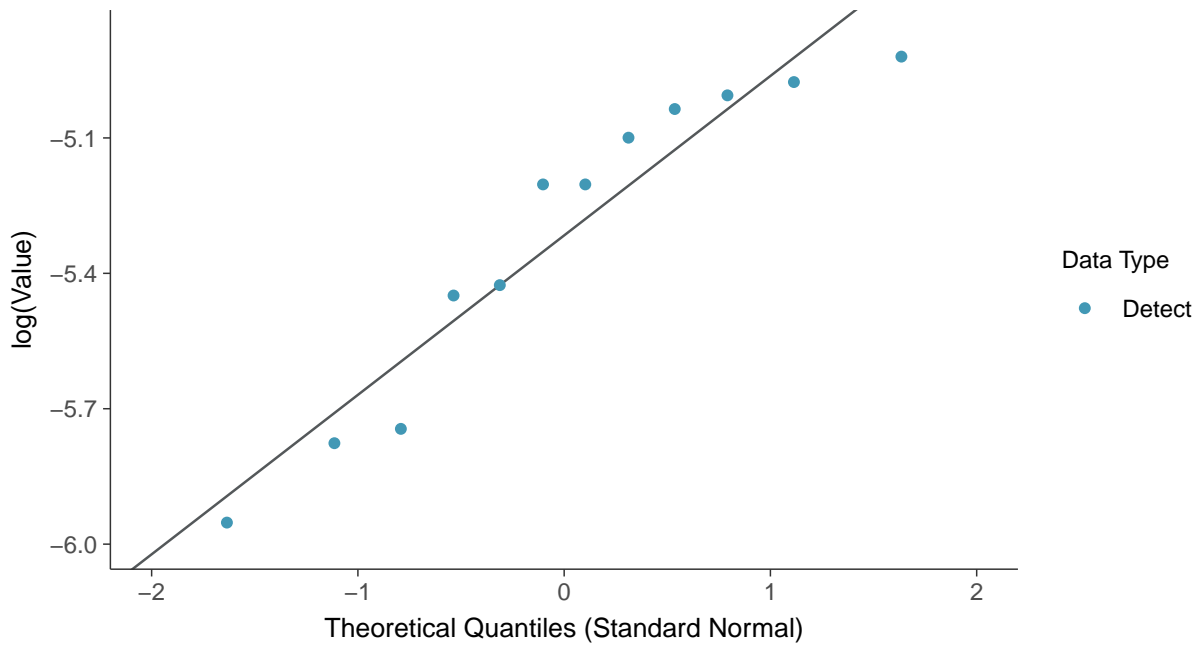




**Normal Q-Q plot**  
Arsenic, MW-19 (mg/L)

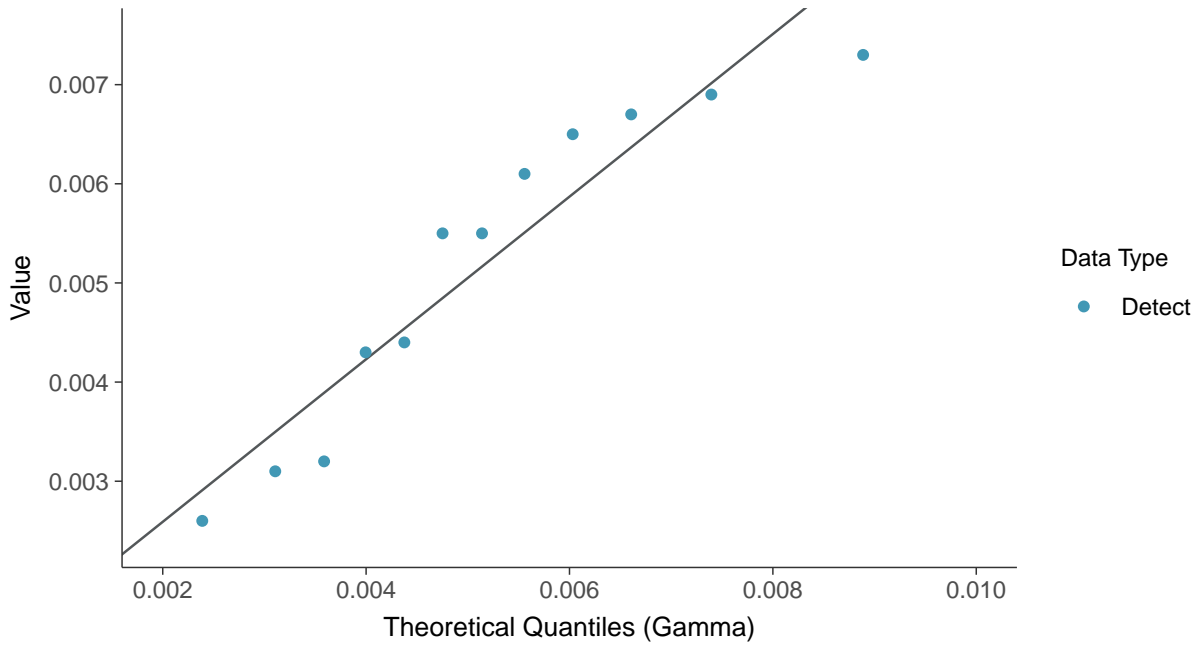


**Lognormal Q-Q plot**  
Arsenic, MW-19 (mg/L)

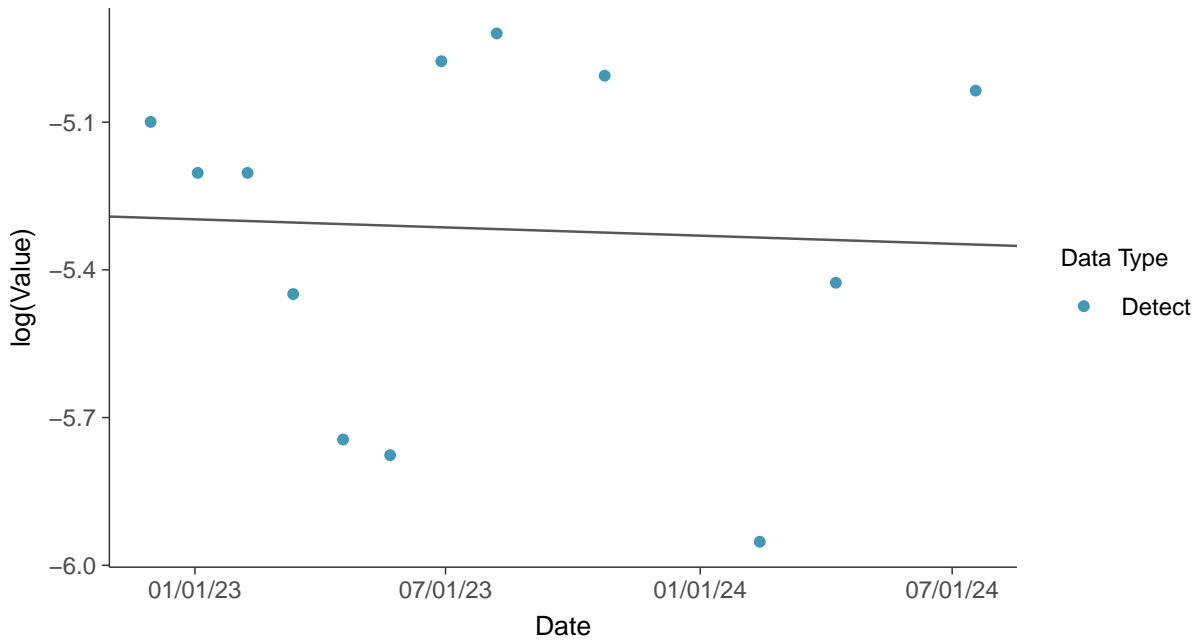




**Gamma Q-Q plot**  
Arsenic, MW-19 (mg/L)

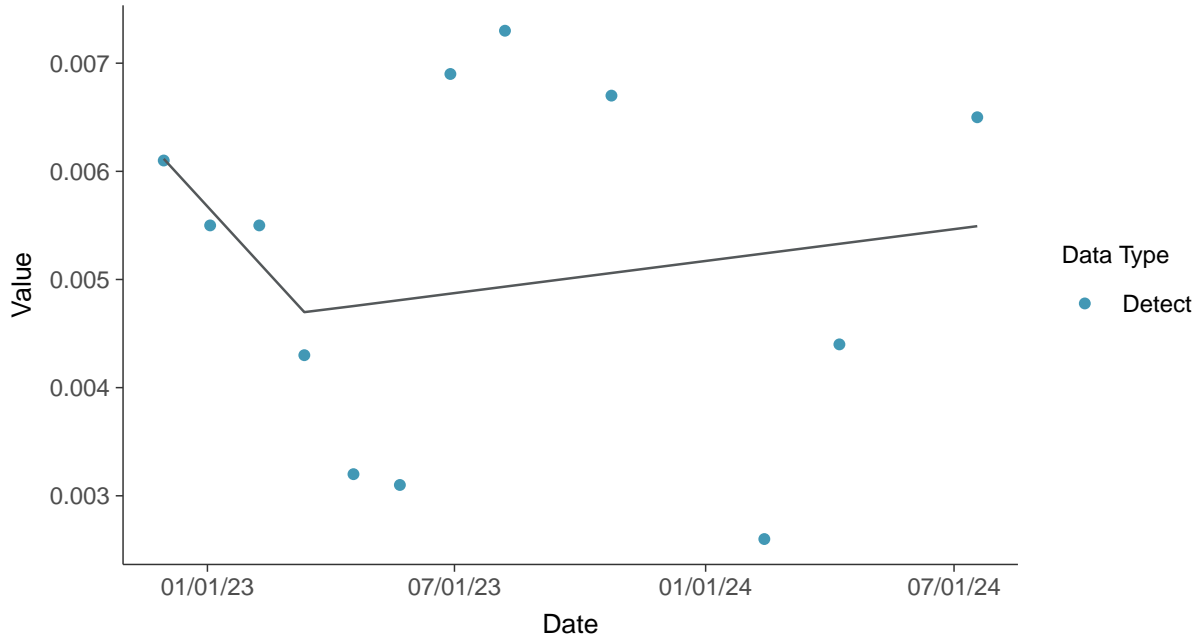


**Trend Regression: Lognormal MLE**  
Arsenic, MW-19 (mg/L)





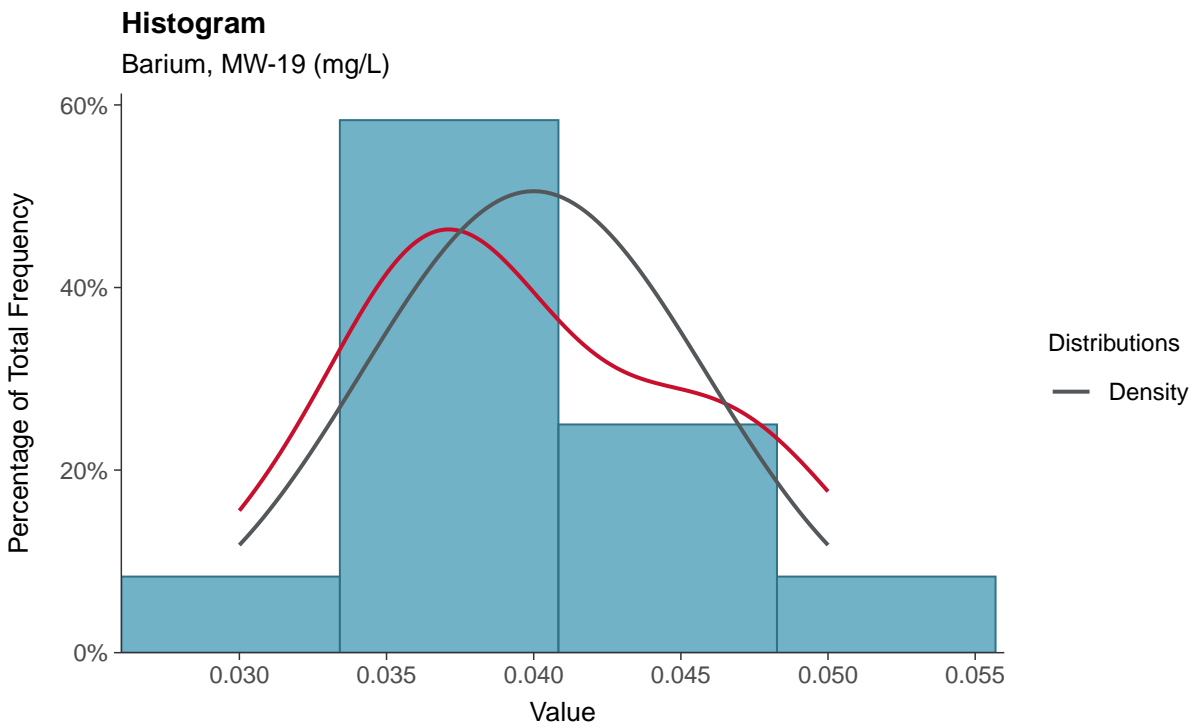
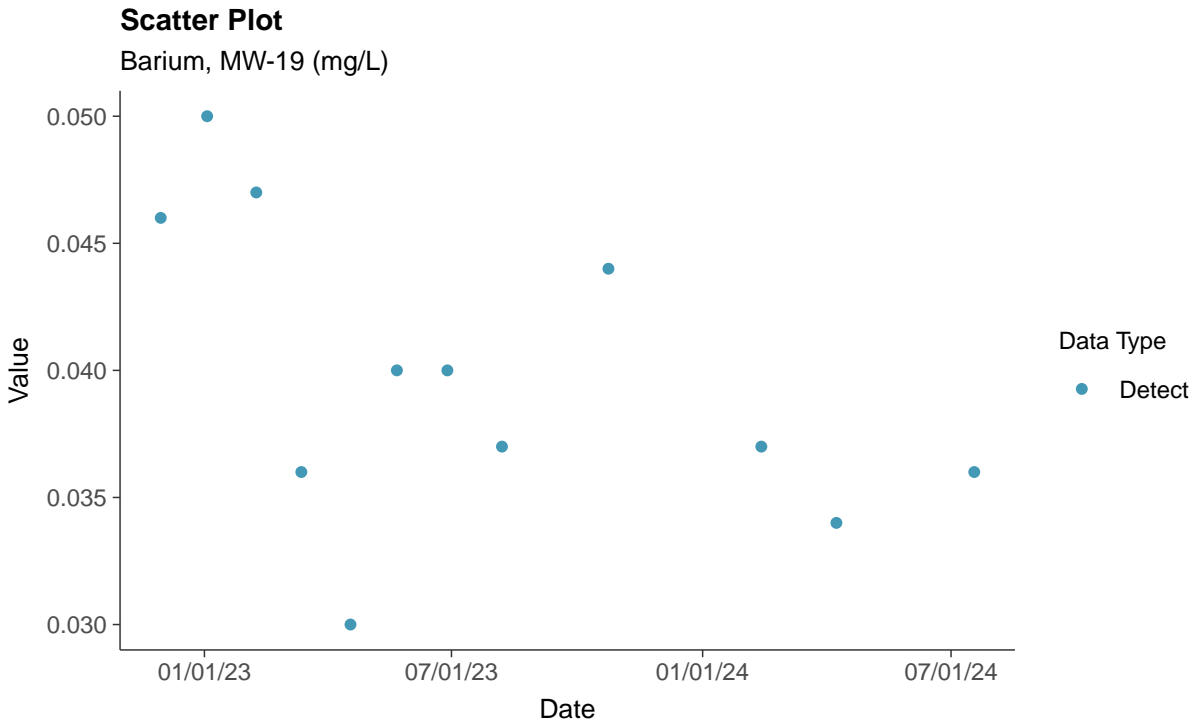
**Trend Regression: Piecewise Linear-Linear**  
Arsenic, MW-19 (mg/L)





### Appendix IV: Barium, MW-19

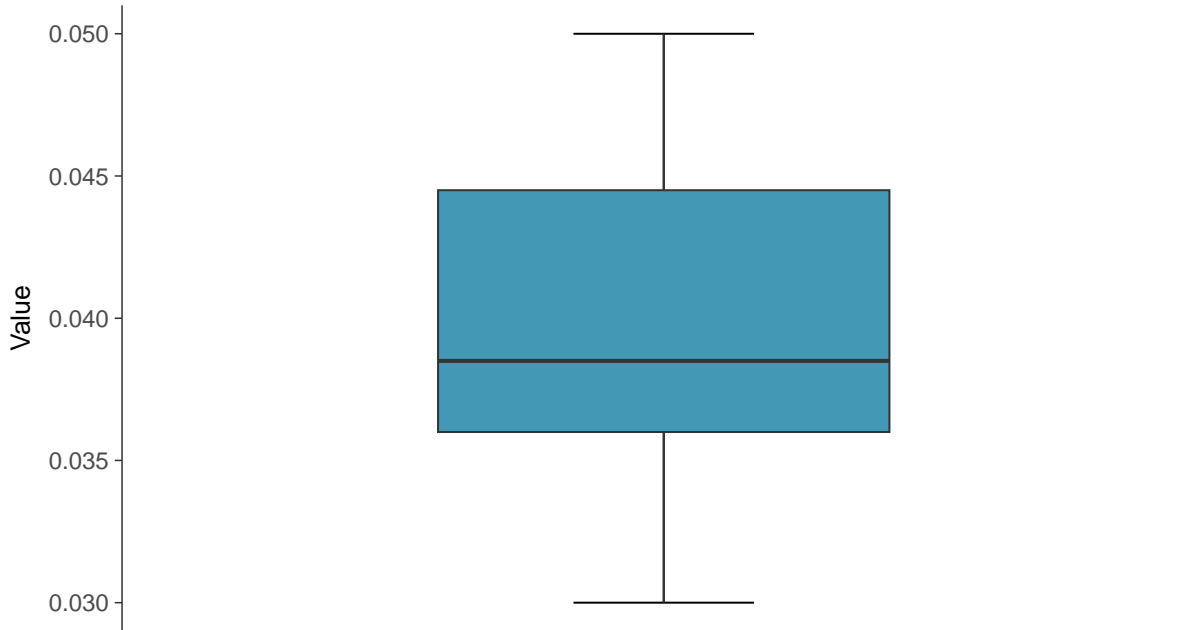
ID: 29\_1\_5\_103





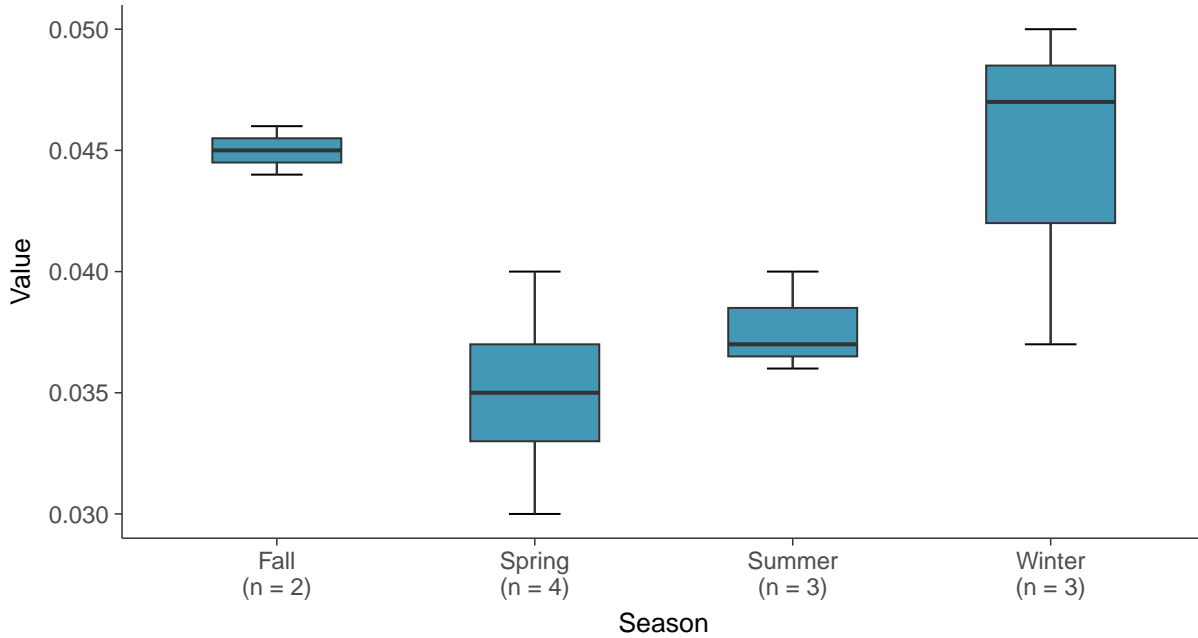
### Boxplot

Barium, MW-19 (mg/L)



### Boxplot by Season

Barium, MW-19 (mg/L)

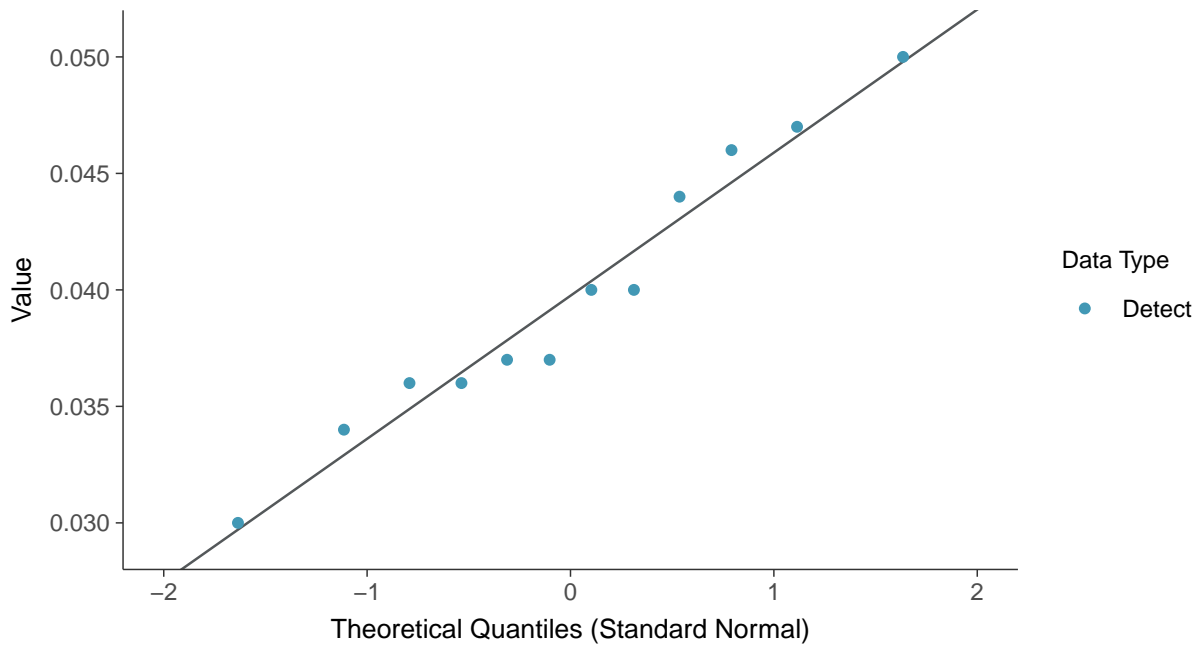






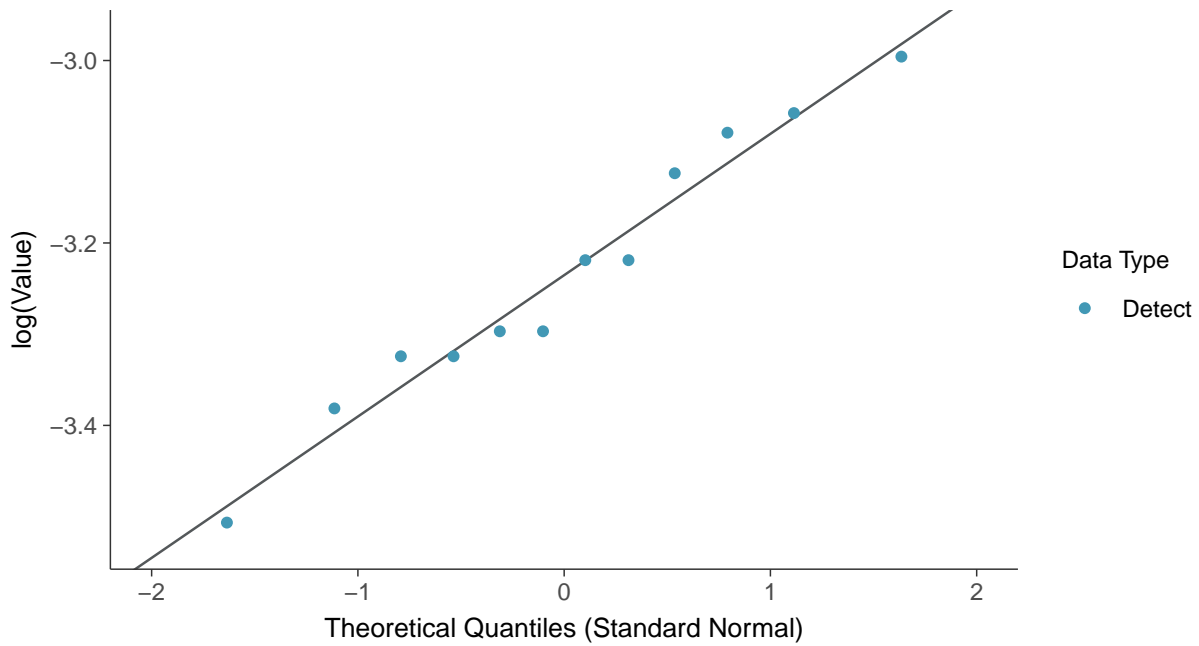
### Normal Q-Q plot

Barium, MW-19 (mg/L)



### Lognormal Q-Q plot

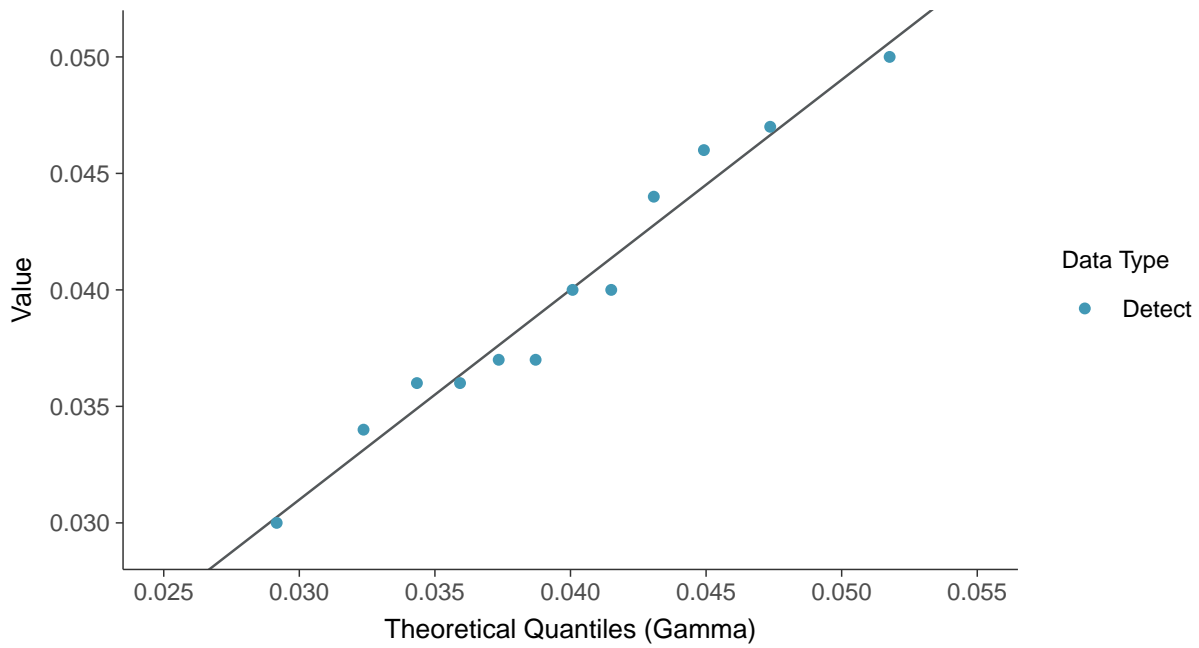
Barium, MW-19 (mg/L)





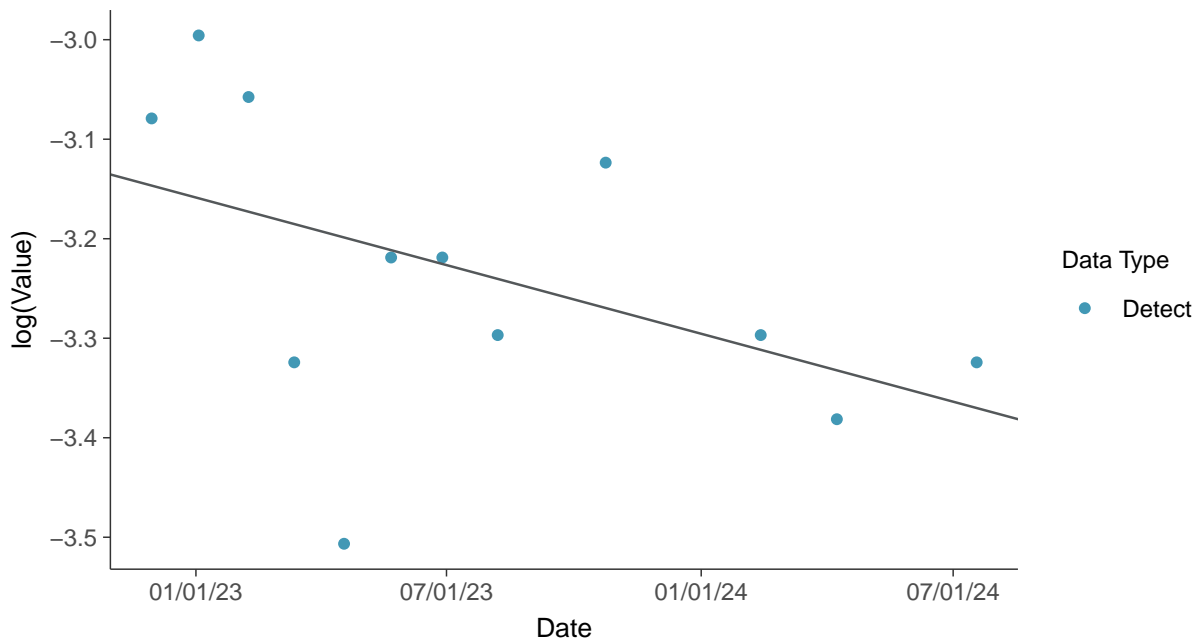
### Gamma Q-Q plot

Barium, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

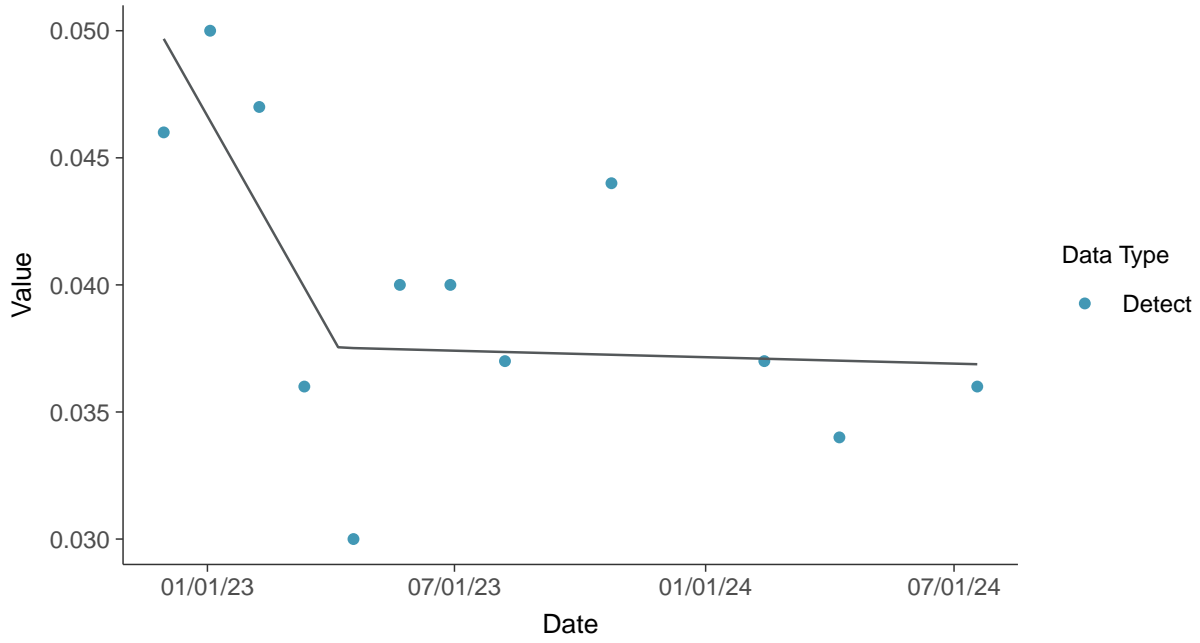
Barium, MW-19 (mg/L)





### Trend Regression: Piecewise Linear-Linear

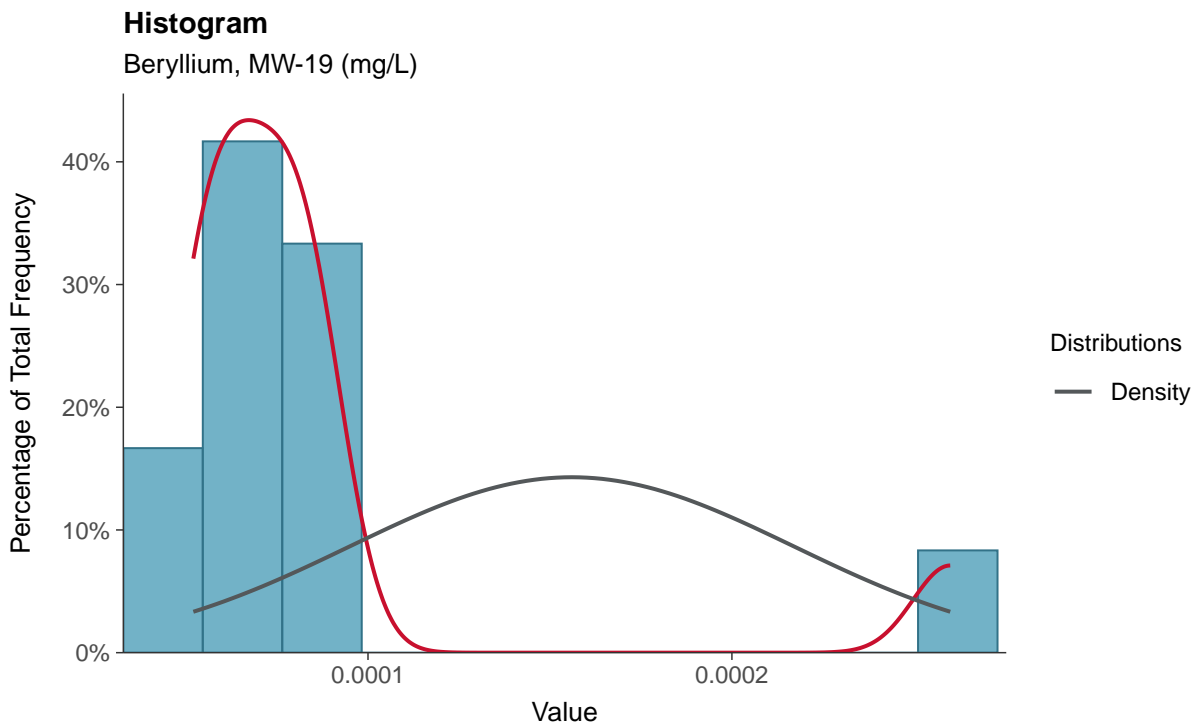
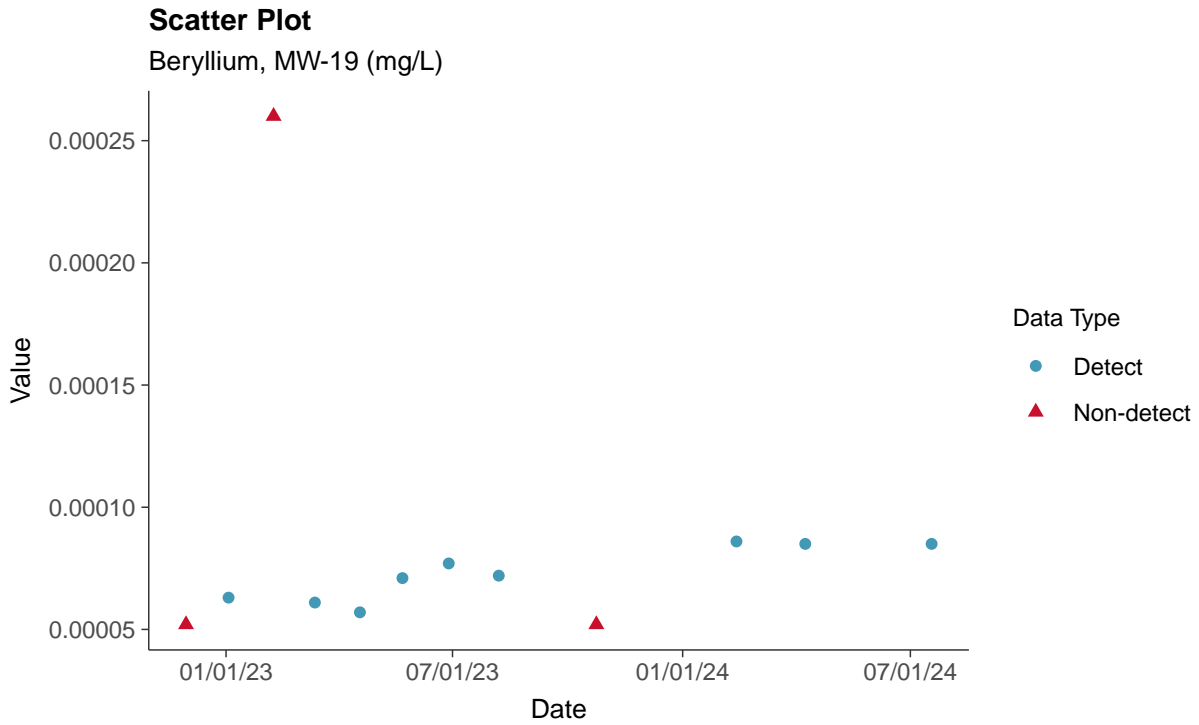
Barium, MW-19 (mg/L)





### Appendix IV: Beryllium, MW-19

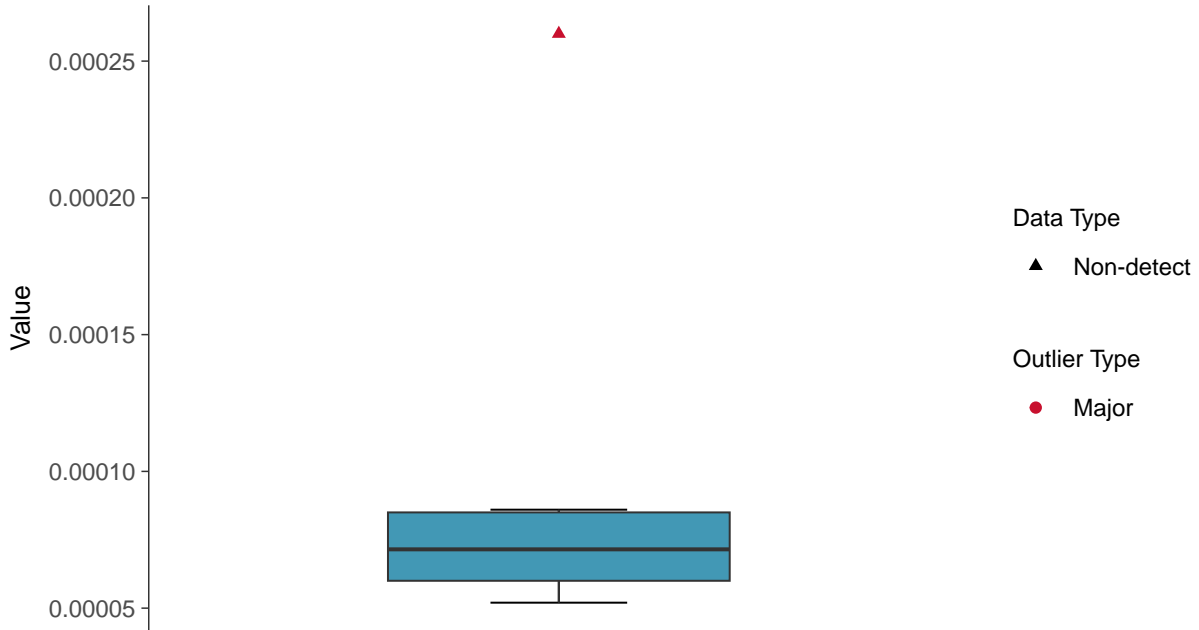
ID: 29\_1\_5\_104





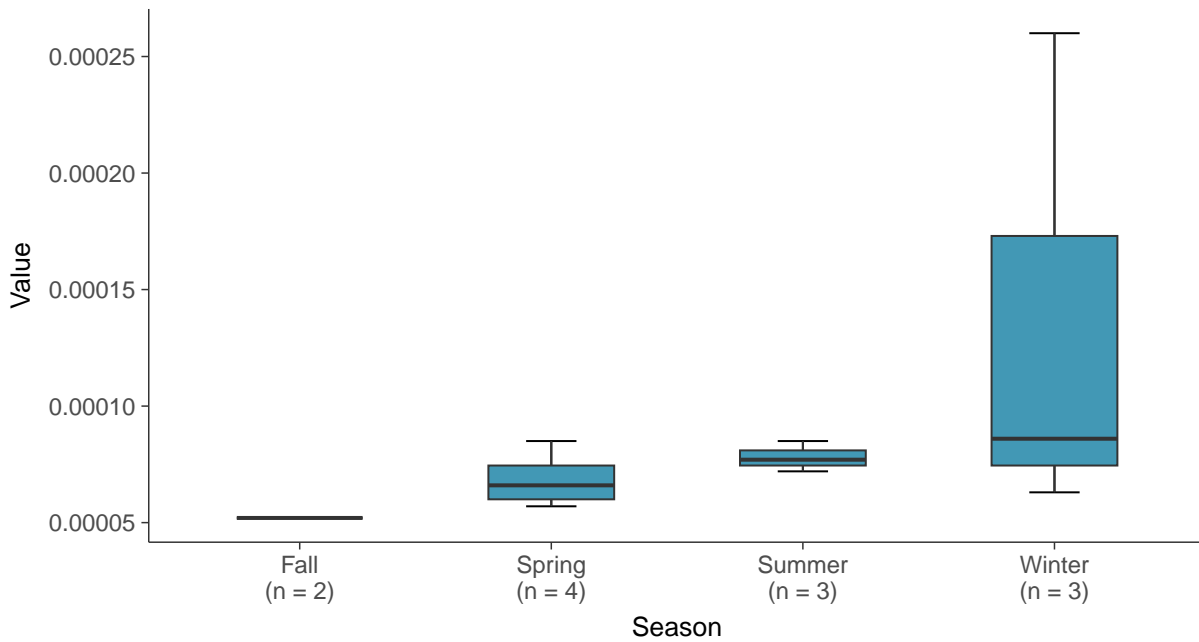
### Boxplot

Beryllium, MW-19 (mg/L)



### Boxplot by Season

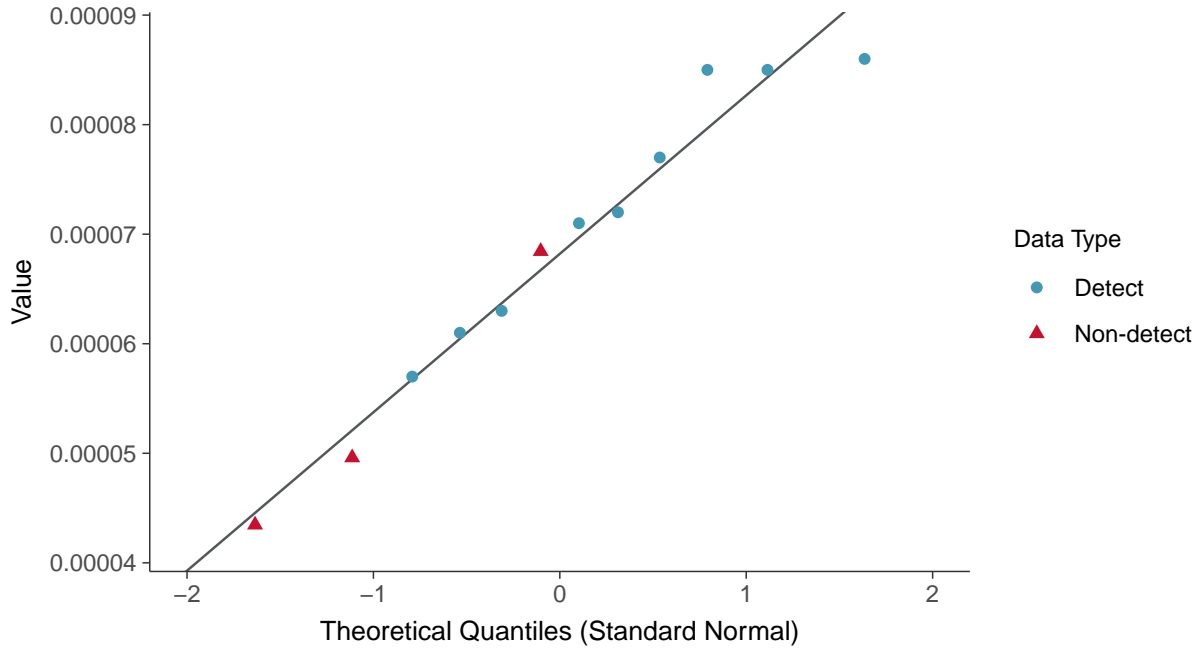
Beryllium, MW-19 (mg/L)





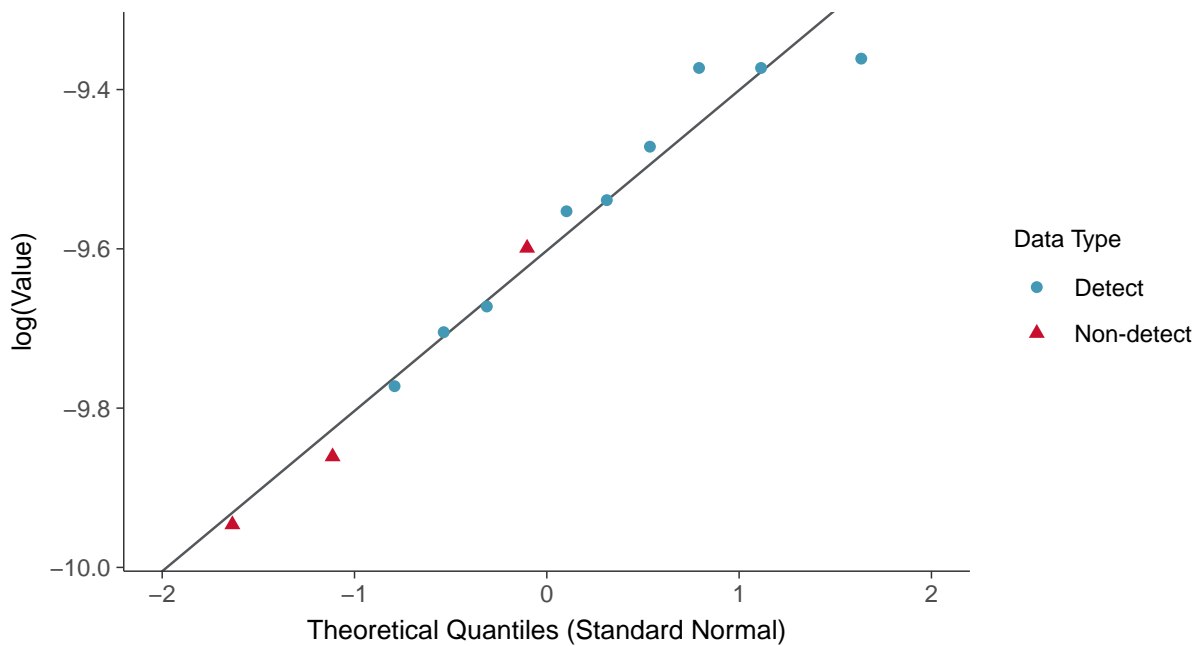
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

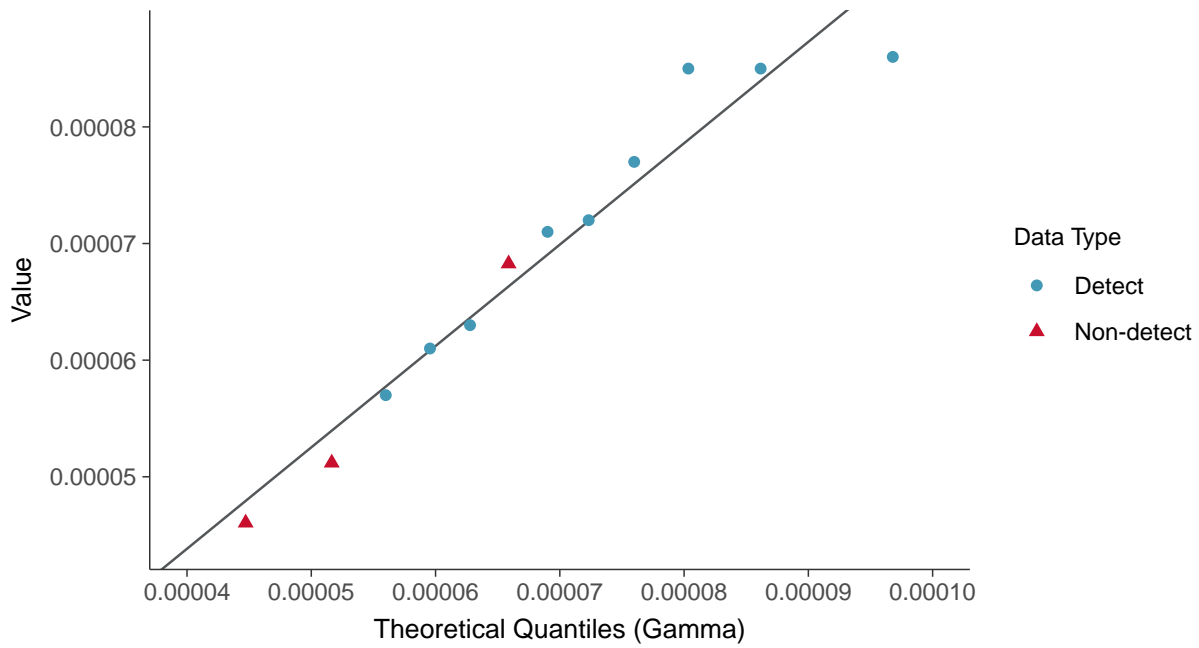
Beryllium, MW-19 (mg/L)





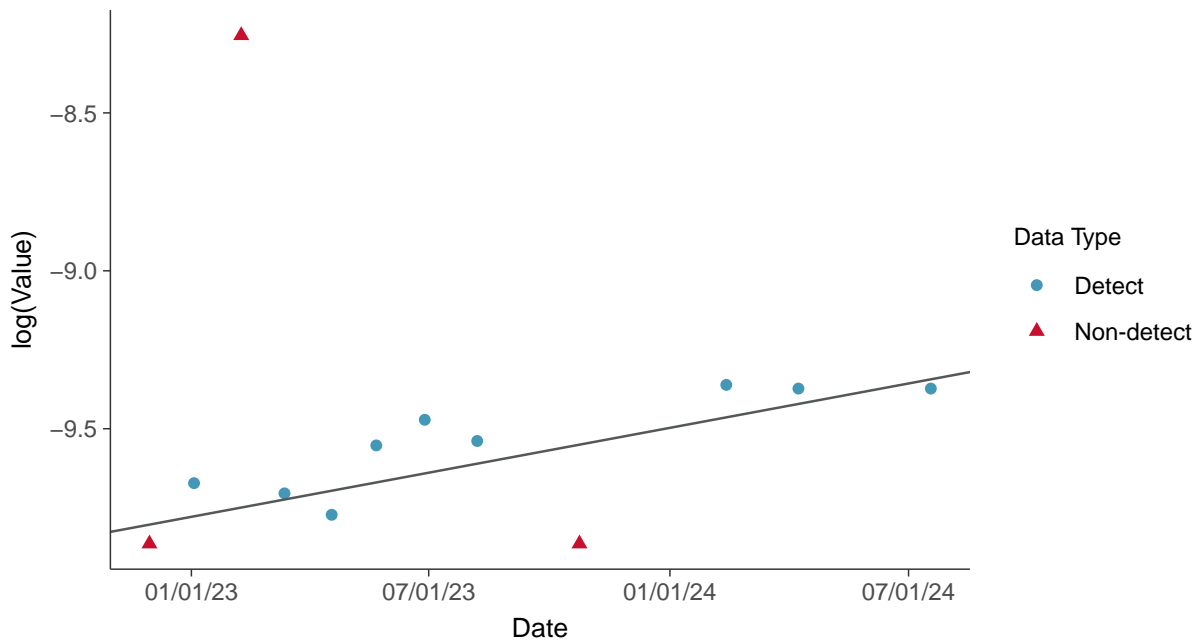
### Gamma Q-Q plot using ROS Imputed Estimates

Beryllium, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

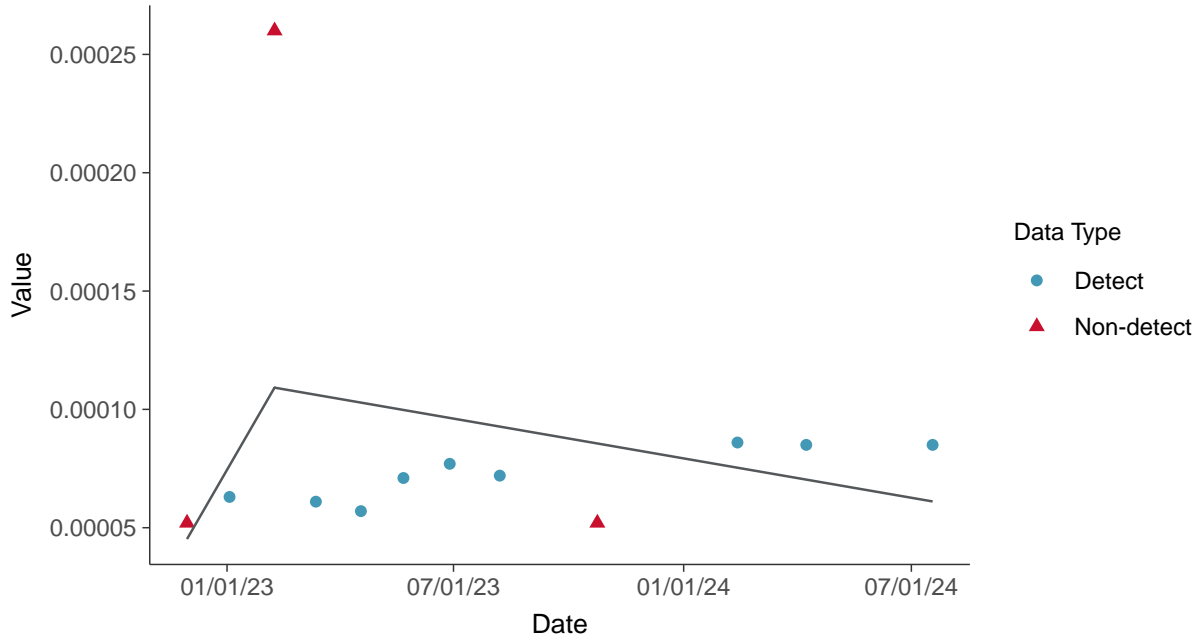
Beryllium, MW-19 (mg/L)





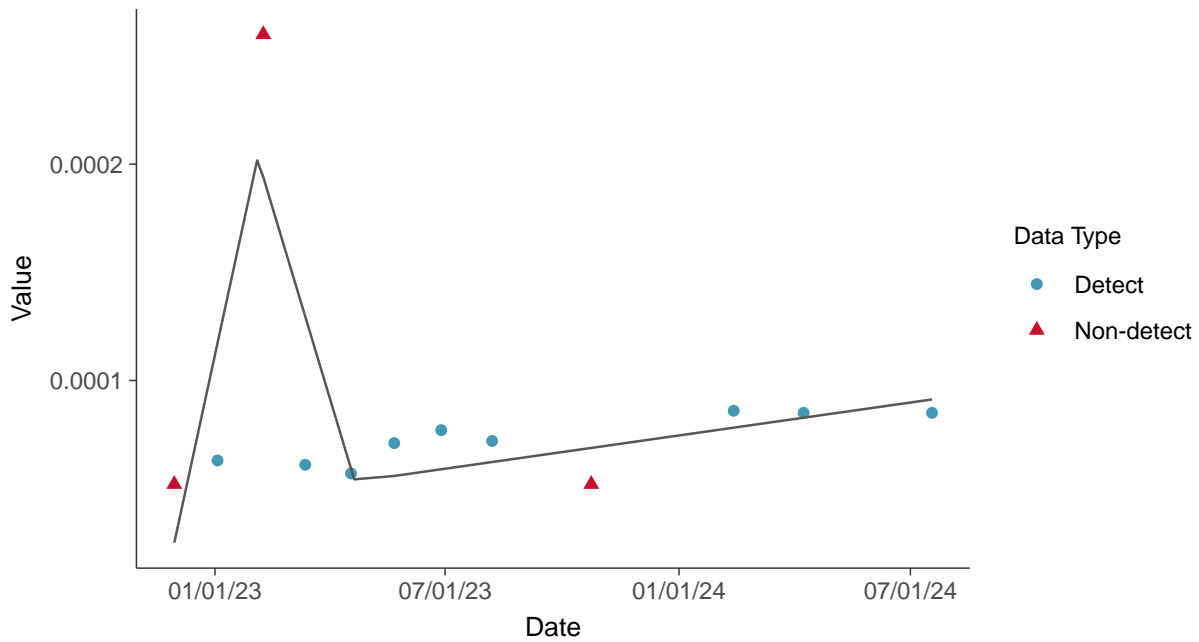
### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-19 (mg/L)





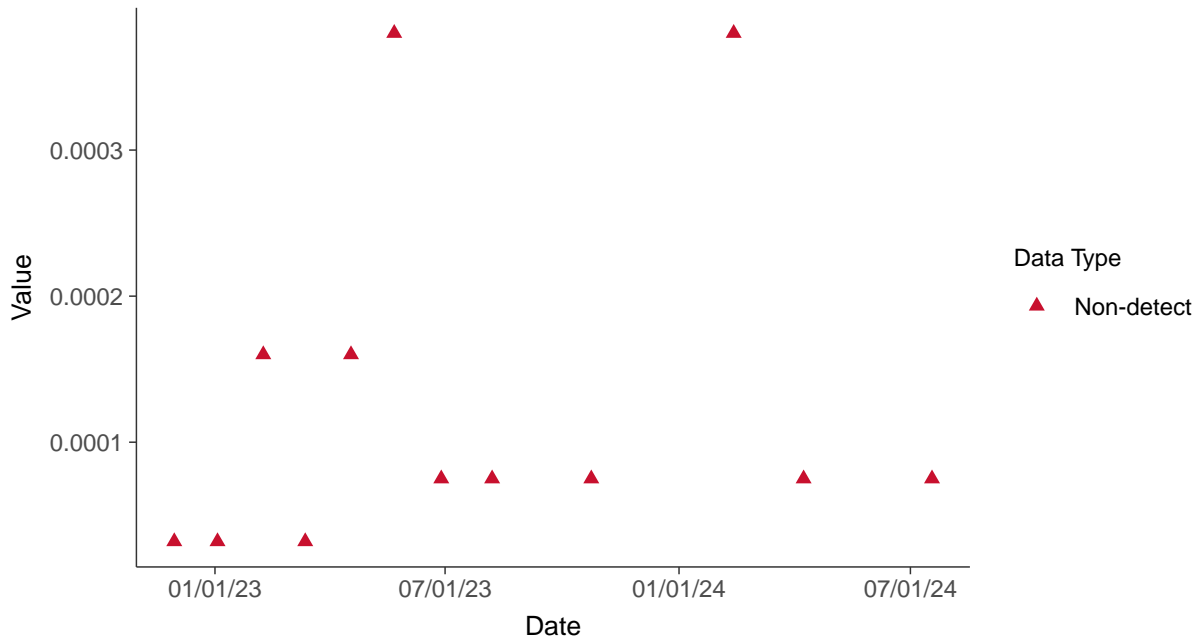


### Appendix IV: Cadmium, MW-19

ID: 29\_1\_5\_106

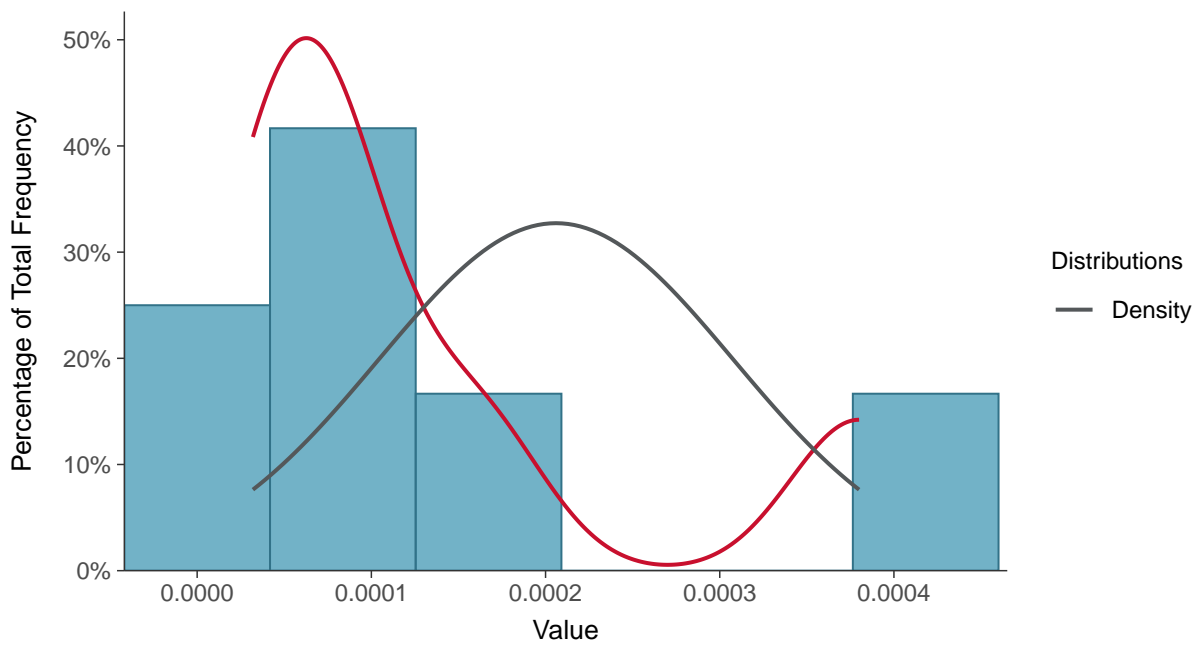
#### Scatter Plot

Cadmium, MW-19 (mg/L)



#### Histogram

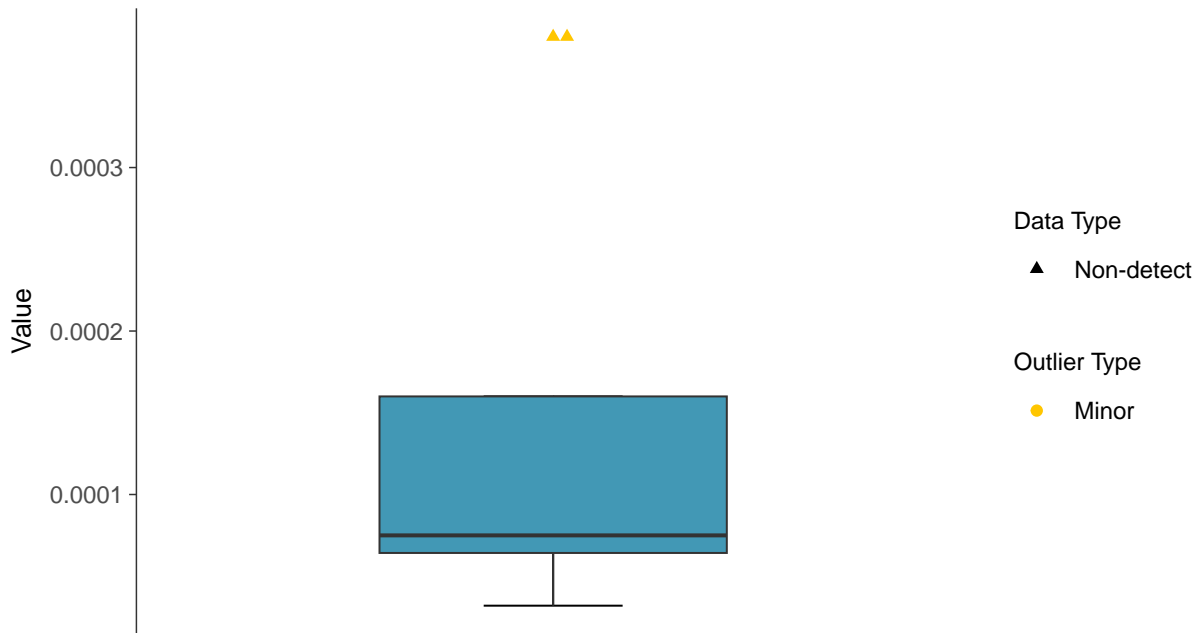
Cadmium, MW-19 (mg/L)





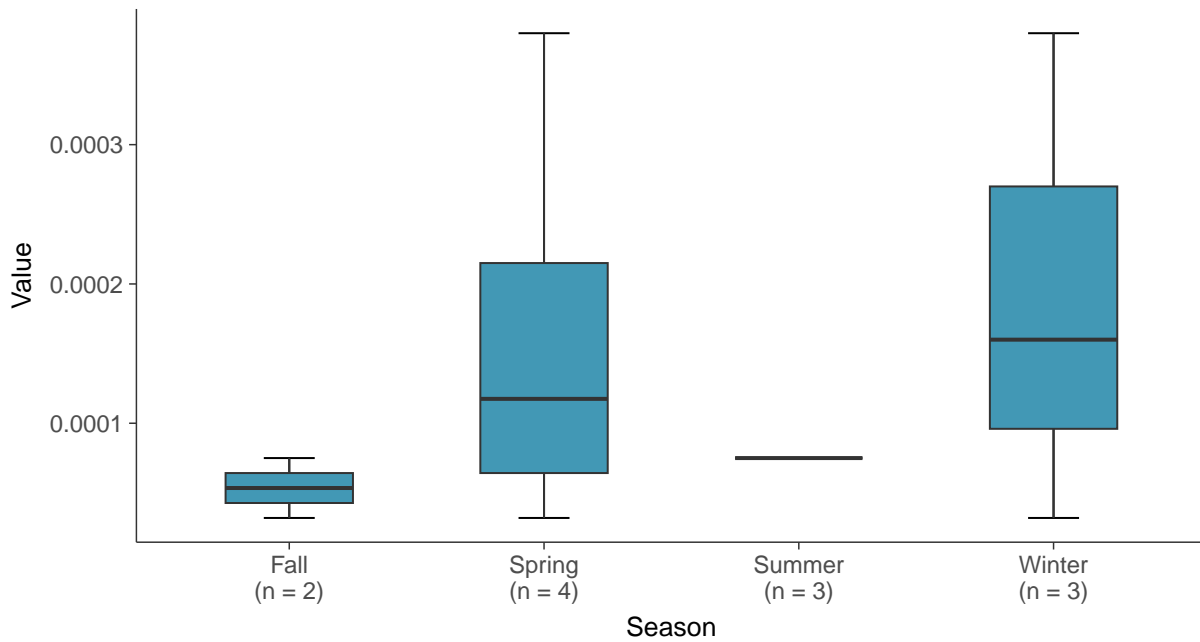
### Boxplot

Cadmium, MW-19 (mg/L)



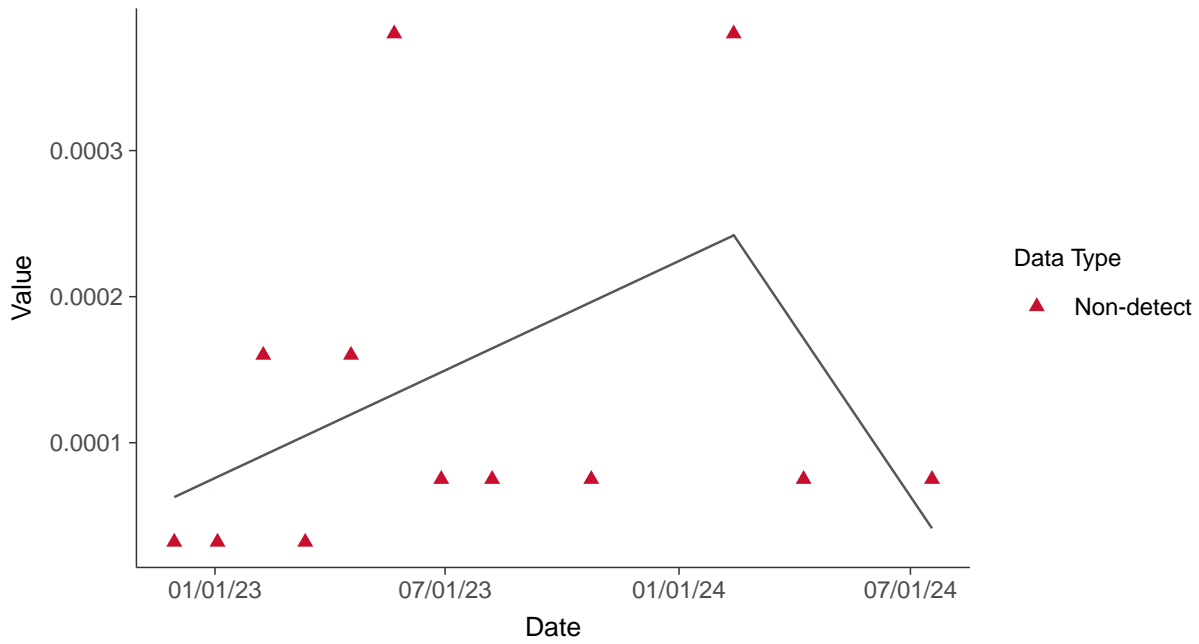
### Boxplot by Season

Cadmium, MW-19 (mg/L)

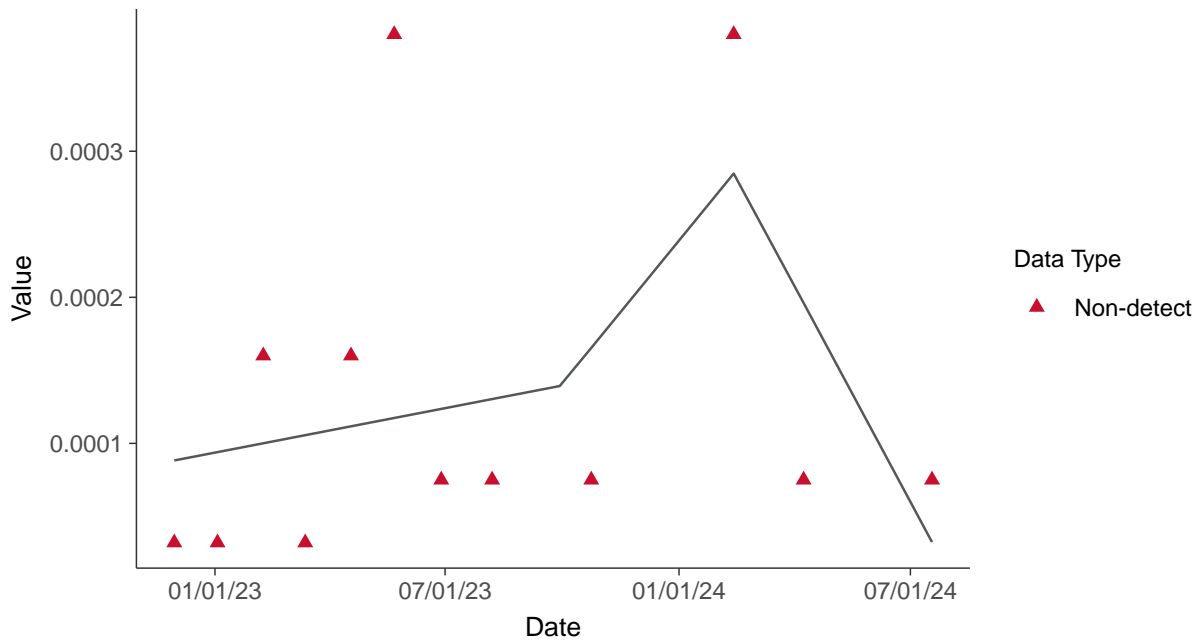




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-19 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-19 (mg/L)



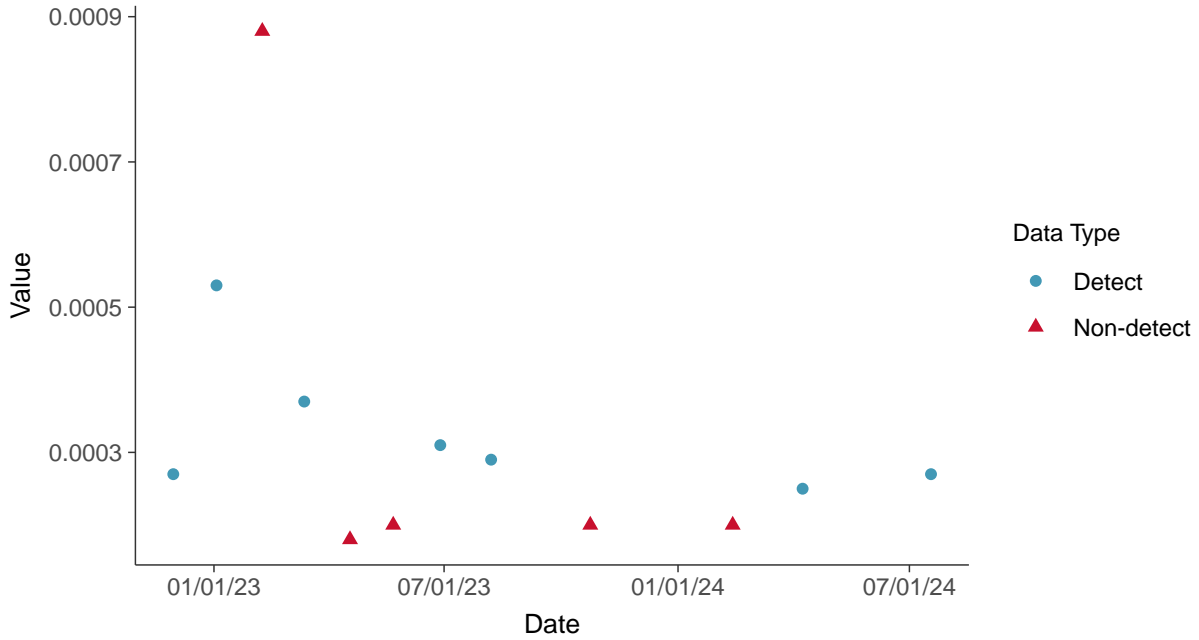


### Appendix IV: Chromium, Total, MW-19

ID: 29\_1\_5\_109

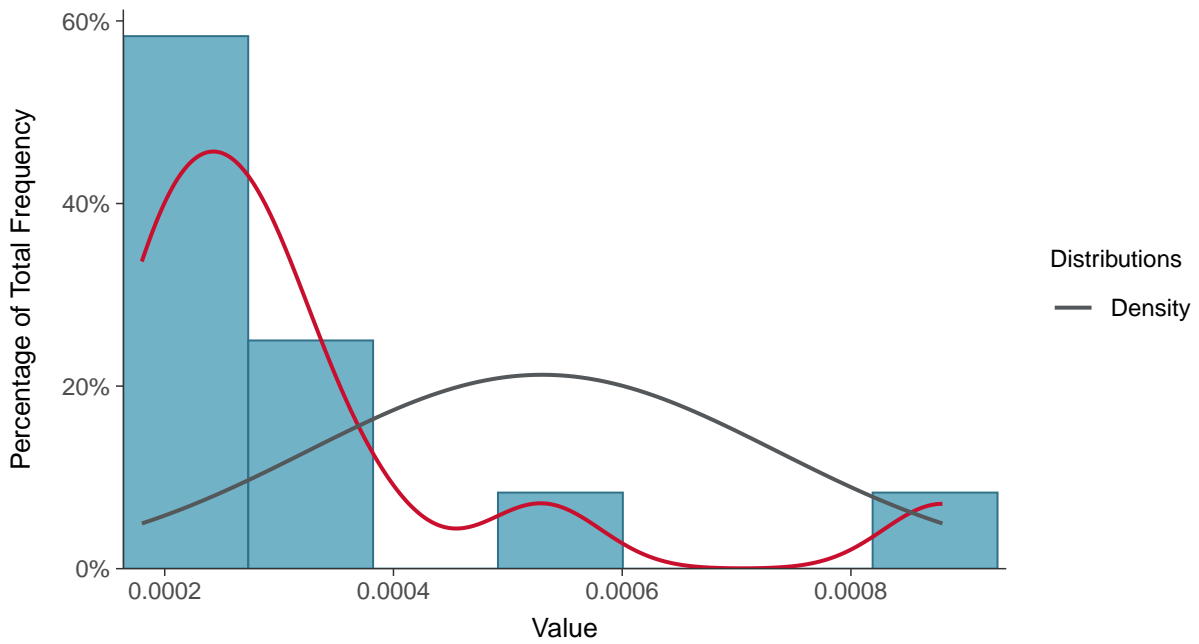
#### Scatter Plot

Chromium, Total, MW-19 (mg/L)



#### Histogram

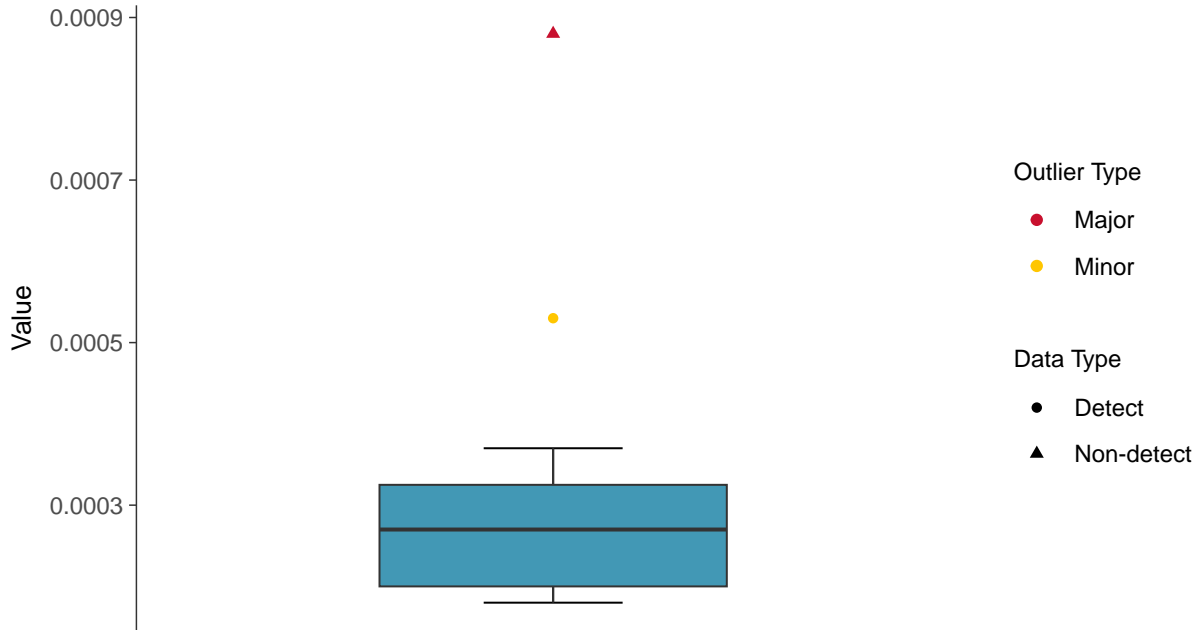
Chromium, Total, MW-19 (mg/L)





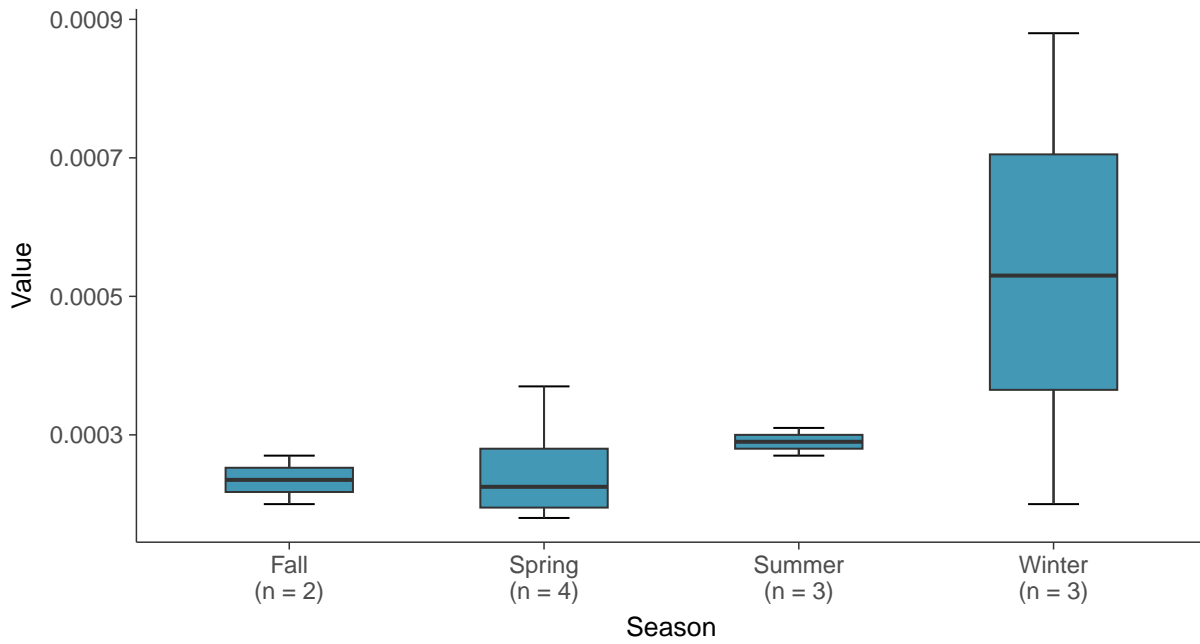
### Boxplot

Chromium, Total, MW-19 (mg/L)



### Boxplot by Season

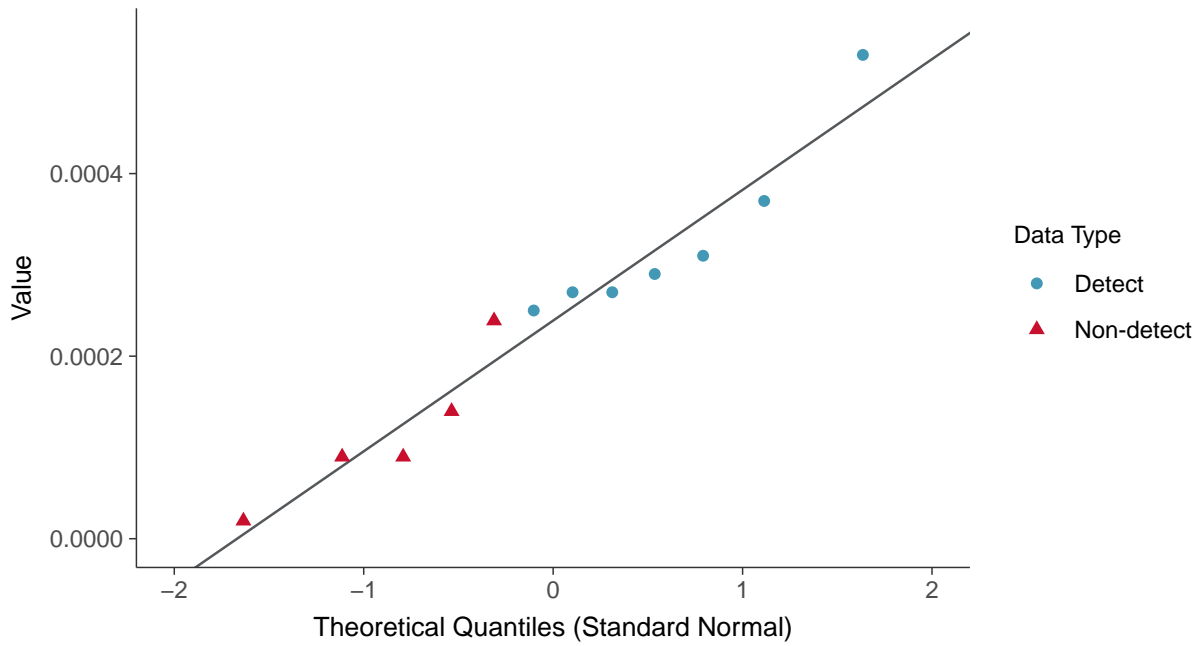
Chromium, Total, MW-19 (mg/L)





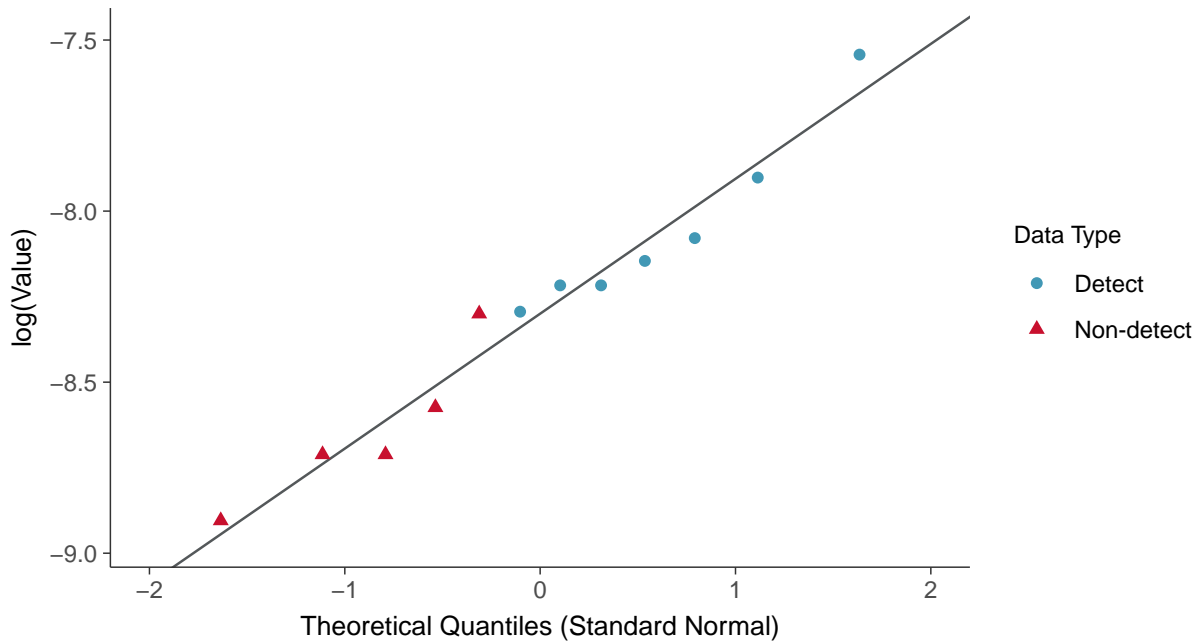
### Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)



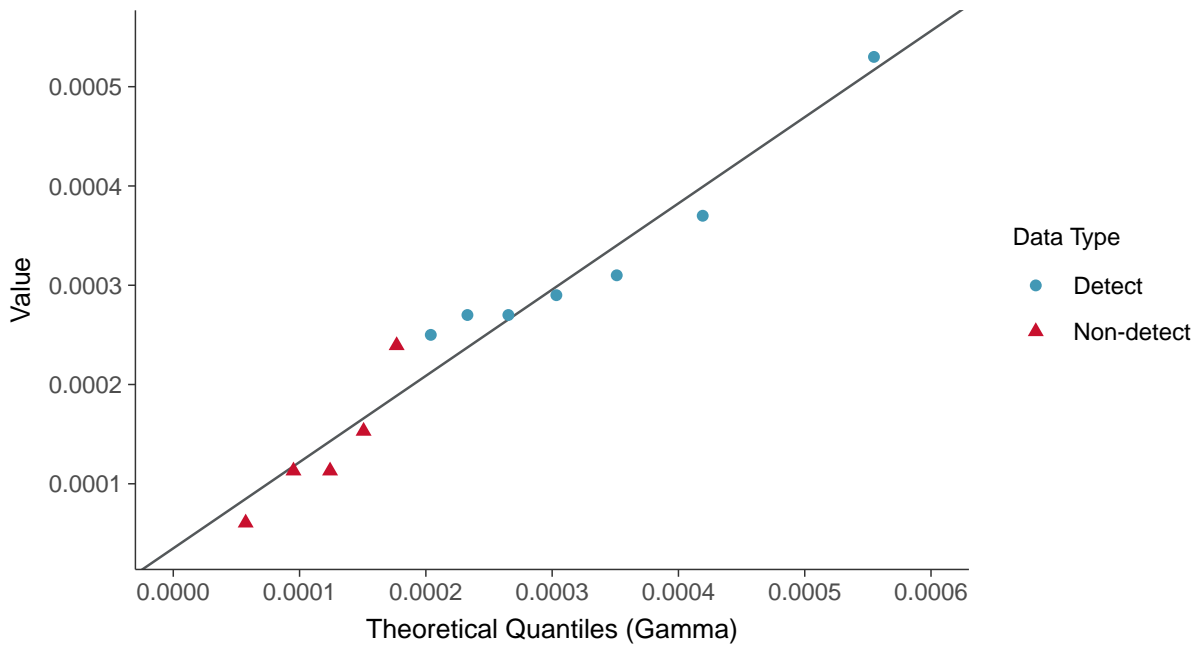
### Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-19 (mg/L)

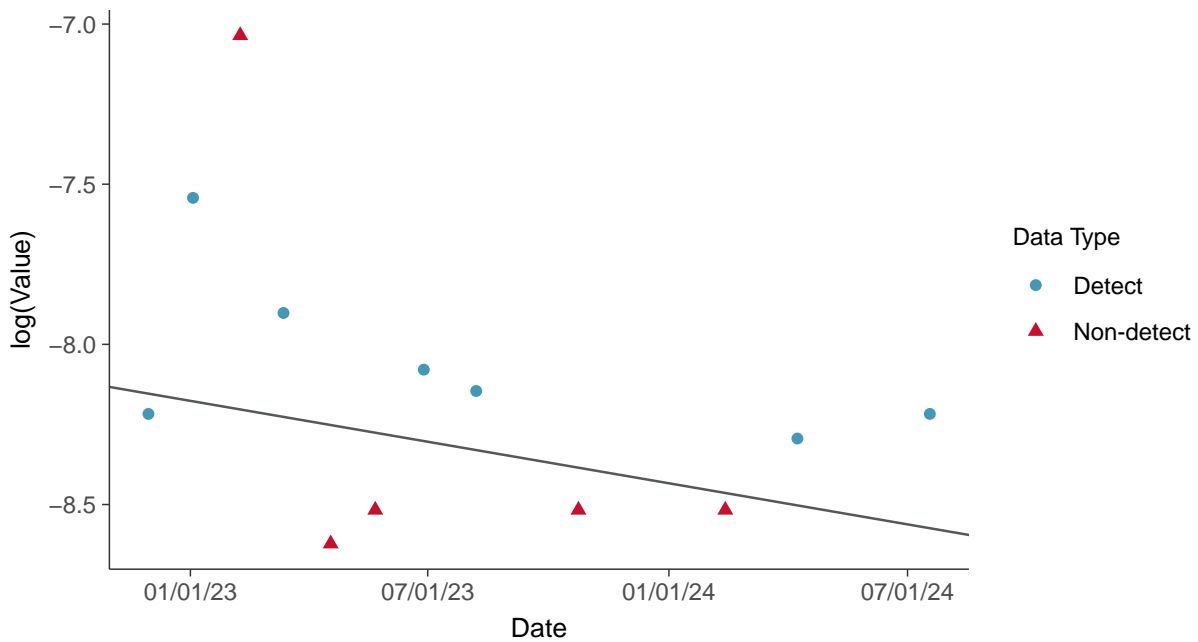




**Gamma Q-Q plot using ROS Imputed Estimates**  
Chromium, Total, MW-19 (mg/L)

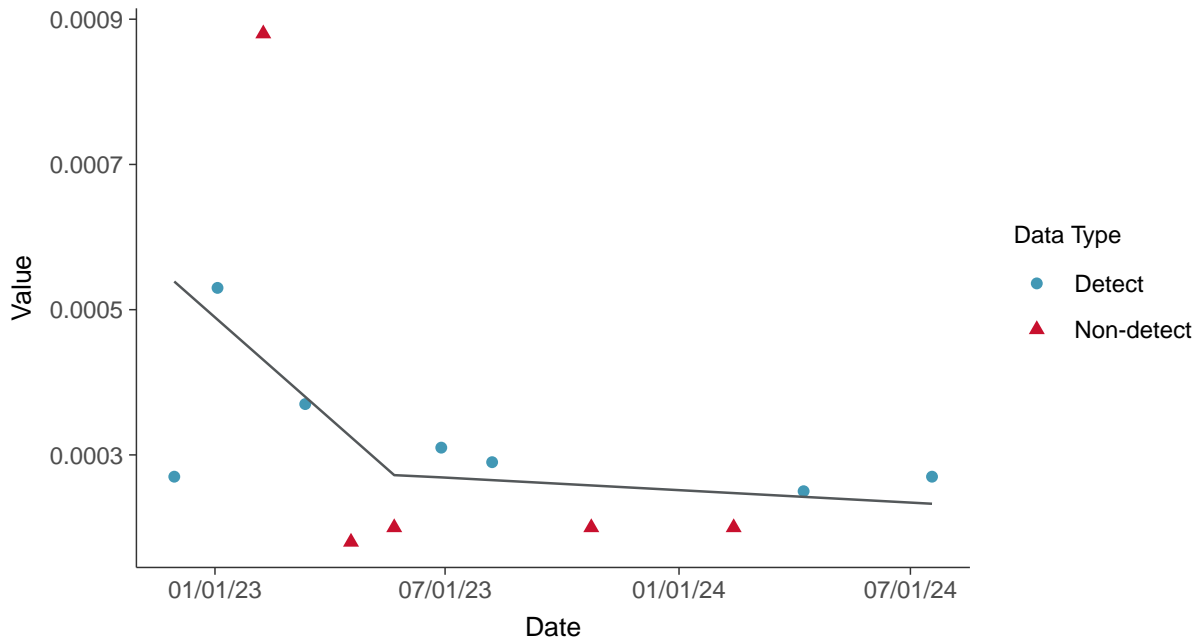


**Trend Regression: Lognormal MLE**  
Chromium, Total, MW-19 (mg/L)

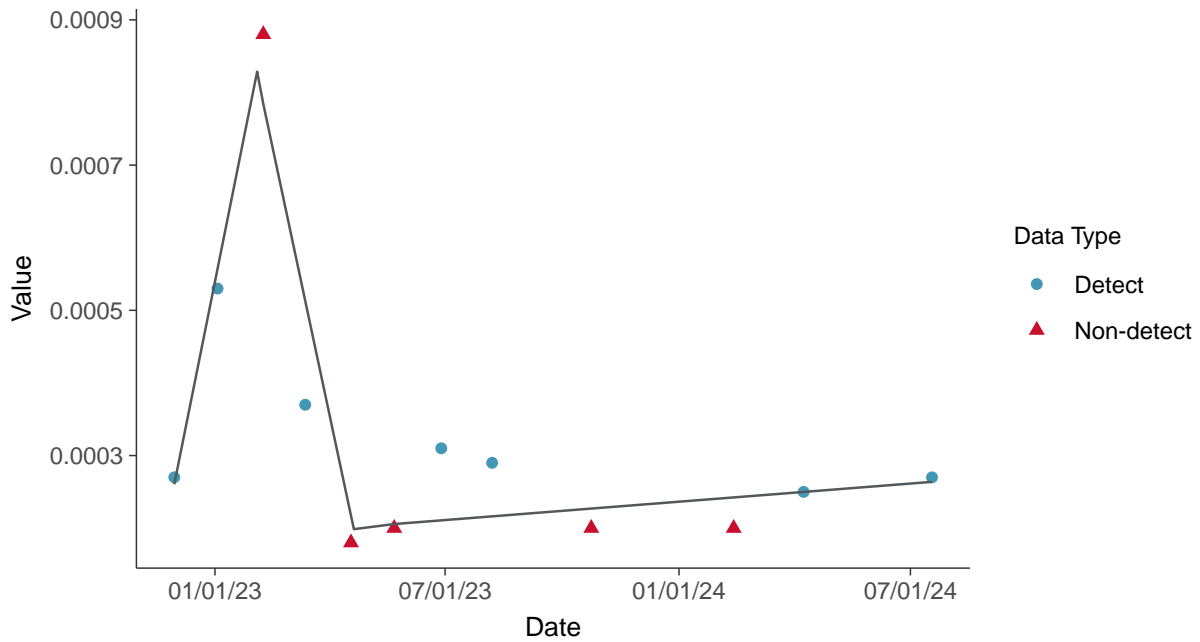




**Trend Regression: Piecewise Linear-Linear**  
Chromium, Total, MW-19 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Chromium, Total, MW-19 (mg/L)

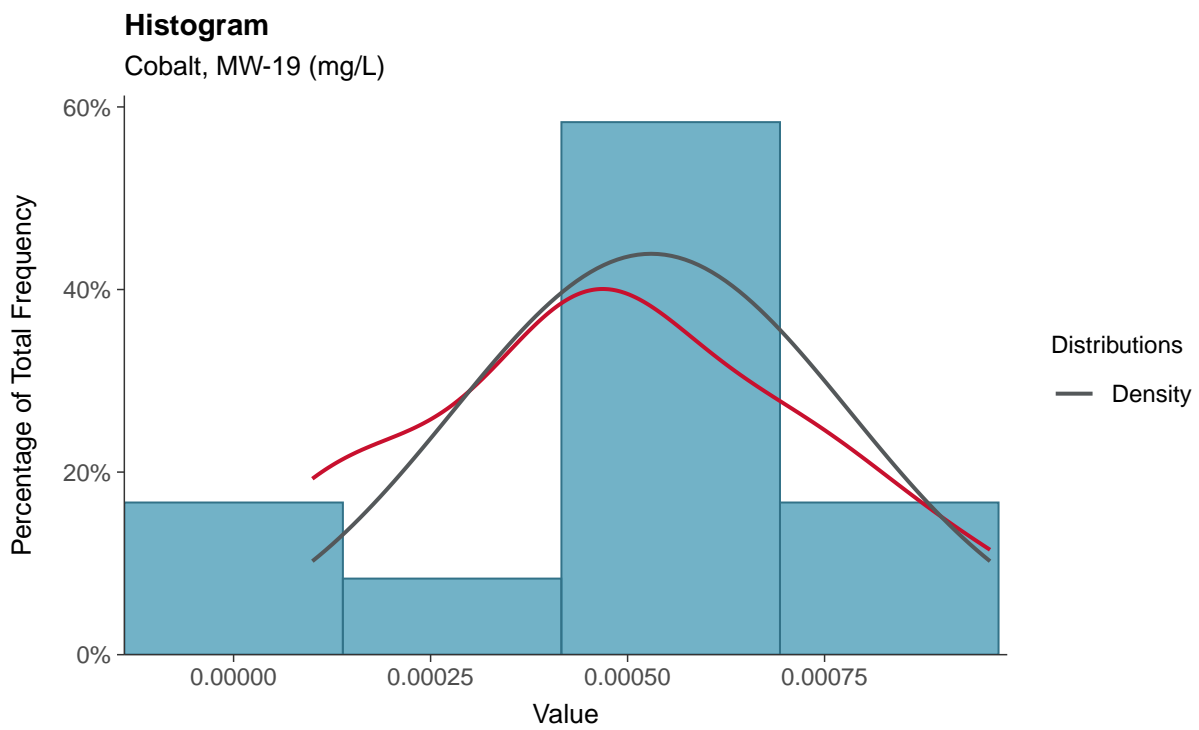
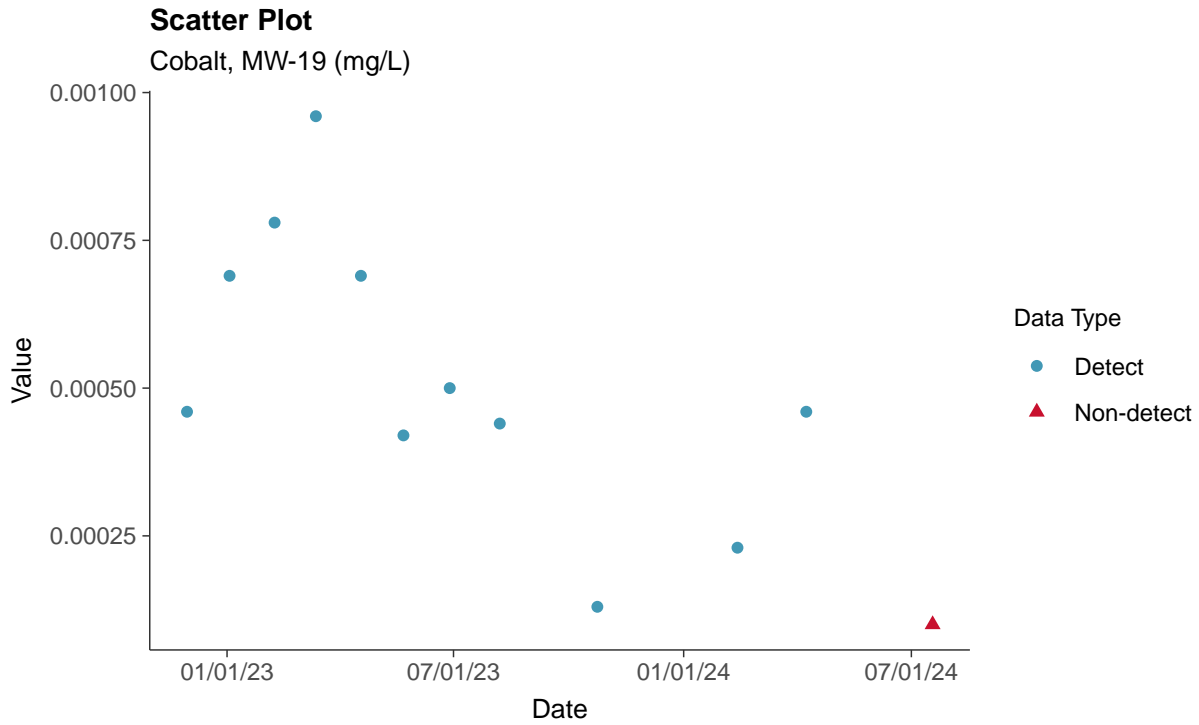






### Appendix IV: Cobalt, MW-19

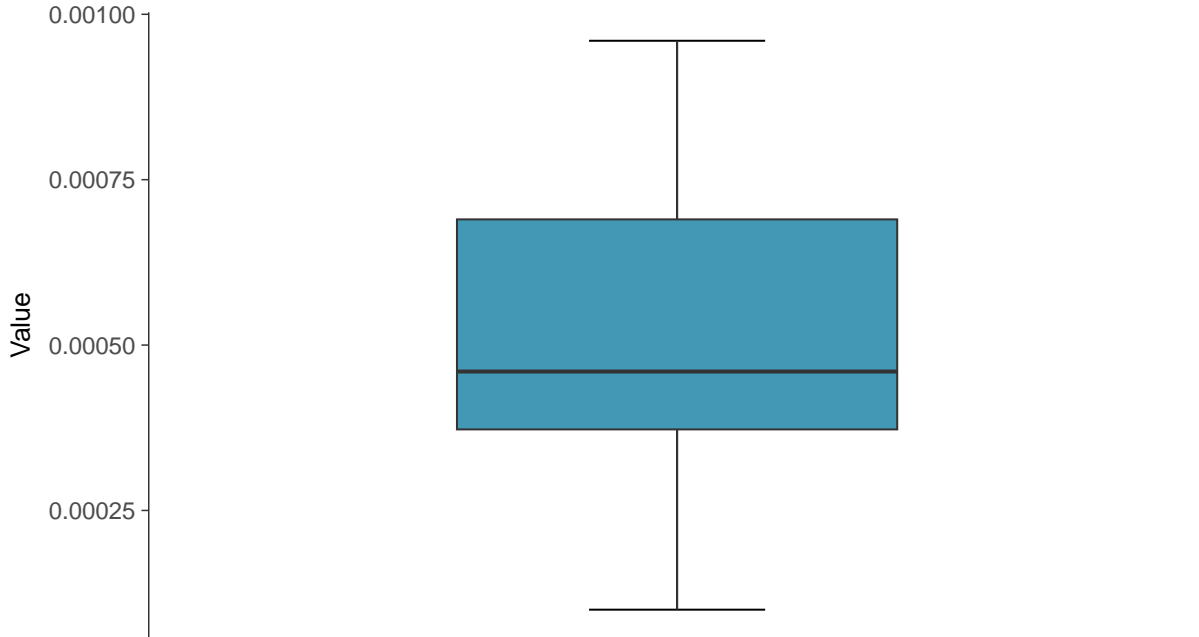
ID: 29\_1\_5\_110





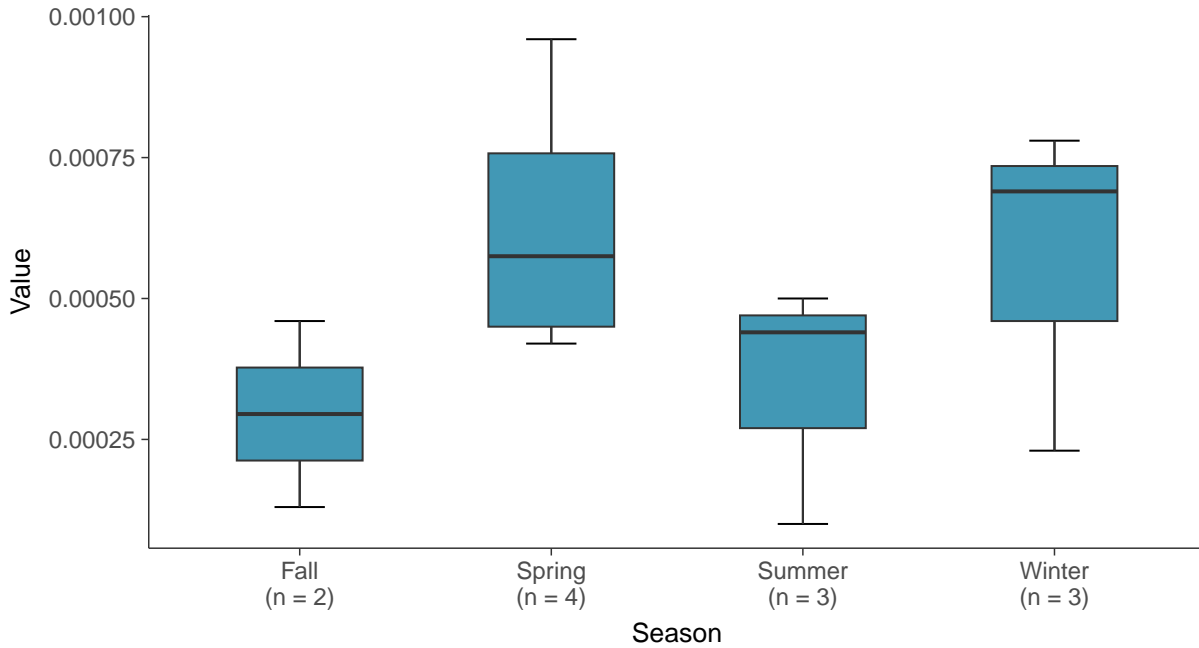
### Boxplot

Cobalt, MW-19 (mg/L)



### Boxplot by Season

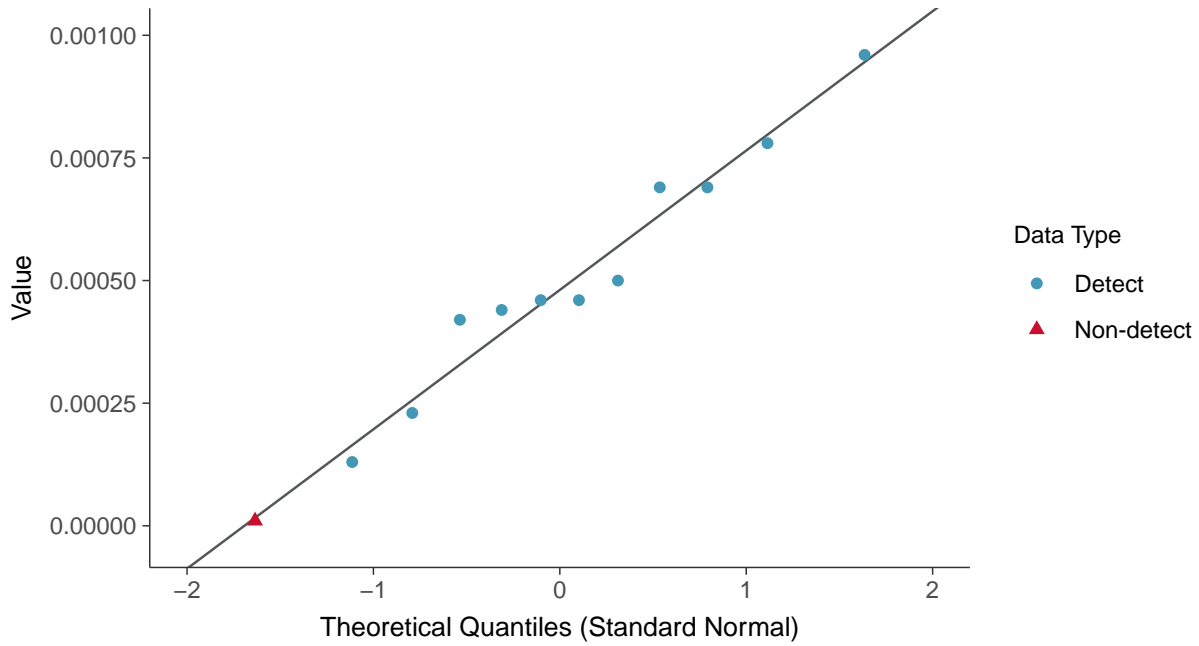
Cobalt, MW-19 (mg/L)





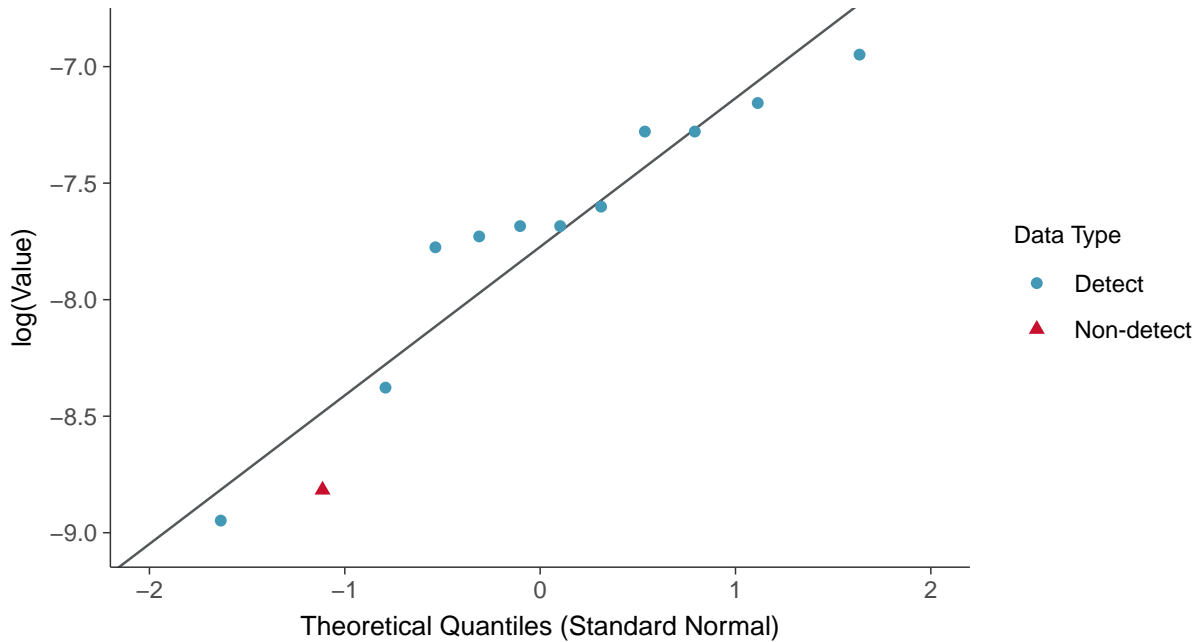
### Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-19 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

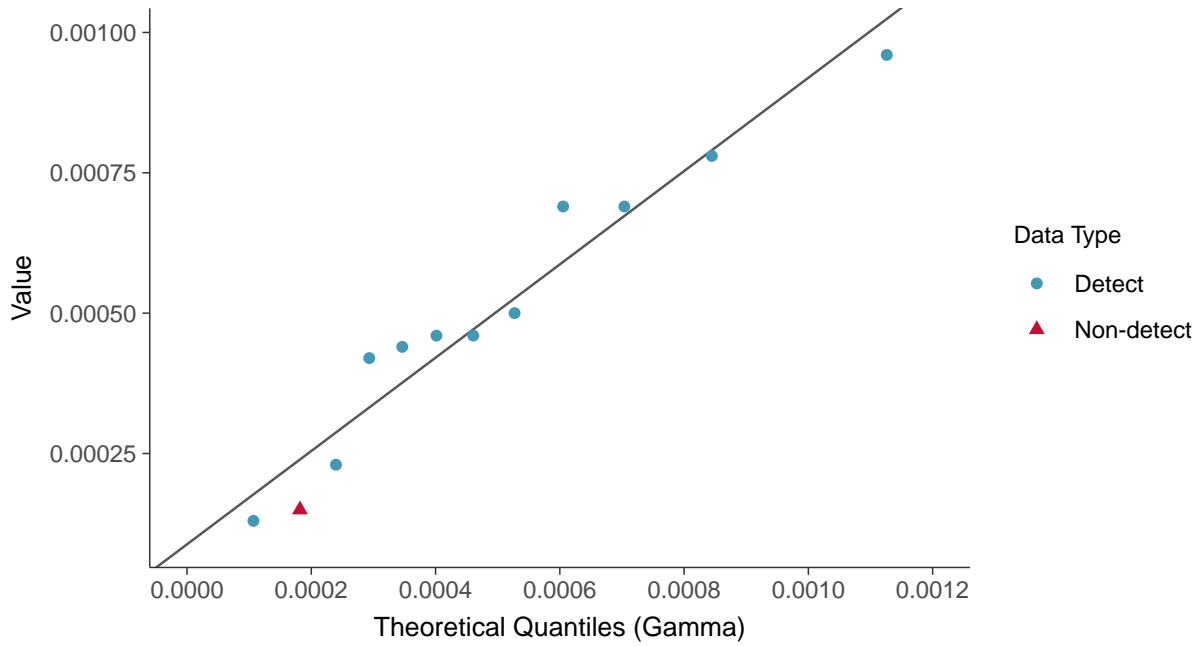
Cobalt, MW-19 (mg/L)





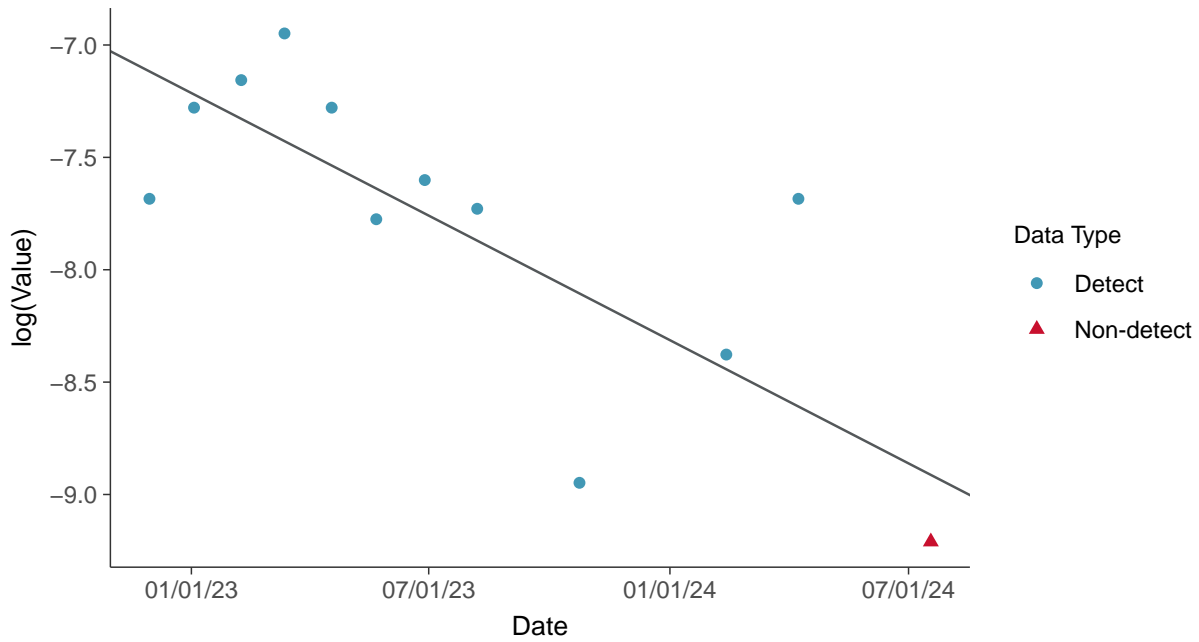
### Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

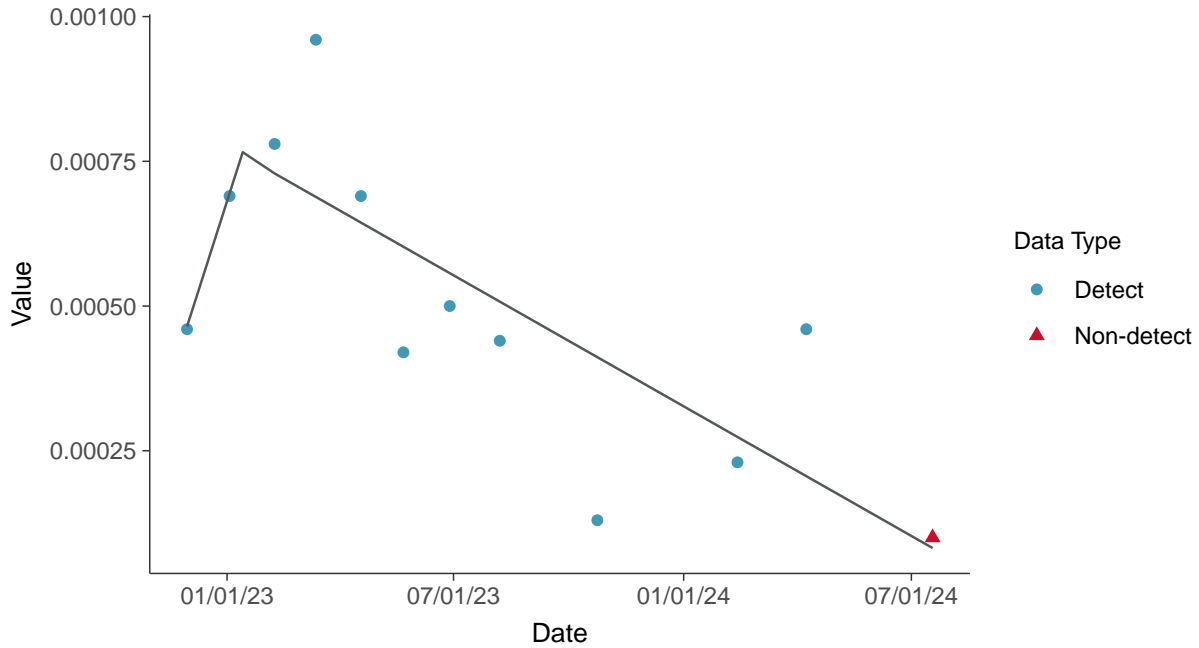
Cobalt, MW-19 (mg/L)





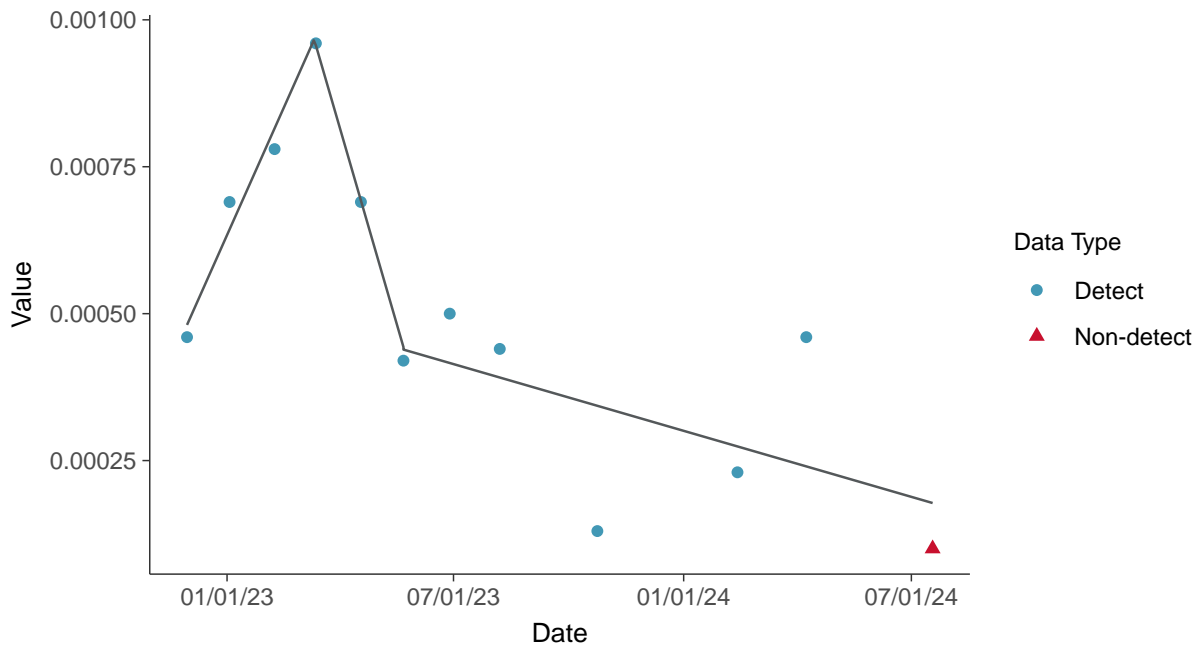
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-19 (mg/L)



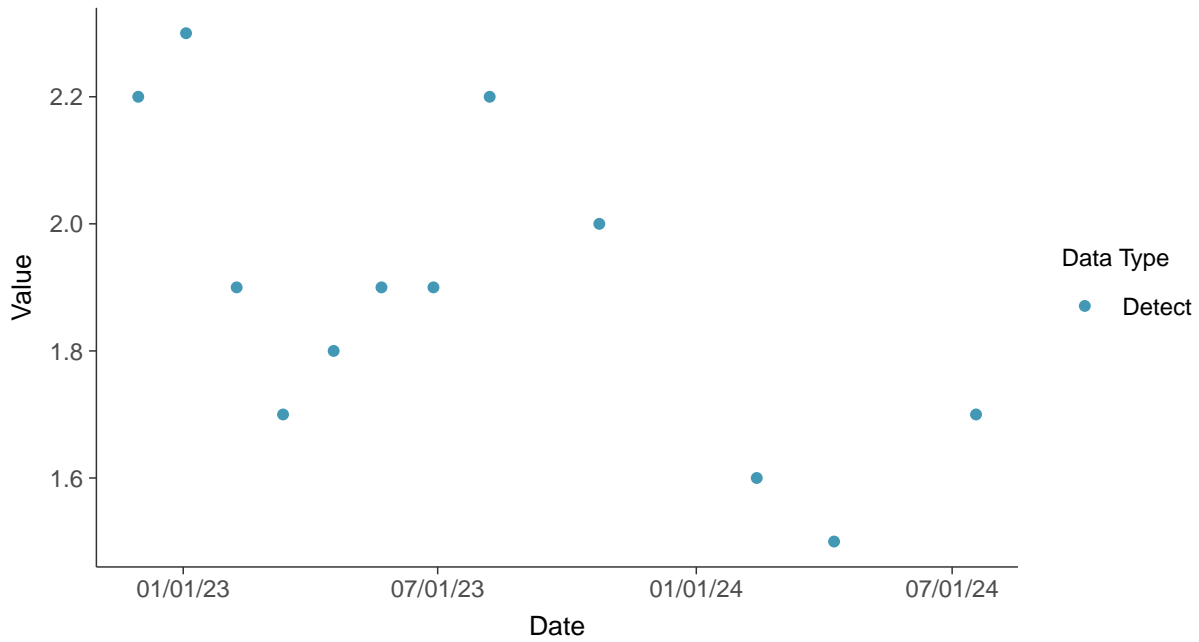


### Appendix IV: Fluoride (App IV), MW-19

ID: 29\_1\_5\_113

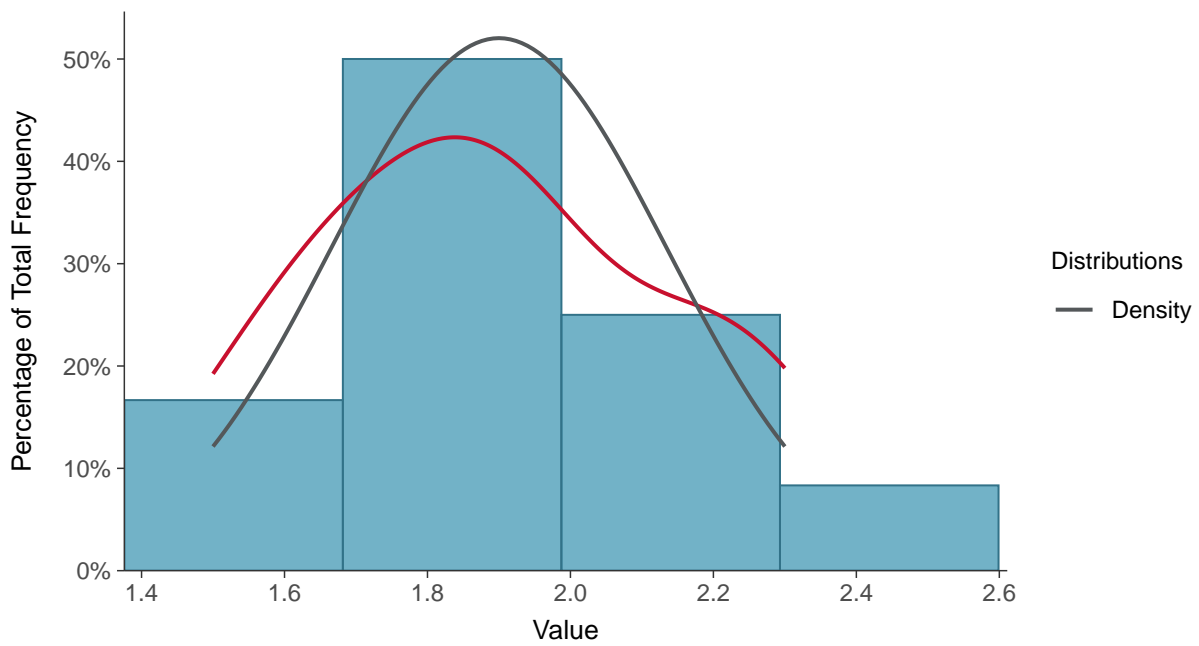
#### Scatter Plot

Fluoride (App IV), MW-19 (mg/L)



#### Histogram

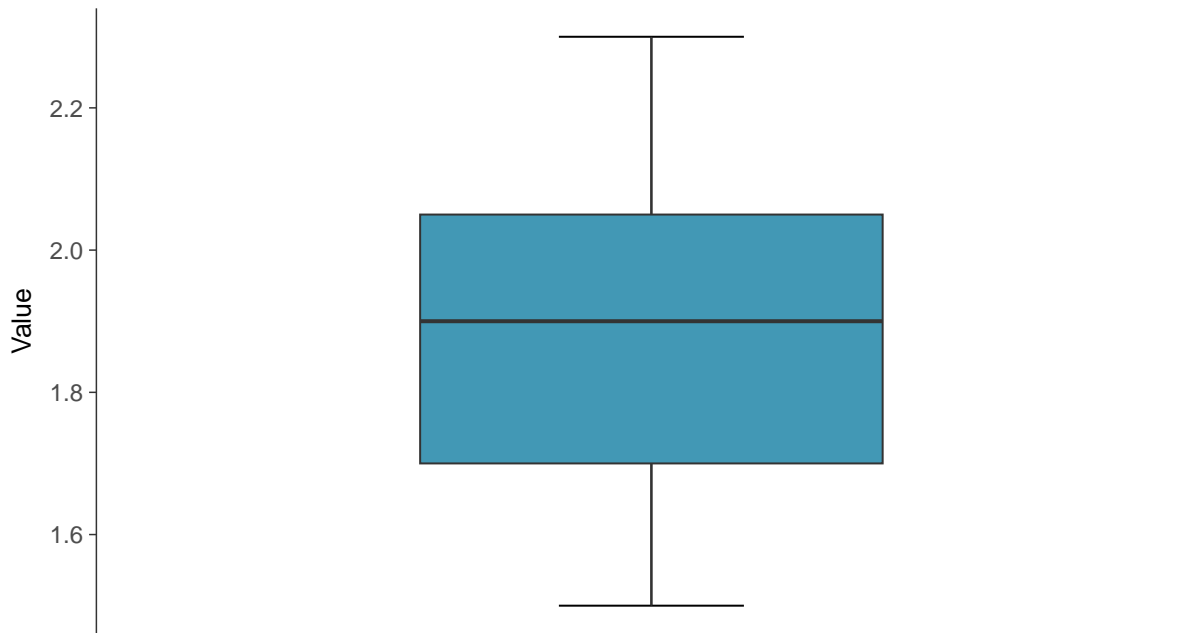
Fluoride (App IV), MW-19 (mg/L)





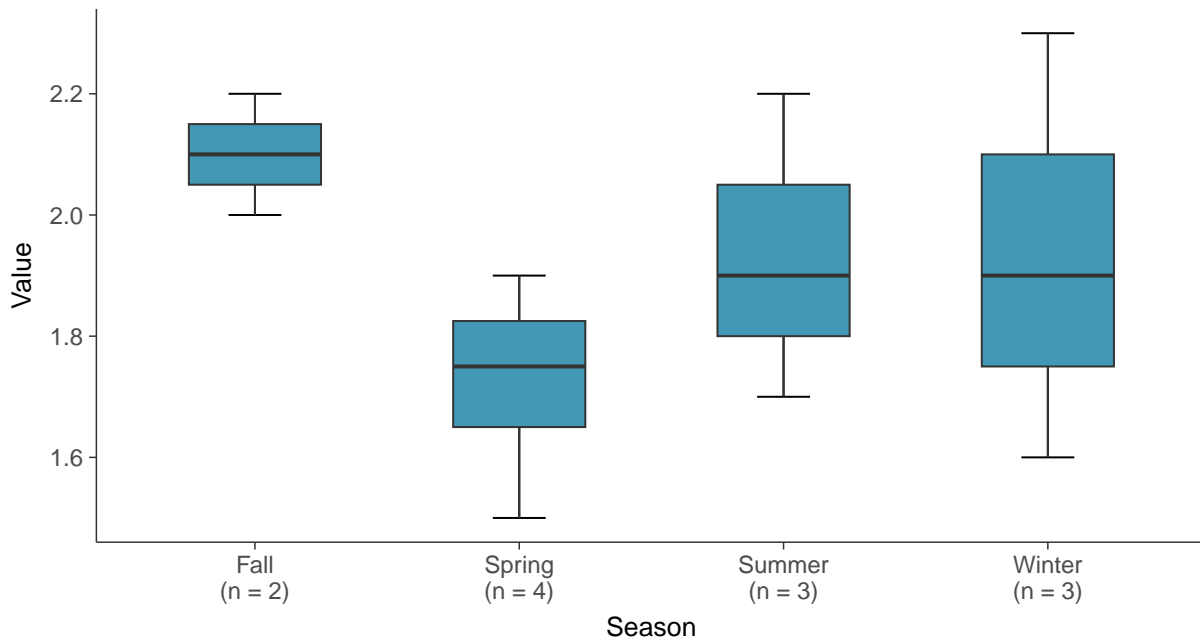
### Boxplot

Fluoride (App IV), MW-19 (mg/L)



### Boxplot by Season

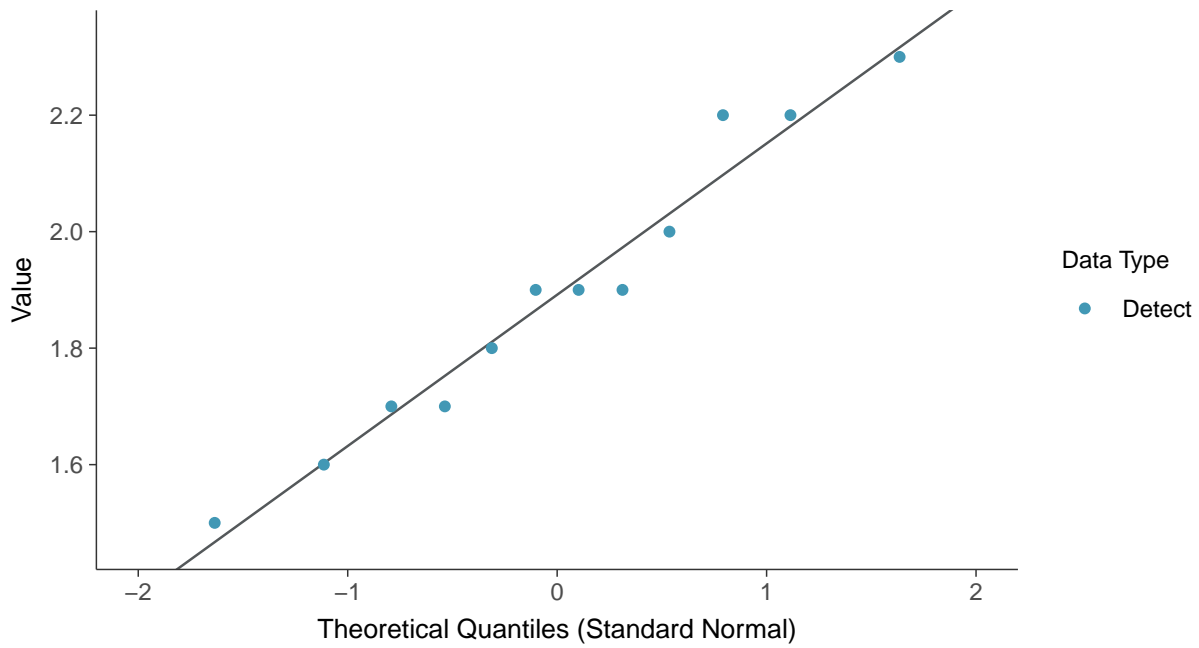
Fluoride (App IV), MW-19 (mg/L)





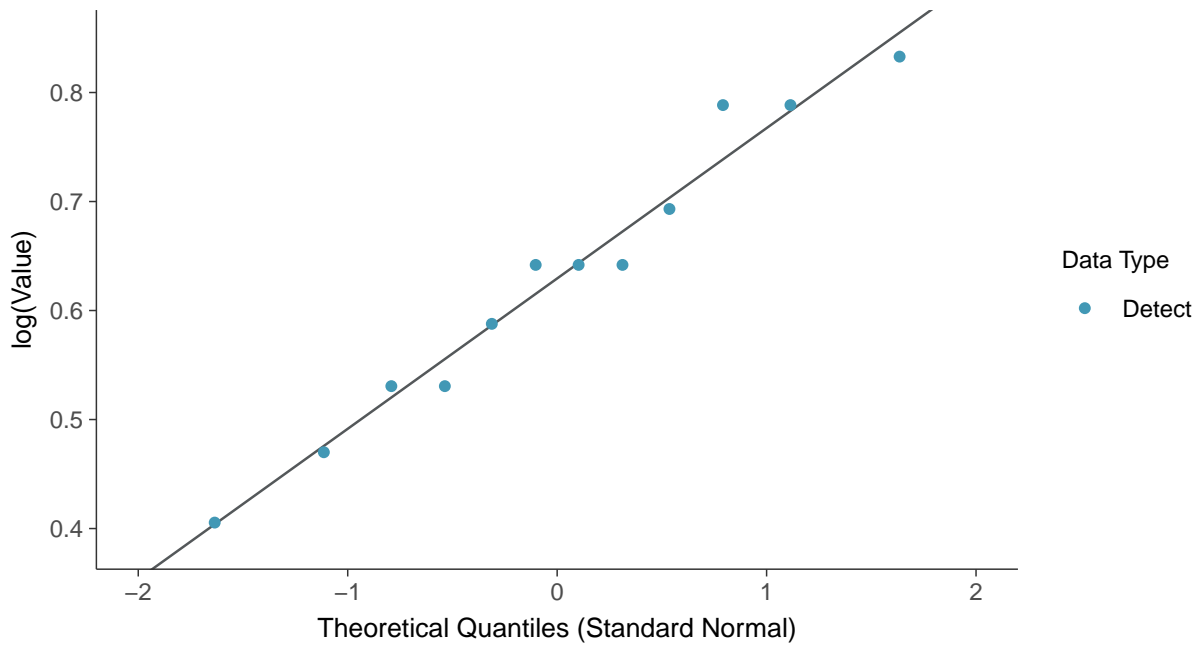
### Normal Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



### Lognormal Q-Q plot

Fluoride (App IV), MW-19 (mg/L)

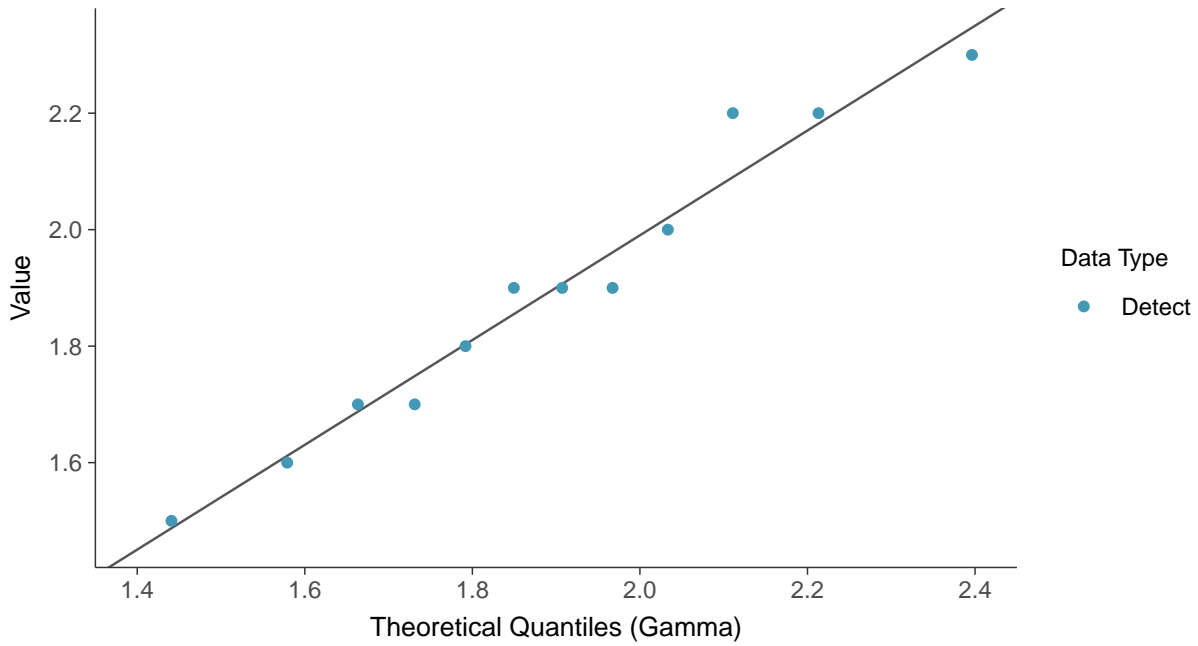






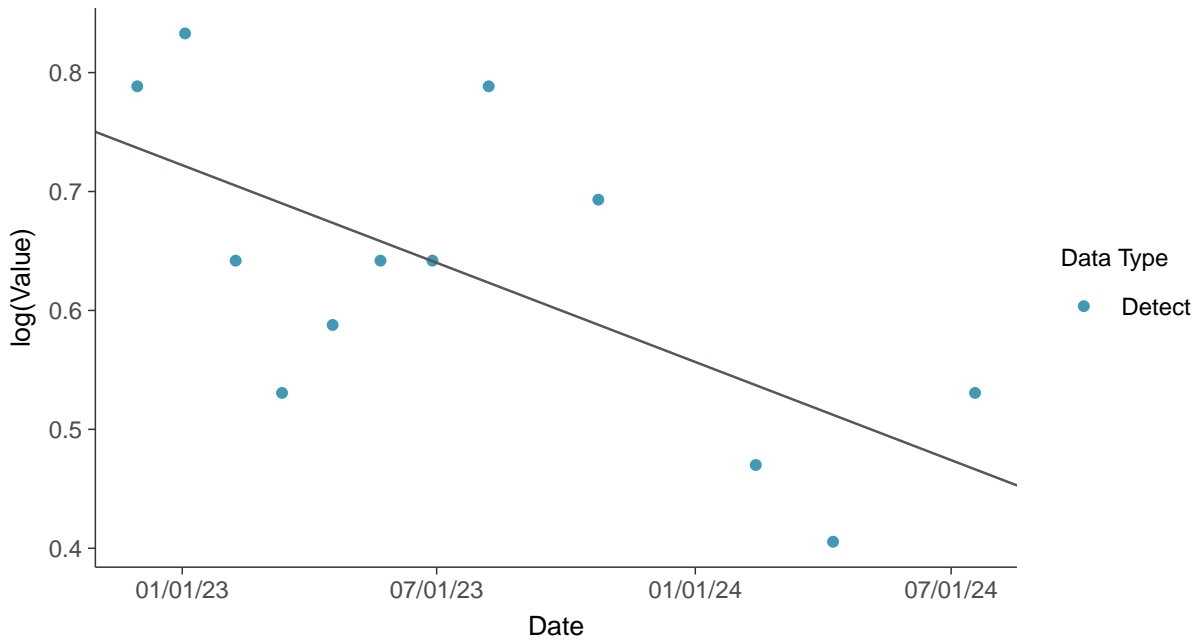
### Gamma Q-Q plot

Fluoride (App IV), MW-19 (mg/L)



### Trend Regression: Lognormal MLE

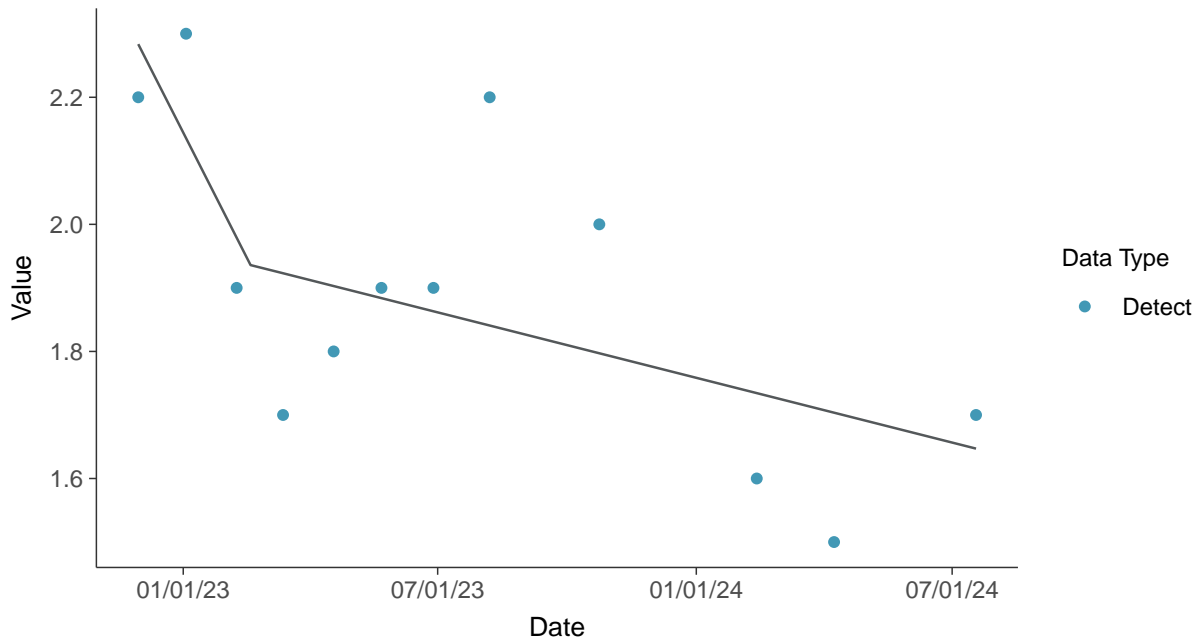
Fluoride (App IV), MW-19 (mg/L)





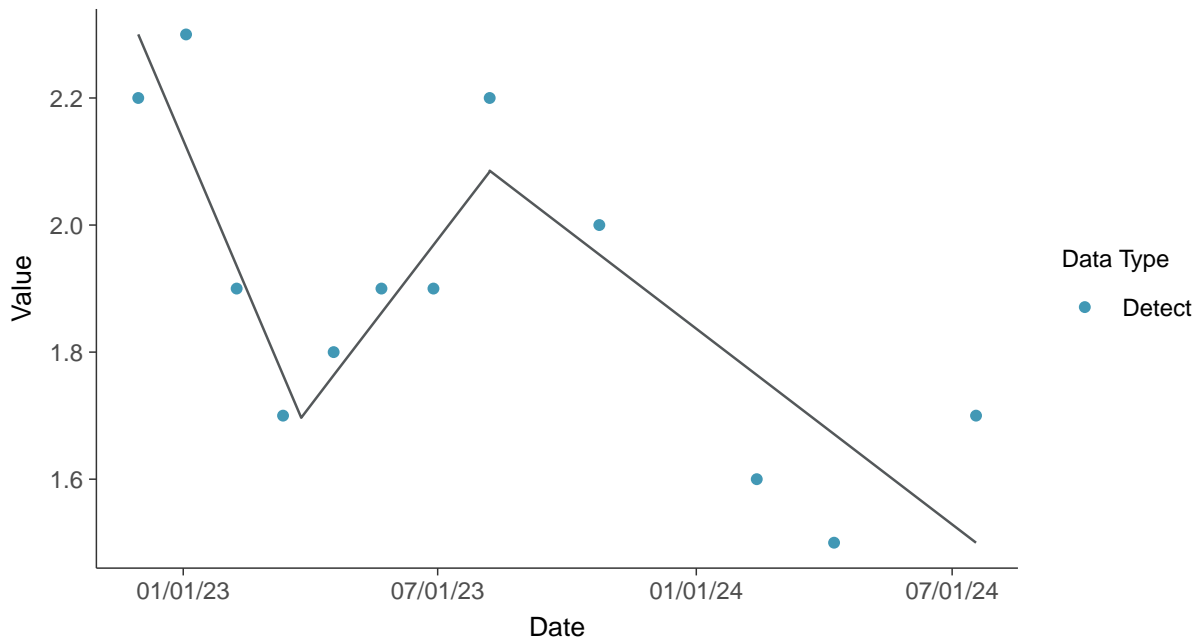
### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

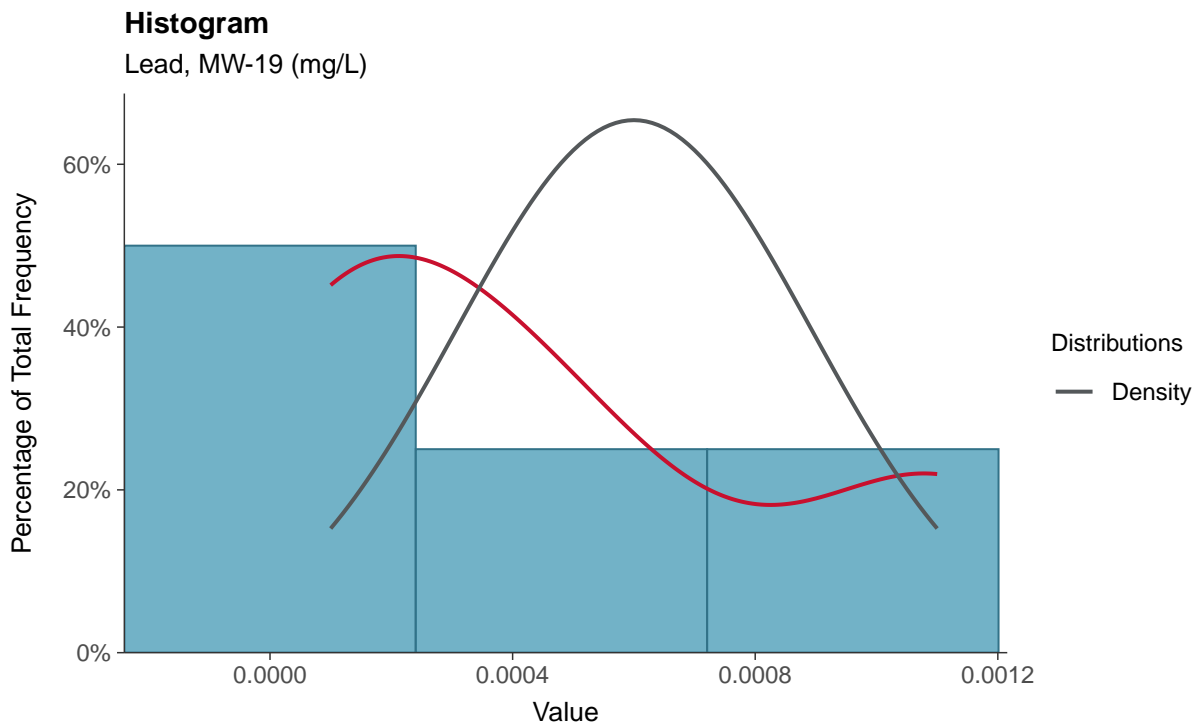
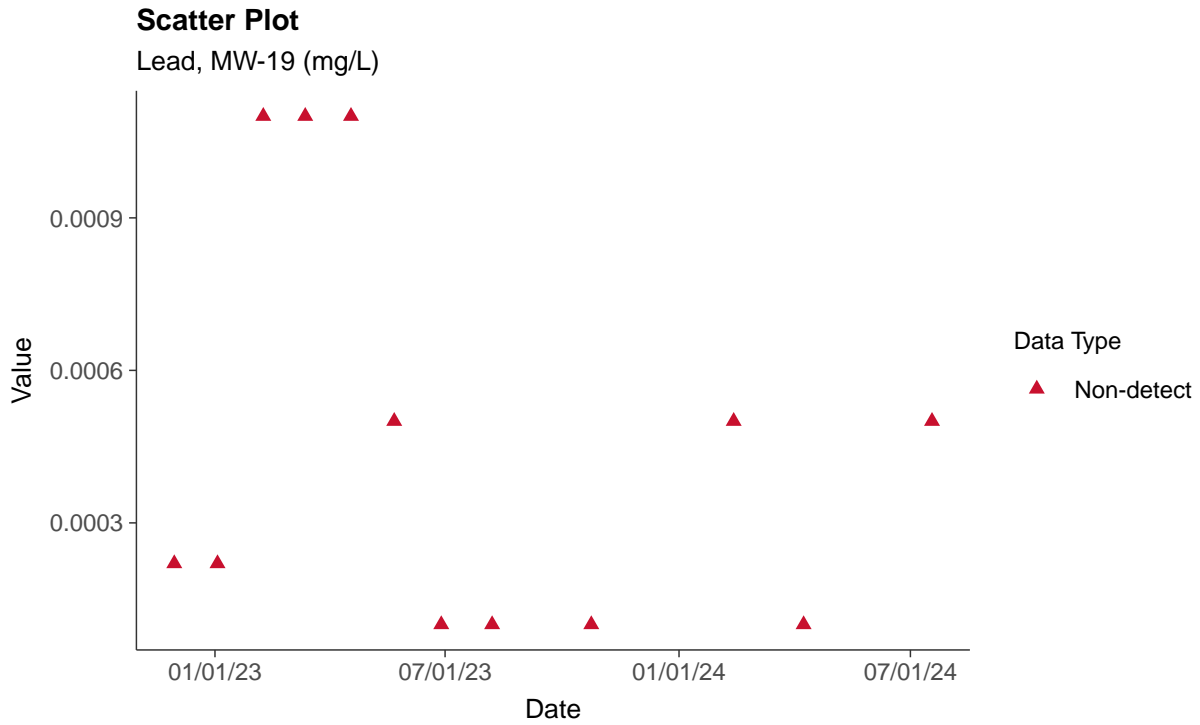
Fluoride (App IV), MW-19 (mg/L)





### Appendix IV: Lead, MW-19

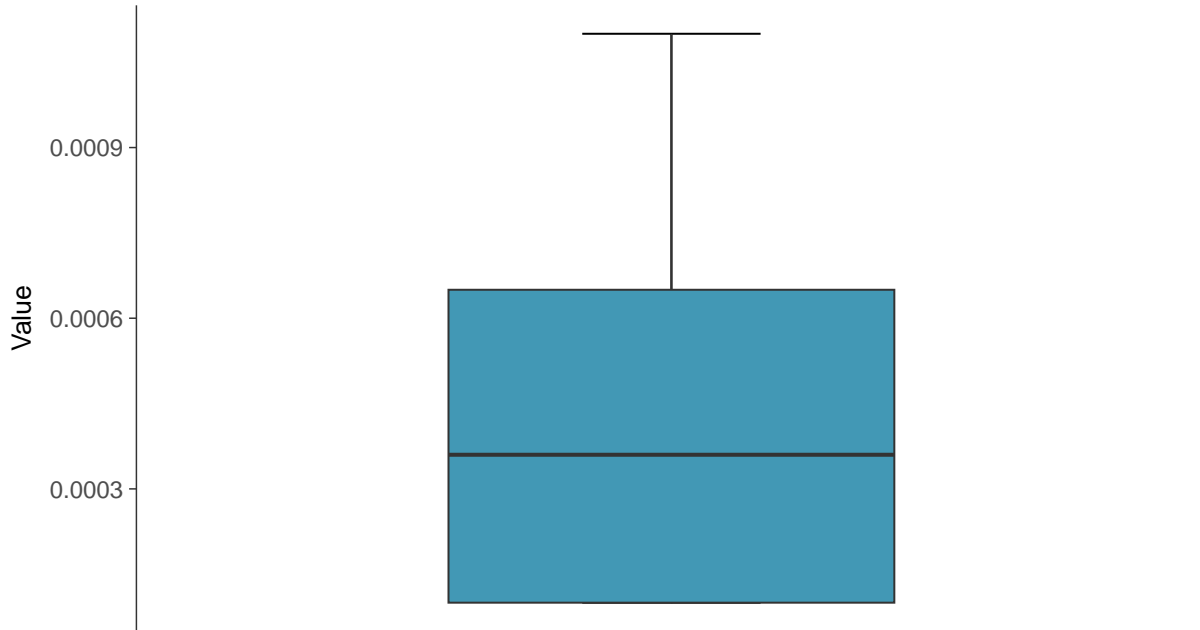
ID: 29\_1\_5\_115





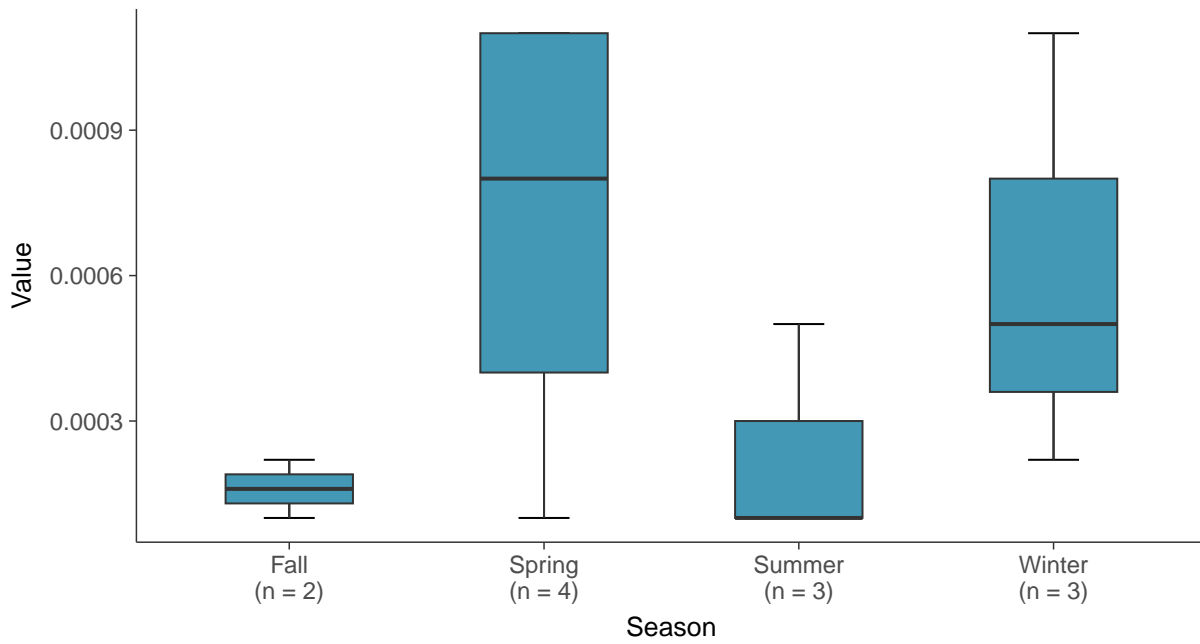
### Boxplot

Lead, MW-19 (mg/L)



### Boxplot by Season

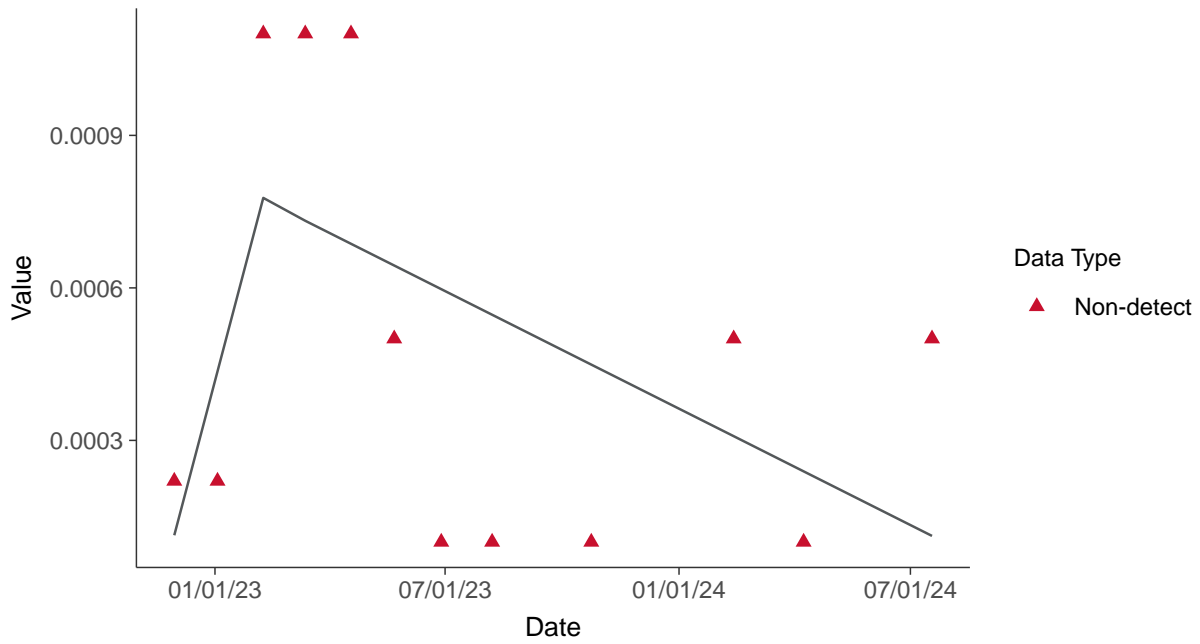
Lead, MW-19 (mg/L)





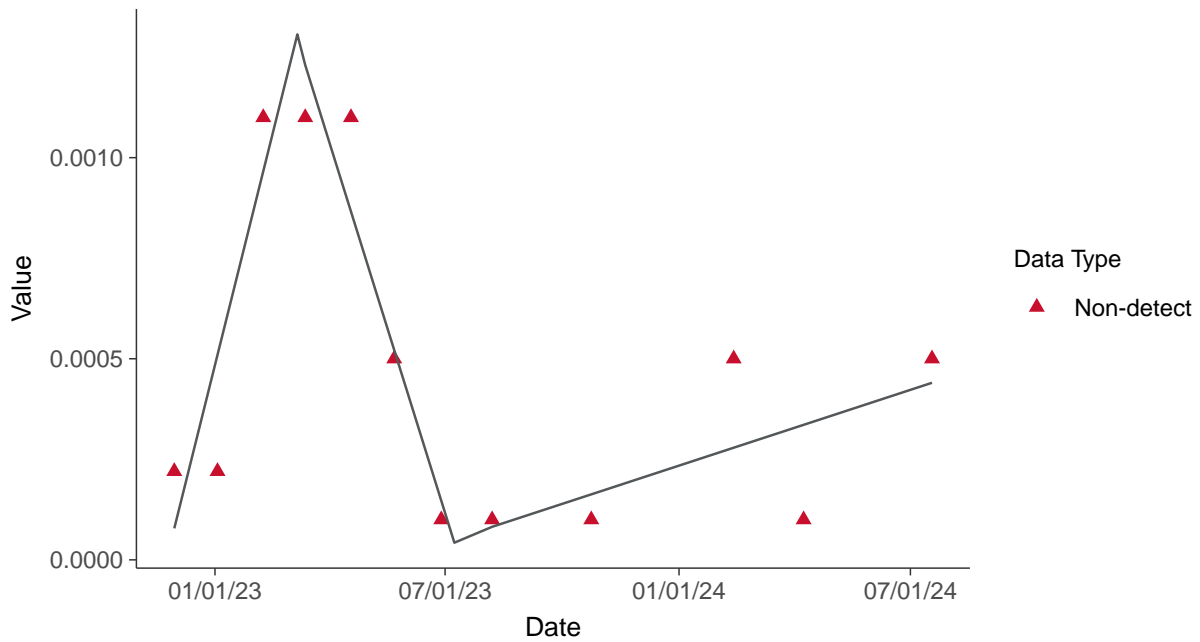
### Trend Regression: Piecewise Linear-Linear

Lead, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

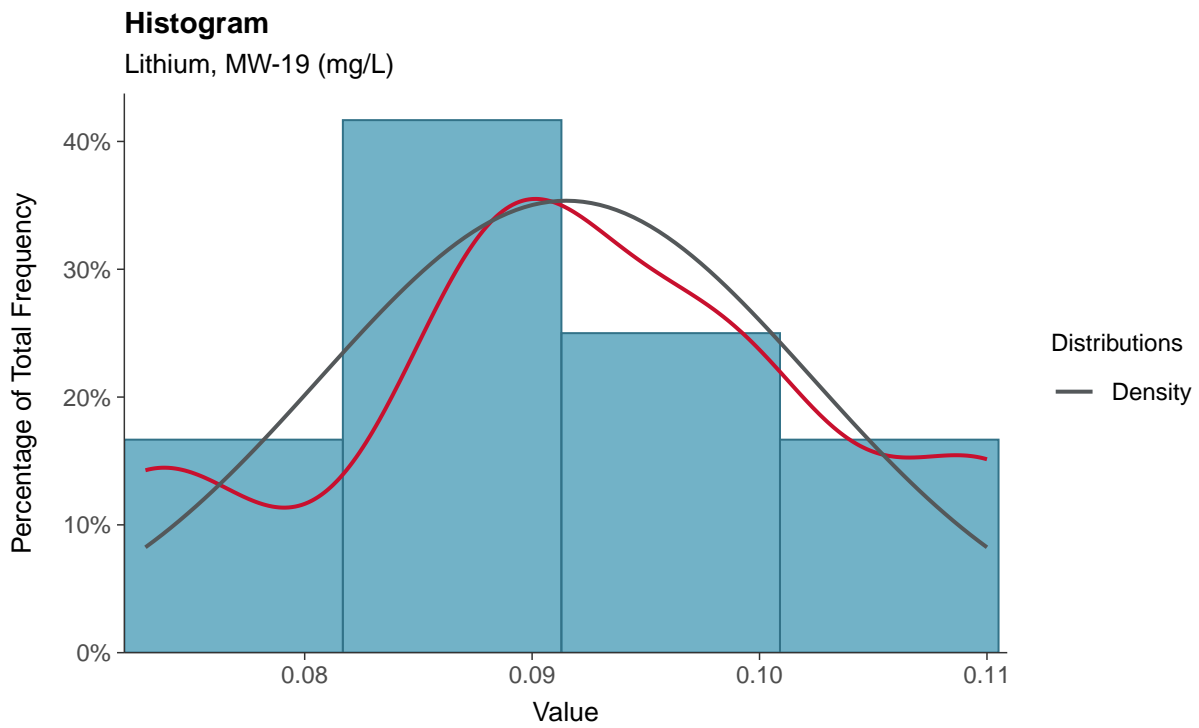
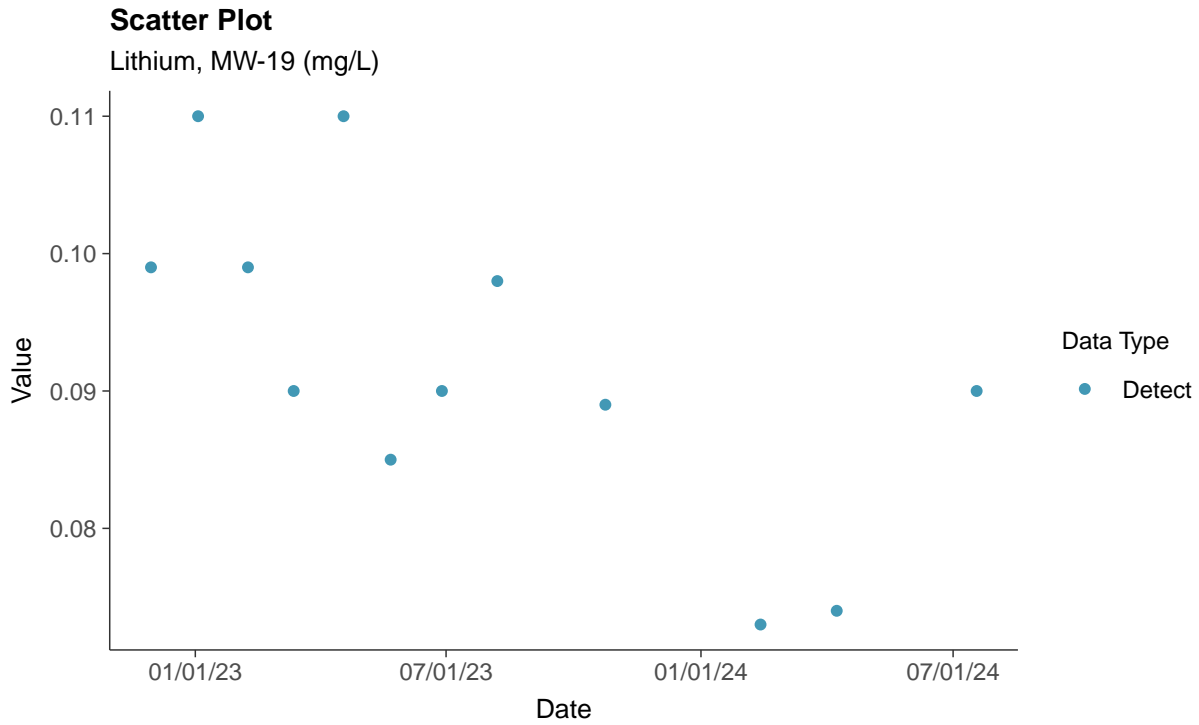
Lead, MW-19 (mg/L)





### Appendix IV: Lithium, MW-19

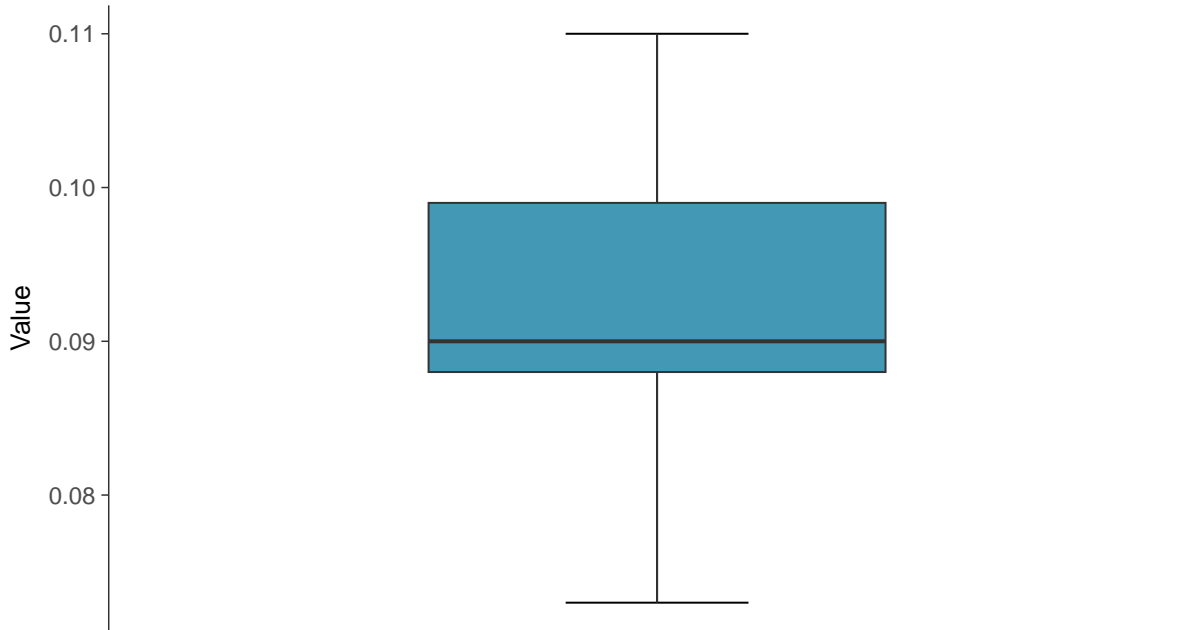
ID: 29\_1\_5\_116





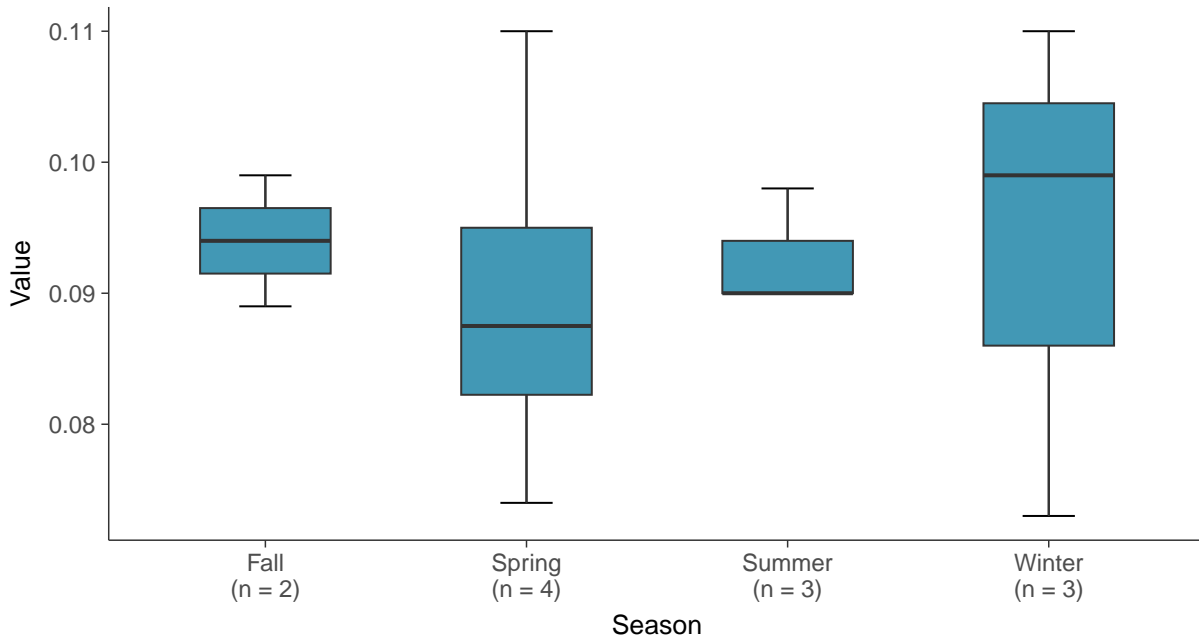
### Boxplot

Lithium, MW-19 (mg/L)



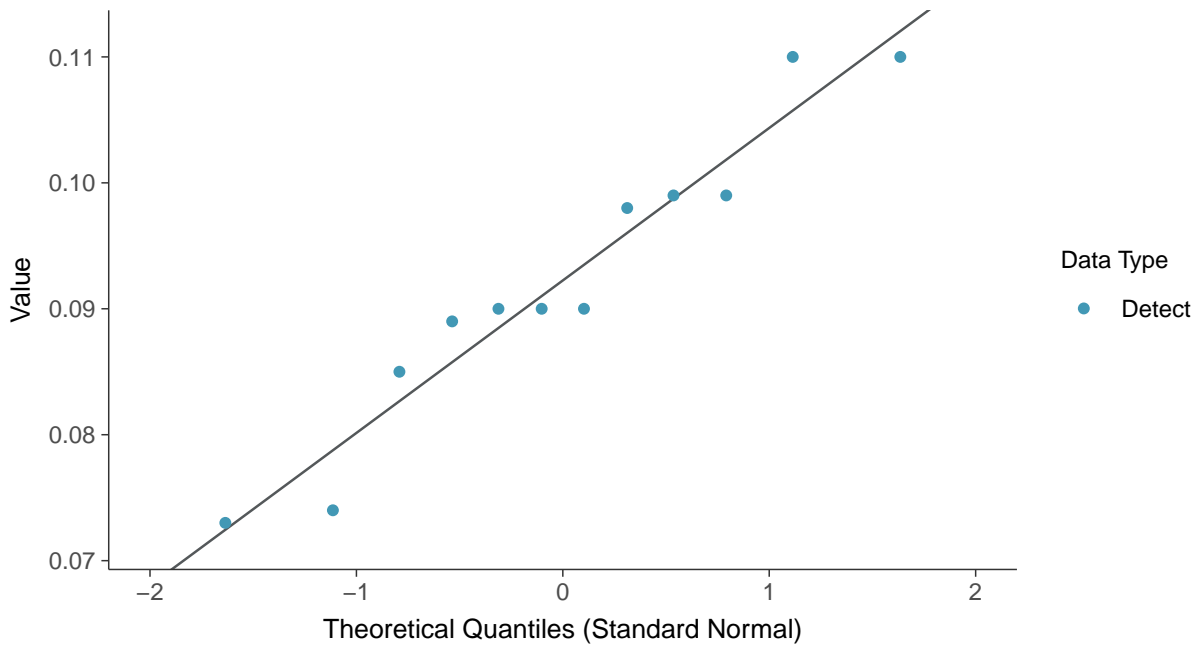
### Boxplot by Season

Lithium, MW-19 (mg/L)

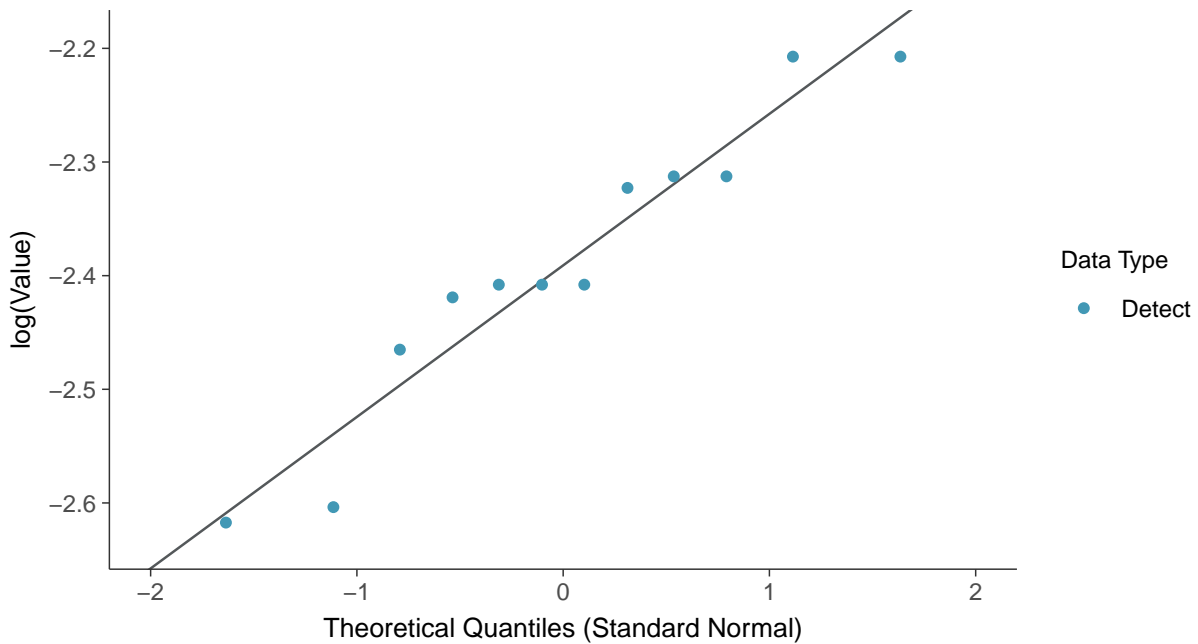




**Normal Q-Q plot**  
Lithium, MW-19 (mg/L)



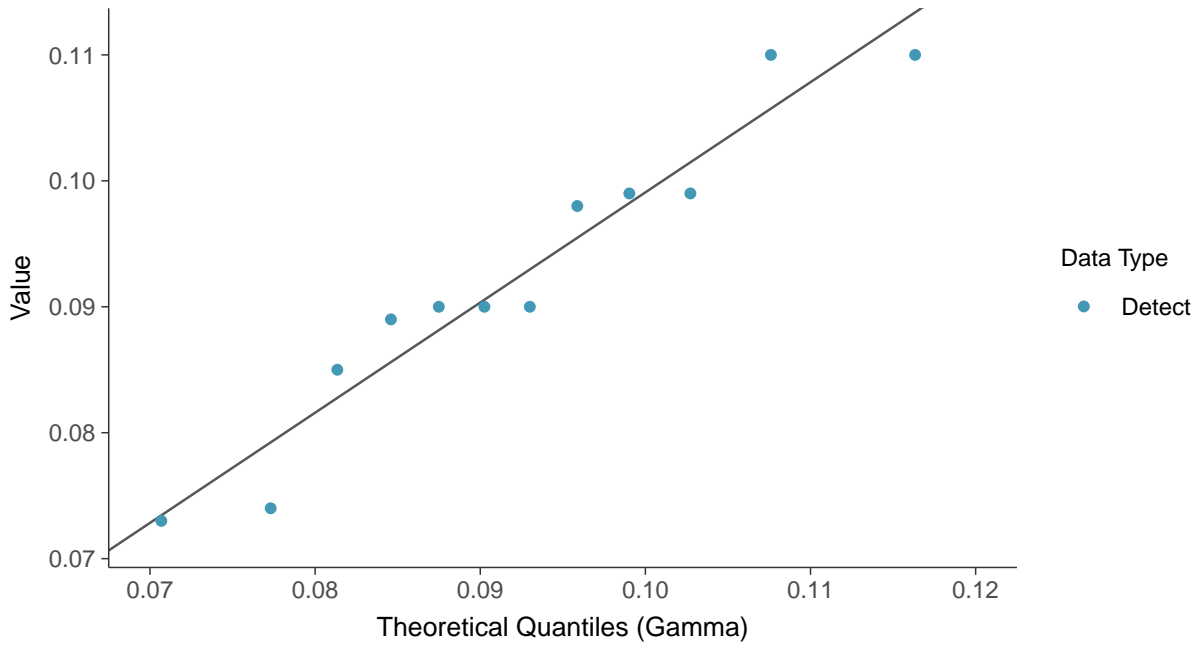
**Lognormal Q-Q plot**  
Lithium, MW-19 (mg/L)



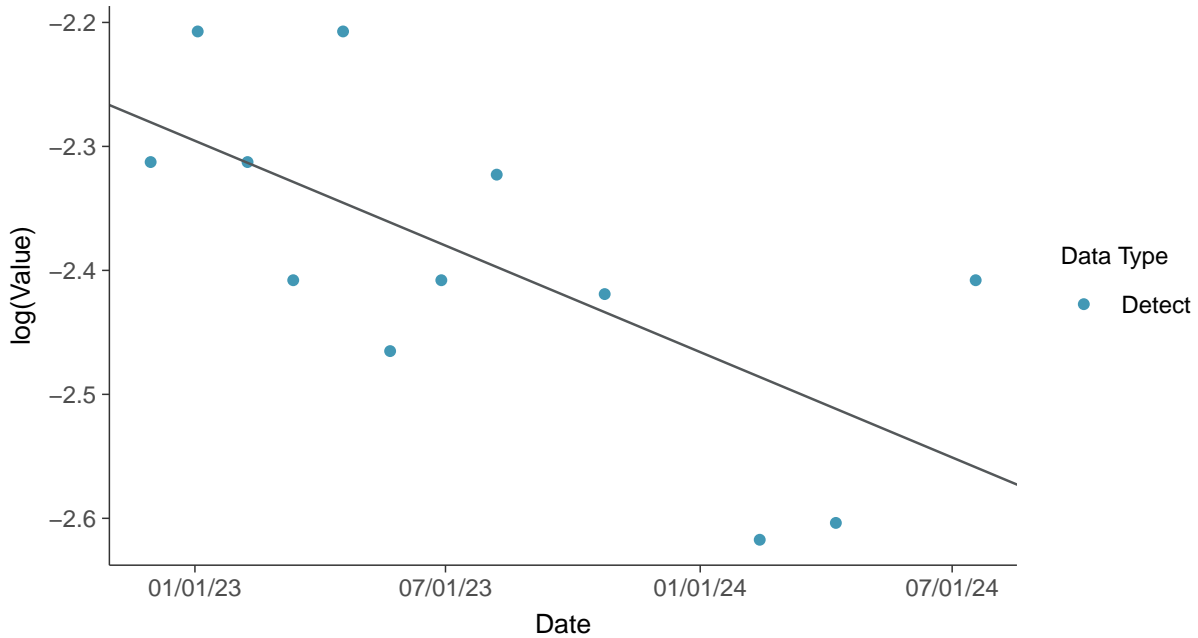




**Gamma Q-Q plot**  
Lithium, MW-19 (mg/L)



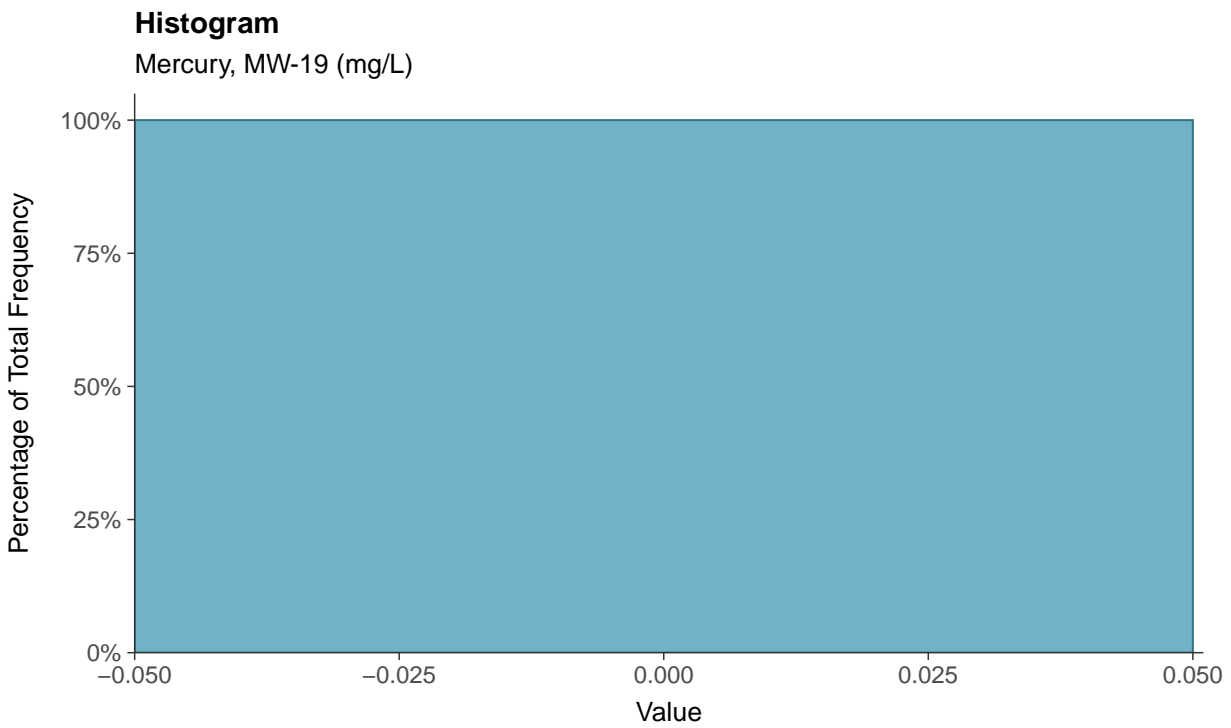
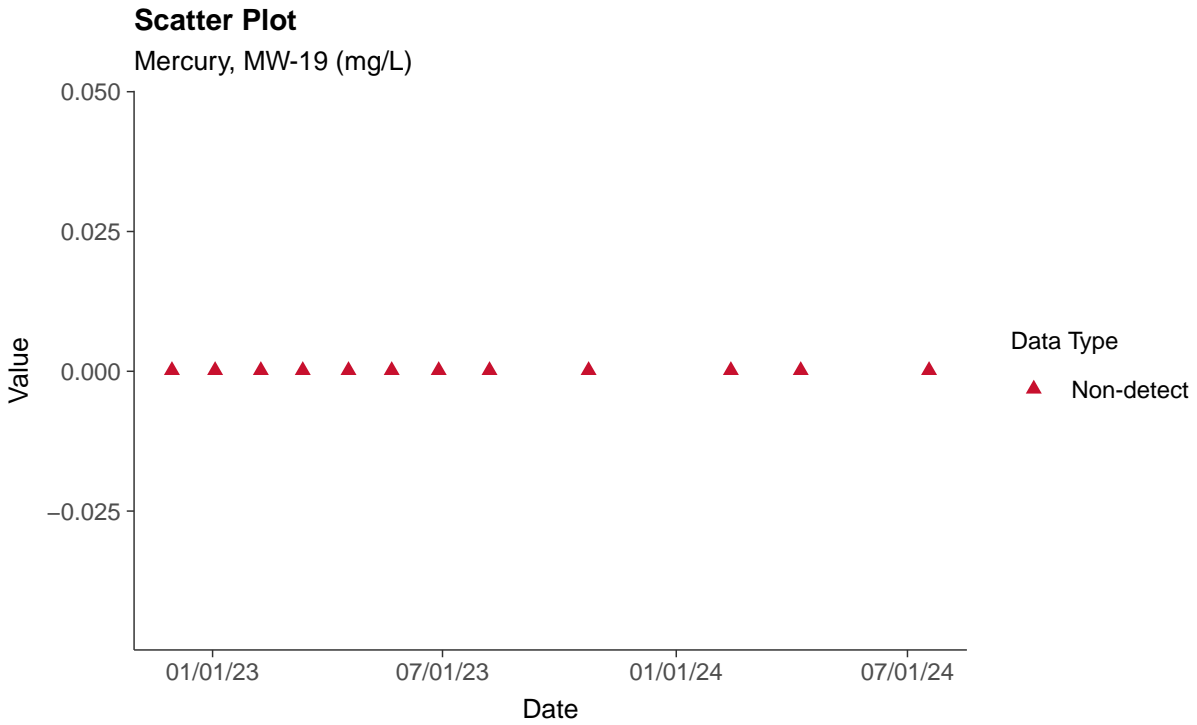
**Trend Regression: Lognormal MLE**  
Lithium, MW-19 (mg/L)





### Appendix IV: Mercury, MW-19

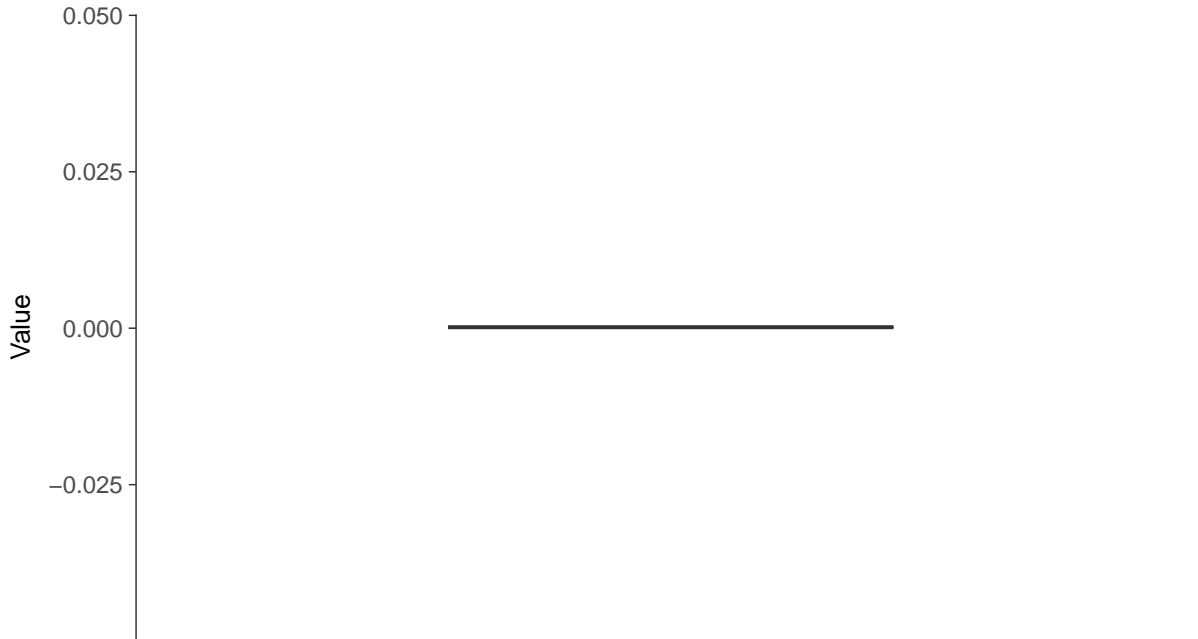
ID: 29\_1\_5\_117





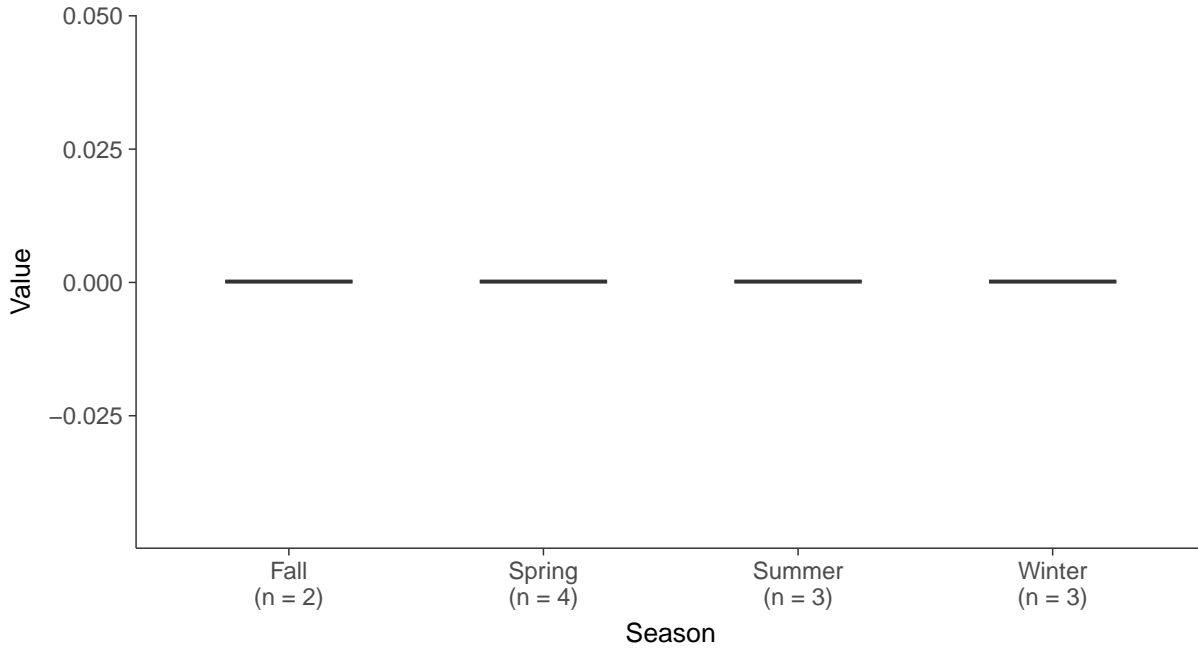
### Boxplot

Mercury, MW-19 (mg/L)



### Boxplot by Season

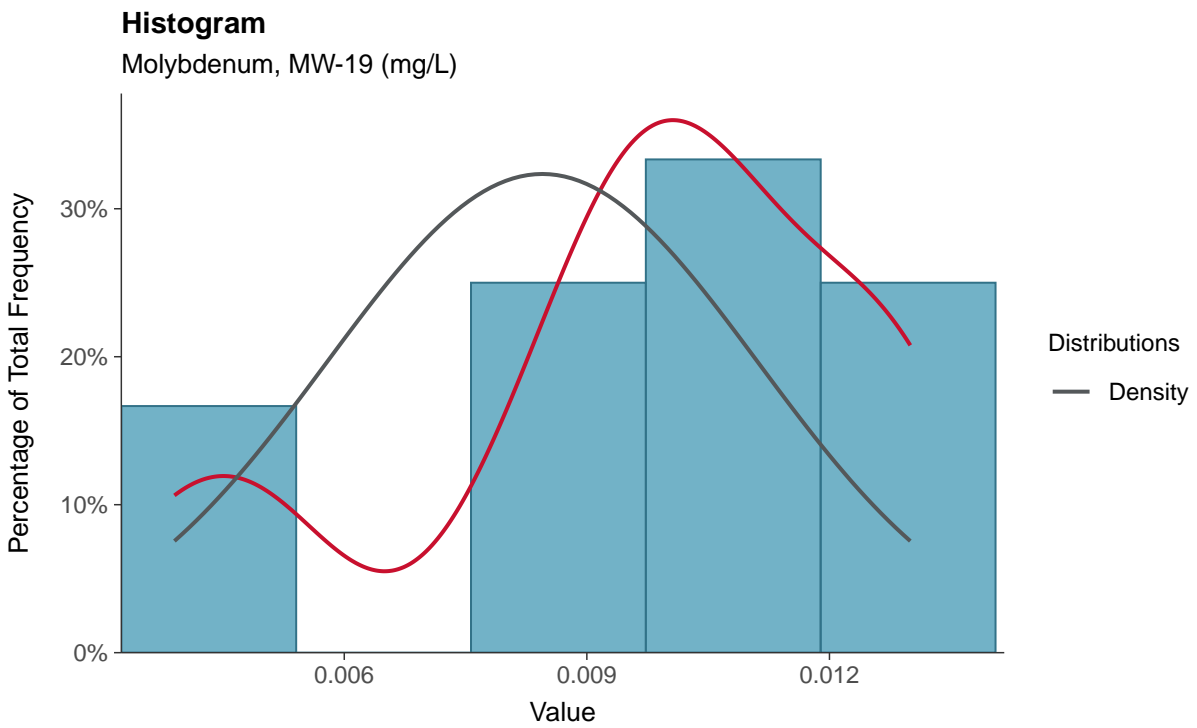
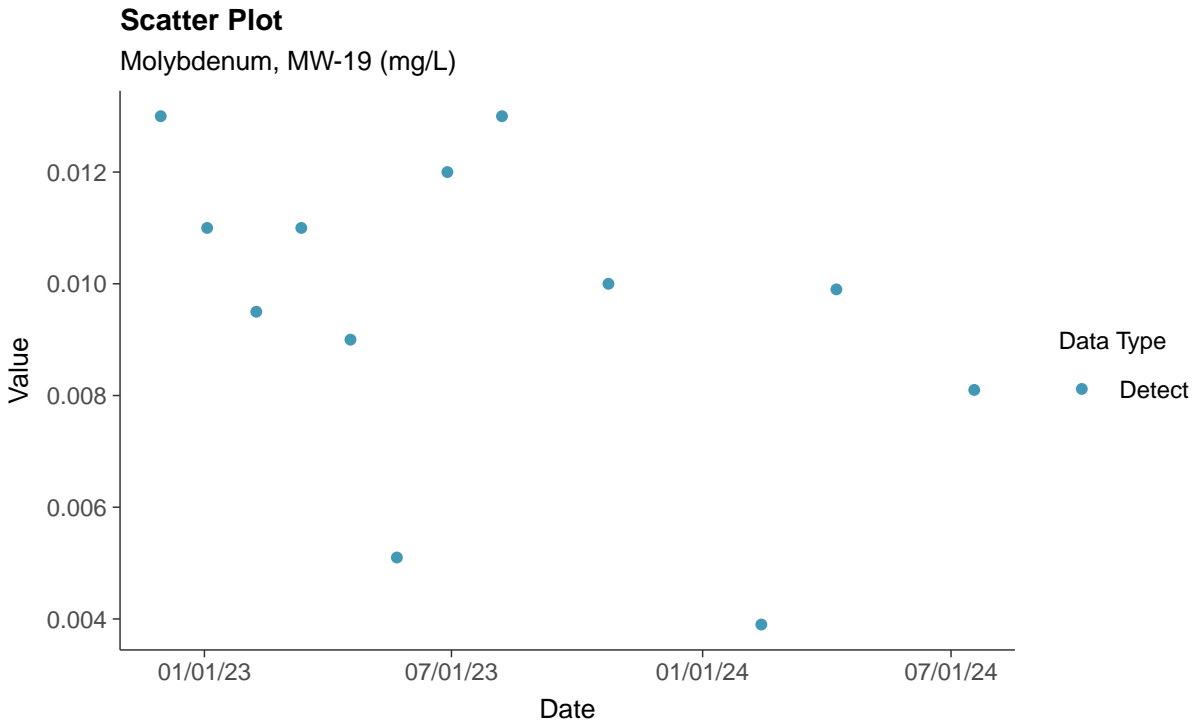
Mercury, MW-19 (mg/L)





### Appendix IV: Molybdenum, MW-19

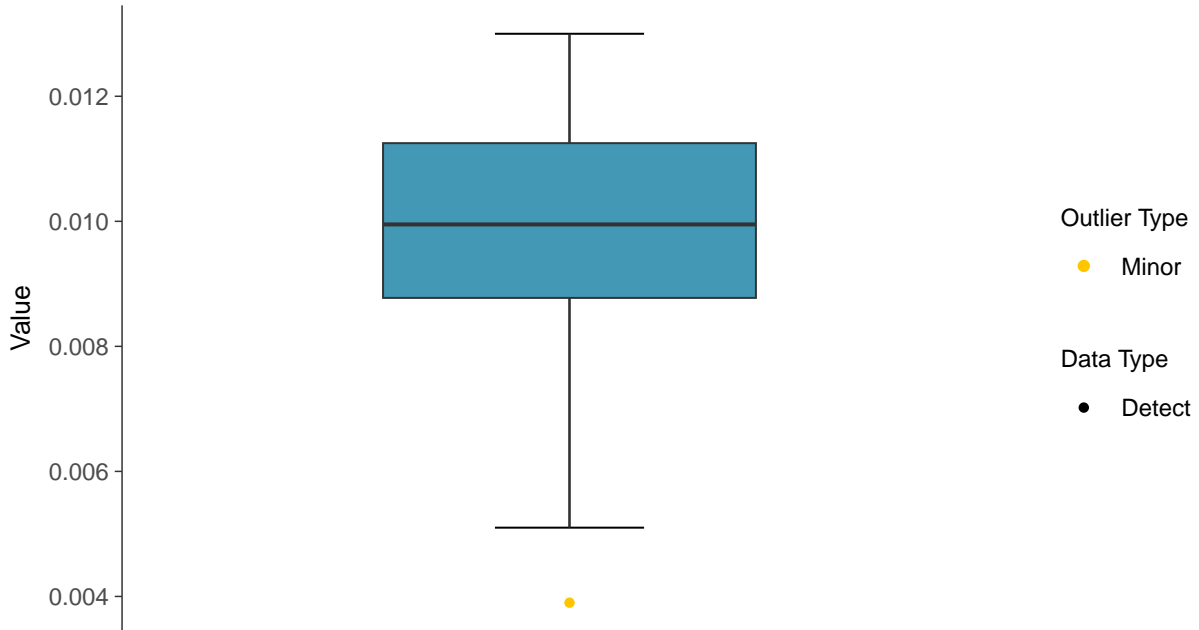
ID: 29\_1\_5\_118





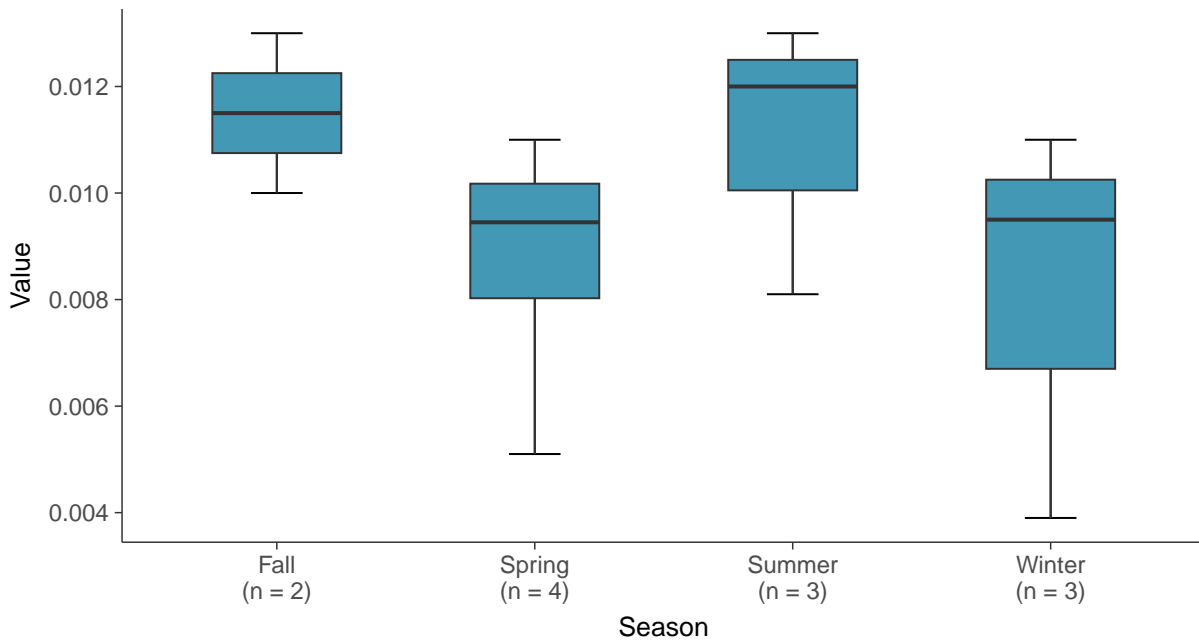
### Boxplot

Molybdenum, MW-19 (mg/L)



### Boxplot by Season

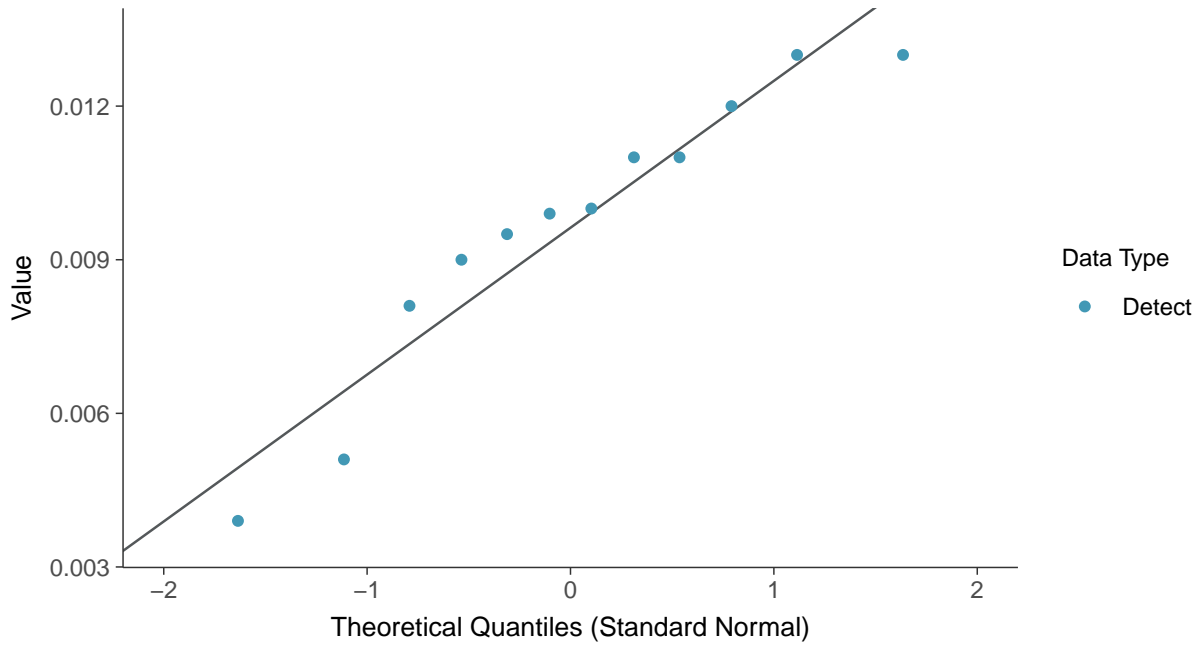
Molybdenum, MW-19 (mg/L)





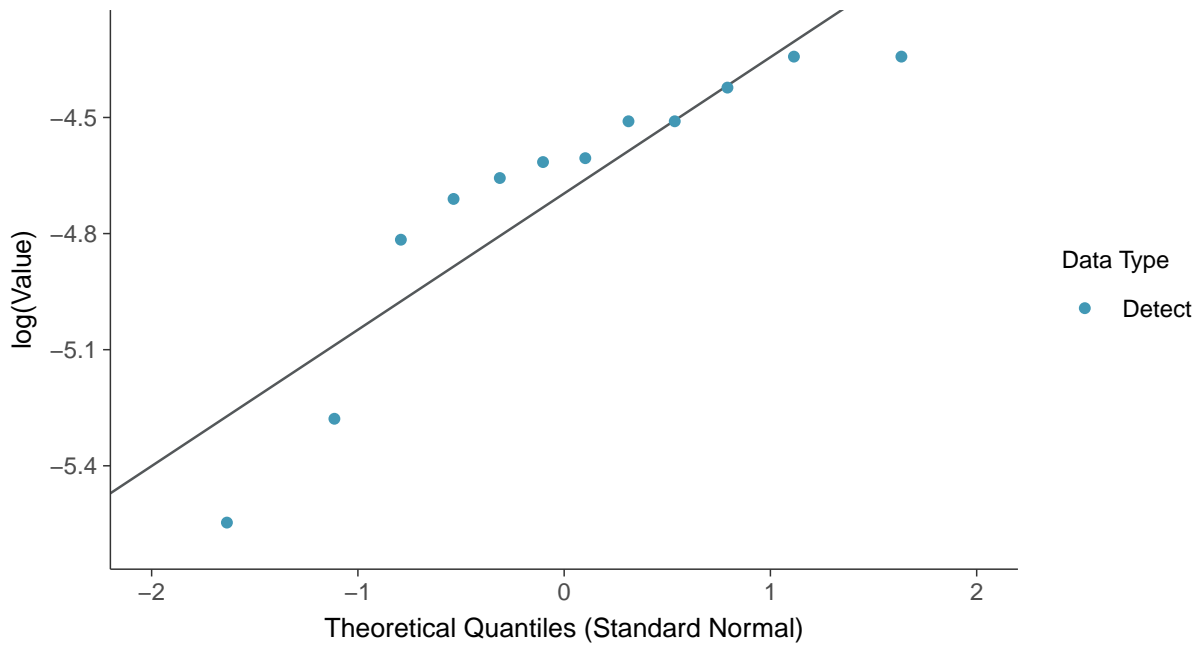
### Normal Q-Q plot

Molybdenum, MW-19 (mg/L)



### Lognormal Q-Q plot

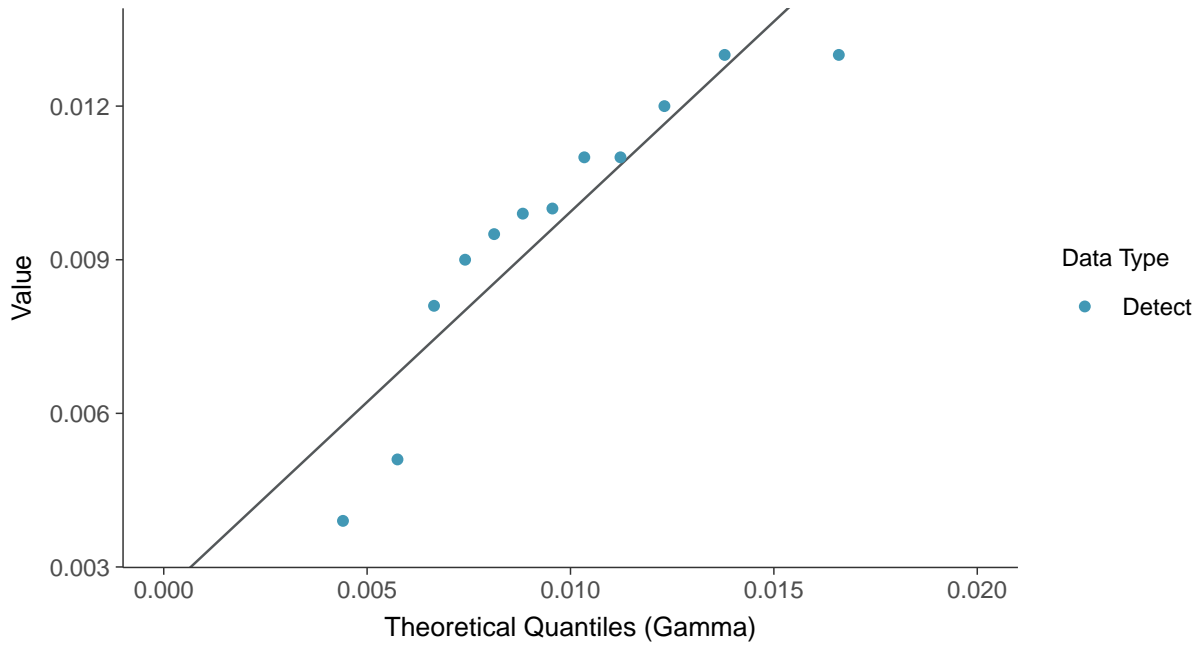
Molybdenum, MW-19 (mg/L)





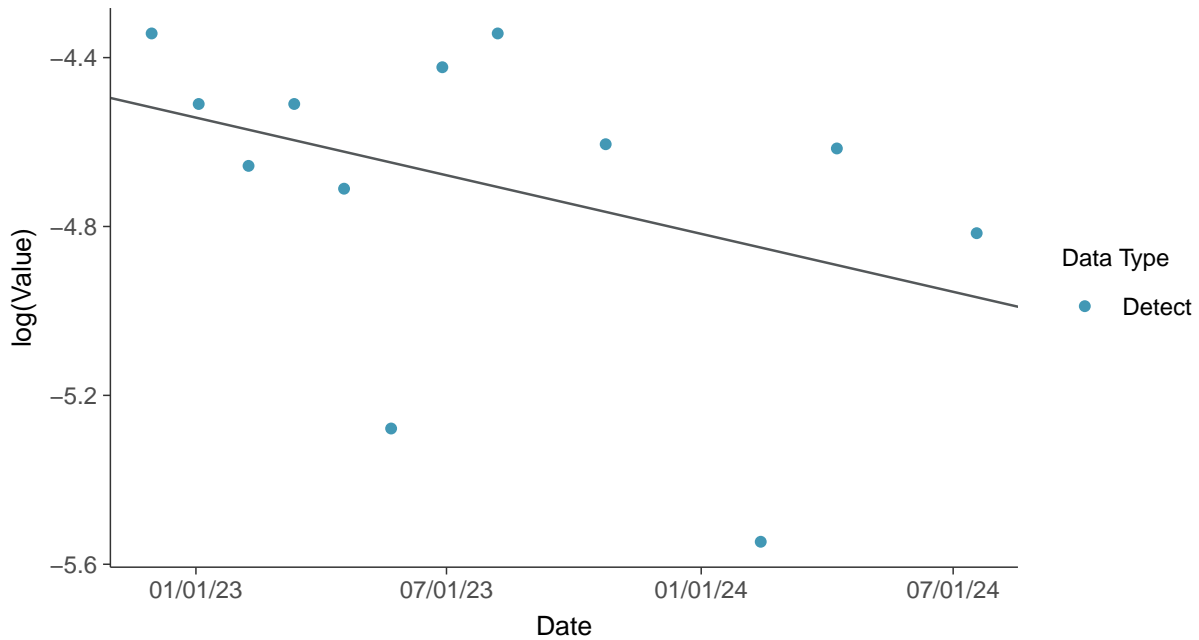
### Gamma Q-Q plot

Molybdenum, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

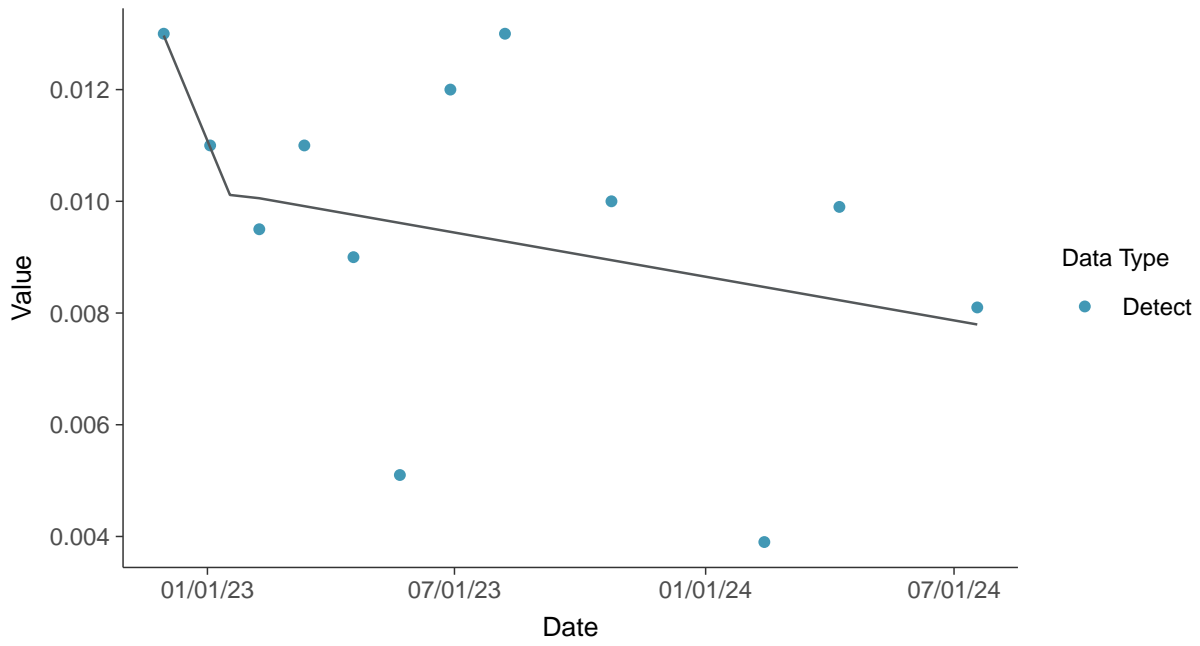
Molybdenum, MW-19 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-19 (mg/L)





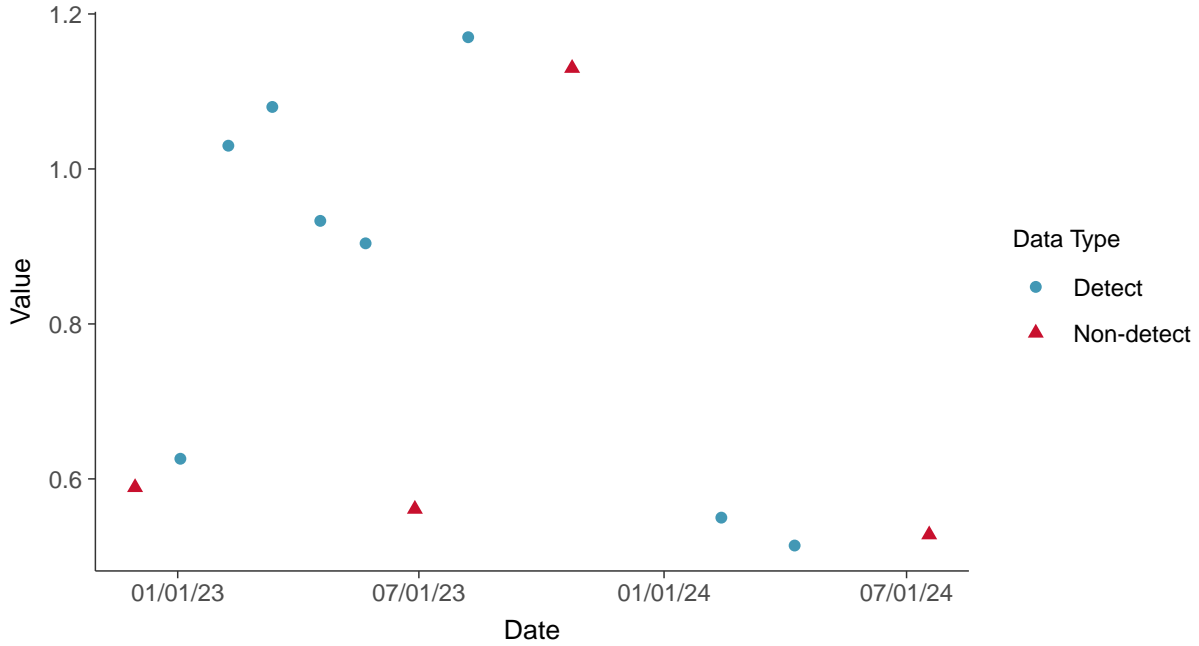


### Appendix IV: Radium 226 and 228, MW-19

ID: 29\_1\_5\_121

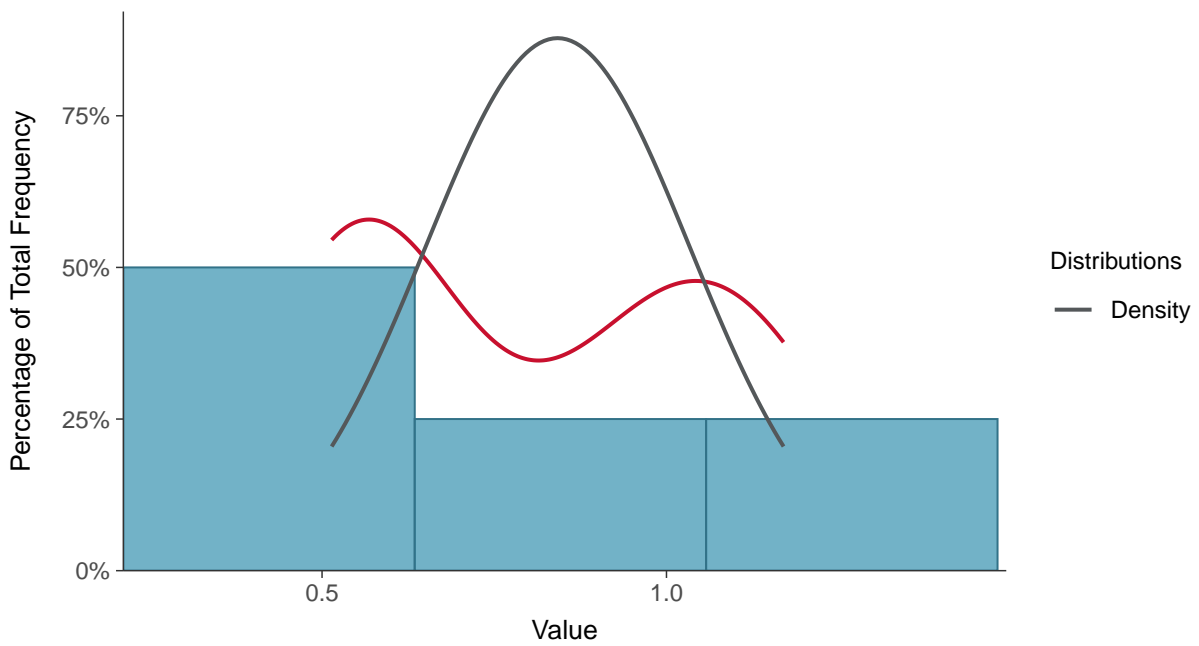
#### Scatter Plot

Radium 226 and 228, MW-19 (pCi/L)



#### Histogram

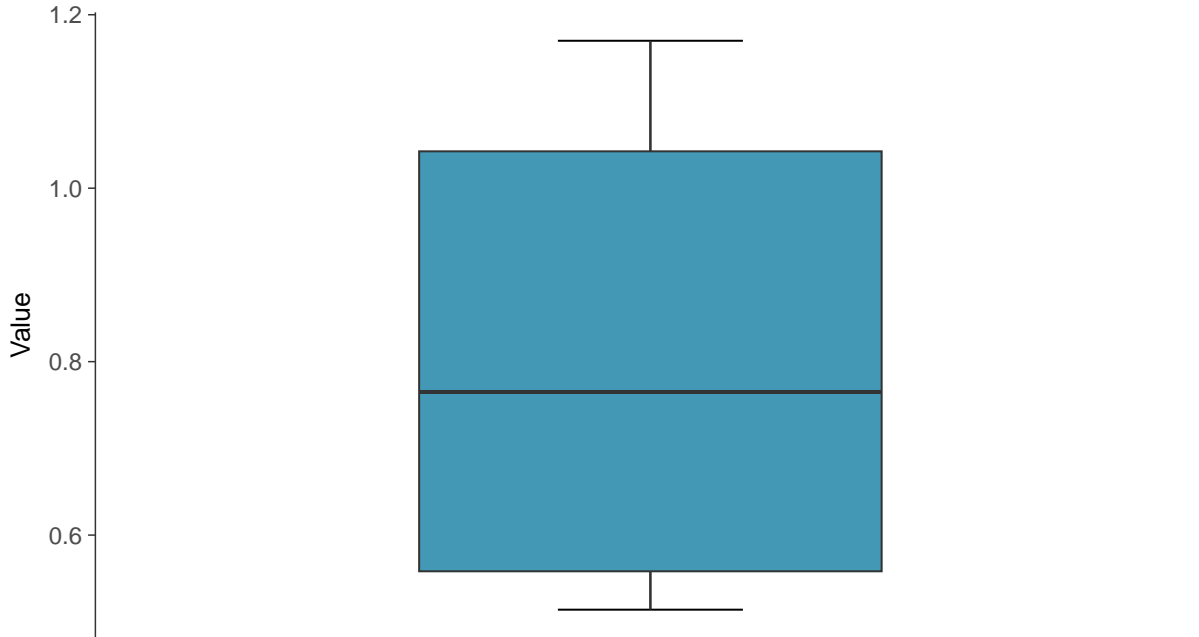
Radium 226 and 228, MW-19 (pCi/L)





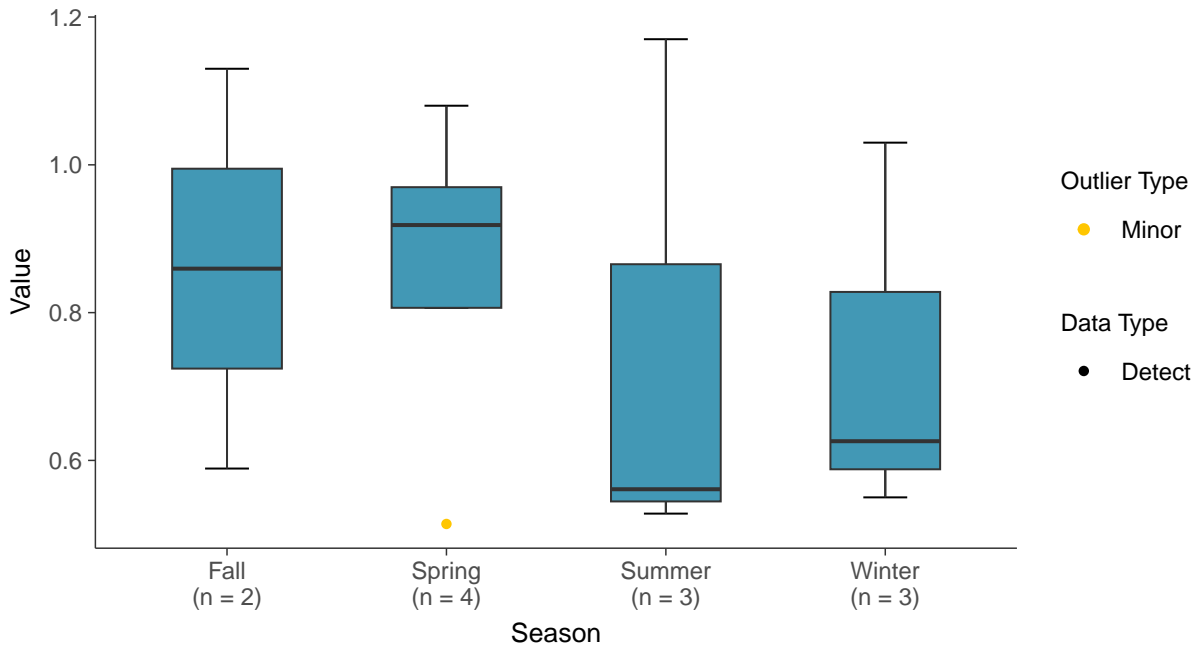
### Boxplot

Radium 226 and 228, MW-19 (pCi/L)



### Boxplot by Season

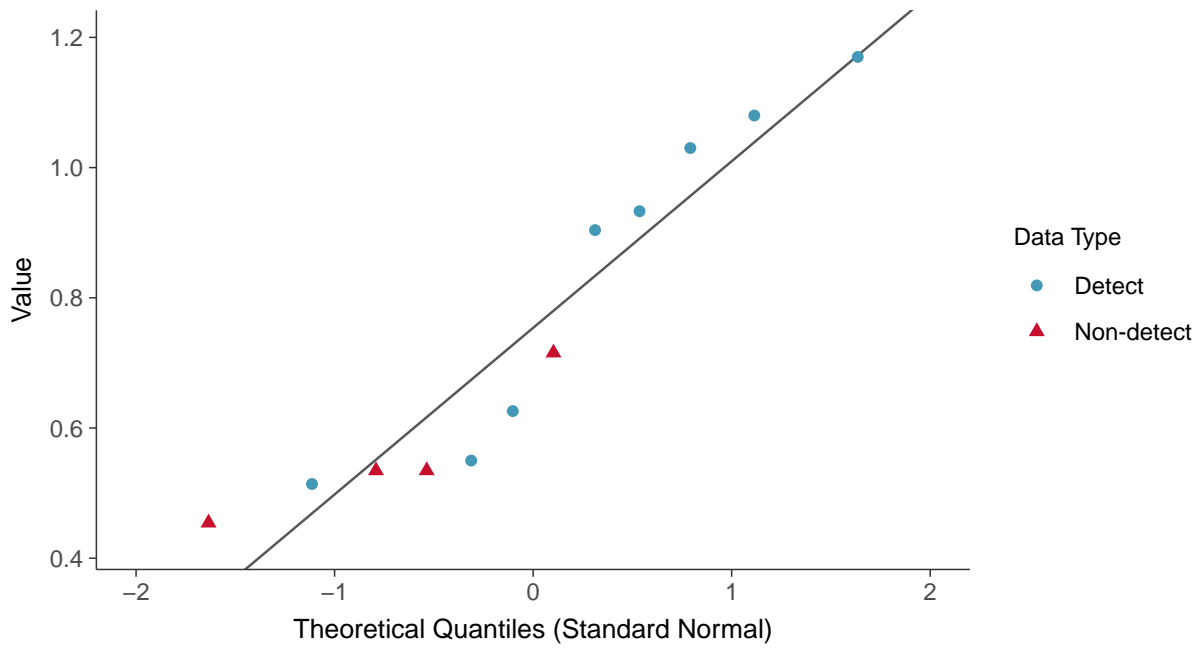
Radium 226 and 228, MW-19 (pCi/L)





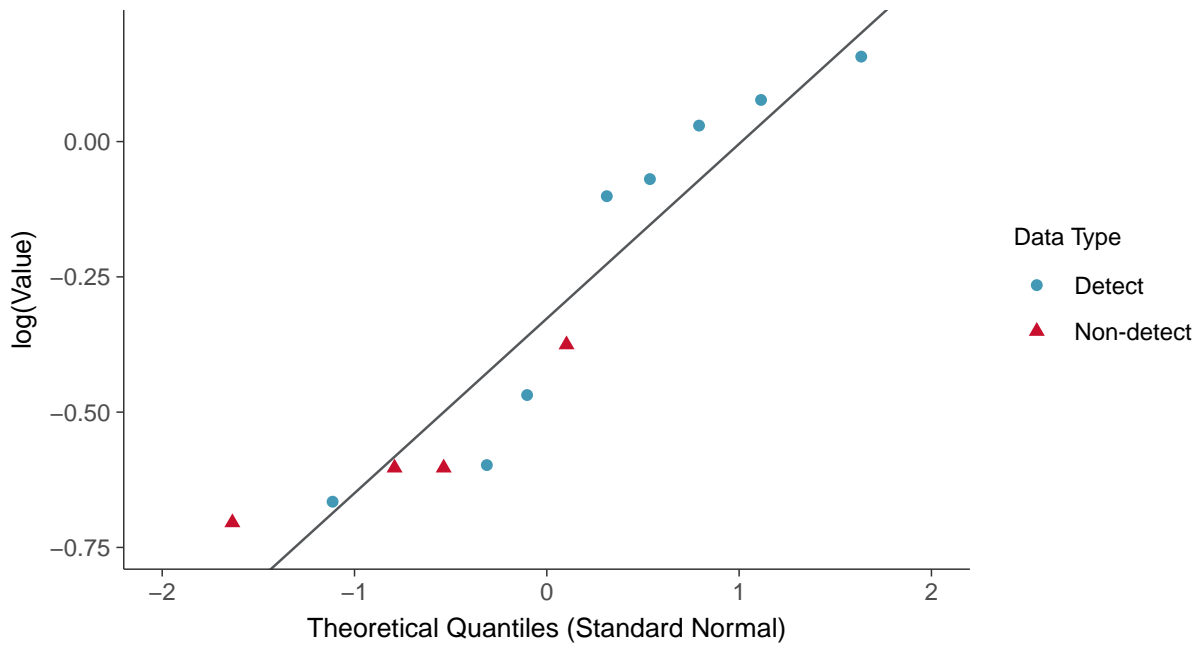
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

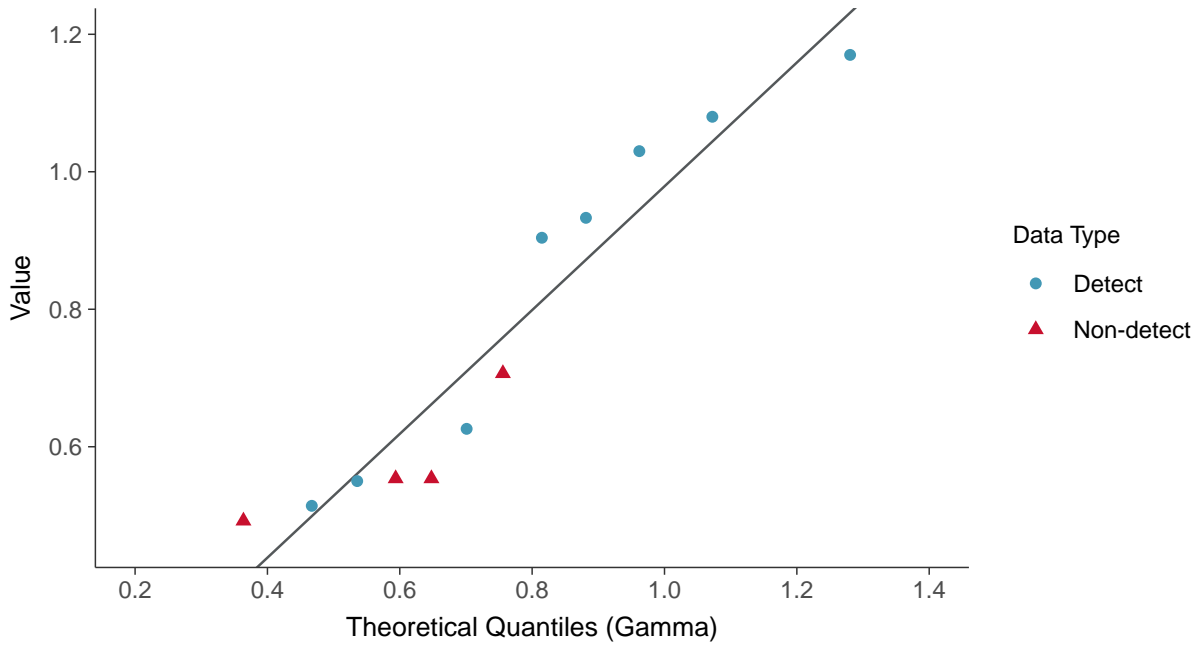
Radium 226 and 228, MW-19 (pCi/L)





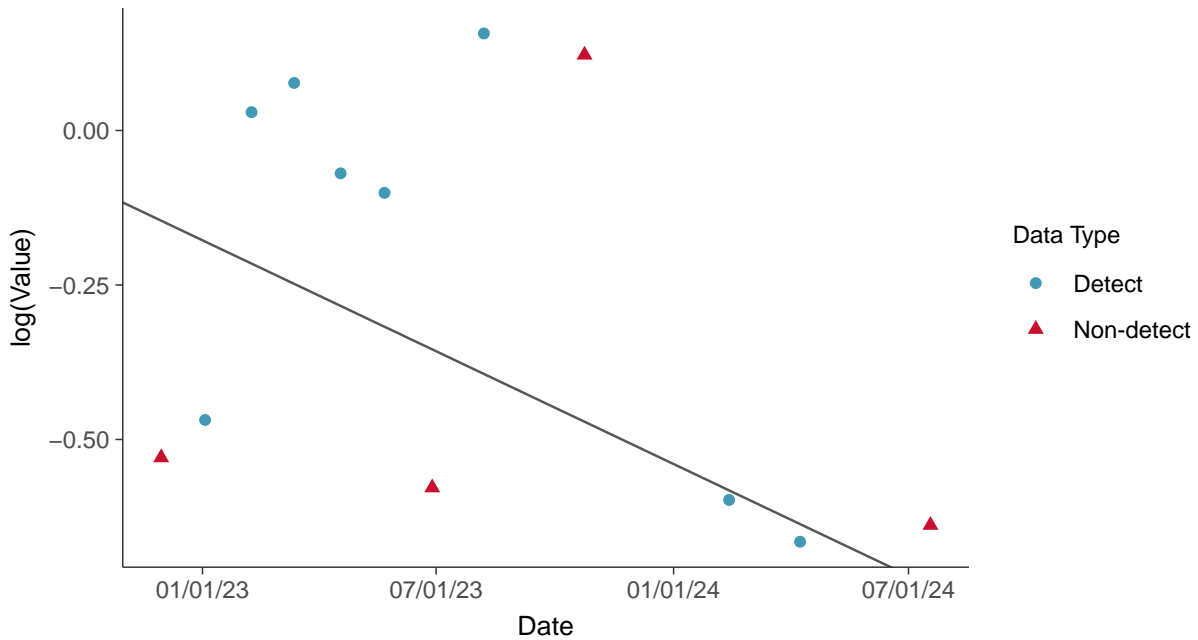
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-19 (pCi/L)



### Trend Regression: Lognormal MLE

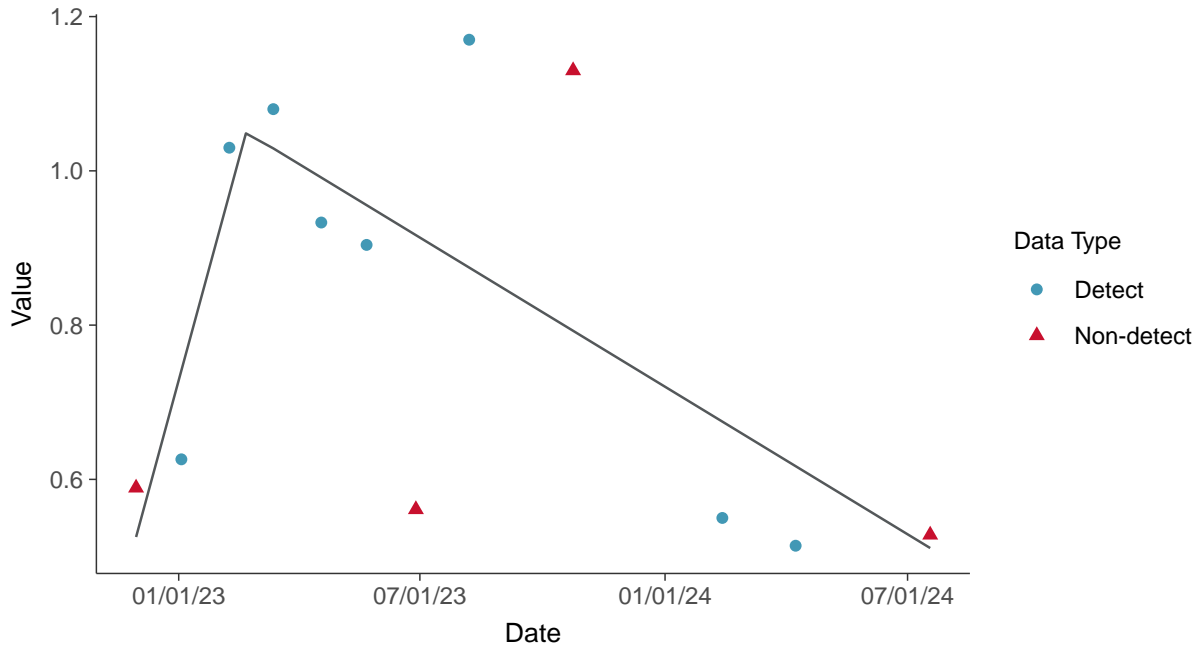
Radium 226 and 228, MW-19 (pCi/L)





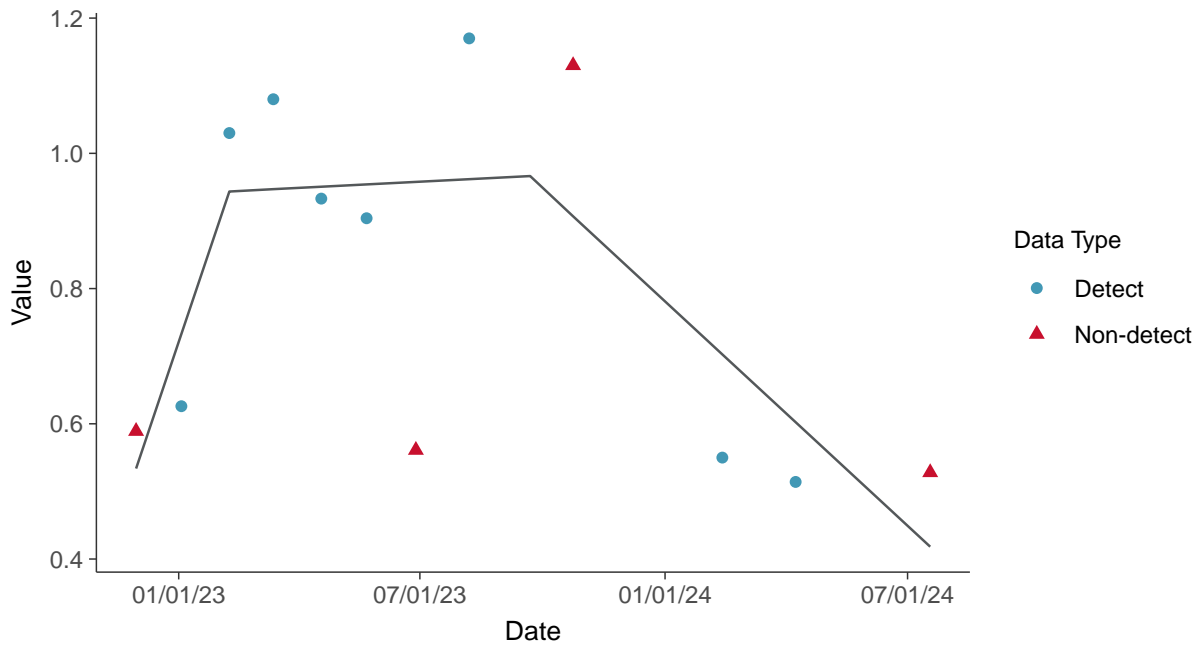
### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-19 (pCi/L)



### Trend Regression: Piecewise Linear-Linear-Linear

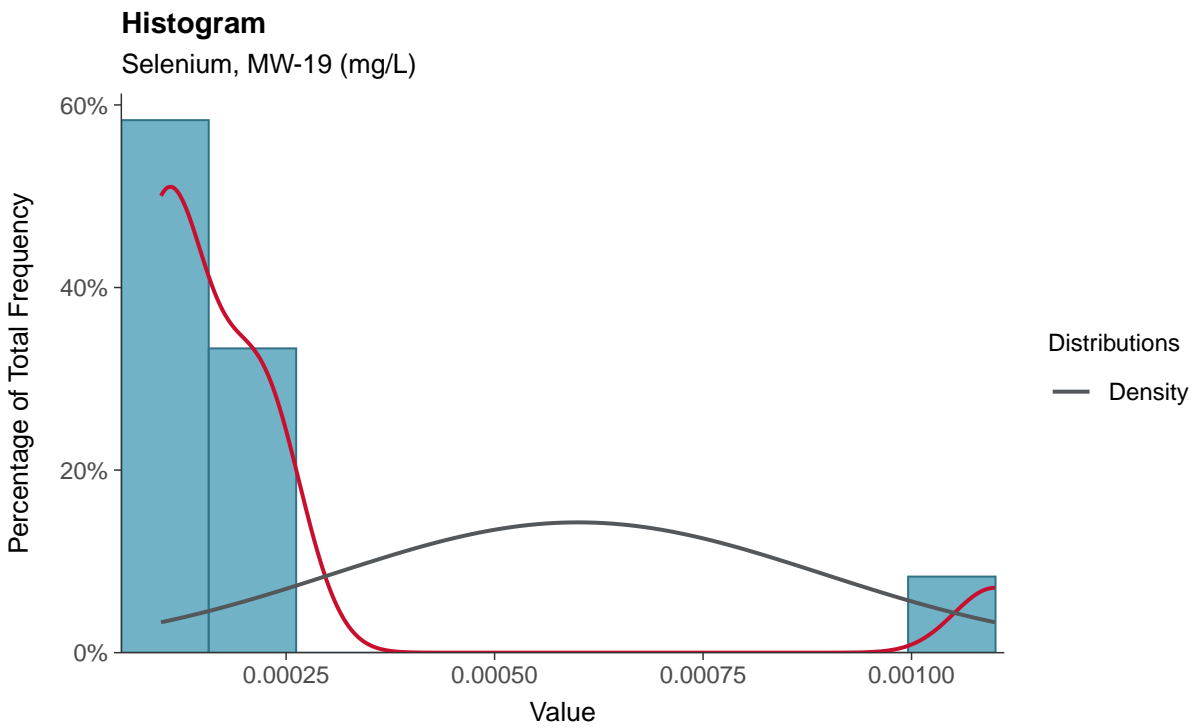
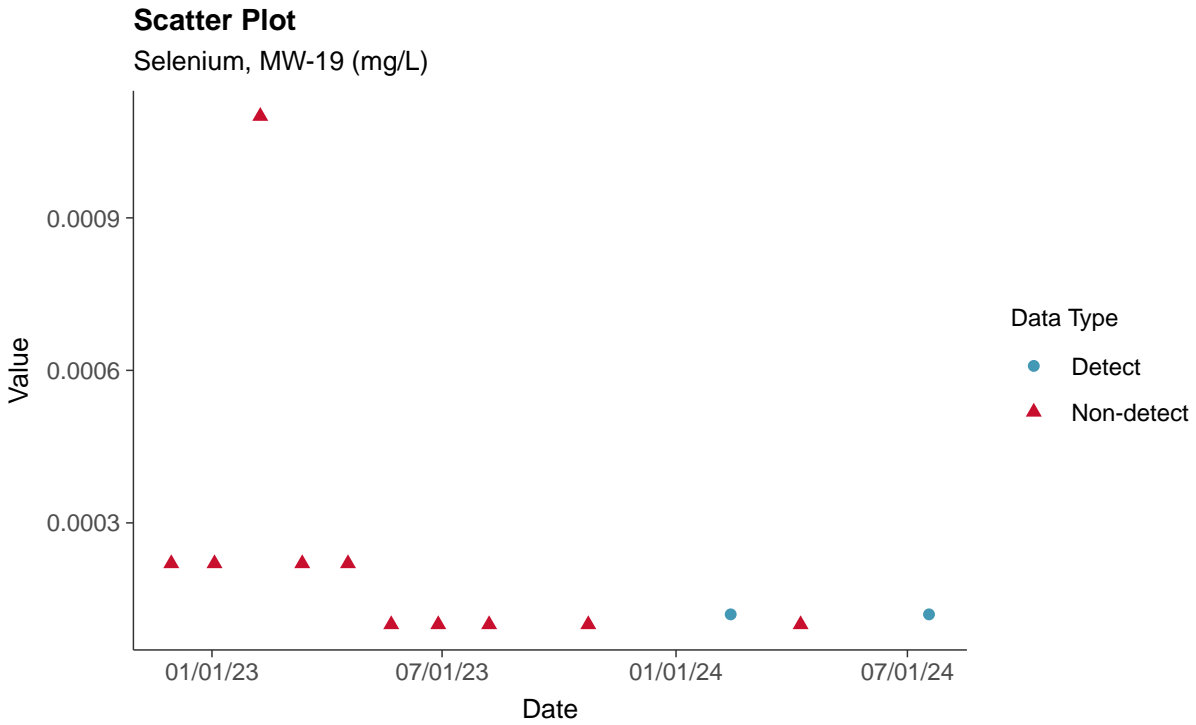
Radium 226 and 228, MW-19 (pCi/L)





### Appendix IV: Selenium, MW-19

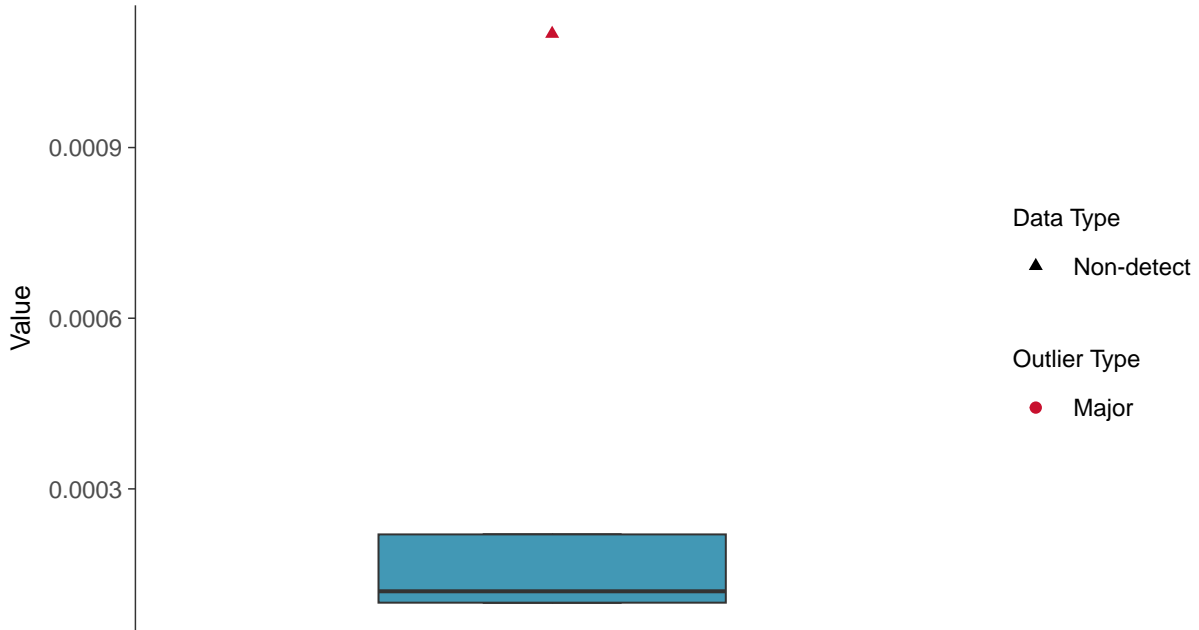
ID: 29\_1\_5\_122





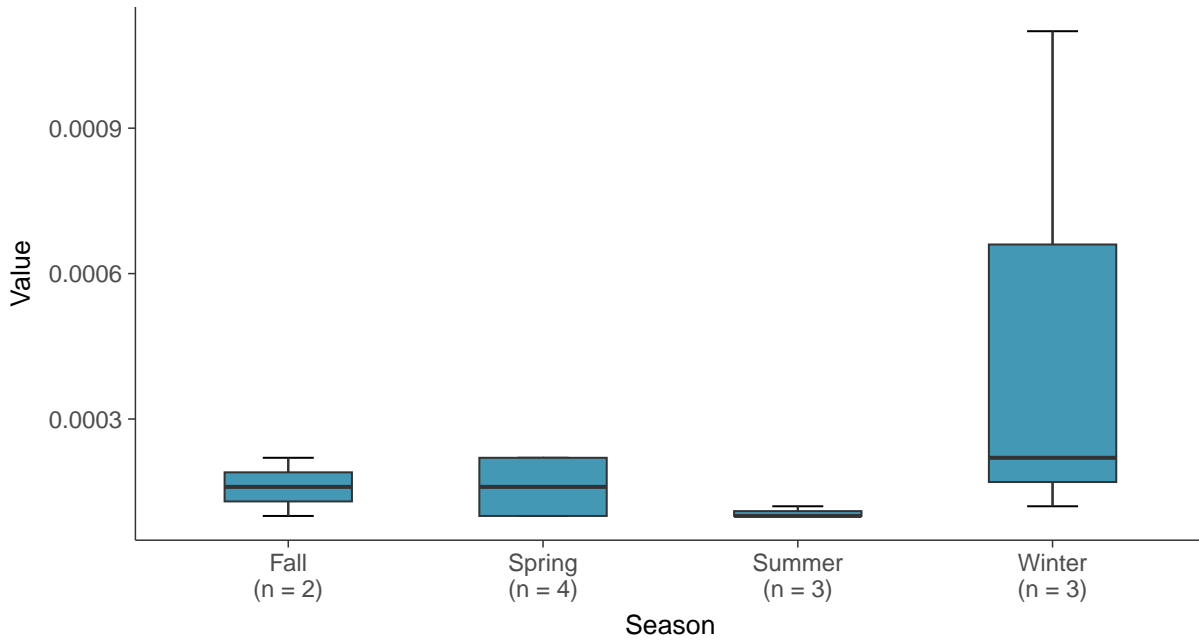
### Boxplot

Selenium, MW-19 (mg/L)



### Boxplot by Season

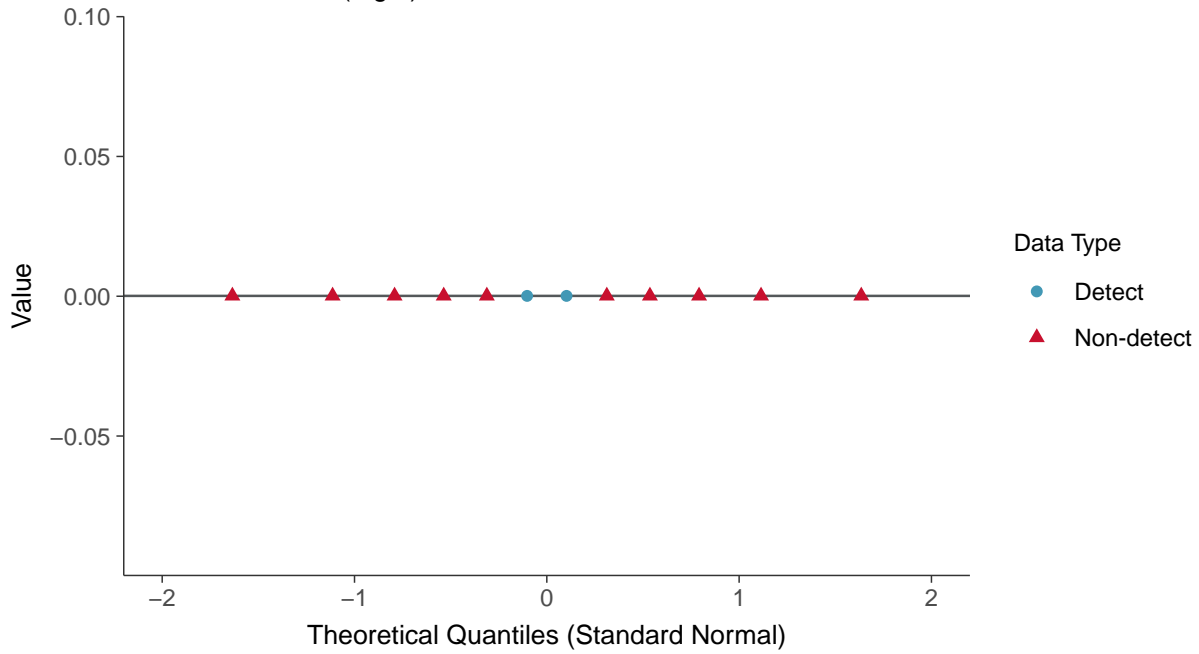
Selenium, MW-19 (mg/L)





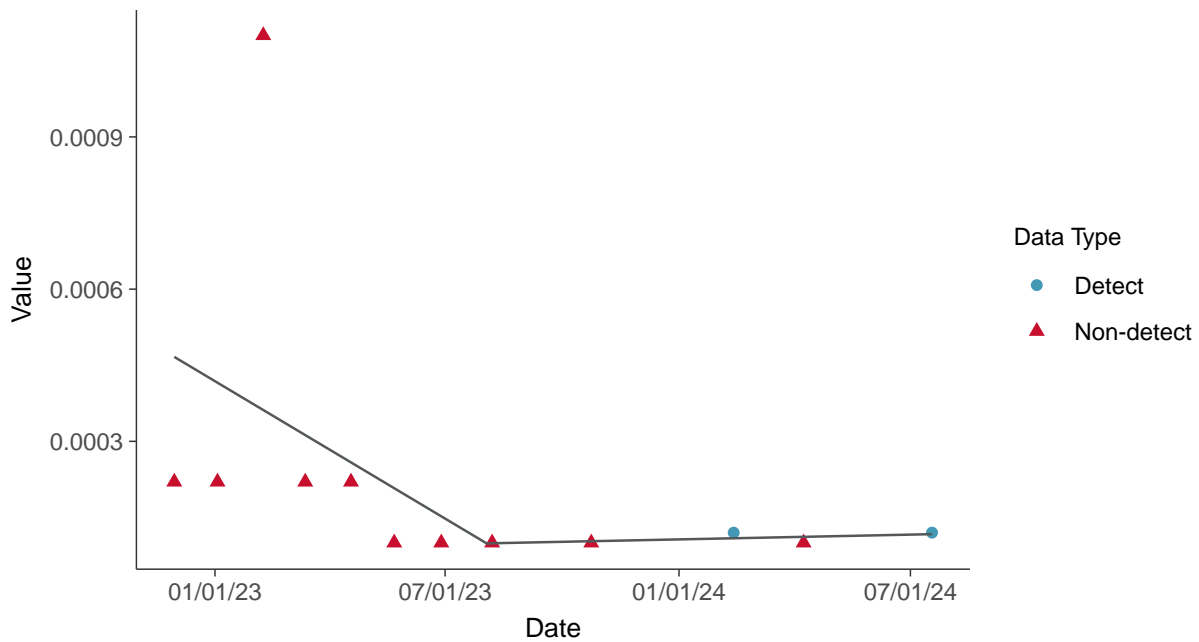
### Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Selenium, MW-19 (mg/L)

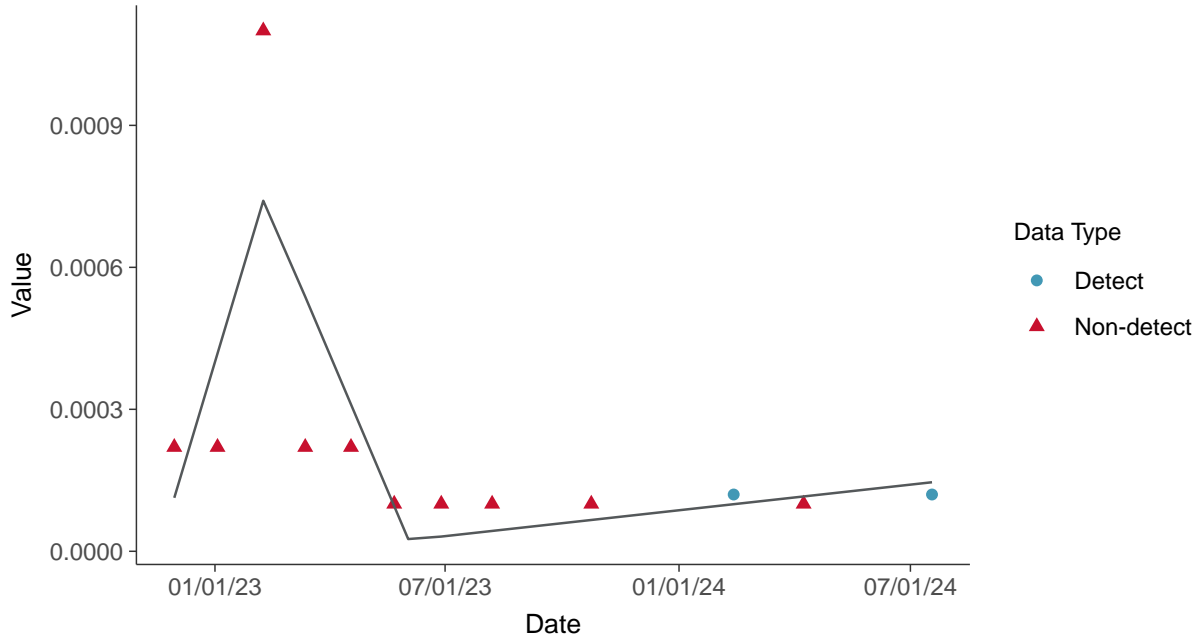






### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-19 (mg/L)



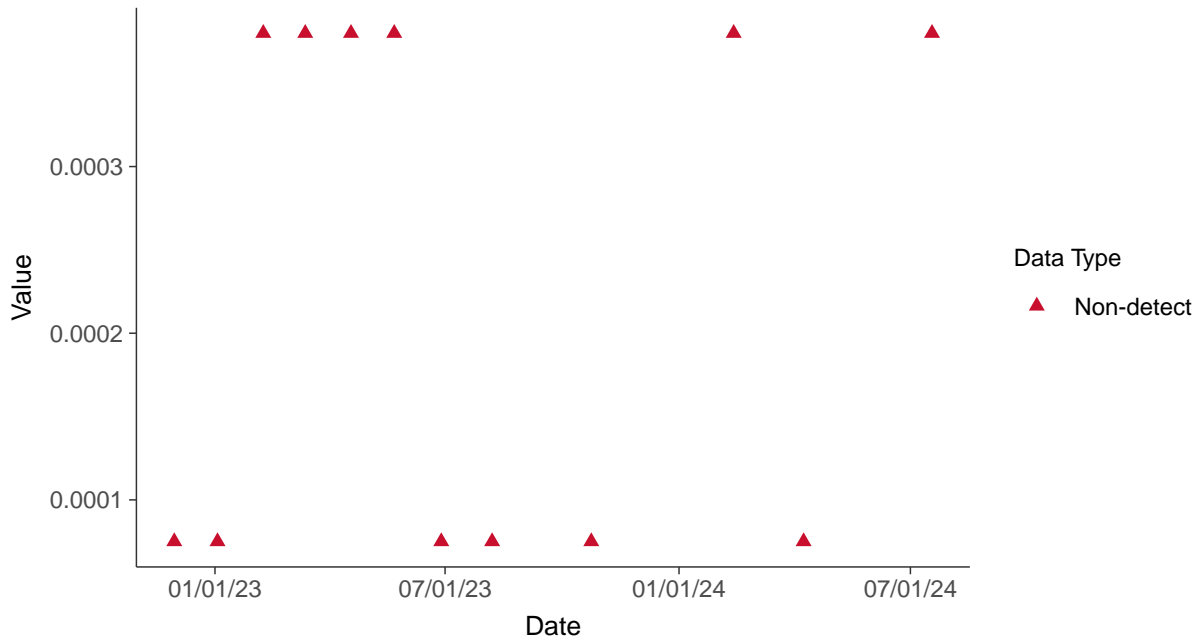


### Appendix IV: Thallium, MW-19

ID: 29\_1\_5\_125

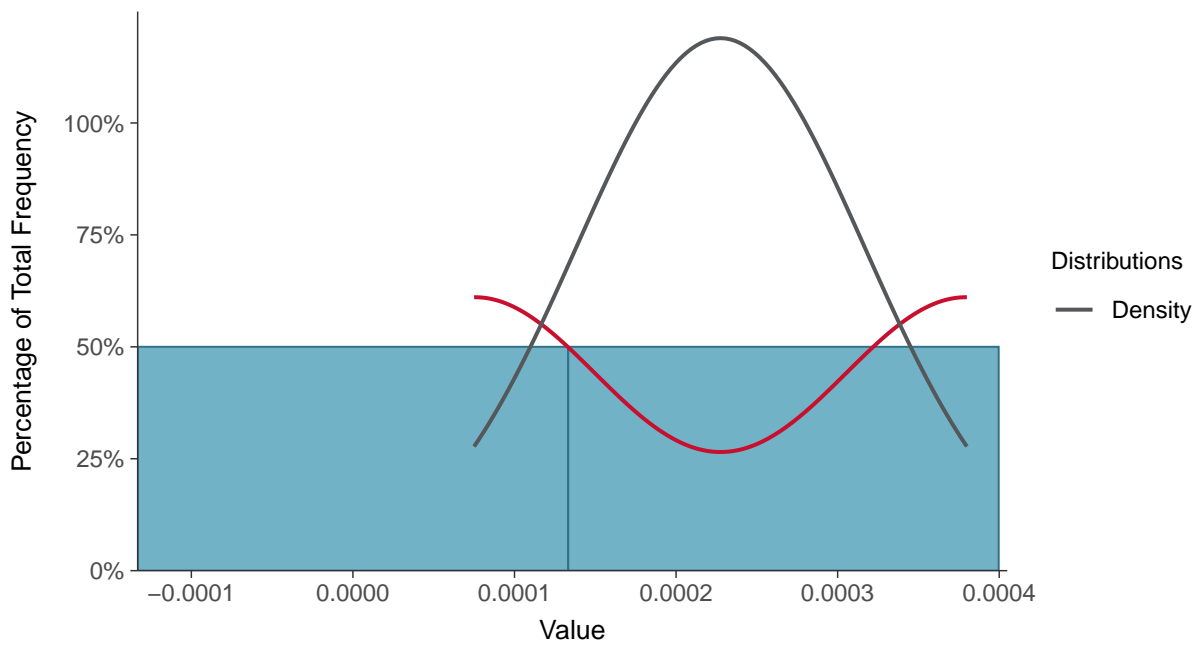
#### Scatter Plot

Thallium, MW-19 (mg/L)



#### Histogram

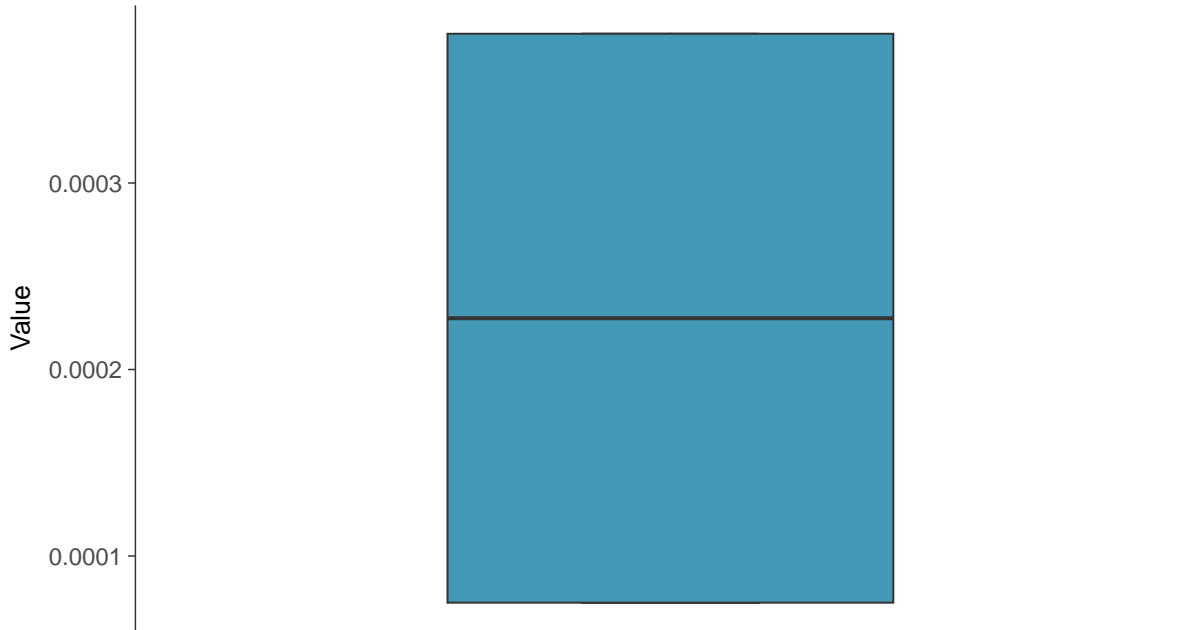
Thallium, MW-19 (mg/L)





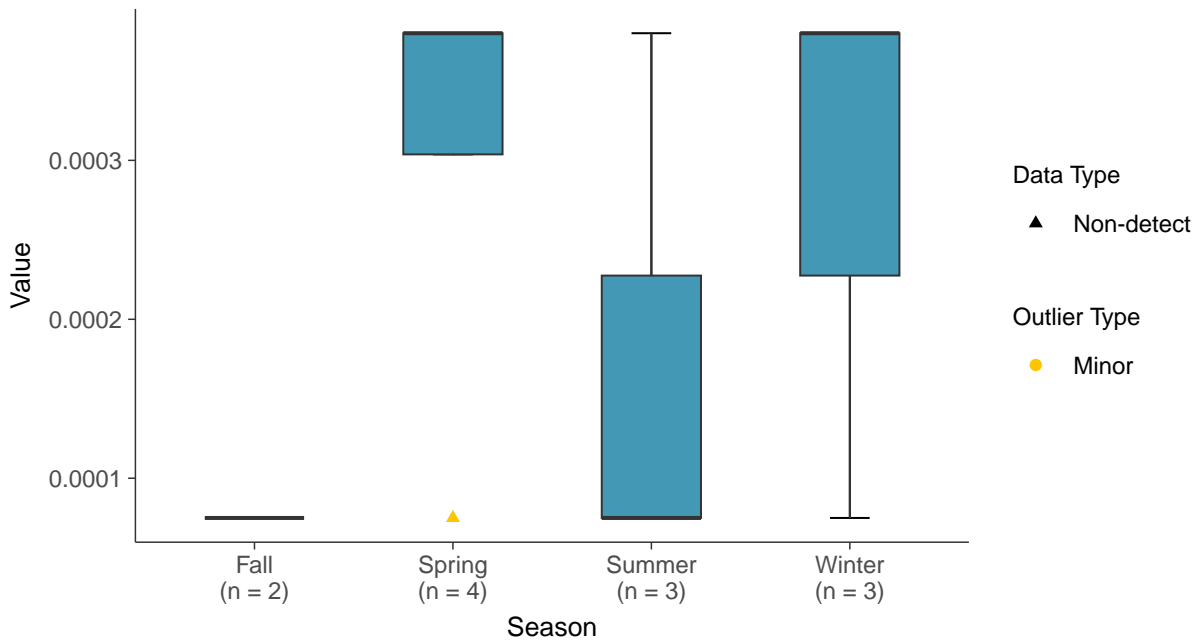
### Boxplot

Thallium, MW-19 (mg/L)



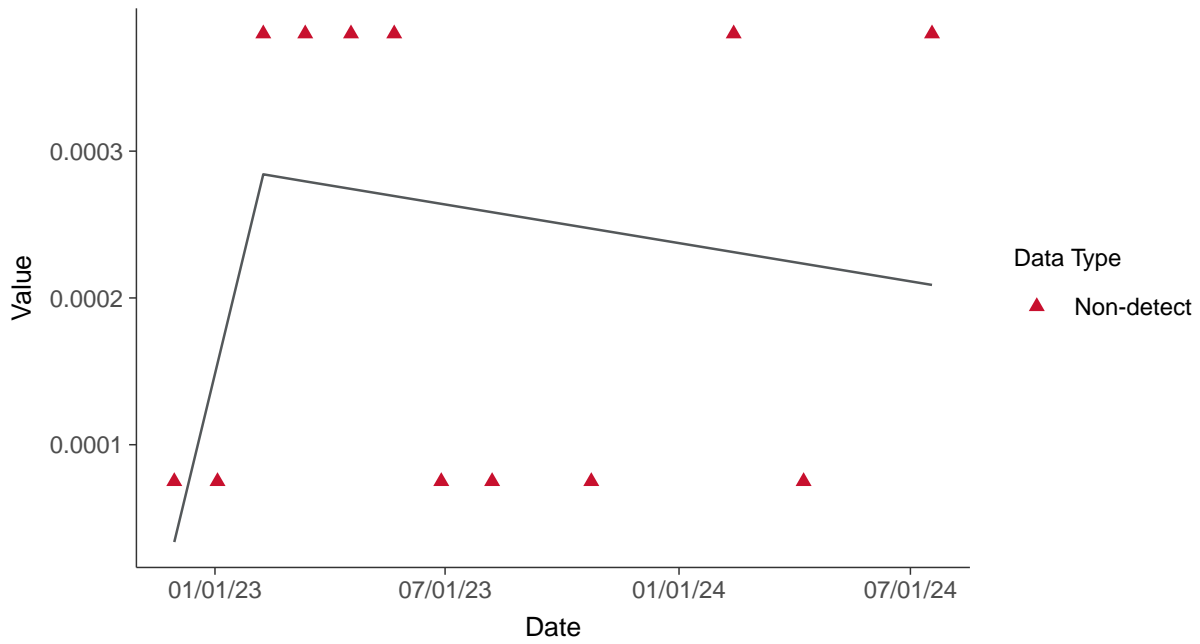
### Boxplot by Season

Thallium, MW-19 (mg/L)

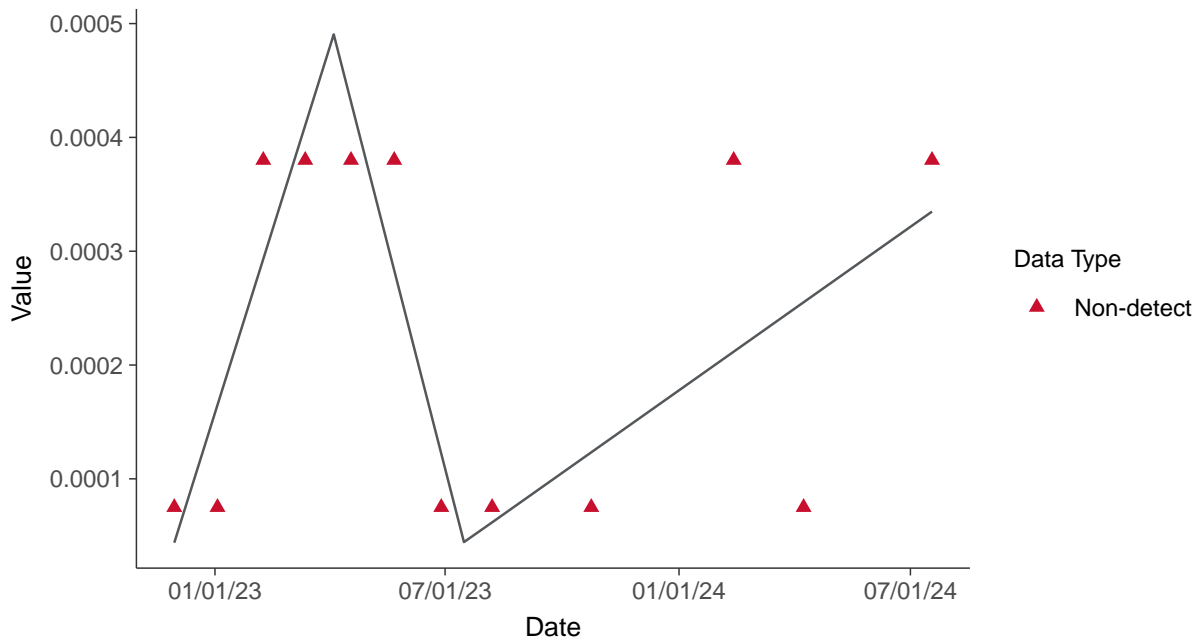




**Trend Regression: Piecewise Linear-Linear**  
Thallium, MW-19 (mg/L)



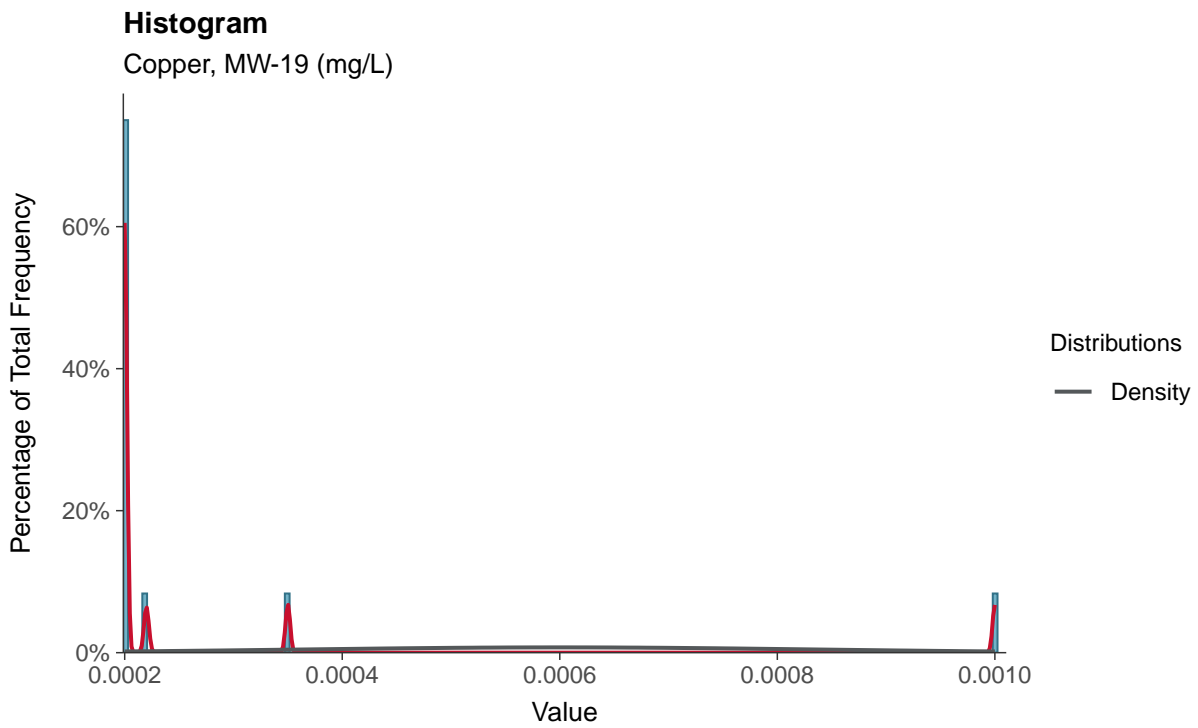
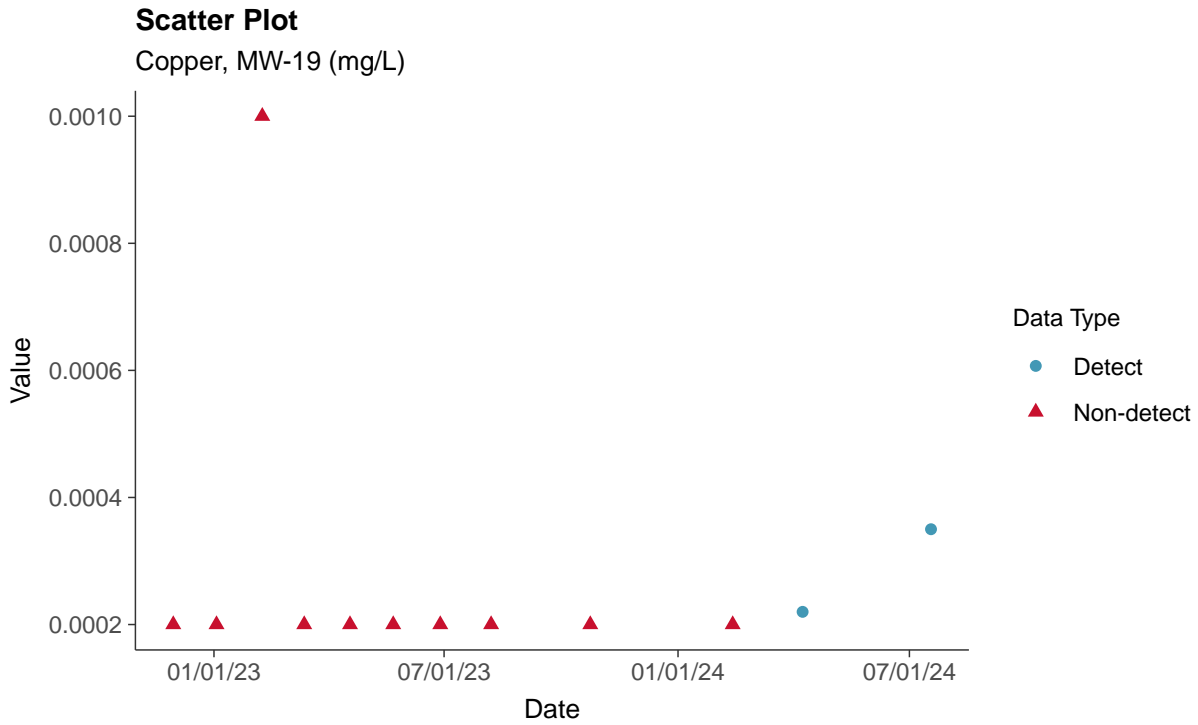
**Trend Regression: Piecewise Linear-Linear-Linear**  
Thallium, MW-19 (mg/L)





**Part 115: Copper, MW-19**

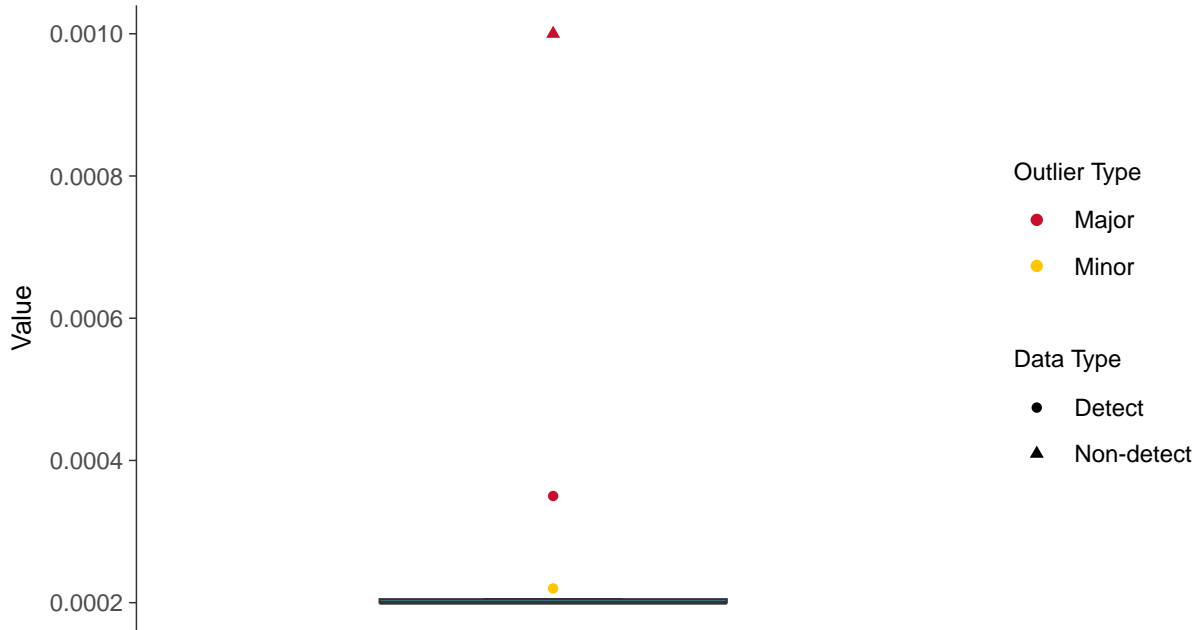
ID: 29\_1\_6\_111





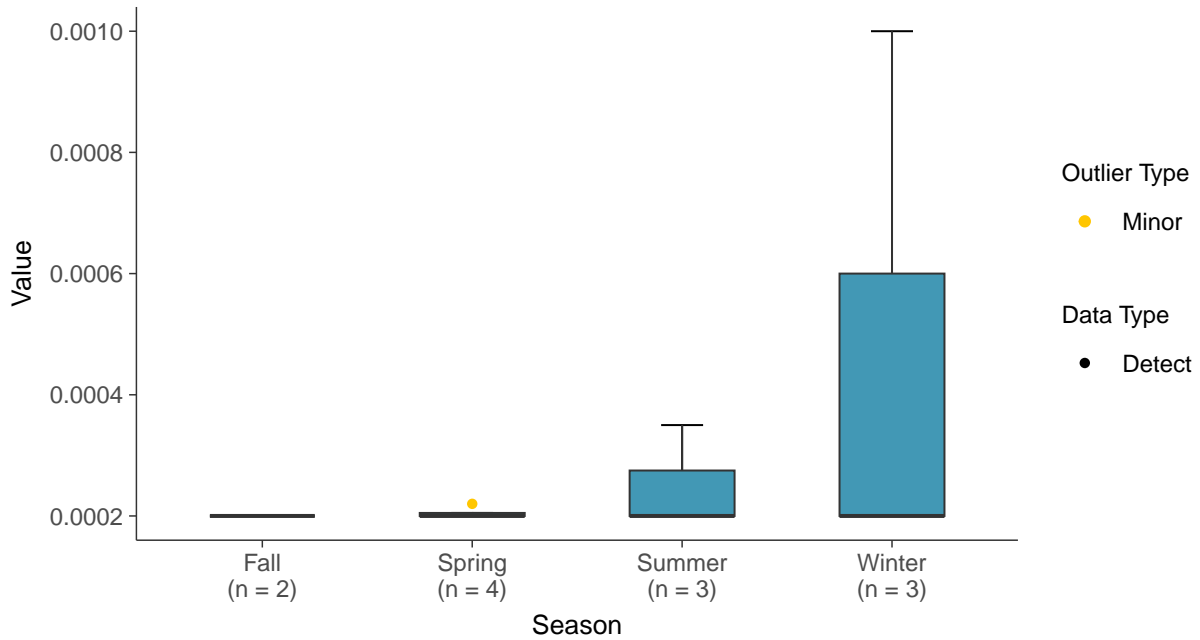
### Boxplot

Copper, MW-19 (mg/L)



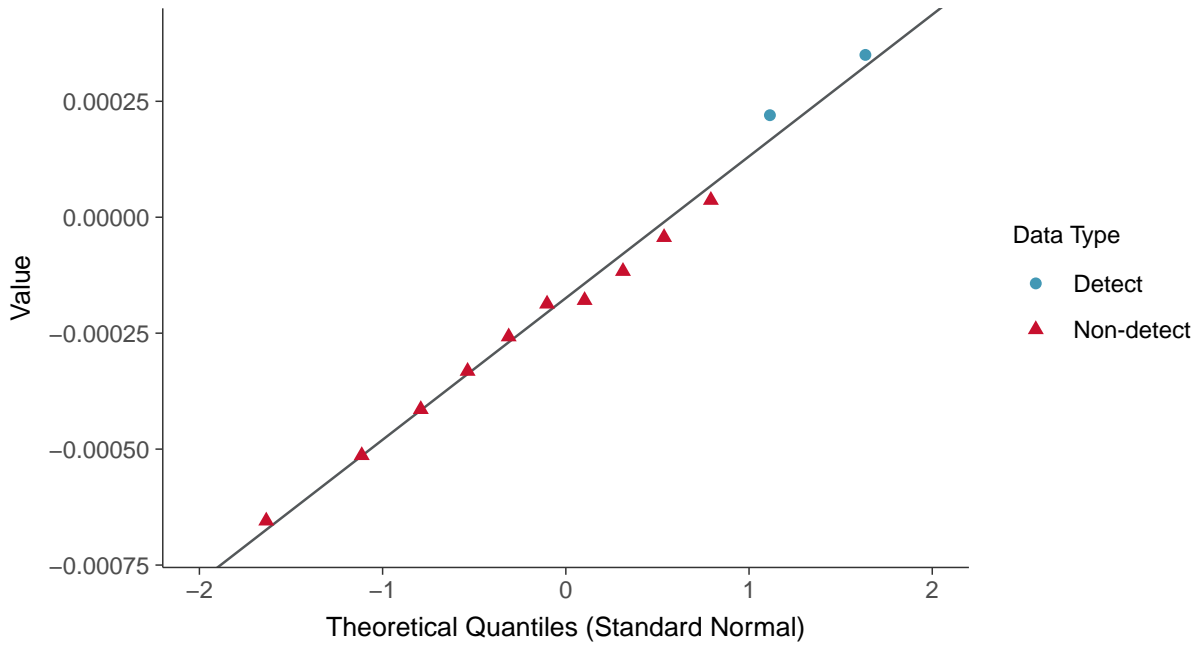
### Boxplot by Season

Copper, MW-19 (mg/L)

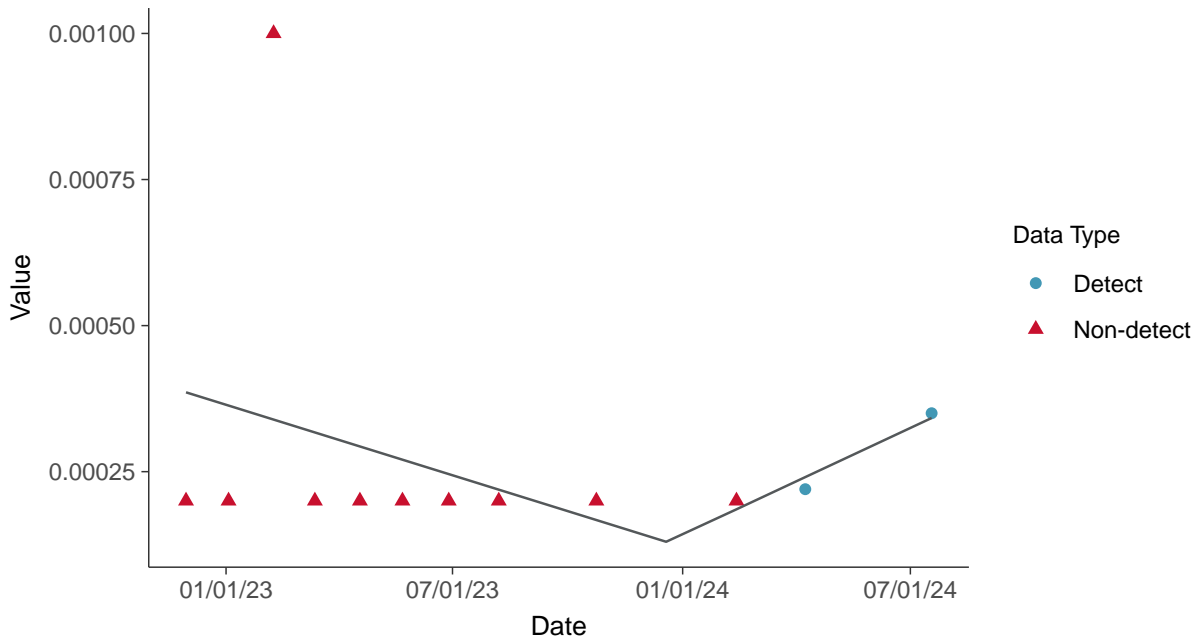




**Normal Q-Q plot using ROS Imputed Estimates**  
Copper, MW-19 (mg/L)

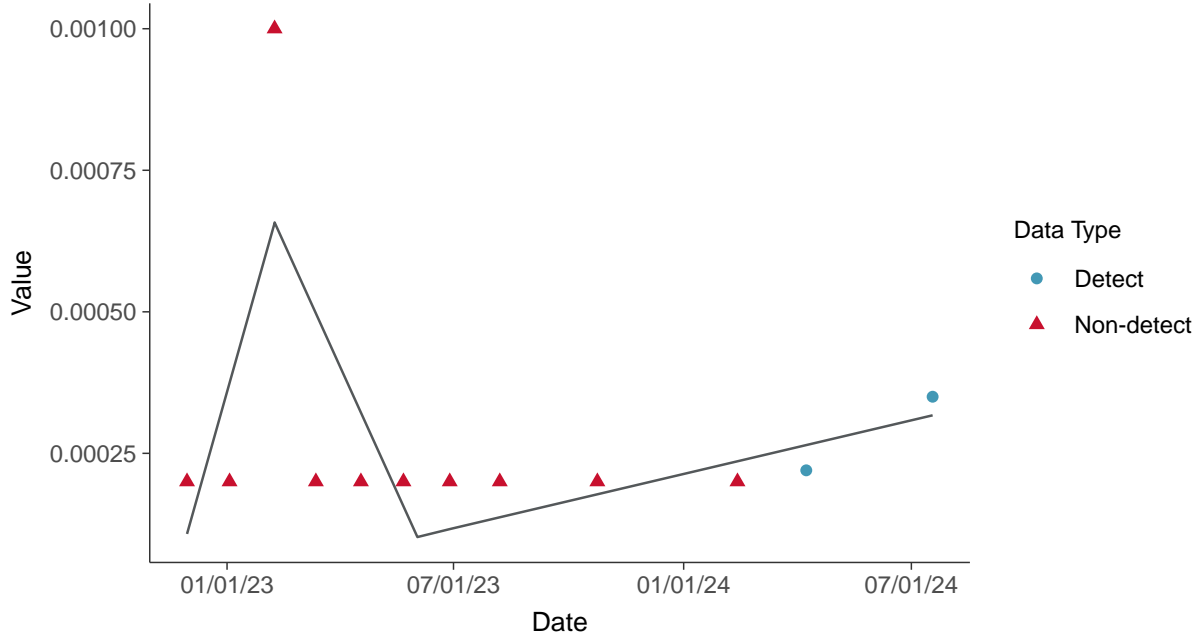


**Trend Regression: Piecewise Linear-Linear**  
Copper, MW-19 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Copper, MW-19 (mg/L)





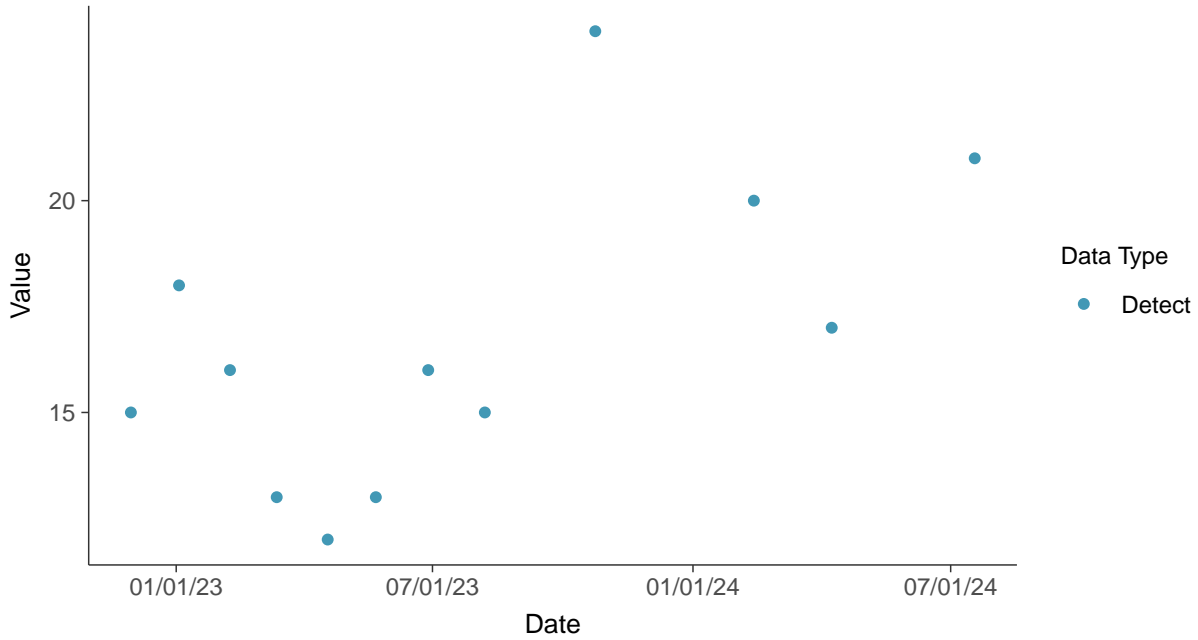


### Part 115: Iron, MW-19

ID: 29\_1\_6\_114

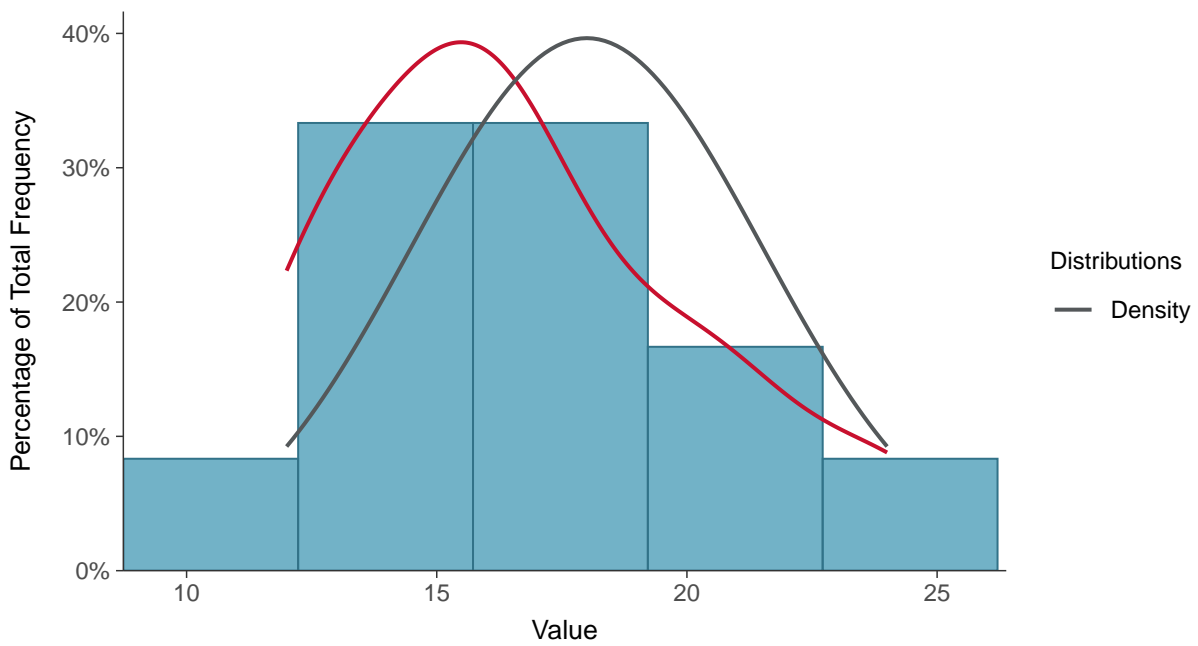
#### Scatter Plot

Iron, MW-19 (mg/L)



#### Histogram

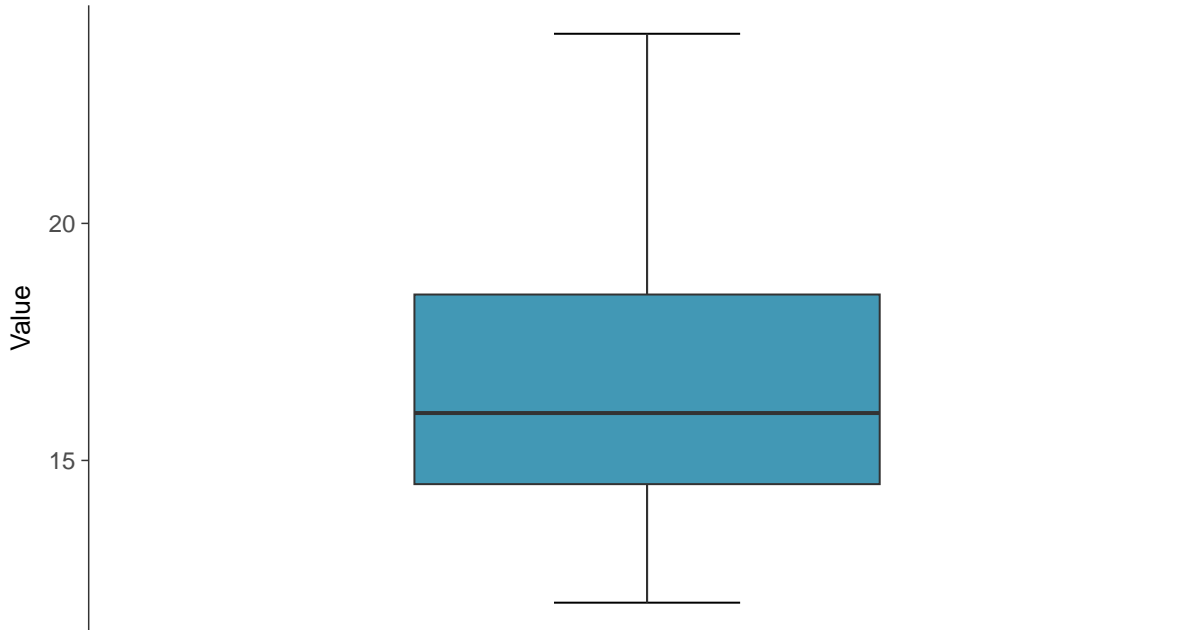
Iron, MW-19 (mg/L)





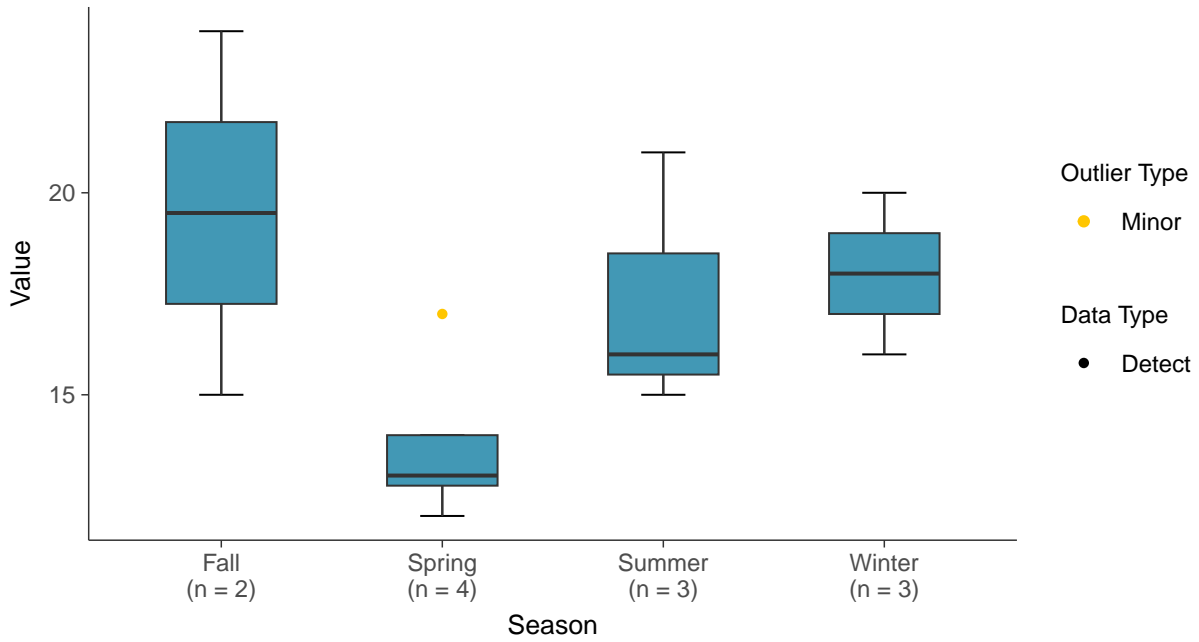
### Boxplot

Iron, MW-19 (mg/L)



### Boxplot by Season

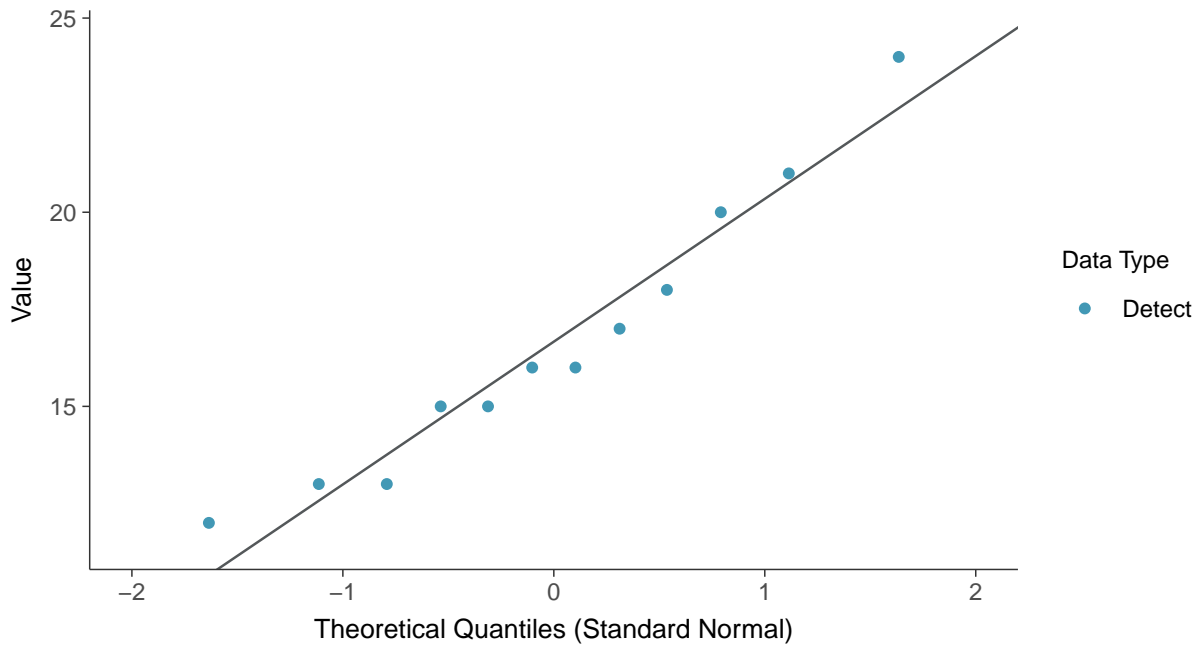
Iron, MW-19 (mg/L)





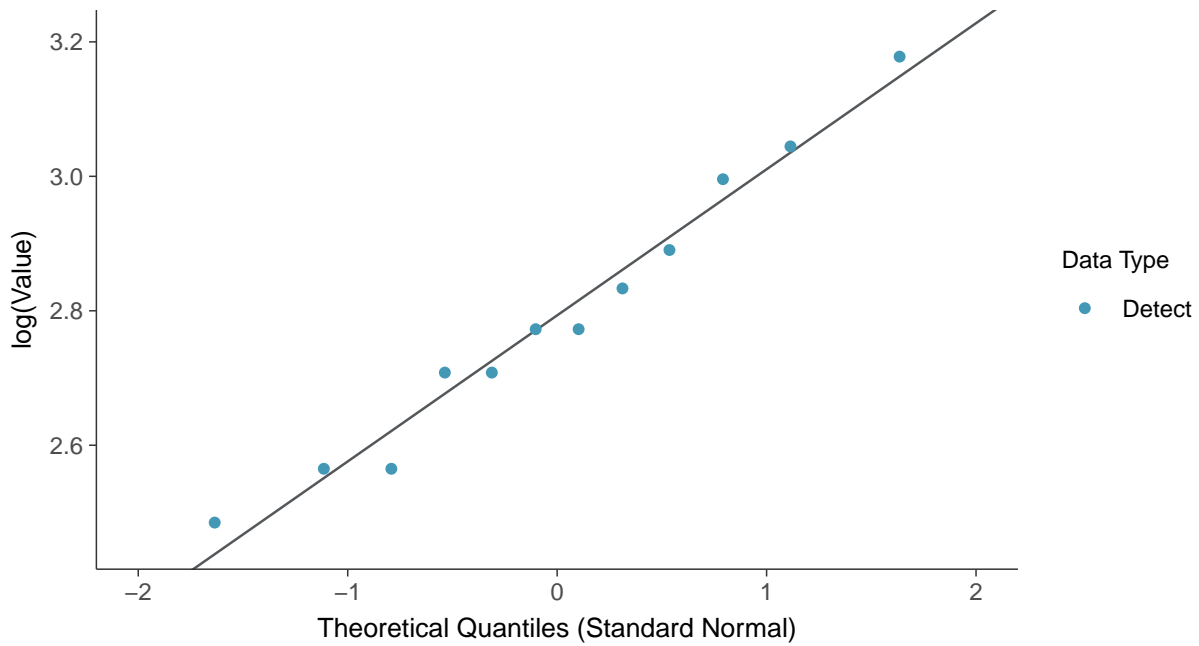
### Normal Q-Q plot

Iron, MW-19 (mg/L)



### Lognormal Q-Q plot

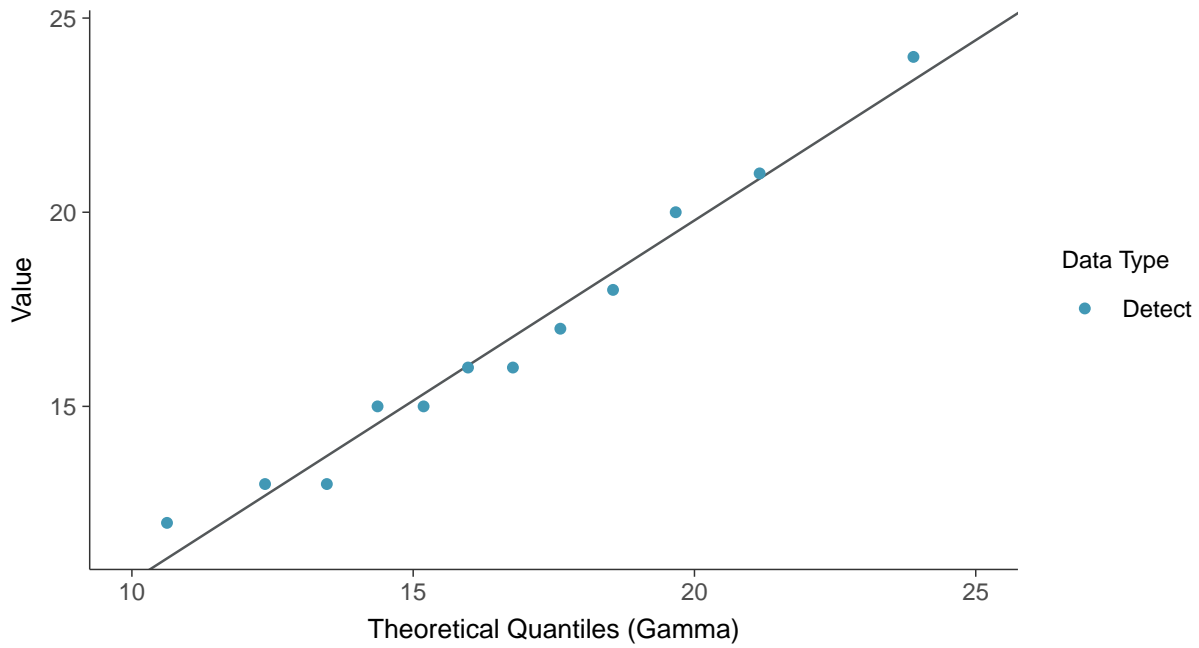
Iron, MW-19 (mg/L)





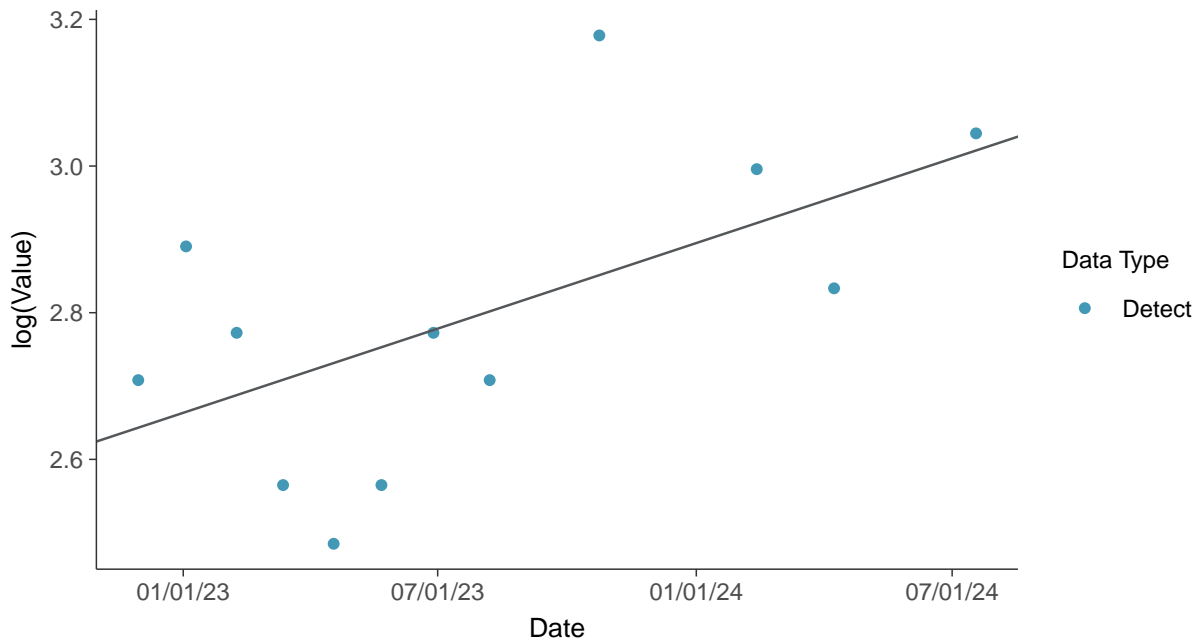
### Gamma Q-Q plot

Iron, MW-19 (mg/L)



### Trend Regression: Lognormal MLE

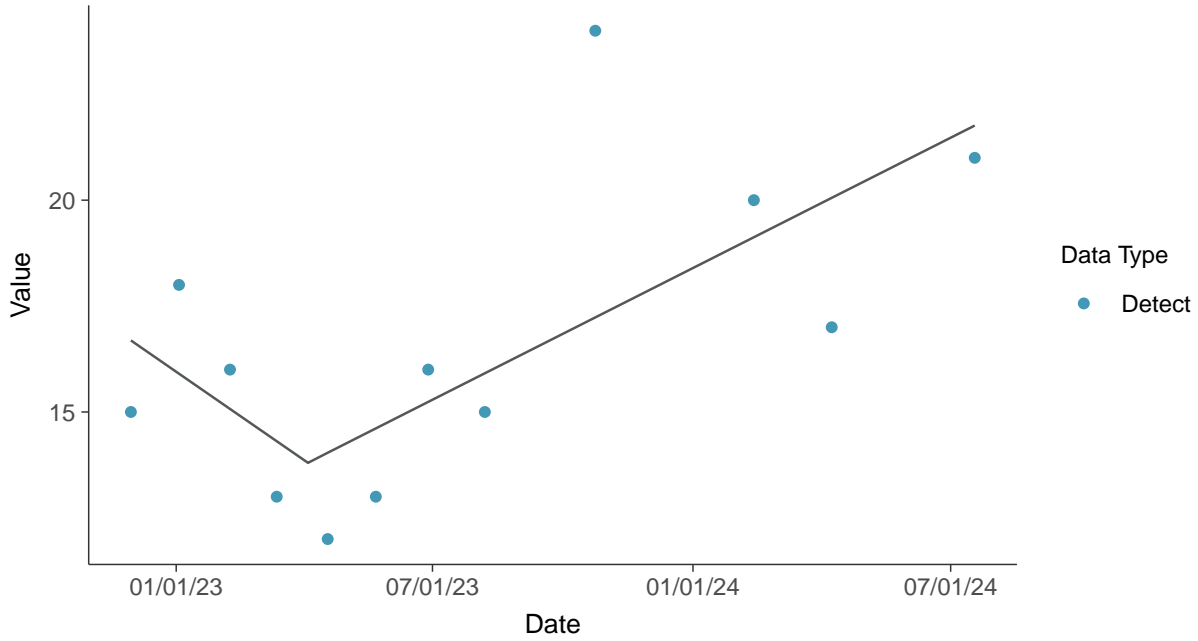
Iron, MW-19 (mg/L)





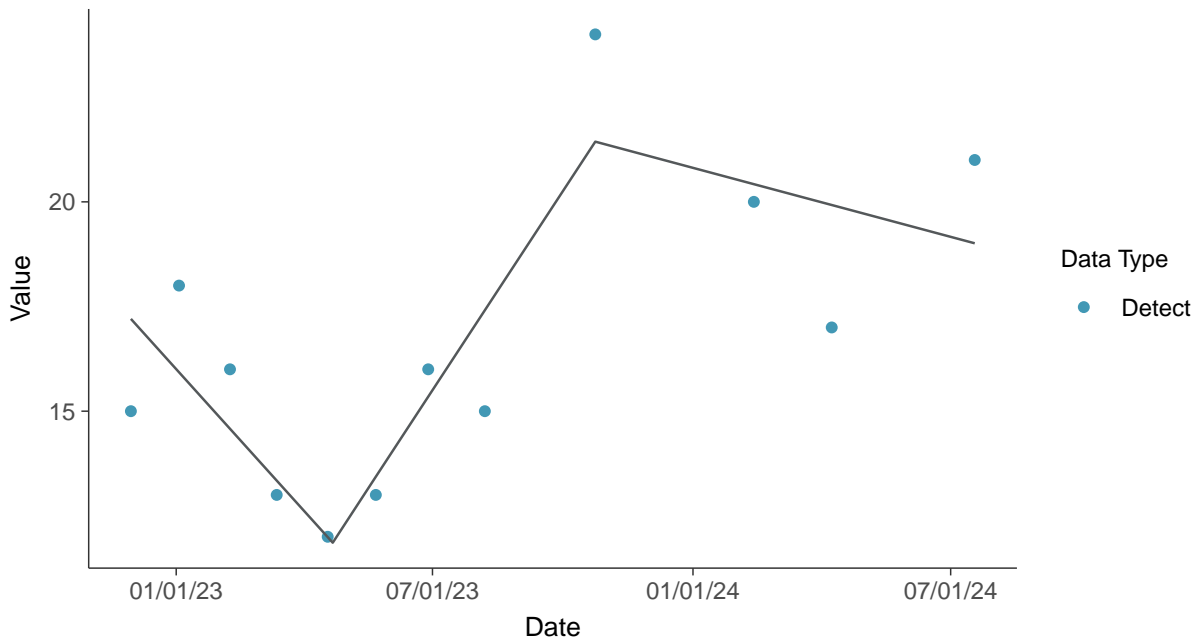
### Trend Regression: Piecewise Linear-Linear

Iron, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Iron, MW-19 (mg/L)



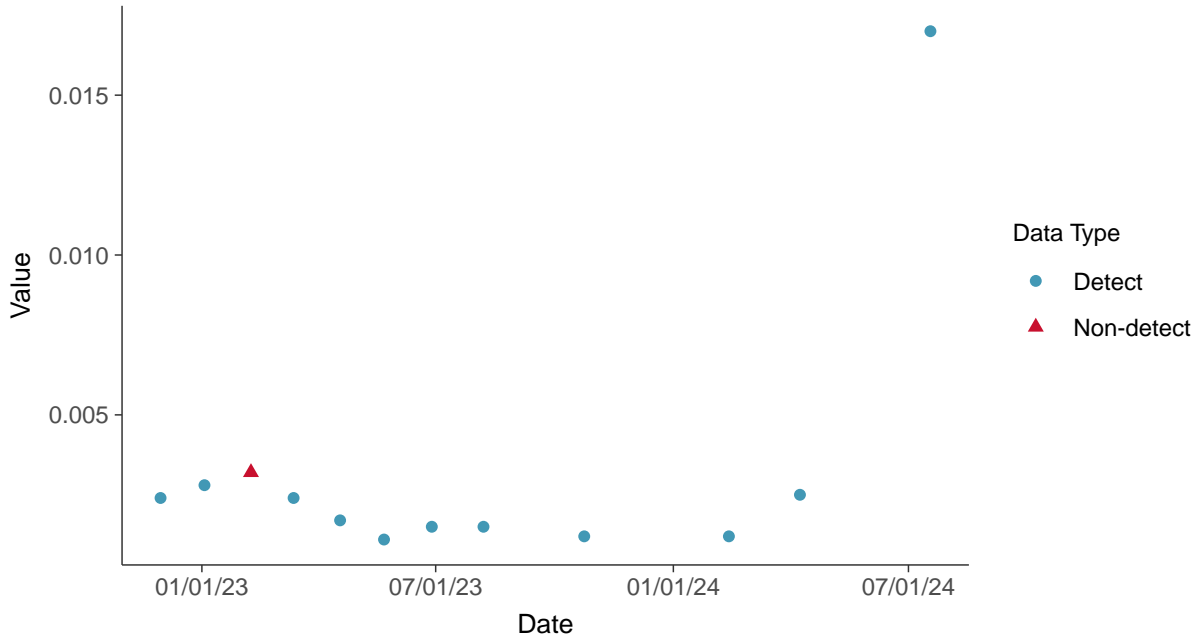


### Part 115: Nickel, MW-19

ID: 29\_1\_6\_119

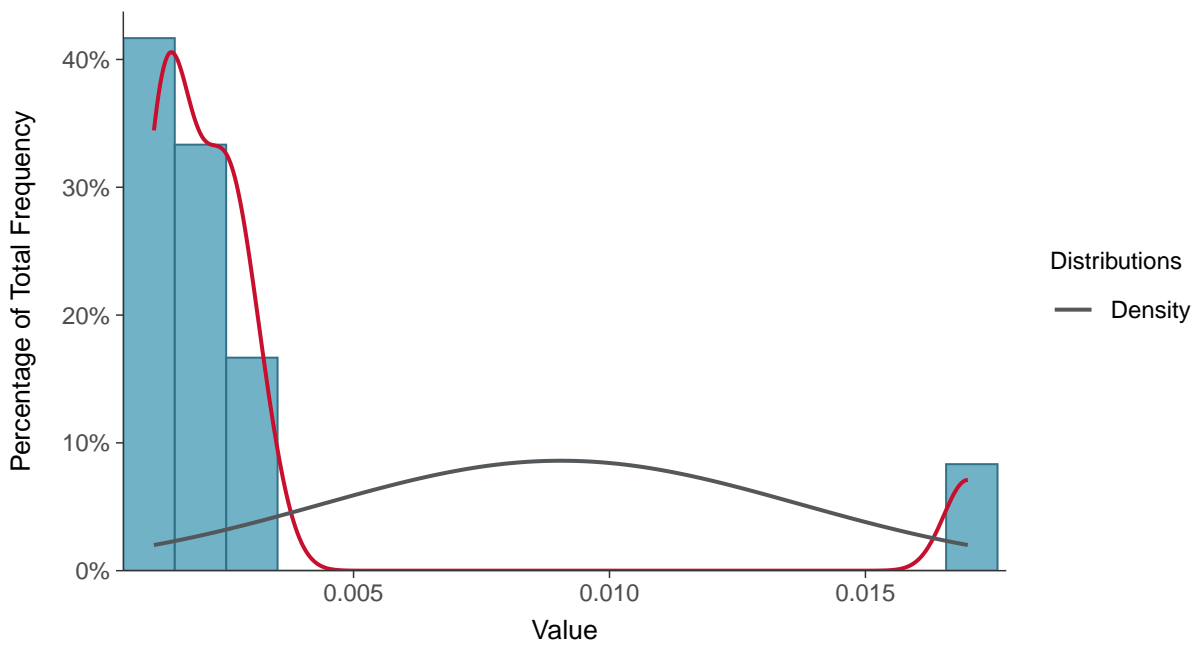
#### Scatter Plot

Nickel, MW-19 (mg/L)



#### Histogram

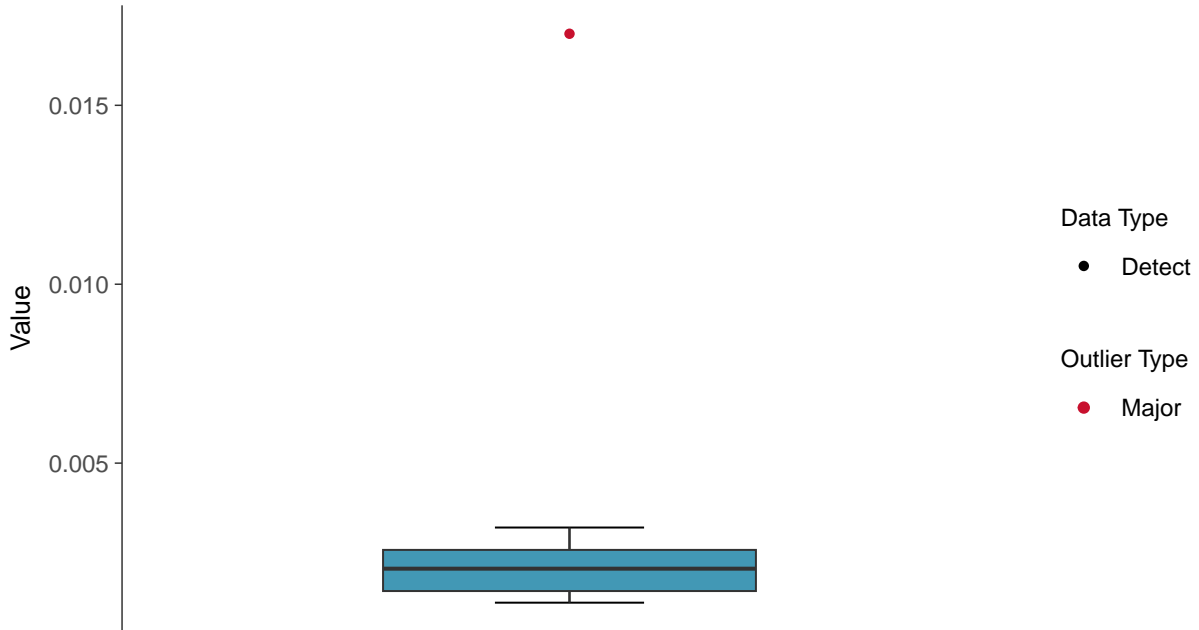
Nickel, MW-19 (mg/L)





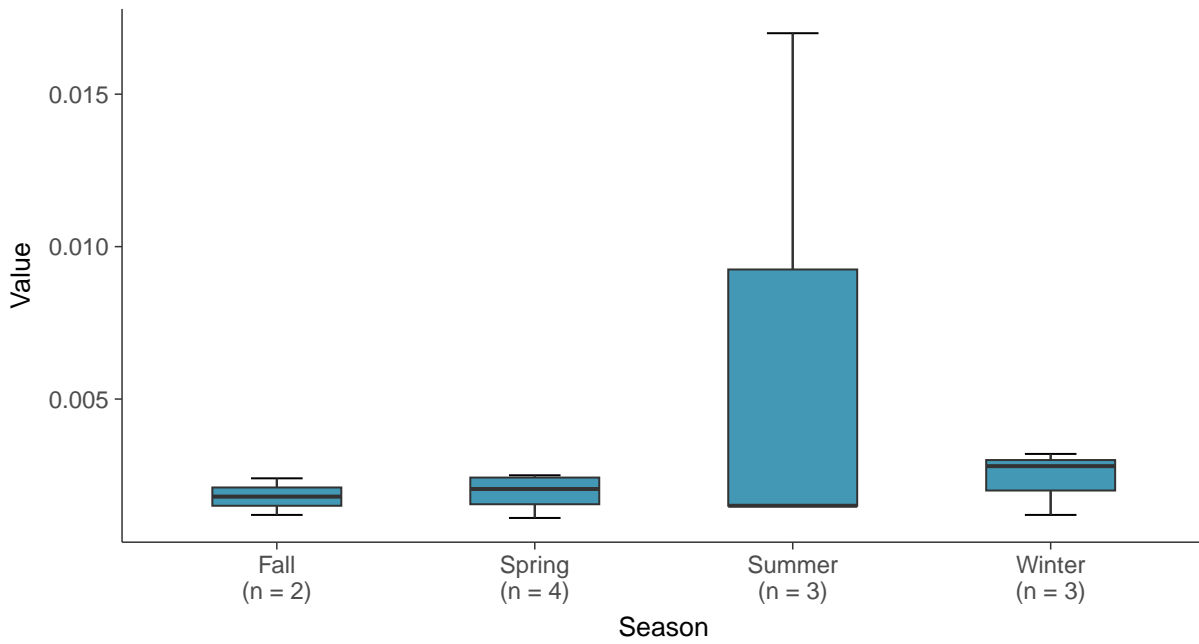
### Boxplot

Nickel, MW-19 (mg/L)



### Boxplot by Season

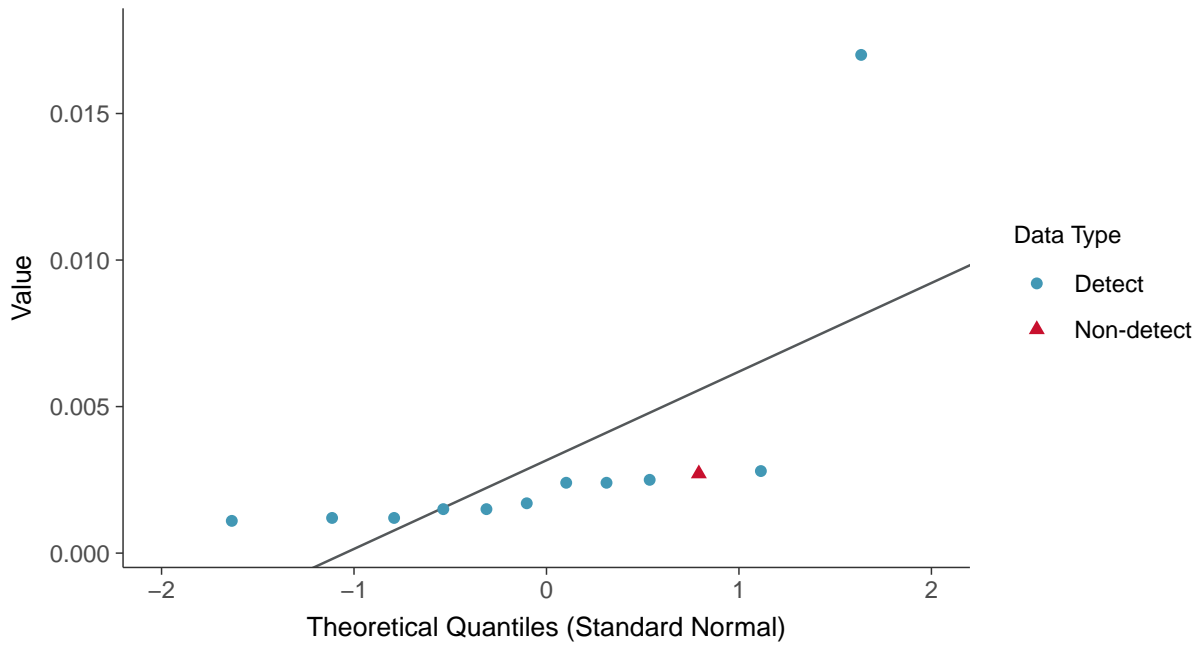
Nickel, MW-19 (mg/L)





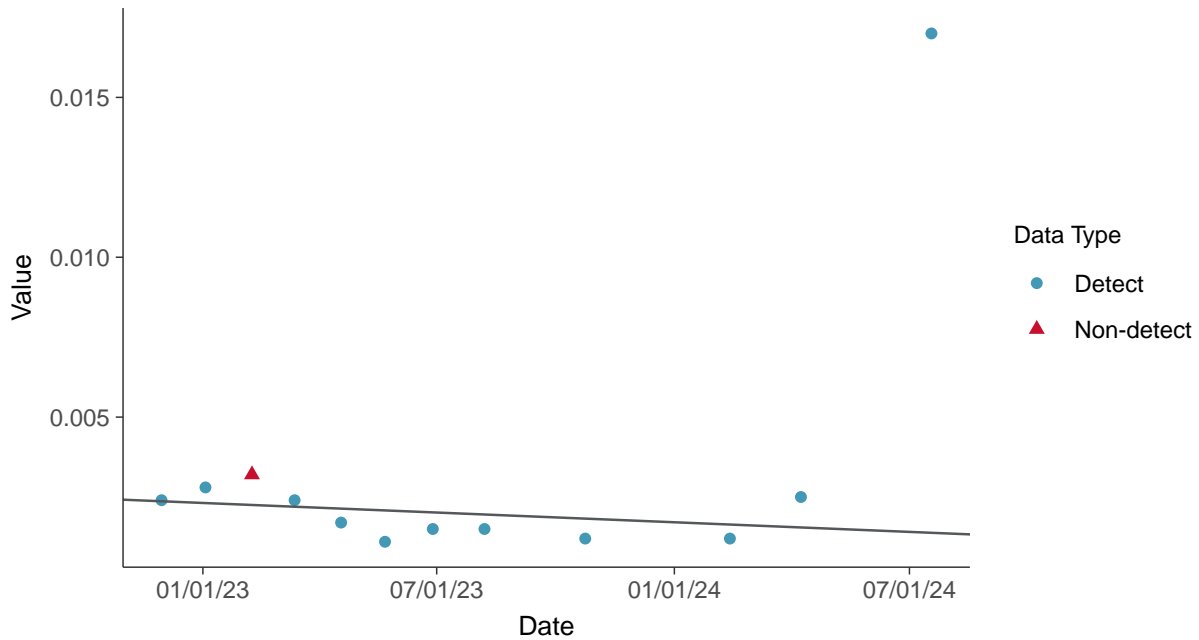
### Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-19 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Nickel, MW-19 (mg/L)

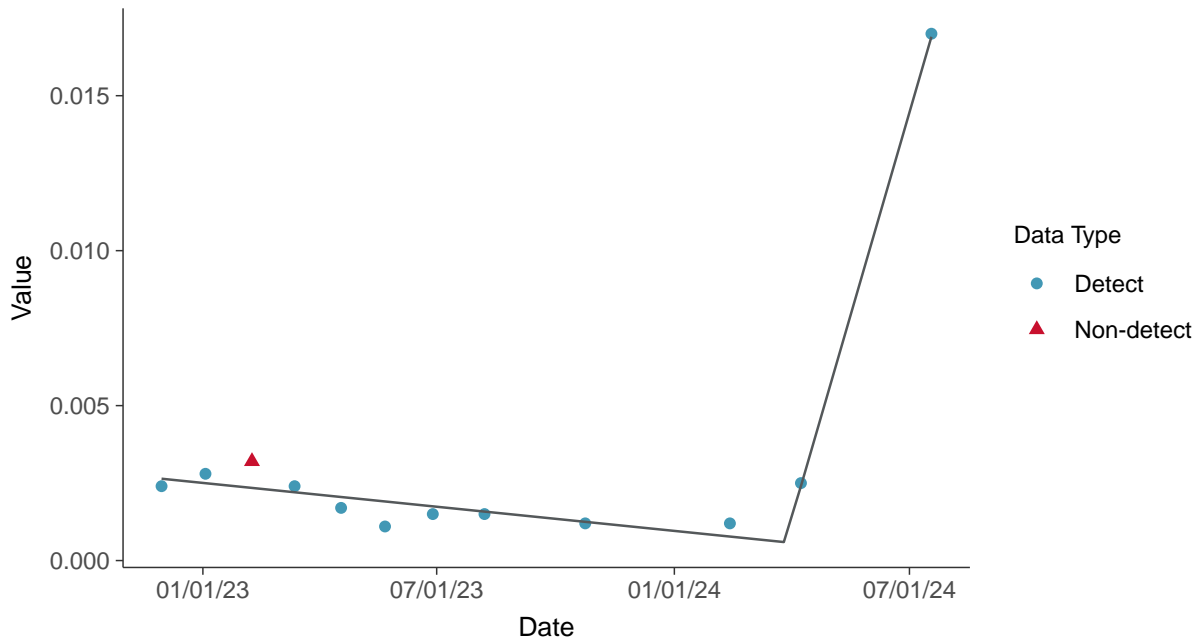






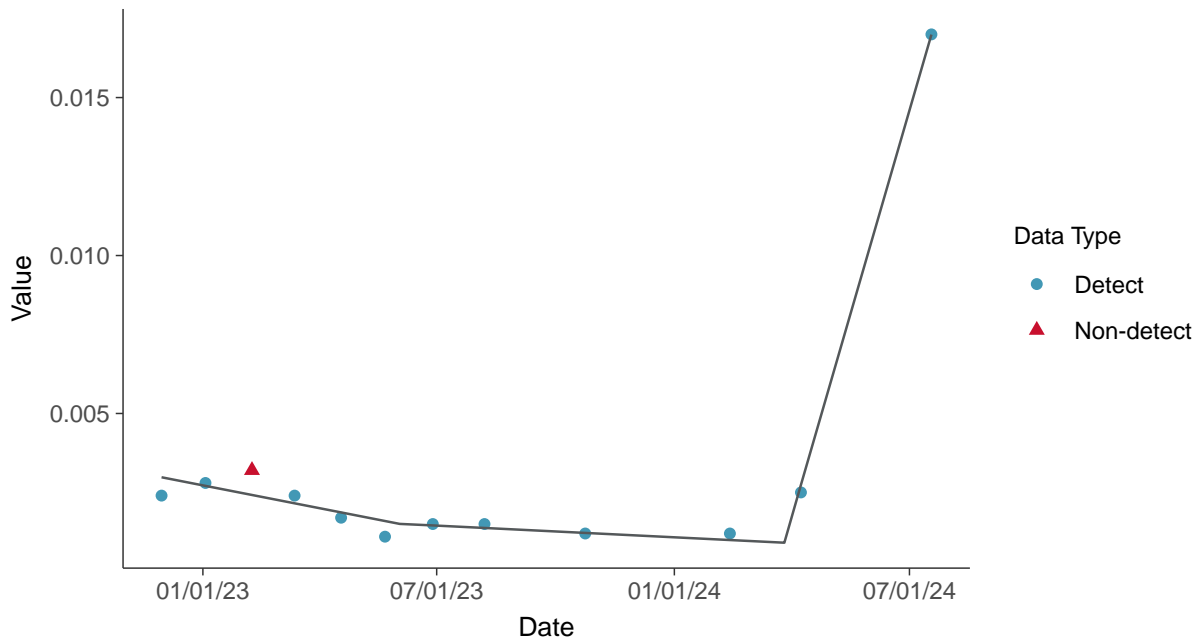
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

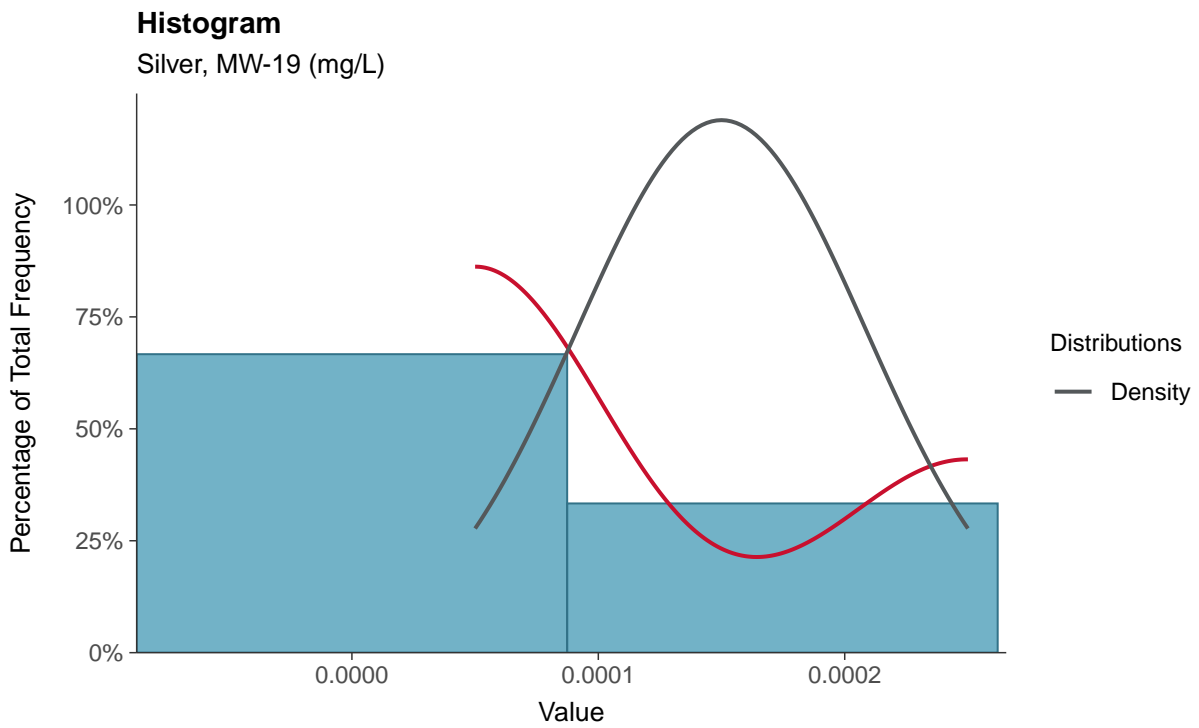
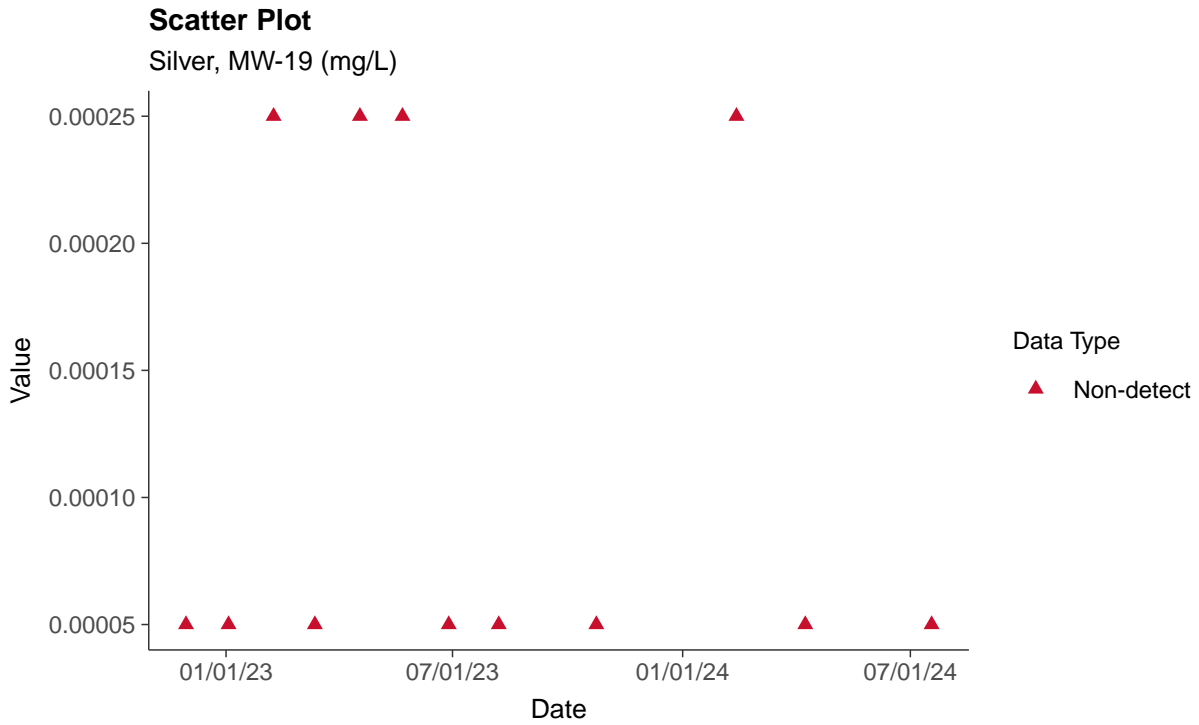
Nickel, MW-19 (mg/L)





### Part 115: Silver, MW-19

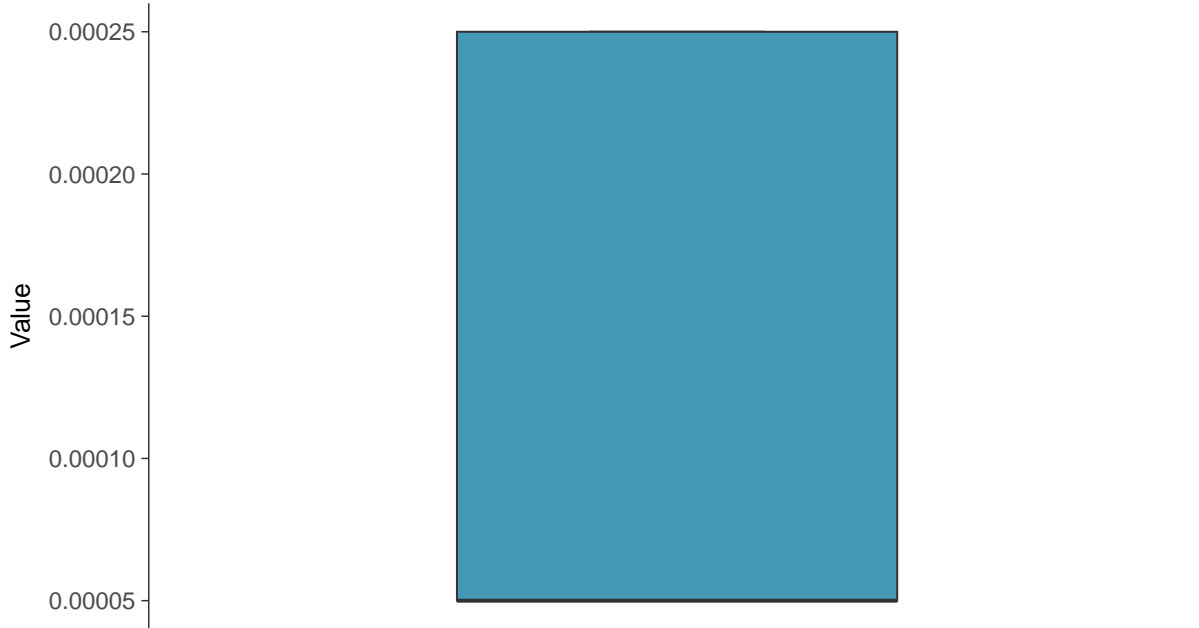
ID: 29\_1\_6\_123





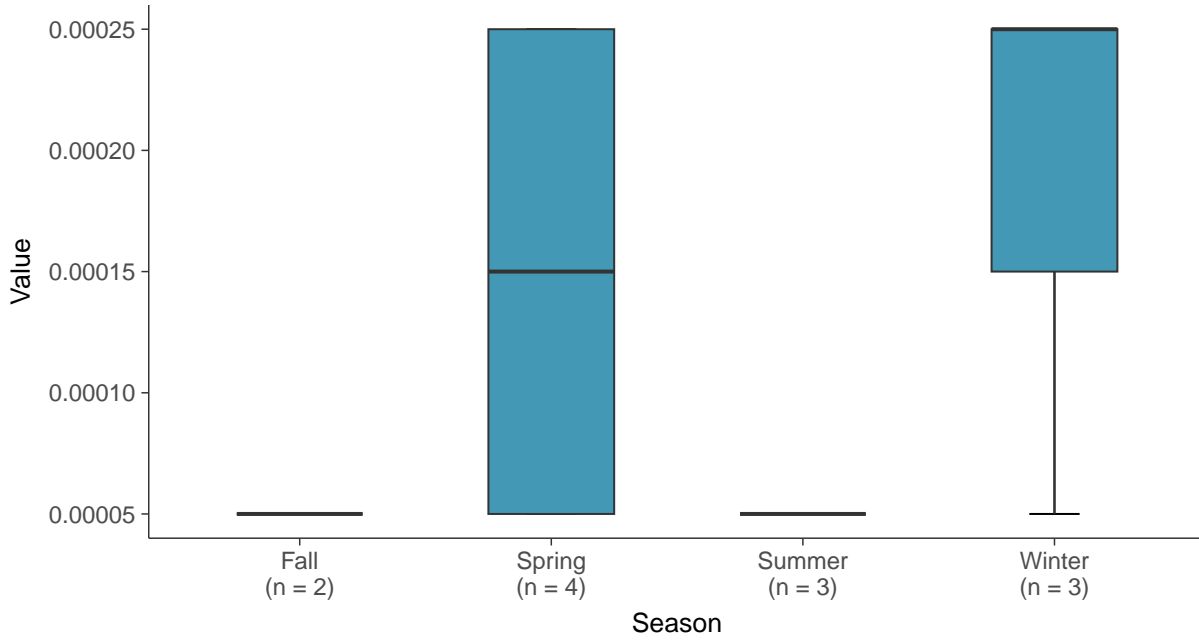
### Boxplot

Silver, MW-19 (mg/L)



### Boxplot by Season

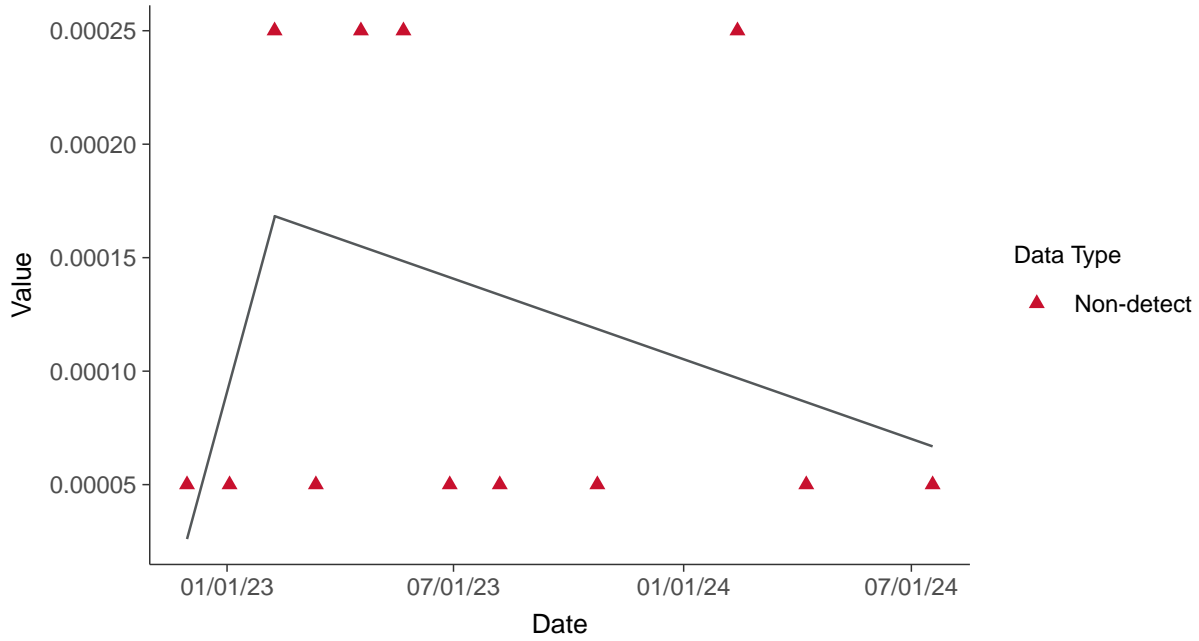
Silver, MW-19 (mg/L)





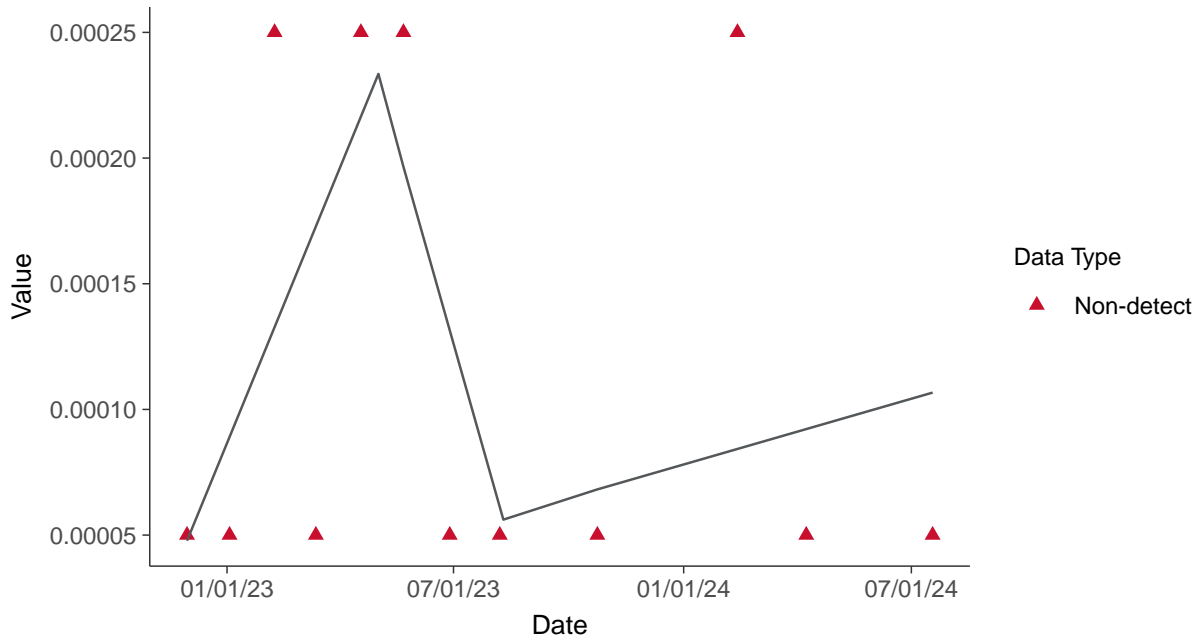
### Trend Regression: Piecewise Linear-Linear

Silver, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-19 (mg/L)



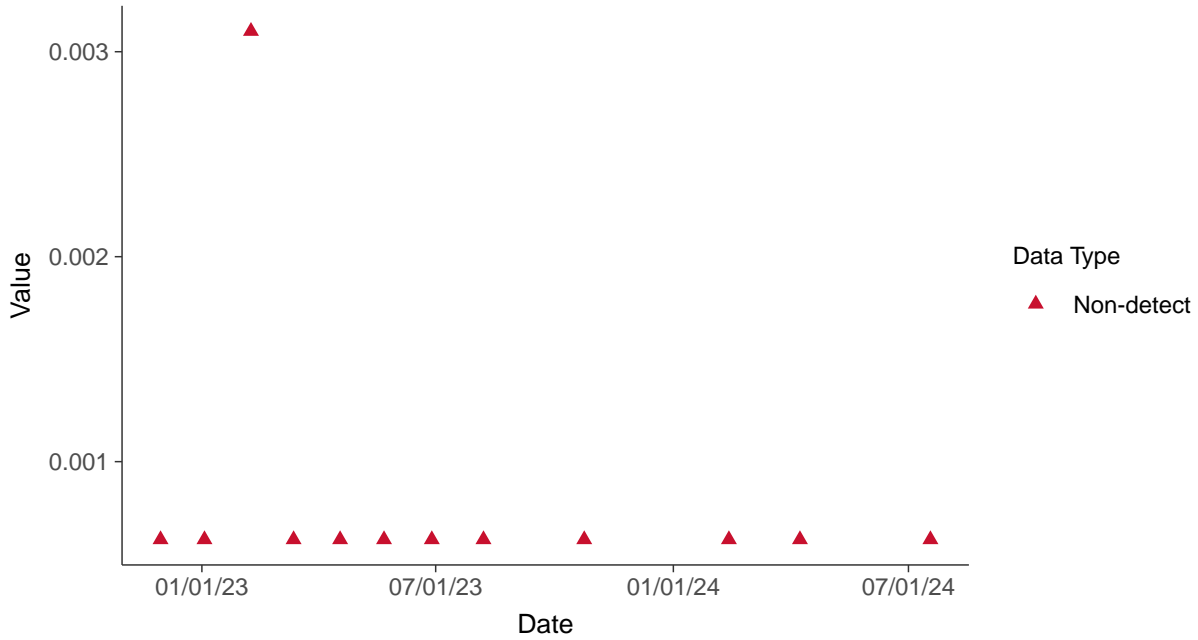


### Part 115: Vanadium, MW-19

ID: 29\_1\_6\_129

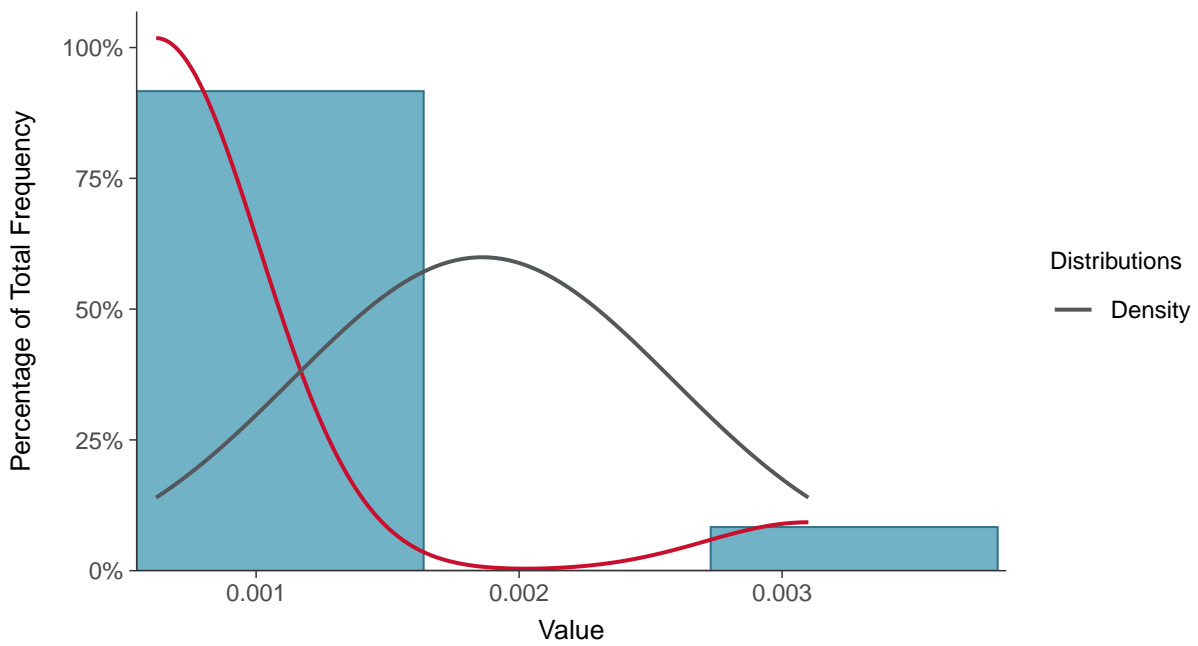
#### Scatter Plot

Vanadium, MW-19 (mg/L)



#### Histogram

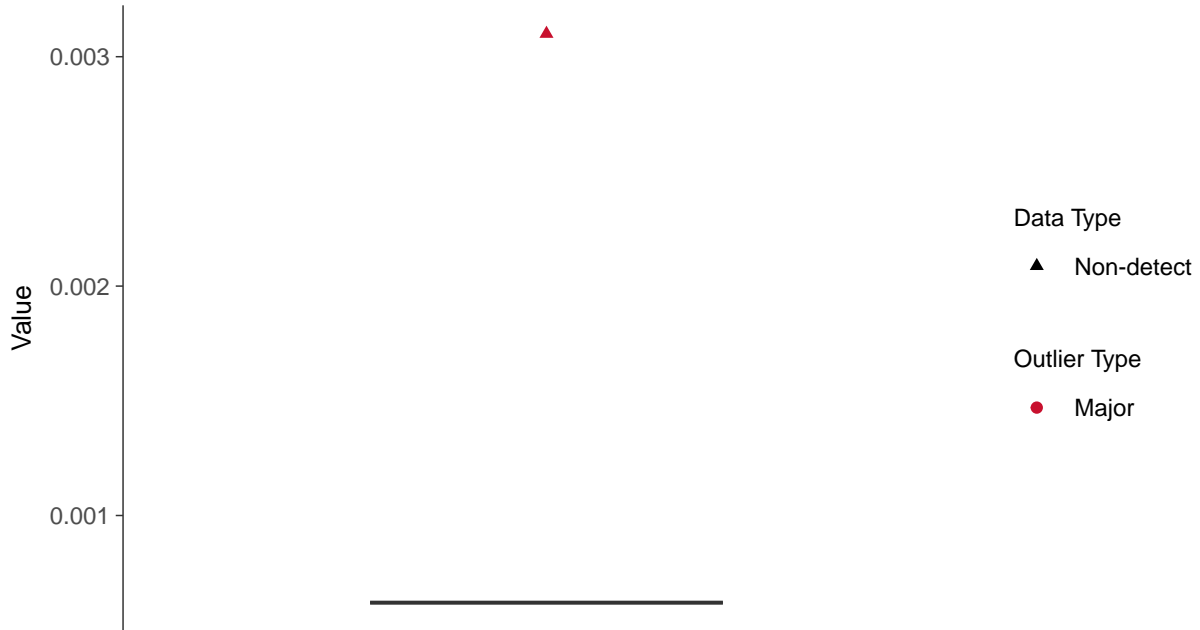
Vanadium, MW-19 (mg/L)





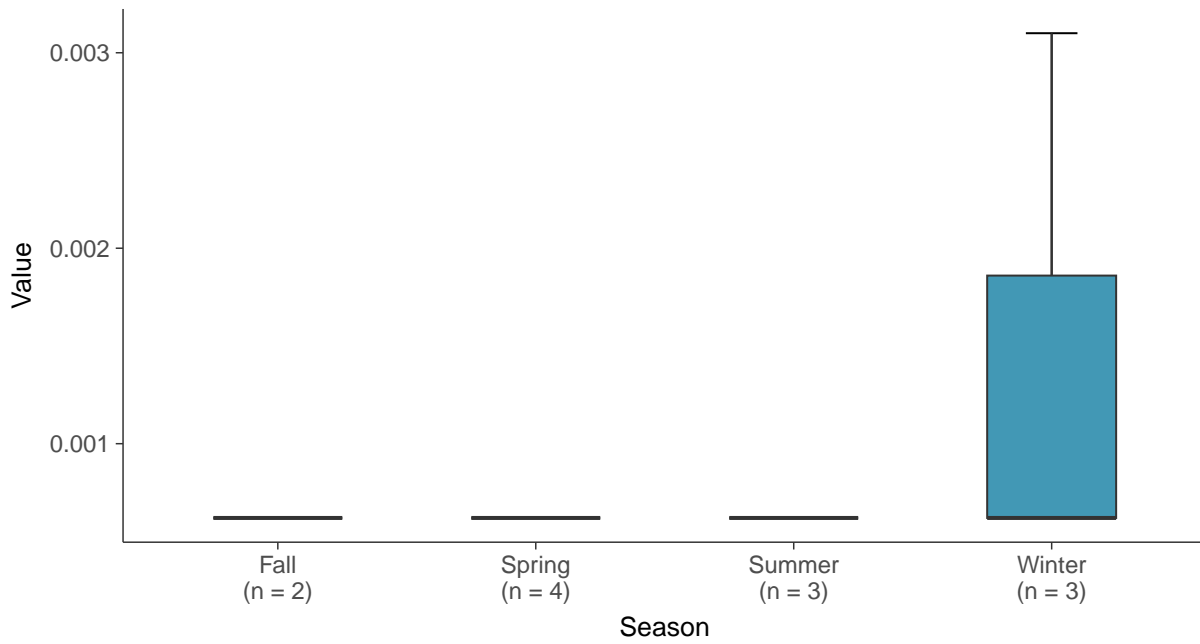
### Boxplot

Vanadium, MW-19 (mg/L)



### Boxplot by Season

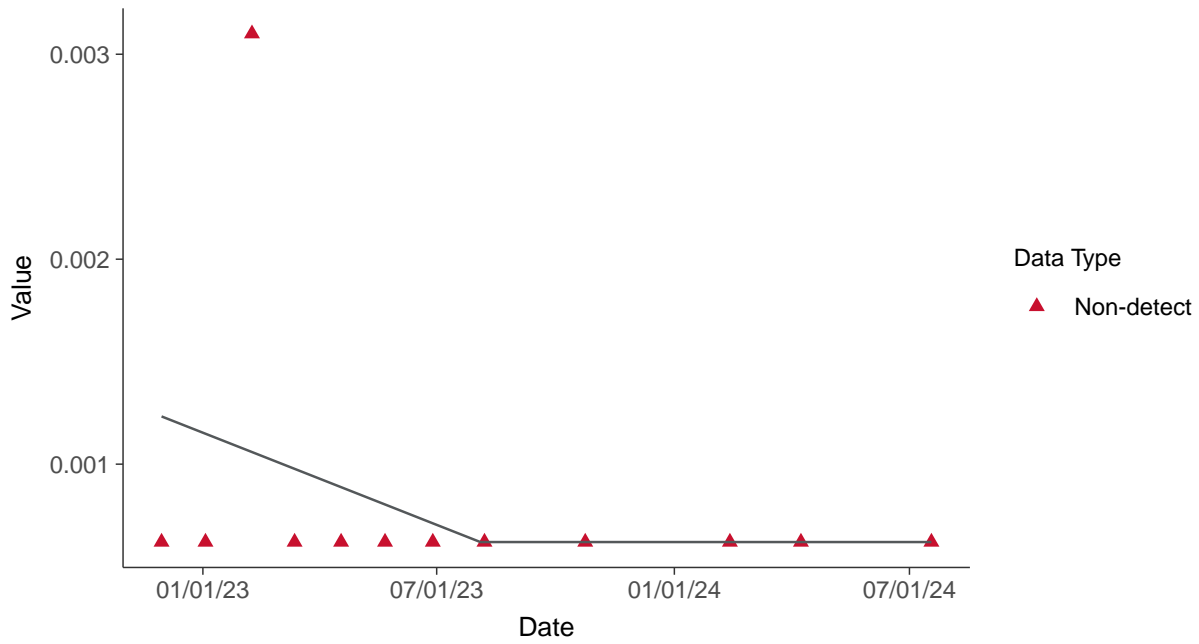
Vanadium, MW-19 (mg/L)





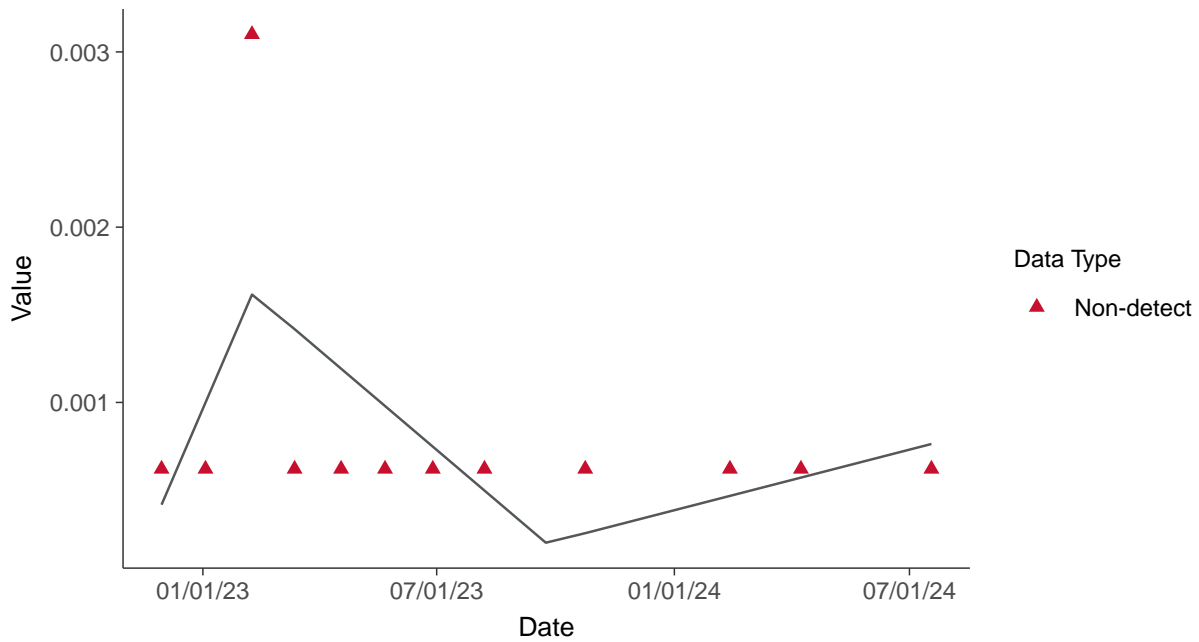
### Trend Regression: Piecewise Linear-Linear

Vanadium, MW-19 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

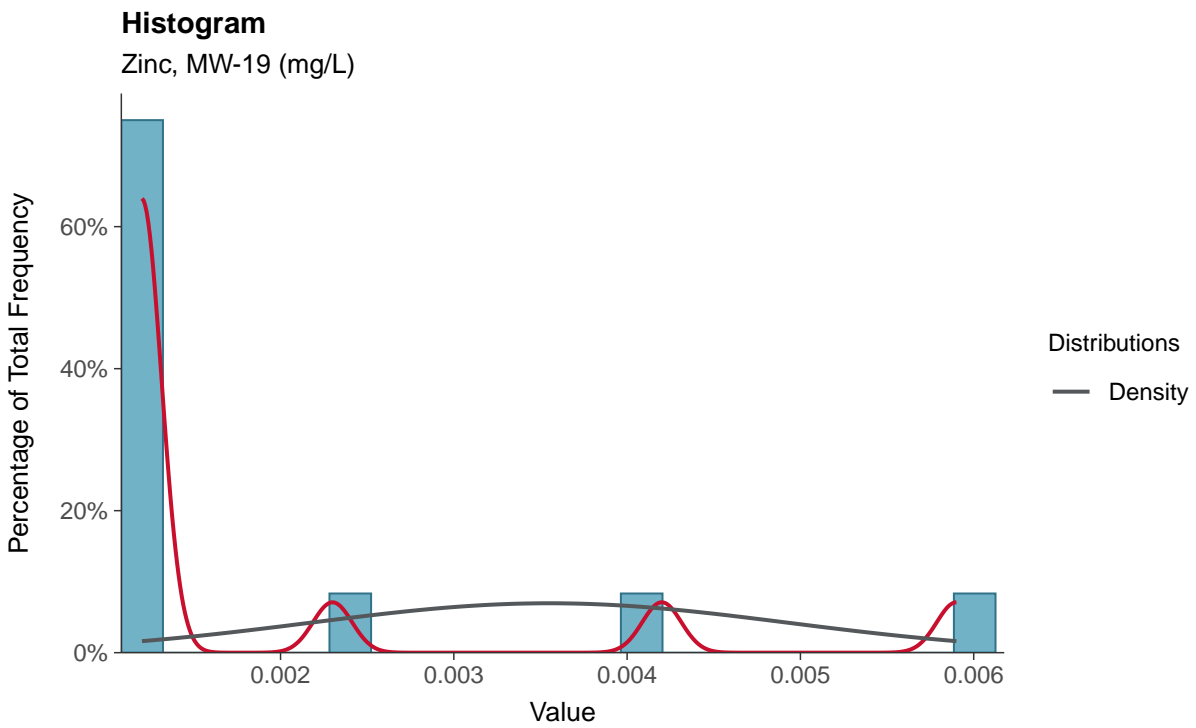
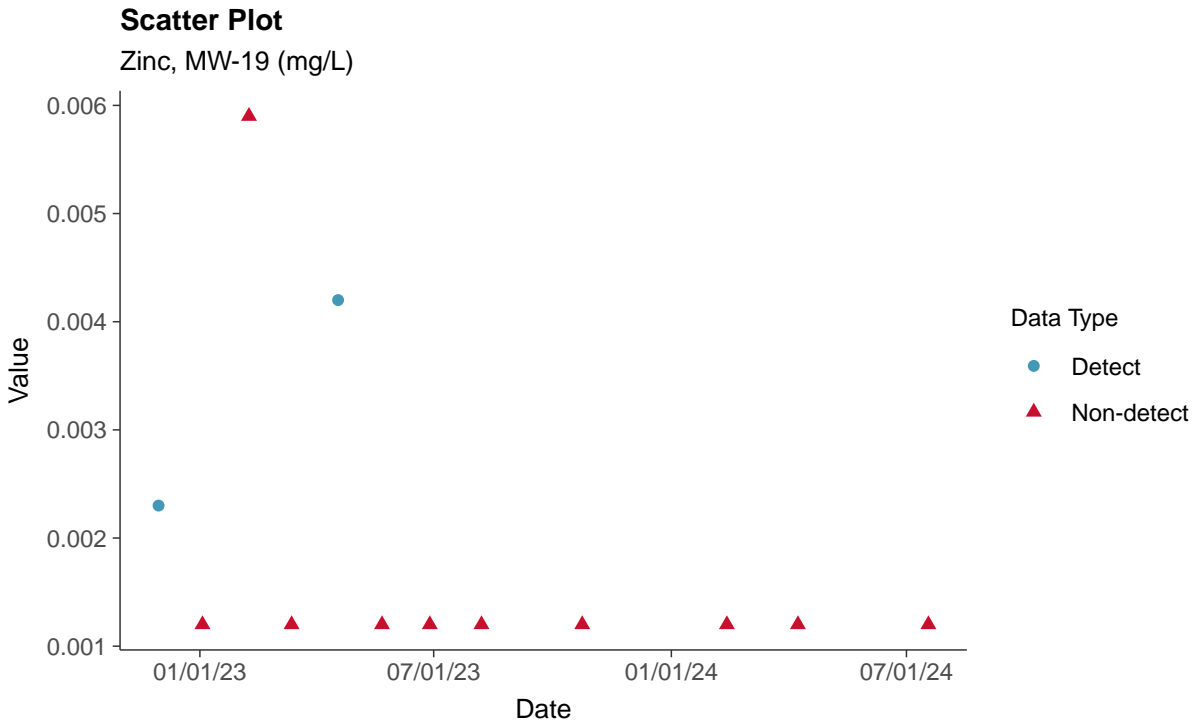
Vanadium, MW-19 (mg/L)





### Part 115: Zinc, MW-19

ID: 29\_1\_6\_130

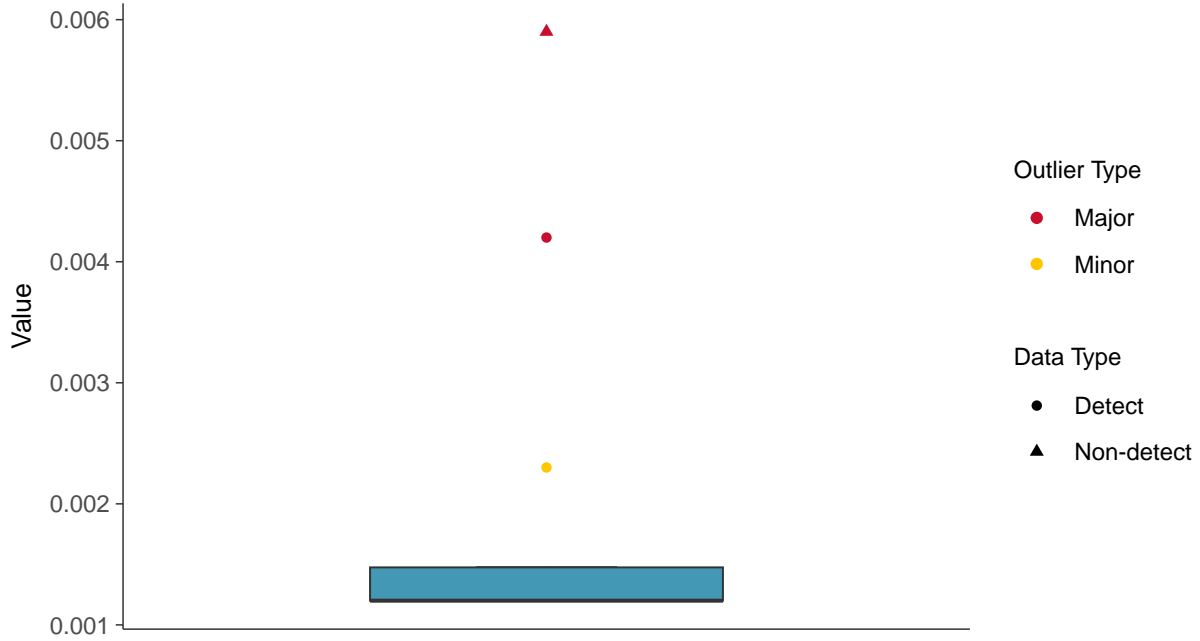






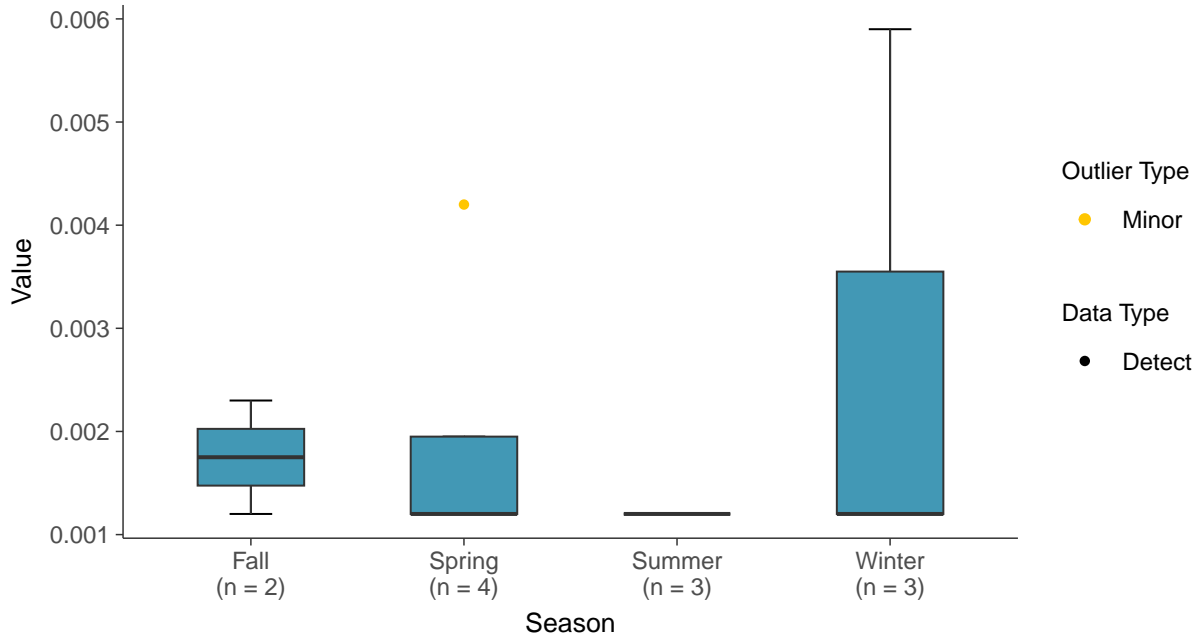
### Boxplot

Zinc, MW-19 (mg/L)



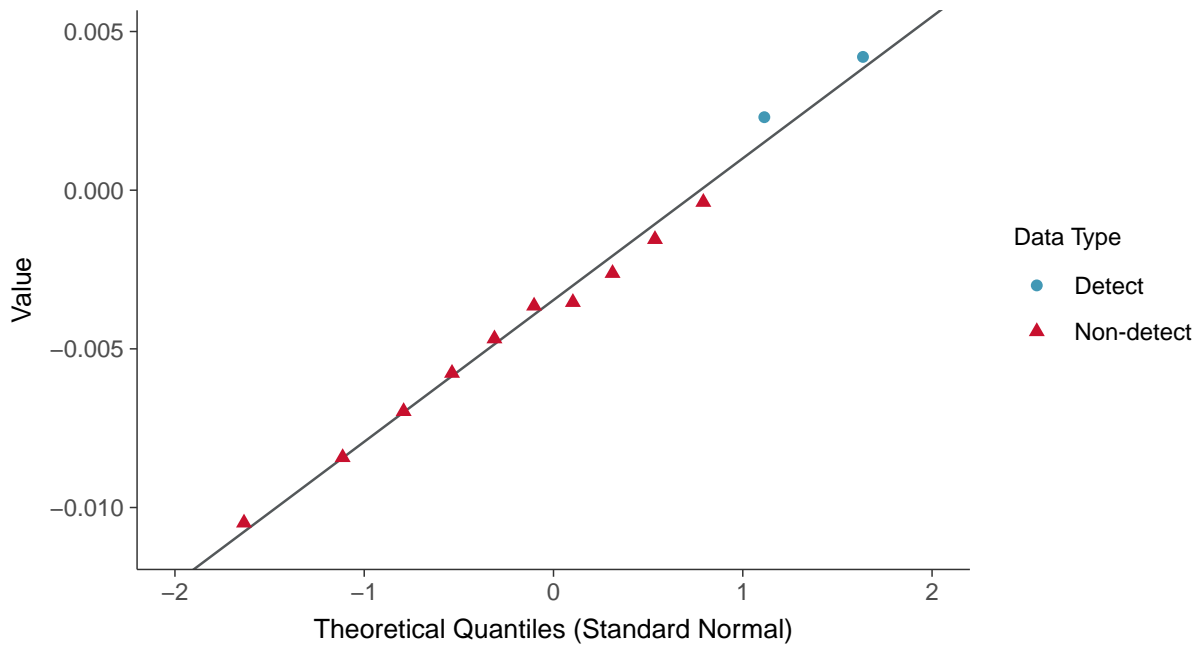
### Boxplot by Season

Zinc, MW-19 (mg/L)

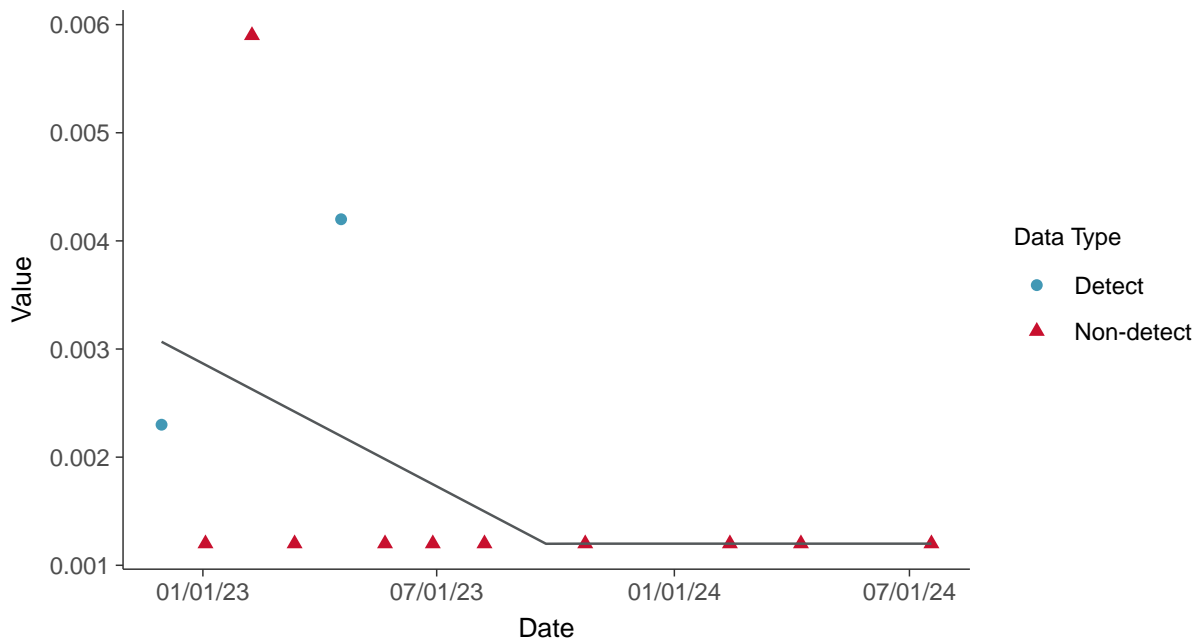




**Normal Q-Q plot using ROS Imputed Estimates**  
Zinc, MW-19 (mg/L)



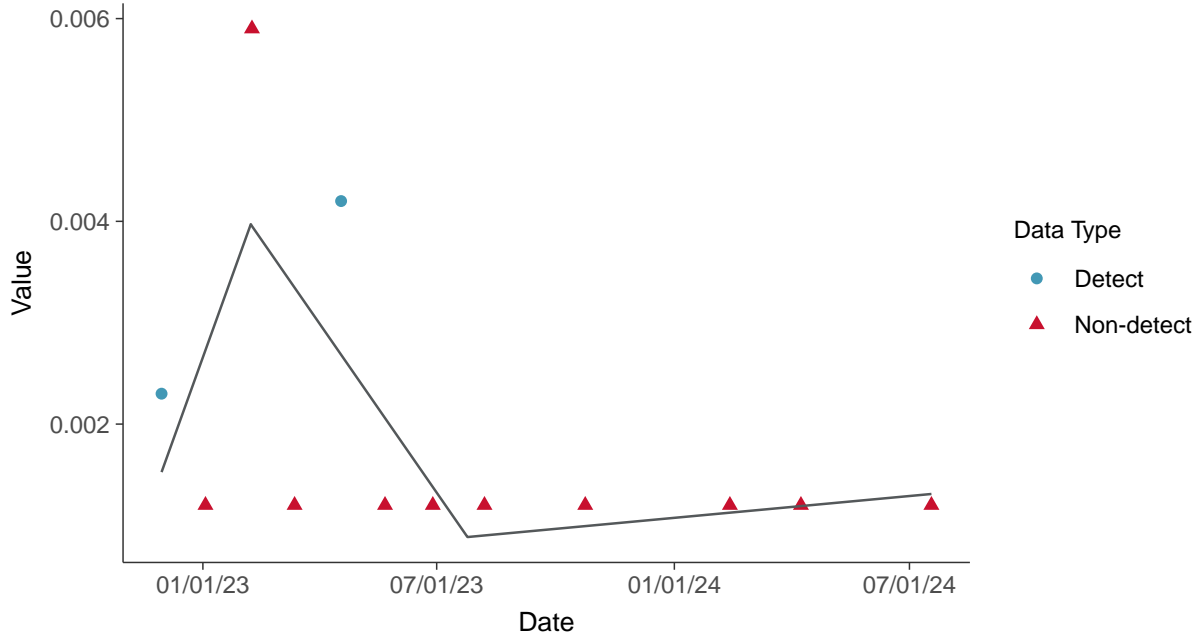
**Trend Regression: Piecewise Linear-Linear**  
Zinc, MW-19 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-19 (mg/L)



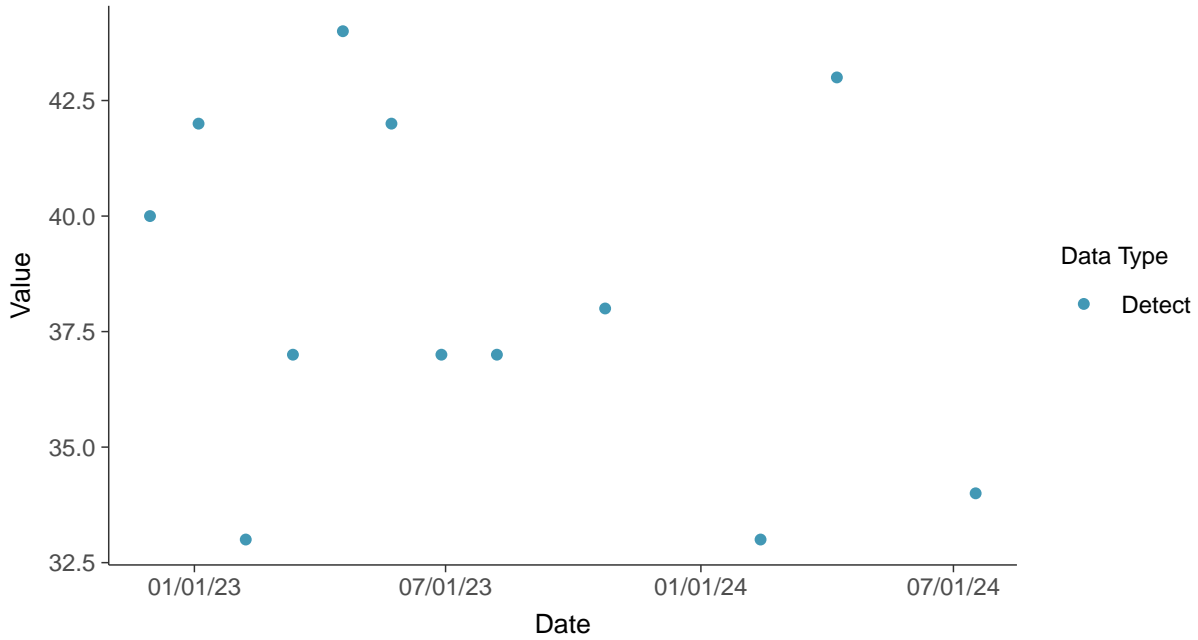


### Additional Parameters: Total Suspended Solids, MW-20

ID: 30\_1\_3\_127

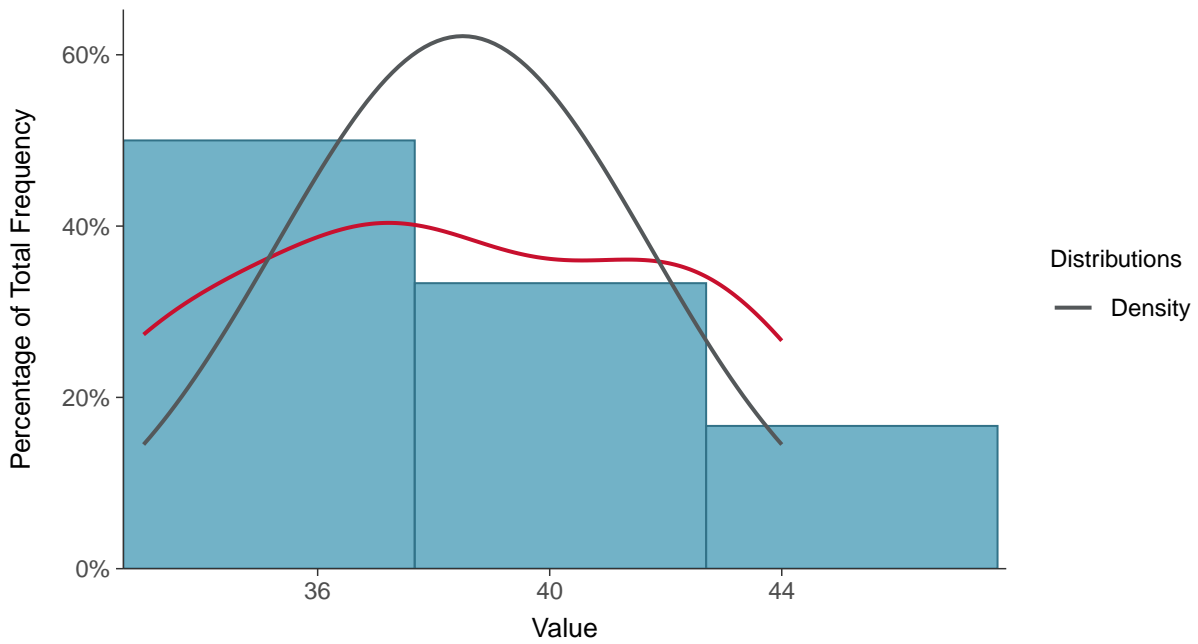
#### Scatter Plot

Total Suspended Solids, MW-20 (mg/L)



#### Histogram

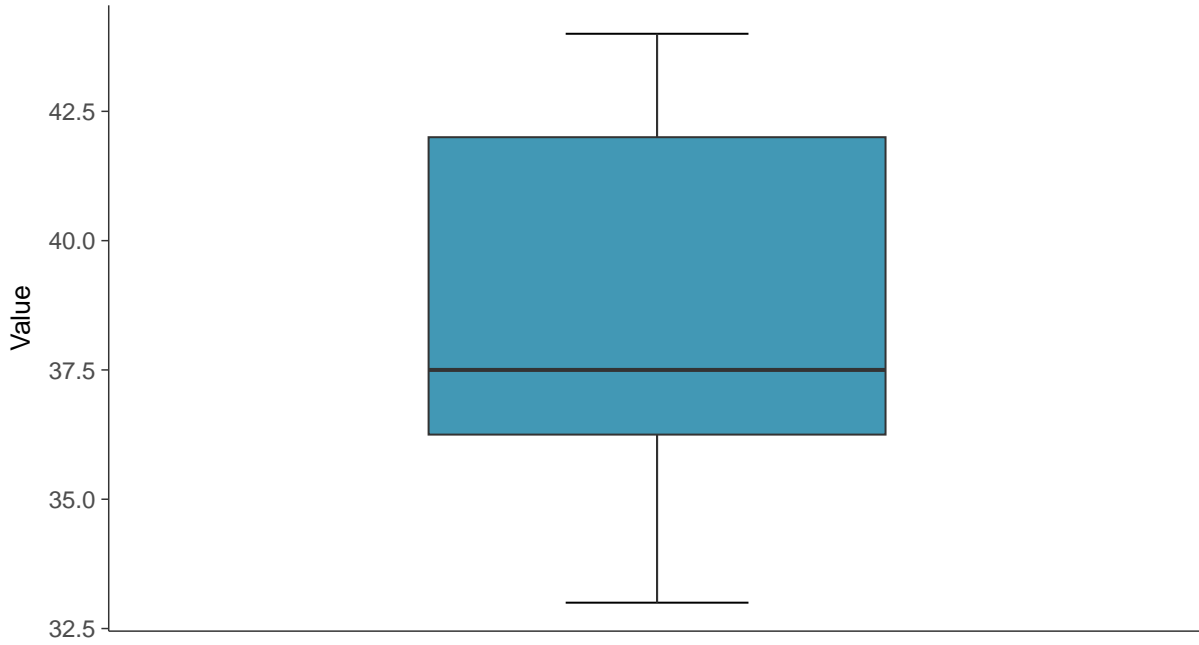
Total Suspended Solids, MW-20 (mg/L)





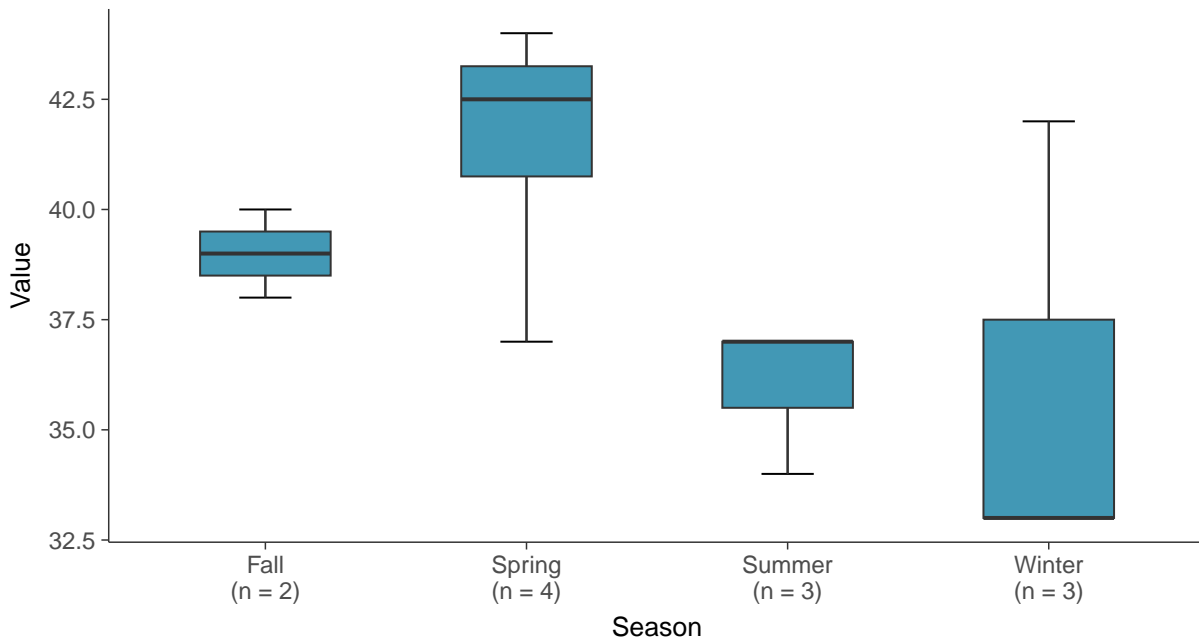
### Boxplot

Total Suspended Solids, MW-20 (mg/L)



### Boxplot by Season

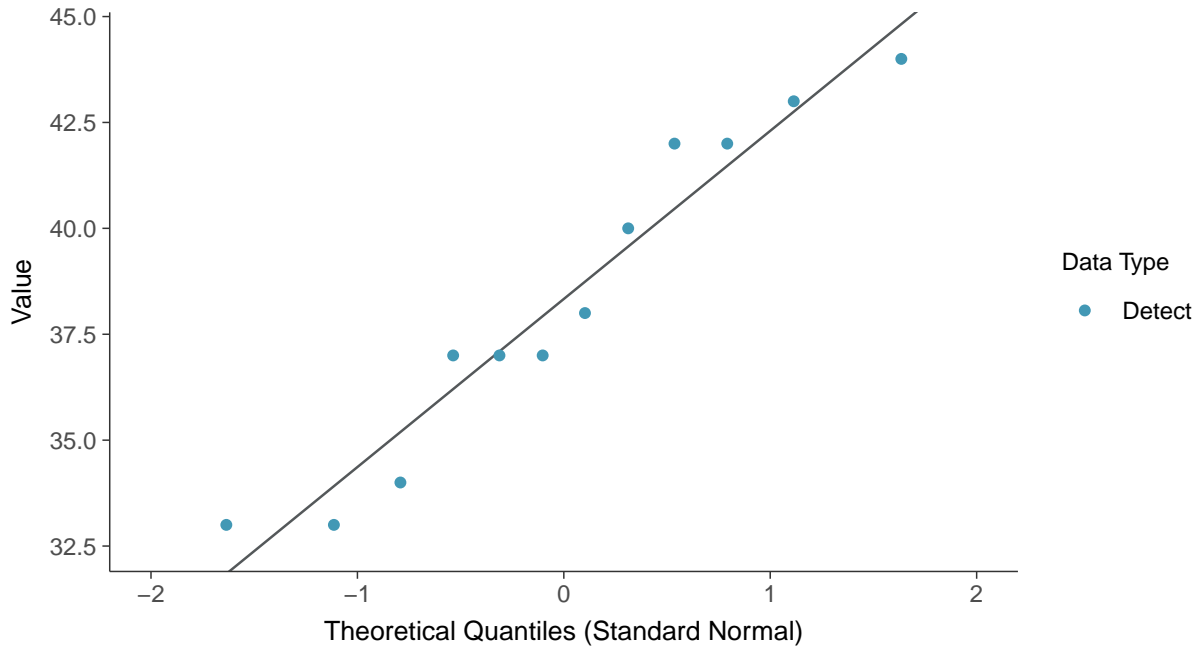
Total Suspended Solids, MW-20 (mg/L)





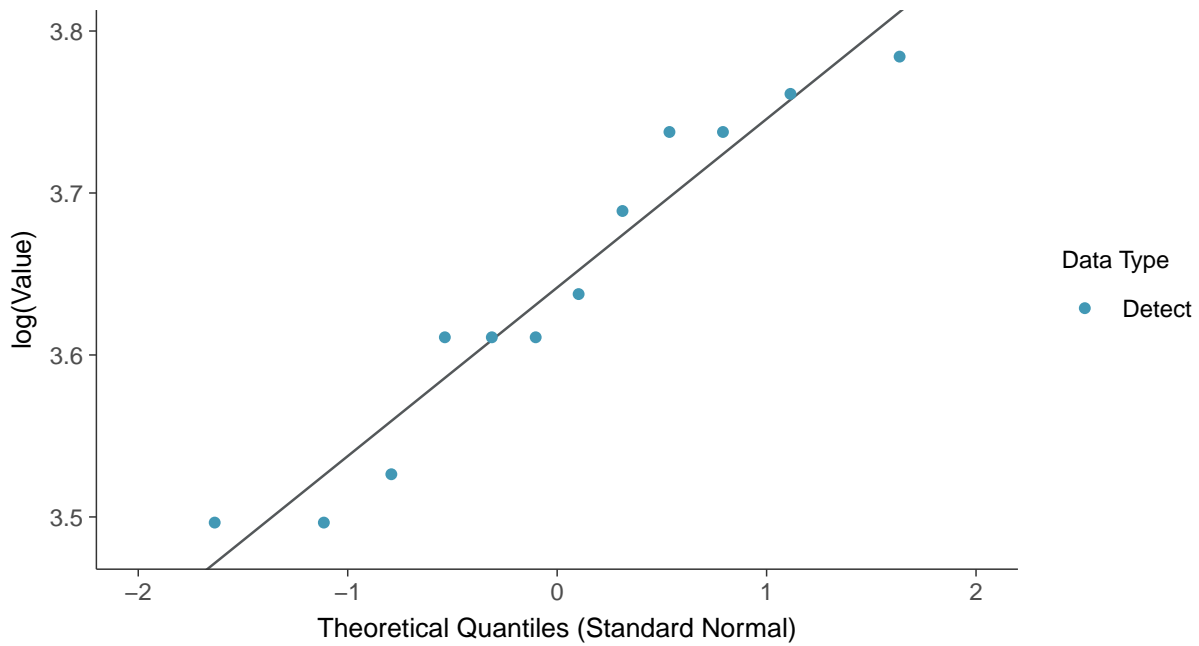
### Normal Q-Q plot

Total Suspended Solids, MW-20 (mg/L)



### Lognormal Q-Q plot

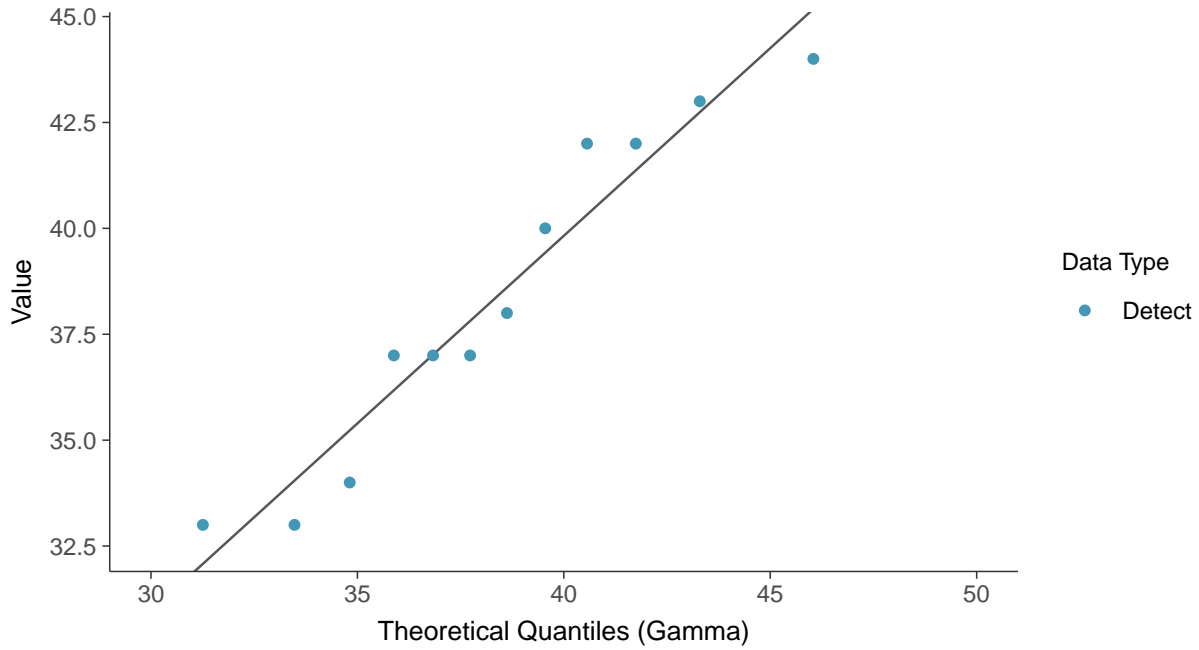
Total Suspended Solids, MW-20 (mg/L)





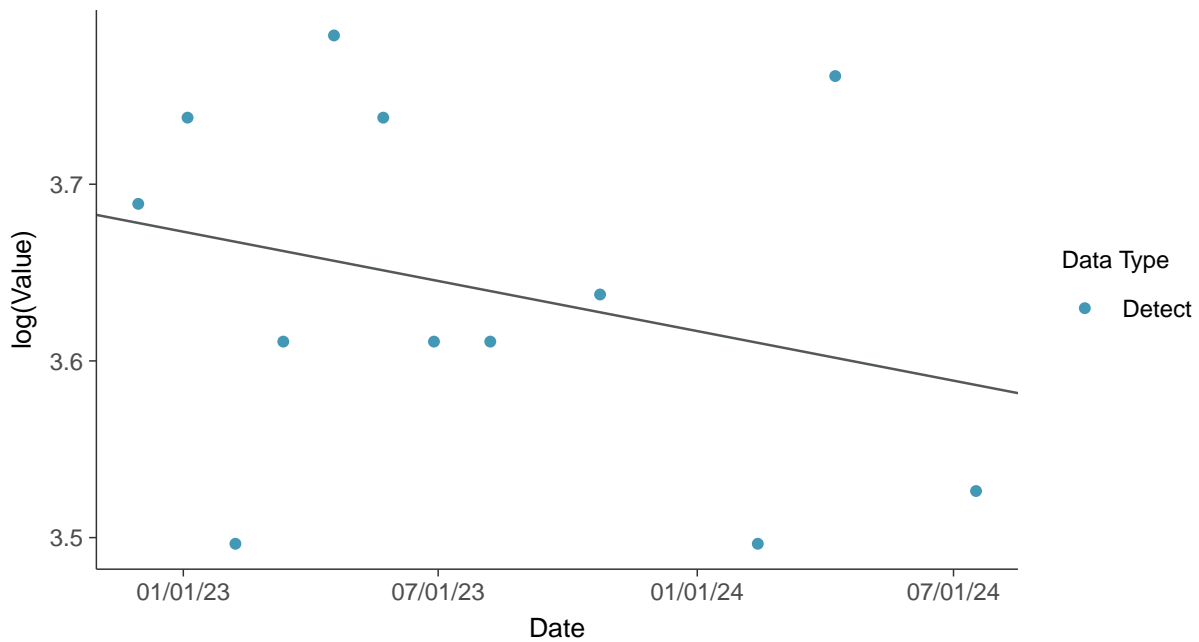
### Gamma Q-Q plot

Total Suspended Solids, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

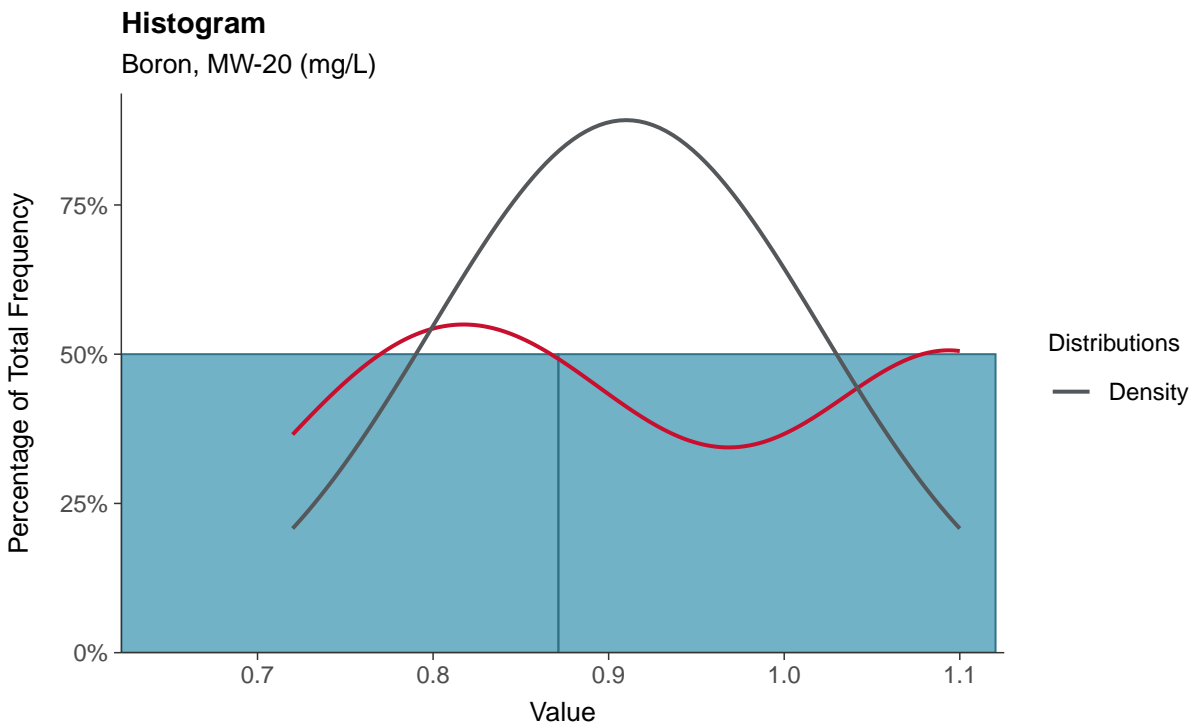
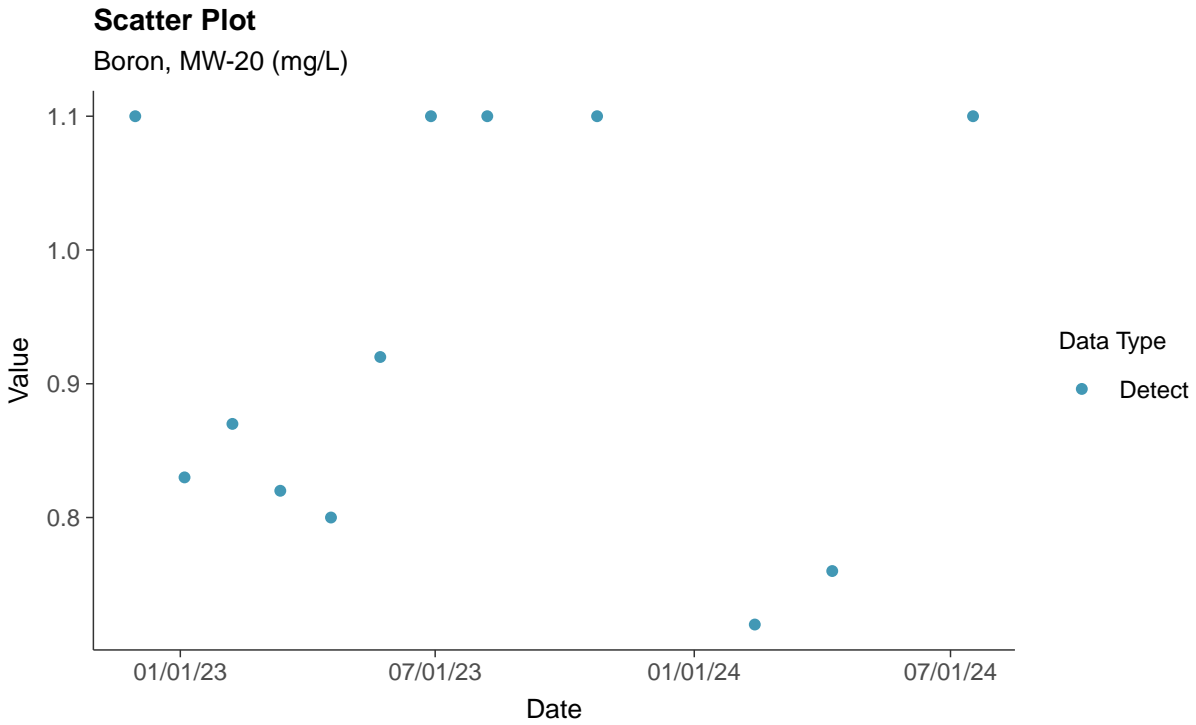
Total Suspended Solids, MW-20 (mg/L)





### Appendix III: Boron, MW-20

ID: 30\_1\_4\_105

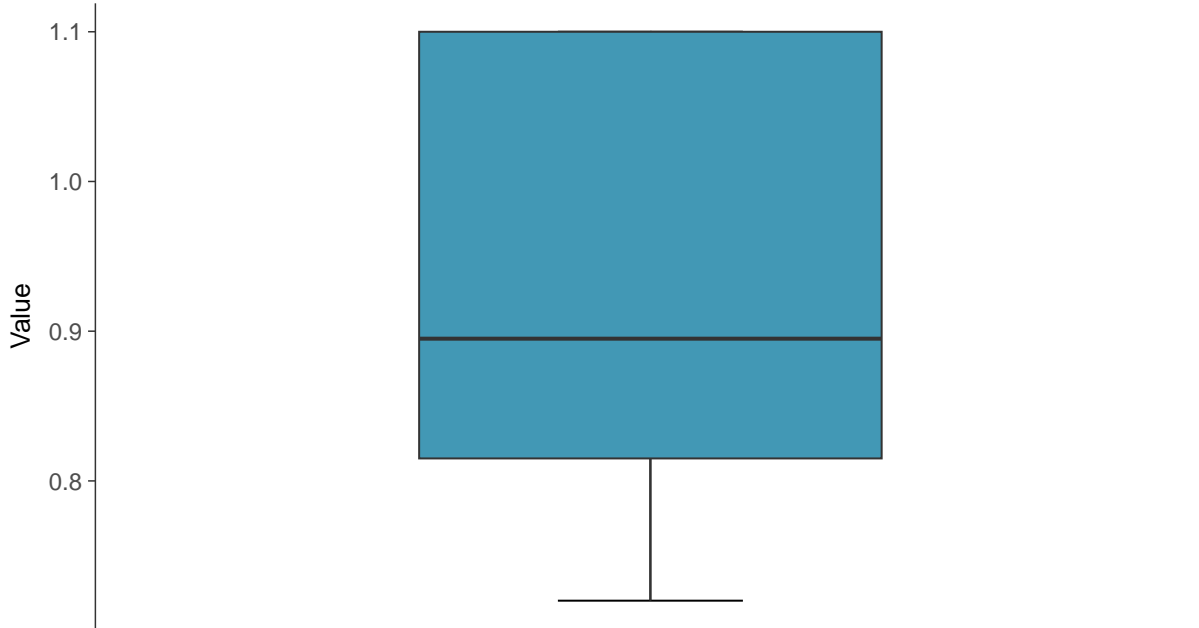






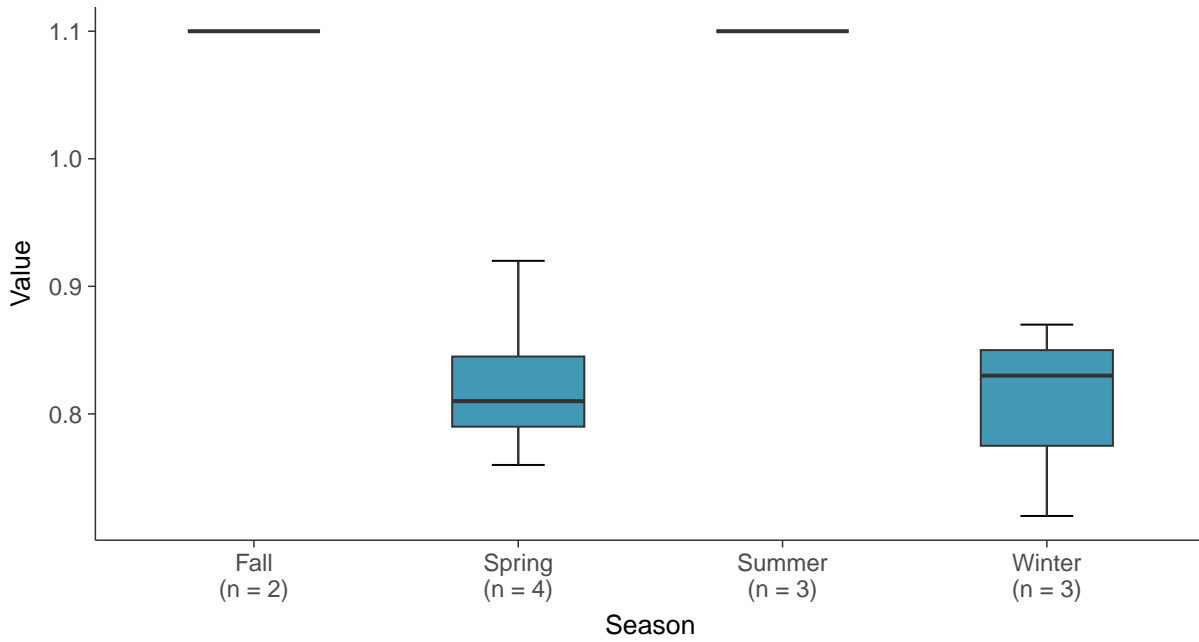
### Boxplot

Boron, MW-20 (mg/L)



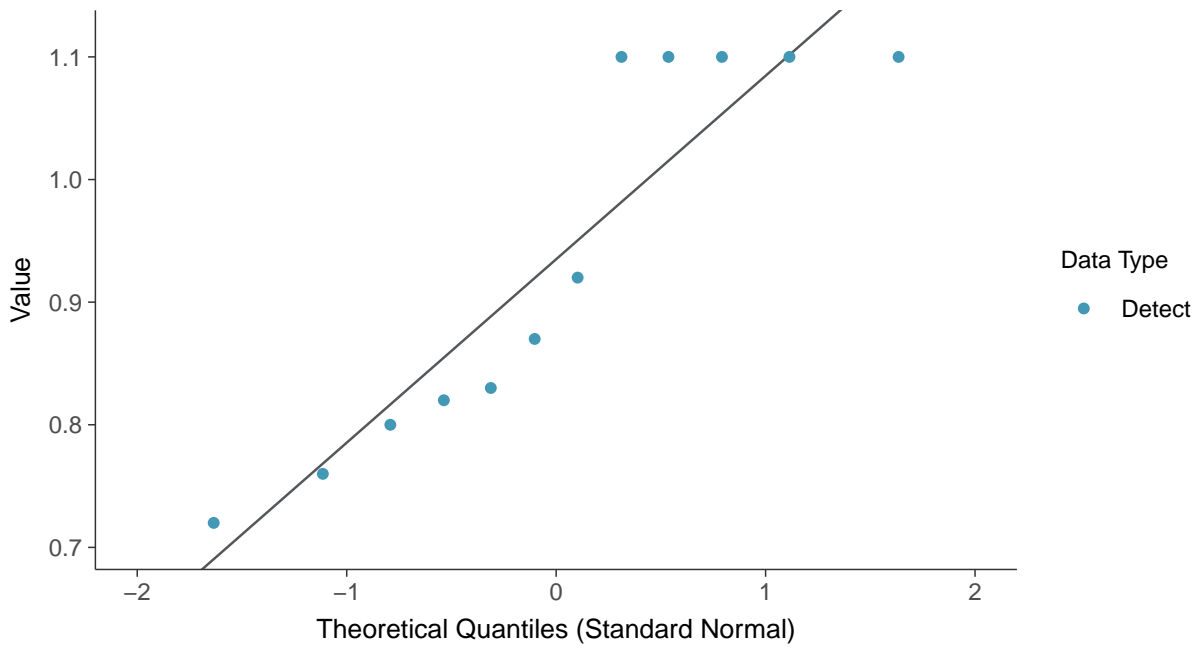
### Boxplot by Season

Boron, MW-20 (mg/L)

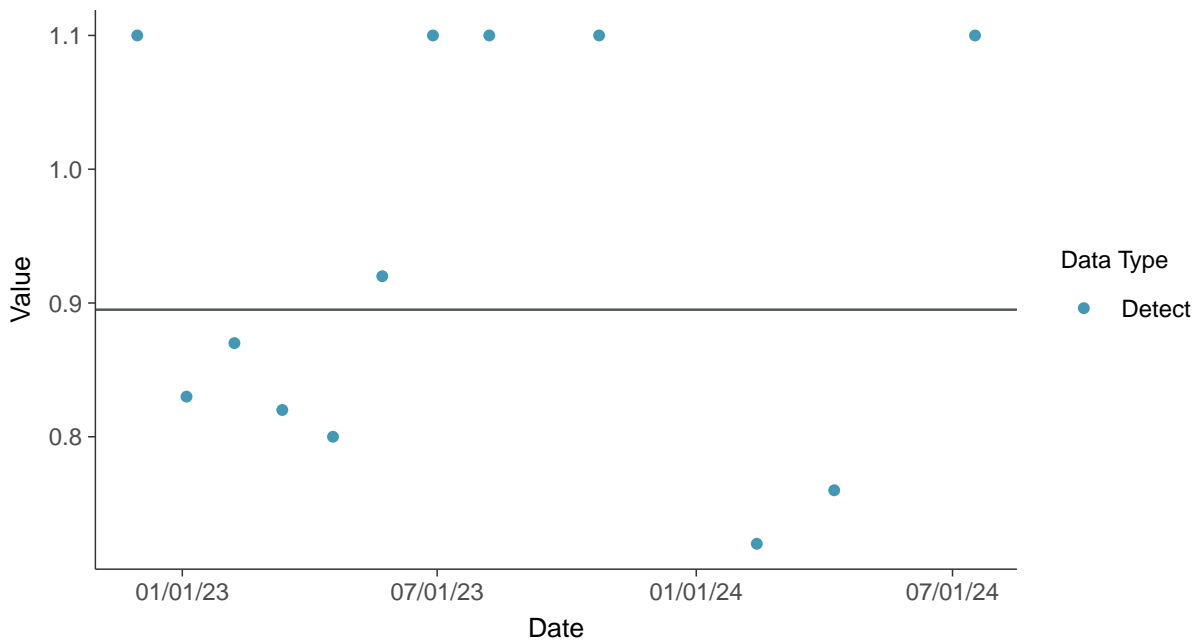




**Normal Q-Q plot**  
Boron, MW-20 (mg/L)



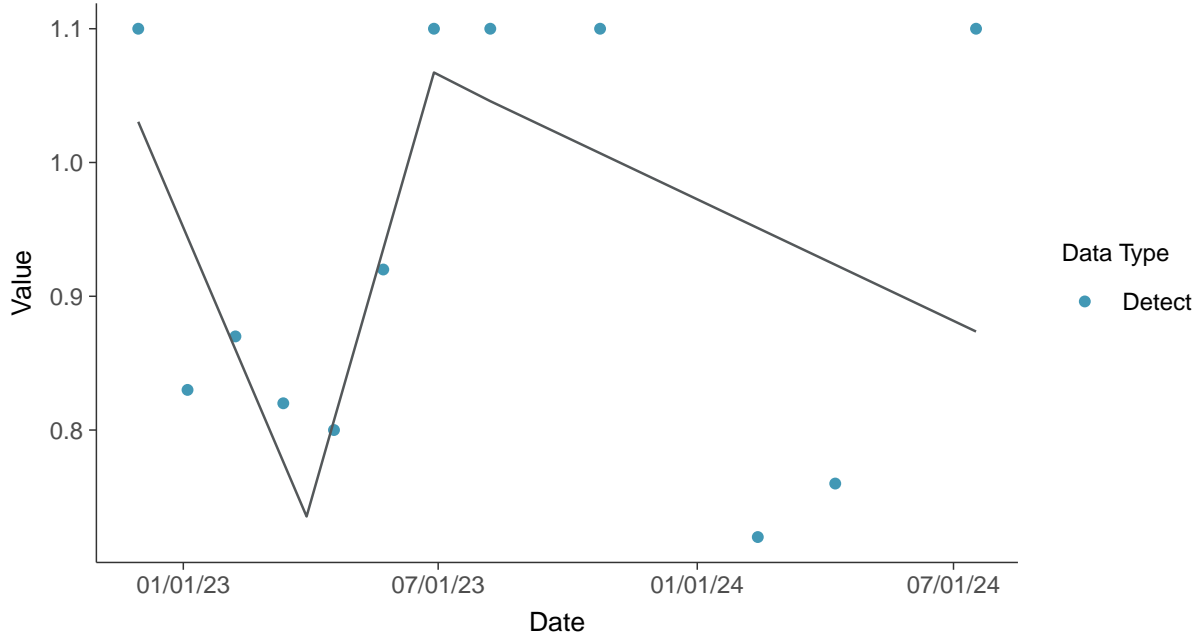
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Boron, MW-20 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

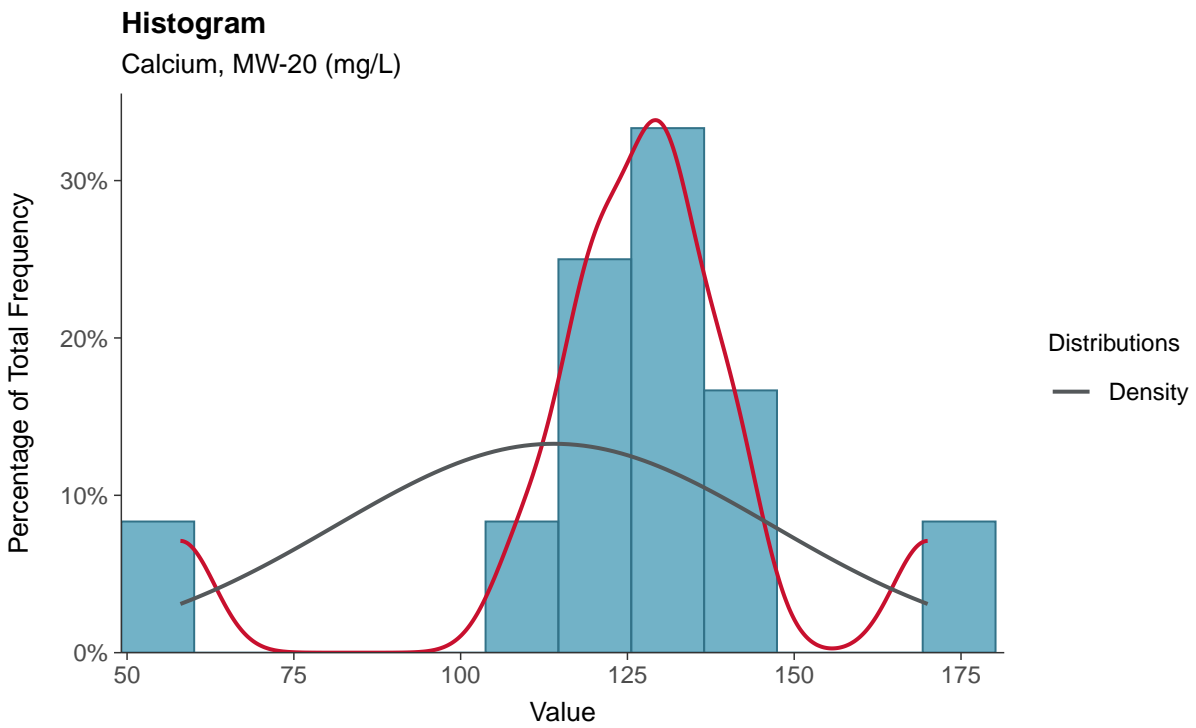
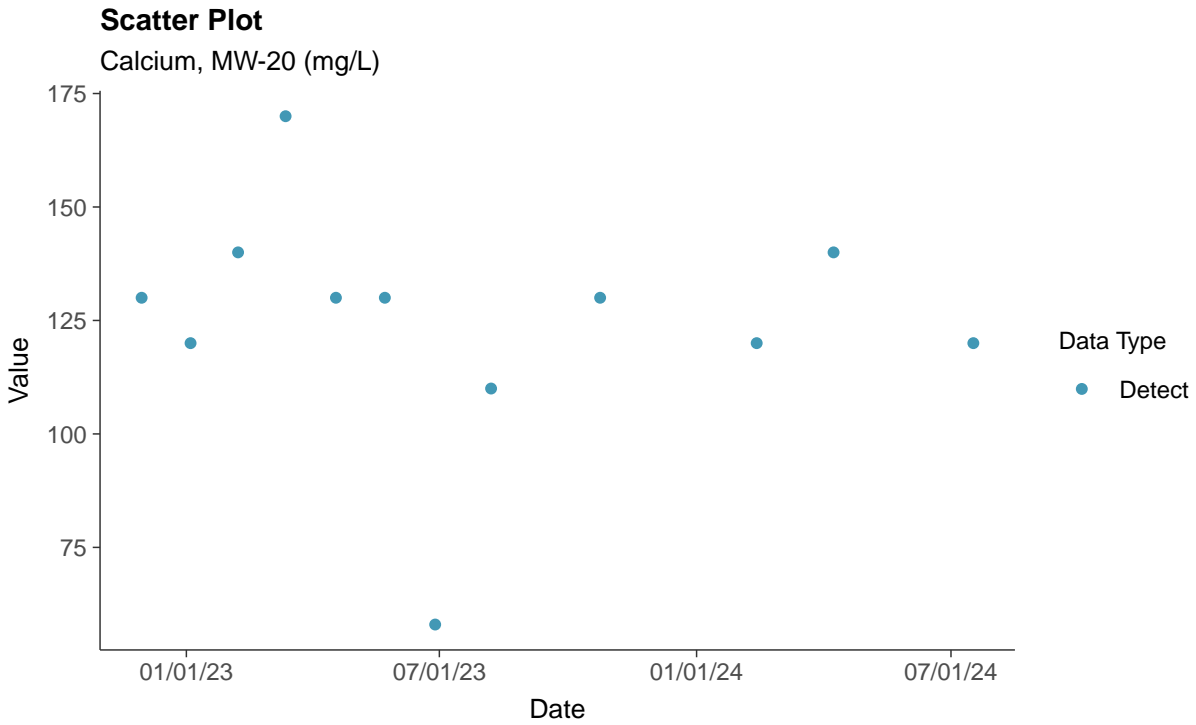
Boron, MW-20 (mg/L)





### Appendix III: Calcium, MW-20

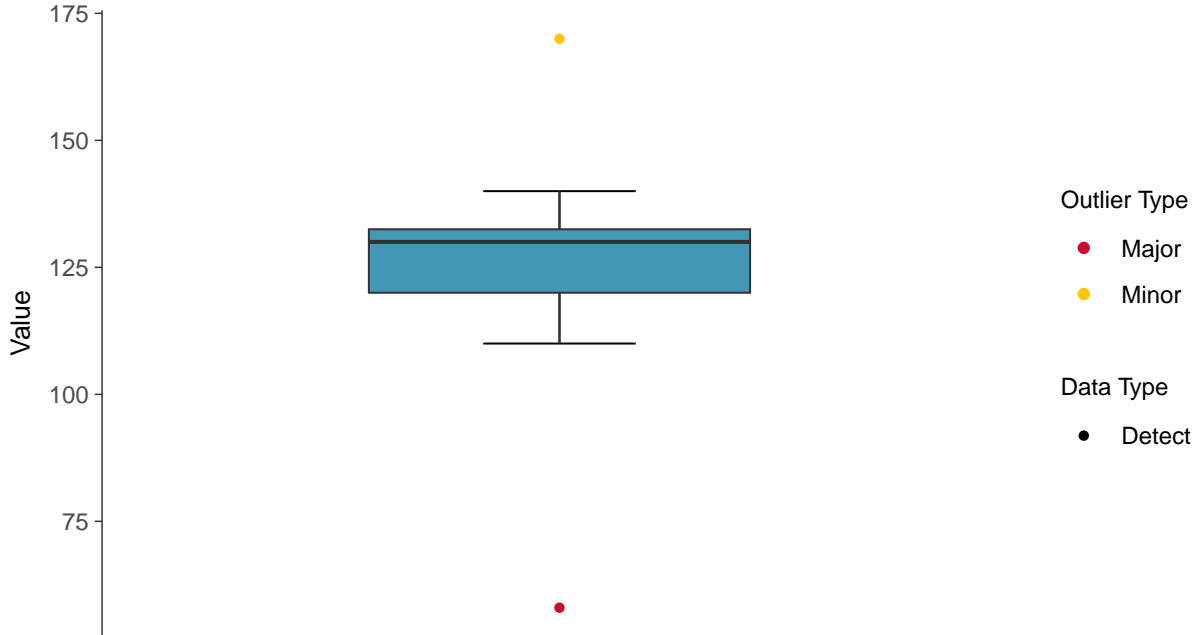
ID: 30\_1\_4\_107





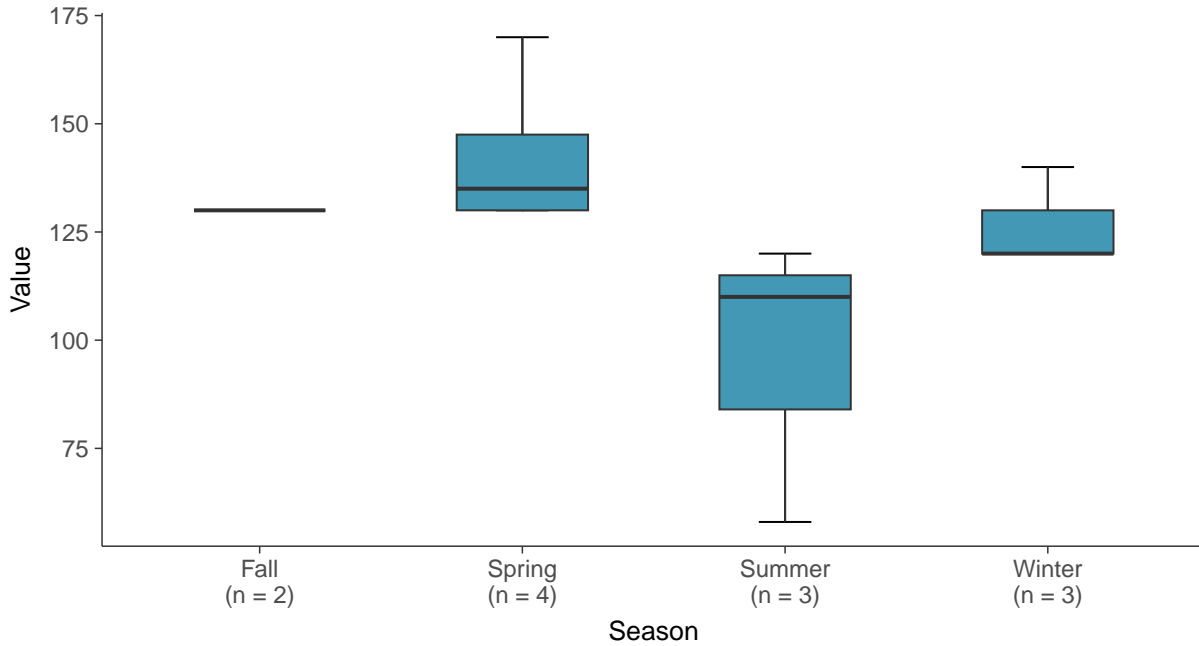
### Boxplot

Calcium, MW-20 (mg/L)



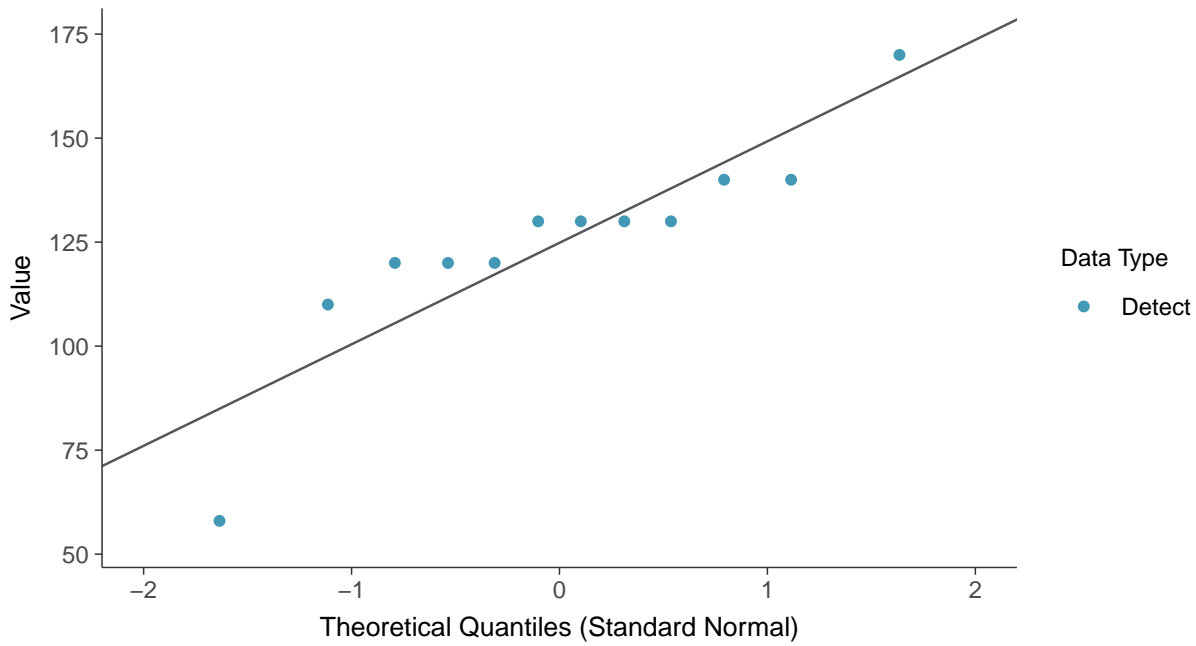
### Boxplot by Season

Calcium, MW-20 (mg/L)

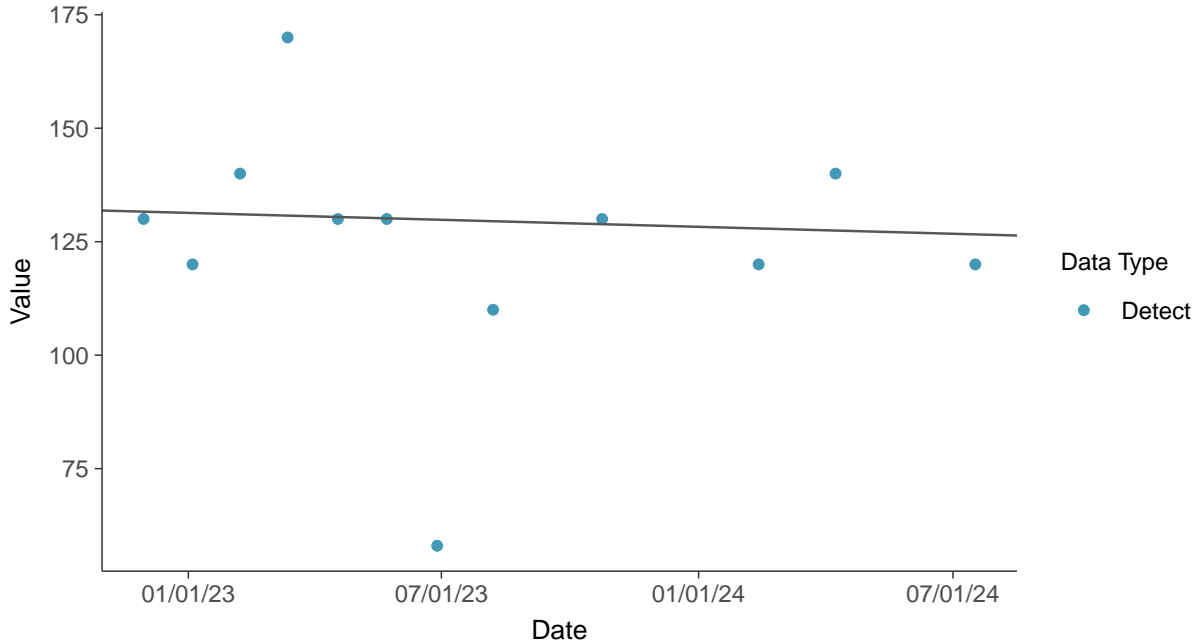




**Normal Q-Q plot**  
Calcium, MW-20 (mg/L)



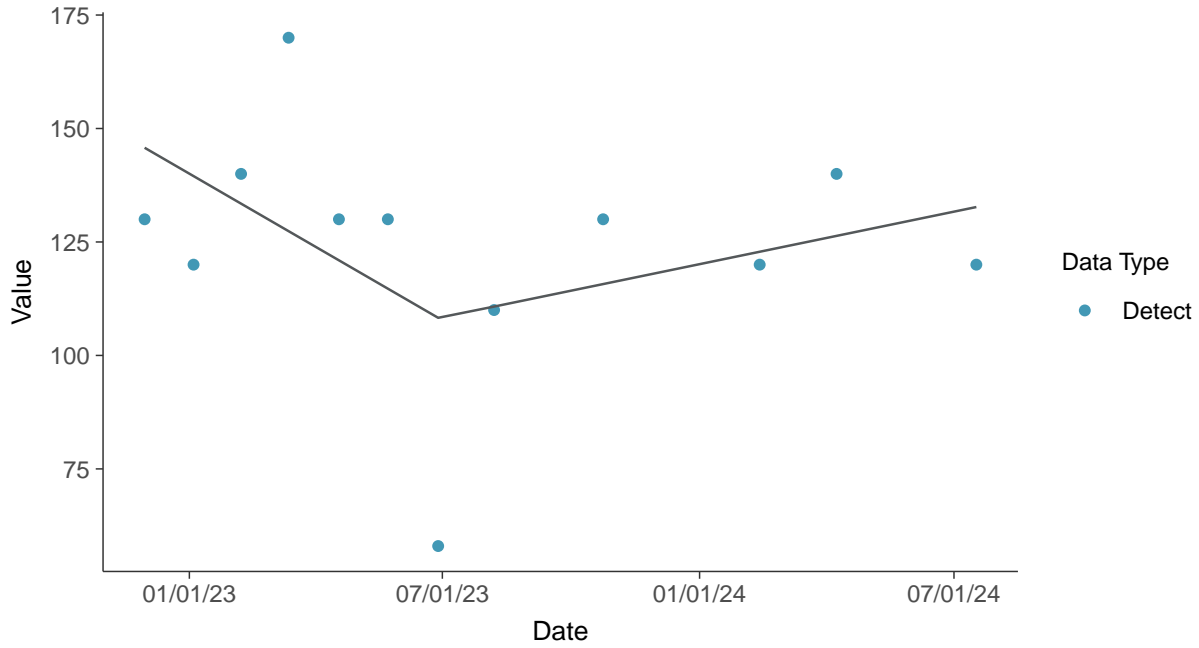
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Calcium, MW-20 (mg/L)





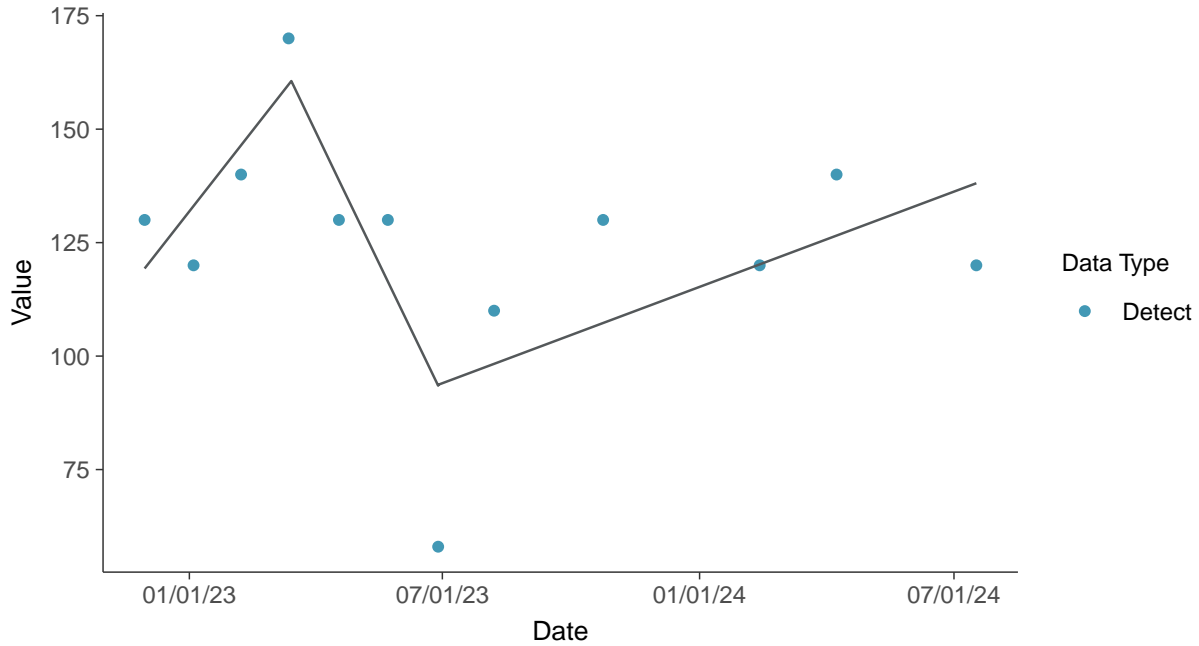
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-20 (mg/L)



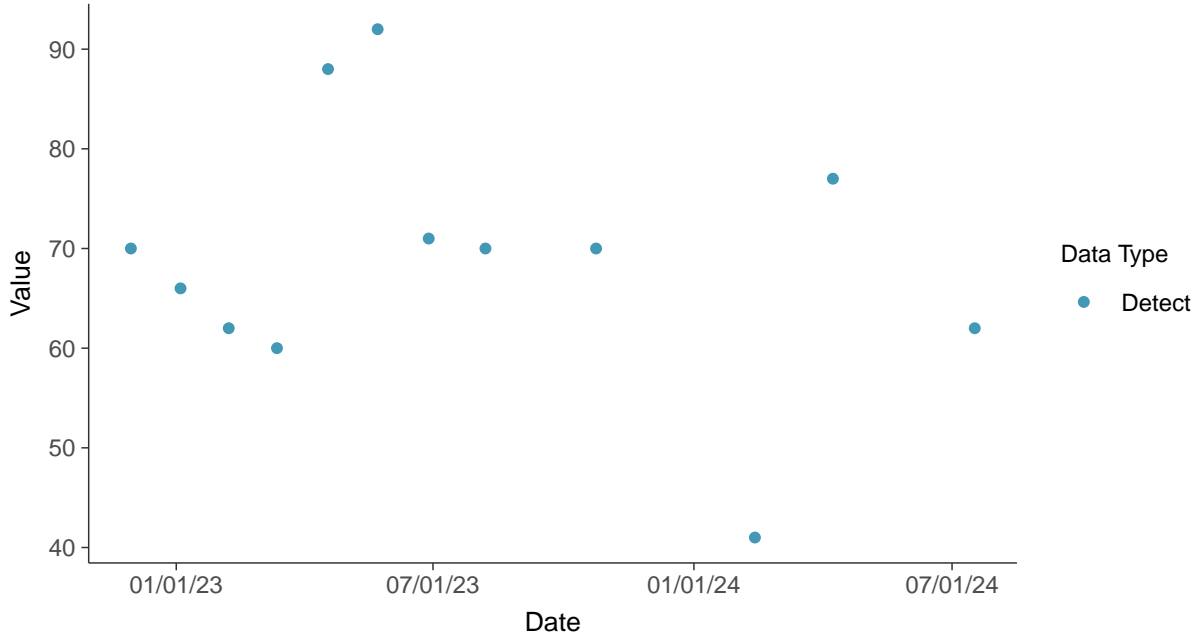


### Appendix III: Chloride (as Cl), MW-20

ID: 30\_1\_4\_108

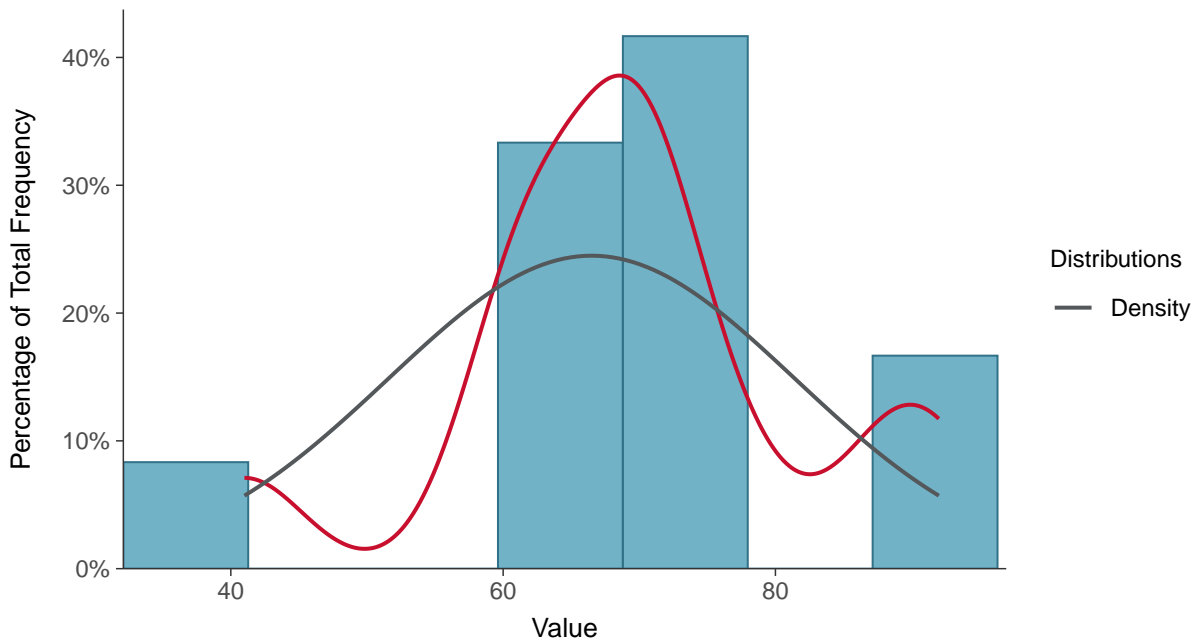
#### Scatter Plot

Chloride (as Cl), MW-20 (mg/L)



#### Histogram

Chloride (as Cl), MW-20 (mg/L)

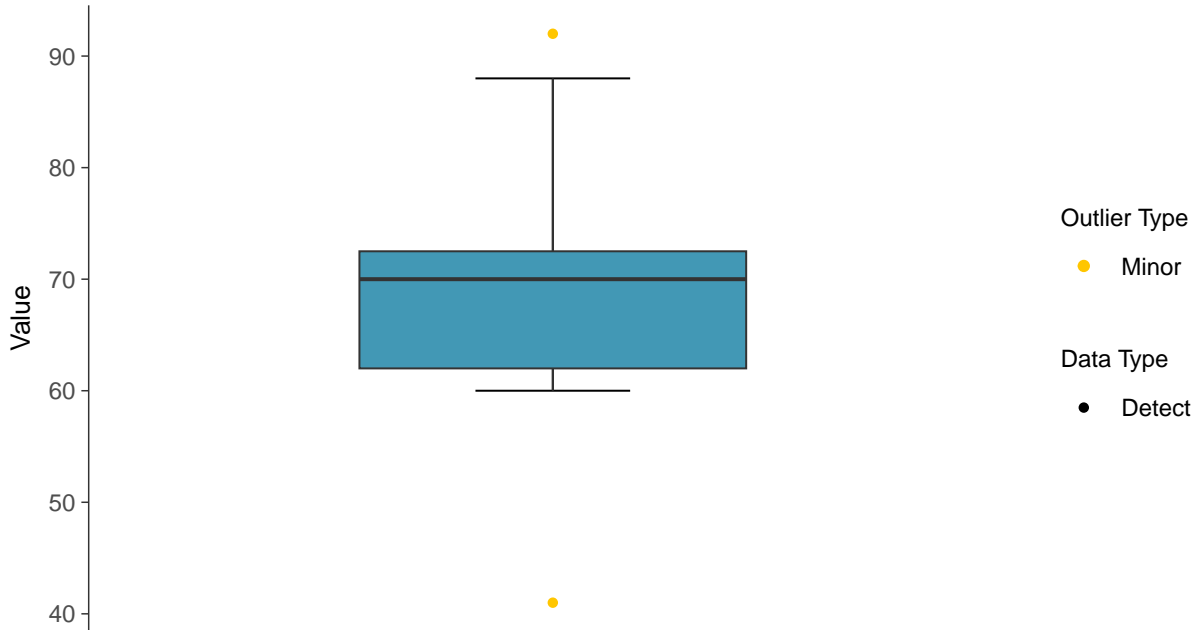






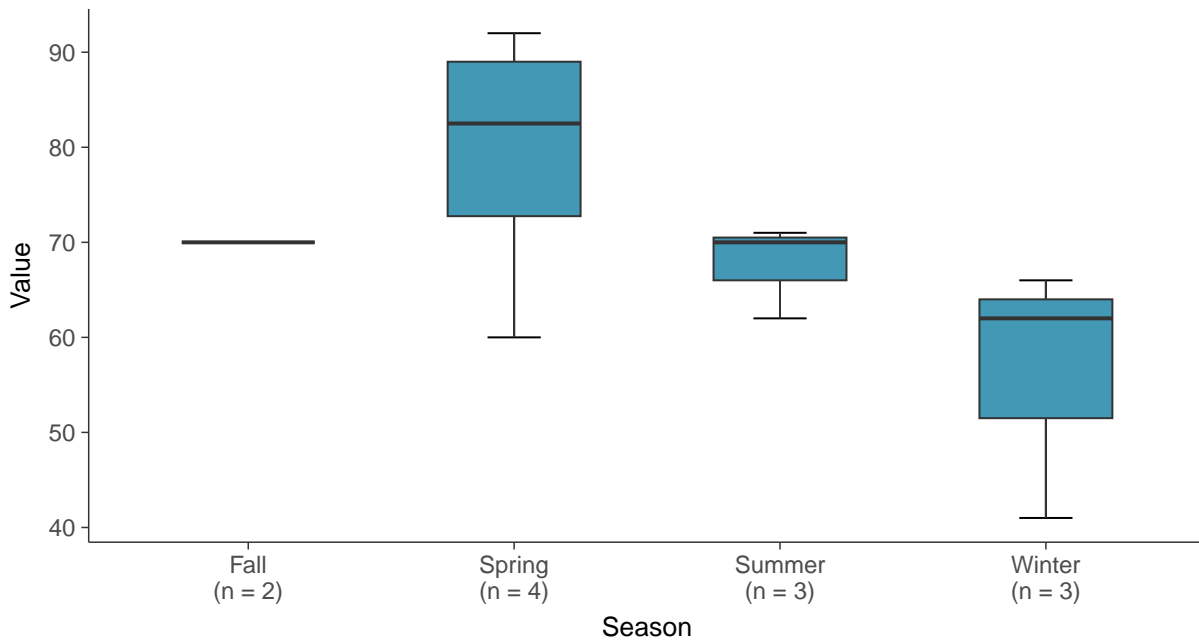
### Boxplot

Chloride (as Cl), MW-20 (mg/L)



### Boxplot by Season

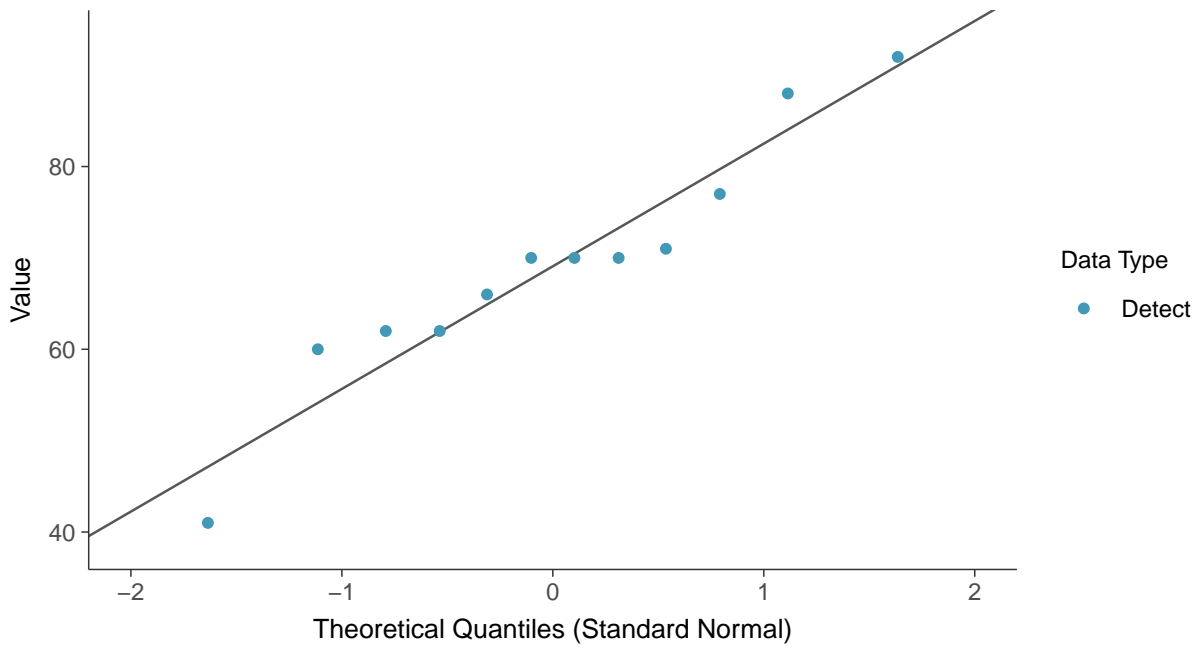
Chloride (as Cl), MW-20 (mg/L)





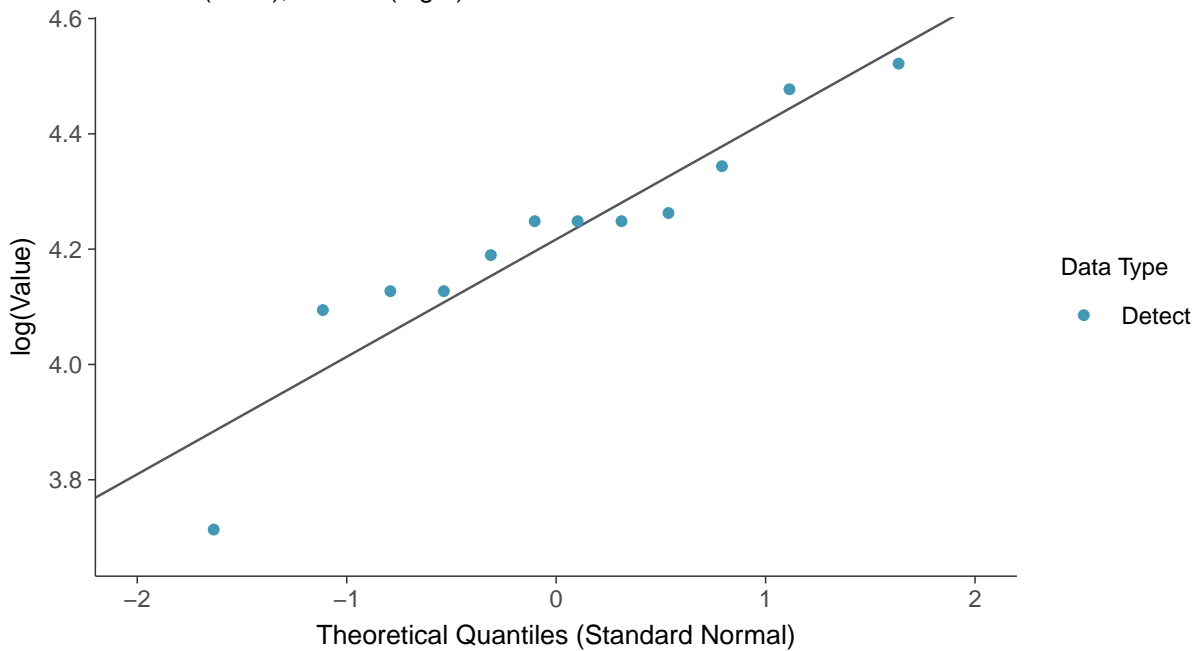
### Normal Q-Q plot

Chloride (as Cl), MW-20 (mg/L)



### Lognormal Q-Q plot

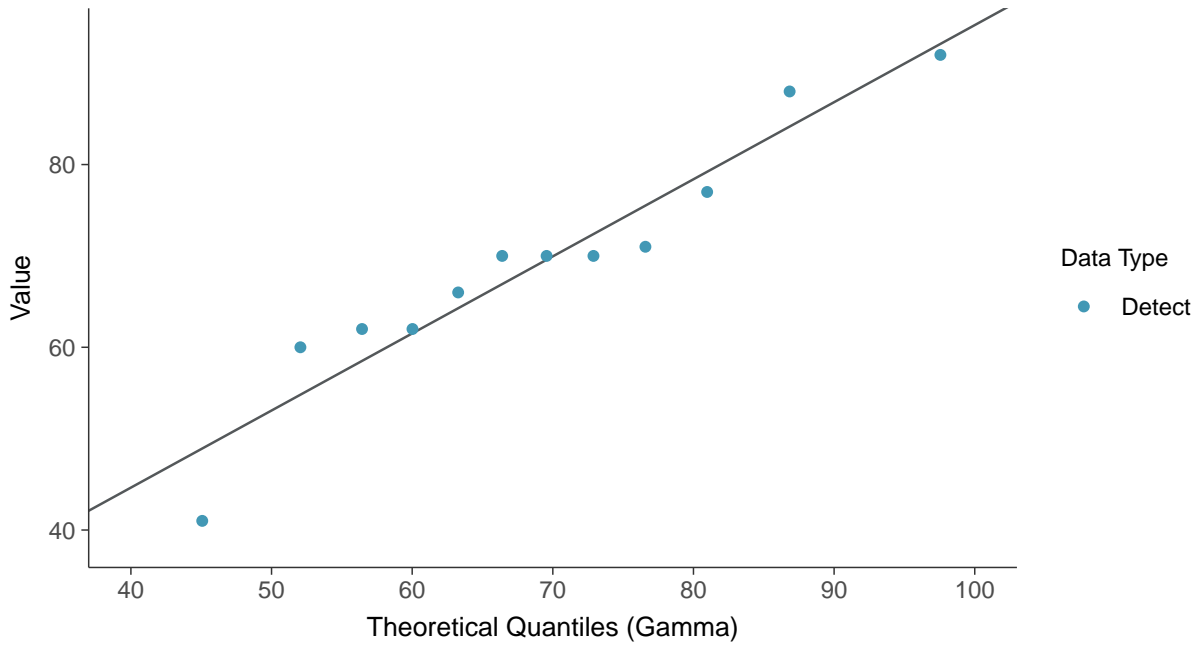
Chloride (as Cl), MW-20 (mg/L)





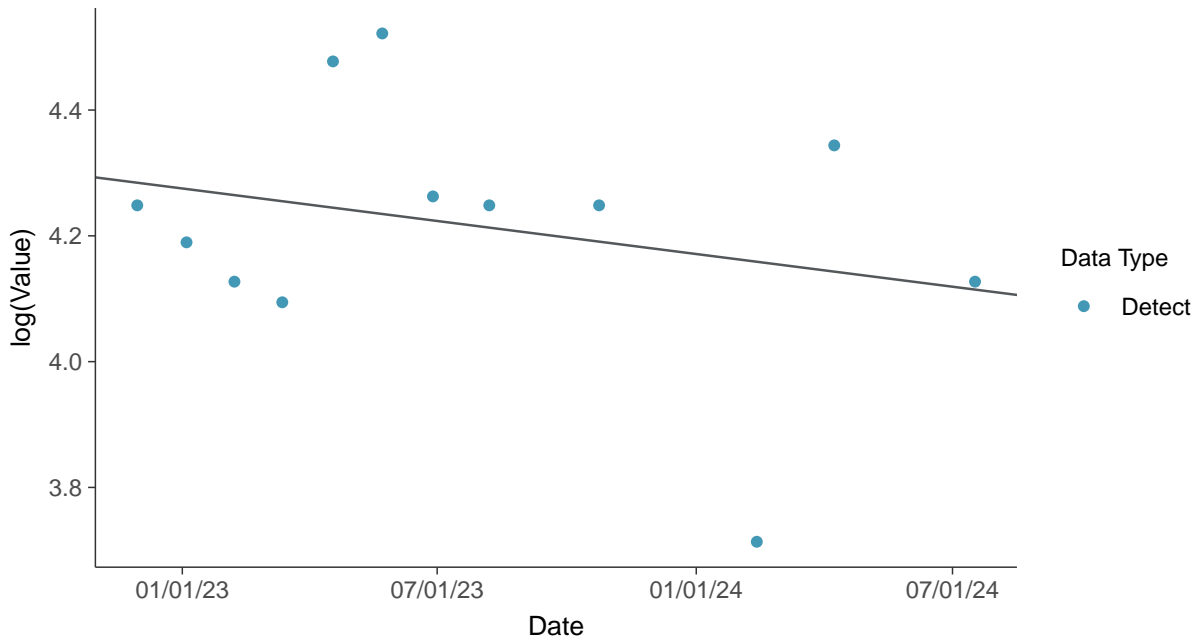
### Gamma Q-Q plot

Chloride (as Cl), MW-20 (mg/L)



### Trend Regression: Lognormal MLE

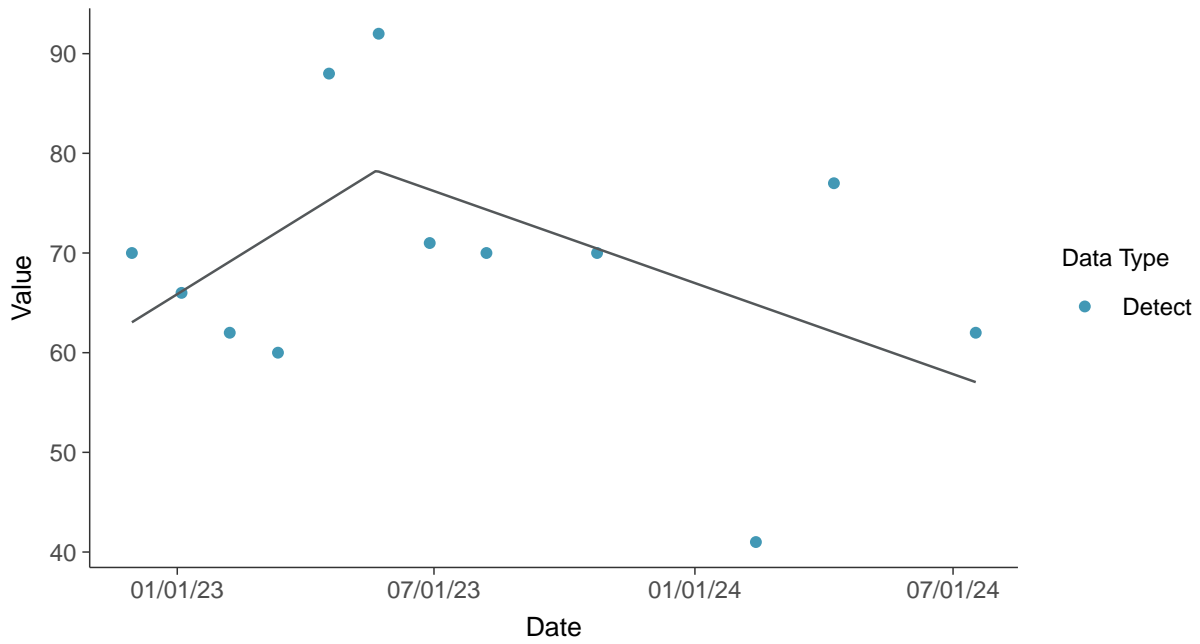
Chloride (as Cl), MW-20 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Chloride (as Cl), MW-20 (mg/L)



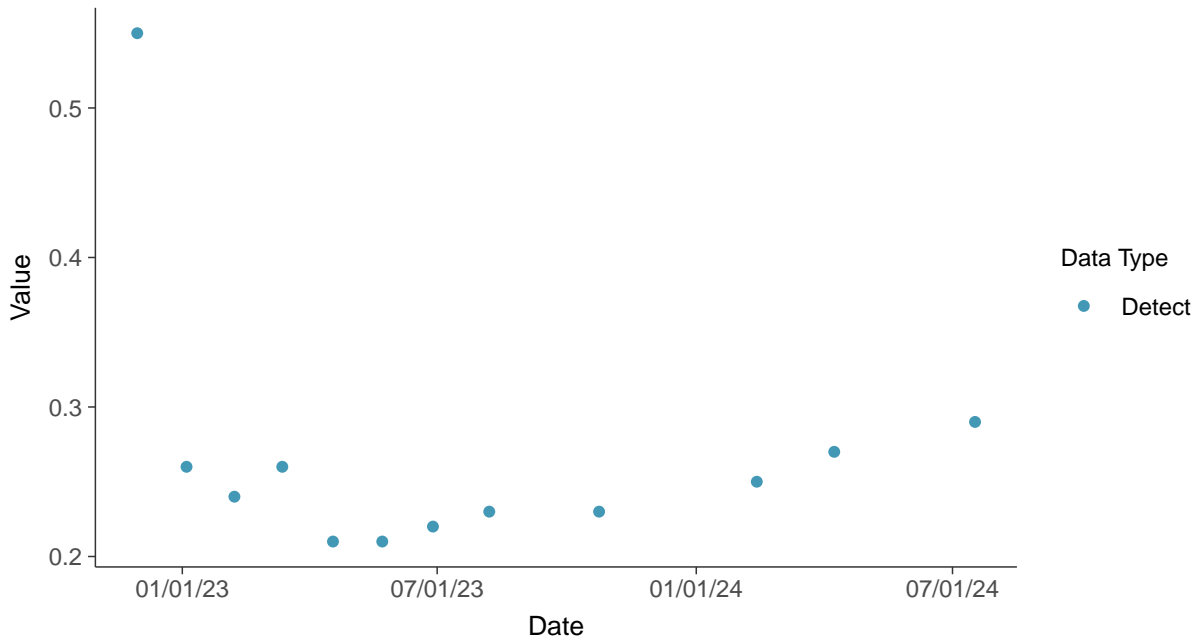


### Appendix III: Fluoride, MW-20

ID: 30\_1\_4\_112

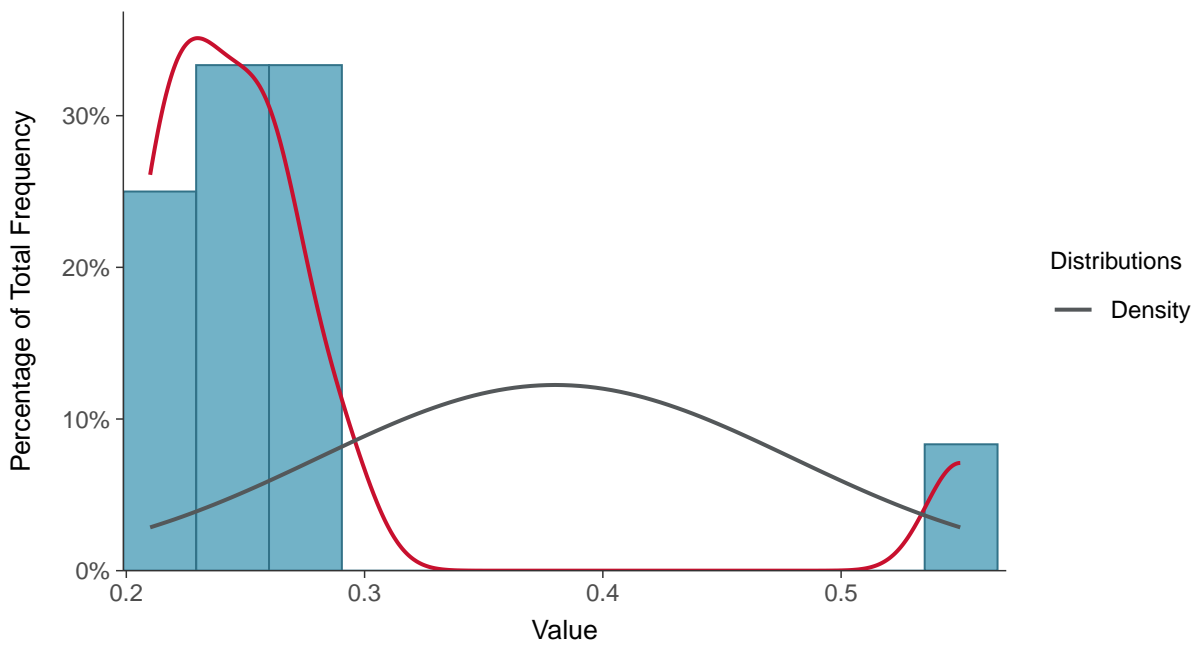
#### Scatter Plot

Fluoride, MW-20 (mg/L)



#### Histogram

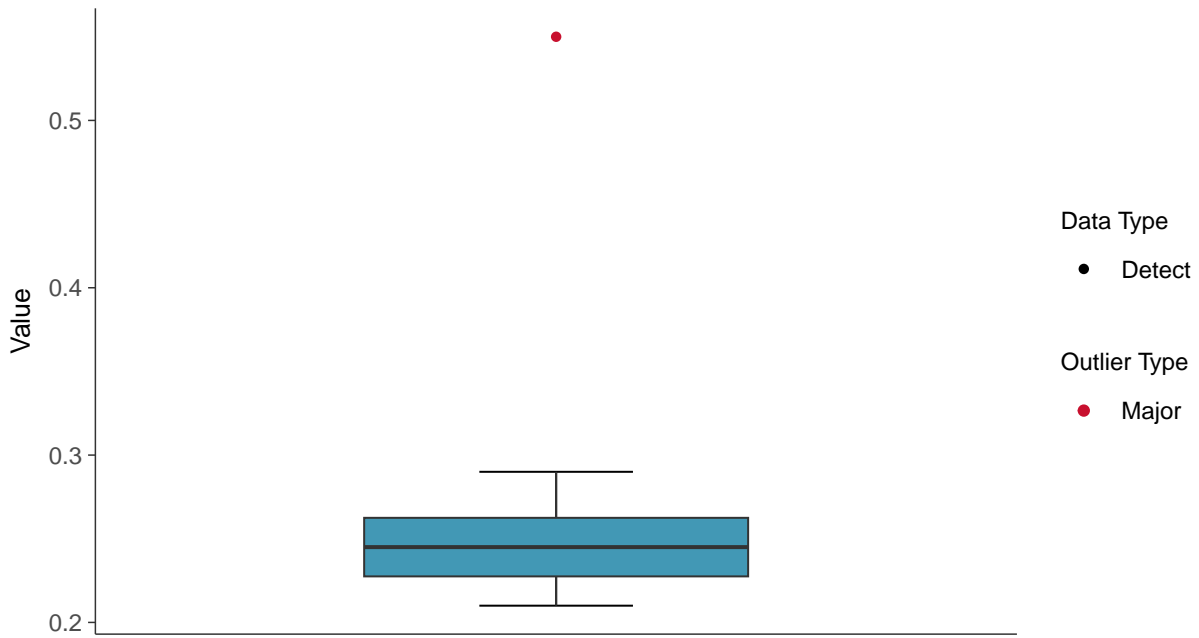
Fluoride, MW-20 (mg/L)





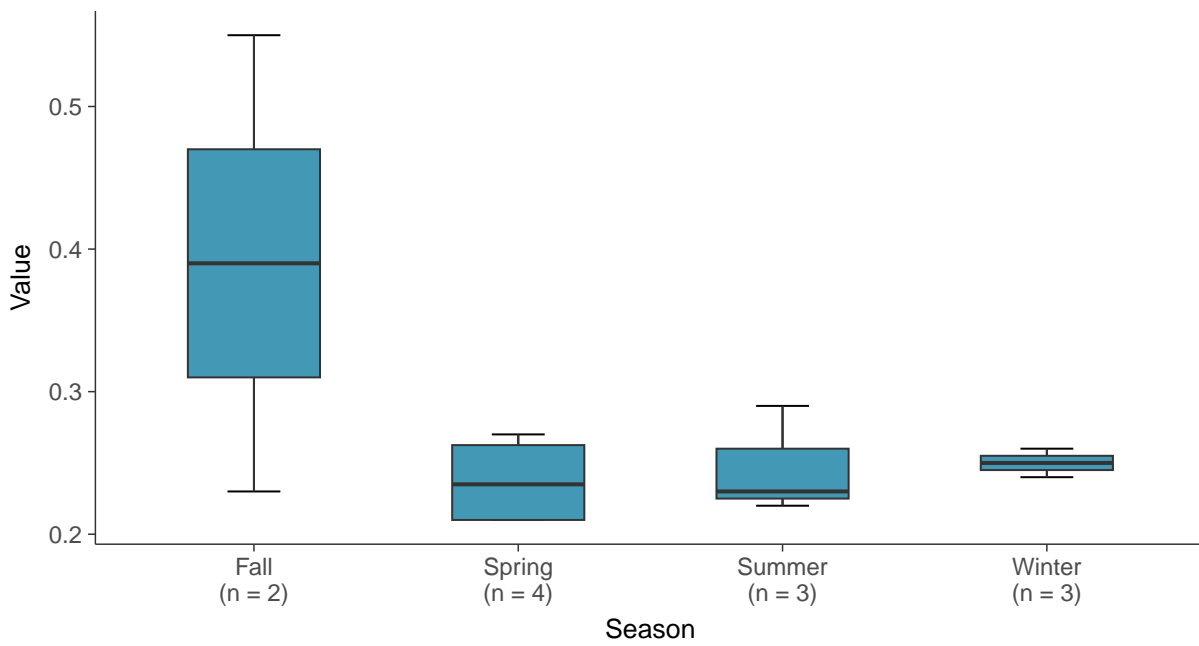
### Boxplot

Fluoride, MW-20 (mg/L)



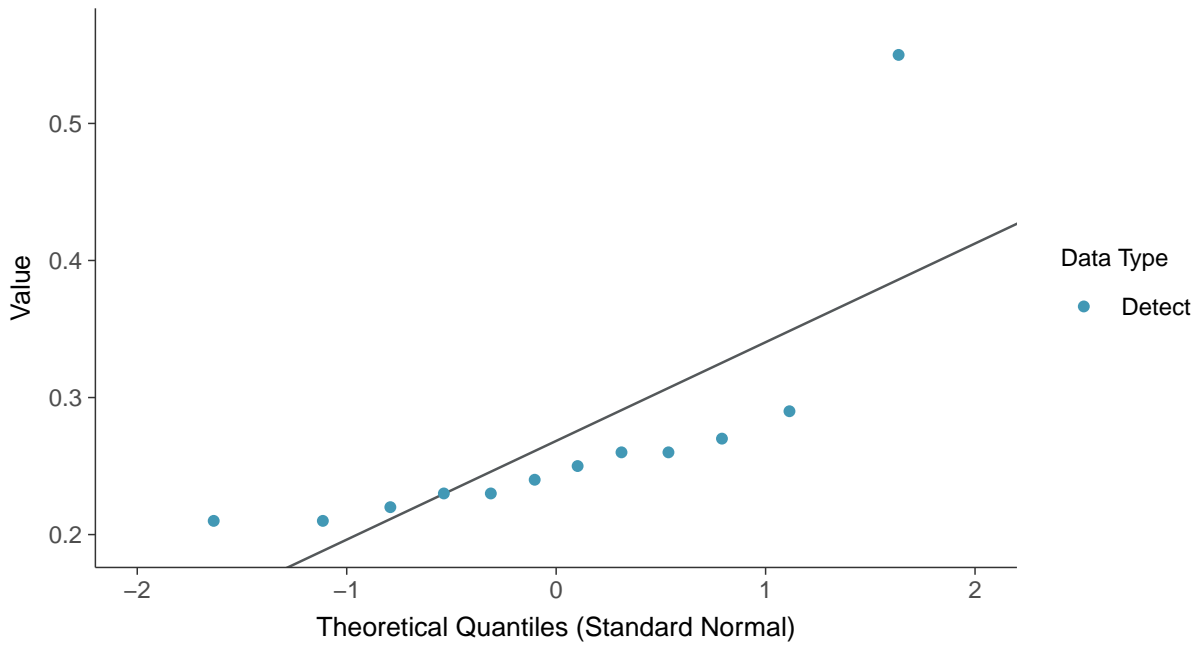
### Boxplot by Season

Fluoride, MW-20 (mg/L)

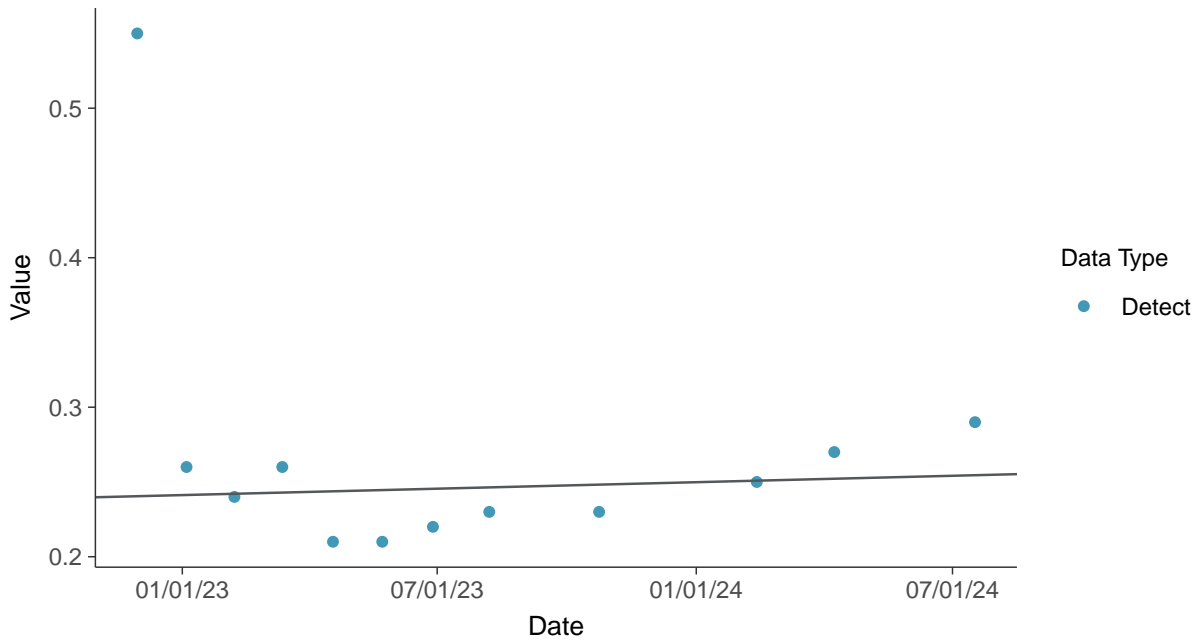




**Normal Q-Q plot**  
Fluoride, MW-20 (mg/L)



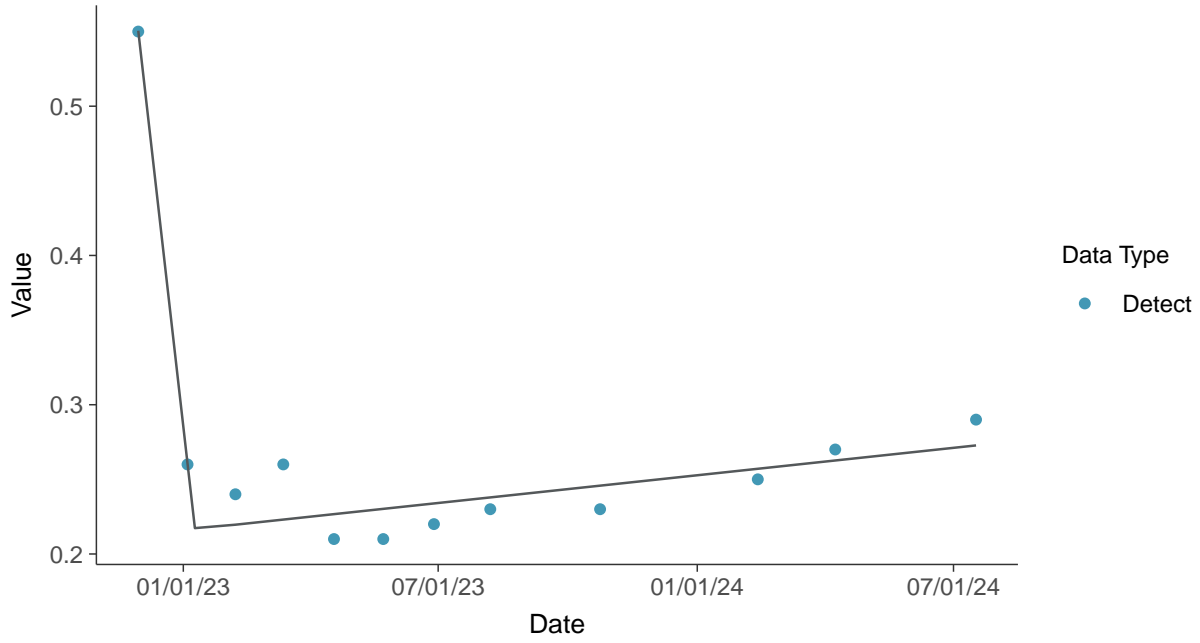
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Fluoride, MW-20 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-20 (mg/L)

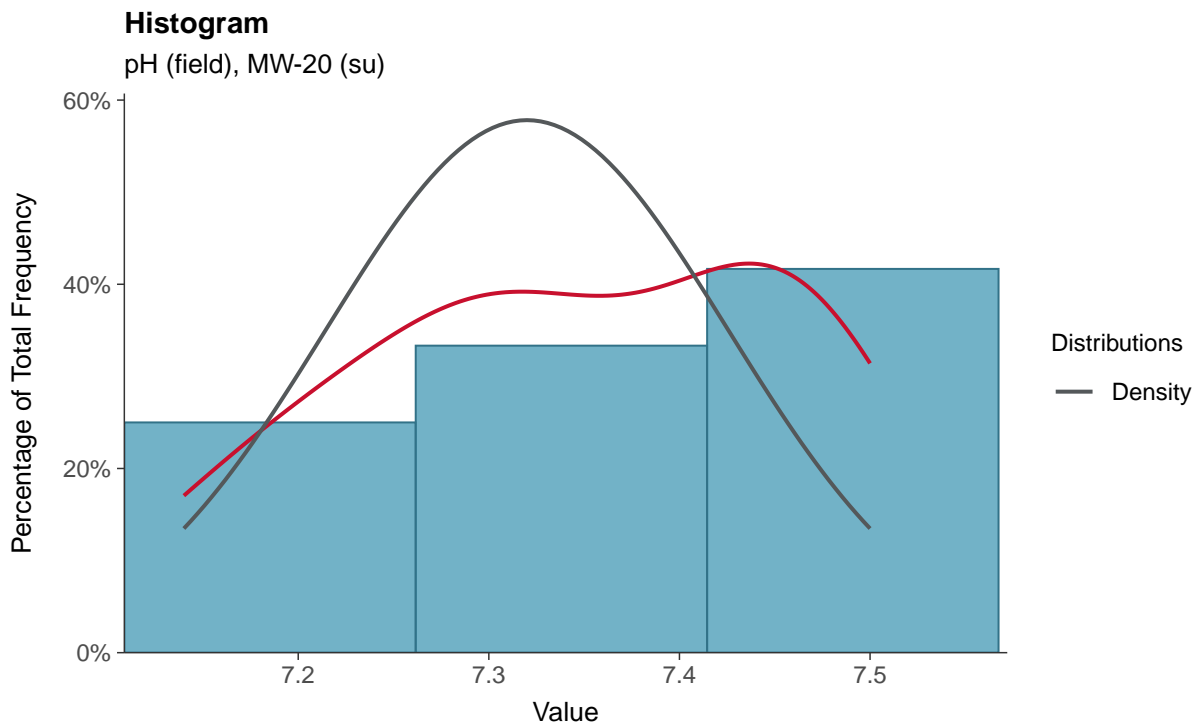
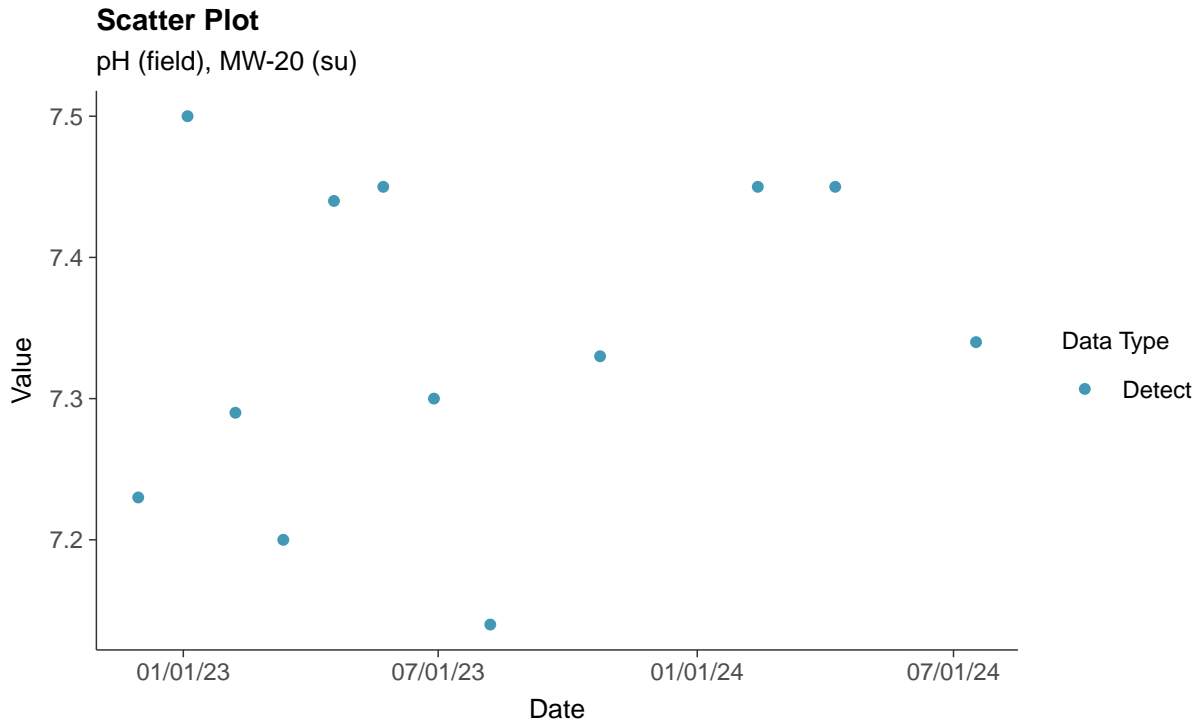






### Appendix III: pH (field), MW-20

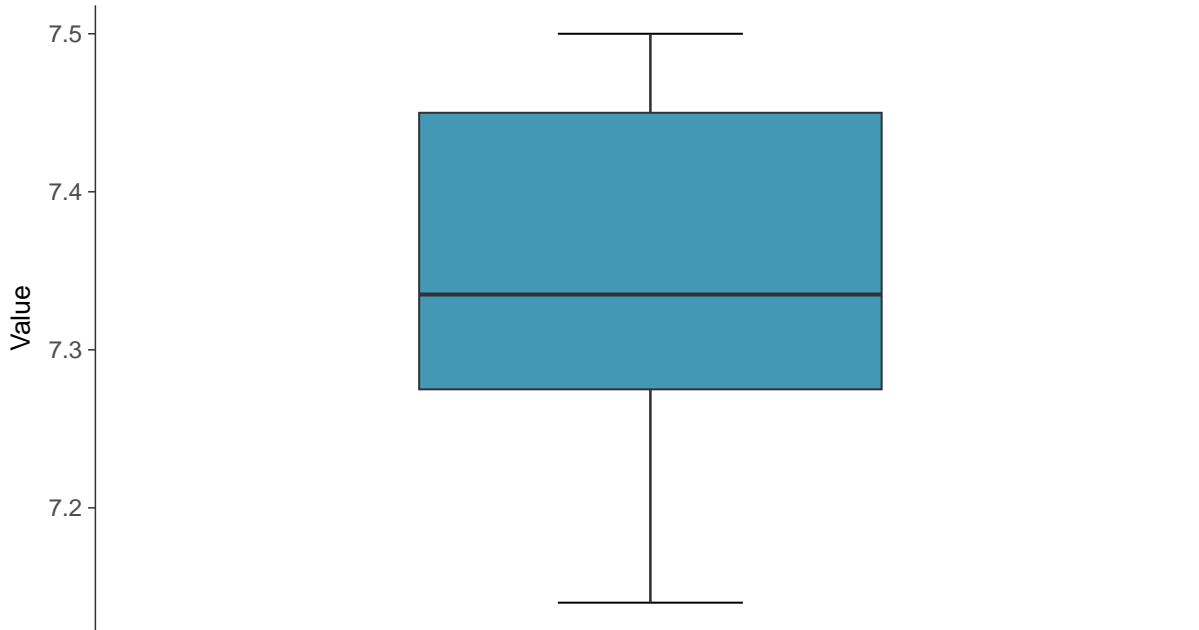
ID: 30\_1\_4\_120





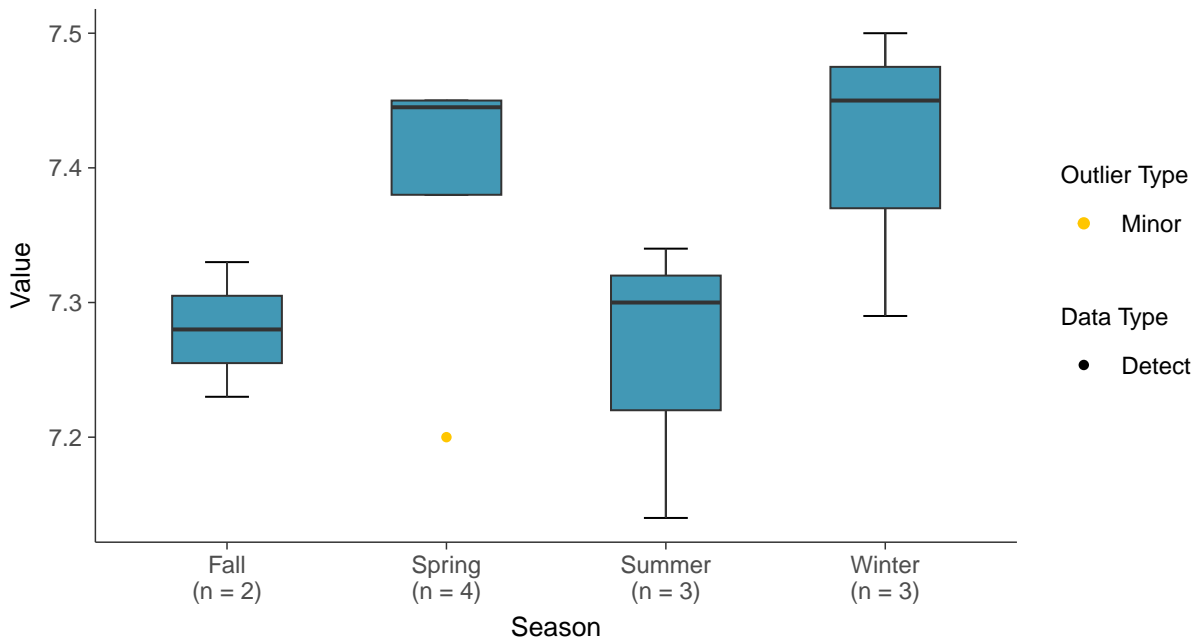
### Boxplot

pH (field), MW-20 (su)



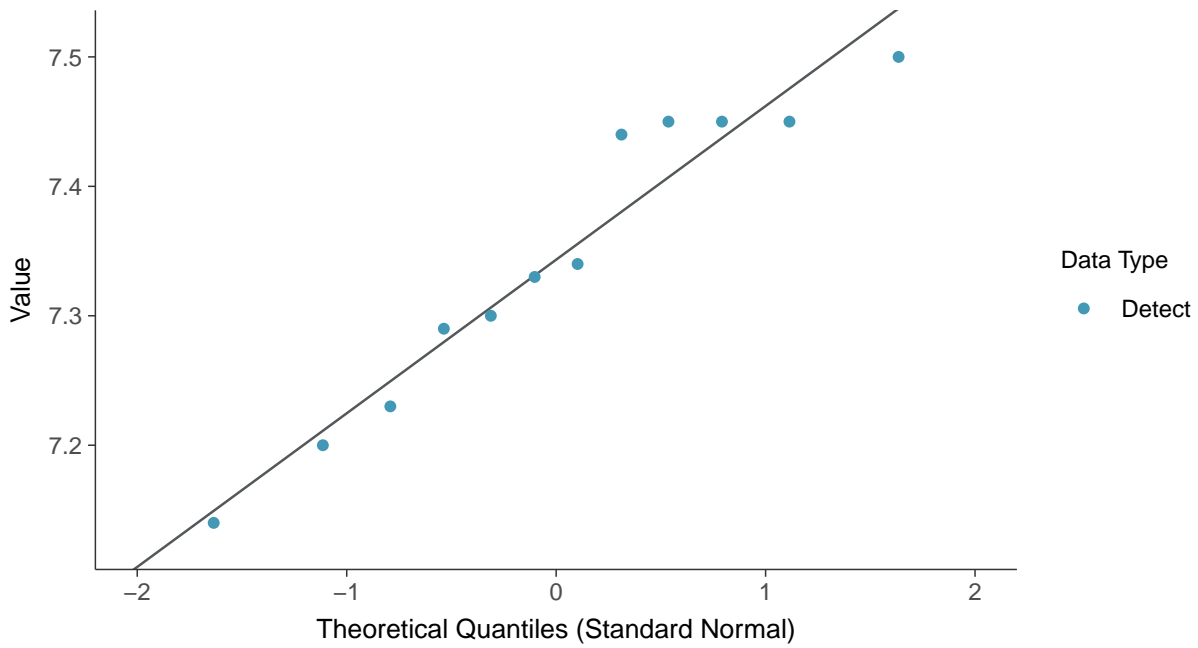
### Boxplot by Season

pH (field), MW-20 (su)

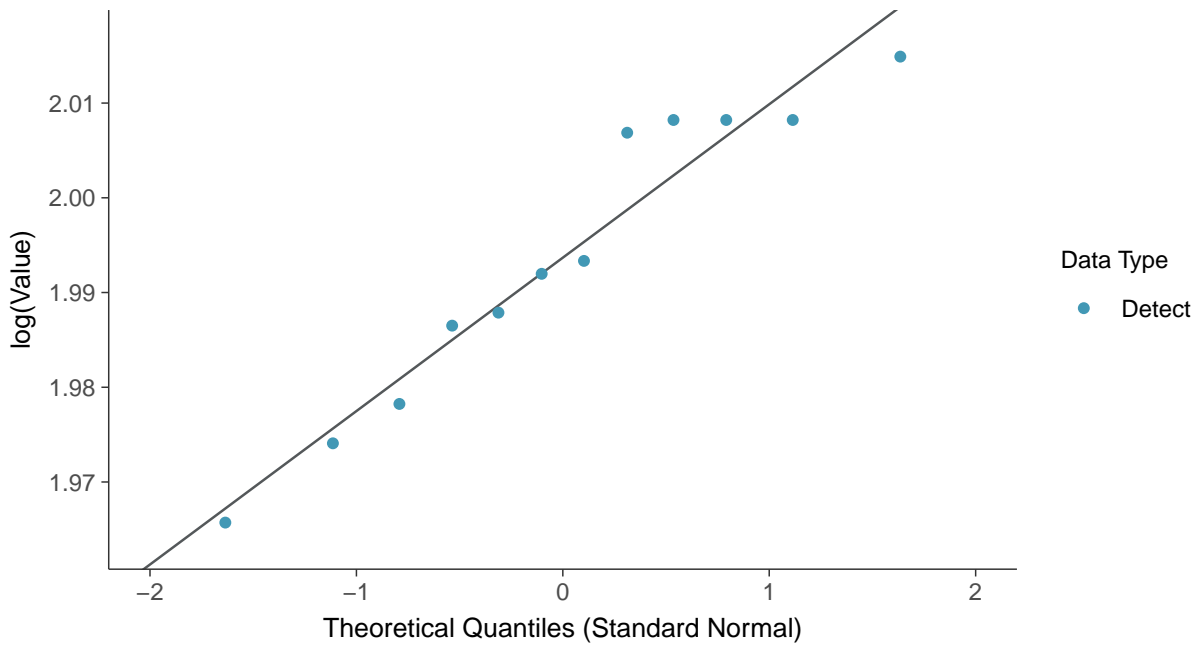




**Normal Q-Q plot**  
pH (field), MW-20 (su)



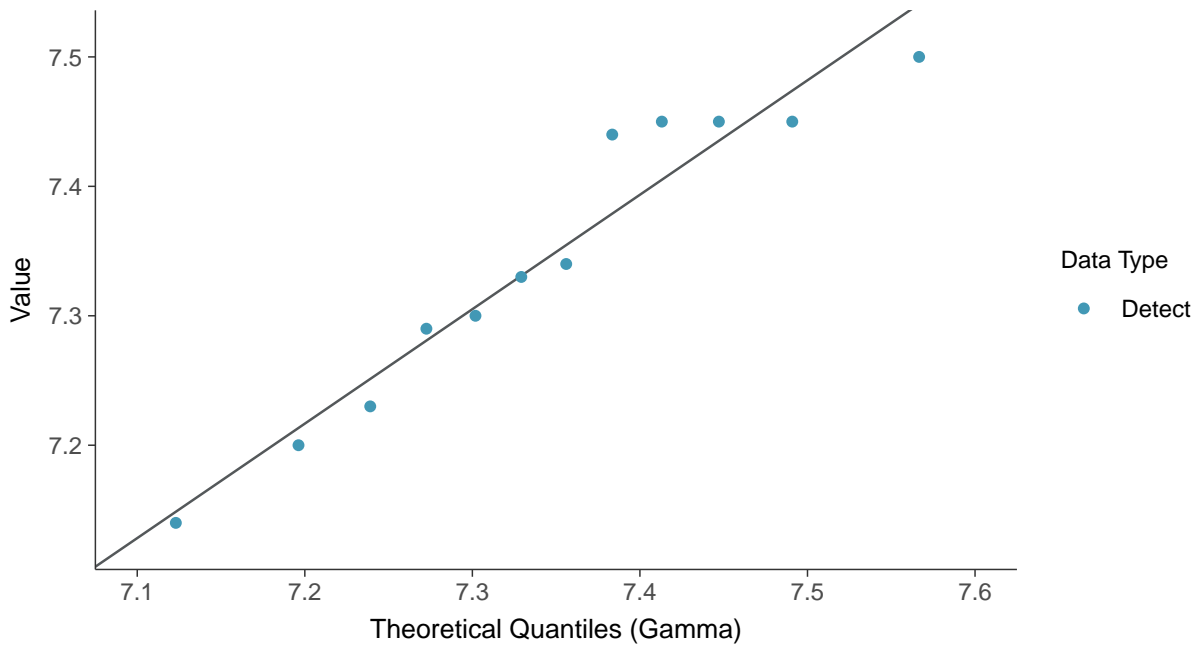
**Lognormal Q-Q plot**  
pH (field), MW-20 (su)





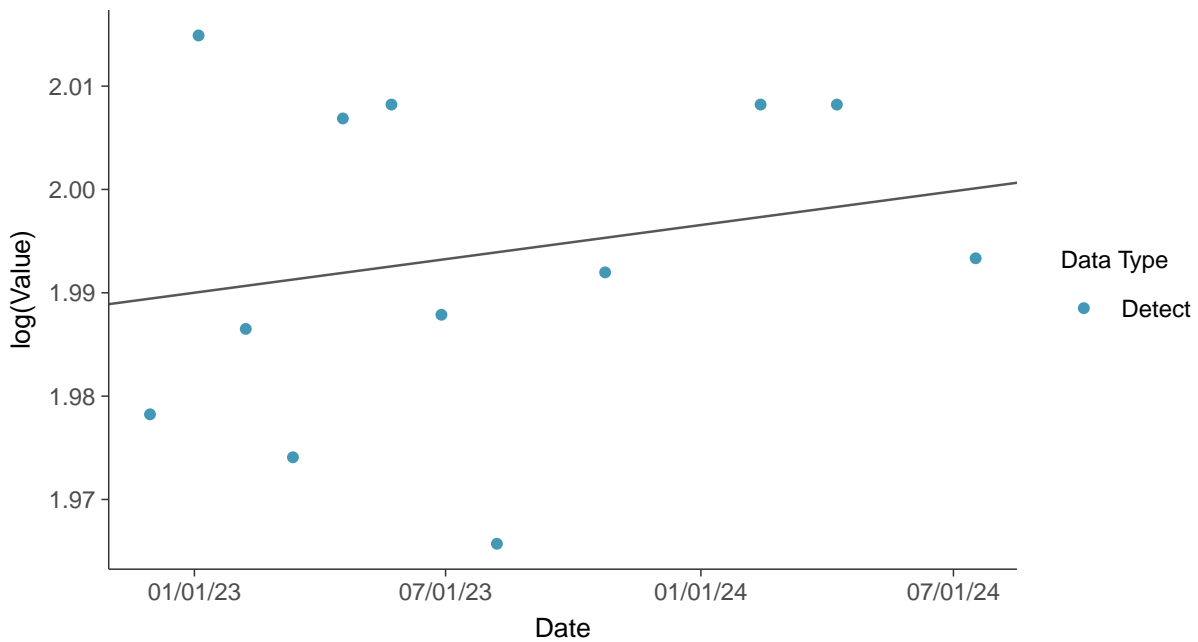
### Gamma Q-Q plot

pH (field), MW-20 (su)



### Trend Regression: Lognormal MLE

pH (field), MW-20 (su)



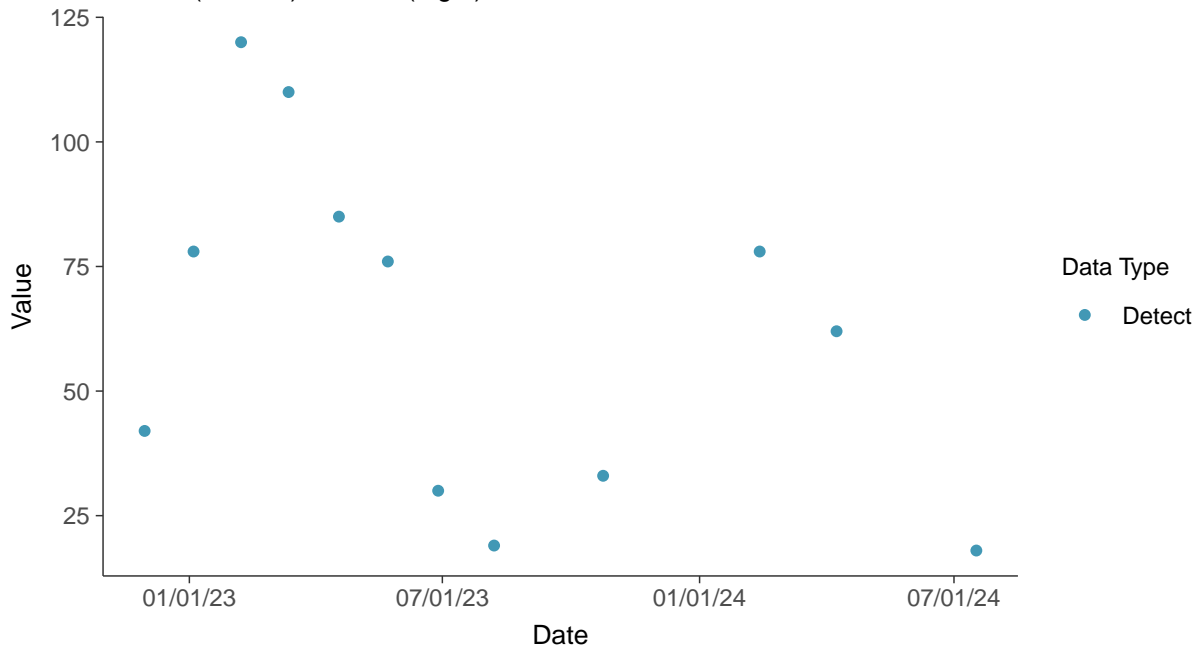


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-20

ID: 30\_1\_4\_124

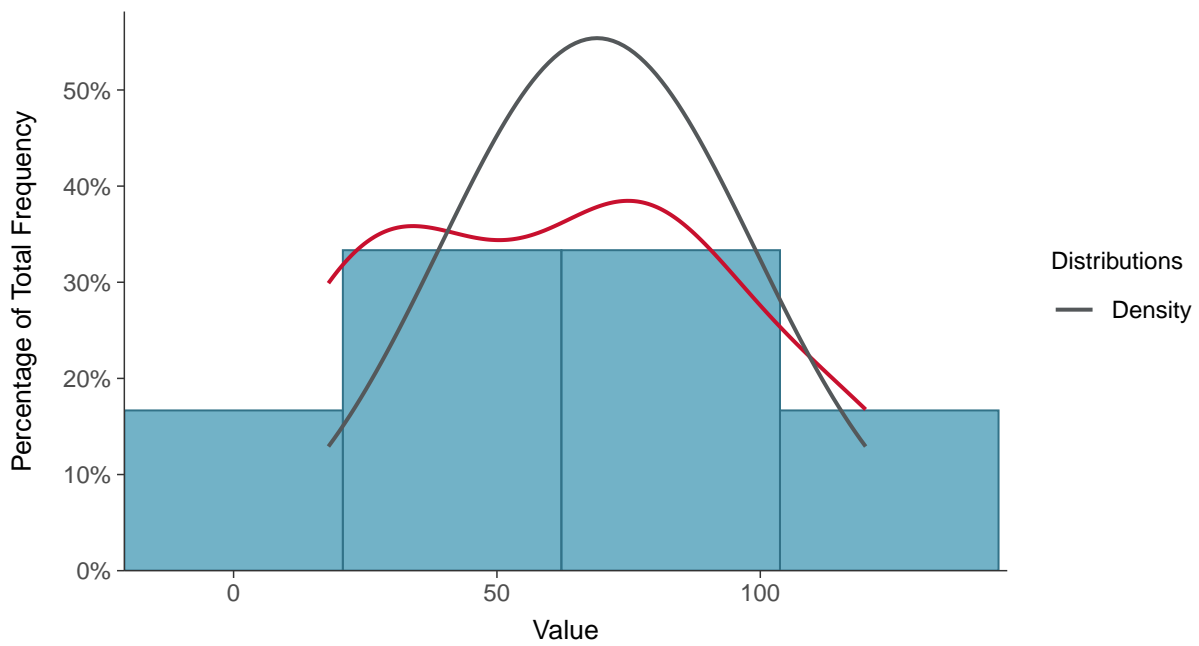
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



#### Histogram

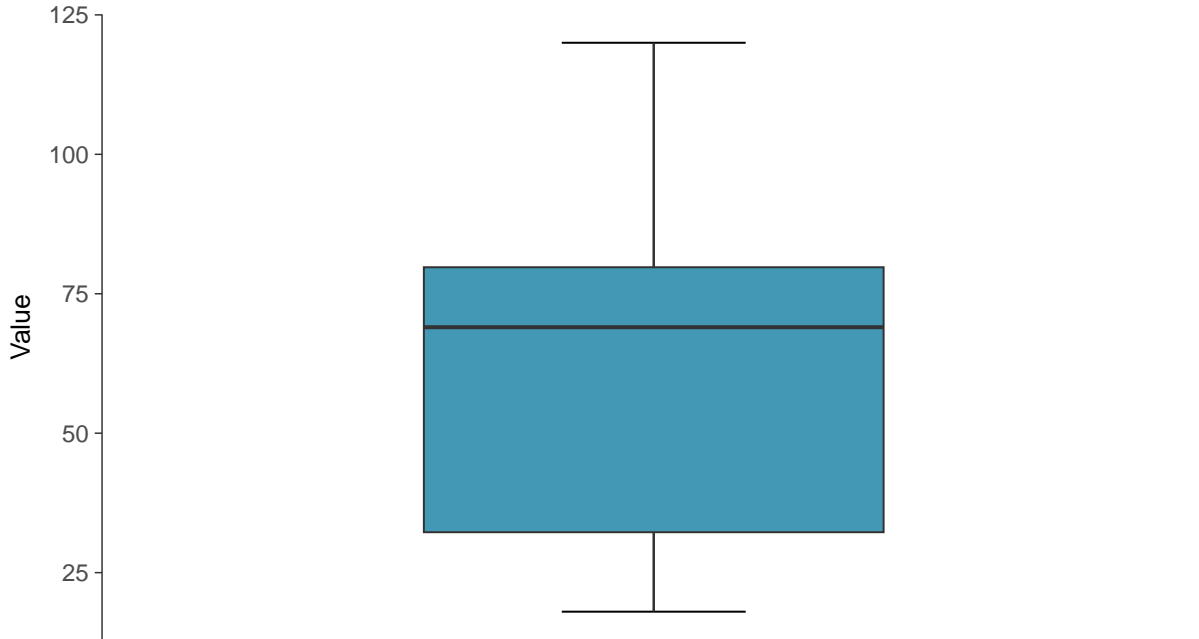
Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)





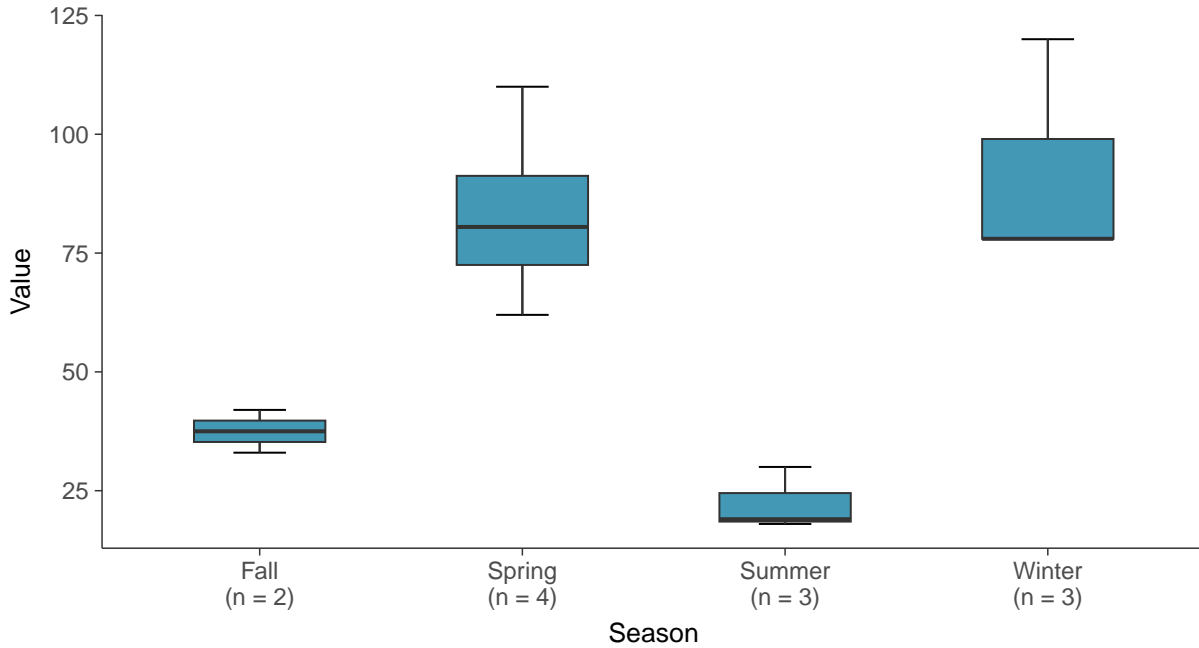
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



### Boxplot by Season

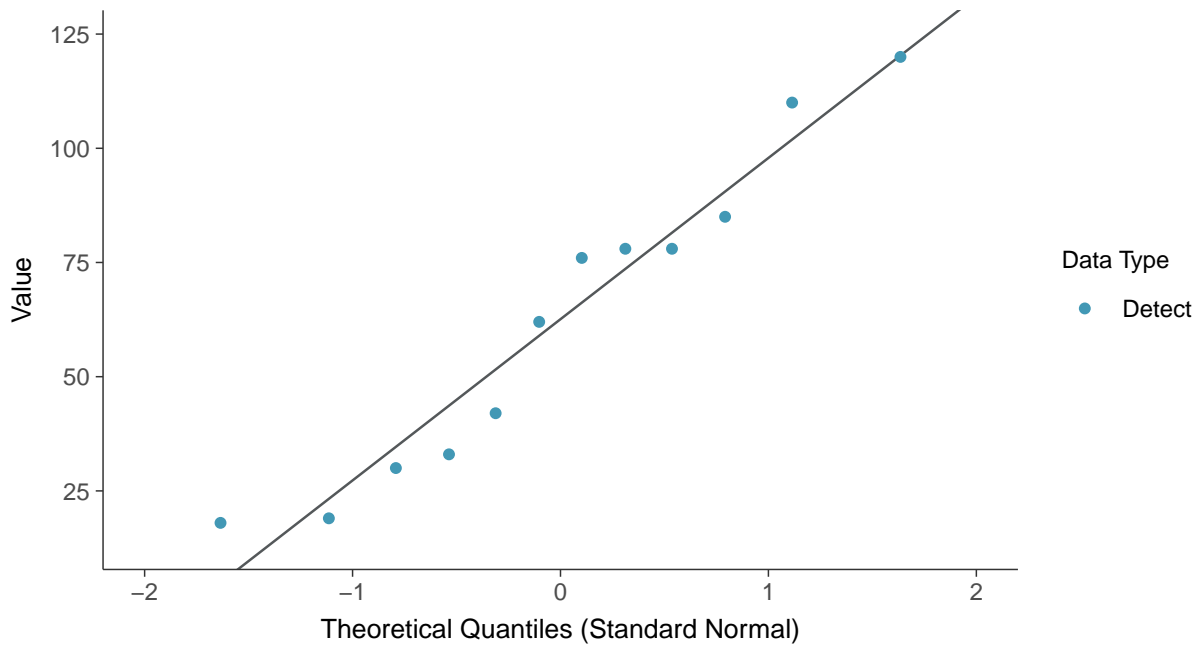
Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)





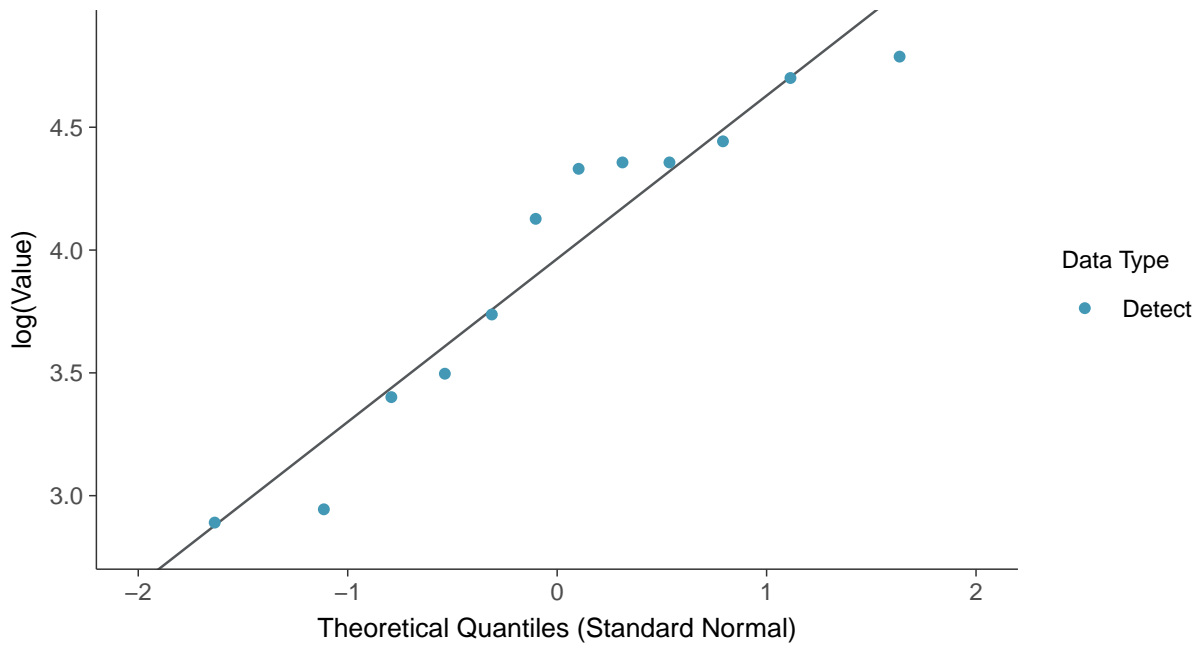
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



### Lognormal Q-Q plot

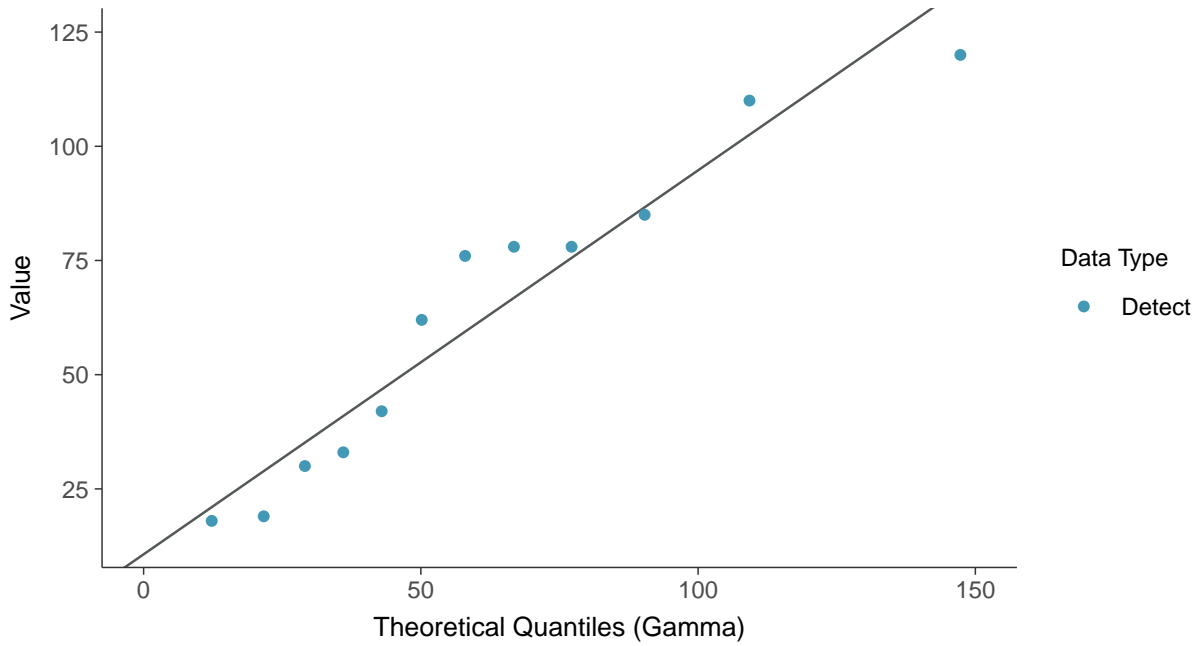
Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)





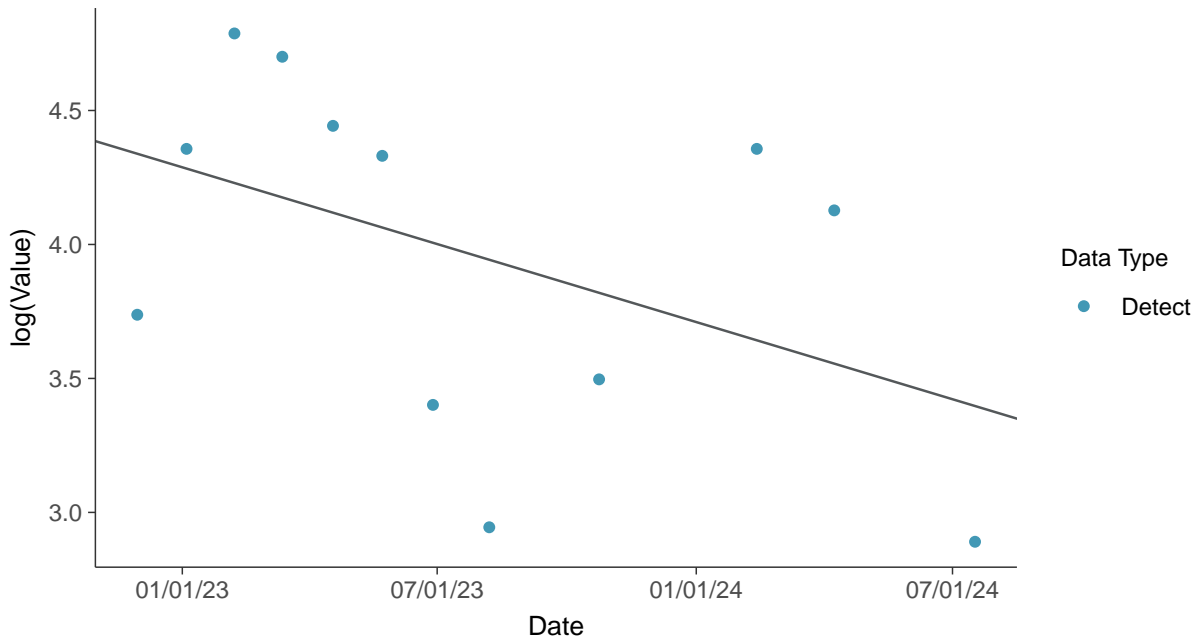
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)

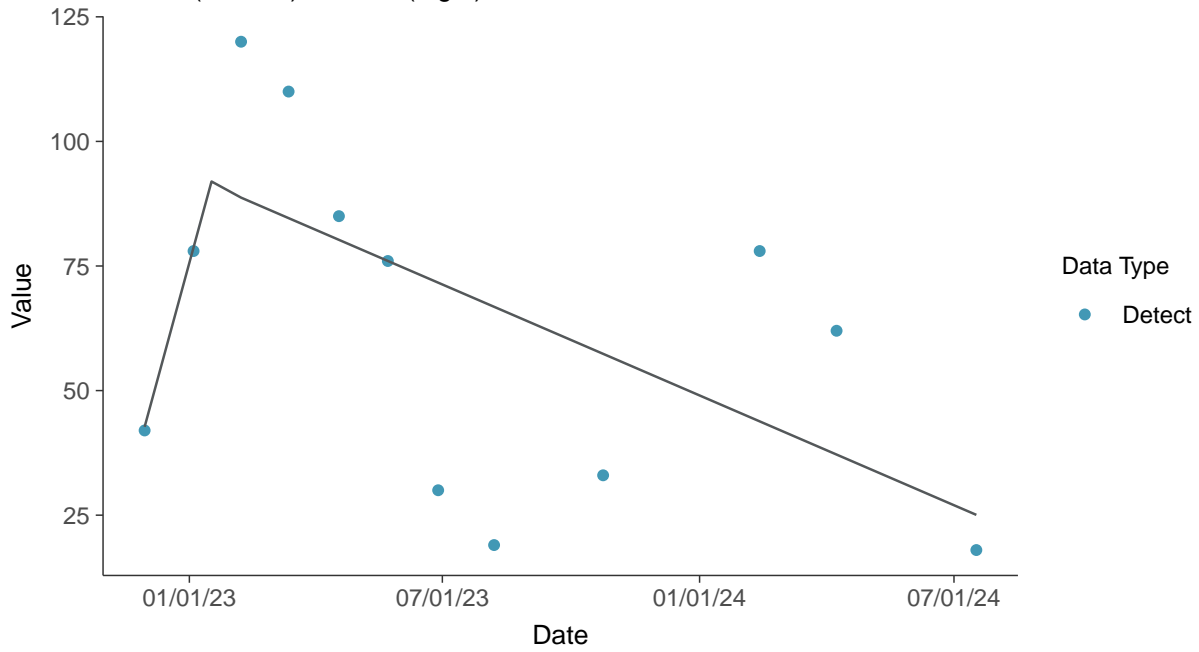






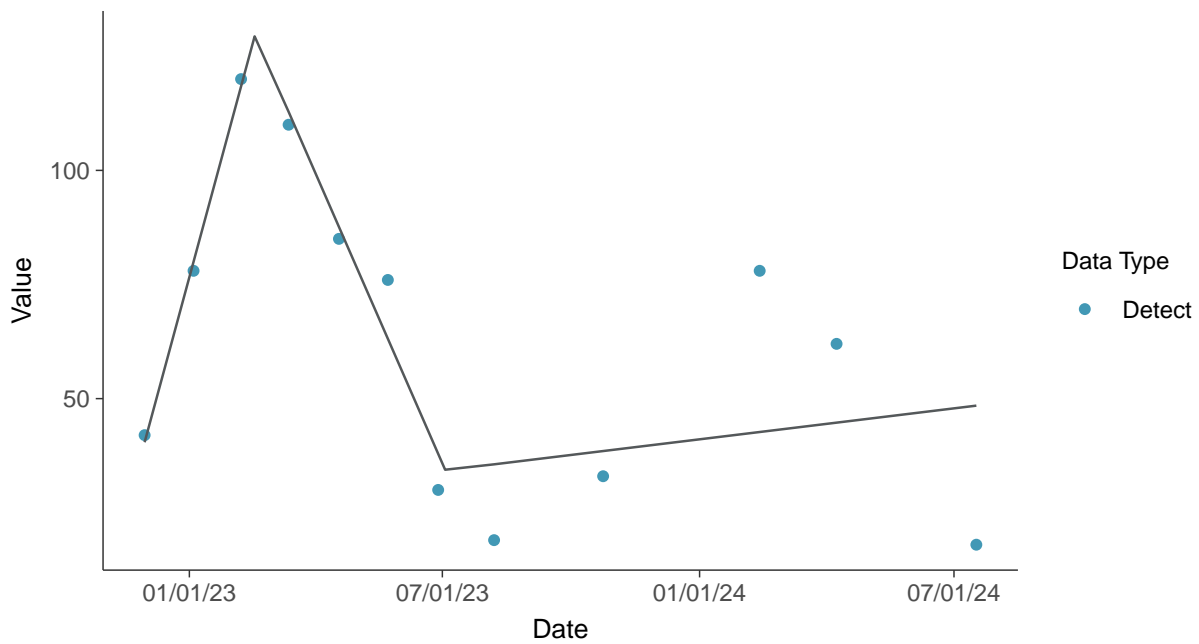
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-20 (mg/L)



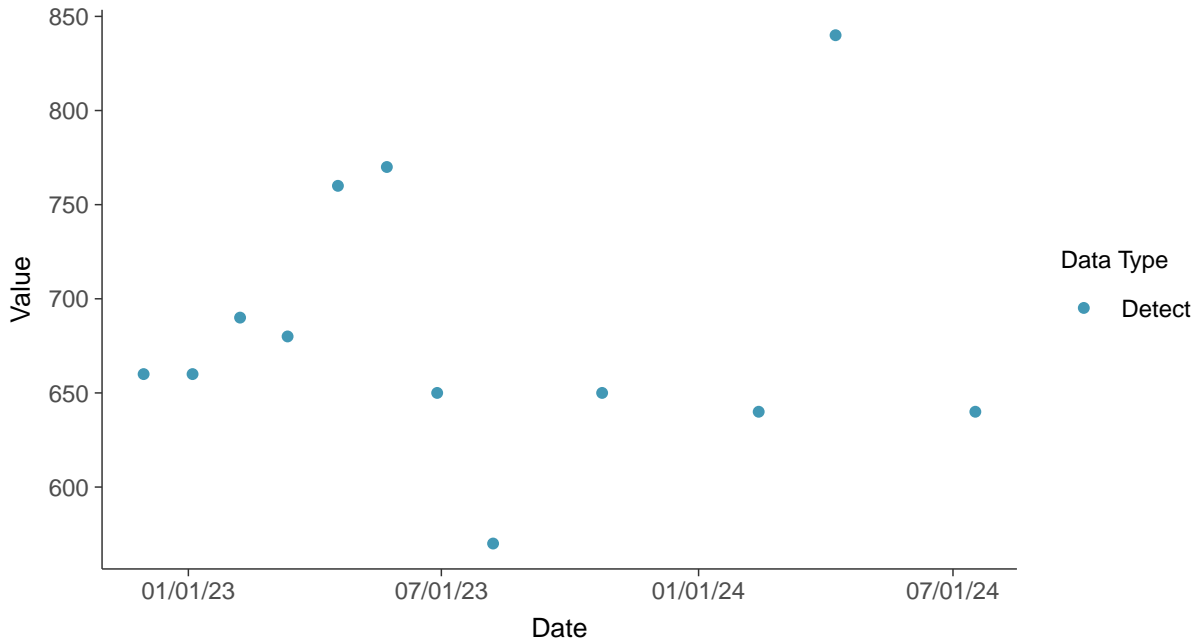


### Appendix III: Total Dissolved Solids, MW-20

ID: 30\_1\_4\_126

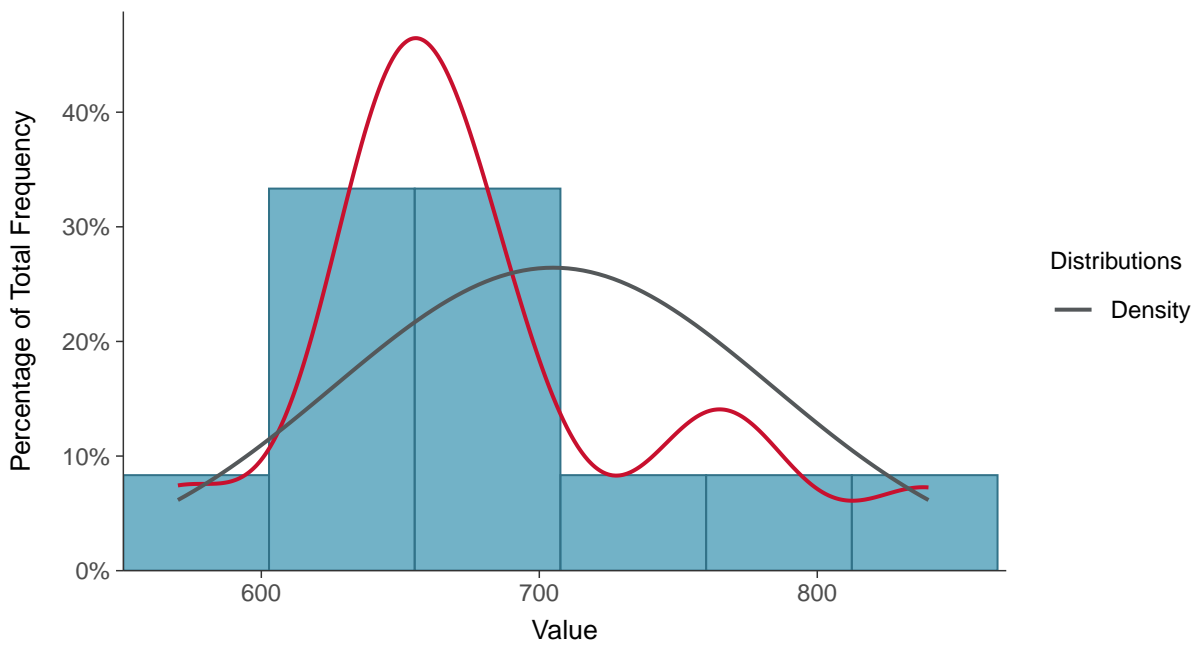
#### Scatter Plot

Total Dissolved Solids, MW-20 (mg/L)



#### Histogram

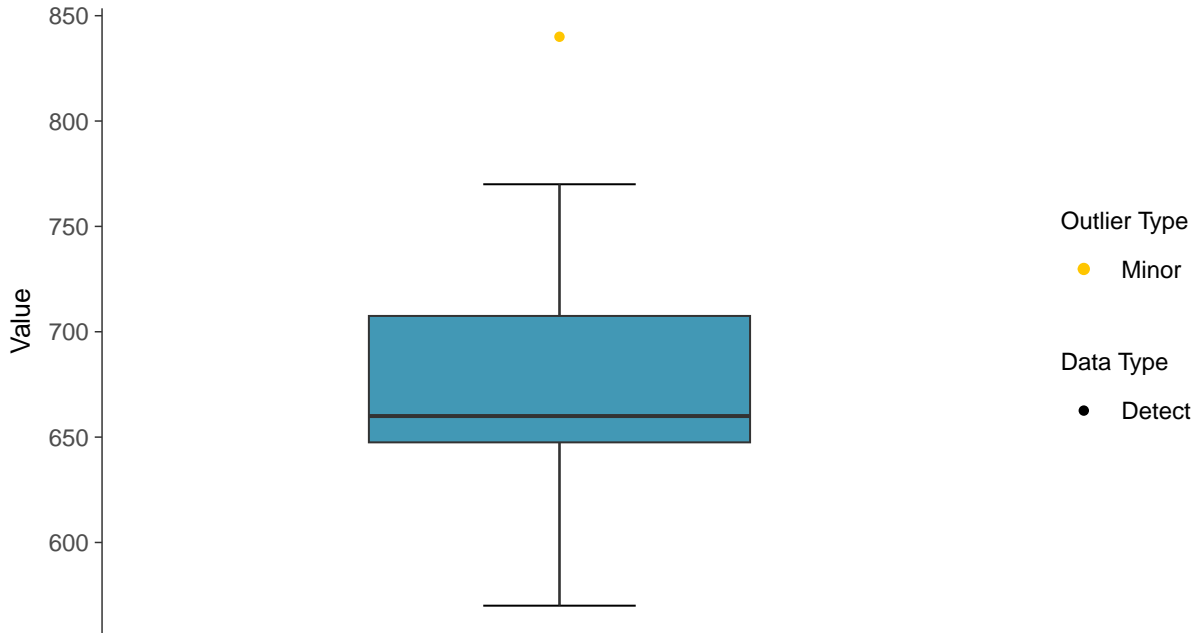
Total Dissolved Solids, MW-20 (mg/L)





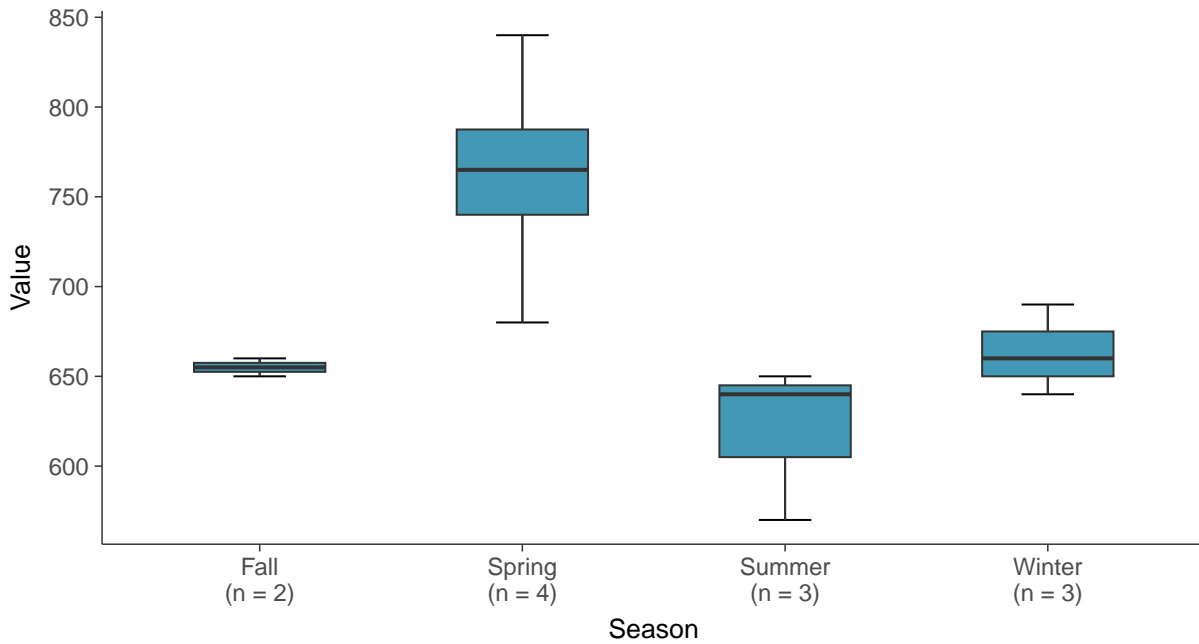
### Boxplot

Total Dissolved Solids, MW-20 (mg/L)



### Boxplot by Season

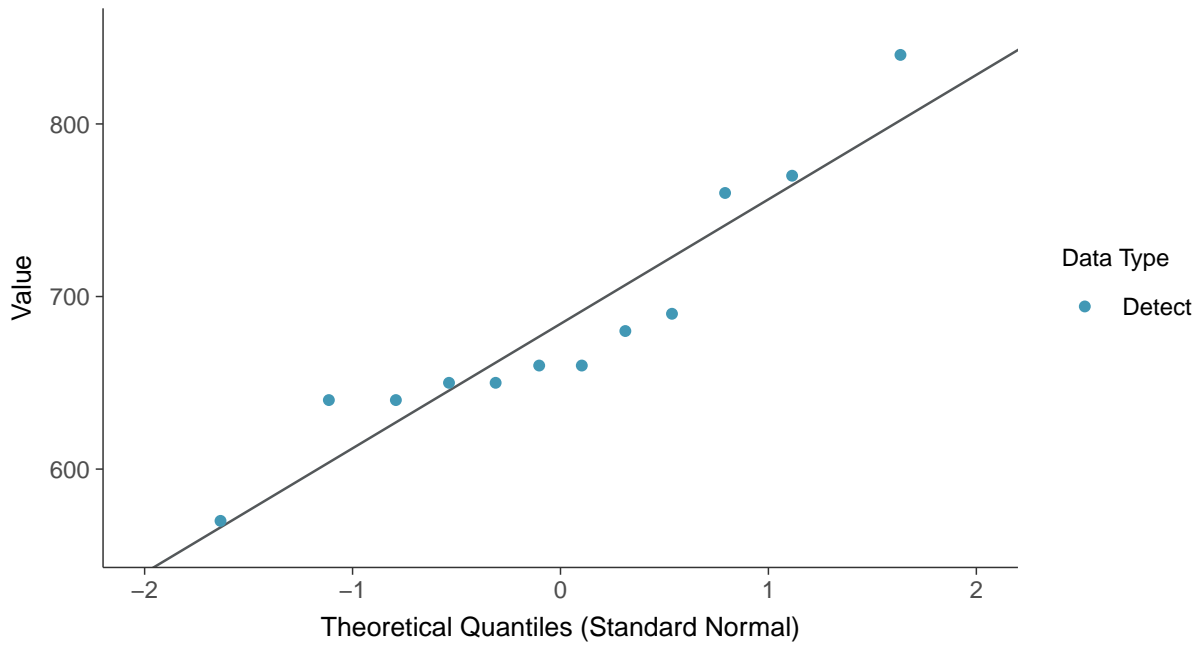
Total Dissolved Solids, MW-20 (mg/L)





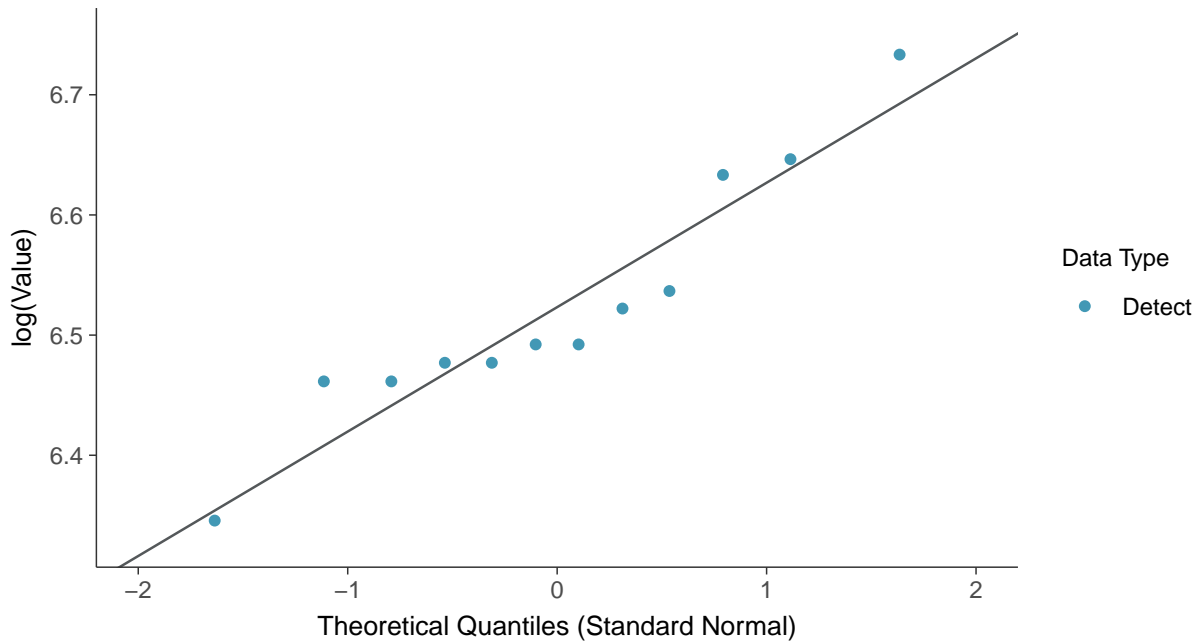
### Normal Q-Q plot

Total Dissolved Solids, MW-20 (mg/L)



### Lognormal Q-Q plot

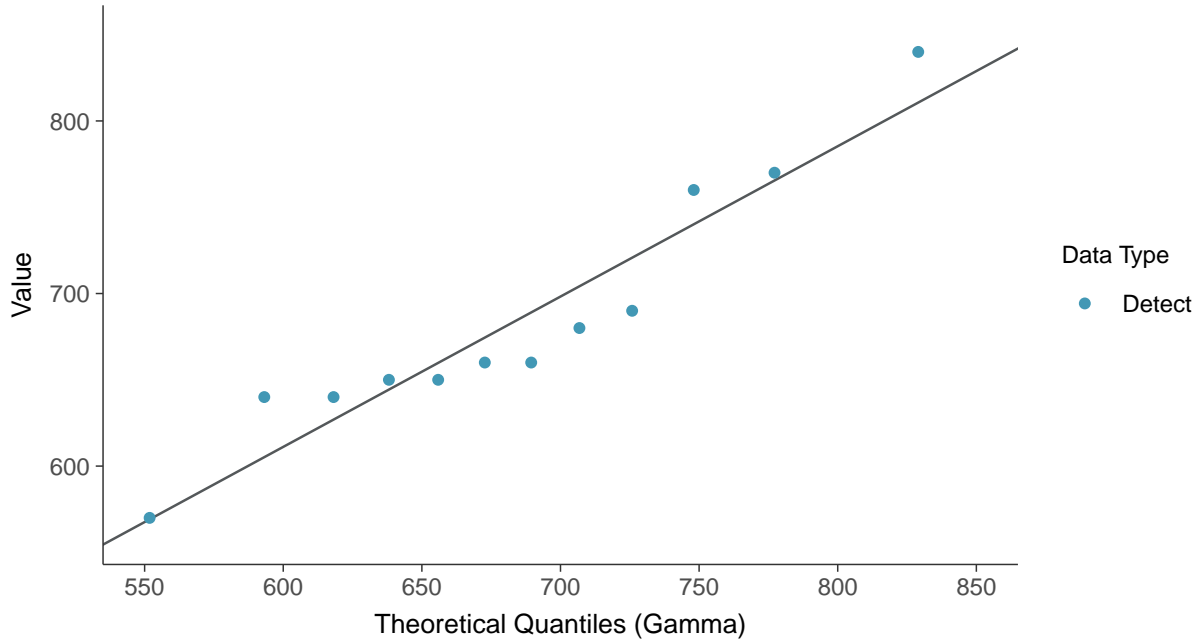
Total Dissolved Solids, MW-20 (mg/L)





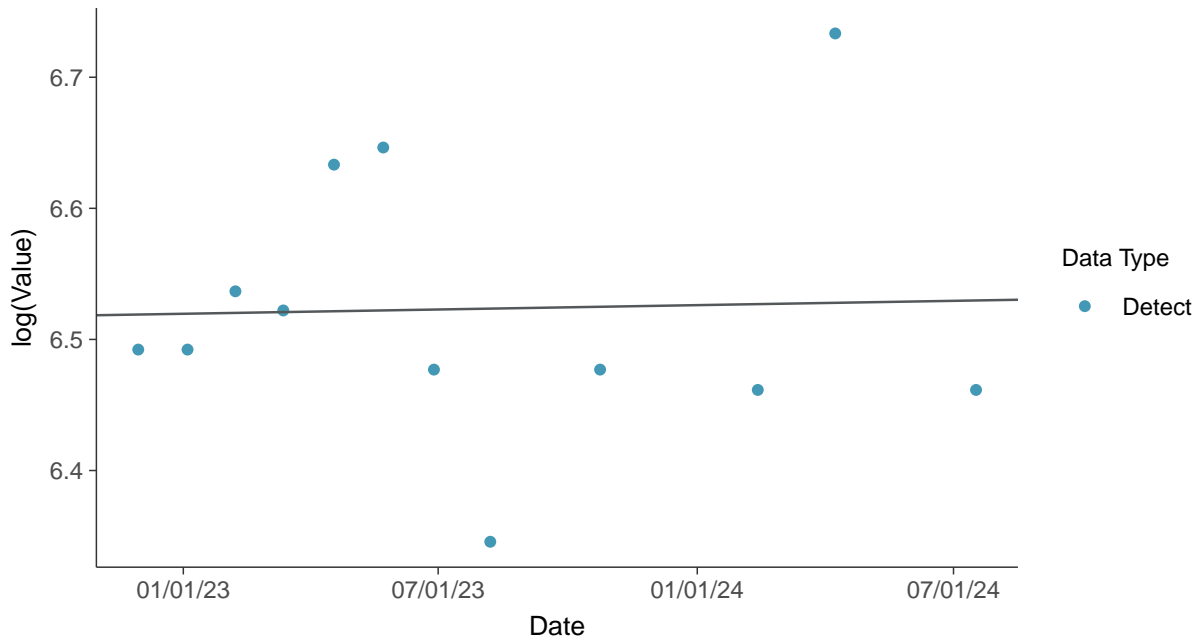
### Gamma Q-Q plot

Total Dissolved Solids, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

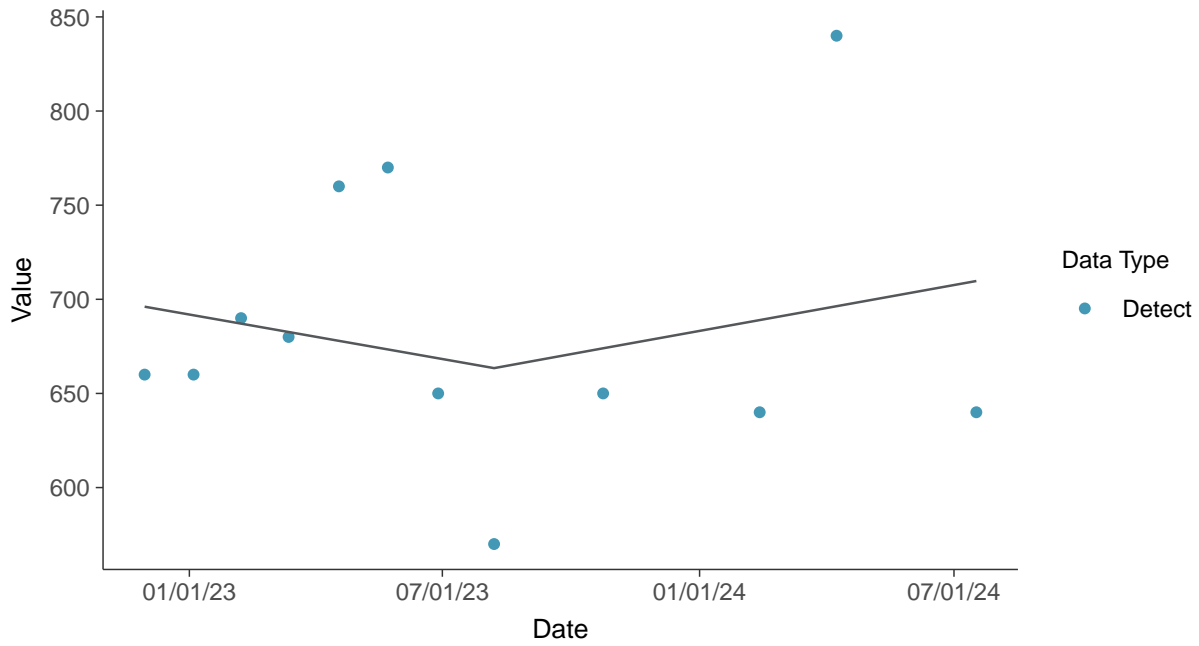
Total Dissolved Solids, MW-20 (mg/L)





### Trend Regression: Piecewise Linear-Linear

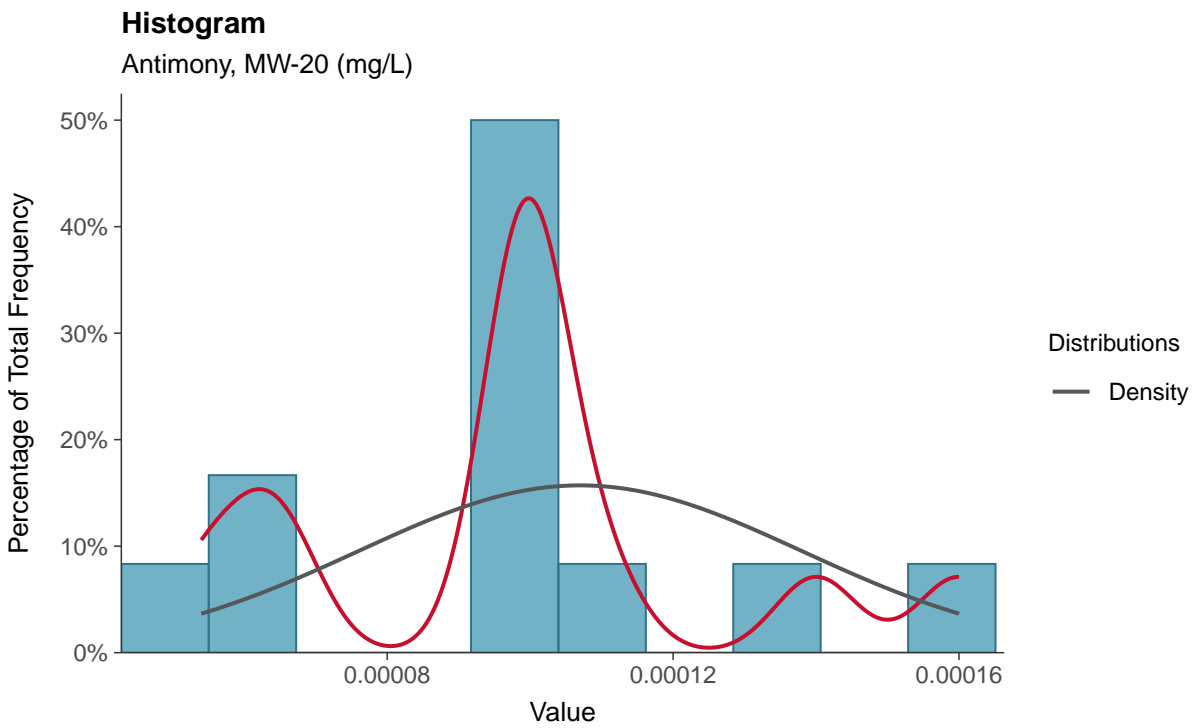
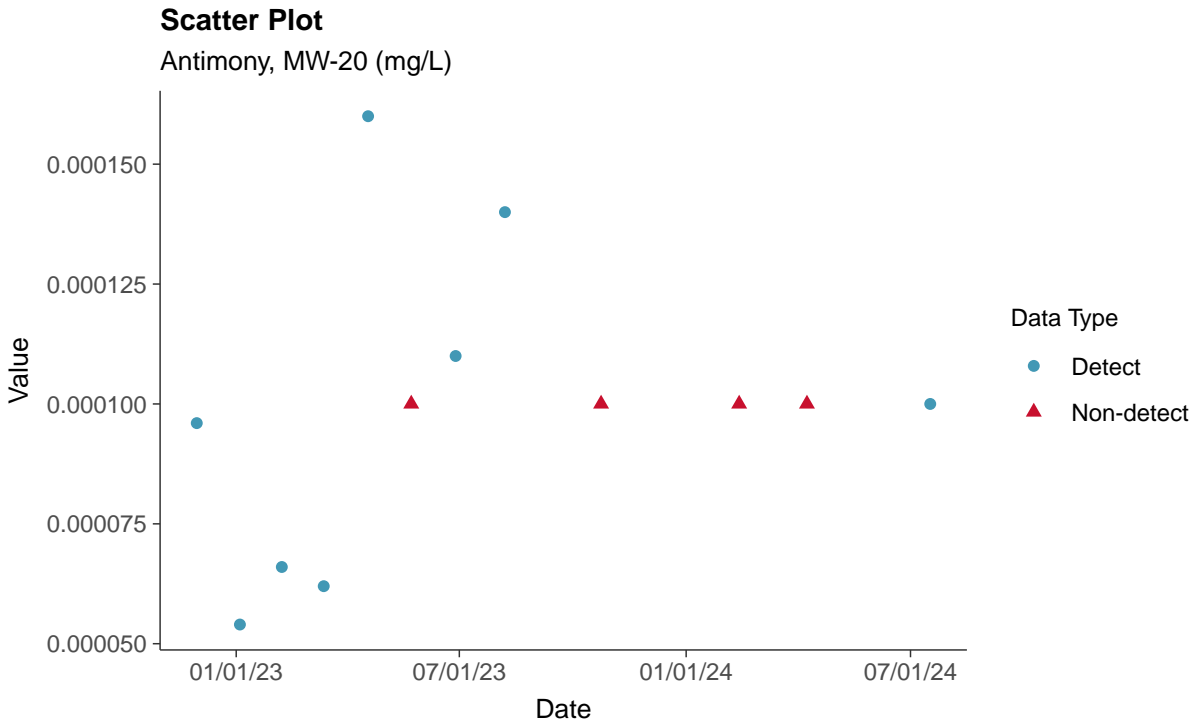
Total Dissolved Solids, MW-20 (mg/L)





### Appendix IV: Antimony, MW-20

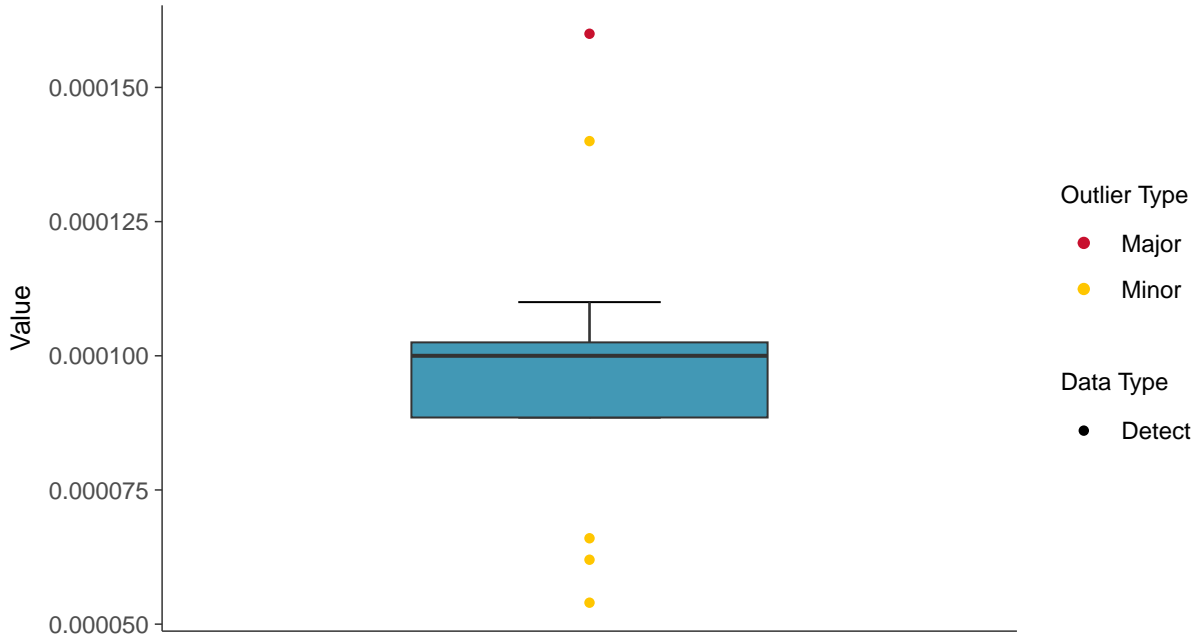
ID: 30\_1\_5\_101





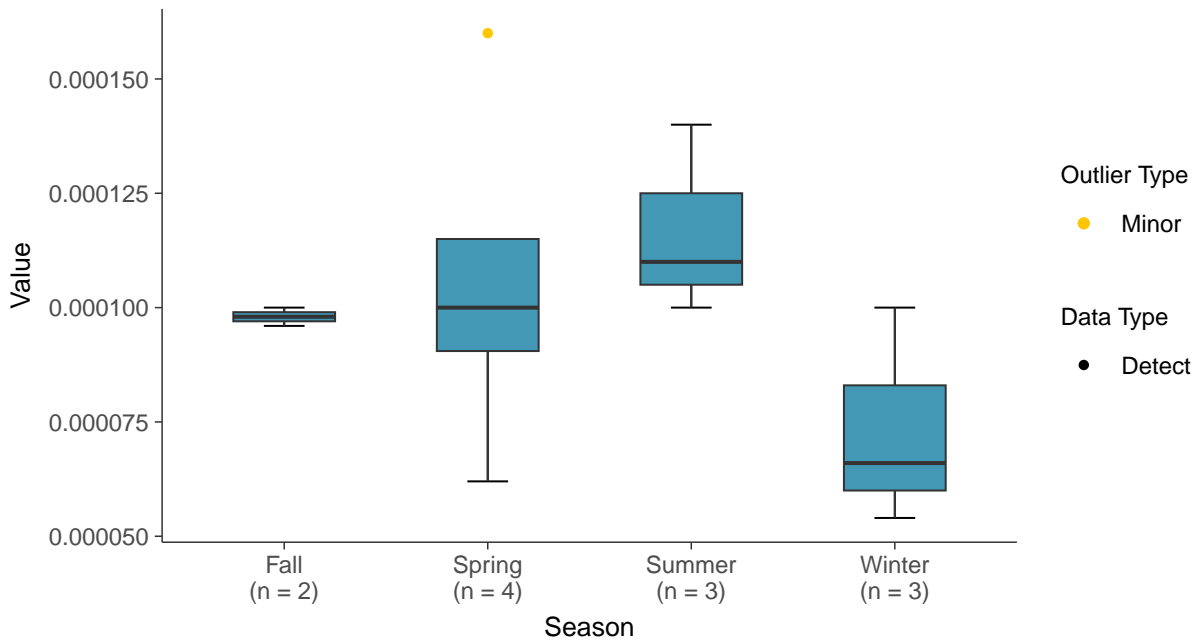
### Boxplot

Antimony, MW-20 (mg/L)



### Boxplot by Season

Antimony, MW-20 (mg/L)

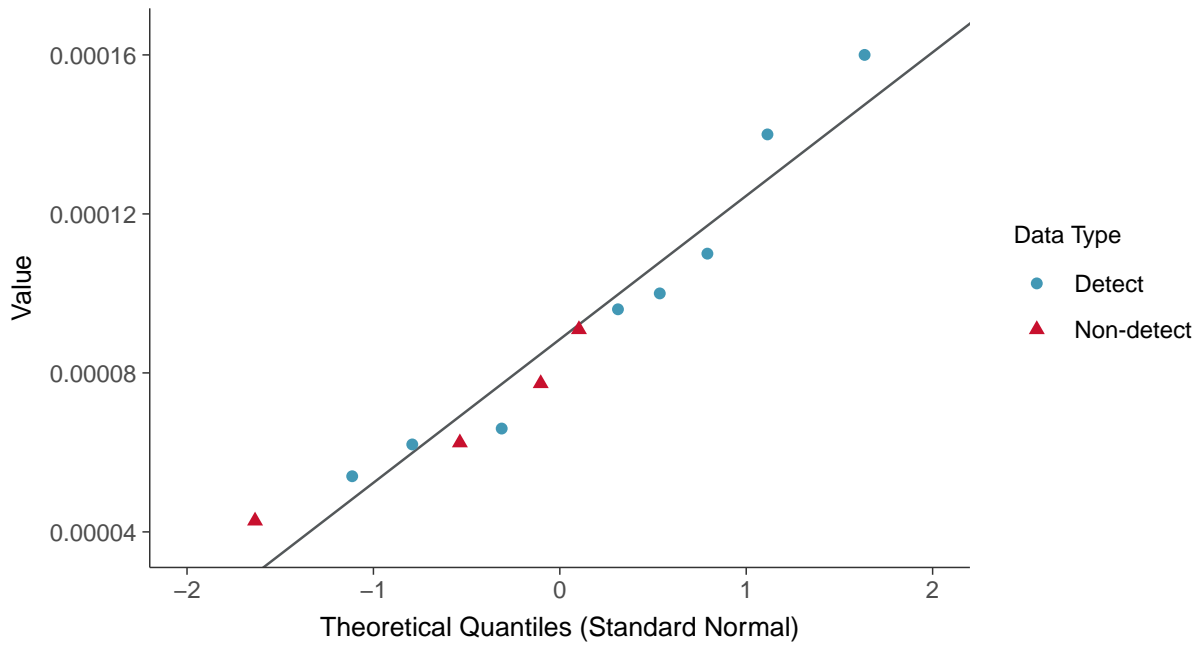






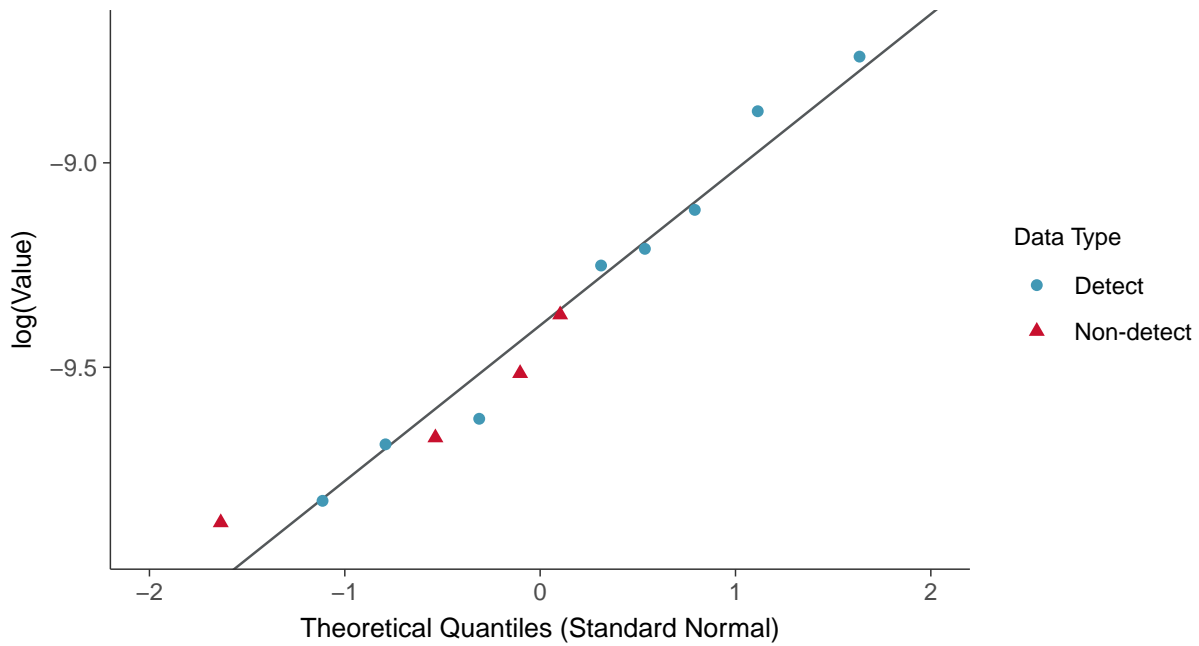
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

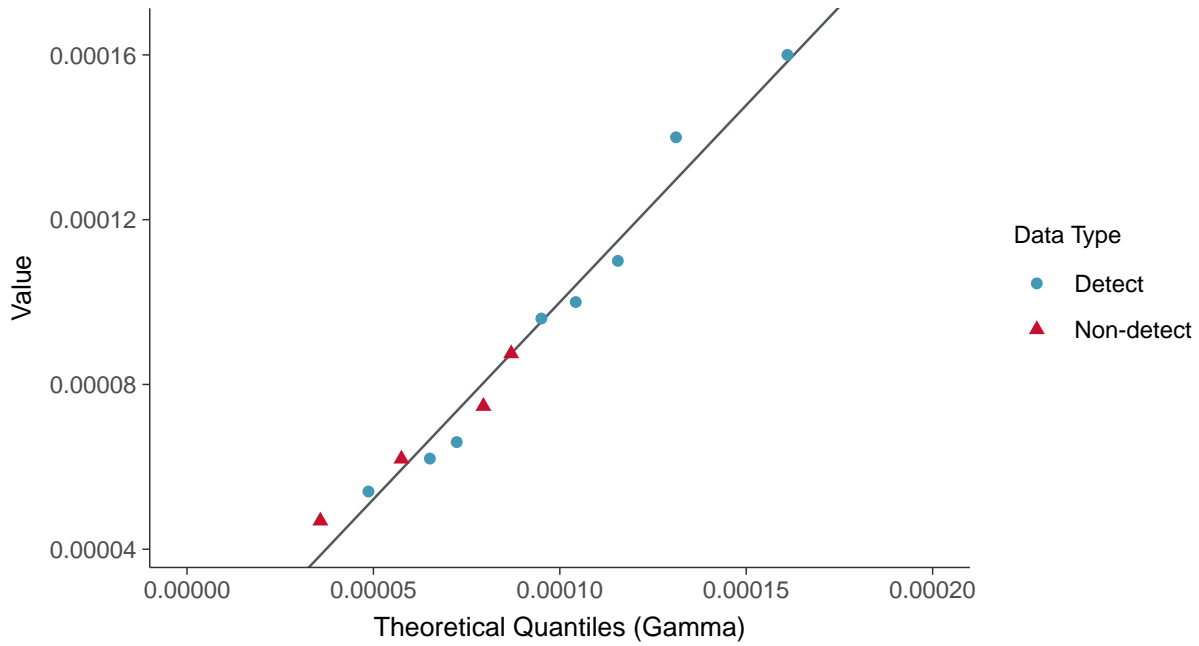
Antimony, MW-20 (mg/L)





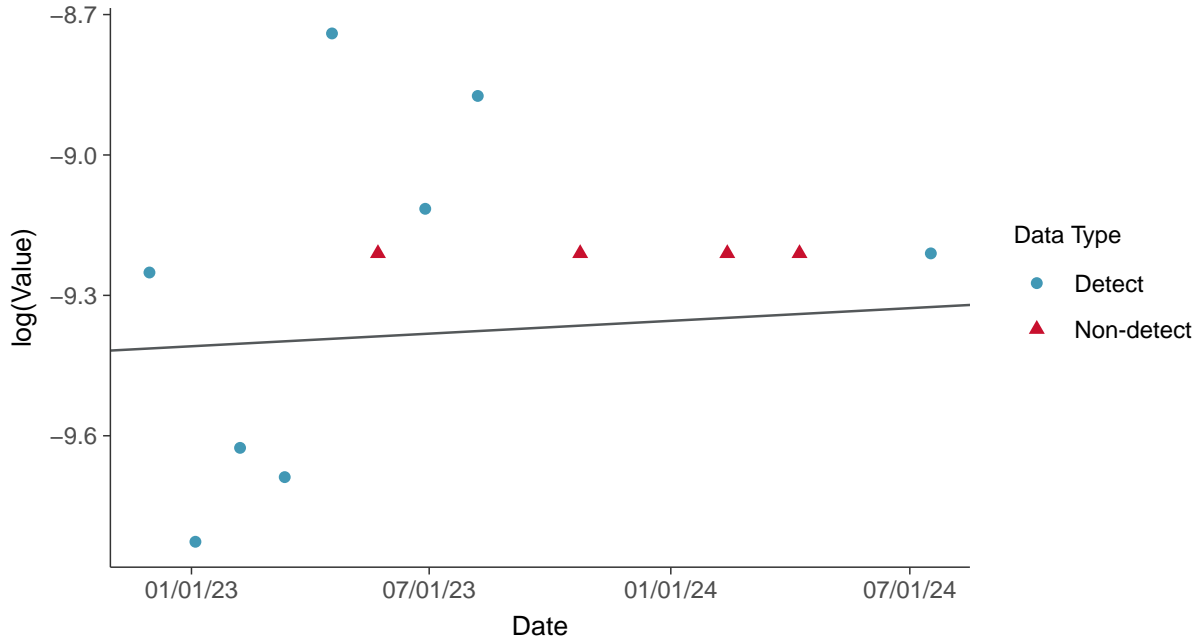
### Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

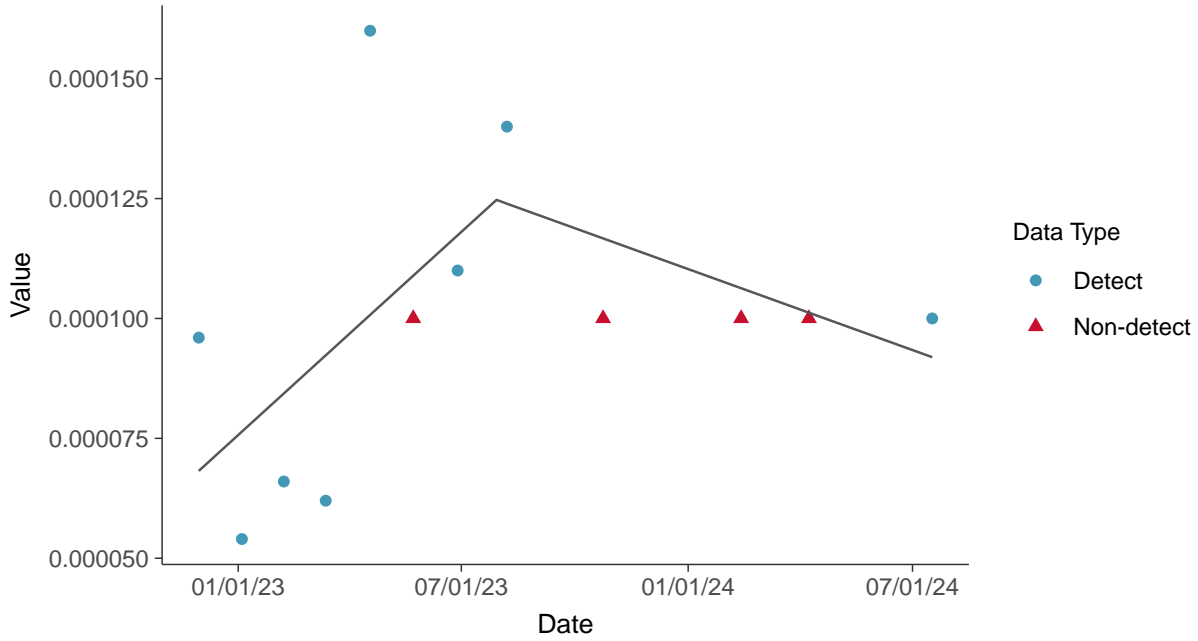
Antimony, MW-20 (mg/L)





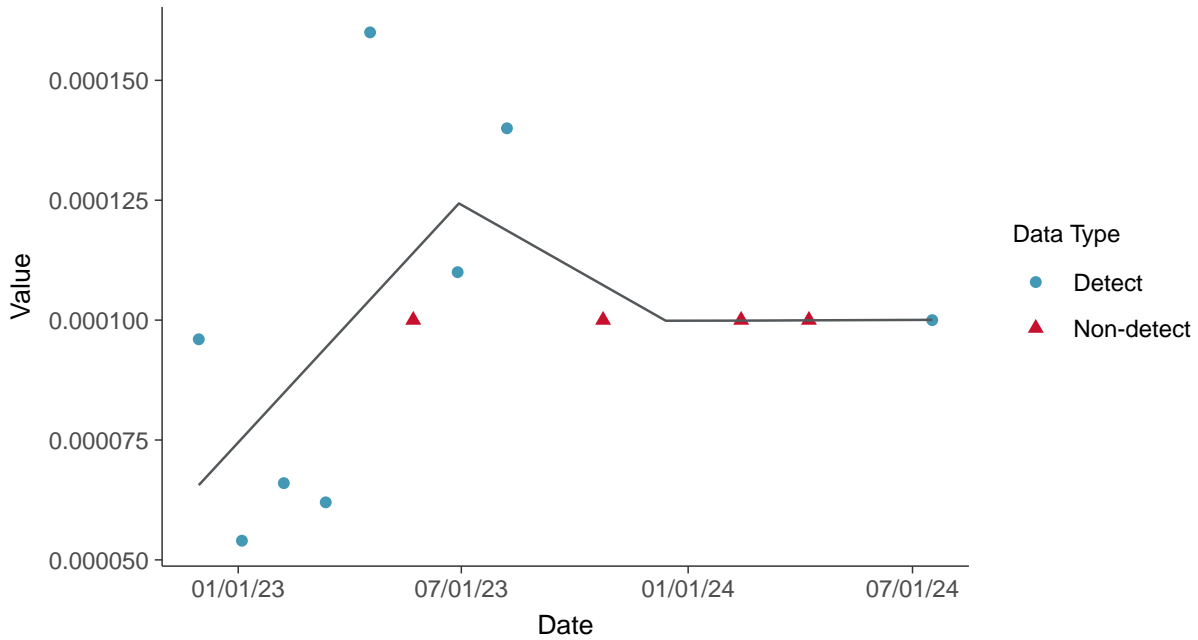
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-20 (mg/L)



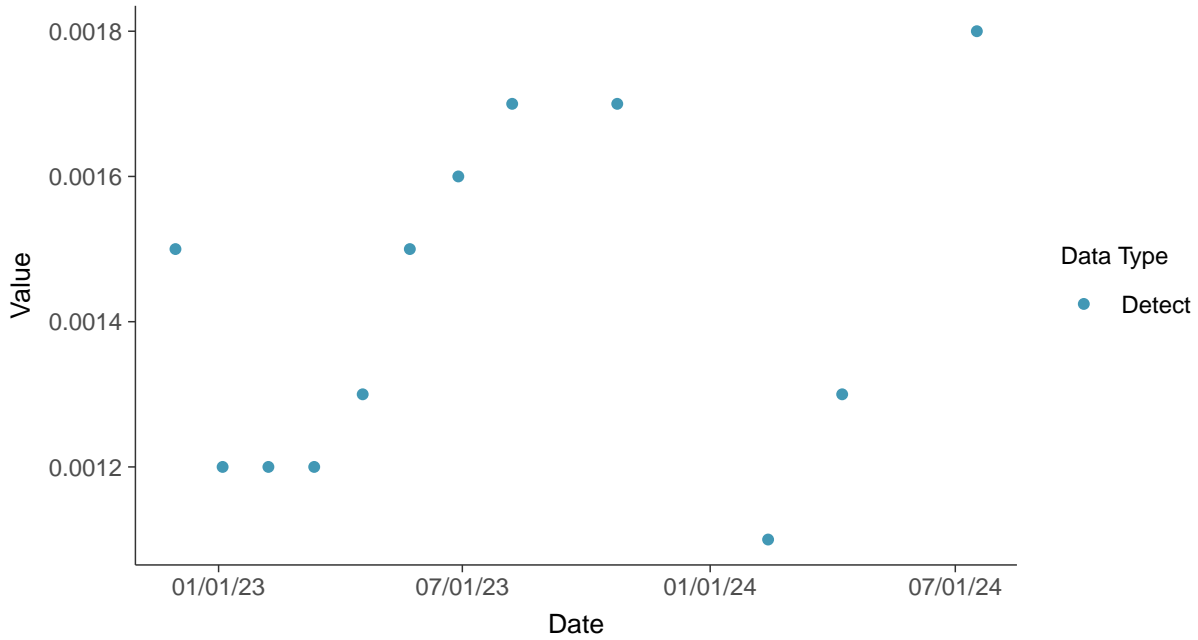


### Appendix IV: Arsenic, MW-20

ID: 30\_1\_5\_102

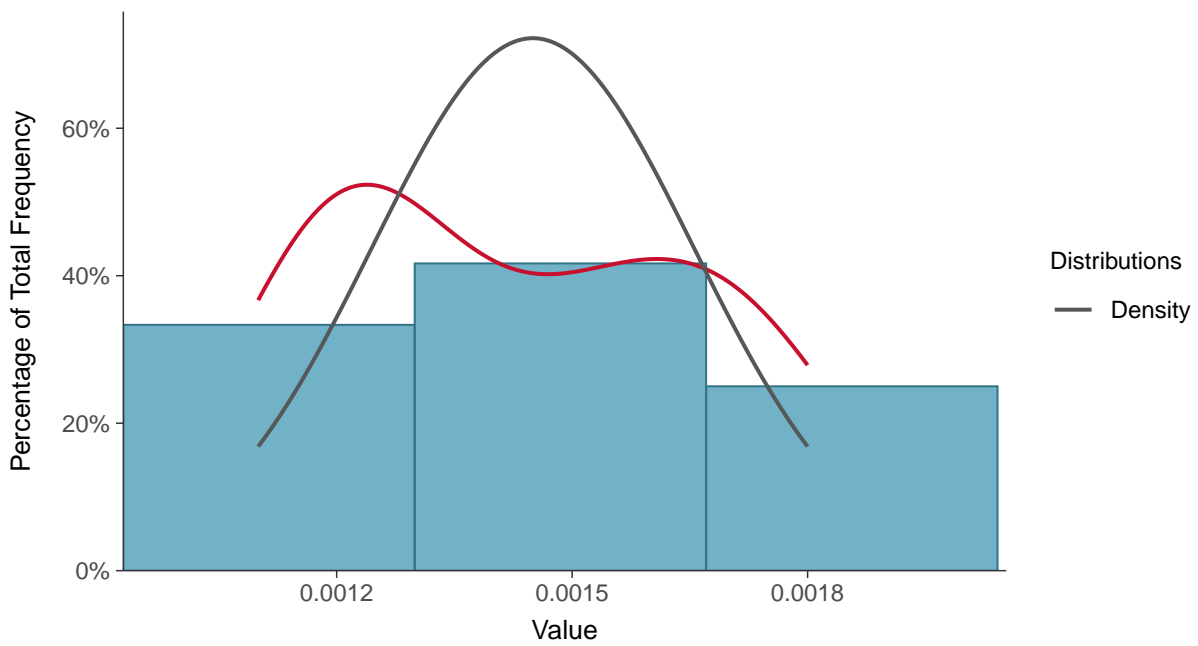
#### Scatter Plot

Arsenic, MW-20 (mg/L)



#### Histogram

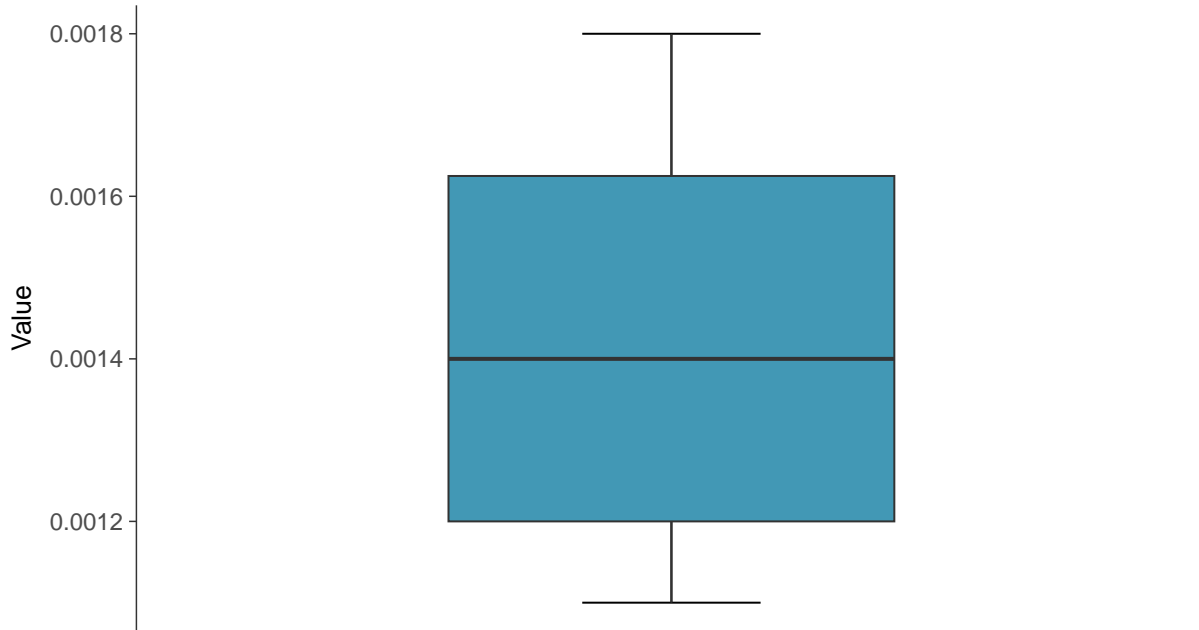
Arsenic, MW-20 (mg/L)





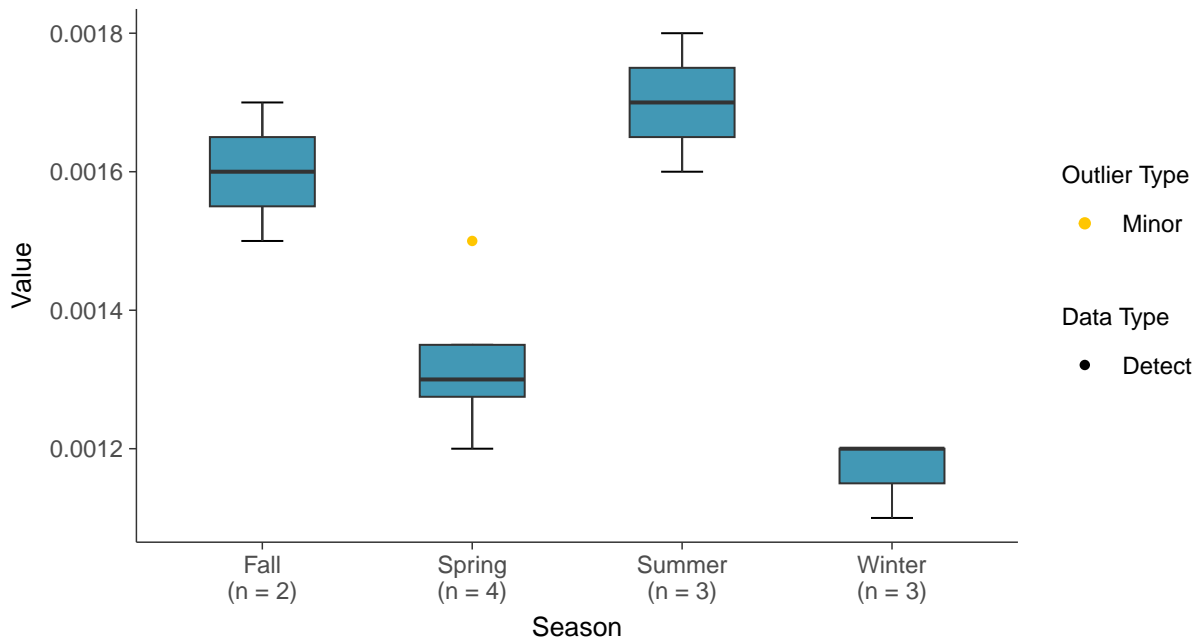
### Boxplot

Arsenic, MW-20 (mg/L)



### Boxplot by Season

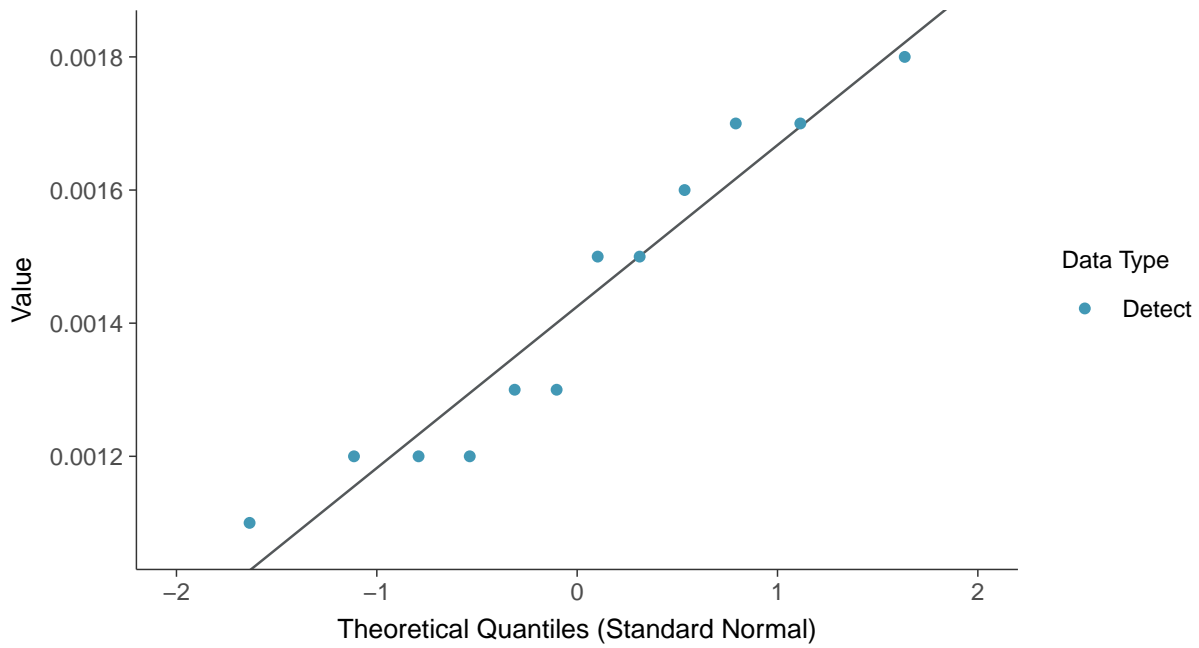
Arsenic, MW-20 (mg/L)





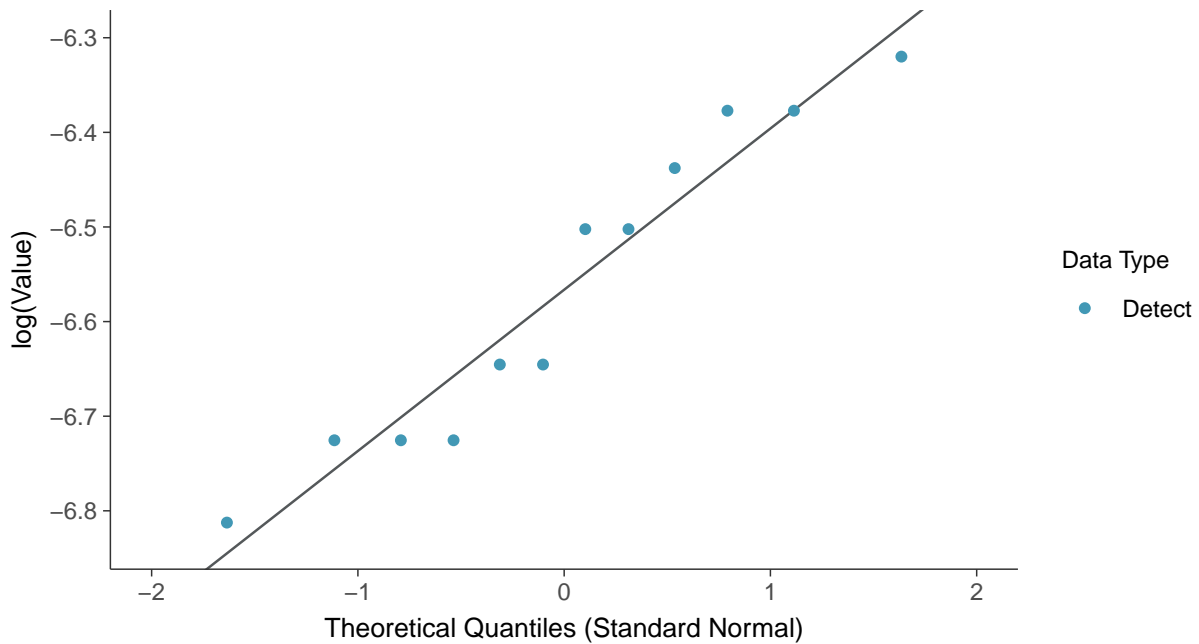
### Normal Q-Q plot

Arsenic, MW-20 (mg/L)



### Lognormal Q-Q plot

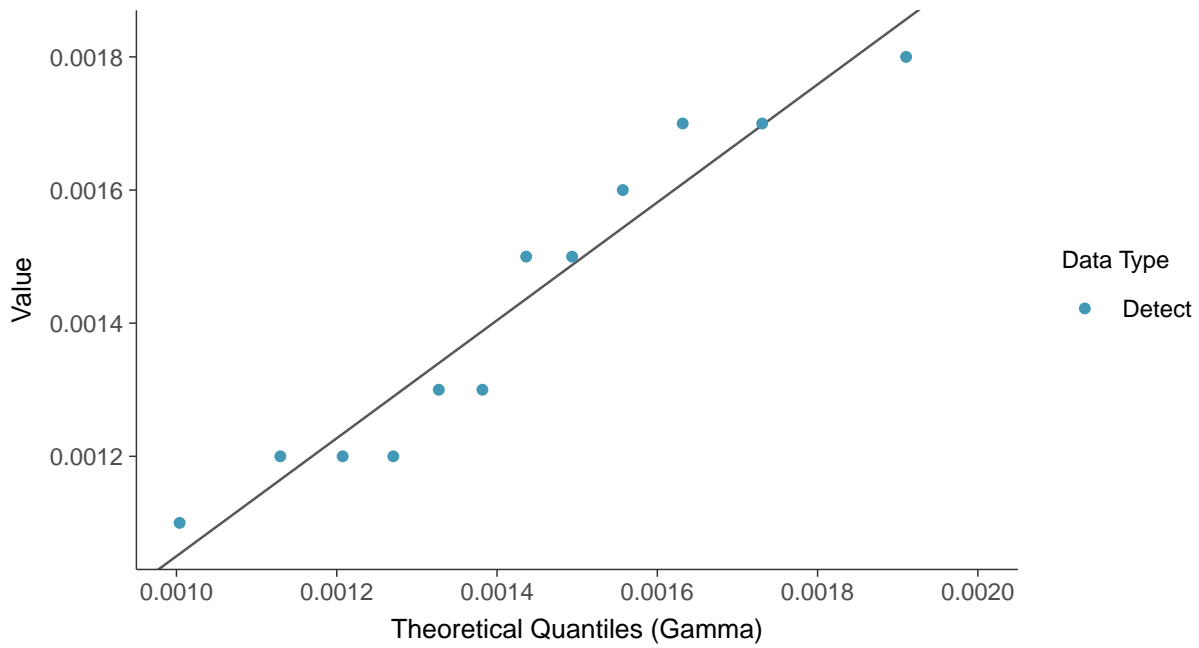
Arsenic, MW-20 (mg/L)





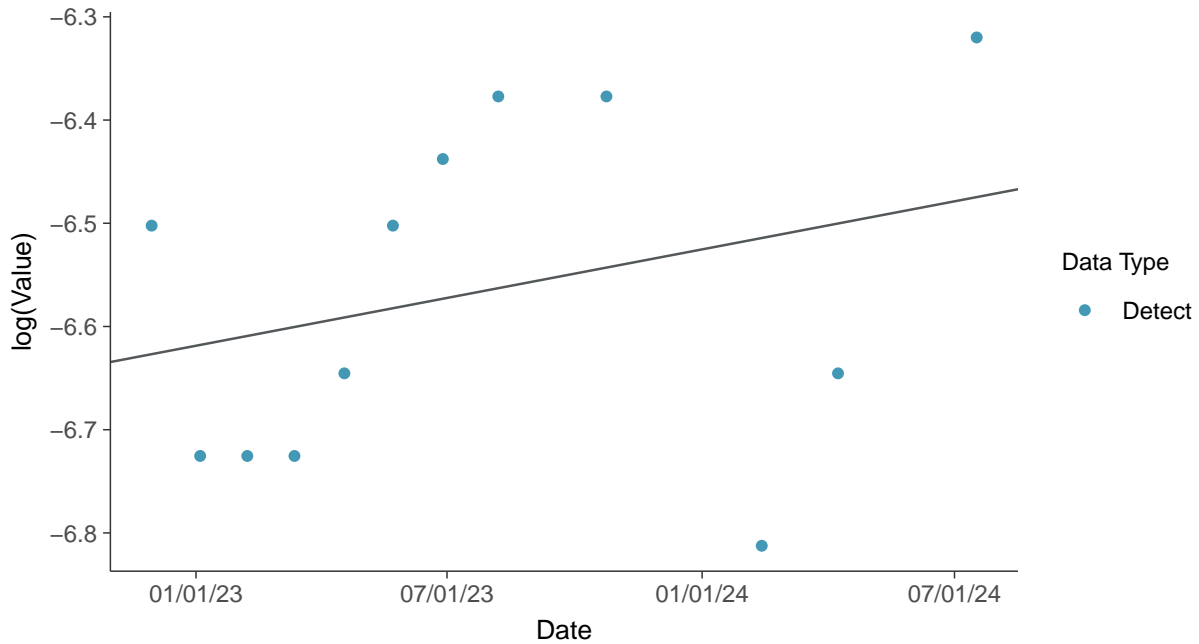
### Gamma Q-Q plot

Arsenic, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

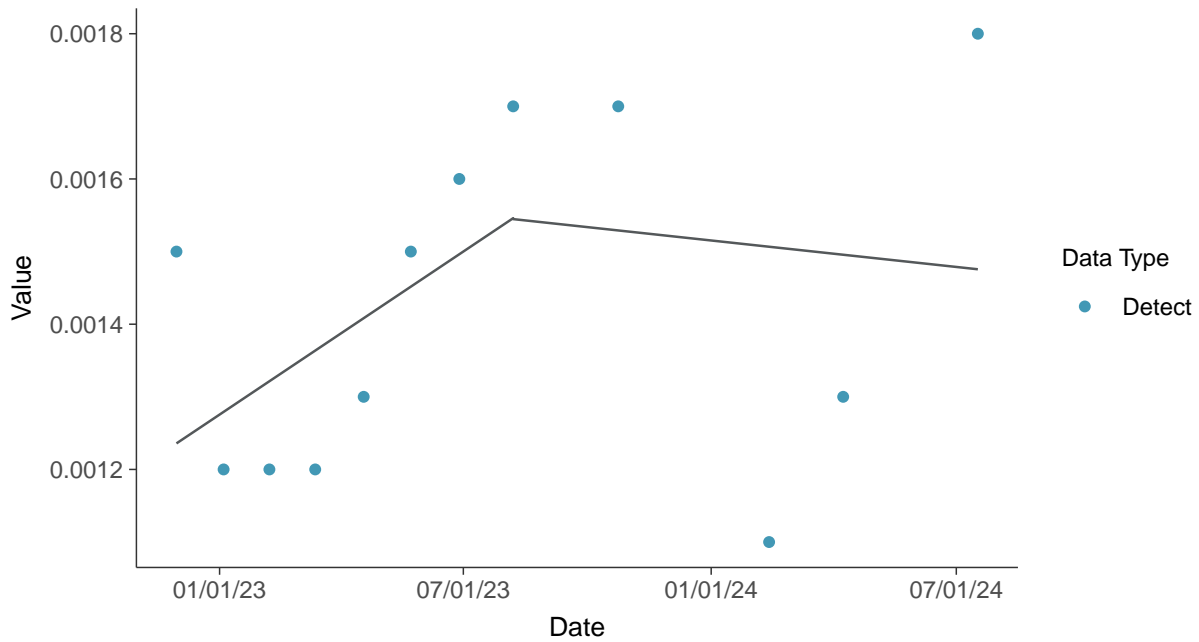
Arsenic, MW-20 (mg/L)





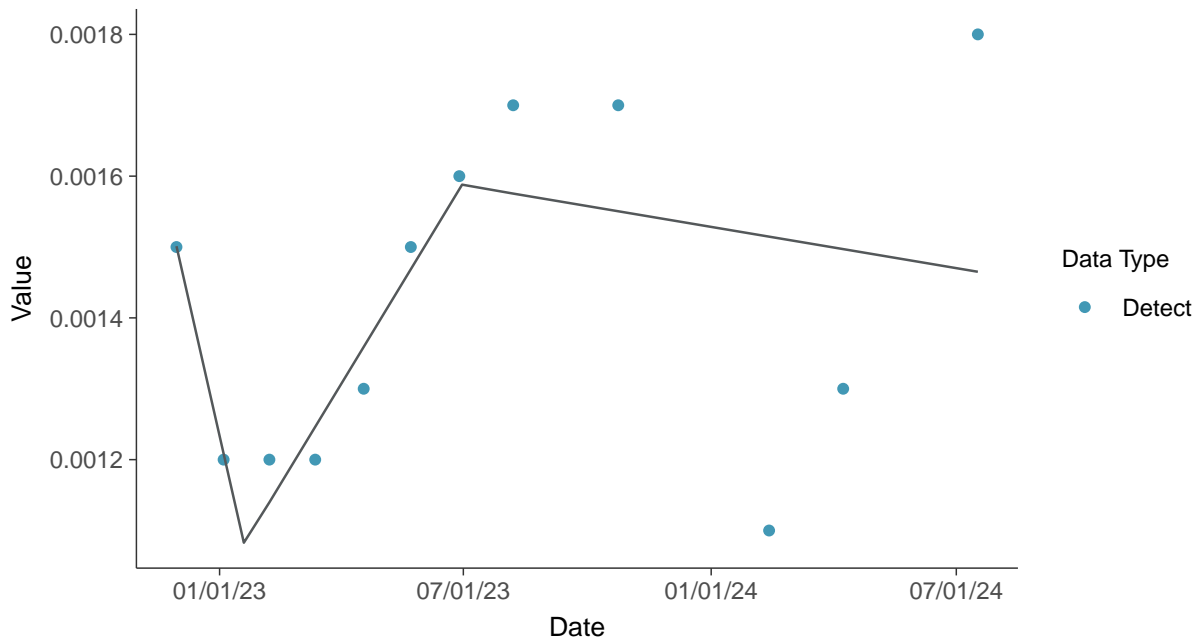
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-20 (mg/L)

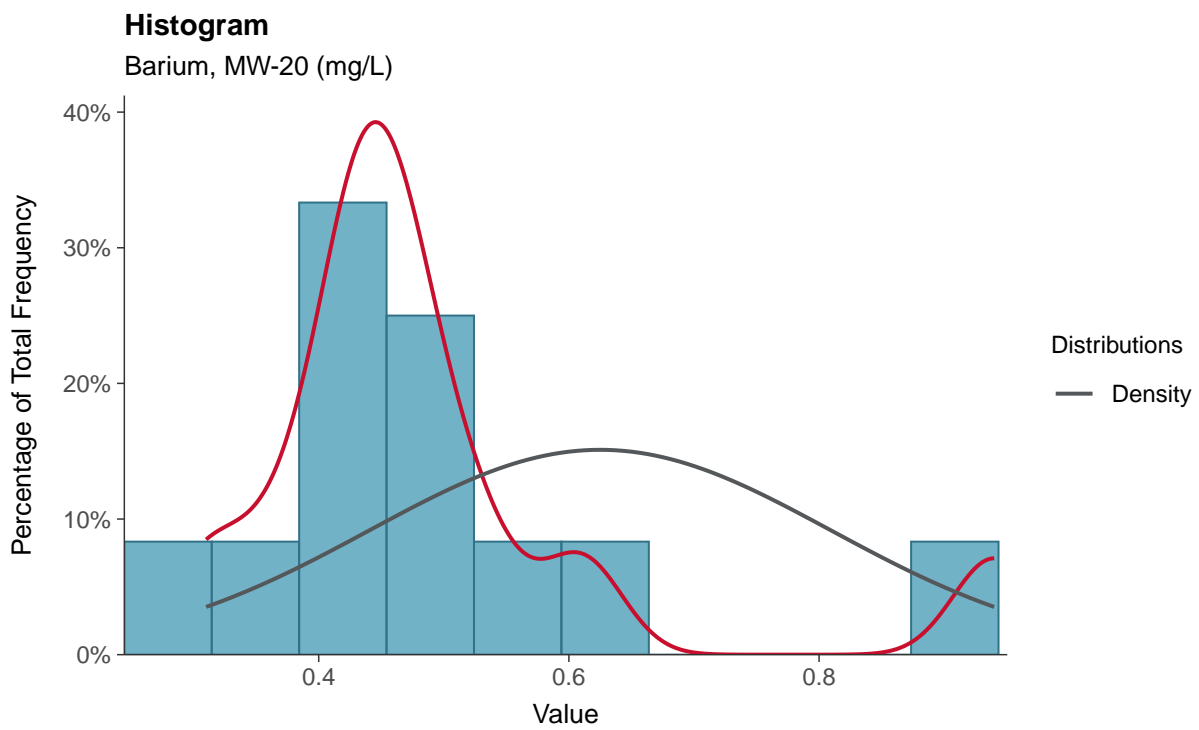
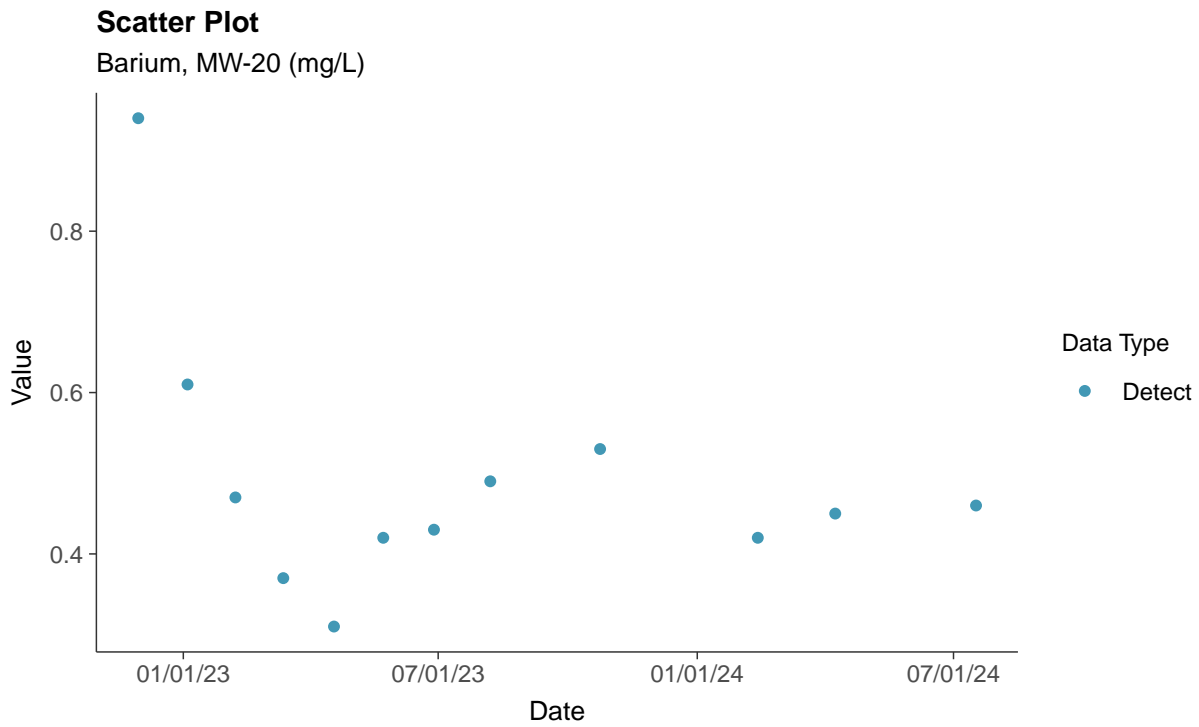






## Appendix IV: Barium, MW-20

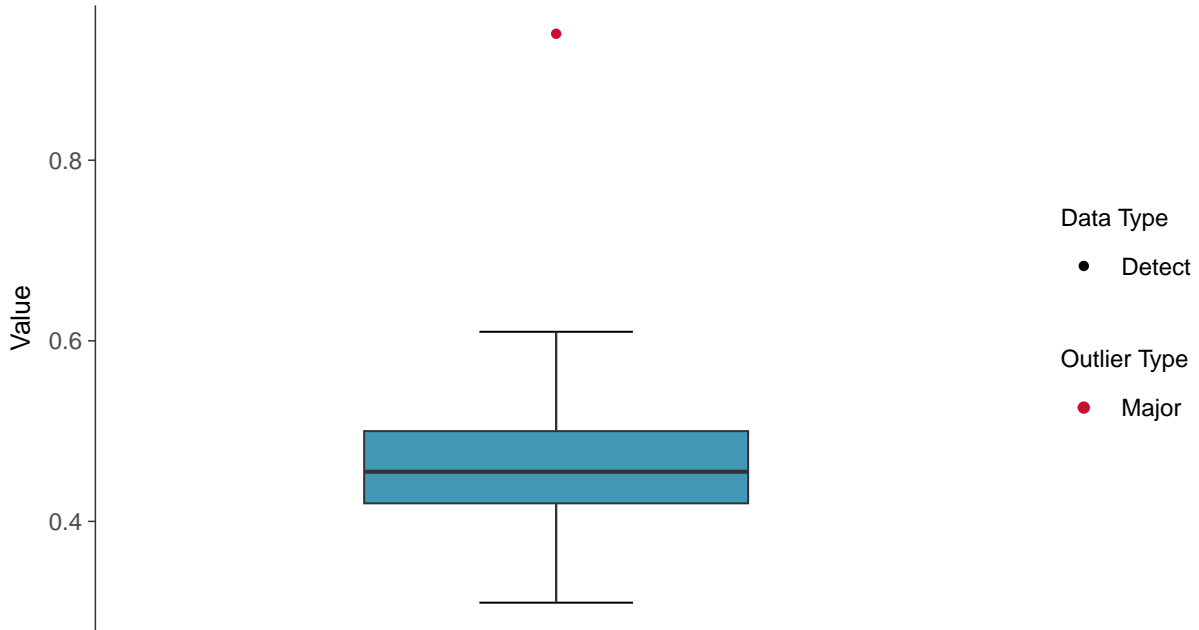
ID: 30\_1\_5\_103





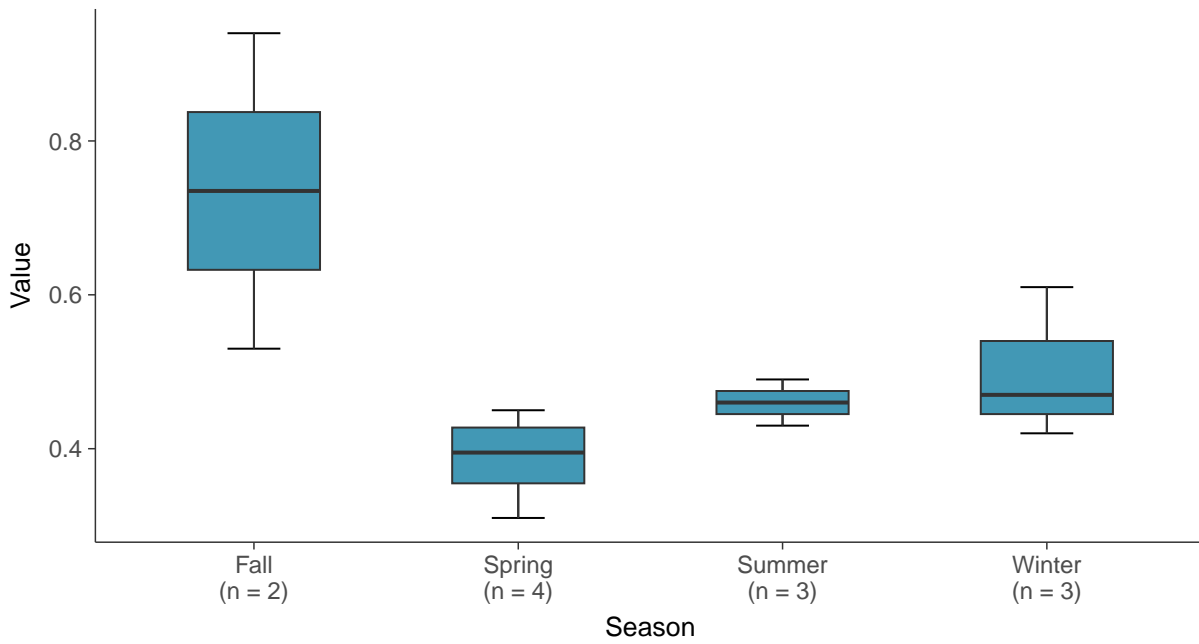
### Boxplot

Barium, MW-20 (mg/L)



### Boxplot by Season

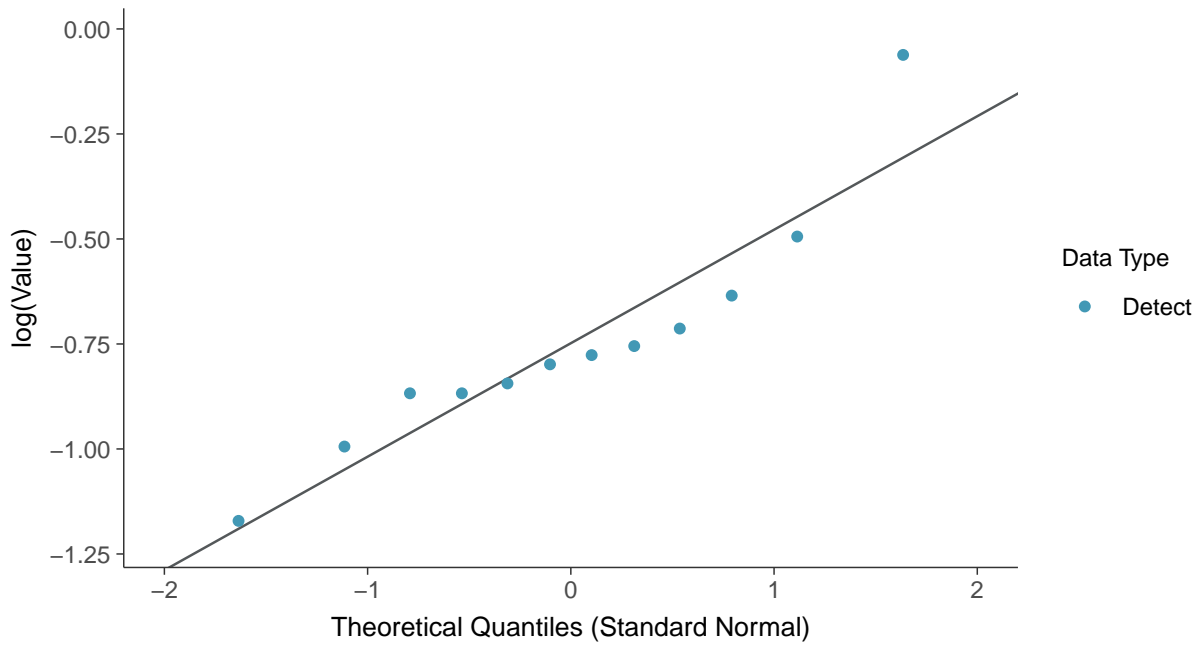
Barium, MW-20 (mg/L)





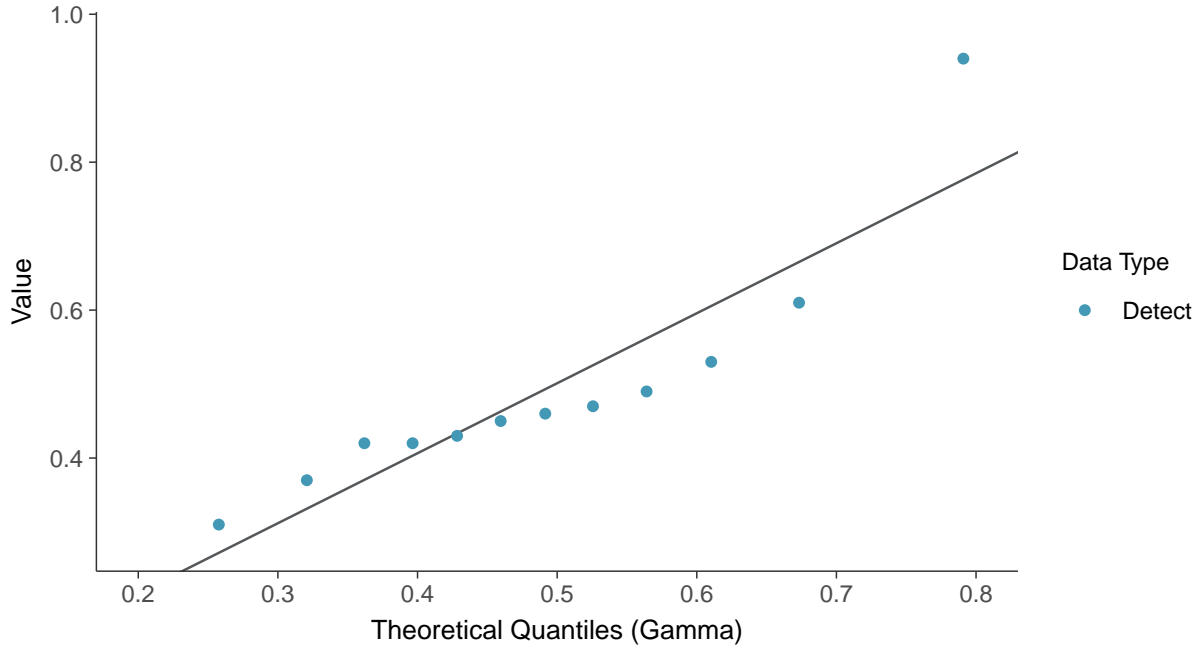
### Lognormal Q-Q plot

Barium, MW-20 (mg/L)



### Gamma Q-Q plot

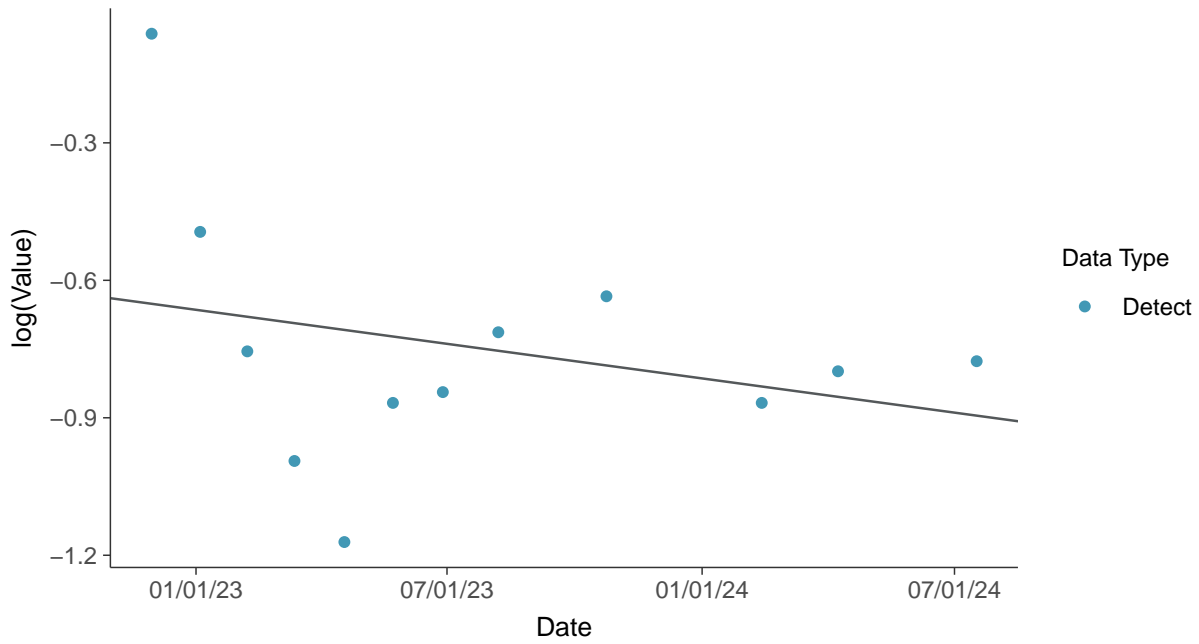
Barium, MW-20 (mg/L)





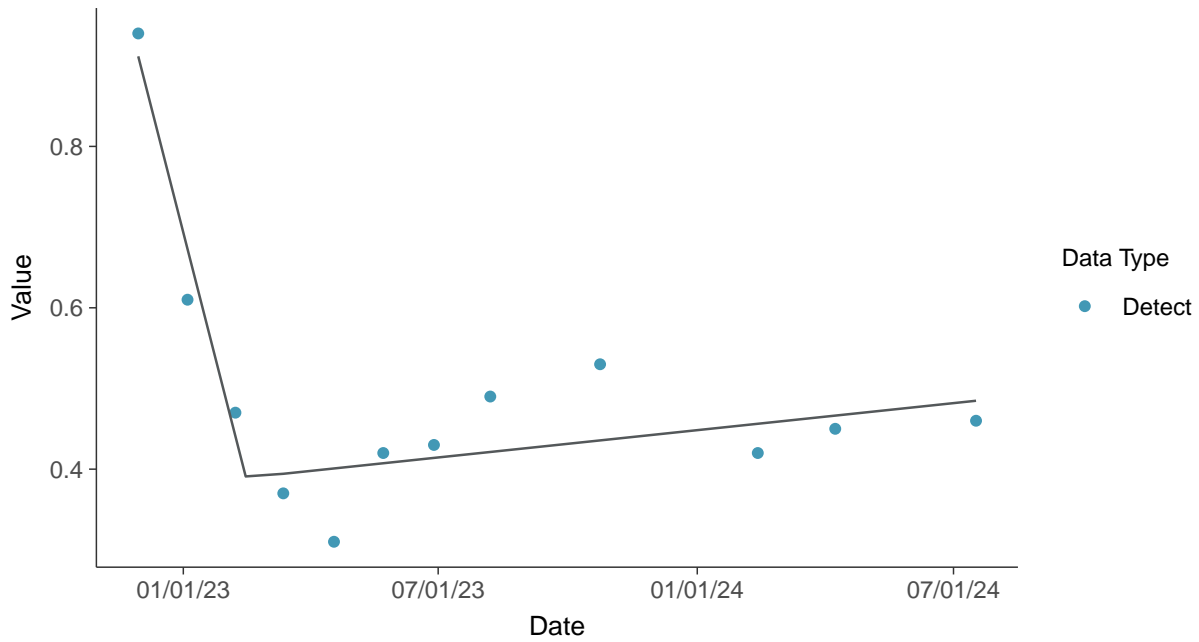
### Trend Regression: Lognormal MLE

Barium, MW-20 (mg/L)



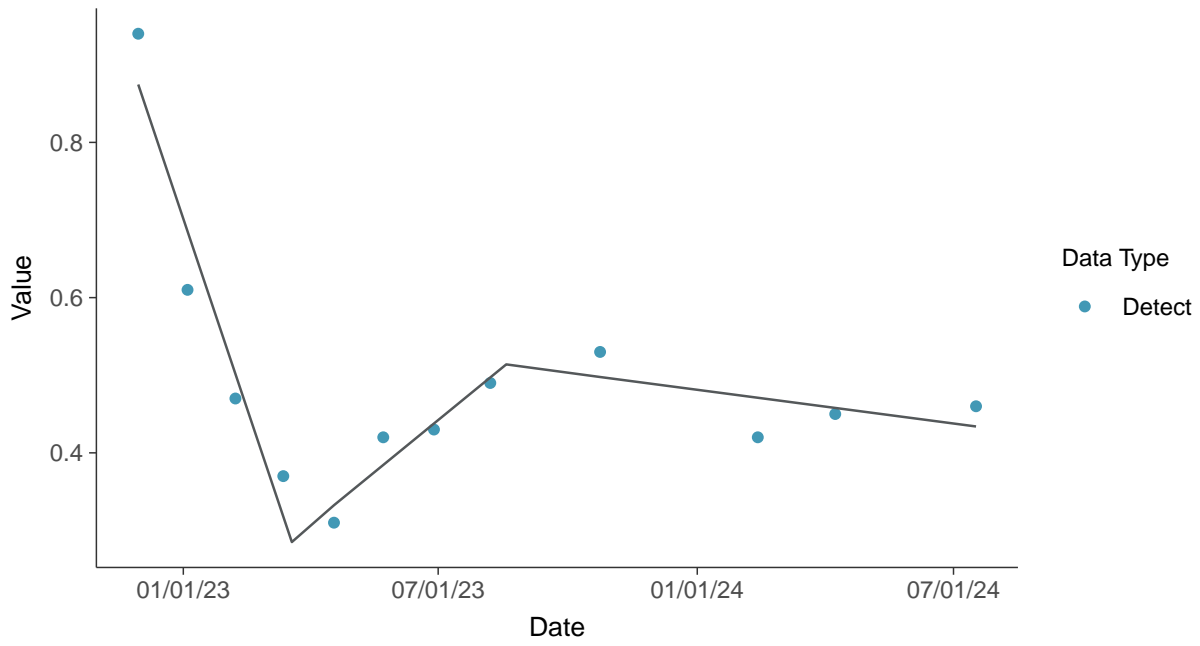
### Trend Regression: Piecewise Linear-Linear

Barium, MW-20 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Barium, MW-20 (mg/L)



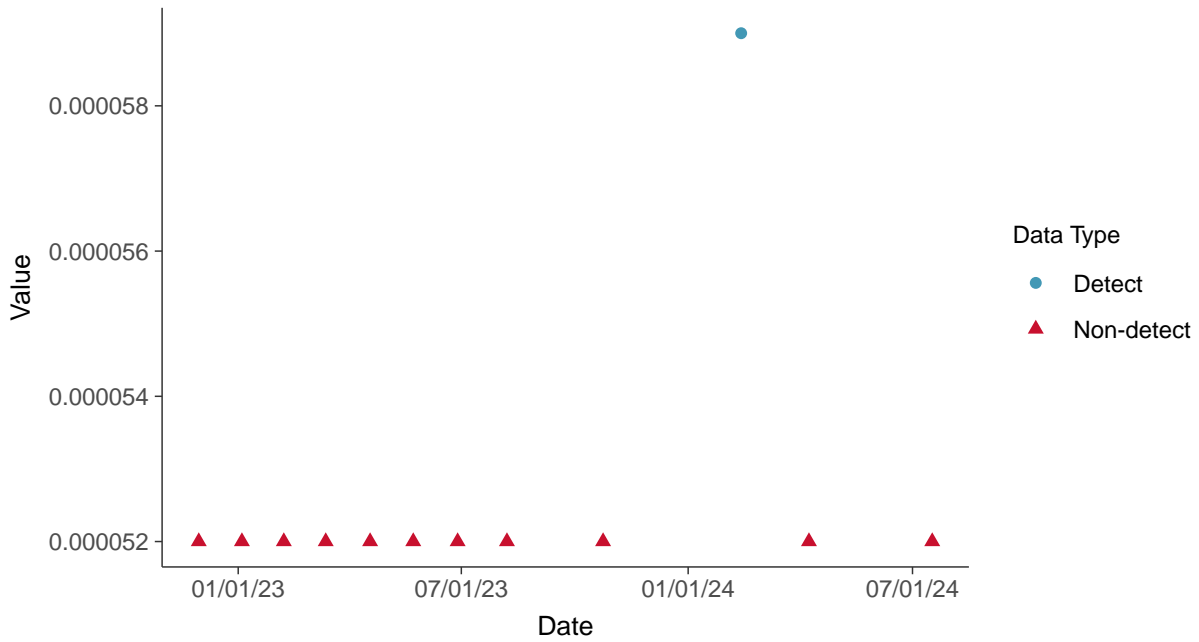


### Appendix IV: Beryllium, MW-20

ID: 30\_1\_5\_104

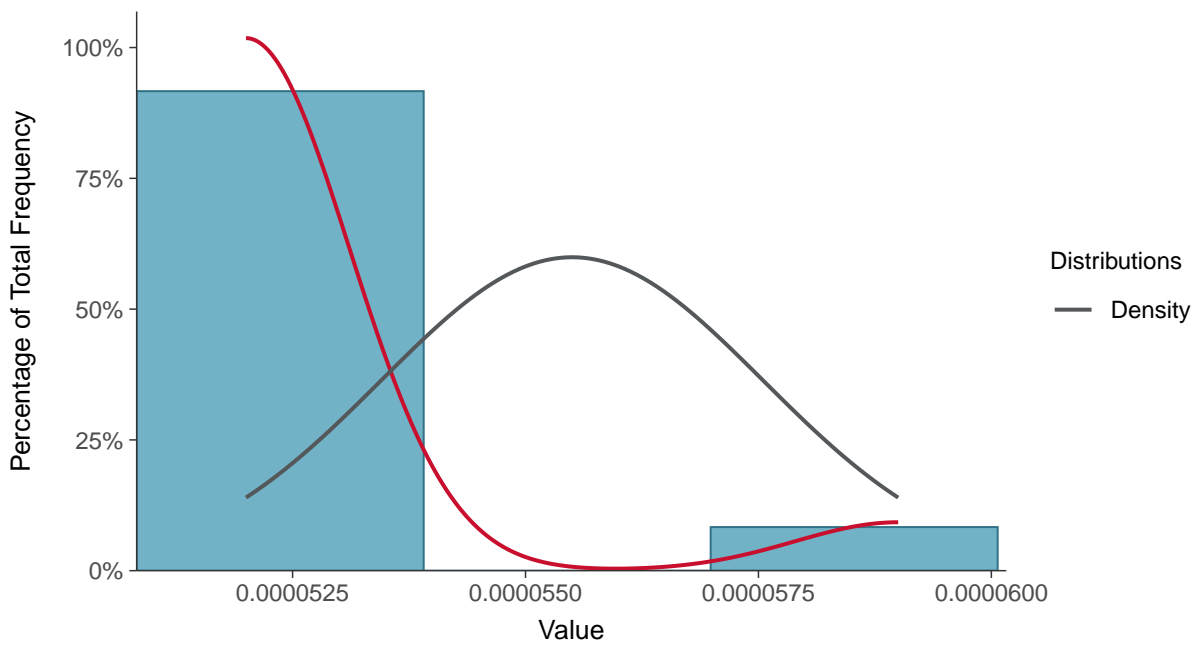
#### Scatter Plot

Beryllium, MW-20 (mg/L)



#### Histogram

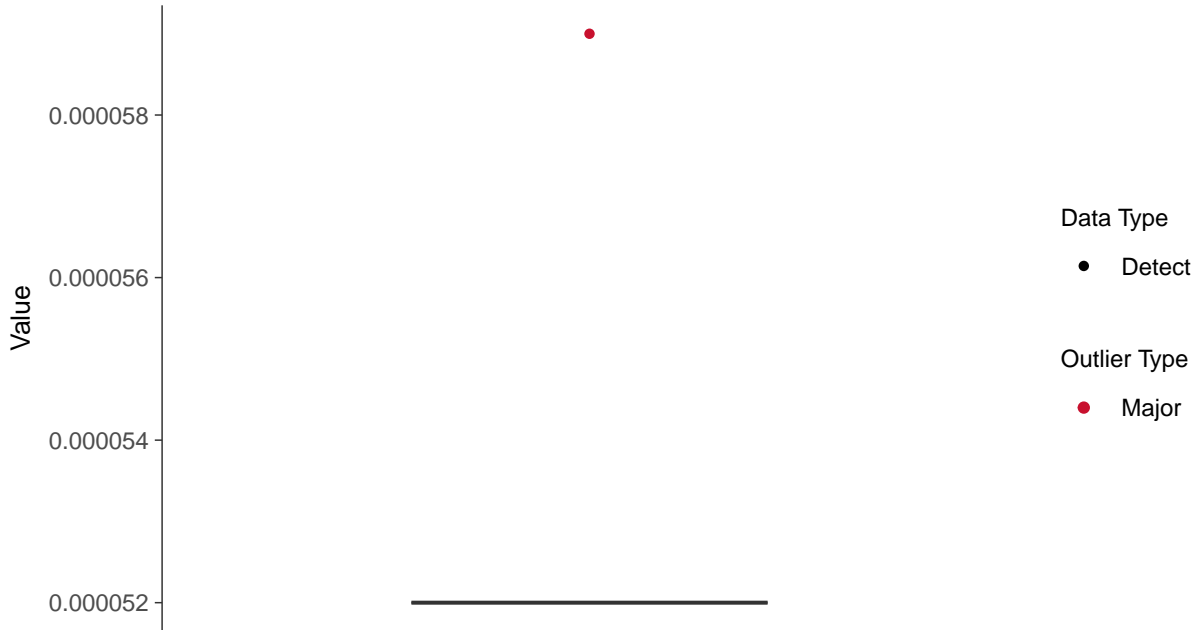
Beryllium, MW-20 (mg/L)





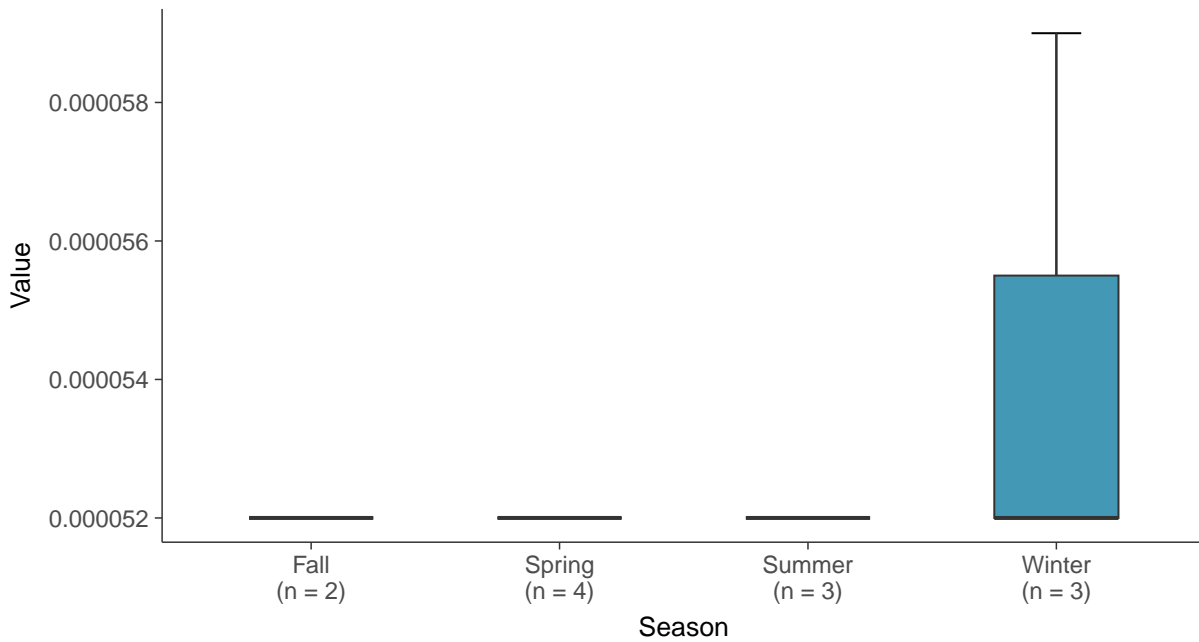
### Boxplot

Beryllium, MW-20 (mg/L)



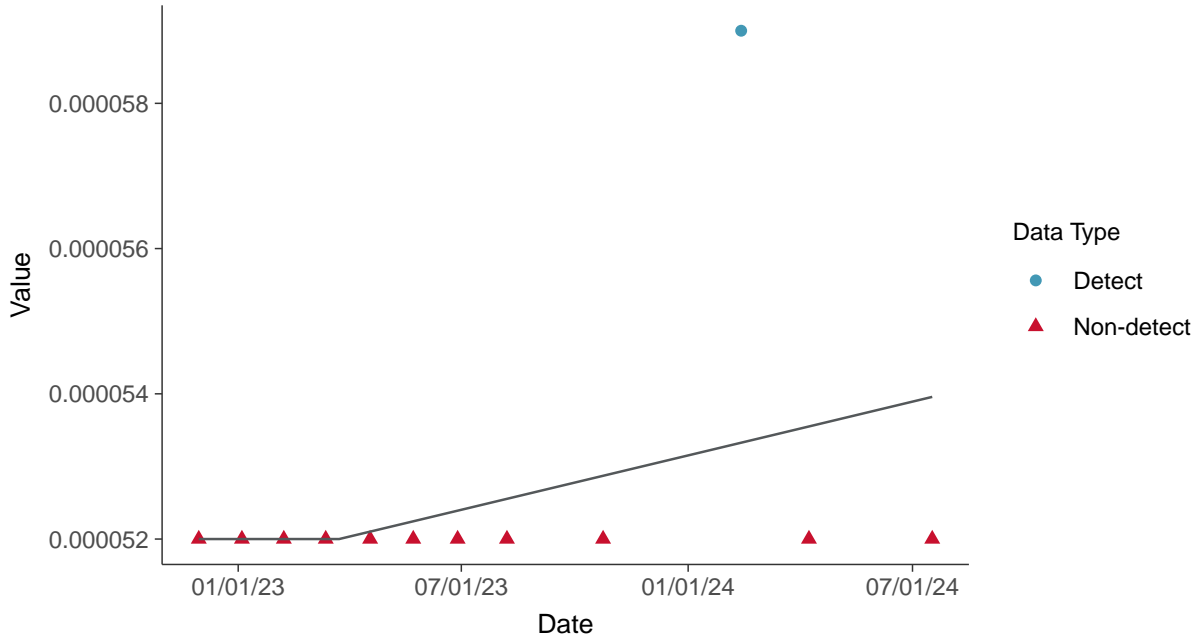
### Boxplot by Season

Beryllium, MW-20 (mg/L)

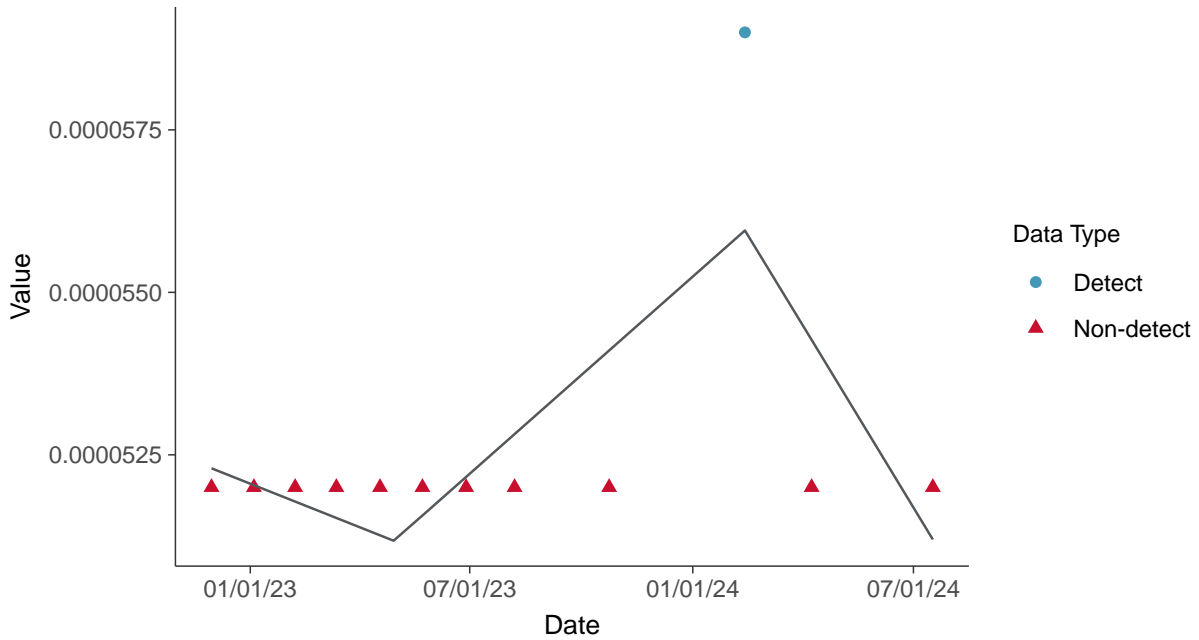




**Trend Regression: Piecewise Linear-Linear**  
Beryllium, MW-20 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Beryllium, MW-20 (mg/L)

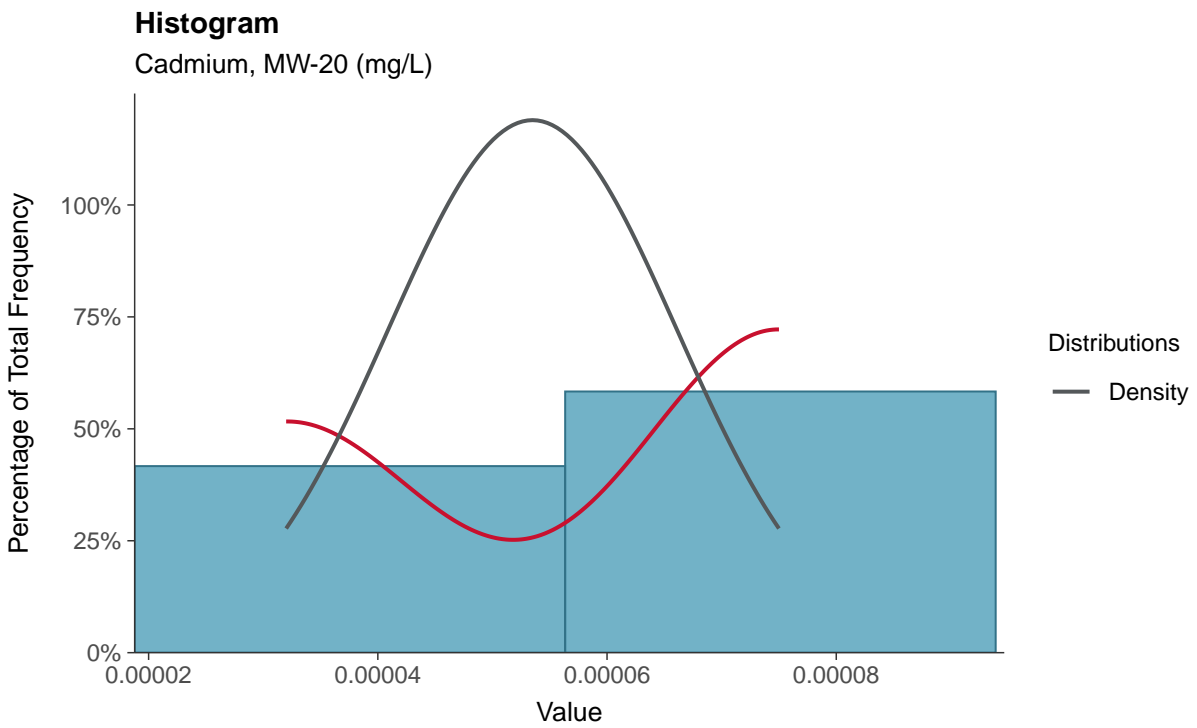
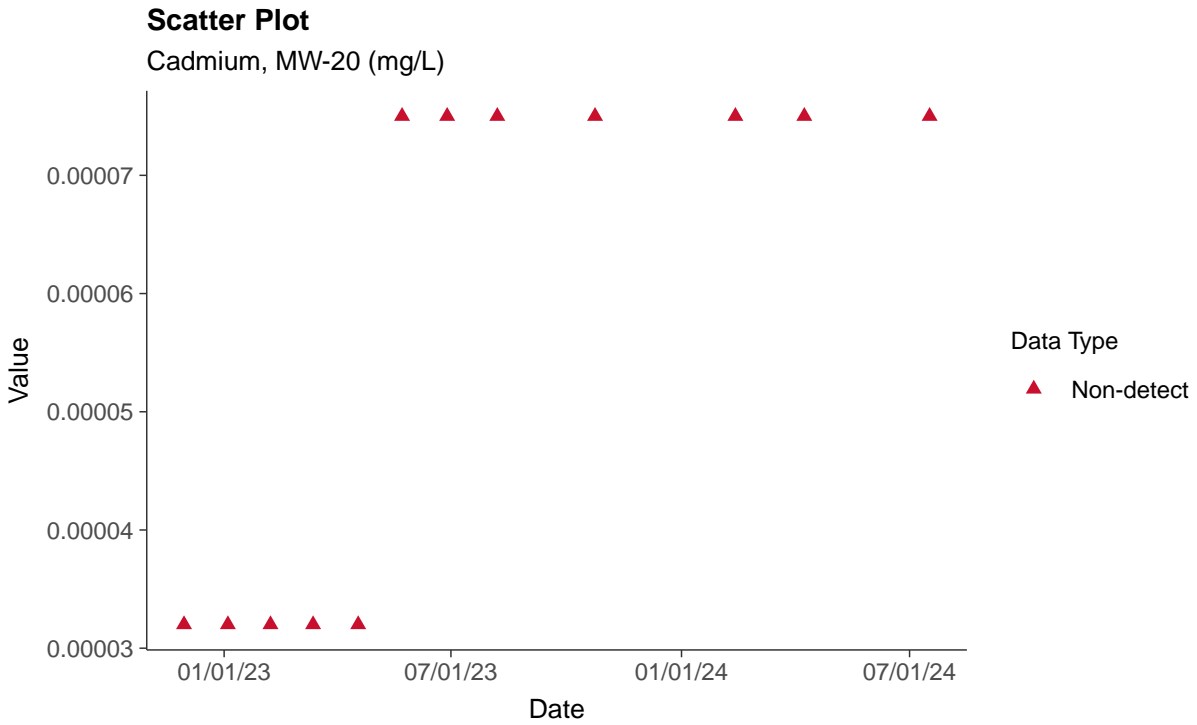






### Appendix IV: Cadmium, MW-20

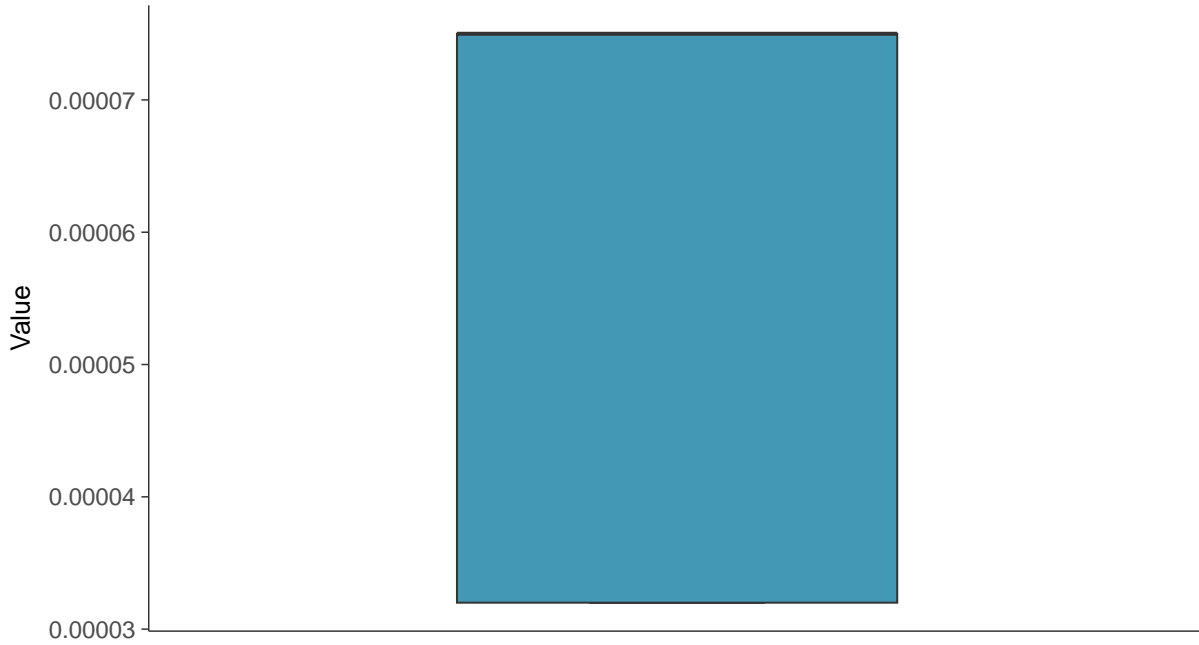
ID: 30\_1\_5\_106





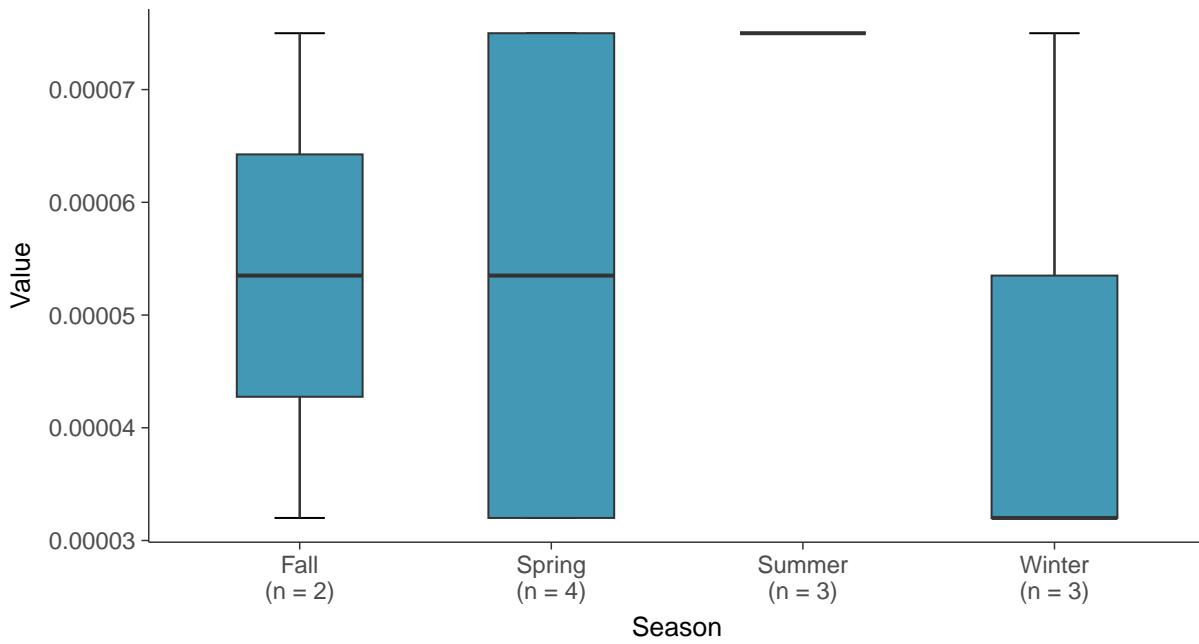
### Boxplot

Cadmium, MW-20 (mg/L)



### Boxplot by Season

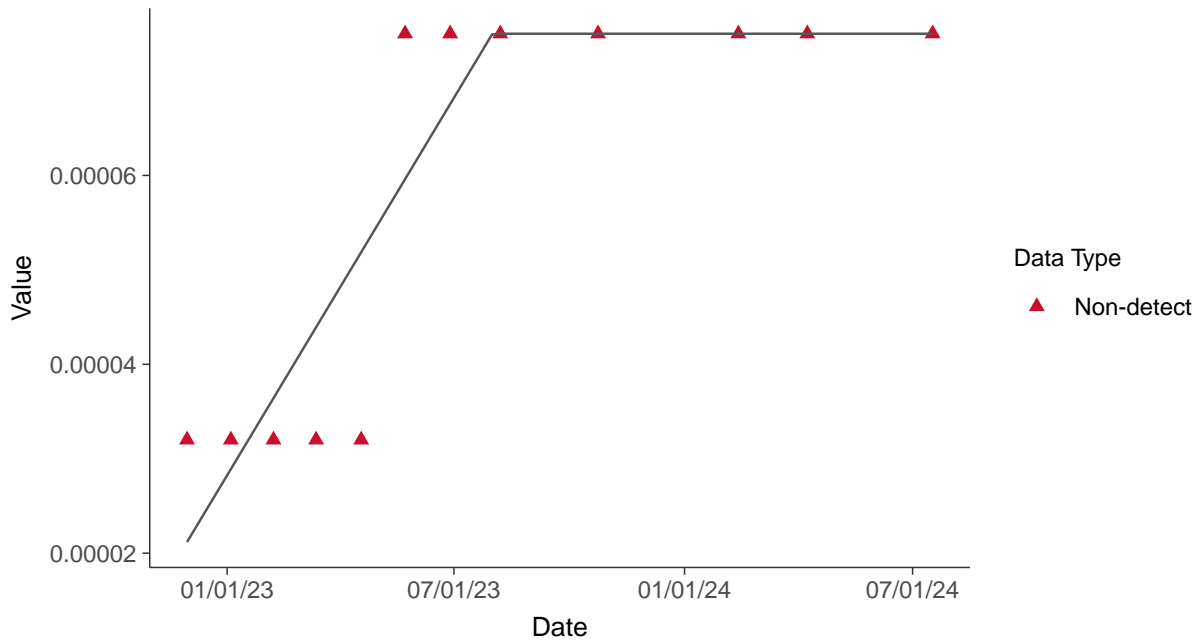
Cadmium, MW-20 (mg/L)





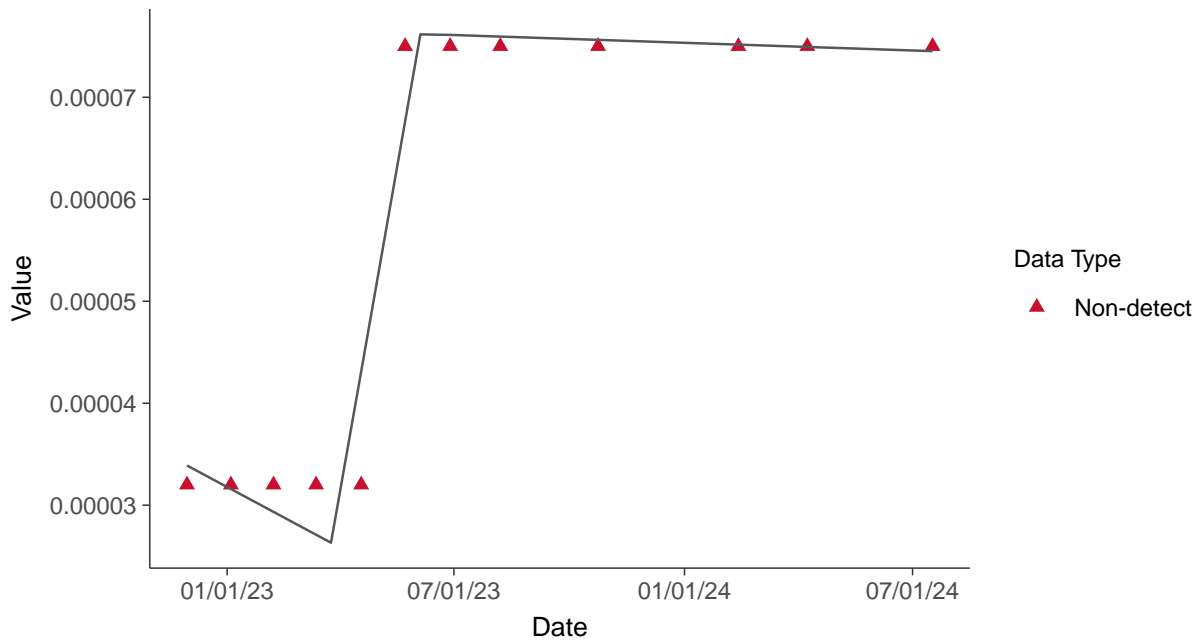
### Trend Regression: Piecewise Linear-Linear

Cadmium, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-20 (mg/L)



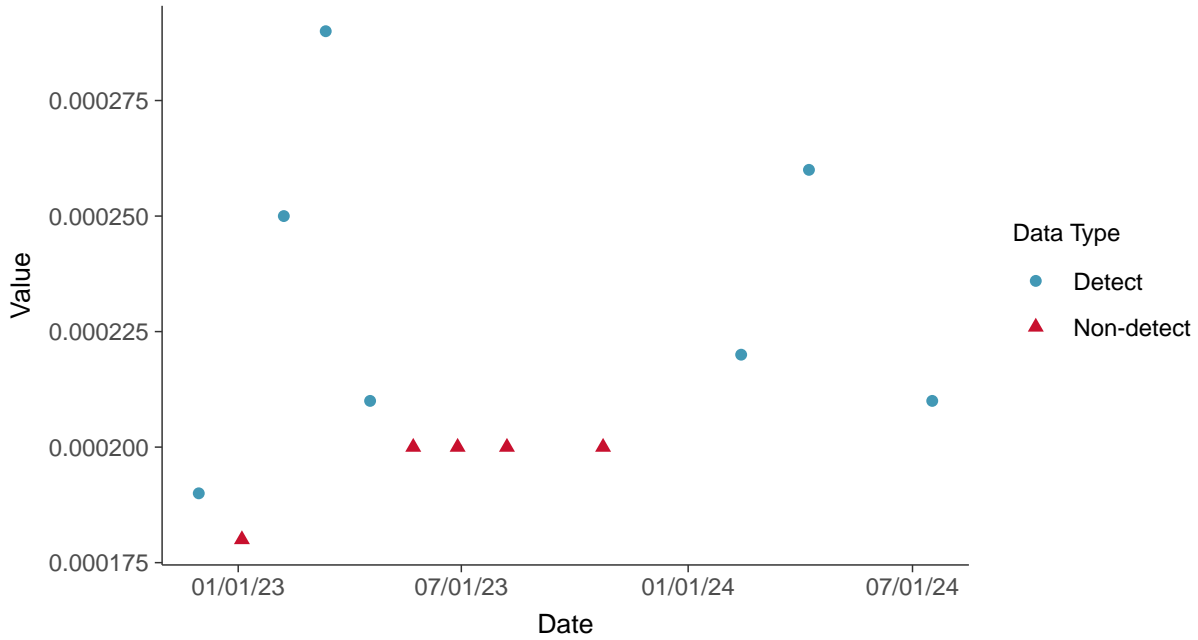


### Appendix IV: Chromium, Total, MW-20

ID: 30\_1\_5\_109

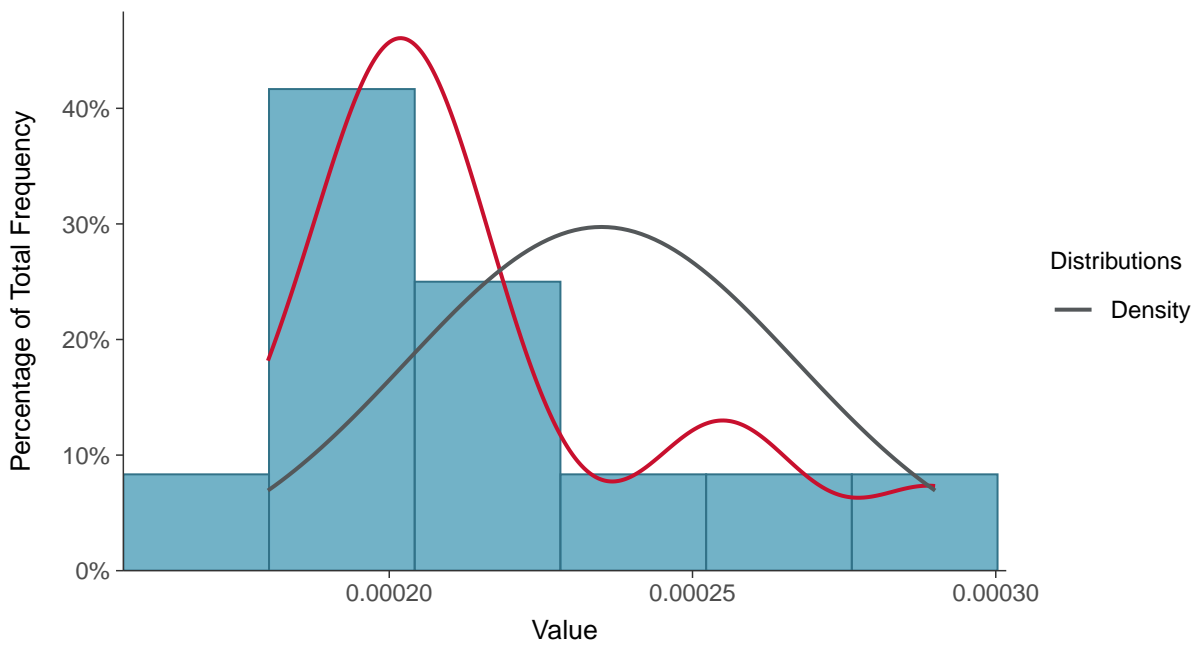
#### Scatter Plot

Chromium, Total, MW-20 (mg/L)



#### Histogram

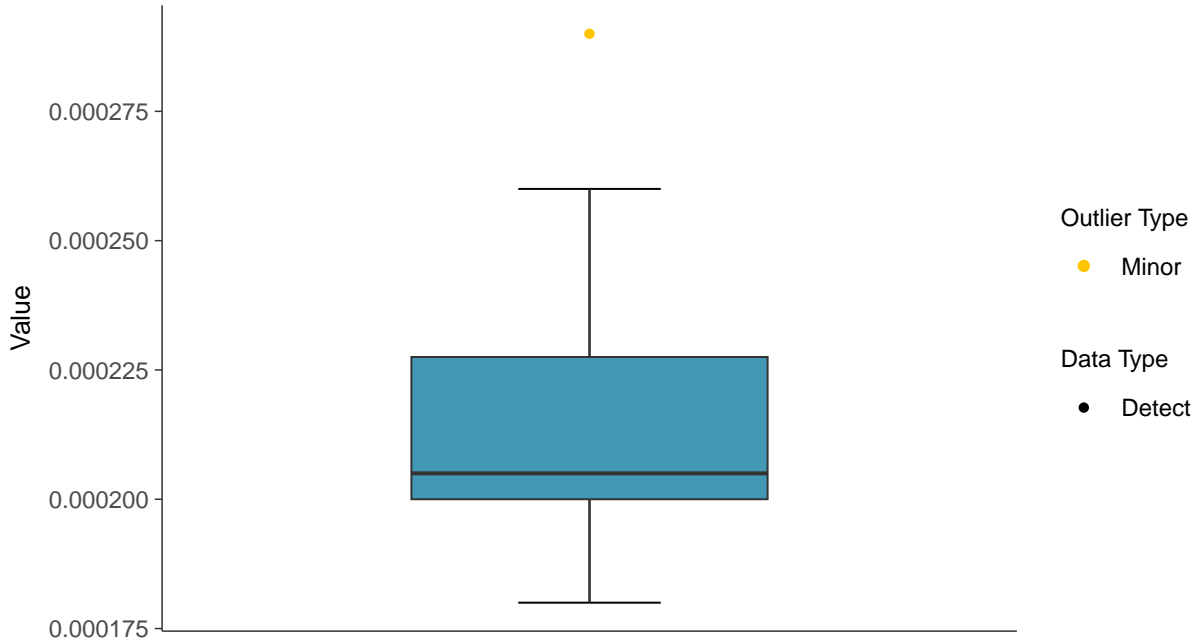
Chromium, Total, MW-20 (mg/L)





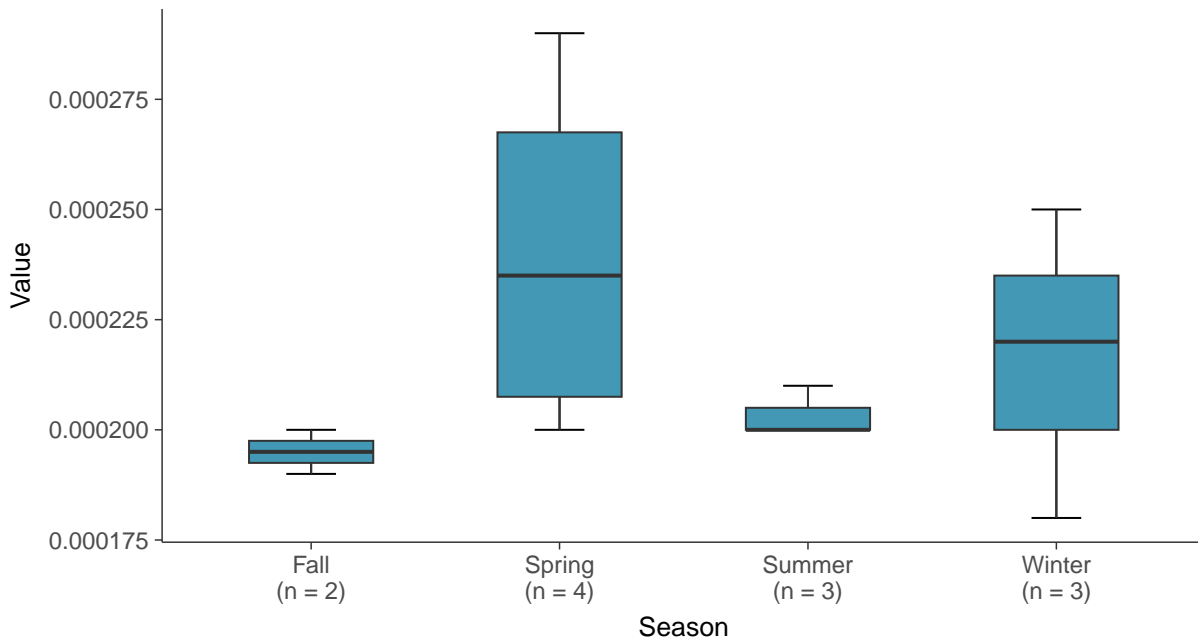
### Boxplot

Chromium, Total, MW-20 (mg/L)



### Boxplot by Season

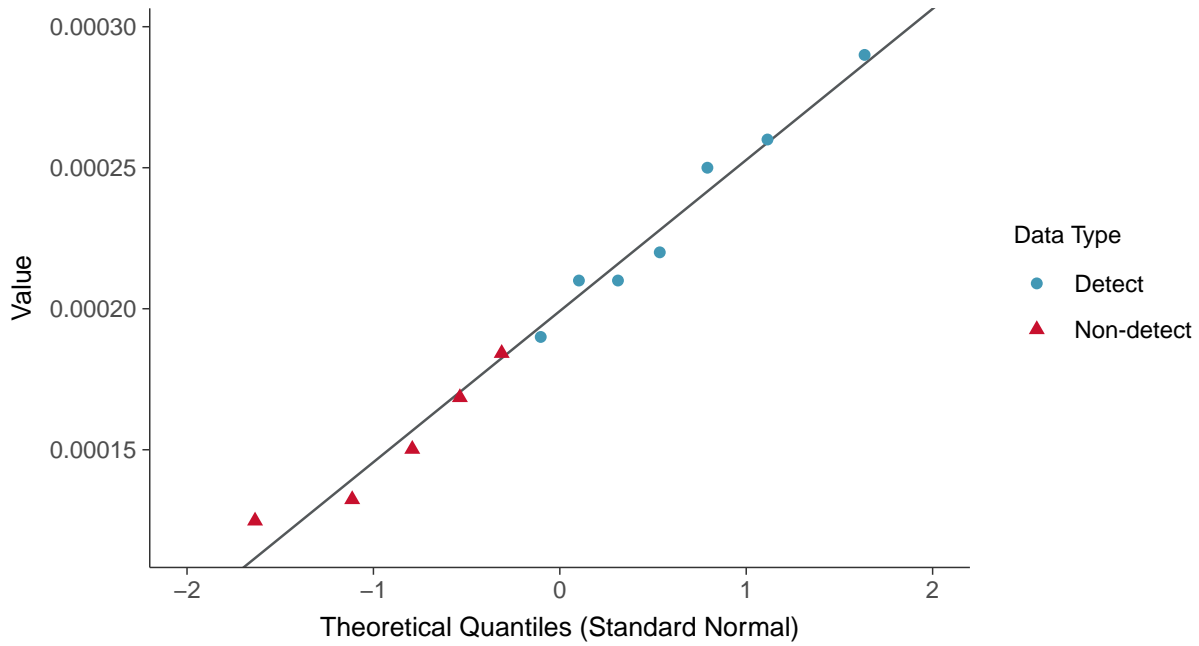
Chromium, Total, MW-20 (mg/L)





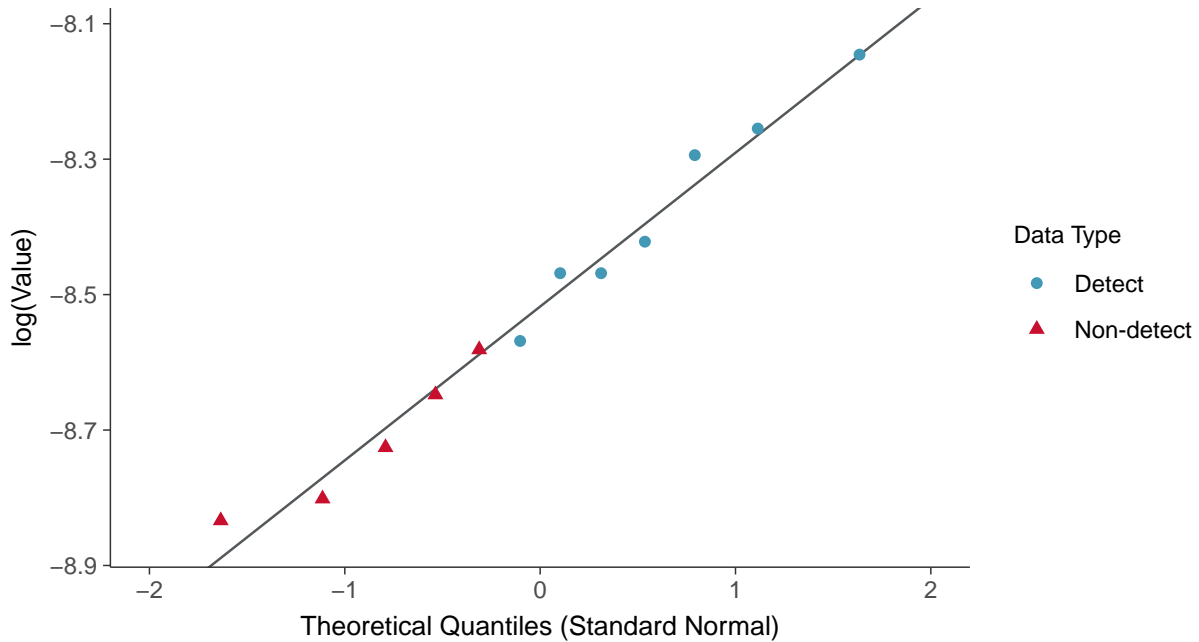
### Normal Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-20 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

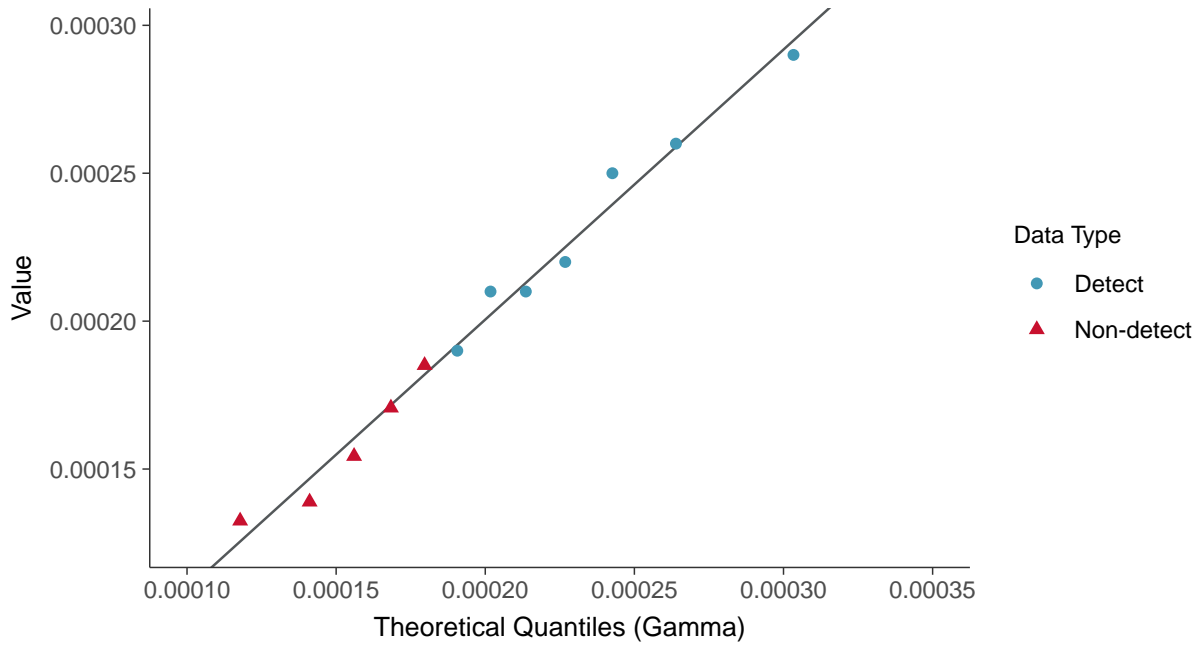
Chromium, Total, MW-20 (mg/L)





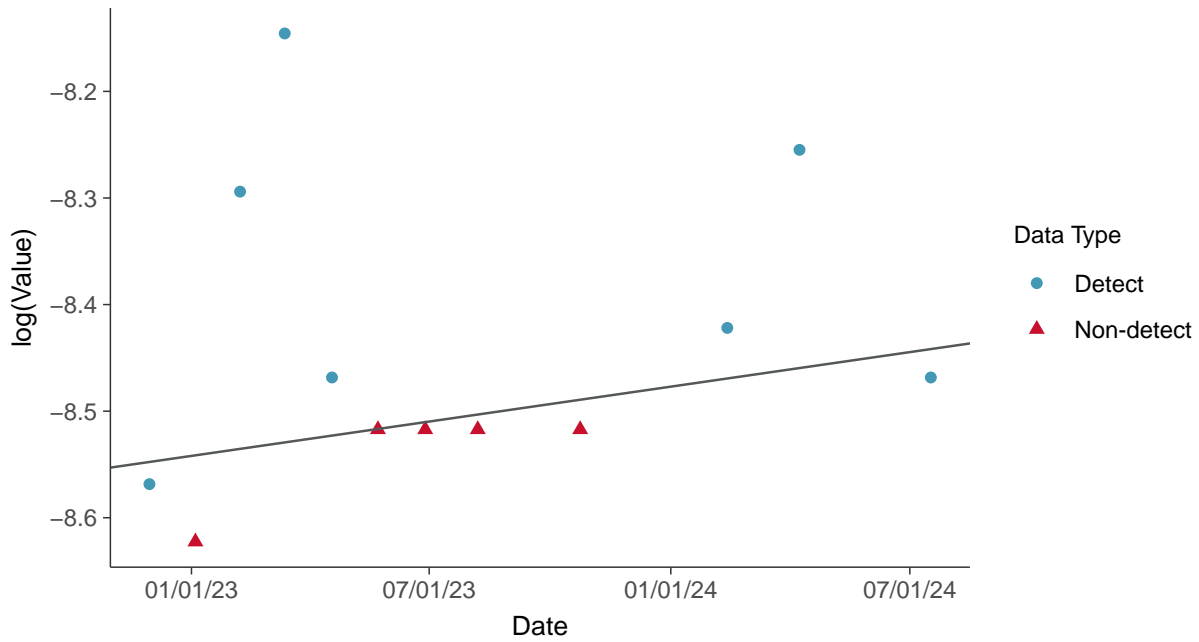
### Gamma Q-Q plot using ROS Imputed Estimates

Chromium, Total, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

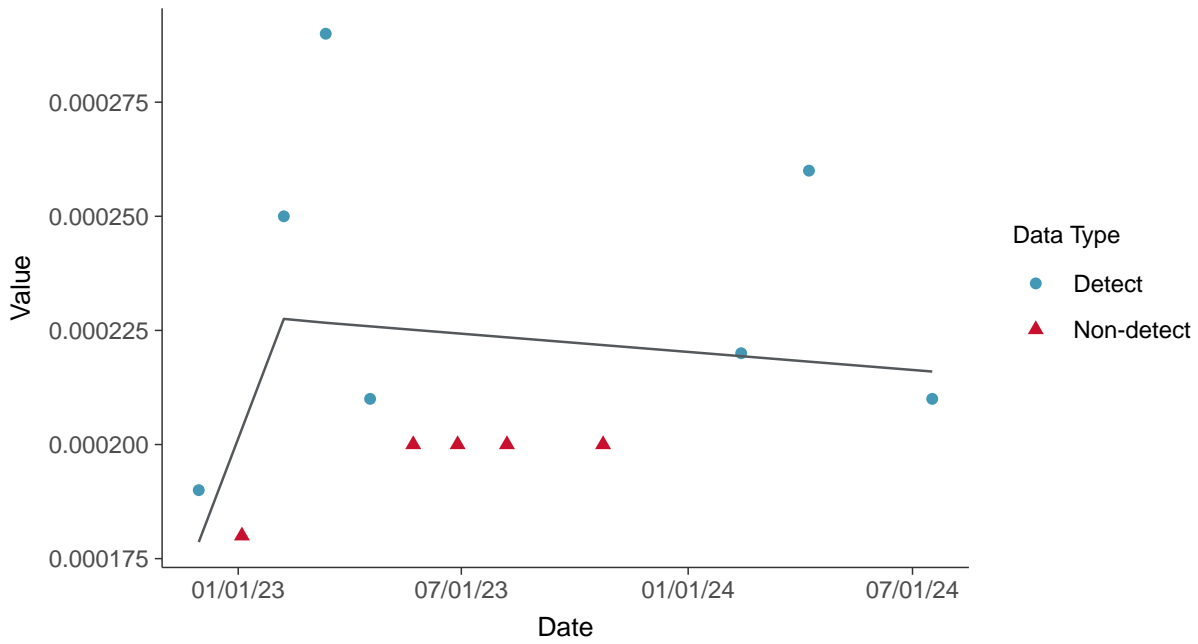
Chromium, Total, MW-20 (mg/L)





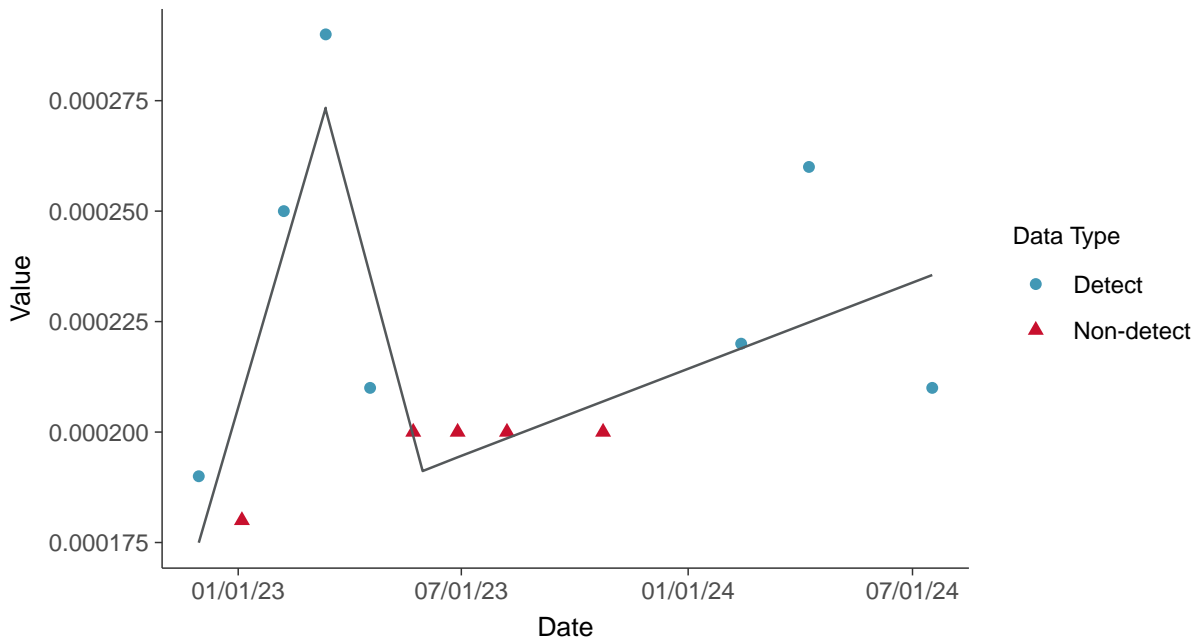
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-20 (mg/L)

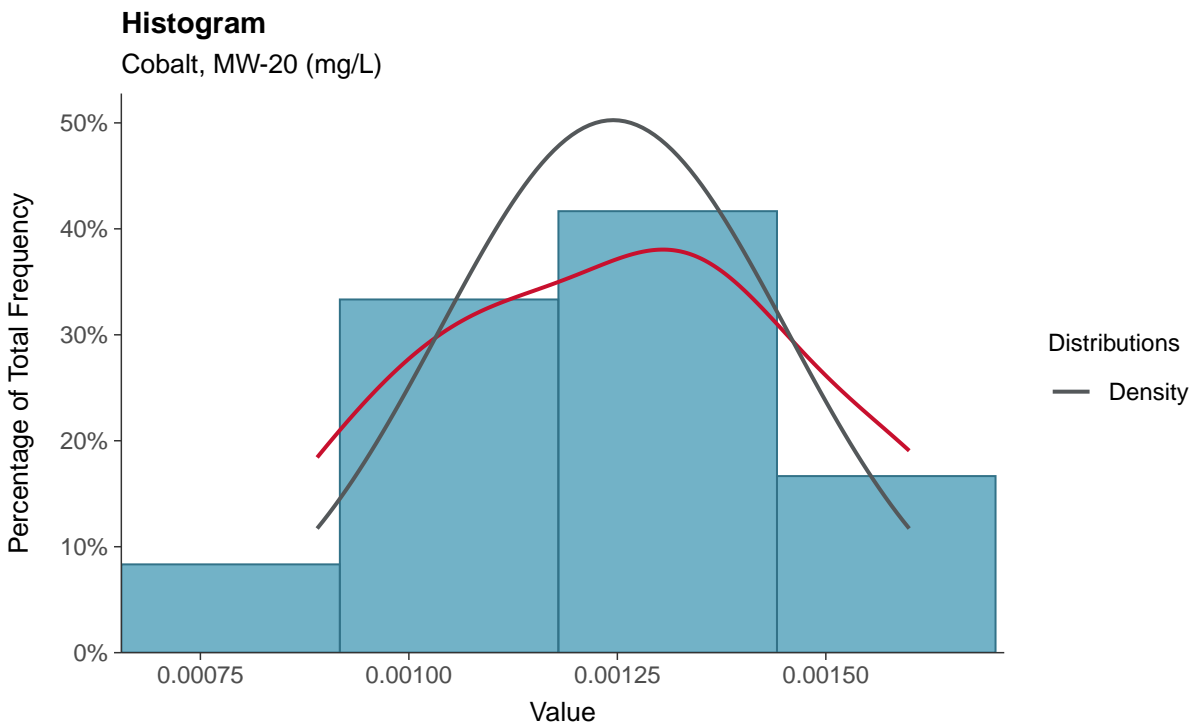
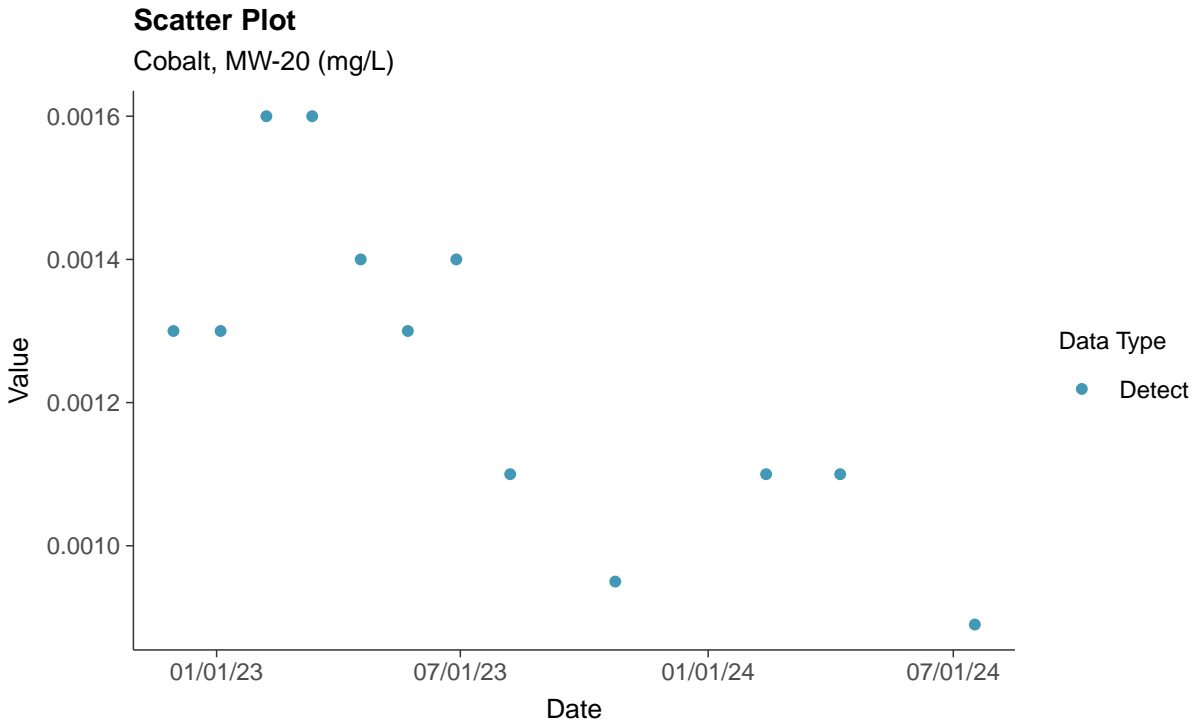






### Appendix IV: Cobalt, MW-20

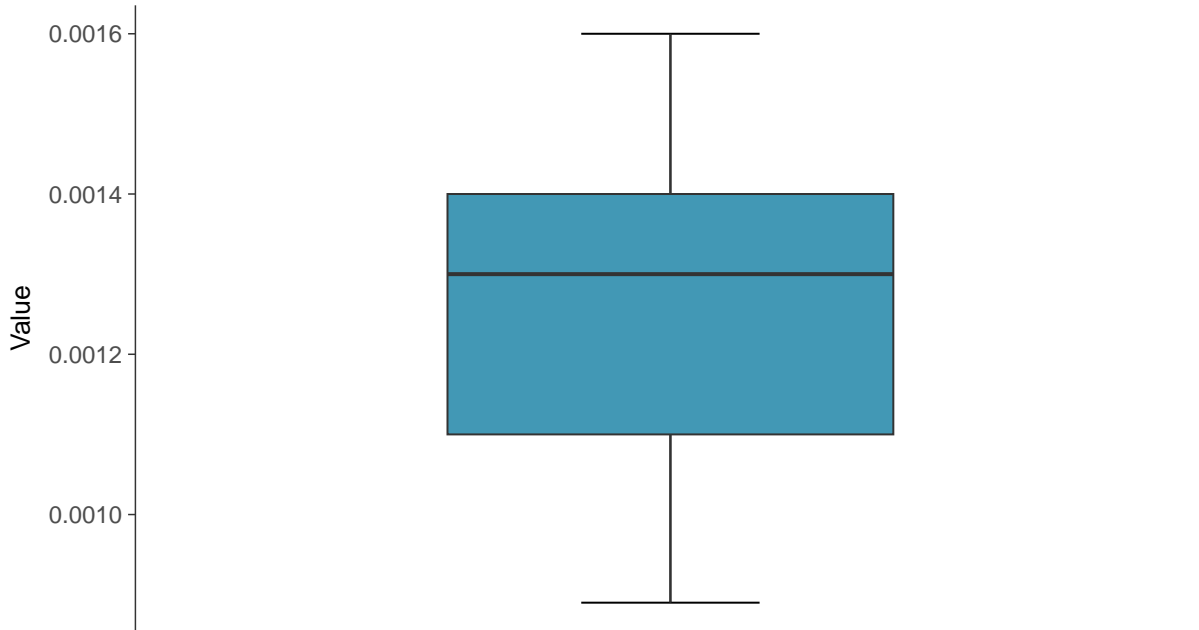
ID: 30\_1\_5\_110





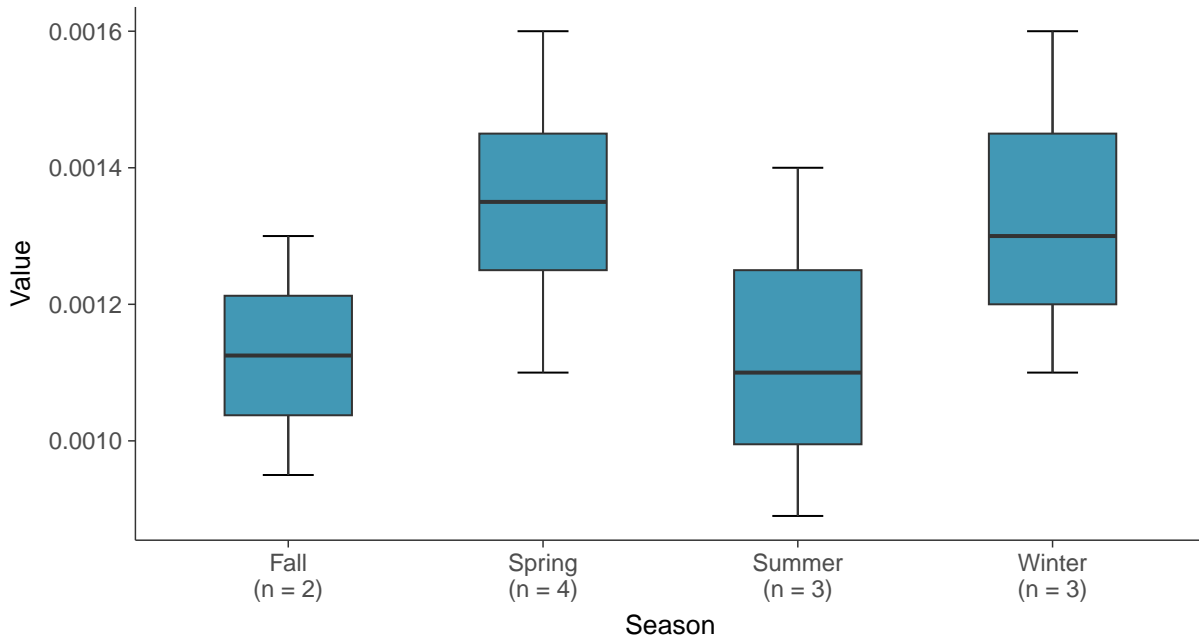
### Boxplot

Cobalt, MW-20 (mg/L)



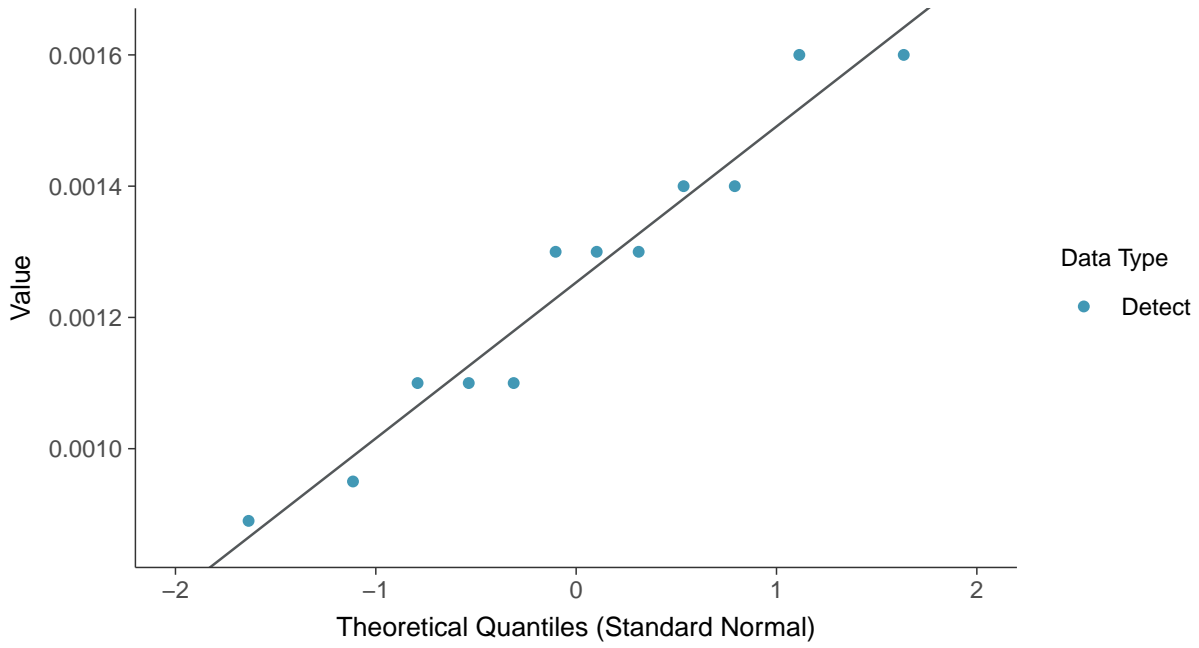
### Boxplot by Season

Cobalt, MW-20 (mg/L)

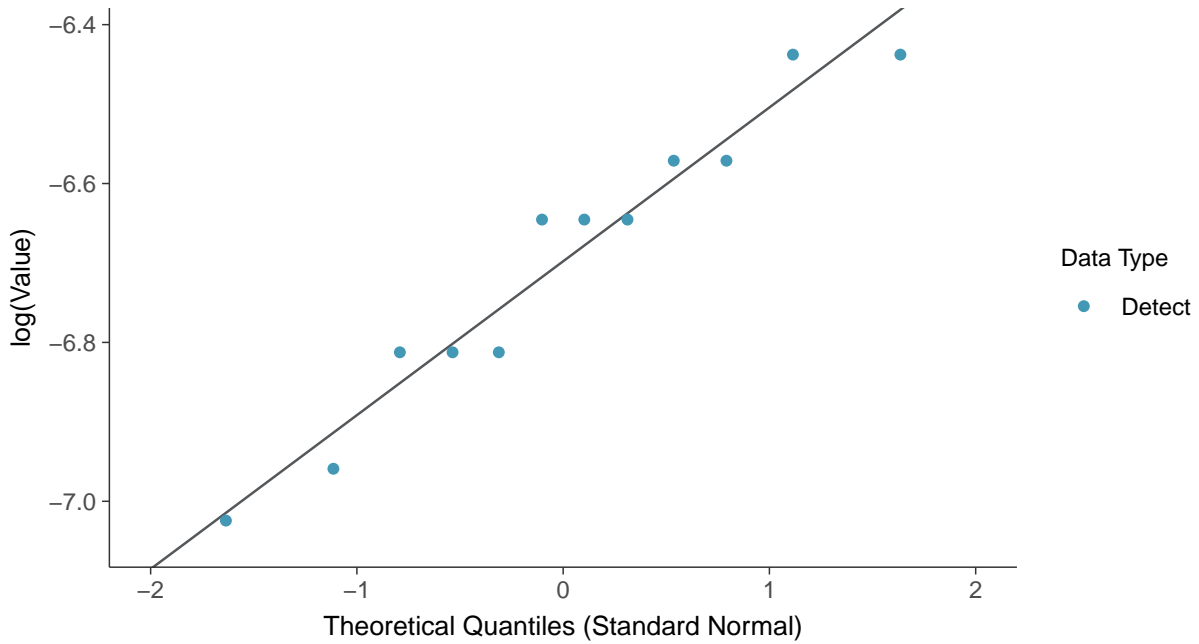




**Normal Q-Q plot**  
Cobalt, MW-20 (mg/L)

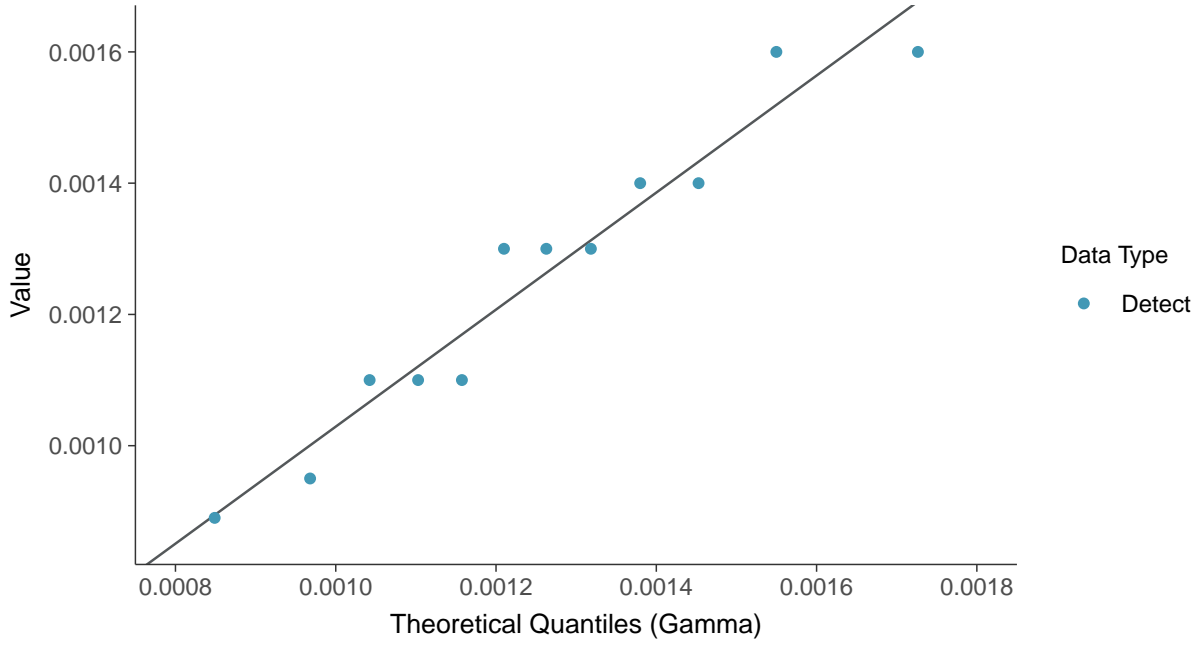


**Lognormal Q-Q plot**  
Cobalt, MW-20 (mg/L)

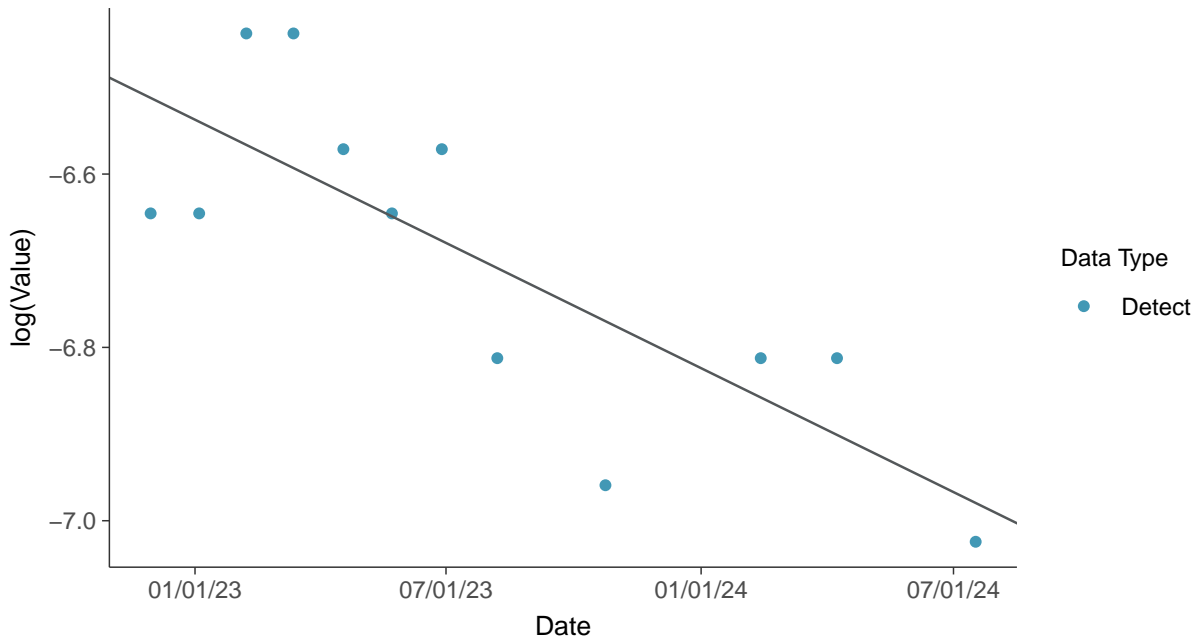




**Gamma Q-Q plot**  
Cobalt, MW-20 (mg/L)



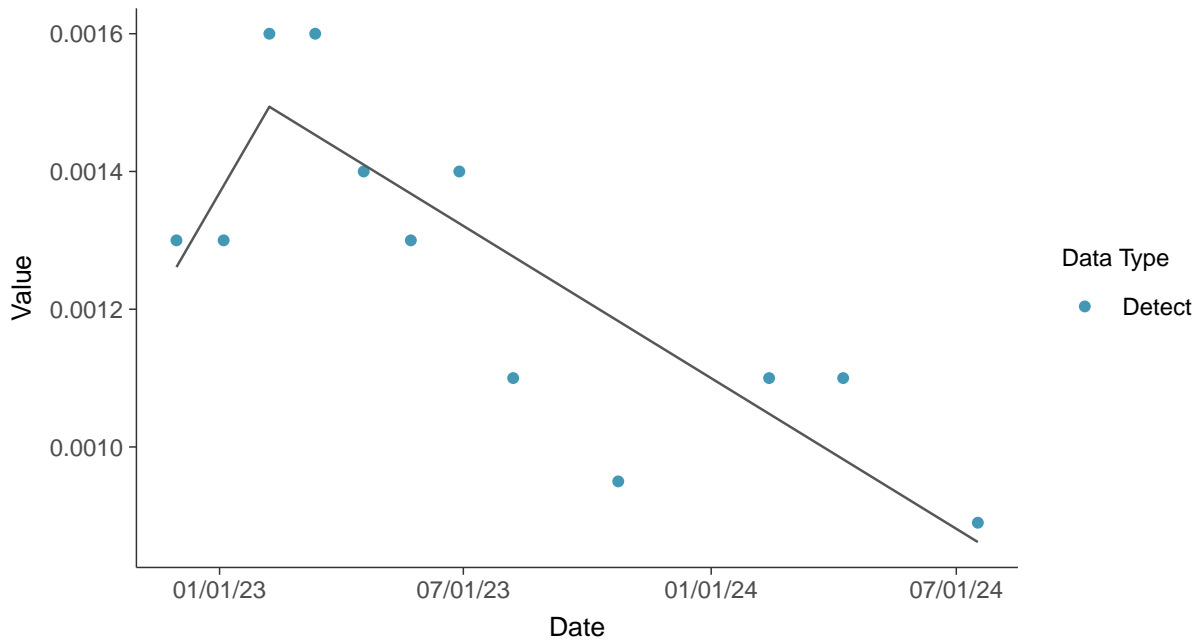
**Trend Regression: Lognormal MLE**  
Cobalt, MW-20 (mg/L)





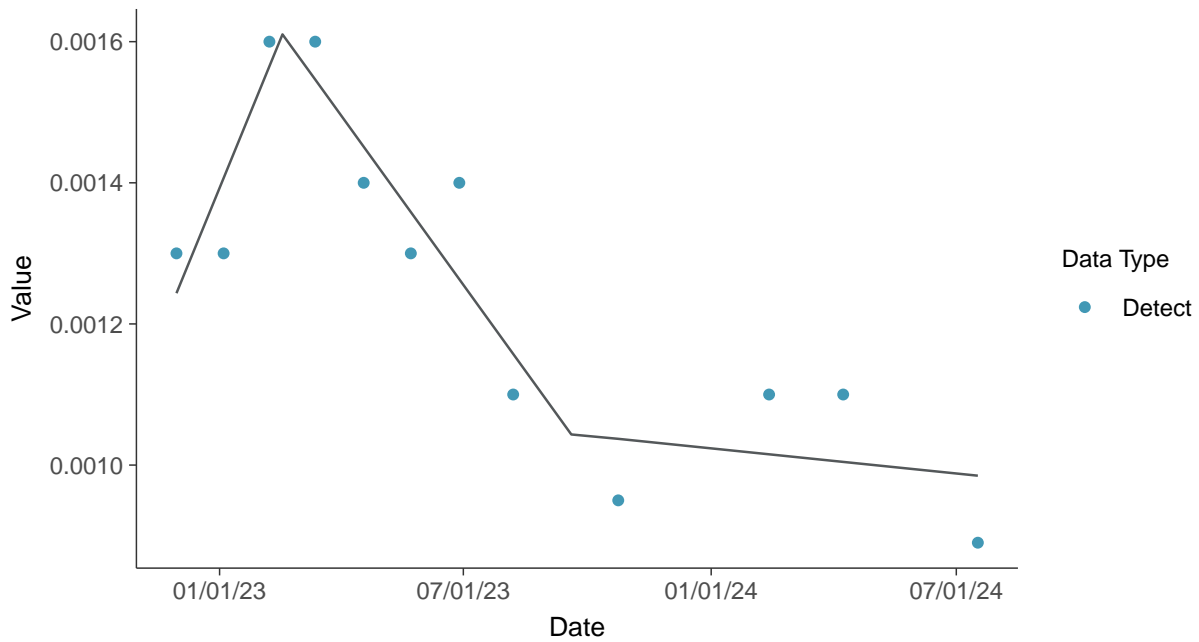
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-20 (mg/L)



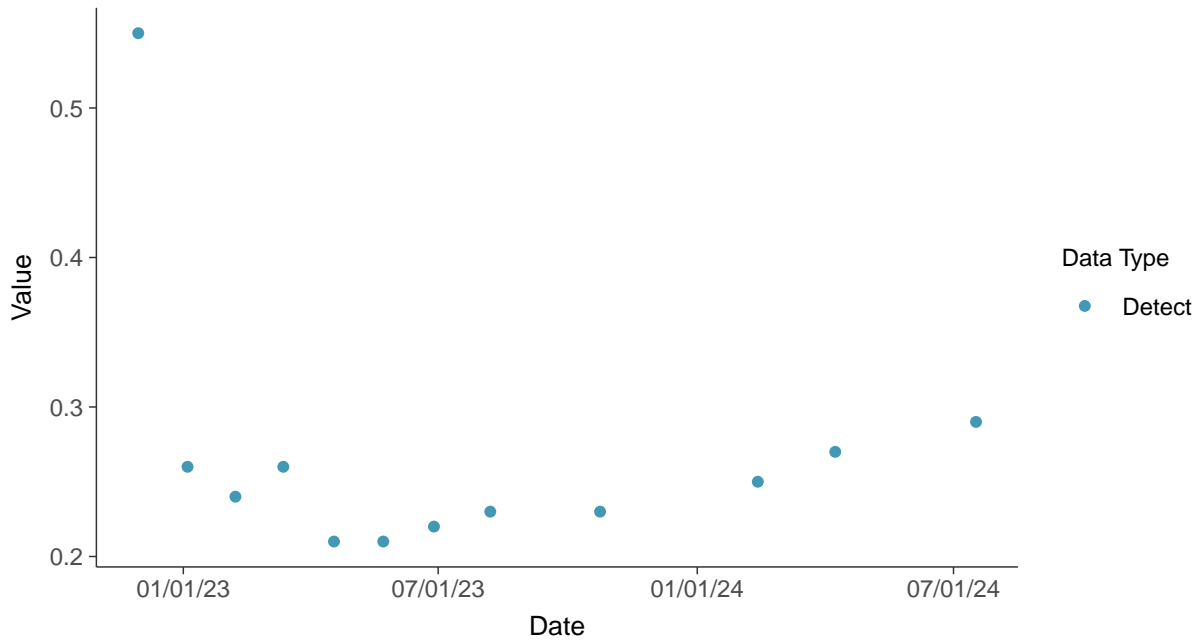


### Appendix IV: Fluoride (App IV), MW-20

ID: 30\_1\_5\_113

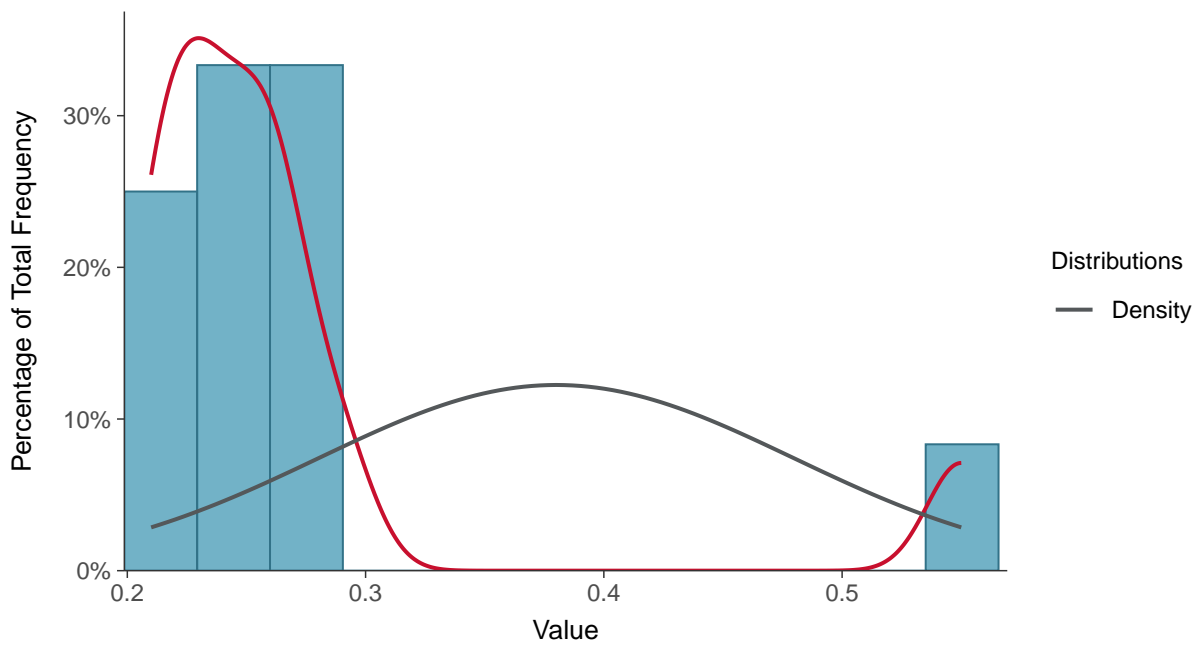
#### Scatter Plot

Fluoride (App IV), MW-20 (mg/L)



#### Histogram

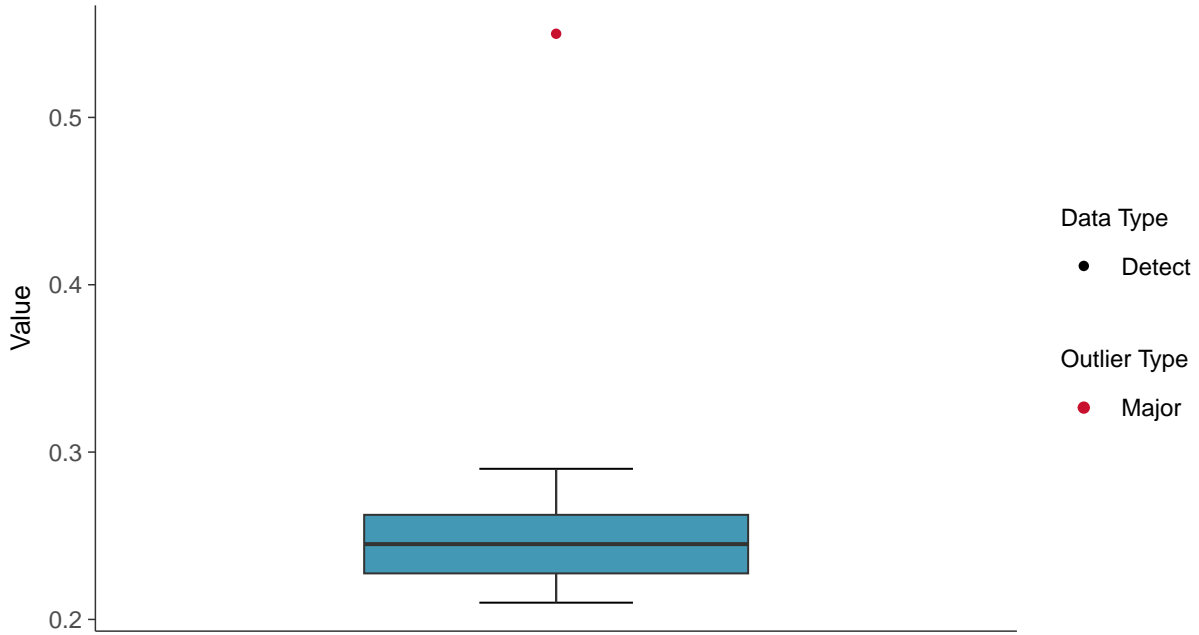
Fluoride (App IV), MW-20 (mg/L)





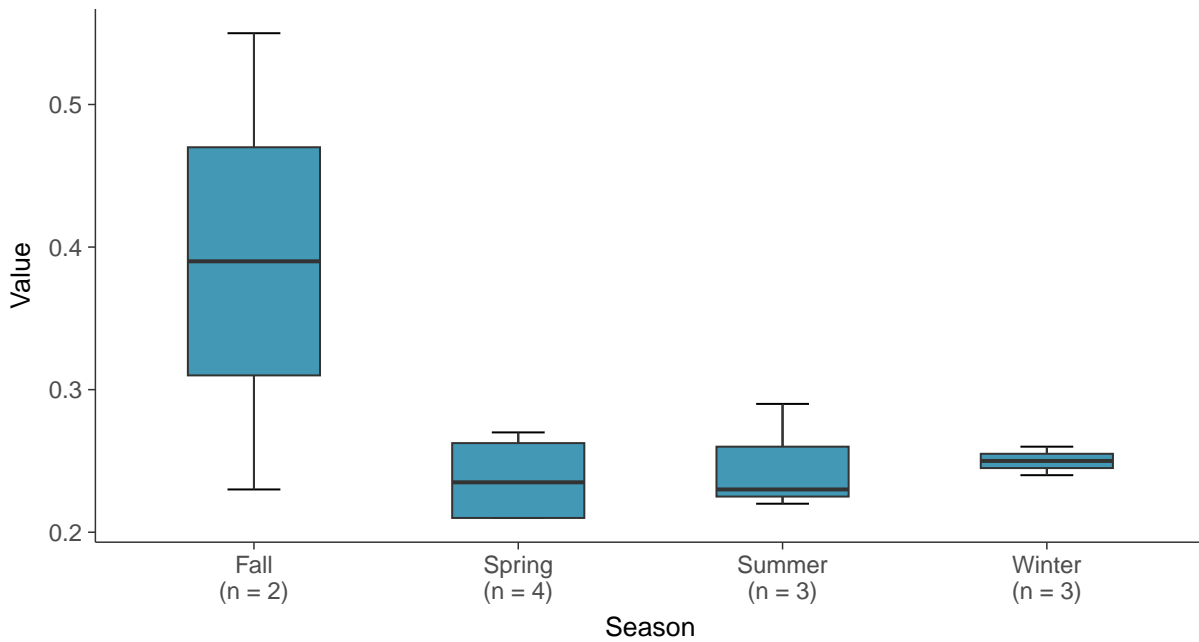
### Boxplot

Fluoride (App IV), MW-20 (mg/L)



### Boxplot by Season

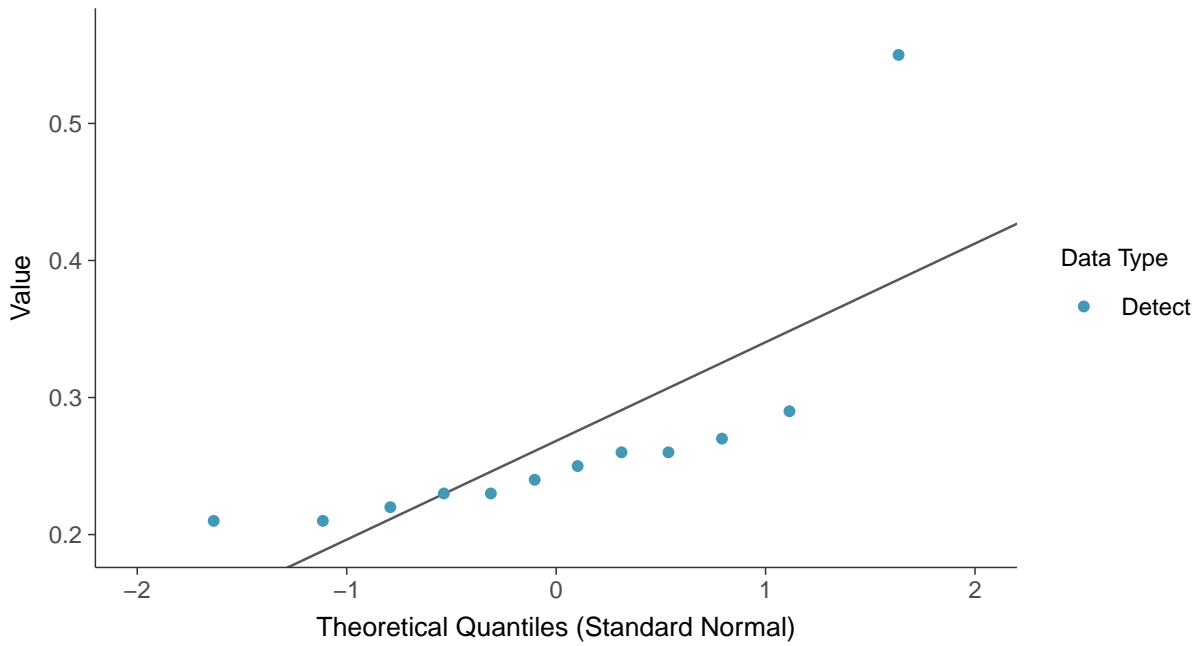
Fluoride (App IV), MW-20 (mg/L)





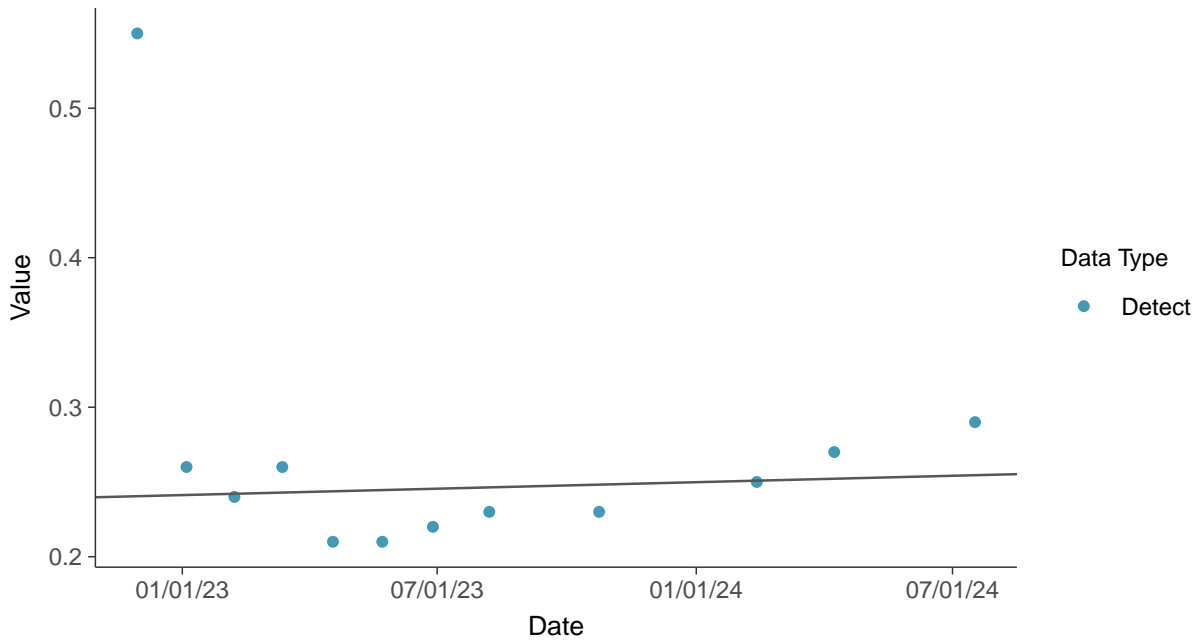
### Normal Q-Q plot

Fluoride (App IV), MW-20 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

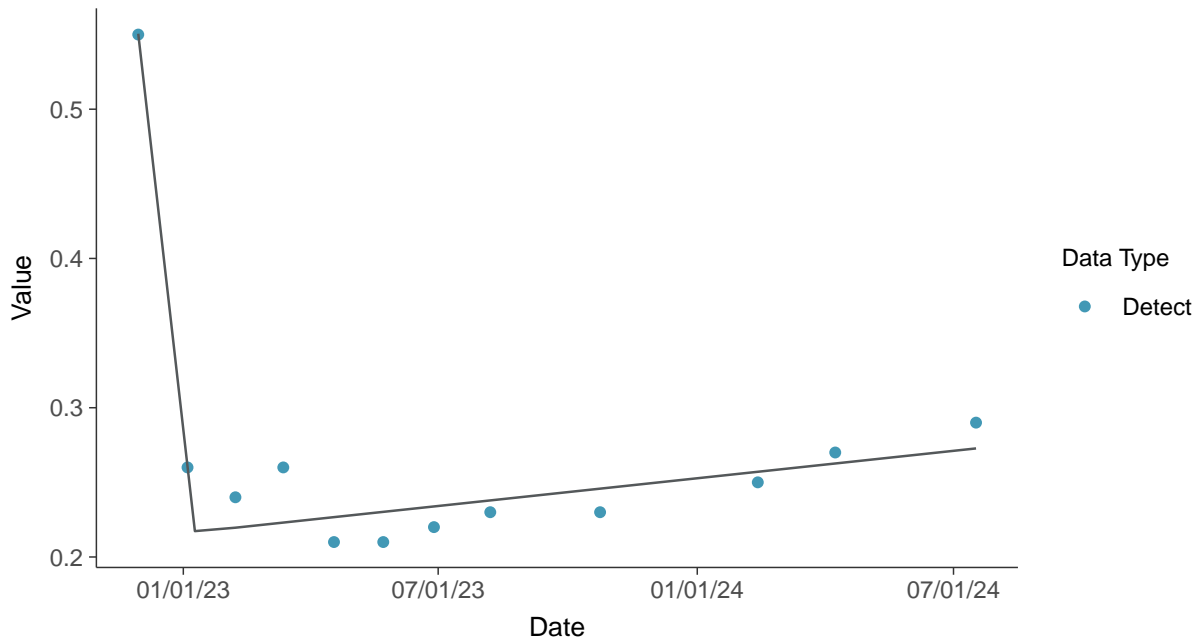
Fluoride (App IV), MW-20 (mg/L)







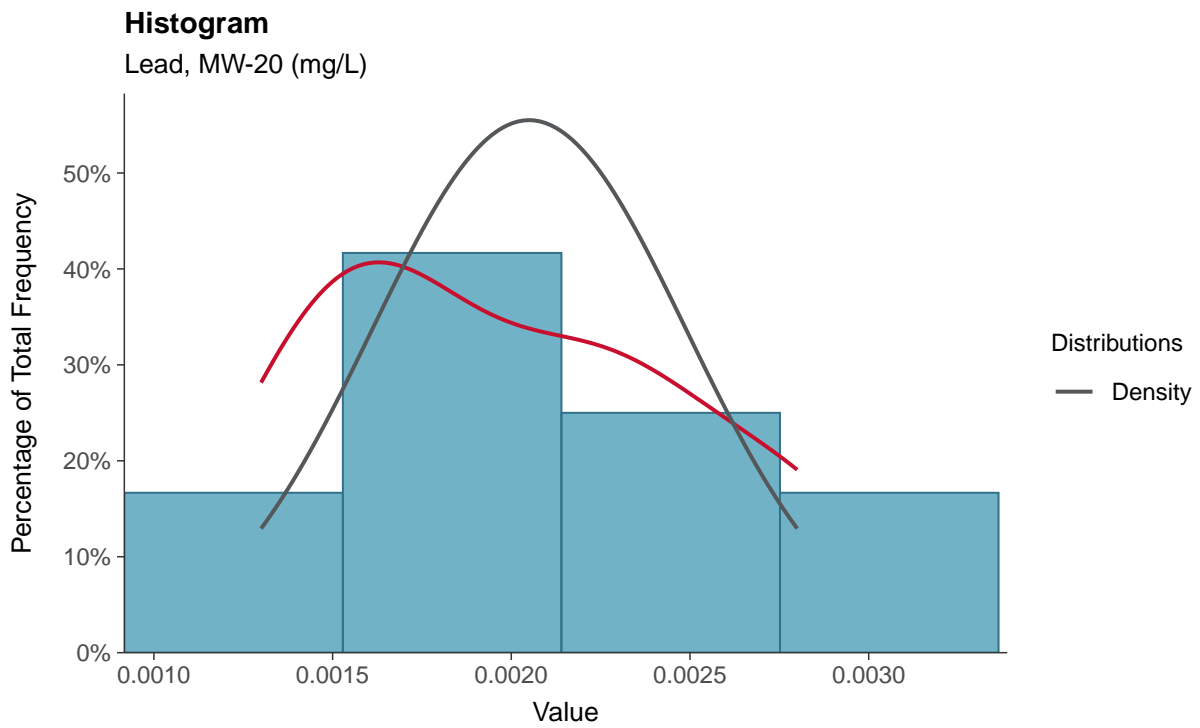
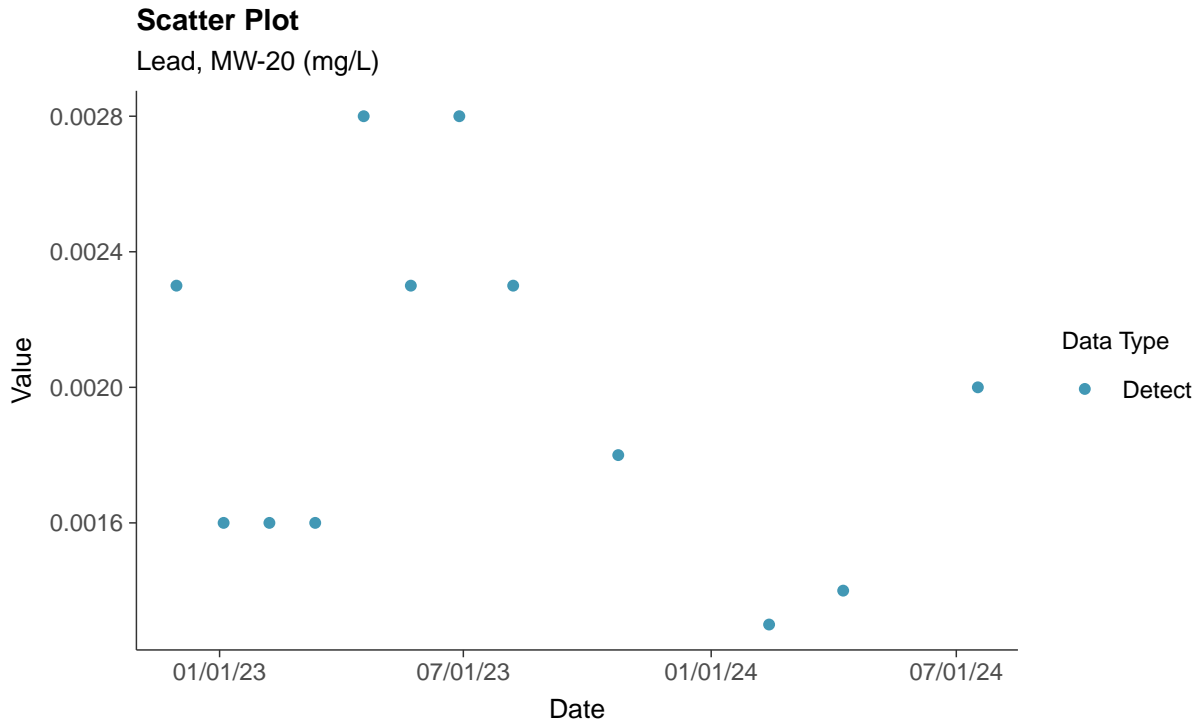
**Trend Regression: Piecewise Linear-Linear**  
Fluoride (App IV), MW-20 (mg/L)





### Appendix IV: Lead, MW-20

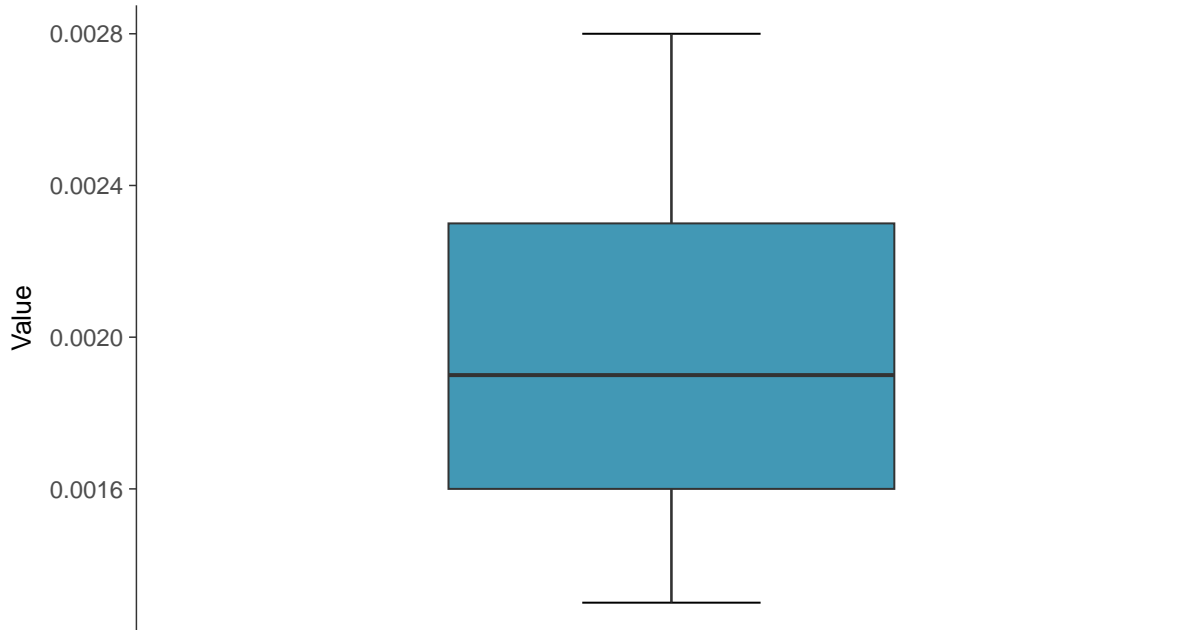
ID: 30\_1\_5\_115





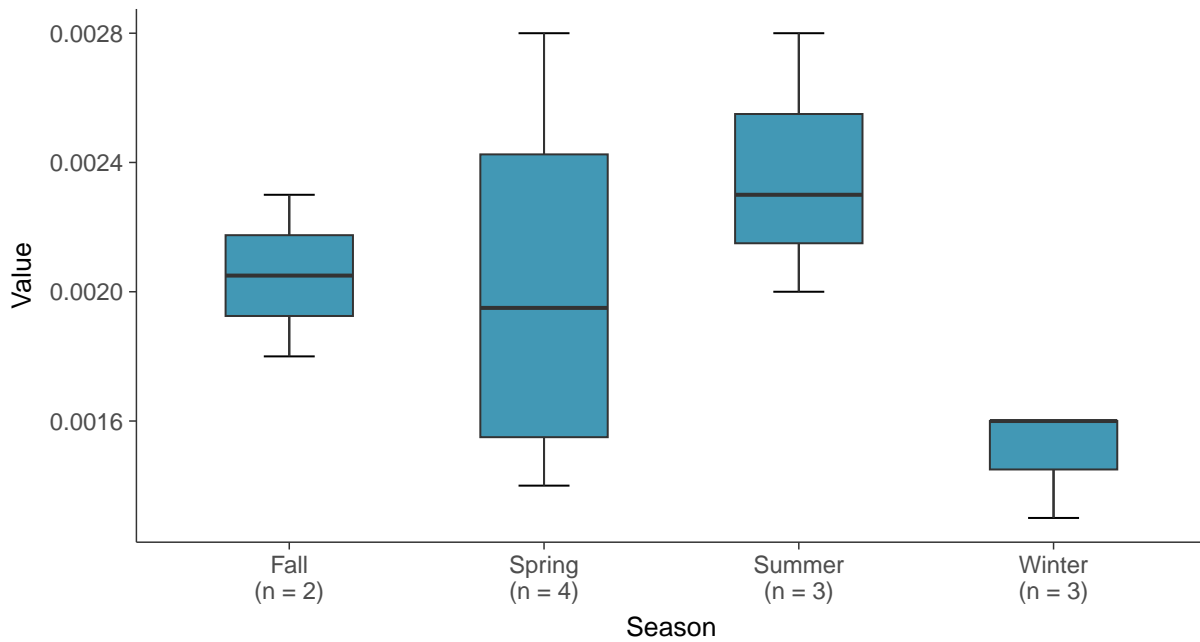
### Boxplot

Lead, MW-20 (mg/L)



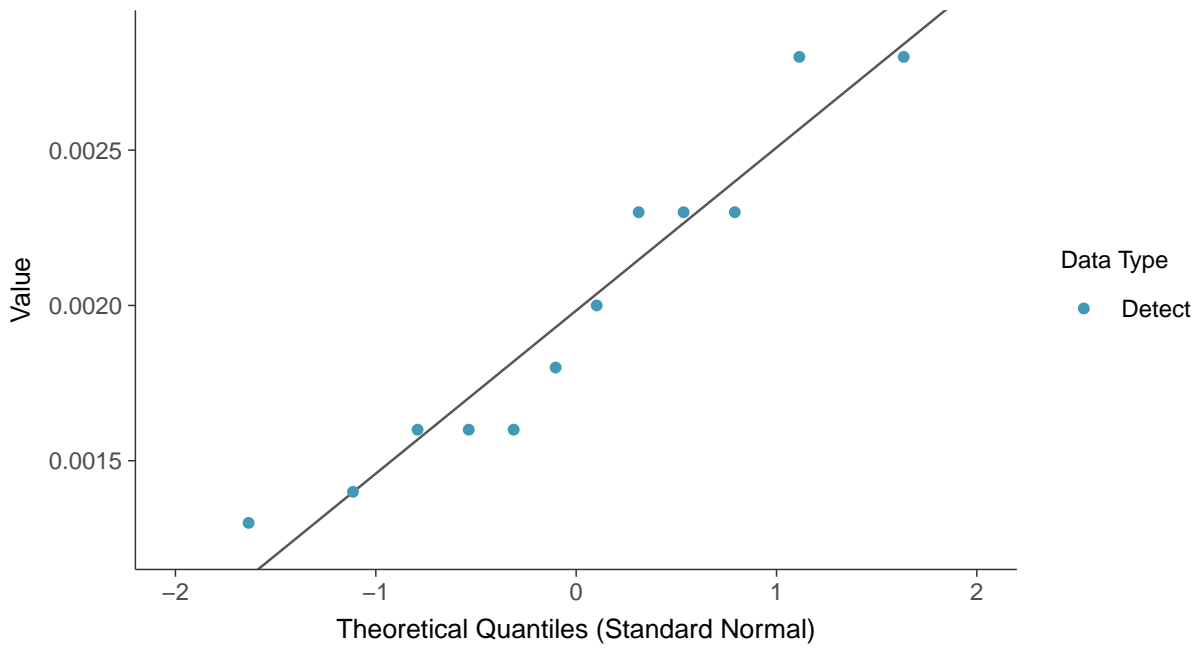
### Boxplot by Season

Lead, MW-20 (mg/L)

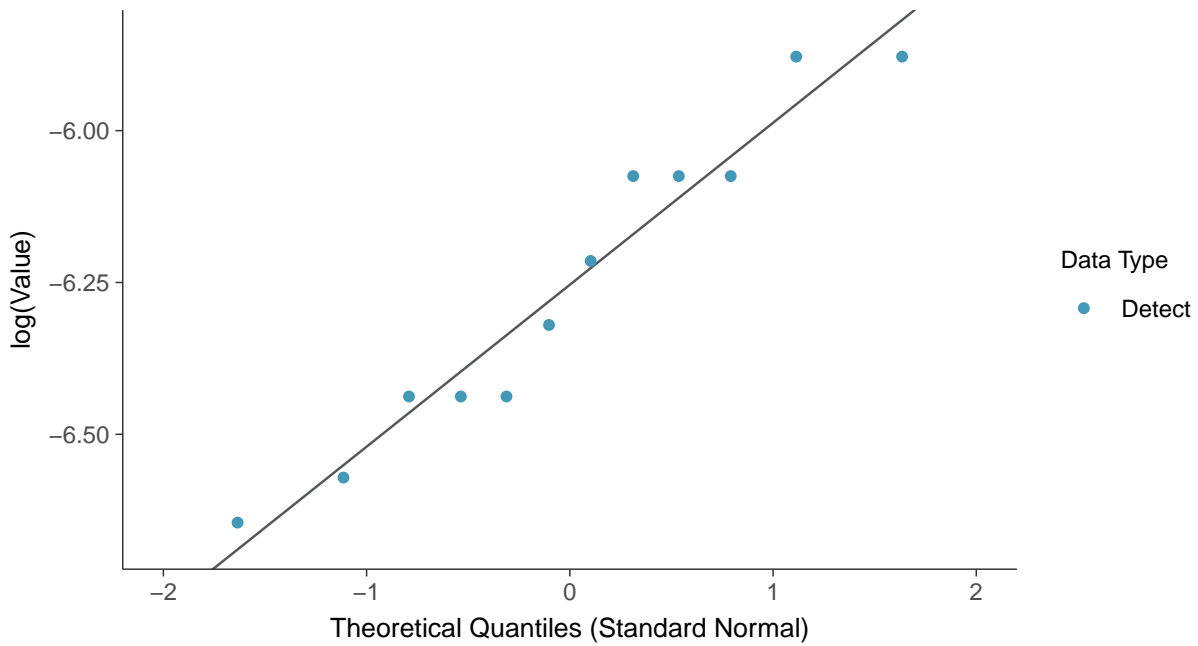




**Normal Q-Q plot**  
Lead, MW-20 (mg/L)

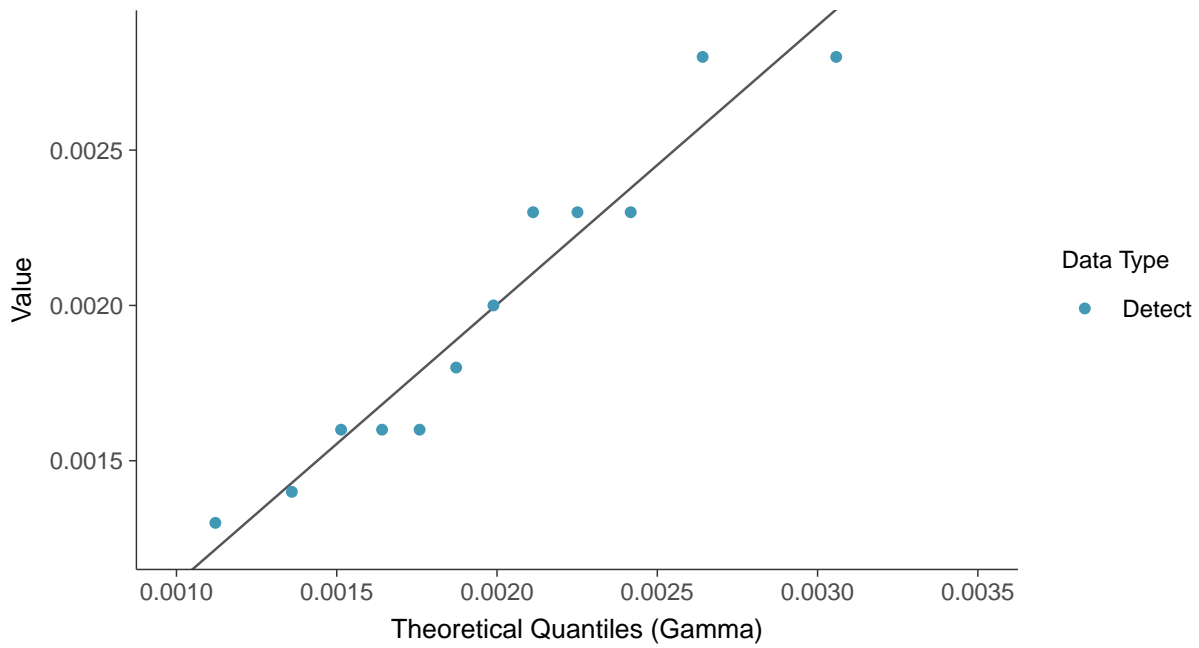


**Lognormal Q-Q plot**  
Lead, MW-20 (mg/L)

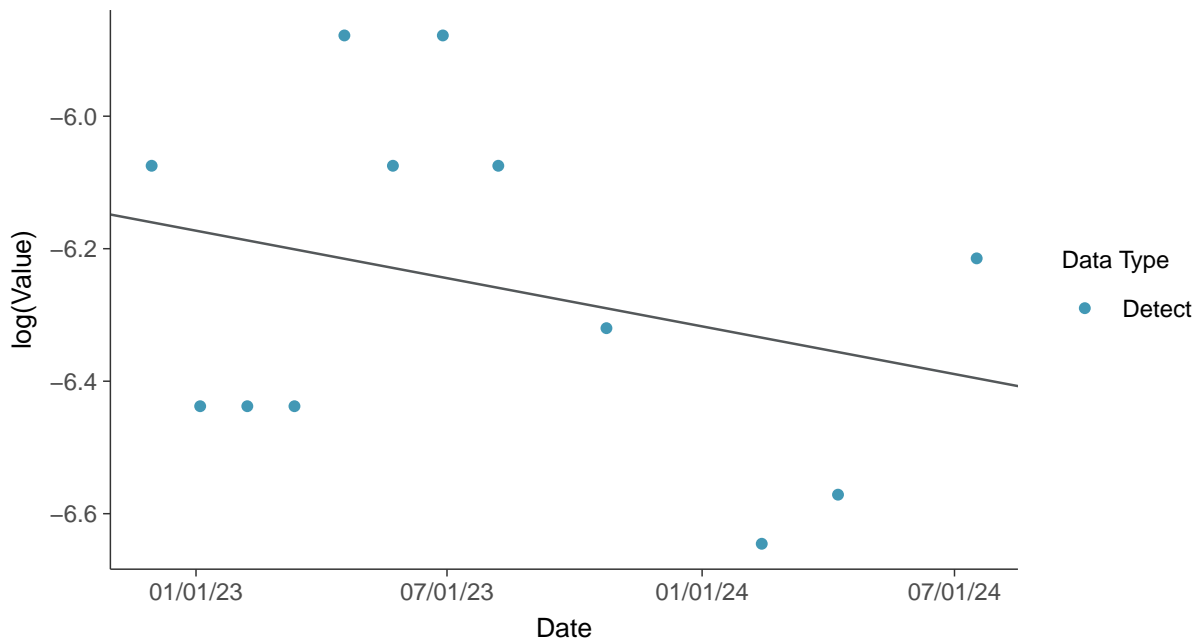




**Gamma Q-Q plot**  
Lead, MW-20 (mg/L)



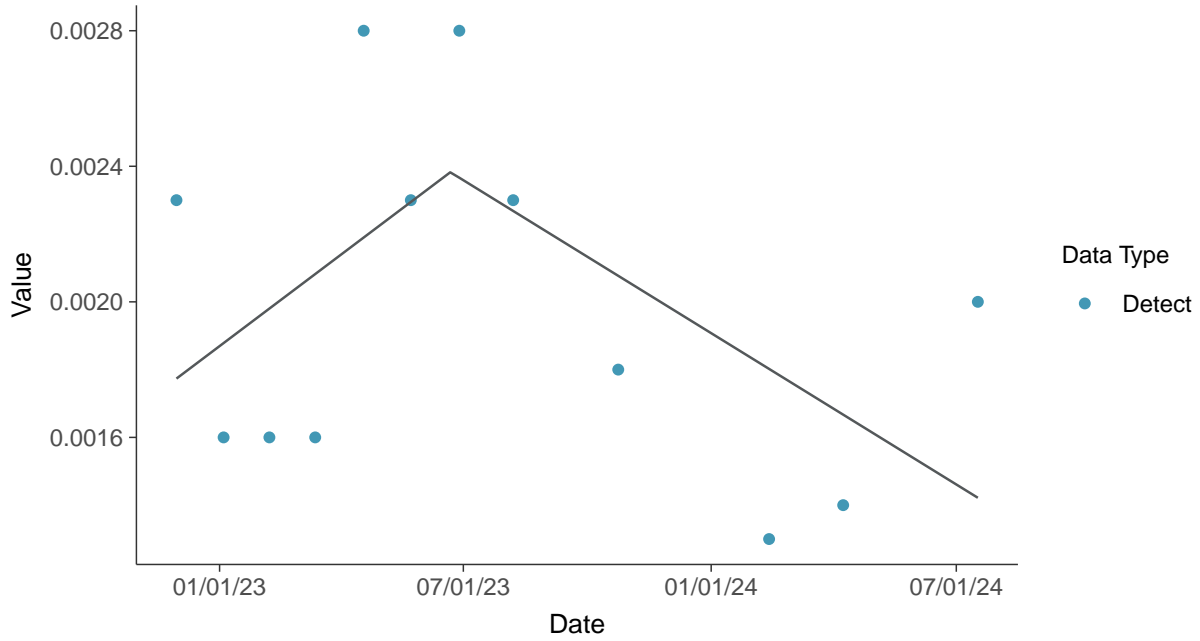
**Trend Regression: Lognormal MLE**  
Lead, MW-20 (mg/L)





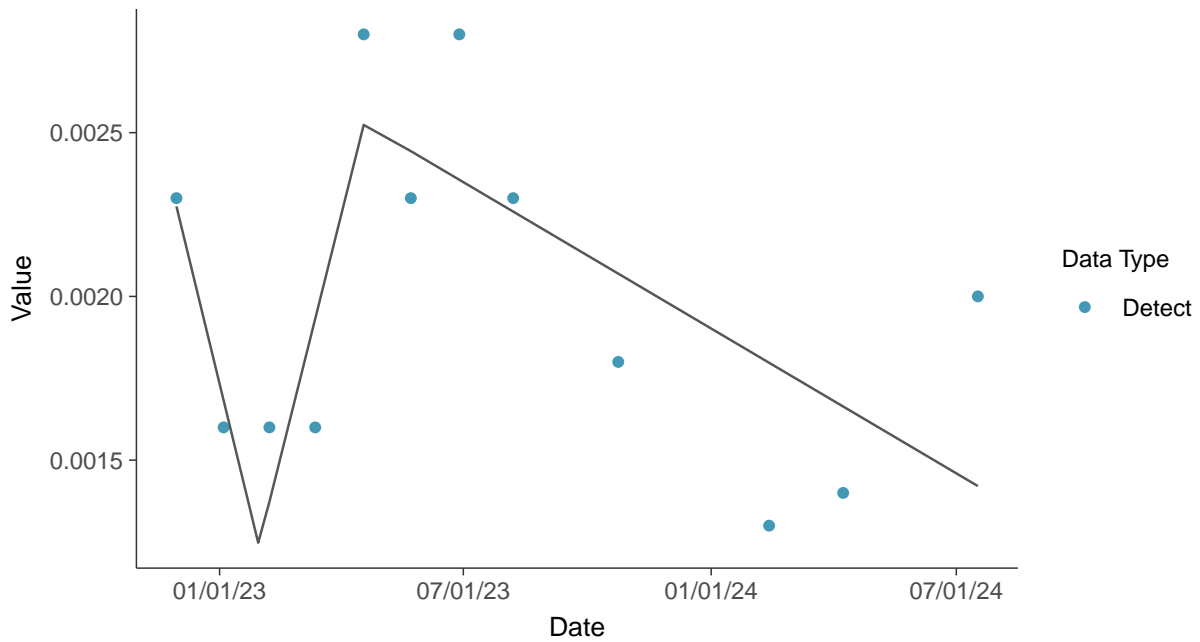
### Trend Regression: Piecewise Linear-Linear

Lead, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

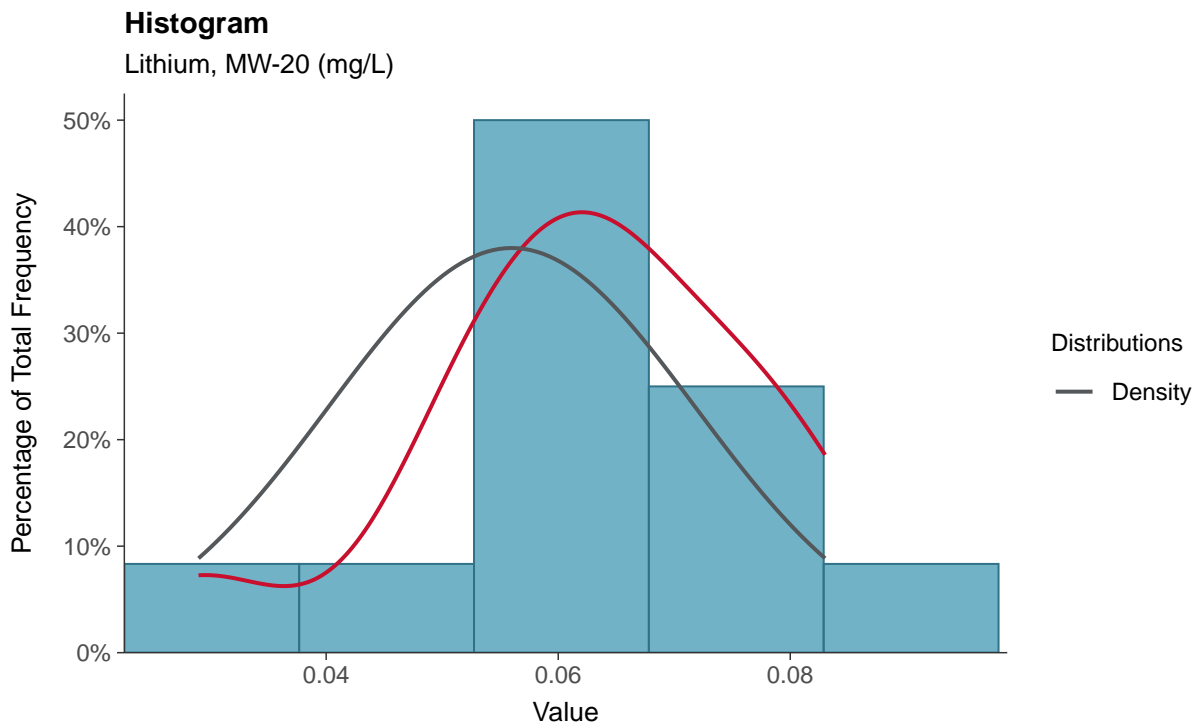
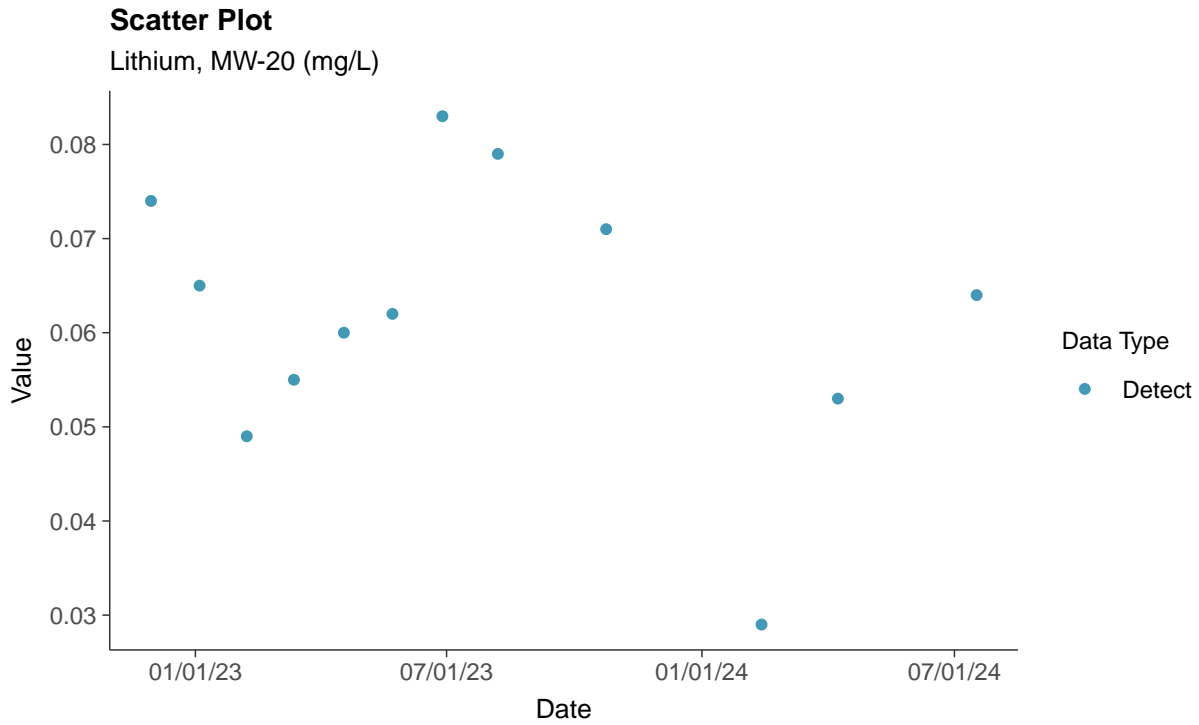
Lead, MW-20 (mg/L)





### Appendix IV: Lithium, MW-20

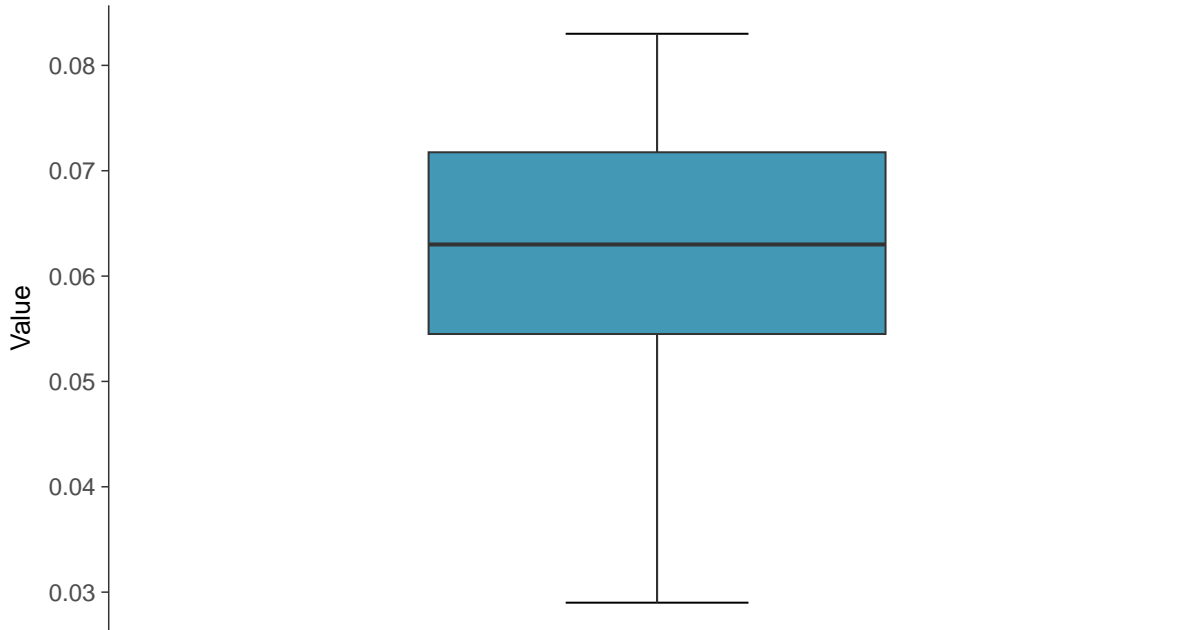
ID: 30\_1\_5\_116





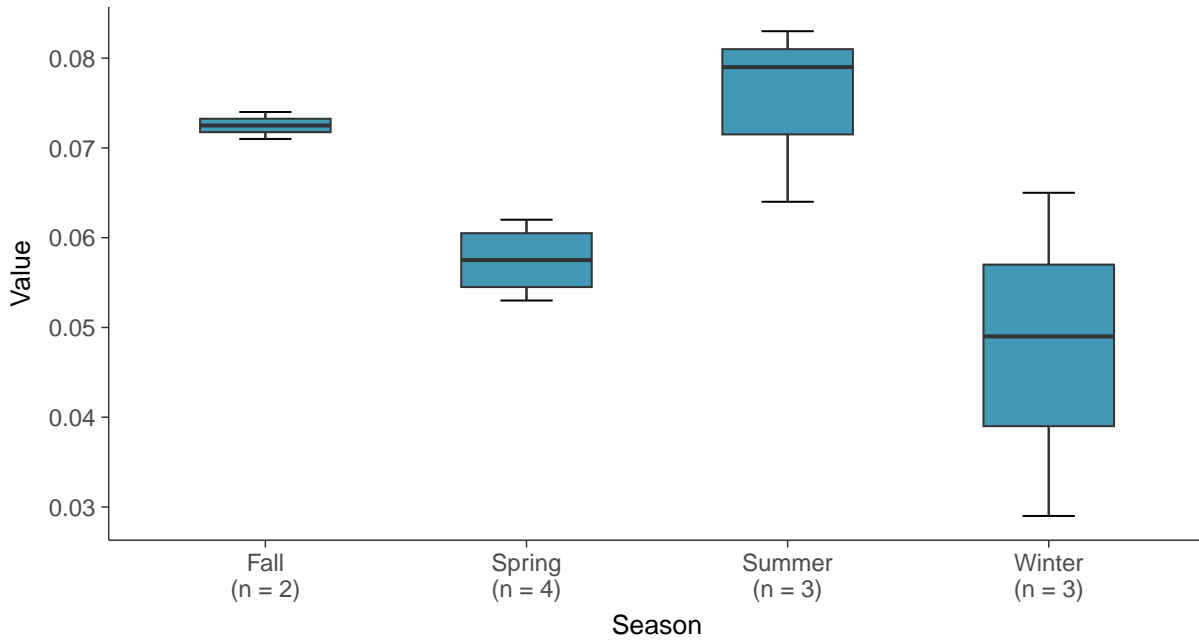
### Boxplot

Lithium, MW-20 (mg/L)



### Boxplot by Season

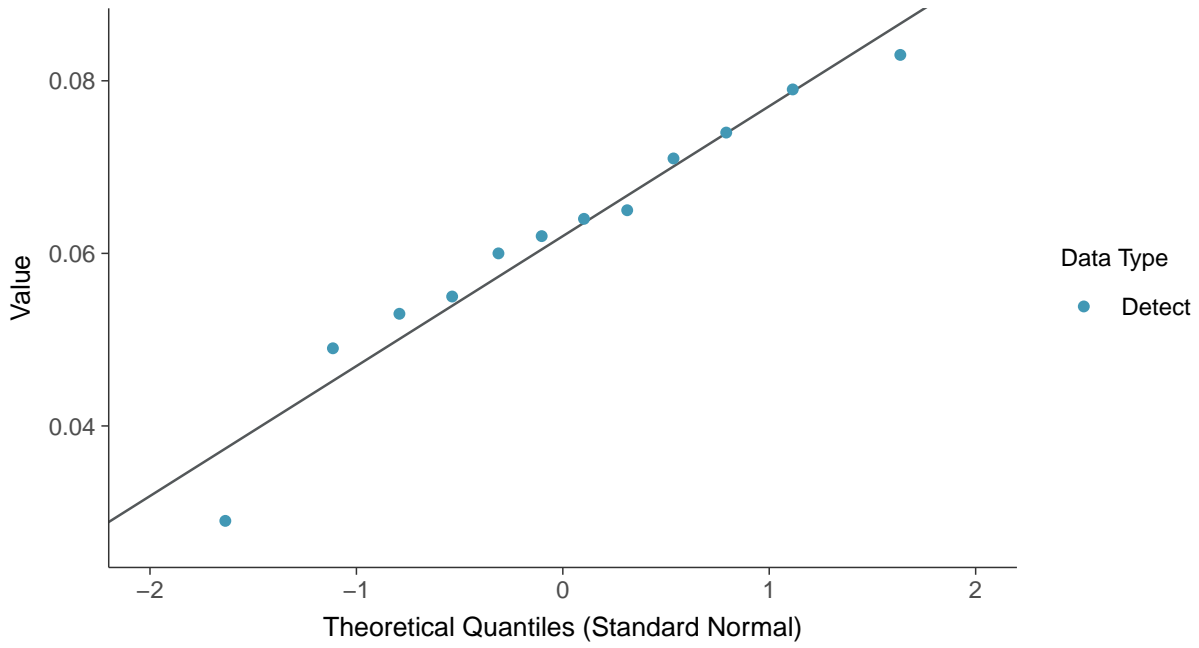
Lithium, MW-20 (mg/L)



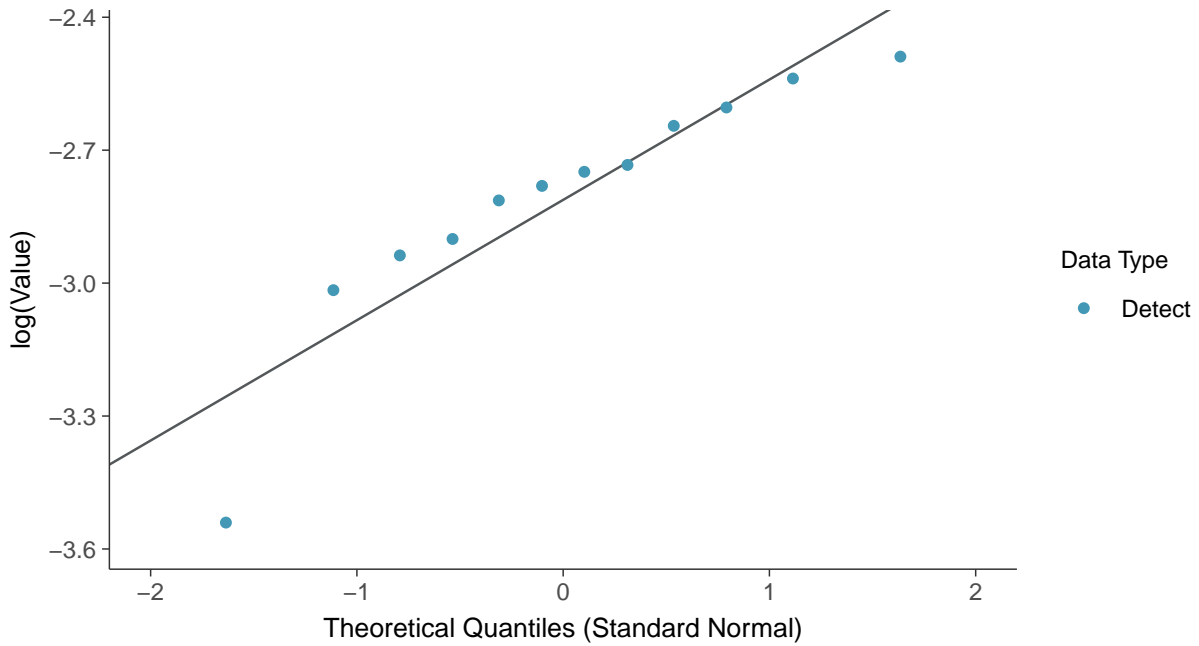




**Normal Q-Q plot**  
Lithium, MW-20 (mg/L)

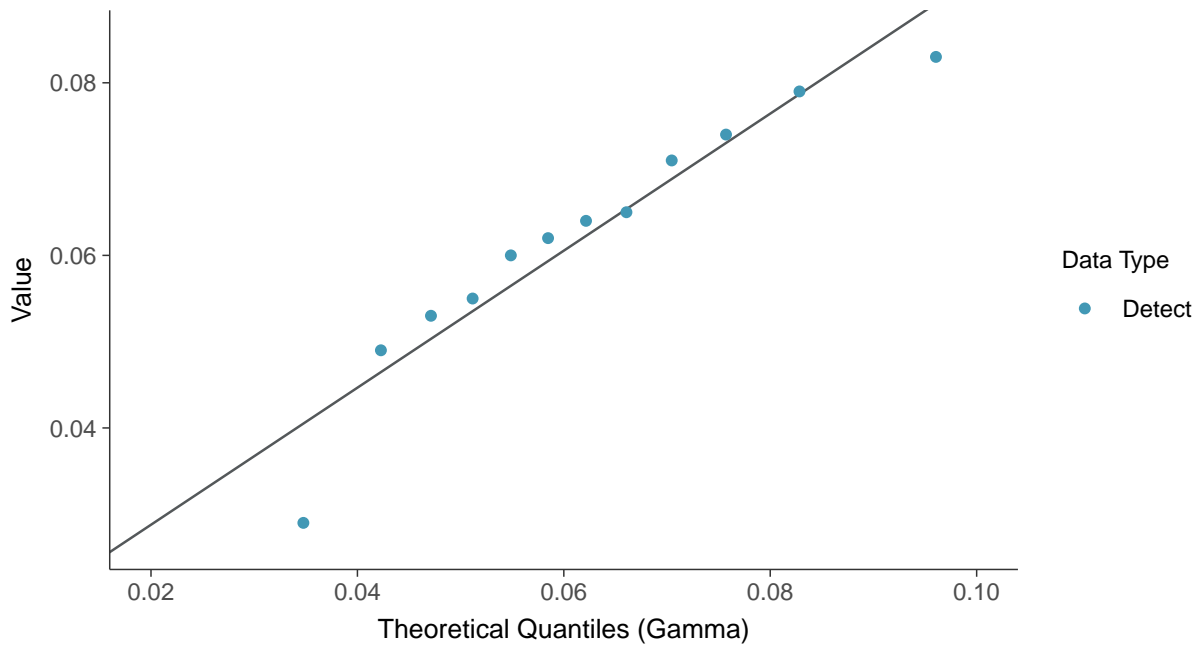


**Lognormal Q-Q plot**  
Lithium, MW-20 (mg/L)

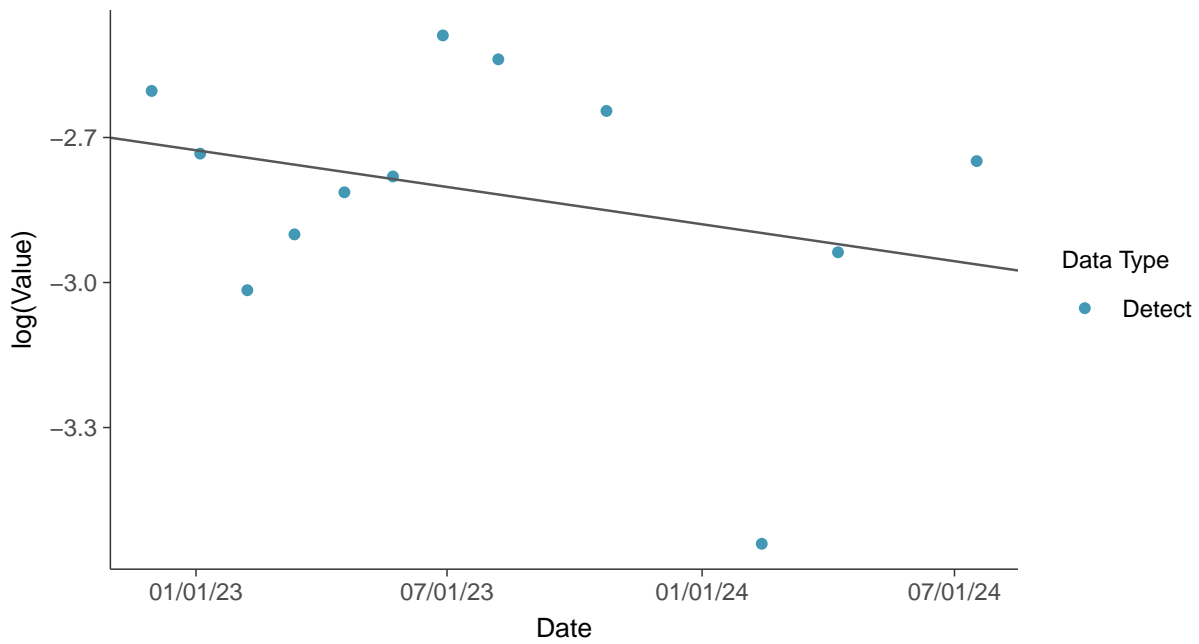




**Gamma Q-Q plot**  
Lithium, MW-20 (mg/L)



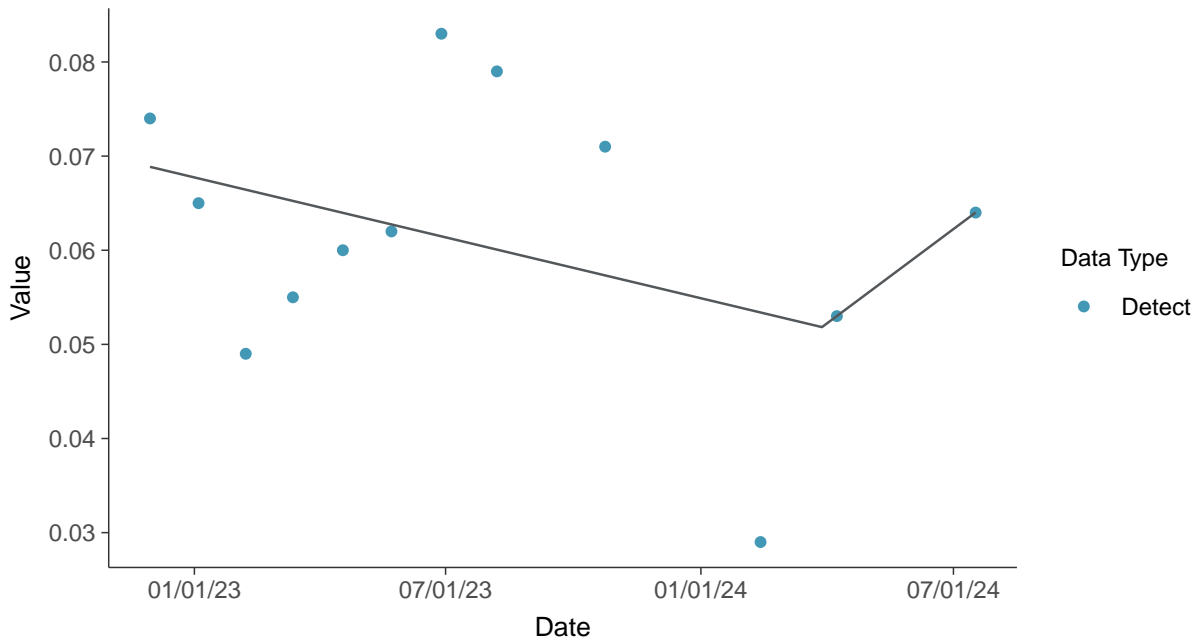
**Trend Regression: Lognormal MLE**  
Lithium, MW-20 (mg/L)





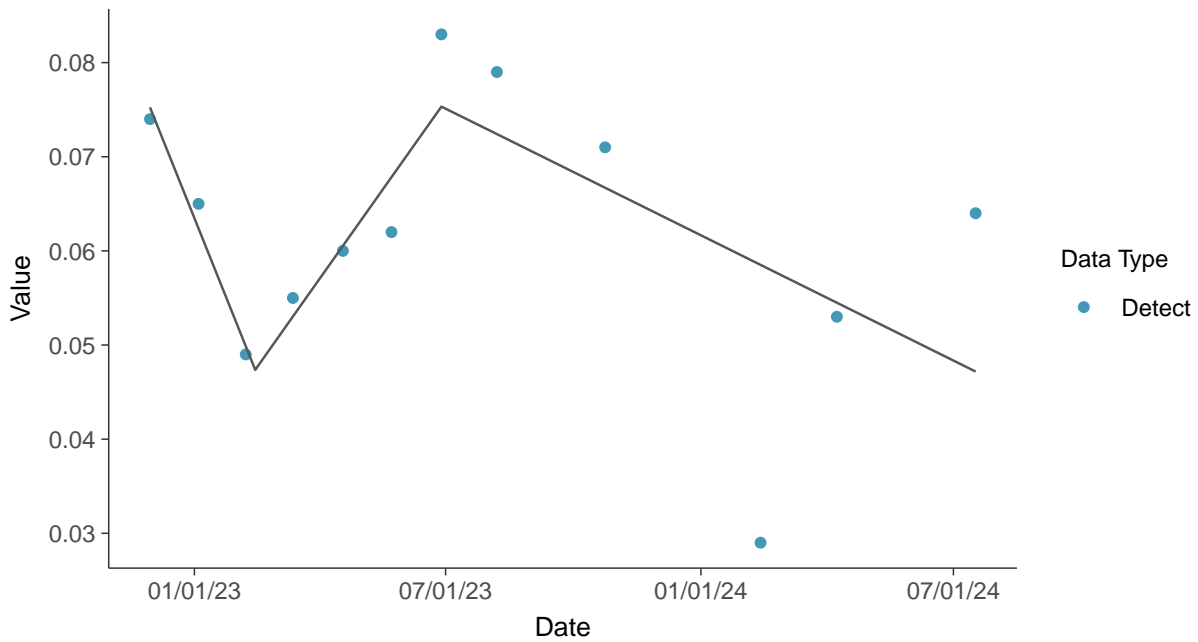
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

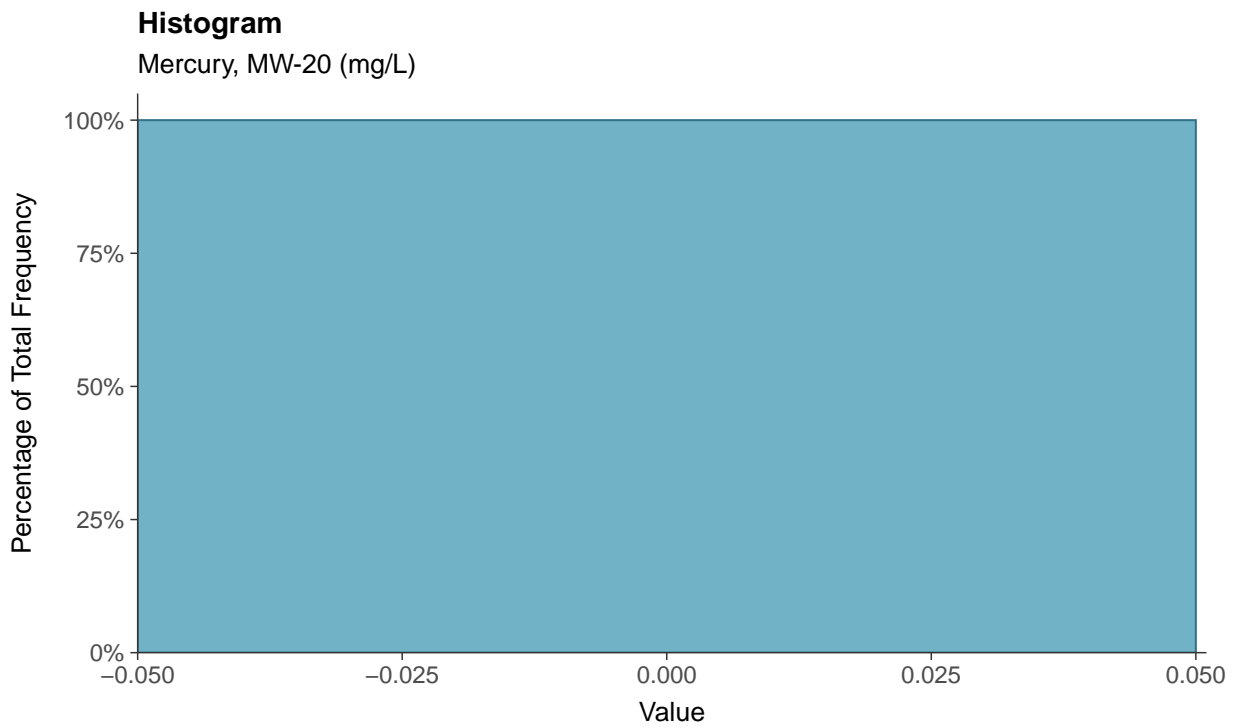
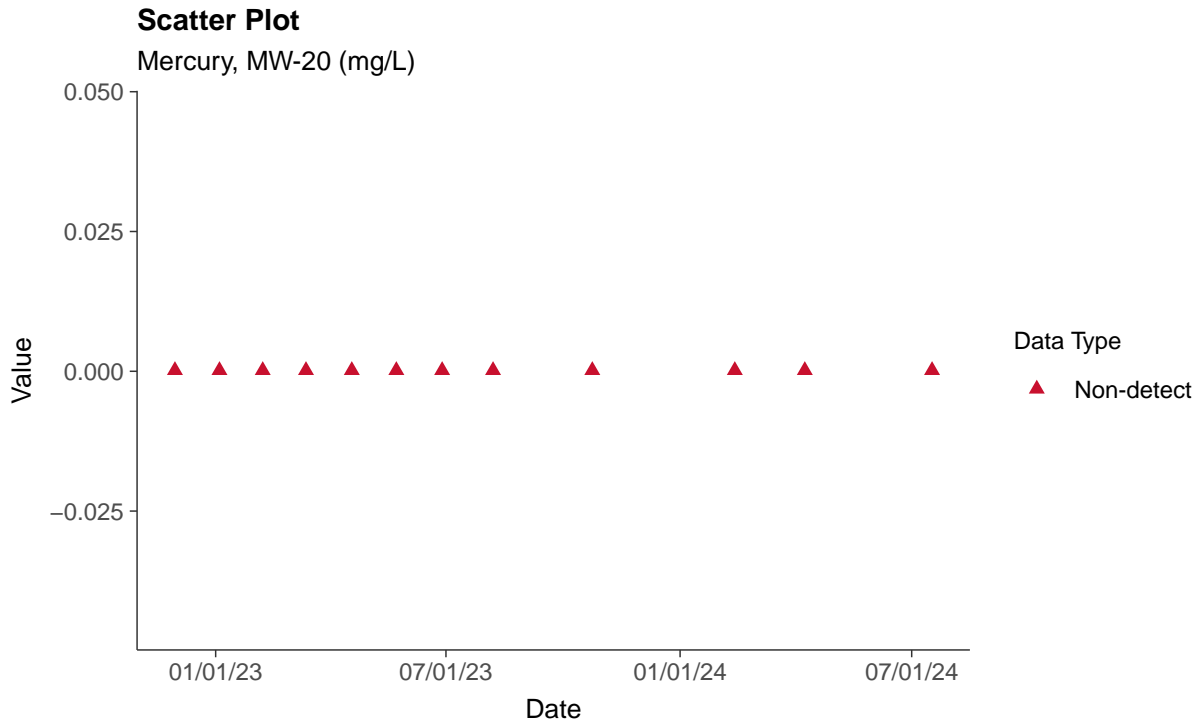
Lithium, MW-20 (mg/L)





### Appendix IV: Mercury, MW-20

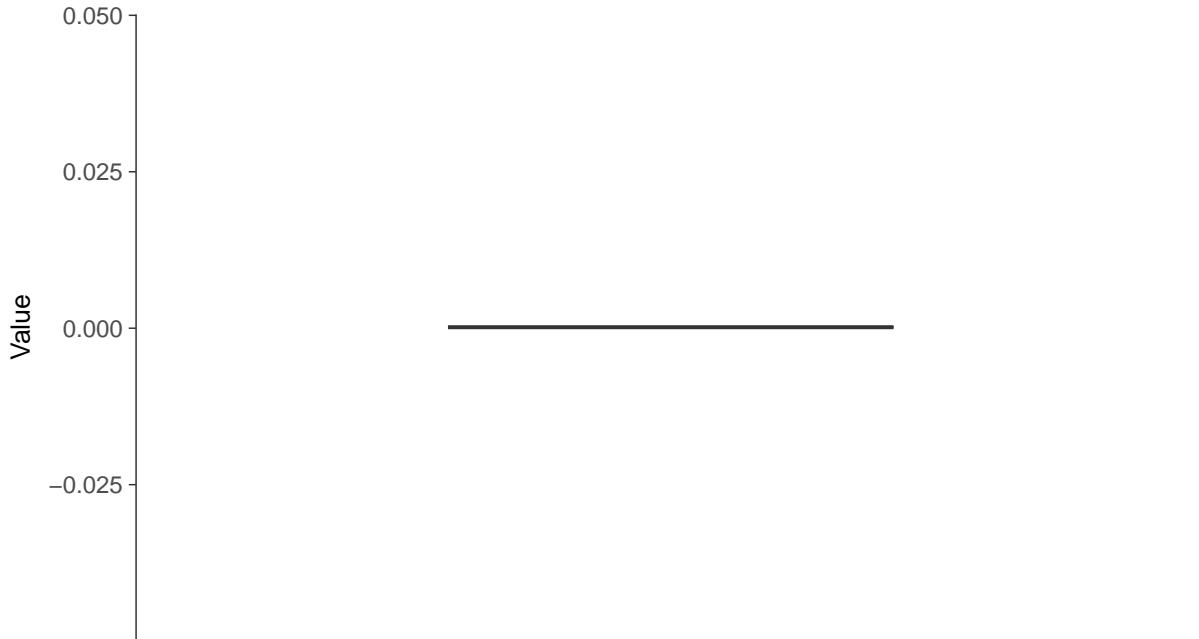
ID: 30\_1\_5\_117





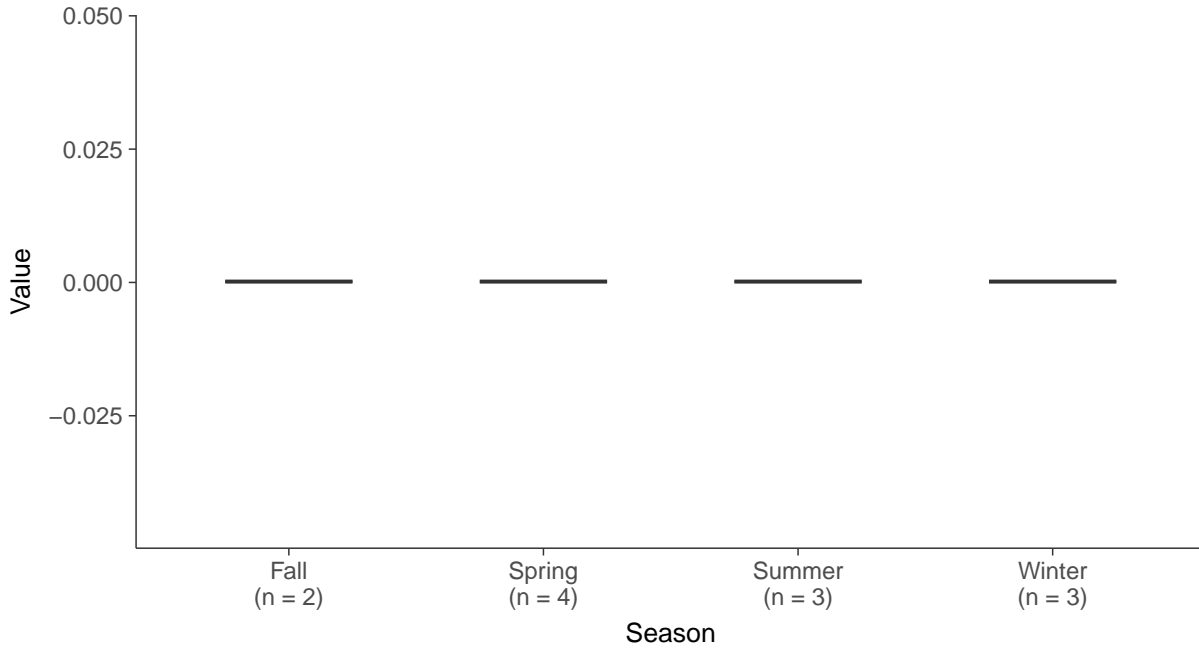
### Boxplot

Mercury, MW-20 (mg/L)



### Boxplot by Season

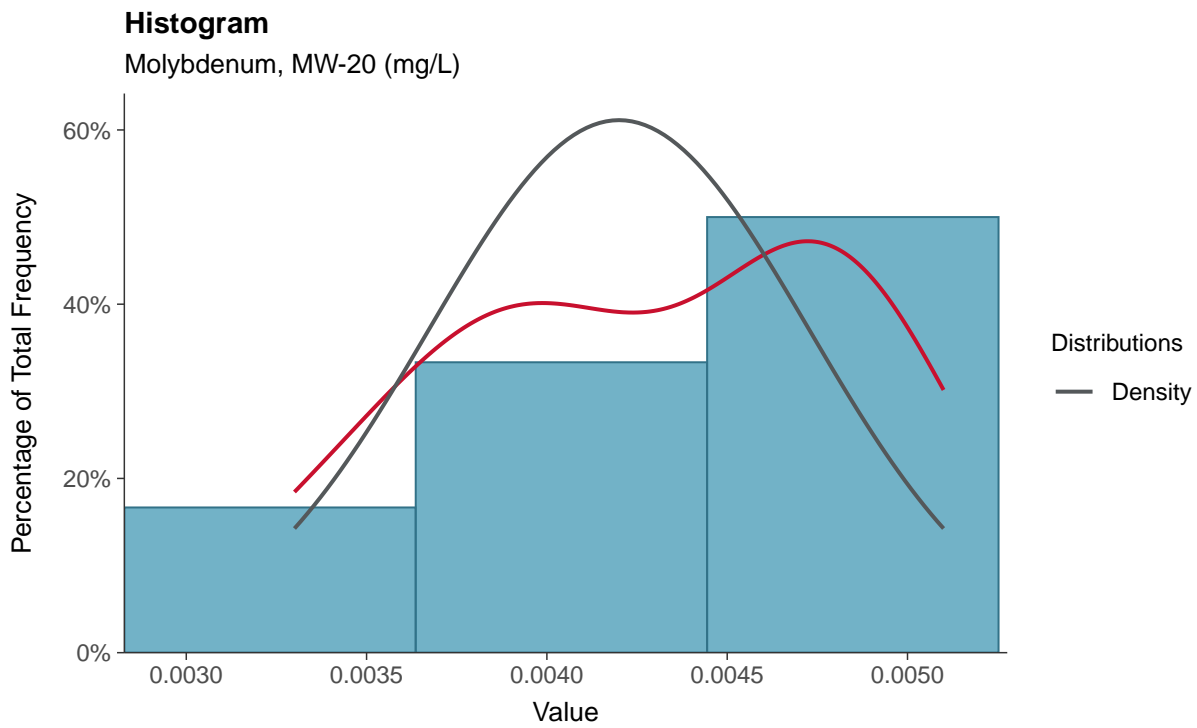
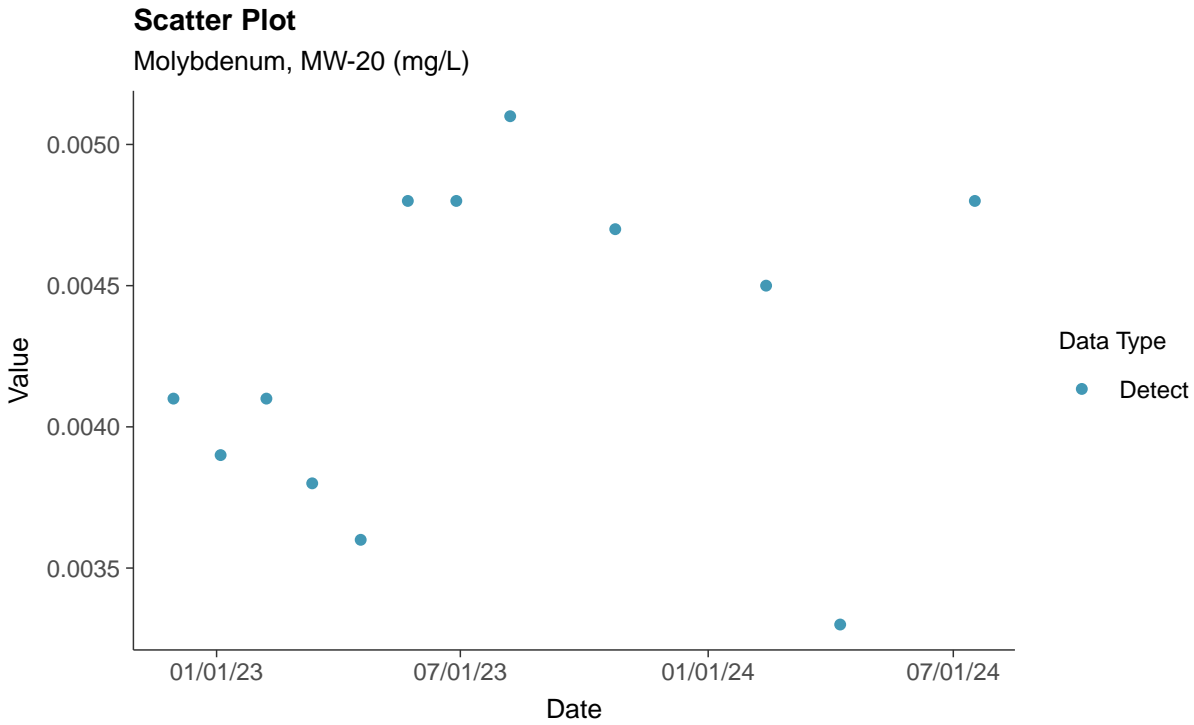
Mercury, MW-20 (mg/L)





### Appendix IV: Molybdenum, MW-20

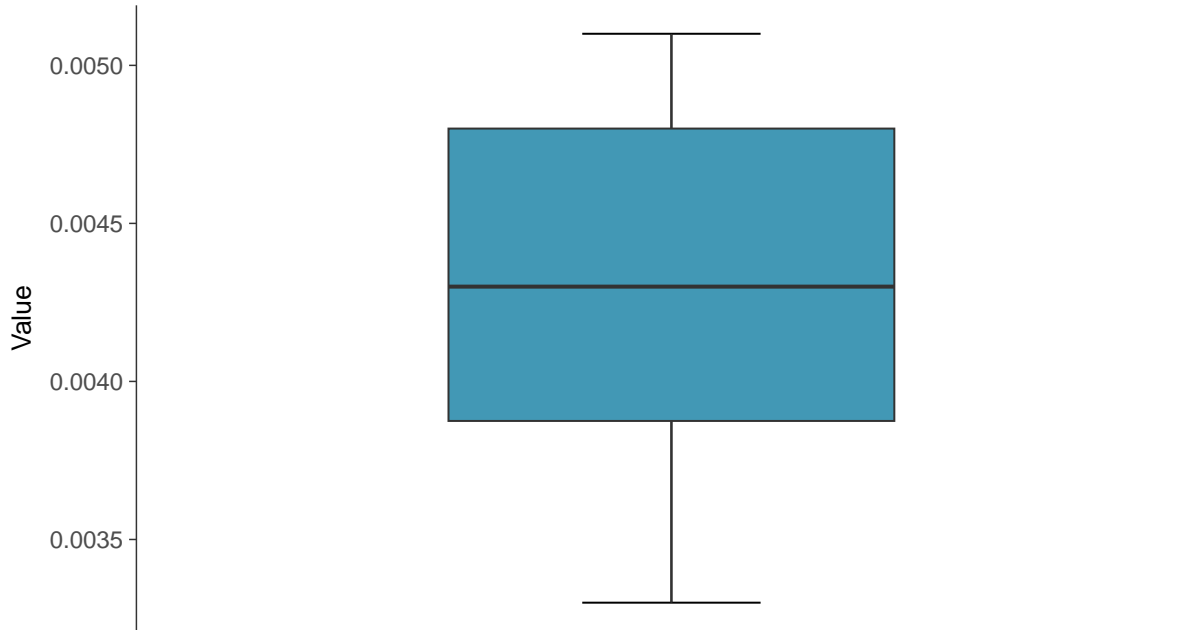
ID: 30\_1\_5\_118





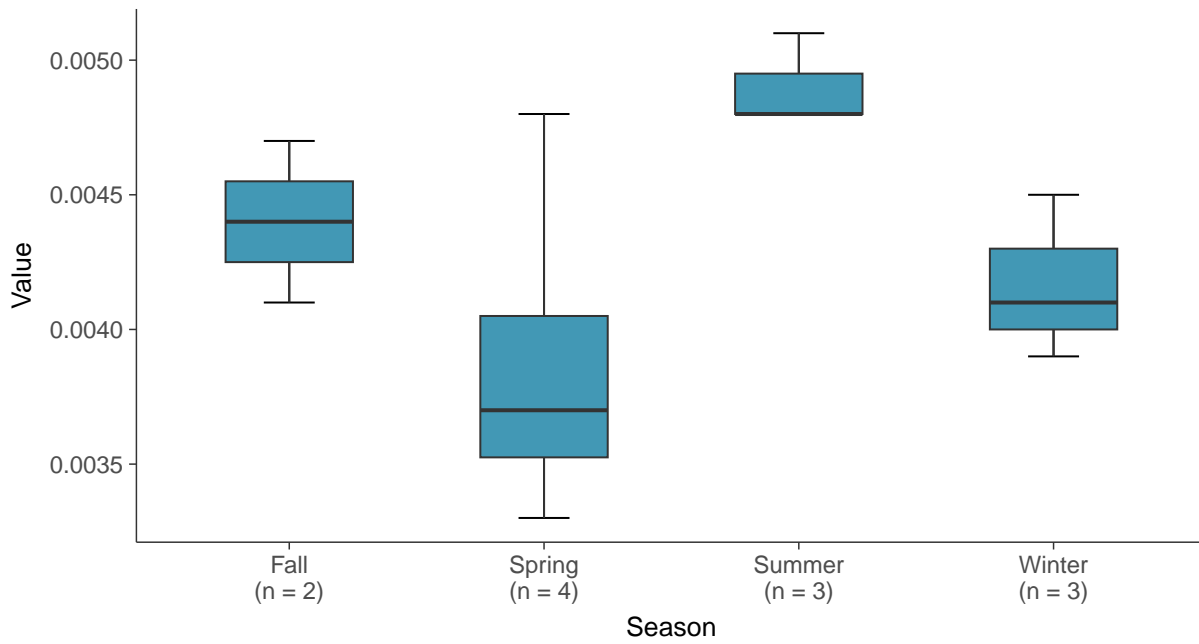
### Boxplot

Molybdenum, MW-20 (mg/L)



### Boxplot by Season

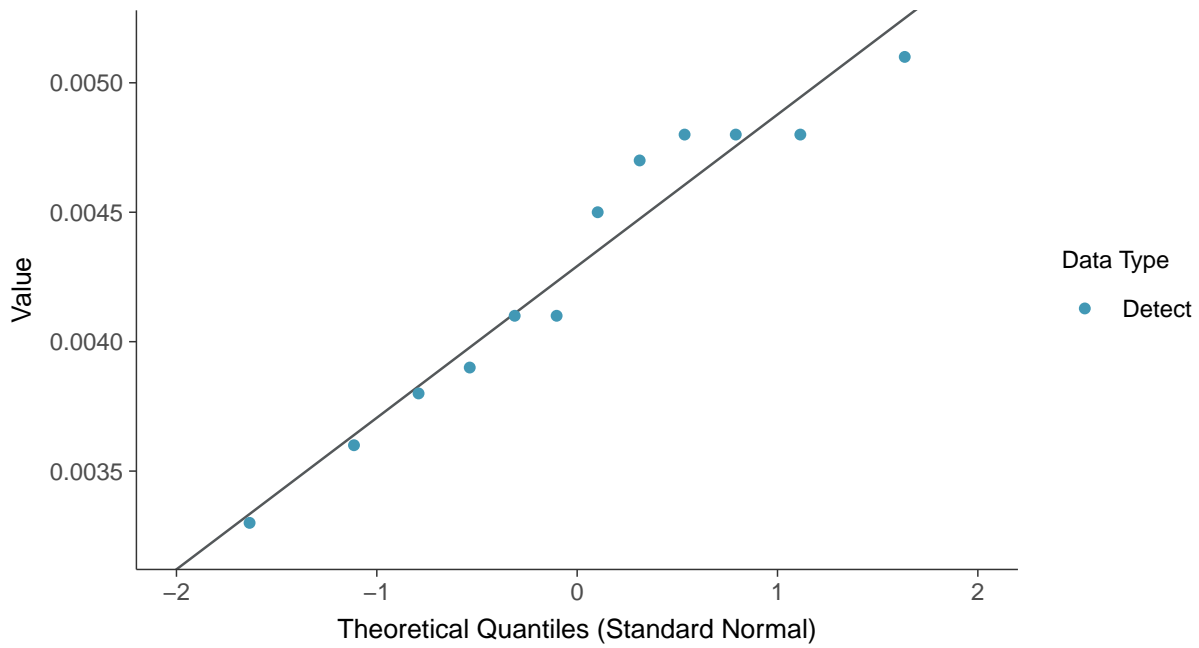
Molybdenum, MW-20 (mg/L)





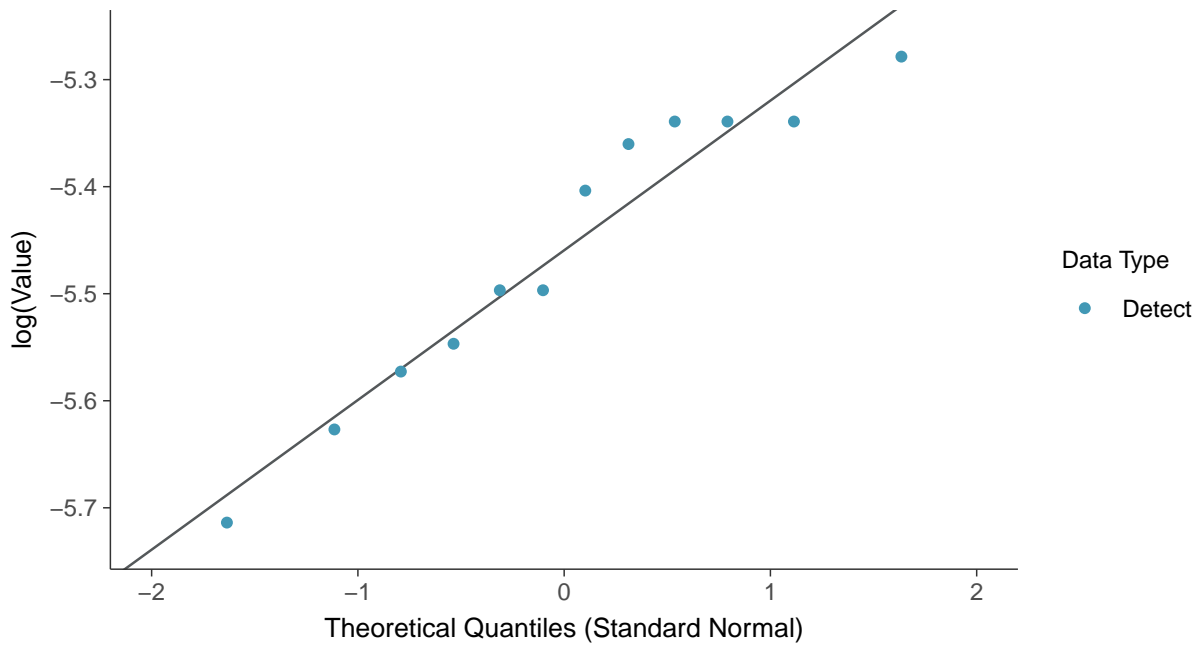
### Normal Q-Q plot

Molybdenum, MW-20 (mg/L)



### Lognormal Q-Q plot

Molybdenum, MW-20 (mg/L)

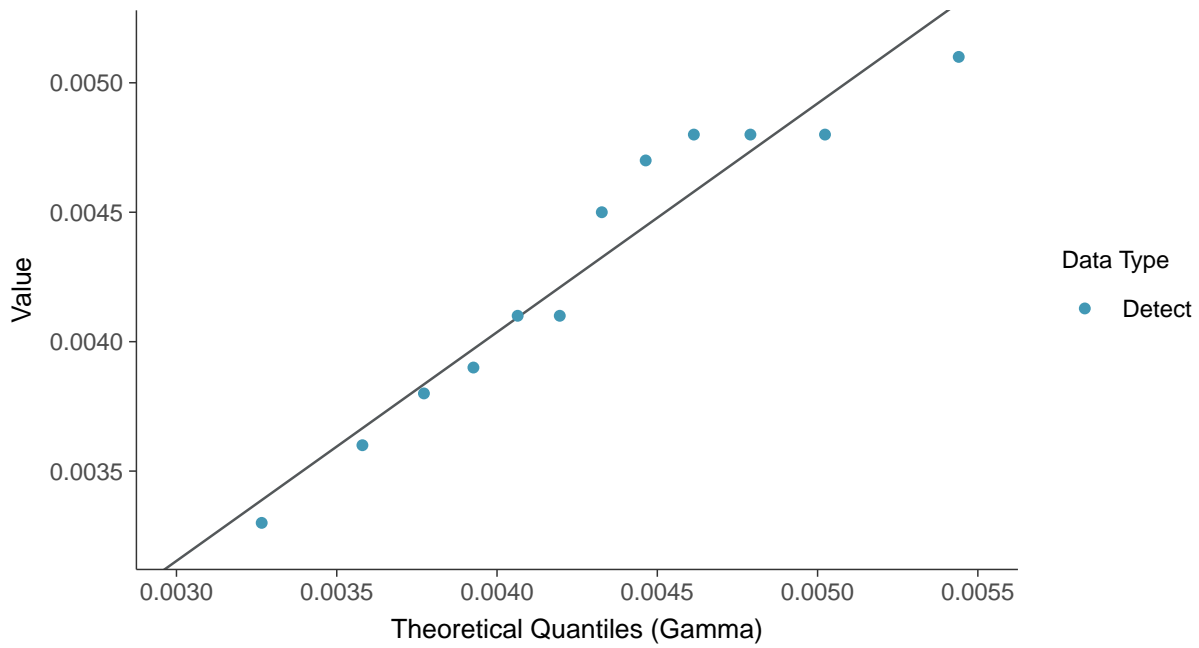






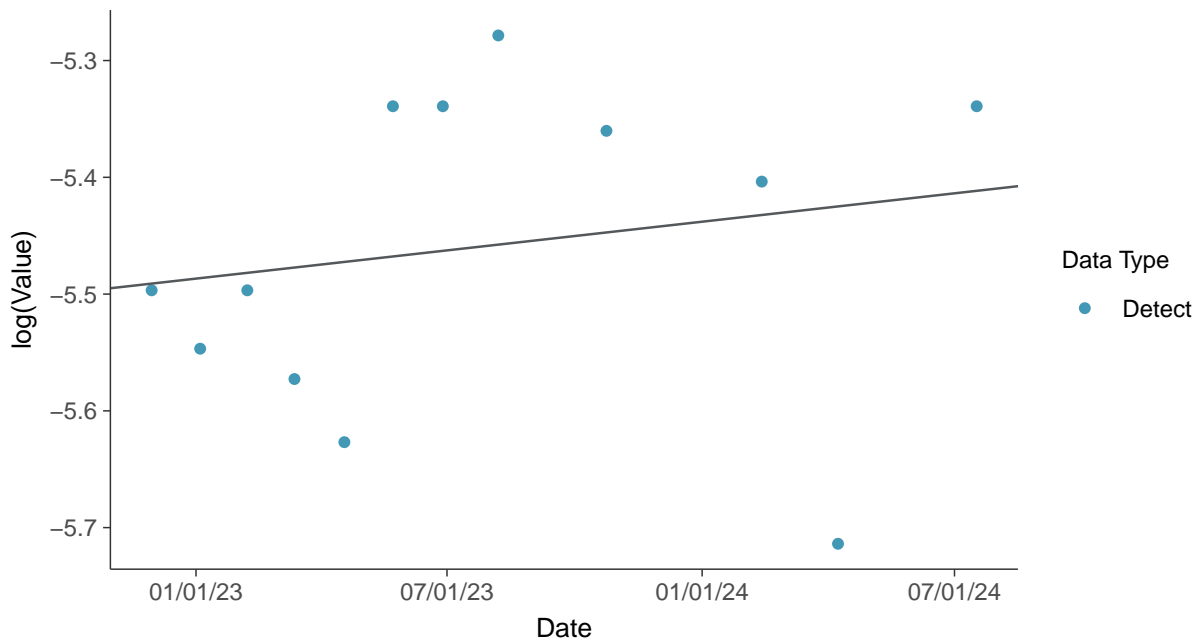
### Gamma Q-Q plot

Molybdenum, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

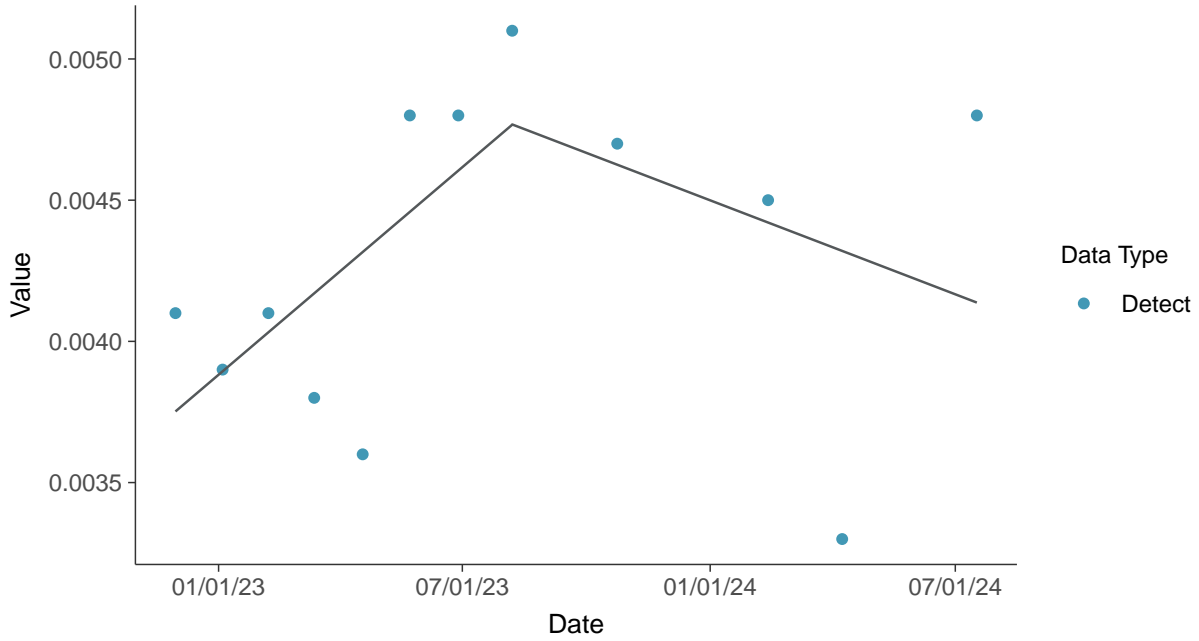
Molybdenum, MW-20 (mg/L)





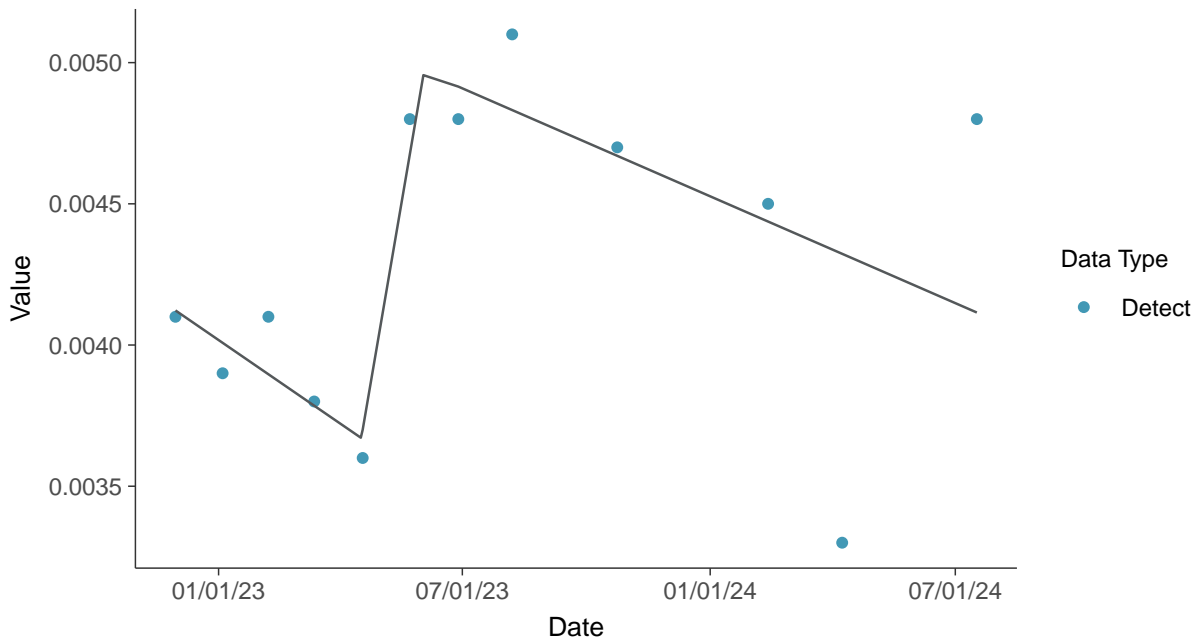
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

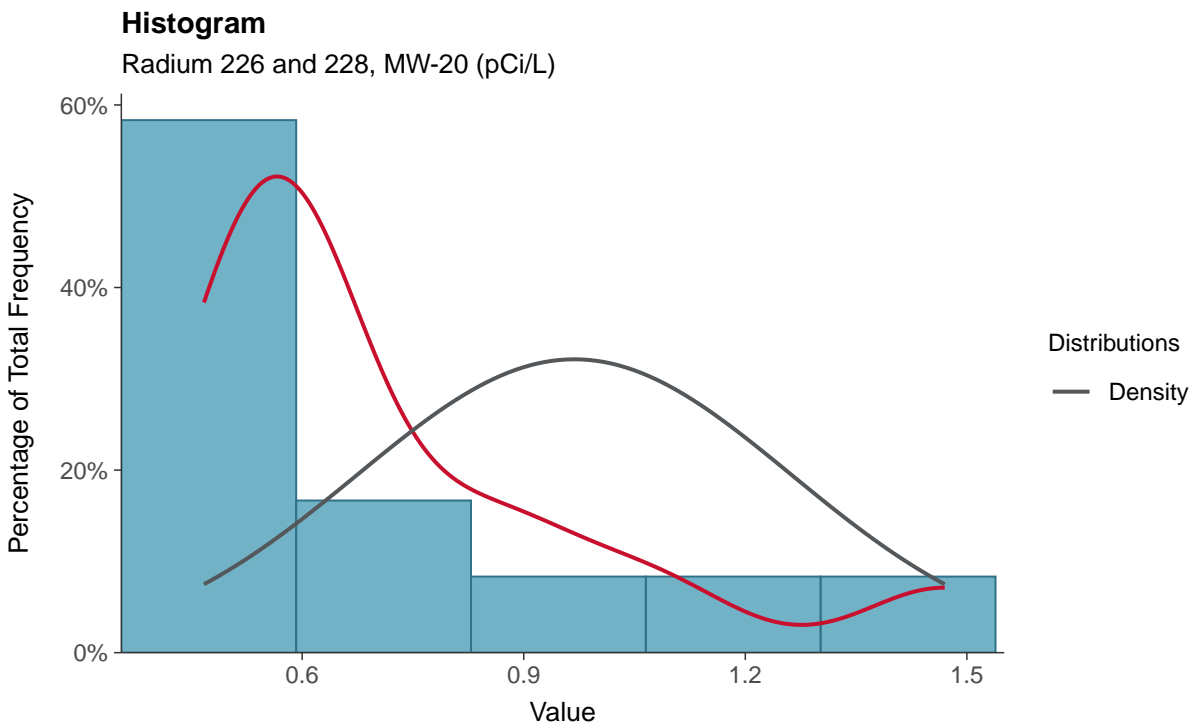
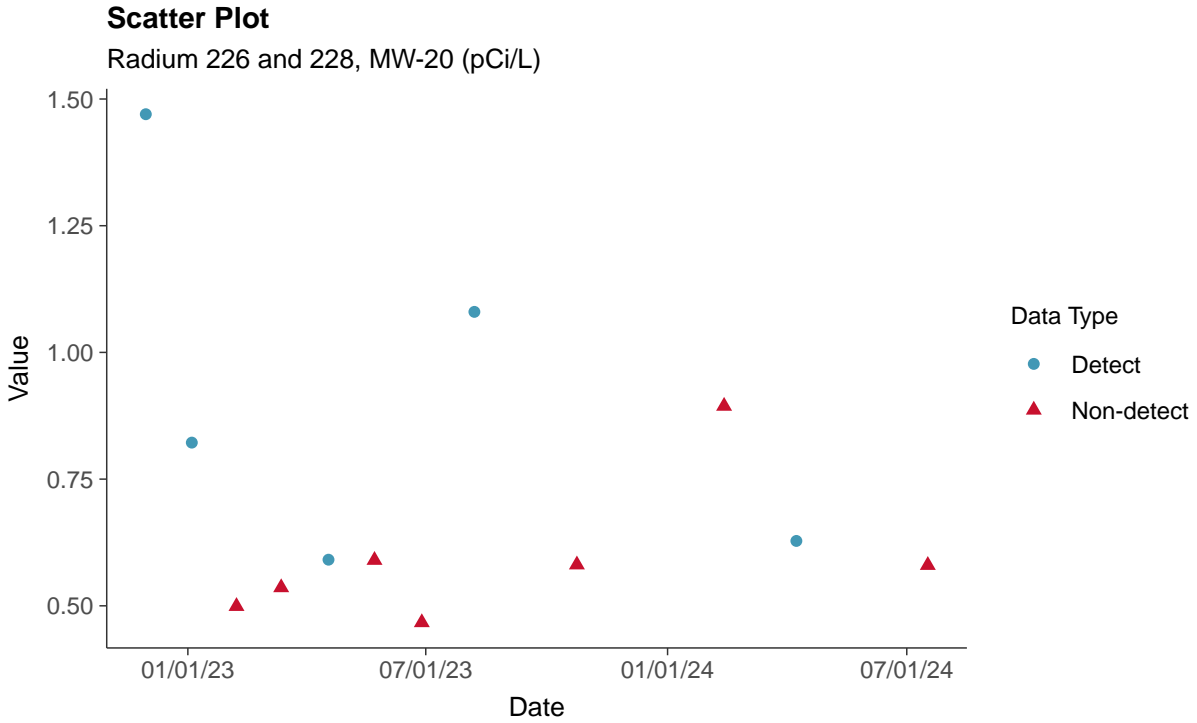
Molybdenum, MW-20 (mg/L)





## Appendix IV: Radium 226 and 228, MW-20

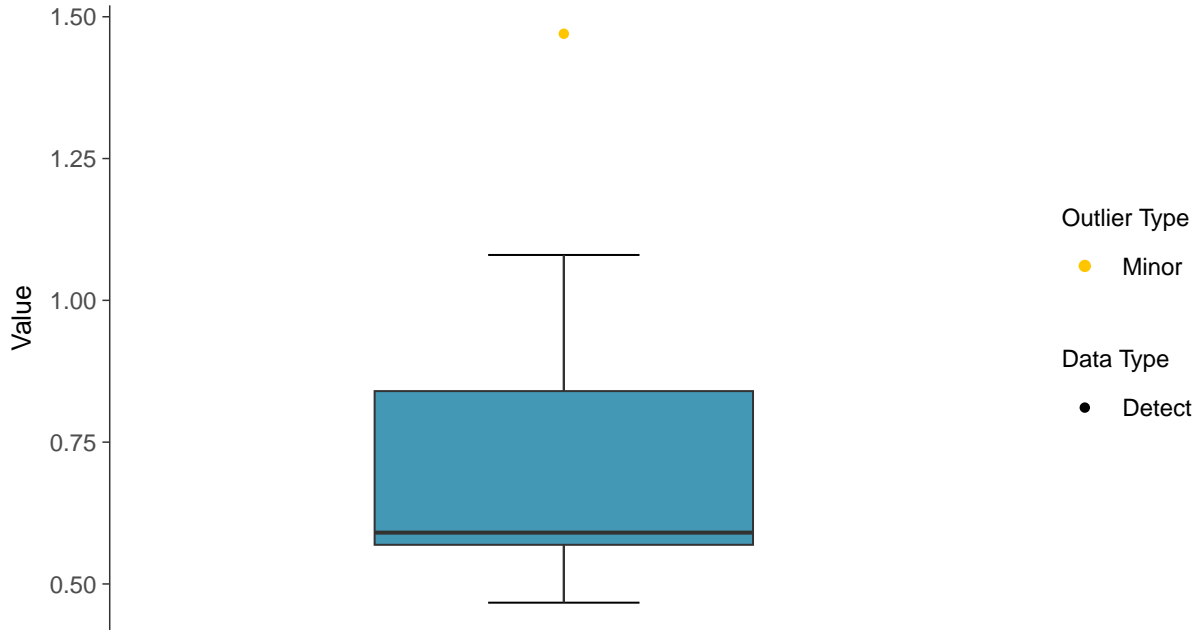
ID: 30\_1\_5\_121





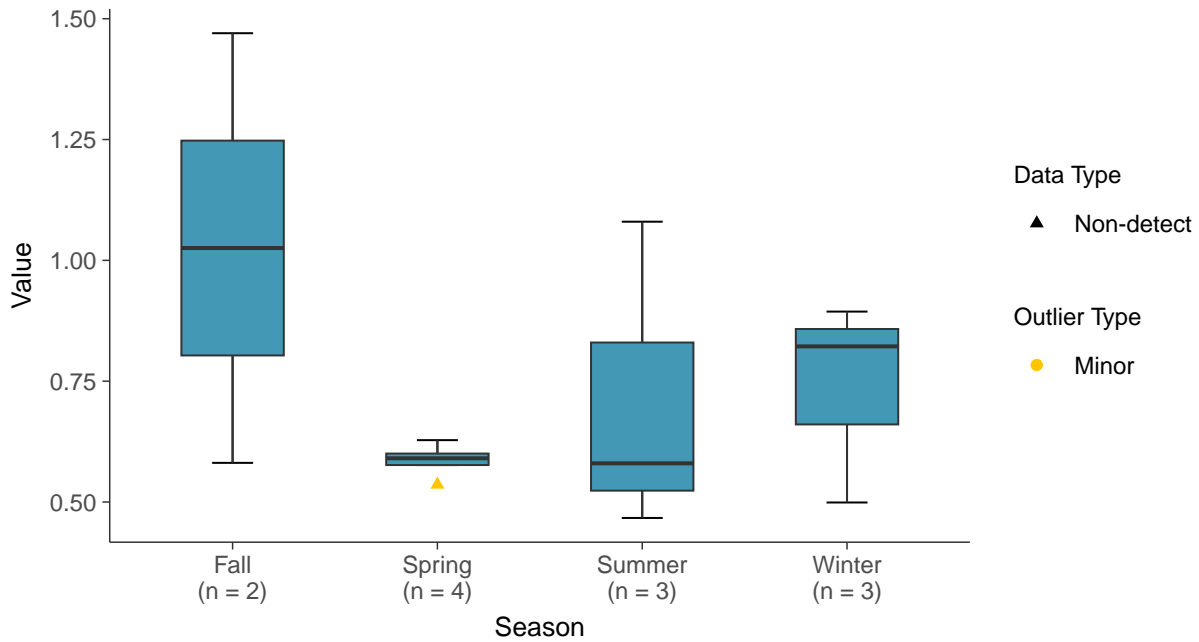
### Boxplot

Radium 226 and 228, MW-20 (pCi/L)



### Boxplot by Season

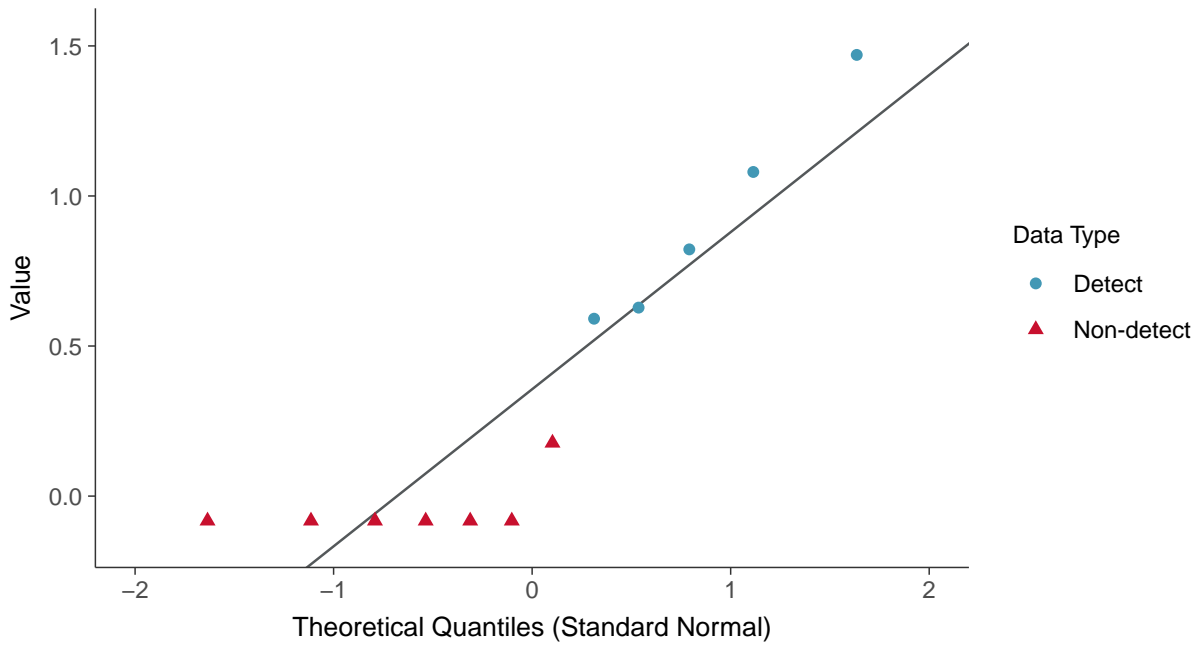
Radium 226 and 228, MW-20 (pCi/L)





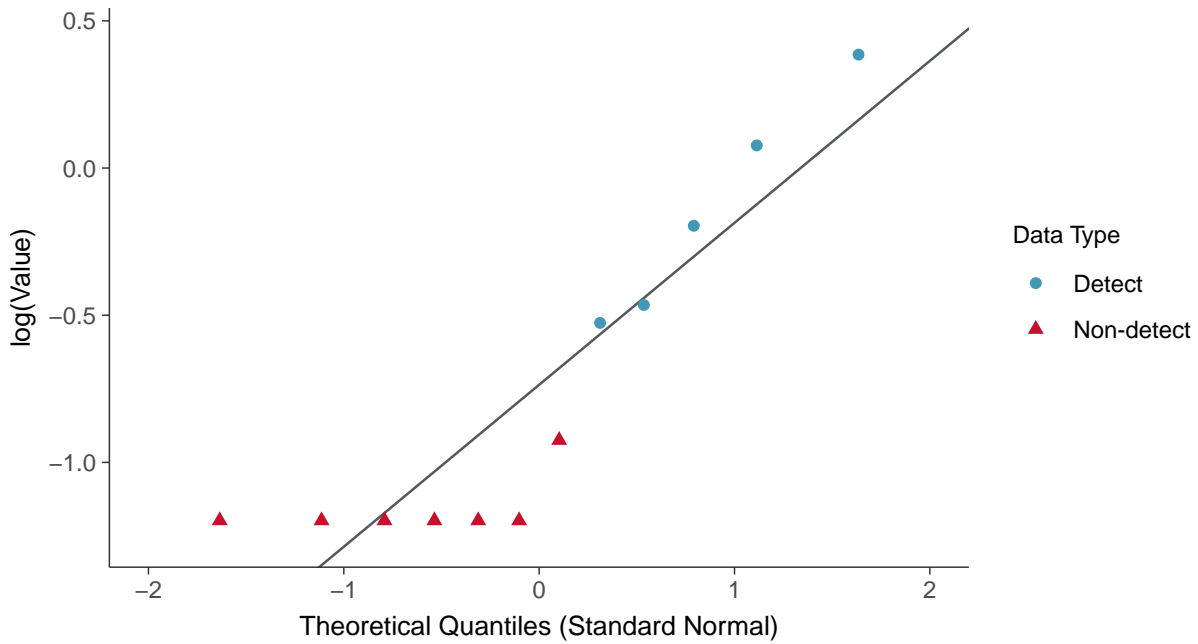
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-20 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

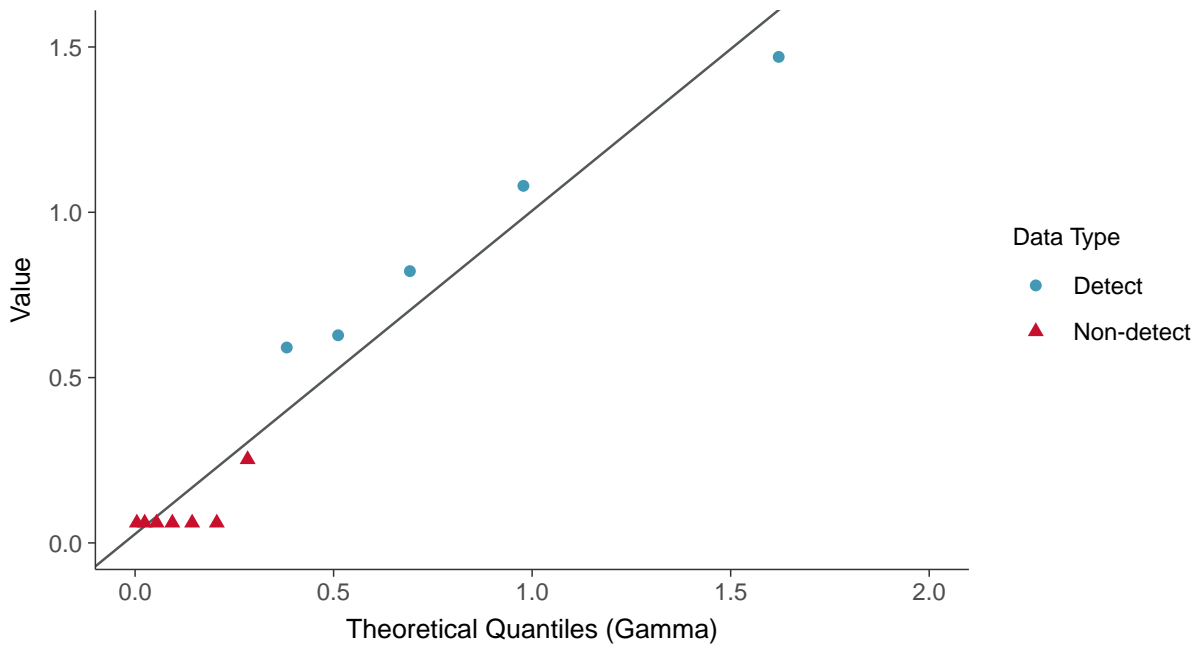
Radium 226 and 228, MW-20 (pCi/L)





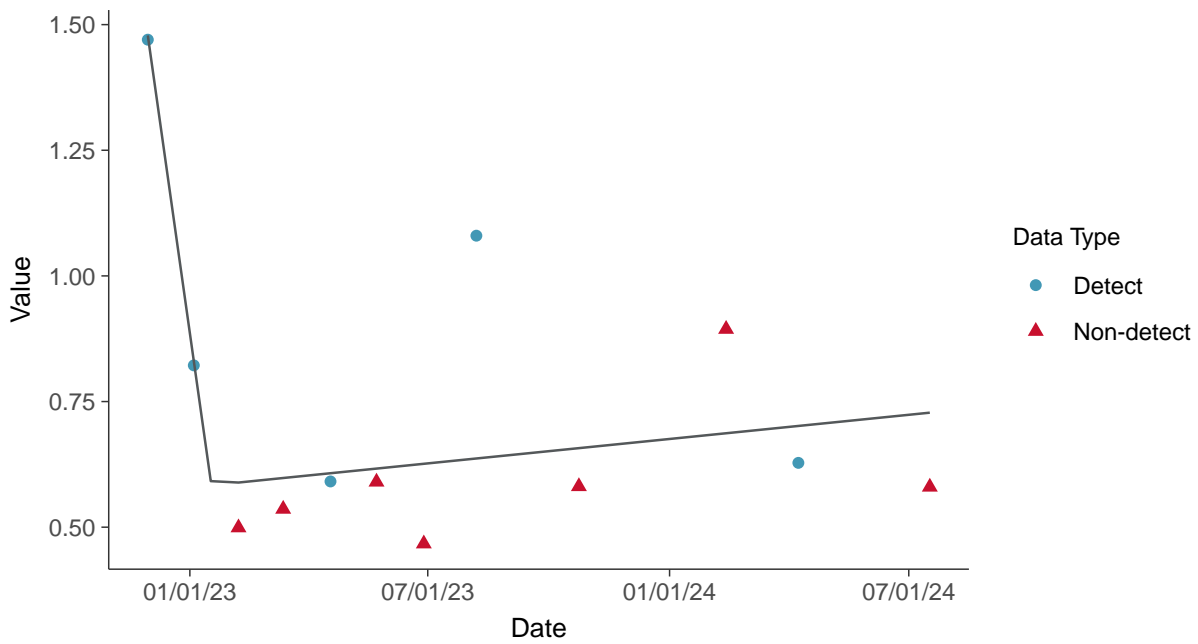
### Gamma Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-20 (pCi/L)



### Trend Regression: Piecewise Linear-Linear

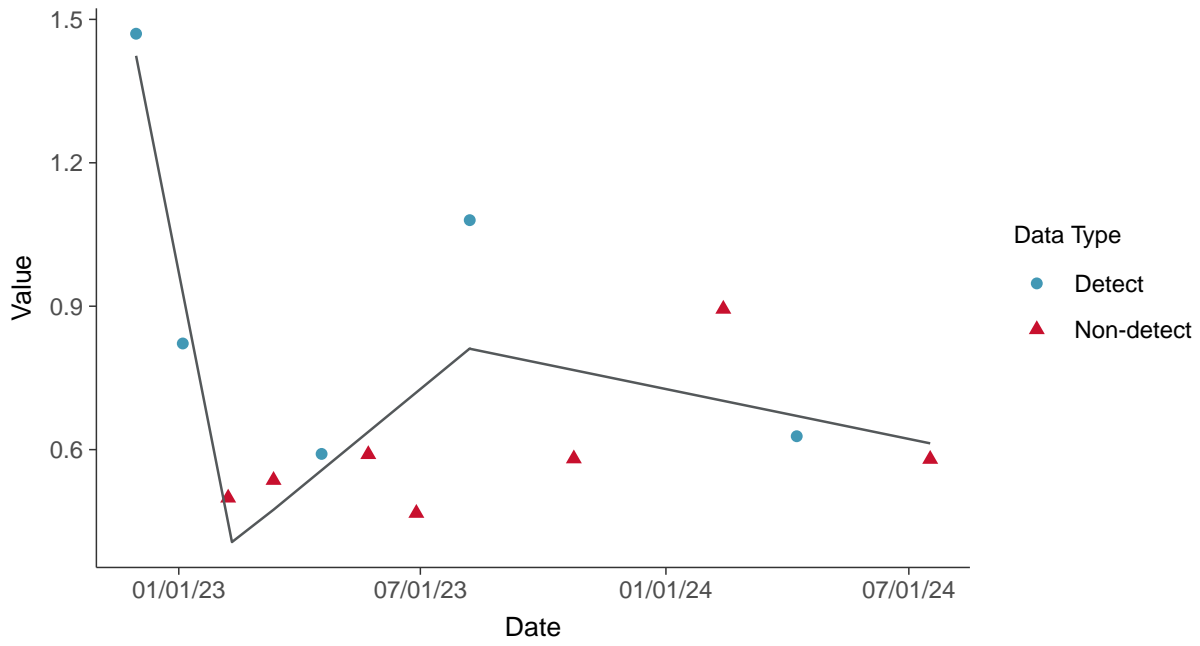
Radium 226 and 228, MW-20 (pCi/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-20 (pCi/L)



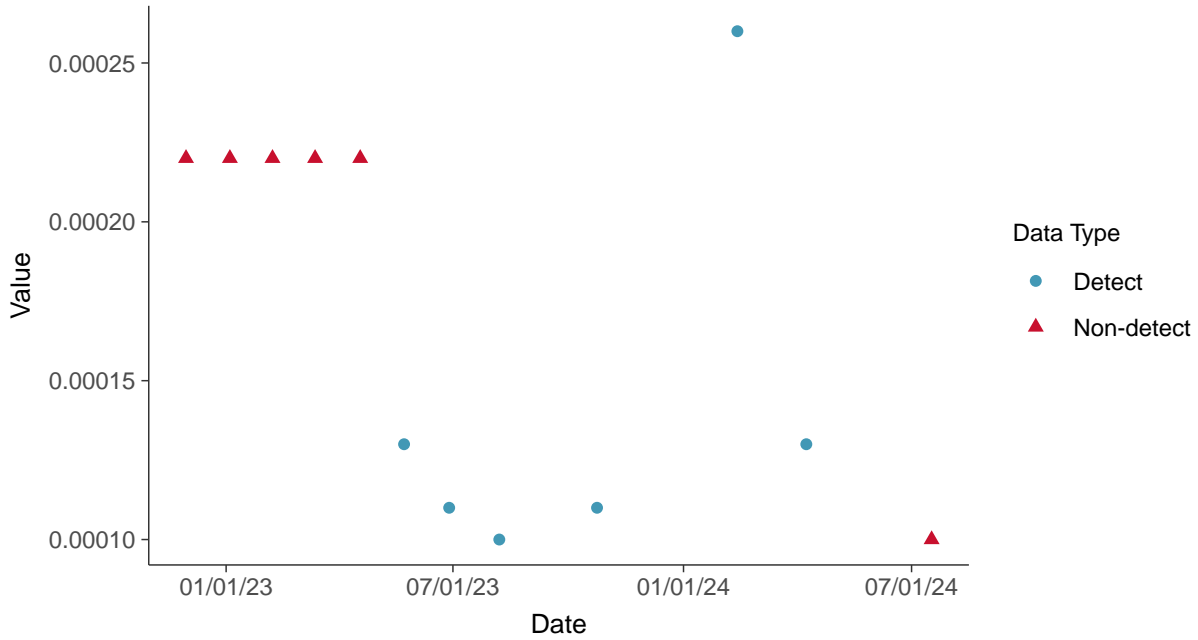


### Appendix IV: Selenium, MW-20

ID: 30\_1\_5\_122

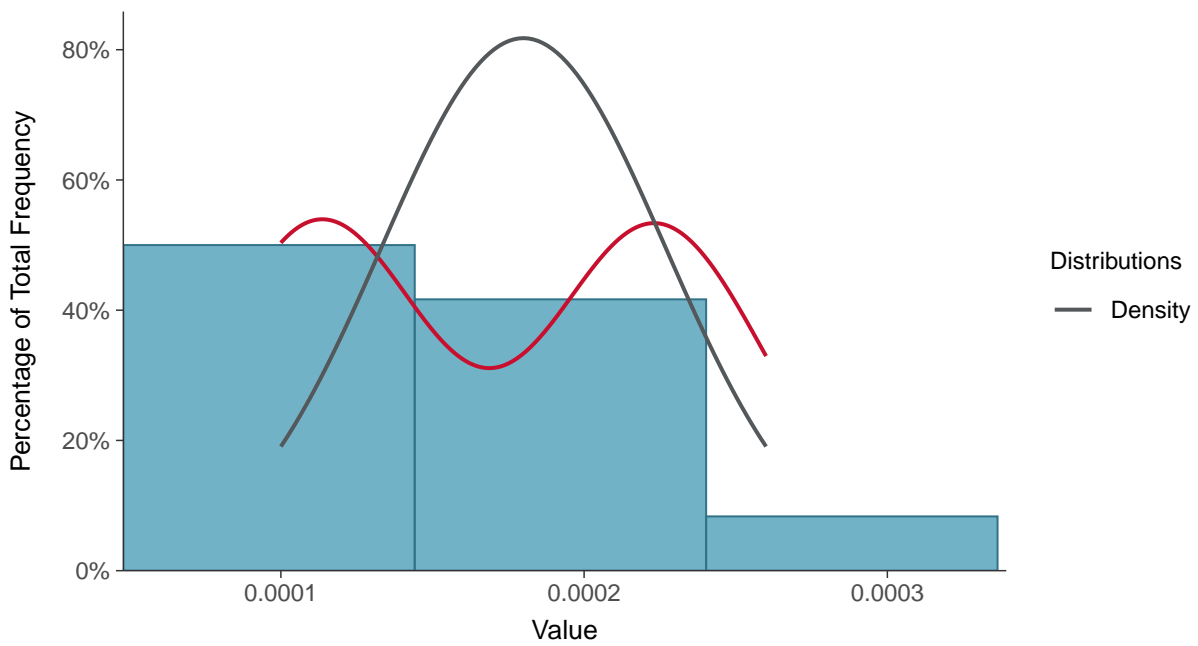
#### Scatter Plot

Selenium, MW-20 (mg/L)



#### Histogram

Selenium, MW-20 (mg/L)

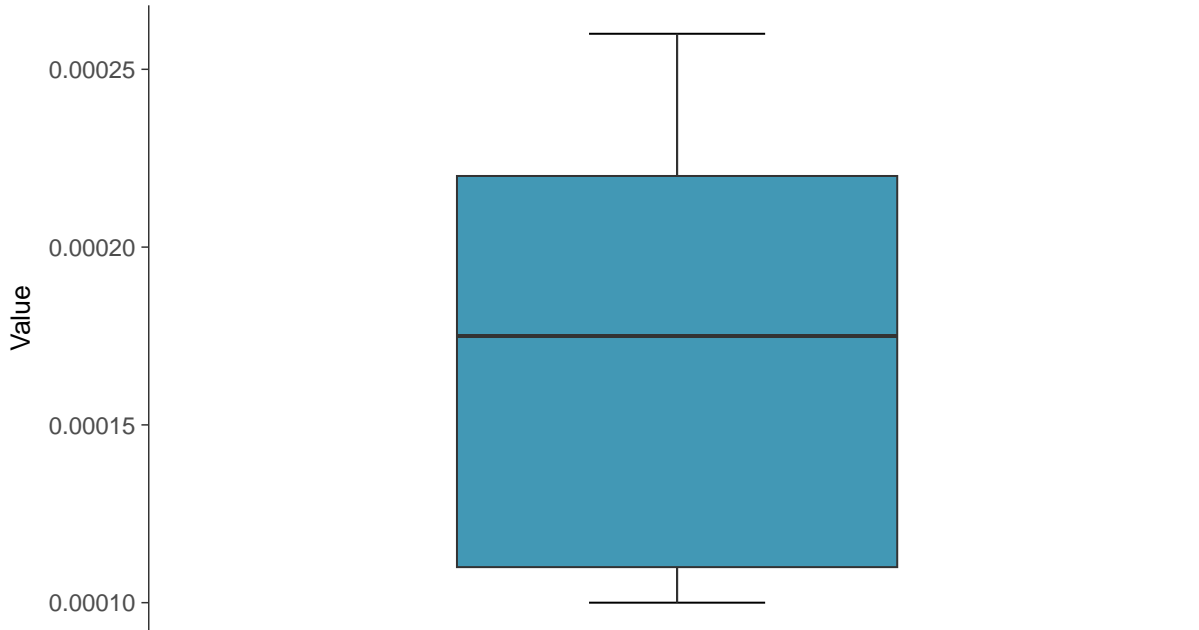






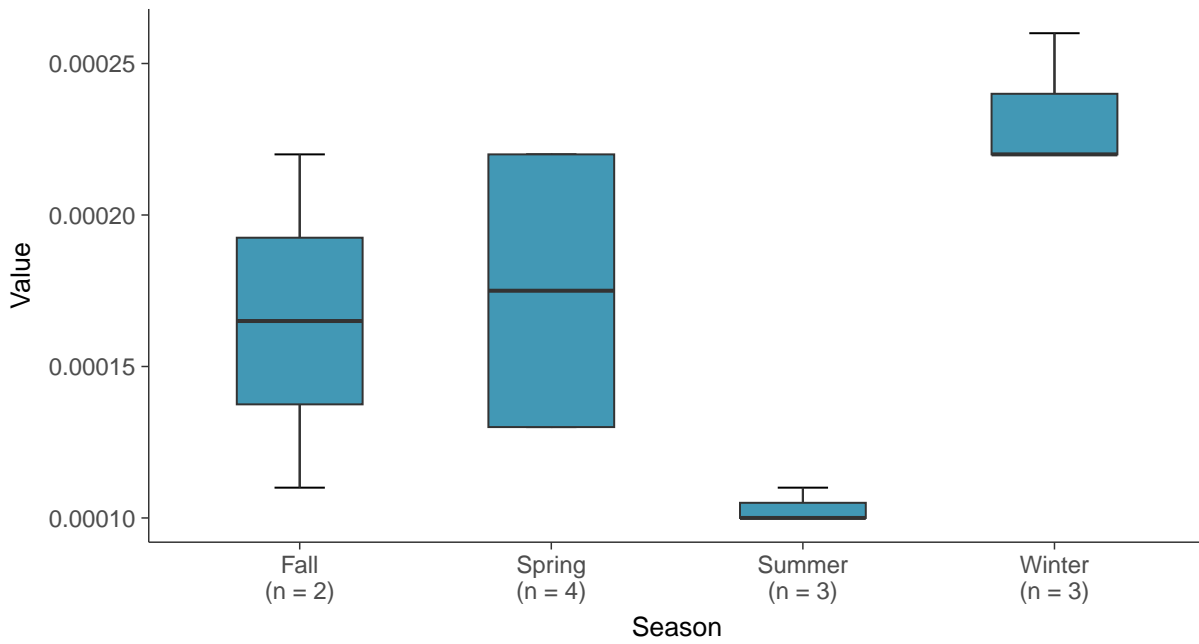
### Boxplot

Selenium, MW-20 (mg/L)



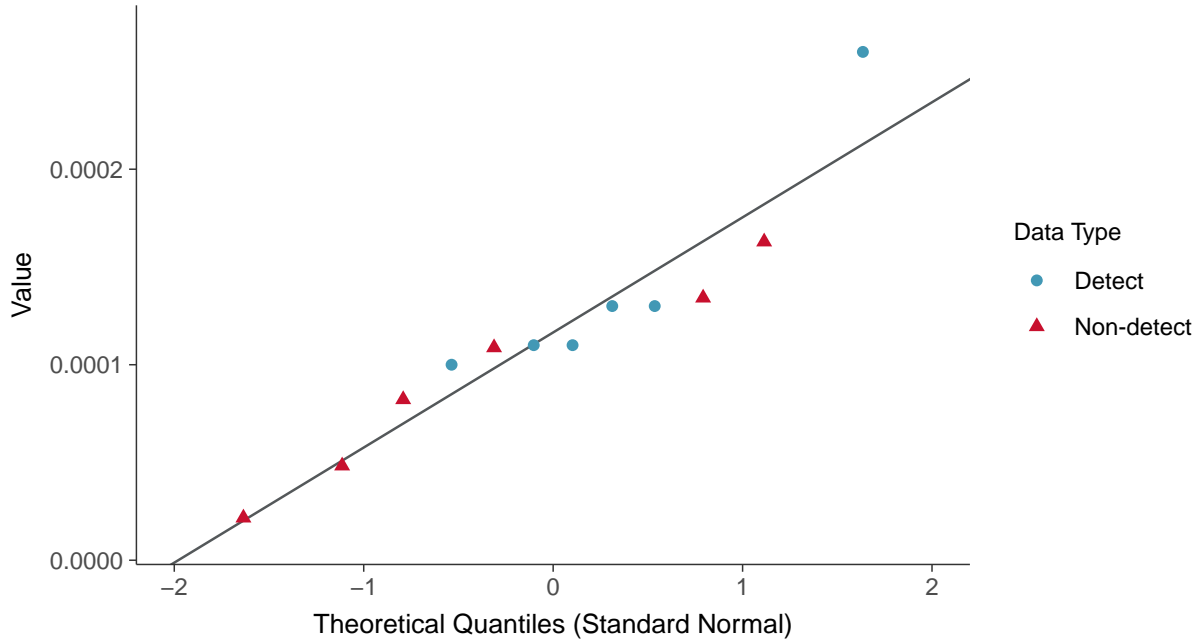
### Boxplot by Season

Selenium, MW-20 (mg/L)

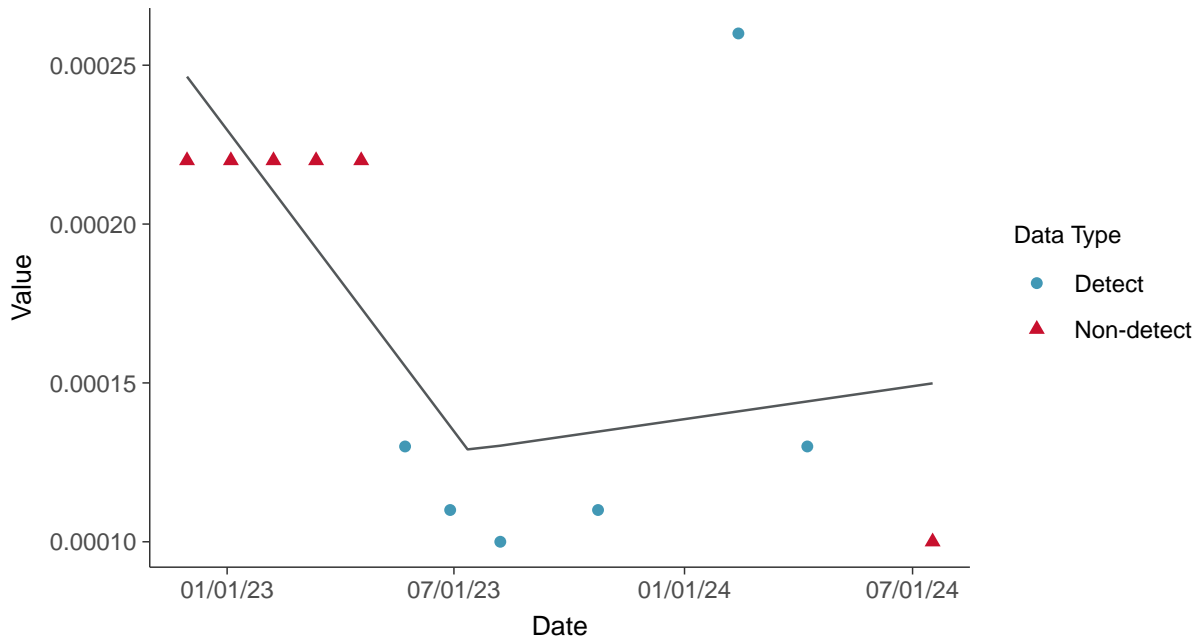




**Normal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-20 (mg/L)



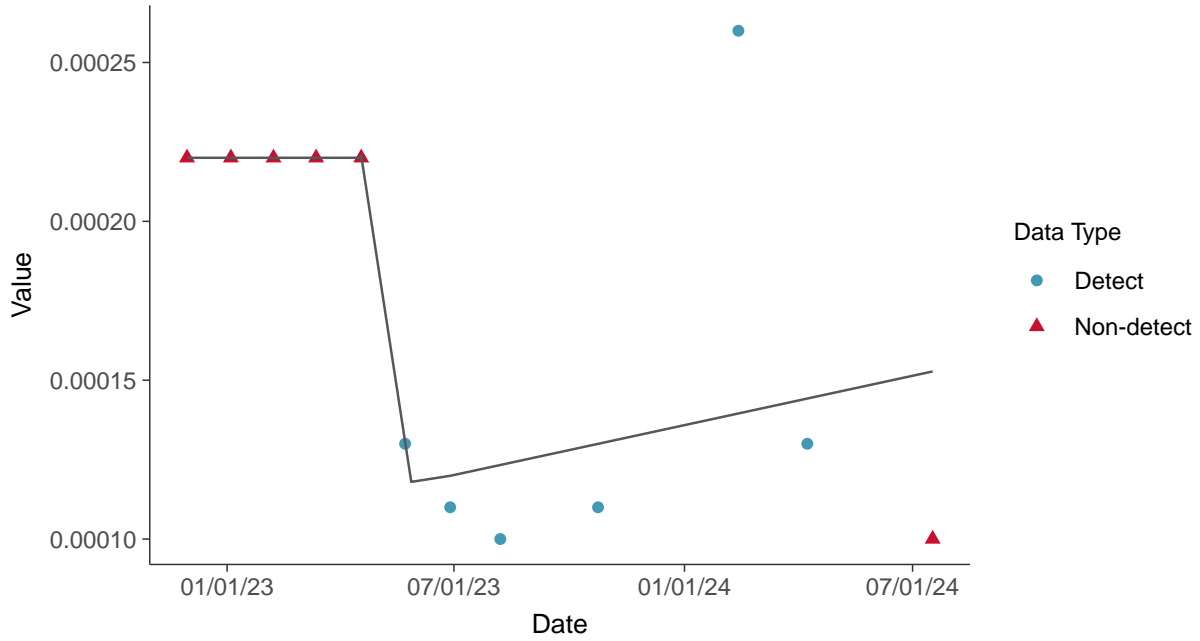
**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-20 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-20 (mg/L)



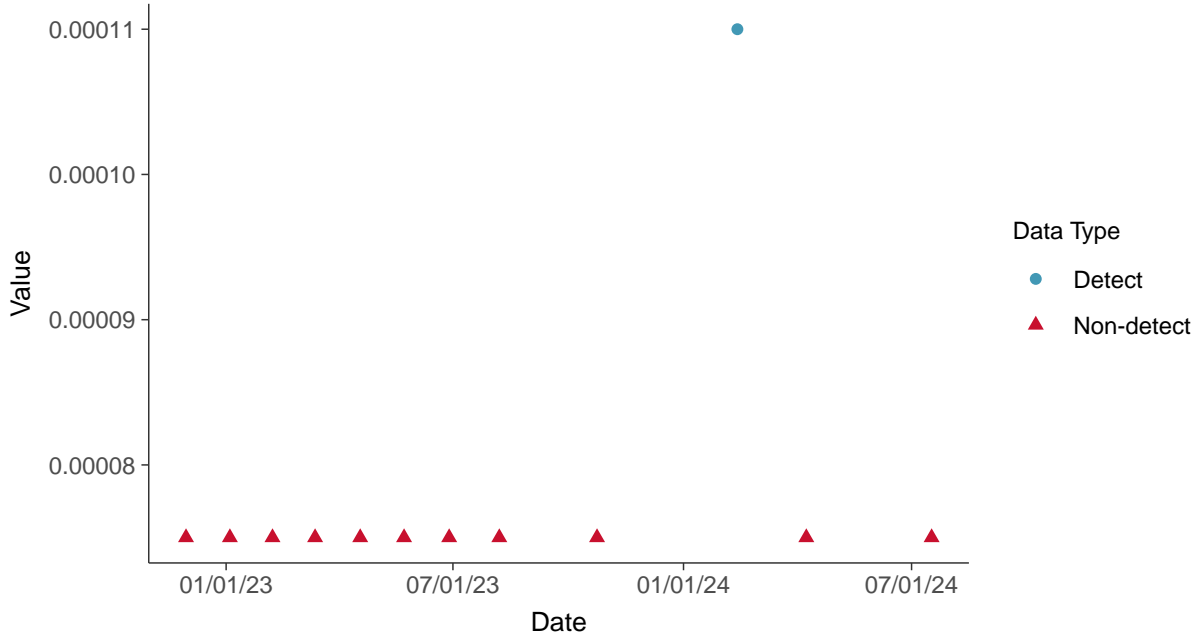


### Appendix IV: Thallium, MW-20

ID: 30\_1\_5\_125

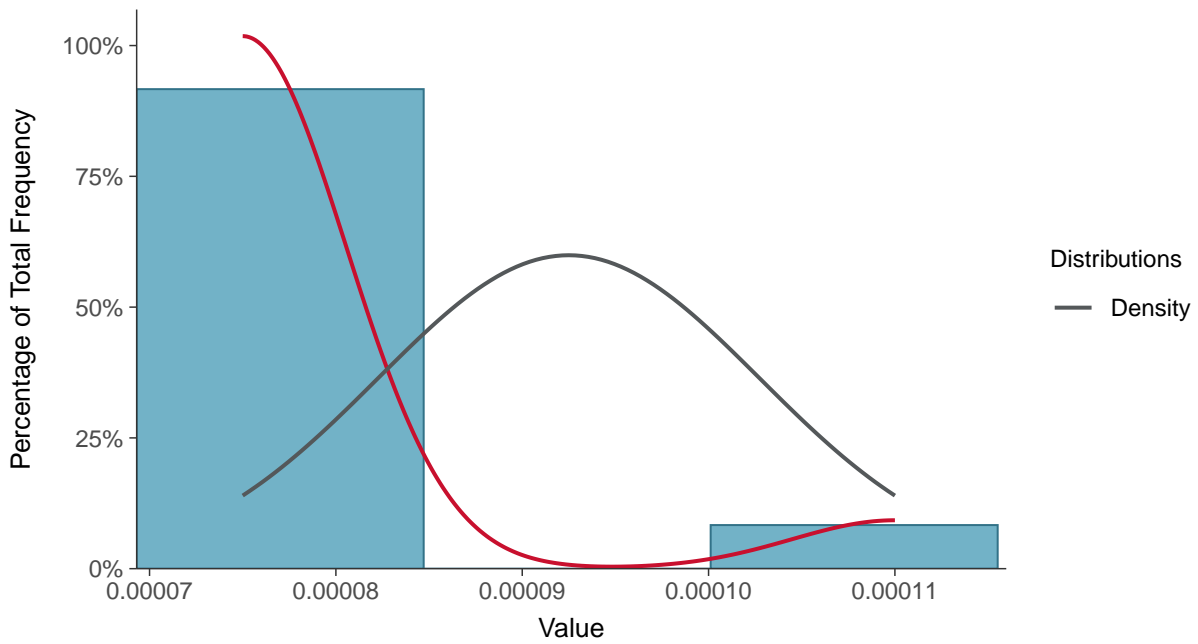
#### Scatter Plot

Thallium, MW-20 (mg/L)



#### Histogram

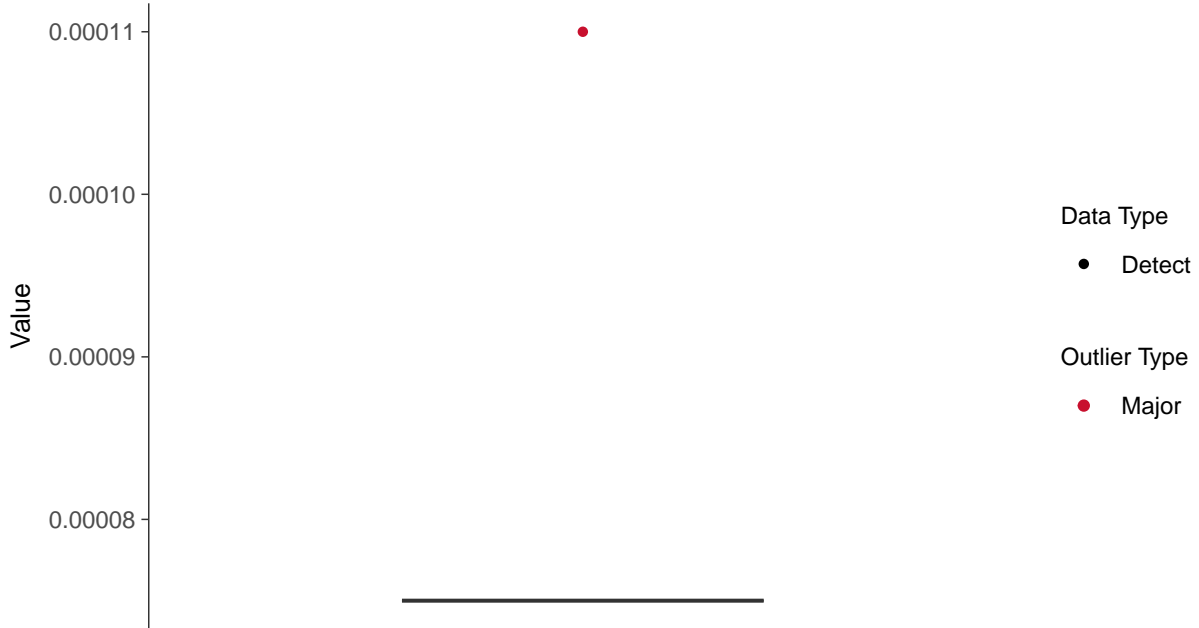
Thallium, MW-20 (mg/L)





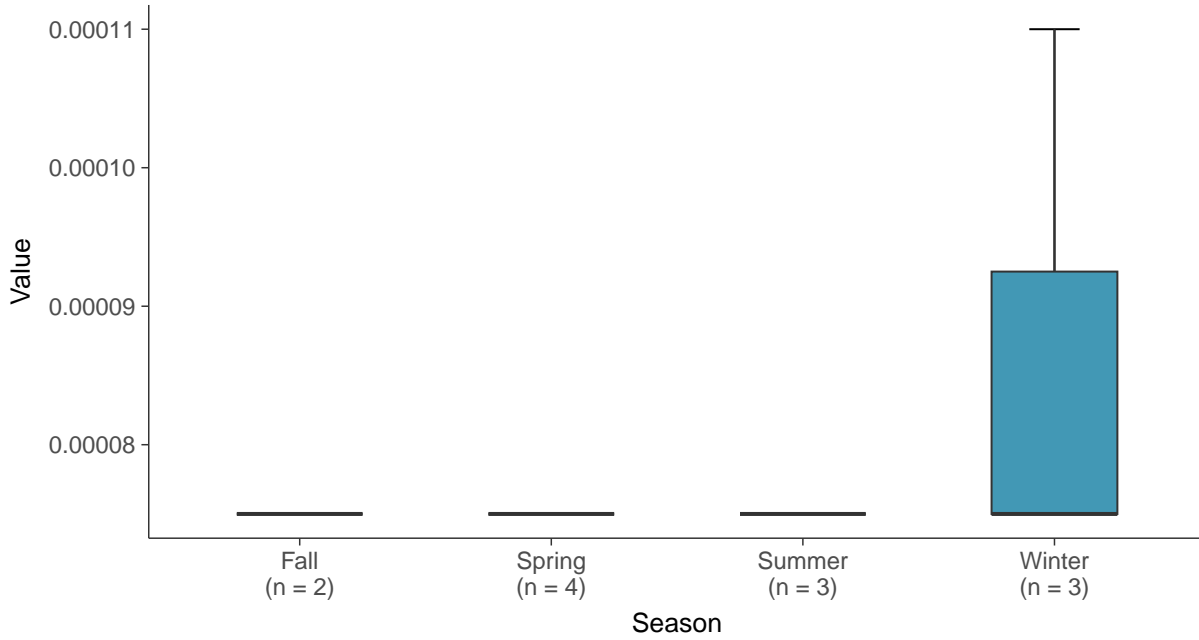
### Boxplot

Thallium, MW-20 (mg/L)



### Boxplot by Season

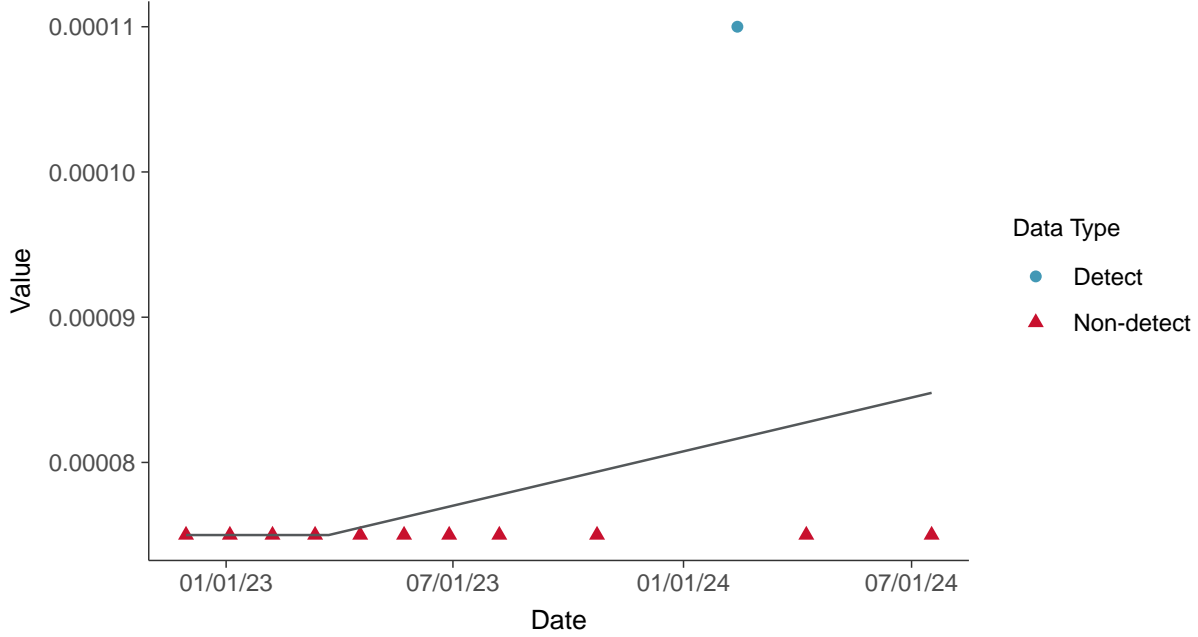
Thallium, MW-20 (mg/L)





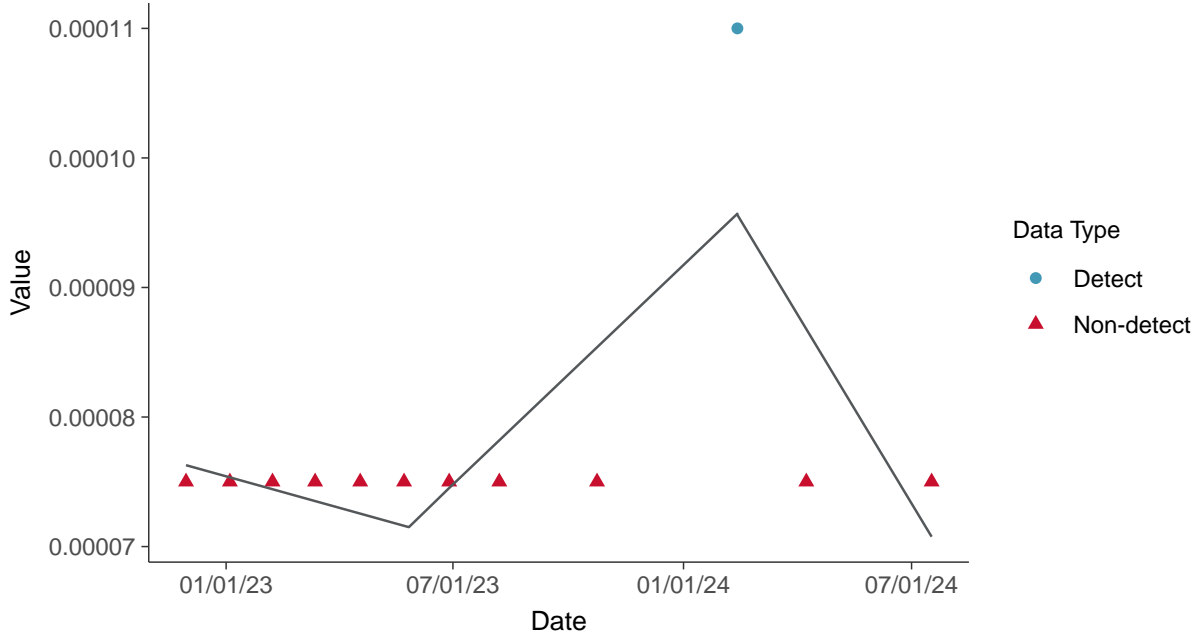
### Trend Regression: Piecewise Linear-Linear

Thallium, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-20 (mg/L)



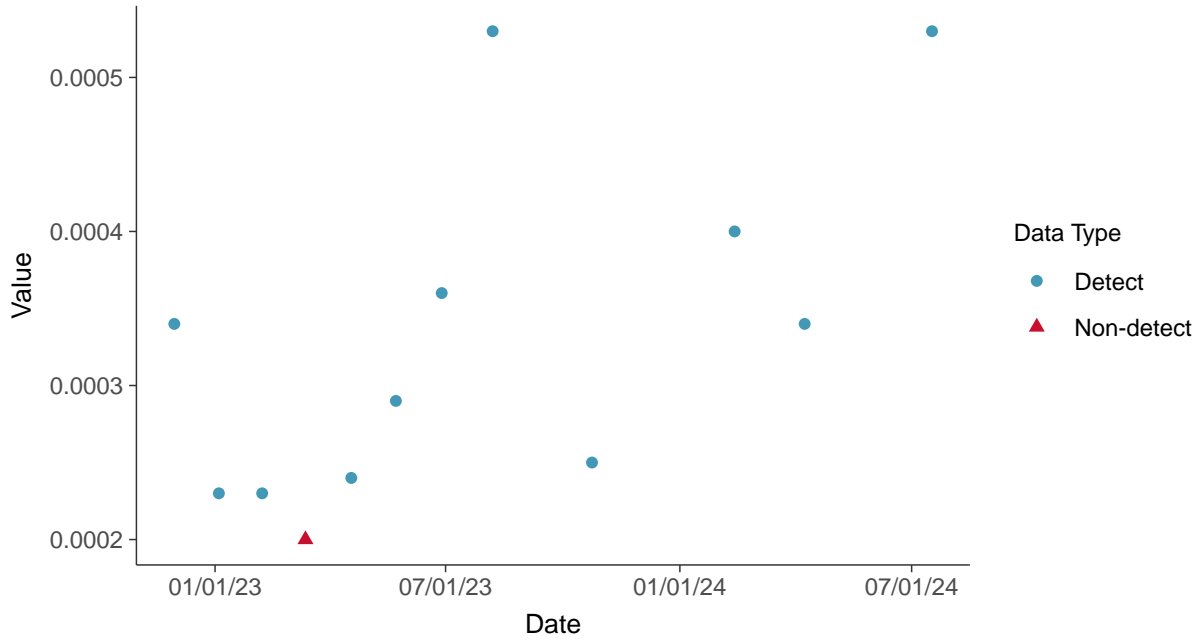


### Part 115: Copper, MW-20

ID: 30\_1\_6\_111

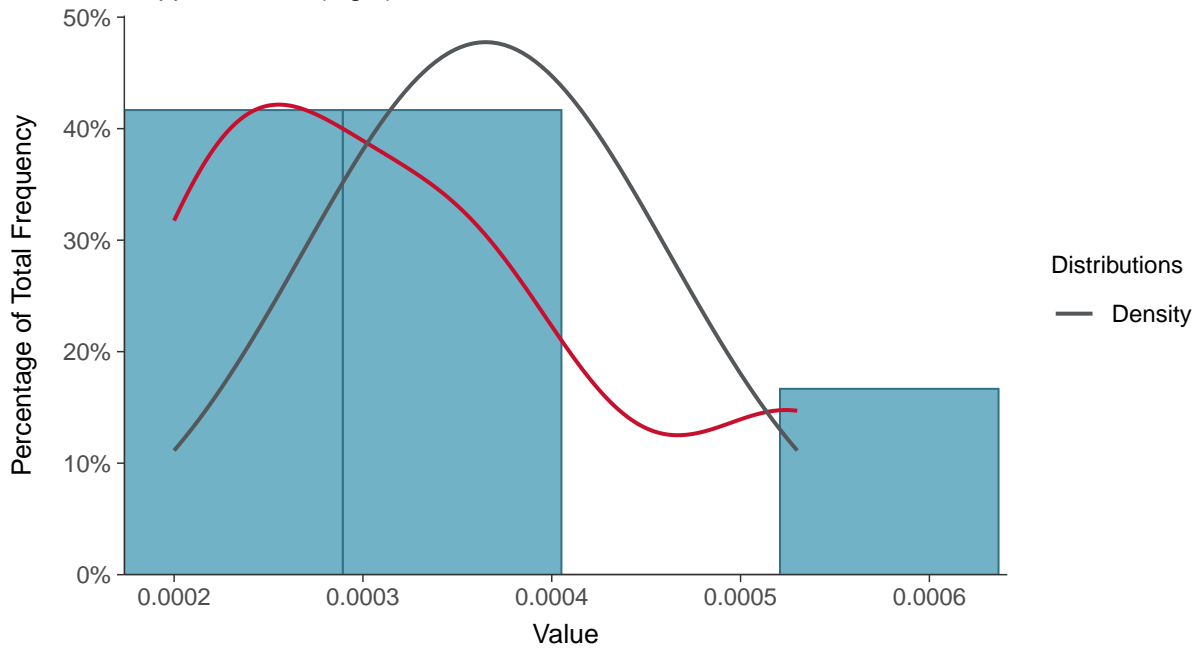
#### Scatter Plot

Copper, MW-20 (mg/L)



#### Histogram

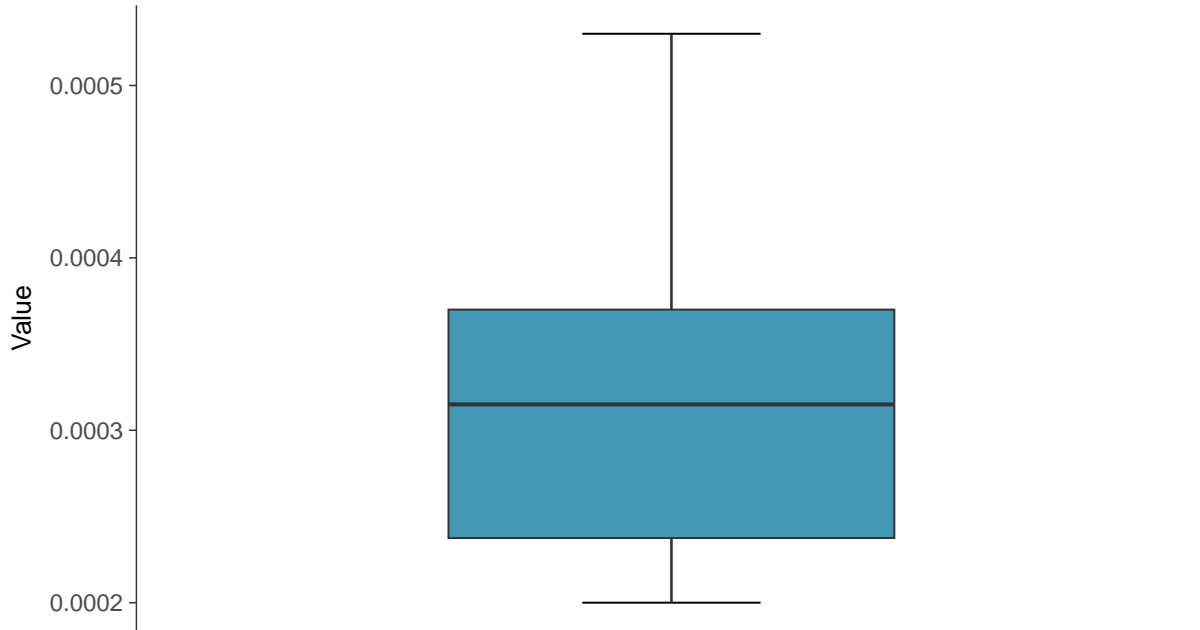
Copper, MW-20 (mg/L)





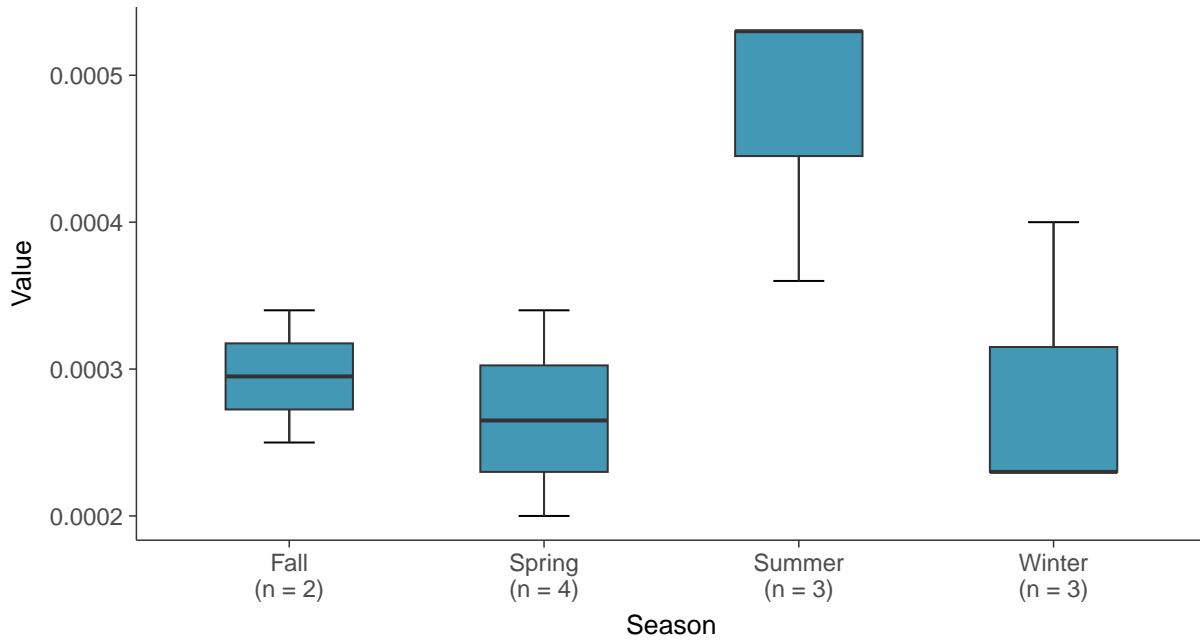
### Boxplot

Copper, MW-20 (mg/L)



### Boxplot by Season

Copper, MW-20 (mg/L)

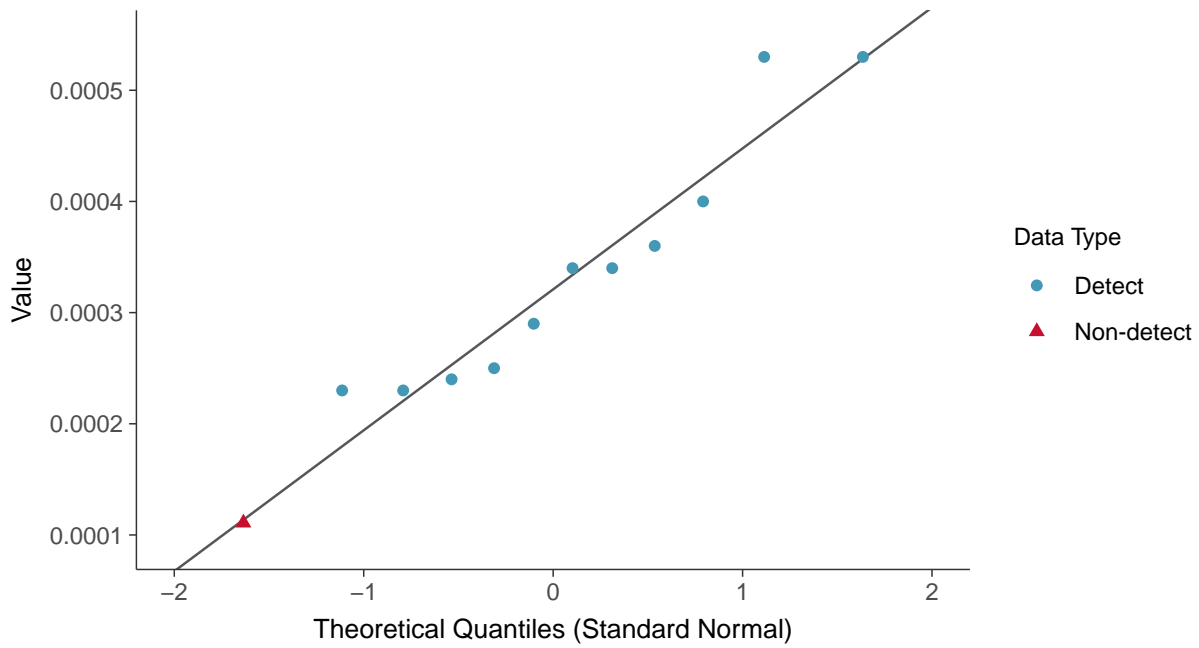






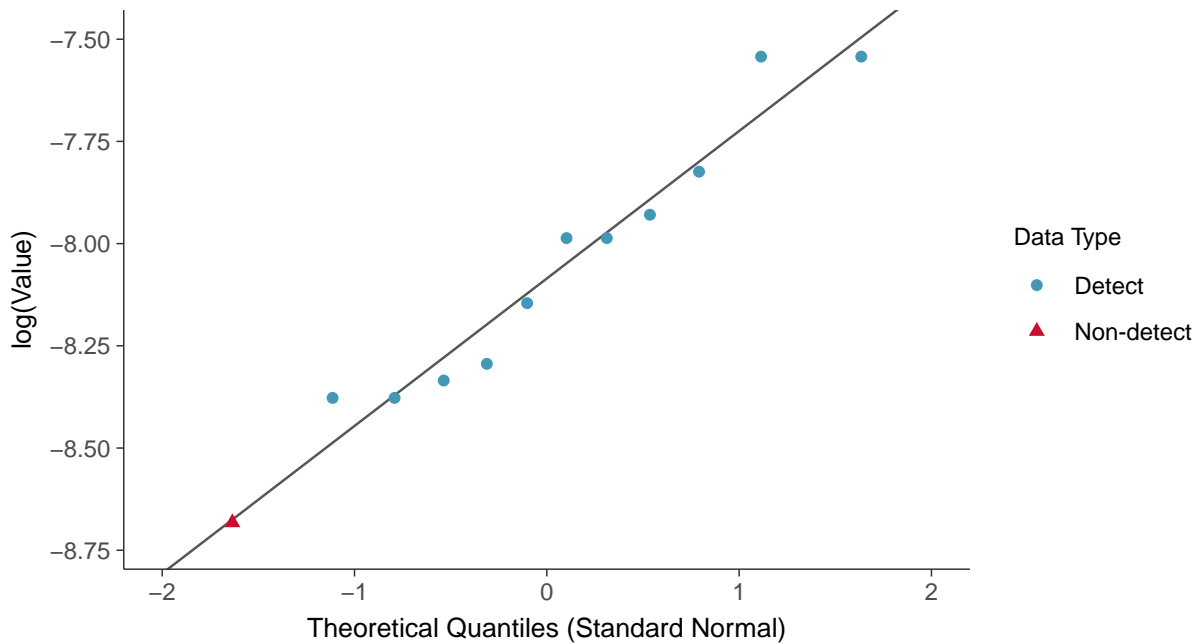
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-20 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

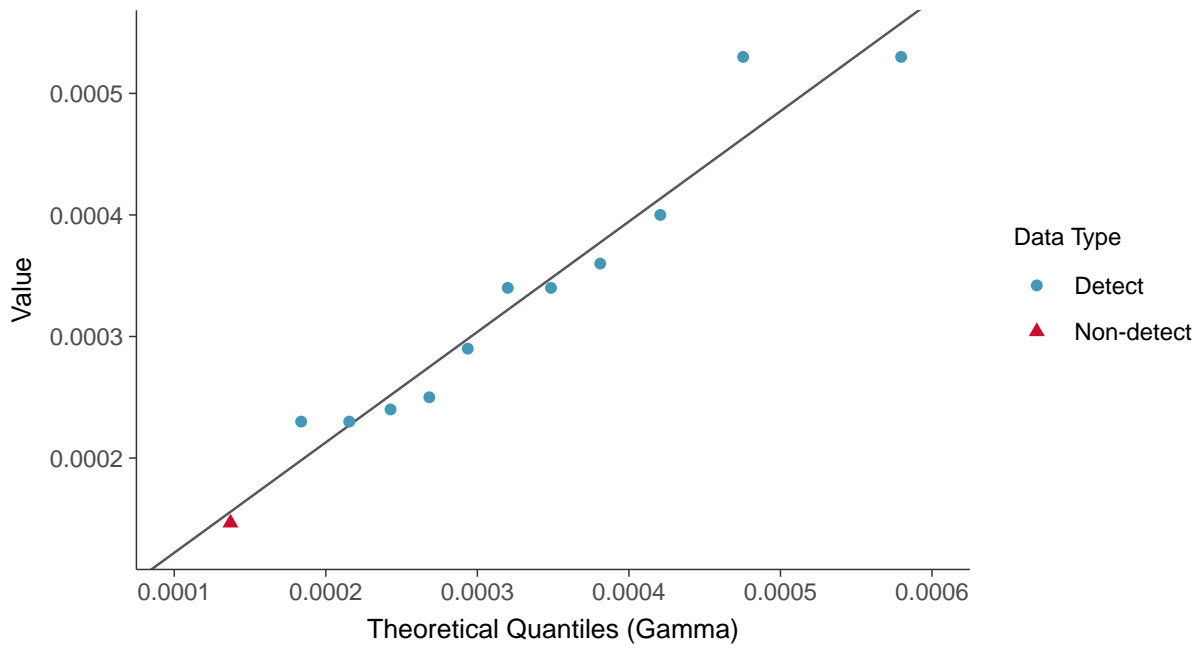
Copper, MW-20 (mg/L)





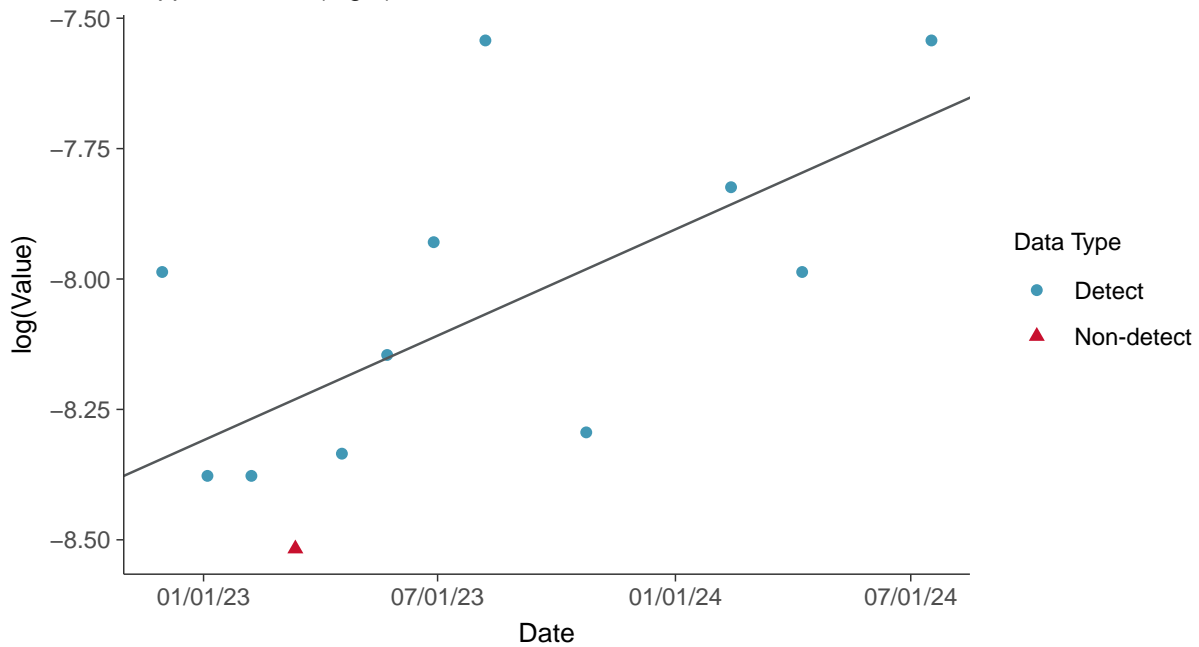
### Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

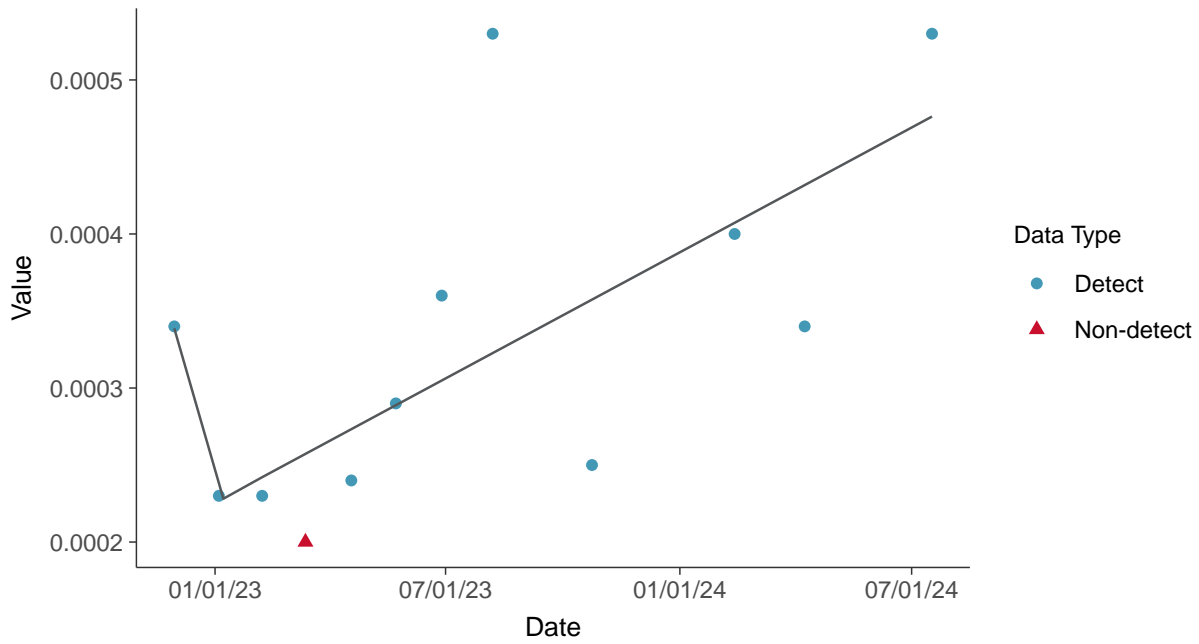
Copper, MW-20 (mg/L)





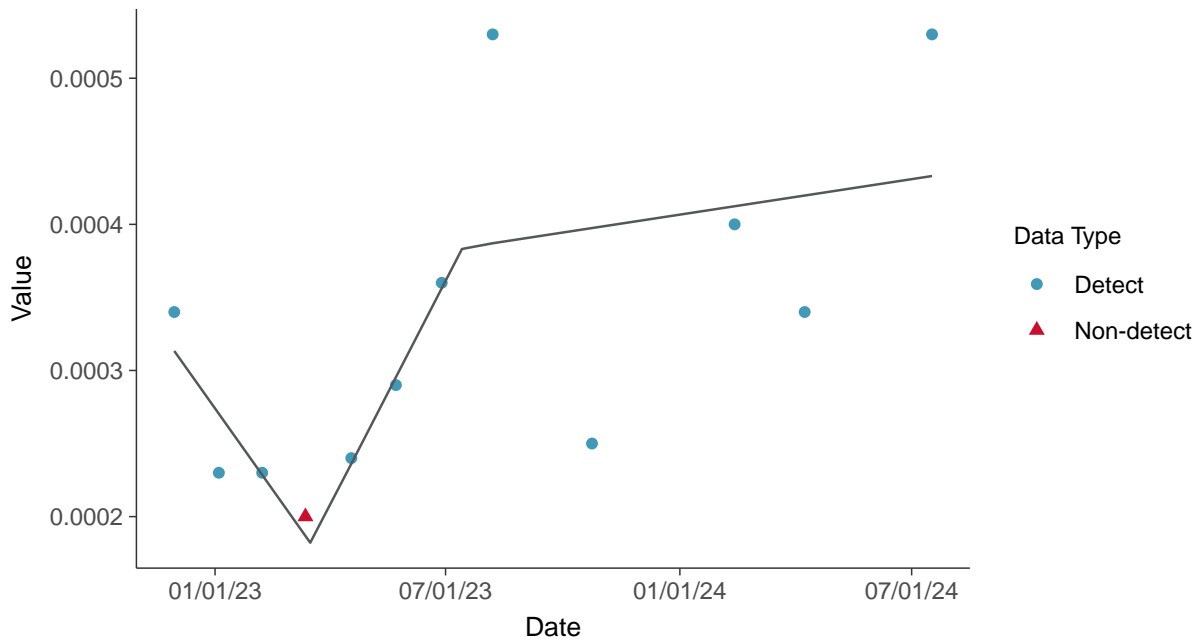
### Trend Regression: Piecewise Linear-Linear

Copper, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-20 (mg/L)



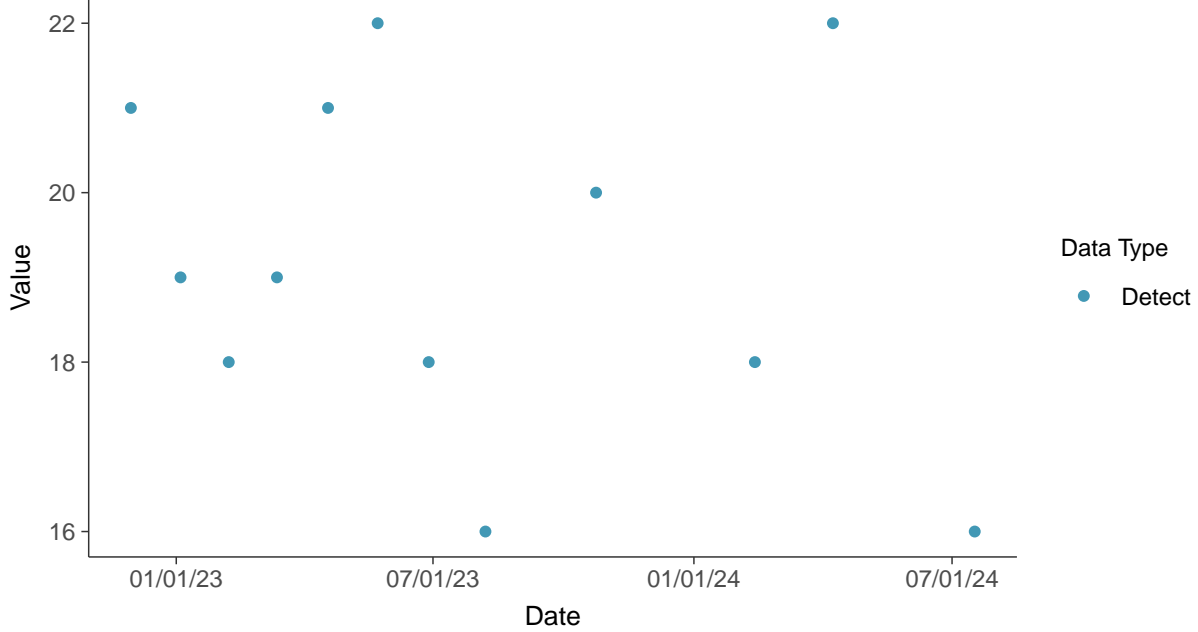


### Part 115: Iron, MW-20

ID: 30\_1\_6\_114

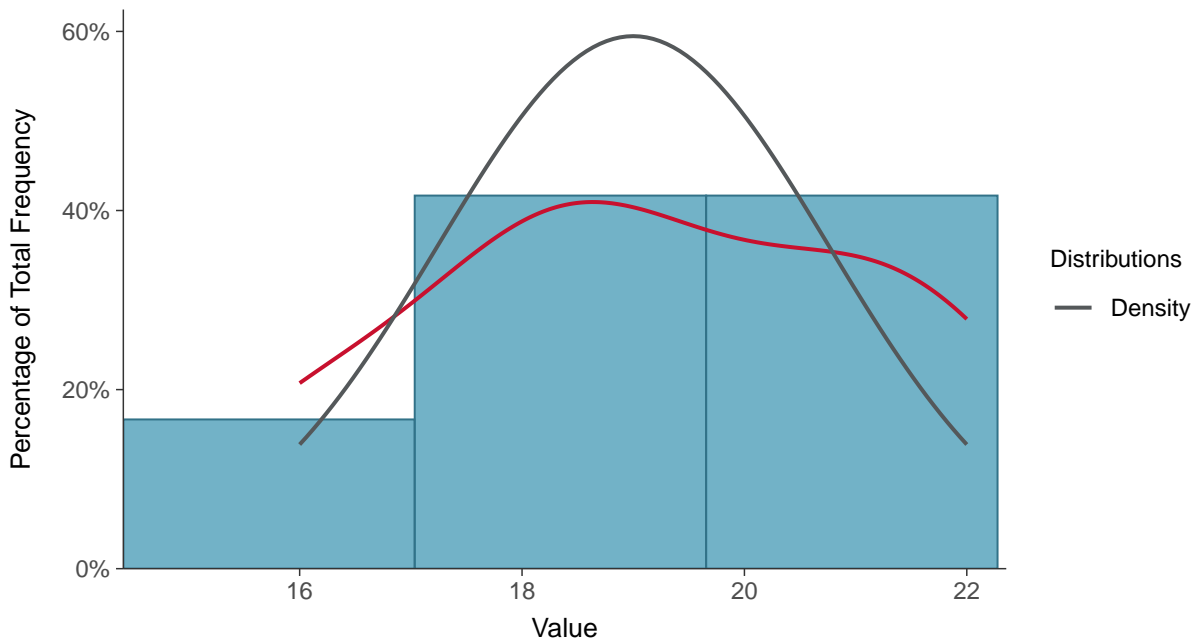
#### Scatter Plot

Iron, MW-20 (mg/L)



#### Histogram

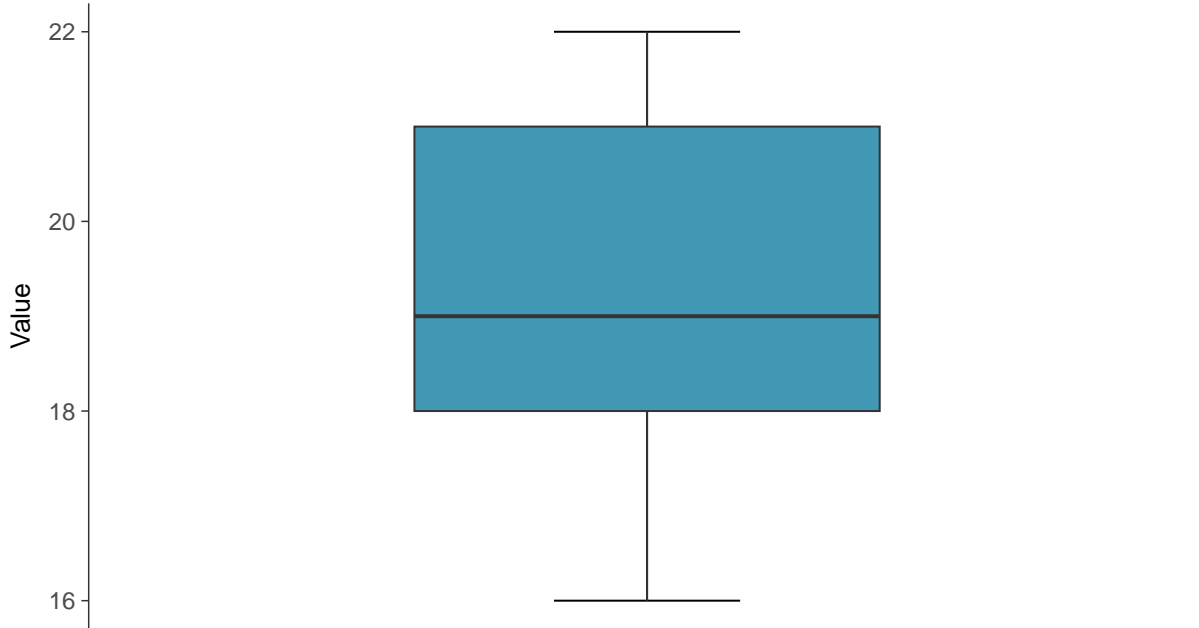
Iron, MW-20 (mg/L)





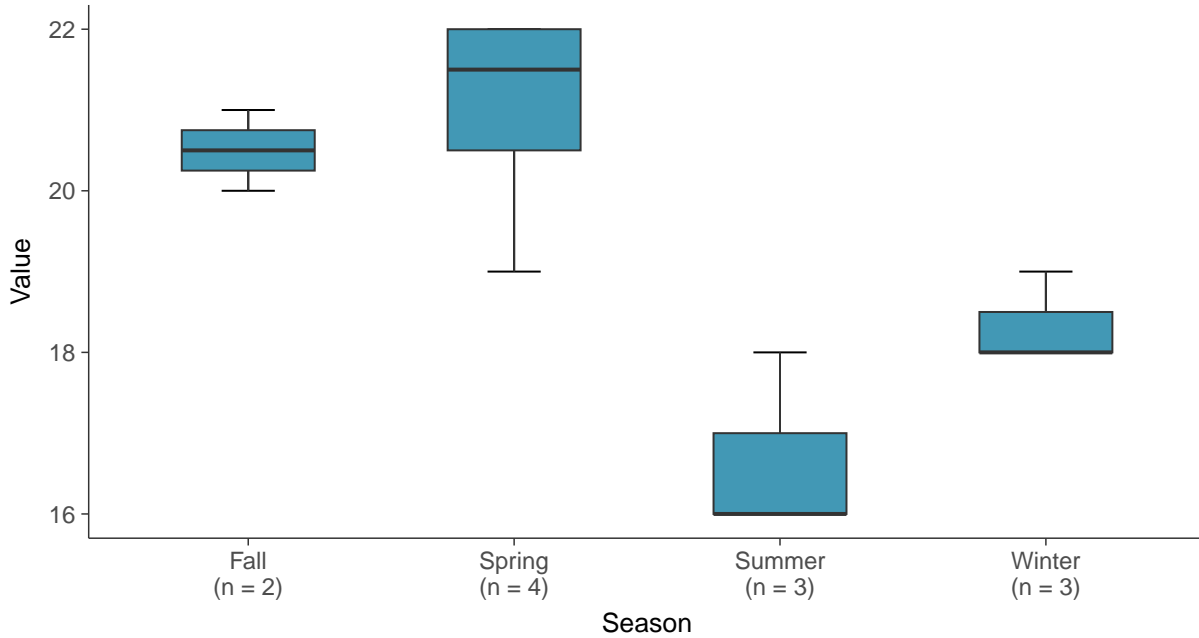
### Boxplot

Iron, MW-20 (mg/L)



### Boxplot by Season

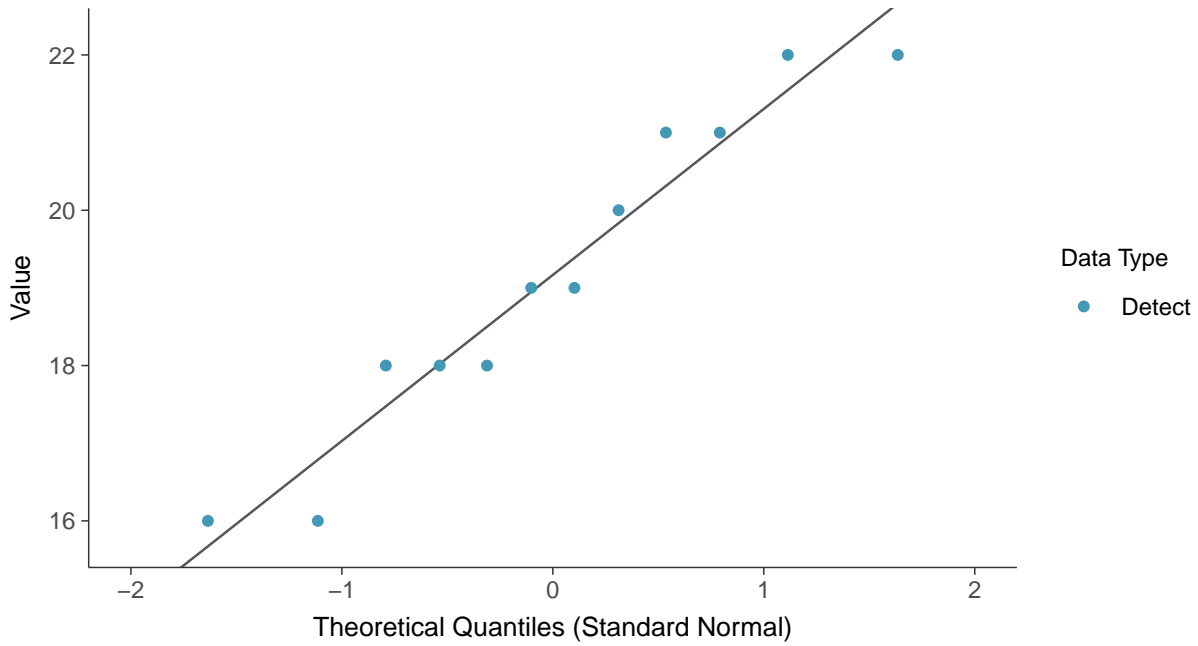
Iron, MW-20 (mg/L)





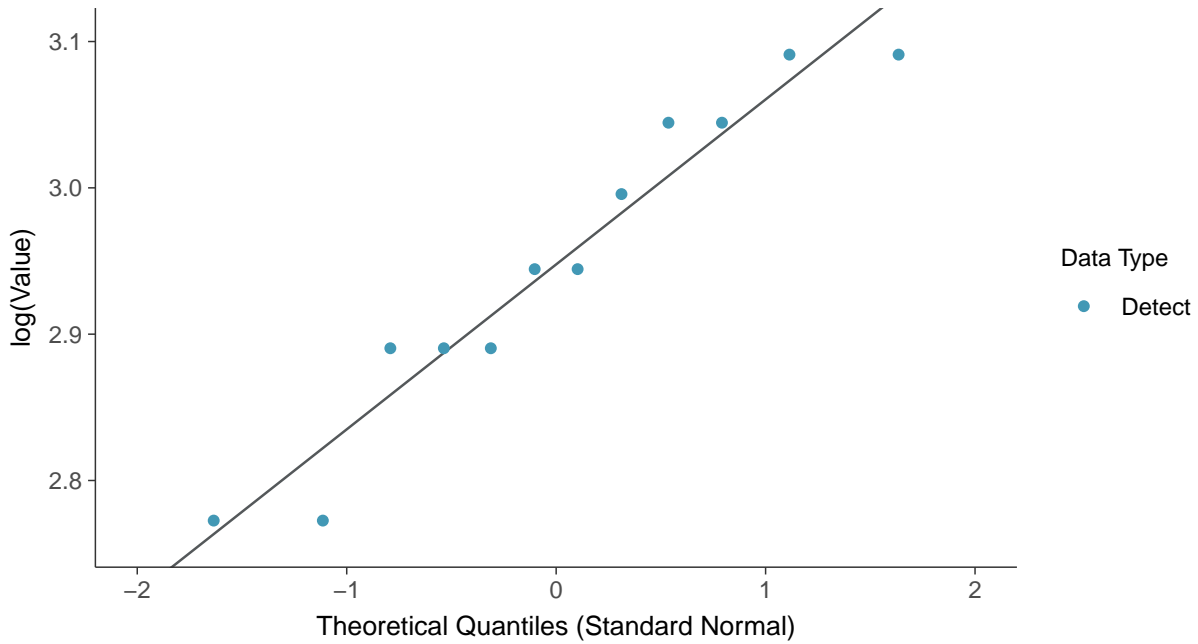
### Normal Q-Q plot

Iron, MW-20 (mg/L)



### Lognormal Q-Q plot

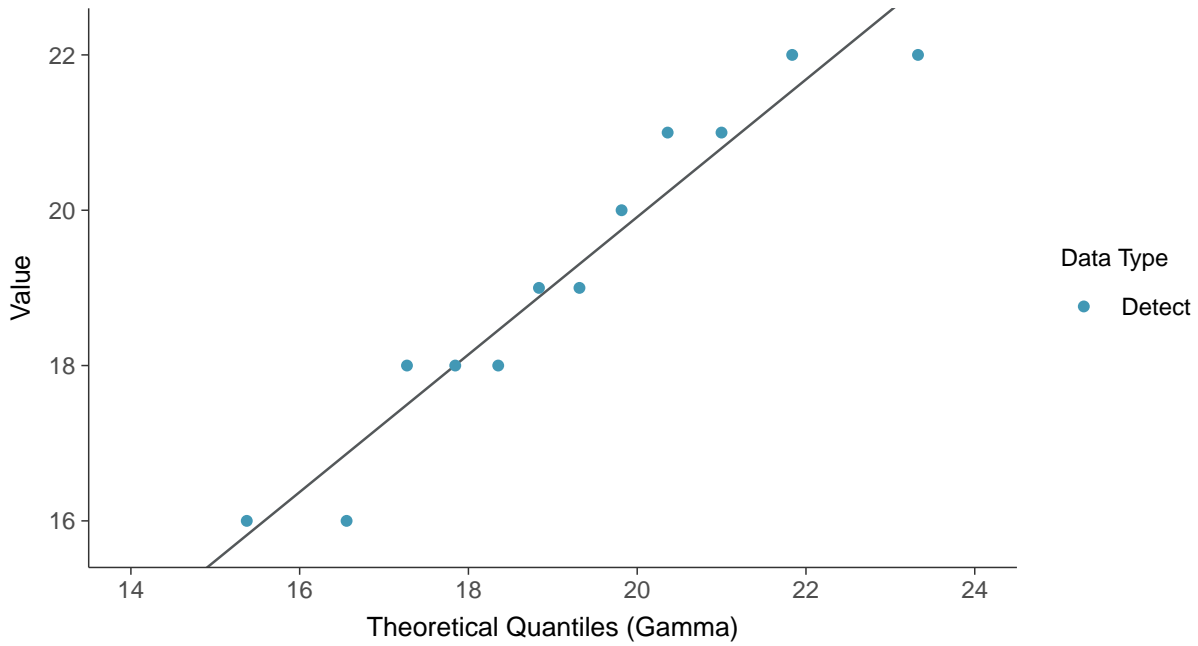
Iron, MW-20 (mg/L)





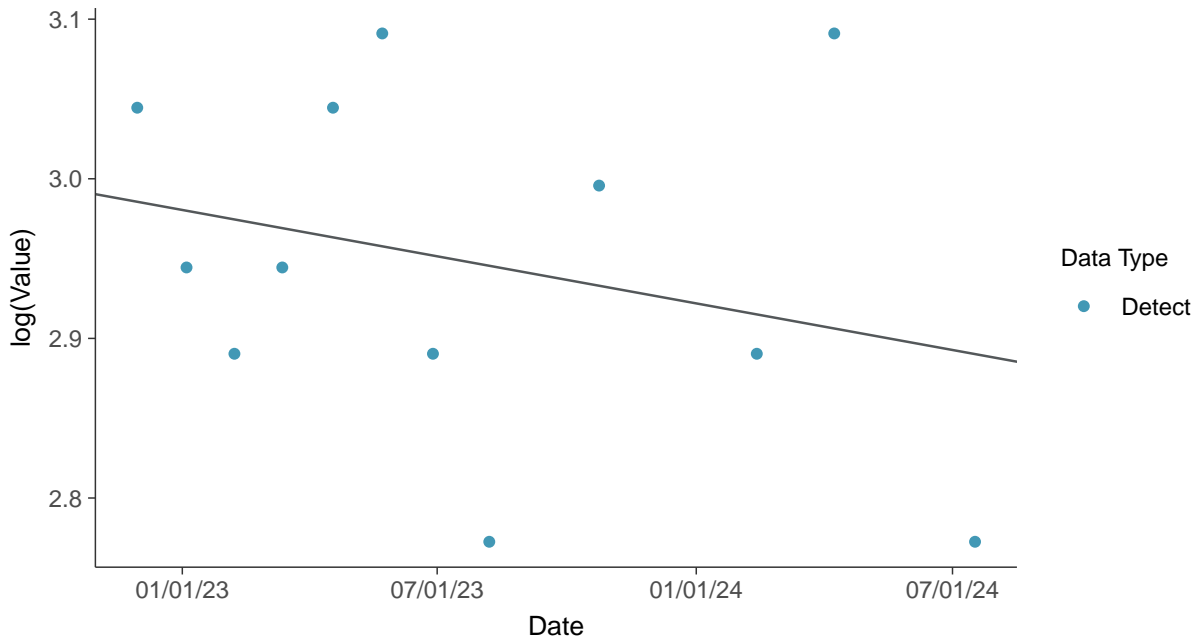
### Gamma Q-Q plot

Iron, MW-20 (mg/L)



### Trend Regression: Lognormal MLE

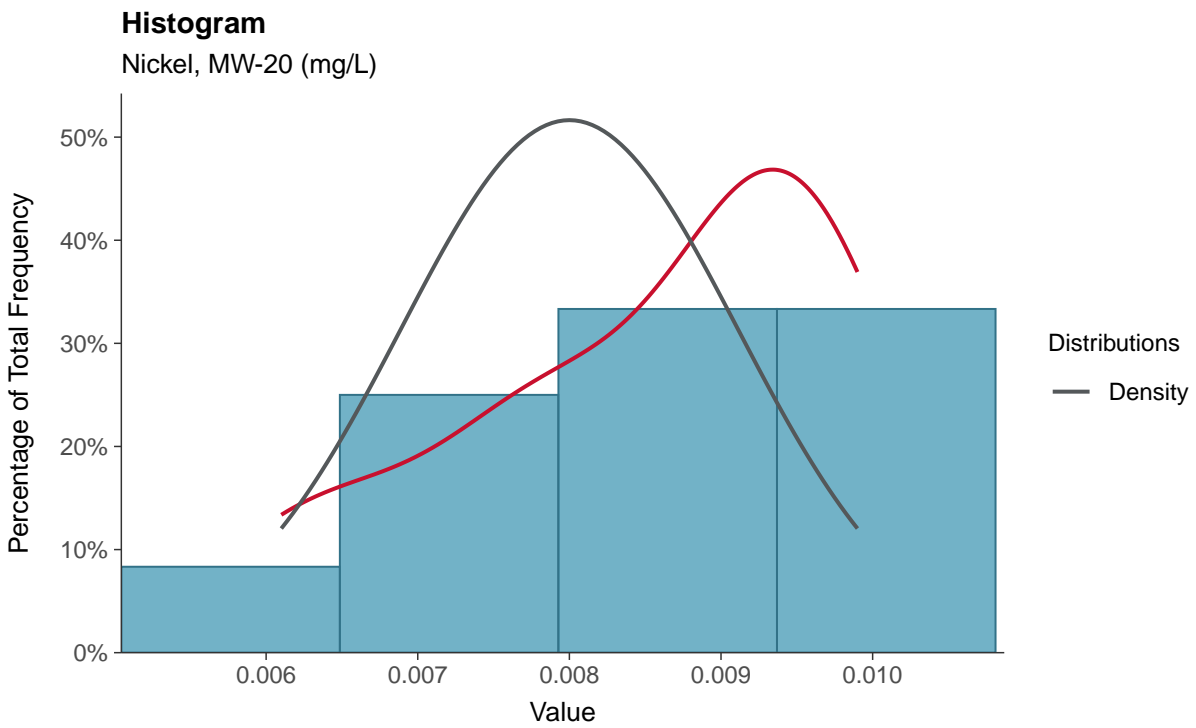
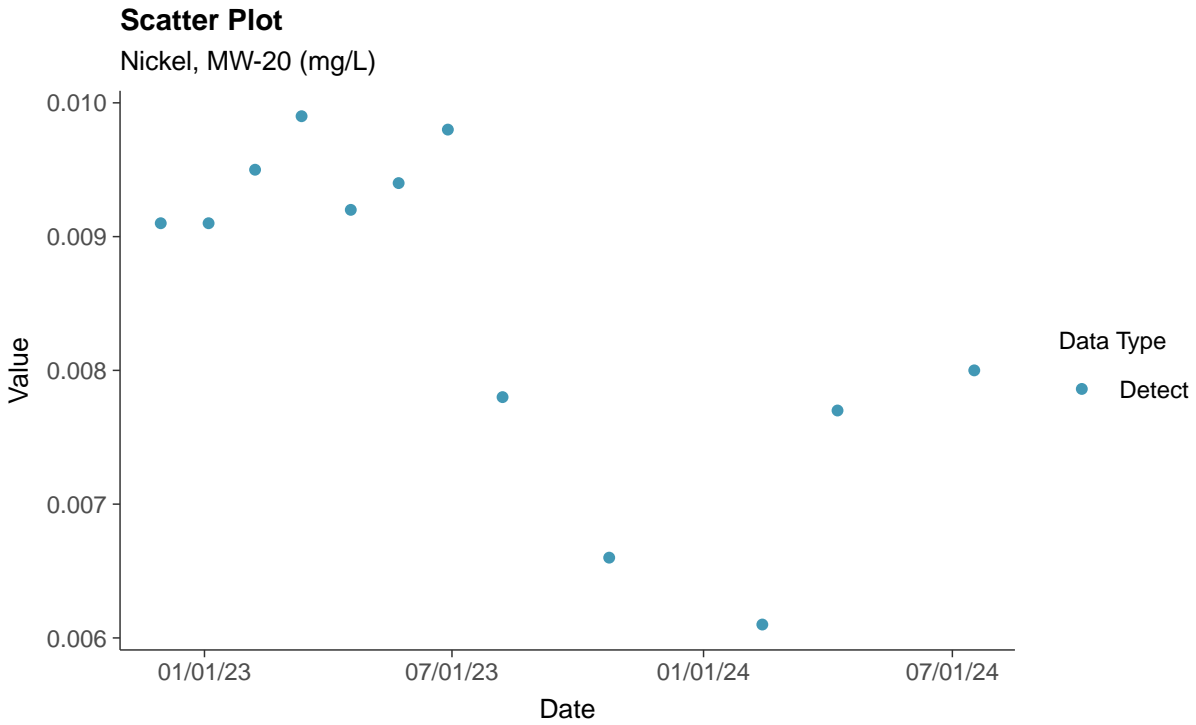
Iron, MW-20 (mg/L)





### Part 115: Nickel, MW-20

ID: 30\_1\_6\_119

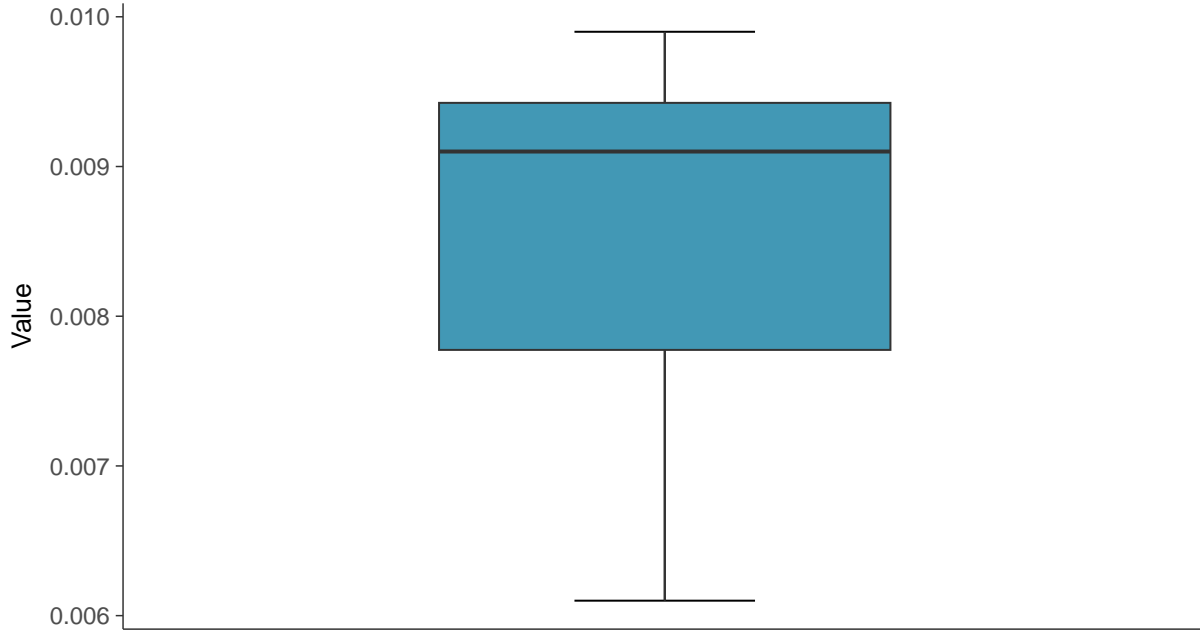






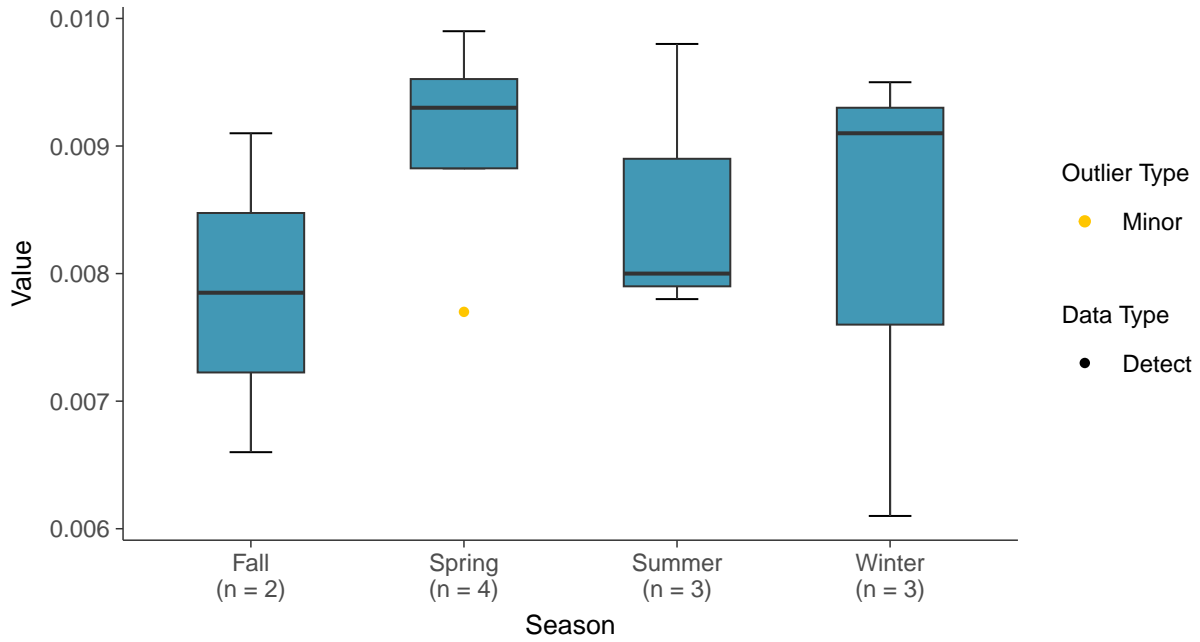
### Boxplot

Nickel, MW-20 (mg/L)



### Boxplot by Season

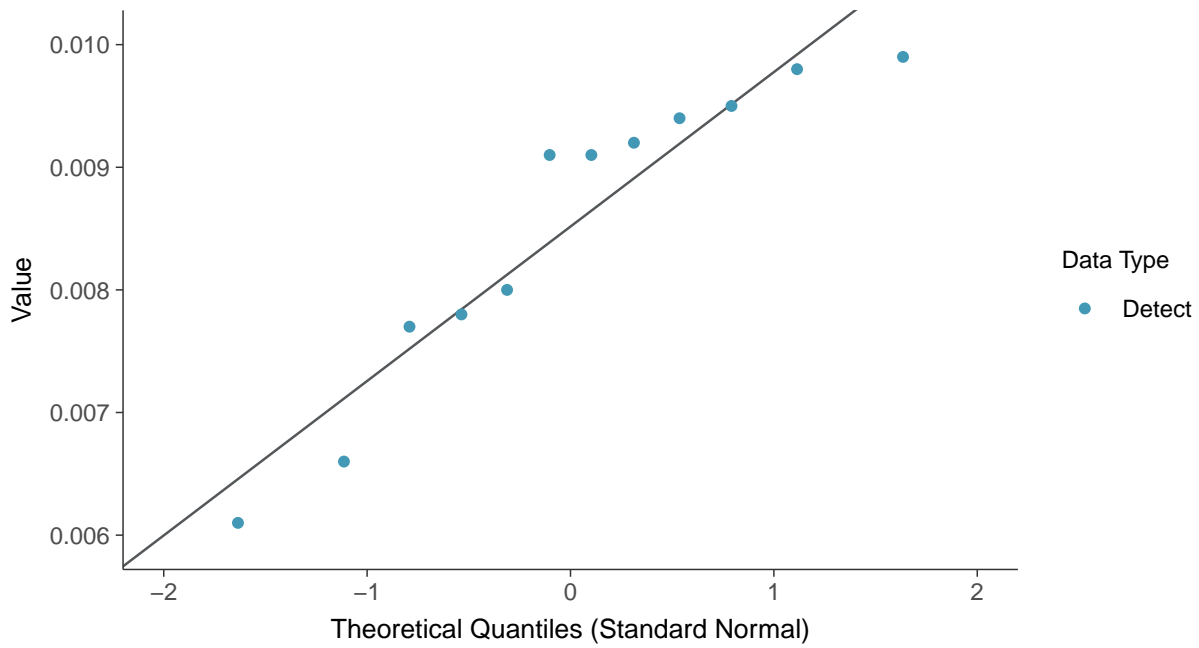
Nickel, MW-20 (mg/L)





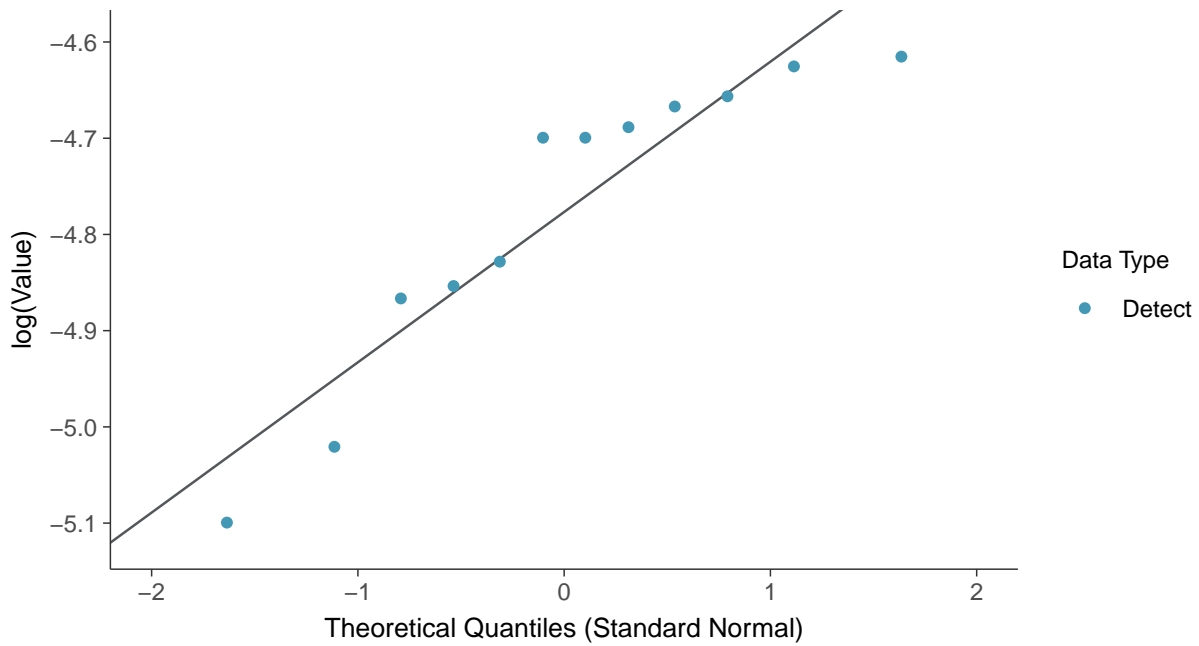
### Normal Q-Q plot

Nickel, MW-20 (mg/L)



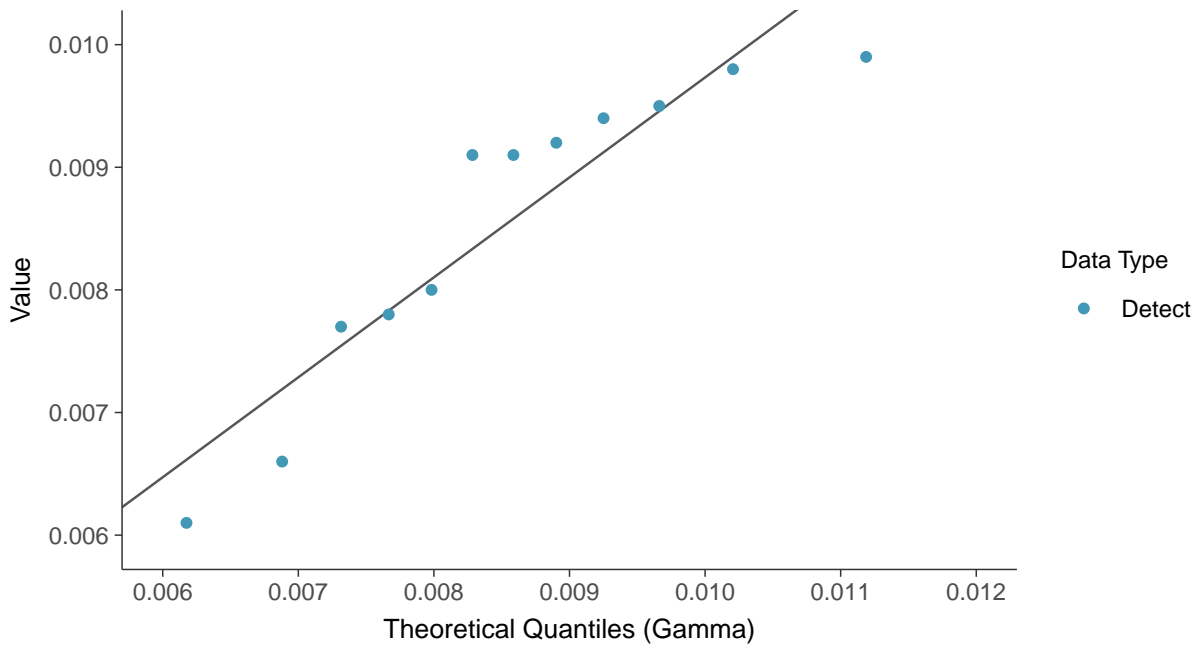
### Lognormal Q-Q plot

Nickel, MW-20 (mg/L)

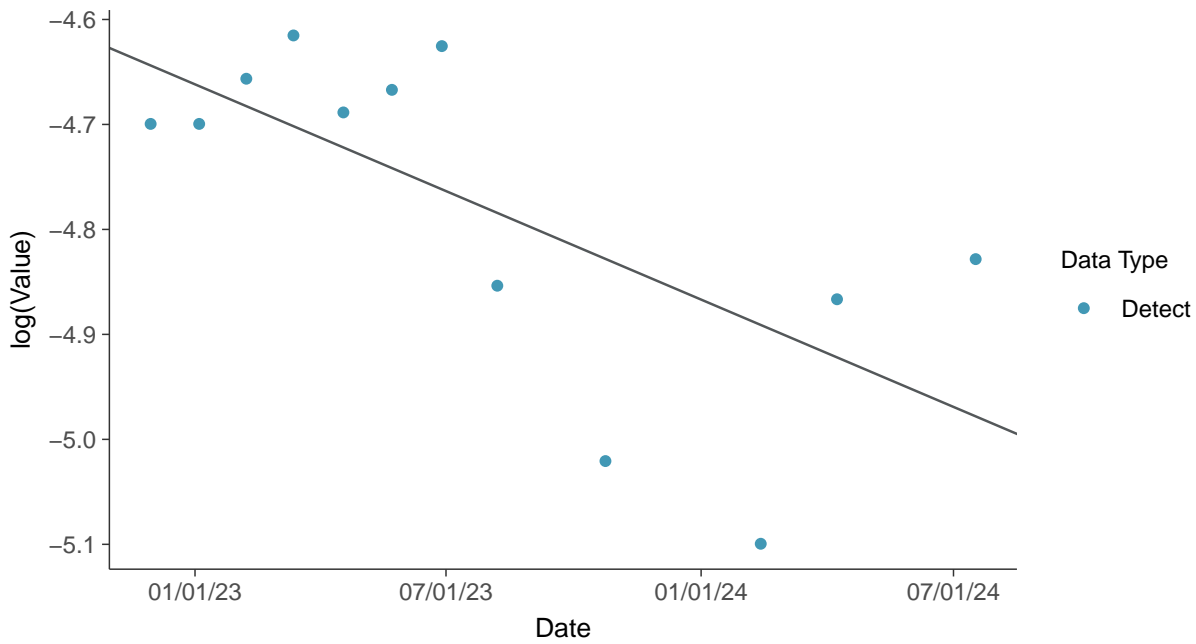




**Gamma Q-Q plot**  
Nickel, MW-20 (mg/L)



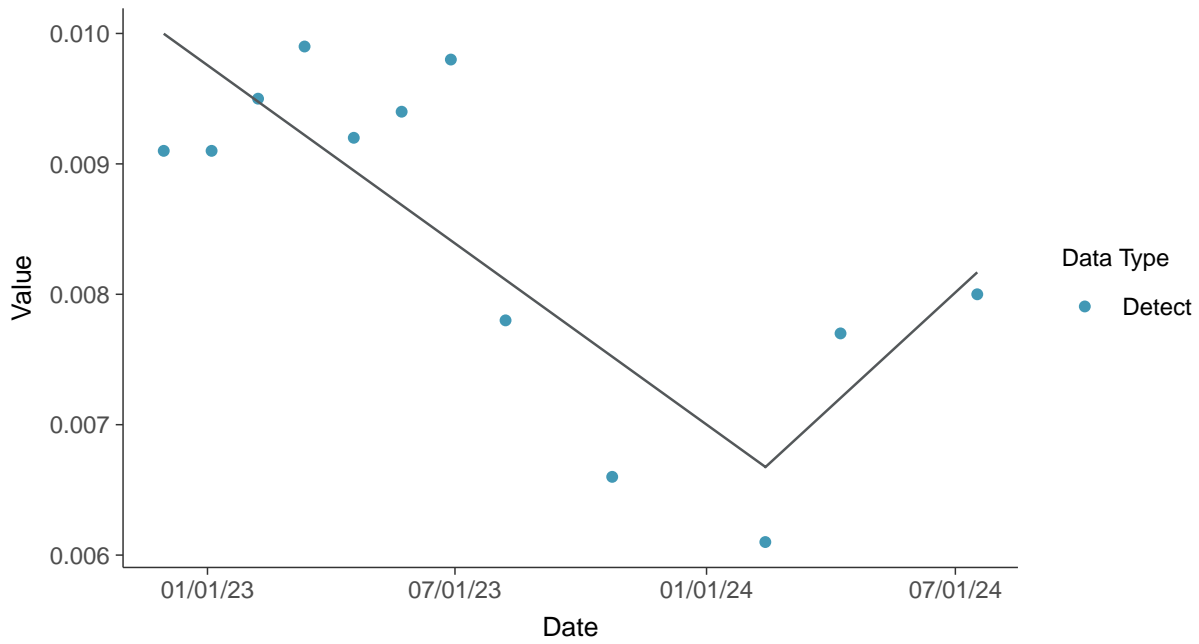
**Trend Regression: Lognormal MLE**  
Nickel, MW-20 (mg/L)





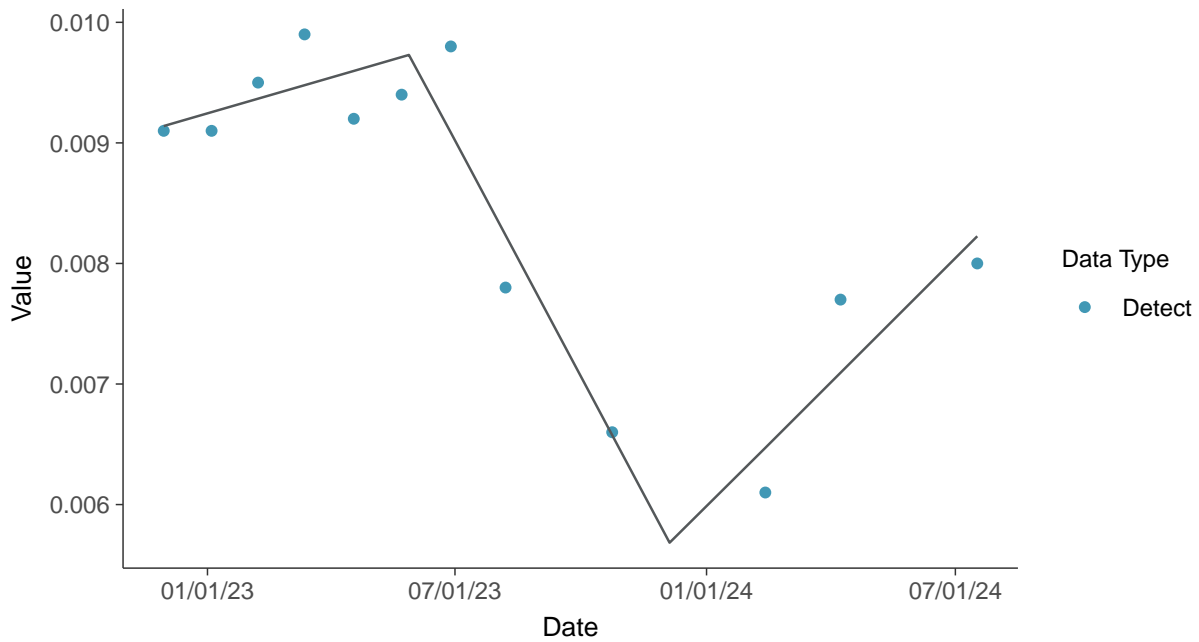
### Trend Regression: Piecewise Linear-Linear

Nickel, MW-20 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

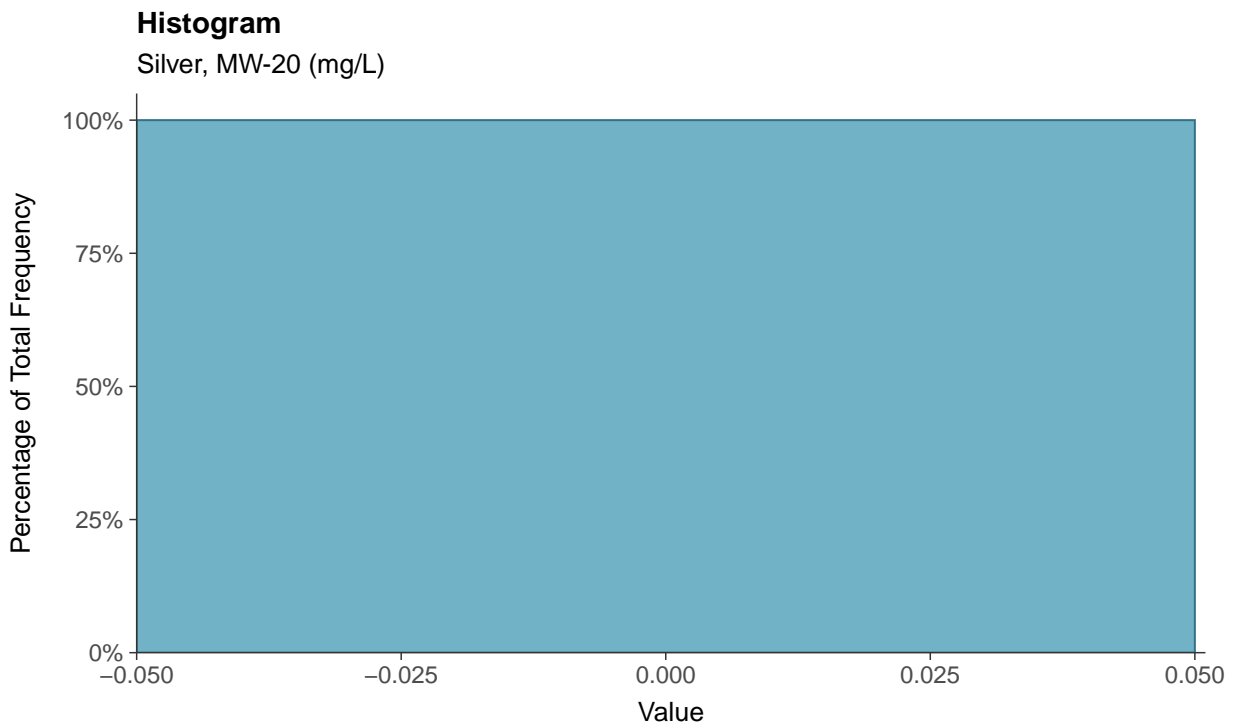
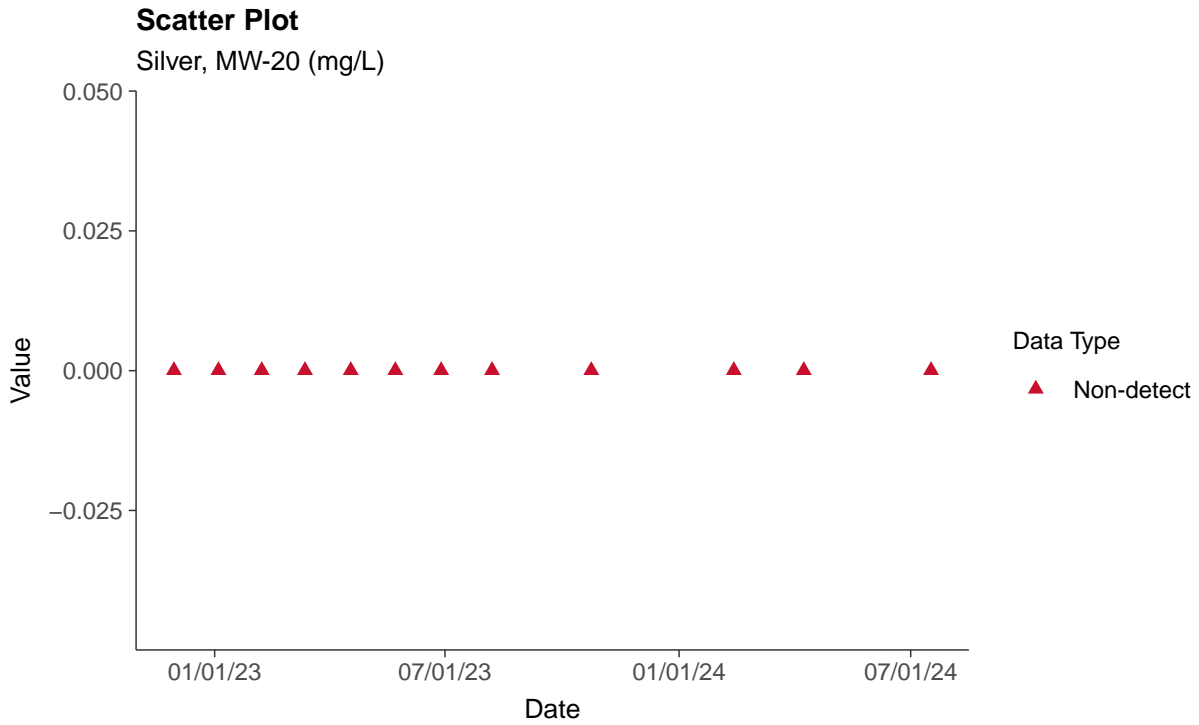
Nickel, MW-20 (mg/L)





### Part 115: Silver, MW-20

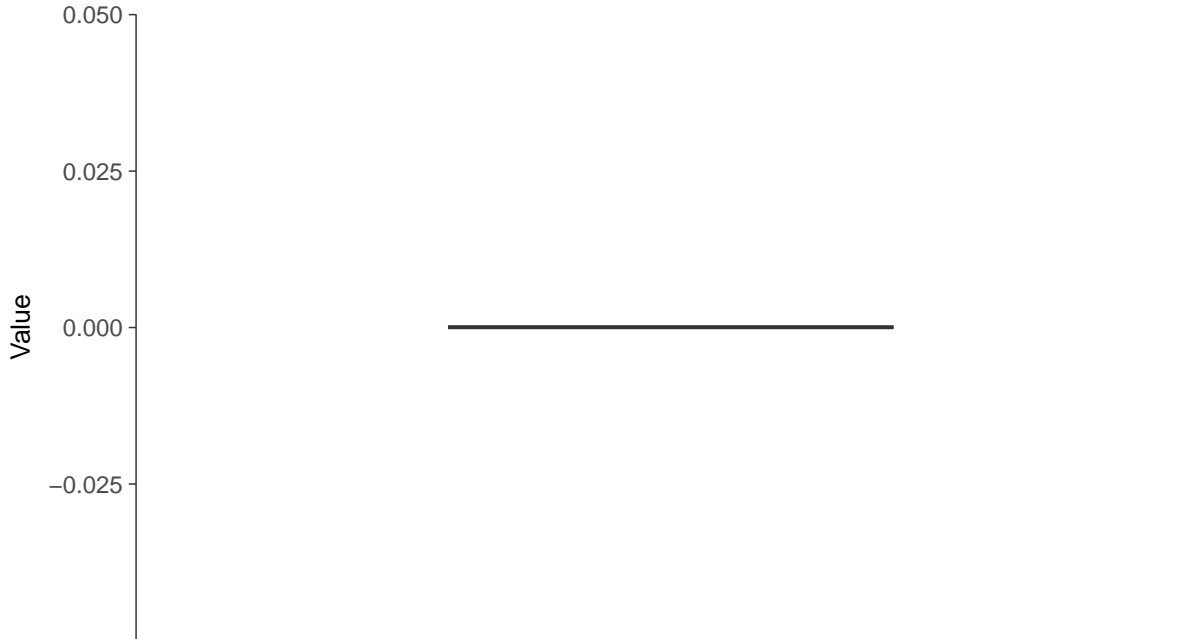
ID: 30\_1\_6\_123





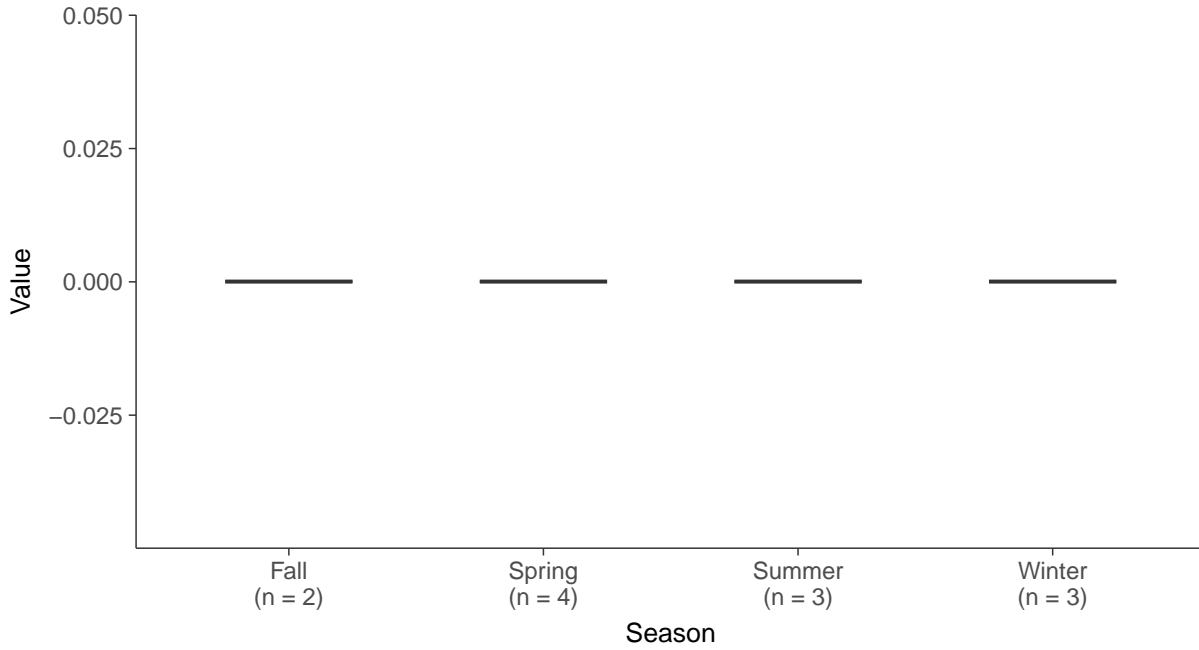
### Boxplot

Silver, MW-20 (mg/L)



### Boxplot by Season

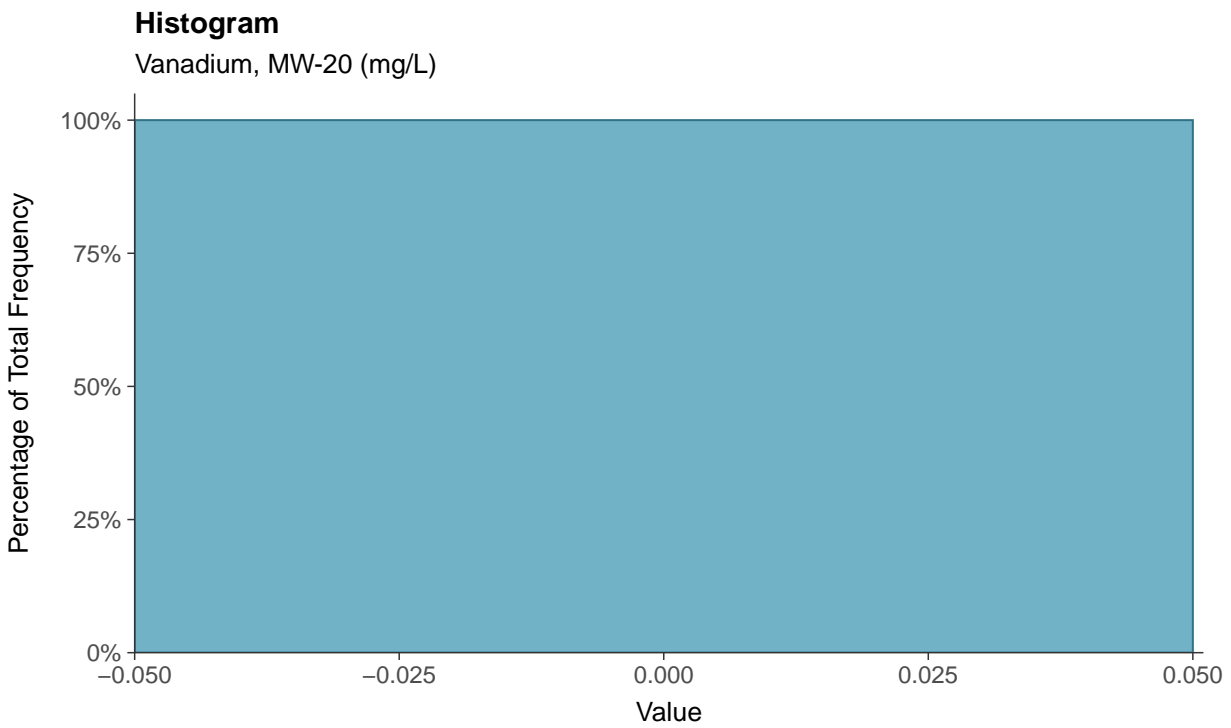
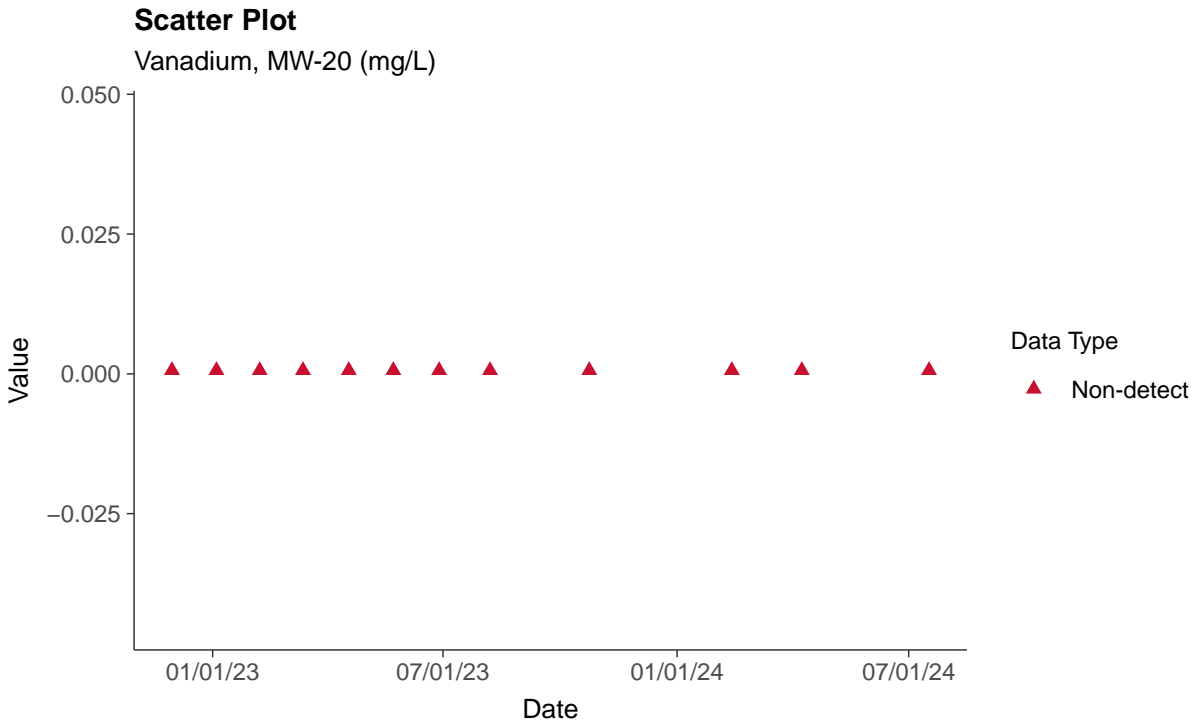
Silver, MW-20 (mg/L)





### Part 115: Vanadium, MW-20

ID: 30\_1\_6\_129





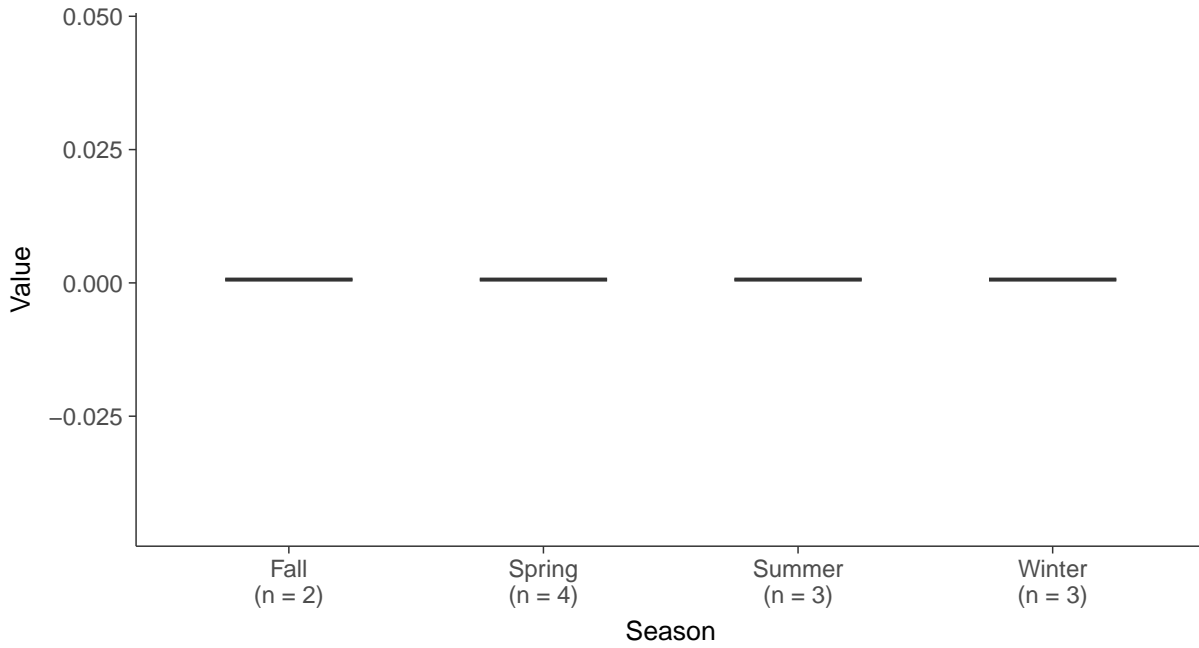
### Boxplot

Vanadium, MW-20 (mg/L)



### Boxplot by Season

Vanadium, MW-20 (mg/L)

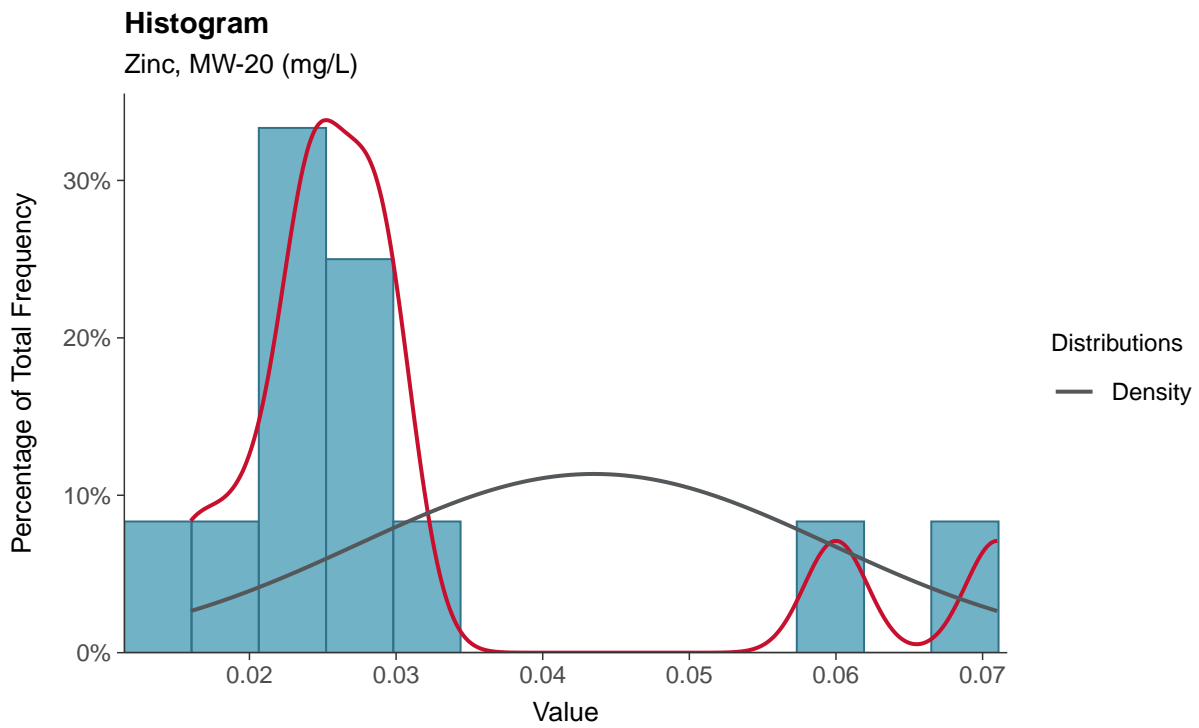
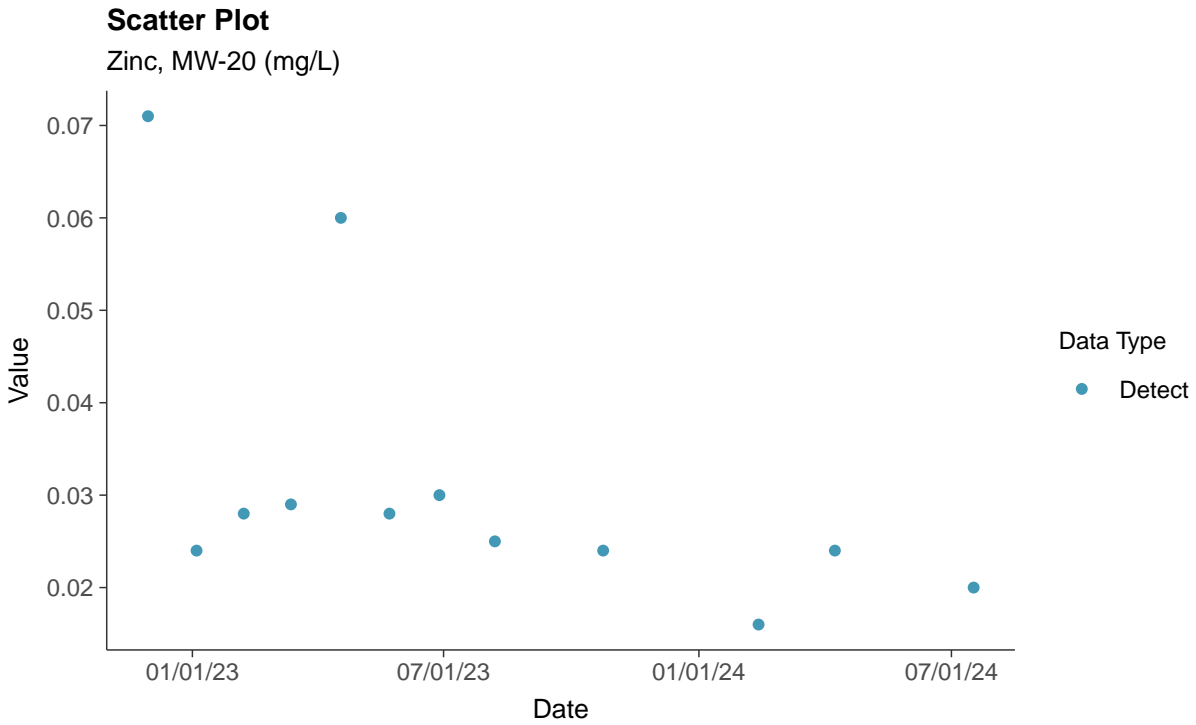






### Part 115: Zinc, MW-20

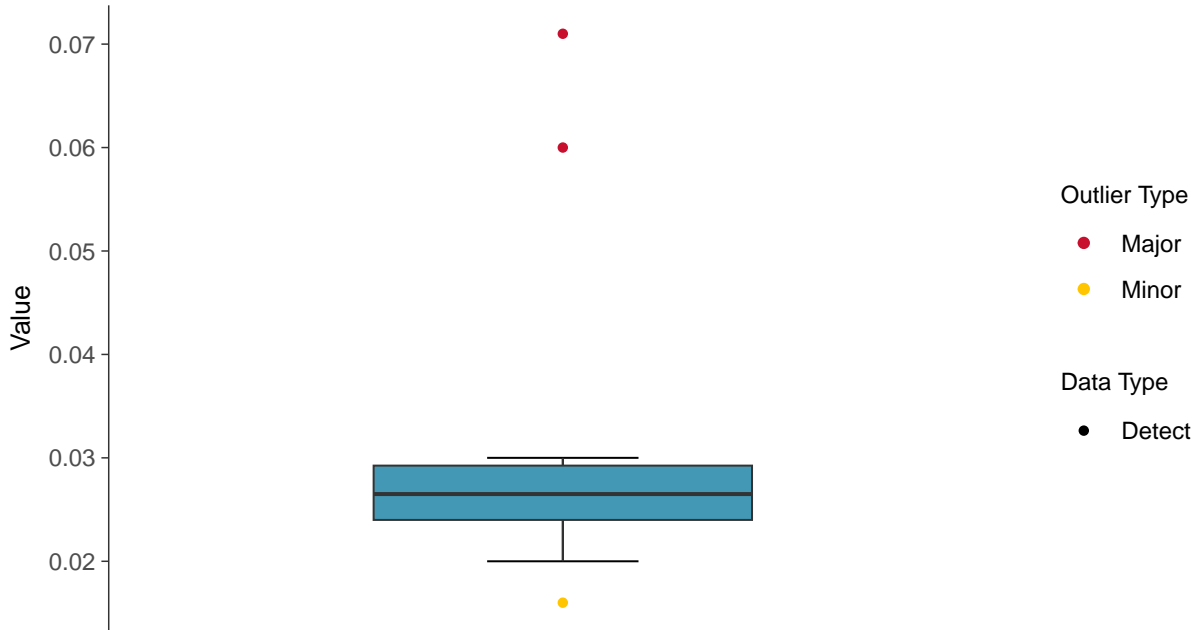
ID: 30\_1\_6\_130





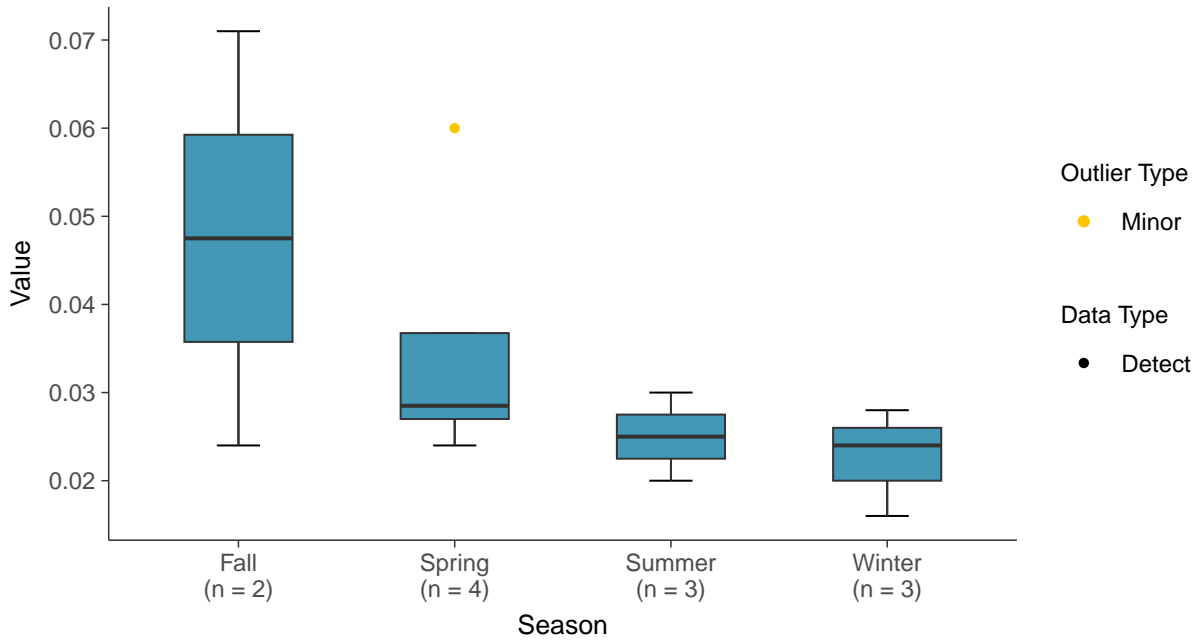
### Boxplot

Zinc, MW-20 (mg/L)



### Boxplot by Season

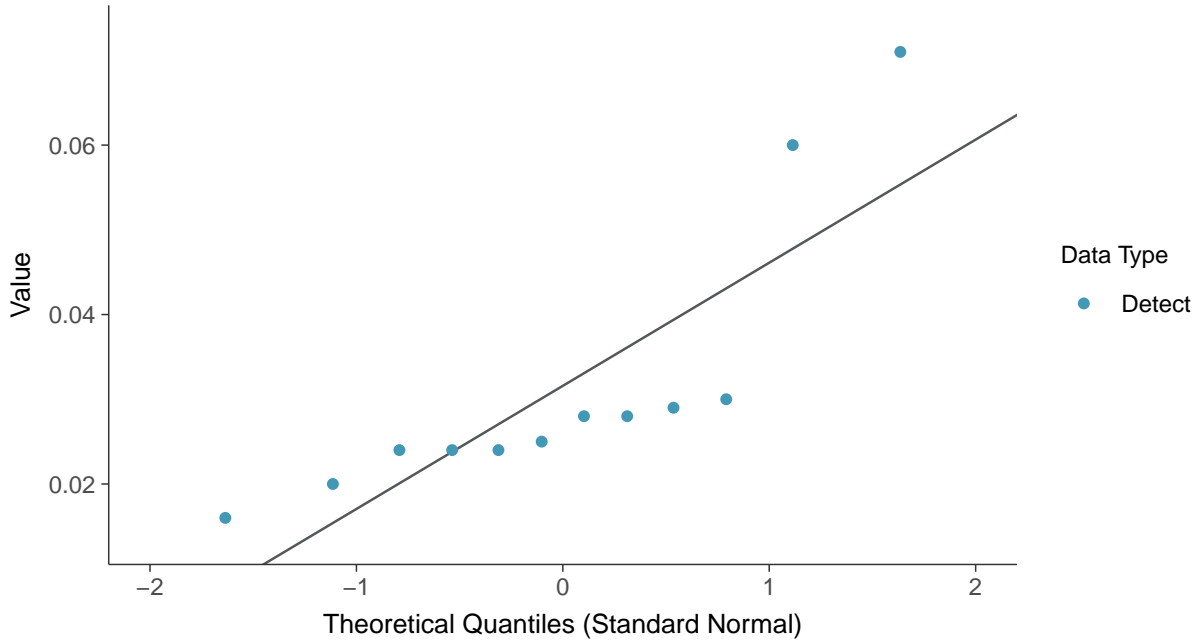
Zinc, MW-20 (mg/L)





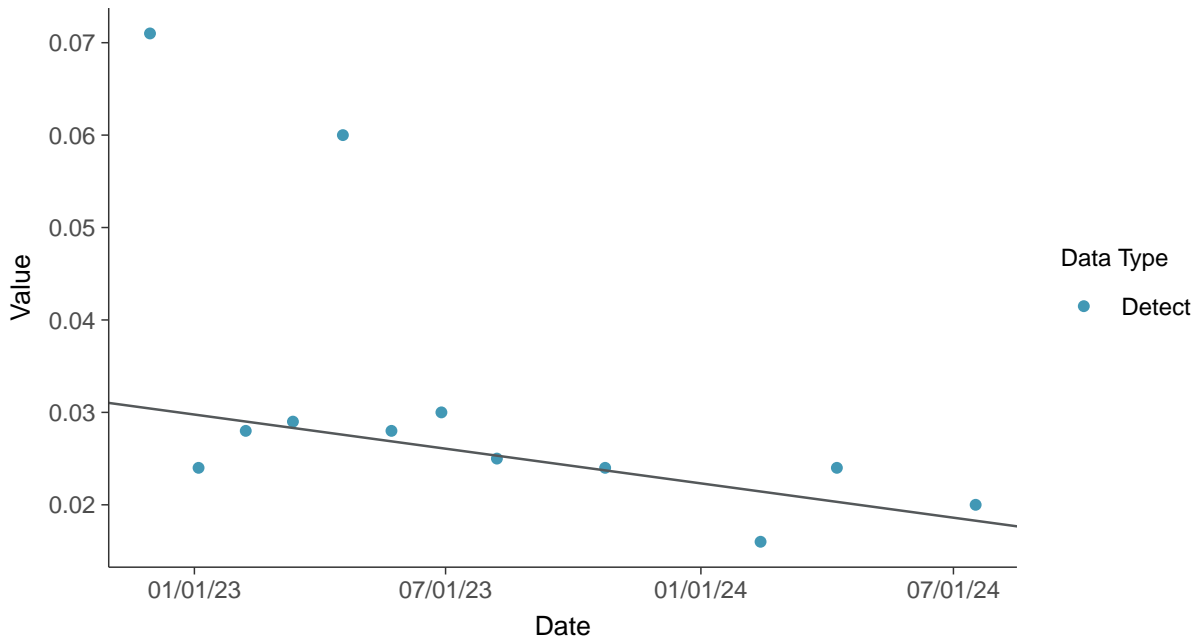
### Normal Q-Q plot

Zinc, MW-20 (mg/L)



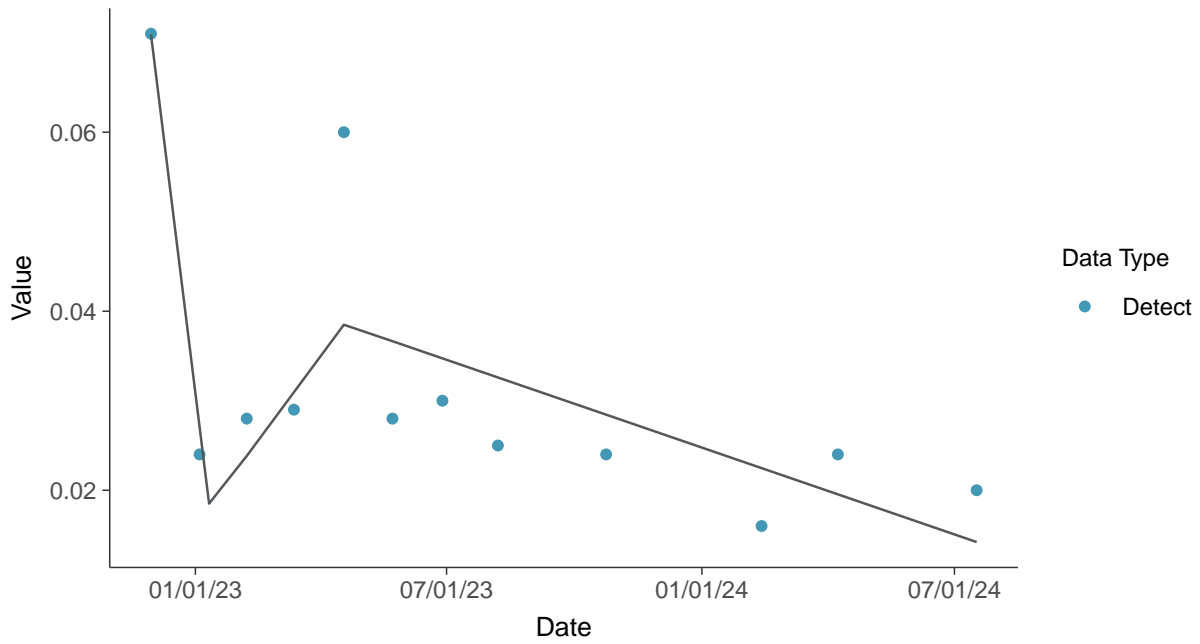
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Zinc, MW-20 (mg/L)





**Trend Regression: Piecewise Linear-Linear-Linear**  
Zinc, MW-20 (mg/L)



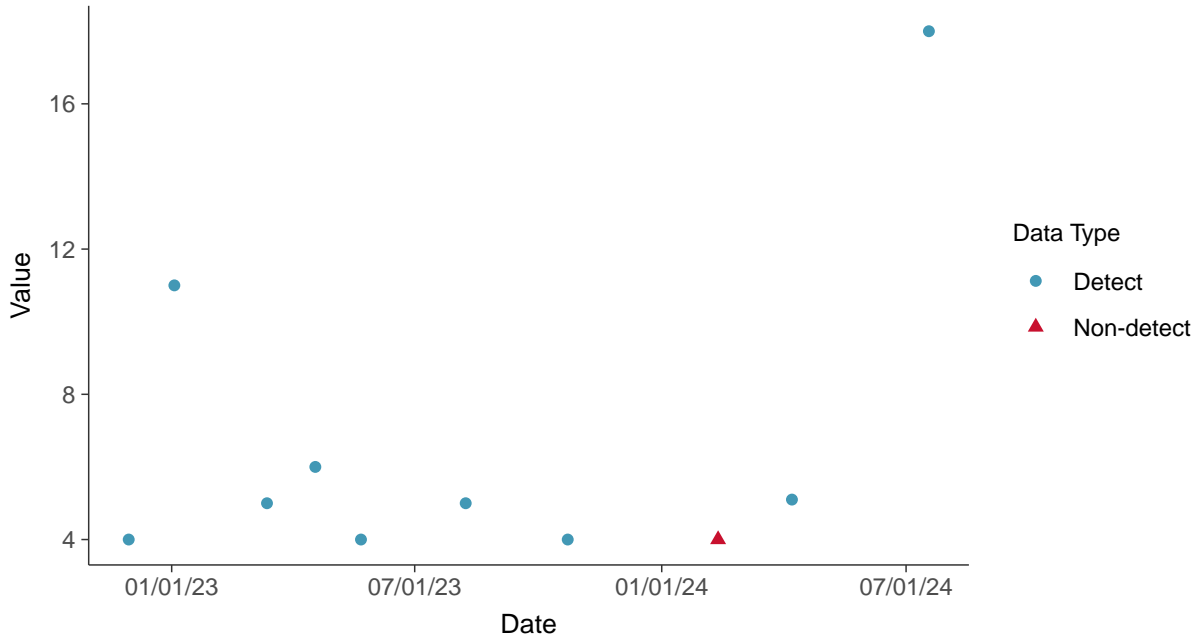


### Additional Parameters: Total Suspended Solids, MW-30

ID: 40\_1\_3\_127

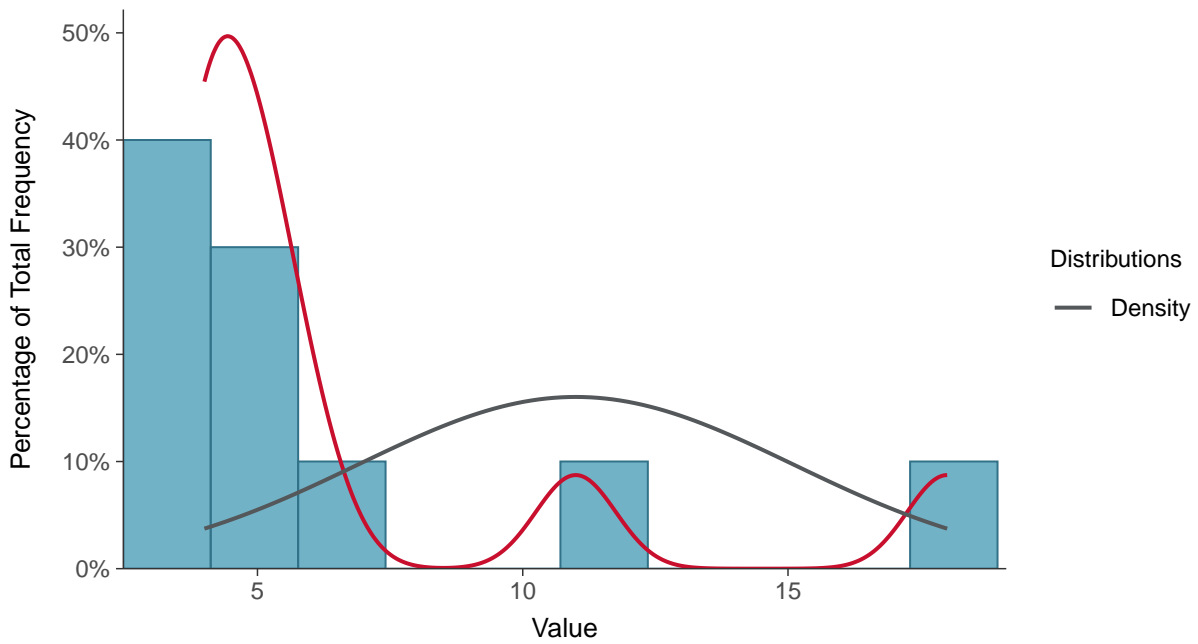
#### Scatter Plot

Total Suspended Solids, MW-30 (mg/L)



#### Histogram

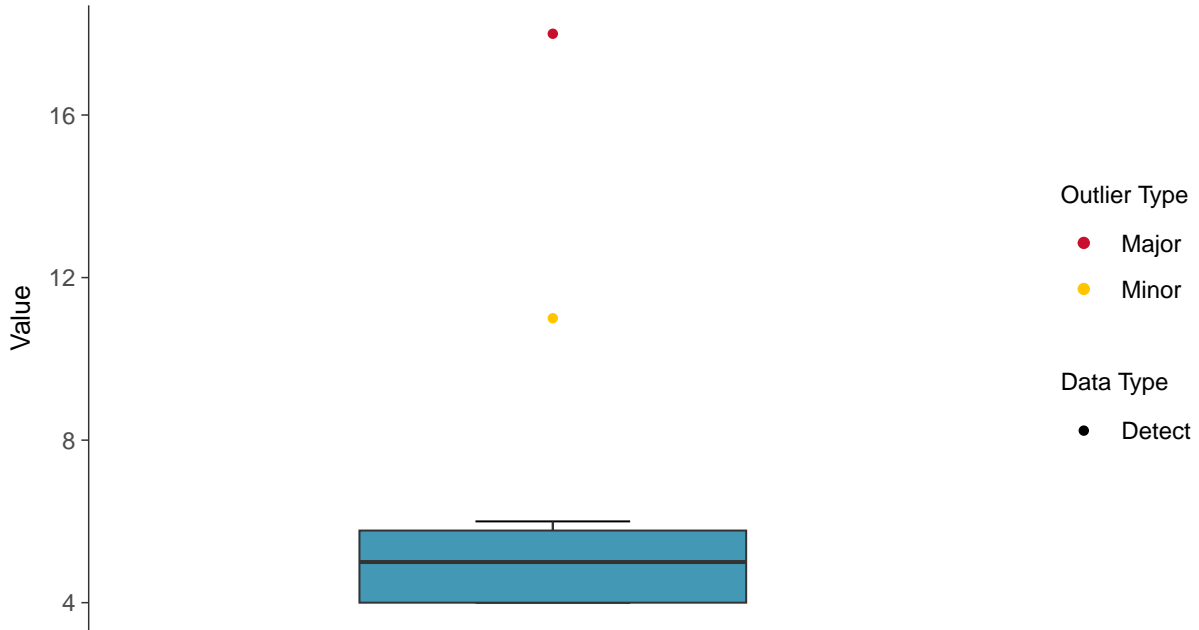
Total Suspended Solids, MW-30 (mg/L)





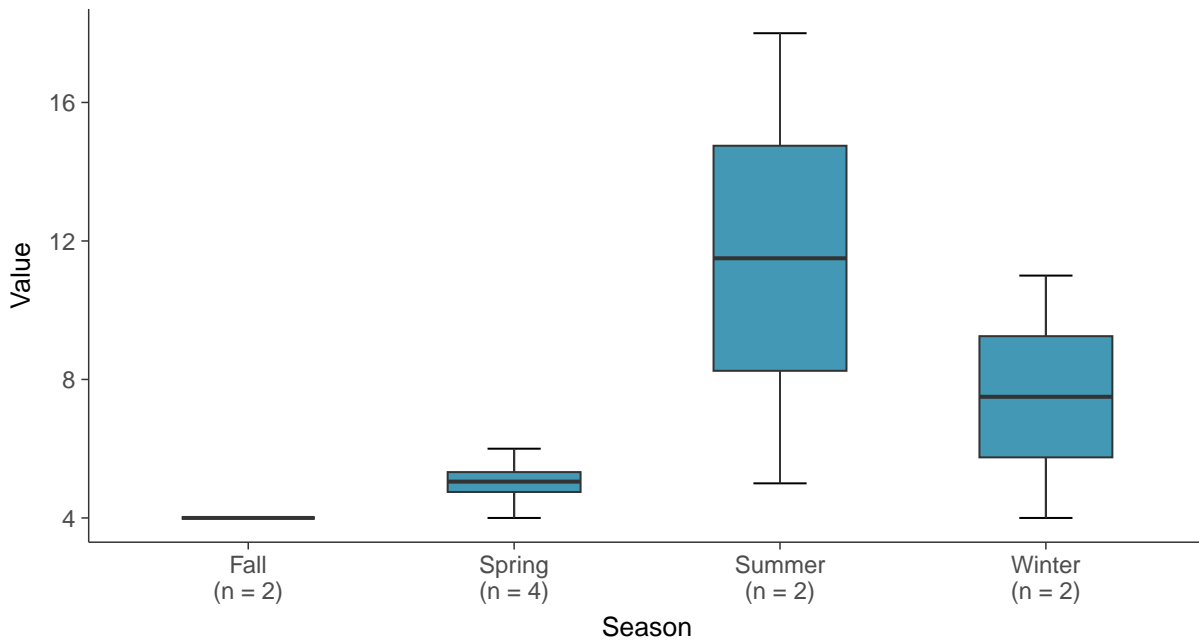
### Boxplot

Total Suspended Solids, MW-30 (mg/L)



### Boxplot by Season

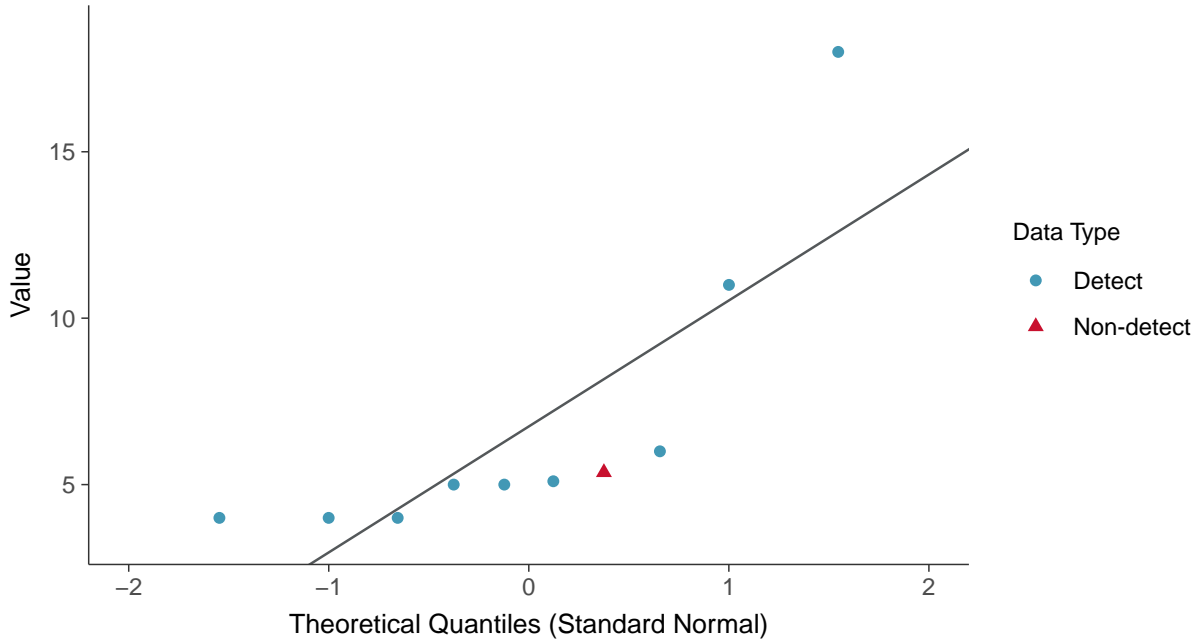
Total Suspended Solids, MW-30 (mg/L)





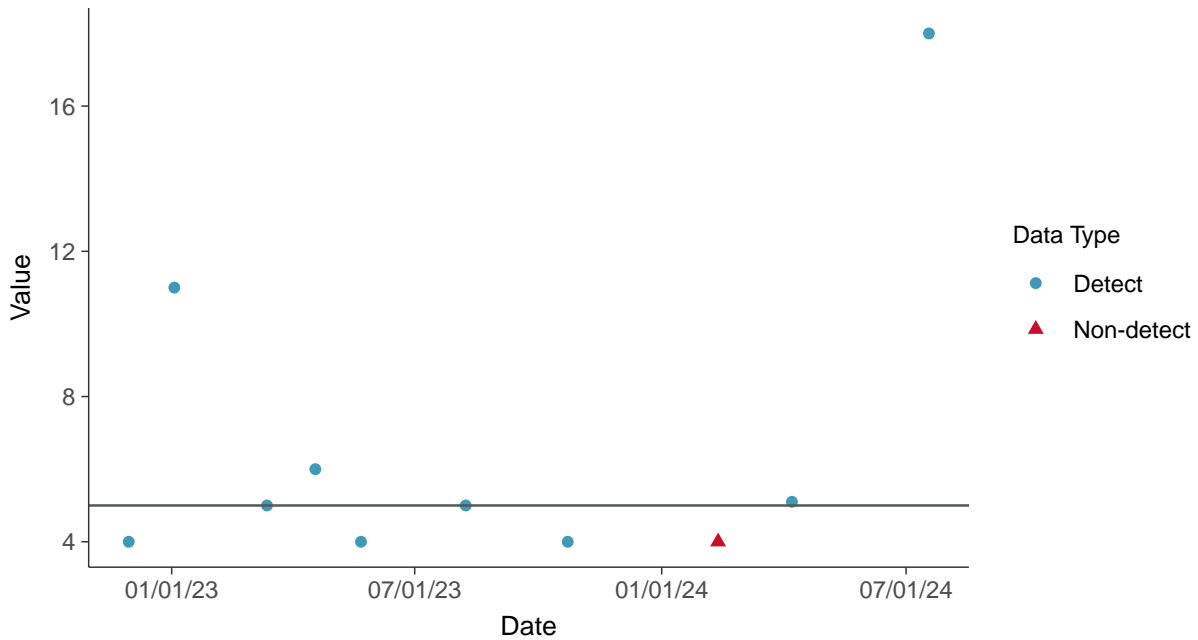
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-30 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

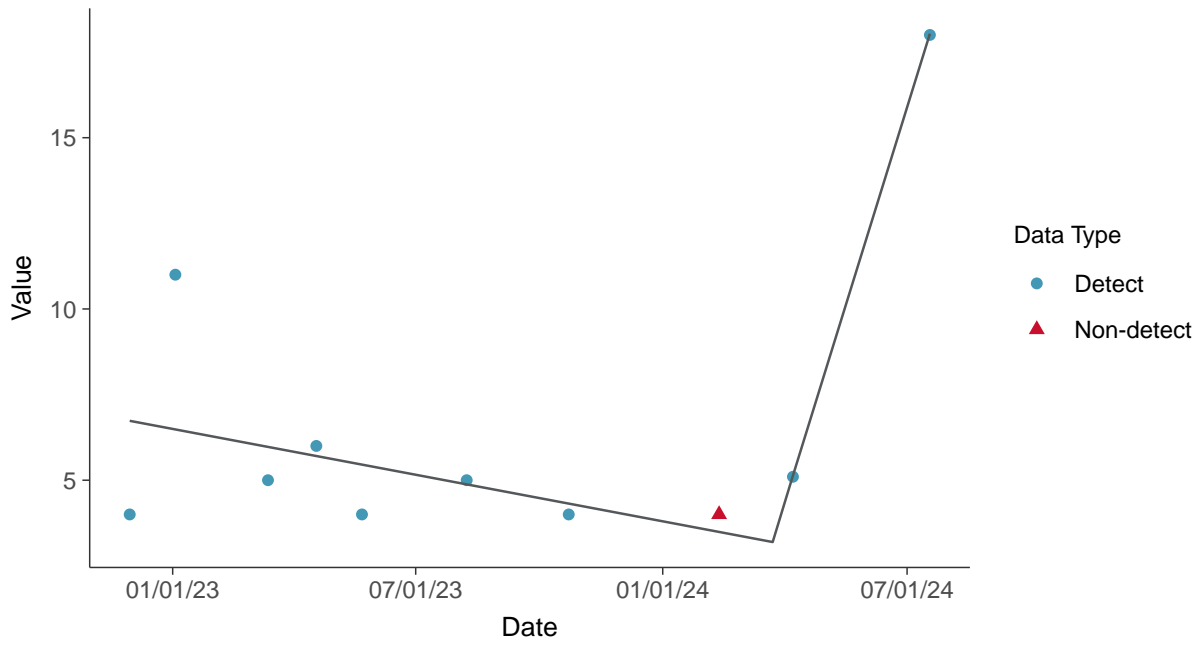
Total Suspended Solids, MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-30 (mg/L)

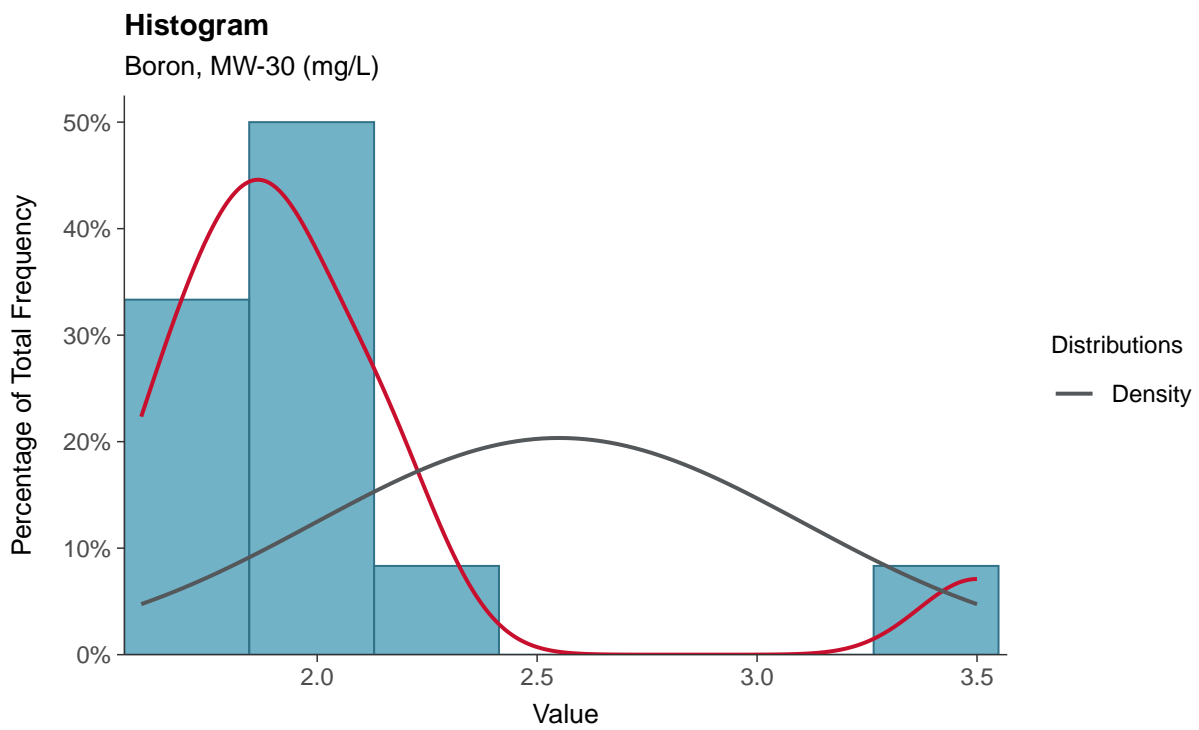
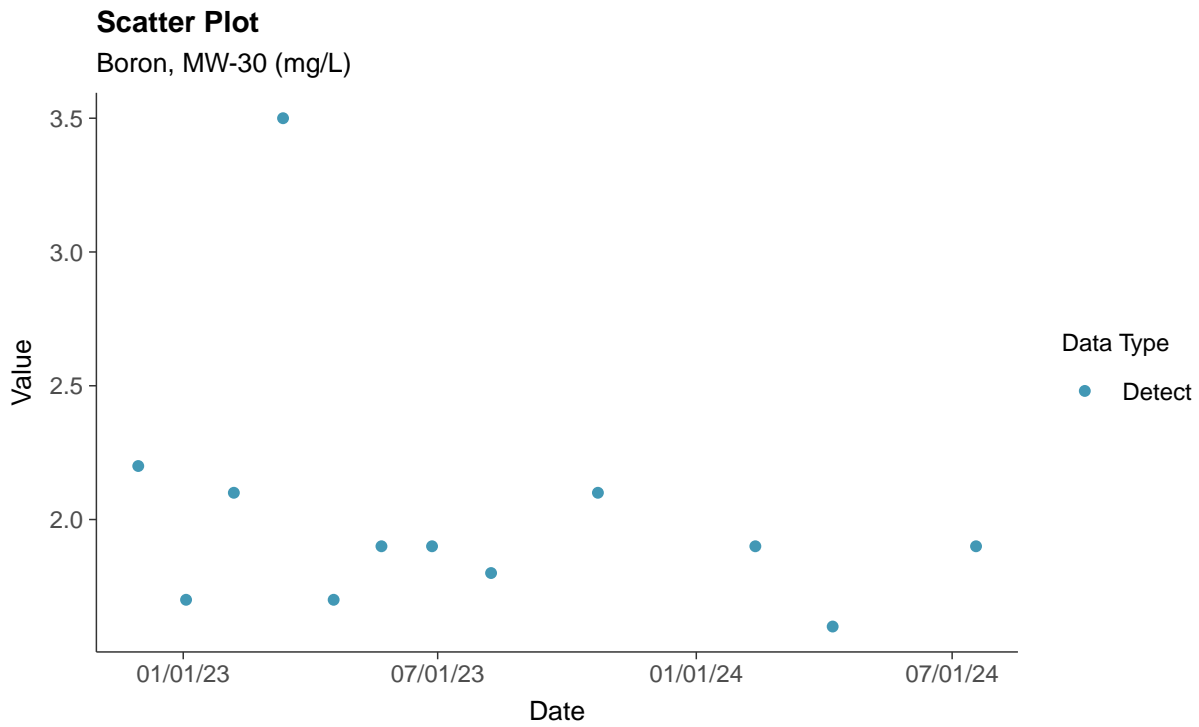






### Appendix III: Boron, MW-30

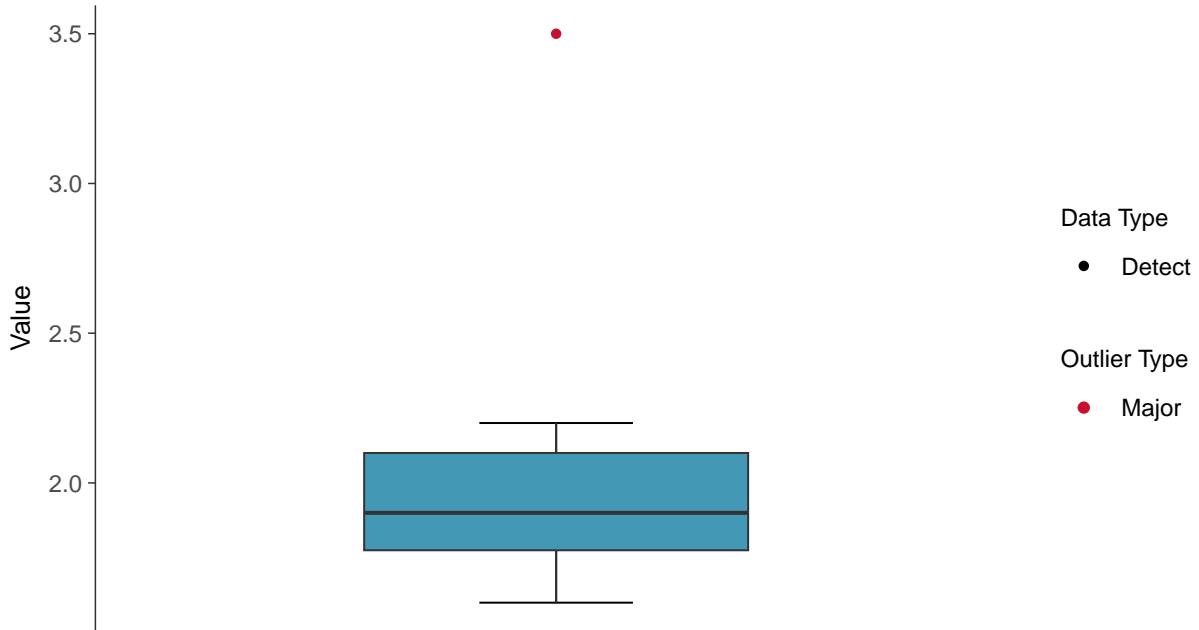
ID: 40\_1\_4\_105





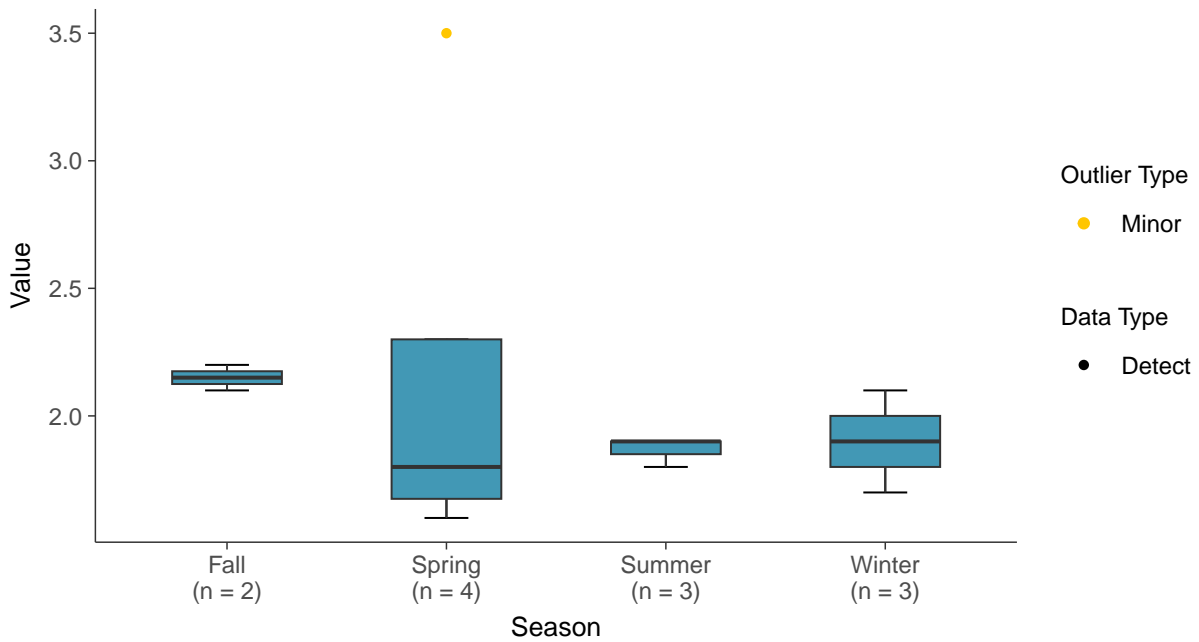
### Boxplot

Boron, MW-30 (mg/L)



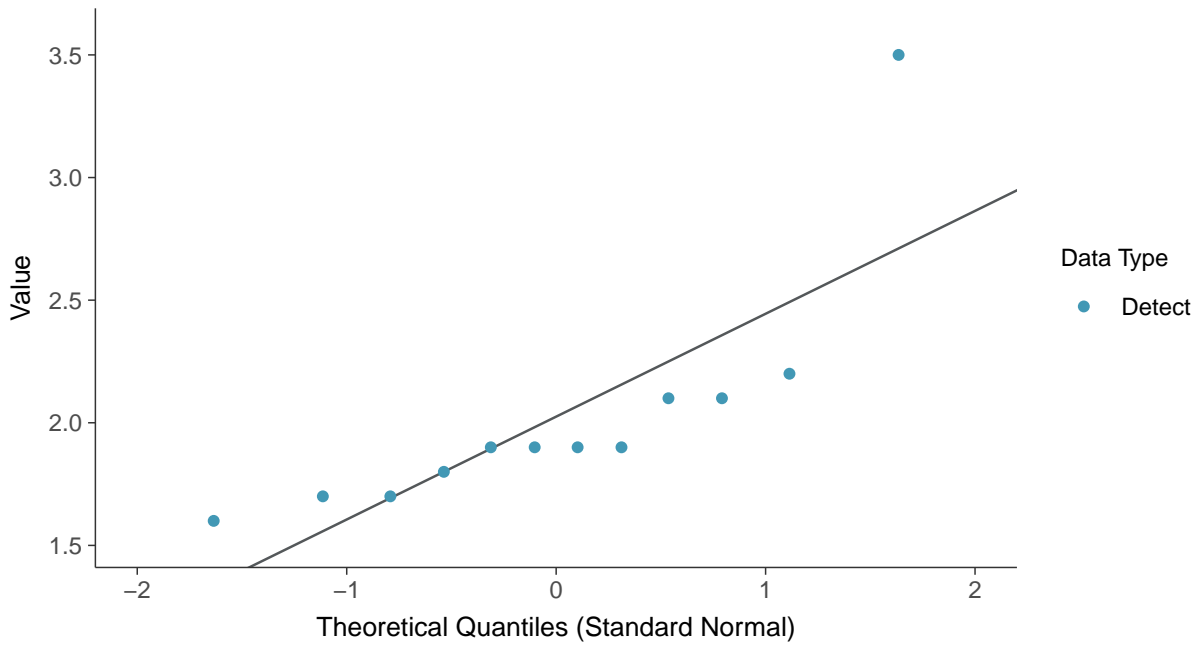
### Boxplot by Season

Boron, MW-30 (mg/L)

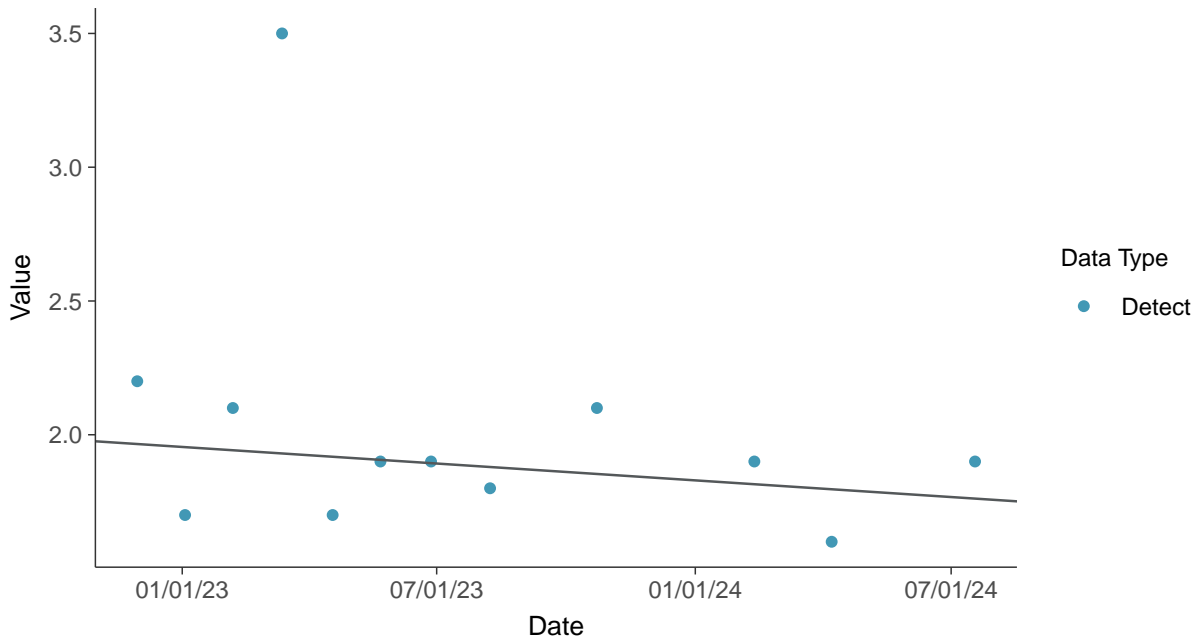




**Normal Q-Q plot**  
Boron, MW-30 (mg/L)



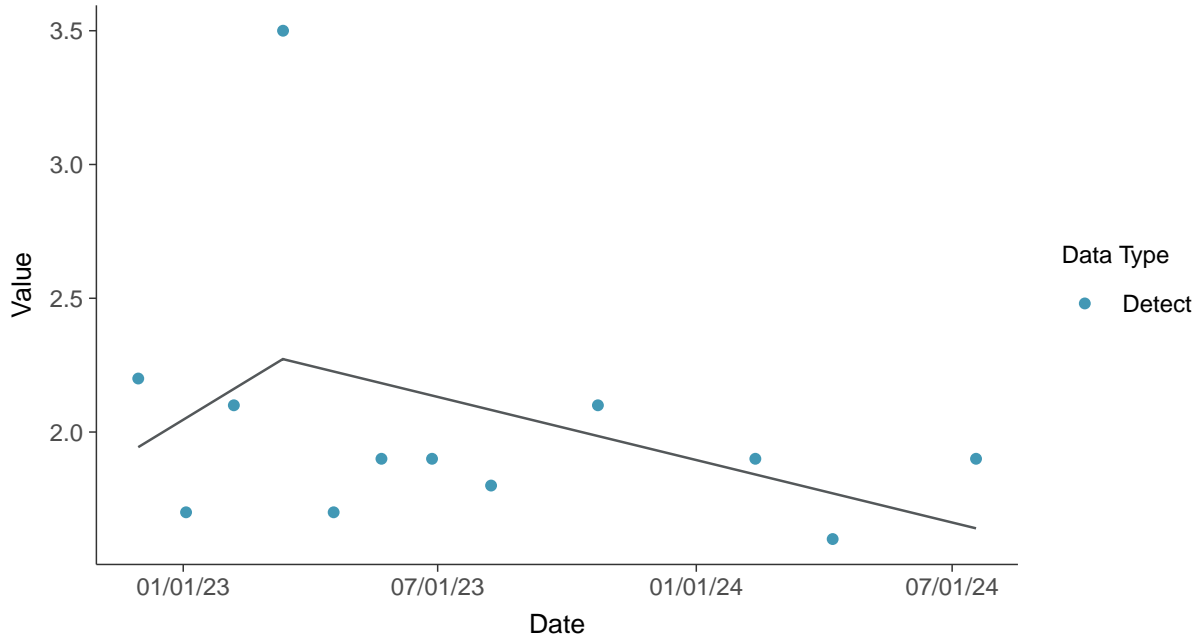
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Boron, MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Boron, MW-30 (mg/L)



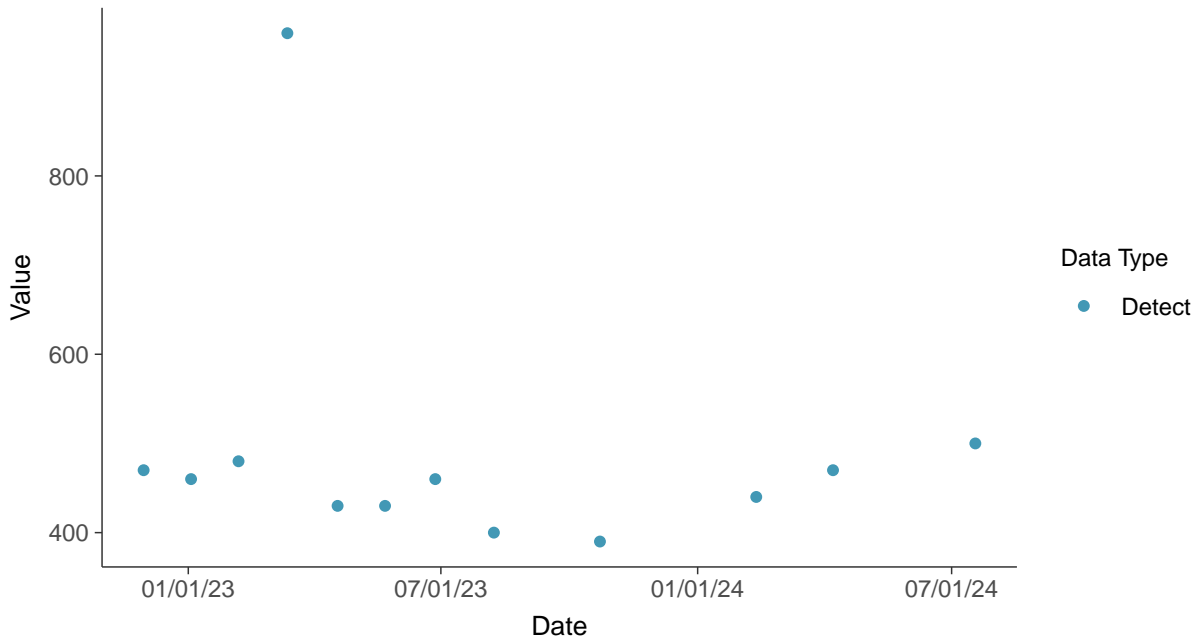


### Appendix III: Calcium, MW-30

ID: 40\_1\_4\_107

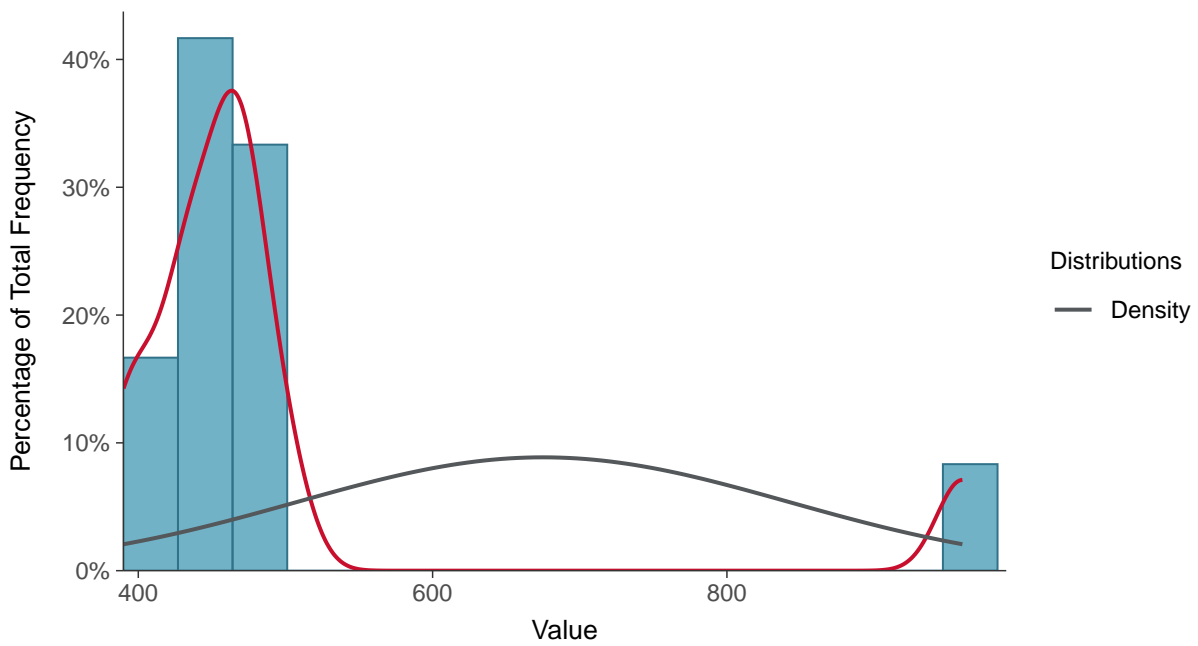
#### Scatter Plot

Calcium, MW-30 (mg/L)



#### Histogram

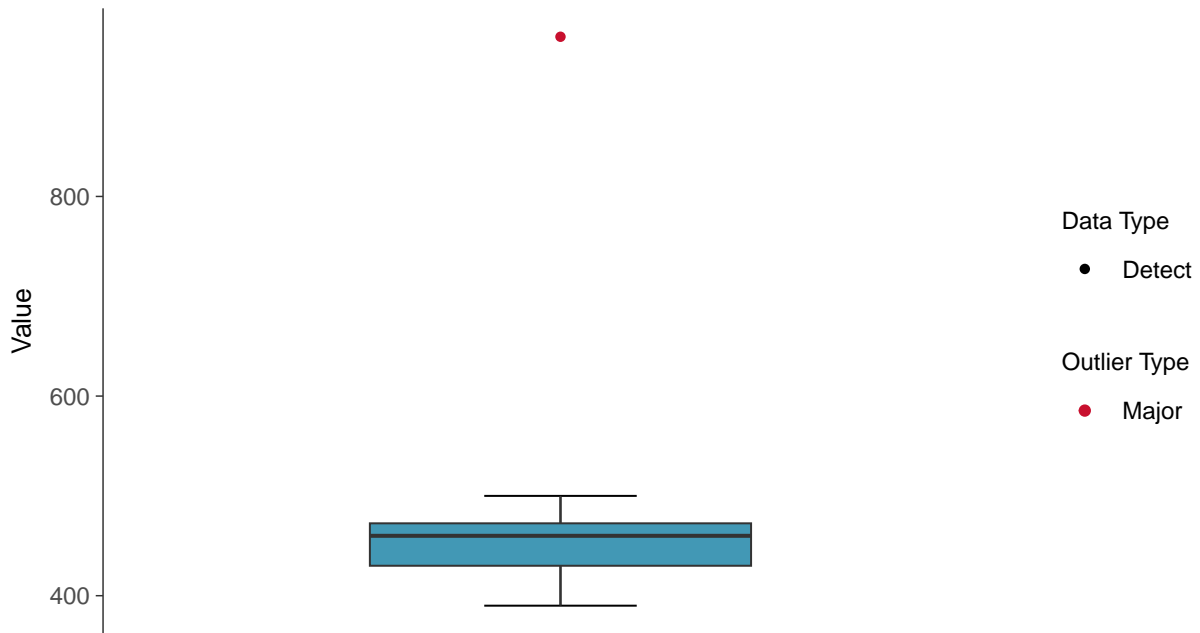
Calcium, MW-30 (mg/L)





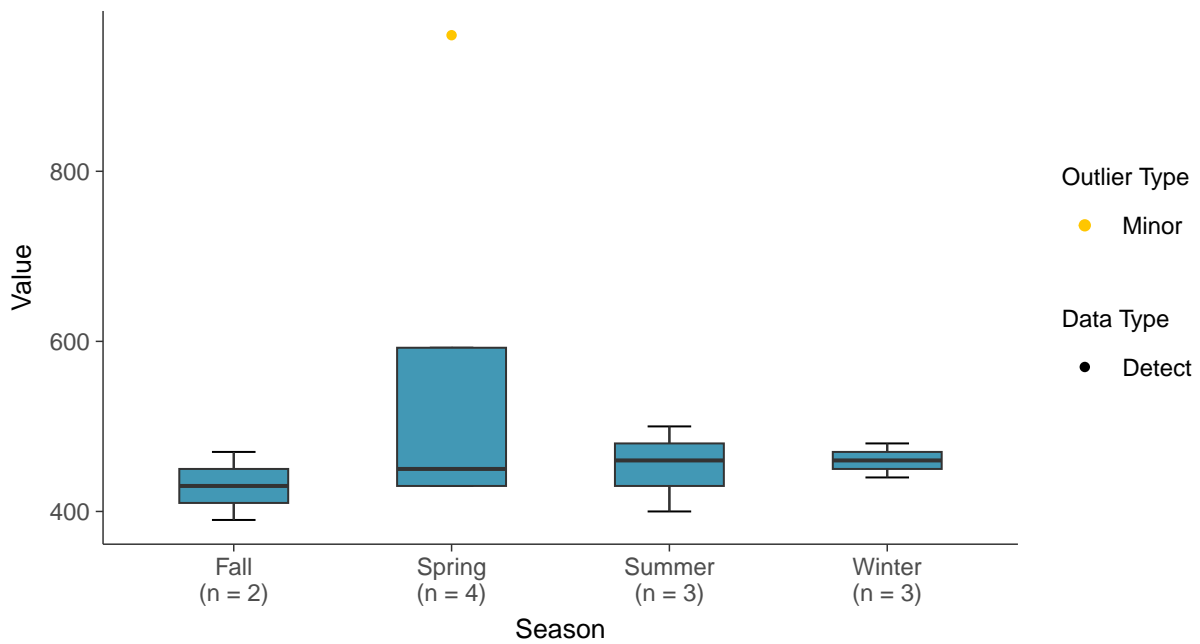
### Boxplot

Calcium, MW-30 (mg/L)



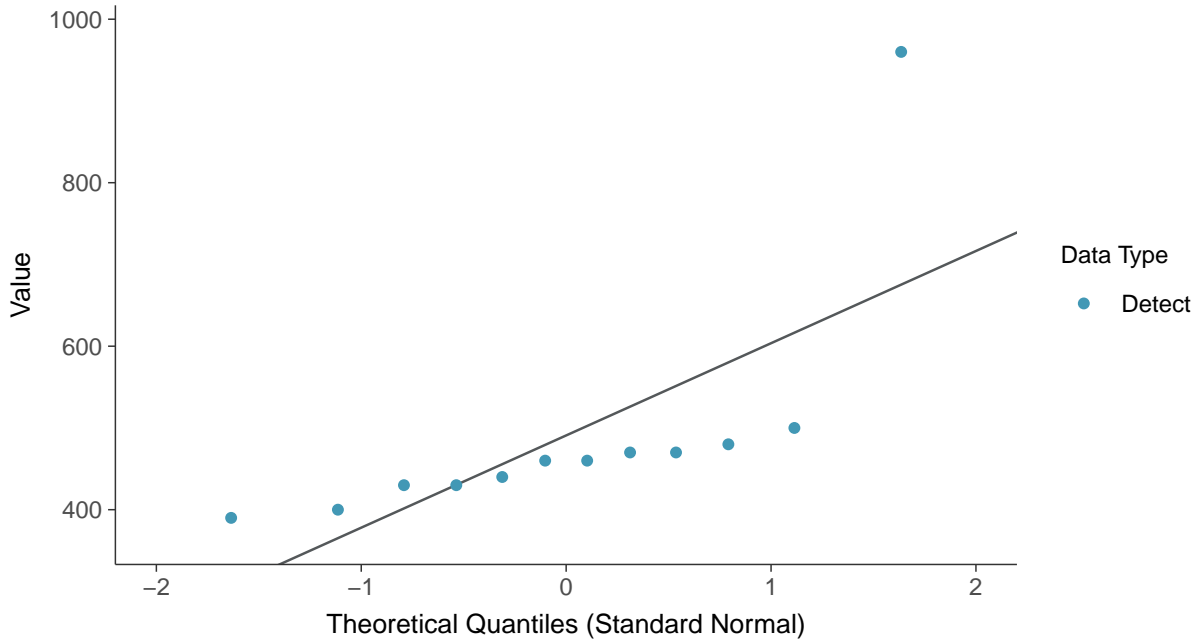
### Boxplot by Season

Calcium, MW-30 (mg/L)

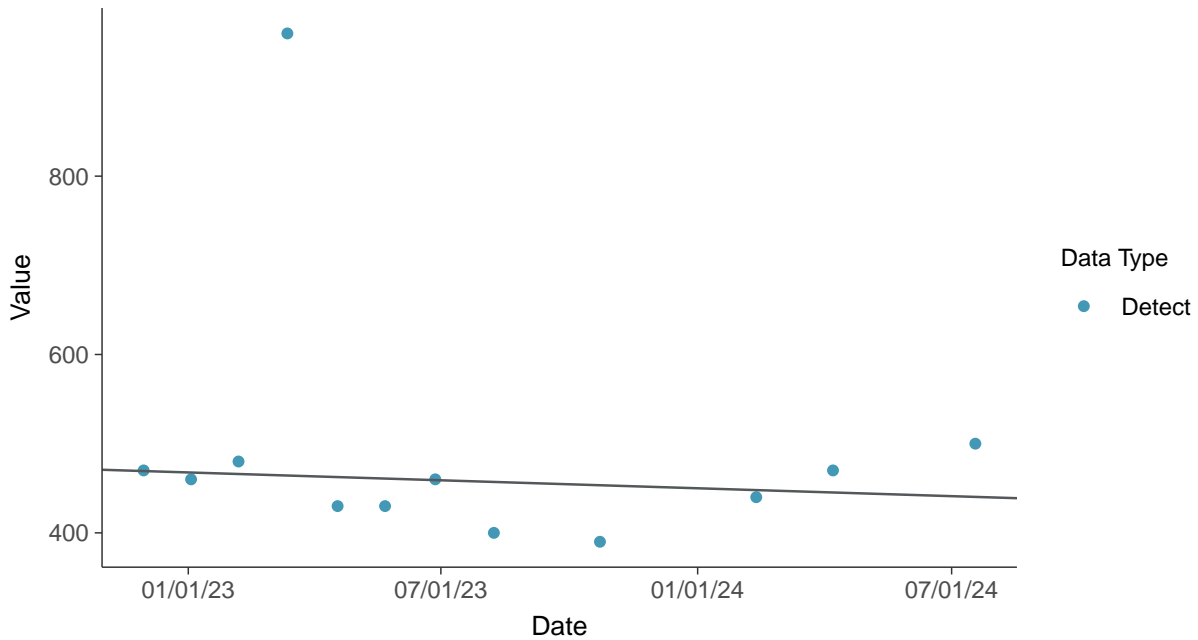




**Normal Q-Q plot**  
Calcium, MW-30 (mg/L)



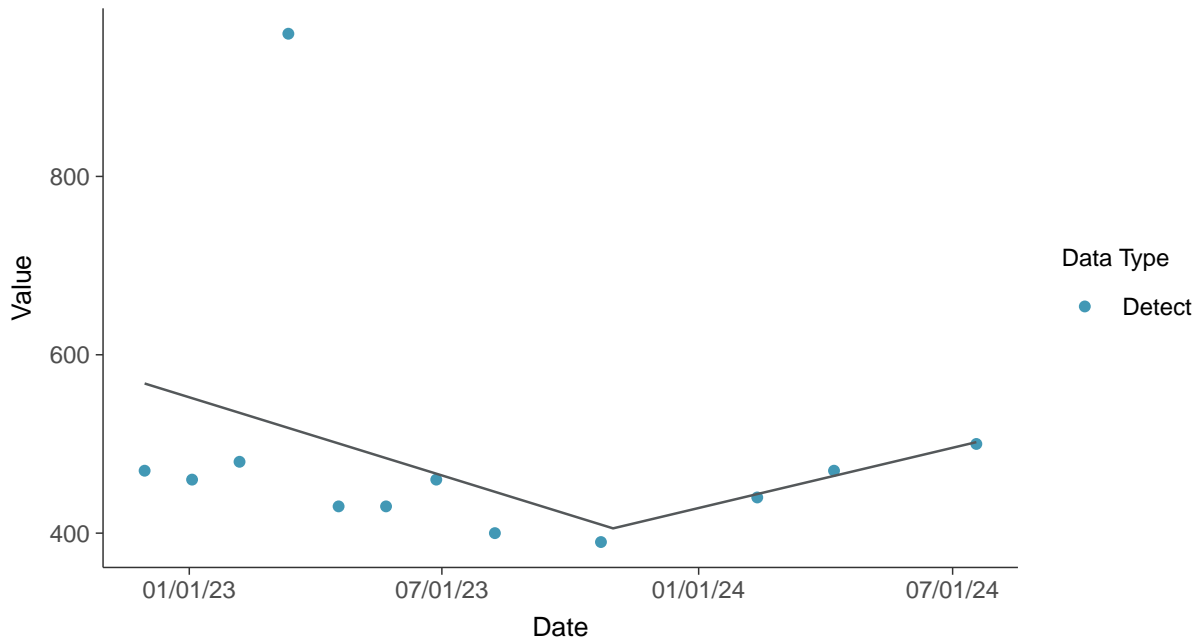
**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Calcium, MW-30 (mg/L)





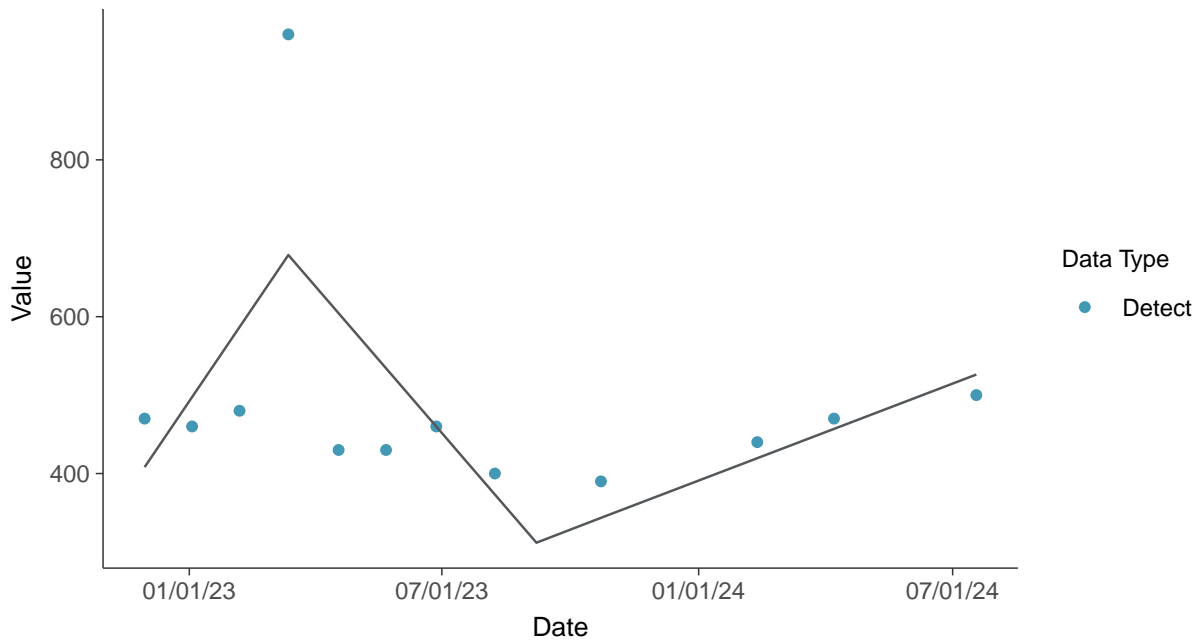
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-30 (mg/L)





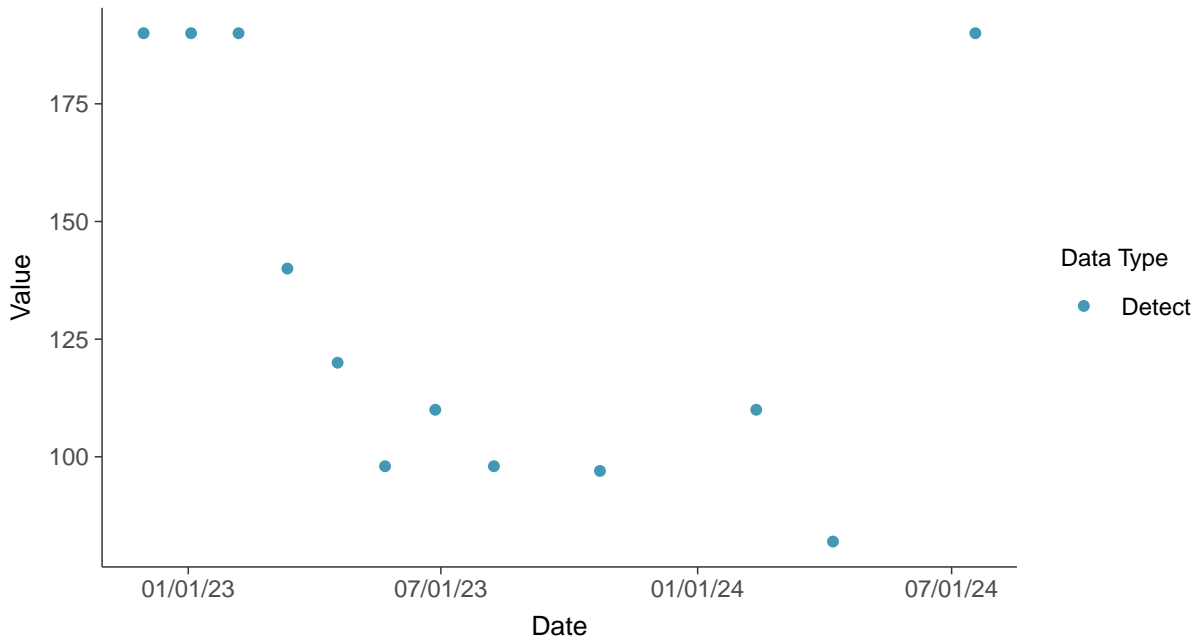


### Appendix III: Chloride (as Cl), MW-30

ID: 40\_1\_4\_108

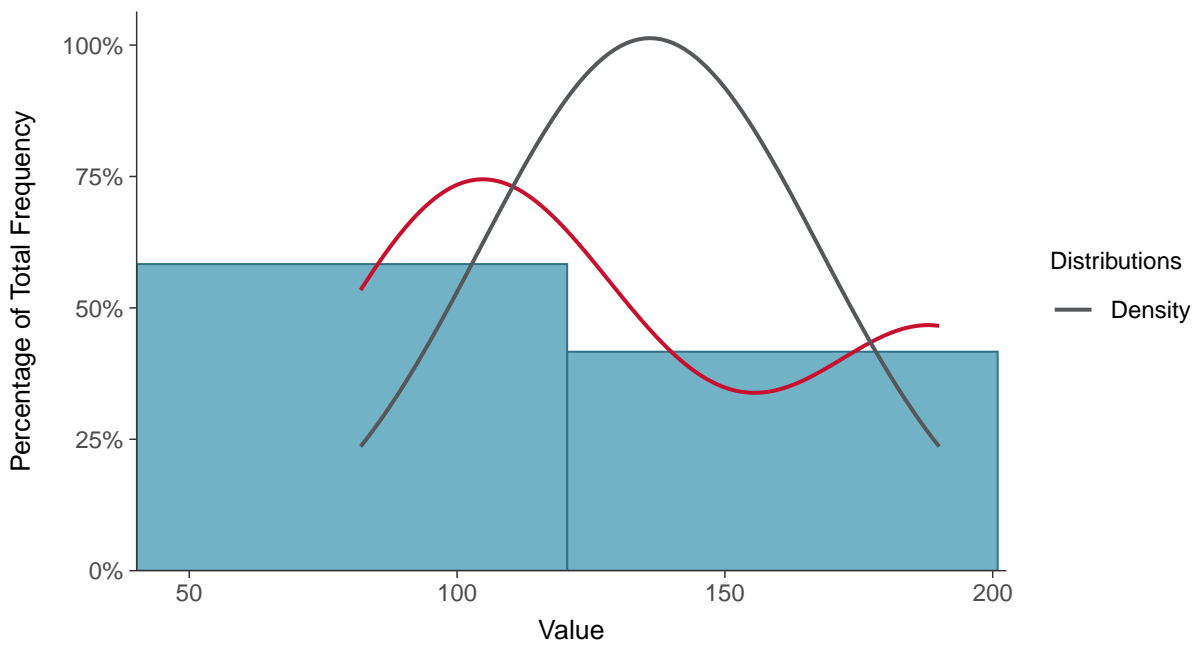
#### Scatter Plot

Chloride (as Cl), MW-30 (mg/L)



#### Histogram

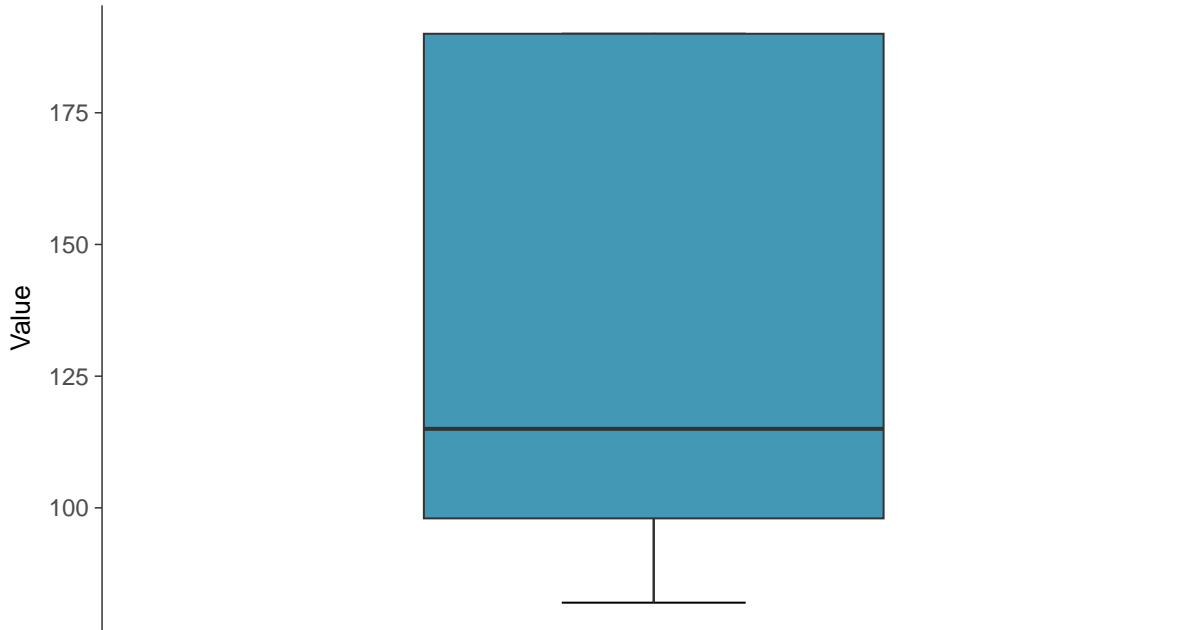
Chloride (as Cl), MW-30 (mg/L)





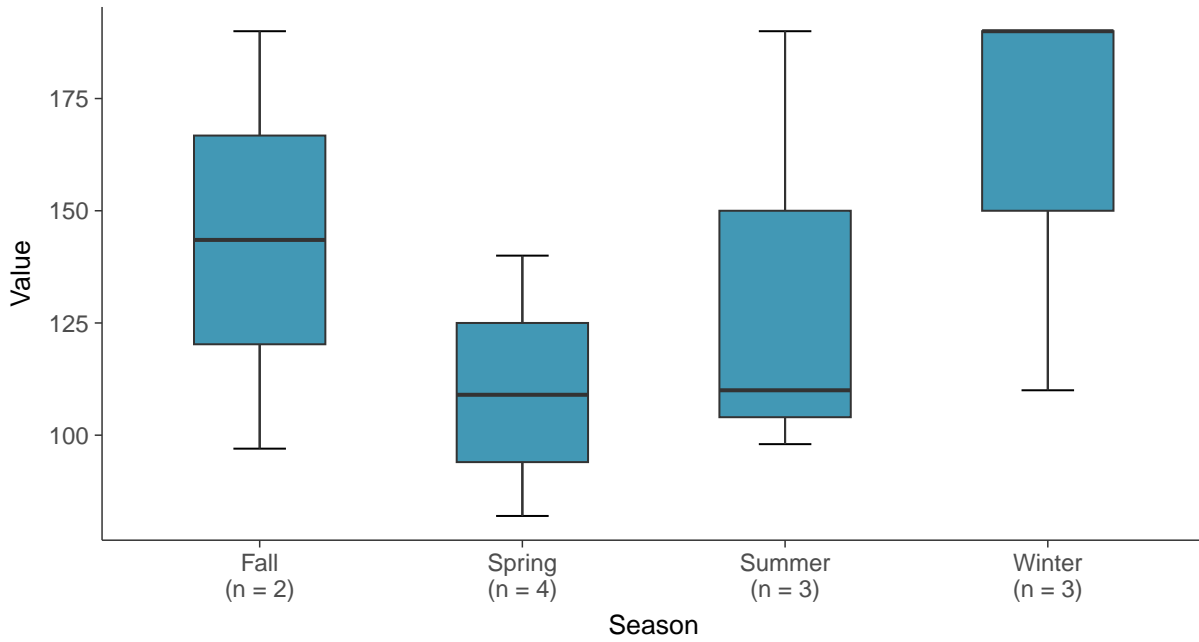
### Boxplot

Chloride (as Cl), MW-30 (mg/L)



### Boxplot by Season

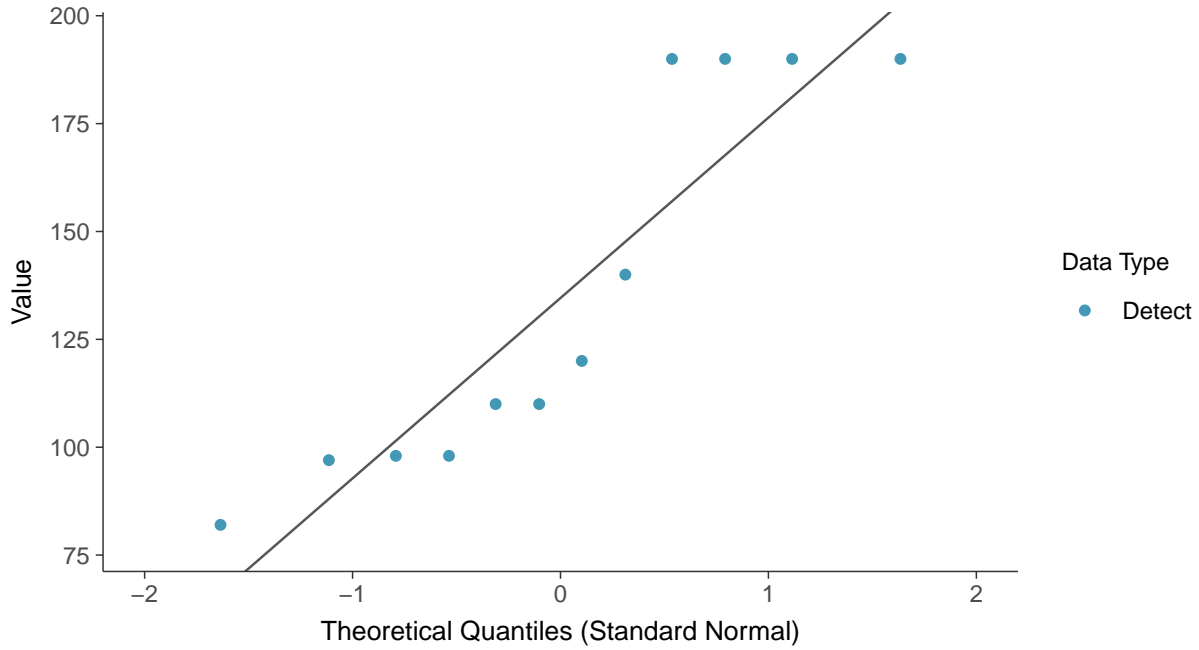
Chloride (as Cl), MW-30 (mg/L)





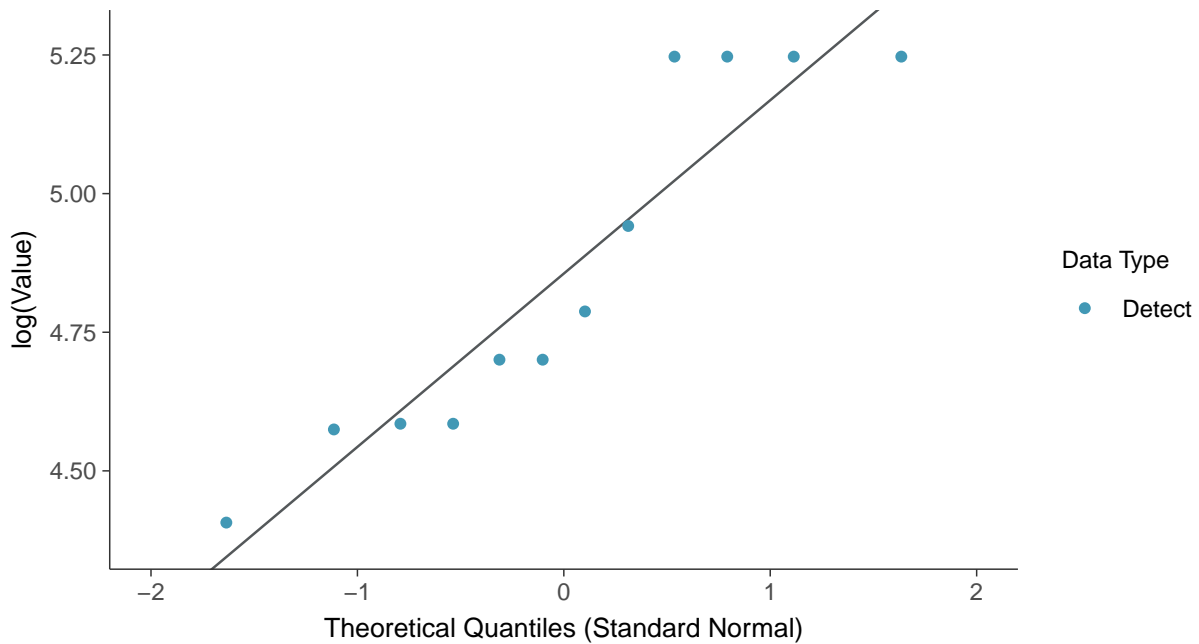
### Normal Q-Q plot

Chloride (as Cl), MW-30 (mg/L)



### Lognormal Q-Q plot

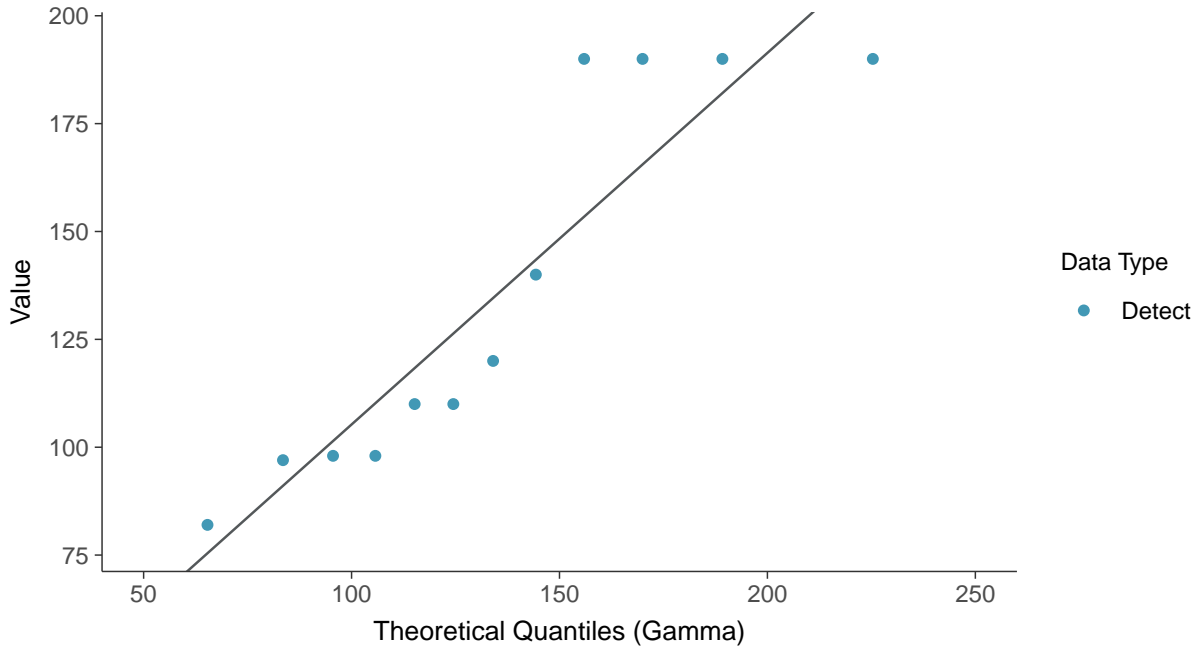
Chloride (as Cl), MW-30 (mg/L)





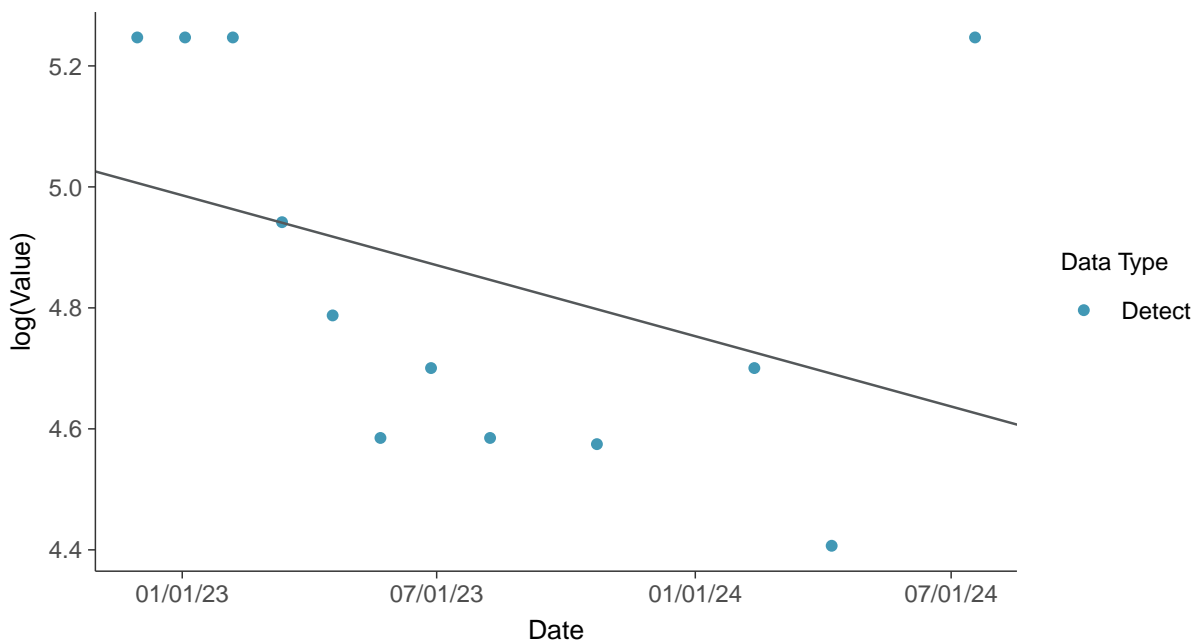
### Gamma Q-Q plot

Chloride (as Cl), MW-30 (mg/L)



### Trend Regression: Lognormal MLE

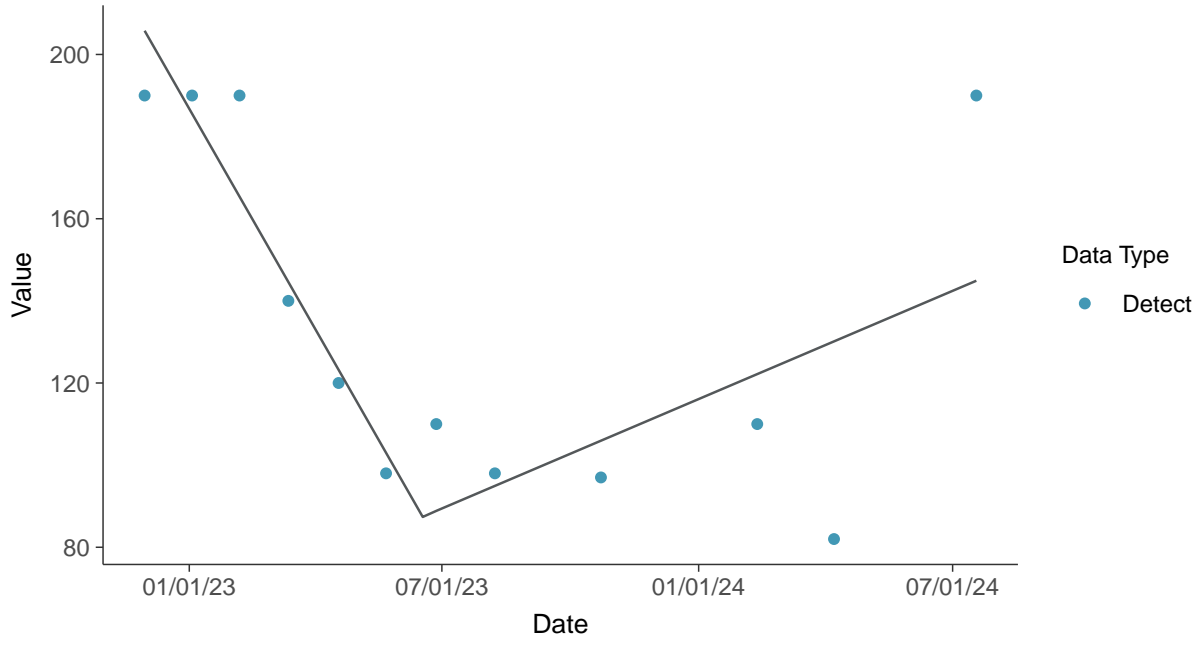
Chloride (as Cl), MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear

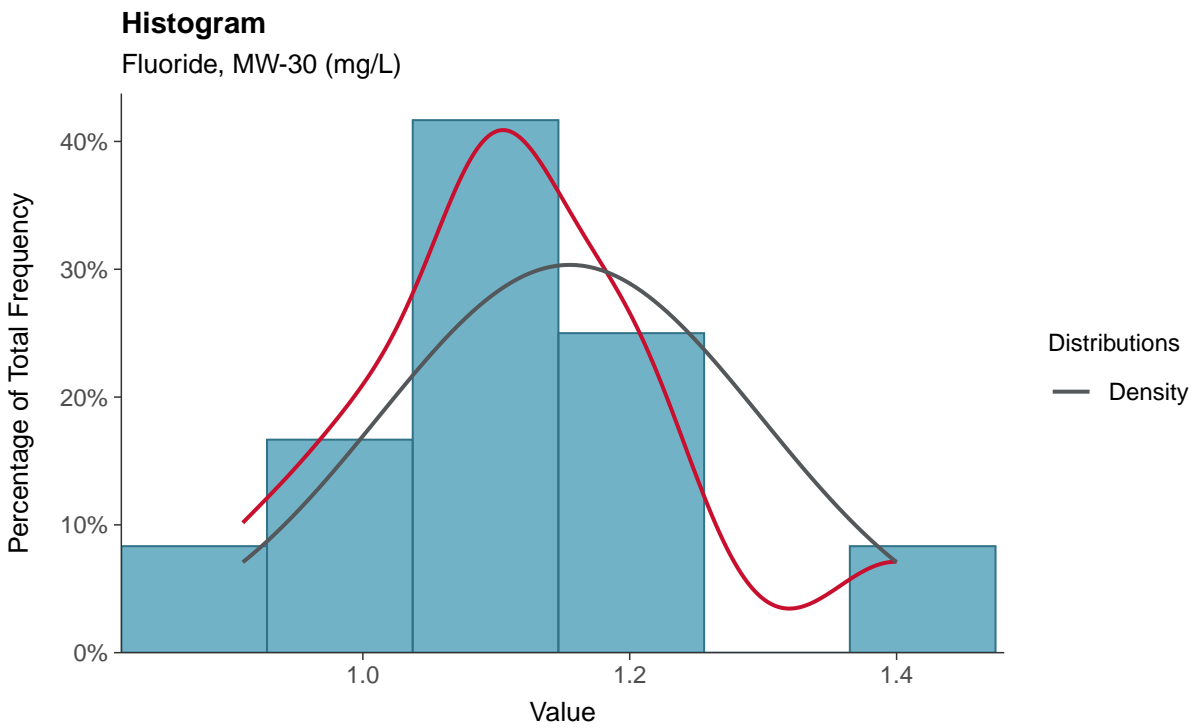
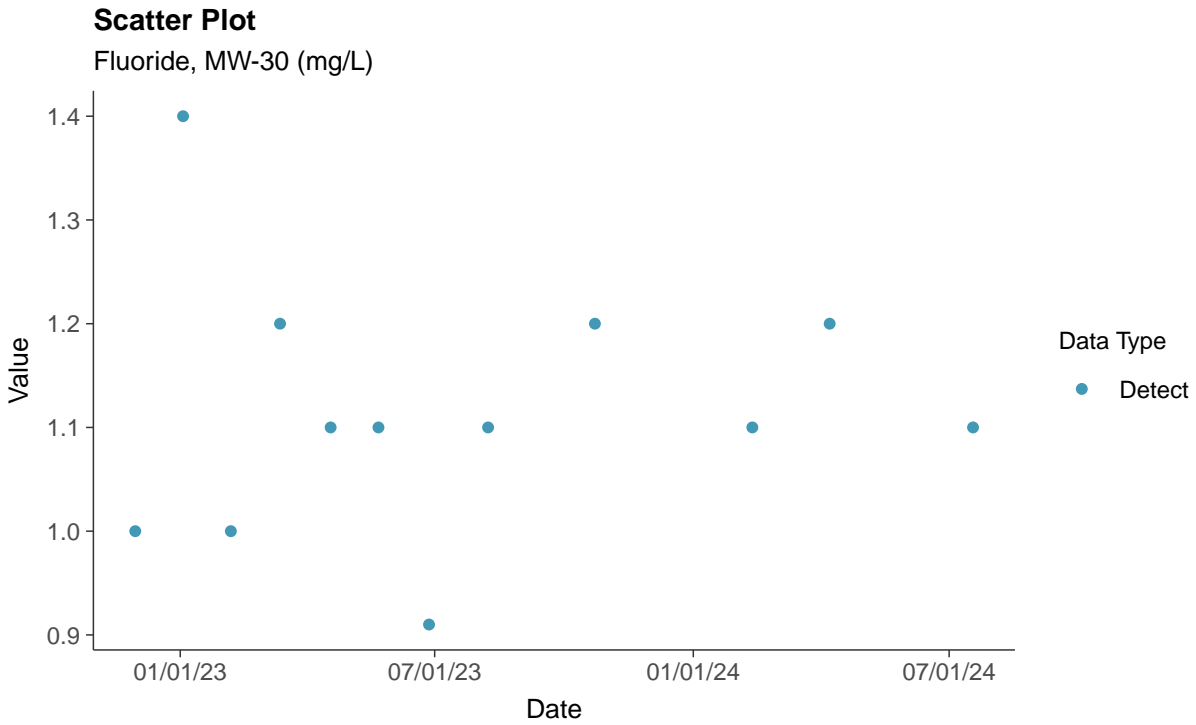
Chloride (as Cl), MW-30 (mg/L)





### Appendix III: Fluoride, MW-30

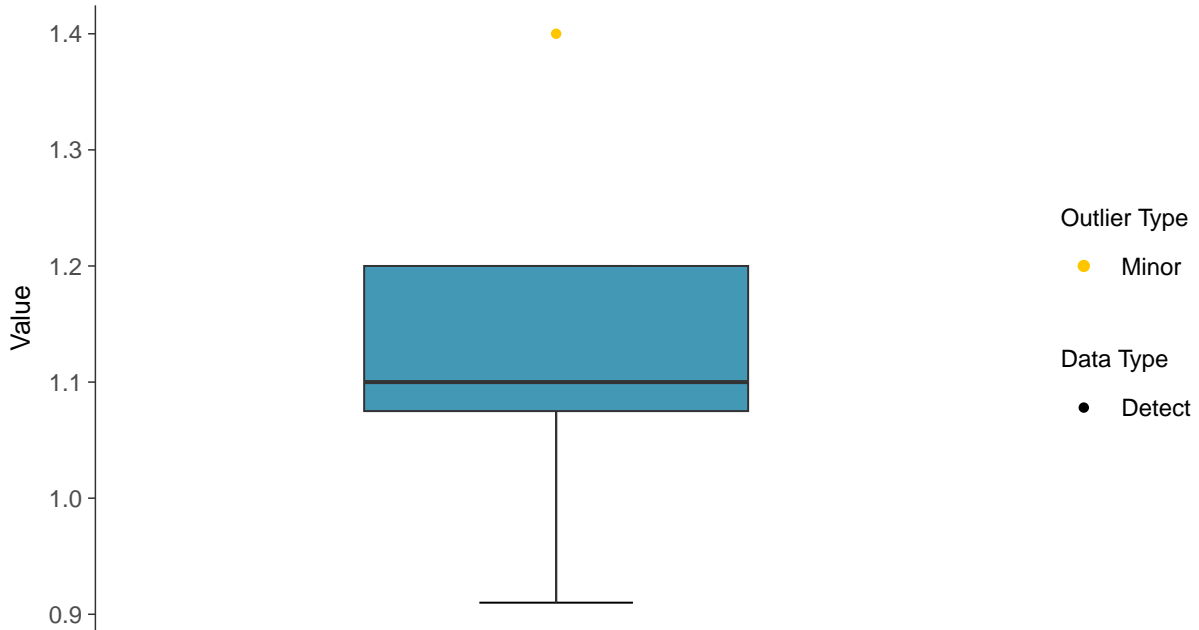
ID: 40\_1\_4\_112





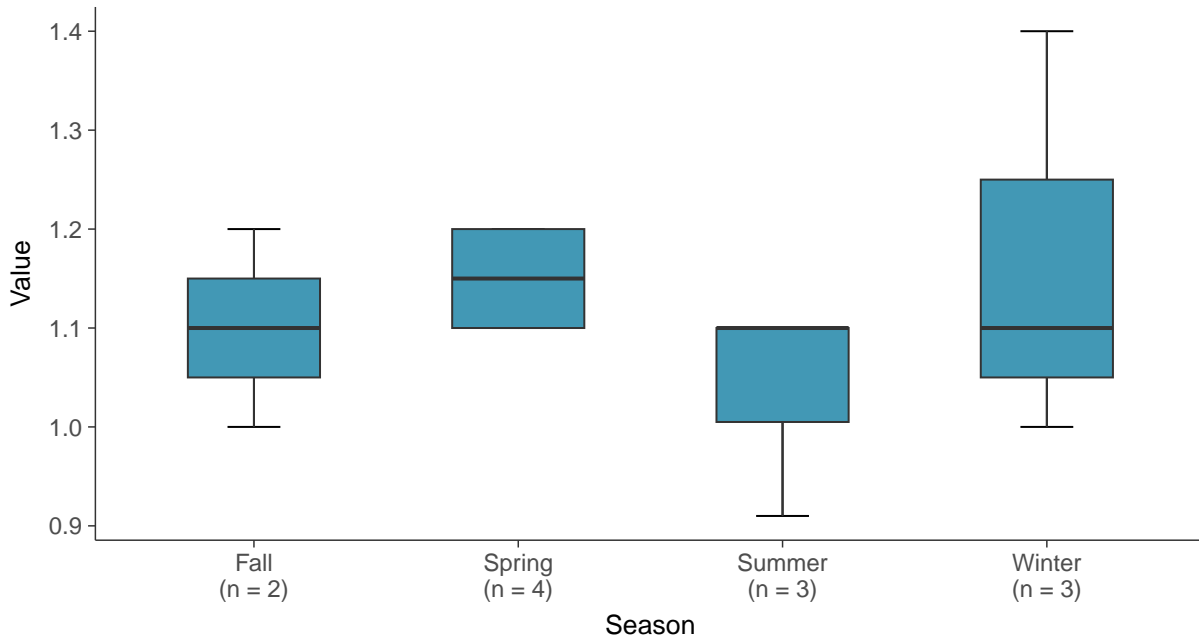
### Boxplot

Fluoride, MW-30 (mg/L)



### Boxplot by Season

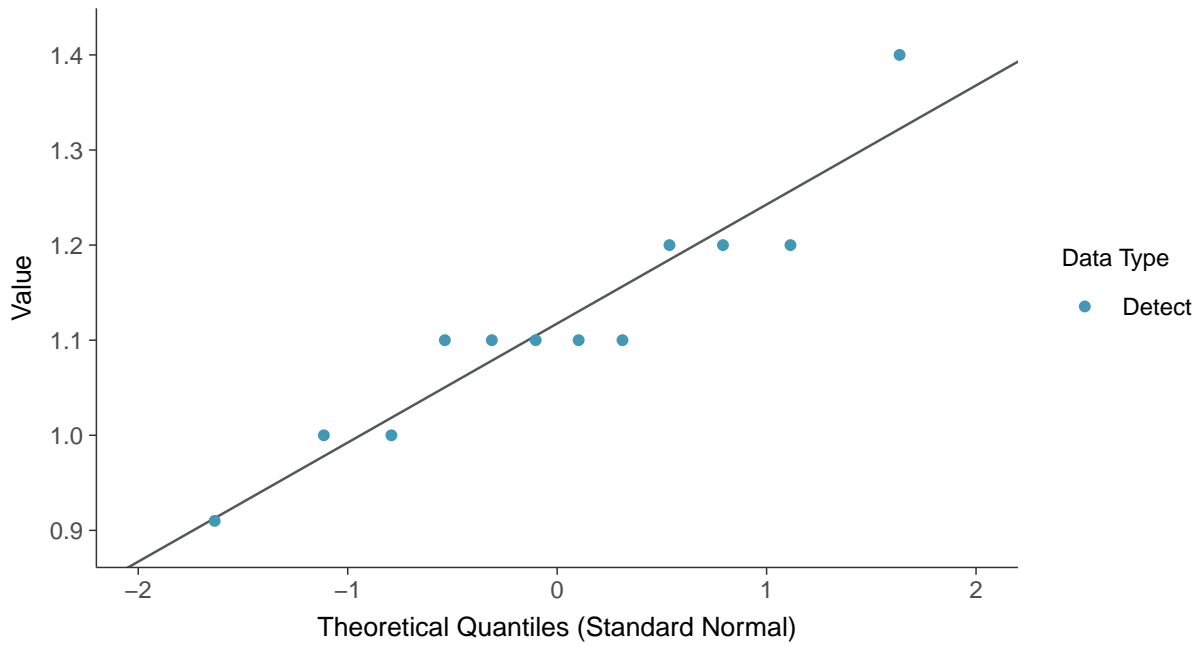
Fluoride, MW-30 (mg/L)





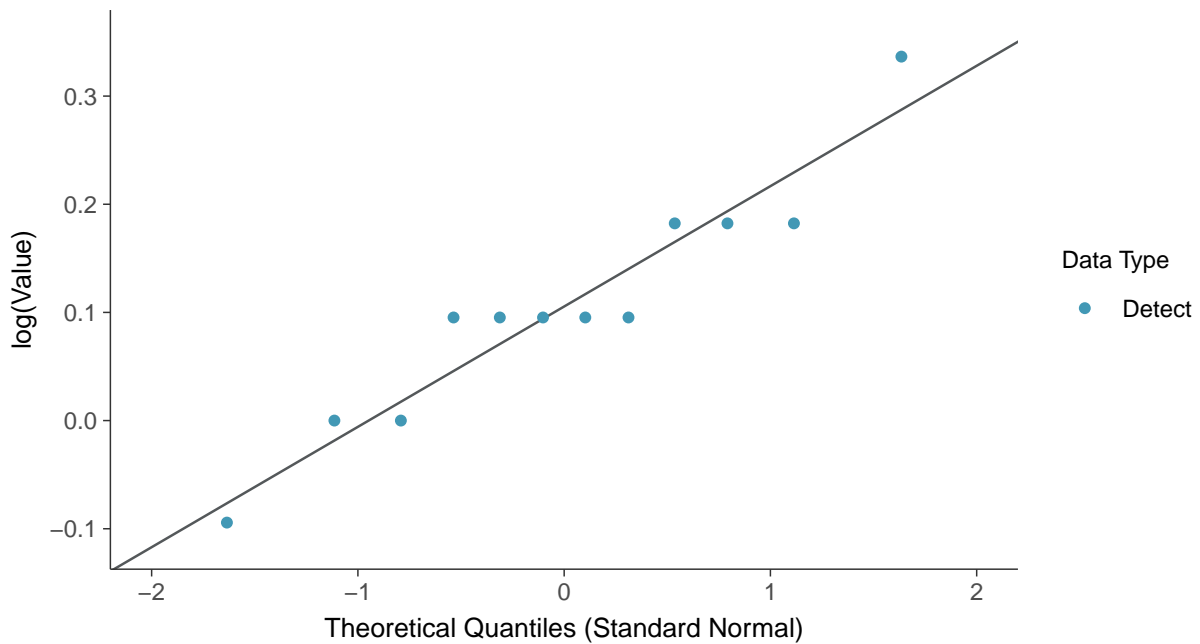
### Normal Q-Q plot

Fluoride, MW-30 (mg/L)



### Lognormal Q-Q plot

Fluoride, MW-30 (mg/L)

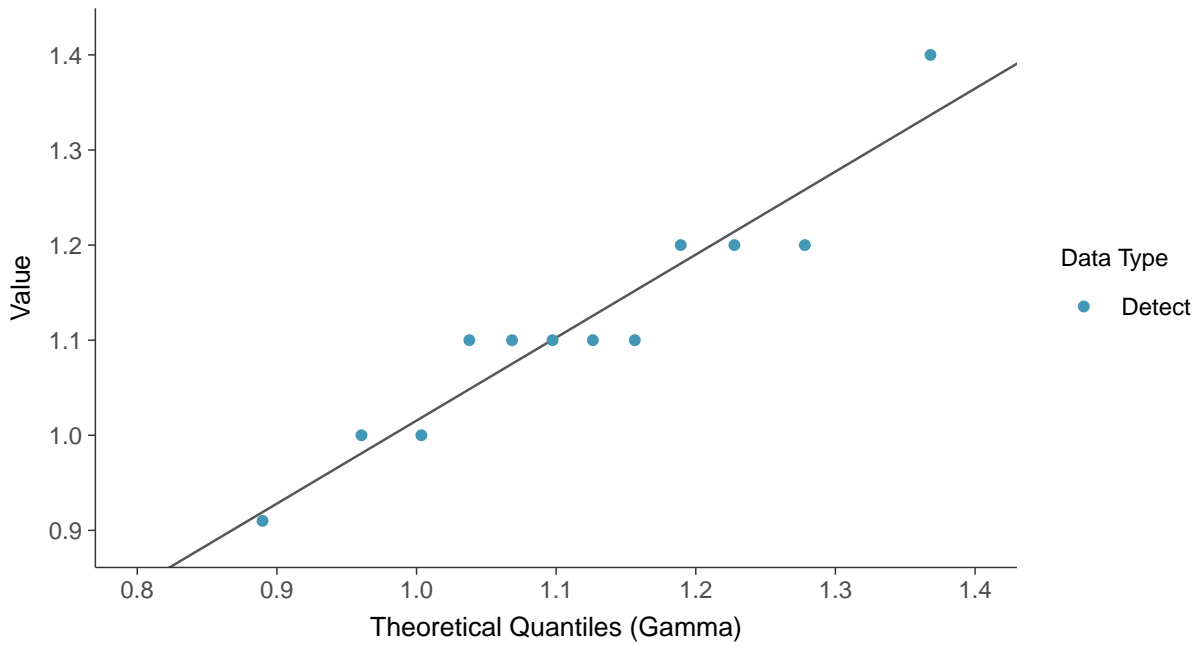






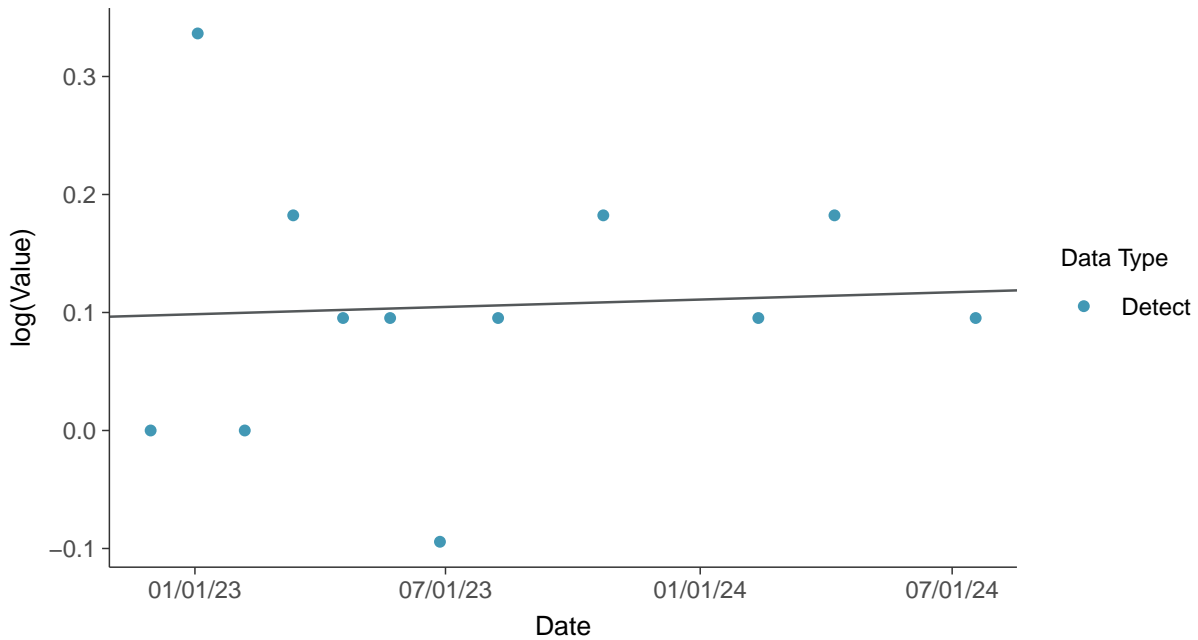
### Gamma Q-Q plot

Fluoride, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

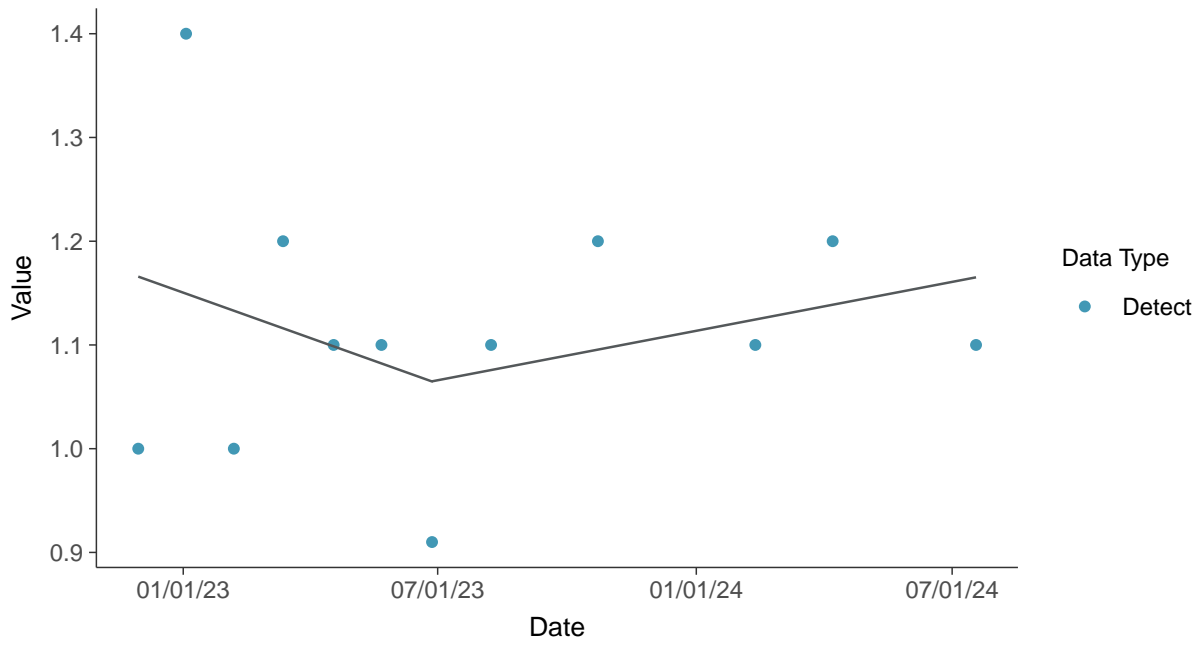
Fluoride, MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear

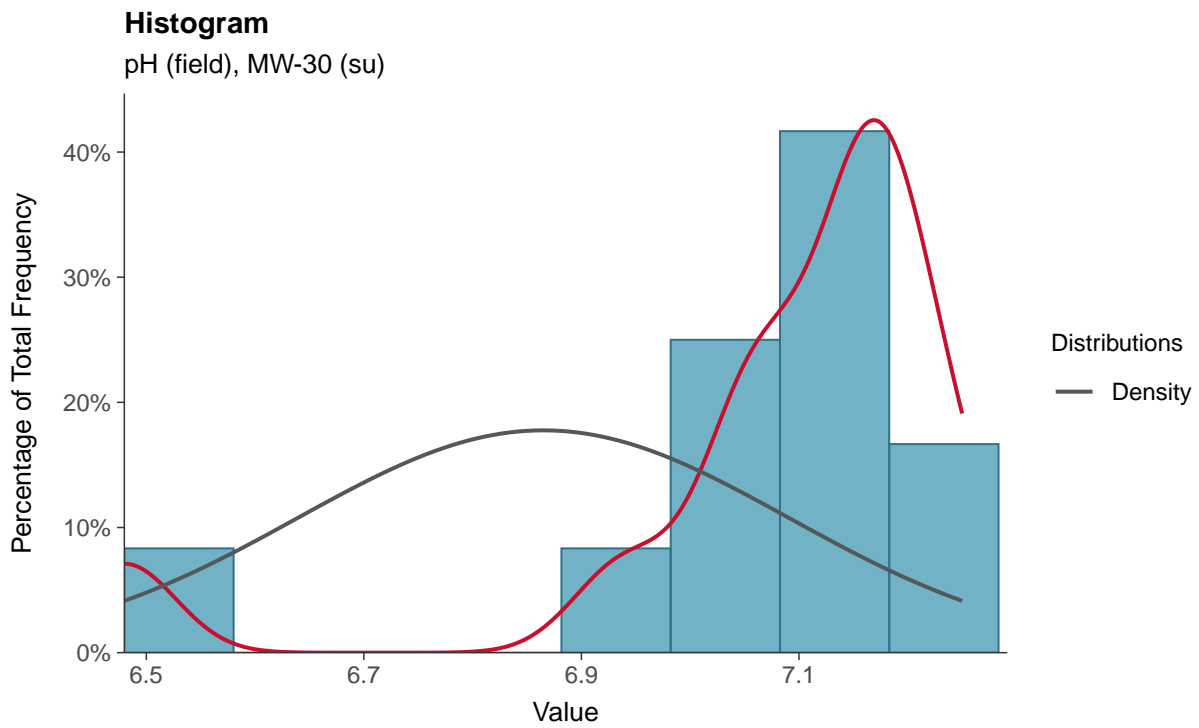
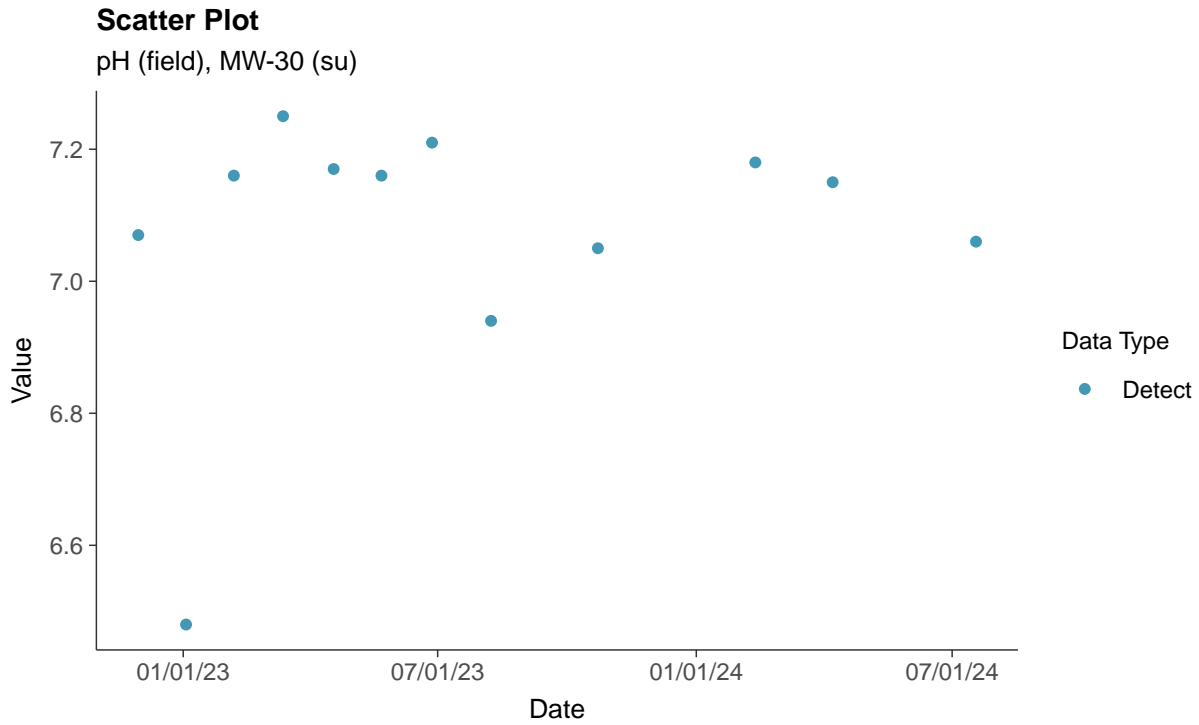
Fluoride, MW-30 (mg/L)





### Appendix III: pH (field), MW-30

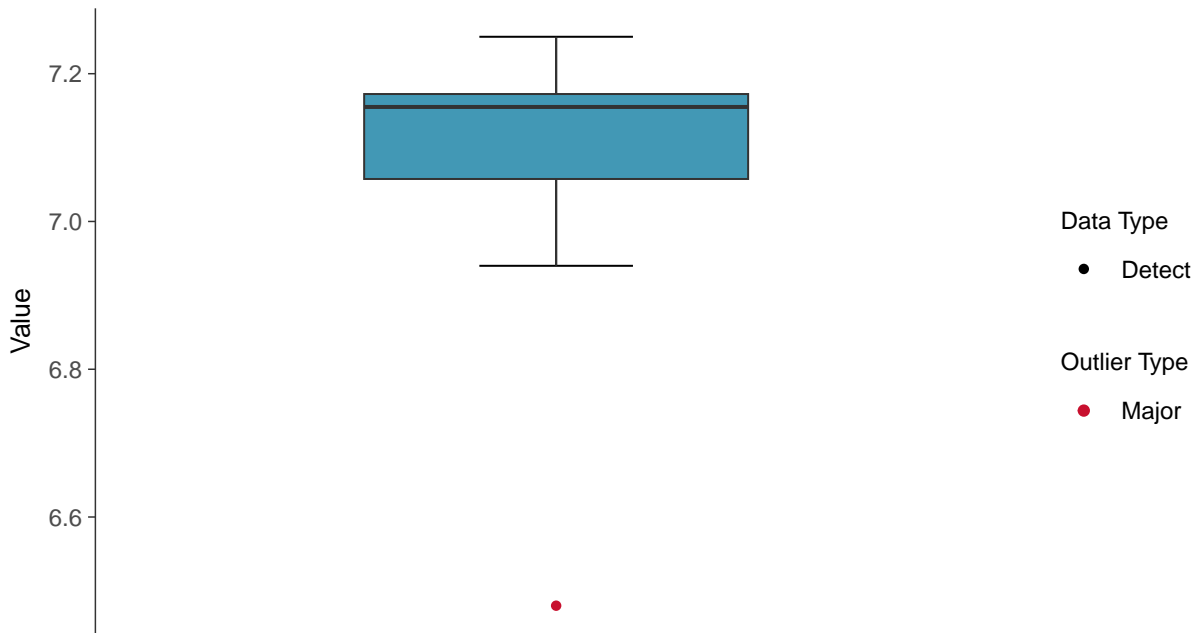
ID: 40\_1\_4\_120





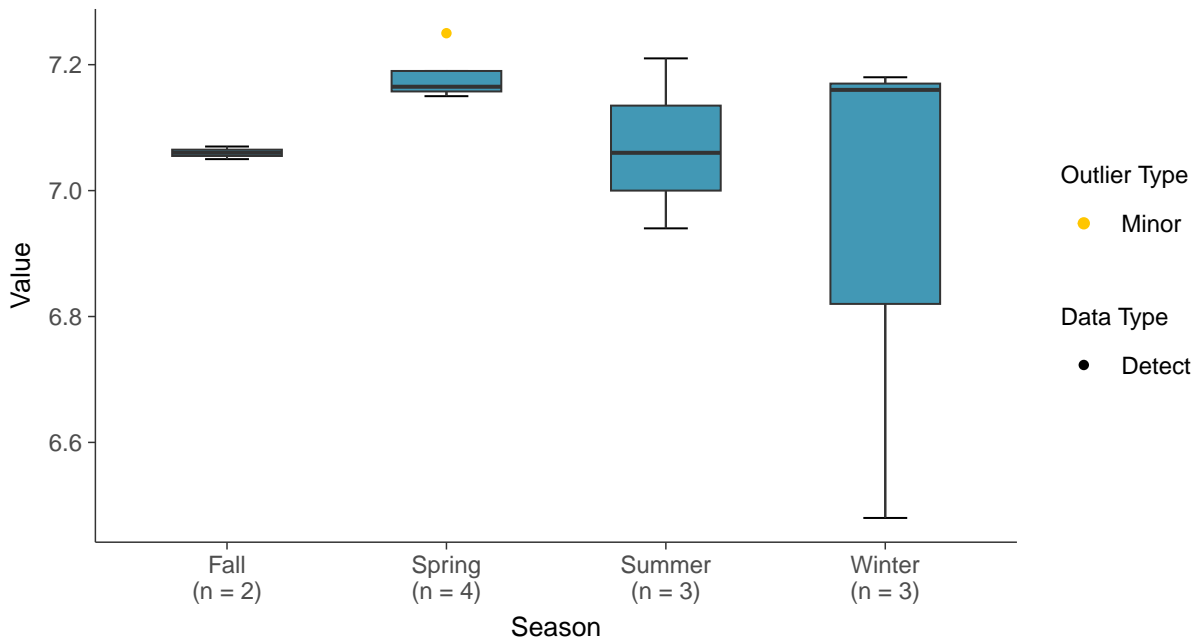
### Boxplot

pH (field), MW-30 (su)



### Boxplot by Season

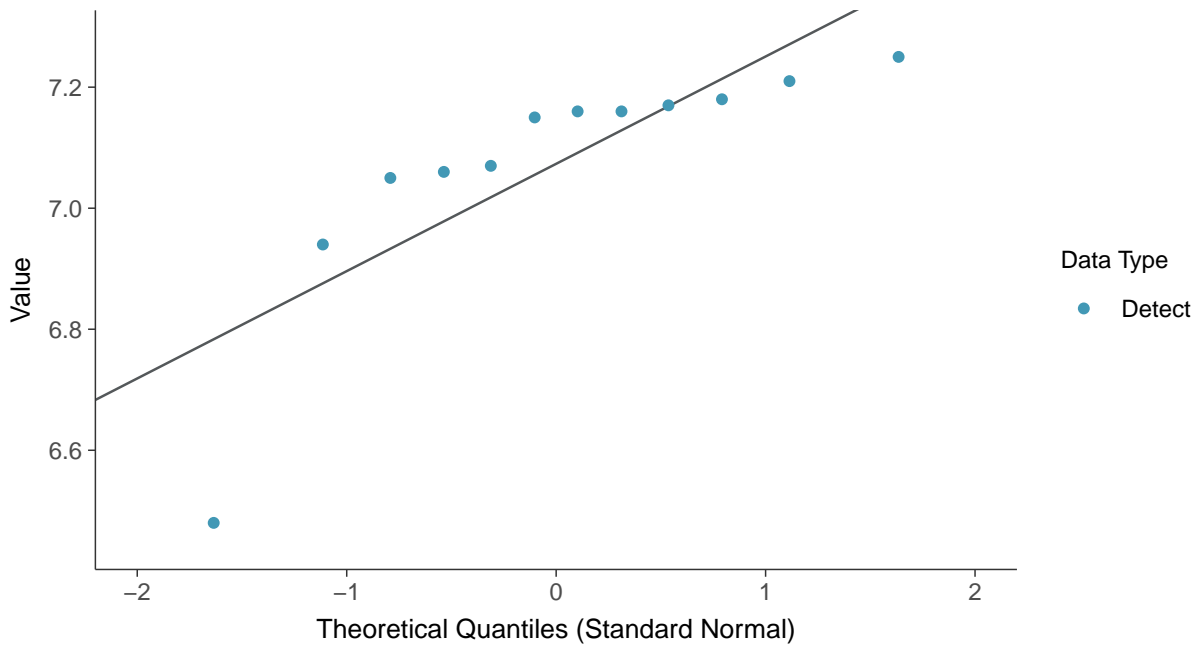
pH (field), MW-30 (su)





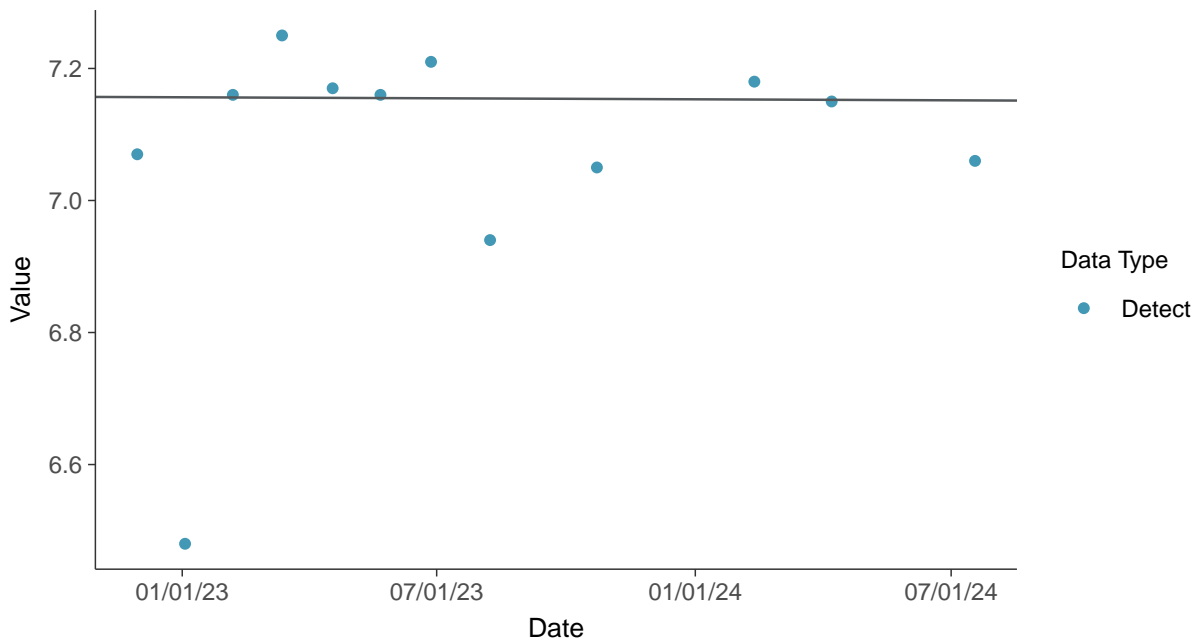
### Normal Q-Q plot

pH (field), MW-30 (su)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

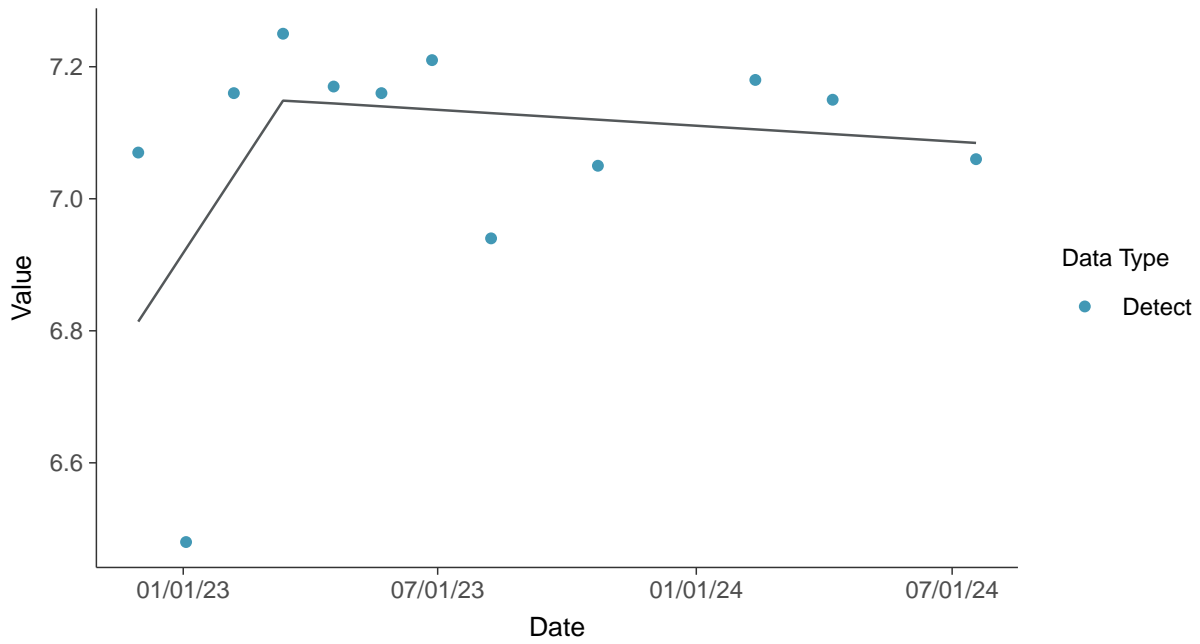
pH (field), MW-30 (su)





### Trend Regression: Piecewise Linear-Linear

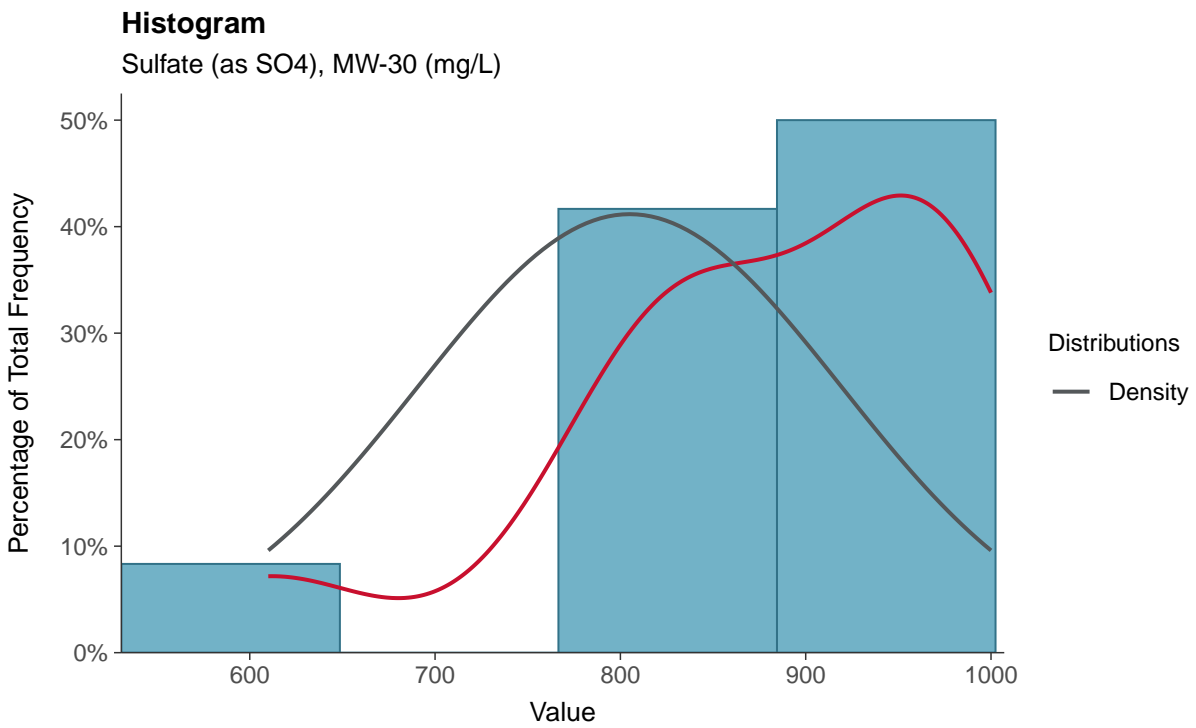
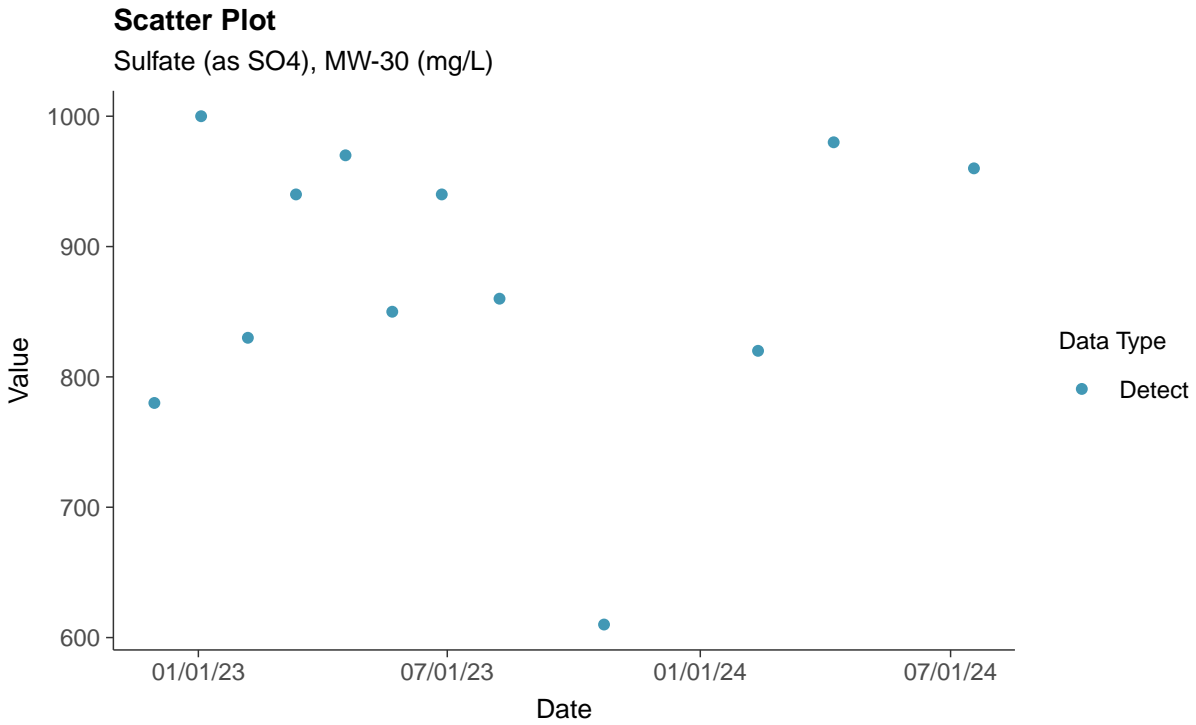
pH (field), MW-30 (su)





### Appendix III: Sulfate (as SO<sub>4</sub>), MW-30

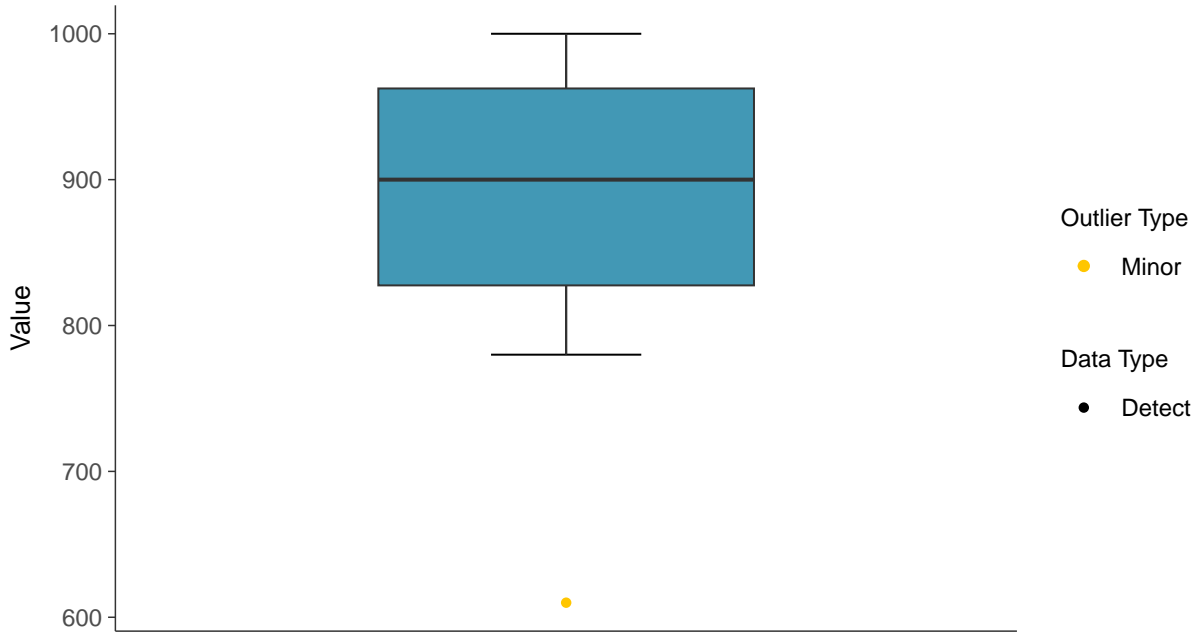
ID: 40\_1\_4\_124





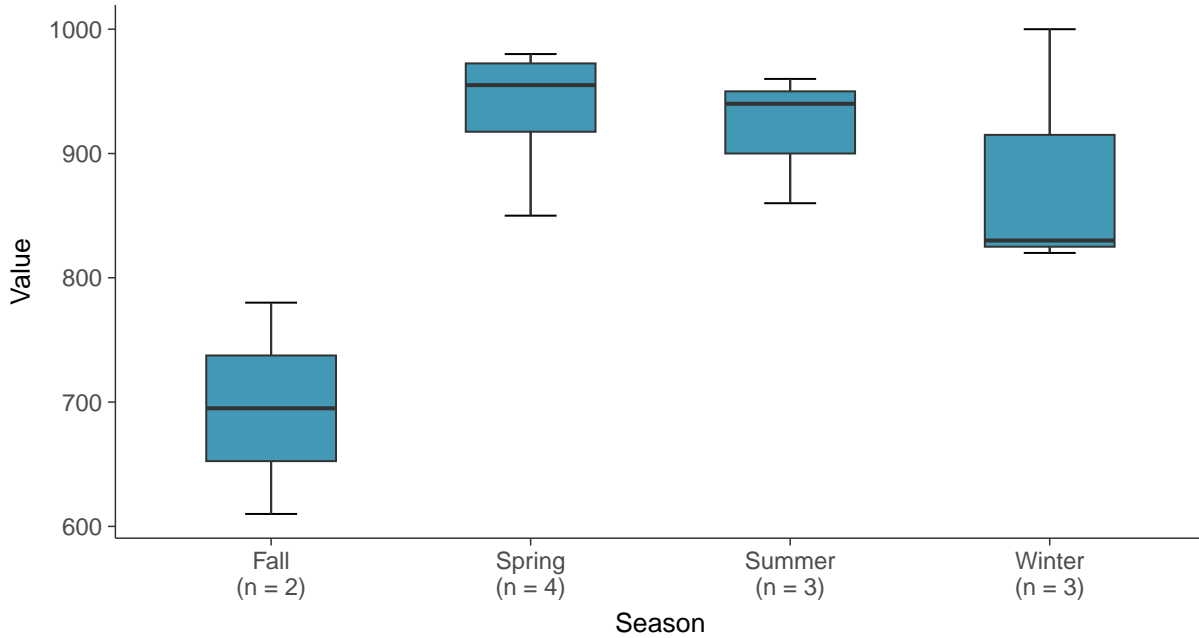
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)



### Boxplot by Season

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)

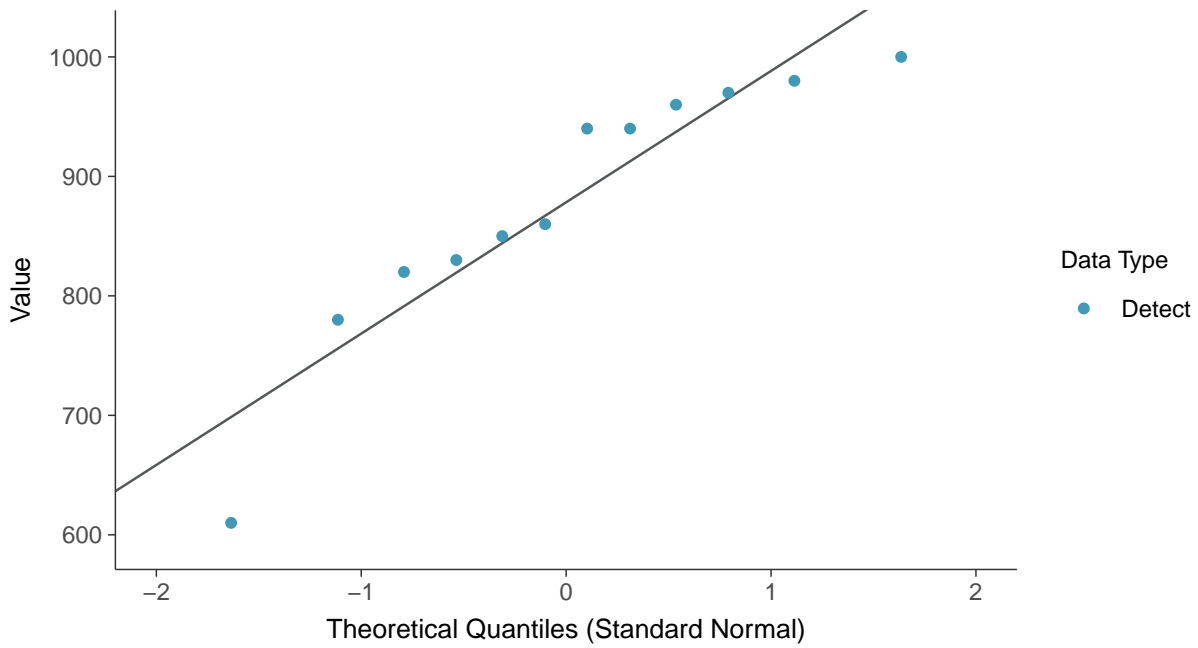






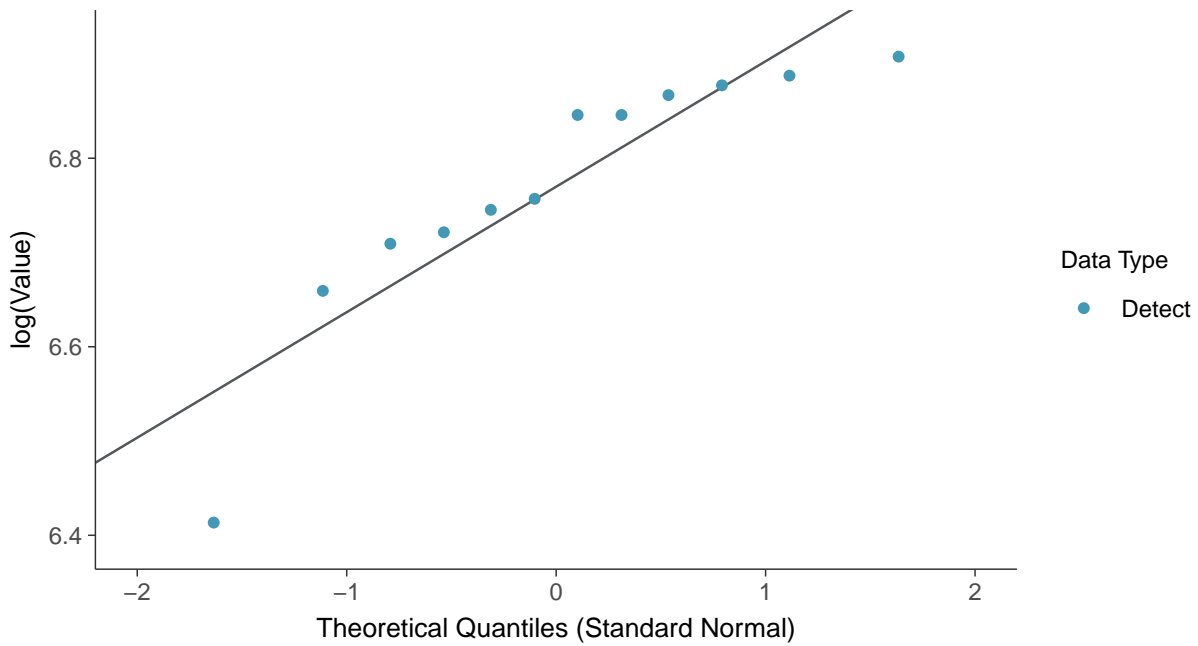
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)



### Lognormal Q-Q plot

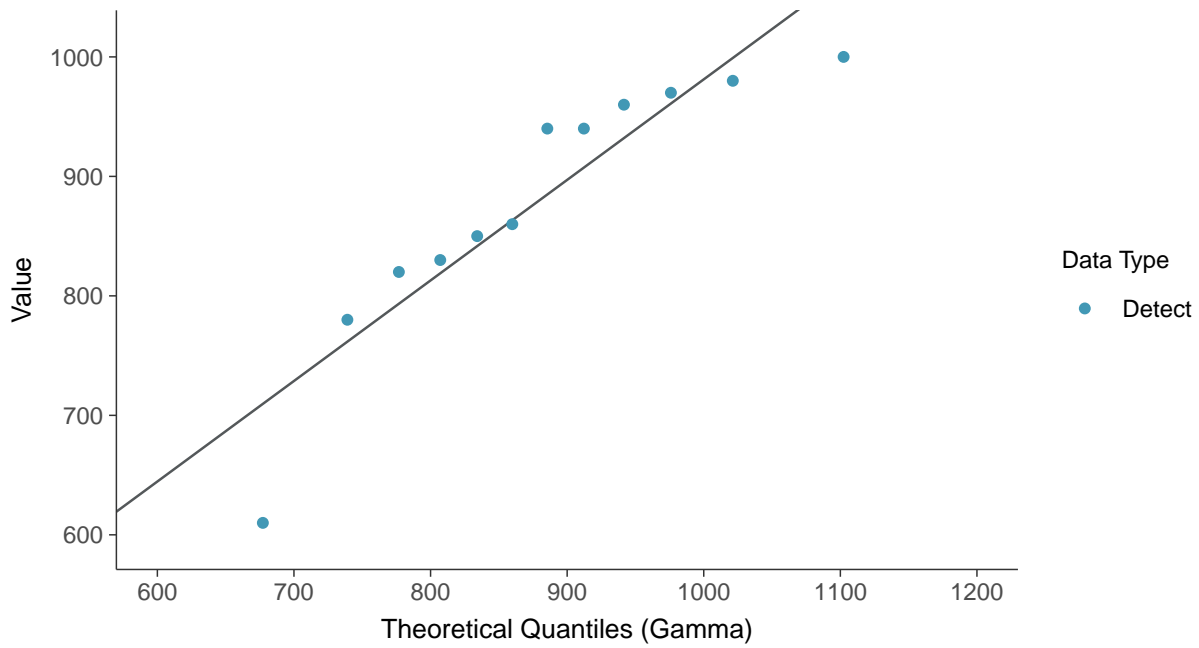
Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)





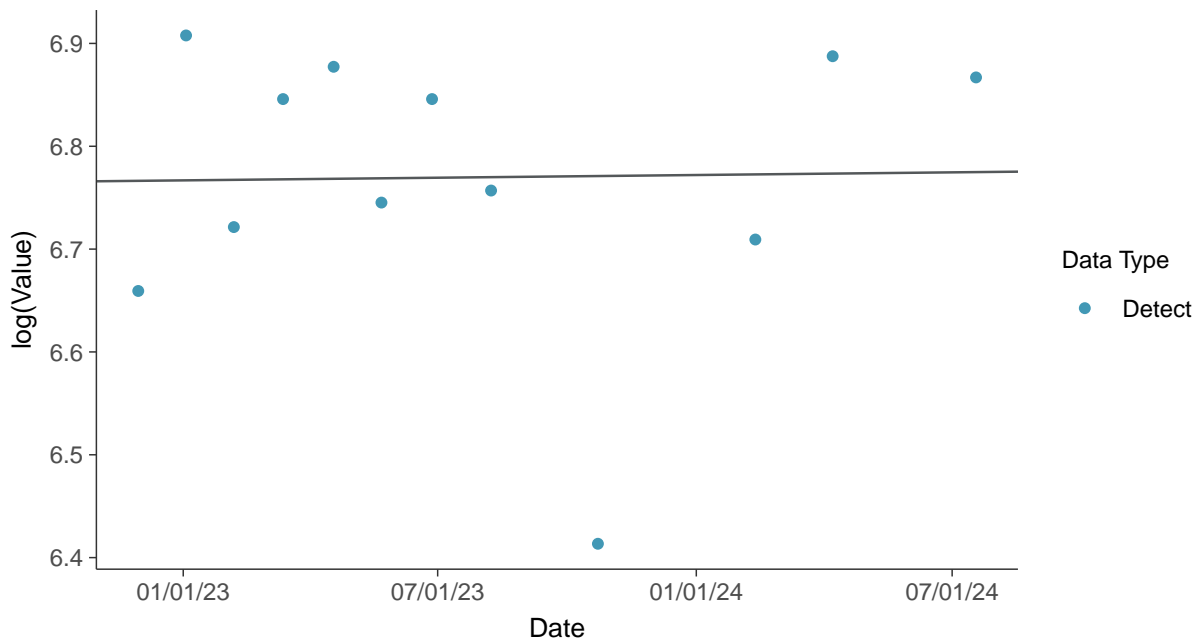
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)



### Trend Regression: Lognormal MLE

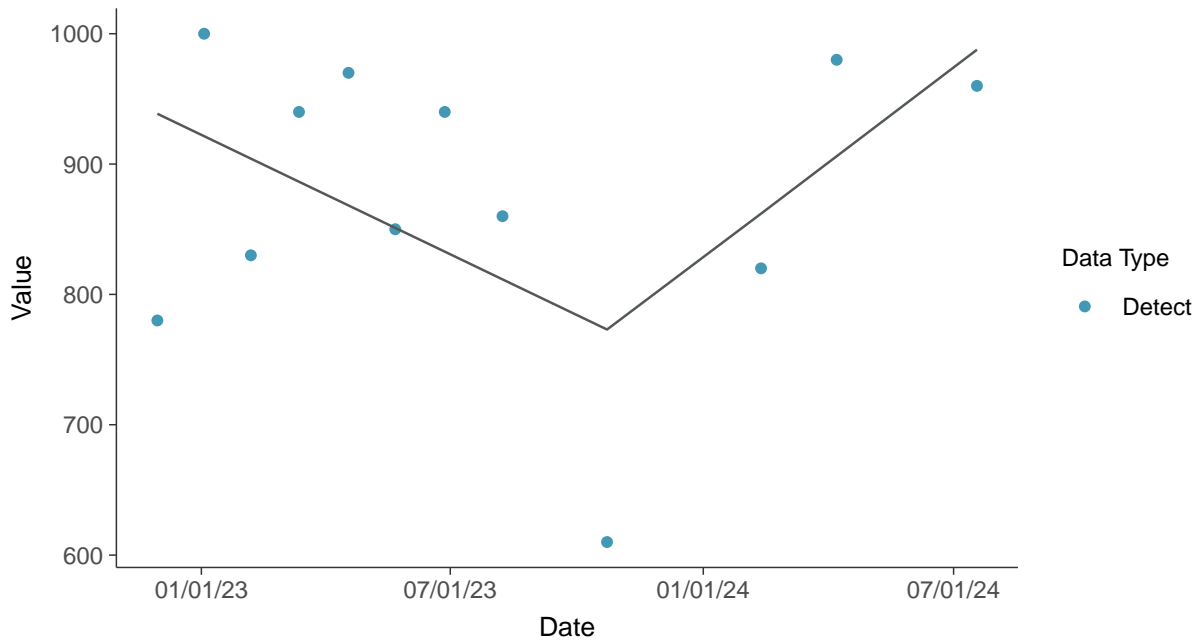
Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)





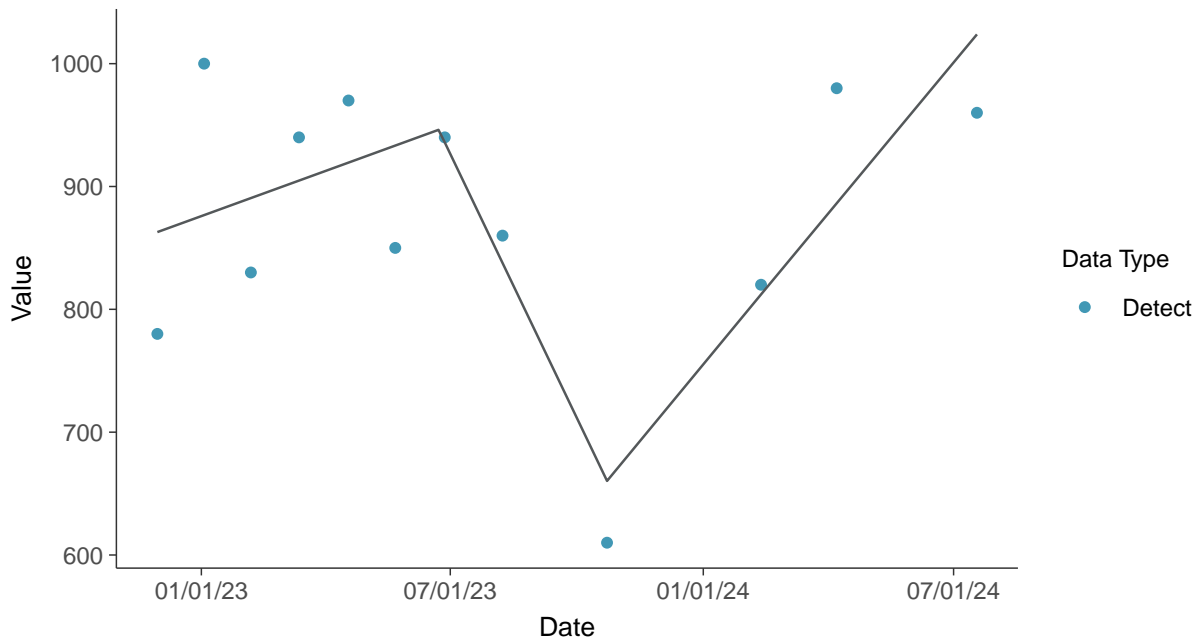
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-30 (mg/L)



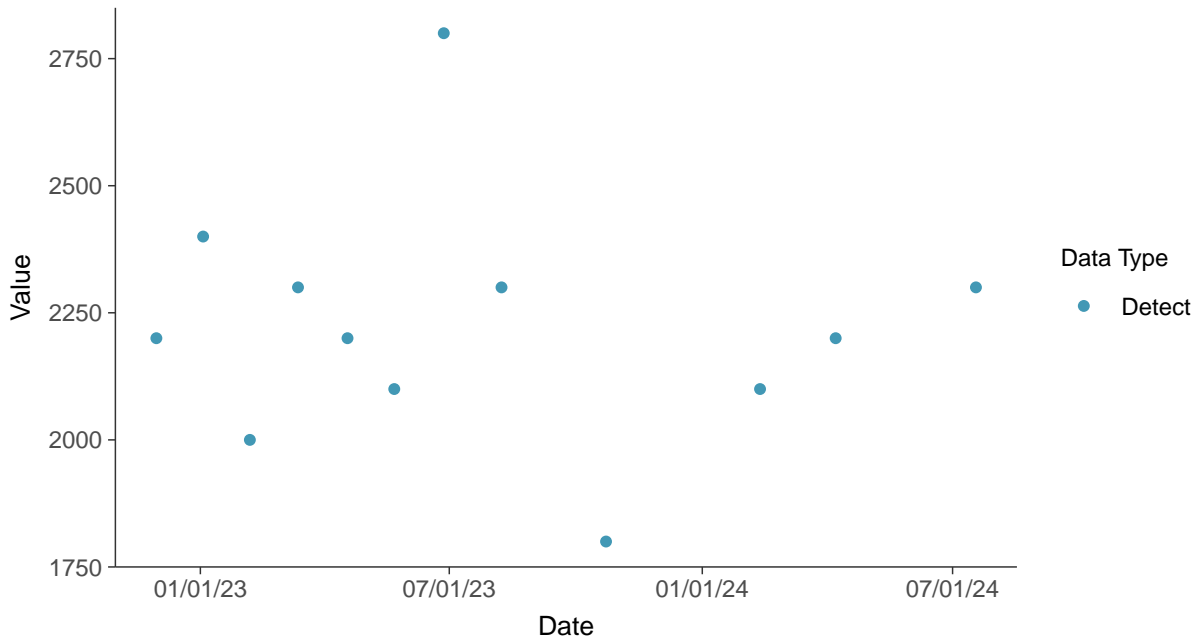


### Appendix III: Total Dissolved Solids, MW-30

ID: 40\_1\_4\_126

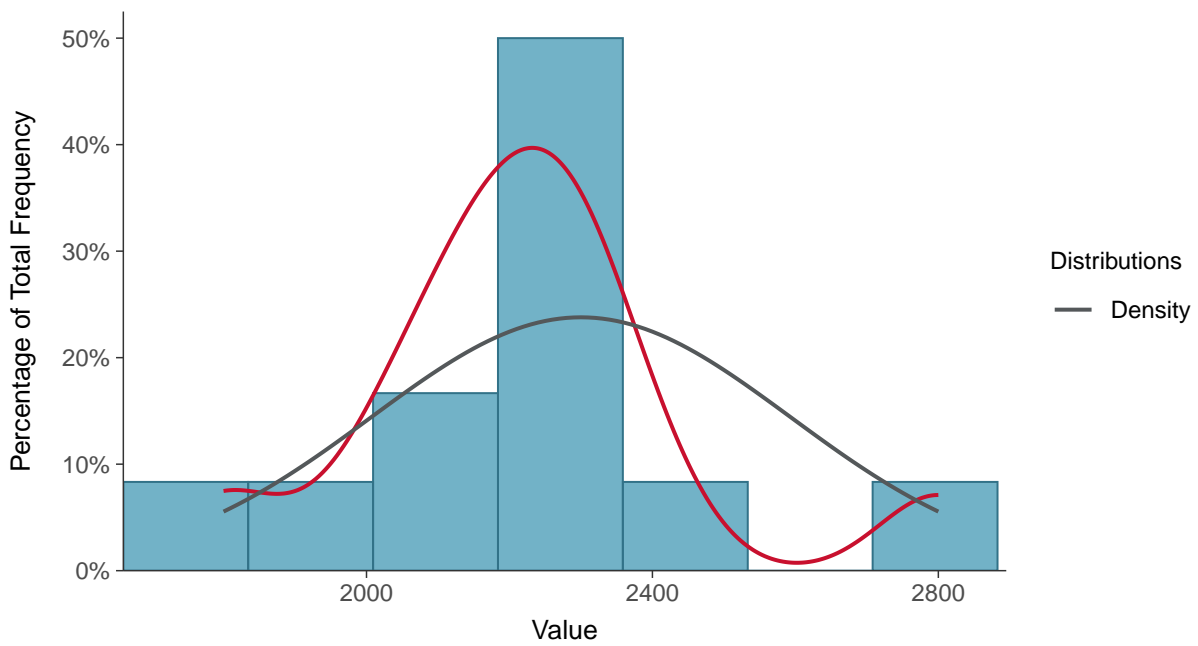
#### Scatter Plot

Total Dissolved Solids, MW-30 (mg/L)



#### Histogram

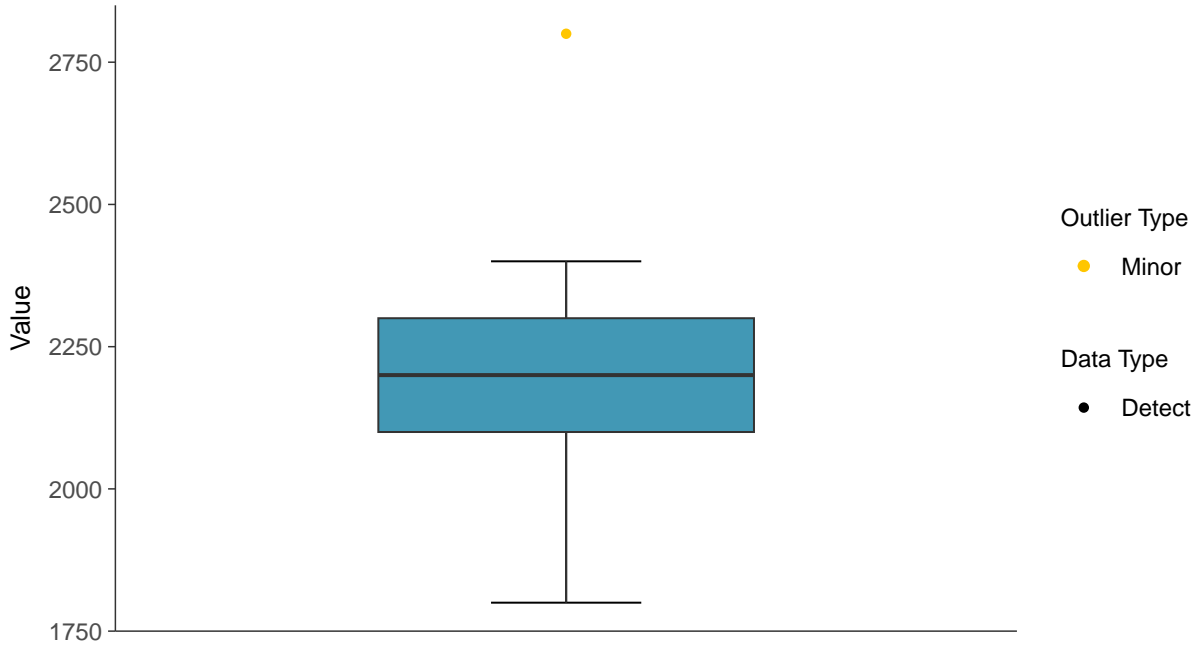
Total Dissolved Solids, MW-30 (mg/L)





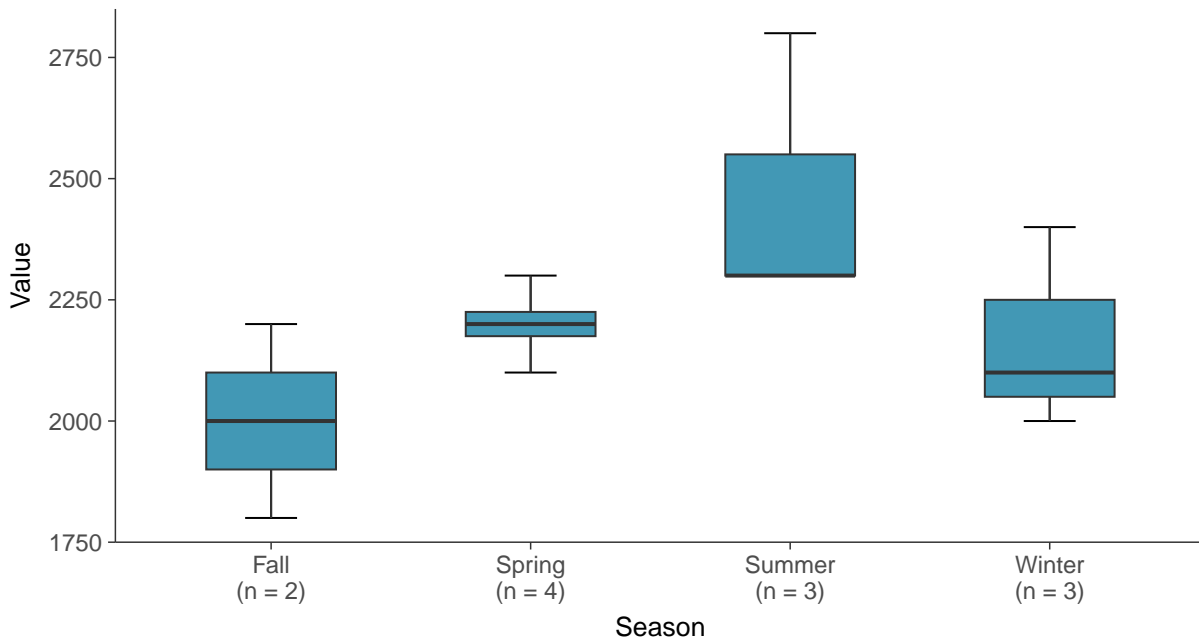
### Boxplot

Total Dissolved Solids, MW-30 (mg/L)



### Boxplot by Season

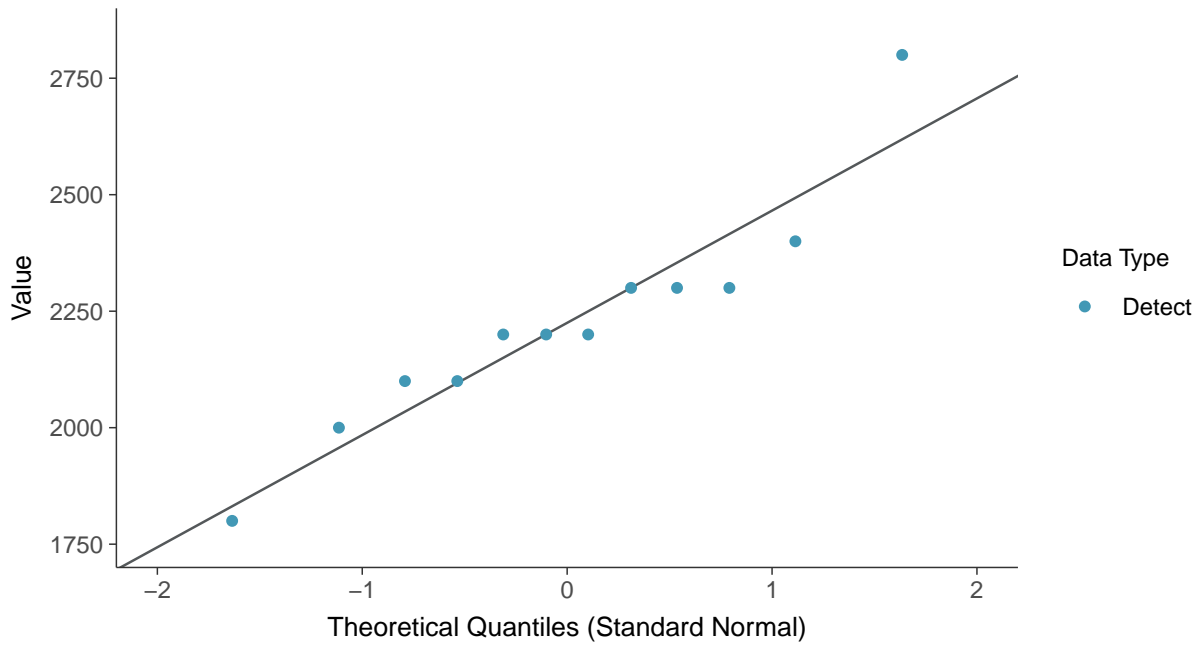
Total Dissolved Solids, MW-30 (mg/L)





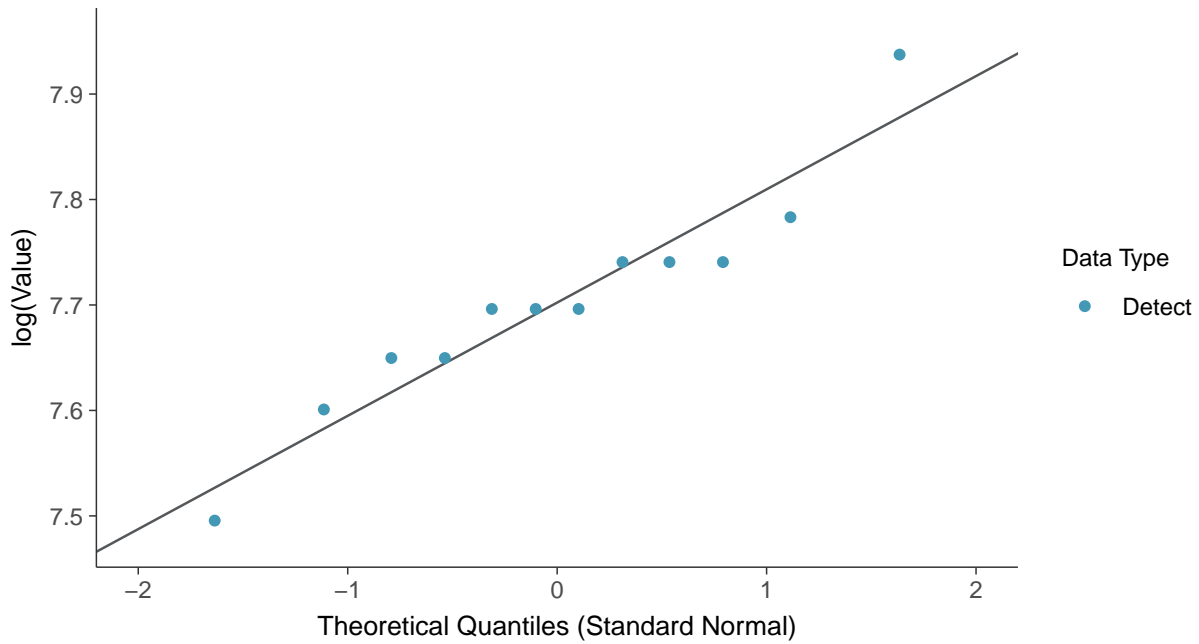
### Normal Q-Q plot

Total Dissolved Solids, MW-30 (mg/L)



### Lognormal Q-Q plot

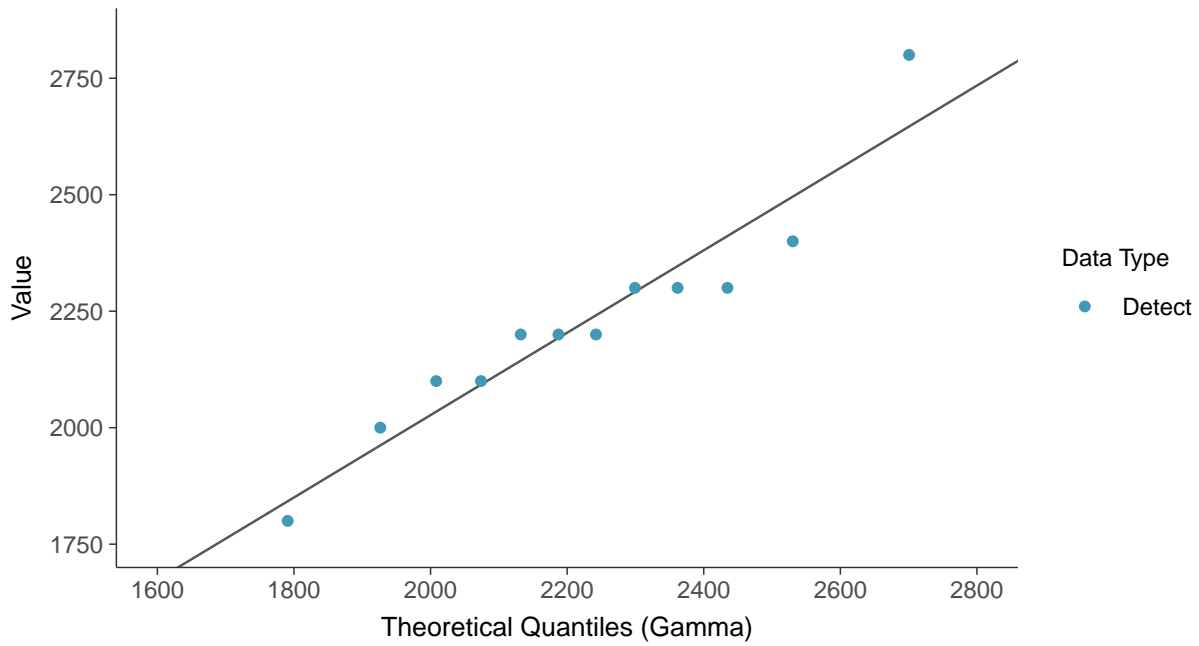
Total Dissolved Solids, MW-30 (mg/L)





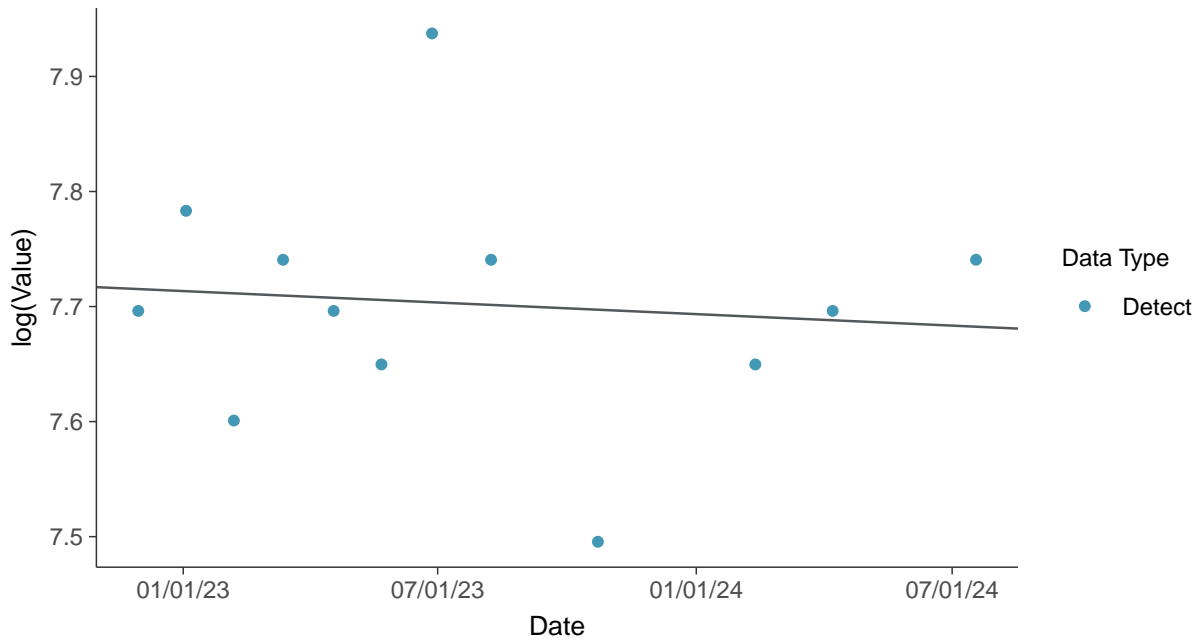
### Gamma Q-Q plot

Total Dissolved Solids, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

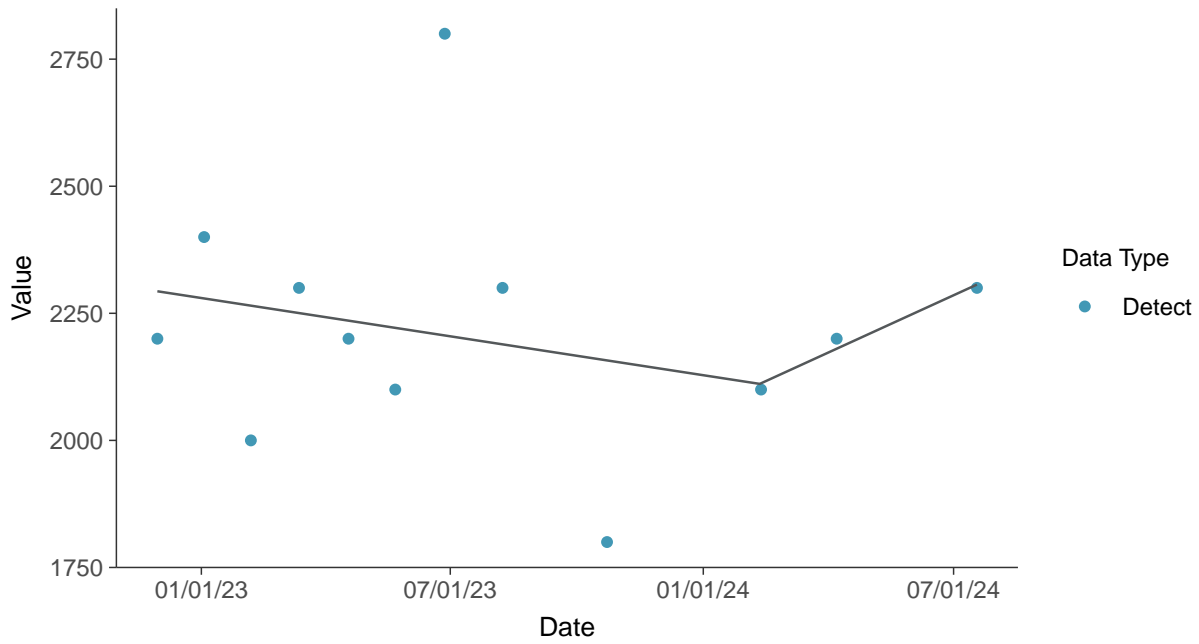
Total Dissolved Solids, MW-30 (mg/L)





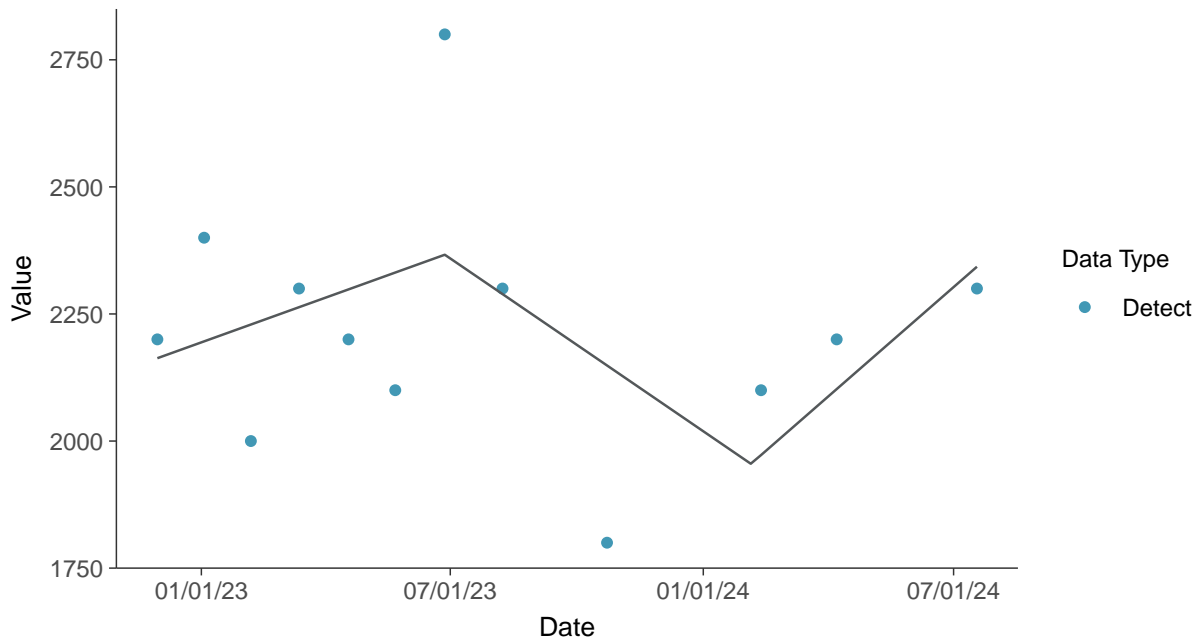
### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-30 (mg/L)

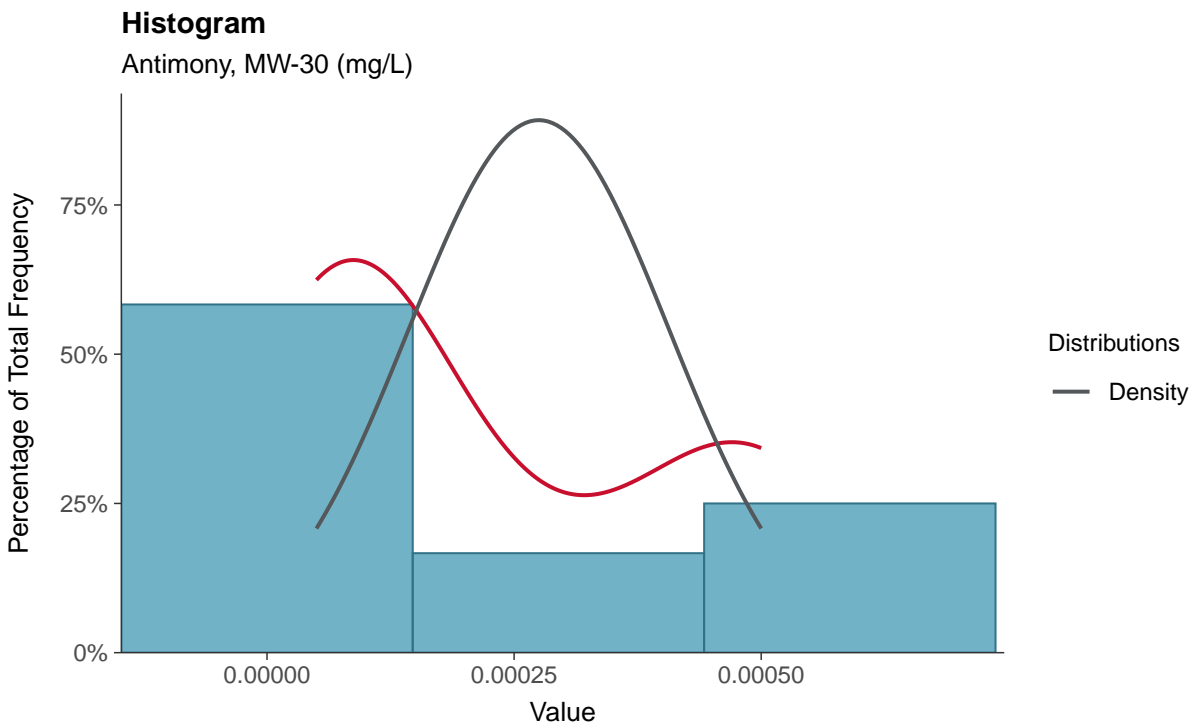
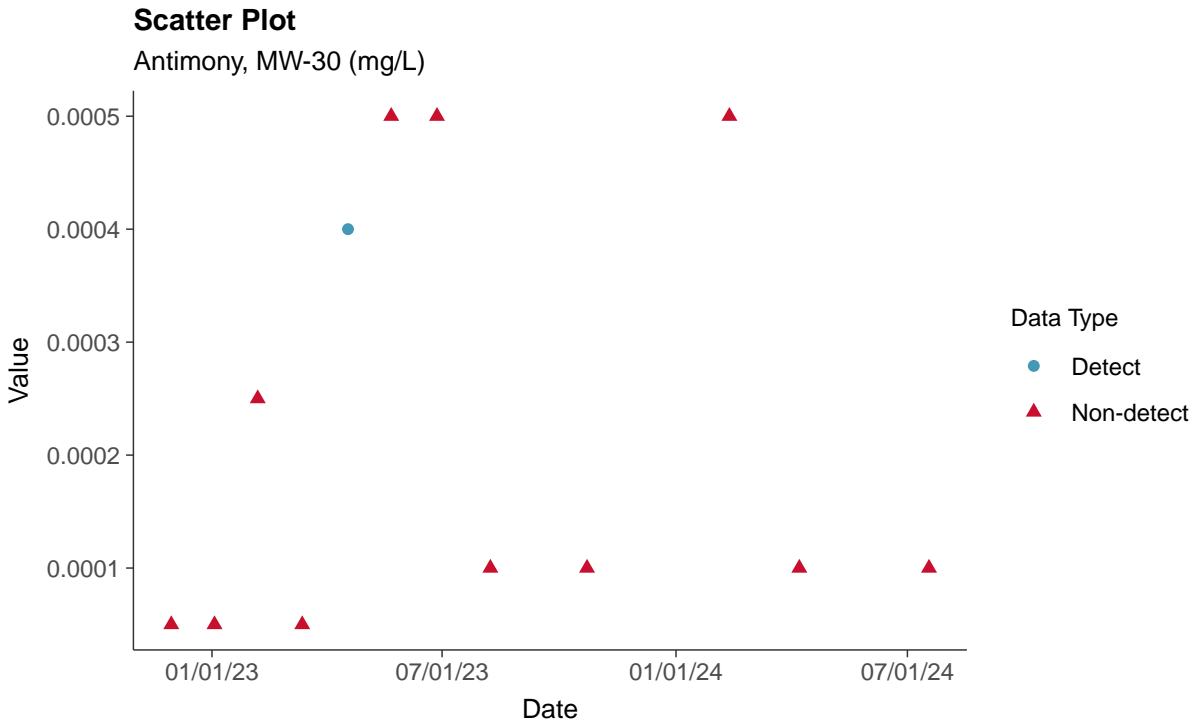






### Appendix IV: Antimony, MW-30

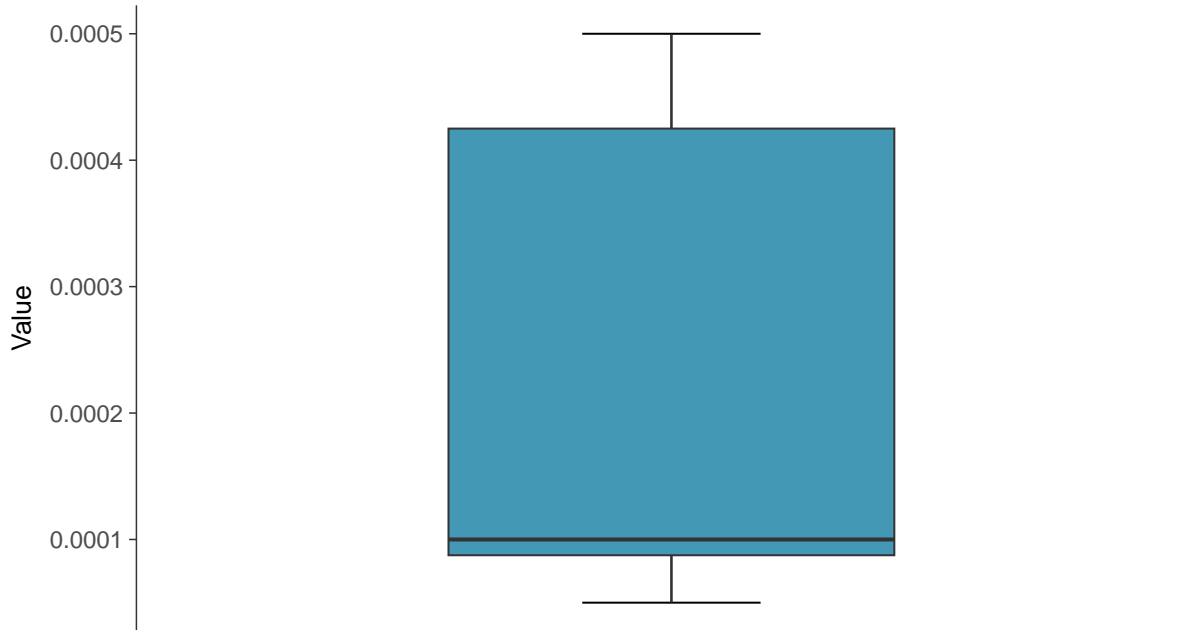
ID: 40\_1\_5\_101





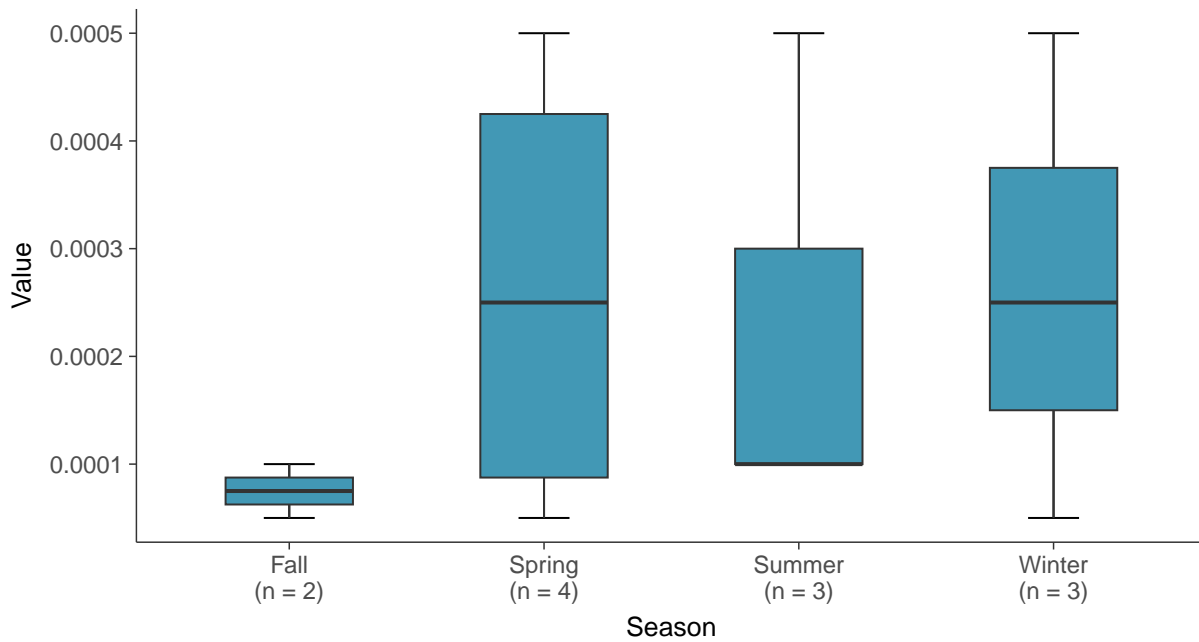
### Boxplot

Antimony, MW-30 (mg/L)



### Boxplot by Season

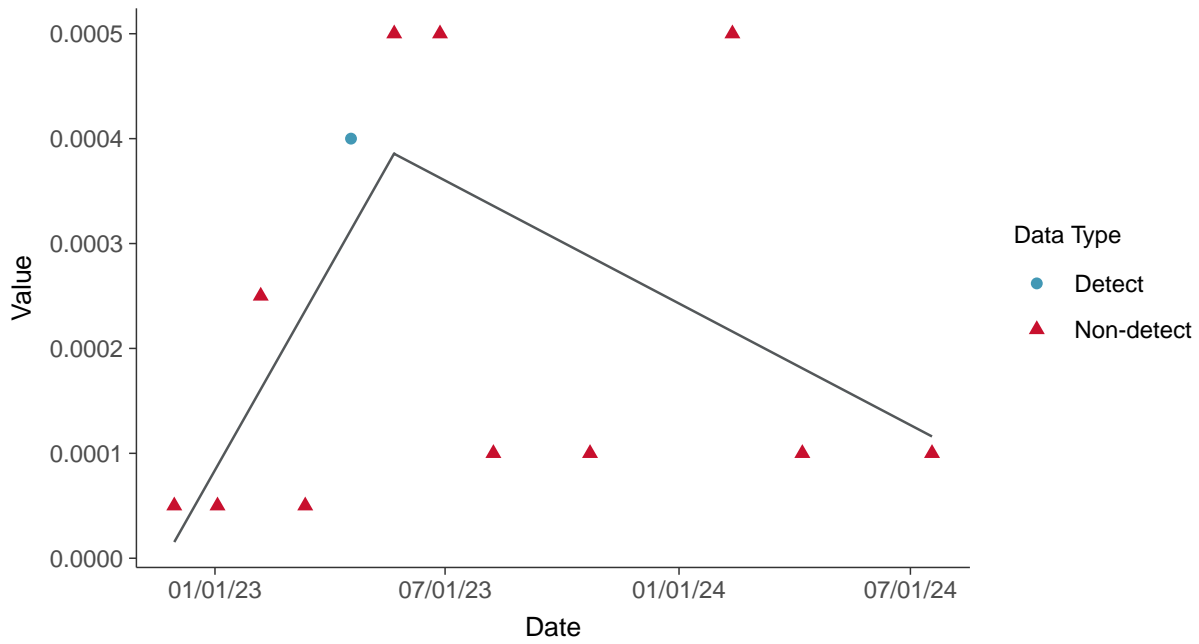
Antimony, MW-30 (mg/L)





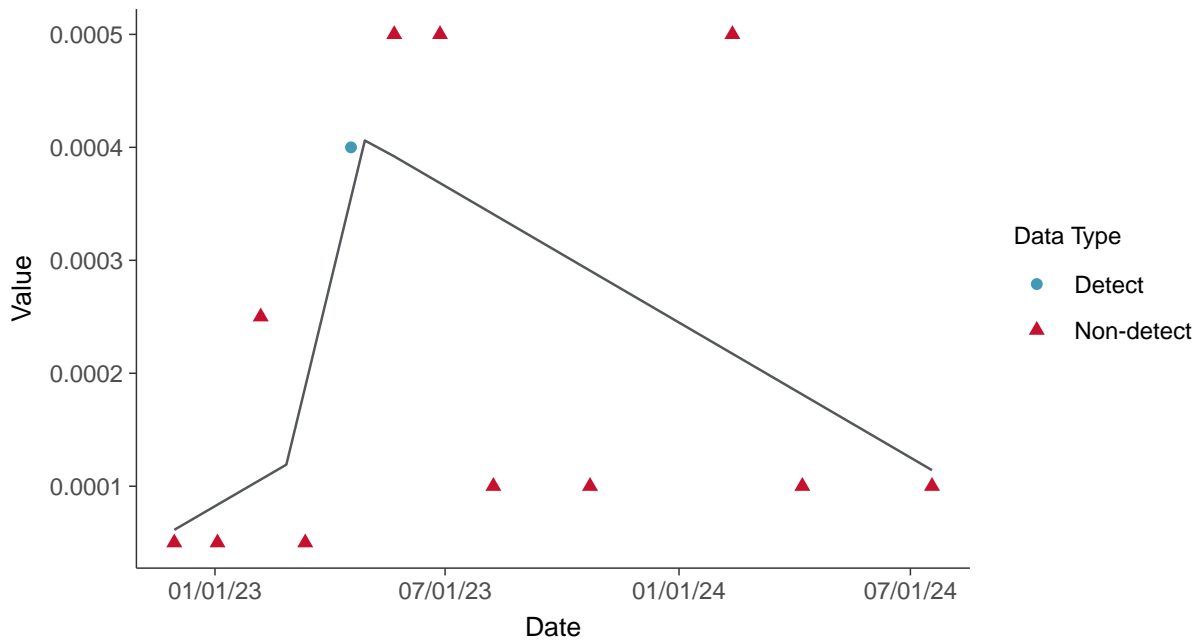
### Trend Regression: Piecewise Linear-Linear

Antimony, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

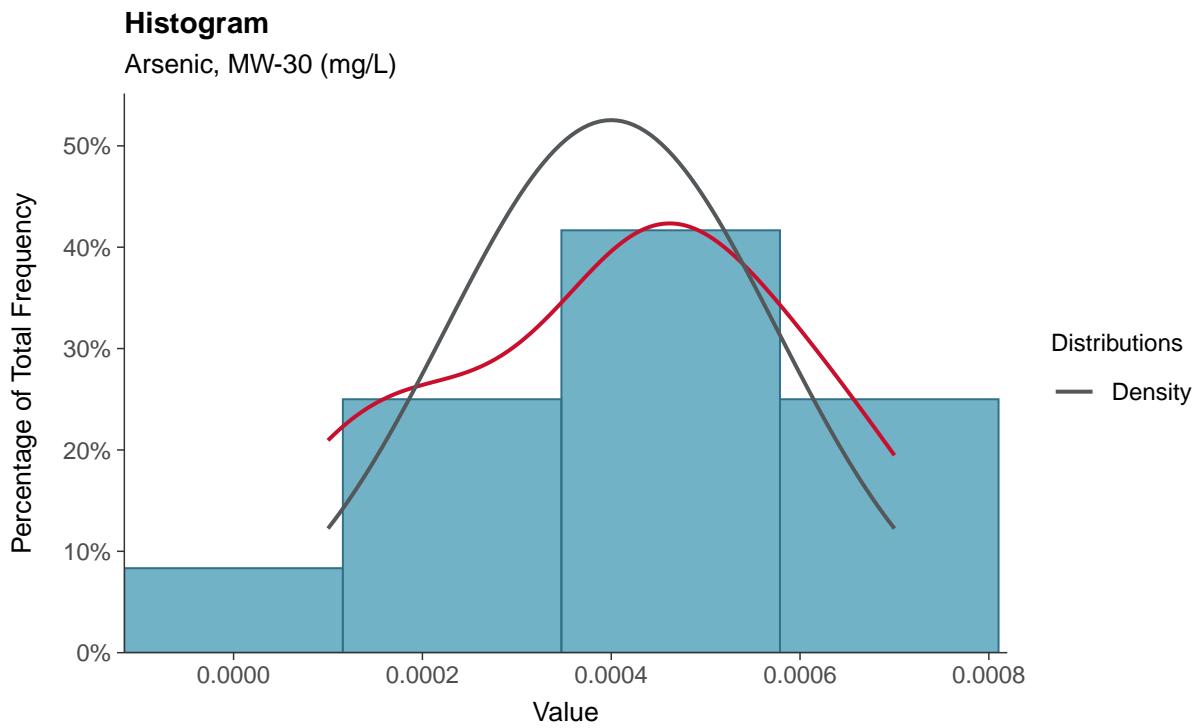
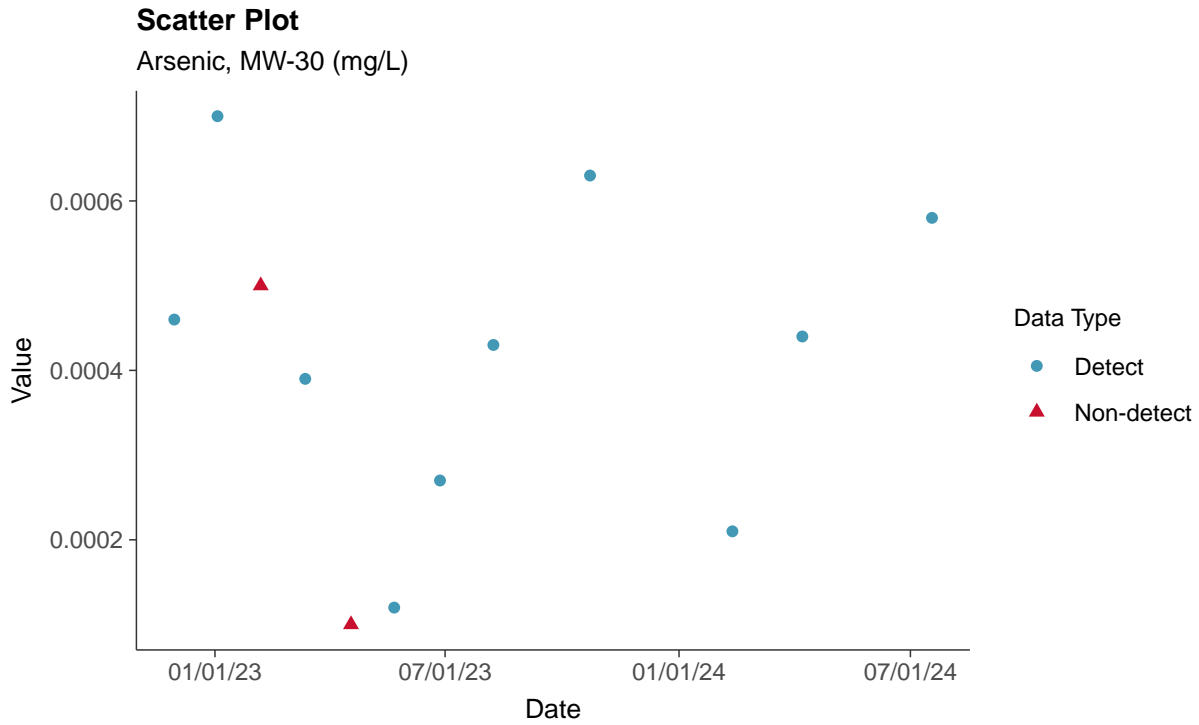
Antimony, MW-30 (mg/L)





### Appendix IV: Arsenic, MW-30

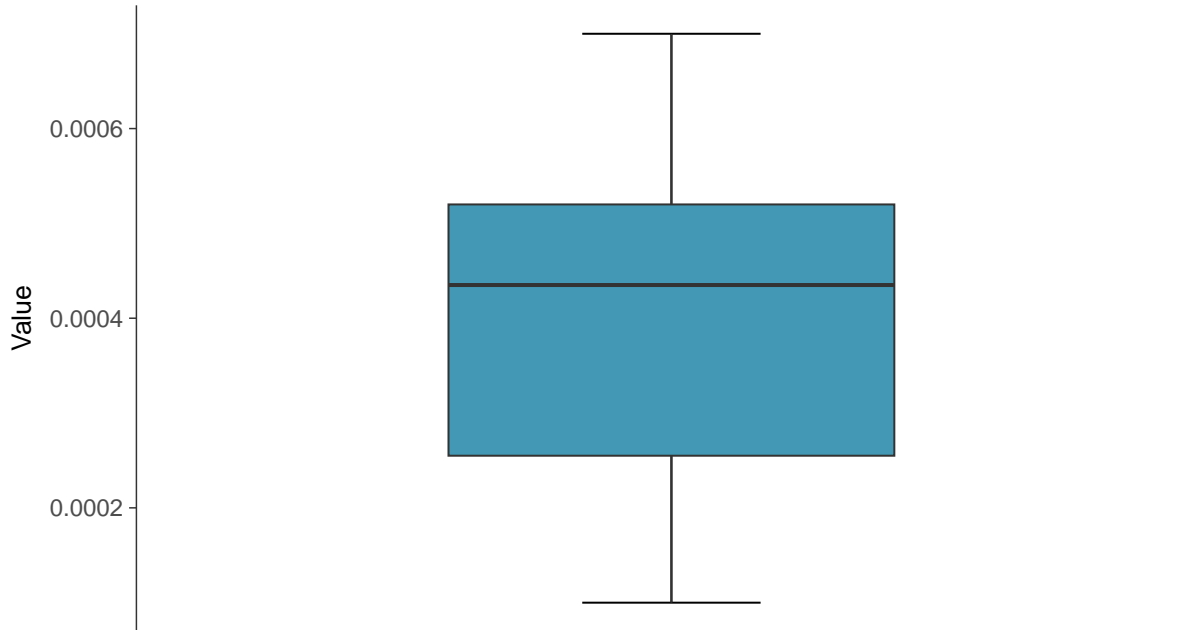
ID: 40\_1\_5\_102





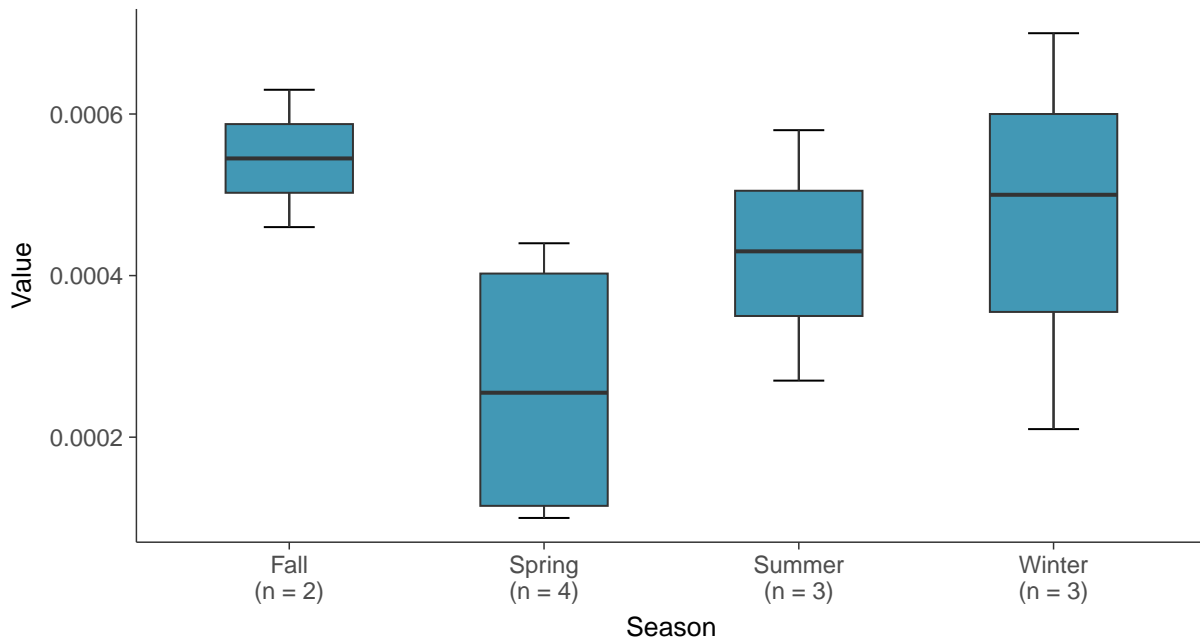
### Boxplot

Arsenic, MW-30 (mg/L)



### Boxplot by Season

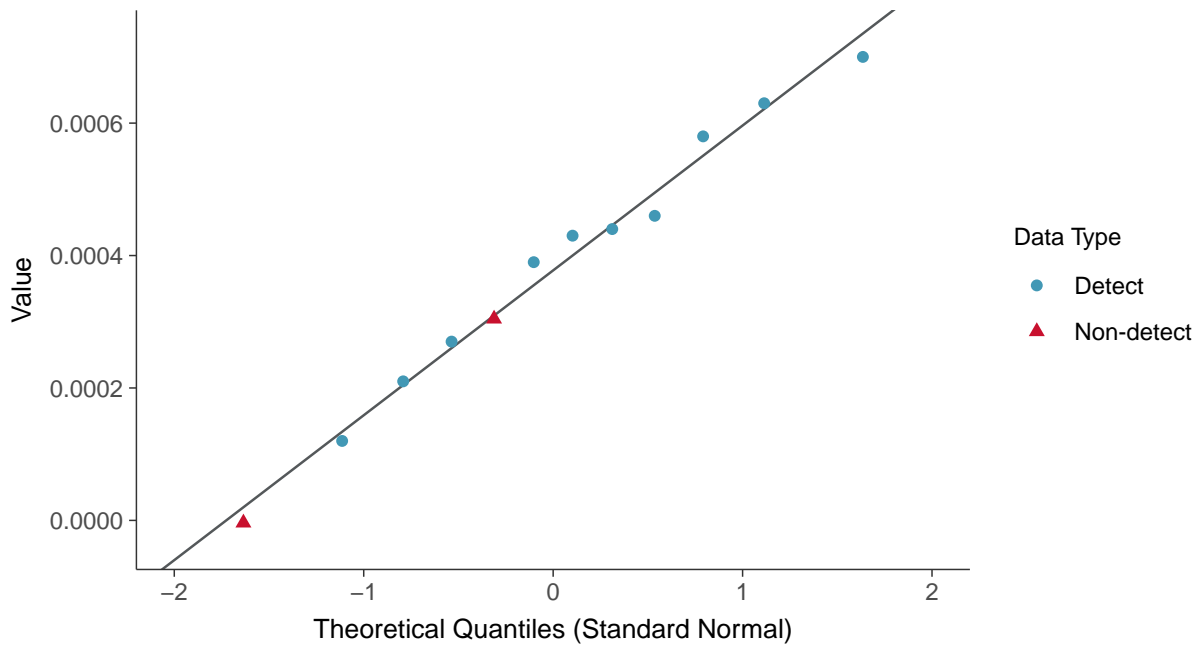
Arsenic, MW-30 (mg/L)





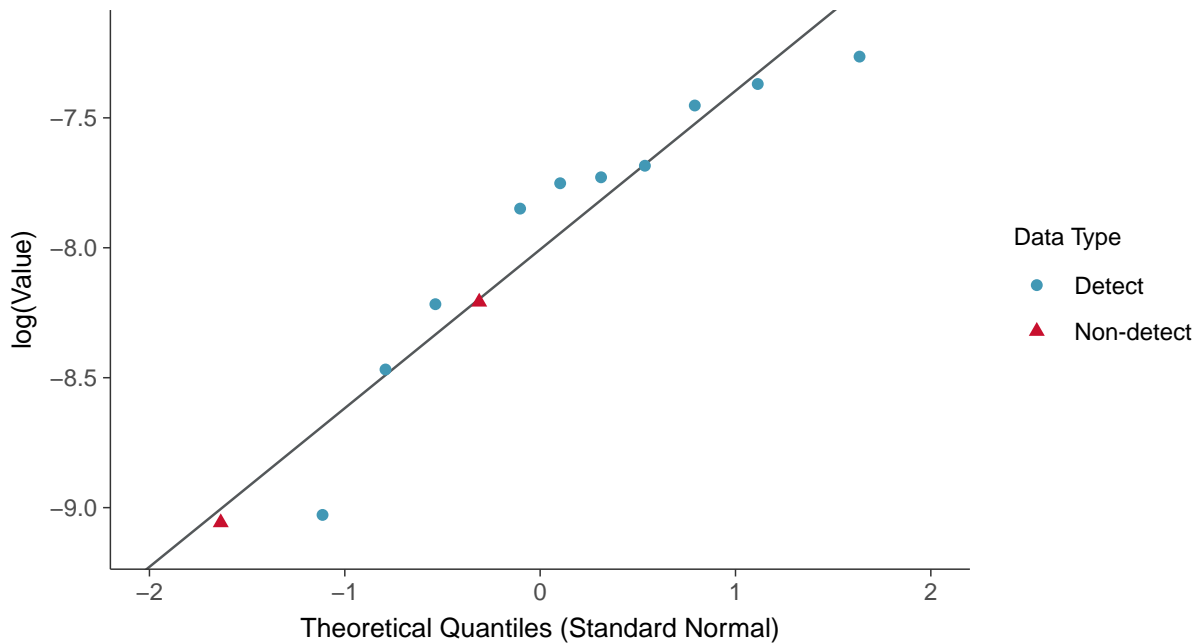
### Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

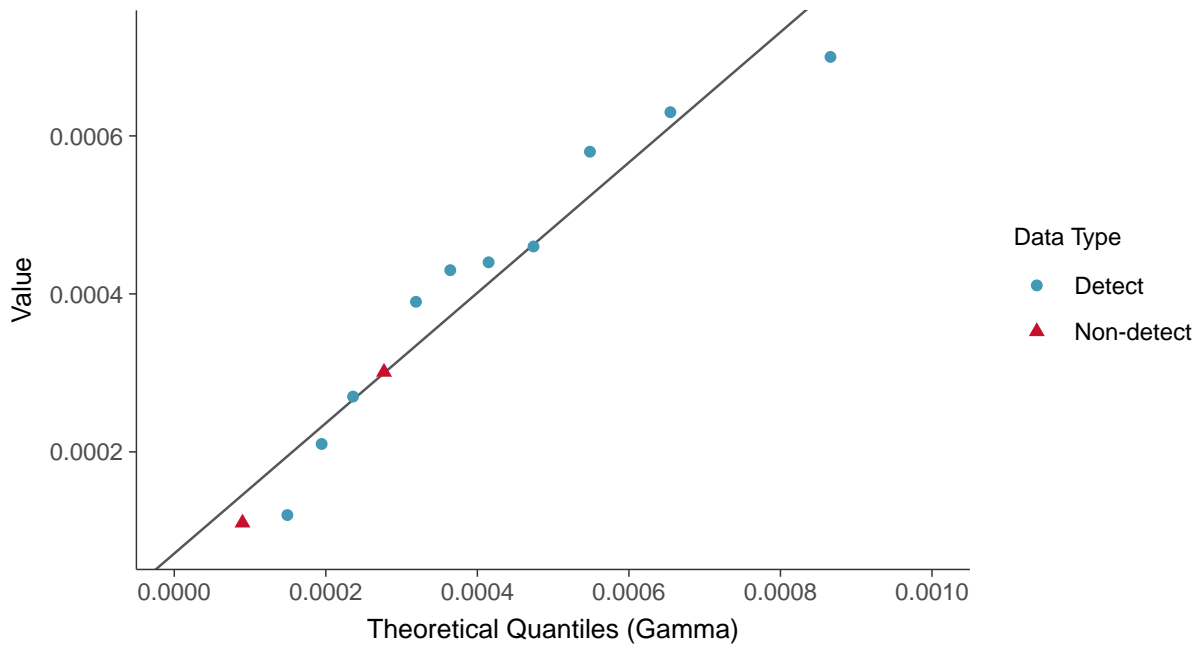
Arsenic, MW-30 (mg/L)





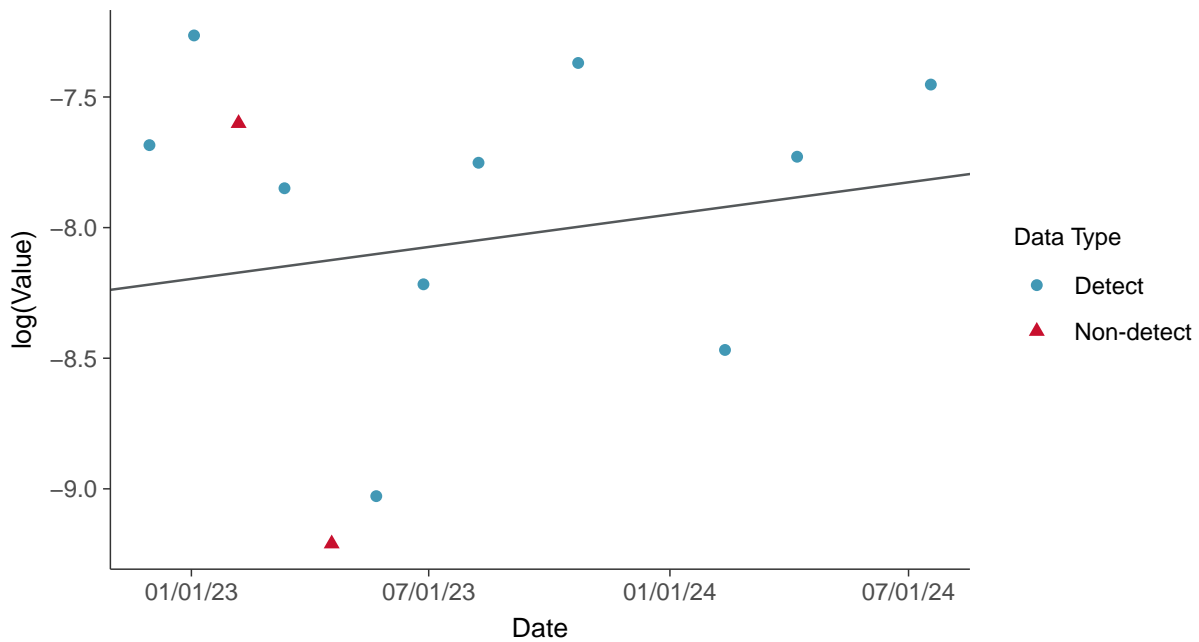
### Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

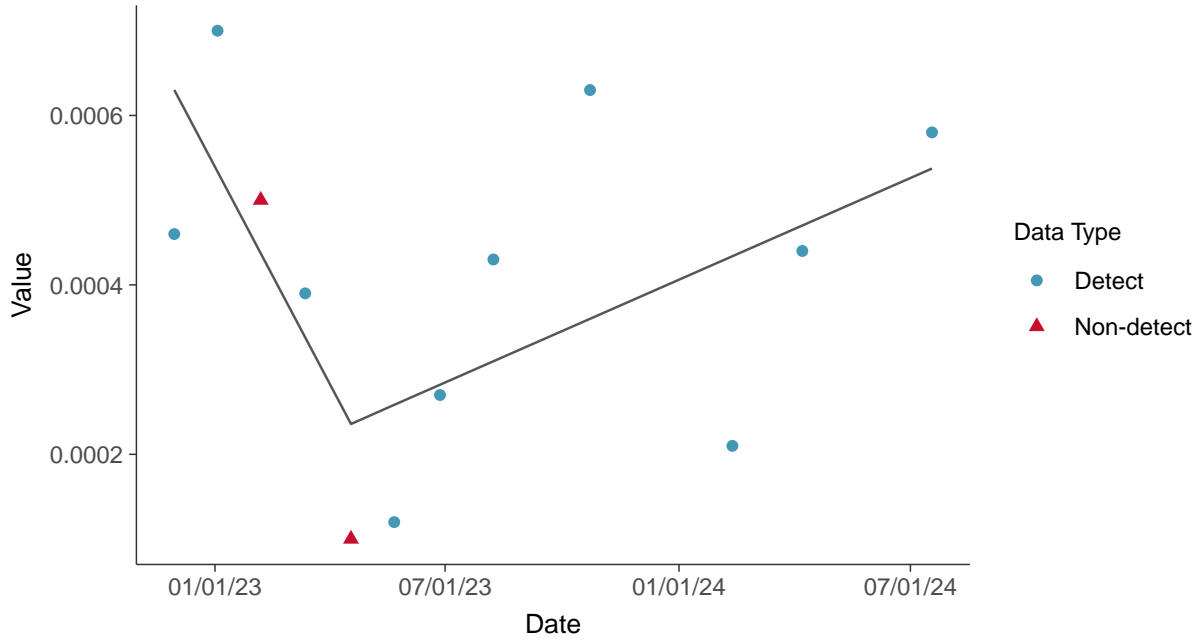
Arsenic, MW-30 (mg/L)





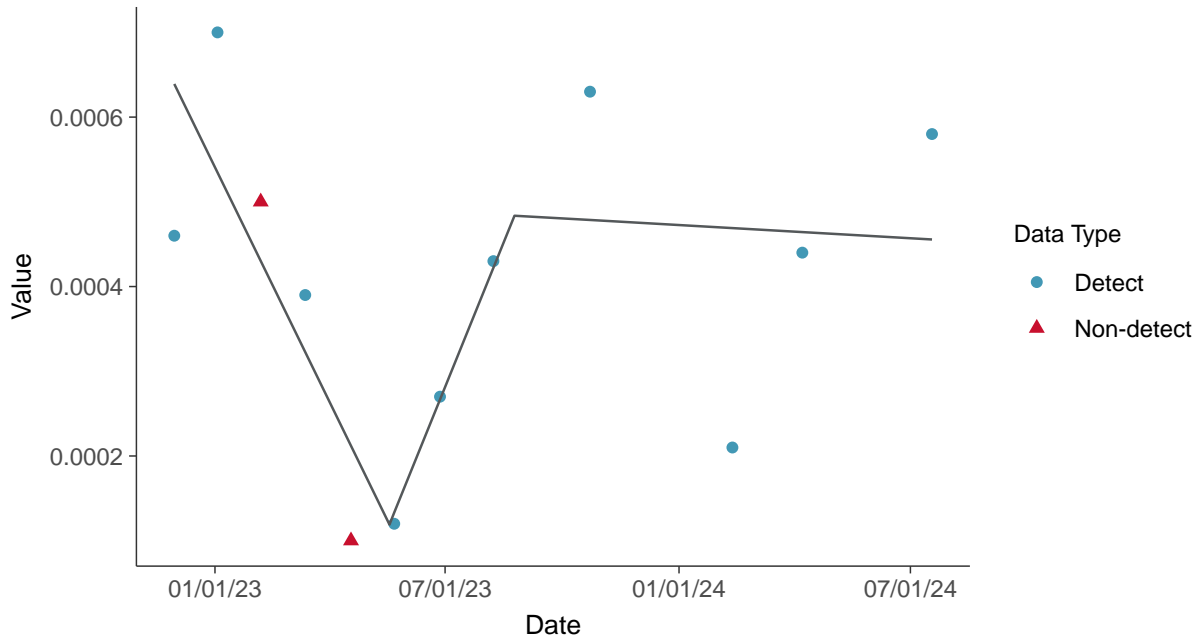
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-30 (mg/L)

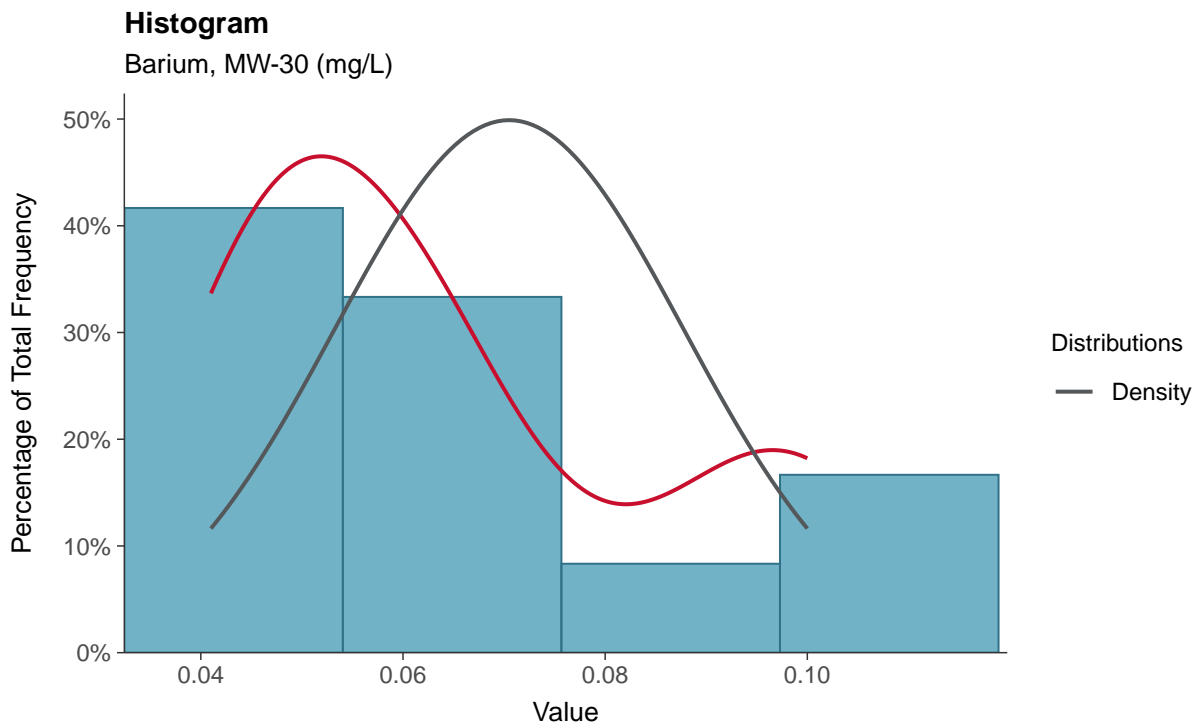
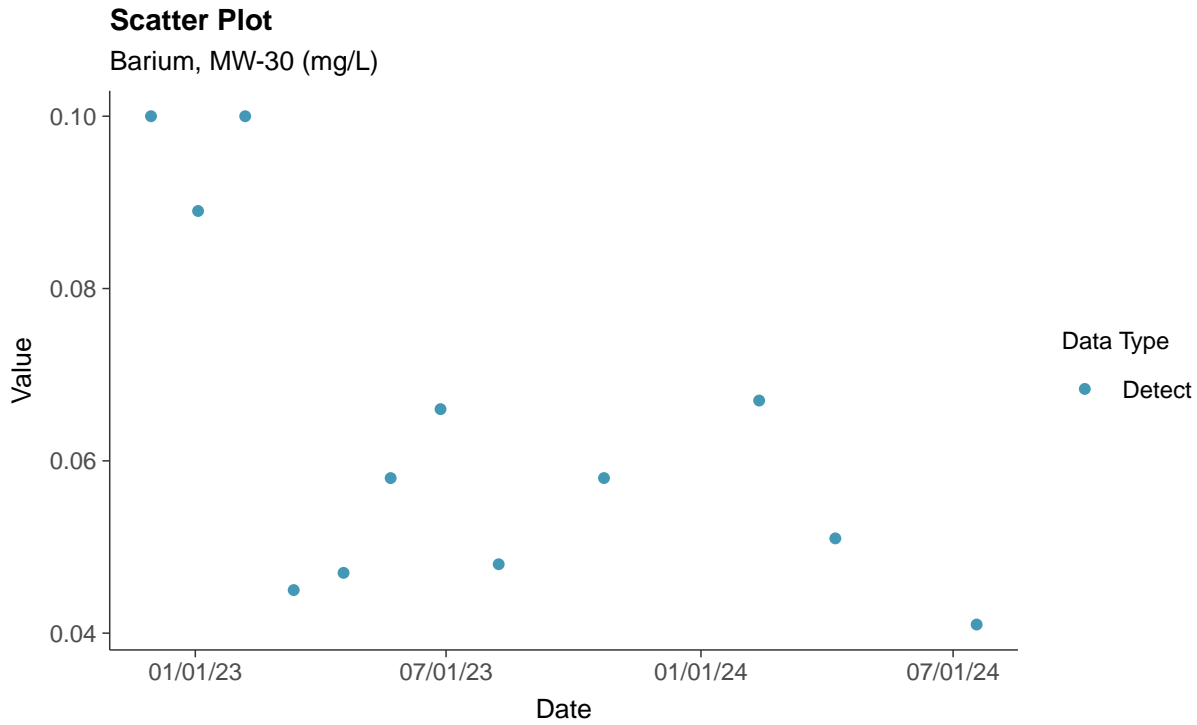






### Appendix IV: Barium, MW-30

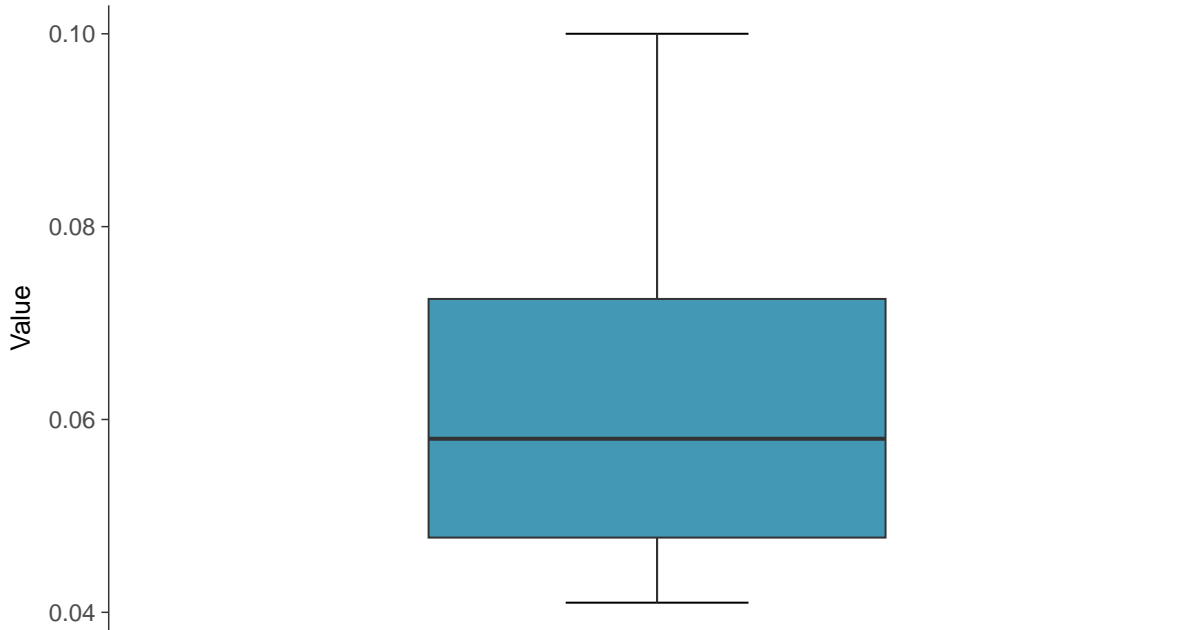
ID: 40\_1\_5\_103





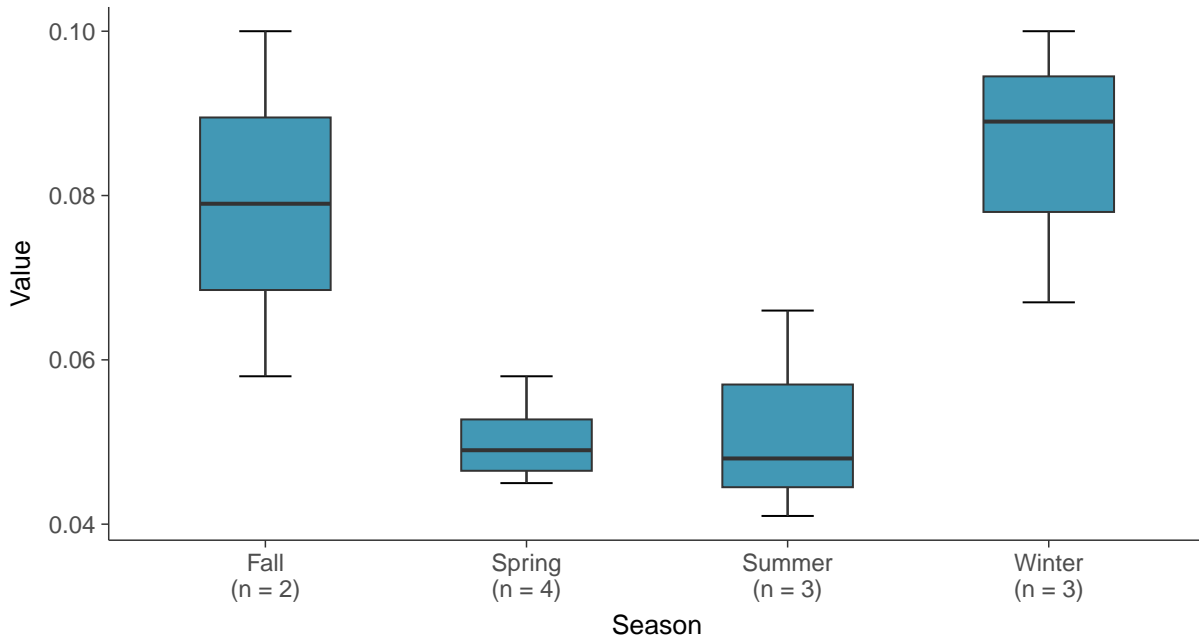
### Boxplot

Barium, MW-30 (mg/L)



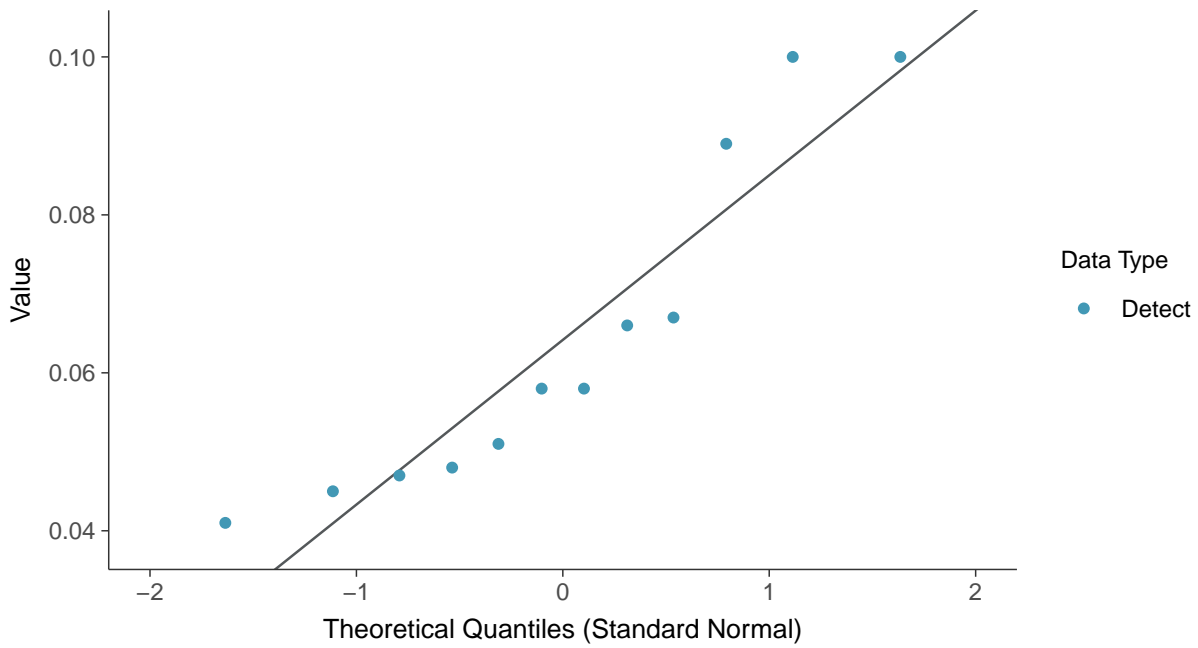
### Boxplot by Season

Barium, MW-30 (mg/L)

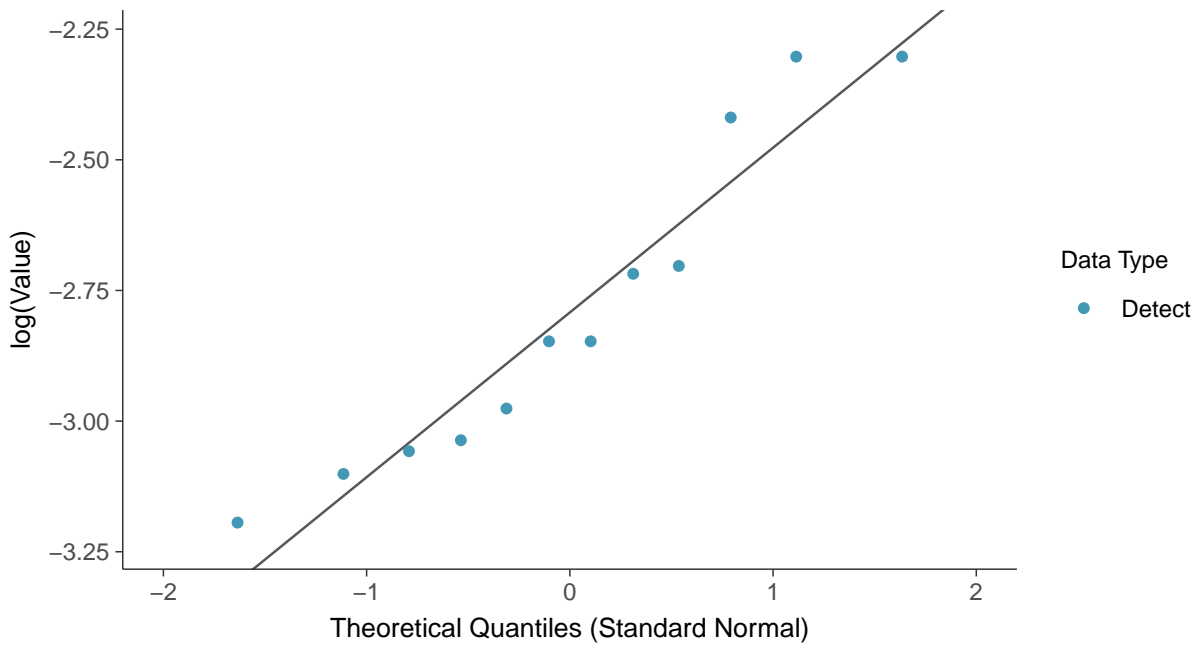




**Normal Q-Q plot**  
Barium, MW-30 (mg/L)

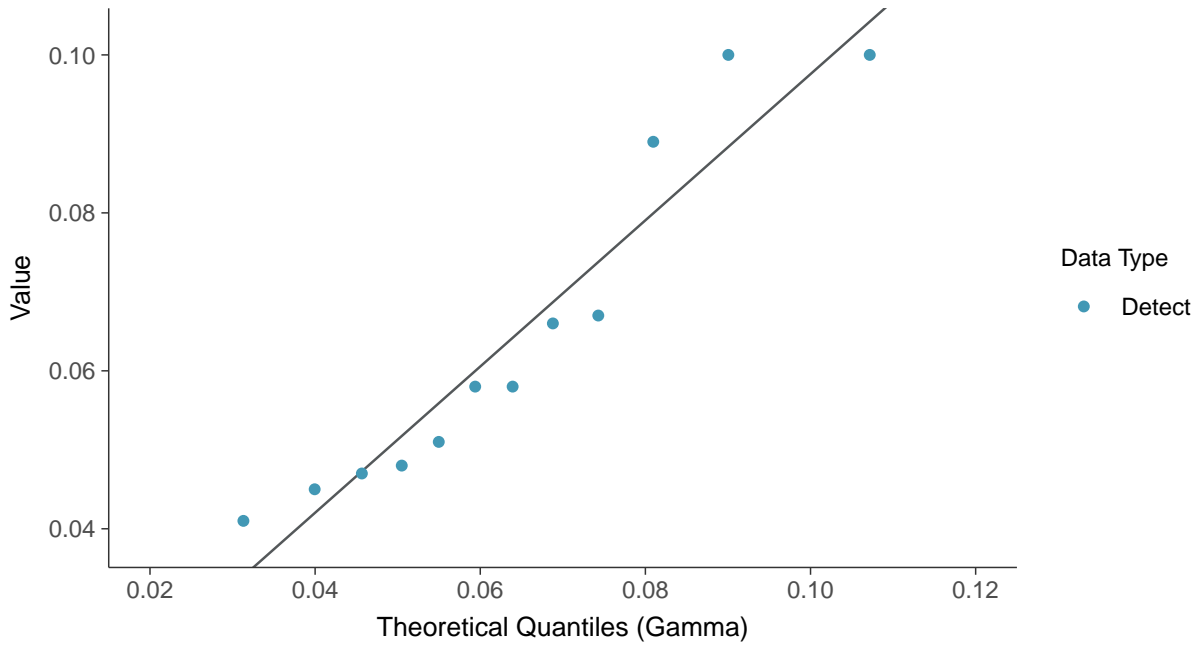


**Lognormal Q-Q plot**  
Barium, MW-30 (mg/L)

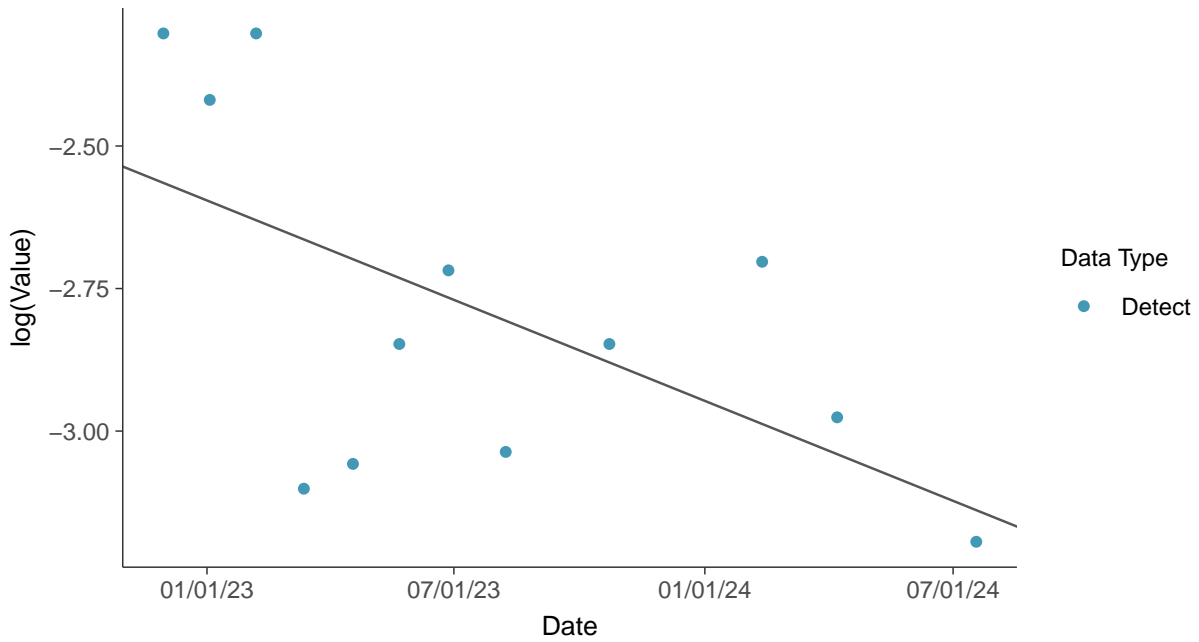




**Gamma Q-Q plot**  
Barium, MW-30 (mg/L)



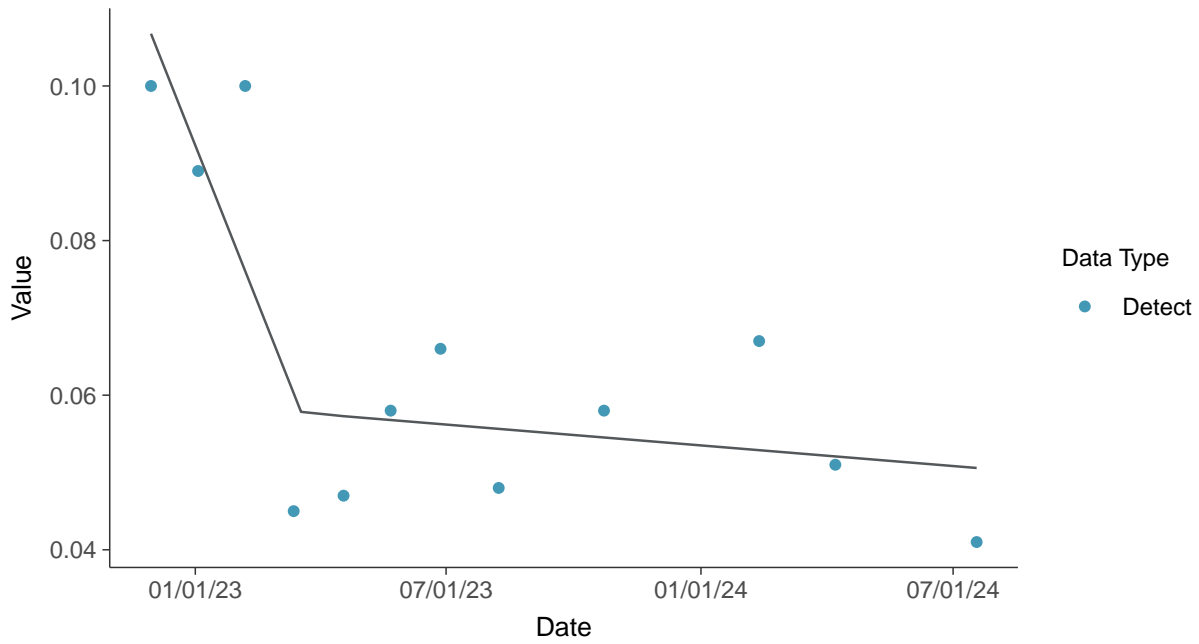
**Trend Regression: Lognormal MLE**  
Barium, MW-30 (mg/L)





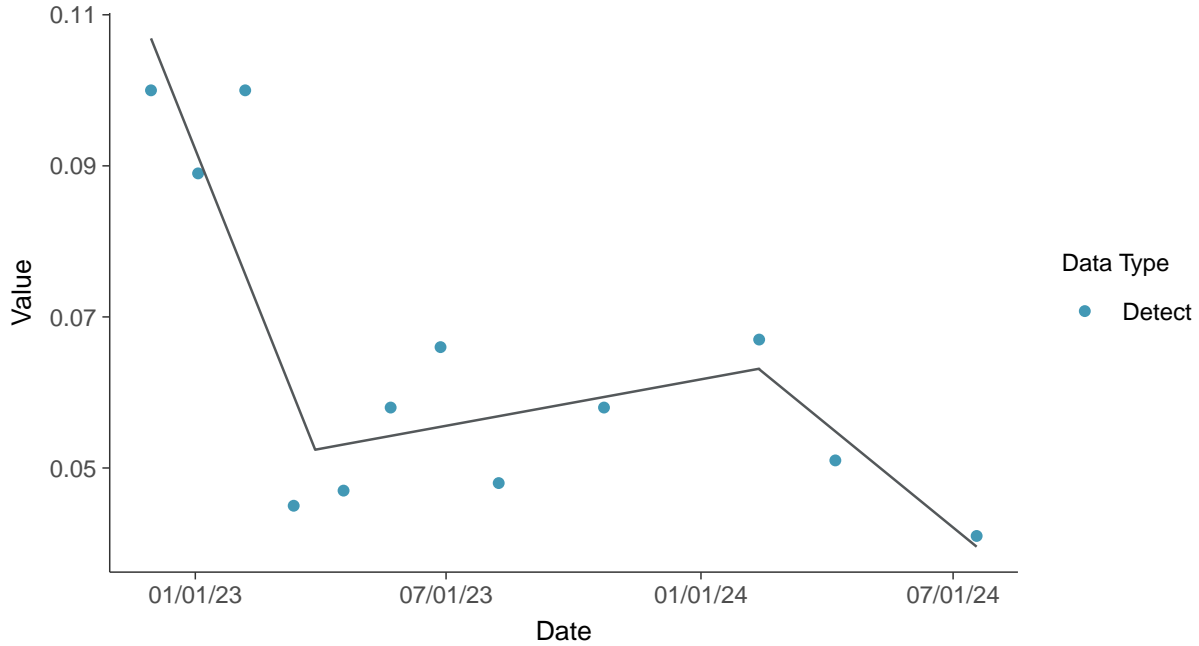
### Trend Regression: Piecewise Linear-Linear

Barium, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

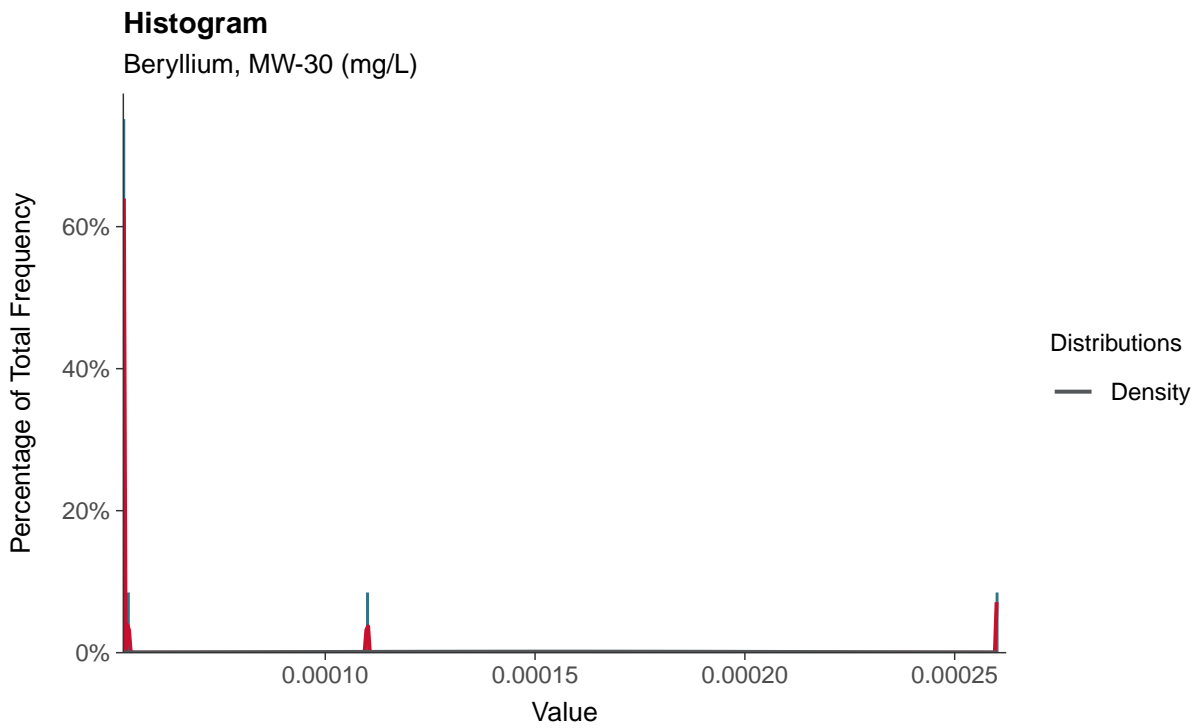
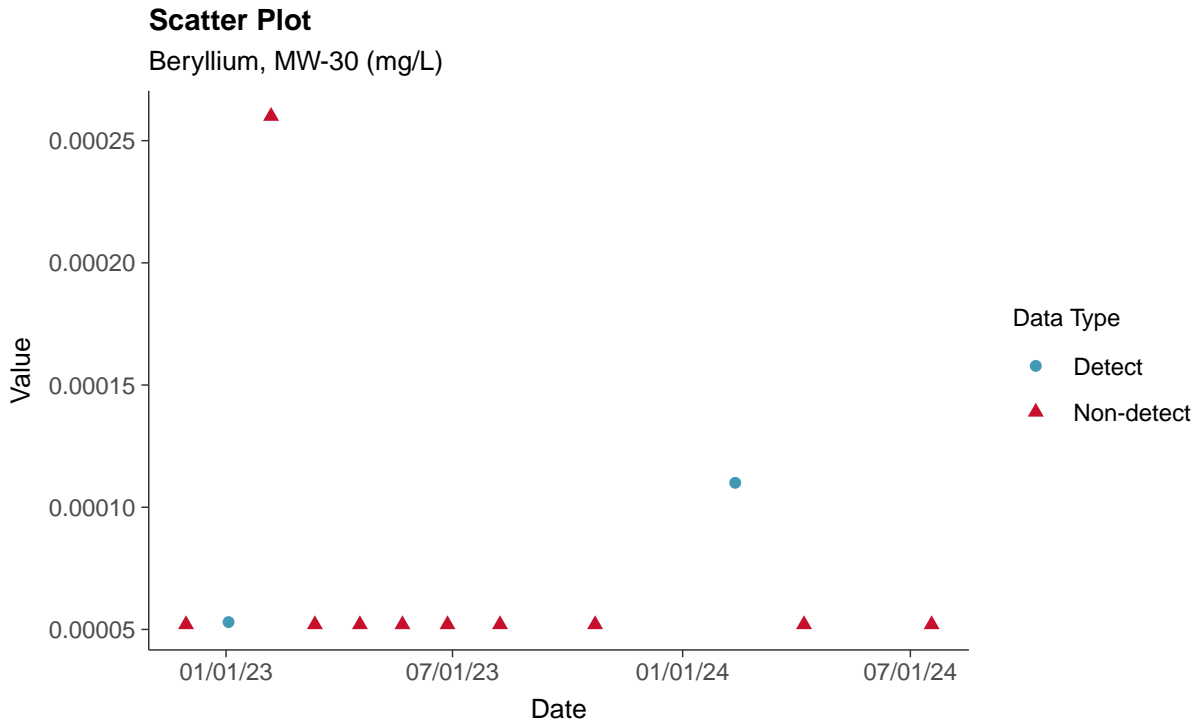
Barium, MW-30 (mg/L)





### Appendix IV: Beryllium, MW-30

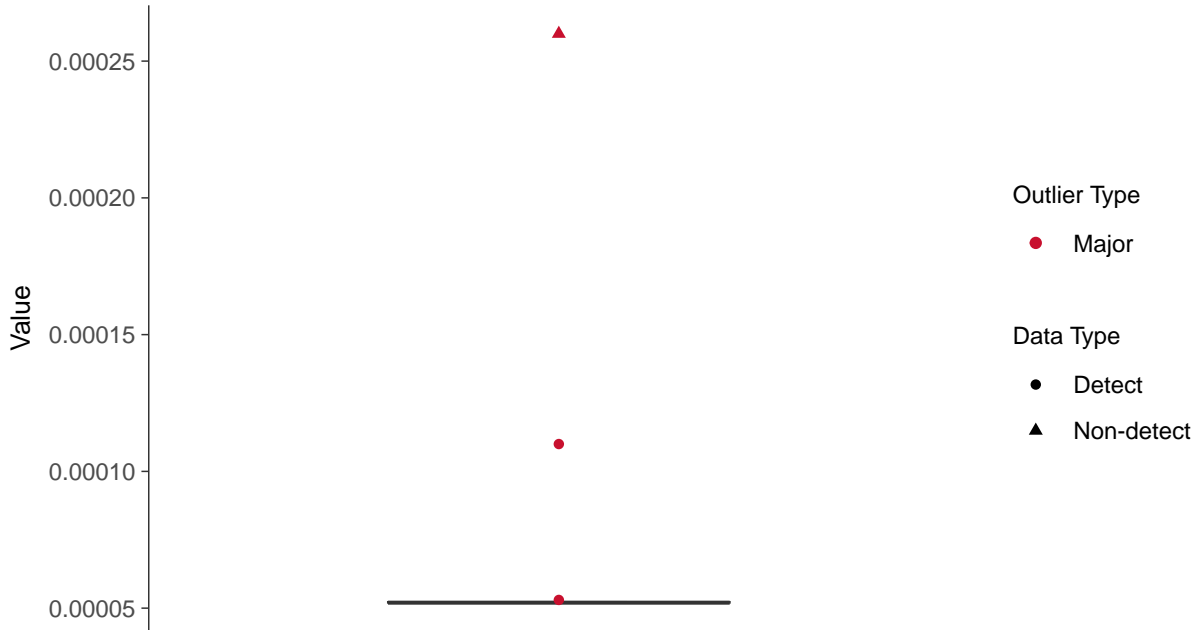
ID: 40\_1\_5\_104





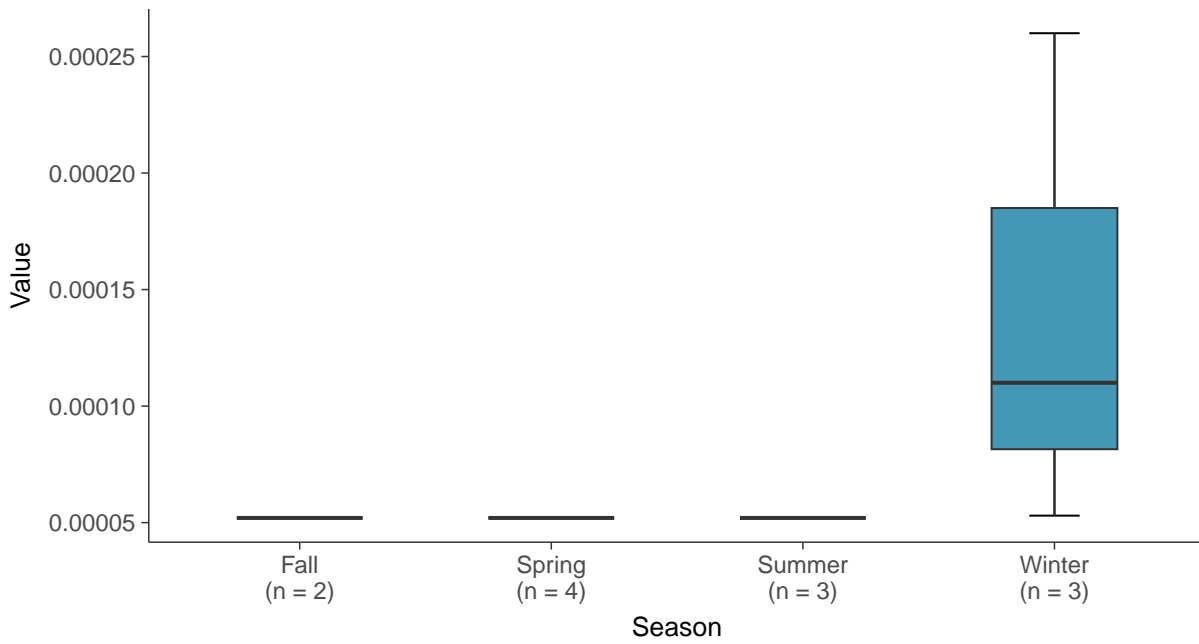
### Boxplot

Beryllium, MW-30 (mg/L)



### Boxplot by Season

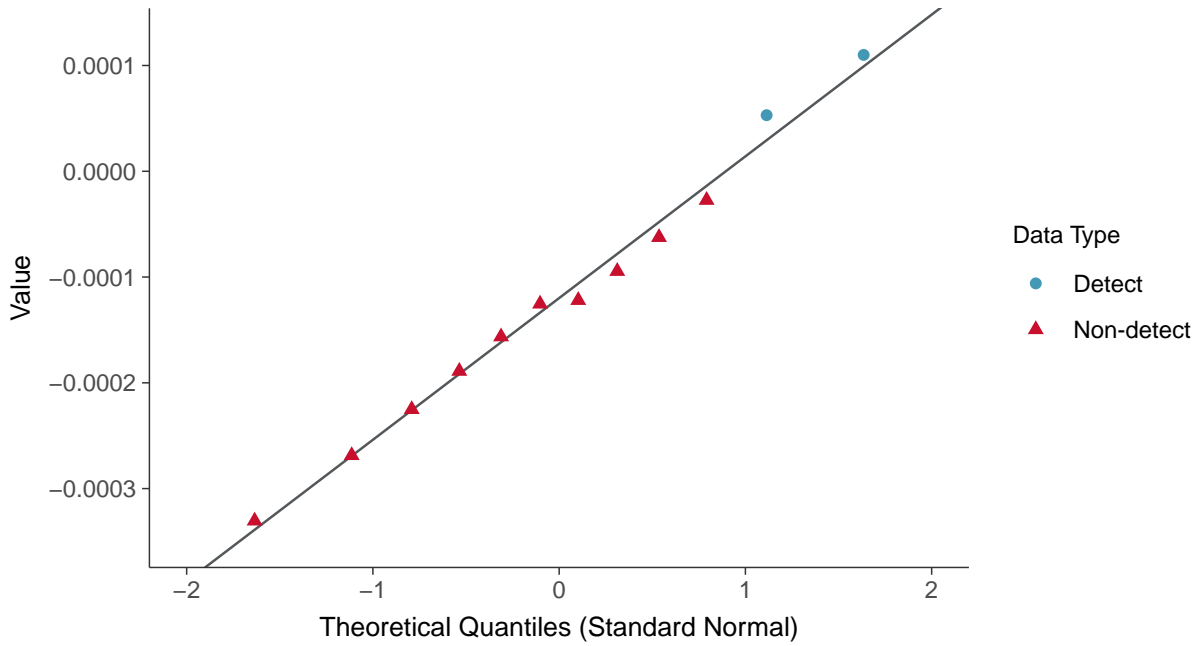
Beryllium, MW-30 (mg/L)





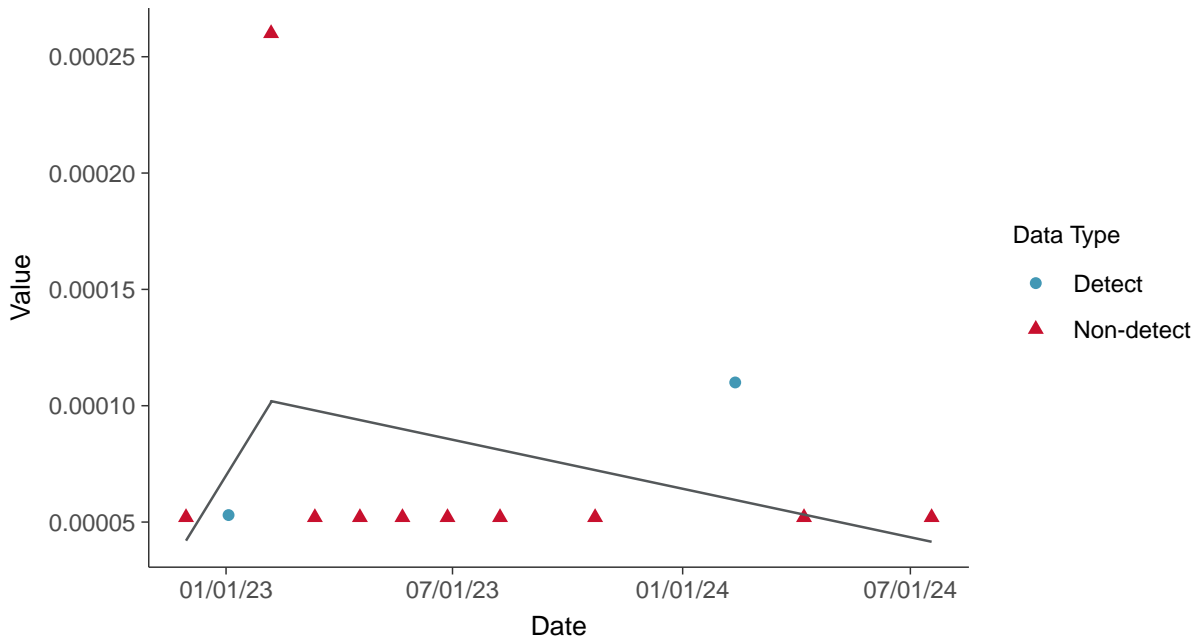
### Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-30 (mg/L)

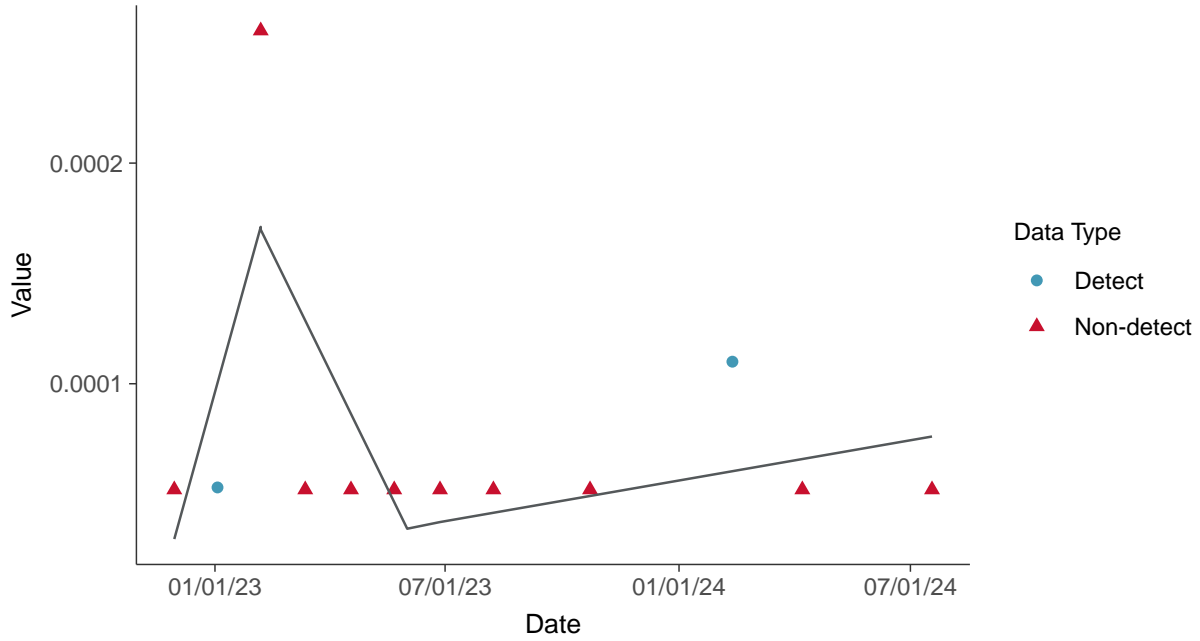






### Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-30 (mg/L)



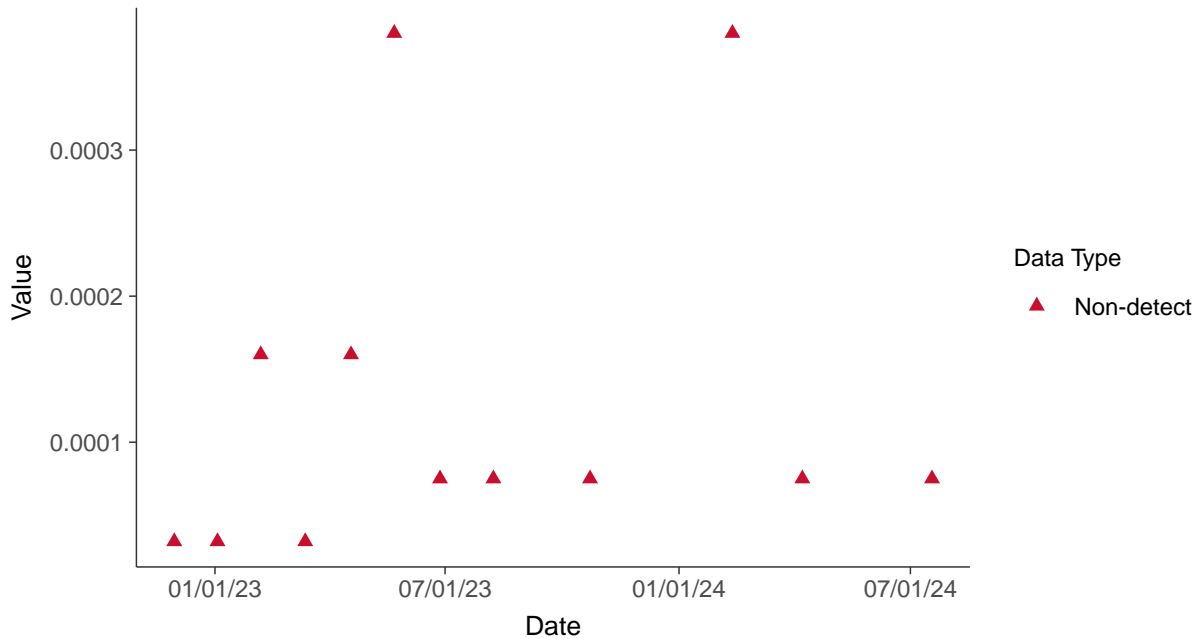


### Appendix IV: Cadmium, MW-30

ID: 40\_1\_5\_106

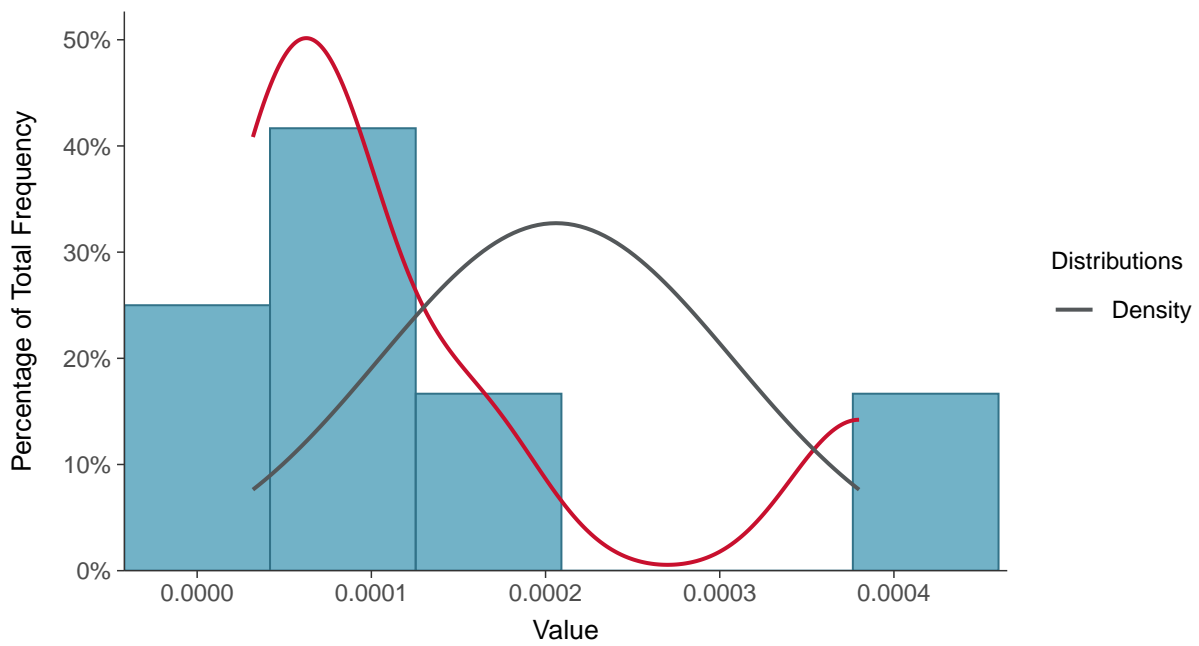
#### Scatter Plot

Cadmium, MW-30 (mg/L)



#### Histogram

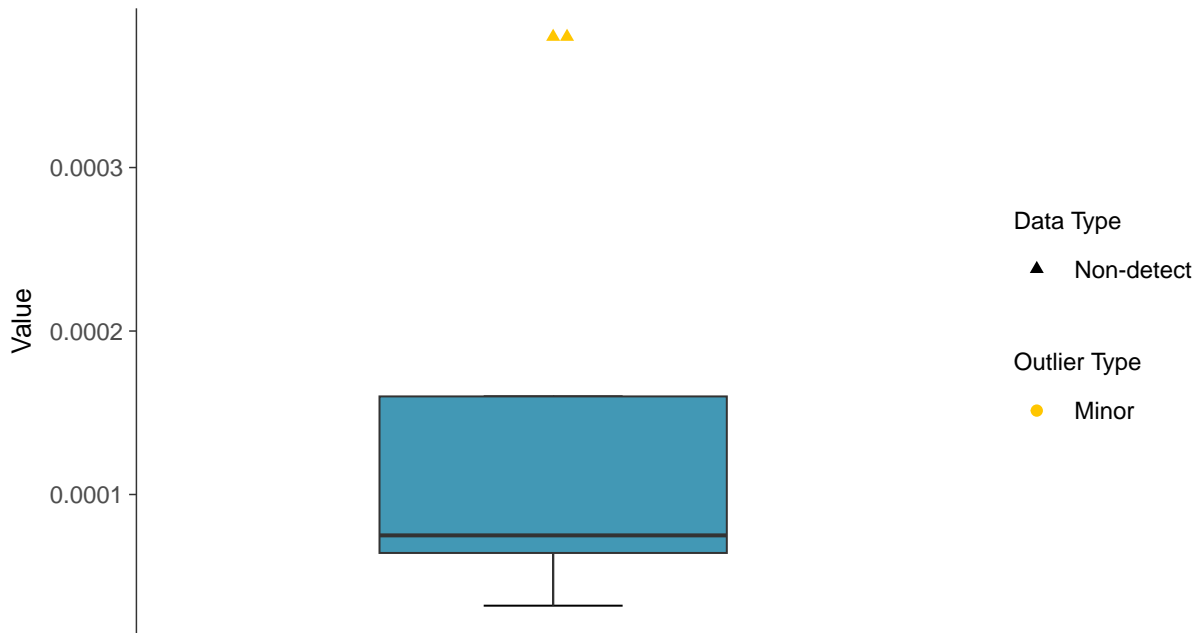
Cadmium, MW-30 (mg/L)





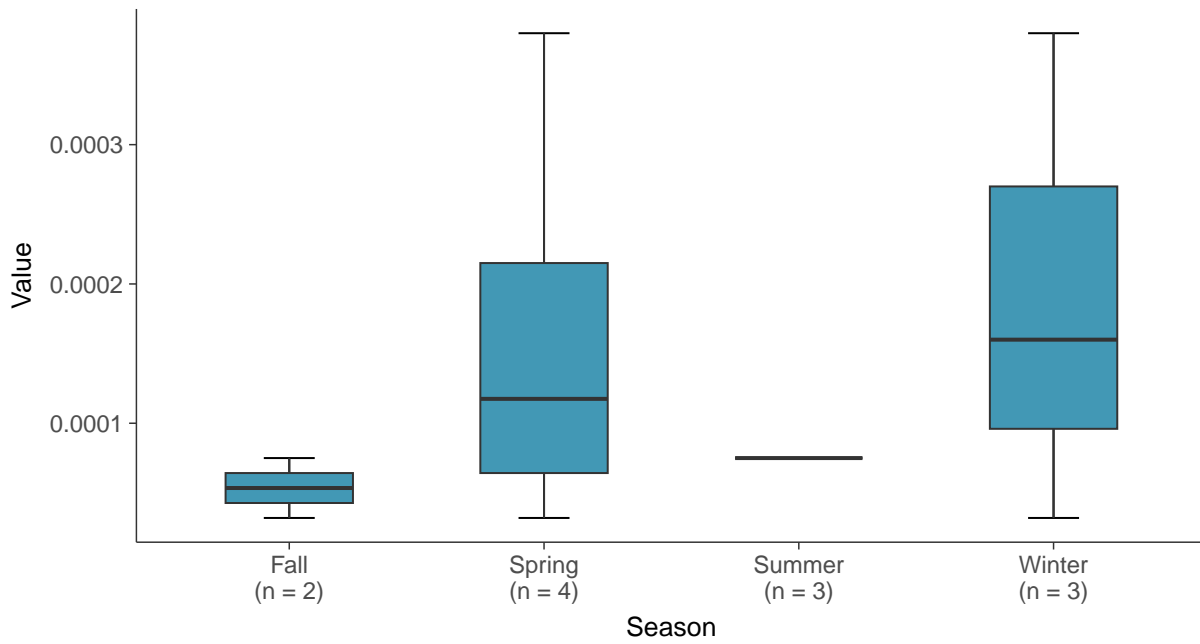
### Boxplot

Cadmium, MW-30 (mg/L)



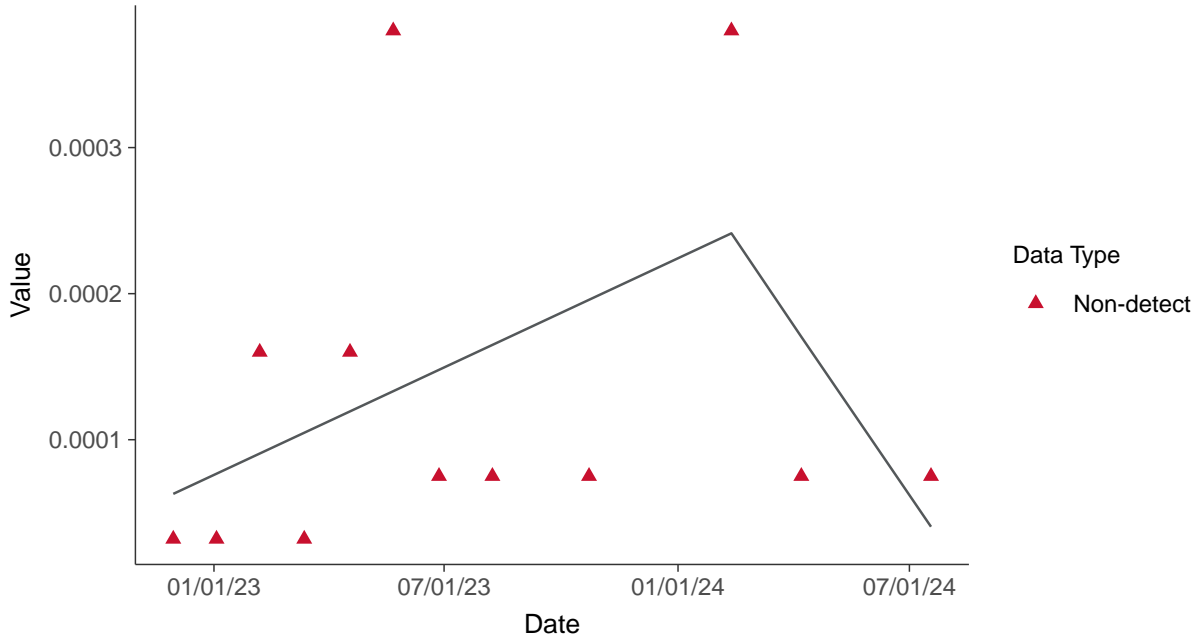
### Boxplot by Season

Cadmium, MW-30 (mg/L)

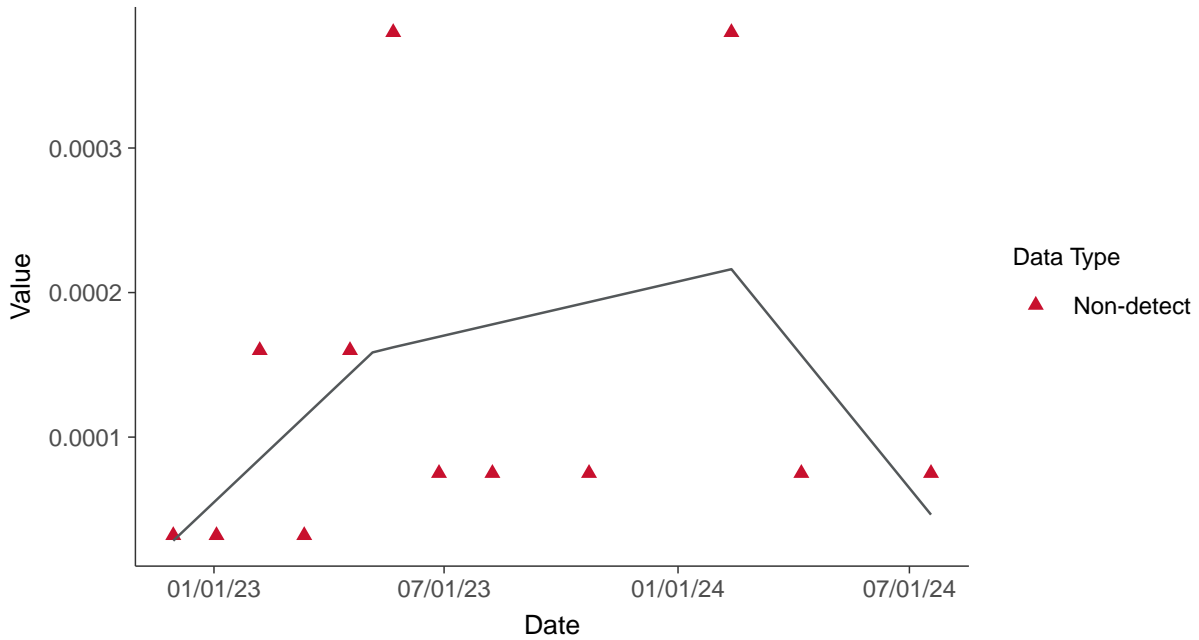




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-30 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-30 (mg/L)



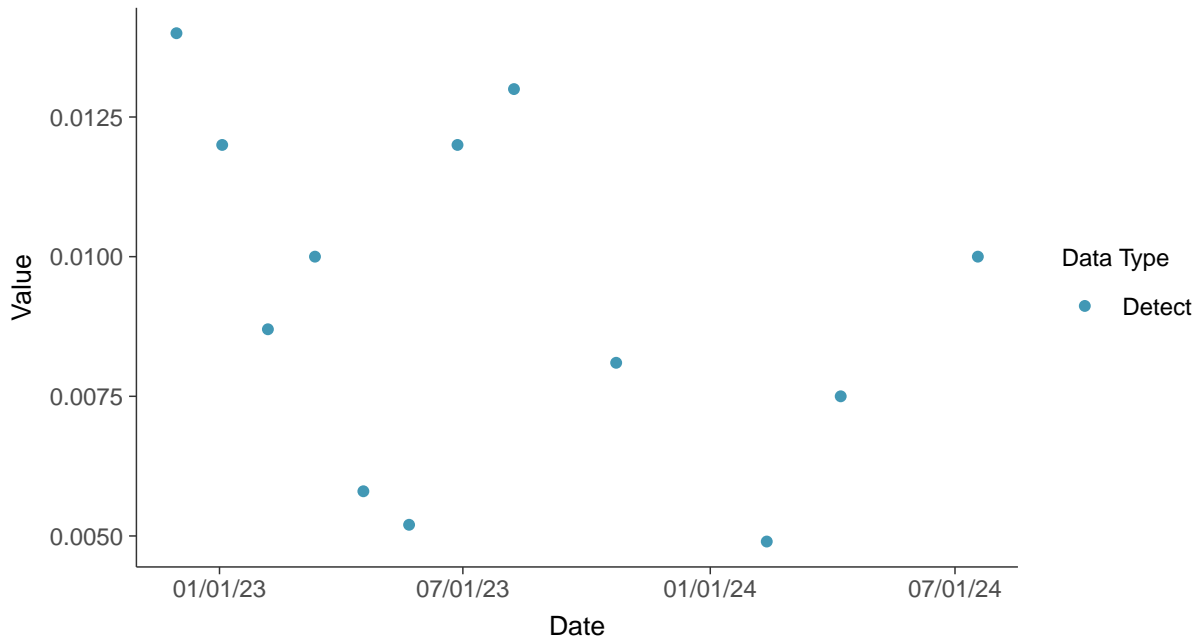


### Appendix IV: Chromium, Total, MW-30

ID: 40\_1\_5\_109

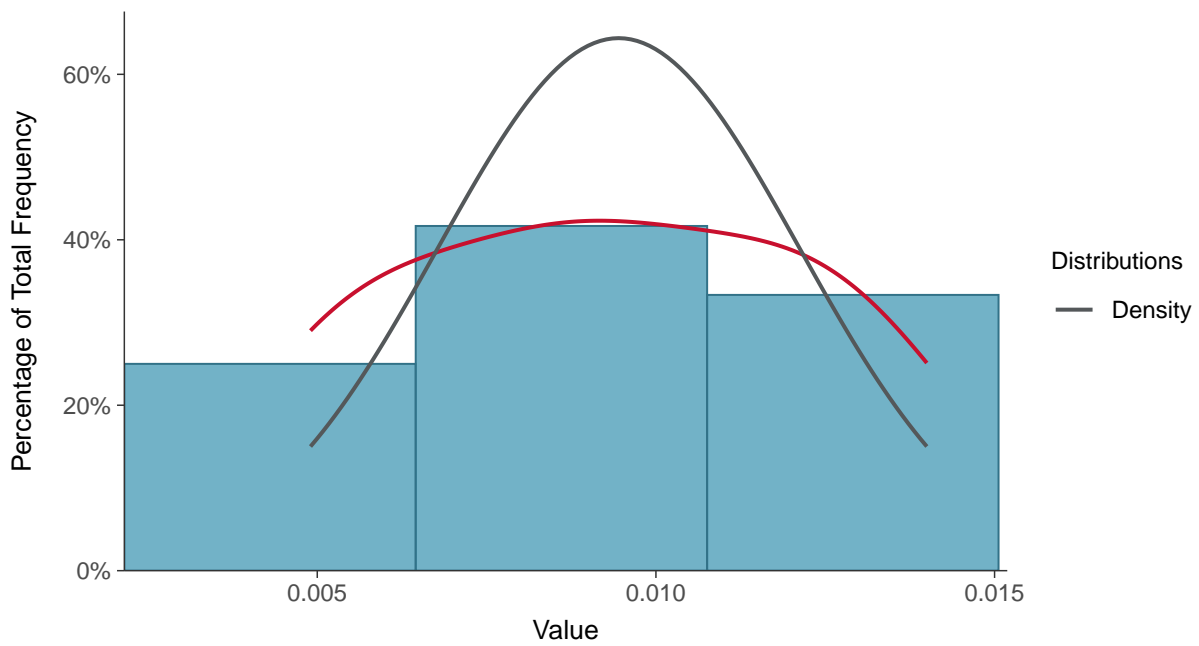
#### Scatter Plot

Chromium, Total, MW-30 (mg/L)



#### Histogram

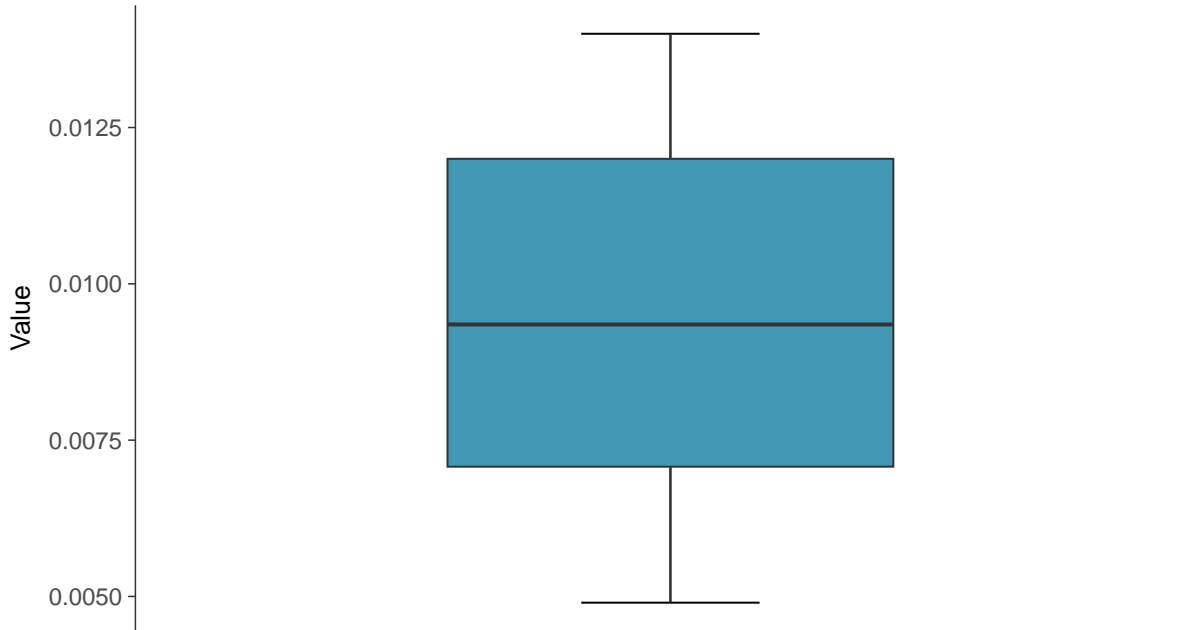
Chromium, Total, MW-30 (mg/L)





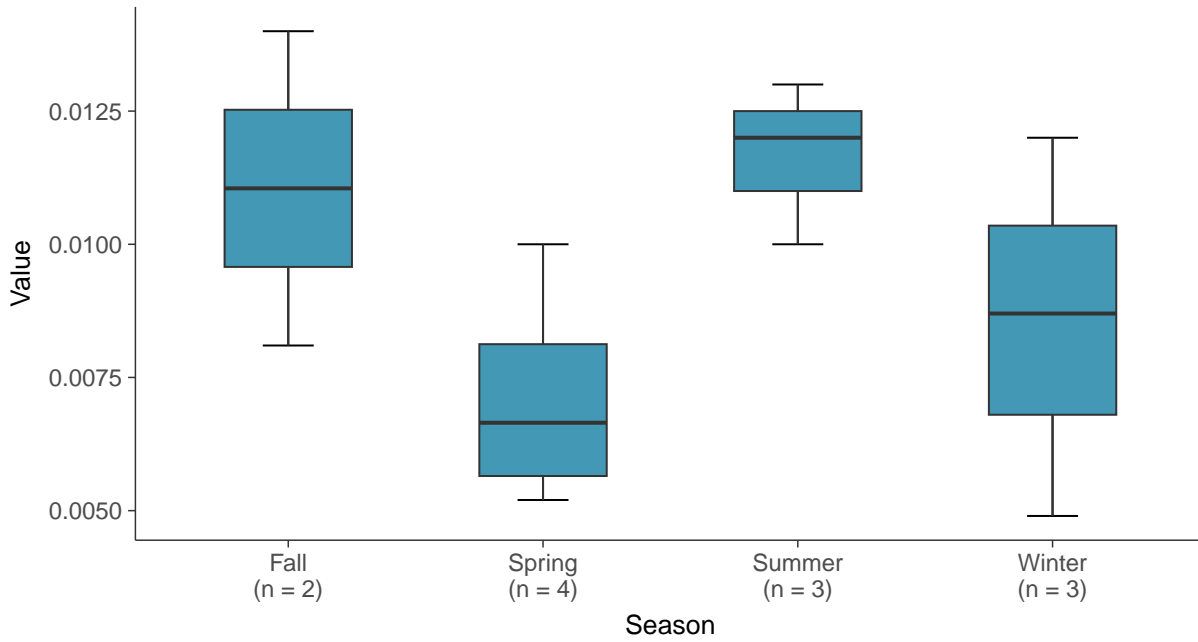
### Boxplot

Chromium, Total, MW-30 (mg/L)



### Boxplot by Season

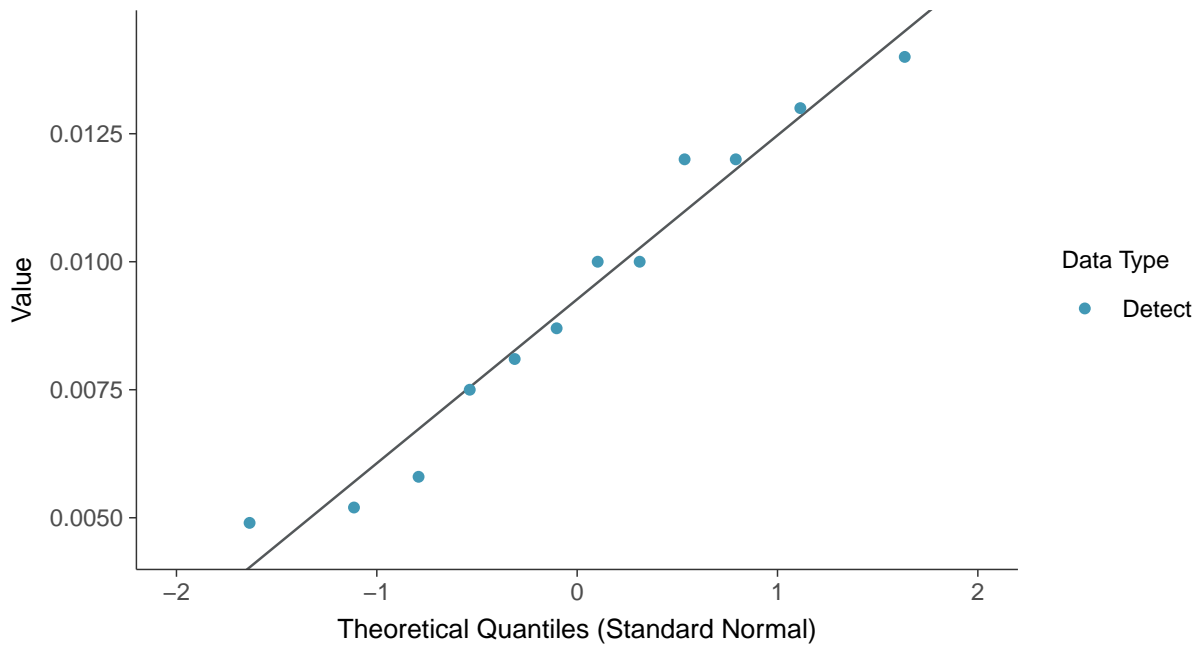
Chromium, Total, MW-30 (mg/L)





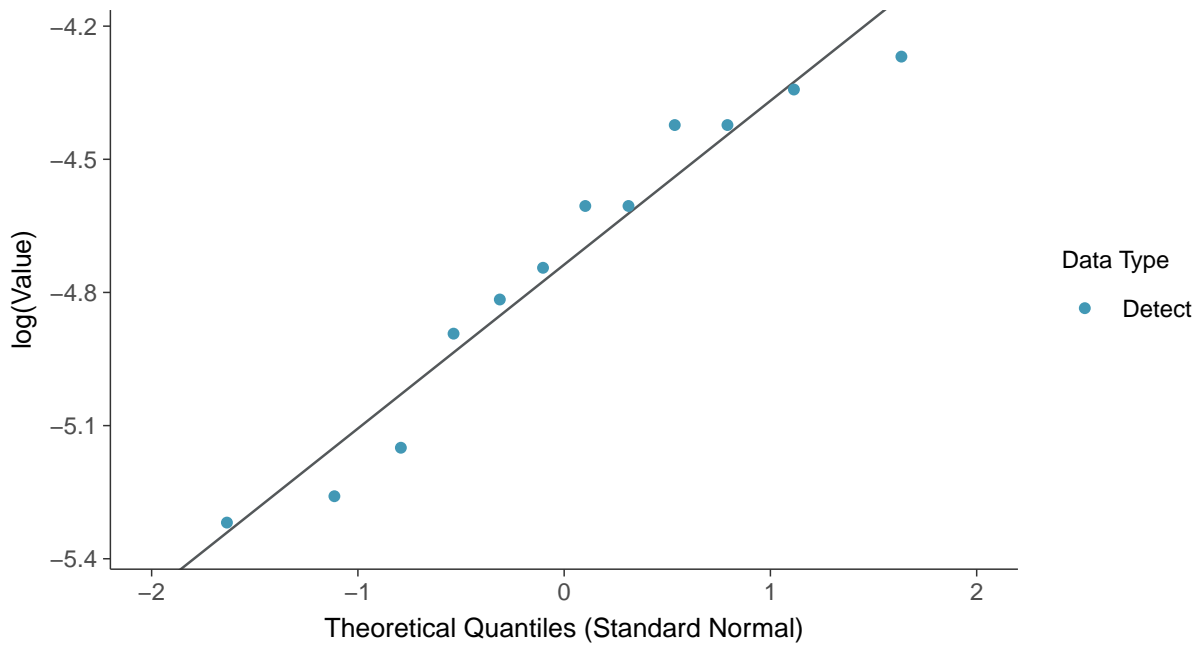
### Normal Q-Q plot

Chromium, Total, MW-30 (mg/L)



### Lognormal Q-Q plot

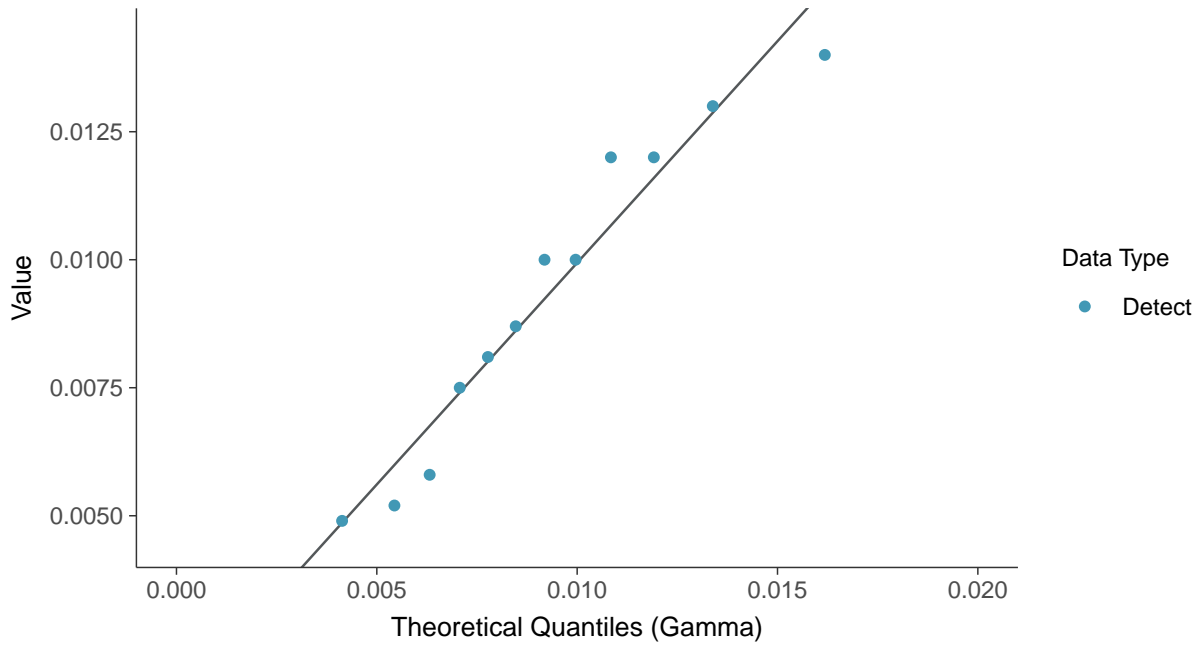
Chromium, Total, MW-30 (mg/L)





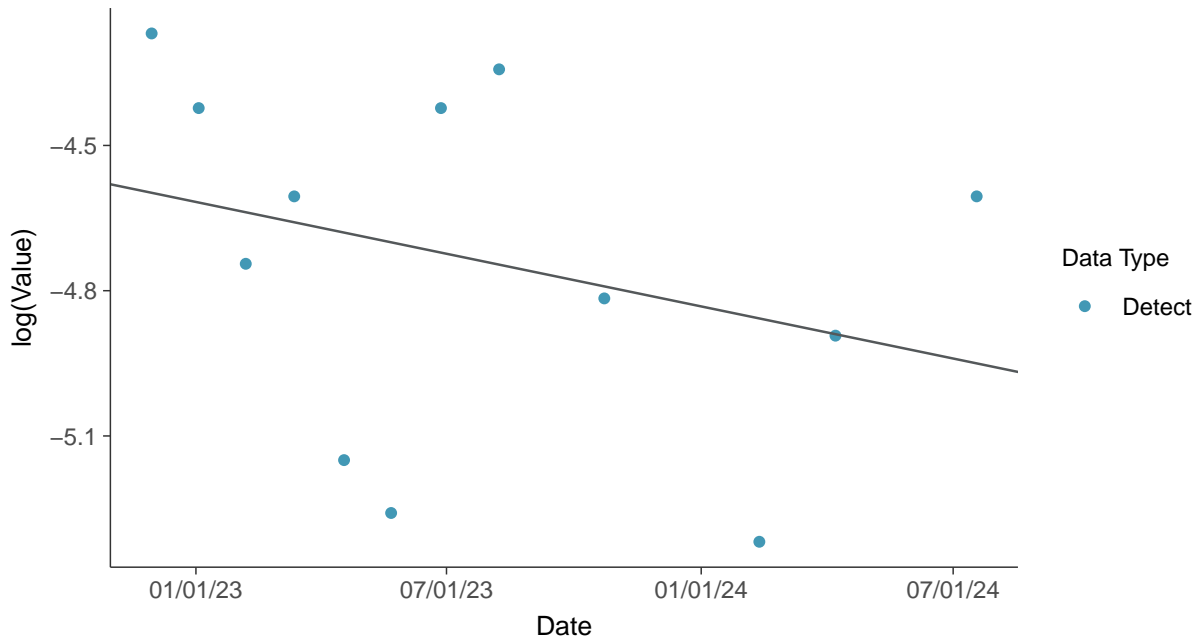
### Gamma Q-Q plot

Chromium, Total, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

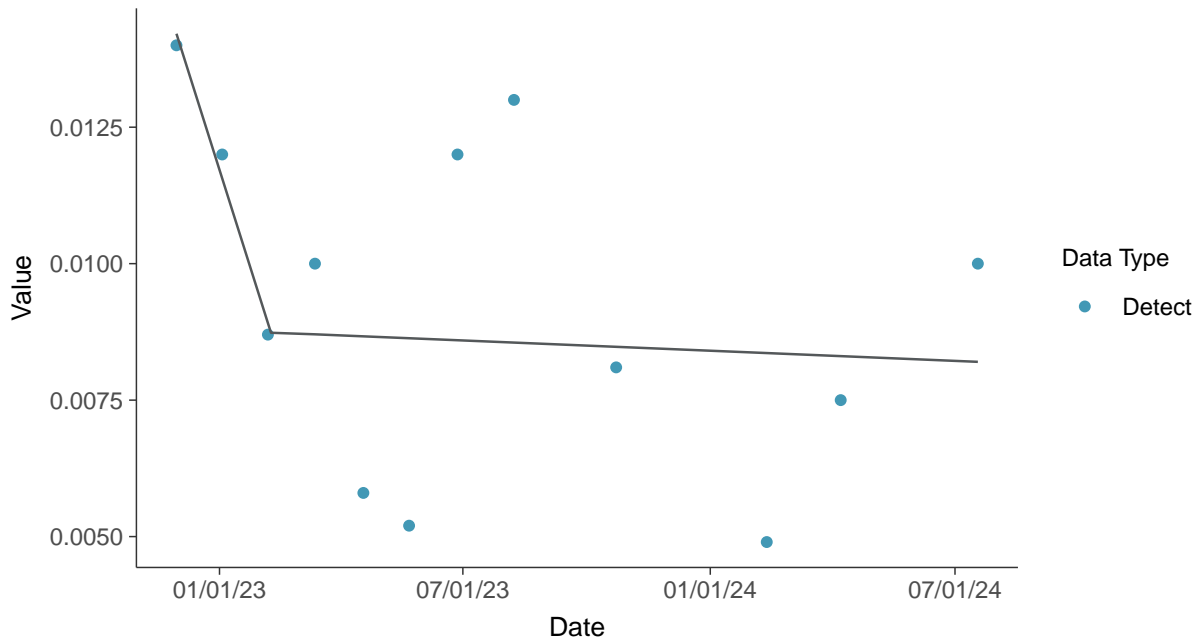
Chromium, Total, MW-30 (mg/L)







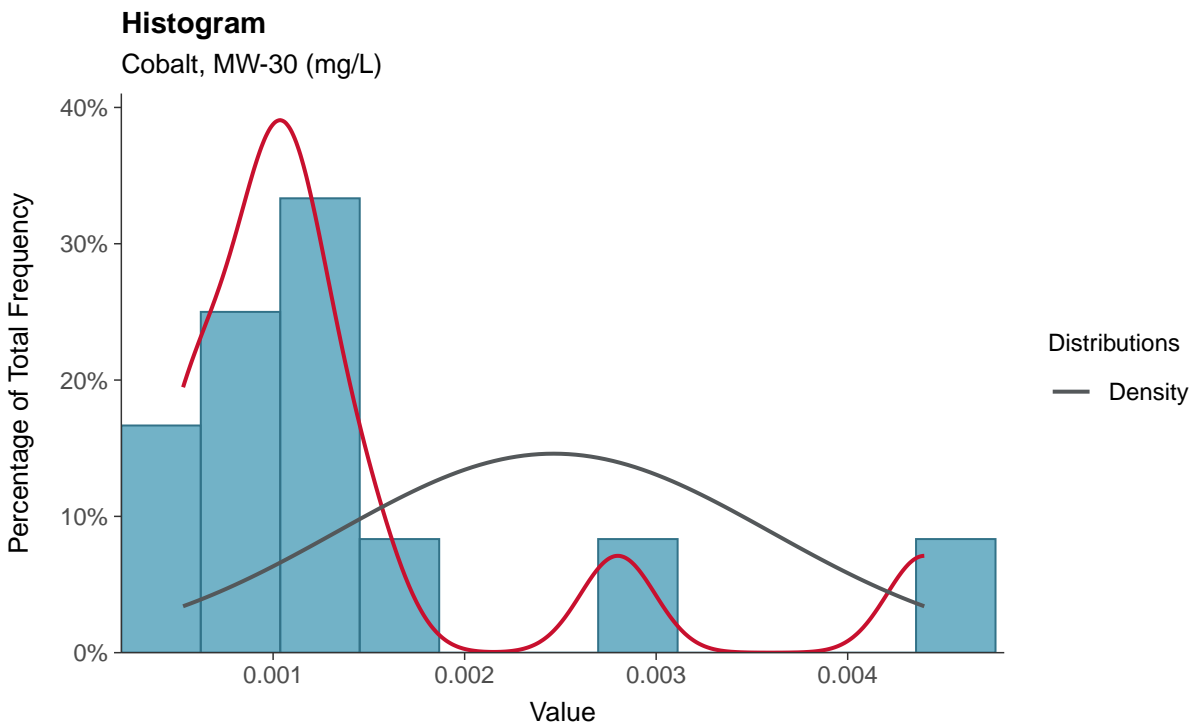
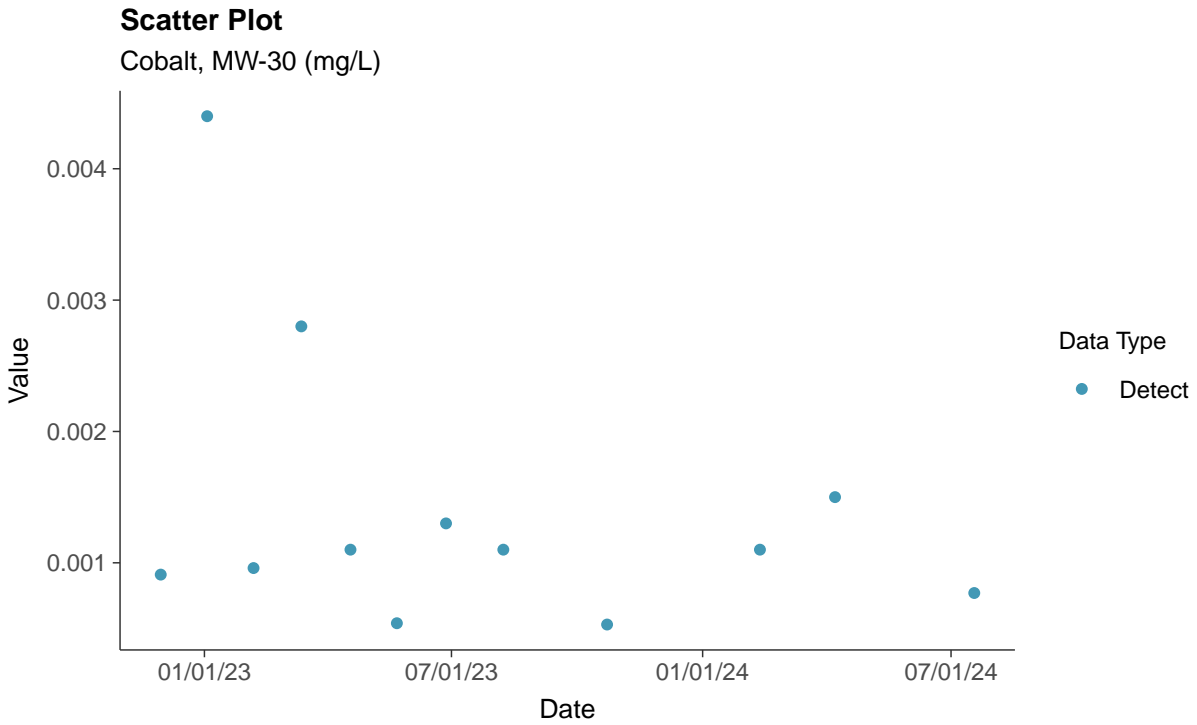
**Trend Regression: Piecewise Linear-Linear**  
Chromium, Total, MW-30 (mg/L)





### Appendix IV: Cobalt, MW-30

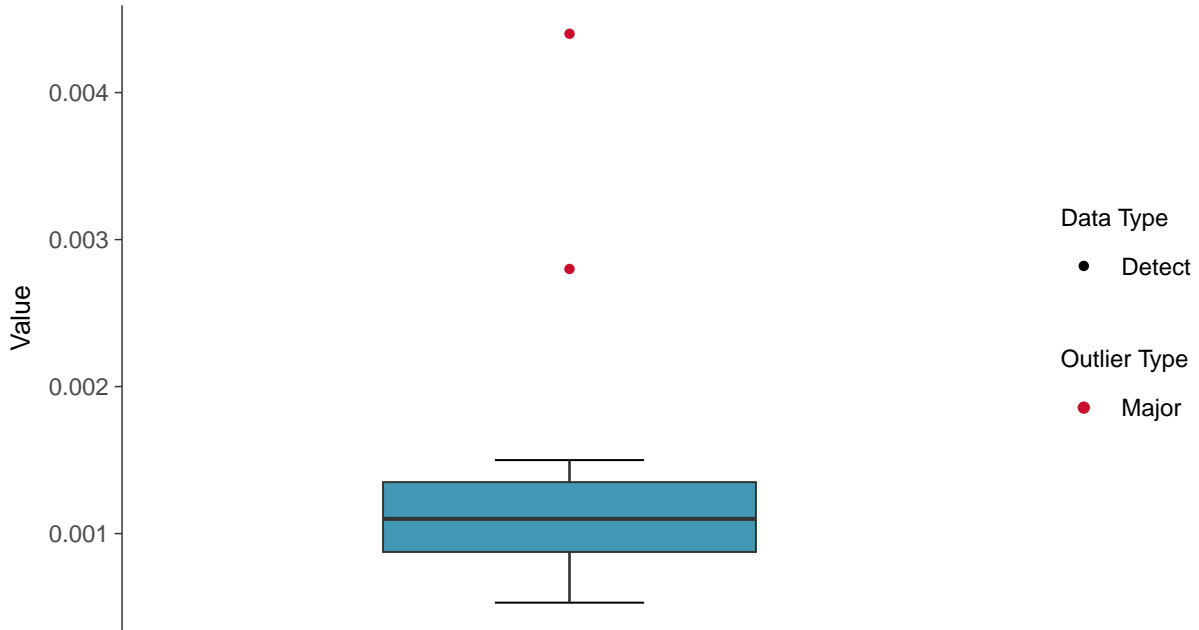
ID: 40\_1\_5\_110





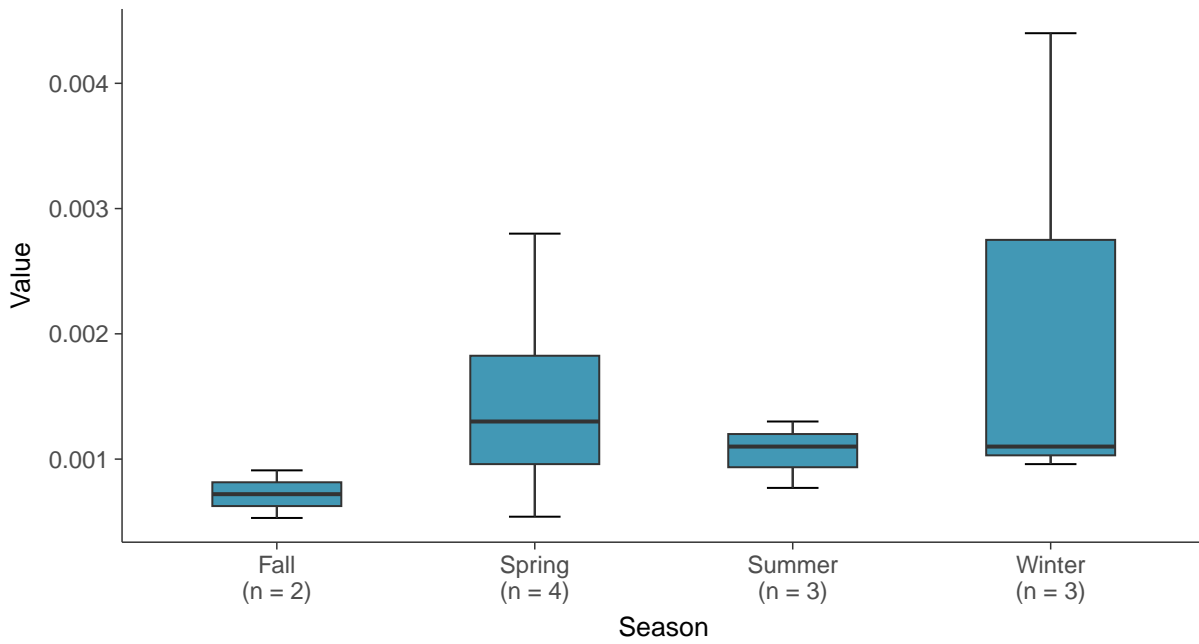
### Boxplot

Cobalt, MW-30 (mg/L)



### Boxplot by Season

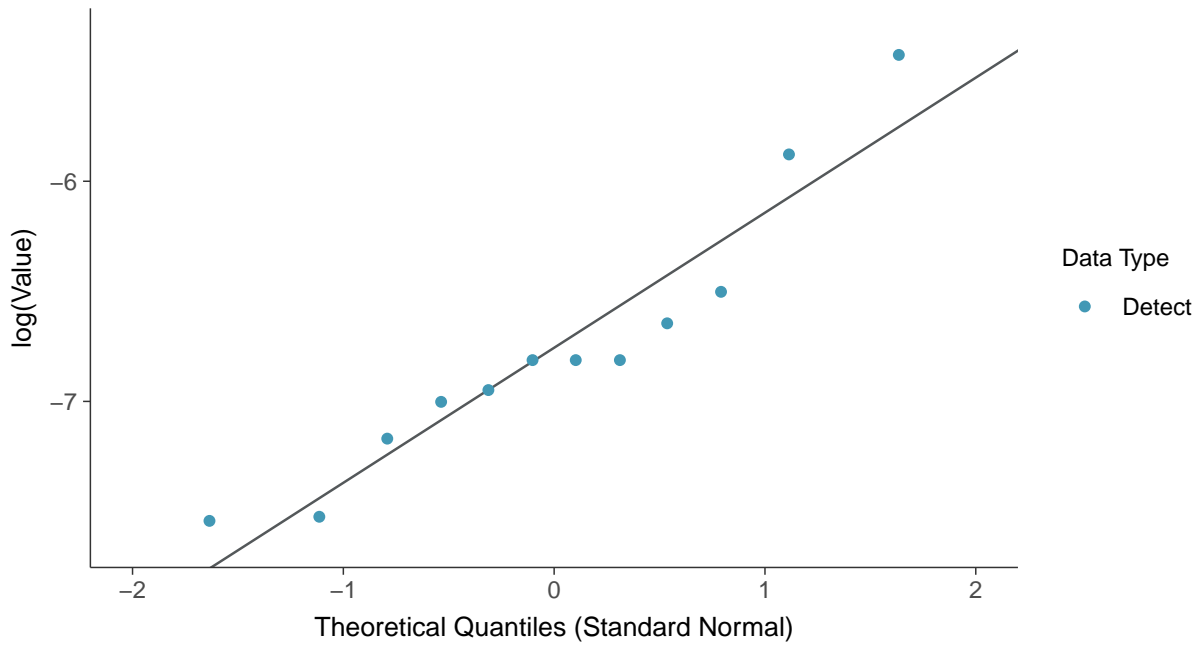
Cobalt, MW-30 (mg/L)





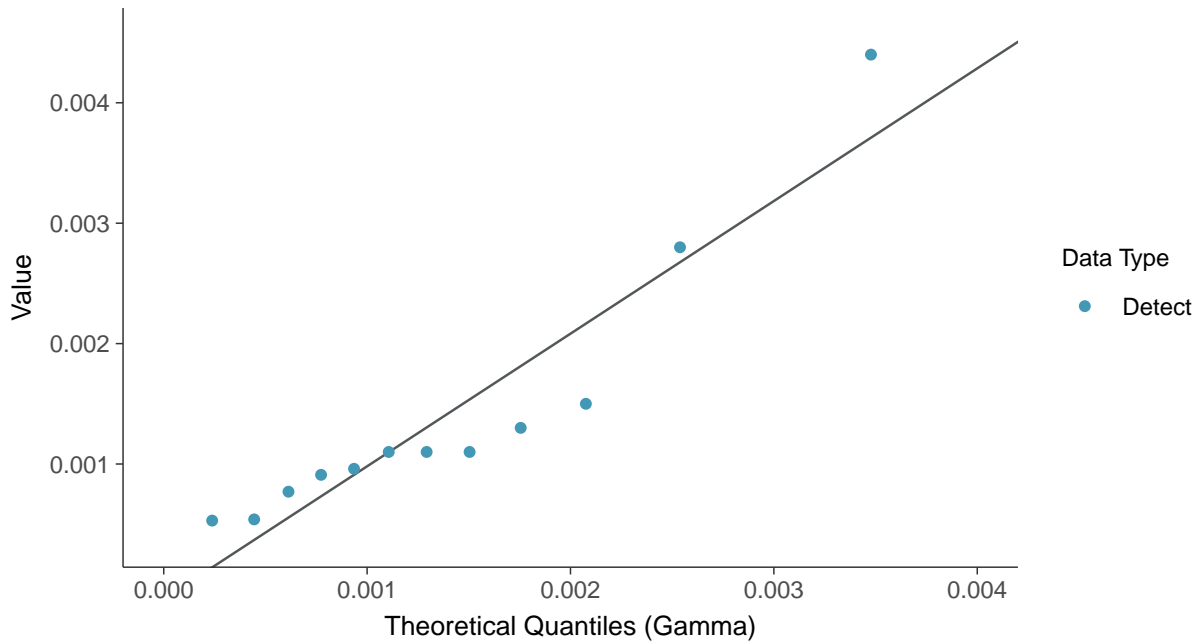
### Lognormal Q-Q plot

Cobalt, MW-30 (mg/L)



### Gamma Q-Q plot

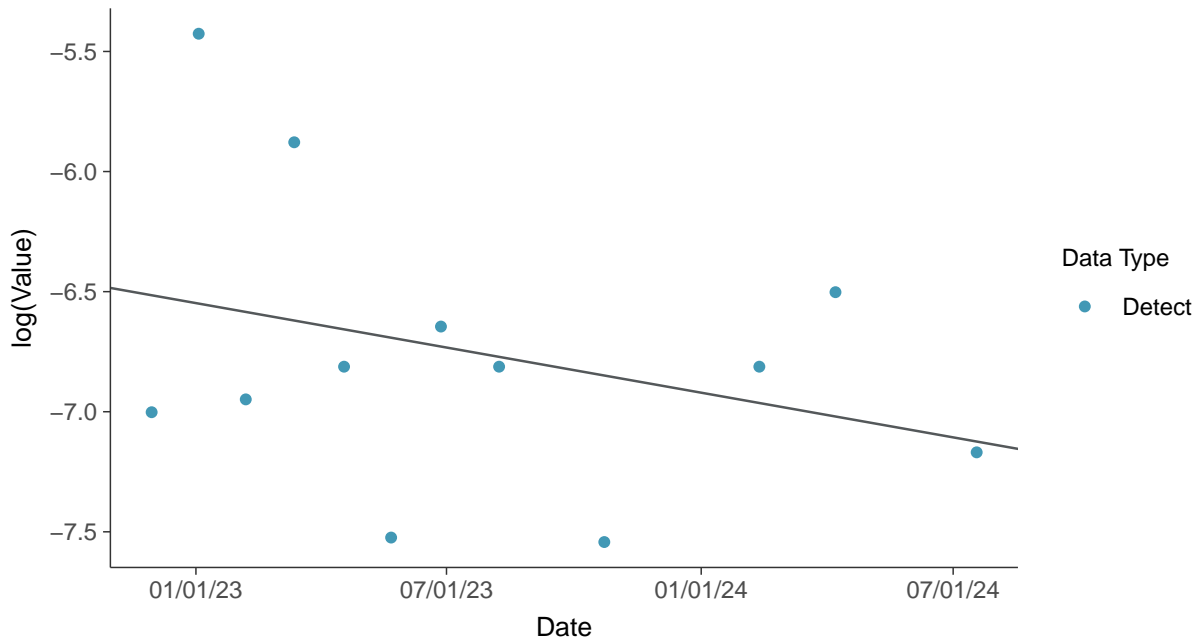
Cobalt, MW-30 (mg/L)





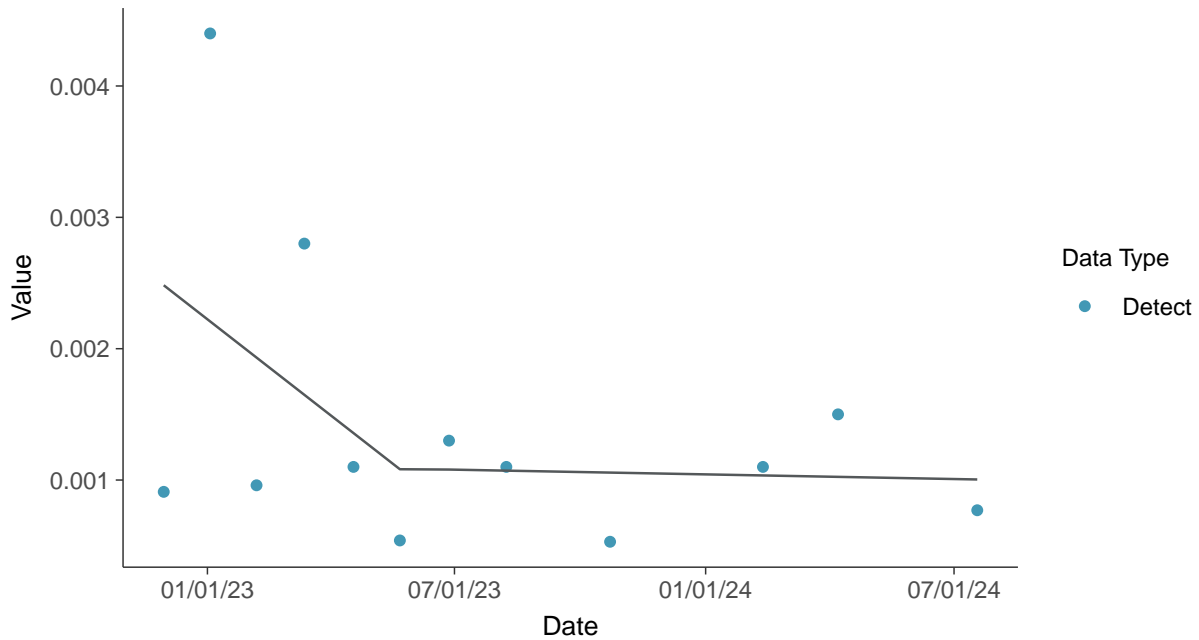
### Trend Regression: Lognormal MLE

Cobalt, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-30 (mg/L)



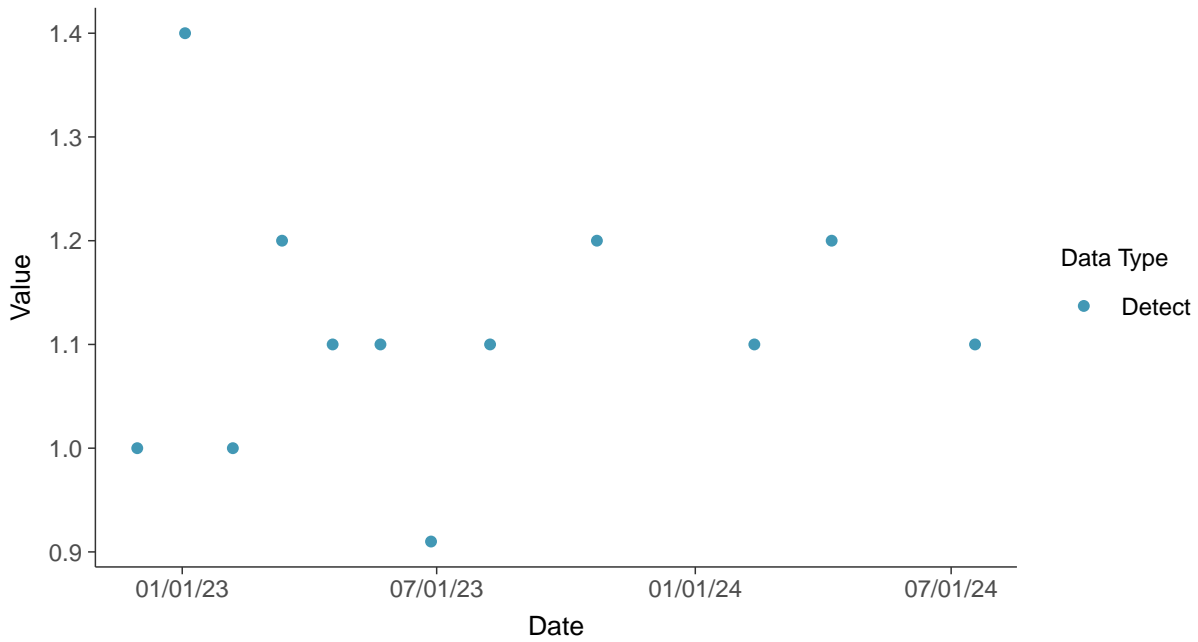


### Appendix IV: Fluoride (App IV), MW-30

ID: 40\_1\_5\_113

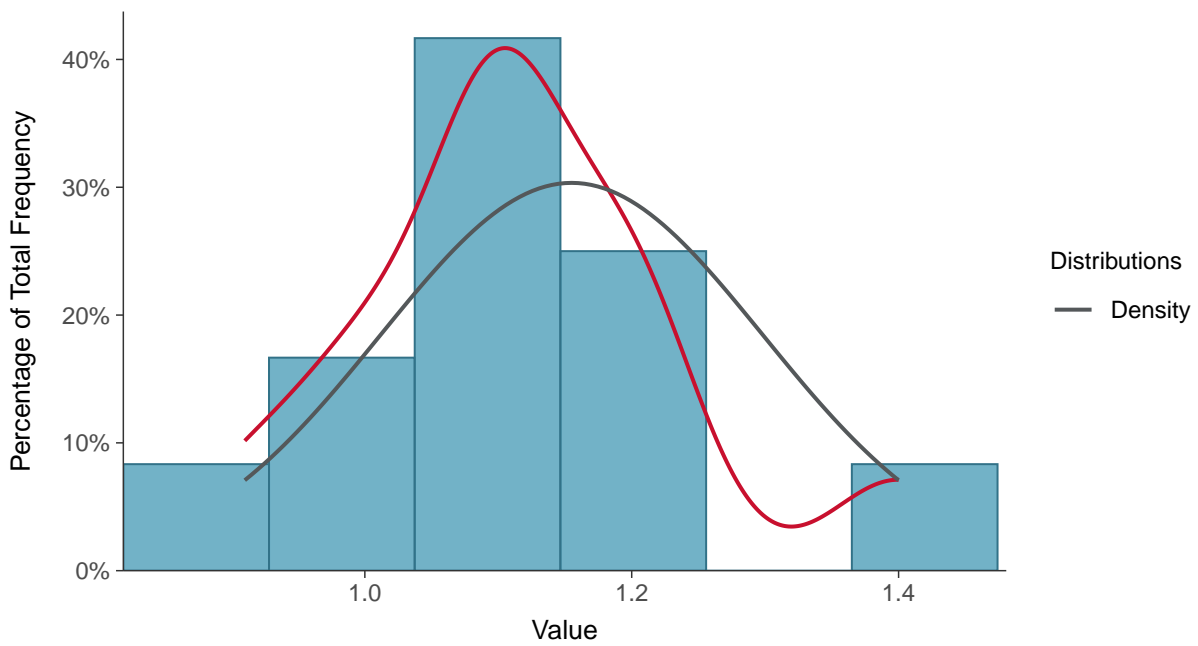
#### Scatter Plot

Fluoride (App IV), MW-30 (mg/L)



#### Histogram

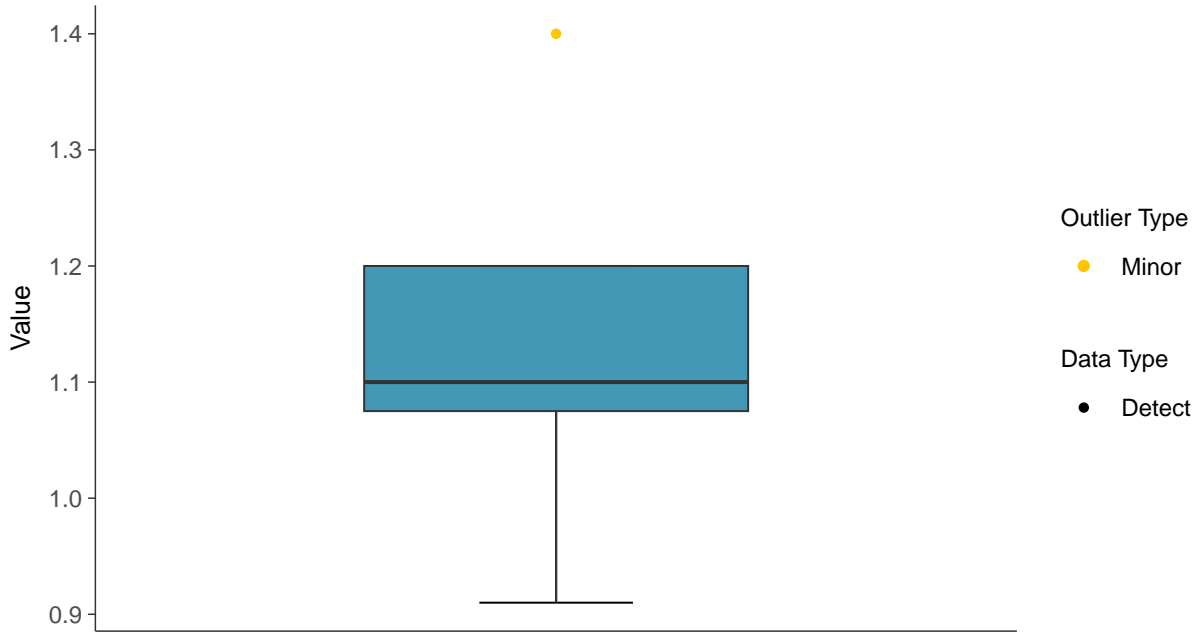
Fluoride (App IV), MW-30 (mg/L)





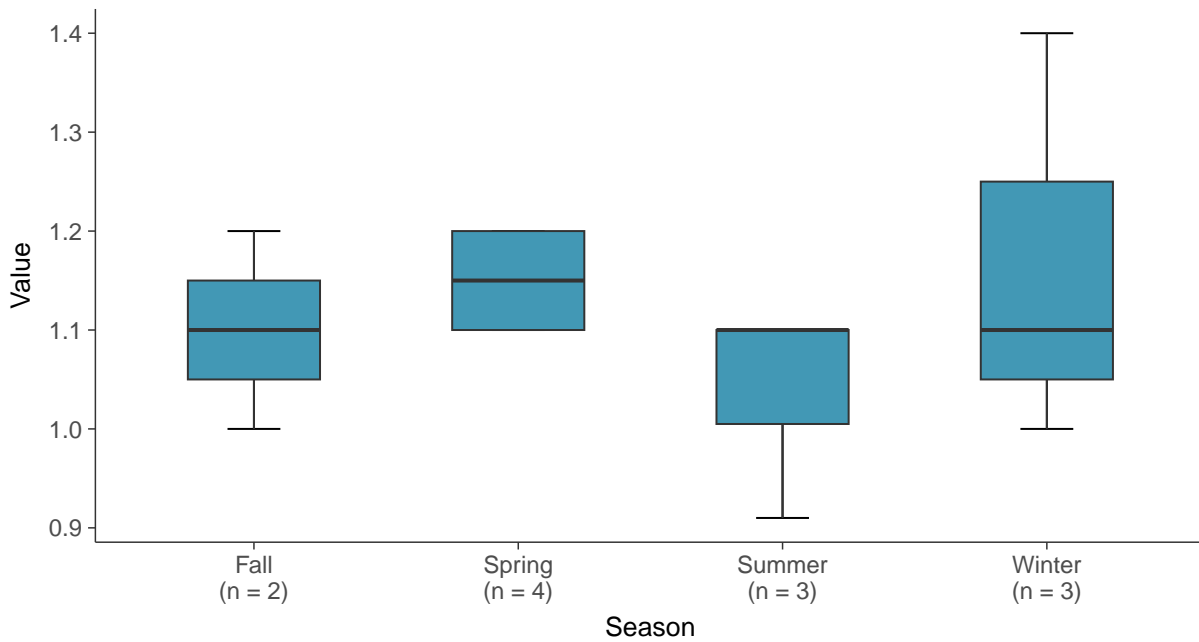
### Boxplot

Fluoride (App IV), MW-30 (mg/L)



### Boxplot by Season

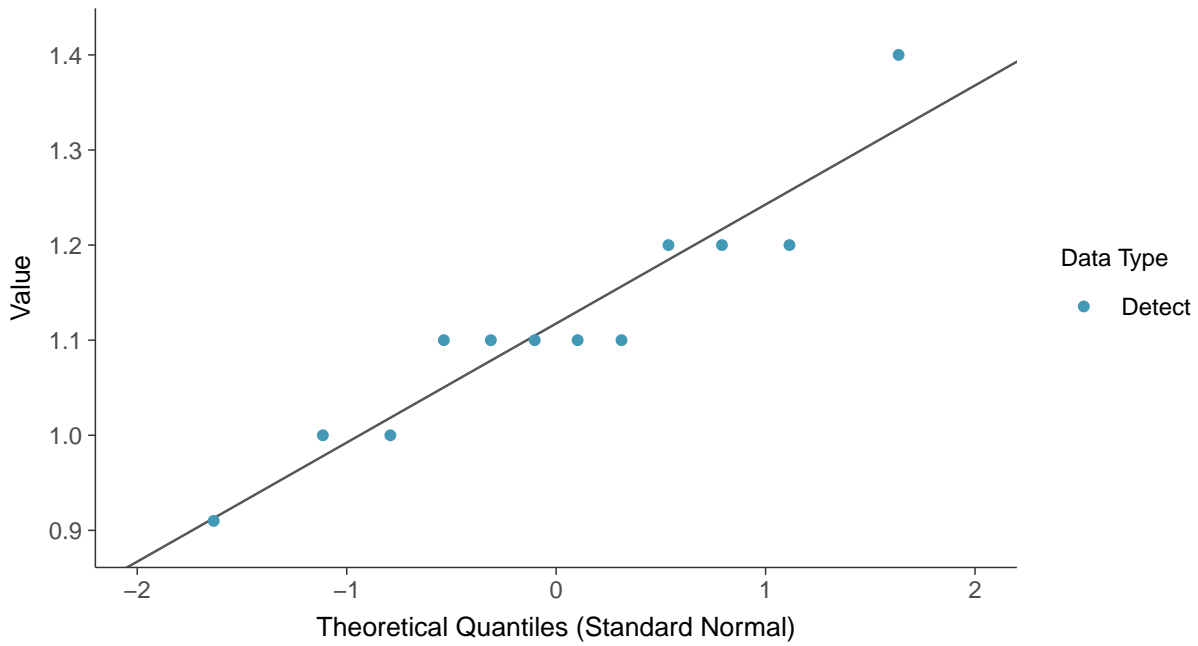
Fluoride (App IV), MW-30 (mg/L)





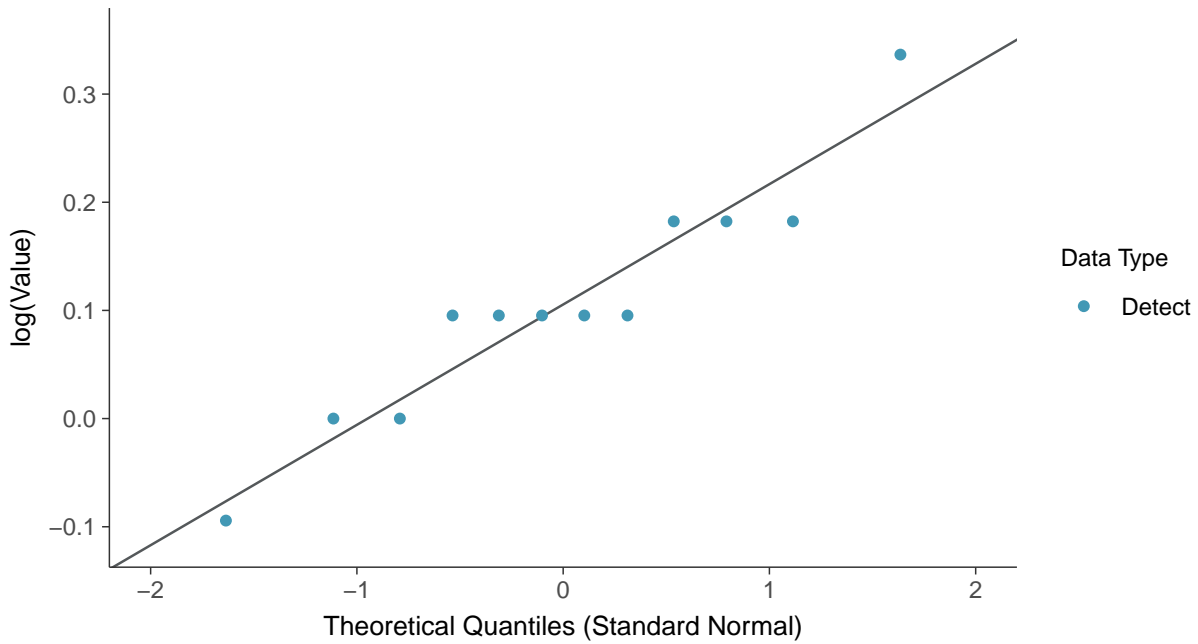
### Normal Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



### Lognormal Q-Q plot

Fluoride (App IV), MW-30 (mg/L)

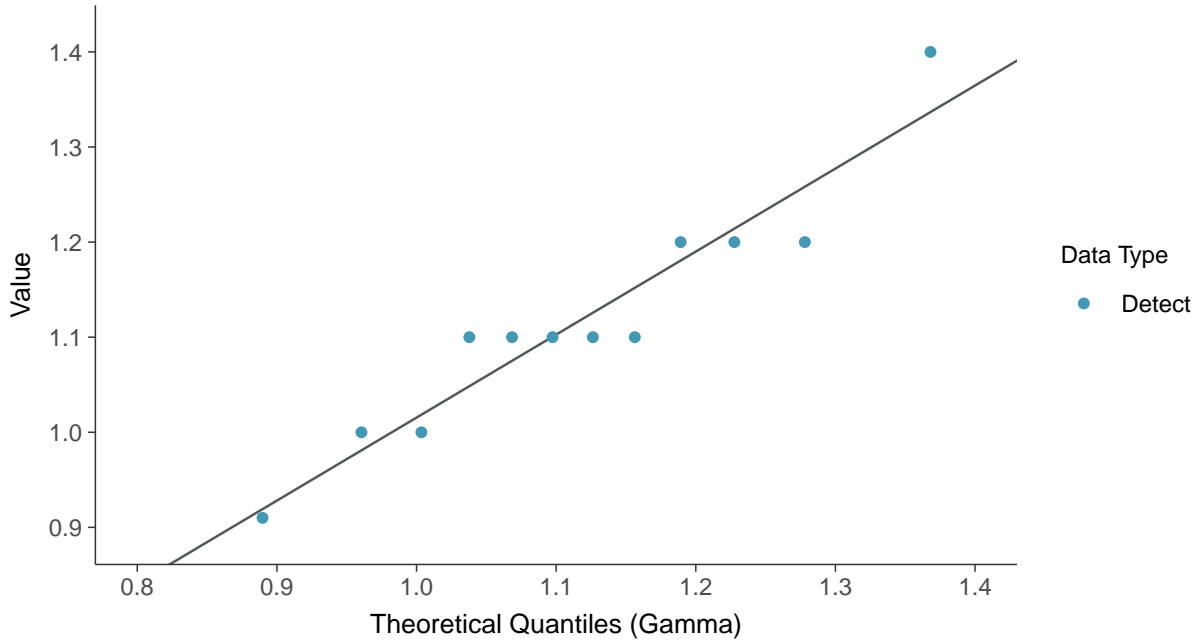






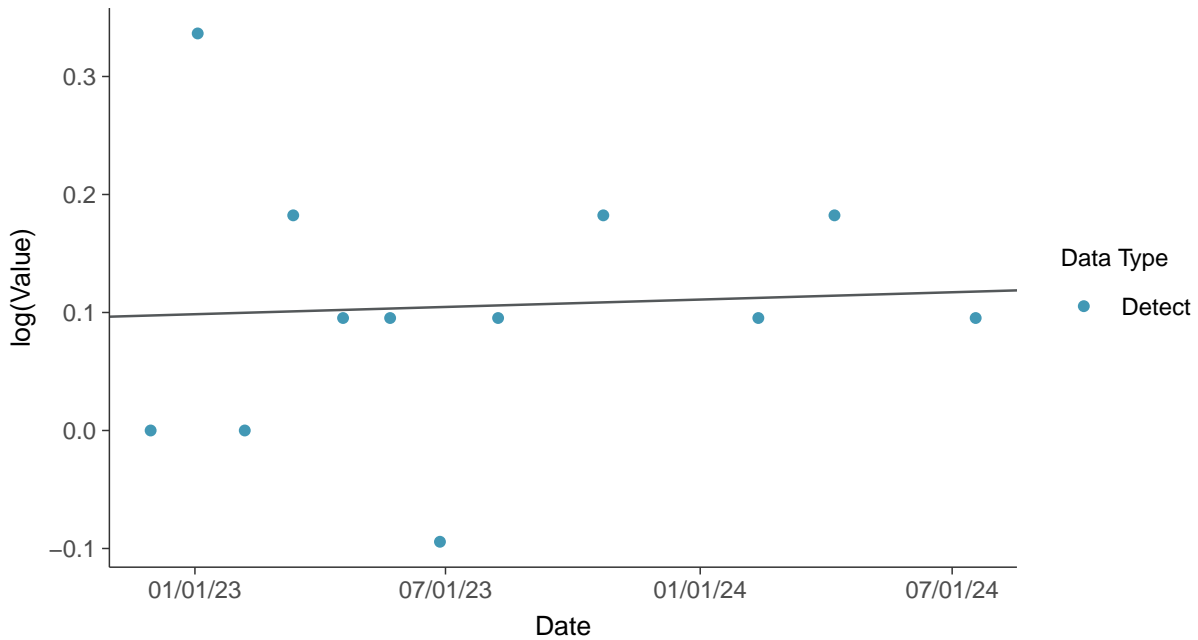
### Gamma Q-Q plot

Fluoride (App IV), MW-30 (mg/L)



### Trend Regression: Lognormal MLE

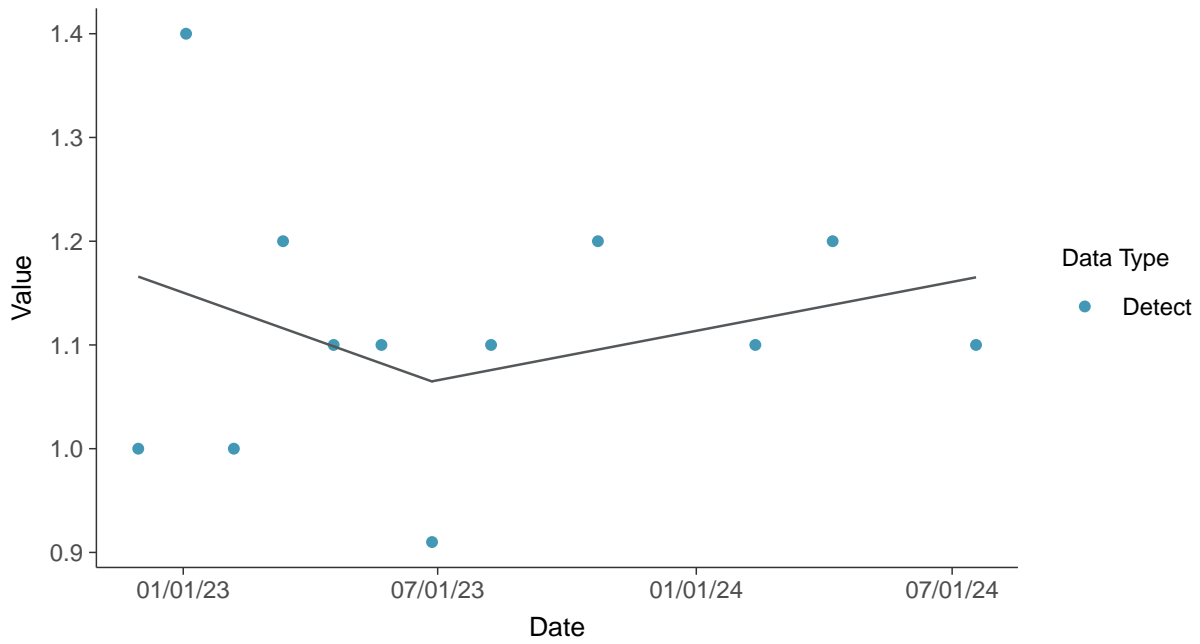
Fluoride (App IV), MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear

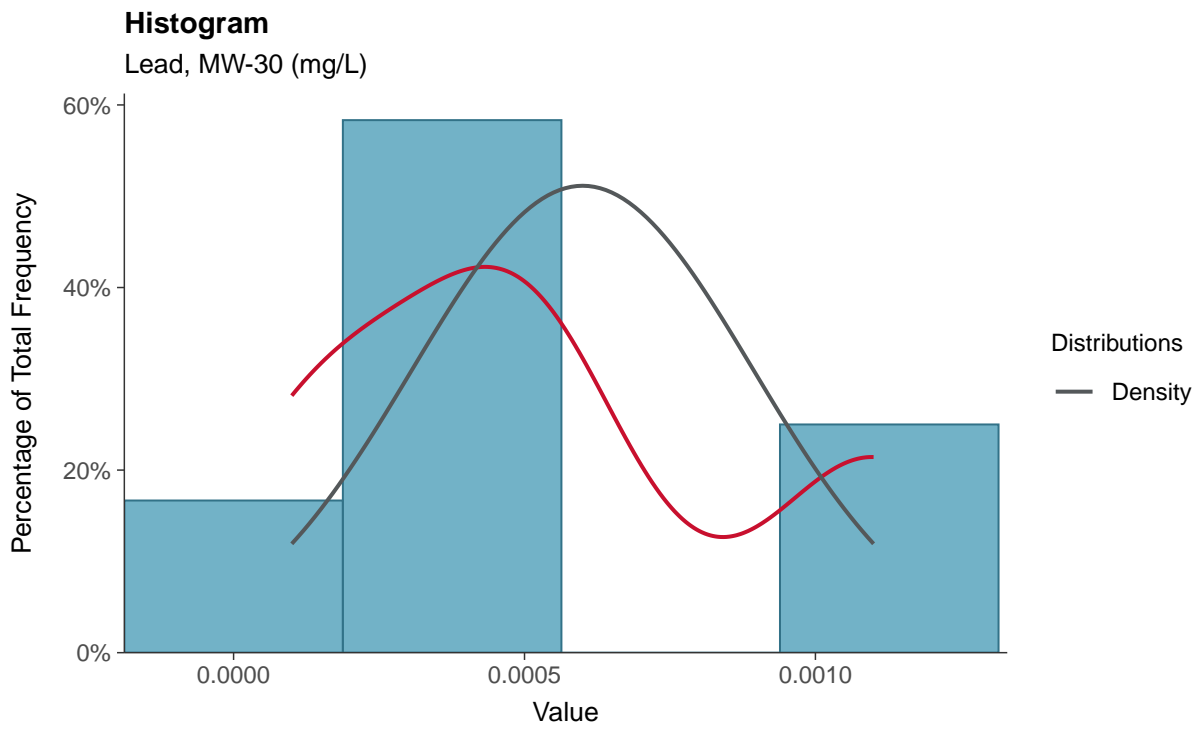
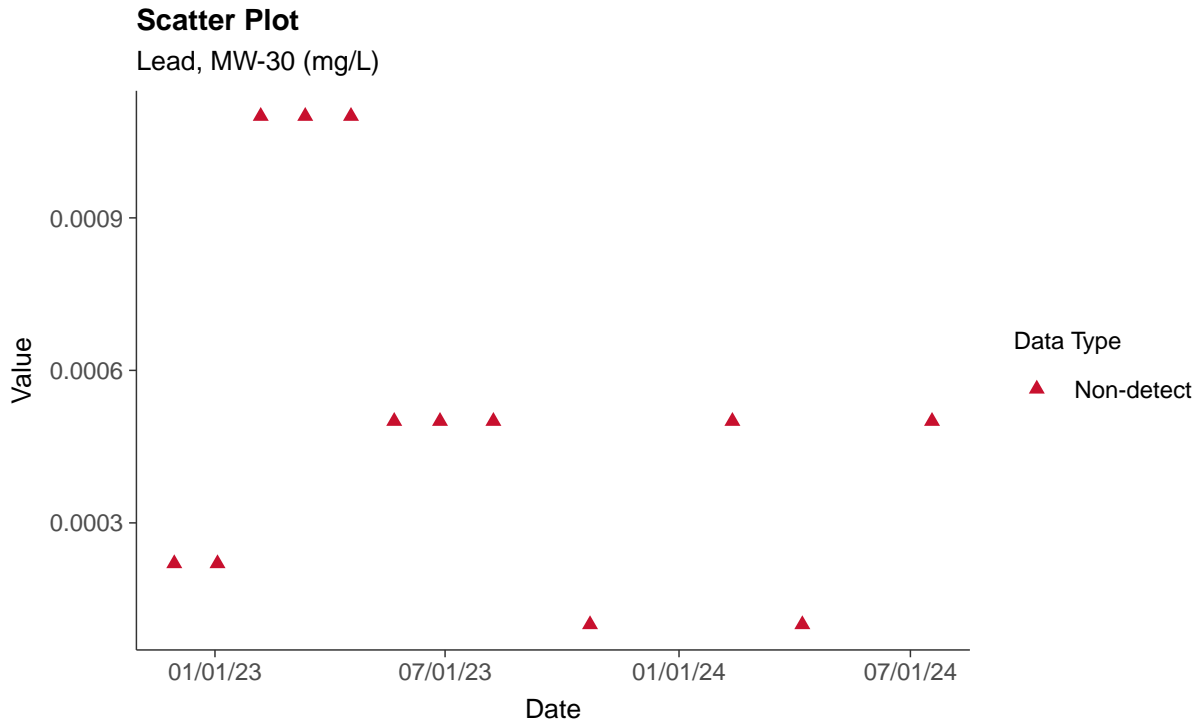
Fluoride (App IV), MW-30 (mg/L)





### Appendix IV: Lead, MW-30

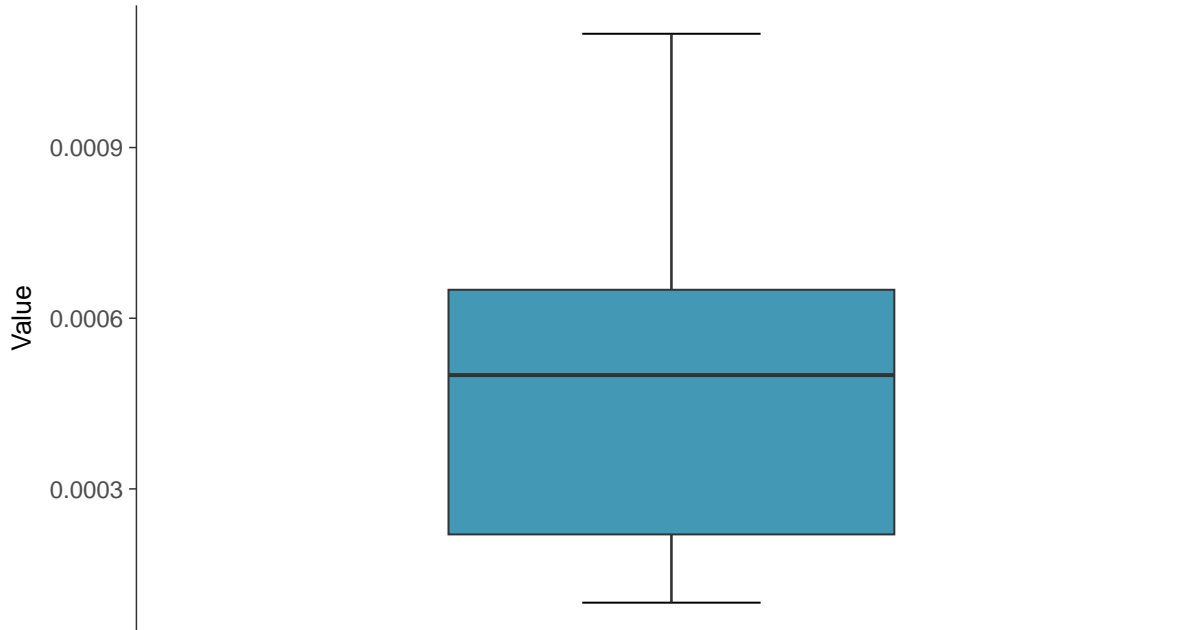
ID: 40\_1\_5\_115





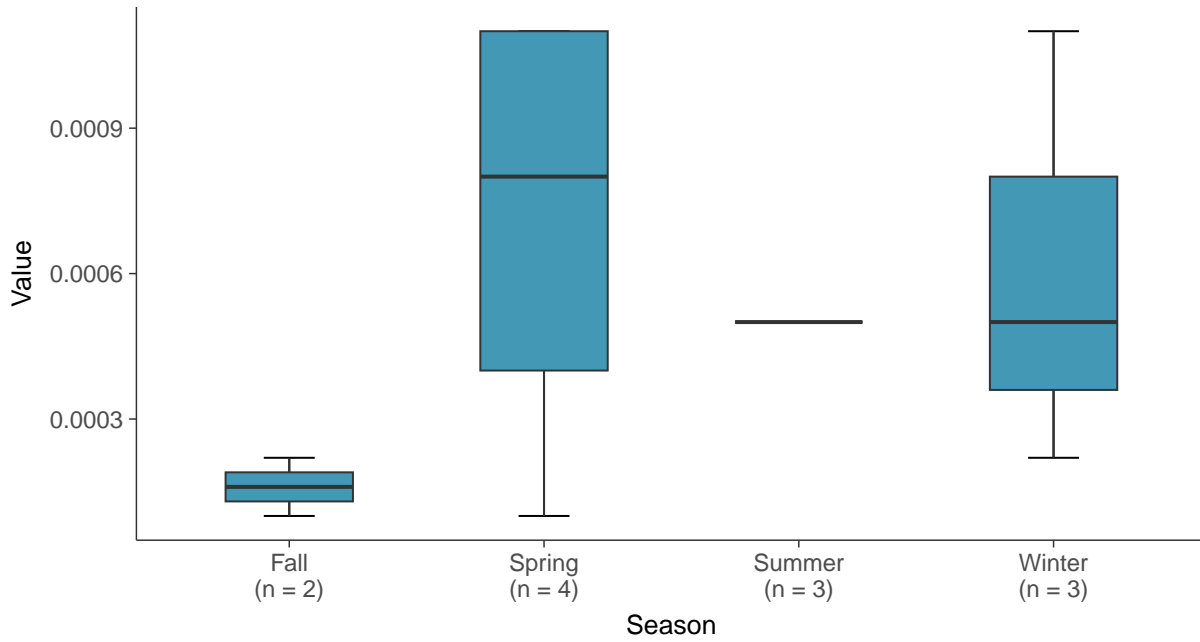
### Boxplot

Lead, MW-30 (mg/L)



### Boxplot by Season

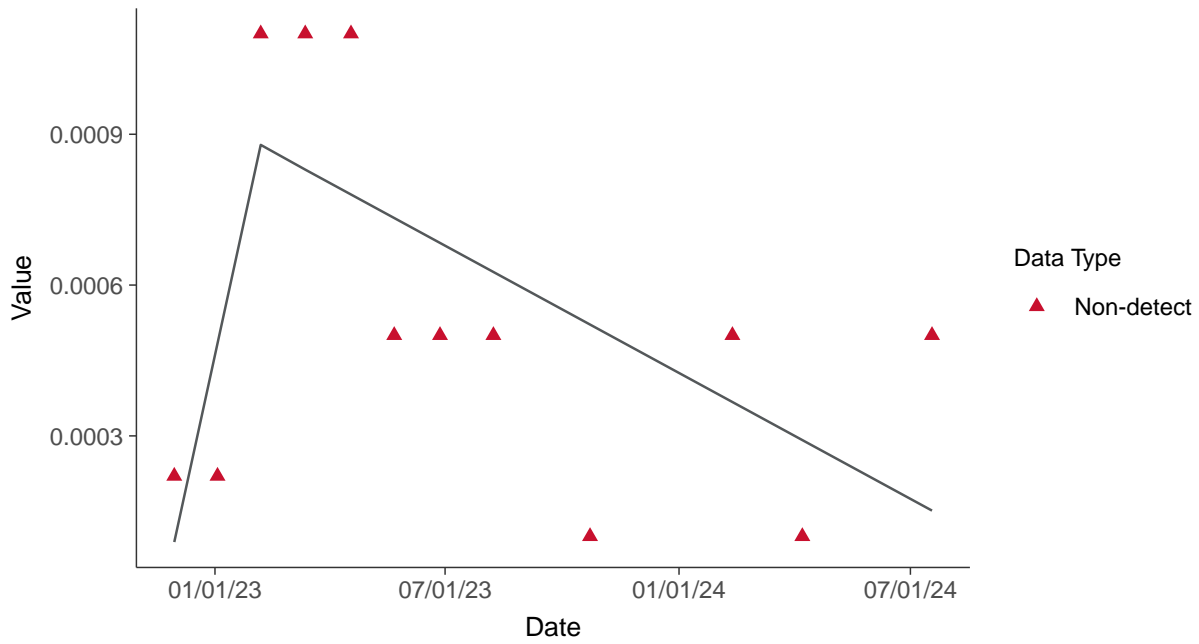
Lead, MW-30 (mg/L)





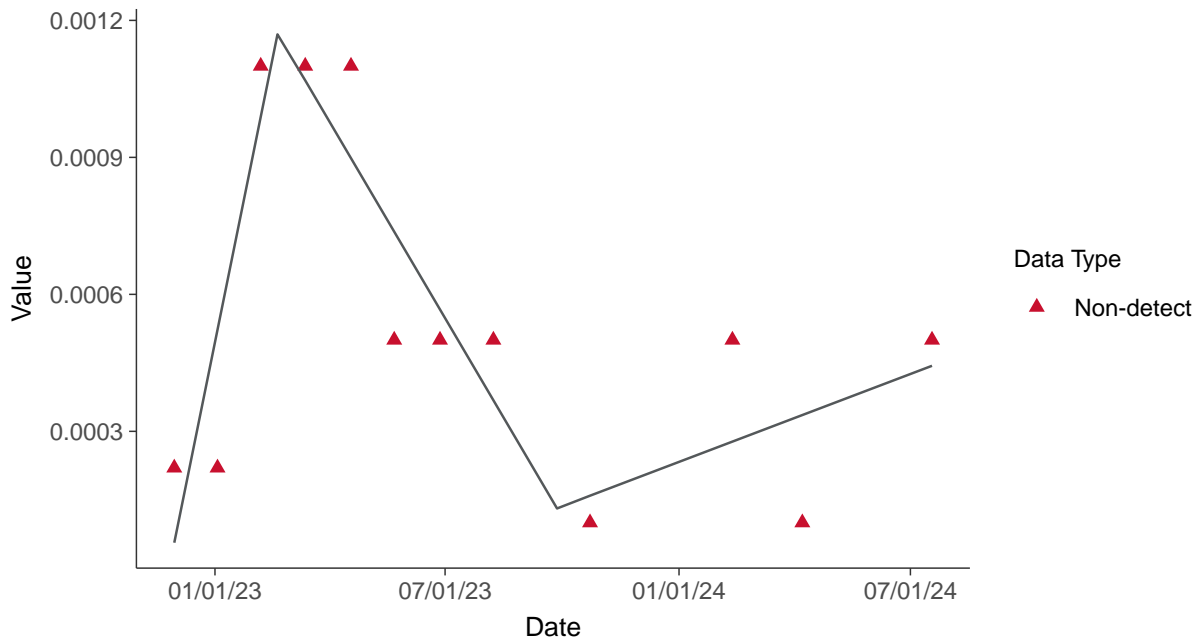
### Trend Regression: Piecewise Linear-Linear

Lead, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

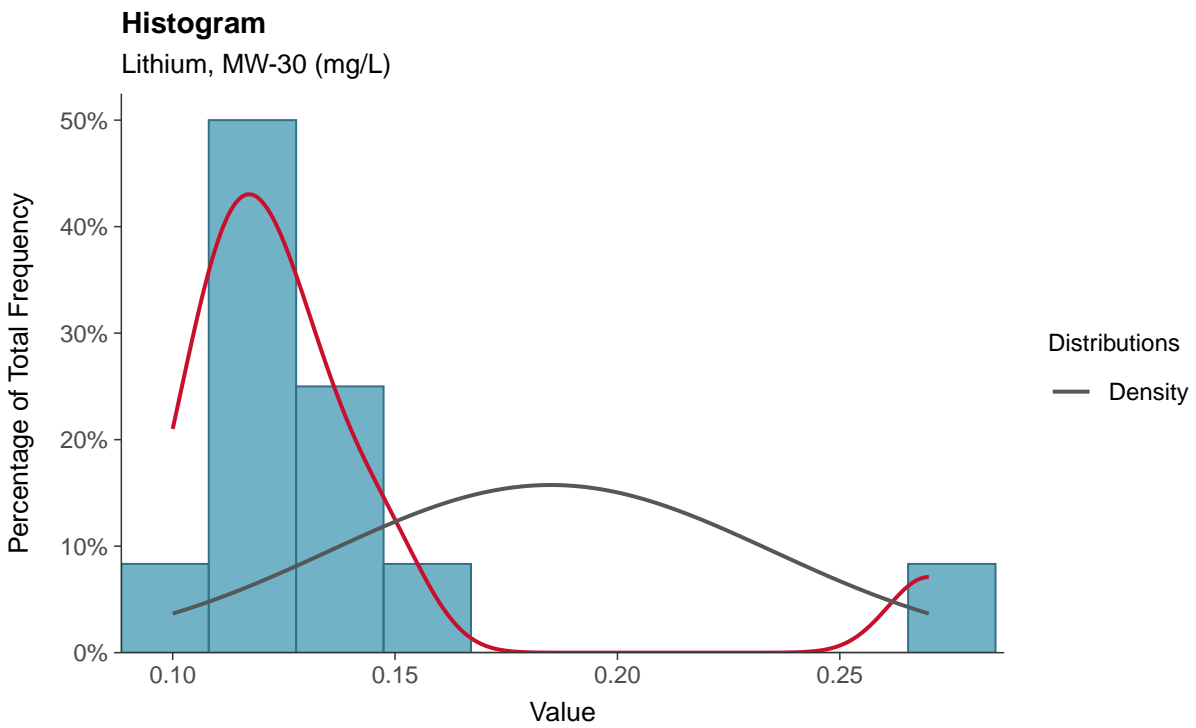
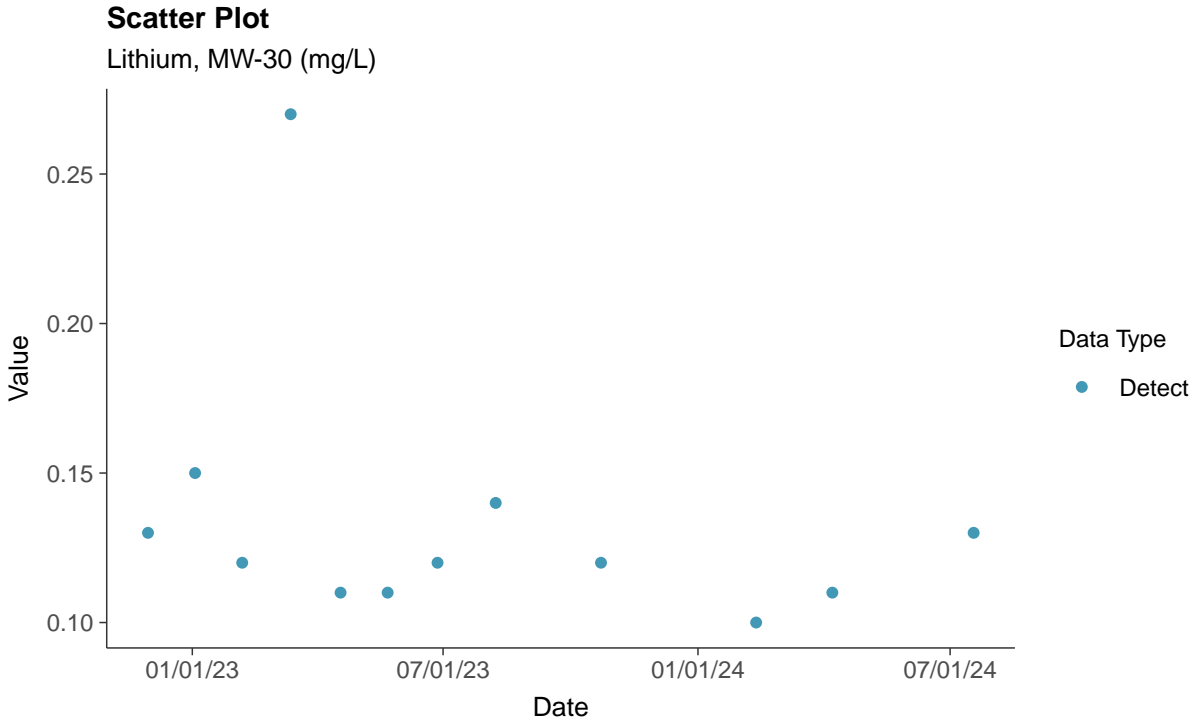
Lead, MW-30 (mg/L)





### Appendix IV: Lithium, MW-30

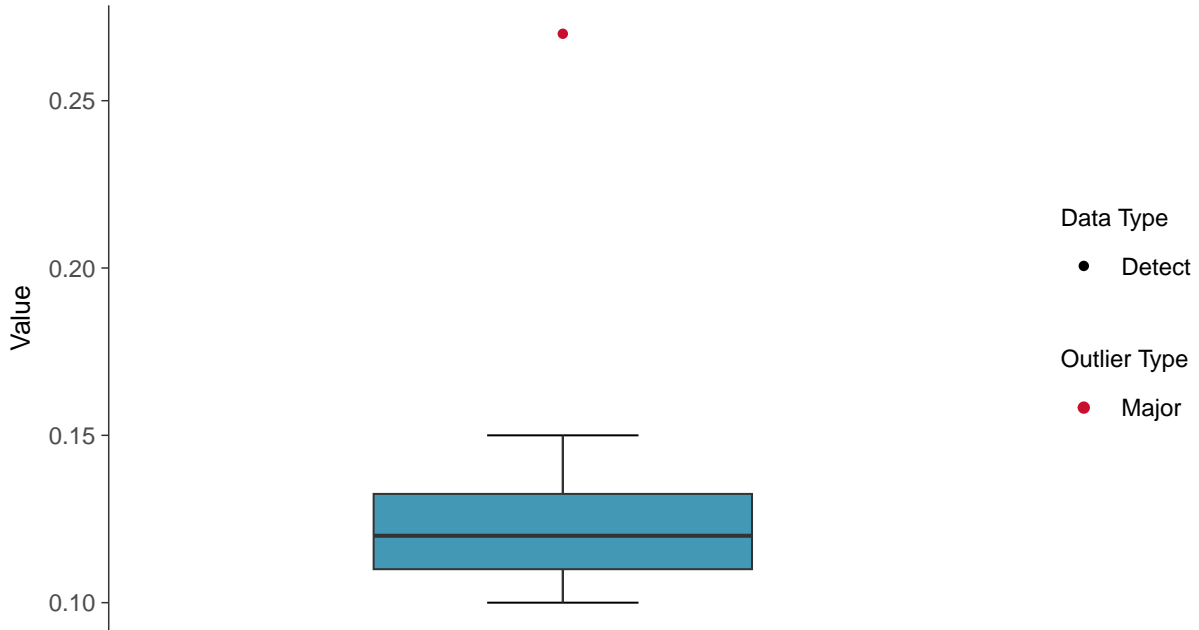
ID: 40\_1\_5\_116





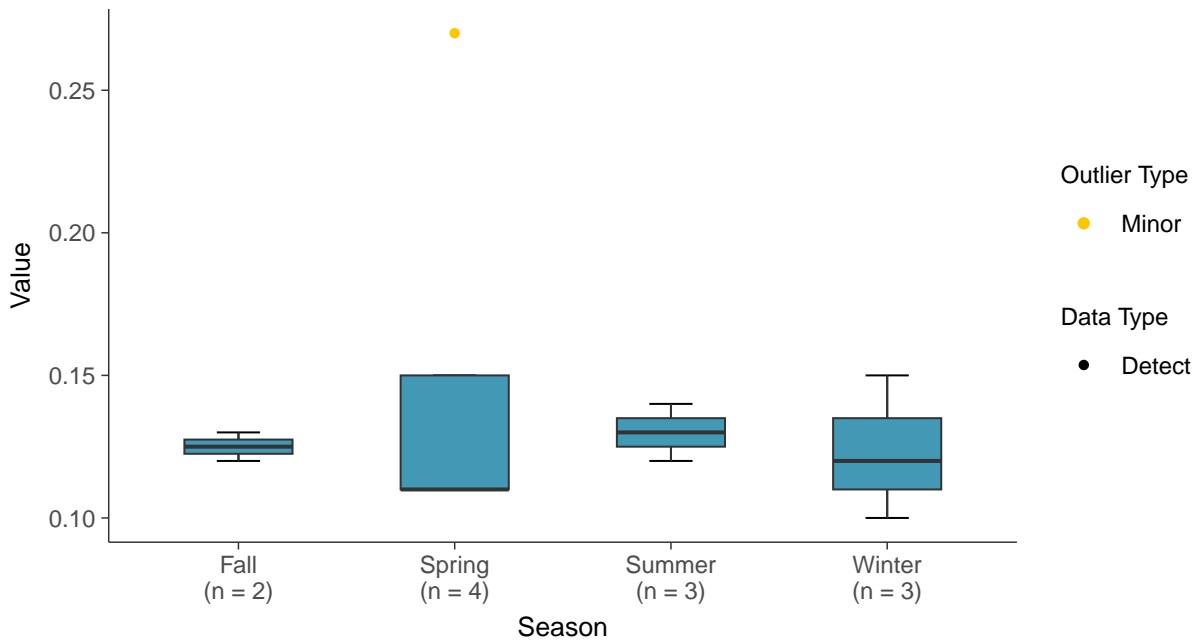
### Boxplot

Lithium, MW-30 (mg/L)



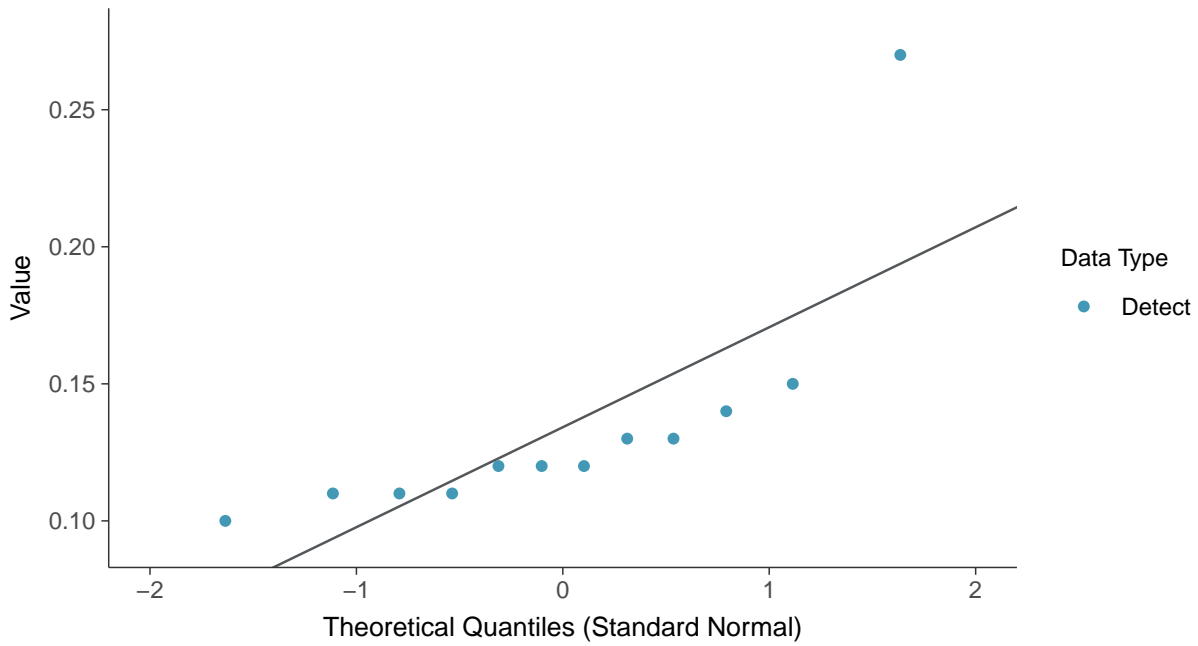
### Boxplot by Season

Lithium, MW-30 (mg/L)

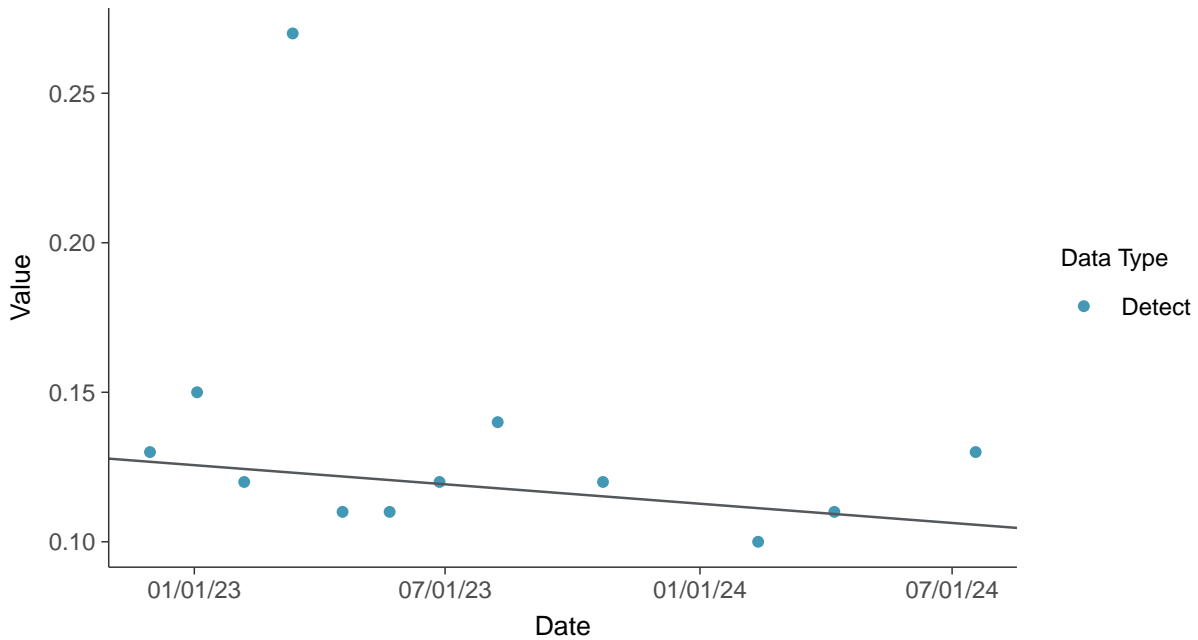




**Normal Q-Q plot**  
Lithium, MW-30 (mg/L)



**Trend Regression: Mann-Kendall/Theil-Sen Estimate**  
Lithium, MW-30 (mg/L)

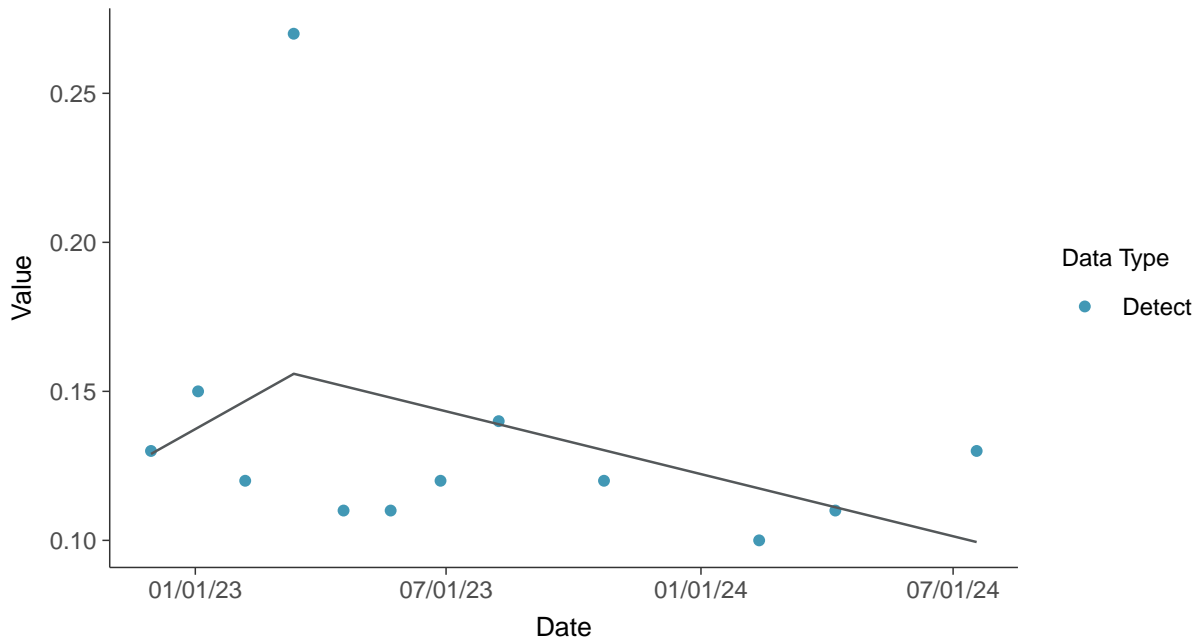






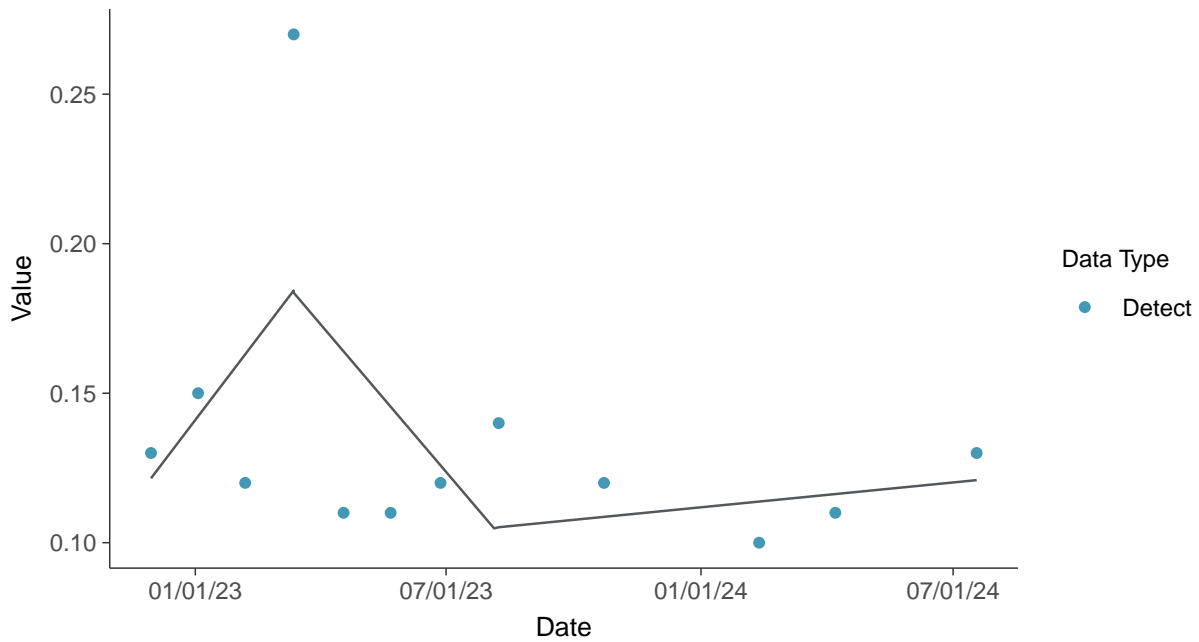
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

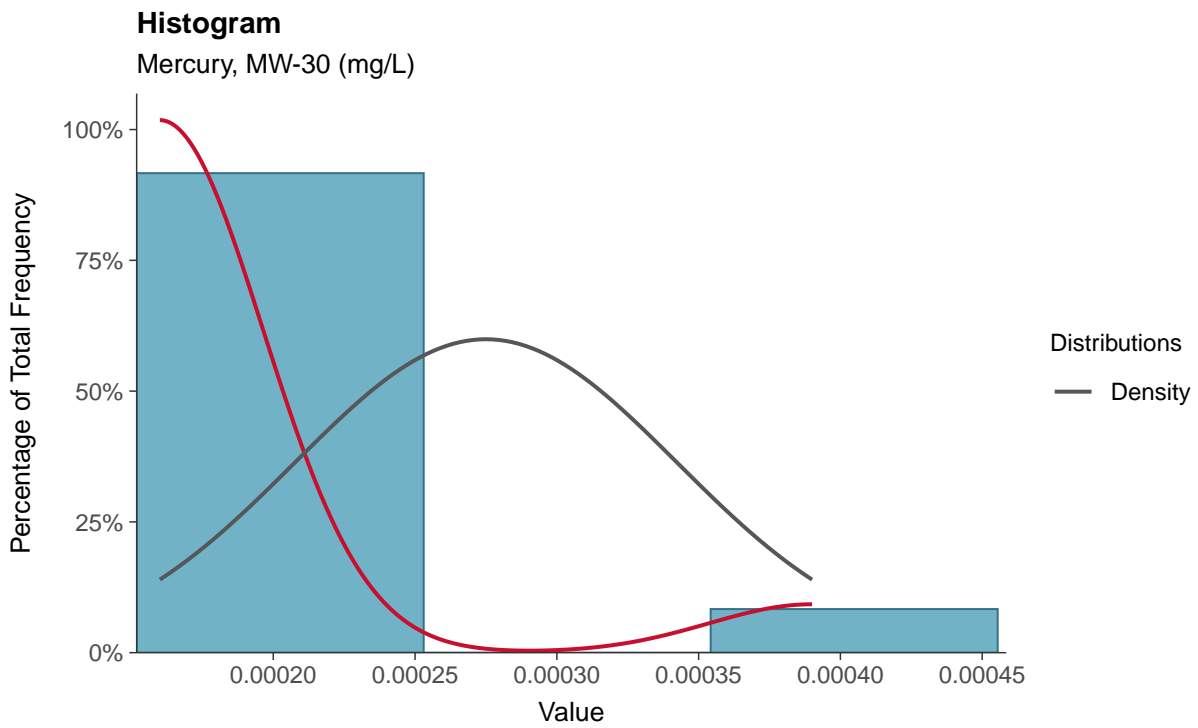
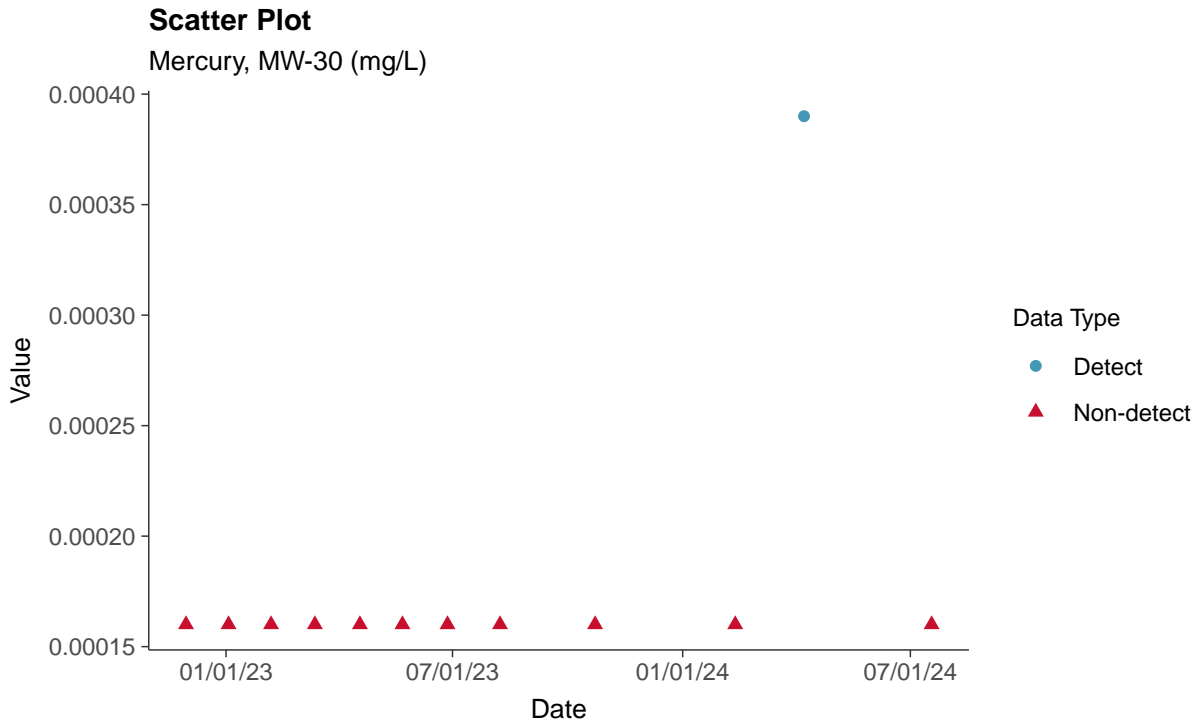
Lithium, MW-30 (mg/L)





### Appendix IV: Mercury, MW-30

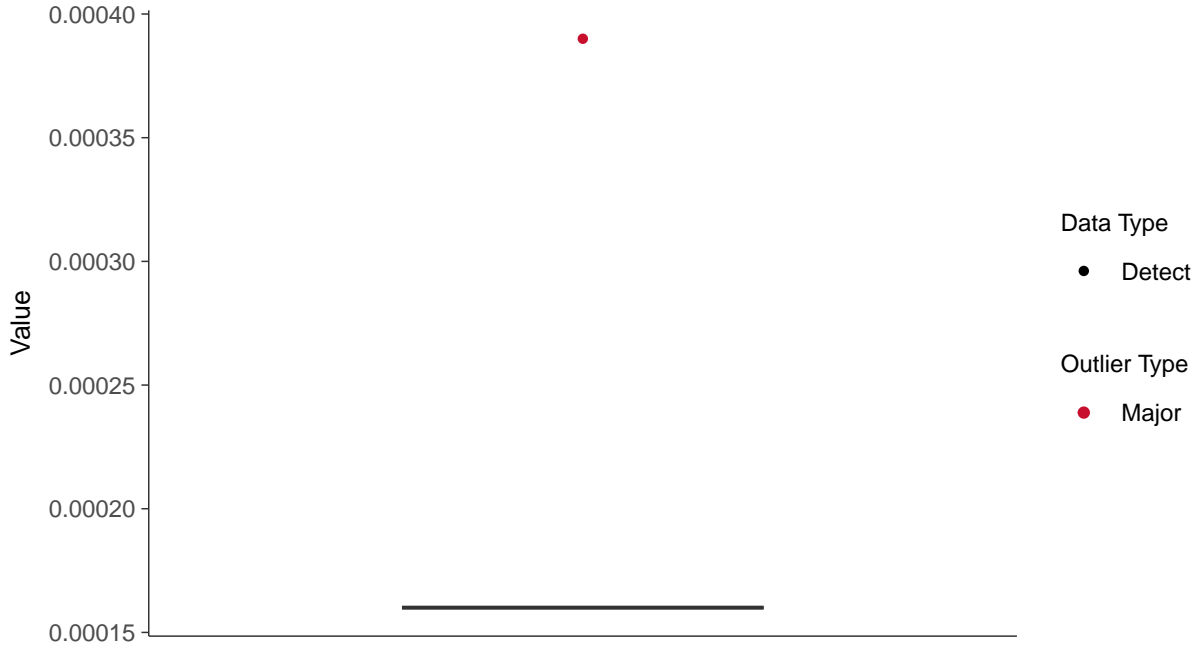
ID: 40\_1\_5\_117





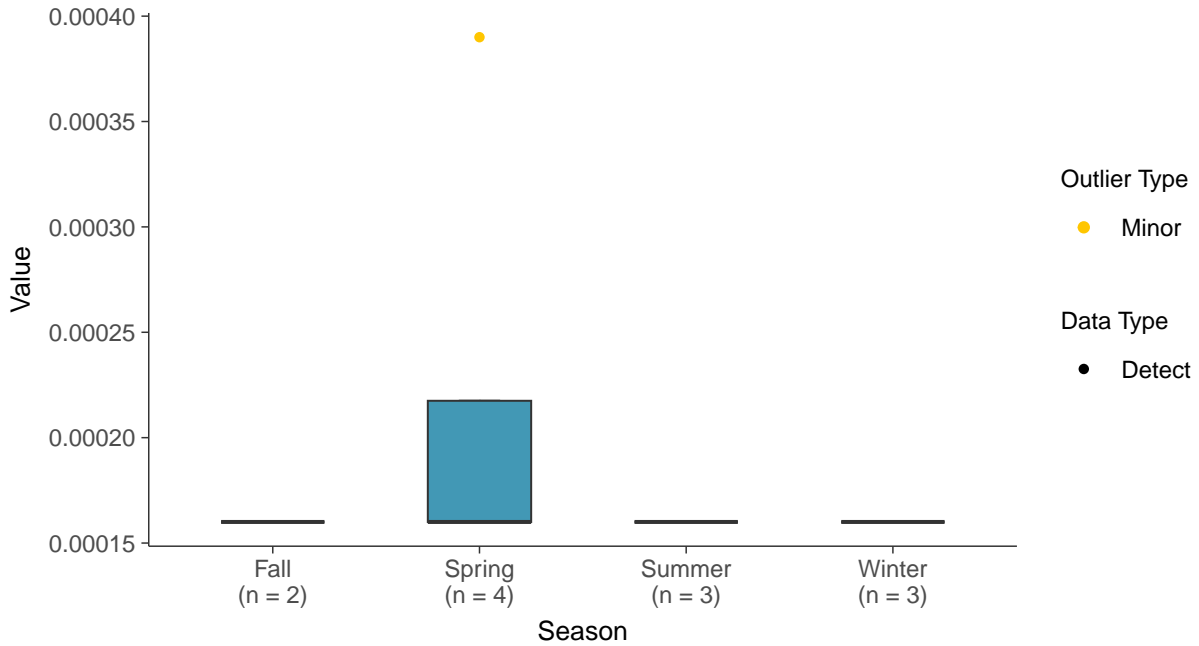
### Boxplot

Mercury, MW-30 (mg/L)



### Boxplot by Season

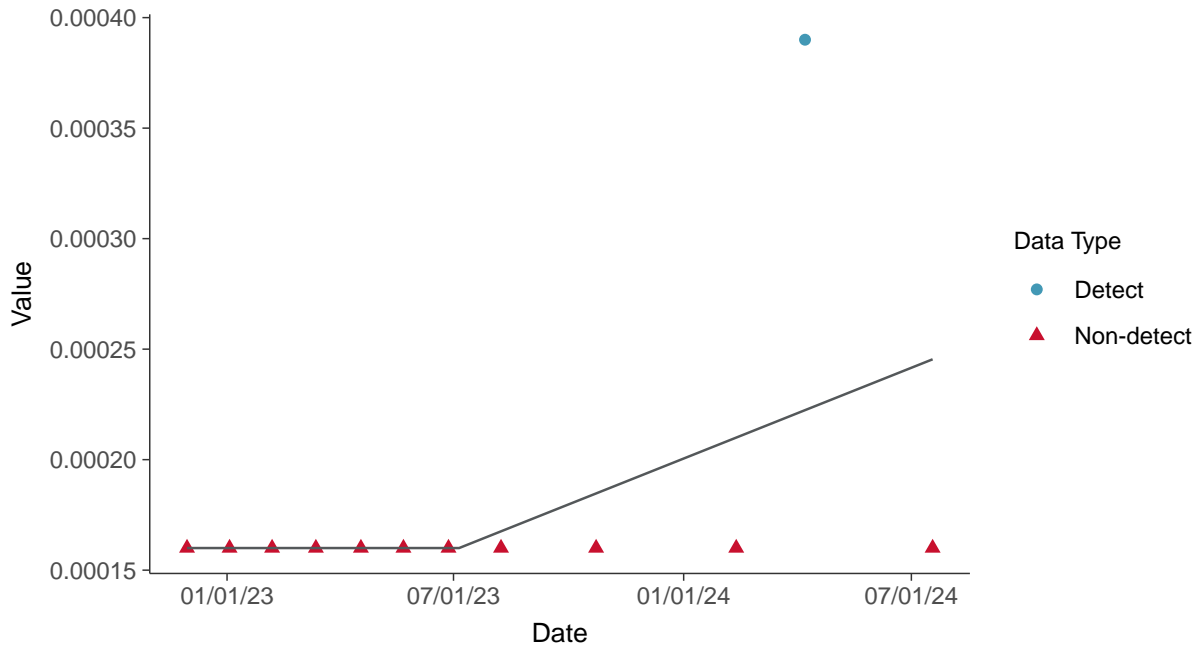
Mercury, MW-30 (mg/L)





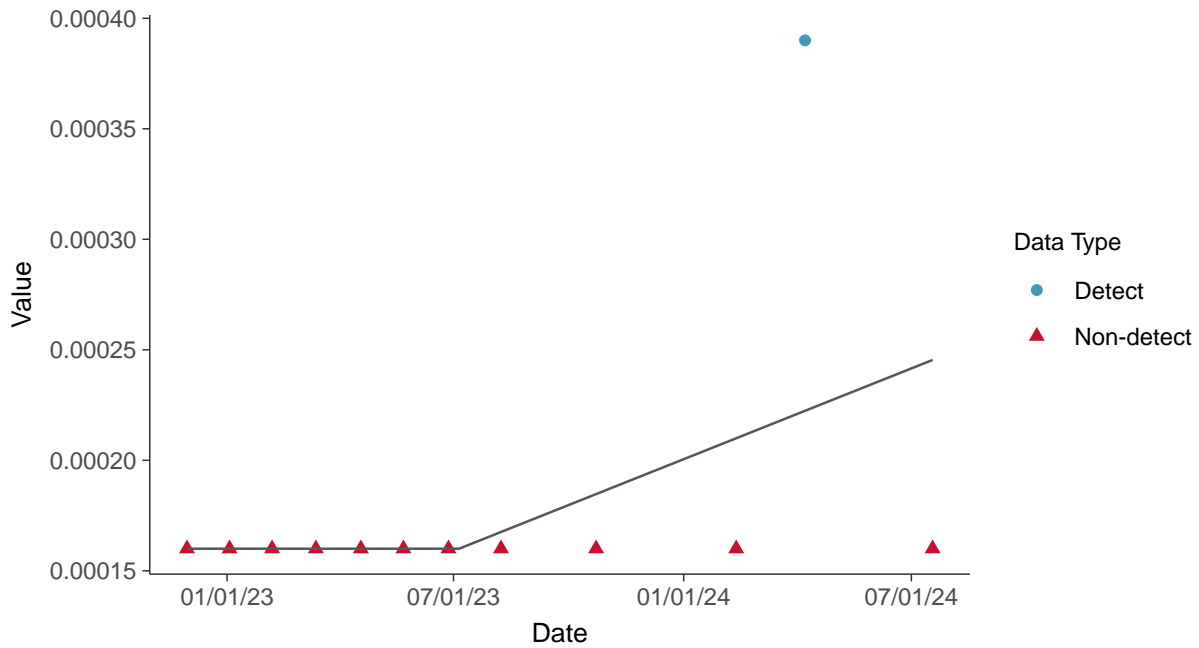
### Trend Regression: Piecewise Linear-Linear

Mercury, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-30 (mg/L)



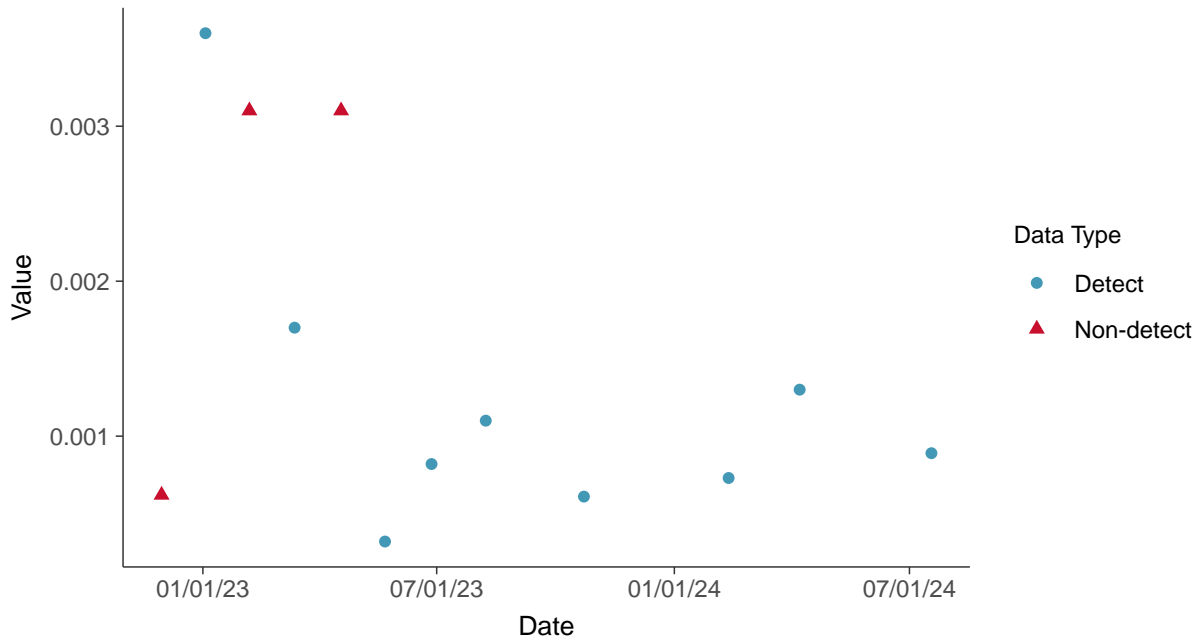


### Appendix IV: Molybdenum, MW-30

ID: 40\_1\_5\_118

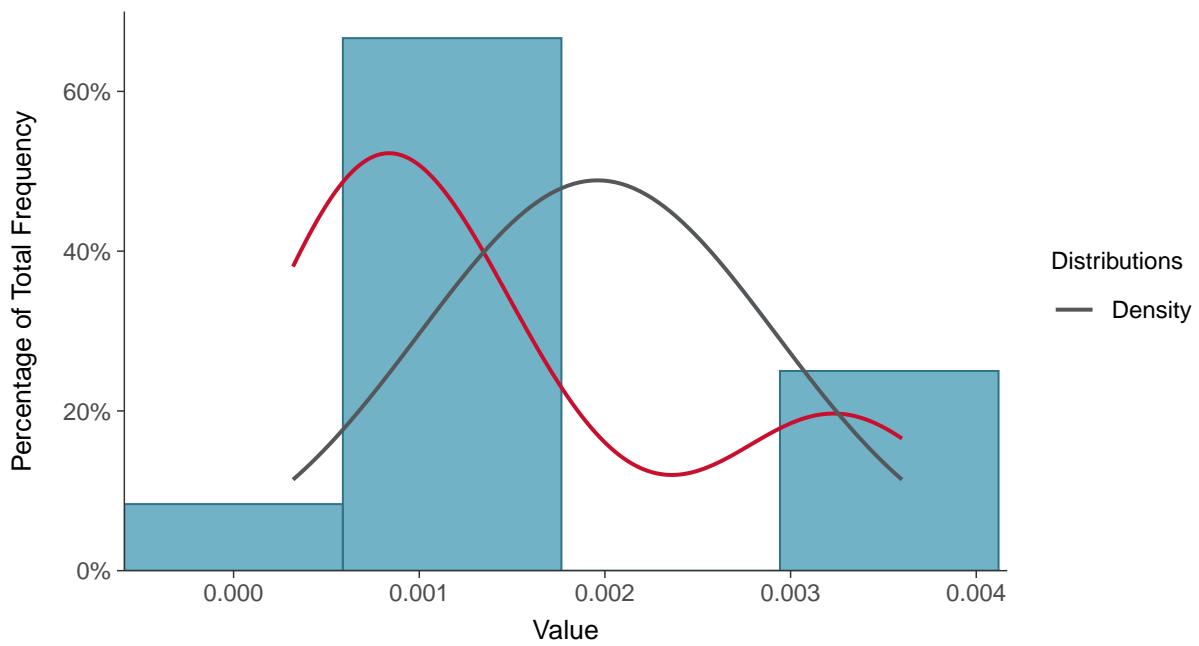
#### Scatter Plot

Molybdenum, MW-30 (mg/L)



#### Histogram

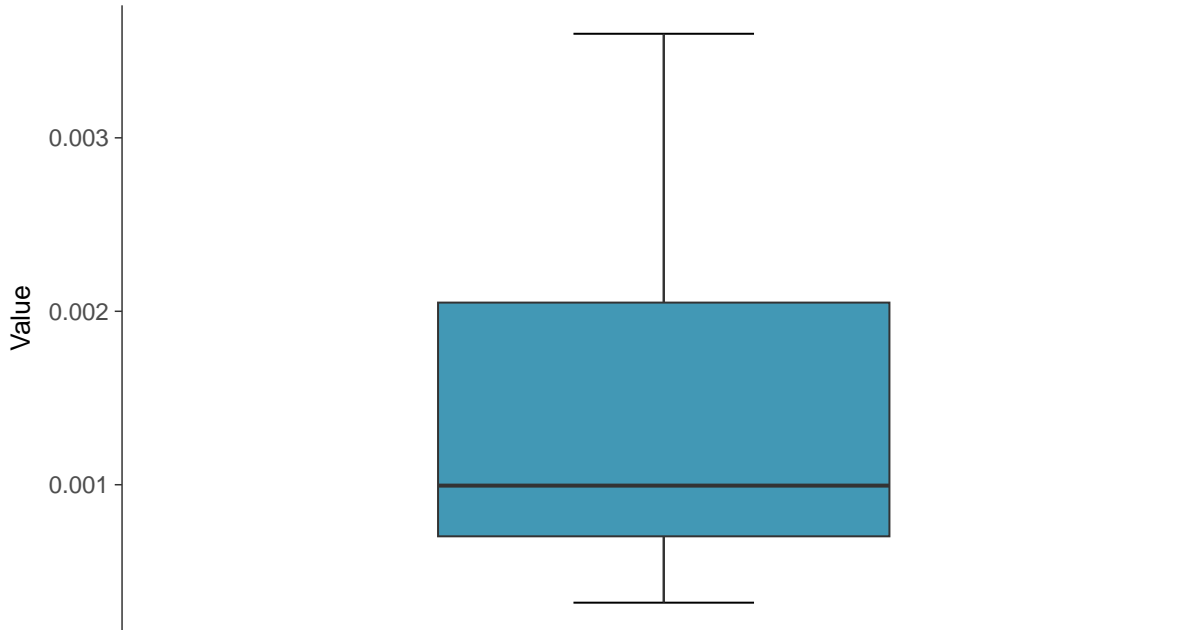
Molybdenum, MW-30 (mg/L)





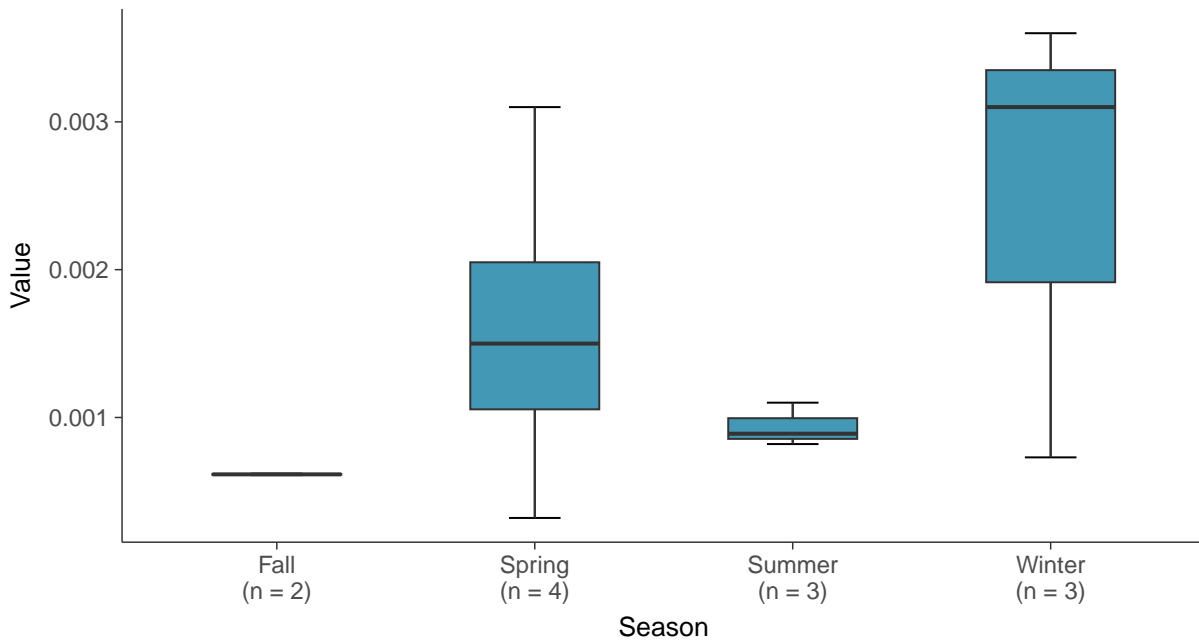
### Boxplot

Molybdenum, MW-30 (mg/L)



### Boxplot by Season

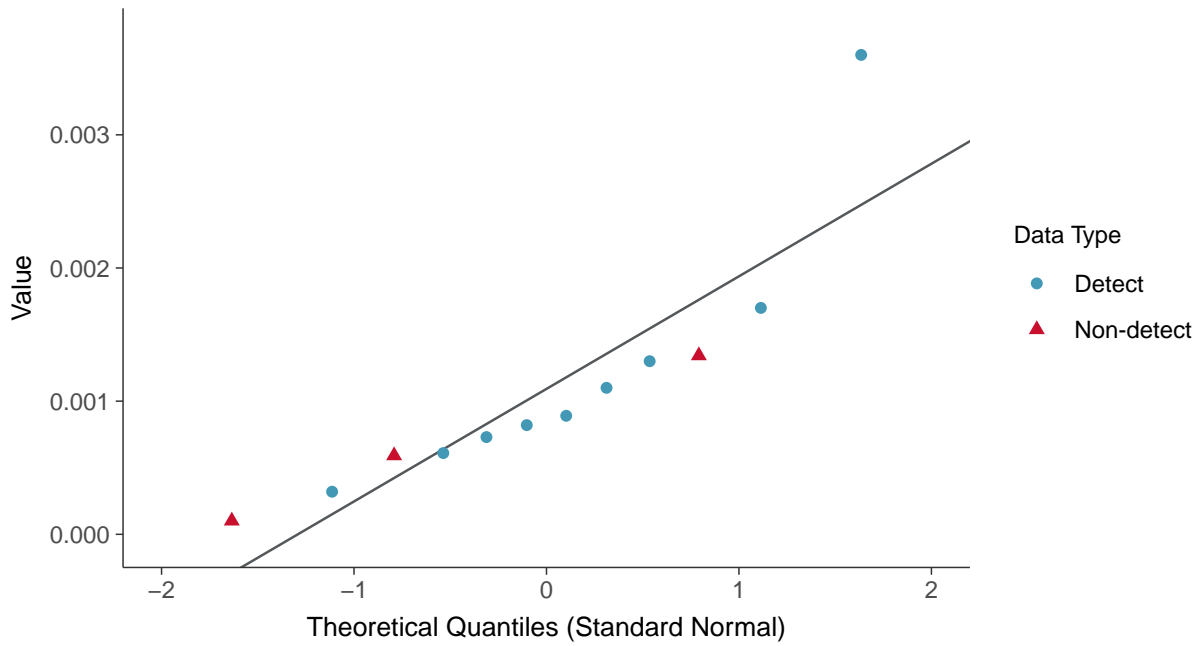
Molybdenum, MW-30 (mg/L)





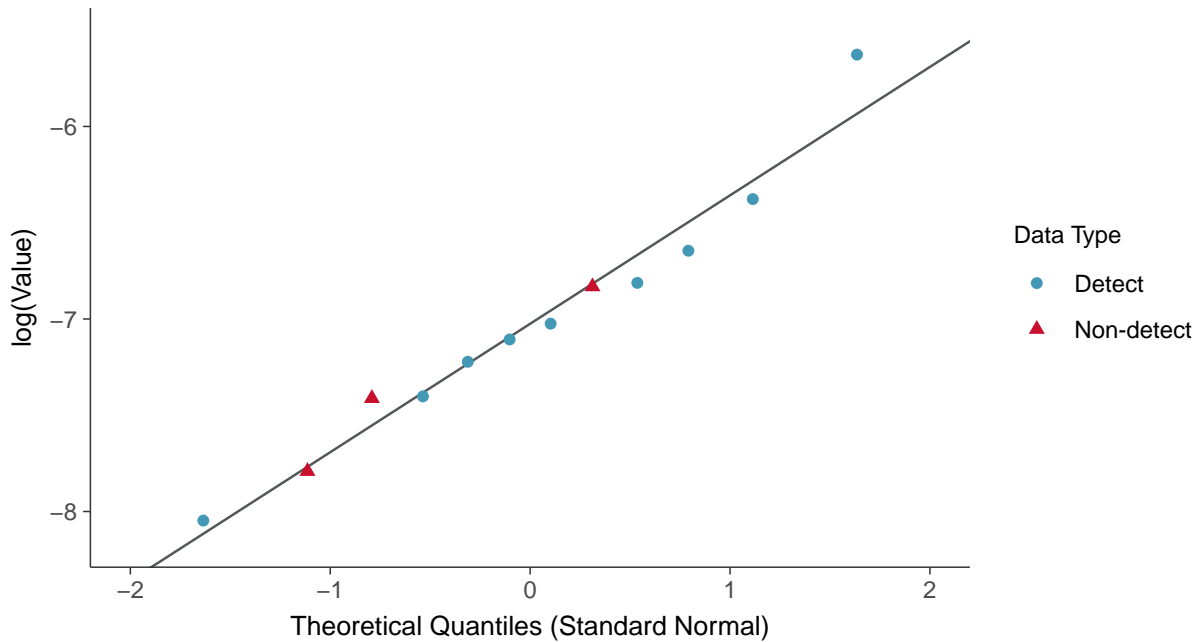
### Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

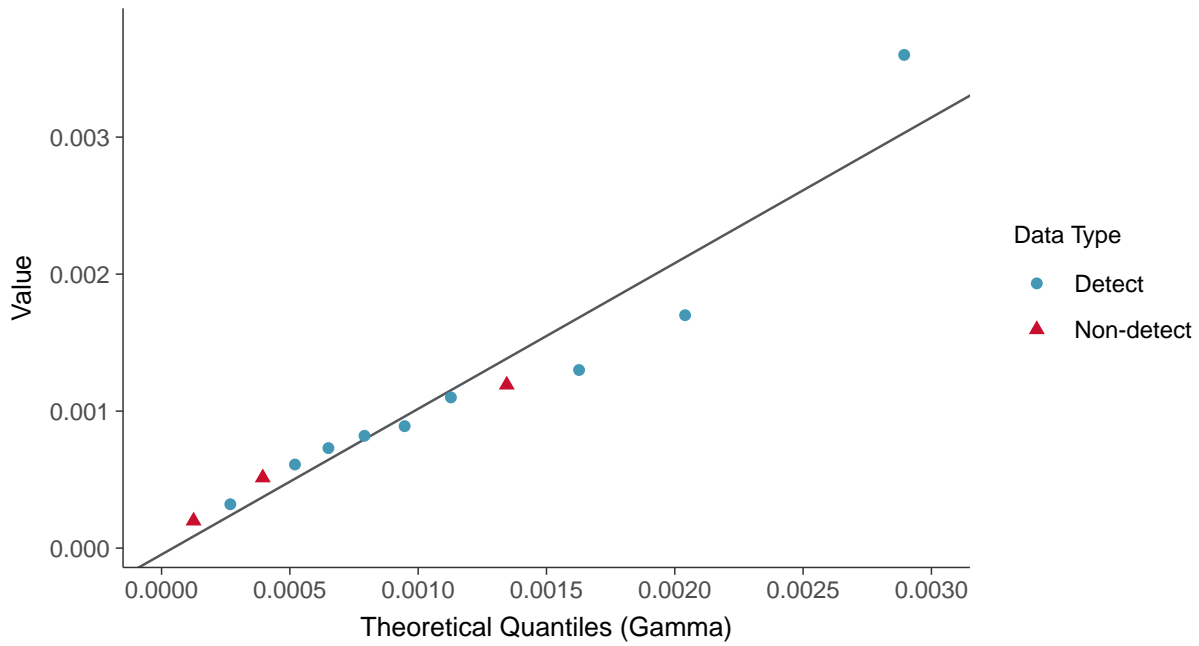
Molybdenum, MW-30 (mg/L)





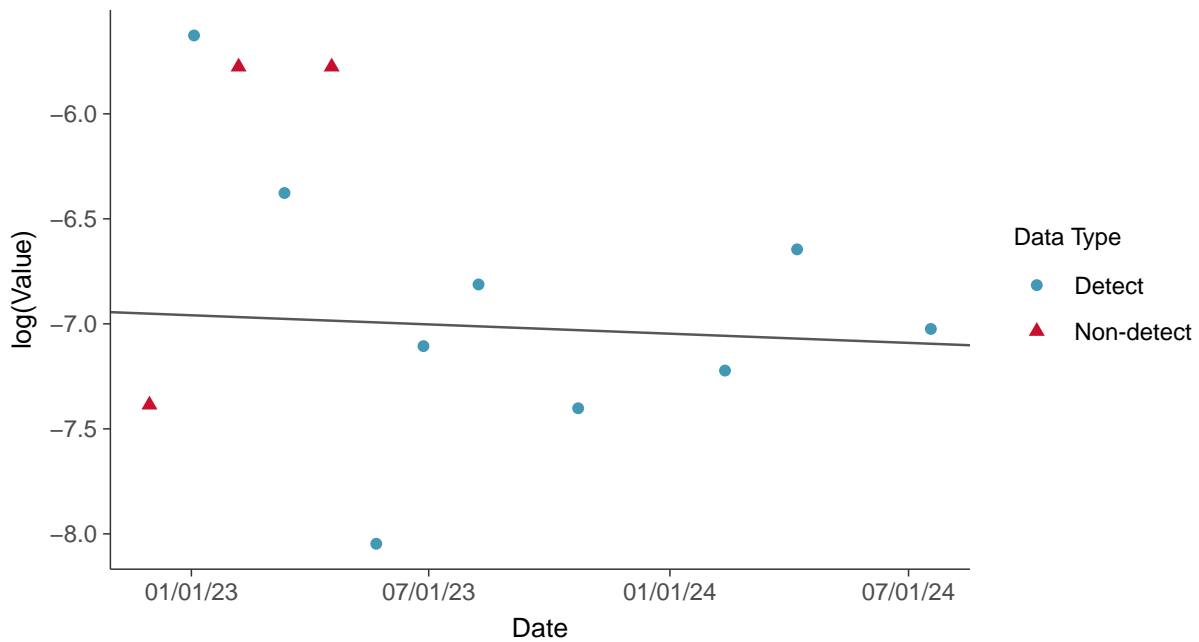
### Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

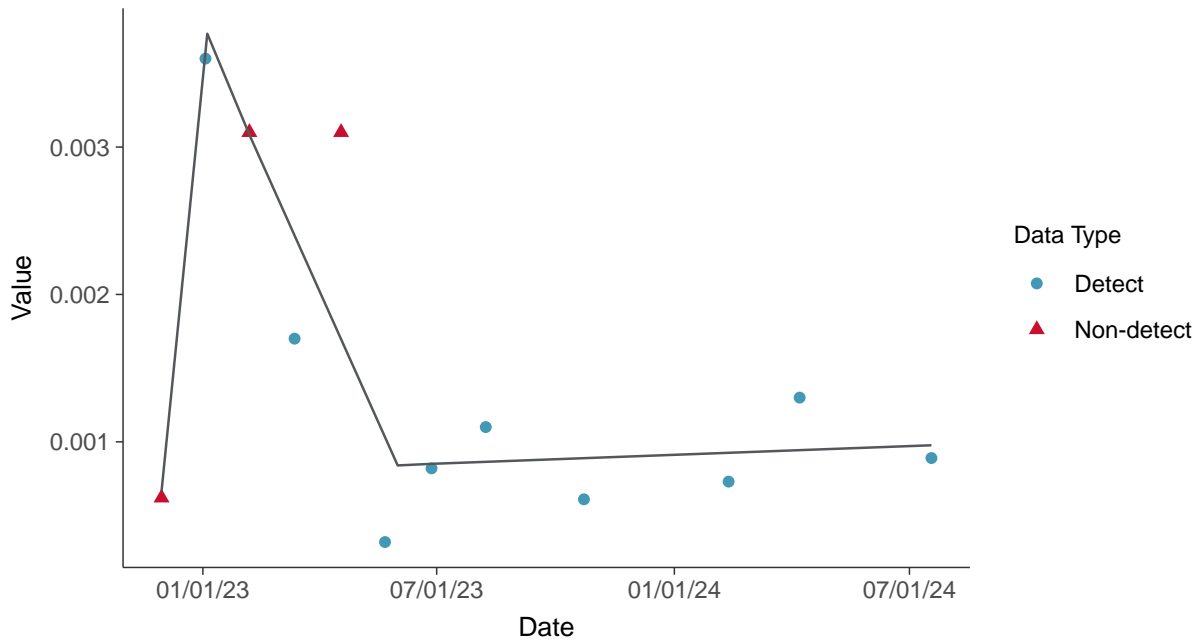
Molybdenum, MW-30 (mg/L)







**Trend Regression: Piecewise Linear-Linear-Linear**  
Molybdenum, MW-30 (mg/L)



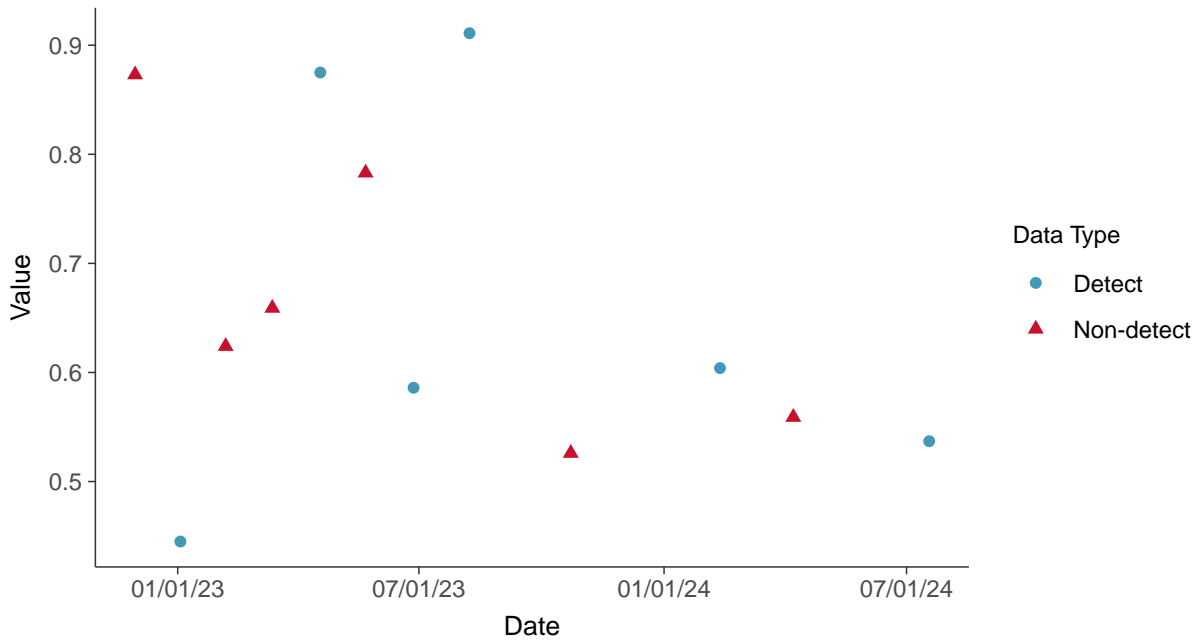


### Appendix IV: Radium 226 and 228, MW-30

ID: 40\_1\_5\_121

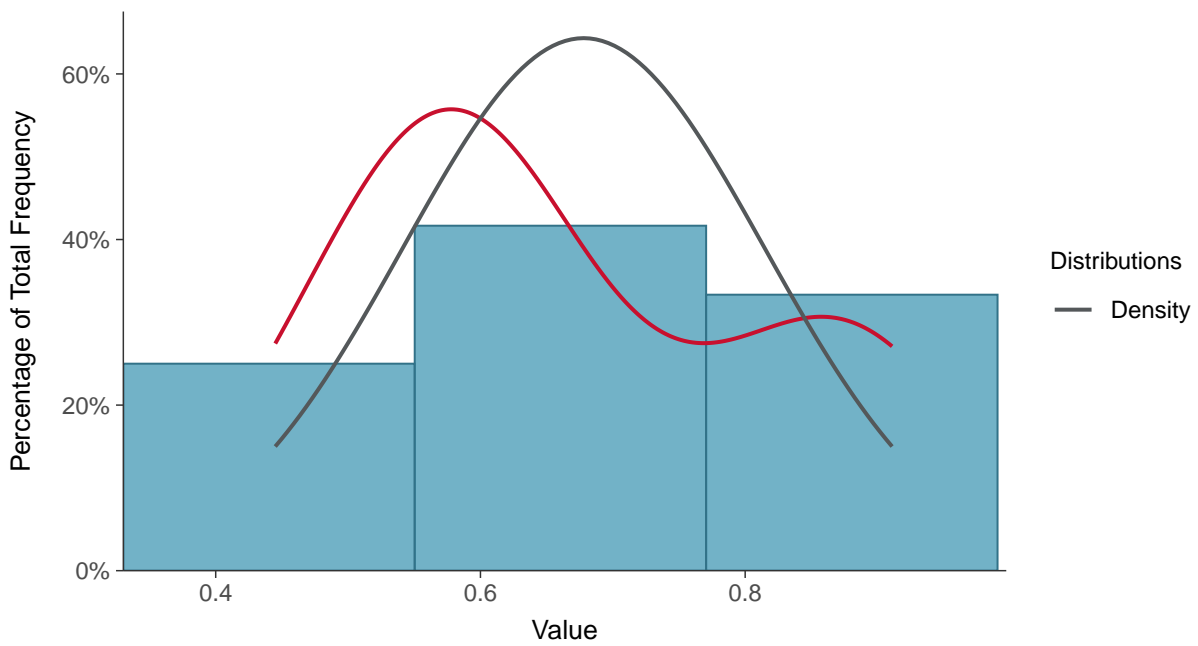
#### Scatter Plot

Radium 226 and 228, MW-30 (pCi/L)



#### Histogram

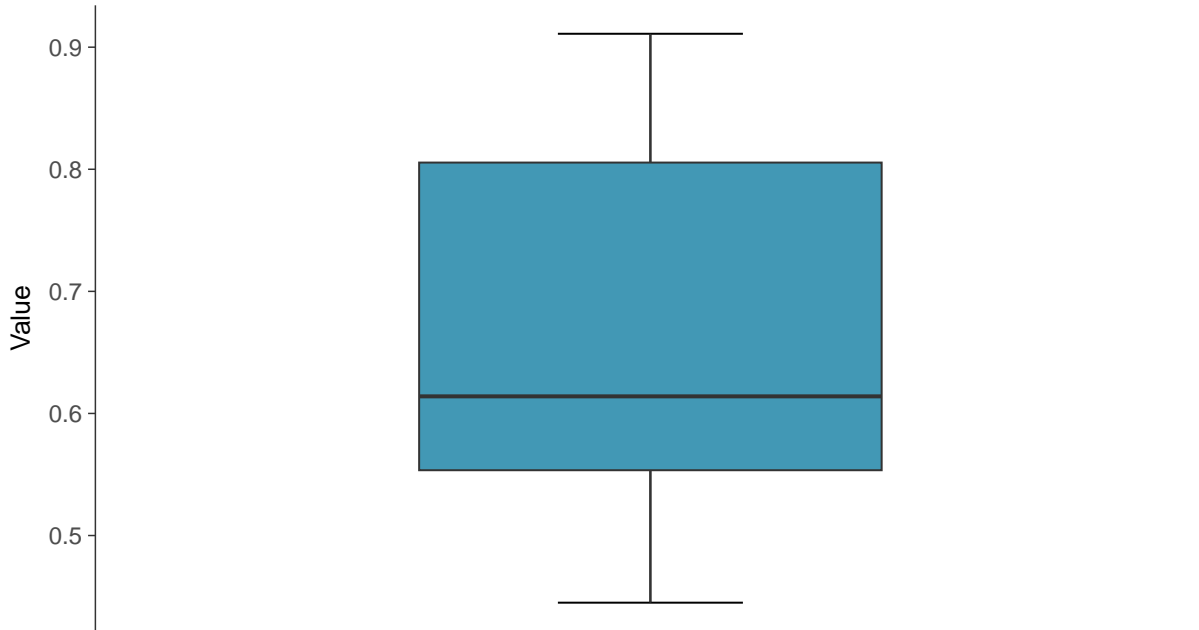
Radium 226 and 228, MW-30 (pCi/L)





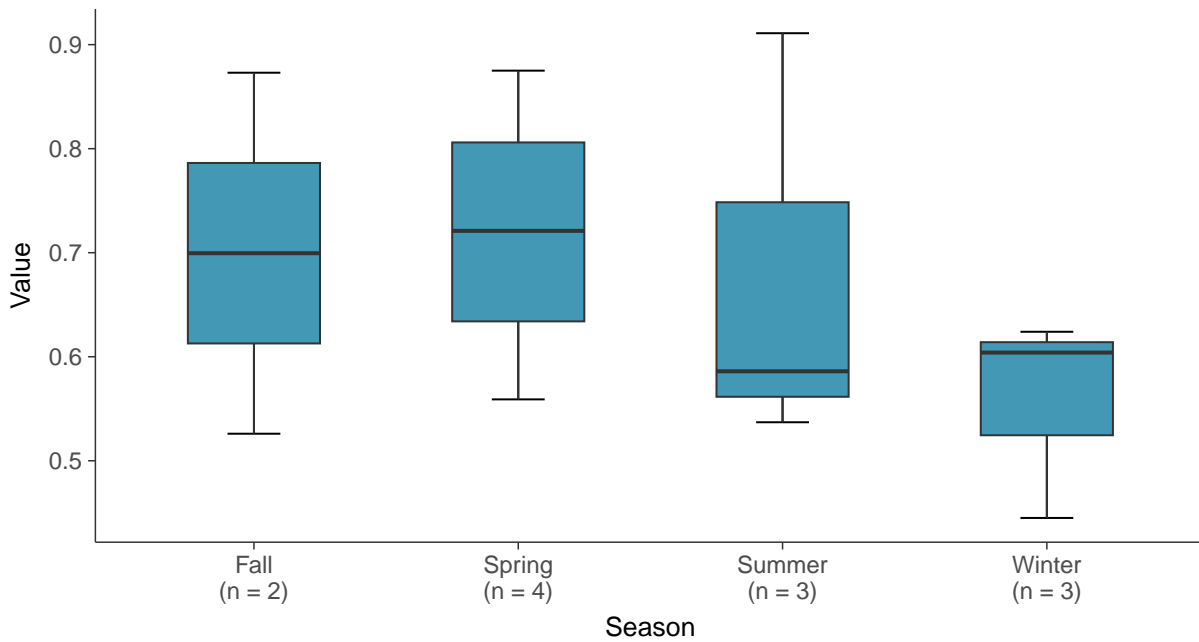
### Boxplot

Radium 226 and 228, MW-30 (pCi/L)



### Boxplot by Season

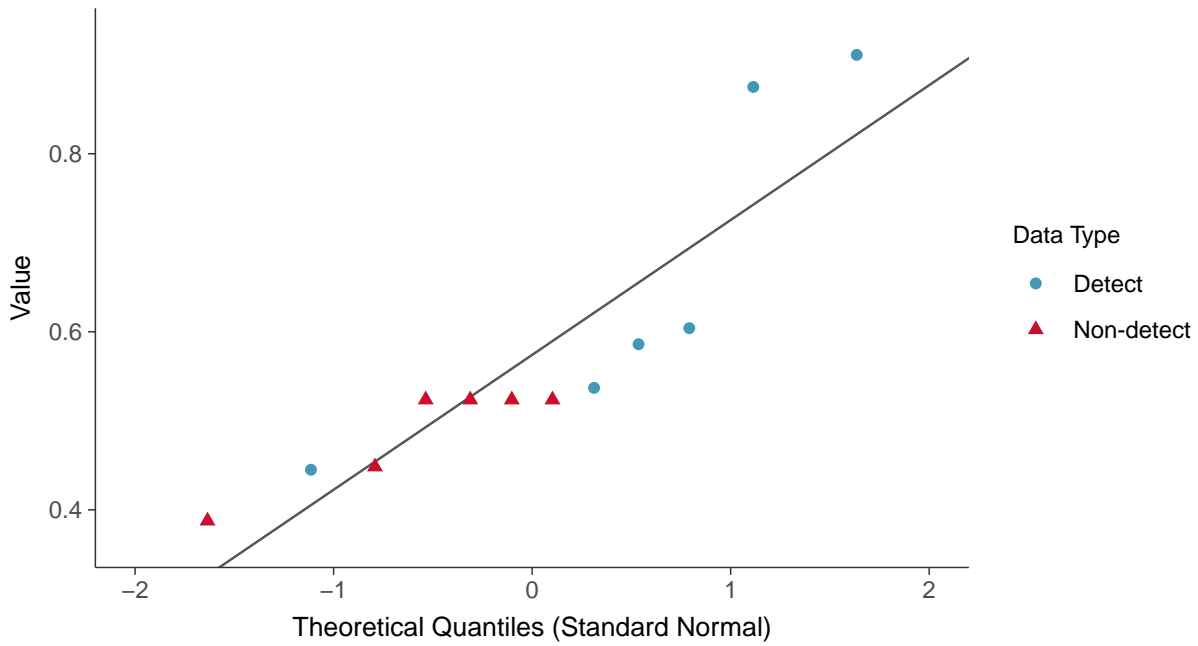
Radium 226 and 228, MW-30 (pCi/L)





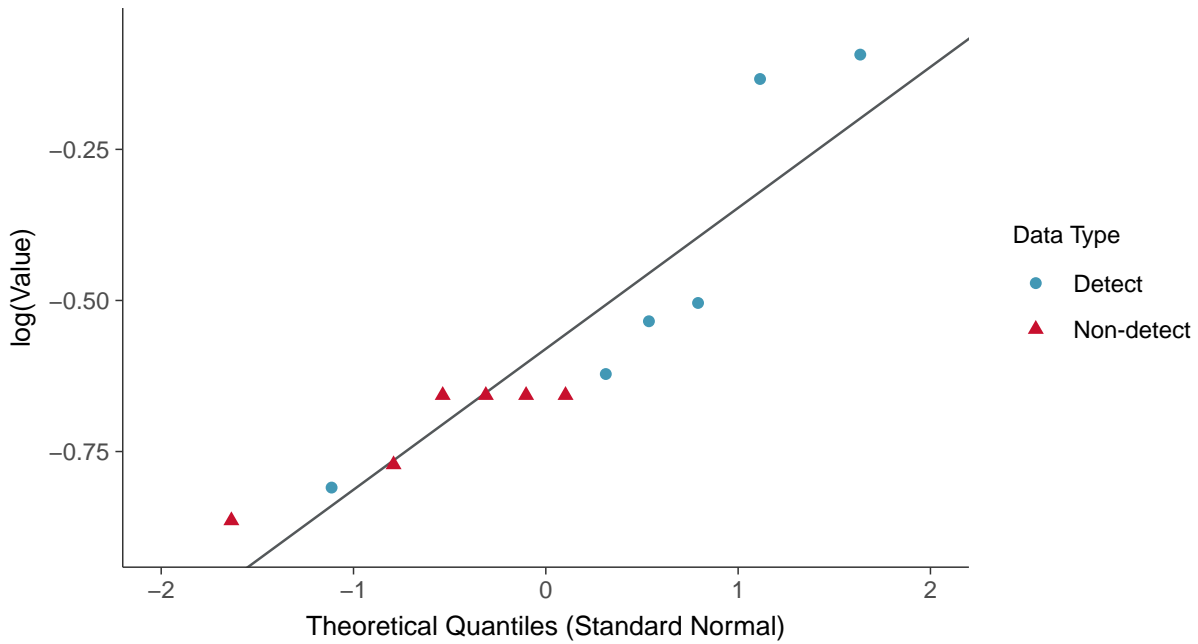
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-30 (pCi/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

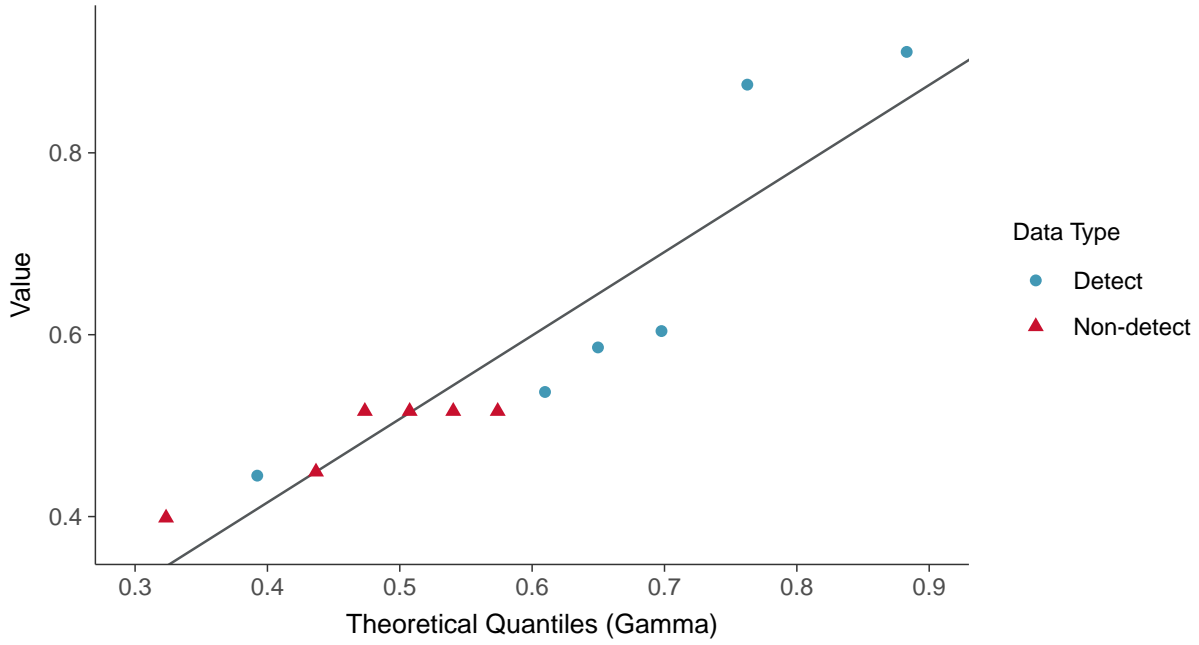
Radium 226 and 228, MW-30 (pCi/L)





### Gamma Q-Q plot using ROS Imputed Estimates

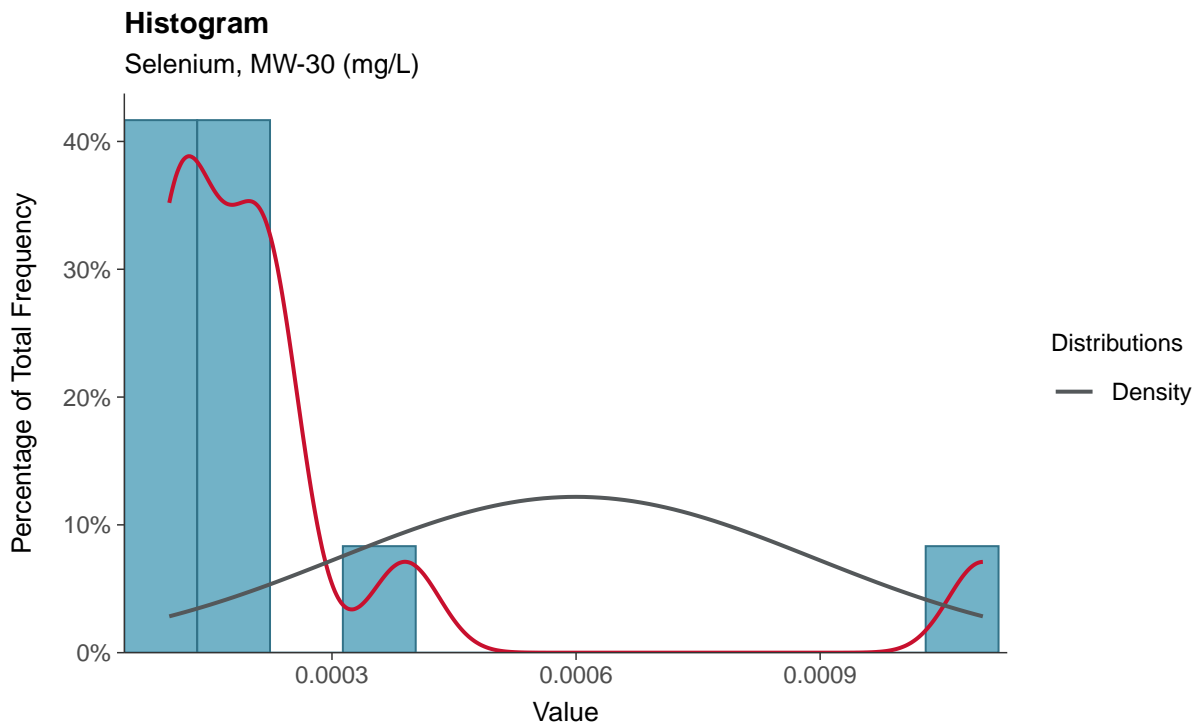
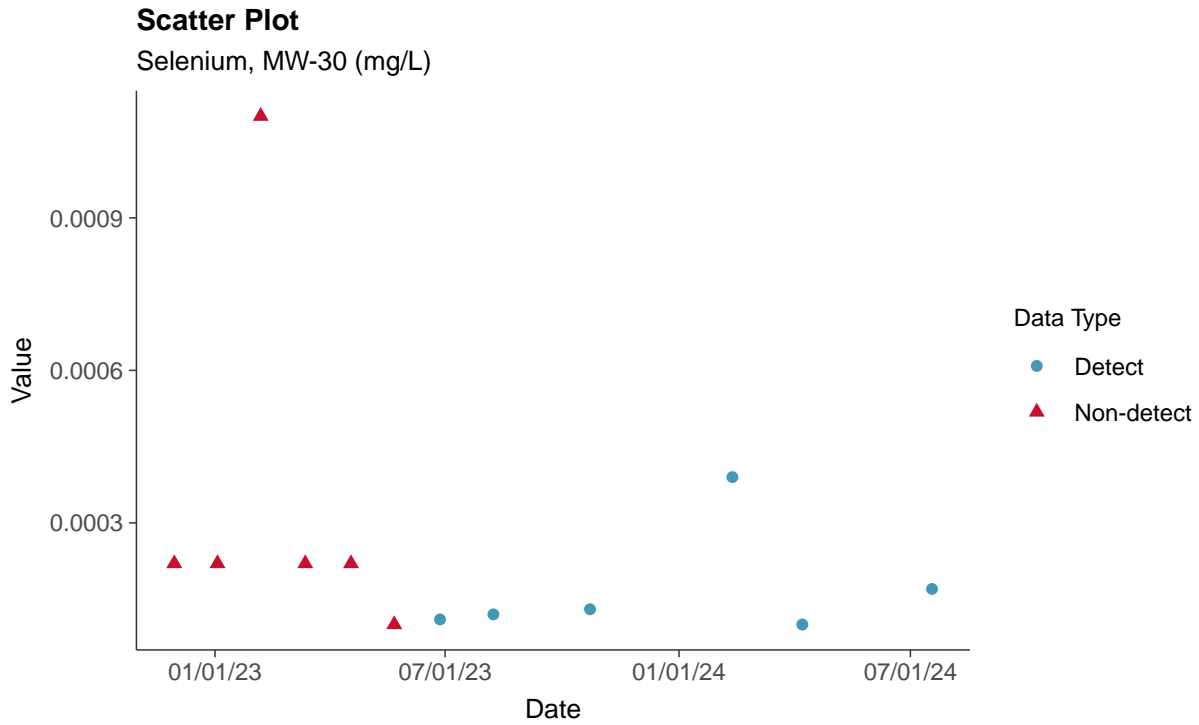
Radium 226 and 228, MW-30 (pCi/L)





### Appendix IV: Selenium, MW-30

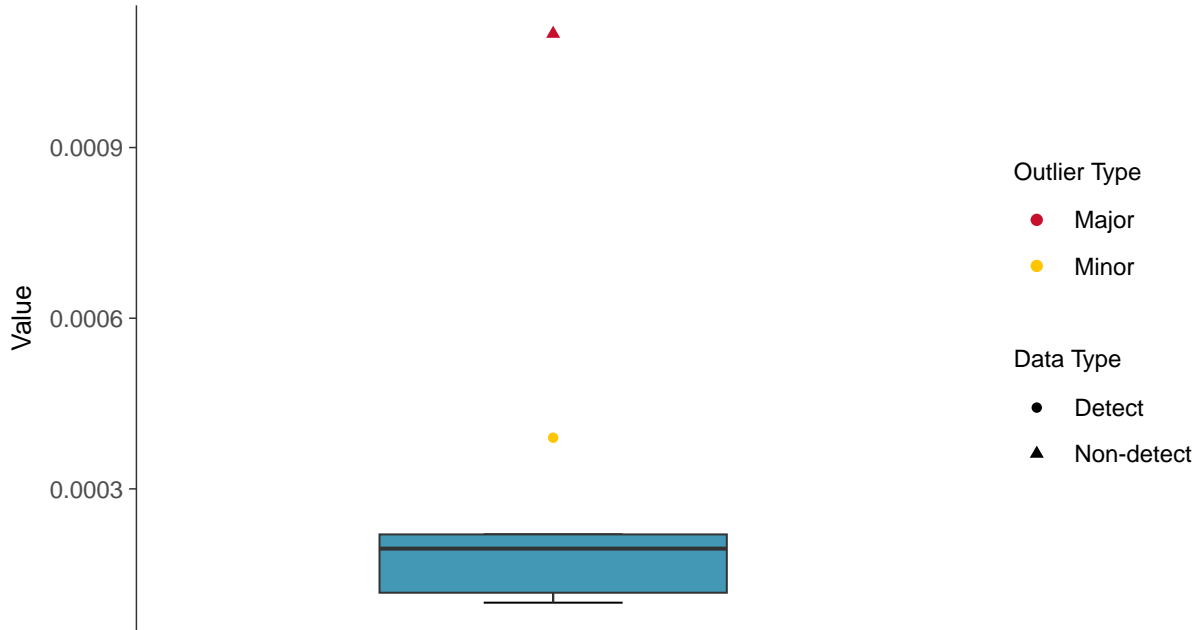
ID: 40\_1\_5\_122





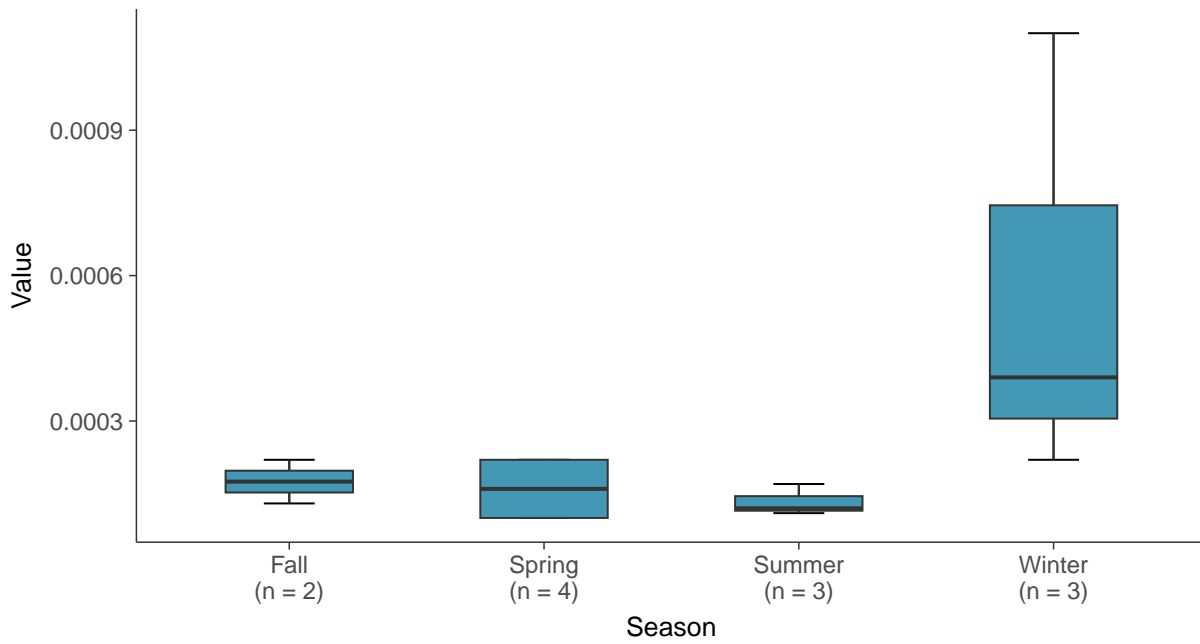
### Boxplot

Selenium, MW-30 (mg/L)



### Boxplot by Season

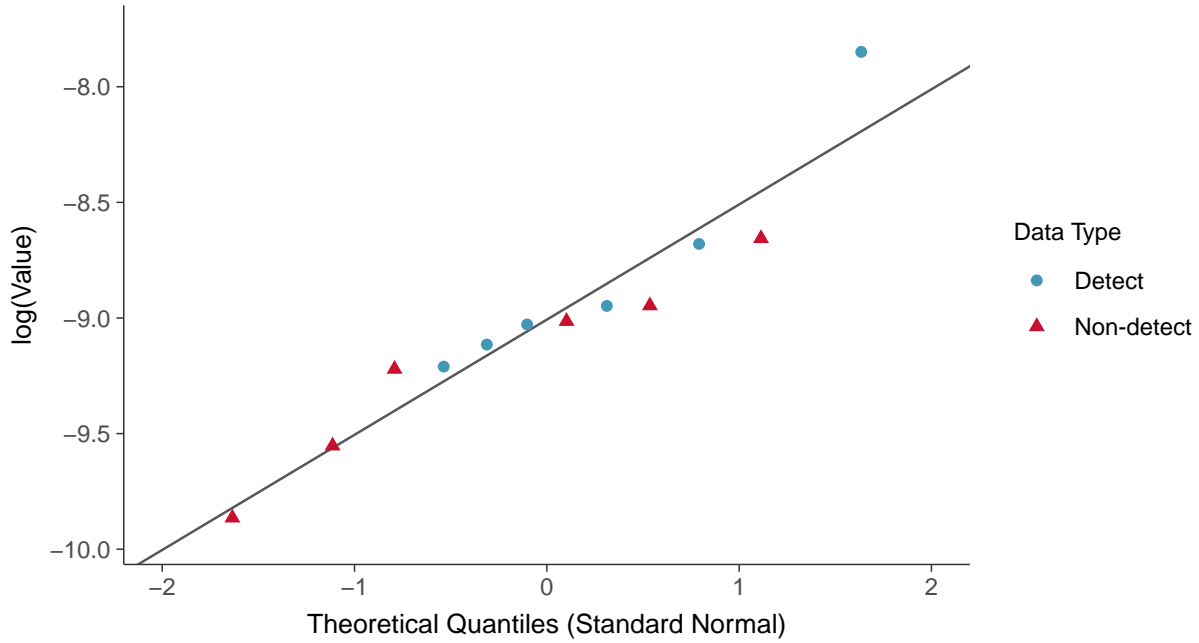
Selenium, MW-30 (mg/L)





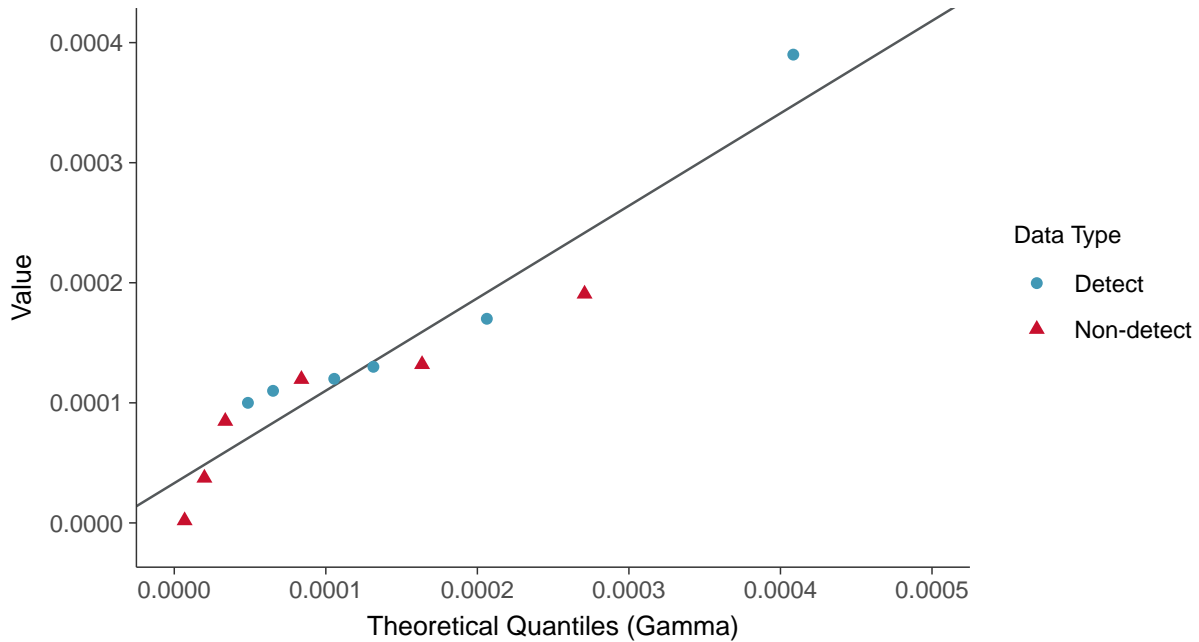
### Lognormal Q-Q plot using ROS Imputed Estimates

Selenium, MW-30 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

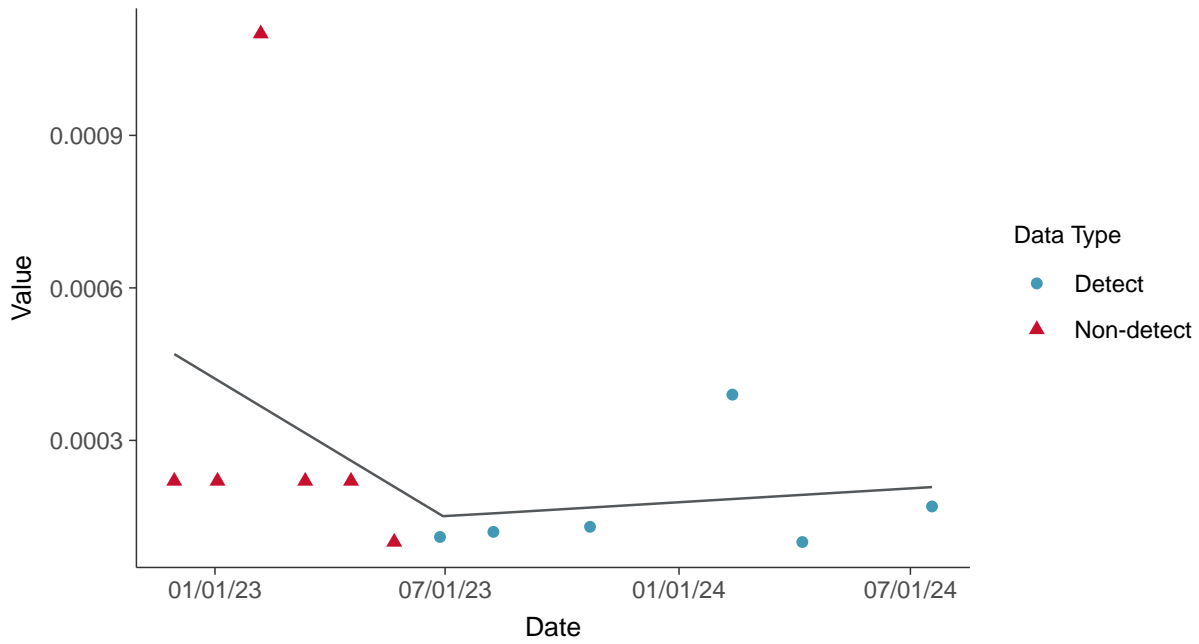
Selenium, MW-30 (mg/L)



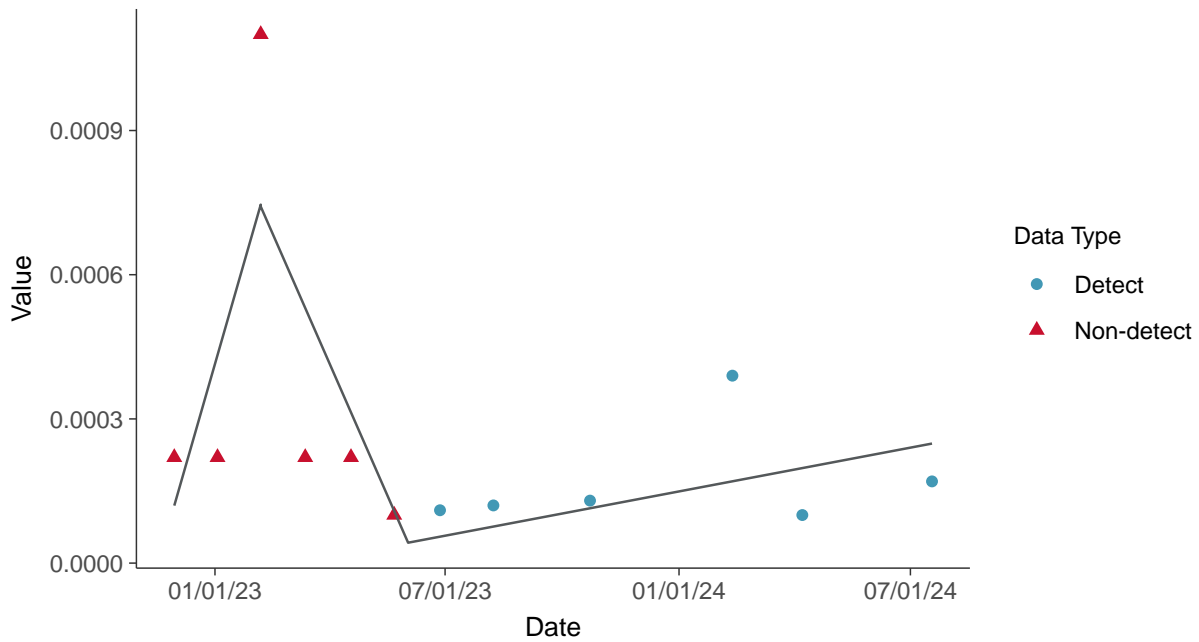




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-30 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-30 (mg/L)



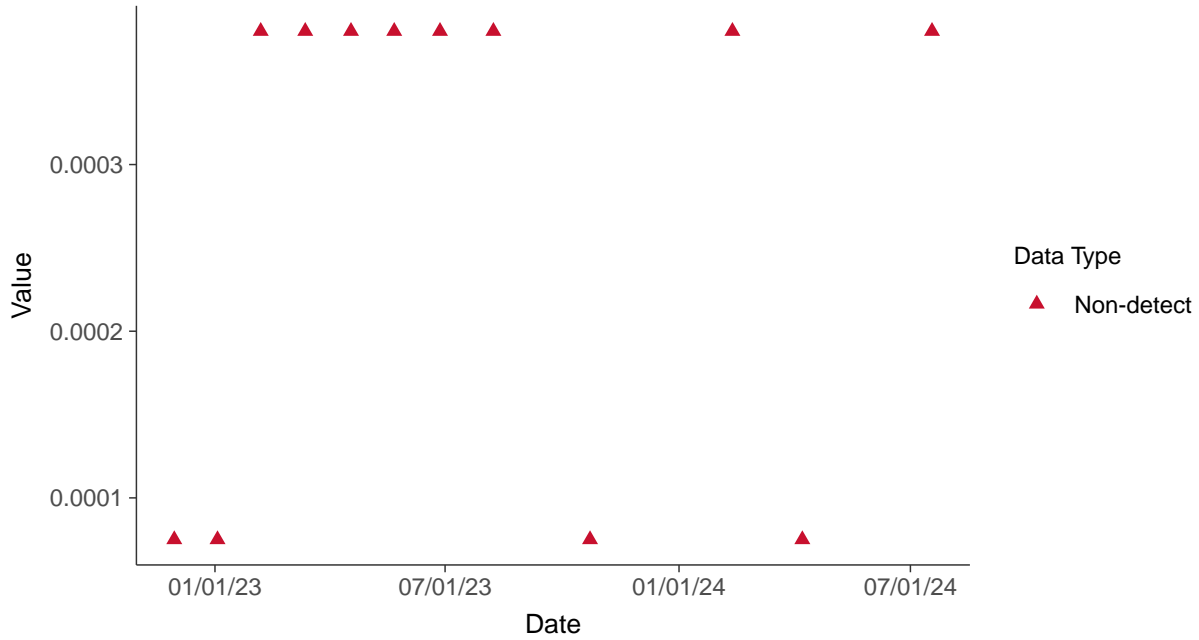


### Appendix IV: Thallium, MW-30

ID: 40\_1\_5\_125

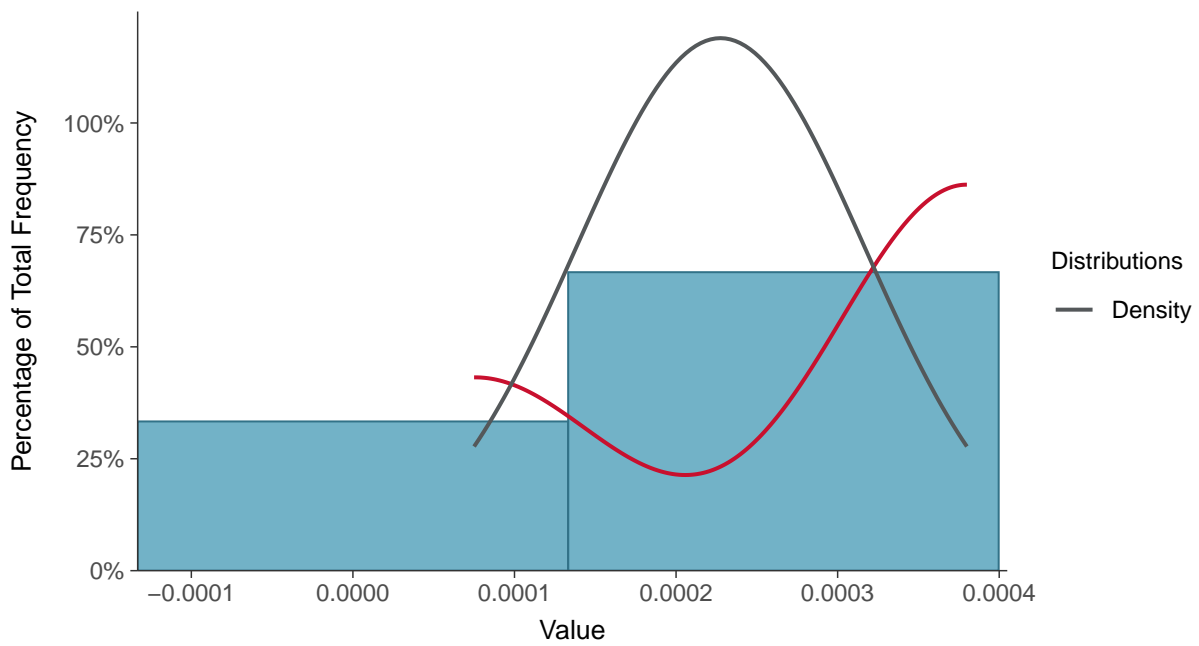
#### Scatter Plot

Thallium, MW-30 (mg/L)



#### Histogram

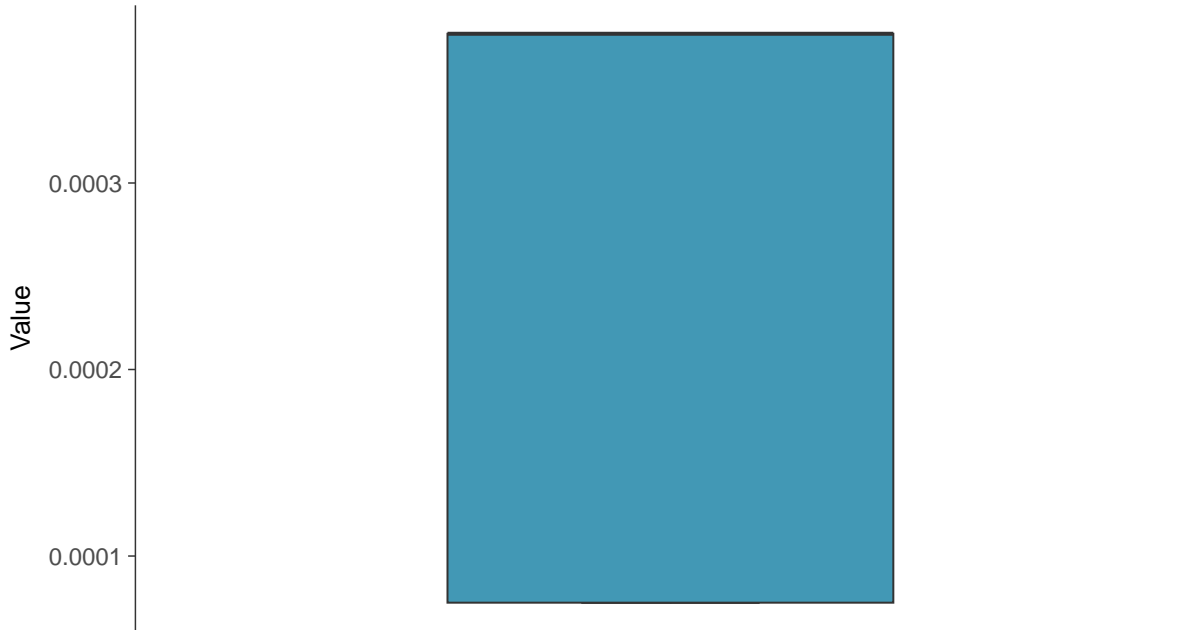
Thallium, MW-30 (mg/L)





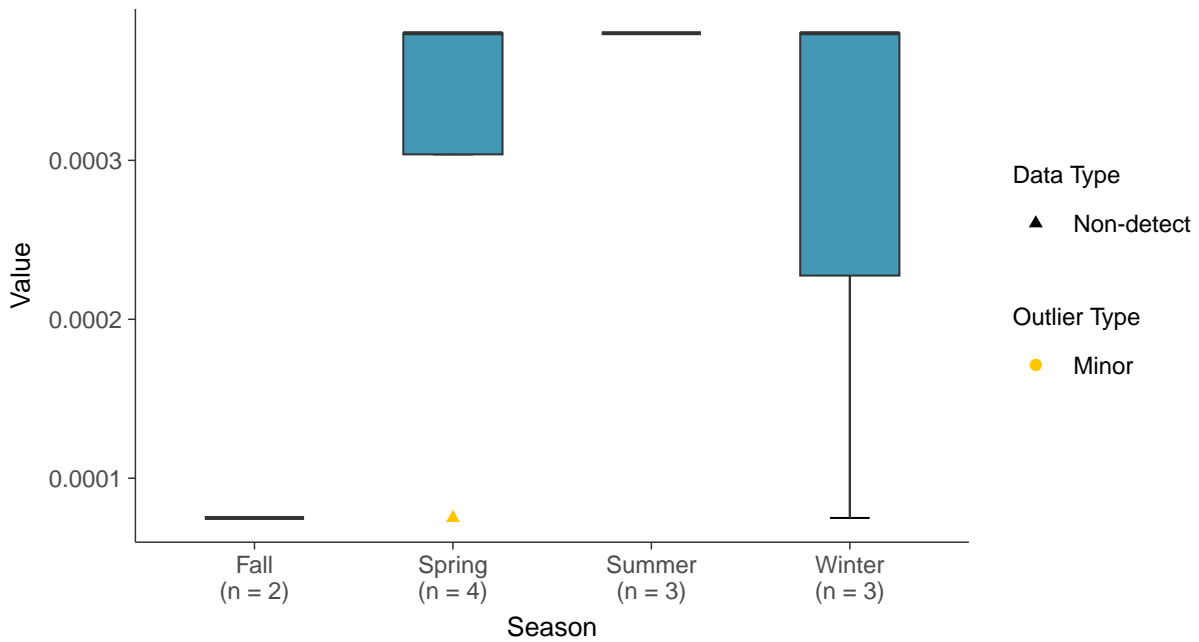
### Boxplot

Thallium, MW-30 (mg/L)



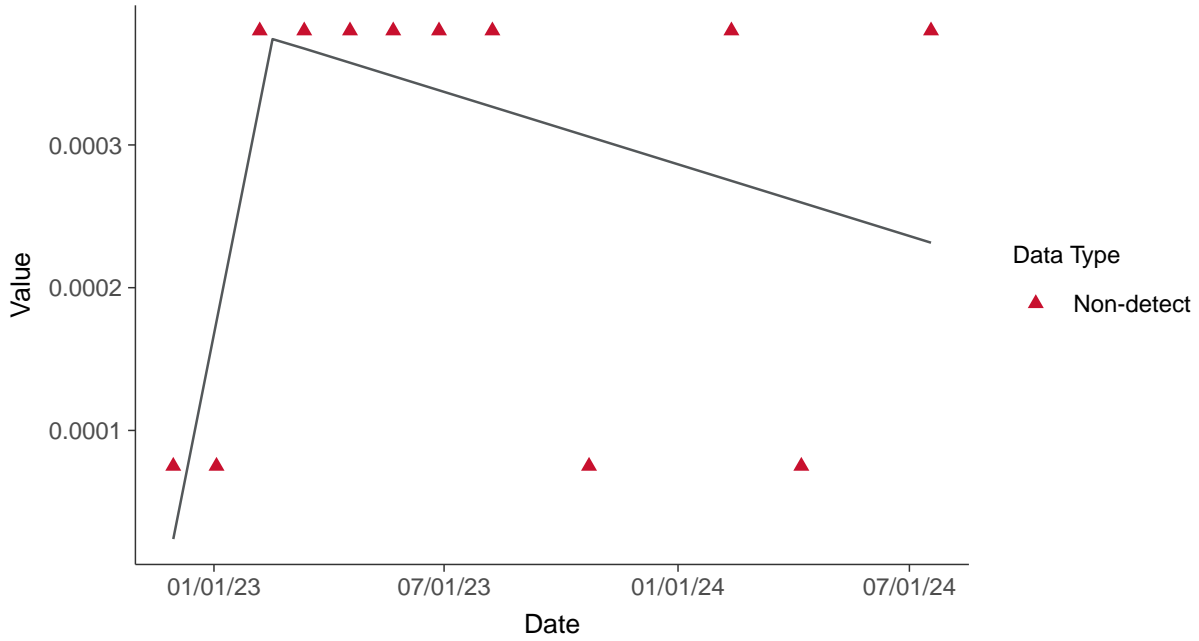
### Boxplot by Season

Thallium, MW-30 (mg/L)

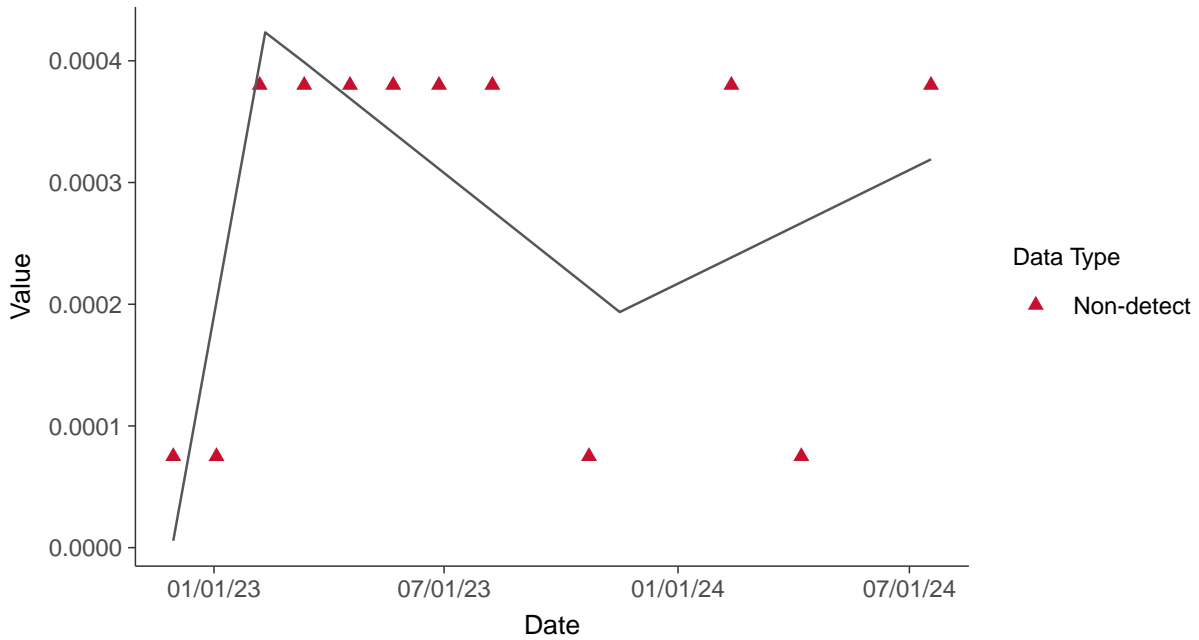




**Trend Regression: Piecewise Linear-Linear**  
Thallium, MW-30 (mg/L)



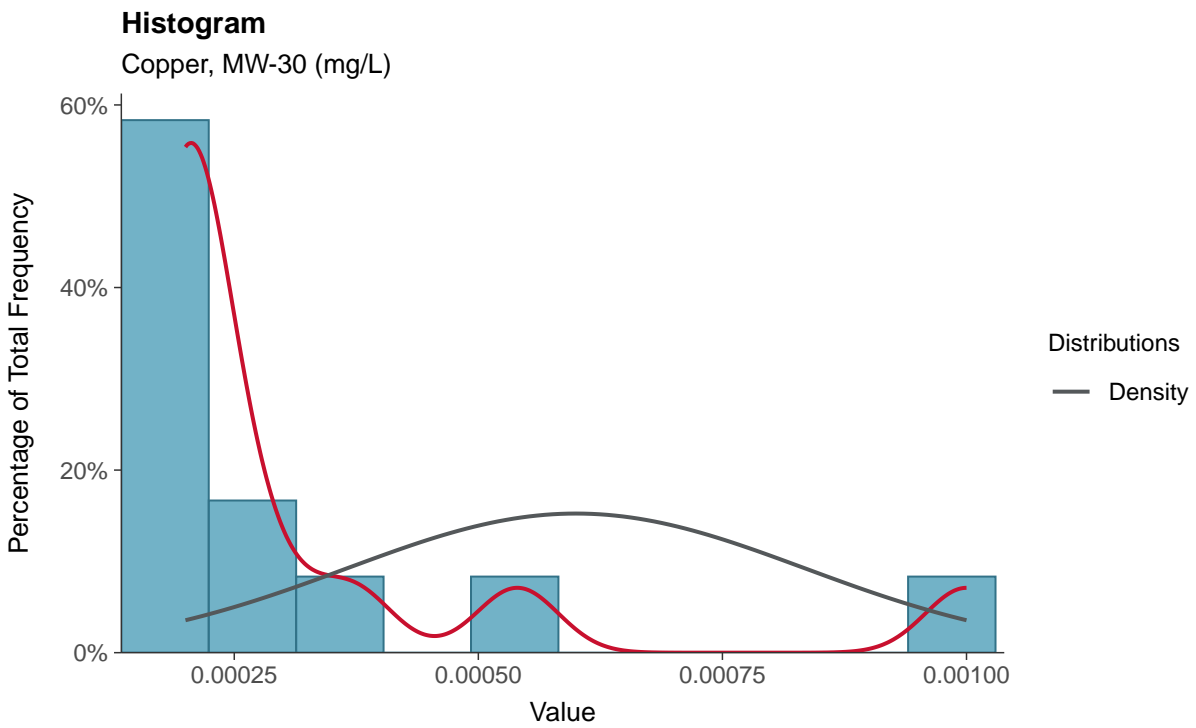
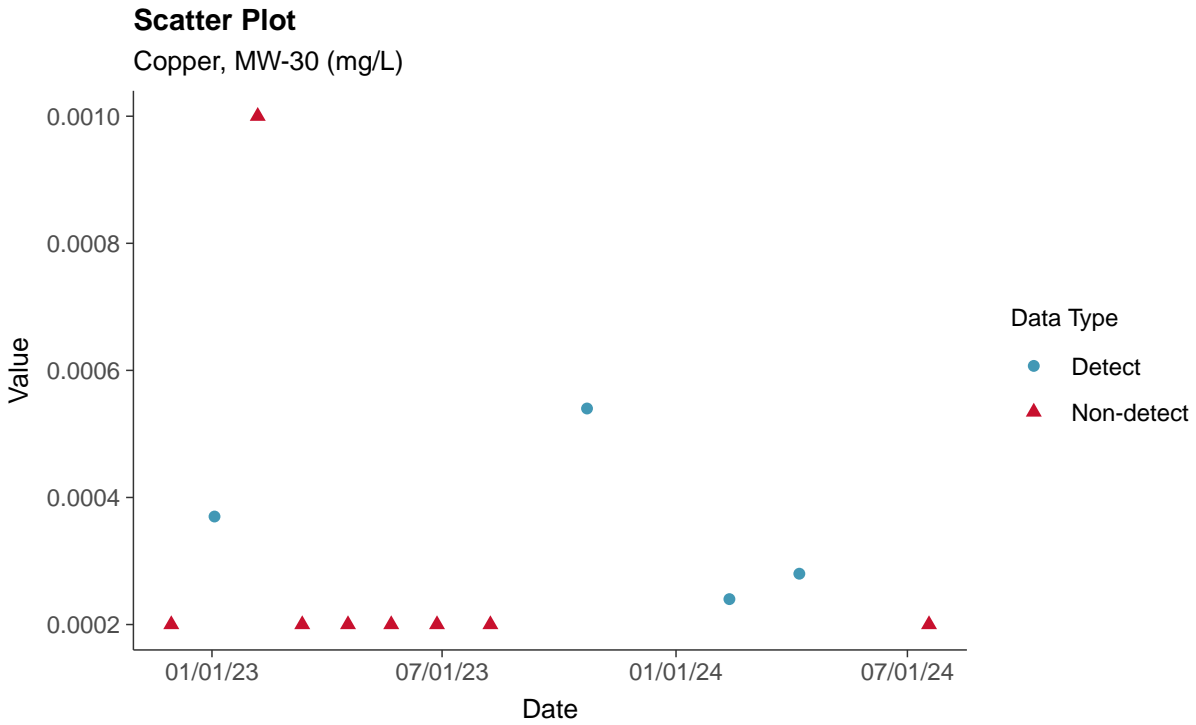
**Trend Regression: Piecewise Linear-Linear-Linear**  
Thallium, MW-30 (mg/L)





### Part 115: Copper, MW-30

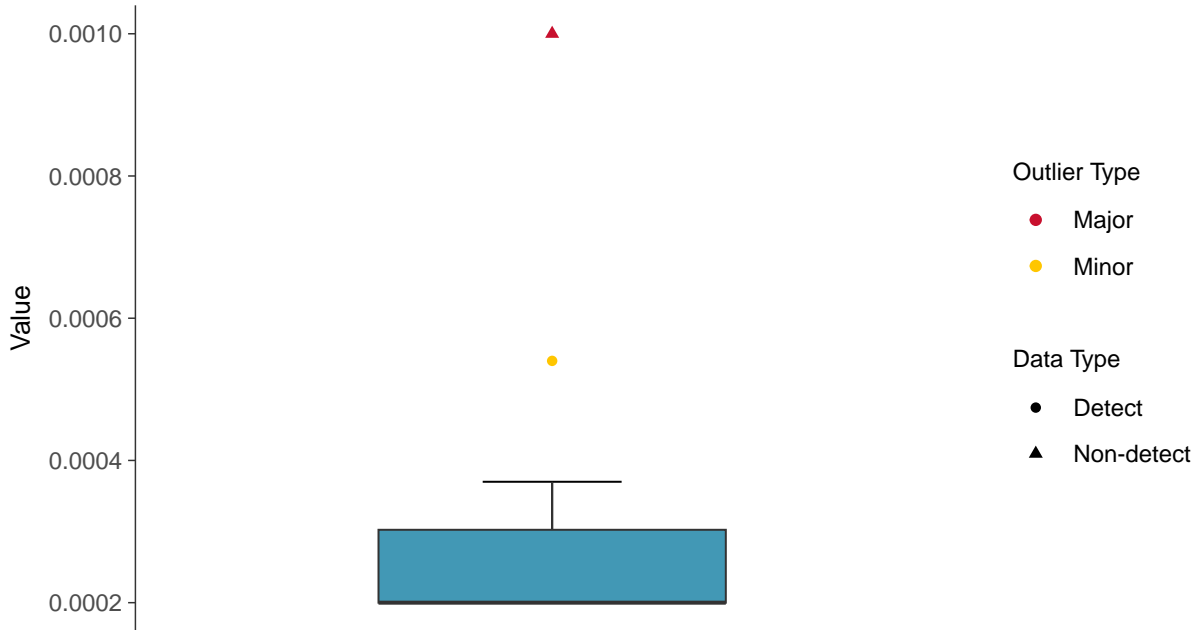
ID: 40\_1\_6\_111





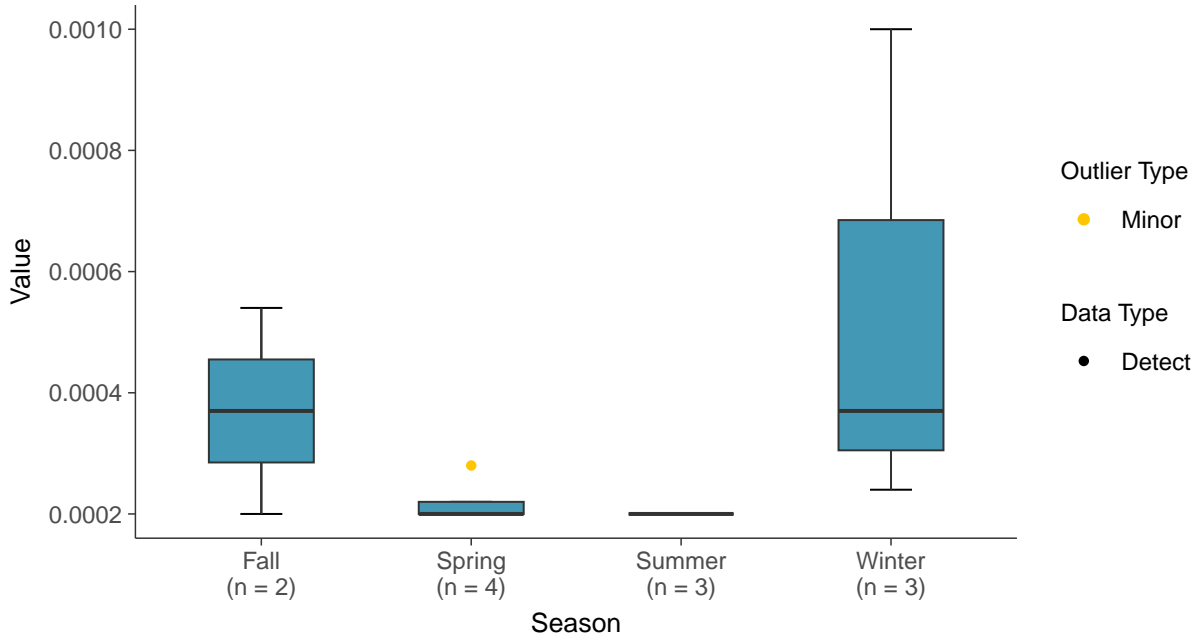
### Boxplot

Copper, MW-30 (mg/L)



### Boxplot by Season

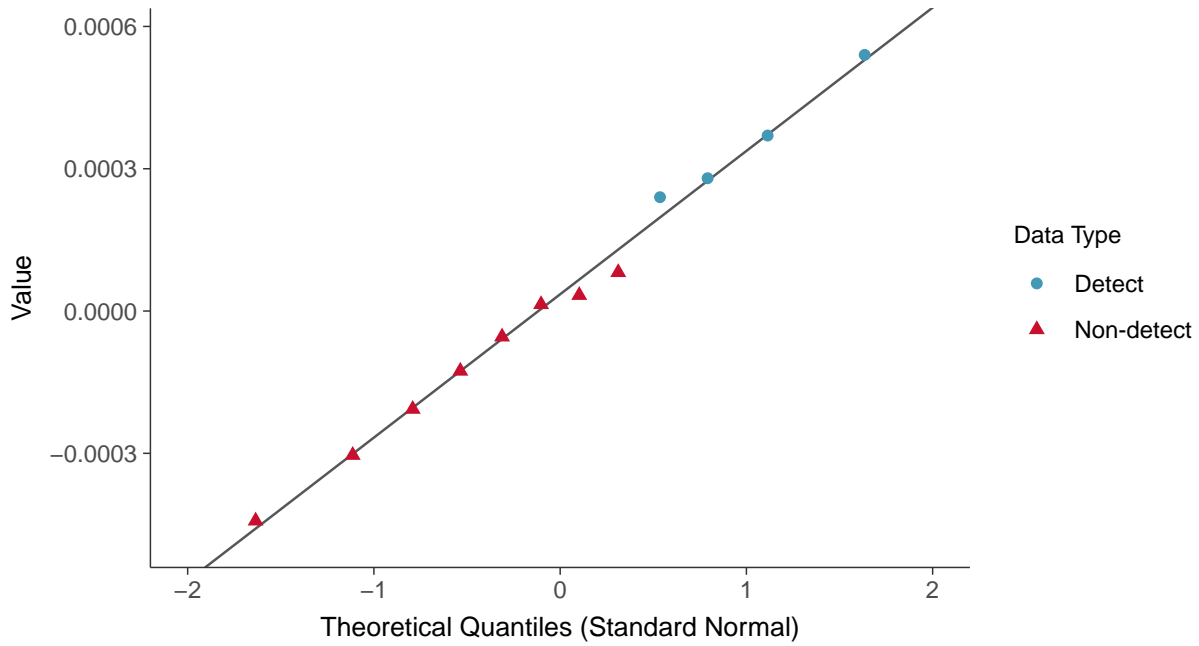
Copper, MW-30 (mg/L)





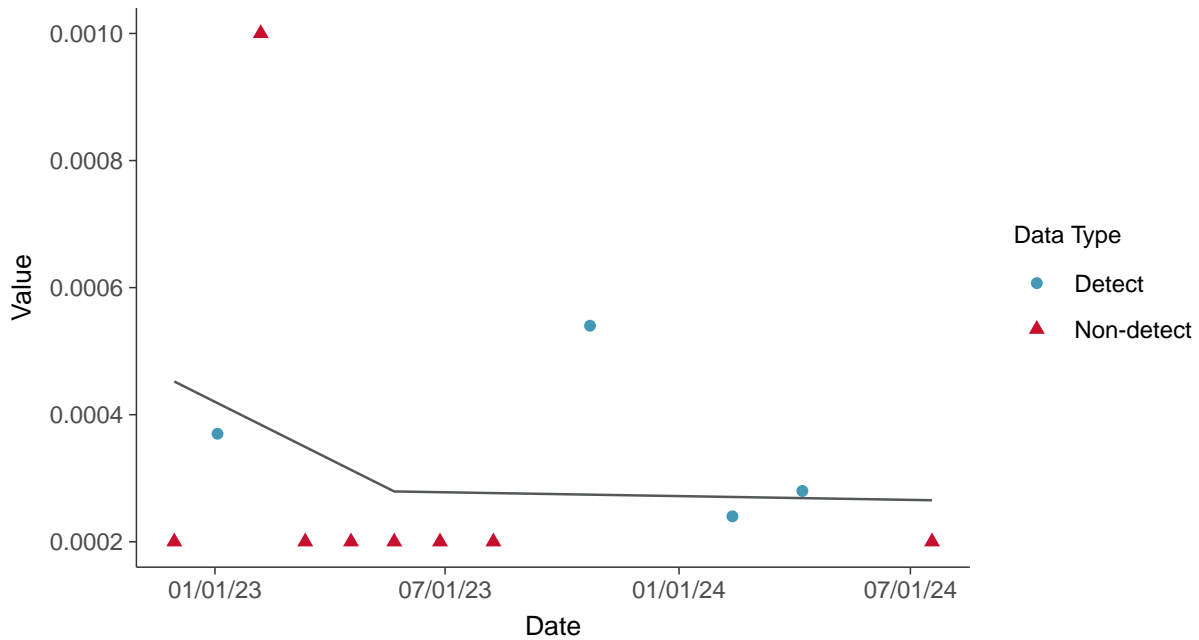
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear

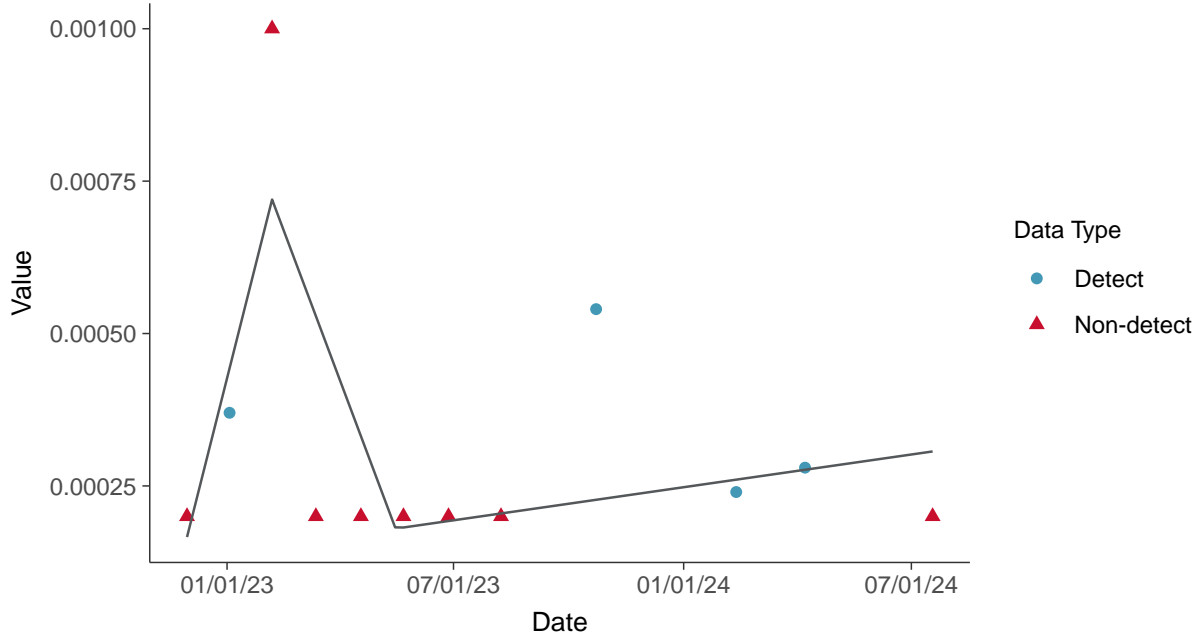
Copper, MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-30 (mg/L)





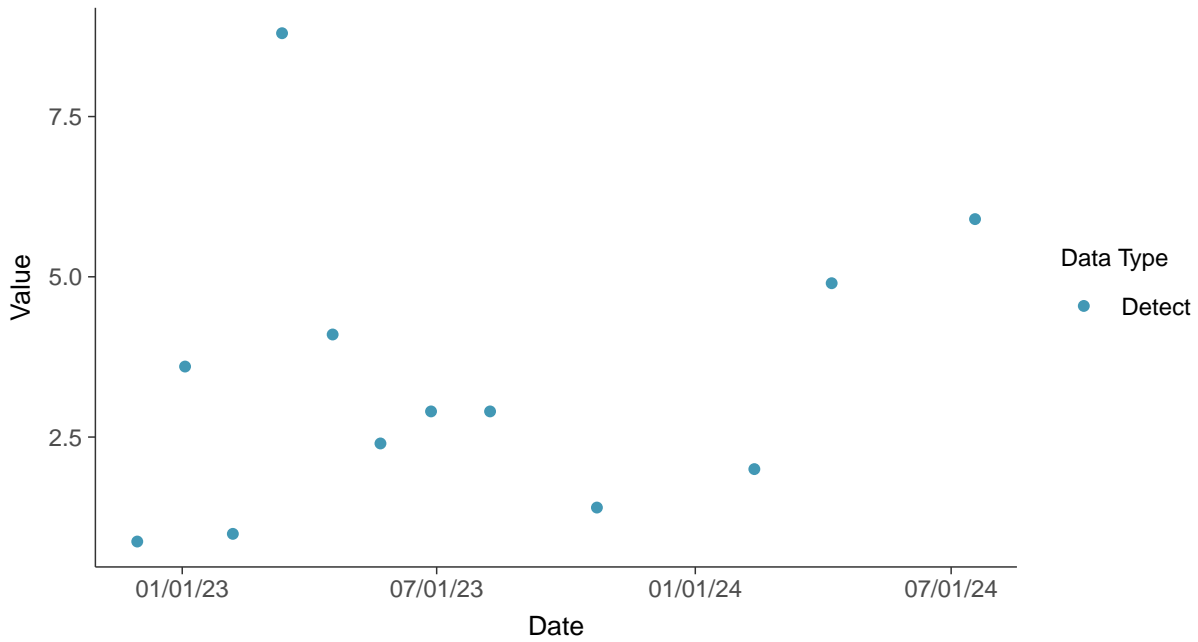


### Part 115: Iron, MW-30

ID: 40\_1\_6\_114

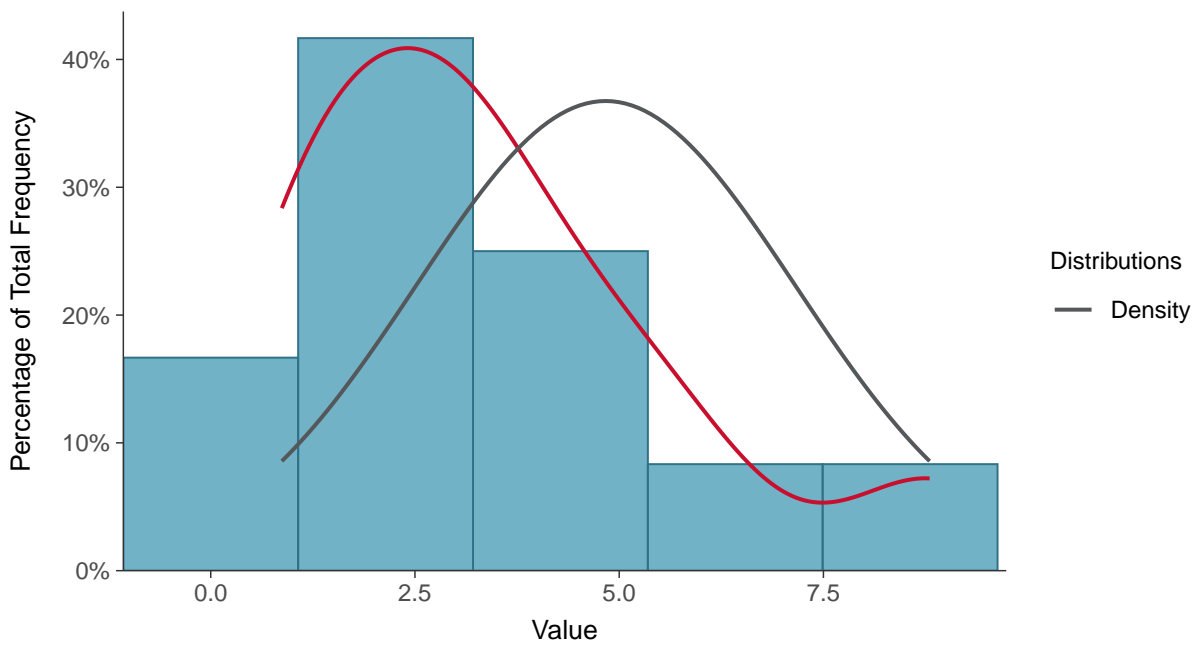
#### Scatter Plot

Iron, MW-30 (mg/L)



#### Histogram

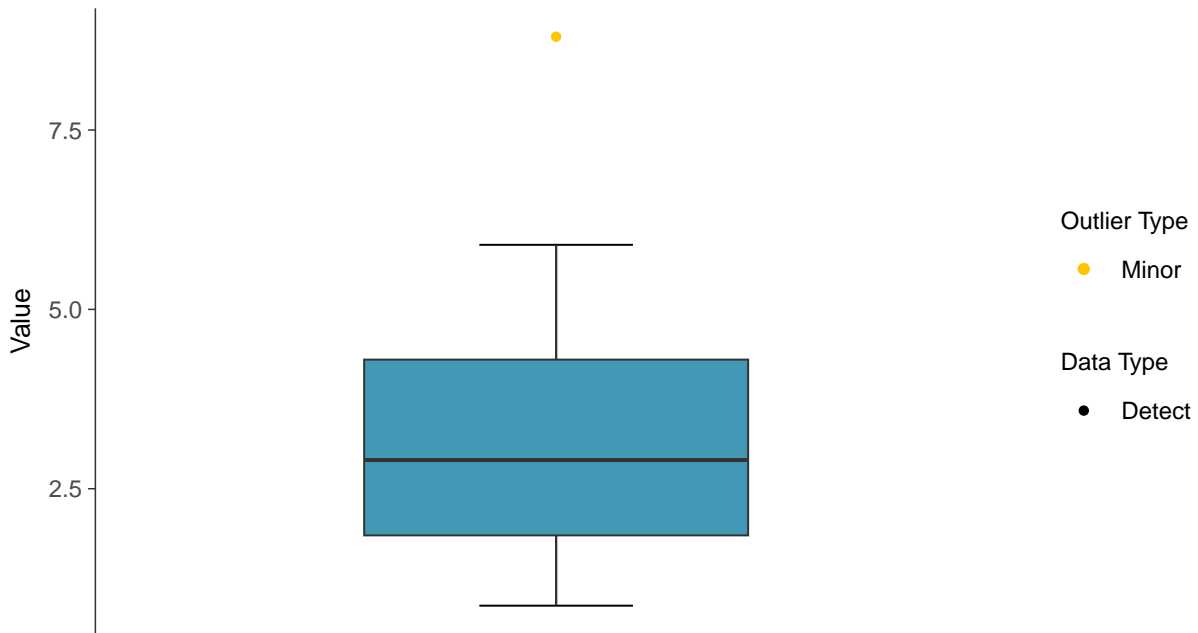
Iron, MW-30 (mg/L)





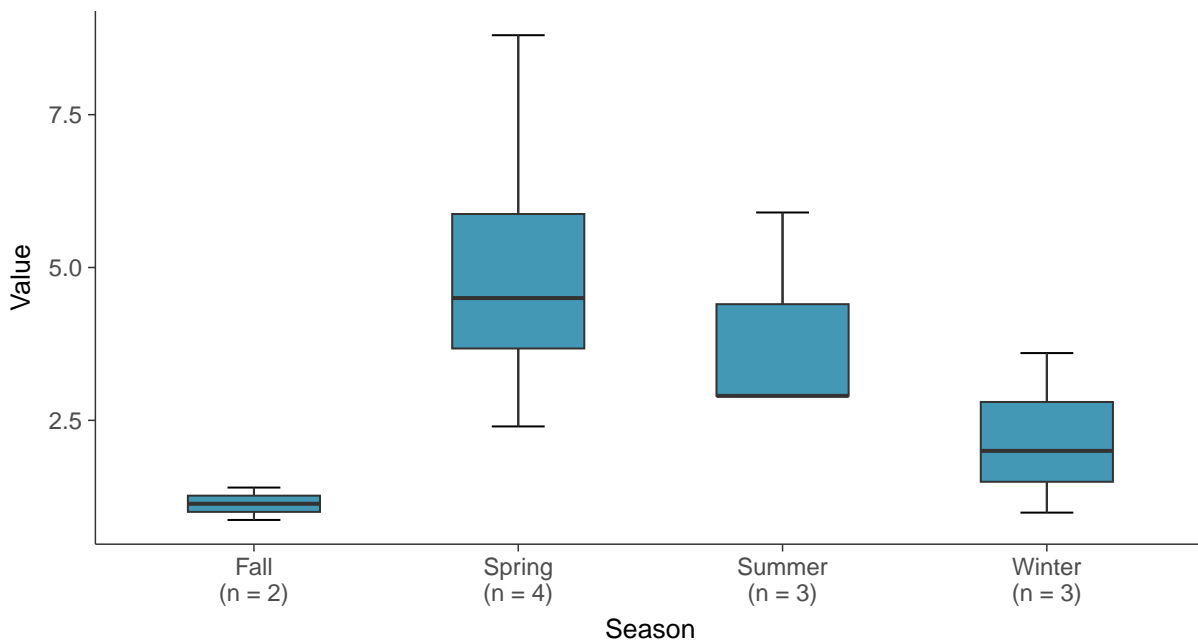
### Boxplot

Iron, MW-30 (mg/L)



### Boxplot by Season

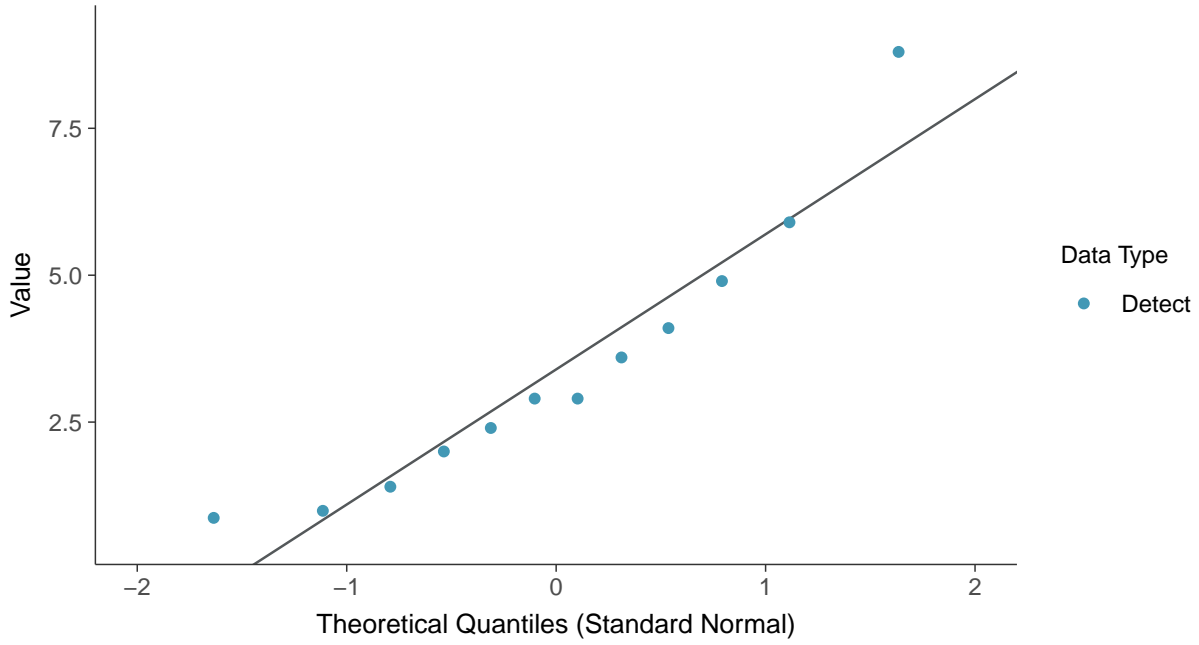
Iron, MW-30 (mg/L)





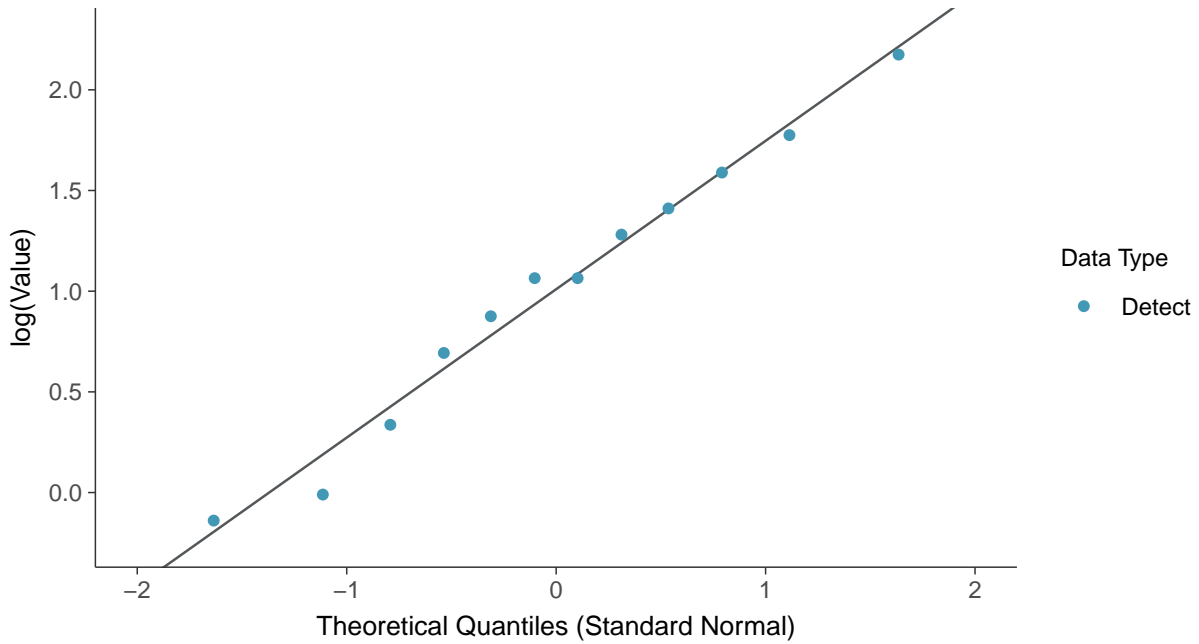
### Normal Q-Q plot

Iron, MW-30 (mg/L)



### Lognormal Q-Q plot

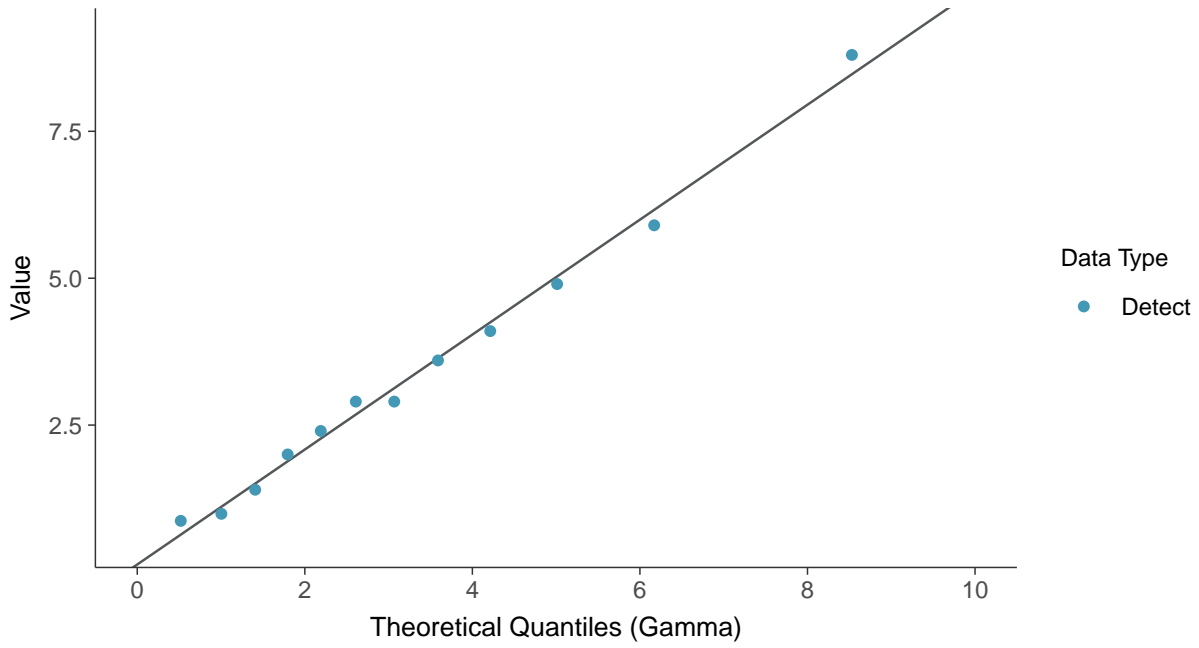
Iron, MW-30 (mg/L)





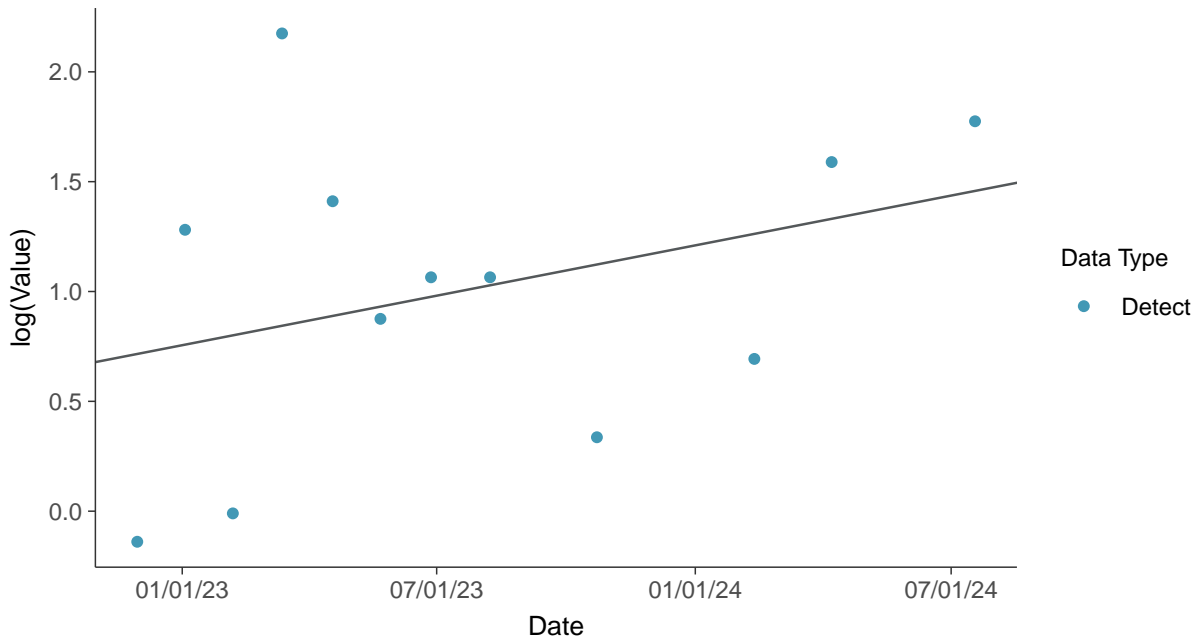
### Gamma Q-Q plot

Iron, MW-30 (mg/L)



### Trend Regression: Lognormal MLE

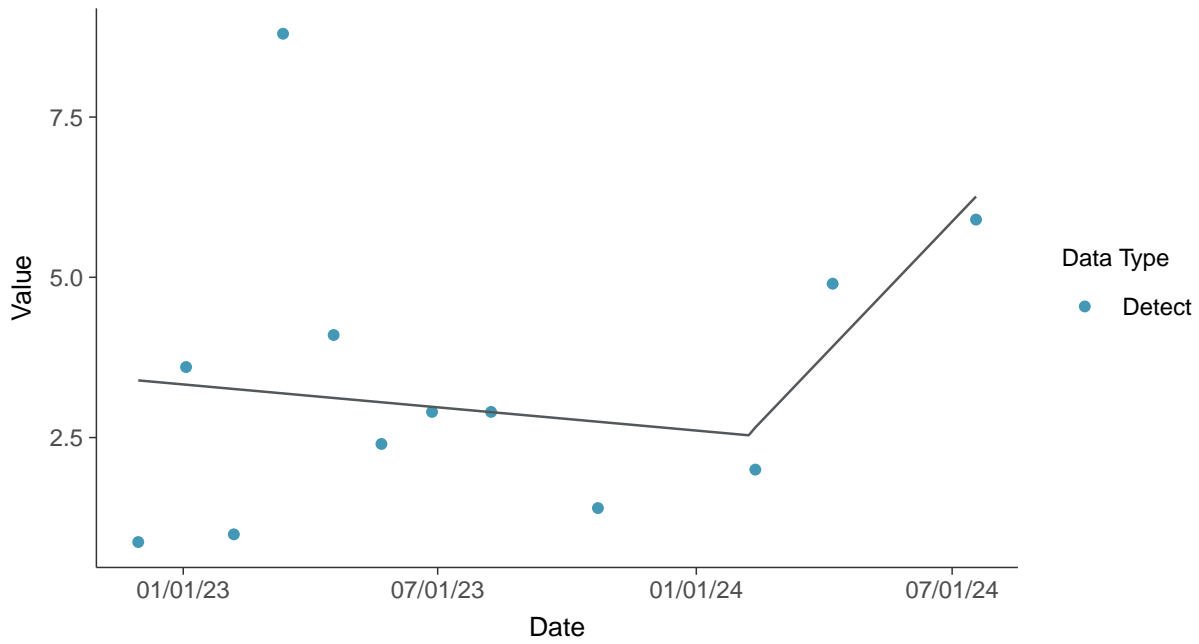
Iron, MW-30 (mg/L)





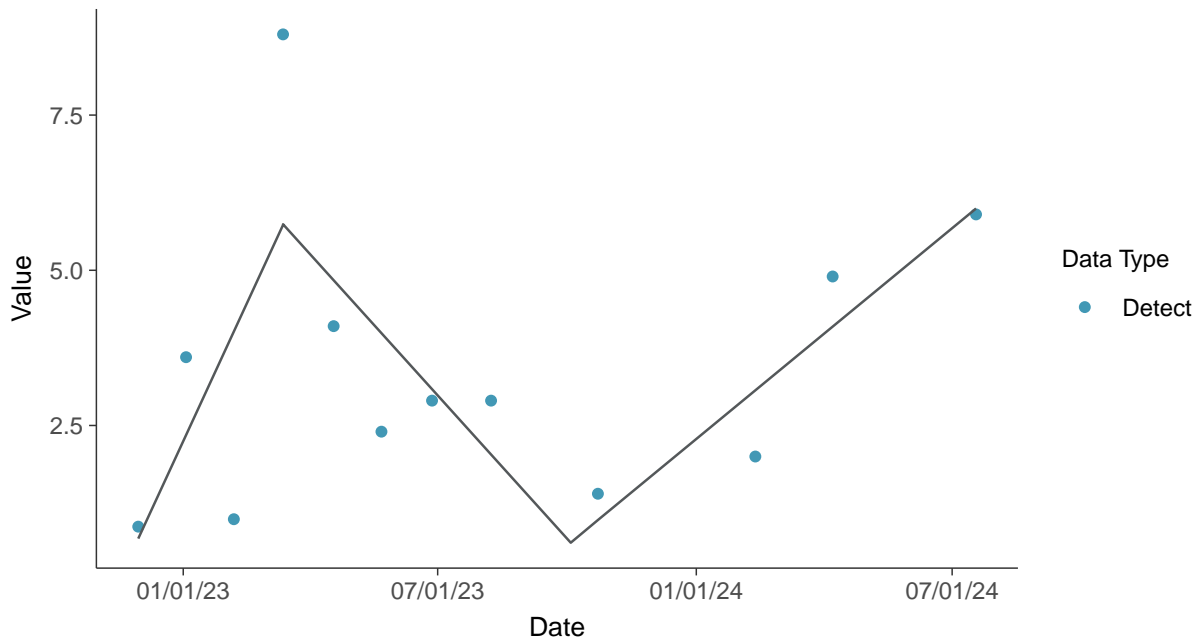
### Trend Regression: Piecewise Linear-Linear

Iron, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

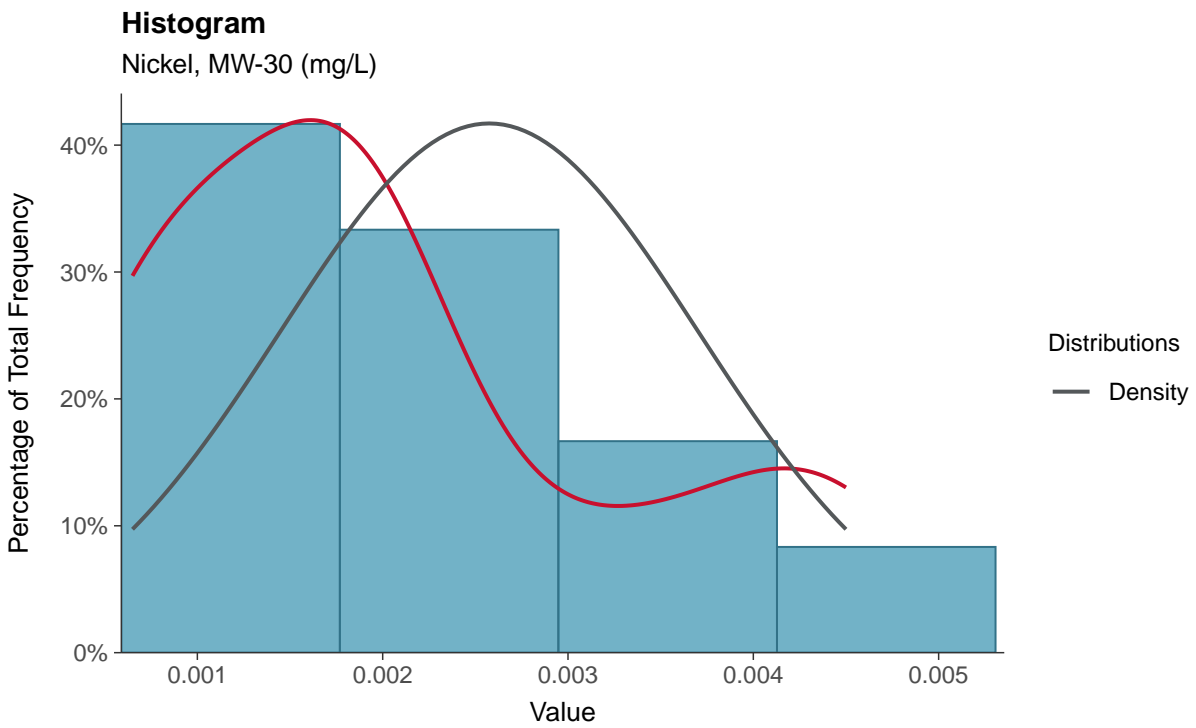
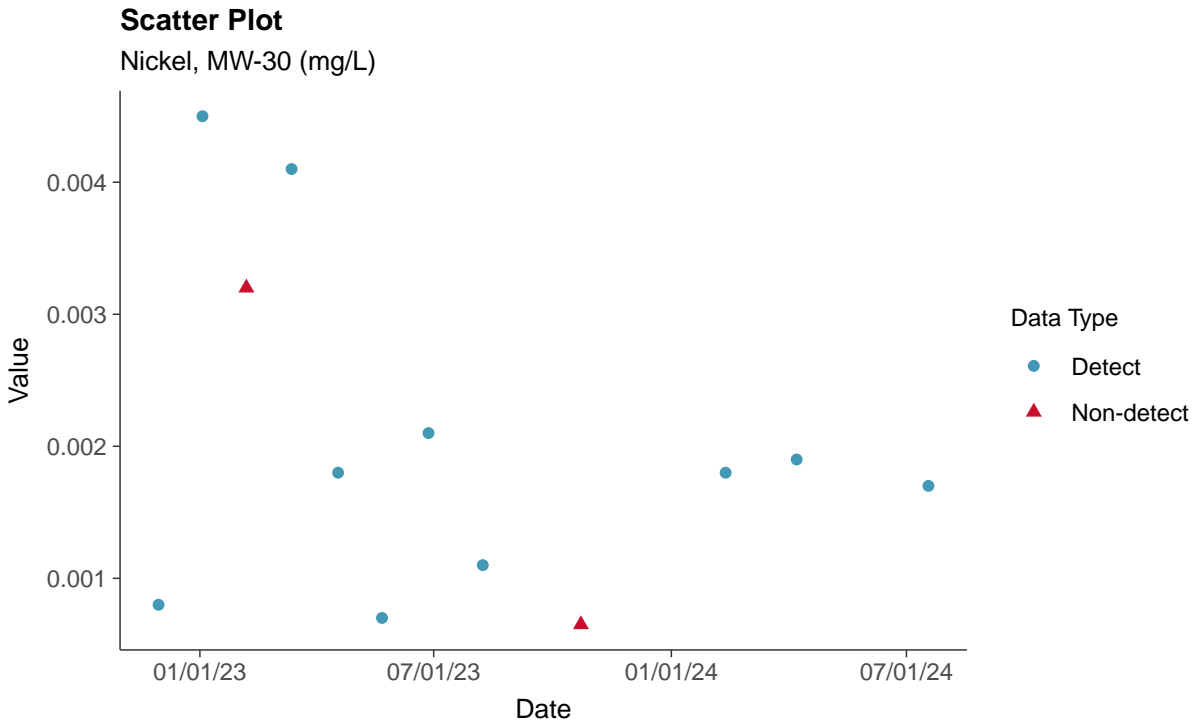
Iron, MW-30 (mg/L)





### Part 115: Nickel, MW-30

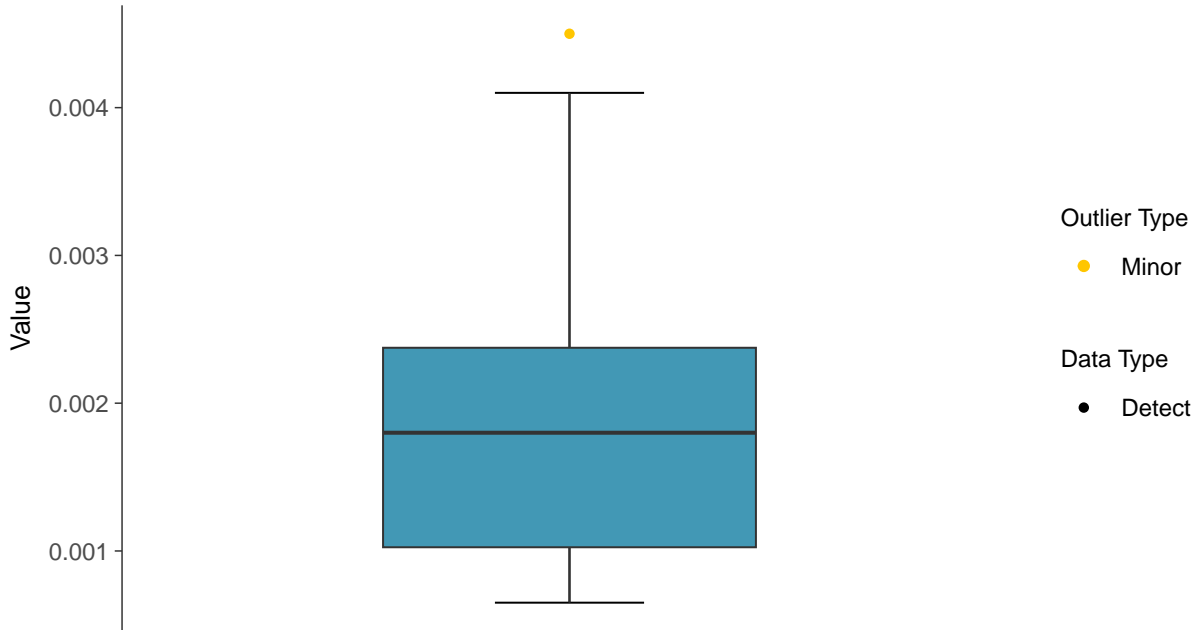
ID: 40\_1\_6\_119





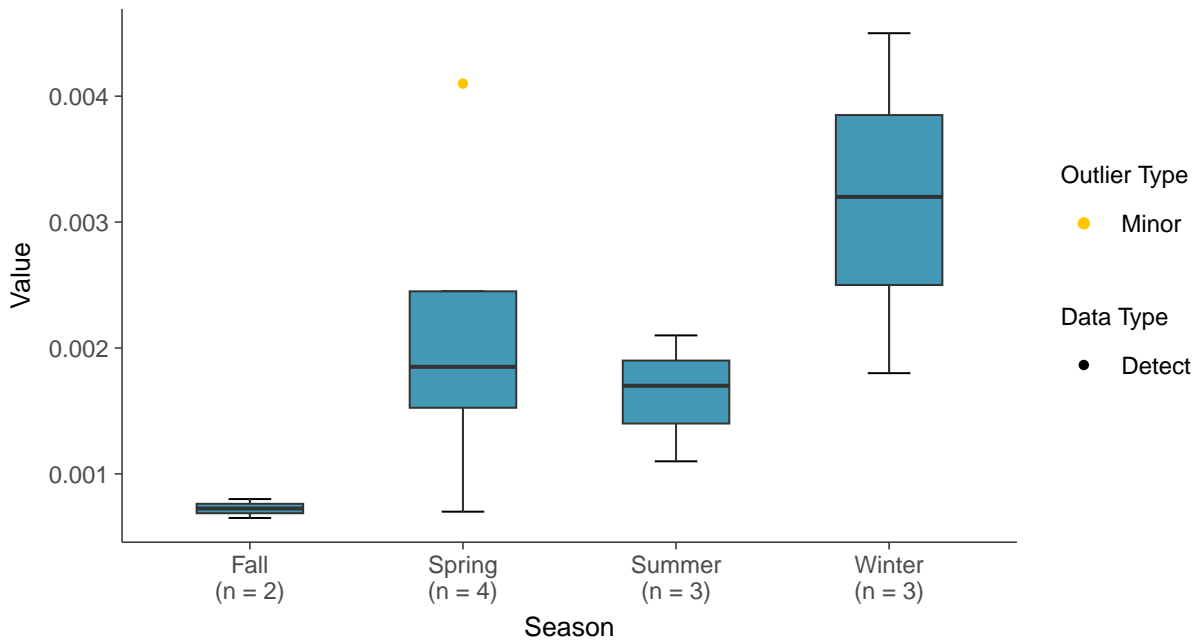
### Boxplot

Nickel, MW-30 (mg/L)



### Boxplot by Season

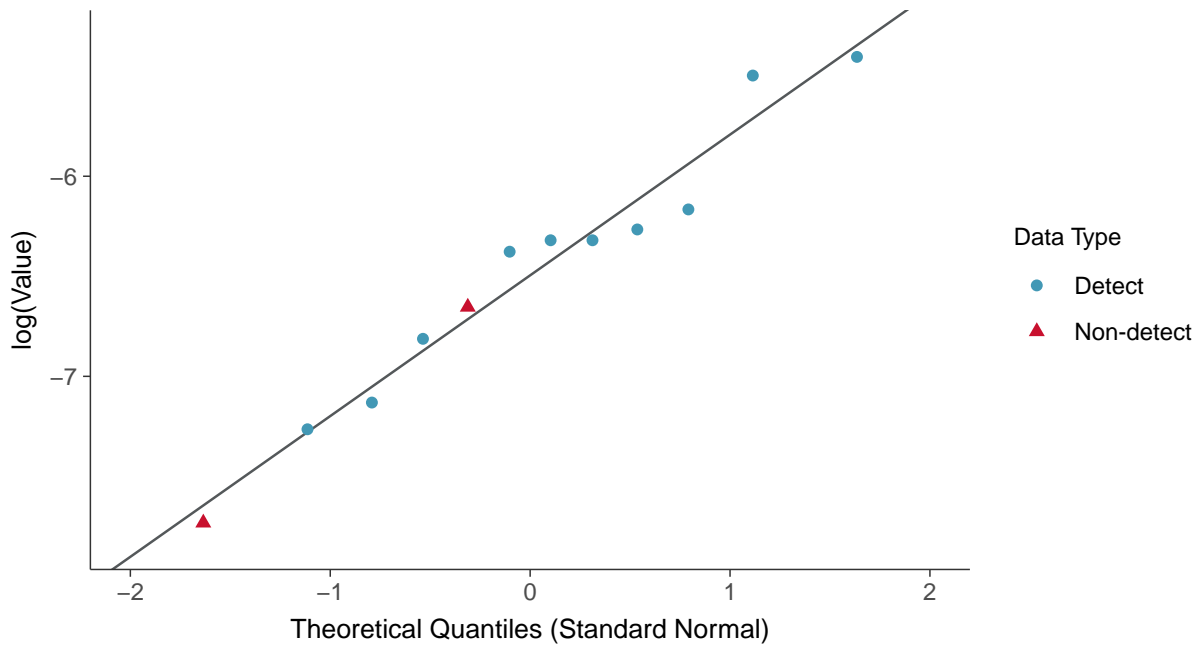
Nickel, MW-30 (mg/L)





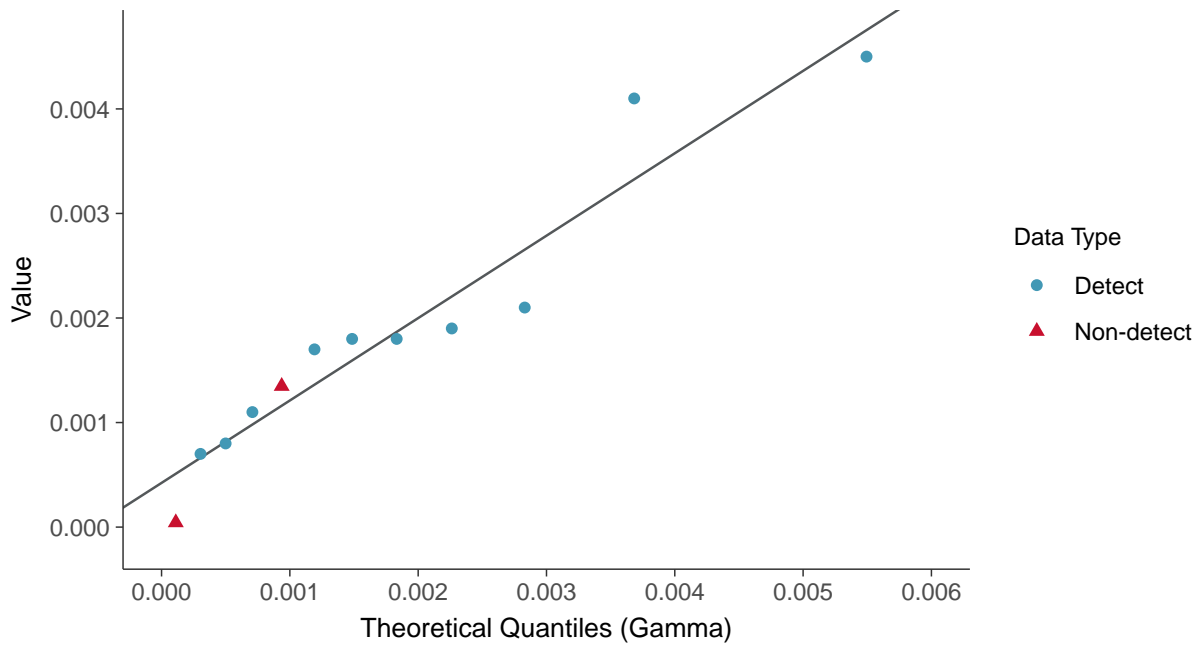
### Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-30 (mg/L)



### Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-30 (mg/L)

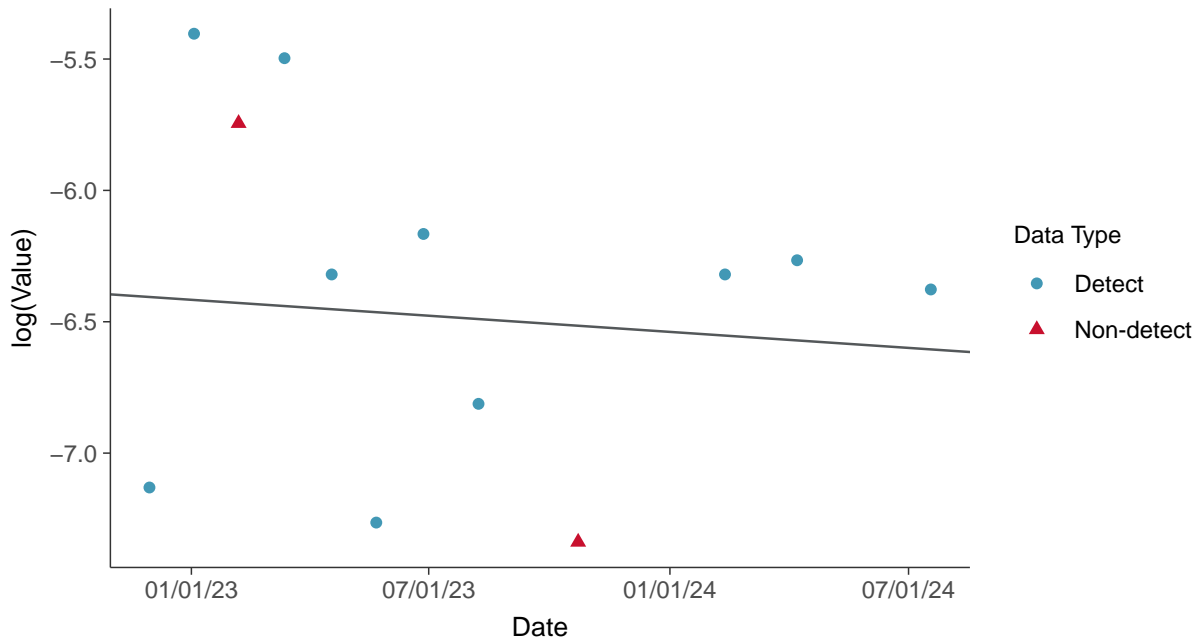






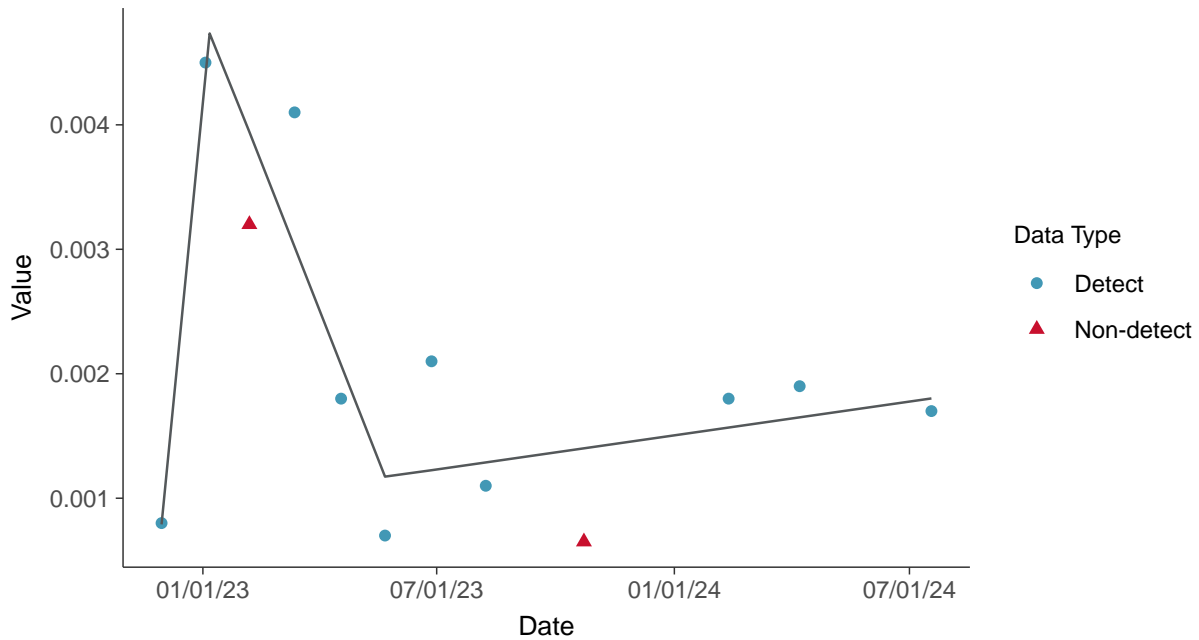
### Trend Regression: Lognormal MLE

Nickel, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

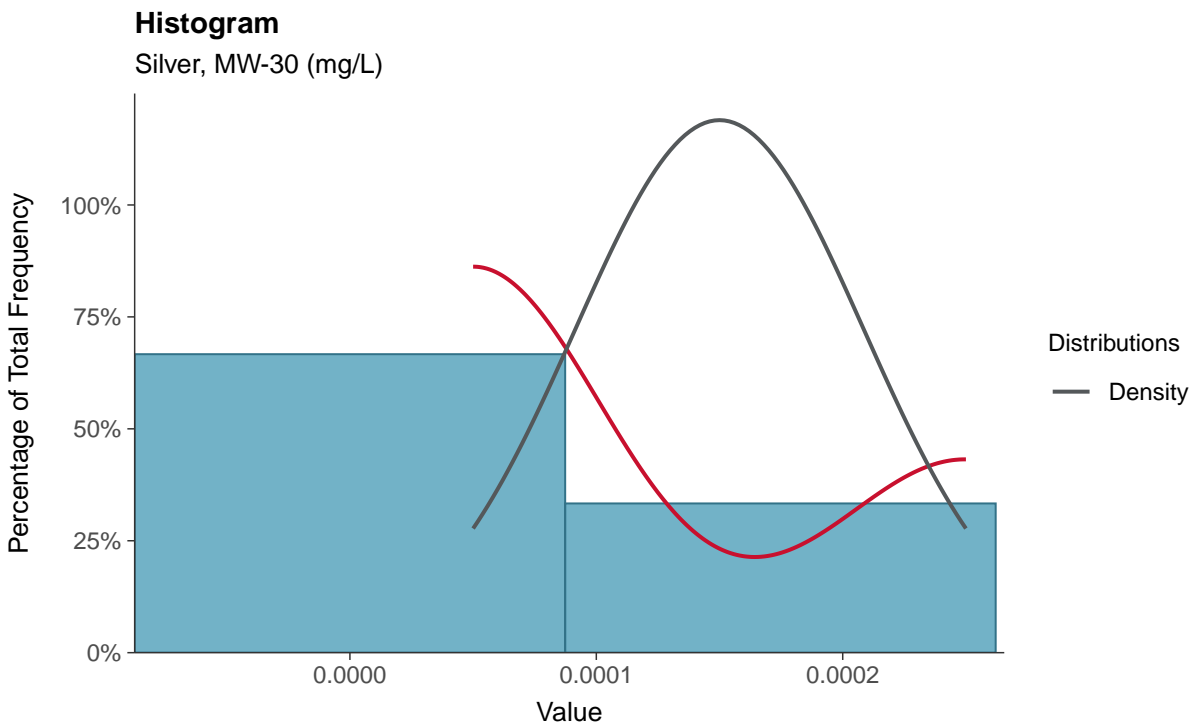
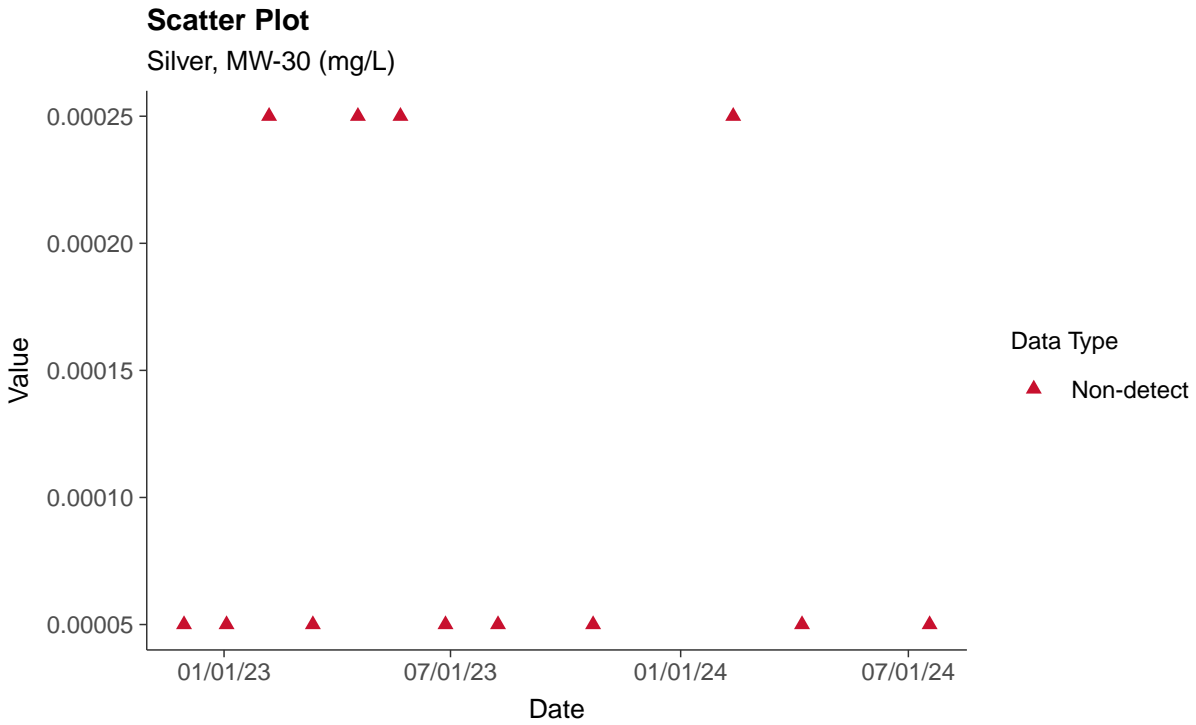
Nickel, MW-30 (mg/L)





### Part 115: Silver, MW-30

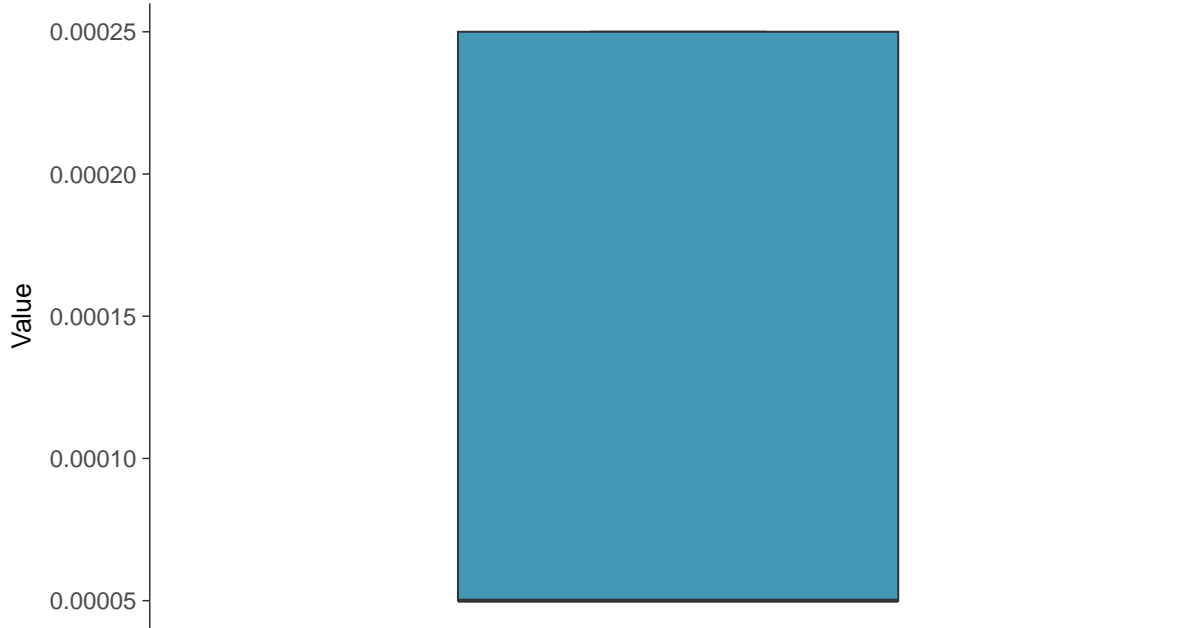
ID: 40\_1\_6\_123





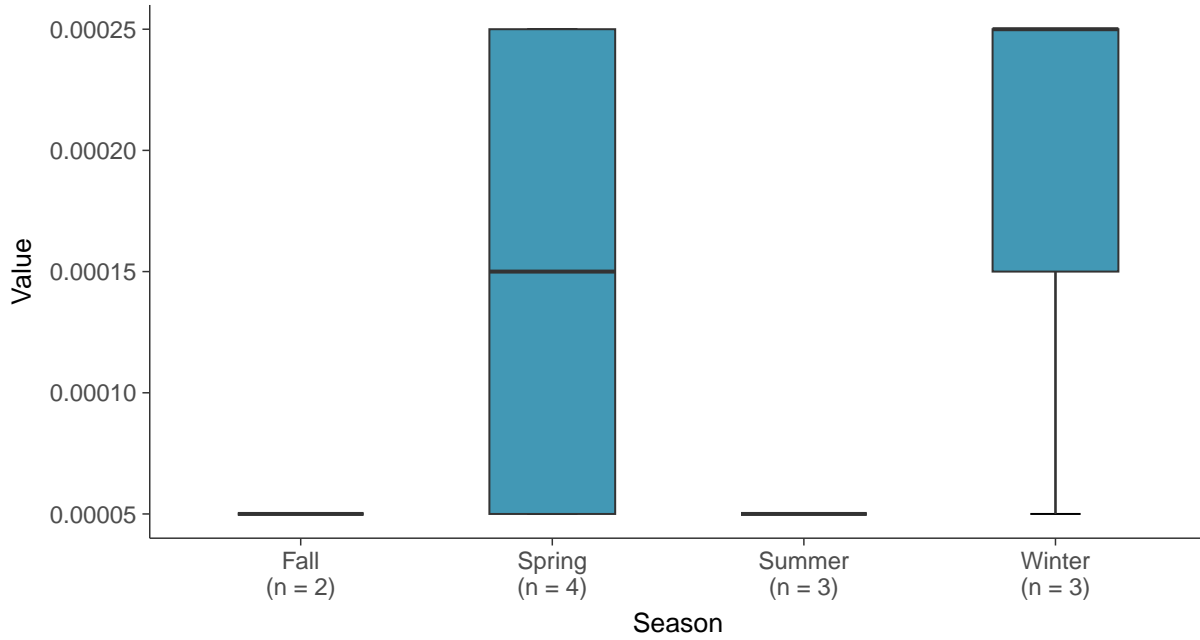
### Boxplot

Silver, MW-30 (mg/L)



### Boxplot by Season

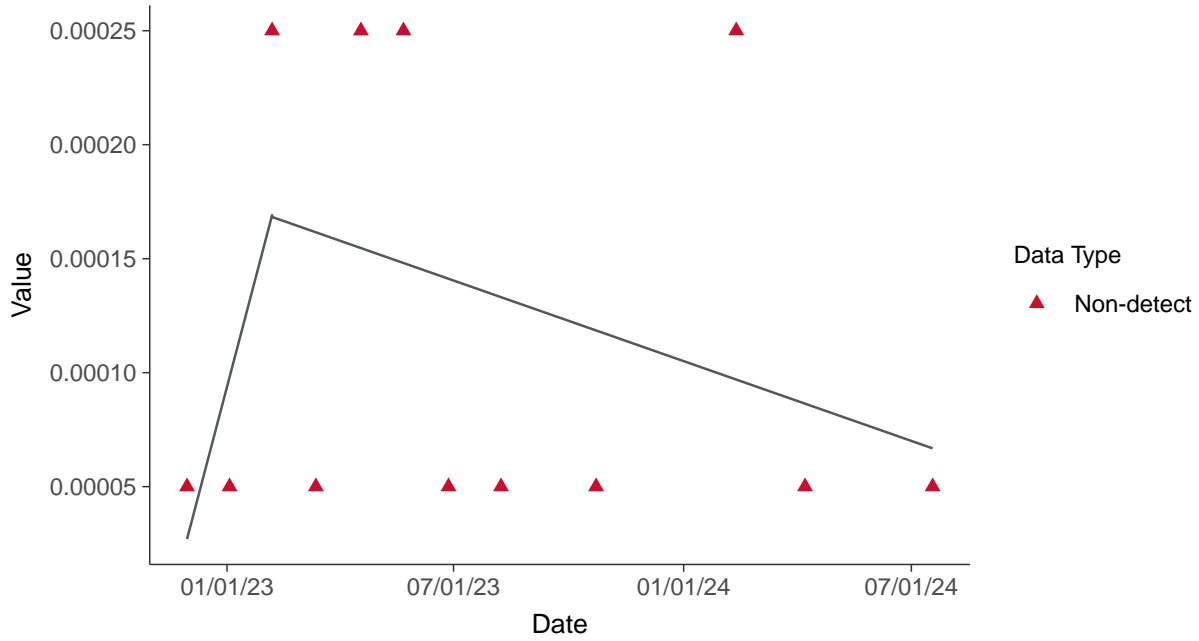
Silver, MW-30 (mg/L)





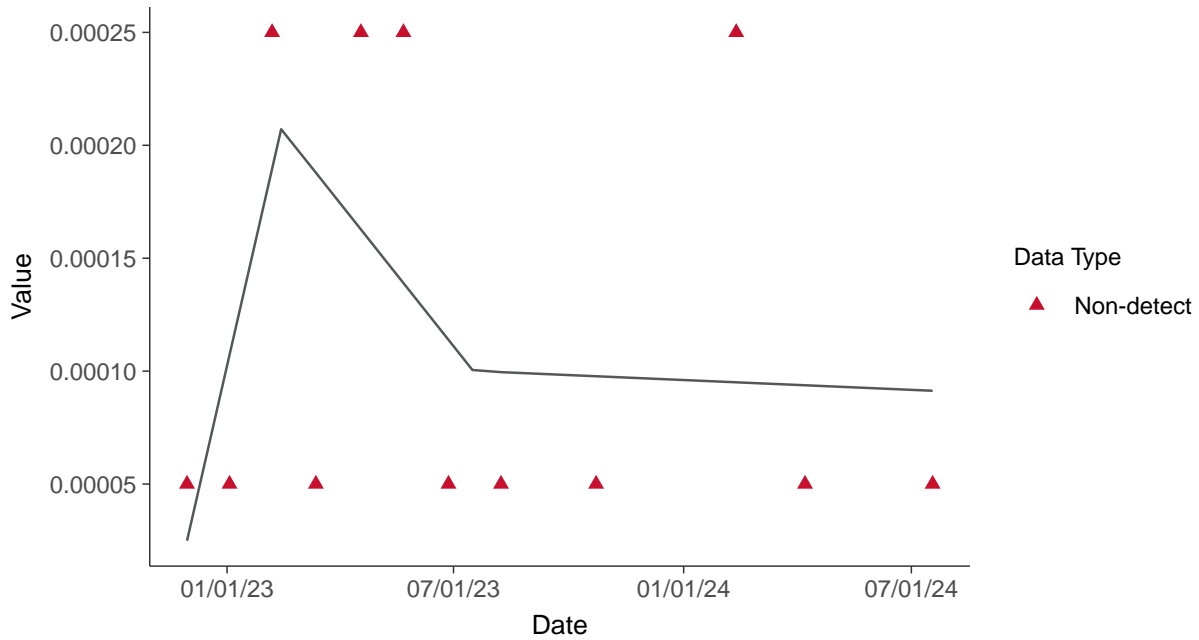
### Trend Regression: Piecewise Linear-Linear

Silver, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-30 (mg/L)



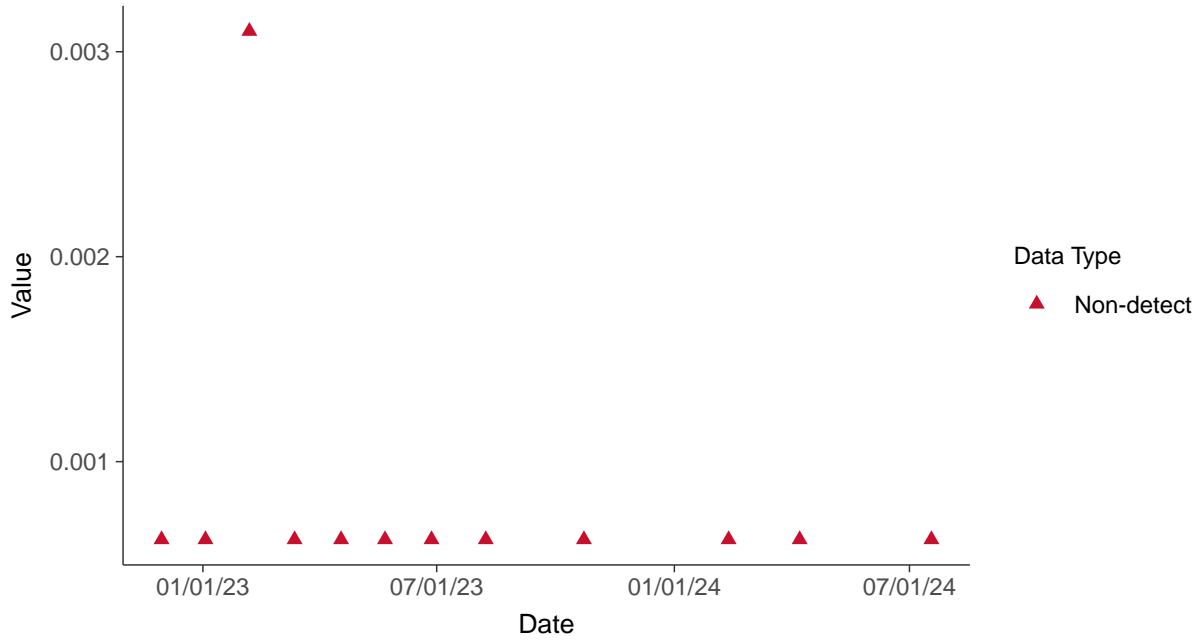


### Part 115: Vanadium, MW-30

ID: 40\_1\_6\_129

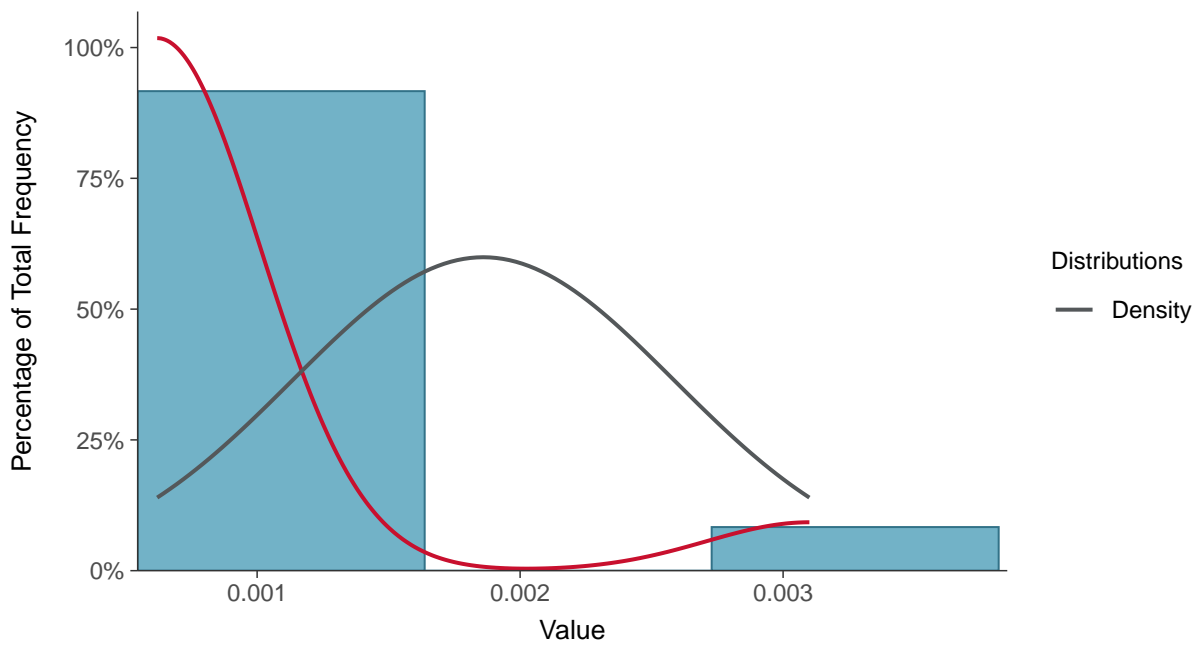
#### Scatter Plot

Vanadium, MW-30 (mg/L)



#### Histogram

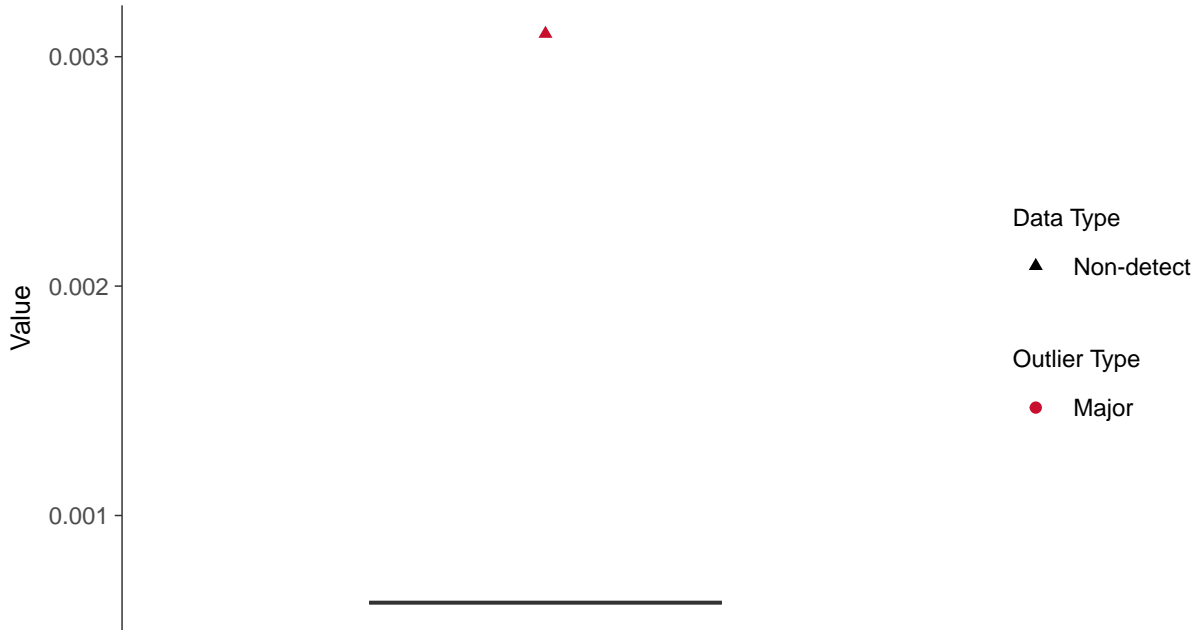
Vanadium, MW-30 (mg/L)





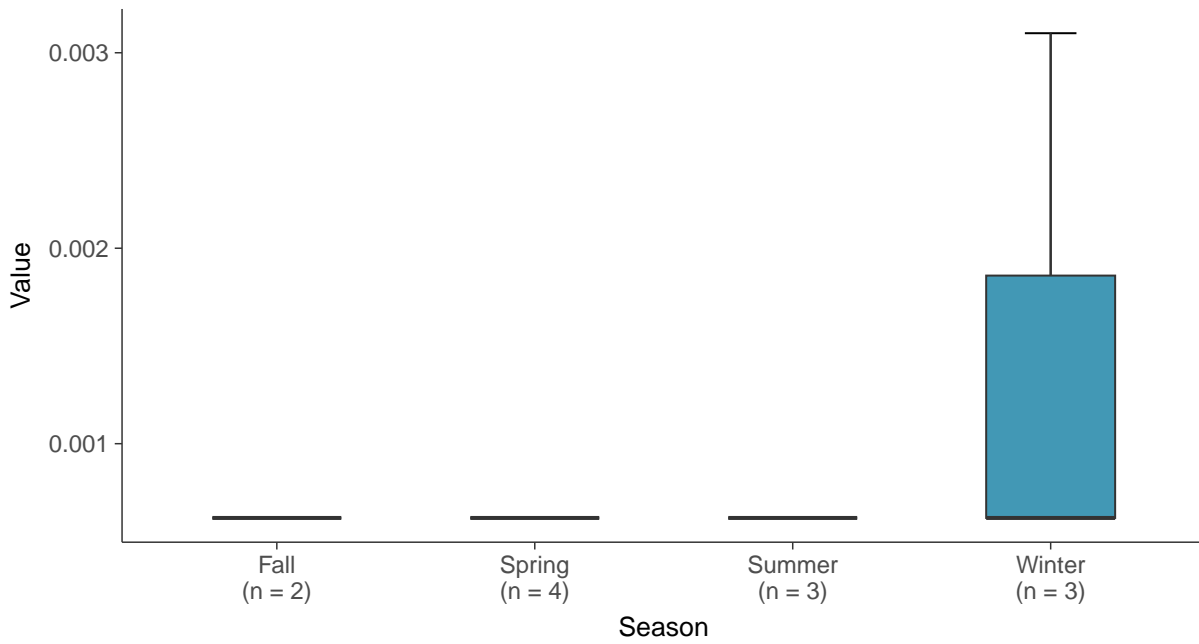
### Boxplot

Vanadium, MW-30 (mg/L)



### Boxplot by Season

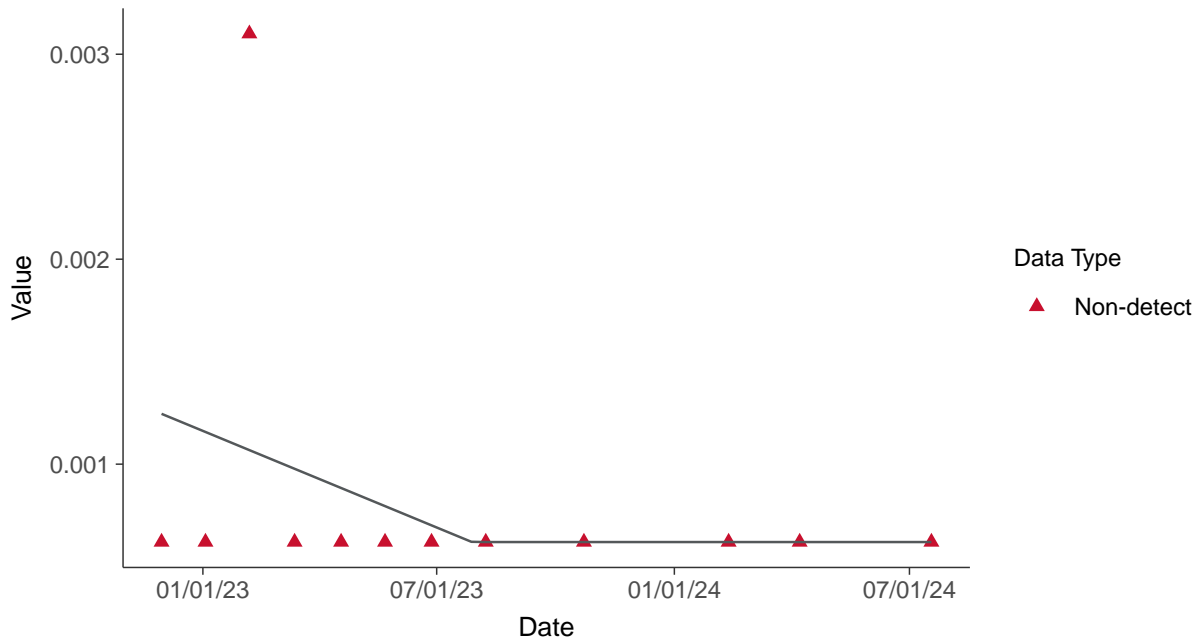
Vanadium, MW-30 (mg/L)





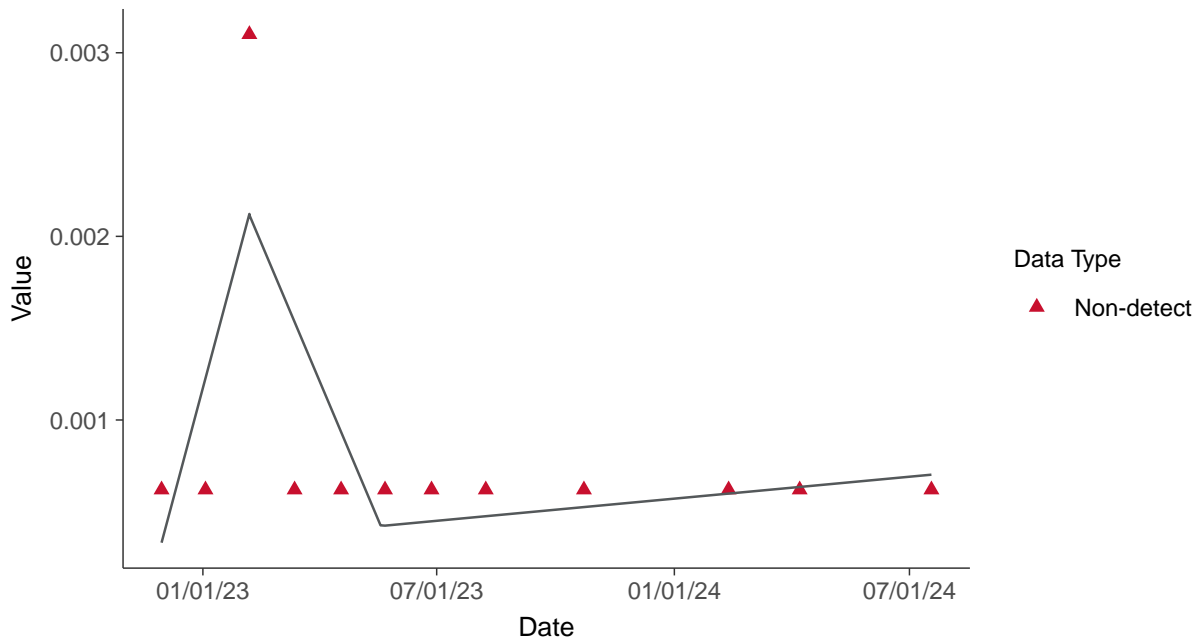
### Trend Regression: Piecewise Linear-Linear

Vanadium, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

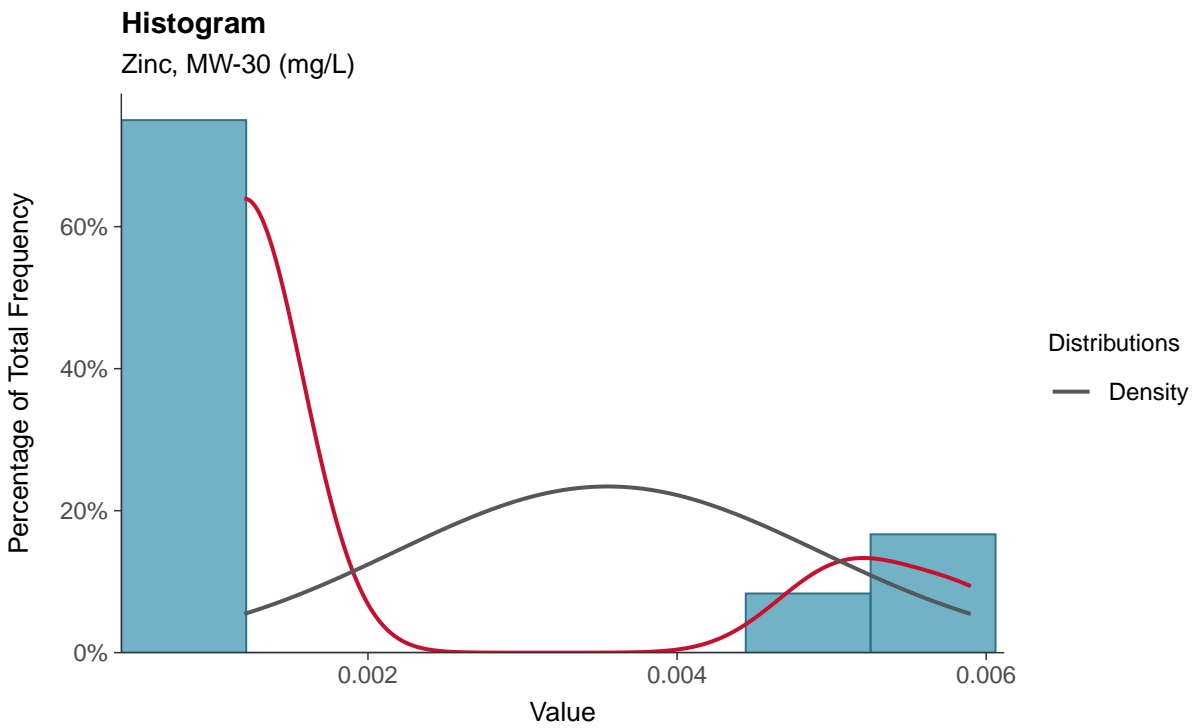
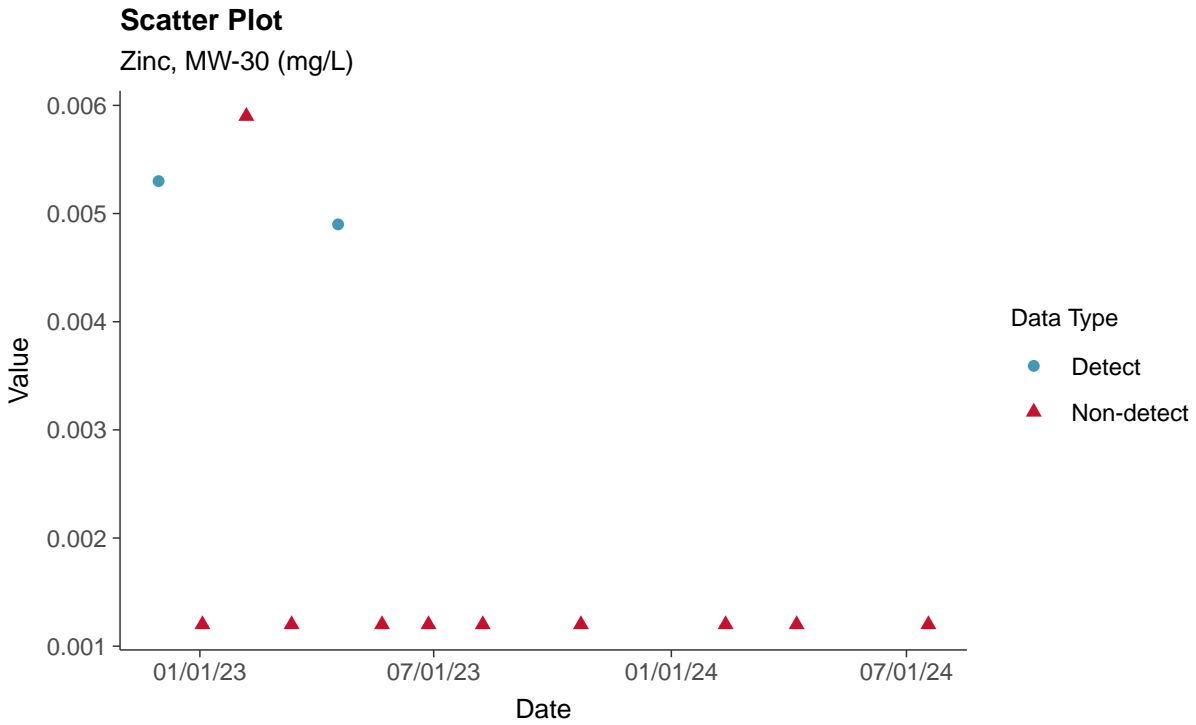
Vanadium, MW-30 (mg/L)





### Part 115: Zinc, MW-30

ID: 40\_1\_6\_130

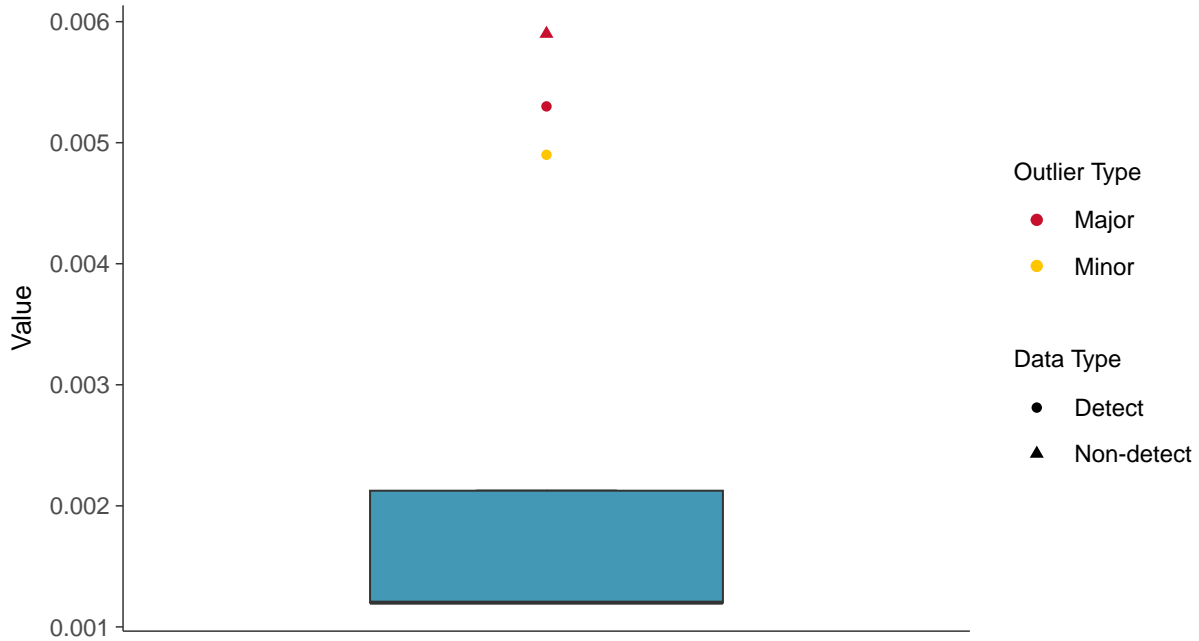






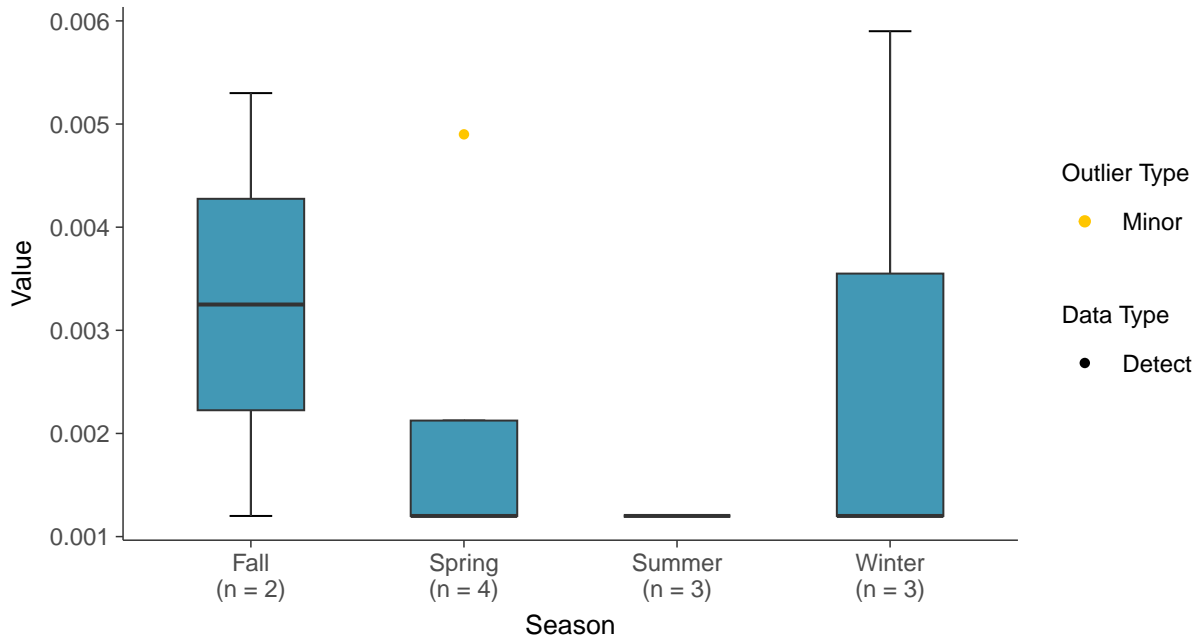
### Boxplot

Zinc, MW-30 (mg/L)



### Boxplot by Season

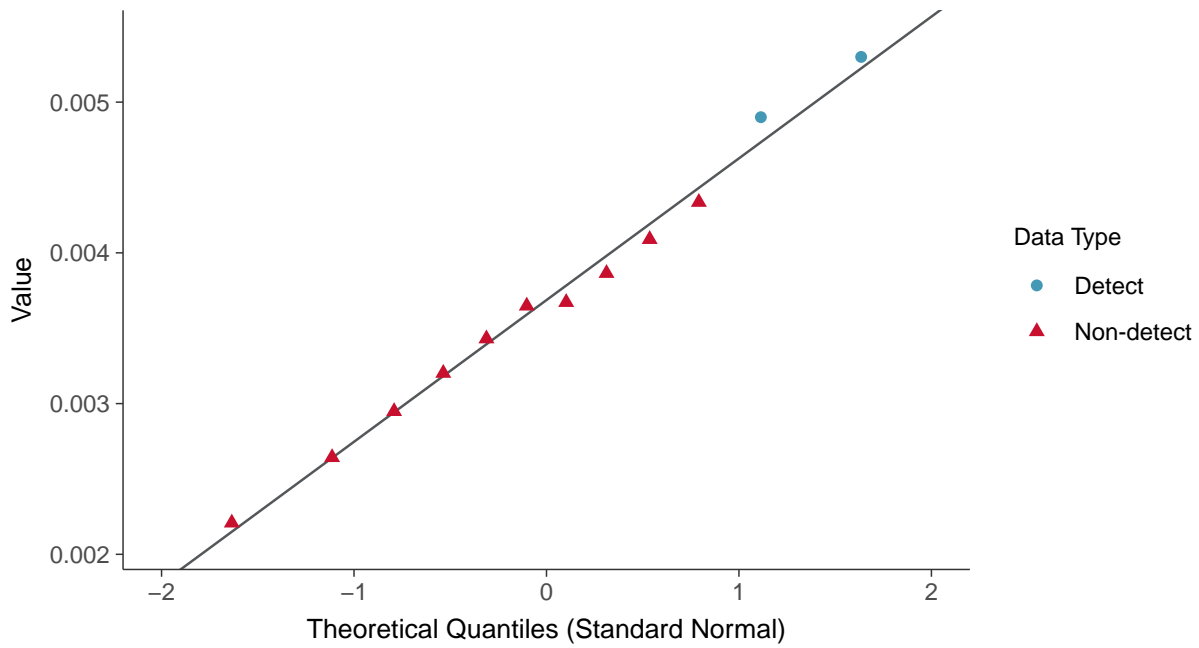
Zinc, MW-30 (mg/L)





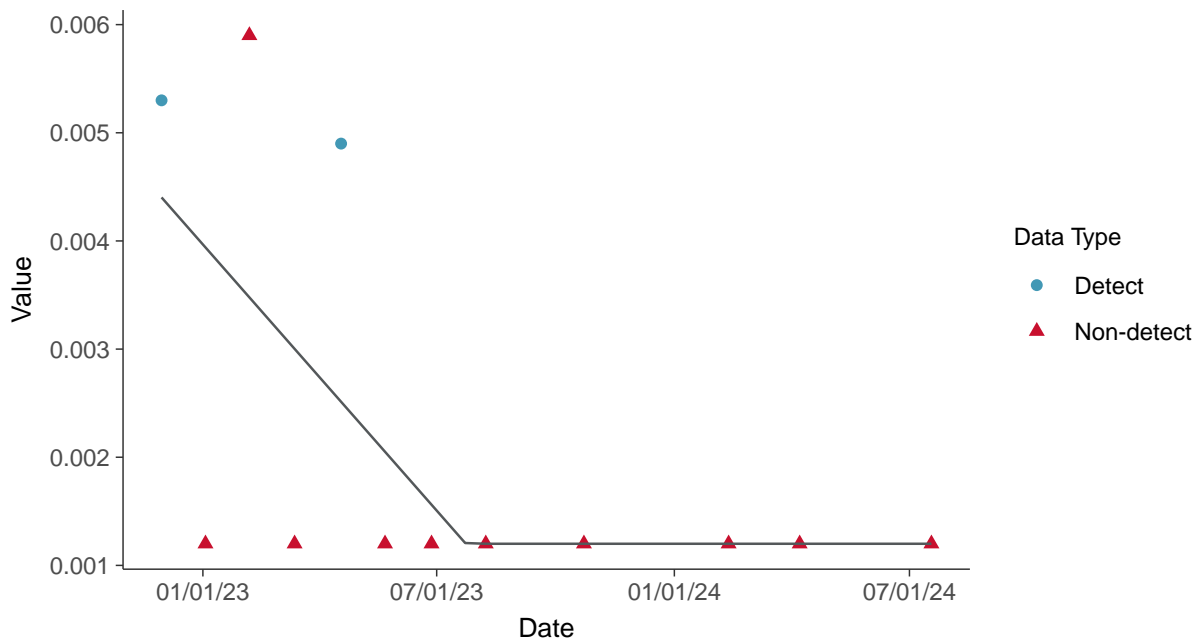
### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-30 (mg/L)



### Trend Regression: Piecewise Linear-Linear

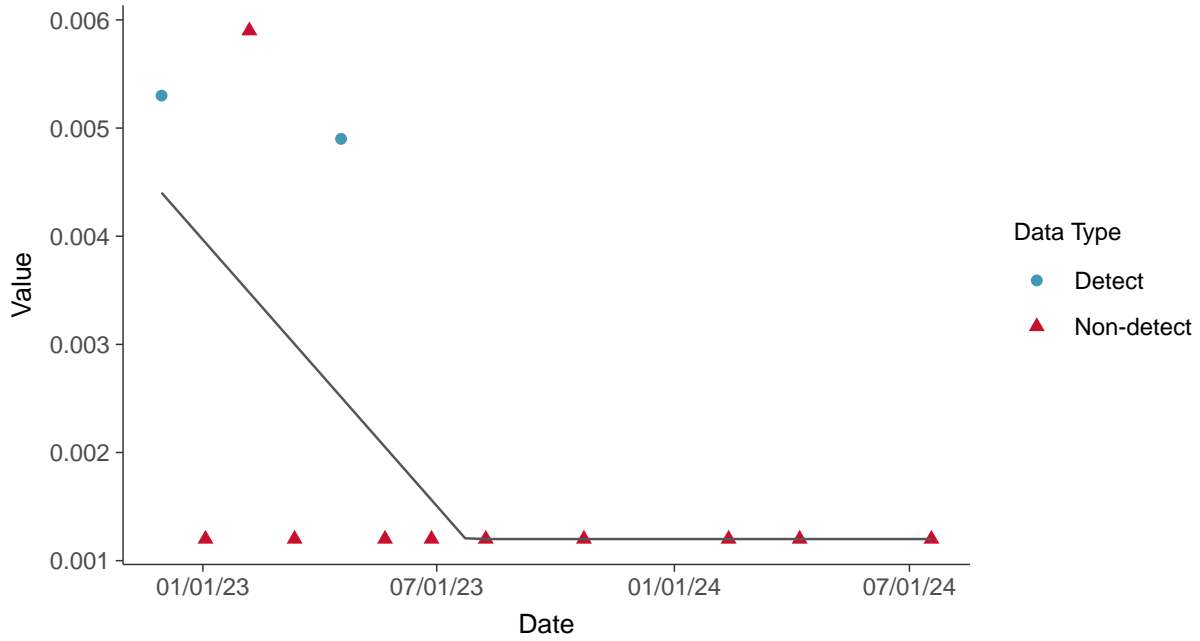
Zinc, MW-30 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-30 (mg/L)



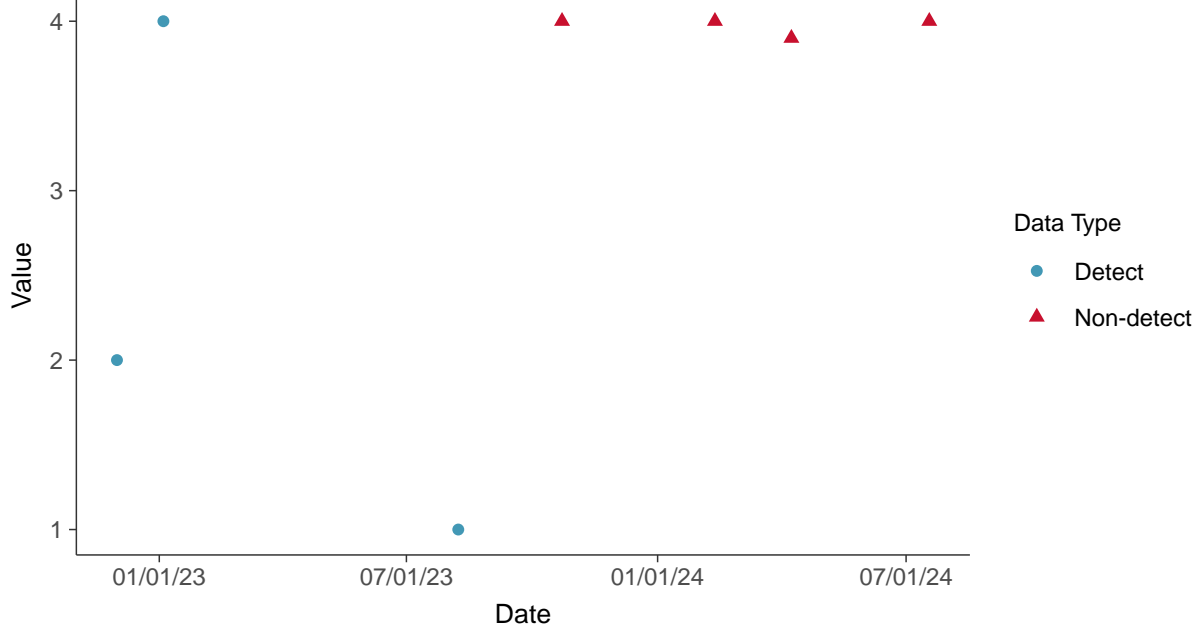


### Additional Parameters: Total Suspended Solids, MW-31

ID: 41\_1\_3\_127

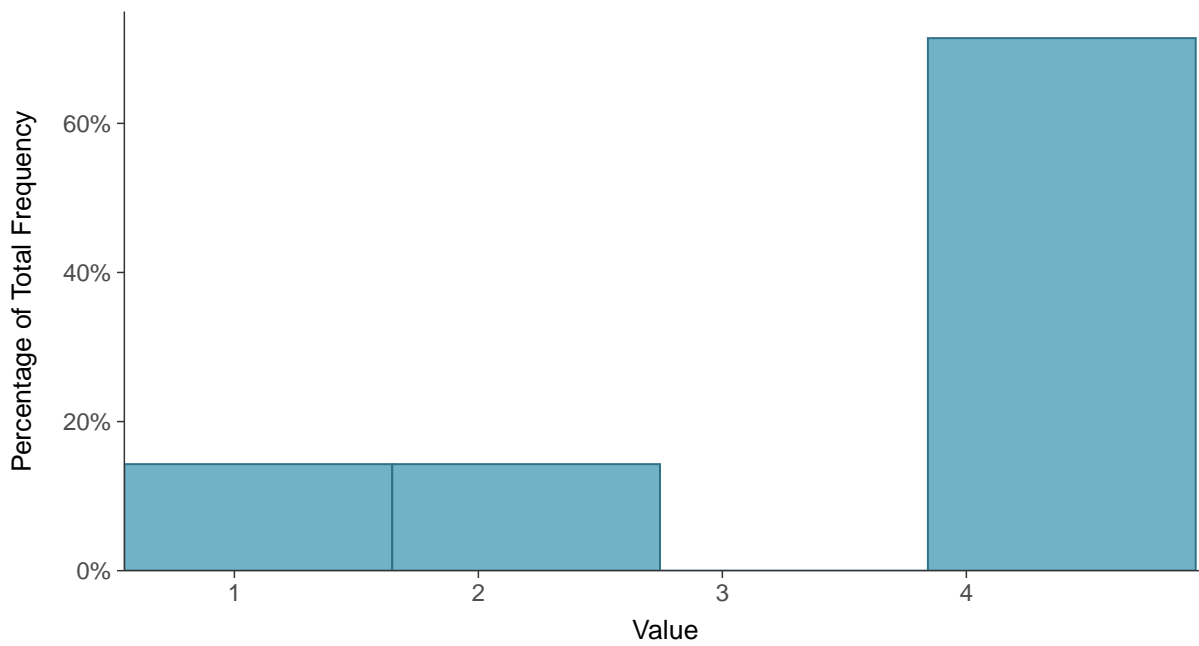
#### Scatter Plot

Total Suspended Solids, MW-31 (mg/L)



#### Histogram

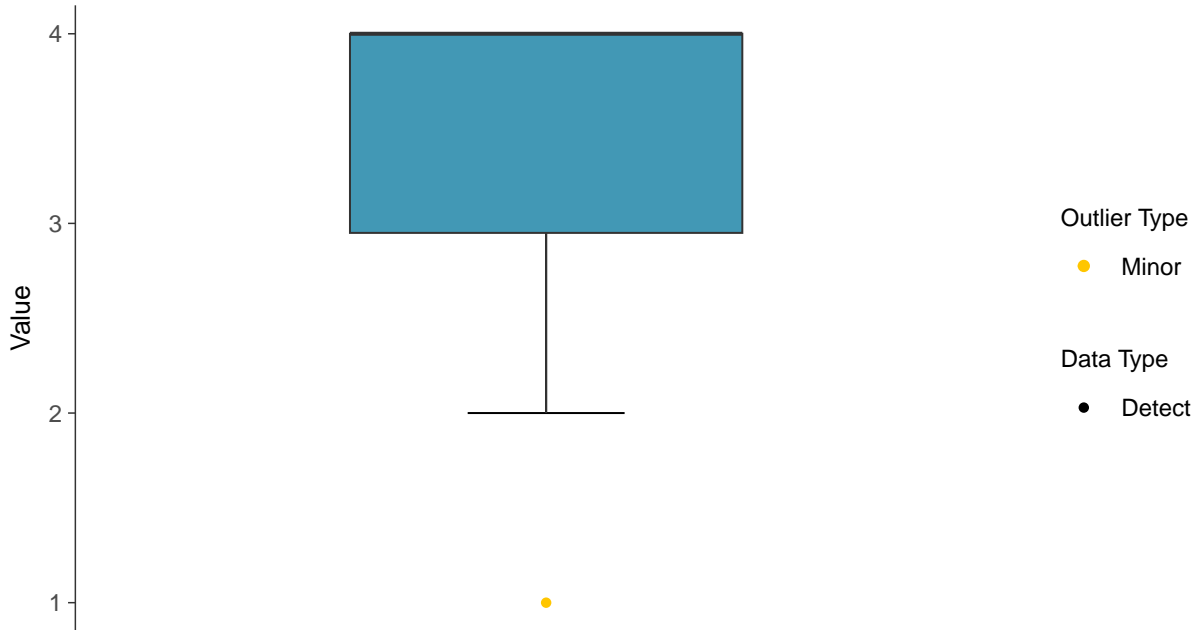
Total Suspended Solids, MW-31 (mg/L)





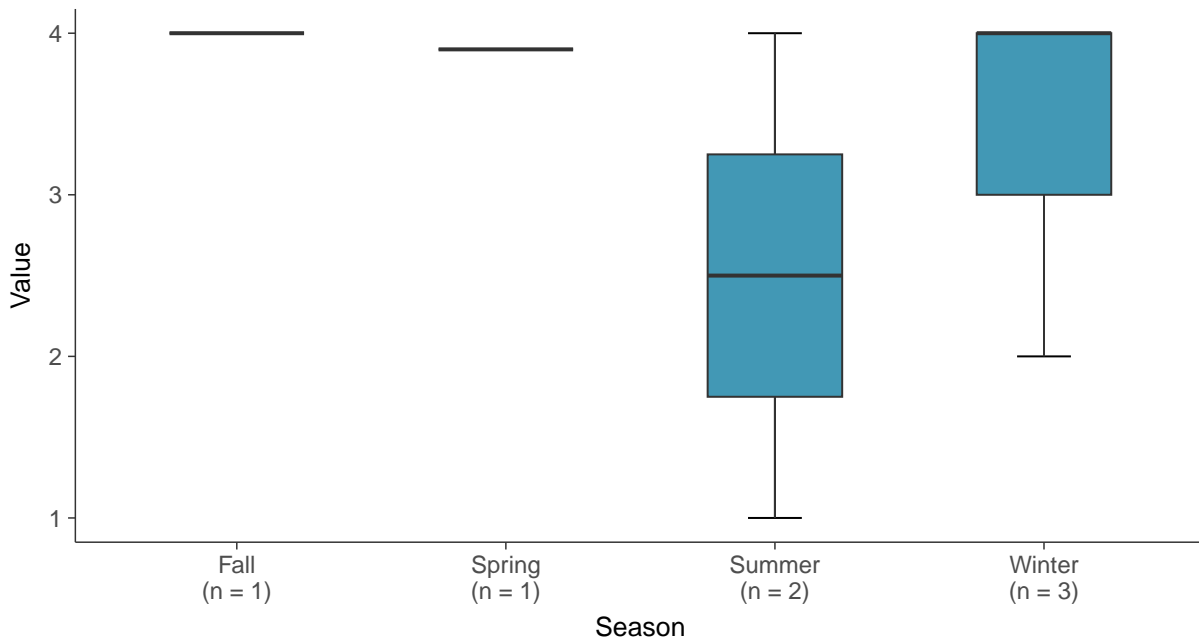
### Boxplot

Total Suspended Solids, MW-31 (mg/L)



### Boxplot by Season

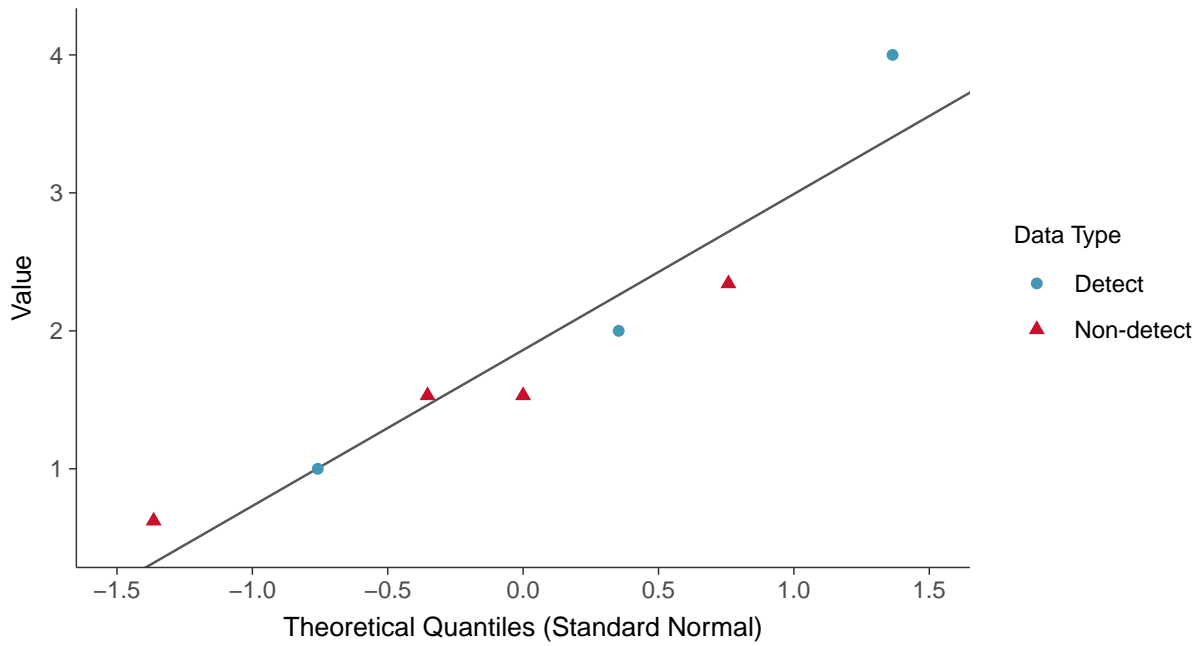
Total Suspended Solids, MW-31 (mg/L)





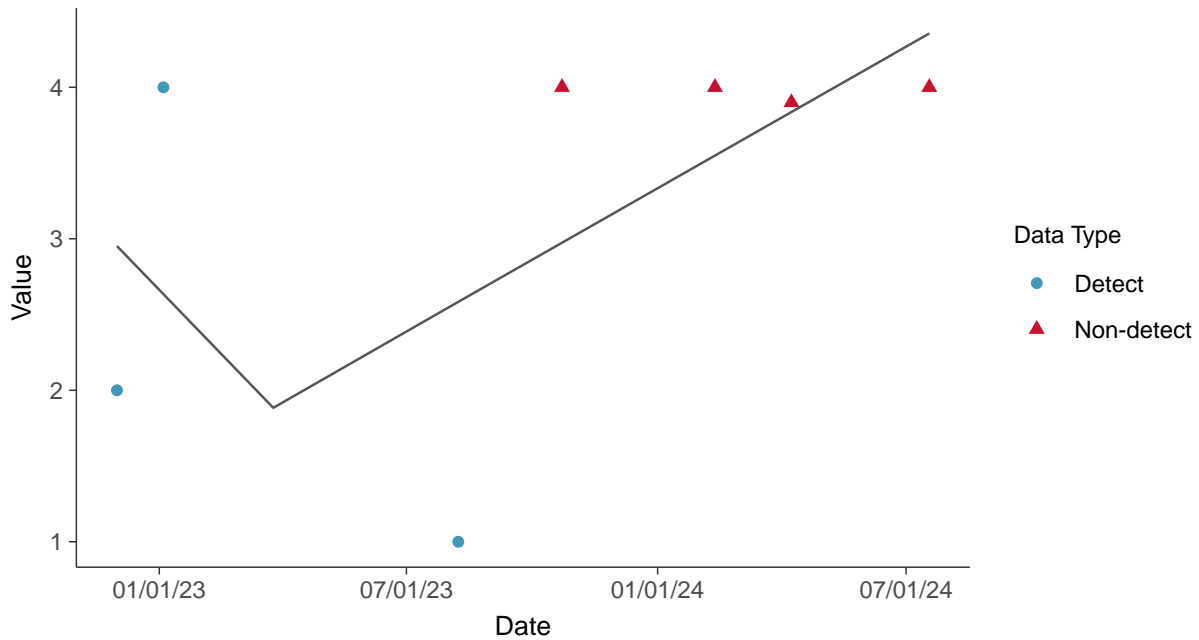
### Normal Q-Q plot using ROS Imputed Estimates

Total Suspended Solids, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear

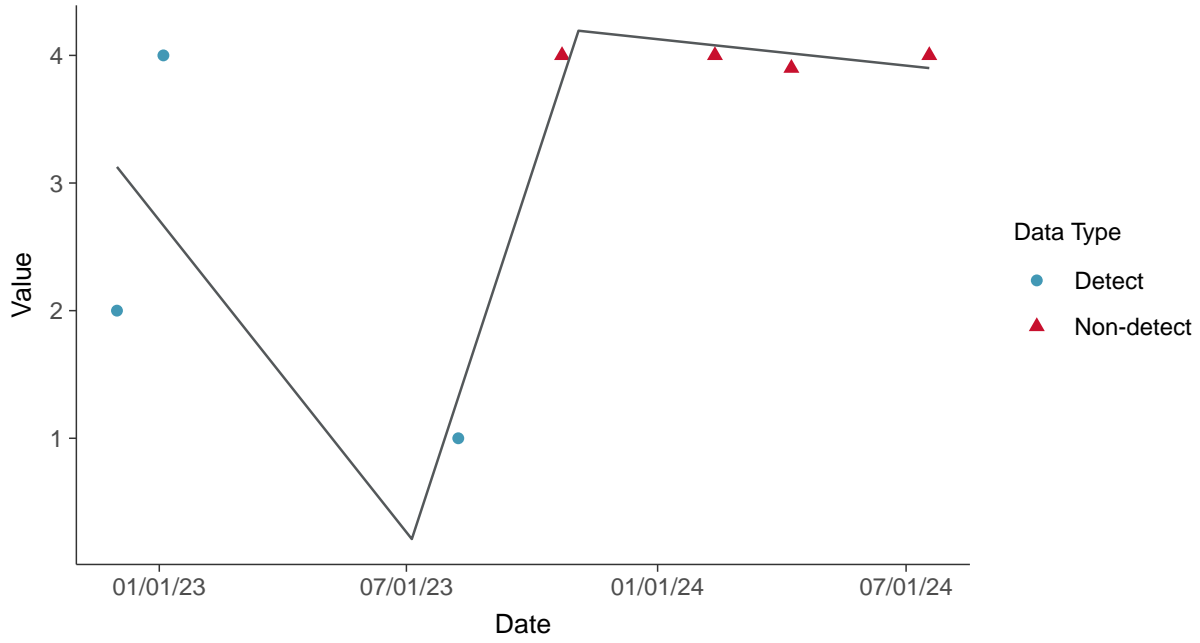
Total Suspended Solids, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

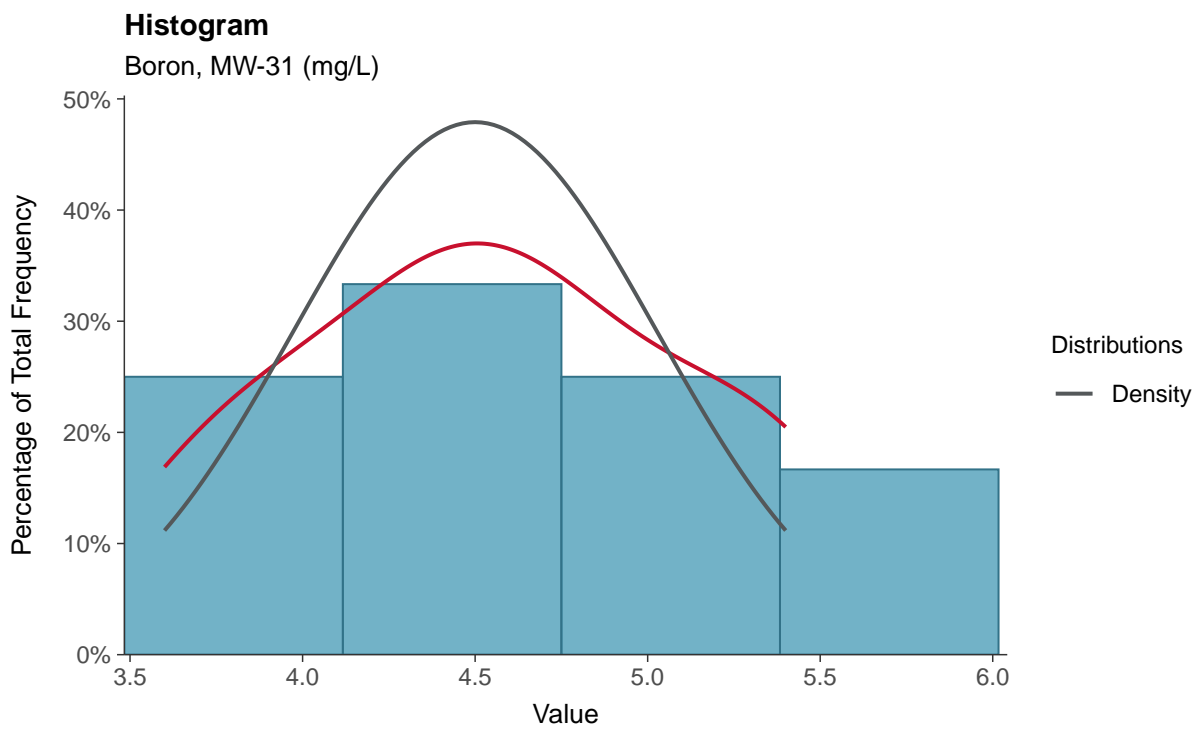
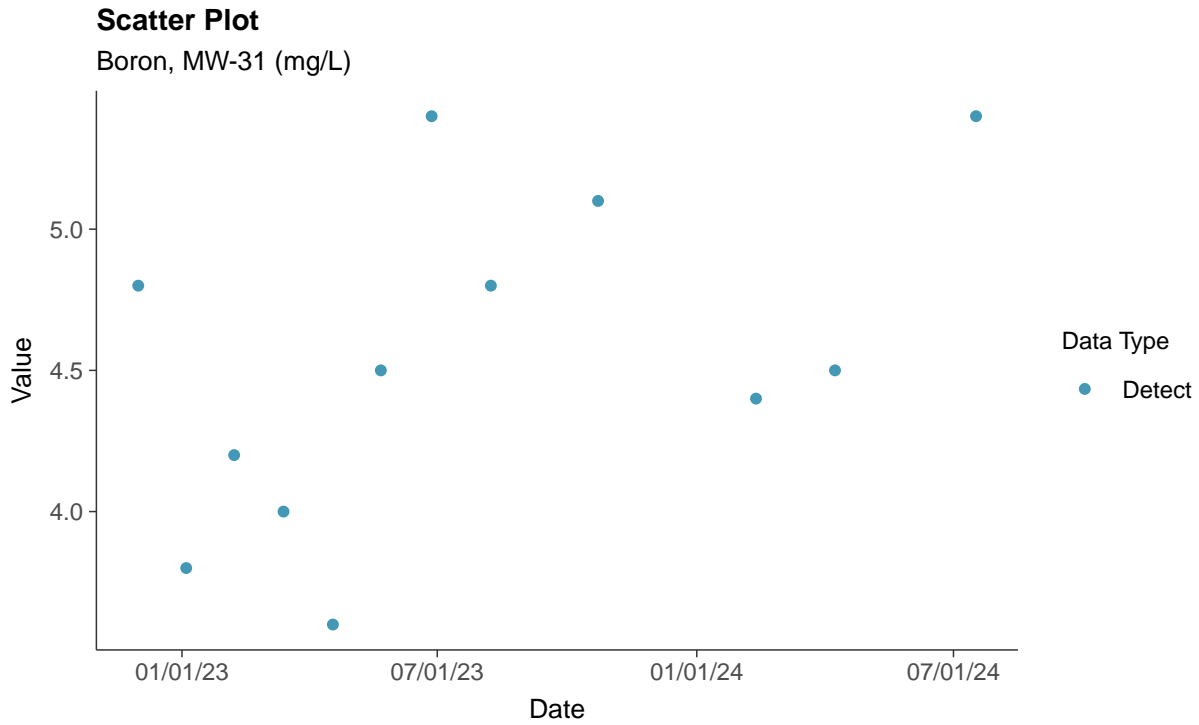
Total Suspended Solids, MW-31 (mg/L)





### Appendix III: Boron, MW-31

ID: 41\_1\_4\_105

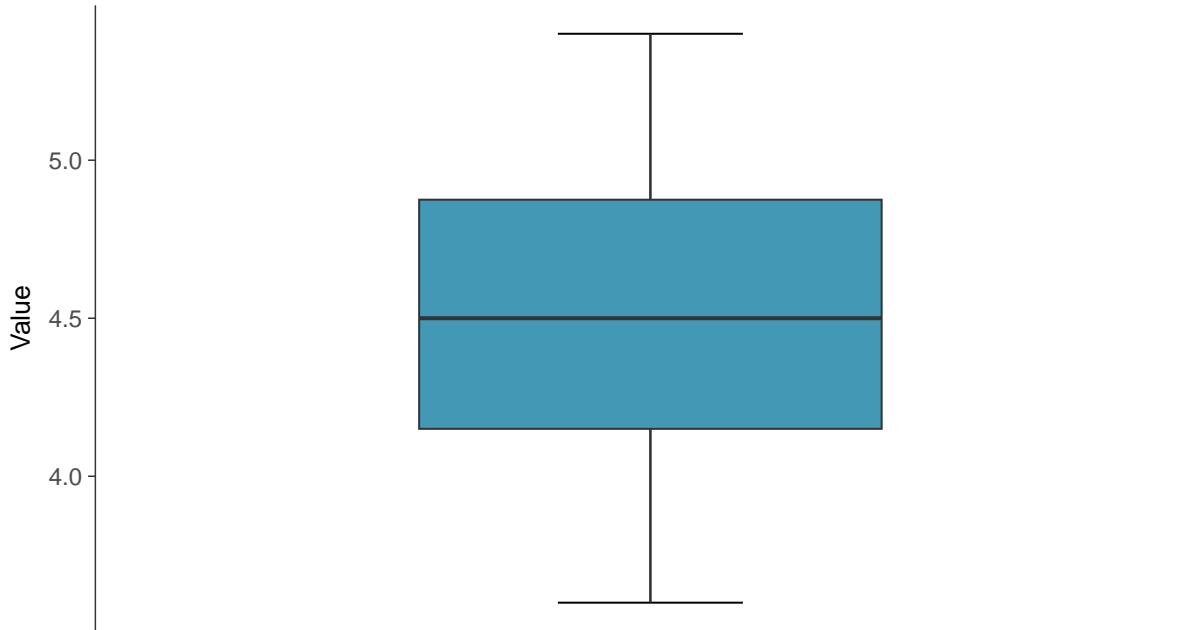






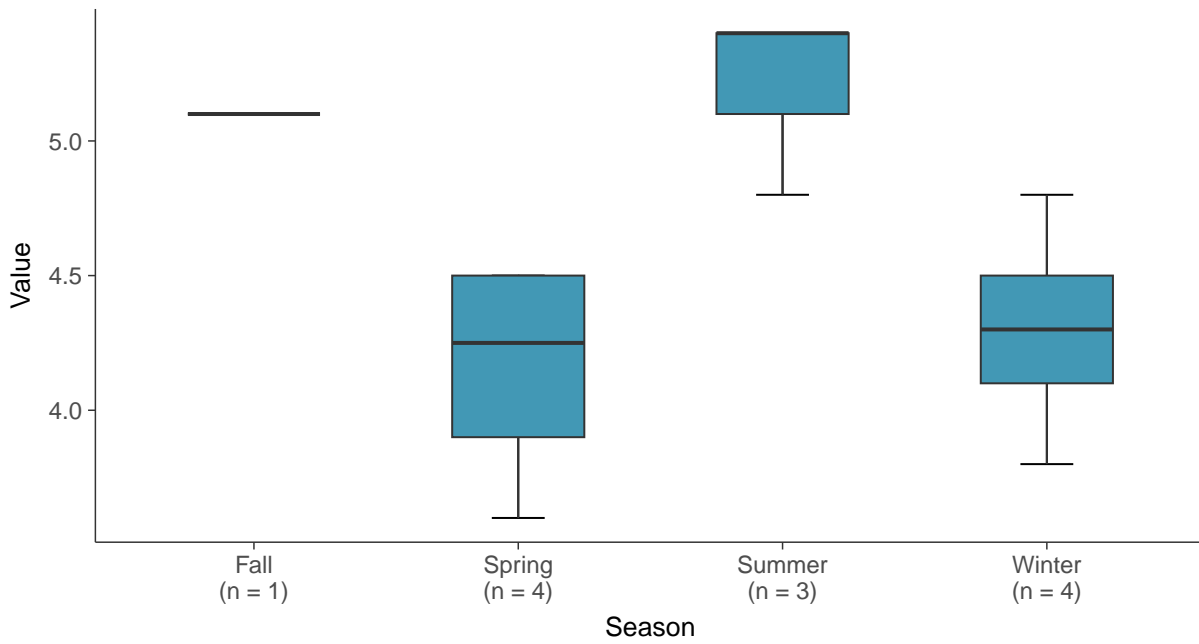
### Boxplot

Boron, MW-31 (mg/L)



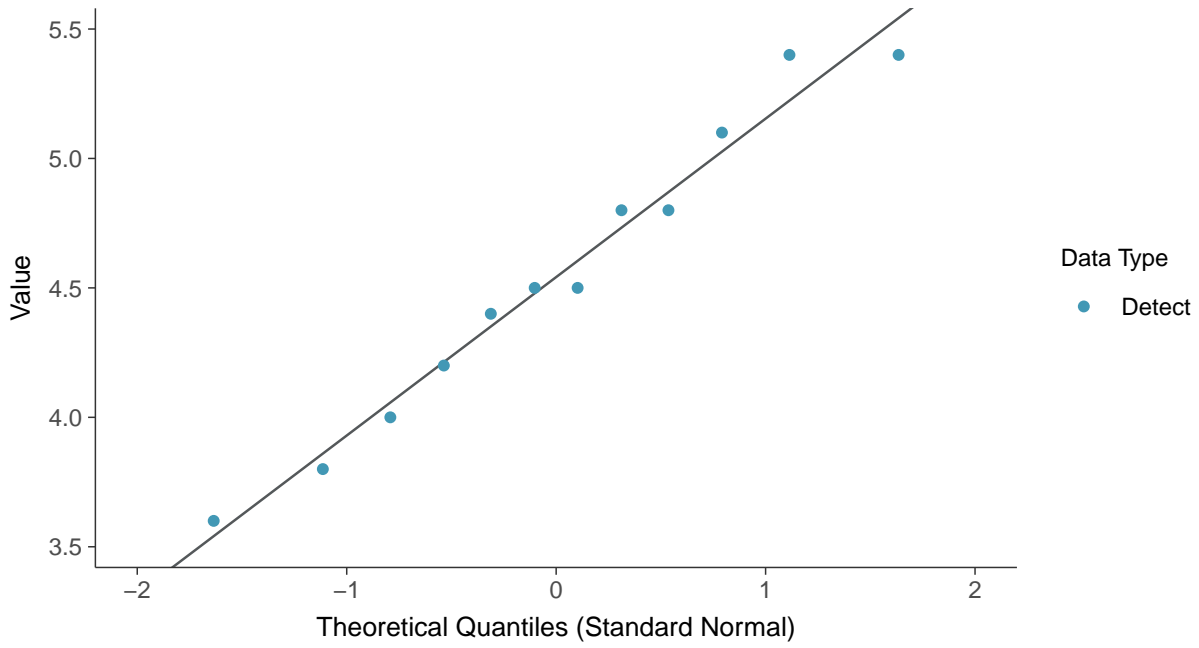
### Boxplot by Season

Boron, MW-31 (mg/L)

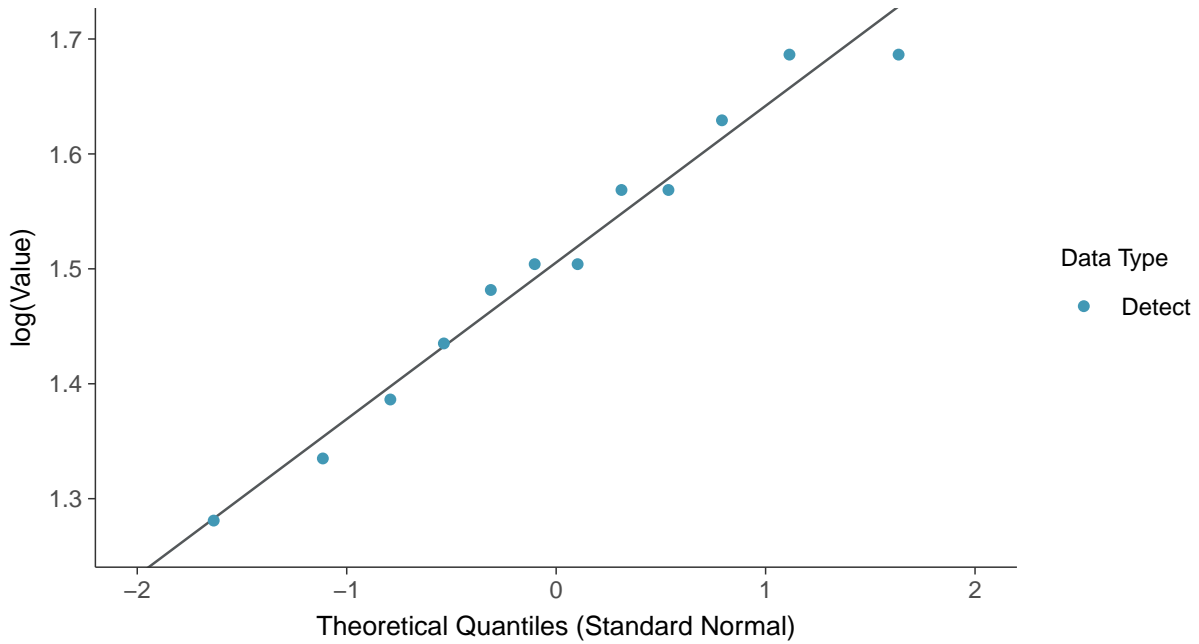




**Normal Q-Q plot**  
Boron, MW-31 (mg/L)

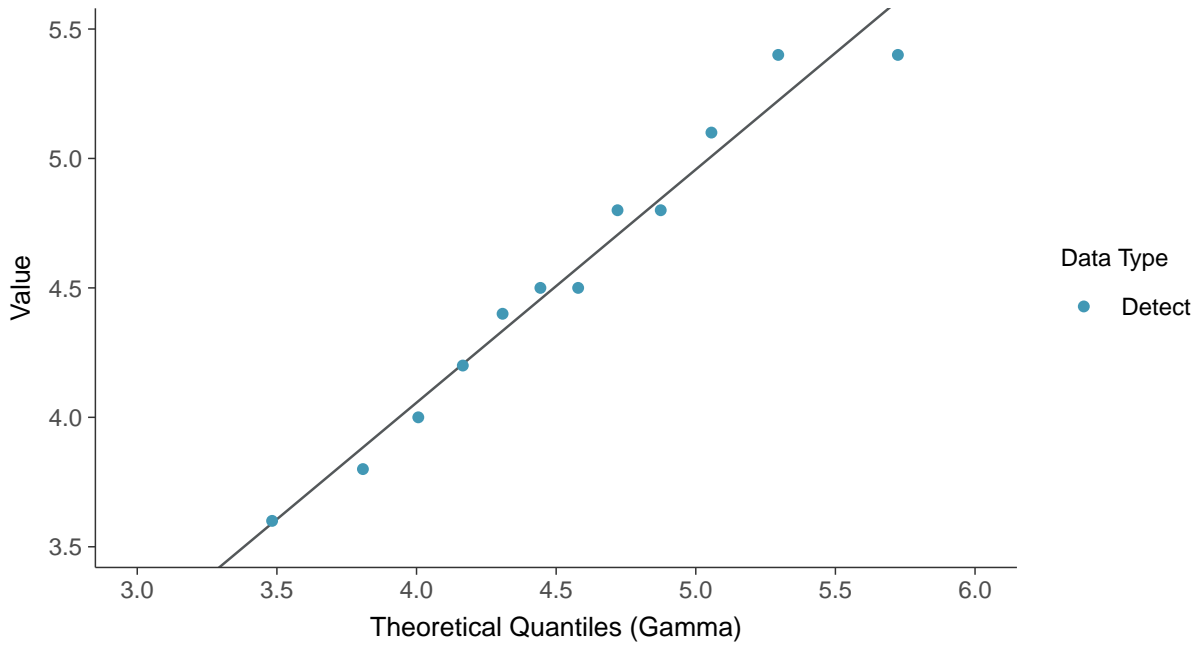


**Lognormal Q-Q plot**  
Boron, MW-31 (mg/L)

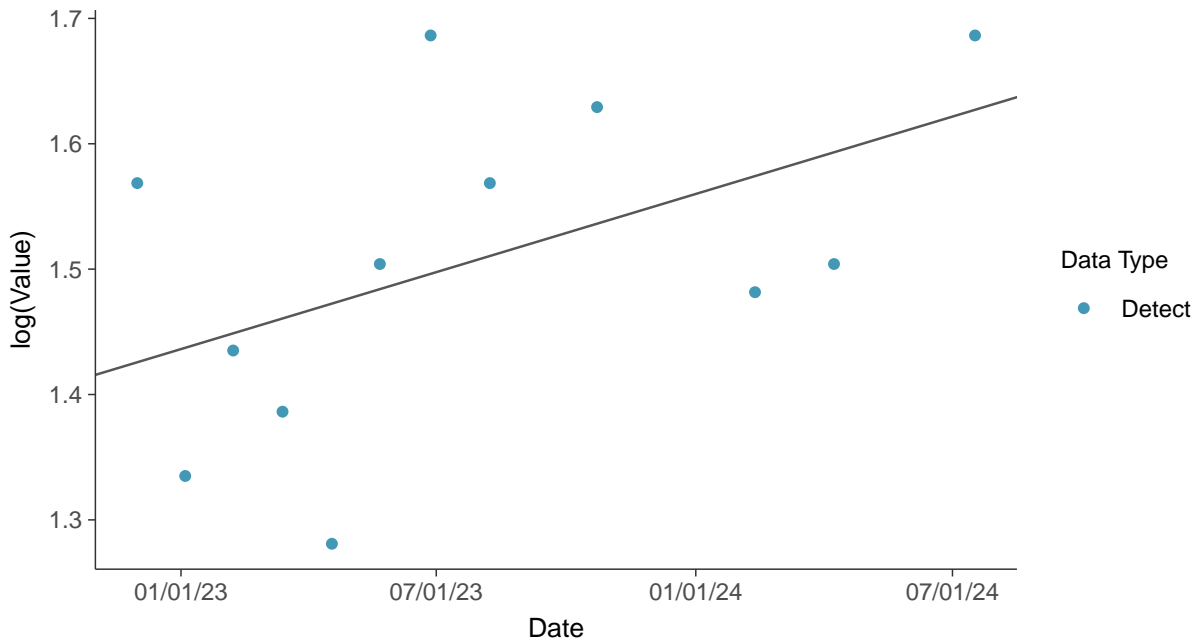




**Gamma Q-Q plot**  
Boron, MW-31 (mg/L)



**Trend Regression: Lognormal MLE**  
Boron, MW-31 (mg/L)



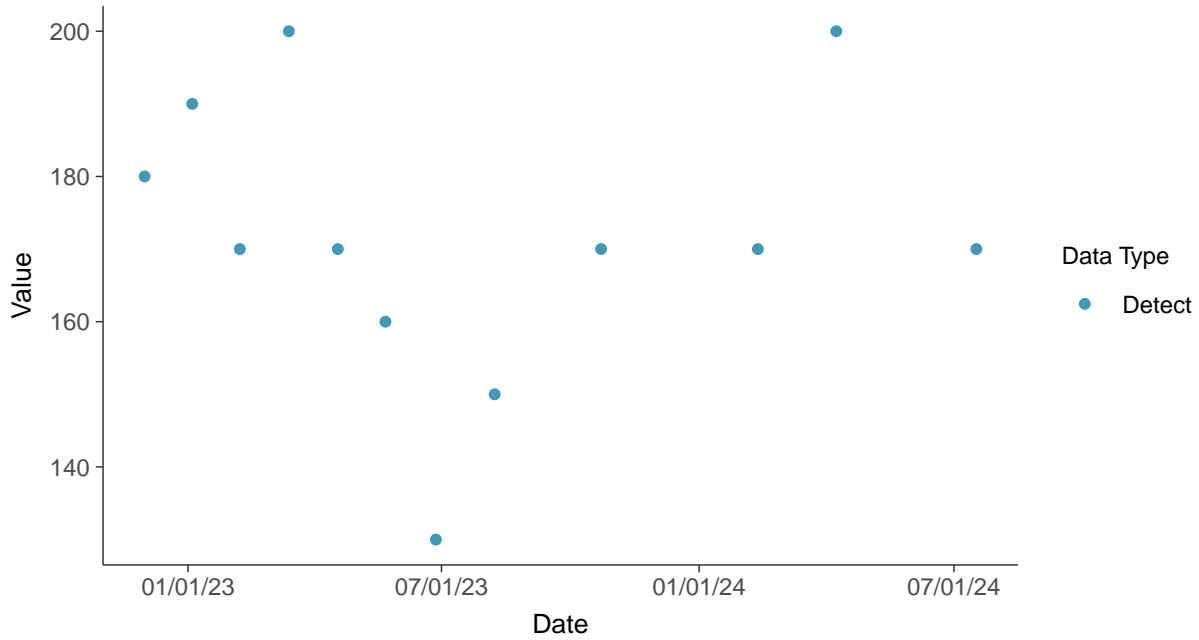


### Appendix III: Calcium, MW-31

ID: 41\_1\_4\_107

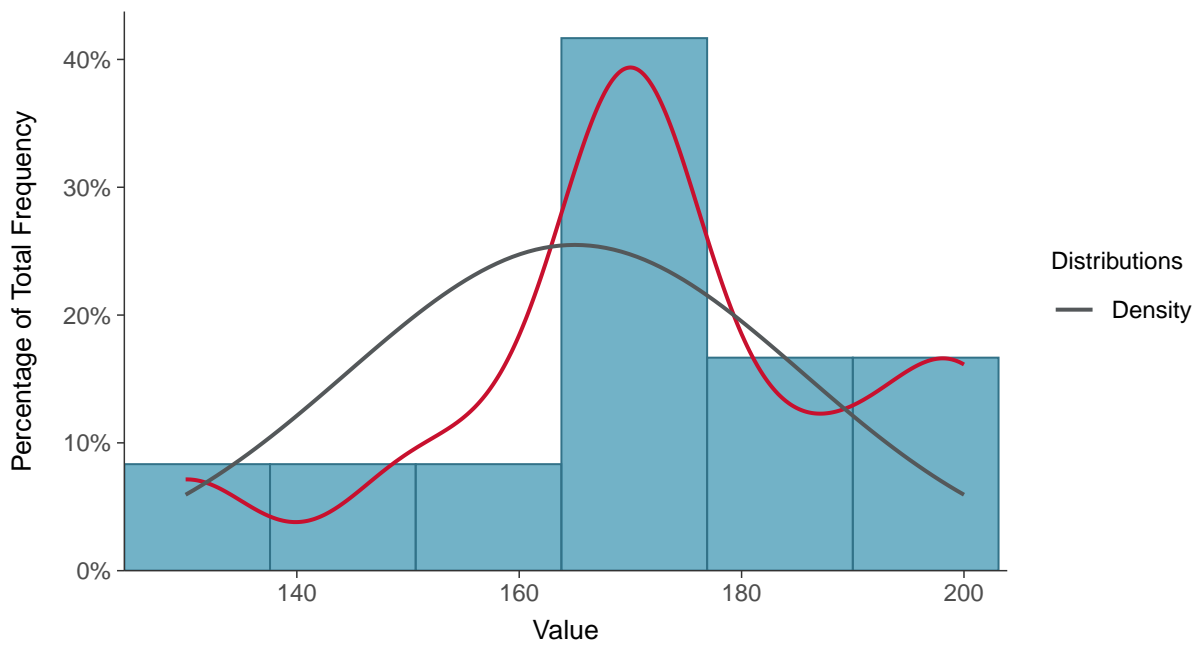
#### Scatter Plot

Calcium, MW-31 (mg/L)



#### Histogram

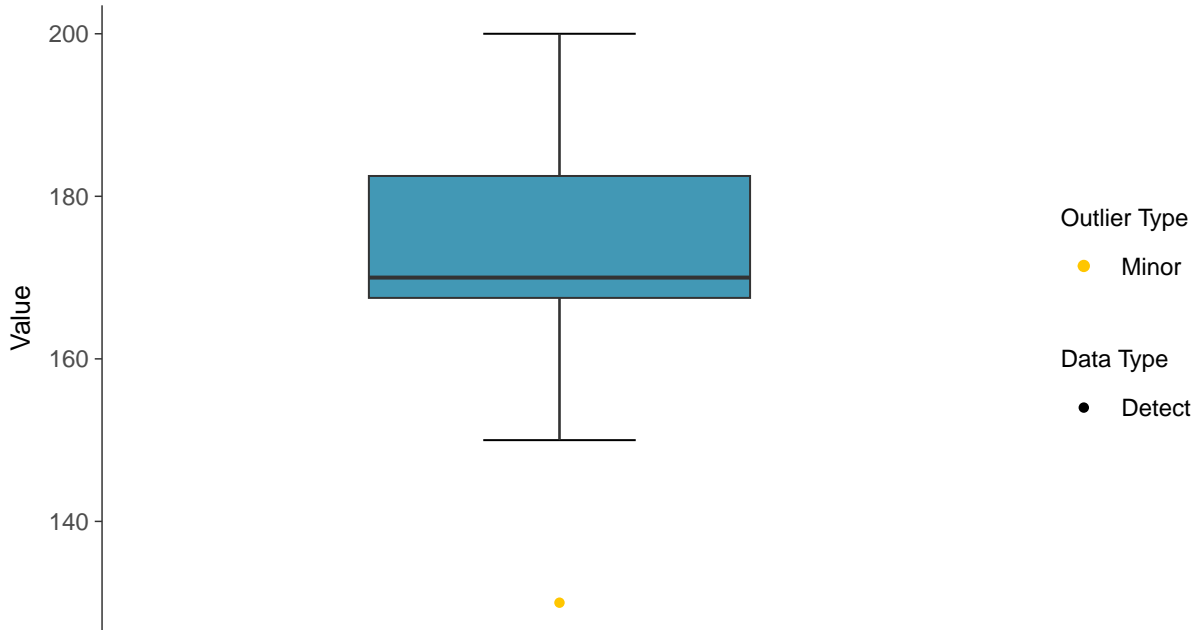
Calcium, MW-31 (mg/L)





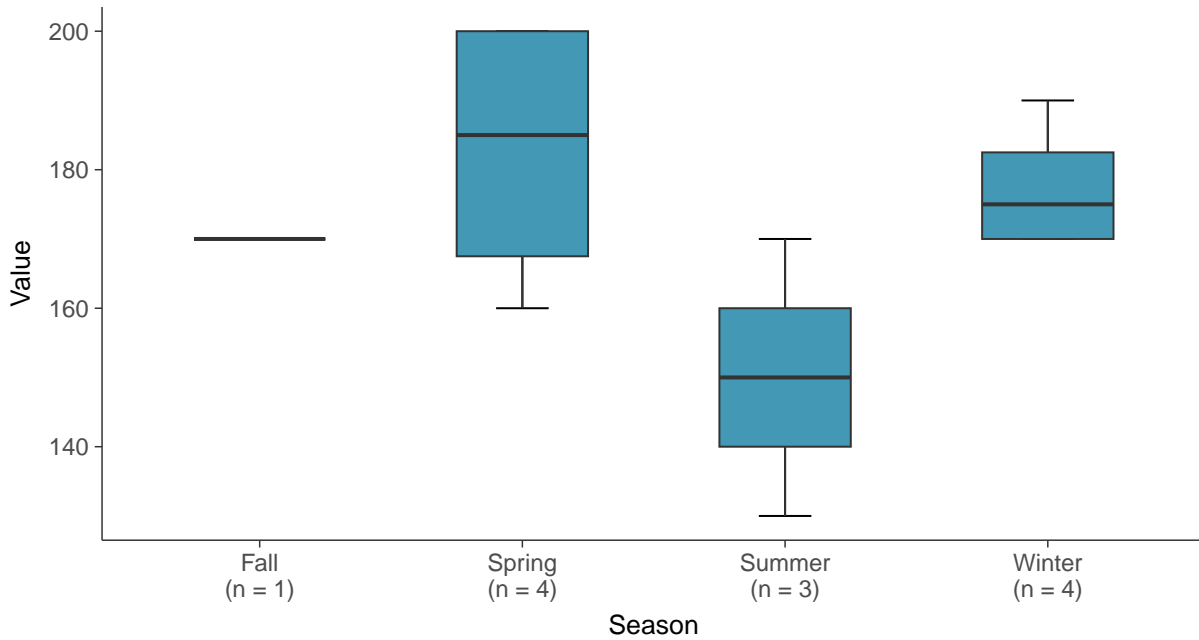
### Boxplot

Calcium, MW-31 (mg/L)



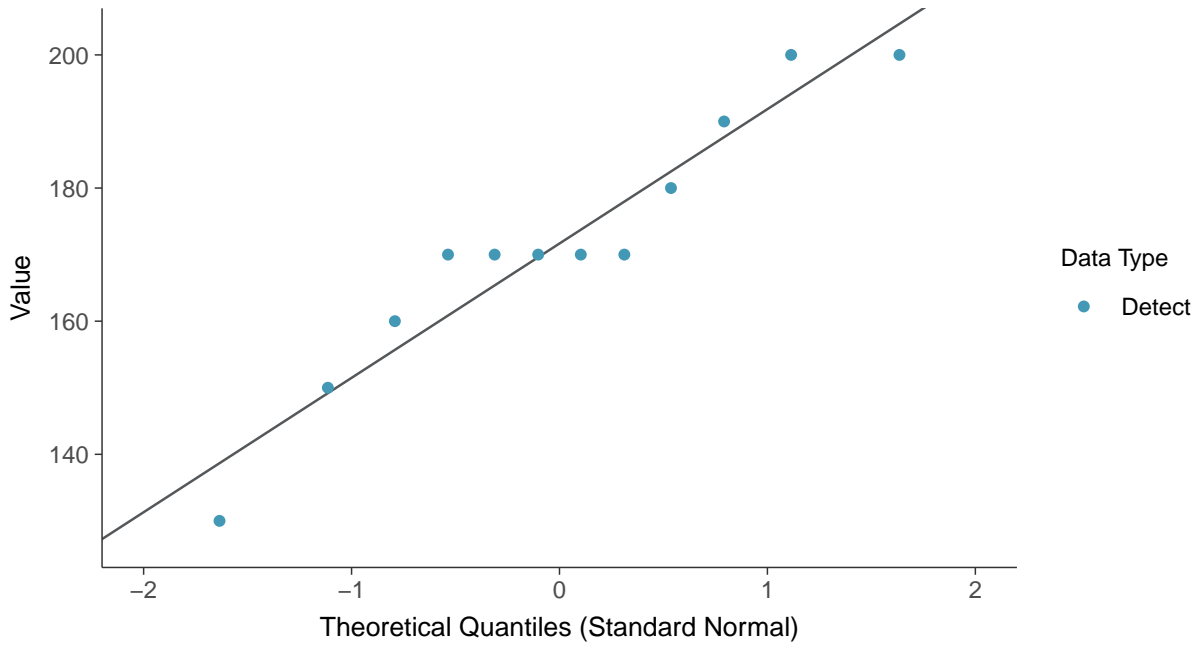
### Boxplot by Season

Calcium, MW-31 (mg/L)

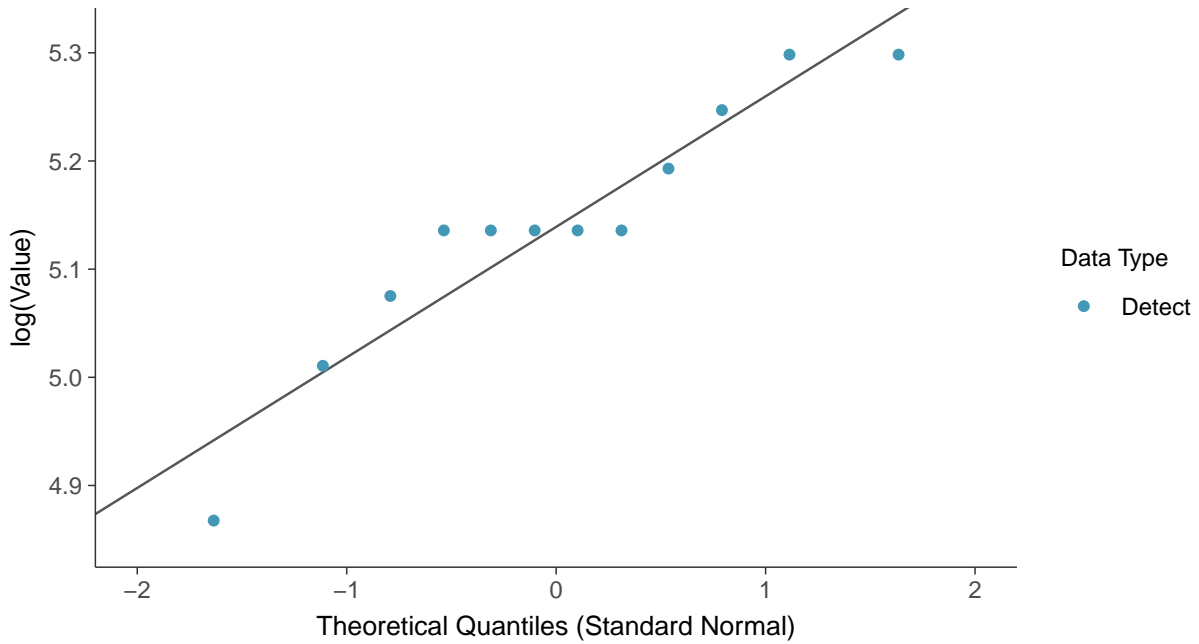




**Normal Q-Q plot**  
Calcium, MW-31 (mg/L)

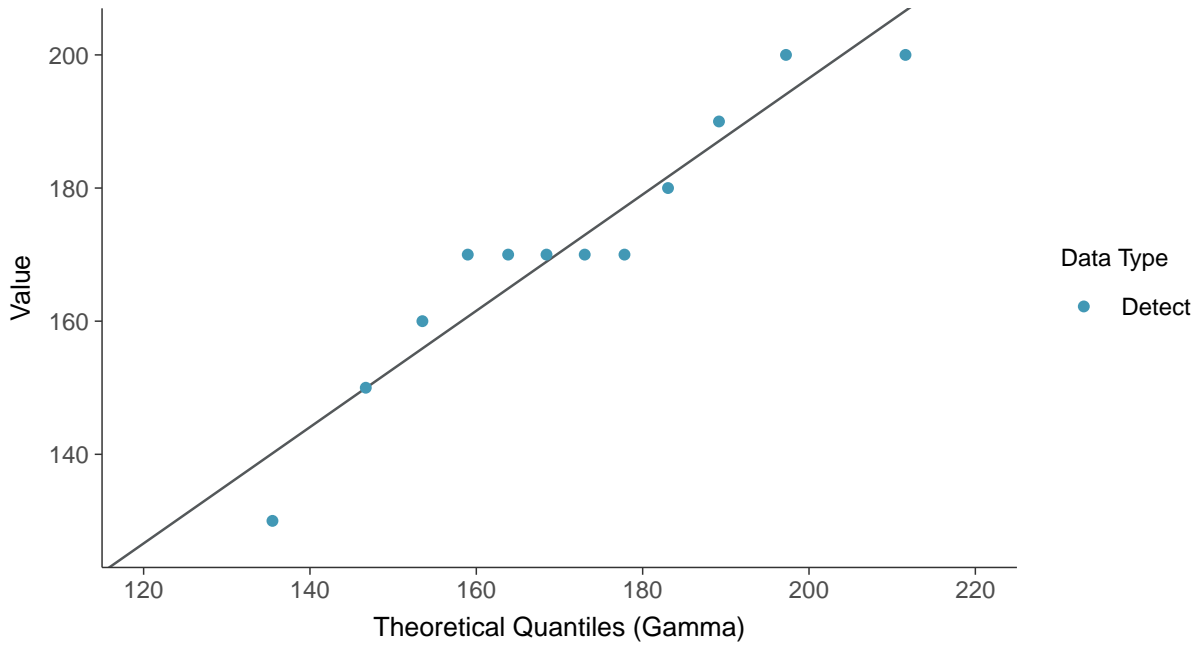


**Lognormal Q-Q plot**  
Calcium, MW-31 (mg/L)

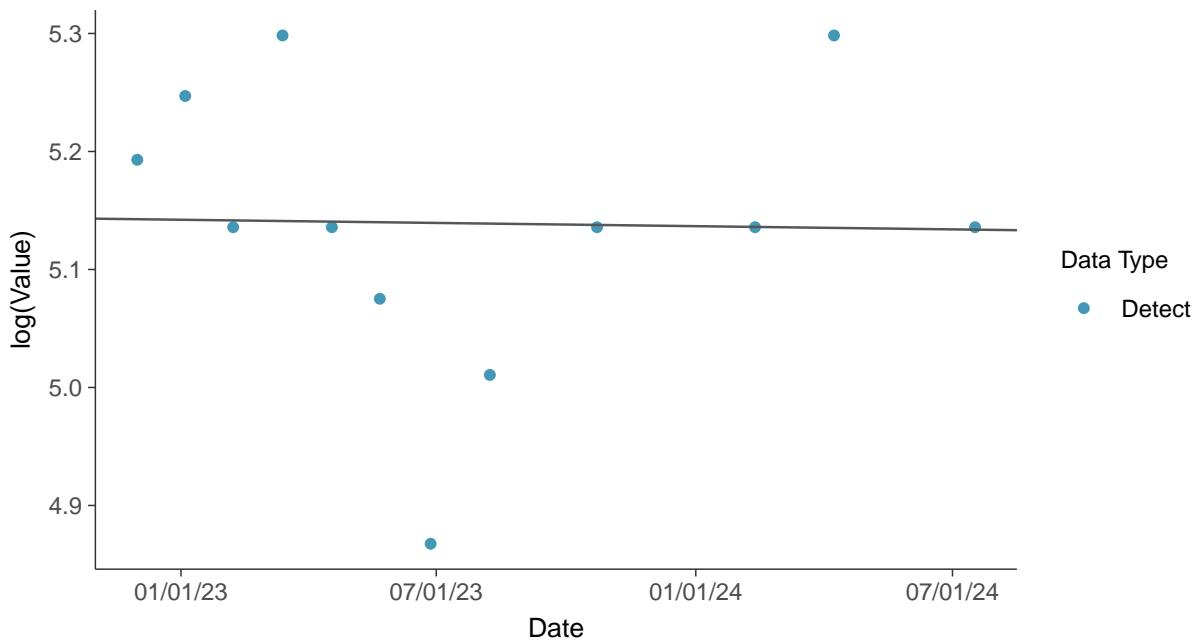




**Gamma Q-Q plot**  
Calcium, MW-31 (mg/L)



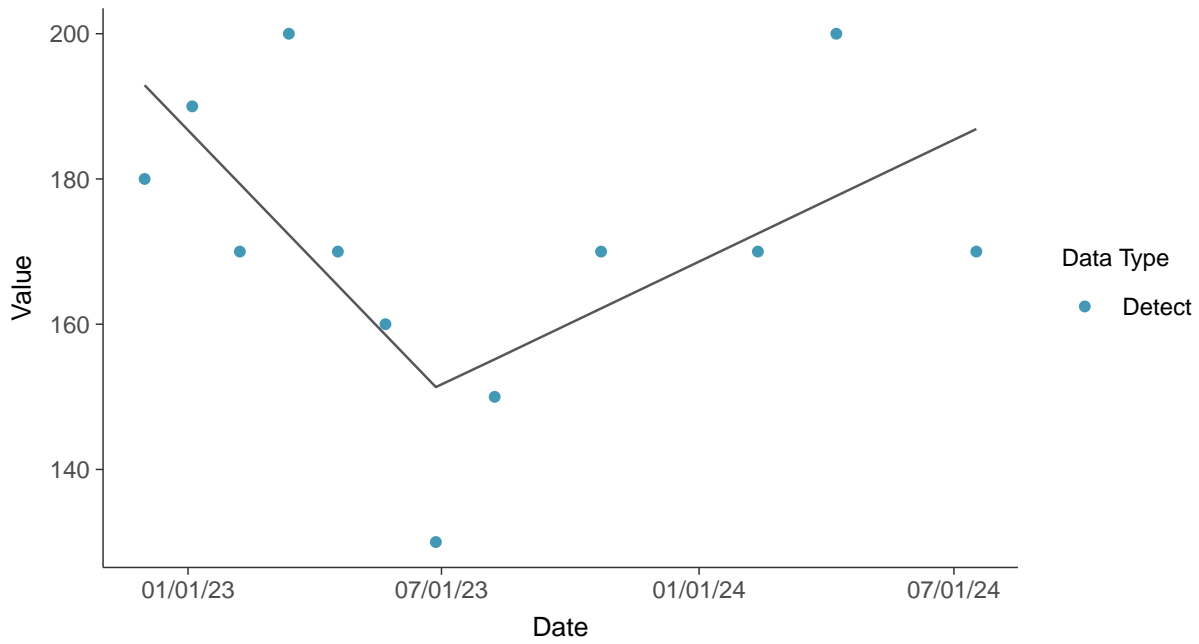
**Trend Regression: Lognormal MLE**  
Calcium, MW-31 (mg/L)





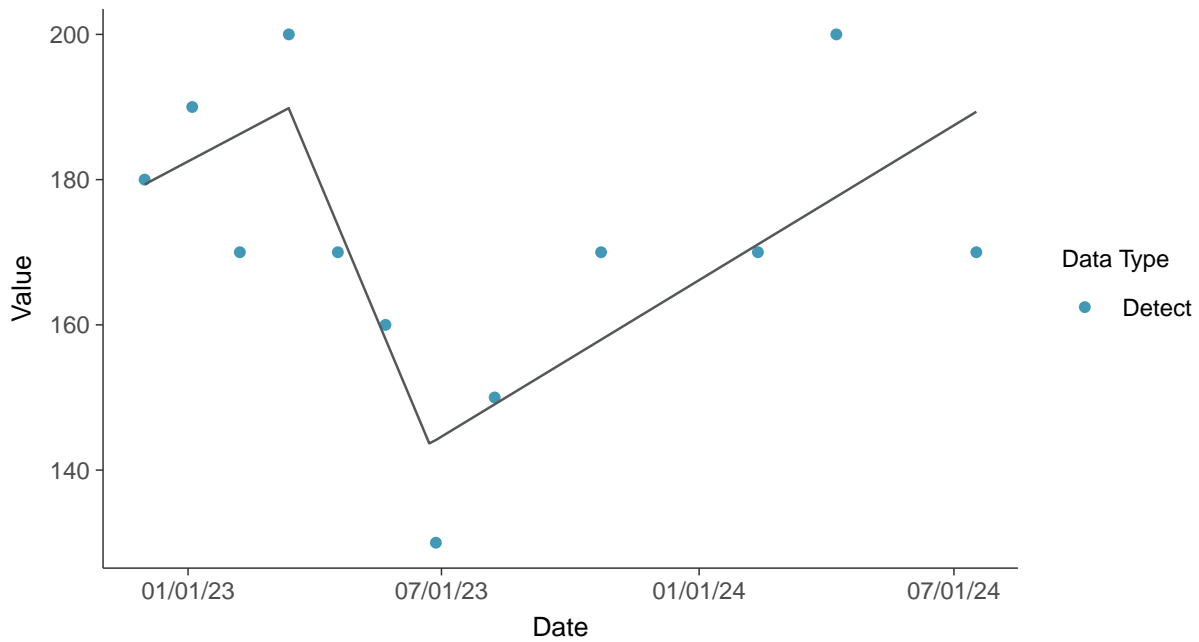
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-31 (mg/L)





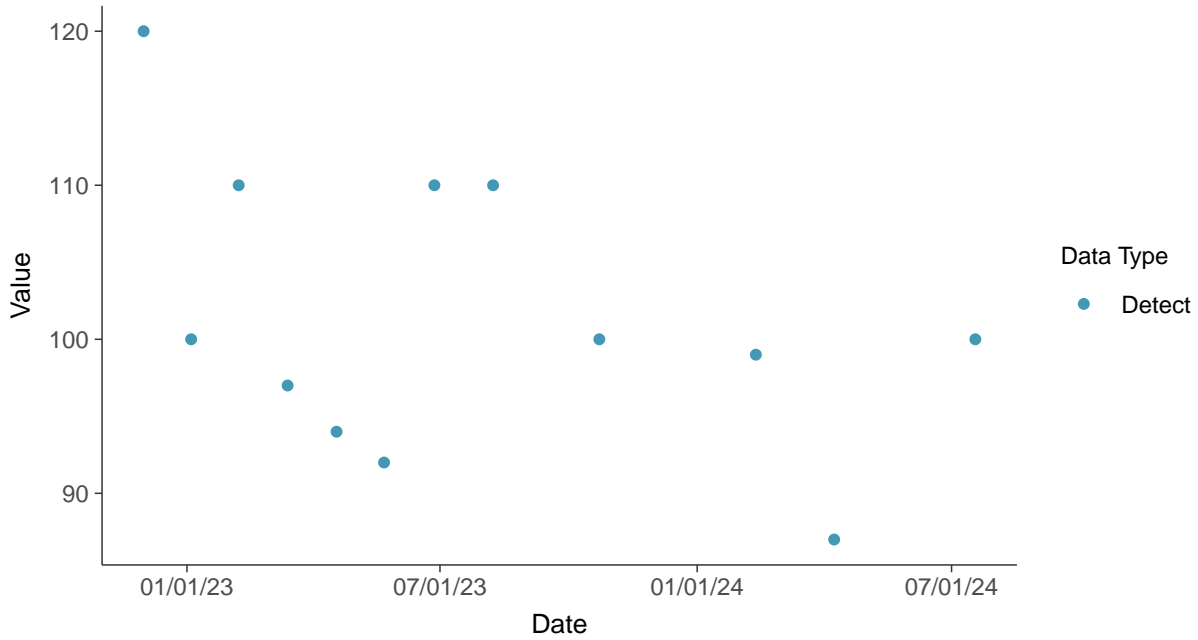


### Appendix III: Chloride (as Cl), MW-31

ID: 41\_1\_4\_108

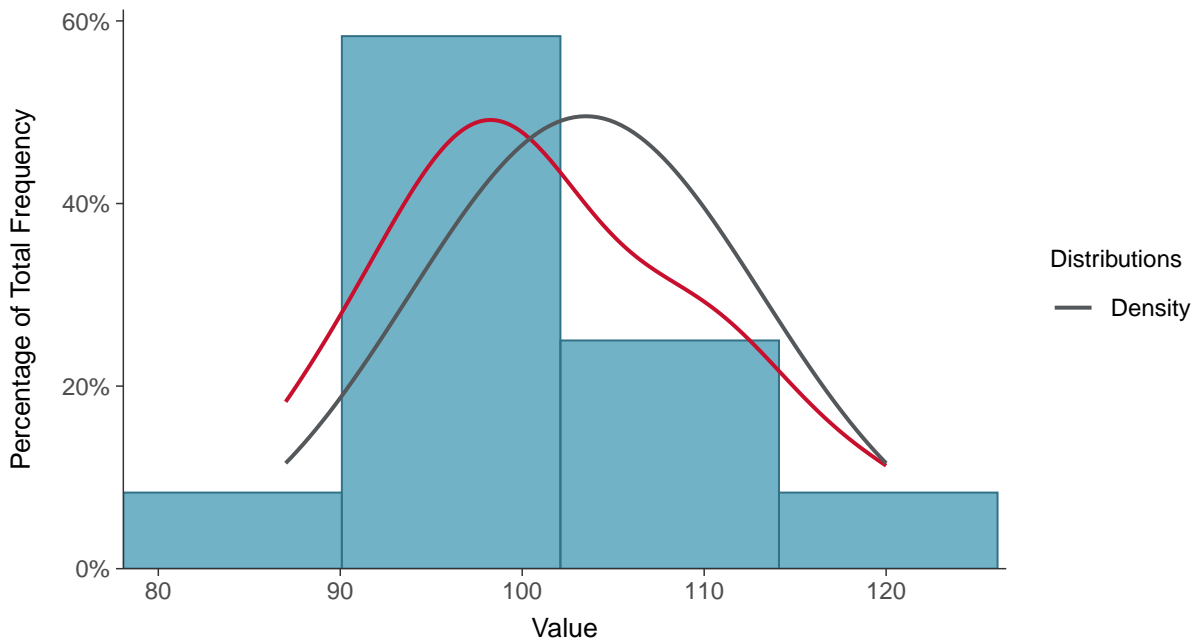
#### Scatter Plot

Chloride (as Cl), MW-31 (mg/L)



#### Histogram

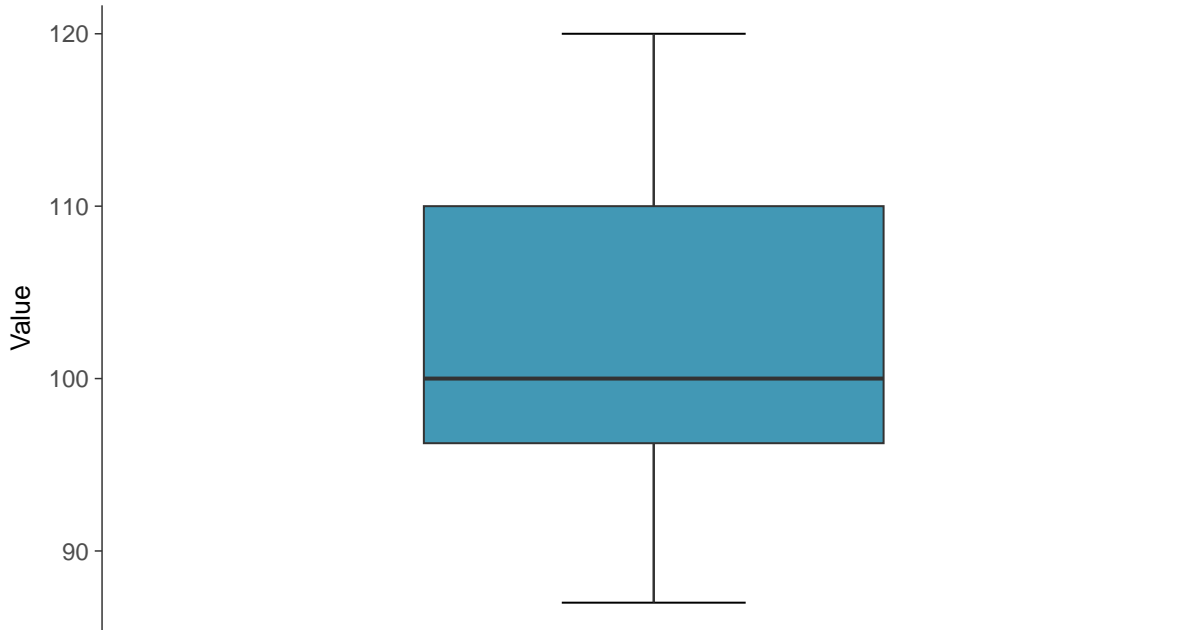
Chloride (as Cl), MW-31 (mg/L)





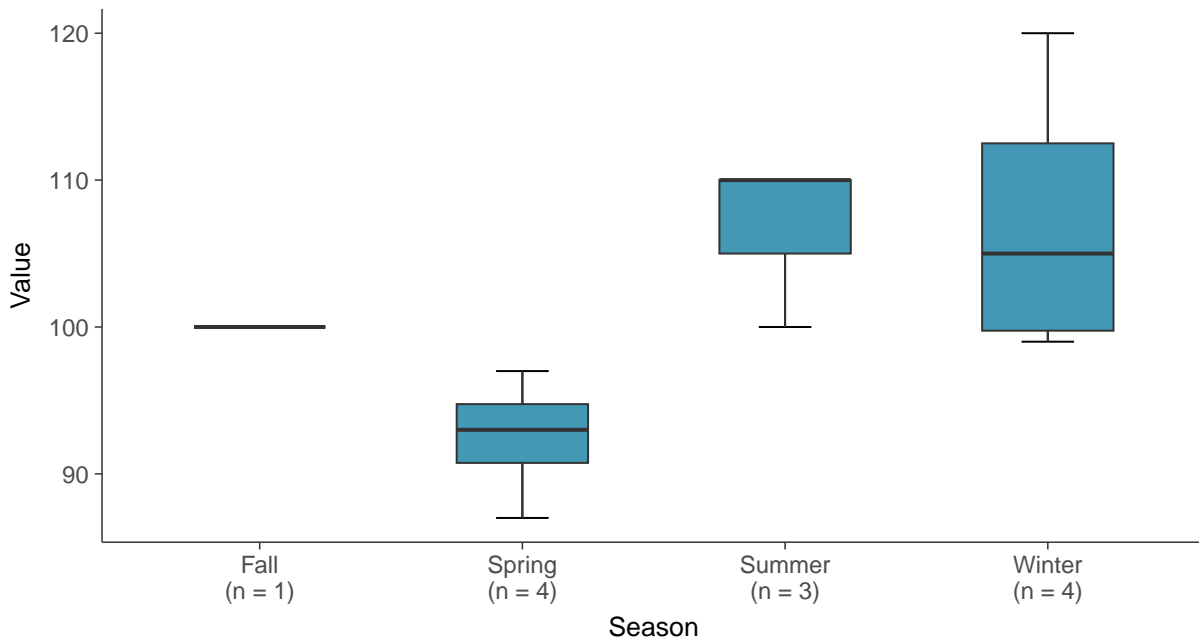
### Boxplot

Chloride (as Cl), MW-31 (mg/L)



### Boxplot by Season

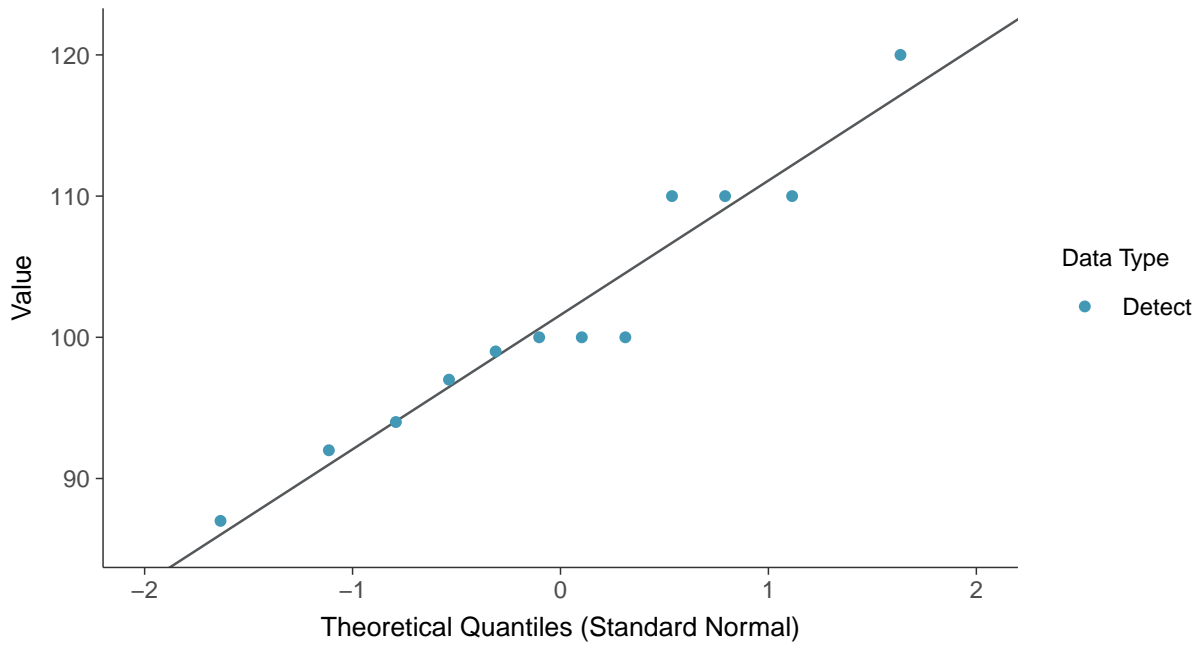
Chloride (as Cl), MW-31 (mg/L)





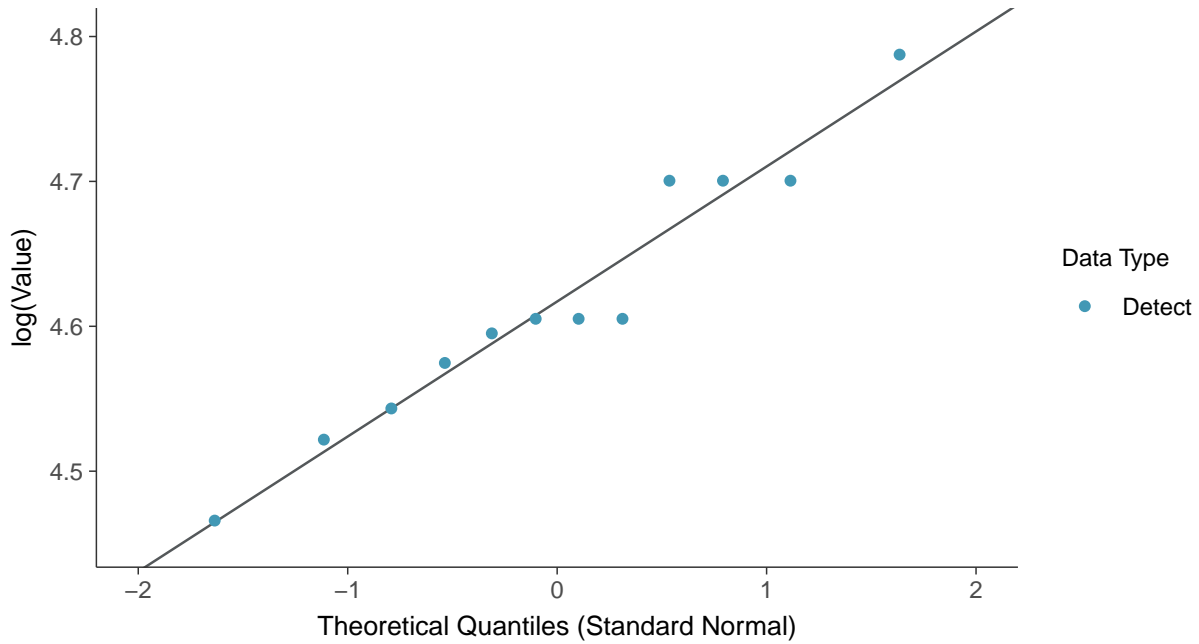
### Normal Q-Q plot

Chloride (as Cl), MW-31 (mg/L)



### Lognormal Q-Q plot

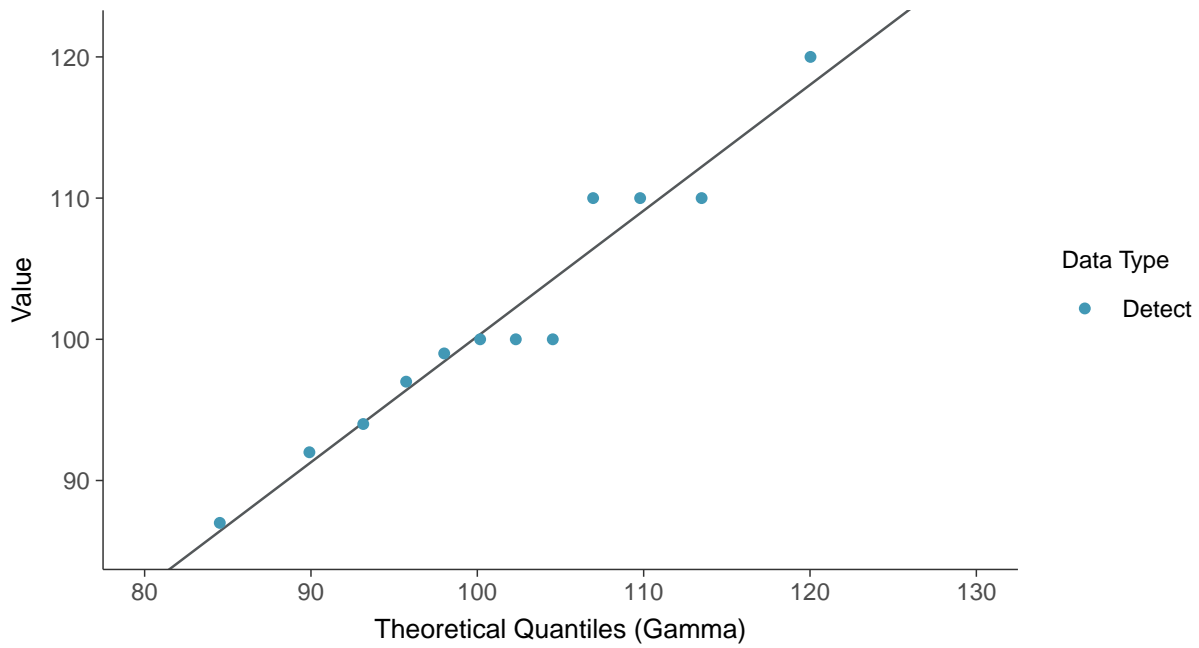
Chloride (as Cl), MW-31 (mg/L)





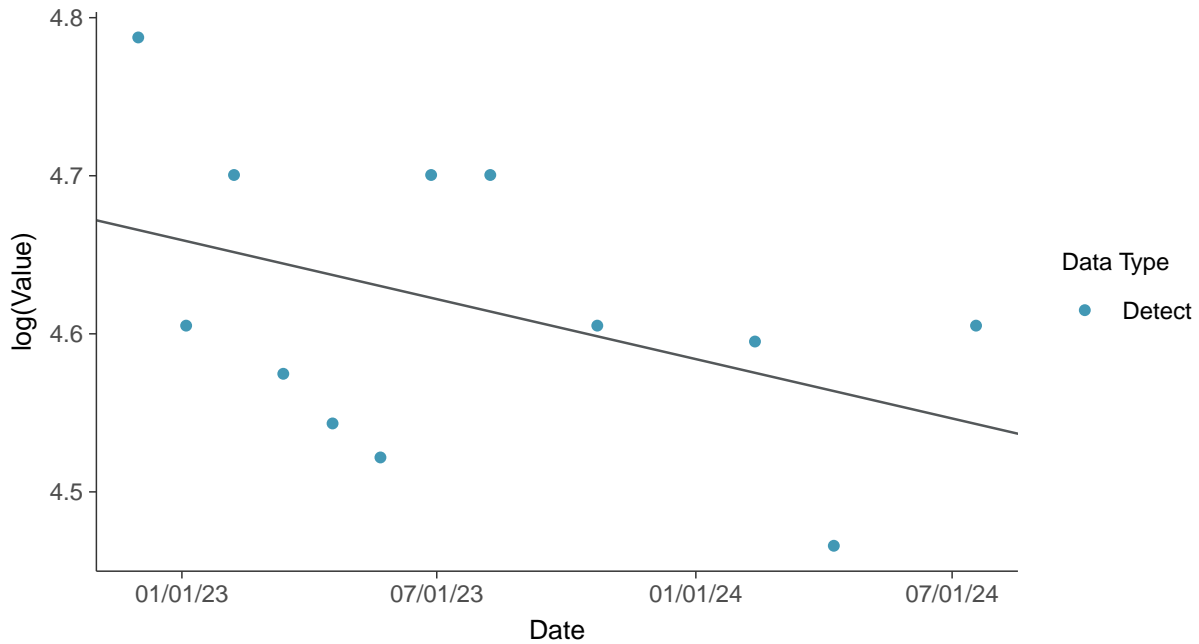
### Gamma Q-Q plot

Chloride (as Cl), MW-31 (mg/L)



### Trend Regression: Lognormal MLE

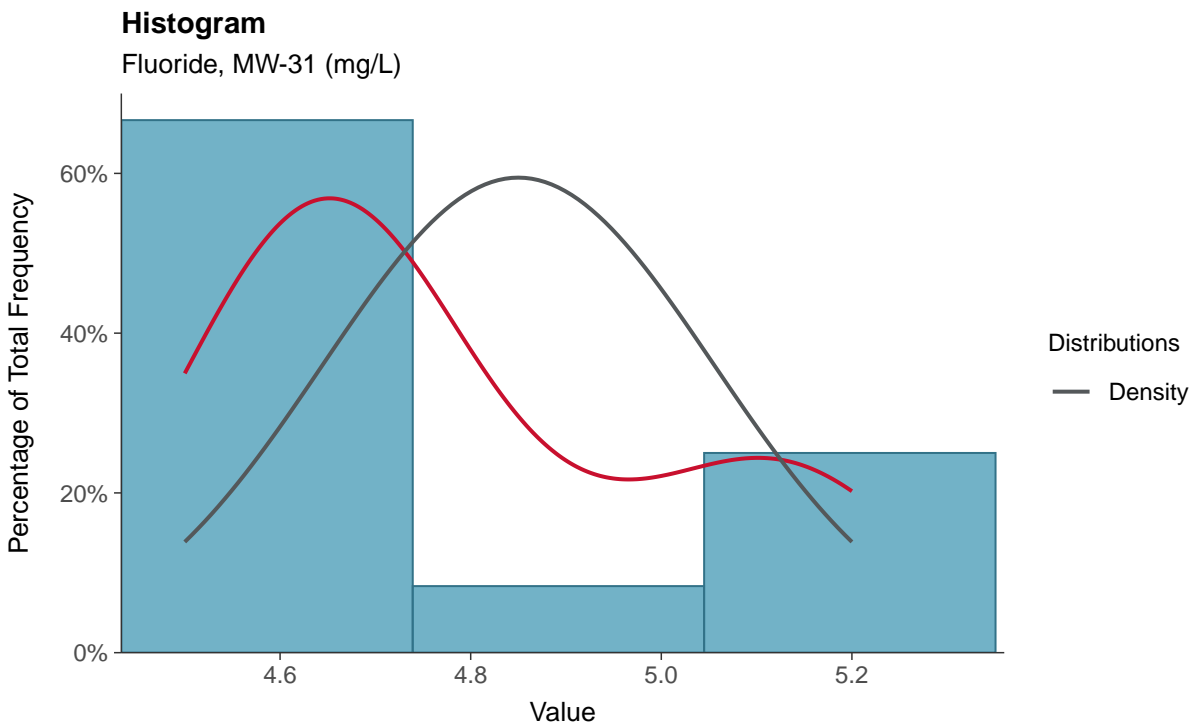
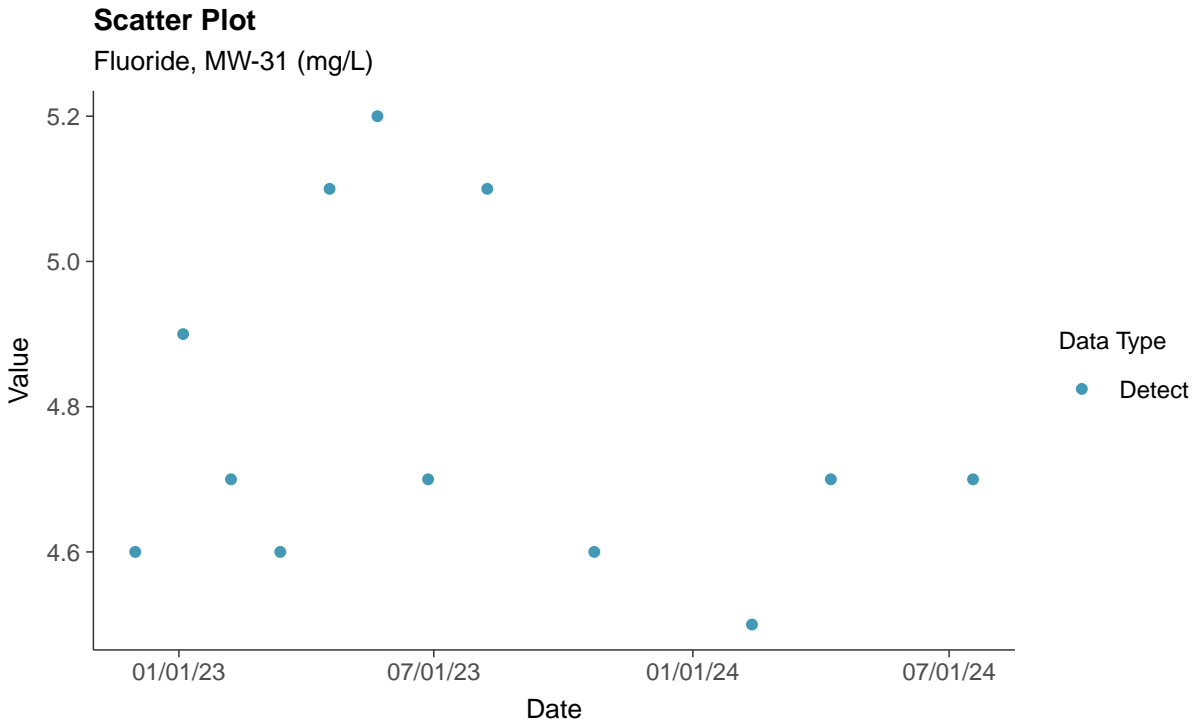
Chloride (as Cl), MW-31 (mg/L)





### Appendix III: Fluoride, MW-31

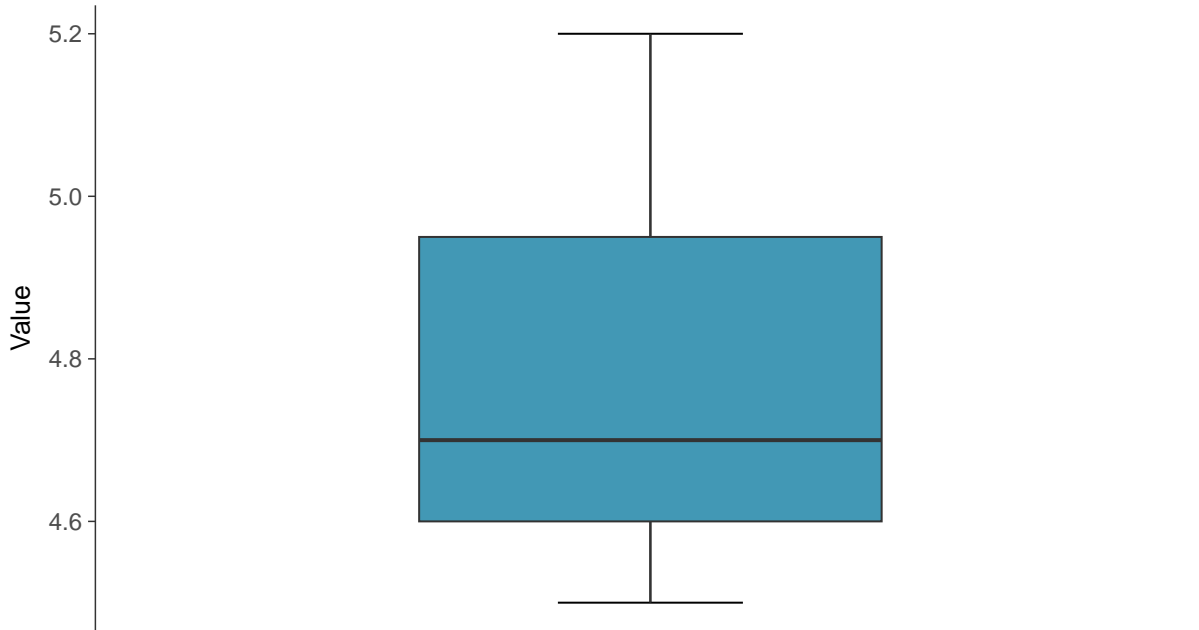
ID: 41\_1\_4\_112





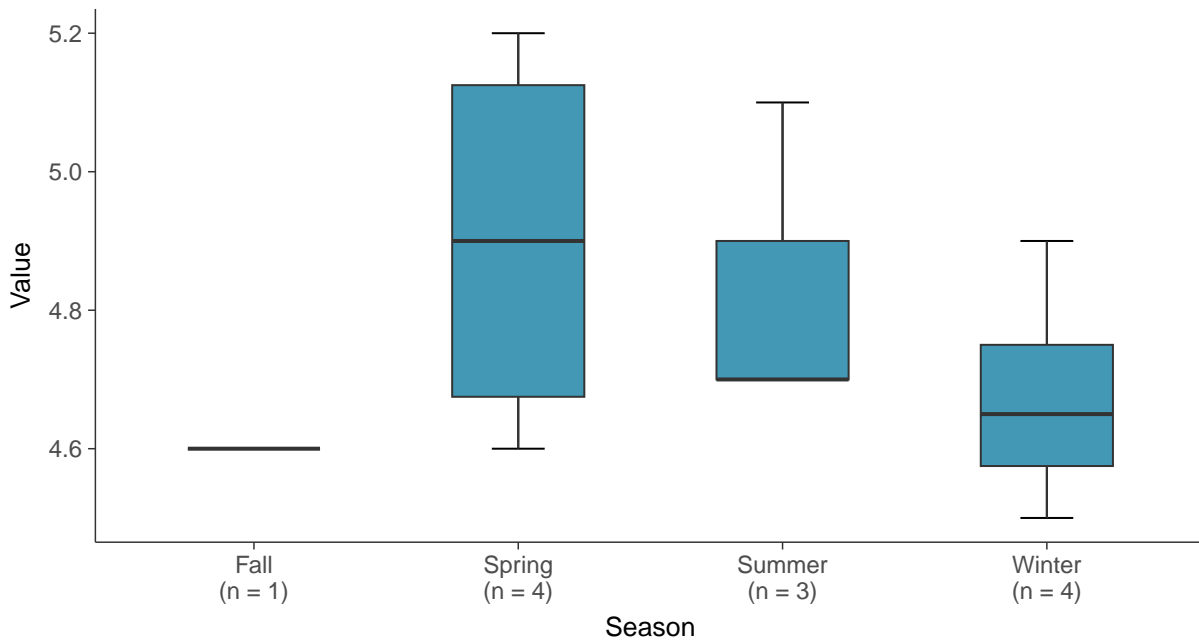
### Boxplot

Fluoride, MW-31 (mg/L)



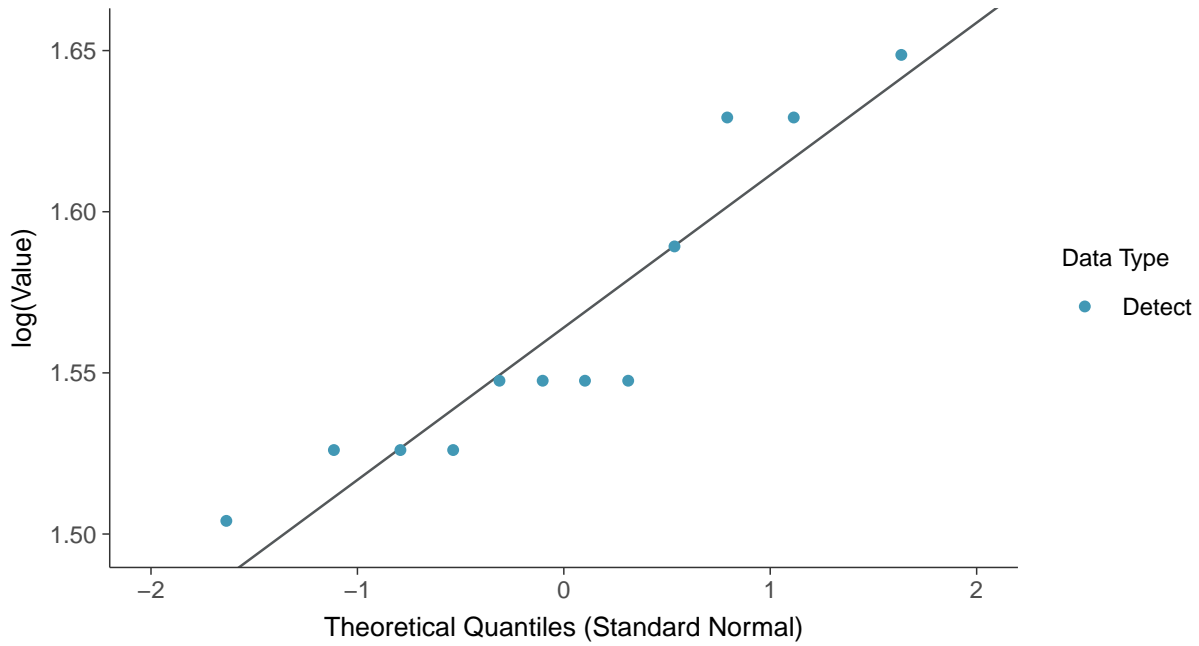
### Boxplot by Season

Fluoride, MW-31 (mg/L)

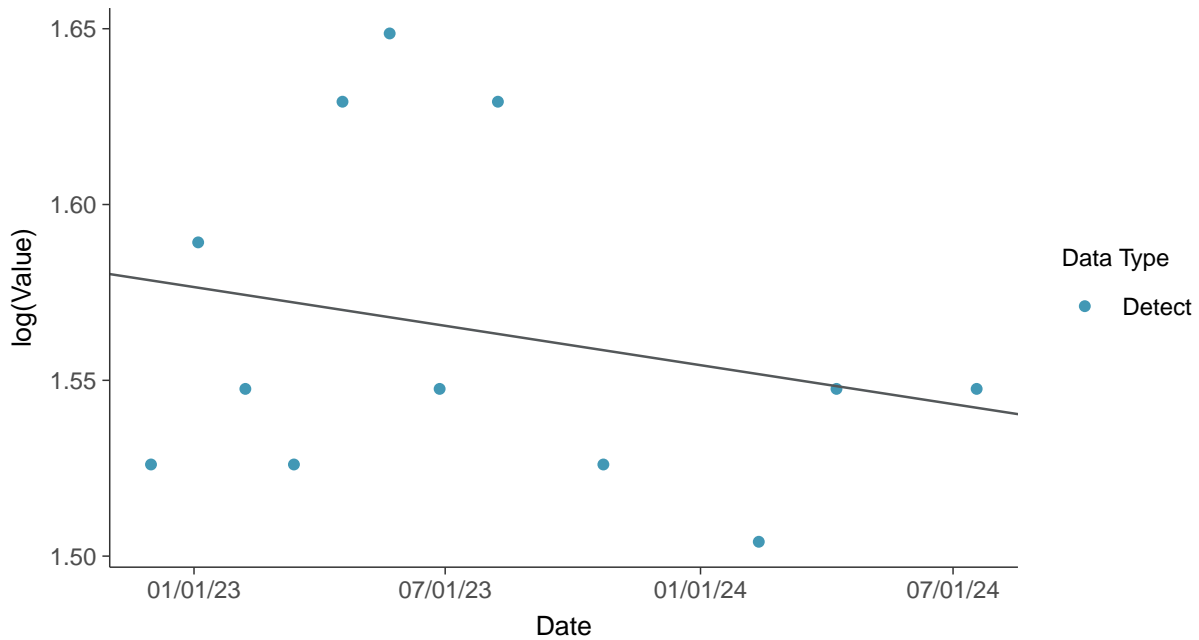




**Lognormal Q-Q plot**  
Fluoride, MW-31 (mg/L)



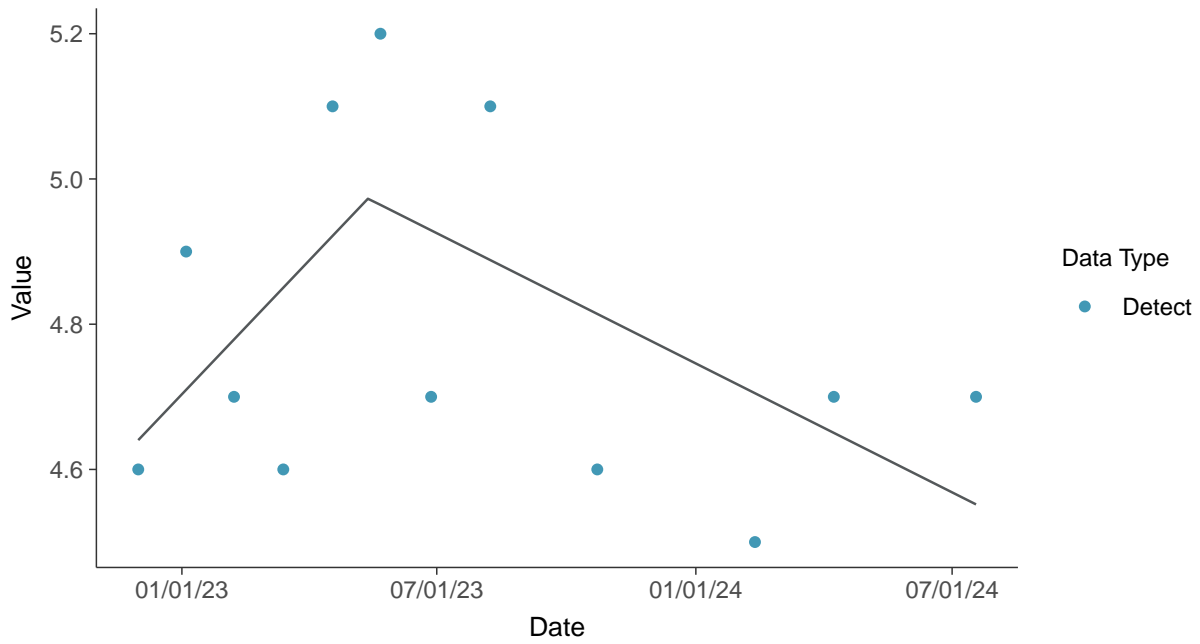
**Trend Regression: Lognormal MLE**  
Fluoride, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Fluoride, MW-31 (mg/L)

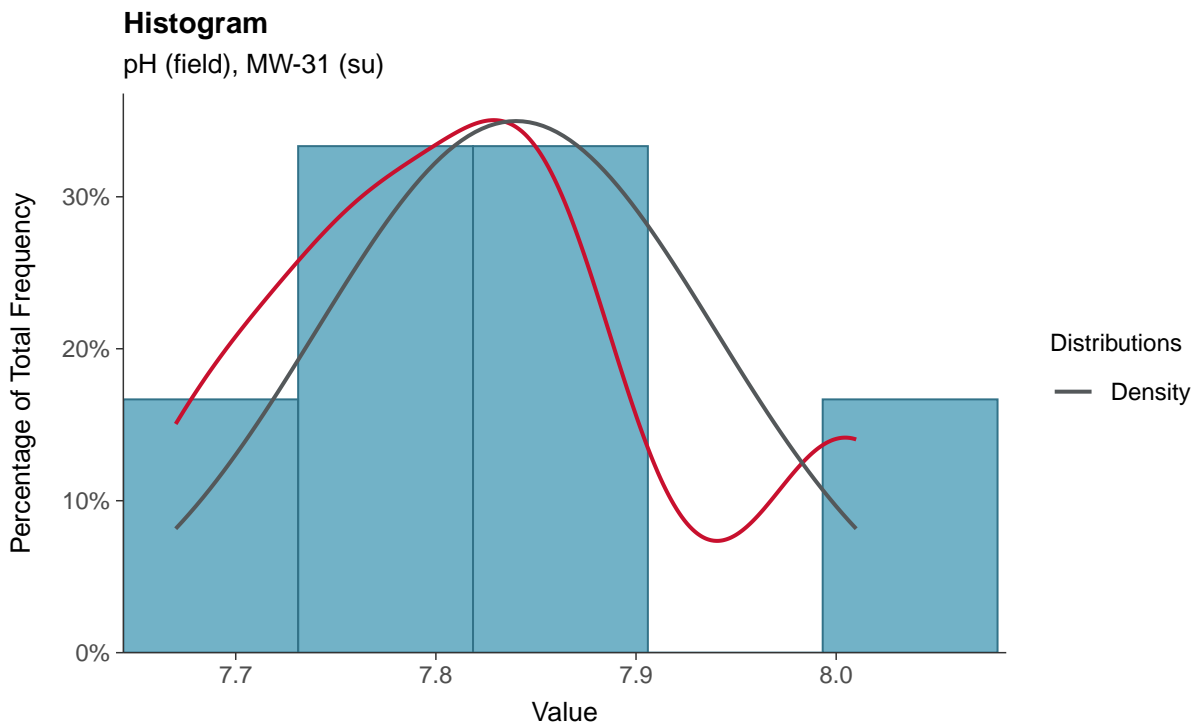
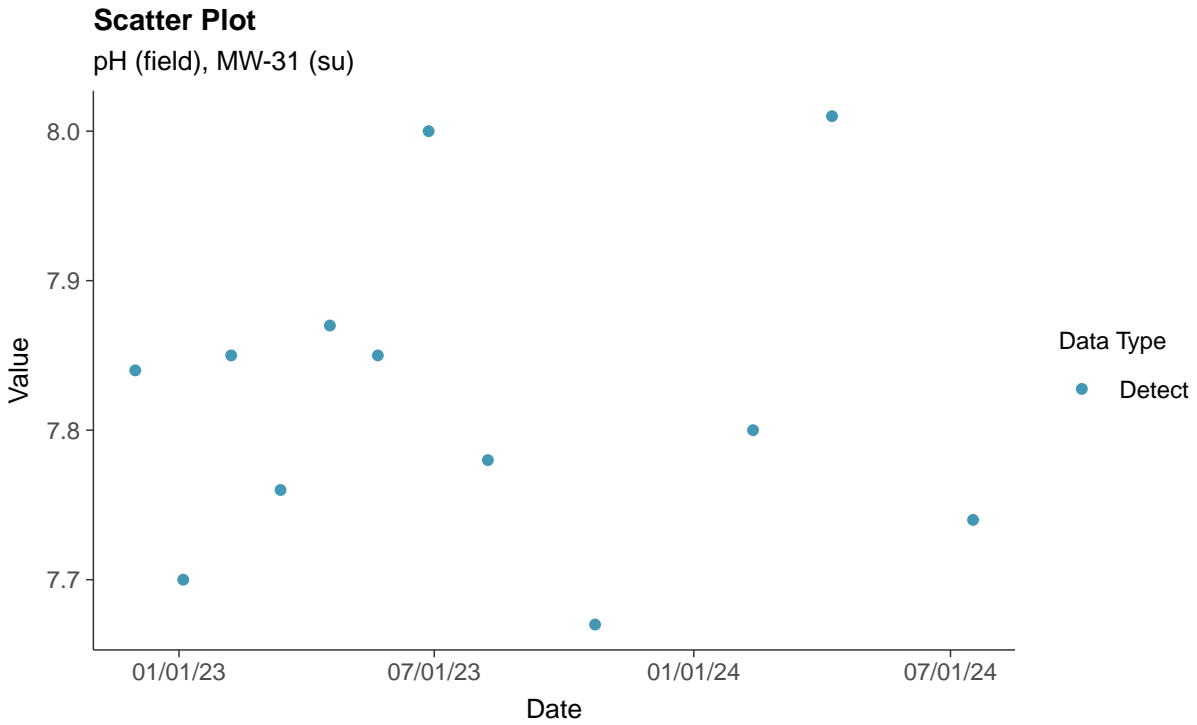






### Appendix III: pH (field), MW-31

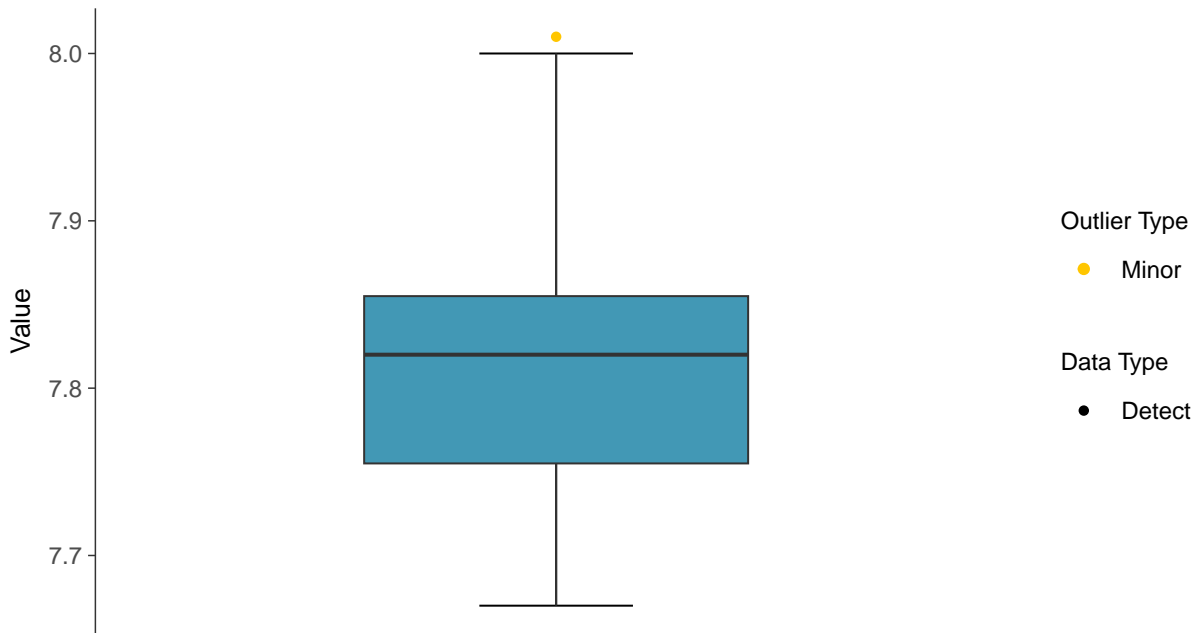
ID: 41\_1\_4\_120





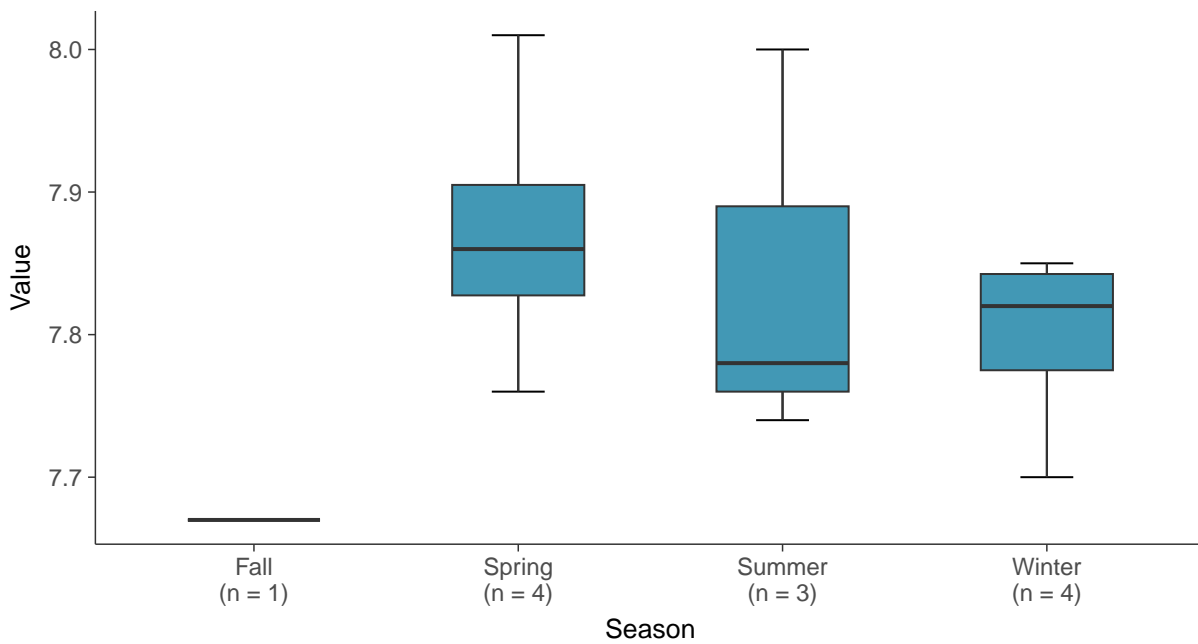
### Boxplot

pH (field), MW-31 (su)



### Boxplot by Season

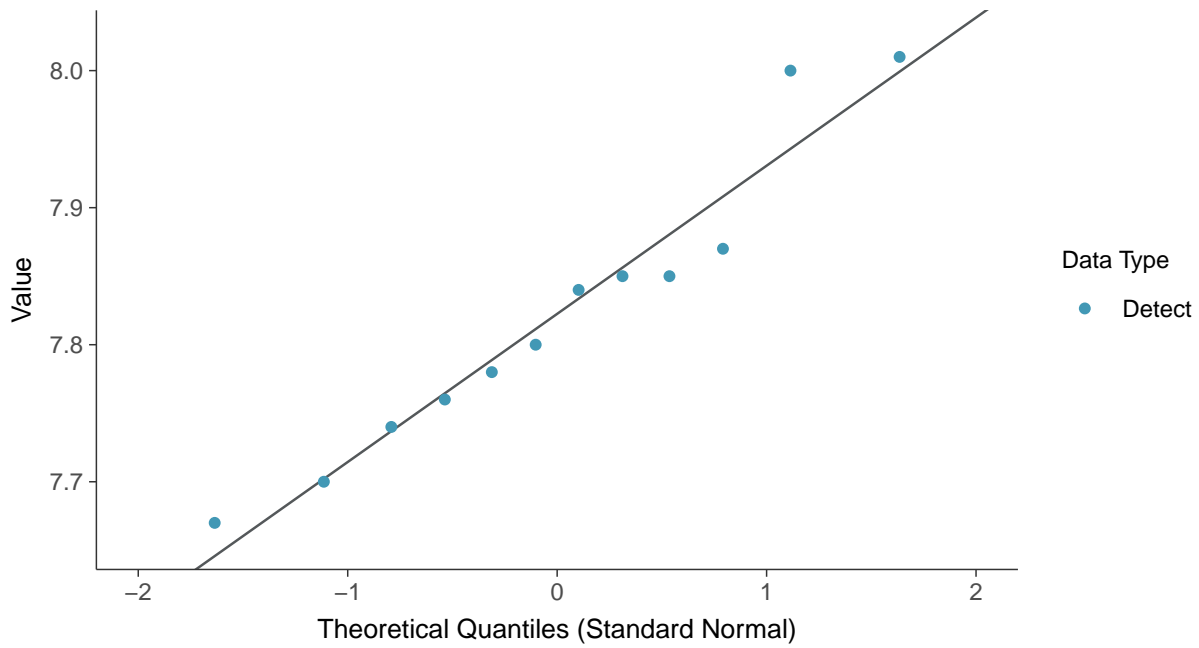
pH (field), MW-31 (su)





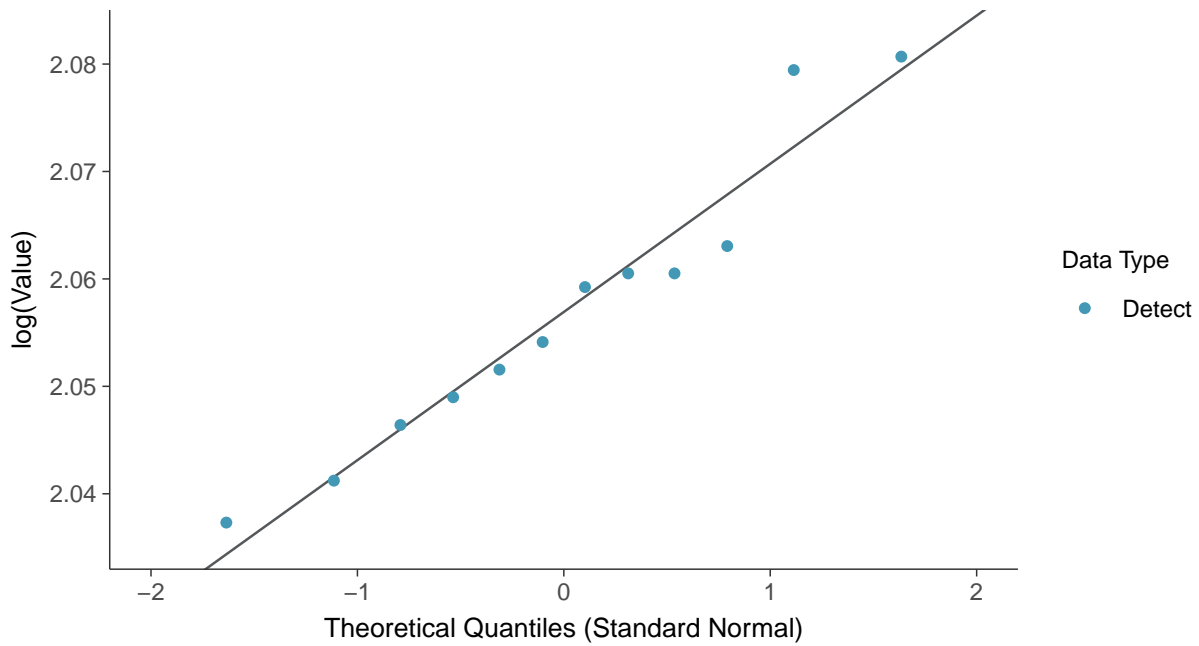
### Normal Q-Q plot

pH (field), MW-31 (su)



### Lognormal Q-Q plot

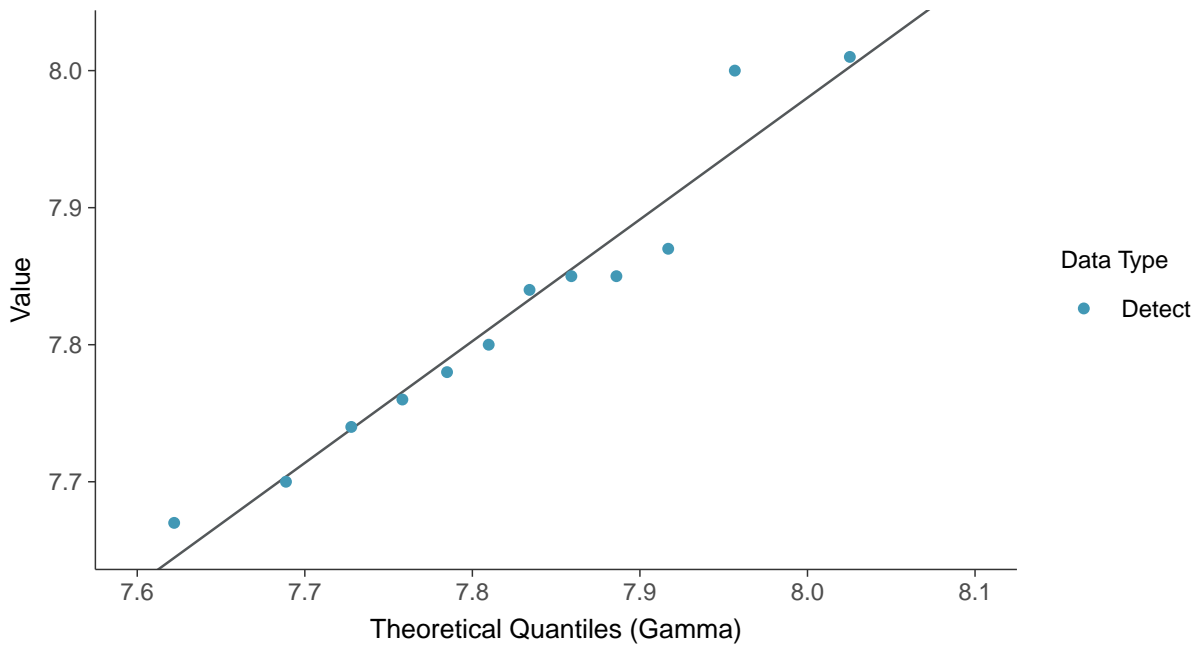
pH (field), MW-31 (su)





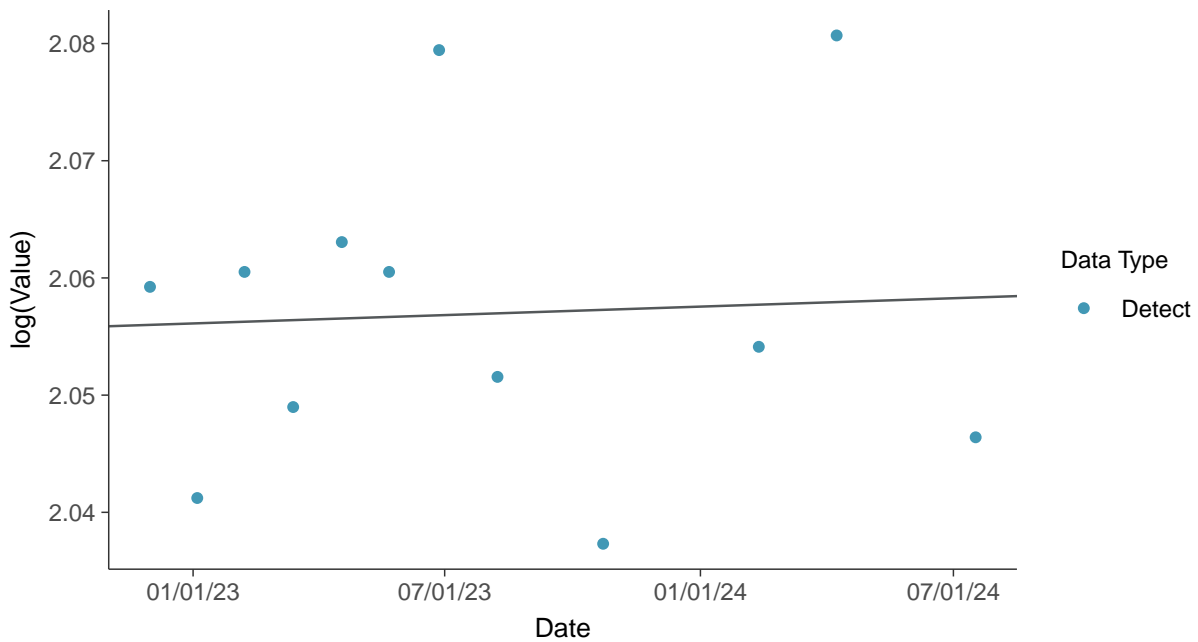
### Gamma Q-Q plot

pH (field), MW-31 (su)



### Trend Regression: Lognormal MLE

pH (field), MW-31 (su)



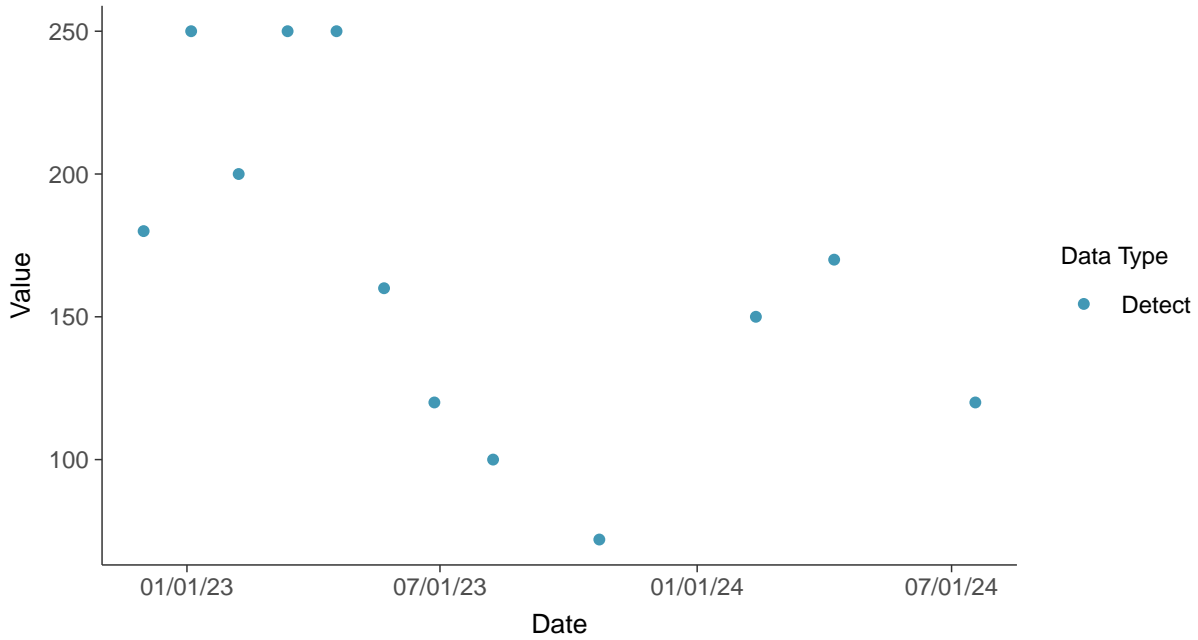


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-31

ID: 41\_1\_4\_124

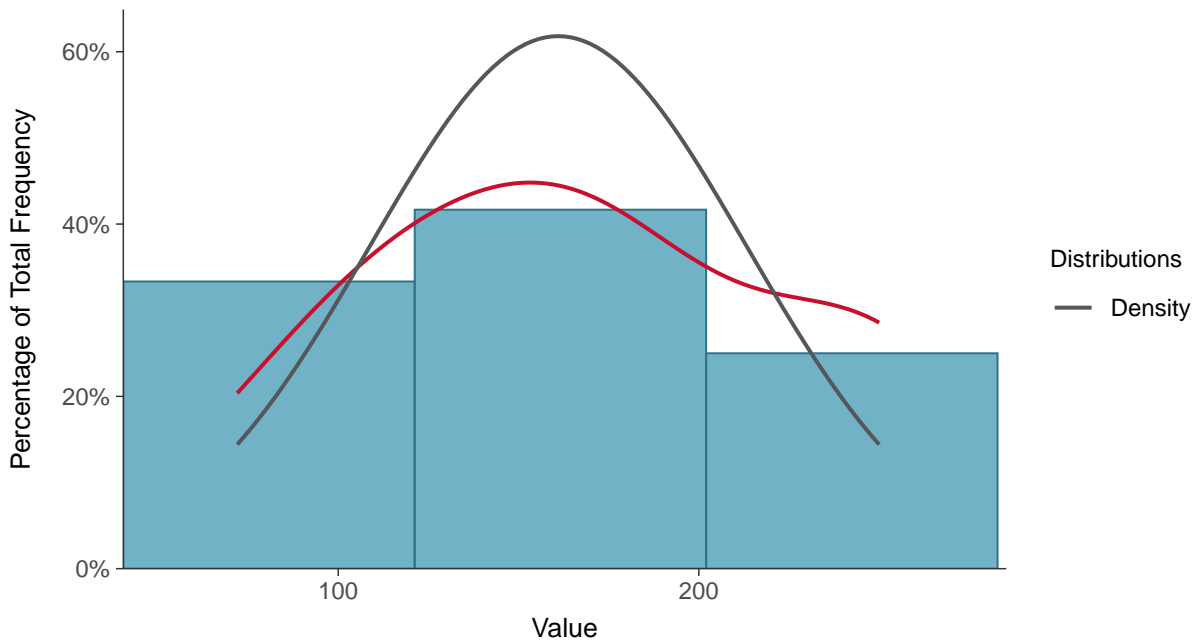
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



#### Histogram

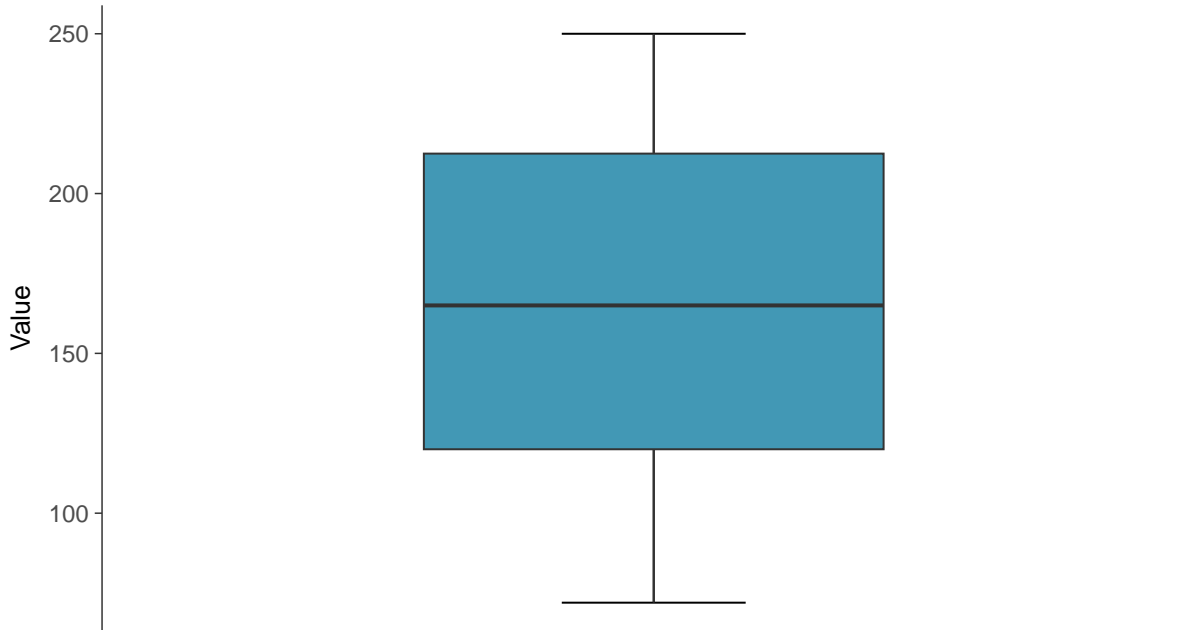
Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)





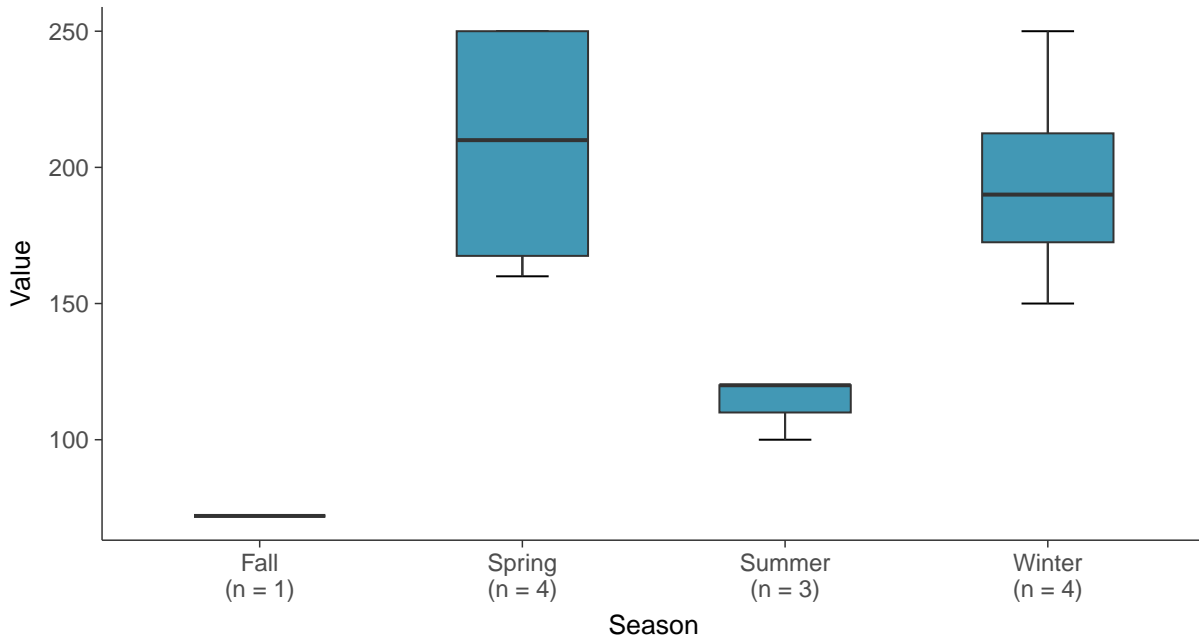
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



### Boxplot by Season

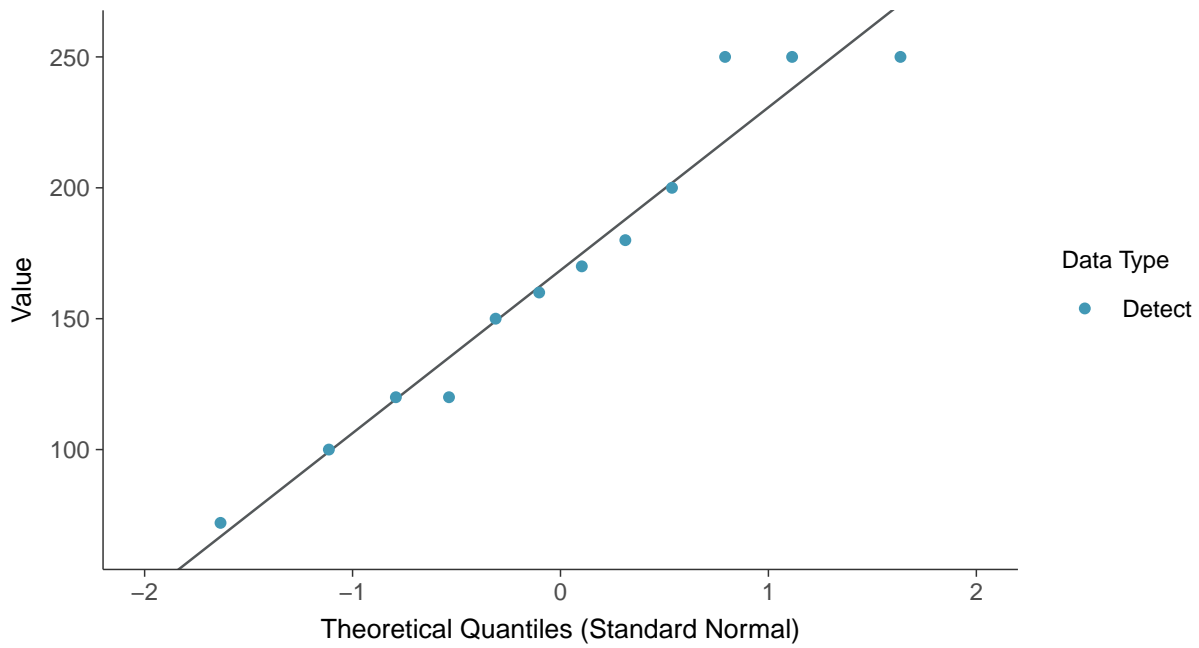
Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)





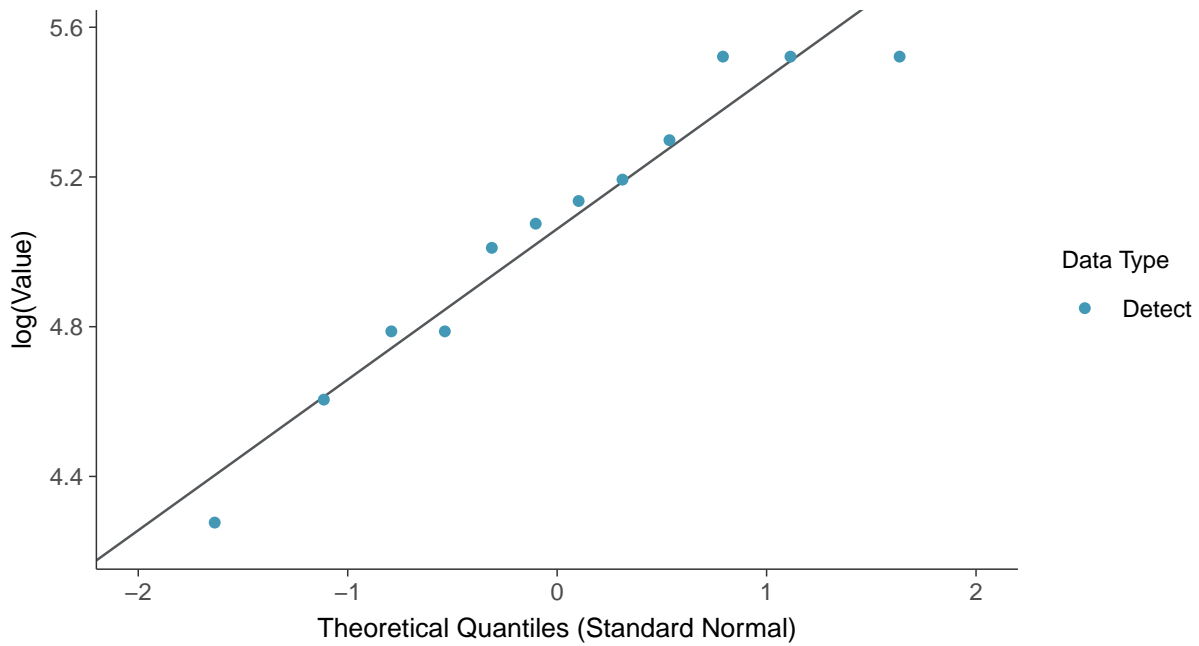
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



### Lognormal Q-Q plot

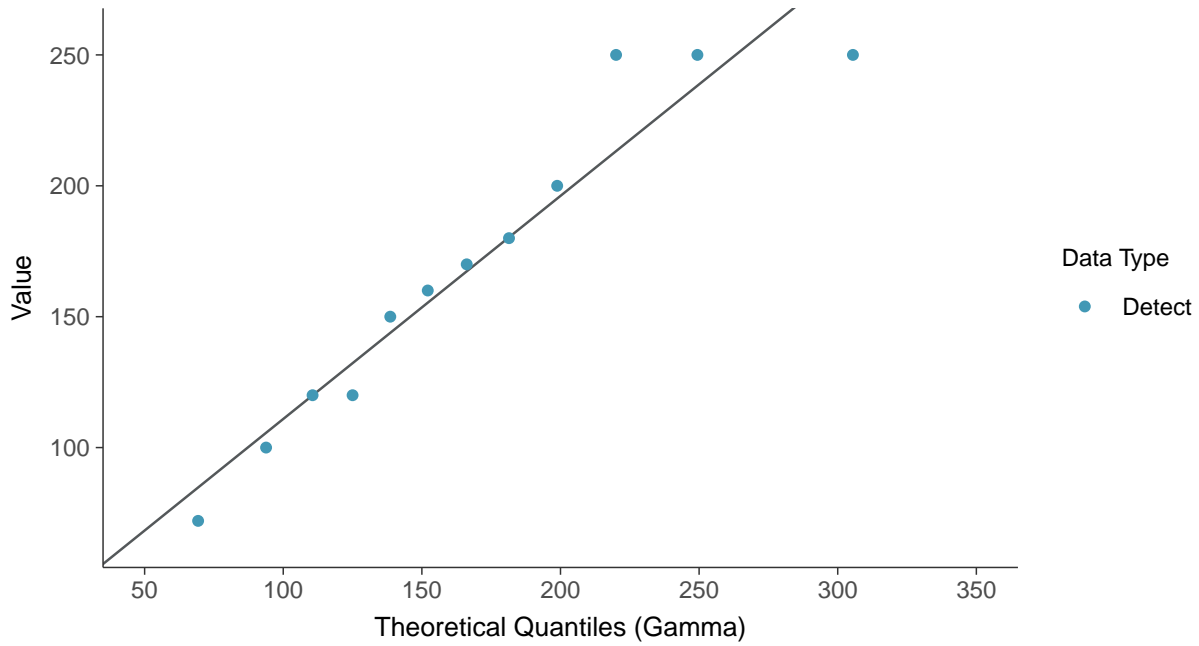
Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)





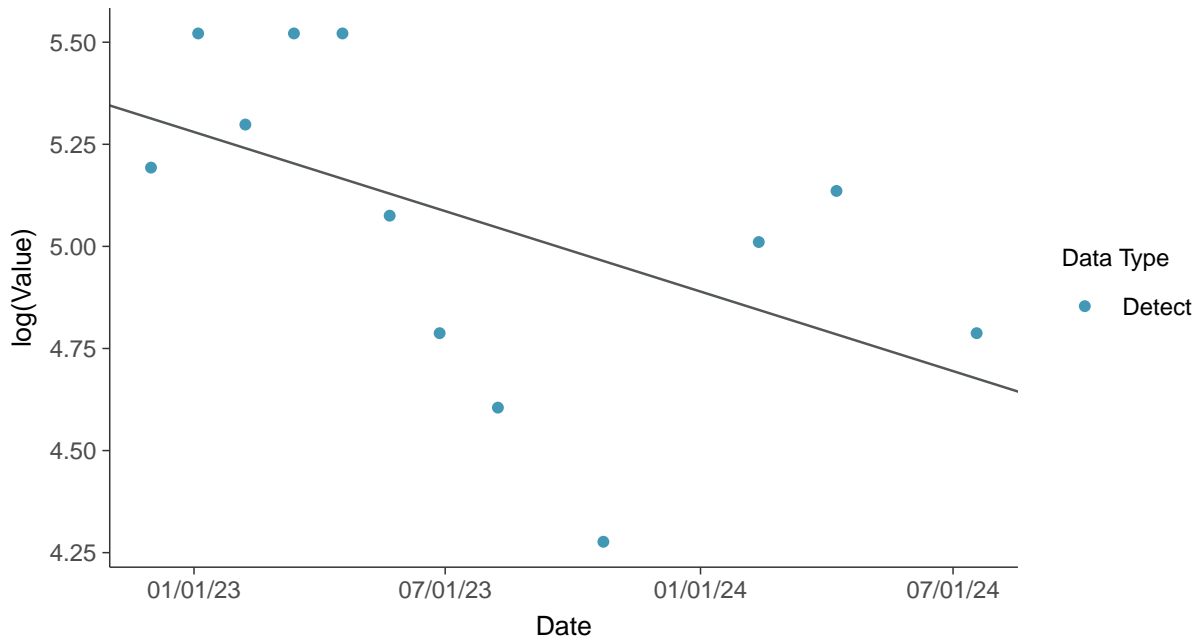
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)

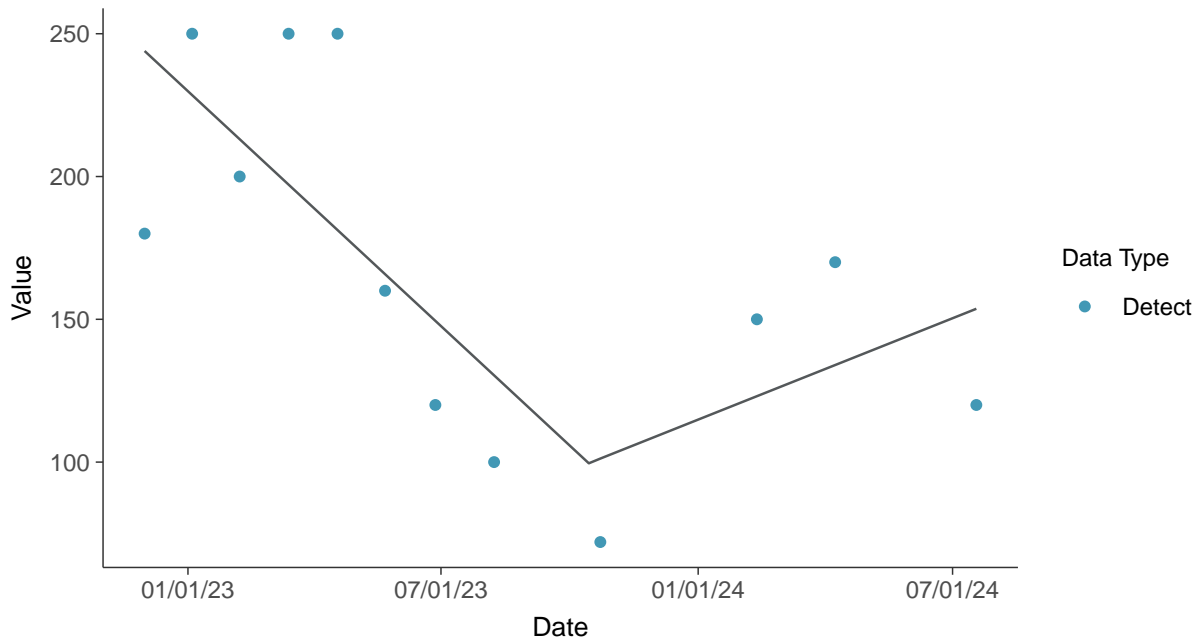






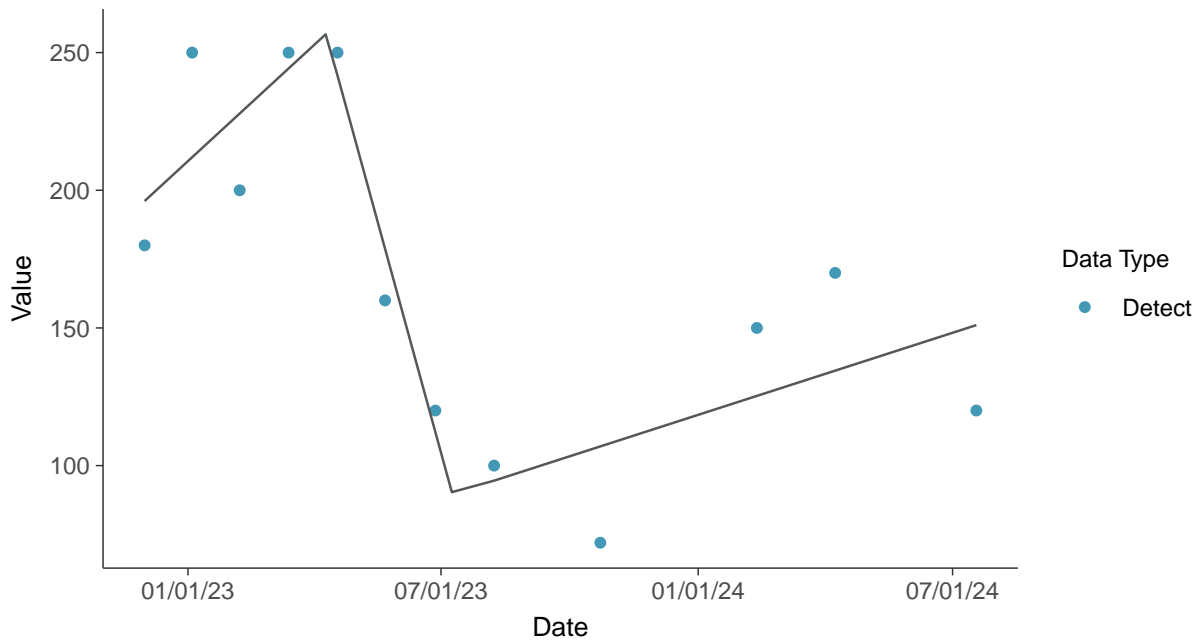
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO<sub>4</sub>), MW-31 (mg/L)



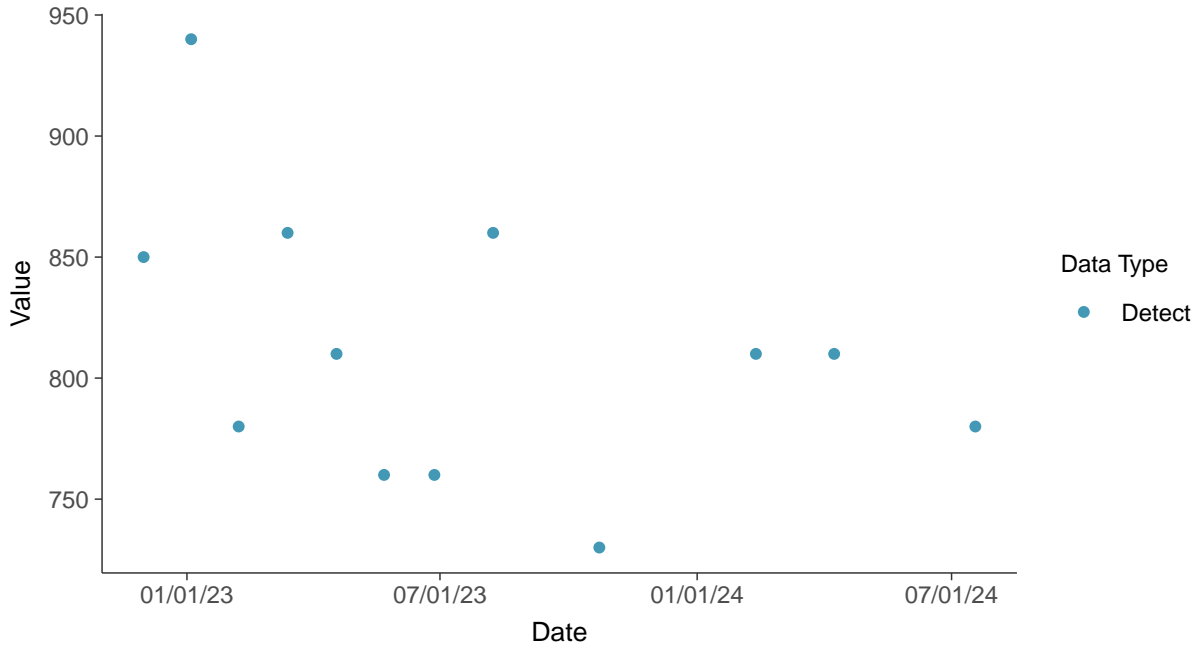


### Appendix III: Total Dissolved Solids, MW-31

ID: 41\_1\_4\_126

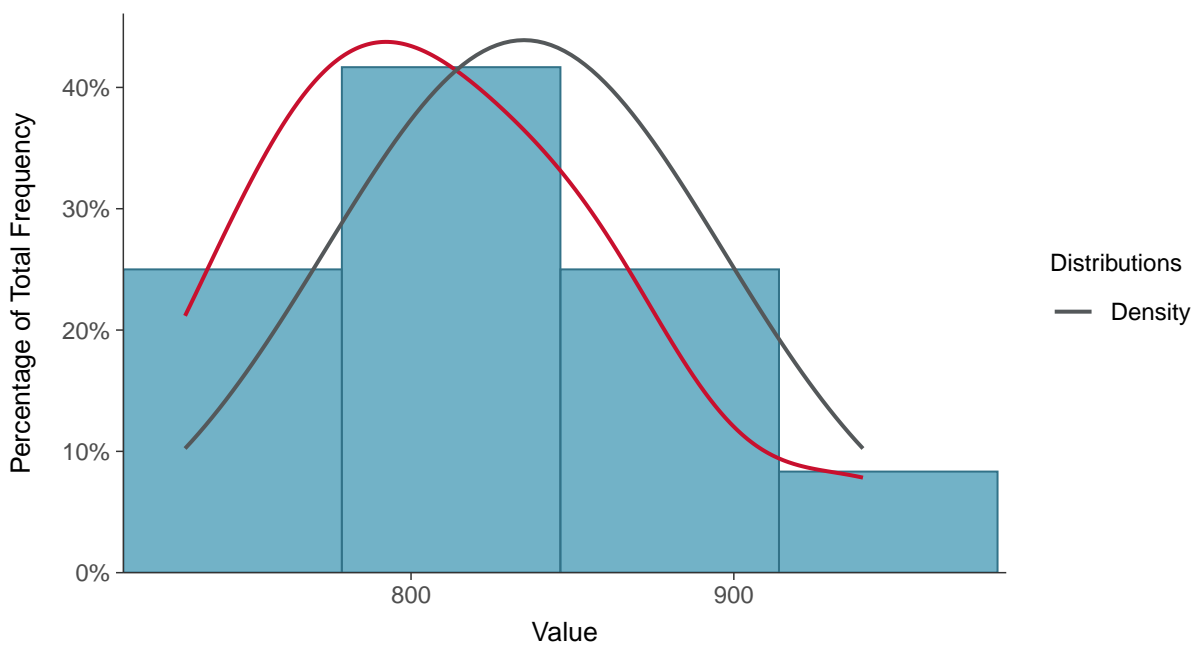
#### Scatter Plot

Total Dissolved Solids, MW-31 (mg/L)



#### Histogram

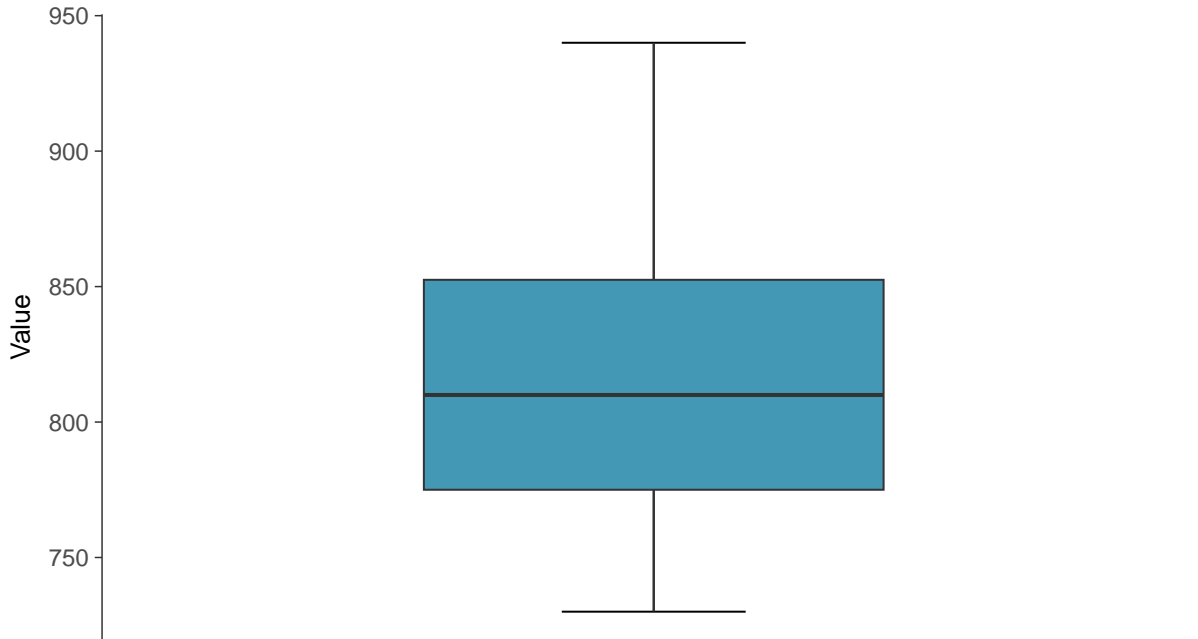
Total Dissolved Solids, MW-31 (mg/L)





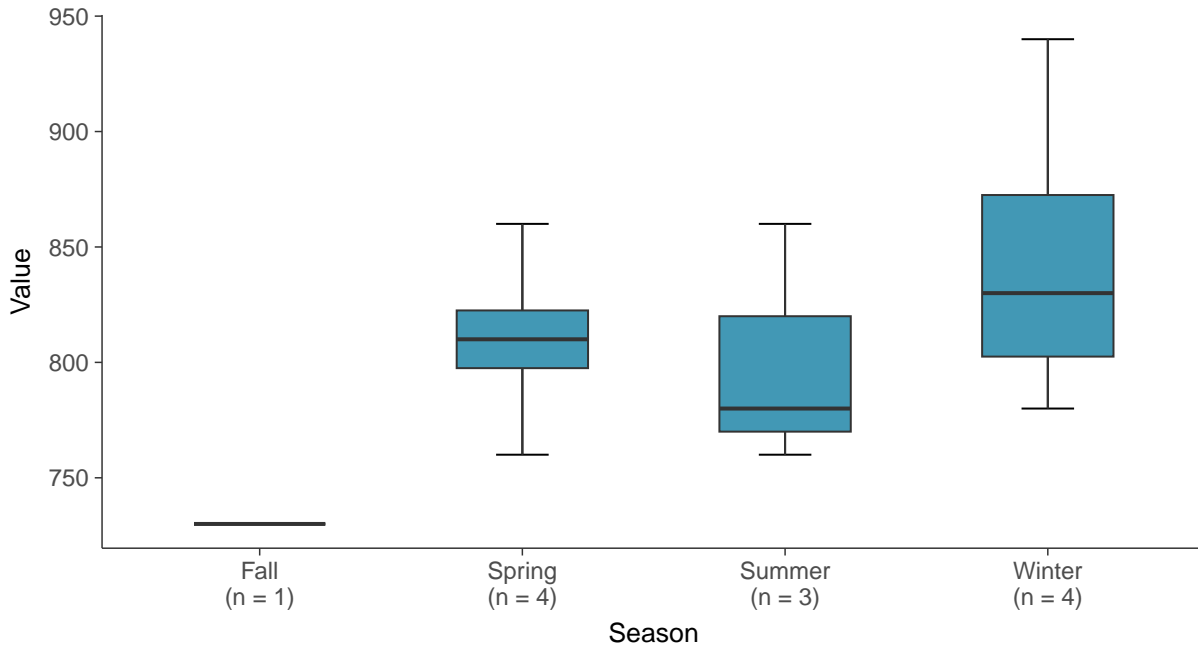
### Boxplot

Total Dissolved Solids, MW-31 (mg/L)



### Boxplot by Season

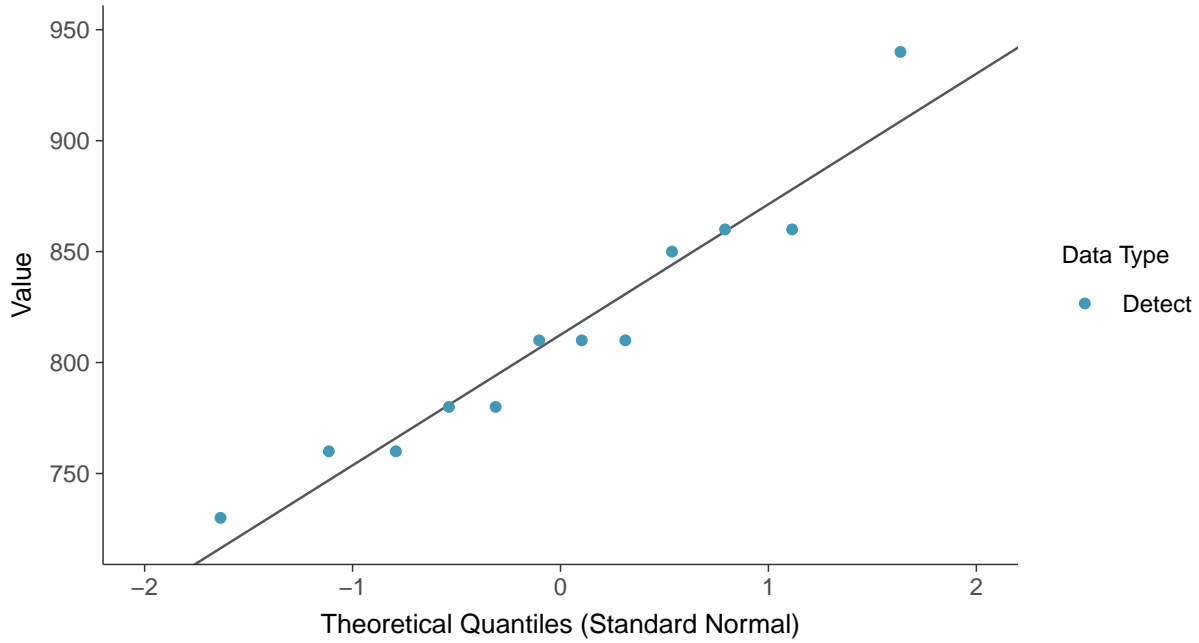
Total Dissolved Solids, MW-31 (mg/L)





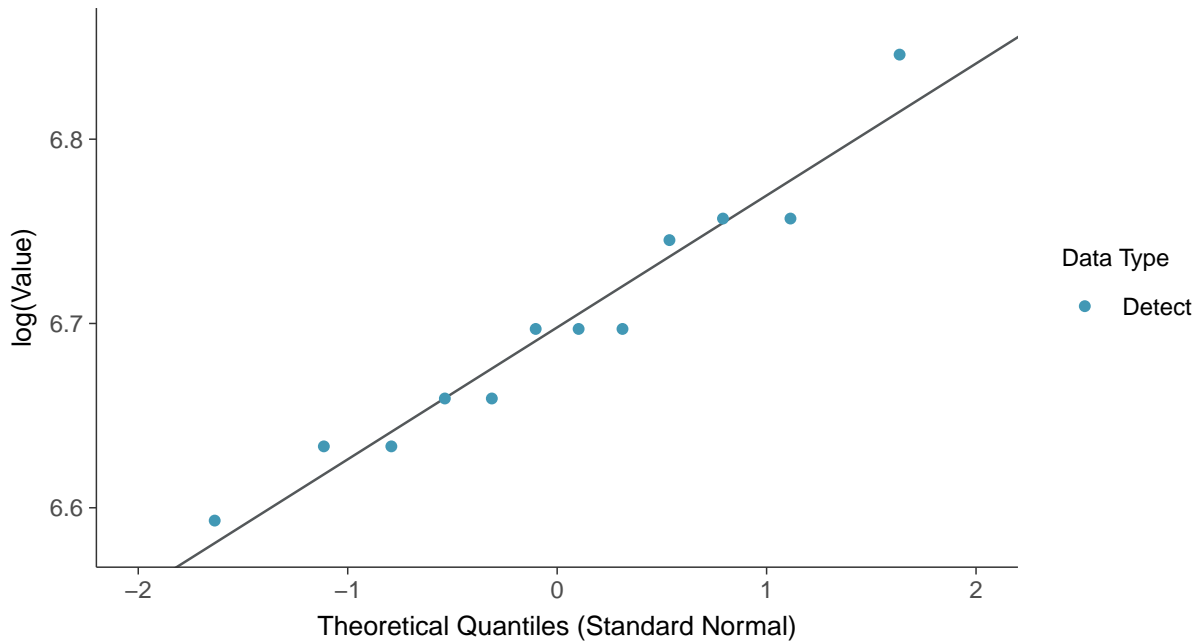
### Normal Q-Q plot

Total Dissolved Solids, MW-31 (mg/L)



### Lognormal Q-Q plot

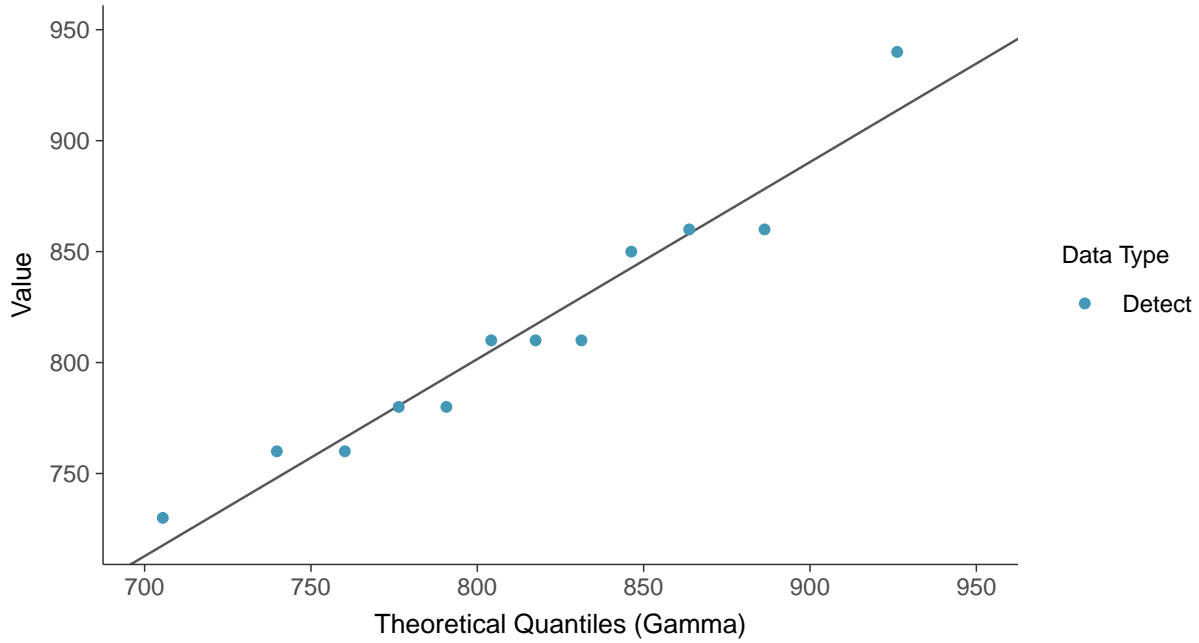
Total Dissolved Solids, MW-31 (mg/L)





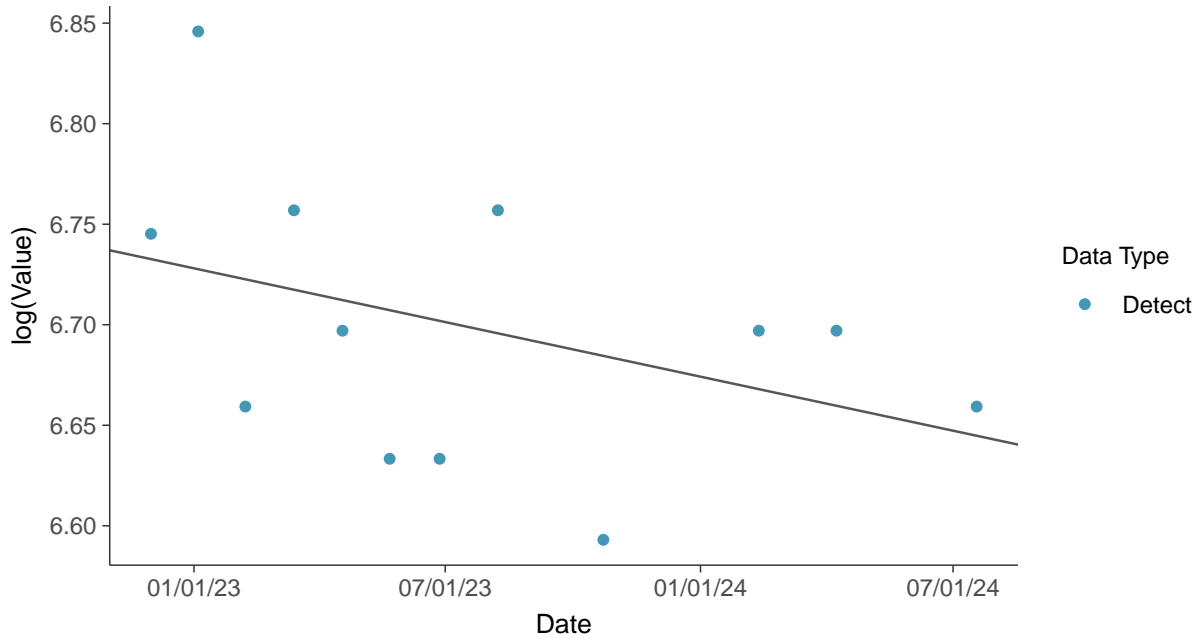
### Gamma Q-Q plot

Total Dissolved Solids, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

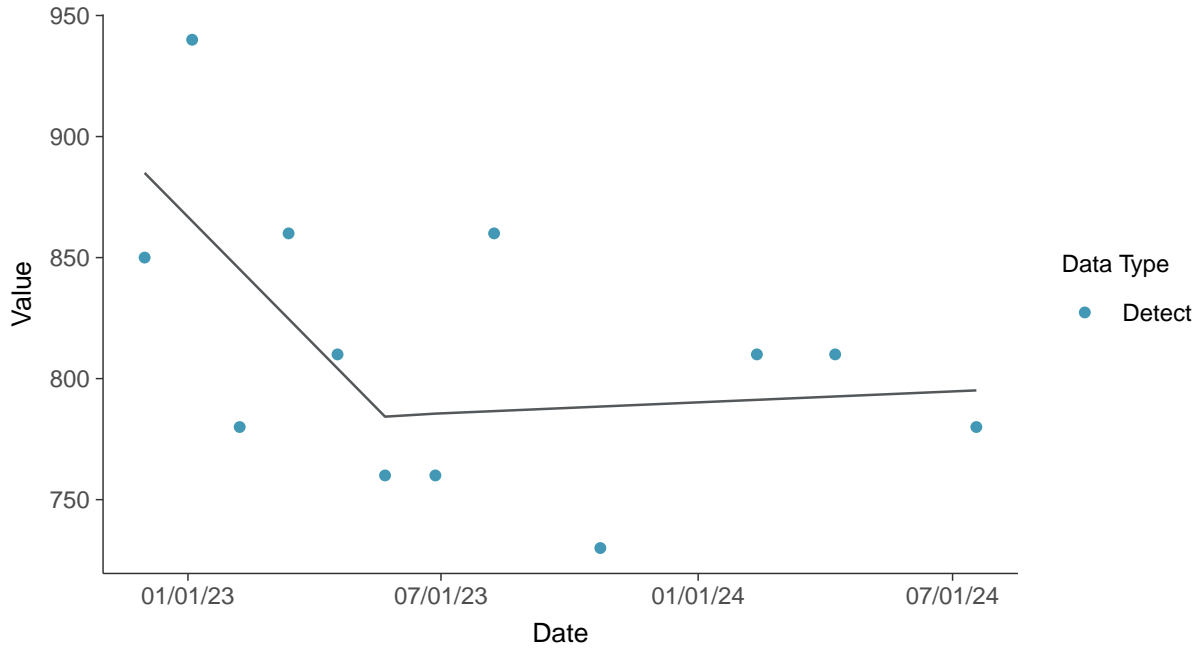
Total Dissolved Solids, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-31 (mg/L)



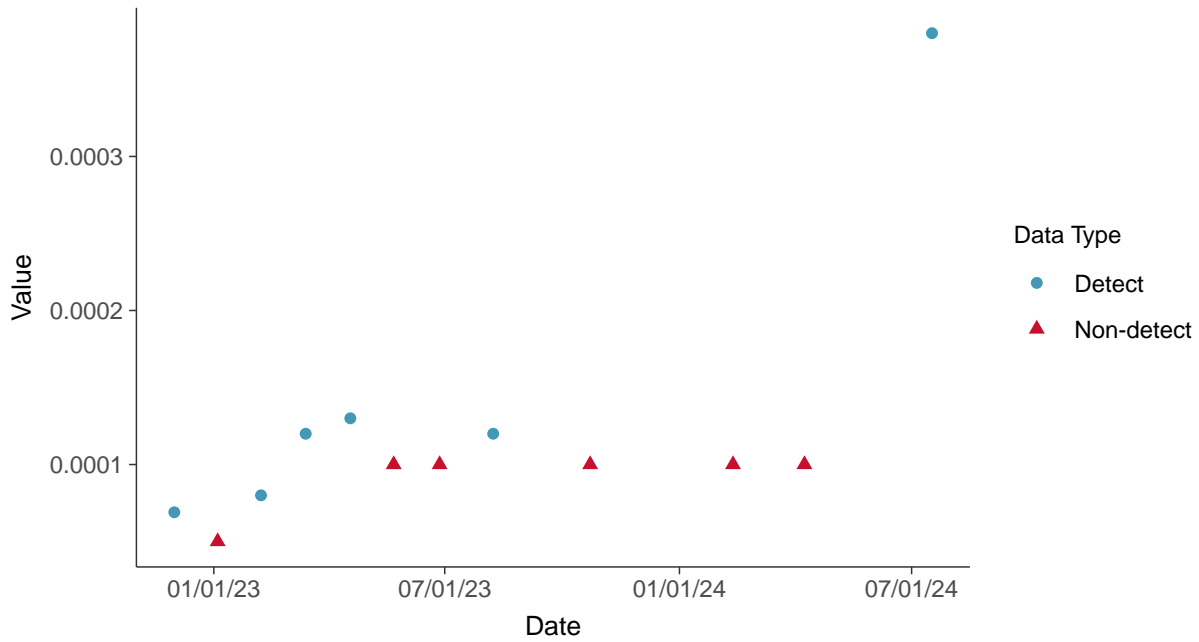


### Appendix IV: Antimony, MW-31

ID: 41\_1\_5\_101

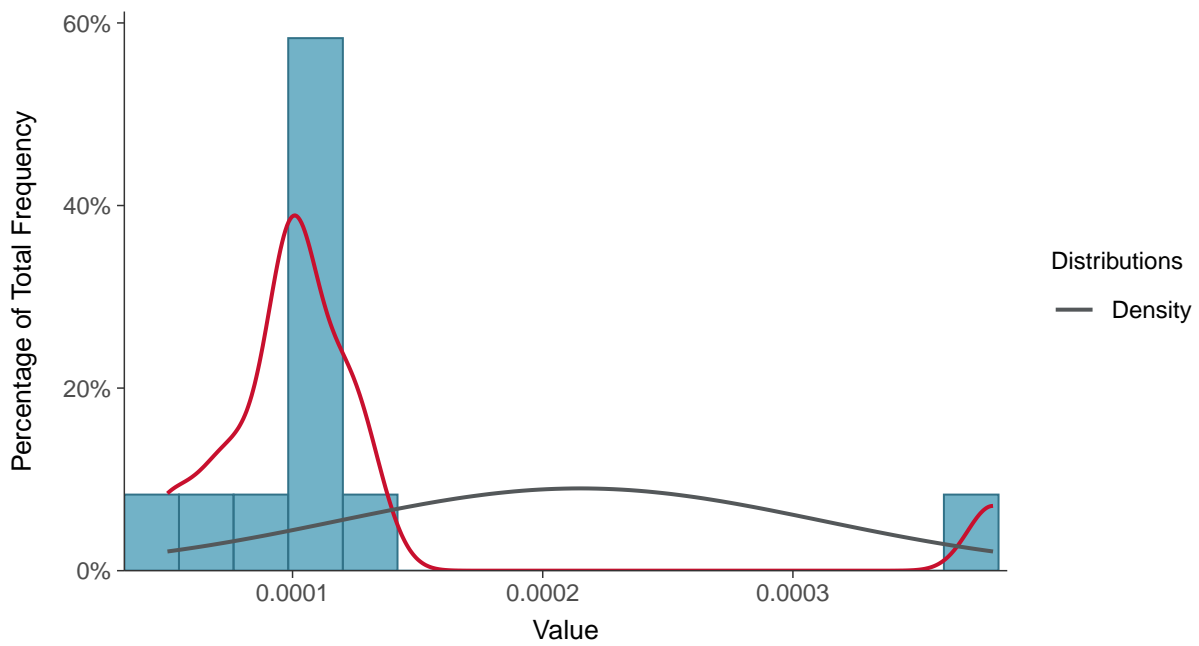
#### Scatter Plot

Antimony, MW-31 (mg/L)



#### Histogram

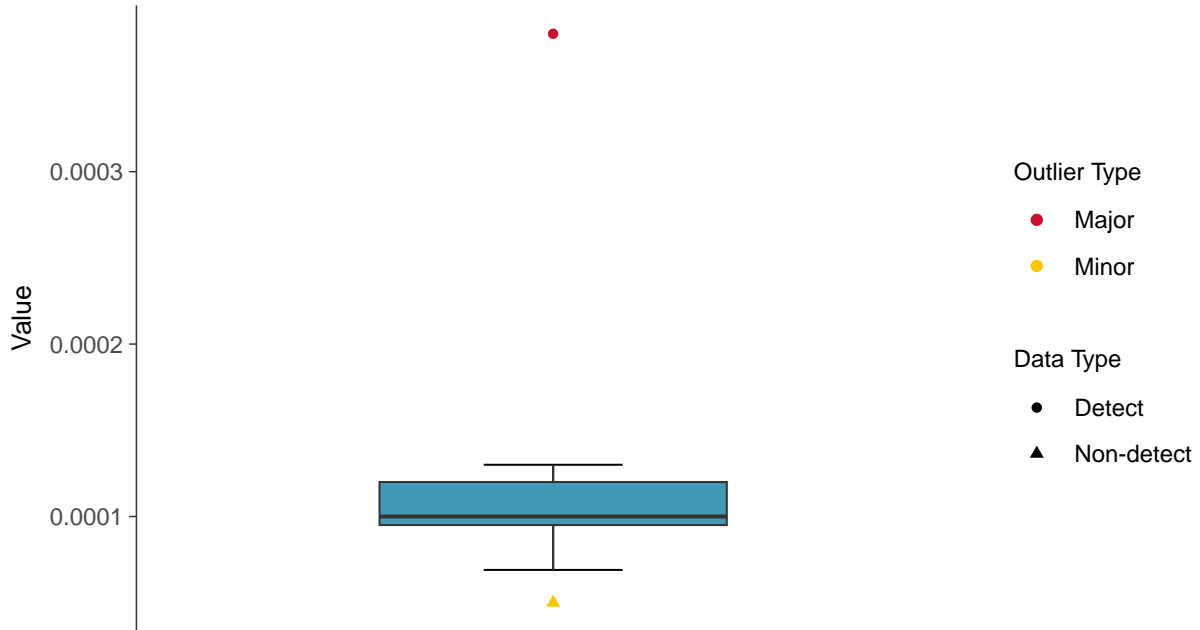
Antimony, MW-31 (mg/L)





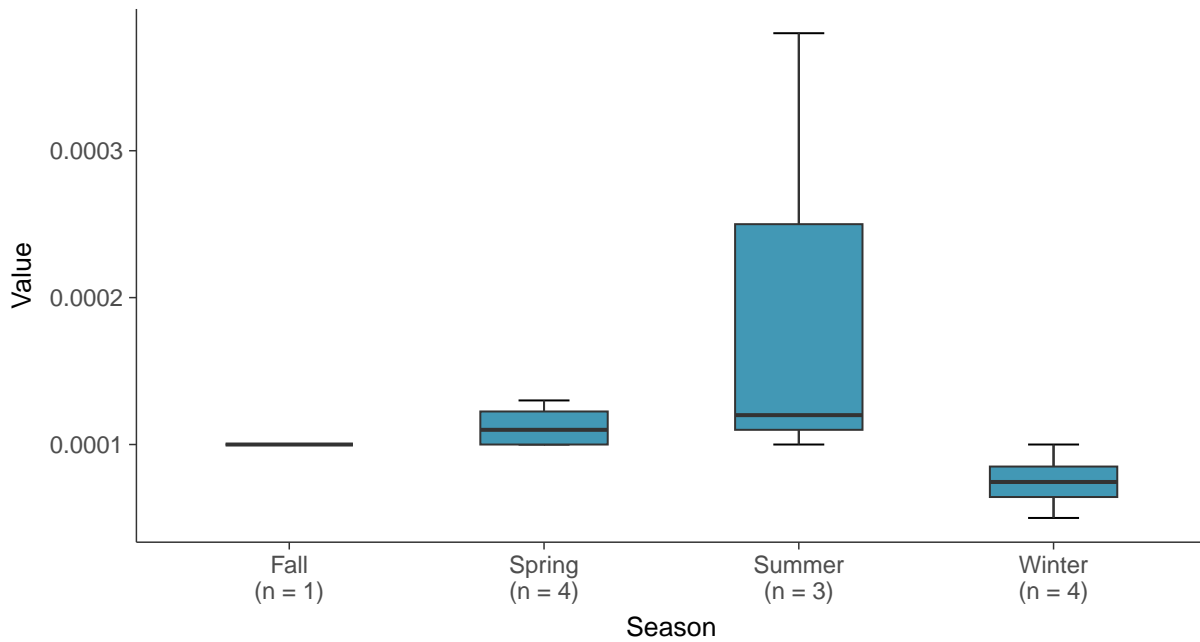
### Boxplot

Antimony, MW-31 (mg/L)



### Boxplot by Season

Antimony, MW-31 (mg/L)

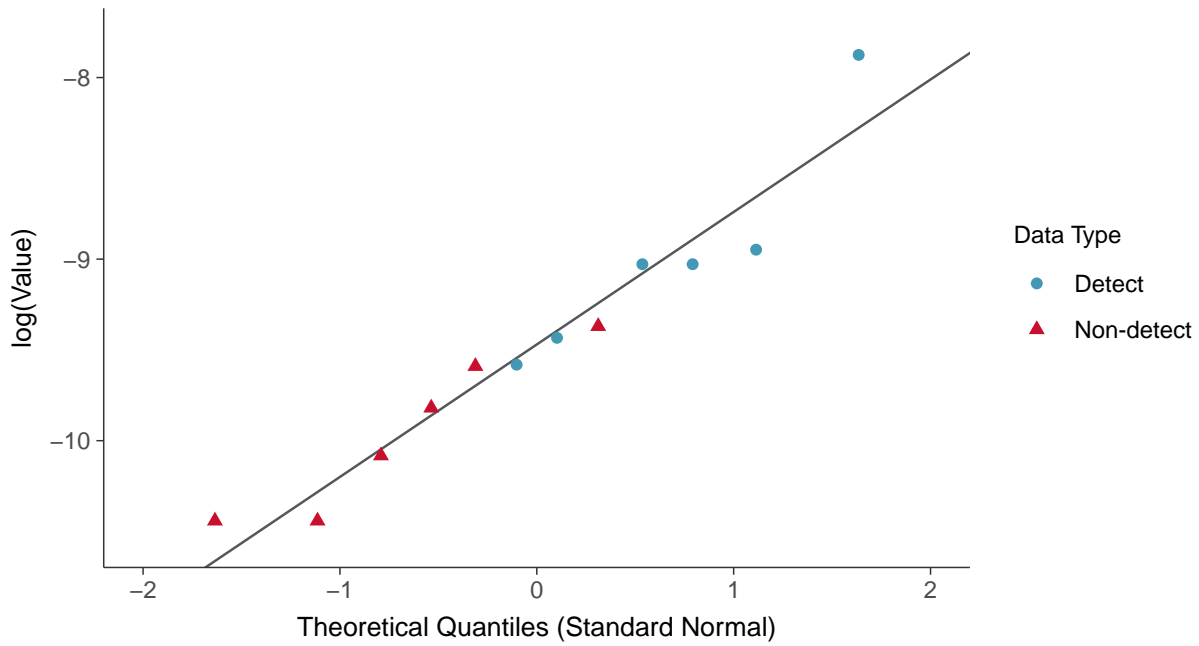






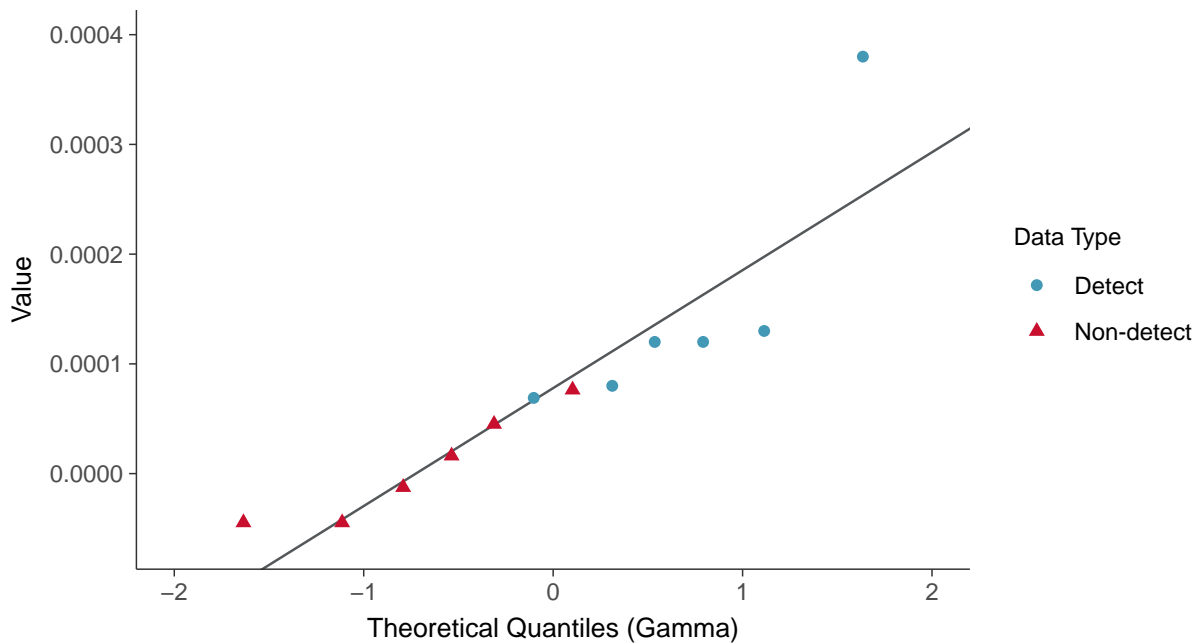
### Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)



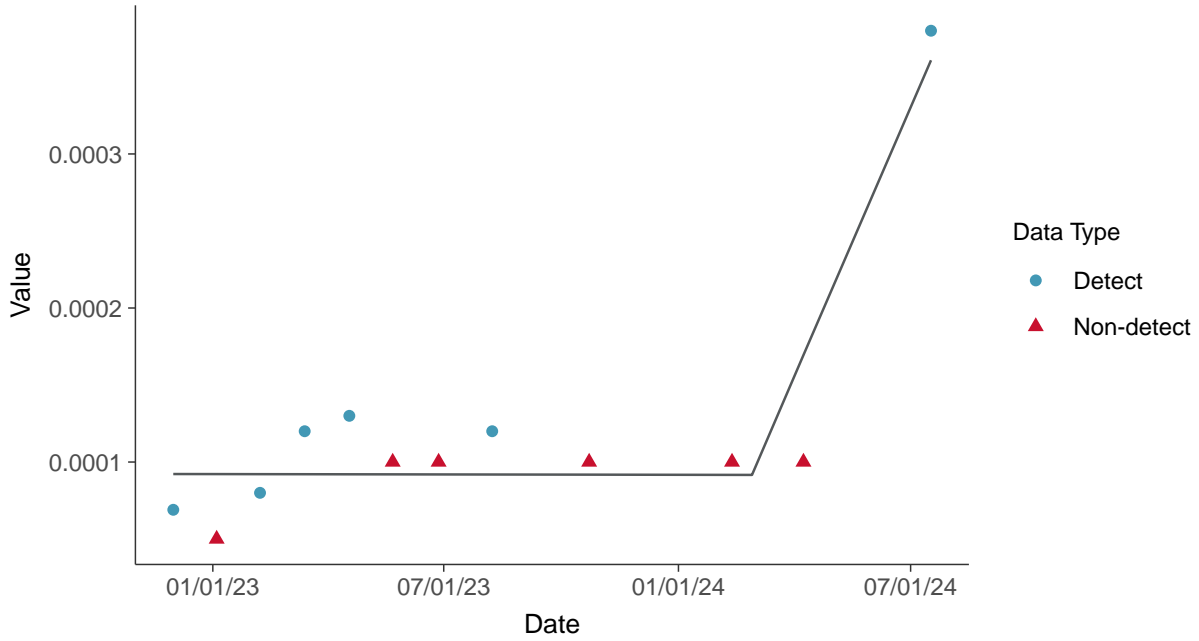
### Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-31 (mg/L)

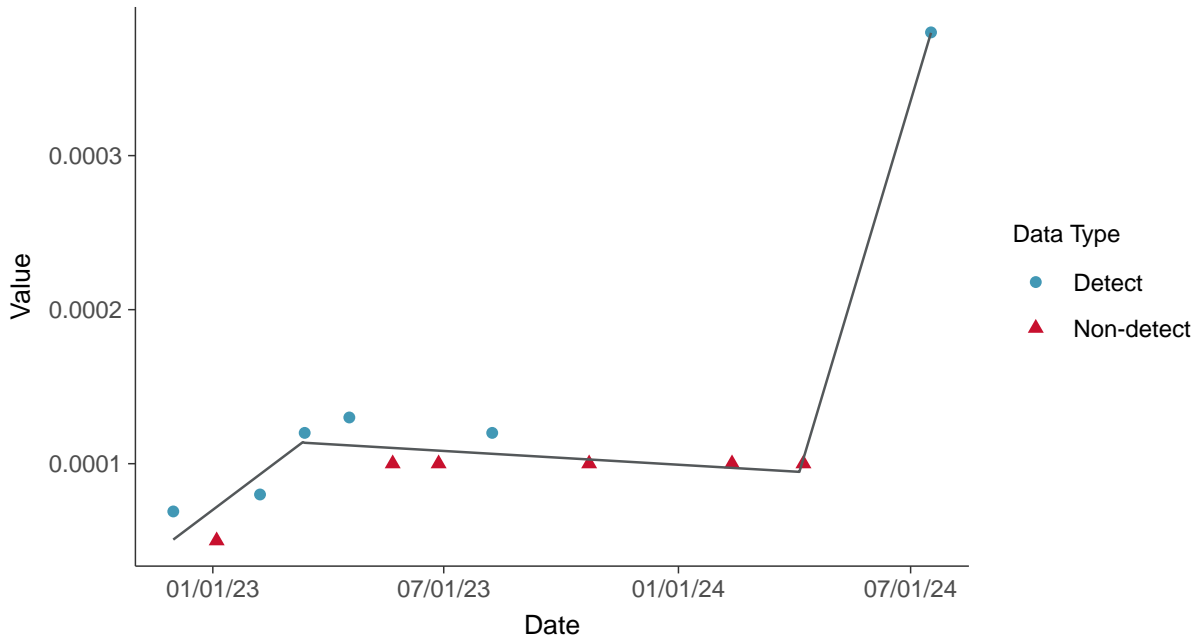




**Trend Regression: Piecewise Linear-Linear**  
Antimony, MW-31 (mg/L)



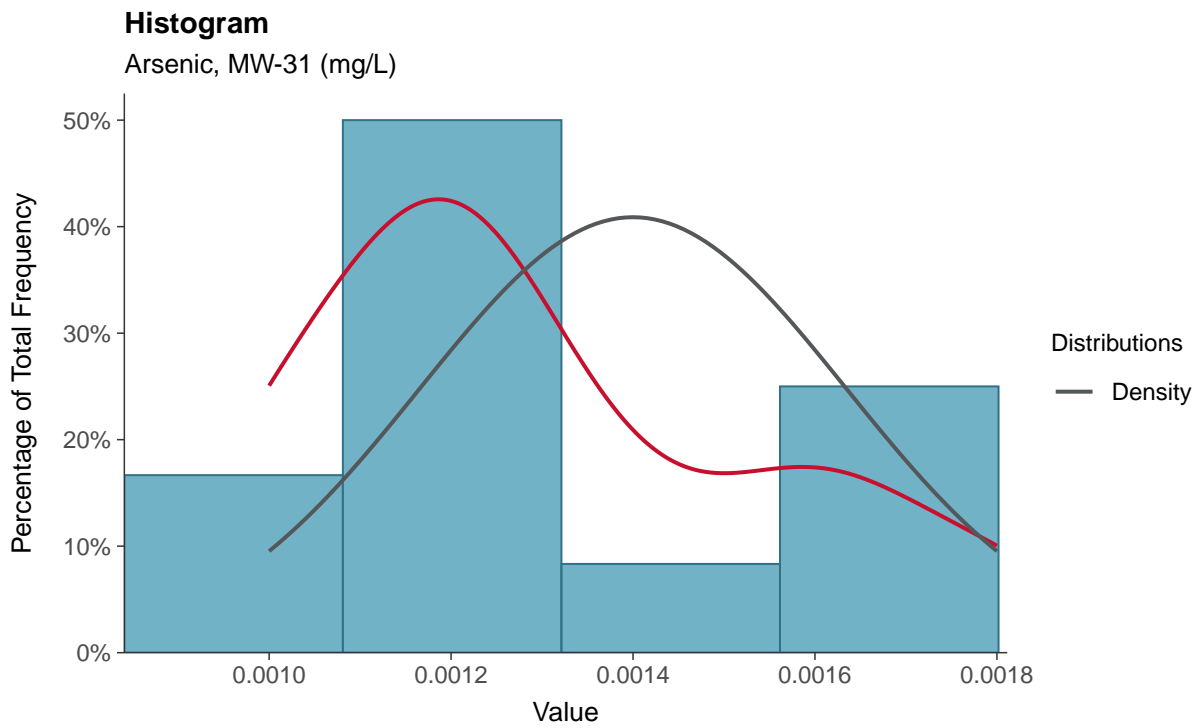
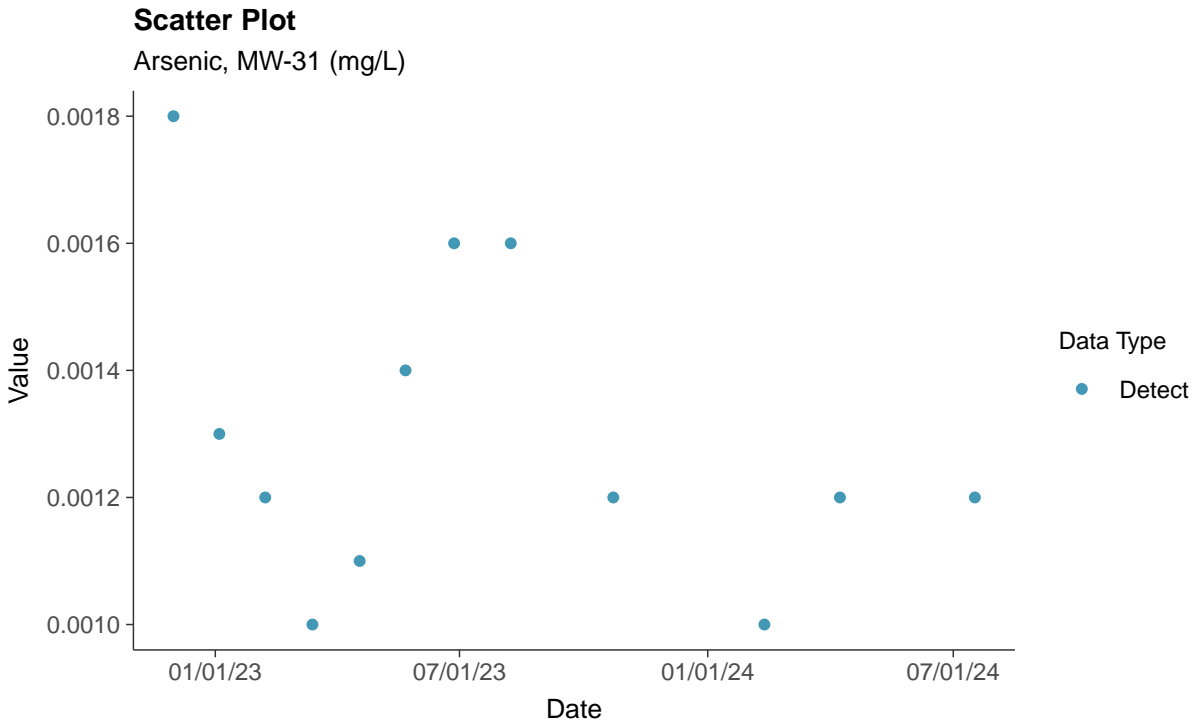
**Trend Regression: Piecewise Linear-Linear-Linear**  
Antimony, MW-31 (mg/L)





### Appendix IV: Arsenic, MW-31

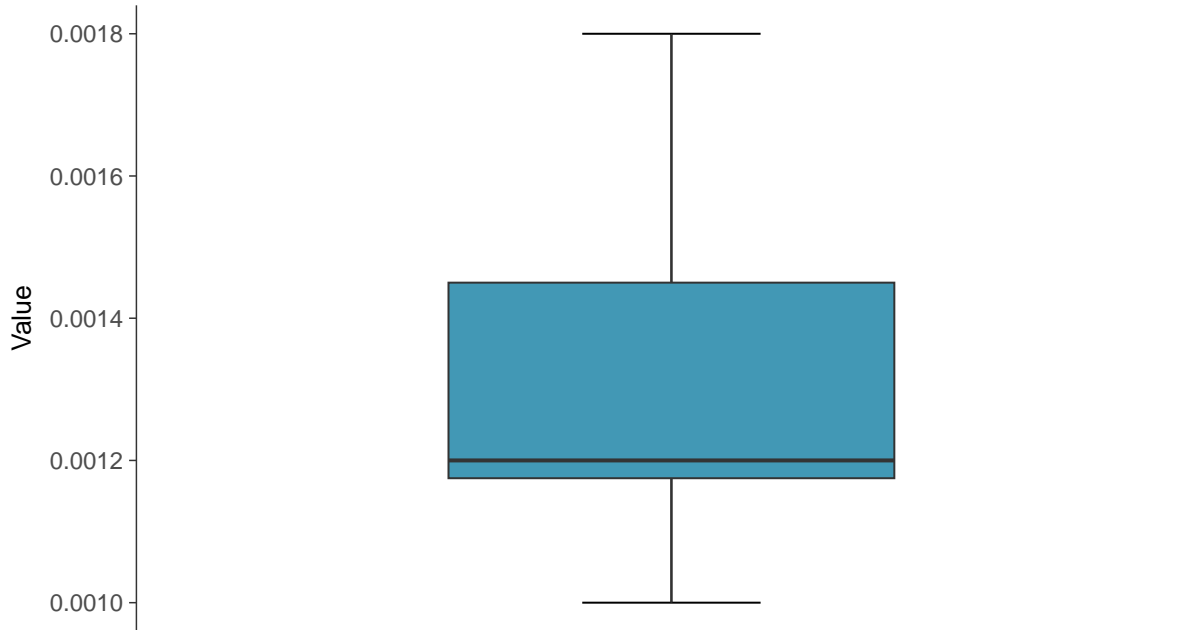
ID: 41\_1\_5\_102





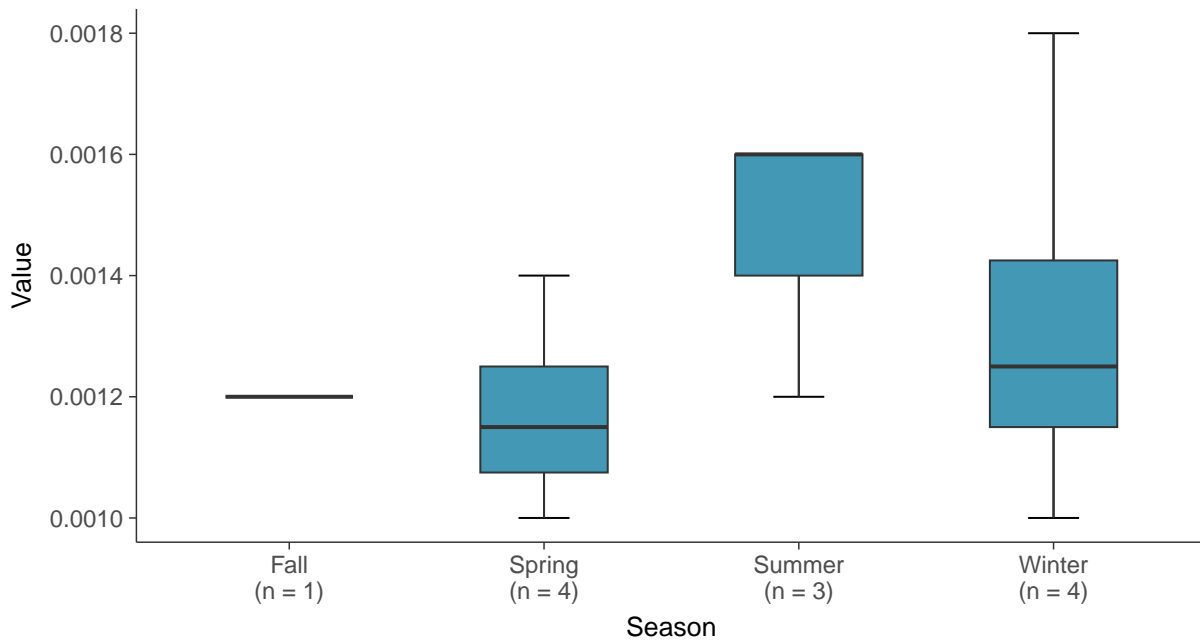
### Boxplot

Arsenic, MW-31 (mg/L)



### Boxplot by Season

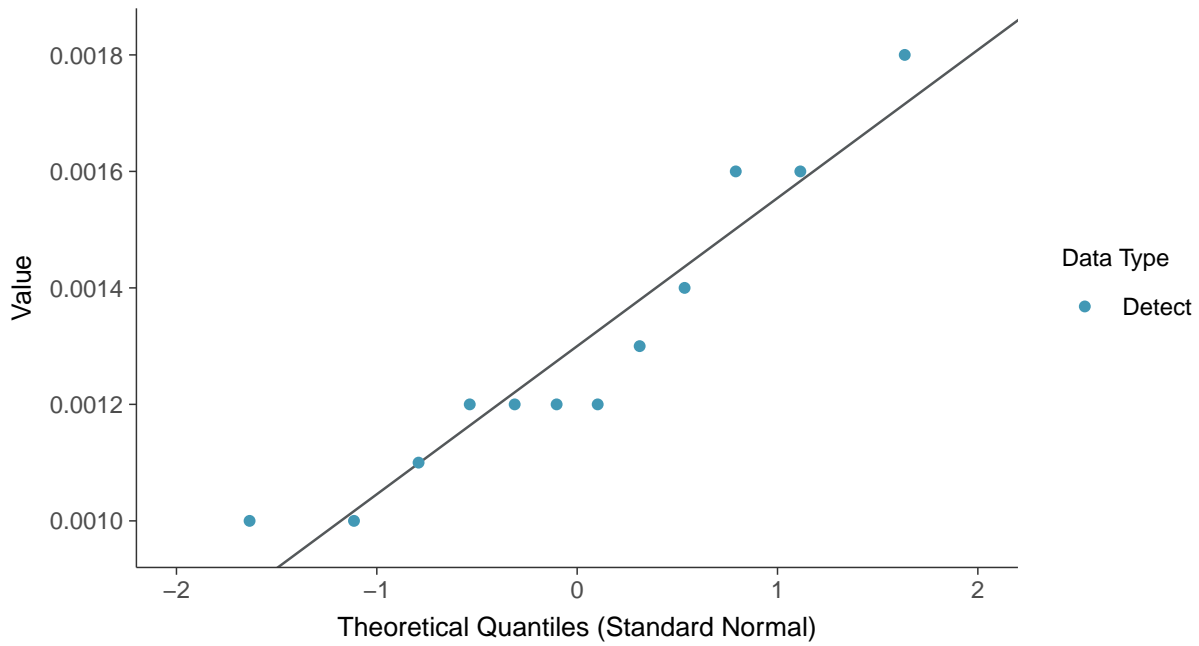
Arsenic, MW-31 (mg/L)





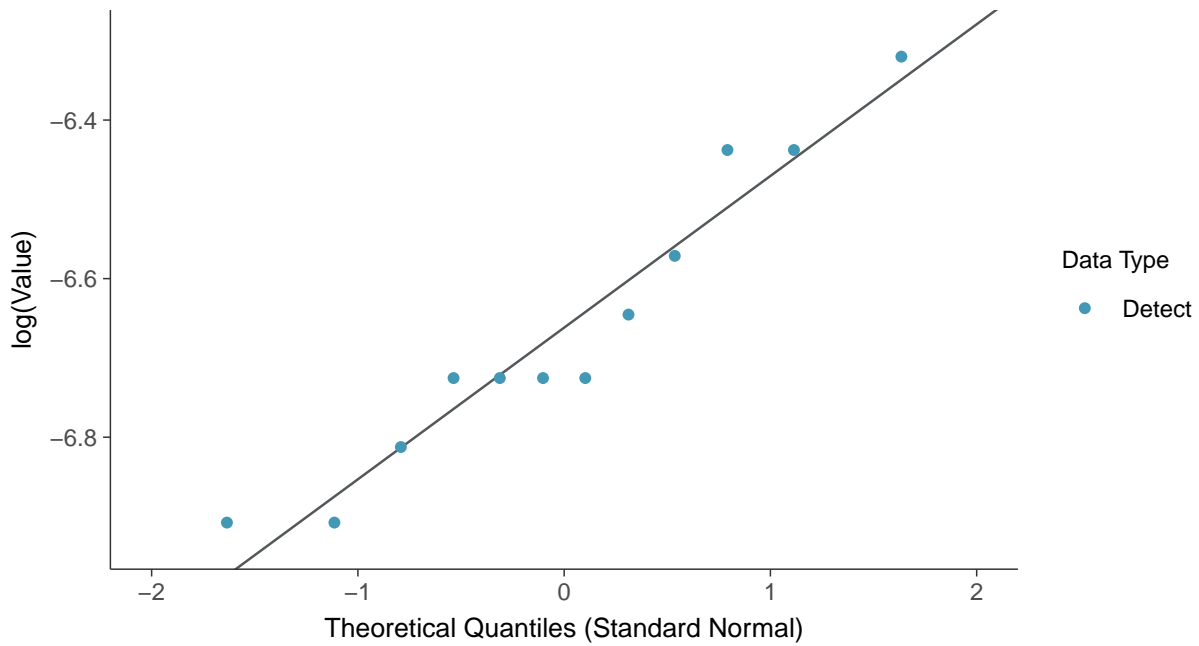
### Normal Q-Q plot

Arsenic, MW-31 (mg/L)



### Lognormal Q-Q plot

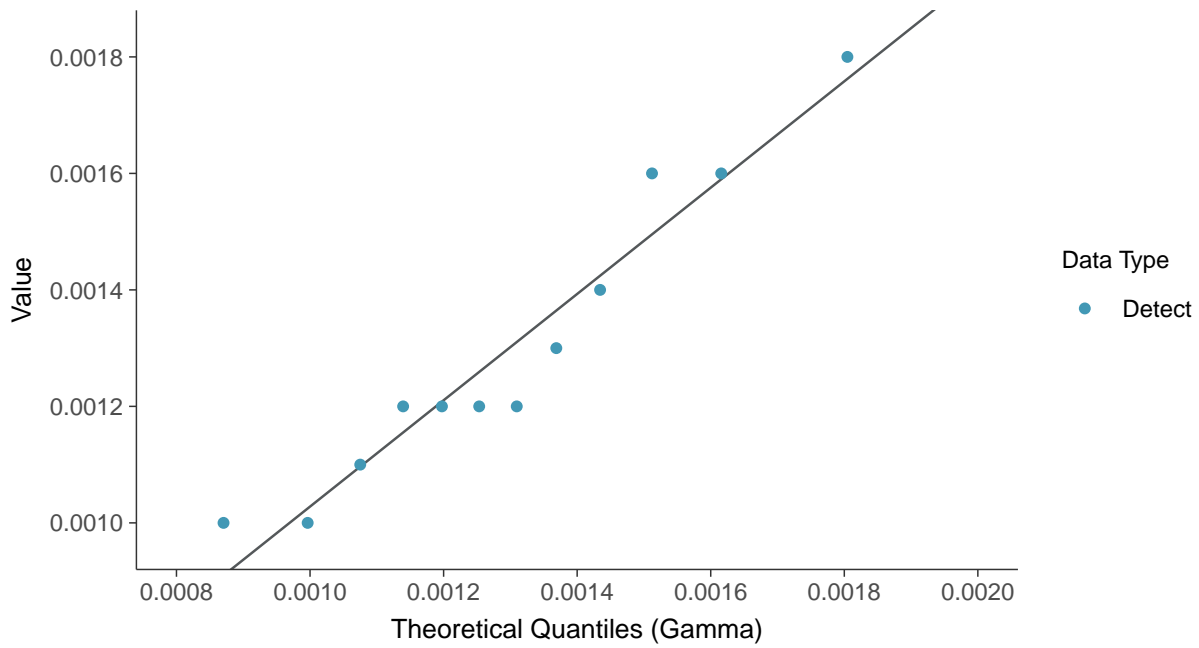
Arsenic, MW-31 (mg/L)





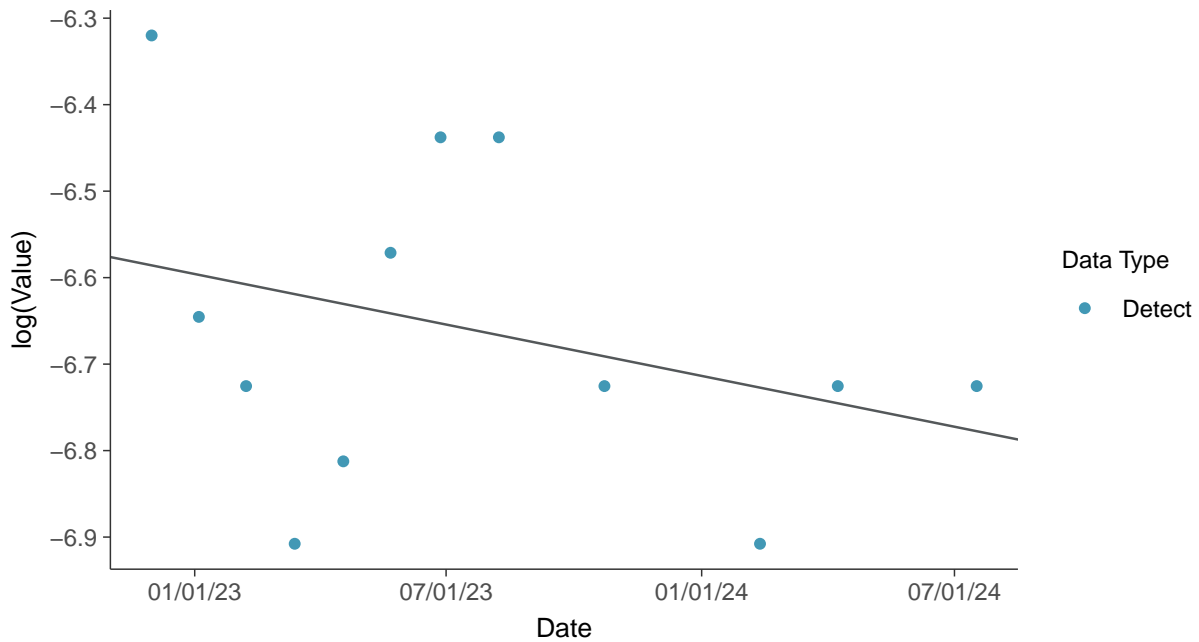
### Gamma Q-Q plot

Arsenic, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

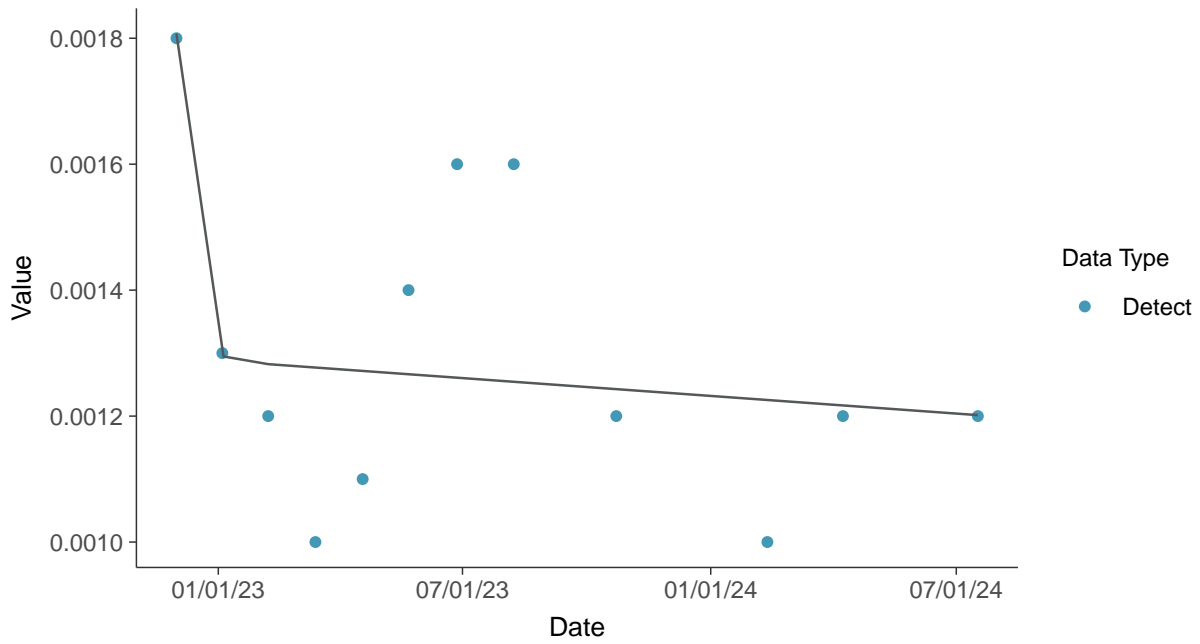
Arsenic, MW-31 (mg/L)





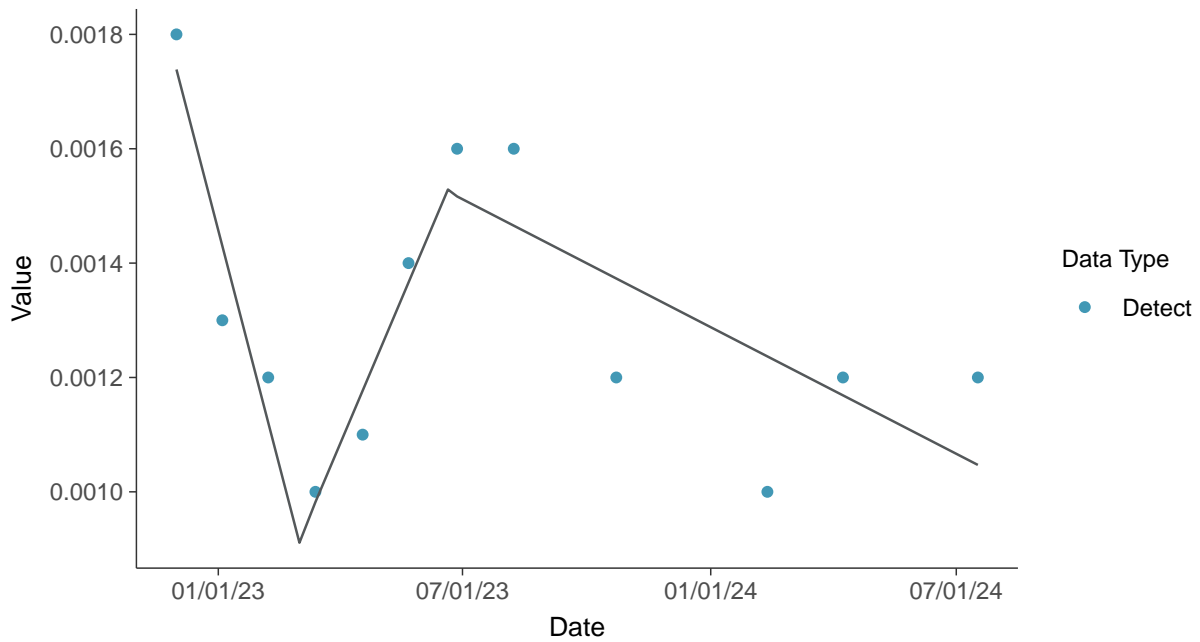
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

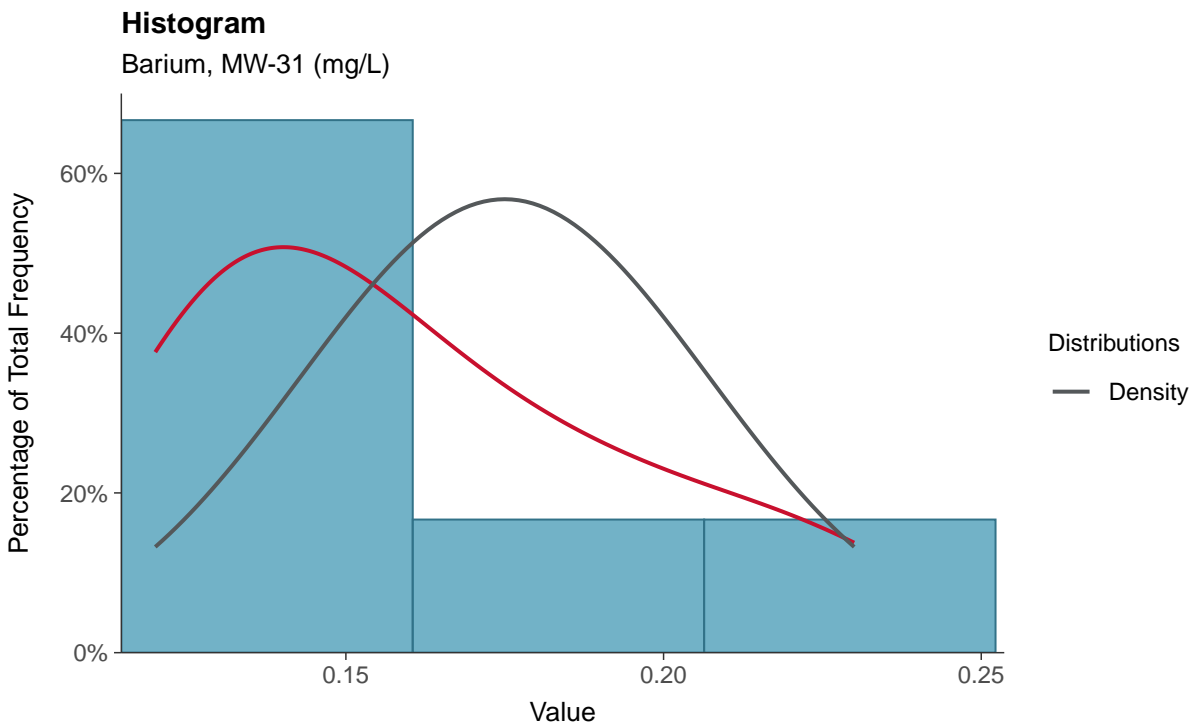
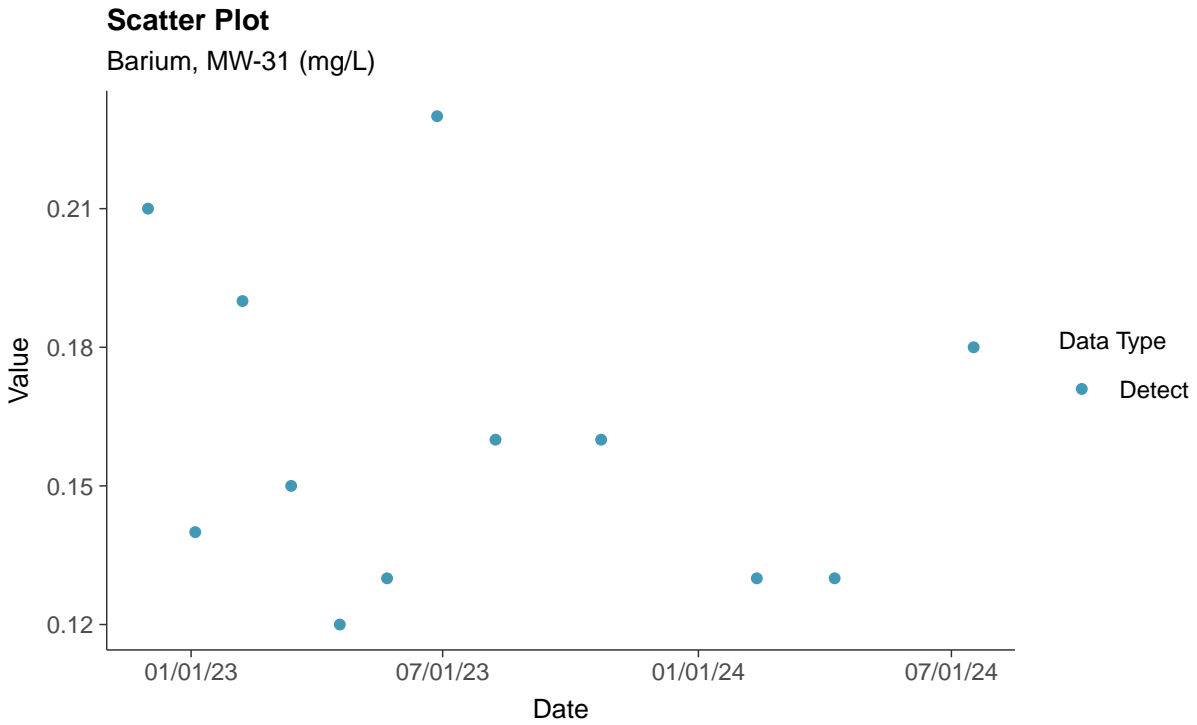
Arsenic, MW-31 (mg/L)





### Appendix IV: Barium, MW-31

ID: 41\_1\_5\_103

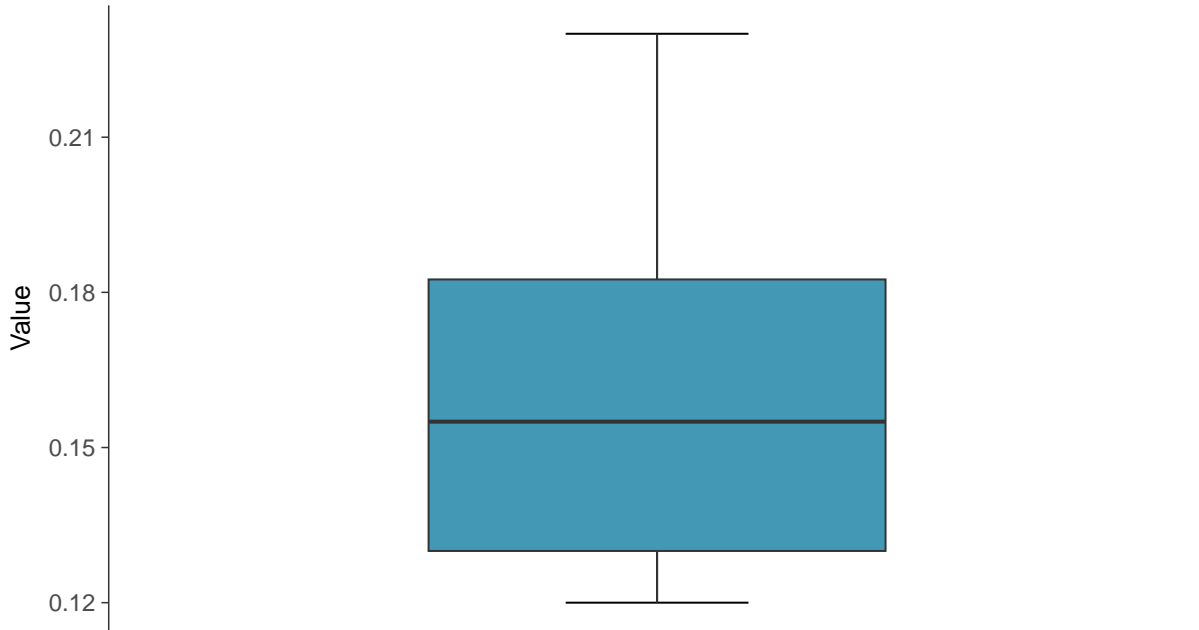






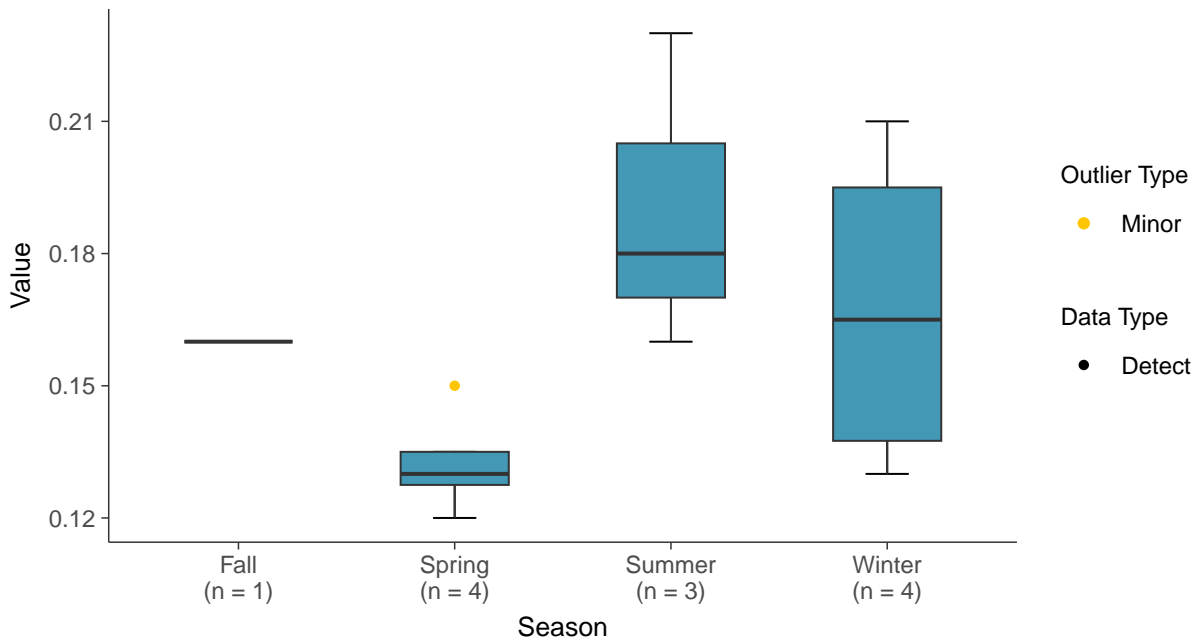
### Boxplot

Barium, MW-31 (mg/L)



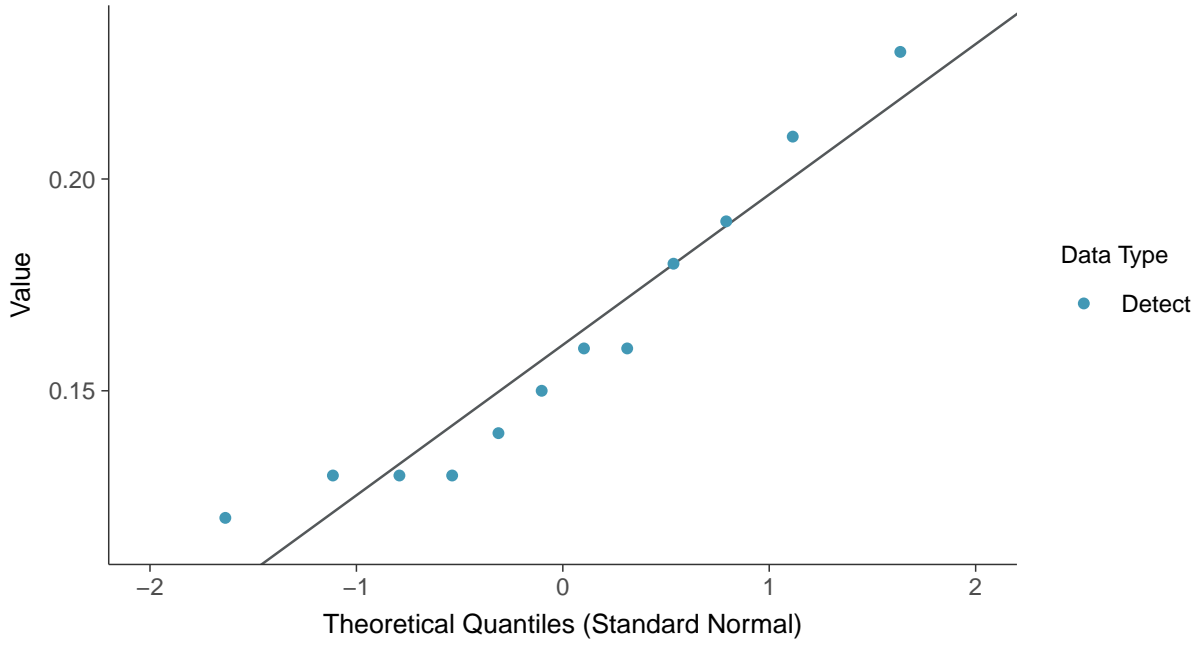
### Boxplot by Season

Barium, MW-31 (mg/L)

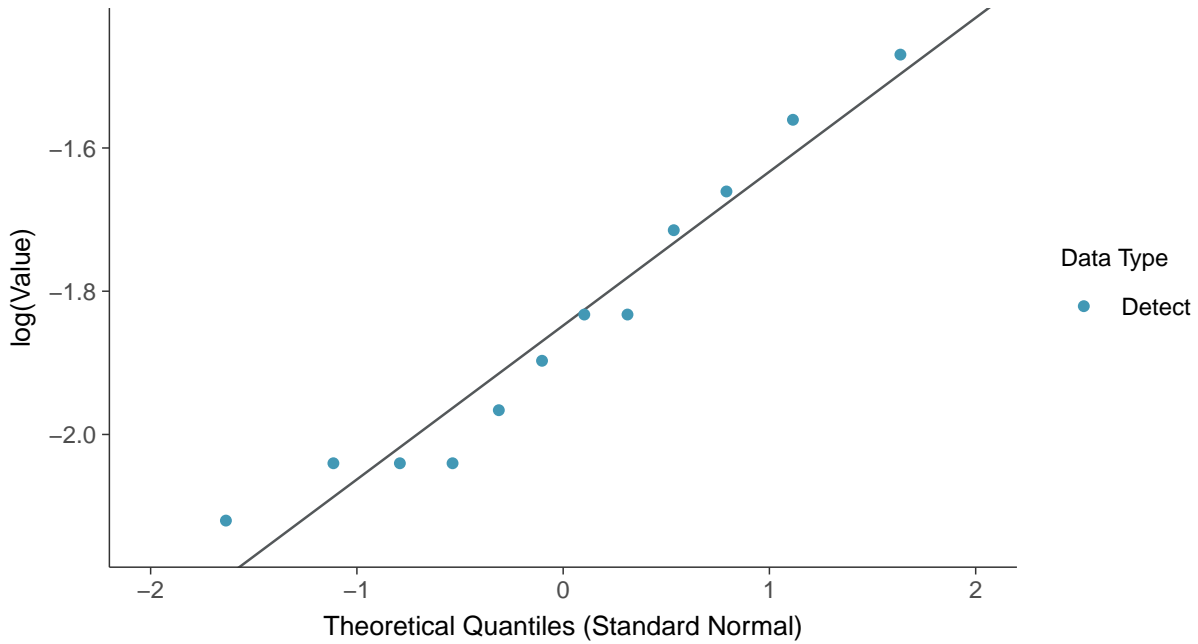




**Normal Q-Q plot**  
Barium, MW-31 (mg/L)



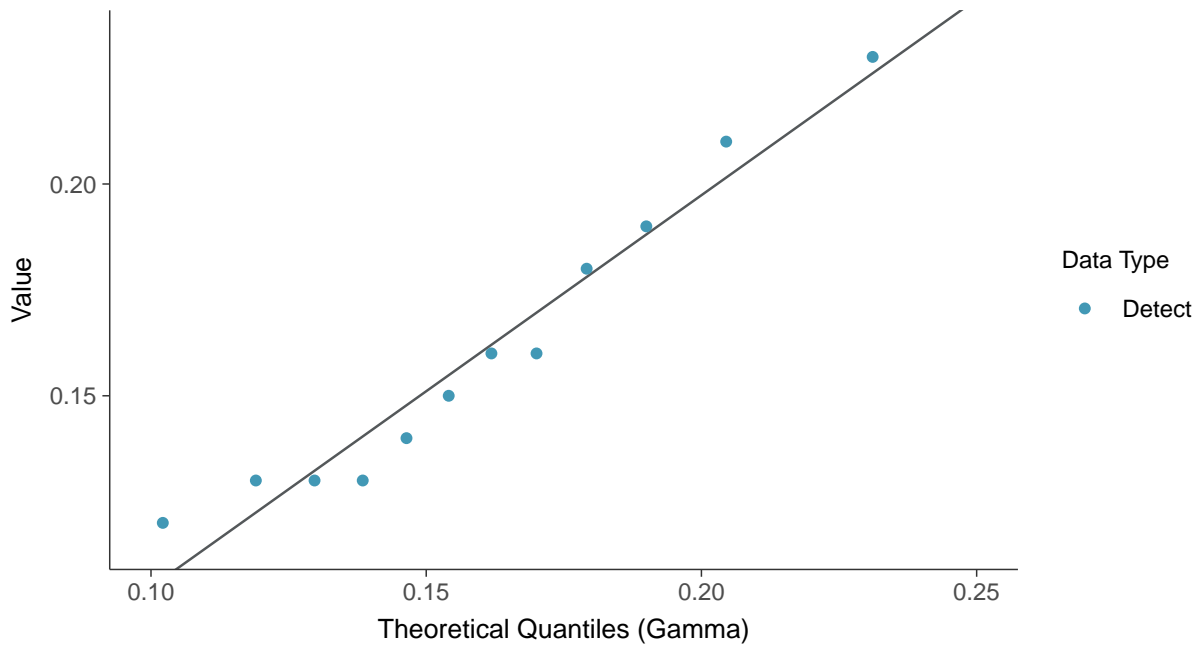
**Lognormal Q-Q plot**  
Barium, MW-31 (mg/L)





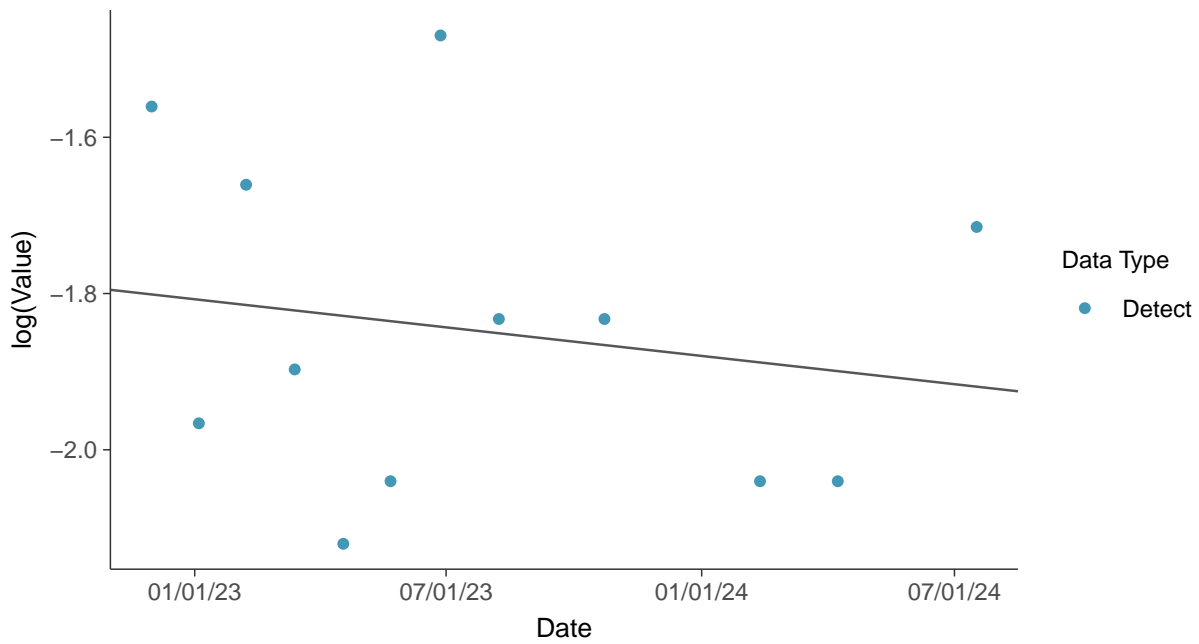
### Gamma Q-Q plot

Barium, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

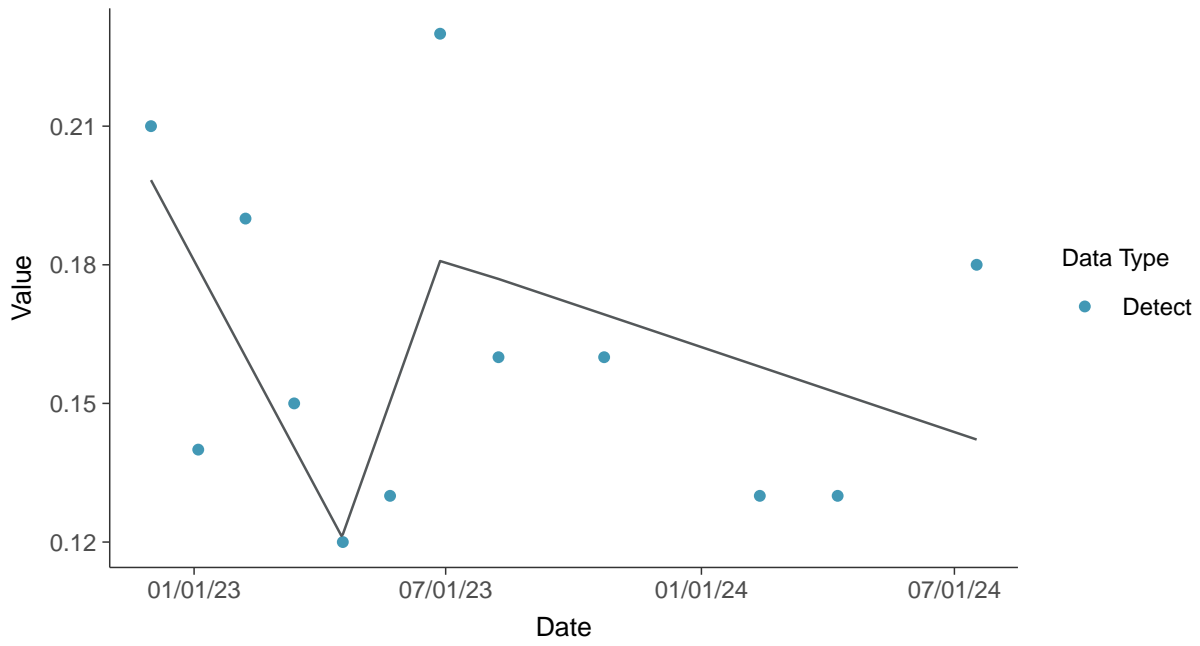
Barium, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

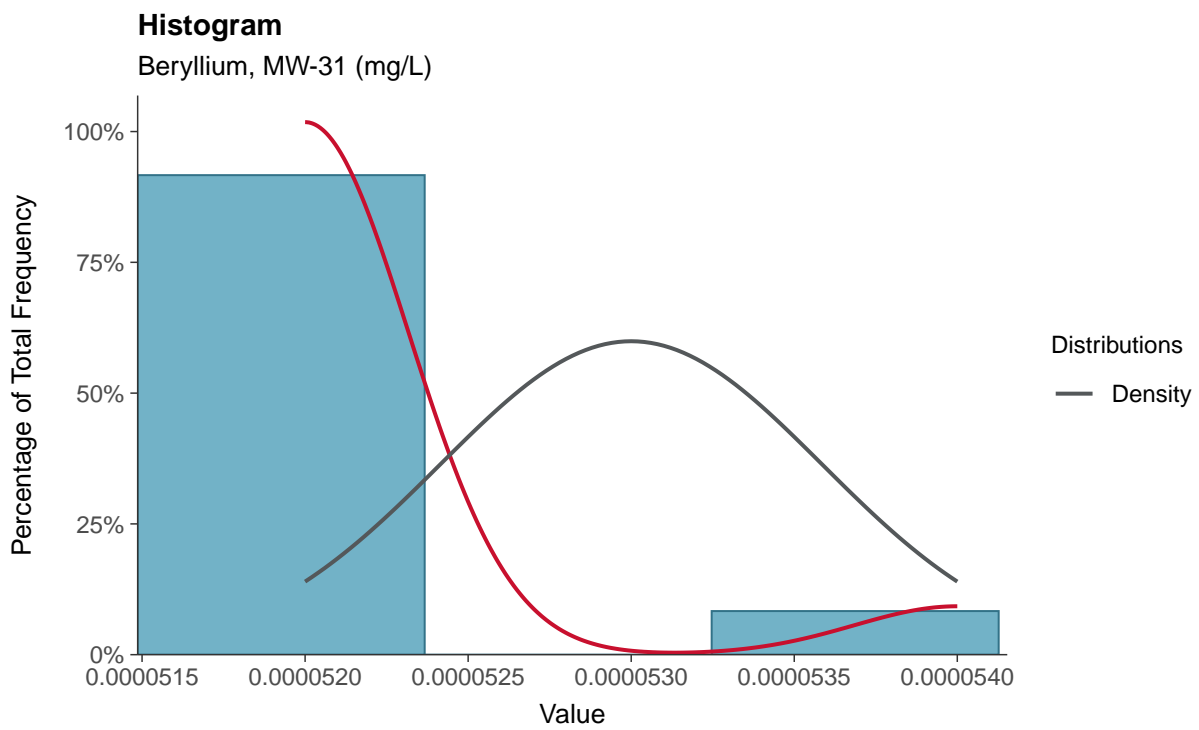
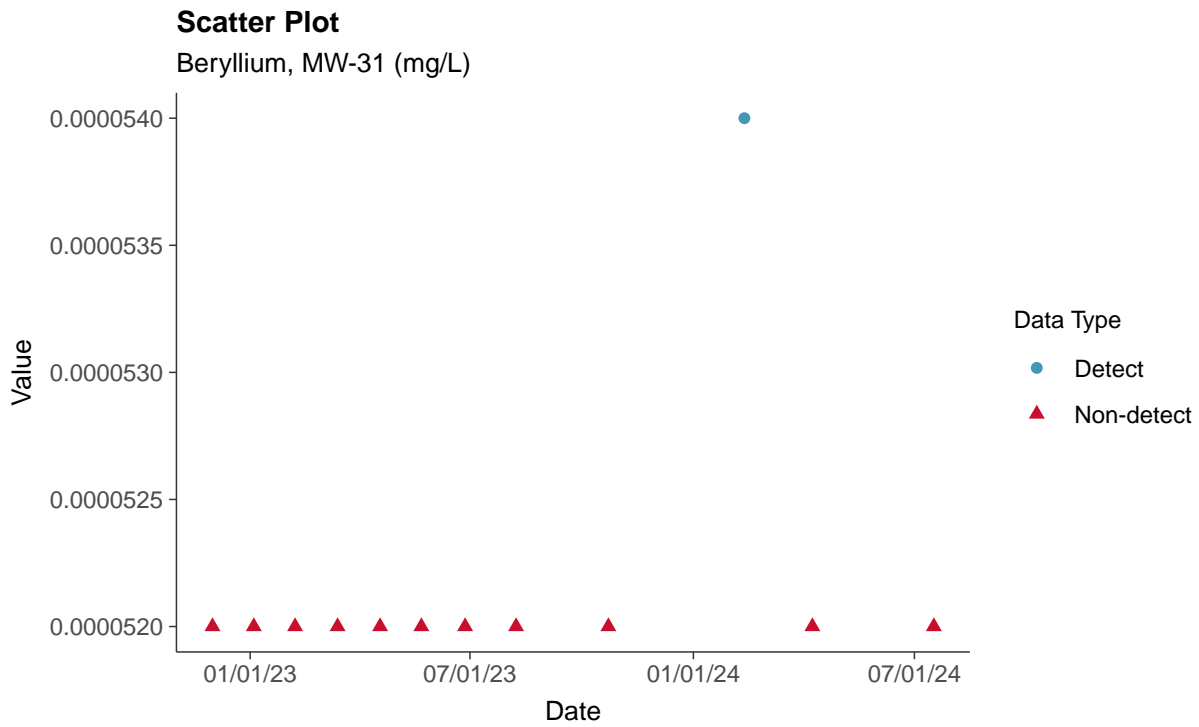
Barium, MW-31 (mg/L)





### Appendix IV: Beryllium, MW-31

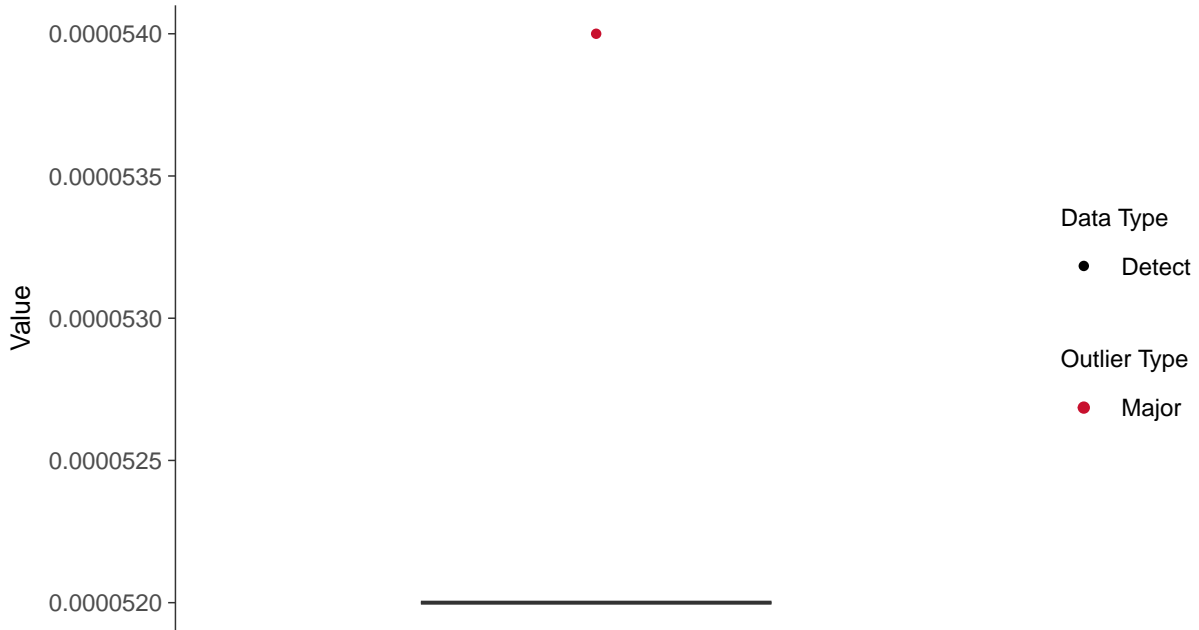
ID: 41\_1\_5\_104





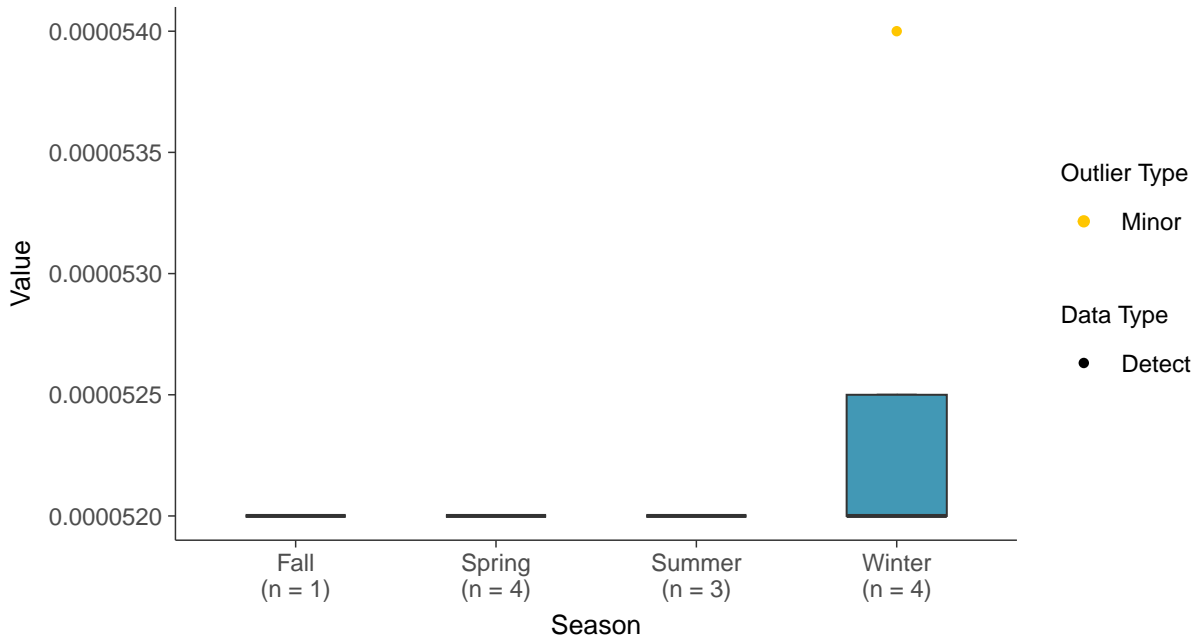
### Boxplot

Beryllium, MW-31 (mg/L)



### Boxplot by Season

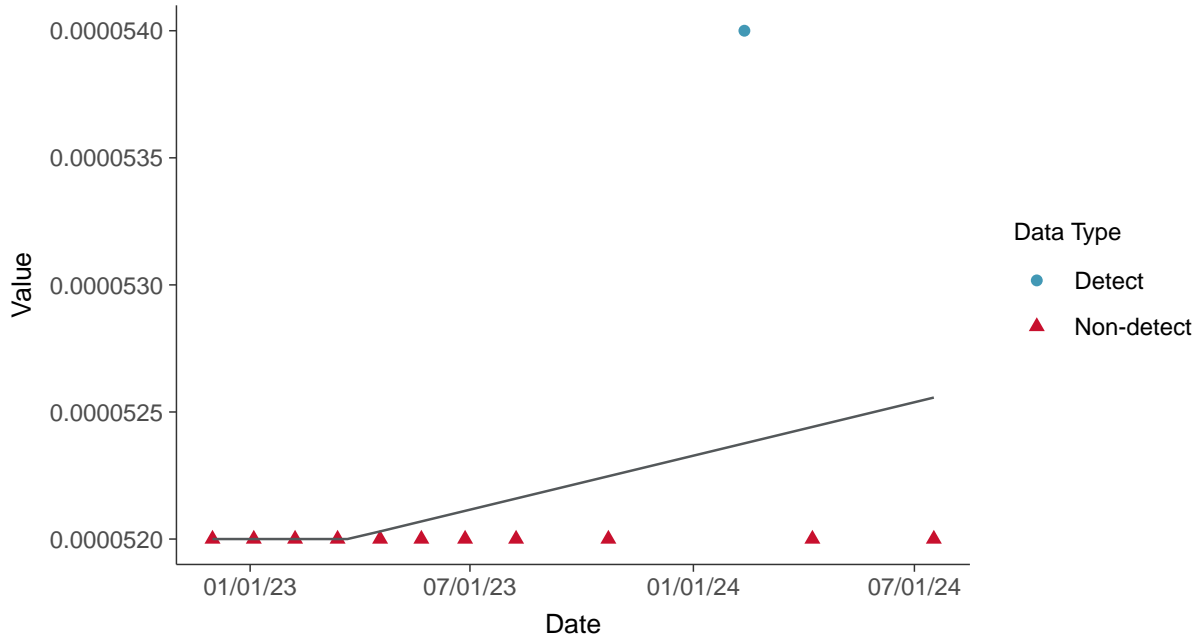
Beryllium, MW-31 (mg/L)





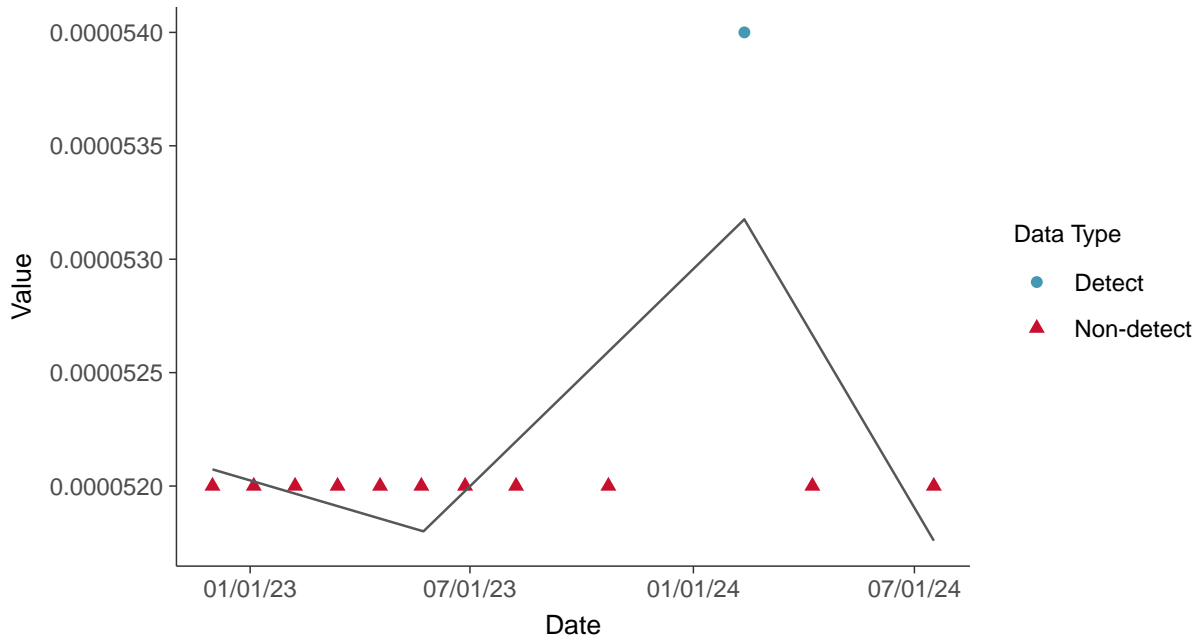
### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

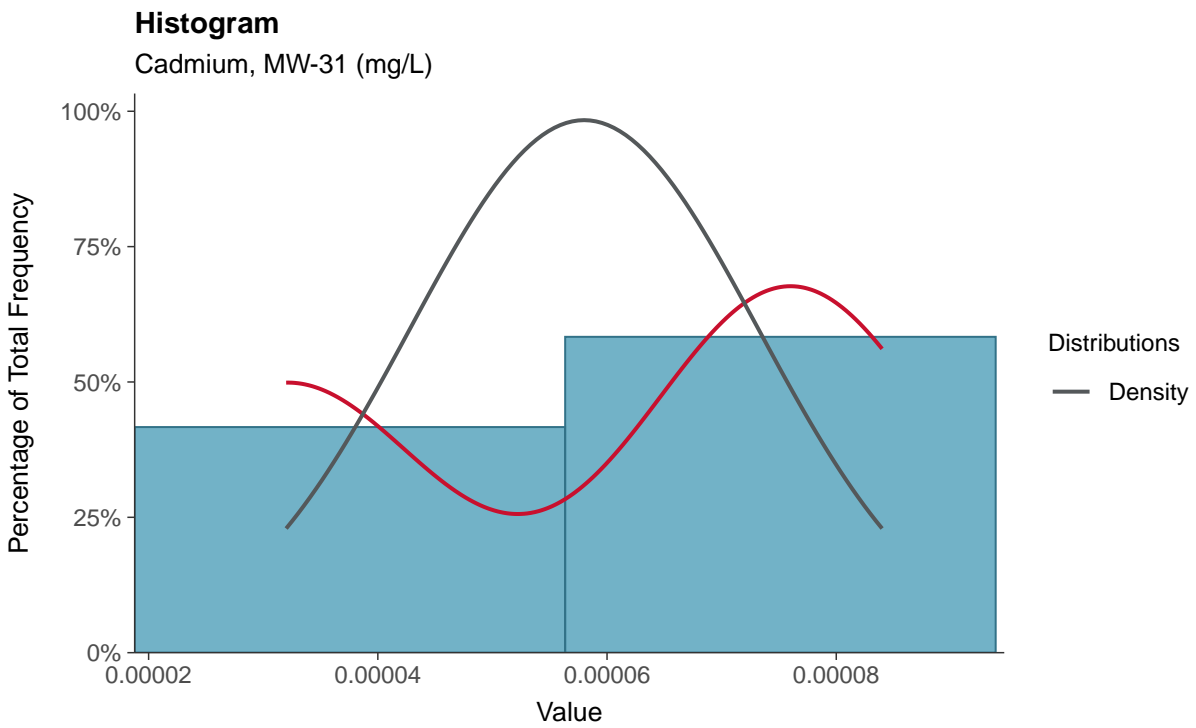
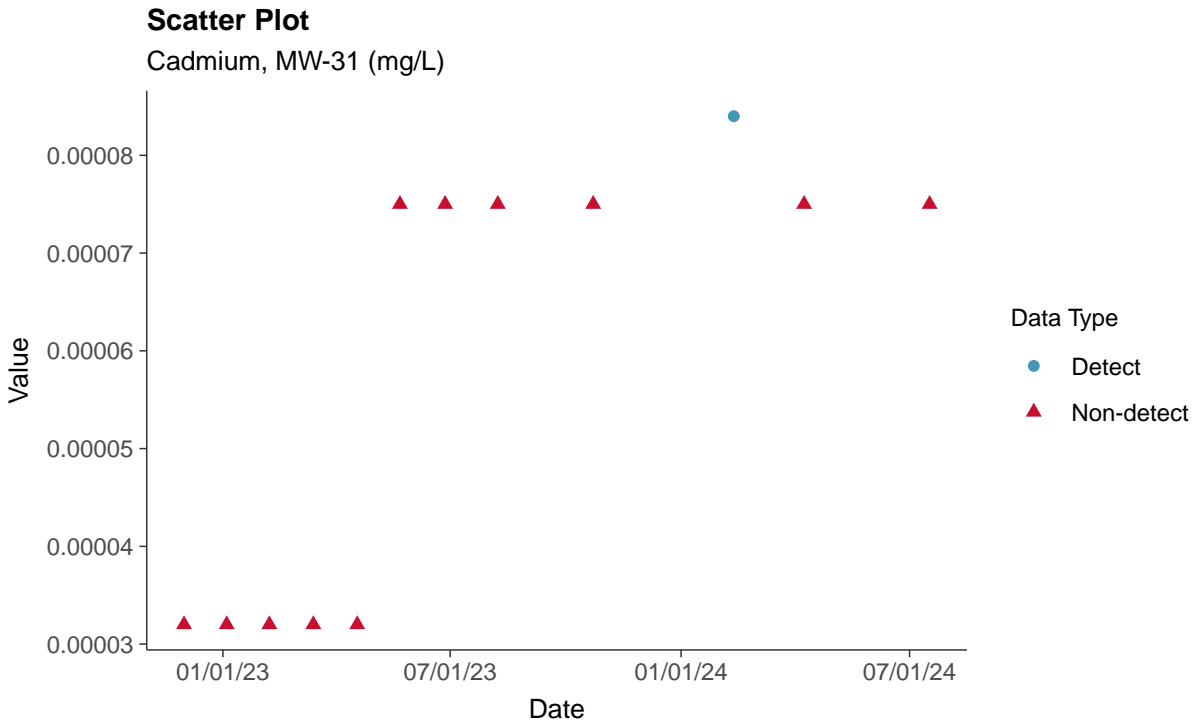
Beryllium, MW-31 (mg/L)





### Appendix IV: Cadmium, MW-31

ID: 41\_1\_5\_106

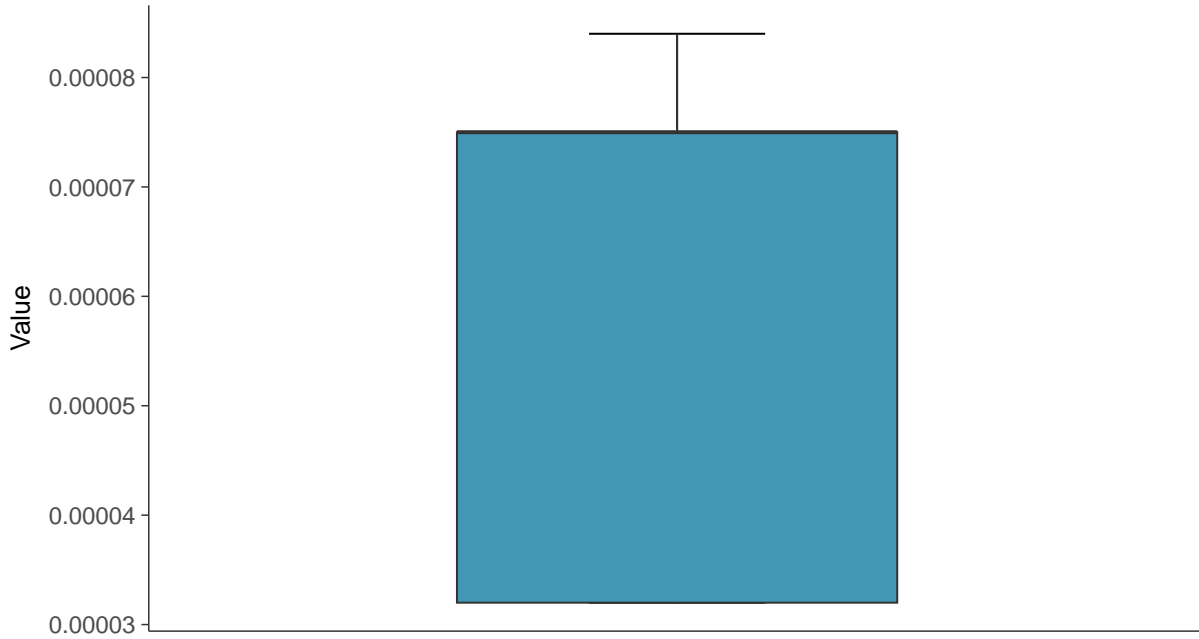






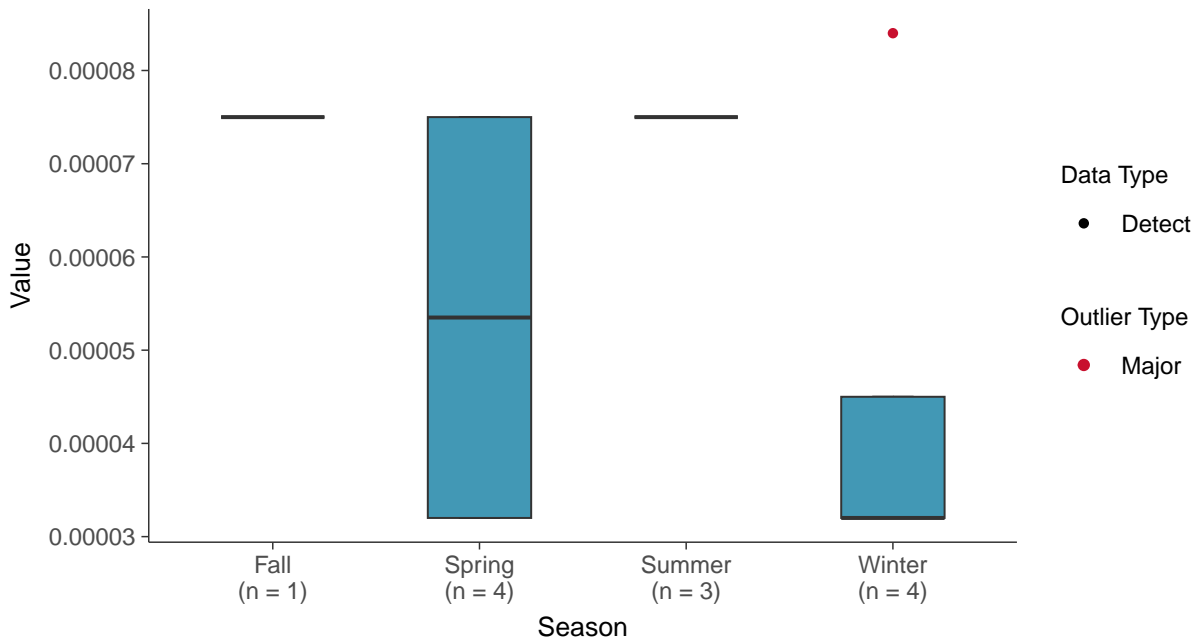
### Boxplot

Cadmium, MW-31 (mg/L)



### Boxplot by Season

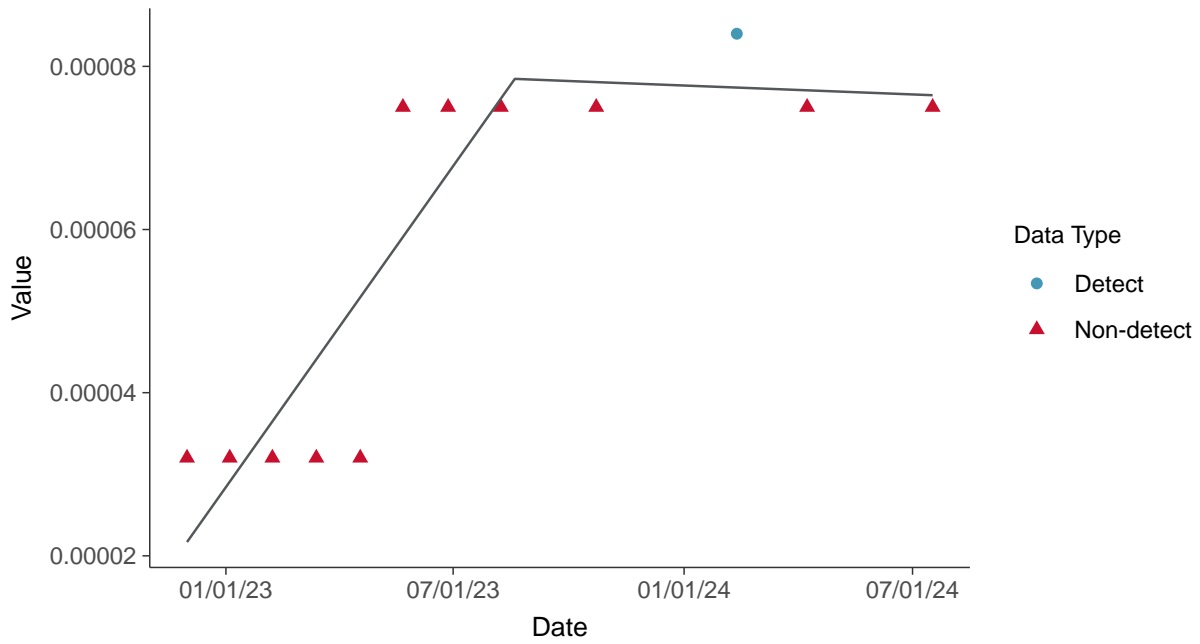
Cadmium, MW-31 (mg/L)





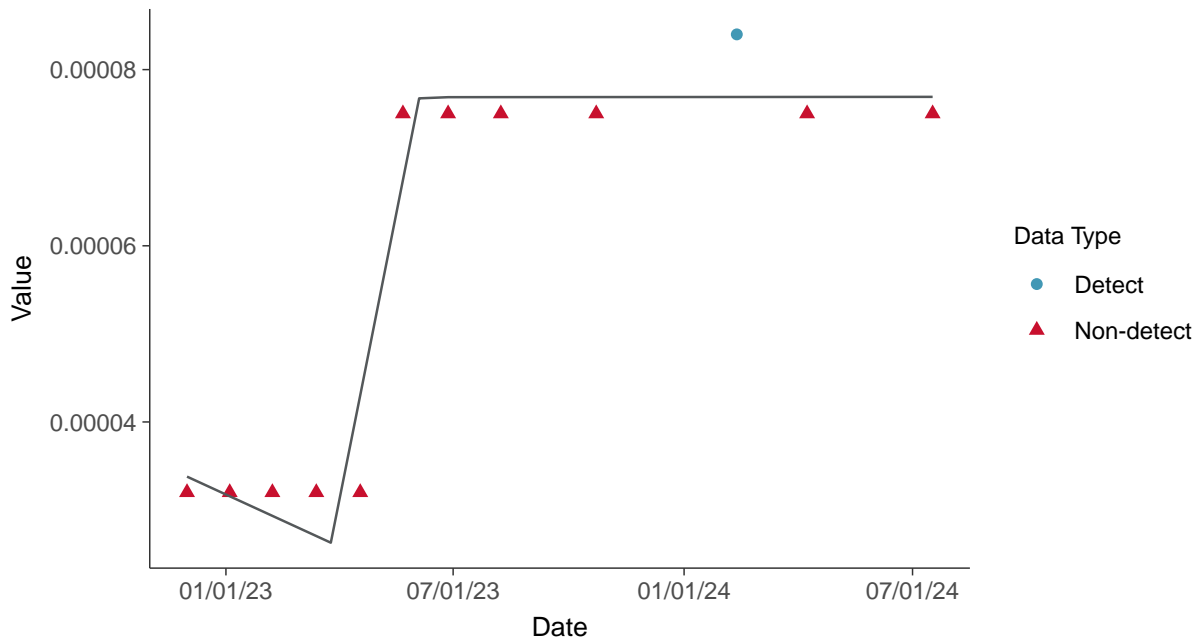
### Trend Regression: Piecewise Linear-Linear

Cadmium, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-31 (mg/L)



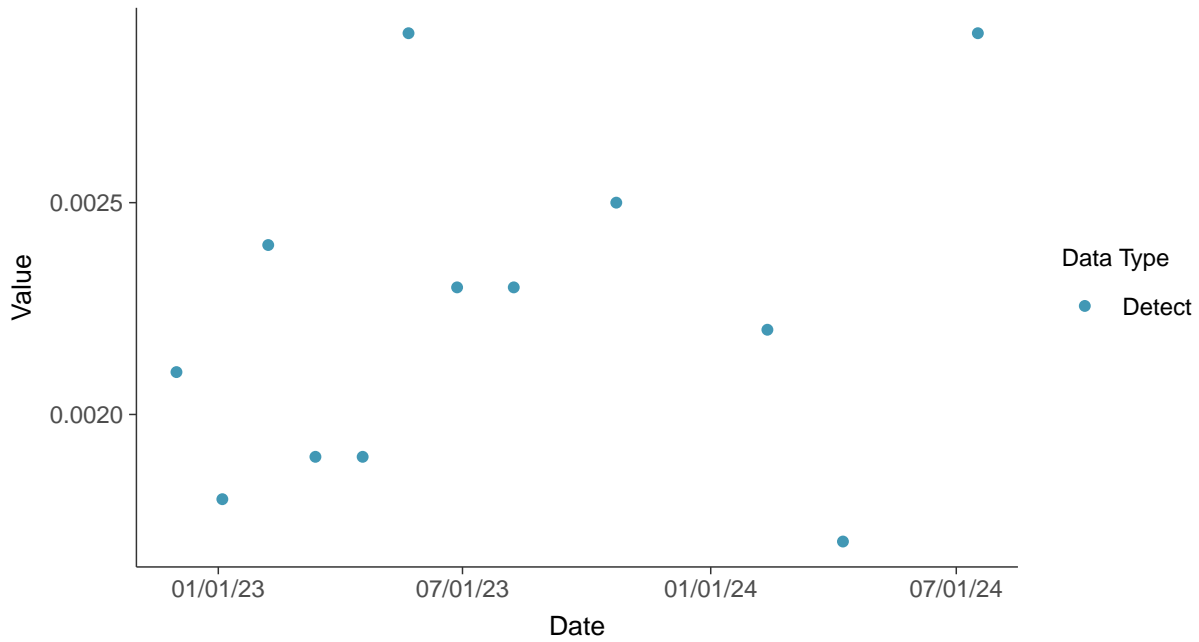


### Appendix IV: Chromium, Total, MW-31

ID: 41\_1\_5\_109

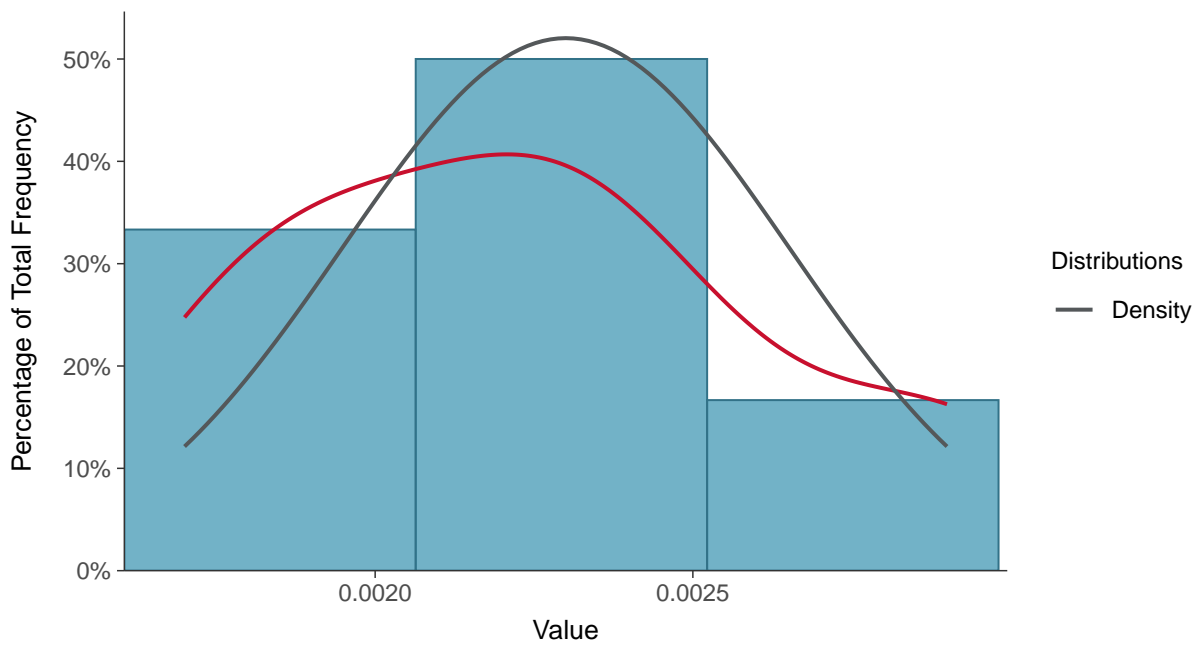
#### Scatter Plot

Chromium, Total, MW-31 (mg/L)



#### Histogram

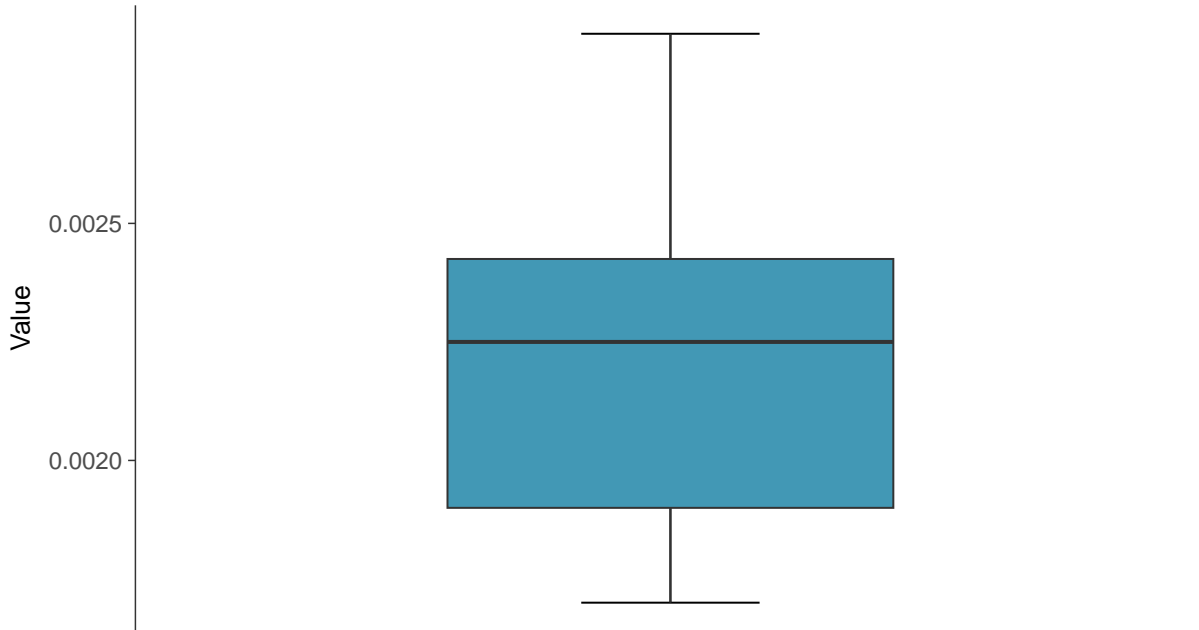
Chromium, Total, MW-31 (mg/L)





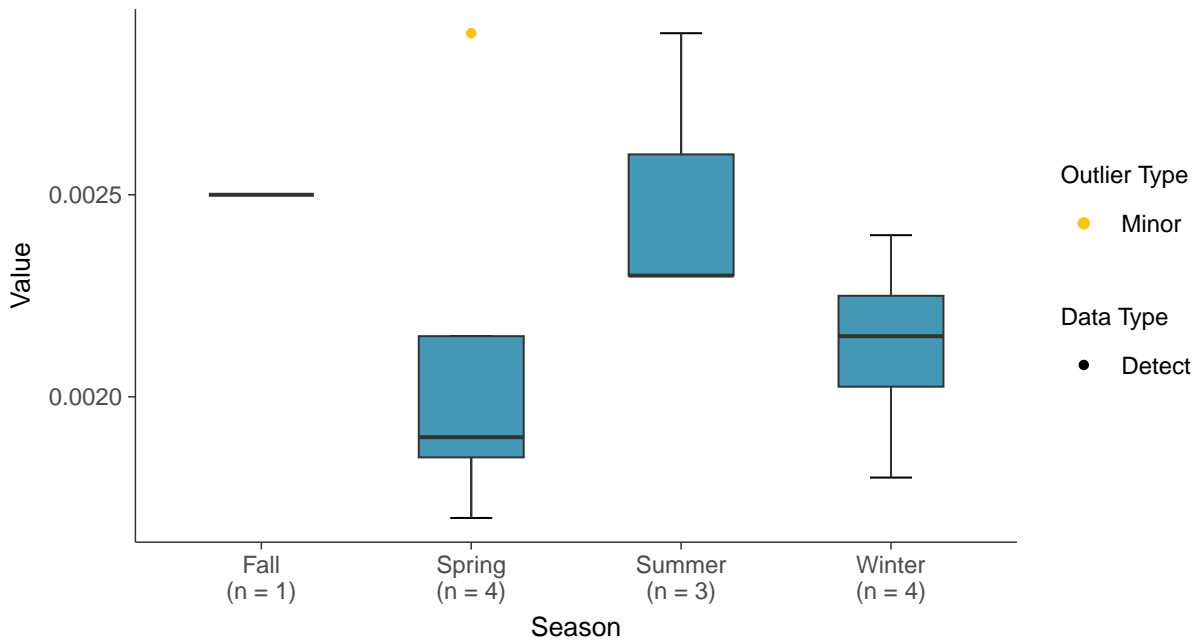
### Boxplot

Chromium, Total, MW-31 (mg/L)



### Boxplot by Season

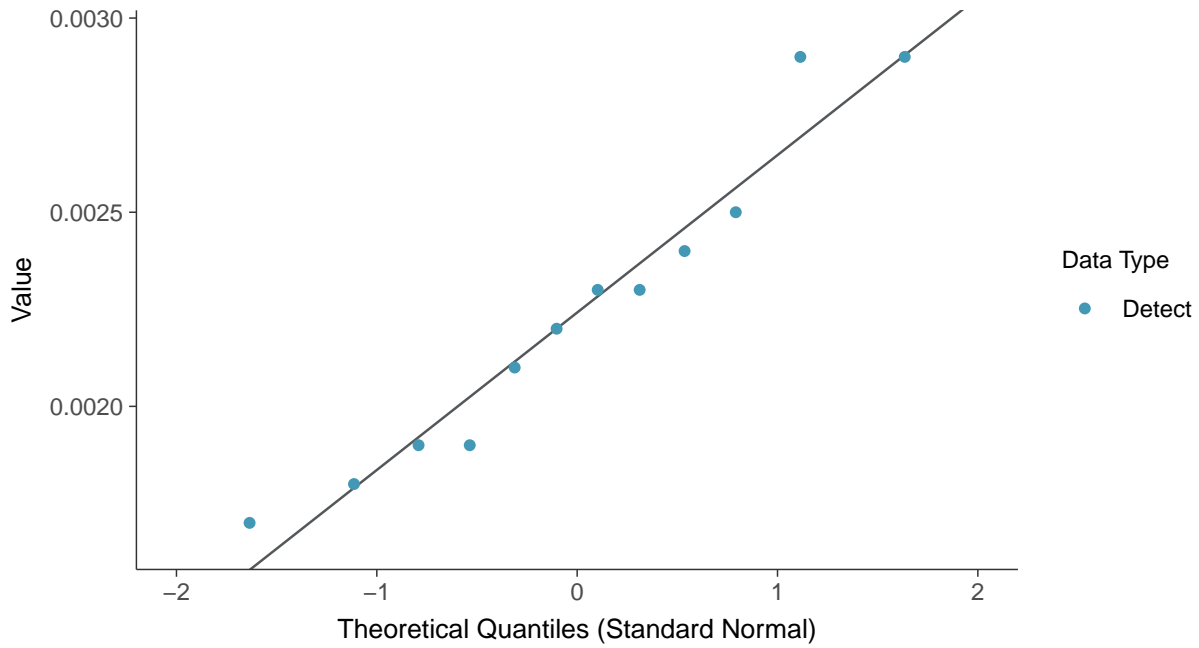
Chromium, Total, MW-31 (mg/L)





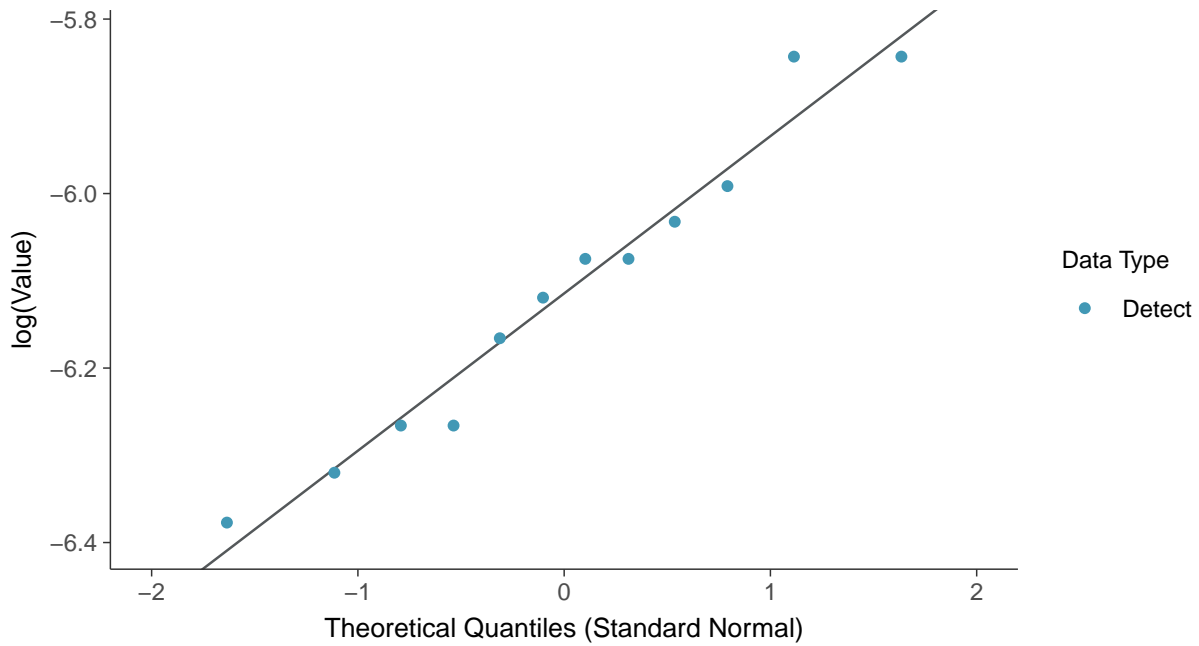
### Normal Q-Q plot

Chromium, Total, MW-31 (mg/L)



### Lognormal Q-Q plot

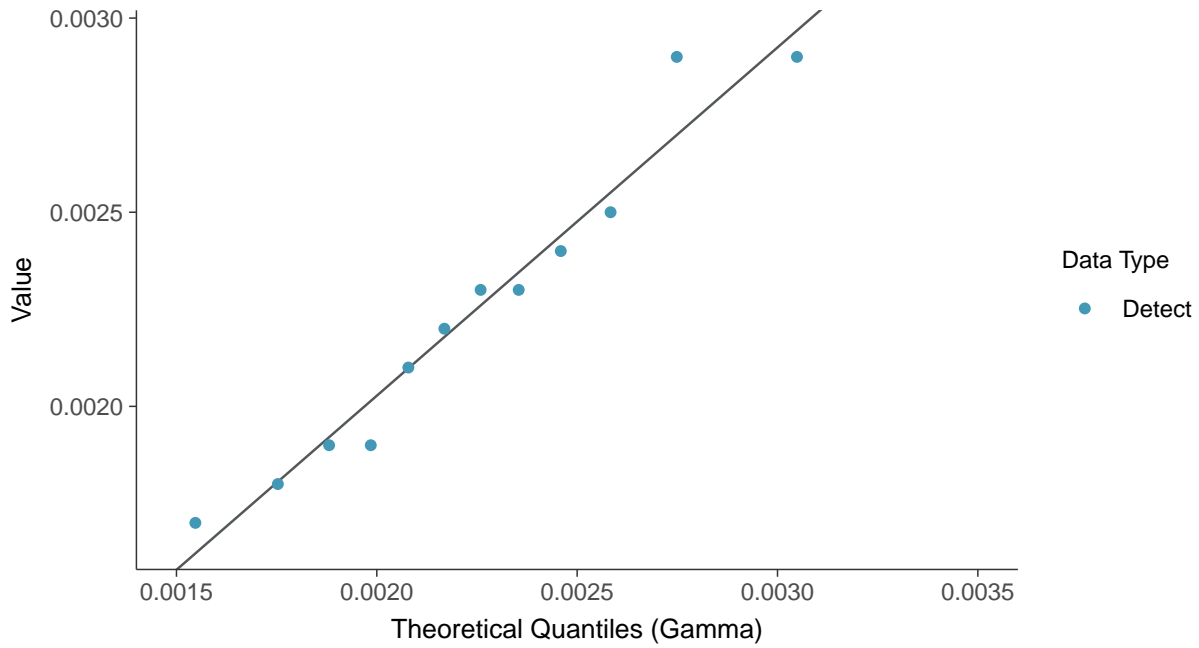
Chromium, Total, MW-31 (mg/L)





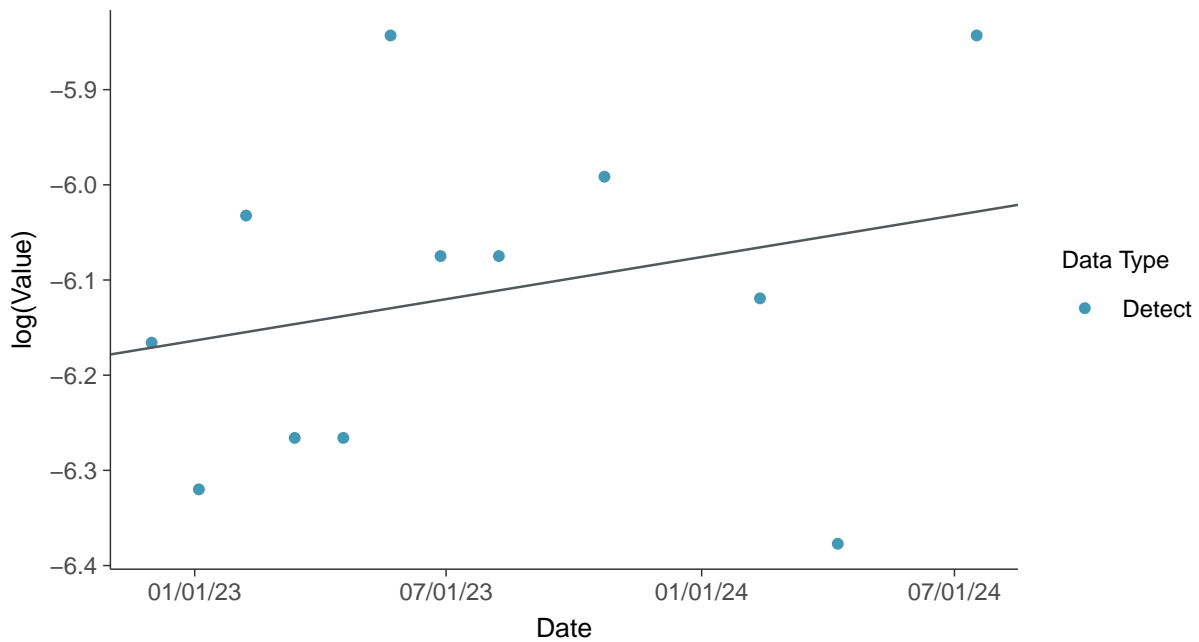
### Gamma Q-Q plot

Chromium, Total, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

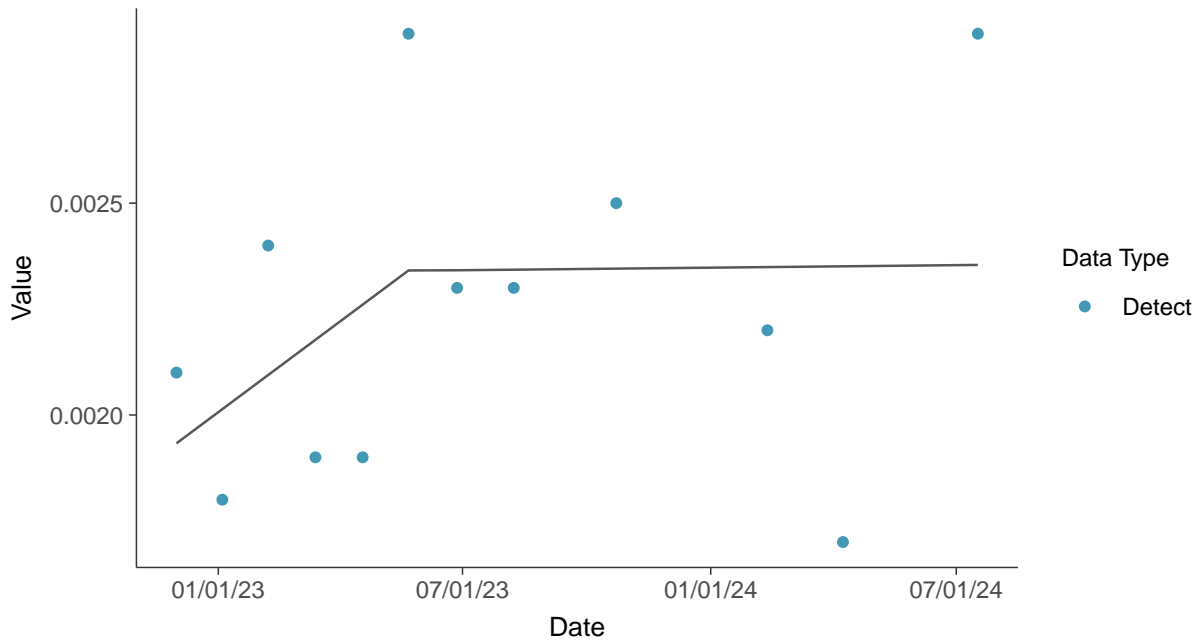
Chromium, Total, MW-31 (mg/L)





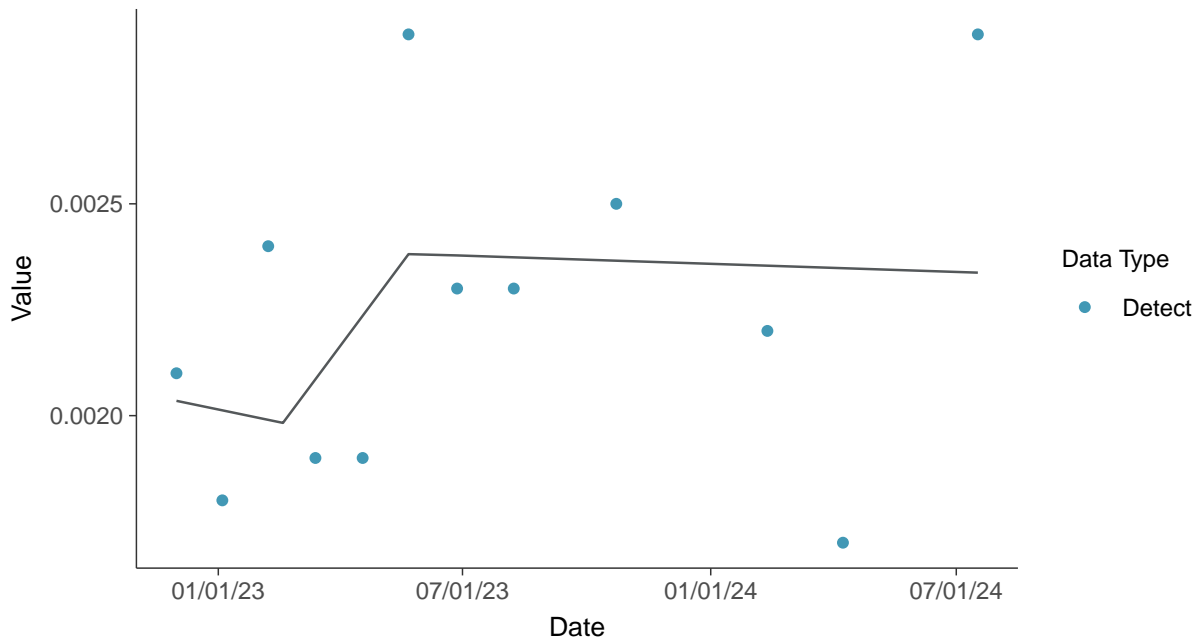
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-31 (mg/L)



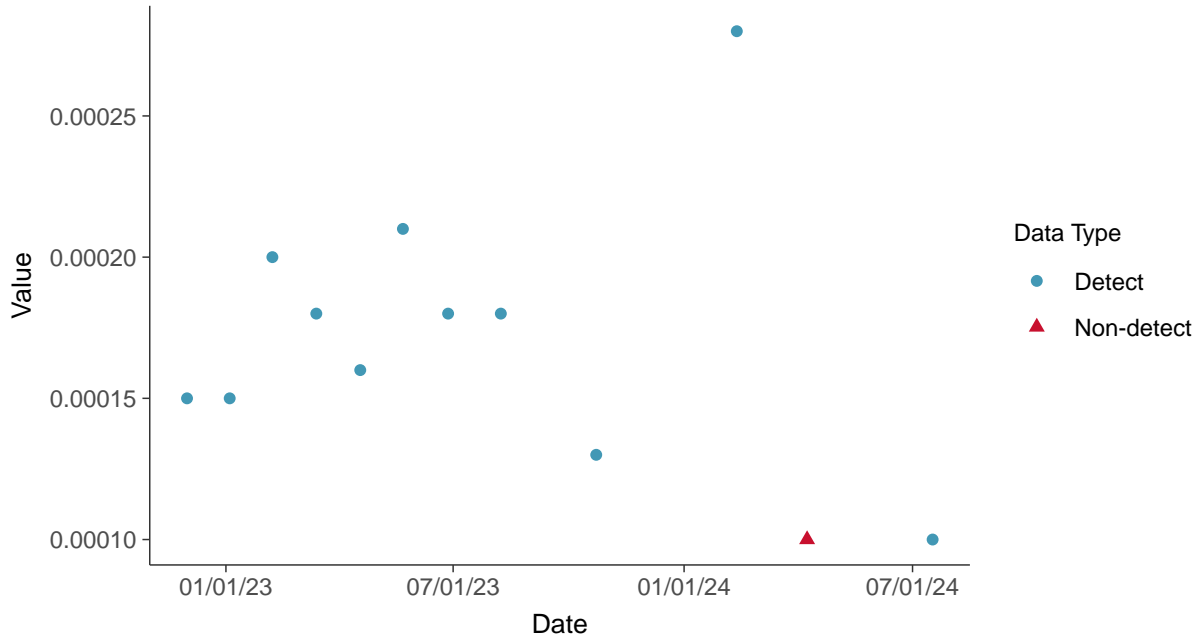


### Appendix IV: Cobalt, MW-31

ID: 41\_1\_5\_110

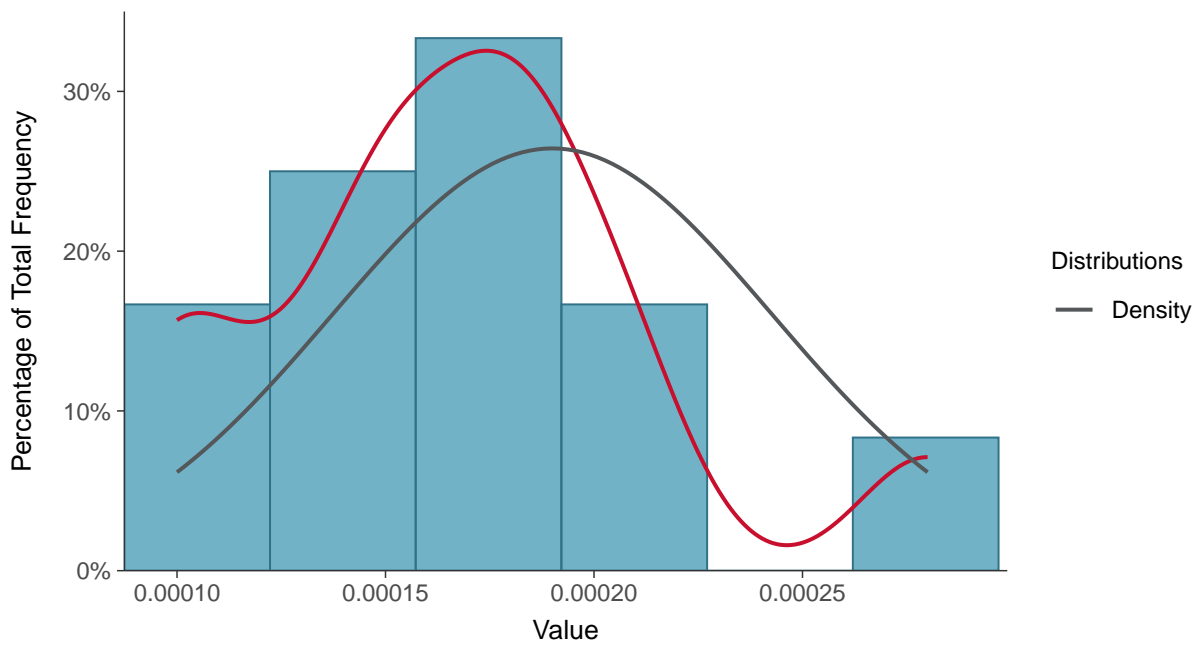
#### Scatter Plot

Cobalt, MW-31 (mg/L)



#### Histogram

Cobalt, MW-31 (mg/L)

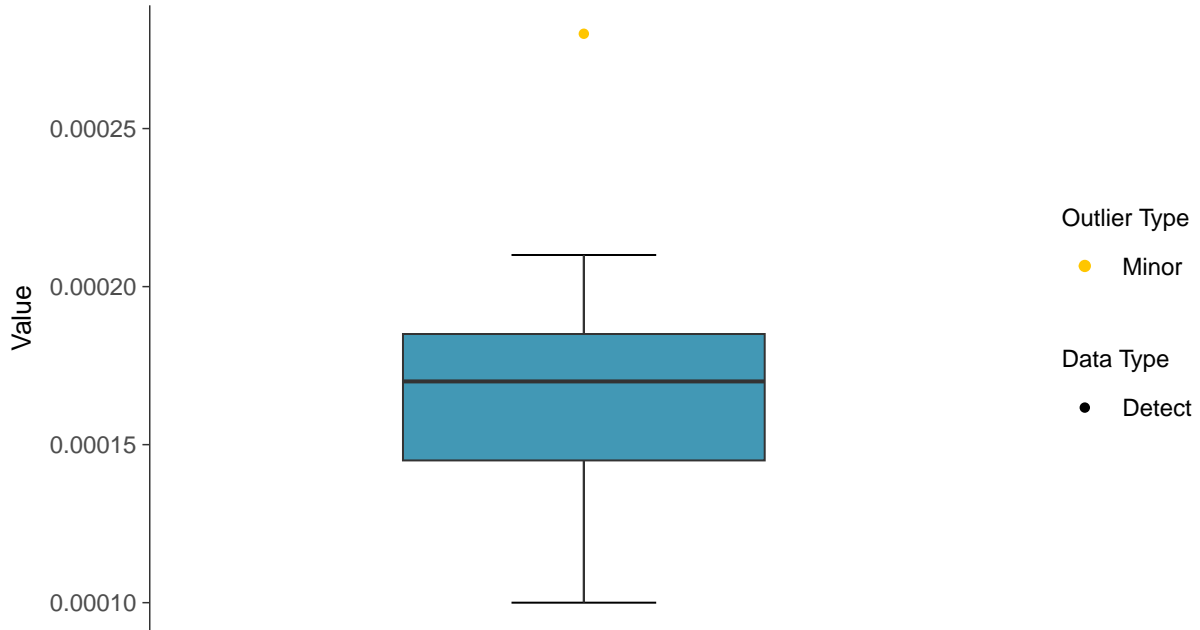






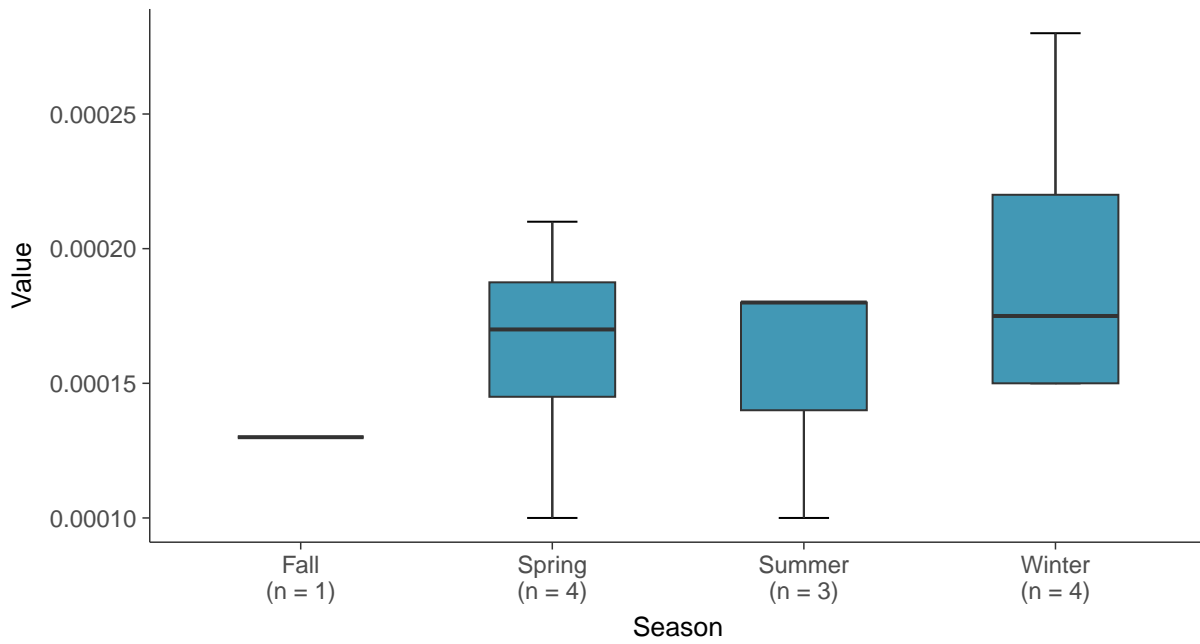
### Boxplot

Cobalt, MW-31 (mg/L)



### Boxplot by Season

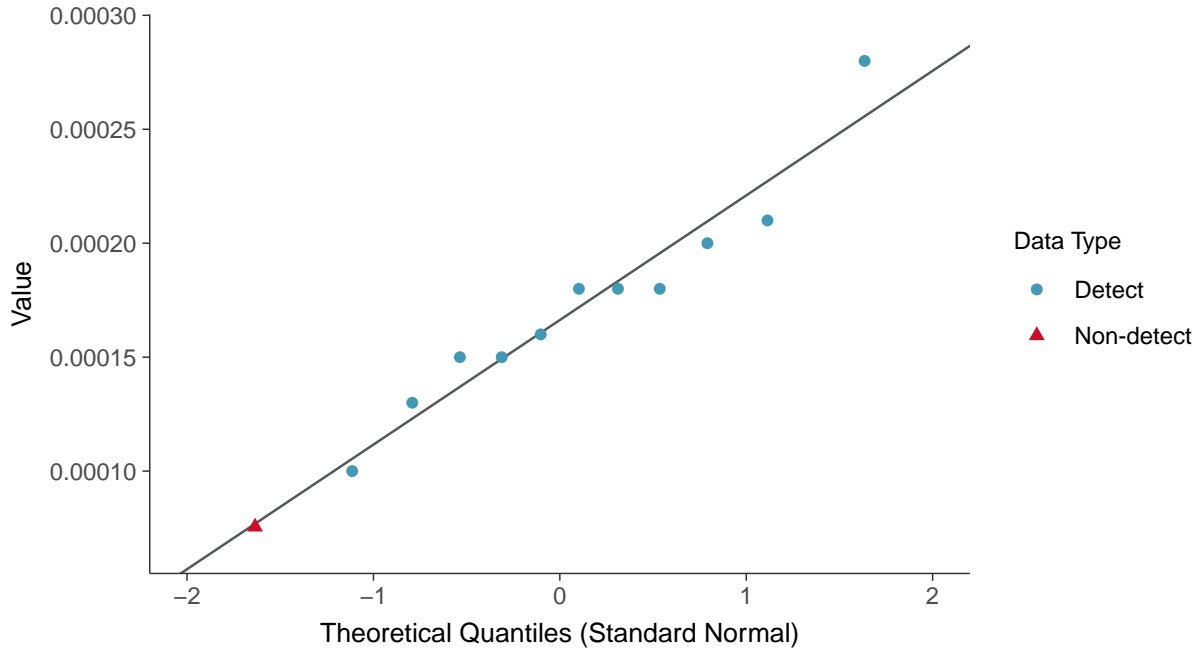
Cobalt, MW-31 (mg/L)





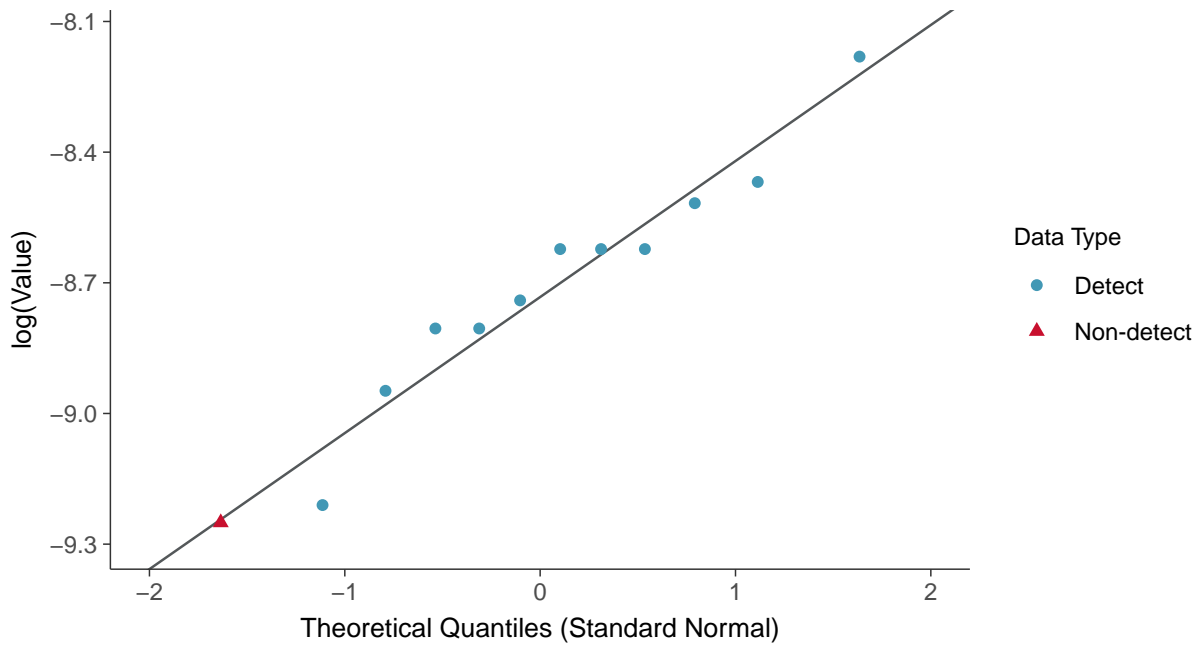
### Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-31 (mg/L)



### Lognormal Q-Q plot using ROS Imputed Estimates

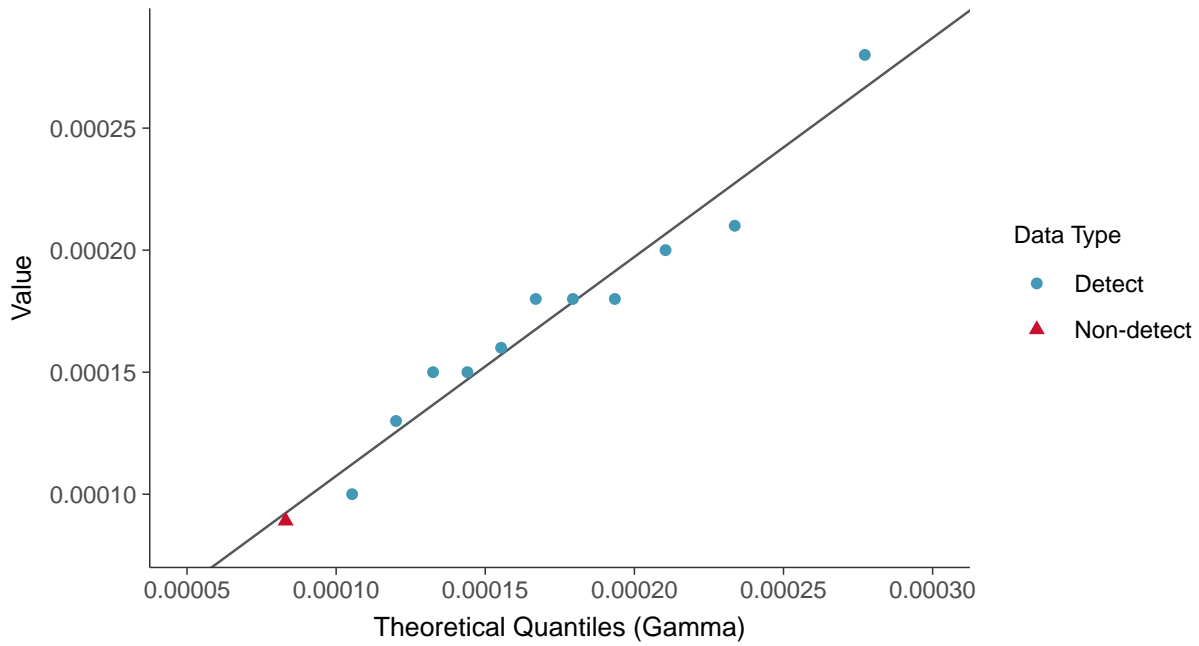
Cobalt, MW-31 (mg/L)





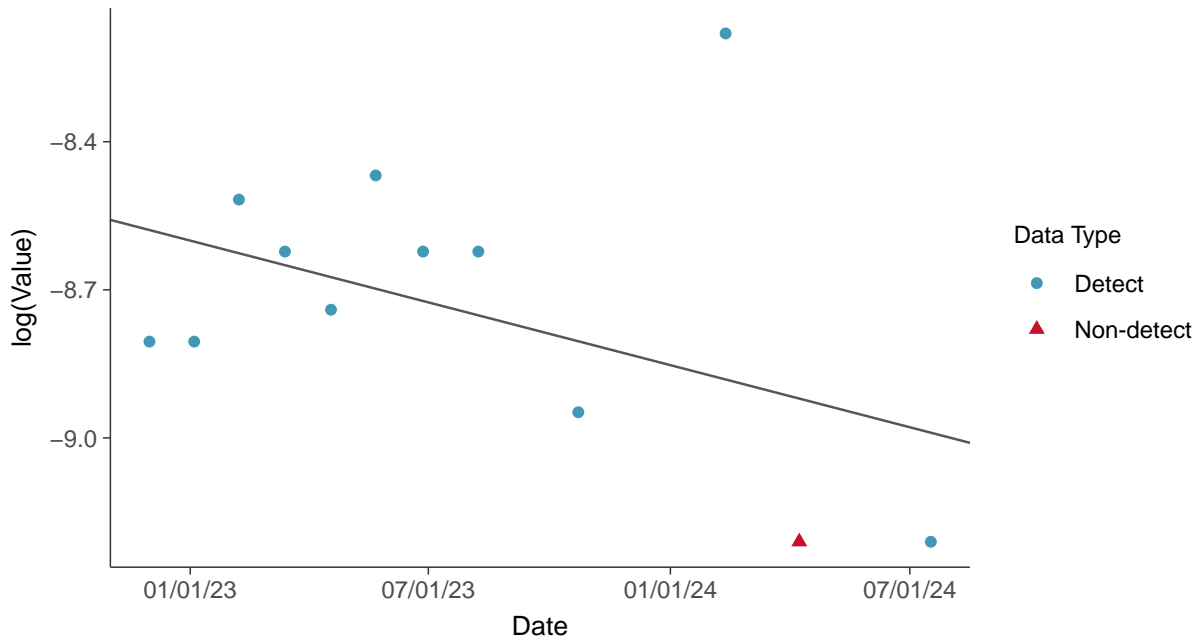
### Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

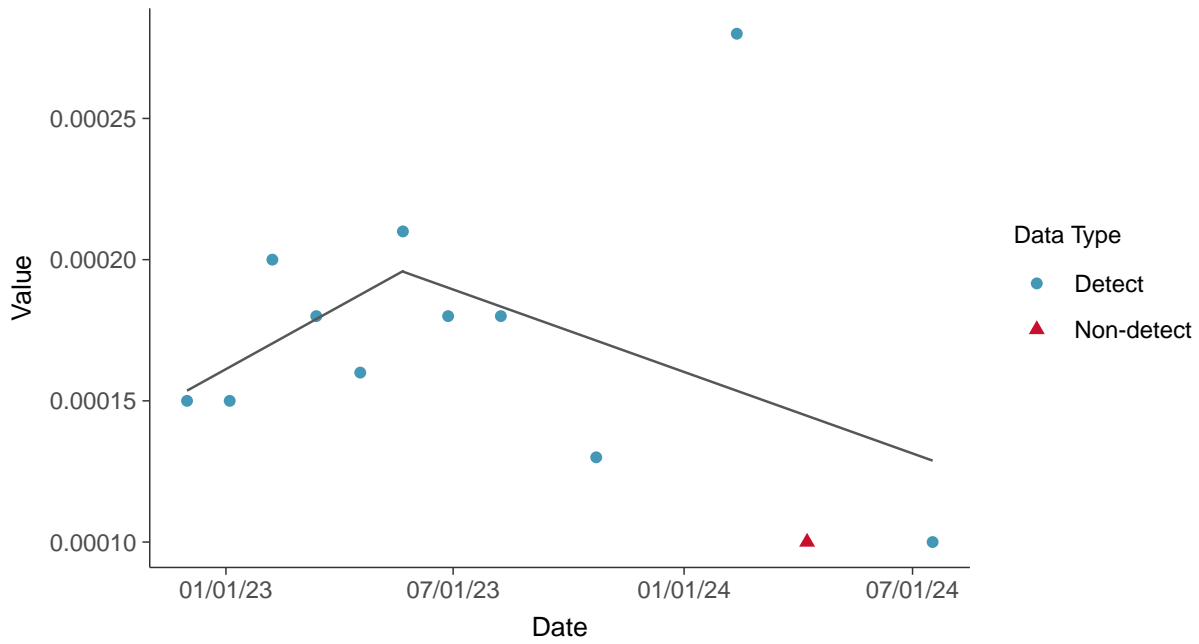
Cobalt, MW-31 (mg/L)





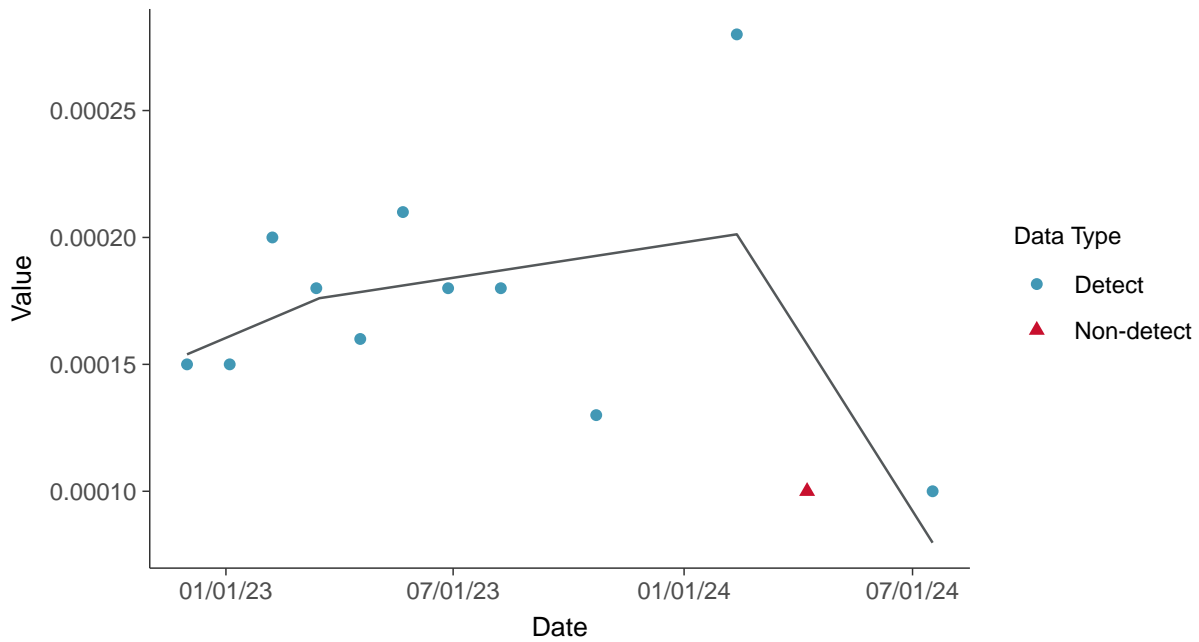
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-31 (mg/L)



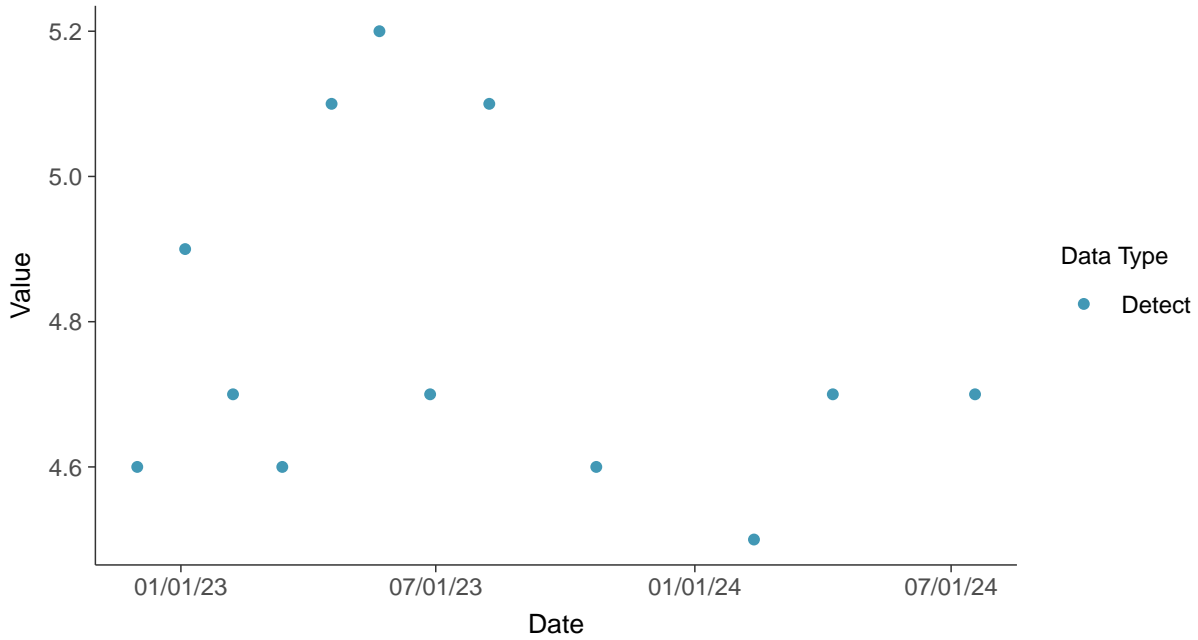


## Appendix IV: Fluoride (App IV), MW-31

ID: 41\_1\_5\_113

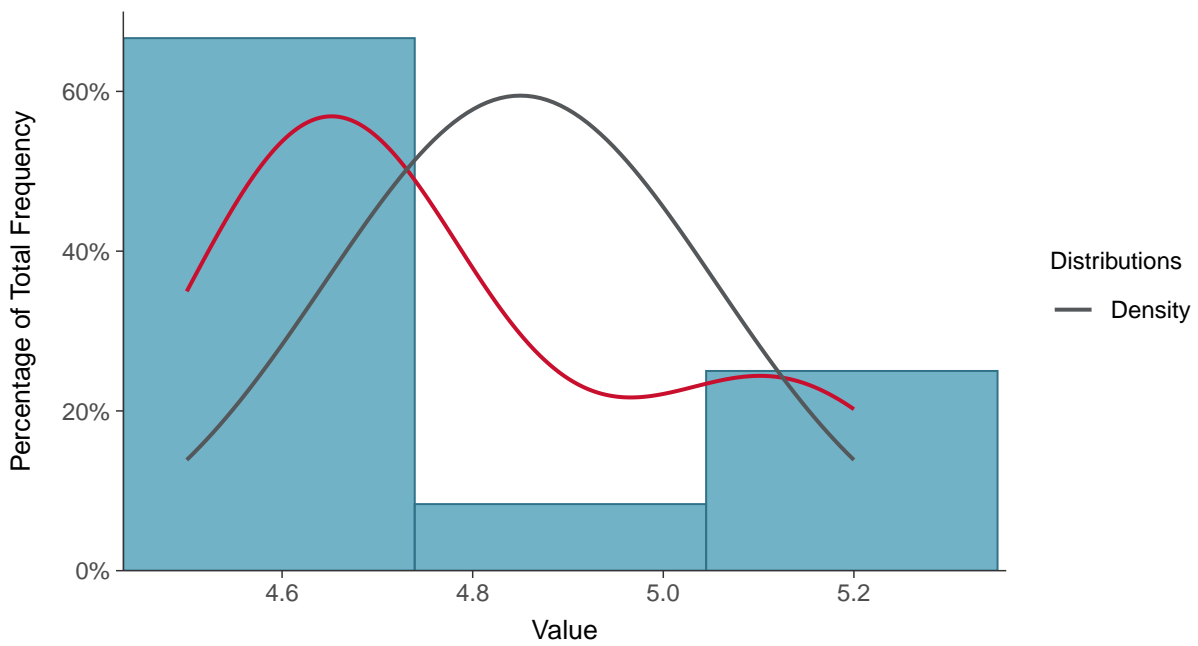
### Scatter Plot

Fluoride (App IV), MW-31 (mg/L)



### Histogram

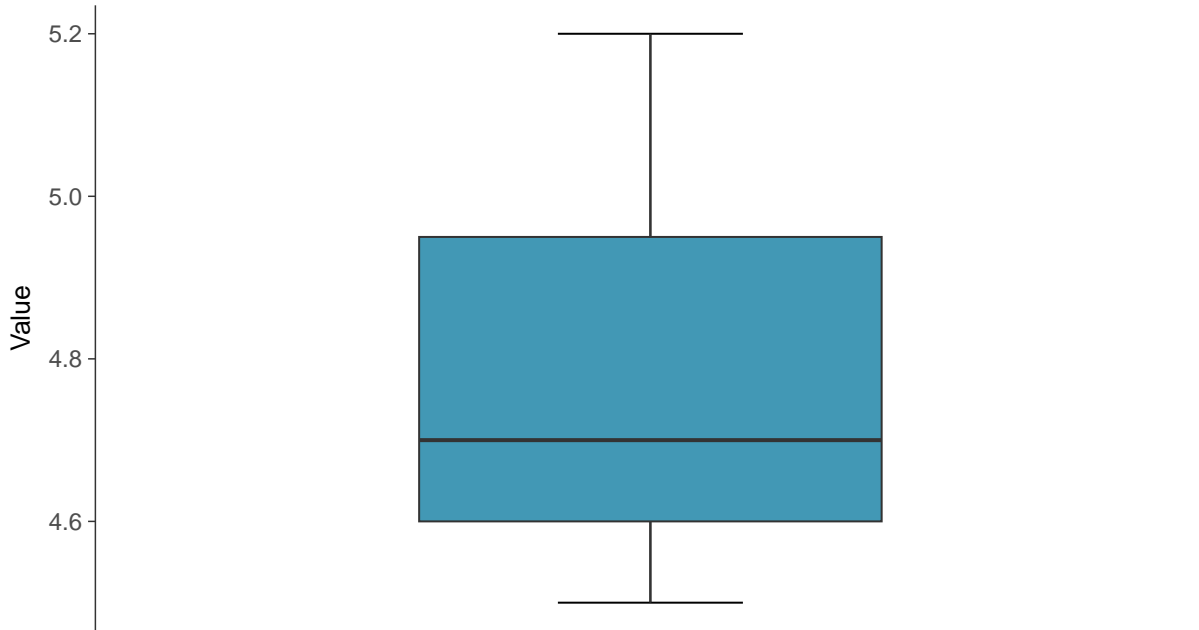
Fluoride (App IV), MW-31 (mg/L)





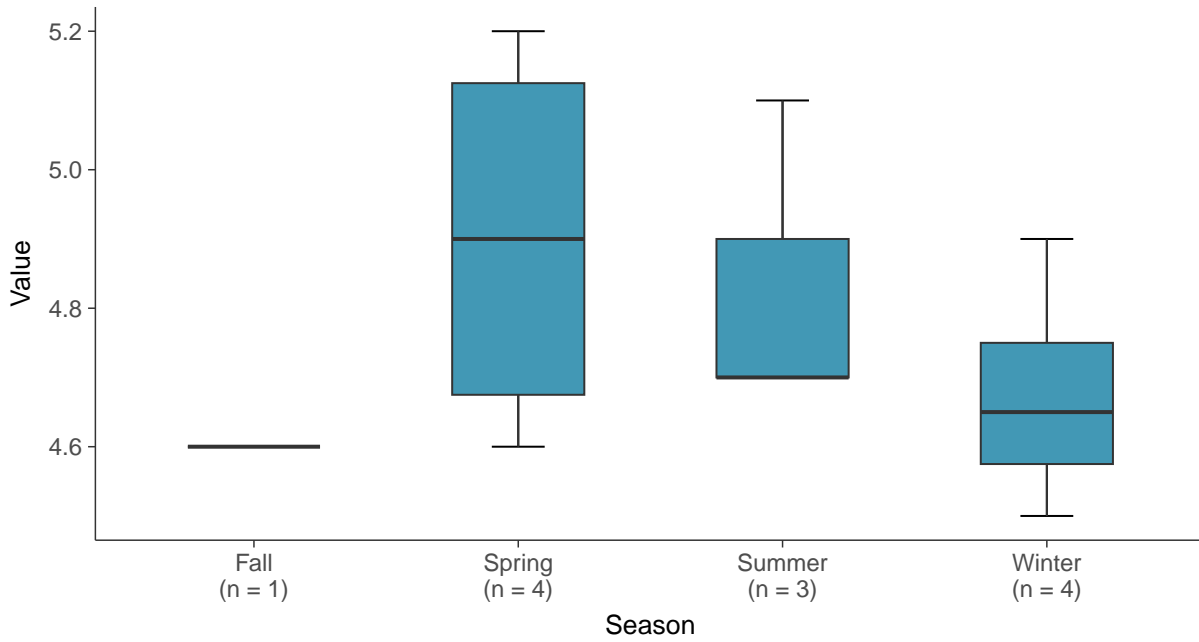
### Boxplot

Fluoride (App IV), MW-31 (mg/L)



### Boxplot by Season

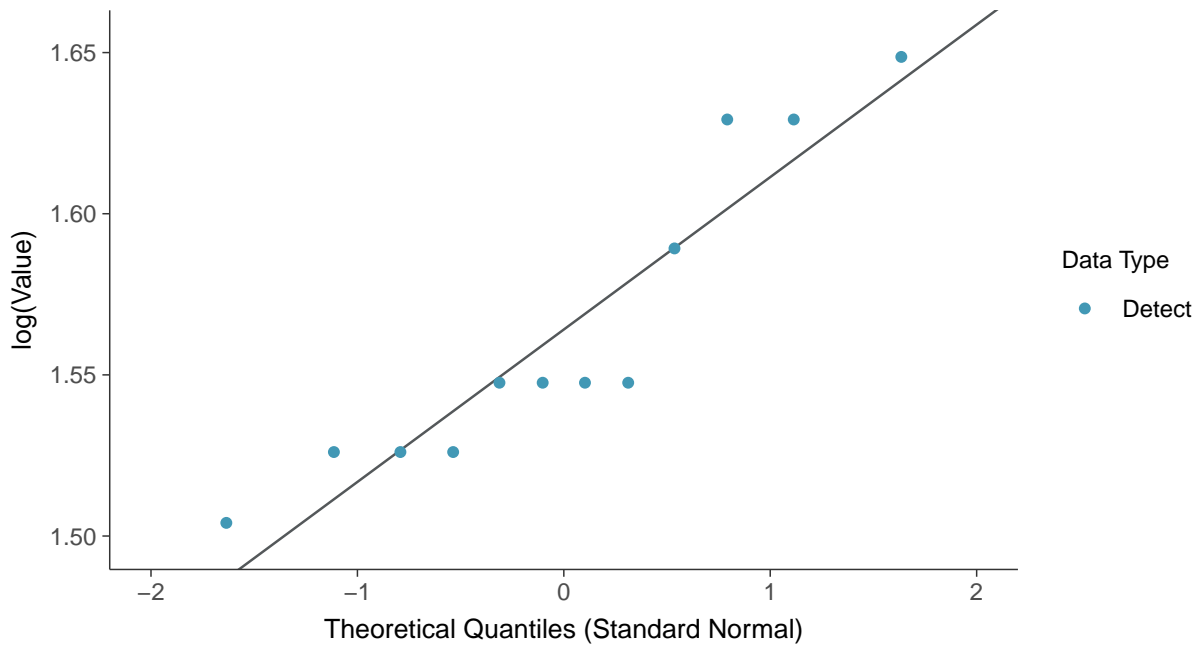
Fluoride (App IV), MW-31 (mg/L)





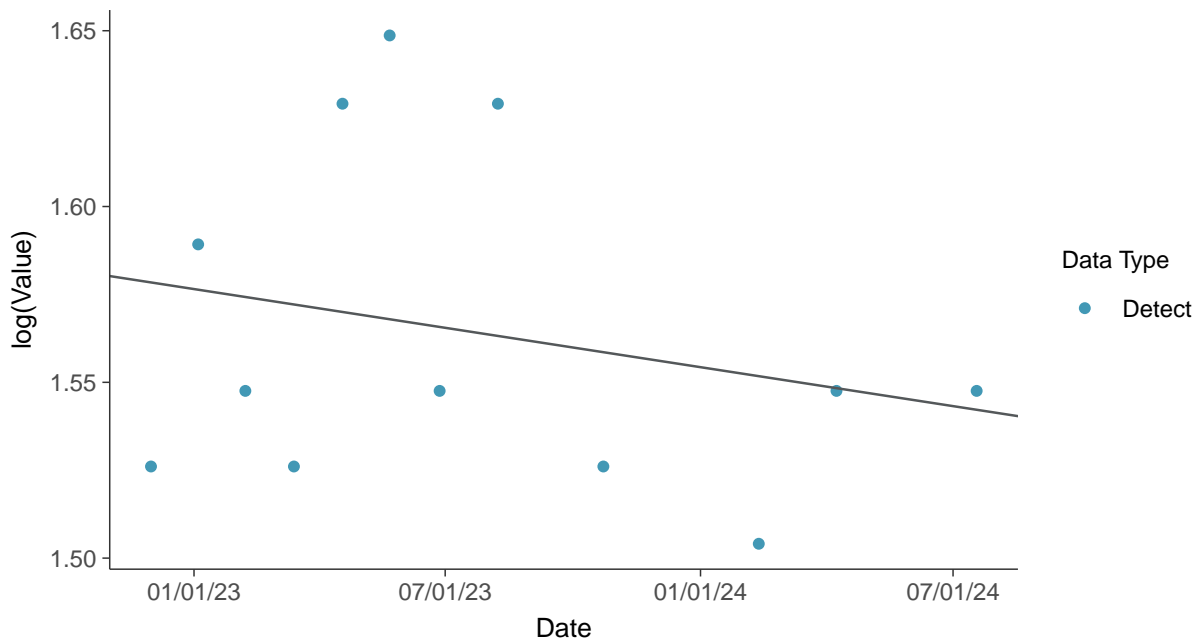
### Lognormal Q-Q plot

Fluoride (App IV), MW-31 (mg/L)



### Trend Regression: Lognormal MLE

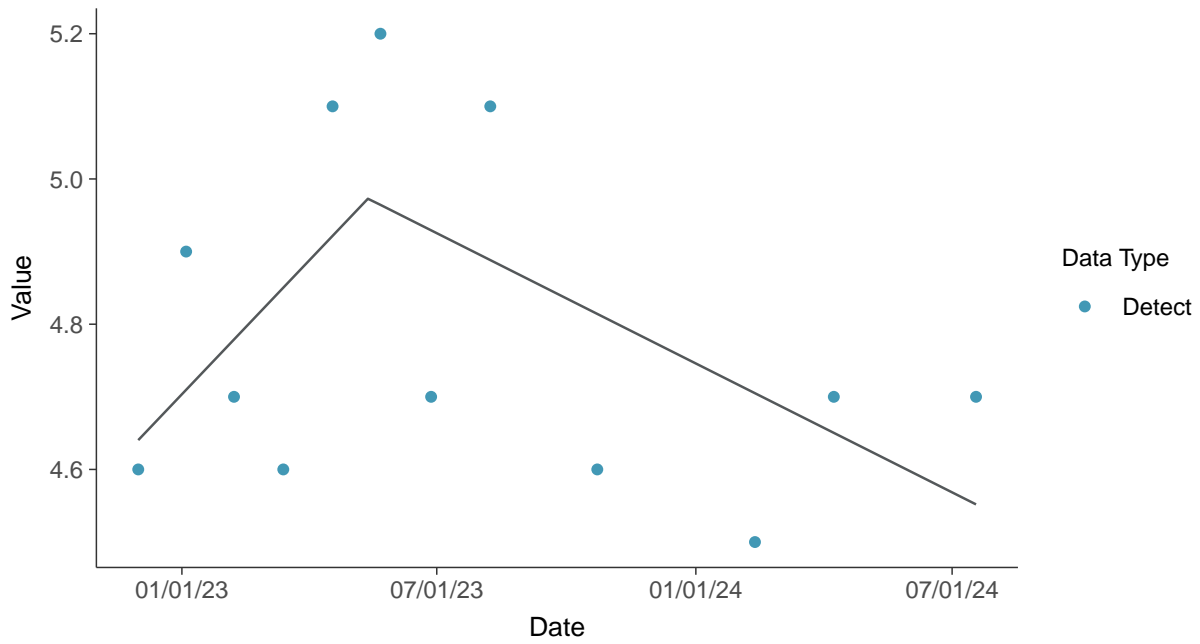
Fluoride (App IV), MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Fluoride (App IV), MW-31 (mg/L)

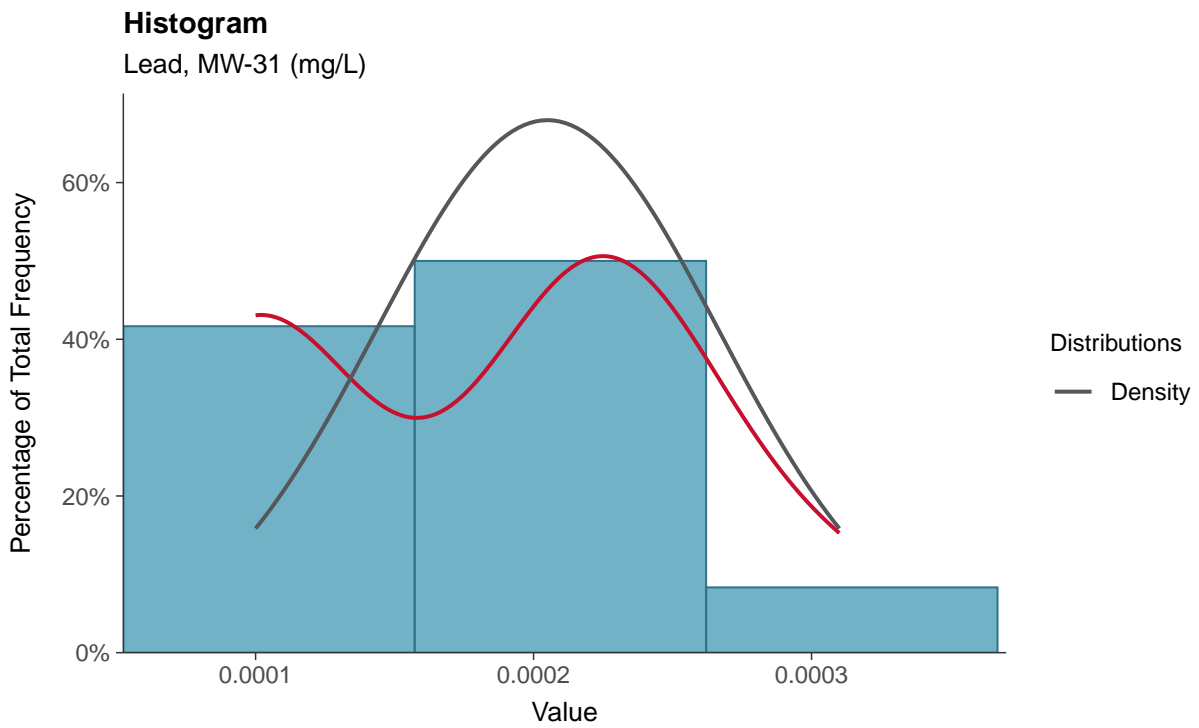
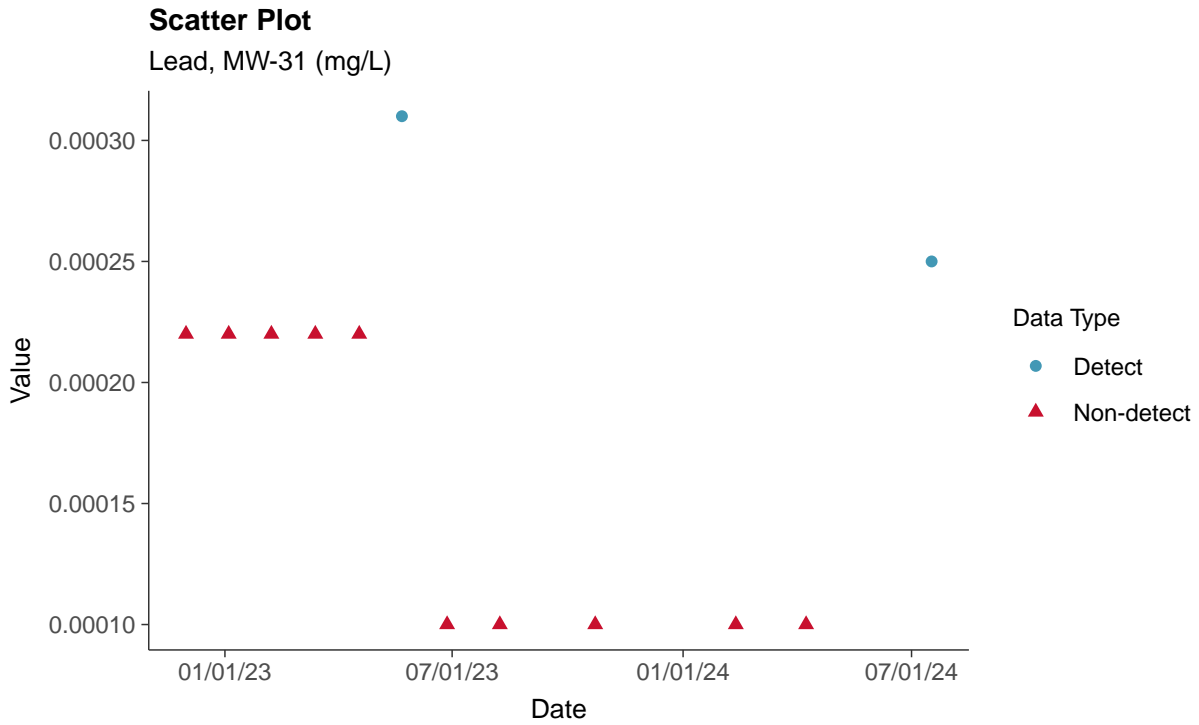






### Appendix IV: Lead, MW-31

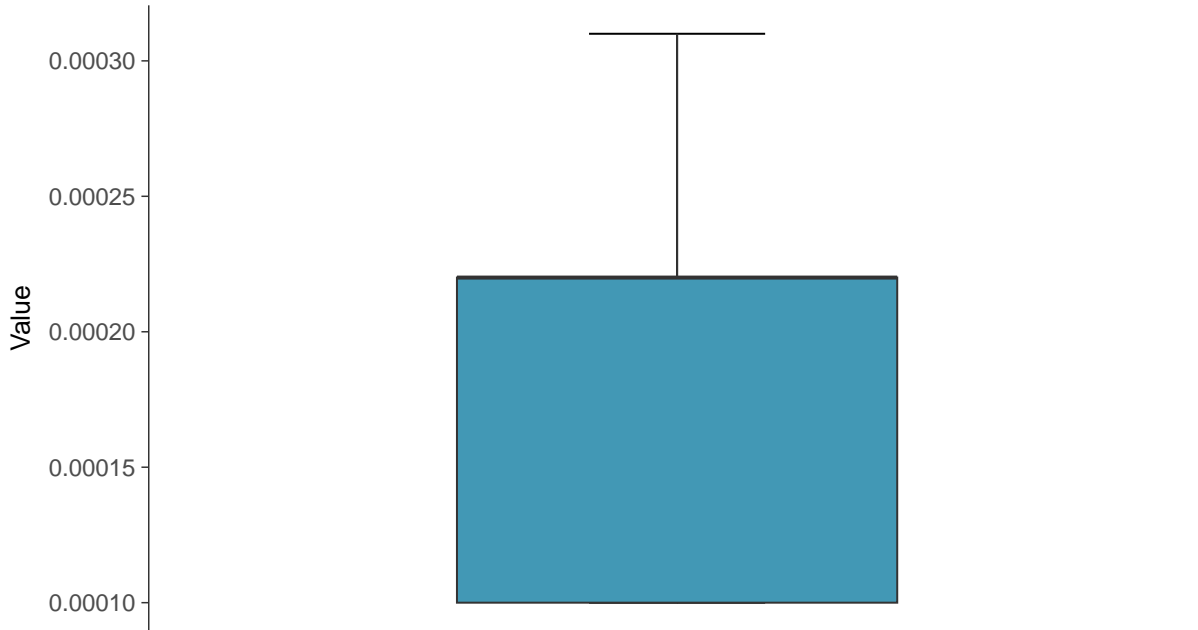
ID: 41\_1\_5\_115





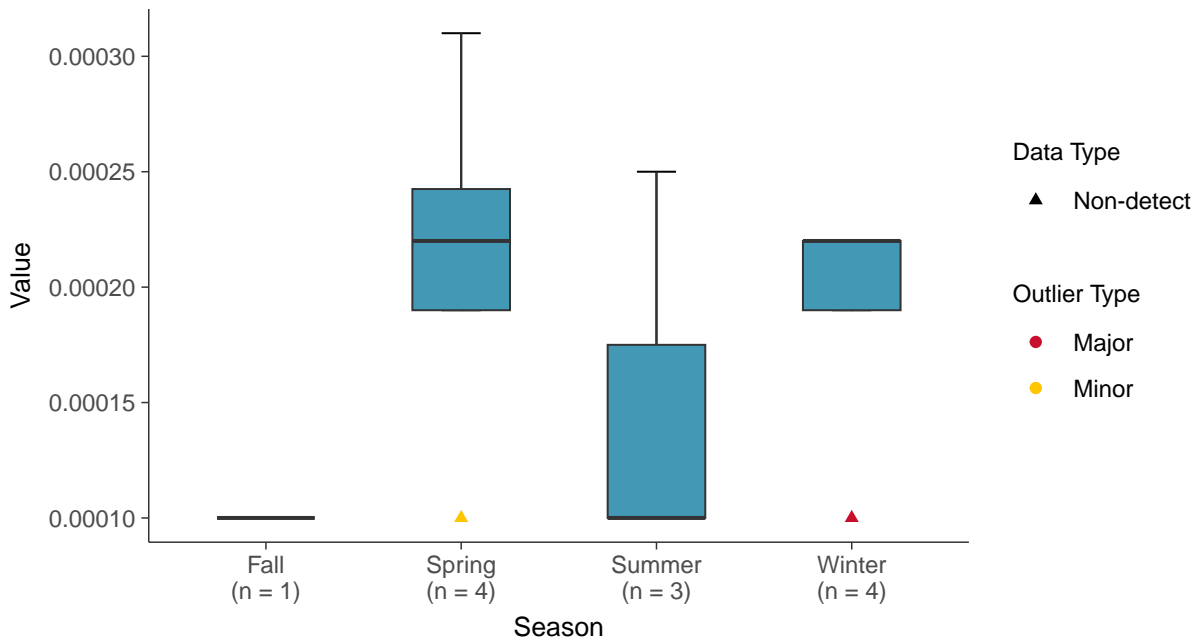
### Boxplot

Lead, MW-31 (mg/L)



### Boxplot by Season

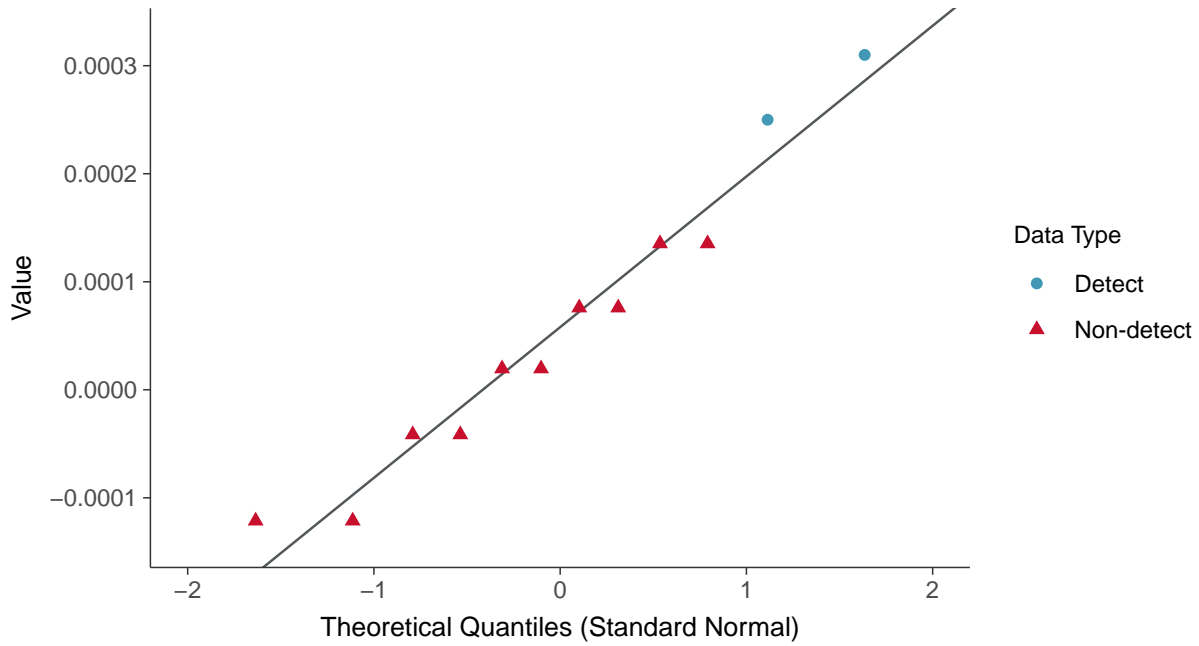
Lead, MW-31 (mg/L)





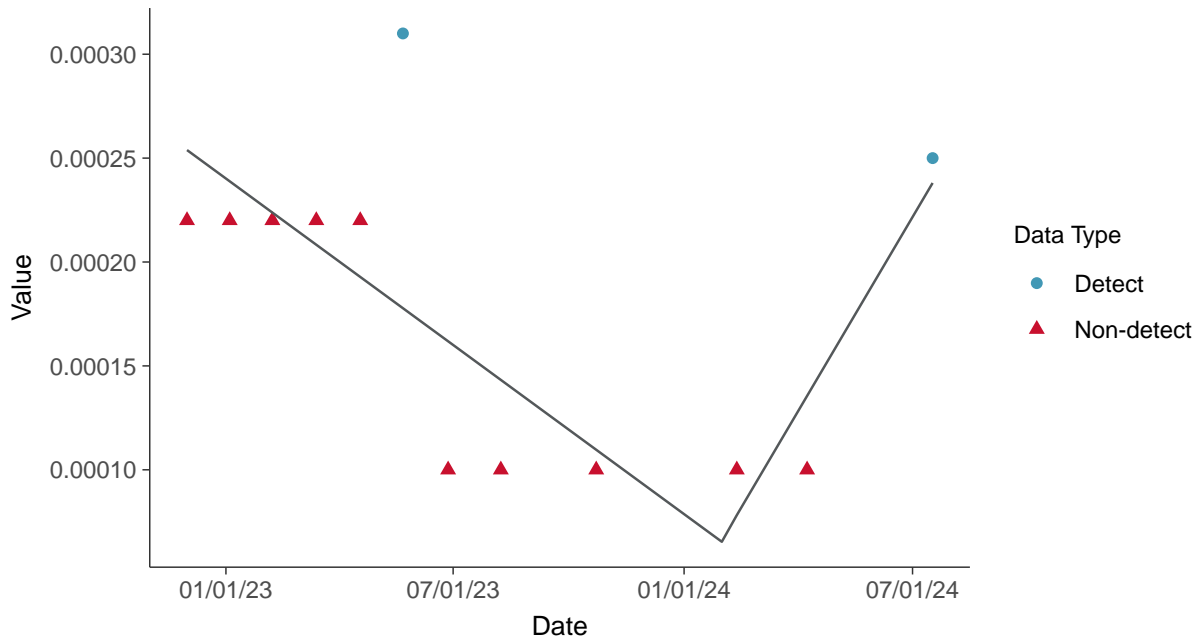
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear

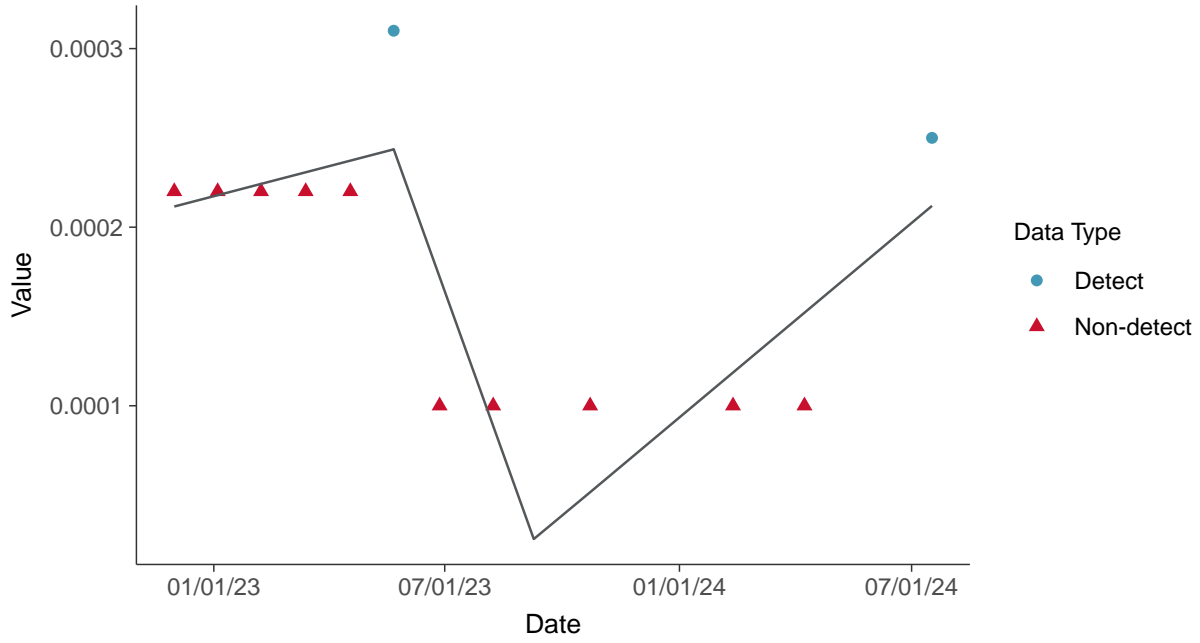
Lead, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-31 (mg/L)



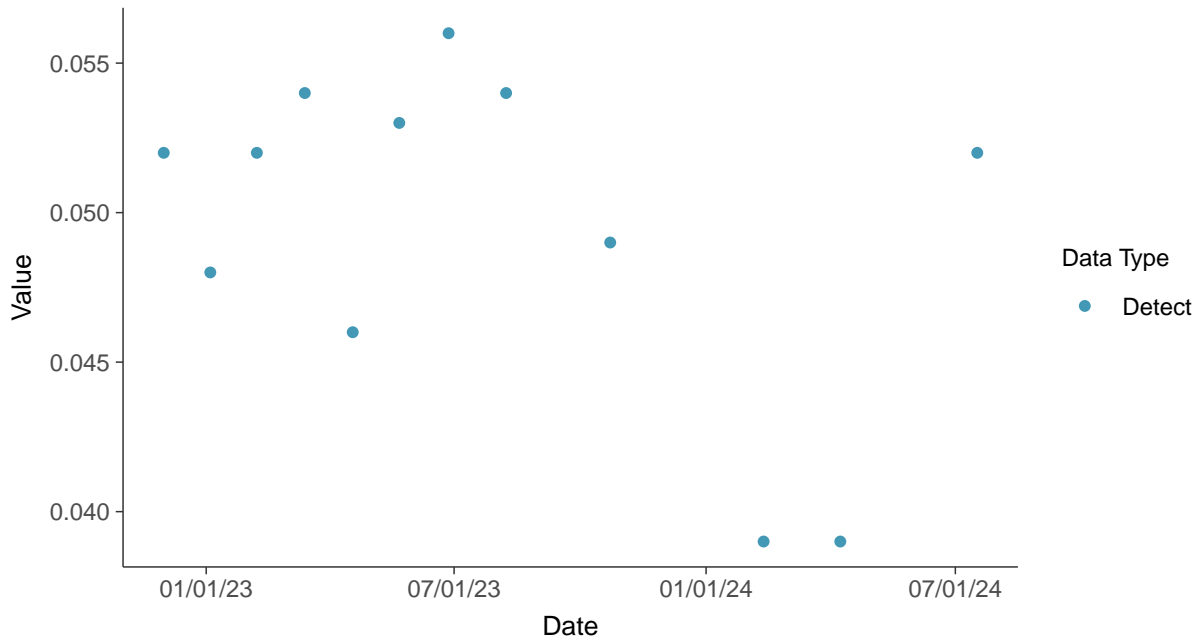


### Appendix IV: Lithium, MW-31

ID: 41\_1\_5\_116

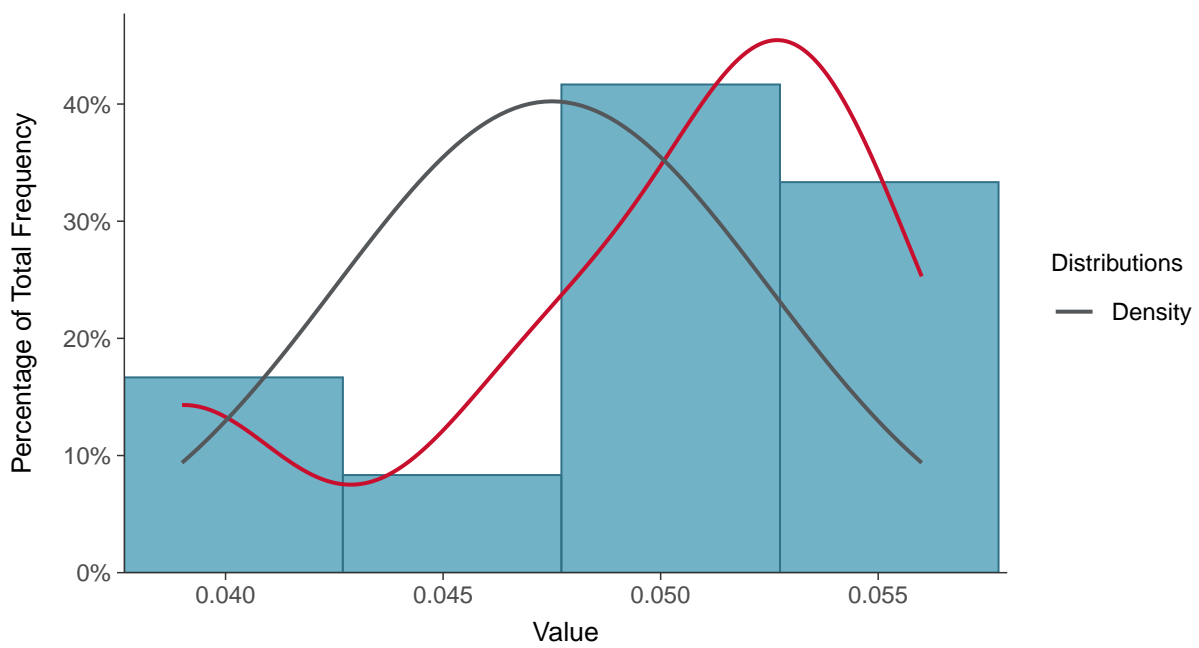
#### Scatter Plot

Lithium, MW-31 (mg/L)



#### Histogram

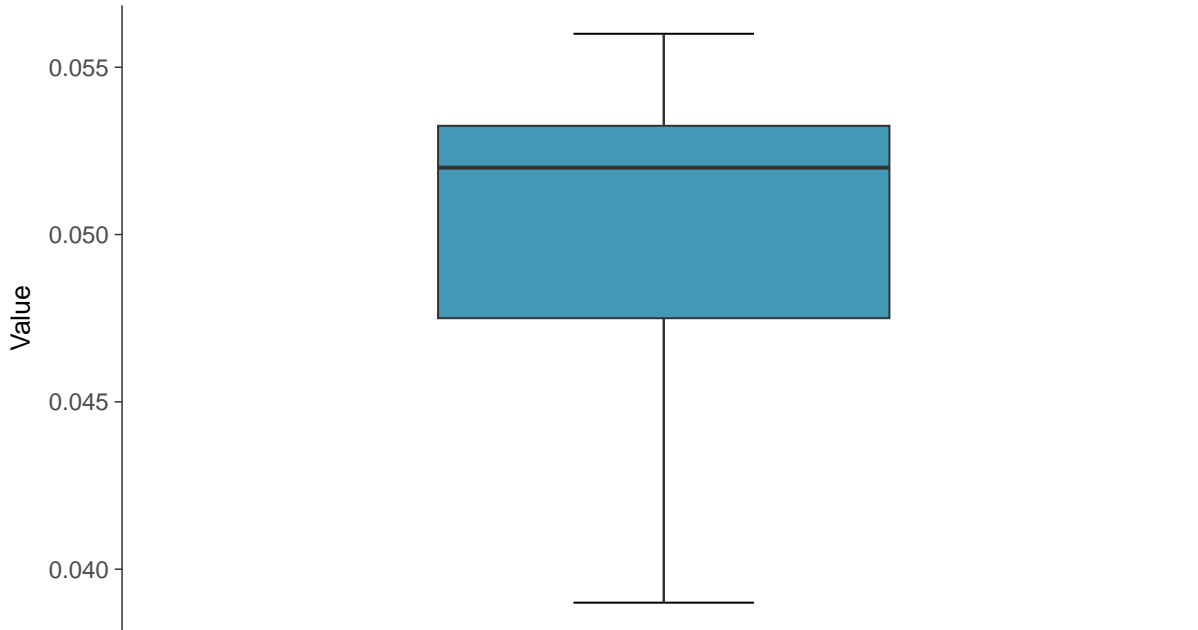
Lithium, MW-31 (mg/L)





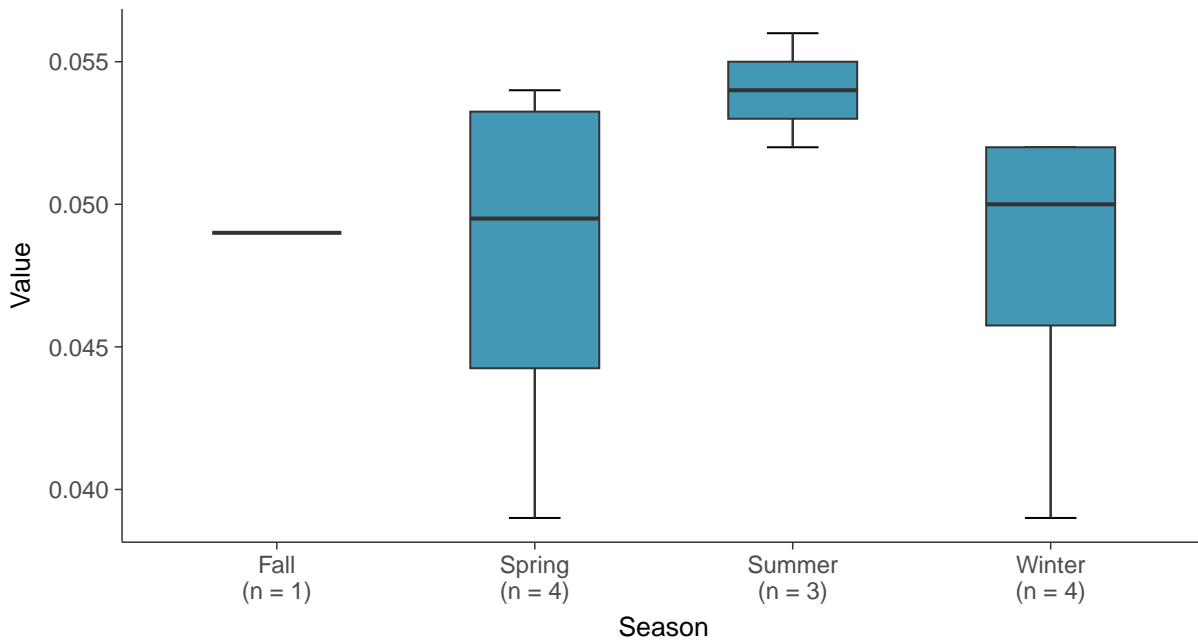
### Boxplot

Lithium, MW-31 (mg/L)



### Boxplot by Season

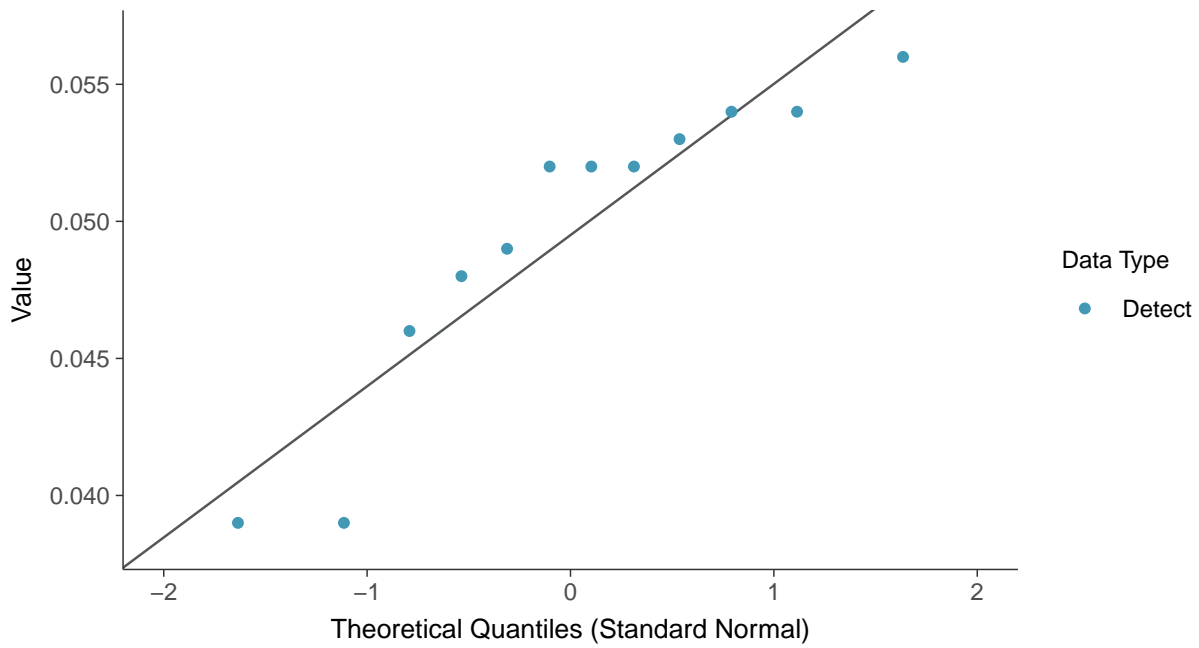
Lithium, MW-31 (mg/L)





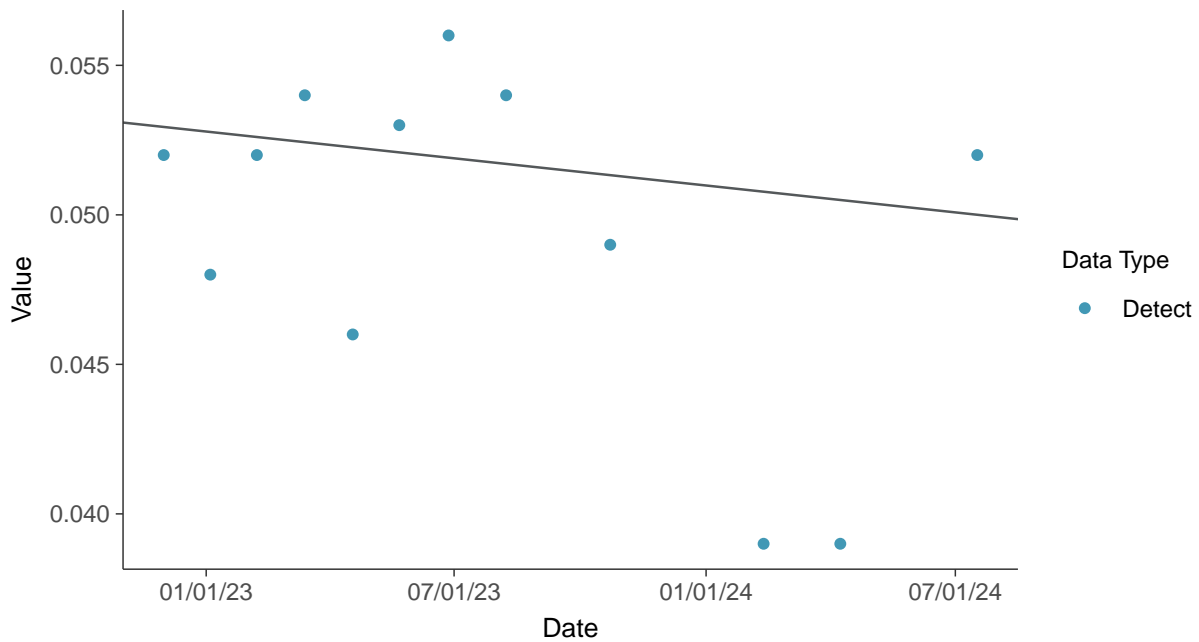
### Normal Q-Q plot

Lithium, MW-31 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

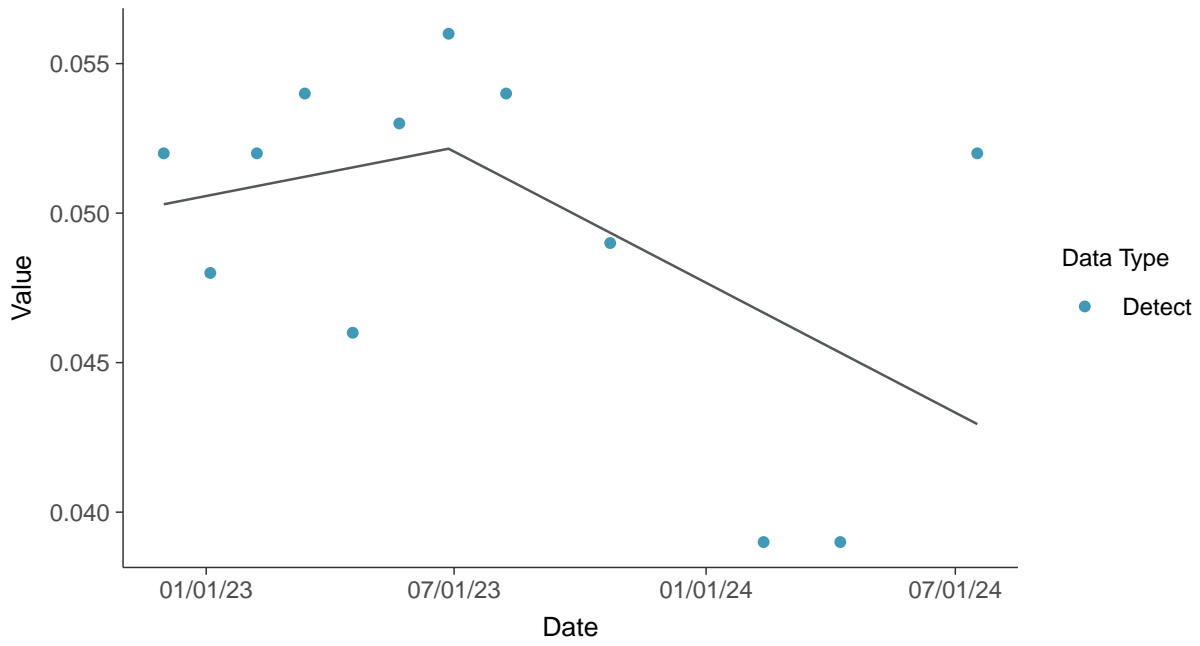
Lithium, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Lithium, MW-31 (mg/L)

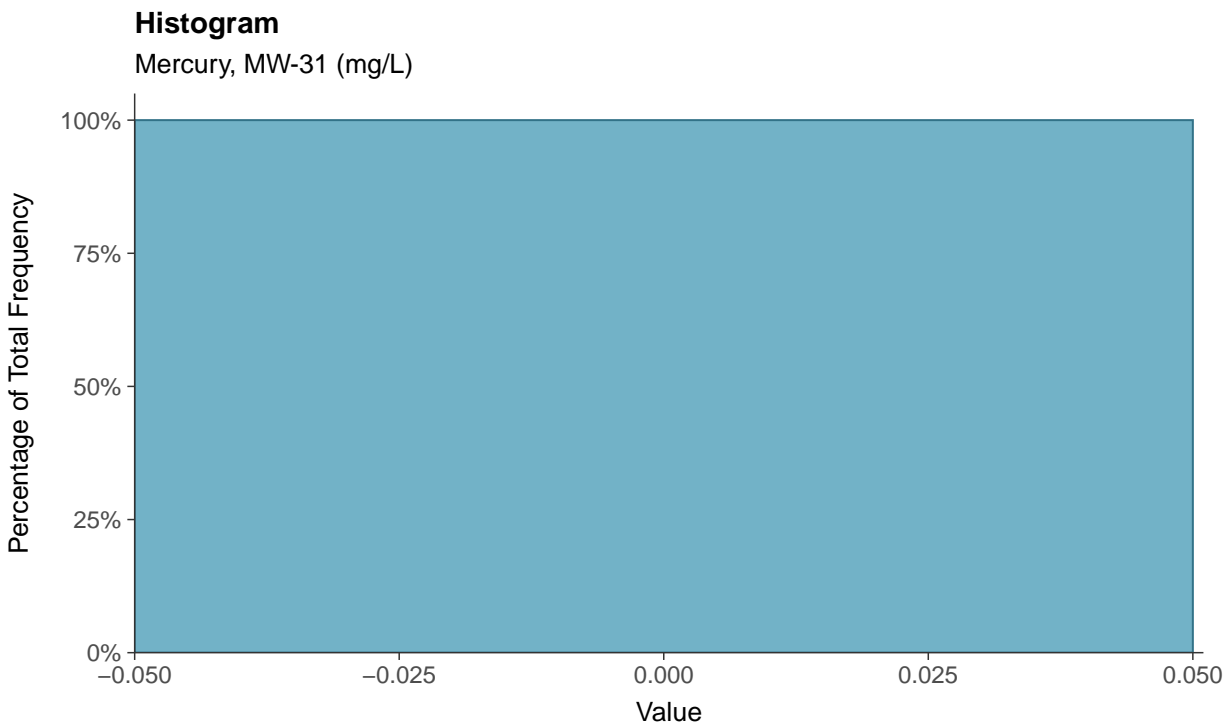
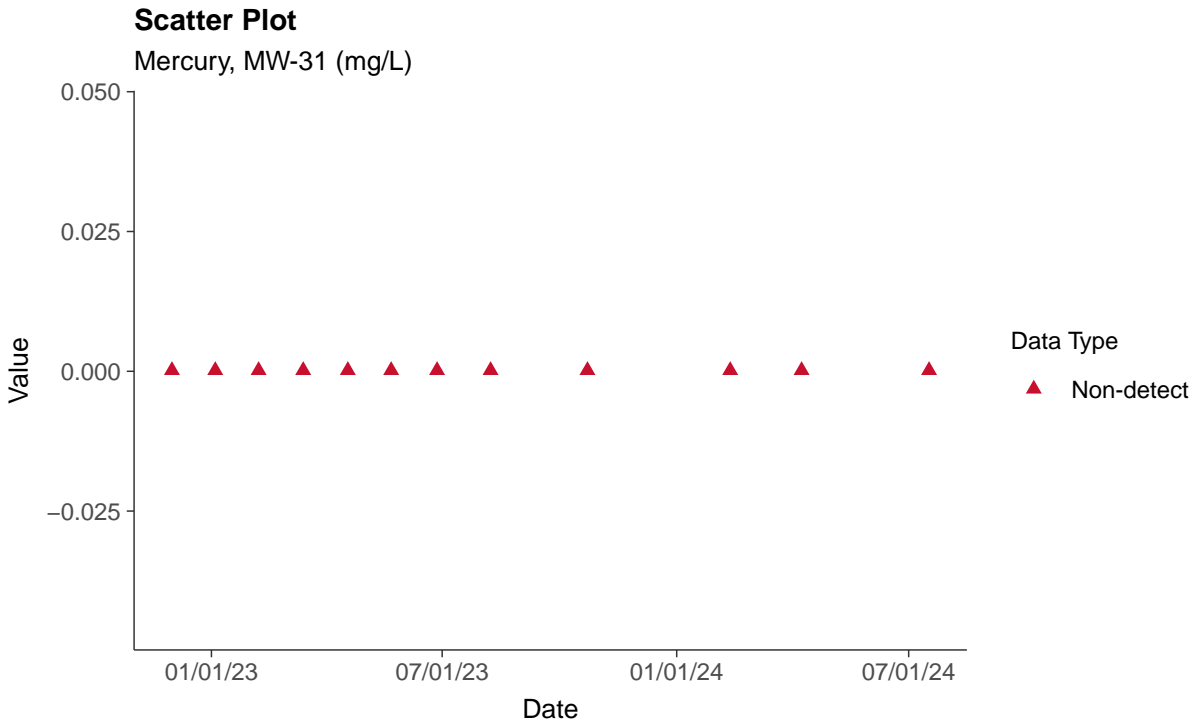






### Appendix IV: Mercury, MW-31

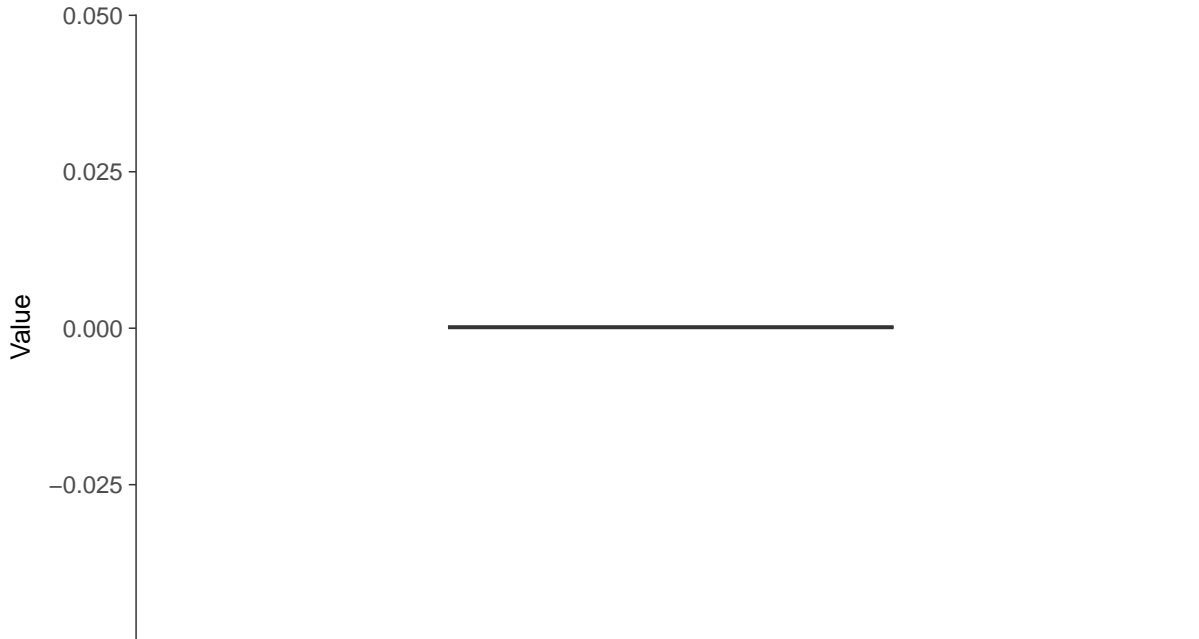
ID: 41\_1\_5\_117





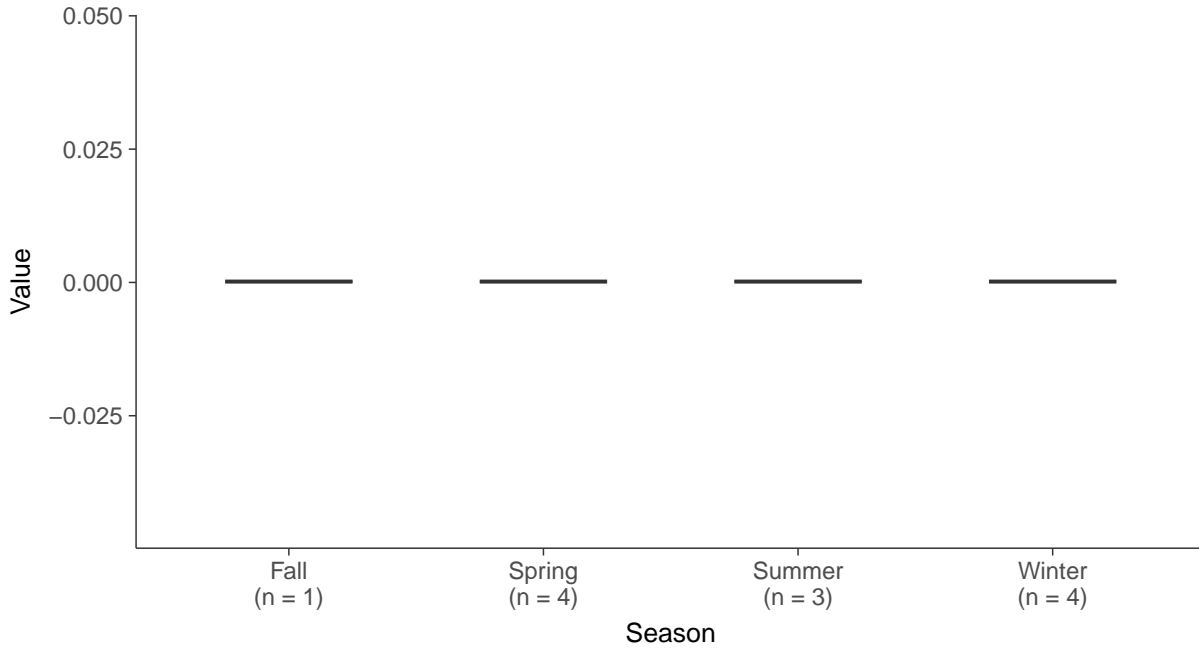
### Boxplot

Mercury, MW-31 (mg/L)



### Boxplot by Season

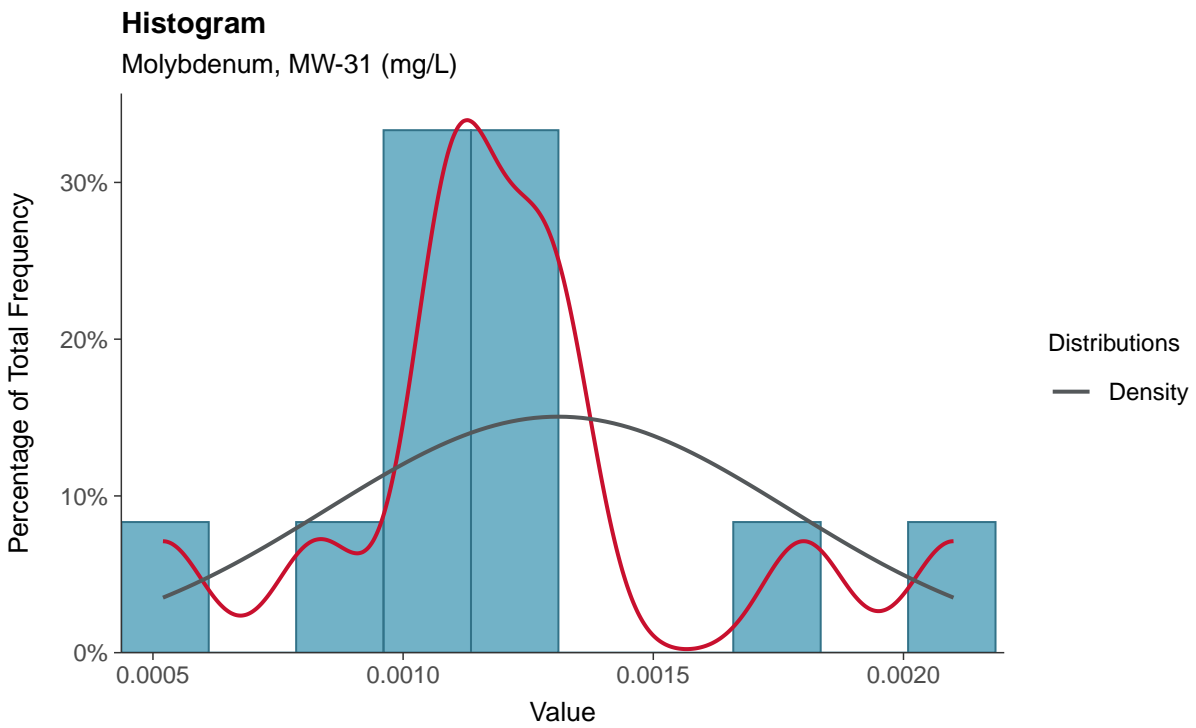
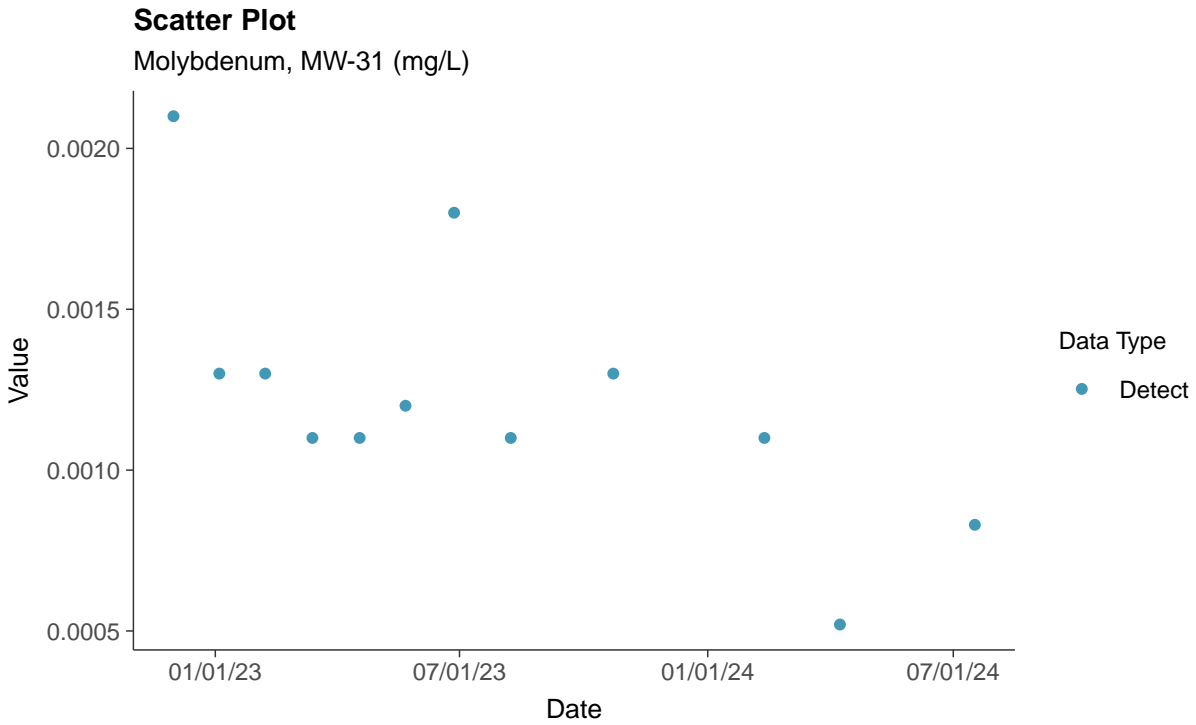
Mercury, MW-31 (mg/L)





### Appendix IV: Molybdenum, MW-31

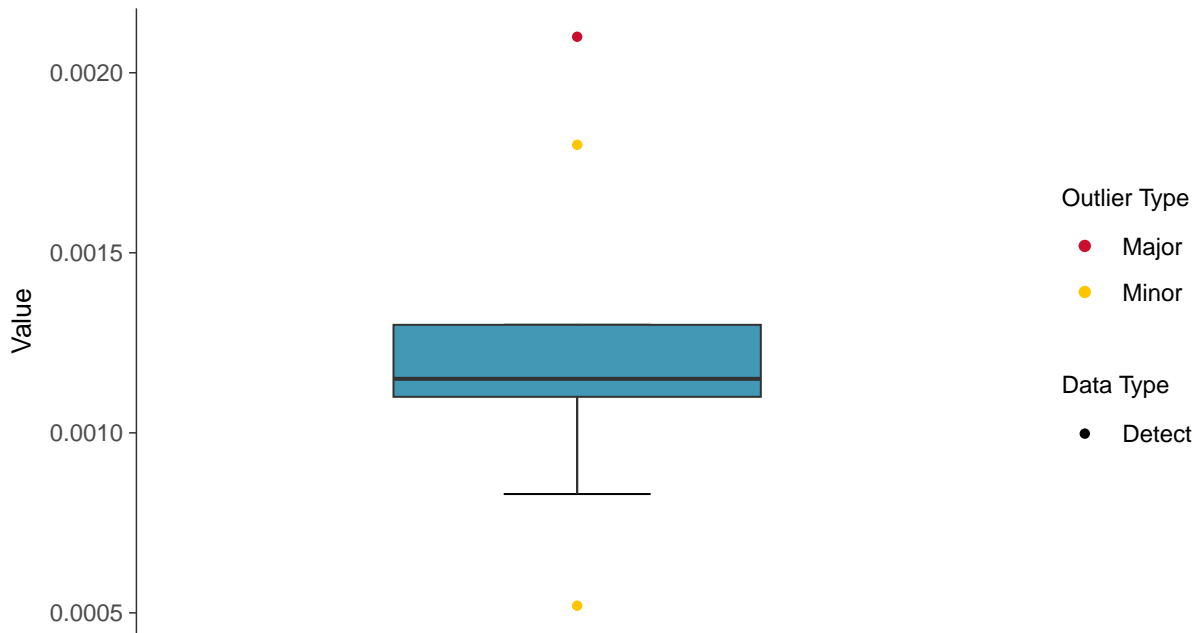
ID: 41\_1\_5\_118





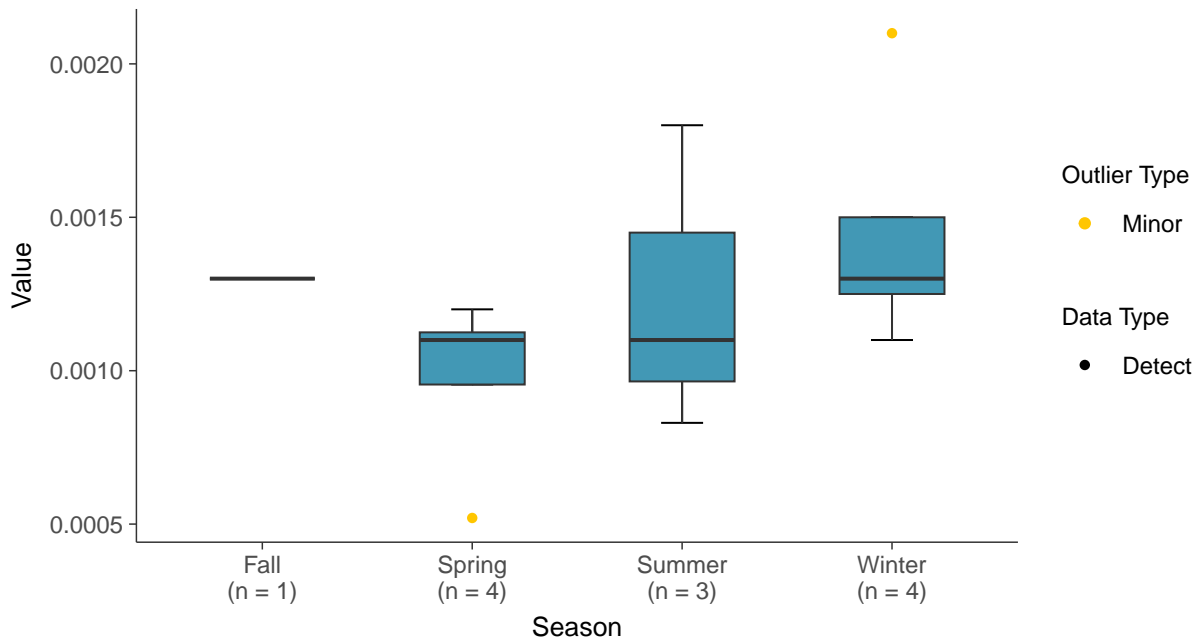
### Boxplot

Molybdenum, MW-31 (mg/L)



### Boxplot by Season

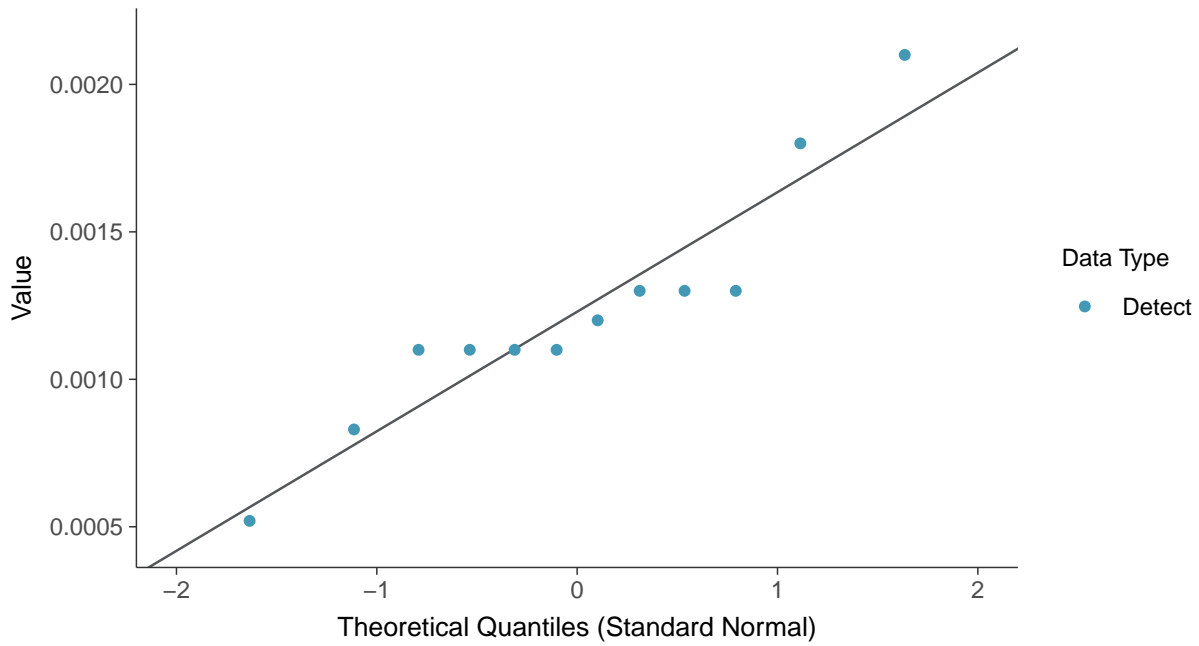
Molybdenum, MW-31 (mg/L)





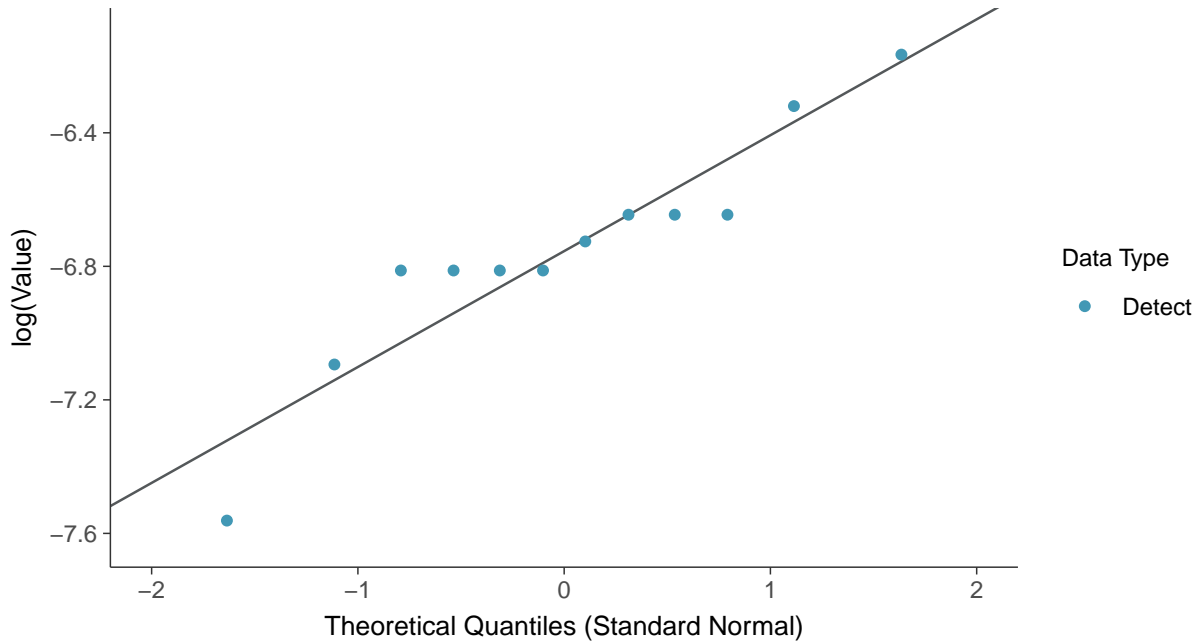
### Normal Q-Q plot

Molybdenum, MW-31 (mg/L)



### Lognormal Q-Q plot

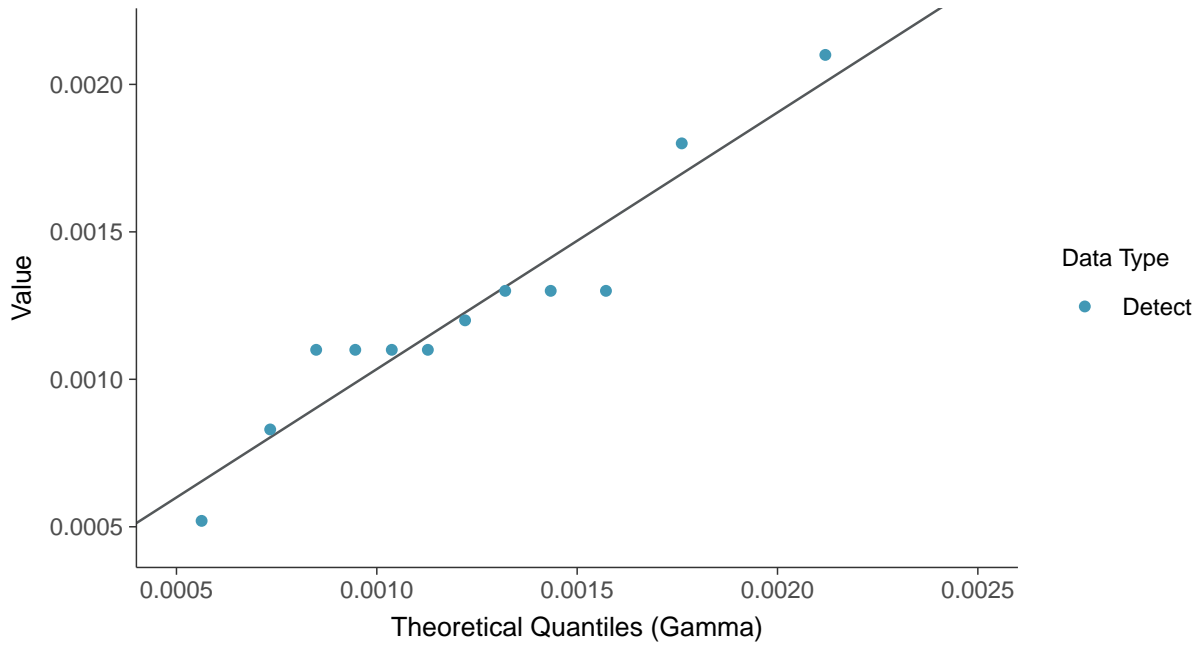
Molybdenum, MW-31 (mg/L)





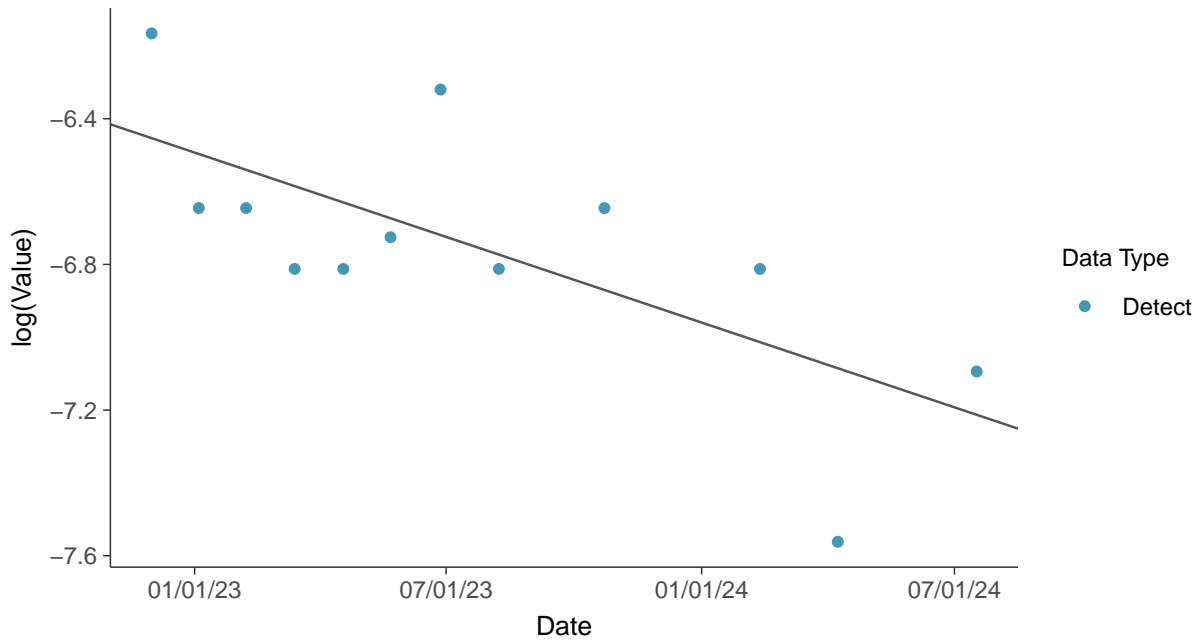
### Gamma Q-Q plot

Molybdenum, MW-31 (mg/L)



### Trend Regression: Lognormal MLE

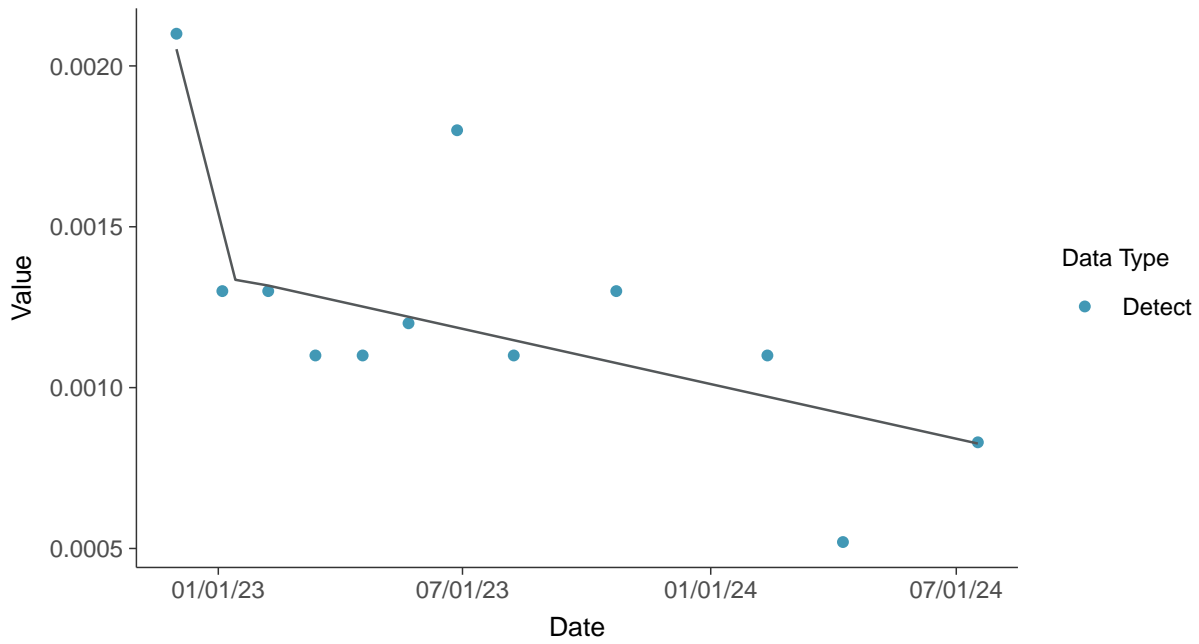
Molybdenum, MW-31 (mg/L)





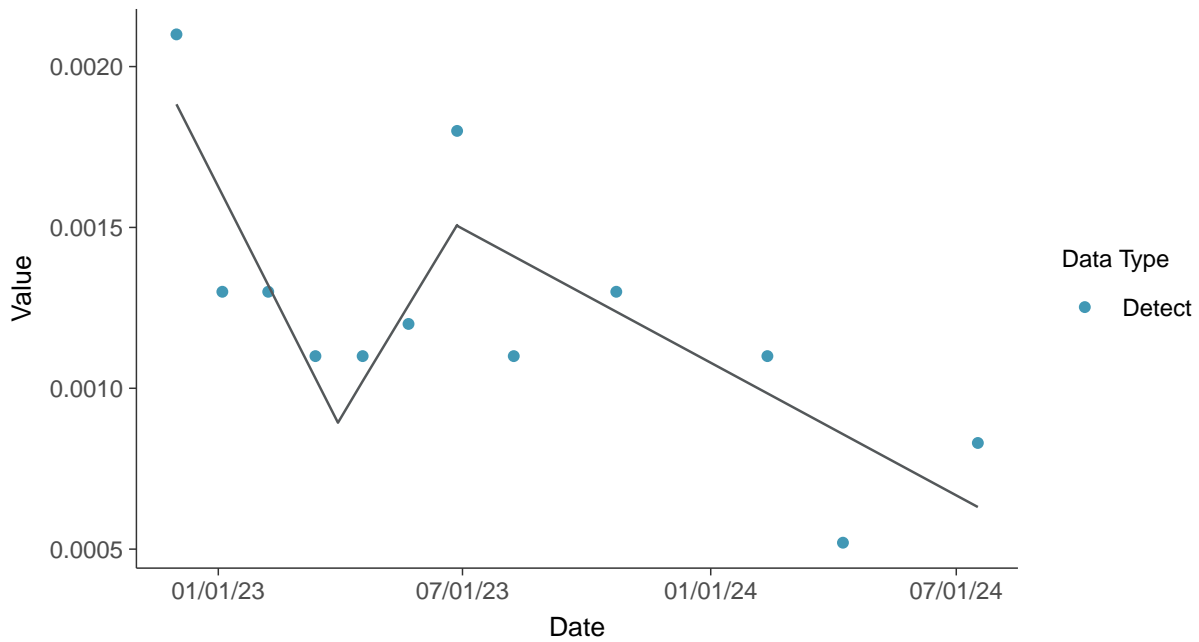
### Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-31 (mg/L)



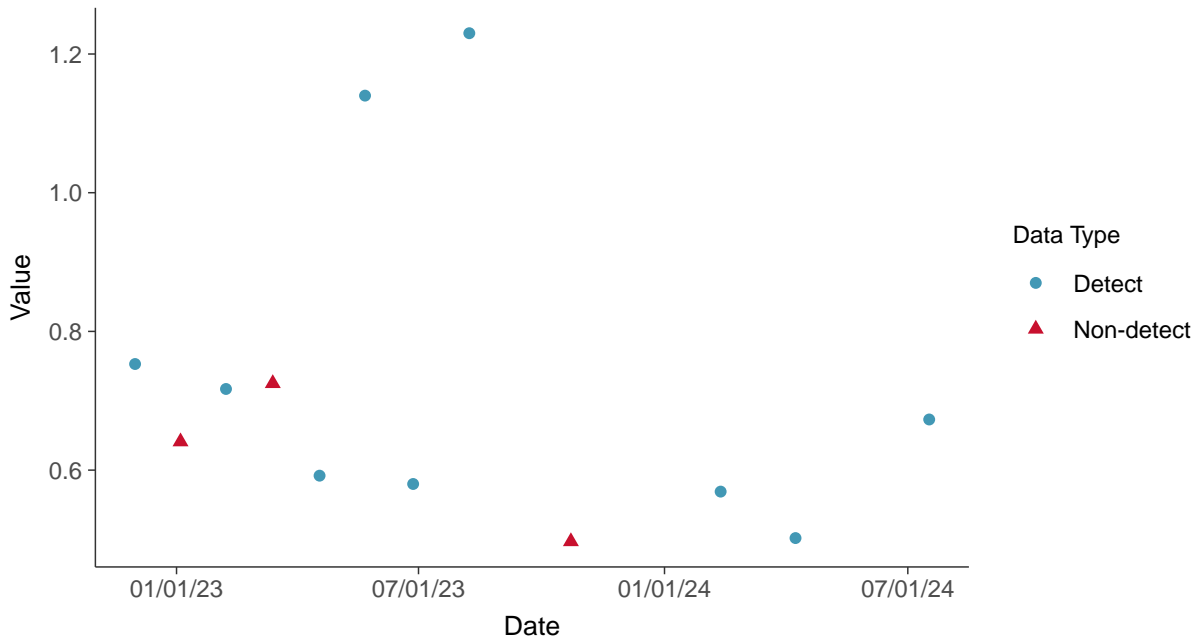


## Appendix IV: Radium 226 and 228, MW-31

ID: 41\_1\_5\_121

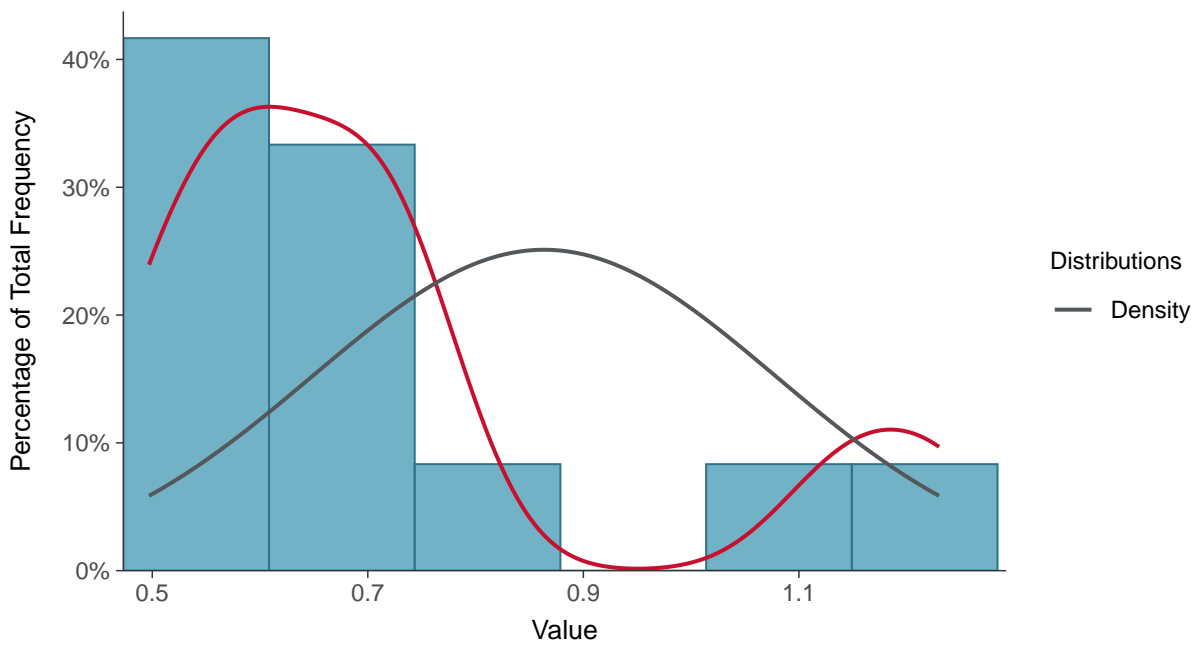
### Scatter Plot

Radium 226 and 228, MW-31 (pCi/L)



### Histogram

Radium 226 and 228, MW-31 (pCi/L)

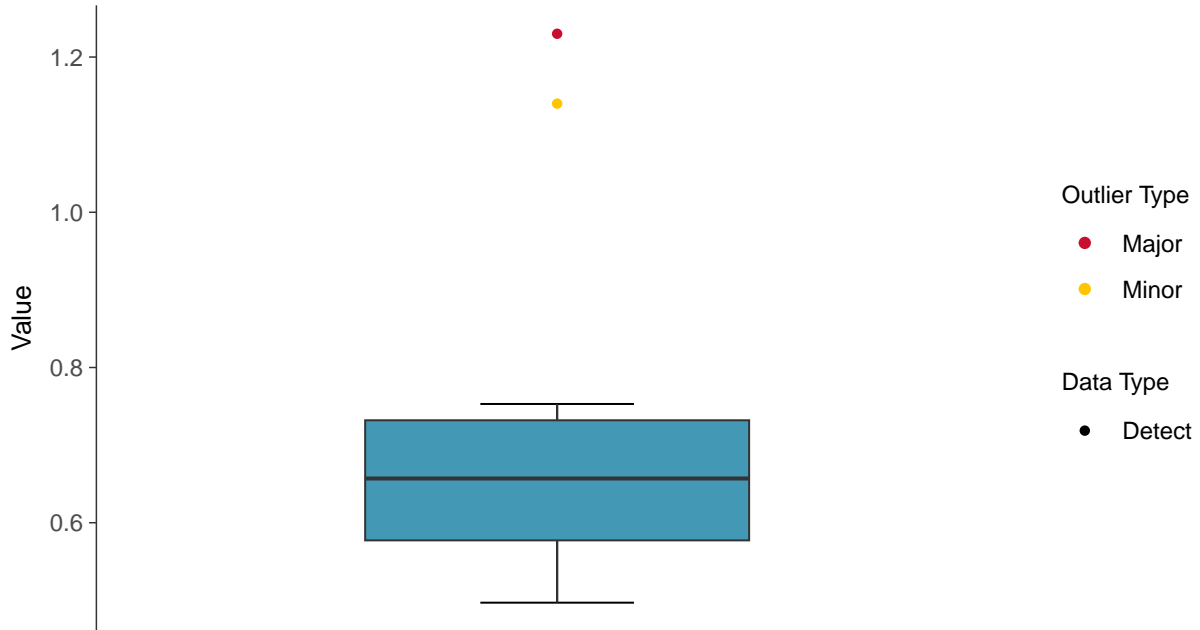






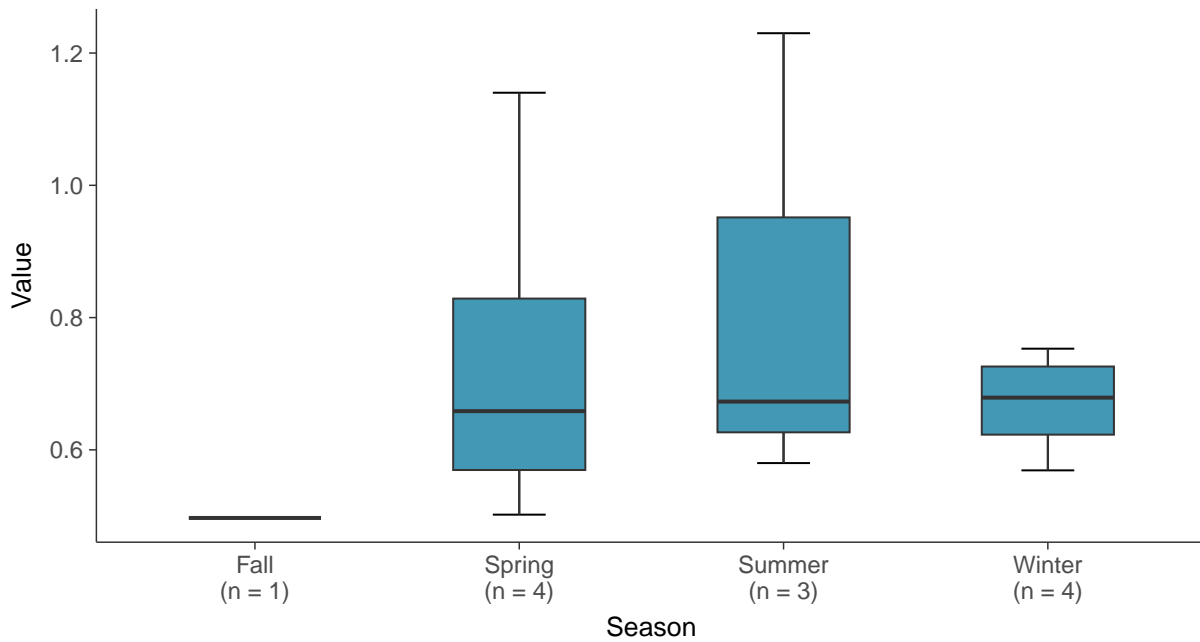
### Boxplot

Radium 226 and 228, MW-31 (pCi/L)



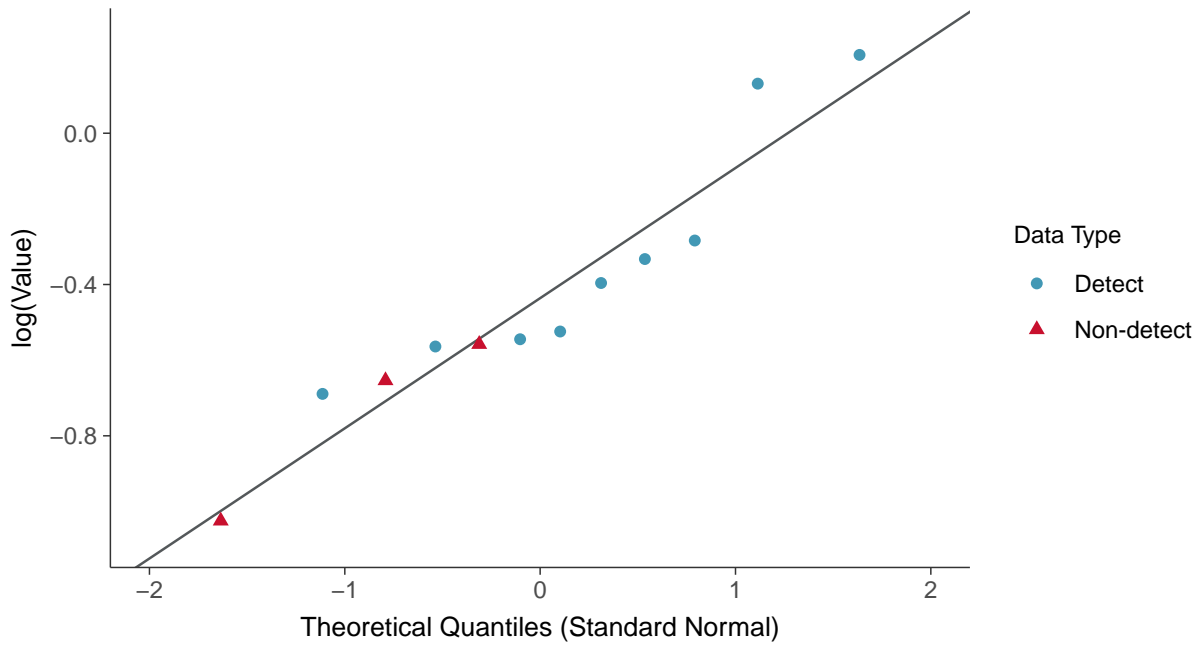
### Boxplot by Season

Radium 226 and 228, MW-31 (pCi/L)

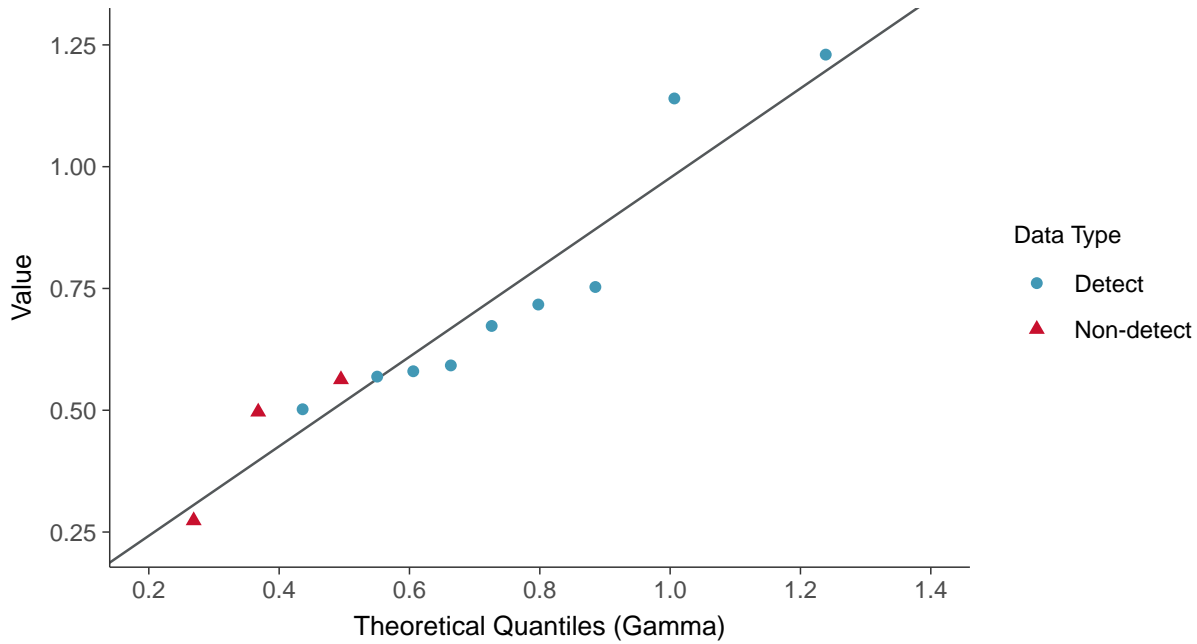




**Lognormal Q-Q plot using ROS Imputed Estimates**  
Radium 226 and 228, MW-31 (pCi/L)



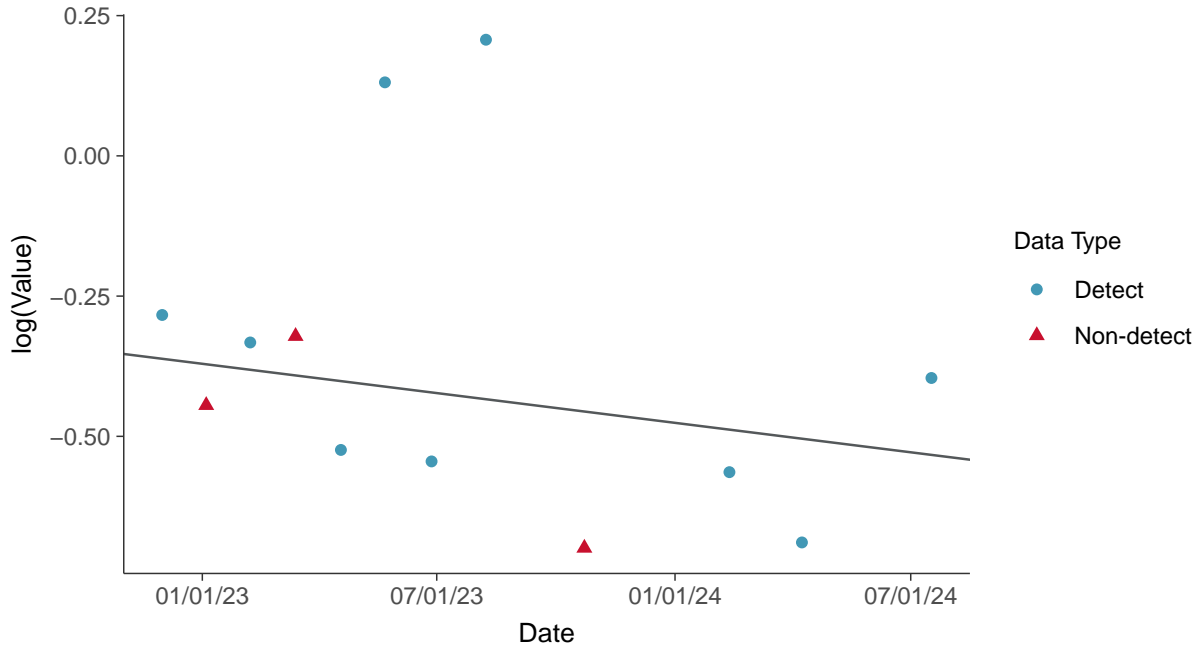
**Gamma Q-Q plot using ROS Imputed Estimates**  
Radium 226 and 228, MW-31 (pCi/L)





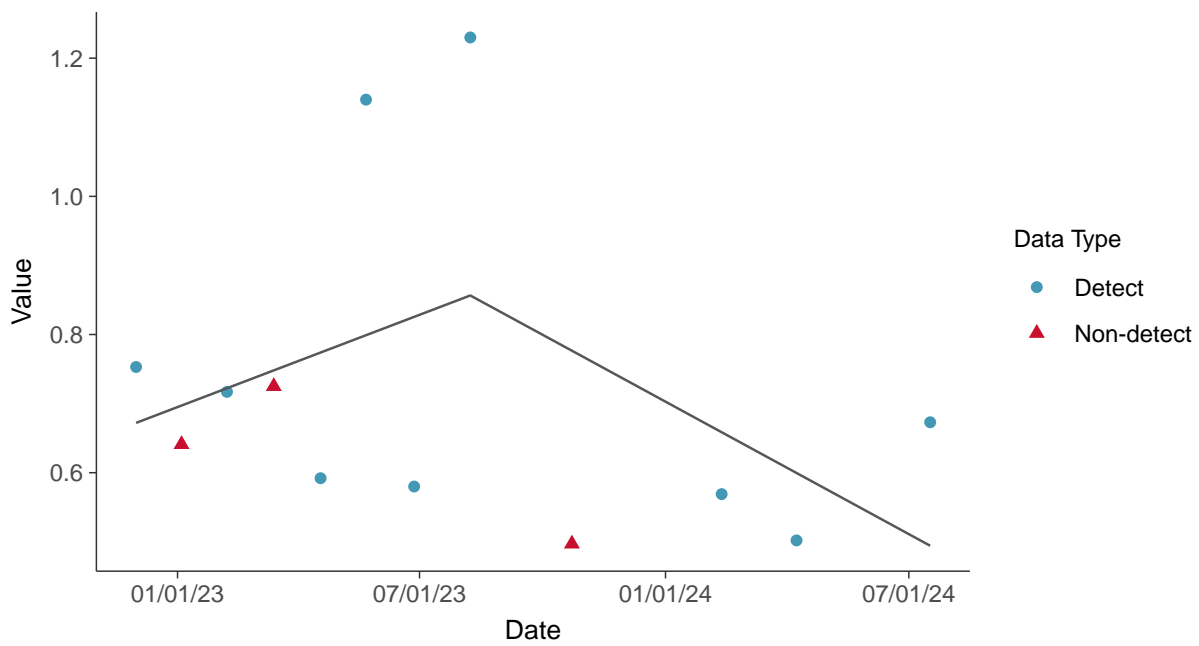
### Trend Regression: Lognormal MLE

Radium 226 and 228, MW-31 (pCi/L)



### Trend Regression: Piecewise Linear-Linear

Radium 226 and 228, MW-31 (pCi/L)



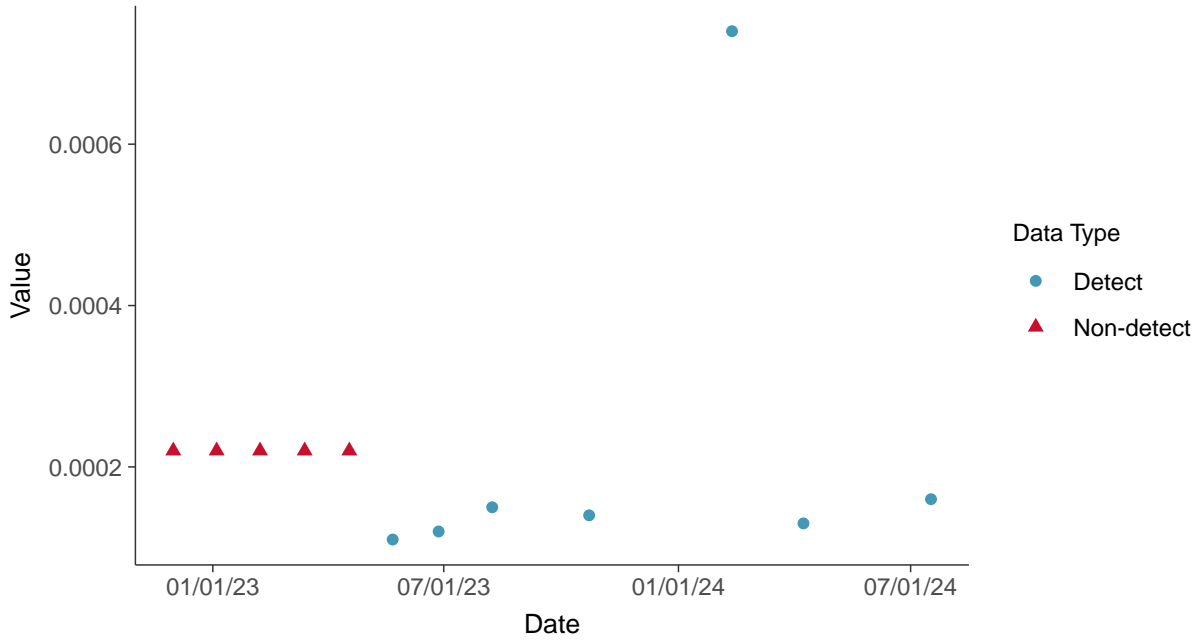


### Appendix IV: Selenium, MW-31

ID: 41\_1\_5\_122

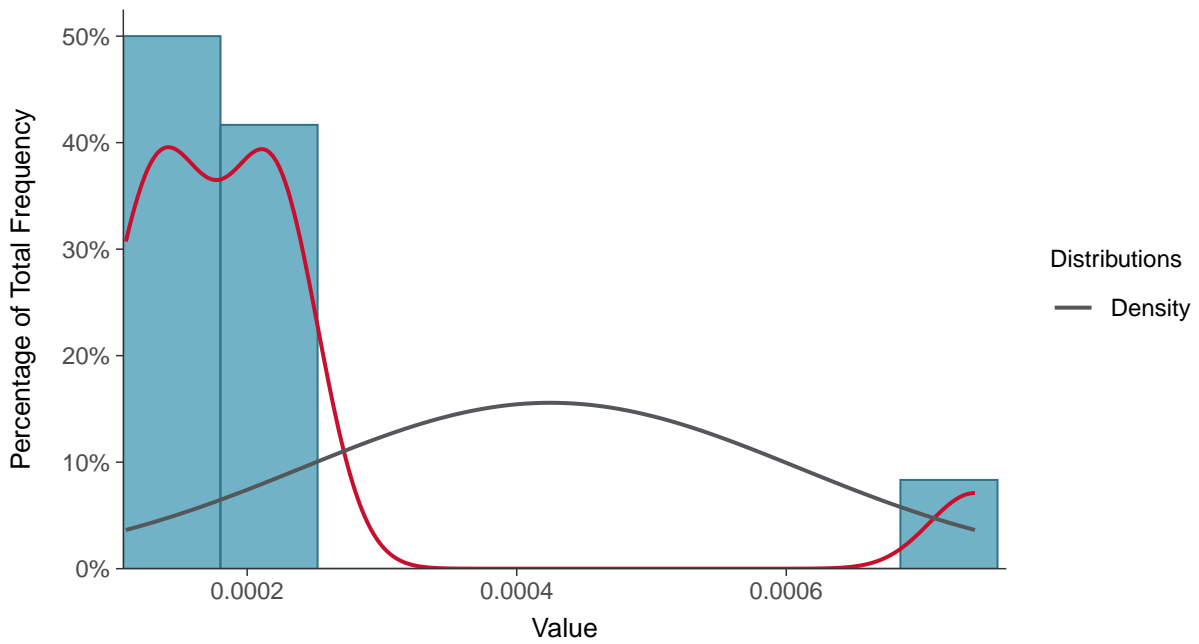
#### Scatter Plot

Selenium, MW-31 (mg/L)



#### Histogram

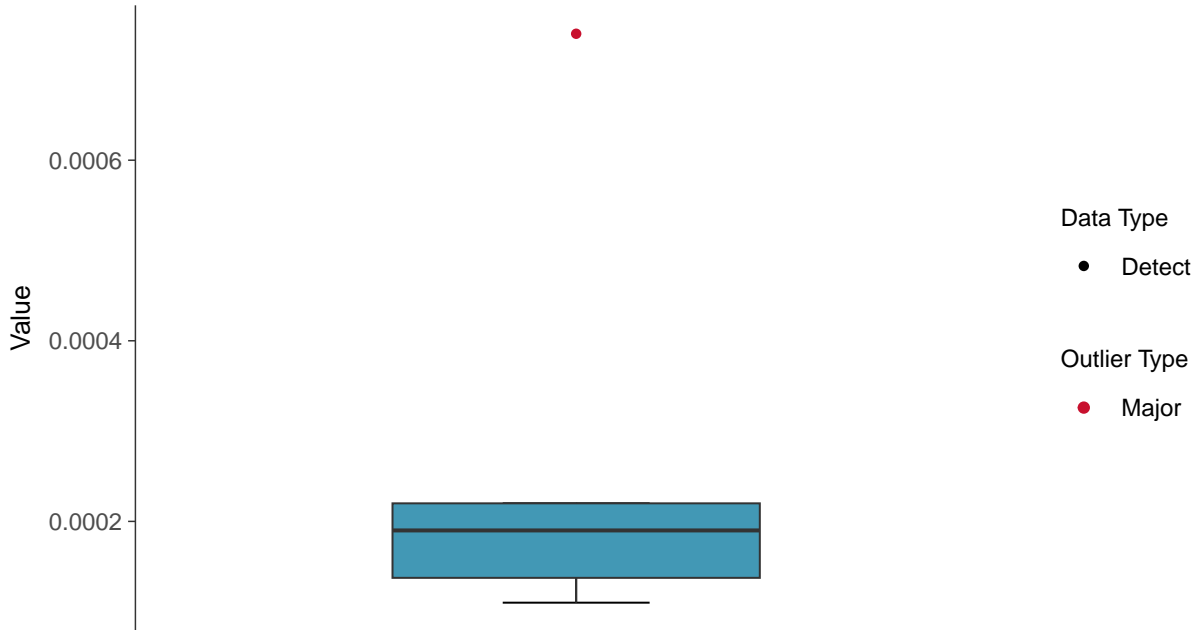
Selenium, MW-31 (mg/L)





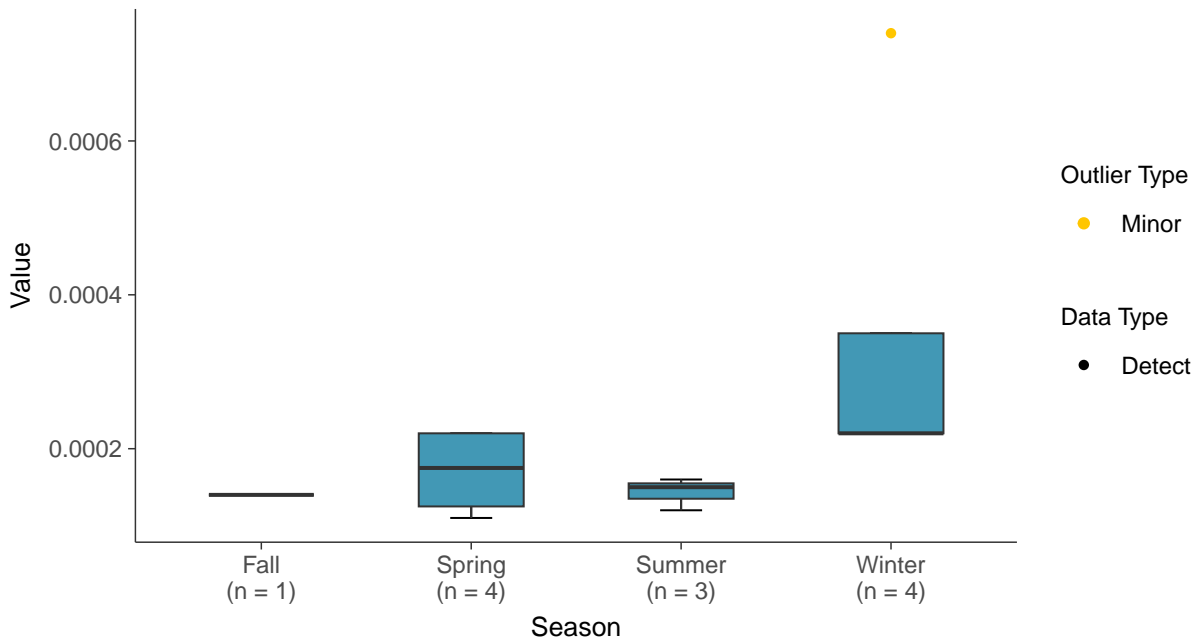
### Boxplot

Selenium, MW-31 (mg/L)



### Boxplot by Season

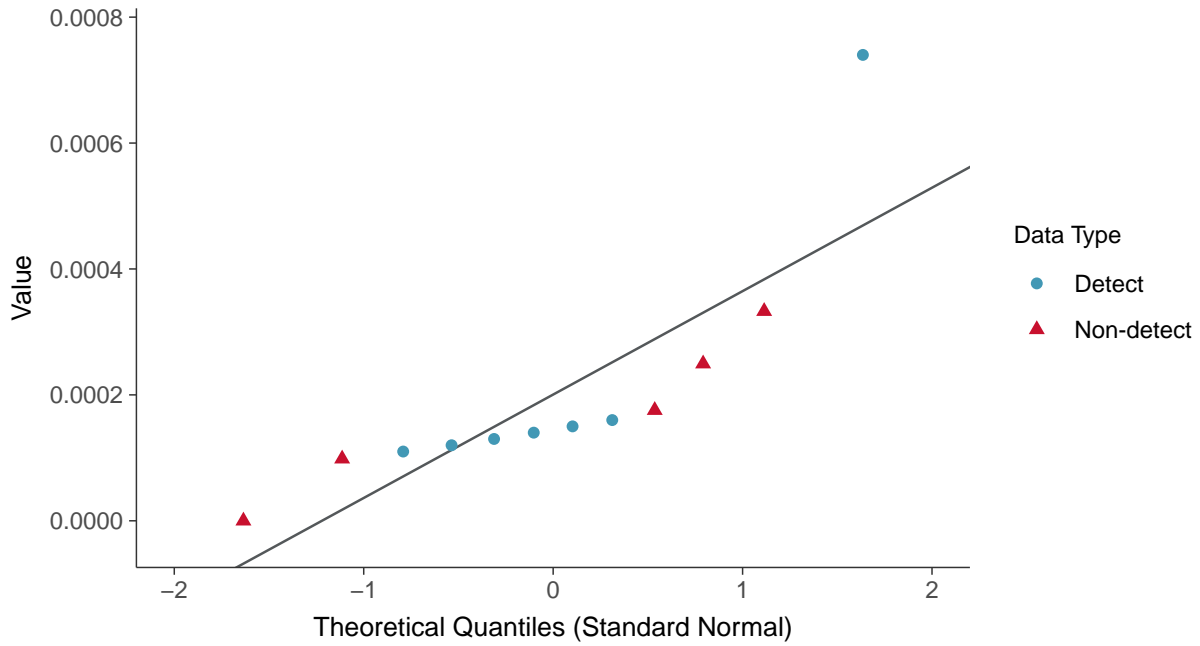
Selenium, MW-31 (mg/L)





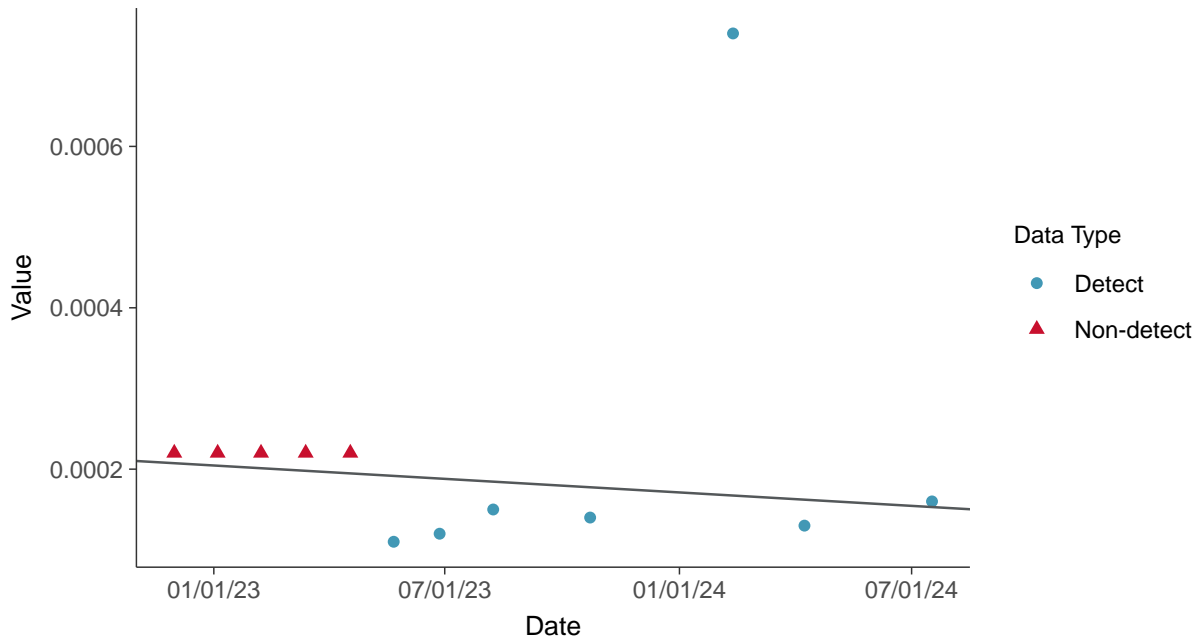
### Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-31 (mg/L)



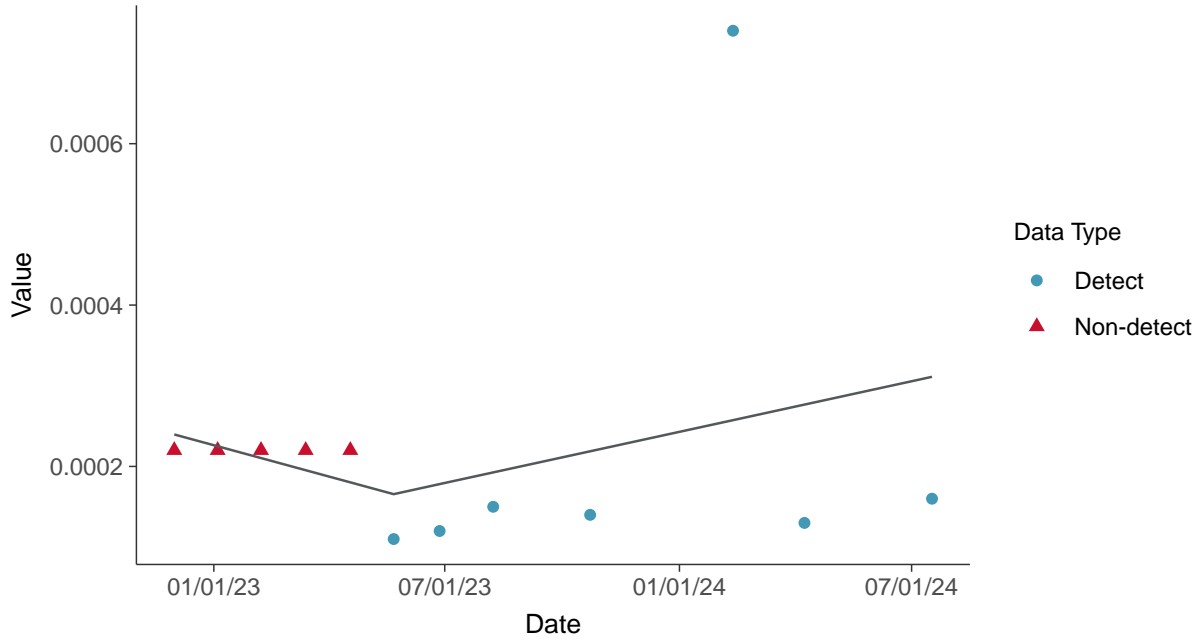
### Trend Regression: Mann-Kendall/Theil-Sen Estimate

Selenium, MW-31 (mg/L)

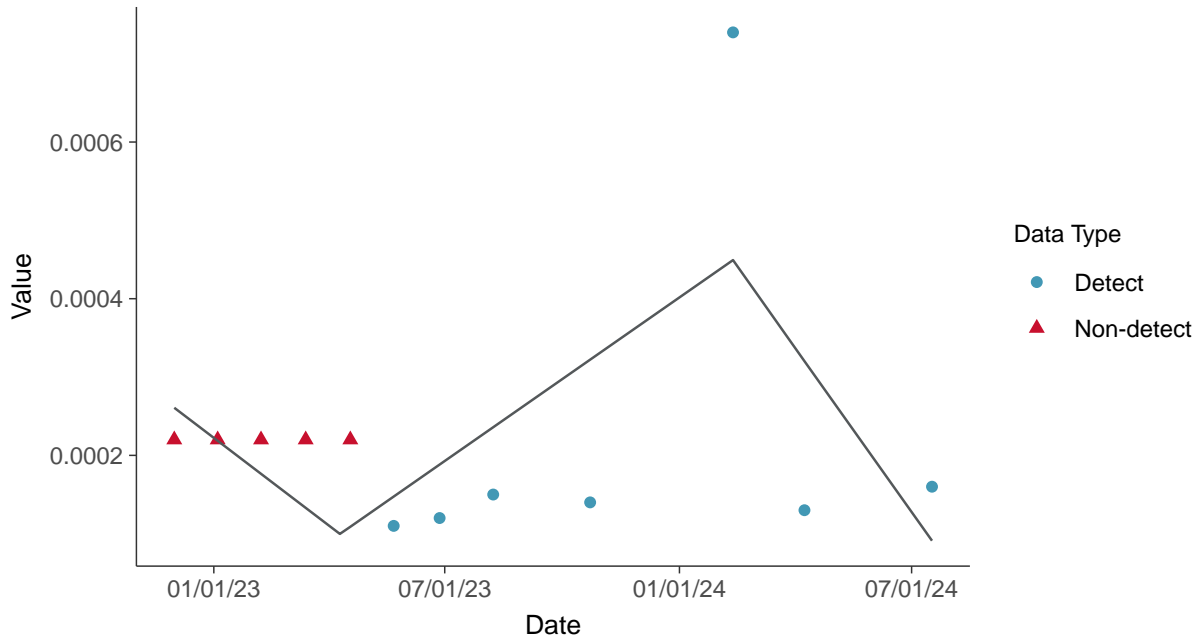




**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-31 (mg/L)



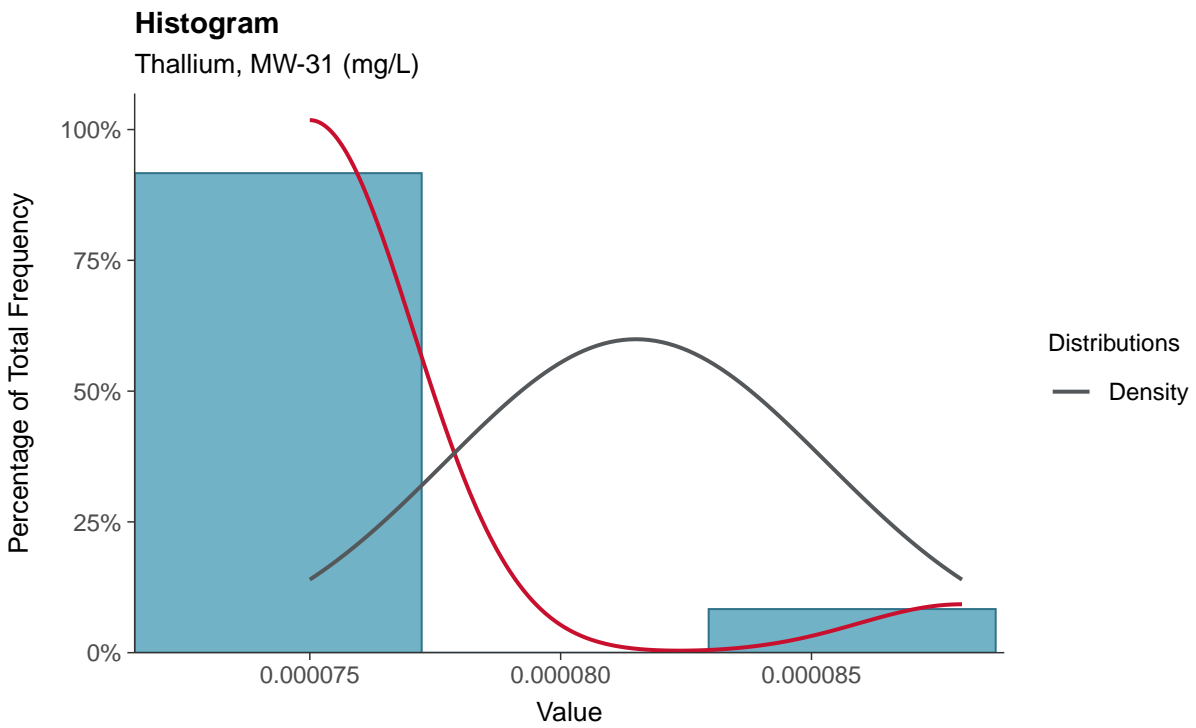
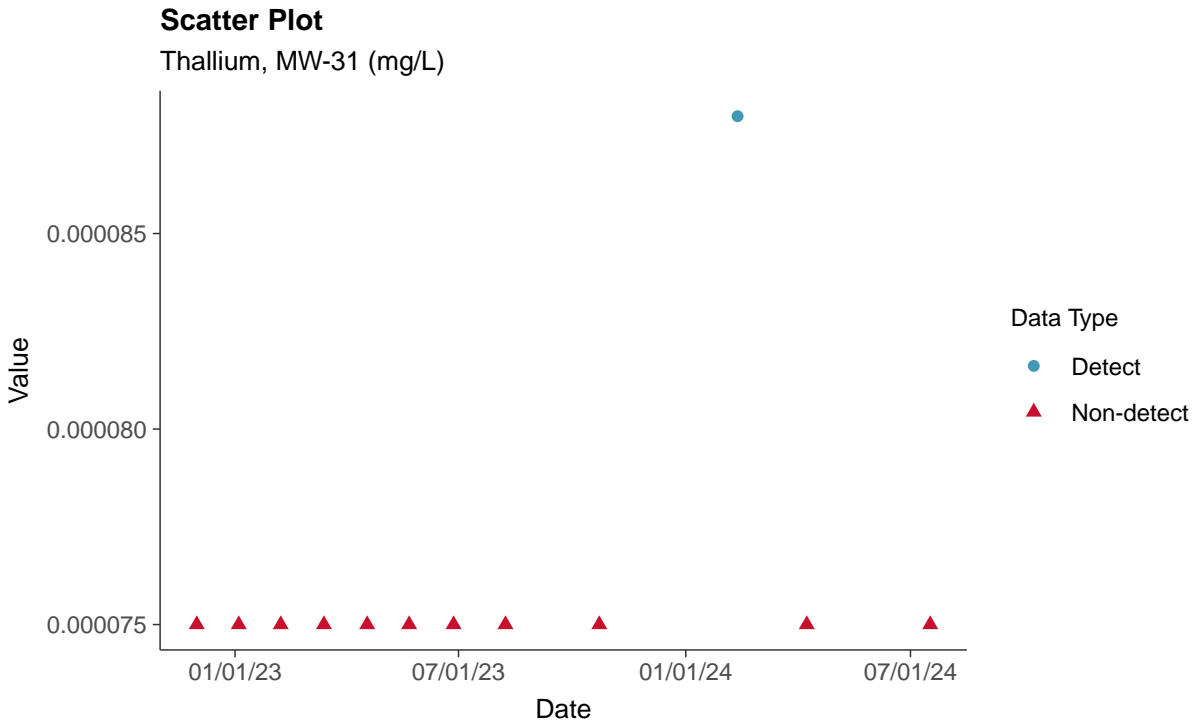
**Trend Regression: Piecewise Linear-Linear-Linear**  
Selenium, MW-31 (mg/L)





### Appendix IV: Thallium, MW-31

ID: 41\_1\_5\_125

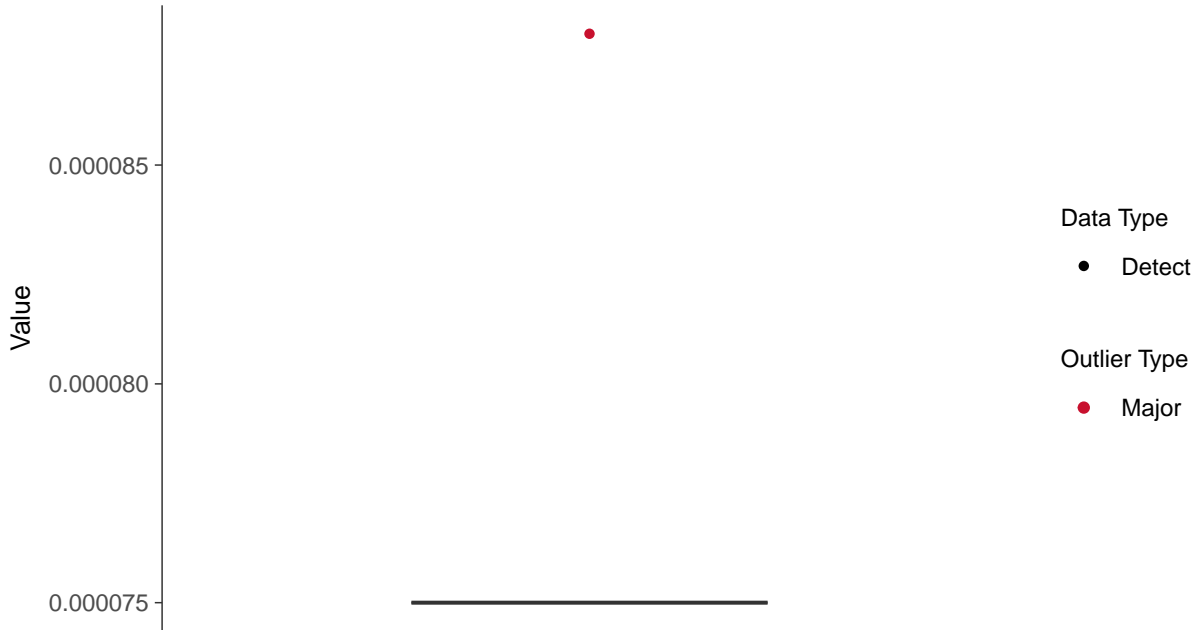






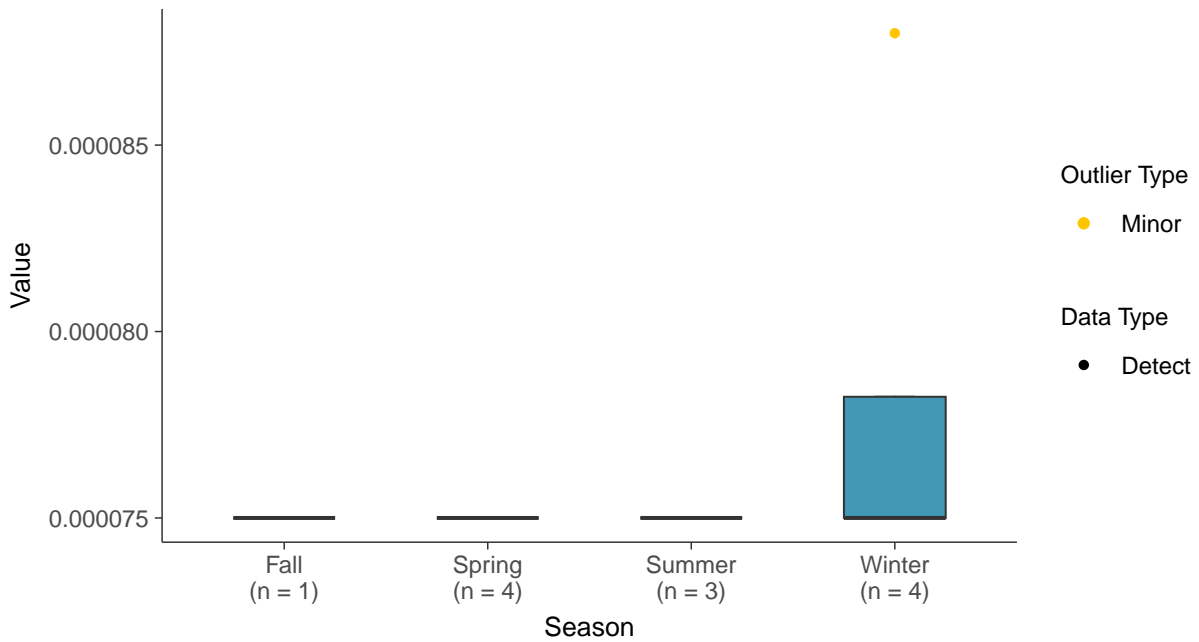
### Boxplot

Thallium, MW-31 (mg/L)



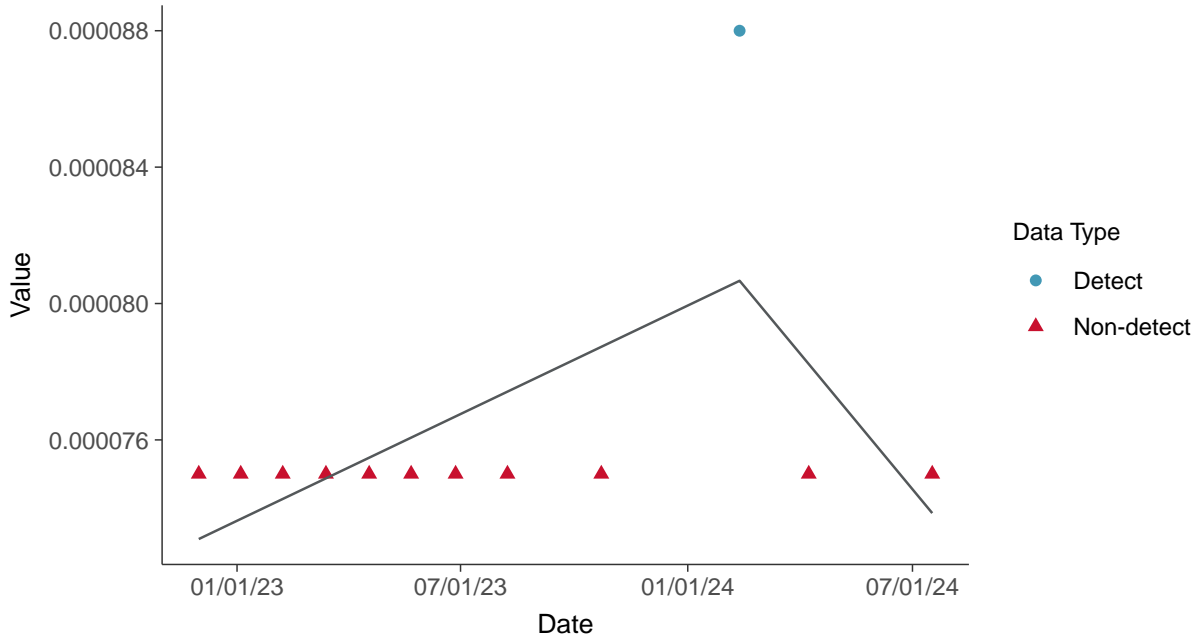
### Boxplot by Season

Thallium, MW-31 (mg/L)

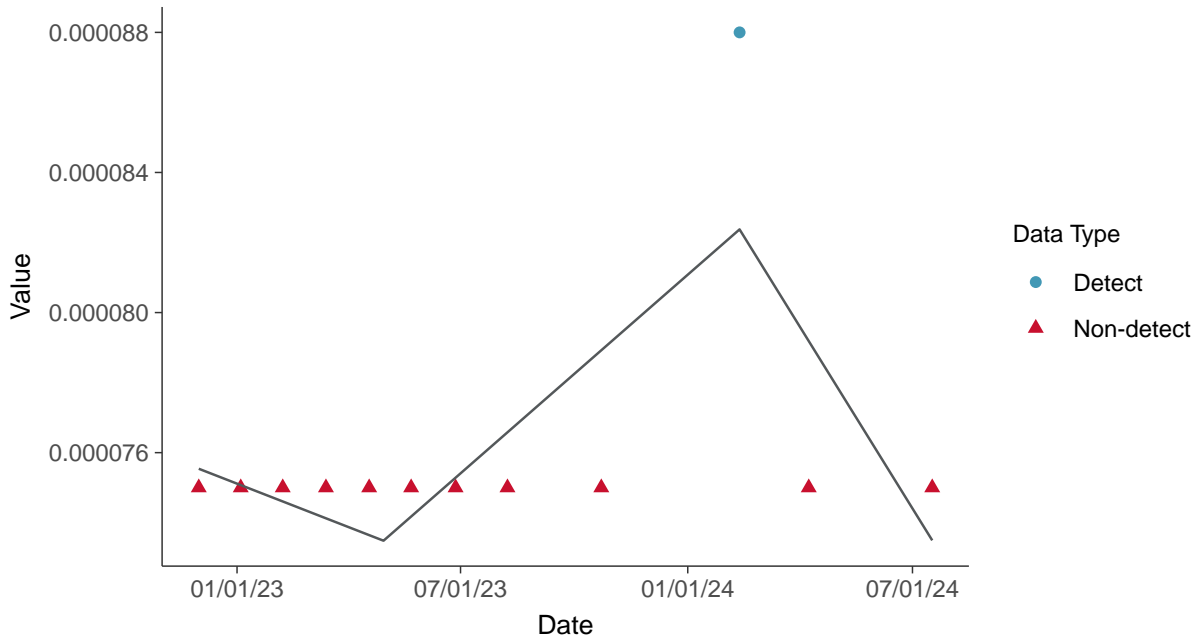




**Trend Regression: Piecewise Linear-Linear**  
Thallium, MW-31 (mg/L)



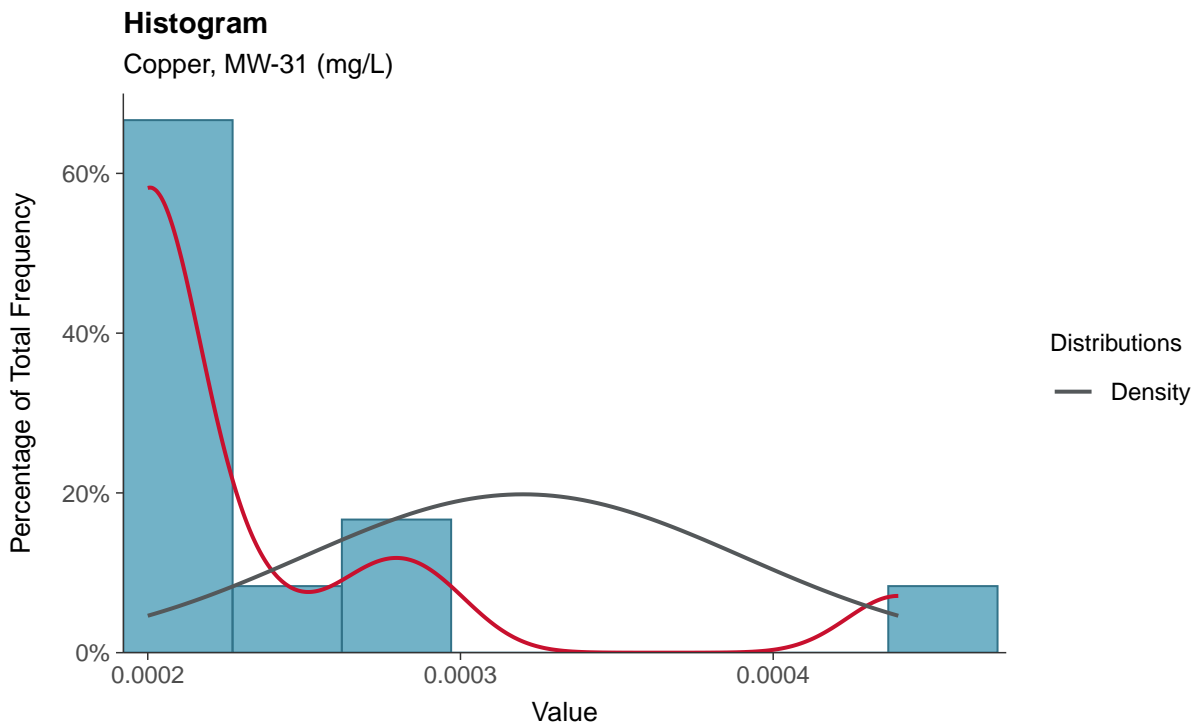
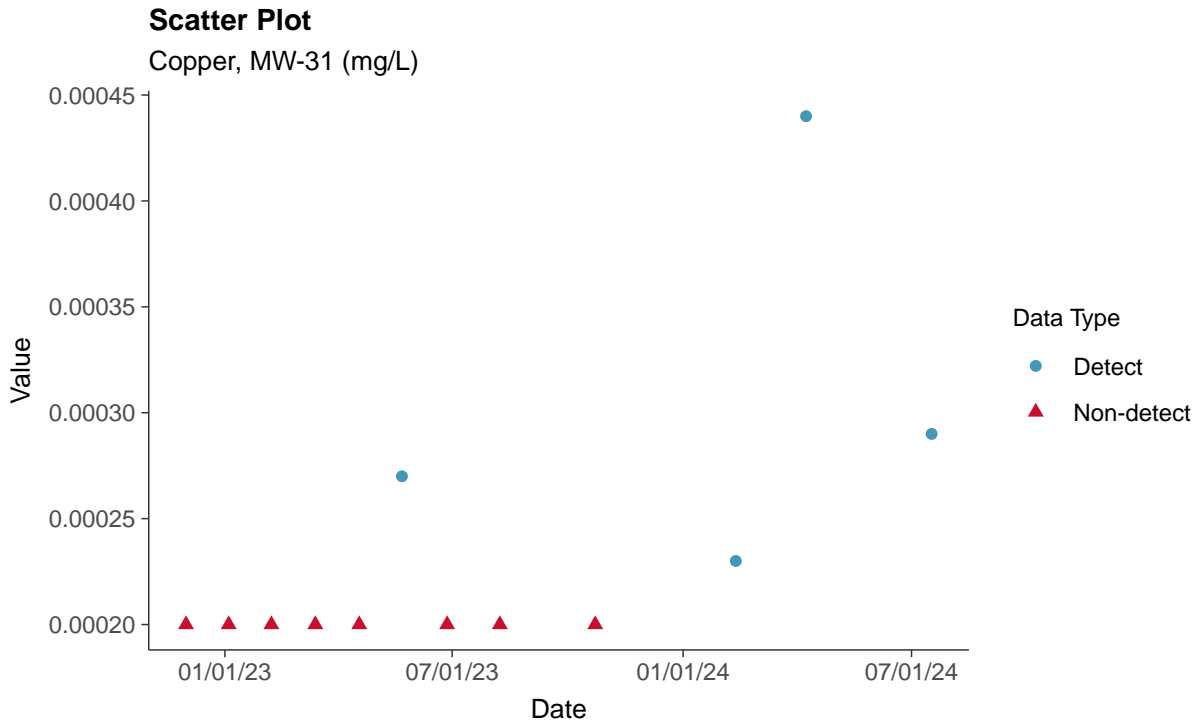
**Trend Regression: Piecewise Linear-Linear-Linear**  
Thallium, MW-31 (mg/L)





### Part 115: Copper, MW-31

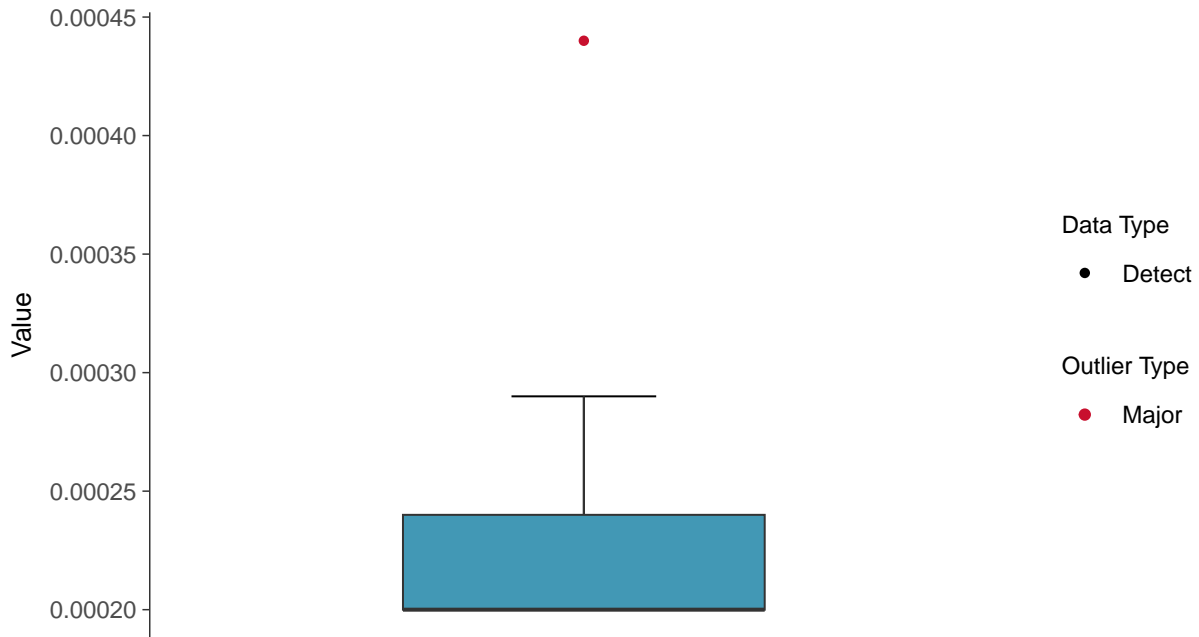
ID: 41\_1\_6\_111





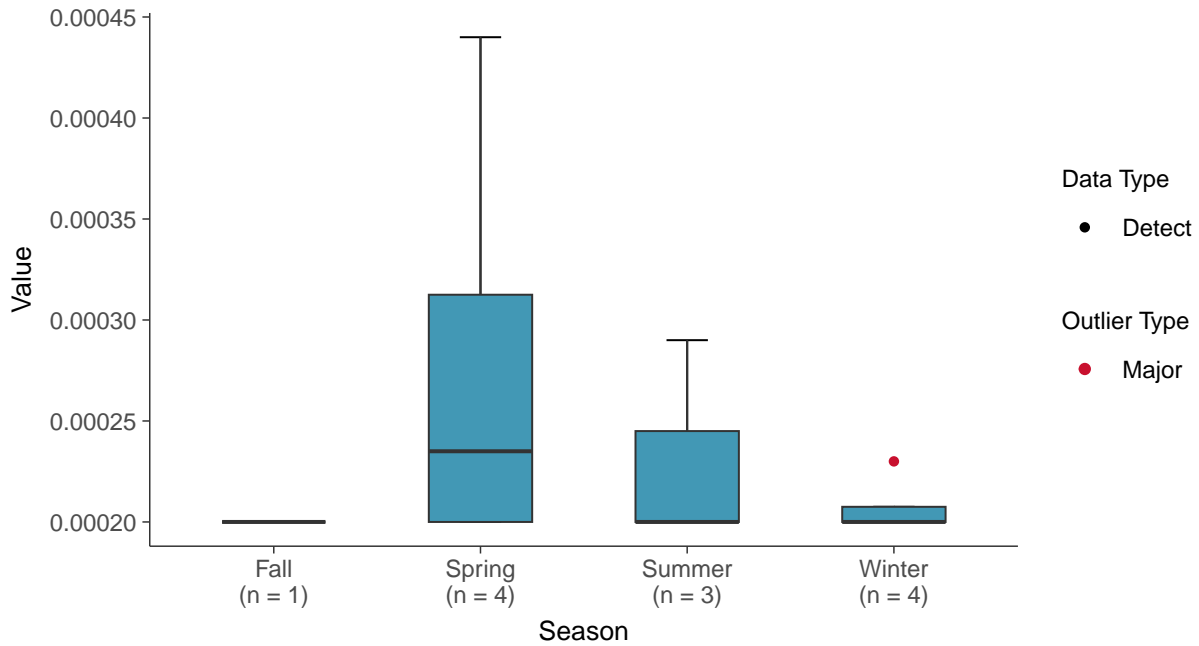
### Boxplot

Copper, MW-31 (mg/L)



### Boxplot by Season

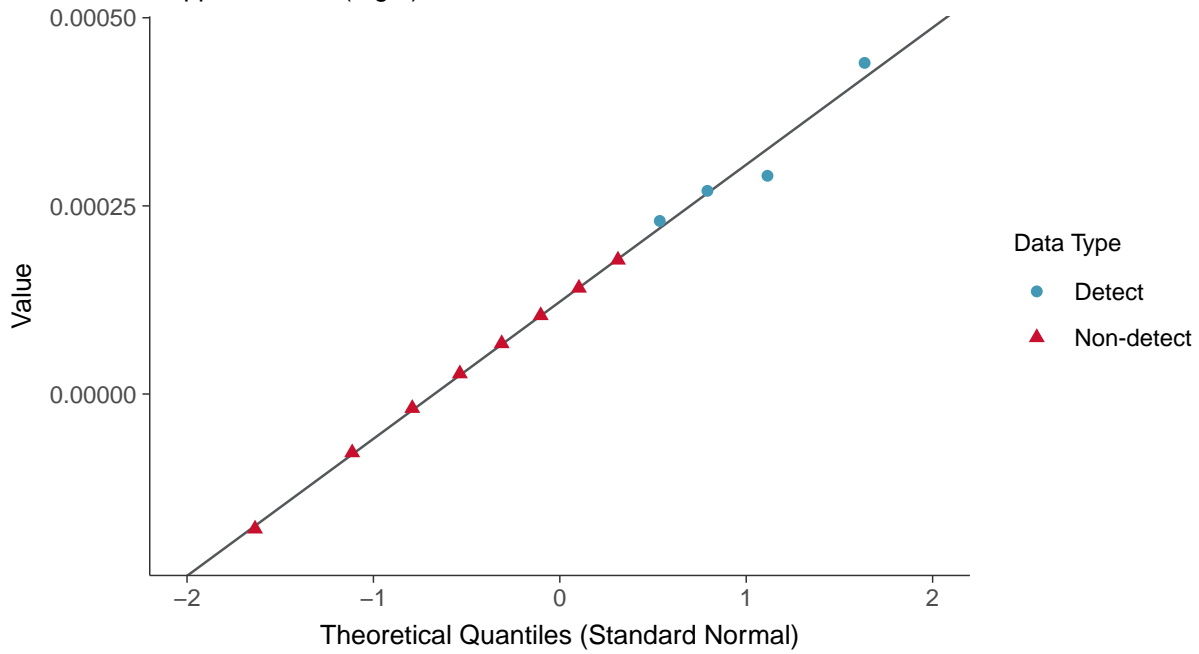
Copper, MW-31 (mg/L)





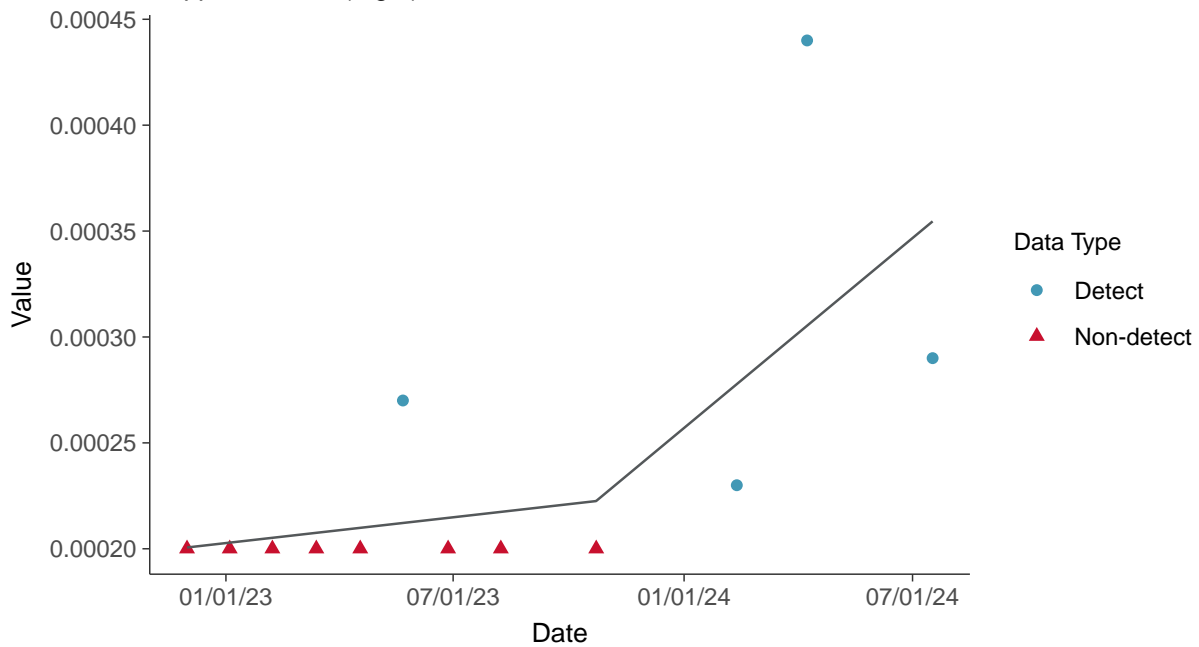
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-31 (mg/L)



### Trend Regression: Piecewise Linear-Linear

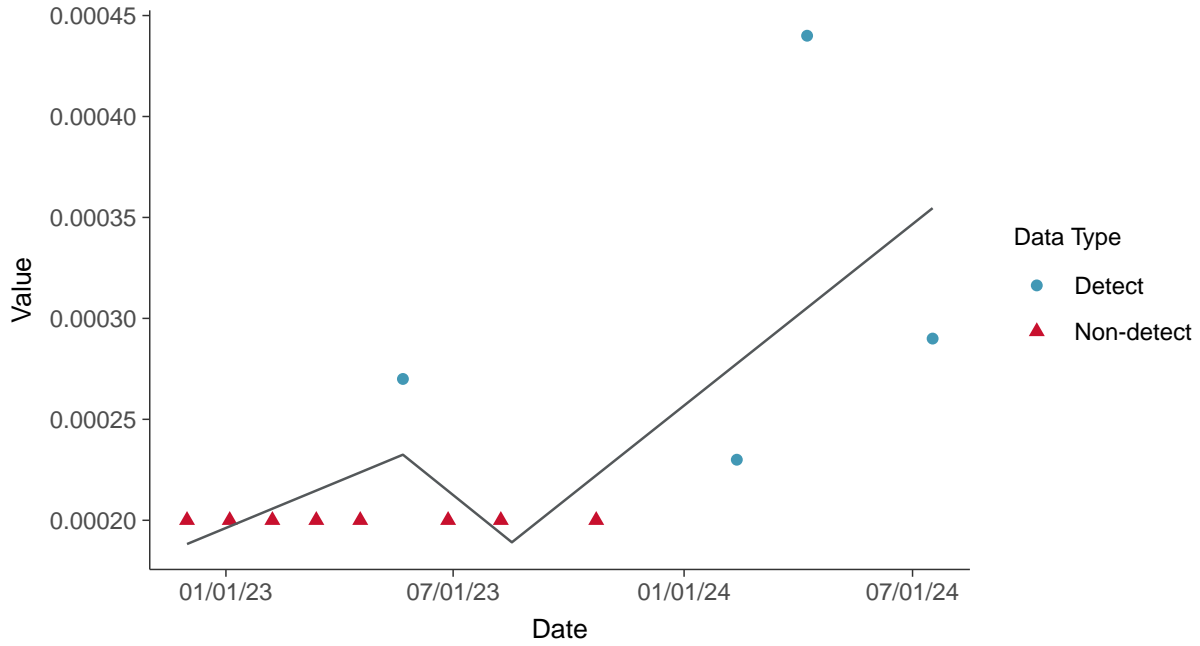
Copper, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

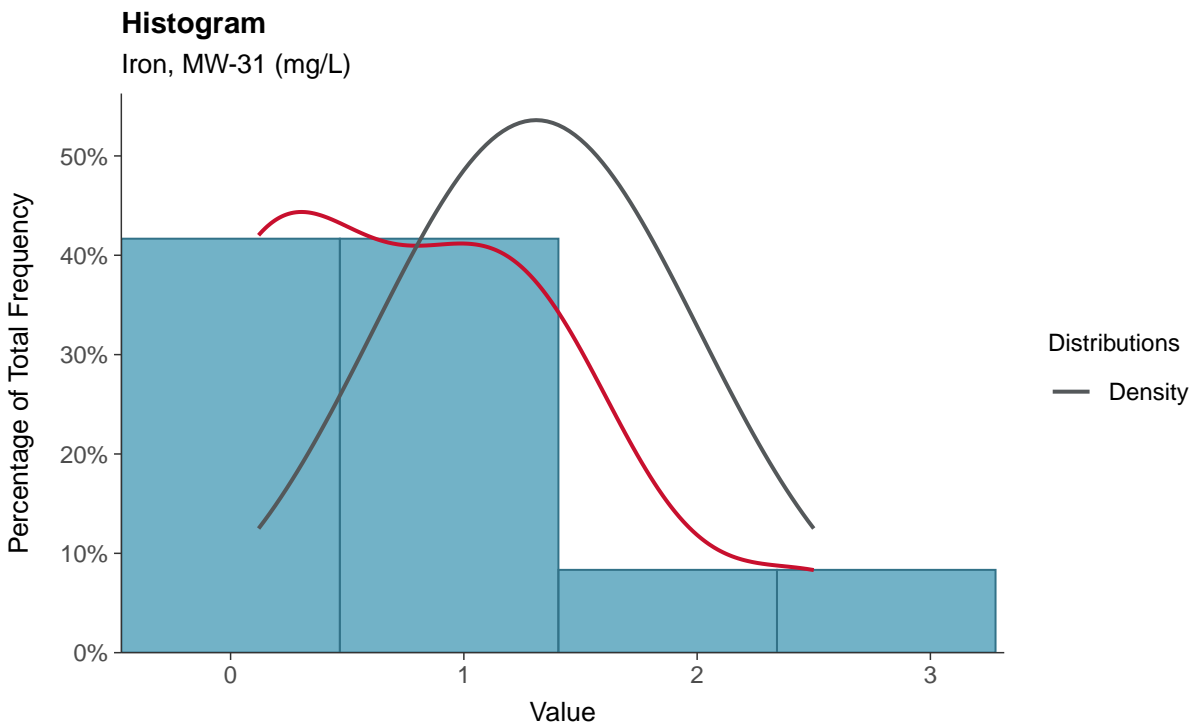
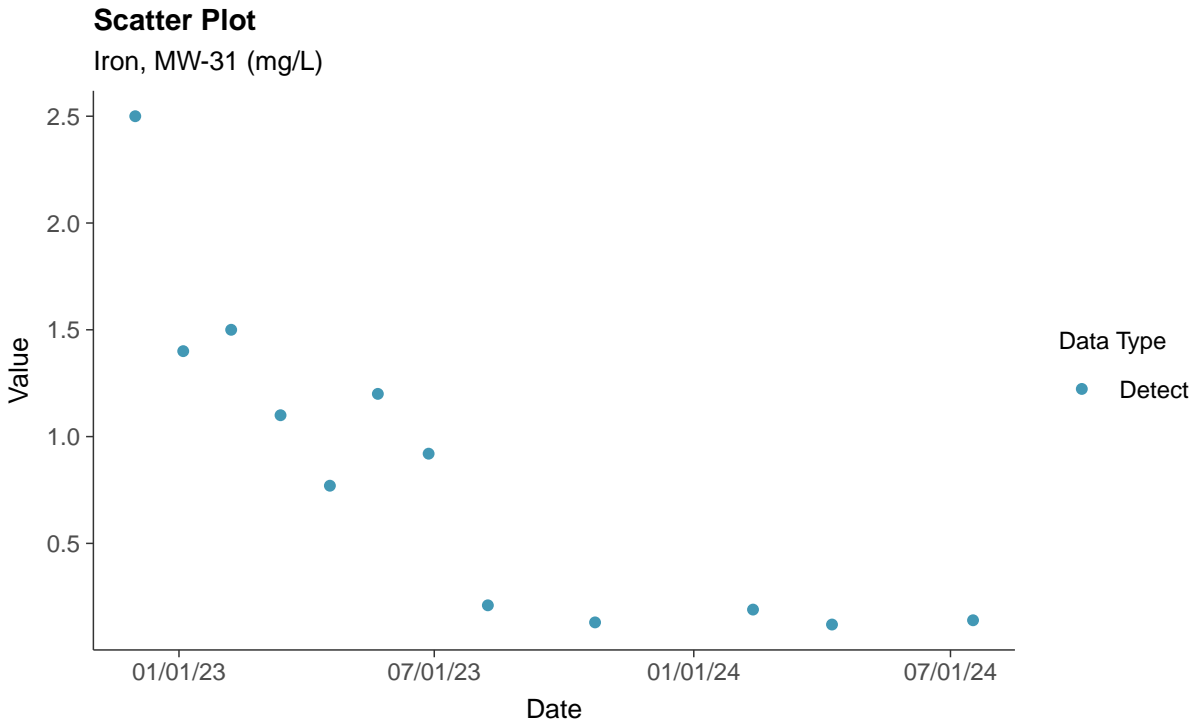
Copper, MW-31 (mg/L)





### Part 115: Iron, MW-31

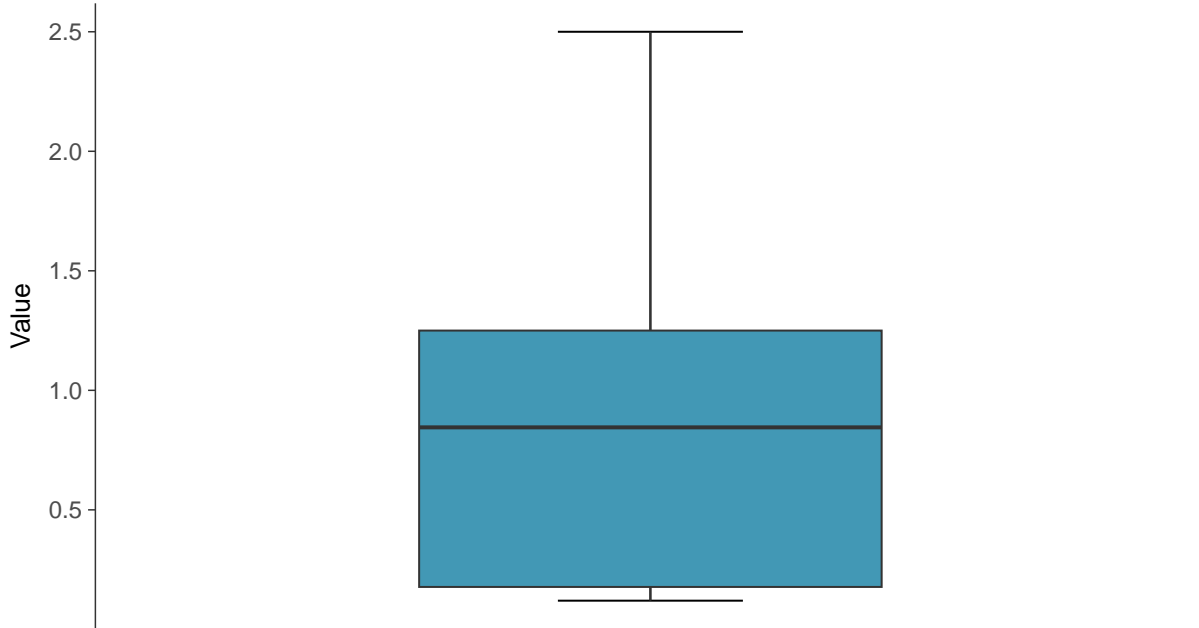
ID: 41\_1\_6\_114





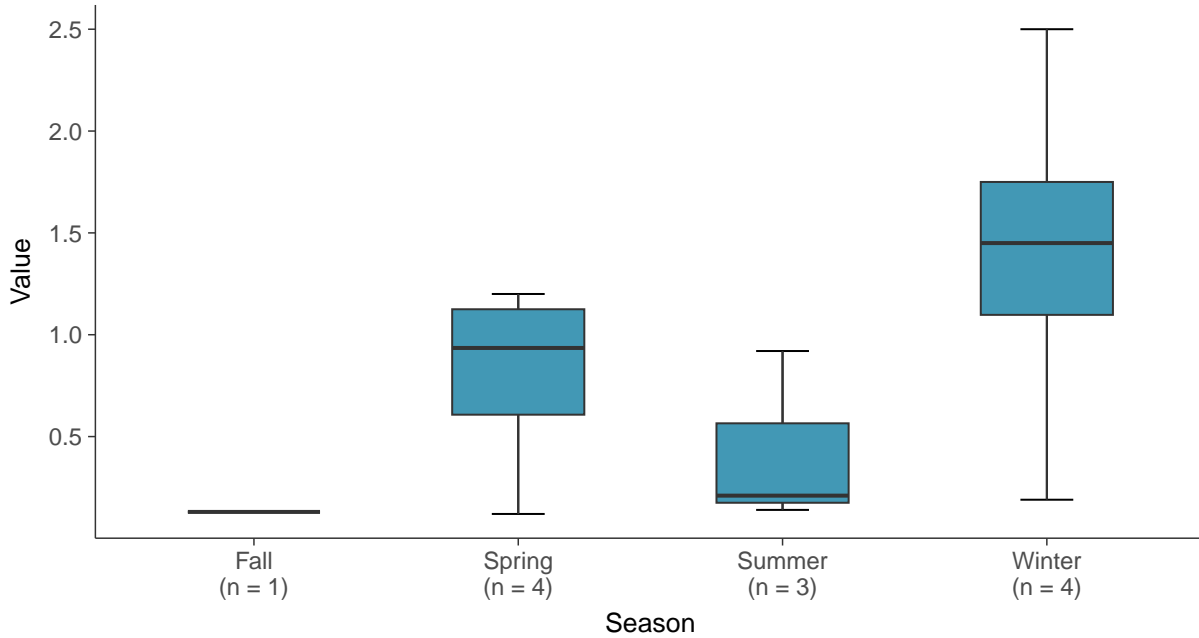
### Boxplot

Iron, MW-31 (mg/L)



### Boxplot by Season

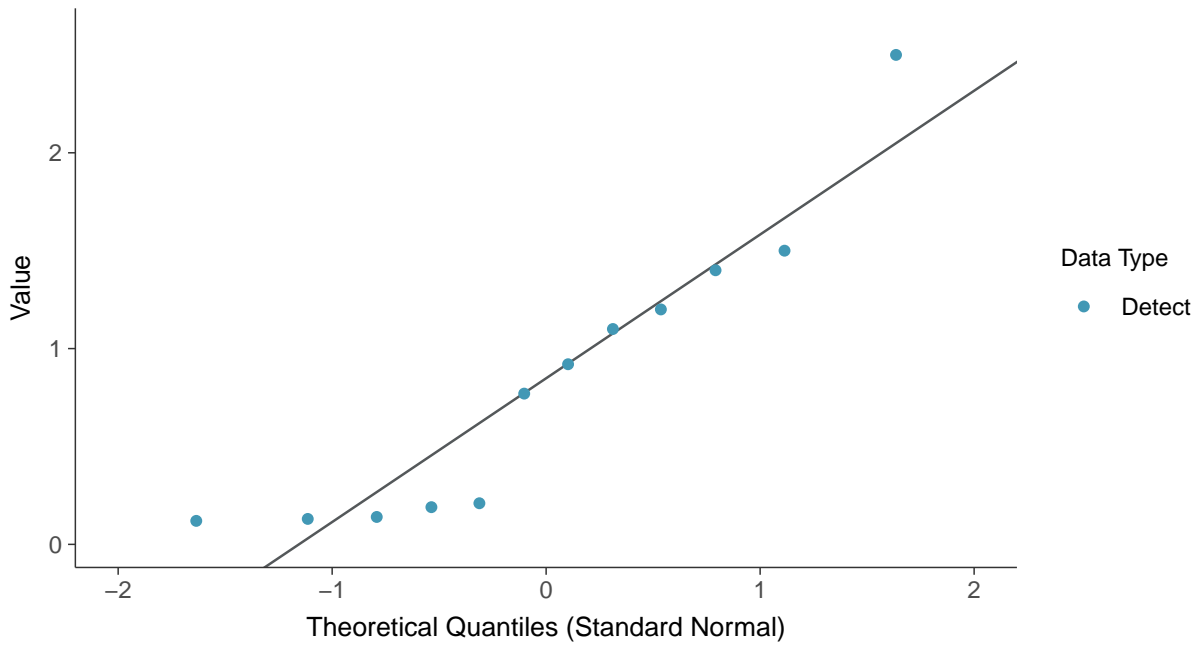
Iron, MW-31 (mg/L)



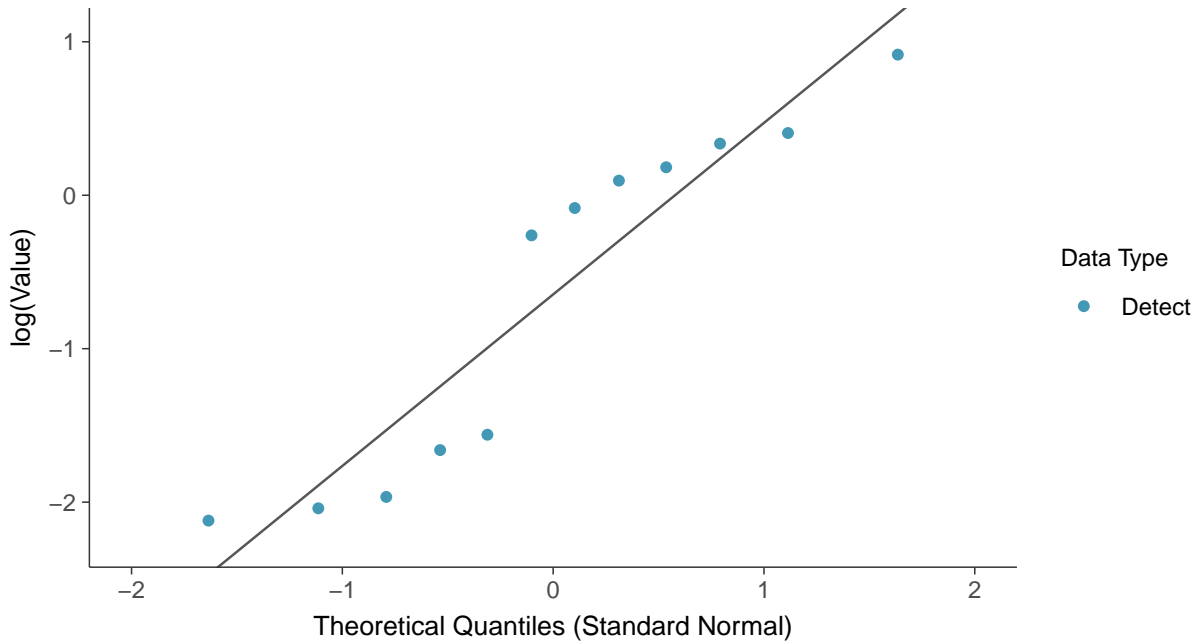




**Normal Q-Q plot**  
Iron, MW-31 (mg/L)

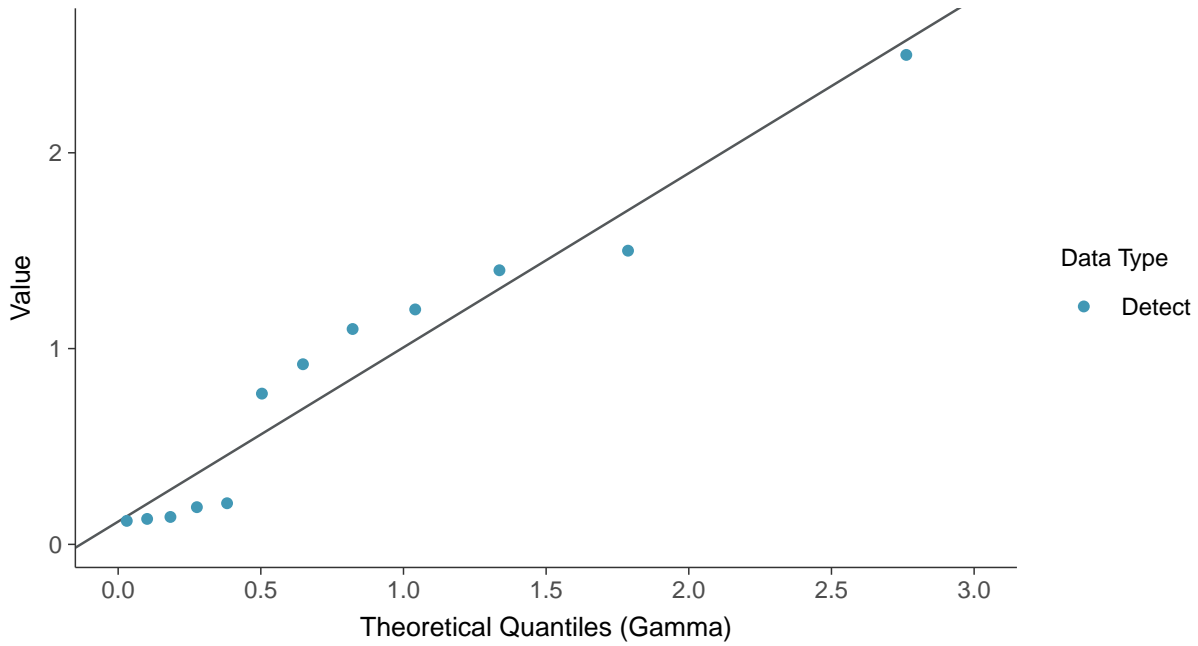


**Lognormal Q-Q plot**  
Iron, MW-31 (mg/L)

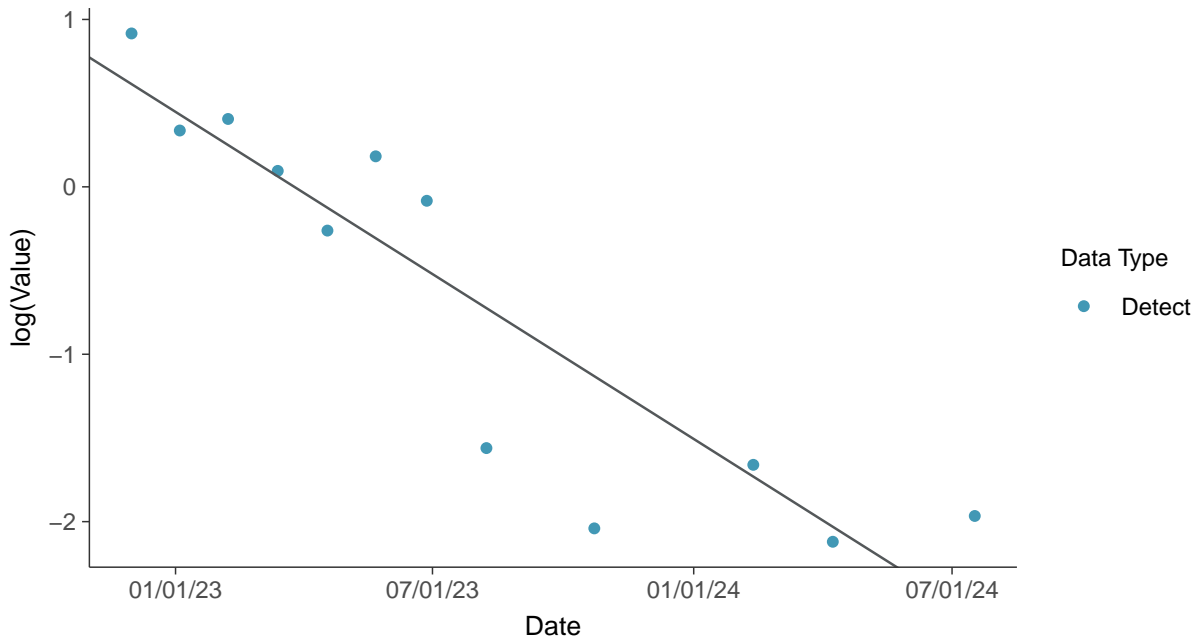




**Gamma Q-Q plot**  
Iron, MW-31 (mg/L)



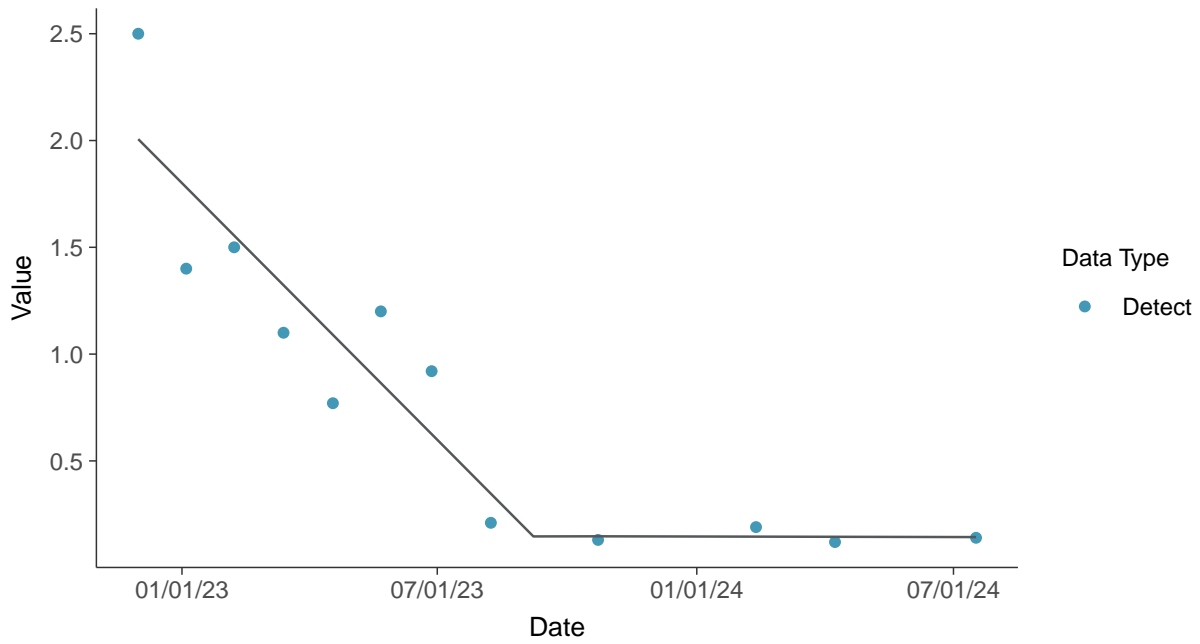
**Trend Regression: Lognormal MLE**  
Iron, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Iron, MW-31 (mg/L)



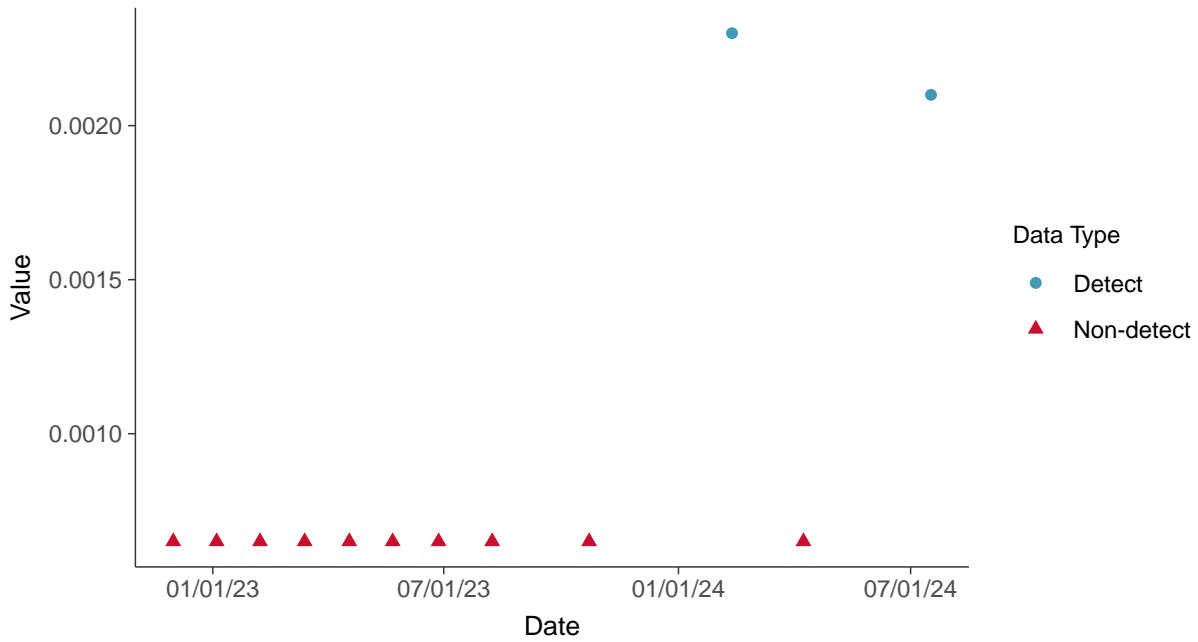


### Part 115: Nickel, MW-31

ID: 41\_1\_6\_119

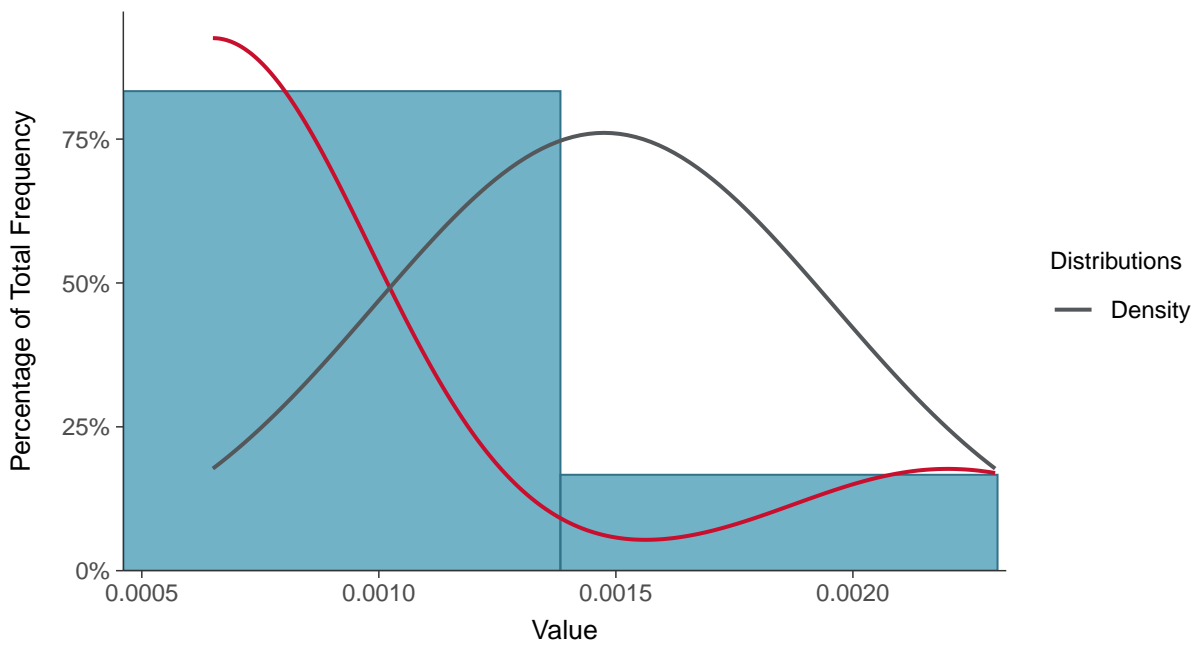
#### Scatter Plot

Nickel, MW-31 (mg/L)



#### Histogram

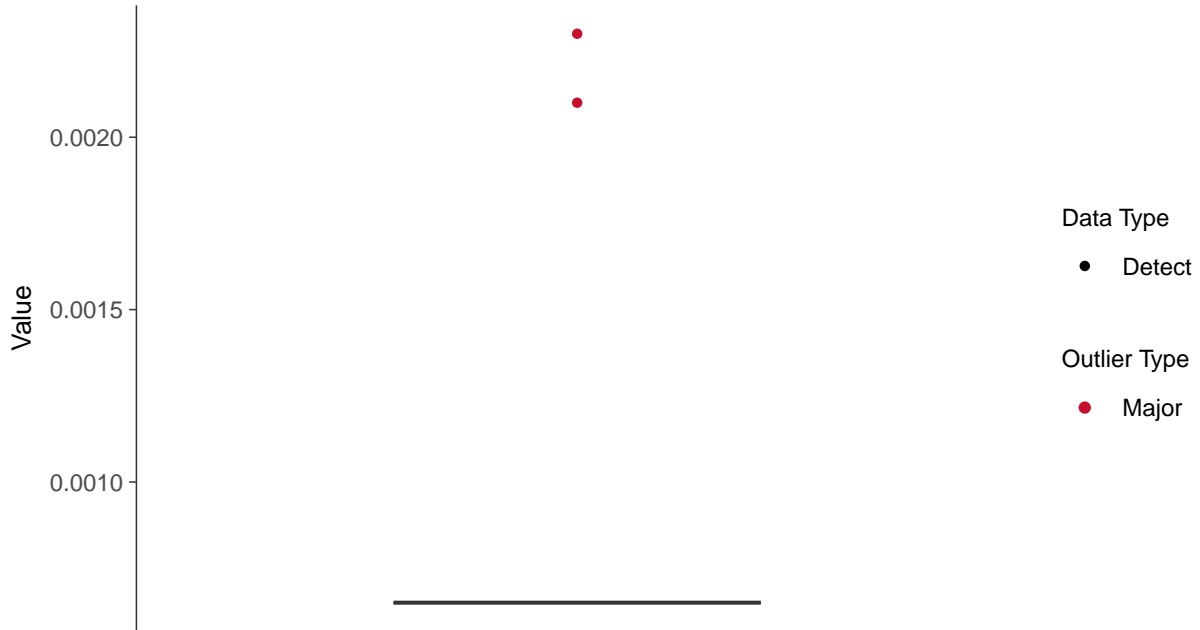
Nickel, MW-31 (mg/L)





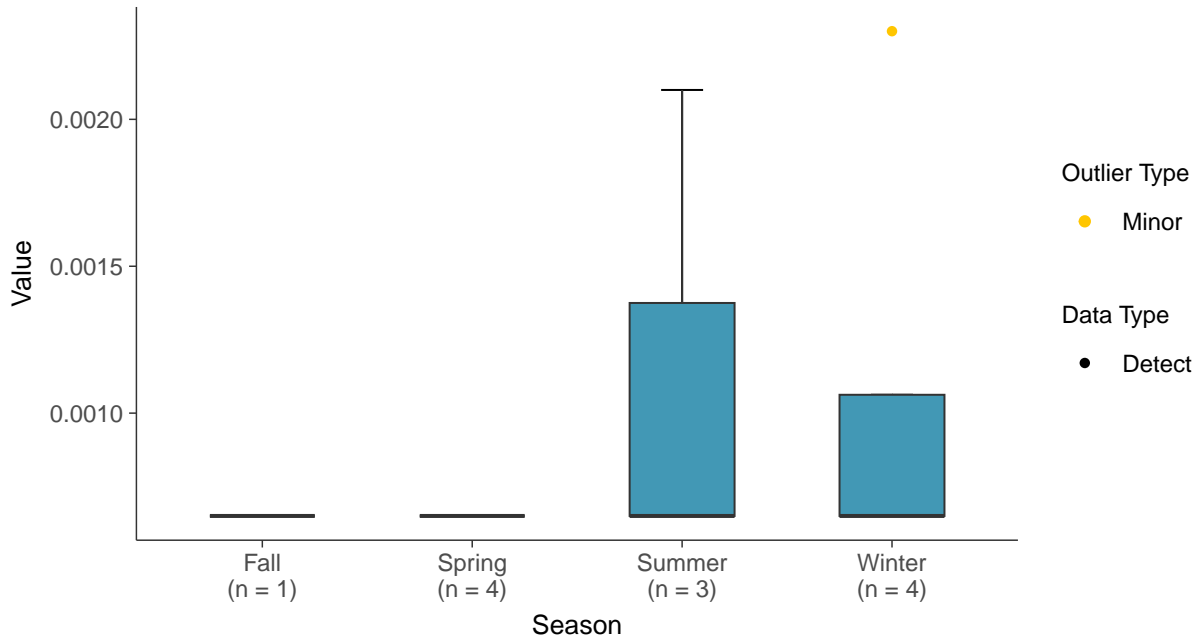
### Boxplot

Nickel, MW-31 (mg/L)



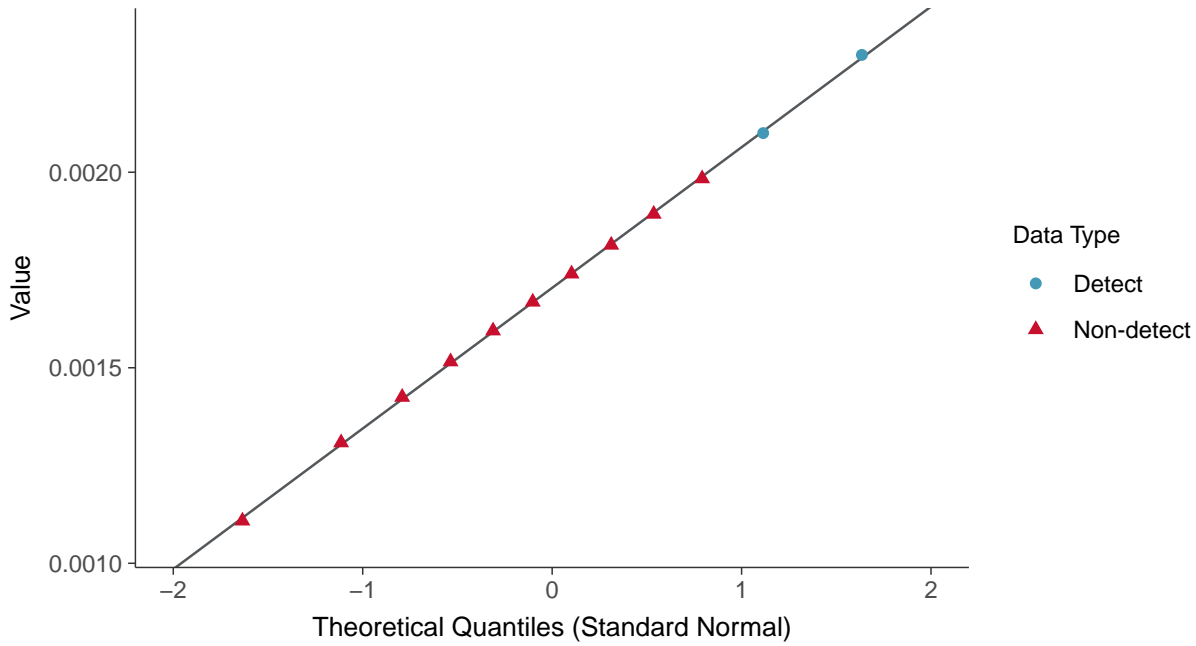
### Boxplot by Season

Nickel, MW-31 (mg/L)

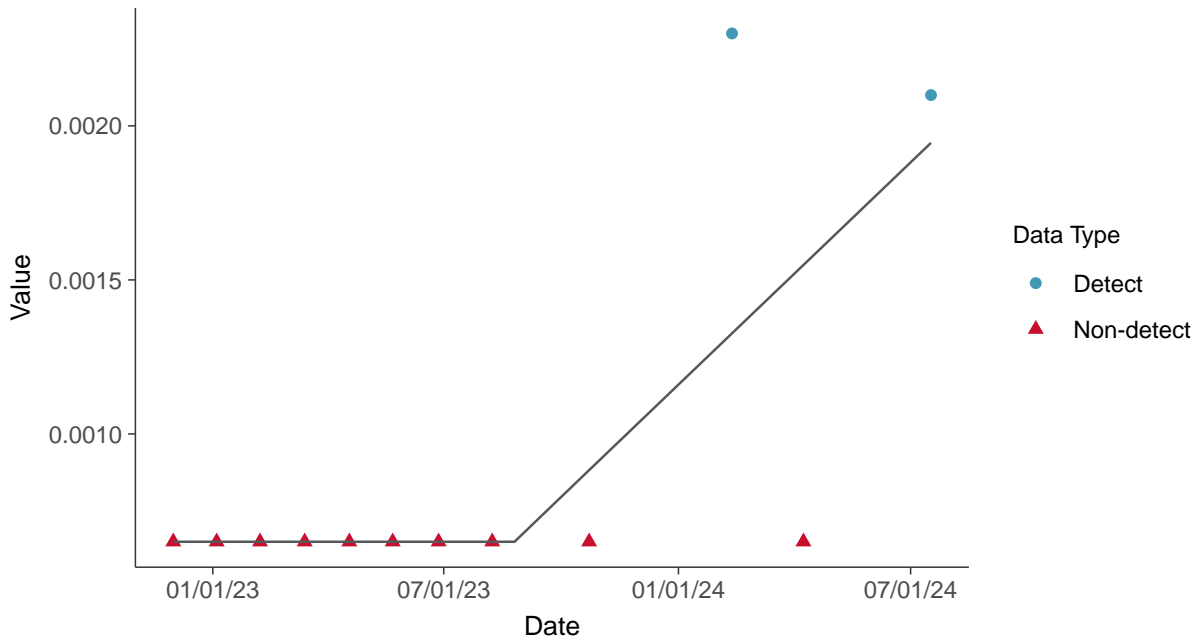




**Normal Q-Q plot using ROS Imputed Estimates**  
Nickel, MW-31 (mg/L)



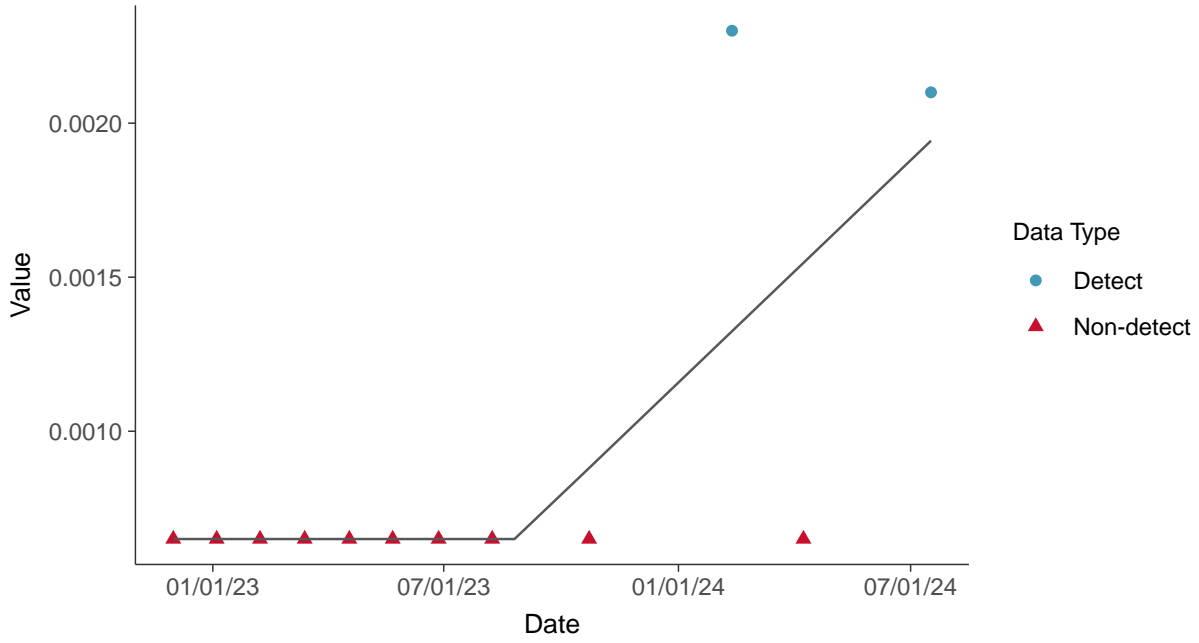
**Trend Regression: Piecewise Linear-Linear**  
Nickel, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

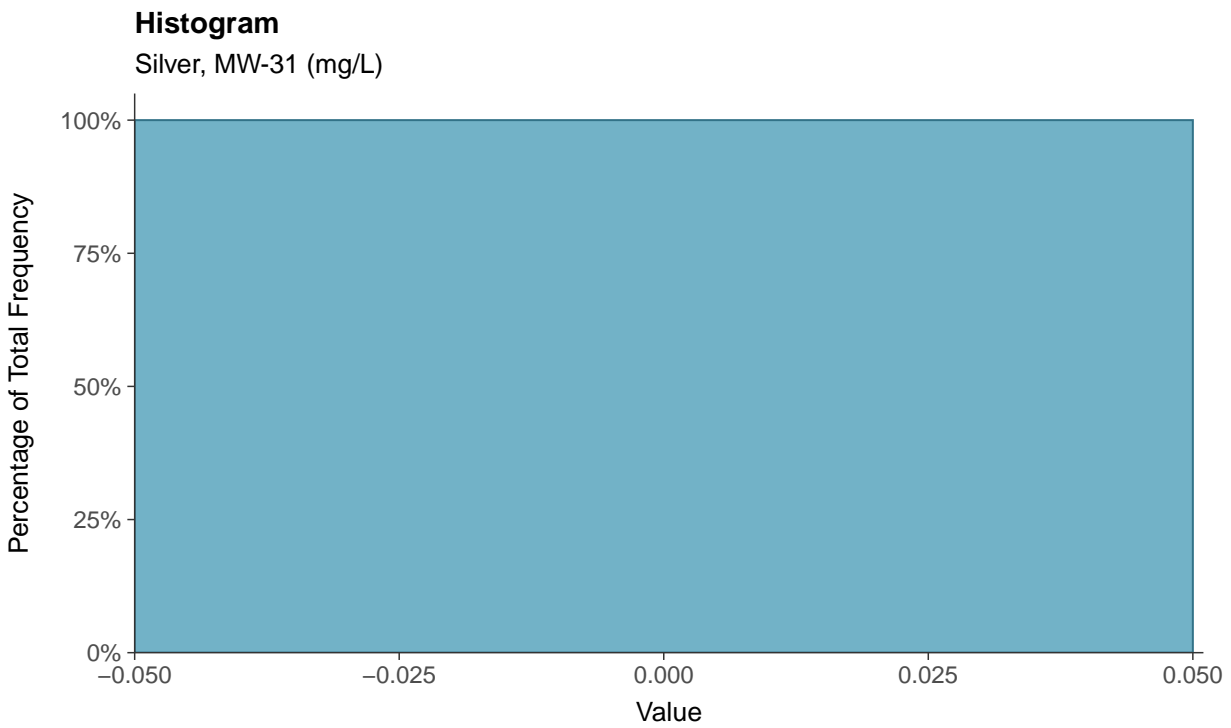
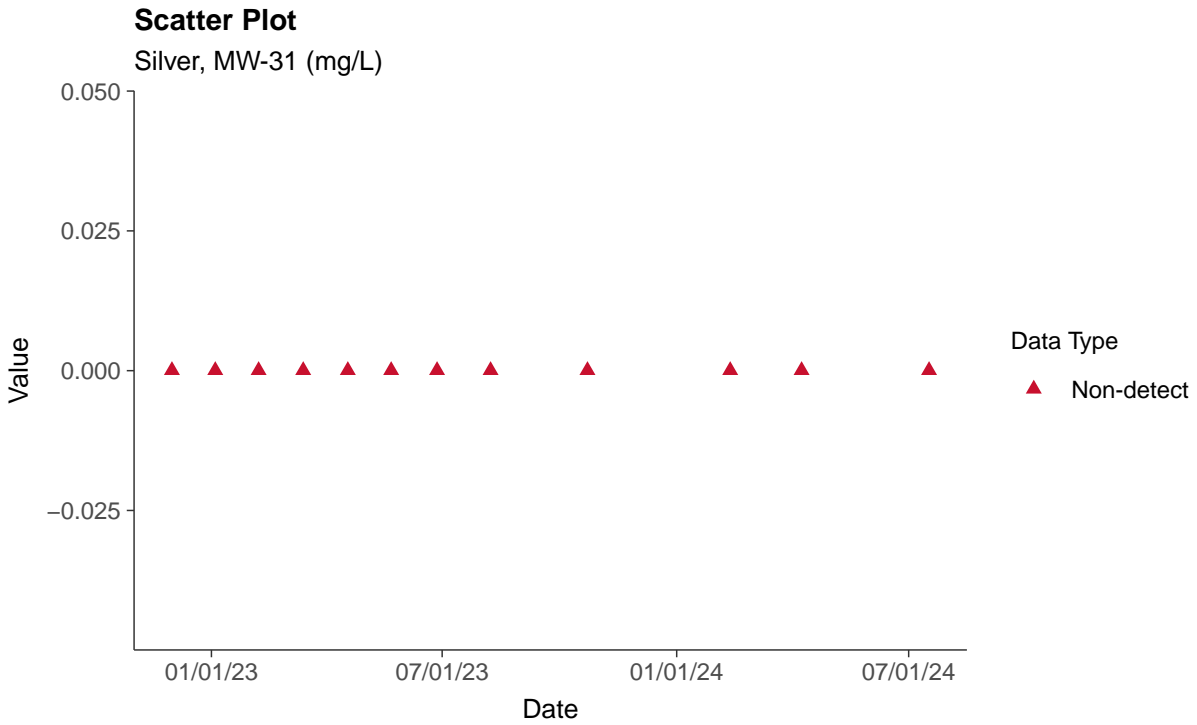
Nickel, MW-31 (mg/L)





### Part 115: Silver, MW-31

ID: 41\_1\_6\_123

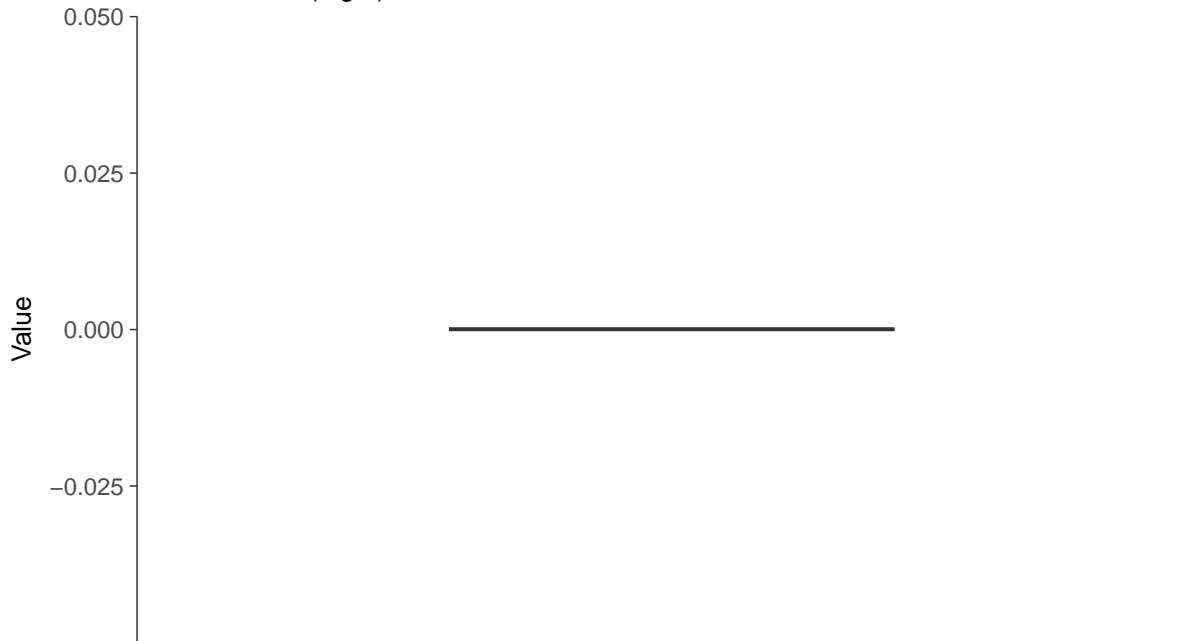






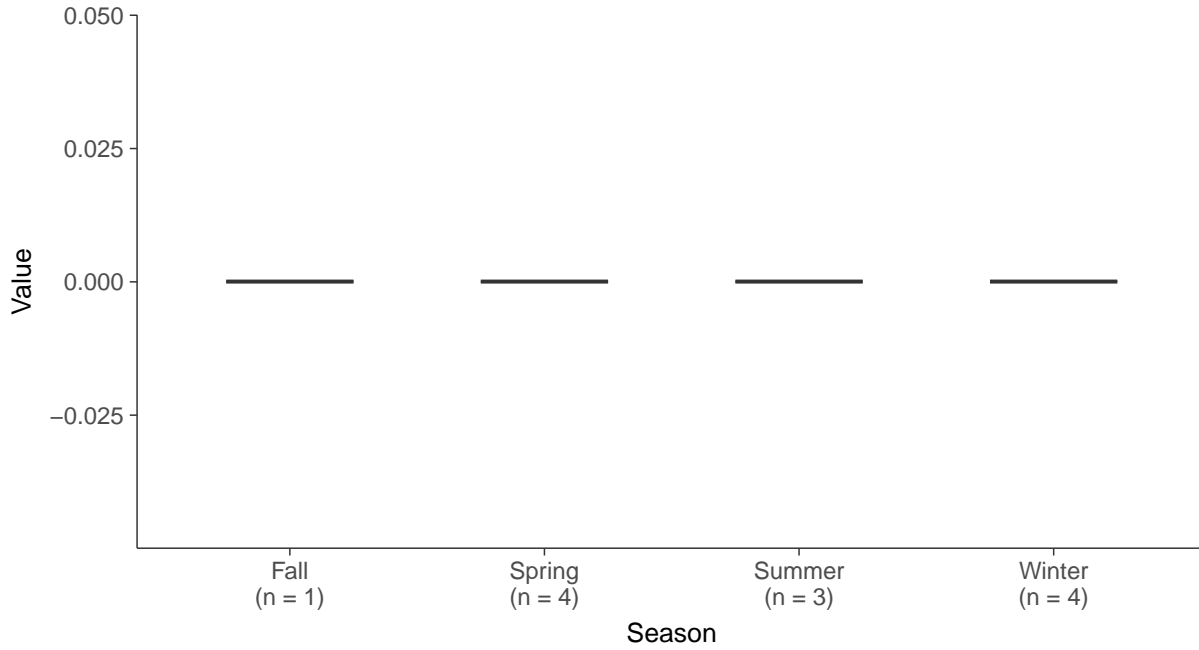
### Boxplot

Silver, MW-31 (mg/L)



### Boxplot by Season

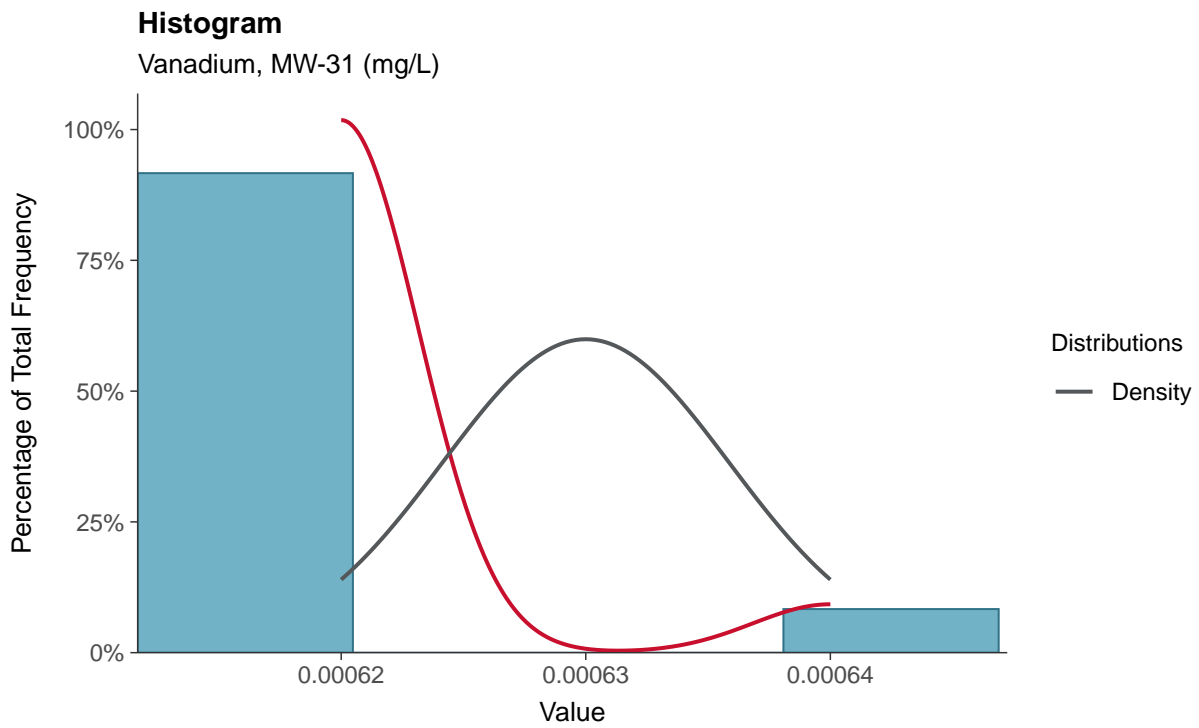
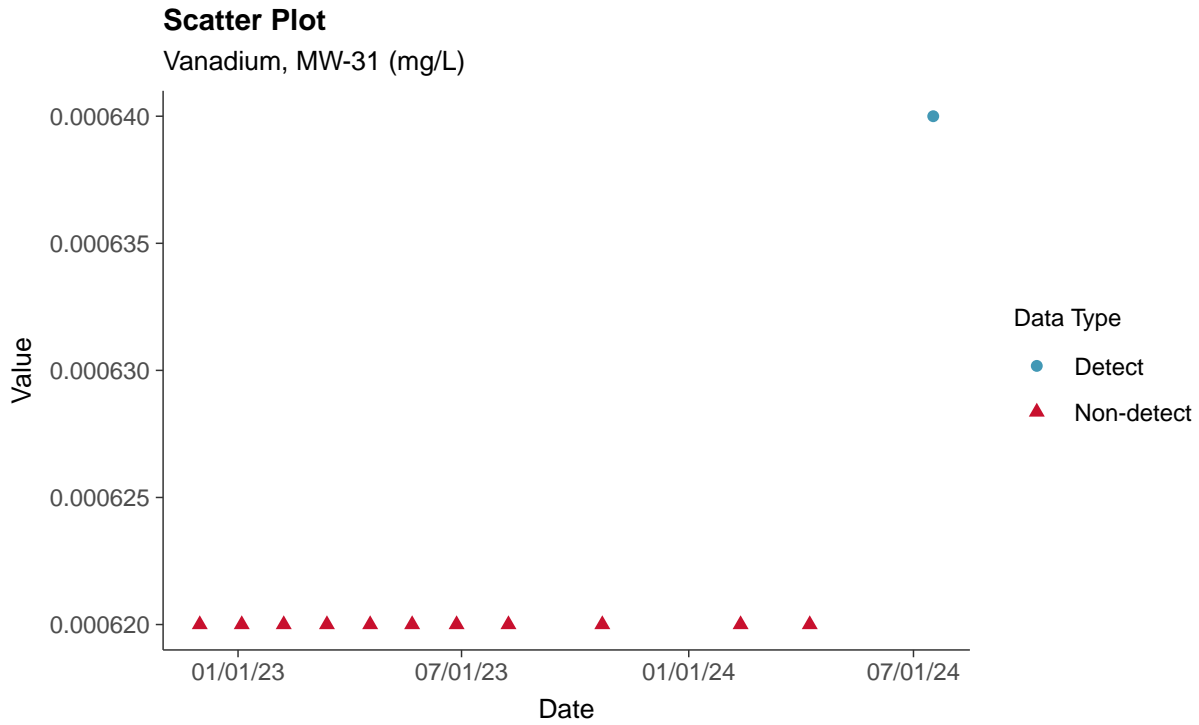
Silver, MW-31 (mg/L)





### Part 115: Vanadium, MW-31

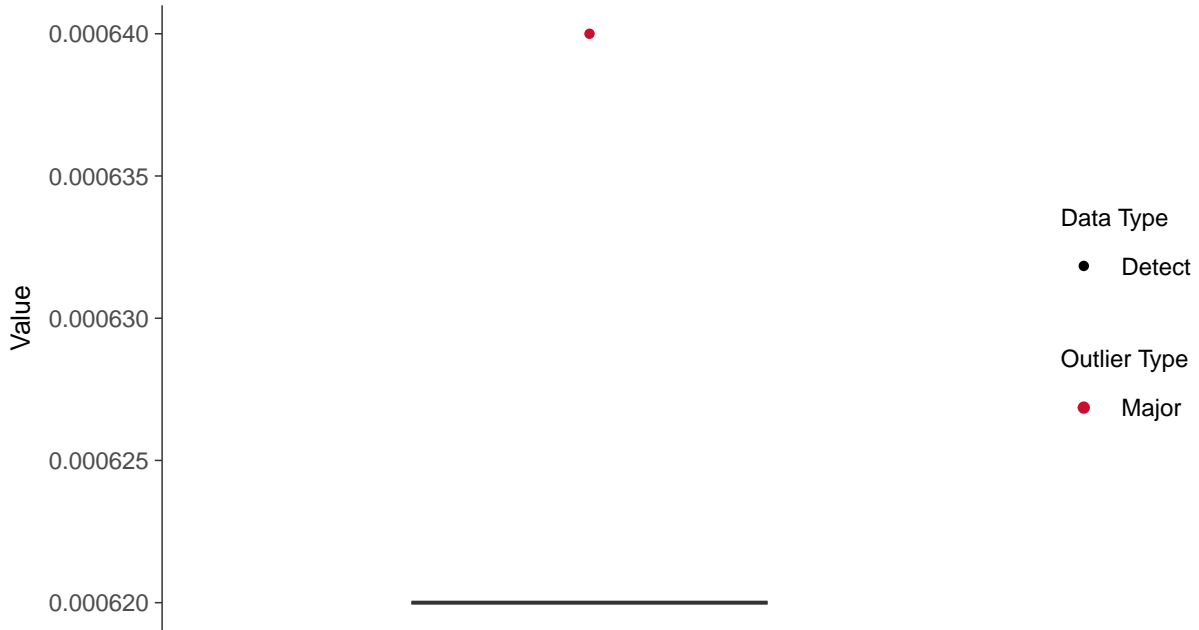
ID: 41\_1\_6\_129





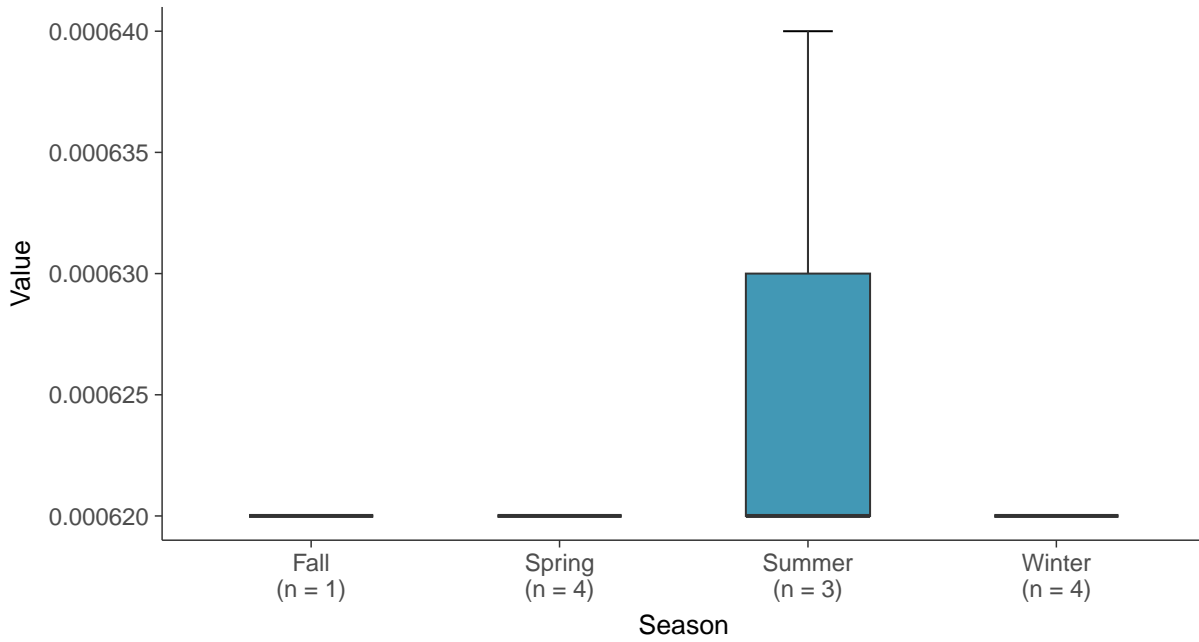
### Boxplot

Vanadium, MW-31 (mg/L)



### Boxplot by Season

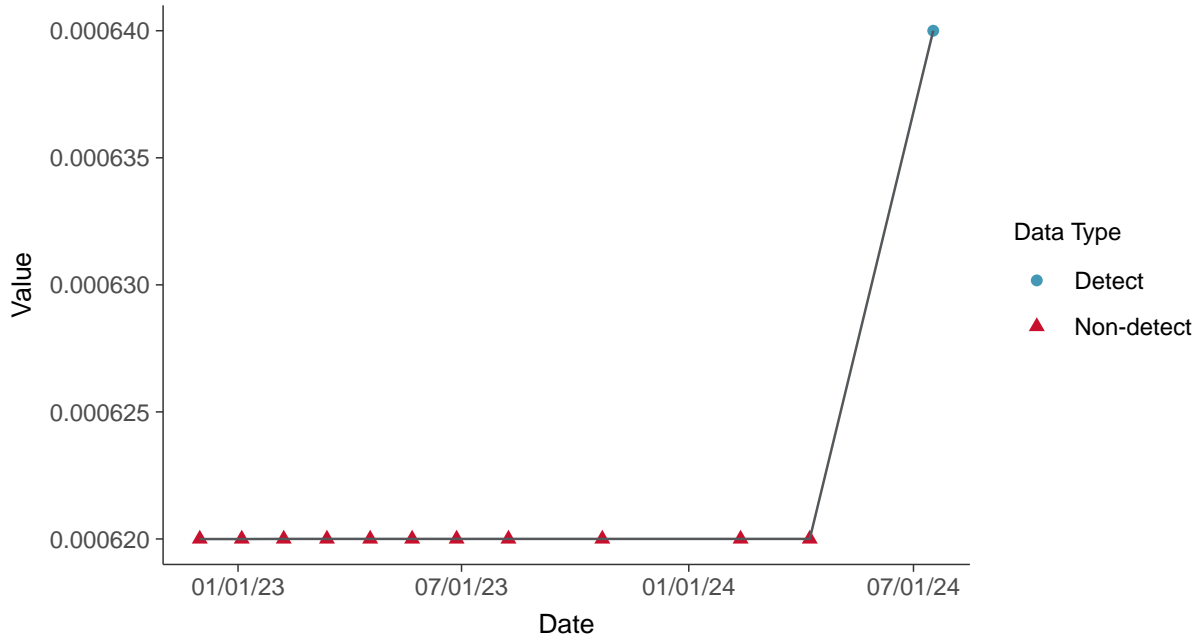
Vanadium, MW-31 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

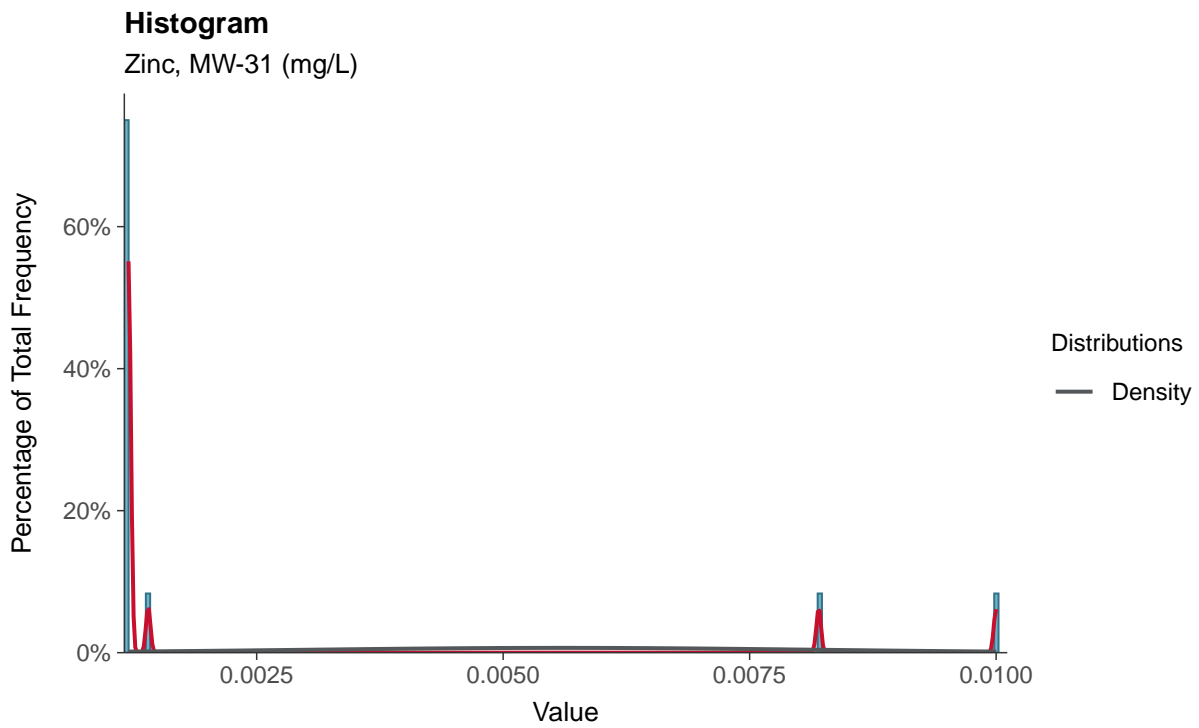
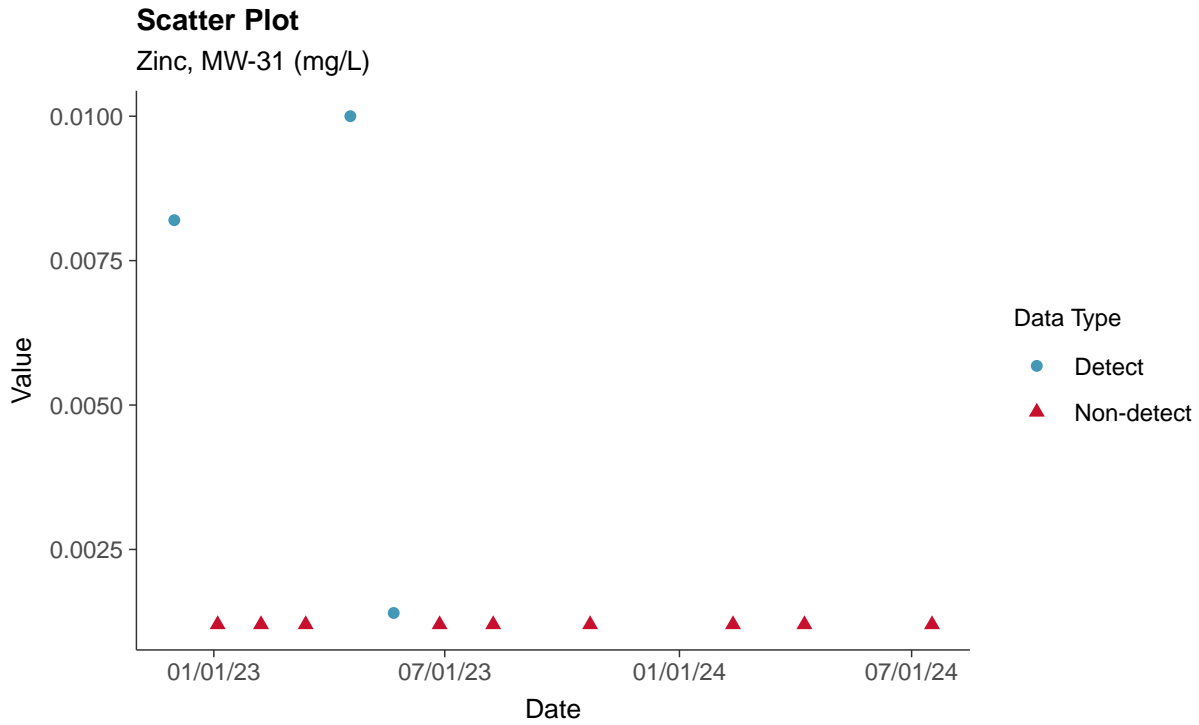
Vanadium, MW-31 (mg/L)





### Part 115: Zinc, MW-31

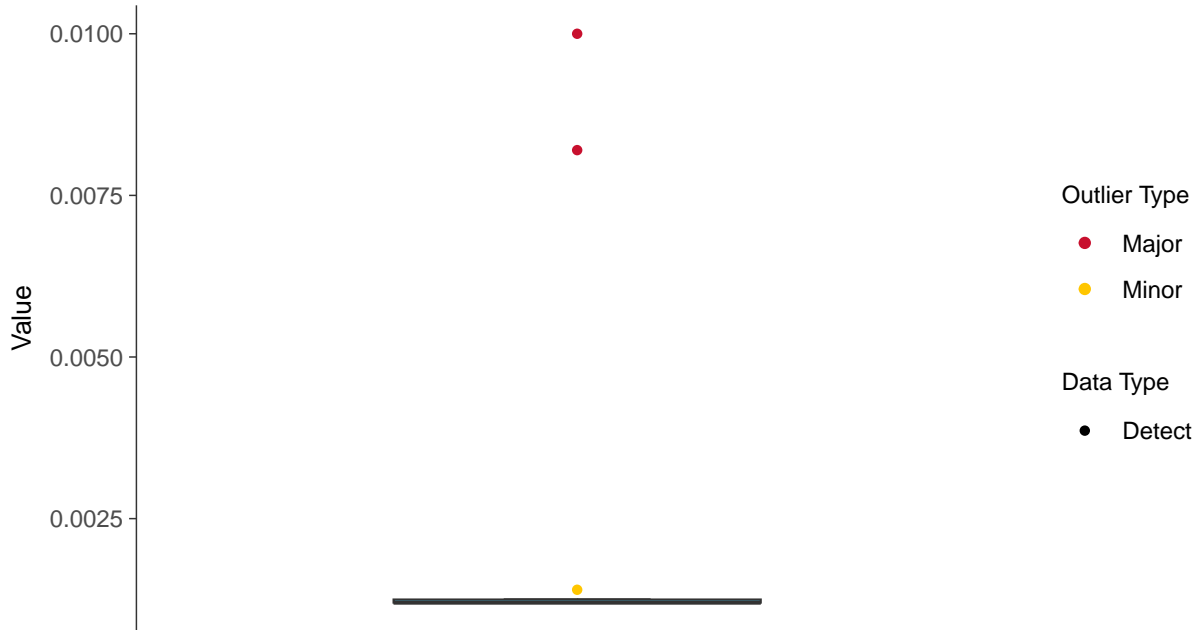
ID: 41\_1\_6\_130





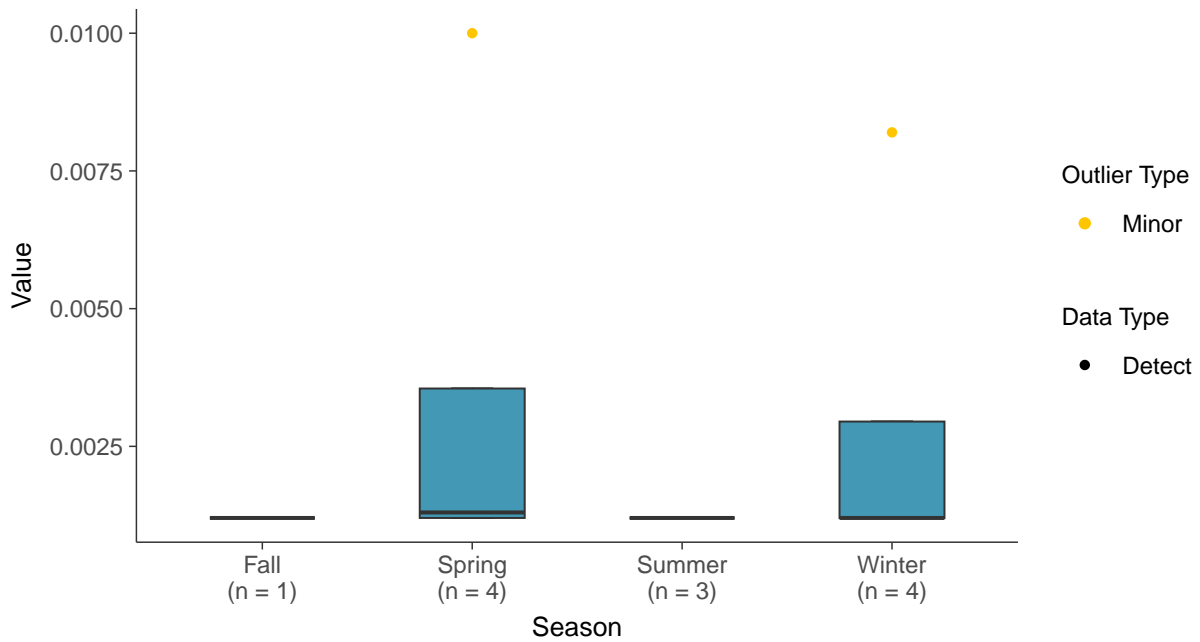
### Boxplot

Zinc, MW-31 (mg/L)



### Boxplot by Season

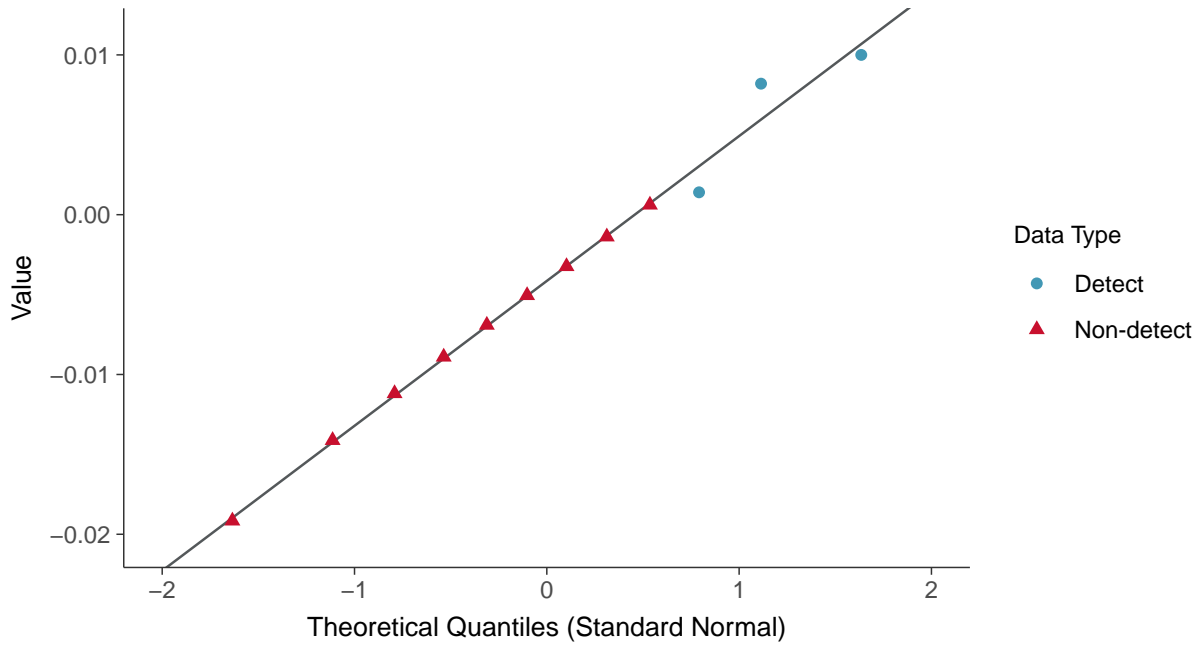
Zinc, MW-31 (mg/L)





### Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-31 (mg/L)



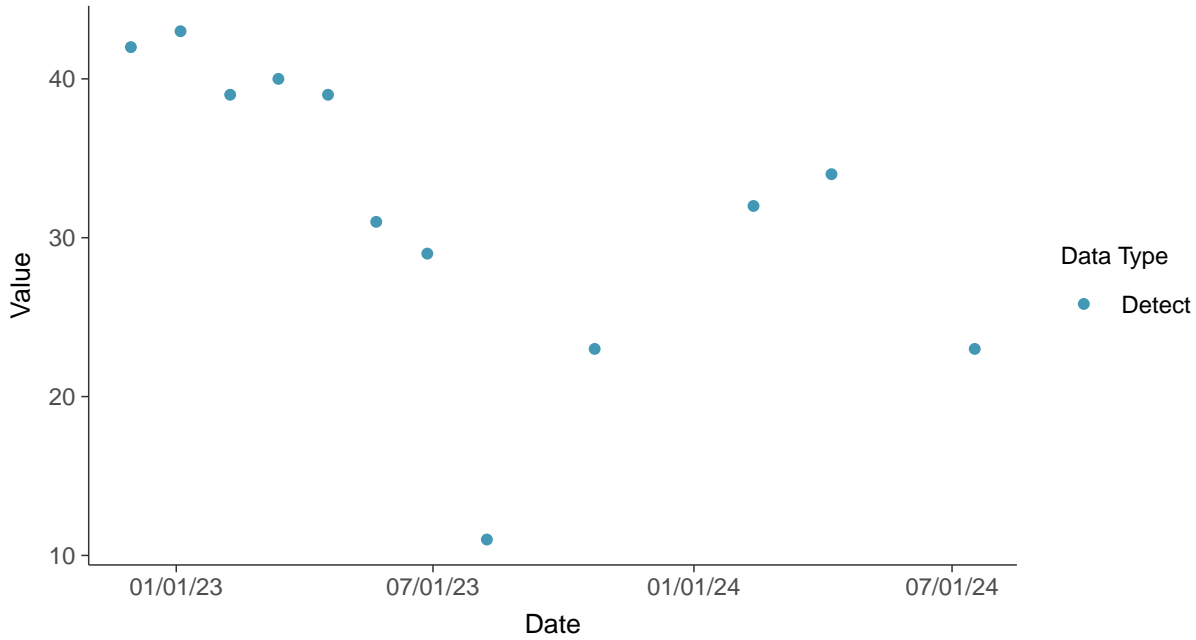


### Additional Parameters: Total Suspended Solids, MW-32

ID: 42\_1\_3\_127

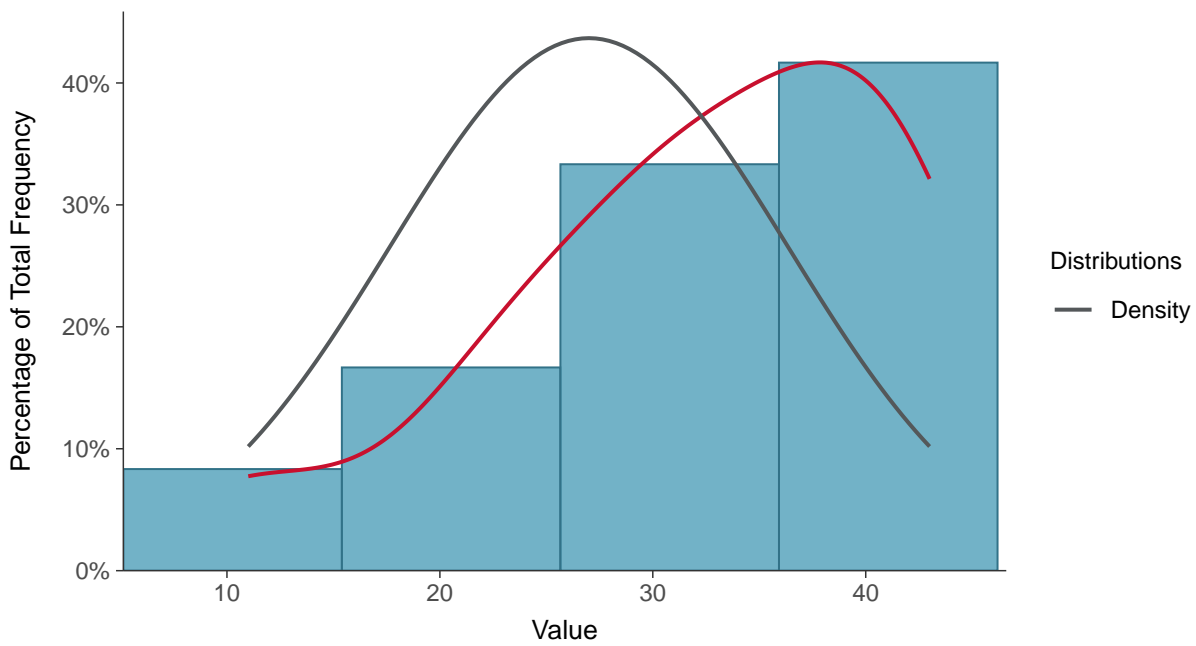
#### Scatter Plot

Total Suspended Solids, MW-32 (mg/L)



#### Histogram

Total Suspended Solids, MW-32 (mg/L)

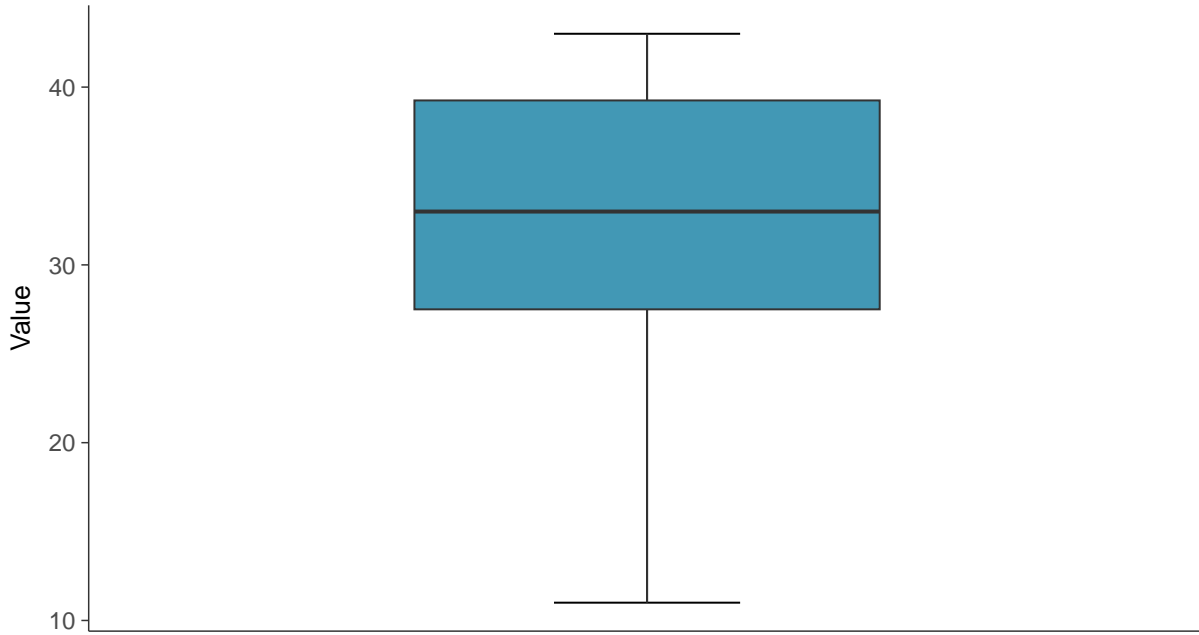






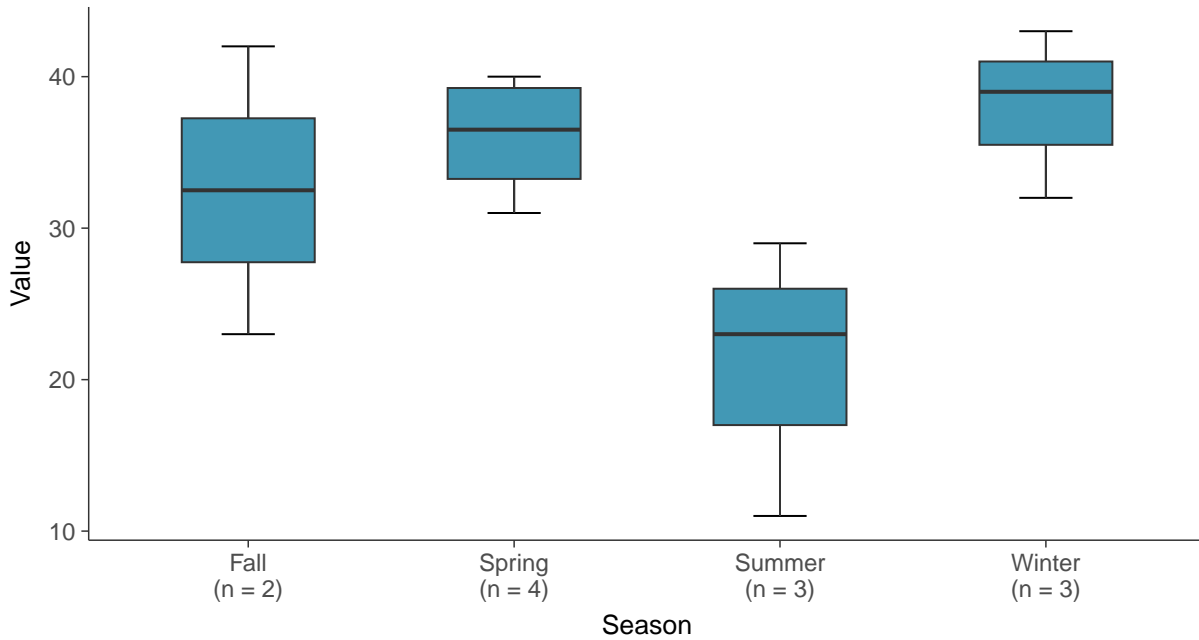
### Boxplot

Total Suspended Solids, MW-32 (mg/L)



### Boxplot by Season

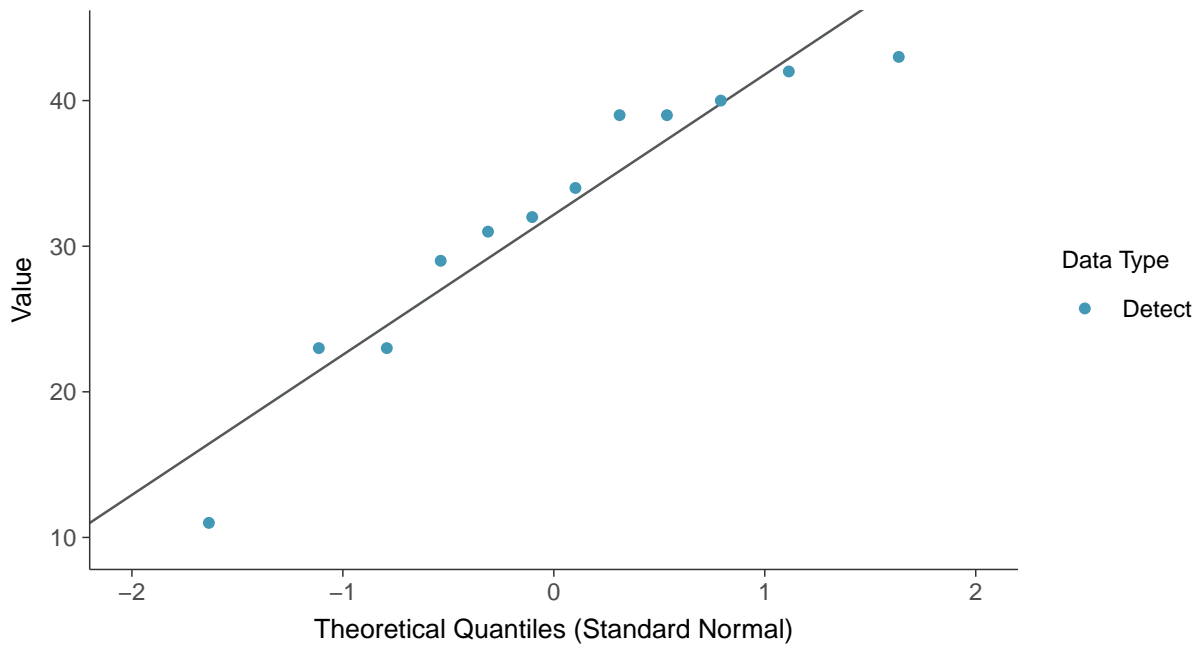
Total Suspended Solids, MW-32 (mg/L)





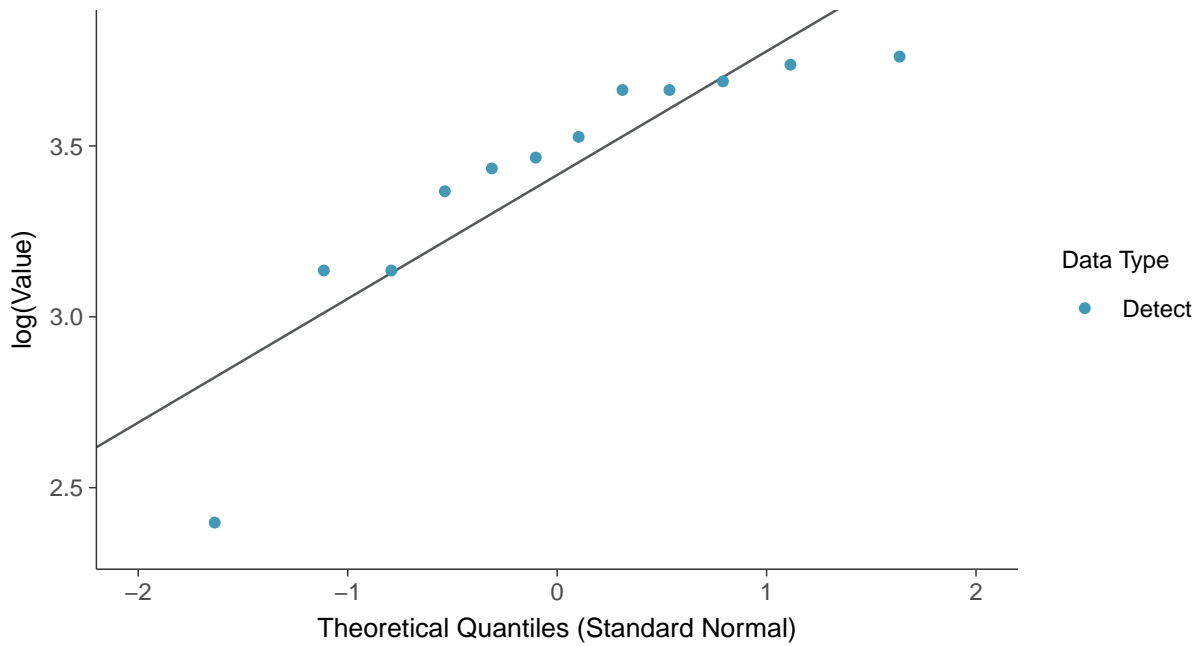
### Normal Q-Q plot

Total Suspended Solids, MW-32 (mg/L)



### Lognormal Q-Q plot

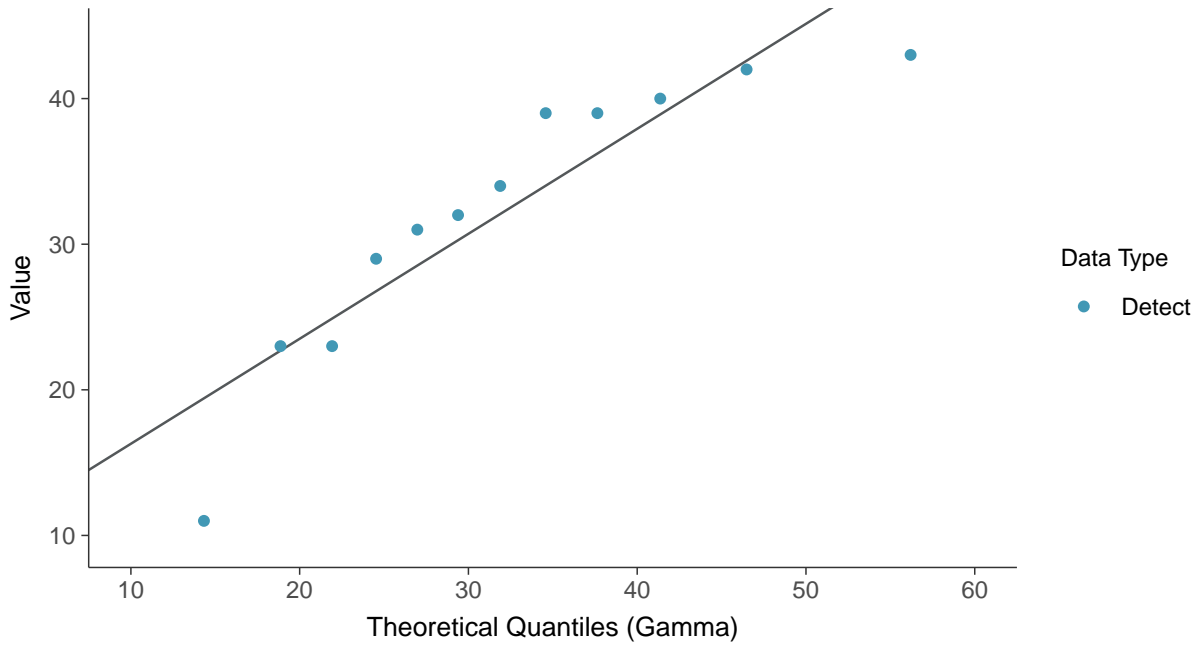
Total Suspended Solids, MW-32 (mg/L)





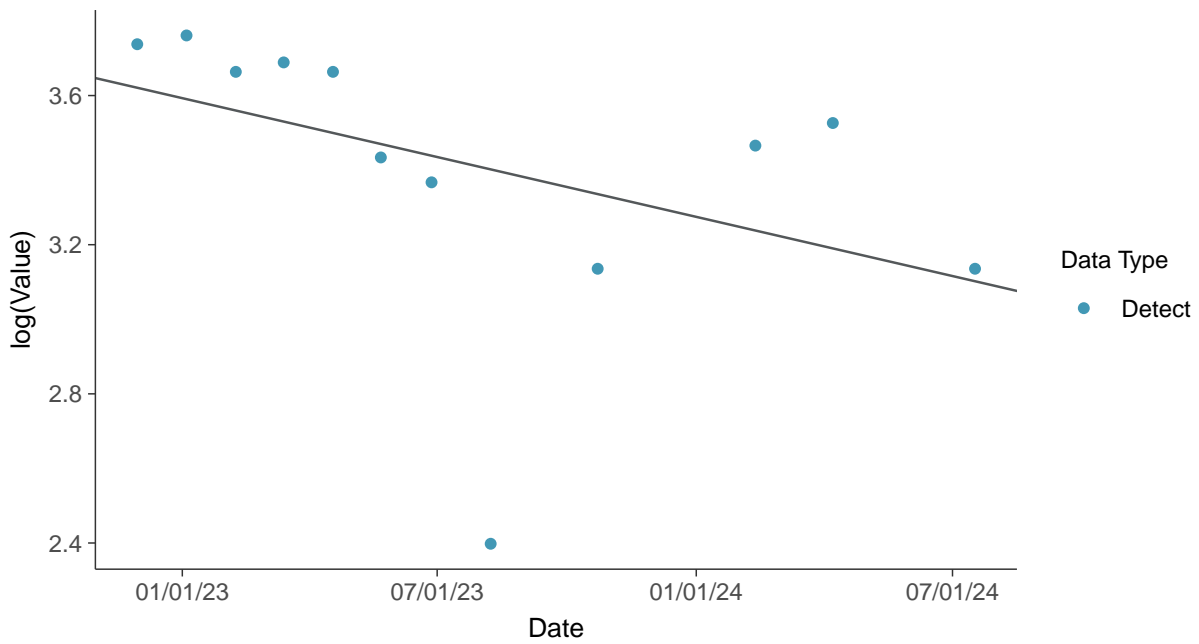
### Gamma Q-Q plot

Total Suspended Solids, MW-32 (mg/L)



### Trend Regression: Lognormal MLE

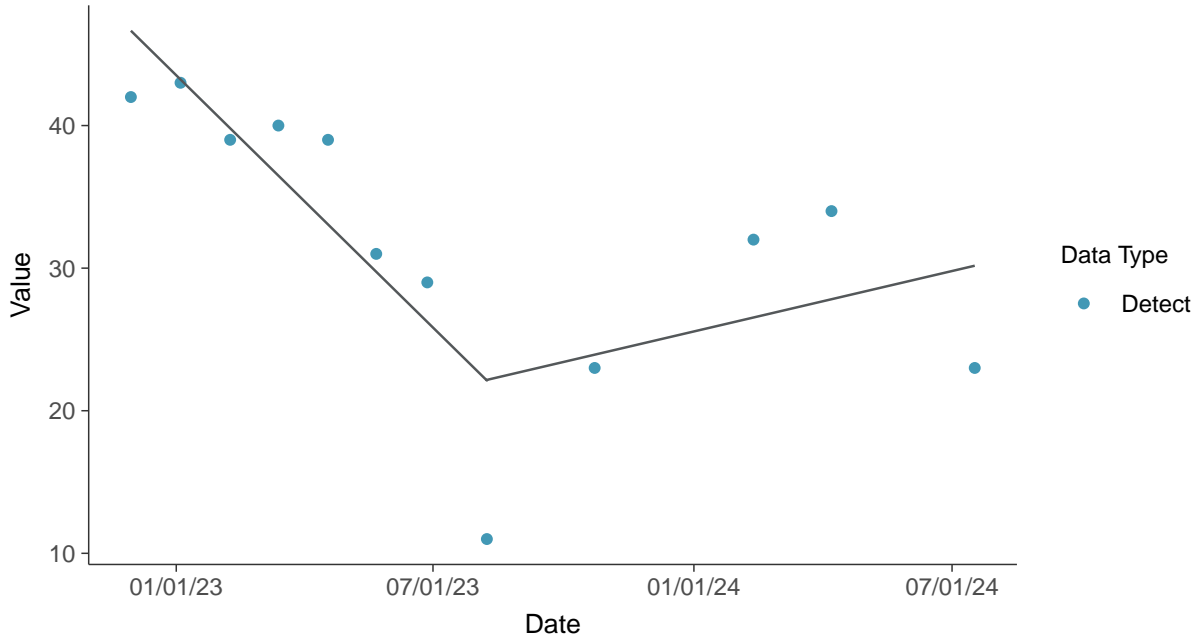
Total Suspended Solids, MW-32 (mg/L)





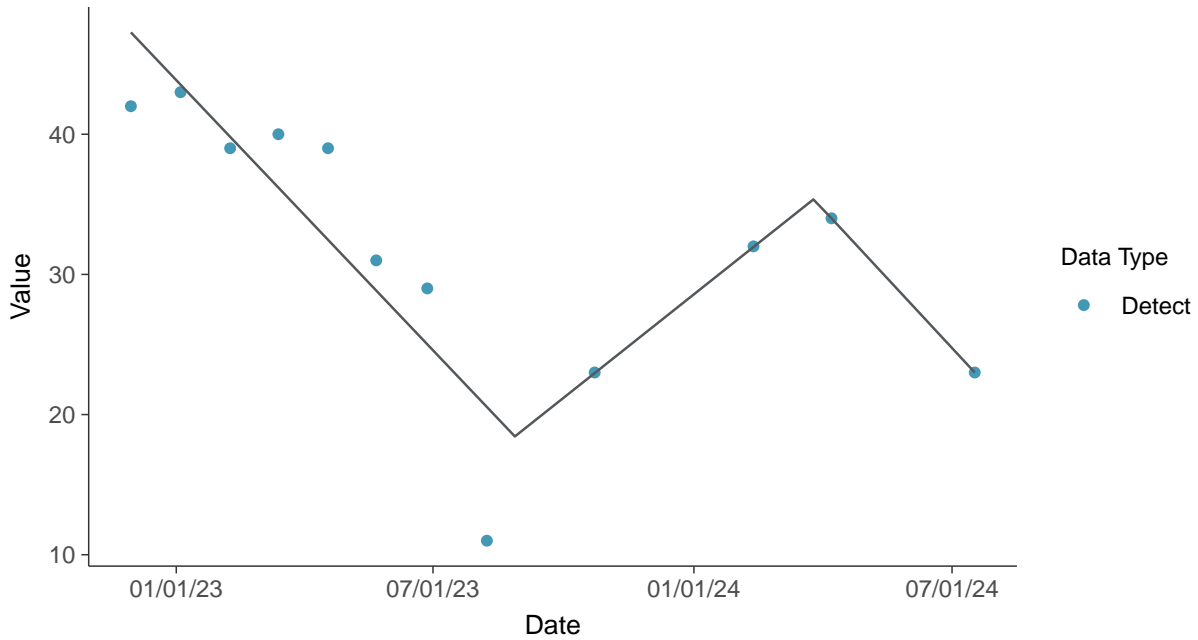
### Trend Regression: Piecewise Linear-Linear

Total Suspended Solids, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

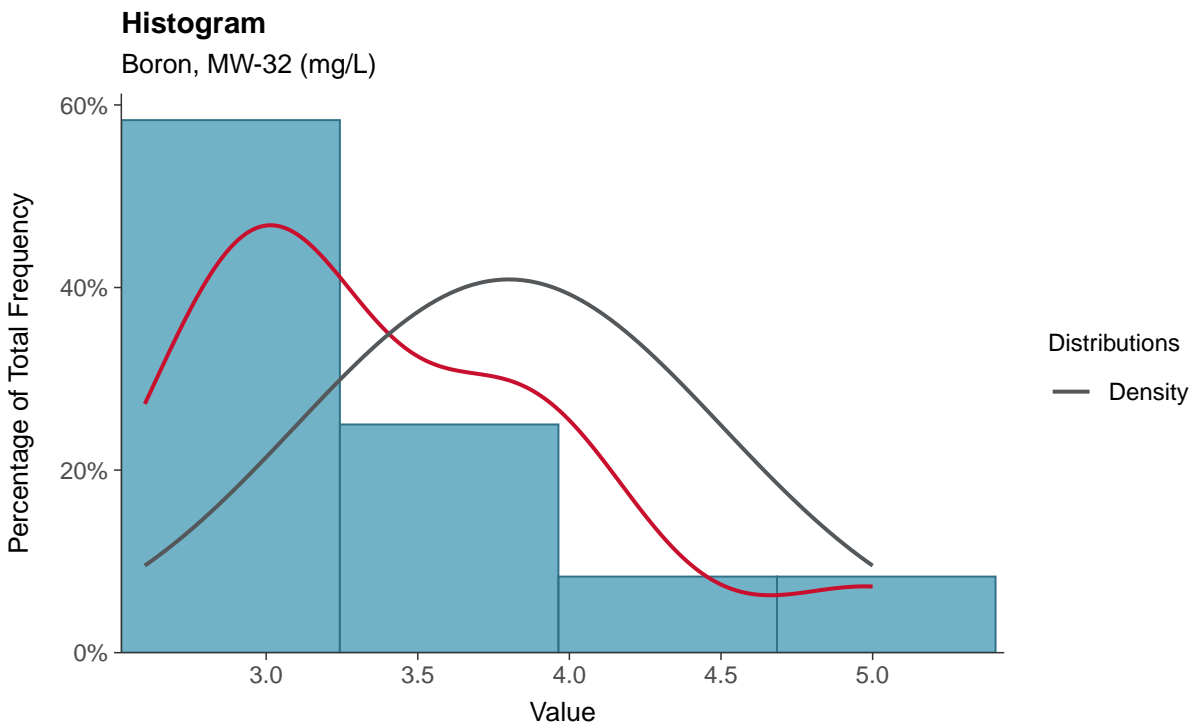
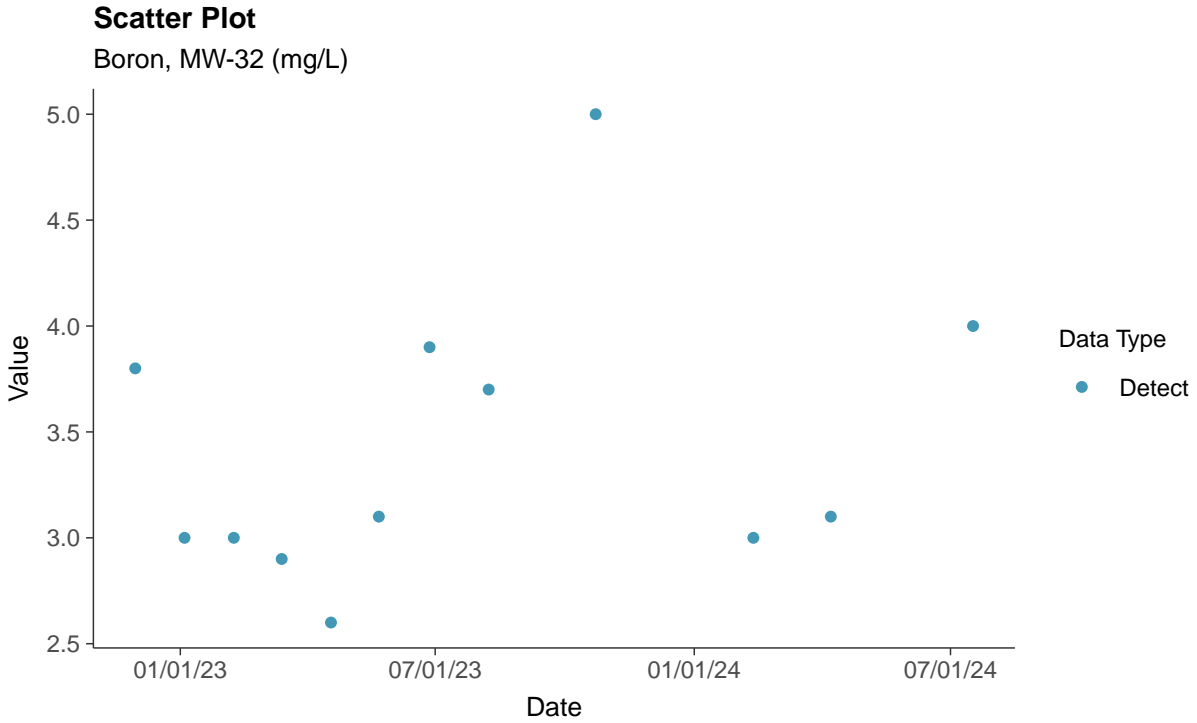
Total Suspended Solids, MW-32 (mg/L)





### Appendix III: Boron, MW-32

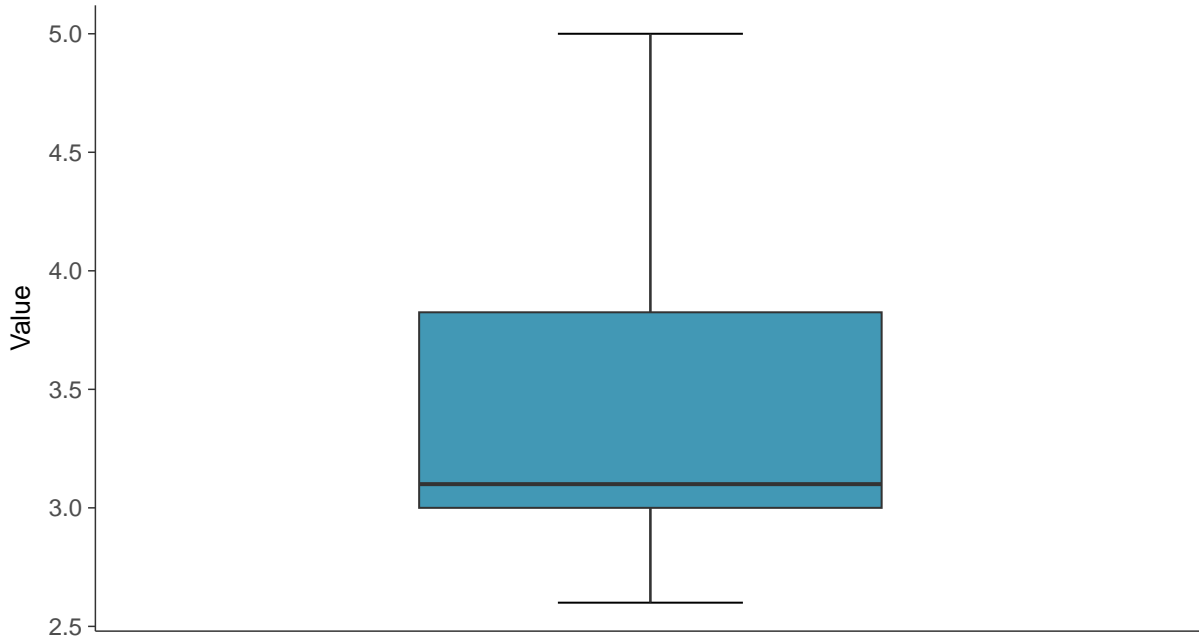
ID: 42\_1\_4\_105





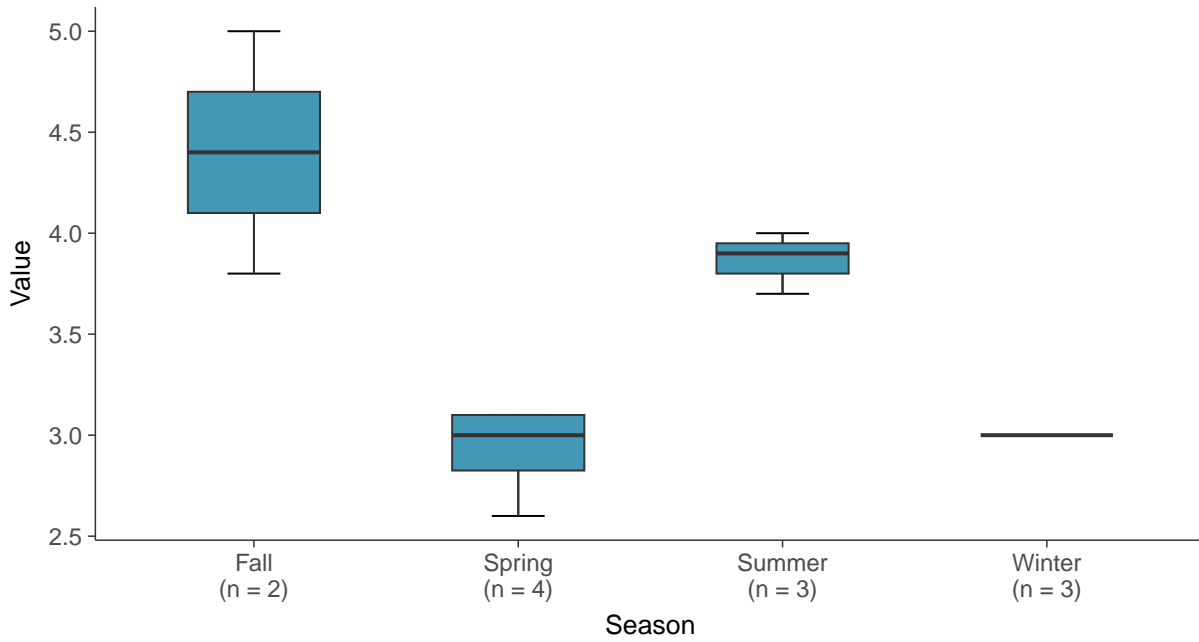
### Boxplot

Boron, MW-32 (mg/L)



### Boxplot by Season

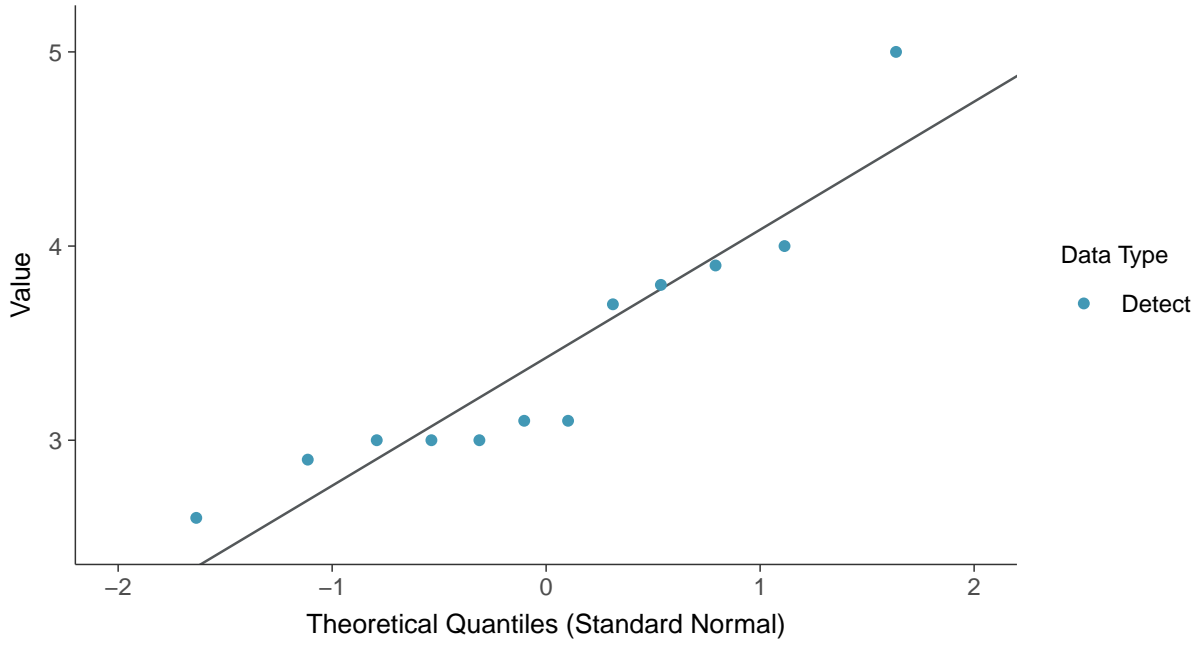
Boron, MW-32 (mg/L)





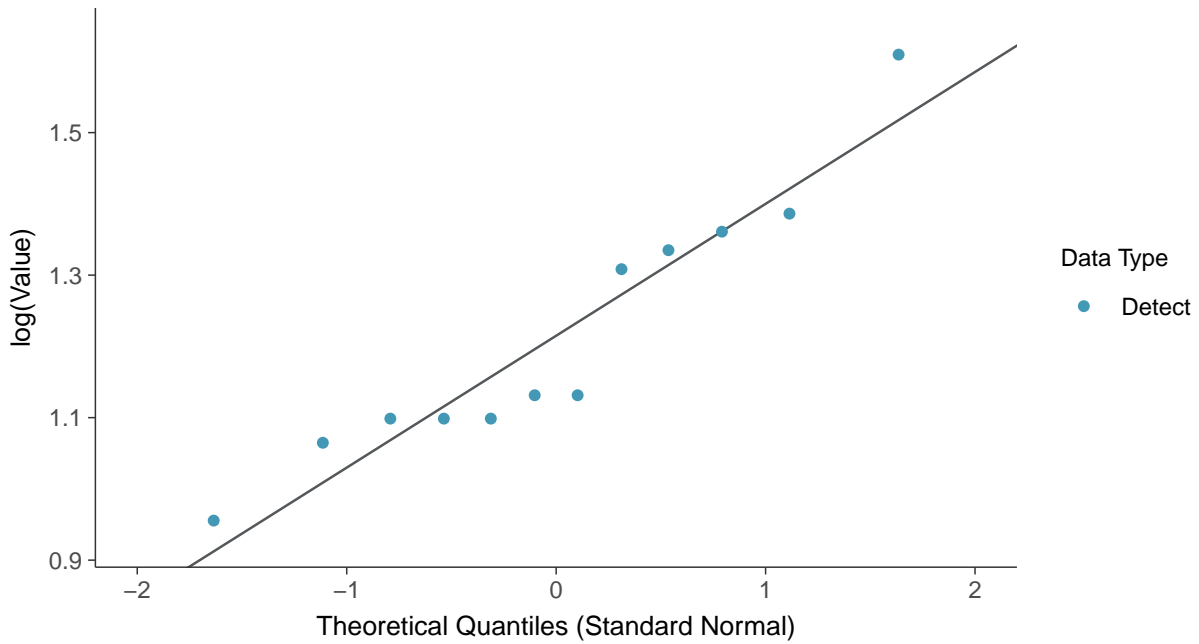
### Normal Q-Q plot

Boron, MW-32 (mg/L)



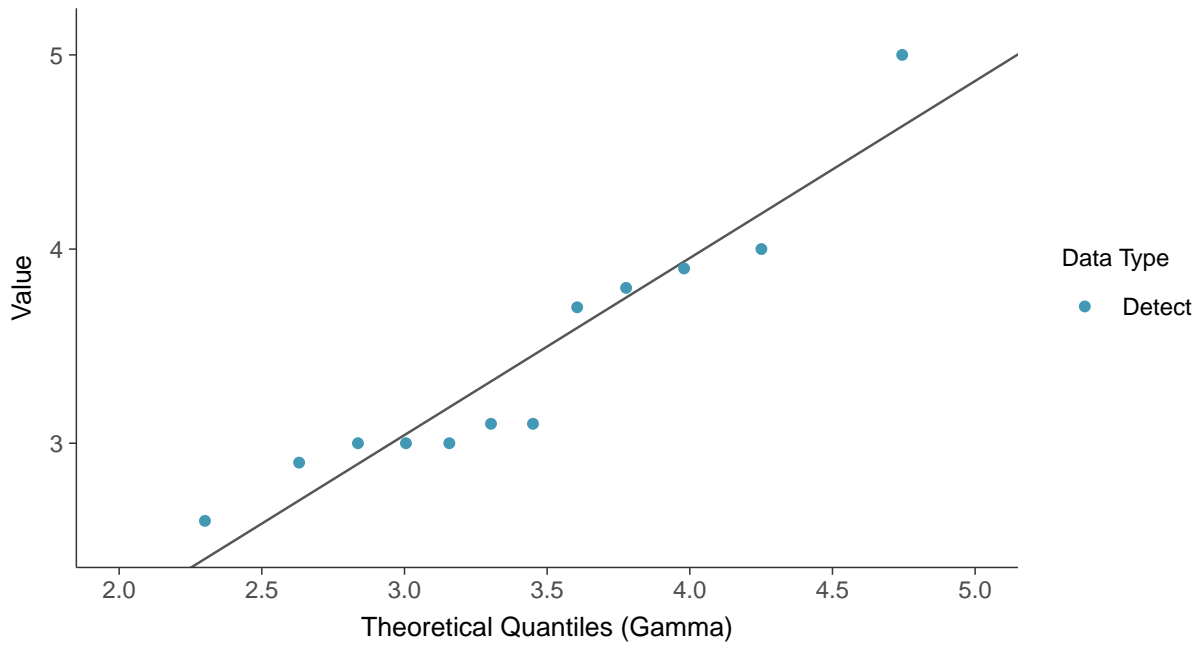
### Lognormal Q-Q plot

Boron, MW-32 (mg/L)

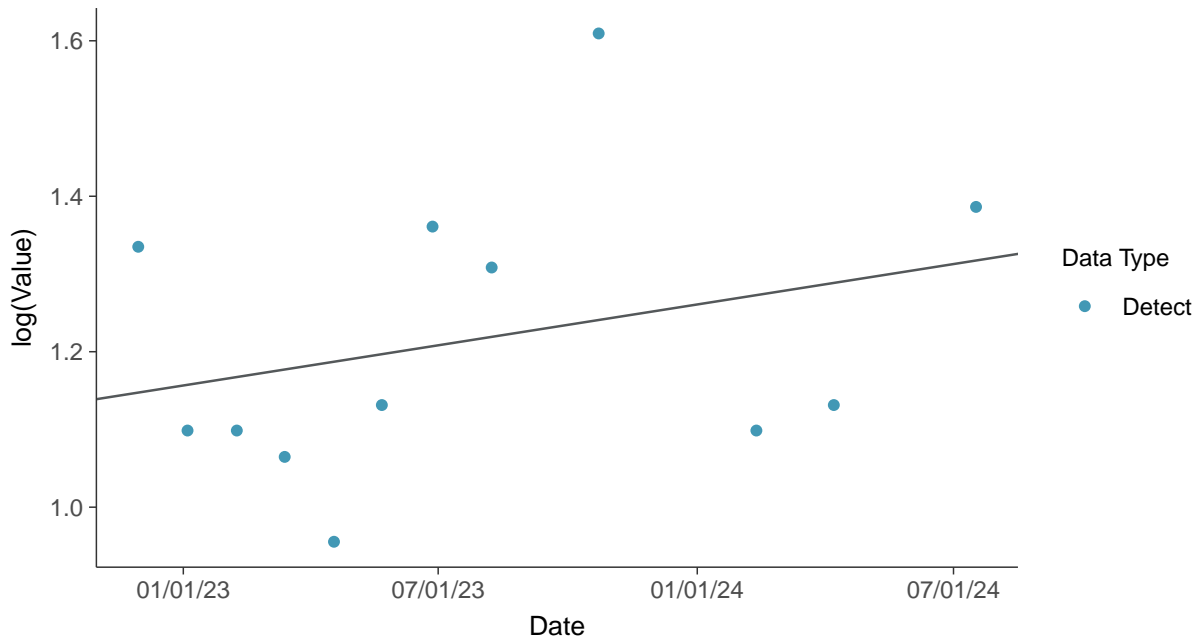




**Gamma Q-Q plot**  
Boron, MW-32 (mg/L)



**Trend Regression: Lognormal MLE**  
Boron, MW-32 (mg/L)

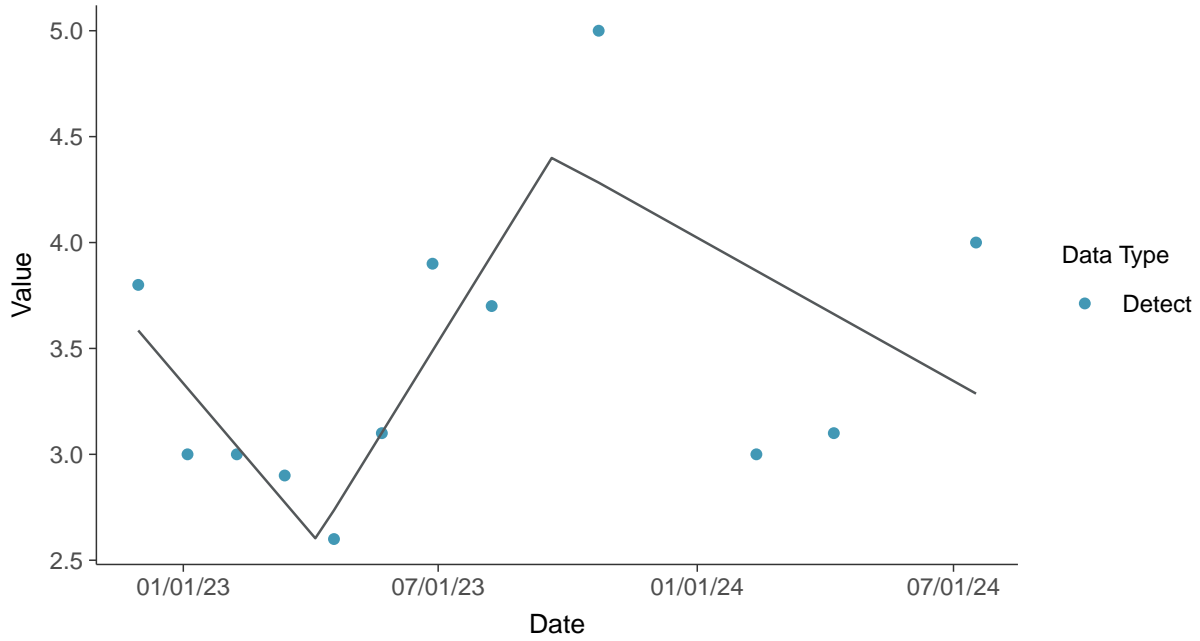






### Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-32 (mg/L)



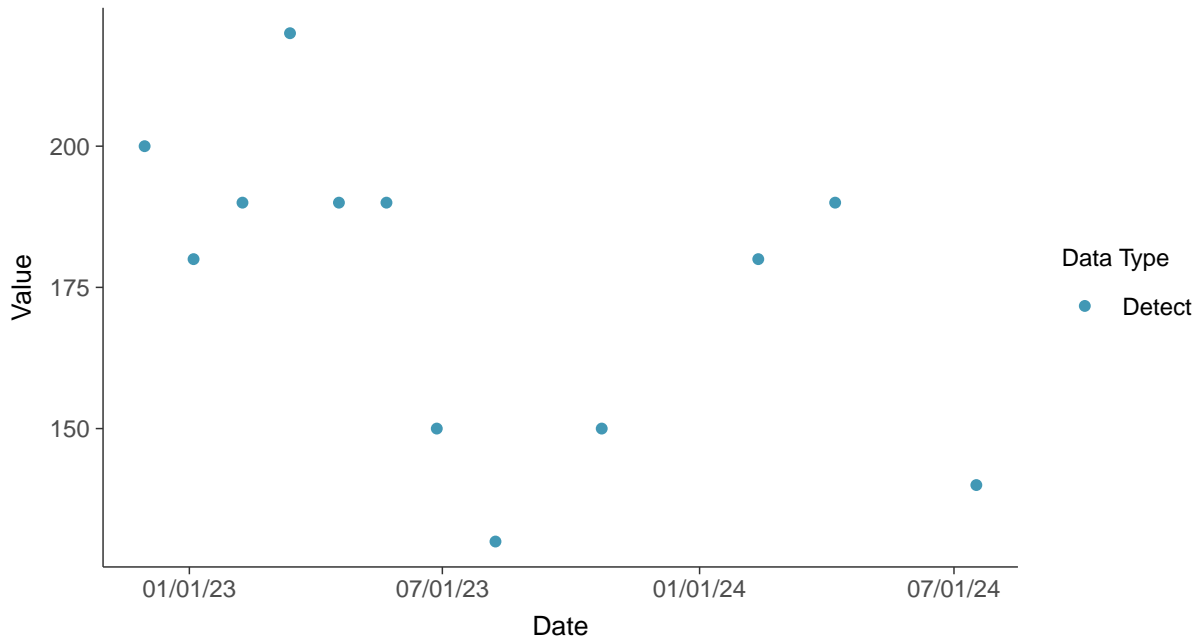


### Appendix III: Calcium, MW-32

ID: 42\_1\_4\_107

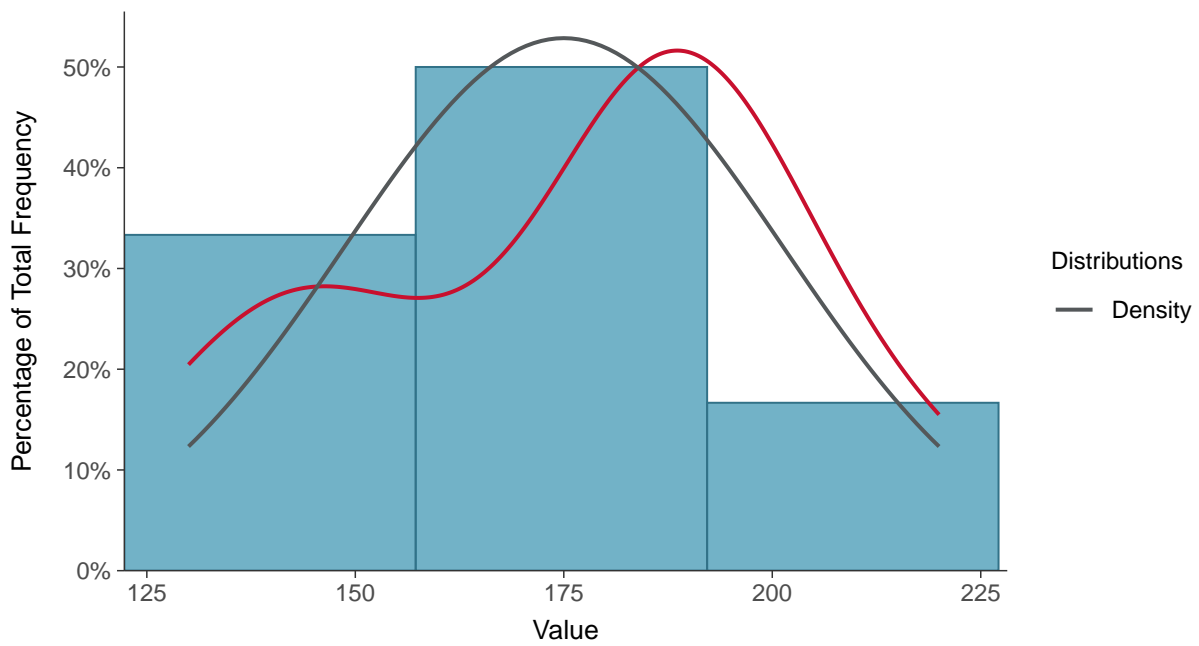
#### Scatter Plot

Calcium, MW-32 (mg/L)



#### Histogram

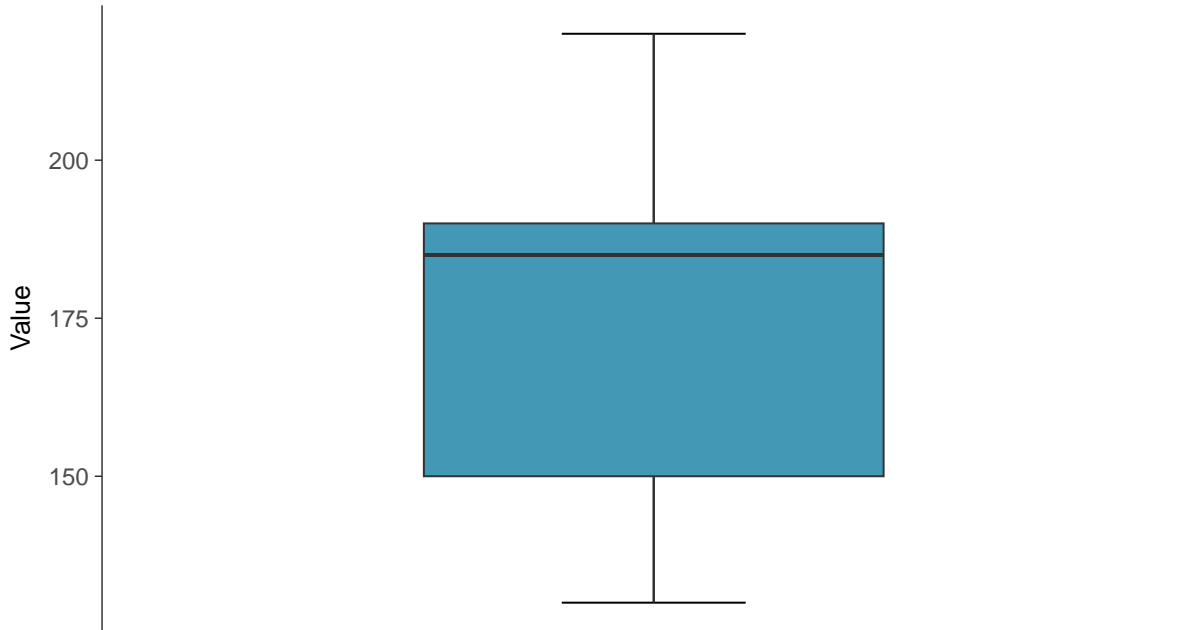
Calcium, MW-32 (mg/L)





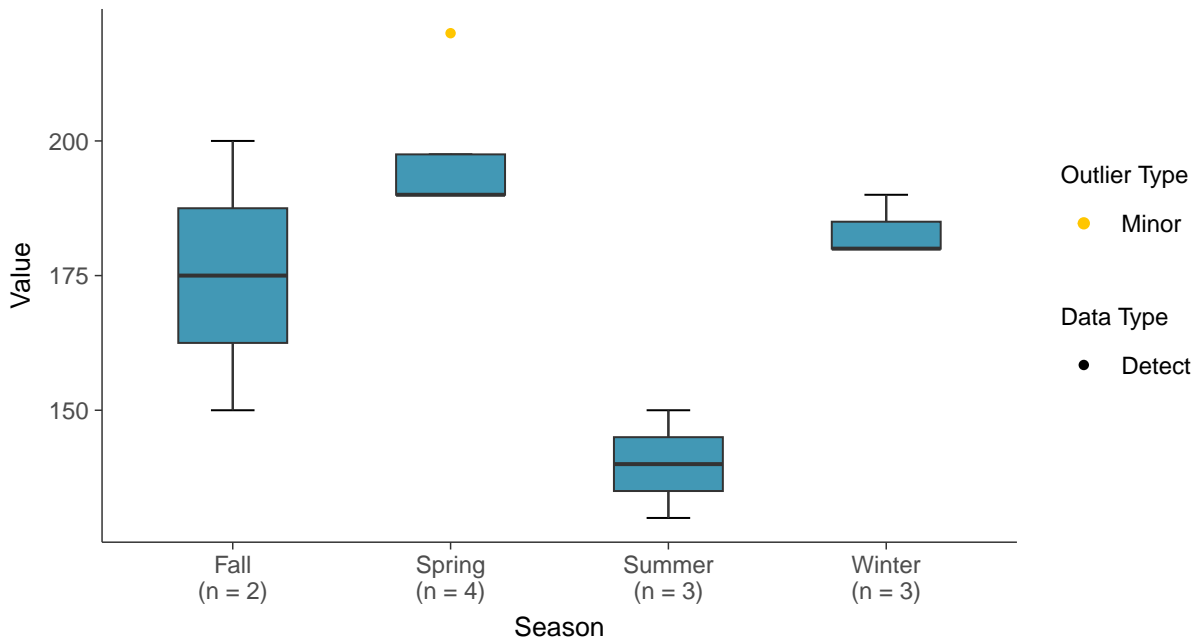
### Boxplot

Calcium, MW-32 (mg/L)



### Boxplot by Season

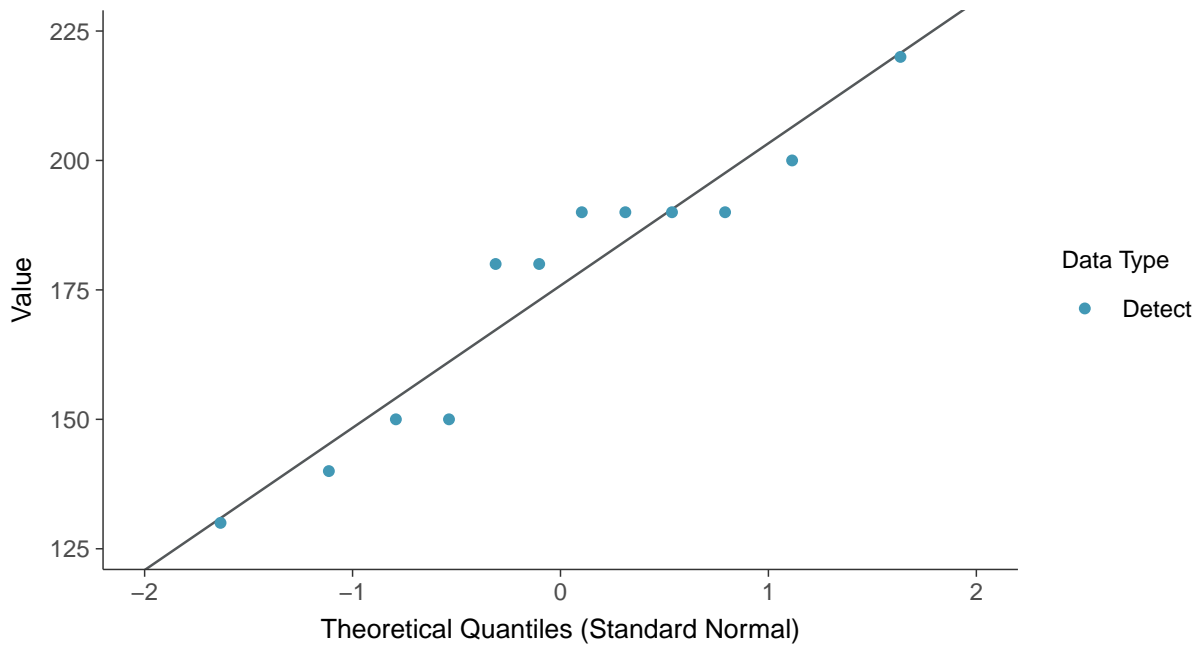
Calcium, MW-32 (mg/L)





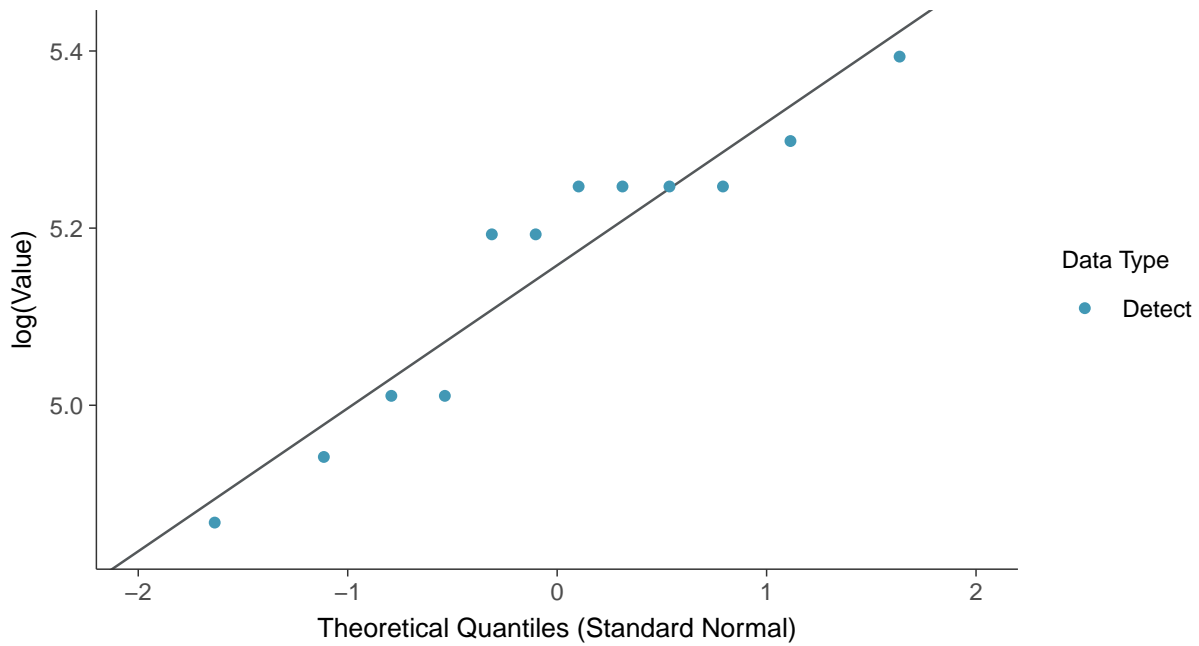
### Normal Q-Q plot

Calcium, MW-32 (mg/L)



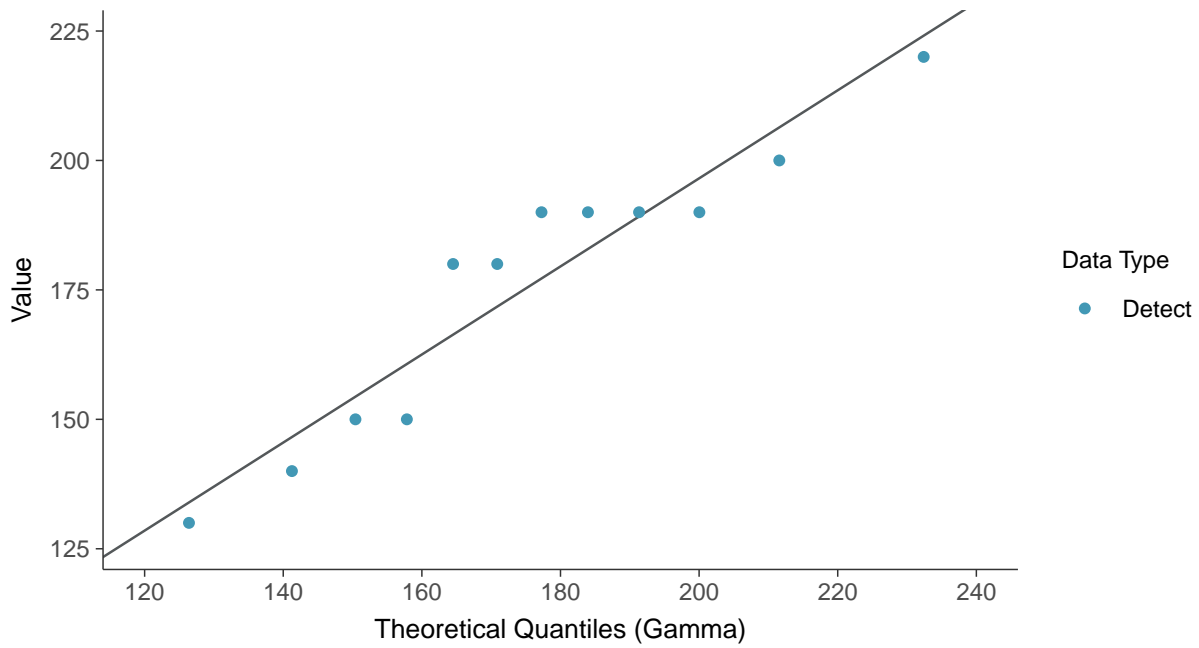
### Lognormal Q-Q plot

Calcium, MW-32 (mg/L)

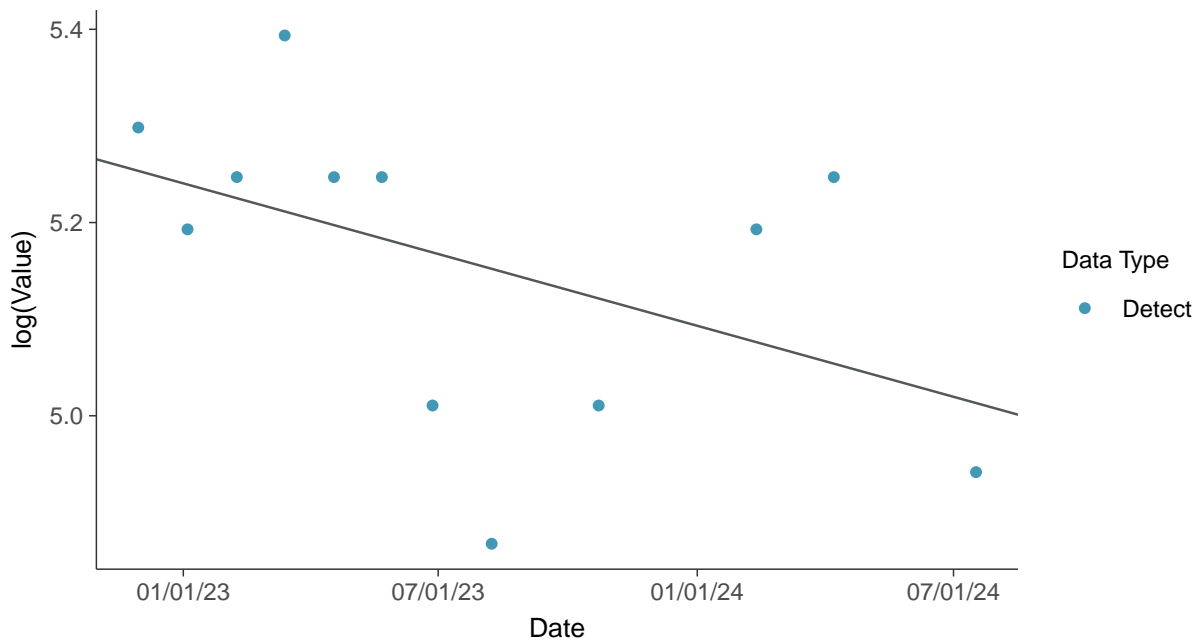




**Gamma Q-Q plot**  
Calcium, MW-32 (mg/L)



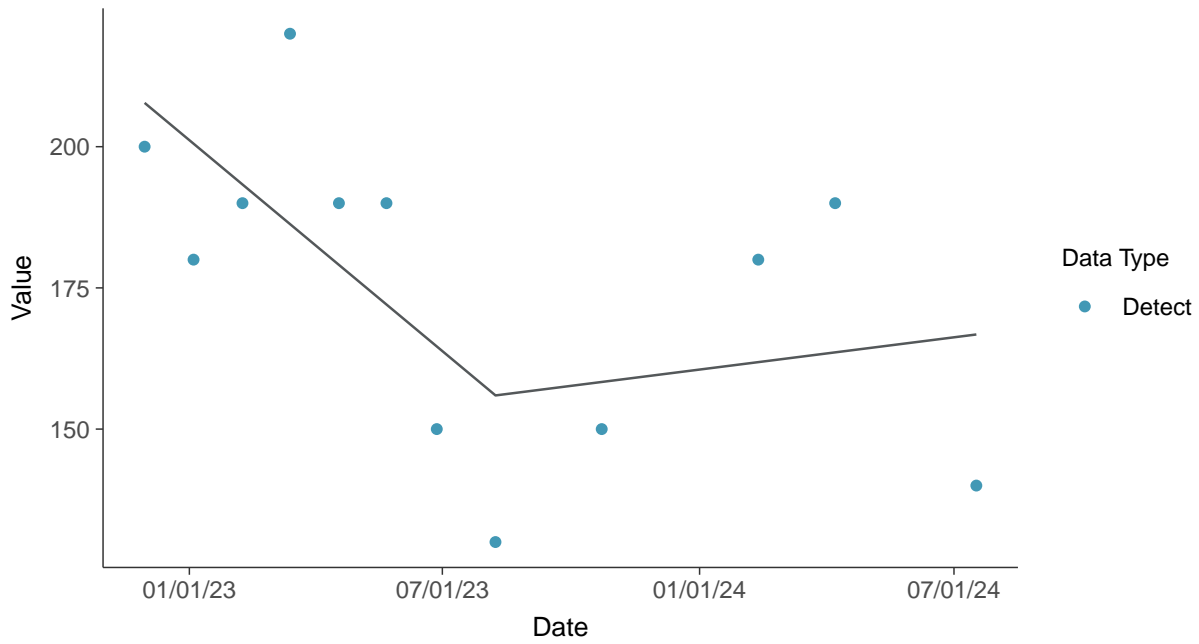
**Trend Regression: Lognormal MLE**  
Calcium, MW-32 (mg/L)





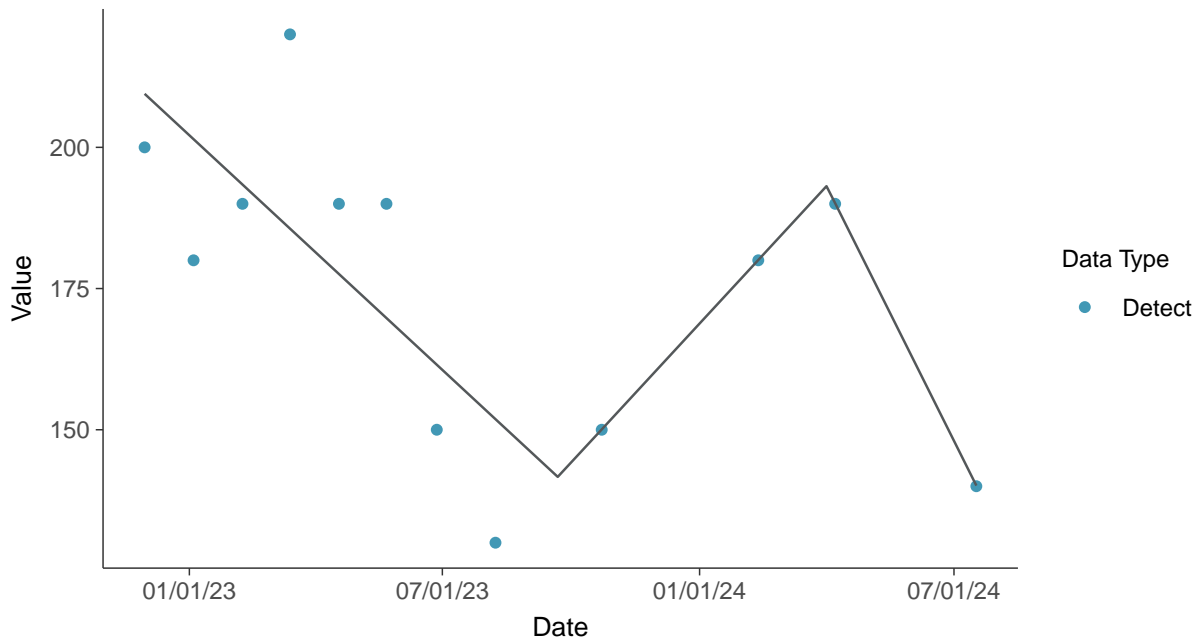
### Trend Regression: Piecewise Linear-Linear

Calcium, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

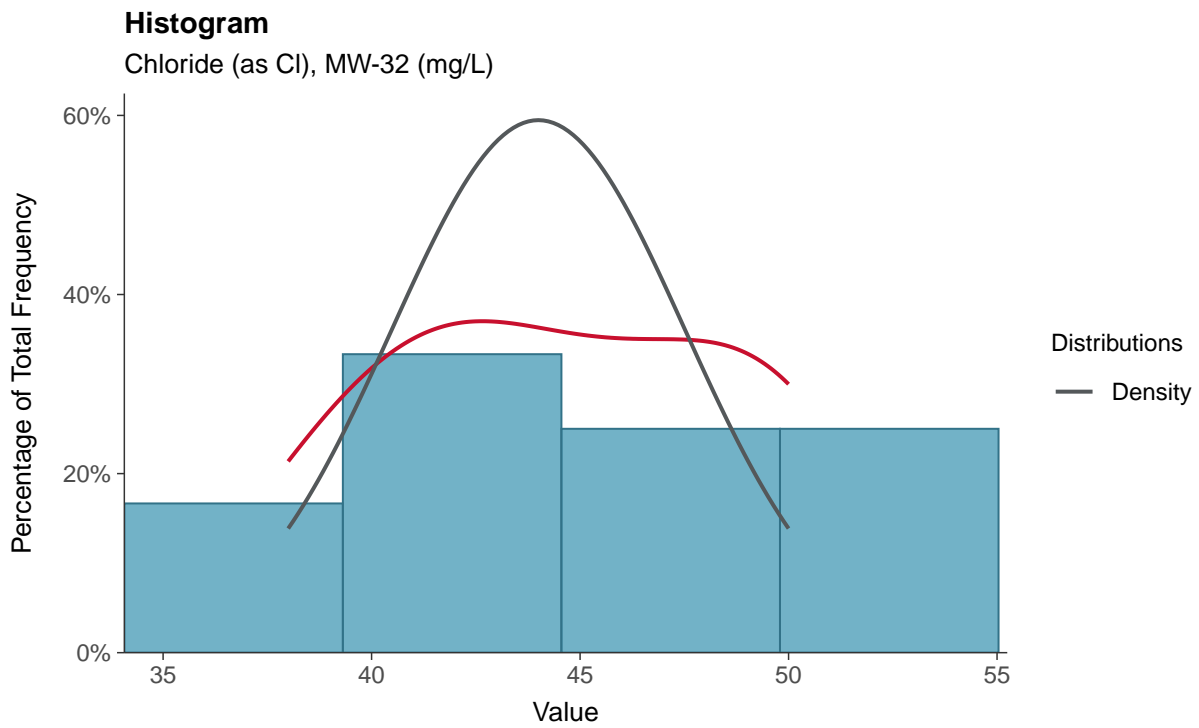
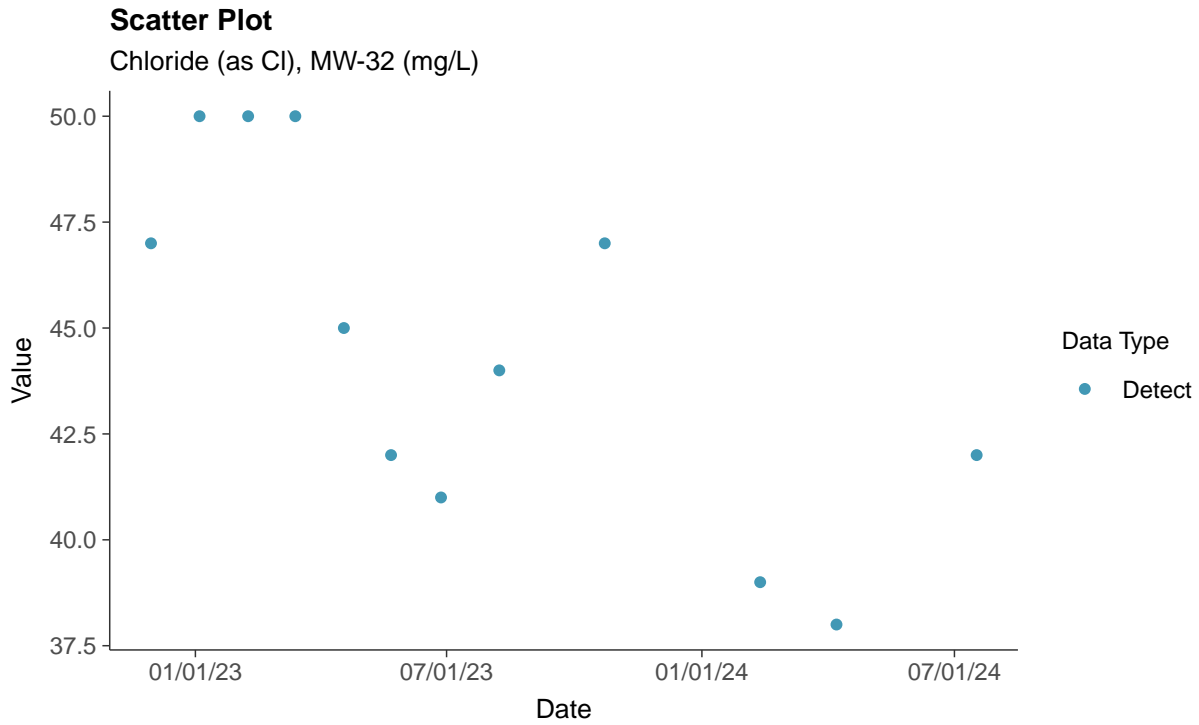
Calcium, MW-32 (mg/L)





### Appendix III: Chloride (as Cl), MW-32

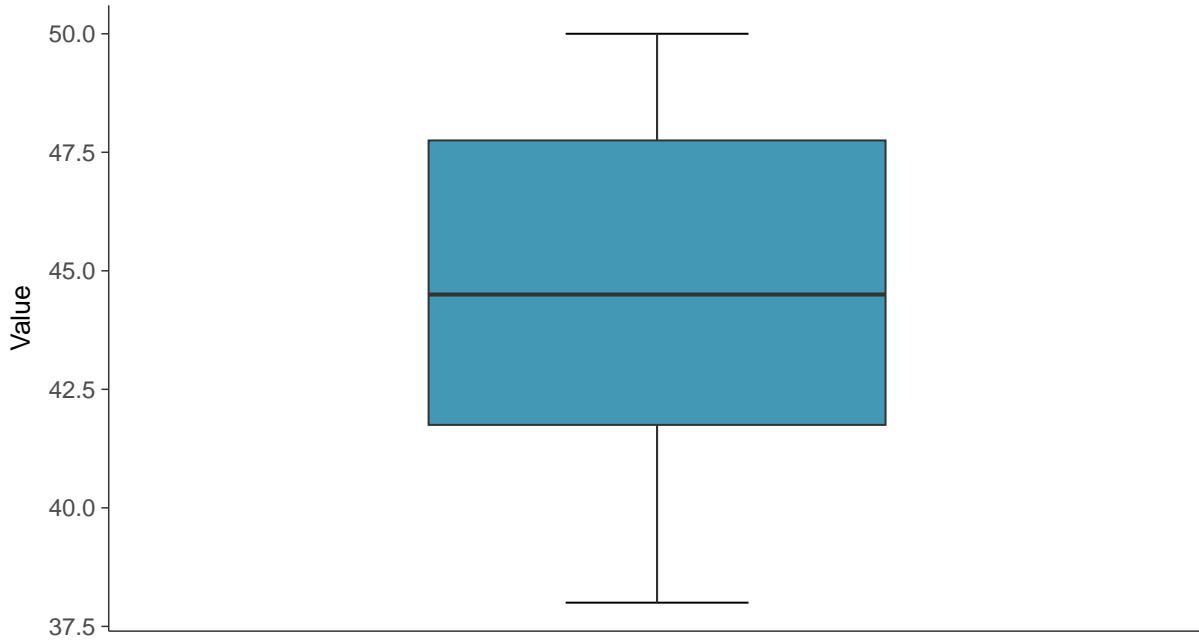
ID: 42\_1\_4\_108





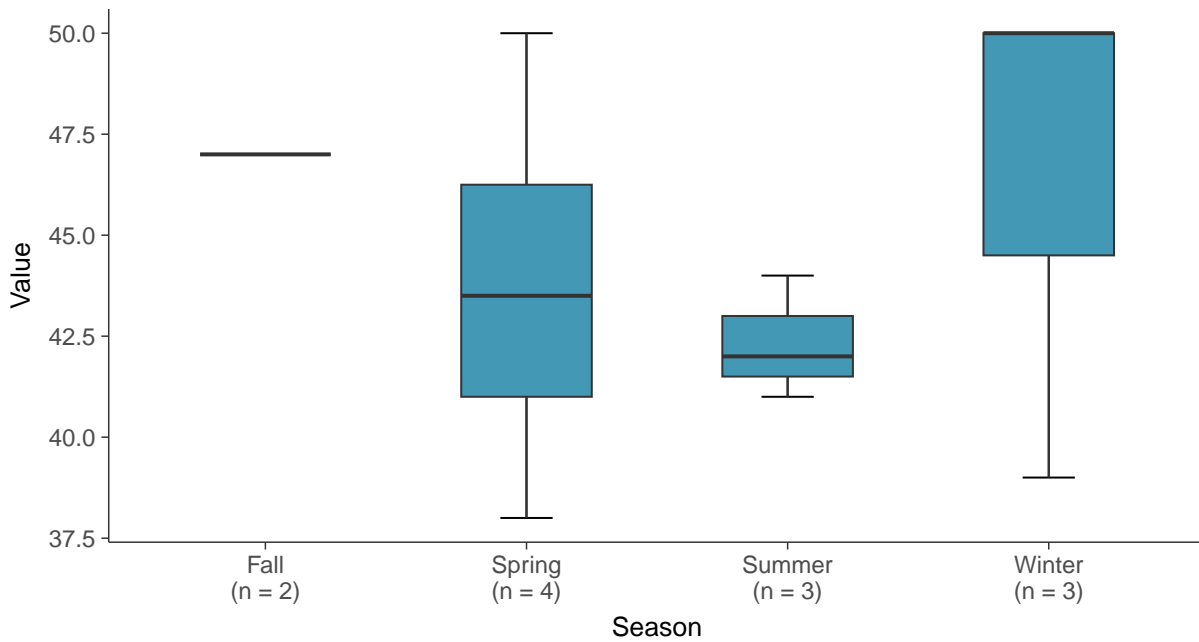
### Boxplot

Chloride (as Cl), MW-32 (mg/L)



### Boxplot by Season

Chloride (as Cl), MW-32 (mg/L)

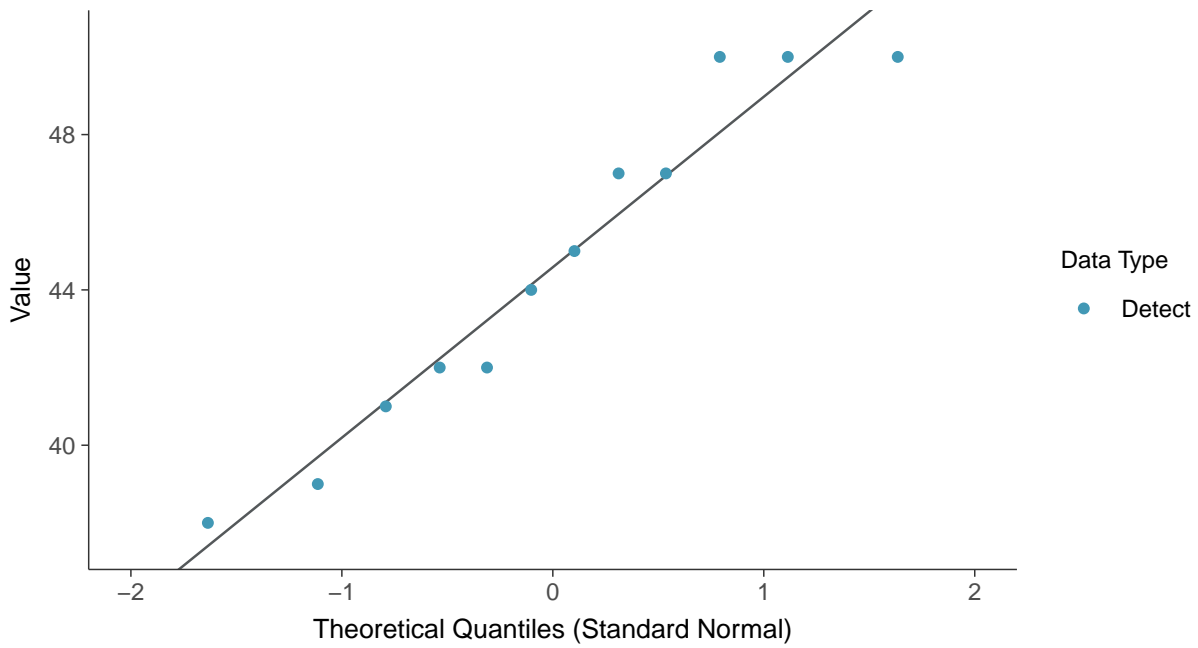






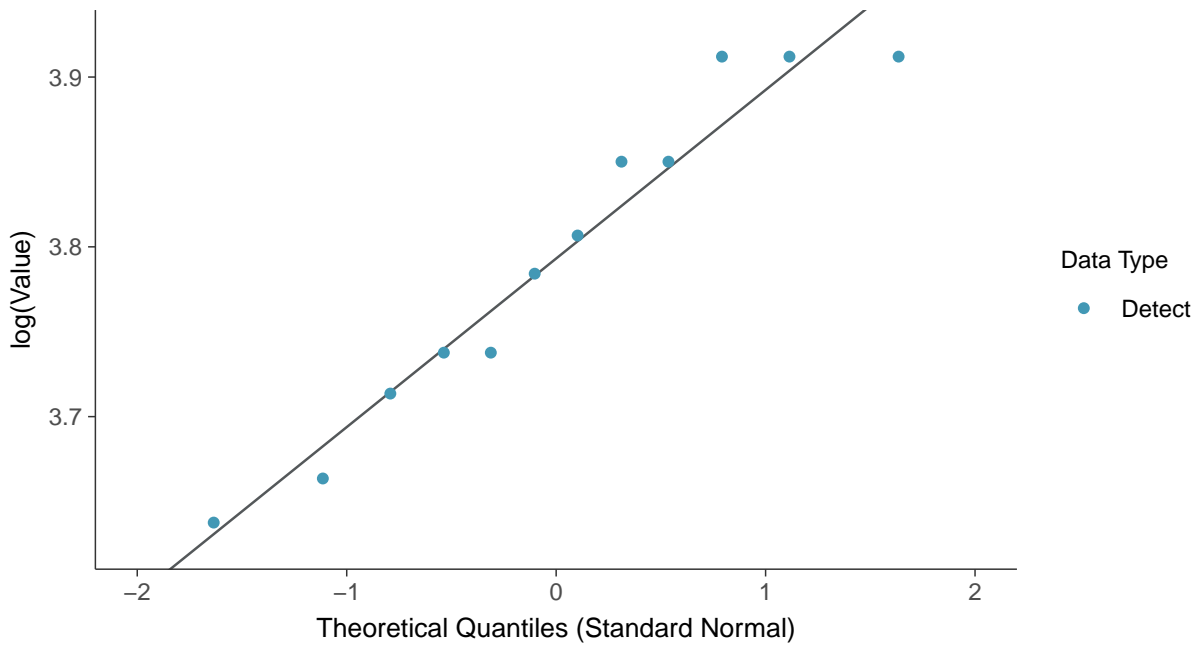
### Normal Q-Q plot

Chloride (as Cl), MW-32 (mg/L)



### Lognormal Q-Q plot

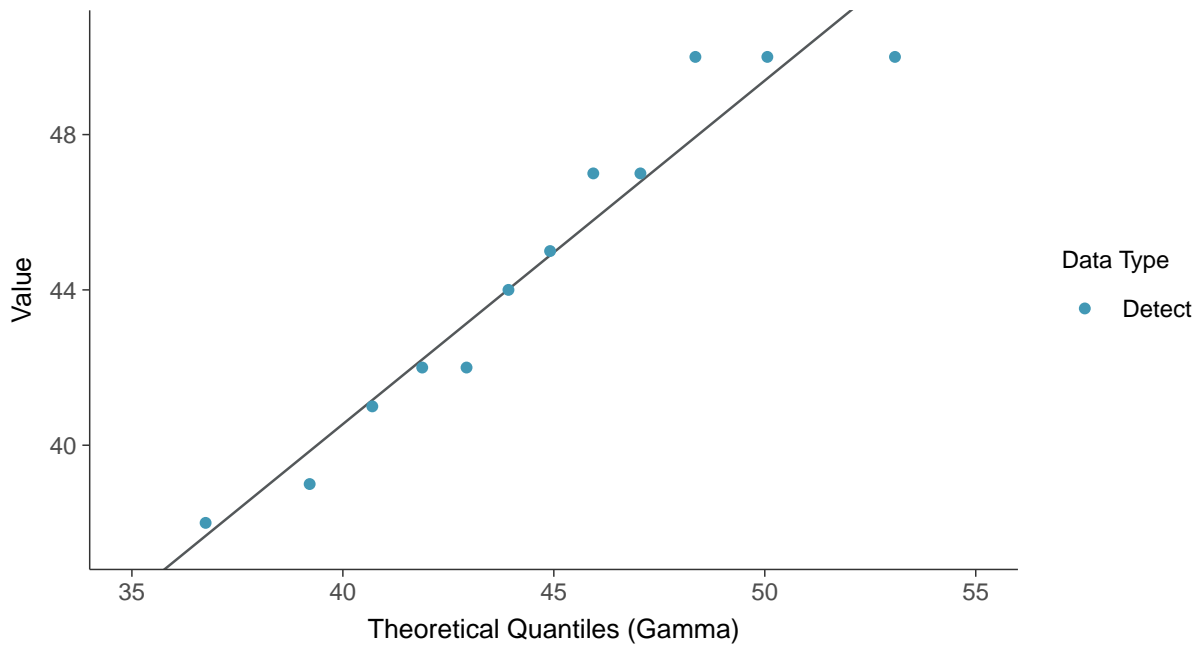
Chloride (as Cl), MW-32 (mg/L)





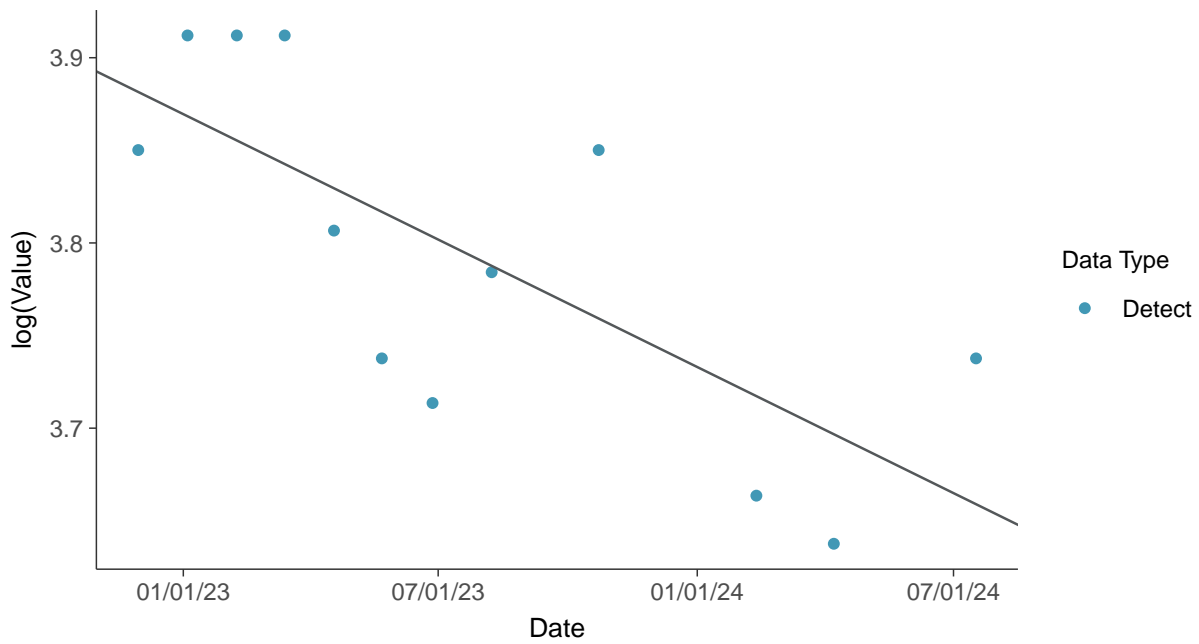
### Gamma Q-Q plot

Chloride (as Cl), MW-32 (mg/L)



### Trend Regression: Lognormal MLE

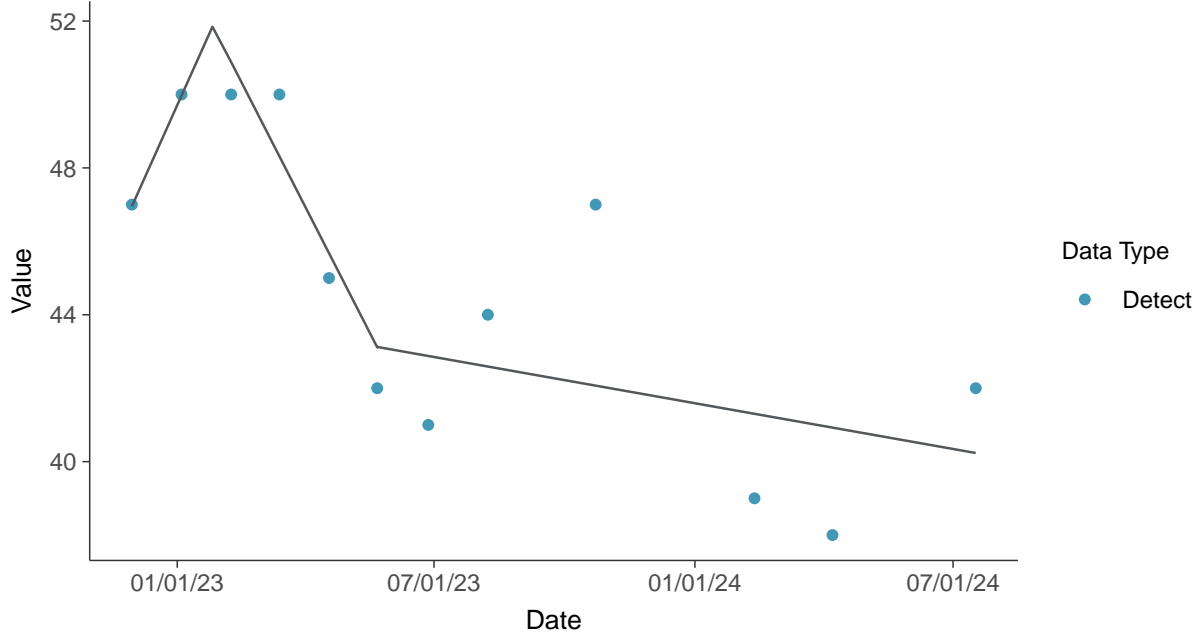
Chloride (as Cl), MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Chloride (as Cl), MW-32 (mg/L)



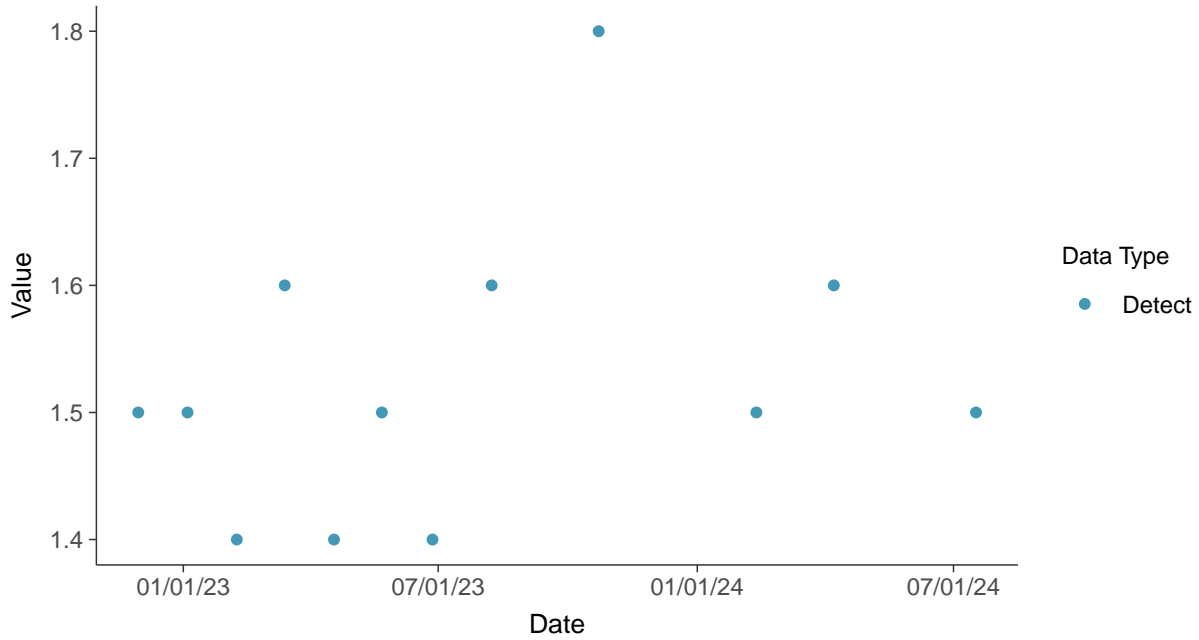


### Appendix III: Fluoride, MW-32

ID: 42\_1\_4\_112

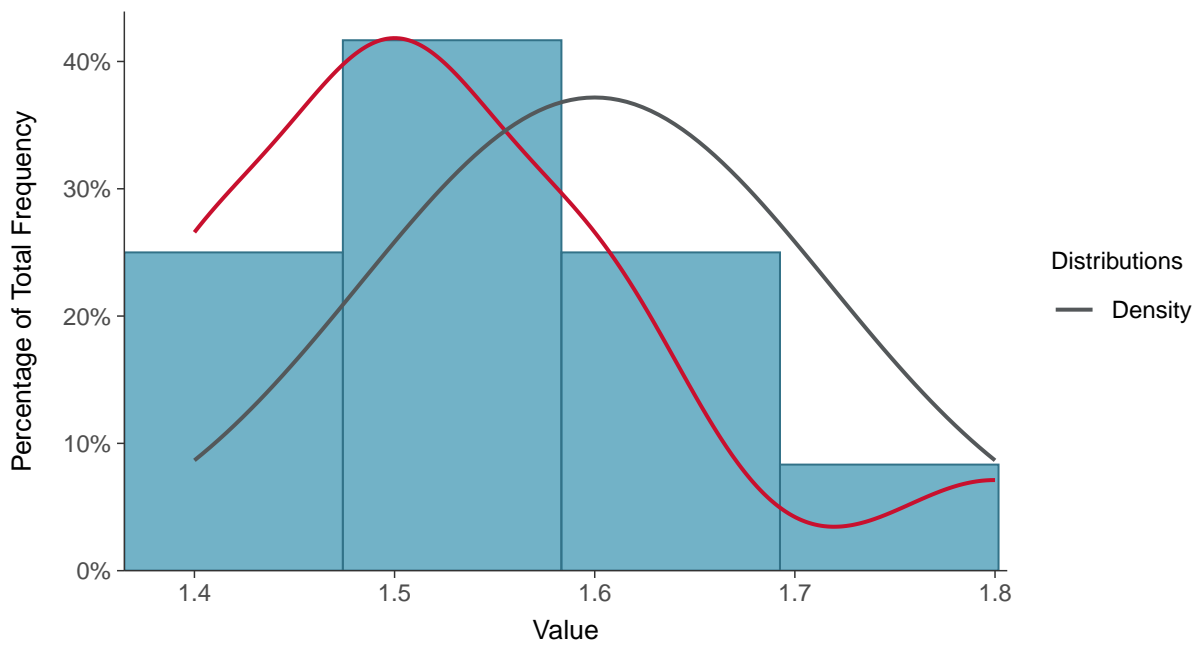
#### Scatter Plot

Fluoride, MW-32 (mg/L)



#### Histogram

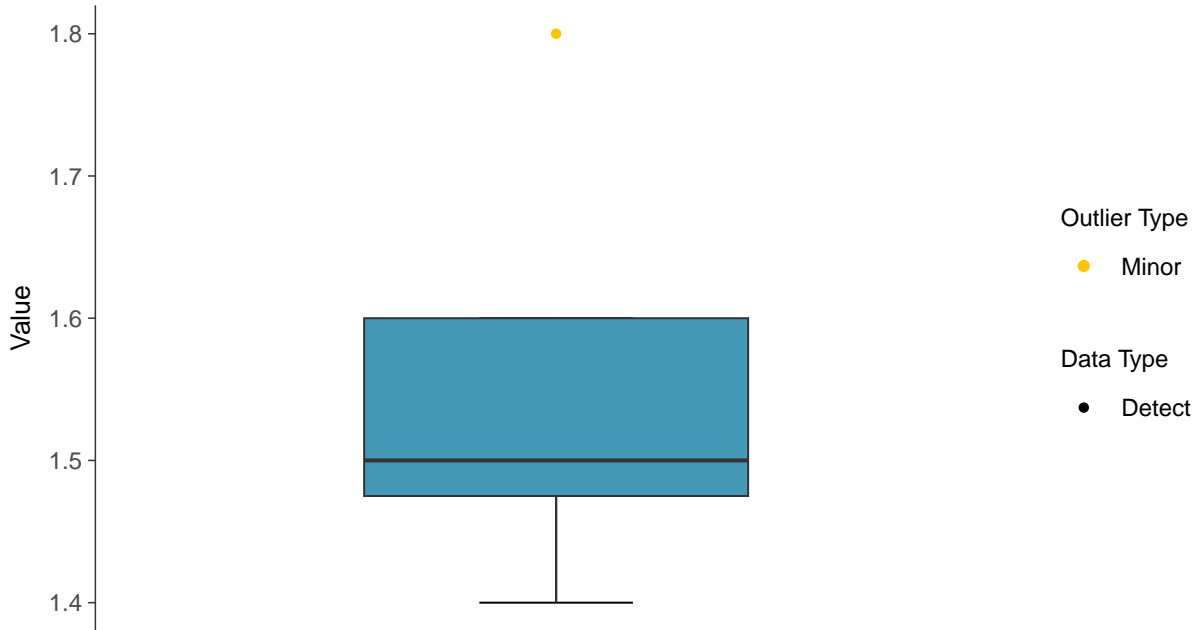
Fluoride, MW-32 (mg/L)





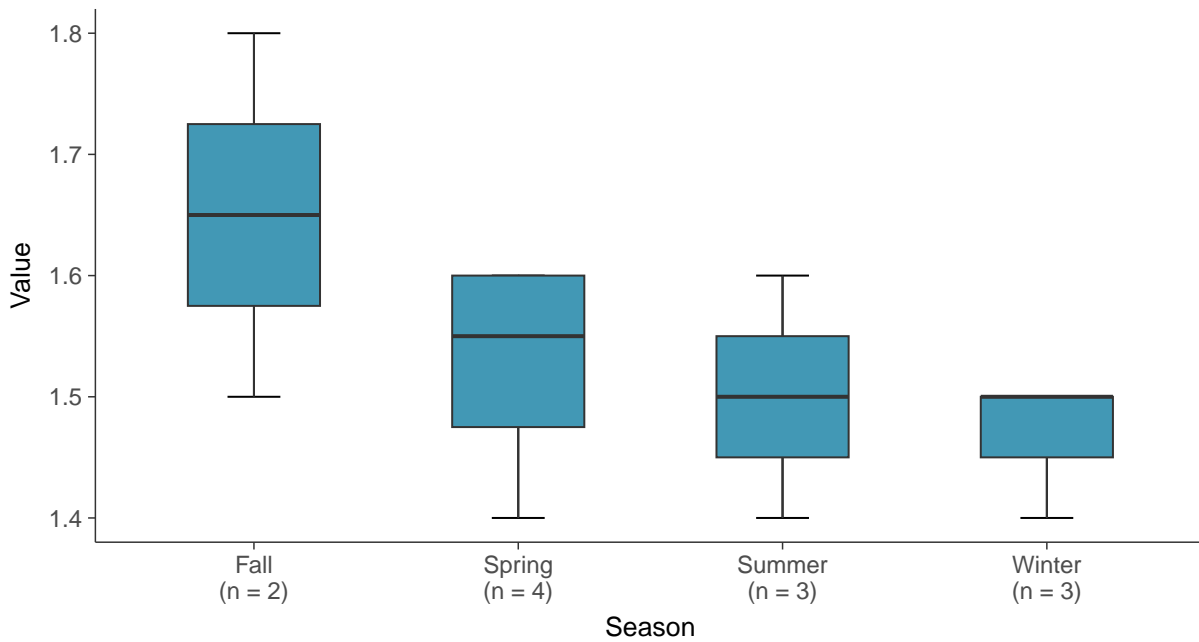
### Boxplot

Fluoride, MW-32 (mg/L)



### Boxplot by Season

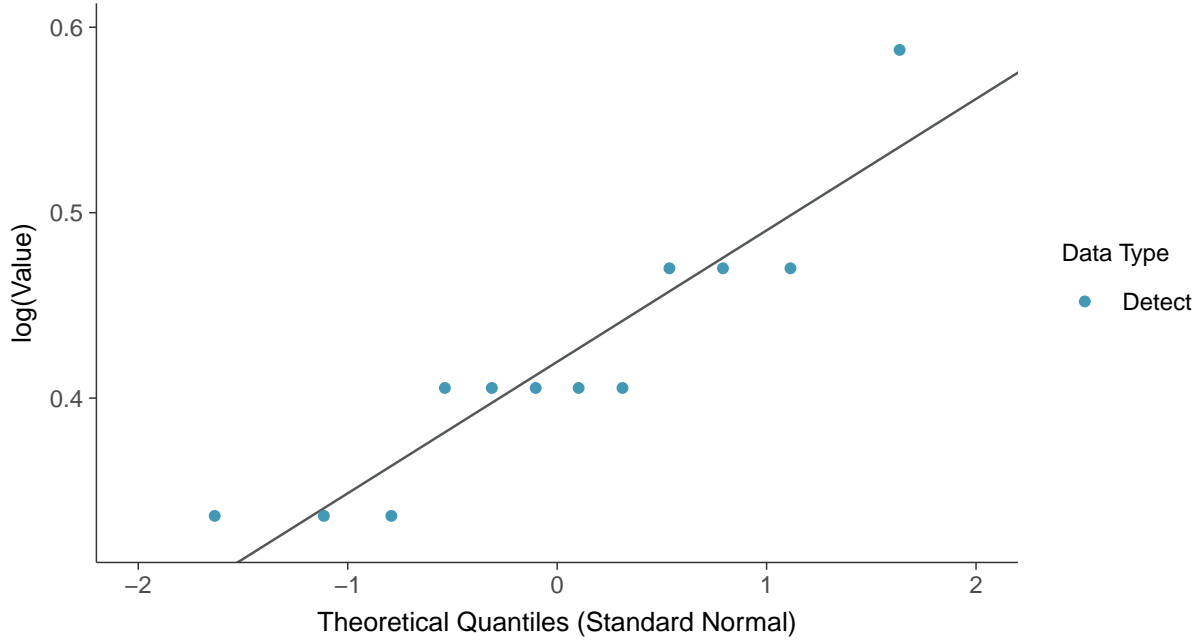
Fluoride, MW-32 (mg/L)





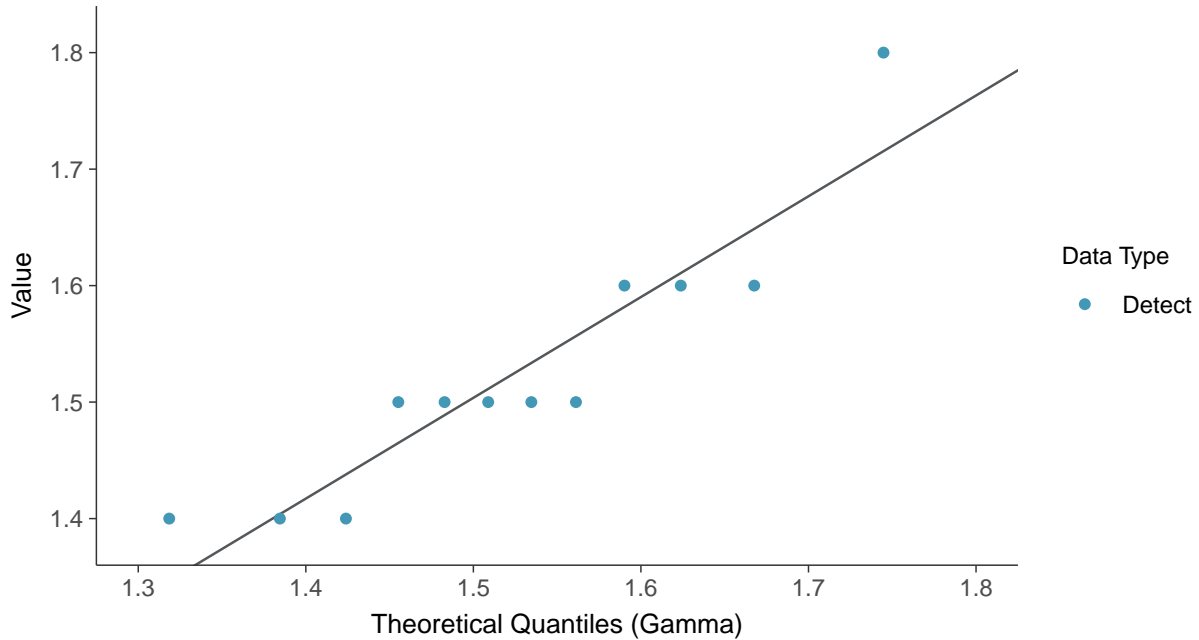
### Lognormal Q-Q plot

Fluoride, MW-32 (mg/L)



### Gamma Q-Q plot

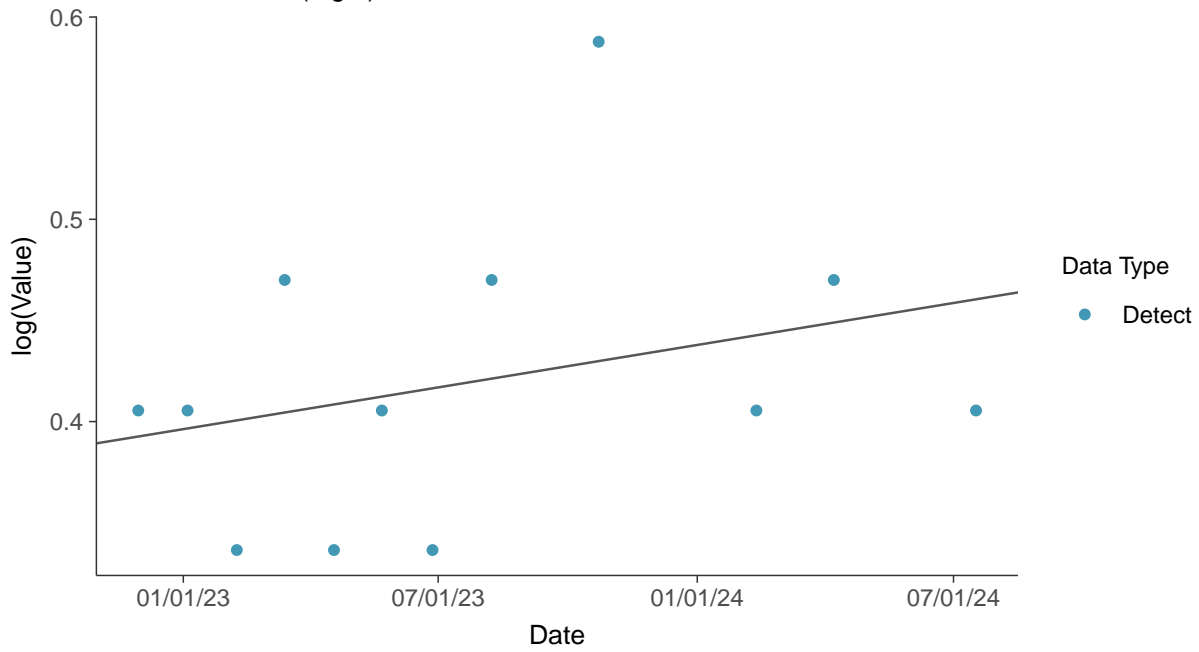
Fluoride, MW-32 (mg/L)





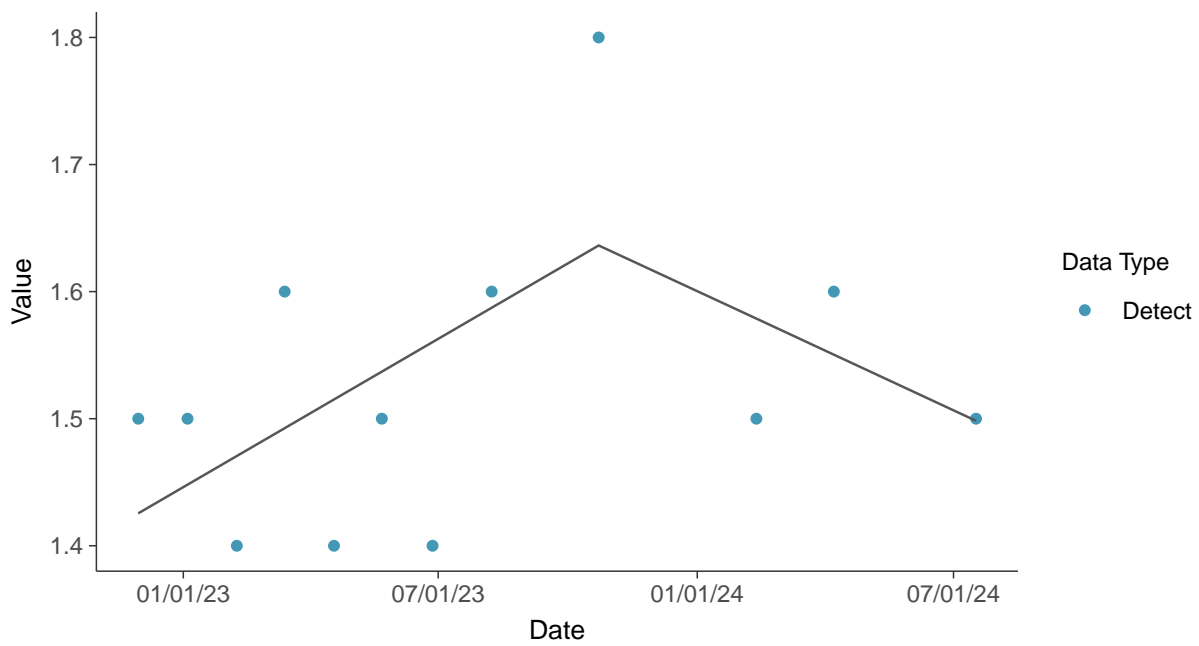
### Trend Regression: Lognormal MLE

Fluoride, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear

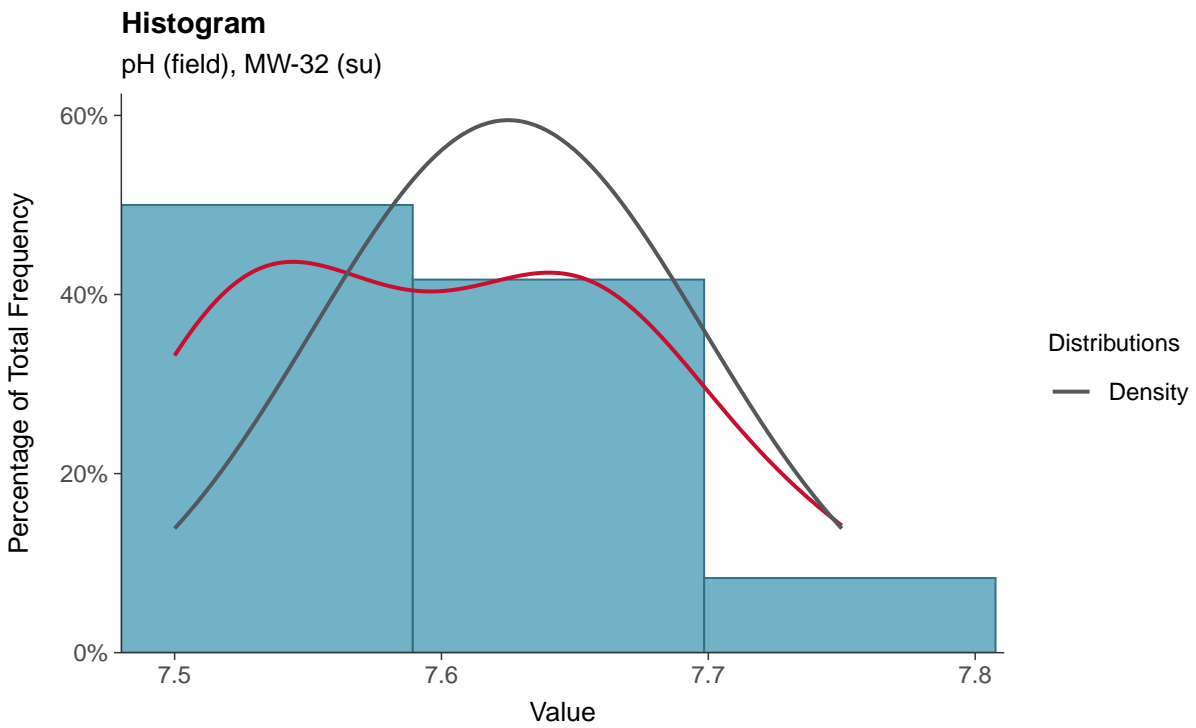
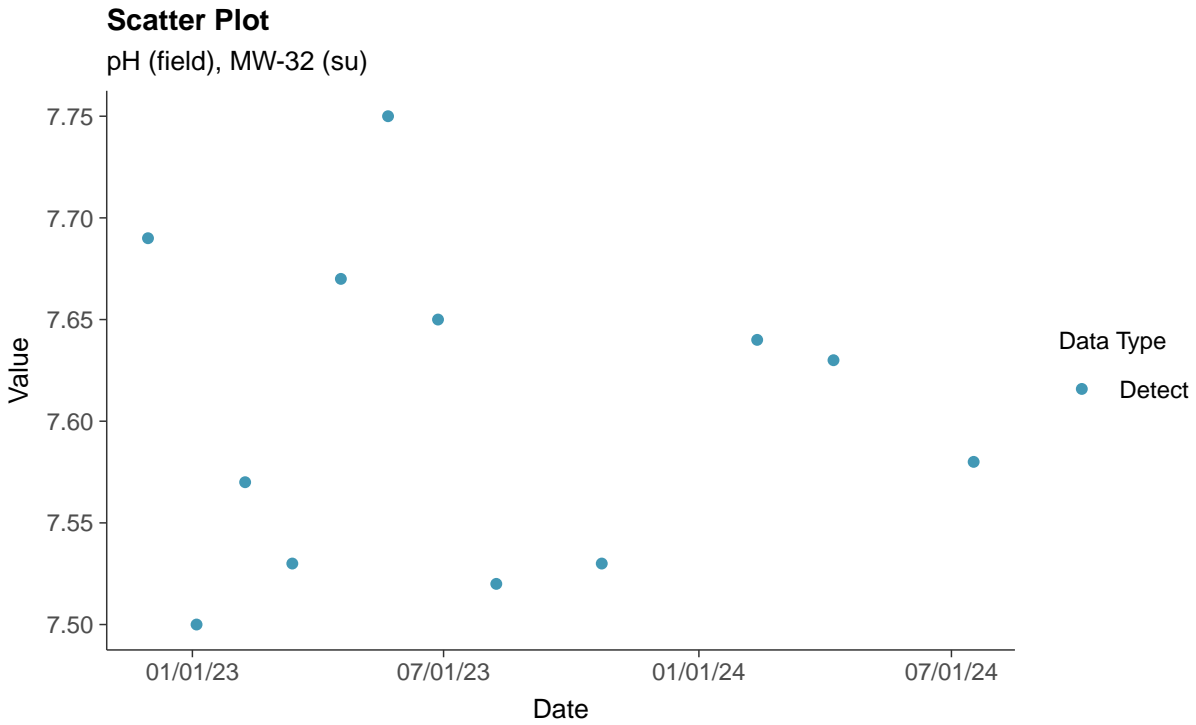
Fluoride, MW-32 (mg/L)





### Appendix III: pH (field), MW-32

ID: 42\_1\_4\_120

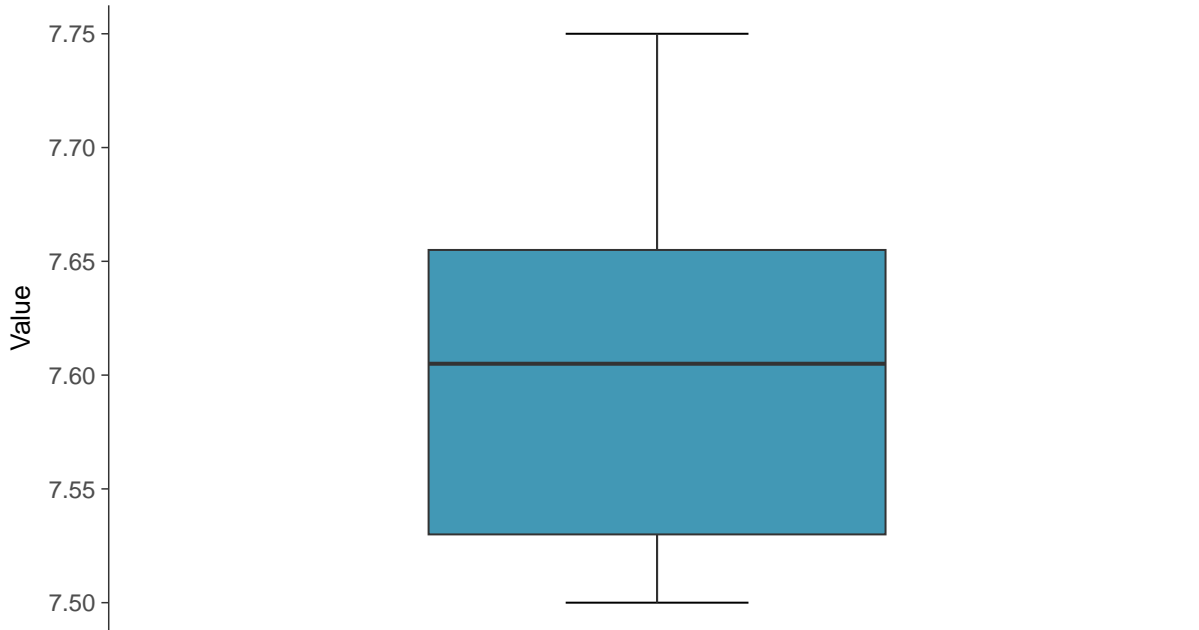






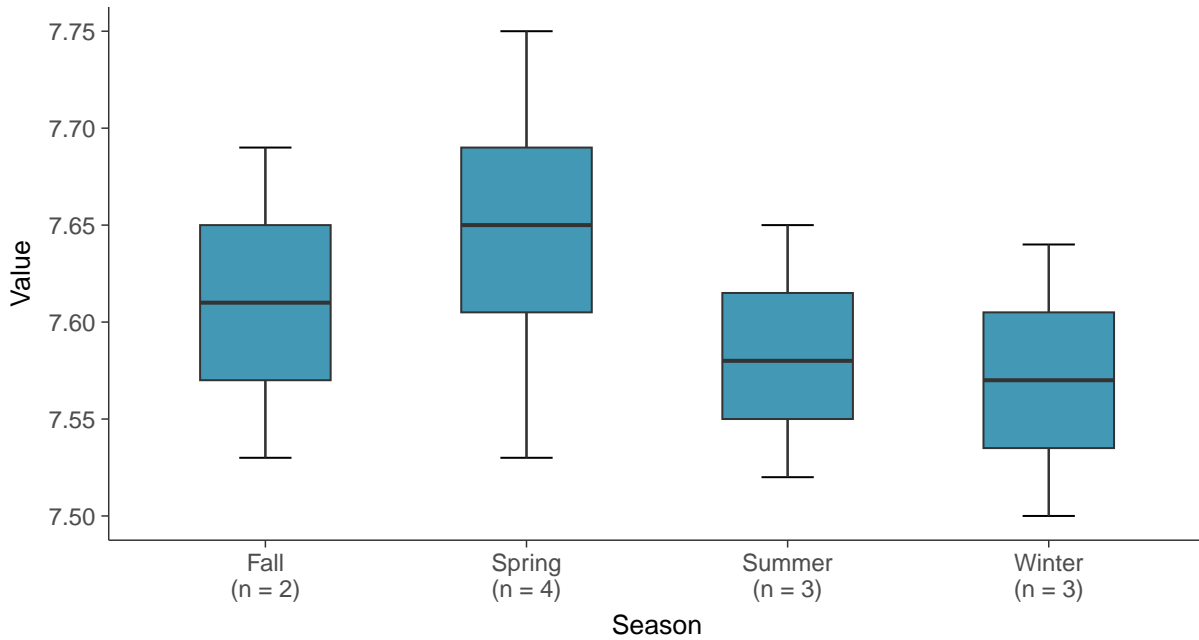
### Boxplot

pH (field), MW-32 (su)



### Boxplot by Season

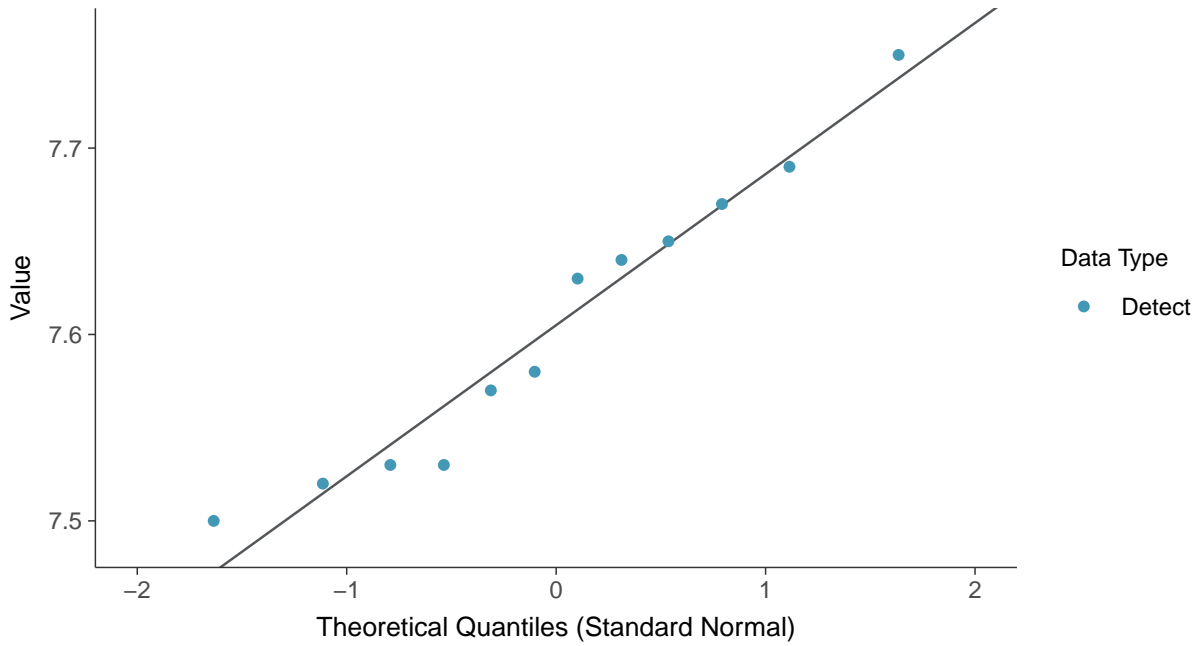
pH (field), MW-32 (su)





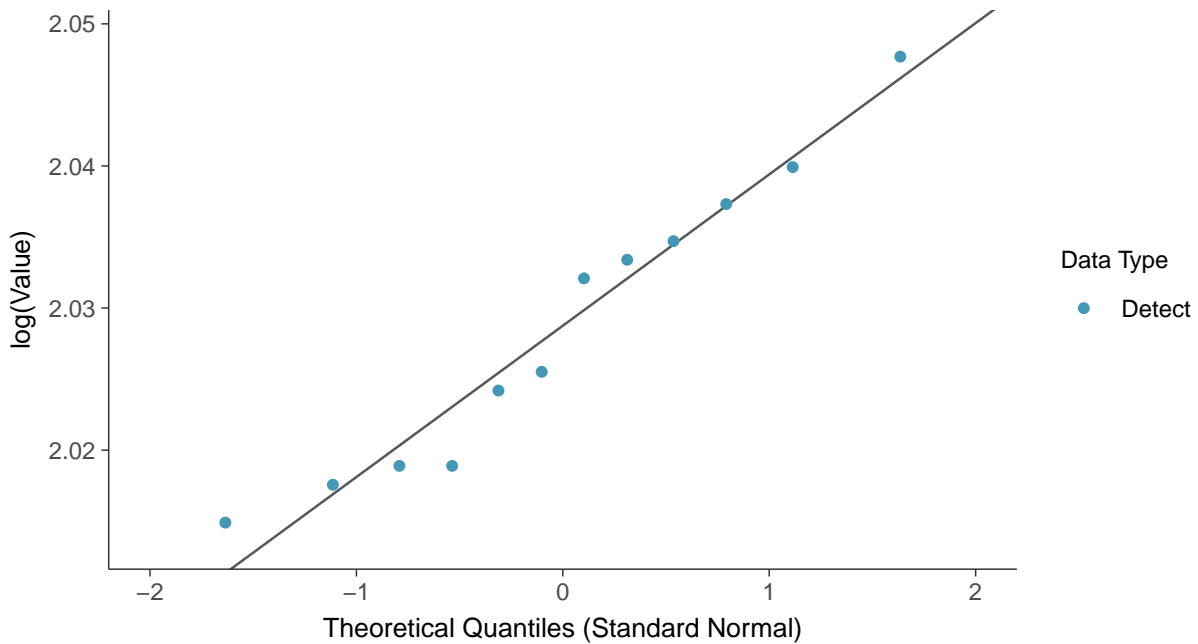
### Normal Q-Q plot

pH (field), MW-32 (su)



### Lognormal Q-Q plot

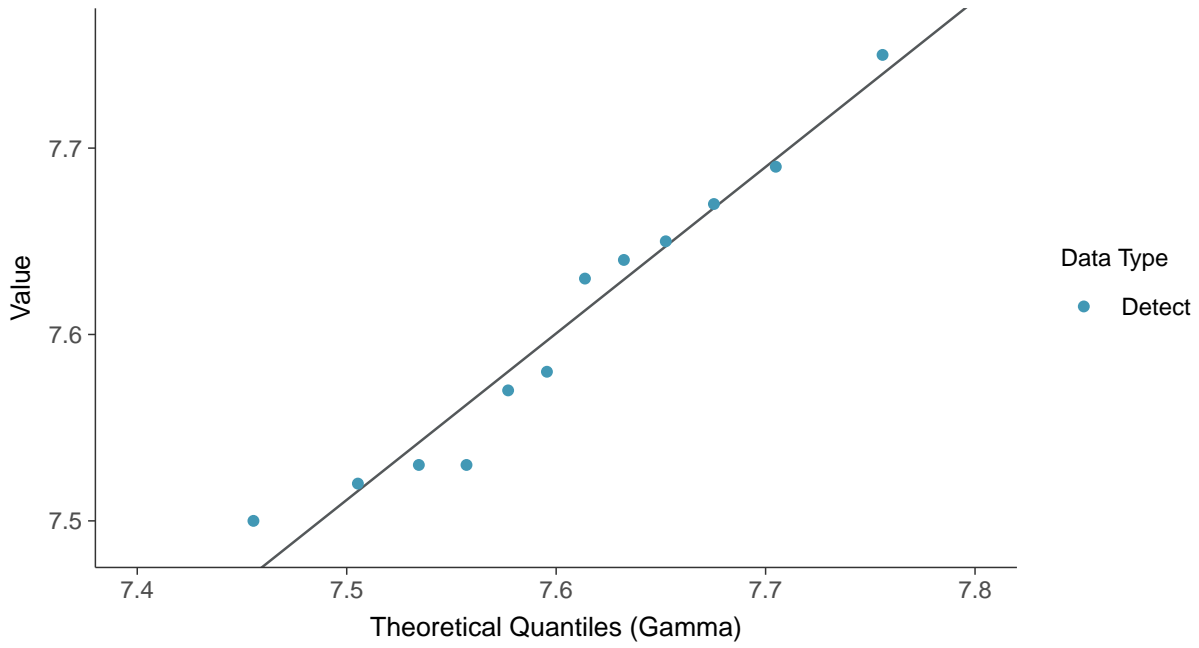
pH (field), MW-32 (su)





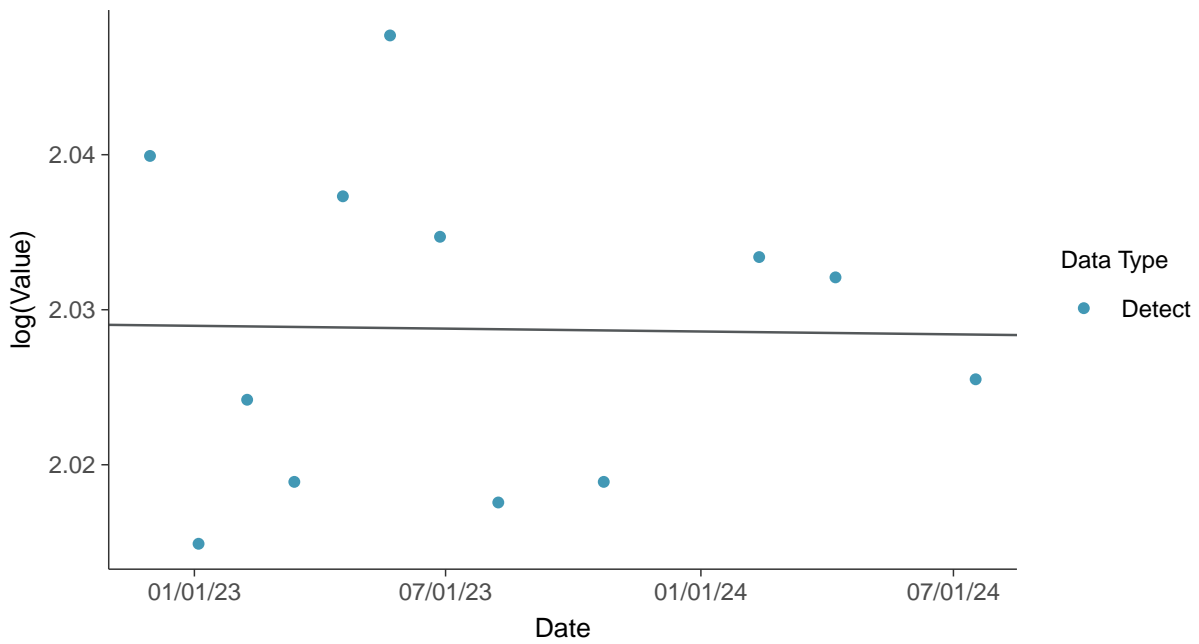
### Gamma Q-Q plot

pH (field), MW-32 (su)



### Trend Regression: Lognormal MLE

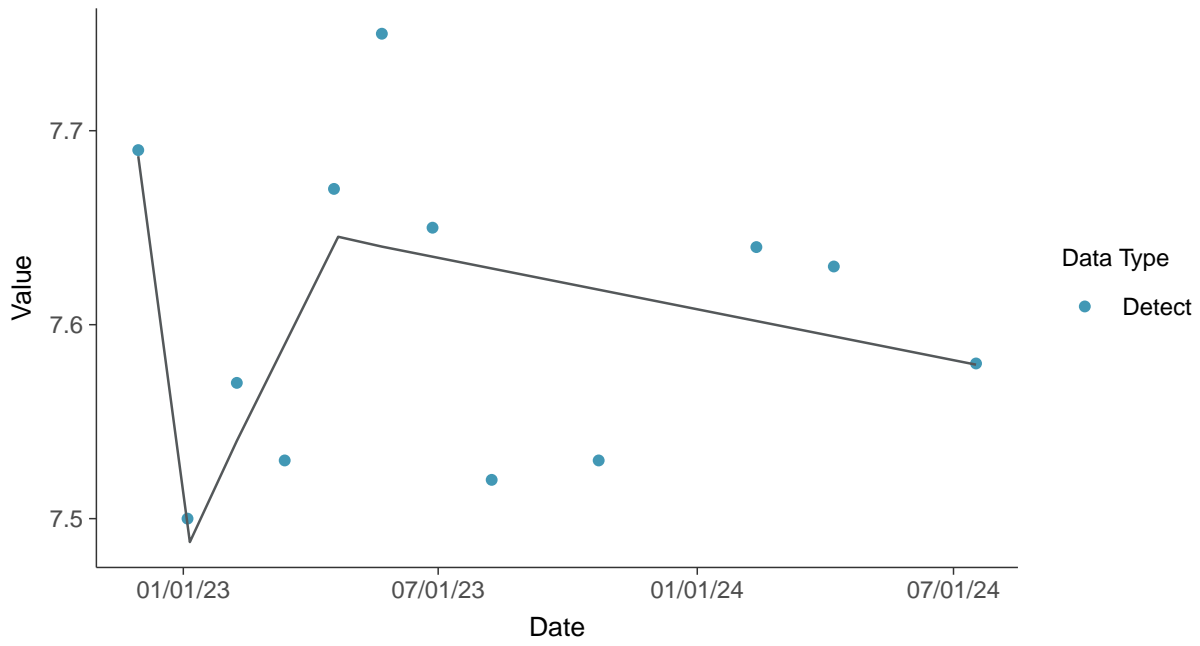
pH (field), MW-32 (su)





### Trend Regression: Piecewise Linear-Linear-Linear

pH (field), MW-32 (su)



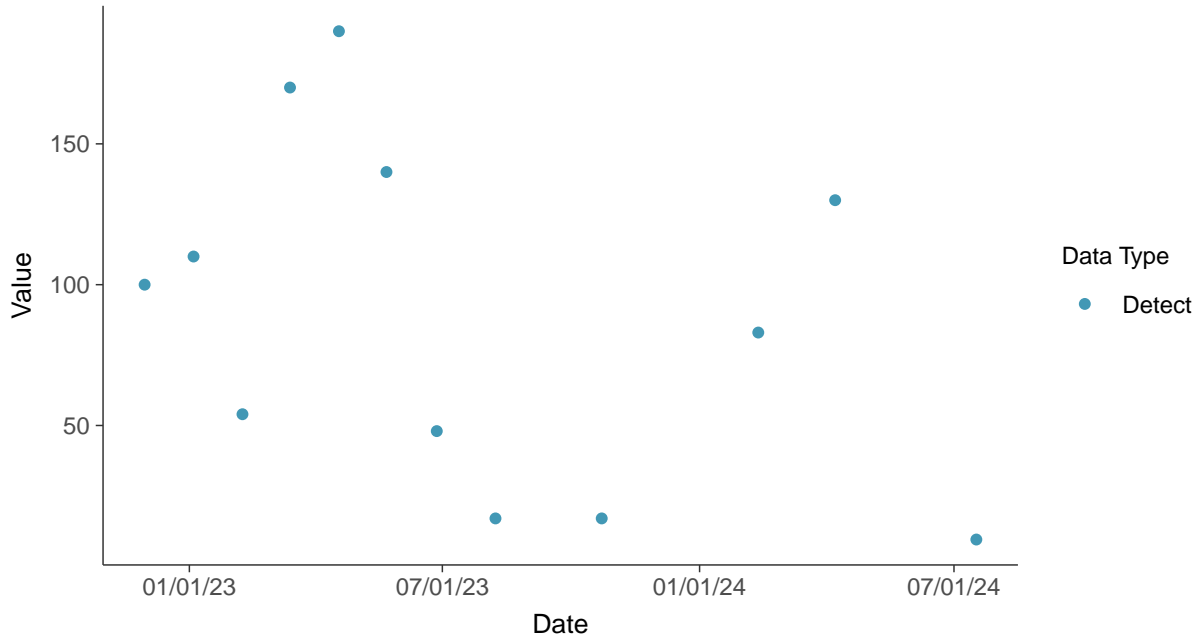


### Appendix III: Sulfate (as SO<sub>4</sub>), MW-32

ID: 42\_1\_4\_124

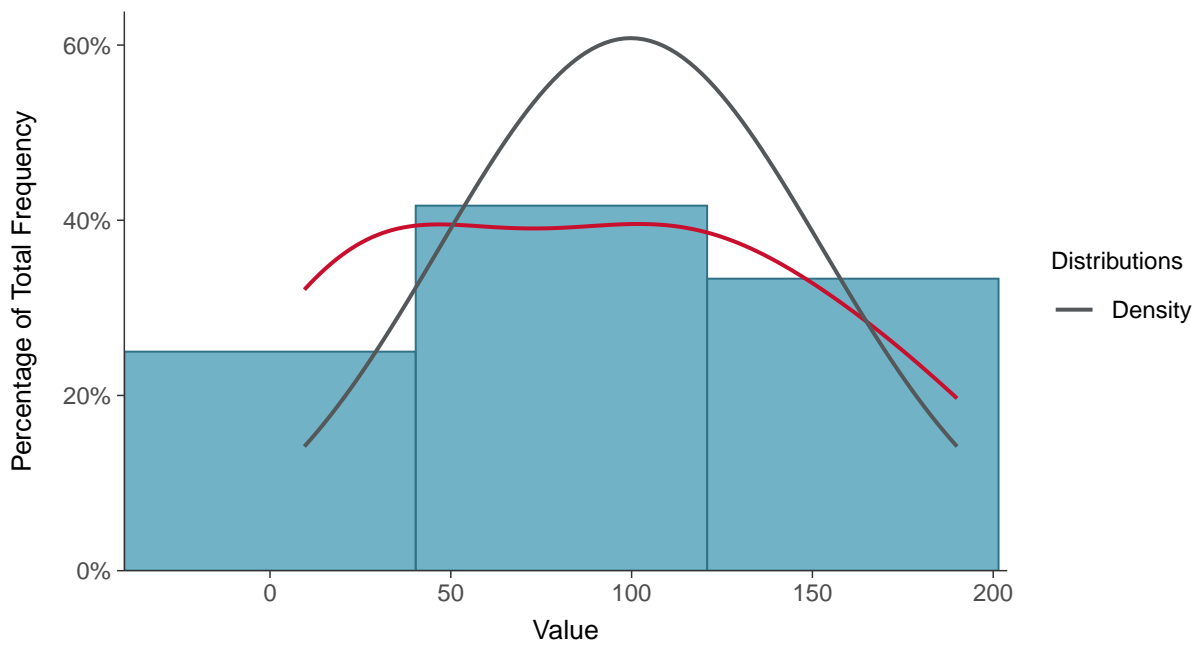
#### Scatter Plot

Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)



#### Histogram

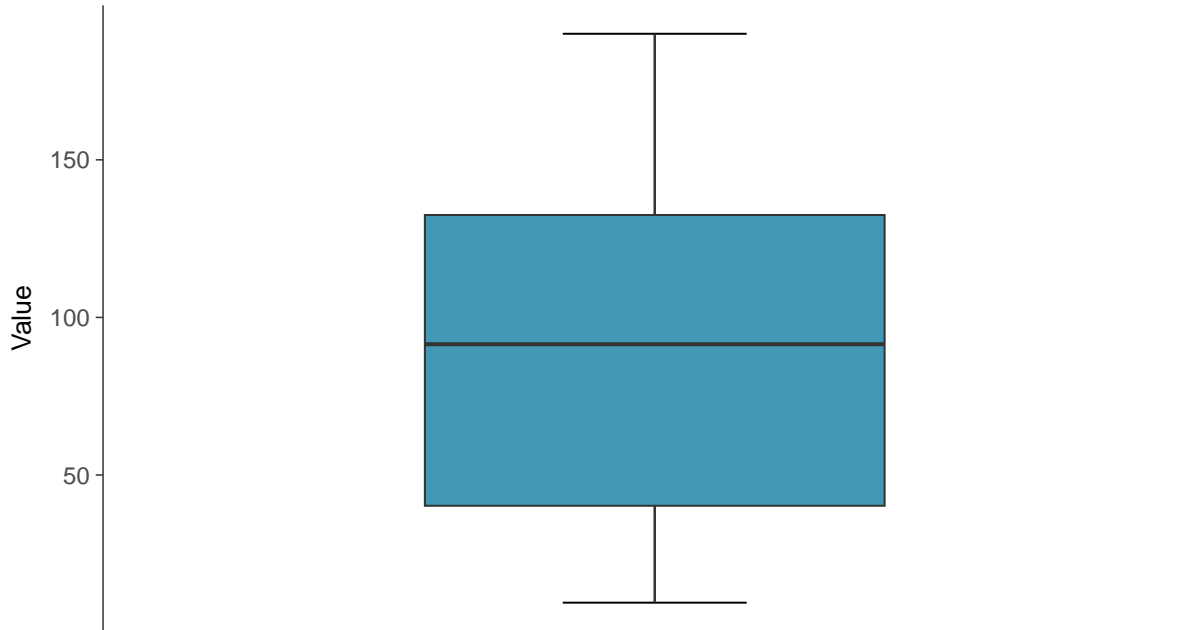
Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)





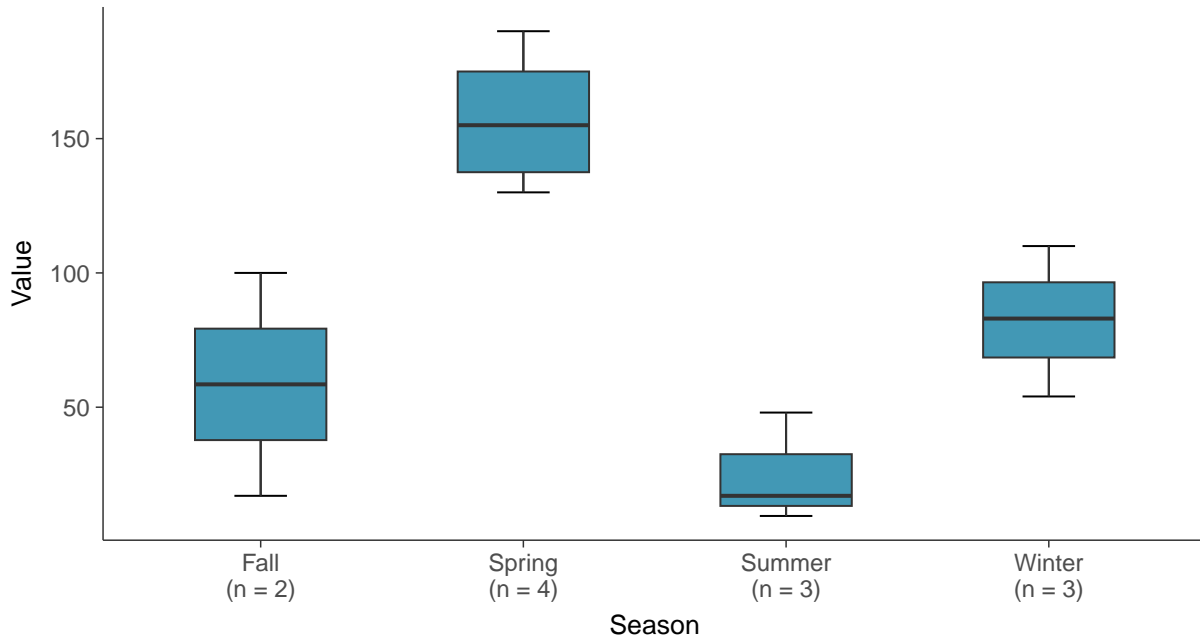
### Boxplot

Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)



### Boxplot by Season

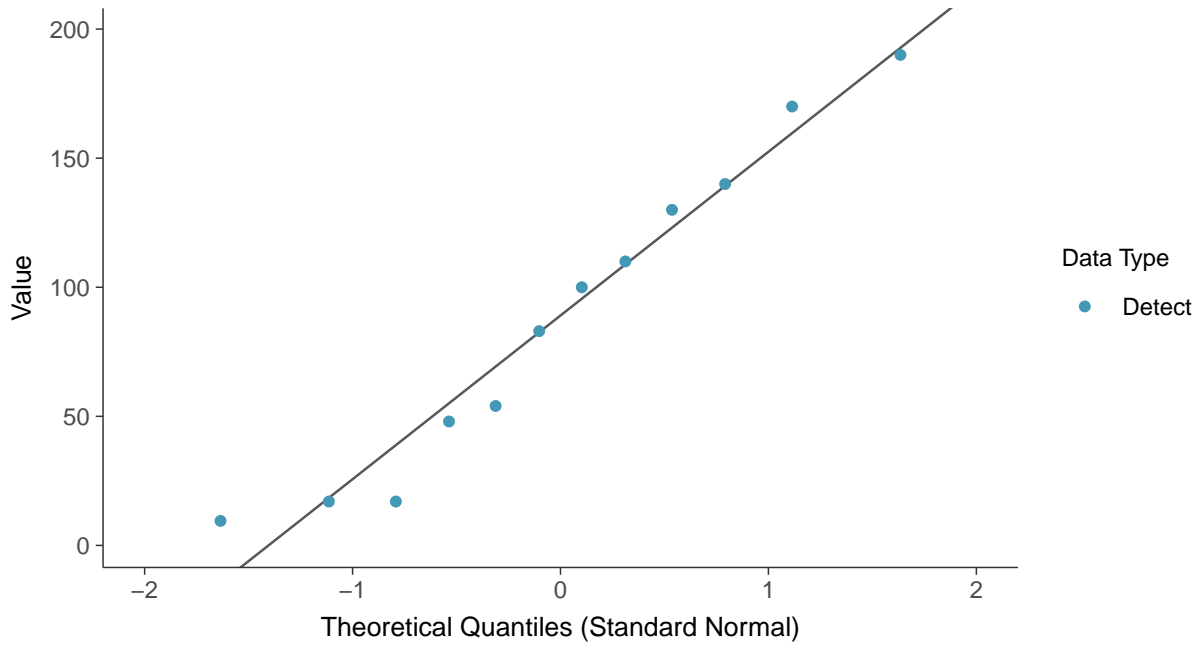
Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)





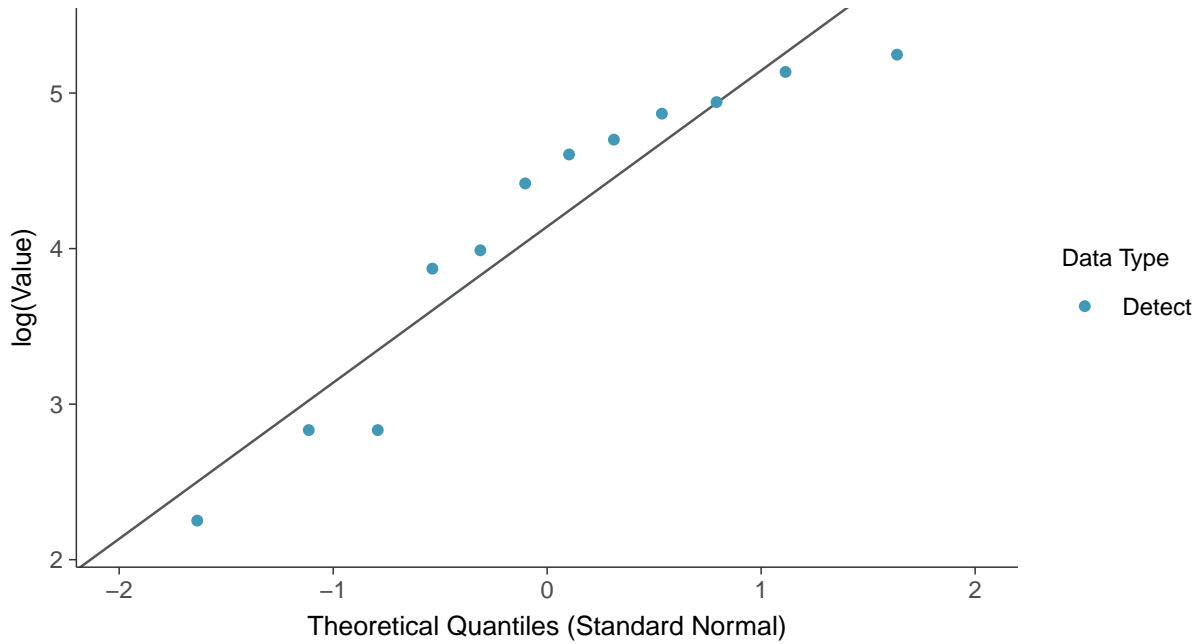
### Normal Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)



### Lognormal Q-Q plot

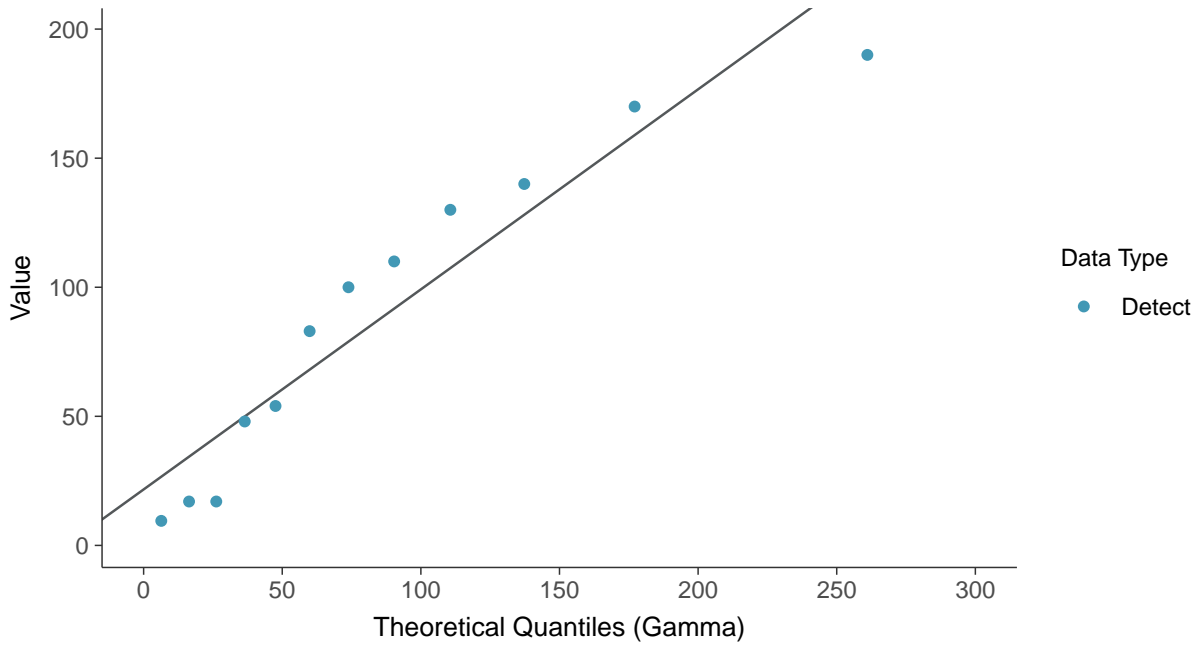
Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)





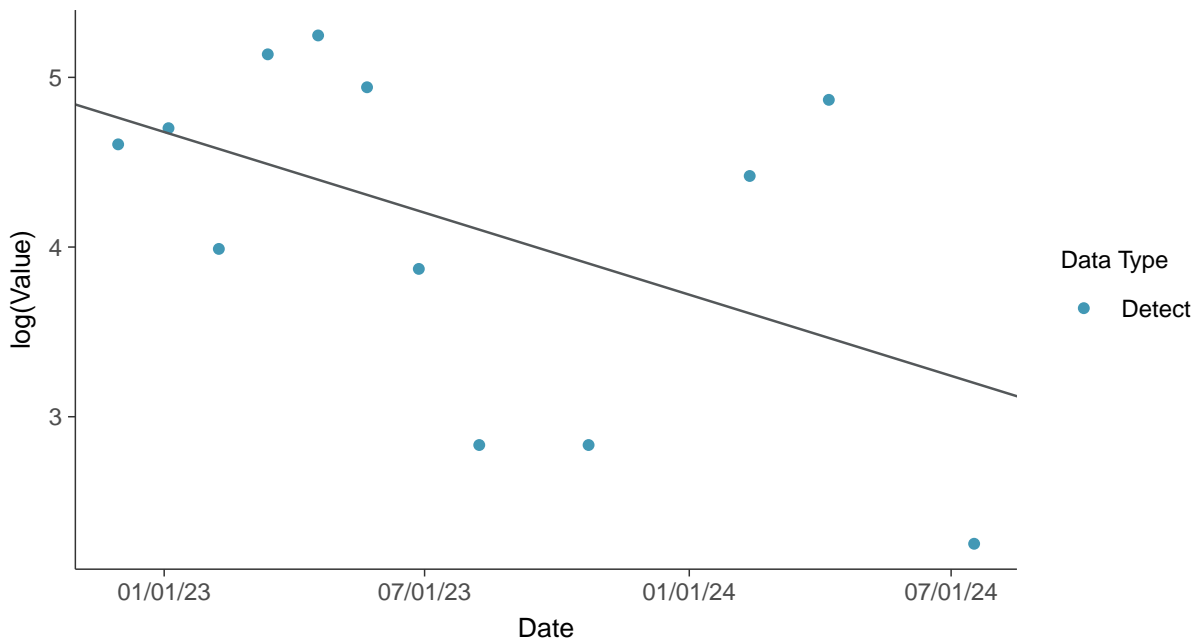
### Gamma Q-Q plot

Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)



### Trend Regression: Lognormal MLE

Sulfate (as SO<sub>4</sub>), MW-32 (mg/L)

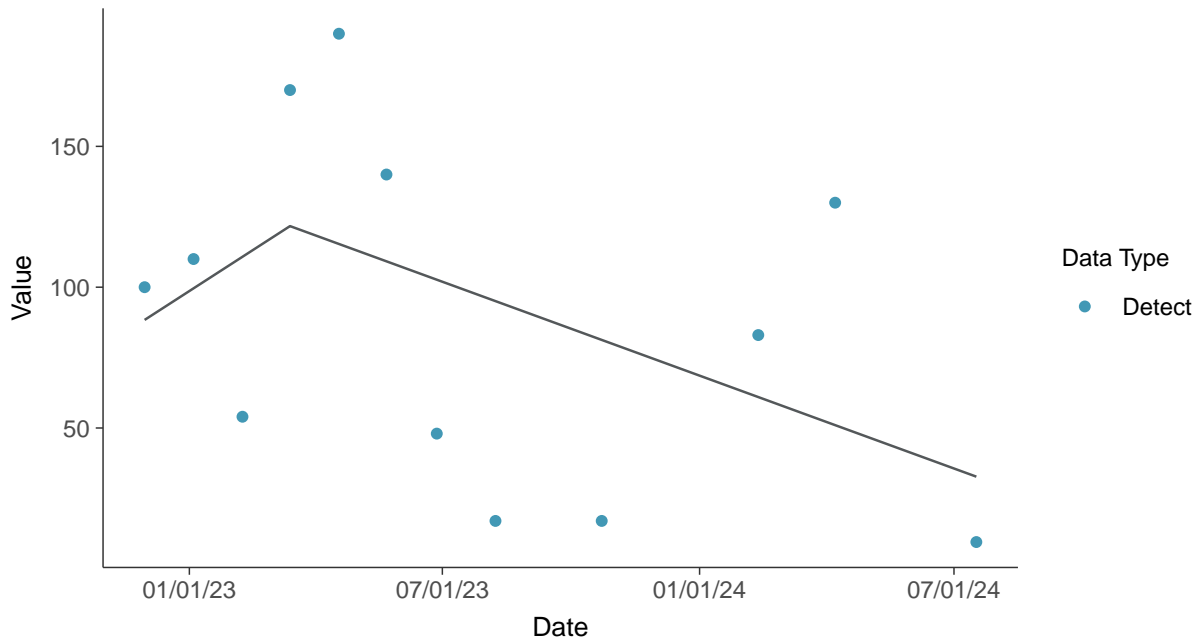






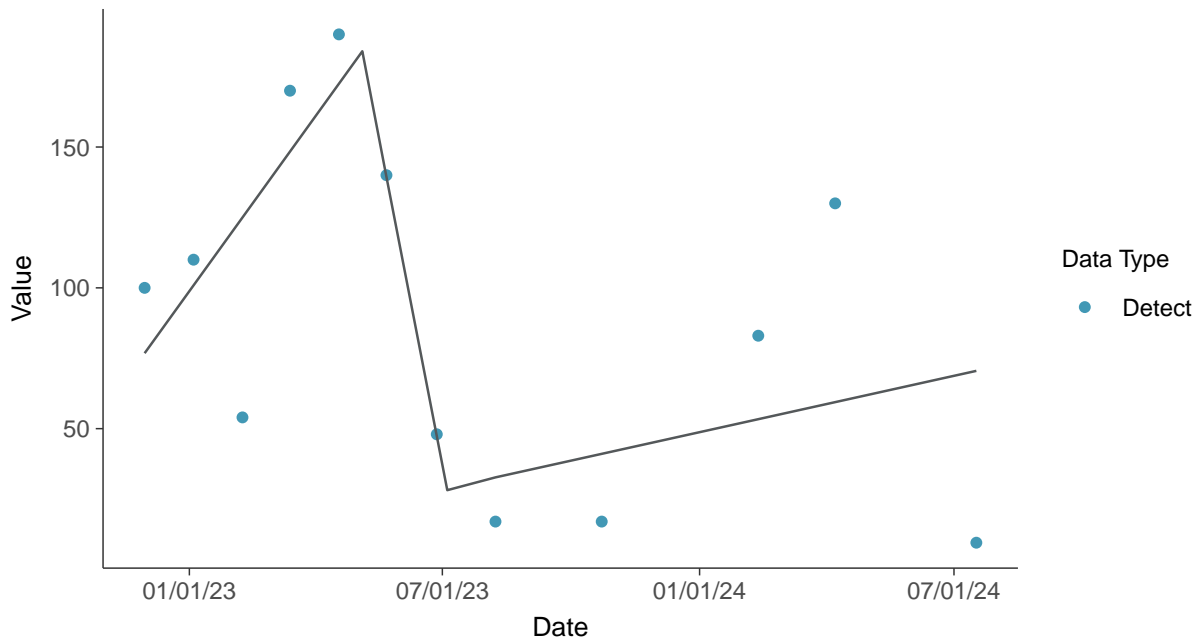
### Trend Regression: Piecewise Linear-Linear

Sulfate (as SO4), MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Sulfate (as SO4), MW-32 (mg/L)



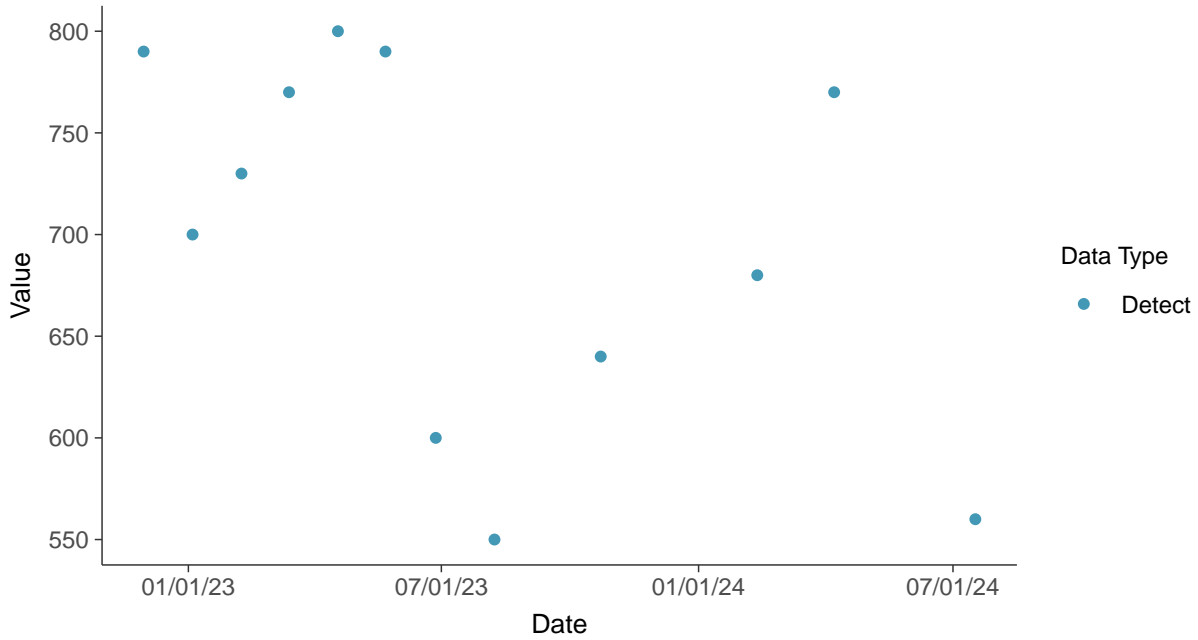


### Appendix III: Total Dissolved Solids, MW-32

ID: 42\_1\_4\_126

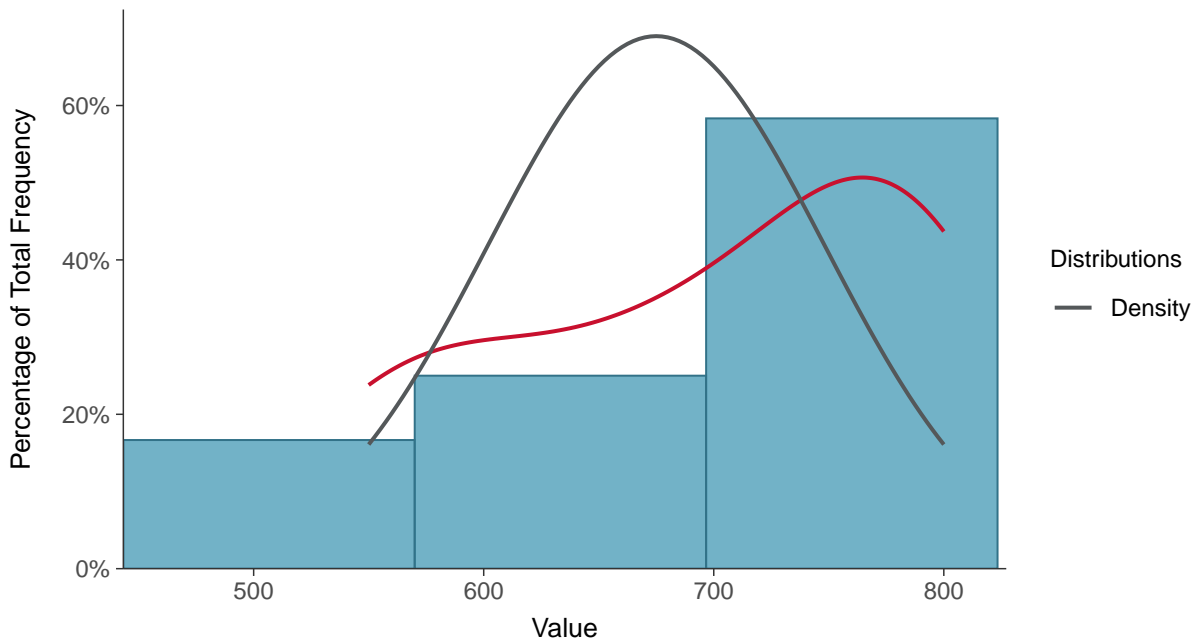
#### Scatter Plot

Total Dissolved Solids, MW-32 (mg/L)



#### Histogram

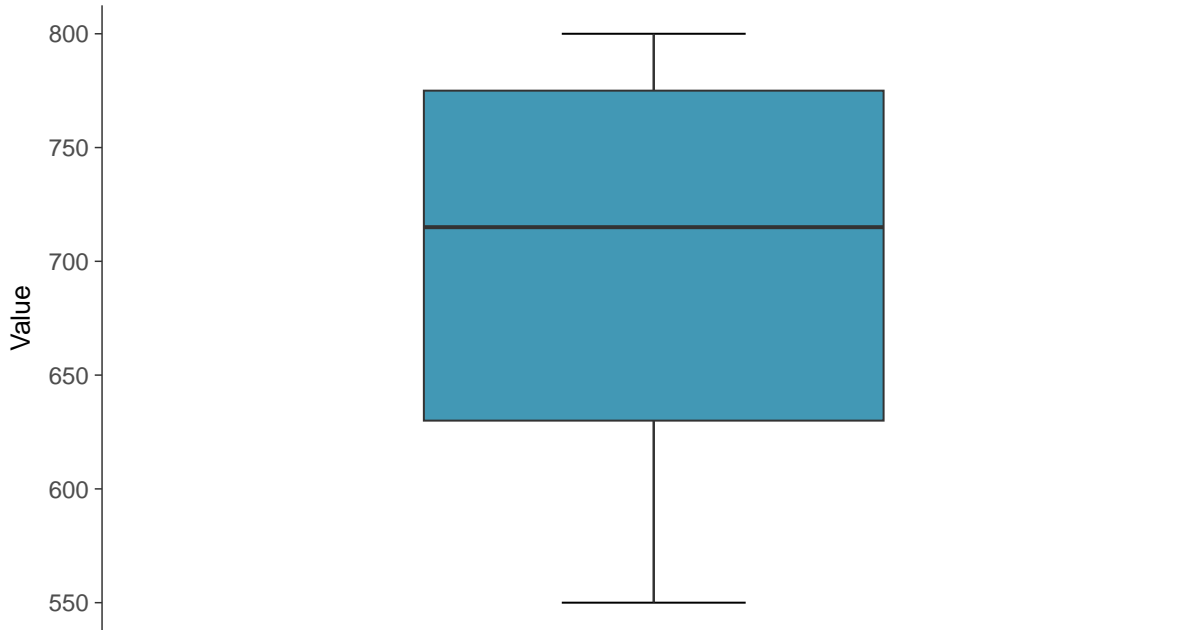
Total Dissolved Solids, MW-32 (mg/L)





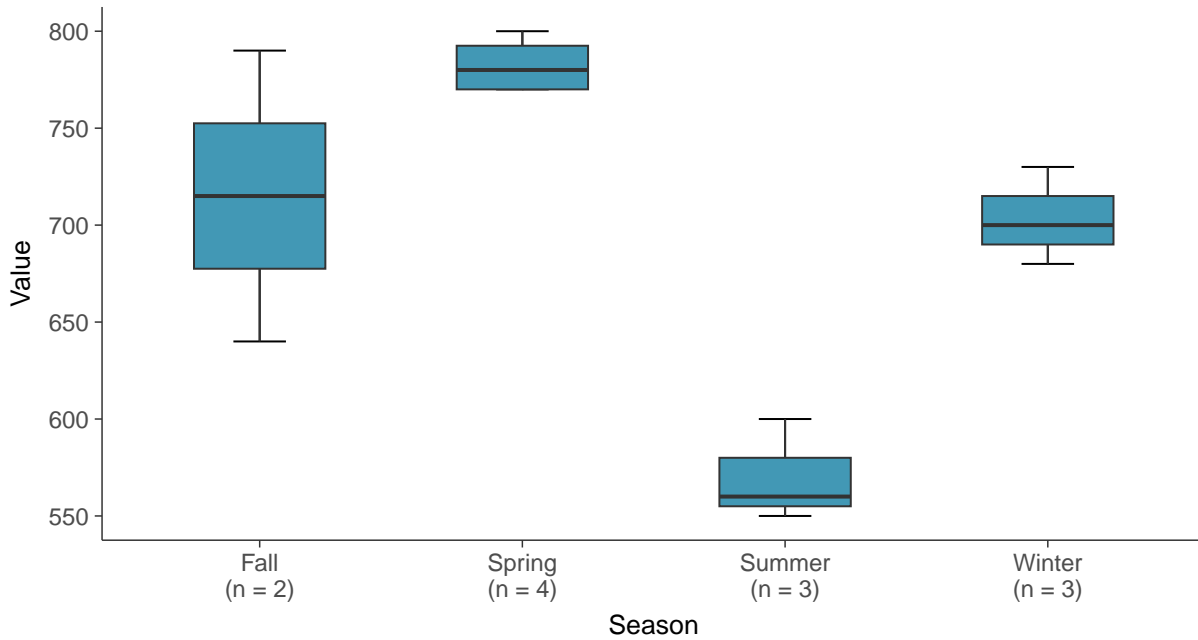
### Boxplot

Total Dissolved Solids, MW-32 (mg/L)



### Boxplot by Season

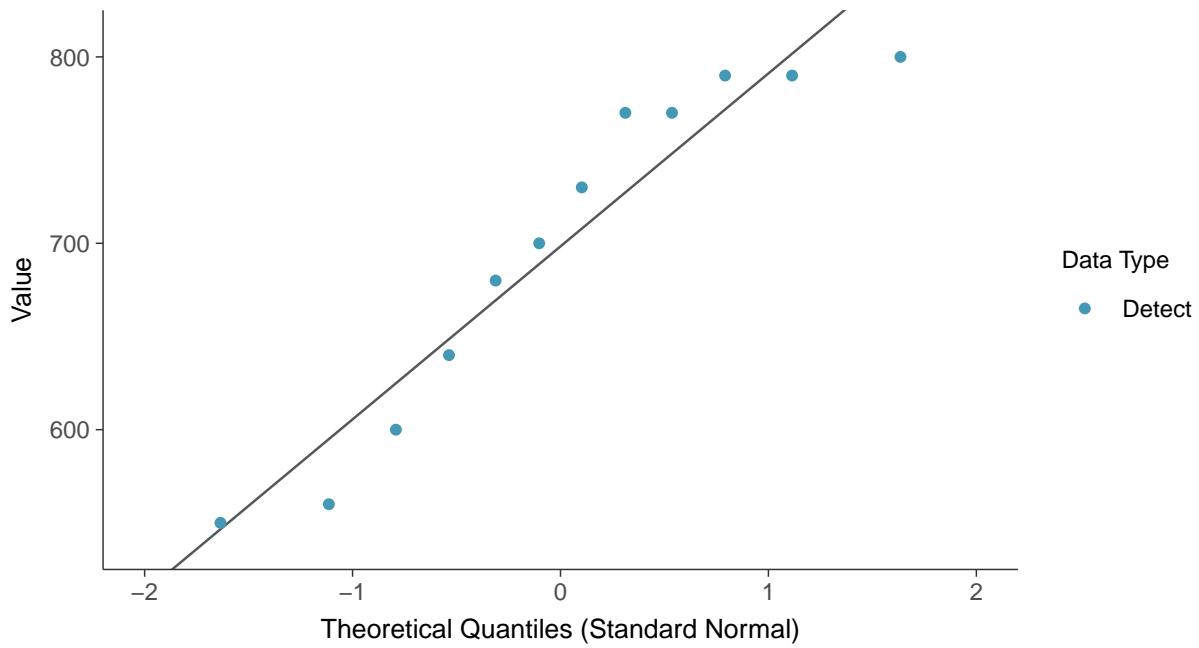
Total Dissolved Solids, MW-32 (mg/L)





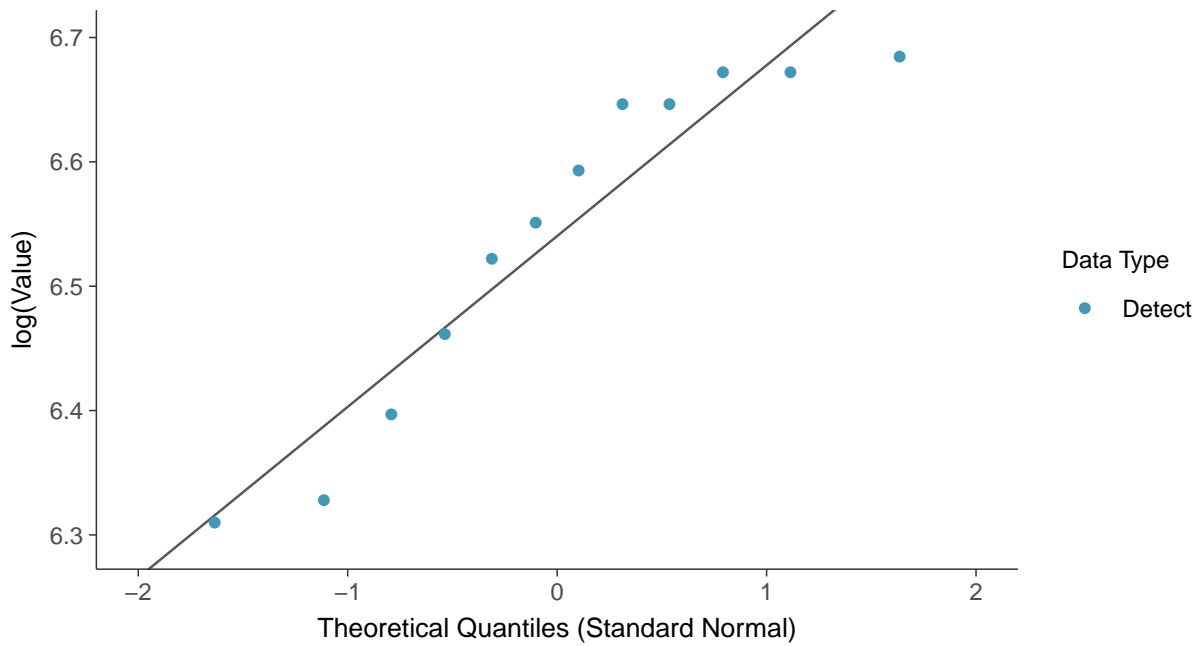
### Normal Q-Q plot

Total Dissolved Solids, MW-32 (mg/L)



### Lognormal Q-Q plot

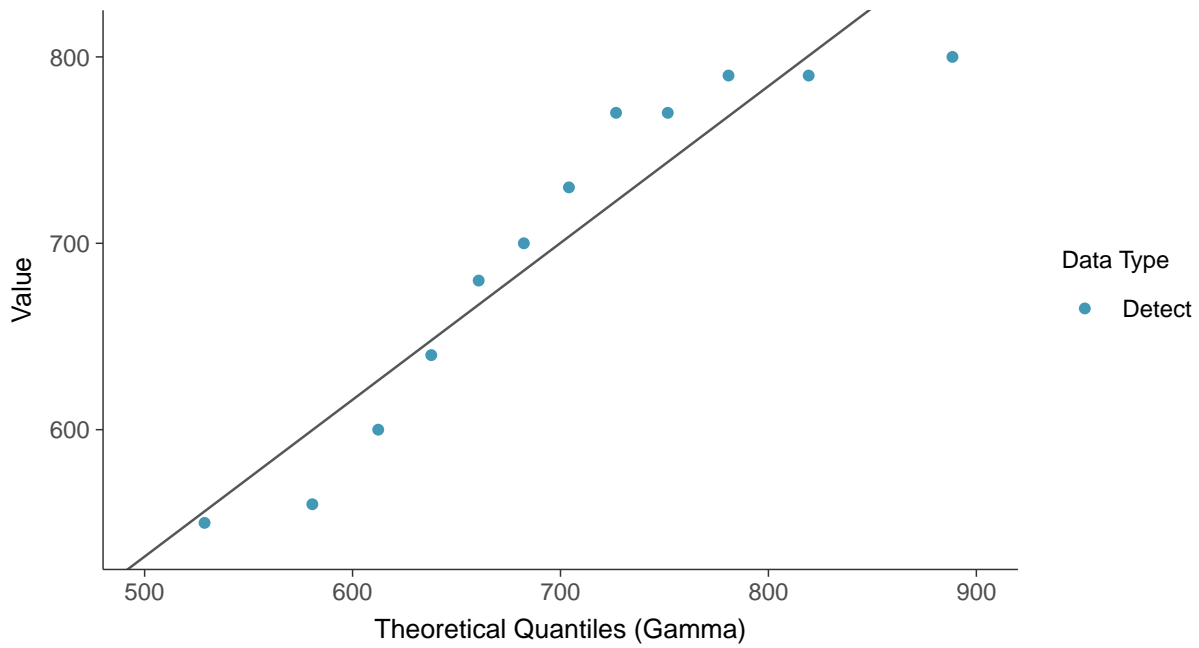
Total Dissolved Solids, MW-32 (mg/L)





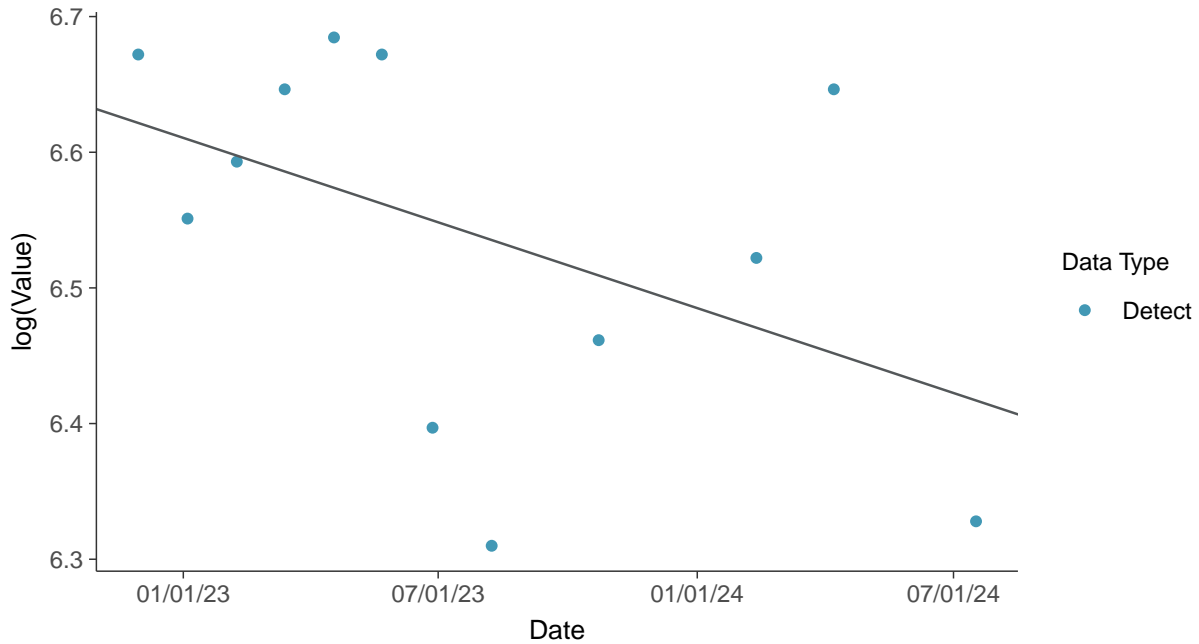
### Gamma Q-Q plot

Total Dissolved Solids, MW-32 (mg/L)



### Trend Regression: Lognormal MLE

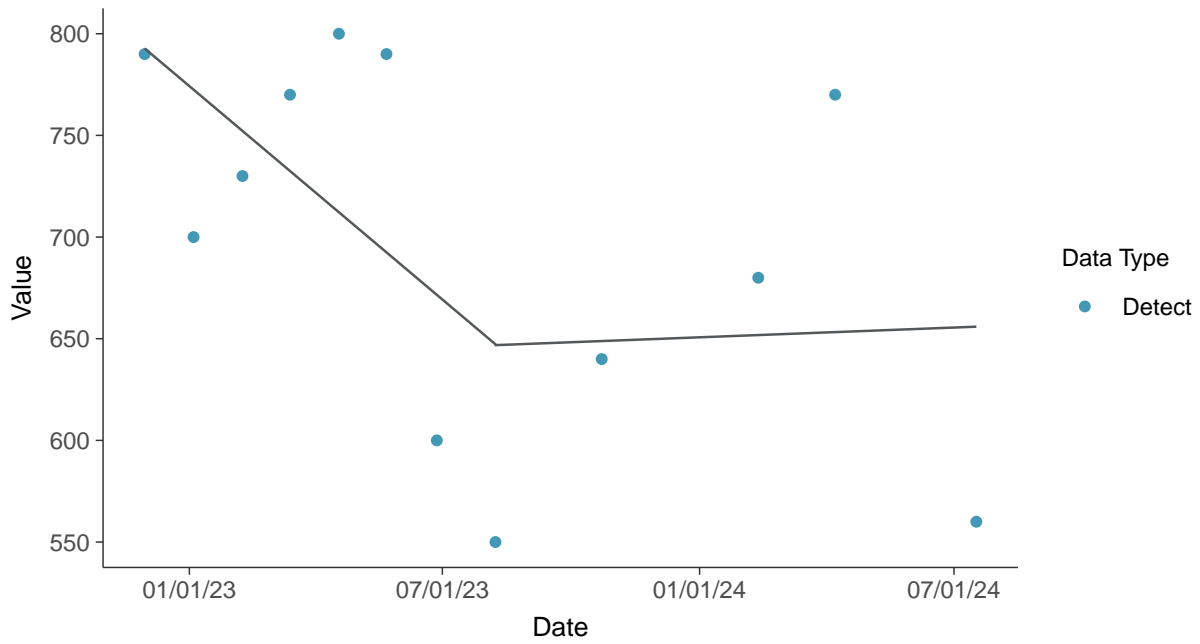
Total Dissolved Solids, MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-32 (mg/L)



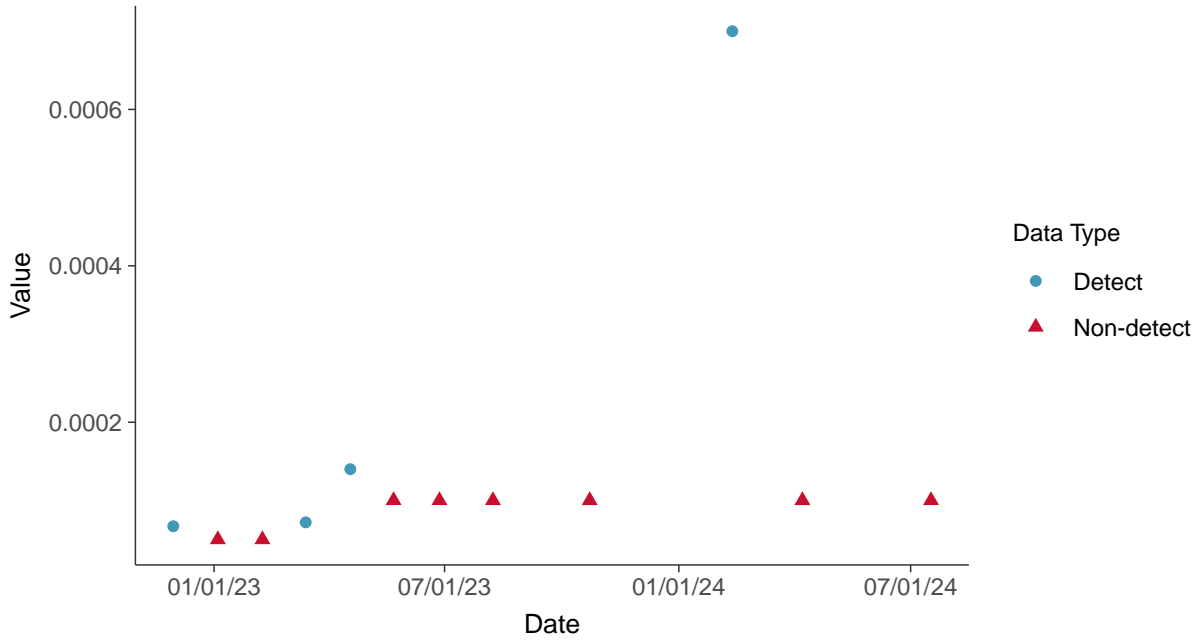


### Appendix IV: Antimony, MW-32

ID: 42\_1\_5\_101

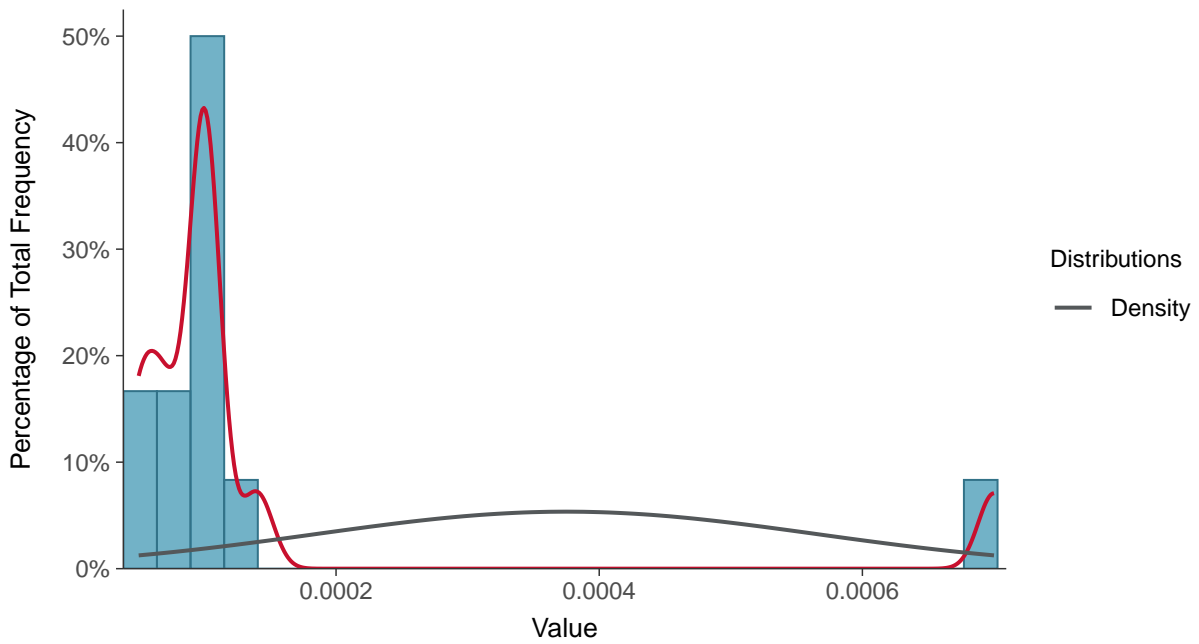
#### Scatter Plot

Antimony, MW-32 (mg/L)



#### Histogram

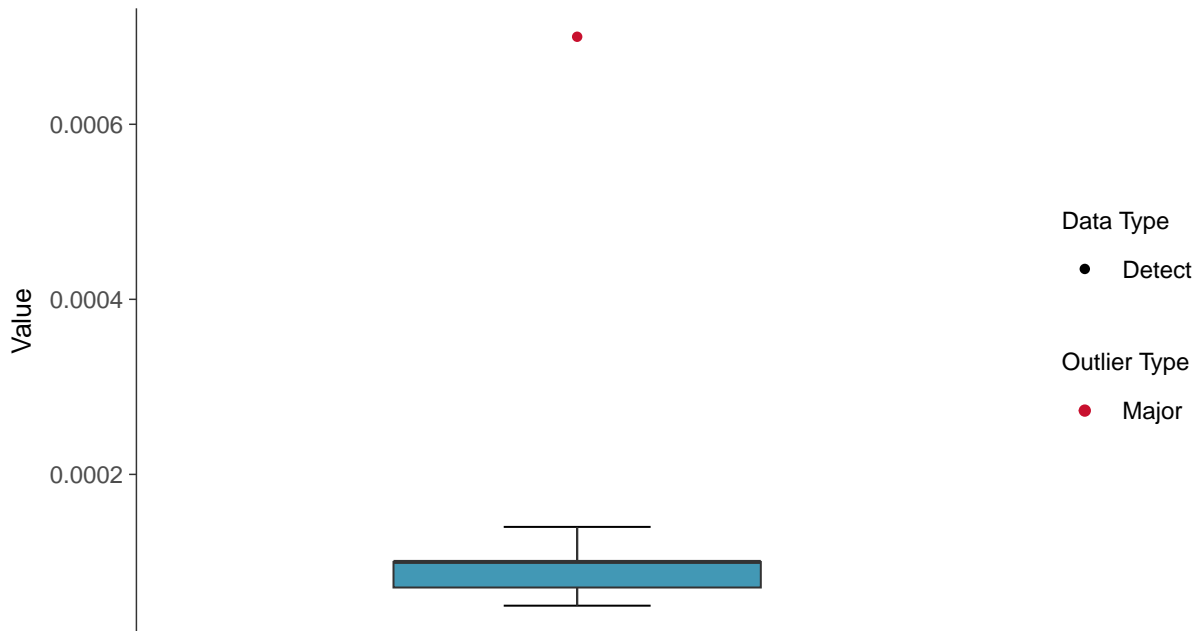
Antimony, MW-32 (mg/L)





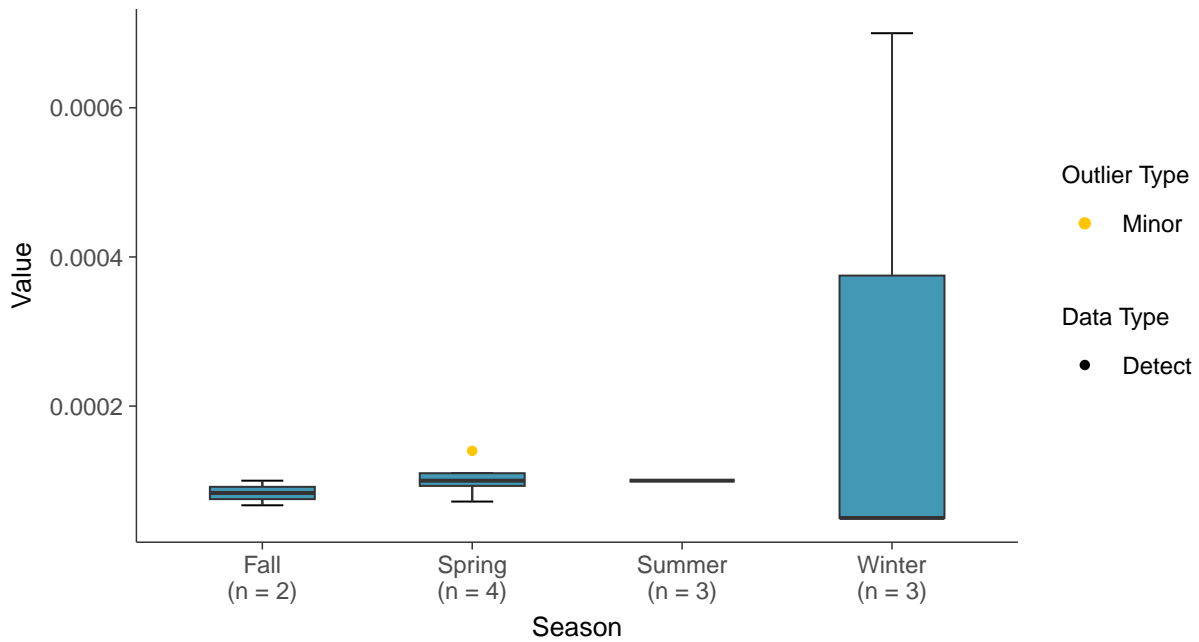
### Boxplot

Antimony, MW-32 (mg/L)



### Boxplot by Season

Antimony, MW-32 (mg/L)

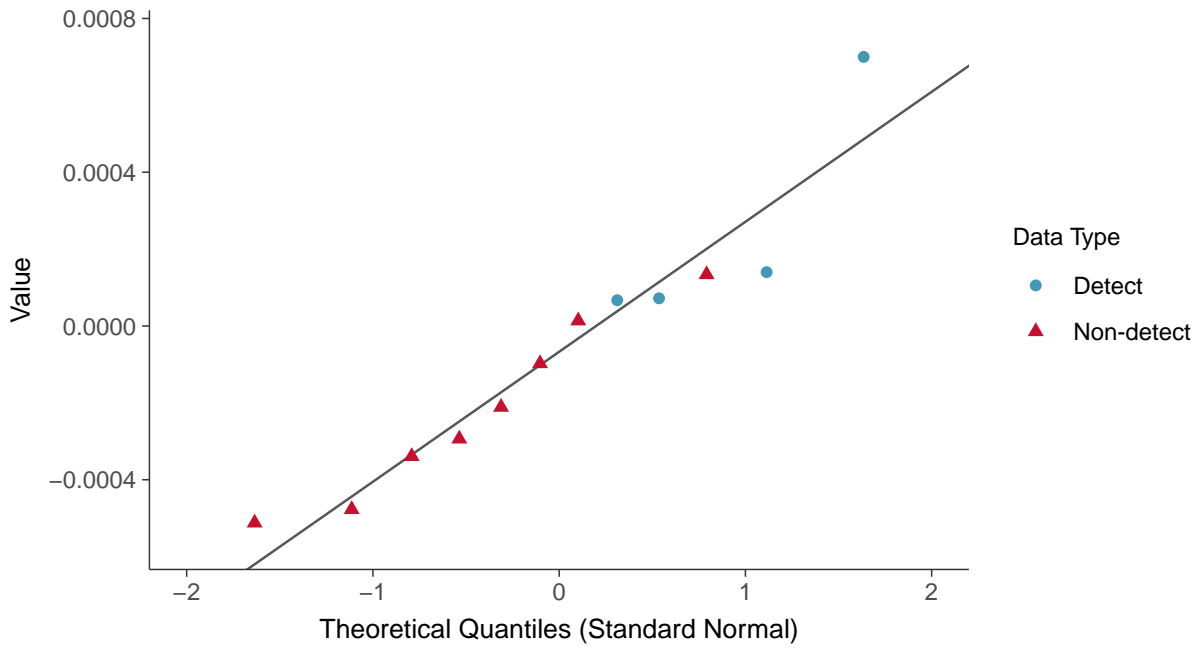






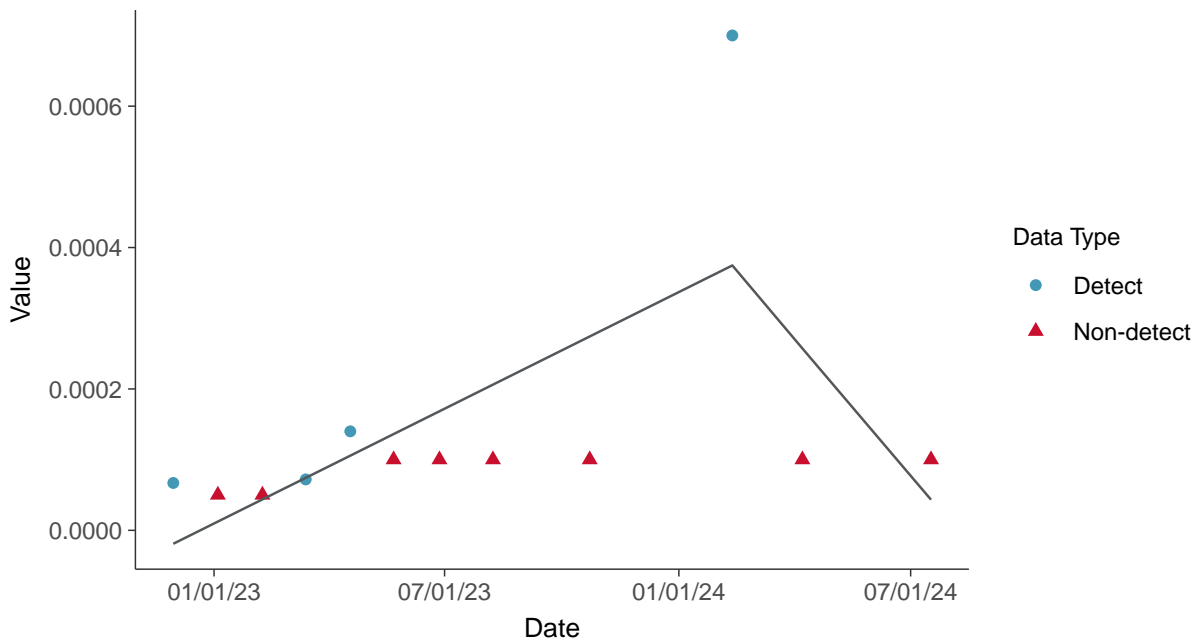
### Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear

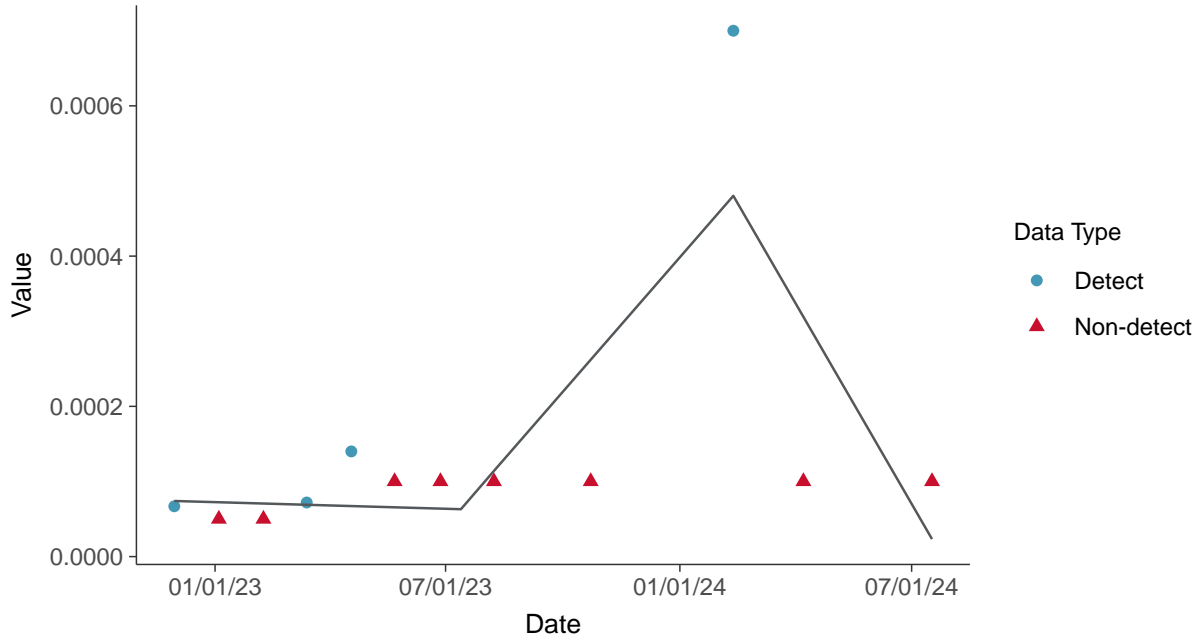
Antimony, MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-32 (mg/L)



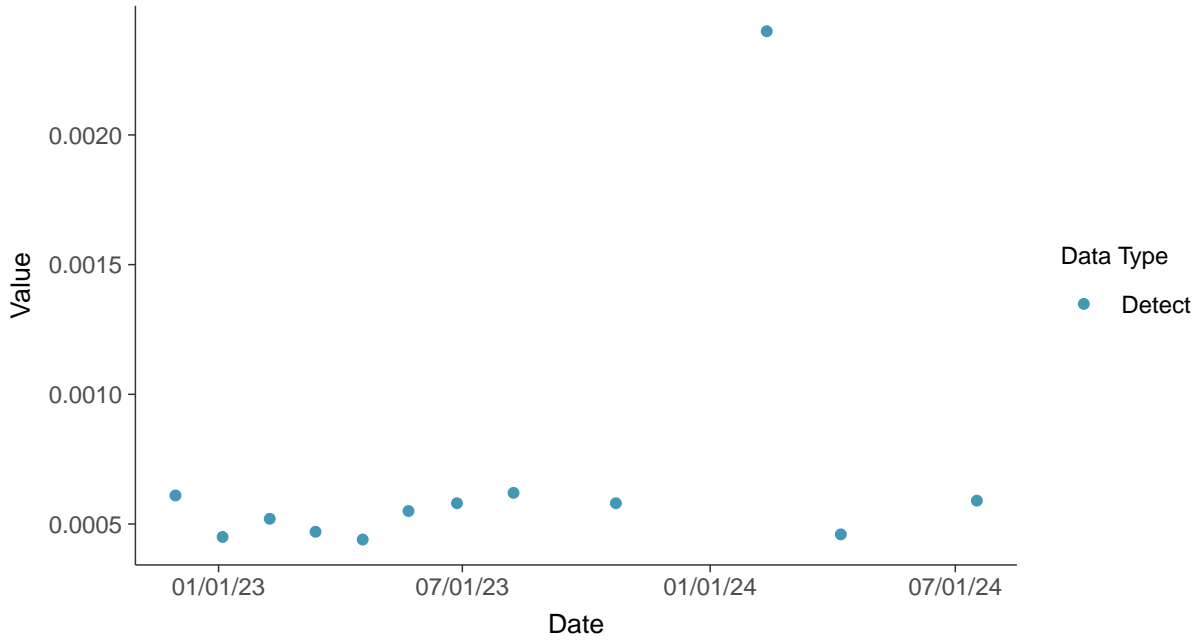


### Appendix IV: Arsenic, MW-32

ID: 42\_1\_5\_102

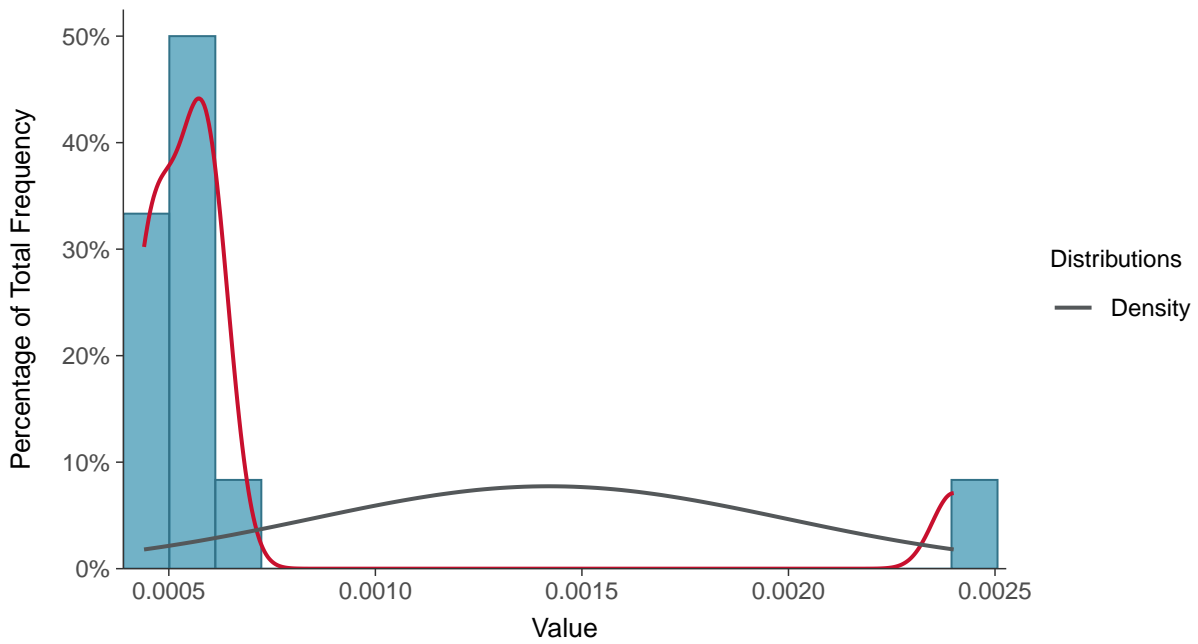
#### Scatter Plot

Arsenic, MW-32 (mg/L)



#### Histogram

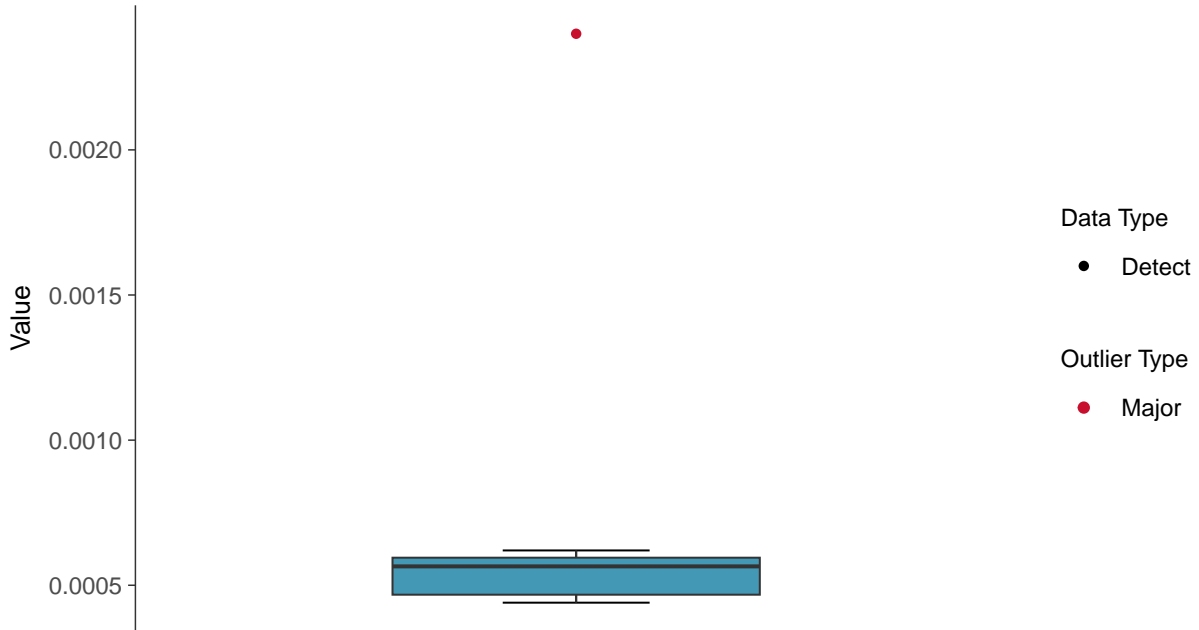
Arsenic, MW-32 (mg/L)





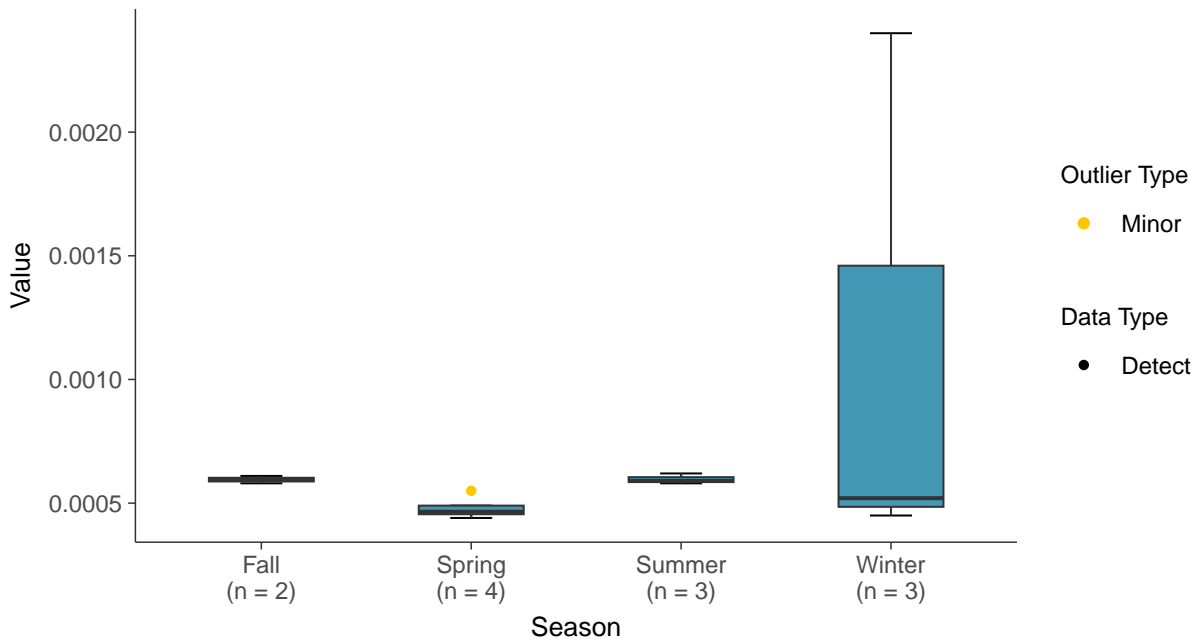
### Boxplot

Arsenic, MW-32 (mg/L)



### Boxplot by Season

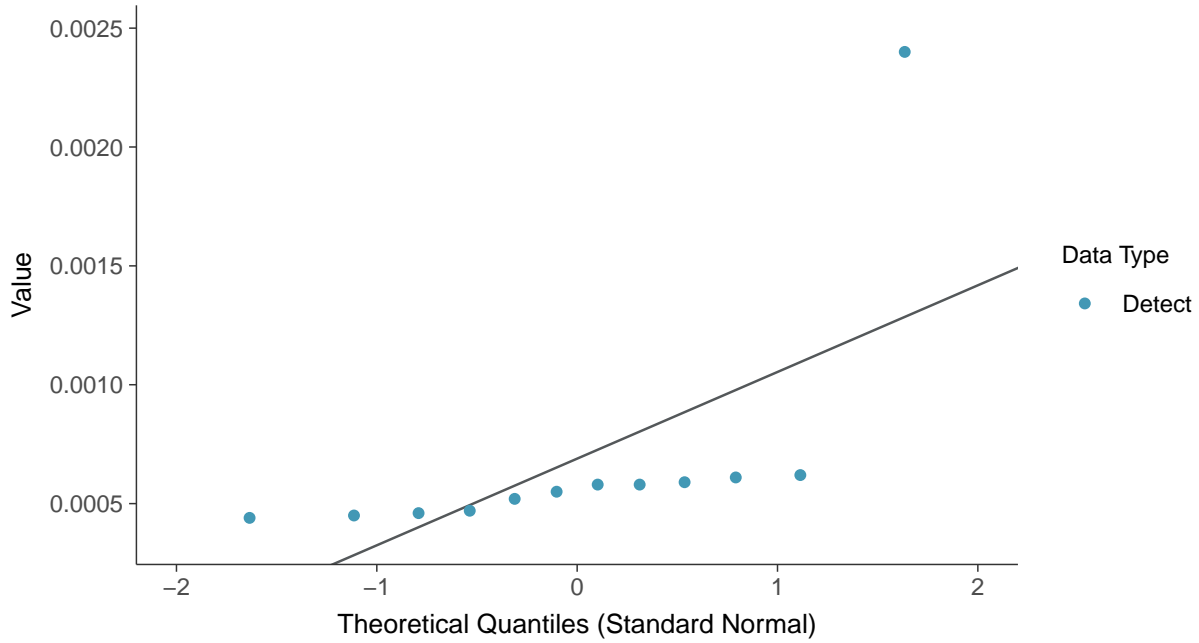
Arsenic, MW-32 (mg/L)





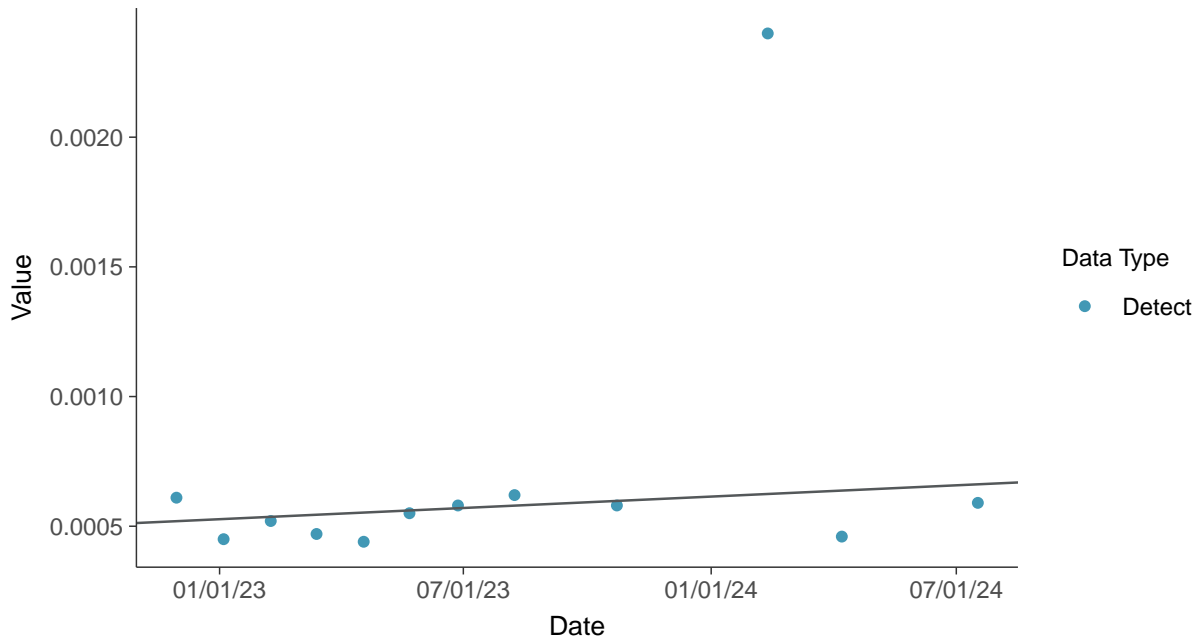
### Normal Q-Q plot

Arsenic, MW-32 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

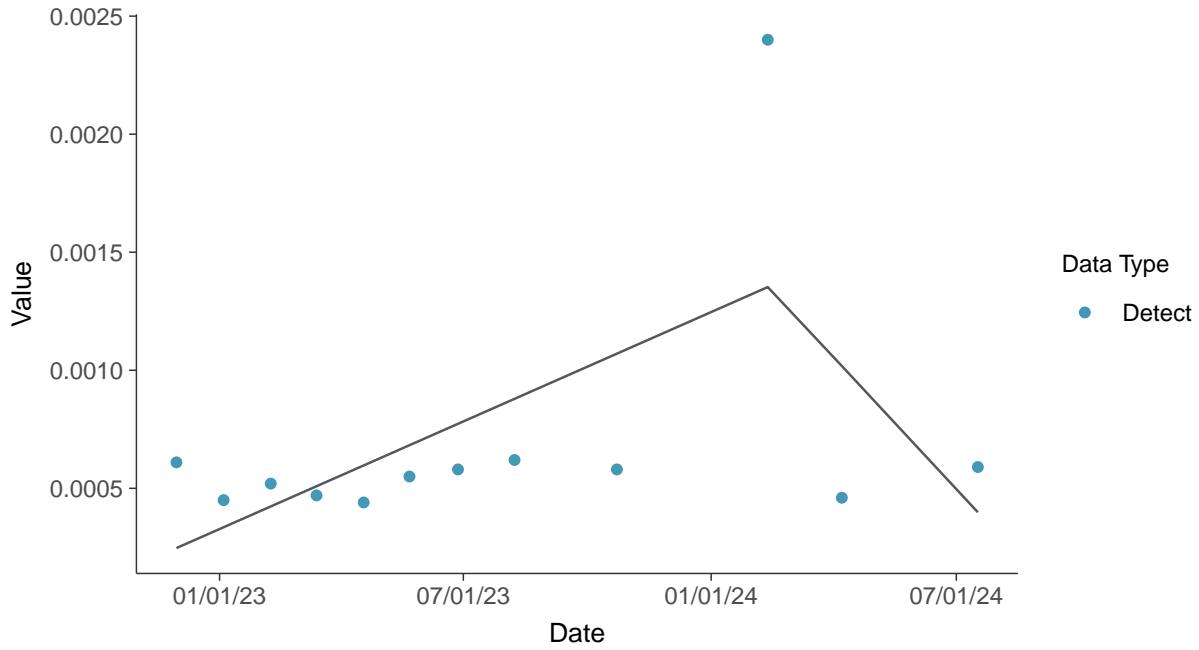
Arsenic, MW-32 (mg/L)





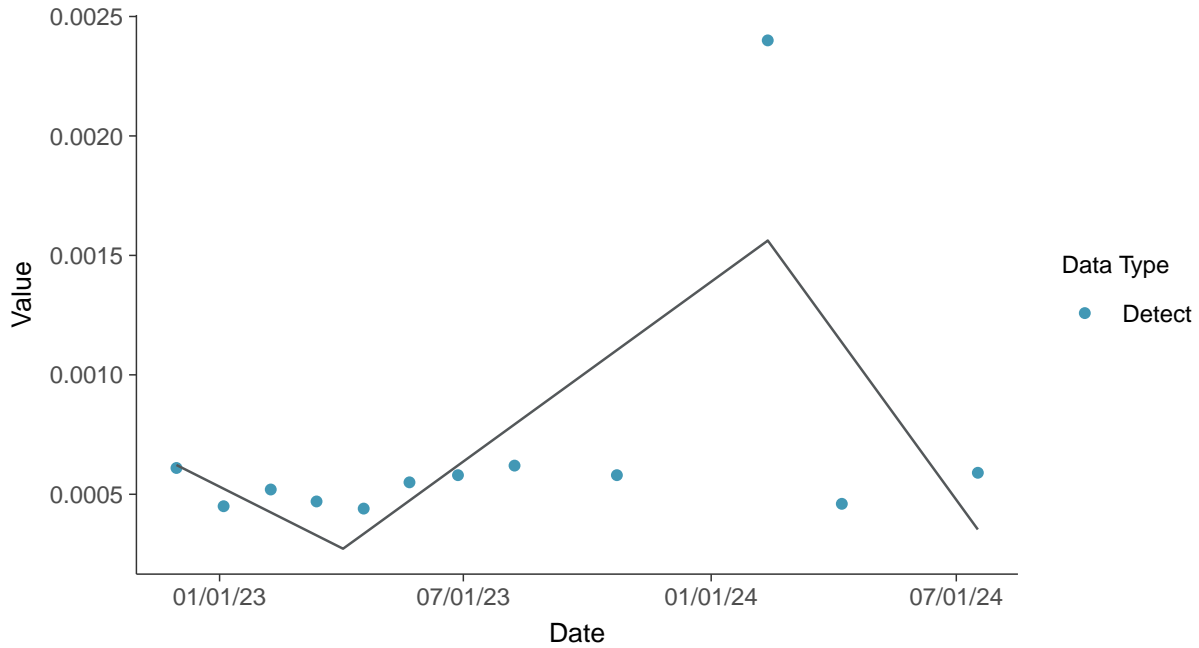
### Trend Regression: Piecewise Linear-Linear

Arsenic, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-32 (mg/L)



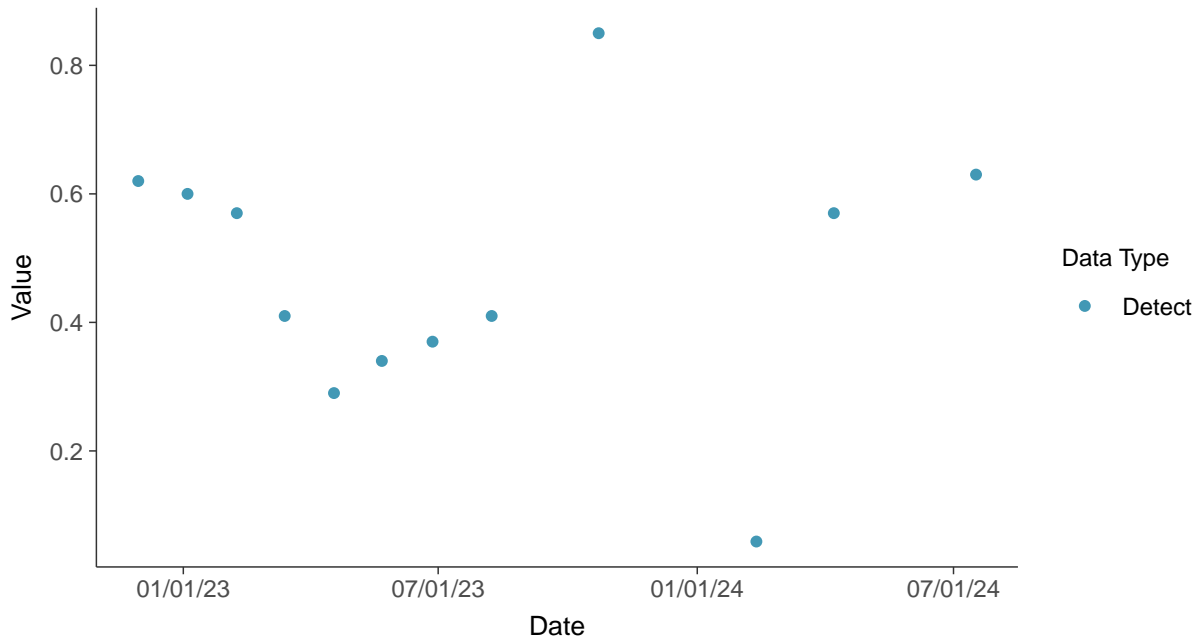


### Appendix IV: Barium, MW-32

ID: 42\_1\_5\_103

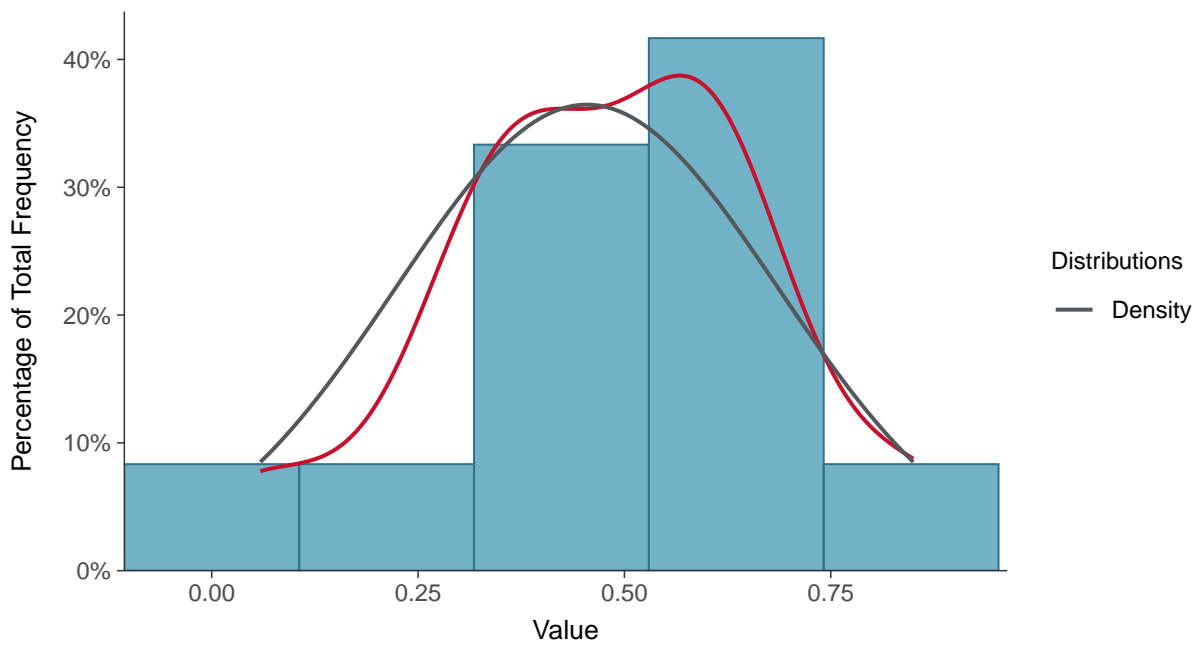
#### Scatter Plot

Barium, MW-32 (mg/L)



#### Histogram

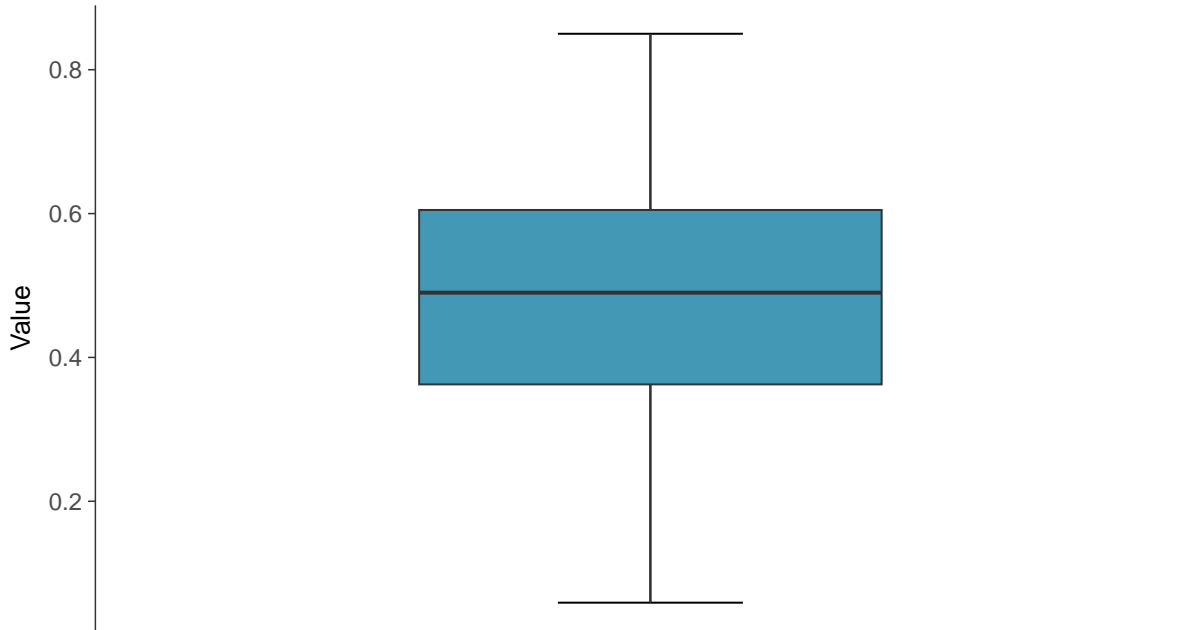
Barium, MW-32 (mg/L)





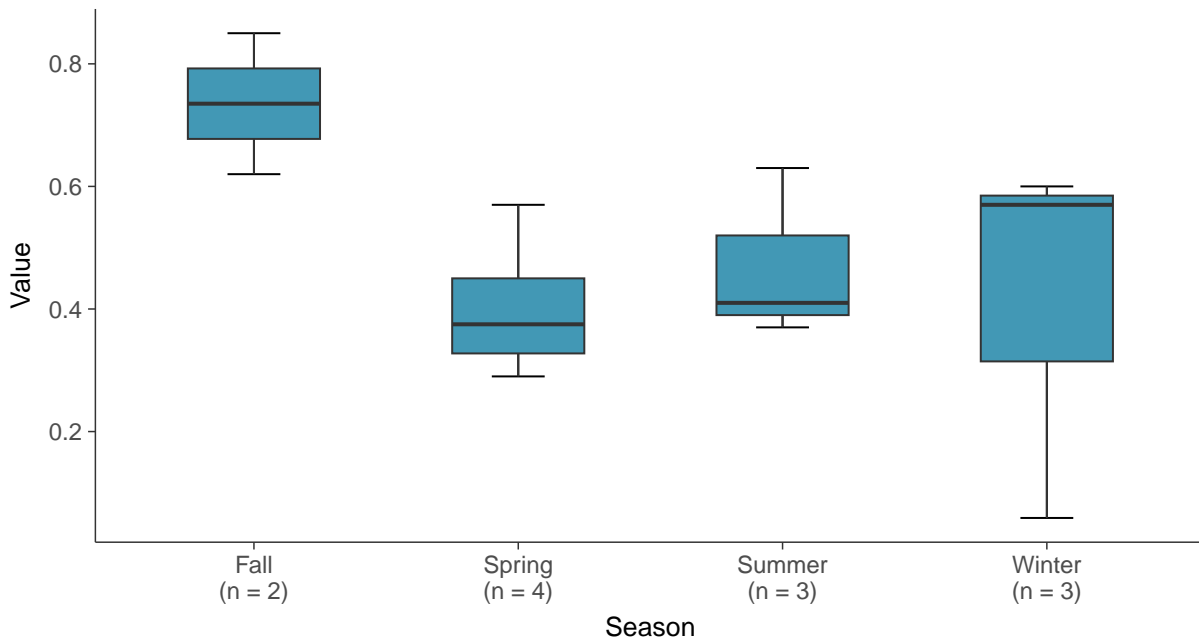
### Boxplot

Barium, MW-32 (mg/L)



### Boxplot by Season

Barium, MW-32 (mg/L)

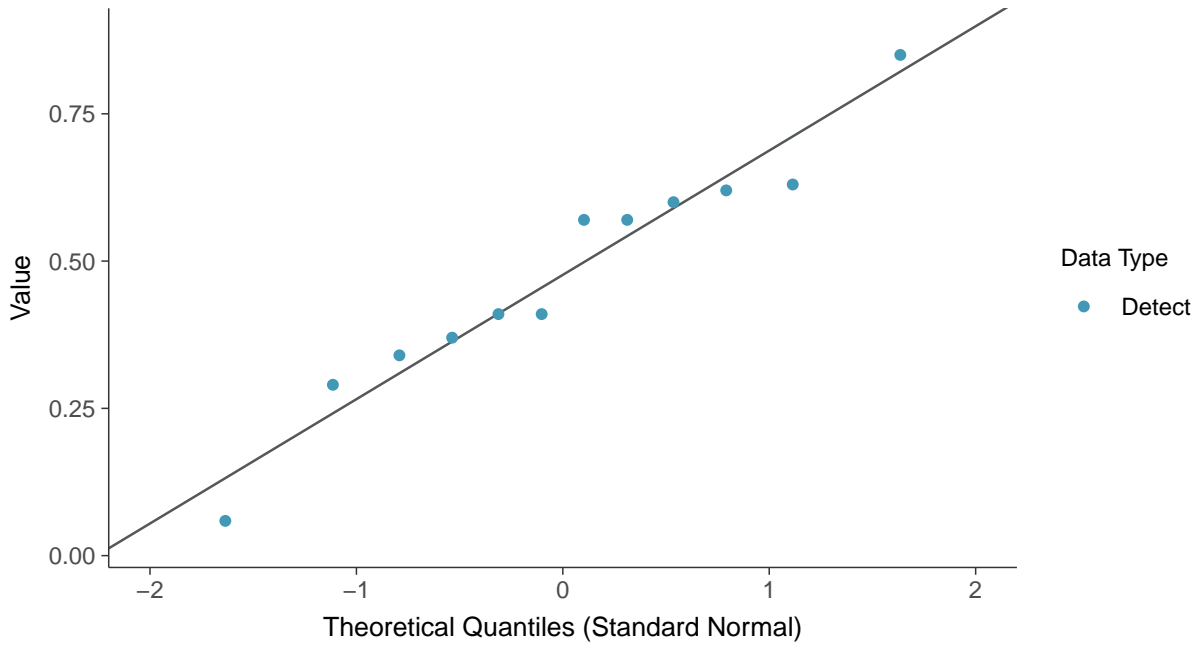






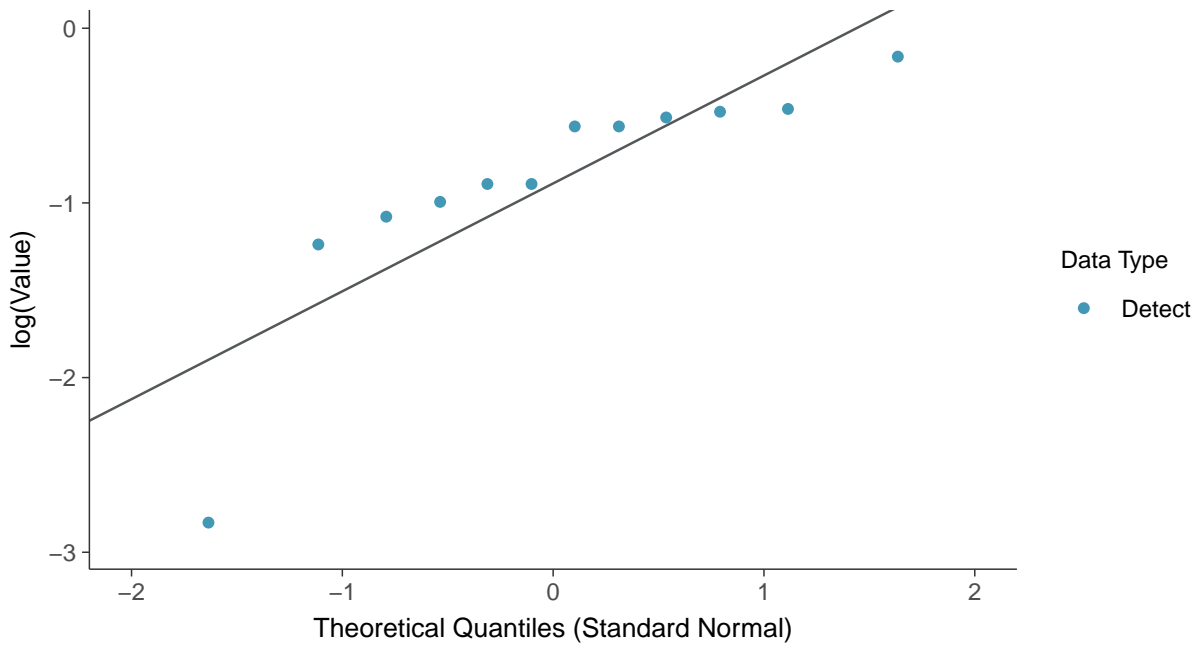
### Normal Q-Q plot

Barium, MW-32 (mg/L)



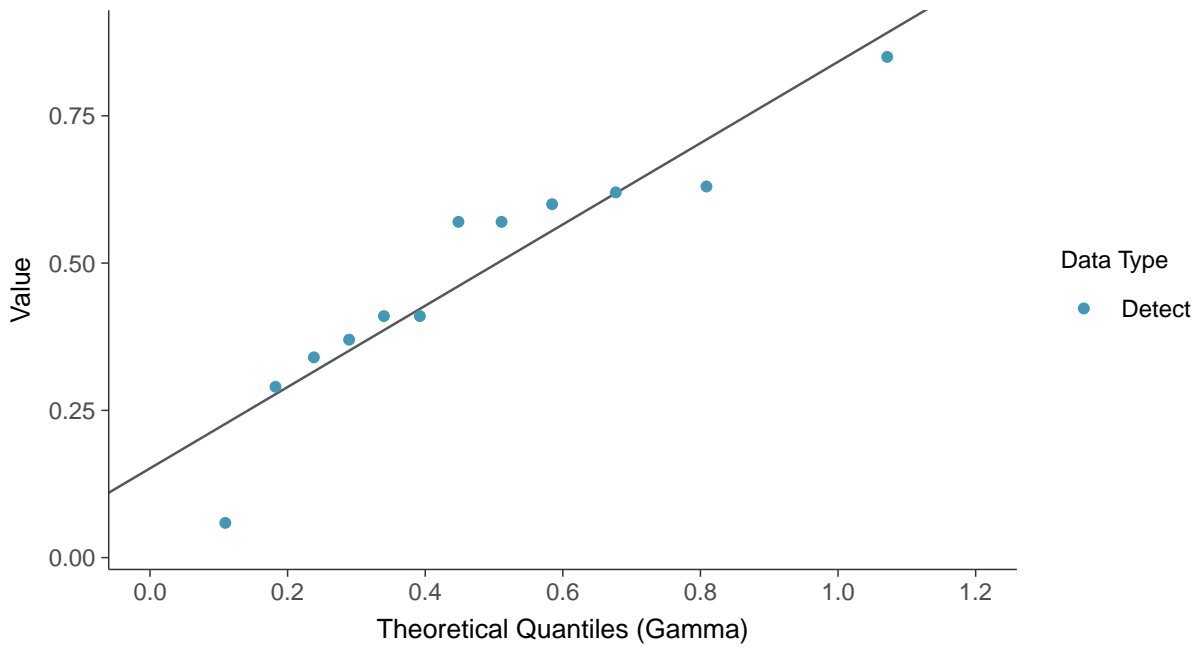
### Lognormal Q-Q plot

Barium, MW-32 (mg/L)

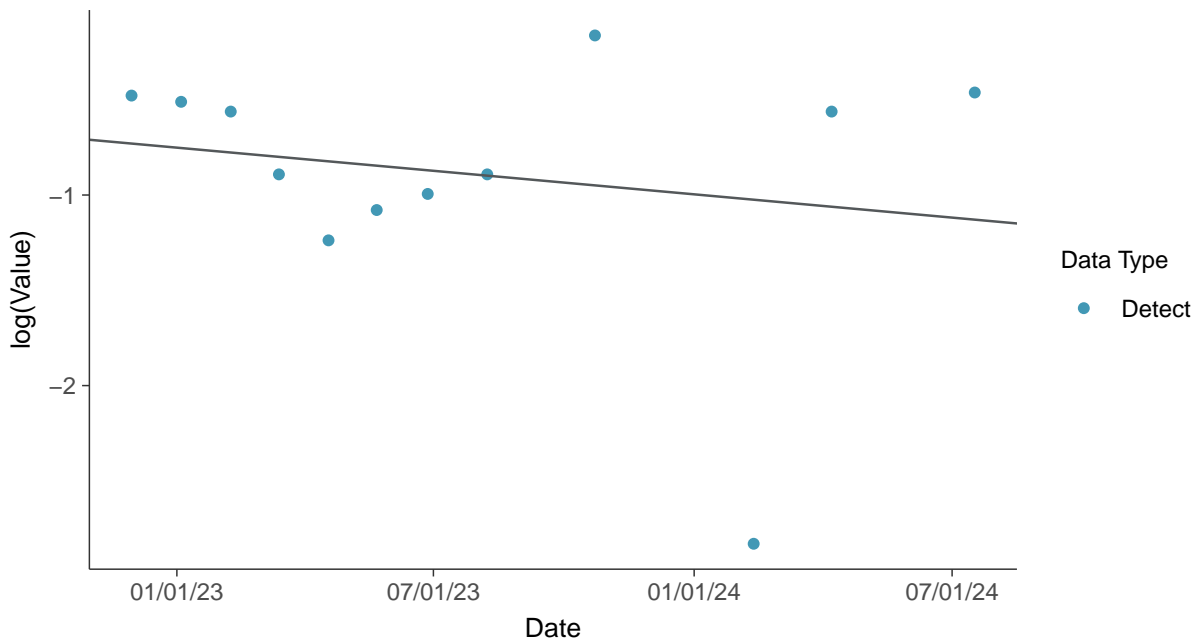




**Gamma Q-Q plot**  
Barium, MW-32 (mg/L)

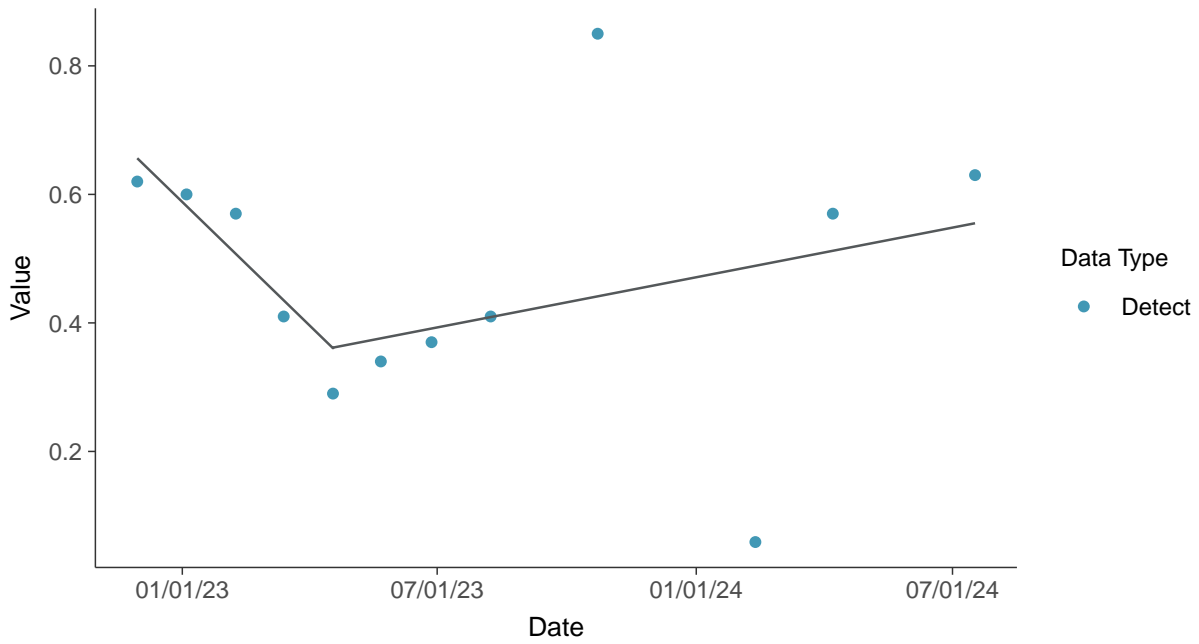


**Trend Regression: Lognormal MLE**  
Barium, MW-32 (mg/L)

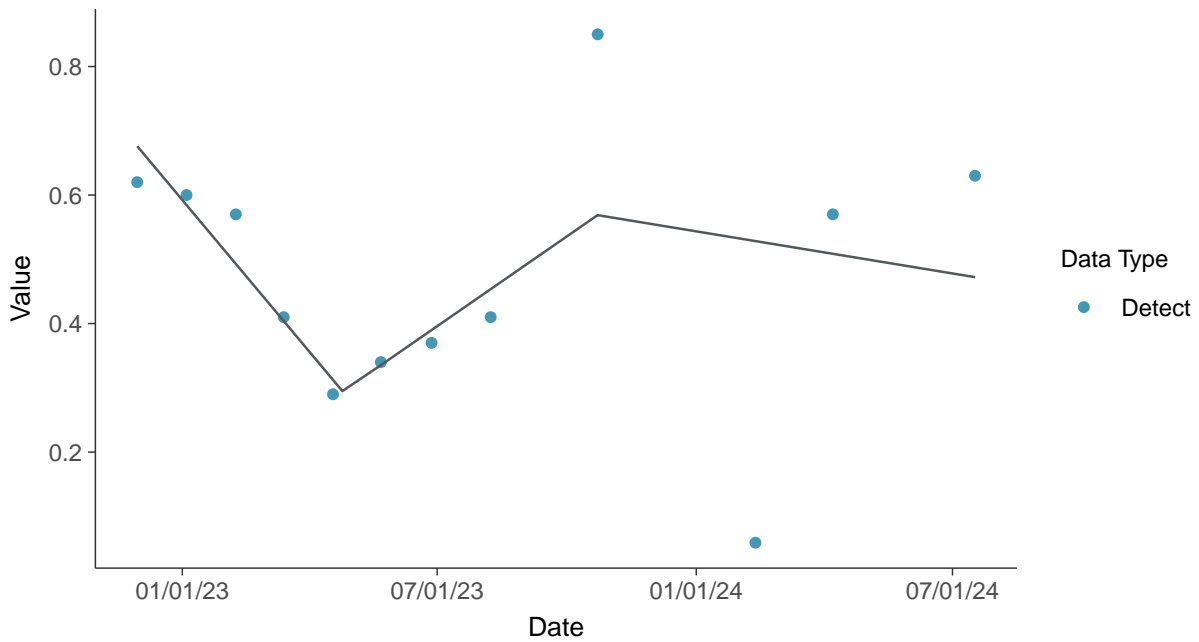




**Trend Regression: Piecewise Linear-Linear**  
Barium, MW-32 (mg/L)



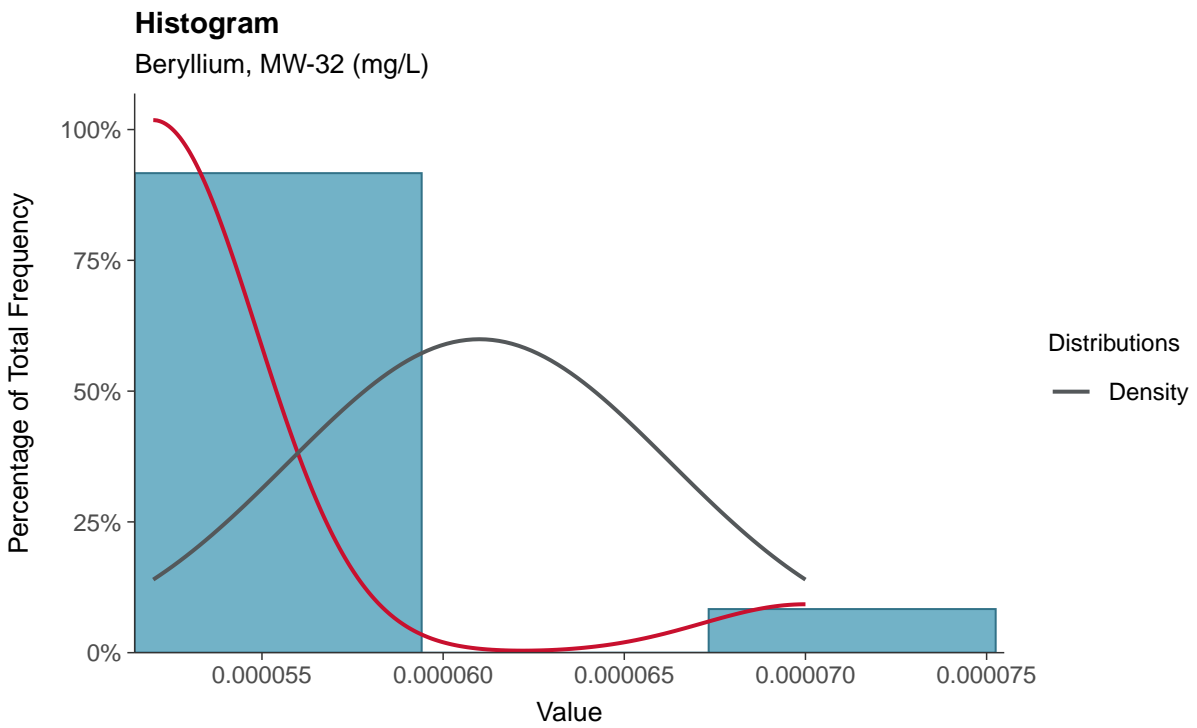
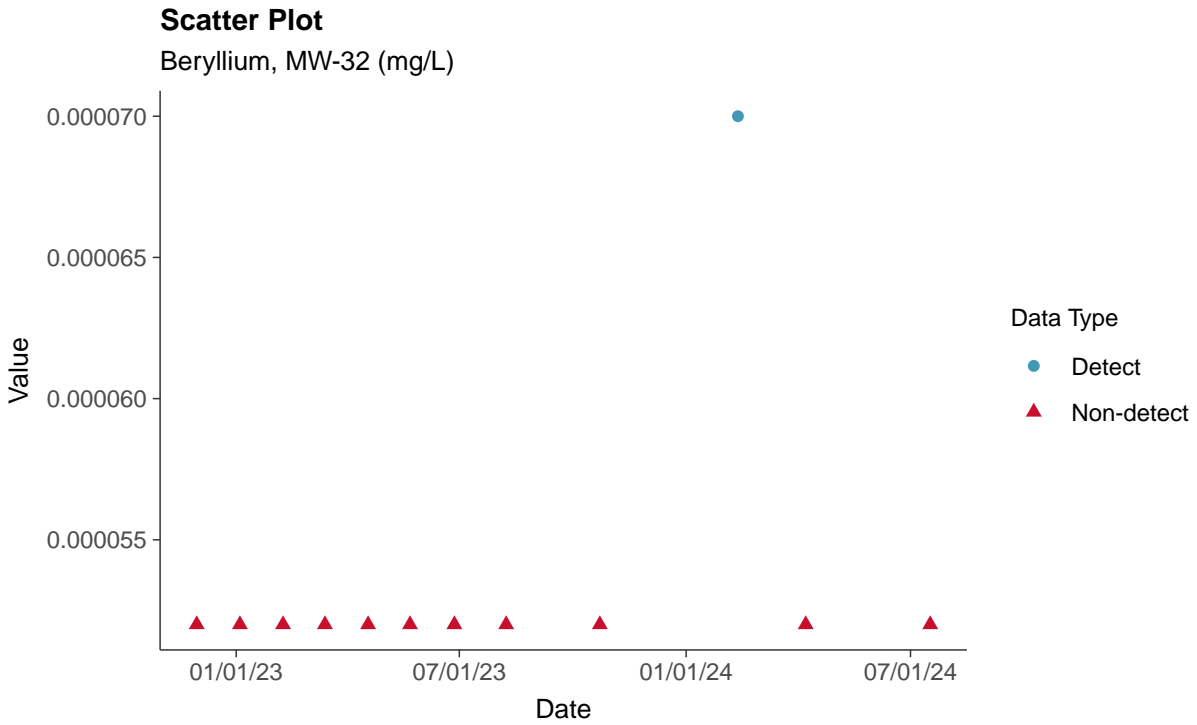
**Trend Regression: Piecewise Linear-Linear-Linear**  
Barium, MW-32 (mg/L)





### Appendix IV: Beryllium, MW-32

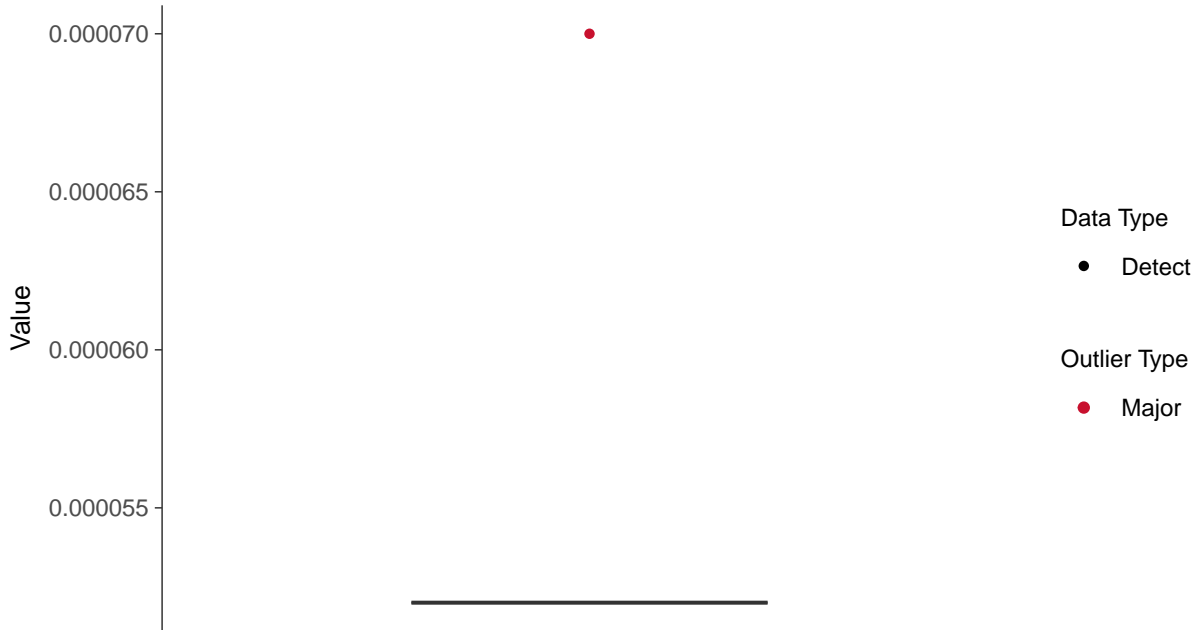
ID: 42\_1\_5\_104





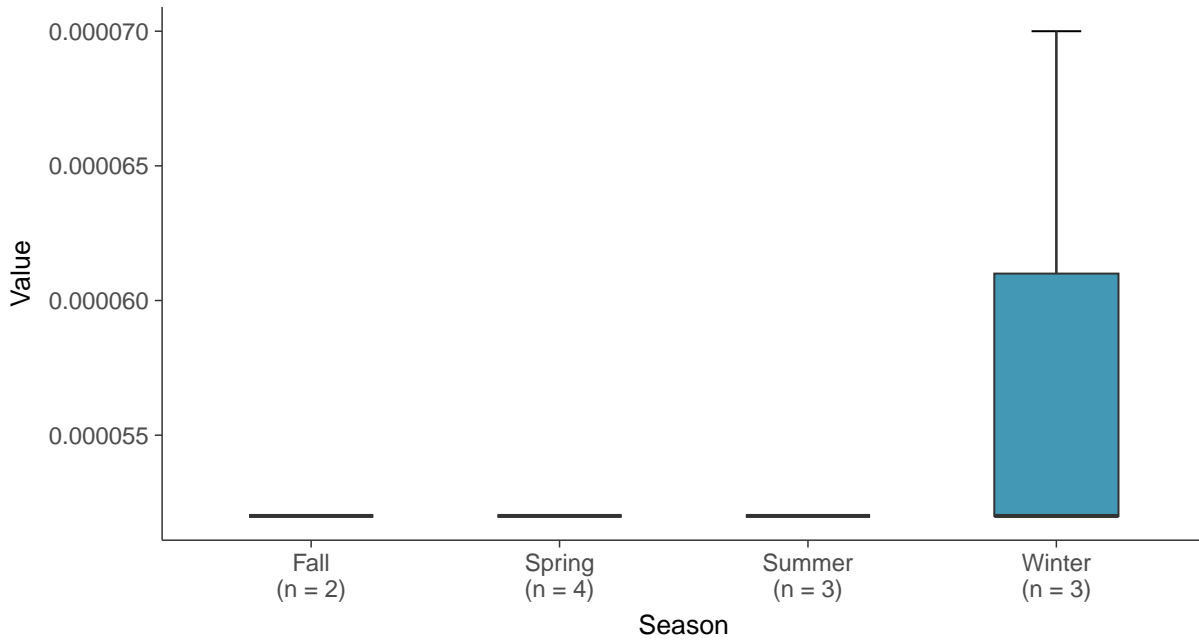
### Boxplot

Beryllium, MW-32 (mg/L)



### Boxplot by Season

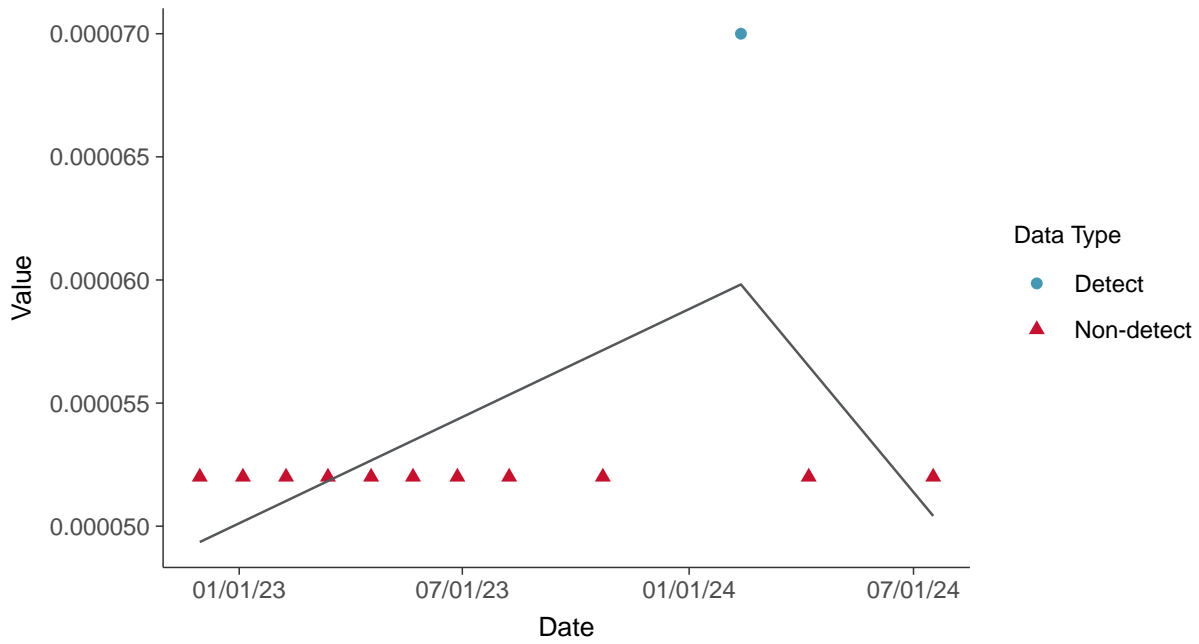
Beryllium, MW-32 (mg/L)





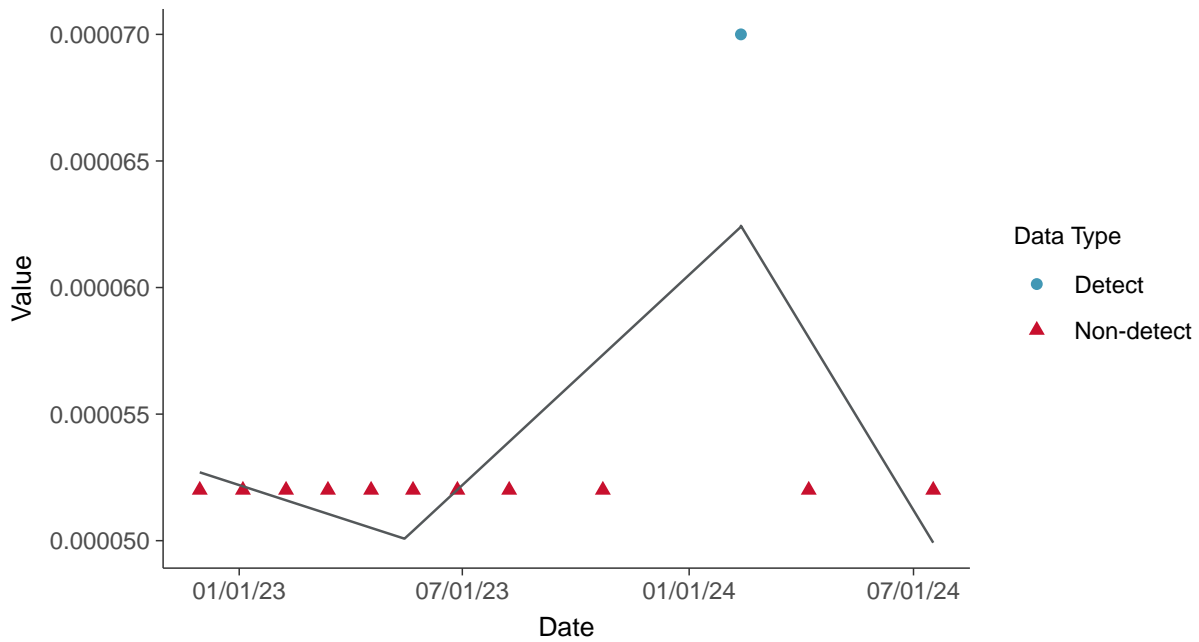
### Trend Regression: Piecewise Linear-Linear

Beryllium, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

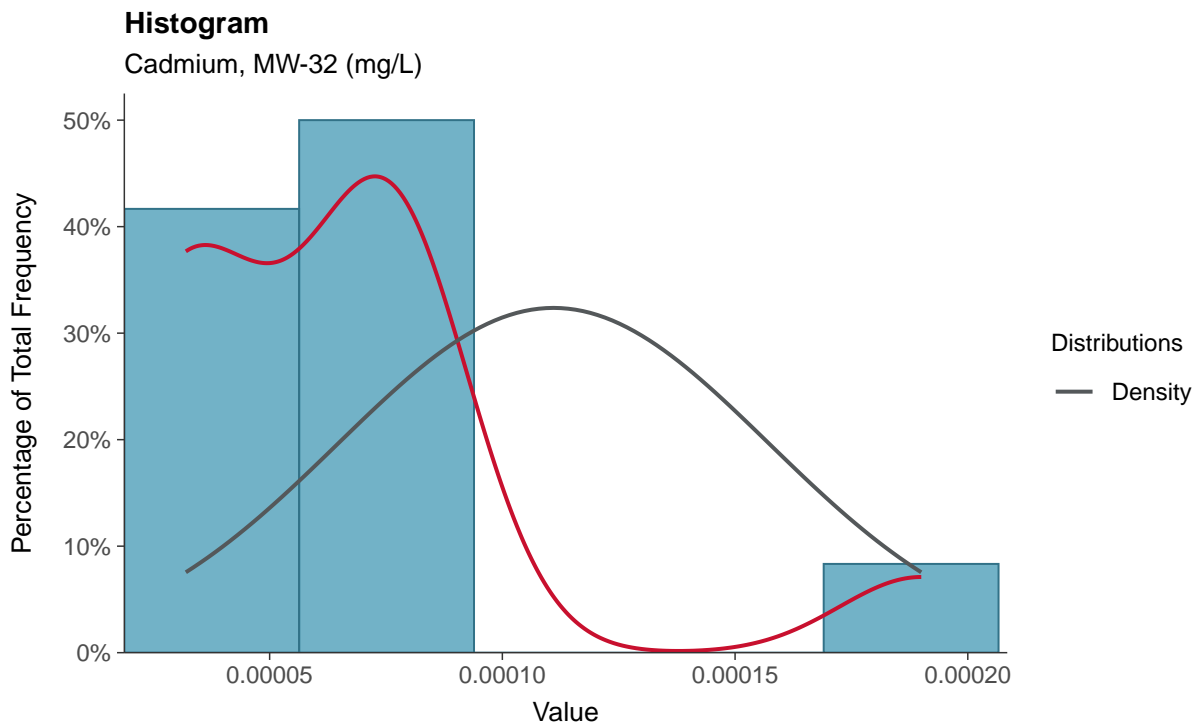
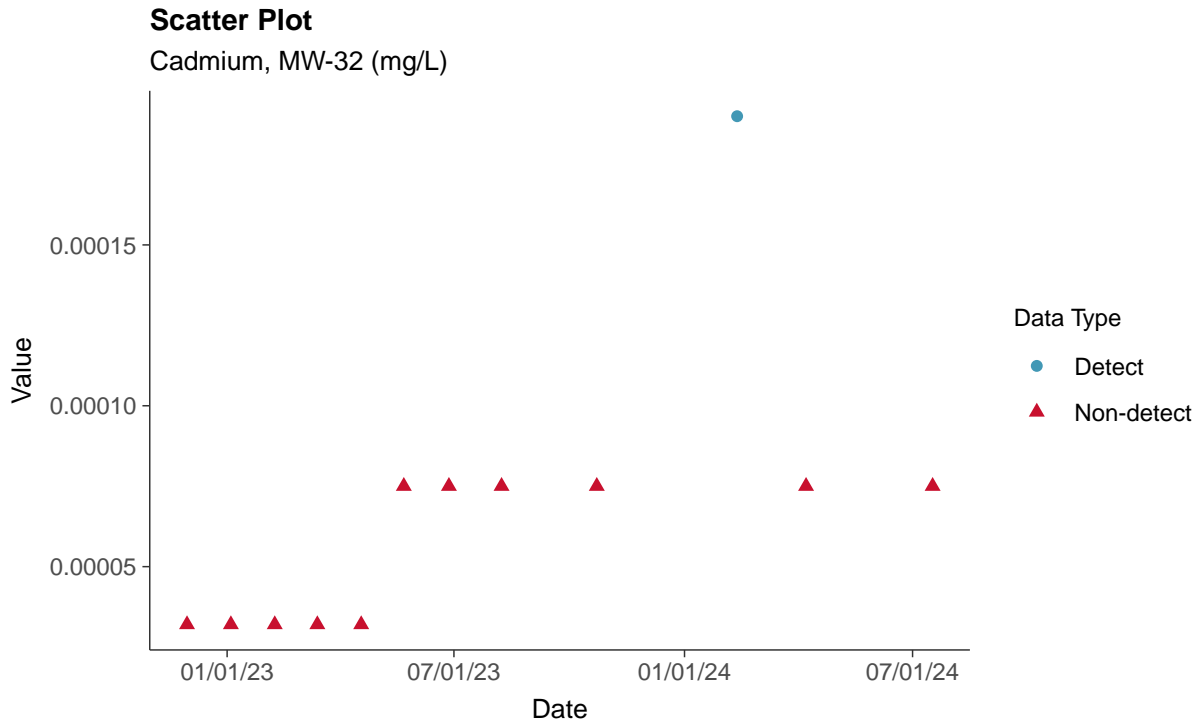
Beryllium, MW-32 (mg/L)





### Appendix IV: Cadmium, MW-32

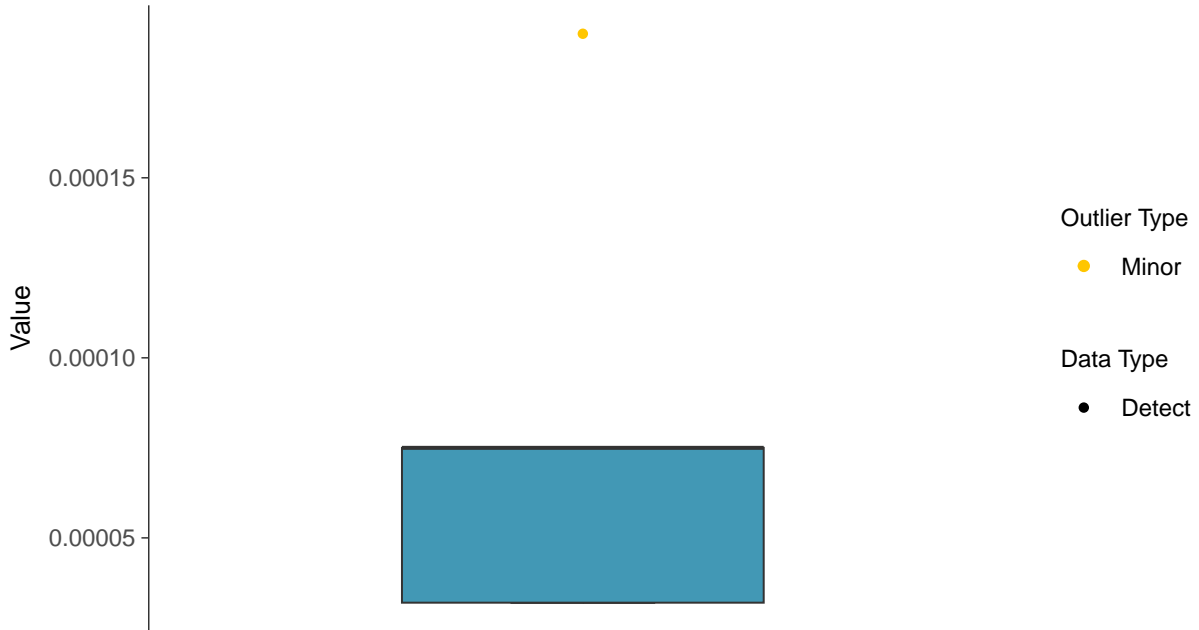
ID: 42\_1\_5\_106





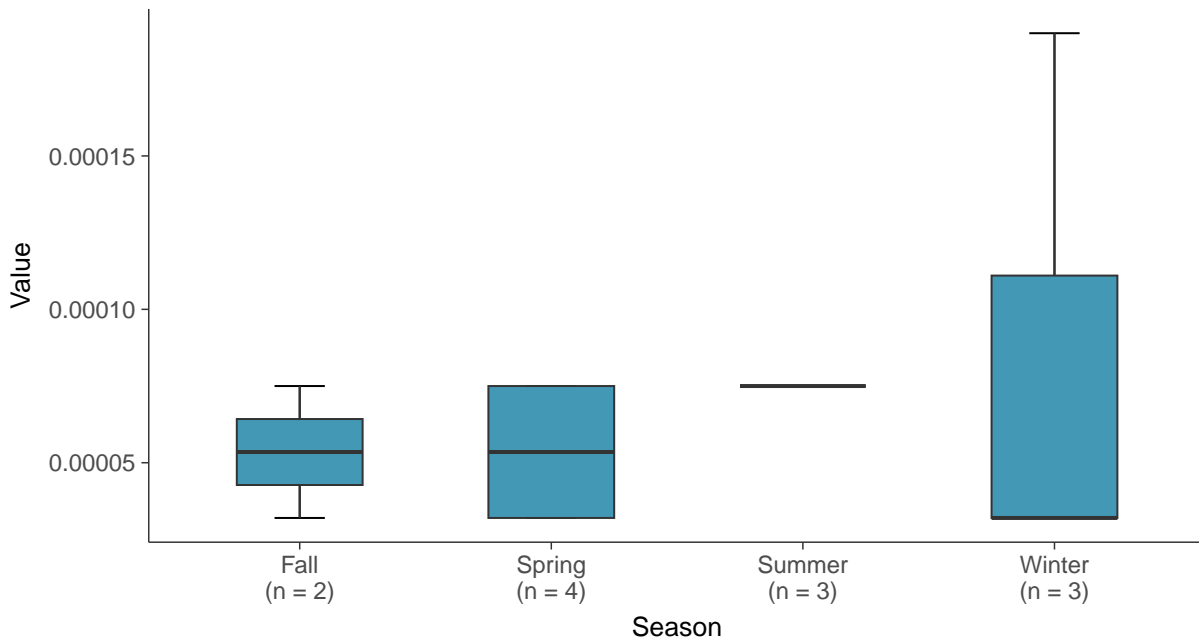
### Boxplot

Cadmium, MW-32 (mg/L)



### Boxplot by Season

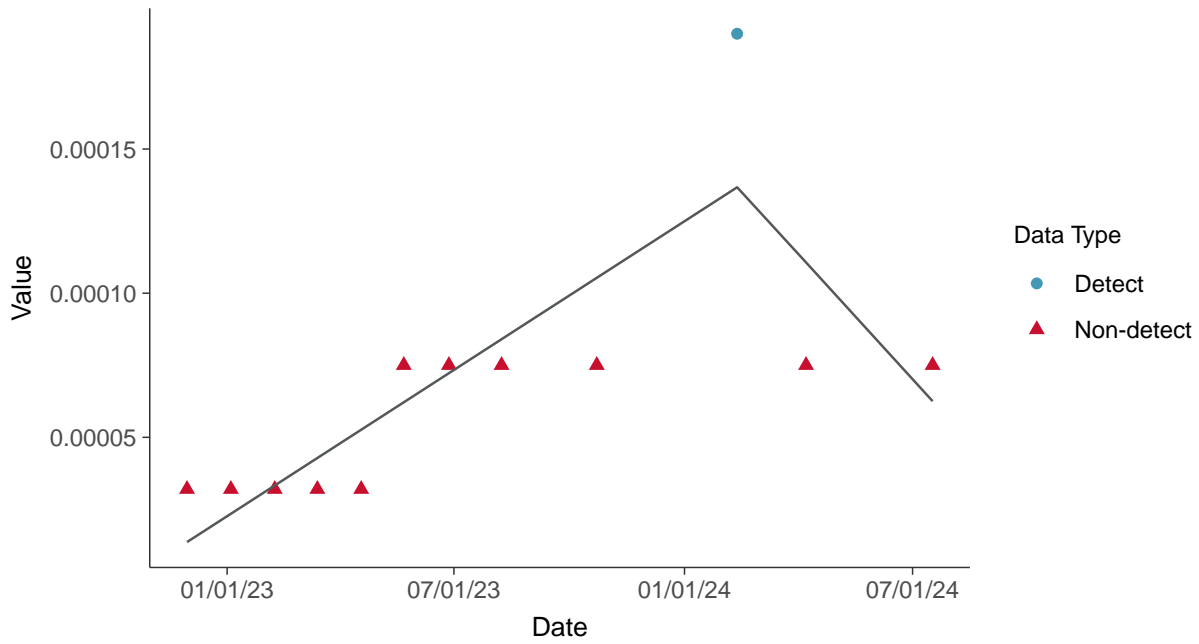
Cadmium, MW-32 (mg/L)



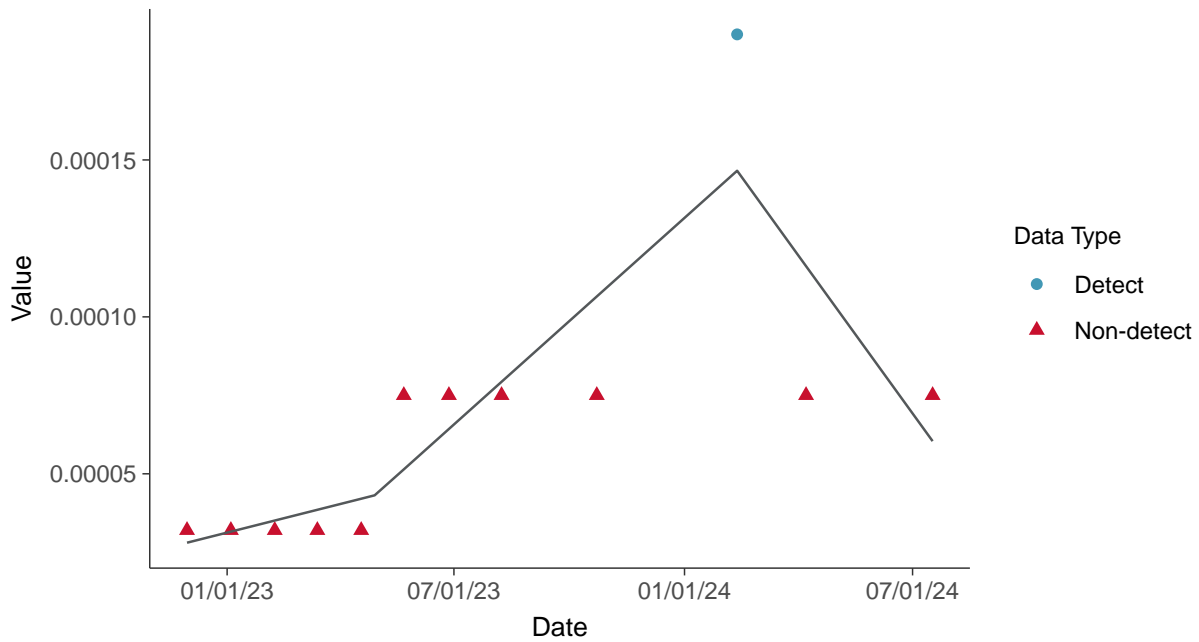




**Trend Regression: Piecewise Linear-Linear**  
Cadmium, MW-32 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Cadmium, MW-32 (mg/L)



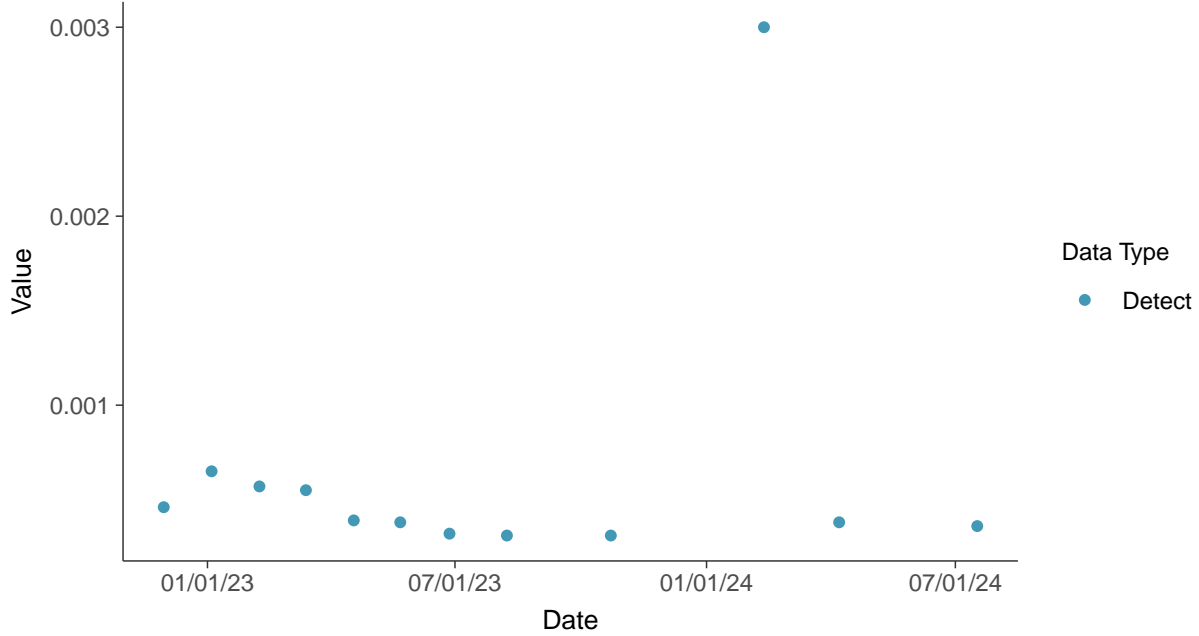


## Appendix IV: Chromium, Total, MW-32

ID: 42\_1\_5\_109

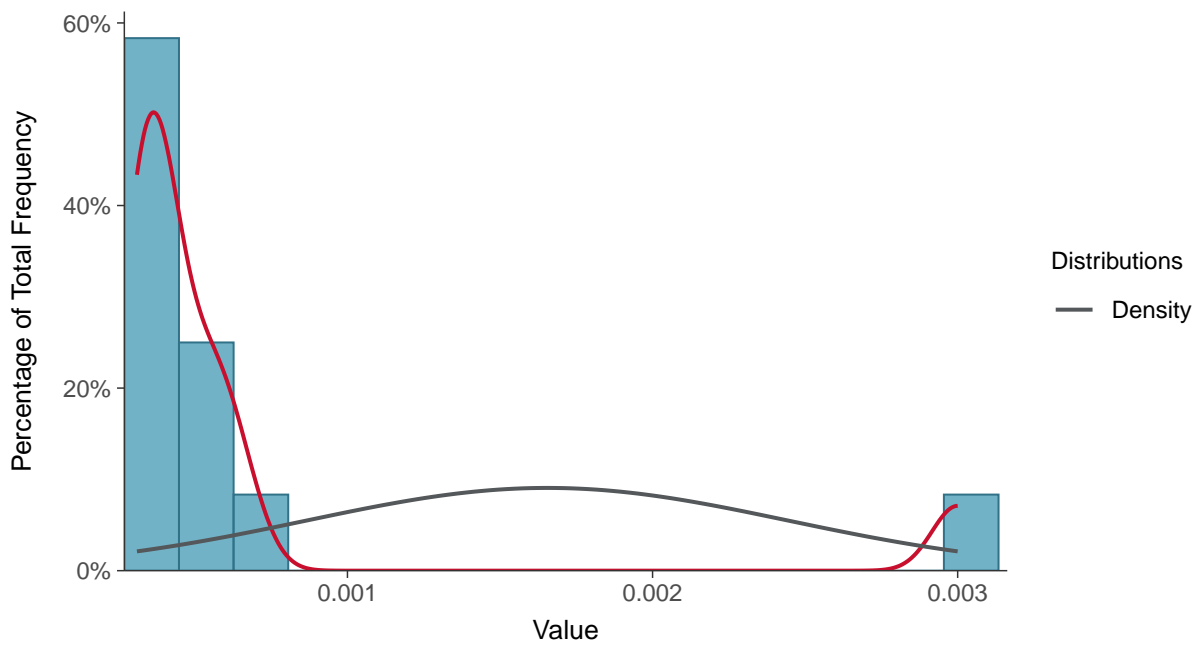
### Scatter Plot

Chromium, Total, MW-32 (mg/L)



### Histogram

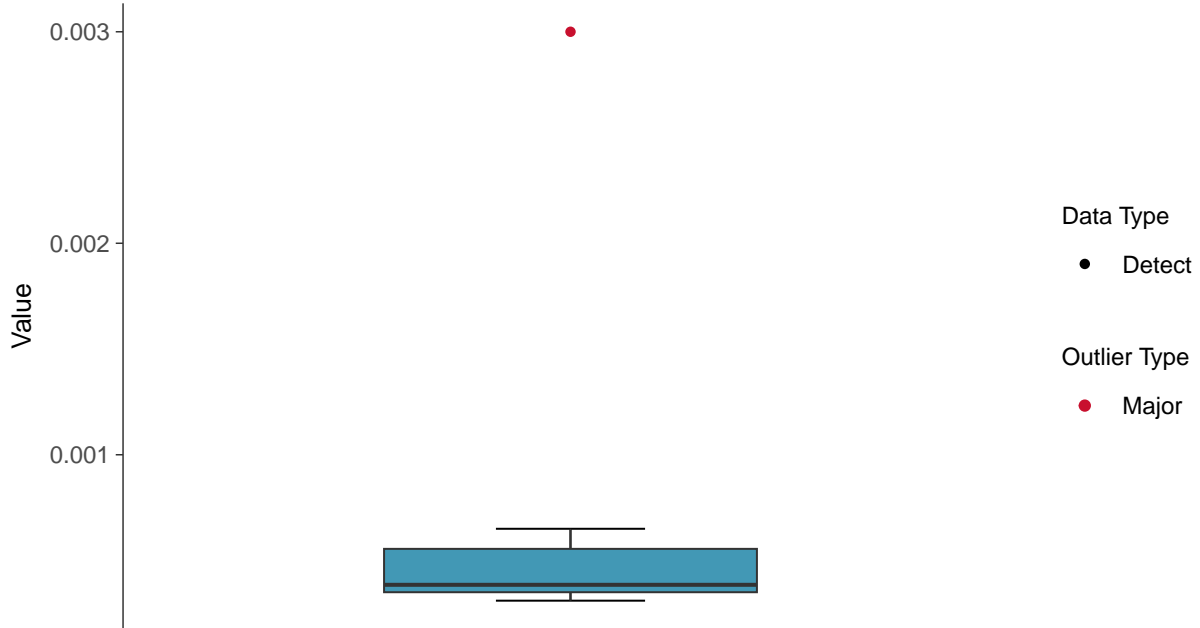
Chromium, Total, MW-32 (mg/L)





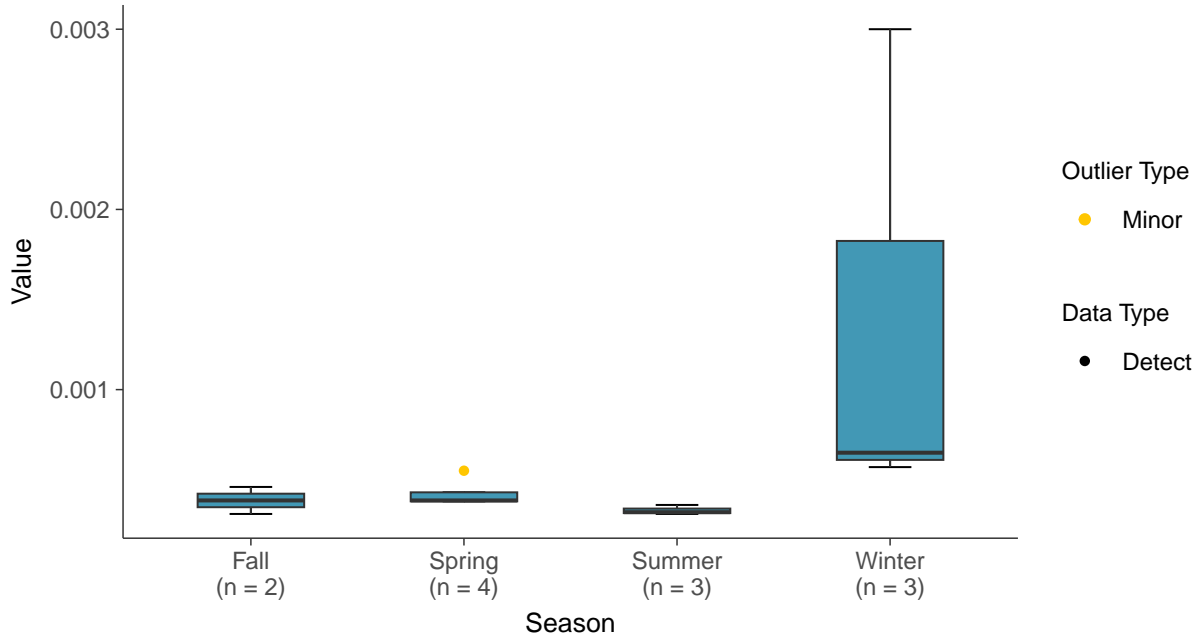
### Boxplot

Chromium, Total, MW-32 (mg/L)



### Boxplot by Season

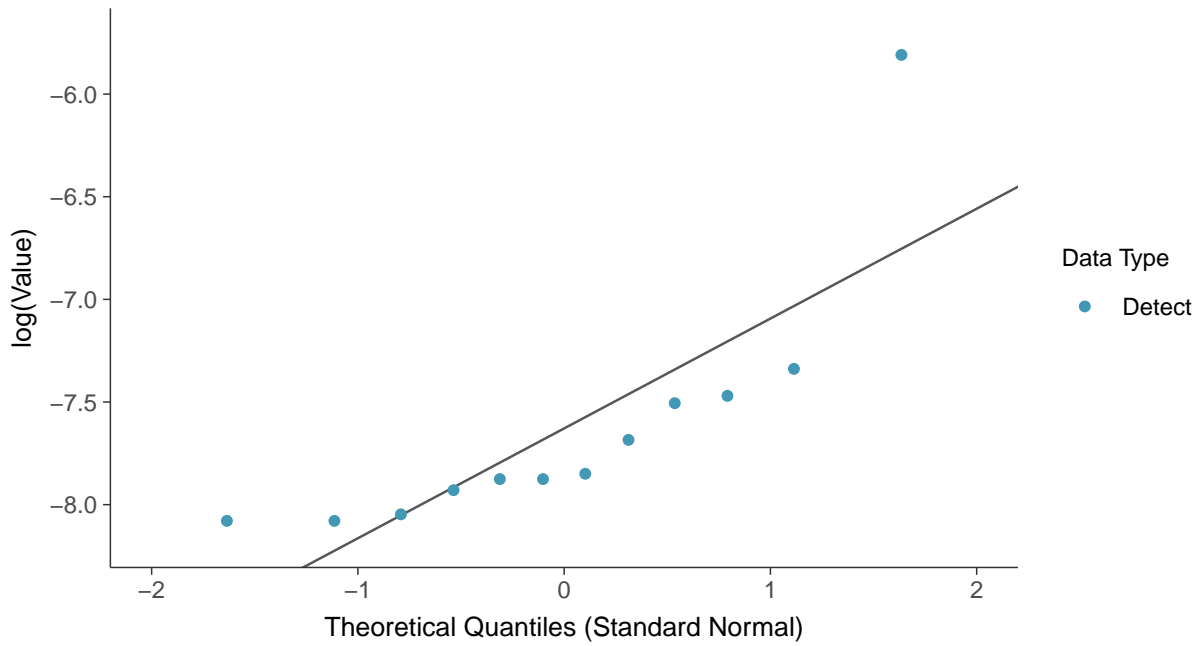
Chromium, Total, MW-32 (mg/L)





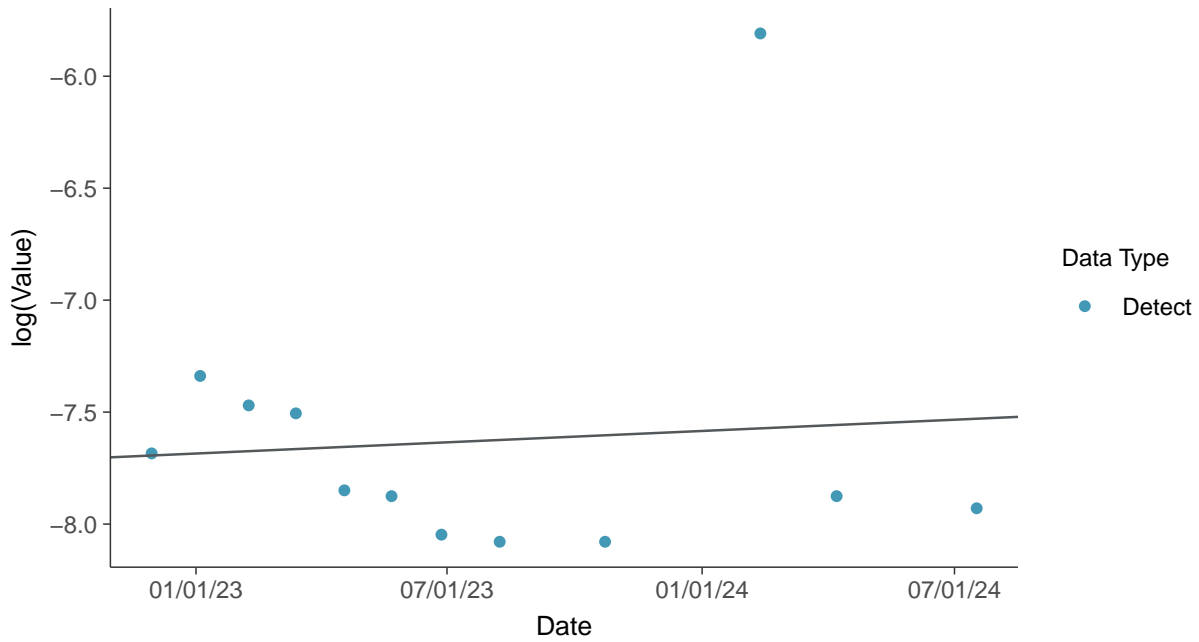
### Lognormal Q-Q plot

Chromium, Total, MW-32 (mg/L)



### Trend Regression: Lognormal MLE

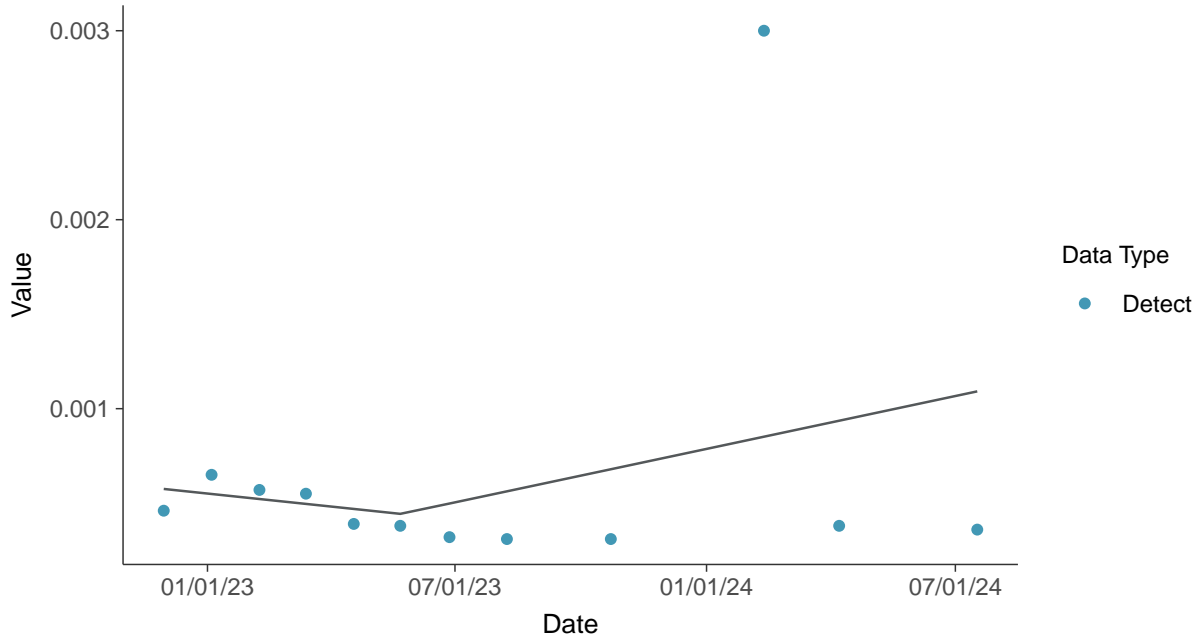
Chromium, Total, MW-32 (mg/L)





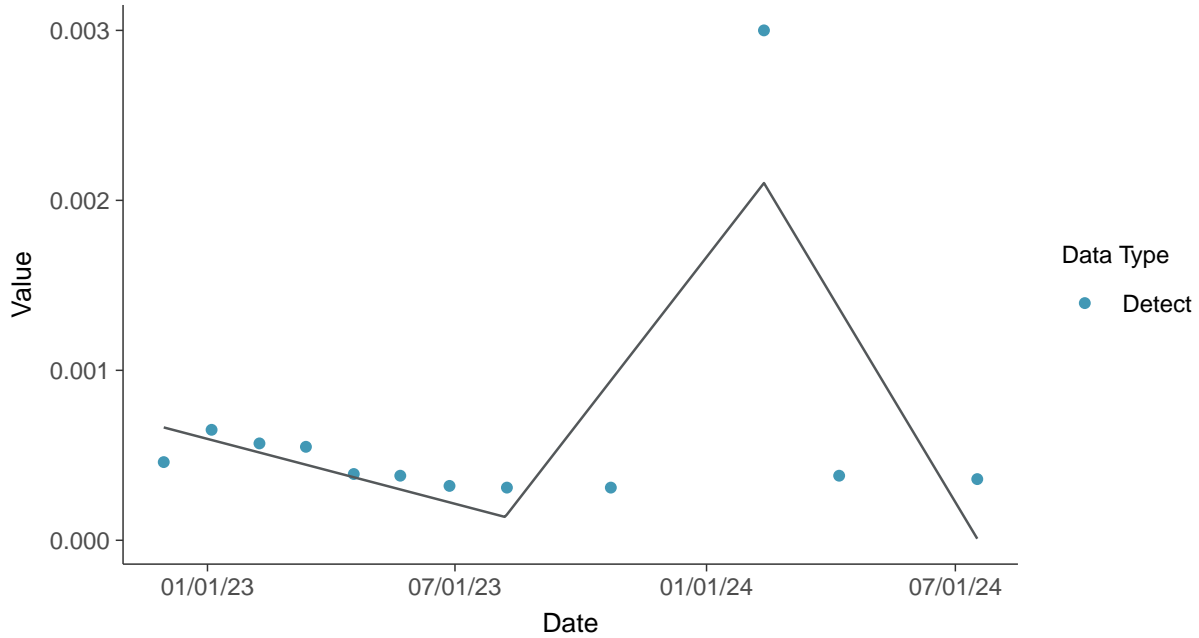
### Trend Regression: Piecewise Linear-Linear

Chromium, Total, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Chromium, Total, MW-32 (mg/L)



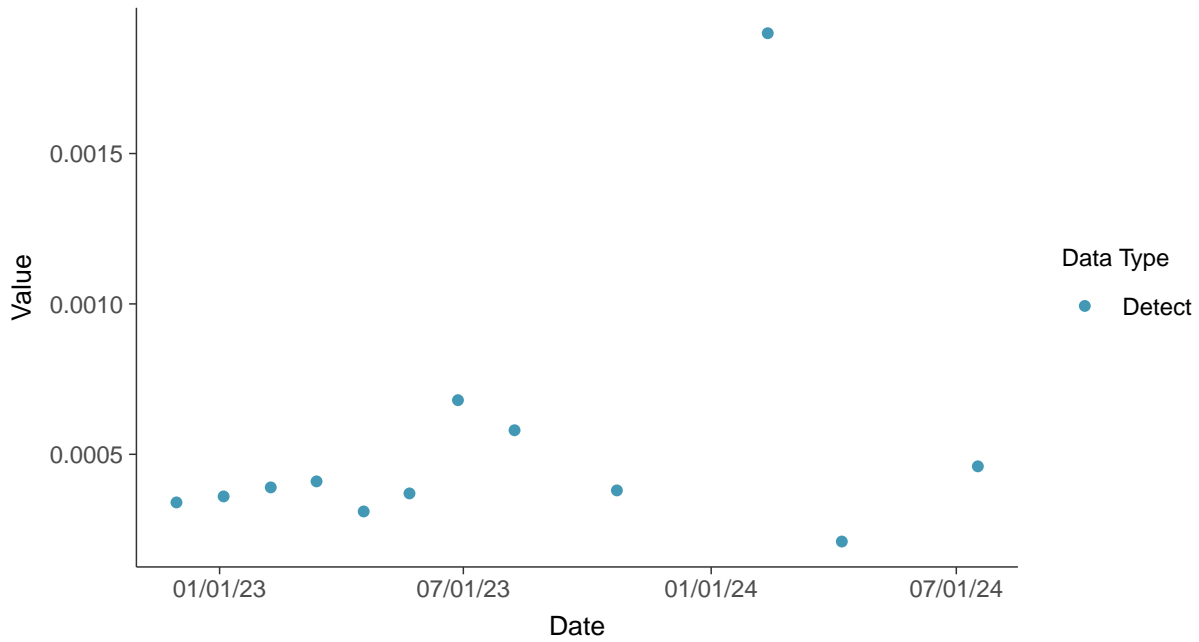


### Appendix IV: Cobalt, MW-32

ID: 42\_1\_5\_110

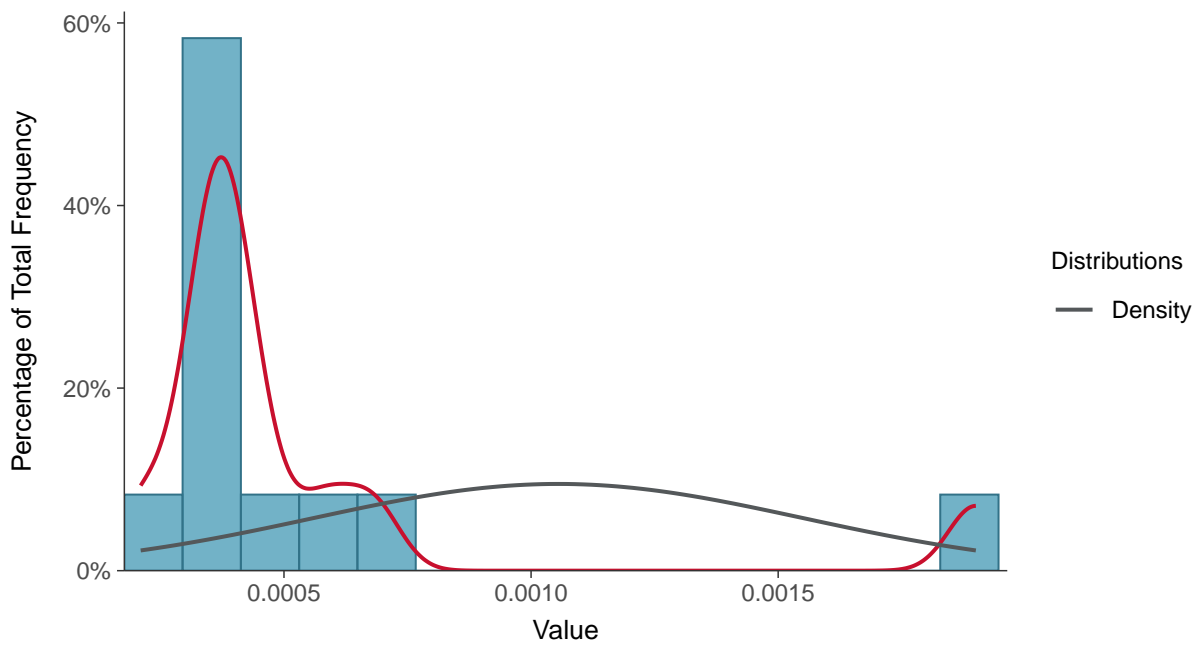
#### Scatter Plot

Cobalt, MW-32 (mg/L)



#### Histogram

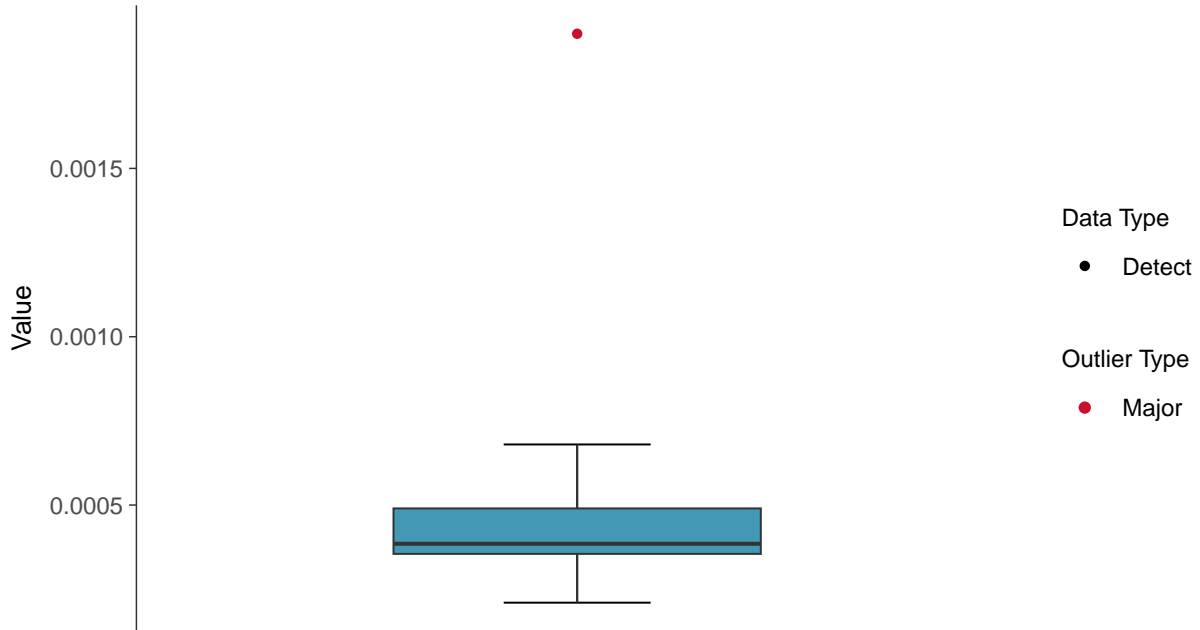
Cobalt, MW-32 (mg/L)





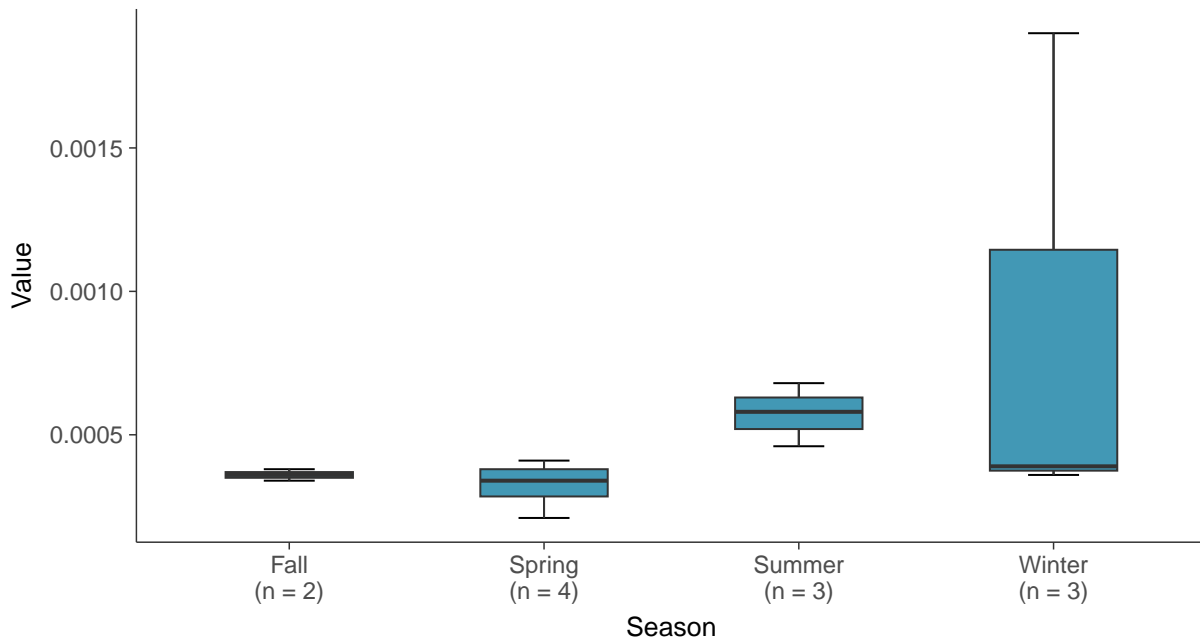
### Boxplot

Cobalt, MW-32 (mg/L)



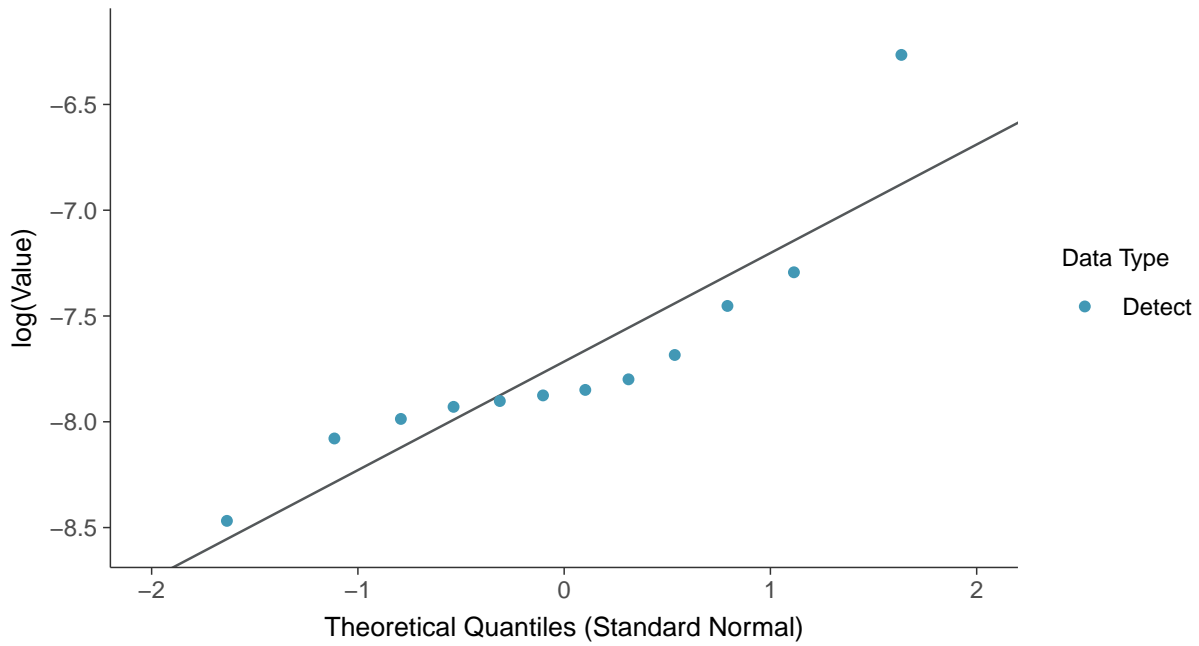
### Boxplot by Season

Cobalt, MW-32 (mg/L)

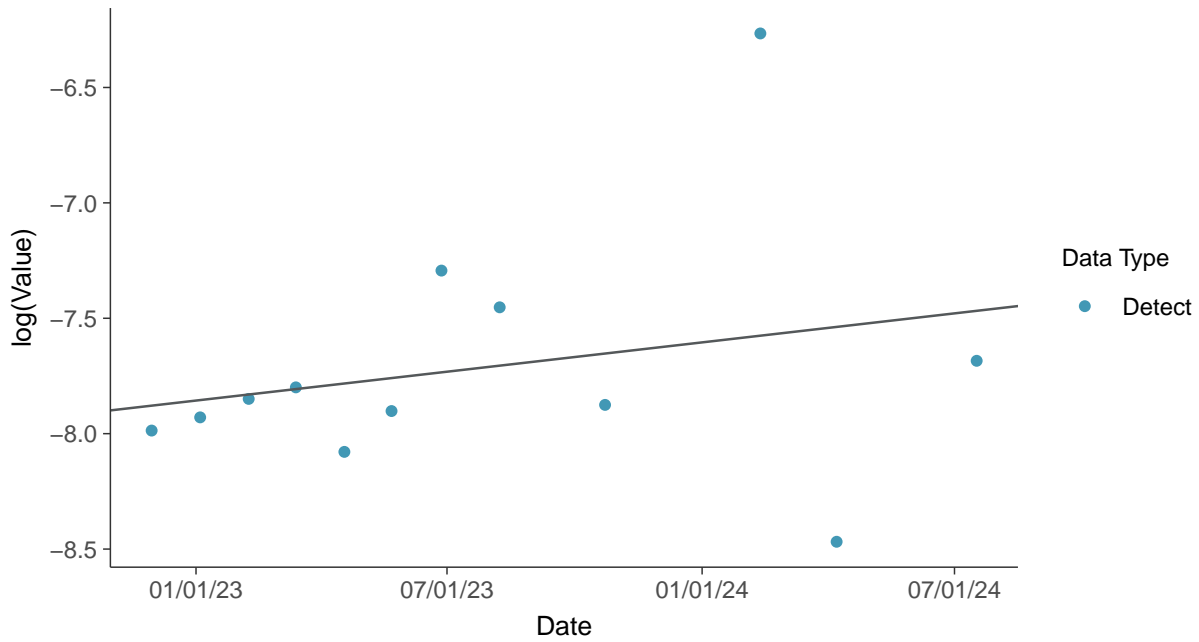




**Lognormal Q-Q plot**  
Cobalt, MW-32 (mg/L)



**Trend Regression: Lognormal MLE**  
Cobalt, MW-32 (mg/L)

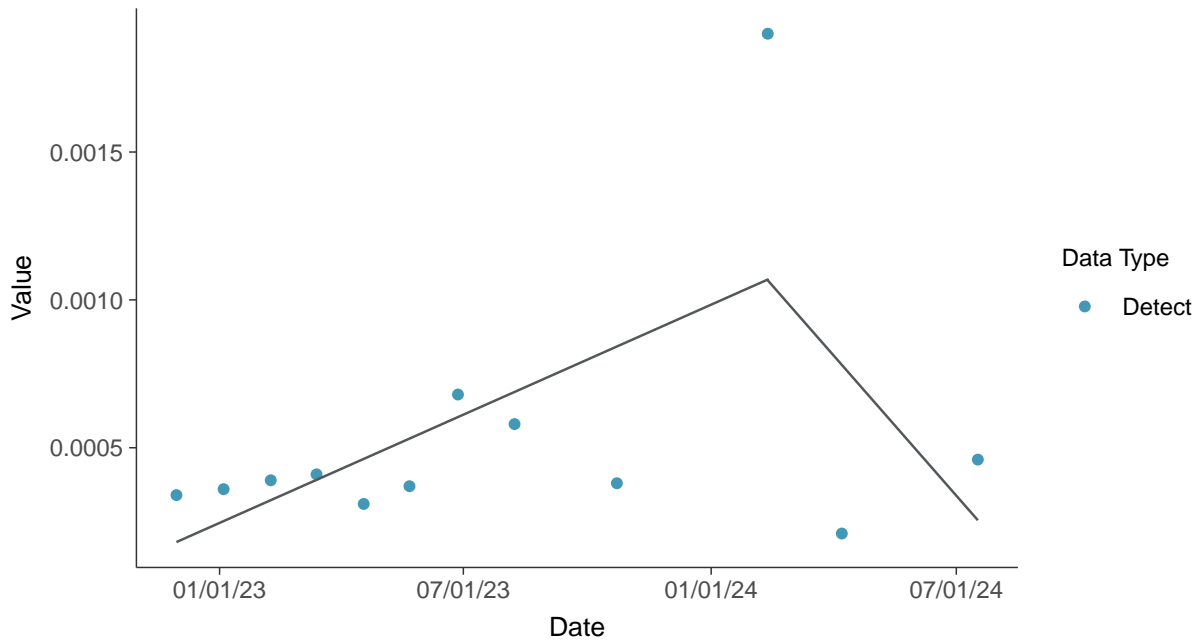






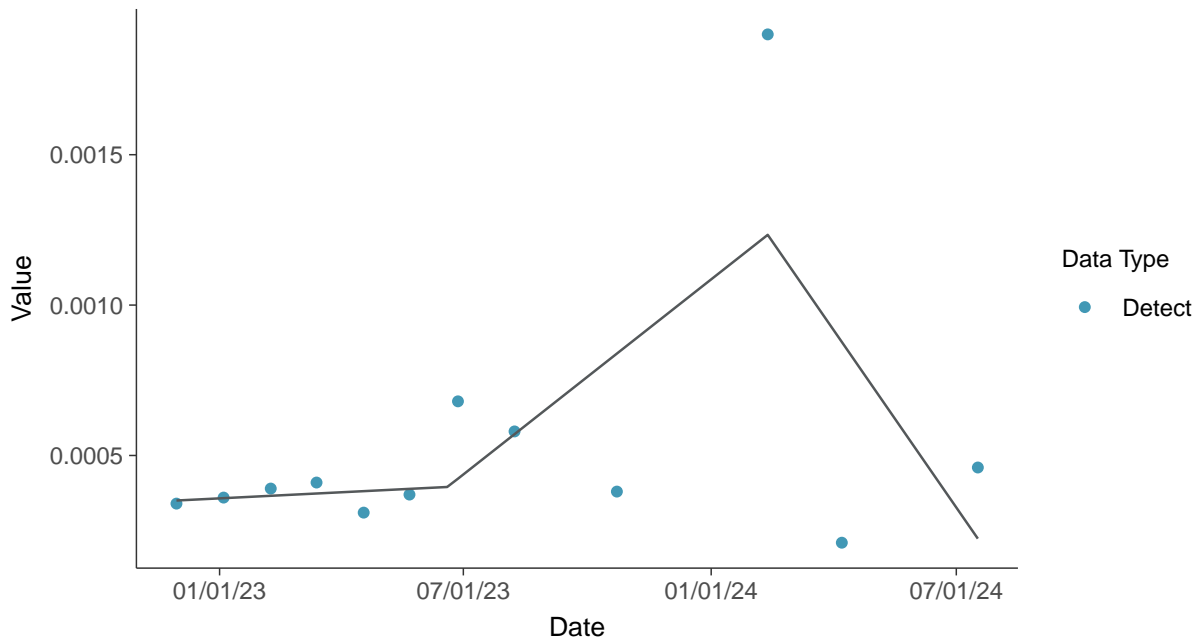
### Trend Regression: Piecewise Linear-Linear

Cobalt, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-32 (mg/L)



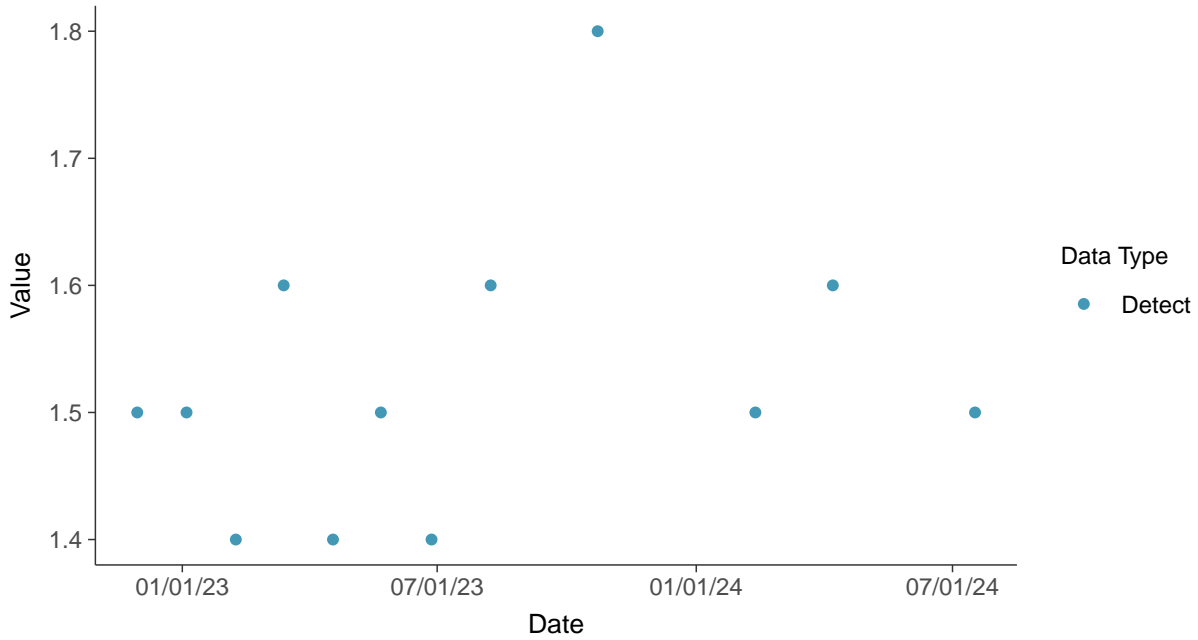


### Appendix IV: Fluoride (App IV), MW-32

ID: 42\_1\_5\_113

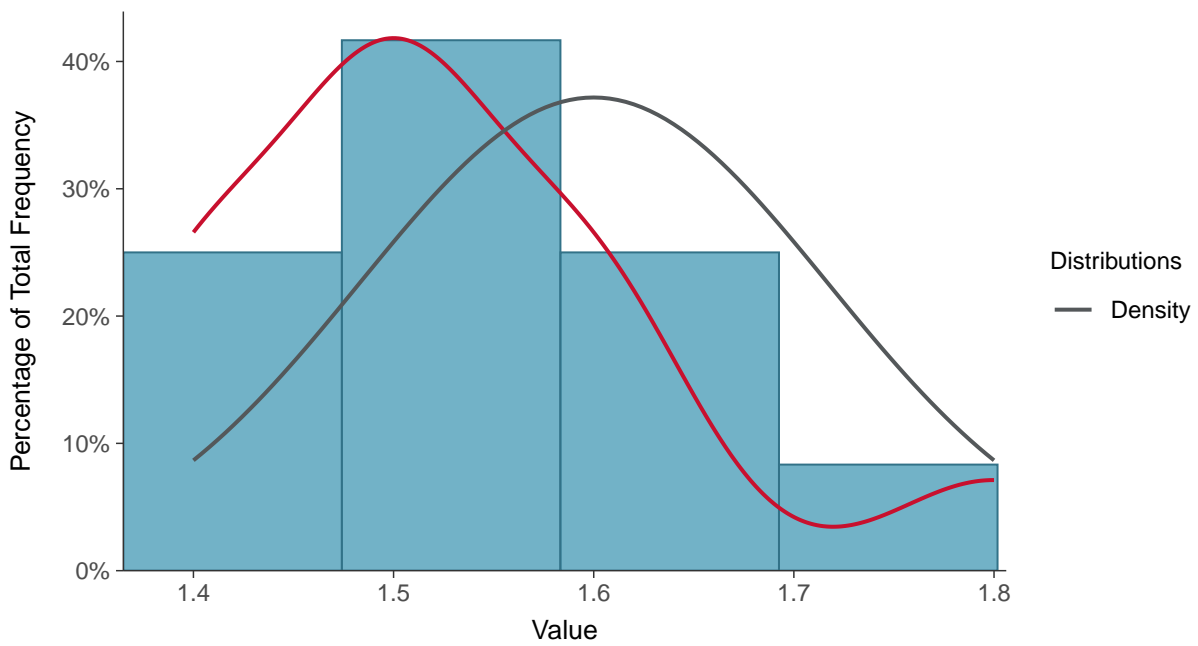
#### Scatter Plot

Fluoride (App IV), MW-32 (mg/L)



#### Histogram

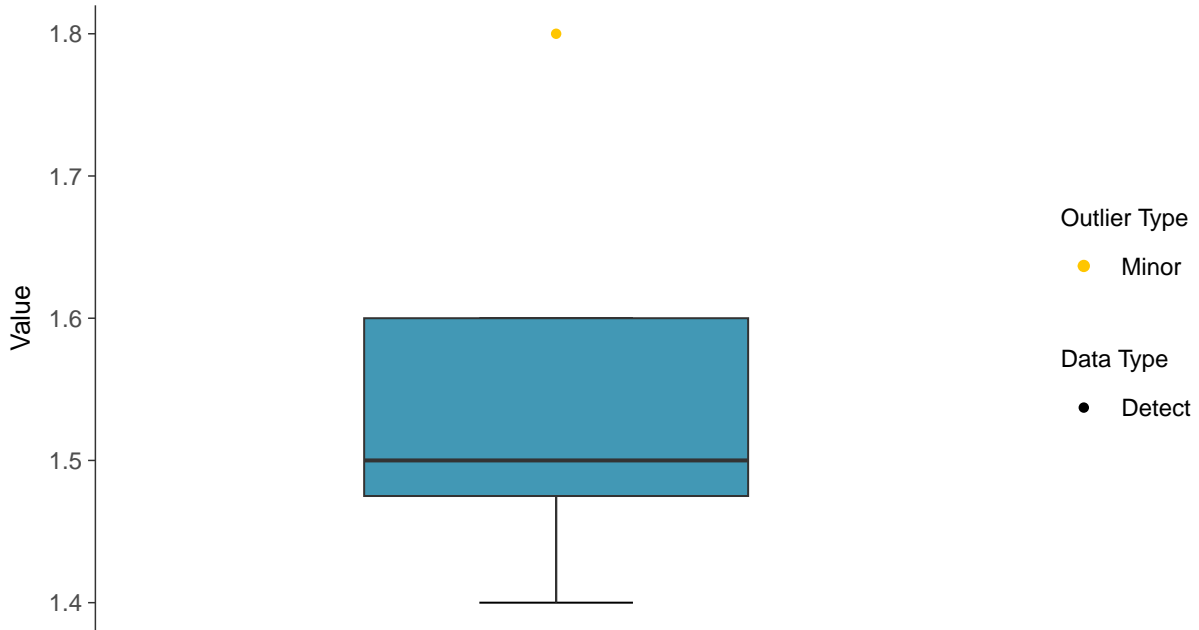
Fluoride (App IV), MW-32 (mg/L)





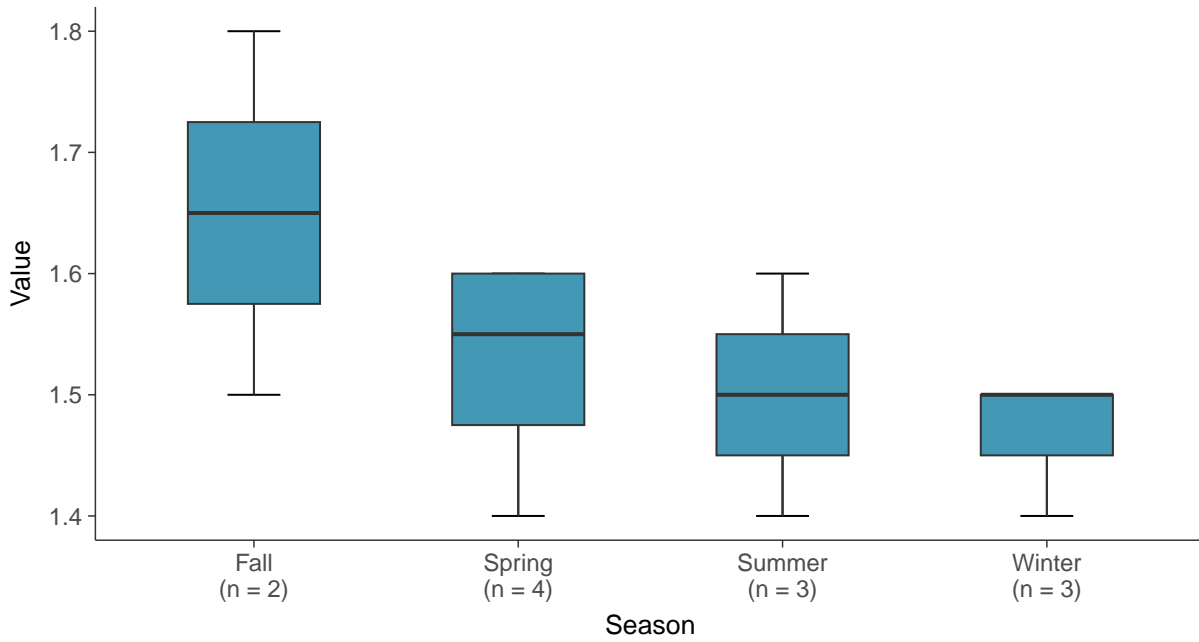
### Boxplot

Fluoride (App IV), MW-32 (mg/L)



### Boxplot by Season

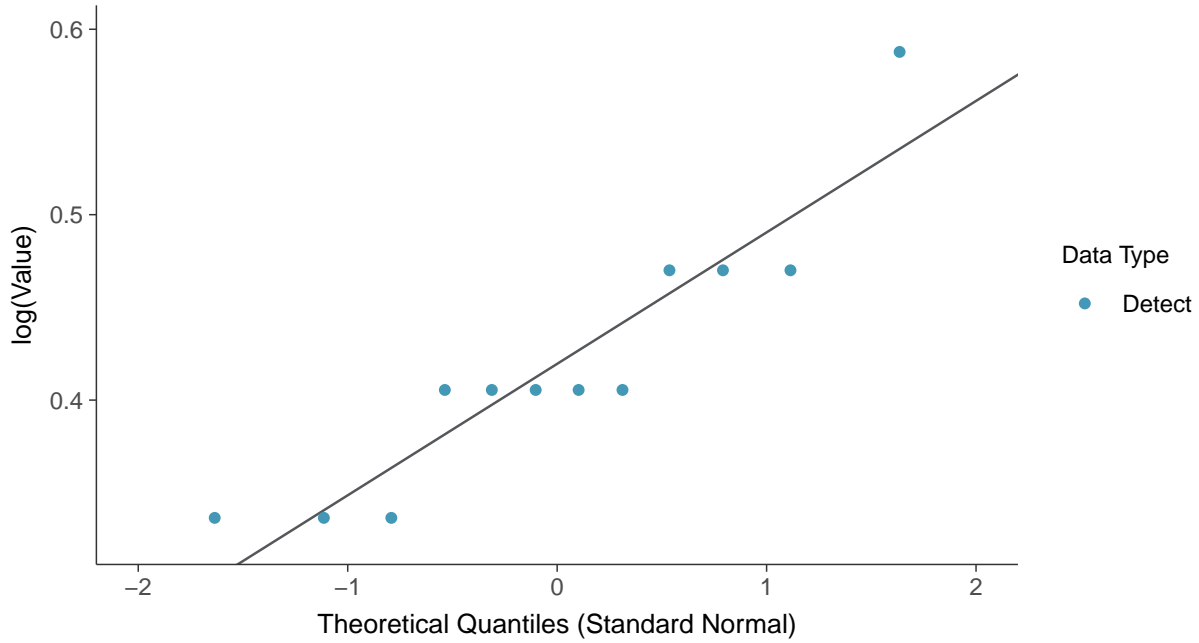
Fluoride (App IV), MW-32 (mg/L)





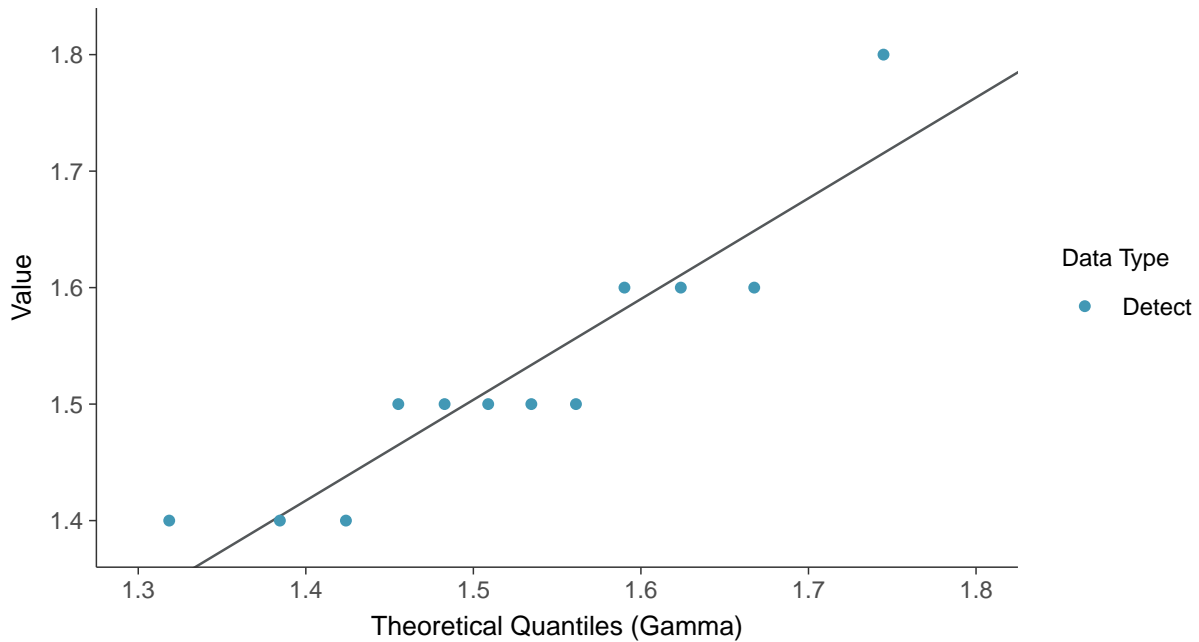
### Lognormal Q-Q plot

Fluoride (App IV), MW-32 (mg/L)



### Gamma Q-Q plot

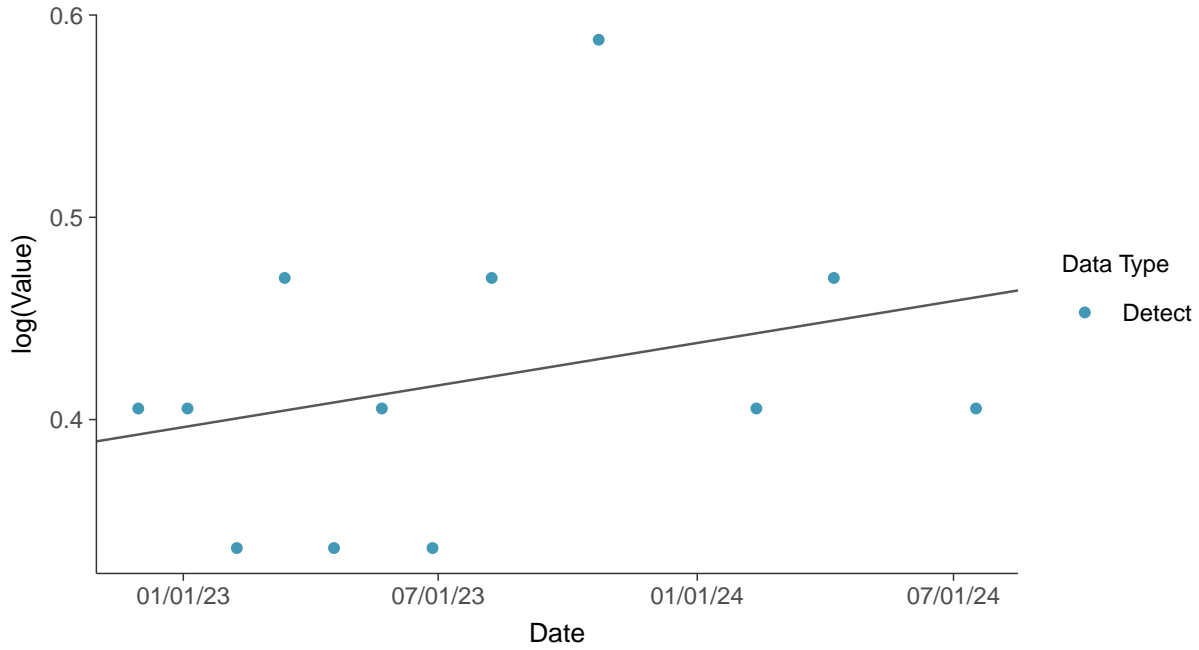
Fluoride (App IV), MW-32 (mg/L)





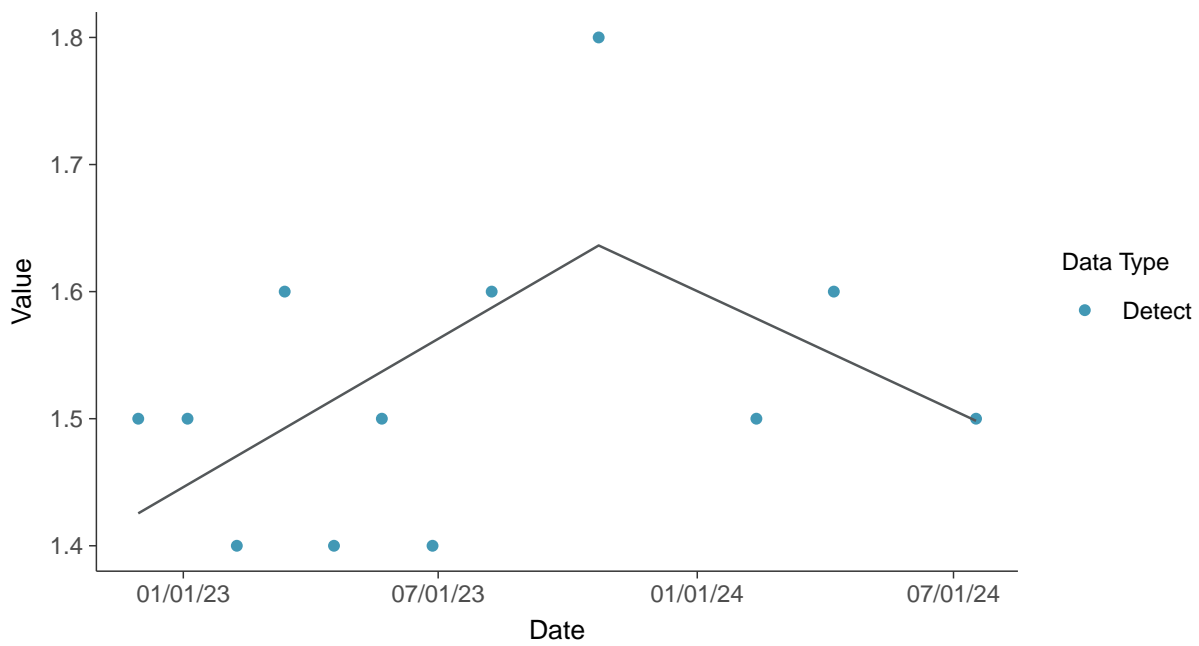
### Trend Regression: Lognormal MLE

Fluoride (App IV), MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear

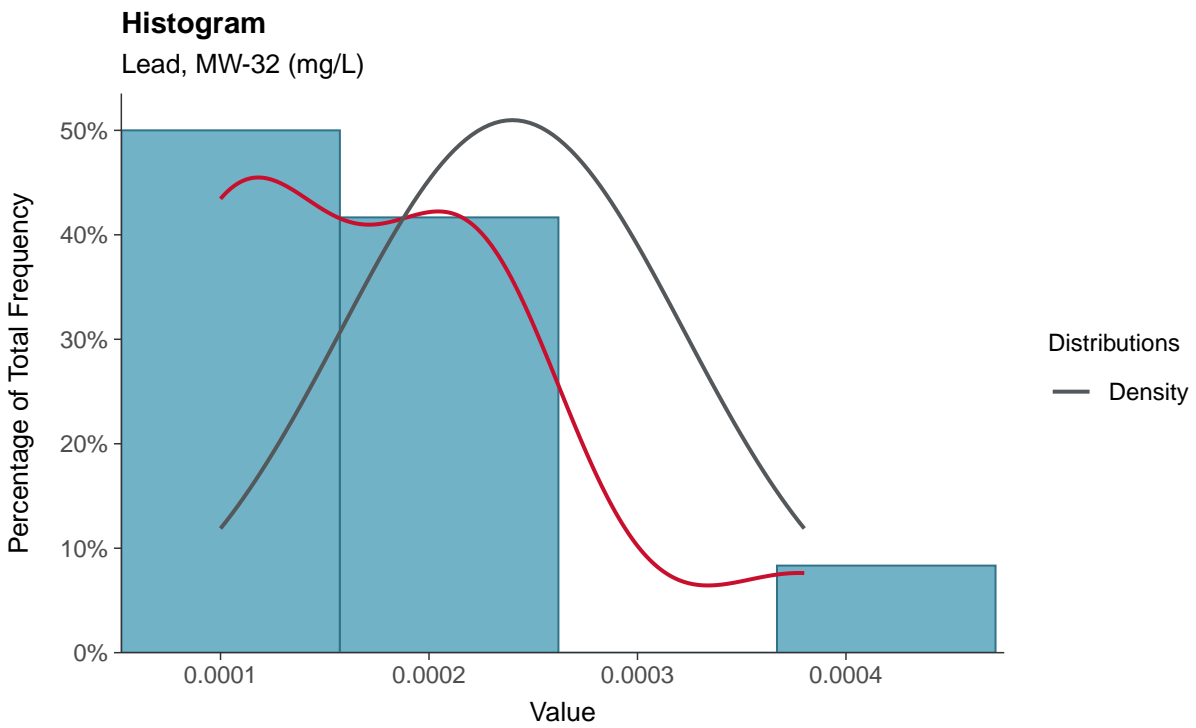
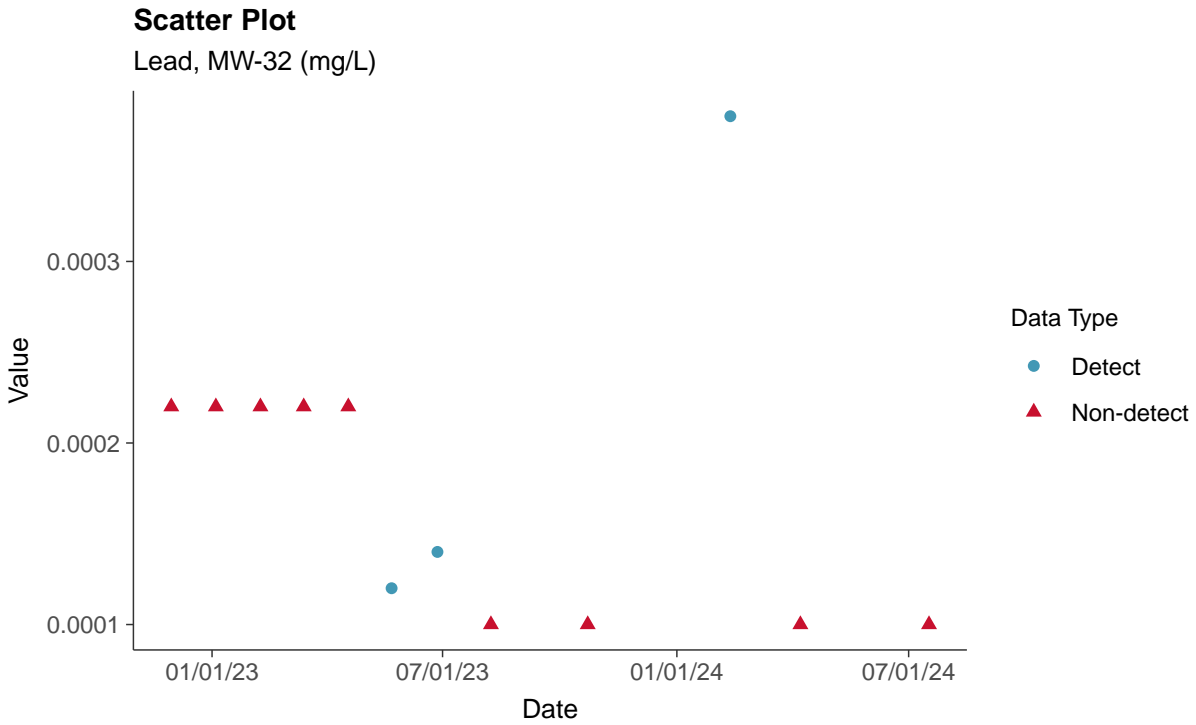
Fluoride (App IV), MW-32 (mg/L)





### Appendix IV: Lead, MW-32

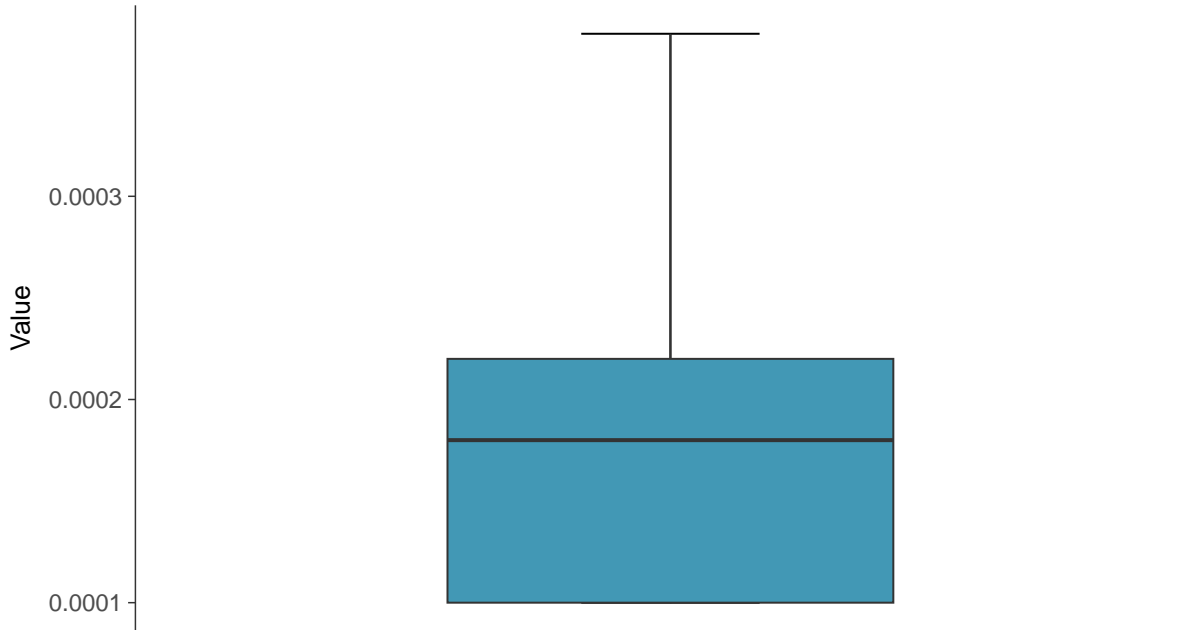
ID: 42\_1\_5\_115





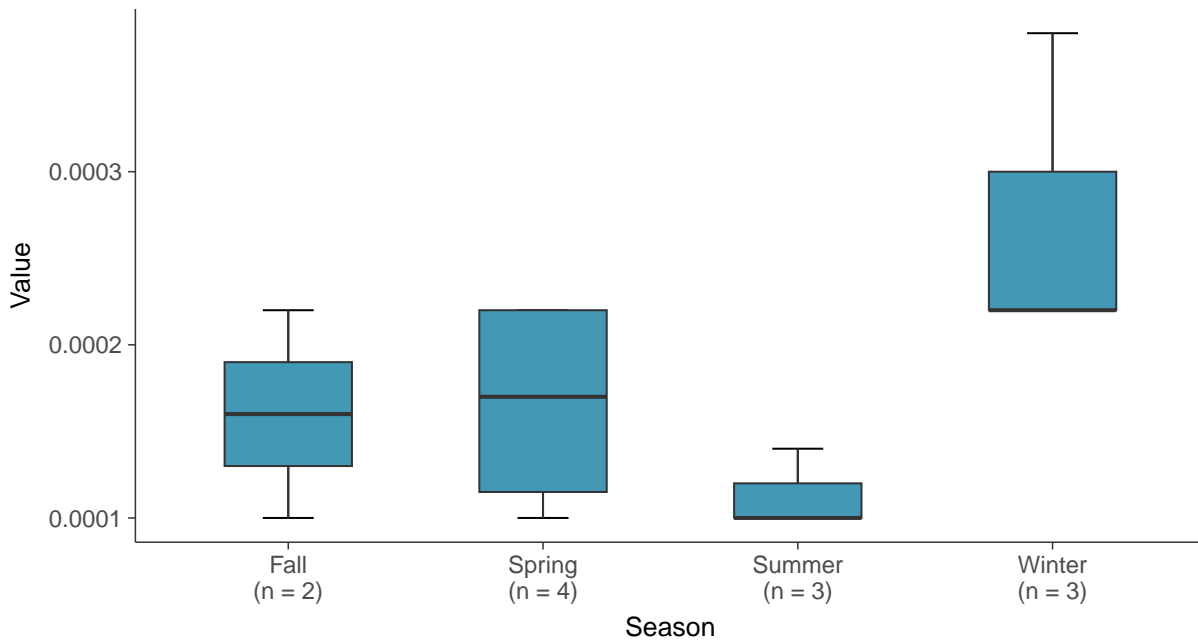
### Boxplot

Lead, MW-32 (mg/L)



### Boxplot by Season

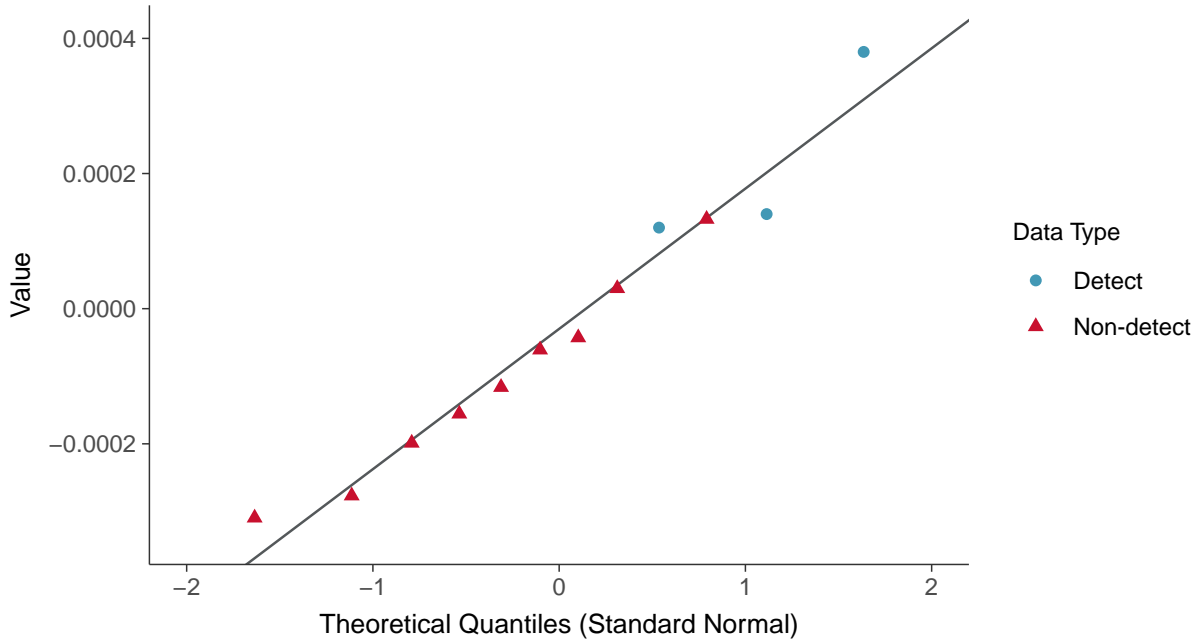
Lead, MW-32 (mg/L)





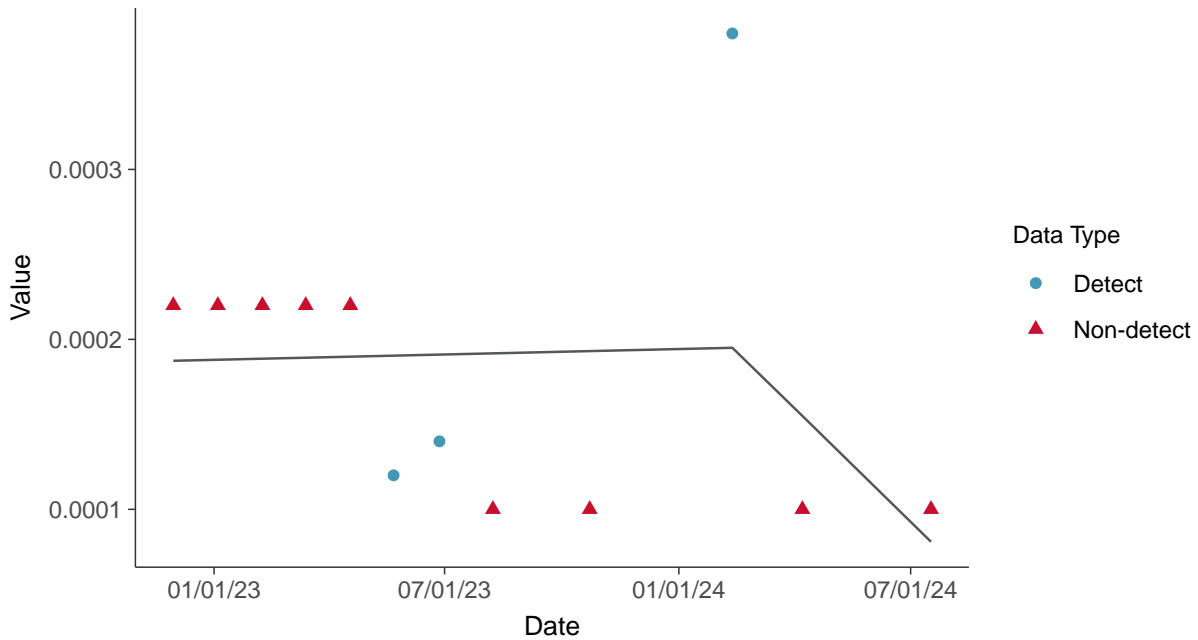
### Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear

Lead, MW-32 (mg/L)

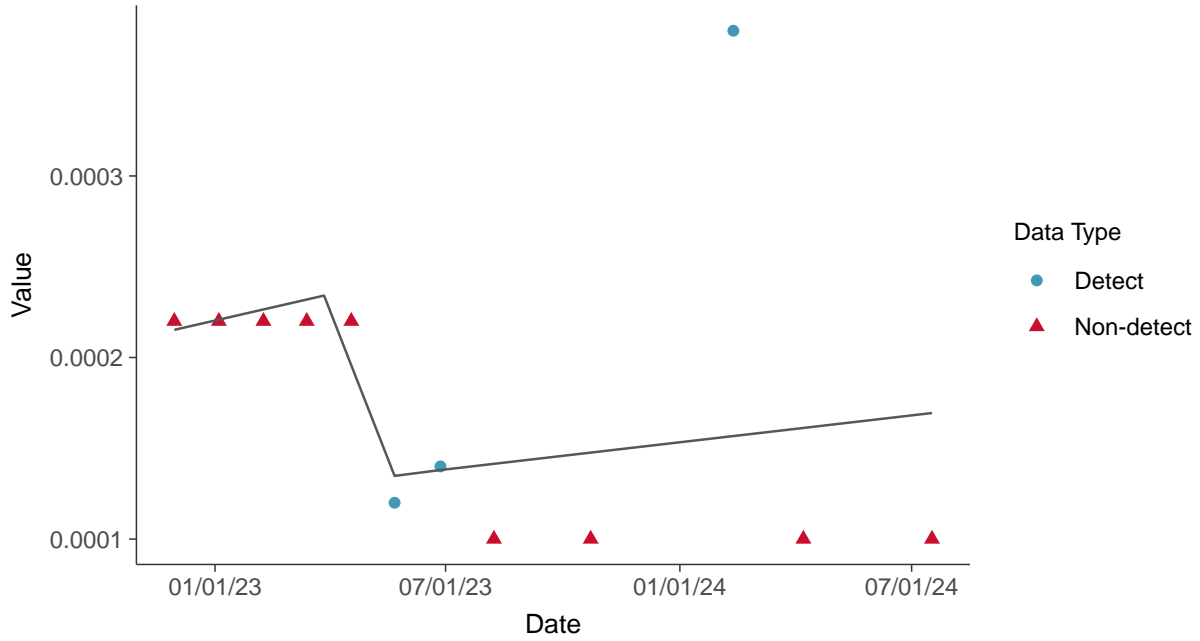






### Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-32 (mg/L)



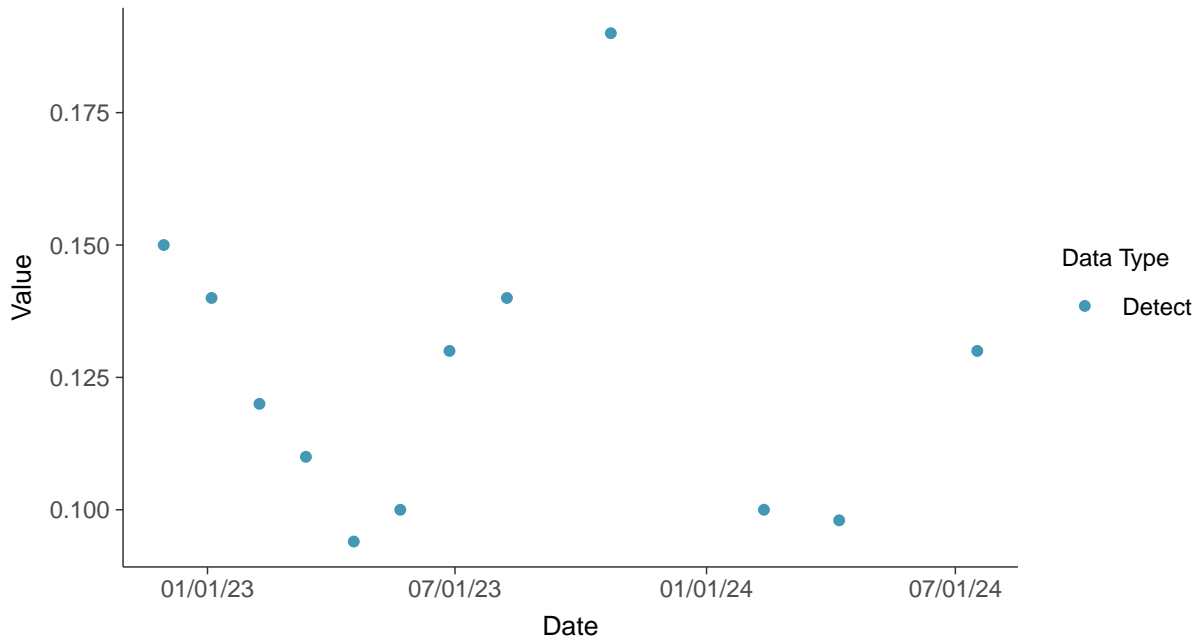


### Appendix IV: Lithium, MW-32

ID: 42\_1\_5\_116

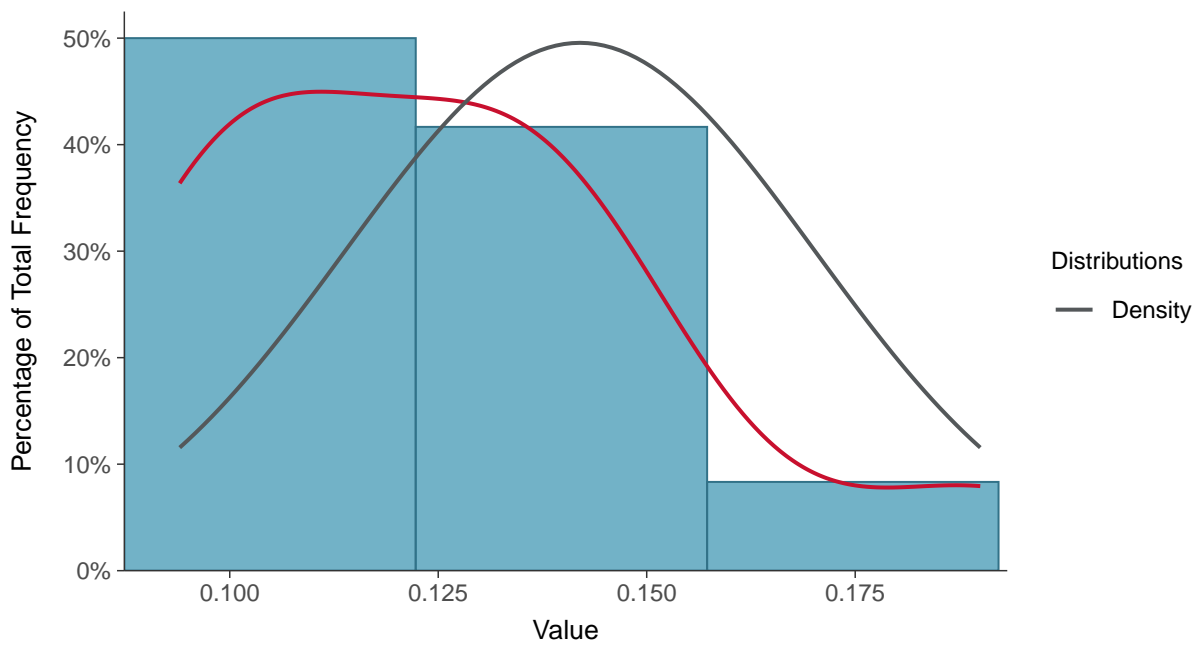
#### Scatter Plot

Lithium, MW-32 (mg/L)



#### Histogram

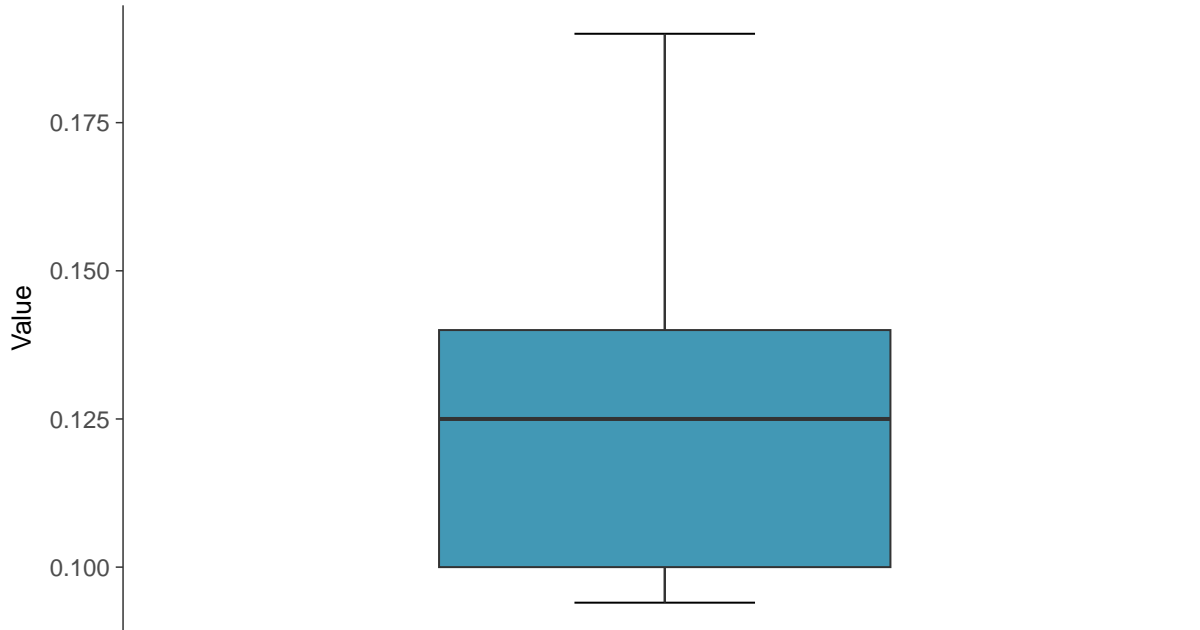
Lithium, MW-32 (mg/L)





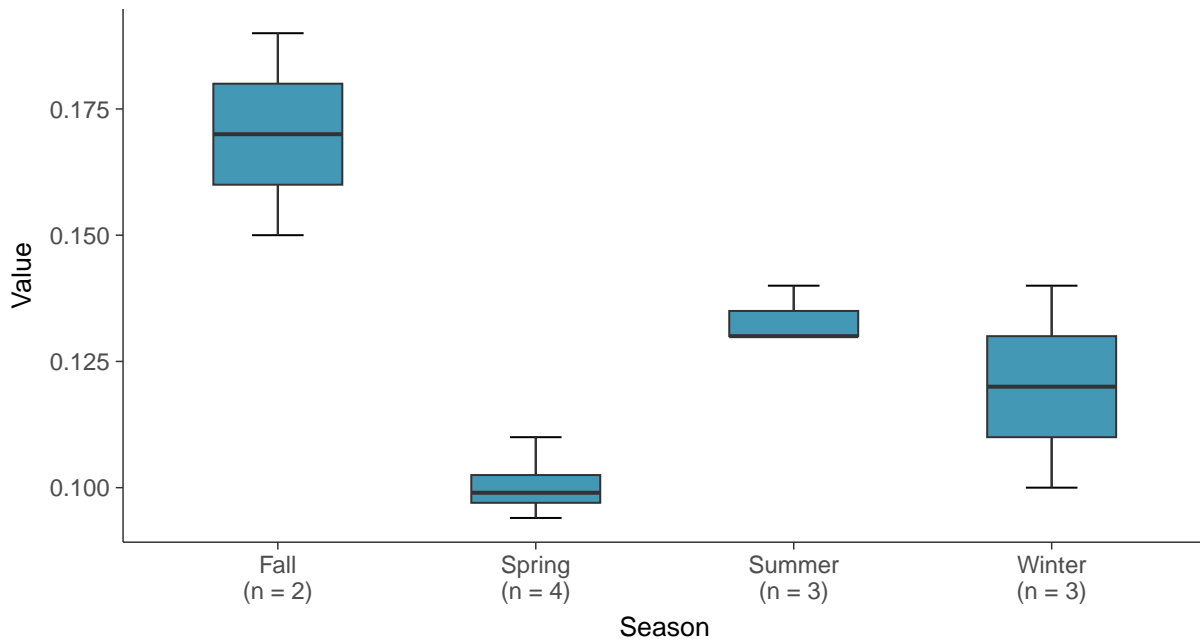
### Boxplot

Lithium, MW-32 (mg/L)



### Boxplot by Season

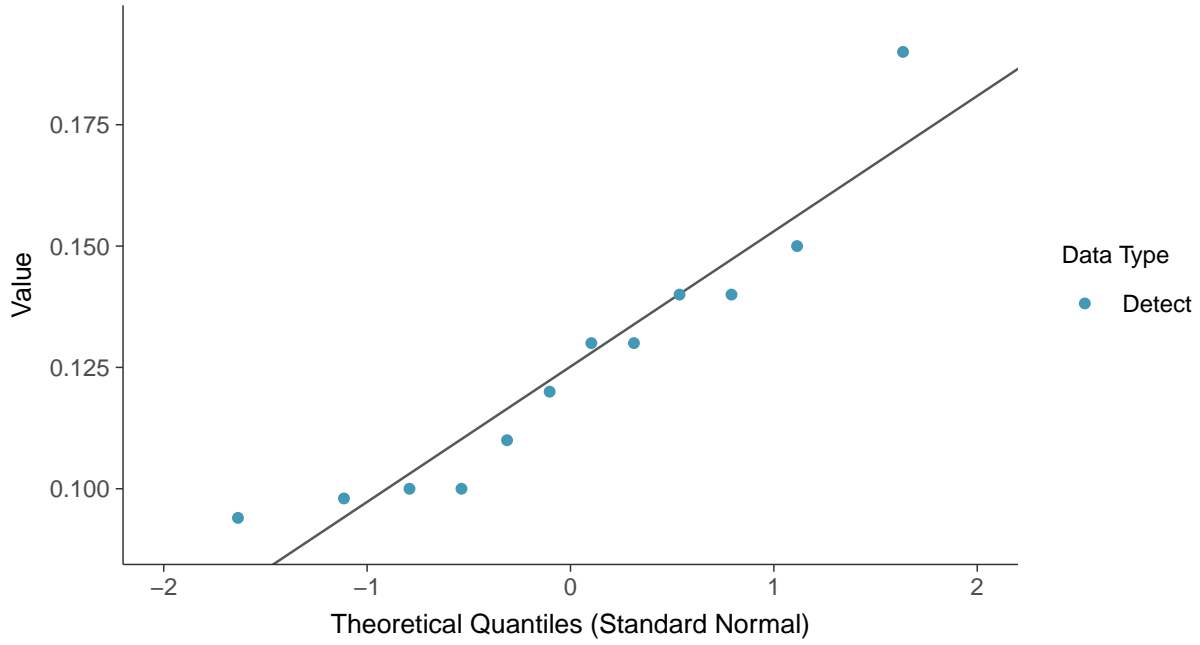
Lithium, MW-32 (mg/L)





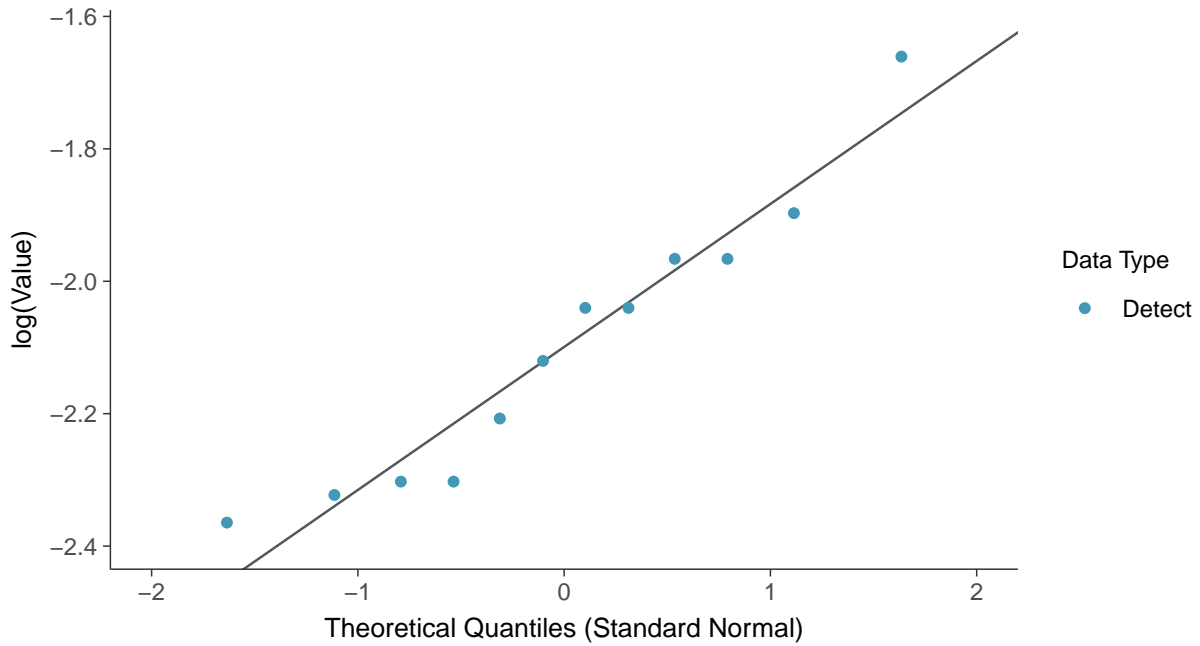
### Normal Q-Q plot

Lithium, MW-32 (mg/L)



### Lognormal Q-Q plot

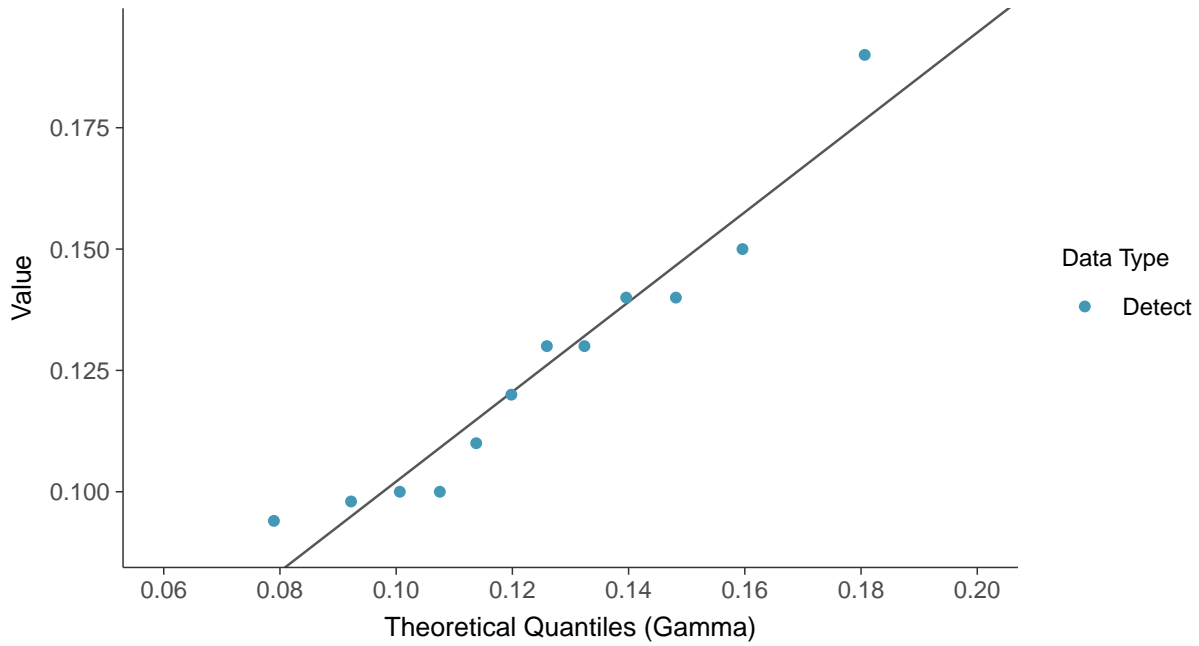
Lithium, MW-32 (mg/L)





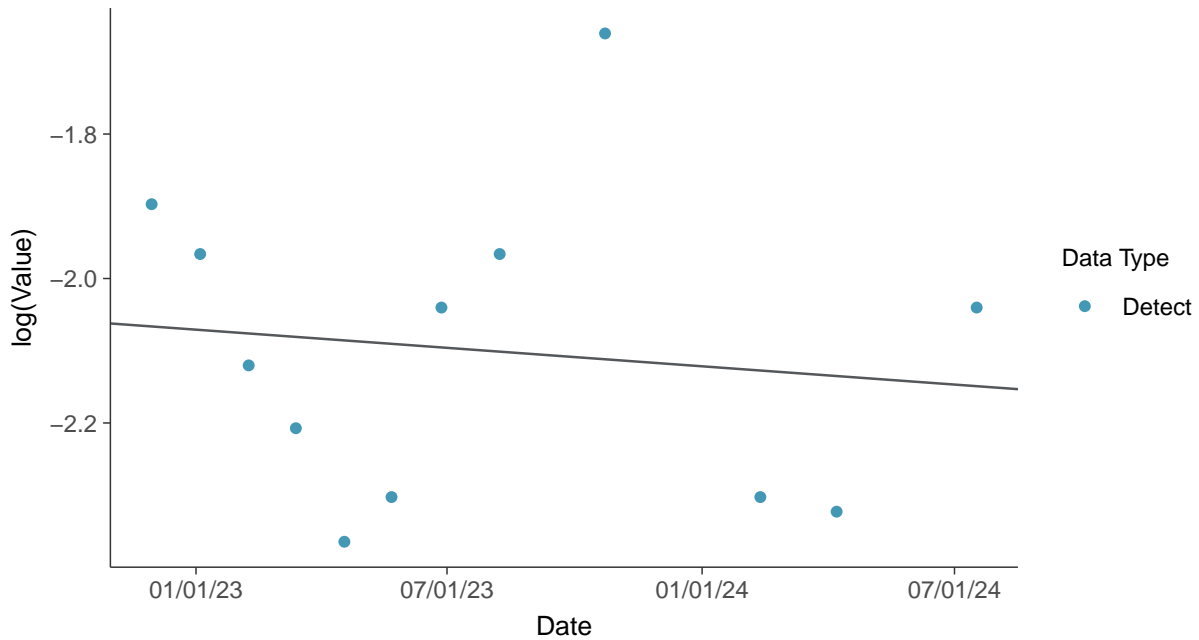
### Gamma Q-Q plot

Lithium, MW-32 (mg/L)



### Trend Regression: Lognormal MLE

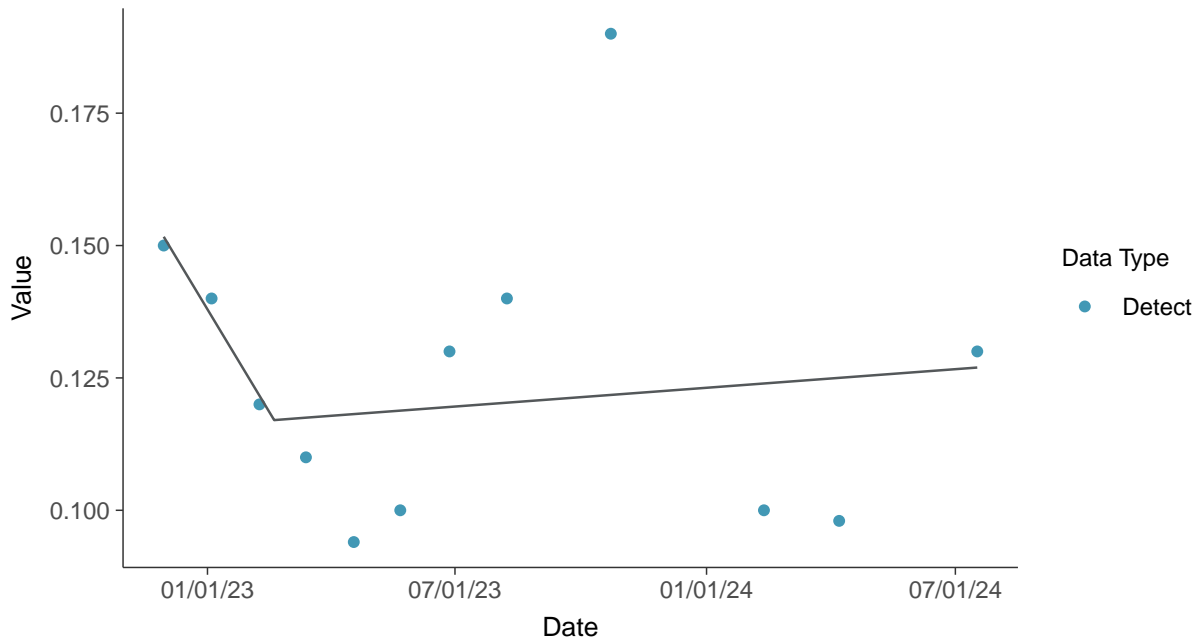
Lithium, MW-32 (mg/L)





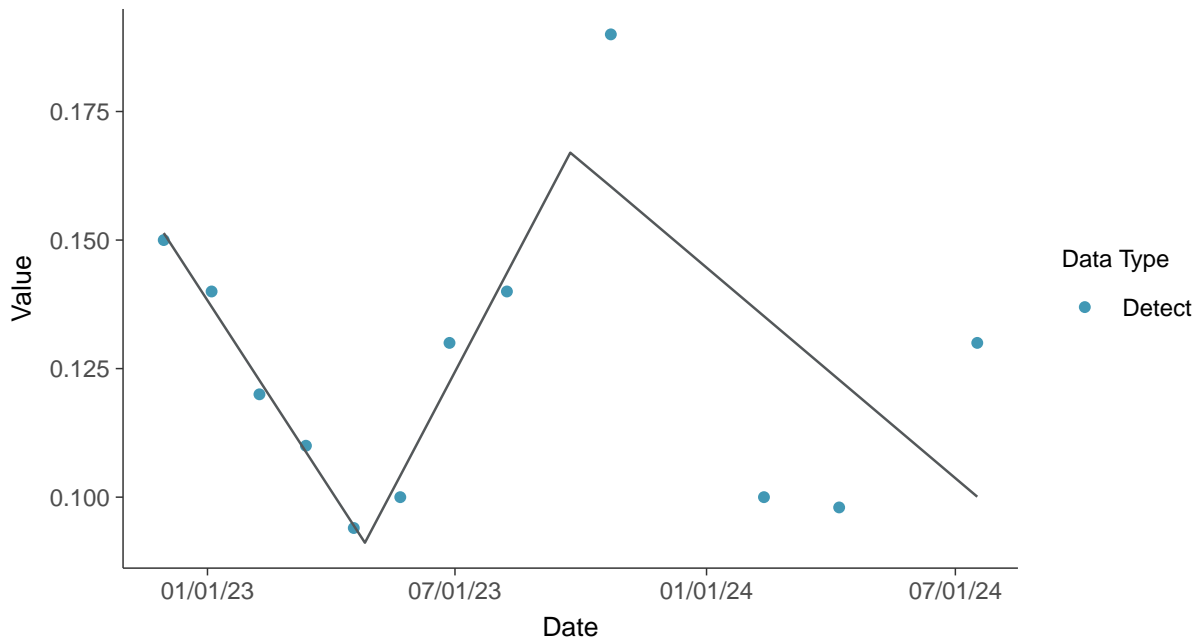
### Trend Regression: Piecewise Linear-Linear

Lithium, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear-Linear

Lithium, MW-32 (mg/L)



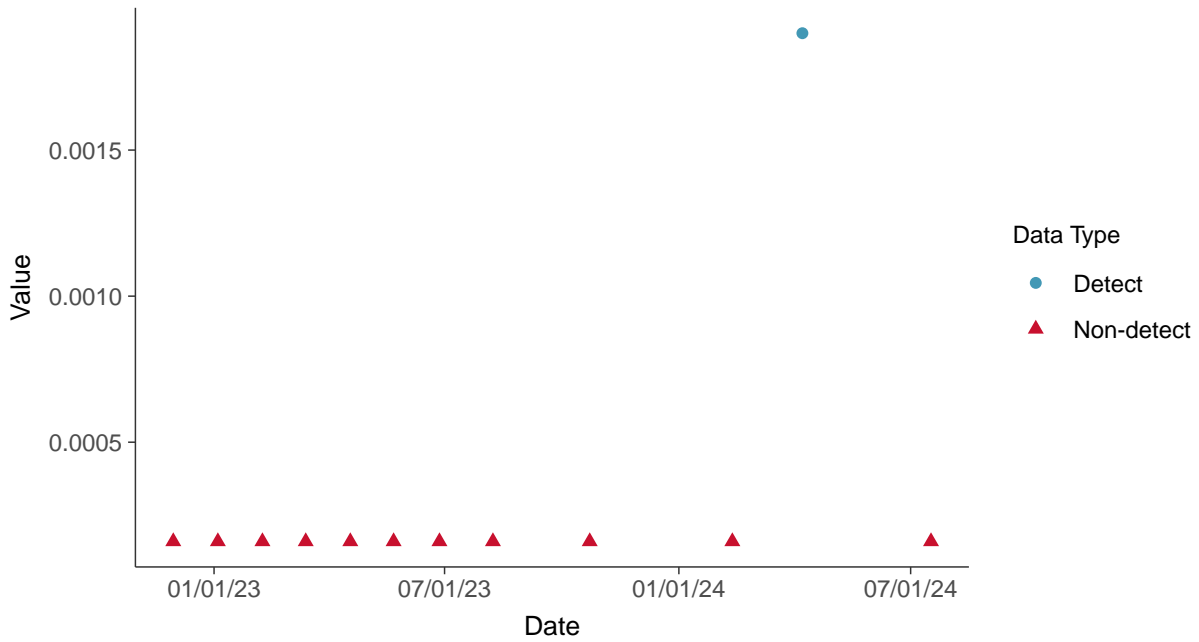


### Appendix IV: Mercury, MW-32

ID: 42\_1\_5\_117

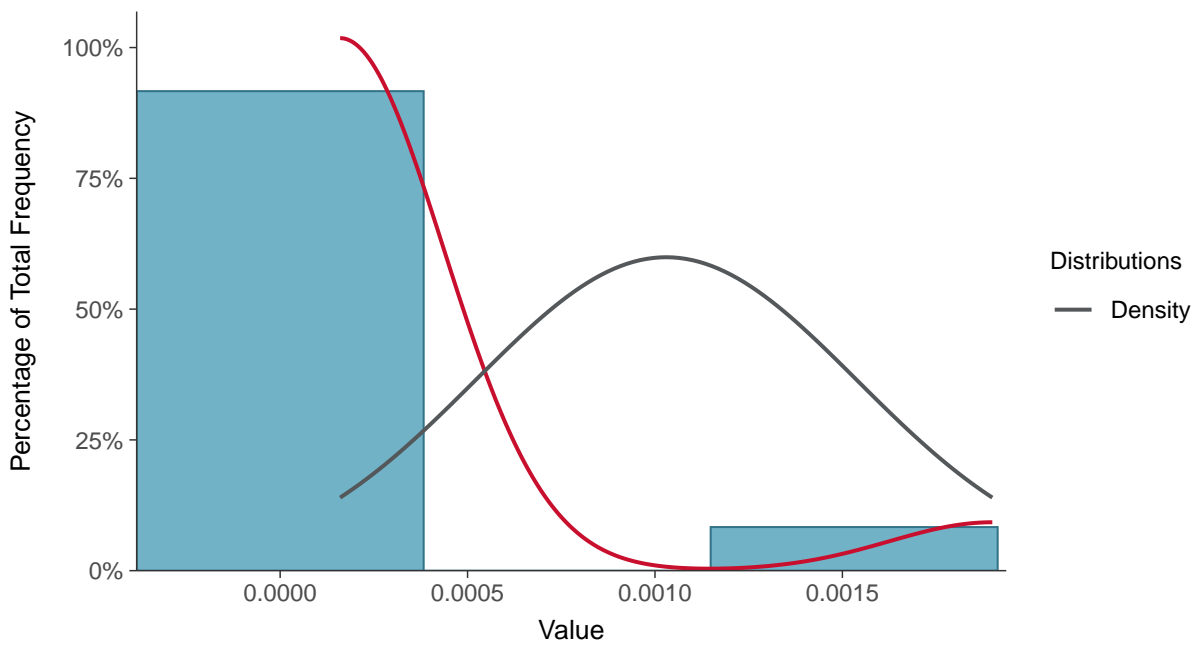
#### Scatter Plot

Mercury, MW-32 (mg/L)



#### Histogram

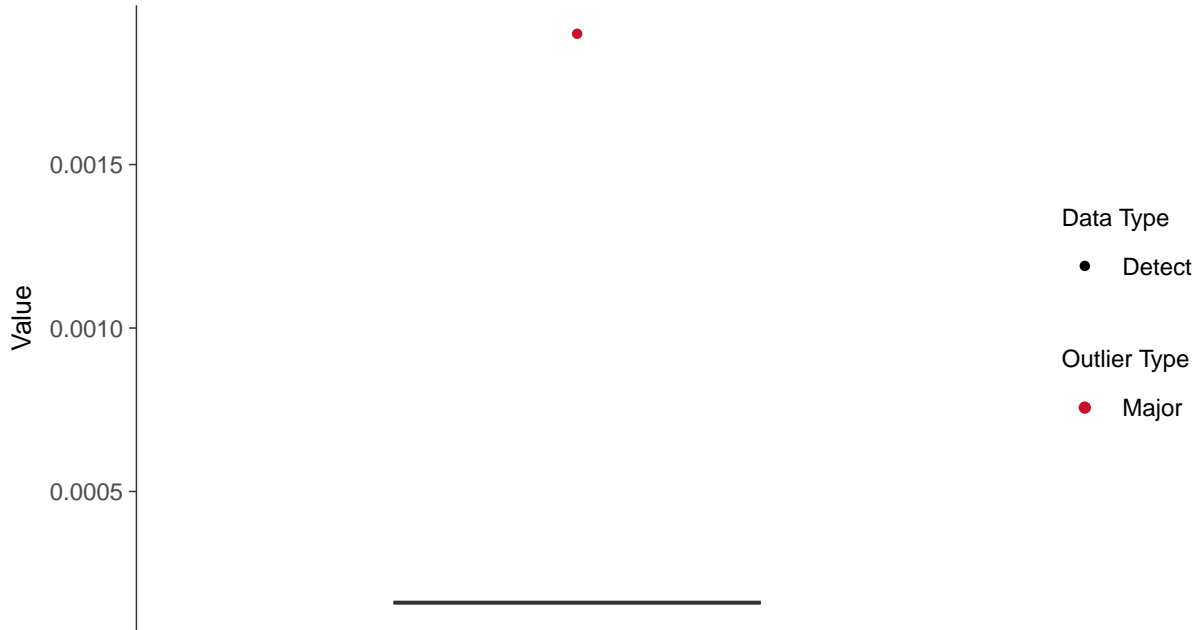
Mercury, MW-32 (mg/L)





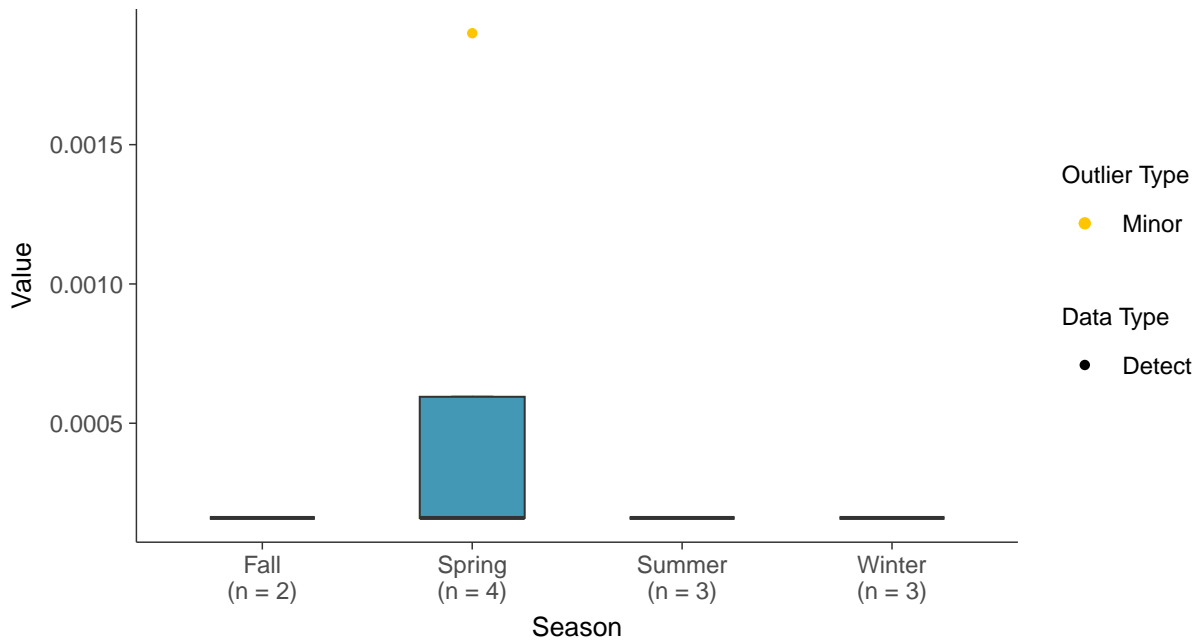
### Boxplot

Mercury, MW-32 (mg/L)



### Boxplot by Season

Mercury, MW-32 (mg/L)

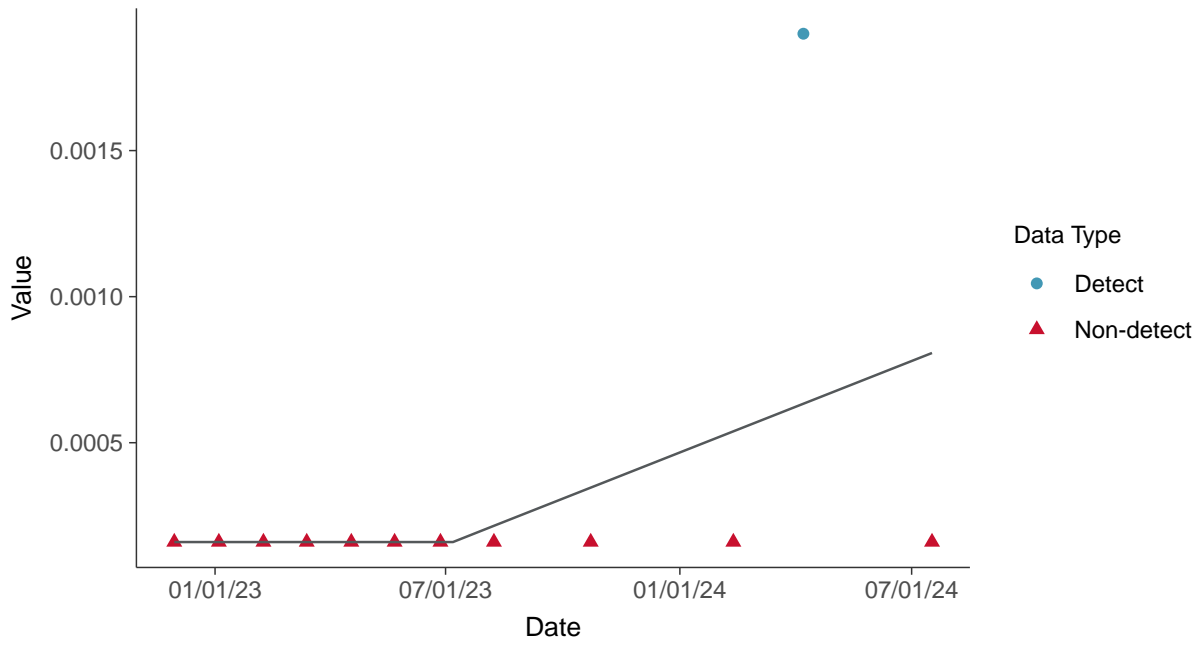






### Trend Regression: Piecewise Linear-Linear

Mercury, MW-32 (mg/L)



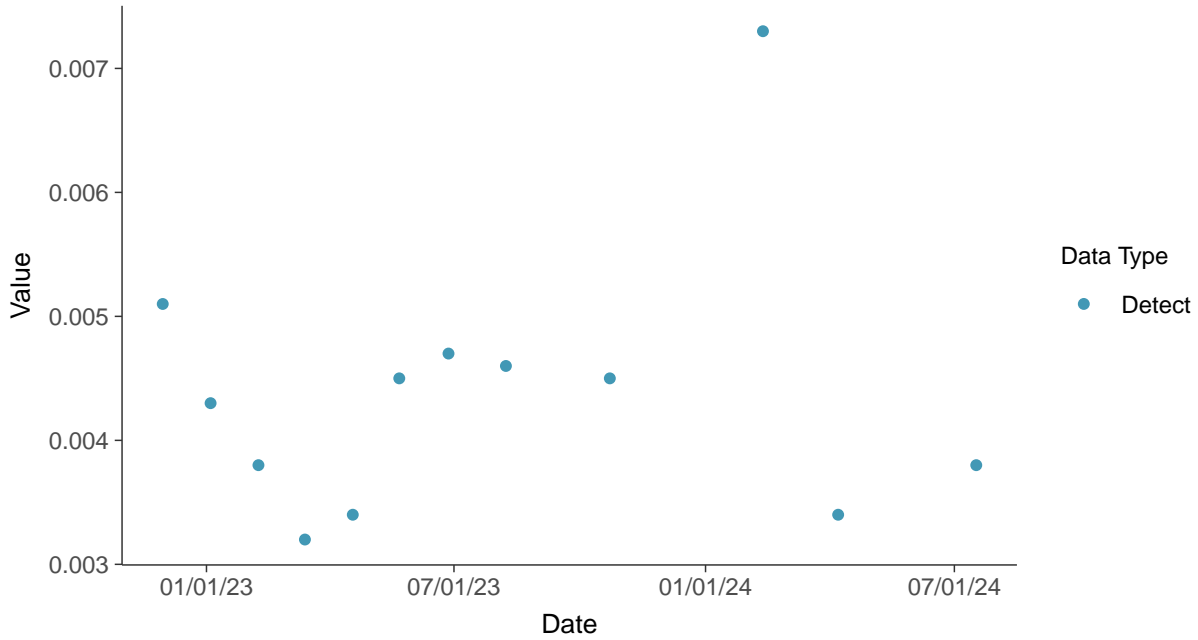


## Appendix IV: Molybdenum, MW-32

ID: 42\_1\_5\_118

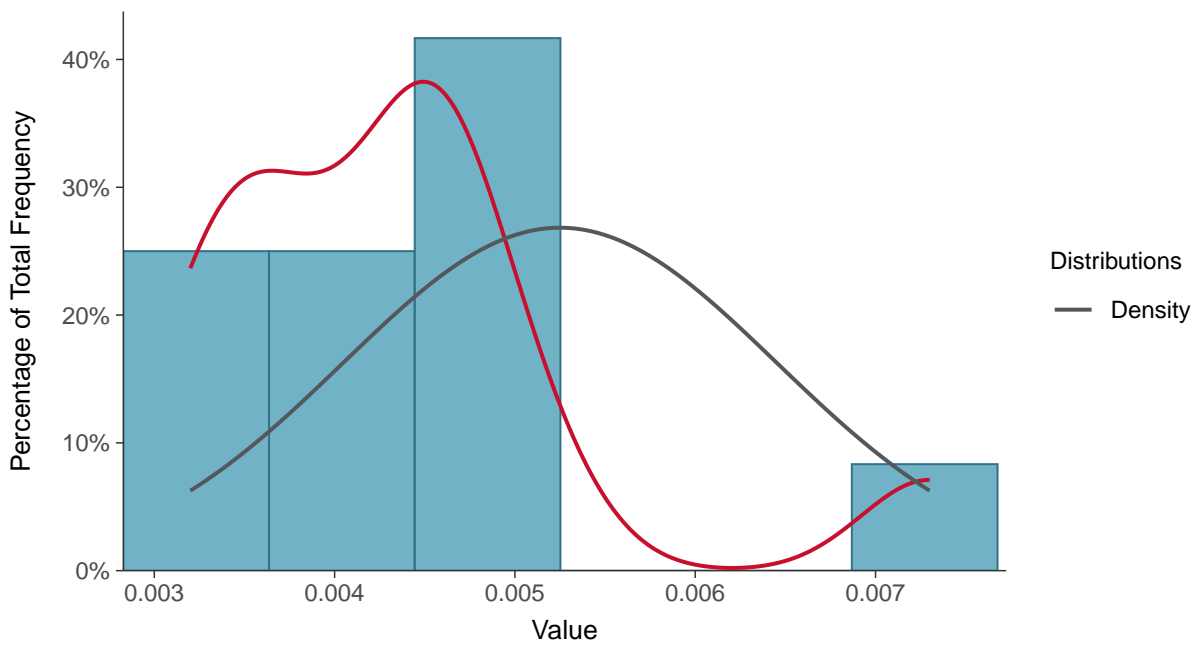
### Scatter Plot

Molybdenum, MW-32 (mg/L)



### Histogram

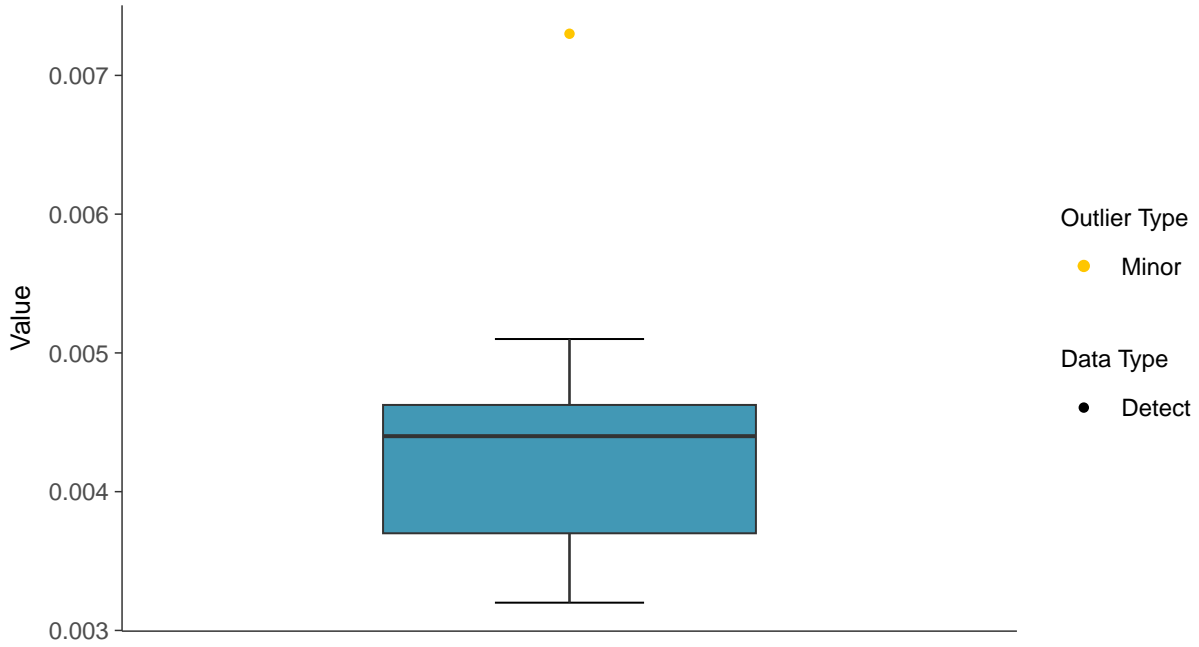
Molybdenum, MW-32 (mg/L)





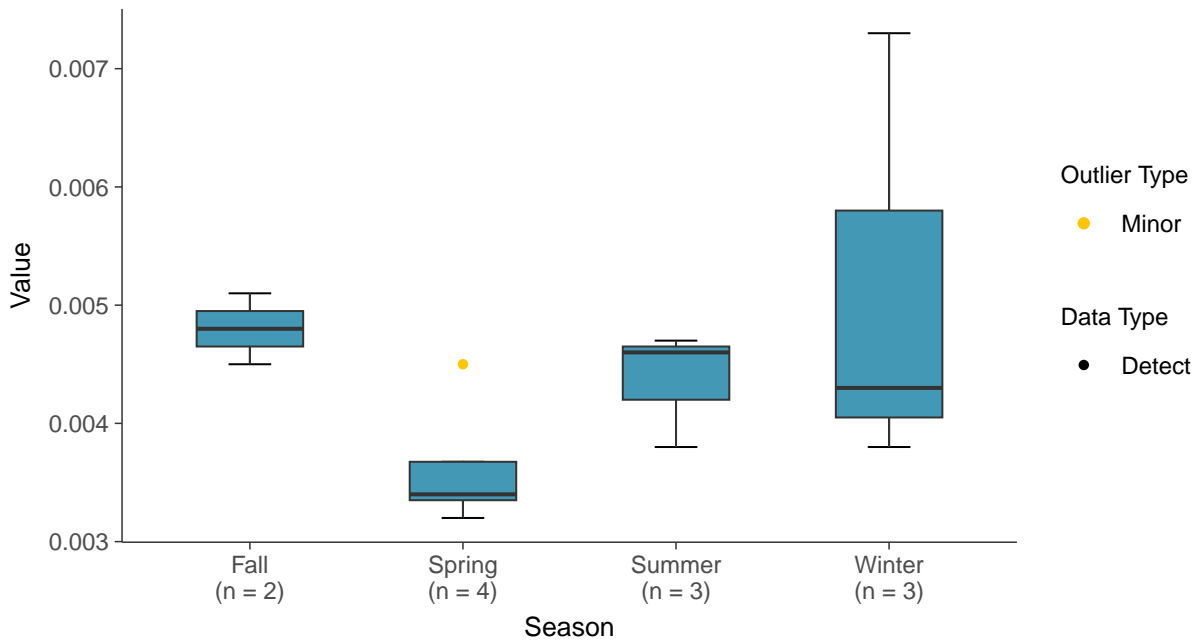
### Boxplot

Molybdenum, MW-32 (mg/L)



### Boxplot by Season

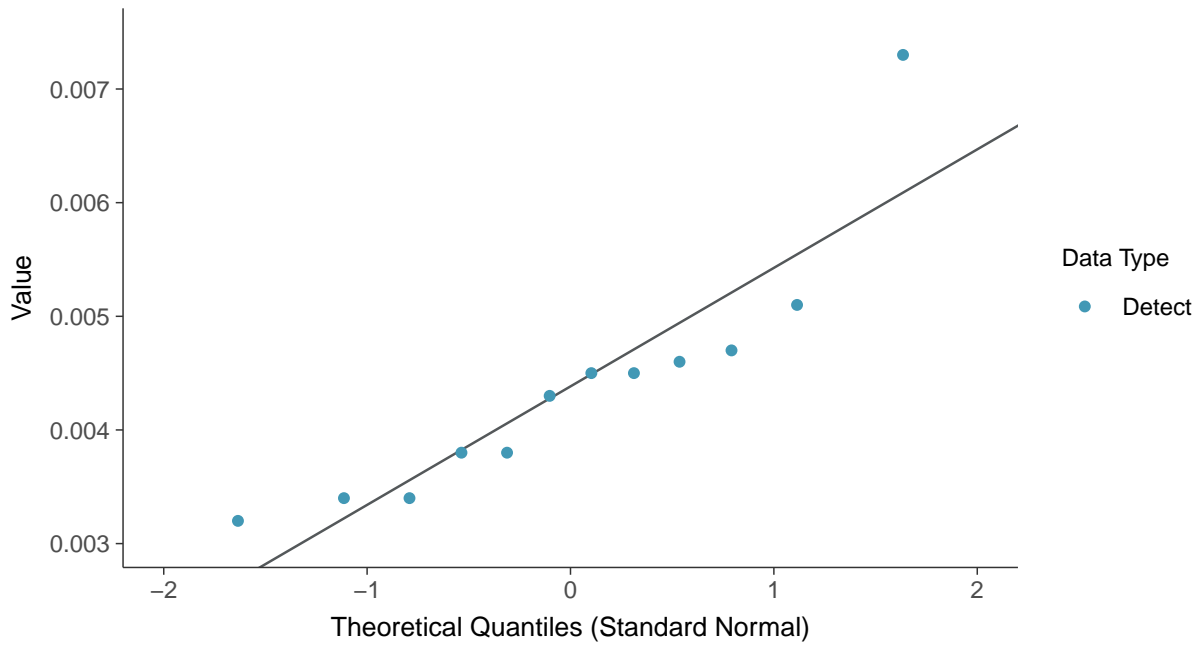
Molybdenum, MW-32 (mg/L)





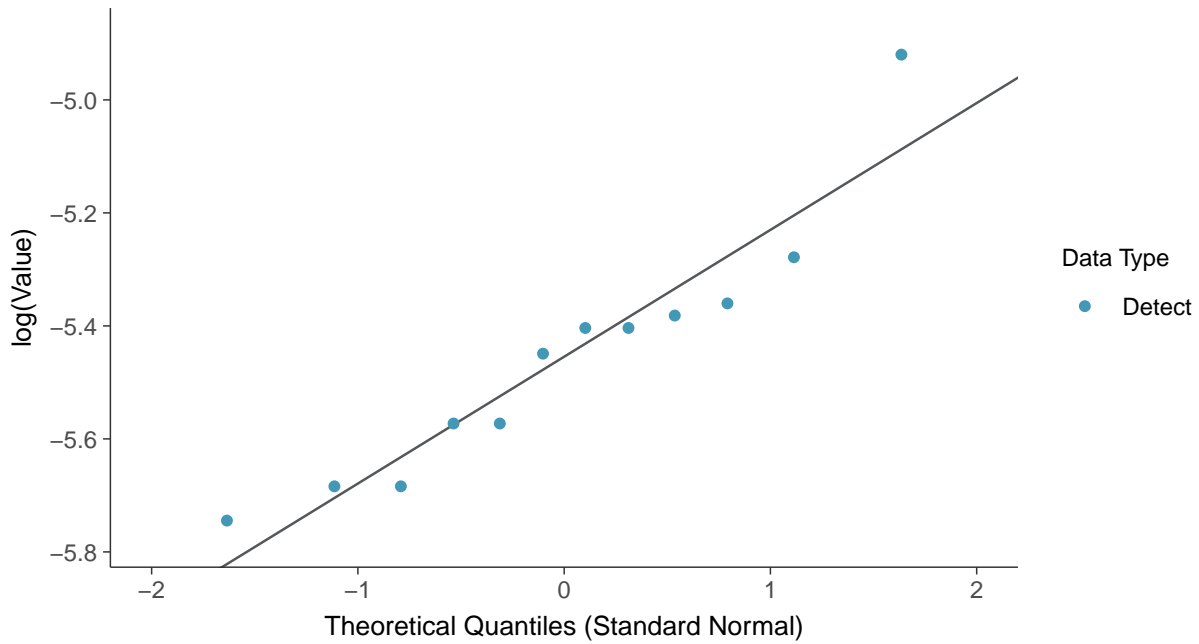
### Normal Q-Q plot

Molybdenum, MW-32 (mg/L)



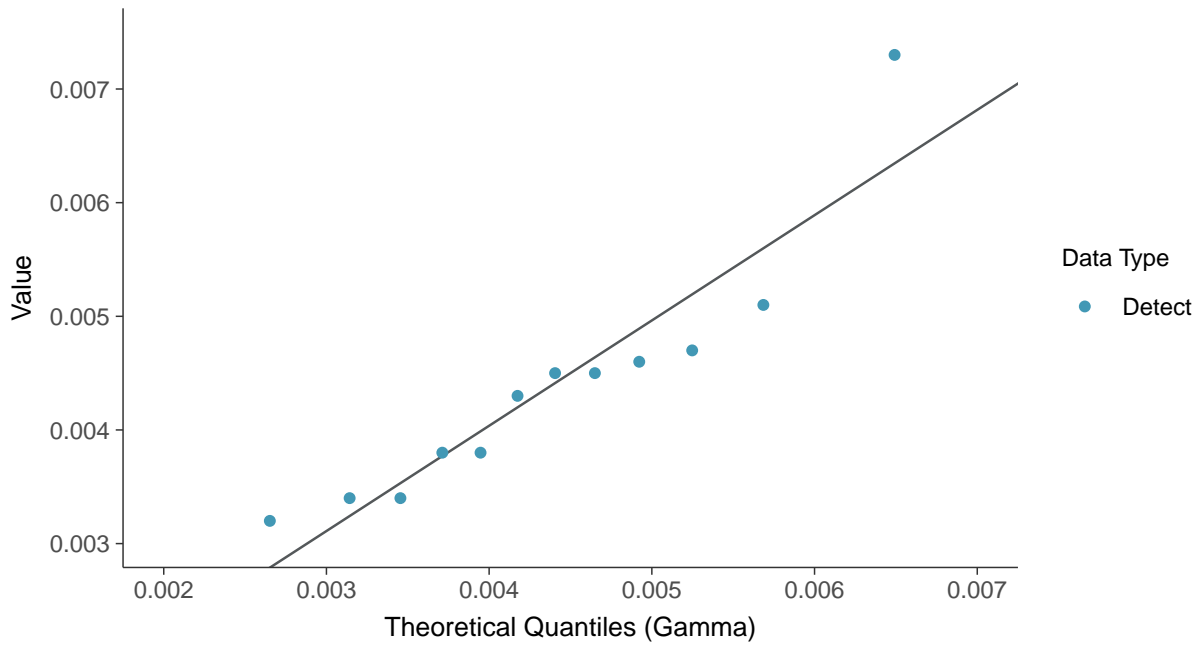
### Lognormal Q-Q plot

Molybdenum, MW-32 (mg/L)

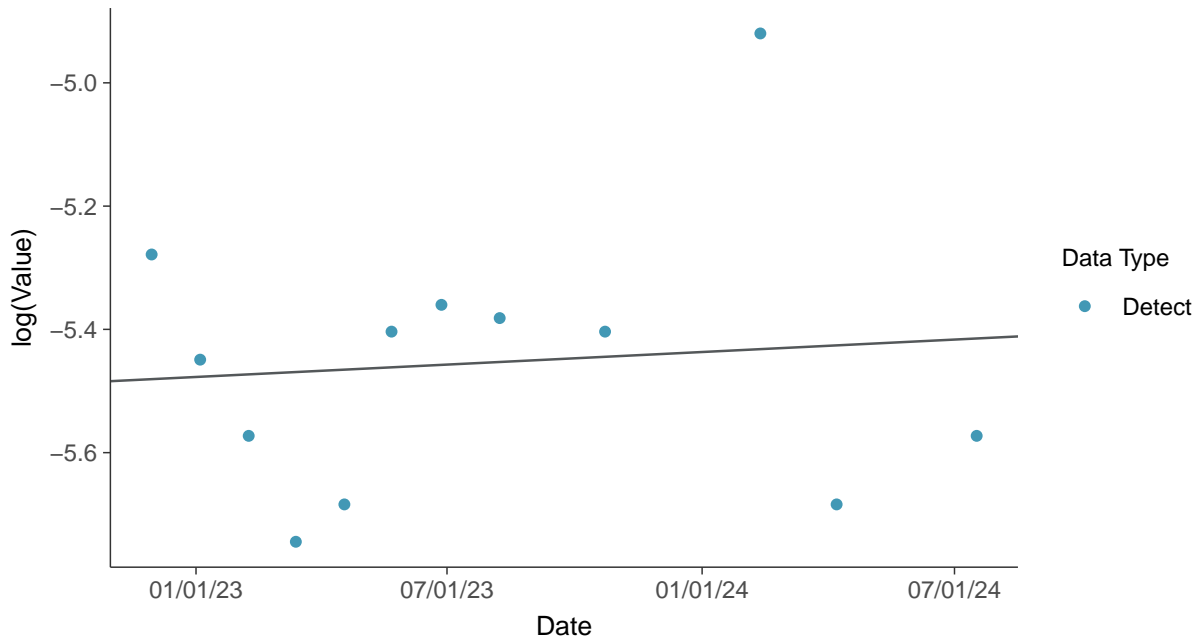




**Gamma Q-Q plot**  
Molybdenum, MW-32 (mg/L)

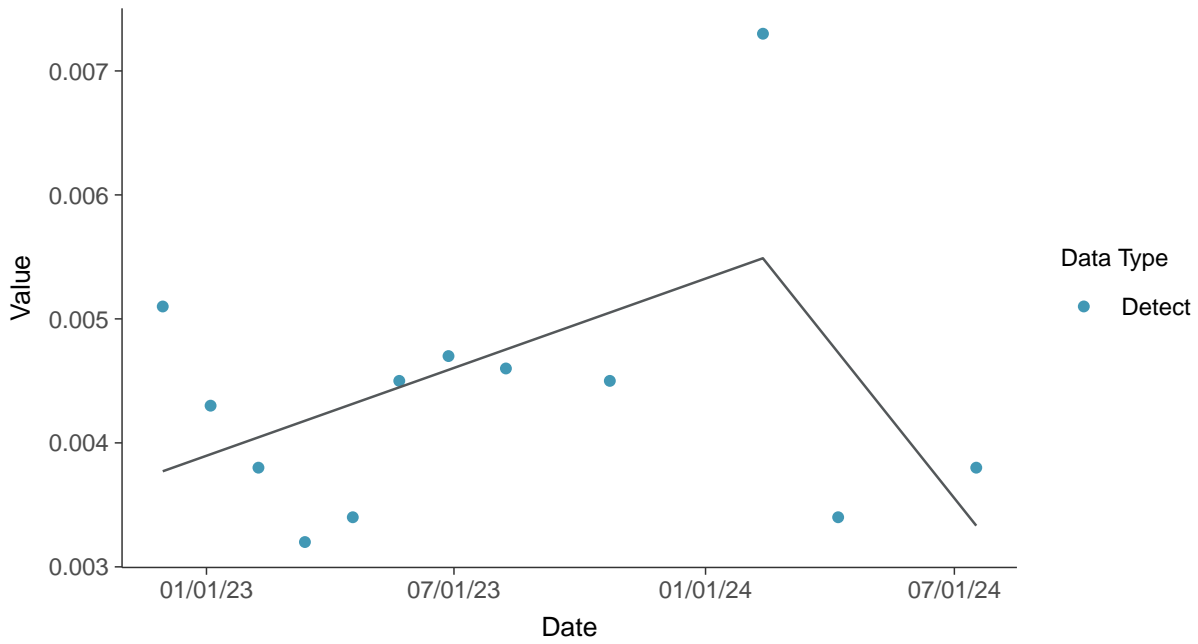


**Trend Regression: Lognormal MLE**  
Molybdenum, MW-32 (mg/L)

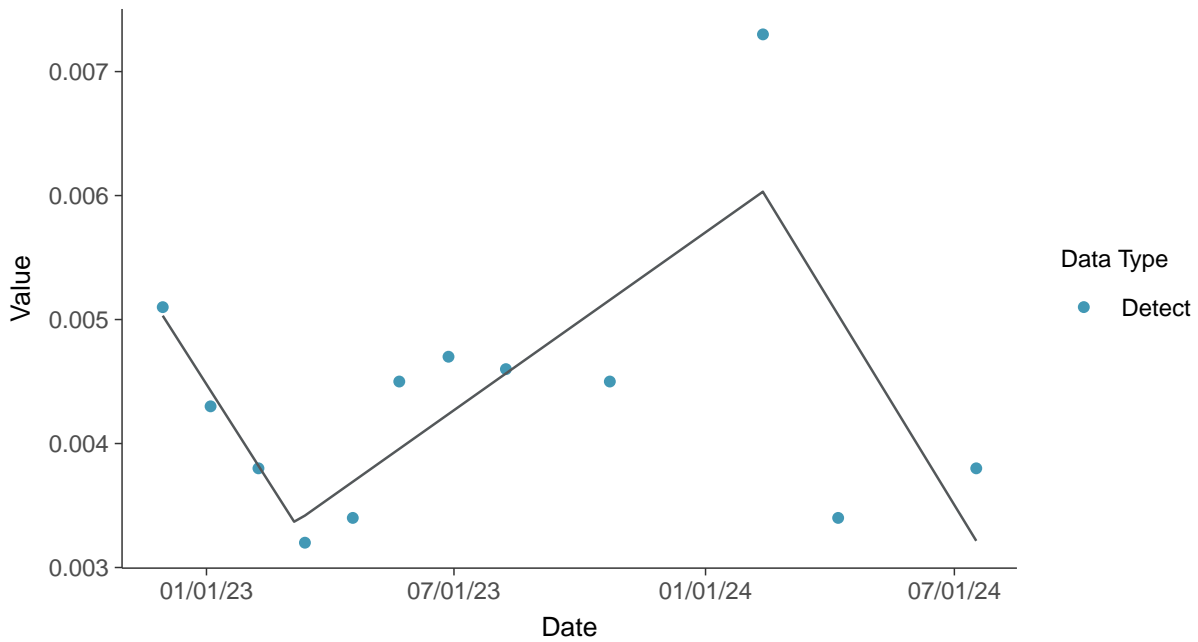




**Trend Regression: Piecewise Linear-Linear**  
Molybdenum, MW-32 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Molybdenum, MW-32 (mg/L)



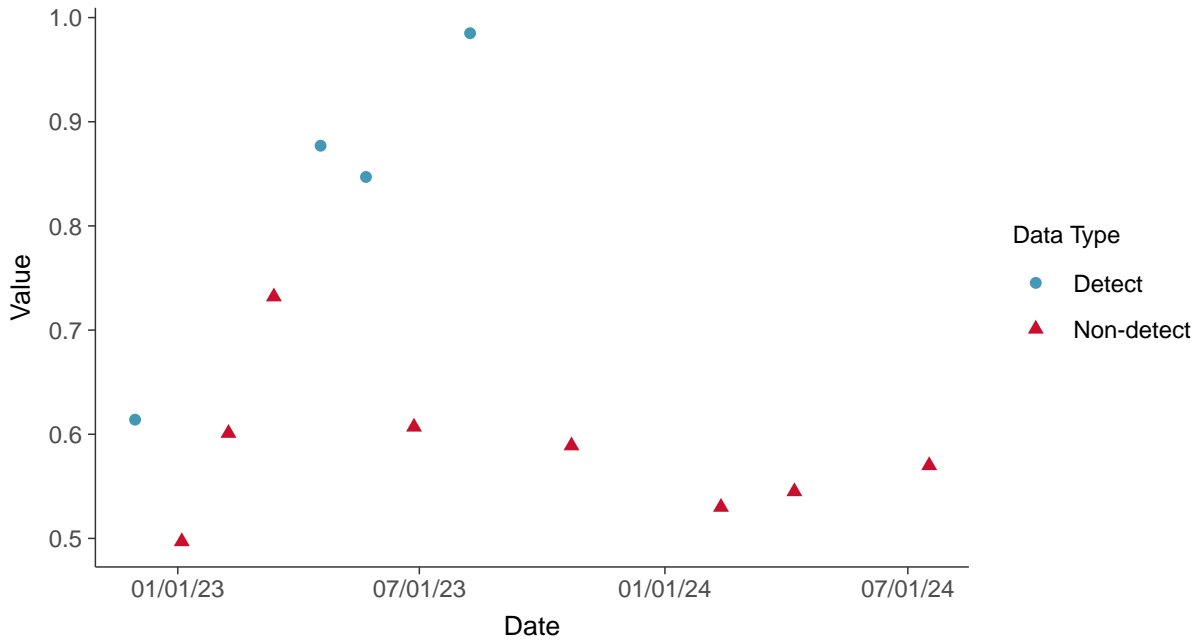


### Appendix IV: Radium 226 and 228, MW-32

ID: 42\_1\_5\_121

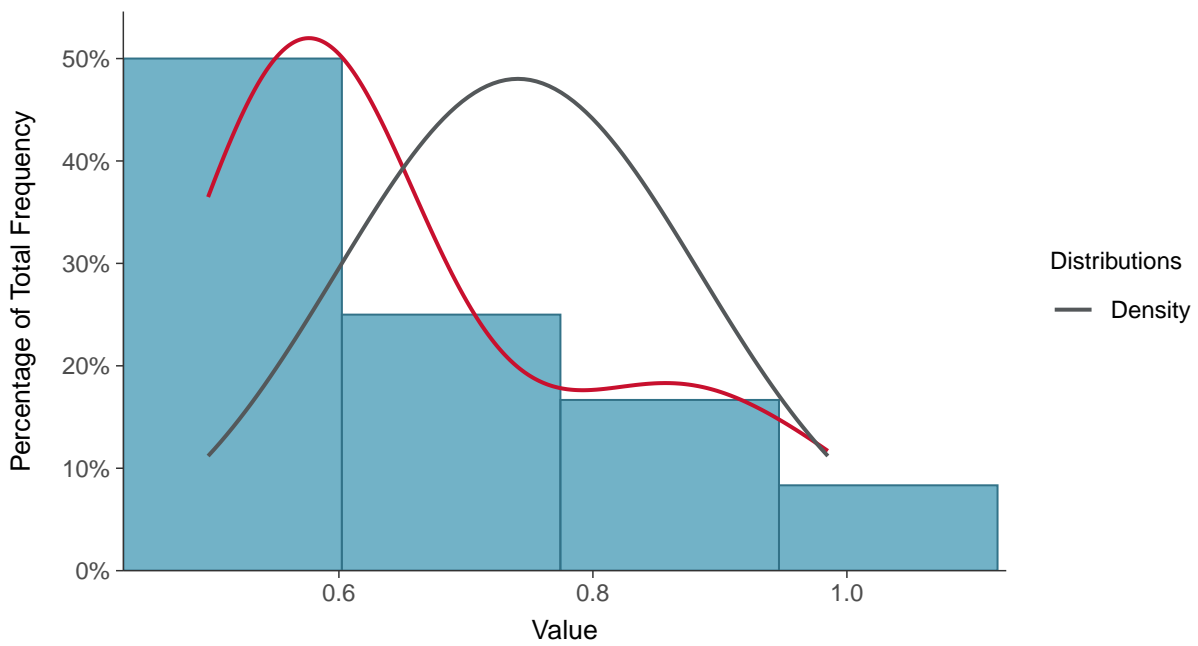
#### Scatter Plot

Radium 226 and 228, MW-32 (pCi/L)



#### Histogram

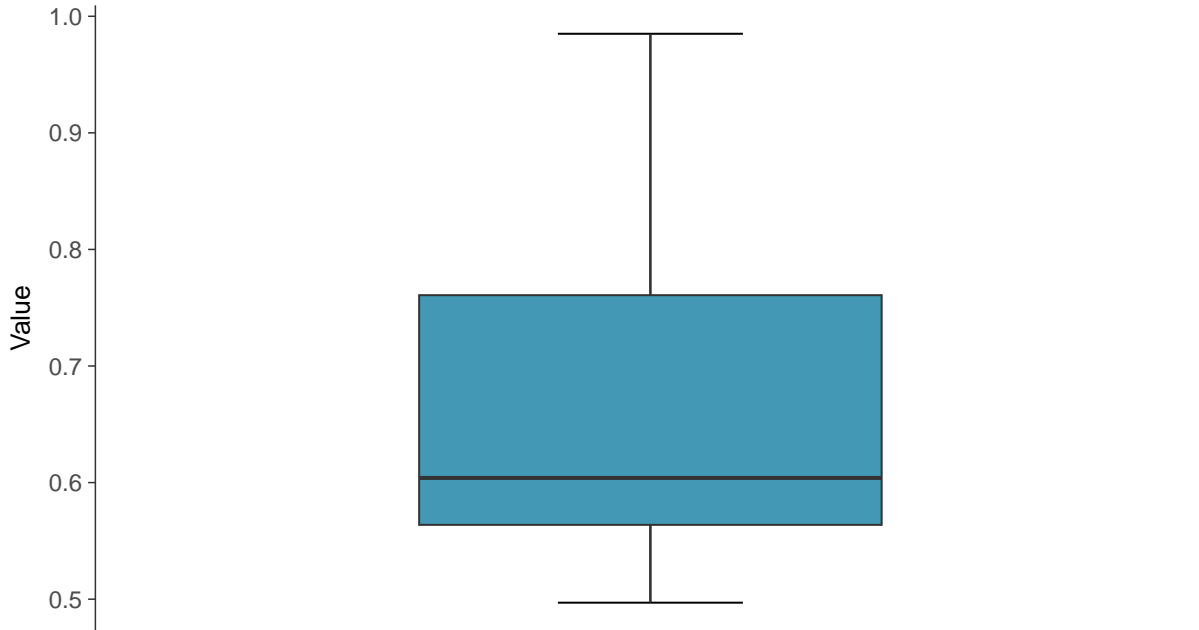
Radium 226 and 228, MW-32 (pCi/L)





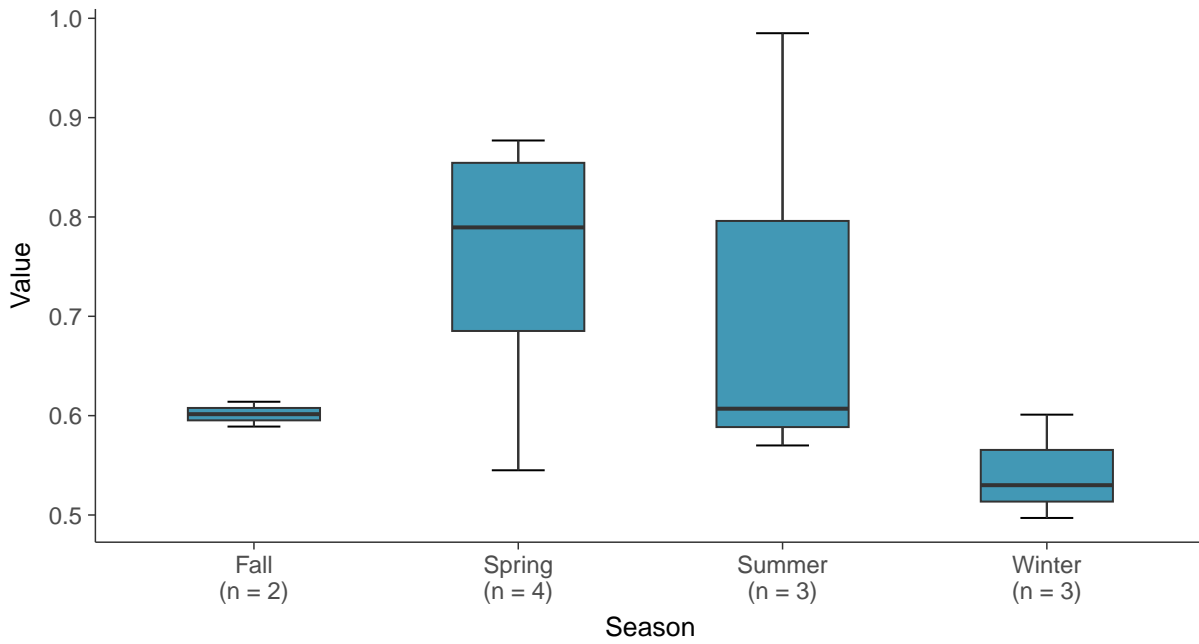
### Boxplot

Radium 226 and 228, MW-32 (pCi/L)



### Boxplot by Season

Radium 226 and 228, MW-32 (pCi/L)

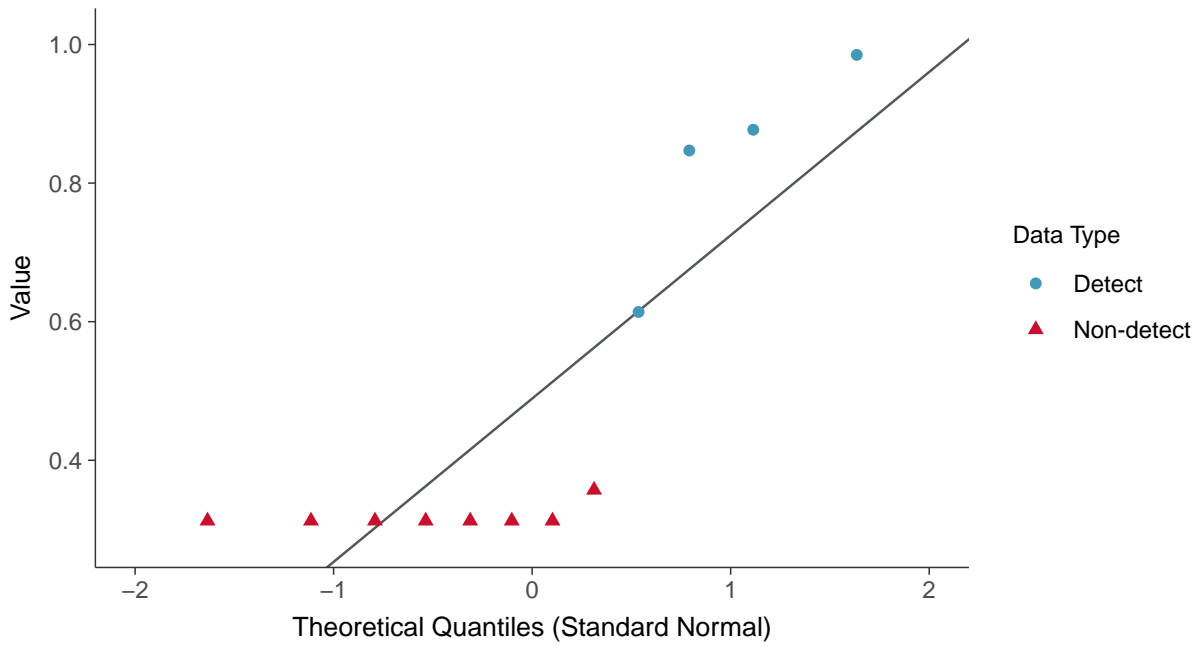






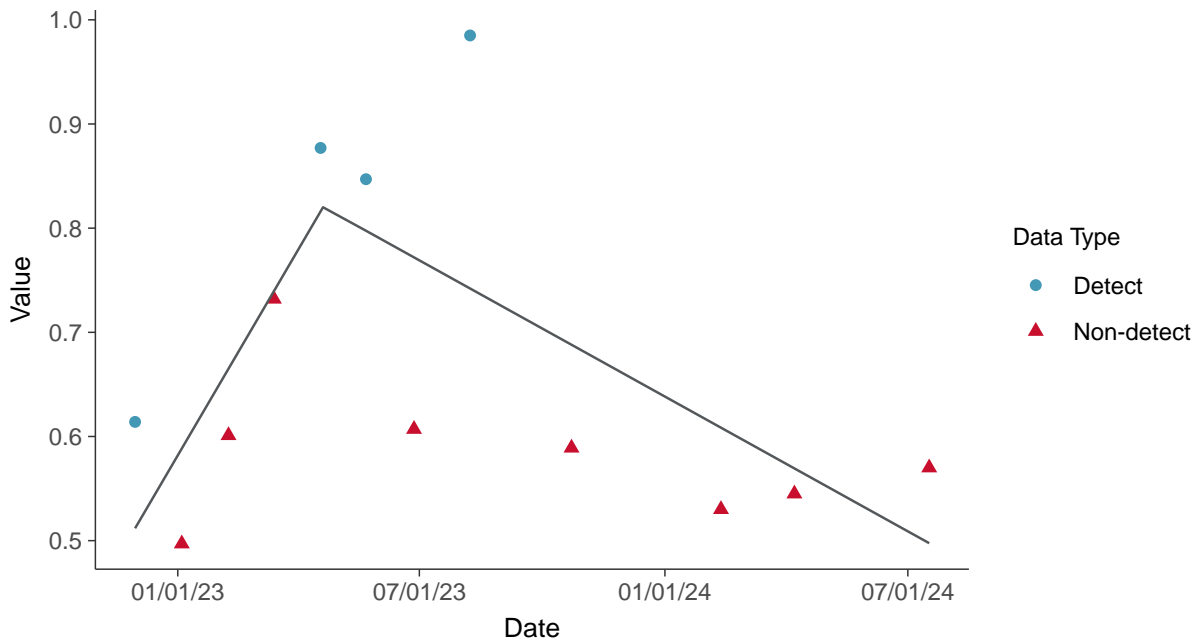
### Normal Q-Q plot using ROS Imputed Estimates

Radium 226 and 228, MW-32 (pCi/L)



### Trend Regression: Piecewise Linear-Linear

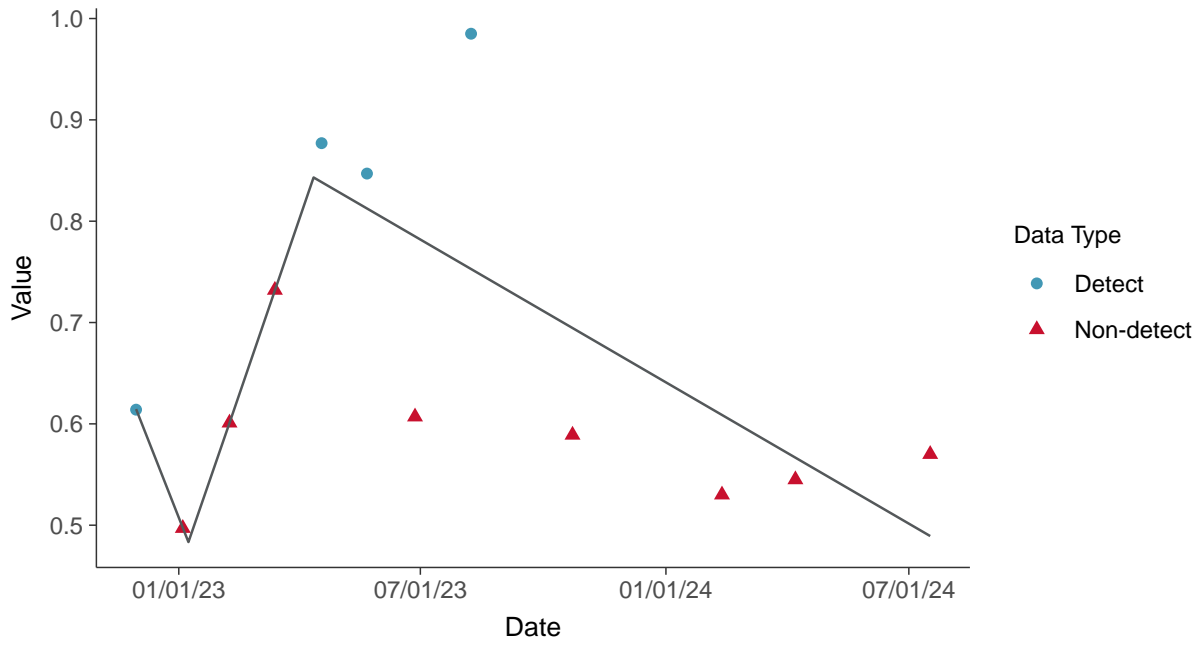
Radium 226 and 228, MW-32 (pCi/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Radium 226 and 228, MW-32 (pCi/L)



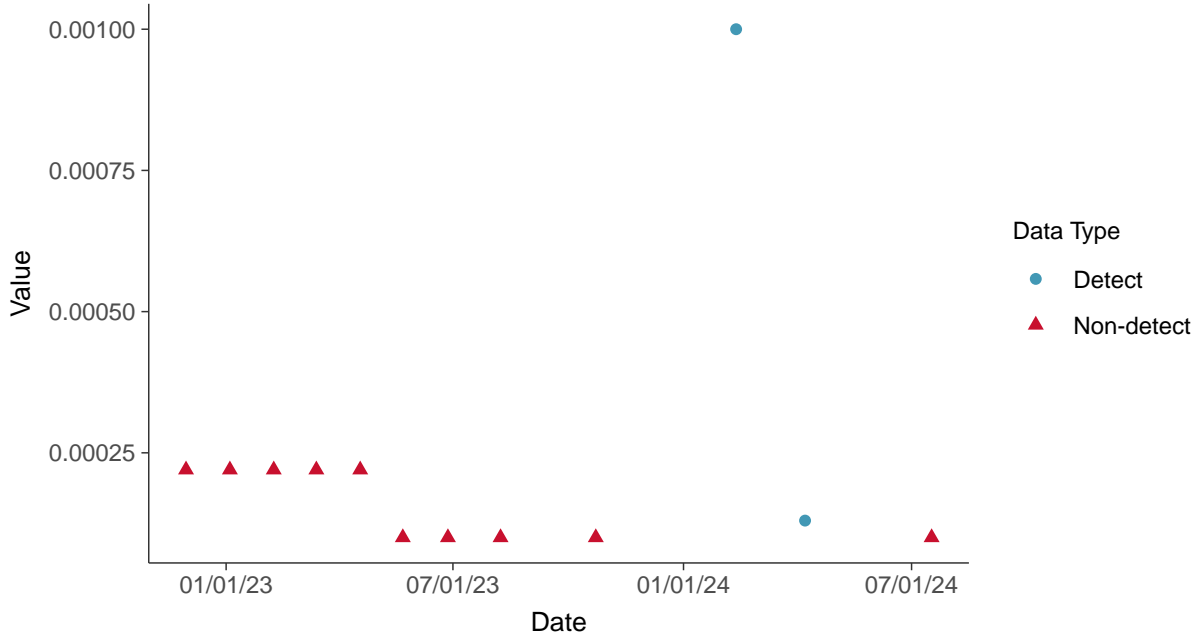


### Appendix IV: Selenium, MW-32

ID: 42\_1\_5\_122

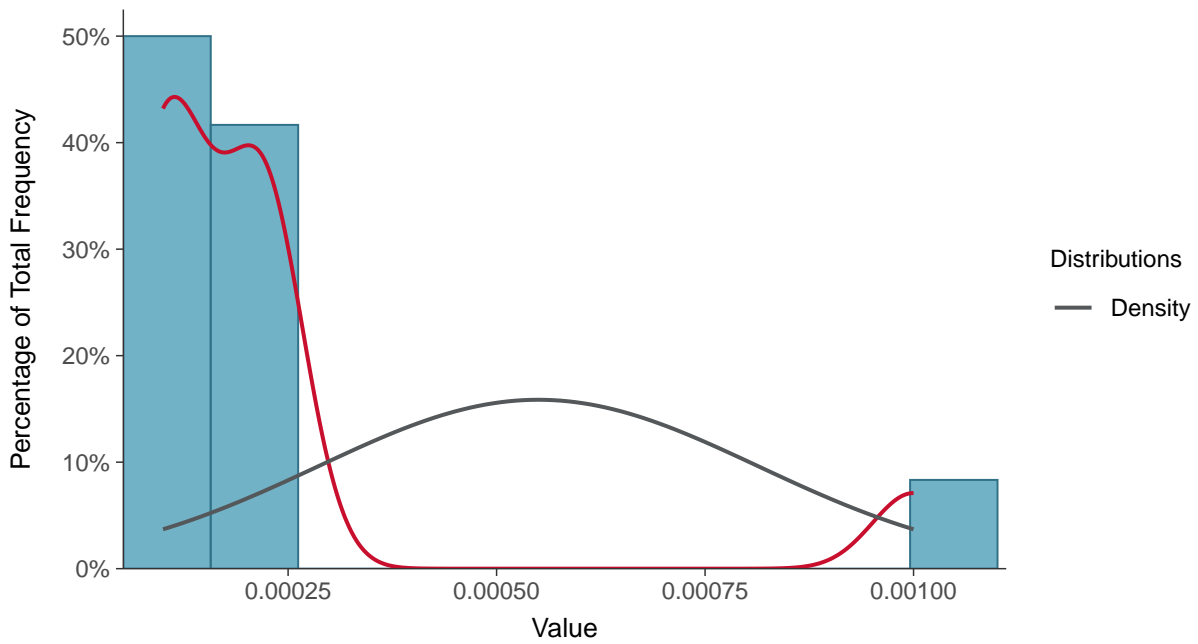
#### Scatter Plot

Selenium, MW-32 (mg/L)



#### Histogram

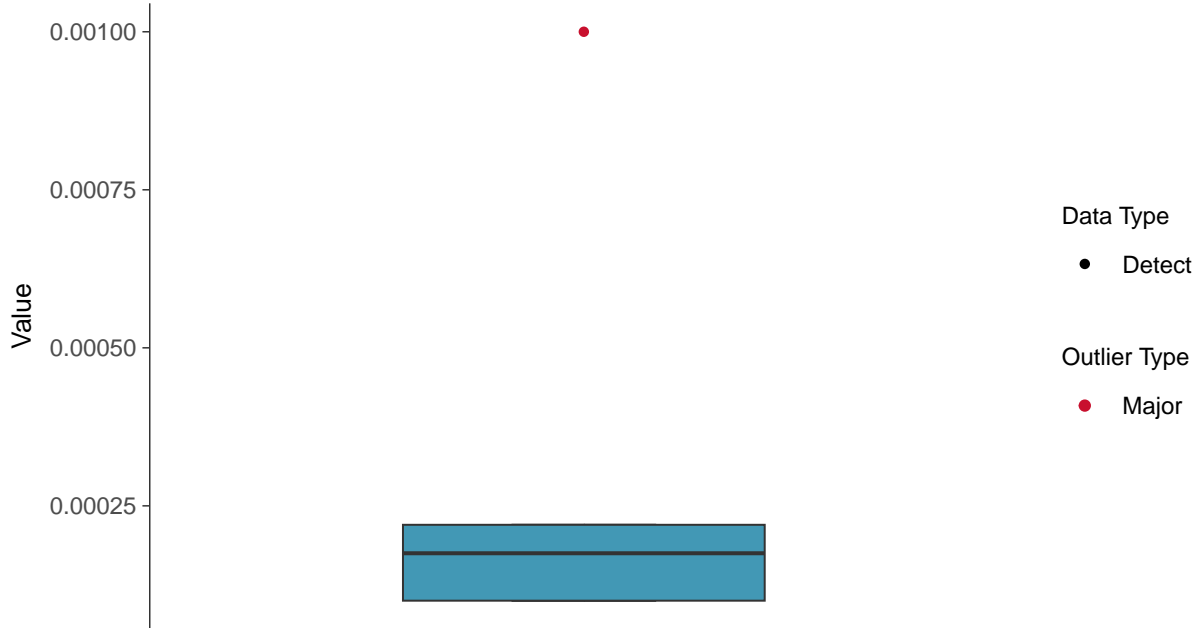
Selenium, MW-32 (mg/L)





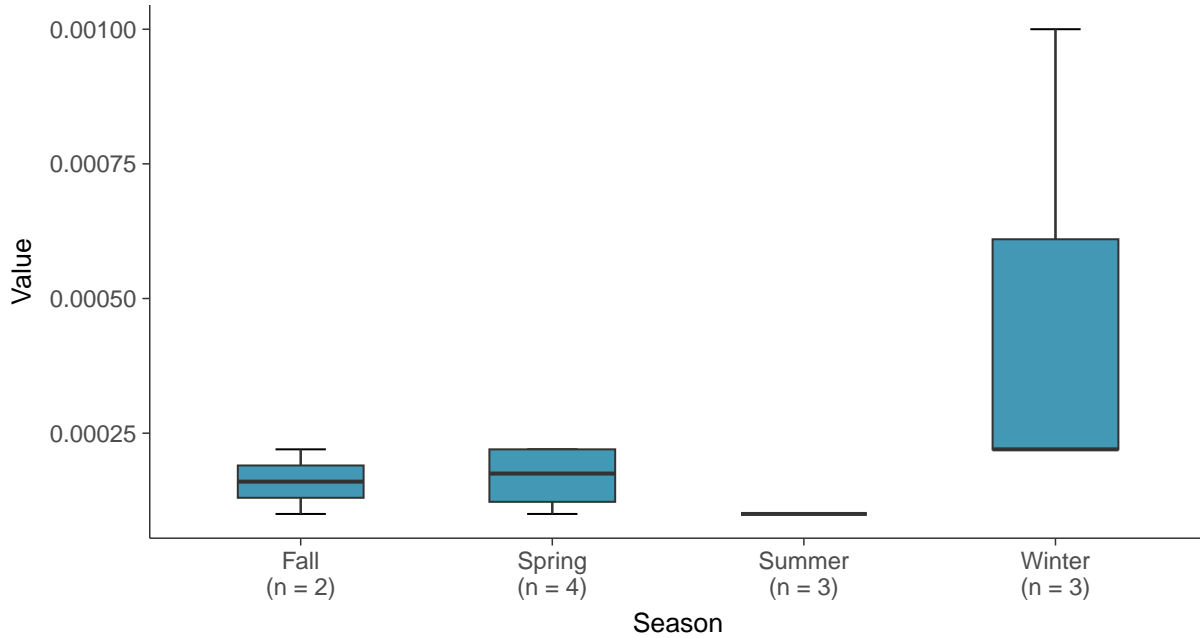
### Boxplot

Selenium, MW-32 (mg/L)



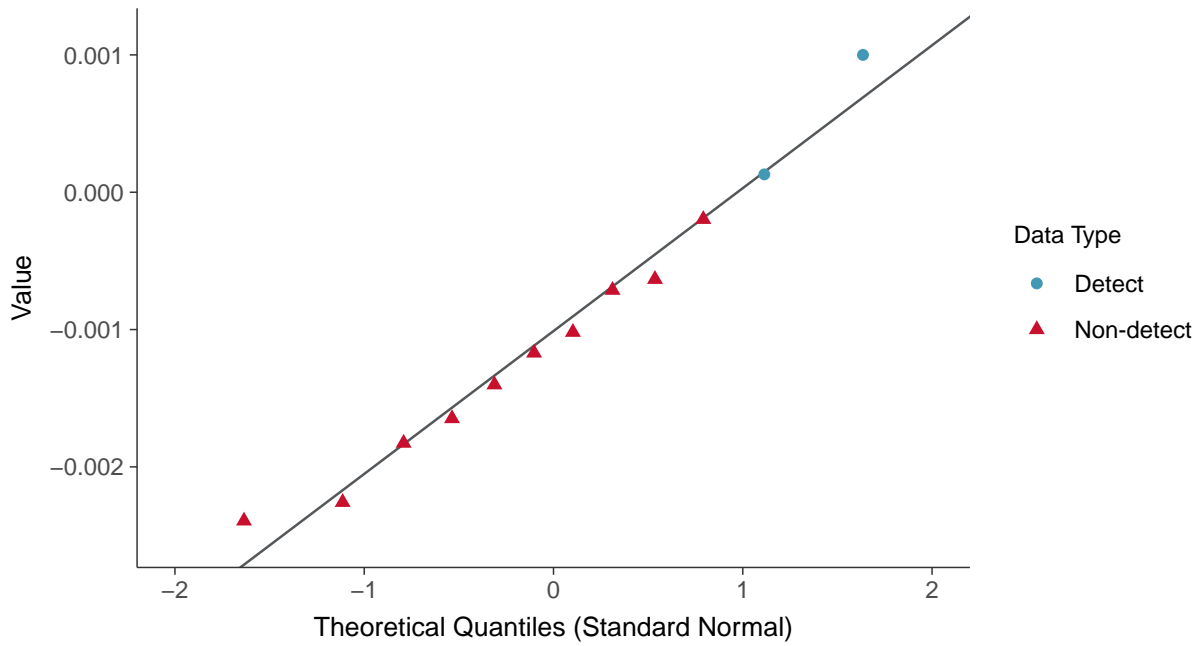
### Boxplot by Season

Selenium, MW-32 (mg/L)

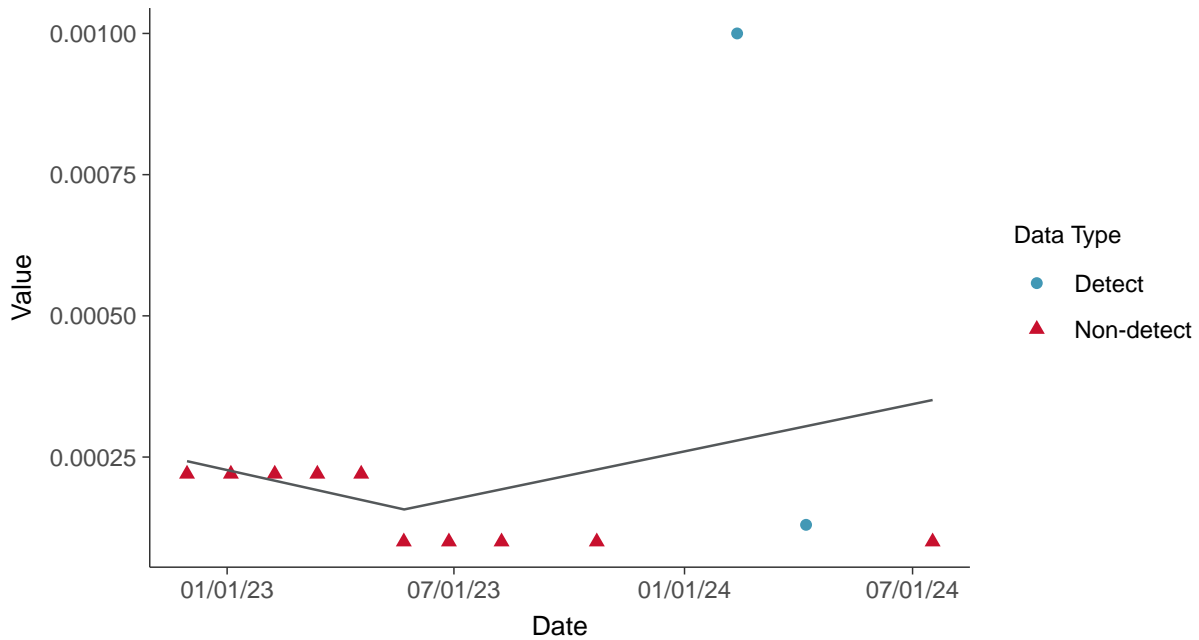




**Normal Q-Q plot using ROS Imputed Estimates**  
Selenium, MW-32 (mg/L)



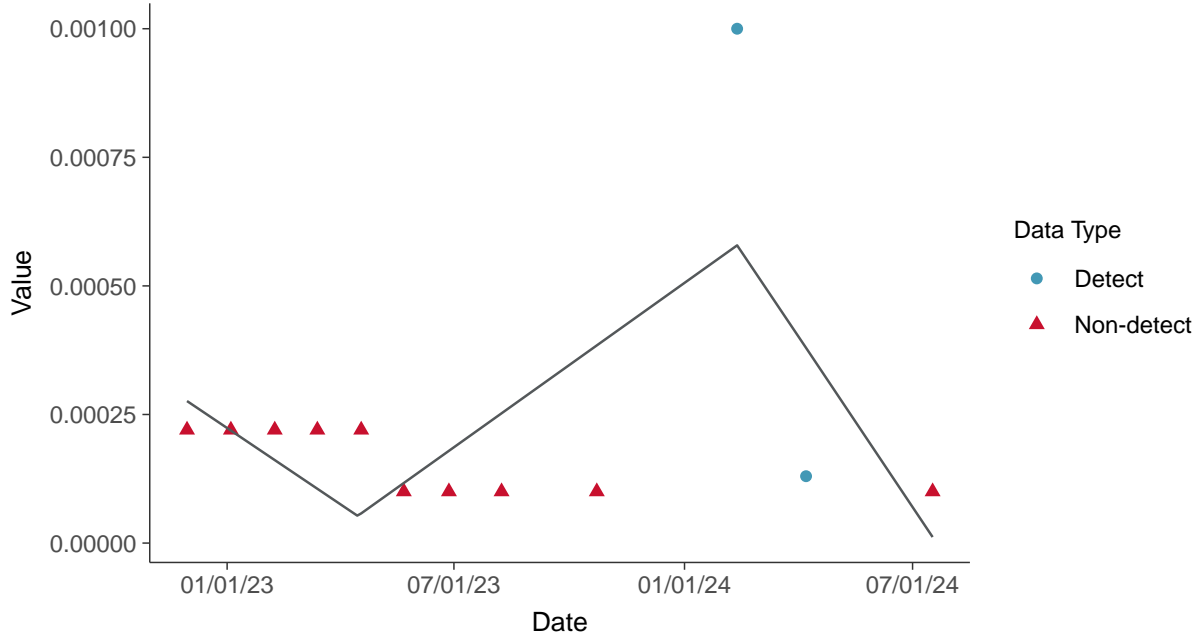
**Trend Regression: Piecewise Linear-Linear**  
Selenium, MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-32 (mg/L)



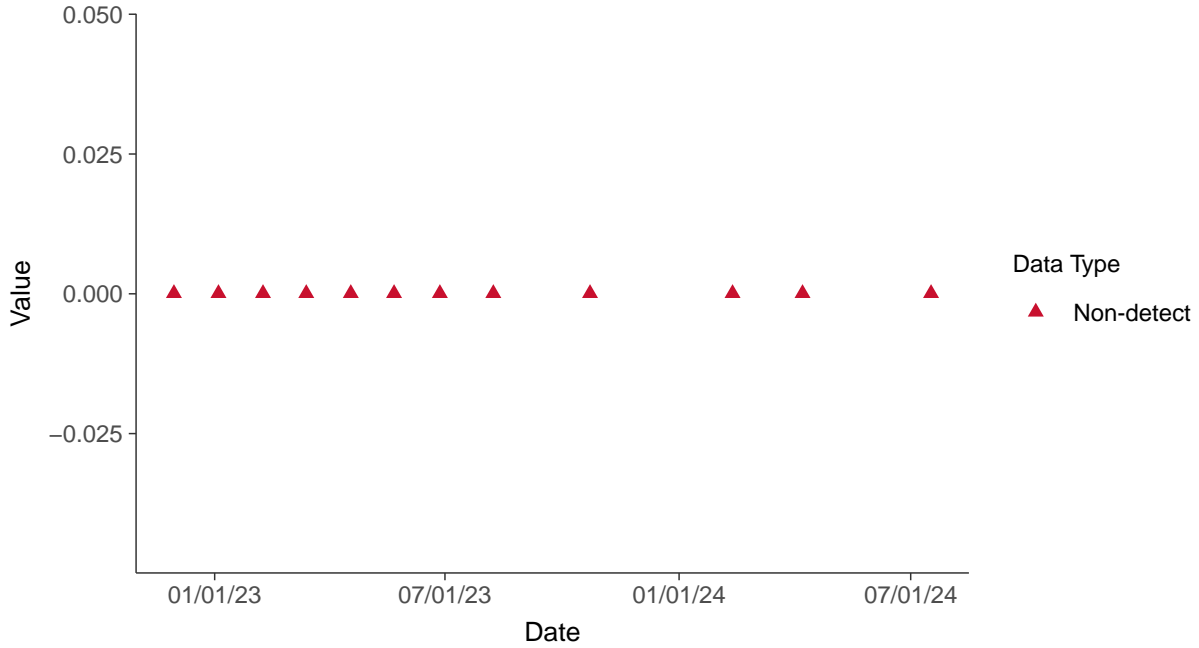


### Appendix IV: Thallium, MW-32

ID: 42\_1\_5\_125

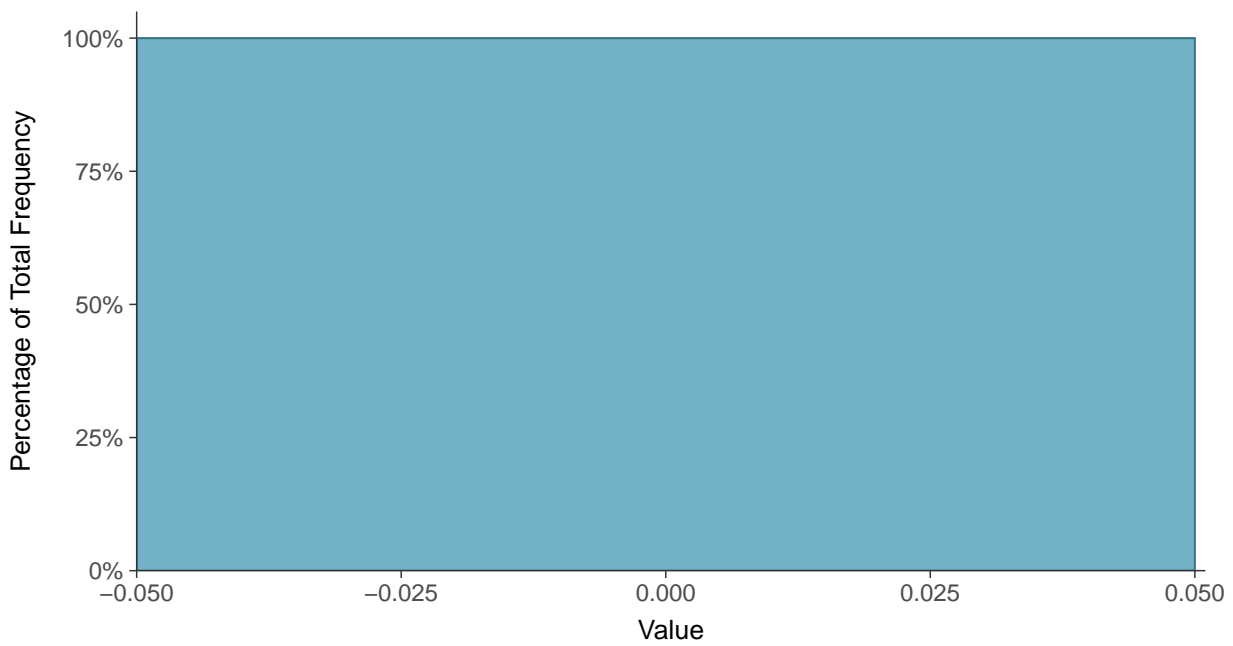
#### Scatter Plot

Thallium, MW-32 (mg/L)



#### Histogram

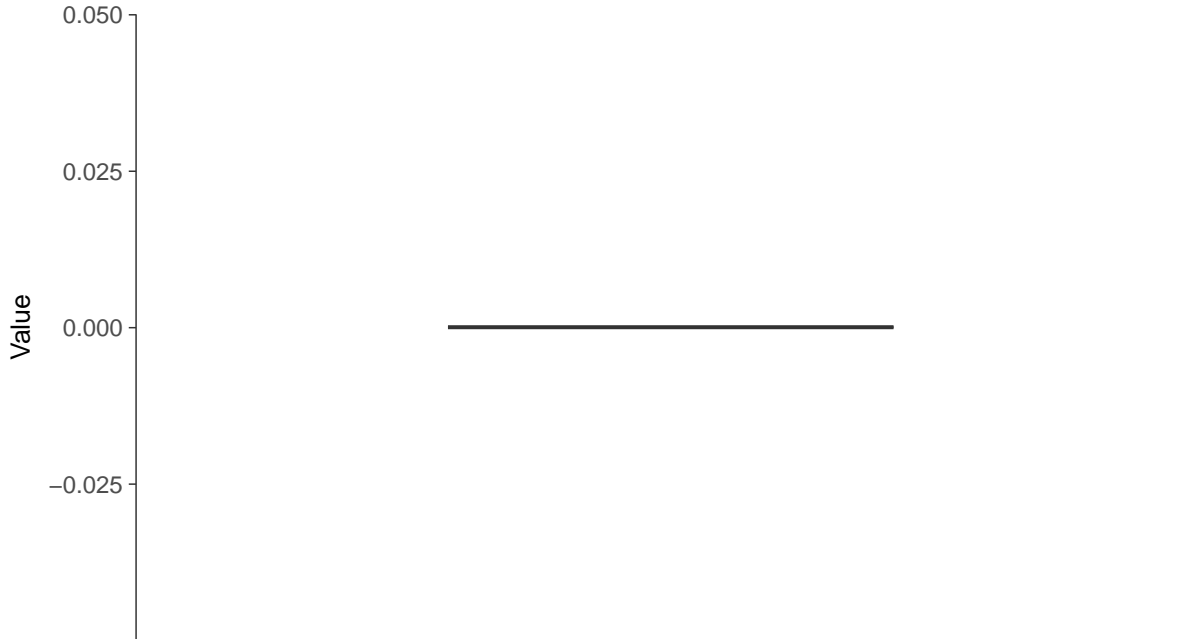
Thallium, MW-32 (mg/L)





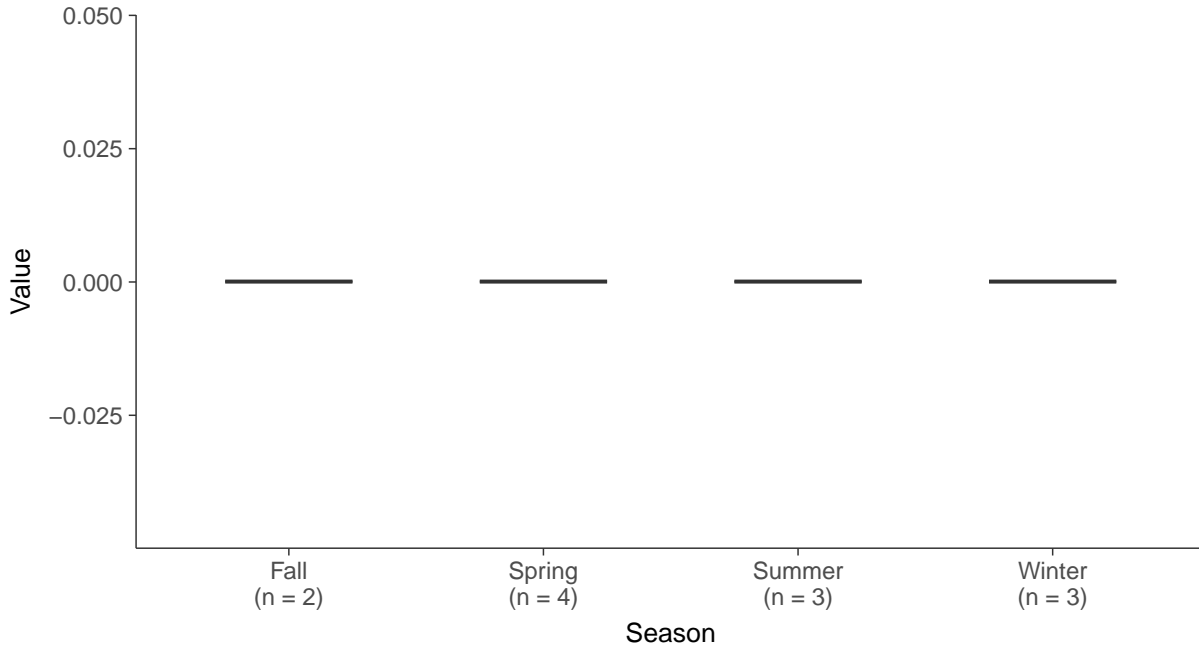
### Boxplot

Thallium, MW-32 (mg/L)



### Boxplot by Season

Thallium, MW-32 (mg/L)

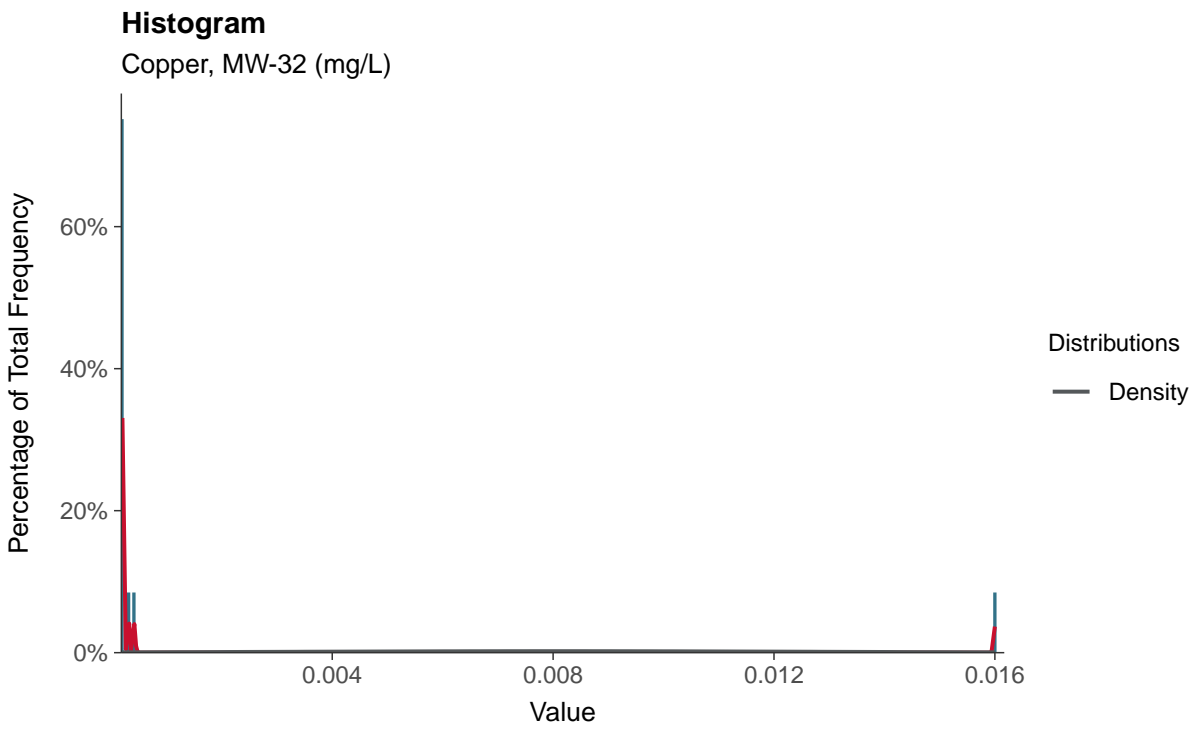
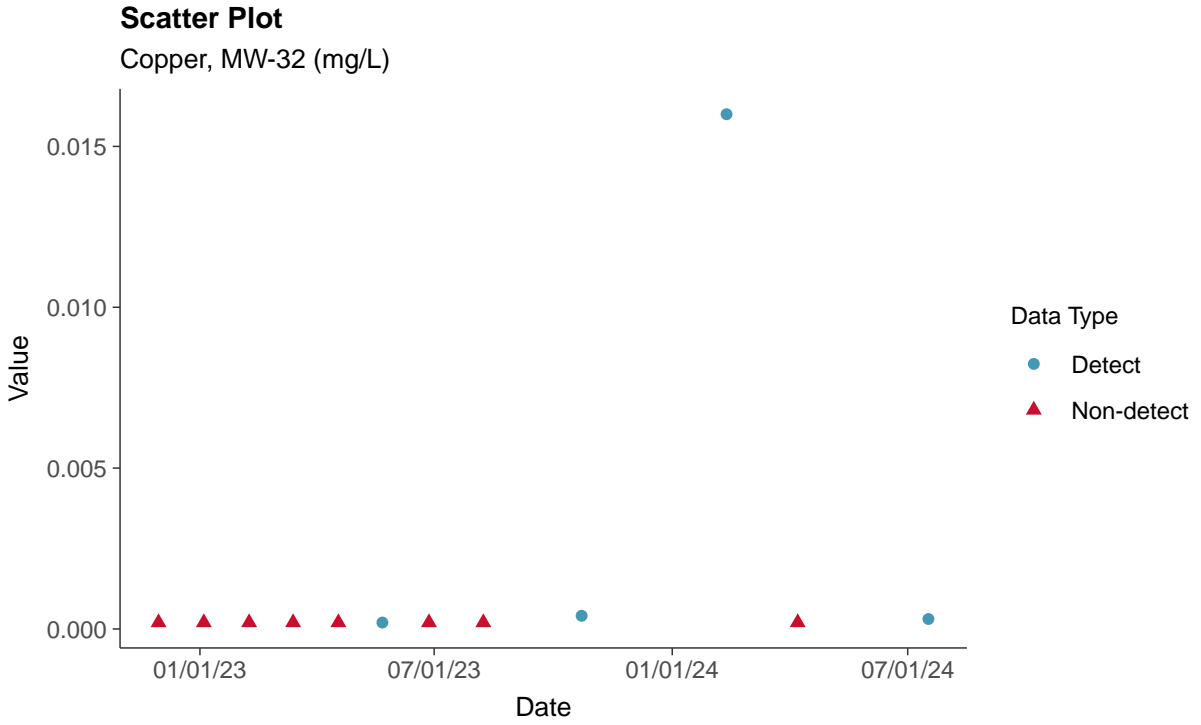






**Part 115: Copper, MW-32**

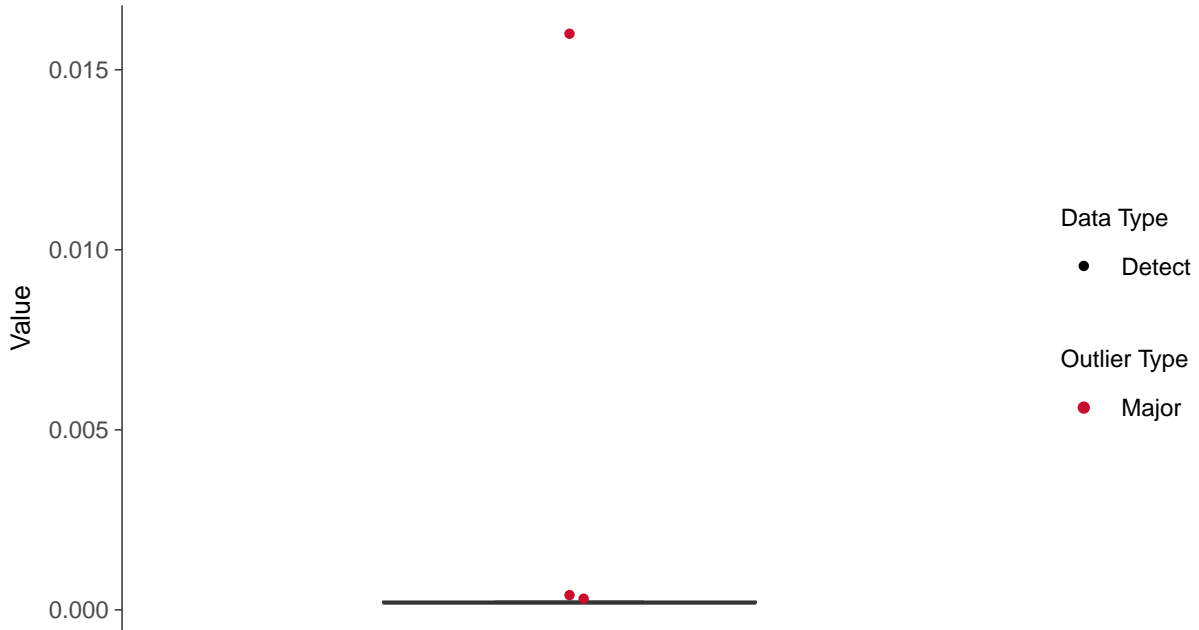
ID: 42\_1\_6\_111





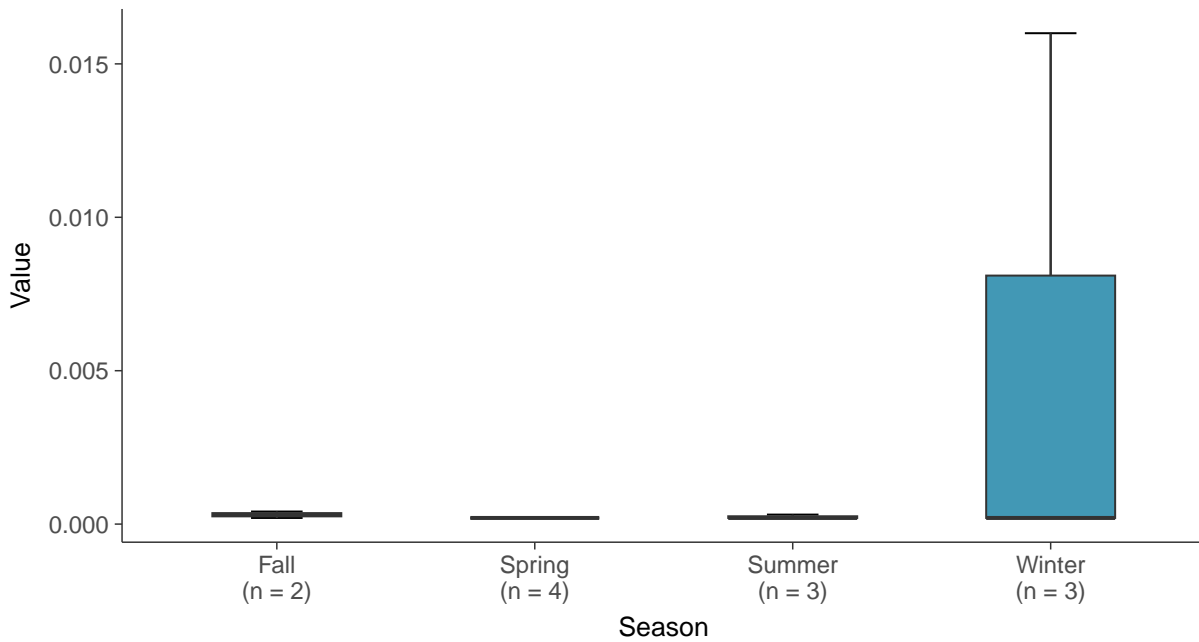
### Boxplot

Copper, MW-32 (mg/L)



### Boxplot by Season

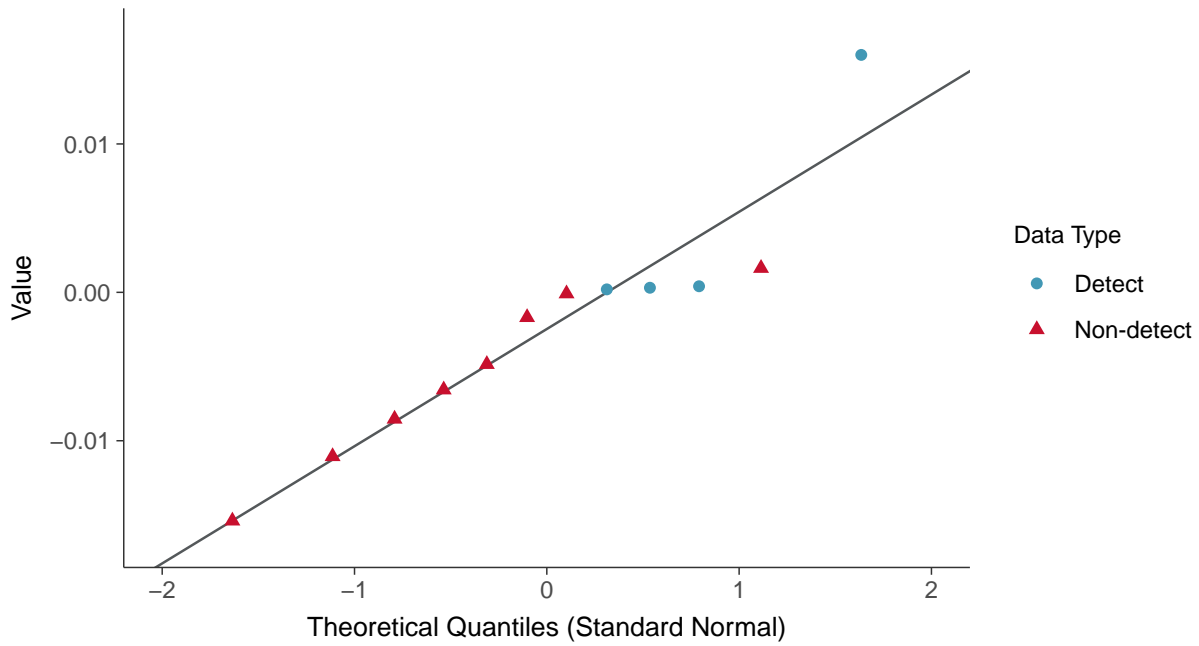
Copper, MW-32 (mg/L)





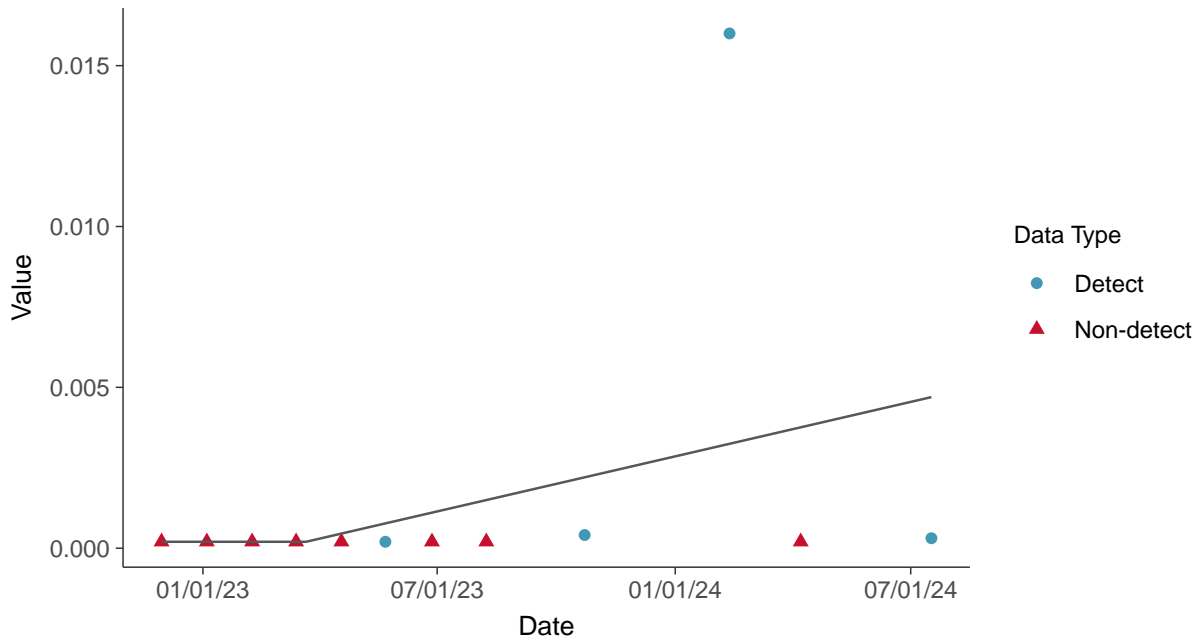
### Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-32 (mg/L)



### Trend Regression: Piecewise Linear-Linear

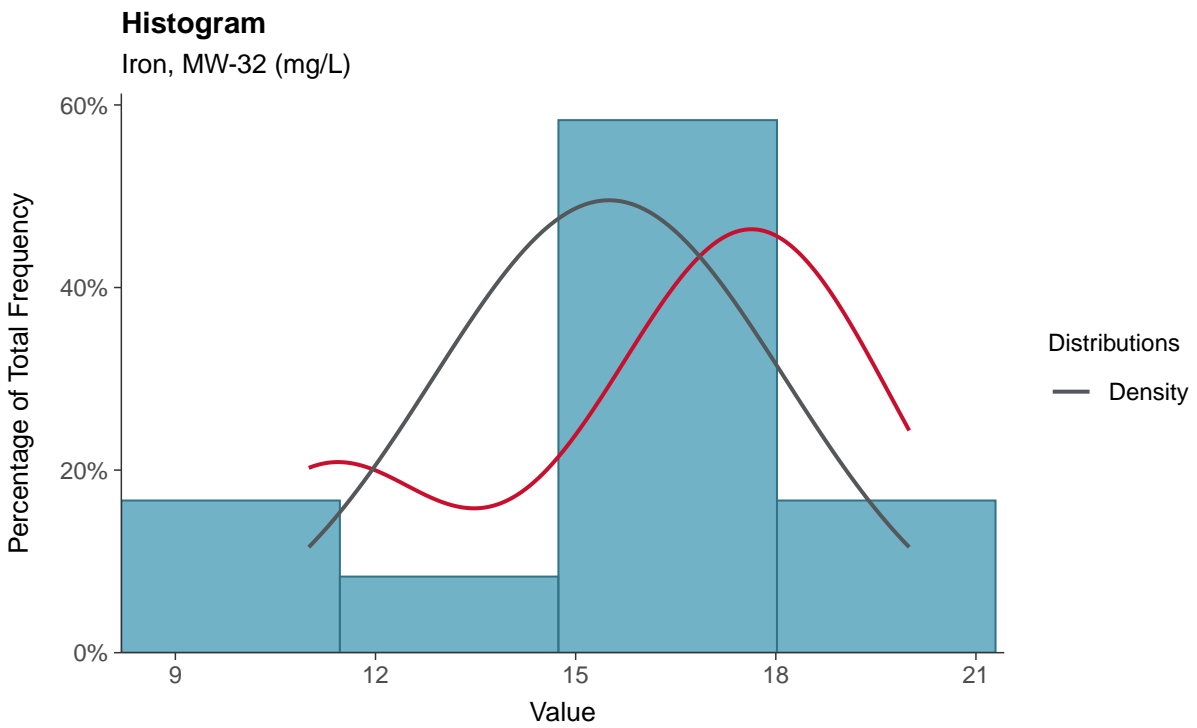
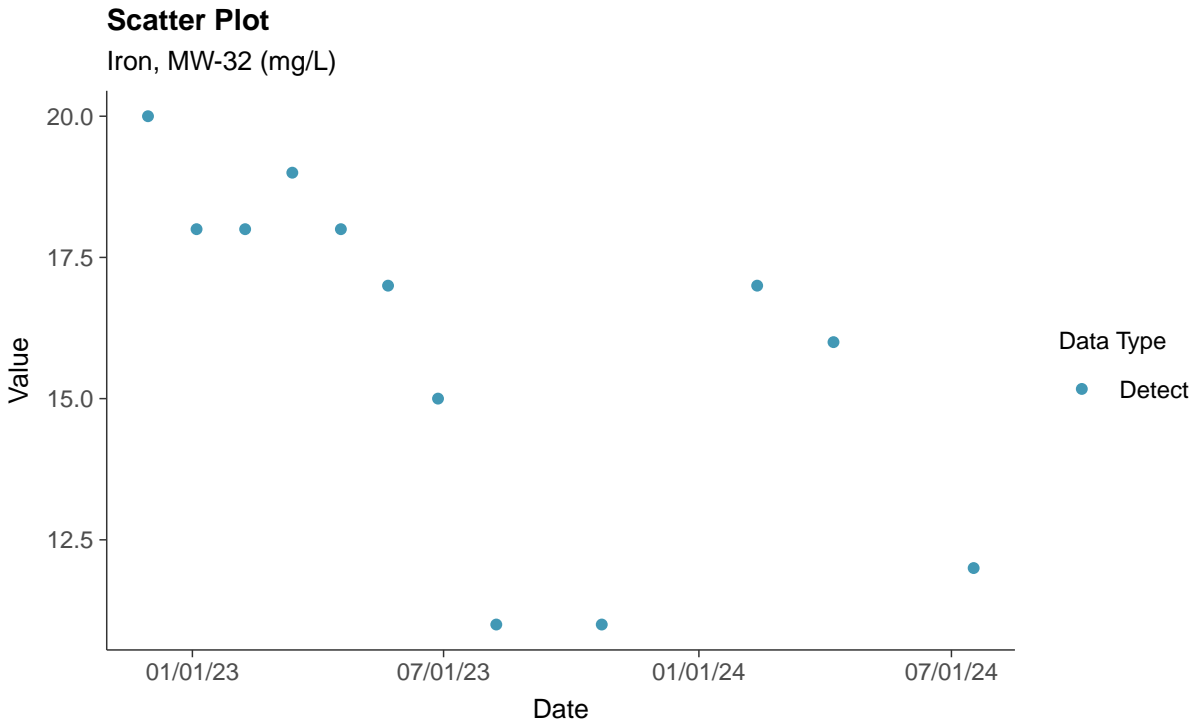
Copper, MW-32 (mg/L)





### Part 115: Iron, MW-32

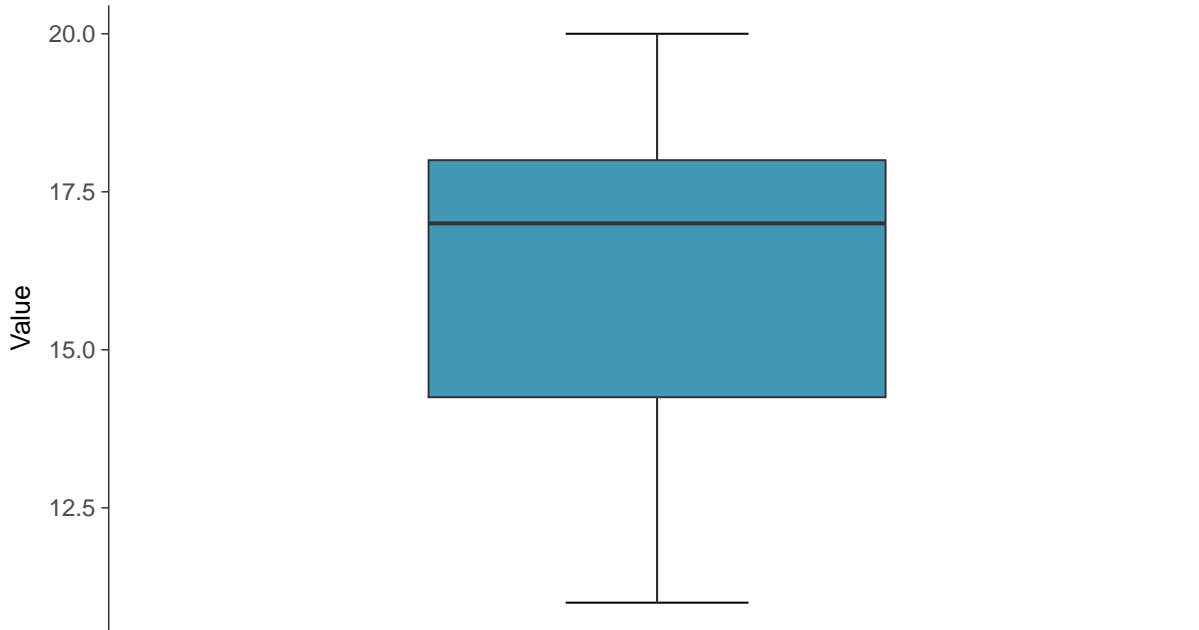
ID: 42\_1\_6\_114





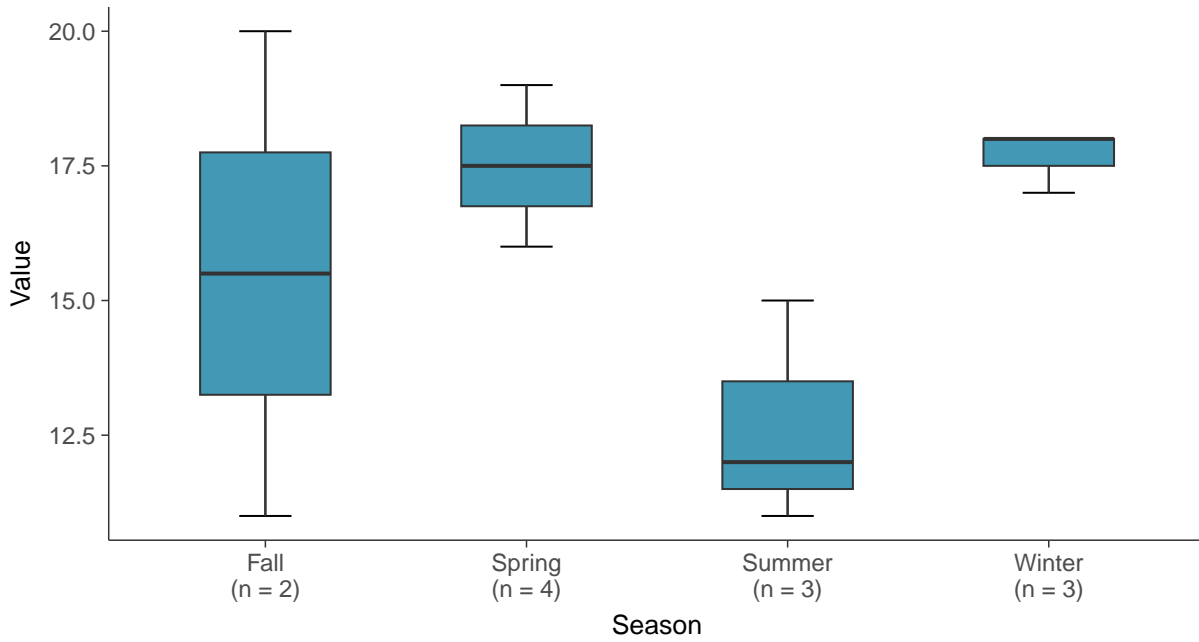
### Boxplot

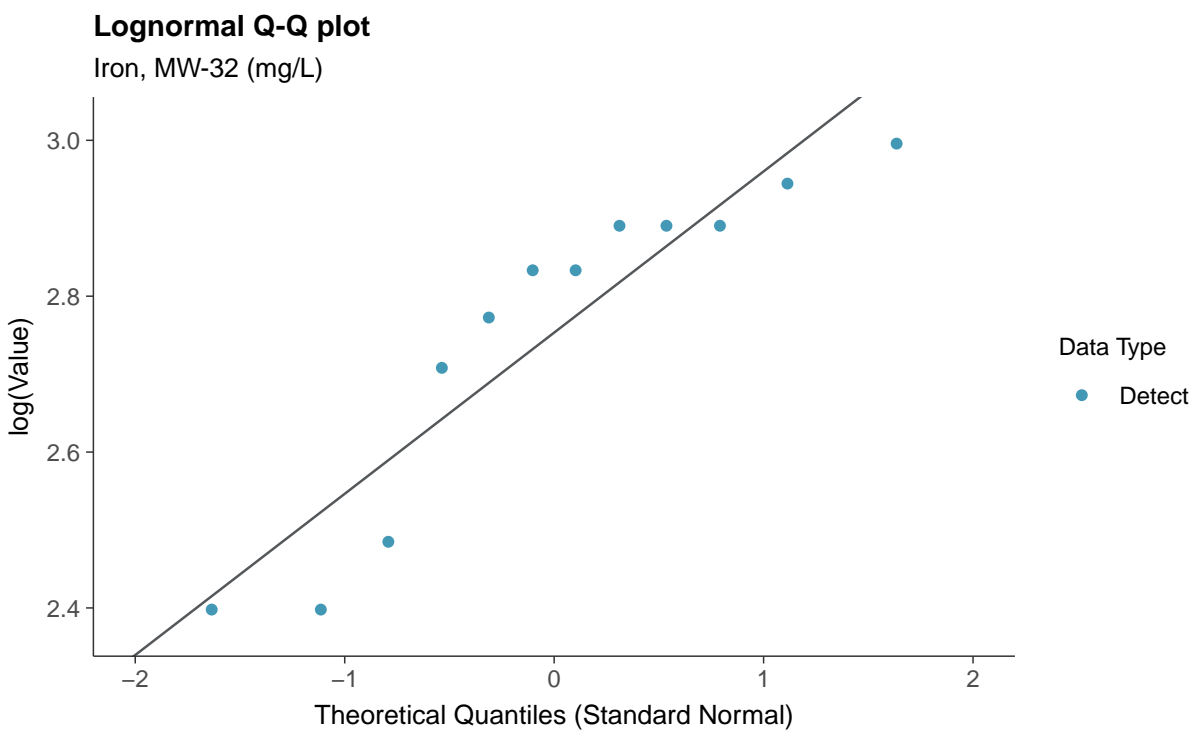
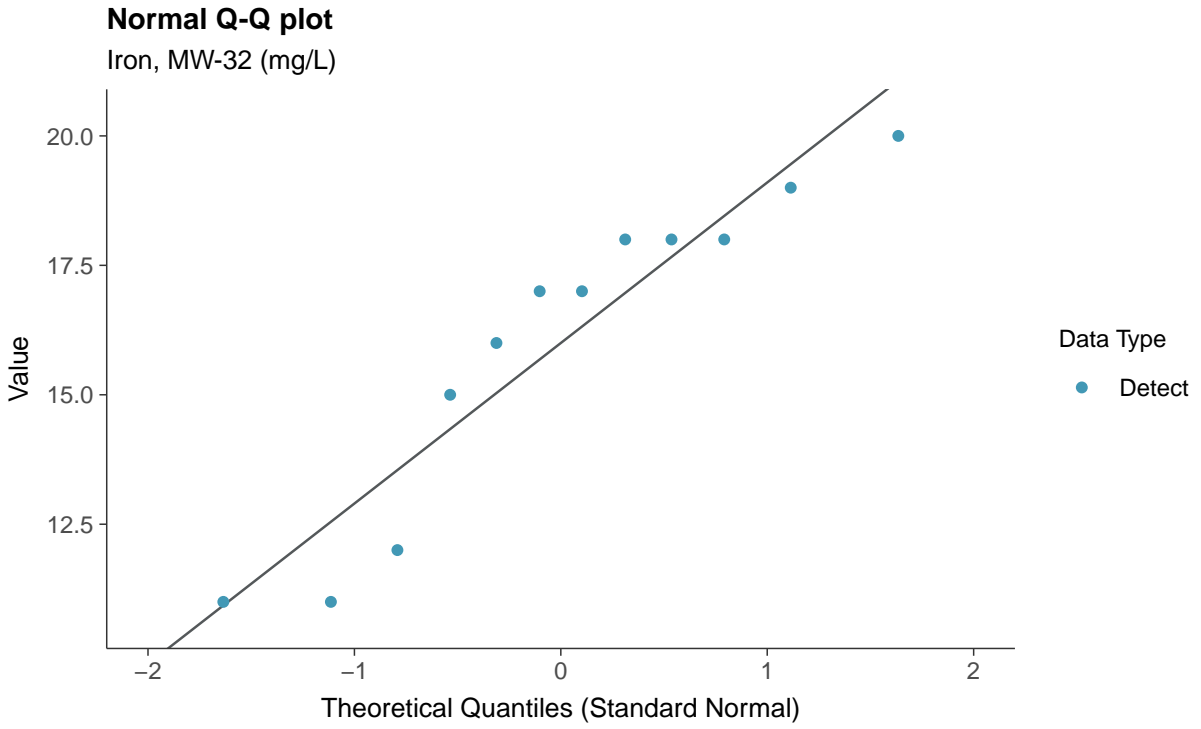
Iron, MW-32 (mg/L)

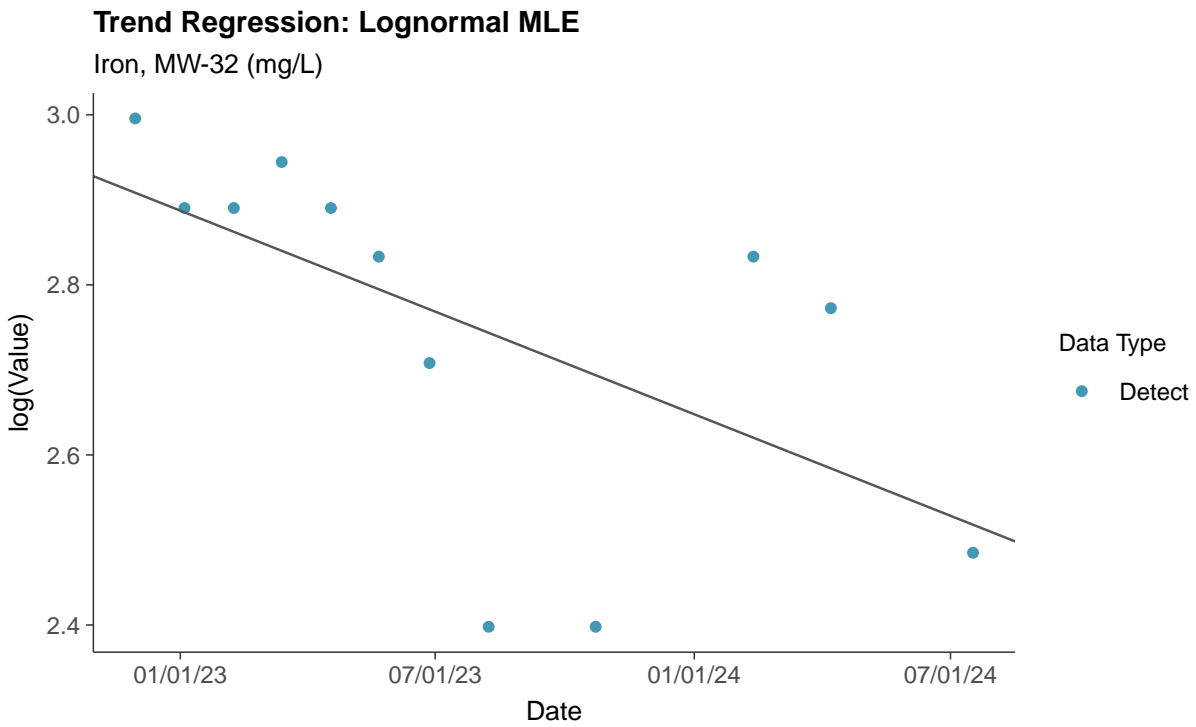
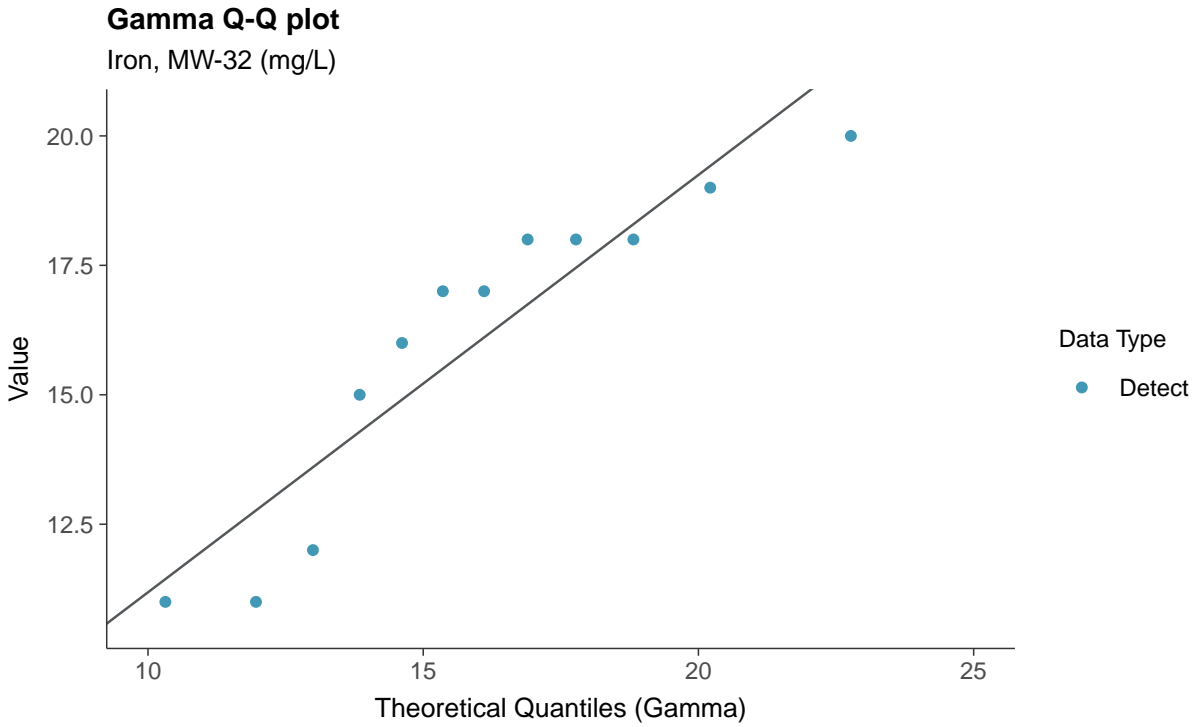


### Boxplot by Season

Iron, MW-32 (mg/L)

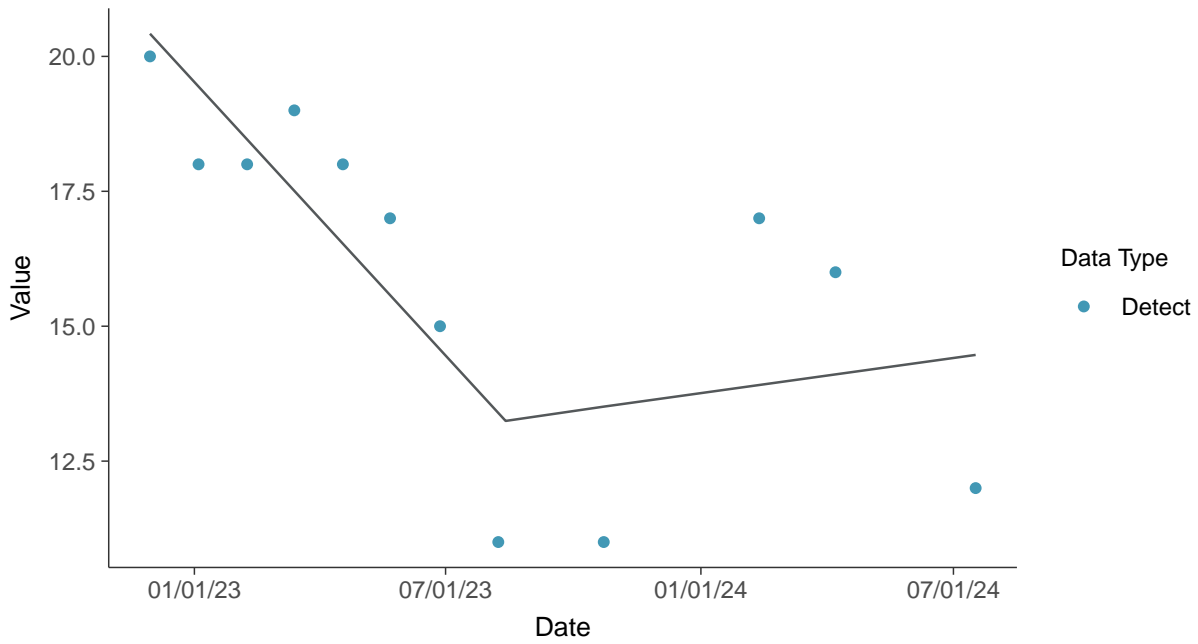




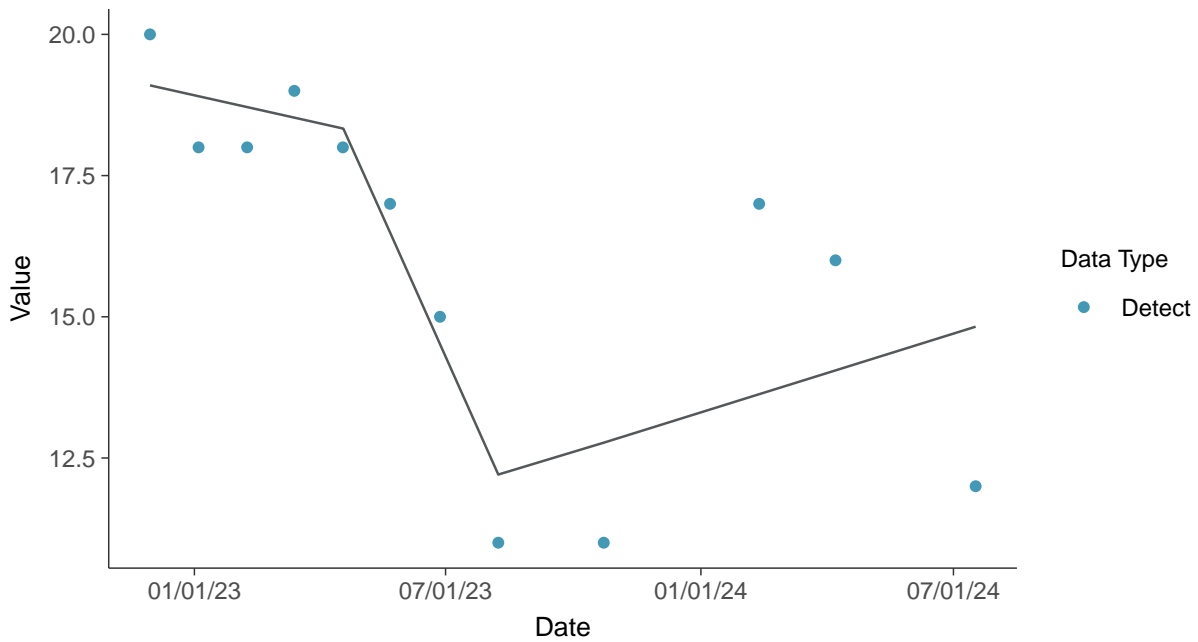




**Trend Regression: Piecewise Linear-Linear**  
Iron, MW-32 (mg/L)



**Trend Regression: Piecewise Linear-Linear-Linear**  
Iron, MW-32 (mg/L)

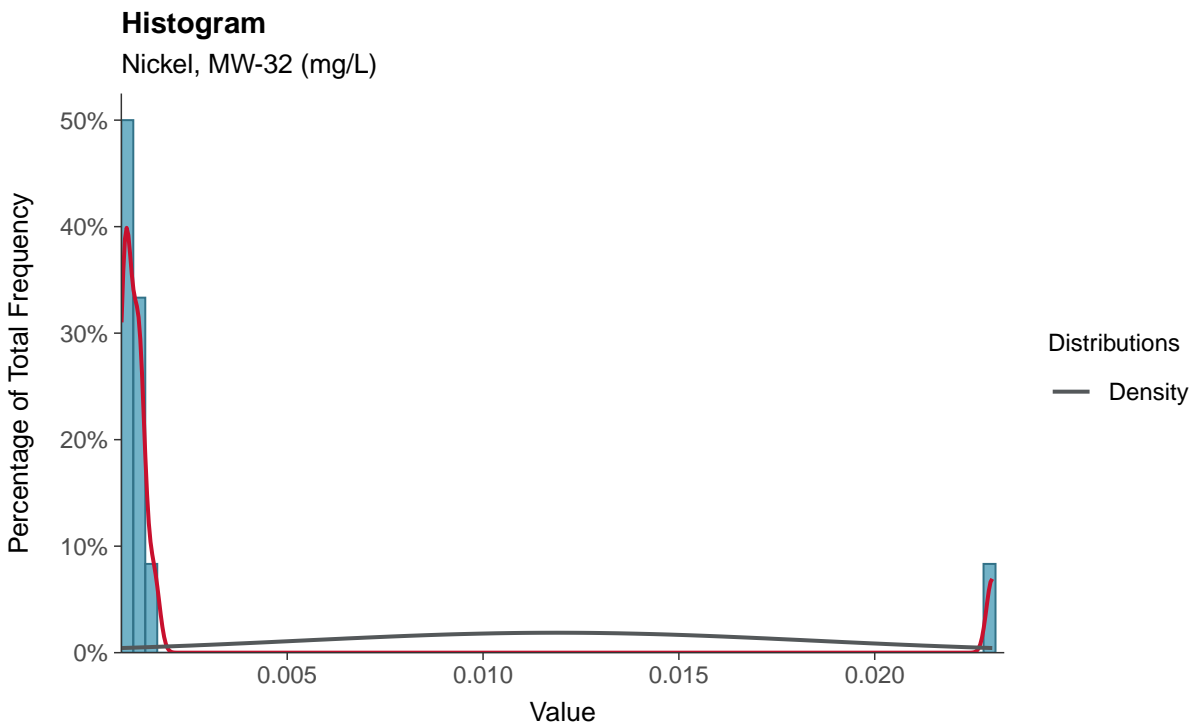
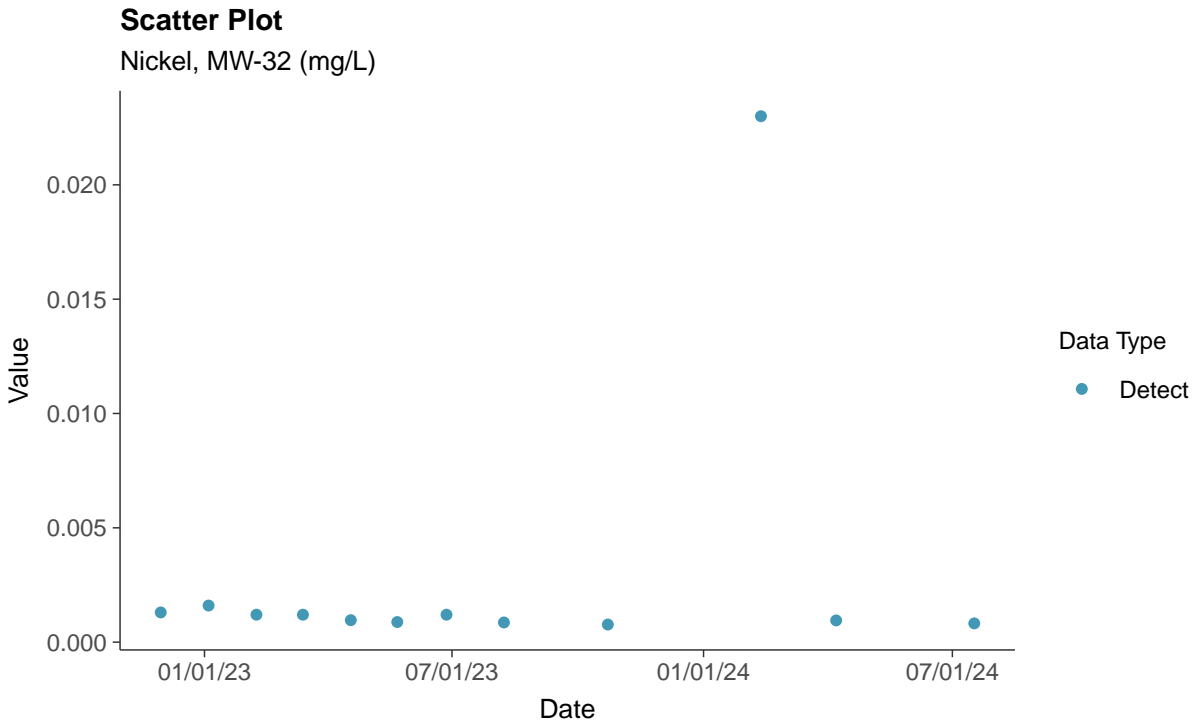






### Part 115: Nickel, MW-32

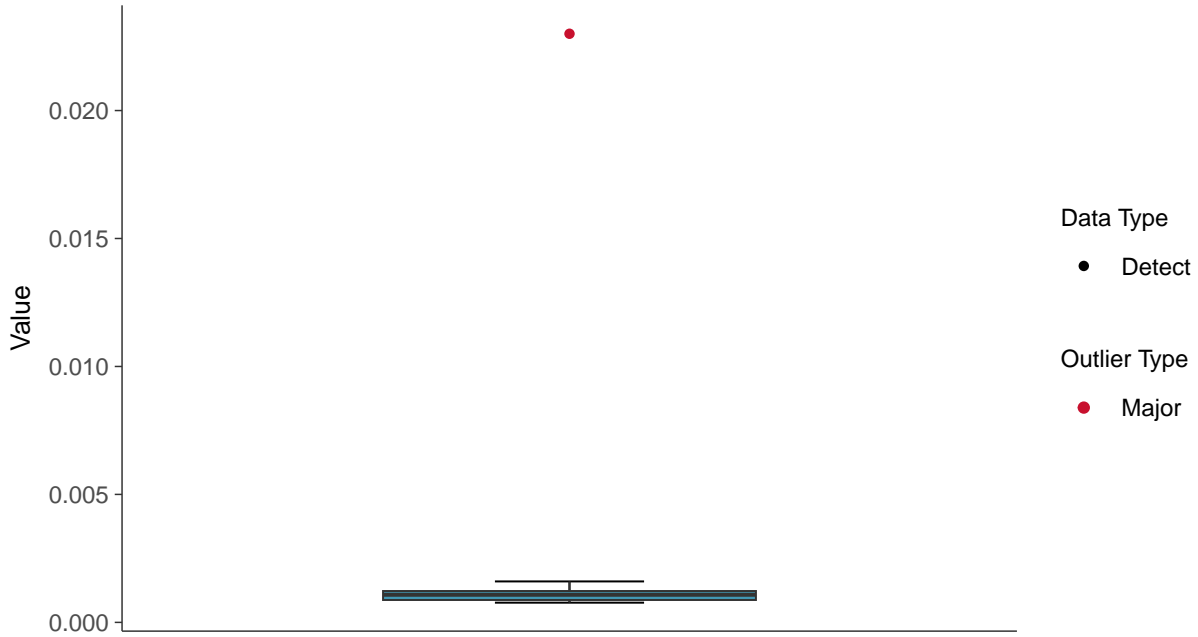
ID: 42\_1\_6\_119





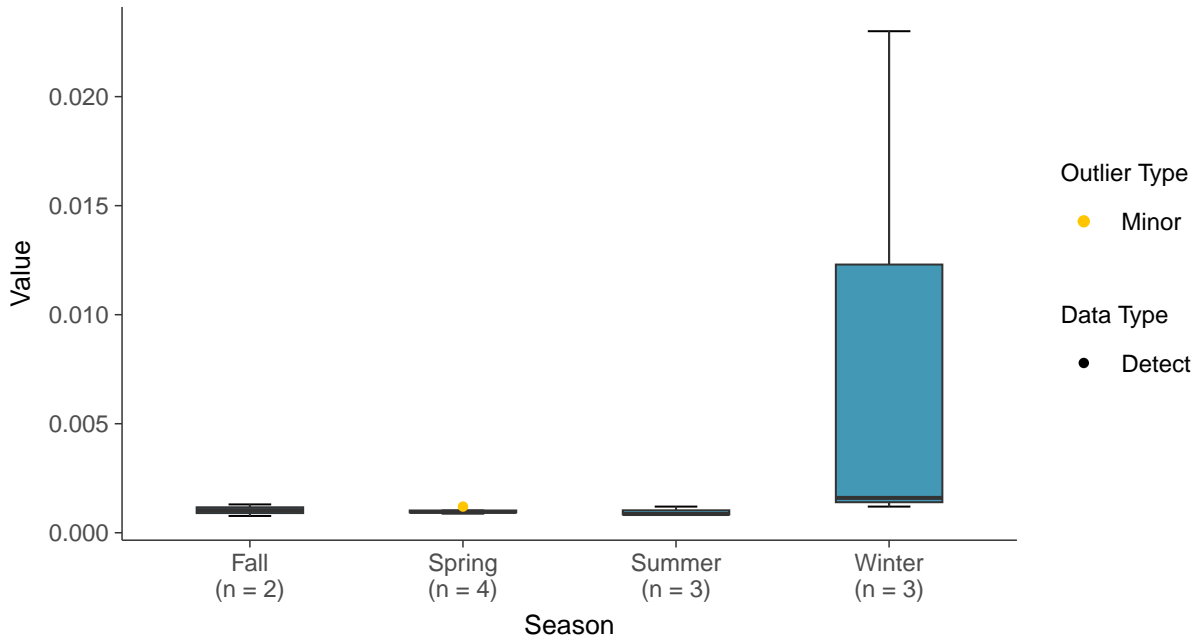
### Boxplot

Nickel, MW-32 (mg/L)



### Boxplot by Season

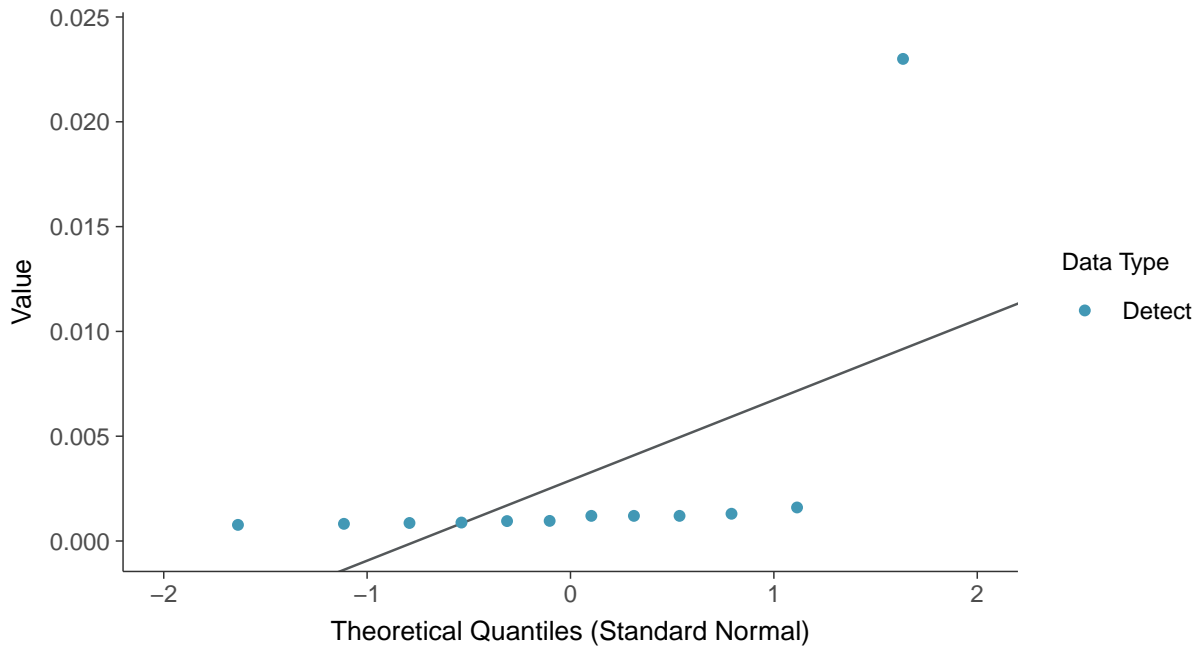
Nickel, MW-32 (mg/L)





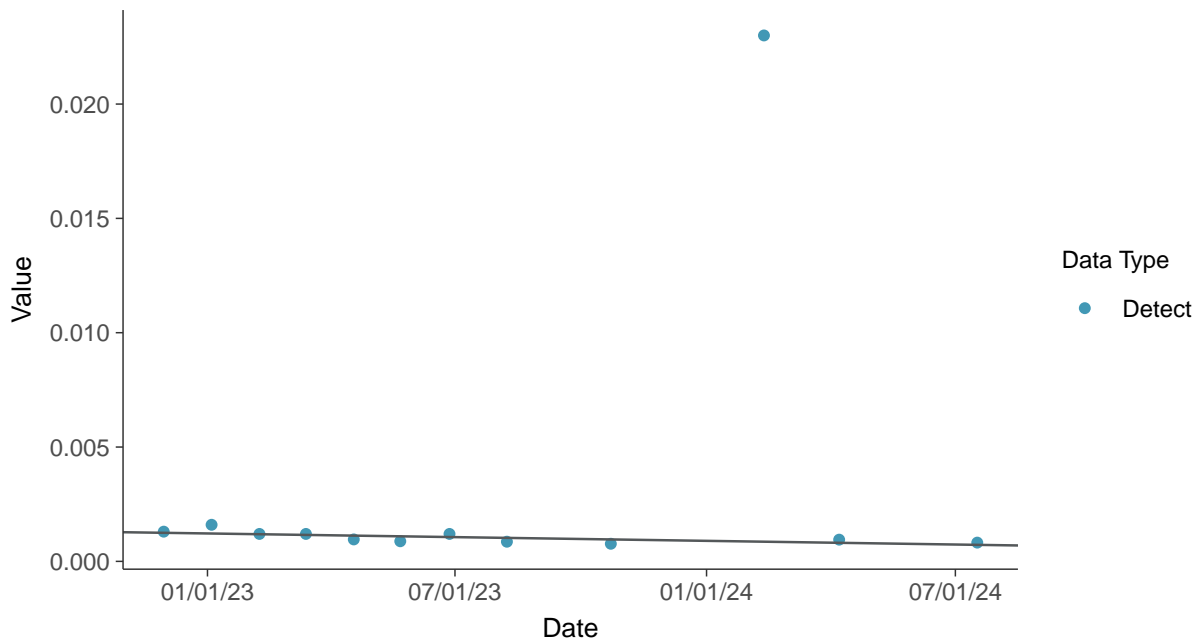
### Normal Q-Q plot

Nickel, MW-32 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

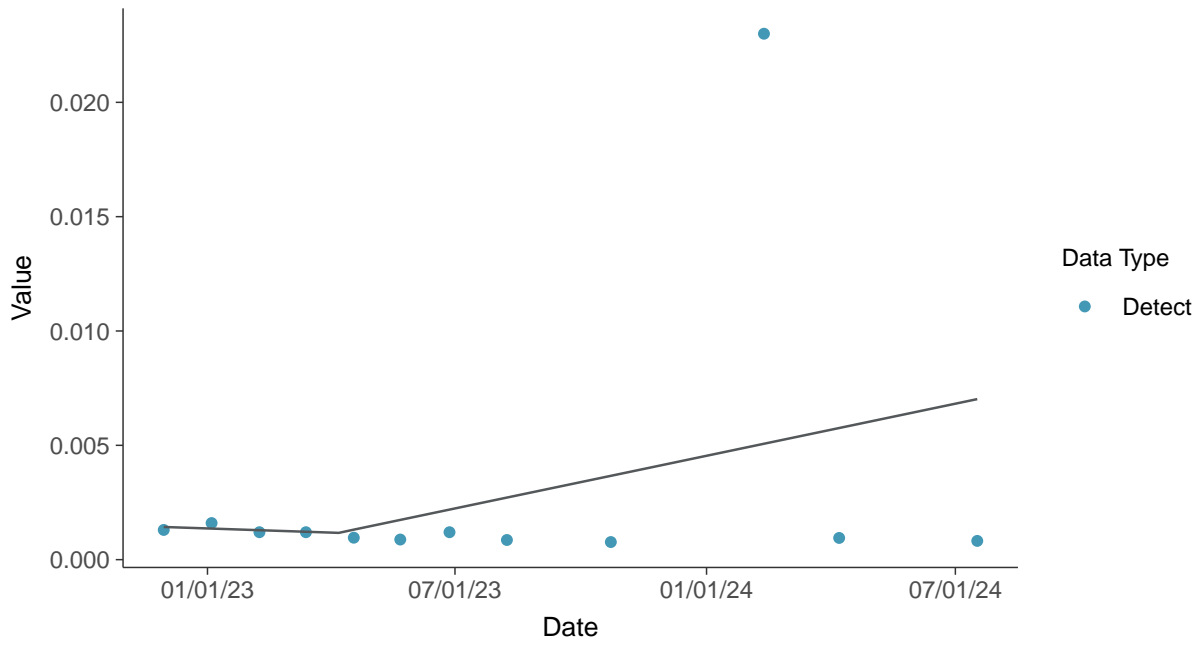
Nickel, MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear

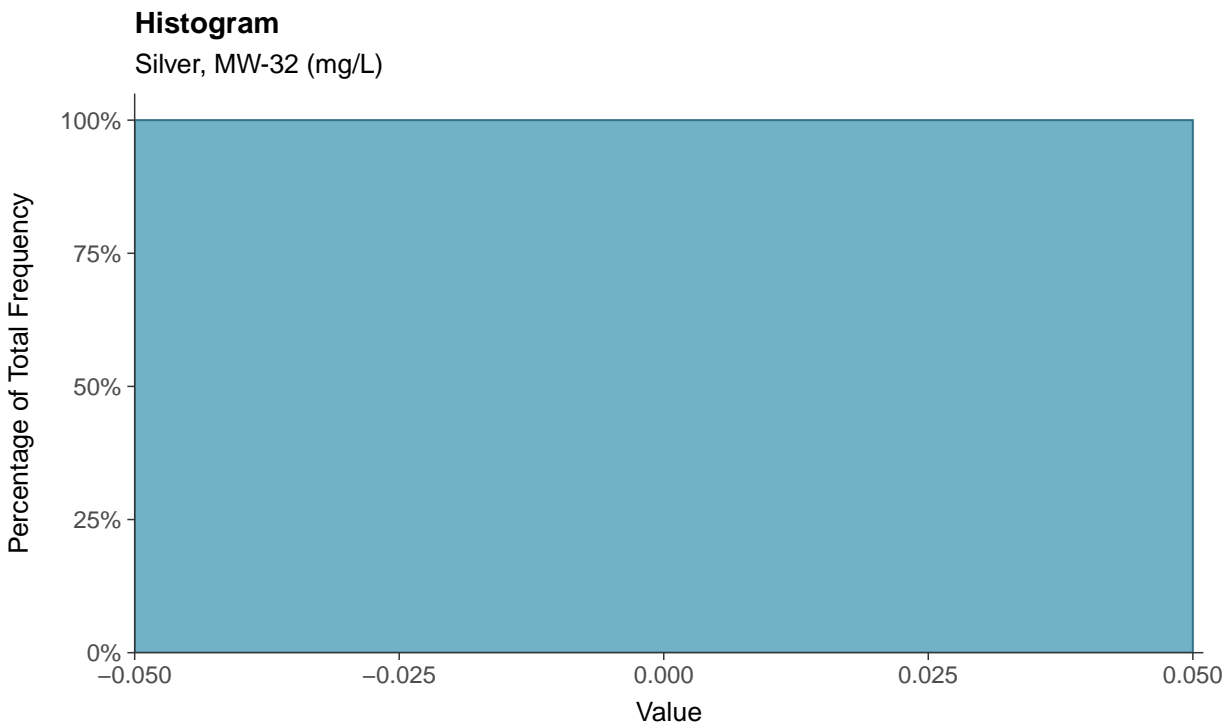
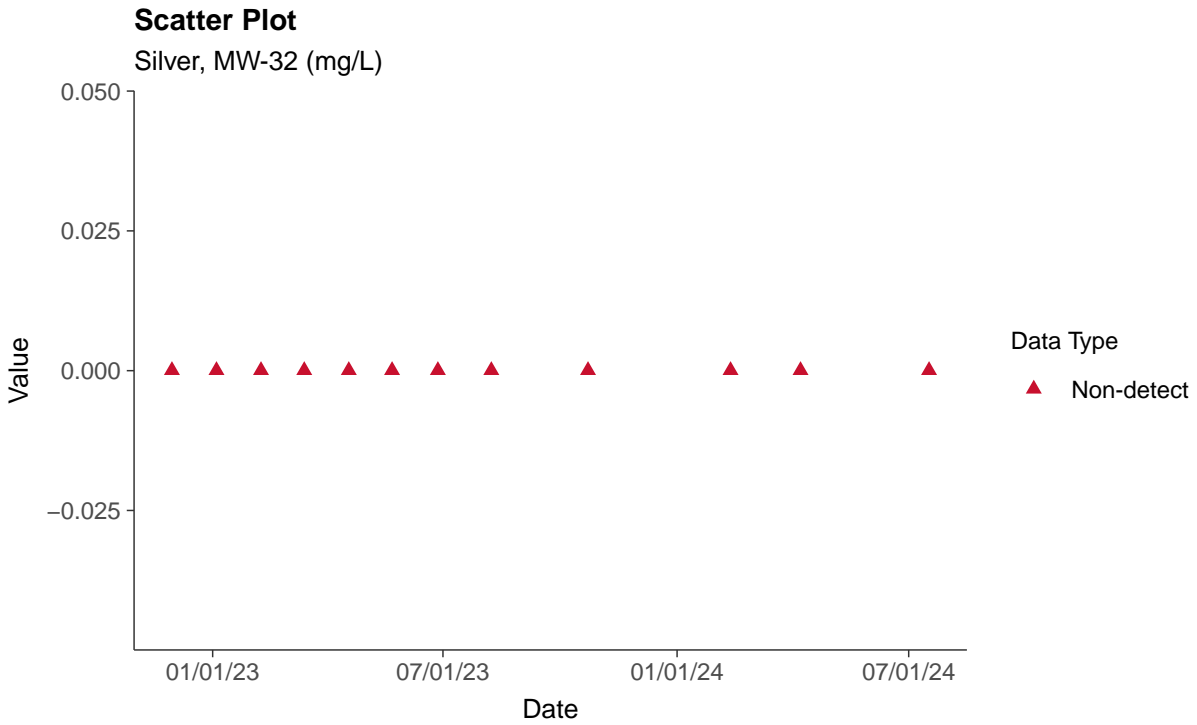
Nickel, MW-32 (mg/L)





### Part 115: Silver, MW-32

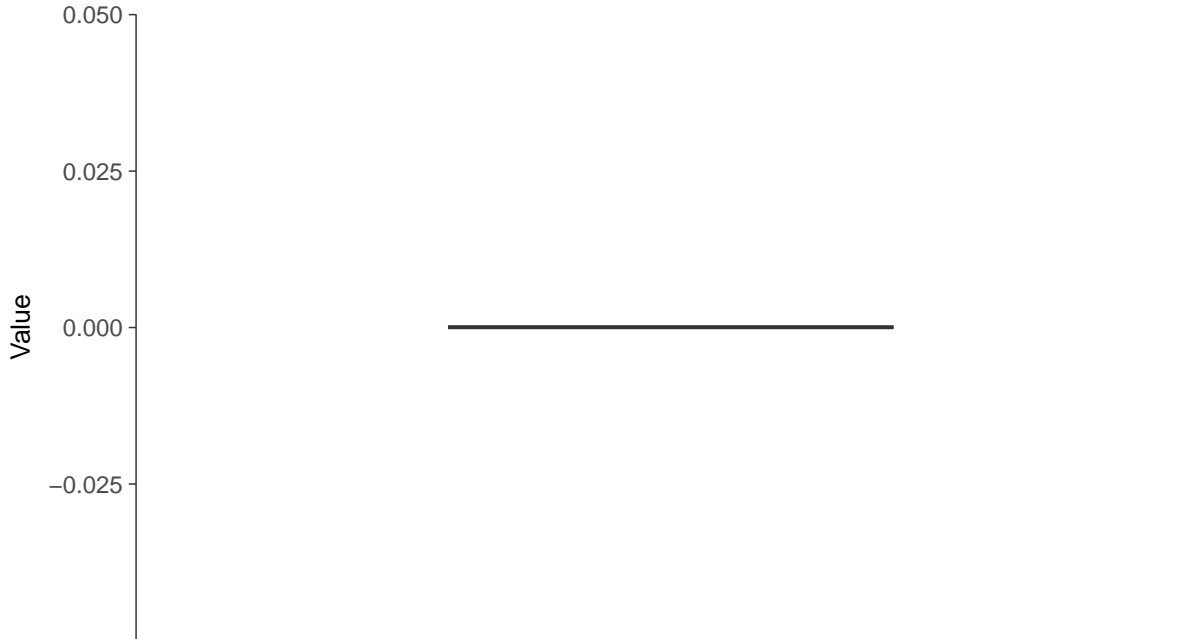
ID: 42\_1\_6\_123





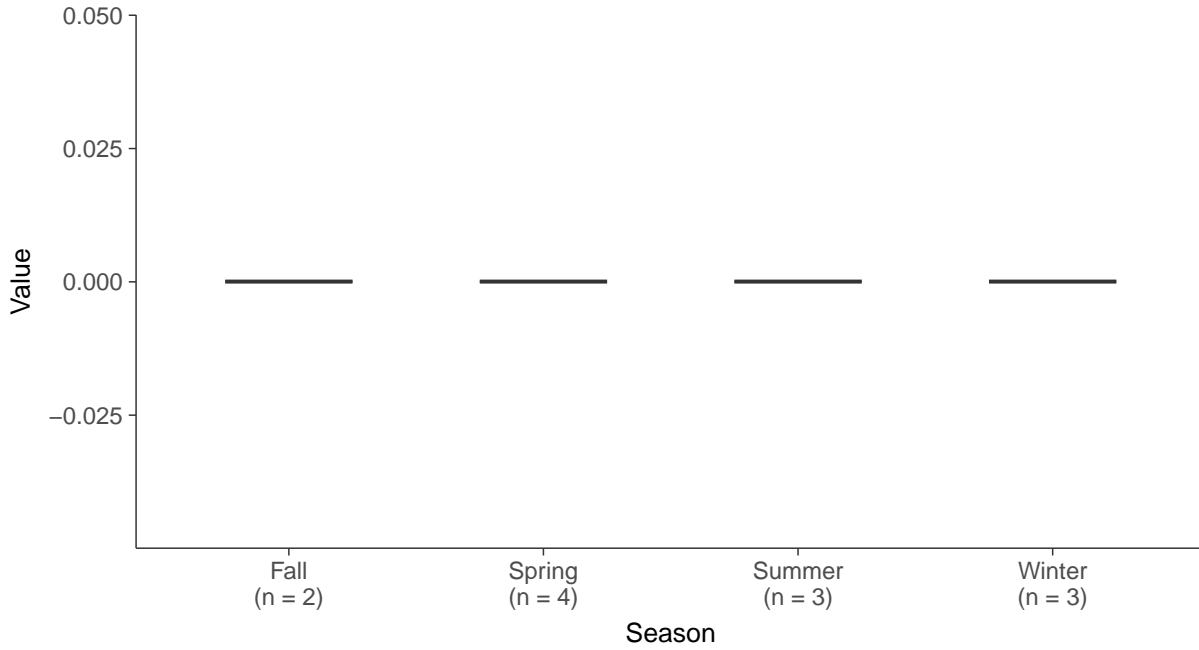
### Boxplot

Silver, MW-32 (mg/L)



### Boxplot by Season

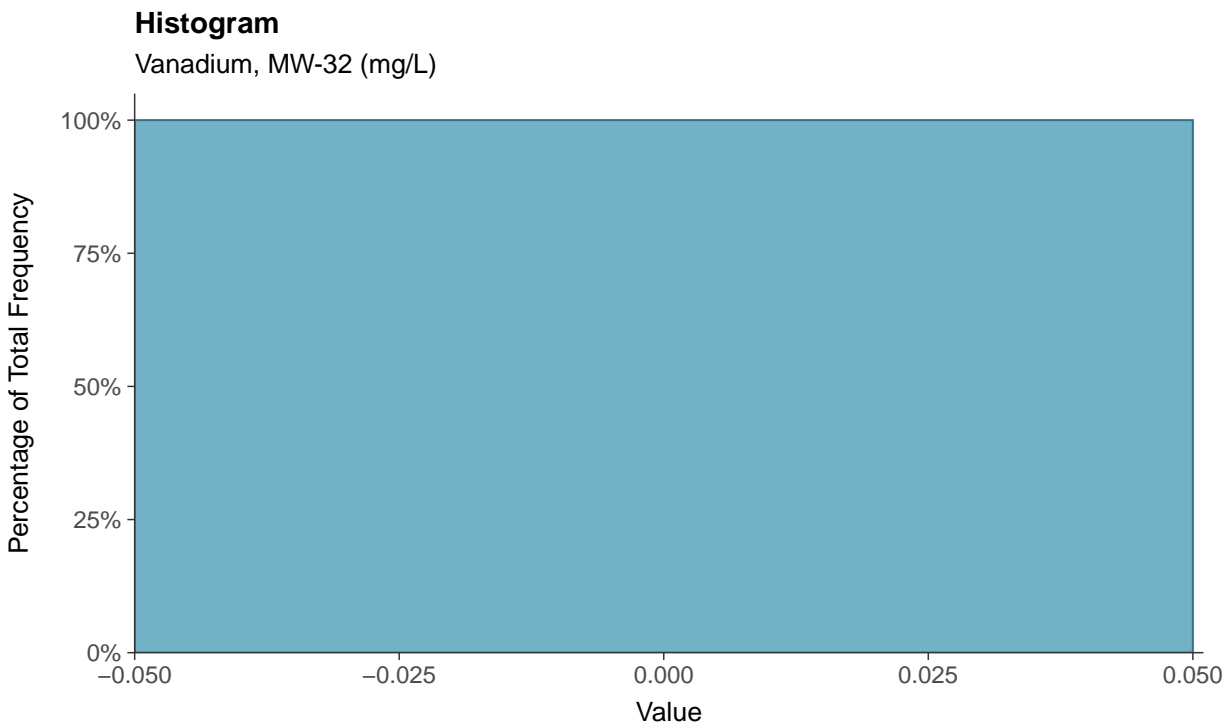
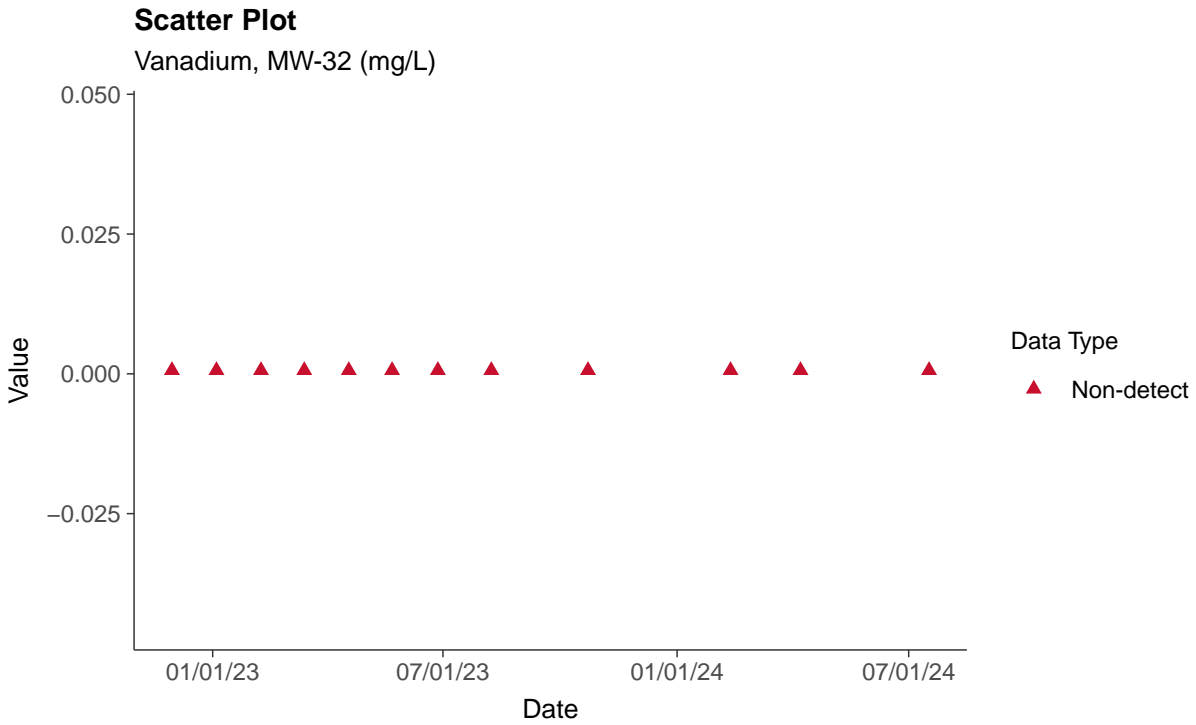
Silver, MW-32 (mg/L)





### Part 115: Vanadium, MW-32

ID: 42\_1\_6\_129





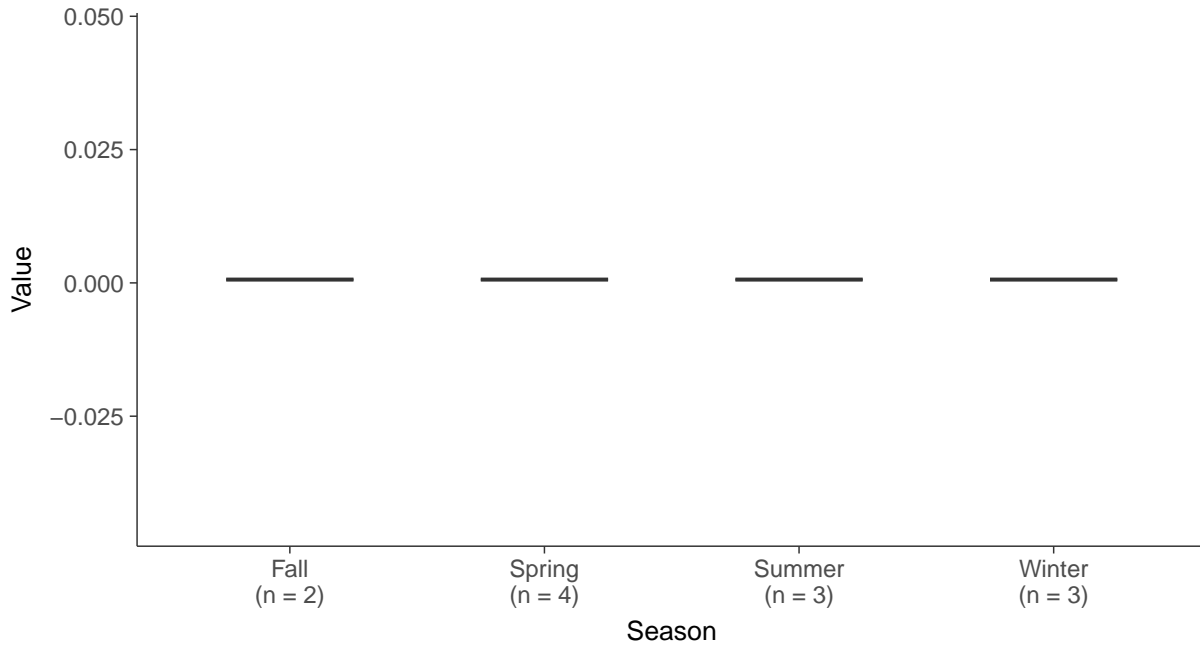
### Boxplot

Vanadium, MW-32 (mg/L)



### Boxplot by Season

Vanadium, MW-32 (mg/L)

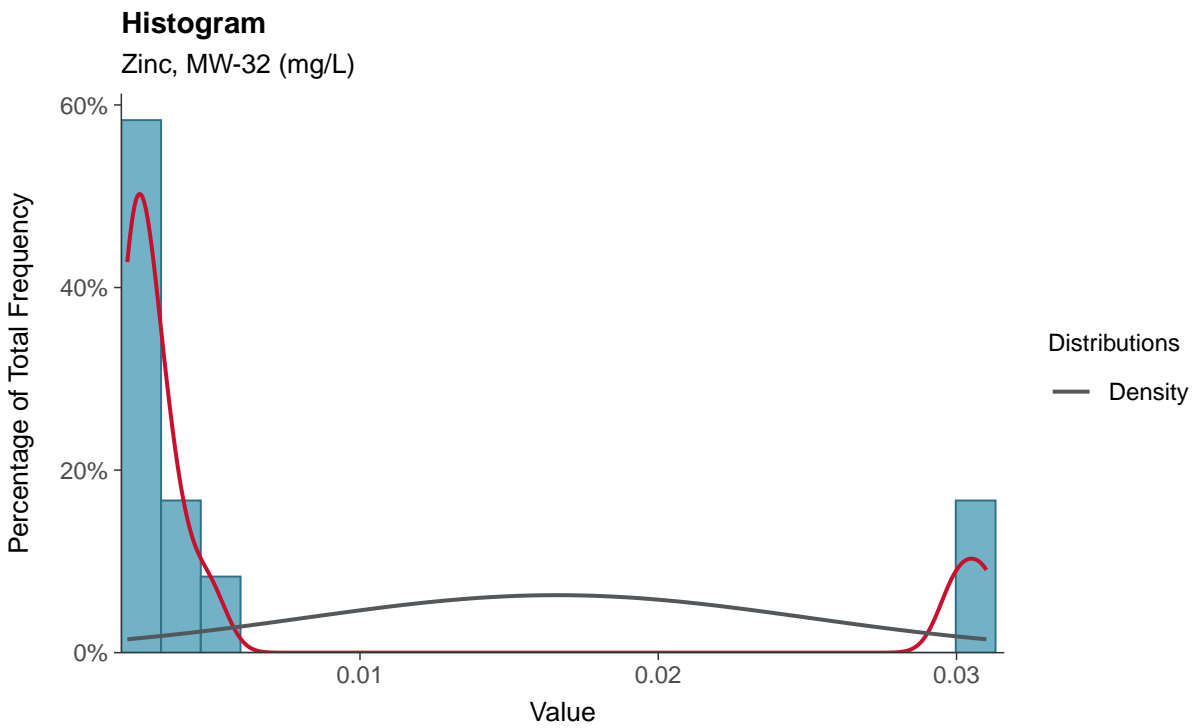
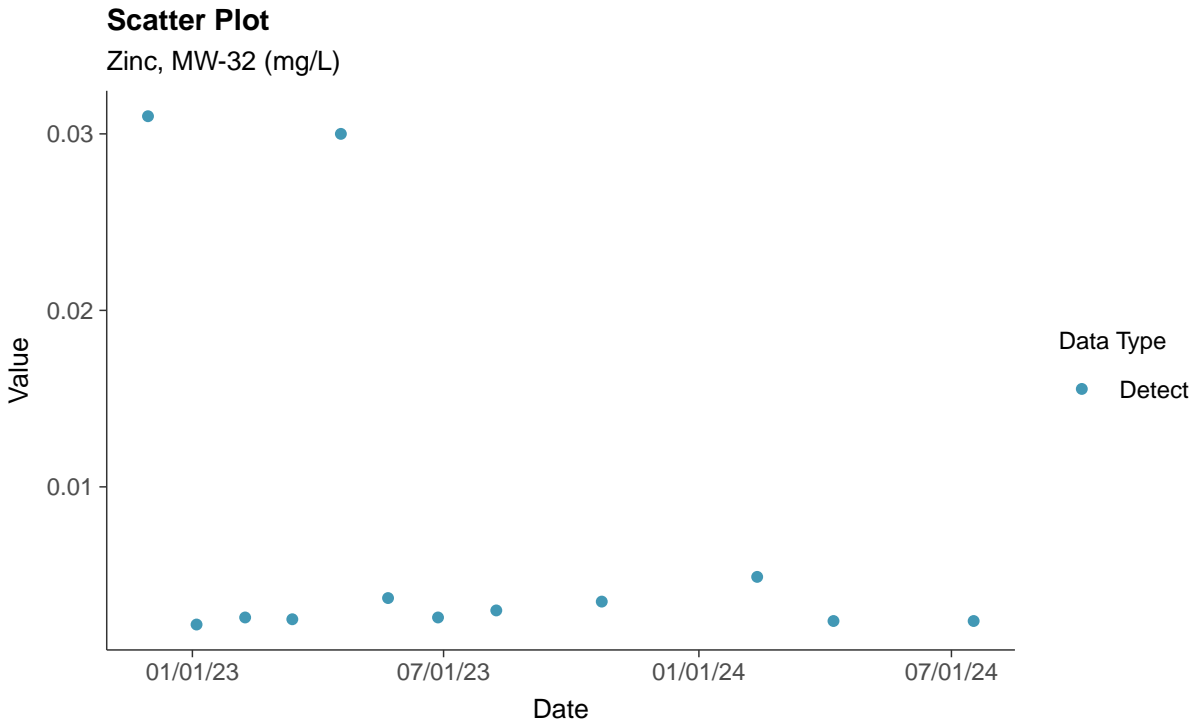






### Part 115: Zinc, MW-32

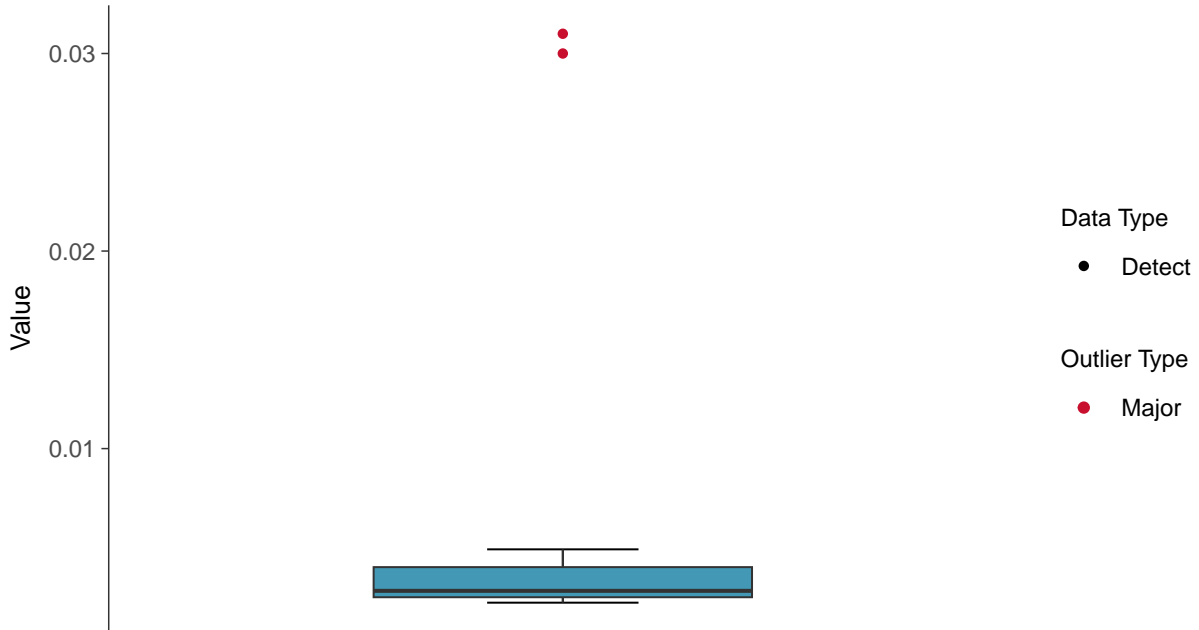
ID: 42\_1\_6\_130





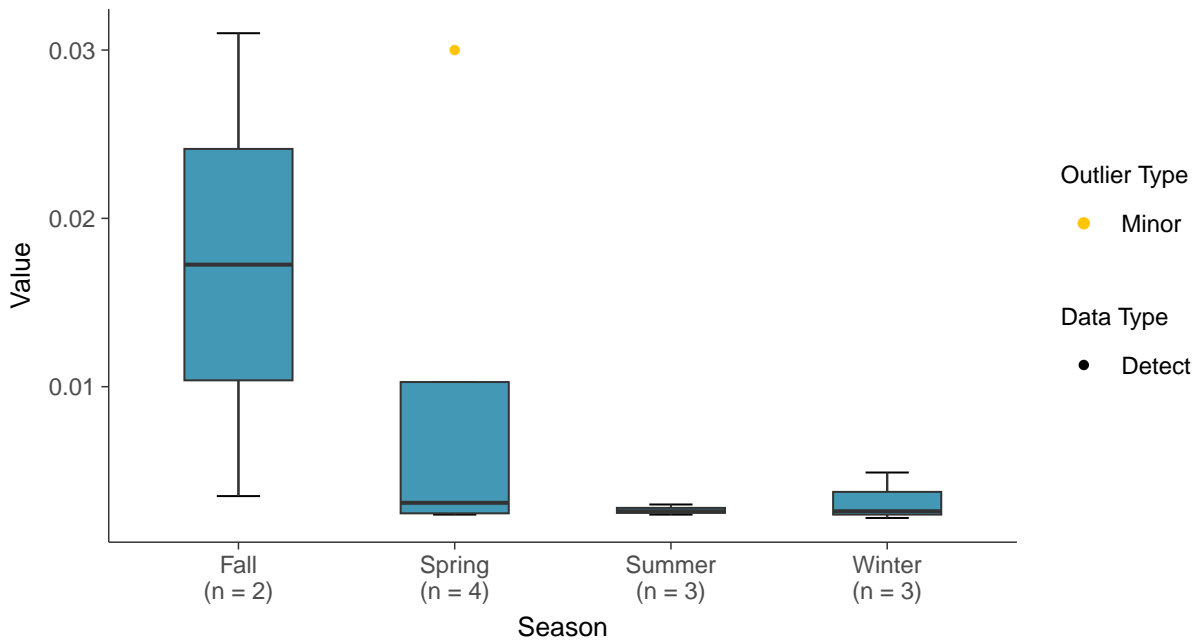
### Boxplot

Zinc, MW-32 (mg/L)



### Boxplot by Season

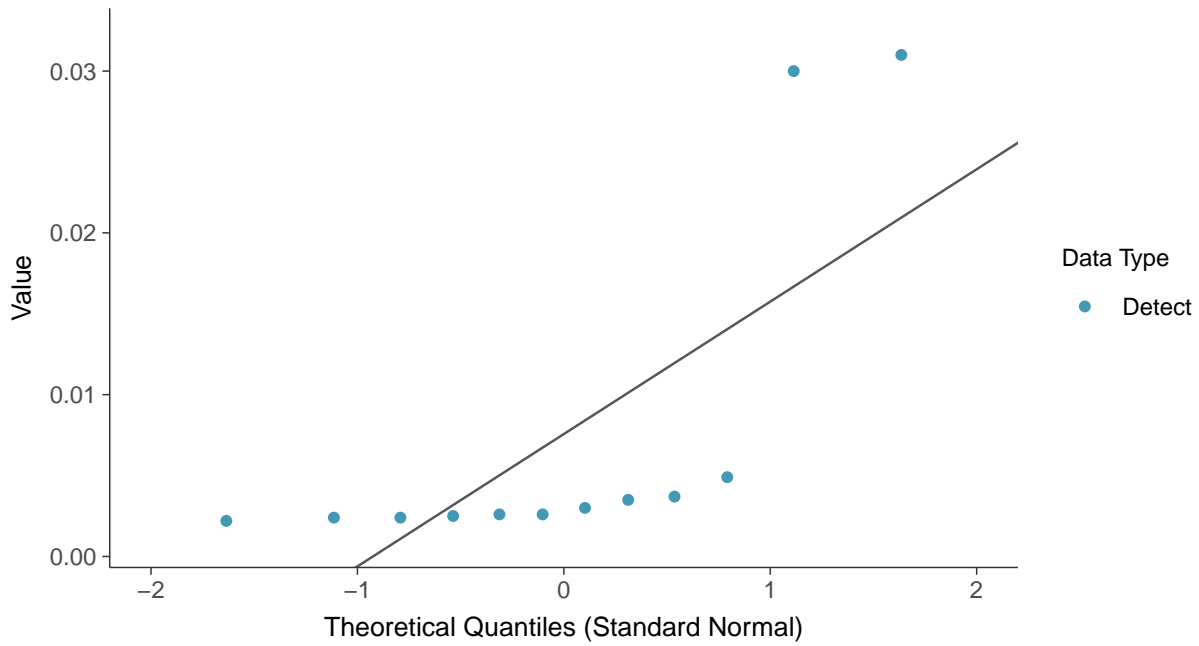
Zinc, MW-32 (mg/L)





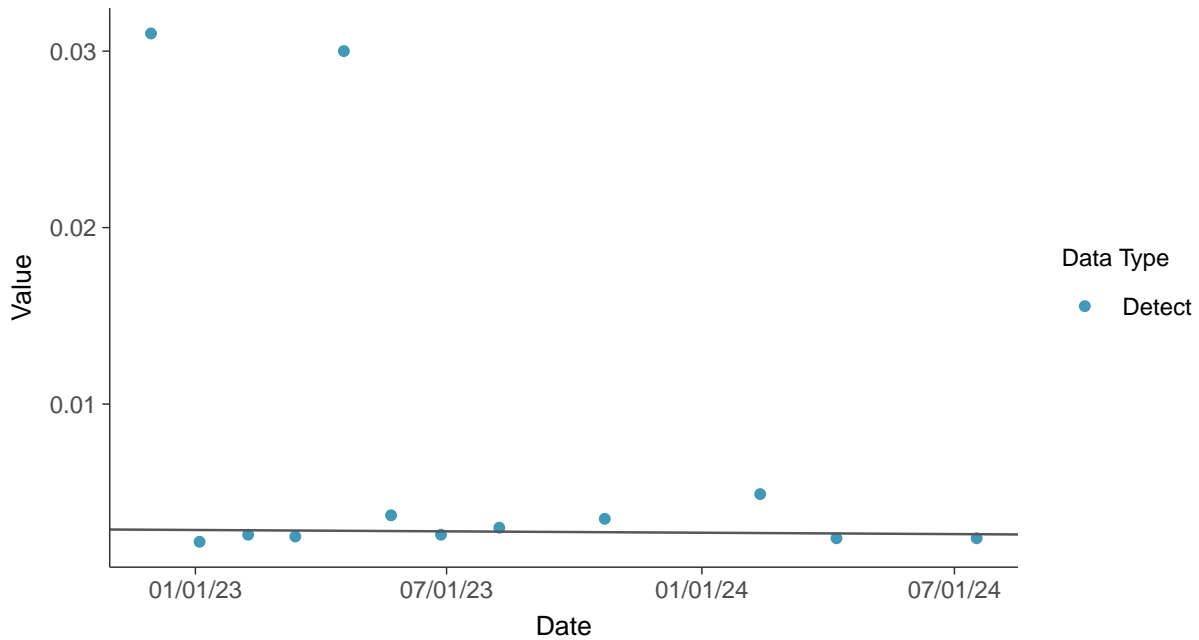
### Normal Q-Q plot

Zinc, MW-32 (mg/L)



### Trend Regression: Mann-Kendall/Theil-Sen Estimate

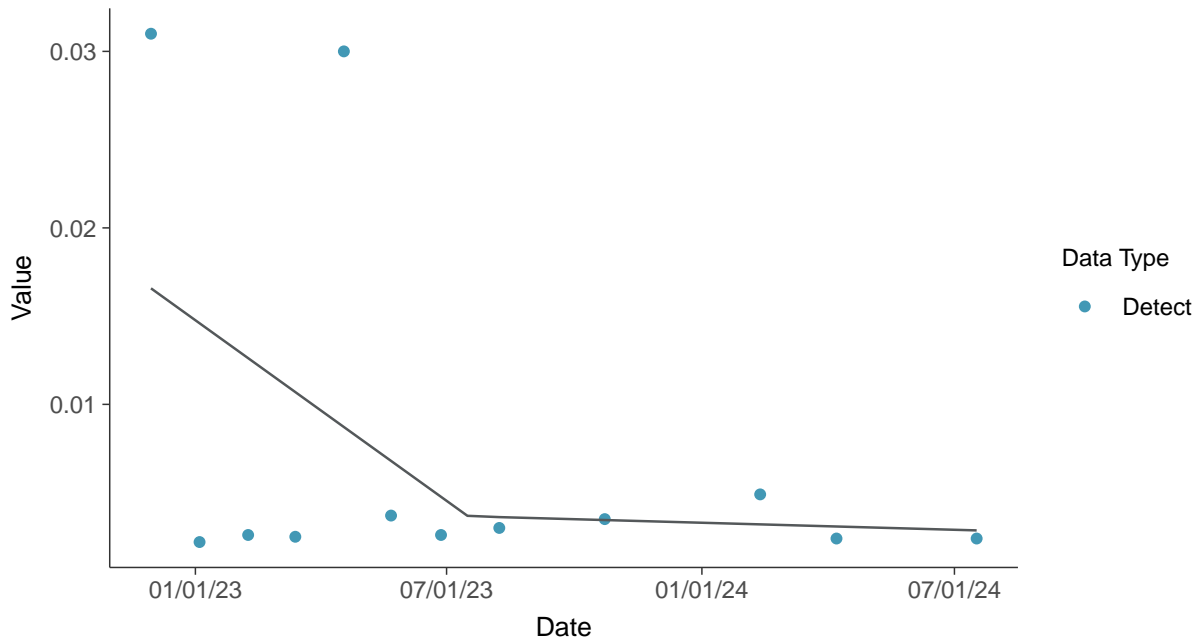
Zinc, MW-32 (mg/L)





### Trend Regression: Piecewise Linear-Linear

Zinc, MW-32 (mg/L)



**Grand Haven, Downgradient Wells as of July 2024**

**95% Lower Confidence Limits for Assessment Monitoring**

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-01R	Appendix III	Boron	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	83
MW-01R	Appendix III	Calcium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	210
MW-01R	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	110
MW-01R	Appendix III	Fluoride	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	9.3
MW-01R	Appendix III	pH (field)	su	12	0%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	7.6
MW-01R	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	300
MW-01R	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	2,300
MW-01R	Appendix IV	Antimony	mg/L	12	25%	2022-11-29 to 2024-07-18	Lognormal MLE Likelihood Profile LCL	0.00025
MW-01R	Appendix IV	Arsenic	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	0.0012
MW-01R	Appendix IV	Barium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.26
MW-01R	Appendix IV	Beryllium	mg/L	12	8%	2022-11-29 to 2024-07-18	Normal MLE LCL	0.00016
MW-01R	Appendix IV	Cadmium	mg/L	12	75%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-01R	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-29 to 2024-07-18	Lognormal H-LCL	0.0023
MW-01R	Appendix IV	Cobalt	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	0.0013
MW-01R	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	9.3
MW-01R	Appendix IV	Lead	mg/L	12	17%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	0.00072
MW-01R	Appendix IV	Lithium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	1.8
MW-01R	Appendix IV	Mercury	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-01R	Appendix IV	Molybdenum	mg/L	12	8%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	0.00075
MW-01R	Appendix IV	Radium 226 and 228	pCi/L	12	58%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.67
MW-01R	Appendix IV	Selenium	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	0.00058
MW-01R	Appendix IV	Thallium	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-01R	Part 115	Copper	mg/L	12	42%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-01R	Part 115	Iron	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.42
MW-01R	Part 115	Nickel	mg/L	12	0%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.0015
MW-01R	Part 115	Silver	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-01R	Part 115	Vanadium	mg/L	12	17%	2022-11-29 to 2024-07-18	Normal MLE LCL	0.00089
MW-01R	Part 115	Zinc	mg/L	12	25%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-02	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	92
MW-02	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	200
MW-02	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	140
MW-02	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	9.2
MW-02	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-07-17	Normal LCL	7.2
MW-02	Appendix III	Sulfate (as SO4)	mg/L	12	67%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.41
MW-02	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	1,800
MW-02	Appendix IV	Antimony	mg/L	12	25%	2022-11-28 to 2024-07-17	Gamma MLE Bootstrap LCL	0.00017
MW-02	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.0074
MW-02	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.43
MW-02	Appendix IV	Beryllium	mg/L	12	8%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.00020
MW-02	Appendix IV	Cadmium	mg/L	12	75%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000046
MW-02	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-28 to 2024-07-17	Adjusted Gamma LCL	0.025
MW-02	Appendix IV	Cobalt	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0043
MW-02	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	9.2

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-02	Appendix IV	Lead	mg/L	12	8%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.0017
MW-02	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	1.2
MW-02	Appendix IV	Mercury	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-02	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-28 to 2024-07-17	Adjusted Gamma LCL	0.0054
MW-02	Appendix IV	Radium 226 and 228	pCi/L	12	33%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.79
MW-02	Appendix IV	Selenium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.00094
MW-02	Appendix IV	Thallium	mg/L	12	92%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-02	Part 115	Copper	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0014
MW-02	Part 115	Iron	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	22
MW-02	Part 115	Nickel	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.016
MW-02	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-02	Part 115	Vanadium	mg/L	12	8%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.0025
MW-02	Part 115	Zinc	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.0022
MW-03	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	3.9
MW-03	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	350
MW-03	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	150
MW-03	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.54
MW-03	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-07-18	Normal LCL	7.3
MW-03	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	320
MW-03	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	1,900
MW-03	Appendix IV	Antimony	mg/L	12	58%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-03	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.00079
MW-03	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.31
MW-03	Appendix IV	Beryllium	mg/L	12	58%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000052
MW-03	Appendix IV	Cadmium	mg/L	12	92%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-03	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.0041
MW-03	Appendix IV	Cobalt	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.00064
MW-03	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.54
MW-03	Appendix IV	Lead	mg/L	12	92%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00022
MW-03	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.035
MW-03	Appendix IV	Mercury	mg/L	12	92%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-03	Appendix IV	Molybdenum	mg/L	12	75%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00025
MW-03	Appendix IV	Radium 226 and 228	pCi/L	12	8%	2022-11-28 to 2024-07-18	Normal MLE LCL	0.91
MW-03	Appendix IV	Selenium	mg/L	12	25%	2022-11-28 to 2024-07-18	Normal MLE LCL	0.00028
MW-03	Appendix IV	Thallium	mg/L	12	92%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-03	Part 115	Copper	mg/L	12	42%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-03	Part 115	Iron	mg/L	12	0%	2022-11-28 to 2024-07-18	Adjusted Gamma LCL	0.99
MW-03	Part 115	Nickel	mg/L	12	8%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00094
MW-03	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-03	Part 115	Vanadium	mg/L	12	75%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-03	Part 115	Zinc	mg/L	12	58%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-04	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	3.9
MW-04	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	350
MW-04	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	150
MW-04	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	1.2

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-04	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-07-18	Normal LCL	7.3
MW-04	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	470
MW-04	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	1,800
MW-04	Appendix IV	Antimony	mg/L	12	75%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000071
MW-04	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.00077
MW-04	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.11
MW-04	Appendix IV	Beryllium	mg/L	12	92%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000052
MW-04	Appendix IV	Cadmium	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-04	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.0033
MW-04	Appendix IV	Cobalt	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.00036
MW-04	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	1.2
MW-04	Appendix IV	Lead	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-04	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.058
MW-04	Appendix IV	Mercury	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-04	Appendix IV	Molybdenum	mg/L	12	17%	2022-11-28 to 2024-07-18	Normal MLE LCL	0.00064
MW-04	Appendix IV	Radium 226 and 228	pCi/L	12	25%	2022-11-28 to 2024-07-18	Normal MLE LCL	0.79
MW-04	Appendix IV	Selenium	mg/L	12	42%	2022-11-28 to 2024-07-18	Gamma MLE Bootstrap LCL	0.00016
MW-04	Appendix IV	Thallium	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-04	Part 115	Copper	mg/L	12	83%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-04	Part 115	Iron	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	5.6
MW-04	Part 115	Nickel	mg/L	12	0%	2022-11-28 to 2024-07-18	Normal LCL	0.012
MW-04	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-04	Part 115	Vanadium	mg/L	12	83%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-04	Part 115	Zinc	mg/L	12	75%	2022-11-28 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-06	Appendix III	Boron	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	8.3
MW-06	Appendix III	Calcium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	250
MW-06	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	52
MW-06	Appendix III	Fluoride	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	1.1
MW-06	Appendix III	pH (field)	su	12	0%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	7.2
MW-06	Appendix III	Sulfate (as SO4)	mg/L	12	17%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	5.9
MW-06	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	1,200
MW-06	Appendix IV	Antimony	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-06	Appendix IV	Arsenic	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.00061
MW-06	Appendix IV	Barium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	1.3
MW-06	Appendix IV	Beryllium	mg/L	12	92%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000052
MW-06	Appendix IV	Cadmium	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-06	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.0014
MW-06	Appendix IV	Cobalt	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.00047
MW-06	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	1.1
MW-06	Appendix IV	Lead	mg/L	12	75%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-06	Appendix IV	Lithium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.16
MW-06	Appendix IV	Mercury	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-06	Appendix IV	Molybdenum	mg/L	12	67%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00025
MW-06	Appendix IV	Radium 226 and 228	pCi/L	12	25%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.64
MW-06	Appendix IV	Selenium	mg/L	12	42%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00020

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-06	Appendix IV	Thallium	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-06	Part 115	Copper	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-06	Part 115	Iron	mg/L	12	0%	2022-11-29 to 2024-07-18	Lognormal H-LCL	17
MW-06	Part 115	Nickel	mg/L	12	42%	2022-11-29 to 2024-07-18	Normal MLE LCL	0.00054
MW-06	Part 115	Silver	mg/L	12	100%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-06	Part 115	Vanadium	mg/L	12	92%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-06	Part 115	Zinc	mg/L	12	17%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-07	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	11
MW-07	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	140
MW-07	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	13
MW-07	Appendix III	Fluoride	mg/L	12	8%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.083
MW-07	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-17	Normal LCL	6.8
MW-07	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	20
MW-07	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	620
MW-07	Appendix IV	Antimony	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-07	Appendix IV	Arsenic	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.00020
MW-07	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.33
MW-07	Appendix IV	Beryllium	mg/L	12	75%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-07	Appendix IV	Cadmium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-07	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-30 to 2024-07-17	Lognormal H-LCL	0.00033
MW-07	Appendix IV	Cobalt	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.00084
MW-07	Appendix IV	Fluoride (App IV)	mg/L	12	8%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.083
MW-07	Appendix IV	Lead	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-07	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0051
MW-07	Appendix IV	Mercury	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-07	Appendix IV	Molybdenum	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00025
MW-07	Appendix IV	Radium 226 and 228	pCi/L	12	17%	2022-11-30 to 2024-07-17	Gamma MLE Bootstrap LCL	0.81
MW-07	Appendix IV	Selenium	mg/L	12	75%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-07	Appendix IV	Thallium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-07	Part 115	Copper	mg/L	12	75%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00020
MW-07	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	14
MW-07	Part 115	Nickel	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00065
MW-07	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-07	Part 115	Vanadium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-07	Part 115	Zinc	mg/L	12	75%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.0012
MW-08	Appendix III	Boron	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	5.5
MW-08	Appendix III	Calcium	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	130
MW-08	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	23
MW-08	Appendix III	Fluoride	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.79
MW-08	Appendix III	pH (field)	su	12	0%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	7.2
MW-08	Appendix III	Sulfate (as SO4)	mg/L	12	33%	2022-12-01 to 2024-07-18	Gamma MLE Bootstrap LCL	3.3
MW-08	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	510
MW-08	Appendix IV	Antimony	mg/L	12	50%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-08	Appendix IV	Arsenic	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.027
MW-08	Appendix IV	Barium	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	1.1



Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-08	Appendix IV	Beryllium	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.000052
MW-08	Appendix IV	Cadmium	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-08	Appendix IV	Chromium, Total	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.00076
MW-08	Appendix IV	Cobalt	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.00042
MW-08	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.79
MW-08	Appendix IV	Lead	mg/L	12	75%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-08	Appendix IV	Lithium	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.097
MW-08	Appendix IV	Mercury	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-08	Appendix IV	Molybdenum	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	0.00094
MW-08	Appendix IV	Radium 226 and 228	pCi/L	12	25%	2022-12-01 to 2024-07-18	Normal MLE LCL	0.71
MW-08	Appendix IV	Selenium	mg/L	12	42%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.00014
MW-08	Appendix IV	Thallium	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-08	Part 115	Copper	mg/L	12	42%	2022-12-01 to 2024-07-18	Normal MLE LCL	0.00013
MW-08	Part 115	Iron	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	17
MW-08	Part 115	Nickel	mg/L	12	0%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.0010
MW-08	Part 115	Silver	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-08	Part 115	Vanadium	mg/L	12	100%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-08	Part 115	Zinc	mg/L	12	25%	2022-12-01 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-09	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	5.5
MW-09	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	330
MW-09	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	13
MW-09	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	2.4
MW-09	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	7.2
MW-09	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	320
MW-09	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	1,200
MW-09	Appendix IV	Antimony	mg/L	12	58%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000092
MW-09	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.0015
MW-09	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-07-17	Lognormal H-LCL	0.28
MW-09	Appendix IV	Beryllium	mg/L	12	83%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-09	Appendix IV	Cadmium	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-09	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0021
MW-09	Appendix IV	Cobalt	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.00043
MW-09	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	2.4
MW-09	Appendix IV	Lead	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-09	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.29
MW-09	Appendix IV	Mercury	mg/L	12	83%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-09	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.017
MW-09	Appendix IV	Radium 226 and 228	pCi/L	12	92%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.69
MW-09	Appendix IV	Selenium	mg/L	12	17%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.00021
MW-09	Appendix IV	Thallium	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-09	Part 115	Copper	mg/L	12	75%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00020
MW-09	Part 115	Iron	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	19
MW-09	Part 115	Nickel	mg/L	12	0%	2022-11-28 to 2024-07-17	Adjusted Gamma LCL	0.0020
MW-09	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-09	Part 115	Vanadium	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00062

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-09	Part 115	Zinc	mg/L	12	67%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.0012
MW-10	Appendix III	Boron	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	11
MW-10	Appendix III	Calcium	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	230
MW-10	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	170
MW-10	Appendix III	Fluoride	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	4.2
MW-10	Appendix III	pH (field)	su	12	0%	2022-11-29 to 2024-07-17	Normal LCL	7.6
MW-10	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	430
MW-10	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	1,700
MW-10	Appendix IV	Antimony	mg/L	12	67%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-10	Appendix IV	Arsenic	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	0.00044
MW-10	Appendix IV	Barium	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	0.22
MW-10	Appendix IV	Beryllium	mg/L	12	50%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-10	Appendix IV	Cadmium	mg/L	12	100%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-10	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	0.0026
MW-10	Appendix IV	Cobalt	mg/L	12	8%	2022-11-29 to 2024-07-17	Gamma MLE Bootstrap LCL	0.00032
MW-10	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	4.2
MW-10	Appendix IV	Lead	mg/L	12	83%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00012
MW-10	Appendix IV	Lithium	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	0.79
MW-10	Appendix IV	Mercury	mg/L	12	92%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-10	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	0.0025
MW-10	Appendix IV	Radium 226 and 228	pCi/L	12	83%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.64
MW-10	Appendix IV	Selenium	mg/L	12	8%	2022-11-29 to 2024-07-17	Gamma MLE Bootstrap LCL	0.00031
MW-10	Appendix IV	Thallium	mg/L	12	100%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-10	Part 115	Copper	mg/L	12	75%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00020
MW-10	Part 115	Iron	mg/L	12	0%	2022-11-29 to 2024-07-17	Normal LCL	4.0
MW-10	Part 115	Nickel	mg/L	12	50%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00065
MW-10	Part 115	Silver	mg/L	12	100%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-10	Part 115	Vanadium	mg/L	12	83%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-10	Part 115	Zinc	mg/L	12	42%	2022-11-29 to 2024-07-17	Nonparametric LCL around the Median	0.0012
MW-11	Appendix III	Boron	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	3.9
MW-11	Appendix III	Calcium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	230
MW-11	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	59
MW-11	Appendix III	Fluoride	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.41
MW-11	Appendix III	pH (field)	su	12	0%	2022-11-29 to 2024-07-18	Normal LCL	7.3
MW-11	Appendix III	Sulfate (as SO4)	mg/L	12	25%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	20
MW-11	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	950
MW-11	Appendix IV	Antimony	mg/L	12	67%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000082
MW-11	Appendix IV	Arsenic	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.0012
MW-11	Appendix IV	Barium	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.53
MW-11	Appendix IV	Beryllium	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000052
MW-11	Appendix IV	Cadmium	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-11	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-11	Appendix IV	Cobalt	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	0.00046
MW-11	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	0.41
MW-11	Appendix IV	Lead	mg/L	12	25%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00022

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-11	Appendix IV	Lithium	mg/L	12	0%	2022-11-29 to 2024-07-18	Adjusted Gamma LCL	0.042
MW-11	Appendix IV	Mercury	mg/L	12	92%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-11	Appendix IV	Molybdenum	mg/L	12	17%	2022-11-29 to 2024-07-18	Normal MLE LCL	0.00071
MW-11	Appendix IV	Radium 226 and 228	pCi/L	12	33%	2022-11-29 to 2024-07-18	Normal MLE LCL	0.61
MW-11	Appendix IV	Selenium	mg/L	12	25%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	0.00019
MW-11	Appendix IV	Thallium	mg/L	12	92%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-11	Part 115	Copper	mg/L	12	25%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-11	Part 115	Iron	mg/L	12	0%	2022-11-29 to 2024-07-18	Normal LCL	5.4
MW-11	Part 115	Nickel	mg/L	12	0%	2022-11-29 to 2024-07-18	Lognormal H-LCL	0.0013
MW-11	Part 115	Silver	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-11	Part 115	Vanadium	mg/L	12	83%	2022-11-29 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-11	Part 115	Zinc	mg/L	12	33%	2022-11-29 to 2024-07-18	Gamma MLE Bootstrap LCL	0.0044
MW-12	Appendix III	Boron	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.25
MW-12	Appendix III	Calcium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	57
MW-12	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	17
MW-12	Appendix III	Fluoride	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.28
MW-12	Appendix III	pH (field)	su	12	0%	2022-11-28 to 2024-07-17	Normal LCL	7.5
MW-12	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	98
MW-12	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	230
MW-12	Appendix IV	Antimony	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.00051
MW-12	Appendix IV	Arsenic	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0020
MW-12	Appendix IV	Barium	mg/L	12	0%	2022-11-28 to 2024-07-17	Adjusted Gamma LCL	0.027
MW-12	Appendix IV	Beryllium	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-12	Appendix IV	Cadmium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.00095
MW-12	Appendix IV	Chromium, Total	mg/L	12	42%	2022-11-28 to 2024-07-17	Normal MLE LCL	0.000016
MW-12	Appendix IV	Cobalt	mg/L	12	42%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median*	0.00010
MW-12	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.28
MW-12	Appendix IV	Lead	mg/L	12	50%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00015
MW-12	Appendix IV	Lithium	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0030
MW-12	Appendix IV	Mercury	mg/L	12	83%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-12	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0061
MW-12	Appendix IV	Radium 226 and 228	pCi/L	12	75%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.52
MW-12	Appendix IV	Selenium	mg/L	12	0%	2022-11-28 to 2024-07-17	Adjusted Gamma LCL	0.00065
MW-12	Appendix IV	Thallium	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-12	Part 115	Copper	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.00095
MW-12	Part 115	Iron	mg/L	12	50%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.026
MW-12	Part 115	Nickel	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0021
MW-12	Part 115	Silver	mg/L	12	100%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-12	Part 115	Vanadium	mg/L	12	50%	2022-11-28 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-12	Part 115	Zinc	mg/L	12	0%	2022-11-28 to 2024-07-17	Normal LCL	0.0062
MW-18	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	2.3
MW-18	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	310
MW-18	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	20
MW-18	Appendix III	Fluoride	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	3.5
MW-18	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-17	Normal LCL	7.1

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-18	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	700
MW-18	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	1,300
MW-18	Appendix IV	Antimony	mg/L	12	25%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00012
MW-18	Appendix IV	Arsenic	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.022
MW-18	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.016
MW-18	Appendix IV	Beryllium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-18	Appendix IV	Cadmium	mg/L	12	42%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.000037
MW-18	Appendix IV	Chromium, Total	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00018
MW-18	Appendix IV	Cobalt	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	0.0023
MW-18	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	3.5
MW-18	Appendix IV	Lead	mg/L	12	67%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00015
MW-18	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.030
MW-18	Appendix IV	Mercury	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-18	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.012
MW-18	Appendix IV	Radium 226 and 228	pCi/L	12	67%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.50
MW-18	Appendix IV	Selenium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.00033
MW-18	Appendix IV	Thallium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-18	Part 115	Copper	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	0.00047
MW-18	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	5.7
MW-18	Part 115	Nickel	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	0.0055
MW-18	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-18	Part 115	Vanadium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-18	Part 115	Zinc	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.040
MW-19	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1.8
MW-19	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	450
MW-19	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	38
MW-19	Appendix III	Fluoride	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1.8
MW-19	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-18	Adjusted Gamma LCL	6.8
MW-19	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	920
MW-19	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1,800
MW-19	Appendix IV	Antimony	mg/L	12	92%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-19	Appendix IV	Arsenic	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.0043
MW-19	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.037
MW-19	Appendix IV	Beryllium	mg/L	12	25%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.000061
MW-19	Appendix IV	Cadmium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-19	Appendix IV	Chromium, Total	mg/L	12	42%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.00015
MW-19	Appendix IV	Cobalt	mg/L	12	8%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.00034
MW-19	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1.8
MW-19	Appendix IV	Lead	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-19	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.086
MW-19	Appendix IV	Mercury	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-19	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.0082
MW-19	Appendix IV	Radium 226 and 228	pCi/L	12	33%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.52
MW-19	Appendix IV	Selenium	mg/L	12	83%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00010
MW-19	Appendix IV	Thallium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000075

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-19	Part 115	Copper	mg/L	12	83%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-19	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	15
MW-19	Part 115	Nickel	mg/L	12	8%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-19	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-19	Part 115	Vanadium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-19	Part 115	Zinc	mg/L	12	83%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-20	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.80
MW-20	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	120
MW-20	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	62
MW-20	Appendix III	Fluoride	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.22
MW-20	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-17	Normal LCL	7.3
MW-20	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	45
MW-20	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	650
MW-20	Appendix IV	Antimony	mg/L	12	33%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.000065
MW-20	Appendix IV	Arsenic	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0013
MW-20	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	0.42
MW-20	Appendix IV	Beryllium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-20	Appendix IV	Cadmium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-20	Appendix IV	Chromium, Total	mg/L	12	42%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.00017
MW-20	Appendix IV	Cobalt	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0011
MW-20	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.22
MW-20	Appendix IV	Lead	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0017
MW-20	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.054
MW-20	Appendix IV	Mercury	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-20	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0040
MW-20	Appendix IV	Radium 226 and 228	pCi/L	12	58%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.54
MW-20	Appendix IV	Selenium	mg/L	12	50%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00011
MW-20	Appendix IV	Thallium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-20	Part 115	Copper	mg/L	12	8%	2022-11-30 to 2024-07-17	Normal MLE LCL	0.00026
MW-20	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	18
MW-20	Part 115	Nickel	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0079
MW-20	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-20	Part 115	Vanadium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-20	Part 115	Zinc	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.024
MW-30	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	1.7
MW-30	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	430
MW-30	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	110
MW-30	Appendix III	Fluoride	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1.1
MW-30	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	7.0
MW-30	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	820
MW-30	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	2,100
MW-30	Appendix IV	Antimony	mg/L	12	92%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-30	Appendix IV	Arsenic	mg/L	12	17%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.00026
MW-30	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.053
MW-30	Appendix IV	Beryllium	mg/L	12	83%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000052

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-30	Appendix IV	Cadmium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000032
MW-30	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	0.0077
MW-30	Appendix IV	Cobalt	mg/L	12	0%	2022-11-30 to 2024-07-18	Adjusted Gamma LCL	0.0010
MW-30	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	1.1
MW-30	Appendix IV	Lead	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00022
MW-30	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.11
MW-30	Appendix IV	Mercury	mg/L	12	92%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00016
MW-30	Appendix IV	Molybdenum	mg/L	12	25%	2022-11-30 to 2024-07-18	Normal MLE LCL	0.00054
MW-30	Appendix IV	Radium 226 and 228	pCi/L	12	50%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.54
MW-30	Appendix IV	Selenium	mg/L	12	50%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00011
MW-30	Appendix IV	Thallium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000075
MW-30	Part 115	Copper	mg/L	12	67%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00020
MW-30	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-18	Normal LCL	2.2
MW-30	Part 115	Nickel	mg/L	12	17%	2022-11-30 to 2024-07-18	Gamma MLE Bootstrap LCL	0.0013
MW-30	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.000050
MW-30	Part 115	Vanadium	mg/L	12	100%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.00062
MW-30	Part 115	Zinc	mg/L	12	83%	2022-11-30 to 2024-07-18	Nonparametric LCL around the Median	0.0012
MW-31	Appendix III	Boron	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	4.2
MW-31	Appendix III	Calcium	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	160
MW-31	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	97
MW-31	Appendix III	Fluoride	mg/L	12	0%	2022-12-01 to 2024-07-18	Lognormal H-LCL	4.7
MW-31	Appendix III	pH (field)	su	12	0%	2022-12-01 to 2024-07-17	Normal LCL	7.8
MW-31	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	140
MW-31	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-12-01 to 2024-07-18	Normal LCL	780
MW-31	Appendix IV	Antimony	mg/L	12	50%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.000080
MW-31	Appendix IV	Arsenic	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	0.0012
MW-31	Appendix IV	Barium	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	0.14
MW-31	Appendix IV	Beryllium	mg/L	12	92%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-31	Appendix IV	Cadmium	mg/L	12	92%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-31	Appendix IV	Chromium, Total	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	0.0020
MW-31	Appendix IV	Cobalt	mg/L	12	8%	2022-12-01 to 2024-07-17	Normal MLE LCL	0.00014
MW-31	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-12-01 to 2024-07-18	Lognormal H-LCL	4.7
MW-31	Appendix IV	Lead	mg/L	12	83%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-31	Appendix IV	Lithium	mg/L	12	0%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.046
MW-31	Appendix IV	Mercury	mg/L	12	100%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-31	Appendix IV	Molybdenum	mg/L	12	0%	2022-12-01 to 2024-07-17	Normal LCL	0.0010
MW-31	Appendix IV	Radium 226 and 228	pCi/L	12	25%	2022-12-01 to 2024-07-17	Gamma MLE Bootstrap LCL	0.58
MW-31	Appendix IV	Selenium	mg/L	12	42%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00013
MW-31	Appendix IV	Thallium	mg/L	12	92%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-31	Part 115	Copper	mg/L	12	67%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00020
MW-31	Part 115	Iron	mg/L	12	0%	2022-12-01 to 2024-07-17	Adjusted Gamma LCL	0.52
MW-31	Part 115	Nickel	mg/L	12	83%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00065
MW-31	Part 115	Silver	mg/L	12	100%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-31	Part 115	Vanadium	mg/L	12	92%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-31	Part 115	Zinc	mg/L	12	75%	2022-12-01 to 2024-07-17	Nonparametric LCL around the Median	0.0012

Well	Type	Constituent	Unit	n	% NDs	Range of Sampling Period	Method	LCL
MW-32	Appendix III	Boron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	3.1
MW-32	Appendix III	Calcium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	160
MW-32	Appendix III	Chloride (as Cl)	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	42
MW-32	Appendix III	Fluoride	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	1.5
MW-32	Appendix III	pH (field)	su	12	0%	2022-11-30 to 2024-07-17	Normal LCL	7.6
MW-32	Appendix III	Sulfate (as SO4)	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	58
MW-32	Appendix III	Total Dissolved Solids	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	650
MW-32	Appendix IV	Antimony	mg/L	12	67%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000067
MW-32	Appendix IV	Arsenic	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00046
MW-32	Appendix IV	Barium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.37
MW-32	Appendix IV	Beryllium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000052
MW-32	Appendix IV	Cadmium	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000032
MW-32	Appendix IV	Chromium, Total	mg/L	12	0%	2022-11-30 to 2024-07-17	Lognormal H-LCL	0.00044
MW-32	Appendix IV	Cobalt	mg/L	12	0%	2022-11-30 to 2024-07-17	Lognormal H-LCL	0.00040
MW-32	Appendix IV	Fluoride (App IV)	mg/L	12	0%	2022-11-30 to 2024-07-17	Adjusted Gamma LCL	1.5
MW-32	Appendix IV	Lead	mg/L	12	75%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-32	Appendix IV	Lithium	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.11
MW-32	Appendix IV	Mercury	mg/L	12	92%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00016
MW-32	Appendix IV	Molybdenum	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	0.0038
MW-32	Appendix IV	Radium 226 and 228	pCi/L	12	67%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.54
MW-32	Appendix IV	Selenium	mg/L	12	83%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00010
MW-32	Appendix IV	Thallium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000075
MW-32	Part 115	Copper	mg/L	12	67%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00020
MW-32	Part 115	Iron	mg/L	12	0%	2022-11-30 to 2024-07-17	Normal LCL	14
MW-32	Part 115	Nickel	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00086
MW-32	Part 115	Silver	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.000050
MW-32	Part 115	Vanadium	mg/L	12	100%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.00062
MW-32	Part 115	Zinc	mg/L	12	0%	2022-11-30 to 2024-07-17	Nonparametric LCL around the Median	0.0024

\* While one or more parametric distributions fit the data, nonparametric methods were used to compute the LCL due to non-convergence or negative parametric LCLs.