2024
ANNUAL GROUNDWATER QUALITY REPORT

OF

THE AUDUBON COUNTY SANITARY LANDFILL
05-SDP-01-75C
AUDUBON, IOWA

by:
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January, 2025

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Engineering *Management*

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Certification

Prepared by: ________________________________ Date: 1-15-2025

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Section 1.0 Background Information

1.1 Report Format

Table 1 through Table 13 are attached to this report and satisfy the IDNR requirement to provide the tables to meet the IDNR format requirements.

1.2 Report Priority

No requests are made herein for priority review of this document.

1.3 Period of Report Coverage

Water quality data evaluation is based on a running compilation of data beginning in June 9, 2008. Statistical evaluations herein are based on the most recent water quality data collected through October 15, 2024.

1.4 Current Site Maps

Figure 1 is attached illustrating the current site features, monitoring well locations, buildings, and leachate piezometer locations.

Figure 2 represents the groundwater contour map.

1.5 Site Status and Applicable Rules

Site Location & Status

The Audubon County Sanitary Landfill is a closed landfill that operated from 1975 until its closure in 2007. The site is located in the NW ¼ of the SE ¼, the NW ¼ of the SW ¼, and lot B of the SW¼ of the NE ¼, all in Section 33, T80N, R35W of Audubon County, Iowa (Figure 1). Approximately 8.3 acres originally received waste and were closed under previous rules. An additional 10.6 acres also received waste and was closed during 2008. The permitted landfill stopped accepting waste on October 20, 2007, and began transferring to the Harrison County Landfill.

A closure permit (Permit No. 05-SDP-01-75C) was issued July 3, 2008, and expires July 3, 2038.

Site Geology/Hydrogeology

The site geology and site hydrogeology are reported by Howard R. Green in the *Hydrogeologic Evaluation* (October 1990) and the *Supplement to the Hydrologic Monitoring Plan* (February 1992 – Doc #68059).

Monitoring Well Data

The monitoring wells, their screened intervals, and the soil type are listed in the Table below.

Monitoring wells in the sampling program at the Audubon County Sanitary Landfill

Monitoring Well	Screened Interval (feet bgs)	Screened Across
MW-90-4	8.0-18.0	Alluvium/colluvium
MW-90-7	7.5-12.5	Weathered till
MW-90-14	7.0-17.0	Alluvium/colluvium
MW-90-17	25.0-35.0	Weathered till
MW-91-19	7.5-22.5	Alluvium with sand seams Over till with sand lens
MW-91-20	15.0-30.0	Glacial till

Applicable Rules
Iowa Administrative Code (IAC) 567-113 is applicable to the site.

MONITORING WELL MAINTENANCE PERFORMANCE REEVALUATION

Table 3 outlines the status of well performance and maintenance activities performed as required by IAC 567-113.10(2)"f". Water elevation information is summarized in Table 4 and Table 4A.

High & Low Water Levels
Current year water elevation data is included on Table 4. Historic water elevation data (2009 to present) is included in Table 4A. The high and low water elevations in 2024 are summarized in Table 4.

A Water Table Contour Map (Figure 2) dated October 15, 2024, is included with this report and illustrates the water surfaces and the effects of the topography.

Review of the 2024 water elevation data does not indicate any remarkable water elevation conditions.

Well Depth & Sedimentation
Well depth measurements were made October 15, 2024. Review of the well depth data included on Table 4 do not indicate that significant well sedimentation is occurring at any site monitoring wells (less than 6 inches of sedimentation).

Well Recharge Rates & Chemistry

The general in-situ permeability was defined in the 1990 Hydrogeologic Investigation Report and the 1992 Supplement to the Hydrologic Monitoring Plan. The summary information is included in Table 4. The well recharge information gathered April 18, 2024 indicates that recharge is relatively unchanged over time.

Based on the apparent static conditions across the site, it appears that the semi-annual water elevation data is sufficient to adequately monitor the hydrologic condition of the site. Review of the water elevation data for 2024 does not indicate excessive variability compared to historic water elevation data. The wells are interpreted to be appropriately located to detect any impact, should it occur.

Section 2.0 Reporting Period Monitoring Activities

The Hydrologic Monitoring for the site is approved by Permit Amendment #3 dated October 26, 2010 (Doc# 60926). The current HMSP is summarized in Table 1.

Background monitoring wells are restricted to a single well (MW90-17). The background monitoring well is functioning as a valid sampling point based on the hydrogeology and the water quality results.

Downgradient monitoring points include MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3.

The HMSP Implementation Schedule for 2025 is itemized in Table 2.

A comprehensive summary of Analytical Data for the episodes between 2008 and October 15, 2024, is included on Table 9.

2.1 Current Detection Monitoring Activities

The background well is currently MW90-17.

Downgradient monitoring points include MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3.

2.2 Current Assessment Monitoring Activities

Monitoring wells MW90-4, MW90-7, MW90-14, MW91-19 are included in the assessment monitoring program. To date, bis(2-ethylhexyl)phthalate is the only Appendix II compounds detected.

The full Appendix II parameter list is analyzed on an approved five (5) year frequency at all assessment wells. Approval of the five (5) year frequency is included in Permit Amendment #4, dated November 20, 2014 (Doc # 81876).

The most recent full Appendix II sampling was completed on April 18, 2024, at MW90-7 and MW91-19 (Table 2A).

Section 3.0 Data Evaluation and Summary

Field sampling information for April 18, 2024, and October 15, 2024, sampling episodes is included on the field forms (IDNR Form 542-1322) in Appendix A. Chemical analytical results for April 18, 2024, and October 15, 2024, sample collection episodes are included in Appendix B. The cumulative chemical analytical data is also presented in summary form in Table 9.

Statistical Evaluations are prepared by Otter Creek Environmental Services for the Spring and Fall monitoring episodes. The Groundwater Statistics Report for the Audubon County Sanitary Landfill, First Semi-Annual Monitoring Event in 2024, dated May 2024, is included in Appendix C.1. The Groundwater Statistics Report for the Audubon County Sanitary Landfill, Second Semi-Annual Monitoring Event in 2024, dated November 2024, is also included in Appendix C.2.

QUALITY ASSURANCE/QUALITY CONTROL

A blind duplicate sample was collected at MW90-4 during the April 18, 2024, sampling episode. A blind duplicate was collected at MW90-17 during October 15, 2024, sampling episode.

The purpose of the field duplicate is to evaluate the precision of sample collection and analysis process from the field through the laboratory. The calculation of the Relative Percent Difference (RPD) for duplicate pair results is used to evaluate the precision.

The Quality Control (QC) limit for the RPD on field duplicates is established at thirty percent (30%) for duplicate pairs that have reported concentrations five (5) times greater than the laboratory Reporting Limit. For samples and respective duplicates with reported analyte concentrations nearer the Reporting Limit, the RPD calculations demonstrate greater variability and the RPD can be very large. RPD values are considered non-representative in the following conditions:

a) Both the original and the duplicate results are less than five (5) times the Reporting Limit.
b) One or both results are qualified, flagged, or estimated.
c) One or both results are not detected.

The results of the blind duplicate and the monitoring well results (April 18, 2024, and October 15, 2024) were within the limits established and indicate that the data quality is acceptable without restriction.

SITE SPECIFIC GWPS

There are no Site-Specific GWPS established for this facility. GWPS are listed in the Statewide Standards published in Iowa Administrative Code (IAC) 567, Chapter 137. All GWPS are summarized in Table 5.

STATISTICALLY SIGNIFICANT INCREASES (SSI)

Test results from background monitoring well MW90-17 (Table 5) are utilized to establish background conditions of site groundwater.

All downgradient data is evaluated herein. In the downgradient wells, compounds that have exceeded a calculated prediction limit in 2024 (spring and/or fall) are summarized in Table 6.

The water quality data at each downgradient well is also evaluated over time in Table 7 which summarizes compounds in downgradient wells that have exceeded a control limit since September 30, 2009. Note that exceedances are documented over time at assessment monitoring wells (MW90-4, MW90-7, MW90-14, MW91-19).

ASSESSMENT MONITORING SUMMARY

The full Appendix II (assessment) monitoring events have historically been completed at MW90-4, MW90-7, MW90-14, and MW91-19. Bis (2-ethylhexyl) phthalate is the only Appendix II compound detected (beyond the Appendix I list).

Full Appendix II List Assessment Monitoring is required on a five (5) year frequency as approved by the IDNR in Permit Amendment #4, dated November 20, 2014 (Doc # 81876).

The most recent full Appendix II sampling was completed on April 18, 2024, at MW90-7 and MW91-19 (Table 2A).

A summary of bis(2-ethylhexyl) phthalate testing to date is presented in Appendix D. The full Appendix II sampling episodes are highlighted in green in the tables in Appendix D.

STATISTICALLY SIGNIFICANT LEVELS (SSL)

The detections that exceed site prediction limits (brown highlights on Table 7) are utilized to calculate the Confidence Interval (the 95% lower confidence limits (LCL) and the 95% upper control limits (UCL)) in accordance with the 2009 Unified Guidance for Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities by US EPA. The 95% LCL values are compared to applicable GWPS. Any 95% LCL value that exceeds an applicable GWPS is recorded as an SSL.

The Confidence Intervals (95% LCL and 95% UCL) are calculated during each statistical evaluation based on the most recent four (4) data points. *There are no recorded SSL.*

CORRECTIVE MEASURES MONITORING RESULTS

Not applicable at this time.

Section 4.0 Leachate Collection System Performance Evaluation

The Audubon County Sanitary Landfill was originally permitted in 1975. The pre-1989 fill areas are unlined areas constructed and operated as an area-type fill on the east side of the landfill. A vertical expansion was approved in 1992. When that was filled in 1994, an expansion between two filled cells on the south side of the site allowed vertical expansion over the existing waste cells. A four-foot clay liner was installed between the two cells with a leachate collection system completed in 1995. The leachate control system consists of three perforated collection lines that extend several feet into the existing waste cells. The collection lines are tied to solid wall conveyance lines that gravity flow into two manholes located in series. The second manhole directs the leachate to a lagoon for storage. The lagoon is an earthen structure lined with a 60 ml HDPE liner.

Periodically, when full, the lagoon contents are hauled to the Audubon Public-Owned Treatment Works (POTW) for treatment in accordance with previous treatment agreements with the City of Audubon.

During June 2017, an aerator was installed in the leachate lagoon to reduce the volume of leachate required to be transported to the POTW. An email from IDNR dated June 13, 2016, indicated a permit amendment was not required for the aerator.

QUANTITIES

Appendix E summarizes the annual quantity of leachate collected and hauled and/or recirculated since the installation of the leachate control system (1996). In 2024, no leachate was hauled to the Audubon POTW for treatment.

The available freeboard in the lagoon is inspected semi-annually during the routine landfill inspections.

The tile line (SW-3) constructed on the north side of the lagoon continues to be monitored semi-annually as part of the groundwater monitoring program. No evidence of leakage from the liner has been observed or detected during any monitoring event.

LEACHATE TESTING

A leachate sample was collected for analysis on October 5, 2022 (Appendix F). The sample was collected in anticipation of the lagoon contents being transported to the POTW during the fall of 2022. However, hauling instead occurred during the spring of 2023. There was no testing performed in 2024, as no leachate was disposed of from the site.

MAINTENANCE OF THE SYSTEM

Currently, existing leachate piezometers are measured semi-annually (Table 12 and Table 12A).

The current bottom elevations are also checked during each monitoring event.

The collection lines were cleaned by an outside contractor during the summer of 2023 in accordance with rule. The leachate line cleaning is scheduled to occur again in 2026.

PERFORMANCE EVALUATION

Leachate piezometer level measurements for 2024 are included on Table 12.

Table 12A summarizes the leachate levels from 2009 through 2024. The historical leachate column thickness (prior to 2009) has been previously provided by others.

The standard deviation and average leachate thickness is included in Table 12A. It appears that the levels vary little between monitoring events. This implies that the piezometers are isolated and not impacted by precipitation.

The leachate levels are measured semi-annually as approved in the IDNR review letter dated June 24, 2022 (Doc #103487).

Section 5.0 Gas Monitoring

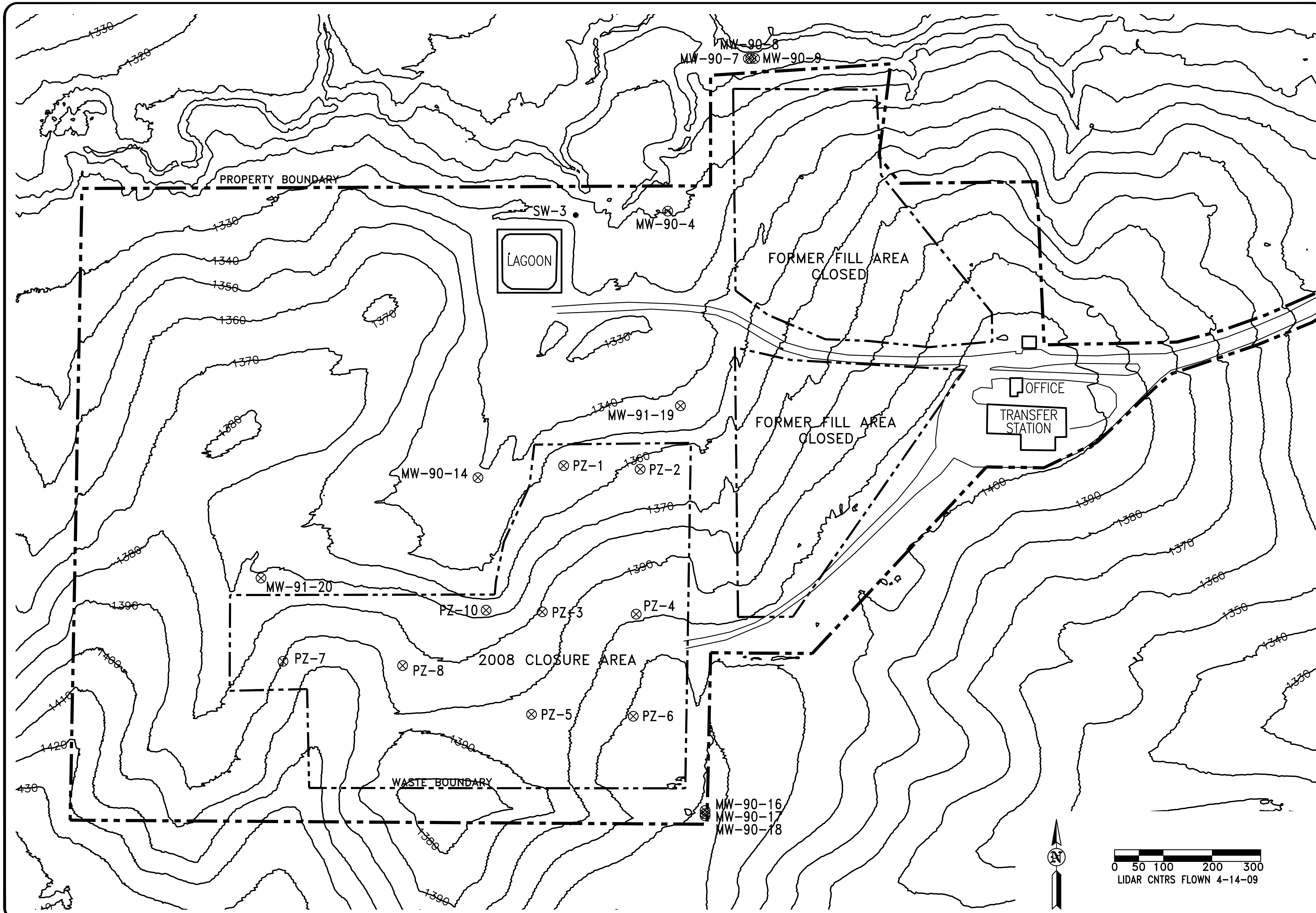
Explosive gas monitoring was performed semi-annually during monitoring well sampling events. The results are summarized in Table 13.

Review of Table 13 indicates that all recorded readings in 2024 were reported at 0% of the Lower Explosive Limit (LEL). Gas monitoring was conducted in all site structures and no readings were detected in 2024.

Section 6.0 Recommendations

a. Continue to perform sampling in accordance with the Permit.
b. Continue to evaluate water quality in the Annual Water Quality Report, due January 31 of each year.
c. Continue to perform semi-annual water level measurements in the Spring & Fall of each year and reevaluate the data in the Annual Water Quality Report.
d. The Well Recharge Rate Evaluation should be performed again in 2026.
e. Continue to perform *semi-annual* leachate level measurements. Continue to re-evaluate leachate levels in the Annual Groundwater Quality Report/Leachate Control System Performance Evaluation.
f. Continue to perform semi-annual explosive gas monitoring and report the results in the Annual Groundwater Quality Report.
g. Continue to maintain adequate free board in the lagoon.

Figures



SITE PLAN

AUDUBON COUNTY SANITARY LANDFILL
AUDUBON, IOWA

FIGURE: 1

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6050	DATE 1-5-25

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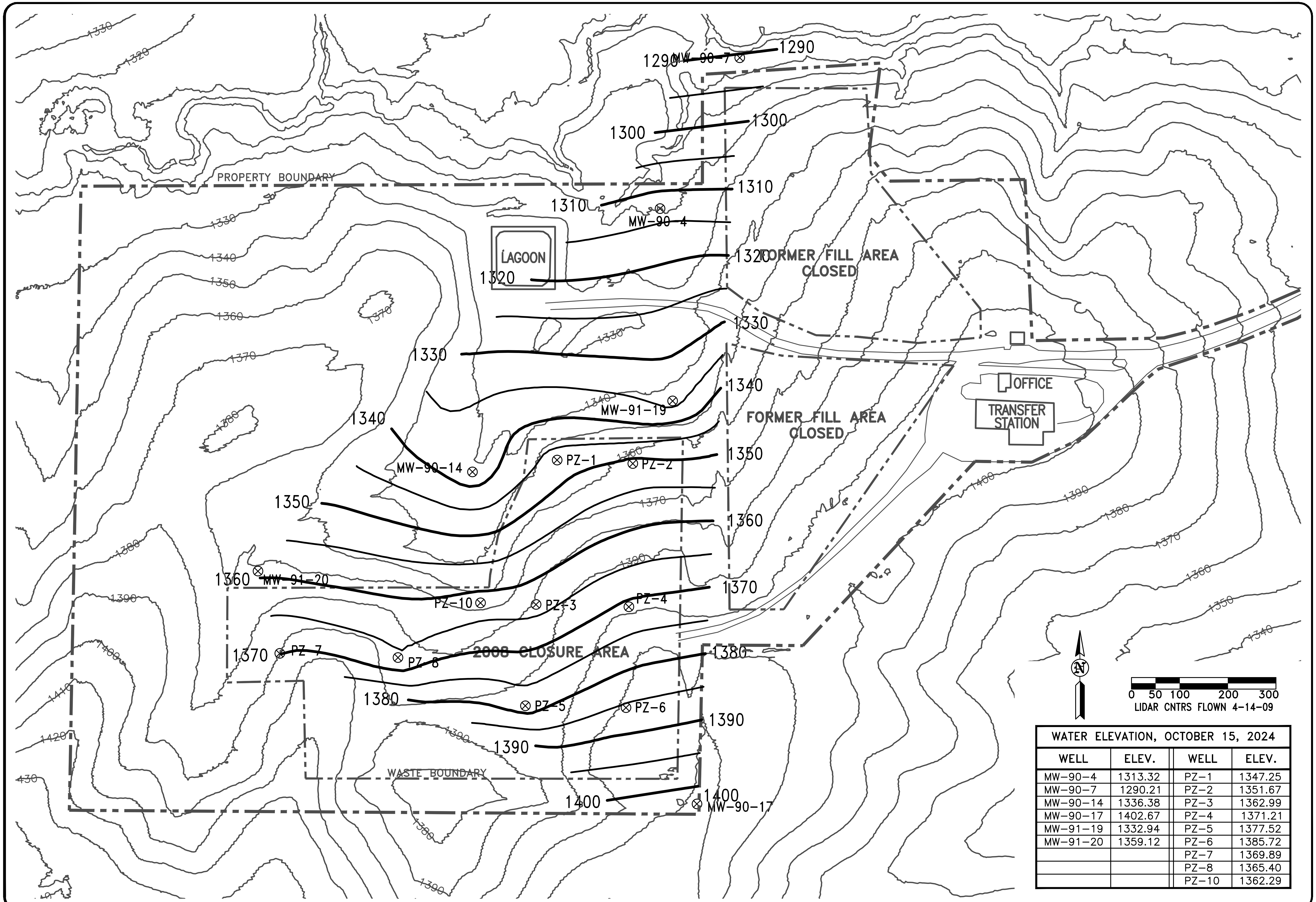

WATER ELEVATION, OCTOBER 15, 2024

WELL	ELEV.	WELL	ELEV.
MW-90-4	1313.32	PZ-1	1347.25
MW-90-7	1290.21	PZ-2	1351.67
MW-90-14	1336.38	PZ-3	1362.99
MW-90-17	1402.67	PZ-4	1371.21
MW-91-19	1332.94	PZ-5	1377.52
MW-91-20	1359.12	PZ-6	1385.72
		PZ-7	1369.89
		PZ-8	1365.40
		PZ-10	1362.29

FIGURE: 2

REVISION	NO.	DATE
DRAWN DRA	PROJECT NO. 6050	DATE 1-5-25

GROUNDWATER CONTOURS

AUDUBON COUNTY SANITARY LANDFILL
AUDUBON, IOWA

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Tables

Table 1 – Monitoring Program Summary

Table 1
Monitoring Program Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Monitoring Well	Formation	Current Monitoring Program	Change for next sampling event	Historic - Constituents w/ SSI	Current Spring - Constituents w/ SSI	Current Fall - Constituents w/ SSI	Historic - Constituents w/ SSL	Current Spring - Constituents w/ SSL	Current Fall - Constituents w/ SSL	Total # of Samples in each monitoring program since September 30, 2009		
										Detection	Assessment	Corrective Action
MW90-17 (b)	Glacial Till	Background	NC	None	None	None	None	None	None	31	0	0
MW90-4	Glacial Till	Assessment	NC	**barium, cadmium, cobalt, bis(2ethylhexyl)phthalate**	**barium**	**barium, cadmium**	None	None	None	0	31	0
MW90-7	Glacial Till	Assessment	NC	**cobalt, nickel, bis(2ethylhexyl)phthalate**	**cobalt, nickel**	**cobalt, nickel**	None	None	None	0	31	0
MW90-14	Glacial Till	Assessment	NC	**barium, cadmium, cobalt, nickel, zinc, bis(2ethylhexyl)phthalate**	**nickel**	**nickel, cadmium**	None	None	None	0	31	0
MW91-19	Glacial Till	Assessment	NC	**barium, cadmium, cobalt, nickel, bis(2ethylhexyl)phthalate**	None	None	None	None	None	0	31	0
MW91-20	Glacial Till	Detection	NC	None	None	None	None	None	None	31	0	0
SW-3	Glacial Till	Detection	NC	None	None	None	None	None	None	31	0	0

Table 2 – Monitoring Program Implementation Schedule

Table 2
Monitoring Program Implementation Schedule
Annual Water Quality Report
Audubon County Sanitary Landfill
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Monitoring Well	Recent Sampling Dates and Constituents	Upcoming Sampling Dates and Constituents		Full Appendix II Sample Dates	
		April, 2025	October, 2025	Previously Collected	Next Event
MW90-17 (b)		Appendix I	Appendix I	June, 2008	N/A
MW90-4		Appendix I	Appendix I	June, 2008; March, 2016; April, 2021	April, 2026
MW90-7	**See Table 2A**	Appendix I	Appendix I	June, 2008; April, 2014; April, 2019; April 2024	April, 2029
MW90-14		Appendix I	Appendix I	June, 2008; Sept., 2013; Sept.,2018; Oct. 2023	October, 2028
MW91-19		Appendix I	Appendix I	June, 2008; April, 2014; April, 2023; April, 2024	April, 2029
MW91-20		Appendix I	Appendix I	June, 2008	N/A
SW-3		Appendix I	Appendix I	June, 2008	N/A

(b) background well

Table 2A – Historic Monitoring Summary

Table 2A
Historic Monitoring
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Date	Monitoring Well						
	MW90-17 (b)	**MW90-4**	**MW90-7**	**MW90-14**	**MW91-19**	**MW91-20**	**SW-3**
9/24/2012	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
4/24/2013	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
9/20/2013	Appendix I	Appendix I	Appendix I	**Appendix II**	Appendix I	Appendix I	Appendix I
4/8/2014	Appendix I	Appendix I	**Appendix II**	Appendix I	**Appendix II**	Appendix I	Appendix I
9/22/2014	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
3/20/2015	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
9/17/2015	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
3/17/2016	Appendix I	**Appendix II**	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
8/26/2016	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
4/11/2017	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
9/23/2017	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
4/10/2018	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I	Appendix I
9/24/2018	Appendix I	Appendix I	Appendix I	**Appendix II**	Appendix I	Appendix I	Appendix I
11/1/2018	Appendix I	Appendix I	Appendix I	Appendix I (1)	Appendix I	Appendix I	Appendix I
4/16/2019	Appendix I	Appendix I	**Appendix II**	Appendix I (1)	Appendix I	Appendix I	Appendix I
6/25/2019	Appendix I	Appendix I	Appendix I (1)	NT	Appendix I	Appendix I	Appendix I
8/29/2019	Appendix I	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I
4/10/2020	Appendix I	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I
10/9/2020	Appendix I	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I
4/9/2021	Appendix I	**Appendix II**	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I
10/11/2021	Appendix I	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I
4/7/2022	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I	Appendix I
10/6/2022	Appendix I	Appendix I (1)	Appendix I (1)	Appendix I	Appendix I	Appendix I	Appendix I
4/5/2023	Appendix I	Appendix I (1)	Appendix I	Appendix I	**Appendix II**	Appendix I	Appendix I
10/13/2023	Appendix I	Appendix I (1)	Appendix I	**Appendix II**	Appendix I	Appendix I	Appendix I
4/18/2024	Appendix I	Appendix I	**Appendix II**	Appendix I	**Appendix II**	Appendix I	Appendix I
10/15/2024	Appendix I	Appendix I	Appendix I (1)	Appendix I	Appendix I (1)	Appendix I	Appendix I

(1) = bis(2-ethylhexyl)phthalate

Table 3 – Monitoring Well Maintenance Performance Reevaluation Schedule

Table 3
Monitoring Well Maintenance and Performance Revaluation Schedule
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Compliance with:	Monitoring Calendar Years									
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
567 IAC 113.10(2)"f"(1) high and low water levels (bi-annual)	X		X		X	X	X	P	P	P
567 IAC 113.10(2)"f"(2) changes in the hydrologic setting and flow paths (historic = 1 per 5 years; current = bi-annual)	X		X		X	X	X	P	P	P
567 IAC 113.10(2)"f"(3) well depths (annual)	X		X		X	X	X	P	P	P
567 IAC 113.10(2)"f"(4) well recharge rates and chemistry (bi-annual)	X		X		X		X		P	
Waste separation from ground water 113.6(2)"I"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

X = completed
P = Planned
N/A = Not Applicable

Table 4 – Monitoring Well Maintenance Performance Reevaluation Summary

Table 4
Monitoring Well Maintenance and Performance Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
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Well	Top of casing	Top of Screen	Total Depth		Date of Measurements		Maximum Depth	Hydraulic Cond.	Most Recent Recharge Rate	
					4/18/2024	**10/15/2024**	Discrepancy (ft)	(cm/sec)/date	**4/18/2024**	Change
MW90-17	1427.97	1400.67	37.3	Groundwater Level (ft)	27	25.3	0.07	0.0000004 1992	Full recovery in 24 hour	None percieved
				Groundwater Elevation (Ft MSL)	1400.97	1402.67				
				Measured Well Depth (ft)	37.23	37.23				
				Submerged (+) or Exposed screen (-)	0.3	2				
MW90-4	1324.25	1307.28	26.97	Groundwater Level (ft)	11.39	10.93	0	0.00005 1992	Full recovery in 3 hours	None percieved
				Groundwater Elevation (Ft MSL)	1312.86	1313.32				
				Measured Well Depth (ft)	26.97	26.97				
				Submerged (+) or Exposed screen (-)	5.58	6.04				
MW90-7	1300.32	1290.32	15	Groundwater Level (ft)	9.61	10.11	-0.03	0.00007 1992	Full recovery in 5 hours	None percieved
				Groundwater Elevation (Ft MSL)	1290.71	1290.21				
				Measured Well Depth (ft)	15.03	15.03				
				Submerged (+) or Exposed screen (-)	0.39	-0.11				
MW90-14	1347.51	1337.81	19.7	Groundwater Level (ft)	9.20	11.13	-0.16	0.00001 1992	Full recovery in 3 hours	None percieved
				Groundwater Elevation (Ft MSL)	1338.31	1336.38				
				Measured Well Depth (ft)	19.86	19.86				
				Submerged (+) or Exposed screen (-)	0.5	-1.43				
MW91-19	1347.5	1337.5	25	Groundwater Level (ft)	13.27	14.36	-0.1	0.00003 1992	Full recovery in 3 hours	None percieved
				Groundwater Elevation (Ft MSL)	1334.23	1333.14				
				Measured Well Depth (ft)	25.1	25.1				
				Submerged (+) or Exposed screen (-)	-3.27	-4.36				
MW91-20	1371.99	1354.59	32.4	Groundwater Level (ft)	14.06	12.87	0.08	0.0000003 1992	Full recovery in 6 hours	None percieved
				Groundwater Elevation (Ft MSL)	1357.93	1359.12				
				Measured Well Depth (ft)	32.32	32.32				
				Submerged (+) or Exposed screen (-)	3.34	4.53				

Table 4A – Historic Water Level Summary

Table 4A
Water Level Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Table 4A.--- Water-level data, Audubon County Sanitary Landfill (Continued).

Monitor Well/ TOC Elev. (ft)	Screened Interval Depth (ft)	Screened Interval Elev. (ft)	Water Level	Date									
				3/5/2009	9/30/2009	3/23/2010	9/7/2010	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013
MW-90-4	9.84	1314.41	Depth (ft)	9.81	9.90	6.21	9.28	8.85	9.80	8.71	11.60	5.31	10.82
1324.25	19.84	1304.41	Elev. (ft)	1314.44	1314.35	1318.04	1314.97	1315.40	1314.45	1315.54	1312.65	1318.94	1313.43
MW-90-7	9.60	1290.72	Depth (ft)	7.25	7.49	5.90	7.14	6.55	7.27	7.45	8.59	6.14	8.86
1300.32	14.60	1285.72	Elev. (ft)	1293.07	1292.83	1294.42	1293.18	1293.77	1293.05	1292.87	1291.73	1294.18	1291.46
MW-90-14	9.80	1337.71	Depth (ft)	9.15	9.32	4.61	8.38	8.48	9.11	8.40	10.26	5.48	10.19
1347.51	19.80	1327.71	Elev. (ft)	1338.36	1338.19	1342.90	1339.13	1339.03	1338.40	1339.11	1337.25	1342.03	1337.32
MW-90-17	26.89	1401.08	Depth (ft)	20.35	22.31	14.31	19.73	20.50	21.80	24.27	25.78	23.94	23.66
1427.97	36.89	1391.08	Elev. (ft)	1407.62	1405.66	1413.66	1408.24	1407.47	1406.17	1403.70	1402.19	1404.03	1404.31
MW-91-19	9.67	1337.83	Depth (ft)	12.40	13.24	9.33	12.64	11.82	13.02	11.49	14.10	7.56	13.80
1347.50	24.67	1322.83	Elev. (ft)	1335.10	1334.26	1338.17	1334.86	1335.68	1334.48	1336.01	1333.40	1339.94	1333.70
MW-91-20	17.26	1354.73	Depth (ft)	12.75	12.17	6.12	8.92	9.92	11.60	10.58	15.42	5.87	14.35
1371.99	32.26	1339.73	Elev. (ft)	1359.24	1359.82	1365.87	1363.07	1362.07	1360.39	1361.41	1356.57	1366.12	1357.64

Table 4A
Water Level Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Table 4A.--- Water-level data, Audubon County Sanitary Landfill (Continued).

Monitor Well/ TOC Elev. (ft)	Water Level	Date									
		4/8/2014	9/22/2014	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2018	4/10/2018	9/24/2018
MW-90-4	Depth (ft)	11.31	5.86	9.76	9.34	8.81	10.05	7.33	8.92	8.53	7.84
1324.25	Elev. (ft)	1312.94	1318.39	1314.49	1314.91	1315.44	1314.20	1316.92	1315.33	1315.72	1316.41
MW-90-7	Depth (ft)	8.50	6.39	7.98	7.86	6.97	8.54	6.82	8.18	7.35	7.16
1300.32	Elev. (ft)	1291.82	1293.93	1292.34	1292.46	1293.35	1291.78	1293.50	1292.14	1292.97	1293.16
MW-90-14	Depth (ft)	10.37	6.21	8.08	8.21	7.65	9.11	7.22	8.52	8.01	7.99
1347.51	Elev. (ft)	1337.14	1341.30	1339.43	1339.30	1339.86	1338.40	1340.29	1338.99	1339.50	1339.52
MW-90-17	Depth (ft)	27.37	18.84	20.62	18.98	19.03	22.50	21.05	23.47	23.24	22.25
1427.97	Elev. (ft)	1400.60	1409.13	1407.35	1408.99	1408.94	1405.47	1406.92	1404.50	1404.73	1405.72
MW-91-19	Depth (ft)	13.91	9.45	12.57	12.25	11.37	13.18	10.07	12.26	11.33	11.44
1347.50	Elev. (ft)	1333.59	1338.05	1334.93	1335.25	1336.13	1334.32	1337.43	1335.24	1336.17	1336.06
MW-91-20	Depth (ft)	13.69	4.93	8.96	6.69	4.65	10.85	5.18	9.70	6.41	6.07
1371.99	Elev. (ft)	1358.30	1367.06	1363.03	1365.30	1367.34	1361.14	1366.81	1362.29	1365.58	1365.92

Table 4A
Water Level Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Table 4A.--- Water-level data, Audubon County Sanitary Landfill (Continued).

Monitor Well/ TOC Elev. (ft)	Water Level	Date									
		4/16/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023	10/13/2023
MW-90-4	Depth (ft)	8.49	7.88	8.50	11.16	7.90	9.47	8.30	11.02	10.17	13.17
1324.25	Elev. (ft)	1315.76	1316.37	1315.75	1313.09	1316.35	1314.78	1315.95	1313.23	1314.08	1311.08
MW-90-7	Depth (ft)	7.19	7.58	7.05	9.75	8.78	9.04	7.82	10.05	9.24	10.37
1300.32	Elev. (ft)	1293.13	1292.74	1293.27	1290.57	1291.54	1291.28	1292.50	1290.27	1291.08	1289.95
MW-90-14	Depth (ft)	7.90	7.79	7.98	10.28	7.68	9.45	6.10	10.30	8.95	12.25
1347.51	Elev. (ft)	1339.61	1339.72	1339.53	1337.23	1339.83	1338.06	1341.41	1337.21	1338.56	1335.26
MW-90-17	Depth (ft)	20.70	22.26	20.45	25.37	23.35	26.70	25.05	24.63	25.95	27.30
1427.97	Elev. (ft)	1407.27	1405.71	1407.52	1402.60	1404.62	1401.27	1402.92	1403.34	1402.02	1400.67
MW-91-19	Depth (ft)	11.32	11.06	11.49	13.93	10.75	13.30	10.96	14.05	13.31	14.91
1347.50	Elev. (ft)	1336.18	1336.44	1336.01	1333.57	1336.75	1334.20	1336.54	1333.45	1334.19	1332.59
MW-91-20	Depth (ft)	5.71	6.60	5.35	12.85	6.31	11.64	6.22	13.25	10.92	13.25
1371.99	Elev. (ft)	1366.28	1365.39	1366.64	1359.14	1365.68	1360.35	1365.77	1358.74	1361.07	1358.74

Table 4A
Water Level Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Table 4A.--- Water-level data, Audubon County Sani

Monitor Wel TOC Elev. (f	Water Level	Date		Mean/ Std. Dev.
		4/18/2024	10/15/2024	
MW-90-4	Depth (ft)	8.49	7.88	9.08
1324.25	Elev. (ft)	1315.76	1316.37	1.68
MW-90-7	Depth (ft)	7.19	7.58	7.81
1300.32	Elev. (ft)	1293.13	1292.74	1.10
MW-90-14	Depth (ft)	7.90	7.79	8.41
1347.51	Elev. (ft)	1339.61	1339.72	1.54
MW-90-17	Depth (ft)	20.70	22.26	22.46
1427.97	Elev. (ft)	1407.27	1405.71	2.86
MW-91-19	Depth (ft)	11.32	11.06	12.02
1347.50	Elev. (ft)	1336.18	1336.44	1.61
MW-91-20	Depth (ft)	5.71	6.60	9.04
1371.99	Elev. (ft)	1366.28	1365.39	3.32

Table 5 – Background and GWPS Summary

Table 5
Background and GWPS Summary
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Interwell Background Well (MW90-17)

Inorganics - Appendix I										
Constituent	**Units**	**Model Type**	**Samples - N**	**Detections**	**Mean**	**SD**	**Prediction Limit**	**Confidence**	**GWPS**	**Source**
Antimony (Sb)	µg/l	nonparametric	31	0			2.0000	0.99	6	SS
Arsenic (As)	µg/l	nonparametric	31	0			4.0000	0.99	10	SS
Barium (Ba)	µg/l	normal	31	**31**	250.1290	45.4435	363.5707		2000	SS
Beryllium (Be)	µg/l	nonparametric	31	0			4.0000	0.99	4	SS
Cadmium (Cd)	µg/l	nonparametric	31	1			1.1000	0.99	5	SS
Chromium (Cr)	µg/l	nonparametric	30	0			8.0000	0.99	100	SS
Cobalt (Co)	µg/l	nonparametric	31	0			0.8000	0.99	0.8	SS
Copper (Cu)	µg/l	nonparametric	31	0			4.0000	0.99	1300	SS
Lead (Pb)	µg/l	nonparametric	31	0			4.0000	0.99	15	SS
Nickel (Ni)	µg/l	nonparametric	31	4			7.1000	0.99	100	SS
Selenium (Se)	µg/l	nonparametric	31	0			4.0000	0.99	50	SS
Silver (Ag)	µg/l	nonparametric	31	0			4.0000	0.99	100	SS
Thallium (Tl)	µg/l	nonparametric	31	0			2.0000	0.99	2	SS
Vanadium (V)	µg/l	nonparametric	31	1			20.1000	0.99	35	SS
Zinc (Zn)	µg/l	nonparametric	31	2			10.5000	0.99	2000	SS

VOC - Appendix I										
Constituent	**Units**	**Model Type**	**Samples - N**	**Detections**	**Mean**	**SD**	**Prediction Limit**	**Confidence**	**GWPS**	**Source**
All	µg/l	DQR	31	0	<1	<1	<1	<1	various	SS

= Prediction limit exceeds the GWPS. A Site-Specific GWPS is warranted

Table 6 – Summary of Detections

Table 6
Summary of Well/Detected Constituent Pairs that Exceed the Prediction Limit
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

Date	Well	Constituent	Units	Most recent result	Background Standard
4/18/2024	MW90-7	Cobalt	ug/L	1.9	0.8
10/15/2024	MW90-7	Cobalt	ug/L	7.6	0.8
4/18/2024	MW90-7	Nickel	ug/L	28.4	7.1
10/15/2024	MW90-7	Nickel	ug/L	23.3	7.1
4/18/2024	MW90-14	Nickel	ug/L	13.1	7.1
10/15/2024	MW90-14	Nickel	ug/L	12.9	7.1
10/15/2024	MW90-14	Cadmium	ug/L	1.3	1.1
4/18/2024	MW90-4	Barium	ug/L	375	363.9
10/15/2024	MW90-4	Barium	ug/L	381	363.6
10/15/2024	MW90-4	Cadmium	ug/L	1.3	1.1

Table 7 – Summary of Ongoing and Newly Identified SSI

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-4	Barium	9/30/2009	**512**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	3/23/2010	315	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/7/2010	**420**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/5/2011	**427**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/6/2011	**499**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	3/16/2012	**399**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/24/2012	322	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/24/2013	233	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/20/2013	**679**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/28/2013	329	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/8/2014	**379**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/22/2014	**383**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	3/20/2015	**434**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/17/2015	**437**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	3/17/2016	**381**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	8/26/2016	**381**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/11/2017	332	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/23/2017	362	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	11/15/2017	339	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/10/2018	340	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	9/24/2018	306	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/16/2019	361	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	8/29/2019	359	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/10/2020	**377**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/9/2020	**385**	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/9/2021	298	363.9328	---	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/11/2021	**377**	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/7/2022	348	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/6/2022	351	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/5/2023	320	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/13/2023	342	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	4/18/2024	**375**	363.9328	320.228	2000	9/30/2009	NA	9/6/2011
MW90-4	Barium	10/15/2024	**381**	363.5707	320.755	2000	9/30/2009	NA	9/6/2011

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-4	Cadmium	9/30/2009	<1.0	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	3/23/2010	<1.0	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	9/7/2010	<1.0	1.10	0.004	5	10/3/2017	1/3/2018	10/5/2016
MW90-4	Cadmium	4/5/2011	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	9/6/2011	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	3/16/2012	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	9/24/2012	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	4/24/2013	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	9/20/2013	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	10/28/2013	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	4/8/2014	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	9/22/2014	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	3/20/2015	<0.8	1.10	0.004	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	9/17/2015	**1.20**	1.10	0.000	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	3/17/2016	<0.8	1.10	0.000	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	8/26/2016	<0.8	1.10	0.000	5	10/3/2017	NA	10/5/2016
MW90-4	Cadmium	4/11/2017	<0.8	1.10	0.000	5	NA	NA	10/5/2016
MW90-4	Cadmium	9/23/2017	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/10/2018	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	9/24/2018	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/16/2019	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	8/29/2019	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/10/2020	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	10/9/2020	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/9/2021	**0.80**	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	10/11/2021	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/7/2022	<0.8	1.10	0.004	5	NA	NA	10/5/2016
MW90-4	Cadmium	10/6/2022	**3.10**	1.10	0.000	5	NA	NA	10/5/2016
MW90-4	Cadmium	1/4/2023	<0.8	1.10	0.000	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/5/2023	<0.8	1.10	0.000	5	NA	NA	10/5/2016
MW90-4	Cadmium	10/13/2023	<0.8	1.10	0.000	5	NA	NA	10/5/2016
MW90-4	Cadmium	4/18/2024	<0.8	1.10	0.400	5	NA	NA	10/5/2016
MW90-4	Cadmium	10/15/2024	**1.30**	1.10	0.096	5	NA	NA	10/5/2016

Table 7
Summary of Ongoing & Newly Identified SSI
Annual Water Quality Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C

KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-4	Cobalt	9/30/2009	<4.0	0.80	0.004	2.1	NA	NA	10/5/2016
MW90-4	Cobalt	3/23/2010	<4.0	0.80	0.004	2.1	NA	NA	10/5/2016
MW90-4	Cobalt	9/7/2010	<4.0	0.80	0.004	2.1	NA	NA	10/5/2016
MW90-4	Cobalt	4/5/2011	<4.0	0.80	0.004	2.1	NA	NA	10/5/2016
MW90-4	Cobalt	9/6/2011	<4.0	0.80	0.004	2.1	10/3/2017	1/3/2018	10/5/2016
MW90-4	Cobalt	3/16/2012	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	9/24/2012	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	4/24/2013	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	9/20/2013	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	10/28/2013	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	4/8/2014	<4.0	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	9/22/2014	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	3/20/2015	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	9/17/2015	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	3/17/2016	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	8/26/2016	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	4/11/2017	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	9/23/2017	<0.8	0.80	0.004	2.1	10/3/2017	NA	10/5/2016
MW90-4	Cobalt	4/10/2018	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	9/24/2018	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/16/2019	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	8/29/2019	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/10/2020	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	10/9/2020	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/9/2021	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	10/11/2021	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/7/2022	<0.8	0.80	0.004	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	10/6/2022	**2.0**	0.80	0.000	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	1/4/2023	<0.8	0.80	0.000	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/5/2023	<0.8	0.80	0.000	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	10/13/2023	<0.8	0.80	0.000	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	4/18/2024	<0.4	0.80	0.200	2.1	10/5/2022	NA	10/5/2016
MW90-4	Cobalt	10/15/2024	<0.4	0.80	0.200	2.1	10/5/2022	NA	10/5/2016

Table 7

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KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-4	bis(2-ethylhexyl)phthalate	9/30/2009	NT	6.00	---	6	NA	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	3/23/2010	NT	6.00	---	6	NA	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/7/2010	NT	6.00	---	6	NA	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/5/2011	NT	6.00	---	6	NA	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/6/2011	NT	6.00	---	6	10/3/2017	1/3/2018	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	3/16/2012	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/24/2012	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/24/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/20/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/28/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/8/2014	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/22/2014	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	3/20/2015	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/17/2015	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	3/17/2016	<8	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	8/26/2016	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/11/2017	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/23/2017	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/10/2018	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	9/24/2018	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/16/2019	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	8/29/2019	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/10/2020	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/9/2020	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/9/2021	**9.0**	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/11/2021	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/7/2022	<6	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/6/2022	**14.0**	6.00	2.119	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/5/2023	<6	6.00	2.119	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/13/2023	<6	6.00	0.000	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	4/18/2024	NT	6.00	0.000	6	10/5/2022	NA	10/5/2016
MW90-4	bis(2-ethylhexyl)phthalate	10/15/2024	NT	6.00	0.000	6	10/5/2022	NA	10/5/2016

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-7	Cobalt	9/30/2009	**4.80**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	3/23/2010	<4.0	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	9/7/2010	<4.0	0.80	---	2.1	10/3/2017	1/3/2018	10/5/2016
MW90-7	Cobalt	4/5/2011	<4.0	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	9/6/2011	<4.0	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	3/16/2012	**4.30**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	9/24/2012	**4.40**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	4/24/2013	<4.0	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	9/20/2013	**5.70**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	10/28/2013	<4.0	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	4/8/2014	**6.30**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	9/22/2014	**2.70**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	3/20/2015	**4.60**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	9/17/2015	**6.50**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	3/17/2016	<4.0	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	8/26/2016	**6.60**	0.80	---	2.1	10/3/2017	NA	10/5/2016
MW90-7	Cobalt	4/11/2017	**1.50**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	9/23/2017	**2.50**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/10/2018	**1.90**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	9/24/2018	**5.10**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/16/2019	**<4.0**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	8/29/2019	**1.60**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/10/2020	**2.10**	0.80	---	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	10/9/2020	**2.10**	0.80	1.67	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/9/2021	**2.10**	0.80	1.681	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	10/11/2021	**5.30**	0.80	1.018	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/7/2022	**0.80**	0.80	0.320	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	10/6/2022	**6.00**	0.80	0.611	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/5/2023	**1.60**	0.80	0.360	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	10/13/2023	**19.80**	0.80	0.000	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	4/18/2024	**1.90**	0.80	0.000	2.1	NA	NA	10/5/2016
MW90-7	Cobalt	10/15/2024	**7.60**	0.80	0.000	2.1	NA	NA	10/5/2016

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MW90-7	Nickel	9/30/2009	**49.10**	7.10	---	100	NA	NA	10/5/2016
MW90-7	Nickel	3/23/2010	**38.30**	7.10	---	100	NA	NA	10/5/2016
MW90-7	Nickel	9/7/2010	**50.50**	7.10	---	100	NA	NA	10/5/2016
MW90-7	Nickel	4/5/2011	**52.50**	7.10	---	100	NA	NA	10/5/2016
MW90-7	Nickel	9/6/2011	**43.40**	7.10	---	100	10/3/2017	1/3/2018	10/5/2016
MW90-7	Nickel	3/16/2012	**42.60**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	9/24/2012	**28.60**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	4/24/2013	**33.40**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	9/20/2013	**60.40**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	10/28/2013	**41.40**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	4/8/2014	**39.60**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	9/22/2014	**25.3**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	3/20/2015	**34.0**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	9/17/2015	**29.6**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	3/17/2016	**23.5**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	8/26/2016	**32.6**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	4/11/2017	**23.3**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	9/23/2017	**26.4**	7.10	---	100	10/3/2017	NA	10/5/2016
MW90-7	Nickel	4/10/2018	**33.8**	7.10	---	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	9/24/2018	**22.3**	7.10	---	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/16/2019	**16.3**	7.10	---	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	8/29/2019	**25.6**	7.10	---	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/10/2020	**23.0**	7.10	---	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	10/9/2020	**29.2**	7.10	17.119	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/9/2021	**42.1**	7.10	20.008	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	10/11/2021	**29.7**	7.10	21.586	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/7/2022	**15.2**	7.10	16.118	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	10/6/2022	**27.4**	7.10	15.635	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/5/2023	**25.6**	7.10	16.939	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	10/13/2023	**29.4**	7.10	16.958	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	4/18/2024	**28.4**	7.10	25.794	100	10/5/2022	NA	10/5/2016
MW90-7	Nickel	10/15/2024	**23.3**	7.10	23.422	100	10/5/2022	NA	10/5/2016

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MW90-7	bis(2-ethylhexyl)phthalate	9/30/2009	NT	6.00	---	6	NA	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	3/23/2010	NT	6.00	---	6	NA	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/7/2010	NT	6.00	---	6	NA	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/5/2011	NT	6.00	---	6	NA	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/6/2011	NT	6.00	---	6	10/3/2017	1/3/2018	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	3/16/2012	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/24/2012	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/24/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/20/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/28/2013	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/8/2014	<8	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/22/2014	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	3/20/2015	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/17/2015	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	3/17/2016	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	8/26/2016	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/11/2017	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/23/2017	NT	6.00	---	6	10/3/2017	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/10/2018	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	9/24/2018	NT	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/16/2019	**9.00**	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	6/25/2019	**11.00**	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	8/29/2019	**15.00**	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/10/2020	**7.00**	6.00	---	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/9/2020	<6	6.00	3.619	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/9/2021	**7.00**	6.00	2.701	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/11/2021	<6	6.00	2.283	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/7/2022	<6	6.00	1.647	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/6/2022	<6	6.00	1.647	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/5/2023	NT	6.00	1.647	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/13/2023	NT	6.00	1.647	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	4/18/2024	**18.00**	6.00	0.000	6	10/5/2022	NA	10/5/2016
MW90-7	bis(2-ethylhexyl)phthalate	10/15/2024	<6	6.00	0.000	6	10/5/2022	NA	10/5/2016

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-14	Barium	9/30/2009	**840**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	3/23/2010	**307**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/7/2010	**388**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/5/2011	**360**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/6/2011	**352**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	3/16/2012	**611**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/24/2012	**601**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/24/2013	**361**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/20/2013	**1150**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/28/2013	**450**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/8/2014	**482**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/22/2014	**462**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	3/20/2015	**332**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/17/2015	**274**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	3/17/2016	**314**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	8/26/2016	**301**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/11/2017	**300**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/23/2017	**270**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/10/2018	**264**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	9/24/2018	**307**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/16/2019	**199**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	8/29/2019	**300**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/10/2020	**321**	360.435	---	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/9/2020	**503**	360.435	181.853	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/9/2021	**272**	360.435	225.948	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/11/2021	**313**	360.435	231.367	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/7/2022	**255**	360.435	201.504	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/6/2022	**245**	360.435	235.983	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/5/2023	**134**	360.435	148.796	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/13/2023	**381**	360.435	134.930	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	4/18/2024	**263**	363.9328	136.798	2000	3/16/2012	NA	9/6/2011
MW90-14	Barium	10/15/2024	**237**	363.5707	134.372	2000	3/16/2012	NA	9/6/2011

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KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-14	Cadmium	3/20/2015	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	9/17/2015	**1.8**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	3/17/2016	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	8/26/2016	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/11/2017	**1.3**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	9/23/2017	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/10/2018	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	9/24/2018	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/16/2019	<0.8	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	8/29/2019	**0.9**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/10/2020	**1.7**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	10/9/2020	**1.2**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/9/2021	**1.0**	1.1	---	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	10/11/2021	<0.8	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/7/2022	**0.8**	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	10/6/2022	<0.8	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/5/2023	<0.8	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	10/13/2023	<0.8	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	4/18/2024	<0.8	1.1	0.400	5	9/17/2015	NA	4/11/2017
MW90-14	Cadmium	10/15/2024	**1.3**	1.1	0.096	5	9/17/2015	NA	4/11/2017

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KEY:	SSI	SSL LCL>GWPS

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-14	Cobalt	9/30/2009	**7.00**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	3/23/2010	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/7/2010	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/5/2011	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/6/2011	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	3/16/2012	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/24/2012	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/24/2013	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/20/2013	**6.00**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/28/2013	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/8/2014	<4.0	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/22/2014	**2.50**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	3/20/2015	**2.40**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/17/2015	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	3/17/2016	**1.00**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	8/26/2016	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/11/2017	**0.80**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/23/2017	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/10/2018	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	9/24/2018	**1.30**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/16/2019	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	8/29/2019	<0.8	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/10/2020	**0.50**	0.80	---	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/9/2020	**1.70**	0.80	0.710	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/9/2021	**0.60**	0.80	0.304	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/11/2021	**0.70**	0.80	0.221	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/7/2022	<0.8	0.80	0.421	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/6/2022	**2.40**	0.80	0.354	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/5/2023	<0.8	0.80	0.903	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/13/2023	**0.90**	0.80	1.066	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	4/18/2024	<0.4	0.80	0.000	2.1	9/22/2014	NA	9/6/2011
MW90-14	Cobalt	10/15/2024	<0.4	0.80	0.231	2.1	9/22/2014	NA	9/6/2011

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-14	Nickel	9/30/2009	**59.10**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	3/23/2010	**31.50**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/7/2010	**45.20**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/5/2011	**45.50**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/6/2011	**33.90**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	3/16/2012	**36.60**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/24/2012	**26.40**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/24/2013	**24.10**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/20/2013	**60.20**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/28/2013	**13.90**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/8/2014	**31.10**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/22/2014	**34.0**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	3/20/2015	**18.3**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/17/2015	**20.8**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	3/17/2016	**36.1**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	8/26/2016	**21.3**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/11/2017	**31.9**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/23/2017	**30.9**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/10/2018	**20.1**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	9/24/2018	**35.0**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/16/2019	**12.2**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	8/29/2019	**33.1**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/10/2020	**41.7**	7.10	---	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/9/2020	**59.0**	7.10	13.617	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/9/2021	**31.1**	7.10	26.273	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/11/2021	**33.4**	7.10	26.423	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/7/2022	**20.2**	7.10	16.604	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/6/2022	**27.8**	7.10	21.348	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/5/2023	**6.3**	7.10	8.118	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/13/2023	**36.5**	7.10	7.641	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	4/18/2024	**13.1**	7.10	4.783	100	3/23/2010	NA	9/6/2011
MW90-14	Nickel	10/15/2024	**12.9**	7.10	1.615	100	3/23/2010	NA	9/6/2011

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW90-14	Zinc	9/30/2009	**38.5**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	3/23/2010	**20.1**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/7/2010	<10.0	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/5/2011	<8.0	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/6/2011	<8.0	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	3/16/2012	**13.7**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/24/2012	<8.0	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/24/2013	**13.7**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/20/2013	**21.3**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/28/2013	**8.7**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/8/2014	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/22/2014	**8.9**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	3/20/2015	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/17/2015	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	3/17/2016	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	8/26/2016	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/11/2017	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/23/2017	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/10/2018	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	9/24/2018	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/16/2019	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	8/29/2019	**9.6**	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/10/2020	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/9/2020	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/9/2021	<20	10.50	---	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/11/2021	<20	10.50	10.000	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/7/2022	<20	10.50	10.000	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/6/2022	**20.0**	10.50	8.170	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/5/2023	<20	10.50	8.170	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/13/2023	<20	10.50	8.170	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	4/18/2024	<20	10.50	8.170	2000	3/23/2010	NA	9/6/2011
MW90-14	Zinc	10/15/2024	<20	10.50	10.000	2000	3/23/2010	NA	9/6/2011

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MW90-14	bis(2-ethylhexyl)phthalate	9/30/2009	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	3/23/2010	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/7/2010	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/5/2011	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/6/2011	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	3/16/2012	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/24/2012	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/24/2013	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/20/2013	<10	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/28/2013	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/8/2014	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/22/2014	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	3/20/2015	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/17/2015	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	3/17/2016	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	8/26/2016	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/11/2017	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/23/2017	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/10/2018	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	9/24/2018	**12.00**	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	11/1/2018	**21.00**	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/16/2019	**6.00**	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	6/25/2019	NT	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	8/29/2019	**9.00**	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/10/2020	<6	6.00	---	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/9/2020	<6	6.00	1.871	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/9/2021	<6	6.00	0.971	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/11/2021	<6	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/7/2022	NT	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/6/2022	NT	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/5/2023	NT	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/13/2023	<6	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	4/18/2024	NT	6.00	3.000	6	11/1/2018	NA	4/10/2020
MW90-14	bis(2-ethylhexyl)phthalate	10/15/2024	NT	6.00	3.000	6	11/1/2018	NA	4/10/2020

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Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW91-19	Barium	9/30/2009	390	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	3/23/2010	350	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/7/2010	430	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/5/2011	347	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/6/2011	534	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	3/16/2012	390	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/24/2012	449	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/24/2013	277	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/20/2013	833	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/28/2013	467	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/8/2014	396	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/22/2014	317	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	3/20/2015	331	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/17/2015	275	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	3/17/2016	372	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	6/15/2016	310	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	8/26/2016	362	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/29/2016	291	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/11/2017	325	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/23/2017	516	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	11/15/2017	296	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/10/2018	339	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	9/24/2018	281	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/16/2019	342	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	8/29/2019	335	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/10/2020	373	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	6/9/2020	327	360.435	---	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/9/2020	495	360.435	291.175	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/9/2021	328	360.435	287.670	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/11/2021	321	360.435	267.895	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/7/2022	343	360.435	274.497	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/6/2022	504	360.435	271.485	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	1/4/2023	434	360.435	332.936	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/5/2023	380	360.435	332.936	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/13/2023	482	360.435	385.229	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	4/18/2024	303	363.933	309.426	2000	3/16/2012	NA	9/6/2011
MW91-19	Barium	10/15/2024	276	363.571	251.613	2000	3/16/2012	NA	9/6/2011

Table 7
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KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW91-19	Cadmium	9/30/2009	<1.0	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	3/23/2010	<1.0	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/7/2010	<1.0	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/5/2011	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/6/2011	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	3/16/2012	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/24/2012	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/24/2013	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/20/2013	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/28/2013	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/8/2014	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/22/2014	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	3/20/2015	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/17/2015	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	3/17/2016	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	8/26/2016	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/11/2017	**2.3**	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/23/2017	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/10/2018	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	9/24/2018	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/16/2019	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	8/29/2019	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/10/2020	<0.8	1.1	---	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/9/2020	<0.8	1.1	0.400	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/9/2021	<0.8	1.1	0.400	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/11/2021	<0.8	1.1	0.400	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/7/2022	<0.8	1.1	0.400	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/6/2022	**2.9**	1.1	0.000	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/5/2023	<0.8	1.1	0.000	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/13/2023	<0.8	1.1	0.000	5	NA	NA	9/6/2011
MW91-19	Cadmium	4/18/2024	<0.8	1.1	0.000	5	NA	NA	9/6/2011
MW91-19	Cadmium	10/15/2024	<0.8	1.1	0.400	5	NA	NA	9/6/2011

Table 7
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KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW91-19	Cobalt	9/30/2009	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	3/23/2010	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/7/2010	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/5/2011	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/6/2011	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	3/16/2012	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/24/2012	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/24/2013	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/20/2013	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/28/2013	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/8/2014	<4.0	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/22/2014	**1.00**	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	3/20/2015	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/17/2015	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	3/17/2016	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	8/26/2016	**1.00**	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/11/2017	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/23/2017	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/10/2018	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	9/24/2018	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/16/2019	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	8/29/2019	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/10/2020	<0.8	0.80	---	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/9/2020	**2.40**	0.80	1.865	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/9/2021	<0.8	0.80	0.000	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/11/2021	<0.8	0.80	0.000	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/7/2022	<0.8	0.80	0.000	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/6/2022	**1.90**	0.80	0.000	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	1/4/2023	**0.70**	0.80	0.058	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/5/2023	**0.50**	0.80	0.058	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/13/2023	**1.40**	0.80	0.366	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	4/18/2024	<0.4	0.80	0.220	2.1	NA	NA	9/6/2011
MW91-19	Cobalt	10/15/2024	<0.4	0.80	0.104	2.1	NA	NA	9/6/2011

Table 7

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KEY:	SSI	SSL LCL>GWPS

Note: The absence of shading indicates that the condition does not exist.

Monitoring Well	Compound	Sample Date	Each Result (ug/L)	Prediction Limit (ug/L)	95% LCL (ug/L)	GWPS Limit (ug/L)	Initial Exceedance	Resamples Due	5th Background Sample
MW91-19	Nickel	9/30/2009	**7.10**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	3/23/2010	**6.70**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/7/2010	**6.90**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/5/2011	**9.70**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/6/2011	**8.30**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	3/16/2012	**6.20**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/24/2012	**6.80**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/24/2013	**6.00**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/20/2013	**5.50**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/28/2013	**4.40**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/8/2014	**4.30**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/22/2014	**6.8**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	3/20/2015	**4.0**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/17/2015	<4.0	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	3/17/2016	**5.2**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	8/26/2016	**7.1**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/11/2017	**5.1**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/23/2017	**4.5**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/10/2018	<4.0	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	9/24/2018	<4.0	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/16/2019	<4.0	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	8/29/2019	<4.0	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/10/2020	**5.7**	7.10	---	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/9/2020	**9.3**	7.10	0.634	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/9/2021	<4.0	7.10	0.634	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/11/2021	<4.0	7.10	0.634	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/7/2022	<4.0	7.10	0.000	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/6/2022	**7.8**	7.10	0.039	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	1/4/2023	**10.1**	7.10	0.628	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/5/2023	<4.0	7.10	0.628	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/13/2023	**5.3**	7.10	2.215	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	4/18/2024	<4.0	7.10	0.345	100	9/6/2011	NA	9/6/2011
MW91-19	Nickel	10/15/2024	<4.0	7.10	0.884	100	9/6/2011	NA	9/6/2011

Table 8 - Summary of Ongoing and Newly Identified SSL **- (Not Required)**

Table 9 – Analytical Data Summary

Table 9

Analytical Data Summary for MW90-14

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L		<1.0		<1.0	<1.0	1.4	<1.0	<1.0
1,1-dichloroethene	ug/L		<2		<2	<2	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<10						
1,2,4-trichlorobenzene	ug/L		<8 *						
1,2-dibromo-3-chloropropane	ug/L		<10.00		<.86	<.86	<1.00	<1.00	<1.00
1,2-dibromoethane (edb)	ug/L		<10.00		<.25	<.25	<1.00	<1.00	<1.00
1,2-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L								
1,3,5-trinitrobenzene	ug/L		<10						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<10						
1,4-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L		<10						
1,4-phenylenediamine	ug/L		<10						
1-naphthylamine	ug/L		<10						
2,2-dichloropropane	ug/L		<4						
2,3,4,6-tetrachlorophenol	ug/L		<10						
2,4,5-t	ug/L		<5.0						
2,4,5-tp (silvex)	ug/L		<5.0						
2,4,5-trichlorophenol	ug/L		<10						
2,4,6-trichlorophenol	ug/L		<10						
2,4-d	ug/L		<5						
2,4-db	ug/L		<5						
2,4-dichlorophenol	ug/L		<10						
2,4-dimethylphenol	ug/L		<10						
2,4-dinitrophenol	ug/L		<10						
2,4-dinitrotoluene	ug/L		<10						
2,6-dichlorophenol	ug/L		<10						
2,6-dinitrotoluene	ug/L		<10						
2-acetylaminofluorene	ug/L		<10						
2-butanone (mek)	ug/L		<10		<10	<10	<5	<5	<5
2-chloronaphthalene	ug/L		<10						
2-chlorophenol	ug/L		<10						
2-hexanone	ug/L		<10		<10	<10	<5	<5	<5
2-methylnaphthalene	ug/L		<10						
2-methylphenol (o-cresol)	ug/L		<10						
2-naphthylamine	ug/L		<10						
2-nitroaniline	ug/L		<10						
2-nitrophenol	ug/L		<10						
3,3´-dichlorobenzidine	ug/L		<85						
3,3'-dimethylbenzidine	ug/L		<20						
3/4-methylphenol	ug/L		<10						
3-methylcholanthrene	ug/L		<10						
3-nitroaniline	ug/L		<10						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<10						
4-aminobiphenyl	ug/L		<20						
4-bromophenyl phenyl ether	ug/L		<10						
4-chloro-3-methylphenol	ug/L		<10						
4-chloroaniline	ug/L		<10						
4-chlorophenyl phenyl ether	ug/L		<10						
4-methyl-2-pentanone (mibk)	ug/L		<10		<10	<10	<5	<5	<5
4-nitroaniline	ug/L		<10						
4-nitrophenol	ug/L		<8 *						
5-nitro-o-toluidine	ug/L		<10						
7,12-dimethylbenz (a) anthracene	ug/L		<10						
Acenaphthene	ug/L		<10 *						
Acetone	ug/L		<10.0		13.6	<10.0	<10.0	<10.0	<10.0
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<10						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L		<10		<10	<10	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<2						
Alpha-bhc	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
(3 4)-methylphenol						<8			
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
1,1-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene						<1			
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene						<8			
1,2,4-trichlorobenzene						<1			
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene						<8			
1,3,5-trinitrobenzene						<8			
1,3-dichlorobenzene						<1			
1,3-dichloropropane						<1			
1,3-dinitrobenzene						<8			
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone						<8			
1,4-phenylenediamine						<8			
1-naphthylamine						<8			
2,2-dichloropropane						<1			
2,3,4,6-tetrachlorophenol						<8			
2,4,5-t						<.5			
2,4,5-tp (silvex)						<.5			
2,4,5-trichlorophenol						<8			
2,4,6-trichlorophenol						<8			
2,4-d						<2			
2,4-db									
2,4-dichlorophenol						<8			
2,4-dimethylphenol						<8			
2,4-dinitrophenol						<8			
2,4-dinitrotoluene						<8			
2,6-dichlorophenol						<8			
2,6-dinitrotoluene						<8			
2-acetylaminofluorene						<8			
2-butanone (mek)	<5	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene						<8			
2-chlorophenol						<8			
2-hexanone	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene						<8			
2-methylphenol (o-cresol)						<8			
2-naphthylamine						<8			
2-nitroaniline						<8			
2-nitrophenol						<8			
3,3´-dichlorobenzidine						<8			
3,3'-dimethylbenzidine						<8			
3/4-methylphenol									
3-methylcholanthrene						<8			
3-nitroaniline						<8			
4,4'-ddd						<.05			
4,4'-dde						<.05			
4,4'-ddt						<.05			
4,6-dinitro-2-methylphenol						<8			
4-aminobiphenyl						<8			
4-bromophenyl phenyl ether						<8			
4-chloro-3-methylphenol						<8			
4-chloroaniline						<8			
4-chlorophenyl phenyl ether						<8			
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline						<8			
4-nitrophenol						<8			
5-nitro-o-toluidine						<8			
7,12-dimethylbenz (a) anthracene						<8			
Acenaphthene						<8 *			
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		<10.0	<10.0
Acetonitrile						<10			
Acetophenone						<8			
Acrolein						<10			
Acrylonitrile	<5	<5	<5	<5	<5	<5		<5	<5
Aldrin						<.05			
Allyl chloride						<1			
Alpha-bhc						<.05			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	11/1/2018
(3 4)-methylphenol								<8	
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	
1,1-dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	
1,1-dichloropropene								<1	
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	
1,2,4,5-tetrachlorobenzene								<8	
1,2,4-trichlorobenzene								<1	
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	
1,2-dinitrobenzene								<8	
1,3,5-trinitrobenzene								<8	
1,3-dichlorobenzene								<1	
1,3-dichloropropane								<1	
1,3-dinitrobenzene								<8	
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	
1,4-naphthoquinone								<8	
1,4-phenylenediamine								<8	
1-naphthylamine								<8	
2,2-dichloropropane								<1	
2,3,4,6-tetrachlorophenol								<8	
2,4,5-t								<.5	
2,4,5-tp (silvex)								<.5	
2,4,5-trichlorophenol								<8	
2,4,6-trichlorophenol								<8	
2,4-d								<2	
2,4-db									
2,4-dichlorophenol								<8	
2,4-dimethylphenol								<8	
2,4-dinitrophenol								<8	
2,4-dinitrotoluene								<8	
2,6-dichlorophenol								<8	
2,6-dinitrotoluene								<8	
2-acetylaminofluorene								<8	
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	
2-chloronaphthalene								<8	
2-chlorophenol								<8	
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	
2-methylnaphthalene								<8	
2-methylphenol (o-cresol)								<8	
2-naphthylamine								<8	
2-nitroaniline								<8	
2-nitrophenol								<8	
3,3´-dichlorobenzidine								<8	
3,3'-dimethylbenzidine								<8	
3/4-methylphenol									
3-methylcholanthrene								<8	
3-nitroaniline								<8	
4,4'-ddd								<.05	
4,4'-dde								<.05	
4,4'-ddt								<.05	
4,6-dinitro-2-methylphenol								<8	
4-aminobiphenyl								<8	
4-bromophenyl phenyl ether								<8	
4-chloro-3-methylphenol								<8	
4-chloroaniline								<8	
4-chlorophenyl phenyl ether								<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	
4-nitroaniline								<8	
4-nitrophenol								<8	
5-nitro-o-toluidine								<8	
7,12-dimethylbenz (a) anthracene								<8	
Acenaphthene								<8 *	
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Acetonitrile								<10	
Acetophenone								<8	
Acrolein								<10	
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	
Aldrin								<.05	
Allyl chloride								<1	
Alpha-bhc								<.05	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/16/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
(3 4)-methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1.00	<1.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-db									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<10	<10	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3/4-methylphenol									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	10/13/2023	4/18/2024	10/15/2024
(3 4)-methylphenol	<8		
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1.0	<1.0	<1.0
1,1-dichloroethene	<1	<1	<1
1,1-dichloropropene	<1		
1,2,3-trichloropropane	<1	<1	<1
1,2,4,5-tetrachlorobenzene	<8		
1,2,4-trichlorobenzene	<1		
1,2-dibromo-3-chloropropane	<1.00	<5.00	<5.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<1	<1	<1
1,2-dinitrobenzene	<8		
1,3,5-trinitrobenzene	<8		
1,3-dichlorobenzene	<1		
1,3-dichloropropane	<1		
1,3-dinitrobenzene	<8		
1,4-dichlorobenzene	<1	<1	<1
1,4-naphthoquinone	<8		
1,4-phenylenediamine	<8		
1-naphthylamine	<8		
2,2-dichloropropane	<1		
2,3,4,6-tetrachlorophenol	<8		
2,4,5-t	<.5		
2,4,5-tp (silvex)	<.5		
2,4,5-trichlorophenol	<8		
2,4,6-trichlorophenol	<8		
2,4-d	<2		
2,4-db			
2,4-dichlorophenol	<8		
2,4-dimethylphenol	<8		
2,4-dinitrophenol	<8		
2,4-dinitrotoluene	<8		
2,6-dichlorophenol	<8		
2,6-dinitrotoluene	<8		
2-acetylaminofluorene	<8		
2-butanone (mek)	<5	<10	<10
2-chloronaphthalene	<8		
2-chlorophenol	<8		
2-hexanone	<5	<5	<5
2-methylnaphthalene	<8		
2-methylphenol (o-cresol)	<8		
2-naphthylamine	<8		
2-nitroaniline	<8		
2-nitrophenol	<8		
3,3´-dichlorobenzidine	<8		
3,3'-dimethylbenzidine	<8		
3/4-methylphenol			
3-methylcholanthrene	<8		
3-nitroaniline	<8		
4,4'-ddd	<.05		
4,4'-dde	<.05		
4,4'-ddt	<.05		
4,6-dinitro-2-methylphenol	<8		
4-aminobiphenyl	<8		
4-bromophenyl phenyl ether	<8		
4-chloro-3-methylphenol	<8		
4-chloroaniline	<8		
4-chlorophenyl phenyl ether	<8		
4-methyl-2-pentanone (mibk)	<5	<5	<5
4-nitroaniline	<8		
4-nitrophenol	<8		
5-nitro-o-toluidine	<8		
7,12-dimethylbenz (a) anthracene	<8		
Acenaphthene	<8 *		
Acetone	<10.0	<10.0	<10.0
Acetonitrile	<10		
Acetophenone	<8		
Acrolein	<10		
Acrylonitrile	<5	<5	<5
Aldrin	<.05		
Allyl chloride	<1		
Alpha-bhc	<.05		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Alpha-chlordane	ug/L		<.05						
Ammonia as n	mg/L	<.2 *							
Anthracene	ug/L		<10						
Antimony, total	ug/L		<6		<6	<6	<1	<2	<2
Arsenic, total	ug/L		2.86		4.10	11.00	5.30	<4.00	5.40
Azobenzene	ug/L								
Barium, total	ug/L		386		394	368	840	307	388
Benzene	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Benzo(a)anthracene	ug/L		<10						
Benzo(a)pyrene	ug/L		<10						
Benzo(b)fluoranthene	ug/L		<10						
Benzo(g,h,i)perylene	ug/L		<10						
Benzo(k)fluoranthene	ug/L		<10						
Benzyl alcohol	ug/L		<10						
Beryllium, total	ug/L		<1		<1	<1	<4	<4	<4
Beta-bhc	ug/L								
Bis(2-chloroethoxy)methane	ug/L		<10						
Bis(2-chloroethyl)ether	ug/L		<10						
Bis(2-chloroisopropyl) ether	ug/L		<10						
Bis(2-ethylhexyl)phthalate	ug/L		<10						
Bis[2-chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L		<5		<5	<5	<1	<1	<1
Bromodichloromethane	ug/L		<1		<1	<1	<1	<1	<1
Bromoform	ug/L		<5		<5	<5	<1	<1	<1
Bromomethane	ug/L		<4		<4	<4	<1	<1	<1
Butyl benzyl phthalate	ug/L		<10						
Cadmium, total	ug/L		1.83		1.45	2.84	3.80	1.30	1.00
Carbon disulfide	ug/L		<1		<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L		<2		<2	<2	<1	<1	<1
Chemical oxygen demand	mg/L	13.2 *	29.8						
Chlordane	ug/L								
Chloride	mg/L	145 *	156	128 *					
Chlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
Chlorobenzilate	ug/L		<10						
Chlorodibromomethane	ug/L		<5		<5	<5			
Chloroethane	ug/L		<4.0		<4.0	<4.0	2.2	<1.0	<1.0
Chloroform	ug/L		<1		<2	<1	<1	<1	<1
Chloromethane	ug/L		<3		<3	<3	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L		<20		<20	<20	<10	<10	<10
Chrysene	ug/L		<10						
Cis-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Cobalt, total	ug/L		<20.0		<20.0	<20.0	7.0	<4.0	<4.0
Copper, total	ug/L		<20.0		<20.0	<20.0	10.2	5.7	4.1
Cyanide	mg/L		<.010						
Dalapon	ug/L		<10						
Delta-bhc	ug/L								
Diallate	ug/L								
Diallate (cis or trans)	ug/L		<10						
Dibenzo(a,h)anthracene	ug/L		<10						
Dibenzofuran	ug/L		<10						
Dibromochloromethane	ug/L						<1	<1	<1
Dibromomethane	ug/L		<1		<1	<1	<1	<1	<1
Dicamba	ug/L		<5						
Dichlorodifluoromethane	ug/L		<3						
Dichloroprop	ug/L		<5						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<10						
Dimethoate	ug/L		<10.0						
Dimethyl phthalate	ug/L		<10						
Di-n-butyl phthalate	ug/L		<10						
Di-n-octyl phthalate	ug/L		<10						
Dinoseb	ug/L		<7.5 *						
Diphenylamine	ug/L		<10						
Disulfoton	ug/L		<70.0						
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Endrin ketone	ug/L		<.05						
Ethyl methacrylate	ug/L		<2						
Ethyl methanesulfonate	ug/L		<10						
Ethylbenzene	ug/L		<1		<1	<1	<1	<1	<1
Famphur	ug/L		<20.0						
Fluoranthene	ug/L		<10						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Alpha-chlordane									
Ammonia as n									
Anthracene						<8			
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.00	<4.00	4.10	5.10	<4.00	8.90	<4.00	5.10	<4.00
Azobenzene						<8			
Barium, total	360	352	611	601	361	1150	450	482	462
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene						<8			
Benzo(a)pyrene						<8			
Benzo(b)fluoranthene						<8			
Benzo(g,h,i)perylene						<8			
Benzo(k)fluoranthene						<8			
Benzyl alcohol						<8			
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc						<.05			
Bis(2-chloroethoxy)methane						<8			
Bis(2-chloroethyl)ether						<8			
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate						<10			
Bis[2-chloroisopropyl]ether						<8			
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromoform	<1	<1	<1	<1	<1	<1		<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate						<8			
Cadmium, total	.90	1.20	11.70	35.40	2.80	10.30	<.80	25.60	.90
Carbon disulfide	<1	<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane						<.1			
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate						<8			
Chlorodibromomethane									
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Chloroform	<1	<1	<1	<1	<1	<1		<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroprene						<1			
Chromium, total	<8	<20	<8	<8	<8	<8	<8	<8	<8
Chrysene						<8			
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<4.0	6.0	<4.0	<4.0	2.5
Copper, total	4.0	<4.0	7.3	9.2	5.3	15.8	<4.0	15.6	<4.0
Cyanide						<.007			
Dalapon									
Delta-bhc						<.05			
Diallate						<8			
Diallate (cis or trans)									
Dibenzo(a,h)anthracene						<8			
Dibenzofuran						<8			
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane						<1			
Dichloroprop									
Dieldrin						<.05			
Diethyl phthalate						<8			
Dimethoate						<.4			
Dimethyl phthalate						<8			
Di-n-butyl phthalate						<8			
Di-n-octyl phthalate						<8			
Dinoseb						<.5			
Diphenylamine						<8			
Disulfoton						<.4			
Endosulfan i						<.05			
Endosulfan ii						<.05			
Endosulfan sulfate						<.05			
Endrin						<.05			
Endrin aldehyde						<.05			
Endrin ketone									
Ethyl methacrylate						<10			
Ethyl methanesulfonate						<8			
Ethylbenzene	<1	<1	<1	<1	<1	<1		<1	<1
Famphur						<.4			
Fluoranthene						<8			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	11/1/2018
Alpha-chlordane									
Ammonia as n									
Anthracene								<8	
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	
Arsenic, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	
Azobenzene								<8	
Barium, total	332	274	314	301	300	270	264	307	
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Benzo(a)anthracene								<8	
Benzo(a)pyrene								<8	
Benzo(b)fluoranthene								<8	
Benzo(g,h,i)perylene								<8	
Benzo(k)fluoranthene								<8	
Benzyl alcohol								<8	
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	
Beta-bhc								<.05	
Bis(2-chloroethoxy)methane								<8	
Bis(2-chloroethyl)ether								<8	
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate								12	21
Bis[2-chloroisopropyl]ether								<8	
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	
Butyl benzyl phthalate								<8	
Cadmium, total	<.80	1.80	<.80	<.80	1.30	<.80	<.80	<.80	
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	
Chemical oxygen demand									
Chlordane								<.1	
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	
Chlorobenzilate								<8	
Chlorodibromomethane									
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Chloroprene								<1	
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	
Chrysene								<8	
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	
Cobalt, total	2.4	<.8	1.0	<.8	.8	<.8	<.8	1.3	
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
Cyanide								<.005	
Dalapon									
Delta-bhc								<.05	
Diallate								<8	
Diallate (cis or trans)									
Dibenzo(a,h)anthracene								<8	
Dibenzofuran								<8	
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	
Dicamba									
Dichlorodifluoromethane								<1	
Dichloroprop									
Dieldrin								<.05	
Diethyl phthalate								<8	
Dimethoate								<.4	
Dimethyl phthalate								<8	
Di-n-butyl phthalate								<8	
Di-n-octyl phthalate								<8	
Dinoseb								<.5	
Diphenylamine								<8	
Disulfoton								<.4	
Endosulfan i								<.05	
Endosulfan ii								<.05	
Endosulfan sulfate								<.05	
Endrin								<.05	
Endrin aldehyde								<.05	
Endrin ketone									
Ethyl methacrylate								<10	
Ethyl methanesulfonate								<8	
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	
Famphur								<.4	
Fluoranthene								<8	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/16/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Alpha-chlordane									
Ammonia as n									
Anthracene									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Azobenzene									
Barium, total	199	300	321	503	272	313	255	245	134
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate	6	9	<6	<6	<6	<6			
Bis[2-chloroisopropyl]ether									
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									
Cadmium, total	<.80	.90	1.70	1.20	1.00	<.80	.80	<.80	<.80
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chlordane									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
Chlorodibromomethane									
Chloroethane	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene									
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	.5	1.7	.6	.7	<.4	2.4	<.4
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cyanide									
Dalapon									
Delta-bhc									
Diallate									
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dicamba									
Dichlorodifluoromethane									
Dichloroprop									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Endrin ketone									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	10/13/2023	4/18/2024	10/15/2024
Alpha-chlordane			
Ammonia as n			
Anthracene	<8		
Antimony, total	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00
Azobenzene	<8		
Barium, total	381	263	237
Benzene	<1.0	<1.0	<1.0
Benzo(a)anthracene	<8		
Benzo(a)pyrene	<8		
Benzo(b)fluoranthene	<8		
Benzo(g,h,i)perylene	<8		
Benzo(k)fluoranthene	<8		
Benzyl alcohol	<8		
Beryllium, total	<4	<4	<4
Beta-bhc	<.05		
Bis(2-chloroethoxy)methane	<8		
Bis(2-chloroethyl)ether	<8		
Bis(2-chloroisopropyl) ether			
Bis(2-ethylhexyl)phthalate	<6		
Bis[2-chloroisopropyl]ether	<8		
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Butyl benzyl phthalate	<8		
Cadmium, total	<.80	<.80	1.30
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chemical oxygen demand			
Chlordane	<.1		
Chloride			
Chlorobenzene	<1	<1	<1
Chlorobenzilate	<8		
Chlorodibromomethane			
Chloroethane	<1.0	<1.0	<1.0
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chloroprene	<1		
Chromium, total	<8	<8	<8
Chrysene	<8		
Cis-1,2-dichloroethene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	.9	<.4	.4
Copper, total	<4.0	<4.0	<4.0
Cyanide	<.005		
Dalapon			
Delta-bhc	<.05		
Diallate	<8		
Diallate (cis or trans)			
Dibenzo(a,h)anthracene	<8		
Dibenzofuran	<8		
Dibromochloromethane	<1	<1	<1
Dibromomethane	<1	<1	<1
Dicamba			
Dichlorodifluoromethane	<1		
Dichloroprop			
Dieldrin	<.05		
Diethyl phthalate	<8		
Dimethoate	<.4		
Dimethyl phthalate	<8		
Di-n-butyl phthalate	<8		
Di-n-octyl phthalate	<8		
Dinoseb	<.5		
Diphenylamine	<8		
Disulfoton	<.4		
Endosulfan i	<.05		
Endosulfan ii	<.05		
Endosulfan sulfate	<.05		
Endrin	<.05		
Endrin aldehyde	<.05		
Endrin ketone			
Ethyl methacrylate	<10		
Ethyl methanesulfonate	<8		
Ethylbenzene	<1	<1	<1
Famphur	<.4		
Fluoranthene	<8		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Fluorene	ug/L		<10						
Gamma-bhc (lindane)	ug/L		<.05						
Gamma-chlordane	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<10.00						
Hexachlorobutadiene	ug/L		<10						
Hexachlorocyclopentadiene	ug/L		<10						
Hexachloroethane	ug/L		<10						
Hexachloropropene	ug/L		<10						
Indeno(1,2,3-cd)pyrene	ug/L		<10						
Iodomethane	ug/L		<10		<10	<10	<1	<1	<1
Iron, dissolved	mg/L	.219		5.700					
Iron, total	mg/L	.219		5.700					
Isobutanol	ug/L		<10						
Isodrin	ug/L		<10						
Isophorone	ug/L		<10						
Isosafrole	ug/L		<10						
Kepone	ug/L		<10						
Lead, total	ug/L		5.86		8.27	7.78	6.20	<4.00	<4.00
Mcpa	ug/L		<500						
Mcpp	ug/L		<500						
Mercury, total	ug/L		<.2						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<10						
Methoxychlor	ug/L		<.05						
Methyl methacrylate	ug/L		<2						
Methyl methanesulfonate	ug/L		<10						
Methyl parathion	ug/L								
Methylene chloride	ug/L		<10		<5	<5	<5	<5	<5
Naphthalene	ug/L		<5						
Nickel, total	ug/L		69.7		65.3	<50.0	59.1	31.5	45.2
Nitrobenzene	ug/L		<10						
N-nitrosodiethylamine	ug/L		<10						
N-nitrosodimethylamine	ug/L		<10						
N-nitrosodi-n-butylamine	ug/L		<10						
N-nitroso-di-n-propylamine	ug/L		<10						
N-nitrosodiphenylamine	ug/L		<10						
N-nitrosomethylethylamine	ug/L		<10						
N-nitrosopiperidine	ug/L		<10						
N-nitrosopyrrolidine	ug/L		<10						
O,o,o-triethyl phosphorothioate	ug/L		<30.0						
O-toluidine	ug/L		<10						
P-(dimethylamino)azobenzene	ug/L		<10						
Parathion	ug/L								
Parathion-ethyl	ug/L		<10						
Parathion-methyl	ug/L		<10						
Pcb-1016	ug/L		<.8						
Pcb-1221	ug/L		<.8						
Pcb-1232	ug/L		<.8						
Pcb-1242	ug/L		<.8						
Pcb-1248	ug/L		<.8						
Pcb-1254	ug/L		<.8						
Pcb-1260	ug/L		<.8						
Pcb-1268	ug/L		<.8						
Pentachlorobenzene	ug/L		<10						
Pentachloroethane	ug/L		<10						
Pentachloronitrobenzene	ug/L		<10						
Pentachlorophenol	ug/L		<8 *						
pH	units	6.97	<2.00	7.03	<2.00	6.57			
Phenacetin	ug/L		<10						
Phenanthrene	ug/L		<10						
Phenol	ug/L		<20						
Phorate	ug/L		<60.0						
Picloram	ug/L		<5						
Pronamide	ug/L		<10						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<10						
Pyridine	ug/L		<10						
Safrole	ug/L		<10						
Selenium, total	ug/L		<5		<5	<5	<4	<4	<4
Silver, total	ug/L		<20		<20	<20	<4	<4	<4
Specific conductance	umhos/cm	1272		895		1625			
Styrene	ug/L		<1		<1	<1	<1	<1	<1
Sulfide, total	mg/L		<2.0						
Tetrachloroethene	ug/L		<1		<1	<1	<1	<1	<1
Thallium, total	ug/L		<2		<2	<2	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Fluorene						<8			
Gamma-bhc (lindane)						<.05			
Gamma-chlordane									
Heptachlor						<.05			
Heptachlor epoxide						<.05			
Hexachlorobenzene						<4.03 *			
Hexachlorobutadiene						<8			
Hexachlorocyclopentadiene						<8			
Hexachloroethane						<8			
Hexachloropropene						<8			
Indeno(1,2,3-cd)pyrene						<8			
Iodomethane	<1	<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol						<1000			
Isodrin						<8			
Isophorone						<8			
Isosafrole						<8			
Kepone						<8			
Lead, total	<4.00	<4.00	4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Mcpa									
Mcpp									
Mercury, total						<.5			
Methacrylonitrile						<1			
Methapyrilene						<8			
Methoxychlor						<.05			
Methyl methacrylate						<1			
Methyl methanesulfonate						<8			
Methyl parathion						<.4			
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene						<8			
Nickel, total	45.5	33.9	36.6	26.4	24.1	60.2	13.9	31.1	34.0
Nitrobenzene						<8			
N-nitrosodiethylamine						<8			
N-nitrosodimethylamine						<8			
N-nitrosodi-n-butylamine						<8			
N-nitroso-di-n-propylamine						<8			
N-nitrosodiphenylamine						<8			
N-nitrosomethylethylamine									
N-nitrosopiperidine						<8			
N-nitrosopyrrolidine						<8			
O,o,o-triethyl phosphorothioate						<.4			
O-toluidine						<8			
P-(dimethylamino)azobenzene						<8			
Parathion						<.4			
Parathion-ethyl									
Parathion-methyl									
Pcb-1016						<.1			
Pcb-1221						<.2			
Pcb-1232						<.2			
Pcb-1242						<.2			
Pcb-1248						<.2			
Pcb-1254						<.1			
Pcb-1260						<.1			
Pcb-1268									
Pentachlorobenzene						<8			
Pentachloroethane									
Pentachloronitrobenzene						<8			
Pentachlorophenol						<8			
pH									
Phenacetin						<8			
Phenanthrene						<8			
Phenol						<8			
Phorate						<.4			
Picloram									
Pronamide						<8			
Propionitrile						<10			
Pyrene						<8			
Pyridine									
Safrole						<8			
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total						<.1			
Tetrachloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Thallium, total	<4	<4	<2	<2	<2	<4	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	11/1/2018
Fluorene								<8	
Gamma-bhc (lindane)								<.05	
Gamma-chlordane									
Heptachlor								<.05	
Heptachlor epoxide								<.05	
Hexachlorobenzene								<.05	
Hexachlorobutadiene								<8	
Hexachlorocyclopentadiene								<8	
Hexachloroethane								<8	
Hexachloropropene								<8	
Indeno(1,2,3-cd)pyrene								<8	
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	
Iron, dissolved									
Iron, total									
Isobutanol								<1000	
Isodrin								<8	
Isophorone								<8	
Isosafrole								<8	
Kepone								<8	
Lead, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	
Mcpa									
Mcpp									
Mercury, total								<.5	
Methacrylonitrile								<1	
Methapyrilene								<8	
Methoxychlor								<.05	
Methyl methacrylate								<1	
Methyl methanesulfonate								<8	
Methyl parathion								<.4	
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	
Naphthalene								<8	
Nickel, total	18.3	20.8	36.1	21.3	31.9	30.9	20.1	35.0	
Nitrobenzene								<8	
N-nitrosodiethylamine								<8	
N-nitrosodimethylamine								<8	
N-nitrosodi-n-butylamine								<8	
N-nitroso-di-n-propylamine								<8	
N-nitrosodiphenylamine								<8	
N-nitrosomethylethylamine								<8	
N-nitrosopiperidine								<8	
N-nitrosopyrrolidine								<8	
O,o,o-triethyl phosphorothioate								<.4	
O-toluidine								<8	
P-(dimethylamino)azobenzene								<8	
Parathion								<.4	
Parathion-ethyl									
Parathion-methyl									
Pcb-1016								<.1	
Pcb-1221								<.2	
Pcb-1232								<.2	
Pcb-1242								<.2	
Pcb-1248								<.2	
Pcb-1254								<.1	
Pcb-1260								<.1	
Pcb-1268									
Pentachlorobenzene								<8	
Pentachloroethane									
Pentachloronitrobenzene								<8	
Pentachlorophenol								<8	
pH									
Phenacetin								<8	
Phenanthrene								<8	
Phenol								<8	
Phorate								<.4	
Picloram									
Pronamide								<8	
Propionitrile								<10	
Pyrene								<8	
Pyridine									
Safrole								<8	
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	
Sulfide, total								<.1	
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	
Thallium, total	<4	<4	<4	<4	<4	<4	<4	<4	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/16/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Fluorene									
Gamma-bhc (lindane)									
Gamma-chlordane									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Mcpa									
Mcpp									
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total	12.2	33.1	41.7	59.0	31.1	33.4	20.2	27.8	6.3
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
P-(dimethylamino)azobenzene									
Parathion									
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									
Pcb-1221									
Pcb-1232									
Pcb-1242									
Pcb-1248									
Pcb-1254									
Pcb-1260									
Pcb-1268									
Pentachlorobenzene									
Pentachloroethane									
Pentachloronitrobenzene									
Pentachlorophenol									
pH									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Picloram									
Pronamide									
Propionitrile									
Pyrene									
Pyridine									
Safrole									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	10/13/2023	4/18/2024	10/15/2024
Fluorene	<8		
Gamma-bhc (lindane)	<.05		
Gamma-chlordane			
Heptachlor	<.05		
Heptachlor epoxide	<.05		
Hexachlorobenzene	<.05		
Hexachlorobutadiene	<8		
Hexachlorocyclopentadiene	<8		
Hexachloroethane	<8		
Hexachloropropene	<8		
Indeno(1,2,3-cd)pyrene	<8		
Iodomethane	<2	<1	<1
Iron, dissolved			
Iron, total			
Isobutanol	<1000		
Isodrin	<8		
Isophorone	<8		
Isosafrole	<8		
Kepone	<8		
Lead, total	<4.00	<4.00	<4.00
Mcpa			
Mcpp			
Mercury, total	<.5		
Methacrylonitrile	<1		
Methapyrilene	<8		
Methoxychlor	<.05		
Methyl methacrylate	<1		
Methyl methanesulfonate	<8		
Methyl parathion	<.4		
Methylene chloride	<5	<5	<5
Naphthalene	<8		
Nickel, total	36.5	13.1	12.9
Nitrobenzene	<8		
N-nitrosodiethylamine	<8		
N-nitrosodimethylamine	<8		
N-nitrosodi-n-butylamine	<8		
N-nitroso-di-n-propylamine	<8		
N-nitrosodiphenylamine	<8		
N-nitrosomethylethylamine	<8		
N-nitrosopiperidine	<8		
N-nitrosopyrrolidine	<8		
O,o,o-triethyl phosphorothioate	<.4		
O-toluidine	<8		
P-(dimethylamino)azobenzene	<8		
Parathion	<.4		
Parathion-ethyl			
Parathion-methyl			
Pcb-1016	<.2		
Pcb-1221	<.2		
Pcb-1232	<.2		
Pcb-1242	<.2		
Pcb-1248	<.2		
Pcb-1254	<.2		
Pcb-1260	<.2		
Pcb-1268			
Pentachlorobenzene	<8		
Pentachloroethane			
Pentachloronitrobenzene	<8		
Pentachlorophenol	<8		
pH			
Phenacetin	<8		
Phenanthrene	<8		
Phenol	<8		
Phorate	<.4		
Picloram			
Pronamide	<8		
Propionitrile	<10		
Pyrene	<8		
Pyridine			
Safrole	<8		
Selenium, total	<4	<4	<4
Silver, total	<4	<4	<4
Specific conductance			
Styrene	<1	<1	<1
Sulfide, total	<.1		
Tetrachloroethene	<1	<1	<1
Thallium, total	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Thionazin	ug/L		<10.0						
Tin, total	ug/L		<100						
Toluene	ug/L		<1		<1	<1	<1	<1	<1
Total organic halides	mg/L			.0324 *					
Total suspended solids	mg/L								
Toxaphene	ug/L		<2.0						
Trans-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L		<10		<10	<10	<5	<5	<5
Trichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L		<4		<4	<4	<1	<1	<1
Vanadium, total	ug/L		<50.0		<50.0	<50.0	14.4	<10.0	<10.0
Vinyl acetate	ug/L		<2		<2	<2	<5	<5	<5
Vinyl chloride	ug/L		<1		<1	<1	<1	<1	<1
Xylenes, total	ug/L		<3		<3	<3	<2	<2	<2
Zinc, total	ug/L		106.0		51.2	57.9	38.5	20.1	<10.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Thionazin						<.4			
Tin, total						<20			
Toluene	<1	<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids									43
Toxaphene						<.2			
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	26.4	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	<8.0	<8.0	13.7	<8.0	13.7	21.3	8.7	<20.0	8.9

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	11/1/2018
Thionazin								<.4	
Tin, total								<20	
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	
Total organic halides									
Total suspended solids	36	5	4	<2	297	16	3	6	
Toxaphene								<.2	
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	
Zinc, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<20.0	<8.0	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	4/16/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids	4	2	10	23					
Toxaphene									
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	9.6	<20.0	<20.0	<20.0	<20.0	<20.0	20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-14

Constituents	10/13/2023	4/18/2024	10/15/2024
Thionazin	<.4		
Tin, total	<20		
Toluene	<1	<1	<1
Total organic halides			
Total suspended solids			
Toxaphene	<.2		
Trans-1,2-dichloroethene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-17

Constituents	Units	3/21/2008	9/2/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010	4/5/2011	9/6/2011	3/16/2012
1,1,1,2-tetrachloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dibromoethane (edb)	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L				<5	<5	<5	<5	<5	<5
2-hexanone	ug/L				<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L				<5	<5	<5	<5	<5	<5
Acetone	ug/L				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	ug/L				<5	<5	<5	<5	<5	<5
Ammonia as n	mg/L	<.2 *	<.2 *	<.2 *						
Antimony, total	ug/L				<1	<2	<5	<2	<2	<2
Arsenic, dissolved	ug/L			<1 *						
Arsenic, total	ug/L				<4	<4	<10	<4	<4	<4
Barium, dissolved	ug/L			170 *						
Barium, total	ug/L				199	171	169	215	207	196
Benzene	ug/L				<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L				<4	<4	<10	<4	<4	<4
Bromochloromethane	ug/L				<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L				<1	<1	<1	<1	<1	<1
Bromoform	ug/L				<1	<1	<1	<1	<1	<1
Bromomethane	ug/L				<1	<1	<1	<1	<1	<1
Cadmium, dissolved	mg/L			<.0005 *						
Cadmium, total	ug/L				<1.0	<1.0	<2.5	<.8	<.8	<.8
Carbon disulfide	ug/L				<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L				<1	<1	<1	<1	<1	<1
Chemical oxygen demand	mg/L	<5 *	<5 *	<5 *						
Chloride	mg/L	<5 *	<5 *	<5 *						
Chlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
Chloroethane	ug/L				<1	<1	<1	<1	<1	<1
Chloroform	ug/L				<1	<1	<1	<1	<1	<1
Chloromethane	ug/L				<1	<1	<1	<1	<1	<1
Chromium, total	ug/L				<10	<10	<25	<8	<20	<8
Cis-1,2-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L				<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L				<4.0	<4.0	<10.0	<4.0	<4.0	<4.0
Copper, total	ug/L				<4	<4	<10	<4	<4	<4
Dibromochloromethane	ug/L				<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L				<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L				<1	<1	<1	<1	<1	<1
Iodomethane	ug/L				<1	<1	<1	<1	<1	<1
Iron, dissolved	mg/L	<.1	<.1	<.1 *						
Iron, total	mg/L	<.1	<.1							
Lead, total	ug/L				<4	<4	<10	<4	<4	<4
Methylene chloride	ug/L				<5	<5	<5	<5	<5	<5
Nickel, total	ug/L				<4.0	<4.0	<10.0	7.1	4.8	4.8
pH	units	7.60	7.68	7.97						
Phenol	ug/L		<20 *							
Selenium, total	ug/L				<4	<4	<10	<4	<4	<4
Silver, total	ug/L				<4	<4	<10	<4	<4	<4
Specific conductance	umhos/cm	652	566	738						
Styrene	ug/L				<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L				<1	<1	<1	<1	<1	<1
Thallium, total	ug/L				<4	<4	<10	<4	<4	<2
Toluene	ug/L				<1	<1	<1	<1	<1	<1
Total organic halides	mg/L		<.01 *							
Total suspended solids	mg/L									
Trans-1,2-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L				<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L				<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L				<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L				<10.0	<10.0	<25.0	20.1	<20.0	<20.0
Vinyl acetate	ug/L				<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L				<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L				<2	<2	<2	<2	<2	<2
Zinc, dissolved	mg/L			.023 *						
Zinc, total	ug/L				<10.0	10.5	<25.0	<8.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-17

Constituents	9/24/2012	4/24/2013	9/20/2013	4/8/2014	9/22/2014	3/20/2015	9/17/2015	3/17/2016	8/26/2016
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, dissolved									
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, dissolved									
Barium, total	185	183	351	261	212	257	234	246	266
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, dissolved									
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<.8	<.8	<.8	<.8	<.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	5.3	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Phenol									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<4	<4	<4	<4	<4	<4	<4
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids					6	8	4	3	<2
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, dissolved									
Zinc, total	<8.0	<8.0	<20.0	<20.0	<8.0	<8.0	<8.0	<8.0	8.3

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-17

Constituents	4/11/2017	9/23/2017	11/15/2017	4/10/2018	9/24/2018	11/1/2018	4/16/2019	8/29/2019	9/23/2019
1,1,1,2-tetrachloroethane	<1	<1		<1	<1		<1	<1	
1,1,1-trichloroethane	<1	<1		<1	<1		<1	<1	
1,1,2,2-tetrachloroethane	<1	<1		<1	<1		<1	<1	
1,1,2-trichloroethane	<1	<1		<1	<1		<1	<1	
1,1-dichloroethane	<1	<1		<1	<1		<1	<1	
1,1-dichloroethene	<1	<1		<1	<1		<1	<1	
1,2,3-trichloropropane	<1	<1		<1	<1		<1	<1	
1,2-dibromo-3-chloropropane	<1	<1		<1	<1		<1	<1	
1,2-dibromoethane (edb)	<1	<1		<1	<1		<1	<1	
1,2-dichlorobenzene	<1	<1		<1	<1		<1	<1	
1,2-dichloroethane	<1	<1		<1	<1		<1	<1	
1,2-dichloropropane	<1	<1		<1	<1		<1	<1	
1,4-dichlorobenzene	<1	<1		<1	<1		<1	<1	
2-butanone (mek)	<5	<5		<5	<5		<5	<5	
2-hexanone	<5	<5		<5	<5		<5	<5	
4-methyl-2-pentanone (mibk)	<5	<5		<5	<5		<5	<5	
Acetone	<10.0	12.9	<10.0	<10.0	<10.0		<10.0	<10.0	
Acrylonitrile	<5	<5		<5	<5		<5	<5	
Ammonia as n									
Antimony, total	<2	<2		<2	<2		<2	<2	
Arsenic, dissolved									
Arsenic, total	<4	<4		<4	<4		<4	<4	
Barium, dissolved									
Barium, total	234	275		242	259		242	281	
Benzene	<1	<1		<1	<1		<1	<1	
Beryllium, total	<4	<4		<4	<4		<4	<4	
Bromochloromethane	<1	<1		<1	<1		<1	<1	
Bromodichloromethane	<1	<1		<1	<1		<1	<1	
Bromoform	<1	<1		<1	<1		<1	<1	
Bromomethane	<1	<1		<1	<1		<1	<1	
Cadmium, dissolved									
Cadmium, total	<.8	<.8		<.8	1.1	<.8	<.8	<.8	
Carbon disulfide	<1	<1		<1	<1		<1	<1	
Carbon tetrachloride	<1	<1		<1	<1		<1	<1	
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1		<1	<1		<1	<1	
Chloroethane	<1	<1		<1	<1		<1	<1	
Chloroform	<1	<1		<1	<1		<1	<1	
Chloromethane	<1	<1		<1	<1		<1	<1	
Chromium, total	<8	<8		<8	<8		<8	<8	
Cis-1,2-dichloroethene	<1	<1		<1	<1		<1	<1	
Cis-1,3-dichloropropene	<1	<1		<1	<1		<1	<1	
Cobalt, total	<.8	<.8		<.8	<.8		<.8	<.8	
Copper, total	<4	<4		<4	<4		<4	<4	
Dibromochloromethane	<1	<1		<1	<1		<1	<1	
Dibromomethane	<1	<1		<1	<1		<1	<1	
Ethylbenzene	<1	<1		<1	<1		<1	<1	
Iodomethane	<1	<1		<1	<1		<1	<1	
Iron, dissolved									
Iron, total									
Lead, total	<4	<4		<4	<4		<4	<4	
Methylene chloride	<5	<5		<5	<5		<5	<5	
Nickel, total	<4.0	<4.0		<4.0	<4.0		<4.0	<4.0	
pH									
Phenol									
Selenium, total	<4	<4		<4	<4		<4	<4	
Silver, total	<4	<4		<4	<4		<4	<4	
Specific conductance									
Styrene	<1	<1		<1	<1		<1	<1	
Tetrachloroethene	<1	<1		<1	<1		<1	<1	
Thallium, total	<4	<4		<4	<4		<2	<2	
Toluene	<1	<1		<1	<1		<1	<1	
Total organic halides									
Total suspended solids	76	4		<2	2		<2	<2	
Trans-1,2-dichloroethene	<1	<1		<1	<1		<1	<1	
Trans-1,3-dichloropropene	<1	<1		<1	<1		<1	<1	
Trans-1,4-dichloro-2-butene	<5	<5		<5	<5		<5	<5	
Trichloroethene	<1	<1		<1	<1		<1	<1	
Trichlorofluoromethane	<1	<1		<1	<1		<1	<1	
Vanadium, total	<20.0	<20.0		<20.0	<20.0		<20.0	<20.0	
Vinyl acetate	<5	<5		<5	<5		<5	<5	
Vinyl chloride	<1	<1		<1	<1		<1	<1	
Xylenes, total	<2	<2		<2	<2		<2	<2	
Zinc, dissolved									
Zinc, total	<8.0	<8.0		<20.0	<8.0		<8.0	37.8	<8.0 *

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-17

Constituents	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023	10/13/2023	4/18/2024
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<10	<10	<10	<10	<10
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, dissolved									
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, dissolved									
Barium, total	274	281	265	251	299	288	307	314	310
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, dissolved									
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Phenol									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids	4	2							
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, dissolved									
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-17

Constituents	10/15/2024
1,1,1,2-tetrachloroethane	<1
1,1,1-trichloroethane	<1
1,1,2,2-tetrachloroethane	<1
1,1,2-trichloroethane	<1
1,1-dichloroethane	<1
1,1-dichloroethene	<1
1,2,3-trichloropropane	<1
1,2-dibromo-3-chloropropane	<5
1,2-dibromoethane (edb)	<1
1,2-dichlorobenzene	<1
1,2-dichloroethane	<1
1,2-dichloropropane	<1
1,4-dichlorobenzene	<1
2-butanone (mek)	<10
2-hexanone	<5
4-methyl-2-pentanone (mibk)	<5
Acetone	<10.0
Acrylonitrile	<5
Ammonia as n	
Antimony, total	<2
Arsenic, dissolved	
Arsenic, total	<4
Barium, dissolved	
Barium, total	280
Benzene	<1
Beryllium, total	<4
Bromochloromethane	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1
Cadmium, dissolved	
Cadmium, total	<.8
Carbon disulfide	<1
Carbon tetrachloride	<1
Chemical oxygen demand	
Chloride	
Chlorobenzene	<1
Chloroethane	<1
Chloroform	<1
Chloromethane	<1
Chromium, total	<8
Cis-1,2-dichloroethene	<1
Cis-1,3-dichloropropene	<1
Cobalt, total	<.4
Copper, total	<4
Dibromochloromethane	<1
Dibromomethane	<1
Ethylbenzene	<1
Iodomethane	<1
Iron, dissolved	
Iron, total	
Lead, total	<4
Methylene chloride	<5
Nickel, total	<4.0
pH	
Phenol	
Selenium, total	<4
Silver, total	<4
Specific conductance	
Styrene	<1
Tetrachloroethene	<1
Thallium, total	<2
Toluene	<1
Total organic halides	
Total suspended solids	
Trans-1,2-dichloroethene	<1
Trans-1,3-dichloropropene	<1
Trans-1,4-dichloro-2-butene	<5
Trichloroethene	<1
Trichlorofluoromethane	<1
Vanadium, total	<20.0
Vinyl acetate	<5
Vinyl chloride	<1
Xylenes, total	<2
Zinc, dissolved	
Zinc, total	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L		<2		<2	<2	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<10						
1,2,4-trichlorobenzene	ug/L		<8 *						
1,2-dibromo-3-chloropropane	ug/L		<10.00		<.86	<.86	<1.00	<1.00	<1.00
1,2-dibromoethane (edb)	ug/L		<10.00		<.25	<.25	<1.00	<1.00	<1.00
1,2-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L								
1,3,5-trinitrobenzene	ug/L		<10						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<10						
1,4-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L		<10						
1,4-phenylenediamine	ug/L		<10						
1-naphthylamine	ug/L		<10						
2,2-dichloropropane	ug/L		<4						
2,3,4,6-tetrachlorophenol	ug/L		<10						
2,4,5-t	ug/L		<.556						
2,4,5-tp (silvex)	ug/L		<.556						
2,4,5-trichlorophenol	ug/L		<10						
2,4,6-trichlorophenol	ug/L		<10						
2,4-d	ug/L		<.556						
2,4-db	ug/L		<.556						
2,4-dichlorophenol	ug/L		<10						
2,4-dimethylphenol	ug/L		<10						
2,4-dinitrophenol	ug/L		<10						
2,4-dinitrotoluene	ug/L		<10						
2,6-dichlorophenol	ug/L		<10						
2,6-dinitrotoluene	ug/L		<10						
2-acetylaminofluorene	ug/L		<10						
2-butanone (mek)	ug/L		<10		<10	<10	<5	<5	<5
2-chloronaphthalene	ug/L		<10						
2-chlorophenol	ug/L		<10						
2-hexanone	ug/L		<10		<10	<10	<5	<5	<5
2-methylnaphthalene	ug/L		<10						
2-methylphenol (o-cresol)	ug/L		<10						
2-naphthylamine	ug/L		<10						
2-nitroaniline	ug/L		<10						
2-nitrophenol	ug/L		<10						
3,3´-dichlorobenzidine	ug/L		<85						
3,3'-dimethylbenzidine	ug/L		<20						
3/4-methylphenol	ug/L		<10						
3-methylcholanthrene	ug/L		<10						
3-nitroaniline	ug/L		<10						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<10						
4-aminobiphenyl	ug/L		<20						
4-bromophenyl phenyl ether	ug/L		<10						
4-chloro-3-methylphenol	ug/L		<10						
4-chloroaniline	ug/L		<10						
4-chlorophenyl phenyl ether	ug/L		<10						
4-methyl-2-pentanone (mibk)	ug/L		<10		<10	<10	<5	<5	<5
4-nitroaniline	ug/L		<10						
4-nitrophenol	ug/L		<5.278 *						
5-nitro-o-toluidine	ug/L		<10						
7,12-dimethylbenz (a) anthracene	ug/L		<10						
Acenaphthene	ug/L		<10 *						
Acetone	ug/L		<10		<10	<10	<10	<10	<10
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<10						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L		<10		<10	<10	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<2						
Alpha-bhc	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
(3 4)-methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-db									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene									
2-chlorophenol									
2-hexanone	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3/4-methylphenol									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acetone	<10	<10	<10	<10	<10	<10		<10	<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5	<5	<5	<5		<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	11/15/2017	4/10/2018	9/24/2018
(3 4)-methylphenol			<8						
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene			<1						
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene			<8						
1,2,4-trichlorobenzene			<1						
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene			<8						
1,3,5-trinitrobenzene			<8						
1,3-dichlorobenzene			<1						
1,3-dichloropropane			<1						
1,3-dinitrobenzene			<8						
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone			<8						
1,4-phenylenediamine			<8						
1-naphthylamine			<8						
2,2-dichloropropane			<1						
2,3,4,6-tetrachlorophenol			<8						
2,4,5-t			<.500						
2,4,5-tp (silvex)			<.500						
2,4,5-trichlorophenol			<8						
2,4,6-trichlorophenol			<8						
2,4-d			<2.000						
2,4-db									
2,4-dichlorophenol			<8						
2,4-dimethylphenol			<8						
2,4-dinitrophenol			<8						
2,4-dinitrotoluene			<8						
2,6-dichlorophenol			<8						
2,6-dinitrotoluene			<8						
2-acetylaminofluorene			<8						
2-butanone (mek)	<5	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene			<8						
2-chlorophenol			<8						
2-hexanone	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene			<8						
2-methylphenol (o-cresol)			<8						
2-naphthylamine			<8						
2-nitroaniline			<8						
2-nitrophenol			<8						
3,3´-dichlorobenzidine			<8						
3,3'-dimethylbenzidine			<8						
3/4-methylphenol									
3-methylcholanthrene			<8						
3-nitroaniline			<8						
4,4'-ddd			<.05						
4,4'-dde			<.05						
4,4'-ddt			<.05						
4,6-dinitro-2-methylphenol			<8						
4-aminobiphenyl			<8						
4-bromophenyl phenyl ether			<8						
4-chloro-3-methylphenol			<8						
4-chloroaniline			<8						
4-chlorophenyl phenyl ether			<8						
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline			<8						
4-nitrophenol			<8.000						
5-nitro-o-toluidine			<8						
7,12-dimethylbenz (a) anthracene			<8						
Acenaphthene			<8 *						
Acetone	<10	<10	<10	<10	<10	<10		<10	<10
Acetonitrile			<10						
Acetophenone			<8						
Acrolein			<10						
Acrylonitrile	<5	<5	<5	<5	<5	<5		<5	<5
Aldrin			<.05						
Allyl chloride			<1						
Alpha-bhc			<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/16/2019	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022
(3 4)-methylphenol						<8			
1,1,1,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene						<1			
1,2,3-trichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene						<8			
1,2,4-trichlorobenzene						<1			
1,2-dibromo-3-chloropropane	<1.00		<1.00	<5.00	<5.00	<1.00	<5.00	<5.00	<5.00
1,2-dibromoethane (edb)	<1.00		<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1		<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene						<8			
1,3,5-trinitrobenzene						<8			
1,3-dichlorobenzene						<1			
1,3-dichloropropane						<1			
1,3-dinitrobenzene						<8			
1,4-dichlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone						<8			
1,4-phenylenediamine						<8			
1-naphthylamine						<8			
2,2-dichloropropane						<1			
2,3,4,6-tetrachlorophenol						<8			
2,4,5-t						<.500			
2,4,5-tp (silvex)						<.500			
2,4,5-trichlorophenol						<8			
2,4,6-trichlorophenol						<8			
2,4-d						<2.000			
2,4-db									
2,4-dichlorophenol						<8			
2,4-dimethylphenol						<8			
2,4-dinitrophenol						<8			
2,4-dinitrotoluene						<8			
2,6-dichlorophenol						<8			
2,6-dinitrotoluene						<8			
2-acetylaminofluorene						<8			
2-butanone (mek)	<5		<5	<5	<5	<5	<5	<10	<10
2-chloronaphthalene						<8			
2-chlorophenol						<8			
2-hexanone	<5		<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene						<8			
2-methylphenol (o-cresol)						<8			
2-naphthylamine						<8			
2-nitroaniline						<8			
2-nitrophenol						<8			
3,3´-dichlorobenzidine						<8			
3,3'-dimethylbenzidine						<8			
3/4-methylphenol									
3-methylcholanthrene						<8			
3-nitroaniline						<8			
4,4'-ddd						<.05			
4,4'-dde						<.05			
4,4'-ddt						<.05			
4,6-dinitro-2-methylphenol						<8			
4-aminobiphenyl						<8			
4-bromophenyl phenyl ether						<8			
4-chloro-3-methylphenol						<8			
4-chloroaniline						<8			
4-chlorophenyl phenyl ether						<8			
4-methyl-2-pentanone (mibk)	<5		<5	<5	<5	<5	<5	<5	<5
4-nitroaniline						<8			
4-nitrophenol						<8.000			
5-nitro-o-toluidine						<8			
7,12-dimethylbenz (a) anthracene						<8			
Acenaphthene						<8 *			
Acetone	<10		<10	<10	<10	<10	<10	<10	<10
Acetonitrile						<10			
Acetophenone						<8			
Acrolein						<10			
Acrylonitrile	<5		<5	<5	<5	<5	<5	<5	<5
Aldrin						<.05			
Allyl chloride						<1			
Alpha-bhc						<.05			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
(3 4)-methylphenol					
1,1,1,2-tetrachloroethane		<1	<1	<1	<1
1,1,1-trichloroethane		<1	<1	<1	<1
1,1,2,2-tetrachloroethane		<1	<1	<1	<1
1,1,2-trichloroethane		<1	<1	<1	<1
1,1-dichloroethane		<1	<1	<1	<1
1,1-dichloroethene		<1	<1	<1	<1
1,1-dichloropropene					
1,2,3-trichloropropane		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					
1,2,4-trichlorobenzene					
1,2-dibromo-3-chloropropane		<5.00	<5.00	<5.00	<5.00
1,2-dibromoethane (edb)		<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene		<1	<1	<1	<1
1,2-dichloroethane		<1	<1	<1	<1
1,2-dichloropropane		<1	<1	<1	<1
1,2-dinitrobenzene					
1,3,5-trinitrobenzene					
1,3-dichlorobenzene					
1,3-dichloropropane					
1,3-dinitrobenzene					
1,4-dichlorobenzene		<1	<1	<1	<1
1,4-naphthoquinone					
1,4-phenylenediamine					
1-naphthylamine					
2,2-dichloropropane					
2,3,4,6-tetrachlorophenol					
2,4,5-t					
2,4,5-tp (silvex)					
2,4,5-trichlorophenol					
2,4,6-trichlorophenol					
2,4-d					
2,4-db					
2,4-dichlorophenol					
2,4-dimethylphenol					
2,4-dinitrophenol					
2,4-dinitrotoluene					
2,6-dichlorophenol					
2,6-dinitrotoluene					
2-acetylaminofluorene					
2-butanone (mek)		<10	<10	<10	<10
2-chloronaphthalene					
2-chlorophenol					
2-hexanone		<5	<5	<5	<5
2-methylnaphthalene					
2-methylphenol (o-cresol)					
2-naphthylamine					
2-nitroaniline					
2-nitrophenol					
3,3´-dichlorobenzidine					
3,3'-dimethylbenzidine					
3/4-methylphenol					
3-methylcholanthrene					
3-nitroaniline					
4,4'-ddd					
4,4'-dde					
4,4'-ddt					
4,6-dinitro-2-methylphenol					
4-aminobiphenyl					
4-bromophenyl phenyl ether					
4-chloro-3-methylphenol					
4-chloroaniline					
4-chlorophenyl phenyl ether					
4-methyl-2-pentanone (mibk)		<5	<5	<5	<5
4-nitroaniline					
4-nitrophenol					
5-nitro-o-toluidine					
7,12-dimethylbenz (a) anthracene					
Acenaphthene					
Acetone		<10	<10	<10	<10
Acetonitrile					
Acetophenone					
Acrolein					
Acrylonitrile		<5	<5	<5	<5
Aldrin					
Allyl chloride					
Alpha-bhc					

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Alpha-chlordane	ug/L		<.05						
Ammonia as n	mg/L	<.2 *							
Anthracene	ug/L		<10						
Antimony, total	ug/L		<6		<6	<6	<1	<2	<2
Arsenic, total	ug/L		<1.00		<1.00	6.87	<4.00	<4.00	<4.00
Azobenzene	ug/L								
Barium, total	ug/L		336		469	444	512	315	420
Benzene	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Benzo(a)anthracene	ug/L		<10						
Benzo(a)pyrene	ug/L		<10						
Benzo(b)fluoranthene	ug/L		<10						
Benzo(g,h,i)perylene	ug/L		<10						
Benzo(k)fluoranthene	ug/L		<10						
Benzyl alcohol	ug/L		<10						
Beryllium, total	ug/L		<1.00		<1.00	1.31	<4.00	<4.00	<4.00
Beta-bhc	ug/L								
Bis(2-chloroethoxy)methane	ug/L		<10						
Bis(2-chloroethyl)ether	ug/L		<10						
Bis(2-chloroisopropyl) ether	ug/L		<10						
Bis(2-ethylhexyl)phthalate	ug/L		<10						
Bis[2-chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L		<5		<5	<5	<1	<1	<1
Bromodichloromethane	ug/L		<1		<1	<1	<1	<1	<1
Bromoform	ug/L		<5		<5	<5	<1	<1	<1
Bromomethane	ug/L		<4		<4	<4	<1	<1	<1
Butyl benzyl phthalate	ug/L		<10						
Cadmium, total	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Carbon disulfide	ug/L		<1		<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L		<2		<2	<2	<1	<1	<1
Chemical oxygen demand	mg/L	<5.0 *	14.2	13.5 *					
Chlordane	ug/L								
Chloride	mg/L	64.4 *	49.8	63.8 *					
Chlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
Chlorobenzilate	ug/L		<10						
Chlorodibromomethane	ug/L		<5		<5	<5			
Chloroethane	ug/L		<4		<4	<4	<1	<1	<1
Chloroform	ug/L		<1		<1	<1	<1	<1	<1
Chloromethane	ug/L		<3		<3	<3	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L		<20.0		<20.0	<20.0	<10.0	<10.0	<10.0
Chrysene	ug/L		<10						
Cis-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Cobalt, total	ug/L		<20.0		<20.0	<20.0	<4.0	<4.0	<4.0
Copper, total	ug/L		<20.0		<20.0	<20.0	7.2	<4.0	5.2
Cyanide	mg/L		<.010						
Dalapon	ug/L		<1.11						
Delta-bhc	ug/L								
Diallate	ug/L								
Diallate (cis or trans)	ug/L		<10						
Dibenzo(a,h)anthracene	ug/L		<10						
Dibenzofuran	ug/L		<10						
Dibromochloromethane	ug/L						<1	<1	<1
Dibromomethane	ug/L		<1		<1	<1	<1	<1	<1
Dicamba	ug/L		<.556						
Dichlorodifluoromethane	ug/L		<3						
Dichloroprop	ug/L		<.556						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<10						
Dimethoate	ug/L		<10.0						
Dimethyl phthalate	ug/L		<10						
Di-n-butyl phthalate	ug/L		<10						
Di-n-octyl phthalate	ug/L		<10						
Dinoseb	ug/L		<5.278 *						
Diphenylamine	ug/L		<10						
Disulfoton	ug/L		<70.0						
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Endrin ketone	ug/L		<.05						
Ethyl methacrylate	ug/L		<2						
Ethyl methanesulfonate	ug/L		<10						
Ethylbenzene	ug/L		<1		<1	<1	<1	<1	<1
Famphur	ug/L		<20.0						
Fluoranthene	ug/L		<10						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Alpha-chlordane									
Ammonia as n									
Anthracene									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00	<4.00	<4.00	4.50	<4.00	<4.00	<4.00
Azobenzene									
Barium, total	427	499	399	322	233	679	329	379	383
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate									
Bis[2-chloroisopropyl]ether									
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromoform	<1	<1	<1	<1	<1	<1		<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate									
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate									
Chlorodibromomethane									
Chloroethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroform	<1	<1	<1	<1	<1	<1		<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroprene									
Chromium, total	<8.0	<20.0	<8.0	<8.0	<8.0	9.9	<8.0	<8.0	<8.0
Chrysene									
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<.8
Copper, total	5.4	7.5	4.8	4.5	<4.0	10.6	<4.0	6.0	<4.0
Cyanide									
Dalapon									
Delta-bhc									
Diallate									
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane									
Dichloroprop									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Endrin ketone									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1	<1	<1	<1		<1	<1
Famphur									
Fluoranthene									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	11/15/2017	4/10/2018	9/24/2018
Alpha-chlordane									
Ammonia as n									
Anthracene			<8						
Antimony, total	<2	<2	<2	<2	<2	<2		<2	<2
Arsenic, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00		<4.00	<4.00
Azobenzene			<8						
Barium, total	434	437	381	381	332	362	339	340	306
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene			<8						
Benzo(a)pyrene			<8						
Benzo(b)fluoranthene			<8						
Benzo(g,h,i)perylene			<8						
Benzo(k)fluoranthene			<8						
Benzyl alcohol			<8						
Beryllium, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00		<4.00	<4.00
Beta-bhc			<.05						
Bis(2-chloroethoxy)methane			<8						
Bis(2-chloroethyl)ether			<8						
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate			<8						
Bis[2-chloroisopropyl]ether			<8						
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromoform	<1	<1	<1	<1	<1	<1		<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate			<8						
Cadmium, total	<.8	1.2	<.8	<.8	<.8	<.8		<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane			<.1						
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate			<8						
Chlorodibromomethane									
Chloroethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroform	<1	<1	<1	<1	<1	<1		<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroprene			<1						
Chromium, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0		<8.0	<8.0
Chrysene			<8						
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.8		<.8	<.8
Copper, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0
Cyanide			<.005						
Dalapon									
Delta-bhc			<.05						
Diallate			<8						
Diallate (cis or trans)									
Dibenzo(a,h)anthracene			<8						
Dibenzofuran			<8						
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane			<1						
Dichloroprop									
Dieldrin			<.05						
Diethyl phthalate			<8						
Dimethoate			<.4						
Dimethyl phthalate			<8						
Di-n-butyl phthalate			<8						
Di-n-octyl phthalate			<8						
Dinoseb			<.500						
Diphenylamine			<8						
Disulfoton			<.4						
Endosulfan i			<.05						
Endosulfan ii			<.05						
Endosulfan sulfate			<.05						
Endrin			<.05						
Endrin aldehyde			<.05						
Endrin ketone									
Ethyl methacrylate			<10						
Ethyl methanesulfonate			<8						
Ethylbenzene	<1	<1	<1	<1	<1	<1		<1	<1
Famphur			<.4						
Fluoranthene			<8						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/16/2019	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022
Alpha-chlordane									
Ammonia as n									
Anthracene						<8			
Antimony, total	<2		<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.00		<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Azobenzene						<8			
Barium, total	361	433	359	377	385	298	377	348	351
Benzene	<1.0		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene						<8			
Benzo(a)pyrene						<8			
Benzo(b)fluoranthene						<8			
Benzo(g,h,i)perylene						<8			
Benzo(k)fluoranthene						<8			
Benzyl alcohol						<8			
Beryllium, total	<4.00		<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Beta-bhc						<.05			
Bis(2-chloroethoxy)methane						<8			
Bis(2-chloroethyl)ether						<8			
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate						9		<6	14
Bis[2-chloroisopropyl]ether						<8			
Bromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Bromoform	<1		<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate						<8			
Cadmium, total	<.8		<.8	<.8	<.8	.8	<.8	<.8	3.1
Carbon disulfide	<1		<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1		<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chlordane						<.1			
Chloride									
Chlorobenzene	<1		<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate						<8			
Chlorodibromomethane									
Chloroethane	<1		<1	<1	<1	<1	<1	<1	<1
Chloroform	<1		<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Chloroprene						<1			
Chromium, total	<8.0		<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0
Chrysene						<8			
Cis-1,2-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8		<.8	<.4	<.4	<.4	<.4	<.4	2.0
Copper, total	<4.0		<4.0	<4.0	12.1	<4.0	<4.0	<4.0	<4.0
Cyanide						<.005			
Dalapon									
Delta-bhc						<.05			
Diallate						<8			
Diallate (cis or trans)									
Dibenzo(a,h)anthracene						<8			
Dibenzofuran						<8			
Dibromochloromethane	<1		<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1		<1	<1	<1	<1	<1	<1	<1
Dicamba									
Dichlorodifluoromethane						<1			
Dichloroprop									
Dieldrin						<.05			
Diethyl phthalate						<8			
Dimethoate						<.4			
Dimethyl phthalate						<8			
Di-n-butyl phthalate						<8			
Di-n-octyl phthalate						<8			
Dinoseb						<.500			
Diphenylamine						<8			
Disulfoton						<.4			
Endosulfan i						<.05			
Endosulfan ii						<.05			
Endosulfan sulfate						<.05			
Endrin						<.05			
Endrin aldehyde						<.05			
Endrin ketone									
Ethyl methacrylate						<10			
Ethyl methanesulfonate						<8			
Ethylbenzene	<1		<1	<1	<1	<1	<1	<1	<1
Famphur						<.4			
Fluoranthene						<8			

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Alpha-chlordane					
Ammonia as n					
Anthracene					
Antimony, total		<2	<2	<2	<2
Arsenic, total		<4.00	<4.00	<4.00	<4.00
Azobenzene					
Barium, total		320	342	375	381
Benzene		<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene					
Benzo(a)pyrene					
Benzo(b)fluoranthene					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene					
Benzyl alcohol					
Beryllium, total		<4.00	<4.00	<4.00	<4.00
Beta-bhc					
Bis(2-chloroethoxy)methane					
Bis(2-chloroethyl)ether					
Bis(2-chloroisopropyl) ether					
Bis(2-ethylhexyl)phthalate		<6	<6		
Bis[2-chloroisopropyl]ether					
Bromochloromethane		<1	<1	<1	<1
Bromodichloromethane		<1	<1	<1	<1
Bromoform		<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1
Butyl benzyl phthalate					
Cadmium, total	<.8	<.8	<.8	<.8	1.3
Carbon disulfide		<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	<1
Chemical oxygen demand					
Chlordane					
Chloride					
Chlorobenzene		<1	<1	<1	<1
Chlorobenzilate					
Chlorodibromomethane					
Chloroethane		<1	<1	<1	<1
Chloroform		<1	<1	<1	<1
Chloromethane		<1	<1	<1	<1
Chloroprene					
Chromium, total		<8.0	<8.0	<8.0	<8.0
Chrysene					
Cis-1,2-dichloroethene		<1	<1	<1	<1
Cis-1,3-dichloropropene		<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	<.4
Copper, total		<4.0	<4.0	<4.0	<4.0
Cyanide					
Dalapon					
Delta-bhc					
Diallate					
Diallate (cis or trans)					
Dibenzo(a,h)anthracene					
Dibenzofuran					
Dibromochloromethane		<1	<1	<1	<1
Dibromomethane		<1	<1	<1	<1
Dicamba					
Dichlorodifluoromethane					
Dichloroprop					
Dieldrin					
Diethyl phthalate					
Dimethoate					
Dimethyl phthalate					
Di-n-butyl phthalate					
Di-n-octyl phthalate					
Dinoseb					
Diphenylamine					
Disulfoton					
Endosulfan i					
Endosulfan ii					
Endosulfan sulfate					
Endrin					
Endrin aldehyde					
Endrin ketone					
Ethyl methacrylate					
Ethyl methanesulfonate					
Ethylbenzene		<1	<1	<1	<1
Famphur					
Fluoranthene					

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Fluorene	ug/L		<10						
Gamma-bhc (lindane)	ug/L		<.05						
Gamma-chlordane	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<10.00						
Hexachlorobutadiene	ug/L		<10						
Hexachlorocyclopentadiene	ug/L		<10						
Hexachloroethane	ug/L		<10						
Hexachloropropene	ug/L		<10						
Indeno(1,2,3-cd)pyrene	ug/L		<10						
Iodomethane	ug/L		<10		<10	<10	<1	<1	<1
Iron, dissolved	mg/L	<.1		<.1					
Iron, total	mg/L	<.1		<.1					
Isobutanol	ug/L		<10						
Isodrin	ug/L		<10						
Isophorone	ug/L		<10						
Isosafrole	ug/L		<10						
Kepone	ug/L		<10						
Lead, total	ug/L		<4.00		<4.00	8.04	<4.00	<4.00	<4.00
Mcpa	ug/L		<55.6						
Mcpp	ug/L		<55.6						
Mercury, total	ug/L		<.2						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<10						
Methoxychlor	ug/L		<.05						
Methyl methacrylate	ug/L		<2						
Methyl methanesulfonate	ug/L		<10						
Methyl parathion	ug/L								
Methylene chloride	ug/L		<10		<5	<5	<5	<5	<5
Naphthalene	ug/L		<5						
Nickel, total	ug/L		<50.0		<50.0	<50.0	11.4	6.6	10.2
Nitrobenzene	ug/L		<10						
N-nitrosodiethylamine	ug/L		<10						
N-nitrosodimethylamine	ug/L		<10						
N-nitrosodi-n-butylamine	ug/L		<10						
N-nitroso-di-n-propylamine	ug/L		<10						
N-nitrosodiphenylamine	ug/L		<10						
N-nitrosomethylethylamine	ug/L		<10						
N-nitrosopiperidine	ug/L		<10						
N-nitrosopyrrolidine	ug/L		<10						
O,o,o-triethyl phosphorothioate	ug/L		<30.0						
O-toluidine	ug/L		<10						
P-(dimethylamino)azobenzene	ug/L		<10						
Parathion	ug/L								
Parathion-ethyl	ug/L		<10						
Parathion-methyl	ug/L		<10						
Pcb-1016	ug/L		<.8						
Pcb-1221	ug/L		<.8						
Pcb-1232	ug/L		<.8						
Pcb-1242	ug/L		<.8						
Pcb-1248	ug/L		<.8						
Pcb-1254	ug/L		<.8						
Pcb-1260	ug/L		<.8						
Pcb-1268	ug/L		<.8						
Pentachlorobenzene	ug/L		<10						
Pentachloroethane	ug/L		<10						
Pentachloronitrobenzene	ug/L		<10						
Pentachlorophenol	ug/L		<5.278 *						
pH	units	7.17	<2.00	7.16	<2.00	6.84			
Phenacetin	ug/L		<10						
Phenanthrene	ug/L		<10						
Phenol	ug/L		<20						
Phorate	ug/L		<60.0						
Picloram	ug/L		<.556						
Pronamide	ug/L		<10						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<10						
Pyridine	ug/L		<10						
Safrole	ug/L		<10						
Selenium, total	ug/L		<5		<5	<5	<4	<4	<4
Silver, total	ug/L		<20		<20	<20	<4	<4	<4
Specific conductance	umhos/cm	900		734		1063			
Styrene	ug/L		<1		<1	<1	<1	<1	<1
Sulfide, total	mg/L		<2.0						
Tetrachloroethene	ug/L		<1		<1	<1	<1	<1	<1
Thallium, total	ug/L		<2		<2	<2	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Fluorene									
Gamma-bhc (lindane)									
Gamma-chlordane									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane	<1	<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Mcpa									
Mcpp									
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene									
Nickel, total	14.8	13.4	9.4	9.1	6.0	13.9	5.4	10.4	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
P-(dimethylamino)azobenzene									
Parathion									
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									
Pcb-1221									
Pcb-1232									
Pcb-1242									
Pcb-1248									
Pcb-1254									
Pcb-1260									
Pcb-1268									
Pentachlorobenzene									
Pentachloroethane									
Pentachloronitrobenzene									
Pentachlorophenol									
pH									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Picloram									
Pronamide									
Propionitrile									
Pyrene									
Pyridine									
Safrole									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total									
Tetrachloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Thallium, total	<4	<4	<2	<2	<2	<4	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	11/15/2017	4/10/2018	9/24/2018
Fluorene			<8						
Gamma-bhc (lindane)			<.05						
Gamma-chlordane									
Heptachlor			<.05						
Heptachlor epoxide			<.05						
Hexachlorobenzene			<.05						
Hexachlorobutadiene			<8						
Hexachlorocyclopentadiene			<8						
Hexachloroethane			<8						
Hexachloropropene			<8						
Indeno(1,2,3-cd)pyrene			<8						
Iodomethane	<1	<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol			<1000						
Isodrin			<8						
Isophorone			<8						
Isosafrole			<8						
Kepone			<8						
Lead, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00		<4.00	<4.00
Mcpa									
Mcpp									
Mercury, total			<.5						
Methacrylonitrile			<1						
Methapyrilene			<8						
Methoxychlor			<.05						
Methyl methacrylate			<1						
Methyl methanesulfonate			<8						
Methyl parathion			<.4						
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene			<8						
Nickel, total	4.3	<4.0	4.3	<4.0	<4.0	<4.0		<4.0	<4.0
Nitrobenzene			<8						
N-nitrosodiethylamine			<8						
N-nitrosodimethylamine			<8						
N-nitrosodi-n-butylamine			<8						
N-nitroso-di-n-propylamine			<8						
N-nitrosodiphenylamine			<8						
N-nitrosomethylethylamine			<8						
N-nitrosopiperidine			<8						
N-nitrosopyrrolidine			<8						
O,o,o-triethyl phosphorothioate			<.4						
O-toluidine			<8						
P-(dimethylamino)azobenzene			<8						
Parathion			<.4						
Parathion-ethyl									
Parathion-methyl									
Pcb-1016			<.1						
Pcb-1221			<.2						
Pcb-1232			<.2						
Pcb-1242			<.2						
Pcb-1248			<.2						
Pcb-1254			<.1						
Pcb-1260			<.1						
Pcb-1268									
Pentachlorobenzene			<8						
Pentachloroethane									
Pentachloronitrobenzene			<8						
Pentachlorophenol			<8.000						
pH									
Phenacetin			<8						
Phenanthrene			<8						
Phenol			<8						
Phorate			<.4						
Picloram									
Pronamide			<8						
Propionitrile			<10						
Pyrene			<8						
Pyridine									
Safrole			<8						
Selenium, total	<4	<4	<4	<4	<4	<4		<4	<4
Silver, total	<4	<4	<4	<4	<4	<4		<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total			<.1						
Tetrachloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Thallium, total	<4	<4	<4	<4	<4	<4		<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/16/2019	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022
Fluorene						<8			
Gamma-bhc (lindane)						<.05			
Gamma-chlordane									
Heptachlor						<.05			
Heptachlor epoxide						<.05			
Hexachlorobenzene						<.05			
Hexachlorobutadiene						<8			
Hexachlorocyclopentadiene						<8			
Hexachloroethane						<8			
Hexachloropropene						<8			
Indeno(1,2,3-cd)pyrene						<8			
Iodomethane	<1		<1	<1	<1	<2	<1	<1	<1
Iron, dissolved									
Iron, total									
Isobutanol						<1000			
Isodrin						<8			
Isophorone						<8			
Isosafrole						<8			
Kepone						<8			
Lead, total	<4.00		<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Mcpa									
Mcpp									
Mercury, total						<.5			
Methacrylonitrile						<1			
Methapyrilene						<8			
Methoxychlor						<.05			
Methyl methacrylate						<1			
Methyl methanesulfonate						<8			
Methyl parathion						<.4			
Methylene chloride	<5		<5	<5	<5	<5	<5	<5	<5
Naphthalene						<8			
Nickel, total	4.2		<4.0	<4.0	11.0	<4.0	<4.0	<4.0	4.1
Nitrobenzene						<8			
N-nitrosodiethylamine						<8			
N-nitrosodimethylamine						<8			
N-nitrosodi-n-butylamine						<8			
N-nitroso-di-n-propylamine						<8			
N-nitrosodiphenylamine						<8			
N-nitrosomethylethylamine						<8			
N-nitrosopiperidine						<8			
N-nitrosopyrrolidine						<8			
O,o,o-triethyl phosphorothioate						<.4			
O-toluidine						<8			
P-(dimethylamino)azobenzene						<8			
Parathion						<.4			
Parathion-ethyl									
Parathion-methyl									
Pcb-1016						<.1			
Pcb-1221						<.2			
Pcb-1232						<.2			
Pcb-1242						<.2			
Pcb-1248						<.2			
Pcb-1254						<.1			
Pcb-1260						<.1			
Pcb-1268									
Pentachlorobenzene						<8			
Pentachloroethane									
Pentachloronitrobenzene						<8			
Pentachlorophenol						<8.000			
pH									
Phenacetin						<8			
Phenanthrene						<8			
Phenol						<8			
Phorate						<.4			
Picloram									
Pronamide						<8			
Propionitrile						<10			
Pyrene						<8			
Pyridine									
Safrole						<8			
Selenium, total	<4		<4	<4	<4	<4	<4	<4	<4
Silver, total	<4		<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1		<1	<1	<1	<1	<1	<1	<1
Sulfide, total						<.1			
Tetrachloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2		<2	<2	<2	<2	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Fluorene					
Gamma-bhc (lindane)					
Gamma-chlordane					
Heptachlor					
Heptachlor epoxide					
Hexachlorobenzene					
Hexachlorobutadiene					
Hexachlorocyclopentadiene					
Hexachloroethane					
Hexachloropropene					
Indeno(1,2,3-cd)pyrene					
Iodomethane		<1	<1	<1	<1
Iron, dissolved					
Iron, total					
Isobutanol					
Isodrin					
Isophorone					
Isosafrole					
Kepone					
Lead, total		<4.00	<4.00	<4.00	<4.00
Mcpa					
Mcpp					
Mercury, total					
Methacrylonitrile					
Methapyrilene					
Methoxychlor					
Methyl methacrylate					
Methyl methanesulfonate					
Methyl parathion					
Methylene chloride		<5	<5	<5	<5
Naphthalene					
Nickel, total		<4.0	4.3	<4.0	<4.0
Nitrobenzene					
N-nitrosodiethylamine					
N-nitrosodimethylamine					
N-nitrosodi-n-butylamine					
N-nitroso-di-n-propylamine					
N-nitrosodiphenylamine					
N-nitrosomethylethylamine					
N-nitrosopiperidine					
N-nitrosopyrrolidine					
O,o,o-triethyl phosphorothioate					
O-toluidine					
P-(dimethylamino)azobenzene					
Parathion					
Parathion-ethyl					
Parathion-methyl					
Pcb-1016					
Pcb-1221					
Pcb-1232					
Pcb-1242					
Pcb-1248					
Pcb-1254					
Pcb-1260					
Pcb-1268					
Pentachlorobenzene					
Pentachloroethane					
Pentachloronitrobenzene					
Pentachlorophenol					
pH					
Phenacetin					
Phenanthrene					
Phenol					
Phorate					
Picloram					
Pronamide					
Propionitrile					
Pyrene					
Pyridine					
Safrole					
Selenium, total		<4	<4	<4	<4
Silver, total		<4	<4	<4	<4
Specific conductance					
Styrene		<1	<1	<1	<1
Sulfide, total					
Tetrachloroethene		<1	<1	<1	<1
Thallium, total		<2	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Thionazin	ug/L		<10.0						
Tin, total	ug/L		<100						
Toluene	ug/L		<1		<1	<1	<1	<1	<1
Total organic halides	mg/L			.0322 *					
Total suspended solids	mg/L								
Toxaphene	ug/L		<2.0						
Trans-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L		<10		<10	<10	<5	<5	<5
Trichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L		<4		<4	<4	<1	<1	<1
Vanadium, total	ug/L		<50.0		<50.0	<50.0	15.3	<10.0	<10.0
Vinyl acetate	ug/L		<2		<2	<2	<5	<5	<5
Vinyl chloride	ug/L		<1		<1	<1	<1	<1	<1
Xylenes, total	ug/L		<3		<3	<3	<2	<2	<2
Zinc, total	ug/L		63.9		29.1	51.6	27.9	11.3	<10.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Thionazin									
Tin, total									
Toluene	<1	<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids									25
Toxaphene									
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	30.0	<20.0	<20.0	<20.0	<20.0	22.9	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	9.3	13.6	9.6	<8.0	<8.0	27.6	10.9	20.2	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	11/15/2017	4/10/2018	9/24/2018
Thionazin			<.4						
Tin, total			<20						
Toluene	<1	<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids	52	26	13	13	67	38		16	26
Toxaphene			<.2						
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0		<20.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	4/16/2019	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022
Thionazin						<.4			
Tin, total						<20			
Toluene	<1		<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids	17		15	65	121				
Toxaphene						<.2			
Trans-1,2-dichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1		<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5		<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1		<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1		<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0		<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5		<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1		<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2		<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0		26.8	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-4

Constituents	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Thionazin					
Tin, total					
Toluene		<1	<1	<1	<1
Total organic halides					
Total suspended solids					
Toxaphene					
Trans-1,2-dichloroethene		<1	<1	<1	<1
Trans-1,3-dichloropropene		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene		<5	<5	<5	<5
Trichloroethene		<1	<1	<1	<1
Trichlorofluoromethane		<1	<1	<1	<1
Vanadium, total		<20.0	<20.0	<20.0	<20.0
Vinyl acetate		<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1
Xylenes, total		<2	<2	<2	<2
Zinc, total		<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L		<2		<2	<2	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<10						
1,2,4-trichlorobenzene	ug/L		<8 *						
1,2-dibromo-3-chloropropane	ug/L		<10.00		<.86	<.86	<1.00	<1.00	<1.00
1,2-dibromoethane (edb)	ug/L		<10.00		<.25	<.25	<1.00	<1.00	<1.00
1,2-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L								
1,3,5-trinitrobenzene	ug/L		<10						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<10						
1,4-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L		<10						
1,4-phenylenediamine	ug/L		<10						
1-naphthylamine	ug/L		<10						
2,2-dichloropropane	ug/L		<4						
2,3,4,6-tetrachlorophenol	ug/L		<10						
2,4,5-t	ug/L		<.526						
2,4,5-tp (silvex)	ug/L		<.526						
2,4,5-trichlorophenol	ug/L		<10						
2,4,6-trichlorophenol	ug/L		<10						
2,4-d	ug/L		<.526						
2,4-db	ug/L		<.526						
2,4-dichlorophenol	ug/L		<10						
2,4-dimethylphenol	ug/L		<10						
2,4-dinitrophenol	ug/L		<10						
2,4-dinitrotoluene	ug/L		<10						
2,6-dichlorophenol	ug/L		<10						
2,6-dinitrotoluene	ug/L		<10						
2-acetylaminofluorene	ug/L		<10						
2-butanone (mek)	ug/L		<10		<10	<10	<5	<5	<5
2-chloronaphthalene	ug/L		<10						
2-chlorophenol	ug/L		<10						
2-hexanone	ug/L		<10		<10	<10	<5	<5	<5
2-methylnaphthalene	ug/L		<10						
2-methylphenol (o-cresol)	ug/L		<10						
2-naphthylamine	ug/L		<10						
2-nitroaniline	ug/L		<10						
2-nitrophenol	ug/L		<10						
3,3´-dichlorobenzidine	ug/L		<85						
3,3'-dimethylbenzidine	ug/L		<20						
3/4-methylphenol	ug/L		<10						
3-methylcholanthrene	ug/L		<10						
3-nitroaniline	ug/L		<10						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<10						
4-aminobiphenyl	ug/L		<20						
4-bromophenyl phenyl ether	ug/L		<10						
4-chloro-3-methylphenol	ug/L		<10						
4-chloroaniline	ug/L		<10						
4-chlorophenyl phenyl ether	ug/L		<10						
4-methyl-2-pentanone (mibk)	ug/L		<10		<10	<10	<5	<5	<5
4-nitroaniline	ug/L		<10						
4-nitrophenol	ug/L		<5.263 *						
5-nitro-o-toluidine	ug/L		<10						
7,12-dimethylbenz (a) anthracene	ug/L		<10						
Acenaphthene	ug/L		<10 *						
Acetone	ug/L		<10		<10	<10	<10	<10	<10
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<10						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L		<10		<10	<10	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<2						
Alpha-bhc	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
(3 4)-methylphenol								<8	
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene								<1	
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene								<8	
1,2,4-trichlorobenzene								<1	
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene								<8	
1,3,5-trinitrobenzene								<8	
1,3-dichlorobenzene								<1	
1,3-dichloropropane								<1	
1,3-dinitrobenzene								<8	
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone								<8	
1,4-phenylenediamine								<8	
1-naphthylamine								<8	
2,2-dichloropropane								<1	
2,3,4,6-tetrachlorophenol								<8	
2,4,5-t								<.500	
2,4,5-tp (silvex)								<.500	
2,4,5-trichlorophenol								<8	
2,4,6-trichlorophenol								<8	
2,4-d								<2.000	
2,4-db									
2,4-dichlorophenol								<8	
2,4-dimethylphenol								<8	
2,4-dinitrophenol								<8	
2,4-dinitrotoluene								<8	
2,6-dichlorophenol								<8	
2,6-dinitrotoluene								<8	
2-acetylaminofluorene								<8	
2-butanone (mek)	<5	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene								<8	
2-chlorophenol								<8	
2-hexanone	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene								<8	
2-methylphenol (o-cresol)								<8	
2-naphthylamine								<8	
2-nitroaniline								<8	
2-nitrophenol								<8	
3,3´-dichlorobenzidine								<8	
3,3'-dimethylbenzidine								<8	
3/4-methylphenol									
3-methylcholanthrene								<8	
3-nitroaniline								<8	
4,4'-ddd								<.05	
4,4'-dde								<.05	
4,4'-ddt								<.05	
4,6-dinitro-2-methylphenol								<8	
4-aminobiphenyl								<8	
4-bromophenyl phenyl ether								<8	
4-chloro-3-methylphenol								<8	
4-chloroaniline								<8	
4-chlorophenyl phenyl ether								<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline								<8	
4-nitrophenol								<8.000	
5-nitro-o-toluidine								<8	
7,12-dimethylbenz (a) anthracene								<8	
Acenaphthene								<8 *	
Acetone	<10	<10	<10	<10	<10	<10		<10	<10
Acetonitrile								<10	
Acetophenone								<8	
Acrolein								<10	
Acrylonitrile	<5	<5	<5	<5	<5	<5		<5	<5
Aldrin								<.05	
Allyl chloride								<1	
Alpha-bhc								<.05	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	4/16/2019
(3 4)-methylphenol									<8
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									<8
1,2,4-trichlorobenzene									<1
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene									<8
1,3,5-trinitrobenzene									<8
1,3-dichlorobenzene									<1
1,3-dichloropropane									<1
1,3-dinitrobenzene									<8
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									<8
1,4-phenylenediamine									<8
1-naphthylamine									<8
2,2-dichloropropane									<1
2,3,4,6-tetrachlorophenol									<8
2,4,5-t									<.500
2,4,5-tp (silvex)									<.500
2,4,5-trichlorophenol									<8
2,4,6-trichlorophenol									<8
2,4-d									<2.000
2,4-db									
2,4-dichlorophenol									<8
2,4-dimethylphenol									<8
2,4-dinitrophenol									<8
2,4-dinitrotoluene									<8
2,6-dichlorophenol									<8
2,6-dinitrotoluene									<8
2-acetylaminofluorene									<8
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-chloronaphthalene									<8
2-chlorophenol									<8
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									<8
2-methylphenol (o-cresol)									<8
2-naphthylamine									<8
2-nitroaniline									<8
2-nitrophenol									<8
3,3´-dichlorobenzidine									<8
3,3'-dimethylbenzidine									<8
3/4-methylphenol									
3-methylcholanthrene									<8
3-nitroaniline									<8
4,4'-ddd									<.05
4,4'-dde									<.05
4,4'-ddt									<.05
4,6-dinitro-2-methylphenol									<8
4-aminobiphenyl									<8
4-bromophenyl phenyl ether									<8
4-chloro-3-methylphenol									<8
4-chloroaniline									<8
4-chlorophenyl phenyl ether									<8
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									<8
4-nitrophenol									<8.000
5-nitro-o-toluidine									<8
7,12-dimethylbenz (a) anthracene									<8
Acenaphthene									<8 *
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile									<10
Acetophenone									<8
Acrolein									<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									<.05
Allyl chloride									<1
Alpha-bhc									<.05

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
(3 4)-methylphenol									
1,1,1,2-tetrachloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane		<1	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane		<1.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
1,2-dibromoethane (edb)		<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane		<1	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-db									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)		<5	<5	<5	<5	<5	<10	<10	<10
2-chloronaphthalene									
2-chlorophenol									
2-hexanone		<5	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3/4-methylphenol									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)		<5	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acetone		<10	<10	<10	<10	<10	<10	<10	<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile		<5	<5	<5	<5	<5	<5	<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	10/13/2023	4/18/2024	10/15/2024
(3 4)-methylphenol		<8	
1,1,1,2-tetrachloroethane	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1
1,1-dichloroethane	<1	<1	<1
1,1-dichloroethene	<1	<1	<1
1,1-dichloropropene		<1	
1,2,3-trichloropropane	<1	<1	<1
1,2,4,5-tetrachlorobenzene		<8	
1,2,4-trichlorobenzene		<1	
1,2-dibromo-3-chloropropane	<5.00	<1.00	<5.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1
1,2-dichloroethane	<1	<1	<1
1,2-dichloropropane	<1	<1	<1
1,2-dinitrobenzene		<8	
1,3,5-trinitrobenzene		<8	
1,3-dichlorobenzene		<1	
1,3-dichloropropane		<1	
1,3-dinitrobenzene		<8	
1,4-dichlorobenzene	<1	<1	<1
1,4-naphthoquinone		<8	
1,4-phenylenediamine		<8	
1-naphthylamine		<8	
2,2-dichloropropane		<1	
2,3,4,6-tetrachlorophenol		<8	
2,4,5-t		<.500	
2,4,5-tp (silvex)		<.500	
2,4,5-trichlorophenol		<8	
2,4,6-trichlorophenol		<8	
2,4-d		<2.000	
2,4-db			
2,4-dichlorophenol		<8	
2,4-dimethylphenol		<8	
2,4-dinitrophenol		<8	
2,4-dinitrotoluene		<8	
2,6-dichlorophenol		<8	
2,6-dinitrotoluene		<8	
2-acetylaminofluorene		<8	
2-butanone (mek)	<10	<5	<10
2-chloronaphthalene		<8	
2-chlorophenol		<8	
2-hexanone	<5	<5	<5
2-methylnaphthalene		<8	
2-methylphenol (o-cresol)		<8	
2-naphthylamine		<8	
2-nitroaniline		<8	
2-nitrophenol		<8	
3,3´-dichlorobenzidine		<8	
3,3'-dimethylbenzidine		<8	
3/4-methylphenol			
3-methylcholanthrene		<8	
3-nitroaniline		<8	
4,4'-ddd		<.05	
4,4'-dde		<.05	
4,4'-ddt		<.05	
4,6-dinitro-2-methylphenol		<8	
4-aminobiphenyl		<8	
4-bromophenyl phenyl ether		<8	
4-chloro-3-methylphenol		<8	
4-chloroaniline		<8	
4-chlorophenyl phenyl ether		<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5
4-nitroaniline		<8	
4-nitrophenol		<8.000	
5-nitro-o-toluidine		<8	
7,12-dimethylbenz (a) anthracene		<8	
Acenaphthene		<8 *	
Acetone	<10	<10	<10
Acetonitrile		<10	
Acetophenone		<8	
Acrolein		<10	
Acrylonitrile	<5	<5	<5
Aldrin		<.05	
Allyl chloride		<1	
Alpha-bhc		<.05	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Alpha-chlordane	ug/L		<.05						
Ammonia as n	mg/L	<.2 *							
Anthracene	ug/L		<10						
Antimony, total	ug/L		<6		<6	<6	<1	<2	<2
Arsenic, total	ug/L		2.96		15.60	7.89	<4.00	<4.00	<4.00
Azobenzene	ug/L								
Barium, total	ug/L		249.0		368.0	289.0	303.0	204.0	275.0
Benzene	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Benzo(a)anthracene	ug/L		<10						
Benzo(a)pyrene	ug/L		<10						
Benzo(b)fluoranthene	ug/L		<10						
Benzo(g,h,i)perylene	ug/L		<10						
Benzo(k)fluoranthene	ug/L		<10						
Benzyl alcohol	ug/L		<10						
Beryllium, total	ug/L		<1		<1	<1	<4	<4	<4
Beta-bhc	ug/L								
Bis(2-chloroethoxy)methane	ug/L		<10						
Bis(2-chloroethyl)ether	ug/L		<10						
Bis(2-chloroisopropyl) ether	ug/L		<10						
Bis(2-ethylhexyl)phthalate	ug/L		<10						
Bis[2-chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L		<5		<5	<5	<1	<1	<1
Bromodichloromethane	ug/L		<1		<1	<1	<1	<1	<1
Bromoform	ug/L		<5		<5	<5	<1	<1	<1
Bromomethane	ug/L		<4		<4	<4	<1	<1	<1
Butyl benzyl phthalate	ug/L		<10						
Cadmium, total	ug/L		.591		1.460	.515	<1.000	<1.000	<1.000
Carbon disulfide	ug/L		<1		<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L		<2		<2	<2	<1	<1	<1
Chemical oxygen demand	mg/L	<5.0 *	19.9						
Chlordane	ug/L								
Chloride	mg/L	257 *	198	168 *					
Chlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
Chlorobenzilate	ug/L		<10						
Chlorodibromomethane	ug/L		<5		<5	<5			
Chloroethane	ug/L		<4		<4	<4	<1	<1	<1
Chloroform	ug/L		<1		<1	<1	<1	<1	<1
Chloromethane	ug/L		<3		<3	<3	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L		<20		<20	<20	<10	<10	<10
Chrysene	ug/L		<10						
Cis-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Cobalt, total	ug/L		<20.0		<20.0	<20.0	4.8	<4.0	<4.0
Copper, total	ug/L		<20		<20	<20	<4	<4	<4
Cyanide	mg/L		<.010						
Dalapon	ug/L		<1.05						
Delta-bhc	ug/L								
Diallate	ug/L								
Diallate (cis or trans)	ug/L		<10						
Dibenzo(a,h)anthracene	ug/L		<10						
Dibenzofuran	ug/L		<10						
Dibromochloromethane	ug/L						<1	<1	<1
Dibromomethane	ug/L		<1		<1	<1	<1	<1	<1
Dicamba	ug/L		<.526						
Dichlorodifluoromethane	ug/L		<3						
Dichloroprop	ug/L		<.526						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<10						
Dimethoate	ug/L		<10.0						
Dimethyl phthalate	ug/L		<10						
Di-n-butyl phthalate	ug/L		<10						
Di-n-octyl phthalate	ug/L		<10						
Dinoseb	ug/L		<5.263 *						
Diphenylamine	ug/L		<10						
Disulfoton	ug/L		<70.0						
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Endrin ketone	ug/L		<.05						
Ethyl methacrylate	ug/L		<2						
Ethyl methanesulfonate	ug/L		<10						
Ethylbenzene	ug/L		<1		<1	<1	<1	<1	<1
Famphur	ug/L		<20.0						
Fluoranthene	ug/L		<10						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Alpha-chlordane									
Ammonia as n									
Anthracene								<8	
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	7.10	<4.00	5.30	<4.00	6.20	11.80	6.40	7.50	4.60
Azobenzene								<8	
Barium, total	260.0	262.0	259.0	12.5	164.0	402.0	250.0	289.0	189.0
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene								<8	
Benzo(a)pyrene								<8	
Benzo(b)fluoranthene								<8	
Benzo(g,h,i)perylene								<8	
Benzo(k)fluoranthene								<8	
Benzyl alcohol								<8	
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc								<.05	
Bis(2-chloroethoxy)methane								<8	
Bis(2-chloroethyl)ether								<8	
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate								<8	
Bis[2-chloroisopropyl]ether								<8	
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromoform	<1	<1	<1	<1	<1	<1		<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate								<8	
Cadmium, total	<.800	<.800	<.800	<.800	<.800	<.800	<.800	<.800	<.800
Carbon disulfide	<1	<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane								<.1	
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate								<8	
Chlorodibromomethane									
Chloroethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroform	<1	<1	<1	<1	<1	<1		<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroprene								<1	
Chromium, total	<8	<20	<8	<8	<8	<8	<8	<8	<8
Chrysene								<8	
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	<4.0	<4.0	4.3	4.4	<4.0	5.7	<4.0	6.3	2.7
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide								<.005	
Dalapon									
Delta-bhc								<.05	
Diallate								<8	
Diallate (cis or trans)									
Dibenzo(a,h)anthracene								<8	
Dibenzofuran								<8	
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane								<1	
Dichloroprop									
Dieldrin								<.05	
Diethyl phthalate								<8	
Dimethoate								<.4	
Dimethyl phthalate								<8	
Di-n-butyl phthalate								<8	
Di-n-octyl phthalate								<8	
Dinoseb								<.500	
Diphenylamine								<8	
Disulfoton								<.4	
Endosulfan i								<.05	
Endosulfan ii								<.05	
Endosulfan sulfate								<.05	
Endrin								<.05	
Endrin aldehyde								<.05	
Endrin ketone									
Ethyl methacrylate								<10	
Ethyl methanesulfonate								<8	
Ethylbenzene	<1	<1	<1	<1	<1	<1		<1	<1
Famphur								<.4	
Fluoranthene								<8	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	4/16/2019
Alpha-chlordane									
Ammonia as n									
Anthracene									<8
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	4.30	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Azobenzene									<8
Barium, total	255.0	271.0	259.0	302.0	267.0	284.0	251.0	250.0	253.0
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene									<8
Benzo(a)pyrene									<8
Benzo(b)fluoranthene									<8
Benzo(g,h,i)perylene									<8
Benzo(k)fluoranthene									<8
Benzyl alcohol									<8
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									<.05
Bis(2-chloroethoxy)methane									<8
Bis(2-chloroethyl)ether									<8
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate									9
Bis[2-chloroisopropyl]ether									<8
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									<8
Cadmium, total	<.800	<.800	<.800	<.800	<.800	<.800	<.800	<.800	<.800
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chlordane									<.1
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									<8
Chlorodibromomethane									
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene									<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	4.6	6.5	<.8	6.6	1.5	2.5	1.9	5.1	<.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide									<.005
Dalapon									
Delta-bhc									<.05
Diallate									<8
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									<8
Dibenzofuran									<8
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dicamba									
Dichlorodifluoromethane									<1
Dichloroprop									
Dieldrin									<.05
Diethyl phthalate									<8
Dimethoate									<.4
Dimethyl phthalate									<8
Di-n-butyl phthalate									<8
Di-n-octyl phthalate									<8
Dinoseb									<.500
Diphenylamine									<8
Disulfoton									<.4
Endosulfan i									<.05
Endosulfan ii									<.05
Endosulfan sulfate									<.05
Endrin									<.05
Endrin aldehyde									<.05
Endrin ketone									
Ethyl methacrylate									<10
Ethyl methanesulfonate									<8
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Famphur									<.4
Fluoranthene									<8

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Alpha-chlordane									
Ammonia as n									
Anthracene									
Antimony, total		<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total		<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Azobenzene									
Barium, total		334.0	311.0	308.0	403.0	269.0	182.0	242.0	242.0
Benzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total		<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate	11	15	7	<6	7	<6	<6	<6	
Bis[2-chloroisopropyl]ether									
Bromochloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Bromoform		<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate									
Cadmium, total		<.800	1.400	<.800	<.800	<.800	<.800	<.800	<.800
Carbon disulfide		<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride		<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chlordane									
Chloride									
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate									
Chlorodibromomethane									
Chloroethane		<1	<1	<1	<1	<1	<1	<1	<1
Chloroform		<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Chloroprene									
Chromium, total		<8	<8	<8	<8	<8	<8	<8	<8
Chrysene									
Cis-1,2-dichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene		<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total		1.6	2.1	2.1	2.1	5.3	.8	6.0	1.6
Copper, total		<4	<4	<4	<4	<4	<4	<4	<4
Cyanide									
Dalapon									
Delta-bhc									
Diallate									
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane		<1	<1	<1	<1	<1	<1	<1	<1
Dicamba									
Dichlorodifluoromethane									
Dichloroprop									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Endrin ketone									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
Famphur									
Fluoranthene									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	10/13/2023	4/18/2024	10/15/2024
Alpha-chlordane			
Ammonia as n			
Anthracene		<8	
Antimony, total	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00
Azobenzene		<8	
Barium, total	302.0	248.0	271.0
Benzene	<1.0	<1.0	<1.0
Benzo(a)anthracene		<8	
Benzo(a)pyrene		<8	
Benzo(b)fluoranthene		<8	
Benzo(g,h,i)perylene		<8	
Benzo(k)fluoranthene		<8	
Benzyl alcohol		<8	
Beryllium, total	<4	<4	<4
Beta-bhc		<.05	
Bis(2-chloroethoxy)methane		<8	
Bis(2-chloroethyl)ether		<8	
Bis(2-chloroisopropyl) ether			
Bis(2-ethylhexyl)phthalate		18	<6
Bis[2-chloroisopropyl]ether		<8	
Bromochloromethane	<1	<1	<1
Bromodichloromethane	<1	<1	<1
Bromoform	<1	<1	<1
Bromomethane	<1	<1	<1
Butyl benzyl phthalate		<8	
Cadmium, total	<.800	<.800	<.800
Carbon disulfide	<1	<1	<1
Carbon tetrachloride	<1	<1	<1
Chemical oxygen demand			
Chlordane		<.1	
Chloride			
Chlorobenzene	<1	<1	<1
Chlorobenzilate		<8	
Chlorodibromomethane			
Chloroethane	<1	<1	<1
Chloroform	<1	<1	<1
Chloromethane	<1	<1	<1
Chloroprene		<1	
Chromium, total	<8	<8	<8
Chrysene		<8	
Cis-1,2-dichloroethene	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1
Cobalt, total	19.8	1.9	7.6
Copper, total	<4	<4	<4
Cyanide		<.005	
Dalapon			
Delta-bhc		<.05	
Diallate		<8	
Diallate (cis or trans)			
Dibenzo(a,h)anthracene		<8	
Dibenzofuran		<8	
Dibromochloromethane	<1	<1	<1
Dibromomethane	<1	<1	<1
Dicamba			
Dichlorodifluoromethane		<1	
Dichloroprop			
Dieldrin		<.05	
Diethyl phthalate		<8	
Dimethoate		<.4	
Dimethyl phthalate		<8	
Di-n-butyl phthalate		<8	
Di-n-octyl phthalate		<8	
Dinoseb		<.500	
Diphenylamine		<8	
Disulfoton		<.4	
Endosulfan i		<.05	
Endosulfan ii		<.05	
Endosulfan sulfate		<.05	
Endrin		<.05	
Endrin aldehyde		<.05	
Endrin ketone			
Ethyl methacrylate		<10	
Ethyl methanesulfonate		<8	
Ethylbenzene	<1	<1	<1
Famphur		<.4	
Fluoranthene		<8	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Fluorene	ug/L		<10						
Gamma-bhc (lindane)	ug/L		<.05						
Gamma-chlordane	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<10.00						
Hexachlorobutadiene	ug/L		<10						
Hexachlorocyclopentadiene	ug/L		<10						
Hexachloroethane	ug/L		<10						
Hexachloropropene	ug/L		<10						
Indeno(1,2,3-cd)pyrene	ug/L		<10						
Iodomethane	ug/L		<10		<10	<10	<1	<1	<1
Iron, dissolved	mg/L	<.1		.3					
Iron, total	mg/L	<.1		.3					
Isobutanol	ug/L		<10						
Isodrin	ug/L		<10						
Isophorone	ug/L		<10						
Isosafrole	ug/L		<10						
Kepone	ug/L		<10						
Lead, total	ug/L		<4		<4	<4	<4	<4	<4
Mcpa	ug/L		<52.6						
Mcpp	ug/L		<52.6						
Mercury, total	ug/L		<.2						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<10						
Methoxychlor	ug/L		<.05						
Methyl methacrylate	ug/L		<2						
Methyl methanesulfonate	ug/L		<10						
Methyl parathion	ug/L								
Methylene chloride	ug/L		<10		<5	<5	<5	<5	<5
Naphthalene	ug/L		<5						
Nickel, total	ug/L		<50.0		54.9	<50.0	49.1	38.3	50.5
Nitrobenzene	ug/L		<10						
N-nitrosodiethylamine	ug/L		<10						
N-nitrosodimethylamine	ug/L		<10						
N-nitrosodi-n-butylamine	ug/L		<10						
N-nitroso-di-n-propylamine	ug/L		<10						
N-nitrosodiphenylamine	ug/L		<10						
N-nitrosomethylethylamine	ug/L		<10						
N-nitrosopiperidine	ug/L		<10						
N-nitrosopyrrolidine	ug/L		<10						
O,o,o-triethyl phosphorothioate	ug/L		<30.0						
O-toluidine	ug/L		<10						
P-(dimethylamino)azobenzene	ug/L		<10						
Parathion	ug/L								
Parathion-ethyl	ug/L		<10						
Parathion-methyl	ug/L		<10						
Pcb-1016	ug/L		<.8						
Pcb-1221	ug/L		<.8						
Pcb-1232	ug/L		<.8						
Pcb-1242	ug/L		<.8						
Pcb-1248	ug/L		<.8						
Pcb-1254	ug/L		<.8						
Pcb-1260	ug/L		<.8						
Pcb-1268	ug/L		<.8						
Pentachlorobenzene	ug/L		<10						
Pentachloroethane	ug/L		<10						
Pentachloronitrobenzene	ug/L		<10						
Pentachlorophenol	ug/L		<5.263 *						
pH	units	7.37	<2.00	6.94	<2.00	6.86			
Phenacetin	ug/L		<10						
Phenanthrene	ug/L		<10						
Phenol	ug/L		<20						
Phorate	ug/L		<60.0						
Picloram	ug/L		<.526						
Pronamide	ug/L		<10						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<10						
Pyridine	ug/L		<10						
Safrole	ug/L		<10						
Selenium, total	ug/L		<5.0		<5.0	<5.0	5.6	<4.0	<4.0
Silver, total	ug/L		<20		<20	<20	<4	<4	<4
Specific conductance	umhos/cm	1511		1021		1887			
Styrene	ug/L		<1		<1	<1	<1	<1	<1
Sulfide, total	mg/L		<2.00						
Tetrachloroethene	ug/L		<1		<1	<1	<1	<1	<1
Thallium, total	ug/L		<2		<2	<2	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Fluorene								<8	
Gamma-bhc (lindane)								<.05	
Gamma-chlordane									
Heptachlor								<.05	
Heptachlor epoxide								<.05	
Hexachlorobenzene								<4.03 *	
Hexachlorobutadiene								<8	
Hexachlorocyclopentadiene								<8	
Hexachloroethane								<8	
Hexachloropropene								<8	
Indeno(1,2,3-cd)pyrene								<8	
Iodomethane	<1	<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol								<1000	
Isodrin								<8	
Isophorone								<8	
Isosafrole								<8	
Kepone								<8	
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mcpa									
Mcpp									
Mercury, total								<.5	
Methacrylonitrile								<1	
Methapyrilene								<8	
Methoxychlor								<.05	
Methyl methacrylate								<1	
Methyl methanesulfonate								<8	
Methyl parathion								<.4	
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene								<8	
Nickel, total	52.5	43.4	42.6	28.6	33.4	60.4	41.4	39.6	25.3
Nitrobenzene								<8	
N-nitrosodiethylamine								<8	
N-nitrosodimethylamine								<8	
N-nitrosodi-n-butylamine								<8	
N-nitroso-di-n-propylamine								<8	
N-nitrosodiphenylamine								<8	
N-nitrosomethylethylamine								<8	
N-nitrosopiperidine								<8	
N-nitrosopyrrolidine								<8	
O,o,o-triethyl phosphorothioate								<.4	
O-toluidine								<8	
P-(dimethylamino)azobenzene								<8	
Parathion								<.4	
Parathion-ethyl									
Parathion-methyl									
Pcb-1016								<.1	
Pcb-1221								<.2	
Pcb-1232								<.2	
Pcb-1242								<.2	
Pcb-1248								<.2	
Pcb-1254								<.1	
Pcb-1260								<.1	
Pcb-1268									
Pentachlorobenzene								<8	
Pentachloroethane									
Pentachloronitrobenzene								<8	
Pentachlorophenol								<8.000	
pH									
Phenacetin								<8	
Phenanthrene								<8	
Phenol								<8	
Phorate								<.4	
Picloram									
Pronamide								<8	
Propionitrile								<10	
Pyrene								<8	
Pyridine									
Safrole								<8	
Selenium, total	6.2	<4.0	<4.0	<4.0	21.2	<4.0	<4.0	20.2	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total								<.10	
Tetrachloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Thallium, total	<4	<4	<2	<2	<2	<4	<4	<4	<4

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	4/16/2019
Fluorene									<8
Gamma-bhc (lindane)									<.05
Gamma-chlordane									
Heptachlor									<.05
Heptachlor epoxide									<.05
Hexachlorobenzene									<.05
Hexachlorobutadiene									<8
Hexachlorocyclopentadiene									<8
Hexachloroethane									<8
Hexachloropropene									<8
Indeno(1,2,3-cd)pyrene									<8
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Isobutanol									<1000
Isodrin									<8
Isophorone									<8
Isosafrole									<8
Kepone									<8
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mcpa									
Mcpp									
Mercury, total									<.5
Methacrylonitrile									<1
Methapyrilene									<8
Methoxychlor									<.05
Methyl methacrylate									<1
Methyl methanesulfonate									<8
Methyl parathion									<.4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									<8
Nickel, total	34.0	29.6	23.5	32.6	23.3	26.4	33.8	22.3	16.3
Nitrobenzene									<8
N-nitrosodiethylamine									<8
N-nitrosodimethylamine									<8
N-nitrosodi-n-butylamine									<8
N-nitroso-di-n-propylamine									<8
N-nitrosodiphenylamine									<8
N-nitrosomethylethylamine									<8
N-nitrosopiperidine									<8
N-nitrosopyrrolidine									<8
O,o,o-triethyl phosphorothioate									<.4
O-toluidine									<8
P-(dimethylamino)azobenzene									<8
Parathion									<.4
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									<.1
Pcb-1221									<.2
Pcb-1232									<.2
Pcb-1242									<.2
Pcb-1248									<.2
Pcb-1254									<.1
Pcb-1260									<.1
Pcb-1268									
Pentachlorobenzene									<8
Pentachloroethane									
Pentachloronitrobenzene									<8
Pentachlorophenol									<8.000
pH									
Phenacetin									<8
Phenanthrene									<8
Phenol									<8
Phorate									<.4
Picloram									
Pronamide									<8
Propionitrile									<10
Pyrene									<8
Pyridine									
Safrole									<8
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									<.10
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<4	<4	<4	<4	<4	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Fluorene									
Gamma-bhc (lindane)									
Gamma-chlordane									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane		<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total		<4	<4	<4	<4	<4	<4	<4	<4
Mcpa									
Mcpp									
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride		<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene									
Nickel, total		25.6	23.0	29.2	42.1	29.7	15.2	27.4	25.6
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
P-(dimethylamino)azobenzene									
Parathion									
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									
Pcb-1221									
Pcb-1232									
Pcb-1242									
Pcb-1248									
Pcb-1254									
Pcb-1260									
Pcb-1268									
Pentachlorobenzene									
Pentachloroethane									
Pentachloronitrobenzene									
Pentachlorophenol									
pH									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Picloram									
Pronamide									
Propionitrile									
Pyrene									
Pyridine									
Safrole									
Selenium, total		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total		<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene		<1	<1	<1	<1	<1	<1	<1	<1
Sulfide, total									
Tetrachloroethene		<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total		<2	<2	<2	<2	<2	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	10/13/2023	4/18/2024	10/15/2024
Fluorene		<8	
Gamma-bhc (lindane)		<.05	
Gamma-chlordane			
Heptachlor		<.05	
Heptachlor epoxide		<.05	
Hexachlorobenzene		<.05	
Hexachlorobutadiene		<8	
Hexachlorocyclopentadiene		<8	
Hexachloroethane		<8	
Hexachloropropene		<8	
Indeno(1,2,3-cd)pyrene		<8	
Iodomethane	<1	<2	<1
Iron, dissolved			
Iron, total			
Isobutanol		<1000	
Isodrin		<8	
Isophorone		<8	
Isosafrole		<8	
Kepone		<8	
Lead, total	<4	<4	<4
Mcpa			
Mcpp			
Mercury, total		<.5	
Methacrylonitrile		<1	
Methapyrilene		<8	
Methoxychlor		<.05	
Methyl methacrylate		<1	
Methyl methanesulfonate		<8	
Methyl parathion		<.4	
Methylene chloride	<5	<5	<5
Naphthalene		<8	
Nickel, total	29.4	28.4	23.3
Nitrobenzene		<8	
N-nitrosodiethylamine		<8	
N-nitrosodimethylamine		<8	
N-nitrosodi-n-butylamine		<8	
N-nitroso-di-n-propylamine		<8	
N-nitrosodiphenylamine		<8	
N-nitrosomethylethylamine		<8	
N-nitrosopiperidine		<8	
N-nitrosopyrrolidine		<8	
O,o,o-triethyl phosphorothioate		<.4	
O-toluidine		<8	
P-(dimethylamino)azobenzene		<8	
Parathion		<.4	
Parathion-ethyl			
Parathion-methyl			
Pcb-1016		<.2	
Pcb-1221		<.2	
Pcb-1232		<.2	
Pcb-1242		<.2	
Pcb-1248		<.2	
Pcb-1254		<.2	
Pcb-1260		<.2	
Pcb-1268			
Pentachlorobenzene		<8	
Pentachloroethane			
Pentachloronitrobenzene		<8	
Pentachlorophenol		<8.000	
pH			
Phenacetin		<8	
Phenanthrene		<8	
Phenol		<8	
Phorate		<.4	
Picloram			
Pronamide		<8	
Propionitrile		<10	
Pyrene		<8	
Pyridine			
Safrole		<8	
Selenium, total	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4
Specific conductance			
Styrene	<1	<1	<1
Sulfide, total		<.15	
Tetrachloroethene	<1	<1	<1
Thallium, total	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Thionazin	ug/L		<10.0						
Tin, total	ug/L		<100						
Toluene	ug/L		<1		<1	<1	<1	<1	<1
Total organic halides	mg/L			.0502 *					
Total suspended solids	mg/L								
Toxaphene	ug/L		<2.0						
Trans-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L		<10		<10	<10	<5	<5	<5
Trichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L		<4		<4	<4	<1	<1	<1
Vanadium, total	ug/L		<50.0		<50.0	<50.0	<10.0	<10.0	<10.0
Vinyl acetate	ug/L		<2		<2	<2	<5	<5	<5
Vinyl chloride	ug/L		<1		<1	<1	<1	<1	<1
Xylenes, total	ug/L		<3		<3	<3	<2	<2	<2
Zinc, total	ug/L		109.0		36.7	63.4	12.1	<10.0	<10.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Thionazin								<.4	
Tin, total								<20	
Toluene	<1	<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids									10
Toxaphene								<.2	
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	23.1	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	<8.0	<8.0	<8.0	15.0	<8.0	<20.0	<8.0	<20.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	3/20/2015	9/17/2015	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	4/16/2019
Thionazin									<.4
Tin, total									<20
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids	10	8	4	3	71	12	4	7	3
Toxaphene									<.2
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	<20.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	6/25/2019	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023
Thionazin									
Tin, total									
Toluene		<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids		2	8	16					
Toxaphene									
Trans-1,2-dichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene		<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene		<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane		<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total		<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate		<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride		<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total		<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total		<8.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW90-7

Constituents	10/13/2023	4/18/2024	10/15/2024
Thionazin		<.4	
Tin, total		<20	
Toluene	<1	<1	<1
Total organic halides			
Total suspended solids			
Toxaphene		<.2	
Trans-1,2-dichloroethene	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5
Trichloroethene	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5
Vinyl chloride	<1	<1	<1
Xylenes, total	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
(3 4)-methylphenol	ug/L								
1,1,1,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L		<2		<2	<2	<1	<1	<1
1,1-dichloropropene	ug/L		<1						
1,2,3-trichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L		<10						
1,2,4-trichlorobenzene	ug/L		<8 *						
1,2-dibromo-3-chloropropane	ug/L		<10.00		<.86	<.86	<1.00	<1.00	<1.00
1,2-dibromoethane (edb)	ug/L		<10.00		<.25	<.25	<1.00	<1.00	<1.00
1,2-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L		<1		<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L								
1,3,5-trinitrobenzene	ug/L		<10						
1,3-dichlorobenzene	ug/L		<1						
1,3-dichloropropane	ug/L		<1						
1,3-dinitrobenzene	ug/L		<10						
1,4-dichlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L		<10						
1,4-phenylenediamine	ug/L		<10						
1-naphthylamine	ug/L		<10						
2,2-dichloropropane	ug/L		<4						
2,3,4,6-tetrachlorophenol	ug/L		<10						
2,4,5-t	ug/L		<5.0						
2,4,5-tp (silvex)	ug/L		<5.0						
2,4,5-trichlorophenol	ug/L		<10						
2,4,6-trichlorophenol	ug/L		<10						
2,4-d	ug/L		<5						
2,4-db	ug/L		<5						
2,4-dichlorophenol	ug/L		<10						
2,4-dimethylphenol	ug/L		<10						
2,4-dinitrophenol	ug/L		<10						
2,4-dinitrotoluene	ug/L		<10						
2,6-dichlorophenol	ug/L		<10						
2,6-dinitrotoluene	ug/L		<10						
2-acetylaminofluorene	ug/L		<10						
2-butanone (mek)	ug/L		<10		<10	<10	<5	<5	<5
2-chloronaphthalene	ug/L		<10						
2-chlorophenol	ug/L		<10						
2-hexanone	ug/L		<10		<10	<10	<5	<5	<5
2-methylnaphthalene	ug/L		<10						
2-methylphenol (o-cresol)	ug/L		<10						
2-naphthylamine	ug/L		<10						
2-nitroaniline	ug/L		<10						
2-nitrophenol	ug/L		<10						
3,3´-dichlorobenzidine	ug/L		<85						
3,3'-dimethylbenzidine	ug/L		<20						
3/4-methylphenol	ug/L		<10						
3-methylcholanthrene	ug/L		<10						
3-nitroaniline	ug/L		<10						
4,4'-ddd	ug/L		<.05						
4,4'-dde	ug/L		<.05						
4,4'-ddt	ug/L		<.05						
4,6-dinitro-2-methylphenol	ug/L		<10						
4-aminobiphenyl	ug/L		<20						
4-bromophenyl phenyl ether	ug/L		<10						
4-chloro-3-methylphenol	ug/L		<10						
4-chloroaniline	ug/L		<10						
4-chlorophenyl phenyl ether	ug/L		<10						
4-methyl-2-pentanone (mibk)	ug/L		<10		<10	<10	<5	<5	<5
4-nitroaniline	ug/L		<10						
4-nitrophenol	ug/L		<8 *						
5-nitro-o-toluidine	ug/L		<10						
7,12-dimethylbenz (a) anthracene	ug/L		<10						
Acenaphthene	ug/L		<10 *						
Acetone	ug/L		<10		<10	<10	<10	<10	<10
Acetonitrile	ug/L		<10						
Acetophenone	ug/L		<10						
Acrolein	ug/L		<10						
Acrylonitrile	ug/L		<10		<10	<10	<5	<5	<5
Aldrin	ug/L		<.05						
Allyl chloride	ug/L		<2						
Alpha-bhc	ug/L		<.05						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
(3 4)-methylphenol								<8	
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene								<1	
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene								<8	
1,2,4-trichlorobenzene								<1	
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene								<8	
1,3,5-trinitrobenzene								<8	
1,3-dichlorobenzene								<1	
1,3-dichloropropane								<1	
1,3-dinitrobenzene								<8	
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone								<8	
1,4-phenylenediamine								<8	
1-naphthylamine								<8	
2,2-dichloropropane								<1	
2,3,4,6-tetrachlorophenol								<8	
2,4,5-t								<.5	
2,4,5-tp (silvex)								<.5	
2,4,5-trichlorophenol								<8	
2,4,6-trichlorophenol								<8	
2,4-d								<2	
2,4-db									
2,4-dichlorophenol								<8	
2,4-dimethylphenol								<8	
2,4-dinitrophenol								<8	
2,4-dinitrotoluene								<8	
2,6-dichlorophenol								<8	
2,6-dinitrotoluene								<8	
2-acetylaminofluorene								<8	
2-butanone (mek)	<5	<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene								<8	
2-chlorophenol								<8	
2-hexanone	<5	<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene								<8	
2-methylphenol (o-cresol)								<8	
2-naphthylamine								<8	
2-nitroaniline								<8	
2-nitrophenol								<8	
3,3´-dichlorobenzidine								<8	
3,3'-dimethylbenzidine								<8	
3/4-methylphenol									
3-methylcholanthrene								<8	
3-nitroaniline								<8	
4,4'-ddd								<.05	
4,4'-dde								<.05	
4,4'-ddt								<.05	
4,6-dinitro-2-methylphenol								<8	
4-aminobiphenyl								<8	
4-bromophenyl phenyl ether								<8	
4-chloro-3-methylphenol								<8	
4-chloroaniline								<8	
4-chlorophenyl phenyl ether								<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5		<5	<5
4-nitroaniline								<8	
4-nitrophenol								<8	
5-nitro-o-toluidine								<8	
7,12-dimethylbenz (a) anthracene								<8	
Acenaphthene								<8 *	
Acetone	<10	<10	<10	<10	<10	<10		<10	<10
Acetonitrile								<10	
Acetophenone								<8	
Acrolein								<10	
Acrylonitrile	<5	<5	<5	<5	<5	<5		<5	<5
Aldrin								<.05	
Allyl chloride								<1	
Alpha-bhc								<.05	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	3/20/2015	9/17/2015	3/17/2016	6/15/2016	8/26/2016	9/29/2016	4/11/2017	7/14/2017	9/23/2017
(3 4)-methylphenol									
1,1,1,2-tetrachloroethane	<1	<1	<1		<1		<1		<1
1,1,1-trichloroethane	<1	<1	<1		<1		<1		<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1		<1		<1
1,1,2-trichloroethane	<1	<1	<1		<1		<1		<1
1,1-dichloroethane	<1	<1	<1		<1		<1		<1
1,1-dichloroethene	<1	<1	<1		<1		<1		<1
1,1-dichloropropene									
1,2,3-trichloropropane	<1	<1	<1		<1		<1		<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane	<1.00	<1.00	<1.00		<1.00		<1.00		<1.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00		<1.00		<1.00		<1.00
1,2-dichlorobenzene	<1	<1	<1		<1		<1		<1
1,2-dichloroethane	<1	<1	<1		<1		<1		<1
1,2-dichloropropane	<1	<1	<1		<1		<1		<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene	<1	<1	<1		<1		<1		<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-db									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)	<5	<5	<5		<5		<5		<5
2-chloronaphthalene									
2-chlorophenol									
2-hexanone	<5	<5	<5		<5		<5		<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3/4-methylphenol									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)	<5	<5	<5		<5		<5		<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acetone	<10	<10	<10		<10		<10		<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile	<5	<5	<5		<5		<5		<5
Aldrin									
Allyl chloride									
Alpha-bhc									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	11/15/2017	4/10/2018	9/24/2018	4/16/2019	8/29/2019	4/10/2020	6/9/2020	10/9/2020	4/9/2021
(3 4)-methylphenol									
1,1,1,2-tetrachloroethane		<1	<1	<1	<1	<1		<1	<1
1,1,1-trichloroethane		<1	<1	<1	<1	<1		<1	<1
1,1,2,2-tetrachloroethane		<1	<1	<1	<1	<1		<1	<1
1,1,2-trichloroethane		<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethane		<1	<1	<1	<1	<1		<1	<1
1,1-dichloroethene		<1	<1	<1	<1	<1		<1	<1
1,1-dichloropropene									
1,2,3-trichloropropane		<1	<1	<1	<1	<1		<1	<1
1,2,4,5-tetrachlorobenzene									
1,2,4-trichlorobenzene									
1,2-dibromo-3-chloropropane		<1.00	<1.00	<1.00	<1.00	<5.00		<5.00	<5.00
1,2-dibromoethane (edb)		<1.00	<1.00	<1.00	<1.00	<1.00		<1.00	<1.00
1,2-dichlorobenzene		<1	<1	<1	<1	<1		<1	<1
1,2-dichloroethane		<1	<1	<1	<1	<1		<1	<1
1,2-dichloropropane		<1	<1	<1	<1	<1		<1	<1
1,2-dinitrobenzene									
1,3,5-trinitrobenzene									
1,3-dichlorobenzene									
1,3-dichloropropane									
1,3-dinitrobenzene									
1,4-dichlorobenzene		<1	<1	<1	<1	<1		<1	<1
1,4-naphthoquinone									
1,4-phenylenediamine									
1-naphthylamine									
2,2-dichloropropane									
2,3,4,6-tetrachlorophenol									
2,4,5-t									
2,4,5-tp (silvex)									
2,4,5-trichlorophenol									
2,4,6-trichlorophenol									
2,4-d									
2,4-db									
2,4-dichlorophenol									
2,4-dimethylphenol									
2,4-dinitrophenol									
2,4-dinitrotoluene									
2,6-dichlorophenol									
2,6-dinitrotoluene									
2-acetylaminofluorene									
2-butanone (mek)		<5	<5	<5	<5	<5		<5	<5
2-chloronaphthalene									
2-chlorophenol									
2-hexanone		<5	<5	<5	<5	<5		<5	<5
2-methylnaphthalene									
2-methylphenol (o-cresol)									
2-naphthylamine									
2-nitroaniline									
2-nitrophenol									
3,3´-dichlorobenzidine									
3,3'-dimethylbenzidine									
3/4-methylphenol									
3-methylcholanthrene									
3-nitroaniline									
4,4'-ddd									
4,4'-dde									
4,4'-ddt									
4,6-dinitro-2-methylphenol									
4-aminobiphenyl									
4-bromophenyl phenyl ether									
4-chloro-3-methylphenol									
4-chloroaniline									
4-chlorophenyl phenyl ether									
4-methyl-2-pentanone (mibk)		<5	<5	<5	<5	<5		<5	<5
4-nitroaniline									
4-nitrophenol									
5-nitro-o-toluidine									
7,12-dimethylbenz (a) anthracene									
Acenaphthene									
Acetone		<10	<10	<10	<10	<10		<10	<10
Acetonitrile									
Acetophenone									
Acrolein									
Acrylonitrile		<5	<5	<5	<5	<5		<5	<5
Aldrin									
Allyl chloride									
Alpha-bhc									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	10/11/2021	4/7/2022	10/6/2022	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
(3 4)-methylphenol					<8		<8	
1,1,1,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1		<1	<1	<1	<1
1,1-dichloropropene					<1		<1	
1,2,3-trichloropropane	<1	<1	<1		<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene					<8		<8	
1,2,4-trichlorobenzene					<1		<1	
1,2-dibromo-3-chloropropane	<5.00	<5.00	<5.00		<1.00	<5.00	<1.00	<5.00
1,2-dibromoethane (edb)	<1.00	<1.00	<1.00		<1.00	<1.00	<1.00	<1.00
1,2-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1		<1	<1	<1	<1
1,2-dinitrobenzene					<8		<8	
1,3,5-trinitrobenzene					<8		<8	
1,3-dichlorobenzene					<1		<1	
1,3-dichloropropane					<1		<1	
1,3-dinitrobenzene					<8		<8	
1,4-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1
1,4-naphthoquinone					<8		<8	
1,4-phenylenediamine					<8		<8	
1-naphthylamine					<8		<8	
2,2-dichloropropane					<1		<1	
2,3,4,6-tetrachlorophenol					<8		<8	
2,4,5-t					<.5		<.5	
2,4,5-tp (silvex)					<.5		<.5	
2,4,5-trichlorophenol					<8		<8	
2,4,6-trichlorophenol					<8		<8	
2,4-d					<2		<2	
2,4-db								
2,4-dichlorophenol					<8		<8	
2,4-dimethylphenol					<8		<8	
2,4-dinitrophenol					<8		<8	
2,4-dinitrotoluene					<8		<8	
2,6-dichlorophenol					<8		<8	
2,6-dinitrotoluene					<8		<8	
2-acetylaminofluorene					<8		<8	
2-butanone (mek)	<5	<10	<10		<5	<10	<5	<10
2-chloronaphthalene					<8		<8	
2-chlorophenol					<8		<8	
2-hexanone	<5	<5	<5		<5	<5	<5	<5
2-methylnaphthalene					<8		<8	
2-methylphenol (o-cresol)					<8		<8	
2-naphthylamine					<8		<8	
2-nitroaniline					<8		<8	
2-nitrophenol					<8		<8	
3,3´-dichlorobenzidine					<8		<8	
3,3'-dimethylbenzidine					<8		<8	
3/4-methylphenol								
3-methylcholanthrene					<8		<8	
3-nitroaniline					<8		<8	
4,4'-ddd					<.05		<.05	
4,4'-dde					<.05		<.05	
4,4'-ddt					<.05		<.05	
4,6-dinitro-2-methylphenol					<8		<8	
4-aminobiphenyl					<8		<8	
4-bromophenyl phenyl ether					<8		<8	
4-chloro-3-methylphenol					<8		<8	
4-chloroaniline					<8		<8	
4-chlorophenyl phenyl ether					<8		<8	
4-methyl-2-pentanone (mibk)	<5	<5	<5		<5	<5	<5	<5
4-nitroaniline					<8		<8	
4-nitrophenol					<8		<8	
5-nitro-o-toluidine					<8		<8	
7,12-dimethylbenz (a) anthracene					<8		<8	
Acenaphthene					<8 *		<8 *	
Acetone	<10	<10	<10		<10	<10	<10	<10
Acetonitrile					<10		<10	
Acetophenone					<8		<8	
Acrolein					<10		<10	
Acrylonitrile	<5	<5	<5		<5	<5	<5	<5
Aldrin					<.05		<.05	
Allyl chloride					<1		<1	
Alpha-bhc					<.05		<.05	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Alpha-chlordane	ug/L		<.05						
Ammonia as n	mg/L	<.2 *							
Anthracene	ug/L		<10						
Antimony, total	ug/L		<6		<6	<6	<1	<2	<2
Arsenic, total	ug/L		<1.00		<1.00	1.92	<4.00	<4.00	<4.00
Azobenzene	ug/L								
Barium, total	ug/L		331		331	374	390	350	430
Benzene	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Benzo(a)anthracene	ug/L		<10						
Benzo(a)pyrene	ug/L		<10						
Benzo(b)fluoranthene	ug/L		<10						
Benzo(g,h,i)perylene	ug/L		<10						
Benzo(k)fluoranthene	ug/L		<10						
Benzyl alcohol	ug/L		<10						
Beryllium, total	ug/L		<1		<1	<1	<4	<4	<4
Beta-bhc	ug/L								
Bis(2-chloroethoxy)methane	ug/L		<10						
Bis(2-chloroethyl)ether	ug/L		<10						
Bis(2-chloroisopropyl) ether	ug/L		<10						
Bis(2-ethylhexyl)phthalate	ug/L		<10						
Bis[2-chloroisopropyl]ether	ug/L								
Bromochloromethane	ug/L		<5		<5	<5	<1	<1	<1
Bromodichloromethane	ug/L		<1		<1	<1	<1	<1	<1
Bromoform	ug/L		<5		<5	<5	<1	<1	<1
Bromomethane	ug/L		<4		<4	<4	<1	<1	<1
Butyl benzyl phthalate	ug/L		<10						
Cadmium, total	ug/L		<.5		<.5	<.5	<1.0	<1.0	<1.0
Carbon disulfide	ug/L		<1		<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L		<2		<2	<2	<1	<1	<1
Chemical oxygen demand	mg/L	<5.0 *	8.1						
Chlordane	ug/L								
Chloride	mg/L	104.0 *	76.0	79.3 *					
Chlorobenzene	ug/L		<1		<1	<1	<1	<1	<1
Chlorobenzilate	ug/L		<10						
Chlorodibromomethane	ug/L		<5		<5	<5			
Chloroethane	ug/L		<4		<4	<4	<1	<1	<1
Chloroform	ug/L		<1		<2	<1	<1	<1	<1
Chloromethane	ug/L		<3		<3	<3	<1	<1	<1
Chloroprene	ug/L		<1						
Chromium, total	ug/L		<20		<20	<20	<10	<10	<10
Chrysene	ug/L		<10						
Cis-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Cobalt, total	ug/L		<20.0		<20.0	<20.0	<4.0	<4.0	<4.0
Copper, total	ug/L		<20		<20	<20	<4	<4	<4
Cyanide	mg/L		<.010						
Dalapon	ug/L		<10						
Delta-bhc	ug/L								
Diallate	ug/L								
Diallate (cis or trans)	ug/L		<10						
Dibenzo(a,h)anthracene	ug/L		<10						
Dibenzofuran	ug/L		<10						
Dibromochloromethane	ug/L						<1	<1	<1
Dibromomethane	ug/L		<1		<1	<1	<1	<1	<1
Dicamba	ug/L		<5						
Dichlorodifluoromethane	ug/L		<3						
Dichloroprop	ug/L		<5						
Dieldrin	ug/L		<.05						
Diethyl phthalate	ug/L		<10						
Dimethoate	ug/L		<10.0						
Dimethyl phthalate	ug/L		<10						
Di-n-butyl phthalate	ug/L		<10		<10	<10	<10	<10	<10
Di-n-octyl phthalate	ug/L		<10						
Dinoseb	ug/L		<7.5 *						
Diphenylamine	ug/L		<10						
Disulfoton	ug/L		<70.0						
Endosulfan i	ug/L		<.05						
Endosulfan ii	ug/L		<.05						
Endosulfan sulfate	ug/L		<.05						
Endrin	ug/L		<.05						
Endrin aldehyde	ug/L		<.05						
Endrin ketone	ug/L		<.05						
Ethyl methacrylate	ug/L		<2						
Ethyl methanesulfonate	ug/L		<10						
Ethylbenzene	ug/L		<1		<1	<1	<1	<1	<1
Famphur	ug/L		<20.0						
Fluoranthene	ug/L		<10						

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Alpha-chlordane									
Ammonia as n									
Anthracene								<8	
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00	<4.00
Azobenzene								<8	
Barium, total	347	534	390	449	277	833	467	396	317
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene								<8	
Benzo(a)pyrene								<8	
Benzo(b)fluoranthene								<8	
Benzo(g,h,i)perylene								<8	
Benzo(k)fluoranthene								<8	
Benzyl alcohol								<8	
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Beta-bhc								<.05	
Bis(2-chloroethoxy)methane								<8	
Bis(2-chloroethyl)ether								<8	
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate								<8	
Bis[2-chloroisopropyl]ether								<8	
Bromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Bromoform	<1	<1	<1	<1	<1	<1		<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate								<8	
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane								<.1	
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate								<8	
Chlorodibromomethane									
Chloroethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroform	<1	<1	<1	<1	<1	<1		<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Chloroprene								<1	
Chromium, total	<8	<20	<8	<8	<8	<8	<8	<8	<8
Chrysene								<8	
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	1.0
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Cyanide								<.005	
Dalapon									
Delta-bhc								<.05	
Diallate								<8	
Diallate (cis or trans)									
Dibenzo(a,h)anthracene								<8	
Dibenzofuran								<8	
Dibromochloromethane	<1	<1	<1	<1	<1	<1		<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane								<1	
Dichloroprop									
Dieldrin								<.05	
Diethyl phthalate								<8	
Dimethoate								<.4	
Dimethyl phthalate								<8	
Di-n-butyl phthalate								<8	
Di-n-octyl phthalate								<8	
Dinoseb								<.5	
Diphenylamine								<8	
Disulfoton								<.4	
Endosulfan i								<.05	
Endosulfan ii								<.05	
Endosulfan sulfate								<.05	
Endrin								<.05	
Endrin aldehyde								<.05	
Endrin ketone									
Ethyl methacrylate								<10	
Ethyl methanesulfonate								<8	
Ethylbenzene	<1	<1	<1	<1	<1	<1		<1	<1
Famphur								<.4	
Fluoranthene								<8	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	3/20/2015	9/17/2015	3/17/2016	6/15/2016	8/26/2016	9/29/2016	4/11/2017	7/14/2017	9/23/2017
Alpha-chlordane									
Ammonia as n									
Anthracene									
Antimony, total	<2	<2	<2		<2		<2		<2
Arsenic, total	<4.00	<4.00	<4.00		<4.00		<4.00		<4.00
Azobenzene									
Barium, total	331	275	372	310	362	291	325		516
Benzene	<1.0	<1.0	<1.0		<1.0		<1.0		<1.0
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total	<4	<4	<4		<4		<4		<4
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate									
Bis[2-chloroisopropyl]ether									
Bromochloromethane	<1	<1	<1		<1		<1		<1
Bromodichloromethane	<1	<1	<1		<1		<1		<1
Bromoform	<1	<1	<1		<1		<1		<1
Bromomethane	<1	<1	<1		<1		<1		<1
Butyl benzyl phthalate									
Cadmium, total	<.8	<.8	<.8		<.8		2.3	<.8	<.8
Carbon disulfide	<1	<1	<1		<1		<1		<1
Carbon tetrachloride	<1	<1	<1		<1		<1		<1
Chemical oxygen demand									
Chlordane									
Chloride									
Chlorobenzene	<1	<1	<1		<1		<1		<1
Chlorobenzilate									
Chlorodibromomethane									
Chloroethane	<1	<1	<1		<1		<1		<1
Chloroform	<1	<1	<1		<1		<1		<1
Chloromethane	<1	<1	<1		<1		<1		<1
Chloroprene									
Chromium, total	<8	<8	<8		<8		<8		<8
Chrysene									
Cis-1,2-dichloroethene	<1	<1	<1		<1		<1		<1
Cis-1,3-dichloropropene	<1	<1	<1		<1		<1		<1
Cobalt, total	<.8	<.8	<.8		1.0		<.8		<.8
Copper, total	<4	<4	<4		<4		<4		<4
Cyanide									
Dalapon									
Delta-bhc									
Diallate									
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane	<1	<1	<1		<1		<1		<1
Dibromomethane	<1	<1	<1		<1		<1		<1
Dicamba									
Dichlorodifluoromethane									
Dichloroprop									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Endrin ketone									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene	<1	<1	<1		<1		<1		<1
Famphur									
Fluoranthene									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	11/15/2017	4/10/2018	9/24/2018	4/16/2019	8/29/2019	4/10/2020	6/9/2020	10/9/2020	4/9/2021
Alpha-chlordane									
Ammonia as n									
Anthracene									
Antimony, total		<2	<2	<2	<2	<2		<2	<2
Arsenic, total		<4.00	<4.00	<4.00	<4.00	<4.00		<4.00	<4.00
Azobenzene									
Barium, total	296	339	281	342	335	373	327	495	328
Benzene		<1.0	<1.0	<1.0	<1.0	<1.0		<1.0	<1.0
Benzo(a)anthracene									
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(g,h,i)perylene									
Benzo(k)fluoranthene									
Benzyl alcohol									
Beryllium, total		<4	<4	<4	<4	<4		<4	<4
Beta-bhc									
Bis(2-chloroethoxy)methane									
Bis(2-chloroethyl)ether									
Bis(2-chloroisopropyl) ether									
Bis(2-ethylhexyl)phthalate									
Bis[2-chloroisopropyl]ether									
Bromochloromethane		<1	<1	<1	<1	<1		<1	<1
Bromodichloromethane		<1	<1	<1	<1	<1		<1	<1
Bromoform		<1	<1	<1	<1	<1		<1	<1
Bromomethane		<1	<1	<1	<1	<1		<1	<1
Butyl benzyl phthalate									
Cadmium, total		<.8	<.8	<.8	<.8	<.8		<.8	<.8
Carbon disulfide		<1	<1	<1	<1	<1		<1	<1
Carbon tetrachloride		<1	<1	<1	<1	<1		<1	<1
Chemical oxygen demand									
Chlordane									
Chloride									
Chlorobenzene		<1	<1	<1	<1	<1		<1	<1
Chlorobenzilate									
Chlorodibromomethane									
Chloroethane		<1	<1	<1	<1	<1		<1	<1
Chloroform		<1	<1	<1	<1	<1		<1	<1
Chloromethane		<1	<1	<1	<1	<1		<1	<1
Chloroprene									
Chromium, total		<8	<8	<8	<8	<8		<8	<8
Chrysene									
Cis-1,2-dichloroethene		<1	<1	<1	<1	<1		<1	<1
Cis-1,3-dichloropropene		<1	<1	<1	<1	<1		<1	<1
Cobalt, total		<.8	<.8	<.8	<.8	<.4		2.4	<.4
Copper, total		<4	<4	<4	<4	<4		<4	<4
Cyanide									
Dalapon									
Delta-bhc									
Diallate									
Diallate (cis or trans)									
Dibenzo(a,h)anthracene									
Dibenzofuran									
Dibromochloromethane		<1	<1	<1	<1	<1		<1	<1
Dibromomethane		<1	<1	<1	<1	<1		<1	<1
Dicamba									
Dichlorodifluoromethane									
Dichloroprop									
Dieldrin									
Diethyl phthalate									
Dimethoate									
Dimethyl phthalate									
Di-n-butyl phthalate									
Di-n-octyl phthalate									
Dinoseb									
Diphenylamine									
Disulfoton									
Endosulfan i									
Endosulfan ii									
Endosulfan sulfate									
Endrin									
Endrin aldehyde									
Endrin ketone									
Ethyl methacrylate									
Ethyl methanesulfonate									
Ethylbenzene		<1	<1	<1	<1	<1		<1	<1
Famphur									
Fluoranthene									

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	10/11/2021	4/7/2022	10/6/2022	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Alpha-chlordane								
Ammonia as n								
Anthracene					<8		<8	
Antimony, total	<2	<2	<2		<2	<2	<2	<2
Arsenic, total	<4.00	<4.00	<4.00		<4.00	<4.00	<4.00	<4.00
Azobenzene					<8		<8	
Barium, total	321	343	504	434	380	482	303	276
Benzene	<1.0	<1.0	<1.0		<1.0	<1.0	<1.0	<1.0
Benzo(a)anthracene					<8		<8	
Benzo(a)pyrene					<8		<8	
Benzo(b)fluoranthene					<8		<8	
Benzo(g,h,i)perylene					<8		<8	
Benzo(k)fluoranthene					<8		<8	
Benzyl alcohol					<8		<8	
Beryllium, total	<4	<4	<4		<4	<4	<4	<4
Beta-bhc					<.05		<.05	
Bis(2-chloroethoxy)methane					<8		<8	
Bis(2-chloroethyl)ether					<8		<8	
Bis(2-chloroisopropyl) ether								
Bis(2-ethylhexyl)phthalate					<6		13	<6
Bis[2-chloroisopropyl]ether					<8		<8	
Bromochloromethane	<1	<1	<1		<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1		<1	<1	<1	<1
Bromoform	<1	<1	<1		<1	<1	<1	<1
Bromomethane	<1	<1	<1		<1	<1	<1	<1
Butyl benzyl phthalate					<8		<8	
Cadmium, total	<.8	<.8	2.9	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1		<1	<1	<1	<1
Chemical oxygen demand								
Chlordane					<.1		<.1	
Chloride								
Chlorobenzene	<1	<1	<1		<1	<1	<1	<1
Chlorobenzilate					<8		<8	
Chlorodibromomethane								
Chloroethane	<1	<1	<1		<1	<1	<1	<1
Chloroform	<1	<1	<1		<1	<1	<1	<1
Chloromethane	<1	<1	<1		<1	<1	<1	<1
Chloroprene					<1		<1	
Chromium, total	<8	<8	<8		<8	<8	<8	<8
Chrysene					<8		<8	
Cis-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	<.4	<.4	1.9	.7	.5	1.4	<.4	<.4
Copper, total	<4	<4	<4		<4	<4	<4	<4
Cyanide					<.005		<.005	
Dalapon								
Delta-bhc					<.05		<.05	
Diallate					<8		<8	
Diallate (cis or trans)								
Dibenzo(a,h)anthracene					<8		<8	
Dibenzofuran					<8		<8	
Dibromochloromethane	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	<1	<1	<1		<1	<1	<1	<1
Dicamba								
Dichlorodifluoromethane					<1		<1	
Dichloroprop								
Dieldrin					<.05		<.05	
Diethyl phthalate					<8		<8	
Dimethoate					<.4		<.4	
Dimethyl phthalate					<8		<8	
Di-n-butyl phthalate					<8		<8	
Di-n-octyl phthalate					<8		<8	
Dinoseb					<.5		<.5	
Diphenylamine					<8		<8	
Disulfoton					<.4		<.4	
Endosulfan i					<.05		<.05	
Endosulfan ii					<.05		<.05	
Endosulfan sulfate					<.05		<.05	
Endrin					<.05		<.05	
Endrin aldehyde					<.05		<.05	
Endrin ketone								
Ethyl methacrylate					<10		<10	
Ethyl methanesulfonate					<8		<8	
Ethylbenzene	<1	<1	<1		<1	<1	<1	<1
Famphur					<.4		<.4	
Fluoranthene					<8		<8	

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Fluorene	ug/L		<10						
Gamma-bhc (lindane)	ug/L		<.05						
Gamma-chlordane	ug/L		<.05						
Heptachlor	ug/L		<.05						
Heptachlor epoxide	ug/L		<.05						
Hexachlorobenzene	ug/L		<10.00						
Hexachlorobutadiene	ug/L		<10						
Hexachlorocyclopentadiene	ug/L		<10						
Hexachloroethane	ug/L		<10						
Hexachloropropene	ug/L		<10						
Indeno(1,2,3-cd)pyrene	ug/L		<10						
Iodomethane	ug/L		<10		<10	<10	<1	<1	<1
Iron, dissolved	mg/L	<.1		<.1					
Iron, total	mg/L	<.1		<.1					
Isobutanol	ug/L		<10						
Isodrin	ug/L		<10						
Isophorone	ug/L		<10						
Isosafrole	ug/L		<10						
Kepone	ug/L		<10						
Lead, total	ug/L		<4		<4	<4	<4	<4	<4
Mcpa	ug/L		<500						
Mcpp	ug/L		<500						
Mercury, total	ug/L		<.2						
Methacrylonitrile	ug/L		<1						
Methapyrilene	ug/L		<10						
Methoxychlor	ug/L		<.05						
Methyl methacrylate	ug/L		<2						
Methyl methanesulfonate	ug/L		<10						
Methyl parathion	ug/L								
Methylene chloride	ug/L		<10		<5	<5	<5	<5	<5
Naphthalene	ug/L		<5						
Nickel, total	ug/L		<50.0		<50.0	<50.0	7.1	6.7	6.9
Nitrobenzene	ug/L		<10						
N-nitrosodiethylamine	ug/L		<10						
N-nitrosodimethylamine	ug/L		<10						
N-nitrosodi-n-butylamine	ug/L		<10						
N-nitroso-di-n-propylamine	ug/L		<10						
N-nitrosodiphenylamine	ug/L		<10						
N-nitrosomethylethylamine	ug/L		<10						
N-nitrosopiperidine	ug/L		<10						
N-nitrosopyrrolidine	ug/L		<10						
O,o,o-triethyl phosphorothioate	ug/L		<30.0						
O-toluidine	ug/L		<10						
P-(dimethylamino)azobenzene	ug/L		<10						
Parathion	ug/L								
Parathion-ethyl	ug/L		<10						
Parathion-methyl	ug/L		<10						
Pcb-1016	ug/L		<.8						
Pcb-1221	ug/L		<.8						
Pcb-1232	ug/L		<.8						
Pcb-1242	ug/L		<.8						
Pcb-1248	ug/L		<.8						
Pcb-1254	ug/L		<.8						
Pcb-1260	ug/L		<.8						
Pcb-1268	ug/L		<.8						
Pentachlorobenzene	ug/L		<10						
Pentachloroethane	ug/L		<10						
Pentachloronitrobenzene	ug/L		<10						
Pentachlorophenol	ug/L		<8 *						
pH	units	7.16	<2.00	7.29	<2.00	6.60			
Phenacetin	ug/L		<10						
Phenanthrene	ug/L		<10						
Phenol	ug/L		<20						
Phorate	ug/L		<60.0						
Picloram	ug/L		<5						
Pronamide	ug/L		<10						
Propionitrile	ug/L		<10						
Pyrene	ug/L		<10						
Pyridine	ug/L		<10						
Safrole	ug/L		<10						
Selenium, total	ug/L		<5		<5	<5	<4	<4	<4
Silver, total	ug/L		<20		<20	<20	<4	<4	<4
Specific conductance	umhos/cm	694		536		778			
Styrene	ug/L		<1		<1	<1	<1	<1	<1
Sulfide, total	mg/L		<2.00						
Terphenyl-dl4	ug/L								55
Tetrachloroethene	ug/L		<1		<1	<1	<1	<1	<1

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Fluorene								<8	
Gamma-bhc (lindane)								<.05	
Gamma-chlordane									
Heptachlor								<.05	
Heptachlor epoxide								<.05	
Hexachlorobenzene								<4.03 *	
Hexachlorobutadiene								<8	
Hexachlorocyclopentadiene								<8	
Hexachloroethane								<8	
Hexachloropropene								<8	
Indeno(1,2,3-cd)pyrene								<8	
Iodomethane	<1	<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol								<1000	
Isodrin								<8	
Isophorone								<8	
Isosafrole								<8	
Kepone								<8	
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Mcpa									
Mcpp									
Mercury, total								<.5	
Methacrylonitrile								<1	
Methapyrilene								<8	
Methoxychlor								<.05	
Methyl methacrylate								<1	
Methyl methanesulfonate								<8	
Methyl parathion								<.4	
Methylene chloride	<5	<5	<5	<5	<5	<5		<5	<5
Naphthalene								<8	
Nickel, total	9.7	8.3	6.2	6.8	6.0	5.5	4.4	4.3	6.8
Nitrobenzene								<8	
N-nitrosodiethylamine								<8	
N-nitrosodimethylamine								<8	
N-nitrosodi-n-butylamine								<8	
N-nitroso-di-n-propylamine								<8	
N-nitrosodiphenylamine								<8	
N-nitrosomethylethylamine								<8	
N-nitrosopiperidine								<8	
N-nitrosopyrrolidine								<8	
O,o,o-triethyl phosphorothioate								<.4	
O-toluidine								<8	
P-(dimethylamino)azobenzene								<8	
Parathion								<.4	
Parathion-ethyl									
Parathion-methyl									
Pcb-1016								<.1	
Pcb-1221								<.2	
Pcb-1232								<.2	
Pcb-1242								<.2	
Pcb-1248								<.2	
Pcb-1254								<.1	
Pcb-1260								<.1	
Pcb-1268									
Pentachlorobenzene								<8	
Pentachloroethane									
Pentachloronitrobenzene								<8	
Pentachlorophenol								<8	
pH									
Phenacetin								<8	
Phenanthrene								<8	
Phenol								<8	
Phorate								<.4	
Picloram									
Pronamide								<8	
Propionitrile								<10	
Pyrene								<8	
Pyridine									
Safrole								<8	
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1		<1	<1
Sulfide, total								<.10	
Terphenyl-dl4									
Tetrachloroethene	<1	<1	<1	<1	<1	<1		<1	<1

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	3/20/2015	9/17/2015	3/17/2016	6/15/2016	8/26/2016	9/29/2016	4/11/2017	7/14/2017	9/23/2017
Fluorene									
Gamma-bhc (lindane)									
Gamma-chlordane									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane	<1	<1	<1		<1		<1		<1
Iron, dissolved									
Iron, total									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total	<4	<4	<4		<4		<4		<4
Mcpa									
Mcpp									
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride	<5	<5	<5		<5		<5		<5
Naphthalene									
Nickel, total	4.0	<4.0	5.2		7.1		5.1		4.5
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
P-(dimethylamino)azobenzene									
Parathion									
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									
Pcb-1221									
Pcb-1232									
Pcb-1242									
Pcb-1248									
Pcb-1254									
Pcb-1260									
Pcb-1268									
Pentachlorobenzene									
Pentachloroethane									
Pentachloronitrobenzene									
Pentachlorophenol									
pH									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Picloram									
Pronamide									
Propionitrile									
Pyrene									
Pyridine									
Safrole									
Selenium, total	<4	<4	<4		<4		<4		<4
Silver, total	<4	<4	<4		<4		<4		<4
Specific conductance									
Styrene	<1	<1	<1		<1		<1		<1
Sulfide, total									
Terphenyl-dl4									
Tetrachloroethene	<1	<1	<1		<1		<1		<1

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	11/15/2017	4/10/2018	9/24/2018	4/16/2019	8/29/2019	4/10/2020	6/9/2020	10/9/2020	4/9/2021
Fluorene									
Gamma-bhc (lindane)									
Gamma-chlordane									
Heptachlor									
Heptachlor epoxide									
Hexachlorobenzene									
Hexachlorobutadiene									
Hexachlorocyclopentadiene									
Hexachloroethane									
Hexachloropropene									
Indeno(1,2,3-cd)pyrene									
Iodomethane		<1	<1	<1	<1	<1		<1	<1
Iron, dissolved									
Iron, total									
Isobutanol									
Isodrin									
Isophorone									
Isosafrole									
Kepone									
Lead, total		<4	<4	<4	<4	<4		<4	<4
Mcpa									
Mcpp									
Mercury, total									
Methacrylonitrile									
Methapyrilene									
Methoxychlor									
Methyl methacrylate									
Methyl methanesulfonate									
Methyl parathion									
Methylene chloride		<5	<5	<5	<5	<5		<5	<5
Naphthalene									
Nickel, total		<4.0	<4.0	<4.0	<4.0	5.7		9.3	<4.0
Nitrobenzene									
N-nitrosodiethylamine									
N-nitrosodimethylamine									
N-nitrosodi-n-butylamine									
N-nitroso-di-n-propylamine									
N-nitrosodiphenylamine									
N-nitrosomethylethylamine									
N-nitrosopiperidine									
N-nitrosopyrrolidine									
O,o,o-triethyl phosphorothioate									
O-toluidine									
P-(dimethylamino)azobenzene									
Parathion									
Parathion-ethyl									
Parathion-methyl									
Pcb-1016									
Pcb-1221									
Pcb-1232									
Pcb-1242									
Pcb-1248									
Pcb-1254									
Pcb-1260									
Pcb-1268									
Pentachlorobenzene									
Pentachloroethane									
Pentachloronitrobenzene									
Pentachlorophenol									
pH									
Phenacetin									
Phenanthrene									
Phenol									
Phorate									
Picloram									
Pronamide									
Propionitrile									
Pyrene									
Pyridine									
Safrole									
Selenium, total		<4	<4	<4	<4	<4		<4	<4
Silver, total		<4	<4	<4	<4	<4		<4	<4
Specific conductance									
Styrene		<1	<1	<1	<1	<1		<1	<1
Sulfide, total									
Terphenyl-dl4									
Tetrachloroethene		<1	<1	<1	<1	<1		<1	<1

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	10/11/2021	4/7/2022	10/6/2022	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Fluorene					<8		<8	
Gamma-bhc (lindane)					<.05		<.05	
Gamma-chlordane								
Heptachlor					<.05		<.05	
Heptachlor epoxide					<.05		<.05	
Hexachlorobenzene					<.05		<.05	
Hexachlorobutadiene					<8		<8	
Hexachlorocyclopentadiene					<8		<8	
Hexachloroethane					<8		<8	
Hexachloropropene					<8		<8	
Indeno(1,2,3-cd)pyrene					<8		<8	
Iodomethane	<1	<1	<1		<2	<1	<2	<1
Iron, dissolved								
Iron, total								
Isobutanol					<1000		<1000	
Isodrin					<8		<8	
Isophorone					<8		<8	
Isosafrole					<8		<8	
Kepone					<8		<8	
Lead, total	<4	<4	<4		<4	<4	<4	<4
Mcpa								
Mcpp								
Mercury, total					<.5		<.5	
Methacrylonitrile					<1		<1	
Methapyrilene					<8		<8	
Methoxychlor					<.05		<.05	
Methyl methacrylate					<1		<1	
Methyl methanesulfonate					<8		<8	
Methyl parathion					<.4		<.4	
Methylene chloride	<5	<5	<5		<5	<5	<5	<5
Naphthalene					<8		<8	
Nickel, total	<4.0	<4.0	7.8	10.1	<4.0	5.3	<4.0	<4.0
Nitrobenzene					<8		<8	
N-nitrosodiethylamine					<8		<8	
N-nitrosodimethylamine					<8		<8	
N-nitrosodi-n-butylamine					<8		<8	
N-nitroso-di-n-propylamine					<8		<8	
N-nitrosodiphenylamine					<8		<8	
N-nitrosomethylethylamine					<8		<8	
N-nitrosopiperidine					<8		<8	
N-nitrosopyrrolidine					<8		<8	
O,o,o-triethyl phosphorothioate					<.4		<.4	
O-toluidine					<8		<8	
P-(dimethylamino)azobenzene					<8		<8	
Parathion					<.4		<.4	
Parathion-ethyl								
Parathion-methyl								
Pcb-1016					<.1		<.2	
Pcb-1221					<.2		<.2	
Pcb-1232					<.2		<.2	
Pcb-1242					<.2		<.2	
Pcb-1248					<.2		<.2	
Pcb-1254					<.1		<.2	
Pcb-1260					<.1		<.2	
Pcb-1268								
Pentachlorobenzene					<8		<8	
Pentachloroethane								
Pentachloronitrobenzene					<8		<8	
Pentachlorophenol					<8		<8	
pH								
Phenacetin					<8		<8	
Phenanthrene					<8		<8	
Phenol					<8		<8	
Phorate					<.4		<.4	
Picloram								
Pronamide					<8		<8	
Propionitrile					<10		<10	
Pyrene					<8		<8	
Pyridine								
Safrole					<8		<8	
Selenium, total	<4	<4	<4		<4	<4	<4	<4
Silver, total	<4	<4	<4		<4	<4	<4	<4
Specific conductance								
Styrene	<1	<1	<1		<1	<1	<1	<1
Sulfide, total					<.10		<.15	
Terphenyl-dl4								
Tetrachloroethene	<1	<1	<1		<1	<1	<1	<1

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	Units	3/21/2008	6/9/2008	9/2/2008	10/16/2008	3/5/2009	9/30/2009	3/23/2010	9/7/2010
Thallium, total	ug/L		<2		<2	<2	<4	<4	<4
Thionazin	ug/L		<10.0						
Tin, total	ug/L		<100						
Toluene	ug/L		<1		<1	<1	<1	<1	<1
Total organic halides	mg/L			.0164 *					
Total suspended solids	mg/L								
Toxaphene	ug/L		<2.0						
Trans-1,2-dichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L		<5		<5	<5	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L		<10		<10	<10	<5	<5	<5
Trichloroethene	ug/L		<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L		<4		<4	<4	<1	<1	<1
Vanadium, total	ug/L		<50.0		<50.0	<50.0	<10.0	<10.0	<10.0
Vinyl acetate	ug/L		<2		<2	<2	<5	<5	<5
Vinyl chloride	ug/L		<1		<1	<1	<1	<1	<1
Xylenes, total	ug/L		<3		<3	<3	<2	<2	<2
Zinc, total	ug/L		56.4		<20.0	34.4	18.1	17.0	<10.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	4/5/2011	9/6/2011	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014
Thallium, total	<4	<4	<2	<2	<2	<4	<4	<4	<4
Thionazin								<.4	
Tin, total								<20	
Toluene	<1	<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids									43
Toxaphene								<.2	
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5		<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1		<1	<1
Vanadium, total	20.8	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5		<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1		<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2		<2	<2
Zinc, total	<8.0	<8.0	<8.0	<8.0	<8.0	<20.0	8.6	<20.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	3/20/2015	9/17/2015	3/17/2016	6/15/2016	8/26/2016	9/29/2016	4/11/2017	7/14/2017	9/23/2017
Thallium, total	<4	<4	<4		<4		<4		<4
Thionazin									
Tin, total									
Toluene	<1	<1	<1		<1		<1		<1
Total organic halides									
Total suspended solids	31	3	<2		<2		44		4
Toxaphene									
Trans-1,2-dichloroethene	<1	<1	<1		<1		<1		<1
Trans-1,3-dichloropropene	<1	<1	<1		<1		<1		<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5		<5		<5
Trichloroethene	<1	<1	<1		<1		<1		<1
Trichlorofluoromethane	<1	<1	<1		<1		<1		<1
Vanadium, total	<20.0	<20.0	<20.0		<20.0		<20.0		<20.0
Vinyl acetate	<5	<5	<5		<5		<5		<5
Vinyl chloride	<1	<1	<1		<1		<1		<1
Xylenes, total	<2	<2	<2		<2		<2		<2
Zinc, total	8.4	<8.0	<8.0		<8.0		<8.0		<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	11/15/2017	4/10/2018	9/24/2018	4/16/2019	8/29/2019	4/10/2020	6/9/2020	10/9/2020	4/9/2021
Thallium, total		<4	<4	<2	<2	<2		<2	<2
Thionazin									
Tin, total									
Toluene		<1	<1	<1	<1	<1		<1	<1
Total organic halides									
Total suspended solids		<2	4	<2	<2	2		7	
Toxaphene									
Trans-1,2-dichloroethene		<1	<1	<1	<1	<1		<1	<1
Trans-1,3-dichloropropene		<1	<1	<1	<1	<1		<1	<1
Trans-1,4-dichloro-2-butene		<5	<5	<5	<5	<5		<5	<5
Trichloroethene		<1	<1	<1	<1	<1		<1	<1
Trichlorofluoromethane		<1	<1	<1	<1	<1		<1	<1
Vanadium, total		<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0
Vinyl acetate		<5	<5	<5	<5	<5		<5	<5
Vinyl chloride		<1	<1	<1	<1	<1		<1	<1
Xylenes, total		<2	<2	<2	<2	<2		<2	<2
Zinc, total		<20.0	<8.0	<8.0	<8.0	<20.0		<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-19

Constituents	10/11/2021	4/7/2022	10/6/2022	1/4/2023	4/5/2023	10/13/2023	4/18/2024	10/15/2024
Thallium, total	<2	<2	<2		<2	<2	<2	<2
Thionazin					<.4		<.4	
Tin, total					<20		<20	
Toluene	<1	<1	<1		<1	<1	<1	<1
Total organic halides								
Total suspended solids								
Toxaphene					<.2		<.2	
Trans-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5		<5	<5	<5	<5
Vinyl chloride	<1	<1	<1		<1	<1	<1	<1
Xylenes, total	<2	<2	<2		<2	<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-20

Constituents	Units	3/21/2008	9/2/2008	3/5/2009	3/6/2009	9/30/2009	3/23/2010	9/7/2010	4/5/2011	9/6/2011
1,1,1,2-tetrachloroethane	ug/L					<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L					<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L					<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L					<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L					<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L					<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L					<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L					<1	<1	<1	<1	<1
1,2-dibromoethane (edb)	ug/L					<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L					<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L					<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L					<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L					<1	<1	<1	<1	<1
2-butanone (mek)	ug/L					<5	<5	<5	<5	<5
2-hexanone	ug/L					<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L					<5	<5	<5	<5	<5
Acetone	ug/L					<10	<10	<10	<10	<10
Acrylonitrile	ug/L					<5	<5	<5	<5	<5
Ammonia as n	mg/L	<.2 *	<.2 *	<.2	<.2					
Antimony, total	ug/L					<1	<2	<2	<2	<2
Arsenic, total	ug/L					<4	<4	<4	<4	<4
Barium, total	ug/L					174	138	156	168	156
Benzene	ug/L					<1	<1	<1	<1	<1
Beryllium, total	ug/L					<4	<4	<4	<4	<4
Bromochloromethane	ug/L					<1	<1	<1	<1	<1
Bromodichloromethane	ug/L					<1	<1	<1	<1	<1
Bromoform	ug/L					<1	<1	<1	<1	<1
Bromomethane	ug/L					<1	<1	<1	<1	<1
Cadmium, total	ug/L					<1.0	<1.0	<1.0	<.8	<.8
Carbon disulfide	ug/L					<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L					<1	<1	<1	<1	<1
Chemical oxygen demand	mg/L	<5 *	<5 *	<5	<5					
Chloride	mg/L	6.11 *	<5.00 *	<5.00	<5.00					
Chlorobenzene	ug/L					<1	<1	<1	<1	<1
Chloroethane	ug/L					<1	<1	<1	<1	<1
Chloroform	ug/L					<1	<1	<1	<1	<1
Chloromethane	ug/L					<1	<1	<1	<1	<1
Chromium, total	ug/L					<10	<10	<10	<8	<20
Cis-1,2-dichloroethene	ug/L					<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L					<1	<1	<1	<1	<1
Cobalt, total	ug/L					<4.0	<4.0	<4.0	<4.0	<4.0
Copper, total	ug/L					<4	<4	<4	<4	<4
Dibromochloromethane	ug/L					<1	<1	<1	<1	<1
Dibromomethane	ug/L					<1	<1	<1	<1	<1
Ethylbenzene	ug/L					<1	<1	<1	<1	<1
Iodomethane	ug/L					<1	<1	<1	<1	<1
Iron, dissolved	mg/L	<.1	<.1	<.1	<.1					
Iron, total	mg/L	<.1	<.1							
Lead, total	ug/L					<4	<4	<4	<4	<4
Methylene chloride	ug/L					<5	<5	<5	<5	<5
Nickel, total	ug/L					5.6	4.4	5.6	5.1	5.3
pH	units	7.95	8.32	7.72						
Phenol	ug/L		<20 *							
Selenium, total	ug/L					4.5	5.0	7.4	4.1	11.3
Silver, total	ug/L					<4	<4	<4	<4	<4
Specific conductance	umhos/cm	453	420	517						
Styrene	ug/L					<1	<1	<1	<1	<1
Tetrachloroethene	ug/L					<1	<1	<1	<1	<1
Thallium, total	ug/L					<4	<4	<4	<4	<4
Toluene	ug/L					<1	<1	<1	<1	<1
Total organic halides	mg/L		<.01 *							
Total suspended solids	mg/L									
Trans-1,2-dichloroethene	ug/L					<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L					<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L					<5	<5	<5	<5	<5
Trichloroethene	ug/L					<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L					<1	<1	<1	<1	<1
Vanadium, total	ug/L					<10.0	<10.0	<10.0	22.4	<20.0
Vinyl acetate	ug/L					<5	<5	<5	<5	<5
Vinyl chloride	ug/L					<1	<1	<1	<1	<1
Xylenes, total	ug/L					<2	<2	<2	<2	<2
Zinc, total	ug/L					13.0	<10.0	<10.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-20

Constituents	3/16/2012	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014	3/20/2015	9/17/2015
1,1,1,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dibromoethane (edb)	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1		<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1		<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5		<5	<5	<5	<5
2-hexanone	<5	<5	<5	<5		<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5		<5	<5	<5	<5
Acetone	<10	<10	<10	<10		<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5		<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	152	140	149	263	151	176	169	172	167
Benzene	<1	<1	<1	<1		<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Bromoform	<1	<1	<1	<1		<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1		<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1		<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1		<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1		<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1		<1	<1	<1	<1
Chloroform	<1	<1	<1	<1		<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<.8	.8	<.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1		<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1		<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1		<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1		<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5		<5	<5	<5	<5
Nickel, total	<4.0	<4.0	6.1	4.4	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Phenol									
Selenium, total	13.3	9.5	<4.0	22.3	8.1	5.3	<4.0	4.1	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1		<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Thallium, total	<2	<2	<2	<4	<4	<4	<4	<4	<4
Toluene	<1	<1	<1	<1		<1	<1	<1	<1
Total organic halides									
Total suspended solids							10	23	2
Trans-1,2-dichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1		<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5		<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1		<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1		<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5		<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1		<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2		<2	<2	<2	<2
Zinc, total	<8.0	<8.0	11.1	<20.0	14.6	<20.0	<8.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-20

Constituents	3/17/2016	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	4/16/2019	8/29/2019	4/10/2020
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<5
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, total	195	168	180	186	182	180	191	164	212
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Phenol									
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<4	<4	<4	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total organic halides									
Total suspended solids	<2	<2	41	4	<2	<2	<2	<2	<2
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, total	<8.0	<8.0	<8.0	<8.0	<20.0	<8.0	<8.0	<8.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-20

Constituents	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	1/4/2023	4/5/2023	10/13/2023	4/18/2024
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1		<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1		<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5		<5	<5	<5
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1		<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1		<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1		<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1		<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1		<1	<1	<1
2-butanone (mek)	<5	<5	<5	<10	<10		<10	<10	<10
2-hexanone	<5	<5	<5	<5	<5		<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5		<5	<5	<5
Acetone	<10	<10	<10	<10	<10		<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5		<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2		<2	<2	<2
Arsenic, total	<4	<4	<4	<4	<4		<4	<4	<4
Barium, total	197	191	180	204	181		192	210	202
Benzene	<1	<1	<1	<1	<1		<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4		<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1		<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1		<1	<1	<1
Bromoform	<1	<1	<1	<1	<1		<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1		<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	2.6	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1		<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1		<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1		<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1		<1	<1	<1
Chloroform	<1	<1	<1	<1	<1		<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1		<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8		<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1		<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	.4		<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4		<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1		<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1		<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1		<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1		<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4		<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5		<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
pH									
Phenol									
Selenium, total	<4.0	<4.0	<4.0	<4.0	<4.0		<4.0	<4.0	<4.0
Silver, total	<4	<4	<4	<4	<4		<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1		<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1		<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2		<2	<2	<2
Toluene	<1	<1	<1	<1	<1		<1	<1	<1
Total organic halides									
Total suspended solids	10								
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1		<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1		<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5		<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1		<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1		<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5		<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1		<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2		<2	<2	<2
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0		<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for MW91-20

Constituents	10/15/2024
1,1,1,2-tetrachloroethane	<1
1,1,1-trichloroethane	<1
1,1,2,2-tetrachloroethane	<1
1,1,2-trichloroethane	<1
1,1-dichloroethane	<1
1,1-dichloroethene	<1
1,2,3-trichloropropane	<1
1,2-dibromo-3-chloropropane	<5
1,2-dibromoethane (edb)	<1
1,2-dichlorobenzene	<1
1,2-dichloroethane	<1
1,2-dichloropropane	<1
1,4-dichlorobenzene	<1
2-butanone (mek)	<10
2-hexanone	<5
4-methyl-2-pentanone (mibk)	<5
Acetone	<10
Acrylonitrile	<5
Ammonia as n	
Antimony, total	<2
Arsenic, total	<4
Barium, total	161
Benzene	<1
Beryllium, total	<4
Bromochloromethane	<1
Bromodichloromethane	<1
Bromoform	<1
Bromomethane	<1
Cadmium, total	<.8
Carbon disulfide	<1
Carbon tetrachloride	<1
Chemical oxygen demand	
Chloride	
Chlorobenzene	<1
Chloroethane	<1
Chloroform	<1
Chloromethane	<1
Chromium, total	<8
Cis-1,2-dichloroethene	<1
Cis-1,3-dichloropropene	<1
Cobalt, total	<.4
Copper, total	<4
Dibromochloromethane	<1
Dibromomethane	<1
Ethylbenzene	<1
Iodomethane	<1
Iron, dissolved	
Iron, total	
Lead, total	<4
Methylene chloride	<5
Nickel, total	<4.0
pH	
Phenol	
Selenium, total	<4.0
Silver, total	<4
Specific conductance	
Styrene	<1
Tetrachloroethene	<1
Thallium, total	<2
Toluene	<1
Total organic halides	
Total suspended solids	
Trans-1,2-dichloroethene	<1
Trans-1,3-dichloropropene	<1
Trans-1,4-dichloro-2-butene	<5
Trichloroethene	<1
Trichlorofluoromethane	<1
Vanadium, total	<20.0
Vinyl acetate	<5
Vinyl chloride	<1
Xylenes, total	<2
Zinc, total	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-1

Constituents	Units	3/21/2008	9/2/2008
Ammonia as n	mg/L	<.2 *	<.2 *
Chemical oxygen demand	mg/L	8.6 *	11.8 *
Chloride	mg/L	9.47 *	6.62 *
Iron, dissolved	mg/L	<.1	<.1
Iron, total	mg/L	<.1	<.1
pH	units	8.37	7.82
Phenol	ug/L		<20 *
Specific conductance	umhos/cm	518	432
Total organic halides	mg/L		.026 *

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-2

Constituents	Units	3/21/2008	9/2/2008
Ammonia as n	mg/L	<.2 *	<.2 *
Chemical oxygen demand	mg/L	<5.0 *	7.9 *
Chloride	mg/L	14.2 *	12.2 *
Iron, dissolved	mg/L	<.1	<.1
Iron, total	mg/L	<.1	<.1
pH	units	8.67	8.10
Phenol	ug/L		<20 *
Specific conductance	umhos/cm	521	433
Total organic halides	mg/L		<.01 *

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-3

Constituents	Units	3/21/2008	3/5/2009	3/6/2009	9/30/2009	3/23/2010	9/7/2010	4/5/2011	9/6/2011	3/16/2012
1,1,1,2-tetrachloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dibromoethane (edb)	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L				<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L				<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L				<5	<5	<5	<5	<5	<5
2-hexanone	ug/L				<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L				<5	<5	<5	<5	<5	<5
Acetone	ug/L				<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L				<5	<5	<5	<5	<5	<5
Ammonia as n	mg/L	<.200 *	.277	.277						
Antimony, total	ug/L				<1	<2	<2	<2	<2	<2
Arsenic, dissolved	ug/L		1.30	1.25						
Arsenic, total	ug/L				<4	<4	<4	<4	<4	<4
Barium, dissolved	ug/L		138	138						
Barium, total	ug/L				282	268	261	245	324	211
Benzene	ug/L				<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L				<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/L				<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L				<1	<1	<1	<1	<1	<1
Bromoform	ug/L				<1	<1	<1	<1	<1	<1
Bromomethane	ug/L				<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L				<1.0	<1.0	<1.0	<.8	<.8	<.8
Carbon disulfide	ug/L				<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L				<1	<1	<1	<1	<1	<1
Chemical oxygen demand	mg/L	6.2 *	16.2	16.2						
Chloride	mg/L	9.47 *	21.30	21.30						
Chlorobenzene	ug/L				<1	<1	<1	<1	<1	<1
Chloroethane	ug/L				<1	<1	<1	<1	<1	<1
Chloroform	ug/L				<1	<1	<1	<1	<1	<1
Chloromethane	ug/L				<1	<1	<1	<1	<1	<1
Chromium, total	ug/L				<10	<10	<10	<8	<20	<8
Cis-1,2-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L				<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L				<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Copper, total	ug/L				<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L				<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L				<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L				<1	<1	<1	<1	<1	<1
Iodomethane	ug/L				<1	<1	<1	<1	<1	<1
Iron, dissolved	mg/L	<.1	<.1	<.1						
Iron, total	mg/L	<.1								
Lead, total	ug/L				<4	<4	<4	<4	<4	<4
Methylene chloride	ug/L				<5	<5	<5	<5	<5	<5
Nickel, total	ug/L				<4.0	7.6	<4.0	7.3	4.1	4.2
pH	units	8.39	7.71							
Selenium, total	ug/L				<4	<4	<4	<4	<4	<4
Silver, total	ug/L				<4	<4	<4	<4	<4	<4
Specific conductance	umhos/cm	517	437							
Styrene	ug/L				<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L				<1	<1	<1	<1	<1	<1
Thallium, total	ug/L				<4	<4	<4	<4	<4	<2
Toluene	ug/L				<1	<1	<1	<1	<1	<1
Total suspended solids	mg/L									
Trans-1,2-dichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L				<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L				<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L				<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L				<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L				<10.0	<10.0	<10.0	24.5	<20.0	<20.0
Vinyl acetate	ug/L				<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L				<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L				<2	<2	<2	<2	<2	<2
Zinc, dissolved	mg/L		<.02	<.02						
Zinc, total	ug/L				13.1	22.4	<10.0	<8.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-3

Constituents	9/24/2012	4/24/2013	9/20/2013	10/28/2013	4/8/2014	9/22/2014	3/20/2015	9/17/2015	3/17/2016
1,1,1,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dibromoethane (edb)	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1		<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1		<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5		<5	<5	<5	<5	<5
2-hexanone	<5	<5	<5		<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5		<5	<5	<5	<5	<5
Acetone	<10	<10	<10		<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5		<5	<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, dissolved									
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, dissolved									
Barium, total	259	184	514	290	207	312	235	317	313
Benzene	<1	<1	<1		<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1		<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1		<1	<1	<1	<1	<1
Bromoform	<1	<1	<1		<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1		<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1		<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1		<1	<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1		<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1		<1	<1	<1	<1	<1
Chloroform	<1	<1	<1		<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1		<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1
Cobalt, total	<4.0	<4.0	<4.0	<4.0	<4.0	<.8	<.8	<.8	<.8
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1		<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1		<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1		<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1		<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5		<5	<5	<5	<5	<5
Nickel, total	4.5	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1		<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Thallium, total	<2	<2	<4	<4	<4	<4	<4	<4	<4
Toluene	<1	<1	<1		<1	<1	<1	<1	<1
Total suspended solids						<2	<2	<2	<2
Trans-1,2-dichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1		<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5		<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1		<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1		<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5		<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1		<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2		<2	<2	<2	<2	<2
Zinc, dissolved									
Zinc, total	<8.0	<8.0	<20.0	<8.0	<20.0	<8.0	<8.0	<8.0	<8.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-3

Constituents	8/26/2016	4/11/2017	9/23/2017	4/10/2018	9/24/2018	8/29/2019	4/10/2020	10/9/2020	4/9/2021
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<1	<1	<1	<1	<1	<1	<5	<5	<5
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<5	<5	<5	<5	<5	<5	<5	<5
2-hexanone	<5	<5	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ammonia as n									
Antimony, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Arsenic, dissolved									
Arsenic, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Barium, dissolved									
Barium, total	311	282	342	258	343	355	305	319	248
Benzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand									
Chloride									
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.8	<.8	<.8	<.8	<.8	<.8	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved									
Iron, total									
Lead, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH									
Selenium, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4	<4	<4
Specific conductance									
Styrene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<4	<4	<4	<4	<4	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total suspended solids	<2	<2	37	<2	44	39	<2	1	
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2	<2	<2
Zinc, dissolved									
Zinc, total	<8.0	<8.0	<8.0	<20.0	8.3	9.4	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 9

Analytical Data Summary for SW-3

Constituents	10/11/2021	4/7/2022	10/6/2022	4/5/2023	10/13/2023	4/18/2024	10/15/2024
1,1,1,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane (edb)	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	<5	<10	<10	<10	<10	<10	<10
2-hexanone	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	<5	<5	<5	<5	<5	<5	<5
Acetone	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	<5	<5	<5	<5	<5	<5	<5
Ammonia as n							
Antimony, total	<2	<2	<2	<2	<2	<2	<2
Arsenic, dissolved							
Arsenic, total	<4	<4	<4	<4	<4	<4	<4
Barium, dissolved							
Barium, total	307	259	288	209	255	198	287
Benzene	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1
Chemical oxygen demand							
Chloride							
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Chromium, total	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	<.4	<.4	<.4	<.4	<.4	<.4	<.4
Copper, total	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1
Iodomethane	<1	<1	<1	<1	<1	<1	<1
Iron, dissolved							
Iron, total							
Lead, total	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	<5	<5	<5	<5	<5	<5	<5
Nickel, total	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
pH							
Selenium, total	<4	<4	<4	<4	<4	<4	<4
Silver, total	<4	<4	<4	<4	<4	<4	<4
Specific conductance							
Styrene	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<1	<1	<1	<1	<1	<1	<1
Thallium, total	<2	<2	<2	<2	<2	<2	<2
Toluene	<1	<1	<1	<1	<1	<1	<1
Total suspended solids							
Trans-1,2-dichloroethene	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0
Vinyl acetate	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	<2	<2	<2	<2	<2	<2	<2
Zinc, dissolved							
Zinc, total	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0

* - The displayed value is the arithmetic mean of multiple database matches.

Table 10 – Historic SSI and SSL **- (Not Required)**

Table 11 – Corrective Action Trend Analysis **- (Not Required)**

Table 12 – Leachate Elevation Data (Current Year)

Table 12
Leachate Measurement Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C
2024

Well #	TOC Elevation	Bottom Elevation	Field Reading 4/18/2024	Leachate Elev.	Depth of Leachate		Field Reading 10/15/2024	Leachate Elev.	Bottom Field Reading	Bottom Elevation	Depth of Leachate (ft)
PZ-P-1	1362.10	1346.40	14.40	1347.70	1.30		14.85	1347.25	15.65	1346.45	0.80
PZ-P-2	1368.94	1349.24	17.37	1351.57	2.33		17.27	1351.67	19.60	1349.34	2.33
PZ-P-3	1388.64	1358.94	25.62	1363.02	4.08		25.65	1362.99	29.70	1358.94	4.05
PZ-P-4	1394.21	1369.01	23.92	1370.29	1.28		23.00	1371.21	25.20	1369.01	2.20
PZ-P-5	1400.02	1372.42	22.80	1377.22	4.80		22.50	1377.52	27.60	1372.42	5.10
PZ-P-6	1407.15	1382.40	21.35	1385.80	3.40		21.43	1385.72	24.65	1382.50	3.22
PZ-P-7	1396.65	1368.35	24.90	1371.75	3.40		26.76	1369.89	27.95	1368.70	1.19
PZ-P-8	1391.32	1363.67	25.48	1365.84	2.17		25.92	1365.40	26.60	1364.72	0.68
PZ-P-10	1370.94	1355.69	6.35	1364.59	8.90		8.65	1362.29	15.20	1355.74	6.55

Volume of Leachate Transported to POTW - 0 gallons in 2024

NOTES:

Some piezometers slanted due to settlement and cover construction activities.
The minor difference between dry and bottom elevations is attributed to the silt accumulating in the PZ or trying to determine true depth
Piezometer bottoms measured 4-11-17 by HLW
PZ-P-9 mowed off during summer 2018
PZ-P-9 abandoned Sept. 24, 2018 per IDNR approval

Table 12A – Leachate Elevation Data (Over Time)

TABLE 12A----LEACHATE LEVELS - AUDUBON COUNTY SANITARY LANDFILL

PZ No.	Measured Leachate Level								Leachate Head Level					
Depth	Leachate Head				Date Measured									
	1/30/2009	2/26/2009	3/20/2009	4/16/2009	5/18/2009	6/28/2009	7/24/2009	8/14/2009	9/30/2009	2/10/2010	4/13/2010	7/12/2010	10/7/2010	11/19/2010
LPZ 1	14.70	14.50	14.50	14.50	14.50	14.50	14.40	14.40	14.40	13.87	13.54	13.95	14.25	14.50
15.70	1.00	1.20	1.20	1.20	1.20	1.20	1.30	1.30	1.30	1.83	2.16	1.75	1.45	1.20
LPZ 2	17.70	17.80	17.70	17.70	17.50	17.50	17.60	17.70	17.70	17.55	17.40	17.30	17.20	17.57
19.80	2.10	2.00	2.10	2.10	2.30	2.30	2.20	2.10	2.10	2.25	2.40	2.50	2.60	2.23
LPZ 3	25.00	frozen	25.20	25.40	25.60	25.80	25.80	25.80	25.75	25.75	25.80	NA	25.70	25.60
29.75	4.75	NA	4.55	4.35	4.15	3.95	3.95	3.95	4.00	4.00	3.95	NA	4.05	4.15
LPZ 4	23.10	23.90	23.80	23.75	26.70	23.60	23.50	23.40	23.15	22.76	22.33	20.70	19.30	19.85
25.00	1.90	1.10	1.20	1.25	-1.70	1.40	1.50	1.60	1.85	2.24	2.67	4.30	5.70	5.15
LPZ 5	18.00	18.40	18.60	18.75	19.00	19.15	19.30	19.50	19.50	19.78	20.30	20.30	22.50	20.11
27.30	9.30	8.90	8.70	8.55	8.30	8.15	8.00	7.80	7.80	7.52	7.00	7.00	4.80	7.19
LPZ 6	broken	broken	17.60	17.65	17.80	17.90	17.80	17.60	17.75	18.01	18.25	17.80	17.65	17.65
23.80	NA	NA	6.20	6.15	6.00	5.90	6.00	6.20	6.05	5.79	5.55	6.00	6.15	6.15
LPZ 7	23.40	23.80	23.70	23.60	23.50	23.40	23.00	22.40	23.20	22.83	21.58	21.38	22.00	22.45
27.70	4.30	3.90	4.00	4.10	4.20	4.30	4.70	5.30	4.50	4.87	6.12	6.32	5.70	5.25
LPZ 8	26.30	26.40	26.30	26.00	25.75	25.45	25.70	26.40	26.35	26.01	25.80	23.90	27.00	27.00
26.70	0.40	0.30	0.40	0.70	0.95	1.25	1.00	0.30	0.35	0.69	0.90	2.80	-0.30	-0.30
LPZ 10	8.70	8.70	8.50	8.35	7.80	7.05	7.30	7.75	8.05	7.67	7.00	7.60	7.00	7.00
15.25	6.55	6.55	6.75	6.90	7.45	8.20	7.95	7.50	7.20	7.58	8.25	7.65	8.25	8.25

TABLE 12A Continued ----LEACHATE LEVELS - AUDUBON COUNTY SANITARY LANDFILL

PZ No. Depth	4/11/2011	6/2/2011	8/29/2011	10/24/2011	3/13/2012	6/13/2012	7/30/2012	9/24/2012	1/16/2013	4/24/2013	7/20/2013	9/20/2013
LPZ 1	14.10	13.95	14.25	14.55	14.65	14.61	15.70	14.70				
15.70	1.60	1.75	1.45	1.15	1.05	1.09	0.00	1.00	0.50	1.00	1.08	0.50
LPZ 2	17.36	17.15	17.39	17.63	17.17	17.59	19.80	17.80				
19.80	2.44	2.65	2.41	2.17	2.63	2.21	0.00	2.00	1.50	1.50	2.33	1.33
LPZ 3	25.50	25.44	25.59	25.75	25.69	25.67	25.66	25.72				
29.75	4.25	4.31	4.16	4.00	4.06	4.08	4.09	4.03	2.50	2.83	3.25	2.50
LPZ 4	21.12	21.42	21.43	21.45	22.10	22.90	23.09	23.00				
25.00	3.88	3.58	3.57	3.55	2.90	2.10	1.91	2.00	1.50	2.50	2.67	2.00
LPZ 5	21.00	21.20	21.30	21.40	21.22	21.56	21.70	21.35				
27.30	6.30	6.10	6.00	5.90	6.08	5.74	5.60	5.95	6.50	5.92	5.00	5.50
LPZ 6	17.86	18.30	18.30	18.30	18.81	19.36	19.58	20.20	19.78	20.04	19.72	19.82
23.80	5.94	5.50	5.50	5.50	4.99	4.44	4.22	3.60	4.02	3.76	4.08	3.98
LPZ 7	22.63	22.90	23.73	24.55	24.35	23.00	27.70	24.00		23.00		
27.70	5.07	4.80	3.97	3.15	3.35	4.70	0.00	3.70	4.17	4.70	6.83	4.67
LPZ 8	NA	24.35	25.43	26.50	26.55	26.54	26.60	26.70				
26.70	NA	2.35	1.27	0.20	0.15	0.16	0.10	0.00	0.00	0.00	0.00	0.00
LPZ 10	6.25	5.50	6.97	8.43	6.23	8.20	8.32	8.25		5.01		
15.25	9.00	9.75	8.28	6.82	9.02	7.05	6.93	7.00	8.17	10.24	7.00	6.17

TABLE 12A Continued ----LEACHATE LEVELS - AUDUBON COUNTY SANITARY LANDFILL

PZ No. Depth	1/13/2014	4/8/2014	7/7/2014	9/22/2014	1/19/2015	3/20/2015	7/9/2015	9/17/2015	1/4/2016	3/17/2016	6/14/2016	8/26/2016
LPZ 1												
15.70	0.58	0.42	1.25	0.50	0.50	0.50	0.83	0.67	1.00	1.25	1.25	0.83
LPZ 2												
19.70	1.50	1.08	1.75	1.00	1.25	1.33	1.50	1.67	1.92	2.33	2.08	1.67
LPZ 3												
29.70	3.33	2.00	2.08	1.75	2.67	2.17	2.08	2.17	2.58	2.16	2.25	2.17
LPZ 4												
25.20	2.17	1.67	1.00	2.17	3.25	3.00	4.83	4.92	7.58	5.33	9.17	9.33
LPZ 5												
27.60	5.25	5.17	5.00	6.08	4.38	5.50	5.92	7.00	7.83	6.58	6.83	7.00
LPZ 6	19.67	20.34	20.52	20.60	19.42	19.24	18.75	18.23	17.26	17.46	17.38	18.04
24.75	5.08	3.46	3.28	3.20	4.38	4.56	5.05	5.57	6.54	6.34	6.42	5.76
LPZ 7												
28.30	3.83	3.50	5.50	7.00	6.50	6.67	8.25	7.58	8.92	7.25	7.33	5.17
LPZ 8			24.28	24.20	25.53	26.40	24.90	25.02	23.36	22.43	23.58	24.65
27.65	0.00	0.00	2.42	2.50	1.17	0.30	1.80	1.68	3.34	4.27	3.12	2.05
LPZ 10												
15.25	5.17	6.00	8.16	8.58	6.67	6.17	8.17	6.33	8.33	8.50	6.83	6.83

TABLE 12A Continued ----LEACHATE LEVELS - AUDUBON COUNTY SANITARY LANDFILL

PZ No. Depth	12/30/2016	4/11/2017	7/14/2017	9/23/2017	1/9/2018	4/23/2018	7/17/2018	9/24/2018	1/8/2019	4/16/2019	6/25/2019
PZ-P-1		13.60									
15.70	1.08	2.10	0.58	1.42	0.83	1.08	1.42	1.50	1.17	1.58	1.75
PZ-P-2		16.60									
19.70	2.42	3.10	1.67	2.42	1.17	2.50	2.50	3.17	2.42	3.17	3.17
PZ-P-3		25.60									
29.70	2.42	4.10	2.00	3.17	3.17	2.25	3.17	2.67	2.17	2.58	3.33
PZ-P-4		12.90									
25.20	8.17	12.30	7.83	9.92	6.42	8.03	7.83	10.33	8.75	10.67	6.50
PZ-P-5		21.60									
27.60	6.67	6.00	6.25	6.50	6.67	5.83	6.25	7.08	6.42	6.25	5.92
PZ-P-6	18.34	19.00	18.68	18.45	18.40	19.06	19.06	18.83	18.65	18.78	18.70
24.75	5.46	5.75	6.07	6.30	6.35	5.69	5.69	5.92	6.10	5.97	6.05
PZ-P-7		20.92									
28.30	4.75	7.38	6.50	5.33	Frozen	4.83	8.42	8.83	Frozen	7.92	8.25
PZ-P-8	26.65	21.65	27.65	24.70	25.15	23.42	22.04	21.03	19.70	26.80	23.00
27.65	0.05	6.00	0.00	2.95	2.50	4.23	5.61	6.62	7.95	0.85	4.65
PZ-P-10		6.20									
15.25	7.33	9.05	6.67	8.58	7.17	8.25	7.67	9.17	6.83	9.67	7.42

TABLE 12A Continued ----LEACHATE LEVELS - AUDUBON COUNTY SANITARY LANDFILL

PZ No. Depth	8/29/2019	4/10/2020	10/9/2020	4/9/2021	10/11/2021	4/7/2022	10/6/2022	4/5/2023	10/13/2023	4/18/2024	10/15/2024	Std. Dev./ Mean
PZ-P-1					14.45	13.20	14.40	14.88	14.82	14.40	14.85	0.46
15.65	1.58	2.00	1.42	1.33	1.20	2.45	1.25	0.77	0.83	1.25	0.80	1.41
PZ-P-2					17.10	16.90	17.08	17.55	17.77	17.35	17.27	0.60
19.60	2.83	3.42	1.67	2.00	2.50	2.70	2.52	2.05	1.83	2.25	2.33	2.41
PZ-P-3					25.55	25.55	25.55	25.60	26.20	25.62	25.65	0.90
29.70	2.83	4.00	2.08	1.75	4.15	4.15	4.15	4.10	3.50	4.08	4.05	3.74
PZ-P-4					21.50	20.80	22.25	22.70	23.00	23.92	23.00	3.08
25.20	9.92	5.00	6.25	6.75	3.70	4.40	2.95	2.50	2.20	1.28	2.20	4.69
PZ-P-5					21.29	21.75	21.65	21.90	21.65	22.80	22.50	1.07
27.60	6.58	6.00	6.92	6.00	6.36	5.85	5.95	5.70	5.95	4.80	5.10	6.80
PZ-P-6	18.90			19.91	20.75	19.70	21.30	21.30	21.50	21.35	21.43	1.08
24.65	5.85	5.75	6.50	4.84	3.90	4.95	3.35	3.35	3.15	3.30	3.22	5.52
PZ-P-7					23.66	23.80	23.51	24.05	23.70	24.90	26.76	1.81
27.95	6.08	8.25	6.75	5.25	4.29	4.15	4.44	3.90	4.25	3.05	1.19	5.70
PZ-P-8	21.20			22.70	24.85	23.10	24.53	24.76	25.15	25.48	25.92	2.15
26.60	6.45	7.33	5.25	4.95	1.75	3.50	2.07	1.84	1.45	1.12	0.68	2.36
PZ-P-10					7.05	6.20	8.90	5.55	9.10	6.35	8.65	1.14
15.20	8.92	9.00	6.25	5.67	8.15	9.00	6.30	9.65	6.10	8.85	6.55	7.77

Table 13 – Gas Monitoring Summary

Table 13
Annual Methane Gas Evaluation Report
Audubon County Sanitary Landfill
Permit No. 05-SDP-01-75C
2024

Location/Date	**4/18/24**	**10/15/24**
	% LEL	**% LEL**
Ambient Air - Breathing Zone		
BLDG 1 (Office)	0	0
BLDG 2 (Old Equipment Bldg)	0	0
BLDG 3 (Transfer Station)	0	0
MW-4	0	0
MW-7	0	0
MW-14	0	0
MW-17	0	0
MW-19	0	0
MW-20	0	0
SW-3	0	0

Frequency of gas monitoring changed to semi-annually in the 4/21/20 email from IDNR (Doc #97559)

APPENDIX A

Field Sampling Forms

AUDUBON COUNTY SANITARY LANDFILL
PERMIT # 05-SDP-01-75C

4/18/2024 Sampled by: Todd Whipple Weather Conditions: Partly cloudy, breezy, 51 degrees

IDNR Form 542-1322

Monitoring Well: MW-90-4 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1324.25
Well Depth	26.97
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

CONFIRM

NO PURGE METHOD

TOC	1324.25
Well Depth	26.97
Top Screen	1307.28
Bottom Screen	1297.28
Bottom Well	1297.28
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	1303.25
Bottom sample	1299.25
Turbidity(NTU)	2.49

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	15:09	11.39	1312.86	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.49
Appendix I	Metals	250	250		2.49
Appendix I	VOC	120	120		2.49
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1324.25
Well Depth	26.97

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	4/18/2024	15:09	11.39	1312.86	3	1.2	no
After purging				1324.25			
Top of Screen January 1990				1307.28			
				5.58	feet above (+) or below (-) top screen		
Bottom of Well January 1990				1297.28			
Bottom of Well	4/18/2024		26.97	1297.28			
				0.00	feet sedimentation		
Before Sampling				1324.25			
Recovery	4/18/2024	15:20	13.30	1310.95			
Recovery	4/18/2024	17:58	11.42	1312.83			
Recovery				1324.25			
Recovery				1324.25			

IDNR Form 542-1322

Monitoring Well:	MW-90-7 (dg)
Primary Sampling Method:	No-Purge for Appendix I
Secondary Sampling Method:	Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1300.32
Well Depth	15.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1300.32
Well Depth	15.00
Top Screen	1290.32
Bottom Screen	1285.32
Bottom Well	1285.32
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	10.00
Top sample	1290.32
Bottom sample	1286.32
Turbidity(NTU)	2.44

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	15:27	9.61	1290.71	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.44
Appendix I	Metals	250	250		2.44
Appendix I	VOC	120	120		2.44
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1300.32	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	15.00	Before purging	4/18/2024	15:27	9.61	1290.71	3	3.4	no
		After purging				1300.32			
		Top of Screen January 1990				1290.32			
						0.39	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1285.32			
		Bottom of Well	4/18/2024		15.03	1285.29			
						-0.03	feet sedimentation		
		Before Sampling				1300.32			
		Recovery	4/18/2024	15:42	12.52	1287.80			
		Recovery	4/18/2024	18:00	9.68	1290.64			
		Recovery				1300.32			
		Recovery				1300.32			

IDNR Form 542-1322

Monitoring Well: MW-90-14 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1347.51
Well Depth	19.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1347.51
Well Depth	19.70
Top Screen	1337.81
Bottom Screen	1327.81
Bottom Well	1327.81
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	14.00
Top sample	1333.51
Bottom sample	1329.51
Turbidity(NTU)	2.98

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	16:25	9.20	1338.31	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.98
Appendix I	Metals	250	250		2.98
Appendix I	VOC	120	120		2.98
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1347.51	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.70	Before purging	4/18/2024	16:25	9.20	1338.31	3	1.8	no
		After purging	10/13/2023	12:26	17.85	1329.66			
		Top of Screen January 1990				1337.81			
						0.50	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1327.81			
		Bottom of Well	4/18/2024		19.86	1327.65			
						-0.16	feet sedimentation		
		Before Sampling				1347.51			
		Recovery	4/18/2024	16:33	10.22	1337.29			
		Recovery	4/18/2024	17:53	9.21	1338.30			
		Recovery				1347.51			
		Recovery				1347.51			

IDNR Form 542-1322

Monitoring Well: MW-90-17 (ug)
Background Well

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1427.97
Well Depth	37.30
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1427.97
Well Depth	37.30
Top Screen	1400.67
Bottom Screen	1390.67
Bottom Well	1390.67
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	1396.97
Bottom sample	1392.97
Turbidity(NTU)	2.50

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	16:58	27.00	1400.97	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.50
Appendix I	Metals	250	250		2.50
Appendix I	VOC	120	120		2.50
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1427.97	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.30	Before purging	4/18/2024	16:58	27.00	1400.97	3	1.8	no
		After purging				1427.97			
		Top of Screen January 1990				1400.67			
						0.30	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1390.67			
		Bottom of Well	4/18/2024		37.23	1390.74			
						0.07	feet sedimentation		
		Before Sampling				1427.97			
		Recovery	4/18/2024	17:08	30.70	1397.27			
		Recovery	4/18/2024	17:50	30.15	1397.82			
		Recovery				1427.97			
		Recovery				1427.97			

IDNR Form 542-1322

Monitoring Well: MW-91-19 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1347.5
Well Depth	25.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1347.5
Well Depth	25.00
Top Screen	1337.50
Bottom Screen	1322.50
Bottom Well	1322.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	20.00
Top sample	1327.50
Bottom sample	1323.50
Turbidity(NTU)	2.11

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	16:00	13.27	1334.23	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.11
Appendix I	Metals	250	250		2.11
Appendix I	VOC	120	120		2.11
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1347.5	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	25.00	Before purging	4/18/2024	16:00	13.27	1334.23	6	3.1	no
		After purging				1347.50			
		Top of Screen January 1990				1337.50			
						-3.27	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1322.50			
		Bottom of Well	4/18/2024		25.10	1322.40			
						-0.10	feet sedimentation		
		Before Sampling				1347.50			
		Recovery	4/18/2024	16:15	16.40	1331.10			
		Recovery	4/18/2024	18:04	13.28	1334.22			
		Recovery				1347.50			
		Recovery				1347.50			

IDNR Form 542-1322

Monitoring Well: MW-91-20 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1371.99
Well Depth	32.40
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1371.99
Well Depth	32.40
Top Screen	1354.59
Bottom Screen	1339.59
Bottom Well	1339.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1345.99
Bottom sample	1341.99
Turbidity(NTU)	1.96

Date	Time	Water Level	Water Elevation	Notes
4/18/2024	16:29	14.06	1357.93	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.96
Appendix I	Metals	250	250		1.96
Appendix I	VOC	120	120		1.96
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1371.99	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.40	Before purging	4/18/2024	16:29	14.06	1357.93	3	1.0	no
		After purging				1371.99			
		Top of Screen January 1990				1354.59			
						3.34	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1339.59			
		Bottom of Well	4/18/2024		32.32	1339.67			
						0.08	feet sedimentation		
		Before Sampling				1371.99			
		Recovery	4/18/2024	16:49	17.65	1354.34			
		Recovery	4/18/2024	17:55	16.55	1355.44			
		Recovery				1371.99			
		Recovery				1371.99			

AUDUBON COUNTY SANITARY LANDFILL
PERMIT # 05-SDP-01-75C

4/18/2024 Sampled by: Todd Whipple Weather Conditions: Partly cloudy, breezy, 51 degrees

IDNR Form 542-1324

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-3	4/18/2024	17:20	Lagoon Underdrain	yes	250 ml per 18 sec			No	No	No
										Turbidity(NTU)
										1.79

AUDUBON COUNTY SANITARY LANDFILL
PERMIT # 05-SDP-01-75C

10/15/2024 Sampled by: Glenn Hunter Weather Conditions: Sunny 37-48 degrees

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

Monitoring Well: MW-90-4 (dg)

GENERAL INFORMATION

TOC	1324.25
Well Depth	26.97
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

CONFIRM

NO PURGE METHOD

TOC	1324.25
Well Depth	26.97
Top Screen	1307.28
Bottom Screen	1297.28
Bottom Well	1297.28
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	21.00
Top sample	1303.25
Bottom sample	1299.25
Turbidity(NTU)	1.08

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	10:23	10.93	1313.32	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.08
Appendix I	Metals	250	250		1.08
Appendix I	VOC	120	120		1.08
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1324.25
Well Depth	26.97

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/15/2024	10:23	10.93	1313.32		0.0	
After purging				1324.25			
Top of Screen January 1990				1307.28			
				6.04	feet above (+) or below (-) top screen		
Bottom of Well January 1990				1297.28			
Bottom of Well	10/15/2024		26.97	1297.28			
				0.00	feet sedimentation		
Before Sampling				1324.25			
Recovery				1324.25			
Recovery				1324.25			
Recovery				1324.25			
Recovery				1324.25			

IDNR Form 542-1322

Monitoring Well: MW-90-7 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1300.32
Well Depth	15.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1300.32
Well Depth	15.00
Top Screen	1290.32
Bottom Screen	1285.32
Bottom Well	1285.32
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	10.00
Top sample	1290.32
Bottom sample	1286.32
Turbidity(NTU)	11.10

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	10:55	10.11	1290.21	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		11.10
Appendix I	Metals	250	250		11.10
Appendix I	VOC	120	120		11.10
Full Appendix II	10 more containers	5620	490		
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			870	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1300.32
Well Depth	15.00

2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Before purging	10/15/2024	10:55	10.11	1290.21		0.0	
After purging				1300.32			
Top of Screen January 1990				1290.32			
				-0.11	feet above (+) or below (-) top screen		
Bottom of Well January 1990				1285.32			
Bottom of Well	10/15/2024		15.03	1285.29			
				-0.03	feet sedimentation		
Before Sampling				1300.32			
Recovery				1300.32			
Recovery				1300.32			
Recovery				1300.32			
Recovery				1300.32			

IDNR Form 542-1322

Monitoring Well: MW-90-14 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1347.51
Well Depth	19.70
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1347.51
Well Depth	19.70
Top Screen	1337.81
Bottom Screen	1327.81
Bottom Well	1327.81
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	13.00
Top sample	1334.51
Bottom sample	1330.51
Turbidity(NTU)	1.80

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	9:45	11.13	1336.38	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.80
Appendix I	Metals	250	250		1.80
Appendix I	VOC	120	120		1.80
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1347.51	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	19.70	Before purging	10/15/2024	9:45	11.13	1336.38		0.0	
		After purging	10/13/2023	12:26	17.85	1329.66			
		Top of Screen January 1990				1337.81			
						-1.43	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1327.81			
		Bottom of Well	10/15/2024		19.86	1327.65			
						-0.16	feet sedimentation		
		Before Sampling				1347.51			
		Recovery				1347.51			
		Recovery				1347.51			
		Recovery				1347.51			
		Recovery				1347.51			

IDNR Form 542-1322

Primary Sampling Method: No-Purge for Appendix I

Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

Monitoring Well: MW-90-17 (ug)
Background Well

GENERAL INFORMATION

TOC	1427.97
Well Depth	37.30
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1427.97
Well Depth	37.30
Top Screen	1400.67
Bottom Screen	1390.67
Bottom Well	1390.67
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	31.00
Top sample	1396.97
Bottom sample	1392.97
Turbidity(NTU)	2.21

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	9:14	25.30	1402.67	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		2.21
Appendix I	Metals	250	250		2.21
Appendix I	VOC	120	120		2.21
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1427.97	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	37.30	Before purging	10/15/2024	9:14	25.30	1402.67		0.0	
		After purging				1427.97			
		Top of Screen January 1990				1400.67			
						2.00	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1390.67			
		Bottom of Well	10/15/2024		37.23	1390.74			
						0.07	feet sedimentation		
		Before Sampling				1427.97			
		Recovery				1427.97			
		Recovery				1427.97			
		Recovery				1427.97			
		Recovery				1427.97			

IDNR Form 542-1322

Monitoring Well: MW-91-19 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1347.5
Well Depth	25.00
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1347.5
Well Depth	25.00
Top Screen	1337.50
Bottom Screen	1322.50
Bottom Well	1322.50
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	19.00
Top sample	1328.50
Bottom sample	1324.50
Turbidity(NTU)	1.34

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	10:11	14.36	1333.14	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		1.34
Appendix I	Metals	250	250		1.34
Appendix I	VOC	120	120		1.34
Full Appendix II	10 more containers	5620	490		
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			870	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

		2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
TOC	1347.5								
Well Depth	25.00	Before purging	10/15/2024	10:11	14.36	1333.14		0.0	
		After purging				1347.50			
		Top of Screen January 1990				1337.50			
						-4.36	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1322.50			
		Bottom of Well	10/15/2024		25.10	1322.40			
						-0.10	feet sedimentation		
		Before Sampling				1347.50			
		Recovery				1347.50			
		Recovery				1347.50			
		Recovery				1347.50			
		Recovery				1347.50			

IDNR Form 542-1322

Monitoring Well: MW-91-20 (dg)

Primary Sampling Method: No-Purge for Appendix I
Secondary Sampling Method: Purge & Sample for all analytes beyond Appendix I

GENERAL INFORMATION

TOC	1371.99
Well Depth	32.40
Capped	YES
Standing Water	NO
Litter	NO
Level Tape	Solinst 101
NTU Meter	Hach 2100P
No-Purge Equipment -	Solinst 429
Purge Equipment -	Waterra

NO PURGE METHOD

TOC	1371.99
Well Depth	32.40
Top Screen	1354.59
Bottom Screen	1339.59
Bottom Well	1339.59
Sampler Length (ft)	4.00
Sampler Volume (mL)	440.00
Feet cordage	26.00
Top sample	1345.99
Bottom sample	1341.99
Turbidity(NTU)	0.86

Date	Time	Water Level	Water Elevation	Notes
10/15/2024	9:27	12.87	1359.12	

ANALYTES, CONTAINERS, AND VOLUMES

Analyte		Required Volume (mL)	Volume Collected No-Purge (mL)	Volume Collected Purge & Sample (mL)	Turbidity this Container (NTU)
All	Field NTU	10	10		0.86
Appendix I	Metals	250	250		0.86
Appendix I	VOC	120	120		0.86
Full Appendix II	10 more containers	5620			
Sulfide	Sulfide	250			
Supplemental	Minerals	750			
Total			380	0	

PURGE & SAMPLE METHOD - Purge by Waterra Inertial Lift Pump, then well rest, then sample collection

TOC	1371.99	2" dia.	Date	Time	Depth	Elevation	Gallons	# of Vol.	Purged Dry?
Well Depth	32.40	Before purging	10/15/2024	9:27	12.87	1359.12		0.0	
		After purging				1371.99			
		Top of Screen January 1990				1354.59			
						4.53	feet above (+) or below (-) top screen		
		Bottom of Well January 1990				1339.59			
		Bottom of Well	10/15/2024		32.32	1339.67			
						0.08	feet sedimentation		
		Before Sampling				1371.99			
		Recovery				1371.99			
		Recovery				1371.99			
		Recovery				1371.99			
		Recovery				1371.99			

AUDUBON COUNTY SANITARY LANDFILL
PERMIT # 05-SDP-01-75C

10/15/2024 Sampled by: Glenn Hunter Weather Conditions: Sunny 37-48 degrees

IDNR Form 542-1324

	Date	Time	Type	Flowing	Quantity			Discolored	Odor	Litter
SW-3	10/15/2024	10:34	Lagoon Underdrain	yes	250 ml per 18 sec			No	No	No
										Turbidity(NTU)
										1.55

APPENDIX B

Laboratory Analytical Data

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1864

Project Description

6050

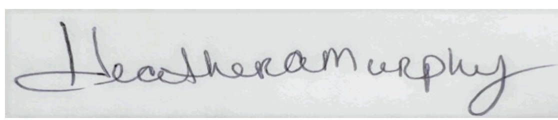
For:

Todd Whipple

HLW Engineering

PO Box 314

Story City, IA 50248



Heather Murphy

Customer Relationship Specialist

Monday, May 13, 2024

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

MICROBAC®

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1864

HLW Engineering

Todd Whipple
PO Box 314
Story City, IA 50248

Project Name: 6050

Project / PO Number: Audubon Co. - New Regs
Received: 04/19/2024
Reported: 05/13/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-90-4	1HD1864-01	Aqueous	GRAB		04/18/24 16:09	04/19/24 11:08
MW-90-7	1HD1864-02	Aqueous	GRAB		04/18/24 15:27	04/19/24 11:08
MW-90-14	1HD1864-03	Aqueous	GRAB		04/18/24 16:25	04/19/24 11:08
MW-90-17	1HD1864-04	Aqueous	GRAB		04/18/24 16:58	04/19/24 11:08
MW-91-19	1HD1864-05	Aqueous	GRAB		04/18/24 16:00	04/19/24 11:08
MW-91-20	1HD1864-06	Aqueous	GRAB		04/18/24 16:39	04/19/24 11:08
SW-3	1HD1864-07	Aqueous	GRAB		04/18/24 17:20	04/19/24 11:08
Duplicate	1HD1864-08	Aqueous	GRAB		04/18/24 00:00	04/19/24 11:08

Analytical Testing Parameters

Client Sample ID:	MW-90-4		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-01	**Collection Date:**	04/18/2024 16:09

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS

Client Sample ID:	MW-90-4		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-01	**Collection Date:**	04/18/2024 16:09

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: Dibromofluoromethane	93.8	Limit: 75-136	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: Dibromofluoromethane	93.8	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: 1,2-Dichloroethane-d4	96.4	Limit: 61-142	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: 1,2-Dichloroethane-d4	96.4	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: Toluene-d8	97.0	Limit: 82-121	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: Toluene-d8	97.0	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 80-116	% Rec	1		04/25/24 0000	04/25/24 1320	LJS
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1320	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Barium, total	**0.375**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2136	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2136	RVV

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Acrolein	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Methyl Iodide	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Acetonitrile	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
2,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
2-Butanone (MEK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Ethyl Methacrylate	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,3-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1343	LJS
Allyl chloride	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1245	LNH
Chloroprene	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1245	LNH
Methacrylonitrile	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1245	LNH
Methyl Methacrylate	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1245	LNH
Propionitrile	<10.0	10.0	ug/L	1		04/30/24 0000	04/30/24 1245	LNH
Surrogate: Dibromofluoromethane	93.6	Limit: 80-126	% Rec	1		04/30/24 0000	04/30/24 1245	LNH
Surrogate: Dibromofluoromethane	92.7	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: 1,2-Dichloroethane-d4	96.9	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: 1,2-Dichloroethane-d4	95.1	Limit: 63-138	% Rec	1		04/30/24 0000	04/30/24 1245	LNH
Surrogate: 1,2-Dichloroethane-d4	96.9	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: Toluene-d8	99.1	Limit: 87-116	% Rec	1		04/30/24 0000	04/30/24 1245	LNH
Surrogate: Toluene-d8	97.4	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: Toluene-d8	97.4	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: 4-Bromofluorobenzene	96.4	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: 4-Bromofluorobenzene	96.4	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1343	LJS
Surrogate: 4-Bromofluorobenzene	101	Limit: 85-111	% Rec	1		04/30/24 0000	04/30/24 1245	LNH

Determination of General Solvents	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1		04/29/24 1336	04/30/24 0036	PDS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosomethylethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Phenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Base/Neutral/Acid Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Chlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Benzyl Alcohol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Acetophenone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
o-Toluidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Hexachloroethane	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Nitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Isophorone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Nitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Naphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Chloroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Hexachloropropene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Hexachlorobutadiene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Methylnaphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Isosafrole	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Safrole	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Chloronaphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Dimethylphthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Acenaphthylene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
3-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Acenaphthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2,4-Dinitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Nitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Dibenzofuran	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Pentachlorobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1-Naphthylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Naphthylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Diethyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Fluorene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Diphenylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Azobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Diallate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Phenacetin	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
4-Aminobiphenyl	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Pentachlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Pronamide	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Phenanthrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Methapyrilene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Isodrin	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Chlorobenzilate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Benzo(a)anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Chrysene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Bis(2-Ethylhexyl) Phthalate	**18**	6	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Kepone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
3,3´-Dichlorobenzidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
2-Acetylaminofluorene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Benzo(b)Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
3-Methylcholanthrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: 2-Fluorophenol	79.1	Limit: 24-136	% Rec	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: Phenol-d6	84.5	Limit: 15-140	% Rec	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: Nitrobenzene-d5	91.7	Limit: 29-130	% Rec	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: 2-Fluorobiphenyl	90.1	Limit: 23-113	% Rec	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: 2,4,6-Tribromophenol	86.6	Limit: 15-139	% Rec	1		04/25/24 1028	05/07/24 1723	EPP
Surrogate: Terphenyl-dl4	112	Limit: 27-141	% Rec	1		04/25/24 1028	05/07/24 1723	EPP

Determination of Organophosphorus Insecticides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Thionazin	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Phorate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Dimethoate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Disulfoton	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Parathion	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Famphur	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1255	EPP
Surrogate: 2-Nitro-m-xylene	70.0	Limit: 38-122	% Rec	1		04/24/24 1056	05/02/24 1255	EPP

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		04/25/24 0846	04/30/24 2350	MSV
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		04/25/24 0846	04/30/24 2350	MSV
2,4,5-T	<0.5	0.5	ug/L	1		04/25/24 0846	04/30/24 2350	MSV
Dinoseb	<0.5	0.5	ug/L	1		04/25/24 0846	04/30/24 2350	MSV
Surrogate: 2,5-Dichlorobenzoic Acid	99.5	Limit: 31-116	% Rec	1		04/25/24 0846	04/30/24 2350	MSV

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Beta-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Heptachlor	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP

Client Sample ID:	MW-90-7			
Sample Matrix:	Aqueous		**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02		**Collection Date:**	04/18/2024 15:27

Determination of Organochlorine Insecticides & Metabolites	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
Delta-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Aldrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Endosulfan I	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Dieldrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Endrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Endosulfan II	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Methoxychlor	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Chlordane	<0.10	0.10	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Toxaphene	<0.20	0.20	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0944	EPP
Surrogate: Tetrachloro-m-xylene	92.9	Limit: 10-121	% Rec	1		04/24/24 1049	05/01/24 0944	EPP

Determination of Polychlorinated Biphenyls (PCB)	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0944	EPP
Surrogate: Tetrachloro-m-xylene	100	Limit: 38-121	% Rec	1		04/24/24 1053	05/01/24 0944	EPP
Surrogate: Decachlorobiphenyl	98.3	Limit: 25-119	% Rec	1		04/24/24 1053	05/01/24 0944	EPP

Determination of Conventional Chemistry Parameters	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 376.2								
Sulfide, total	<0.15	0.15	mg/L	1		04/25/24 1055	04/25/24 1315	CHP
EPA 9010B								
Cyanide, total	<0.005	0.005	mg/L	1		04/25/24 1628	04/26/24 1444	CHP

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Barium, total	**0.248**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV

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CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-02	**Collection Date:**	04/18/2024 15:27

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Cobalt, total	**0.0019**	0.0004	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Nickel, total	**0.0284**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Tin, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2142	RVV
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		04/30/24 1412	05/01/24 1243	JAR

Client Sample ID:	MW-90-14		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-03	**Collection Date:**	04/18/2024 16:25

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS

Client Sample ID:	MW-90-14		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-03	**Collection Date:**	04/18/2024 16:25

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: Dibromofluoromethane	92.7	Limit: 75-136	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: Dibromofluoromethane	92.7	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: 1,2-Dichloroethane-d4	96.9	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: 1,2-Dichloroethane-d4	96.9	Limit: 61-142	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: Toluene-d8	97.8	Limit: 82-121	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: Toluene-d8	97.8	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: 4-Bromofluorobenzene	96.7	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1405	LJS
Surrogate: 4-Bromofluorobenzene	96.7	Limit: 80-116	% Rec	1		04/25/24 0000	04/25/24 1405	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Barium, total	**0.263**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Nickel, total	**0.0131**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2148	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2148	RVV

Client Sample ID:	MW-90-17		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-04	**Collection Date:**	04/18/2024 16:58

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS

Client Sample ID:	MW-90-17		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-04	**Collection Date:**	04/18/2024 16:58

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: Dibromofluoromethane	93.3	Limit: 75-136	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: Dibromofluoromethane	93.3	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: 1,2-Dichloroethane-d4	97.4	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: 1,2-Dichloroethane-d4	97.4	Limit: 61-142	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: Toluene-d8	97.7	Limit: 82-121	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: Toluene-d8	97.7	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: 4-Bromofluorobenzene	96.5	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1428	LJS
Surrogate: 4-Bromofluorobenzene	96.5	Limit: 80-116	% Rec	1		04/25/24 0000	04/25/24 1428	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Barium, total	**0.310**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2154	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2154	RVV

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CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Dichlorodifluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Acrolein	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Methyl Iodide	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Acetonitrile	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
2,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
2-Butanone (MEK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Ethyl Methacrylate	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,3-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,3-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1451	LJS
Allyl chloride	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1308	LJS
Chloroprene	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1308	LJS
Methacrylonitrile	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1308	LJS
Methyl Methacrylate	<1.0	1.0	ug/L	1		04/30/24 0000	04/30/24 1308	LJS
Propionitrile	<10.0	10.0	ug/L	1		04/30/24 0000	04/30/24 1308	LJS
Surrogate: Dibromofluoromethane	94.5	Limit: 80-126	% Rec	1		04/30/24 0000	04/30/24 1308	LJS
Surrogate: Dibromofluoromethane	93.2	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: 1,2-Dichloroethane-d4	98.4	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: 1,2-Dichloroethane-d4	98.4	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: 1,2-Dichloroethane-d4	94.2	Limit: 63-138	% Rec	1		04/30/24 0000	04/30/24 1308	LJS
Surrogate: Toluene-d8	98.8	Limit: 87-116	% Rec	1		04/30/24 0000	04/30/24 1308	LJS
Surrogate: Toluene-d8	98.1	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: Toluene-d8	98.1	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1451	LJS
Surrogate: 4-Bromofluorobenzene	100	Limit: 85-111	% Rec	1		04/30/24 0000	04/30/24 1308	LJS
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1451	LJS

Determination of General Solvents	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8015C								
Isobutanol	<1.0	1.0	mg/L	1		04/29/24 1336	04/30/24 0107	PDS

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8270C								
N-Nitrosodimethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Methyl Methanesulfonate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosodiethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosomethylethylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Ethyl Methanesulfonate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Phenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Bis(2-Chloroethyl) Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Chlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Benzyl Alcohol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Methylphenol (o-Cresol)	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Bis[2-Chloroisopropyl]ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
n-Nitroso-di-n-propylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosopyrrolidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Acetophenone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
o-Toluidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
(3 & 4)-Methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Hexachloroethane	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Nitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosopiperidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Isophorone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Nitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,4-Dimethylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Bis (2-Chloroethoxy) Methane	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,4-Dichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Naphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Chloroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,6-Dichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Hexachloropropene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Hexachlorobutadiene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosodi-n-butylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,4-Phenylenediamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Chloro-3-methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Methylnaphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Isosafrole	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Hexachlorocyclopentadiene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,4,6-Trichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,4,5-Trichlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Safrole	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Chloronaphthalene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,4-Naphthoquinone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Dimethylphthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,3-Dinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,2-Dinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,6-Dinitrotoluene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Acenaphthylene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
3-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Acenaphthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP

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CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
2,4-Dinitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Nitrophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Dibenzofuran	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,4-Dinitrotoluene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2,3,4,6-Tetrachlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Pentachlorobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1-Naphthylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Naphthylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Diethyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Fluorene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Chlorophenyl Phenyl Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Nitroaniline	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
5-Nitro-o-toluidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4,6-Dinitro-2-methylphenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
N-Nitrosodiphenylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Diphenylamine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Azobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Diallate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
1,3,5-Trinitrobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Phenacetin	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Bromophenyl Phenyl Ether	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
4-Aminobiphenyl	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Pentachlorophenol	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Pronamide	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Pentachloronitrobenzene (PCNB)	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Phenanthrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Di-n-butyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Methapyrilene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Isodrin	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Chlorobenzilate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
p-(Dimethylamino)azobenzene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
3,3-Dimethylbenzidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Butyl Benzyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Benzo(a)anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Chrysene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Bis(2-Ethylhexyl) Phthalate	**13**	6	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Kepone	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
3,3´-Dichlorobenzidine	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
2-Acetylaminofluorene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Di-n-octyl Phthalate	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Benzo(b)Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Benzo(k)Fluoranthene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Benzo(a)Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
3-Methylcholanthrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Dibenzo(a,h)anthracene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Benzo(g,h,i)perylene	<8	8	ug/L	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: 2-Fluorophenol	85.6	Limit: 24-136	% Rec	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: Phenol-d6	88.7	Limit: 15-140	% Rec	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: Nitrobenzene-d5	96.8	Limit: 29-130	% Rec	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: 2-Fluorobiphenyl	92.5	Limit: 23-113	% Rec	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: 2,4,6-Tribromophenol	90.8	Limit: 15-139	% Rec	1		04/25/24 1028	05/07/24 1748	EPP
Surrogate: Terphenyl-dl4	104	Limit: 27-141	% Rec	1		04/25/24 1028	05/07/24 1748	EPP

Determination of Organophosphorus Insecticides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8141								
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Thionazin	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Phorate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Dimethoate	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Disulfoton	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Methyl Parathion	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Parathion	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Famphur	<0.4	0.4	ug/L	1		04/24/24 1056	05/02/24 1353	EPP
Surrogate: 2-Nitro-m-xylene	78.8	Limit: 38-122	% Rec	1		04/24/24 1056	05/02/24 1353	EPP

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8151A								
2,4-D	<2.0	2.0	ug/L	1		04/25/24 0846	05/01/24 0023	MSV
2,4,5-TP (Silvex)	<0.5	0.5	ug/L	1		04/25/24 0846	05/01/24 0023	MSV
2,4,5-T	<0.5	0.5	ug/L	1		04/25/24 0846	05/01/24 0023	MSV
Dinoseb	<0.5	0.5	ug/L	1		04/25/24 0846	05/01/24 0023	MSV
Surrogate: 2,5-Dichlorobenzoic Acid	104	Limit: 31-116	% Rec	1		04/25/24 0846	05/01/24 0023	MSV

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3520C/EPA 8081								
Alpha-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Gamma-BHC [Lindane]	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Beta-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Heptachlor	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Delta-BHC	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Aldrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Heptachlor Epoxide	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Endosulfan I	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
4,4`-DDE	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Dieldrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Endrin	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
4,4`-DDD	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Endosulfan II	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
4,4`-DDT	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Endrin Aldehyde	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Endosulfan Sulfate	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Methoxychlor	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Chlordane	<0.10	0.10	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Toxaphene	<0.20	0.20	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Hexachlorobenzene	<0.05	0.05	ug/L	1		04/24/24 1049	05/01/24 0959	EPP
Surrogate: Tetrachloro-m-xylene	89.7	Limit: 10-121	% Rec	1		04/24/24 1049	05/01/24 0959	EPP

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3510C/EPA 8082								
Arochlor 1016	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1221	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1232	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1242	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1248	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1254	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Arochlor 1260	<0.20	0.20	ug/L	1		04/24/24 1053	05/01/24 0959	EPP
Surrogate: Tetrachloro-m-xylene	96.8	Limit: 38-121	% Rec	1		04/24/24 1053	05/01/24 0959	EPP
Surrogate: Decachlorobiphenyl	97.3	Limit: 25-119	% Rec	1		04/24/24 1053	05/01/24 0959	EPP

Determination of Conventional Chemistry Parameters	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 376.2								
Sulfide, total	<0.15	0.15	mg/L	1		04/25/24 1055	04/25/24 1315	CHP
EPA 9010B								
Cyanide, total	<0.005	0.005	mg/L	1		04/25/24 1628	04/26/24 1444	CHP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Barium, total	**0.303**	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-05	**Collection Date:**	04/18/2024 16:00

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Tin, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/30/24 1250	RVV
EPA 7470A								
Mercury, total	<0.00050	0.00050	mg/L	1		04/30/24 1412	05/01/24 1246	JAR

Client Sample ID:	MW-91-20		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-06	**Collection Date:**	04/18/2024 16:39

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS

Client Sample ID:	MW-91-20		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-06	**Collection Date:**	04/18/2024 16:39

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: Dibromofluoromethane	93.9	Limit: 75-136	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: Dibromofluoromethane	93.9	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: 1,2-Dichloroethane-d4	97.8	Limit: 61-142	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: 1,2-Dichloroethane-d4	97.8	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: Toluene-d8	97.7	Limit: 82-121	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: Toluene-d8	97.7	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 80-116	% Rec	1		04/25/24 0000	04/25/24 1514	LJS
Surrogate: 4-Bromofluorobenzene	97.0	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1514	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Barium, total	**0.202**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2206	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2206	RVV

Client Sample ID:	SW-3		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-07	**Collection Date:**	04/18/2024 17:20

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Vinyl Chloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Bromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Chloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Trichlorofluoromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Acetone	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Methyl Iodide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Carbon Disulfide	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Methylene Chloride	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Acrylonitrile	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Vinyl Acetate	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
2-Butanone (MEK)	<10.0	10.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Bromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Chloroform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Carbon Tetrachloride	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Benzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2-Dichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Trichloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2-Dichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Dibromomethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Bromodichloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Toluene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Tetrachloroethylene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Dibromochloromethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2-Dibromoethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Chlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Ethylbenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Xylenes, total	<2.0	2.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Styrene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Bromoform	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS

Client Sample ID:	SW-3		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-07	**Collection Date:**	04/18/2024 17:20

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: Dibromofluoromethane	94.0	Limit: 80-126	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: Dibromofluoromethane	94.0	Limit: 75-136	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: 1,2-Dichloroethane-d4	98.2	Limit: 63-138	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: 1,2-Dichloroethane-d4	98.2	Limit: 61-142	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: Toluene-d8	98.0	Limit: 87-116	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: Toluene-d8	98.0	Limit: 82-121	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: 4-Bromofluorobenzene	96.4	Limit: 85-111	% Rec	1		04/25/24 0000	04/25/24 1537	LJS
Surrogate: 4-Bromofluorobenzene	96.4	Limit: 80-116	% Rec	1		04/25/24 0000	04/25/24 1537	LJS

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Barium, total	**0.198**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2213	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2213	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HD1864

Client Sample ID:	Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	Whipple, Todd
Lab Sample ID:	1HD1864-08	**Collection Date:**	04/18/2024

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Barium, total	**0.359**	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Copper, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Lead, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Silver, total	<0.0040	0.0040	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2231	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		04/26/24 1559	04/29/24 2231	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8081	1HD1434	1HD1434-BLK1	
		1HD1434-BS1	
		1HD1434-BSD1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8082	1HD1436	1HD1436-BLK1	
		1HD1436-BS1	
		1HD1436-BSD1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8141	1HD1439	1HD1439-BLK1	
		1HD1439-BS1	
		1HD1439-BSD1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HD1525	1HD1525-BLK1	
		1HD1525-BS1	
		1HD1525-BSD1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 376.2	1HD1529	1HD1529-MSD1	1HD1864-02
		1HD1529-BLK1	
		1HD1864-02	MW-90-7
		1HD1529-MS1	1HD1864-02
		1HD1529-BS1	
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 9010B	1HD1564	1HD1864-02	MW-90-7
		1HD1564-MSD1	1HD1596-02
		1HD1564-MS1	1HD1596-02
		1HD1564-BS1	
		1HD1564-BLK1	

EPA 9010B	1HD1564	1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HD1572	1HD1572-BS1	
		1HD1572-BSD1	
		1HD1572-BLK1	
		1HD1864-01	MW-90-4
		1HD1864-02	MW-90-7
		1HD1864-03	MW-90-14
		1HD1864-04	MW-90-17
		1HD1864-05	MW-91-19
		1HD1864-06	MW-91-20
		1HD1864-07	SW-3
		1HD1572-MS1	1HD1698-01
		1HD1572-MSD1	1HD1698-01

Method	Batch	Laboratory ID	Client / Source ID
EPA 8151A	1HD1578	1HD1578-BLK1	
		1HD1578-BS1	
		1HD1578-BSD1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HD1622	1HD1622-BLK1	
		1HD1622-BS1	
		1HD1622-MS1	1HD1719-02
		1HD1622-MSD1	1HD1719-02
		1HD1622-PS1	1HD1719-02
		1HD1864-01	MW-90-4
		1HD1864-02	MW-90-7
		1HD1864-03	MW-90-14
		1HD1864-04	MW-90-17
		1HD1864-06	MW-91-20
		1HD1864-07	SW-3
		1HD1864-08	Duplicate
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8015C	1HD1672	1HD1672-BS1	
		1HD1672-BLK1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19
		1HD1672-MS1	1HD1461-02

Method	Batch	Laboratory ID	Client / Source ID
EPA 8015C	1HD1672	1HD1672-MSD1	1HD1461-02
		1HD1672-MRL1	
		1HD1672-MRL2	

Method	Batch	Laboratory ID	Client / Source ID
EPA 7470A	1HD1756	1HD1756-BLK1	
		1HD1756-BS1	
		1HD1756-MS1	1HD0316-01
		1HD1756-MSD1	1HD0316-01
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HE0002	1HE0002-BS1	
		1HE0002-BSD1	
		1HE0002-BLK1	
		1HD1864-02	MW-90-7
		1HD1864-05	MW-91-19

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Blank (1HD1572-BLK1)	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:53									
Dichlorodifluoromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
Acrolein	<10.0	10.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<2.0	2.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Acetonitrile	<10.0	10.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Blank (1HD1572-BLK1)			Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:53							
Methylene Chloride	<5.0	5.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
2,2-Dichloropropane	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<5.0	5.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
1,1-Dichloropropene	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Blank (1HD1572-BLK1)			Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:53							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
Ethyl Methacrylate	<10.0	10.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
1,3-Dichloropropane	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,3-Dichlorobenzene	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
1,2,4-Trichlorobenzene	<1.0	1.0	ug/L							
Surrogate: Dibromofluoromethane	*45.9*		ug/L	*50.2*		*91.4*	*80-126*			
Surrogate: Dibromofluoromethane	*45.9*		ug/L	*50.2*		*91.4*	*80-126*			
Surrogate: Dibromofluoromethane	*45.9*		ug/L	*50.2*		*91.4*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.5*		ug/L	*50.1*		*94.9*	*63-138*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Blank (1HD1572-BLK1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:53						
Surrogate: 1,2-Dichloroethane-d4	*47.5*		ug/L	*50.1*		*94.9*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*47.5*		ug/L	*50.1*		*94.9*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*47.5*		ug/L	*50.1*		*94.9*	*61-142*			
Surrogate: Toluene-d8	*49.0*		ug/L	*50.4*		*97.2*	*87-116*			
Surrogate: Toluene-d8	*49.0*		ug/L	*50.4*		*97.2*	*87-116*			
Surrogate: Toluene-d8	*49.0*		ug/L	*50.4*		*97.2*	*87-116*			
Surrogate: Toluene-d8	*49.0*		ug/L	*50.4*		*97.2*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.1*		*96.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.1*		*96.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.1*		*96.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*48.4*		ug/L	*50.1*		*96.6*	*80-116*			
LCS (1HD1572-BS1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 09:45						
Dichlorodifluoromethane	35.03	1.0	ug/L	31.6		111	44-139			
Chloromethane	31.87	1.0	ug/L	30.6		104	56-152			
Chloromethane	31.87	1.0	ug/L	30.6		104	63-155			
Vinyl Chloride	31.27	1.0	ug/L	30.2		103	62-151			
Vinyl Chloride	31.27	1.0	ug/L	30.2		103	70-154			
Bromomethane	27.29	1.0	ug/L	28.8		94.8	61-162			
Bromomethane	27.29	1.0	ug/L	28.8		94.8	52-176			
Chloroethane	34.72	1.0	ug/L	31.6		110	69-138			
Chloroethane	34.72	1.0	ug/L	31.6		110	72-148			
Trichlorofluoromethane	31.60	1.0	ug/L	32.6		96.9	70-143			
Trichlorofluoromethane	31.60	1.0	ug/L	32.6		96.9	70-152			
Acrolein	82.45	10.0	ug/L	100		82.2	27-144			
1,1-Dichloroethylene	46.16	1.0	ug/L	50.0		92.3	76-140			
1,1-Dichloroethylene	46.16	1.0	ug/L	50.0		92.3	70-148			
Acetone	77.88	10.0	ug/L	101		77.0	51-156			
Acetone	77.88	10.0	ug/L	101		77.0	43-172			
Methyl Iodide	90.24	2.0	ug/L	102		88.6	81-166			
Methyl Iodide	90.24	1.0	ug/L	102		88.6	69-170			
Carbon Disulfide	103.5	1.0	ug/L	103		101	76-147			
Carbon Disulfide	103.5	1.0	ug/L	103		101	72-162			
Acetonitrile	80.18	10.0	ug/L	103		78.1	46-156			
Methylene Chloride	45.98	5.0	ug/L	50.0		92.0	67-139			
Methylene Chloride	45.98	5.0	ug/L	50.0		92.0	68-142			
Acrylonitrile	89.09	5.0	ug/L	100		88.8	67-144			
Acrylonitrile	89.09	5.0	ug/L	100		88.8	67-144			
trans-1,2-Dichloroethylene	47.10	1.0	ug/L	50.0		94.2	72-135			
trans-1,2-Dichloroethylene	47.10	1.0	ug/L	50.0		94.2	66-148			
1,1-Dichloroethane	46.09	1.0	ug/L	50.0		92.2	72-129			
1,1-Dichloroethane	46.09	1.0	ug/L	50.0		92.2	66-143			
Vinyl Acetate	103.5	5.0	ug/L	100		103	24-144			
Vinyl Acetate	103.5	5.0	ug/L	100		103	43-153			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
LCS (1HD1572-BS1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 09:45						
2,2-Dichloropropane	43.78	1.0	ug/L	50.0		87.6	64-131			
cis-1,2-Dichloroethylene	44.41	1.0	ug/L	50.0		88.8	81-137			
cis-1,2-Dichloroethylene	44.41	1.0	ug/L	50.0		88.8	71-149			
2-Butanone (MEK)	98.28	5.0	ug/L	102		96.5	47-149			
2-Butanone (MEK)	98.28	10.0	ug/L	102		96.5	52-159			
Bromochloromethane	46.58	1.0	ug/L	50.0		93.2	75-138			
Bromochloromethane	46.58	1.0	ug/L	50.0		93.2	69-143			
Chloroform	44.67	1.0	ug/L	50.0		89.3	78-131			
Chloroform	44.67	1.0	ug/L	50.0		89.3	69-144			
1,1,1-Trichloroethane	43.41	1.0	ug/L	50.0		86.8	67-121			
1,1,1-Trichloroethane	43.41	1.0	ug/L	50.0		86.8	62-129			
1,1-Dichloropropene	44.04	1.0	ug/L	50.0		88.1	80-131			
Carbon Tetrachloride	46.00	1.0	ug/L	50.0		92.0	71-131			
Carbon Tetrachloride	46.00	1.0	ug/L	50.0		92.0	63-141			
Benzene	48.21	1.0	ug/L	50.0		96.4	77-130			
Benzene	48.21	1.0	ug/L	50.0		96.4	71-134			
1,2-Dichloroethane	46.27	1.0	ug/L	50.0		92.5	76-126			
1,2-Dichloroethane	46.27	1.0	ug/L	50.0		92.5	72-132			
Trichloroethylene	47.24	1.0	ug/L	50.0		94.5	80-124			
Trichloroethylene	47.24	1.0	ug/L	50.0		94.5	71-135			
1,2-Dichloropropane	48.29	1.0	ug/L	50.0		96.6	81-125			
1,2-Dichloropropane	48.29	1.0	ug/L	50.0		96.6	69-136			
Dibromomethane	48.39	1.0	ug/L	50.0		96.8	84-134			
Dibromomethane	48.39	1.0	ug/L	50.0		96.8	73-147			
Bromodichloromethane	46.91	1.0	ug/L	50.0		93.8	78-121			
Bromodichloromethane	46.91	1.0	ug/L	50.0		93.8	68-129			
cis-1,3-Dichloropropene	46.00	1.0	ug/L	50.0		92.0	78-120			
cis-1,3-Dichloropropene	46.00	1.0	ug/L	50.0		92.0	65-134			
4-Methyl-2-pentanone (MIBK)	99.66	5.0	ug/L	100		99.6	67-143			
4-Methyl-2-pentanone (MIBK)	99.66	5.0	ug/L	100		99.6	58-147			
Toluene	46.08	1.0	ug/L	50.0		92.2	77-130			
Toluene	46.08	1.0	ug/L	50.0		92.2	72-133			
trans-1,3-Dichloropropene	48.01	1.0	ug/L	50.0		96.0	77-123			
trans-1,3-Dichloropropene	48.01	1.0	ug/L	50.0		96.0	67-130			
Ethyl Methacrylate	102.8	10.0	ug/L	102		100	52-148			
1,1,2-Trichloroethane	48.29	1.0	ug/L	50.0		96.6	78-124			
1,1,2-Trichloroethane	48.29	1.0	ug/L	50.0		96.6	69-135			
Tetrachloroethylene	47.47	1.0	ug/L	50.0		94.9	73-124			
Tetrachloroethylene	47.47	1.0	ug/L	50.0		94.9	69-130			
1,3-Dichloropropane	54.60	1.0	ug/L	50.0		109	78-131			
2-Hexanone (MBK)	104.2	5.0	ug/L	99.3		105	57-145			
2-Hexanone (MBK)	104.2	5.0	ug/L	99.3		105	55-144			
Dibromochloromethane	49.44	1.0	ug/L	50.0		98.9	78-126			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
LCS (1HD1572-BS1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 09:45						
Dibromochloromethane	49.44	1.0	ug/L	50.0		98.9	73-127			
1,2-Dibromoethane	48.54	1.0	ug/L	50.0		97.1	69-126			
1,2-Dibromoethane	48.54	1.0	ug/L	50.0		97.1	67-132			
Chlorobenzene	48.15	1.0	ug/L	50.0		96.3	76-120			
Chlorobenzene	48.15	1.0	ug/L	50.0		96.3	72-123			
1,1,1,2-Tetrachloroethane	49.04	1.0	ug/L	50.0		98.1	81-122			
1,1,1,2-Tetrachloroethane	49.04	1.0	ug/L	50.0		98.1	73-127			
Ethylbenzene	49.63	1.0	ug/L	50.0		99.3	74-121			
Ethylbenzene	49.63	1.0	ug/L	50.0		99.3	71-127			
Xylenes, total	150.2	2.0	ug/L	150		100	75-122			
Xylenes, total	150.2	2.0	ug/L	150		100	74-127			
Styrene	51.38	1.0	ug/L	50.0		103	76-119			
Styrene	51.38	1.0	ug/L	50.0		103	66-126			
Bromoform	46.93	1.0	ug/L	50.0		93.9	74-127			
Bromoform	46.93	1.0	ug/L	50.0		93.9	68-130			
1,2,3-Trichloropropane	48.22	1.0	ug/L	50.0		96.4	73-125			
1,2,3-Trichloropropane	48.22	1.0	ug/L	50.0		96.4	63-136			
trans-1,4-Dichloro-2-butene	88.46	5.0	ug/L	103		86.1	55-135			
trans-1,4-Dichloro-2-butene	88.46	5.0	ug/L	103		86.1	54-134			
1,1,2,2-Tetrachloroethane	49.14	1.0	ug/L	50.0		98.3	58-133			
1,1,2,2-Tetrachloroethane	49.14	1.0	ug/L	50.0		98.3	61-131			
1,3-Dichlorobenzene	49.29	1.0	ug/L	50.0		98.7	70-125			
1,4-Dichlorobenzene	47.71	1.0	ug/L	50.0		95.4	69-128			
1,4-Dichlorobenzene	47.71	1.0	ug/L	50.0		95.4	70-129			
1,2-Dichlorobenzene	49.58	1.0	ug/L	50.0		99.2	70-125			
1,2-Dichlorobenzene	49.58	1.0	ug/L	50.0		99.2	69-126			
1,2-Dibromo-3-chloropropane	47.66	1.0	ug/L	50.0		95.3	54-147			
1,2-Dibromo-3-chloropropane	47.66	5.0	ug/L	50.0		95.3	50-143			
1,2,4-Trichlorobenzene	47.32	1.0	ug/L	50.0		94.6	55-149			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*80-126*			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*80-126*			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.8*		ug/L	*50.1*		*93.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.8*		ug/L	*50.1*		*93.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.8*		ug/L	*50.1*		*93.5*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.8*		ug/L	*50.1*		*93.5*	*61-142*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.3*	*87-116*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.3*	*87-116*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.3*	*87-116*			
Surrogate: Toluene-d8	*49.6*		ug/L	*50.4*		*98.3*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.1*		*99.8*	*80-116*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
LCS Dup (1HD1572-BSD1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:07						
Dichlorodifluoromethane	33.17	1.0	ug/L	31.6		105	44-139	5.45	30	
Chloromethane	30.48	1.0	ug/L	30.6		99.5	56-152	4.46	30	
Chloromethane	30.48	1.0	ug/L	30.6		99.5	63-155	4.46	24	
Vinyl Chloride	29.91	1.0	ug/L	30.2		99.0	62-151	4.45	28	
Vinyl Chloride	29.91	1.0	ug/L	30.2		99.0	70-154	4.45	25	
Bromomethane	26.94	1.0	ug/L	28.8		93.5	61-162	1.29	28	
Bromomethane	26.94	1.0	ug/L	28.8		93.5	52-176	1.29	27	
Chloroethane	33.02	1.0	ug/L	31.6		104	69-138	5.02	29	
Chloroethane	33.02	1.0	ug/L	31.6		104	72-148	5.02	25	
Trichlorofluoromethane	30.17	1.0	ug/L	32.6		92.5	70-143	4.63	27	
Trichlorofluoromethane	30.17	1.0	ug/L	32.6		92.5	70-152	4.63	26	
Acrolein	83.67	10.0	ug/L	100		83.5	27-144	1.47	30	
1,1-Dichloroethylene	44.10	1.0	ug/L	50.0		88.2	76-140	4.56	30	
1,1-Dichloroethylene	44.10	1.0	ug/L	50.0		88.2	70-148	4.56	24	
Acetone	79.15	10.0	ug/L	101		78.2	51-156	1.62	30	
Acetone	79.15	10.0	ug/L	101		78.2	43-172	1.62	30	
Methyl Iodide	85.49	2.0	ug/L	102		83.9	81-166	5.41	29	
Methyl Iodide	85.49	1.0	ug/L	102		83.9	69-170	5.41	30	
Carbon Disulfide	98.52	1.0	ug/L	103		95.9	76-147	4.91	27	
Carbon Disulfide	98.52	1.0	ug/L	103		95.9	72-162	4.91	24	
Acetonitrile	77.90	10.0	ug/L	103		75.9	46-156	2.88	30	
Methylene Chloride	44.51	5.0	ug/L	50.0		89.0	67-139	3.25	26	
Methylene Chloride	44.51	5.0	ug/L	50.0		89.0	68-142	3.25	21	
Acrylonitrile	88.98	5.0	ug/L	100		88.7	67-144	0.124	24	
Acrylonitrile	88.98	5.0	ug/L	100		88.7	67-144	0.124	24	
trans-1,2-Dichloroethylene	44.92	1.0	ug/L	50.0		89.8	72-135	4.74	28	
trans-1,2-Dichloroethylene	44.92	1.0	ug/L	50.0		89.8	66-148	4.74	27	
1,1-Dichloroethane	44.42	1.0	ug/L	50.0		88.8	72-129	3.69	26	
1,1-Dichloroethane	44.42	1.0	ug/L	50.0		88.8	66-143	3.69	24	
Vinyl Acetate	97.13	5.0	ug/L	100		97.1	24-144	6.31	30	
Vinyl Acetate	97.13	5.0	ug/L	100		97.1	43-153	6.31	30	
2,2-Dichloropropane	41.55	1.0	ug/L	50.0		83.1	64-131	5.23	26	
cis-1,2-Dichloroethylene	52.28	1.0	ug/L	50.0		105	81-137	16.3	27	
cis-1,2-Dichloroethylene	52.28	1.0	ug/L	50.0		105	71-149	16.3	26	
2-Butanone (MEK)	92.77	5.0	ug/L	102		91.1	47-149	5.77	30	
2-Butanone (MEK)	92.77	10.0	ug/L	102		91.1	52-159	5.77	27	
Bromochloromethane	44.92	1.0	ug/L	50.0		89.8	75-138	3.63	24	
Bromochloromethane	44.92	1.0	ug/L	50.0		89.8	69-143	3.63	23	
Chloroform	43.06	1.0	ug/L	50.0		86.1	78-131	3.67	27	
Chloroform	43.06	1.0	ug/L	50.0		86.1	69-144	3.67	23	
1,1,1-Trichloroethane	41.29	1.0	ug/L	50.0		82.6	67-121	5.01	28	
1,1,1-Trichloroethane	41.29	1.0	ug/L	50.0		82.6	62-129	5.01	24	
1,1-Dichloropropene	41.87	1.0	ug/L	50.0		83.7	80-131	5.05	30	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
LCS Dup (1HD1572-BSD1)				Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:07						
Carbon Tetrachloride	43.89	1.0	ug/L	50.0		87.8	71-131	4.69	28	
Carbon Tetrachloride	43.89	1.0	ug/L	50.0		87.8	63-141	4.69	25	
Benzene	46.39	1.0	ug/L	50.0		92.8	77-130	3.85	25	
Benzene	46.39	1.0	ug/L	50.0		92.8	71-134	3.85	24	
1,2-Dichloroethane	45.26	1.0	ug/L	50.0		90.5	76-126	2.21	24	
1,2-Dichloroethane	45.26	1.0	ug/L	50.0		90.5	72-132	2.21	24	
Trichloroethylene	45.57	1.0	ug/L	50.0		91.1	80-124	3.60	27	
Trichloroethylene	45.57	1.0	ug/L	50.0		91.1	71-135	3.60	24	
1,2-Dichloropropane	46.95	1.0	ug/L	50.0		93.9	81-125	2.81	25	
1,2-Dichloropropane	46.95	1.0	ug/L	50.0		93.9	69-136	2.81	24	
Dibromomethane	47.71	1.0	ug/L	50.0		95.4	84-134	1.42	23	
Dibromomethane	47.71	1.0	ug/L	50.0		95.4	73-147	1.42	25	
Bromodichloromethane	45.70	1.0	ug/L	50.0		91.4	78-121	2.61	25	
Bromodichloromethane	45.70	1.0	ug/L	50.0		91.4	68-129	2.61	22	
cis-1,3-Dichloropropene	45.21	1.0	ug/L	50.0		90.4	78-120	1.73	26	
cis-1,3-Dichloropropene	45.21	1.0	ug/L	50.0		90.4	65-134	1.73	23	
4-Methyl-2-pentanone (MIBK)	100.4	5.0	ug/L	100		100	67-143	0.750	26	
4-Methyl-2-pentanone (MIBK)	100.4	5.0	ug/L	100		100	58-147	0.750	27	
Toluene	44.67	1.0	ug/L	50.0		89.3	77-130	3.11	27	
Toluene	44.67	1.0	ug/L	50.0		89.3	72-133	3.11	24	
trans-1,3-Dichloropropene	47.20	1.0	ug/L	50.0		94.4	77-123	1.70	28	
trans-1,3-Dichloropropene	47.20	1.0	ug/L	50.0		94.4	67-130	1.70	24	
Ethyl Methacrylate	101.7	10.0	ug/L	102		99.3	52-148	1.07	30	
1,1,2-Trichloroethane	47.28	1.0	ug/L	50.0		94.6	78-124	2.11	24	
1,1,2-Trichloroethane	47.28	1.0	ug/L	50.0		94.6	69-135	2.11	23	
Tetrachloroethylene	45.29	1.0	ug/L	50.0		90.6	73-124	4.70	26	
Tetrachloroethylene	45.29	1.0	ug/L	50.0		90.6	69-130	4.70	25	
1,3-Dichloropropane	53.66	1.0	ug/L	50.0		107	78-131	1.74	24	
2-Hexanone (MBK)	104.5	5.0	ug/L	99.3		105	57-145	0.230	30	
2-Hexanone (MBK)	104.5	5.0	ug/L	99.3		105	55-144	0.230	25	
Dibromochloromethane	48.16	1.0	ug/L	50.0		96.3	78-126	2.62	23	
Dibromochloromethane	48.16	1.0	ug/L	50.0		96.3	73-127	2.62	22	
1,2-Dibromoethane	47.80	1.0	ug/L	50.0		95.6	69-126	1.54	22	
1,2-Dibromoethane	47.80	1.0	ug/L	50.0		95.6	67-132	1.54	24	
Chlorobenzene	46.58	1.0	ug/L	50.0		93.2	76-120	3.31	25	
Chlorobenzene	46.58	1.0	ug/L	50.0		93.2	72-123	3.31	23	
1,1,1,2-Tetrachloroethane	47.89	1.0	ug/L	50.0		95.8	81-122	2.37	23	
1,1,1,2-Tetrachloroethane	47.89	1.0	ug/L	50.0		95.8	73-127	2.37	24	
Ethylbenzene	47.82	1.0	ug/L	50.0		95.6	74-121	3.71	27	
Ethylbenzene	47.82	1.0	ug/L	50.0		95.6	71-127	3.71	26	
Xylenes, total	145.6	2.0	ug/L	150		97.0	75-122	3.12	26	
Xylenes, total	145.6	2.0	ug/L	150		97.0	74-127	3.12	25	
Styrene	49.77	1.0	ug/L	50.0		99.5	76-119	3.18	26	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
LCS Dup (1HD1572-BSD1)			Prepared: 04/25/24 00:00 Analyzed: 04/25/24 10:07							
Styrene	49.77	1.0	ug/L	50.0		99.5	66-126	3.18	23	
Bromoform	46.69	1.0	ug/L	50.0		93.4	74-127	0.513	22	
Bromoform	46.69	1.0	ug/L	50.0		93.4	68-130	0.513	23	
1,2,3-Trichloropropane	47.89	1.0	ug/L	50.0		95.8	73-125	0.687	20	
1,2,3-Trichloropropane	47.89	1.0	ug/L	50.0		95.8	63-136	0.687	24	
trans-1,4-Dichloro-2-butene	88.16	5.0	ug/L	103		85.8	55-135	0.340	26	
trans-1,4-Dichloro-2-butene	88.16	5.0	ug/L	103		85.8	54-134	0.340	27	
1,1,2,2-Tetrachloroethane	48.31	1.0	ug/L	50.0		96.6	58-133	1.70	28	
1,1,2,2-Tetrachloroethane	48.31	1.0	ug/L	50.0		96.6	61-131	1.70	29	
1,3-Dichlorobenzene	47.62	1.0	ug/L	50.0		95.3	70-125	3.45	27	
1,4-Dichlorobenzene	46.06	1.0	ug/L	50.0		92.1	69-128	3.52	29	
1,4-Dichlorobenzene	46.06	1.0	ug/L	50.0		92.1	70-129	3.52	24	
1,2-Dichlorobenzene	47.96	1.0	ug/L	50.0		95.9	70-125	3.32	25	
1,2-Dichlorobenzene	47.96	1.0	ug/L	50.0		95.9	69-126	3.32	26	
1,2-Dibromo-3-chloropropane	48.25	1.0	ug/L	50.0		96.5	54-147	1.23	29	
1,2-Dibromo-3-chloropropane	48.25	5.0	ug/L	50.0		96.5	50-143	1.23	30	
1,2,4-Trichlorobenzene	46.45	1.0	ug/L	50.0		92.9	55-149	1.86	30	
Surrogate: Dibromofluoromethane	*46.2*		ug/L	*50.2*		*92.2*	*80-126*			
Surrogate: Dibromofluoromethane	*46.2*		ug/L	*50.2*		*92.2*	*80-126*			
Surrogate: Dibromofluoromethane	*46.2*		ug/L	*50.2*		*92.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*46.2*		ug/L	*50.1*		*92.2*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.2*		ug/L	*50.1*		*92.2*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.2*		ug/L	*50.1*		*92.2*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*46.2*		ug/L	*50.1*		*92.2*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.0*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.0*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.0*	*87-116*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.4*		*98.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.1*		*100*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.1*		*100*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.1*		*100*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*50.3*		ug/L	*50.1*		*100*	*80-116*			
Matrix Spike (1HD1572-MS1)	**Source: 1HD1698-01**		Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:02							
Dichlorodifluoromethane	293.2	10.0	ug/L	300	ND	97.7	47-137			
Chloromethane	276.8	10.0	ug/L	300	ND	92.2	49-154			
Chloromethane	276.8	10.0	ug/L	300	ND	92.2	61-152			
Vinyl Chloride	304.3	10.0	ug/L	300	ND	101	61-152			
Vinyl Chloride	304.3	10.0	ug/L	300	ND	101	66-149			
Bromomethane	210.2	10.0	ug/L	301	ND	69.8	47-168			
Bromomethane	210.2	10.0	ug/L	301	ND	69.8	43-171			
Chloroethane	308.6	10.0	ug/L	300	ND	103	61-148			
Chloroethane	308.6	10.0	ug/L	300	ND	103	69-148			
Trichlorofluoromethane	291.8	10.0	ug/L	300	ND	97.3	73-147			
Trichlorofluoromethane	291.8	10.0	ug/L	300	ND	97.3	62-163			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1572-MS1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:02								
Acrolein	272.2	100	ug/L	505	ND	53.9	20-164			
1,1-Dichloroethylene	472.9	10.0	ug/L	501	ND	94.3	68-153			
1,1-Dichloroethylene	472.9	10.0	ug/L	501	ND	94.3	70-148			
Acetone	813.9	100	ug/L	1000	ND	81.3	45-175			
Acetone	813.9	100	ug/L	1000	ND	81.3	45-173			
Methyl Iodide	737.0	20.0	ug/L	1000	ND	73.6	79-167			QM-05
Methyl Iodide	737.0	10.0	ug/L	1000	ND	73.6	62-167			
Carbon Disulfide	937.9	10.0	ug/L	1000	ND	93.7	72-156			
Carbon Disulfide	937.9	10.0	ug/L	1000	ND	93.7	71-163			
Acetonitrile	807.6	100	ug/L	1000	ND	80.6	38-166			
Methylene Chloride	465.7	50.0	ug/L	502	ND	92.8	64-143			
Methylene Chloride	465.7	50.0	ug/L	502	ND	92.8	69-140			
Acrylonitrile	477.0	50.0	ug/L	500	ND	95.4	58-151			
Acrylonitrile	477.0	50.0	ug/L	500	ND	95.4	58-151			
trans-1,2-Dichloroethylene	476.3	10.0	ug/L	503	ND	94.7	65-145			
trans-1,2-Dichloroethylene	476.3	10.0	ug/L	503	ND	94.7	69-144			
1,1-Dichloroethane	469.8	10.0	ug/L	503	ND	93.5	68-136			
1,1-Dichloroethane	469.8	10.0	ug/L	503	ND	93.5	70-138			
Vinyl Acetate	846.4	50.0	ug/L	1620	ND	52.4	58-143			QM-05
Vinyl Acetate	846.4	50.0	ug/L	1620	ND	52.4	58-142			QM-05
2,2-Dichloropropane	418.4	10.0	ug/L	504	ND	83.0	50-118			
cis-1,2-Dichloroethylene	546.4	10.0	ug/L	505	ND	108	67-153			
cis-1,2-Dichloroethylene	546.4	10.0	ug/L	505	ND	108	68-151			
2-Butanone (MEK)	943.1	50.0	ug/L	1000	ND	94.2	52-159			
2-Butanone (MEK)	943.1	100	ug/L	1000	ND	94.2	50-160			
Bromochloromethane	469.3	10.0	ug/L	504	ND	93.0	61-151			
Bromochloromethane	469.3	10.0	ug/L	504	ND	93.0	65-143			
Chloroform	455.5	10.0	ug/L	502	ND	90.8	77-132			
Chloroform	455.5	10.0	ug/L	502	ND	90.8	71-143			
1,1,1-Trichloroethane	460.7	10.0	ug/L	503	ND	91.6	71-118			
1,1,1-Trichloroethane	460.7	10.0	ug/L	503	ND	91.6	63-133			
1,1-Dichloropropene	471.6	10.0	ug/L	504	ND	93.5	82-128			
Carbon Tetrachloride	470.6	10.0	ug/L	502	ND	93.7	71-133			
Carbon Tetrachloride	470.6	10.0	ug/L	502	ND	93.7	63-142			
Benzene	487.8	10.0	ug/L	504	ND	96.7	81-125			
Benzene	487.8	10.0	ug/L	504	ND	96.7	69-133			
1,2-Dichloroethane	462.2	10.0	ug/L	502	ND	92.1	75-125			
1,2-Dichloroethane	462.2	10.0	ug/L	502	ND	92.1	63-138			
Trichloroethylene	486.2	10.0	ug/L	503	ND	96.6	83-120			
Trichloroethylene	486.2	10.0	ug/L	503	ND	96.6	71-133			
1,2-Dichloropropane	486.5	10.0	ug/L	502	ND	96.9	80-124			
1,2-Dichloropropane	486.5	10.0	ug/L	502	ND	96.9	69-132			
Dibromomethane	484.7	10.0	ug/L	505	ND	96.0	84-131			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1572-MS1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:02								
Dibromomethane	484.7	10.0	ug/L	505	ND	96.0	70-147			
Bromodichloromethane	477.9	10.0	ug/L	503	ND	95.1	79-118			
Bromodichloromethane	477.9	10.0	ug/L	503	ND	95.1	67-130			
cis-1,3-Dichloropropene	476.4	10.0	ug/L	502	ND	94.9	75-116			
cis-1,3-Dichloropropene	476.4	10.0	ug/L	502	ND	94.9	61-126			
4-Methyl-2-pentanone (MIBK)	1057	50.0	ug/L	1000	ND	105	65-149			
4-Methyl-2-pentanone (MIBK)	1057	50.0	ug/L	1000	ND	105	55-147			
Toluene	479.4	10.0	ug/L	505	ND	95.0	82-123			
Toluene	479.4	10.0	ug/L	505	ND	95.0	71-133			
trans-1,3-Dichloropropene	477.7	10.0	ug/L	503	ND	95.0	75-117			
trans-1,3-Dichloropropene	477.7	10.0	ug/L	503	ND	95.0	63-124			
Ethyl Methacrylate	1068	100	ug/L	1000	ND	107	73-135			
1,1,2-Trichloroethane	489.0	10.0	ug/L	502	ND	97.4	77-122			
1,1,2-Trichloroethane	489.0	10.0	ug/L	502	ND	97.4	69-133			
Tetrachloroethylene	485.1	10.0	ug/L	502	ND	96.6	74-120			
Tetrachloroethylene	485.1	10.0	ug/L	502	ND	96.6	70-124			
1,3-Dichloropropane	488.0	10.0	ug/L	504	ND	96.8	80-127			
2-Hexanone (MBK)	1090	50.0	ug/L	1000	ND	109	57-150			
2-Hexanone (MBK)	1090	50.0	ug/L	1000	ND	109	53-141			
Dibromochloromethane	486.1	10.0	ug/L	503	ND	96.6	80-120			
Dibromochloromethane	486.1	10.0	ug/L	503	ND	96.6	74-122			
1,2-Dibromoethane	495.9	10.0	ug/L	504	ND	98.3	67-125			
1,2-Dibromoethane	495.9	10.0	ug/L	504	ND	98.3	66-127			
Chlorobenzene	491.8	10.0	ug/L	502	ND	97.9	81-113			
Chlorobenzene	491.8	10.0	ug/L	502	ND	97.9	76-116			
1,1,1,2-Tetrachloroethane	485.6	10.0	ug/L	504	ND	96.3	80-119			
1,1,1,2-Tetrachloroethane	485.6	10.0	ug/L	504	ND	96.3	77-121			
Ethylbenzene	507.9	10.0	ug/L	505	ND	101	78-114			
Ethylbenzene	507.9	10.0	ug/L	505	ND	101	73-124			
Xylenes, total	1537	20.0	ug/L	1510	ND	102	77-116			
Xylenes, total	1537	20.0	ug/L	1510	ND	102	75-123			
Styrene	517.3	10.0	ug/L	504	ND	103	78-114			
Styrene	517.3	10.0	ug/L	504	ND	103	70-120			
Bromoform	470.4	10.0	ug/L	502	ND	93.7	69-125			
Bromoform	470.4	10.0	ug/L	502	ND	93.7	70-124			
1,2,3-Trichloropropane	496.6	10.0	ug/L	504	ND	98.5	72-125			
1,2,3-Trichloropropane	496.6	10.0	ug/L	504	ND	98.5	62-135			
trans-1,4-Dichloro-2-butene	1006	50.0	ug/L	1000	ND	100	48-131			
trans-1,4-Dichloro-2-butene	1006	50.0	ug/L	1000	ND	100	50-120			
1,1,2,2-Tetrachloroethane	498.5	10.0	ug/L	502	ND	99.3	51-138			
1,1,2,2-Tetrachloroethane	498.5	10.0	ug/L	502	ND	99.3	63-126			
1,3-Dichlorobenzene	486.9	10.0	ug/L	503	ND	96.8	70-122			
1,4-Dichlorobenzene	483.9	10.0	ug/L	502	ND	96.4	70-124			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike (1HD1572-MS1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:02								
1,4-Dichlorobenzene	483.9	10.0	ug/L	502	ND	96.4	72-119			
1,2-Dichlorobenzene	481.6	10.0	ug/L	502	ND	96.0	68-123			
1,2-Dichlorobenzene	481.6	10.0	ug/L	502	ND	96.0	71-117			
1,2-Dibromo-3-chloropropane	485.6	10.0	ug/L	505	ND	96.2	46-149			
1,2-Dibromo-3-chloropropane	485.6	50.0	ug/L	505	ND	96.2	49-134			
1,2,4-Trichlorobenzene	465.3	10.0	ug/L	505	ND	92.2	60-137			
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.2*	*80-126*			
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.2*	*80-126*			
Surrogate: Dibromofluoromethane	*467*		ug/L	*502*		*93.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*474*		ug/L	*501*		*94.7*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*474*		ug/L	*501*		*94.7*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*474*		ug/L	*501*		*94.7*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*474*		ug/L	*501*		*94.7*	*61-142*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*87-116*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*87-116*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*87-116*			
Surrogate: Toluene-d8	*499*		ug/L	*504*		*99.0*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.6*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.6*	*80-116*			
Matrix Spike Dup (1HD1572-MSD1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:25								
Dichlorodifluoromethane	295.2	10.0	ug/L	300	ND	98.3	47-137	0.680	20	
Chloromethane	264.9	10.0	ug/L	300	ND	88.2	49-154	4.39	25	
Chloromethane	264.9	10.0	ug/L	300	ND	88.2	61-152	4.39	26	
Vinyl Chloride	291.2	10.0	ug/L	300	ND	97.0	61-152	4.40	24	
Vinyl Chloride	291.2	10.0	ug/L	300	ND	97.0	66-149	4.40	23	
Bromomethane	227.3	10.0	ug/L	301	ND	75.5	47-168	7.82	30	
Bromomethane	227.3	10.0	ug/L	301	ND	75.5	43-171	7.82	29	
Chloroethane	296.6	10.0	ug/L	300	ND	98.8	61-148	3.97	29	
Chloroethane	296.6	10.0	ug/L	300	ND	98.8	69-148	3.97	25	
Trichlorofluoromethane	287.3	10.0	ug/L	300	ND	95.8	73-147	1.55	24	
Trichlorofluoromethane	287.3	10.0	ug/L	300	ND	95.8	62-163	1.55	25	
Acrolein	346.5	100	ug/L	505	ND	68.6	20-164	24.0	24	
1,1-Dichloroethylene	456.6	10.0	ug/L	501	ND	91.1	68-153	3.51	21	
1,1-Dichloroethylene	456.6	10.0	ug/L	501	ND	91.1	70-148	3.51	22	
Acetone	783.7	100	ug/L	1000	ND	78.3	45-175	3.78	23	
Acetone	783.7	100	ug/L	1000	ND	78.3	45-173	3.78	30	
Methyl Iodide	801.1	20.0	ug/L	1000	ND	80.0	79-167	8.33	14	
Methyl Iodide	801.1	10.0	ug/L	1000	ND	80.0	62-167	8.33	24	
Carbon Disulfide	902.2	10.0	ug/L	1000	ND	90.1	72-156	3.88	19	
Carbon Disulfide	902.2	10.0	ug/L	1000	ND	90.1	71-163	3.88	22	
Acetonitrile	806.8	100	ug/L	1000	ND	80.6	38-166	0.0991	20	
Methylene Chloride	450.2	50.0	ug/L	502	ND	89.7	64-143	3.38	19	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HD1572-MSD1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:25								
Methylene Chloride	450.2	50.0	ug/L	502	ND	89.7	69-140	3.38	19	
Acrylonitrile	464.6	50.0	ug/L	500	ND	92.9	58-151	2.63	15	
Acrylonitrile	464.6	50.0	ug/L	500	ND	92.9	58-151	2.63	15	
trans-1,2-Dichloroethylene	454.5	10.0	ug/L	503	ND	90.4	65-145	4.68	18	
trans-1,2-Dichloroethylene	454.5	10.0	ug/L	503	ND	90.4	69-144	4.68	22	
1,1-Dichloroethane	450.4	10.0	ug/L	503	ND	89.6	68-136	4.22	17	
1,1-Dichloroethane	450.4	10.0	ug/L	503	ND	89.6	70-138	4.22	20	
Vinyl Acetate	899.2	50.0	ug/L	1620	ND	55.7	58-143	6.05	14	QM-05
Vinyl Acetate	899.2	50.0	ug/L	1620	ND	55.7	58-142	6.05	24	QM-05
2,2-Dichloropropane	400.7	10.0	ug/L	504	ND	79.5	50-118	4.32	17	
cis-1,2-Dichloroethylene	527.8	10.0	ug/L	505	ND	105	67-153	3.46	22	
cis-1,2-Dichloroethylene	527.8	10.0	ug/L	505	ND	105	68-151	3.46	22	
2-Butanone (MEK)	969.7	50.0	ug/L	1000	ND	96.8	52-159	2.78	28	
2-Butanone (MEK)	969.7	100	ug/L	1000	ND	96.8	50-160	2.78	23	
Bromochloromethane	457.9	10.0	ug/L	504	ND	90.8	61-151	2.46	27	
Bromochloromethane	457.9	10.0	ug/L	504	ND	90.8	65-143	2.46	22	
Chloroform	436.1	10.0	ug/L	502	ND	86.9	77-132	4.35	17	
Chloroform	436.1	10.0	ug/L	502	ND	86.9	71-143	4.35	21	
1,1,1-Trichloroethane	444.5	10.0	ug/L	503	ND	88.3	71-118	3.58	15	
1,1,1-Trichloroethane	444.5	10.0	ug/L	503	ND	88.3	63-133	3.58	23	
1,1-Dichloropropene	451.3	10.0	ug/L	504	ND	89.5	82-128	4.40	16	
Carbon Tetrachloride	452.8	10.0	ug/L	502	ND	90.2	71-133	3.86	14	
Carbon Tetrachloride	452.8	10.0	ug/L	502	ND	90.2	63-142	3.86	22	
Benzene	466.8	10.0	ug/L	504	ND	92.5	81-125	4.40	12	
Benzene	466.8	10.0	ug/L	504	ND	92.5	69-133	4.40	18	
1,2-Dichloroethane	450.5	10.0	ug/L	502	ND	89.8	75-125	2.56	13	
1,2-Dichloroethane	450.5	10.0	ug/L	502	ND	89.8	63-138	2.56	20	
Trichloroethylene	464.9	10.0	ug/L	503	ND	92.3	83-120	4.48	11	
Trichloroethylene	464.9	10.0	ug/L	503	ND	92.3	71-133	4.48	23	
1,2-Dichloropropane	471.3	10.0	ug/L	502	ND	93.8	80-124	3.17	11	
1,2-Dichloropropane	471.3	10.0	ug/L	502	ND	93.8	69-132	3.17	20	
Dibromomethane	472.6	10.0	ug/L	505	ND	93.6	84-131	2.53	13	
Dibromomethane	472.6	10.0	ug/L	505	ND	93.6	70-147	2.53	22	
Bromodichloromethane	464.0	10.0	ug/L	503	ND	92.3	79-118	2.95	11	
Bromodichloromethane	464.0	10.0	ug/L	503	ND	92.3	67-130	2.95	21	
cis-1,3-Dichloropropene	463.0	10.0	ug/L	502	ND	92.2	75-116	2.85	11	
cis-1,3-Dichloropropene	463.0	10.0	ug/L	502	ND	92.2	61-126	2.85	21	
4-Methyl-2-pentanone (MIBK)	1024	50.0	ug/L	1000	ND	102	65-149	3.14	14	
4-Methyl-2-pentanone (MIBK)	1024	50.0	ug/L	1000	ND	102	55-147	3.14	23	
Toluene	456.5	10.0	ug/L	505	ND	90.4	82-123	4.89	12	
Toluene	456.5	10.0	ug/L	505	ND	90.4	71-133	4.89	19	
trans-1,3-Dichloropropene	470.2	10.0	ug/L	503	ND	93.5	75-117	1.58	11	
trans-1,3-Dichloropropene	470.2	10.0	ug/L	503	ND	93.5	63-124	1.58	21	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HD1572-MSD1)	**Source: 1HD1698-01**	Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:25								
Ethyl Methacrylate	1035	100	ug/L	1000	ND	103	73-135	3.06	10	
1,1,2-Trichloroethane	474.2	10.0	ug/L	502	ND	94.4	77-122	3.07	11	
1,1,2-Trichloroethane	474.2	10.0	ug/L	502	ND	94.4	69-133	3.07	19	
Tetrachloroethylene	463.0	10.0	ug/L	502	ND	92.2	74-120	4.66	17	
Tetrachloroethylene	463.0	10.0	ug/L	502	ND	92.2	70-124	4.66	24	
1,3-Dichloropropane	481.5	10.0	ug/L	504	ND	95.5	80-127	1.34	13	
2-Hexanone (MBK)	1065	50.0	ug/L	1000	ND	106	57-150	2.32	17	
2-Hexanone (MBK)	1065	50.0	ug/L	1000	ND	106	53-141	2.32	24	
Dibromochloromethane	477.4	10.0	ug/L	503	ND	94.8	80-120	1.81	12	
Dibromochloromethane	477.4	10.0	ug/L	503	ND	94.8	74-122	1.81	21	
1,2-Dibromoethane	484.9	10.0	ug/L	504	ND	96.1	67-125	2.24	12	
1,2-Dibromoethane	484.9	10.0	ug/L	504	ND	96.1	66-127	2.24	23	
Chlorobenzene	469.2	10.0	ug/L	502	ND	93.4	81-113	4.70	14	
Chlorobenzene	469.2	10.0	ug/L	502	ND	93.4	76-116	4.70	21	
1,1,1,2-Tetrachloroethane	469.9	10.0	ug/L	504	ND	93.2	80-119	3.29	15	
1,1,1,2-Tetrachloroethane	469.9	10.0	ug/L	504	ND	93.2	77-121	3.29	25	
Ethylbenzene	484.5	10.0	ug/L	505	ND	96.0	78-114	4.72	14	
Ethylbenzene	484.5	10.0	ug/L	505	ND	96.0	73-124	4.72	20	
Xylenes, total	1462	20.0	ug/L	1510	ND	96.6	77-116	4.97	13	
Xylenes, total	1462	20.0	ug/L	1510	ND	96.6	75-123	4.97	20	
Styrene	496.6	10.0	ug/L	504	ND	98.5	78-114	4.08	12	
Styrene	496.6	10.0	ug/L	504	ND	98.5	70-120	4.08	23	
Bromoform	466.8	10.0	ug/L	502	ND	92.9	69-125	0.768	14	
Bromoform	466.8	10.0	ug/L	502	ND	92.9	70-124	0.768	22	
1,2,3-Trichloropropane	479.7	10.0	ug/L	504	ND	95.1	72-125	3.46	18	
1,2,3-Trichloropropane	479.7	10.0	ug/L	504	ND	95.1	62-135	3.46	28	
trans-1,4-Dichloro-2-butene	990.8	50.0	ug/L	1000	ND	98.8	48-131	1.48	17	
trans-1,4-Dichloro-2-butene	990.8	50.0	ug/L	1000	ND	98.8	50-120	1.48	26	
1,1,2,2-Tetrachloroethane	484.6	10.0	ug/L	502	ND	96.5	51-138	2.83	30	
1,1,2,2-Tetrachloroethane	484.6	10.0	ug/L	502	ND	96.5	63-126	2.83	24	
1,3-Dichlorobenzene	467.4	10.0	ug/L	503	ND	92.9	70-122	4.09	30	
1,4-Dichlorobenzene	463.5	10.0	ug/L	502	ND	92.4	70-124	4.31	28	
1,4-Dichlorobenzene	463.5	10.0	ug/L	502	ND	92.4	72-119	4.31	24	
1,2-Dichlorobenzene	466.7	10.0	ug/L	502	ND	93.0	68-123	3.14	29	
1,2-Dichlorobenzene	466.7	10.0	ug/L	502	ND	93.0	71-117	3.14	24	
1,2-Dibromo-3-chloropropane	484.3	10.0	ug/L	505	ND	95.9	46-149	0.268	30	
1,2-Dibromo-3-chloropropane	484.3	50.0	ug/L	505	ND	95.9	49-134	0.268	28	
1,2,4-Trichlorobenzene	453.3	10.0	ug/L	505	ND	89.8	60-137	2.61	30	
Surrogate: Dibromofluoromethane	*471*		ug/L	*502*		*93.8*	*80-126*			
Surrogate: Dibromofluoromethane	*471*		ug/L	*502*		*93.8*	*80-126*			
Surrogate: Dibromofluoromethane	*471*		ug/L	*502*		*93.8*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*473*		ug/L	*501*		*94.4*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*473*		ug/L	*501*		*94.4*	*63-138*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1572 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HD1572-MSD1)	**Source: 1HD1698-01**		Prepared: 04/25/24 00:00 Analyzed: 04/25/24 19:25							
Surrogate: 1,2-Dichloroethane-d4	*473*		ug/L	*501*		*94.4*	*63-138*			
Surrogate: 1,2-Dichloroethane-d4	*473*		ug/L	*501*		*94.4*	*61-142*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*87-116*			
Surrogate: Toluene-d8	*498*		ug/L	*504*		*98.8*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.8*	*85-111*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*501*		*99.8*	*80-116*			
Batch 1HE0002 - EPA 5030B - EPA 8260B										
Blank (1HE0002-BLK1)			Prepared: 04/30/24 00:00 Analyzed: 04/30/24 10:54							
Allyl chloride	<1.0	1.0	ug/L							
Chloroprene	<1.0	1.0	ug/L							
Methacrylonitrile	<1.0	1.0	ug/L							
Methyl Methacrylate	<1.0	1.0	ug/L							
Propionitrile	<10.0	10.0	ug/L							
Surrogate: Dibromofluoromethane	*47.0*		ug/L	*50.2*		*93.7*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*47.2*		ug/L	*50.1*		*94.2*	*63-138*			
Surrogate: Toluene-d8	*49.7*		ug/L	*50.4*		*98.6*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*50.5*		ug/L	*50.1*		*101*	*85-111*			
LCS (1HE0002-BS1)			Prepared: 04/30/24 00:00 Analyzed: 04/30/24 09:46							
Allyl chloride	31.64	1.0	ug/L	35.7		88.5	76-134			
Chloroprene	51.22	1.0	ug/L	50.0		102	74-141			
Methacrylonitrile	58.08	1.0	ug/L	64.3		90.4	73-143			
Methyl Methacrylate	56.06	1.0	ug/L	57.3		97.8	72-123			
Propionitrile	72.70	10.0	ug/L	50.0		145	50-151			
Surrogate: Dibromofluoromethane	*46.5*		ug/L	*50.2*		*92.6*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*46.8*		ug/L	*50.1*		*93.4*	*63-138*			
Surrogate: Toluene-d8	*49.9*		ug/L	*50.4*		*99.1*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*50.9*		ug/L	*50.1*		*101*	*85-111*			
LCS Dup (1HE0002-BSD1)			Prepared: 04/30/24 00:00 Analyzed: 04/30/24 10:09							
Allyl chloride	31.58	1.0	ug/L	35.7		88.4	76-134	0.190	30	
Chloroprene	50.69	1.0	ug/L	50.0		101	74-141	1.04	30	
Methacrylonitrile	53.55	1.0	ug/L	64.3		83.3	73-143	8.12	30	
Methyl Methacrylate	55.42	1.0	ug/L	57.3		96.7	72-123	1.15	30	
Propionitrile	63.24	10.0	ug/L	50.0		126	50-151	13.9	30	
Surrogate: Dibromofluoromethane	*46.6*		ug/L	*50.2*		*93.0*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*45.9*		ug/L	*50.1*		*91.7*	*63-138*			
Surrogate: Toluene-d8	*50.2*		ug/L	*50.4*		*99.6*	*87-116*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HE0002 - EPA 5030B - EPA 8260B										
LCS Dup (1HE0002-BSD1)			Prepared: 04/30/24 00:00 Analyzed: 04/30/24 10:09							
Surrogate: 4-Bromofluorobenzene	*50.7*		ug/L	*50.1*		*101*	*85-111*			

Determination of General Solvents	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1672 - Semi-Vol GC - EPA 8015C										
Blank (1HD1672-BLK1)			Prepared: 04/29/24 13:36 Analyzed: 04/29/24 21:26							
Isobutanol	<1.0	1.0	mg/L							
LCS (1HD1672-BS1)			Prepared: 04/29/24 13:36 Analyzed: 04/29/24 19:20							
Isobutanol	27.38	1.0	mg/L	26.0		105	40-135			
Matrix Spike (1HD1672-MS1)	**Source: 1HD1461-02**		Prepared: 04/29/24 13:36 Analyzed: 04/30/24 02:42							
Isobutanol	25.96	1.0	mg/L	26.0	ND	99.9	63-135			
Matrix Spike Dup (1HD1672-MSD1)	**Source: 1HD1461-02**		Prepared: 04/29/24 13:36 Analyzed: 04/30/24 03:13							
Isobutanol	25.02	1.0	mg/L	26.0	ND	96.2	63-135	3.69	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD1525-BLK1)			Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:09							
N-Nitrosodimethylamine	<8	8	ug/L							
Methyl Methanesulfonate	<8	8	ug/L							
N-Nitrosodiethylamine	<8	8	ug/L							
N-Nitrosomethylethylamine	<8	8	ug/L							
Ethyl Methanesulfonate	<8	8	ug/L							
Phenol	<8	8	ug/L							
Bis(2-Chloroethyl) Ether	<8	8	ug/L							
2-Chlorophenol	<8	8	ug/L							
Benzyl Alcohol	<8	8	ug/L							
2-Methylphenol (o-Cresol)	<8	8	ug/L							
Bis[2-Chloroisopropyl]ether	<8	8	ug/L							
n-Nitroso-di-n-propylamine	<8	8	ug/L							
N-Nitrosopyrrolidine	<8	8	ug/L							
Acetophenone	<8	8	ug/L							
o-Toluidine	<8	8	ug/L							
(3 & 4)-Methylphenol	<8	8	ug/L							
Hexachloroethane	<8	8	ug/L							
Nitrobenzene	<8	8	ug/L							
N-Nitrosopiperidine	<8	8	ug/L							
Isophorone	<8	8	ug/L							

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD1525-BLK1)			Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:09							
2-Nitrophenol	<8	8	ug/L							
2,4-Dimethylphenol	<8	8	ug/L							
Bis (2-Chloroethoxy) Methane	<8	8	ug/L							
2,4-Dichlorophenol	<8	8	ug/L							
Naphthalene	<8	8	ug/L							
4-Chloroaniline	9.0	8	ug/L							QB-02
2,6-Dichlorophenol	<8	8	ug/L							
Hexachloropropene	<8	8	ug/L							
Hexachlorobutadiene	<8	8	ug/L							
N-Nitrosodi-n-butylamine	<8	8	ug/L							
1,4-Phenylenediamine	<8	8	ug/L							
4-Chloro-3-methylphenol	<8	8	ug/L							
2-Methylnaphthalene	<8	8	ug/L							
Isosafrole	<8	8	ug/L							
1,2,4,5-Tetrachlorobenzene	<8	8	ug/L							
Hexachlorocyclopentadiene	<8	8	ug/L							
2,4,6-Trichlorophenol	<8	8	ug/L							
2,4,5-Trichlorophenol	<8	8	ug/L							
Safrole	<8	8	ug/L							
2-Chloronaphthalene	<8	8	ug/L							
2-Nitroaniline	<8	8	ug/L							
1,4-Naphthoquinone	<8	8	ug/L							
Dimethylphthalate	<8	8	ug/L							
1,3-Dinitrobenzene	<8	8	ug/L							
1,2-Dinitrobenzene	<8	8	ug/L							
2,6-Dinitrotoluene	<8	8	ug/L							
Acenaphthylene	<8	8	ug/L							
3-Nitroaniline	16.5	8	ug/L							QB-02
Acenaphthene	<8	8	ug/L							
2,4-Dinitrophenol	<8	8	ug/L							
4-Nitrophenol	<8	8	ug/L							
Dibenzofuran	<8	8	ug/L							
2,4-Dinitrotoluene	<8	8	ug/L							
2,3,4,6-Tetrachlorophenol	<8	8	ug/L							
Pentachlorobenzene	<8	8	ug/L							
1-Naphthylamine	<8	8	ug/L							
2-Naphthylamine	<8	8	ug/L							
Diethyl Phthalate	<8	8	ug/L							
Fluorene	<8	8	ug/L							
4-Chlorophenyl Phenyl Ether	<8	8	ug/L							
4-Nitroaniline	11.0	8	ug/L							QB-02
5-Nitro-o-toluidine	30.6	8	ug/L							QB-02

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD1525-BLK1)			Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:09							
4,6-Dinitro-2-methylphenol	<8	8	ug/L							
N-Nitrosodiphenylamine	<8	8	ug/L							
Diphenylamine	<8	8	ug/L							
Azobenzene	<8	8	ug/L							
Diallate	<8	8	ug/L							
1,3,5-Trinitrobenzene	<8	8	ug/L							
Phenacetin	<8	8	ug/L							
4-Bromophenyl Phenyl Ether	<8	8	ug/L							
4-Aminobiphenyl	<8	8	ug/L							
Pentachlorophenol	<8	8	ug/L							
Pronamide	<8	8	ug/L							
Pentachloronitrobenzene (PCNB)	<8	8	ug/L							
Phenanthrene	<8	8	ug/L							
Anthracene	<8	8	ug/L							
Di-n-butyl Phthalate	<8	8	ug/L							
Methapyrilene	<8	8	ug/L							
Fluoranthene	<8	8	ug/L							
Isodrin	<8	8	ug/L							
Chlorobenzilate	<8	8	ug/L							
Pyrene	<8	8	ug/L							
p-(Dimethylamino)azobenzene	<8	8	ug/L							
3,3-Dimethylbenzidine	<8	8	ug/L							
Butyl Benzyl Phthalate	<8	8	ug/L							
Benzo(a)anthracene	<8	8	ug/L							
Chrysene	<8	8	ug/L							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Kepone	<8	8	ug/L							
3,3´-Dichlorobenzidine	<8	8	ug/L							
2-Acetylaminofluorene	<8	8	ug/L							
Di-n-octyl Phthalate	<8	8	ug/L							
Benzo(b)Fluoranthene	<8	8	ug/L							
7,12-Dimethylbenz [a] anthracene	<8	8	ug/L							
Benzo(k)Fluoranthene	<8	8	ug/L							
Benzo(a)Pyrene	<8	8	ug/L							
3-Methylcholanthrene	<8	8	ug/L							
Dibenzo(a,h)anthracene	<8	8	ug/L							
Indeno(1,2,3-cd)Pyrene	<8	8	ug/L							
Benzo(g,h,i)perylene	<8	8	ug/L							
Surrogate: 2-Fluorophenol	*22.2*		ug/L	*29.6*		*75.0*	*24-136*			
Surrogate: Phenol-d6	*23.8*		ug/L	*30.5*		*78.2*	*15-140*			
Surrogate: Nitrobenzene-d5	*25.0*		ug/L	*30.0*		*83.3*	*29-130*			
Surrogate: 2-Fluorobiphenyl	*23.2*		ug/L	*28.8*		*80.4*	*23-113*			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
Blank (1HD1525-BLK1)				Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:09						
Surrogate: 2,4,6-Tribromophenol	*26.1*		ug/L	*29.7*		*87.9*	*15-139*			
Surrogate: Terphenyl-dl4	*30.7*		ug/L	*28.8*		*106*	*27-141*			
LCS (1HD1525-BS1)				Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:34						
N-Nitrosodimethylamine	18.4	8	ug/L	21.4		85.8	36-138			
Methyl Methanesulfonate	16.8	8	ug/L	25.0		67.2	22-114			
N-Nitrosodiethylamine	40.9	8	ug/L	50.0		81.9	52-114			
N-Nitrosomethylethylamine	42.1	8	ug/L	50.0		84.1	36-120			
Ethyl Methanesulfonate	19.1	8	ug/L	25.0		76.6	46-110			
Phenol	20.4	8	ug/L	21.4		95.2	50-112			
Bis(2-Chloroethyl) Ether	25.8	8	ug/L	21.4		120	39-151			
2-Chlorophenol	20.7	8	ug/L	21.4		96.6	56-116			
Benzyl Alcohol	20.0	8	ug/L	21.4		93.7	13-158			
2-Methylphenol (o-Cresol)	21.8	8	ug/L	21.4		102	53-131			
Bis[2-Chloroisopropyl]ether	20.9	8	ug/L	21.4		97.6	50-121			
n-Nitroso-di-n-propylamine	22.8	8	ug/L	21.4		107	50-138			
N-Nitrosopyrrolidine	42.1	8	ug/L	50.0		84.1	31-118			
Acetophenone	19.4	8	ug/L	25.0		77.8	45-104			
o-Toluidine	22.6	8	ug/L	50.0		45.2	10-163			
(3 & 4)-Methylphenol	21.8	8	ug/L	21.4		102	30-164			
Hexachloroethane	12.4	8	ug/L	21.4		58.1	10-110			
Nitrobenzene	23.2	8	ug/L	21.4		108	47-134			
N-Nitrosopiperidine	41.8	8	ug/L	50.0		83.7	51-122			
Isophorone	23.8	8	ug/L	21.4		111	54-128			
2-Nitrophenol	23.6	8	ug/L	21.4		110	54-117			
2,4-Dimethylphenol	23.0	8	ug/L	21.4		107	52-118			
Bis (2-Chloroethoxy) Methane	21.6	8	ug/L	21.4		101	13-132			
2,4-Dichlorophenol	22.6	8	ug/L	21.4		105	58-114			
Naphthalene	19.6	8	ug/L	21.4		91.5	37-116			
4-Chloroaniline	<8	8	ug/L	21.4		36.4	10-198			
2,6-Dichlorophenol	20.3	8	ug/L	25.0		81.2	52-129			
Hexachloropropene	<8	8	ug/L	25.0		26.5	14-110			
Hexachlorobutadiene	13.3	8	ug/L	21.4		62.1	14-110			
N-Nitrosodi-n-butylamine	51.7	8	ug/L	50.0		103	40-135			
4-Chloro-3-methylphenol	23.8	8	ug/L	21.4		111	57-136			
2-Methylnaphthalene	20.3	8	ug/L	21.4		94.7	44-111			
Isosafrole	18.3	8	ug/L	25.0		73.3	49-107			
1,2,4,5-Tetrachlorobenzene	13.9	8	ug/L	25.0		55.4	42-110			
Hexachlorocyclopentadiene	11.3	8	ug/L	21.4		52.7	11-110			
2,4,6-Trichlorophenol	22.1	8	ug/L	21.4		103	55-120			
2,4,5-Trichlorophenol	24.5	8	ug/L	21.4		114	55-121			
Safrole	18.7	8	ug/L	25.0		74.8	40-118			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HD1525-BS1)			Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:34							
2-Chloronaphthalene	14.8	8	ug/L	21.4		69.4	47-127			
2-Nitroaniline	25.3	8	ug/L	21.4		118	36-143			
1,4-Naphthoquinone	23.0	8	ug/L	25.0		91.8	43-152			
Dimethylphthalate	24.4	8	ug/L	21.4		114	59-128			
1,3-Dinitrobenzene	24.8	8	ug/L	21.4		116	63-125			
1,2-Dinitrobenzene	24.2	8	ug/L	21.4		113	63-123			
2,6-Dinitrotoluene	23.8	8	ug/L	21.4		111	60-127			
Acenaphthylene	22.0	8	ug/L	21.4		103	49-113			
3-Nitroaniline	16.0	8	ug/L	21.4		74.7	10-162			
Acenaphthene	22.0	8	ug/L	21.4		103	50-119			
2,4-Dinitrophenol	22.8	8	ug/L	21.4		107	27-157			
4-Nitrophenol	26.0	8	ug/L	21.4		122	49-154			
Dibenzofuran	23.0	8	ug/L	21.4		108	56-121			
2,4-Dinitrotoluene	23.4	8	ug/L	21.4		109	53-138			
2,3,4,6-Tetrachlorophenol	23.6	8	ug/L	21.4		110	47-132			
Pentachlorobenzene	19.0	8	ug/L	25.0		75.8	41-125			
1-Naphthylamine	14.9	8	ug/L	50.0		29.8	10-152			
2-Naphthylamine	<8	8	ug/L	50.0		9.88	19-128			QS-03
Diethyl Phthalate	25.0	8	ug/L	21.4		117	53-138			
Fluorene	23.4	8	ug/L	21.4		110	54-125			
4-Chlorophenyl Phenyl Ether	22.6	8	ug/L	21.4		106	51-122			
4-Nitroaniline	25.0	8	ug/L	21.4		117	10-136			
5-Nitro-o-toluidine	40.5	8	ug/L	50.0		80.9	10-145			
4,6-Dinitro-2-methylphenol	24.1	8	ug/L	21.4		113	49-137			
Diphenylamine	23.5	8	ug/L	21.4		110	35-151			
Azobenzene	22.6	8	ug/L	21.4		106	16-156			
Diallate	22.2	8	ug/L	25.0		88.6	54-132			
1,3,5-Trinitrobenzene	22.5	8	ug/L	25.0		90.1	57-173			
Phenacetin	22.8	8	ug/L	25.0		91.1	55-121			
4-Bromophenyl Phenyl Ether	22.9	8	ug/L	21.4		107	53-122			
Pentachlorophenol	23.8	8	ug/L	21.4		111	18-152			
Pronamide	20.3	8	ug/L	25.0		81.2	42-122			
Pentachloronitrobenzene (PCNB)	23.2	8	ug/L	25.0		92.9	50-128			
Phenanthrene	25.4	8	ug/L	21.4		119	59-131			
Anthracene	25.1	8	ug/L	21.4		117	59-127			
Di-n-butyl Phthalate	28.8	8	ug/L	21.4		134	64-148			
Fluoranthene	26.2	8	ug/L	21.4		123	62-132			
Isodrin	18.3	8	ug/L	25.0		73.3	46-130			
Chlorobenzilate	21.6	8	ug/L	25.0		86.5	48-150			
Pyrene	26.2	8	ug/L	21.4		122	58-135			
p-(Dimethylamino)azobenzene	43.7	8	ug/L	50.0		87.3	28-146			
Butyl Benzyl Phthalate	25.6	8	ug/L	21.4		120	52-150			

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
LCS (1HD1525-BS1)				Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:34						
Benzo(a)anthracene	24.4	8	ug/L	21.4		114	58-131			
Chrysene	25.1	8	ug/L	21.4		117	59-131			
Bis(2-Ethylhexyl) Phthalate	29.5	6	ug/L	21.4		138	33-184			
Kepone	13.6	8	ug/L	25.0		54.5	10-134			
2-Acetylaminofluorene	51.8	8	ug/L	50.0		104	47-166			
Di-n-octyl Phthalate	27.4	8	ug/L	21.4		128	48-162			
Benzo(b)Fluoranthene	25.1	8	ug/L	21.4		117	50-146			
7,12-Dimethylbenz [a] anthracene	20.5	8	ug/L	25.0		81.9	22-155			
Benzo(k)Fluoranthene	25.7	8	ug/L	21.4		120	54-144			
Benzo(a)Pyrene	24.4	8	ug/L	21.4		114	39-148			
3-Methylcholanthrene	19.1	8	ug/L	25.0		76.2	34-118			
Dibenzo(a,h)anthracene	25.9	8	ug/L	21.4		121	46-153			
Indeno(1,2,3-cd)Pyrene	25.9	8	ug/L	21.4		121	48-152			
Benzo(g,h,i)perylene	26.4	8	ug/L	21.4		123	47-161			
Surrogate: 2-Fluorophenol	*22.3*		ug/L	*29.6*		*75.4*	*24-136*			
Surrogate: Phenol-d6	*24.8*		ug/L	*30.5*		*81.3*	*15-140*			
Surrogate: Nitrobenzene-d5	*28.6*		ug/L	*30.0*		*95.2*	*38-115*			
Surrogate: 2-Fluorobiphenyl	*26.7*		ug/L	*28.8*		*92.6*	*33-110*			
Surrogate: 2,4,6-Tribromophenol	*29.4*		ug/L	*29.7*		*99.0*	*15-139*			
Surrogate: Terphenyl-dl4	*32.7*		ug/L	*28.8*		*114*	*30-142*			
LCS Dup (1HD1525-BSD1)				Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:59						
N-Nitrosodimethylamine	23.2	8	ug/L	21.4		108	36-138	23.3	30	
Methyl Methanesulfonate	18.4	8	ug/L	25.0		73.4	22-114	8.87	23	
N-Nitrosodiethylamine	41.8	8	ug/L	50.0		83.6	52-114	2.13	18	
N-Nitrosomethylethylamine	47.6	8	ug/L	50.0		95.3	36-120	12.4	22	
Ethyl Methanesulfonate	19.9	8	ug/L	25.0		79.8	46-110	4.09	24	
Phenol	22.0	8	ug/L	21.4		103	50-112	7.56	28	
Bis(2-Chloroethyl) Ether	21.7	8	ug/L	21.4		101	39-151	17.0	30	
2-Chlorophenol	21.8	8	ug/L	21.4		102	56-116	5.55	22	
Benzyl Alcohol	23.0	8	ug/L	21.4		107	13-158	13.5	30	
2-Methylphenol (o-Cresol)	22.8	8	ug/L	21.4		107	53-131	4.34	25	
Bis[2-Chloroisopropyl]ether	21.7	8	ug/L	21.4		101	50-121	3.80	25	
n-Nitroso-di-n-propylamine	23.0	8	ug/L	21.4		108	50-138	0.871	30	
N-Nitrosopyrrolidine	41.5	8	ug/L	50.0		82.9	31-118	1.44	30	
Acetophenone	19.9	8	ug/L	25.0		79.5	45-104	2.14	30	
o-Toluidine	15.7	8	ug/L	50.0		31.5	10-163	35.8	30	QR-02
(3 & 4)-Methylphenol	22.6	8	ug/L	21.4		106	30-164	3.61	30	
Hexachloroethane	14.8	8	ug/L	21.4		69.1	10-110	17.3	37	
Nitrobenzene	24.5	8	ug/L	21.4		115	47-134	5.49	28	
N-Nitrosopiperidine	42.4	8	ug/L	50.0		84.7	51-122	1.26	30	
Isophorone	23.9	8	ug/L	21.4		112	54-128	0.546	22	
2-Nitrophenol	25.1	8	ug/L	21.4		117	54-117	6.03	21	QS-02

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C										
LCS Dup (1HD1525-BSD1)			Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:59							
2,4-Dimethylphenol	23.5	8	ug/L	21.4		110	52-118	2.20	23	
Bis (2-Chloroethoxy) Methane	21.6	8	ug/L	21.4		101	13-132	0.139	30	
2,4-Dichlorophenol	23.2	8	ug/L	21.4		109	58-114	3.01	20	
Naphthalene	21.1	8	ug/L	21.4		98.4	37-116	7.33	17	
4-Chloroaniline	<8	8	ug/L	21.4		17.8	10-198	68.6	30	QR-02
2,6-Dichlorophenol	20.7	8	ug/L	25.0		82.9	52-129	2.10	16	
Hexachloropropene	<8	8	ug/L	25.0		29.3	14-110	10.0	29	
Hexachlorobutadiene	15.0	8	ug/L	21.4		69.9	14-110	11.8	29	
N-Nitrosodi-n-butylamine	42.0	8	ug/L	50.0		84.1	40-135	20.6	23	
4-Chloro-3-methylphenol	24.0	8	ug/L	21.4		112	57-136	0.585	18	
2-Methylnaphthalene	21.3	8	ug/L	21.4		99.4	44-111	4.86	20	
Isosafrole	20.3	8	ug/L	25.0		81.2	49-107	10.2	12	
1,2,4,5-Tetrachlorobenzene	15.4	8	ug/L	25.0		61.4	42-110	10.2	30	
Hexachlorocyclopentadiene	12.9	8	ug/L	21.4		60.1	11-110	13.2	29	
2,4,6-Trichlorophenol	23.8	8	ug/L	21.4		111	55-120	7.38	15	
2,4,5-Trichlorophenol	24.7	8	ug/L	21.4		115	55-121	0.936	16	
Safrole	19.2	8	ug/L	25.0		76.8	40-118	2.64	30	
2-Chloronaphthalene	14.5	8	ug/L	21.4		67.7	47-127	2.46	17	
2-Nitroaniline	26.3	8	ug/L	21.4		123	36-143	3.68	30	
1,4-Naphthoquinone	32.6	8	ug/L	25.0		130	43-152	34.7	30	QR-02
Dimethylphthalate	24.2	8	ug/L	21.4		113	59-128	0.453	15	
1,3-Dinitrobenzene	26.7	8	ug/L	21.4		125	63-125	7.58	14	
1,2-Dinitrobenzene	25.3	8	ug/L	21.4		118	63-123	4.40	18	
2,6-Dinitrotoluene	24.0	8	ug/L	21.4		112	60-127	0.754	13	
Acenaphthylene	22.7	8	ug/L	21.4		106	49-113	2.82	23	
3-Nitroaniline	10.9	8	ug/L	21.4		50.9	10-162	37.9	30	QR-02
Acenaphthene	22.9	8	ug/L	21.4		107	50-119	3.79	16	
2,4-Dinitrophenol	24.7	8	ug/L	21.4		115	27-157	7.87	23	
4-Nitrophenol	23.5	8	ug/L	21.4		110	49-154	10.3	28	
Dibenzofuran	23.6	8	ug/L	21.4		110	56-121	2.62	18	
2,4-Dinitrotoluene	23.6	8	ug/L	21.4		110	53-138	0.639	18	
2,3,4,6-Tetrachlorophenol	24.2	8	ug/L	21.4		113	47-132	2.43	29	
Pentachlorobenzene	19.8	8	ug/L	25.0		79.3	41-125	4.49	22	
1-Naphthylamine	<8	8	ug/L	50.0			10-152		30	QS-03
2-Naphthylamine	<8	8	ug/L	50.0			19-128		30	QS-03
Diethyl Phthalate	24.0	8	ug/L	21.4		112	53-138	4.00	18	
Fluorene	23.5	8	ug/L	21.4		110	54-125	0.256	14	
4-Chlorophenyl Phenyl Ether	23.0	8	ug/L	21.4		108	51-122	1.84	15	
4-Nitroaniline	23.3	8	ug/L	21.4		109	10-136	7.13	30	
5-Nitro-o-toluidine	32.0	8	ug/L	50.0		64.0	10-145	23.4	30	
4,6-Dinitro-2-methylphenol	25.3	8	ug/L	21.4		118	49-137	4.82	16	
Diphenylamine	22.6	8	ug/L	21.4		106	35-151	3.64	30	

Determination of Base/Neutral/Acid Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1HD1525 - 3520C BNA Cont Liq - EPA 8270C

LCS Dup (1HD1525-BSD1) Prepared: 04/25/24 10:28 Analyzed: 05/07/24 16:59

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Azobenzene	24.6	8	ug/L	21.4		115	16-156	8.52	30	
Diallate	23.7	8	ug/L	25.0		94.8	54-132	6.72	25	
1,3,5-Trinitrobenzene	24.6	8	ug/L	25.0		98.6	57-173	9.03	30	
Phenacetin	22.5	8	ug/L	25.0		90.0	55-121	1.19	30	
4-Bromophenyl Phenyl Ether	24.5	8	ug/L	21.4		115	53-122	6.66	16	
Pentachlorophenol	20.1	8	ug/L	21.4		93.9	18-152	16.9	30	
Pronamide	20.5	8	ug/L	25.0		82.0	42-122	0.981	30	
Pentachloronitrobenzene (PCNB)	23.2	8	ug/L	25.0		93.0	50-128	0.0430	18	
Phenanthrene	25.4	8	ug/L	21.4		118	59-131	0.0789	16	
Anthracene	24.7	8	ug/L	21.4		115	59-127	1.73	16	
Di-n-butyl Phthalate	26.0	8	ug/L	21.4		122	64-148	9.92	30	
Fluoranthene	25.2	8	ug/L	21.4		118	62-132	3.85	16	
Isodrin	23.2	8	ug/L	25.0		92.8	46-130	23.5	29	
Chlorobenzilate	23.0	8	ug/L	25.0		92.0	48-150	6.14	30	
Pyrene	28.2	8	ug/L	21.4		132	58-135	7.43	18	
p-(Dimethylamino)azobenzene	45.0	8	ug/L	50.0		90.0	28-146	3.02	30	
Butyl Benzyl Phthalate	26.6	8	ug/L	21.4		124	52-150	3.91	30	
Benzo(a)anthracene	24.8	8	ug/L	21.4		116	58-131	2.03	30	
Chrysene	25.6	8	ug/L	21.4		120	59-131	1.86	30	
Bis(2-Ethylhexyl) Phthalate	28.8	6	ug/L	21.4		135	33-184	2.50	30	
Kepone	<8	8	ug/L	25.0			10-134		30	QR-02
2-Acetylaminofluorene	53.0	8	ug/L	50.0		106	47-166	2.12	30	
Di-n-octyl Phthalate	28.4	8	ug/L	21.4		133	48-162	3.51	30	
Benzo(b)Fluoranthene	25.3	8	ug/L	21.4		118	50-146	0.715	30	
7,12-Dimethylbenz [a] anthracene	20.7	8	ug/L	25.0		82.8	22-155	1.07	30	
Benzo(k)Fluoranthene	25.8	8	ug/L	21.4		121	54-144	0.544	30	
Benzo(a)Pyrene	24.7	8	ug/L	21.4		116	39-148	1.38	30	
3-Methylcholanthrene	18.9	8	ug/L	25.0		75.5	34-118	1.00	30	
Dibenzo(a,h)anthracene	25.9	8	ug/L	21.4		121	46-153	0.116	30	
Indeno(1,2,3-cd)Pyrene	25.8	8	ug/L	21.4		121	48-152	0.309	30	
Benzo(g,h,i)perylene	26.0	8	ug/L	21.4		122	47-161	1.53	30	
Surrogate: 2-Fluorophenol	*23.8*		ug/L	*29.6*		*80.6*	*24-136*			
Surrogate: Phenol-d6	*25.8*		ug/L	*30.5*		*84.5*	*15-140*			
Surrogate: Nitrobenzene-d5	*29.1*		ug/L	*30.0*		*96.8*	*38-115*			
Surrogate: 2-Fluorobiphenyl	*27.6*		ug/L	*28.8*		*96.0*	*33-110*			
Surrogate: 2,4,6-Tribromophenol	*27.4*		ug/L	*29.7*		*92.0*	*15-139*			
Surrogate: Terphenyl-dl4	*33.8*		ug/L	*28.8*		*117*	*30-142*			

Determination of Organophosphorus Insecticides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Determination of Organophosphorus Insecticides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1439 - 3510C NP/OC Sep Fnl - EPA 8141										
Blank (1HD1439-BLK1)			Prepared: 04/24/24 10:56 Analyzed: 05/02/24 07:07							
O,O,O-Triethyl phosphorothioate	<0.4	0.4	ug/L							
Thionazin	<0.4	0.4	ug/L							
Phorate	<0.4	0.4	ug/L							
Dimethoate	<0.4	0.4	ug/L							
Disulfoton	<0.4	0.4	ug/L							
Methyl Parathion	<0.4	0.4	ug/L							
Parathion	<0.4	0.4	ug/L							
Famphur	<0.4	0.4	ug/L							
Surrogate: 2-Nitro-m-xylene	*5.50*		ug/L	*8.34*		*65.9*	*38-122*			
LCS (1HD1439-BS1)			Prepared: 04/24/24 10:56 Analyzed: 05/02/24 08:05							
O,O,O-Triethyl phosphorothioate	3.30	0.4	ug/L	4.02		81.9	42-115			
Thionazin	3.45	0.4	ug/L	4.03		85.5	28-118			
Phorate	3.52	0.4	ug/L	4.03		87.3	18-159			
Dimethoate	3.87	0.4	ug/L	4.03		96.1	43-155			
Disulfoton	3.11	0.4	ug/L	4.03		77.2	37-126			
Methyl Parathion	3.48	0.4	ug/L	4.04		86.1	28-145			
Parathion	3.21	0.4	ug/L	4.00		80.2	52-121			
Famphur	3.60	0.4	ug/L	4.02		89.4	44-144			
Surrogate: 2-Nitro-m-xylene	*6.84*		ug/L	*8.34*		*82.1*	*38-122*			
LCS Dup (1HD1439-BSD1)			Prepared: 04/24/24 10:56 Analyzed: 05/02/24 09:03							
O,O,O-Triethyl phosphorothioate	3.44	0.4	ug/L	4.02		85.5	42-115	4.31	30	
Thionazin	3.72	0.4	ug/L	4.03		92.3	28-118	7.67	30	
Phorate	3.77	0.4	ug/L	4.03		93.5	18-159	6.86	30	
Dimethoate	3.42	0.4	ug/L	4.03		84.8	43-155	12.5	22	
Disulfoton	3.47	0.4	ug/L	4.03		86.1	37-126	10.9	30	
Methyl Parathion	3.86	0.4	ug/L	4.04		95.5	28-145	10.4	28	
Parathion	3.53	0.4	ug/L	4.00		88.2	52-121	9.50	26	
Famphur	3.83	0.4	ug/L	4.02		95.3	44-144	6.33	28	
Surrogate: 2-Nitro-m-xylene	*7.50*		ug/L	*8.34*		*89.9*	*38-122*			

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1578 - EPA 8151A - EPA 8151A										
Blank (1HD1578-BLK1)			Prepared: 04/25/24 08:46 Analyzed: 04/30/24 22:12							
2,4-D	<2.0	2.0	ug/L							
2,4,5-TP (Silvex)	<0.5	0.5	ug/L							
2,4,5-T	<0.5	0.5	ug/L							
Dinoseb	<0.5	0.5	ug/L							

Determination of Chlorinated Phenoxy Herbicides	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1578 - EPA 8151A - EPA 8151A										
Blank (1HD1578-BLK1)			Prepared: 04/25/24 08:46 Analyzed: 04/30/24 22:12							
Surrogate: 2,5-Dichlorobenzoic Acid	*1.80*		ug/L	*2.02*		*88.9*	*31-116*			
LCS (1HD1578-BS1)			Prepared: 04/25/24 08:46 Analyzed: 04/30/24 22:44							
2,4-D	<2.0	2.0	ug/L	1.15		88.3	16-161			
2,4,5-TP (Silvex)	0.56	0.5	ug/L	0.575		96.5	35-141			
2,4,5-T	0.60	0.5	ug/L	0.575		104	54-149			
Dinoseb	<0.5	0.5	ug/L	1.15		36.5	10-133			
Surrogate: 2,5-Dichlorobenzoic Acid	*2.06*		ug/L	*2.02*		*102*	*31-116*			
LCS Dup (1HD1578-BSD1)			Prepared: 04/25/24 08:46 Analyzed: 04/30/24 23:17							
2,4-D	<2.0	2.0	ug/L	1.15		90.4	16-161	2.43	30	
2,4,5-TP (Silvex)	0.56	0.5	ug/L	0.575		98.3	35-141	1.79	30	
2,4,5-T	0.60	0.5	ug/L	0.575		103	54-149	0.837	30	
Dinoseb	0.66	0.5	ug/L	1.15		57.8	10-133	45.2	30	QR-02
Surrogate: 2,5-Dichlorobenzoic Acid	*2.10*		ug/L	*2.02*		*104*	*31-116*			

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1434 - 3520C NP/OC Cont Liq - EPA 8081										
Blank (1HD1434-BLK1)			Prepared: 04/24/24 10:49 Analyzed: 05/01/24 07:25							
Alpha-BHC	<0.05	0.05	ug/L							
Gamma-BHC [Lindane]	<0.05	0.05	ug/L							
Beta-BHC	<0.05	0.05	ug/L							
Heptachlor	<0.05	0.05	ug/L							
Delta-BHC	<0.05	0.05	ug/L							
Aldrin	<0.05	0.05	ug/L							
Heptachlor Epoxide	<0.05	0.05	ug/L							
Endosulfan I	<0.05	0.05	ug/L							
4,4`-DDE	<0.05	0.05	ug/L							
Dieldrin	<0.05	0.05	ug/L							
Endrin	<0.05	0.05	ug/L							
4,4`-DDD	<0.05	0.05	ug/L							
Endosulfan II	<0.05	0.05	ug/L							
4,4`-DDT	<0.05	0.05	ug/L							
Endrin Aldehyde	<0.05	0.05	ug/L							
Endosulfan Sulfate	<0.05	0.05	ug/L							
Methoxychlor	<0.05	0.05	ug/L							
Chlordane	<0.10	0.10	ug/L							
Toxaphene	<0.20	0.20	ug/L							
Hexachlorobenzene	<0.05	0.05	ug/L							

Determination of Organochlorine Insecticides & Metabolites	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1434 - 3520C NP/OC Cont Liq - EPA 8081										
Blank (1HD1434-BLK1)			Prepared: 04/24/24 10:49 Analyzed: 05/01/24 07:25							
Surrogate: Tetrachloro-m-xylene	*0.508*		ug/L	*0.600*		*84.6*	*10-121*			
LCS (1HD1434-BS1)			Prepared: 04/24/24 10:49 Analyzed: 05/01/24 07:40							
Alpha-BHC	0.208	0.05	ug/L	0.250		83.0	33-123			
Gamma-BHC [Lindane]	0.207	0.05	ug/L	0.250		82.8	34-120			
Beta-BHC	0.199	0.05	ug/L	0.250		79.6	33-125			
Heptachlor	0.240	0.05	ug/L	0.250		95.8	32-117			
Delta-BHC	0.235	0.05	ug/L	0.250		93.9	24-140			
Aldrin	0.193	0.05	ug/L	0.250		77.1	29-122			
Heptachlor Epoxide	0.208	0.05	ug/L	0.250		83.0	37-137			
Endosulfan I	0.227	0.05	ug/L	0.250		90.6	27-141			
4,4`-DDE	0.234	0.05	ug/L	0.250		93.7	38-147			
Dieldrin	0.212	0.05	ug/L	0.250		84.7	32-137			
Endrin	0.318	0.05	ug/L	0.250		127	25-142			
4,4`-DDD	0.275	0.05	ug/L	0.250		110	43-146			
Endosulfan II	0.232	0.05	ug/L	0.250		92.8	36-140			
4,4`-DDT	0.216	0.05	ug/L	0.250		86.6	39-140			
Endrin Aldehyde	0.211	0.05	ug/L	0.250		84.6	17-150			
Endosulfan Sulfate	0.234	0.05	ug/L	0.250		93.8	41-135			
Methoxychlor	0.289	0.05	ug/L	0.250		115	40-148			
Surrogate: Tetrachloro-m-xylene	*0.498*		ug/L	*0.600*		*83.0*	*10-121*			
LCS Dup (1HD1434-BSD1)			Prepared: 04/24/24 10:49 Analyzed: 05/01/24 07:54							
Alpha-BHC	0.224	0.05	ug/L	0.250		89.5	33-123	7.50	30	
Gamma-BHC [Lindane]	0.222	0.05	ug/L	0.250		88.7	34-120	6.88	30	
Beta-BHC	0.216	0.05	ug/L	0.250		86.2	33-125	7.95	30	
Heptachlor	0.260	0.05	ug/L	0.250		104	32-117	8.28	30	
Delta-BHC	0.253	0.05	ug/L	0.250		101	24-140	7.50	30	
Aldrin	0.207	0.05	ug/L	0.250		82.6	29-122	6.86	30	
Heptachlor Epoxide	0.225	0.05	ug/L	0.250		90.0	37-137	8.06	30	
Endosulfan I	0.245	0.05	ug/L	0.250		98.2	27-141	8.02	30	
4,4`-DDE	0.252	0.05	ug/L	0.250		101	38-147	7.22	30	
Dieldrin	0.230	0.05	ug/L	0.250		92.0	32-137	8.23	30	
Endrin	0.345	0.05	ug/L	0.250		138	25-142	8.35	30	
4,4`-DDD	0.301	0.05	ug/L	0.250		121	43-146	9.24	30	
Endosulfan II	0.251	0.05	ug/L	0.250		100	36-140	7.83	30	
4,4`-DDT	0.234	0.05	ug/L	0.250		93.6	39-140	7.86	30	
Endrin Aldehyde	0.234	0.05	ug/L	0.250		93.5	17-150	10.0	30	
Endosulfan Sulfate	0.259	0.05	ug/L	0.250		103	41-135	9.82	30	
Methoxychlor	0.312	0.05	ug/L	0.250		125	40-148	7.73	30	
Surrogate: Tetrachloro-m-xylene	*0.517*		ug/L	*0.600*		*86.2*	*10-121*			

Determination of Polychlorinated Biphenyls (PCB)	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1436 - 3510C NP/OC Sep Fnl - EPA 8082										
Blank (1HD1436-BLK1)			Prepared: 04/24/24 10:53 Analyzed: 05/01/24 07:25							
Arochlor 1016	<0.20	0.20	ug/L							
Arochlor 1221	<0.20	0.20	ug/L							
Arochlor 1232	<0.20	0.20	ug/L							
Arochlor 1242	<0.20	0.20	ug/L							
Arochlor 1248	<0.20	0.20	ug/L							
Arochlor 1254	<0.20	0.20	ug/L							
Arochlor 1260	<0.20	0.20	ug/L							
Surrogate: Tetrachloro-m-xylene	*0.547*		ug/L	*0.600*		*91.1*	*38-121*			
Surrogate: Decachlorobiphenyl	*0.421*		ug/L	*0.600*		*70.1*	*25-119*			
LCS (1HD1436-BS1)			Prepared: 04/24/24 10:53 Analyzed: 05/01/24 08:09							
Arochlor 1016	1.897	0.20	ug/L	2.60		73.0	25-126			
Arochlor 1260	2.747	0.20	ug/L	2.60		106	29-142			
Surrogate: Tetrachloro-m-xylene	*0.544*		ug/L	*0.600*		*90.7*	*38-121*			
Surrogate: Decachlorobiphenyl	*0.603*		ug/L	*0.600*		*101*	*25-119*			
LCS Dup (1HD1436-BSD1)			Prepared: 04/24/24 10:53 Analyzed: 05/01/24 08:45							
Arochlor 1016	1.960	0.20	ug/L	2.60		75.4	25-126	3.28	30	
Arochlor 1260	2.872	0.20	ug/L	2.60		110	29-142	4.46	30	
Surrogate: Tetrachloro-m-xylene	*0.537*		ug/L	*0.600*		*89.5*	*38-121*			
Surrogate: Decachlorobiphenyl	*0.518*		ug/L	*0.600*		*86.3*	*25-119*			

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1529 - Wet Chem Preparation - EPA 376.2										
Blank (1HD1529-BLK1)			Prepared: 04/25/24 10:55 Analyzed: 04/25/24 13:15							
Sulfide, total	<0.10	0.10	mg/L							
LCS (1HD1529-BS1)			Prepared: 04/25/24 10:55 Analyzed: 04/25/24 13:15							
Sulfide, total	0.315	0.10	mg/L	0.31		100	59-110			
Matrix Spike (1HD1529-MS1)	**Source: 1HD1864-02**		Prepared: 04/25/24 10:55 Analyzed: 04/25/24 13:15							
Sulfide, total	0.313	0.15	mg/L	0.47	ND	66.2	50-150			
Matrix Spike Dup (1HD1529-MSD1)	**Source: 1HD1864-02**		Prepared: 04/25/24 10:55 Analyzed: 04/25/24 13:15							
Sulfide, total	0.368	0.15	mg/L	0.47	ND	77.9	50-150	16.1	30	
Batch 1HD1564 - Wet Chem Preparation - EPA 9010B										
Blank (1HD1564-BLK1)			Prepared: 04/25/24 16:28 Analyzed: 04/26/24 14:44							
Cyanide, total	<0.005	0.005	mg/L							
LCS (1HD1564-BS1)			Prepared: 04/25/24 16:28 Analyzed: 04/26/24 14:44							

Determination of Conventional Chemistry Parameters	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1564 - Wet Chem Preparation - EPA 9010B										
LCS (1HD1564-BS1)			Prepared: 04/25/24 16:28 Analyzed: 04/26/24 14:44							
Cyanide, total	0.0274	0.005	mg/L	0.0300		91.5	66-136			
Matrix Spike (1HD1564-MS1)	**Source: 1HD1596-02**		Prepared: 04/25/24 16:28 Analyzed: 04/26/24 14:44							
Cyanide, total	0.0300	0.005	mg/L	0.0300	ND	100	59-153			
Matrix Spike Dup (1HD1564-MSD1)	**Source: 1HD1596-02**		Prepared: 04/25/24 16:28 Analyzed: 04/26/24 14:44							
Cyanide, total	0.0305	0.005	mg/L	0.0300	ND	102	59-153	1.49	30	

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1622 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HD1622-BLK1)			Prepared: 04/26/24 15:59 Analyzed: 04/29/24 19:27							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Tin, total	<0.0200	0.0200	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HD1622-BS1)			Prepared: 04/26/24 15:59 Analyzed: 04/29/24 19:33							
Antimony, total	0.0971	0.0020	mg/L	0.100		97.1	80-120			
Arsenic, total	0.0968	0.0040	mg/L	0.100		96.8	80-120			
Barium, total	0.105	0.0040	mg/L	0.100		105	80-120			
Beryllium, total	0.0981	0.0040	mg/L	0.100		98.1	80-120			
Cadmium, total	0.0960	0.0008	mg/L	0.100		96.0	80-120			
Chromium, total	0.0943	0.0080	mg/L	0.100		94.3	80-120			
Cobalt, total	0.0972	0.0004	mg/L	0.100		97.2	80-120			
Copper, total	0.0953	0.0040	mg/L	0.100		95.3	80-120			
Lead, total	0.0978	0.0040	mg/L	0.100		97.8	80-120			
Nickel, total	0.0973	0.0040	mg/L	0.100		97.3	80-120			
Selenium, total	0.0923	0.0040	mg/L	0.100		92.3	80-120			
Silver, total	0.0983	0.0040	mg/L	0.100		98.3	80-120			
Thallium, total	0.0967	0.0020	mg/L	0.100		96.7	80-120			
Tin, total	0.0999	0.0200	mg/L	0.100		99.9	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1622 - EPA 3005A Total Recoverable Metals - EPA 6020A										
LCS (1HD1622-BS1)			Prepared: 04/26/24 15:59 Analyzed: 04/29/24 19:33							
Vanadium, total	0.102	0.0200	mg/L	0.100		102	80-120			
Zinc, total	0.0938	0.0200	mg/L	0.100		93.8	80-120			
Matrix Spike (1HD1622-MS1)	**Source: 1HD1719-02**		Prepared: 04/26/24 15:59 Analyzed: 04/29/24 19:45							
Antimony, total	0.0620	0.0020	mg/L	0.100	0.0036	58.5	75-125			QM-07
Arsenic, total	0.142	0.0040	mg/L	0.100	0.0514	90.8	75-125			
Barium, total	1.24	0.0040	mg/L	0.100	1.16	88.5	75-125			
Beryllium, total	0.0945	0.0040	mg/L	0.100	0.0022	92.3	75-125			
Cadmium, total	0.0944	0.0008	mg/L	0.100	0.0020	92.4	75-125			
Chromium, total	0.133	0.0080	mg/L	0.100	0.0410	91.6	75-125			
Cobalt, total	0.209	0.0004	mg/L	0.100	0.115	94.2	75-125			
Copper, total	0.142	0.0040	mg/L	0.100	0.0563	85.7	75-125			
Lead, total	0.161	0.0040	mg/L	0.100	0.0682	92.5	75-125			
Nickel, total	0.217	0.0040	mg/L	0.100	0.126	91.2	75-125			
Selenium, total	0.1152	0.0040	mg/L	0.100	0.0319	83.3	75-125			
Silver, total	0.0951	0.0040	mg/L	0.100	ND	95.1	75-125			
Thallium, total	0.0948	0.0020	mg/L	0.100	0.0011	93.8	75-125			
Tin, total	0.0951	0.0200	mg/L	0.100	0.0026	92.4	75-125			
Vanadium, total	0.209	0.0200	mg/L	0.100	0.116	93.3	75-125			
Zinc, total	0.286	0.0200	mg/L	0.100	0.201	85.2	75-125			
Matrix Spike Dup (1HD1622-MSD1)	**Source: 1HD1719-02**		Prepared: 04/26/24 15:59 Analyzed: 04/29/24 20:04							
Antimony, total	0.0635	0.0020	mg/L	0.100	0.0036	59.9	75-125	2.32	20	QM-07
Arsenic, total	0.144	0.0040	mg/L	0.100	0.0514	92.6	75-125	1.26	20	
Barium, total	1.27	0.0040	mg/L	0.100	1.16	110	75-125	1.68	20	
Beryllium, total	0.0957	0.0040	mg/L	0.100	0.0022	93.4	75-125	1.21	20	
Cadmium, total	0.0950	0.0008	mg/L	0.100	0.0020	93.0	75-125	0.692	20	
Chromium, total	0.135	0.0080	mg/L	0.100	0.0410	94.4	75-125	2.03	20	
Cobalt, total	0.211	0.0004	mg/L	0.100	0.115	95.6	75-125	0.670	20	
Copper, total	0.145	0.0040	mg/L	0.100	0.0563	88.5	75-125	1.98	20	
Lead, total	0.162	0.0040	mg/L	0.100	0.0682	94.2	75-125	1.10	20	
Nickel, total	0.218	0.0040	mg/L	0.100	0.126	91.9	75-125	0.326	20	
Selenium, total	0.1145	0.0040	mg/L	0.100	0.0319	82.6	75-125	0.630	20	
Silver, total	0.0971	0.0040	mg/L	0.100	ND	97.1	75-125	2.11	20	
Thallium, total	0.0972	0.0020	mg/L	0.100	0.0011	96.1	75-125	2.46	20	
Tin, total	0.0962	0.0200	mg/L	0.100	0.0026	93.5	75-125	1.14	20	
Vanadium, total	0.213	0.0200	mg/L	0.100	0.116	97.2	75-125	1.87	20	
Zinc, total	0.298	0.0200	mg/L	0.100	0.201	96.7	75-125	3.93	20	
Post Spike (1HD1622-PS1)	**Source: 1HD1719-02**		Prepared: 04/26/24 15:59 Analyzed: 04/29/24 20:10							
Antimony, total	0.0818		mg/L	0.0800	0.0035	97.9	80-120			
Arsenic, total	0.126		mg/L	0.0800	0.0504	94.2	80-120			
Barium, total	1.24		mg/L	0.0800	1.13	135	80-120			PS-04
Beryllium, total	0.0767		mg/L	0.0800	0.0022	93.1	80-120			
Cadmium, total	0.0762		mg/L	0.0800	0.0020	92.7	80-120			
Chromium, total	0.117		mg/L	0.0800	0.0402	95.5	80-120			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HD1622 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Post Spike (1HD1622-PS1)	**Source: 1HD1719-02**		Prepared: 04/26/24 15:59 Analyzed: 04/29/24 20:10							
Cobalt, total	0.194		mg/L	0.0800	0.113	101	80-120			
Copper, total	0.127		mg/L	0.0800	0.0552	89.7	80-120			
Lead, total	0.143		mg/L	0.0800	0.0668	94.6	80-120			
Nickel, total	0.202		mg/L	0.0800	0.124	97.9	80-120			
Selenium, total	0.1011		mg/L	0.0800	0.0313	87.3	80-120			
Silver, total	0.0769		mg/L	0.0800	0.0003	95.8	80-120			
Thallium, total	0.0772		mg/L	0.0800	0.0010	95.2	80-120			
Tin, total	0.0824		mg/L	0.0800	0.0026	99.8	75-125			
Vanadium, total	0.193		mg/L	0.0800	0.114	99.7	80-120			
Zinc, total	0.271		mg/L	0.0800	0.197	92.5	80-120			
Batch 1HD1756 - EPA 7470A Hg Water - EPA 7470A										
Blank (1HD1756-BLK1)			Prepared: 04/30/24 14:12 Analyzed: 05/01/24 12:07							
Mercury, total	<0.00050	0.00050	mg/L							
LCS (1HD1756-BS1)			Prepared: 04/30/24 14:12 Analyzed: 05/01/24 12:09							
Mercury, total	0.00254	0.00050	mg/L	0.00250		102	80-120			
Matrix Spike (1HD1756-MS1)	**Source: 1HD0316-01**		Prepared: 04/30/24 14:12 Analyzed: 05/01/24 12:13							
Mercury, total	0.00255	0.00050	mg/L	0.00250	ND	102	75-125			
Matrix Spike Dup (1HD1756-MSD1)	**Source: 1HD0316-01**		Prepared: 04/30/24 14:12 Analyzed: 05/01/24 12:16							
Mercury, total	0.00251	0.00050	mg/L	0.00250	ND	101	75-125	1.65	20	

Definitions

PS-04:	The post spike recovery exceeded acceptance limits. However, all other QC was acceptable.
QB-02:	The method blank contains analyte at a concentration above the MRL; however, sample concentration was less than the MRL or less than the applicable action level.
QM-05:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-07:	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QR-02:	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QS-02:	The spike recovery for this QC sample exceeded established acceptance limits. However, all samples were below the reporting and/or regulatory limit so the data is acceptable.
QS-03:	The blank spike recovery was below established acceptance limits.
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 1.1°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Heather Murphy

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
05/13/24 14:39

CHAIN O[F CUSTODY]

Keystone LABORATORIES A Microbac Company

600 East 17th Street
Newton, IA 50208
641-792-8451

1HD1864

HLW Engineering
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: Audubon Co. - New Regs
6050

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order 1HD1864
Temperature 1.1
Turn-Cooler: No

☐ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☐ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		Lab Sample Number
-001	MW-90-4	Water	GRAB	4/18/24	18:09	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	01
-001	MW-90-7	Water	GRAB	4/18/24	15:27	17	lndfll-app2-inorg-6020	lndfll-app2-org	02
-001	MW-90-14	Water	GRAB	4/18/24	16:25	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	03
-001	MW-90-17	Water	GRAB	4/18/24	16:58	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	04
-001	MW-91-19	Water	GRAB	4/18/24	16:00	17	lndfll-app2-inorg-6020	lndfll-app2-org	05
-001	MW-91-20	Water	GRAB	4/18/24	16:39	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	06
-001	SW-3	Water	GRAB	4/18/24	17:20	7	lndfill-app1-voc-group	lndfill-app1-metals-6020	07

Relinquished By [signature] Date/Time 4/19/24

Relinquished By Date/Time

Received By Date/Time

Received for Lab By [signature] Date/Time 4/19/24 11:08

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Keystone LABORATORIES *A Microbac Company*

600 East 17th Street S
Newton, IA 50208
641-792-8451

1HD1864
HLW Engineering
PM: Heather Murphy

www.keystonelabs.com

SITE INFORMATION

Sampler: TODD WHIPPLE

Project: Audubon Co. - New Regs
6050

REPORT TO

Todd Whipple
HLW Engineering
PO Box 314
Story City, IA 50248

INVOICE TO

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

SPECIAL INSTRUCTIONS

None

Turn Around Time
☐ Standard ☐ RUSH, need by ___/___/___

LAB USE ONLY

Work Order: 1HD1864
Temperature: 1.1
Turn-Cooler: No

☐ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☐ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Duplicate	Water	GRAB	4/18/24	✓	1	~~lndfll-app1-voc-group~~ lndfll-app1-metals-6020	08

Relinquished By	Date/Time	Relinquished By	Date/Time
[signature]	4/19/24		
Received By	**Date/Time**	**Received for Lab By**	**Date/Time**
		[signature] 4/19/24	11:08

Remarks:

Original - Lab Copy Yellow - Sampler Copy

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1340

Project Description

6050

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Tisdale

Customer Relationship Specialist

Friday, October 25, 2024

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

Microbac Laboratories, Inc.

600 East 17th Street South | Newton, IA 50208 | 641-792-8451 p | www.microbac.com

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1340

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6050

Project / PO Number: N/A
Received: 10/16/2024
Reported: 10/25/2024

Sample Summary Report

Sample Name	Laboratory ID	Client Matrix	Sample Type	Sample Begin	Sample Taken	Lab Received
MW-90-4	1HJ1340-01	Aqueous	GRAB		10/15/24 10:23	10/16/24 10:26
MW-90-7	1HJ1340-02	Aqueous	GRAB		10/15/24 10:55	10/16/24 10:26
MW-90-14	1HJ1340-03	Aqueous	GRAB		10/15/24 09:45	10/16/24 10:26
MW-90-17	1HJ1340-04	Aqueous	GRAB		10/15/24 09:14	10/16/24 10:26
MW-91-19	1HJ1340-05	Aqueous	GRAB		10/15/24 10:11	10/16/24 10:26
MW-91-20	1HJ1340-06	Aqueous	GRAB		10/15/24 09:27	10/16/24 10:26
SW-3	1HJ1340-07	Aqueous	GRAB		10/15/24 10:34	10/16/24 10:26
Duplicate	1HJ1340-08	Aqueous	GRAB		10/15/24 09:14	10/16/24 10:26

Analytical Testing Parameters

Client Sample ID:	MW-90-4		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-01	**Collection Date:**	10/15/2024 10:23

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1340

Client Sample ID:	MW-90-4		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-01	**Collection Date:**	10/15/2024 10:23

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: Dibromofluoromethane	99.8	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: Dibromofluoromethane	99.8	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: 1,2-Dichloroethane-d4	104	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: Toluene-d8	93.7	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: Toluene-d8	93.7	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: 4-Bromofluorobenzene	100	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1751	CSM
Surrogate: 4-Bromofluorobenzene	100	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1751	CSM

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Barium, total	**0.381**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Cadmium, total	**0.0013**	0.0008	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1901	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1901	RVV

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-02	**Collection Date:**	10/15/2024 10:55

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM

Client Sample ID:	MW-90-7		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-02	**Collection Date:**	10/15/2024 10:55

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: Dibromofluoromethane	101	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: Dibromofluoromethane	101	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: 1,2-Dichloroethane-d4	105	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: Toluene-d8	94.8	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: Toluene-d8	94.8	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1814	CSM
Surrogate: 4-Bromofluorobenzene	98.9	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1814	CSM

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		10/18/24 1308	10/22/24 1548	EPP
Surrogate: Nitrobenzene-d5	91.2	Limit: 20-149	% Rec	1		10/18/24 1308	10/22/24 1548	EPP
Surrogate: 2-Fluorobiphenyl	95.4	Limit: 11-146	% Rec	1		10/18/24 1308	10/22/24 1548	EPP
Surrogate: Terphenyl-dl4	107	Limit: 27-155	% Rec	1		10/18/24 1308	10/22/24 1548	EPP

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Barium, total	**0.271**	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Cobalt, total	**0.0076**	0.0004	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Nickel, total	**0.0233**	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/22/24 1444	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/22/24 1444	RVV

CERTIFICATE OF ANALYSIS

1HJ1340

Client Sample ID:	MW-90-14		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-03	**Collection Date:**	10/15/2024 9:45

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM

Client Sample ID:	MW-90-14		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-03	**Collection Date:**	10/15/2024 9:45

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: 1,2-Dichloroethane-d4	106	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: Toluene-d8	95.3	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: Toluene-d8	95.3	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1836	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1836	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Barium, total	**0.237**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Cadmium, total	**0.0013**	0.0008	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Cobalt, total	**0.0004**	0.0004	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Nickel, total	**0.0129**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1913	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1913	RVV

Client Sample ID:	MW-90-17		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-04	**Collection Date:**	10/15/2024 9:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM

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CERTIFICATE OF ANALYSIS

1HJ1340

Client Sample ID:	MW-90-17		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-04	**Collection Date:**	10/15/2024 9:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: Dibromofluoromethane	101	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: Dibromofluoromethane	101	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: 1,2-Dichloroethane-d4	107	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: 1,2-Dichloroethane-d4	107	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: Toluene-d8	94.0	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: Toluene-d8	94.0	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: 4-Bromofluorobenzene	97.8	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1859	CSM
Surrogate: 4-Bromofluorobenzene	97.8	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1859	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Barium, total	**0.280**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1919	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1919	RVV

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-05	**Collection Date:**	10/15/2024 10:11

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM

Client Sample ID:	MW-91-19		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-05	**Collection Date:**	10/15/2024 10:11

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: Dibromofluoromethane	103	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: Dibromofluoromethane	103	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: Toluene-d8	95.6	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: Toluene-d8	95.6	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1922	CSM
Surrogate: 4-Bromofluorobenzene	98.6	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1922	CSM

Determination of Base/Neutral Extractable Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 8270C								
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L	1		10/18/24 1308	10/22/24 1613	EPP
Surrogate: Nitrobenzene-d5	83.9	Limit: 20-149	% Rec	1		10/18/24 1308	10/22/24 1613	EPP
Surrogate: 2-Fluorobiphenyl	88.6	Limit: 11-146	% Rec	1		10/18/24 1308	10/22/24 1613	EPP
Surrogate: Terphenyl-dl4	104	Limit: 27-155	% Rec	1		10/18/24 1308	10/22/24 1613	EPP

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Barium, total	**0.276**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1926	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1926	RVV

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1340

Client Sample ID:	MW-91-20		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-06	**Collection Date:**	10/15/2024 9:27

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM

Client Sample ID:	MW-91-20		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-06	**Collection Date:**	10/15/2024 9:27

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: Dibromofluoromethane	104	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: Dibromofluoromethane	104	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: Toluene-d8	95.0	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: Toluene-d8	95.0	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 1944	CSM
Surrogate: 4-Bromofluorobenzene	96.6	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 1944	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Barium, total	**0.161**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1932	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1932	RVV

Client Sample ID:	SW-3		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-07	**Collection Date:**	10/15/2024 10:34

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM

Client Sample ID:	SW-3		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-07	**Collection Date:**	10/15/2024 10:34

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: Dibromofluoromethane	104	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: Dibromofluoromethane	104	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: Toluene-d8	95.8	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: Toluene-d8	95.8	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: 4-Bromofluorobenzene	98.2	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 2007	CSM
Surrogate: 4-Bromofluorobenzene	98.2	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 2007	CSM

Determination of Total Metals	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Barium, total	**0.287**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1938	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1938	RVV

Client Sample ID:	Duplicate			
Sample Matrix:	Aqueous		**Collected By:**	JGH
Lab Sample ID:	1HJ1340-08		**Collection Date:**	10/15/2024 9:14

Determination of Volatile Organic Compounds	Result	RL	Units	DF	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260B								
Chloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Vinyl Chloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Bromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Chloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Trichlorofluoromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Acetone	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Methyl Iodide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Carbon Disulfide	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Methylene Chloride	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Acrylonitrile	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Vinyl Acetate	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
2-Butanone (MEK)	<10.0	10.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Bromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Chloroform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1,1-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Carbon Tetrachloride	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Benzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2-Dichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Trichloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2-Dichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Dibromomethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Bromodichloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
cis-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Toluene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
trans-1,3-Dichloropropene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1,2-Trichloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Tetrachloroethylene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
2-Hexanone (MBK)	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Dibromochloromethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2-Dibromoethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Chlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Ethylbenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Xylenes, total	<2.0	2.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Styrene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Bromoform	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2,3-Trichloropropane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM

Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1HJ1340

Client Sample ID:	Duplicate		
Sample Matrix:	Aqueous	**Collected By:**	JGH
Lab Sample ID:	1HJ1340-08	**Collection Date:**	10/15/2024 9:14

Determination of Volatile Organic Compounds	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,4-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2-Dichlorobenzene	<1.0	1.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: Dibromofluoromethane	106	Limit: 57-134	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: Dibromofluoromethane	106	Limit: 75-136	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 53-140	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: Toluene-d8	95.4	Limit: 86-114	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: Toluene-d8	95.4	Limit: 82-121	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 78-121	% Rec	1		10/21/24 0000	10/21/24 2029	CSM
Surrogate: 4-Bromofluorobenzene	99.1	Limit: 80-116	% Rec	1		10/21/24 0000	10/21/24 2029	CSM

Determination of Total Metals	**Result**	**RL**	**Units**	**DF**	**Note**	**Prepared**	**Analyzed**	**Analyst**
EPA 3005A/EPA 6020A								
Antimony, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Arsenic, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Barium, total	**0.294**	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Beryllium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Cadmium, total	<0.0008	0.0008	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Chromium, total	<0.0080	0.0080	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Cobalt, total	<0.0004	0.0004	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Copper, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Lead, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Nickel, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Selenium, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Silver, total	<0.0040	0.0040	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Thallium, total	<0.0020	0.0020	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Vanadium, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1944	RVV
Zinc, total	<0.0200	0.0200	mg/L	4		10/17/24 0759	10/18/24 1944	RVV

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1HJ1014	1HJ1014-BLK1	
		1HJ1014-BS1	
		1HJ1340-01	MW-90-4
		1HJ1340-03	MW-90-14
		1HJ1340-04	MW-90-17
		1HJ1340-05	MW-91-19
		1HJ1340-06	MW-91-20
		1HJ1340-07	SW-3
		1HJ1340-08	Duplicate
		1HJ1014-MS1	1HJ1141-02
		1HJ1014-MSD1	1HJ1141-02
		1HJ1014-PS1	1HJ1141-02
		1HJ1340-02	MW-90-7

Method	Batch	Laboratory ID	Client / Source ID
EPA 8270C	1HJ1135	1HJ1135-BLK1	
		1HJ1135-BS1	
		1HJ1135-BSD1	
		1HJ1340-02	MW-90-7
		1HJ1340-05	MW-91-19

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260B	1HJ1301	1HJ1301-BS1	
		1HJ1301-BSD1	
		1HJ1301-BLK1	
		1HJ1340-01	MW-90-4
		1HJ1340-01	MW-90-4
		1HJ1340-02	MW-90-7
		1HJ1340-02	MW-90-7
		1HJ1340-03	MW-90-14
		1HJ1340-03	MW-90-14
		1HJ1340-04	MW-90-17
		1HJ1340-04	MW-90-17
		1HJ1340-05	MW-91-19
		1HJ1340-05	MW-91-19
		1HJ1340-06	MW-91-20
		1HJ1340-06	MW-91-20
		1HJ1340-07	SW-3
		1HJ1340-07	SW-3
		1HJ1340-08	Duplicate

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CERTIFICATE OF ANALYSIS

1HJ1340

EPA 8260B	1HJ1301	1HJ1340-08	Duplicate
		1HJ1301-BS2	
		1HJ1301-BSD2	
		1HJ1301-BLK2	
		1HJ1301-MS1	1HJ1342-01
		1HJ1301-MSD1	1HJ1342-01
		1HJ1301-MS2	1HJ1340-05
		1HJ1301-MSD2	1HJ1340-05

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Blank (1HJ1301-BLK1)			Prepared: 10/21/24 00:00 Analyzed: 10/21/24 11:09							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Blank (1HJ1301-BLK1)			Prepared: 10/21/24 00:00 Analyzed: 10/21/24 11:09							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*47.6*		ug/L	*50.2*		*94.7*	*57-134*			
Surrogate: Dibromofluoromethane	*47.6*		ug/L	*50.2*		*94.7*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.4*		*99.3*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*50.0*		ug/L	*50.4*		*99.3*	*61-142*			
Surrogate: Toluene-d8	*47.2*		ug/L	*50.5*		*93.5*	*86-114*			
Surrogate: Toluene-d8	*47.2*		ug/L	*50.5*		*93.5*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.4*		ug/L	*50.2*		*98.4*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.4*		ug/L	*50.2*		*98.4*	*80-116*			
Blank (1HJ1301-BLK2)			Prepared: 10/21/24 00:00 Analyzed: 10/22/24 01:23							
Chloromethane	<1.0	1.0	ug/L							
Vinyl Chloride	<1.0	1.0	ug/L							
Bromomethane	<1.0	1.0	ug/L							
Chloroethane	<1.0	1.0	ug/L							
Trichlorofluoromethane	<1.0	1.0	ug/L							
1,1-Dichloroethylene	<1.0	1.0	ug/L							
Acetone	<10.0	10.0	ug/L							
Methyl Iodide	<1.0	1.0	ug/L							
Carbon Disulfide	<1.0	1.0	ug/L							
Methylene Chloride	<5.0	5.0	ug/L							
Acrylonitrile	<5.0	5.0	ug/L							
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L							
1,1-Dichloroethane	<1.0	1.0	ug/L							
Vinyl Acetate	<5.0	5.0	ug/L							
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L							
2-Butanone (MEK)	<10.0	10.0	ug/L							
Bromochloromethane	<1.0	1.0	ug/L							
Chloroform	<1.0	1.0	ug/L							
1,1,1-Trichloroethane	<1.0	1.0	ug/L							

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Blank (1HJ1301-BLK2)			Prepared: 10/21/24 00:00 Analyzed: 10/22/24 01:23							
Carbon Tetrachloride	<1.0	1.0	ug/L							
Benzene	<1.0	1.0	ug/L							
1,2-Dichloroethane	<1.0	1.0	ug/L							
Trichloroethylene	<1.0	1.0	ug/L							
1,2-Dichloropropane	<1.0	1.0	ug/L							
Dibromomethane	<1.0	1.0	ug/L							
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
Surrogate: Dibromofluoromethane	*52.2*		ug/L	*50.2*		*104*	*57-134*			
Surrogate: Dibromofluoromethane	*52.2*		ug/L	*50.2*		*104*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*54.8*		ug/L	*50.4*		*109*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*54.8*		ug/L	*50.4*		*109*	*61-142*			
Surrogate: Toluene-d8	*47.9*		ug/L	*50.5*		*94.9*	*86-114*			
Surrogate: Toluene-d8	*47.9*		ug/L	*50.5*		*94.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.2*		*99.5*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.2*		*99.5*	*80-116*			
LCS (1HJ1301-BS1)			Prepared: 10/21/24 00:00 Analyzed: 10/21/24 10:02							
Chloromethane	30.14	1.0	ug/L	30.0		100	63-155			
Vinyl Chloride	28.96	1.0	ug/L	30.0		96.5	70-154			
Bromomethane	33.12	1.0	ug/L	30.0		110	52-176			
Chloroethane	24.87	1.0	ug/L	30.0		82.9	72-148			
Trichlorofluoromethane	24.34	1.0	ug/L	30.0		81.1	70-152			
1,1-Dichloroethylene	44.45	1.0	ug/L	50.0		88.9	70-148			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
LCS (1HJ1301-BS1)				Prepared: 10/21/24 00:00 Analyzed: 10/21/24 10:02						
Acetone	99.33	10.0	ug/L	101		98.2	43-172			
Methyl Iodide	96.99	1.0	ug/L	102		95.2	69-170			
Carbon Disulfide	67.06	1.0	ug/L	103		65.3	72-162			Q3
Methylene Chloride	43.27	5.0	ug/L	50.0		86.5	68-142			
Acrylonitrile	77.56	5.0	ug/L	100		77.3	56-135			
trans-1,2-Dichloroethylene	45.12	1.0	ug/L	50.0		90.2	66-148			
1,1-Dichloroethane	44.18	1.0	ug/L	50.0		88.4	66-143			
Vinyl Acetate	91.56	5.0	ug/L	100		91.6	43-153			
cis-1,2-Dichloroethylene	44.44	1.0	ug/L	50.0		88.9	71-149			
2-Butanone (MEK)	92.08	10.0	ug/L	102		90.5	52-159			
Bromochloromethane	43.62	1.0	ug/L	50.0		87.2	69-143			
Chloroform	44.14	1.0	ug/L	50.0		88.3	69-144			
1,1,1-Trichloroethane	44.67	1.0	ug/L	50.0		89.3	62-129			
Carbon Tetrachloride	45.86	1.0	ug/L	50.0		91.7	63-141			
Benzene	48.01	1.0	ug/L	50.0		96.0	71-134			
1,2-Dichloroethane	52.15	1.0	ug/L	50.0		104	72-132			
Trichloroethylene	47.37	1.0	ug/L	50.0		94.7	71-135			
1,2-Dichloropropane	45.95	1.0	ug/L	50.0		91.9	69-136			
Dibromomethane	48.86	1.0	ug/L	50.0		97.7	73-147			
Bromodichloromethane	47.09	1.0	ug/L	50.0		94.2	68-129			
cis-1,3-Dichloropropene	45.20	1.0	ug/L	50.0		90.4	65-134			
4-Methyl-2-pentanone (MIBK)	102.1	5.0	ug/L	100		102	58-147			
Toluene	46.37	1.0	ug/L	50.0		92.7	72-133			
trans-1,3-Dichloropropene	46.70	1.0	ug/L	50.0		93.4	67-130			
1,1,2-Trichloroethane	46.58	1.0	ug/L	50.0		93.2	69-135			
Tetrachloroethylene	50.31	1.0	ug/L	50.0		101	69-130			
2-Hexanone (MBK)	101.6	5.0	ug/L	99.3		102	55-144			
Dibromochloromethane	48.07	1.0	ug/L	50.0		96.1	73-127			
1,2-Dibromoethane	48.68	1.0	ug/L	50.0		97.4	67-132			
Chlorobenzene	47.64	1.0	ug/L	50.0		95.3	72-123			
1,1,1,2-Tetrachloroethane	50.14	1.0	ug/L	50.0		100	73-127			
Ethylbenzene	50.00	1.0	ug/L	50.0		100	71-127			
Xylenes, total	144.8	2.0	ug/L	150		96.6	74-127			
Styrene	49.55	1.0	ug/L	50.0		99.1	66-126			
Bromoform	48.34	1.0	ug/L	50.0		96.7	68-130			
1,2,3-Trichloropropane	49.06	1.0	ug/L	50.0		98.1	63-136			
trans-1,4-Dichloro-2-butene	90.82	5.0	ug/L	103		88.3	54-134			
1,1,2,2-Tetrachloroethane	48.58	1.0	ug/L	50.0		97.2	61-131			
1,4-Dichlorobenzene	46.59	1.0	ug/L	50.0		93.2	70-129			
1,2-Dichlorobenzene	47.28	1.0	ug/L	50.0		94.6	69-126			
1,2-Dibromo-3-chloropropane	42.84	5.0	ug/L	50.0		85.7	50-143			
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*57-134*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
LCS (1HJ1301-BS1)			Prepared: 10/21/24 00:00 Analyzed: 10/21/24 10:02							
Surrogate: Dibromofluoromethane	*46.3*		ug/L	*50.2*		*92.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.2*		ug/L	*50.4*		*93.8*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*47.2*		ug/L	*50.4*		*93.8*	*61-142*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.4*	*86-114*			
Surrogate: Toluene-d8	*49.2*		ug/L	*50.5*		*97.4*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.4*		ug/L	*50.2*		*98.5*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.4*		ug/L	*50.2*		*98.5*	*80-116*			
LCS (1HJ1301-BS2)			Prepared: 10/21/24 00:00 Analyzed: 10/22/24 00:15							
Chloromethane	35.79	1.0	ug/L	30.0		119	63-155			
Vinyl Chloride	33.44	1.0	ug/L	30.0		111	70-154			
Bromomethane	38.13	1.0	ug/L	30.0		127	52-176			
Chloroethane	28.96	1.0	ug/L	30.0		96.5	72-148			
Trichlorofluoromethane	26.87	1.0	ug/L	30.0		89.6	70-152			
1,1-Dichloroethylene	50.89	1.0	ug/L	50.0		102	70-148			
Acetone	117.9	10.0	ug/L	101		116	43-172			
Methyl Iodide	110.5	1.0	ug/L	102		108	69-170			
Carbon Disulfide	76.48	1.0	ug/L	103		74.5	72-162			
Methylene Chloride	51.38	5.0	ug/L	50.0		103	68-142			
Acrylonitrile	90.93	5.0	ug/L	100		90.6	56-135			
trans-1,2-Dichloroethylene	53.17	1.0	ug/L	50.0		106	66-148			
1,1-Dichloroethane	52.88	1.0	ug/L	50.0		106	66-143			
Vinyl Acetate	102.8	5.0	ug/L	100		103	43-153			
cis-1,2-Dichloroethylene	51.62	1.0	ug/L	50.0		103	71-149			
2-Butanone (MEK)	110.8	10.0	ug/L	102		109	52-159			
Bromochloromethane	52.57	1.0	ug/L	50.0		105	69-143			
Chloroform	52.26	1.0	ug/L	50.0		105	69-144			
1,1,1-Trichloroethane	51.69	1.0	ug/L	50.0		103	62-129			
Carbon Tetrachloride	52.38	1.0	ug/L	50.0		105	63-141			
Benzene	53.07	1.0	ug/L	50.0		106	71-134			
1,2-Dichloroethane	56.57	1.0	ug/L	50.0		113	72-132			
Trichloroethylene	50.92	1.0	ug/L	50.0		102	71-135			
1,2-Dichloropropane	51.66	1.0	ug/L	50.0		103	69-136			
Dibromomethane	53.48	1.0	ug/L	50.0		107	73-147			
Bromodichloromethane	52.33	1.0	ug/L	50.0		105	68-129			
cis-1,3-Dichloropropene	48.84	1.0	ug/L	50.0		97.7	65-134			
4-Methyl-2-pentanone (MIBK)	113.2	5.0	ug/L	100		113	58-147			
Toluene	51.24	1.0	ug/L	50.0		102	72-133			
trans-1,3-Dichloropropene	49.52	1.0	ug/L	50.0		99.0	67-130			
1,1,2-Trichloroethane	51.38	1.0	ug/L	50.0		103	69-135			
Tetrachloroethylene	51.58	1.0	ug/L	50.0		103	69-130			
2-Hexanone (MBK)	108.5	5.0	ug/L	99.3		109	55-144			
Dibromochloromethane	51.28	1.0	ug/L	50.0		103	73-127			
1,2-Dibromoethane	51.91	1.0	ug/L	50.0		104	67-132			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
LCS (1HJ1301-BS2)			Prepared: 10/21/24 00:00 Analyzed: 10/22/24 00:15							
Chlorobenzene	50.99	1.0	ug/L	50.0		102	72-123			
1,1,1,2-Tetrachloroethane	53.59	1.0	ug/L	50.0		107	73-127			
Ethylbenzene	53.82	1.0	ug/L	50.0		108	71-127			
Xylenes, total	156.5	2.0	ug/L	150		104	74-127			
Styrene	53.57	1.0	ug/L	50.0		107	66-126			
Bromoform	50.30	1.0	ug/L	50.0		101	68-130			
1,2,3-Trichloropropane	52.59	1.0	ug/L	50.0		105	63-136			
trans-1,4-Dichloro-2-butene	95.70	5.0	ug/L	103		93.1	54-134			
1,1,2,2-Tetrachloroethane	51.76	1.0	ug/L	50.0		104	61-131			
1,4-Dichlorobenzene	49.42	1.0	ug/L	50.0		98.8	70-129			
1,2-Dichlorobenzene	50.44	1.0	ug/L	50.0		101	69-126			
1,2-Dibromo-3-chloropropane	45.00	5.0	ug/L	50.0		90.0	50-143			
Surrogate: Dibromofluoromethane	*51.3*		ug/L	*50.2*		*102*	*57-134*			
Surrogate: Dibromofluoromethane	*51.3*		ug/L	*50.2*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.6*		ug/L	*50.4*		*104*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*52.6*		ug/L	*50.4*		*104*	*61-142*			
Surrogate: Toluene-d8	*50.5*		ug/L	*50.5*		*100*	*86-114*			
Surrogate: Toluene-d8	*50.5*		ug/L	*50.5*		*100*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.2*		*99.4*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.9*		ug/L	*50.2*		*99.4*	*80-116*			
LCS Dup (1HJ1301-BSD1)			Prepared: 10/21/24 00:00 Analyzed: 10/21/24 10:24							
Chloromethane	28.77	1.0	ug/L	30.0		95.9	63-155	4.65	24	
Vinyl Chloride	27.81	1.0	ug/L	30.0		92.7	70-154	4.05	25	
Bromomethane	32.00	1.0	ug/L	30.0		107	52-176	3.44	27	
Chloroethane	23.72	1.0	ug/L	30.0		79.1	72-148	4.73	25	
Trichlorofluoromethane	23.08	1.0	ug/L	30.0		76.9	70-152	5.31	26	
1,1-Dichloroethylene	42.78	1.0	ug/L	50.0		85.6	70-148	3.83	24	
Acetone	96.37	10.0	ug/L	101		95.2	43-172	3.03	30	
Methyl Iodide	94.39	1.0	ug/L	102		92.7	69-170	2.72	30	
Carbon Disulfide	64.32	1.0	ug/L	103		62.6	72-162	4.17	24	Q3
Methylene Chloride	42.95	5.0	ug/L	50.0		85.9	68-142	0.742	21	
Acrylonitrile	76.96	5.0	ug/L	100		76.7	56-135	0.777	16	
trans-1,2-Dichloroethylene	43.93	1.0	ug/L	50.0		87.9	66-148	2.67	27	
1,1-Dichloroethane	43.12	1.0	ug/L	50.0		86.2	66-143	2.43	24	
Vinyl Acetate	91.64	5.0	ug/L	100		91.6	43-153	0.0873	30	
cis-1,2-Dichloroethylene	44.31	1.0	ug/L	50.0		88.6	71-149	0.293	26	
2-Butanone (MEK)	93.49	10.0	ug/L	102		91.8	52-159	1.52	27	
Bromochloromethane	43.36	1.0	ug/L	50.0		86.7	69-143	0.598	23	
Chloroform	43.75	1.0	ug/L	50.0		87.5	69-144	0.887	23	
1,1,1-Trichloroethane	44.07	1.0	ug/L	50.0		88.1	62-129	1.35	24	
Carbon Tetrachloride	45.28	1.0	ug/L	50.0		90.6	63-141	1.27	25	
Benzene	47.83	1.0	ug/L	50.0		95.7	71-134	0.376	24	
1,2-Dichloroethane	53.08	1.0	ug/L	50.0		106	72-132	1.77	24	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ1301-BSD1)				Prepared: 10/21/24 00:00 Analyzed: 10/21/24 10:24						
Trichloroethylene	46.95	1.0	ug/L	50.0		93.9	71-135	0.891	24	
1,2-Dichloropropane	46.23	1.0	ug/L	50.0		92.5	69-136	0.608	24	
Dibromomethane	49.75	1.0	ug/L	50.0		99.5	73-147	1.81	25	
Bromodichloromethane	48.03	1.0	ug/L	50.0		96.1	68-129	1.98	22	
cis-1,3-Dichloropropene	45.81	1.0	ug/L	50.0		91.6	65-134	1.34	23	
4-Methyl-2-pentanone (MIBK)	103.6	5.0	ug/L	100		104	58-147	1.44	27	
Toluene	46.51	1.0	ug/L	50.0		93.0	72-133	0.301	24	
trans-1,3-Dichloropropene	47.51	1.0	ug/L	50.0		95.0	67-130	1.72	24	
1,1,2-Trichloroethane	47.32	1.0	ug/L	50.0		94.6	69-135	1.58	23	
Tetrachloroethylene	50.18	1.0	ug/L	50.0		100	69-130	0.259	25	
2-Hexanone (MBK)	102.9	5.0	ug/L	99.3		104	55-144	1.24	25	
Dibromochloromethane	49.60	1.0	ug/L	50.0		99.2	73-127	3.13	22	
1,2-Dibromoethane	50.07	1.0	ug/L	50.0		100	67-132	2.82	24	
Chlorobenzene	48.07	1.0	ug/L	50.0		96.1	72-123	0.899	23	
1,1,1,2-Tetrachloroethane	51.22	1.0	ug/L	50.0		102	73-127	2.13	24	
Ethylbenzene	50.70	1.0	ug/L	50.0		101	71-127	1.39	26	
Xylenes, total	147.0	2.0	ug/L	150		98.0	74-127	1.45	25	
Styrene	50.75	1.0	ug/L	50.0		102	66-126	2.39	23	
Bromoform	50.28	1.0	ug/L	50.0		101	68-130	3.93	23	
1,2,3-Trichloropropane	49.77	1.0	ug/L	50.0		99.5	63-136	1.44	24	
trans-1,4-Dichloro-2-butene	92.71	5.0	ug/L	103		90.2	54-134	2.06	27	
1,1,2,2-Tetrachloroethane	49.96	1.0	ug/L	50.0		99.9	61-131	2.80	29	
1,4-Dichlorobenzene	47.87	1.0	ug/L	50.0		95.7	70-129	2.71	24	
1,2-Dichlorobenzene	48.91	1.0	ug/L	50.0		97.8	69-126	3.39	26	
1,2-Dibromo-3-chloropropane	44.18	5.0	ug/L	50.0		88.4	50-143	3.08	30	
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.2*	*57-134*			
Surrogate: Dibromofluoromethane	*45.8*		ug/L	*50.2*		*91.2*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*47.2*		ug/L	*50.4*		*93.8*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*47.2*		ug/L	*50.4*		*93.8*	*61-142*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*97.9*	*86-114*			
Surrogate: Toluene-d8	*49.4*		ug/L	*50.5*		*97.9*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.2*		*99.6*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*50.0*		ug/L	*50.2*		*99.6*	*80-116*			
LCS Dup (1HJ1301-BSD2)				Prepared: 10/21/24 00:00 Analyzed: 10/22/24 00:38						
Chloromethane	34.06	1.0	ug/L	30.0		114	63-155	4.95	24	
Vinyl Chloride	32.00	1.0	ug/L	30.0		107	70-154	4.40	25	
Bromomethane	36.39	1.0	ug/L	30.0		121	52-176	4.67	27	
Chloroethane	27.79	1.0	ug/L	30.0		92.6	72-148	4.12	25	
Trichlorofluoromethane	26.03	1.0	ug/L	30.0		86.8	70-152	3.18	26	
1,1-Dichloroethylene	49.28	1.0	ug/L	50.0		98.6	70-148	3.21	24	
Acetone	119.2	10.0	ug/L	101		118	43-172	1.10	30	
Methyl Iodide	107.9	1.0	ug/L	102		106	69-170	2.35	30	
Carbon Disulfide	73.31	1.0	ug/L	103		71.4	72-162	4.23	24	Q3

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
LCS Dup (1HJ1301-BSD2)			Prepared: 10/21/24 00:00 Analyzed: 10/22/24 00:38							
Methylene Chloride	49.96	5.0	ug/L	50.0		99.9	68-142	2.80	21	
Acrylonitrile	90.42	5.0	ug/L	100		90.1	56-135	0.562	16	
trans-1,2-Dichloroethylene	51.34	1.0	ug/L	50.0		103	66-148	3.50	27	
1,1-Dichloroethane	51.18	1.0	ug/L	50.0		102	66-143	3.27	24	
Vinyl Acetate	102.6	5.0	ug/L	100		103	43-153	0.175	30	
cis-1,2-Dichloroethylene	50.04	1.0	ug/L	50.0		100	71-149	3.11	26	
2-Butanone (MEK)	111.1	10.0	ug/L	102		109	52-159	0.325	27	
Bromochloromethane	52.20	1.0	ug/L	50.0		104	69-143	0.706	23	
Chloroform	51.33	1.0	ug/L	50.0		103	69-144	1.80	23	
1,1,1-Trichloroethane	50.04	1.0	ug/L	50.0		100	62-129	3.24	24	
Carbon Tetrachloride	50.53	1.0	ug/L	50.0		101	63-141	3.60	25	
Benzene	52.09	1.0	ug/L	50.0		104	71-134	1.86	24	
1,2-Dichloroethane	56.17	1.0	ug/L	50.0		112	72-132	0.710	24	
Trichloroethylene	50.28	1.0	ug/L	50.0		101	71-135	1.26	24	
1,2-Dichloropropane	51.01	1.0	ug/L	50.0		102	69-136	1.27	24	
Dibromomethane	52.98	1.0	ug/L	50.0		106	73-147	0.939	25	
Bromodichloromethane	51.57	1.0	ug/L	50.0		103	68-129	1.46	22	
cis-1,3-Dichloropropene	48.44	1.0	ug/L	50.0		96.9	65-134	0.822	23	
4-Methyl-2-pentanone (MIBK)	114.8	5.0	ug/L	100		115	58-147	1.37	27	
Toluene	50.29	1.0	ug/L	50.0		101	72-133	1.87	24	
trans-1,3-Dichloropropene	49.53	1.0	ug/L	50.0		99.1	67-130	0.0202	24	
1,1,2-Trichloroethane	51.06	1.0	ug/L	50.0		102	69-135	0.625	23	
Tetrachloroethylene	49.89	1.0	ug/L	50.0		99.8	69-130	3.33	25	
2-Hexanone (MBK)	110.0	5.0	ug/L	99.3		111	55-144	1.37	25	
Dibromochloromethane	50.52	1.0	ug/L	50.0		101	73-127	1.49	22	
1,2-Dibromoethane	51.35	1.0	ug/L	50.0		103	67-132	1.08	24	
Chlorobenzene	49.99	1.0	ug/L	50.0		100	72-123	1.98	23	
1,1,1,2-Tetrachloroethane	52.40	1.0	ug/L	50.0		105	73-127	2.25	24	
Ethylbenzene	52.53	1.0	ug/L	50.0		105	71-127	2.43	26	
Xylenes, total	153.2	2.0	ug/L	150		102	74-127	2.13	25	
Styrene	52.68	1.0	ug/L	50.0		105	66-126	1.68	23	
Bromoform	50.29	1.0	ug/L	50.0		101	68-130	0.0199	23	
1,2,3-Trichloropropane	51.72	1.0	ug/L	50.0		103	63-136	1.67	24	
trans-1,4-Dichloro-2-butene	94.84	5.0	ug/L	103		92.3	54-134	0.903	27	
1,1,2,2-Tetrachloroethane	51.28	1.0	ug/L	50.0		103	61-131	0.932	29	
1,4-Dichlorobenzene	48.86	1.0	ug/L	50.0		97.7	70-129	1.14	24	
1,2-Dichlorobenzene	49.66	1.0	ug/L	50.0		99.3	69-126	1.56	26	
1,2-Dibromo-3-chloropropane	45.25	5.0	ug/L	50.0		90.5	50-143	0.554	30	
Surrogate: Dibromofluoromethane	*50.6*		ug/L	*50.2*		*101*	*57-134*			
Surrogate: Dibromofluoromethane	*50.6*		ug/L	*50.2*		*101*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.4*		*104*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*52.5*		ug/L	*50.4*		*104*	*61-142*			
Surrogate: Toluene-d8	*51.0*		ug/L	*50.5*		*101*	*86-114*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Batch 1HJ1301 - EPA 5030B - EPA 8260B

LCS Dup (1HJ1301-BSD2) Prepared: 10/21/24 00:00 Analyzed: 10/22/24 00:38

Surrogate: Toluene-d8	*51.0*		ug/L	*50.5*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*49.6*		ug/L	*50.2*		*98.8*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*49.6*		ug/L	*50.2*		*98.8*	*80-116*			

Matrix Spike (1HJ1301-MS1) **Source: 1HJ1342-01** Prepared: 10/21/24 00:00 Analyzed: 10/22/24 04:24

Chloromethane	357.8	10.0	ug/L	300	ND	119	61-152			
Vinyl Chloride	334.2	10.0	ug/L	300	ND	111	66-149			
Bromomethane	359.2	10.0	ug/L	300	ND	120	43-171			
Chloroethane	288.5	10.0	ug/L	300	ND	96.2	69-148			
Trichlorofluoromethane	274.5	10.0	ug/L	300	ND	91.5	62-163			
1,1-Dichloroethylene	511.5	10.0	ug/L	500	ND	102	70-148			
Acetone	1189	100	ug/L	1010	ND	118	45-173			
Methyl Iodide	1049	10.0	ug/L	1020	ND	103	62-167			
Carbon Disulfide	765.6	10.0	ug/L	1030	ND	74.5	71-163			
Methylene Chloride	513.6	50.0	ug/L	500	ND	103	69-140			
Acrylonitrile	903.2	50.0	ug/L	1000	ND	90.0	38-147			
trans-1,2-Dichloroethylene	528.2	10.0	ug/L	500	ND	106	69-144			
1,1-Dichloroethane	526.6	10.0	ug/L	500	ND	105	70-138			
Vinyl Acetate	1006	50.0	ug/L	1000	ND	101	58-142			
cis-1,2-Dichloroethylene	505.4	10.0	ug/L	500	ND	101	68-151			
2-Butanone (MEK)	1048	100	ug/L	1020	ND	103	50-160			
Bromochloromethane	526.0	10.0	ug/L	500	ND	105	65-143			
Chloroform	516.2	10.0	ug/L	500	ND	103	71-143			
1,1,1-Trichloroethane	511.6	10.0	ug/L	500	ND	102	63-133			
Carbon Tetrachloride	520.3	10.0	ug/L	500	ND	104	63-142			
Benzene	530.0	10.0	ug/L	500	ND	106	69-133			
1,2-Dichloroethane	566.1	10.0	ug/L	500	ND	113	63-138			
Trichloroethylene	507.9	10.0	ug/L	500	ND	102	71-133			
1,2-Dichloropropane	509.9	10.0	ug/L	500	ND	102	69-132			
Dibromomethane	530.2	10.0	ug/L	500	ND	106	70-147			
Bromodichloromethane	513.7	10.0	ug/L	500	ND	103	67-130			
cis-1,3-Dichloropropene	469.8	10.0	ug/L	500	ND	94.0	61-126			
4-Methyl-2-pentanone (MIBK)	1094	50.0	ug/L	1000	ND	109	55-147			
Toluene	506.5	10.0	ug/L	500	ND	101	71-133			
trans-1,3-Dichloropropene	481.3	10.0	ug/L	500	ND	96.3	63-124			
1,1,2-Trichloroethane	509.0	10.0	ug/L	500	ND	102	69-133			
Tetrachloroethylene	511.4	10.0	ug/L	500	ND	102	70-124			
2-Hexanone (MBK)	1044	50.0	ug/L	993	ND	105	53-141			
Dibromochloromethane	505.4	10.0	ug/L	500	ND	101	74-122			
1,2-Dibromoethane	510.0	10.0	ug/L	500	ND	102	66-127			
Chlorobenzene	504.8	10.0	ug/L	500	ND	101	76-116			
1,1,1,2-Tetrachloroethane	523.4	10.0	ug/L	500	ND	105	77-121			
Ethylbenzene	533.7	10.0	ug/L	500	ND	107	73-124			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ1301-MS1)	**Source: 1HJ1342-01**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 04:24								
Xylenes, total	1545	20.0	ug/L	1500	ND	103	75-123			
Styrene	527.4	10.0	ug/L	500	ND	105	70-120			
Bromoform	492.6	10.0	ug/L	500	ND	98.5	70-124			
1,2,3-Trichloropropane	506.6	10.0	ug/L	500	ND	101	62-135			
trans-1,4-Dichloro-2-butene	898.2	50.0	ug/L	1030	ND	87.4	50-120			
1,1,2,2-Tetrachloroethane	506.0	10.0	ug/L	500	ND	101	63-126			
1,4-Dichlorobenzene	486.9	10.0	ug/L	500	ND	97.4	72-119			
1,2-Dichlorobenzene	504.8	10.0	ug/L	500	ND	101	71-117			
1,2-Dibromo-3-chloropropane	439.0	50.0	ug/L	500	ND	87.8	49-134			
Surrogate: Dibromofluoromethane	*514*		ug/L	*502*		*102*	*57-134*			
Surrogate: Dibromofluoromethane	*514*		ug/L	*502*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*529*		ug/L	*504*		*105*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*529*		ug/L	*504*		*105*	*61-142*			
Surrogate: Toluene-d8	*509*		ug/L	*505*		*101*	*86-114*			
Surrogate: Toluene-d8	*509*		ug/L	*505*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*497*		ug/L	*502*		*99.0*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*497*		ug/L	*502*		*99.0*	*80-116*			
Matrix Spike (1HJ1301-MS2)	**Source: 1HJ1340-05**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 05:09								
Chloromethane	347.5	10.0	ug/L	300	ND	116	61-152			
Vinyl Chloride	335.4	10.0	ug/L	300	ND	112	66-149			
Bromomethane	366.9	10.0	ug/L	300	ND	122	43-171			
Chloroethane	286.2	10.0	ug/L	300	ND	95.4	69-148			
Trichlorofluoromethane	275.3	10.0	ug/L	300	ND	91.8	62-163			
1,1-Dichloroethylene	516.7	10.0	ug/L	500	ND	103	70-148			
Acetone	1222	100	ug/L	1010	ND	121	45-173			
Methyl Iodide	1093	10.0	ug/L	1020	ND	107	62-167			
Carbon Disulfide	775.1	10.0	ug/L	1030	ND	75.5	71-163			
Methylene Chloride	518.8	50.0	ug/L	500	ND	104	69-140			
Acrylonitrile	931.7	50.0	ug/L	1000	ND	92.8	38-147			
trans-1,2-Dichloroethylene	537.6	10.0	ug/L	500	ND	108	69-144			
1,1-Dichloroethane	535.3	10.0	ug/L	500	ND	107	70-138			
Vinyl Acetate	1044	50.0	ug/L	1000	ND	104	58-142			
cis-1,2-Dichloroethylene	516.5	10.0	ug/L	500	ND	103	68-151			
2-Butanone (MEK)	1102	100	ug/L	1020	ND	108	50-160			
Bromochloromethane	533.9	10.0	ug/L	500	ND	107	65-143			
Chloroform	527.5	10.0	ug/L	500	ND	106	71-143			
1,1,1-Trichloroethane	524.3	10.0	ug/L	500	ND	105	63-133			
Carbon Tetrachloride	536.0	10.0	ug/L	500	ND	107	63-142			
Benzene	535.6	10.0	ug/L	500	ND	107	69-133			
1,2-Dichloroethane	577.4	10.0	ug/L	500	ND	115	63-138			
Trichloroethylene	515.3	10.0	ug/L	500	ND	103	71-133			
1,2-Dichloropropane	520.9	10.0	ug/L	500	ND	104	69-132			
Dibromomethane	538.8	10.0	ug/L	500	ND	108	70-147			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Matrix Spike (1HJ1301-MS2)	**Source: 1HJ1340-05**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 05:09								
Bromodichloromethane	524.5	10.0	ug/L	500	ND	105	67-130			
cis-1,3-Dichloropropene	483.7	10.0	ug/L	500	ND	96.7	61-126			
4-Methyl-2-pentanone (MIBK)	1146	50.0	ug/L	1000	ND	115	55-147			
Toluene	518.7	10.0	ug/L	500	ND	104	71-133			
trans-1,3-Dichloropropene	496.1	10.0	ug/L	500	ND	99.2	63-124			
1,1,2-Trichloroethane	519.0	10.0	ug/L	500	ND	104	69-133			
Tetrachloroethylene	525.7	10.0	ug/L	500	ND	105	70-124			
2-Hexanone (MBK)	1112	50.0	ug/L	993	ND	112	53-141			
Dibromochloromethane	522.0	10.0	ug/L	500	ND	104	74-122			
1,2-Dibromoethane	528.2	10.0	ug/L	500	ND	106	66-127			
Chlorobenzene	516.0	10.0	ug/L	500	ND	103	76-116			
1,1,1,2-Tetrachloroethane	538.7	10.0	ug/L	500	ND	108	77-121			
Ethylbenzene	549.3	10.0	ug/L	500	ND	110	73-124			
Xylenes, total	1596	20.0	ug/L	1500	ND	106	75-123			
Styrene	545.0	10.0	ug/L	500	ND	109	70-120			
Bromoform	508.8	10.0	ug/L	500	ND	102	70-124			
1,2,3-Trichloropropane	534.2	10.0	ug/L	500	ND	107	62-135			
trans-1,4-Dichloro-2-butene	953.8	50.0	ug/L	1030	ND	92.8	50-120			
1,1,2,2-Tetrachloroethane	529.2	10.0	ug/L	500	ND	106	63-126			
1,4-Dichlorobenzene	504.5	10.0	ug/L	500	ND	101	72-119			
1,2-Dichlorobenzene	518.5	10.0	ug/L	500	ND	104	71-117			
1,2-Dibromo-3-chloropropane	464.1	50.0	ug/L	500	ND	92.8	49-134			
Surrogate: Dibromofluoromethane	*508*		ug/L	*502*		*101*	*57-134*			
Surrogate: Dibromofluoromethane	*508*		ug/L	*502*		*101*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*527*		ug/L	*504*		*105*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*527*		ug/L	*504*		*105*	*61-142*			
Surrogate: Toluene-d8	*507*		ug/L	*505*		*101*	*86-114*			
Surrogate: Toluene-d8	*507*		ug/L	*505*		*101*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*502*		*99.4*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*502*		*99.4*	*80-116*			
Matrix Spike Dup (1HJ1301-MSD1)	**Source: 1HJ1342-01**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 04:47								
Chloromethane	338.4	10.0	ug/L	300	ND	113	61-152	5.57	26	
Vinyl Chloride	322.6	10.0	ug/L	300	ND	108	66-149	3.53	23	
Bromomethane	355.2	10.0	ug/L	300	ND	118	43-171	1.12	29	
Chloroethane	275.2	10.0	ug/L	300	ND	91.7	69-148	4.72	25	
Trichlorofluoromethane	265.5	10.0	ug/L	300	ND	88.5	62-163	3.33	25	
1,1-Dichloroethylene	492.8	10.0	ug/L	500	ND	98.6	70-148	3.72	22	
Acetone	1172	100	ug/L	1010	ND	116	45-173	1.50	30	
Methyl Iodide	1055	10.0	ug/L	1020	ND	104	62-167	0.618	24	
Carbon Disulfide	744.0	10.0	ug/L	1030	ND	72.4	71-163	2.86	22	
Methylene Chloride	501.1	50.0	ug/L	500	ND	100	69-140	2.46	19	
Acrylonitrile	894.9	50.0	ug/L	1000	ND	89.1	38-147	0.923	30	
trans-1,2-Dichloroethylene	516.5	10.0	ug/L	500	ND	103	69-144	2.24	22	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ1301-MSD1)	**Source: 1HJ1342-01**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 04:47								
1,1-Dichloroethane	509.5	10.0	ug/L	500	ND	102	70-138	3.30	20	
Vinyl Acetate	1004	50.0	ug/L	1000	ND	100	58-142	0.189	24	
cis-1,2-Dichloroethylene	502.3	10.0	ug/L	500	ND	100	68-151	0.615	22	
2-Butanone (MEK)	1066	100	ug/L	1020	ND	105	50-160	1.74	23	
Bromochloromethane	527.1	10.0	ug/L	500	ND	105	65-143	0.209	22	
Chloroform	509.8	10.0	ug/L	500	ND	102	71-143	1.25	21	
1,1,1-Trichloroethane	505.3	10.0	ug/L	500	ND	101	63-133	1.24	23	
Carbon Tetrachloride	512.1	10.0	ug/L	500	ND	102	63-142	1.59	22	
Benzene	511.3	10.0	ug/L	500	ND	102	69-133	3.59	18	
1,2-Dichloroethane	559.4	10.0	ug/L	500	ND	112	63-138	1.19	20	
Trichloroethylene	494.4	10.0	ug/L	500	ND	98.9	71-133	2.69	23	
1,2-Dichloropropane	505.6	10.0	ug/L	500	ND	101	69-132	0.847	20	
Dibromomethane	527.3	10.0	ug/L	500	ND	105	70-147	0.548	22	
Bromodichloromethane	509.6	10.0	ug/L	500	ND	102	67-130	0.801	21	
cis-1,3-Dichloropropene	470.1	10.0	ug/L	500	ND	94.0	61-126	0.0638	21	
4-Methyl-2-pentanone (MIBK)	1099	50.0	ug/L	1000	ND	110	55-147	0.447	23	
Toluene	493.5	10.0	ug/L	500	ND	98.7	71-133	2.60	19	
trans-1,3-Dichloropropene	482.6	10.0	ug/L	500	ND	96.5	63-124	0.270	21	
1,1,2-Trichloroethane	502.7	10.0	ug/L	500	ND	101	69-133	1.25	19	
Tetrachloroethylene	506.9	10.0	ug/L	500	ND	101	70-124	0.884	24	
2-Hexanone (MBK)	1045	50.0	ug/L	993	ND	105	53-141	0.0766	24	
Dibromochloromethane	506.2	10.0	ug/L	500	ND	101	74-122	0.158	21	
1,2-Dibromoethane	513.8	10.0	ug/L	500	ND	103	66-127	0.742	23	
Chlorobenzene	497.7	10.0	ug/L	500	ND	99.5	76-116	1.42	21	
1,1,1,2-Tetrachloroethane	522.6	10.0	ug/L	500	ND	105	77-121	0.153	25	
Ethylbenzene	525.0	10.0	ug/L	500	ND	105	73-124	1.64	20	
Xylenes, total	1527	20.0	ug/L	1500	ND	102	75-123	1.16	20	
Styrene	524.3	10.0	ug/L	500	ND	105	70-120	0.590	23	
Bromoform	498.5	10.0	ug/L	500	ND	99.7	70-124	1.19	22	
1,2,3-Trichloropropane	517.3	10.0	ug/L	500	ND	103	62-135	2.09	28	
trans-1,4-Dichloro-2-butene	912.3	50.0	ug/L	1030	ND	88.7	50-120	1.56	26	
1,1,2,2-Tetrachloroethane	512.7	10.0	ug/L	500	ND	103	63-126	1.32	24	
1,4-Dichlorobenzene	484.4	10.0	ug/L	500	ND	96.9	72-119	0.515	24	
1,2-Dichlorobenzene	499.1	10.0	ug/L	500	ND	99.8	71-117	1.14	24	
1,2-Dibromo-3-chloropropane	434.2	50.0	ug/L	500	ND	86.8	49-134	1.10	28	
Surrogate: Dibromofluoromethane	*512*		ug/L	*502*		*102*	*57-134*			
Surrogate: Dibromofluoromethane	*512*		ug/L	*502*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*531*		ug/L	*504*		*105*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*531*		ug/L	*504*		*105*	*61-142*			
Surrogate: Toluene-d8	*501*		ug/L	*505*		*99.4*	*86-114*			
Surrogate: Toluene-d8	*501*		ug/L	*505*		*99.4*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*502*		*99.7*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*500*		ug/L	*502*		*99.7*	*80-116*			

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ1301-MSD2)	**Source: 1HJ1340-05**	Prepared: 10/21/24 00:00 Analyzed: 10/22/24 05:32								
Chloromethane	337.5	10.0	ug/L	300	ND	112	61-152	2.92	26	
Vinyl Chloride	315.4	10.0	ug/L	300	ND	105	66-149	6.15	23	
Bromomethane	355.1	10.0	ug/L	300	ND	118	43-171	3.27	29	
Chloroethane	281.7	10.0	ug/L	300	ND	93.9	69-148	1.58	25	
Trichlorofluoromethane	262.5	10.0	ug/L	300	ND	87.5	62-163	4.76	25	
1,1-Dichloroethylene	494.6	10.0	ug/L	500	ND	98.9	70-148	4.37	22	
Acetone	1220	100	ug/L	1010	ND	121	45-173	0.139	30	
Methyl Iodide	1068	10.0	ug/L	1020	ND	105	62-167	2.38	24	
Carbon Disulfide	745.3	10.0	ug/L	1030	ND	72.6	71-163	3.92	22	
Methylene Chloride	510.6	50.0	ug/L	500	ND	102	69-140	1.59	19	
Acrylonitrile	918.8	50.0	ug/L	1000	ND	91.5	38-147	1.39	30	
trans-1,2-Dichloroethylene	518.9	10.0	ug/L	500	ND	104	69-144	3.54	22	
1,1-Dichloroethane	513.8	10.0	ug/L	500	ND	103	70-138	4.10	20	
Vinyl Acetate	1030	50.0	ug/L	1000	ND	103	58-142	1.37	24	
cis-1,2-Dichloroethylene	499.5	10.0	ug/L	500	ND	99.9	68-151	3.35	22	
2-Butanone (MEK)	1127	100	ug/L	1020	ND	111	50-160	2.23	23	
Bromochloromethane	529.1	10.0	ug/L	500	ND	106	65-143	0.903	22	
Chloroform	510.3	10.0	ug/L	500	ND	102	71-143	3.31	21	
1,1,1-Trichloroethane	505.3	10.0	ug/L	500	ND	101	63-133	3.69	23	
Carbon Tetrachloride	513.8	10.0	ug/L	500	ND	103	63-142	4.23	22	
Benzene	518.7	10.0	ug/L	500	ND	104	69-133	3.21	18	
1,2-Dichloroethane	570.9	10.0	ug/L	500	ND	114	63-138	1.13	20	
Trichloroethylene	499.2	10.0	ug/L	500	ND	99.8	71-133	3.17	23	
1,2-Dichloropropane	510.8	10.0	ug/L	500	ND	102	69-132	1.96	20	
Dibromomethane	540.7	10.0	ug/L	500	ND	108	70-147	0.352	22	
Bromodichloromethane	514.7	10.0	ug/L	500	ND	103	67-130	1.89	21	
cis-1,3-Dichloropropene	483.2	10.0	ug/L	500	ND	96.6	61-126	0.103	21	
4-Methyl-2-pentanone (MIBK)	1149	50.0	ug/L	1000	ND	115	55-147	0.218	23	
Toluene	499.6	10.0	ug/L	500	ND	99.9	71-133	3.75	19	
trans-1,3-Dichloropropene	495.5	10.0	ug/L	500	ND	99.1	63-124	0.121	21	
1,1,2-Trichloroethane	515.6	10.0	ug/L	500	ND	103	69-133	0.657	19	
Tetrachloroethylene	501.0	10.0	ug/L	500	ND	100	70-124	4.81	24	
2-Hexanone (MBK)	1110	50.0	ug/L	993	ND	112	53-141	0.198	24	
Dibromochloromethane	513.4	10.0	ug/L	500	ND	103	74-122	1.66	21	
1,2-Dibromoethane	532.2	10.0	ug/L	500	ND	106	66-127	0.754	23	
Chlorobenzene	501.1	10.0	ug/L	500	ND	100	76-116	2.93	21	
1,1,1,2-Tetrachloroethane	522.9	10.0	ug/L	500	ND	105	77-121	2.98	25	
Ethylbenzene	524.9	10.0	ug/L	500	ND	105	73-124	4.54	20	
Xylenes, total	1539	20.0	ug/L	1500	ND	103	75-123	3.66	20	
Styrene	531.3	10.0	ug/L	500	ND	106	70-120	2.55	23	
Bromoform	517.2	10.0	ug/L	500	ND	103	70-124	1.64	22	
1,2,3-Trichloropropane	534.6	10.0	ug/L	500	ND	107	62-135	0.0748	28	
trans-1,4-Dichloro-2-butene	943.8	50.0	ug/L	1030	ND	91.8	50-120	1.05	26	

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1301 - EPA 5030B - EPA 8260B										
Matrix Spike Dup (1HJ1301-MSD2)	**Source: 1HJ1340-05**		Prepared: 10/21/24 00:00 Analyzed: 10/22/24 05:32							
1,1,2,2-Tetrachloroethane	513.1	10.0	ug/L	500	ND	103	63-126	3.09	24	
1,4-Dichlorobenzene	487.6	10.0	ug/L	500	ND	97.5	72-119	3.41	24	
1,2-Dichlorobenzene	503.1	10.0	ug/L	500	ND	101	71-117	3.01	24	
1,2-Dibromo-3-chloropropane	455.6	50.0	ug/L	500	ND	91.1	49-134	1.85	28	
Surrogate: Dibromofluoromethane	*511*		ug/L	*502*		*102*	*57-134*			
Surrogate: Dibromofluoromethane	*511*		ug/L	*502*		*102*	*75-136*			
Surrogate: 1,2-Dichloroethane-d4	*531*		ug/L	*504*		*105*	*53-140*			
Surrogate: 1,2-Dichloroethane-d4	*531*		ug/L	*504*		*105*	*61-142*			
Surrogate: Toluene-d8	*507*		ug/L	*505*		*100*	*86-114*			
Surrogate: Toluene-d8	*507*		ug/L	*505*		*100*	*82-121*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*502*		*99.3*	*78-121*			
Surrogate: 4-Bromofluorobenzene	*498*		ug/L	*502*		*99.3*	*80-116*			

Determination of Base/Neutral Extractable Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1135 - EPA 625 BNA - EPA 8270C										
Blank (1HJ1135-BLK1)			Prepared: 10/18/24 13:08 Analyzed: 10/22/24 13:37							
Bis(2-Ethylhexyl) Phthalate	<6	6	ug/L							
Surrogate: Nitrobenzene-d5	*19.2*		ug/L	*30.8*		*62.1*	*20-149*			
Surrogate: 2-Fluorobiphenyl	*21.0*		ug/L	*29.3*		*71.9*	*11-146*			
Surrogate: Terphenyl-dl4	*31.7*		ug/L	*30.9*		*103*	*27-155*			
LCS (1HJ1135-BS1)			Prepared: 10/18/24 13:08 Analyzed: 10/22/24 14:01							
Bis(2-Ethylhexyl) Phthalate	21.7	6	ug/L	20.0		108	27-186			
Surrogate: Nitrobenzene-d5	*26.1*		ug/L	*30.8*		*84.7*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*27.3*		ug/L	*29.3*		*93.2*	*29-131*			
Surrogate: Terphenyl-dl4	*33.3*		ug/L	*30.9*		*108*	*30-142*			
LCS Dup (1HJ1135-BSD1)			Prepared: 10/18/24 13:08 Analyzed: 10/22/24 14:26							
Bis(2-Ethylhexyl) Phthalate	22.0	6	ug/L	20.0		110	27-186	1.47	30	
Surrogate: Nitrobenzene-d5	*16.3*		ug/L	*30.8*		*52.8*	*31-137*			
Surrogate: 2-Fluorobiphenyl	*23.0*		ug/L	*29.3*		*78.4*	*29-131*			
Surrogate: Terphenyl-dl4	*31.0*		ug/L	*30.9*		*100*	*30-142*			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1014 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ1014-BLK1)			Prepared: 10/17/24 07:59 Analyzed: 10/18/24 16:52							
Antimony, total	<0.0020	0.0020	mg/L							
Arsenic, total	<0.0040	0.0040	mg/L							

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1014 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1HJ1014-BLK1)			Prepared: 10/17/24 07:59 Analyzed: 10/18/24 16:52							
Barium, total	<0.0040	0.0040	mg/L							
Beryllium, total	<0.0040	0.0040	mg/L							
Cadmium, total	<0.0008	0.0008	mg/L							
Chromium, total	<0.0080	0.0080	mg/L							
Cobalt, total	<0.0004	0.0004	mg/L							
Copper, total	<0.0040	0.0040	mg/L							
Lead, total	<0.0040	0.0040	mg/L							
Nickel, total	<0.0040	0.0040	mg/L							
Selenium, total	<0.0040	0.0040	mg/L							
Silver, total	<0.0040	0.0040	mg/L							
Thallium, total	<0.0020	0.0020	mg/L							
Vanadium, total	<0.0200	0.0200	mg/L							
Zinc, total	<0.0200	0.0200	mg/L							
LCS (1HJ1014-BS1)			Prepared: 10/17/24 07:59 Analyzed: 10/18/24 16:59							
Antimony, total	0.0949	0.0020	mg/L	0.100		94.9	80-120			
Arsenic, total	0.0935	0.0040	mg/L	0.100		93.5	80-120			
Barium, total	0.101	0.0040	mg/L	0.100		101	80-120			
Beryllium, total	0.100	0.0040	mg/L	0.100		100	80-120			
Cadmium, total	0.0964	0.0008	mg/L	0.100		96.4	80-120			
Chromium, total	0.0941	0.0080	mg/L	0.100		94.1	80-120			
Cobalt, total	0.0947	0.0004	mg/L	0.100		94.7	80-120			
Copper, total	0.0949	0.0040	mg/L	0.100		94.9	80-120			
Lead, total	0.0962	0.0040	mg/L	0.100		96.2	80-120			
Nickel, total	0.0946	0.0040	mg/L	0.100		94.6	80-120			
Selenium, total	0.0939	0.0040	mg/L	0.100		93.9	80-120			
Silver, total	0.0953	0.0040	mg/L	0.100		95.3	80-120			
Thallium, total	0.0915	0.0020	mg/L	0.100		91.5	80-120			
Vanadium, total	0.0934	0.0200	mg/L	0.100		93.4	80-120			
Zinc, total	0.0969	0.0200	mg/L	0.100		96.9	80-120			
Matrix Spike (1HJ1014-MS1)	Source: 1HJ1141-02		Prepared: 10/17/24 07:59 Analyzed: 10/22/24 14:01							
Antimony, total	0.0964	0.0020	mg/L	0.100	ND	96.4	75-125			
Arsenic, total	0.103	0.0040	mg/L	0.100	0.0028	100	75-125			
Barium, total	0.130	0.0040	mg/L	0.100	0.0260	104	75-125			
Beryllium, total	0.0892	0.0040	mg/L	0.100	ND	89.2	75-125			
Cadmium, total	0.0916	0.0008	mg/L	0.100	ND	91.6	75-125			
Chromium, total	0.0893	0.0080	mg/L	0.100	0.0008	88.5	75-125			
Cobalt, total	0.0964	0.0004	mg/L	0.100	ND	96.4	75-125			
Copper, total	0.0908	0.0040	mg/L	0.100	0.0014	89.4	75-125			
Lead, total	0.0913	0.0040	mg/L	0.100	ND	91.3	75-125			
Nickel, total	0.102	0.0040	mg/L	0.100	0.0096	92.0	75-125			
Selenium, total	0.0937	0.0040	mg/L	0.100	ND	93.7	75-125			
Silver, total	0.0937	0.0040	mg/L	0.100	ND	93.7	75-125			
Thallium, total	0.0944	0.0020	mg/L	0.100	0.0003	94.1	75-125			

Determination of Total Metals	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1HJ1014 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike (1HJ1014-MS1)	**Source: 1HJ1141-02**	Prepared: 10/17/24 07:59 Analyzed: 10/22/24 14:01								
Vanadium, total	0.100	0.0200	mg/L	0.100	ND	100	75-125			
Zinc, total	0.215	0.0200	mg/L	0.100	ND	215	75-125			M1
Matrix Spike Dup (1HJ1014-MSD1)	**Source: 1HJ1141-02**	Prepared: 10/17/24 07:59 Analyzed: 10/22/24 14:08								
Antimony, total	0.0851	0.0020	mg/L	0.100	ND	85.1	75-125	12.4	20	
Arsenic, total	0.0919	0.0040	mg/L	0.100	0.0028	89.1	75-125	11.2	20	
Barium, total	0.116	0.0040	mg/L	0.100	0.0260	89.7	75-125	11.4	20	
Beryllium, total	0.0779	0.0040	mg/L	0.100	ND	77.9	75-125	13.5	20	
Cadmium, total	0.0837	0.0008	mg/L	0.100	ND	83.7	75-125	9.01	20	
Chromium, total	0.0822	0.0080	mg/L	0.100	0.0008	81.4	75-125	8.24	20	
Cobalt, total	0.0862	0.0004	mg/L	0.100	ND	86.2	75-125	11.2	20	
Copper, total	0.0808	0.0040	mg/L	0.100	0.0014	79.5	75-125	11.6	20	
Lead, total	0.0824	0.0040	mg/L	0.100	ND	82.4	75-125	10.3	20	
Nickel, total	0.0922	0.0040	mg/L	0.100	0.0096	82.6	75-125	9.71	20	
Selenium, total	0.0888	0.0040	mg/L	0.100	ND	88.8	75-125	5.37	20	
Silver, total	0.0835	0.0040	mg/L	0.100	ND	83.5	75-125	11.5	20	
Thallium, total	0.0840	0.0020	mg/L	0.100	0.0003	83.7	75-125	11.7	20	
Vanadium, total	0.0901	0.0200	mg/L	0.100	ND	90.1	75-125	10.6	20	
Zinc, total	0.0862	0.0200	mg/L	0.100	ND	86.2	75-125	85.7	20	R1
Post Spike (1HJ1014-PS1)	**Source: 1HJ1141-02**	Prepared: 10/17/24 07:59 Analyzed: 10/22/24 14:14								
Antimony, total	0.0777		mg/L	0.0800	0.0001	97.0	80-120			
Arsenic, total	0.0831		mg/L	0.0800	0.0027	100	80-120			
Barium, total	0.104		mg/L	0.0800	0.0255	97.9	80-120			
Beryllium, total	0.0715		mg/L	0.0800	0.00002	89.3	80-120			
Cadmium, total	0.0740		mg/L	0.0800	0.00006	92.4	80-120			
Chromium, total	0.0726		mg/L	0.0800	0.0008	89.8	80-120			
Cobalt, total	0.0774		mg/L	0.0800	0.00008	96.7	80-120			
Copper, total	0.0734		mg/L	0.0800	0.0013	90.1	80-120			
Lead, total	0.0739		mg/L	0.0800	0.0001	92.2	80-120			
Nickel, total	0.0829		mg/L	0.0800	0.0094	91.8	80-120			
Selenium, total	0.0759		mg/L	0.0800	0.00002	94.9	80-120			
Silver, total	0.0744		mg/L	0.0800	0.0002	92.8	80-120			
Thallium, total	0.0761		mg/L	0.0800	0.0003	94.7	80-120			
Vanadium, total	0.0837		mg/L	0.0800	0.0073	95.5	80-120			
Zinc, total	0.0781		mg/L	0.0800	0.0099	85.2	80-120			

Definitions

M1:	Matrix spike recovery is above acceptance limits.
Q3:	LCS recovery is below acceptance limits. The reported value is estimated.
R1:	Duplicate RPD is outside acceptance criteria.
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 0.3ºC

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. ***The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <https://www.microbac.com/standard-terms-conditions>.***

Reviewed and Approved By:

Heather Tisdale

Heather Tisdale
Customer Relationship Specialist
10/25/24 16:10

CHAIN OF CUSTODY RECORD

MICROBAC®

600 East 17th Street S
Newton, IA 50208
641-792-8451

1HJ1340
HLW Engineering
PM: Heather Murphy

Printed: 10/3/2024 2:55:00P

www.keystonelabs.com

SITE INFORMATION

Sampler: JGH

Project: Audubon Co. - New Regs
8050

REPORT TO

Todd Whipple
HLW Engineering
204 West Broad St
Story City, IA 50248

INVOICE TO

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

SPECIAL INSTRUCTIONS

None

Turn Around Time

☑ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order: 1HJ1340

Temperature: 0.3

Turn-Cooler: No

☐ Custody Seal
☒ Containers Intact
☒ COC/Labels Agree
☐ Preservation Confirmed
☒ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	MW-90-4	Aqueous	GRAB	10/15/24	10:23	7	lndfll-app1-voc-group, lndfll-app1-metals-6020	01
-001	MW-90-7	Aqueous	GRAB	10/15/24	10:55	8	8270-110, lndfll-app1-voc-group, lndfll-app1-metals-6020	02
-001	MW-90-14	Aqueous	GRAB	10/15/24	9:45	7	lndfll-app1-voc-group, lndfll-app1-metals-6020	03
-001	MW-90-17	Aqueous	GRAB	10/15/24	9:14	7	lndfll-app1-voc-group, lndfll-app1-metals-6020	04
-001	MW-91-19	Aqueous	GRAB	10/15/24	10:11	8	8270-110, lndfll-app1-voc-group, lndfll-app1-metals-6020	05
-001	MW-91-20	Aqueous	GRAB	10/15/24	9:27	7	lndfll-app1-voc-group, lndfll-app1-metals-6020	06
-001	SW-3	Aqueous	GRAB	10/15/24	10:34	7	lndfll-app1-voc-group, lndfll-app1-metals-6020	07

Relinquished By: [signature] Date/Time: 10/16/24

Received By: [signature] Date/Time: 10/16/24

Relinquished By: Date/Time:

Received for Lab By: [signature] Date/Time: 10/16/2024 10:26 AM

Remarks:

Original - Lab Copy Yellow - Sampler Copy

CHAIN OF C…

MICROBAC®

600 East 17th Street S…
Newton, IA 50208
641-792-8451

1HJ1340
HLW Engineering
PM: Heather Murphy

Printed: 10/3/2024 2:55:00P
www.keystonelabs.com

SITE INFORMATION

Sampler: JGH

Project: Audubon Co. - New Regs
6050

REPORT TO

Todd Whipple
HLW Engineering
204 West Broad St
Story City, IA 50248

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

SPECIAL INSTRUCTIONS

None

Turn Around Time
☒ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order
Temperature 0.3
Turn-Cooler: No

☐ Custody Seal
☐ Containers Intact
☐ COC/Labels Agree
☐ Preservation Confirmed
☐ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
-001	Duplicate	Aqueous	GRAB	10/15/24	9:14	7	hdlfill-app1-voc-group hdlfill-app1-metals-6020	08

Relinquished By: [signature] Date/Time: 10/16/24
Received By: [signature] Date/Time: 10/16/24
Relinquished By:
Date/Time:
Received for Lab By: [signature] Date/Time: 10/16/2024 10:26 Am

Remarks:

Original - Lab Copy Yellow - Sampler Copy

APPENDIX C

Statistical Reports – Spring & Fall

Appendix C.1 – 1st Semester Statistical Report

Results of the Ground Water Statistics

for Audubon County Sanitary Landfill

First Semi-Annual Monitoring Event in 2024

Prepared for:
Audubon County Solid Waste Management Commission
1881 215th Street
Audubon, Iowa 50025

Prepared by:
Jeffrey A. Holmgren
Otter Creek Environmental Services, L.L.C.
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May 2024

INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the first semi-annual monitoring event in 2024 at Audubon County Sanitary Landfill in Audubon, Iowa. The ground water at Audubon County Sanitary Landfill is monitored by background well MW90-17 and compliance wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3. These monitoring wells were sampled on April 18, 2024 and analyzed for the parameters required by permit.

The statistical plan is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. Both interwell and intrawell methodologies are described and then applied to the Audubon County Sanitary Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance"*, March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for Audubon County Sanitary Landfill includes upgradient well MW90-17 and compliance wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in 113.10(5), which includes 15 inorganic constituents and 47 organic compounds, summarized below.

Detection monitoring constituents listed in Appendix I of IAC 567, Chapter 113.

Organic Compounds:

Acetone	*trans*-1,4-Dichloro-2-butene	Iodomethane
Acrylonitrile	1,1-Dichloroethane	4-Methyl-2-pentanone
Benzene	1,2-Dichloroethane	Styrene
Bromochloromethane	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane
Bromodichloromethane	*cis*-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	*trans*-1,2-Dichloroethene	Tetrachloroethene
Carbon disulfide	1,2-Dichloropropane	Toluene
Carbon tetrachloride	*cis*-1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	*trans*-1,3-Dichloropropene	1,1,2-Trichloroethane
Chloroethane	Ethylbenzene	Trichloroethene
Chloroform	2-Hexanone	Trichlorofluoromethane
Dibromochloromethane	Bromomethane	1,2,3-Trichloropropane
1,2-Dibromo-3-chloropropane	Chloromethane	Vinyl acetate
1,2-Dibromoethane	Dibromomethane	Vinyl chloride
1,2-Dichlorobenzene	Methylene chloride	Xylenes (Total)
1,4-Dichlorobenzene	2-Butanone	

Inorganic constituents:

Antimony, Total	Chromium, Total	Selenium, Total
Arsenic, Total	Cobalt, Total	Silver, Total
Barium, Total	Copper, Total	Thallium, Total
Beryllium, Total	Lead, Total	Vanadium, Total
Cadmium, Total	Nickel, Total	Zinc, Total

The ground water data obtained during the first semi-annual monitoring event in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. Both of these methods were applied to the Audubon County Sanitary Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in “Statistical Methods for Groundwater Monitoring” by Dr. Robert D. Gibbons. The DUMPStat program is completely consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance.

Ground water statistics are to be done on the inorganic constituents listed. The organic constituents are compared to maximum contaminant levels (MCLs) or practical quantitation limits (PQLs), in lieu of statistical comparisons to historical concentrations.

Interwell Statistics: Upgradient versus Downgradient Comparisons

Interwell statistics are appropriate when the upgradient and downgradient wells monitor the same ground water formation and there is similar variability in the upgradient and downgradient zones. Site prediction limits are determined by pooling the historical ground water data from hydraulically upgradient wells. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances. The type of prediction limit utilized (e.g., parametric or nonparametric) is based on the detection frequency and the data distribution of each parameter in the background data. The distribution of the background data is tested for normality using the Shapiro-Wilk test (Gibbons, 1994 and USEPA 1992). If the constituent is normally distributed, a normal prediction limit is used. If normality is rejected by the Shapiro-Wilk test, the background data is transformed by taking the natural logarithm. The Shapiro-Wilk test is then reapplied on the transformed data. If it is not rejected, lognormal prediction limits are used. If after transforming the data, normality is still rejected, nonparametric prediction limits are used for that analyte. The nonparametric prediction limit is the largest determination in the background measurements. For constituents where the background detection frequency is greater than 0% but less than 50%, nonparametric prediction limits will be used. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

Results of the Interwell Statistics

The background data used in this statistical analysis includes the ground water data collected from ground water well MW90-17 during the period from September 2009 through the current data. A summary of the background data from monitoring well MW90-17 is listed in Attachment B, Table 1 “Upgradient Data”. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances.

Table 2 “Most Current Downgradient Monitoring Data”, summarizes the current data from downgradient wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20 and SW-3, compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the table below.

Trace Metal Prediction Limit Exceedances at Audubon County Landfill during the First Semi-Annual Monitoring Event in 2024

Well	Trace Metal Detected	Result, µg/L	Prediction Limit, µg/L	Prediction Limit Type	Verified/ Awaiting verification
MW90-14	Nickel	13.1	7.1000	Nonparametric	Verified
MW90-4	Barium	375	363.9328	Normal	Awaiting verification
MW90-7	Cobalt	1.9	0.8000	Nonparametric	Verified
	Nickel	28.4	7.1000	Nonparametric	Verified

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Only barium was detected at a frequency greater than or equal to 50% in the upgradient well so only this metal was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were be used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 4% and the test becomes sensitive to 3 standard deviation unit increases over background.

The past and current verified trace metal exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, USEPA, March 2009 (Attachment C). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The calculated 95% LCLs are below the respective USEPA MCLs or Iowa statewide standards.

Intrawell statistics

Intrawell statistics are appropriate for facilities where the upgradient wells do not accurately characterize the natural ground water conditions downgradient from the facility. This may be due to different hydrogeological conditions where the wells are screened, having too few upgradient wells to account for the spatial variability, or the site exhibiting no definable hydraulic gradient. Intrawell statistics compare new measurements to the historical data at each ground water monitoring well independently. It is recommended that at least eight background samples be obtained prior to performing the statistics.

The most useful technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure is useful because it will detect releases both in terms of the constituent concentration and cumulative increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined.

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is extremely robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

It is recommended that at least eight rounds of data be available to provide a reliable estimate of the mean and standard deviation of the parameter concentration, although the control charts will be generated with as few as four data points. Having only four data points may produce greater uncertainty in the mean and standard deviation of the background data, leading to higher control limits, thus having a potentially high false negative rate.

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens for outliers using the Dixon test. If the Dixon test indicates an outlier, the value is compared to three times the median value for intrawell analyses. If the value fails both criteria of the two-stage screening, the value is considered a statistical outlier and will not be used in the mean and variance determinations. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established, is indicative of a landfill release.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend. If contamination exists prior to completing the background, the control limits could be potentially high and this control chart method would not be able to detect an increasing trend unless the increase is severe.

Results of the Intrawell Statistics

The Appendix I trace metals data from wells MW90-17, MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3 were evaluated using the combined Shewhart-CUSUM control chart method. The previous background included historical data obtained from September 2009 through 2019.

As ground water monitoring at a municipal solid waste facility proceeds, it is recommended to update background data sets periodically with valid detection monitoring results that are representative of background groundwater quality not affected by leakage from a monitored unit. Failure to update background will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences. Since there were no exceedances attributed to the landfill, the background was updated to included data obtained from September 2009 through 2021.

A summary of the intrawell statistics is included in Attachment D, Table 1 "Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts." The control charts or time series graphs follow the summary table. For the most current data, there were no control limit exceedances detected.

Increasing trends were detected in the background data for barium at upgradient well MW90-17 and barium at MW91-20.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. The site-wide false positive rate is 5% and the test becomes sensitive to 3 standard deviation units over background.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring.

No VOCs were detected but there are detections of bis(2-ethylhexyl)phthalate (18 μg/L) at MW90-7 and bis(2-ethylhexyl)phthalate (13 μg/L) at MW91-19.

The current and previous bis(2-ethylhexyl)phthalate detections were evaluated against the ground water protection standards (GWPS) using confidence limits. The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCLs for bis(2-ethylhexyl)phthalate do not exceed the USEPA MCL of 6 μg/L.

Historical VOC detections are summarized in Attachment E.

Attachment A

Ground Water Data obtained during the First Semi-Annual Monitoring Event in 2024

Table 1

Analytical Data Summary for 4/18/2024

Constituents	Units	MW90-14	MW90-17	MW90-4	MW90-7	MW91-19	MW91-20	SW-3
(3 4)-methylphenol	ug/L				<8	<8		
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	ug/L				<1	<1		
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,4,5-tetrachlorobenzene	ug/L				<8	<8		
1,2,4-trichlorobenzene	ug/L				<1	<1		
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<1	<1	<5	<5
1,2-dibromoethane (edb)	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dinitrobenzene	ug/L				<8	<8		
1,3,5-trinitrobenzene	ug/L				<8	<8		
1,3-dichlorobenzene	ug/L				<1	<1		
1,3-dichloropropane	ug/L				<1	<1		
1,3-dinitrobenzene	ug/L				<8	<8		
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,4-naphthoquinone	ug/L				<8	<8		
1,4-phenylenediamine	ug/L				<8	<8		
1-naphthylamine	ug/L				<8	<8		
2,2-dichloropropane	ug/L				<1	<1		
2,3,4,6-tetrachlorophenol	ug/L				<8	<8		
2,4,5-t	ug/L				<.5	<.5		
2,4,5-tp (silvex)	ug/L				<.5	<.5		
2,4,5-trichlorophenol	ug/L				<8	<8		
2,4,6-trichlorophenol	ug/L				<8	<8		
2,4-d	ug/L				<2	<2		
2,4-dichlorophenol	ug/L				<8	<8		
2,4-dimethylphenol	ug/L				<8	<8		
2,4-dinitrophenol	ug/L				<8	<8		
2,4-dinitrotoluene	ug/L				<8	<8		
2,6-dichlorophenol	ug/L				<8	<8		
2,6-dinitrotoluene	ug/L				<8	<8		
2-acetylaminofluorene	ug/L				<8	<8		
2-butanone (mek)	ug/L	<10	<10	<10	<5	<5	<10	<10
2-chloronaphthalene	ug/L				<8	<8		
2-chlorophenol	ug/L				<8	<8		
2-hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5
2-methylnaphthalene	ug/L				<8	<8		
2-methylphenol (o-cresol)	ug/L				<8	<8		
2-naphthylamine	ug/L				<8	<8		
2-nitroaniline	ug/L				<8	<8		
2-nitrophenol	ug/L				<8	<8		
3,3´-dichlorobenzidine	ug/L				<8	<8		
3,3'-dimethylbenzidine	ug/L				<8	<8		
3-methylcholanthrene	ug/L				<8	<8		
3-nitroaniline	ug/L				<8	<8		
4,4'-ddd	ug/L				<.05	<.05		
4,4'-dde	ug/L				<.05	<.05		
4,4'-ddt	ug/L				<.05	<.05		
4,6-dinitro-2-methylphenol	ug/L				<8	<8		
4-aminobiphenyl	ug/L				<8	<8		
4-bromophenyl phenyl ether	ug/L				<8	<8		
4-chloro-3-methylphenol	ug/L				<8	<8		
4-chloroaniline	ug/L				<8	<8		
4-chlorophenyl phenyl ether	ug/L				<8	<8		
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5
4-nitroaniline	ug/L				<8	<8		
4-nitrophenol	ug/L				<8	<8		
5-nitro-o-toluidine	ug/L				<8	<8		
7,12-dimethylbenz (a) anthracene	ug/L				<8	<8		
Acenaphthene	ug/L				<8 *	<8 *		
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10
Acetonitrile	ug/L				<10	<10		
Acetophenone	ug/L				<8	<8		
Acrolein	ug/L				<10	<10		
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5
Aldrin	ug/L				<.05	<.05		
Allyl chloride	ug/L				<1	<1		
Alpha-bhc	ug/L				<.05	<.05		
Anthracene	ug/L				<8	<8		
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for 4/18/2024

Constituents	Units	MW90-14	MW90-17	MW90-4	MW90-7	MW91-19	MW91-20	SW-3
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Azobenzene	ug/L				<8	<8		
Barium, total	ug/L	263	310	375	248	303	202	198
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Benzo(a)anthracene	ug/L				<8	<8		
Benzo(a)pyrene	ug/L				<8	<8		
Benzo(b)fluoranthene	ug/L				<8	<8		
Benzo(g,h,i)perylene	ug/L				<8	<8		
Benzo(k)fluoranthene	ug/L				<8	<8		
Benzyl alcohol	ug/L				<8	<8		
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Beta-bhc	ug/L				<.05	<.05		
Bis(2-chloroethoxy)methane	ug/L				<8	<8		
Bis(2-chloroethyl)ether	ug/L				<8	<8		
Bis(2-ethylhexyl)phthalate	ug/L				18	13		
Bis[2-chloroisopropyl]ether	ug/L				<8	<8		
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Butyl benzyl phthalate	ug/L				<8	<8		
Cadmium, total	ug/L	<.8	<.8	<.8	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlordane	ug/L				<.1	<.1		
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzilate	ug/L				<8	<8		
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroprene	ug/L				<1	<1		
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8
Chrysene	ug/L				<8	<8		
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	<.4	<.4	<.4	1.9	<.4	<.4	<.4
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Cyanide	mg/L				<.005	<.005		
Delta-bhc	ug/L				<.05	<.05		
Diallate	ug/L				<8	<8		
Dibenzo(a,h)anthracene	ug/L				<8	<8		
Dibenzofuran	ug/L				<8	<8		
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dichlorodifluoromethane	ug/L				<1	<1		
Dieldrin	ug/L				<.05	<.05		
Diethyl phthalate	ug/L				<8	<8		
Dimethoate	ug/L				<.4	<.4		
Dimethyl phthalate	ug/L				<8	<8		
Di-n-butyl phthalate	ug/L				<8	<8		
Di-n-octyl phthalate	ug/L				<8	<8		
Dinoseb	ug/L				<.5	<.5		
Diphenylamine	ug/L				<8	<8		
Disulfoton	ug/L				<.4	<.4		
Endosulfan i	ug/L				<.05	<.05		
Endosulfan ii	ug/L				<.05	<.05		
Endosulfan sulfate	ug/L				<.05	<.05		
Endrin	ug/L				<.05	<.05		
Endrin aldehyde	ug/L				<.05	<.05		
Ethyl methacrylate	ug/L				<10	<10		
Ethyl methanesulfonate	ug/L				<8	<8		
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Famphur	ug/L				<.4	<.4		
Fluoranthene	ug/L				<8	<8		
Fluorene	ug/L				<8	<8		
Gamma-bhc (lindane)	ug/L				<.05	<.05		
Heptachlor	ug/L				<.05	<.05		
Heptachlor epoxide	ug/L				<.05	<.05		
Hexachlorobenzene	ug/L				<.05	<.05		
Hexachlorobutadiene	ug/L				<8	<8		
Hexachlorocyclopentadiene	ug/L				<8	<8		
Hexachloroethane	ug/L				<8	<8		
Hexachloropropene	ug/L				<8	<8		
Indeno(1,2,3-cd)pyrene	ug/L				<8	<8		
Iodomethane	ug/L	<1	<1	<1	<2	<2	<1	<1
Isobutanol	ug/L				<1000	<1000		
Isodrin	ug/L				<8	<8		

* - The displayed value is the arithmetic mean of multiple database matches.

Table 1

Analytical Data Summary for 4/18/2024

Constituents	Units	MW90-14	MW90-17	MW90-4	MW90-7	MW91-19	MW91-20	SW-3
Isophorone	ug/L				<8	<8		
Isosafrole	ug/L				<8	<8		
Kepone	ug/L				<8	<8		
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Mercury, total	ug/L				<.5	<.5		
Methacrylonitrile	ug/L				<1	<1		
Methapyrilene	ug/L				<8	<8		
Methoxychlor	ug/L				<.05	<.05		
Methyl methacrylate	ug/L				<1	<1		
Methyl methanesulfonate	ug/L				<8	<8		
Methyl parathion	ug/L				<.4	<.4		
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L				<8	<8		
Nickel, total	ug/L	13.1	<4.0	<4.0	28.4	<4.0	<4.0	<4.0
Nitrobenzene	ug/L				<8	<8		
N-nitrosodiethylamine	ug/L				<8	<8		
N-nitrosodimethylamine	ug/L				<8	<8		
N-nitrosodi-n-butylamine	ug/L				<8	<8		
N-nitroso-di-n-propylamine	ug/L				<8	<8		
N-nitrosodiphenylamine	ug/L				<8	<8		
N-nitrosomethylethylamine	ug/L				<8	<8		
N-nitrosopiperidine	ug/L				<8	<8		
N-nitrosopyrrolidine	ug/L				<8	<8		
O,o,o-triethyl phosphorothioate	ug/L				<.4	<.4		
O-toluidine	ug/L				<8	<8		
P-(dimethylamino)azobenzene	ug/L				<8	<8		
Parathion	ug/L				<.4	<.4		
Pcb-1016	ug/L				<.2	<.2		
Pcb-1221	ug/L				<.2	<.2		
Pcb-1232	ug/L				<.2	<.2		
Pcb-1242	ug/L				<.2	<.2		
Pcb-1248	ug/L				<.2	<.2		
Pcb-1254	ug/L				<.2	<.2		
Pcb-1260	ug/L				<.2	<.2		
Pentachlorobenzene	ug/L				<8	<8		
Pentachloronitrobenzene	ug/L				<8	<8		
Pentachlorophenol	ug/L				<8	<8		
Phenacetin	ug/L				<8	<8		
Phenanthrene	ug/L				<8	<8		
Phenol	ug/L				<8	<8		
Phorate	ug/L				<.4	<.4		
Pronamide	ug/L				<8	<8		
Propionitrile	ug/L				<10	<10		
Pyrene	ug/L				<8	<8		
Safrole	ug/L				<8	<8		
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
Sulfide, total	mg/L				<.15	<.15		
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Thionazin	ug/L				<.4	<.4		
Tin, total	ug/L				<20	<20		
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Toxaphene	ug/L				<.2	<.2		
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment B

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW90-17	09/30/2009	ND	1.0000	2.0000	**
Antimony, total	ug/L	MW90-17	03/23/2010	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/07/2010	ND	5.0000	2.0000	**
Antimony, total	ug/L	MW90-17	04/05/2011	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/06/2011	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/16/2012	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/24/2012	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/24/2013	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/20/2013	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/08/2014	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/22/2014	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/20/2015	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/17/2015	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/17/2016	ND	2.0000		
Antimony, total	ug/L	MW90-17	08/26/2016	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/11/2017	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/23/2017	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/10/2018	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/24/2018	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/16/2019	ND	2.0000		
Antimony, total	ug/L	MW90-17	08/29/2019	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/10/2020	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/09/2020	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/09/2021	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/11/2021	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/07/2022	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/06/2022	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/05/2023	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/13/2023	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/18/2024	ND	2.0000		
Arsenic, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Arsenic, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Arsenic, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Barium, total	ug/L	MW90-17	09/30/2009		199.0000		
Barium, total	ug/L	MW90-17	03/23/2010		171.0000		
Barium, total	ug/L	MW90-17	09/07/2010		169.0000		
Barium, total	ug/L	MW90-17	04/05/2011		215.0000		
Barium, total	ug/L	MW90-17	09/06/2011		207.0000		
Barium, total	ug/L	MW90-17	03/16/2012		196.0000		
Barium, total	ug/L	MW90-17	09/24/2012		185.0000		
Barium, total	ug/L	MW90-17	04/24/2013		183.0000		
Barium, total	ug/L	MW90-17	09/20/2013		351.0000		
Barium, total	ug/L	MW90-17	04/08/2014		261.0000		
Barium, total	ug/L	MW90-17	09/22/2014		212.0000		
Barium, total	ug/L	MW90-17	03/20/2015		257.0000		
Barium, total	ug/L	MW90-17	09/17/2015		234.0000		
Barium, total	ug/L	MW90-17	03/17/2016		246.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW90-17	08/26/2016		266.0000		
Barium, total	ug/L	MW90-17	04/11/2017		234.0000		
Barium, total	ug/L	MW90-17	09/23/2017		275.0000		
Barium, total	ug/L	MW90-17	04/10/2018		242.0000		
Barium, total	ug/L	MW90-17	09/24/2018		259.0000		
Barium, total	ug/L	MW90-17	04/16/2019		242.0000		
Barium, total	ug/L	MW90-17	08/29/2019		281.0000		
Barium, total	ug/L	MW90-17	04/10/2020		274.0000		
Barium, total	ug/L	MW90-17	10/09/2020		281.0000		
Barium, total	ug/L	MW90-17	04/09/2021		265.0000		
Barium, total	ug/L	MW90-17	10/11/2021		251.0000		
Barium, total	ug/L	MW90-17	04/07/2022		299.0000		
Barium, total	ug/L	MW90-17	10/06/2022		288.0000		
Barium, total	ug/L	MW90-17	04/05/2023		307.0000		
Barium, total	ug/L	MW90-17	10/13/2023		314.0000		
Barium, total	ug/L	MW90-17	04/18/2024		310.0000		
Beryllium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Beryllium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Beryllium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Cadmium, total	ug/L	MW90-17	09/30/2009	ND	1.0000	0.8000	**
Cadmium, total	ug/L	MW90-17	03/23/2010	ND	1.0000	0.8000	**
Cadmium, total	ug/L	MW90-17	09/07/2010	ND	2.5000		*
Cadmium, total	ug/L	MW90-17	04/05/2011	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/06/2011	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/16/2012	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/24/2012	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/24/2013	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/20/2013	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/08/2014	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/22/2014	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/20/2015	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/17/2015	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/17/2016	ND	0.8000		
Cadmium, total	ug/L	MW90-17	08/26/2016	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/11/2017	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/23/2017	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/10/2018	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/24/2018		1.1000		
Cadmium, total	ug/L	MW90-17	11/01/2018	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW90-17	08/29/2019	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/10/2020	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/09/2020	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/09/2021	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/11/2021	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/07/2022	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/06/2022	ND	0.8000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cadmium, total	ug/L	MW90-17	04/05/2023	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/13/2023	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/18/2024	ND	0.8000		
Chromium, total	ug/L	MW90-17	09/30/2009	ND	10.0000	8.0000	**
Chromium, total	ug/L	MW90-17	03/23/2010	ND	10.0000	8.0000	**
Chromium, total	ug/L	MW90-17	09/07/2010	ND	25.0000		*
Chromium, total	ug/L	MW90-17	04/05/2011	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/06/2011	ND	20.0000	8.0000	**
Chromium, total	ug/L	MW90-17	03/16/2012	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/24/2012	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/24/2013	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/20/2013	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/08/2014	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/22/2014	ND	8.0000		
Chromium, total	ug/L	MW90-17	03/20/2015	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/17/2015	ND	8.0000		
Chromium, total	ug/L	MW90-17	03/17/2016	ND	8.0000		
Chromium, total	ug/L	MW90-17	08/26/2016	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/11/2017	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/23/2017	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/10/2018	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/24/2018	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW90-17	08/29/2019	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/10/2020	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/09/2020	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/09/2021	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/11/2021	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/07/2022	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/06/2022	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/05/2023	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/13/2023	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/18/2024	ND	8.0000		
Cobalt, total	ug/L	MW90-17	09/30/2009	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	03/23/2010	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/07/2010	ND	10.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/05/2011	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/06/2011	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	03/16/2012	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/24/2012	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/24/2013	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/20/2013	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/08/2014	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/22/2014	ND	0.8000		
Cobalt, total	ug/L	MW90-17	03/20/2015	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/17/2015	ND	0.8000		
Cobalt, total	ug/L	MW90-17	03/17/2016	ND	0.8000		
Cobalt, total	ug/L	MW90-17	08/26/2016	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/11/2017	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/23/2017	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/10/2018	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/24/2018	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW90-17	08/29/2019	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/10/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/09/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/11/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/07/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/06/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/05/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/13/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/18/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Copper, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Copper, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Copper, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Copper, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Copper, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Copper, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Copper, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Copper, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Copper, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Copper, total	ug/L	MW90-17	09/22/2014	ND	4.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Copper, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Copper, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Copper, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Copper, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Copper, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Copper, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Copper, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Copper, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Copper, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Copper, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Copper, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Copper, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Copper, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Copper, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Copper, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Copper, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Copper, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Lead, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Lead, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Lead, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Lead, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Lead, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Lead, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Lead, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Lead, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Lead, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Lead, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Lead, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Lead, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Lead, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Lead, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Lead, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Lead, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Lead, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Lead, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Lead, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Lead, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Lead, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Lead, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Lead, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Lead, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Lead, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Lead, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Lead, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Lead, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Lead, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Nickel, total	ug/L	MW90-17	04/05/2011		7.1000		
Nickel, total	ug/L	MW90-17	09/06/2011		4.8000		
Nickel, total	ug/L	MW90-17	03/16/2012		4.8000		
Nickel, total	ug/L	MW90-17	09/24/2012		5.3000		
Nickel, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Nickel, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Nickel, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/11/2021	ND	4.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Selenium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Selenium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Silver, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Silver, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Silver, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Silver, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Silver, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Silver, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Silver, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Silver, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Silver, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Silver, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Silver, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Silver, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Silver, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Silver, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Silver, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Silver, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Silver, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Silver, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Silver, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Silver, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Silver, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Silver, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Silver, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Silver, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Silver, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Silver, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Silver, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Silver, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Silver, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/16/2012	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	09/24/2012	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/24/2013	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Thallium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Thallium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/16/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	08/29/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/10/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/09/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/09/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/11/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/07/2022	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/06/2022	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/05/2023	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/13/2023	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/18/2024	ND	2.0000	4.0000	**
Vanadium, total	ug/L	MW90-17	09/30/2009	ND	10.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	03/23/2010	ND	10.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	09/07/2010	ND	25.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	04/05/2011		20.1000		
Vanadium, total	ug/L	MW90-17	09/06/2011	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/16/2012	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/24/2012	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/24/2013	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/20/2013	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/08/2014	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/22/2014	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/20/2015	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/17/2015	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/17/2016	ND	20.0000		
Vanadium, total	ug/L	MW90-17	08/26/2016	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/11/2017	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/23/2017	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/10/2018	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/24/2018	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW90-17	08/29/2019	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/10/2020	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/09/2021	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/11/2021	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/07/2022	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/06/2022	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/05/2023	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/13/2023	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/18/2024	ND	20.0000		
Zinc, total	ug/L	MW90-17	09/30/2009	ND	10.0000	8.0000	**
Zinc, total	ug/L	MW90-17	03/23/2010		10.5000		
Zinc, total	ug/L	MW90-17	09/07/2010	ND	25.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/05/2011	ND	8.0000		
Zinc, total	ug/L	MW90-17	09/06/2011	ND	8.0000		
Zinc, total	ug/L	MW90-17	03/16/2012	ND	8.0000		
Zinc, total	ug/L	MW90-17	09/24/2012	ND	8.0000		
Zinc, total	ug/L	MW90-17	04/24/2013	ND	8.0000		
Zinc, total	ug/L	MW90-17	09/20/2013	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/08/2014	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	09/22/2014	ND	8.0000		
Zinc, total	ug/L	MW90-17	03/20/2015	ND	8.0000		
Zinc, total	ug/L	MW90-17	09/17/2015	ND	8.0000		
Zinc, total	ug/L	MW90-17	03/17/2016	ND	8.0000		
Zinc, total	ug/L	MW90-17	08/26/2016		8.3000		
Zinc, total	ug/L	MW90-17	04/11/2017	ND	8.0000		
Zinc, total	ug/L	MW90-17	09/23/2017	ND	8.0000		
Zinc, total	ug/L	MW90-17	04/10/2018	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	09/24/2018	ND	8.0000		
Zinc, total	ug/L	MW90-17	04/16/2019	ND	8.0000		
Zinc, total	ug/L	MW90-17	08/29/2019		37.8000		*
Zinc, total	ug/L	MW90-17	09/23/2019	ND	8.0000		
Zinc, total	ug/L	MW90-17	04/10/2020	ND	20.0000	8.0000	**

*   - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW90-17	10/09/2020	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/09/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	10/11/2021	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/07/2022	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	10/06/2022	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/05/2023	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	10/13/2023	ND	20.0000	8.0000	**
Zinc, total	ug/L	MW90-17	04/18/2024	ND	20.0000	8.0000	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total	ug/L	MW90-14	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-14	04/18/2024		263.0000	**	363.9328
Beryllium, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-14	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW90-14	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-14	04/18/2024	ND	0.4000	**	0.8000
Copper, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-14	04/18/2024		13.1000	***	7.1000
Selenium, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-14	04/18/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-14	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-14	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-14	04/18/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW90-4	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-4	04/18/2024		375.0000	*	363.9328
Beryllium, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-4	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW90-4	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-4	04/18/2024	ND	0.4000		0.8000
Copper, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-4	04/18/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-4	04/18/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-4	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-4	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-4	04/18/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW90-7	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-7	04/18/2024		248.0000		363.9328
Beryllium, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-7	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW90-7	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-7	04/18/2024		1.9000	***	0.8000
Copper, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-7	04/18/2024		28.4000	***	7.1000
Selenium, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-7	04/18/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-7	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-7	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-7	04/18/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW91-19	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW91-19	04/18/2024		303.0000	**	363.9328
Beryllium, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW91-19	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW91-19	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW91-19	04/18/2024	ND	0.4000	**	0.8000
Copper, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW91-19	04/18/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW91-19	04/18/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW91-19	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW91-19	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW91-19	04/18/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW91-20	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW91-20	04/18/2024		202.0000		363.9328
Beryllium, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW91-20	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW91-20	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW91-20	04/18/2024	ND	0.4000		0.8000
Copper, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW91-20	04/18/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW91-20	04/18/2024	ND	4.0000		4.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW91-20	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW91-20	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW91-20	04/18/2024	ND	20.0000		10.5000
Antimony, total	ug/L	SW-3	04/18/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Barium, total	ug/L	SW-3	04/18/2024		198.0000		363.9328
Beryllium, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	SW-3	04/18/2024	ND	0.8000		1.1000
Chromium, total	ug/L	SW-3	04/18/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	SW-3	04/18/2024	ND	0.4000		0.8000
Copper, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Lead, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Nickel, total	ug/L	SW-3	04/18/2024	ND	4.0000		7.1000
Selenium, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Silver, total	ug/L	SW-3	04/18/2024	ND	4.0000		4.0000
Thallium, total	ug/L	SW-3	04/18/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	SW-3	04/18/2024	ND	20.0000		20.1000
Zinc, total	ug/L	SW-3	04/18/2024	ND	20.0000		10.5000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total	0	30	0.000	0	199	0.000
Arsenic, total	0	30	0.000	25	199	0.126
Barium, total	30	30	1.000	206	206	1.000
Beryllium, total	0	30	0.000	1	199	0.005
Cadmium, total	1	30	0.033	32	203	0.158
Chromium, total	0	29	0.000	1	199	0.005
Cobalt, total	0	30	0.000	46	201	0.229
Copper, total	0	30	0.000	18	199	0.090
Lead, total	0	30	0.000	6	199	0.030
Nickel, total	4	30	0.133	116	200	0.580
Selenium, total	0	30	0.000	15	199	0.075
Silver, total	0	30	0.000	0	199	0.000
Thallium, total	0	30	0.000	0	199	0.000
Vanadium, total	1	30	0.033	9	199	0.045
Zinc, total	2	30	0.067	44	199	0.221

N = Total number of measurements in all wells.
Detect = Total number of detections in all wells.
Proportion = Detect/N.

Table 4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total	0	30	0.000									nonpar
Arsenic, total	0	30	0.000									nonpar
Barium, total	30	30	1.000	0.721	0.136					2.326	normal	normal
Beryllium, total	0	30	0.000									nonpar
Cadmium, total	1	30	0.033									nonpar
Chromium, total	0	29	0.000									nonpar
Cobalt, total	0	30	0.000									nonpar
Copper, total	0	30	0.000									nonpar
Lead, total	0	30	0.000									nonpar
Nickel, total	4	30	0.133	1.529	1.344					2.326	normal	nonpar
Selenium, total	0	30	0.000									nonpar
Silver, total	0	30	0.000									nonpar
Thallium, total	0	30	0.000									nonpar
Vanadium, total	1	30	0.033									nonpar
Zinc, total	2	30	0.067									nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table 5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total	ug/L	0	30					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	0	30					4.0000	nonpar	***	0.99
Barium, total	ug/L	30	30	249.1333	45.8752	0.0100	2.5024	363.9328	normal		
Beryllium, total	ug/L	0	30					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	1	30					1.1000	nonpar		0.99
Chromium, total	ug/L	0	29					8.0000	nonpar	***	0.99
Cobalt, total	ug/L	0	30					0.8000	nonpar	***	0.99
Copper, total	ug/L	0	30					4.0000	nonpar	***	0.99
Lead, total	ug/L	0	30					4.0000	nonpar	***	0.99
Nickel, total	ug/L	4	30					7.1000	nonpar		0.99
Selenium, total	ug/L	0	30					4.0000	nonpar	***	0.99
Silver, total	ug/L	0	30					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	30					4.0000	nonpar	***	0.99
Vanadium, total	ug/L	1	30					20.1000	nonpar		0.99
Zinc, total	ug/L	2	30					10.5000	nonpar		0.99

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cadmium, total	ug/L	MW90-17	09/07/2010	2.5000	< 2.5000	09/30/2009-04/18/2024	31	0.4502
Chromium, total	ug/L	MW90-17	09/07/2010	25.0000	< 25.0000	09/30/2009-04/18/2024	30	0.4556

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW90-14	06/09/2008		386.0000	*	363.9328
Barium, total	ug/L	MW90-14	10/16/2008		394.0000	*	363.9328
Barium, total	ug/L	MW90-14	03/05/2009		368.0000	*	363.9328
Barium, total	ug/L	MW90-14	09/30/2009		840.0000	*	363.9328
Barium, total	ug/L	MW90-14	03/23/2010		307.0000		363.9328
Barium, total	ug/L	MW90-14	09/07/2010		388.0000	*	363.9328
Barium, total	ug/L	MW90-14	04/05/2011		360.0000		363.9328
Barium, total	ug/L	MW90-14	09/06/2011		352.0000		363.9328
Barium, total	ug/L	MW90-14	03/16/2012		611.0000	*	363.9328
Barium, total	ug/L	MW90-14	09/24/2012		601.0000	*	363.9328
Barium, total	ug/L	MW90-14	04/24/2013		361.0000		363.9328
Barium, total	ug/L	MW90-14	09/20/2013		1150.0000	*	363.9328
Barium, total	ug/L	MW90-14	10/28/2013		450.0000	*	363.9328
Barium, total	ug/L	MW90-14	04/08/2014		482.0000	*	363.9328
Barium, total	ug/L	MW90-14	09/22/2014		462.0000	*	363.9328
Barium, total	ug/L	MW90-14	03/20/2015		332.0000		363.9328
Barium, total	ug/L	MW90-14	09/17/2015		274.0000		363.9328
Barium, total	ug/L	MW90-14	03/17/2016		314.0000		363.9328
Barium, total	ug/L	MW90-14	08/26/2016		301.0000		363.9328
Barium, total	ug/L	MW90-14	04/11/2017		300.0000		363.9328
Barium, total	ug/L	MW90-14	09/23/2017		270.0000		363.9328
Barium, total	ug/L	MW90-14	04/10/2018		264.0000		363.9328
Barium, total	ug/L	MW90-14	09/24/2018		307.0000		363.9328
Barium, total	ug/L	MW90-14	04/16/2019		199.0000		363.9328
Barium, total	ug/L	MW90-14	08/29/2019		300.0000		363.9328
Barium, total	ug/L	MW90-14	04/10/2020		321.0000		363.9328
Barium, total	ug/L	MW90-14	10/09/2020		503.0000	*	363.9328
Barium, total	ug/L	MW90-14	04/09/2021		272.0000		363.9328
Barium, total	ug/L	MW90-14	10/11/2021		313.0000		363.9328
Barium, total	ug/L	MW90-14	04/07/2022		255.0000		363.9328
Barium, total	ug/L	MW90-14	10/06/2022		245.0000		363.9328
Barium, total	ug/L	MW90-14	04/05/2023		134.0000		363.9328
Barium, total	ug/L	MW90-14	10/13/2023		381.0000	*	363.9328
Barium, total	ug/L	MW90-14	04/18/2024		263.0000		363.9328
Cobalt, total	ug/L	MW90-14	06/09/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-14	10/16/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-14	03/05/2009	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/30/2009		7.0000	*	0.8000
Cobalt, total	ug/L	MW90-14	03/23/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/07/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	04/05/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/06/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	03/16/2012	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/24/2012	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	04/24/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/20/2013		6.0000	*	0.8000
Cobalt, total	ug/L	MW90-14	10/28/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	04/08/2014	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-14	09/22/2014		2.5000	*	0.8000
Cobalt, total	ug/L	MW90-14	03/20/2015		2.4000	*	0.8000
Cobalt, total	ug/L	MW90-14	09/17/2015	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	03/17/2016		1.0000	*	0.8000
Cobalt, total	ug/L	MW90-14	08/26/2016	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	04/11/2017		0.8000	**	0.8000
Cobalt, total	ug/L	MW90-14	09/23/2017	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	04/10/2018	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	09/24/2018		1.3000	*	0.8000
Cobalt, total	ug/L	MW90-14	04/16/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	08/29/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-14	04/10/2020		0.5000		0.8000
Cobalt, total	ug/L	MW90-14	10/09/2020		1.7000	*	0.8000
Cobalt, total	ug/L	MW90-14	04/09/2021		0.6000		0.8000
Cobalt, total	ug/L	MW90-14	10/11/2021		0.7000		0.8000
Cobalt, total	ug/L	MW90-14	04/07/2022	ND	0.4000		0.8000
Cobalt, total	ug/L	MW90-14	10/06/2022		2.4000	*	0.8000
Cobalt, total	ug/L	MW90-14	04/05/2023	ND	0.4000		0.8000
Cobalt, total	ug/L	MW90-14	10/13/2023		0.9000	*	0.8000
Cobalt, total	ug/L	MW90-14	04/18/2024	ND	0.4000		0.8000
Nickel, total	ug/L	MW90-14	06/09/2008		69.7000	*	7.1000
Nickel, total	ug/L	MW90-14	10/16/2008		65.3000	*	7.1000
Nickel, total	ug/L	MW90-14	03/05/2009	ND	50.0000		7.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW90-14	09/30/2009		59.1000	*	7.1000
Nickel, total	ug/L	MW90-14	03/23/2010		31.5000	*	7.1000
Nickel, total	ug/L	MW90-14	09/07/2010		45.2000	*	7.1000
Nickel, total	ug/L	MW90-14	04/05/2011		45.5000	*	7.1000
Nickel, total	ug/L	MW90-14	09/06/2011		33.9000	*	7.1000
Nickel, total	ug/L	MW90-14	03/16/2012		36.6000	*	7.1000
Nickel, total	ug/L	MW90-14	09/24/2012		26.4000	*	7.1000
Nickel, total	ug/L	MW90-14	04/24/2013		24.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/20/2013		60.2000	*	7.1000
Nickel, total	ug/L	MW90-14	10/28/2013		13.9000	*	7.1000
Nickel, total	ug/L	MW90-14	04/08/2014		31.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/22/2014		34.0000	*	7.1000
Nickel, total	ug/L	MW90-14	03/20/2015		18.3000	*	7.1000
Nickel, total	ug/L	MW90-14	09/17/2015		20.8000	*	7.1000
Nickel, total	ug/L	MW90-14	03/17/2016		36.1000	*	7.1000
Nickel, total	ug/L	MW90-14	08/26/2016		21.3000	*	7.1000
Nickel, total	ug/L	MW90-14	04/11/2017		31.9000	*	7.1000
Nickel, total	ug/L	MW90-14	09/23/2017		30.9000	*	7.1000
Nickel, total	ug/L	MW90-14	04/10/2018		20.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/24/2018		35.0000	*	7.1000
Nickel, total	ug/L	MW90-14	04/16/2019		12.2000	*	7.1000
Nickel, total	ug/L	MW90-14	08/29/2019		33.1000	*	7.1000
Nickel, total	ug/L	MW90-14	04/10/2020		41.7000	*	7.1000
Nickel, total	ug/L	MW90-14	10/09/2020		59.0000	*	7.1000
Nickel, total	ug/L	MW90-14	04/09/2021		31.1000	*	7.1000
Nickel, total	ug/L	MW90-14	10/11/2021		33.4000	*	7.1000
Nickel, total	ug/L	MW90-14	04/07/2022		20.2000	*	7.1000
Nickel, total	ug/L	MW90-14	10/06/2022		27.8000	*	7.1000
Nickel, total	ug/L	MW90-14	04/05/2023		6.3000		7.1000
Nickel, total	ug/L	MW90-14	10/13/2023		36.5000	*	7.1000
Nickel, total	ug/L	MW90-14	04/18/2024		13.1000	*	7.1000
Barium, total	ug/L	MW90-4	06/09/2008		336.0000		363.9328
Barium, total	ug/L	MW90-4	10/16/2008		469.0000	*	363.9328
Barium, total	ug/L	MW90-4	03/05/2009		444.0000	*	363.9328
Barium, total	ug/L	MW90-4	09/30/2009		512.0000	*	363.9328
Barium, total	ug/L	MW90-4	03/23/2010		315.0000		363.9328
Barium, total	ug/L	MW90-4	09/07/2010		420.0000	*	363.9328
Barium, total	ug/L	MW90-4	04/05/2011		427.0000	*	363.9328
Barium, total	ug/L	MW90-4	09/06/2011		499.0000	*	363.9328
Barium, total	ug/L	MW90-4	03/16/2012		399.0000	*	363.9328
Barium, total	ug/L	MW90-4	09/24/2012		322.0000		363.9328
Barium, total	ug/L	MW90-4	04/24/2013		233.0000		363.9328
Barium, total	ug/L	MW90-4	09/20/2013		679.0000	*	363.9328
Barium, total	ug/L	MW90-4	10/28/2013		329.0000		363.9328
Barium, total	ug/L	MW90-4	04/08/2014		379.0000	*	363.9328
Barium, total	ug/L	MW90-4	09/22/2014		383.0000	*	363.9328
Barium, total	ug/L	MW90-4	03/20/2015		434.0000	*	363.9328
Barium, total	ug/L	MW90-4	09/17/2015		437.0000	*	363.9328
Barium, total	ug/L	MW90-4	03/17/2016		381.0000	*	363.9328
Barium, total	ug/L	MW90-4	08/26/2016		381.0000	*	363.9328
Barium, total	ug/L	MW90-4	04/11/2017		332.0000		363.9328
Barium, total	ug/L	MW90-4	09/23/2017		362.0000		363.9328
Barium, total	ug/L	MW90-4	11/15/2017		339.0000		363.9328
Barium, total	ug/L	MW90-4	04/10/2018		340.0000		363.9328
Barium, total	ug/L	MW90-4	09/24/2018		306.0000		363.9328
Barium, total	ug/L	MW90-4	04/16/2019		361.0000		363.9328
Barium, total	ug/L	MW90-4	06/25/2019		433.0000	*	363.9328
Barium, total	ug/L	MW90-4	08/29/2019		359.0000		363.9328
Barium, total	ug/L	MW90-4	04/10/2020		377.0000	*	363.9328
Barium, total	ug/L	MW90-4	10/09/2020		385.0000	*	363.9328
Barium, total	ug/L	MW90-4	04/09/2021		298.0000		363.9328
Barium, total	ug/L	MW90-4	10/11/2021		377.0000	*	363.9328
Barium, total	ug/L	MW90-4	04/07/2022		348.0000		363.9328
Barium, total	ug/L	MW90-4	10/06/2022		351.0000		363.9328
Barium, total	ug/L	MW90-4	04/05/2023		320.0000		363.9328
Barium, total	ug/L	MW90-4	10/13/2023		342.0000		363.9328
Barium, total	ug/L	MW90-4	04/18/2024		375.0000	*	363.9328
Cobalt, total	ug/L	MW90-7	09/07/2007	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	06/09/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	10/16/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	03/05/2009	ND	20.0000		0.8000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cobalt, total	ug/L	MW90-7	09/30/2009		4.8000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/23/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/07/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	04/05/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/06/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	03/16/2012		4.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/24/2012		4.4000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/24/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/20/2013		5.7000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/28/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	04/08/2014		6.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/22/2014		2.7000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/20/2015		4.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/17/2015		6.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/17/2016	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-7	08/26/2016		6.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/11/2017		1.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/23/2017		2.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/10/2018		1.9000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/24/2018		5.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/16/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-7	08/29/2019		1.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/10/2020		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/09/2020		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/09/2021		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/11/2021		5.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/07/2022		0.8000	**	0.8000
Cobalt, total	ug/L	MW90-7	10/06/2022		6.0000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/05/2023		1.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/13/2023		19.8000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/18/2024		1.9000	*	0.8000
Nickel, total	ug/L	MW90-7	09/07/2007	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	06/09/2008	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	10/16/2008		54.9000	*	7.1000
Nickel, total	ug/L	MW90-7	03/05/2009	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	09/30/2009		49.1000	*	7.1000
Nickel, total	ug/L	MW90-7	03/23/2010		38.3000	*	7.1000
Nickel, total	ug/L	MW90-7	09/07/2010		50.5000	*	7.1000
Nickel, total	ug/L	MW90-7	04/05/2011		52.5000	*	7.1000
Nickel, total	ug/L	MW90-7	09/06/2011		43.4000	*	7.1000
Nickel, total	ug/L	MW90-7	03/16/2012		42.6000	*	7.1000
Nickel, total	ug/L	MW90-7	09/24/2012		28.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/24/2013		33.4000	*	7.1000
Nickel, total	ug/L	MW90-7	09/20/2013		60.4000	*	7.1000
Nickel, total	ug/L	MW90-7	10/28/2013		41.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/08/2014		39.6000	*	7.1000
Nickel, total	ug/L	MW90-7	09/22/2014		25.3000	*	7.1000
Nickel, total	ug/L	MW90-7	03/20/2015		34.0000	*	7.1000
Nickel, total	ug/L	MW90-7	09/17/2015		29.6000	*	7.1000
Nickel, total	ug/L	MW90-7	03/17/2016		23.5000	*	7.1000
Nickel, total	ug/L	MW90-7	08/26/2016		32.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/11/2017		23.3000	*	7.1000
Nickel, total	ug/L	MW90-7	09/23/2017		26.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/10/2018		33.8000	*	7.1000
Nickel, total	ug/L	MW90-7	09/24/2018		22.3000	*	7.1000
Nickel, total	ug/L	MW90-7	04/16/2019		16.3000	*	7.1000
Nickel, total	ug/L	MW90-7	08/29/2019		25.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/10/2020		23.0000	*	7.1000
Nickel, total	ug/L	MW90-7	10/09/2020		29.2000	*	7.1000
Nickel, total	ug/L	MW90-7	04/09/2021		42.1000	*	7.1000
Nickel, total	ug/L	MW90-7	10/11/2021		29.7000	*	7.1000
Nickel, total	ug/L	MW90-7	04/07/2022		15.2000	*	7.1000
Nickel, total	ug/L	MW90-7	10/06/2022		27.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/05/2023		25.6000	*	7.1000
Nickel, total	ug/L	MW90-7	10/13/2023		29.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/18/2024		28.4000	*	7.1000
Barium, total	ug/L	MW91-19	06/09/2008		331.0000		363.9328
Barium, total	ug/L	MW91-19	10/16/2008		331.0000		363.9328
Barium, total	ug/L	MW91-19	03/05/2009		374.0000	*	363.9328
Barium, total	ug/L	MW91-19	09/30/2009		390.0000	*	363.9328
Barium, total	ug/L	MW91-19	03/23/2010		350.0000		363.9328

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table 8

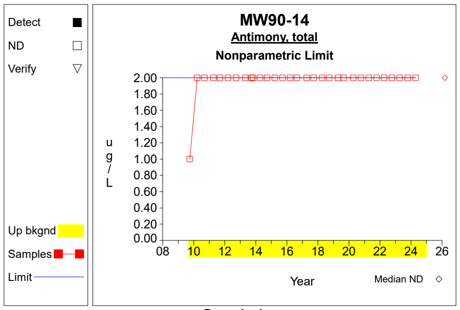
Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW91-19	09/07/2010		430.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/05/2011		347.0000		363.9328
Barium, total	ug/L	MW91-19	09/06/2011		534.0000	*	363.9328
Barium, total	ug/L	MW91-19	03/16/2012		390.0000	*	363.9328
Barium, total	ug/L	MW91-19	09/24/2012		449.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/24/2013		277.0000		363.9328
Barium, total	ug/L	MW91-19	09/20/2013		833.0000	*	363.9328
Barium, total	ug/L	MW91-19	10/28/2013		467.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/08/2014		396.0000	*	363.9328
Barium, total	ug/L	MW91-19	09/22/2014		317.0000		363.9328
Barium, total	ug/L	MW91-19	03/20/2015		331.0000		363.9328
Barium, total	ug/L	MW91-19	09/17/2015		275.0000		363.9328
Barium, total	ug/L	MW91-19	03/17/2016		372.0000	*	363.9328
Barium, total	ug/L	MW91-19	06/15/2016		310.0000		363.9328
Barium, total	ug/L	MW91-19	08/26/2016		362.0000		363.9328
Barium, total	ug/L	MW91-19	09/29/2016		291.0000		363.9328
Barium, total	ug/L	MW91-19	04/11/2017		325.0000		363.9328
Barium, total	ug/L	MW91-19	09/23/2017		516.0000	*	363.9328
Barium, total	ug/L	MW91-19	11/15/2017		296.0000		363.9328
Barium, total	ug/L	MW91-19	04/10/2018		339.0000		363.9328
Barium, total	ug/L	MW91-19	09/24/2018		281.0000		363.9328
Barium, total	ug/L	MW91-19	04/16/2019		342.0000		363.9328
Barium, total	ug/L	MW91-19	08/29/2019		335.0000		363.9328
Barium, total	ug/L	MW91-19	04/10/2020		373.0000	*	363.9328
Barium, total	ug/L	MW91-19	06/09/2020		327.0000		363.9328
Barium, total	ug/L	MW91-19	10/09/2020		495.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/09/2021		328.0000		363.9328
Barium, total	ug/L	MW91-19	10/11/2021		321.0000		363.9328
Barium, total	ug/L	MW91-19	04/07/2022		343.0000		363.9328
Barium, total	ug/L	MW91-19	10/06/2022		504.0000	*	363.9328
Barium, total	ug/L	MW91-19	01/04/2023		434.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/05/2023		380.0000	*	363.9328
Barium, total	ug/L	MW91-19	10/13/2023		482.0000	*	363.9328
Barium, total	ug/L	MW91-19	04/18/2024		303.0000		363.9328
Cobalt, total	ug/L	MW91-19	06/09/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW91-19	10/16/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW91-19	03/05/2009	ND	20.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/30/2009	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	03/23/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/07/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	04/05/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/06/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	03/16/2012	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/24/2012	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	04/24/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/20/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	10/28/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	04/08/2014	ND	4.0000		0.8000
Cobalt, total	ug/L	MW91-19	09/22/2014		1.0000	*	0.8000
Cobalt, total	ug/L	MW91-19	03/20/2015	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	09/17/2015	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	03/17/2016	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	08/26/2016		1.0000	*	0.8000
Cobalt, total	ug/L	MW91-19	04/11/2017	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	09/23/2017	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	04/10/2018	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	09/24/2018	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	04/16/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	08/29/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW91-19	04/10/2020	ND	0.4000		0.8000
Cobalt, total	ug/L	MW91-19	10/09/2020		2.4000	*	0.8000
Cobalt, total	ug/L	MW91-19	04/09/2021	ND	0.4000		0.8000
Cobalt, total	ug/L	MW91-19	10/11/2021	ND	0.4000		0.8000
Cobalt, total	ug/L	MW91-19	04/07/2022	ND	0.4000		0.8000
Cobalt, total	ug/L	MW91-19	10/06/2022		1.9000	*	0.8000
Cobalt, total	ug/L	MW91-19	01/04/2023		0.7000		0.8000
Cobalt, total	ug/L	MW91-19	04/05/2023		0.5000		0.8000
Cobalt, total	ug/L	MW91-19	10/13/2023		1.4000	*	0.8000
Cobalt, total	ug/L	MW91-19	04/18/2024	ND	0.4000		0.8000

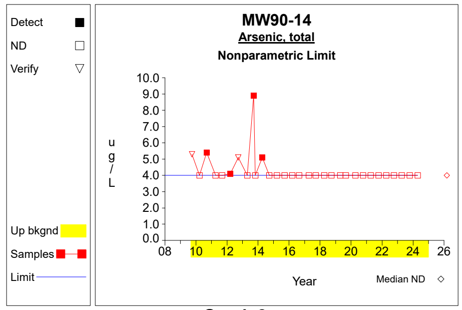
* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Audubon [GW] May 2024

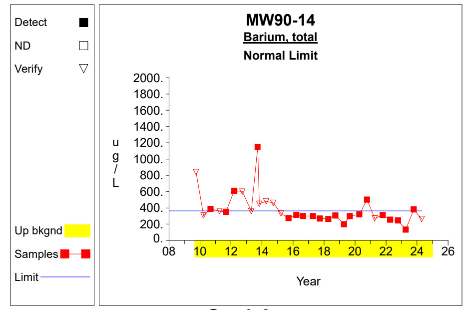
Up vs. Down Prediction Limits



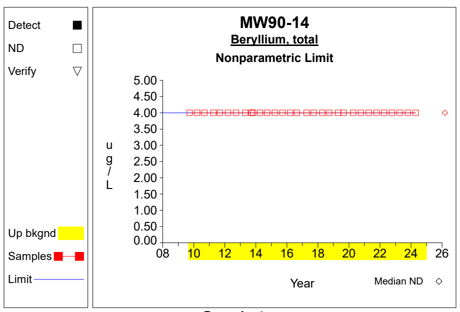
Graph 1



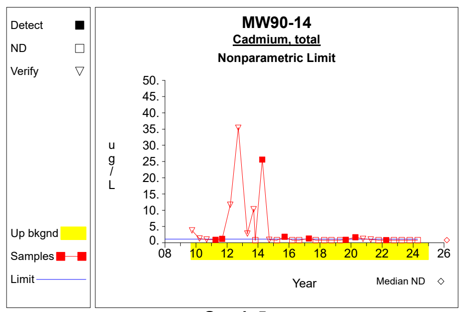
Graph 2



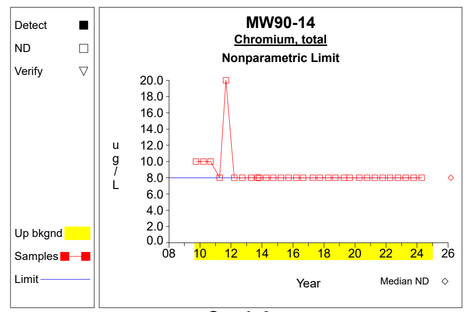
Graph 3



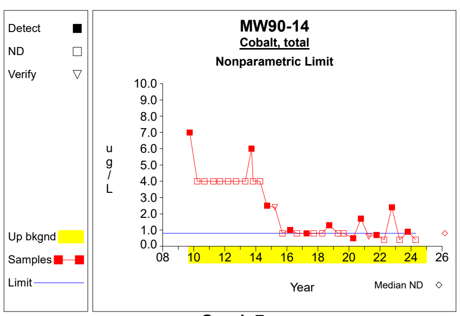
Graph 4



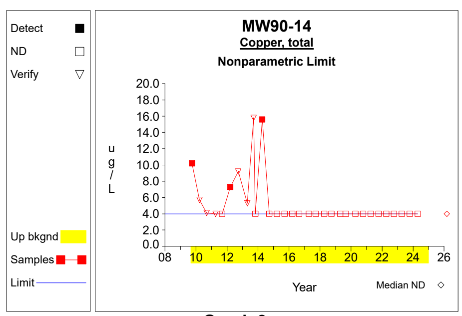
Graph 5



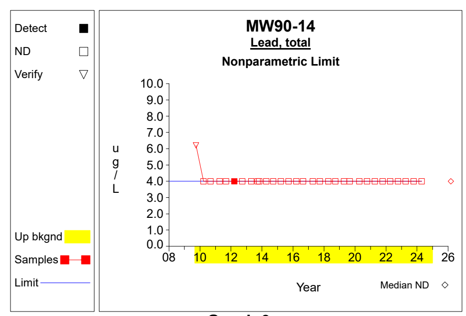
Graph 6



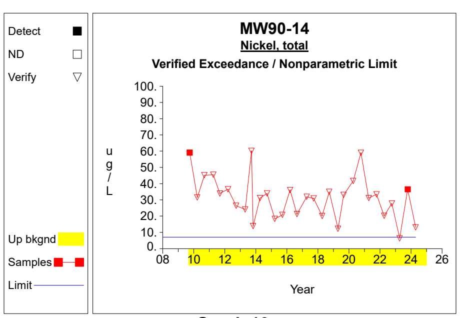
Graph 7



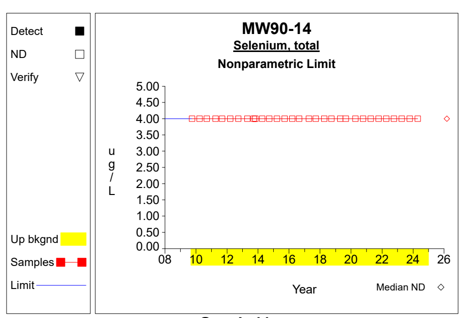
Graph 8



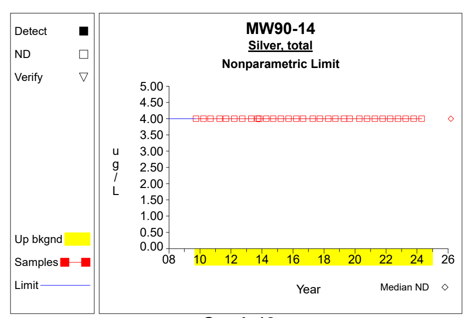
Graph 9



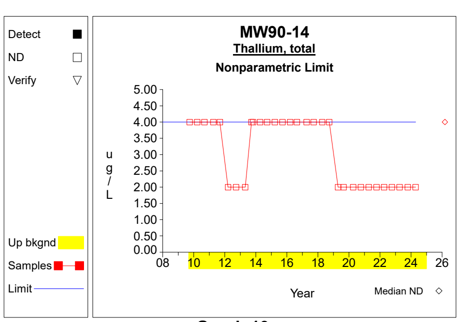
Graph 10



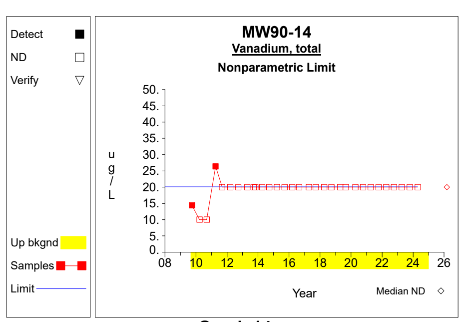
Graph 11



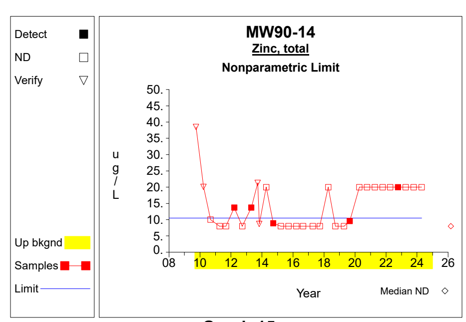
Graph 12



Graph 13



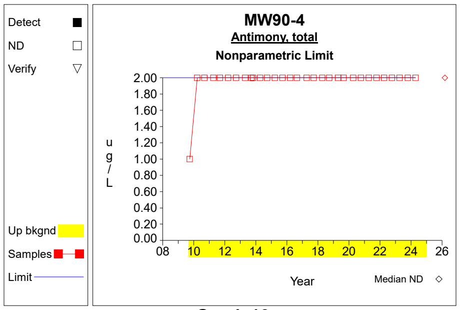
Graph 14



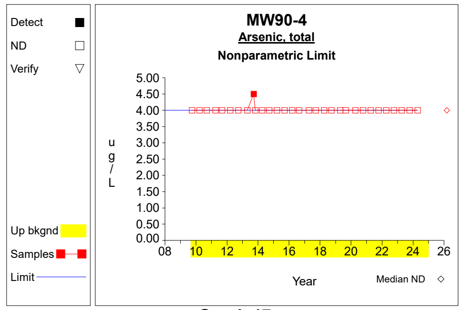
Graph 15

Prepared by: Otter Creek Environmental

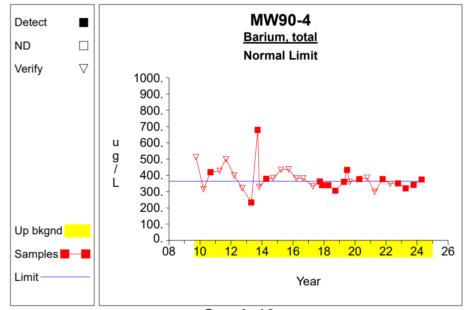
Up vs. Down Prediction Limits



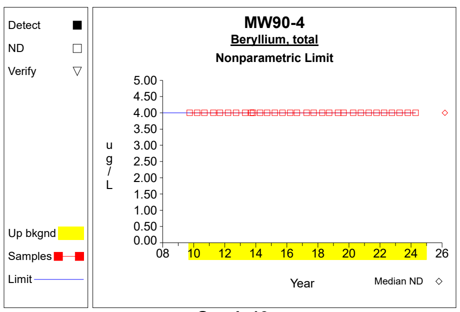
Graph 16



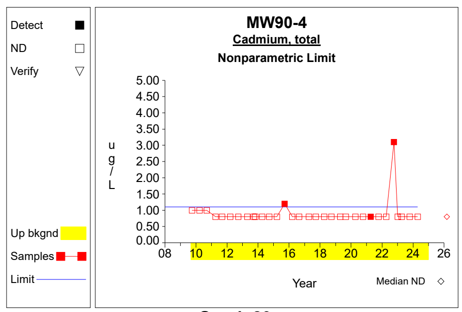
Graph 17



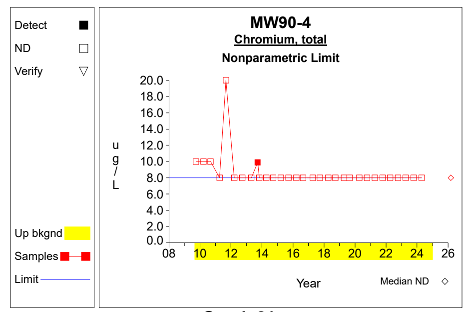
Graph 18



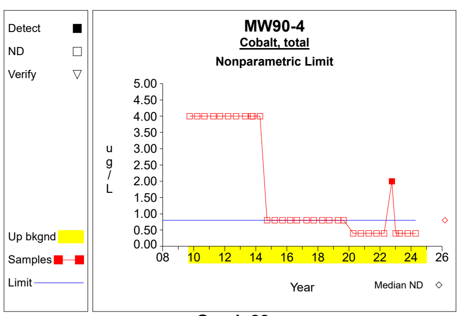
Graph 19



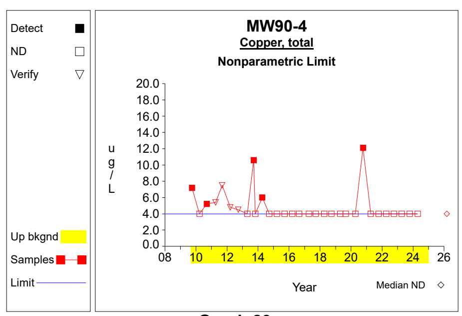
Graph 20



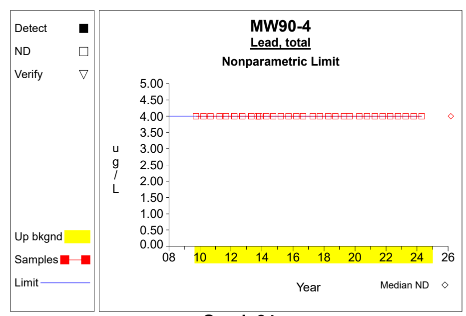
Graph 21



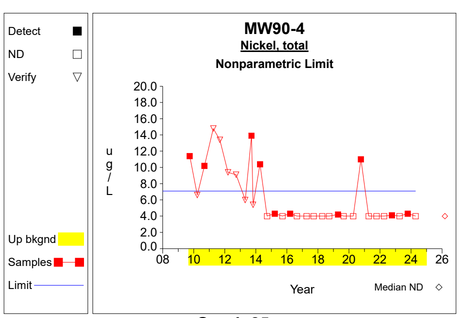
Graph 22



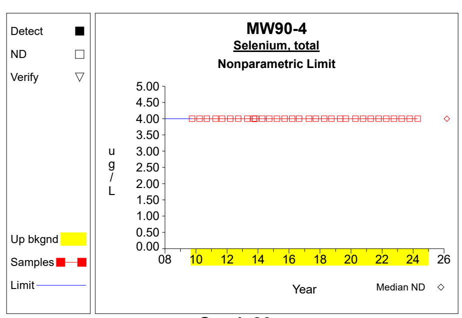
Graph 23



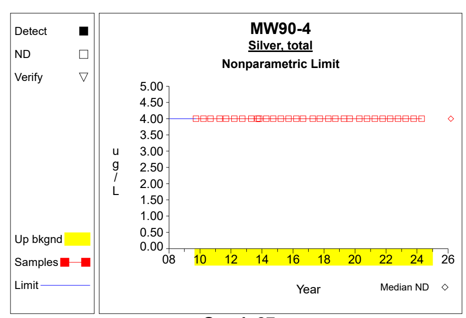
Graph 24



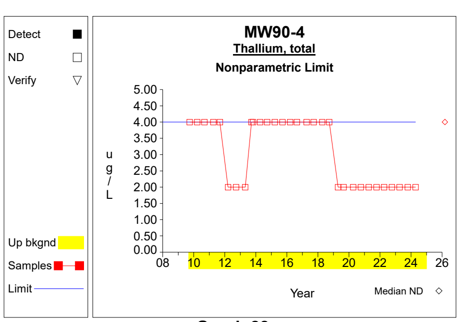
Graph 25



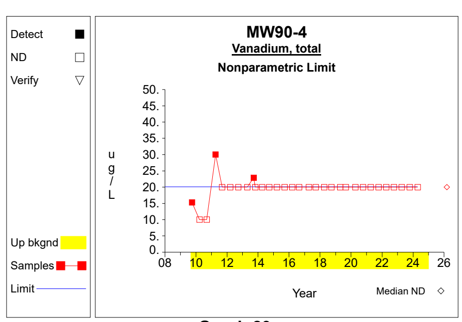
Graph 26



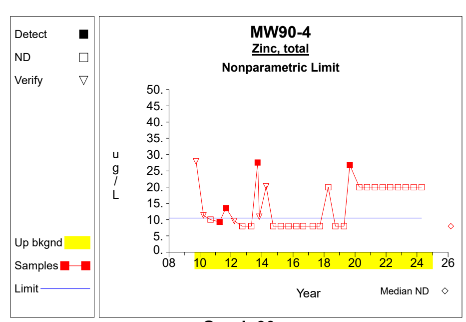
Graph 27



Graph 28

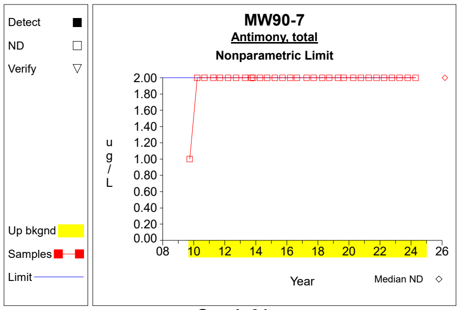


Graph 29

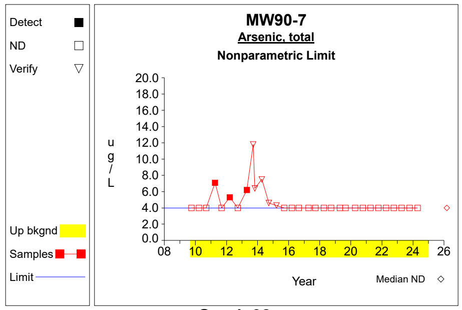


Graph 30

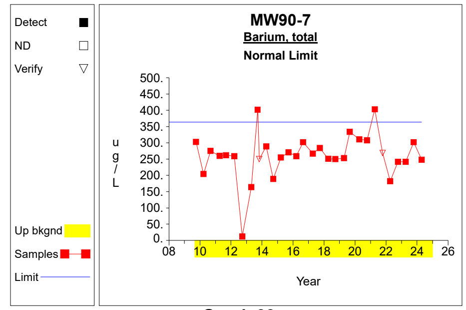
Up vs. Down Prediction Limits



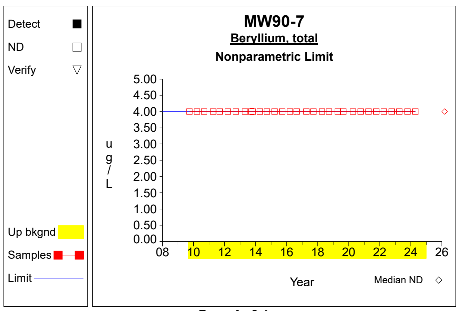
Graph 31



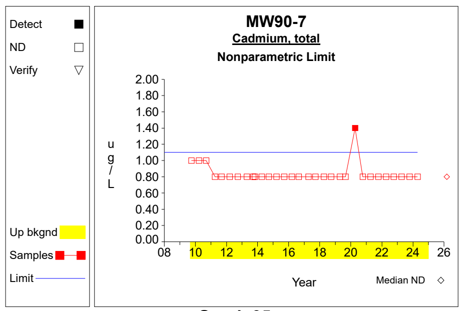
Graph 32



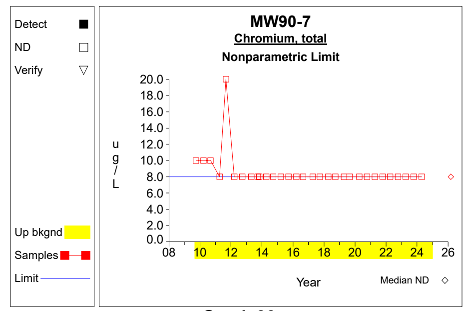
Graph 33



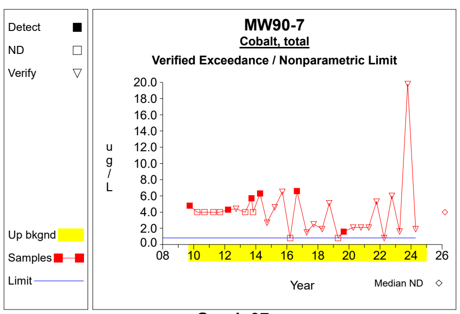
Graph 34



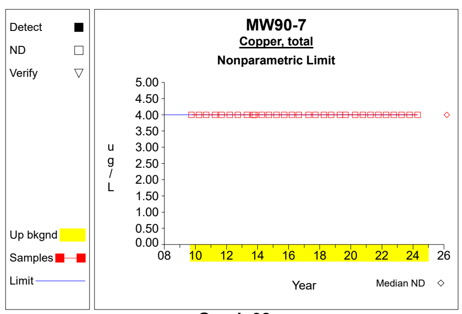
Graph 35



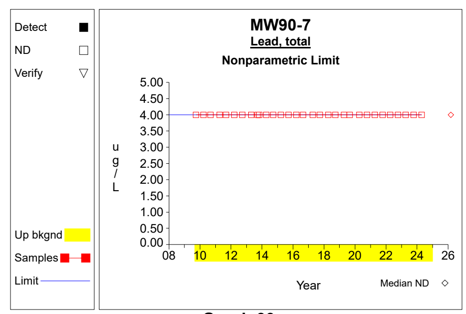
Graph 36



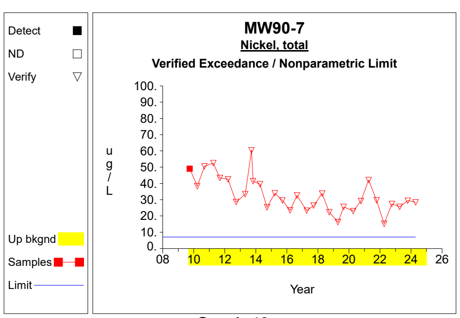
Graph 37



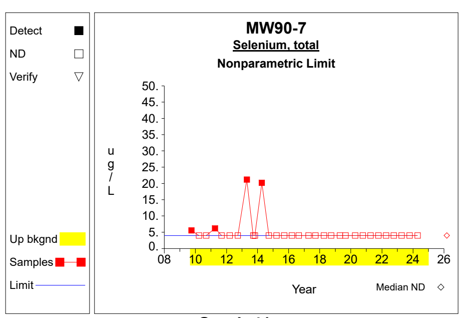
Graph 38



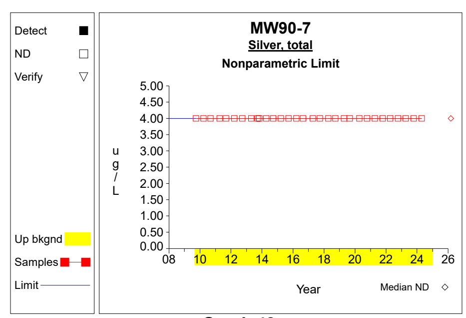
Graph 39



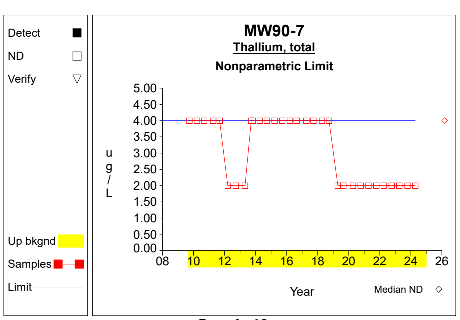
Graph 40



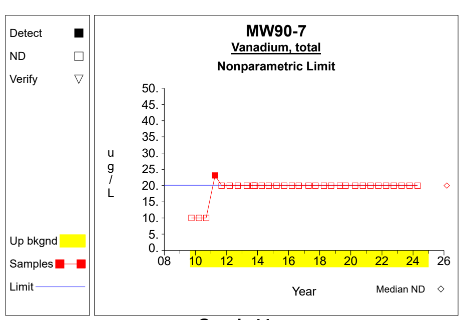
Graph 41



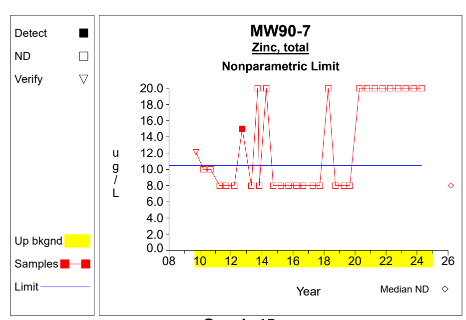
Graph 42



Graph 43

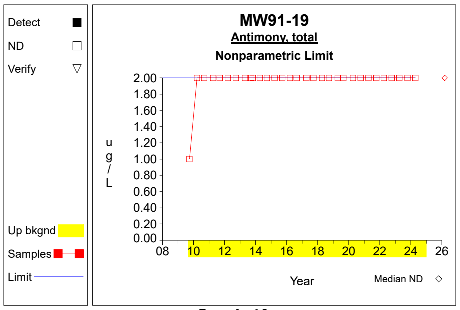


Graph 44

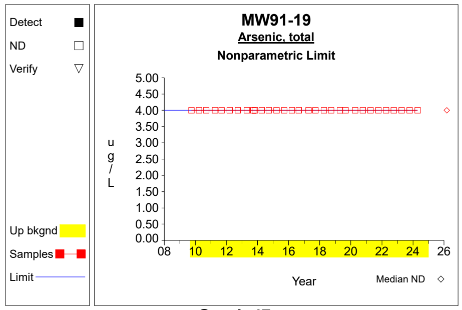


Graph 45

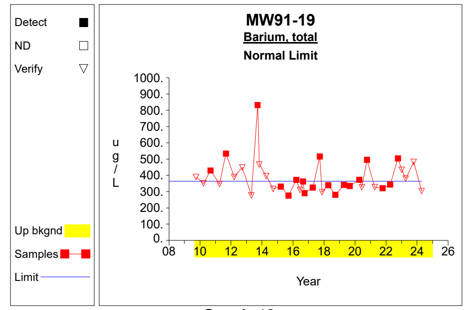
Up vs. Down Prediction Limits



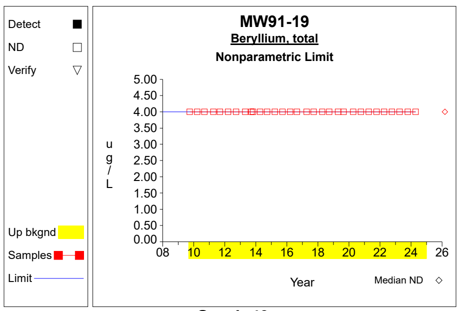
Graph 46



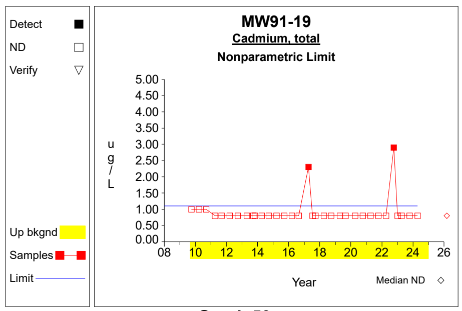
Graph 47



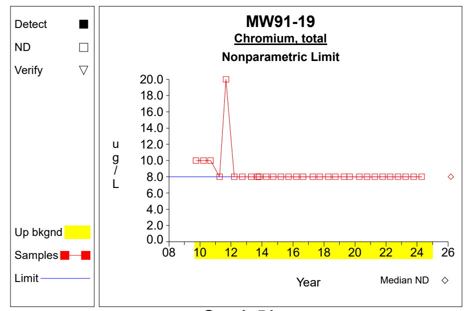
Graph 48



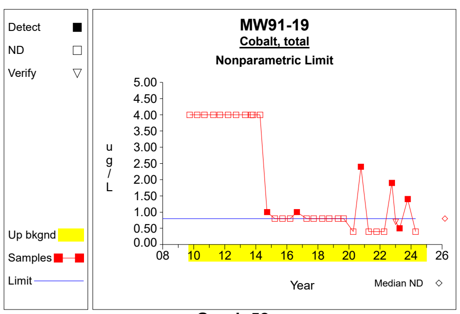
Graph 49



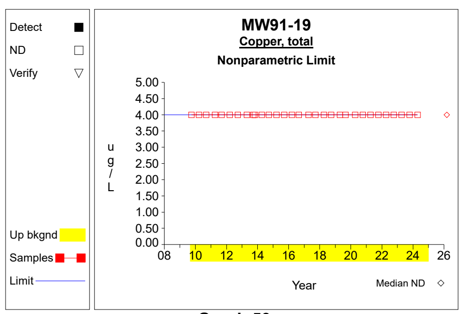
Graph 50



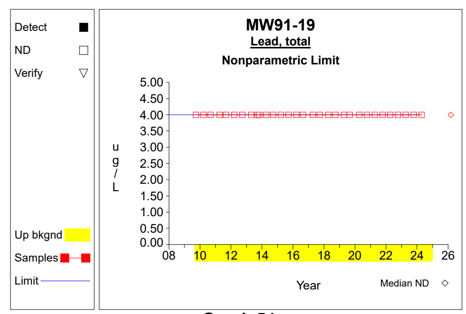
Graph 51



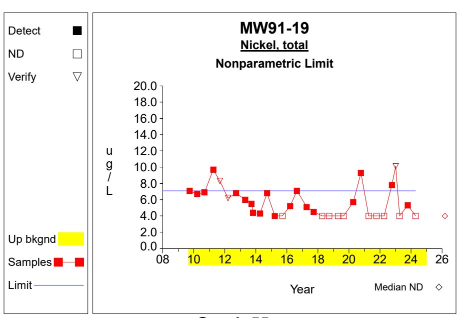
Graph 52



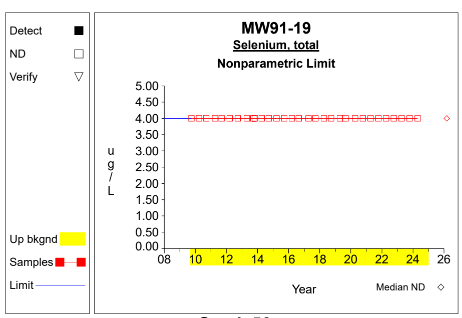
Graph 53



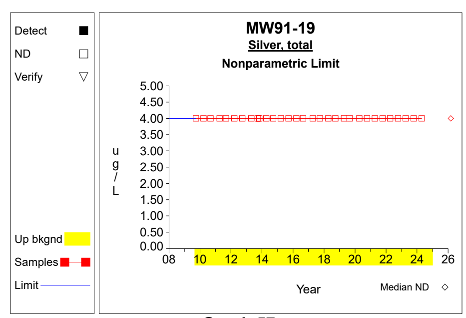
Graph 54



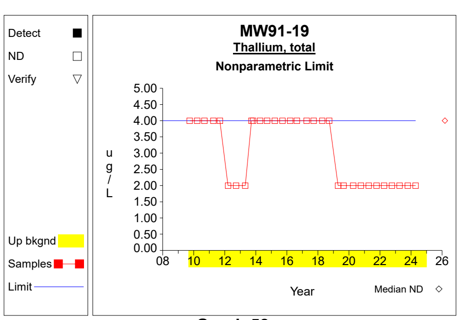
Graph 55



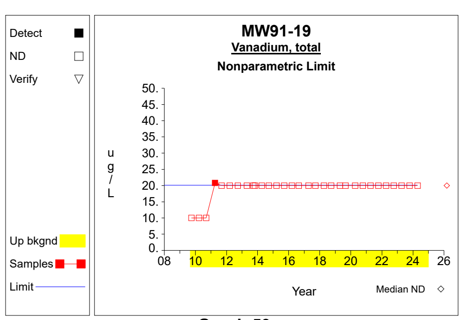
Graph 56



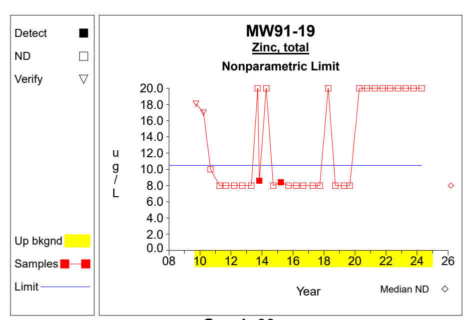
Graph 57



Graph 58

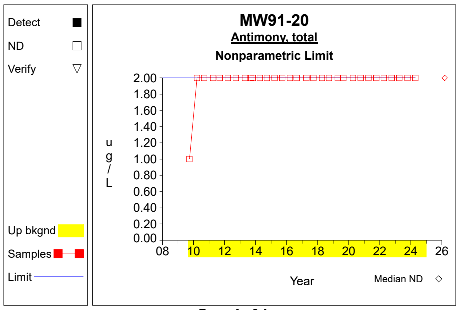


Graph 59

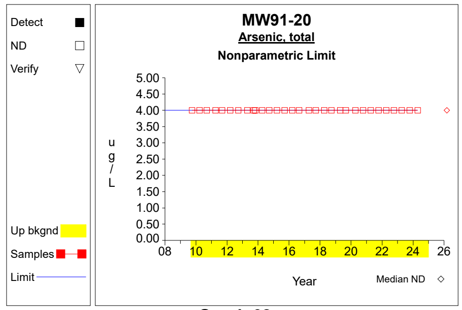


Graph 60

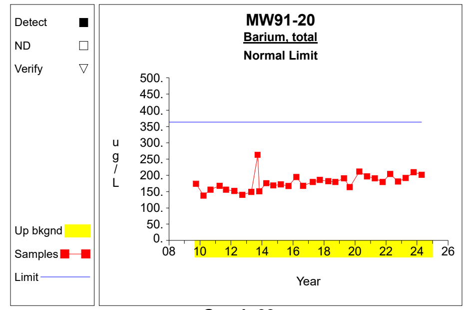
Up vs. Down Prediction Limits



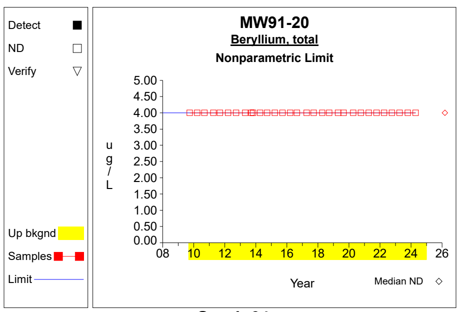
Graph 61



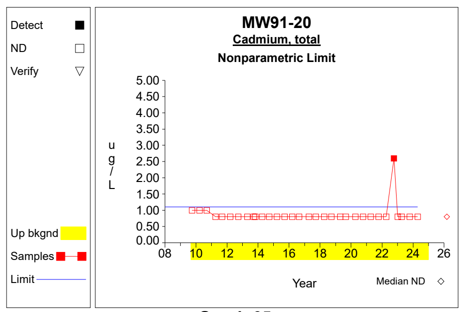
Graph 62



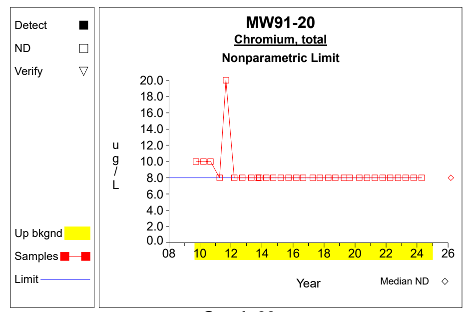
Graph 63



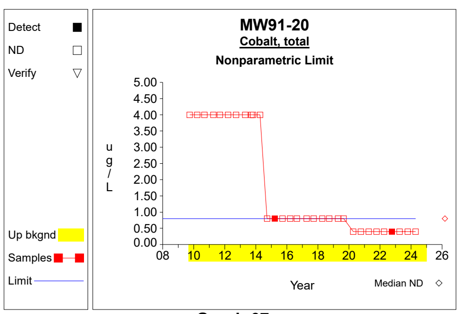
Graph 64



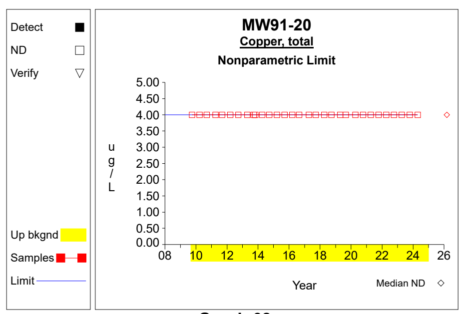
Graph 65



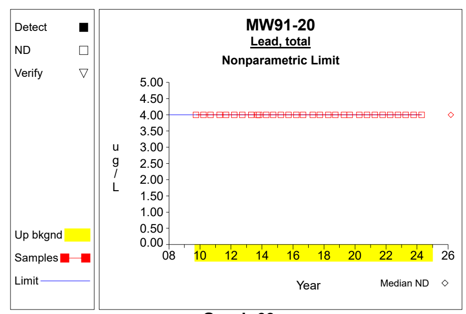
Graph 66



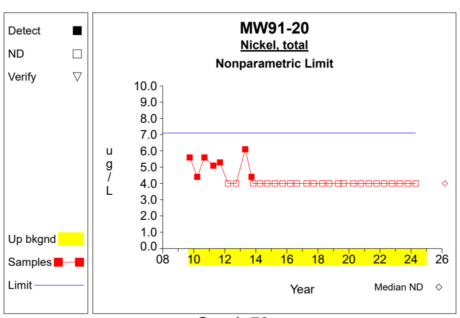
Graph 67



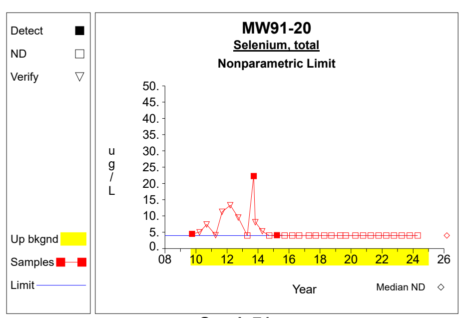
Graph 68



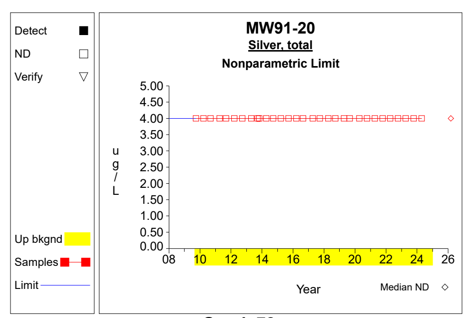
Graph 69



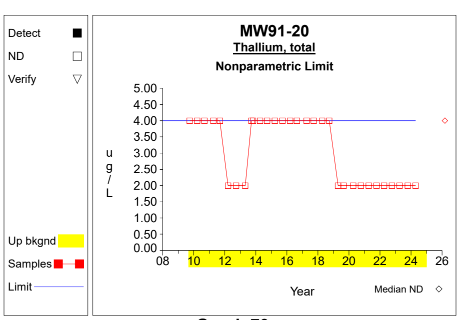
Graph 70



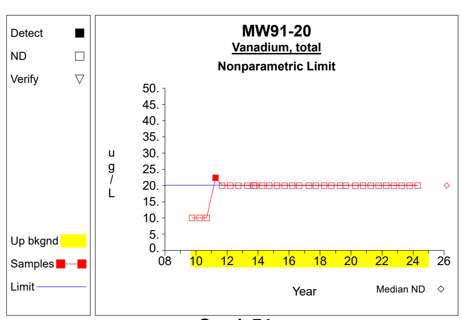
Graph 71



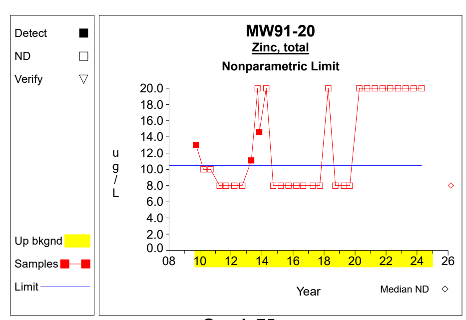
Graph 72



Graph 73

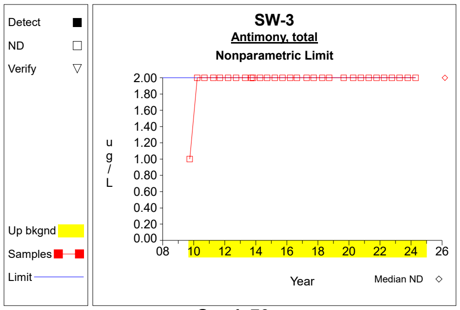


Graph 74

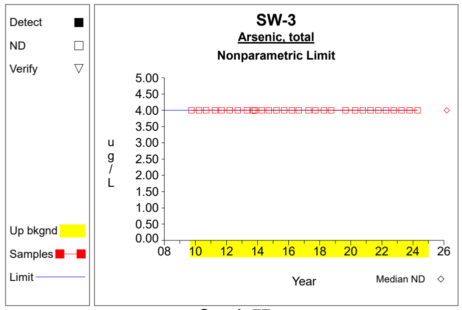


Graph 75

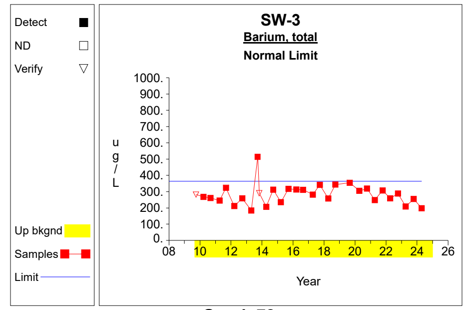
Up vs. Down Prediction Limits



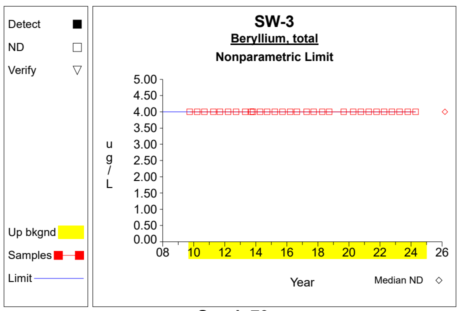
Graph 76



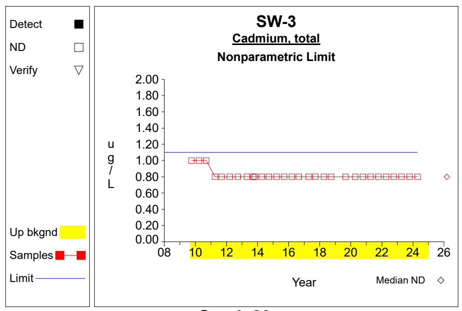
Graph 77



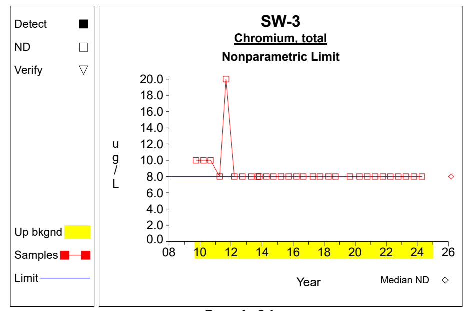
Graph 78



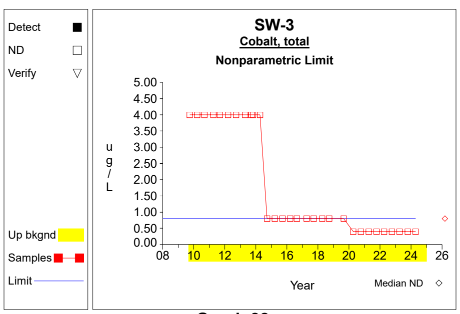
Graph 79



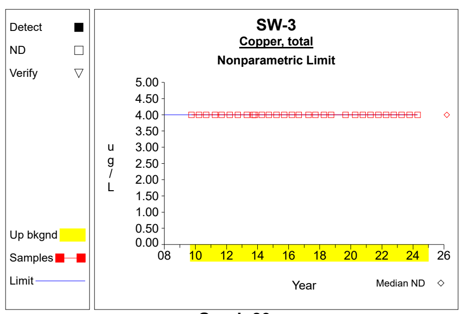
Graph 80



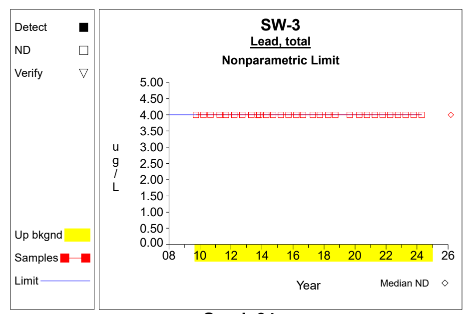
Graph 81



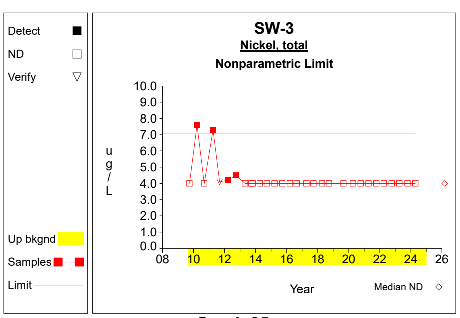
Graph 82



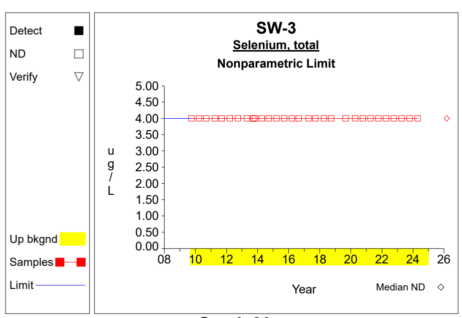
Graph 83



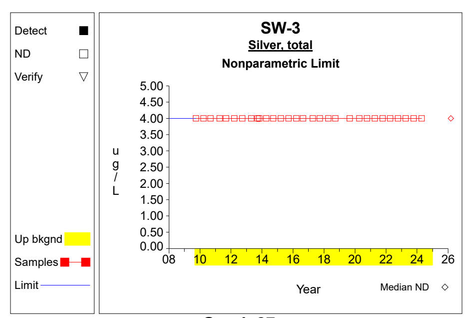
Graph 84



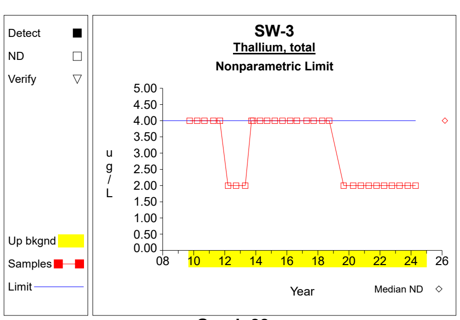
Graph 85



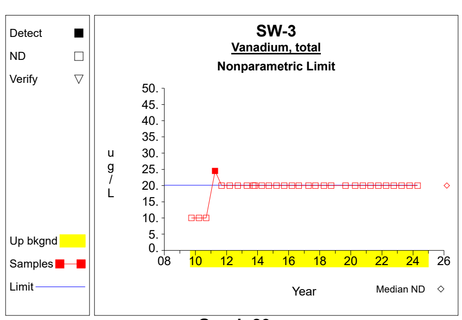
Graph 86



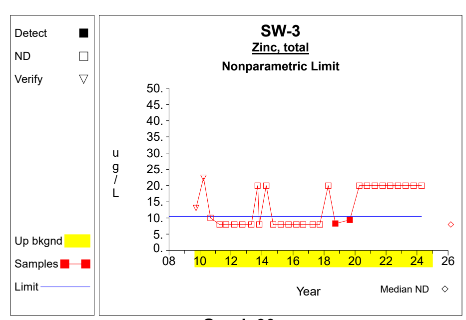
Graph 87



Graph 88

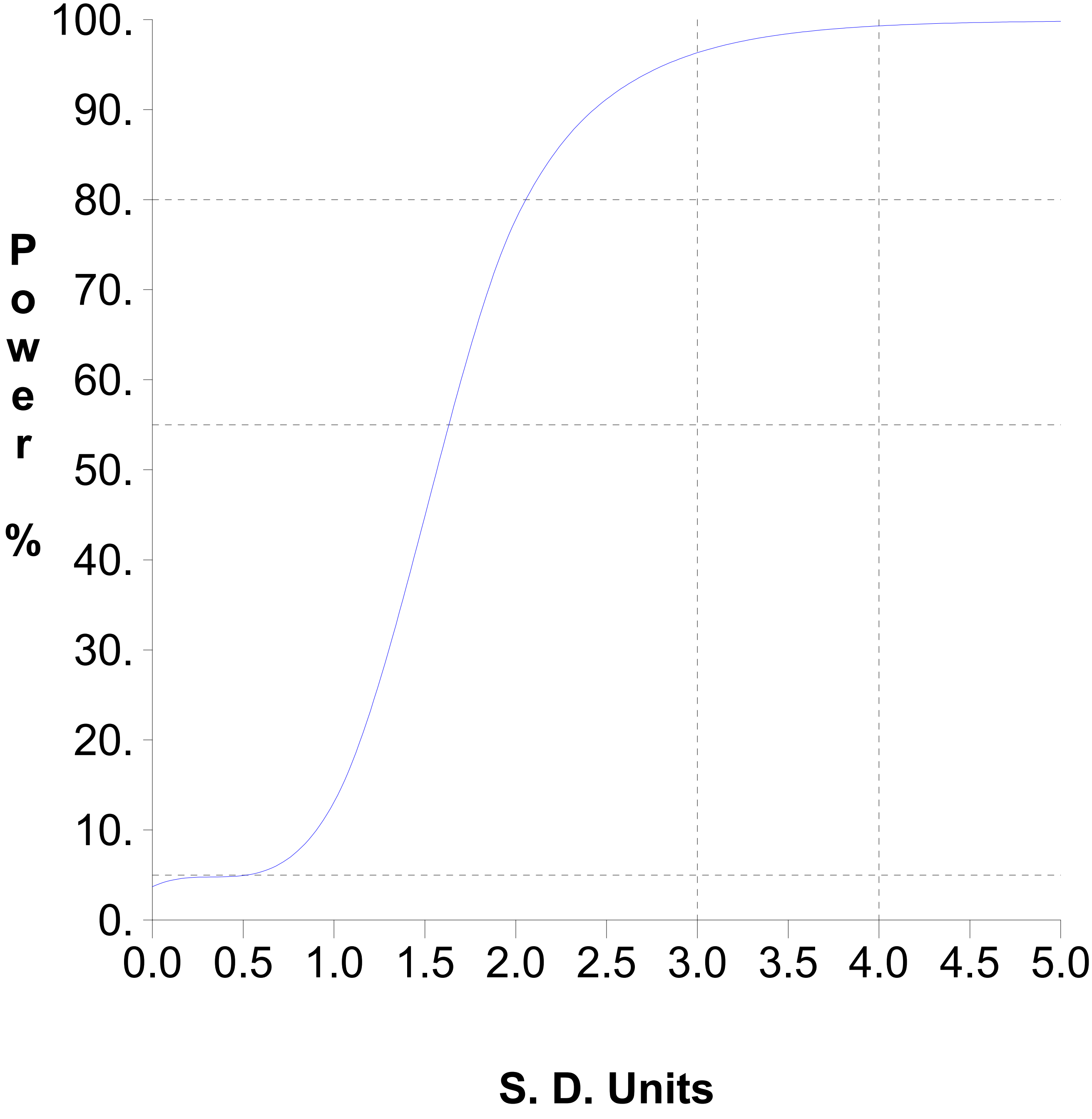


Graph 89



Graph 90

False Positive and False Negative Rates for Current Upgradient vs. Downgradient Monitoring Program



Attachment C

Assessment Statistics for Trace Metals

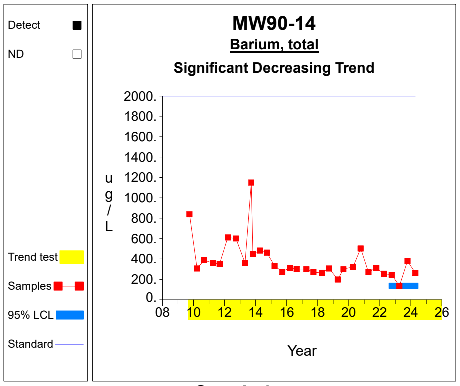
Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

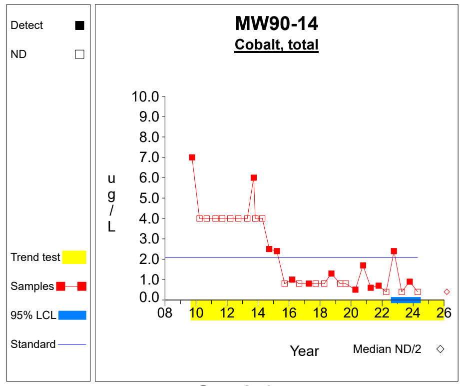
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Barium, total	ug/L	MW90-14	4	255.750	101.125	1.176	136.798	374.702	2000.000	dec
Cobalt, total	ug/L	MW90-14	4	1.025	0.946	1.176	0.000	2.138	2.100	
Nickel, total	ug/L	MW90-14	4	20.925	13.723	1.176	4.783	37.067	100.000	
Barium, total	ug/L	MW90-4	4	347.000	22.760	1.176	320.228	373.772	2000.000	
Cobalt, total	ug/L	MW90-4	4	0.400	0.000	1.176	0.400	0.400	2.100	
Nickel, total	ug/L	MW90-4	4	3.100	1.273	1.176	1.603	4.597	100.000	
Barium, total	ug/L	MW90-7	4	258.500	29.138	1.176	224.226	292.774	2000.000	
Cobalt, total	ug/L	MW90-7	4	7.325	8.555	1.176	0.000	17.389	2.100	
Nickel, total	ug/L	MW90-7	4	27.700	1.621	1.176	25.794	29.606	100.000	dec
Barium, total	ug/L	MW91-19	4	399.750	76.787	1.176	309.426	490.074	2000.000	
Cobalt, total	ug/L	MW91-19	4	0.750	0.451	1.176	0.220	1.280	2.100	
Nickel, total	ug/L	MW91-19	4	4.850	3.830	1.176	0.345	9.355	100.000	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

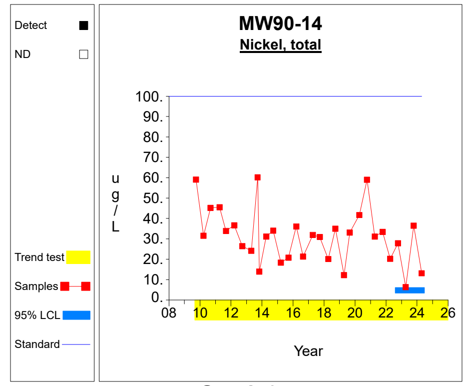
Confidence Limits (Assessment)



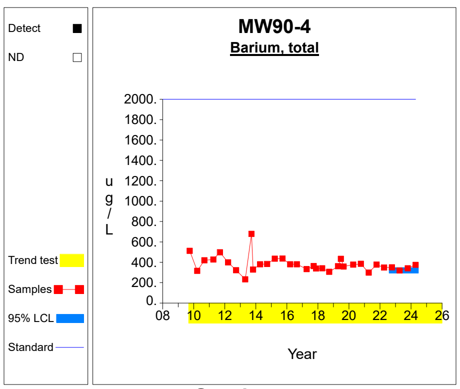
Graph 1



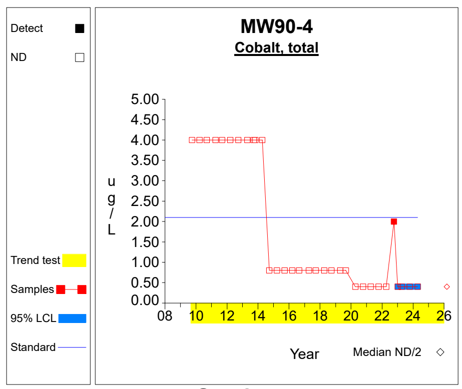
Graph 2



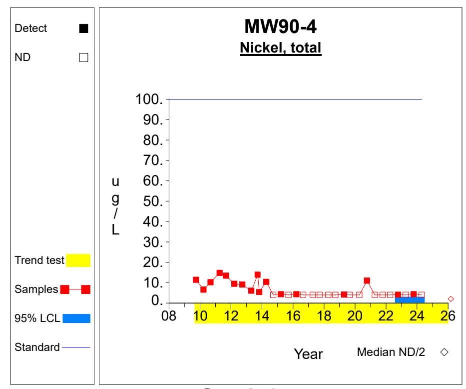
Graph 3



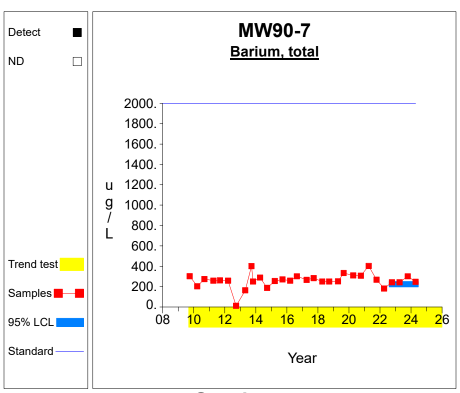
Graph 4



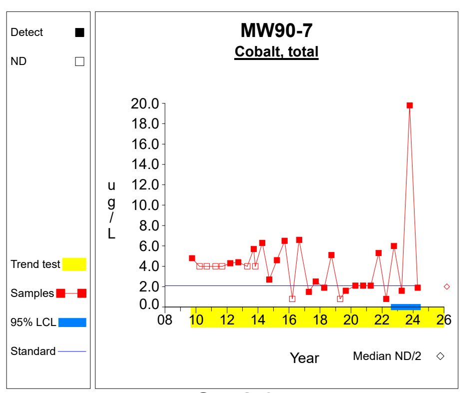
Graph 5



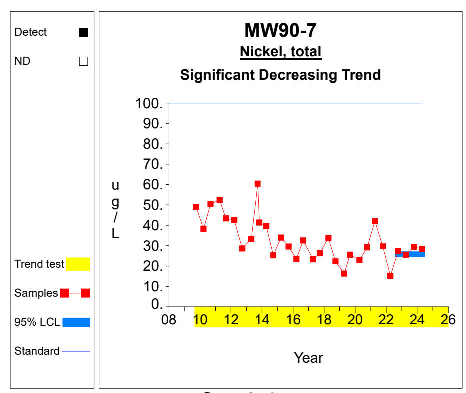
Graph 6



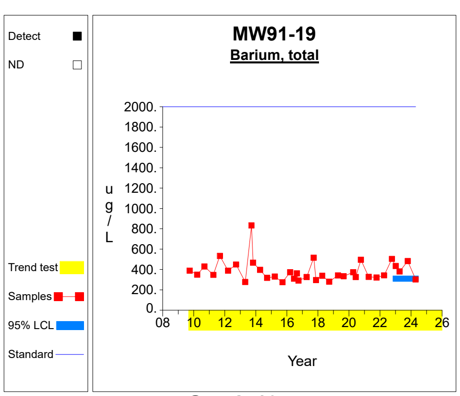
Graph 7



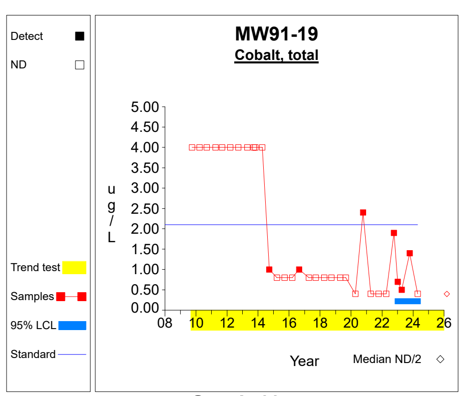
Graph 8



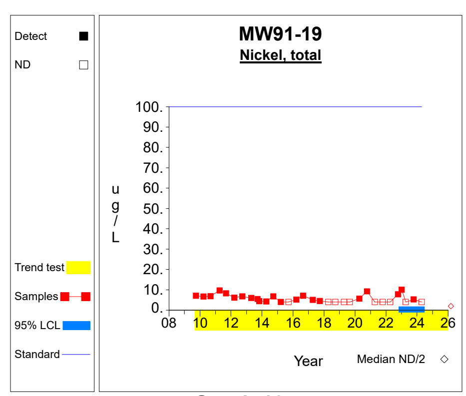
Graph 9



Graph 10



Graph 11



Graph 12

Attachment D

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony, total	ug/L	MW90-14	26	5	34			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-14	26	5	34			4.0000	4.0000			8.9000	nonpar	.99	**
Barium, total	ug/L	MW90-14	26	5	34	409.0000	204.8559	381.0000	263.0000	409.0000	409.0000	1740.5630	normal		
Beryllium, total	ug/L	MW90-14	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-14	26	5	34	4.2308	8.3210	0.8000	0.8000	4.2308	4.2308	58.3173	normal		
Chromium, total	ug/L	MW90-14	26	5	34			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-14	26	5	34	3.2500	1.6698	0.9000	0.4000	3.2500	3.2500	14.1036	normal		
Copper, total	ug/L	MW90-14	26	5	34	5.5846	3.4028	4.0000	4.0000	5.5846	5.5846	27.7027	normal		
Lead, total	ug/L	MW90-14	26	5	34			4.0000	4.0000			6.2000	nonpar	.99	**
Nickel, total	ug/L	MW90-14	26	5	34	33.3231	12.8175	36.5000	13.1000	33.3231	33.3231	116.6368	normal		
Selenium, total	ug/L	MW90-14	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-14	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-14	26	5	34			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-14	26	5	34			20.0000	20.0000			26.4000	nonpar	.99	**
Zinc, total	ug/L	MW90-14	26	5	34	10.7115	6.7267	20.0000	20.0000	10.7115	10.7115	54.4354	normal		
Antimony, total	ug/L	MW90-17	25	5	30			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW90-17	25	5	30	238.2400	42.2328	314.0000	310.0000	366.5817	406.6671	512.7530	normal		
Beryllium, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-17	25	5	31			0.8000	0.8000			1.1000	nonpar	.99	**
Chromium, total	ug/L	MW90-17	24	5	30			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-17	25	5	30			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			7.1000	nonpar	.99	**
Selenium, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-17	25	5	30			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-17	25	5	30			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-17	25	5	30			20.0000	20.0000			20.1000	nonpar	.99	**
Zinc, total	ug/L	MW90-17	25	5	31			20.0000	20.0000			10.5000	nonpar	.99	**
Antimony, total	ug/L	MW90-4	26	5	34			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-4	26	5	34			4.0000	4.0000			4.5000	nonpar	.99	**
Barium, total	ug/L	MW90-4	28	5	36	385.6786	82.5501	342.0000	375.0000	385.6786	385.6786	922.2544	normal		
Beryllium, total	ug/L	MW90-4	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-4	26	6	35			0.8000	0.8000			1.2000	nonpar	.99	**
Chromium, total	ug/L	MW90-4	26	5	34			8.0000	8.0000			9.9000	nonpar	.99	**
Cobalt, total	ug/L	MW90-4	26	6	35			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW90-4	26	5	34	5.0500	2.1098	4.0000	4.0000	5.0500	5.0500	18.7639	normal		
Lead, total	ug/L	MW90-4	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-4	26	5	34	6.8615	3.6953	4.3000	4.0000	6.8615	6.8615	30.8810	normal		
Selenium, total	ug/L	MW90-4	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-4	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-4	26	5	34			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-4	26	5	34			20.0000	20.0000			30.0000	nonpar	.99	**
Zinc, total	ug/L	MW90-4	26	5	34	11.2769	6.5059	20.0000	20.0000	11.2769	11.2769	53.5652	normal		
Antimony, total	ug/L	MW90-7	26	5	35			2.0000	2.0000			2.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Arsenic, total	ug/L	MW90-7	26	5	35	4.8154	1.7681	4.0000	4.0000	4.8154	4.8154	16.3080	normal		
Barium, total	ug/L	MW90-7	25	5	35	274.9600	53.4864	302.0000	248.0000	274.9600	274.9600	622.6213	normal		
Beryllium, total	ug/L	MW90-7	26	5	35			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-7	26	5	35			0.8000	0.8000			1.4000	nonpar	.99	**
Chromium, total	ug/L	MW90-7	26	5	35			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-7	26	5	35	3.9269	1.5019	19.8000	1.9000	18.6736	3.9269	13.6891	normal		
Copper, total	ug/L	MW90-7	26	5	35			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW90-7	26	5	35			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-7	26	5	35	34.4808	10.8781	29.4000	28.4000	34.4808	34.4808	105.1886	normal		
Selenium, total	ug/L	MW90-7	24	5	35			4.0000	4.0000			6.2000	nonpar	.99	**
Silver, total	ug/L	MW90-7	26	5	35			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-7	26	5	35			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-7	26	5	35			20.0000	20.0000			23.1000	nonpar	.99	**
Zinc, total	ug/L	MW90-7	26	5	35			20.0000	20.0000			15.0000	nonpar	.99	**
Antimony, total	ug/L	MW91-19	26	5	34			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW91-19	30	6	39	379.9667	110.3613	482.0000	303.0000	399.2290	379.9667	1097.3152	normal		
Beryllium, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW91-19	27	6	36			0.8000	0.8000			2.3000	nonpar	.99	**
Chromium, total	ug/L	MW91-19	26	5	34			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW91-19	26	6	35			1.4000	0.4000			2.4000	nonpar	.99	**
Copper, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW91-19	26	6	35	5.6769	1.7168	5.3000	4.0000	5.6769	5.6769	16.8362	normal		
Selenium, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW91-19	26	5	34			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW91-19	26	5	34			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW91-19	26	5	34			20.0000	20.0000			20.8000	nonpar	.99	**
Zinc, total	ug/L	MW91-19	26	5	34			20.0000	20.0000			18.1000	nonpar	.99	**
Antimony, total	ug/L	MW91-20	26	5	31			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW91-20	26	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW91-20	26	5	31	175.2692	25.4394	210.0000	202.0000	190.9204	198.5716	340.6255	normal		
Beryllium, total	ug/L	MW91-20	26	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW91-20	26	6	32			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW91-20	26	5	31			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW91-20	26	5	31			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW91-20	26	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW91-20	26	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW91-20	26	5	31	4.3269	0.6315	4.0000	4.0000	4.3269	4.3269	8.4320	normal		
Selenium, total	ug/L	MW91-20	26	5	31	5.9577	4.1790	4.0000	4.0000	5.9577	5.9577	33.1213	normal		
Silver, total	ug/L	MW91-20	26	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW91-20	26	5	31			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW91-20	26	5	31			20.0000	20.0000			22.4000	nonpar	.99	**
Zinc, total	ug/L	MW91-20	26	5	31			20.0000	20.0000			14.6000	nonpar	.99	**
Antimony, total	ug/L	SW-3	25	5	31			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
*   - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Barium, total	ug/L	SW-3	25	5	31	291.6800	64.2766	255.0000	198.0000	291.6800	291.6800	709.4777	normal		
Beryllium, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	SW-3	25	5	31			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	SW-3	25	5	31			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	SW-3	25	5	31			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	SW-3	25	5	31			4.0000	4.0000			7.6000	nonpar	.99	**
Selenium, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	SW-3	25	5	31			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	SW-3	25	5	31			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	SW-3	25	5	31			20.0000	20.0000			24.5000	nonpar	.99	**
Zinc, total	ug/L	SW-3	25	5	31			20.0000	20.0000			22.4000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
*   - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

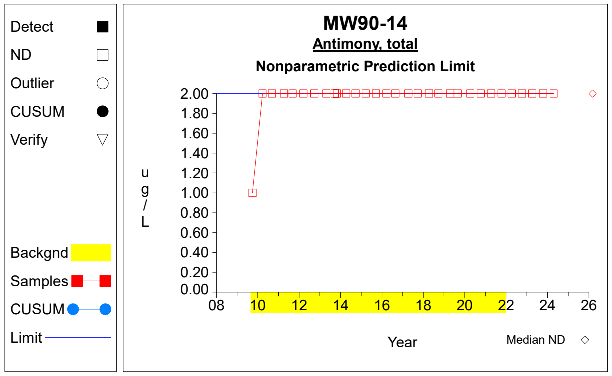
Table 4

Dixon's Test Outliers
1% Significance Level

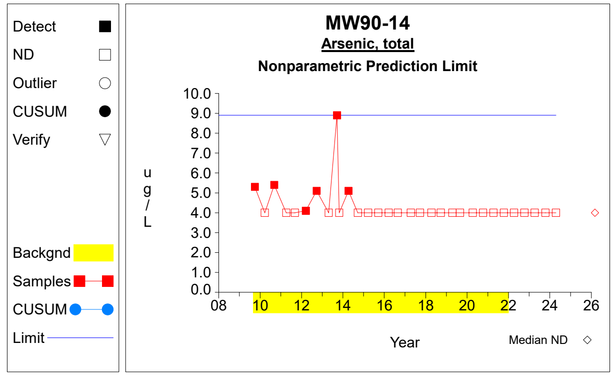
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cadmium, total	ug/L	MW90-17	09/07/2010	2.5000	< 2.5000	09/30/2009-10/11/2021	26	0.4819
Chromium, total	ug/L	MW90-17	09/07/2010	25.0000	< 25.0000	09/30/2009-10/11/2021	25	0.4893
Barium, total	ug/L	MW90-7	09/24/2012	12.5000		09/30/2009-10/11/2021	26	0.4819
Selenium, total	ug/L	MW90-7	04/24/2013	21.2000		09/30/2009-10/11/2021	26	0.4893
Selenium, total	ug/L	MW90-7	04/08/2014	20.2000		09/30/2009-10/11/2021	26	0.4893

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

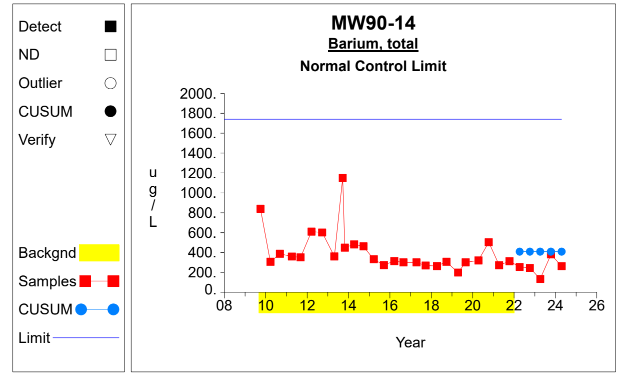
Intra-Well Control Charts / Prediction Limits



Graph 1



Graph 2



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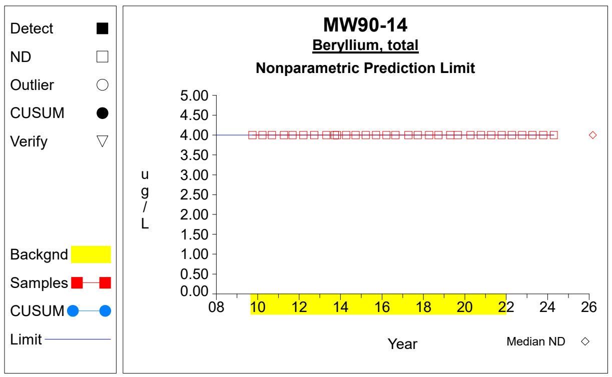

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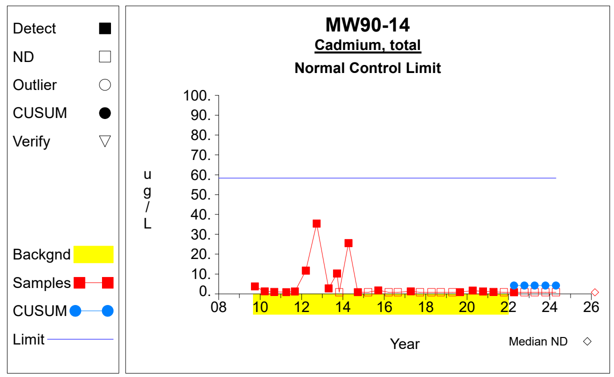

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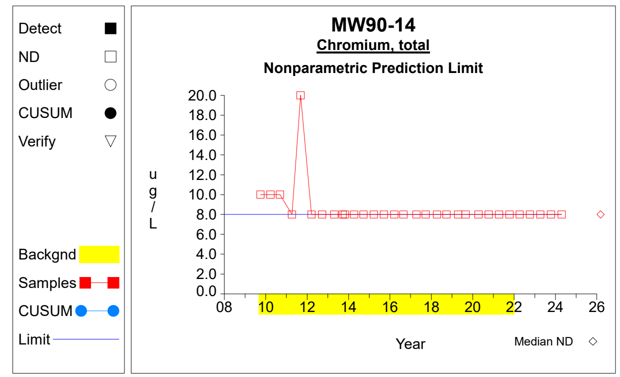

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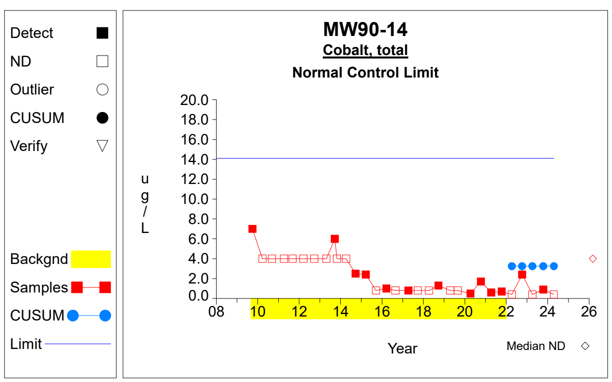

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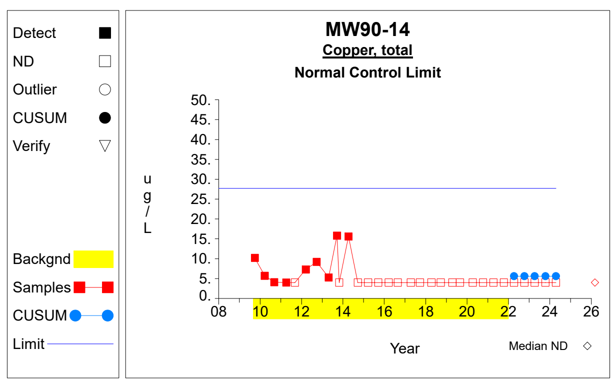

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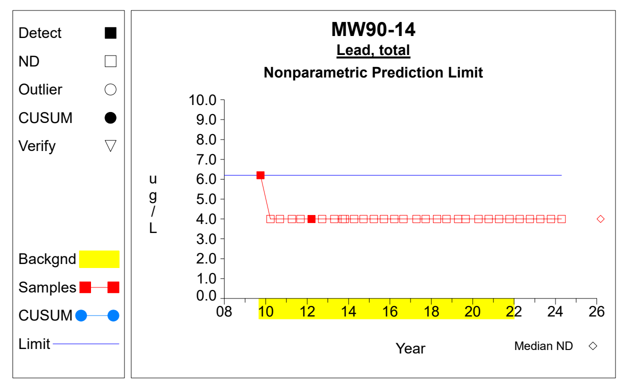

Graph 9

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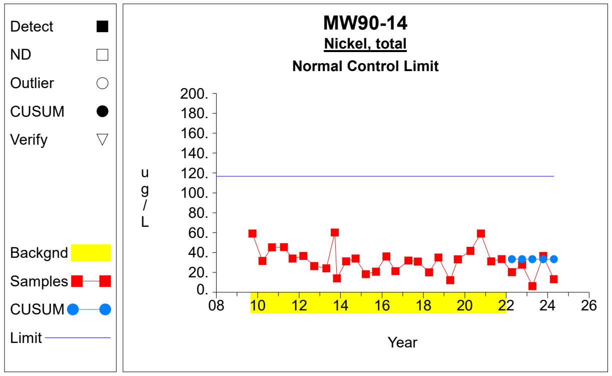
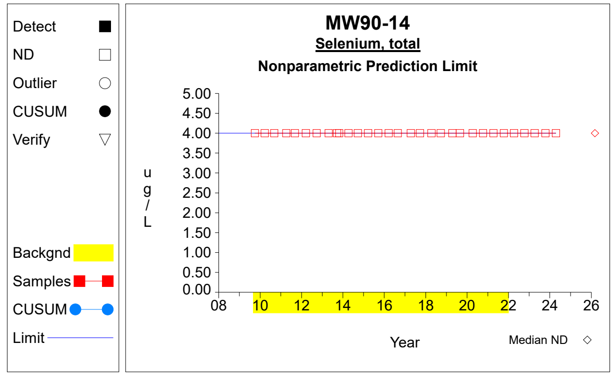
Audubon [GW] May 2024

Intra-Well Control Charts / Prediction Limits



Graph 10



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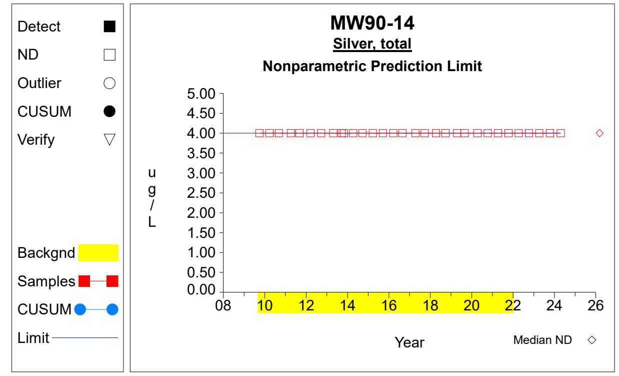

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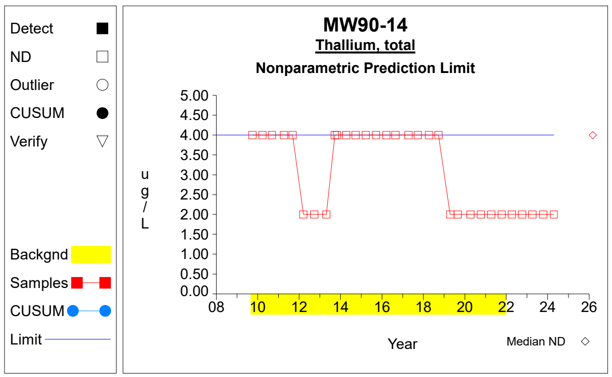

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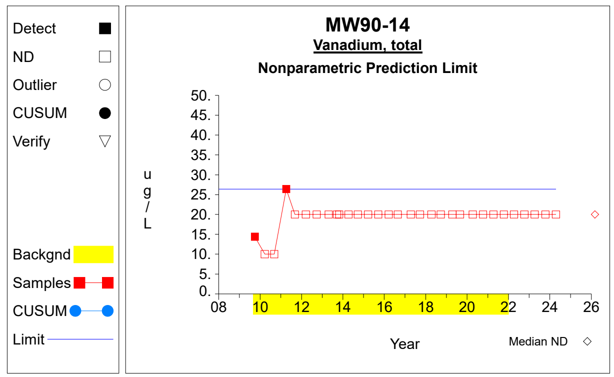

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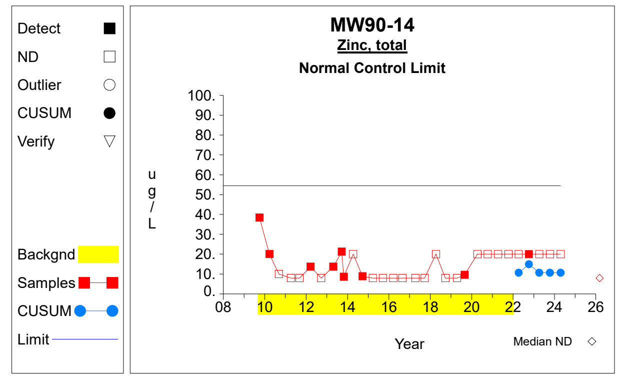

Graph 15

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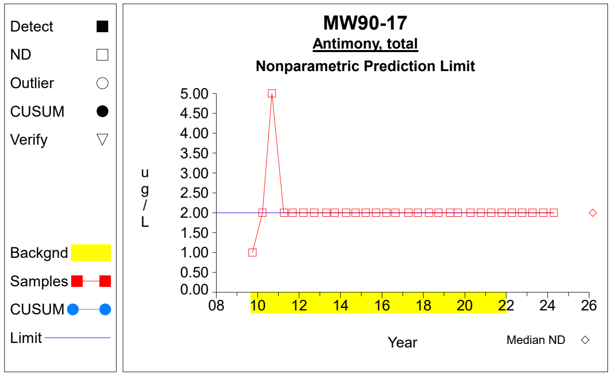
Intra-Well Control Charts / Prediction Limits



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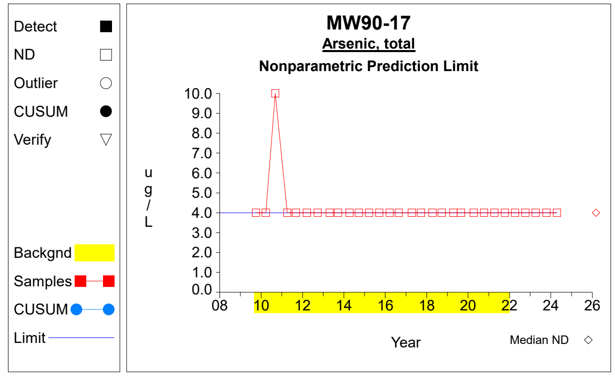

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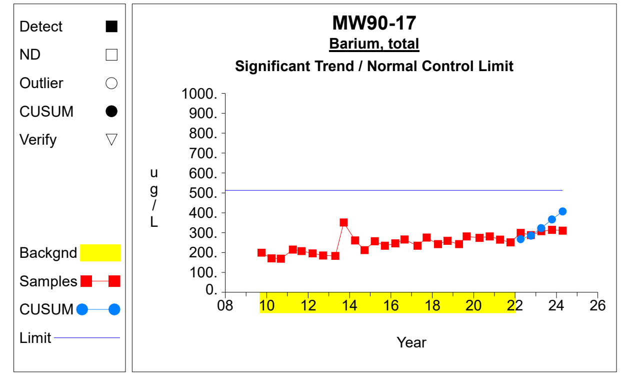

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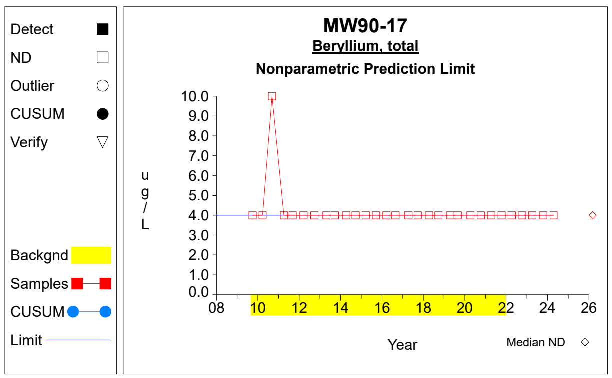

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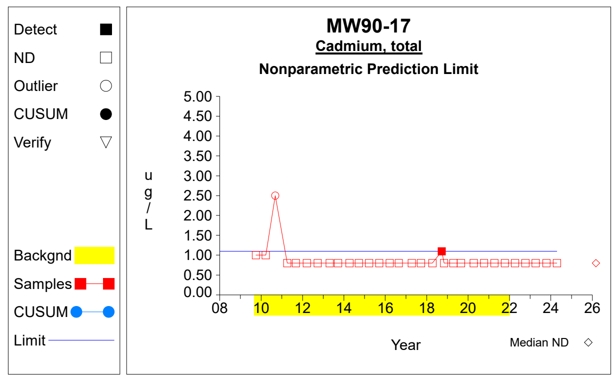

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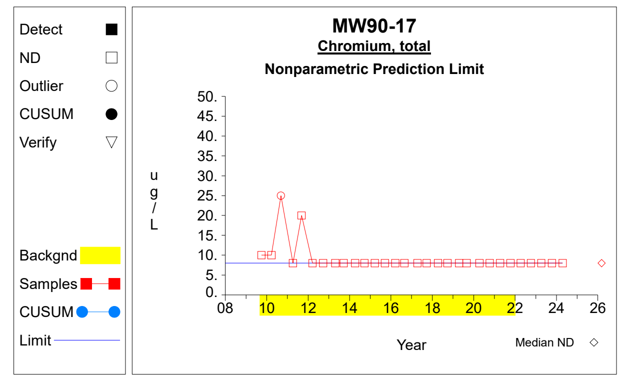

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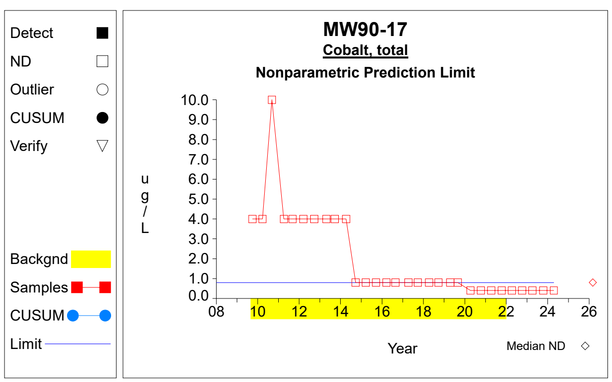

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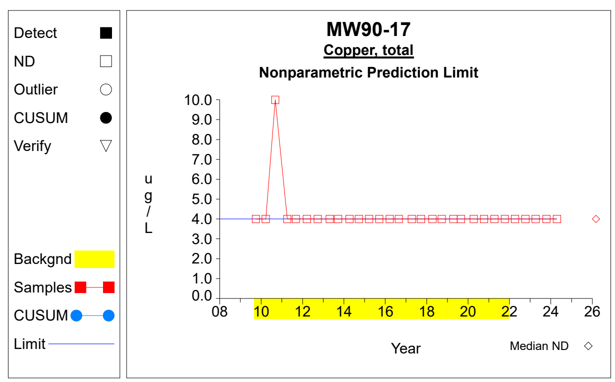

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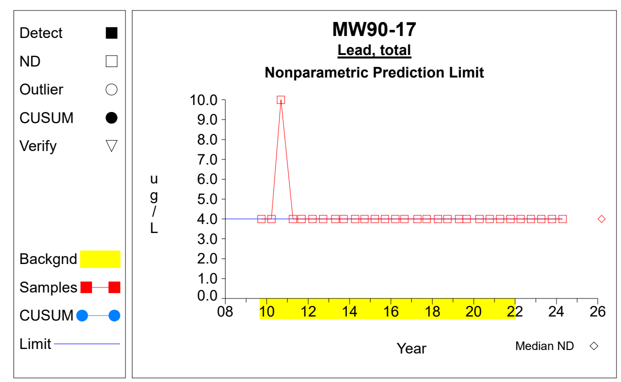

Graph 24

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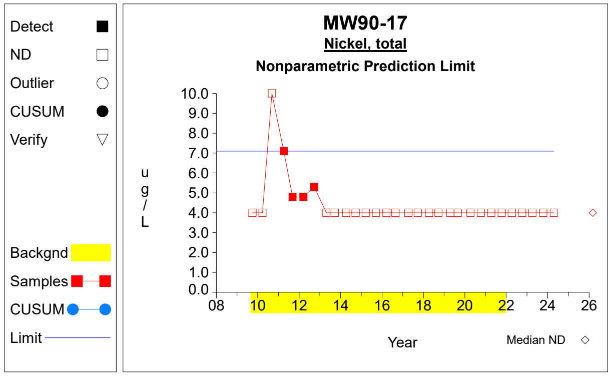
Intra-Well Control Charts / Prediction Limits



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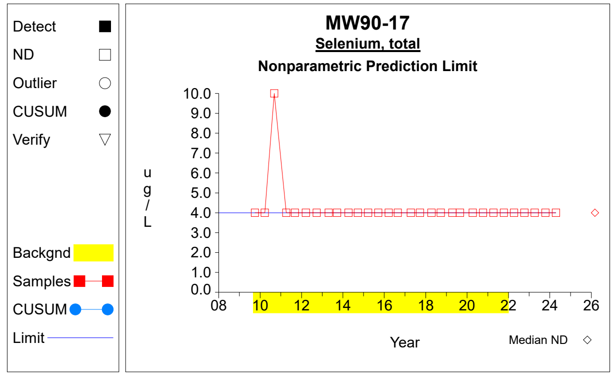

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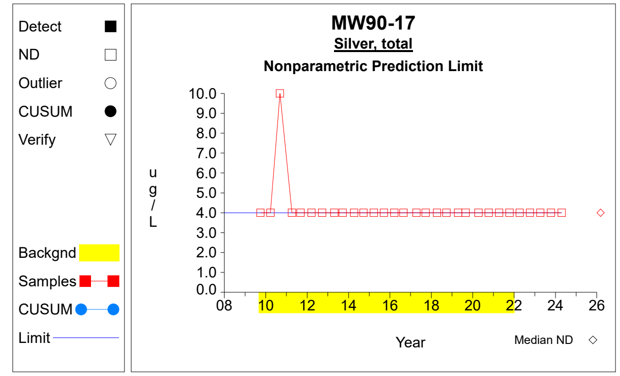

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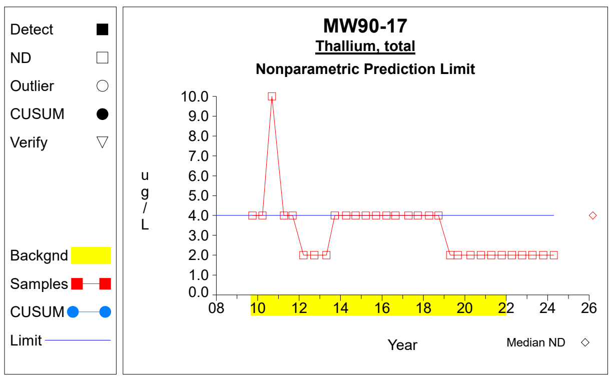

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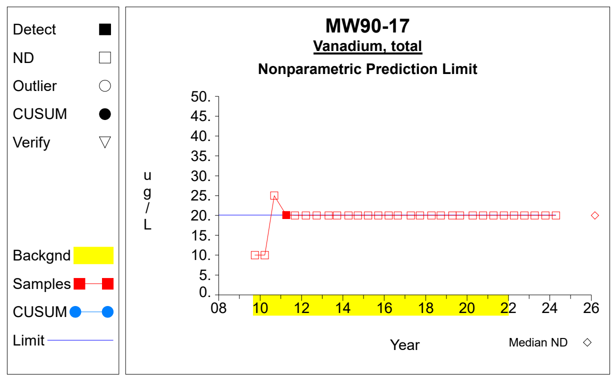

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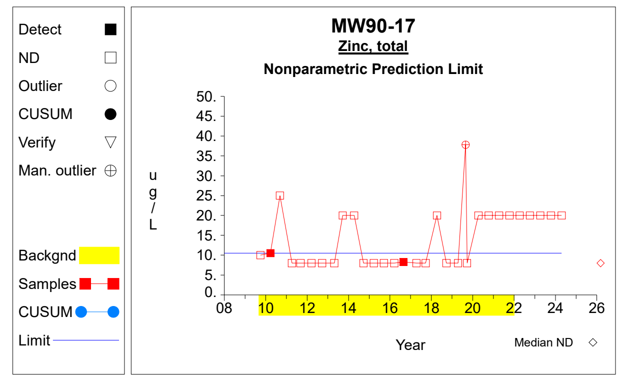

Graph 30

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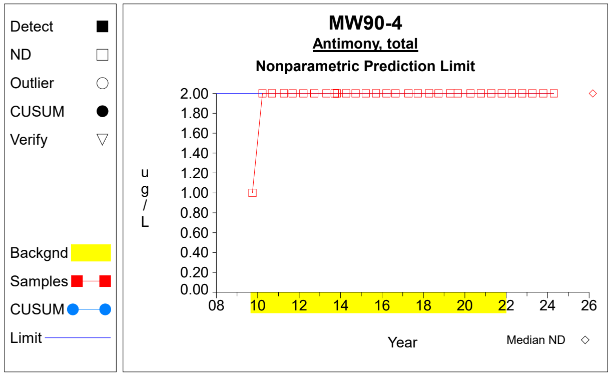
Intra-Well Control Charts / Prediction Limits



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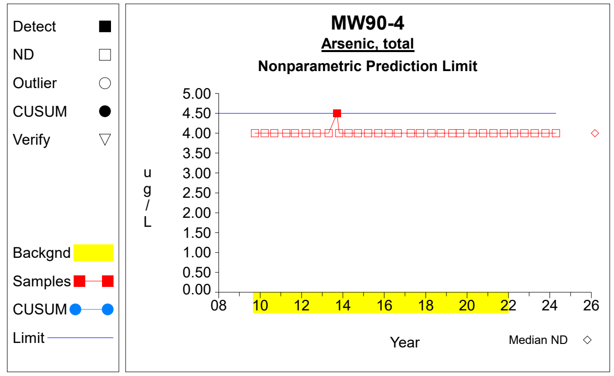

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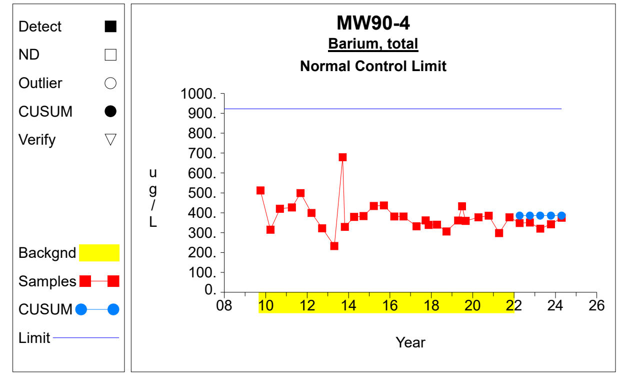

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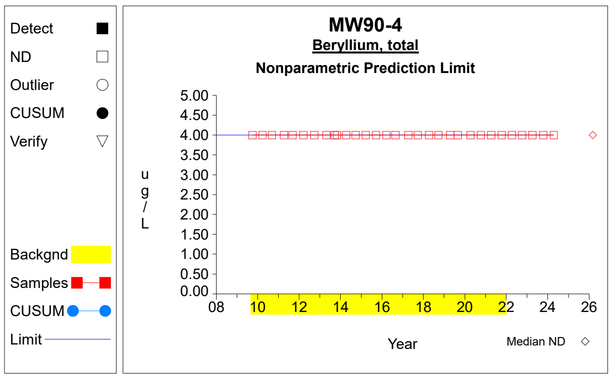

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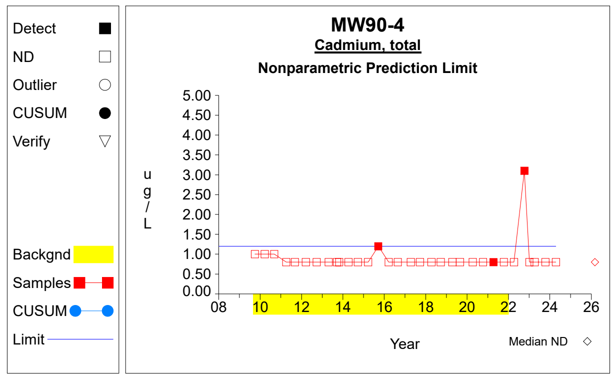

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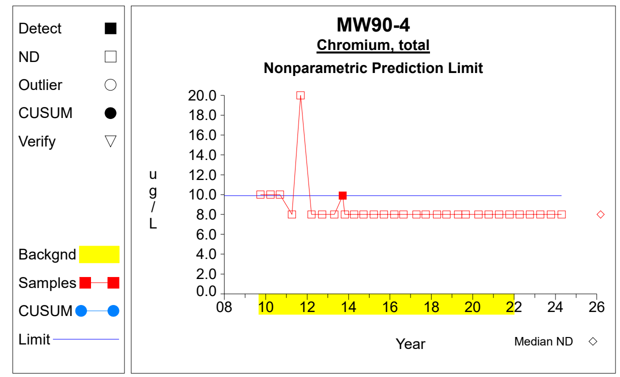

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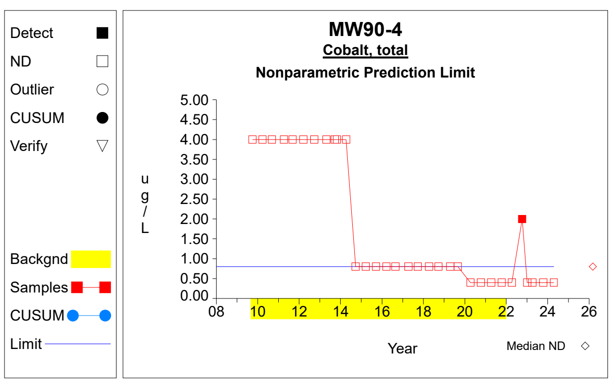

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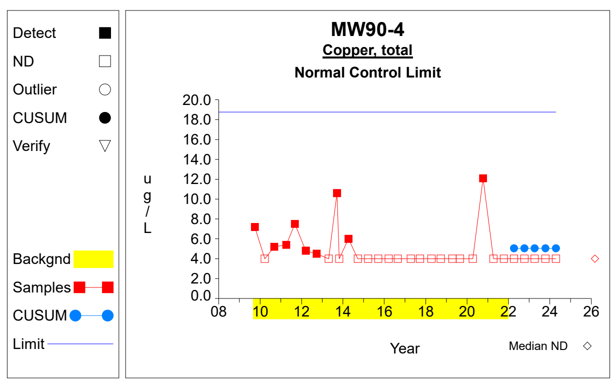

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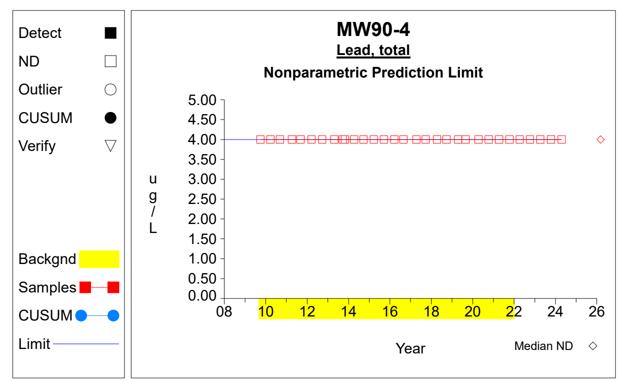

Graph 39

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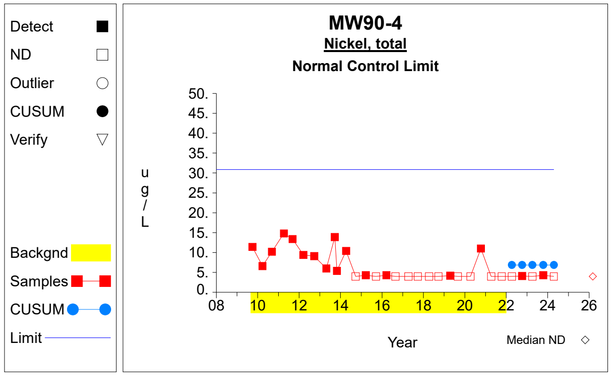
Intra-Well Control Charts / Prediction Limits



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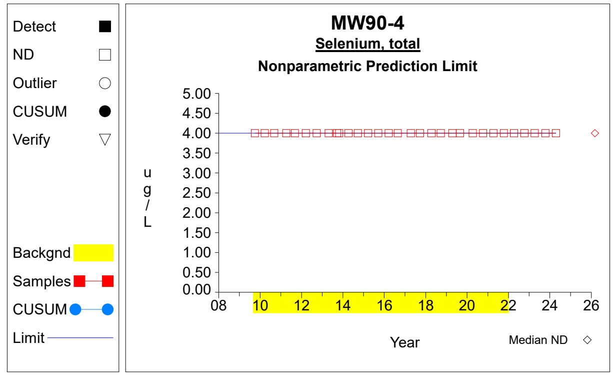

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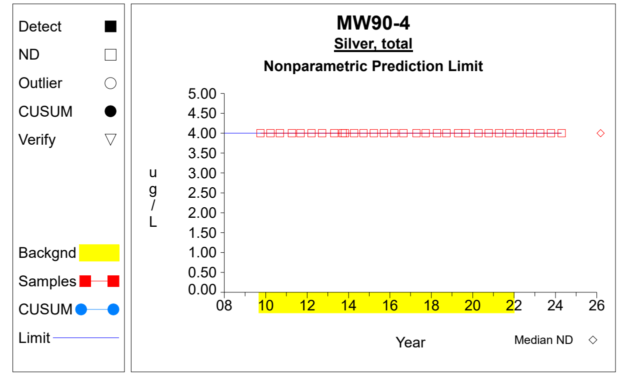
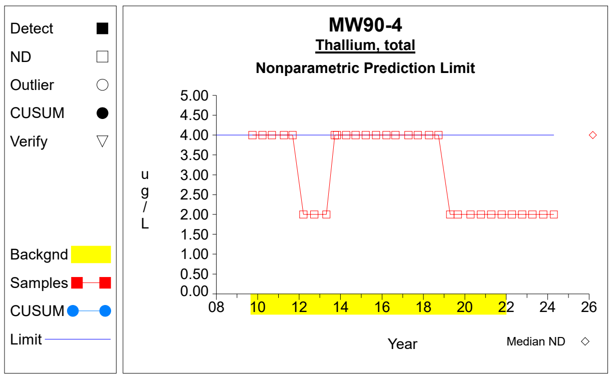


Graph 42



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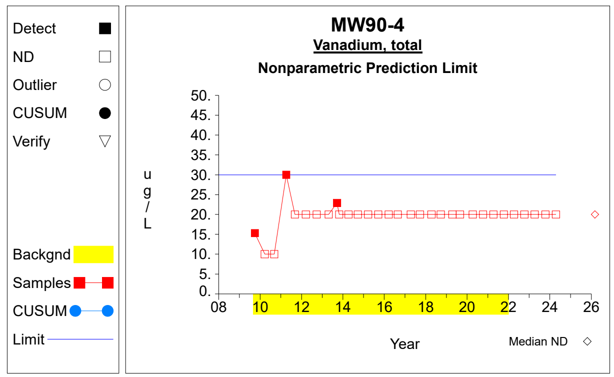

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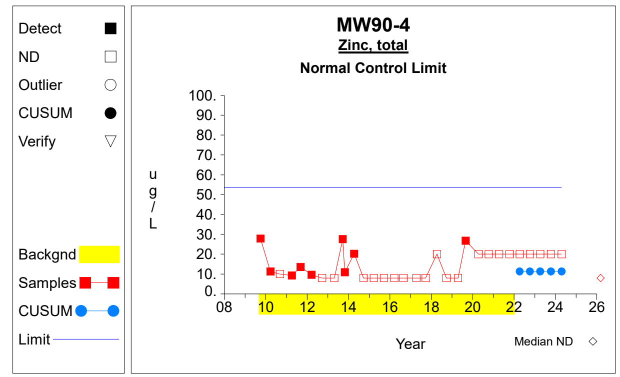
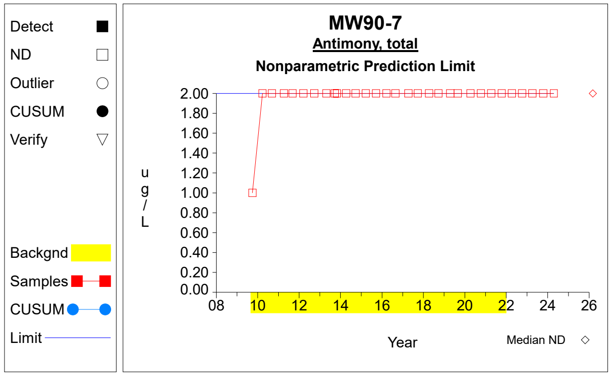


Graph 45

Intra-Well Control Charts / Prediction Limits



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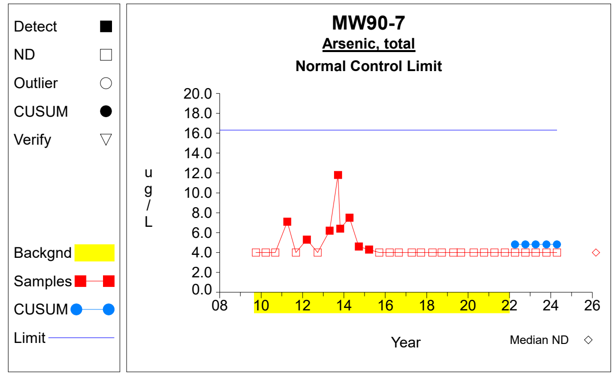

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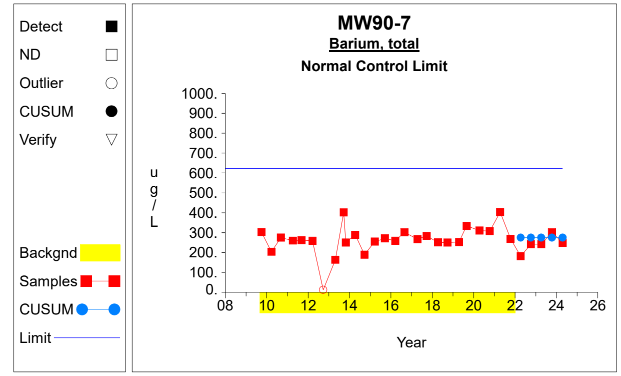

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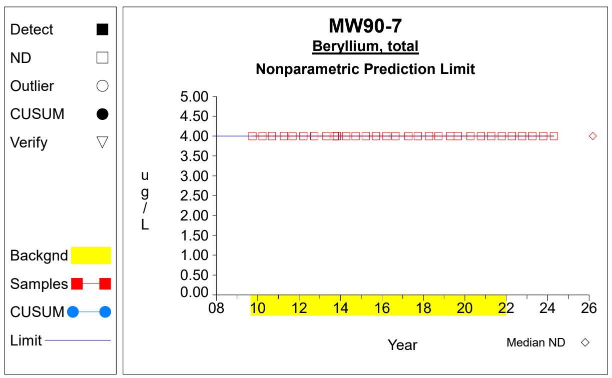

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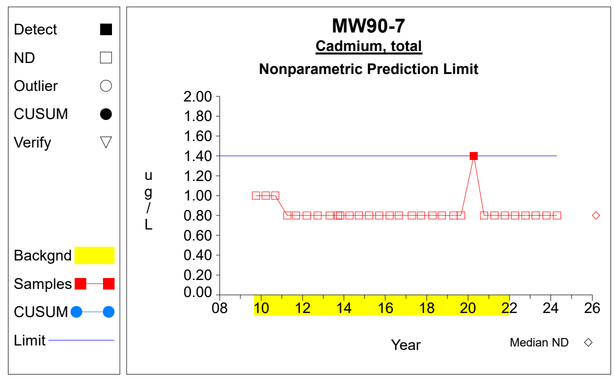

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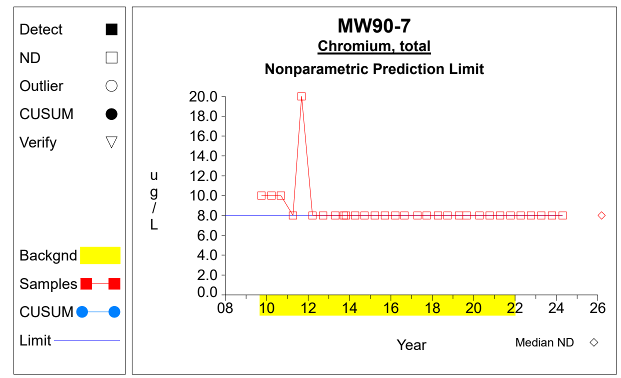

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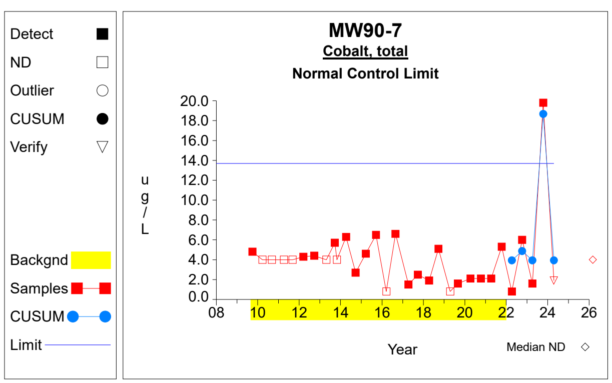

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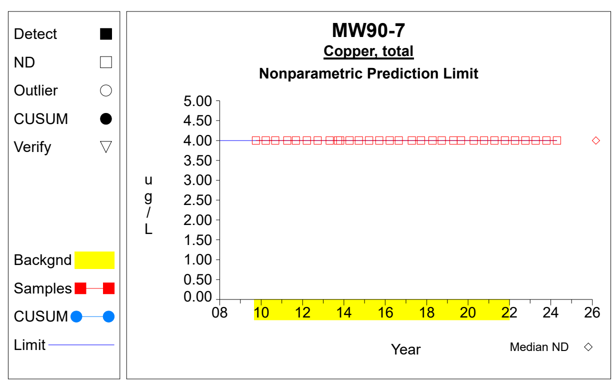

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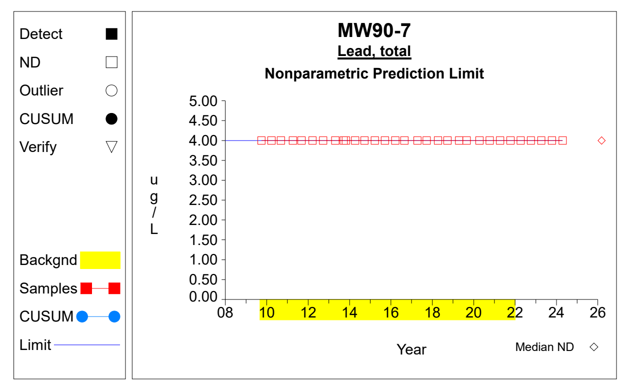
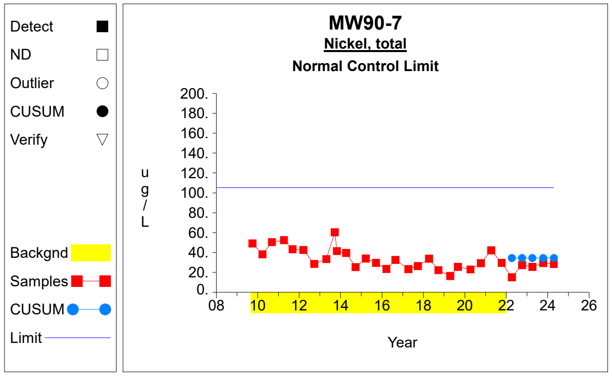


Graph 54

Intra-Well Control Charts / Prediction Limits



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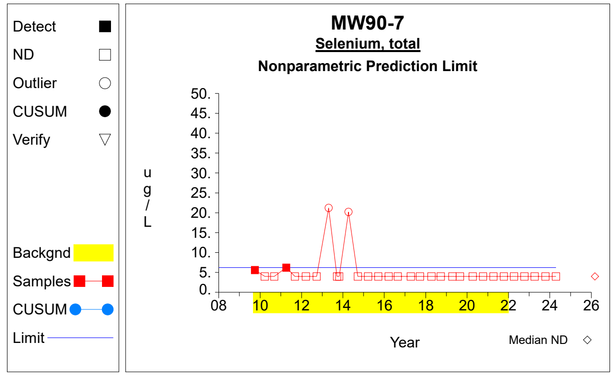

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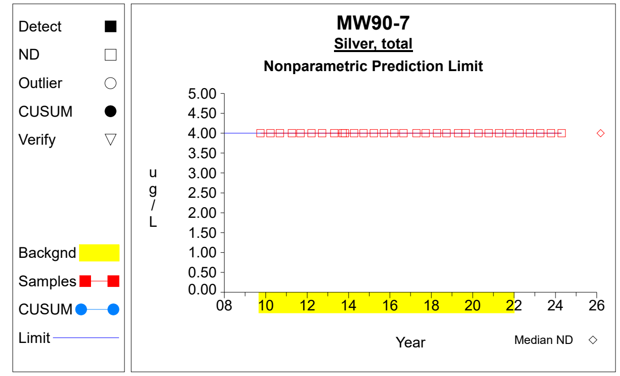

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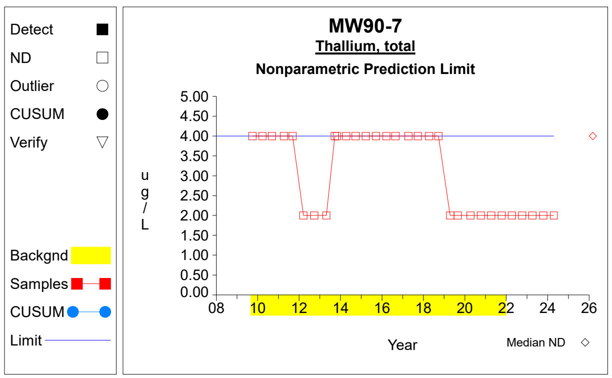

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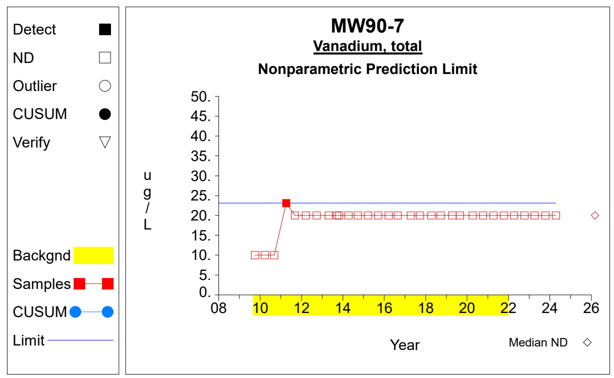
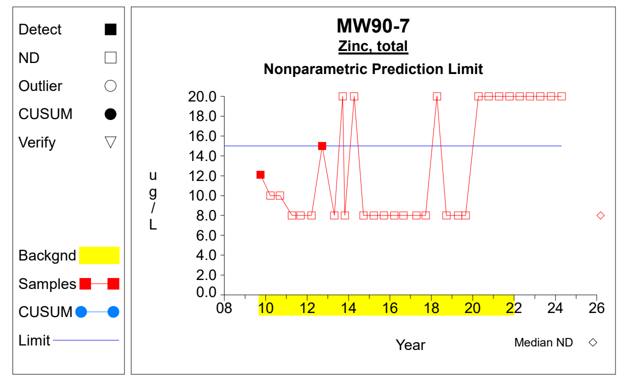
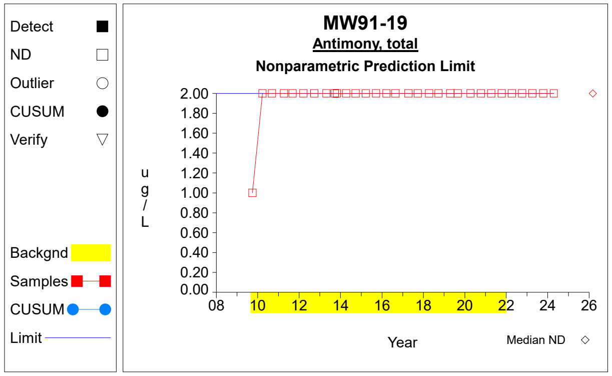


Graph 59

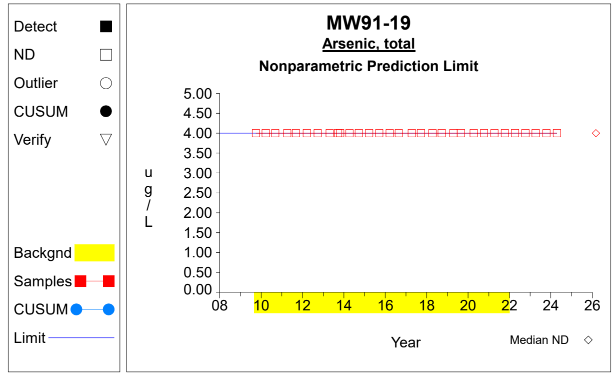


Graph 60

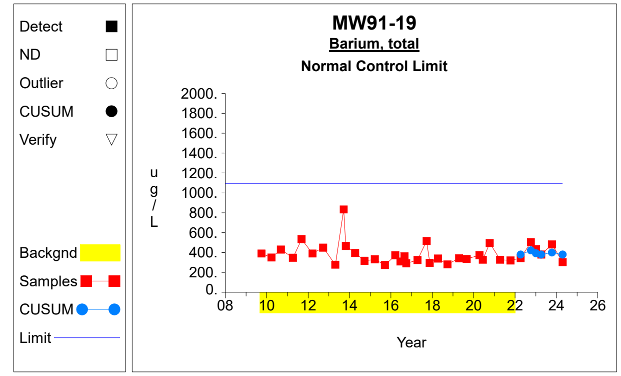
Intra-Well Control Charts / Prediction Limits



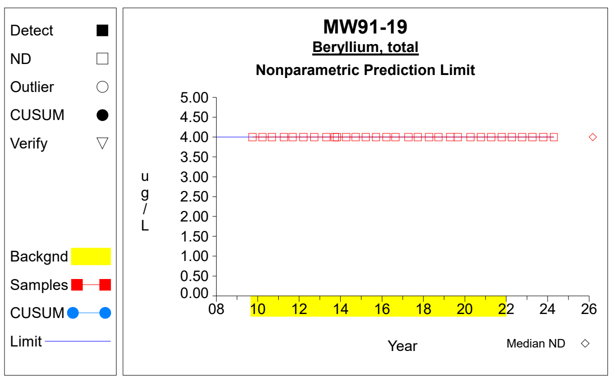
Graph 61



Graph 62



Graph 63



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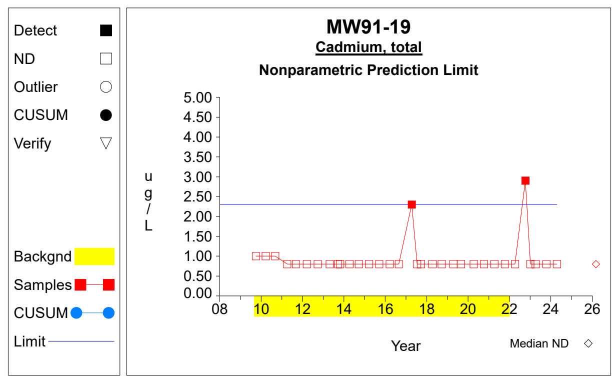
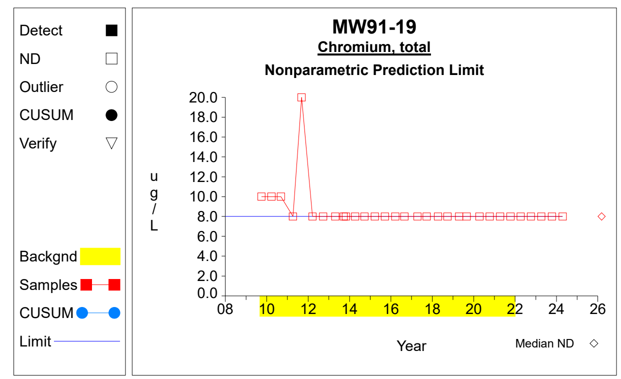
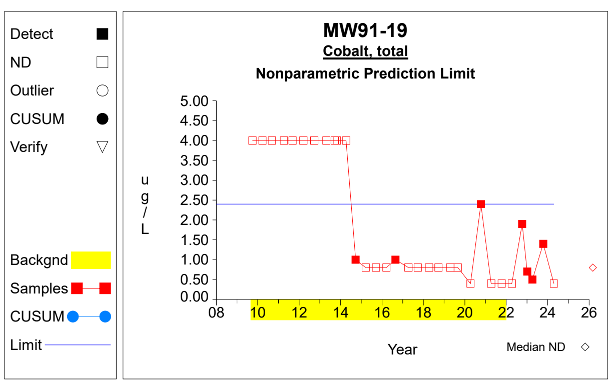


Graph 65



Graph 66



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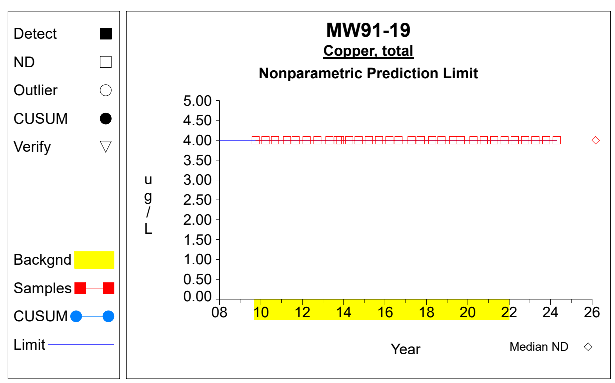
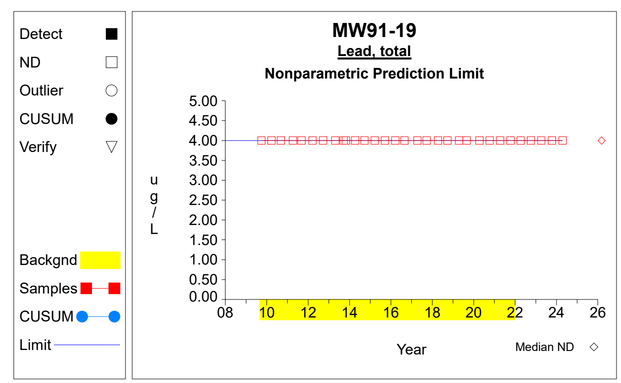


Graph 68



Graph 69

Audubon [GW]

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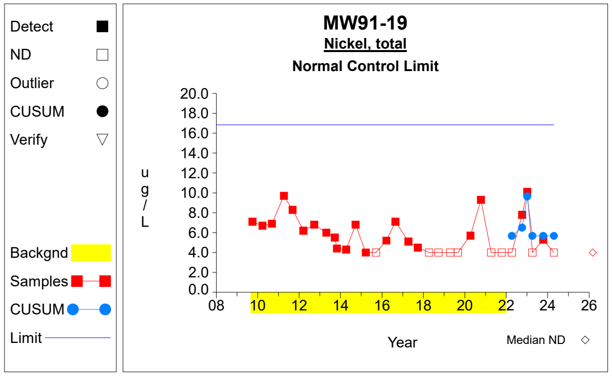
Intra-Well Control Charts / Prediction Limits



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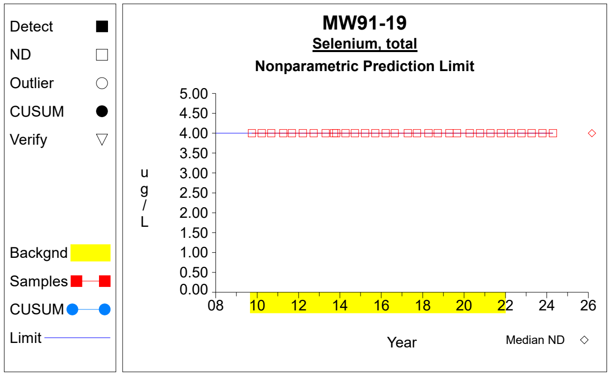

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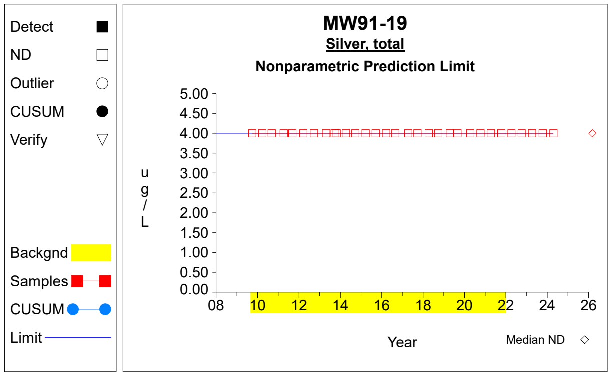
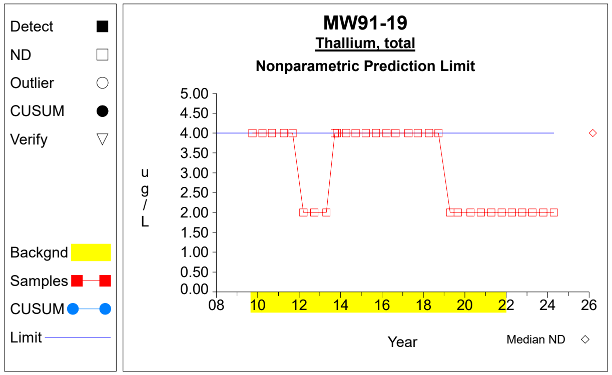


Graph 72



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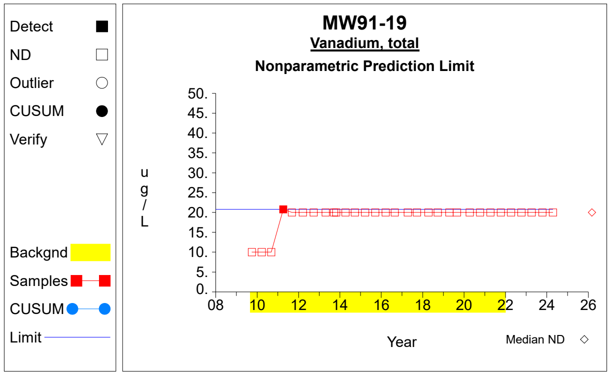

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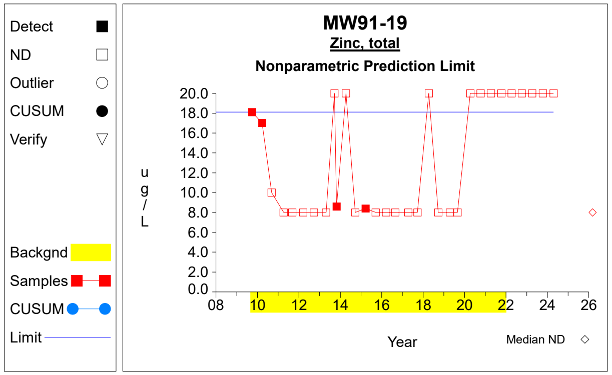

Graph 75

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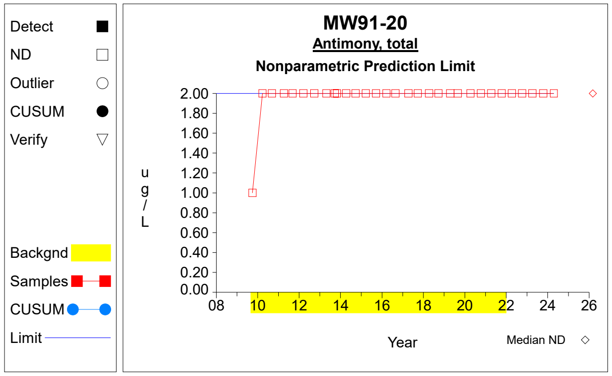
Intra-Well Control Charts / Prediction Limits



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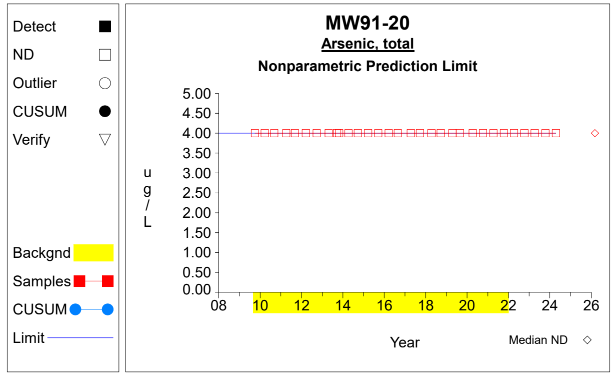

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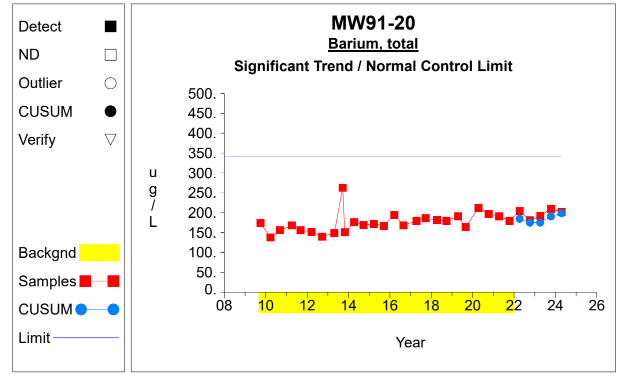

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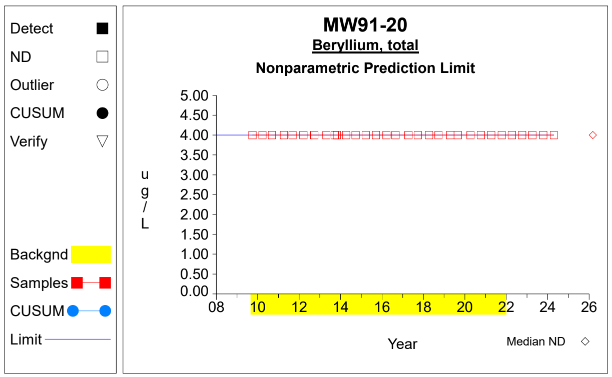

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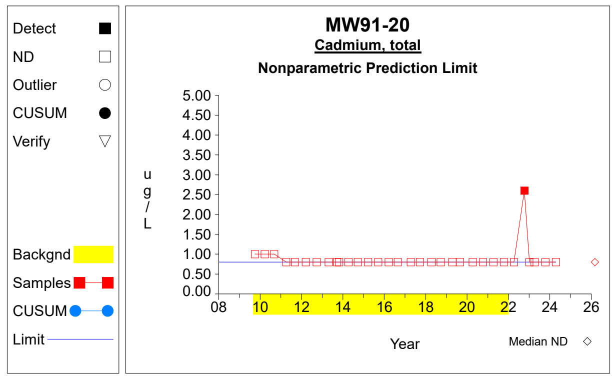

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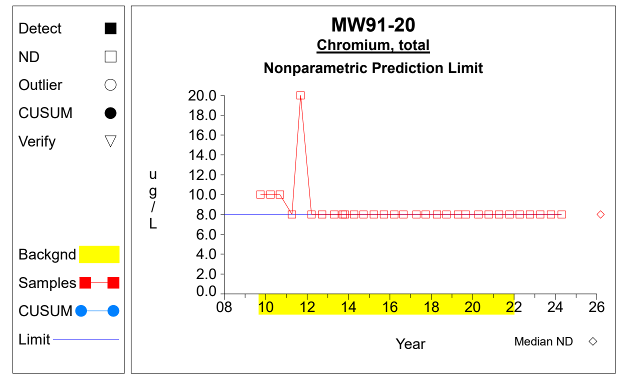

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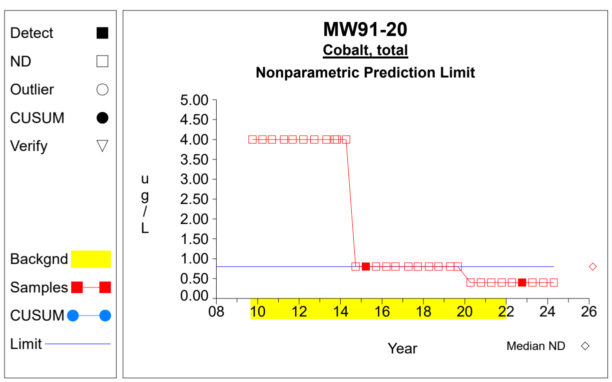

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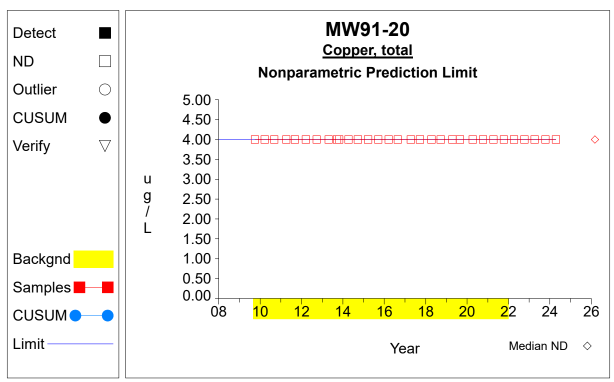

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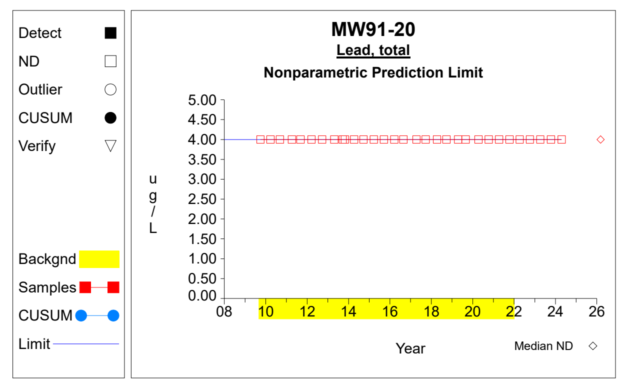

Graph 84

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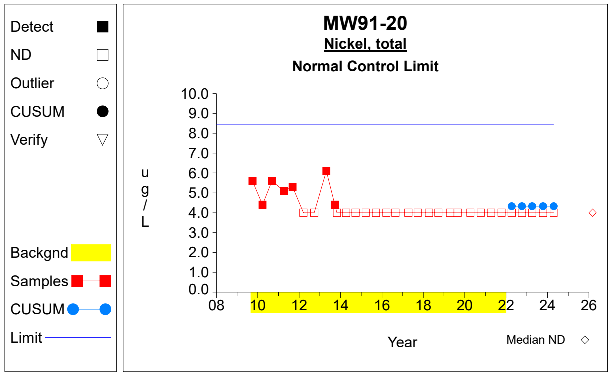
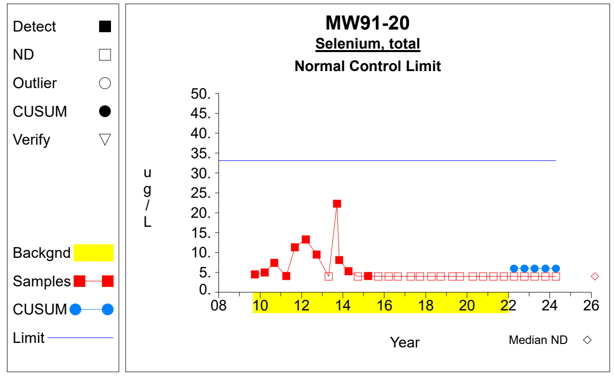
Intra-Well Control Charts / Prediction Limits



Graph 85



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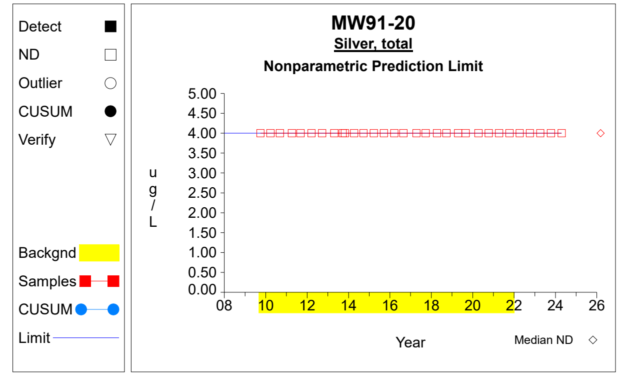

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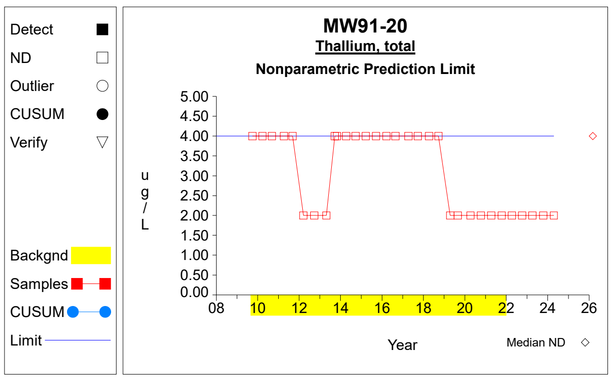

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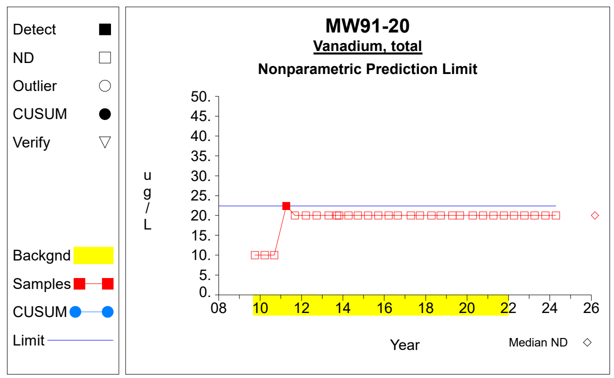

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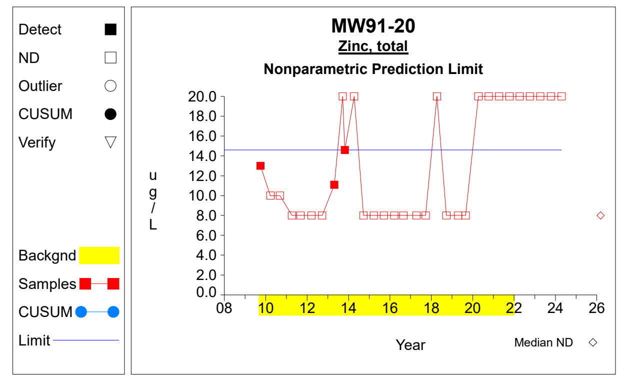

Graph 90

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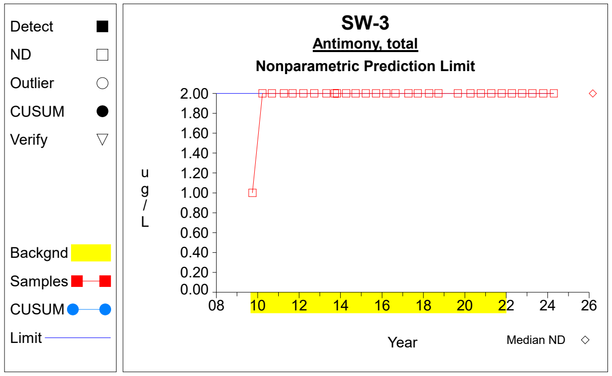
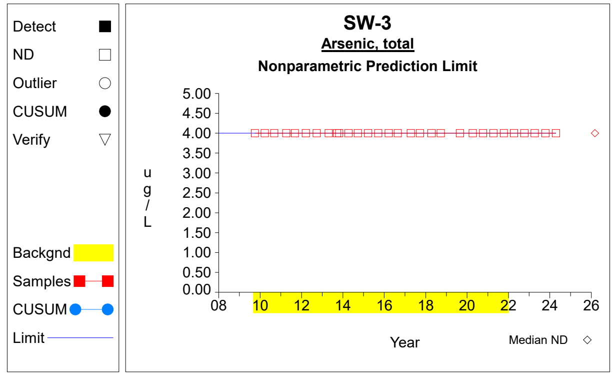
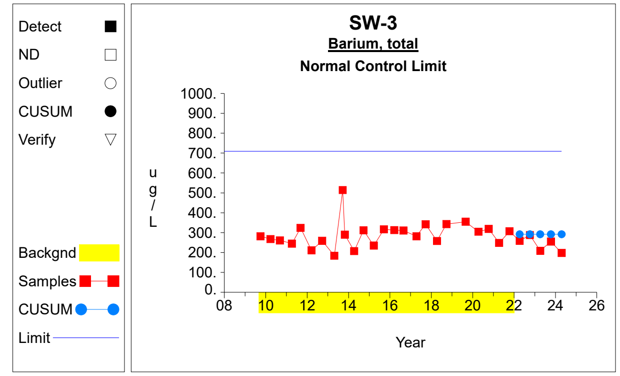
Intra-Well Control Charts / Prediction Limits



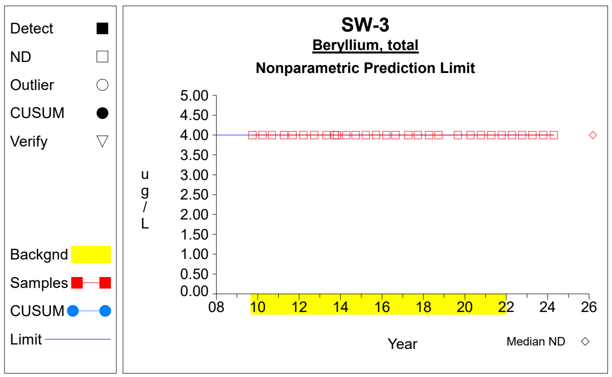
Graph 91



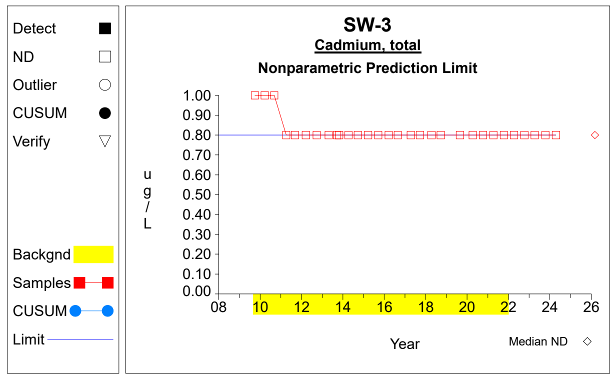
Graph 92



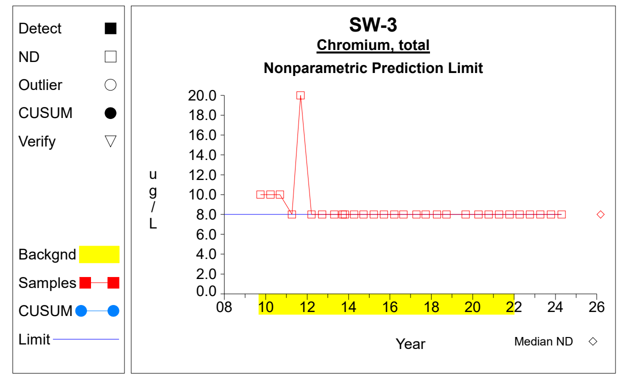
Graph 93



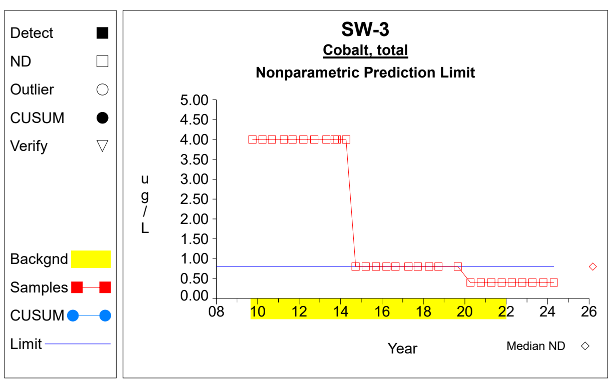
Graph 94



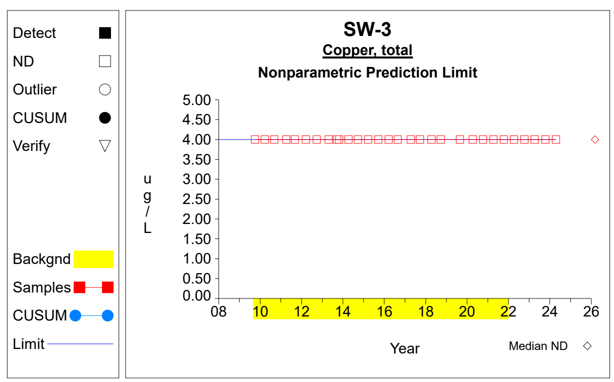
Graph 95



Graph 96



Graph 97



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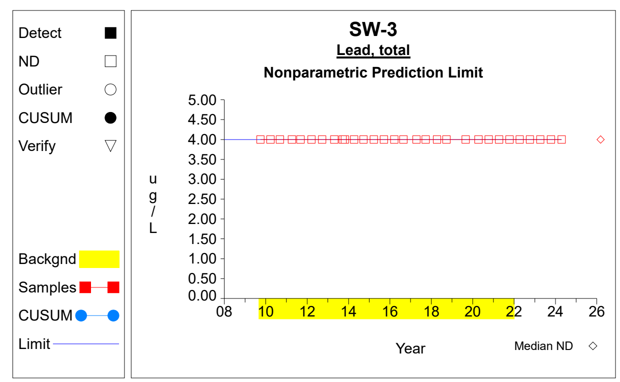
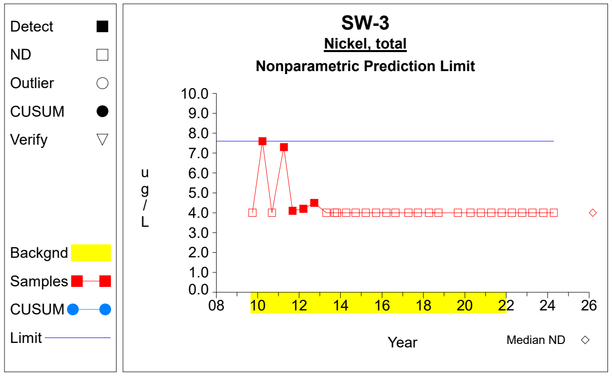
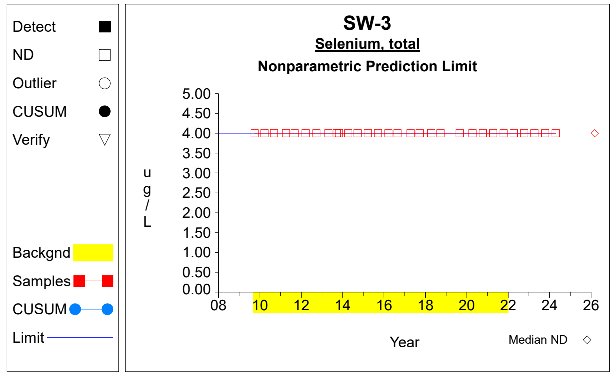


Graph 99

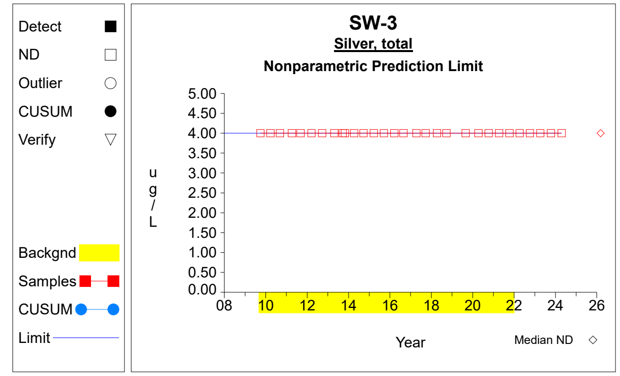
Intra-Well Control Charts / Prediction Limits



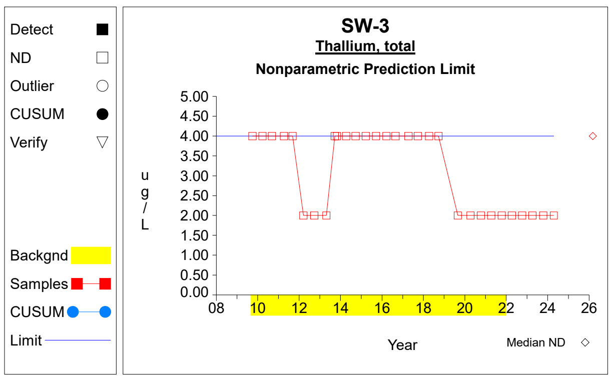
Graph 100



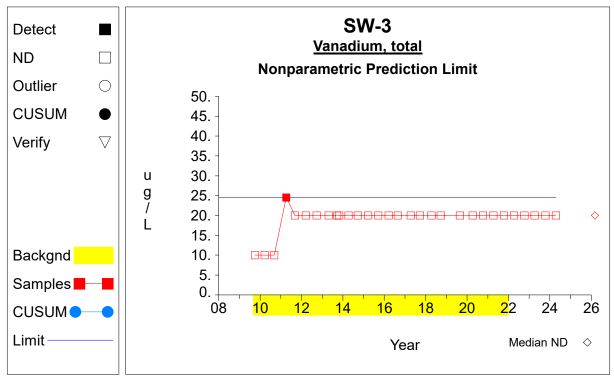
Graph 101



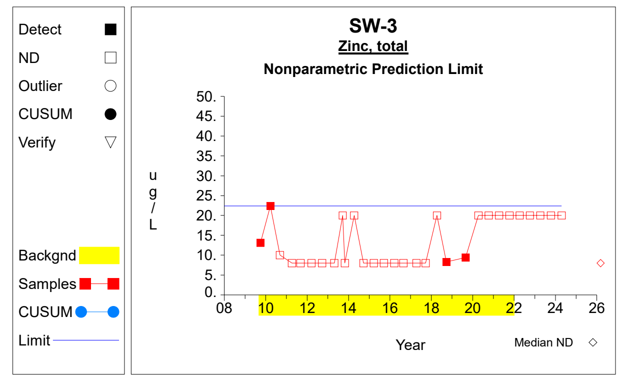
Graph 102



Graph 103

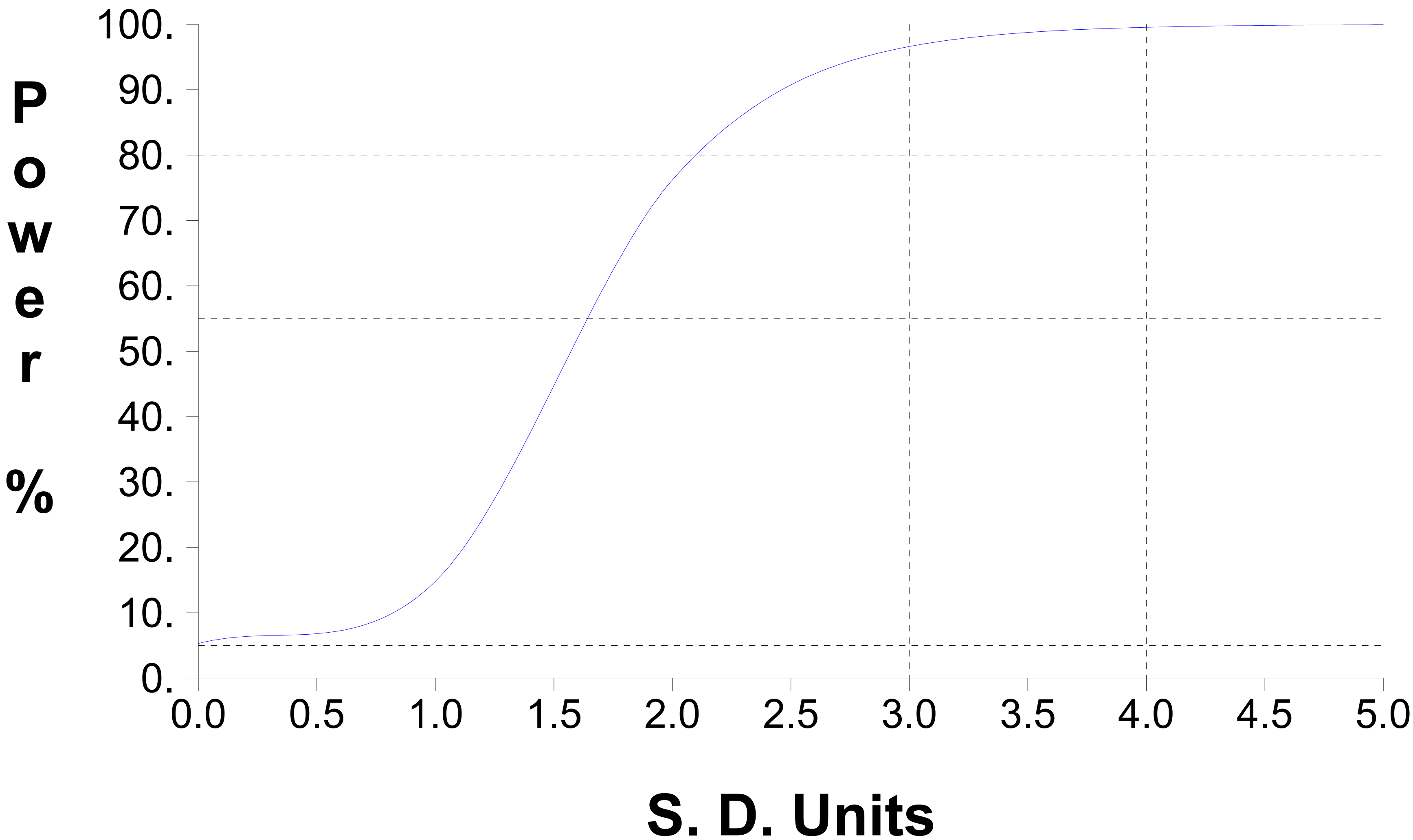


Graph 104



Graph 105

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Attachment E

Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,1-dichloroethane	MW90-14	9/30/2009		1.4	1.0	ug/L
Acetone	MW90-14	10/16/2008		13.6	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	9/24/2018		12	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	11/01/2018		21	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	4/16/2019		6	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	8/29/2019		9	6	ug/L
Chloroethane	MW90-14	9/30/2009		2.2	1.0	ug/L
Acetone	MW90-17	9/23/2017		12.9	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW90-4	4/09/2021		9	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-4	10/06/2022		14	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/16/2019		9	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	6/25/2019		11	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	8/29/2019		15	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/10/2020		7	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/09/2021		7	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/18/2024		18	6	ug/L
Bis(2-ethylhexyl)phthalate	MW91-19	4/18/2024		13	6	ug/L
Acetone	SW-3	9/06/2007		5.42	10.00	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

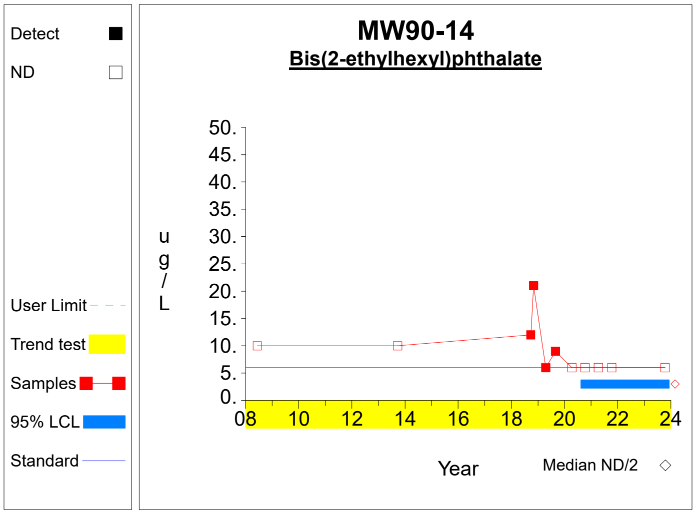
Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

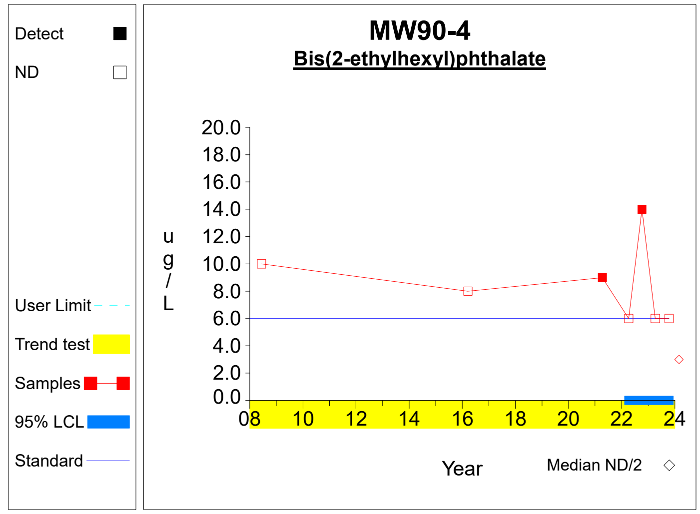
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Bis(2-ethylhexyl)phthalate	ug/L	MW90-14	4	3.000	0.000	1.176	3.000	3.000	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW90-4	4	5.750	5.500	1.176	0.000	12.220	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW90-7	4	6.750	7.500	1.176	0.000	15.572	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW91-19	4	6.250	4.500	1.176	0.957	11.543	6.000	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

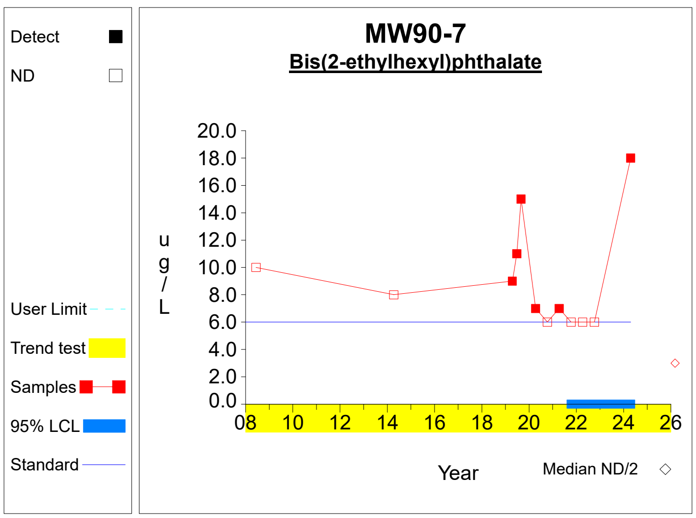
Confidence Limits (Assessment)



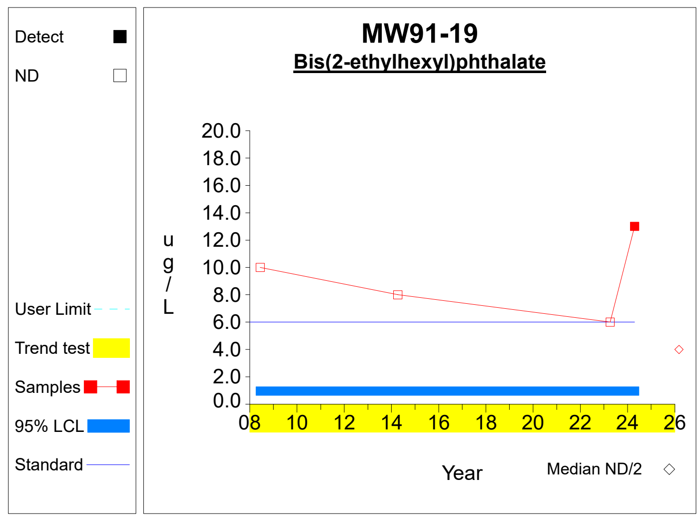
Graph 1



Graph 2



Graph 3



Graph 4

Appendix C.2 – 2nd Semester Statistical Report

Results of the Ground Water Statistics

for Audubon County Sanitary Landfill

Second Semi-Annual Monitoring Event in 2024

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INTRODUCTION

This report contains the results of the statistical analyses used to evaluate the ground water data obtained during the second semi-annual monitoring event in 2024 at Audubon County Sanitary Landfill in Audubon, Iowa. The ground water at Audubon County Sanitary Landfill is monitored by background well MW90-17 and compliance wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3. These monitoring wells were sampled on October 15, 2024 and analyzed for the parameters required by permit.

The statistical plan is designed to detect a release from the facility at the earliest indication so that it is protective of human health and the environment. Both interwell and intrawell methodologies are described and then applied to the Audubon County Sanitary Landfill data. The statistical plan conforms with IAC 567, Chapter 113.10, USEPA Guidance document ("*Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Unified Guidance"*, March 2009), and the American Society for Testing and Materials (ASTM) standard D6312-98, *Developing Appropriate Statistical Approaches for Ground-Water Detection Monitoring Programs*.

Ground Water Monitoring Program

The groundwater monitoring network for Audubon County Sanitary Landfill includes upgradient well MW90-17 and compliance wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3. Each of the groundwater monitoring wells is to be sampled at least semiannually and analyzed for the detection monitoring parameters listed in 113.10(5), which includes 15 inorganic constituents and 47 organic compounds, summarized below.

Detection monitoring constituents listed in Appendix I of IAC 567, Chapter 113.

Organic Compounds:

Acetone	*trans*-1,4-Dichloro-2-butene	Iodomethane
Acrylonitrile	1,1-Dichloroethane	4-Methyl-2-pentanone
Benzene	1,2-Dichloroethane	Styrene
Bromochloromethane	1,1-Dichloroethene	1,1,1,2-Tetrachloroethane
Bromodichloromethane	*cis*-1,2-Dichloroethene	1,1,2,2-Tetrachloroethane
Bromoform	*trans*-1,2-Dichloroethene	Tetrachloroethene
Carbon disulfide	1,2-Dichloropropane	Toluene
Carbon tetrachloride	*cis*-1,3-Dichloropropene	1,1,1-Trichloroethane
Chlorobenzene	*trans*-1,3-Dichloropropene	1,1,2-Trichloroethane
Chloroethane	Ethylbenzene	Trichloroethene
Chloroform	2-Hexanone	Trichlorofluoromethane
Dibromochloromethane	Bromomethane	1,2,3-Trichloropropane
1,2-Dibromo-3-chloropropane	Chloromethane	Vinyl acetate
1,2-Dibromoethane	Dibromomethane	Vinyl chloride
1,2-Dichlorobenzene	Methylene chloride	Xylenes (Total)
1,4-Dichlorobenzene	2-Butanone	

Inorganic constituents:

Antimony, Total	Chromium, Total	Selenium, Total
Arsenic, Total	Cobalt, Total	Silver, Total
Barium, Total	Copper, Total	Thallium, Total
Beryllium, Total	Lead, Total	Vanadium, Total
Cadmium, Total	Nickel, Total	Zinc, Total

The ground water data obtained during the second semi-annual monitoring event in 2024 are summarized in Attachment A.

STATISTICAL METHODOLOGIES FOR DETECTION MONITORING

IAC 567, Chapter 113.10(4) provides several options for statistically evaluating the ground water data at those wells that monitor the open cells or contiguous MSWLF units. The preferred methods for comparing ground water data are using either prediction limits or using control charts. Both of these methods were applied to the Audubon County Sanitary Landfill data using the DUMPStat® statistical program. DUMPStat® is a program for the statistical analysis of groundwater monitoring data using methods described in “Statistical Methods for Groundwater Monitoring” by Dr. Robert D. Gibbons. The DUMPStat program is completely consistent with all USEPA regulations and guidance and the ASTM D6312-98 guidance.

Ground water statistics are to be done on the inorganic constituents listed. The organic constituents are compared to maximum contaminant levels (MCLs) or practical quantitation limits (PQLs), in lieu of statistical comparisons to historical concentrations.

Interwell Statistics: Upgradient versus Downgradient Comparisons

Interwell statistics are appropriate when the upgradient and downgradient wells monitor the same ground water formation and there is similar variability in the upgradient and downgradient zones. Site prediction limits are determined by pooling the historical ground water data from hydraulically upgradient wells. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances. The type of prediction limit utilized (e.g., parametric or nonparametric) is based on the detection frequency and the data distribution of each parameter in the background data. The distribution of the background data is tested for normality using the Shapiro-Wilk test (Gibbons, 1994 and USEPA 1992). If the constituent is normally distributed, a normal prediction limit is used. If normality is rejected by the Shapiro-Wilk test, the background data is transformed by taking the natural logarithm. The Shapiro-Wilk test is then reapplied on the transformed data. If it is not rejected, lognormal prediction limits are used. If after transforming the data, normality is still rejected, nonparametric prediction limits are used for that analyte. The nonparametric prediction limit is the largest determination in the background measurements. For constituents where the background detection frequency is greater than 0% but less than 50%, nonparametric prediction limits will be used. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

<u>Results of the Interwell Statistics</u>

The background data used in this statistical analysis includes the ground water data collected from ground water well MW90-17 during the period from September 2009 through the current data. A summary of the background data from monitoring well MW90-17 is listed in Attachment B, Table 1 “Upgradient Data”. This statistical method compares the current downgradient determinations to site prediction limits and checks for exceedances.

Table 2 "Most Current Downgradient Monitoring Data", summarizes the current data from downgradient wells MW90-4, MW90-7, MW90-14, MW91-19, MW91-20 and SW-3, compared to the site prediction limits. Prediction limit exceedances are flagged with asterisks. For the most current data, the site prediction limit exceedances detected are summarized in the table below.

Trace Metal Prediction Limit Exceedances at Audubon County Landfill during the Second Semi-Annual Monitoring Event in 2024

Well	Trace Metal Detected	Result, µg/L	Prediction Limit, µg/L	Prediction Limit Type	Verified/ Awaiting verification
MW90-14	Cadmium	1.3	1.1000	Nonparametric	Awaiting verification
	Nickel	12.9	7.1000	Nonparametric	Verified
MW90-4	Barium	381	363.5707	Normal	Verified
	Cadmium	1.3	1.1000	Nonparametric	Awaiting verification
MW90-7	Cobalt	7.6	0.8000	Nonparametric	Verified
	Nickel	23.3	7.1000	Nonparametric	Verified

The detection frequencies of the parameters in the up and down gradient monitoring wells are summarized in Table 3. Only barium was detected at a frequency greater than or equal to 50% in the upgradient well so only this metal was tested for normality. The remainder of the metals are rarely detected (less than 50%) in the upgradient wells so nonparametric prediction limits were be used in those cases.

Table 4 summarizes the results of the Shapiro-Wilk test. Table 5 is a summary of the statistics and prediction limits determined for the metals. Time series graphs of each of the parameters at each well with the corresponding prediction limits are attached.

A statistical power curve indicates the expected false assessments for the site as a whole. The false positive rate for interwell analyses is the percentage of failures when the upgradient versus downgradient true mean difference equals zero. False negative rate indicates the chance of missing contamination at a single well for a single constituent. The statistical power is a function of the number of wells included, the number of constituents compared, the detection frequencies, and the data distributions involved. For interwell analysis, the site-wide false positive rate is 3% and the test becomes sensitive to 4 standard deviation unit increases over background.

The past and current verified trace metal exceedances were evaluated against the ground water protection standards (GWPS) using confidence limits calculated in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, USEPA, March 2009 (Attachment C). The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The calculated 95% LCLs are below the respective USEPA MCLs or Iowa statewide standards.

Intrawell statistics

Intrawell statistics are appropriate for facilities where the upgradient wells do not accurately characterize the natural ground water conditions downgradient from the facility. This may be due to different hydrogeological conditions where the wells are screened, having too few upgradient wells to account for the spatial variability, or the site exhibiting no definable hydraulic gradient. Intrawell statistics compare new measurements to the historical data at each ground water monitoring well independently. It is recommended that at least eight background samples be obtained prior to performing the statistics.

The most useful technique for intrawell comparisons is the combined Shewhart-CUSUM control chart. This control chart procedure is useful because it will detect releases both in terms of the constituent concentration and cumulative increases. This method is also extremely sensitive to sudden and gradual releases. A requirement for constructing these control charts is that the parameter is detected at a frequency greater than or equal to 25%, otherwise the data variance is not properly defined.

The combined Shewhart-CUSUM control chart assumes that the data are independent and normally distributed with a fixed mean and a constant variance. Independent data is much more critical than the normality assumption. To achieve independence, it is recommended that data are collected no more frequently than quarterly to account for seasonal variation. The combined Shewhart-CUSUM control chart is extremely robust to deviations from normality. Because the control charts do not use a specific multiplier based on a normal distribution, it is more conservative to assume normality.

It is recommended that at least eight rounds of data be available to provide a reliable estimate of the mean and standard deviation of the parameter concentration, although the control charts will be generated with as few as four data points. Having only four data points may produce greater uncertainty in the mean and standard deviation of the background data, leading to higher control limits, thus having a potentially high false negative rate.

Many groundwater monitoring parameters are not detected at a frequency great enough to generate the combined Shewhart-CUSUM control charts. For constituents that are detected less than 25% of the time at a particular well, the data should be plotted as a time series until a sufficient number of data points are available to provide a 99% confidence nonparametric prediction limit. Thirteen independent measurements (with 1 resample) are necessary to achieve a 99% confidence (1% false positive rate) nonparametric prediction limit. Eight independent measurements (for pass 1 of 2 resamples) are necessary to achieve a 99% confidence nonparametric prediction limit. The nonparametric prediction limit is the largest determination out of the data set collected for that well and parameter. If the detection frequency is 0% after thirteen samples have been collected, the practical quantitation limit (PQL) becomes the nonparametric prediction limit.

In developing the statistical background, the historical data must be thoroughly screened for anomalous data due to sampling error, analytical error, or simply by chance alone. An erroneous data point, if not removed prior to the mean and variance computations, would yield a larger control limit thus increasing the false negative rate. The DUMPStat® program screens for outliers using the Dixon test. Anomalous data will still be plotted on the graphs (with a unique symbol) but will not be included in the calculations.

The verification resample plan is an integral function of the statistical plan to reduce the probability that anomalous data obtained after the background has been established, is indicative of a landfill release.

The background data for each well and constituent is tested for existing trends using Sen's nonparametric estimate of trend. If contamination exists prior to completing the background, the control limits could be potentially high and this control chart method would not be able to detect an increasing trend unless the increase is severe.

Results of the Intrawell Statistics

The Appendix I trace metals data from wells MW90-17, MW90-4, MW90-7, MW90-14, MW91-19, MW91-20, and SW-3 were evaluated using the combined Shewhart-CUSUM control chart method. The previous background included historical data obtained from September 2009 through 2019.

As ground water monitoring at a municipal solid waste facility proceeds, it is recommended to update background data sets periodically with valid detection monitoring results that are representative of background groundwater quality not affected by leakage from a monitored unit. Failure to update background will exclude factors such as natural temporal variation, changes in field or laboratory methodologies, and changes in the water table due to meteorological conditions or other influences. Since there were no exceedances attributed to the landfill, the background was updated to included data obtained from September 2009 through 2021.

A summary of the intrawell statistics is included in Attachment D, Table 1 “Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts.” The control charts or time series graphs follow the summary table. For the most current data, the control limit exceedances detected are summarized in the table below.

Summary of Control Limit Exceedances for the Second Semi-Annual Monitoring Event in 2024

Well	Parameter	Result	CUSUM Value	Control Limit	Control Limit Type	Verified or Awaiting Verification
MW90-4	Cadmium, µg/L	1.3	--	1.2000	Nonparametric	Awaiting Verification

Increasing trends were detected in the background data for barium at upgradient well MW90-17 and barium at MW91-20.

A control chart factor was selected to provide a balance of the site-wide false positive and false negative rates. A statistical power curve indicates the expected false assessments for the site as a whole. The site-wide false positive rate is 5% and the test becomes sensitive to 3 standard deviation units over background.

Volatile Organic Compounds

Volatile Organic Compounds (VOCs) are generally man-made compounds not present in ambient ground water. If VOCs are detected above their statistical limit (i.e., the laboratory PQL or reporting limit), a verification resample will be conducted at the next scheduled sampling event. A statistical exceedance will be indicated if the VOC detection is confirmed by the subsequent monitoring.

No VOCs were detected and the previous detections of bis(2-ethylhexyl)phthalate at MW90-7 and bis(2-ethylhexyl)phthalate at MW91-19 were not confirmed by the current data.

The previous bis(2-ethylhexyl)phthalate detections were evaluated against the ground water protection standards (GWPS) using confidence limits. The analysis was conducted to evaluate whether verified concentrations are significantly above the water quality standard. The 95% lower confidence limit (LCL) for the mean of the historical data was used to evaluate whether the regulated unit is in compliance with the ground-water protection standards under 40 CFR 264 (e.g. whether the verified constituent is detected at a significant level above the GWPS). An exceedance is verified if the LCL is above the Regulatory GWPS.

The 95% LCLs for bis(2-ethylhexyl)phthalate do not exceed the USEPA MCL of 6 μg/L.

Historical VOC detections are summarized in Attachment E.

Attachment A

Ground Water Data obtained during the Second Semi-Annual Monitoring Event in 2024

Table 1

Analytical Data Summary for 10/15/2024

Constituents	Units	MW90-14	MW90-17	MW90-4	MW90-7	MW91-19	MW91-20	SW-3
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,1-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	ug/L	<5	<5	<5	<5	<5	<5	<5
1,2-dibromoethane (edb)	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	ug/L	<1	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
2-butanone (mek)	ug/L	<10	<10	<10	<10	<10	<10	<10
2-hexanone	ug/L	<5	<5	<5	<5	<5	<5	<5
4-methyl-2-pentanone (mibk)	ug/L	<5	<5	<5	<5	<5	<5	<5
Acetone	ug/L	<10	<10	<10	<10	<10	<10	<10
Acrylonitrile	ug/L	<5	<5	<5	<5	<5	<5	<5
Antimony, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Arsenic, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Barium, total	ug/L	237	280	381	271	276	161	287
Benzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Beryllium, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Bis(2-ethylhexyl)phthalate	ug/L				<6	<6		
Bromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromodichloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromoform	ug/L	<1	<1	<1	<1	<1	<1	<1
Bromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Cadmium, total	ug/L	1.3	<.8	1.3	<.8	<.8	<.8	<.8
Carbon disulfide	ug/L	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloroform	ug/L	<1	<1	<1	<1	<1	<1	<1
Chloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Chromium, total	ug/L	<8	<8	<8	<8	<8	<8	<8
Cis-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cis-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Cobalt, total	ug/L	.4	<.4	<.4	7.6	<.4	<.4	<.4
Copper, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	ug/L	<1	<1	<1	<1	<1	<1	<1
Iodomethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Lead, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Methylene chloride	ug/L	<5	<5	<5	<5	<5	<5	<5
Nickel, total	ug/L	12.9	<4.0	<4.0	23.3	<4.0	<4.0	<4.0
Selenium, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Silver, total	ug/L	<4	<4	<4	<4	<4	<4	<4
Styrene	ug/L	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Thallium, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Toluene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,3-dichloropropene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trans-1,4-dichloro-2-butene	ug/L	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	ug/L	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	ug/L	<1	<1	<1	<1	<1	<1	<1
Vanadium, total	ug/L	<20	<20	<20	<20	<20	<20	<20
Vinyl acetate	ug/L	<5	<5	<5	<5	<5	<5	<5
Vinyl chloride	ug/L	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	ug/L	<2	<2	<2	<2	<2	<2	<2
Zinc, total	ug/L	<20	<20	<20	<20	<20	<20	<20

* - The displayed value is the arithmetic mean of multiple database matches.

Attachment B

Summary Tables and Graphs for the Interwell Comparisons

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Antimony, total	ug/L	MW90-17	09/30/2009	ND	1.0000	2.0000	**
Antimony, total	ug/L	MW90-17	03/23/2010	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/07/2010	ND	5.0000	2.0000	**
Antimony, total	ug/L	MW90-17	04/05/2011	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/06/2011	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/16/2012	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/24/2012	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/24/2013	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/20/2013	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/08/2014	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/22/2014	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/20/2015	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/17/2015	ND	2.0000		
Antimony, total	ug/L	MW90-17	03/17/2016	ND	2.0000		
Antimony, total	ug/L	MW90-17	08/26/2016	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/11/2017	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/23/2017	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/10/2018	ND	2.0000		
Antimony, total	ug/L	MW90-17	09/24/2018	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/16/2019	ND	2.0000		
Antimony, total	ug/L	MW90-17	08/29/2019	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/10/2020	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/09/2020	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/09/2021	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/11/2021	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/07/2022	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/06/2022	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/05/2023	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/13/2023	ND	2.0000		
Antimony, total	ug/L	MW90-17	04/18/2024	ND	2.0000		
Antimony, total	ug/L	MW90-17	10/15/2024	ND	2.0000		
Arsenic, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Arsenic, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Arsenic, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Arsenic, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Arsenic, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Arsenic, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Arsenic, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Arsenic, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Barium, total	ug/L	MW90-17	09/30/2009		199.0000		
Barium, total	ug/L	MW90-17	03/23/2010		171.0000		
Barium, total	ug/L	MW90-17	09/07/2010		169.0000		
Barium, total	ug/L	MW90-17	04/05/2011		215.0000		
Barium, total	ug/L	MW90-17	09/06/2011		207.0000		
Barium, total	ug/L	MW90-17	03/16/2012		196.0000		
Barium, total	ug/L	MW90-17	09/24/2012		185.0000		
Barium, total	ug/L	MW90-17	04/24/2013		183.0000		
Barium, total	ug/L	MW90-17	09/20/2013		351.0000		
Barium, total	ug/L	MW90-17	04/08/2014		261.0000		
Barium, total	ug/L	MW90-17	09/22/2014		212.0000		
Barium, total	ug/L	MW90-17	03/20/2015		257.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Barium, total	ug/L	MW90-17	09/17/2015		234.0000		
Barium, total	ug/L	MW90-17	03/17/2016		246.0000		
Barium, total	ug/L	MW90-17	08/26/2016		266.0000		
Barium, total	ug/L	MW90-17	04/11/2017		234.0000		
Barium, total	ug/L	MW90-17	09/23/2017		275.0000		
Barium, total	ug/L	MW90-17	04/10/2018		242.0000		
Barium, total	ug/L	MW90-17	09/24/2018		259.0000		
Barium, total	ug/L	MW90-17	04/16/2019		242.0000		
Barium, total	ug/L	MW90-17	08/29/2019		281.0000		
Barium, total	ug/L	MW90-17	04/10/2020		274.0000		
Barium, total	ug/L	MW90-17	10/09/2020		281.0000		
Barium, total	ug/L	MW90-17	04/09/2021		265.0000		
Barium, total	ug/L	MW90-17	10/11/2021		251.0000		
Barium, total	ug/L	MW90-17	04/07/2022		299.0000		
Barium, total	ug/L	MW90-17	10/06/2022		288.0000		
Barium, total	ug/L	MW90-17	04/05/2023		307.0000		
Barium, total	ug/L	MW90-17	10/13/2023		314.0000		
Barium, total	ug/L	MW90-17	04/18/2024		310.0000		
Barium, total	ug/L	MW90-17	10/15/2024		280.0000		
Beryllium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Beryllium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Beryllium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Beryllium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Beryllium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Beryllium, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Beryllium, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Beryllium, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Cadmium, total	ug/L	MW90-17	09/30/2009	ND	1.0000	0.8000	**
Cadmium, total	ug/L	MW90-17	03/23/2010	ND	1.0000	0.8000	**
Cadmium, total	ug/L	MW90-17	09/07/2010	ND	2.5000		*
Cadmium, total	ug/L	MW90-17	04/05/2011	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/06/2011	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/16/2012	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/24/2012	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/24/2013	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/20/2013	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/08/2014	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/22/2014	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/20/2015	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/17/2015	ND	0.8000		
Cadmium, total	ug/L	MW90-17	03/17/2016	ND	0.8000		
Cadmium, total	ug/L	MW90-17	08/26/2016	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/11/2017	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/23/2017	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/10/2018	ND	0.8000		
Cadmium, total	ug/L	MW90-17	09/24/2018		1.1000		
Cadmium, total	ug/L	MW90-17	11/01/2018	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/16/2019	ND	0.8000		
Cadmium, total	ug/L	MW90-17	08/29/2019	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/10/2020	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/09/2020	ND	0.8000		

*   - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Cadmium, total	ug/L	MW90-17	04/09/2021	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/11/2021	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/07/2022	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/06/2022	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/05/2023	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/13/2023	ND	0.8000		
Cadmium, total	ug/L	MW90-17	04/18/2024	ND	0.8000		
Cadmium, total	ug/L	MW90-17	10/15/2024	ND	0.8000		
Chromium, total	ug/L	MW90-17	09/30/2009	ND	10.0000	8.0000	**
Chromium, total	ug/L	MW90-17	03/23/2010	ND	10.0000	8.0000	**
Chromium, total	ug/L	MW90-17	09/07/2010	ND	25.0000		*
Chromium, total	ug/L	MW90-17	04/05/2011	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/06/2011	ND	20.0000	8.0000	**
Chromium, total	ug/L	MW90-17	03/16/2012	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/24/2012	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/24/2013	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/20/2013	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/08/2014	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/22/2014	ND	8.0000		
Chromium, total	ug/L	MW90-17	03/20/2015	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/17/2015	ND	8.0000		
Chromium, total	ug/L	MW90-17	03/17/2016	ND	8.0000		
Chromium, total	ug/L	MW90-17	08/26/2016	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/11/2017	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/23/2017	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/10/2018	ND	8.0000		
Chromium, total	ug/L	MW90-17	09/24/2018	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/16/2019	ND	8.0000		
Chromium, total	ug/L	MW90-17	08/29/2019	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/10/2020	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/09/2020	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/09/2021	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/11/2021	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/07/2022	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/06/2022	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/05/2023	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/13/2023	ND	8.0000		
Chromium, total	ug/L	MW90-17	04/18/2024	ND	8.0000		
Chromium, total	ug/L	MW90-17	10/15/2024	ND	8.0000		
Cobalt, total	ug/L	MW90-17	09/30/2009	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	03/23/2010	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/07/2010	ND	10.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/05/2011	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/06/2011	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	03/16/2012	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/24/2012	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/24/2013	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/20/2013	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/08/2014	ND	4.0000	0.8000	**
Cobalt, total	ug/L	MW90-17	09/22/2014	ND	0.8000		
Cobalt, total	ug/L	MW90-17	03/20/2015	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/17/2015	ND	0.8000		
Cobalt, total	ug/L	MW90-17	03/17/2016	ND	0.8000		
Cobalt, total	ug/L	MW90-17	08/26/2016	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/11/2017	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/23/2017	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/10/2018	ND	0.8000		
Cobalt, total	ug/L	MW90-17	09/24/2018	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/16/2019	ND	0.8000		
Cobalt, total	ug/L	MW90-17	08/29/2019	ND	0.8000		
Cobalt, total	ug/L	MW90-17	04/10/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/09/2020	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/09/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/11/2021	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/07/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/06/2022	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/05/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/13/2023	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	04/18/2024	ND	0.4000	0.8000	**
Cobalt, total	ug/L	MW90-17	10/15/2024	ND	0.4000	0.8000	**
Copper, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Copper, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Copper, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Copper, total	ug/L	MW90-17	04/05/2011	ND	4.0000		

*   - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Copper, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Copper, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Copper, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Copper, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Copper, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Copper, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Copper, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Copper, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Copper, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Copper, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Copper, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Copper, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Copper, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Copper, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Copper, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Copper, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Copper, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Copper, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Copper, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Copper, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Copper, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Copper, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Copper, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Copper, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Copper, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Copper, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Copper, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Lead, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Lead, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Lead, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Lead, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Lead, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Lead, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Lead, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Lead, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Lead, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Lead, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Lead, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Lead, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Lead, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Lead, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Lead, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Lead, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Lead, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Lead, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Lead, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Lead, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Lead, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Lead, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Lead, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Lead, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Lead, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Lead, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Lead, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Lead, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Lead, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Lead, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Lead, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Nickel, total	ug/L	MW90-17	04/05/2011		7.1000		
Nickel, total	ug/L	MW90-17	09/06/2011		4.8000		
Nickel, total	ug/L	MW90-17	03/16/2012		4.8000		
Nickel, total	ug/L	MW90-17	09/24/2012		5.3000		
Nickel, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Nickel, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Nickel, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/11/2017	ND	4.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Nickel, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Nickel, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Nickel, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Nickel, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Nickel, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Selenium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Selenium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Selenium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Selenium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Selenium, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/05/2023	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Selenium, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Selenium, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Silver, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Silver, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Silver, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Silver, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Silver, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Silver, total	ug/L	MW90-17	03/16/2012	ND	4.0000		
Silver, total	ug/L	MW90-17	09/24/2012	ND	4.0000		
Silver, total	ug/L	MW90-17	04/24/2013	ND	4.0000		
Silver, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Silver, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Silver, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Silver, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Silver, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Silver, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Silver, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Silver, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Silver, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Silver, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Silver, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Silver, total	ug/L	MW90-17	04/16/2019	ND	4.0000		
Silver, total	ug/L	MW90-17	08/29/2019	ND	4.0000		
Silver, total	ug/L	MW90-17	04/10/2020	ND	4.0000		
Silver, total	ug/L	MW90-17	10/09/2020	ND	4.0000		
Silver, total	ug/L	MW90-17	04/09/2021	ND	4.0000		
Silver, total	ug/L	MW90-17	10/11/2021	ND	4.0000		
Silver, total	ug/L	MW90-17	04/07/2022	ND	4.0000		
Silver, total	ug/L	MW90-17	10/06/2022	ND	4.0000		
Silver, total	ug/L	MW90-17	04/05/2023	ND	4.0000		

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Silver, total	ug/L	MW90-17	10/13/2023	ND	4.0000		
Silver, total	ug/L	MW90-17	04/18/2024	ND	4.0000		
Silver, total	ug/L	MW90-17	10/15/2024	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/30/2009	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/23/2010	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/07/2010	ND	10.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/05/2011	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/06/2011	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/16/2012	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	09/24/2012	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/24/2013	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	09/20/2013	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/08/2014	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/22/2014	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/20/2015	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/17/2015	ND	4.0000		
Thallium, total	ug/L	MW90-17	03/17/2016	ND	4.0000		
Thallium, total	ug/L	MW90-17	08/26/2016	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/11/2017	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/23/2017	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/10/2018	ND	4.0000		
Thallium, total	ug/L	MW90-17	09/24/2018	ND	4.0000		
Thallium, total	ug/L	MW90-17	04/16/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	08/29/2019	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/10/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/09/2020	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/09/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/11/2021	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/07/2022	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/06/2022	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/05/2023	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/13/2023	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	04/18/2024	ND	2.0000	4.0000	**
Thallium, total	ug/L	MW90-17	10/15/2024	ND	2.0000	4.0000	**
Vanadium, total	ug/L	MW90-17	09/30/2009	ND	10.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	03/23/2010	ND	10.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	09/07/2010	ND	25.0000	20.0000	**
Vanadium, total	ug/L	MW90-17	04/05/2011		20.1000		
Vanadium, total	ug/L	MW90-17	09/06/2011	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/16/2012	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/24/2012	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/24/2013	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/20/2013	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/08/2014	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/22/2014	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/20/2015	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/17/2015	ND	20.0000		
Vanadium, total	ug/L	MW90-17	03/17/2016	ND	20.0000		
Vanadium, total	ug/L	MW90-17	08/26/2016	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/11/2017	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/23/2017	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/10/2018	ND	20.0000		
Vanadium, total	ug/L	MW90-17	09/24/2018	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/16/2019	ND	20.0000		
Vanadium, total	ug/L	MW90-17	08/29/2019	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/10/2020	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/09/2020	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/09/2021	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/11/2021	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/07/2022	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/06/2022	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/05/2023	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/13/2023	ND	20.0000		
Vanadium, total	ug/L	MW90-17	04/18/2024	ND	20.0000		
Vanadium, total	ug/L	MW90-17	10/15/2024	ND	20.0000		
Zinc, total	ug/L	MW90-17	09/30/2009	ND	10.0000		
Zinc, total	ug/L	MW90-17	03/23/2010		10.5000		
Zinc, total	ug/L	MW90-17	09/07/2010	ND	25.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/05/2011	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/06/2011	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	03/16/2012	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/24/2012	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/24/2013	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/20/2013	ND	20.0000	10.0000	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 1

Upgradient Data

Constituent	Units	Well	Date		Result	Adjusted	
Zinc, total	ug/L	MW90-17	04/08/2014	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/22/2014	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	03/20/2015	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/17/2015	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	03/17/2016	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	08/26/2016		8.3000		
Zinc, total	ug/L	MW90-17	04/11/2017	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/23/2017	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/10/2018	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	09/24/2018	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/16/2019	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	08/29/2019		37.8000		*
Zinc, total	ug/L	MW90-17	09/23/2019	ND	8.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/10/2020	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	10/09/2020	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/09/2021	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	10/11/2021	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/07/2022	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	10/06/2022	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/05/2023	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	10/13/2023	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	04/18/2024	ND	20.0000	10.0000	**
Zinc, total	ug/L	MW90-17	10/15/2024	ND	20.0000	10.0000	**

* - Outlier for that well and constituent.
** - ND value replaced with median RL.
*** - ND value replaced with manual RL.
ND = Not detected, Result = detection limit.

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Antimony, total	ug/L	MW90-14	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-14	10/15/2024		237.0000		363.5707
Beryllium, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-14	10/15/2024		1.3000	*	1.1000
Chromium, total	ug/L	MW90-14	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-14	10/15/2024		0.4000		0.8000
Copper, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-14	10/15/2024		12.9000	***	7.1000
Selenium, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-14	10/15/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-14	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-14	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-14	10/15/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW90-4	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-4	10/15/2024		381.0000	***	363.5707
Beryllium, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-4	10/15/2024		1.3000	*	1.1000
Chromium, total	ug/L	MW90-4	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-4	10/15/2024	ND	0.4000		0.8000
Copper, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-4	10/15/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-4	10/15/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-4	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-4	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-4	10/15/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW90-7	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW90-7	10/15/2024		271.0000		363.5707
Beryllium, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW90-7	10/15/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW90-7	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW90-7	10/15/2024		7.6000	***	0.8000
Copper, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW90-7	10/15/2024		23.3000	***	7.1000
Selenium, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW90-7	10/15/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW90-7	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW90-7	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW90-7	10/15/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW91-19	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW91-19	10/15/2024		276.0000		363.5707
Beryllium, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW91-19	10/15/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW91-19	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW91-19	10/15/2024	ND	0.4000		0.8000
Copper, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW91-19	10/15/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW91-19	10/15/2024	ND	4.0000		4.0000
Thallium, total	ug/L	MW91-19	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW91-19	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW91-19	10/15/2024	ND	20.0000		10.5000
Antimony, total	ug/L	MW91-20	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	MW91-20	10/15/2024		161.0000		363.5707
Beryllium, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	MW91-20	10/15/2024	ND	0.8000		1.1000
Chromium, total	ug/L	MW91-20	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	MW91-20	10/15/2024	ND	0.4000		0.8000
Copper, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	MW91-20	10/15/2024	ND	4.0000		7.1000
Selenium, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	MW91-20	10/15/2024	ND	4.0000		4.0000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table 2

Most Current Downgradient Monitoring Data

Constituent	Units	Well	Date		Result		Pred. Limit
Thallium, total	ug/L	MW91-20	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	MW91-20	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	MW91-20	10/15/2024	ND	20.0000		10.5000
Antimony, total	ug/L	SW-3	10/15/2024	ND	2.0000		2.0000
Arsenic, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Barium, total	ug/L	SW-3	10/15/2024		287.0000		363.5707
Beryllium, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Cadmium, total	ug/L	SW-3	10/15/2024	ND	0.8000		1.1000
Chromium, total	ug/L	SW-3	10/15/2024	ND	8.0000		8.0000
Cobalt, total	ug/L	SW-3	10/15/2024	ND	0.4000		0.8000
Copper, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Lead, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Nickel, total	ug/L	SW-3	10/15/2024	ND	4.0000		7.1000
Selenium, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Silver, total	ug/L	SW-3	10/15/2024	ND	4.0000		4.0000
Thallium, total	ug/L	SW-3	10/15/2024	ND	2.0000		4.0000
Vanadium, total	ug/L	SW-3	10/15/2024	ND	20.0000		20.1000
Zinc, total	ug/L	SW-3	10/15/2024	ND	20.0000		10.5000

* - Current value failed - awaiting verification.
** - Current value passed - previous exceedance not verified.
*** - Current value failed - exceedance verified.
**** - Current value passed - awaiting one more verification.
***** - Insufficient background data to compute prediction limit.
ND = Not Detected, Result = detection limit.

Table 3

Detection Frequencies in Upgradient and Downgradient Wells

Constituent	Upgradient Detect	Upgradient N	Upgradient Proportion	Downgradient Detect	Downgradient N	Downgradient Proportion
Antimony, total	0	31	0.000	0	205	0.000
Arsenic, total	0	31	0.000	25	205	0.122
Barium, total	31	31	1.000	212	212	1.000
Beryllium, total	0	31	0.000	1	205	0.005
Cadmium, total	1	31	0.032	34	209	0.163
Chromium, total	0	30	0.000	1	205	0.005
Cobalt, total	0	31	0.000	48	207	0.232
Copper, total	0	31	0.000	18	205	0.088
Lead, total	0	31	0.000	6	205	0.029
Nickel, total	4	31	0.129	118	206	0.573
Selenium, total	0	31	0.000	15	205	0.073
Silver, total	0	31	0.000	0	205	0.000
Thallium, total	0	31	0.000	0	205	0.000
Vanadium, total	1	31	0.032	9	205	0.044
Zinc, total	2	31	0.065	44	205	0.215

N = Total number of measurements in all wells.
Detect = Total number of detections in all wells.
Proportion = Detect/N.

Table 4

Shapiro-Wilk Multiple Group Test of Normality

Constituent	Detect	N	Detect Freq	G raw	G log	G cbrt	G sqrt	G sqr	G cub	Crit Value	Dist Form	Model Type
Antimony, total	0	31	0.000									nonpar
Arsenic, total	0	31	0.000									nonpar
Barium, total	31	31	1.000	0.549	0.418					2.326	normal	normal
Beryllium, total	0	31	0.000									nonpar
Cadmium, total	1	31	0.032									nonpar
Chromium, total	0	30	0.000									nonpar
Cobalt, total	0	31	0.000									nonpar
Copper, total	0	31	0.000									nonpar
Lead, total	0	31	0.000									nonpar
Nickel, total	4	31	0.129	1.529	1.344					2.326	normal	nonpar
Selenium, total	0	31	0.000									nonpar
Silver, total	0	31	0.000									nonpar
Thallium, total	0	31	0.000									nonpar
Vanadium, total	1	31	0.032									nonpar
Zinc, total	2	31	0.065									nonpar

* - Distribution override for that constituent.
Fit to distribution is confirmed if G <= critical value.
Model type may not match distributional form when detection frequency < 50%.

Table 5

Summary Statistics and Prediction Limits

Constituent	Units	Detect	N	Mean	SD	alpha	Factor	Pred Limit	Type		Conf
Antimony, total	ug/L	0	31					2.0000	nonpar	***	0.99
Arsenic, total	ug/L	0	31					4.0000	nonpar	***	0.99
Barium, total	ug/L	31	31	250.1290	45.4435	0.0100	2.4963	363.5707	normal		
Beryllium, total	ug/L	0	31					4.0000	nonpar	***	0.99
Cadmium, total	ug/L	1	31					1.1000	nonpar		0.99
Chromium, total	ug/L	0	30					8.0000	nonpar	***	0.99
Cobalt, total	ug/L	0	31					0.8000	nonpar	***	0.99
Copper, total	ug/L	0	31					4.0000	nonpar	***	0.99
Lead, total	ug/L	0	31					4.0000	nonpar	***	0.99
Nickel, total	ug/L	4	31					7.1000	nonpar		0.99
Selenium, total	ug/L	0	31					4.0000	nonpar	***	0.99
Silver, total	ug/L	0	31					4.0000	nonpar	***	0.99
Thallium, total	ug/L	0	31					4.0000	nonpar	***	0.99
Vanadium, total	ug/L	1	31					20.1000	nonpar		0.99
Zinc, total	ug/L	2	31					10.5000	nonpar		0.99

Conf = confidence level for passing initial test or one verification resample at all downgradient wells for a single constituent (nonparametric test only).
* - Insufficient Data.
** - Calculated limit raised to Manual Reporting Limit.
*** - Nonparametric limit based on ND value.
For transformed data, mean and SD in transformed units and prediction limit in original units.
All sample sizes and statistics are based on outlier free data.
For nonparametric limits, median reporting limits are substituted for extreme reporting limit values.

Table 6

Dixon's Test Outliers
1% Significance Level

Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cadmium, total	ug/L	MW90-17	09/07/2010	2.5000	< 2.5000	09/30/2009-10/15/2024	32	0.4448
Chromium, total	ug/L	MW90-17	09/07/2010	25.0000	< 25.0000	09/30/2009-10/15/2024	31	0.4502

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cadmium, total	ug/L	MW90-14	06/09/2008		1.8300	*	1.1000
Cadmium, total	ug/L	MW90-14	10/16/2008		1.4500	*	1.1000
Cadmium, total	ug/L	MW90-14	03/05/2009		2.8400	*	1.1000
Cadmium, total	ug/L	MW90-14	09/30/2009		3.8000	*	1.1000
Cadmium, total	ug/L	MW90-14	03/23/2010		1.3000	*	1.1000
Cadmium, total	ug/L	MW90-14	09/07/2010		1.0000		1.1000
Cadmium, total	ug/L	MW90-14	04/05/2011		0.9000		1.1000
Cadmium, total	ug/L	MW90-14	09/06/2011		1.2000	*	1.1000
Cadmium, total	ug/L	MW90-14	03/16/2012		11.7000	*	1.1000
Cadmium, total	ug/L	MW90-14	09/24/2012		35.4000	*	1.1000
Cadmium, total	ug/L	MW90-14	04/24/2013		2.8000	*	1.1000
Cadmium, total	ug/L	MW90-14	09/20/2013		10.3000	*	1.1000
Cadmium, total	ug/L	MW90-14	10/28/2013	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/08/2014		25.6000	*	1.1000
Cadmium, total	ug/L	MW90-14	09/22/2014		0.9000		1.1000
Cadmium, total	ug/L	MW90-14	03/20/2015	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	09/17/2015		1.8000	*	1.1000
Cadmium, total	ug/L	MW90-14	03/17/2016	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	08/26/2016	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/11/2017		1.3000	*	1.1000
Cadmium, total	ug/L	MW90-14	09/23/2017	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/10/2018	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	09/24/2018	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/16/2019	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	08/29/2019		0.9000		1.1000
Cadmium, total	ug/L	MW90-14	04/10/2020		1.7000	*	1.1000
Cadmium, total	ug/L	MW90-14	10/09/2020		1.2000	*	1.1000
Cadmium, total	ug/L	MW90-14	04/09/2021		1.0000		1.1000
Cadmium, total	ug/L	MW90-14	10/11/2021	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/07/2022		0.8000		1.1000
Cadmium, total	ug/L	MW90-14	10/06/2022	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/05/2023	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	10/13/2023	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	04/18/2024	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-14	10/15/2024		1.3000	*	1.1000
Nickel, total	ug/L	MW90-14	06/09/2008		69.7000	*	7.1000
Nickel, total	ug/L	MW90-14	10/16/2008		65.3000	*	7.1000
Nickel, total	ug/L	MW90-14	03/05/2009	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-14	09/30/2009		59.1000	*	7.1000
Nickel, total	ug/L	MW90-14	03/23/2010		31.5000	*	7.1000
Nickel, total	ug/L	MW90-14	09/07/2010		45.2000	*	7.1000
Nickel, total	ug/L	MW90-14	04/05/2011		45.5000	*	7.1000
Nickel, total	ug/L	MW90-14	09/06/2011		33.9000	*	7.1000
Nickel, total	ug/L	MW90-14	03/16/2012		36.6000	*	7.1000
Nickel, total	ug/L	MW90-14	09/24/2012		26.4000	*	7.1000
Nickel, total	ug/L	MW90-14	04/24/2013		24.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/20/2013		60.2000	*	7.1000
Nickel, total	ug/L	MW90-14	10/28/2013		13.9000	*	7.1000
Nickel, total	ug/L	MW90-14	04/08/2014		31.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/22/2014		34.0000	*	7.1000
Nickel, total	ug/L	MW90-14	03/20/2015		18.3000	*	7.1000
Nickel, total	ug/L	MW90-14	09/17/2015		20.8000	*	7.1000
Nickel, total	ug/L	MW90-14	03/17/2016		36.1000	*	7.1000
Nickel, total	ug/L	MW90-14	08/26/2016		21.3000	*	7.1000
Nickel, total	ug/L	MW90-14	04/11/2017		31.9000	*	7.1000
Nickel, total	ug/L	MW90-14	09/23/2017		30.9000	*	7.1000
Nickel, total	ug/L	MW90-14	04/10/2018		20.1000	*	7.1000
Nickel, total	ug/L	MW90-14	09/24/2018		35.0000	*	7.1000
Nickel, total	ug/L	MW90-14	04/16/2019		12.2000	*	7.1000
Nickel, total	ug/L	MW90-14	08/29/2019		33.1000	*	7.1000
Nickel, total	ug/L	MW90-14	04/10/2020		41.7000	*	7.1000
Nickel, total	ug/L	MW90-14	10/09/2020		59.0000	*	7.1000
Nickel, total	ug/L	MW90-14	04/09/2021		31.1000	*	7.1000
Nickel, total	ug/L	MW90-14	10/11/2021		33.4000	*	7.1000
Nickel, total	ug/L	MW90-14	04/07/2022		20.2000	*	7.1000
Nickel, total	ug/L	MW90-14	10/06/2022		27.8000	*	7.1000
Nickel, total	ug/L	MW90-14	04/05/2023		6.3000		7.1000
Nickel, total	ug/L	MW90-14	10/13/2023		36.5000	*	7.1000
Nickel, total	ug/L	MW90-14	04/18/2024		13.1000	*	7.1000
Nickel, total	ug/L	MW90-14	10/15/2024		12.9000	*	7.1000
Barium, total	ug/L	MW90-4	06/09/2008		336.0000		363.5707

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Barium, total	ug/L	MW90-4	10/16/2008		469.0000	*	363.5707
Barium, total	ug/L	MW90-4	03/05/2009		444.0000	*	363.5707
Barium, total	ug/L	MW90-4	09/30/2009		512.0000	*	363.5707
Barium, total	ug/L	MW90-4	03/23/2010		315.0000		363.5707
Barium, total	ug/L	MW90-4	09/07/2010		420.0000	*	363.5707
Barium, total	ug/L	MW90-4	04/05/2011		427.0000	*	363.5707
Barium, total	ug/L	MW90-4	09/06/2011		499.0000	*	363.5707
Barium, total	ug/L	MW90-4	03/16/2012		399.0000	*	363.5707
Barium, total	ug/L	MW90-4	09/24/2012		322.0000		363.5707
Barium, total	ug/L	MW90-4	04/24/2013		233.0000		363.5707
Barium, total	ug/L	MW90-4	09/20/2013		679.0000	*	363.5707
Barium, total	ug/L	MW90-4	10/28/2013		329.0000		363.5707
Barium, total	ug/L	MW90-4	04/08/2014		379.0000	*	363.5707
Barium, total	ug/L	MW90-4	09/22/2014		383.0000	*	363.5707
Barium, total	ug/L	MW90-4	03/20/2015		434.0000	*	363.5707
Barium, total	ug/L	MW90-4	09/17/2015		437.0000	*	363.5707
Barium, total	ug/L	MW90-4	03/17/2016		381.0000	*	363.5707
Barium, total	ug/L	MW90-4	08/26/2016		381.0000	*	363.5707
Barium, total	ug/L	MW90-4	04/11/2017		332.0000		363.5707
Barium, total	ug/L	MW90-4	09/23/2017		362.0000		363.5707
Barium, total	ug/L	MW90-4	11/15/2017		339.0000		363.5707
Barium, total	ug/L	MW90-4	04/10/2018		340.0000		363.5707
Barium, total	ug/L	MW90-4	09/24/2018		306.0000		363.5707
Barium, total	ug/L	MW90-4	04/16/2019		361.0000		363.5707
Barium, total	ug/L	MW90-4	06/25/2019		433.0000	*	363.5707
Barium, total	ug/L	MW90-4	08/29/2019		359.0000		363.5707
Barium, total	ug/L	MW90-4	04/10/2020		377.0000	*	363.5707
Barium, total	ug/L	MW90-4	10/09/2020		385.0000	*	363.5707
Barium, total	ug/L	MW90-4	04/09/2021		298.0000		363.5707
Barium, total	ug/L	MW90-4	10/11/2021		377.0000	*	363.5707
Barium, total	ug/L	MW90-4	04/07/2022		348.0000		363.5707
Barium, total	ug/L	MW90-4	10/06/2022		351.0000		363.5707
Barium, total	ug/L	MW90-4	04/05/2023		320.0000		363.5707
Barium, total	ug/L	MW90-4	10/13/2023		342.0000		363.5707
Barium, total	ug/L	MW90-4	04/18/2024		375.0000	*	363.5707
Barium, total	ug/L	MW90-4	10/15/2024		381.0000	*	363.5707
Cadmium, total	ug/L	MW90-4	06/09/2008	ND	0.5000		1.1000
Cadmium, total	ug/L	MW90-4	10/16/2008	ND	0.5000		1.1000
Cadmium, total	ug/L	MW90-4	03/05/2009	ND	0.5000		1.1000
Cadmium, total	ug/L	MW90-4	09/30/2009	ND	1.0000		1.1000
Cadmium, total	ug/L	MW90-4	03/23/2010	ND	1.0000		1.1000
Cadmium, total	ug/L	MW90-4	09/07/2010	ND	1.0000		1.1000
Cadmium, total	ug/L	MW90-4	04/05/2011	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/06/2011	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	03/16/2012	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/24/2012	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/24/2013	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/20/2013	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	10/28/2013	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/08/2014	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/22/2014	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	03/20/2015	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/17/2015		1.2000	*	1.1000
Cadmium, total	ug/L	MW90-4	03/17/2016	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	08/26/2016	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/11/2017	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/23/2017	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/10/2018	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	09/24/2018	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/16/2019	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	08/29/2019	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/10/2020	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	10/09/2020	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/09/2021		0.8000		1.1000
Cadmium, total	ug/L	MW90-4	10/11/2021	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/07/2022	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	10/06/2022		3.1000	*	1.1000
Cadmium, total	ug/L	MW90-4	01/04/2023	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/05/2023	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	10/13/2023	ND	0.8000		1.1000
Cadmium, total	ug/L	MW90-4	04/18/2024	ND	0.8000		1.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

Constituent	Units	Well	Date		Result		Pred. Limit
Cadmium, total	ug/L	MW90-4	10/15/2024		1.3000	*	1.1000
Cobalt, total	ug/L	MW90-7	09/07/2007	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	06/09/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	10/16/2008	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	03/05/2009	ND	20.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/30/2009		4.8000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/23/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/07/2010	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	04/05/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/06/2011	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	03/16/2012		4.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/24/2012		4.4000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/24/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	09/20/2013		5.7000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/28/2013	ND	4.0000		0.8000
Cobalt, total	ug/L	MW90-7	04/08/2014		6.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/22/2014		2.7000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/20/2015		4.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/17/2015		6.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	03/17/2016	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-7	08/26/2016		6.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/11/2017		1.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/23/2017		2.5000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/10/2018		1.9000	*	0.8000
Cobalt, total	ug/L	MW90-7	09/24/2018		5.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/16/2019	ND	0.8000		0.8000
Cobalt, total	ug/L	MW90-7	08/29/2019		1.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/10/2020		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/09/2020		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/09/2021		2.1000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/11/2021		5.3000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/07/2022		0.8000	**	0.8000
Cobalt, total	ug/L	MW90-7	10/06/2022		6.0000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/05/2023		1.6000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/13/2023		19.8000	*	0.8000
Cobalt, total	ug/L	MW90-7	04/18/2024		1.9000	*	0.8000
Cobalt, total	ug/L	MW90-7	10/15/2024		7.6000	*	0.8000
Nickel, total	ug/L	MW90-7	09/07/2007	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	06/09/2008	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	10/16/2008		54.9000	*	7.1000
Nickel, total	ug/L	MW90-7	03/05/2009	ND	50.0000		7.1000
Nickel, total	ug/L	MW90-7	09/30/2009		49.1000	*	7.1000
Nickel, total	ug/L	MW90-7	03/23/2010		38.3000	*	7.1000
Nickel, total	ug/L	MW90-7	09/07/2010		50.5000	*	7.1000
Nickel, total	ug/L	MW90-7	04/05/2011		52.5000	*	7.1000
Nickel, total	ug/L	MW90-7	09/06/2011		43.4000	*	7.1000
Nickel, total	ug/L	MW90-7	03/16/2012		42.6000	*	7.1000
Nickel, total	ug/L	MW90-7	09/24/2012		28.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/24/2013		33.4000	*	7.1000
Nickel, total	ug/L	MW90-7	09/20/2013		60.4000	*	7.1000
Nickel, total	ug/L	MW90-7	10/28/2013		41.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/08/2014		39.6000	*	7.1000
Nickel, total	ug/L	MW90-7	09/22/2014		25.3000	*	7.1000
Nickel, total	ug/L	MW90-7	03/20/2015		34.0000	*	7.1000
Nickel, total	ug/L	MW90-7	09/17/2015		29.6000	*	7.1000
Nickel, total	ug/L	MW90-7	03/17/2016		23.5000	*	7.1000
Nickel, total	ug/L	MW90-7	08/26/2016		32.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/11/2017		23.3000	*	7.1000
Nickel, total	ug/L	MW90-7	09/23/2017		26.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/10/2018		33.8000	*	7.1000
Nickel, total	ug/L	MW90-7	09/24/2018		22.3000	*	7.1000
Nickel, total	ug/L	MW90-7	04/16/2019		16.3000	*	7.1000
Nickel, total	ug/L	MW90-7	08/29/2019		25.6000	*	7.1000
Nickel, total	ug/L	MW90-7	04/10/2020		23.0000	*	7.1000
Nickel, total	ug/L	MW90-7	10/09/2020		29.2000	*	7.1000
Nickel, total	ug/L	MW90-7	04/09/2021		42.1000	*	7.1000
Nickel, total	ug/L	MW90-7	10/11/2021		29.7000	*	7.1000
Nickel, total	ug/L	MW90-7	04/07/2022		15.2000	*	7.1000
Nickel, total	ug/L	MW90-7	10/06/2022		27.4000	*	7.1000
Nickel, total	ug/L	MW90-7	04/05/2023		25.6000	*	7.1000
Nickel, total	ug/L	MW90-7	10/13/2023		29.4000	*	7.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

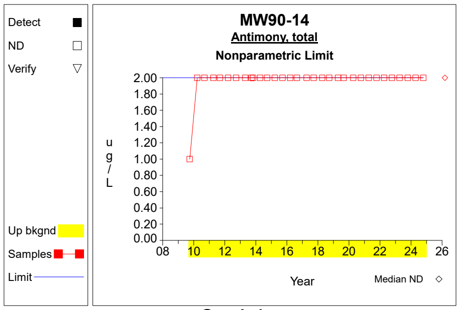
Table 8

Historical Downgradient Data for Constituent-Well Combinations that Failed the Current Statistical Evaluation or are in Verification Resampling Mode

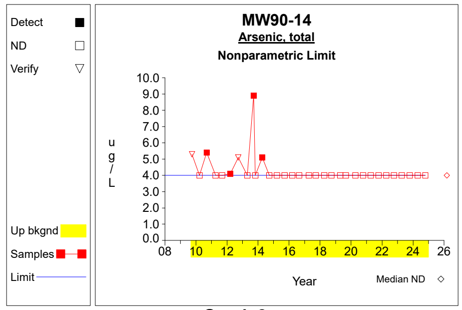
Constituent	Units	Well	Date		Result		Pred. Limit
Nickel, total	ug/L	MW90-7	04/18/2024		28.4000	*	7.1000
Nickel, total	ug/L	MW90-7	10/15/2024		23.3000	*	7.1000

* - Significantly increased over background.
** - Detect at limit for 100% NDs in background (NPPL only).
*** - Manual exclusion.
ND = Not Detected, Result = detection limit.

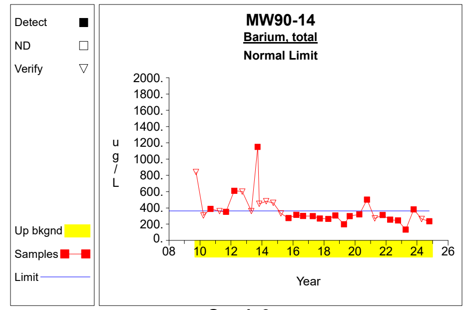
Up vs. Down Prediction Limits



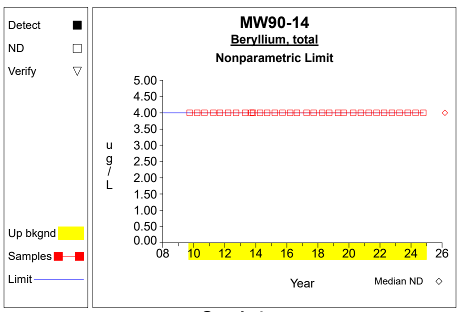
Graph 1



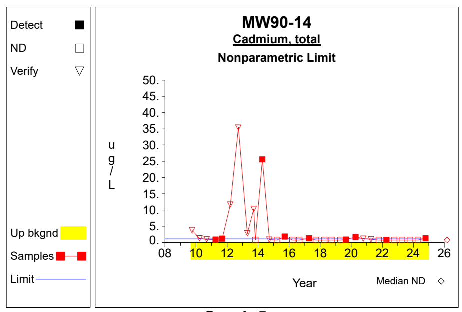
Graph 2



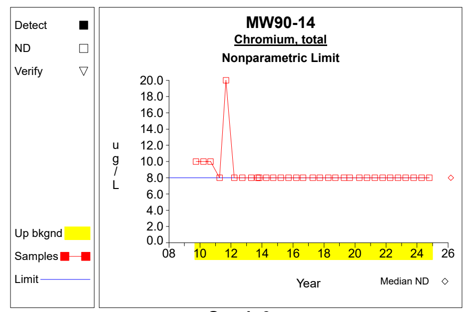
Graph 3



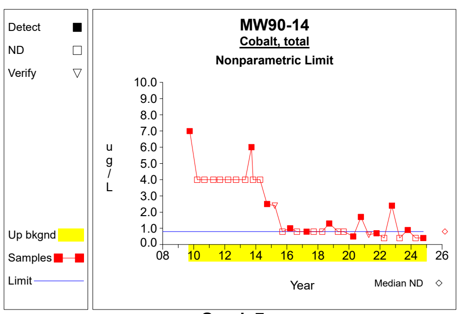
Graph 4



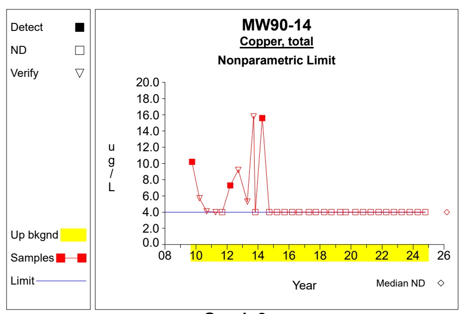
Graph 5



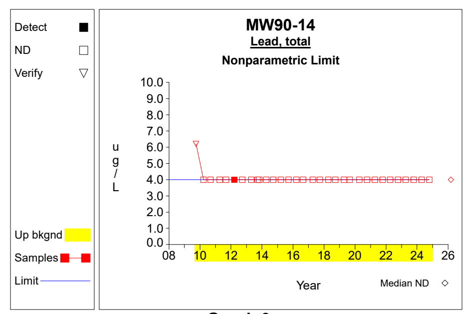
Graph 6



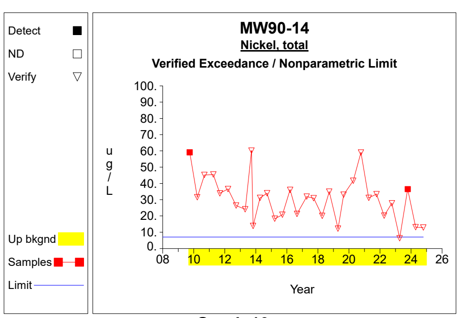
Graph 7



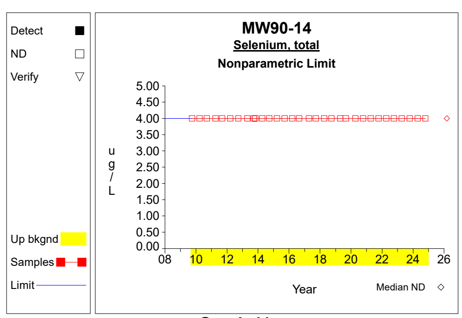
Graph 8



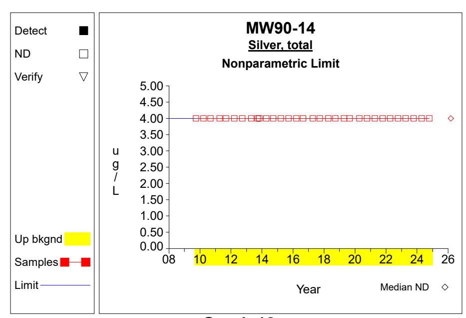
Graph 9



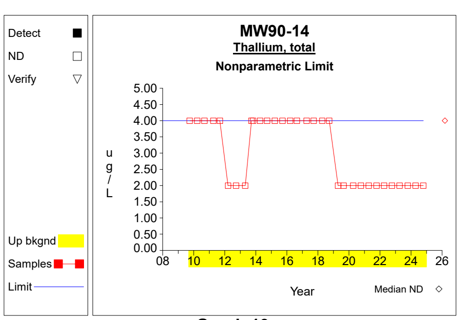
Graph 10



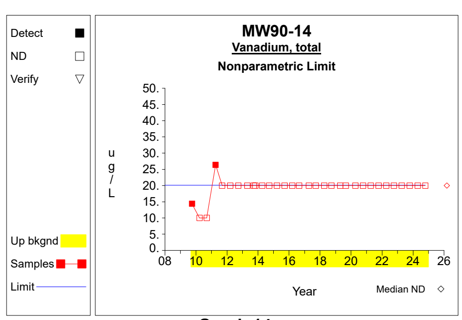
Graph 11



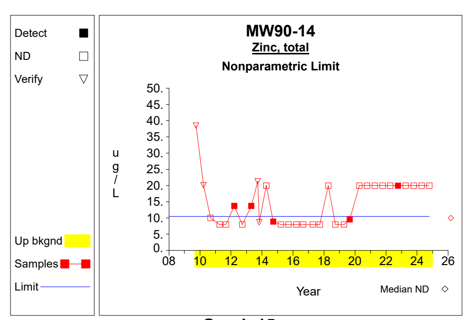
Graph 12



Graph 13



Graph 14



Graph 15

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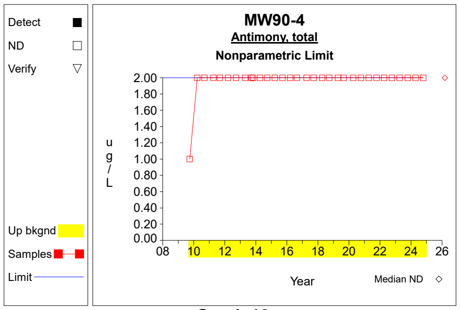
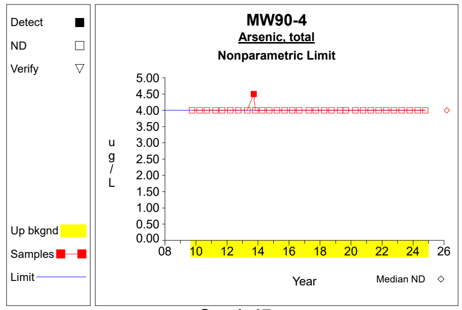
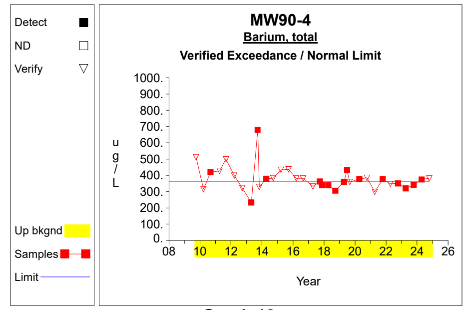
Up vs. Down Prediction Limits



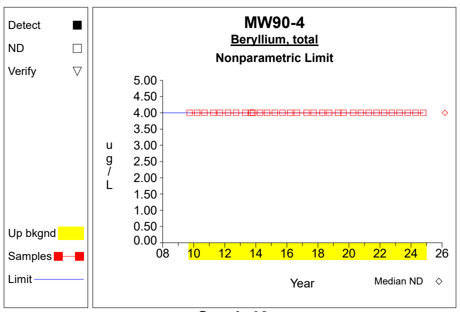
Graph 16



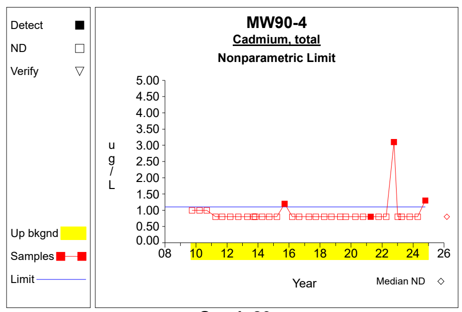
Graph 17



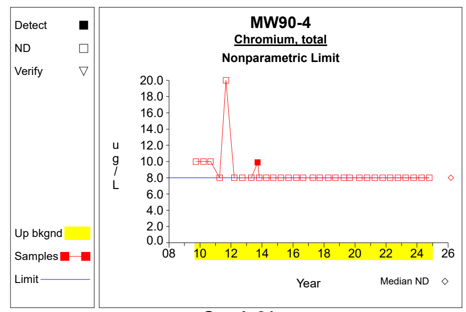
Graph 18



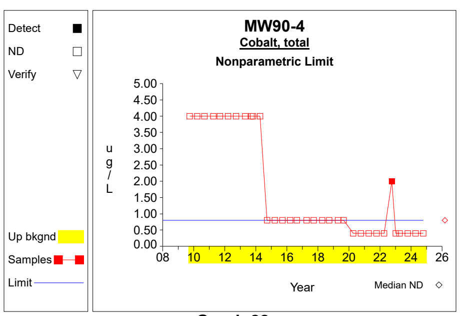
Graph 19



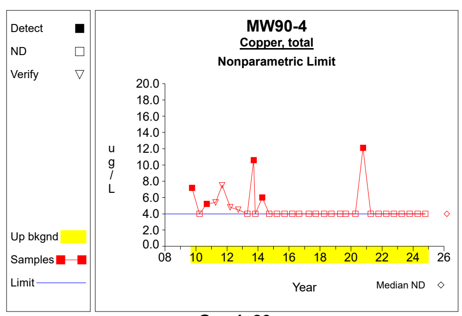
Graph 20



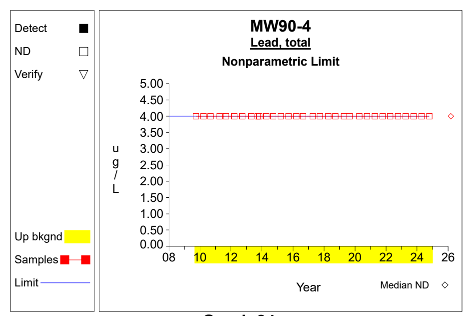
Graph 21



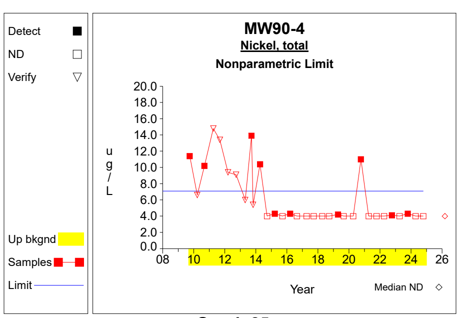
Graph 22



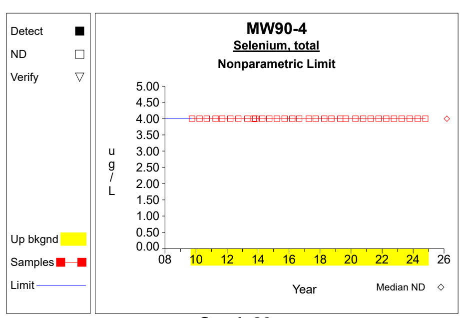
Graph 23



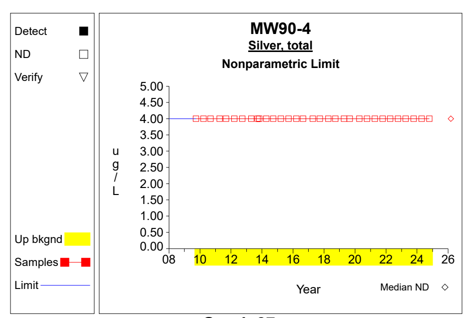
Graph 24



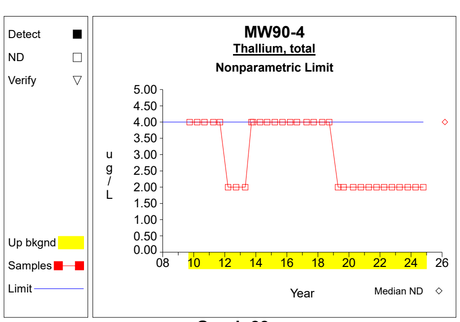
Graph 25



Graph 26



Graph 27



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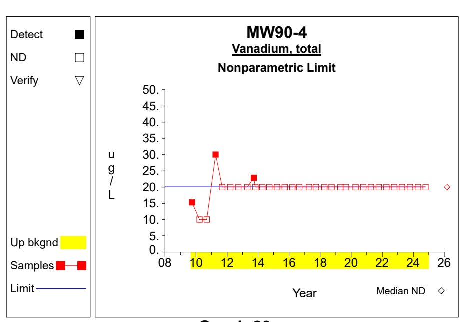
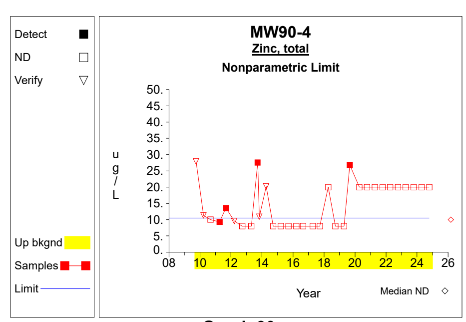
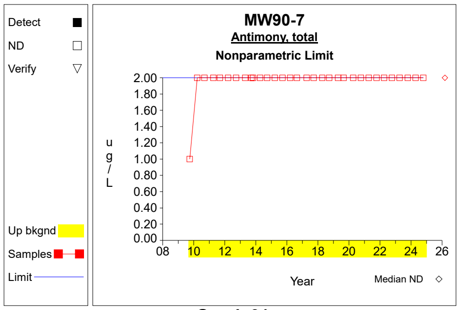


Graph 29

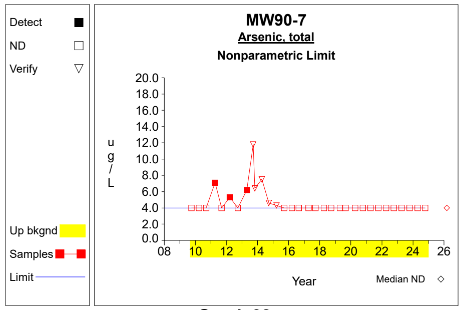


Graph 30

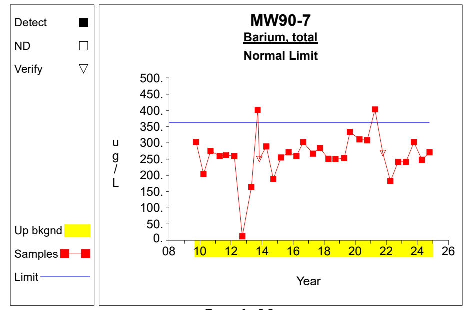
Up vs. Down Prediction Limits



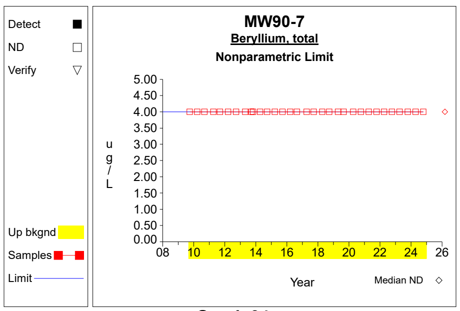
Graph 31



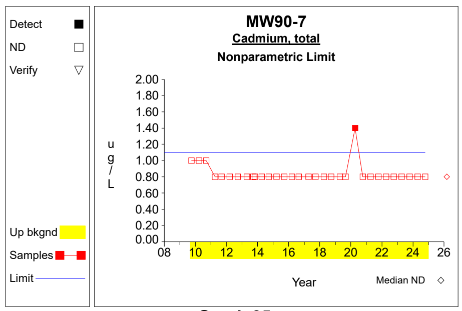
Graph 32



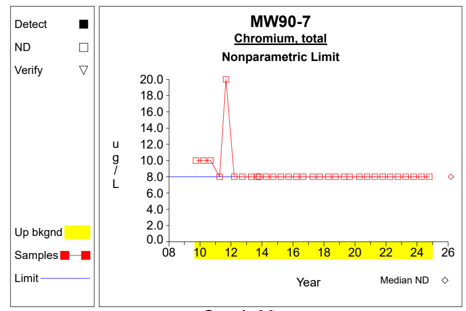
Graph 33



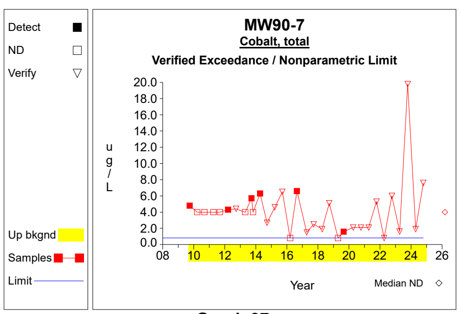
Graph 34



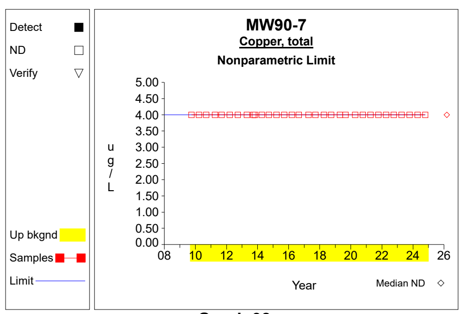
Graph 35



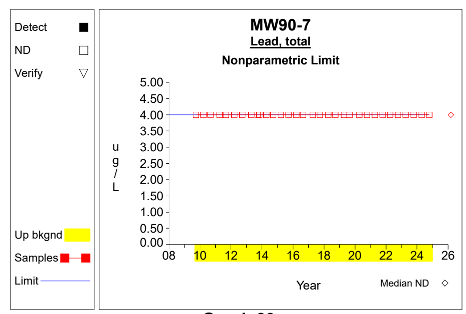
Graph 36



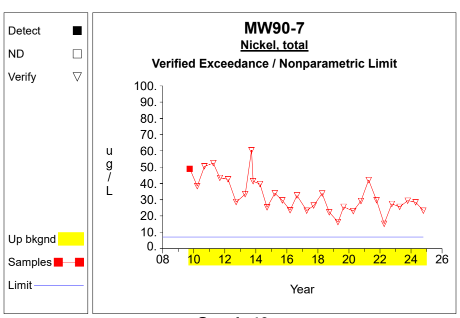
Graph 37



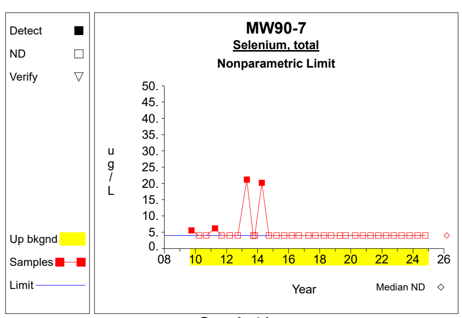
Graph 38



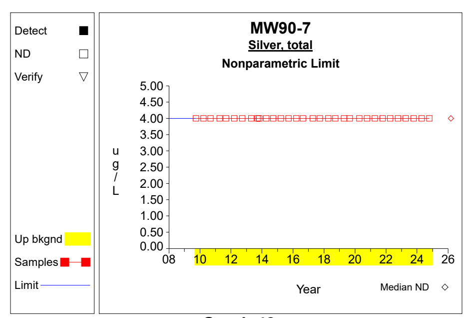
Graph 39



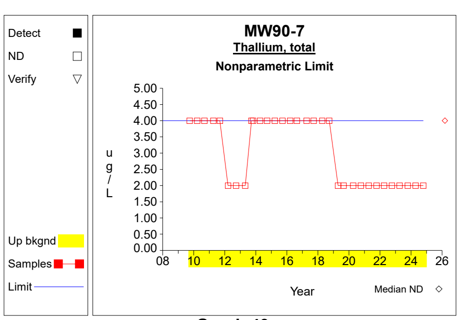
Graph 40



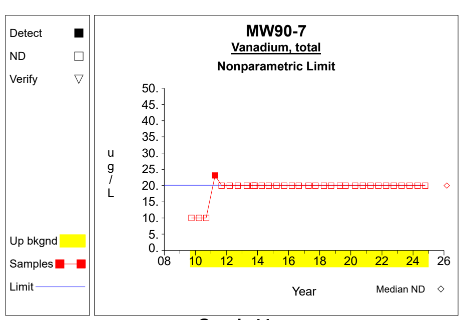
Graph 41



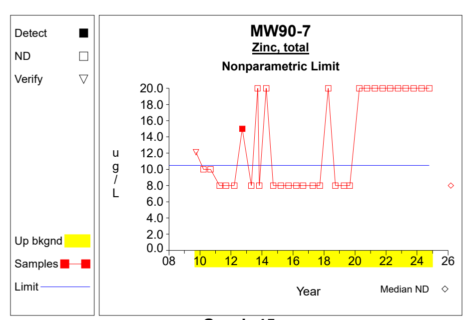
Graph 42



Graph 43



Graph 44



Graph 45

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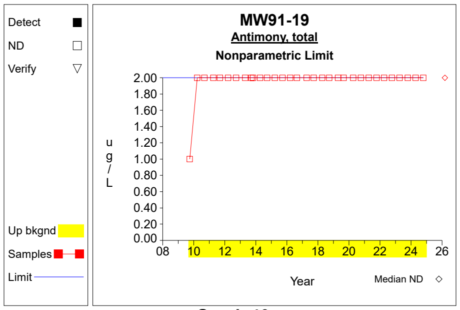
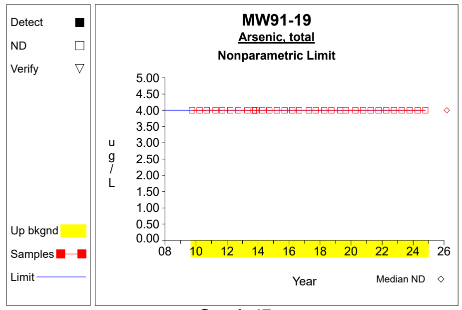
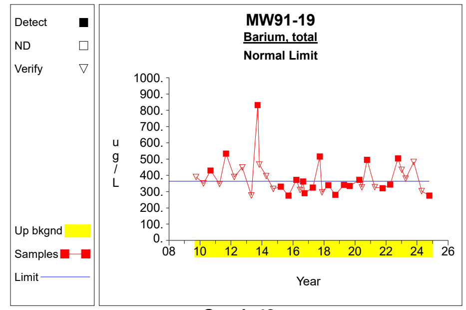
Up vs. Down Prediction Limits



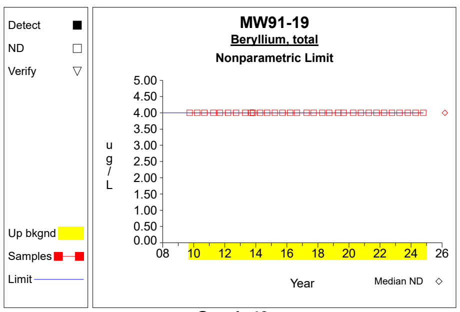
Graph 46



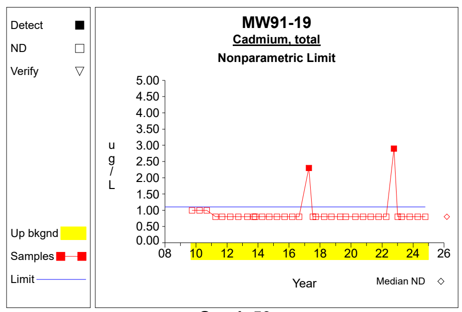
Graph 47



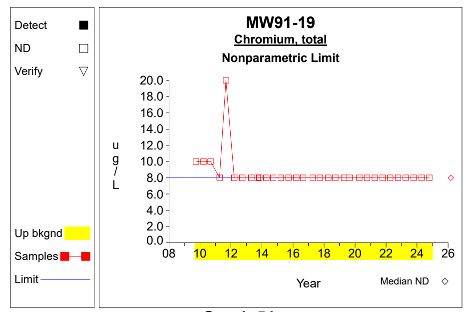
Graph 48



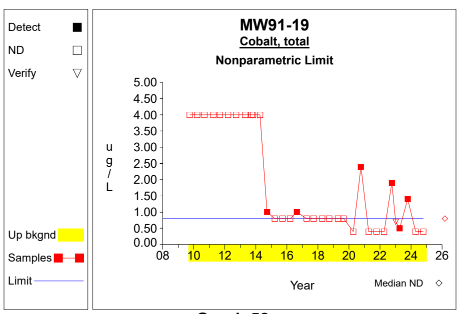
Graph 49



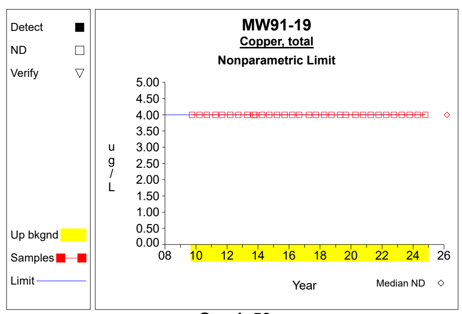
Graph 50



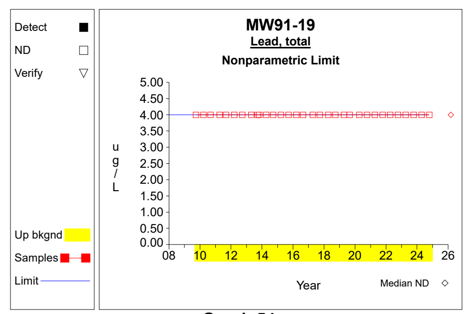
Graph 51



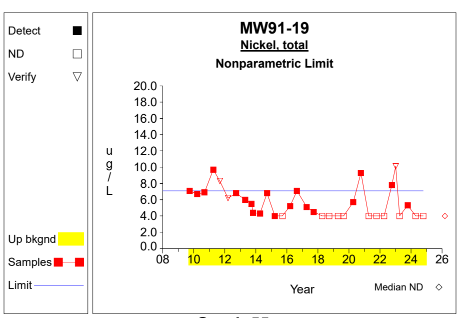
Graph 52



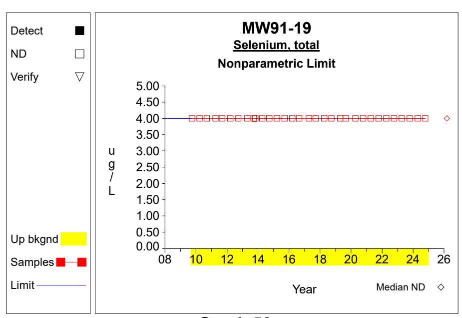
Graph 53



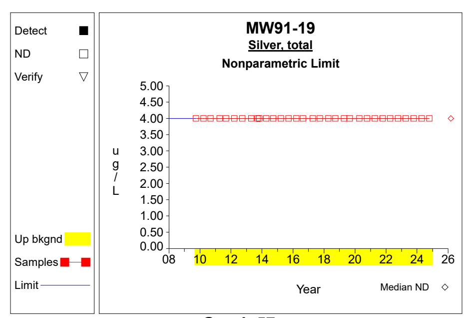
Graph 54



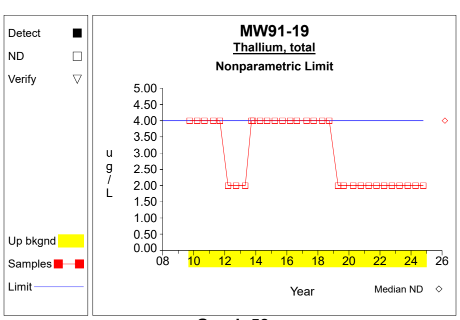
Graph 55



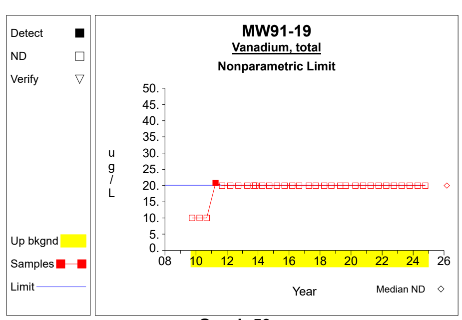
Graph 56



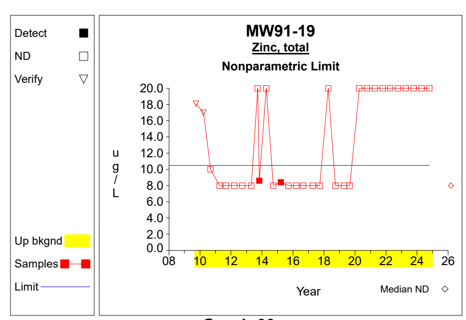
Graph 57



Graph 58

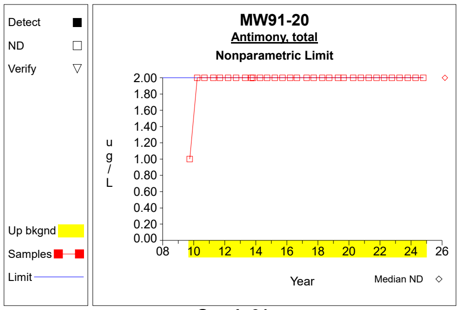


Graph 59

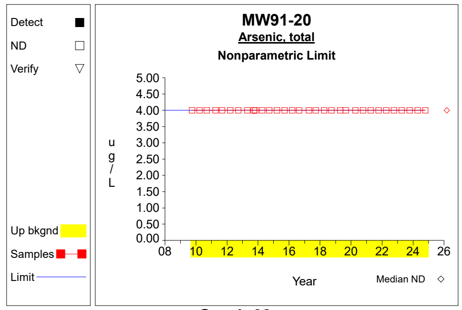


Graph 60

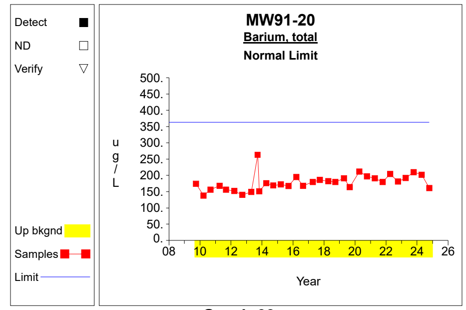
Up vs. Down Prediction Limits



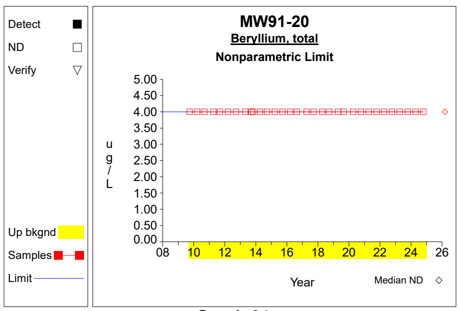
Graph 61



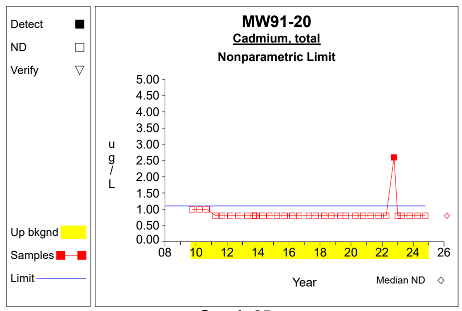
Graph 62



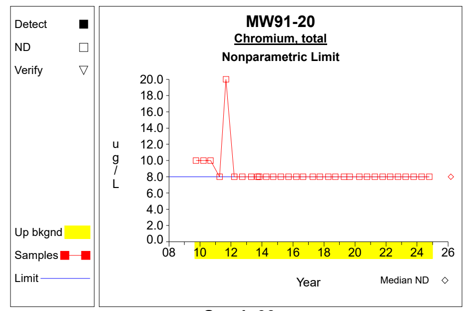
Graph 63



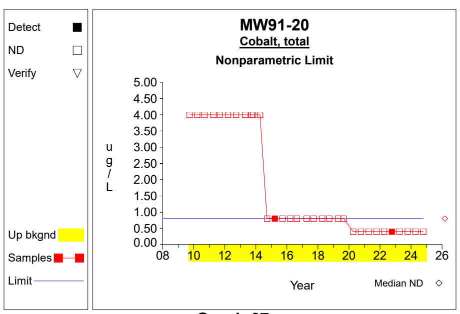
Graph 64



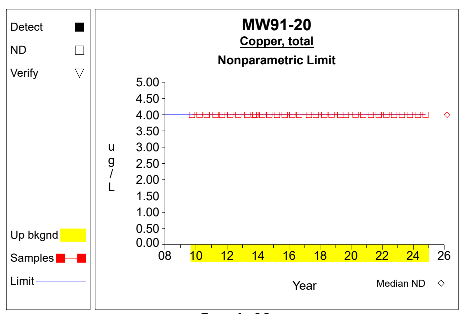
Graph 65



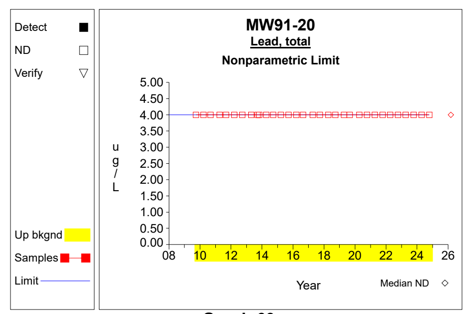
Graph 66



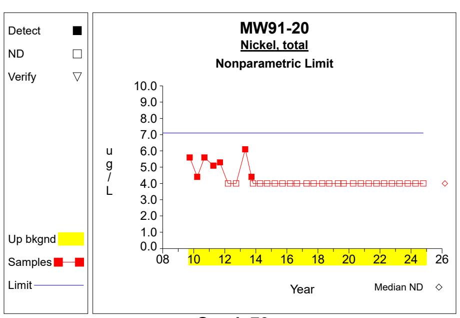
Graph 67



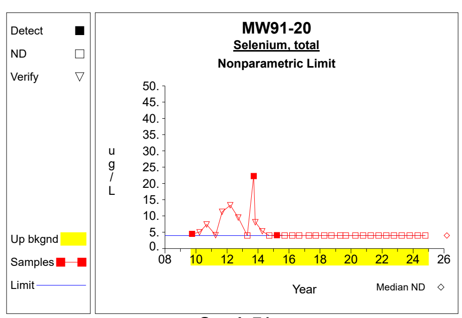
Graph 68



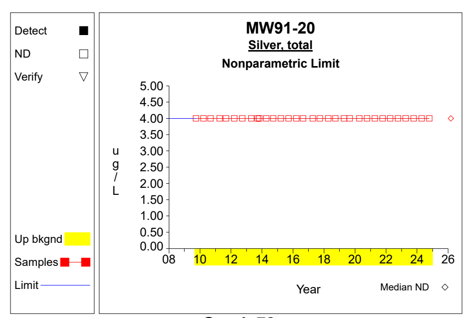
Graph 69



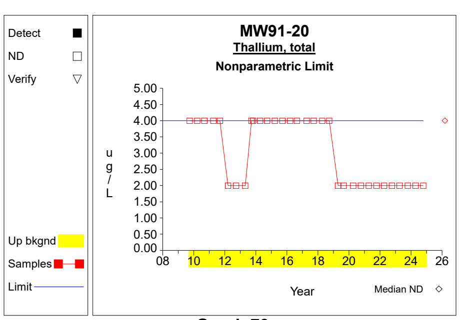
Graph 70



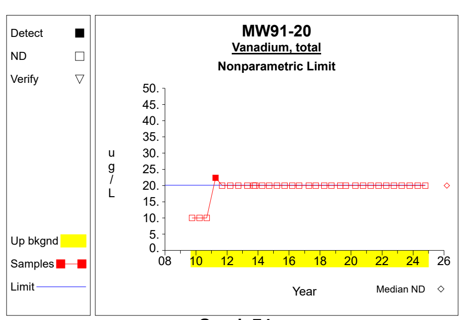
Graph 71



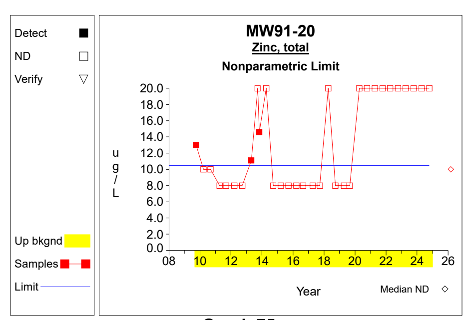
Graph 72



Graph 73



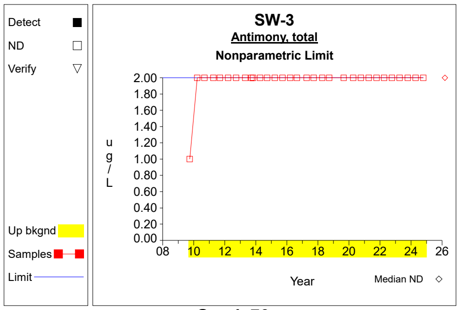
Graph 74



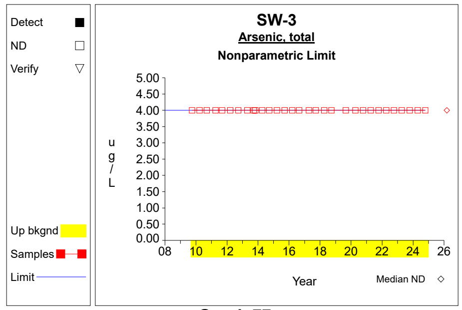
Graph 75

Prepared by: Otter Creek Environmental

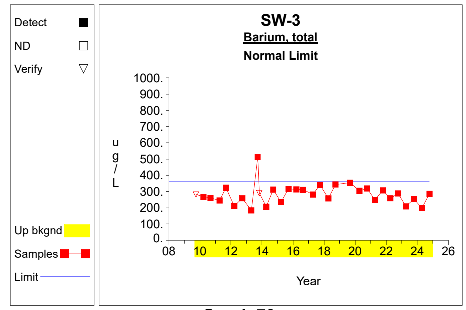
Up vs. Down Prediction Limits



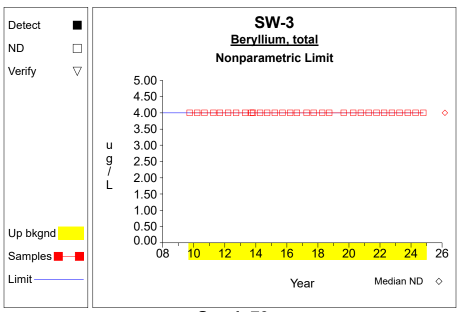
Graph 76



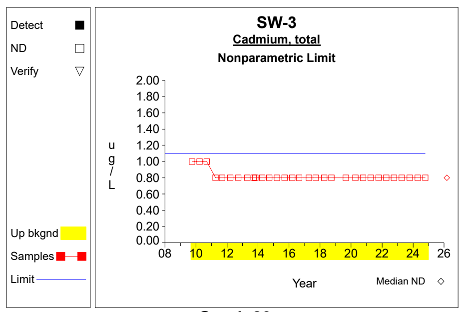
Graph 77



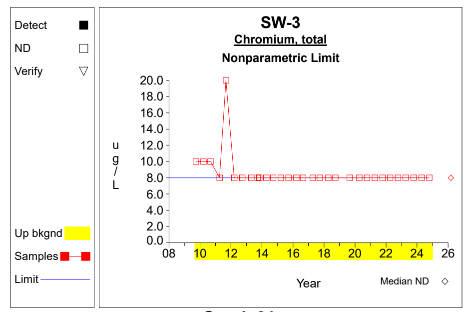
Graph 78



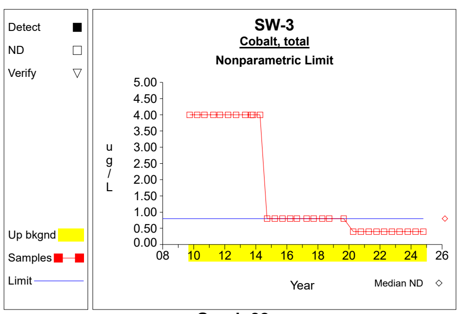
Graph 79



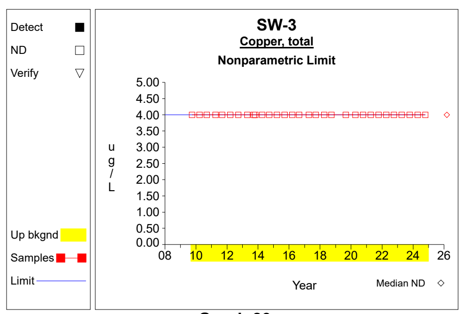
Graph 80



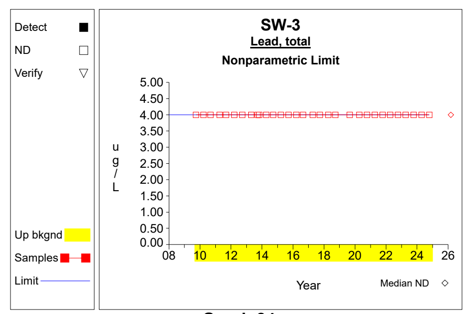
Graph 81



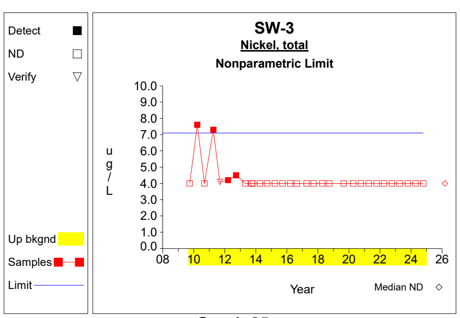
Graph 82



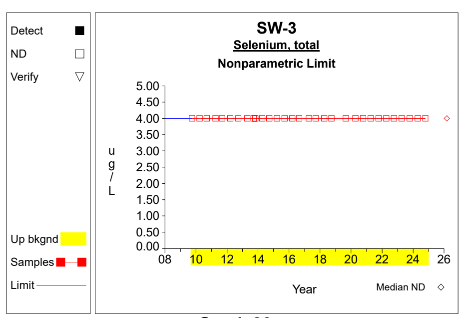
Graph 83



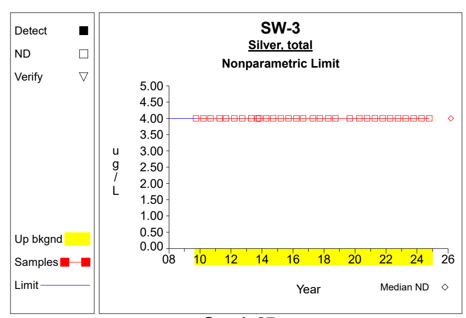
Graph 84



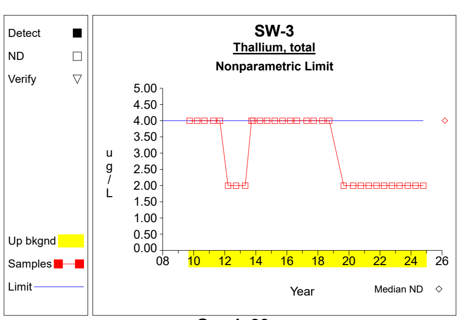
Graph 85



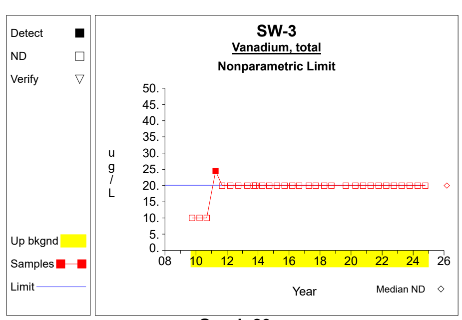
Graph 86



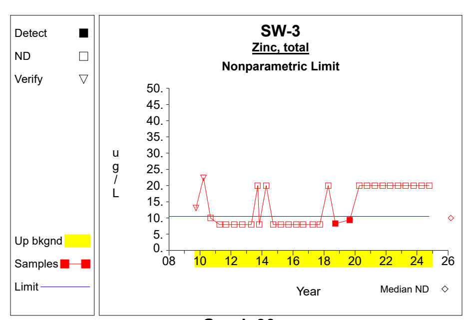
Graph 87



Graph 88

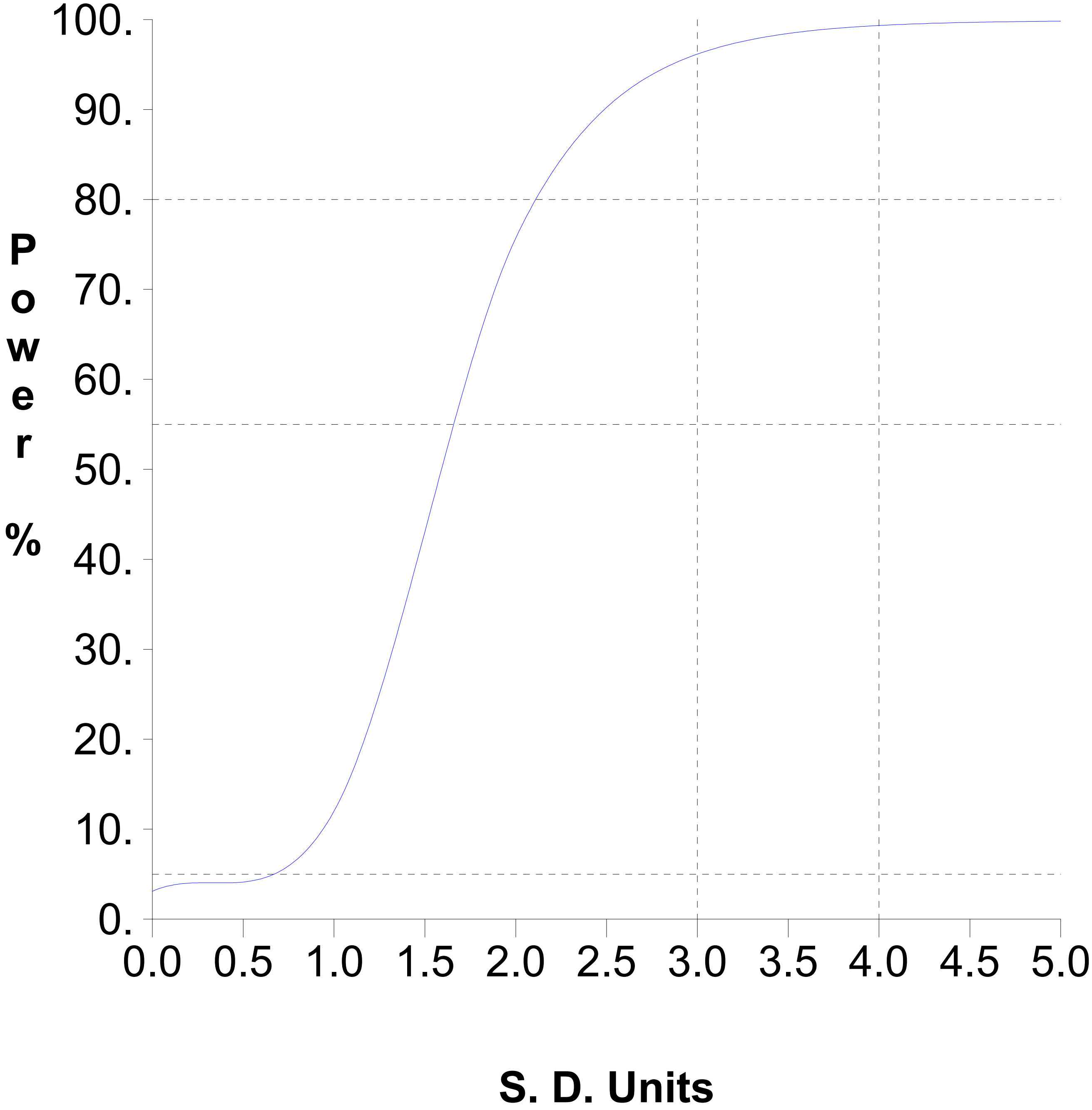


Graph 89



Graph 90

False Positive and False Negative Rates for Current Upgradient vs. Downgradient Monitoring Program



Worksheet 1 - Upgradient vs. Downgradient Comparisons
Antimony, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Arsenic, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Barium, total (ug/L)
Normal Prediction Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{7754.0} / \mathbf{31}$ $= \mathbf{250.129}$	Compute upgradient mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{2.00{\times}10^6} - \mathbf{6.01{\times}10^7}/\mathbf{31}) / (\mathbf{31}-1))^{1/2}$ $= \mathbf{45.444}$	Compute upgradient sd.
3	$alpha = \min[(1-.95^{1/\mathbf{K}})^{1/2}, .01]$ $= \min[(1-.95^{1/\mathbf{90}})^{1/2}, .01]$ $= \mathbf{0.01}$	Adjusted per comparison false positive rate. Pass initial or 1 resample.
4	$PL = \bar{\mathbf{X}} + \mathbf{tS}(1+1/\mathbf{N})^{1/2}$ $= \mathbf{250.129}$ $+ (\mathbf{2.457}*\mathbf{45.444})(1+1/\mathbf{31})^{1/2}$ $= \mathbf{363.571}$	One-sided normal prediction limit (t is Student's t on N-1 degrees of freedom and 1-alpha confidence level).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Beryllium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cadmium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Chromium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.988**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Cobalt, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Copper, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Lead, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Nickel, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **7.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Selenium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Silver, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Thallium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Vanadium, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **20.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 1 - Upgradient vs. Downgradient Comparisons
Zinc, total (ug/L)
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **10.5**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.989**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Attachment C

Assessment Statistics for Trace Metals

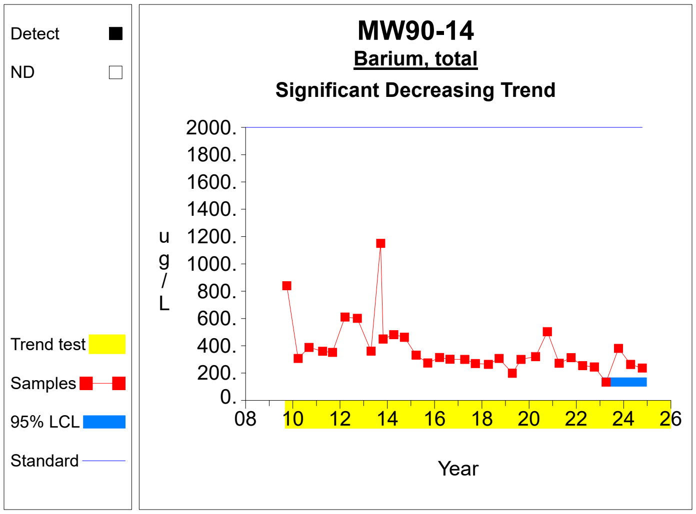
Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

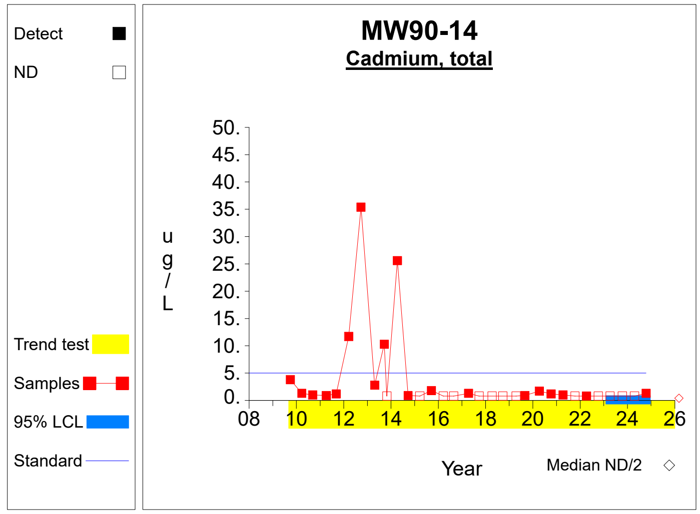
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Barium, total	ug/L	MW90-14	4	253.750	101.487	1.176	134.372	373.128	2000.000	dec
Cadmium, total	ug/L	MW90-14	4	0.625	0.450	1.176	0.096	1.154	5.000	
Cobalt, total	ug/L	MW90-14	4	0.525	0.250	1.176	0.231	0.819	2.100	
Nickel, total	ug/L	MW90-14	4	17.200	13.249	1.176	1.615	32.785	100.000	
Barium, total	ug/L	MW90-4	4	354.500	28.688	1.176	320.755	388.245	2000.000	
Cadmium, total	ug/L	MW90-4	4	0.625	0.450	1.176	0.096	1.154	5.000	
Cobalt, total	ug/L	MW90-4	4	0.400	0.000	1.176	0.400	0.400	2.100	
Nickel, total	ug/L	MW90-4	4	2.575	1.150	1.176	1.222	3.928	100.000	
Barium, total	ug/L	MW90-7	4	265.750	27.208	1.176	233.746	297.754	2000.000	
Cadmium, total	ug/L	MW90-7	4	0.400	0.000	1.176	0.400	0.400	5.000	
Cobalt, total	ug/L	MW90-7	4	7.725	8.510	1.176	0.000	17.735	2.100	
Nickel, total	ug/L	MW90-7	4	26.675	2.766	1.176	23.422	29.928	100.000	dec
Barium, total	ug/L	MW91-19	4	360.250	92.356	1.176	251.613	468.887	2000.000	
Cadmium, total	ug/L	MW91-19	4	0.400	0.000	1.176	0.400	0.400	5.000	
Cobalt, total	ug/L	MW91-19	4	0.675	0.486	1.176	0.104	1.246	2.100	
Nickel, total	ug/L	MW91-19	4	2.825	1.650	1.176	0.884	4.766	100.000	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

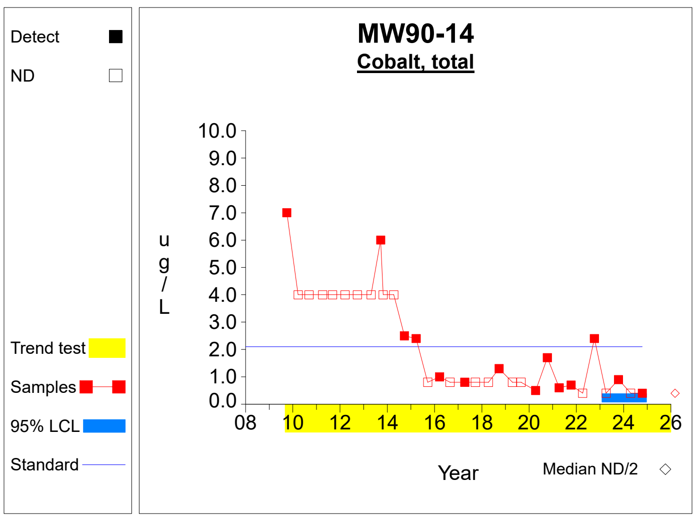
Confidence Limits (Assessment)



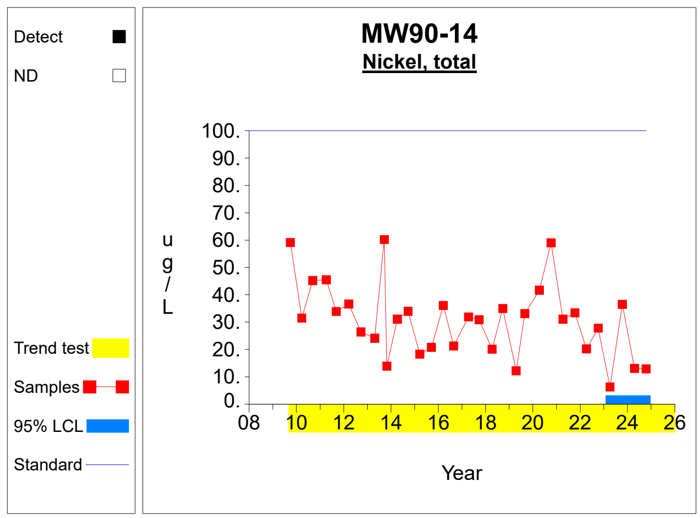
Graph 1



Graph 2



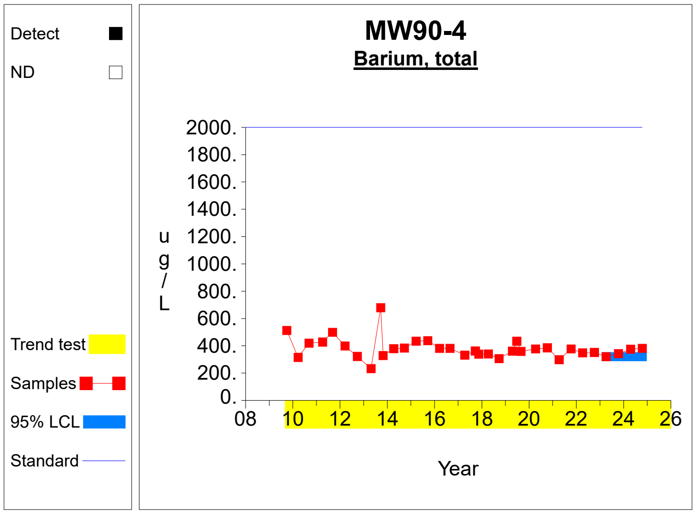
Graph 3



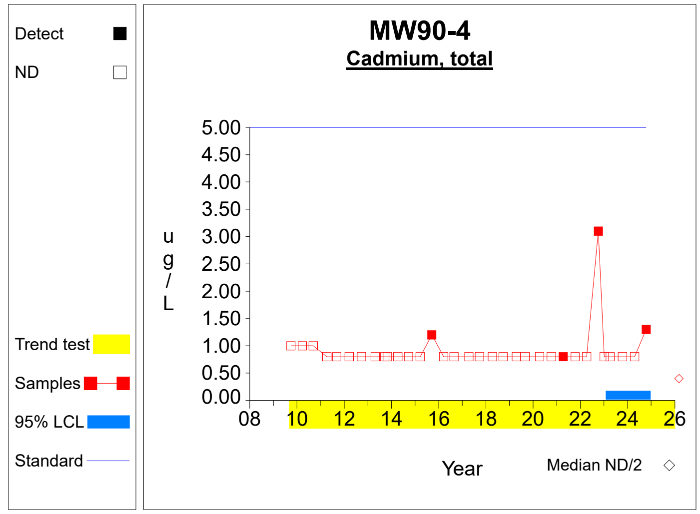
Graph 4

Prepared by: Otter Creek Environmental

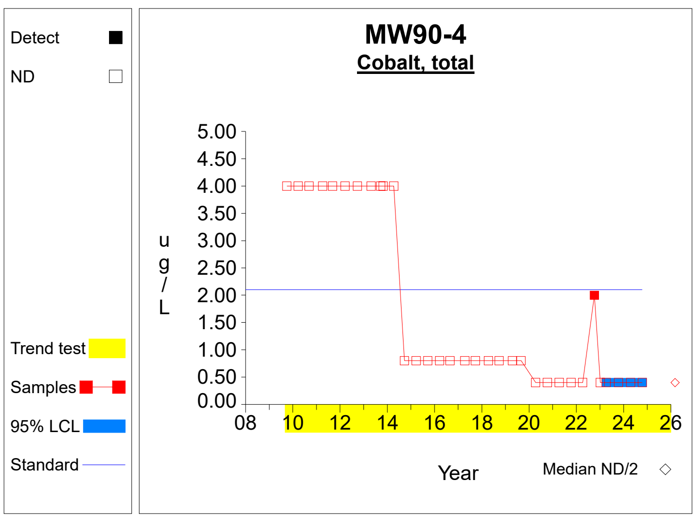
Confidence Limits (Assessment)



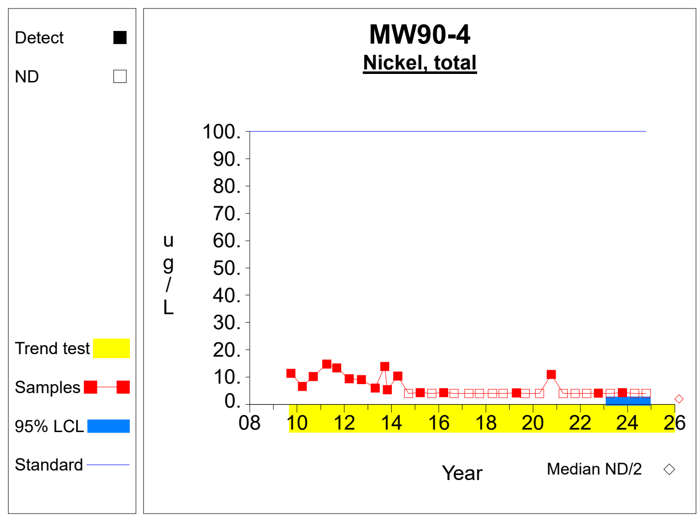
Graph 5



Graph 6

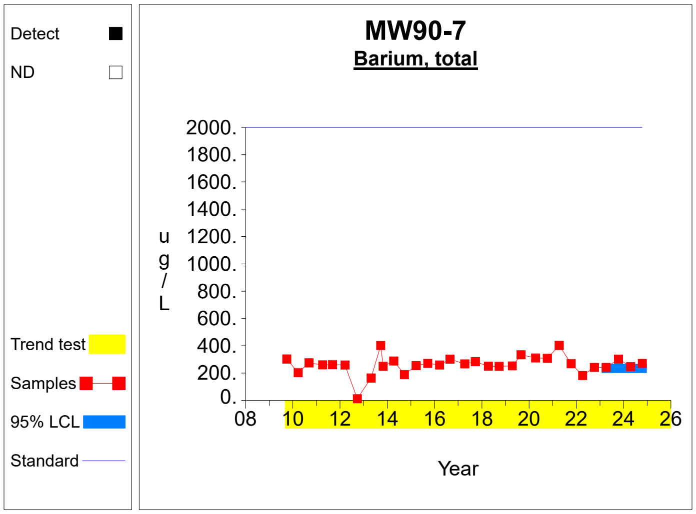


Graph 7

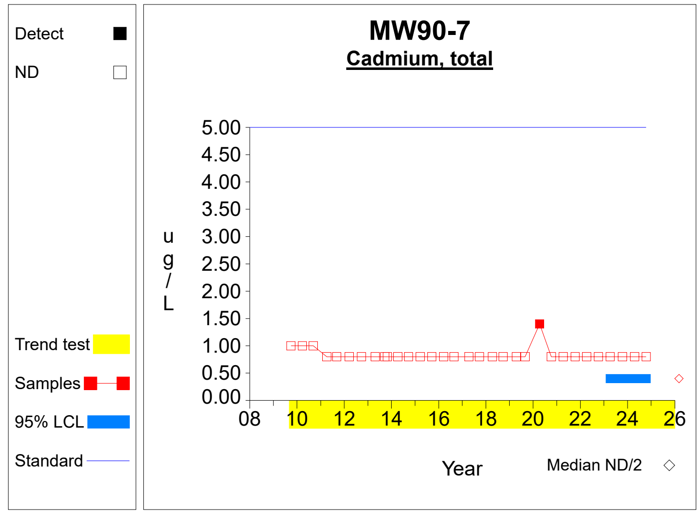


Graph 8

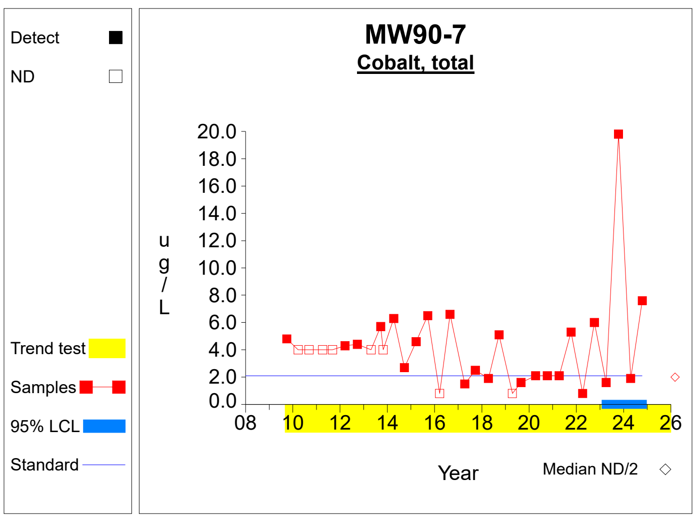
Confidence Limits (Assessment)



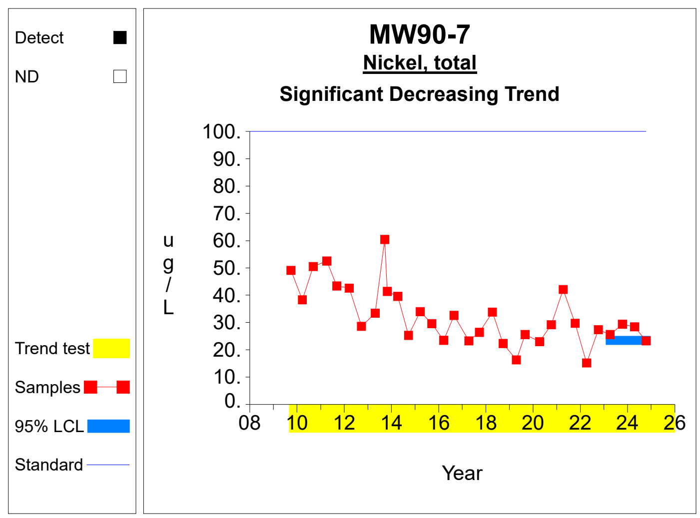
Graph 9



Graph 10

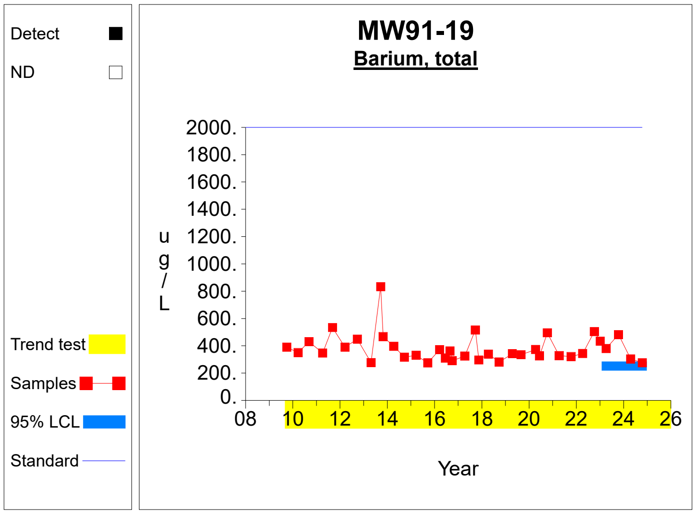


Graph 11

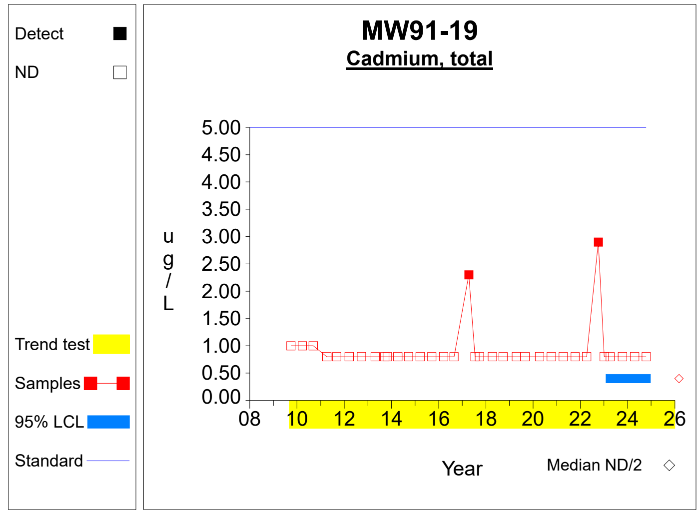


Graph 12

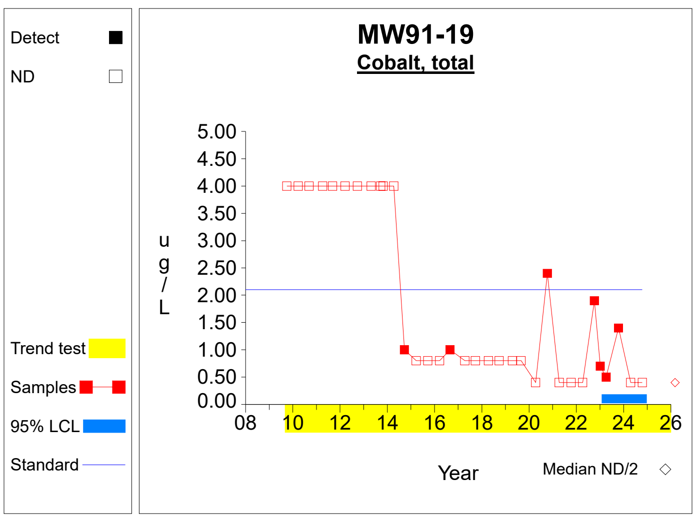
Confidence Limits (Assessment)



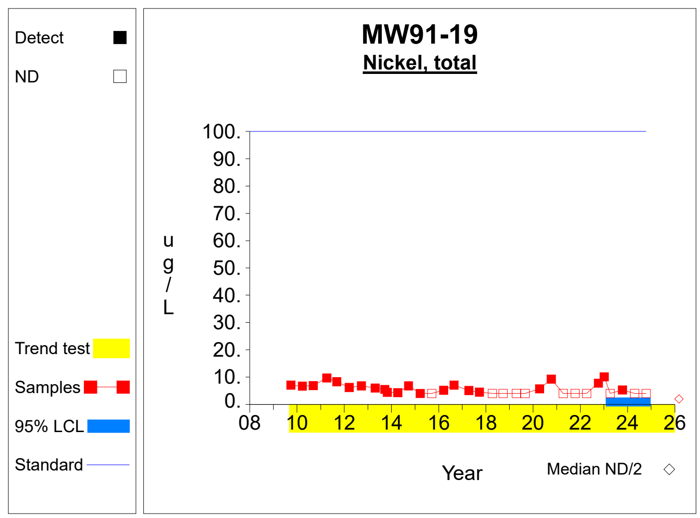
Graph 13



Graph 14



Graph 15



Graph 16

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW90-14

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1015.0** / **4** = **253.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**288455.0** - **1.03**x**10^6/4**) / (**4**-1))^{½} = **101.487**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**^{½} = **253.75** - **2.353** * **101.487**/**4**^{½} = **134.372**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**^{½} = **253.75** + **2.353** * **101.487**/**4**^{½} = **373.128**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **-13.371**	Sen's estimator of trend.
7	var(S) = **3800.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**^{½}) / 2 = (**496** ± **2.576** * **3800.667**^{½}) / 2 = [**168.595**, **327.405**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-28.999**, **-5.714**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW90-14

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.5** / **4** = **0.625**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2.17** - **6.25/4**) / (**4**-1))^{½} = **0.45**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS/N**^{½} = **0.625** - **2.353** * **0.45/4**^{½} = **0.096**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**^{½} = **0.625** + **2.353** * **0.45/4**^{½} = **1.154**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **-0.069**	Sen's estimator of trend.
7	var(S) = **3524.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**496** ± **2.576** * **3524.667**^{½}) / 2 = [**171.533**, **324.467**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.235**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW90-14

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.1** / **4** = **0.525**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**1.29** - **4.41/4**) / (**4**-1))^{½} = **0.25**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**^{½} = **0.525** - **2.353** * **0.25/4**^{½} = **0.231**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$ + tS/N**^{½} = **0.525** + **2.353** * **0.25/4**^{½} = **0.819**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **2984.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**496** ± **2.576** * **2984.667**^{½}) / 2 = [**177.634**, **318.366**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW90-14

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **68.8** / **4** = **17.2**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**1709.96** - **4733.44**/**4**) / (**4**-1))$^{1/2}$ = **13.249**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **17.2** - **2.353** * **13.249**/**4**$^{1/2}$ = **1.615**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **17.2** + **2.353** * **13.249**/**4**$^{1/2}$ = **32.785**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **-1.112**	Sen's estimator of trend.
7	var(S) = **3801.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**496** ± **2.576** * **3801.667**$^{1/2}$) / 2 = [**168.585**, **327.415**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.541**, **0.174**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW90-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute the mean of the last 4 measurements.
	= **1418.0** / **4**	
	= **354.5**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$	Compute sd of the last 4 measurements.
	= ((**505150.0** - **2.01**x**10**^{6}/**4**) / (**4**-1))$^{1/2}$	
	= **28.688**	
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$	Compute lower confidence limit for the mean of the last 4 measurements.
	= **354.5** - **2.353** * **28.688**/**4**$^{1/2}$	
	= **320.755**	
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$	Compute upper confidence limit for the mean of the last 4 measurements.
	= **354.5** + **2.353** * **28.688**/**4**$^{1/2}$	
	= **388.245**	
5	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **34** * (**34**-1) / 2	
	= **561**	
6	S = **-4.049**	Sen's estimator of trend.
7	var(S) = **4545.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
	= (**561** ± **2.576** * **4545.667**$^{1/2}$) / 2	
	= [**193.661**, **367.339**]	
9	CL(S) = [**-10.64**, **2.305**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW90-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **2.5** / **4** = **0.625**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))^½ = ((**2.17** - **6.25/4**) / (**4**-1))^½ = **0.45**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS/N**^½ = **0.625** - **2.353** * **0.45/4**^½ = **0.096**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS/N**^½ = **0.625** + **2.353** * **0.45/4**^½ = **1.154**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **1323.333**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**^½) / 2 = (**528** ± **2.576** * **1323.333**^½) / 2 = [**217.146**, **310.854**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW90-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**0.64** - **2.56**/**4**) / (**4**-1))$^{1/2}$ = **4.21**x**10^{-9}**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **0.4** - **2.353** * **4.21**x**10^{-9}**/**4**$^{1/2}$ = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **0.4** + **2.353** * **4.21**x**10^{-9}**/**4**$^{1/2}$ = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **362.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**528** ± **2.576** * **362.667**$^{1/2}$) / 2 = [**239.472**, **288.528**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW90-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute the mean of the last 4 measurements.
	= **10.3** / **4**	
	= **2.575**	
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$	Compute sd of the last 4 measurements.
	= ((**30.49** - **106.09/4**) / (**4**-1))$^{1/2}$	
	= **1.15**	
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$	Compute lower confidence limit for the mean of the last 4 measurements.
	= **2.575** - **2.353** * **1.15/4**$^{1/2}$	
	= **1.222**	
4	UCL = **$\bar{X}$ + tS/N**$^{1/2}$	Compute upper confidence limit for the mean of the last 4 measurements.
	= **2.575** + **2.353** * **1.15/4**$^{1/2}$	
	= **3.928**	
5	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **32** * (**32**-1) / 2	
	= **496**	
6	S = **-0.493**	Sen's estimator of trend.
7	var(S) = **3390.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **$Z_{.995}$** * **var(S)**$^{1/2}$) / 2	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
	= (**496** ± **2.576** * **3390.667**$^{1/2}$) / 2	
	= [**173.0**, **323.0**]	
9	CL(S) = [**-0.904**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW90-7

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1063.0** / **4** = **265.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**284713.0** - **1.13**x**10^6**/**4**) / (**4**-1))$^{1/2}$ = **27.208**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$** - **tS**/**N**$^{1/2}$ = **265.75** - **2.353** * **27.208**/**4**$^{1/2}$ = **233.746**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$** + **tS**/**N**$^{1/2}$ = **265.75** + **2.353** * **27.208**/**4**$^{1/2}$ = **297.754**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **0.727**	Sen's estimator of trend.
7	var(S) = **3797.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**496** ± **2.576** * **3797.667**$^{1/2}$) / 2 = [**168.627**, **327.373**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.669**, **7.259**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW90-7

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **1.6** / **4** = **0.4**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.64} - \mathbf{2.56/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{4.21 \times 10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \mathbf{\bar{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}/4}^{1/2}$ = **0.4**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \mathbf{\bar{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}/4}^{1/2}$ = **0.4**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **341.0**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{496} \pm \mathbf{2.576} * \mathbf{341.0}^{1/2}) / 2$ = [**224.216**, **271.784**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW90-7

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **30.9** / **4** = **7.725**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))$^{1/2}$ = ((**455.97** - **954.81**/**4**) / (**4**-1))$^{1/2}$ = **8.51**	Compute sd of the last 4 measurements.
3	LCL = $\bar{X}$ - **tS**/**N**$^{1/2}$ = **7.725** - **2.353** * **8.51**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = $\bar{X}$ + **tS**/**N**$^{1/2}$ = **7.725** + **2.353** * **8.51**/**4**$^{1/2}$ = **17.735**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **3731.667**	Variance estimate for slope.
8	M(S) = (**N'** ± $Z_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**496** ± **2.576** * **3731.667**$^{1/2}$) / 2 = [**169.319**, **326.681**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.119**, **0.225**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW90-7

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **106.7** / **4** = **26.675**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]^2**/**N**) / (**N**-1))^{½} = ((**2869.17** - **11384.89**/**4**) / (**4**-1))^{½} = **2.766**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**^{½} = **26.675** - **2.353** * **2.766**/**4**^{½} = **23.422**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**^{½} = **26.675** + **2.353** * **2.766**/**4**^{½} = **29.928**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **32** * (**32**-1) / 2 = **496**	Number of sample pairs during trend detection period.
6	S = **-1.513**	Sen's estimator of trend.
7	var(S) = **3800.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**^{½}) / 2 = (**496** ± **2.576** * **3800.667**^{½}) / 2 = [**168.595**, **327.405**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.475**, **-0.555**]	Two-sided confidence interval for slope.
10	UCL(S) < 0	**Significant decreasing trend.**

Worksheet 6 - Assessment Monitoring
Barium, total (ug/L) at MW91-19

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **1441.0** / **4** = **360.25**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**544709.0** - **2.08**x**10^6/4**) / (**4**-1))$^{1/2}$ = **92.356**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **360.25 - 2.353 * 92.356/4**$^{1/2}$ = **251.613**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **360.25 + 2.353 * 92.356/4**$^{1/2}$ = **468.887**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **37** * (**37**-1) / 2 = **666**	Number of sample pairs during trend detection period.
6	S = **-2.945**	Sen's estimator of trend.
7	var(S) = **5845.0**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**666** ± **2.576** * **5845.0**$^{1/2}$) / 2 = [**234.529**, **431.471**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-10.028**, **5.48**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cadmium, total (ug/L) at MW91-19

Step	Equation	Description
1	$\overline{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{1.6} / \mathbf{4}$ $= \mathbf{0.4}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{0.64} - \mathbf{2.56}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{4.21 \times 10^{-9}}$	Compute sd of the last 4 measurements.
3	$LCL = \overline{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} - \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ $= \mathbf{0.4}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \overline{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{0.4} + \mathbf{2.353} * \mathbf{4.21 \times 10^{-9}}/\mathbf{4}^{1/2}$ $= \mathbf{0.4}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{34} * (\mathbf{34}-1) / 2$ $= \mathbf{561}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{747.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{561} \pm \mathbf{2.576} * \mathbf{747.667}^{1/2}) / 2$ $= [\ \mathbf{245.282}, \mathbf{315.718}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{0.0}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Cobalt, total (ug/L) at MW91-19

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **2.7** / **4** = **0.675**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))$^{1/2}$ = ((**2.53 - 7.29/4**) / (**4**-1))$^{1/2}$ = **0.486**	Compute sd of the last 4 measurements.
3	LCL = **$\overline{X}$ - tS/N**$^{1/2}$ = **0.675 - 2.353 * 0.486/4**$^{1/2}$ = **0.104**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\overline{X}$ + tS/N**$^{1/2}$ = **0.675 + 2.353 * 0.486/4**$^{1/2}$ = **1.246**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **2106.0**	Variance estimate for slope.
8	M(S) = (**N' ± $Z_{.995}$ * var(S)**$^{1/2}$) / 2 = (**528 ± 2.576 * 2106.0**$^{1/2}$) / 2 = [**204.892**, **323.108**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**0.0**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Nickel, total (ug/L) at MW91-19

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **11.3** / **4** = **2.825**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**40.09** - **127.69**/**4**) / (**4**-1))$^{1/2}$ = **1.65**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$** - **tS**/**N**$^{1/2}$ = **2.825** - **2.353** * **1.65**/**4**$^{1/2}$ = **0.884**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS**/**N**$^{1/2}$ = **2.825** + **2.353** * **1.65**/**4**$^{1/2}$ = **4.766**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **33** * (**33**-1) / 2 = **528**	Number of sample pairs during trend detection period.
6	S = **-0.319**	Sen's estimator of trend.
7	var(S) = **3998.333**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**528** ± **2.576** * **3998.333**$^{1/2}$) / 2 = [**182.557**, **345.443**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-0.515**, **0.0**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Attachment D

Summary Tables and Graphs for the Intrawell Comparisons

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Antimony, total	ug/L	MW90-14	26	6	35			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-14	26	6	35			4.0000	4.0000			8.9000	nonpar	.99	**
Barium, total	ug/L	MW90-14	26	6	35	409.0000	204.8559	263.0000	237.0000	409.0000	409.0000	1740.5630	normal		
Beryllium, total	ug/L	MW90-14	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-14	26	6	35	4.2308	8.3210	0.8000	1.3000	4.2308	4.2308	58.3173	normal		
Chromium, total	ug/L	MW90-14	26	6	35			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-14	26	6	35	3.2500	1.6698	0.4000	0.4000	3.2500	3.2500	14.1036	normal		
Copper, total	ug/L	MW90-14	26	6	35	5.5846	3.4028	4.0000	4.0000	5.5846	5.5846	27.7027	normal		
Lead, total	ug/L	MW90-14	26	6	35			4.0000	4.0000			6.2000	nonpar	.99	**
Nickel, total	ug/L	MW90-14	26	6	35	33.3231	12.8175	13.1000	12.9000	33.3231	33.3231	116.6368	normal		
Selenium, total	ug/L	MW90-14	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-14	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-14	26	6	35			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-14	26	6	35			20.0000	20.0000			26.4000	nonpar	.99	**
Zinc, total	ug/L	MW90-14	26	6	35	10.7115	6.7267	20.0000	20.0000	10.7115	10.7115	54.4354	normal		
Antimony, total	ug/L	MW90-17	25	6	31			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW90-17	25	6	31	238.2400	42.2328	310.0000	280.0000	406.6671	416.7525	512.7530	normal		
Beryllium, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-17	25	6	32			0.8000	0.8000			1.1000	nonpar	.99	**
Chromium, total	ug/L	MW90-17	24	6	31			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-17	25	6	31			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			7.1000	nonpar	.99	**
Selenium, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-17	25	6	31			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-17	25	6	31			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-17	25	6	31			20.0000	20.0000			20.1000	nonpar	.99	**
Zinc, total	ug/L	MW90-17	25	6	32			20.0000	20.0000			10.5000	nonpar	.99	**
Antimony, total	ug/L	MW90-4	26	6	35			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW90-4	26	6	35			4.0000	4.0000			4.5000	nonpar	.99	**
Barium, total	ug/L	MW90-4	28	6	37	385.6786	82.5501	375.0000	381.0000	385.6786	385.6786	922.2544	normal		
Beryllium, total	ug/L	MW90-4	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-4	26	7	36			0.8000	1.3000			1.2000	nonpar	.99	**
Chromium, total	ug/L	MW90-4	26	6	35			8.0000	8.0000			9.9000	nonpar	.99	**
Cobalt, total	ug/L	MW90-4	26	7	36			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW90-4	26	6	35	5.0500	2.1098	4.0000	4.0000	5.0500	5.0500	18.7639	normal		
Lead, total	ug/L	MW90-4	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-4	26	6	35	6.8615	3.6953	4.0000	4.0000	6.8615	6.8615	30.8810	normal		
Selenium, total	ug/L	MW90-4	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW90-4	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-4	26	6	35			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-4	26	6	35			20.0000	20.0000			30.0000	nonpar	.99	**
Zinc, total	ug/L	MW90-4	26	6	35	11.2769	6.5059	20.0000	20.0000	11.2769	11.2769	53.5652	normal		
Antimony, total	ug/L	MW90-7	26	6	36			2.0000	2.0000			2.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
* - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Arsenic, total	ug/L	MW90-7	26	6	36	4.8154	1.7681	4.0000	4.0000	4.8154	4.8154	16.3080	normal		
Barium, total	ug/L	MW90-7	25	6	36	274.9600	53.4864	248.0000	271.0000	274.9600	274.9600	622.6213	normal		
Beryllium, total	ug/L	MW90-7	26	6	36			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW90-7	26	6	36			0.8000	0.8000			1.4000	nonpar	.99	**
Chromium, total	ug/L	MW90-7	26	6	36			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW90-7	26	6	36	3.9269	1.5019	1.9000	7.6000	3.9269	6.4736	13.6891	normal		
Copper, total	ug/L	MW90-7	26	6	36			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW90-7	26	6	36			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW90-7	26	6	36	34.4808	10.8781	28.4000	23.3000	34.4808	34.4808	105.1886	normal		
Selenium, total	ug/L	MW90-7	24	6	36			4.0000	4.0000			6.2000	nonpar	.99	**
Silver, total	ug/L	MW90-7	26	6	36			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW90-7	26	6	36			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW90-7	26	6	36			20.0000	20.0000			23.1000	nonpar	.99	**
Zinc, total	ug/L	MW90-7	26	6	36			20.0000	20.0000			15.0000	nonpar	.99	**
Antimony, total	ug/L	MW91-19	26	6	35			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW91-19	30	7	40	379.9667	110.3613	303.0000	276.0000	379.9667	379.9667	1097.3152	normal		
Beryllium, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW91-19	27	7	37			0.8000	0.8000			2.3000	nonpar	.99	**
Chromium, total	ug/L	MW91-19	26	6	35			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW91-19	26	7	36			0.4000	0.4000			2.4000	nonpar	.99	**
Copper, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW91-19	26	7	36	5.6769	1.7168	4.0000	4.0000	5.6769	5.6769	16.8362	normal		
Selenium, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	MW91-19	26	6	35			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW91-19	26	6	35			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW91-19	26	6	35			20.0000	20.0000			20.8000	nonpar	.99	**
Zinc, total	ug/L	MW91-19	26	6	35			20.0000	20.0000			18.1000	nonpar	.99	**
Antimony, total	ug/L	MW91-20	26	6	32			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	MW91-20	26	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Barium, total	ug/L	MW91-20	26	6	32	175.2692	25.4394	202.0000	161.0000	198.5716	175.2692	340.6255	normal		
Beryllium, total	ug/L	MW91-20	26	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	MW91-20	26	7	33			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	MW91-20	26	6	32			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	MW91-20	26	6	32			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	MW91-20	26	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	MW91-20	26	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	MW91-20	26	6	32	4.3269	0.6315	4.0000	4.0000	4.3269	4.3269	8.4320	normal		
Selenium, total	ug/L	MW91-20	26	6	32	5.9577	4.1790	4.0000	4.0000	5.9577	5.9577	33.1213	normal		
Silver, total	ug/L	MW91-20	26	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	MW91-20	26	6	32			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	MW91-20	26	6	32			20.0000	20.0000			22.4000	nonpar	.99	**
Zinc, total	ug/L	MW91-20	26	6	32			20.0000	20.0000			14.6000	nonpar	.99	**
Antimony, total	ug/L	SW-3	25	6	32			2.0000	2.0000			2.0000	nonpar	.99	**
Arsenic, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
*   - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

Table 1

Summary Statistics and Intermediate Computations for Combined Shewhart-CUSUM Control Charts

Constituent	Units	Well	N(back)	N(mon)	N(tot)	Mean	SD	R(i-1)	R(i)	S(i-1)	S(i)	Limit	Type	Conf	
Barium, total	ug/L	SW-3	25	6	32	291.6800	64.2766	198.0000	287.0000	291.6800	291.6800	709.4777	normal		
Beryllium, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Cadmium, total	ug/L	SW-3	25	6	32			0.8000	0.8000			0.8000	nonpar	.99	**
Chromium, total	ug/L	SW-3	25	6	32			8.0000	8.0000			8.0000	nonpar	.99	**
Cobalt, total	ug/L	SW-3	25	6	32			0.4000	0.4000			0.8000	nonpar	.99	**
Copper, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Lead, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Nickel, total	ug/L	SW-3	25	6	32			4.0000	4.0000			7.6000	nonpar	.99	**
Selenium, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Silver, total	ug/L	SW-3	25	6	32			4.0000	4.0000			4.0000	nonpar	.99	**
Thallium, total	ug/L	SW-3	25	6	32			2.0000	2.0000			4.0000	nonpar	.99	**
Vanadium, total	ug/L	SW-3	25	6	32			20.0000	20.0000			24.5000	nonpar	.99	**
Zinc, total	ug/L	SW-3	25	6	32			20.0000	20.0000			22.4000	nonpar	.99	**

N(back) and N(mon) = Non-outlier measurements in the background and monitoring periods.
N(tot) = All independent measurements for that constituent and well.
For transformed data, mean and SD in transformed units and control limit in original units.
Conf = confidence level for passing initial test or one verification resample (nonparametric test only).
*   - Insufficient Data.
** - Detection Frequency < 25%.
*** - Zero Variance.

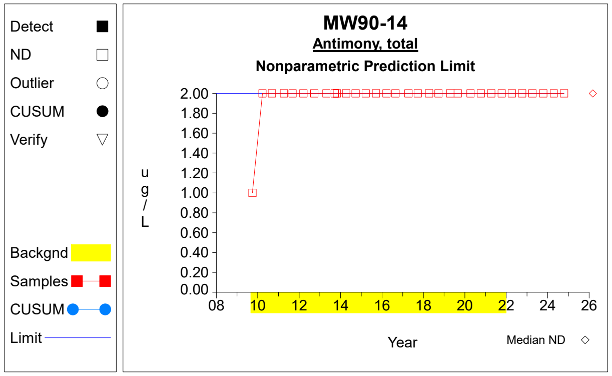
Table 4

Dixon's Test Outliers
1% Significance Level

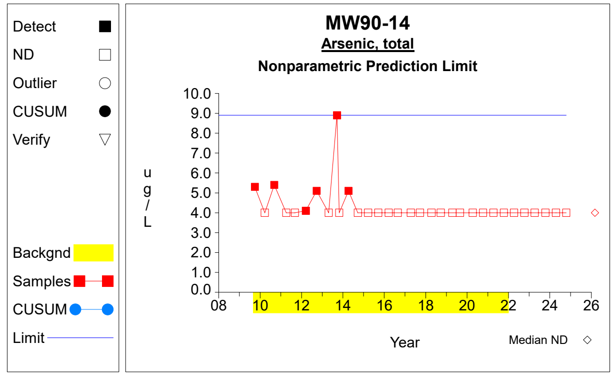
Constituent	Units	Well	Date	Result	ND Qualifier	Date Range	N	Critical Value
Cadmium, total	ug/L	MW90-17	09/07/2010	2.5000	< 2.5000	09/30/2009-10/11/2021	26	0.4819
Chromium, total	ug/L	MW90-17	09/07/2010	25.0000	< 25.0000	09/30/2009-10/11/2021	25	0.4893
Barium, total	ug/L	MW90-7	09/24/2012	12.5000		09/30/2009-10/11/2021	26	0.4819
Selenium, total	ug/L	MW90-7	04/24/2013	21.2000		09/30/2009-10/11/2021	26	0.4893
Selenium, total	ug/L	MW90-7	04/08/2014	20.2000		09/30/2009-10/11/2021	26	0.4893

N = Total number of independent measurements in background at each well.
Date Range = Dates of the first and last measurements included in background at each well.
Critical Value depends on the significance level and on N-1 when the two most extreme values are tested or N for the most extreme value.

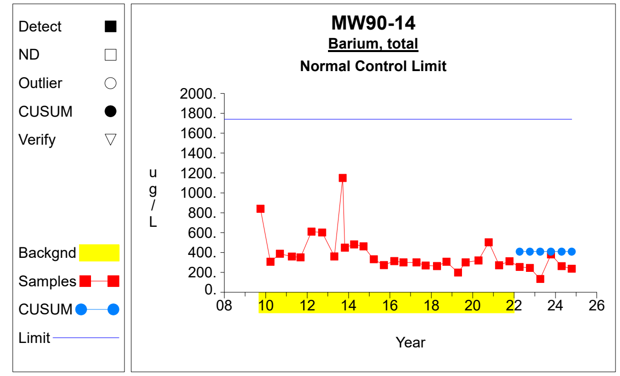
Intra-Well Control Charts / Prediction Limits



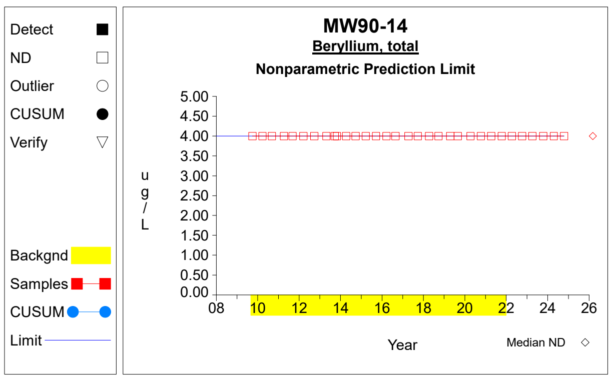
Graph 1



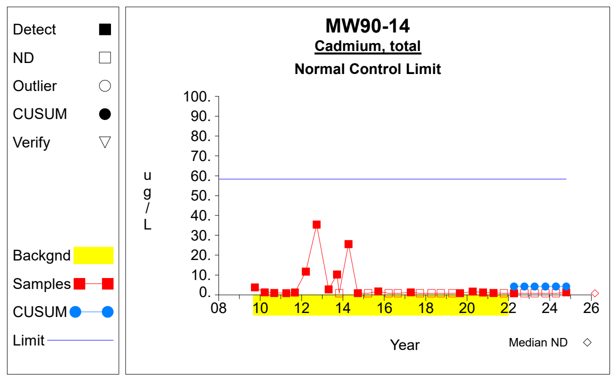
Graph 2



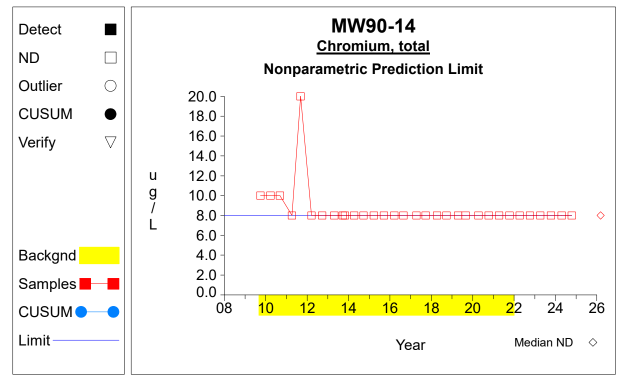
Graph 3



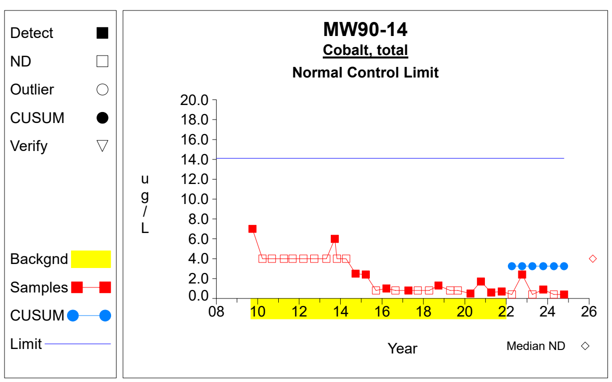
Graph 4



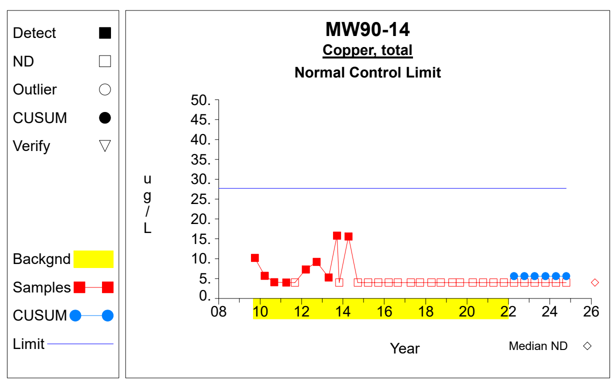
Graph 5



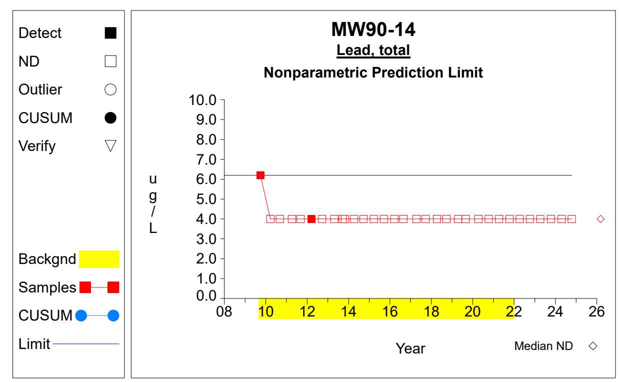
Graph 6



Graph 7

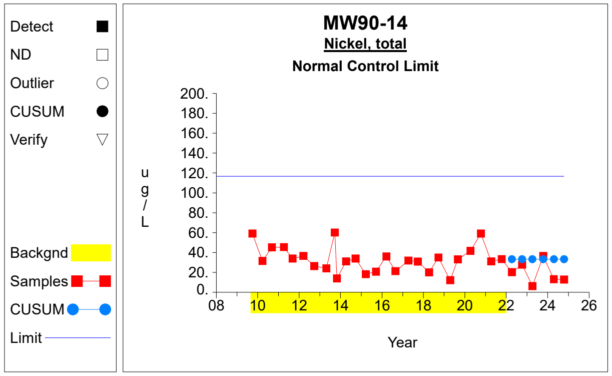


Graph 8

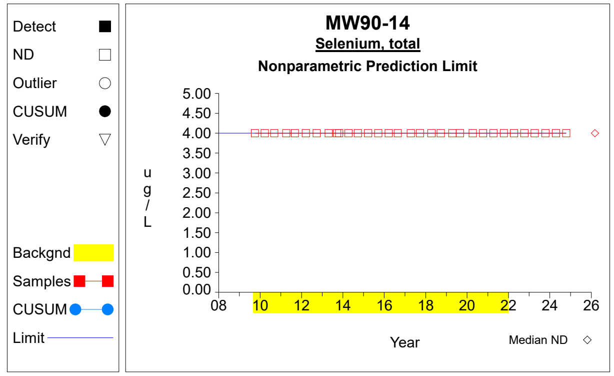


Graph 9

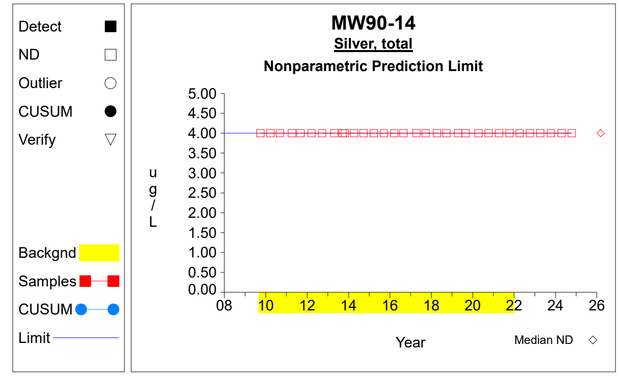
Intra-Well Control Charts / Prediction Limits



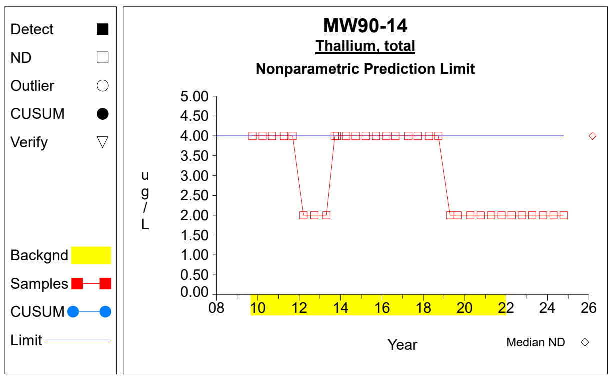
Graph 10



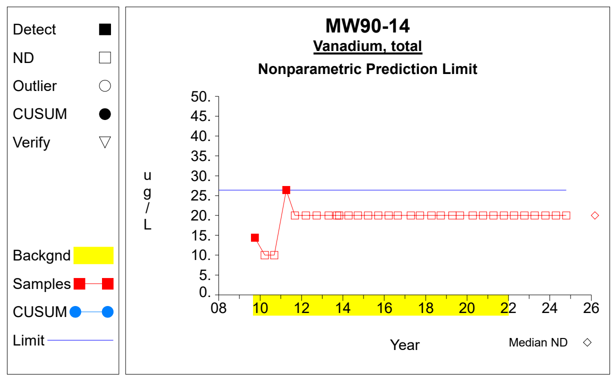
Graph 11



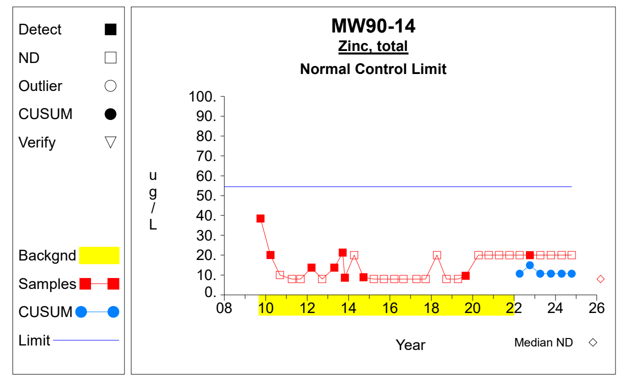
Graph 12



Graph 13



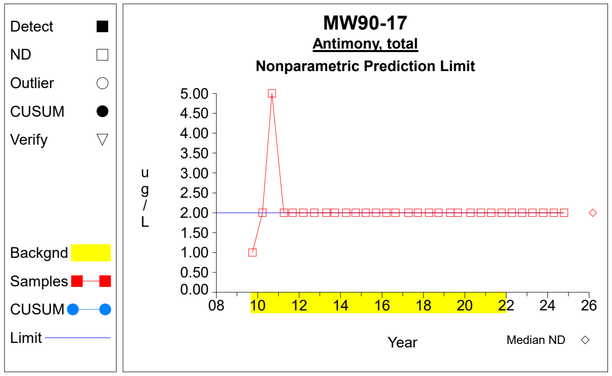
Graph 14



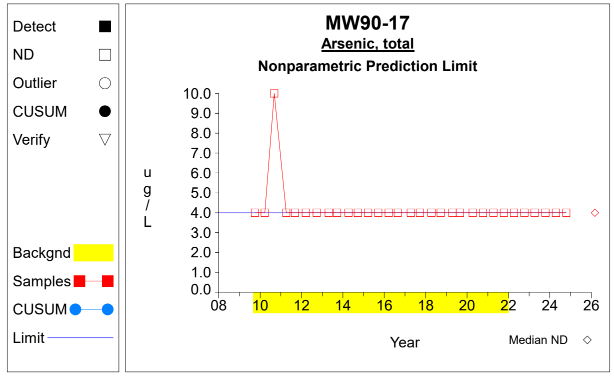
Graph 15

Prepared by: Otter Creek Environmental

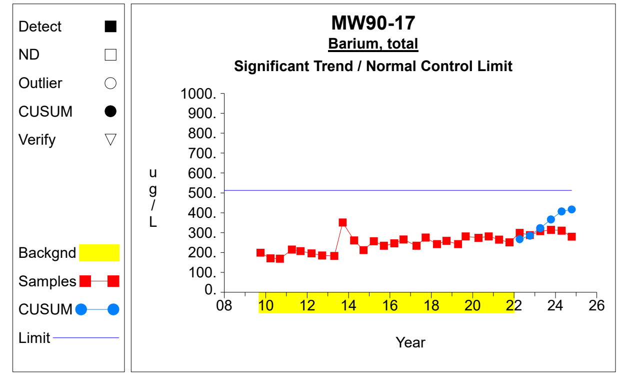
Intra-Well Control Charts / Prediction Limits



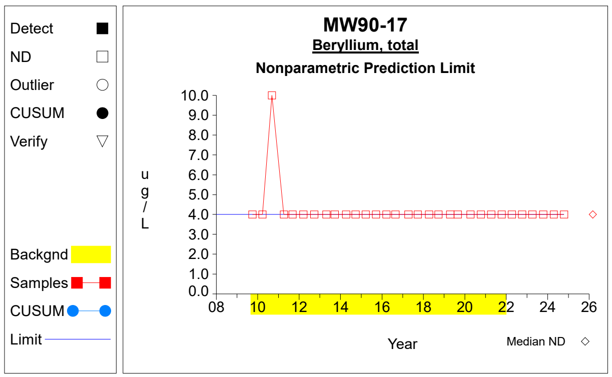
Graph 16



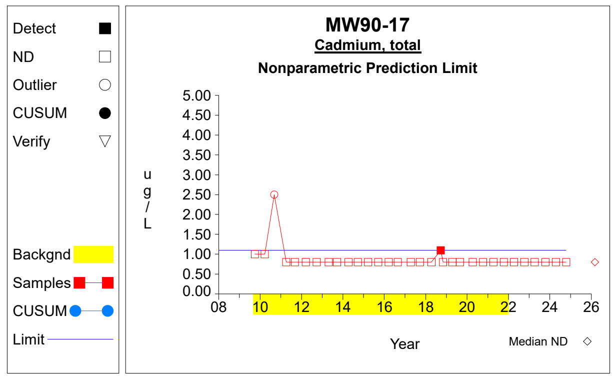
Graph 17



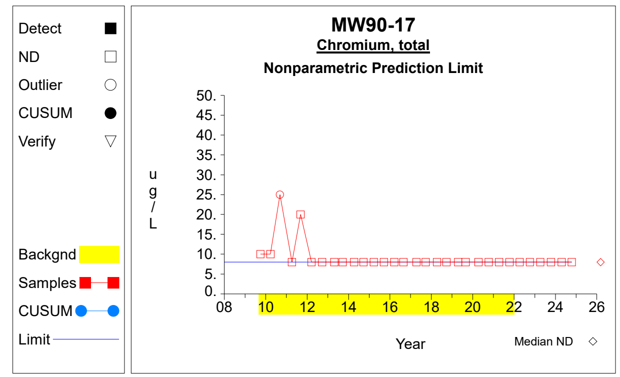
Graph 18



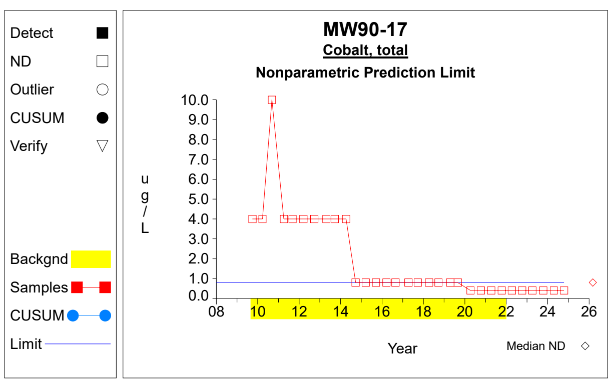
Graph 19



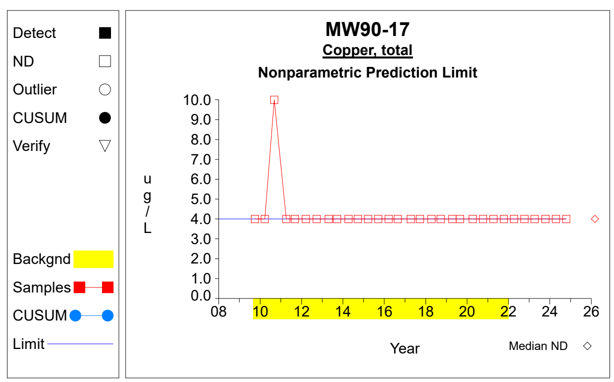
Graph 20



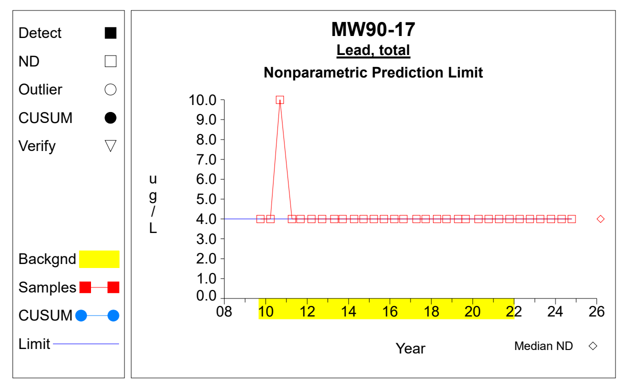
Graph 21



Graph 22



Graph 23

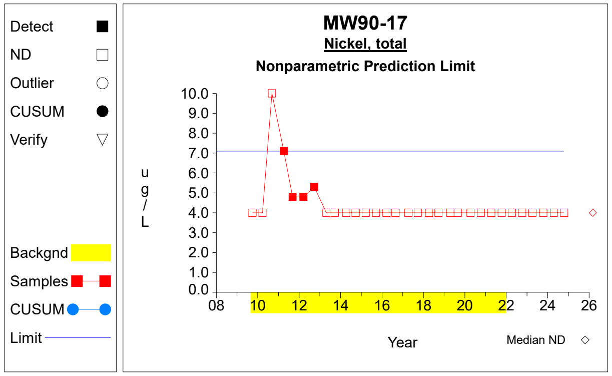


Graph 24

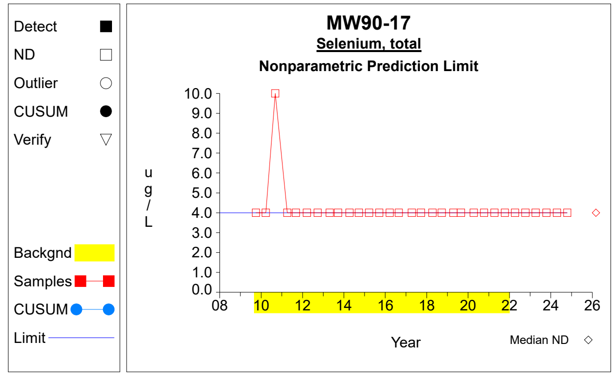
Audubon [GW]

November 2024

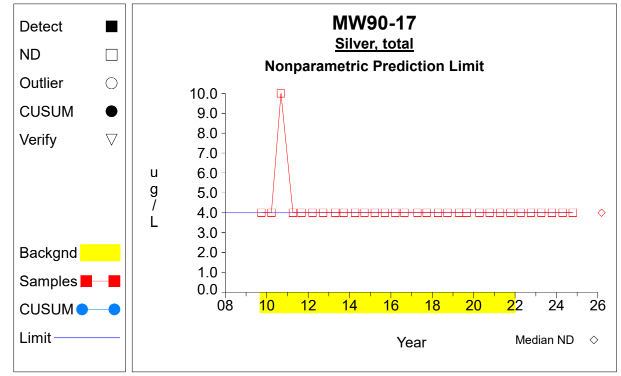
Intra-Well Control Charts / Prediction Limits



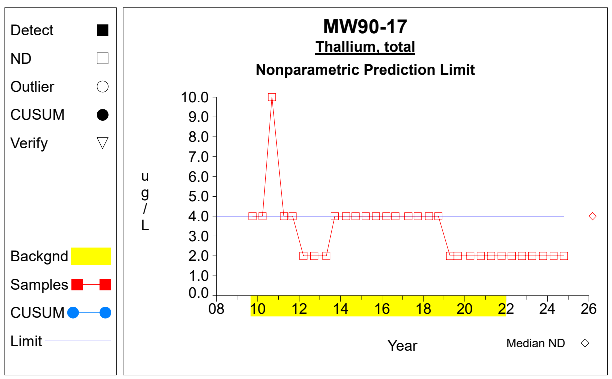
Graph 25



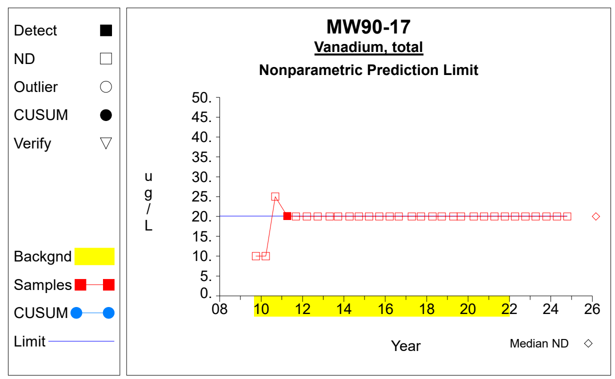
Graph 26



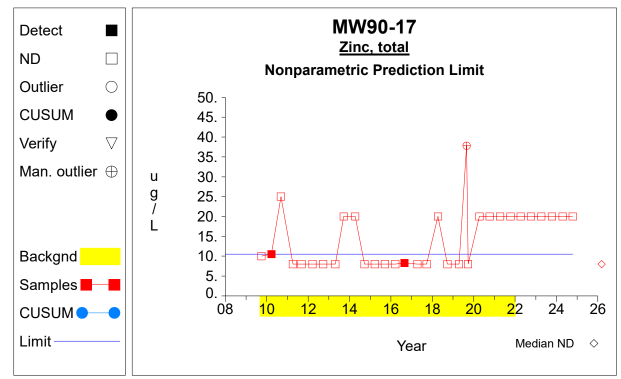
Graph 27



Graph 28

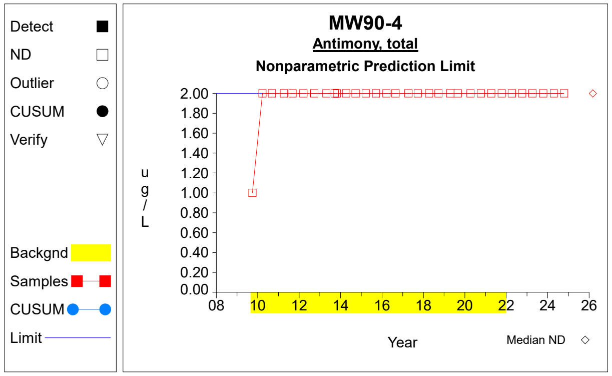


Graph 29

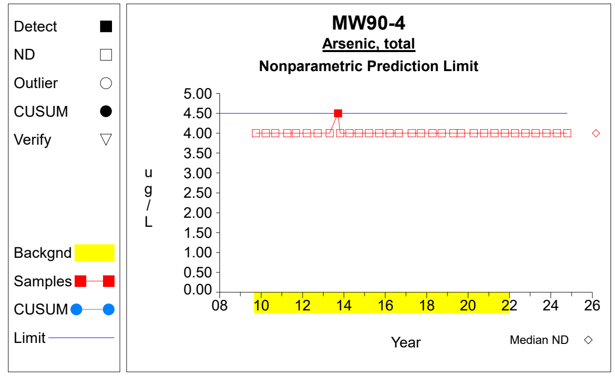


Graph 30

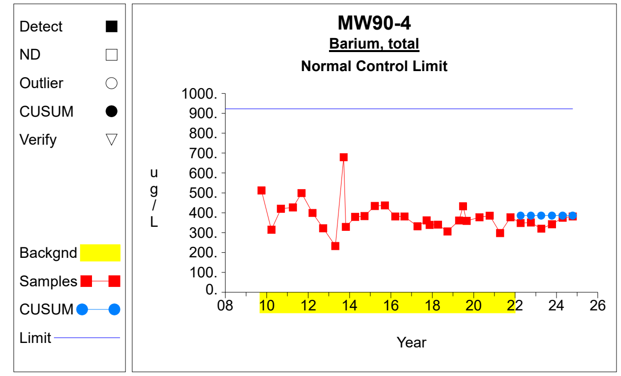
Intra-Well Control Charts / Prediction Limits



Graph 31



Graph 32



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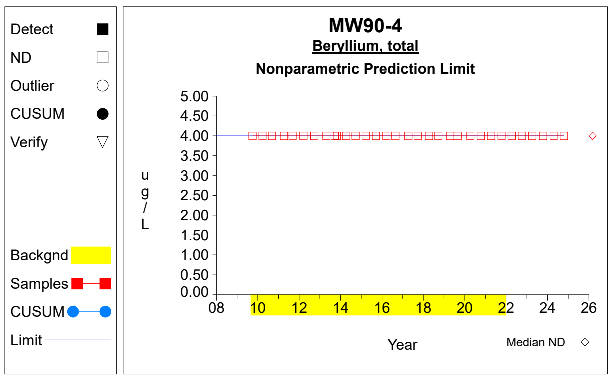
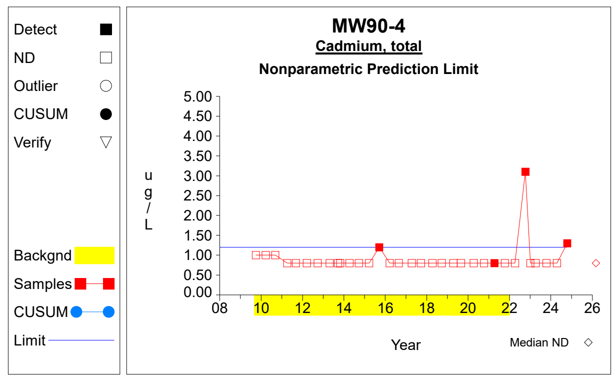
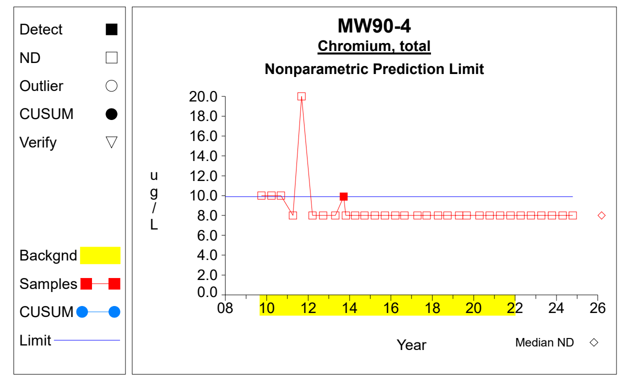


Graph 34



Graph 35



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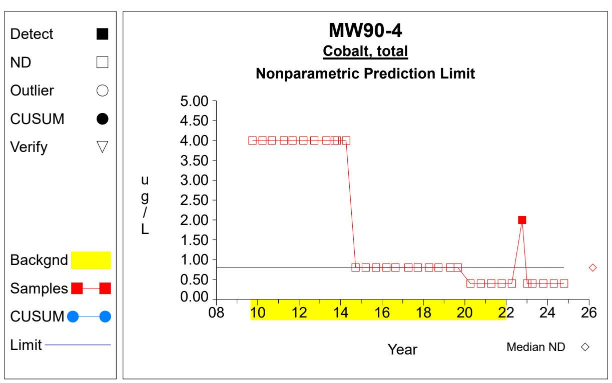
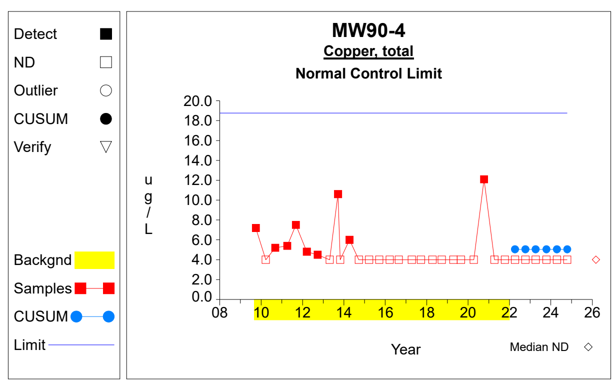


Graph 37



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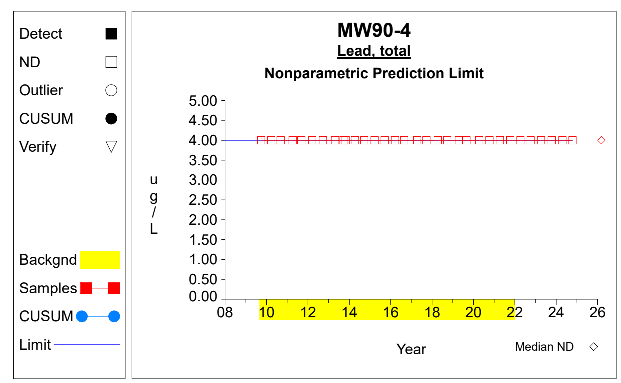

Graph 39

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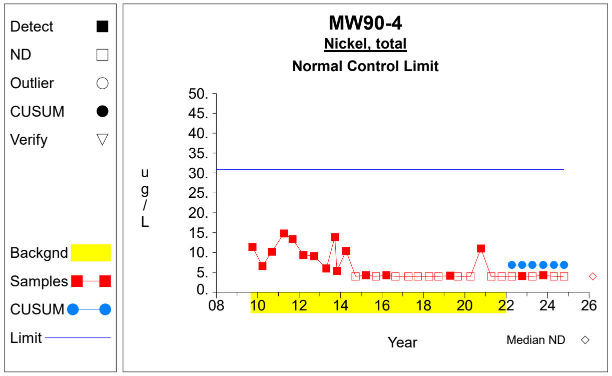
Intra-Well Control Charts / Prediction Limits



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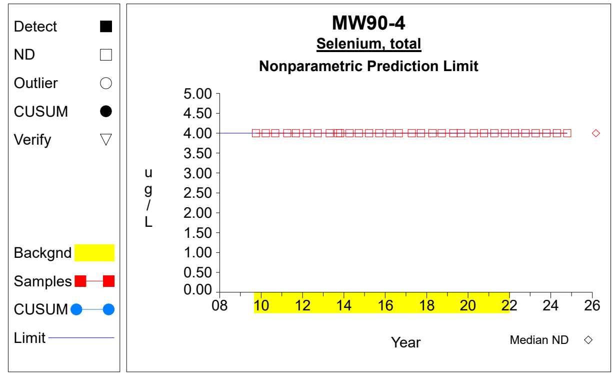

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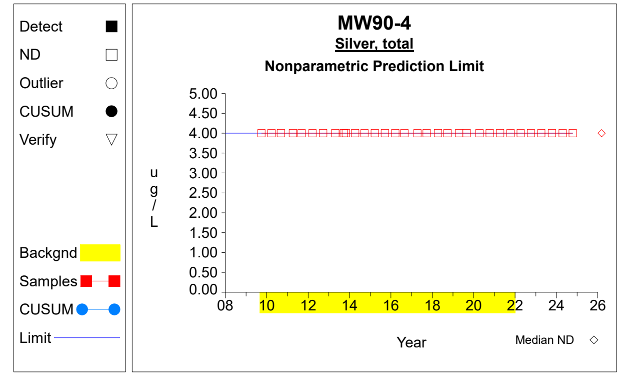
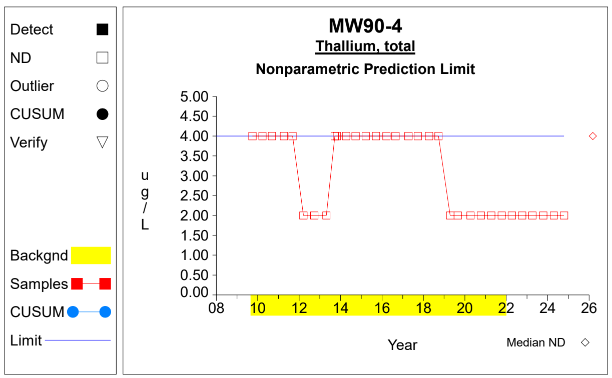
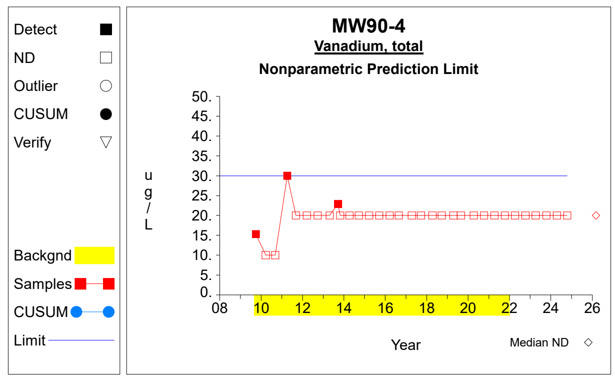


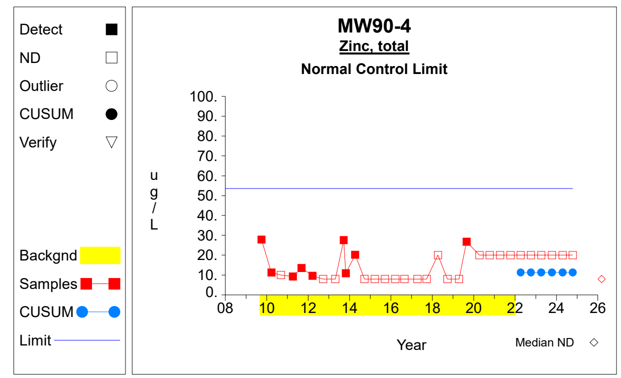
Graph 42



Graph 43

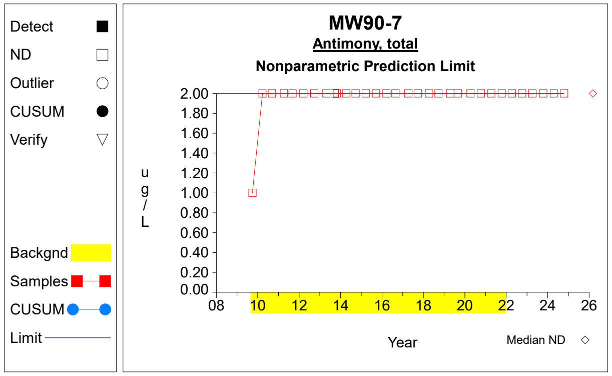


Graph 44

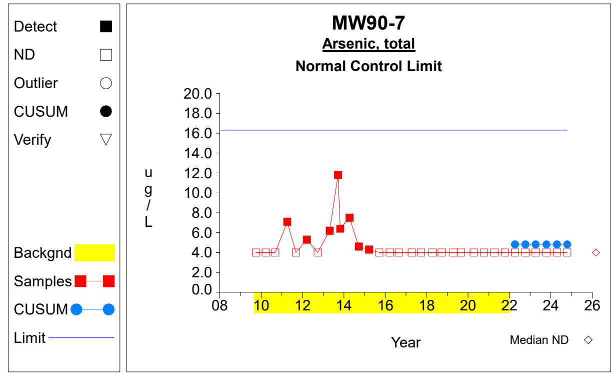


Graph 45

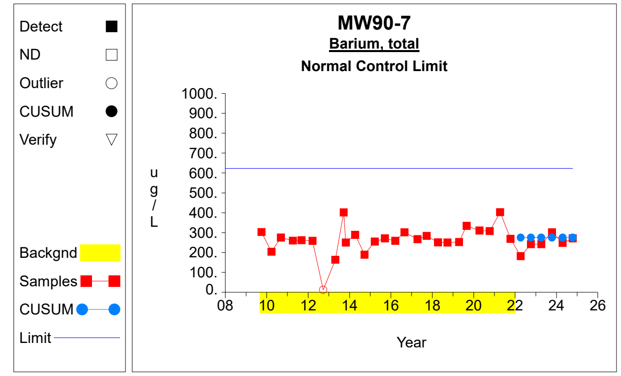
Intra-Well Control Charts / Prediction Limits



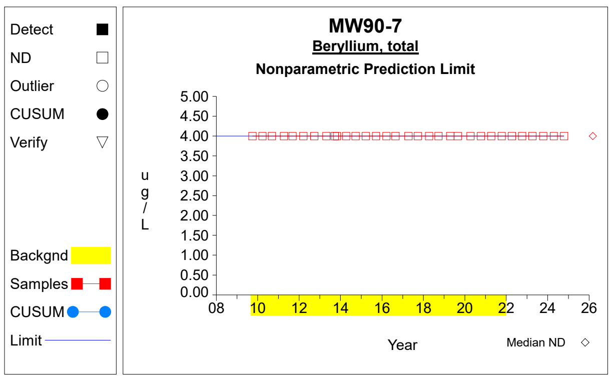
Graph 46



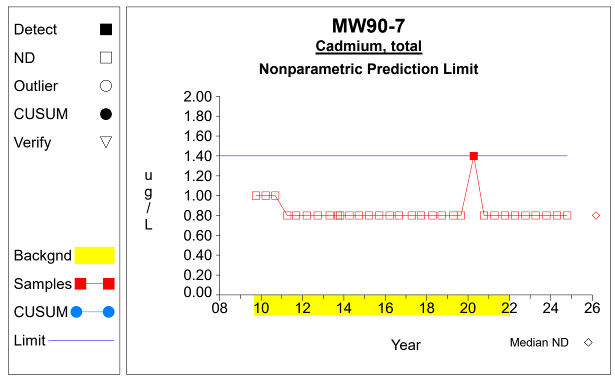
Graph 47



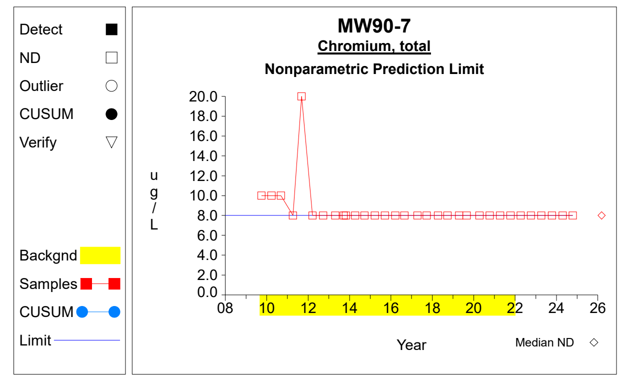
Graph 48



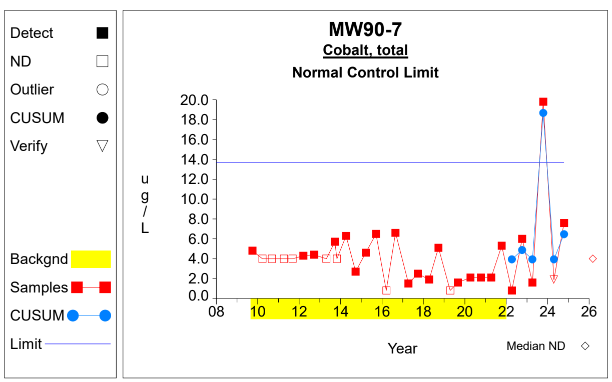
Graph 49



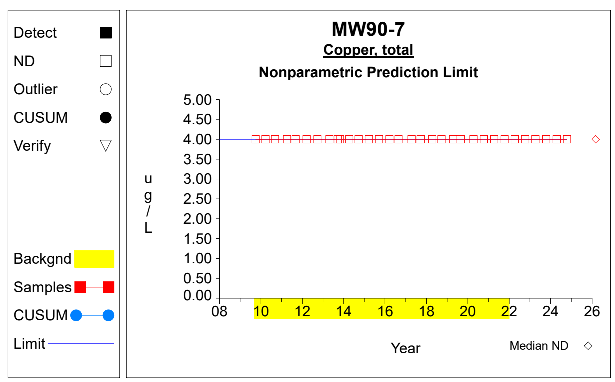
Graph 50



Graph 51



Graph 52



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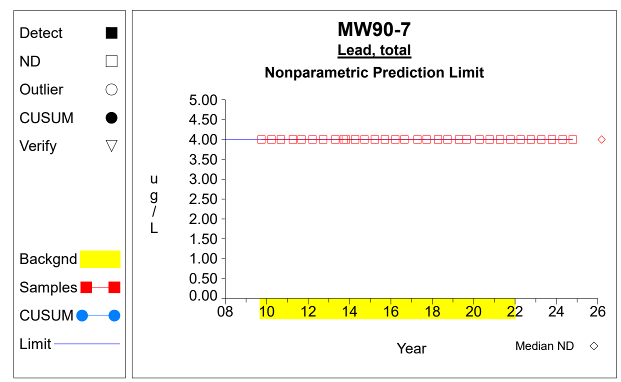
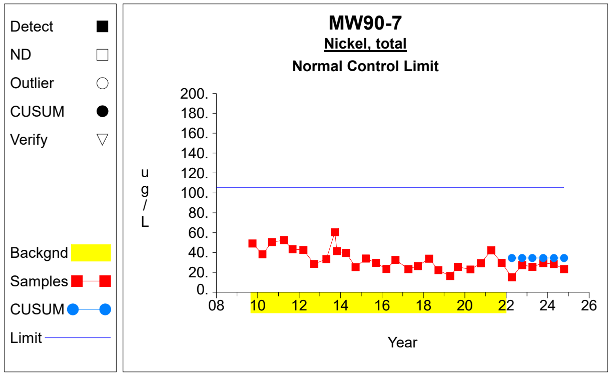
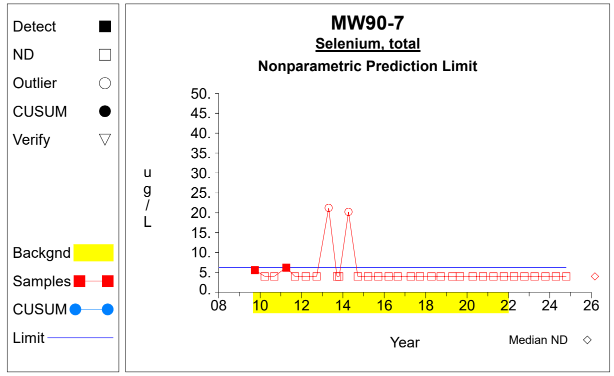


Graph 54

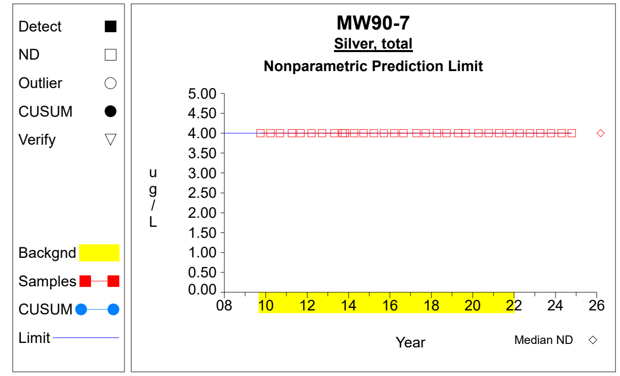
Intra-Well Control Charts / Prediction Limits



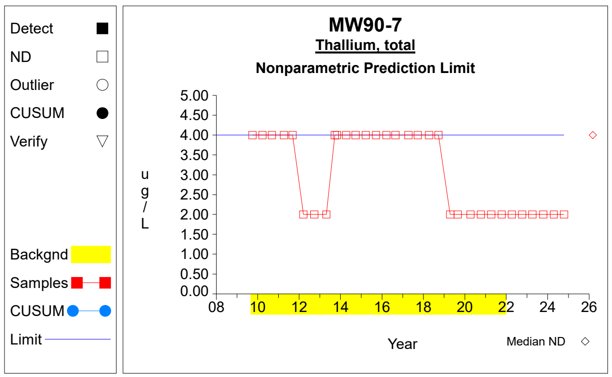
Graph 55



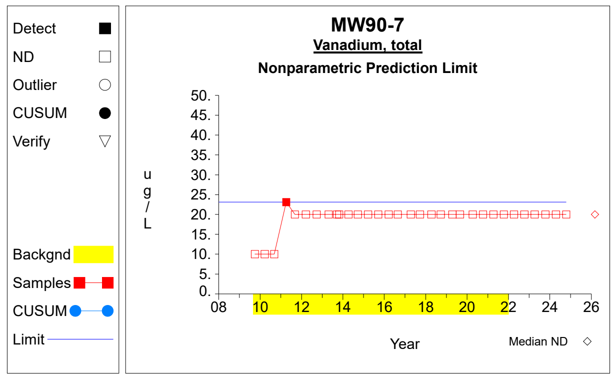
Graph 56



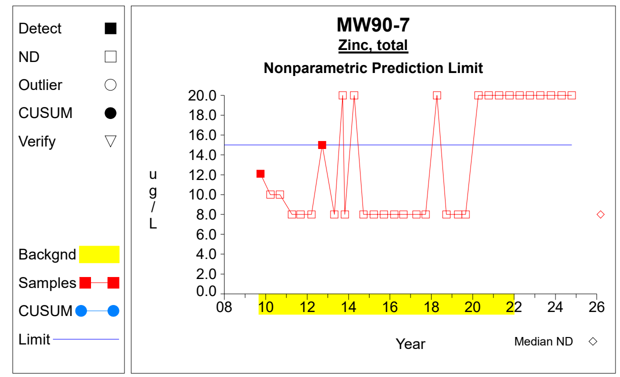
Graph 57



Graph 58



Graph 59



Graph 60

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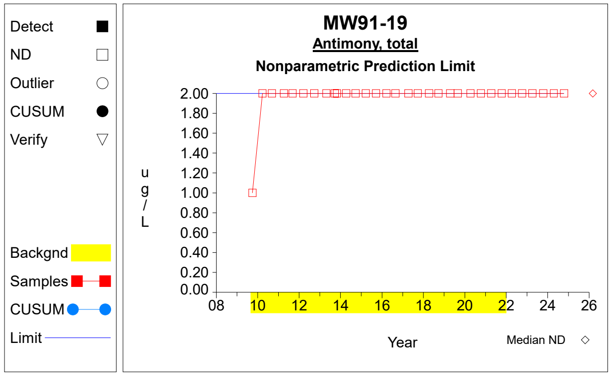
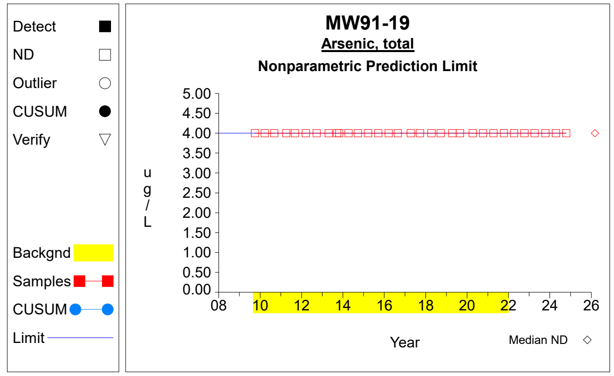
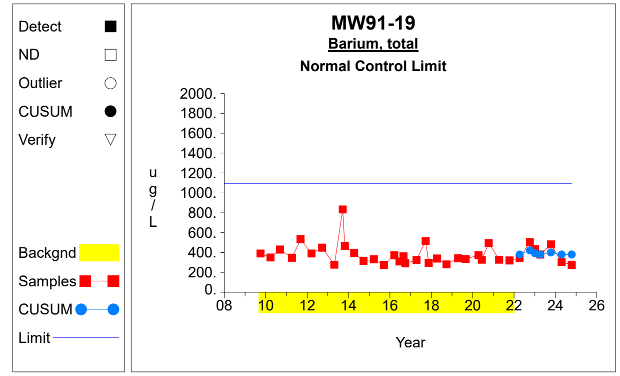
Intra-Well Control Charts / Prediction Limits



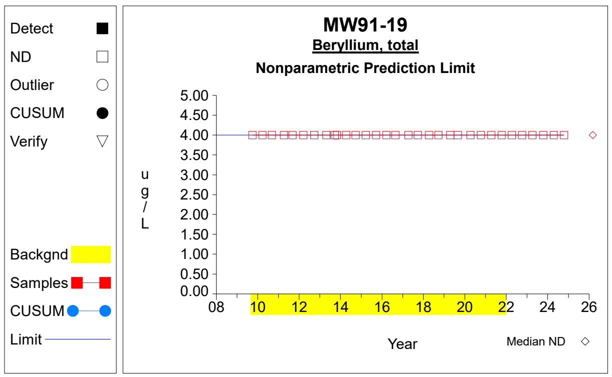
Graph 61



Graph 62



Graph 63



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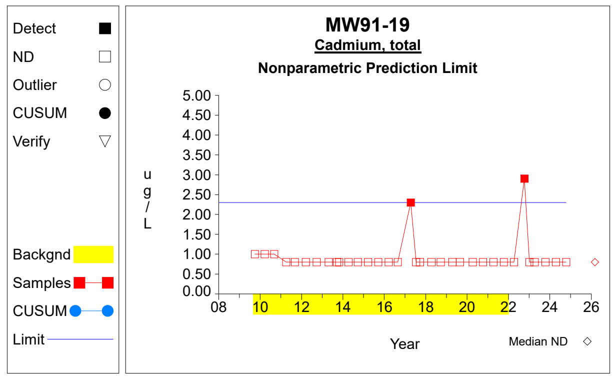
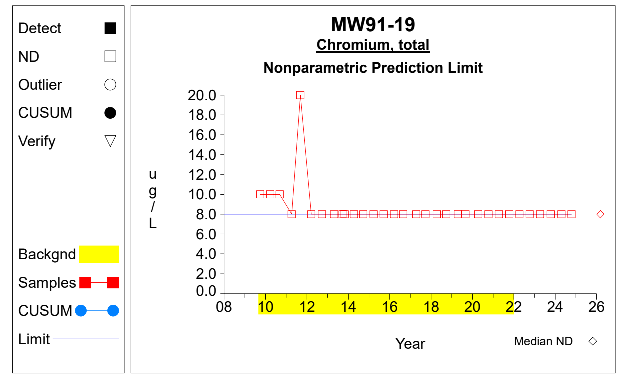
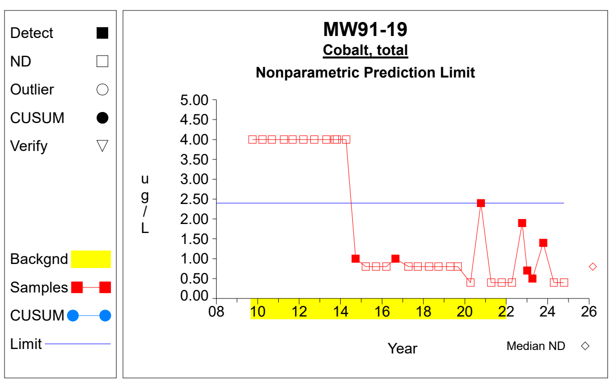


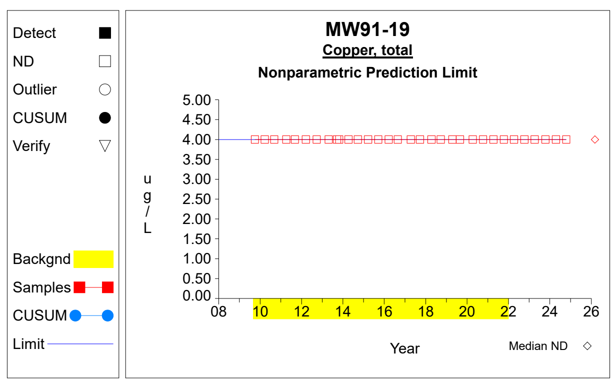
Graph 65



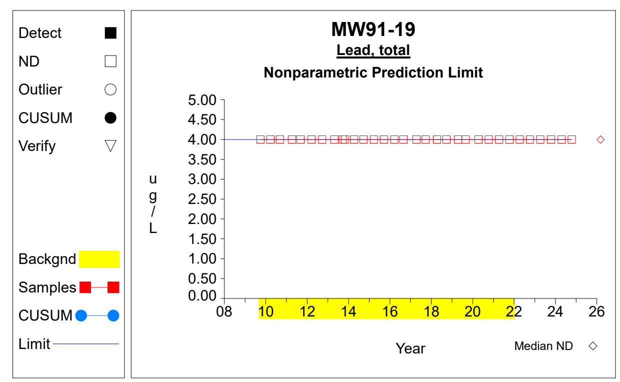
Graph 66



Graph 67



Graph 68



Graph 69

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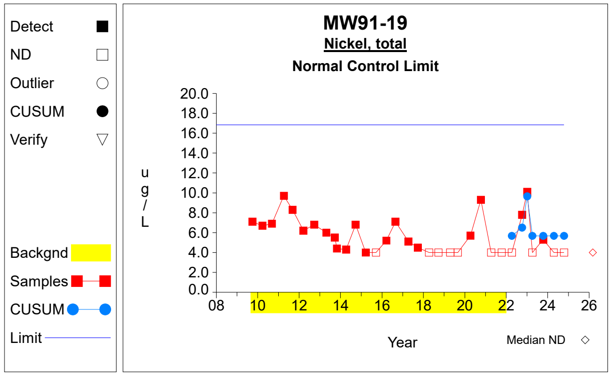
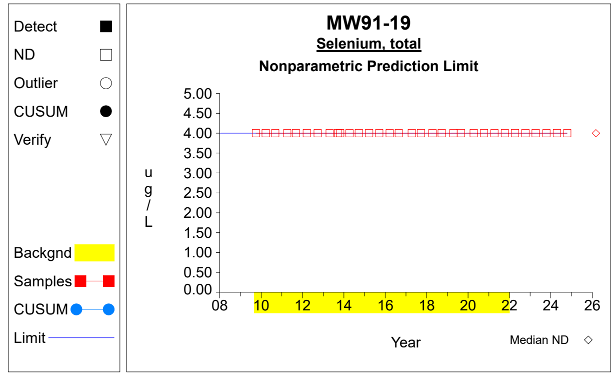
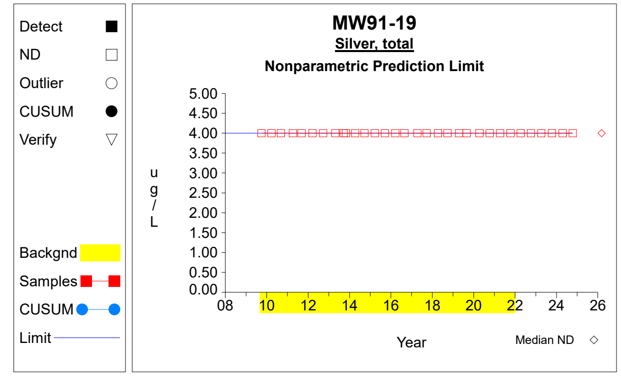
Intra-Well Control Charts / Prediction Limits



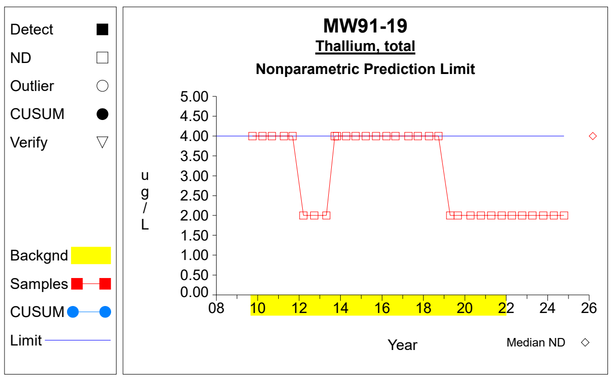
Graph 70



Graph 71



Graph 72



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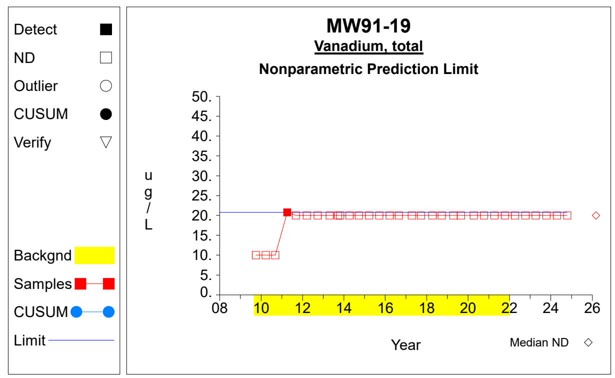
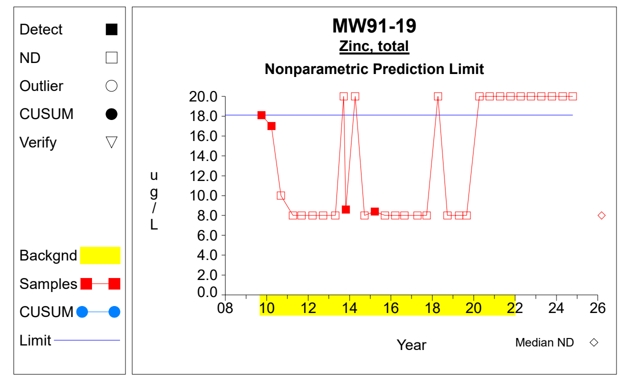
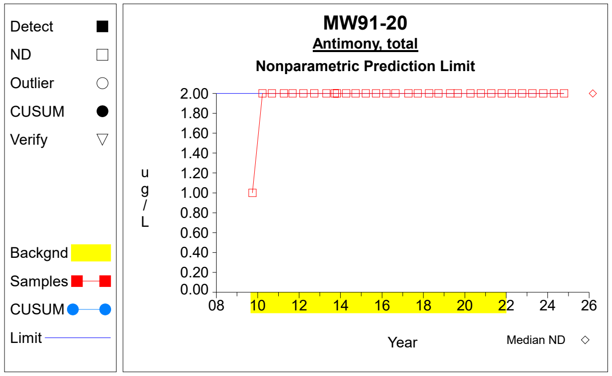


Graph 74

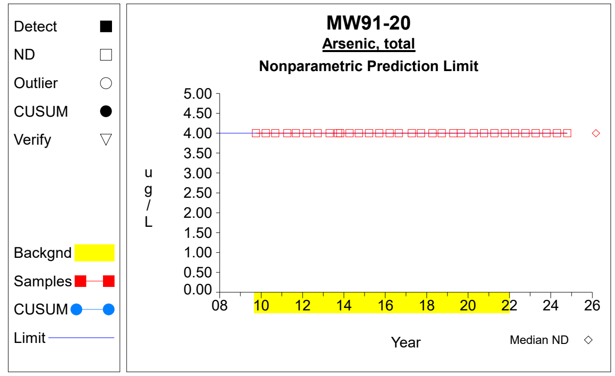


Graph 75

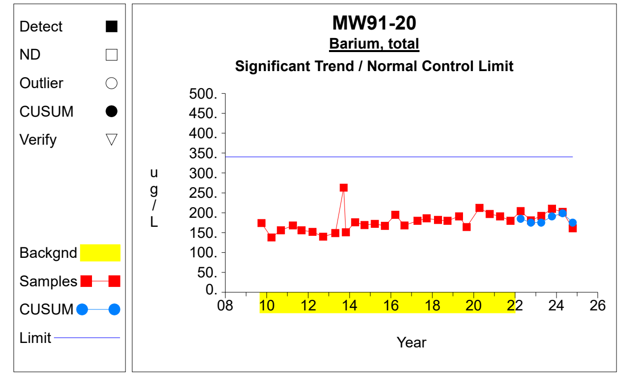
Intra-Well Control Charts / Prediction Limits



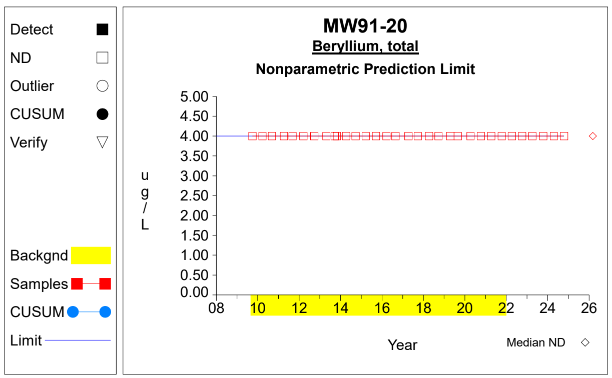
Graph 76



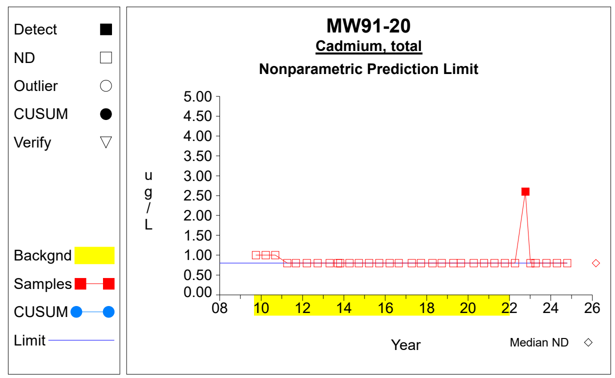
Graph 77



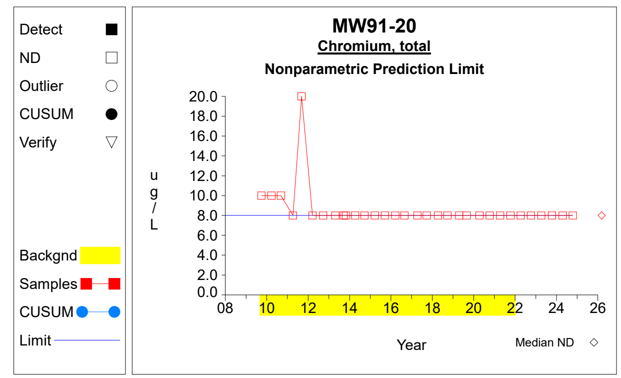
Graph 78



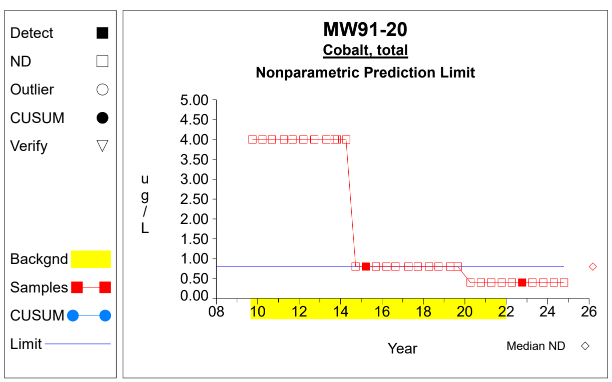
Graph 79



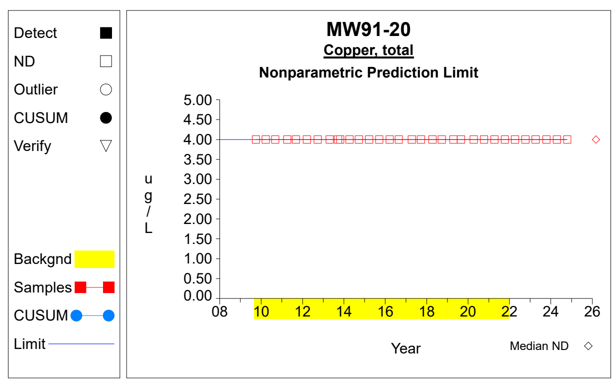
Graph 80



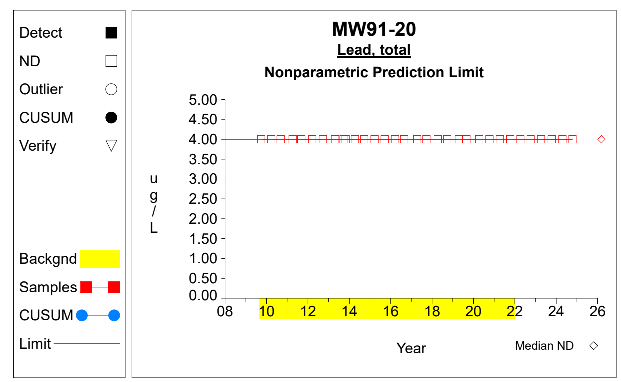
Graph 81



Graph 82

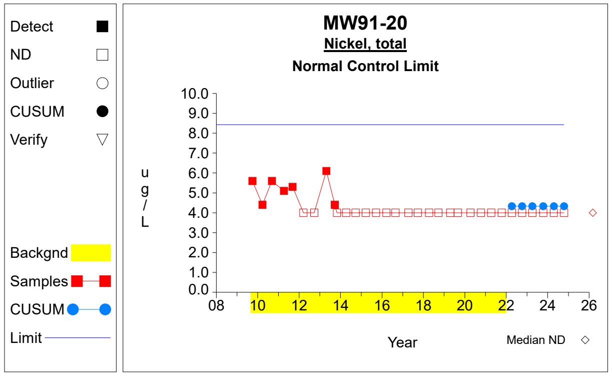


Graph 83

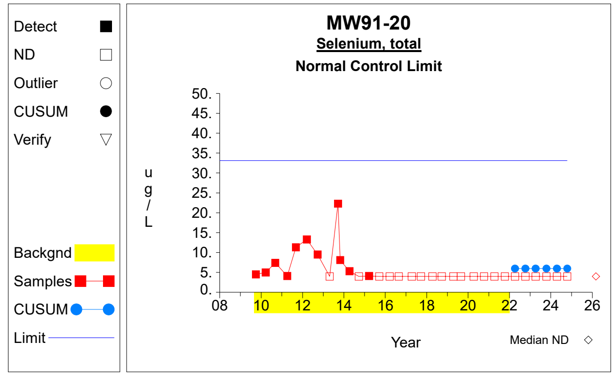


Graph 84

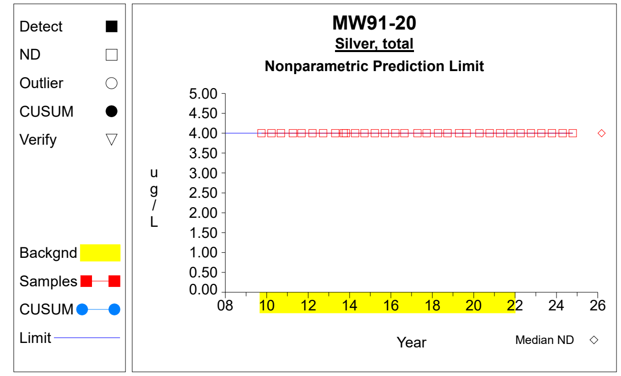
Intra-Well Control Charts / Prediction Limits



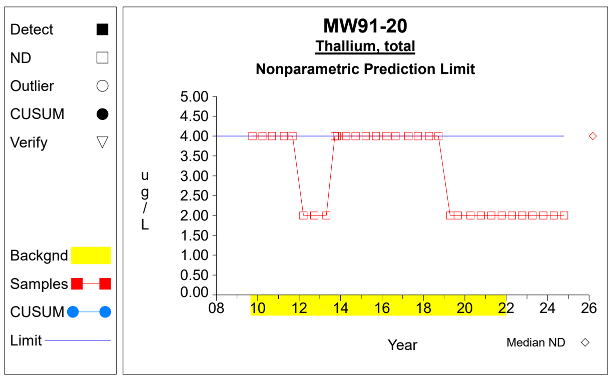
Graph 85



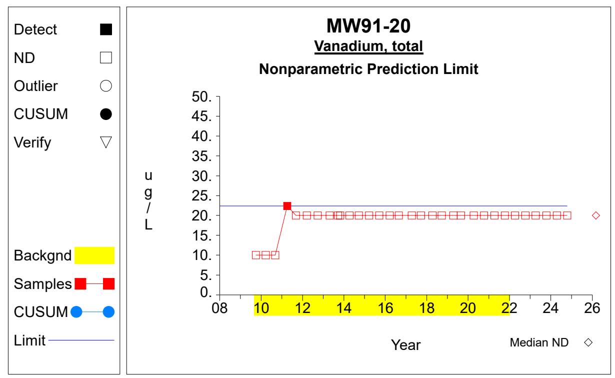
Graph 86



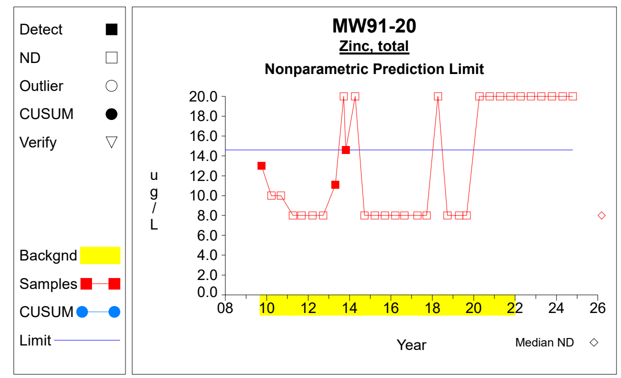
Graph 87



Graph 88



Graph 89



Graph 90

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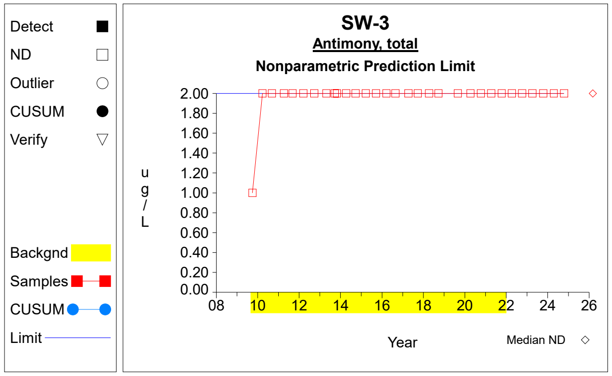
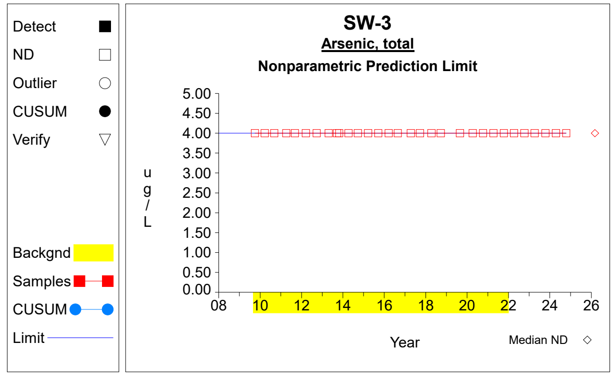
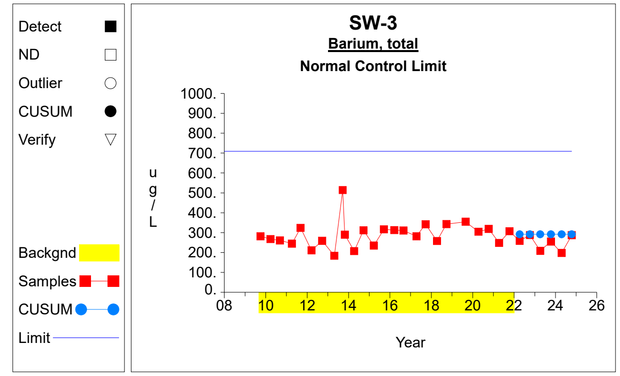
Intra-Well Control Charts / Prediction Limits



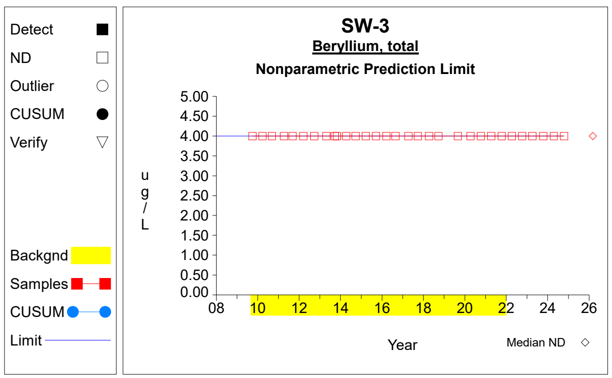
Graph 91



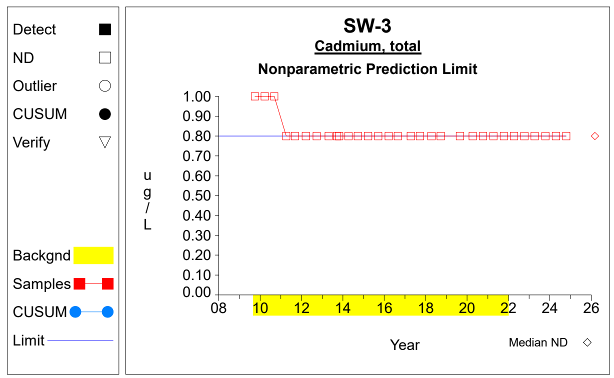
Graph 92



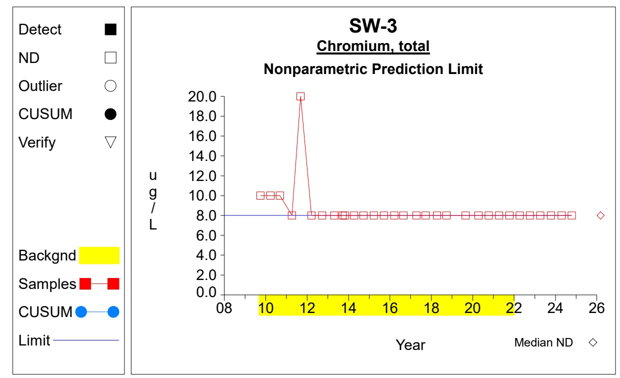
Graph 93



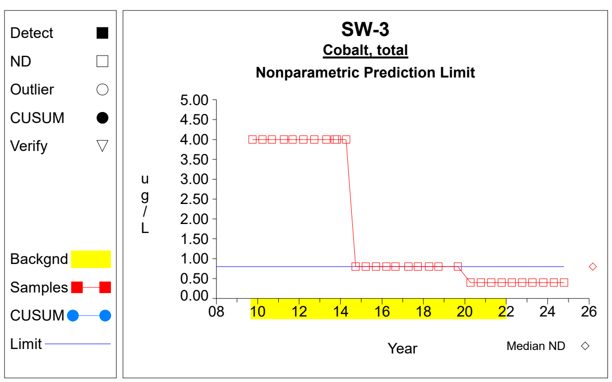
Graph 94



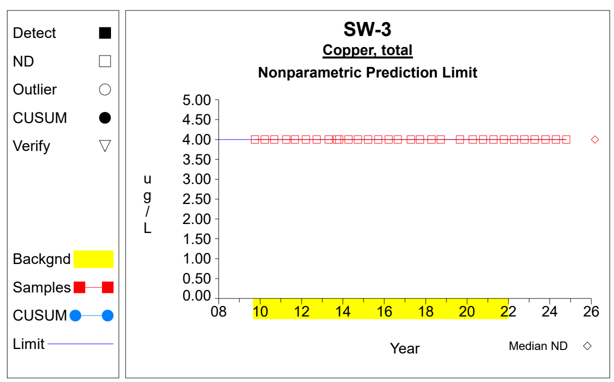
Graph 95



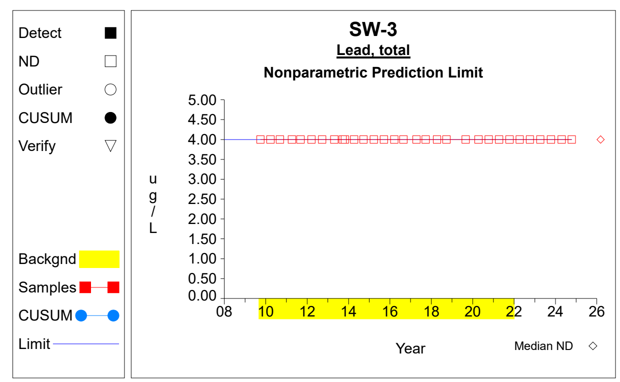
Graph 96



Graph 97



Graph 98

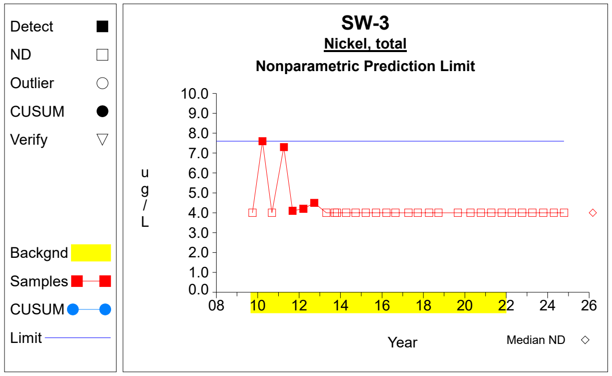


Graph 99

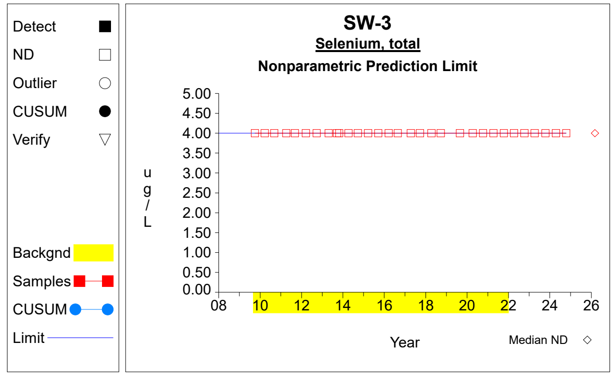
Prepared by: Otter Creek Environmental

Audubon [GW] November 2024

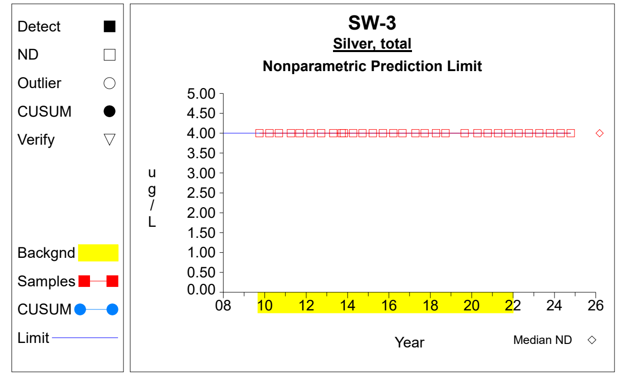
Intra-Well Control Charts / Prediction Limits



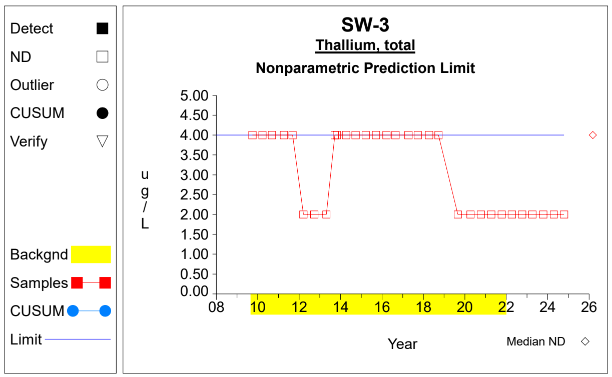
Graph 100



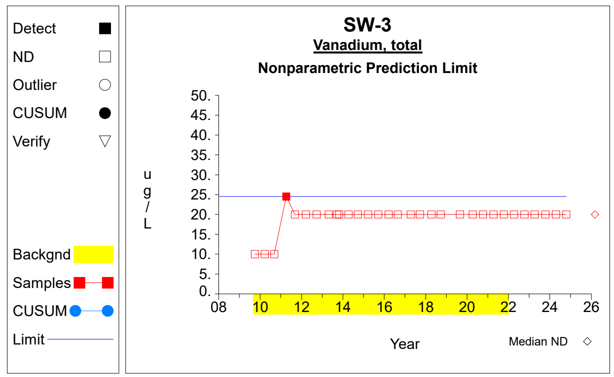
Graph 101



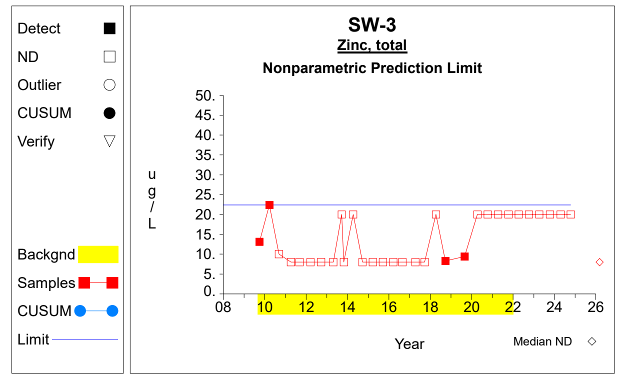
Graph 102



Graph 103

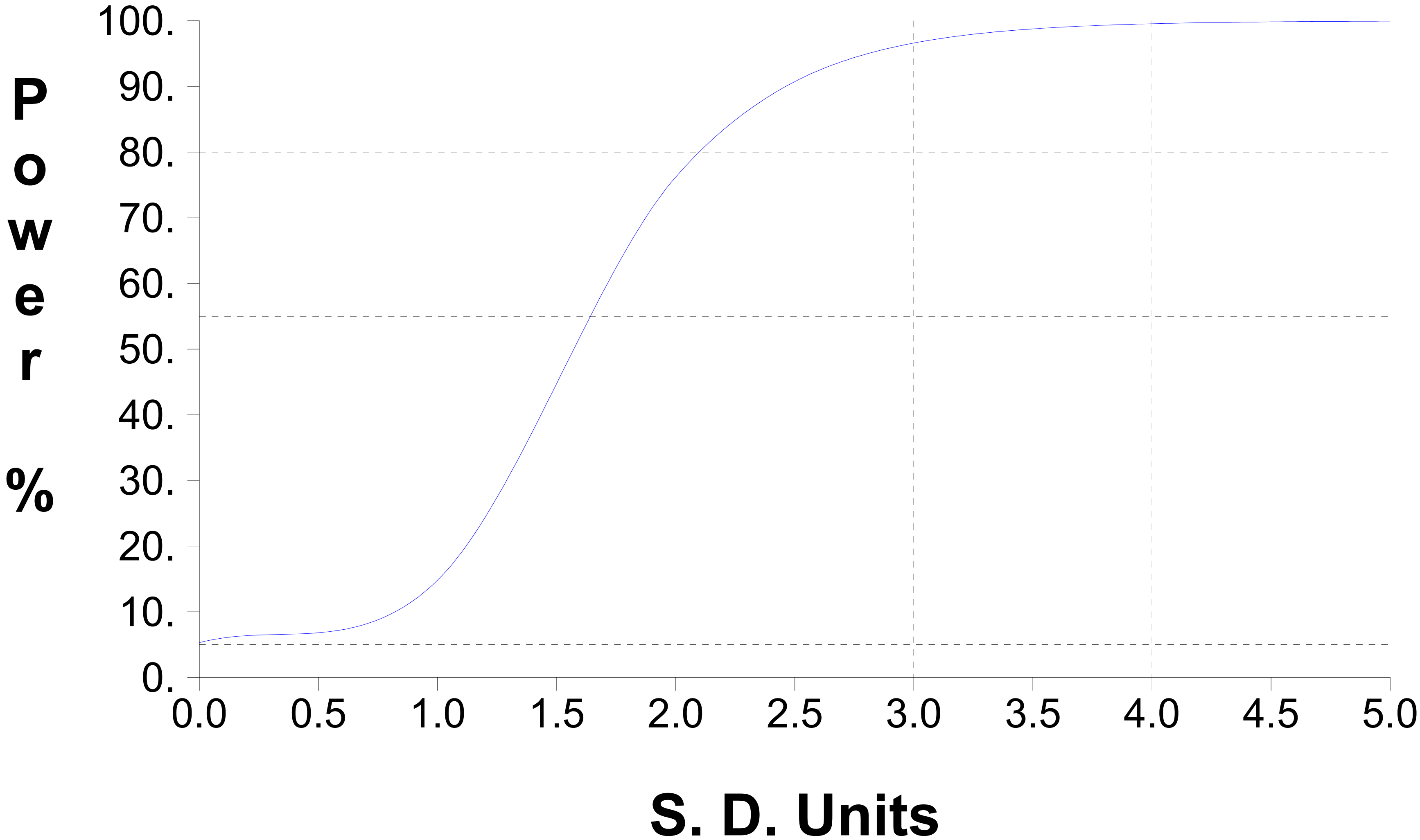


Graph 104



Graph 105

False Positive and False Negative Rates for Current Intra-Well Control Charts Monitoring Program



Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **8.9**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\overline{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{10634.0} / \textbf{26}$ $= \textbf{409.0}$	Compute background mean.
2	$S = ((\textbf{sum}[\textbf{X}^2] - \textbf{sum}[\textbf{X}]^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{5.40}\times\textbf{10}^6 - \textbf{1.13}\times\textbf{10}^8/\textbf{26}) / (\textbf{26}-1))^{1/2}$ $= \textbf{204.856}$	Compute background sd.
3	$SCL = \overline{\textbf{X}} + \textbf{F} * \textbf{S}$ $= \textbf{409.0} + \textbf{6.5} * \textbf{204.856}$ $= \textbf{1740.563}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{26} * (\textbf{26}-1) / 2$ $= \textbf{325}$	Number of sample pairs during trend detection period.
5	$S = \textbf{-13.781}$	Sen's estimator of trend.
6	$var(S) = \textbf{2056.333}$	Variance estimate for slope.
7	$M_1(S) = (\textbf{N'} - \textbf{Z}_{.99} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{325} - \textbf{2.326} * \textbf{2056.333}^{1/2}) / 2$ $= \textbf{109.762}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \textbf{-37.17}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **110.0** / **26** = **4.231**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**2196.36** - **12100.0/26**) / (**26**-1))$^{1/2}$ = **8.321**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **4.231** + **6.5** * **8.321** = **58.317**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-0.036**	Sen's estimator of trend.
6	var(S) = **1959.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**325** - **2.326** * **1959.667**$^{1/2}$) / 2 = **111.016**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.314**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **84.5** / **26** = **3.25**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**344.33** - **7140.25/26**) / (**26**-1))^{½} = **1.67**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **3.25** + **6.5** * **1.67** = **14.104**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-0.269**	Sen's estimator of trend.
6	var(S) = **1650.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**325** - **2.326** * **1650.0**^{½}) / 2 = **115.259**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.434**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **145.2** / **26**	
	= **5.585**	
2	S = ((**sum[X²]** - **sum[X]²**/**N**) / (**N**-1))^½	Compute background sd.
	= ((**1100.36** - **21083.04**/**26**) / (**26**-1))^½	
	= **3.403**	
3	SCL = $\bar{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **5.585** + **6.5** * **3.403**	
	= **27.703**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **26** * (**26**-1) / 2	
	= **325**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1361.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^½) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**325** - **2.326** * **1361.333**^½) / 2	
	= **119.59**	
8	LCL(S) = **-0.171**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **6.2**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **866.4** / **26** = **33.323**	Compute background mean.
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))$^{1/2}$ = ((**32978.32** - **750648.96/26**) / (**26**-1))$^{1/2}$ = **12.817**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **33.323** + **6.5** * **12.817** = **116.637**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-0.436**	Sen's estimator of trend.
6	var(S) = **2057.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**325** - **2.326** * **2057.333**$^{1/2}$) / 2 = **109.749**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-2.456**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW90-14
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **26.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW90-14
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **278.5** / **26**	
	= **10.712**	
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½}	Compute background sd.
	= ((**4114.39** - **77562.25**/**26**) / (**26**-1))^{½}	
	= **6.727**	
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **10.712** + **6.5** * **6.727**	
	= **54.435**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **26** * (**26**-1) / 2	
	= **325**	
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1360.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**325** - **2.326** * **1360.333**^{½}) / 2	
	= **119.605**	
8	LCL(S) = **-0.186**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **2.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW90-17
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **5956.0** / **25** = **238.24**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**1.46**x**10^6** - **3.55**x**10^7**/**25**) / (**25**-1))$^{1/2}$ = **42.233**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **238.24** + **6.5** * **42.233** = **512.753**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
5	S = **7.598**	Sen's estimator of trend.
6	var(S) = **1830.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**300** - **2.326** * **1830.333**$^{1/2}$) / 2 = **100.244**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **3.72**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **7.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **20.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW90-17
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **10.5**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **2.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **4.5**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW90-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **10799.0** / **28** = **385.679**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**4.35**x**10^6** - **1.17**x**10^8**/**28**) / (**28**-1))$^{1/2}$ = **82.55**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **385.679** + **6.5** * **82.55** = **922.254**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **28** * (**28**-1) / 2 = **378**	Number of sample pairs during trend detection period.
5	S = **-5.139**	Sen's estimator of trend.
6	var(S) = **2560.0**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**378 - 2.326** * **2560.0**$^{1/2}$) / 2 = **130.156**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-13.343**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **1.2**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **9.9**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **0.8**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW90-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **131.3** / **26** = **5.05**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**774.35** - **17239.69**/**26**) / (**26**-1))^{½} = **2.11**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **5.05** + **6.5** * **2.11** = **18.764**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1469.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**^{½}) / 2 = (**325** - **2.326** * **1469.0**^{½}) / 2 = **117.925**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.144**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW90-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **178.4** / **26** = **6.862**	Compute background mean.
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))^{½} = ((**1565.48** - **31826.56/26**) / (**26**-1))^{½} = **3.695**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **6.862** + **6.5** * **3.695** = **30.881**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-0.406**	Sen's estimator of trend.
6	var(S) = **1892.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^{½}) / 2 = (**325** - **2.326** * **1892.333**^{½}) / 2 = **111.908**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.895**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **4.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **4.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW90-4
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **30.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW90-4
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **293.2** / **26** = **11.277**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**4364.56** - **85966.24**/**26**) / (**26**-1))^{½} = **6.506**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **11.277** + **6.5** * **6.506** = **53.565**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1469.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**325** - **2.326** * **1469.0**^{½}) / 2 = **117.925**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.313**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW90-7
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **125.2** / **26** = **4.815**	Compute background mean.
2	S = ((**sum[X^2] - sum[X]^2/N**) / (**N**-1))^{½} = ((**681.04** - **15675.04/26**) / (**26**-1))^{½} = **1.768**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **4.815** + **6.5** * **1.768** = **16.308**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1361.333**	Variance estimate for slope.
7	M_1(S) = (**N' - $Z_{.99}$** * **var(S)**^{½}) / 2 = (**325** - **2.326** * **1361.333**^{½}) / 2 = **119.59**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.078**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW90-7
Normal Control Limit

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{6874.0} / \mathbf{25}$ $= \mathbf{274.96}$	Compute background mean.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{1.96}\times\mathbf{10^6} - \mathbf{4.73}\times\mathbf{10^7}/\mathbf{25}) / (\mathbf{25}-1))^{1/2}$ $= \mathbf{53.486}$	Compute background sd.
3	$SCL = \bar{\mathbf{X}} + \mathbf{F} * \mathbf{S}$ $= \mathbf{274.96} + \mathbf{6.5} * \mathbf{53.486}$ $= \mathbf{622.621}$	Compute combined Shewhart-CUSUM normal control limit.
4	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{25} * (\mathbf{25}-1) / 2$ $= \mathbf{300}$	Number of sample pairs during trend detection period.
5	$S = \mathbf{3.686}$	Sen's estimator of trend.
6	$var(S) = \mathbf{1831.333}$	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{300} - \mathbf{2.326} * \mathbf{1831.333}^{1/2}) / 2$ $= \mathbf{100.23}$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	$LCL(S) = \mathbf{-1.44}$	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **1.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW90-7
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N**	Compute background mean.
	= **102.1** / **26**	
	= **3.927**	
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{½}$	Compute background sd.
	$= ((\mathbf{457.33} - \mathbf{10424.41}/\mathbf{26}) / (\mathbf{26}-1))^{½}$	
	= **1.502**	
3	SCL = $\bar{\mathbf{X}}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **3.927** + **6.5** * **1.502**	
	= **13.689**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **26** * (**26**-1) / 2	
	= **325**	
5	S = **-0.131**	Sen's estimator of trend.
6	var(S) = **1989.333**	Variance estimate for slope.
7	$M_1(S) = (\mathbf{N'} - \mathbf{Z}_{.99} * \mathbf{var(S)}^{½}) / 2$	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
	$= (\mathbf{325} - \mathbf{2.326} * \mathbf{1989.333}^{½}) / 2$	
	= **110.628**	
8	LCL(S) = **-0.296**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **4.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW90-7
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **896.5** / **26** = **34.481**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**33870.35** - **803712.25**/**26**) / (**26**-1))^{½} = **10.878**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **34.481** + **6.5** * **10.878** = **105.189**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-1.889**	Sen's estimator of trend.
6	var(S) = **2058.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $\mathbf{Z}_{.99}$ * **var(S)**^{½}) / 2 = (**325** - **2.326** * **2058.333**^{½}) / 2 = **109.736**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-3.136**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **6.2**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **23.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW90-7
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **15.0**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW91-19
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **11399.0** / **30** = **379.967**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**4.68x10^6** - **1.30x10^8**/**30**) / (**30**-1))$^{1/2}$ = **110.361**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **379.967** + **6.5** * **110.361** = **1097.315**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **30** * (**30**-1) / 2 = **435**	Number of sample pairs during trend detection period.
5	S = **-5.982**	Sen's estimator of trend.
6	var(S) = **3140.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**435** - **2.326** * **3140.667**$^{1/2}$) / 2 = **152.324**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-14.164**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.3**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **2.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW91-19
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **147.6** / **26** = **5.677**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**911.6** - **21785.76**/**26**) / (**26**-1))$^{1/2}$ = **1.717**	Compute background sd.
3	SCL = $\overline{\mathbf{X}}$ + **F** * **S** = **5.677** + **6.5** * **1.717** = **16.836**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **-0.269**	Sen's estimator of trend.
6	var(S) = **1991.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**325** - **2.326** * **1991.0**$^{1/2}$) / 2 = **110.606**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.426**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **20.8**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW91-19
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **18.1**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at MW91-20
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **4557.0** / **26** = **175.269**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**814881.0** - **2.08**x**10^7**/**26**) / (**26**-1))$^{1/2}$ = **25.439**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **175.269** + **6.5** * **25.439** = **340.626**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **3.611**	Sen's estimator of trend.
6	var(S) = **2051.667**	Variance estimate for slope.
7	M_1(S) = (**N'** - **$Z_{.99}$** * **var(S)**$^{1/2}$) / 2 = (**325** - **2.326** * **2051.667**$^{1/2}$) / 2 = **109.822**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **1.31**	One-sided lower confidence limit for slope.
9	LCL(S) > 0	**Significant increasing trend.**

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **0.8**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **8.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X)	Compute nonparametric prediction limit as largest background measurement.
	= **0.8**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **4.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at MW91-20
Normal Control Limit

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **112.5** / **26** = **4.327**	Compute background mean.
2	S = ((**sum[X²]** - **sum[X]**²/**N**) / (**N**-1))$^{1/2}$ = ((**496.75** - **12656.25**/**26**) / (**26**-1))$^{1/2}$ = **0.632**	Compute background sd.
3	SCL = $\bar{X}$ + **F** * **S** = **4.327** + **6.5** * **0.632** = **8.432**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **26** * (**26**-1) / 2 = **325**	Number of sample pairs during trend detection period.
5	S = **0.0**	Sen's estimator of trend.
6	var(S) = **1239.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**$^{1/2}$) / 2 = (**325** - **2.326** * **1239.333**$^{1/2}$) / 2 = **121.558**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-0.072**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at MW91-20
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N**	Compute background mean.
	= **154.9** / **26**	
	= **5.958**	
2	S = ((**sum[X²] - sum[X]²/N**) / (**N**-1))^{½}	Compute background sd.
	= ((**1359.45** - **23994.01/26**) / (**26**-1))^{½}	
	= **4.179**	
3	SCL = $\overline{X}$ + **F** * **S**	Compute combined Shewhart-CUSUM normal control limit.
	= **5.958** + **6.5** * **4.179**	
	= **33.121**	
4	N' = **N** * (**N**-1) / 2	Number of sample pairs during trend detection period.
	= **26** * (**26**-1) / 2	
	= **325**	
5	S = **-0.033**	Sen's estimator of trend.
6	var(S) = **1649.0**	Variance estimate for slope.
7	M_1(S) = (**N'** - $Z_{.99}$ * **var(S)**^{½}) / 2	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1^{th} largest slope estimate. When M_1 is not an integer, interpolation is used.
	= (**325** - **2.326** * **1649.0**^{½}) / 2	
	= **115.273**	
8	LCL(S) = **-0.323**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X)	Compute nonparametric prediction limit as median reporting limit in background.
	= **4.0**	
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **22.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at MW91-20
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **14.6**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Antimony, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **2.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Arsenic, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Barium, total (ug/L) at SW-3
Normal Control Limit

Step	Equation	Description
1	$\overline{X}$ = **sum[X]** / **N** = **7292.0** / **25** = **291.68**	Compute background mean.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))^{½} = ((**2.23**x**10**^{6} - **5.32**x**10**^{7}/**25**) / (**25**-1))^{½} = **64.277**	Compute background sd.
3	SCL = $\overline{X}$ + **F** * **S** = **291.68** + **6.5** * **64.277** = **709.478**	Compute combined Shewhart-CUSUM normal control limit.
4	N' = **N** * (**N**-1) / 2 = **25** * (**25**-1) / 2 = **300**	Number of sample pairs during trend detection period.
5	S = **4.948**	Sen's estimator of trend.
6	var(S) = **1832.333**	Variance estimate for slope.
7	M_1(S) = (**N'** - **Z**$_{.99}$ * **var(S)**^{½}) / 2 = (**300** - **2.326** * **1832.333**^{½}) / 2 = **100.217**	Ordinal position for one-sided lower confidence limit for slope. The LCL is the M_1th largest slope estimate. When M_1 is not an integer, interpolation is used.
8	LCL(S) = **-2.158**	One-sided lower confidence limit for slope.

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Beryllium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cadmium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Chromium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **8.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Cobalt, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **0.8**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Copper, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Lead, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Nickel, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **7.6**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Selenium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Silver, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Thallium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = median(X) = **4.0**	Compute nonparametric prediction limit as median reporting limit in background.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Vanadium, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **24.5**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Worksheet 2 - Intra-Well Control Charts / Prediction Limits
Zinc, total (ug/L) at SW-3
Nonparametric Prediction Limit

Step	Equation	Description
1	PL = max(X) = **22.4**	Compute nonparametric prediction limit as largest background measurement.
2	Conf = **0.99**	Confidence level is based on N, K and resampling strategy (see Gibbons 1994).

Attachment E

Historical VOC Detections

Table 1

Historical Volatile Organic Compound Detections

Constituent	Well	Date	Identifier	Result	Limit	Units
1,1-dichloroethane	MW90-14	9/30/2009		1.4	1.0	ug/L
Acetone	MW90-14	10/16/2008		13.6	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	9/24/2018		12	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	11/01/2018		21	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	4/16/2019		6	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-14	8/29/2019		9	6	ug/L
Chloroethane	MW90-14	9/30/2009		2.2	1.0	ug/L
Acetone	MW90-17	9/23/2017		12.9	10.0	ug/L
Bis(2-ethylhexyl)phthalate	MW90-4	4/09/2021		9	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-4	10/06/2022		14	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/16/2019		9	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	6/25/2019		11	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	8/29/2019		15	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/10/2020		7	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/09/2021		7	6	ug/L
Bis(2-ethylhexyl)phthalate	MW90-7	4/18/2024		18	6	ug/L
Bis(2-ethylhexyl)phthalate	MW91-19	4/18/2024		13	6	ug/L
Acetone	SW-3	9/06/2007		5.42	10.00	ug/L

Detections are shown for the constituents and sample points selected for the analysis
The Limit column refers to the laboratory reporting limit

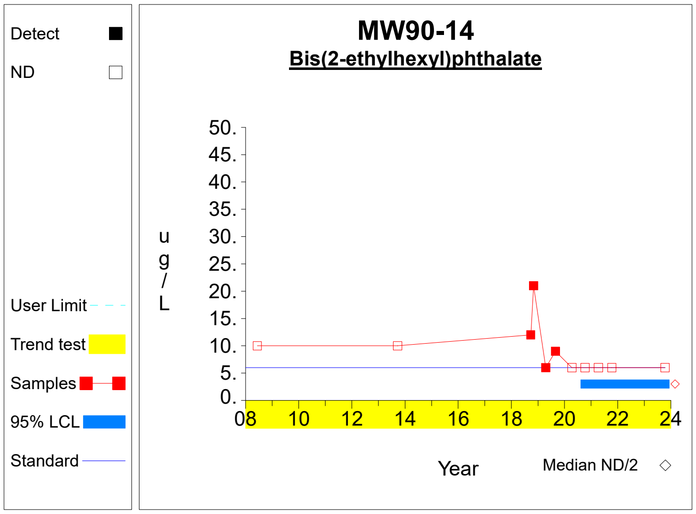
Table 1

Confidence Intervals for Comparing the Mean of the Last 4 Measurements to an Assessment Monitoring Standard

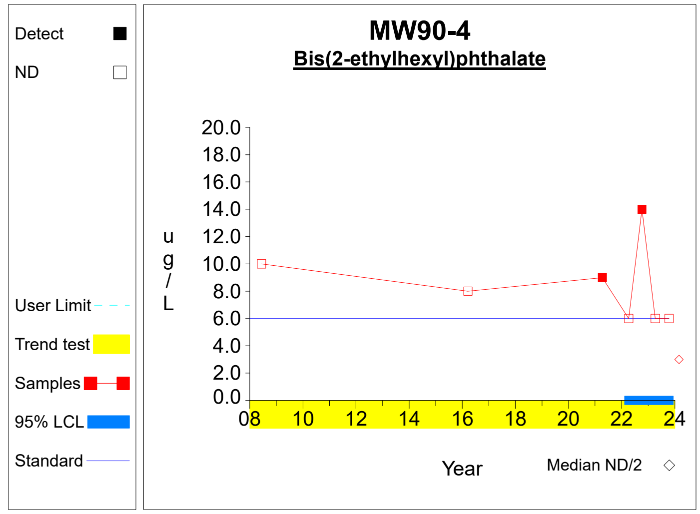
Constituent	Units	Well	N	Mean	SD	Factor	95% LCL	95% UCL	Standard	Trend
Bis(2-ethylhexyl)phthalate	ug/L	MW90-14	4	3.000	0.000	1.176	3.000	3.000	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW90-4	4	5.750	5.500	1.176	0.000	12.220	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW90-7	4	6.750	7.500	1.176	0.000	15.572	6.000	
Bis(2-ethylhexyl)phthalate	ug/L	MW91-19	4	5.500	5.000	1.176	0.000	11.381	6.000	

* - Insufficient Data
** - Significant Exceedance
LCL = Lower Confidence Limit
UCL = Upper Confidence Limit

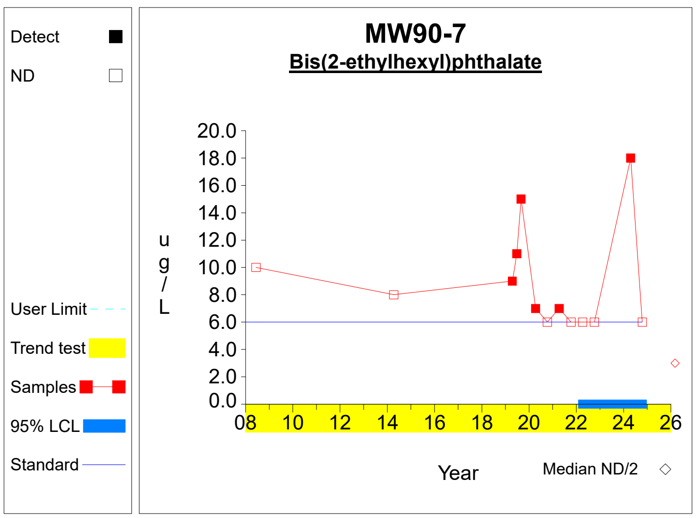
Confidence Limits (Assessment)



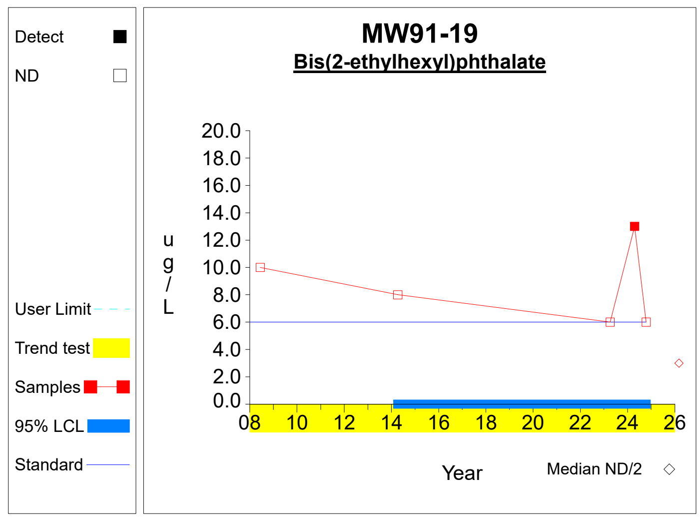
Graph 1



Graph 2



Graph 3



Graph 4

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl)phthalate (ug/L) at MW90-14

Step	Equation	Description
1	$\bar{X} = \mathbf{sum[X]} / \mathbf{N}$ $= \mathbf{12.0} / \mathbf{4}$ $= \mathbf{3.0}$	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{36.0} - \mathbf{144.0/4}) / (\mathbf{4}-1))^{1/2}$ $= \mathbf{0.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS/N}^{1/2}$ $= \mathbf{3.0} - \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{3.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS/N}^{1/2}$ $= \mathbf{3.0} + \mathbf{2.353} * \mathbf{0.0/4}^{1/2}$ $= \mathbf{3.0}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \mathbf{N} * (\mathbf{N}-1) / 2$ $= \mathbf{11} * (\mathbf{11}-1) / 2$ $= \mathbf{55}$	Number of sample pairs during trend detection period.
6	$S = \mathbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \mathbf{120.667}$	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{55} \pm \mathbf{2.576} * \mathbf{120.667}^{1/2}) / 2$ $= [\ \mathbf{13.352}, \mathbf{41.648}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \mathbf{-3.605}, \mathbf{0.0}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl)phthalate (ug/L) at MW90-4

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **23.0** / **4** = **5.75**	Compute the mean of the last 4 measurements.
2	S = ((**sum[X^2]** - **sum[X]**^{2}/**N**) / (**N**-1))$^{1/2}$ = ((**223.0** - **529.0**/**4**) / (**4**-1))$^{1/2}$ = **5.5**	Compute sd of the last 4 measurements.
3	LCL = **$\bar{X}$ - tS/N**$^{1/2}$ = **5.75** - **2.353** * **5.5**/**4**$^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	UCL = **$\bar{X}$** + **tS/N**$^{1/2}$ = **5.75** + **2.353** * **5.5**/**4**$^{1/2}$ = **12.22**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **7** * (**7**-1) / 2 = **21**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **27.667**	Variance estimate for slope.
8	M(S) = (**N'** ± **Z**$_{.995}$ * **var(S)**$^{1/2}$) / 2 = (**21** ± **2.576** * **27.667**$^{1/2}$) / 2 = [**3.725**, **17.275**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the Mth largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-3.845**, **0.883**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl)phthalate (ug/L) at MW90-7

Step	Equation	Description
1	$\bar{X}$ = **sum[X]** / **N** = **27.0** / **4** = **6.75**	Compute the mean of the last 4 measurements.
2	$S = ((\mathbf{sum[X^2]} - \mathbf{sum[X]}^2/\mathbf{N}) / (\mathbf{N}-1))^{1/2}$ $= ((\mathbf{351.0} - \mathbf{729.0}/\mathbf{4}) / (\mathbf{4}-1))^{1/2}$ = **7.5**	Compute sd of the last 4 measurements.
3	$LCL = \bar{\mathbf{X}} - \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{6.75} - \mathbf{2.353} * \mathbf{7.5}/\mathbf{4}^{1/2}$ = **0.0**	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{\mathbf{X}} + \mathbf{tS}/\mathbf{N}^{1/2}$ $= \mathbf{6.75} + \mathbf{2.353} * \mathbf{7.5}/\mathbf{4}^{1/2}$ = **15.572**	Compute upper confidence limit for the mean of the last 4 measurements.
5	N' = **N** * (**N**-1) / 2 = **13** * (**13**-1) / 2 = **78**	Number of sample pairs during trend detection period.
6	S = **0.0**	Sen's estimator of trend.
7	var(S) = **223.333**	Variance estimate for slope.
8	$M(S) = (\mathbf{N'} \pm \mathbf{Z}_{.995} * \mathbf{var(S)}^{1/2}) / 2$ $= (\mathbf{78} \pm \mathbf{2.576} * \mathbf{223.333}^{1/2}) / 2$ = [**19.752**, **58.248**]	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	CL(S) = [**-2.357**, **0.652**]	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

Worksheet 6 - Assessment Monitoring
Bis(2-ethylhexyl)phthalate (ug/L) at MW91-19

Step	Equation	Description
1	$\bar{X} = \textbf{sum[X]} / \textbf{N}$ $= \textbf{22.0} / \textbf{4}$ $= \textbf{5.5}$	Compute the mean of the last 4 measurements.
2	$S = ((\textbf{sum[X}^2\textbf{]} - \textbf{sum[X]}^2/\textbf{N}) / (\textbf{N}-1))^{1/2}$ $= ((\textbf{196.0} - \textbf{484.0}/\textbf{4}) / (\textbf{4}-1))^{1/2}$ $= \textbf{5.0}$	Compute sd of the last 4 measurements.
3	$LCL = \bar{X} - tS/N^{1/2}$ $= \textbf{5.5} - \textbf{2.353} * \textbf{5.0}/\textbf{4}^{1/2}$ $= \textbf{0.0}$	Compute lower confidence limit for the mean of the last 4 measurements.
4	$UCL = \bar{X} + tS/N^{1/2}$ $= \textbf{5.5} + \textbf{2.353} * \textbf{5.0}/\textbf{4}^{1/2}$ $= \textbf{11.381}$	Compute upper confidence limit for the mean of the last 4 measurements.
5	$N' = \textbf{N} * (\textbf{N}-1) / 2$ $= \textbf{5} * (\textbf{5}-1) / 2$ $= \textbf{10}$	Number of sample pairs during trend detection period.
6	$S = \textbf{0.0}$	Sen's estimator of trend.
7	$var(S) = \textbf{8.0}$	Variance estimate for slope.
8	$M(S) = (\textbf{N'} \pm \textbf{Z}_{.995} * \textbf{var(S)}^{1/2}) / 2$ $= (\textbf{10} \pm \textbf{2.576} * \textbf{8.0}^{1/2}) / 2$ $= [\ \textbf{1.357}, \textbf{8.643}\ ]$	Ordinal positions for two-sided lower confidence limits for slope. The LCL and UCL are the M^{th} largest slope estimates for the values shown. When the values are not integers, interpolation is used.
9	$CL(S) = [\ \textbf{-13.075}, \textbf{0.866}\ ]$	Two-sided confidence interval for slope.
10	the interval includes 0	There is no significant trend.

APPENDIX D

Summary of Appendix II Events & Compound Detections (over time)

Bis(2-ethylhexyl) Phthalate Detection (ug/L) Summary ***(green highlights indicate full Appendix II sample events)***

Date	**MW90-4**	**MW90-7**	**MW90-14**	**MW91-19**
6/9/2008	<10	<10	<10	<10
9/24/2012	NT	NT	NT	NT
4/24/2013	NT	NT	NT	NT
9/20/2013	NT	NT	<10	NT
4/8/2014	NT	<8	NT	<8
9/22/2014	NT	NT	NT	NT
3/20/2015	NT	NT	NT	NT
9/17/2015	NT	NT	NT	NT
3/17/2016	<8	NT	NT	NT
8/26/2016	NT	NT	NT	NT
4/11/2017	NT	NT	NT	NT
9/23/2017	NT	NT	NT	NT
4/10/2018	NT	NT	NT	NT
9/24/20	NT	NT	**12.0**	NT
11/1/2018	NT	NT	**21.0**	NT
4/16/2019	NT	**9.0**	**6.0**	NT
6/25/2019	NT	**11.0**	NT	NT
8/29/2019	NT	**15.0**	**9.0**	NT
4/10/2020	NT	**7.0**	<6	NT
10/9/2020	NT	<6	<6	NT
4/9/2021	**9.0**	**7.0**	<6	NT
10/11/2021	NT	<6	<6	NT
4/7/2022	<6	<6	NT	NT
10/6/2022	**14.0**	<6	NT	NT
4/5/2023	<6	NT	NT	<6
10/13/2023	<6	NT	<6	NT
4/18/2024	NT	**18.0**	NT	**13.0**
10/15/2024	NT	<6	NT	<6

Appendix E

Summary of Annual Leachate Disposal (1996 to Present)

Volumes of Leachate Collected

Month of Hauling or Recirculation	Volume Hauled or Recirculated (gals)
August 1996 (Hauled)	246,000
May 1997 (Hauled)	290,250
May 1998 (Hauled)	225,000
July 1999 (Hauled)	344,250
June 2001 (Hauled)	379,200
January 2003-October 2003 (Recirculated)	1,700,000
June 2004 (Hauled)	462,000
December 2006 (Hauled)	312,000
May 2008 (Hauled)	206,500
December 2008 (Hauled)	232,500
May 2010 (Hauled)	364,000
December 2011 (Hauled)	157,500
November 2014 (Hauled)	28,000
March 2015 (Hauled)	354,000
May 2016 (Hauled)	394,200
April 2018 (Hauled)	189,800
December 2018 (Hauled)	43,800
April 2019 (Hauled	175,200
June 2019 (Hauled)	7,300
July 2019 (Hauled)	116,800
August 2020 (Hauled)	204,400
2021	None hauled
2022	None hauled
2023 (Hauled)	153,300
2024	None hauled

Appendix F

Comprehensive Leachate Testing Results – Lab Report

ANALYTICAL REPORT

October 19, 2022

Work Order: 1FJ0440

Report To	**Work Order Information**
Tami Anderson	Date Received: 10/6/2022 8:10:00AM
Audubon County Landfill	Collector: Anderson, Tami
1881 215th St	Phone: (712) 563-3589
Audubon, IA 50025	PO Number:

Project: Audubon Co. - Leachate

Project Number: Audubon Co. - Leachate

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1FJ0440-01 Leachate				Matrix: Water	Collected:	10/05/22 08:30	
1,1,1-Trichloroethane	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
1,1-Dichloroethylene	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
1,2-Dichlorobenzene	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
1,4-Dichlorobenzene	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
Benzene	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
Carbon Tetrachloride	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
Toluene	<1.0 ug/L	1.0	1FJ0337	EPA 8260B	AJM	10/07/22 13:09	
Surrogate: Dibromofluoromethane	*105 %*			*80-126*	AJM	10/07/22 13:09	
Surrogate: 1,2-Dichloroethane-d4	*111 %*			*63-138*	AJM	10/07/22 13:09	
Surrogate: Toluene-d8	*98.2 %*			*87-116*	AJM	10/07/22 13:09	
Surrogate: 4-Bromofluorobenzene	*104 %*			*85-111*	AJM	10/07/22 13:09	
BOD (5 day)	<5 mg/L	5	1FJ0198	SM 5210 B	LAE	10/06/22 14:55	
Cyanide, total	<0.005 mg/L	0.005	1FJ0684	EPA 9010B	AKW	10/14/22 12:15	
COD, total	**46 mg/L**	**20**	1FJ0376	EPA 410.4	AKW	10/10/22 13:34	
Solids, total dissolved	**329 mg/L**	**5**	1FJ0488	USGS I-1750-85	MEAH	10/12/22 9:05	
Solids, total suspended	**5 mg/L**	**3**	1FJ0504	USGS I-3765-85	MEAH	10/12/22 16:05	
Chloride	**91.6 mg/L**	**10.0**	1FJ0949	300.0	MID	10/18/22 18:02	
Arsenic, total	<0.0040 mg/L	0.0040	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Barium, total	**0.143 mg/L**	**0.0040**	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Boron, total	**0.287 mg/L**	**0.100**	1FJ0613	EPA 6010B	JAR	10/15/22 1:00	
Cadmium, total	<0.0008 mg/L	0.0008	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Chromium, total	<0.0080 mg/L	0.0080	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Copper, total	**0.0058 mg/L**	**0.0040**	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Iron, total	**0.199 mg/L**	**0.100**	1FJ0613	EPA 6010B	JAR	10/15/22 1:00	
Mercury, total	<0.00050 mg/L	0.00050	1FJ0473	EPA 7470A	JAR	10/13/22 10:22	
Magnesium, total	**21.0 mg/L**	**0.100**	1FJ0613	EPA 6010B	JAR	10/15/22 1:00	
Molybdenum, total	<0.0040 mg/L	0.0040	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Nickel, total	**0.0151 mg/L**	**0.0040**	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Lead, total	<0.0040 mg/L	0.0040	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

Audubon County Landfill
1881 215th St
Audubon, IA 50025

Work Order: 1FJ0440

Analyte		Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1FJ0440-01	Leachate				Matrix: Water	Collected:	10/05/22 08:30	
Selenium, total		<0.0040 mg/L	0.0040	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
Zinc, total		**0.0301 mg/L**	**0.0200**	1FJ0382	EPA 6020A	RVV	10/17/22 19:33	
1FJ0440-01RE1	Leachate				Matrix: Water	Collected:	10/05/22 08:30	
Trichloroethylene		<1.0 ug/L	1.0	1FJ0403	EPA 8260B	AJM	10/10/22 15:42	
Surrogate: Dibromofluoromethane		*108 %*			*80-126*	AJM	10/10/22 15:42	
Surrogate: 1,2-Dichloroethane-d4		*117 %*			*63-138*	AJM	10/10/22 15:42	
Surrogate: Toluene-d8		*99.1 %*			*87-116*	AJM	10/10/22 15:42	
Surrogate: 4-Bromofluorobenzene		*93.5 %*			*85-111*	AJM	10/10/22 15:42	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. Samples were preserved in accordance with 40 CFR for pH adjustment unless otherwise noted. MRL= Method Reporting Limit.

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0337 - EPA 5030B										
Blank (1FJ0337-BLK1)				Prepared & Analyzed: 10/07/22						
Surrogate: Dibromofluoromethane	*53.4*		*ug/L*	*50.0440*		*107*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*55.5*		*"*	*50.0720*		*111*	*63-138*			
Surrogate: Toluene-d8	*49.3*		*"*	*50.0640*		*98.4*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*52.2*		*"*	*50.1200*		*104*	*85-111*			
1,1-Dichloroethylene	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Carbon Tetrachloride	ND	1.0	"							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
LCS (1FJ0337-BS1)				Prepared & Analyzed: 10/07/22						
Surrogate: Dibromofluoromethane	*53.5*		*ug/L*	*50.0440*		*107*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*53.2*		*"*	*50.0720*		*106*	*63-138*			
Surrogate: Toluene-d8	*51.1*		*"*	*50.0640*		*102*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*50.7*		*"*	*50.1200*		*101*	*85-111*			
1,1-Dichloroethylene	54.70	1.0	"	50.0000		109	76-140			
1,1,1-Trichloroethane	47.91	1.0	"	49.9750		95.9	67-121			
Carbon Tetrachloride	52.01	1.0	"	50.0000		104	71-131			
Benzene	51.08	1.0	"	50.0000		102	77-130			
Toluene	48.29	1.0	"	50.0000		96.6	77-130			
1,4-Dichlorobenzene	47.08	1.0	"	50.0000		94.2	69-128			
1,2-Dichlorobenzene	46.03	1.0	"	50.0000		92.1	70-125			
Matrix Spike (1FJ0337-MS1)	**Source: 1FJ0508-05**			Prepared & Analyzed: 10/07/22						
Surrogate: Dibromofluoromethane	*544*		*ug/L*	*500.440*		*109*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*548*		*"*	*500.720*		*110*	*63-138*			
Surrogate: Toluene-d8	*510*		*"*	*500.640*		*102*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*512*		*"*	*501.200*		*102*	*85-111*			
1,1-Dichloroethylene	572.7	10.0	"	500.000	ND	115	68-153			
1,1,1-Trichloroethane	498.7	10.0	"	499.750	ND	99.8	71-118			
Carbon Tetrachloride	544.6	10.0	"	500.000	ND	109	71-133			
Benzene	521.3	10.0	"	500.000	ND	104	81-125			
Toluene	491.0	10.0	"	500.000	ND	98.2	82-123			
1,4-Dichlorobenzene	484.0	10.0	"	500.000	ND	96.8	70-124			
1,2-Dichlorobenzene	470.7	10.0	"	500.000	ND	94.1	68-123			

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0337 - EPA 5030B										
Matrix Spike Dup (1FJ0337-MSD1)		**Source: 1FJ0508-05**		Prepared & Analyzed: 10/07/22						
Surrogate: Dibromofluoromethane	*539*		*ug/L*	*500.440*		*108*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*545*		*"*	*500.720*		*109*	*63-138*			
Surrogate: Toluene-d8	*503*		*"*	*500.640*		*101*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*517*		*"*	*501.200*		*103*	*85-111*			
1,1-Dichloroethylene	604.5	10.0	"	500.000	ND	121	68-153	5.40	21	
1,1,1-Trichloroethane	517.6	10.0	"	499.750	ND	104	71-118	3.72	15	
Carbon Tetrachloride	569.7	10.0	"	500.000	ND	114	71-133	4.51	14	
Benzene	533.0	10.0	"	500.000	ND	107	81-125	2.22	12	
Toluene	511.2	10.0	"	500.000	ND	102	82-123	4.03	12	
1,4-Dichlorobenzene	478.7	10.0	"	500.000	ND	95.7	70-124	1.10	28	
1,2-Dichlorobenzene	470.6	10.0	"	500.000	ND	94.1	68-123	0.0212	29	
Batch 1FJ0403 - EPA 5030B										
Blank (1FJ0403-BLK1)				Prepared & Analyzed: 10/10/22						
Surrogate: Dibromofluoromethane	*53.4*		*ug/L*	*50.1360*		*106*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*58.1*		*"*	*50.2960*		*116*	*63-138*			
Surrogate: Toluene-d8	*49.8*		*"*	*50.4800*		*98.6*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*46.9*		*"*	*50.2080*		*93.5*	*85-111*			
Trichloroethylene	ND	1.0	"							
LCS (1FJ0403-BS1)				Prepared & Analyzed: 10/10/22						
Surrogate: Dibromofluoromethane	*51.7*		*ug/L*	*50.1360*		*103*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*56.7*		*"*	*50.2960*		*113*	*63-138*			
Surrogate: Toluene-d8	*49.8*		*"*	*50.4800*		*98.7*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*48.6*		*"*	*50.2080*		*96.9*	*85-111*			
Trichloroethylene	50.72	1.0	"	50.0000		101	80-124			

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0403 - EPA 5030B										
LCS (1FJ0403-BS2)				Prepared & Analyzed: 10/10/22						
Surrogate: Dibromofluoromethane	*52.1*		*ug/L*	*50.1360*		*104*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*56.5*		*"*	*50.2960*		*112*	*63-138*			
Surrogate: Toluene-d8	*49.8*		*"*	*50.4800*		*98.7*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*48.2*		*"*	*50.2080*		*95.9*	*85-111*			
Trichloroethylene	33.74	1.0	"	50.0000		67.5	80-124			QS-01
Matrix Spike (1FJ0403-MS1)	**Source: 1FJ0740-02**			Prepared & Analyzed: 10/10/22						
Surrogate: Dibromofluoromethane	*512*		*ug/L*	*501.360*		*102*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*528*		*"*	*502.960*		*105*	*63-138*			
Surrogate: Toluene-d8	*484*		*"*	*504.800*		*95.8*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*474*		*"*	*502.080*		*94.5*	*85-111*			
Trichloroethylene	440.5	10.0	"	500.000	ND	88.1	83-120			
Matrix Spike Dup (1FJ0403-MSD1)	**Source: 1FJ0740-02**			Prepared & Analyzed: 10/10/22						
Surrogate: Dibromofluoromethane	*510*		*ug/L*	*501.360*		*102*	*80-126*			
Surrogate: 1,2-Dichloroethane-d4	*527*		*"*	*502.960*		*105*	*63-138*			
Surrogate: Toluene-d8	*485*		*"*	*504.800*		*96.1*	*87-116*			
Surrogate: 4-Bromofluorobenzene	*474*		*"*	*502.080*		*94.4*	*85-111*			
Trichloroethylene	439.0	10.0	"	500.000	ND	87.8	83-120	0.341	11	

Audubon County Landfill
1881 215th St
Audubon, IA 50025

Work Order: 1FJ0440

Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0198 - General Prep Micro										
Blank (1FJ0198-BLK1)				Prepared & Analyzed: 10/06/22						
BOD (5 day)	ND	4	mg/L							B-06
Blank (1FJ0198-BLK2)				Prepared & Analyzed: 10/06/22						
BOD (5 day)	ND	4	mg/L							
Duplicate (1FJ0198-DUP1)	**Source: 1FJ0275-02**			Prepared & Analyzed: 10/06/22						
BOD (5 day)	264	4	mg/L		298			12.1	29	
Reference (1FJ0198-SRM1)				Prepared & Analyzed: 10/06/22						
BOD (5 day)	212	4	mg/L	198.000		107	84.6-115.4			
Reference (1FJ0198-SRM2)				Prepared & Analyzed: 10/06/22						
BOD (5 day)	219	4	mg/L	198.000		111	84.6-115.4			
Batch 1FJ0376 - Wet Chem Preparation										
Blank (1FJ0376-BLK1)				Prepared & Analyzed: 10/10/22						
COD, total	ND	20	mg/L							
LCS (1FJ0376-BS1)				Prepared & Analyzed: 10/10/22						
COD, total	105	27	mg/L	100.000		105	90-110			
Matrix Spike (1FJ0376-MS1)	**Source: 1FJ0637-01**			Prepared & Analyzed: 10/10/22						
COD, total	48.7	20	mg/L	42.8571	ND	114	90-110			QM-07
Matrix Spike Dup (1FJ0376-MSD1)	**Source: 1FJ0637-01**			Prepared & Analyzed: 10/10/22						
COD, total	50.2	20	mg/L	42.8571	ND	117	90-110	3.07	10	QM-07

Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0488 - Wet Chem Preparation										
Blank (1FJ0488-BLK1)				Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total dissolved	ND	5	mg/L							
LCS (1FJ0488-BS1)				Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total dissolved	94	5	mg/L	100.000		93.9	71-114			
Duplicate (1FJ0488-DUP1)	**Source: 1FJ0381-01**			Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total dissolved	1840	5	mg/L		1880			2.58	30	
Batch 1FJ0504 - Wet Chem Preparation										
Blank (1FJ0504-BLK1)				Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total suspended	ND	1	mg/L							
LCS (1FJ0504-BS1)				Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total suspended	16.3	1	mg/L	15.0000		109	74-114			
Duplicate (1FJ0504-DUP1)	**Source: 1FJ0478-01**			Prepared: 10/11/22 Analyzed: 10/12/22						
Solids, total suspended	126	10	mg/L		149			16.7	30	
Batch 1FJ0684 - Wet Chem Preparation										
Blank (1FJ0684-BLK1)				Prepared & Analyzed: 10/14/22						
Cyanide, total	ND	0.005	mg/L							
LCS (1FJ0684-BS1)				Prepared & Analyzed: 10/14/22						
Cyanide, total	0.0170	0.005	mg/L	0.0200000		85.1	68-137			

Audubon County Landfill
1881 215th St
Audubon, IA 50025

Work Order: 1FJ0440

Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0684 - Wet Chem Preparation										
Matrix Spike (1FJ0684-MS1)		**Source: 1FJ0440-01**		Prepared & Analyzed: 10/14/22						
Cyanide, total	0.0169	0.005	mg/L	0.0200000	ND	84.5	57-150			
Matrix Spike Dup (1FJ0684-MSD1)		**Source: 1FJ0440-01**		Prepared & Analyzed: 10/14/22						
Cyanide, total	0.0266	0.005	mg/L	0.0200000	ND	133	57-150	44.6	20	QR-02

Determination of Inorganic Anions - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0949 - General Prep HPLC/IC										
Blank (1FJ0949-BLK1)				Prepared & Analyzed: 10/18/22						
Chloride	ND	1.0	mg/L							
Blank (1FJ0949-BLK2)				Prepared & Analyzed: 10/18/22						
Chloride	ND	1.0	mg/L							
LCS (1FJ0949-BS1)				Prepared & Analyzed: 10/18/22						
Chloride	14.84	1.0	mg/L	15.4295		96.2	90-110			
LCS Dup (1FJ0949-BSD1)				Prepared & Analyzed: 10/18/22						
Chloride	14.86	1.0	mg/L	15.4295		96.3	90-110	0.128	10	
MRL Check (1FJ0949-MRL1)				Prepared & Analyzed: 10/18/22						
Chloride	0.66	1.0	mg/L	0.611236		107	50-150			
Matrix Spike (1FJ0949-MS1)	**Source: 1FJ0861-02**			Prepared & Analyzed: 10/18/22						
Chloride	21.62	1.0	mg/L	15.4295	6.34	99.0	80-120			
Matrix Spike Dup (1FJ0949-MSD1)	**Source: 1FJ0861-02**			Prepared & Analyzed: 10/18/22						
Chloride	21.51	1.0	mg/L	15.4295	6.34	98.3	80-120	0.510	10	

Keystone LABORATORIES
A Microbac Company

Audubon County Landfill
1881 215th St
Audubon, IA 50025

Work Order: 1FJ0440

Determination of Total Metals - Quality Control
Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0382 - EPA 3005A Total Recoverable Metals										
Blank (1FJ0382-BLK1)				Prepared: 10/10/22 Analyzed: 10/17/22						
Arsenic, total	ND	0.0040	mg/L							
Barium, total	ND	0.0040	"							
Cadmium, total	ND	0.0008	"							
Chromium, total	ND	0.0080	"							
Copper, total	ND	0.0040	"							
Lead, total	ND	0.0040	"							
Molybdenum, total	ND	0.0040	"							
Nickel, total	ND	0.0040	"							
Selenium, total	ND	0.0040	"							
Zinc, total	ND	0.0200	"							
LCS (1FJ0382-BS1)				Prepared: 10/10/22 Analyzed: 10/17/22						
Arsenic, total	0.0952	0.0040	mg/L	0.100000		95.2	80-120			
Barium, total	0.108	0.0040	"	0.100000		108	80-120			
Cadmium, total	0.0958	0.0008	"	0.100000		95.8	80-120			
Chromium, total	0.0965	0.0080	"	0.100000		96.5	80-120			
Copper, total	0.0992	0.0040	"	0.100000		99.2	80-120			
Lead, total	0.0967	0.0040	"	0.100000		96.7	80-120			
Molybdenum, total	0.0983	0.0040	"	0.100000		98.3	80-120			
Nickel, total	0.100	0.0040	"	0.100000		100	80-120			
Selenium, total	0.1043	0.0040	"	0.100000		104	80-120			
Zinc, total	0.0956	0.0200	"	0.100000		95.6	80-120			
Matrix Spike (1FJ0382-MS1)		**Source: 1FJ0776-01**		Prepared: 10/10/22 Analyzed: 10/17/22						
Arsenic, total	0.0970	0.0040	mg/L	0.100000	0.0020	95.0	75-125			
Barium, total	0.168	0.0040	"	0.100000	0.0624	105	75-125			
Cadmium, total	0.0902	0.0008	"	0.100000	0.0004	89.8	75-125			
Chromium, total	0.116	0.0080	"	0.100000	0.0248	90.9	75-125			
Copper, total	0.117	0.0040	"	0.100000	0.0280	88.9	75-125			
Lead, total	0.0900	0.0040	"	0.100000	0.0010	89.1	75-125			
Molybdenum, total	0.104	0.0040	"	0.100000	0.0037	100	75-125			
Nickel, total	0.0954	0.0040	"	0.100000	0.0026	92.9	75-125			
Selenium, total	0.1030	0.0040	"	0.100000	0.0021	101	75-125			
Zinc, total	0.110	0.0200	"	0.100000	0.0208	89.6	75-125			

Determination of Total Metals - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0382 - EPA 3005A Total Recoverable Metals										
Matrix Spike Dup (1FJ0382-MSD1)		**Source: 1FJ0776-01**		Prepared: 10/10/22 Analyzed: 10/17/22						
Arsenic, total	0.103	0.0040	mg/L	0.100000	0.0020	101	75-125	5.78	20	
Barium, total	0.177	0.0040	"	0.100000	0.0624	115	75-125	5.65	20	
Cadmium, total	0.0936	0.0008	"	0.100000	0.0004	93.2	75-125	3.66	20	
Chromium, total	0.120	0.0080	"	0.100000	0.0248	95.1	75-125	3.60	20	
Copper, total	0.127	0.0040	"	0.100000	0.0280	99.1	75-125	8.34	20	
Lead, total	0.0922	0.0040	"	0.100000	0.0010	91.2	75-125	2.33	20	
Molybdenum, total	0.107	0.0040	"	0.100000	0.0037	104	75-125	3.09	20	
Nickel, total	0.105	0.0040	"	0.100000	0.0026	102	75-125	9.49	20	
Selenium, total	0.1076	0.0040	"	0.100000	0.0021	106	75-125	4.36	20	
Zinc, total	0.112	0.0200	"	0.100000	0.0208	91.5	75-125	1.70	20	
Post Spike (1FJ0382-PS1)		**Source: 1FJ0776-01**		Prepared: 10/10/22 Analyzed: 10/17/22						
Arsenic, total	0.0801		mg/L	0.0800000	0.0019	97.7	80-120			
Barium, total	0.146		"	0.0800000	0.0611	107	80-120			
Cadmium, total	0.0740		"	0.0800000	0.0004	92.0	80-120			
Chromium, total	0.0992		"	0.0800000	0.0243	93.7	80-120			
Copper, total	0.105		"	0.0800000	0.0275	96.7	80-120			
Lead, total	0.0729		"	0.0800000	0.0010	89.9	80-120			
Molybdenum, total	0.0849		"	0.0800000	0.0037	102	80-120			
Nickel, total	0.0793		"	0.0800000	0.0025	96.0	80-120			
Selenium, total	0.0800		"	0.0800000	0.0020	97.4	80-120			
Zinc, total	0.0939		"	0.0800000	0.0204	91.9	80-120			
Batch 1FJ0473 - EPA 7470A Hg Water										
Blank (1FJ0473-BLK1)				Prepared: 10/11/22 Analyzed: 10/13/22						
Mercury, total	ND	0.00050	mg/L							

Audubon County Landfill
1881 215th St
Audubon, IA 50025

Work Order: 1FJ0440

Determination of Total Metals - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0473 - EPA 7470A Hg Water										
LCS (1FJ0473-BS1)				Prepared: 10/11/22 Analyzed: 10/13/22						
Mercury, total	0.00264	0.00050	mg/L	0.00250000		105	80-120			
Matrix Spike (1FJ0473-MS1)		**Source: 1FJ0164-01**		Prepared: 10/11/22 Analyzed: 10/13/22						
Mercury, total	0.00282	0.00050	mg/L	0.00250000	ND	113	75-125			
Matrix Spike Dup (1FJ0473-MSD1)		**Source: 1FJ0164-01**		Prepared: 10/11/22 Analyzed: 10/13/22						
Mercury, total	0.00263	0.00050	mg/L	0.00250000	ND	105	75-125	7.27	20	
Batch 1FJ0613 - EPA 3010A Digestion (Water)										
Blank (1FJ0613-BLK1)				Prepared: 10/13/22 Analyzed: 10/15/22						
Boron, total	ND	0.100	mg/L							
Iron, total	ND	0.100	"							
Magnesium, total	ND	0.100	"							
LCS (1FJ0613-BS1)				Prepared: 10/13/22 Analyzed: 10/15/22						
Boron, total	0.214	0.100	mg/L	0.200000		107	80-120			
Iron, total	2.41	0.100	"	2.20000		109	80-120			
Magnesium, total	2.41	0.100	"	2.20000		109	80-120			
Matrix Spike (1FJ0613-MS1)		**Source: 1FJ0440-01**		Prepared: 10/13/22 Analyzed: 10/15/22						
Boron, total	0.502	0.100	mg/L	0.200000	0.287	108	75-125			
Iron, total	2.51	0.100	"	2.20000	0.199	105	75-125			
Magnesium, total	24.0	0.100	"	2.20000	21.0	137	75-125			QM-4X
Matrix Spike Dup (1FJ0613-MSD1)		**Source: 1FJ0440-01**		Prepared: 10/13/22 Analyzed: 10/15/22						
Boron, total	0.526	0.100	mg/L	0.200000	0.287	119	75-125	4.52	20	
Iron, total	2.59	0.100	"	2.20000	0.199	109	75-125	3.30	20	
Magnesium, total	25.5	0.100	"	2.20000	21.0	204	75-125	6.03	20	QM-4X

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Work Order: 1FJ0440

Determination of Total Metals - Quality Control

Keystone Laboratories - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1FJ0613 - EPA 3010A Digestion (Water)										
Post Spike (1FJ0613-PS1)	**Source: 1FJ0440-01**		Prepared: 10/13/22 Analyzed: 10/15/22							
Boron, total	1.10		mg/L	0.800000	0.287	101	80-120			
Iron, total	9.25		"	8.80000	0.199	103	80-120			
Magnesium, total	30.7		"	8.80000	21.0	110	80-120			

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

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Audubon County Landfill
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Work Order: 1FJ0440

Certified Analyses Included In This Report

Method/Matrix	Analyte	Certifications
300.0 in Water		
	Chloride	KS-NT,SIA1X
EPA 410.4 in Water		
	COD, total	KS-NT,SIA1X
EPA 6010B in Water		
	Boron, total	KS-NT,SIA1X
	Iron, total	KS-NT,SIA1X
	Magnesium, total	KS-NT,SIA1X
EPA 6020A in Water		
	Arsenic, total	SIA1X,KS-NT
	Barium, total	SIA1X,KS-NT
	Cadmium, total	SIA1X,KS-NT
	Chromium, total	SIA1X,KS-NT
	Copper, total	SIA1X,KS-NT
	Lead, total	SIA1X,KS-NT
	Molybdenum, total	SIA1X
	Nickel, total	SIA1X,KS-NT
	Selenium, total	SIA1X,KS-NT
	Zinc, total	SIA1X,KS-NT
EPA 7470A in Water		
	Mercury, total	KS-NT,SIA1X
EPA 8260B in Water		
	1,1-Dichloroethylene	KS-NT,SIA1X
	1,1,1-Trichloroethane	KS-NT,SIA1X
	Carbon Tetrachloride	KS-NT,SIA1X
	Benzene	KS-NT,SIA1X
	Trichloroethylene	KS-NT,SIA1X
	Toluene	KS-NT,SIA1X
	1,4-Dichlorobenzene	KS-NT,SIA1X
	1,2-Dichlorobenzene	KS-NT,SIA1X
EPA 9010B in Water		
	Cyanide, total	KS-NT,SIA1X
SM 5210 B in Water		
	BOD (5 day)	SIA1X
USGS I-1750-85 in Water		
	Solids, total dissolved	KS-NT,SIA1X
USGS I-3765-85 in Water		
	Solids, total suspended	SIA1X,KS-NT

Audubon County Landfill
1881 215th St
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Work Order: 1FJ0440

Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2023
KS-NT	Kansas Department of Health and Environment (NELAP)	E-10287	10/31/2022
MO-KC	Missouri Department of Natural Resources	140	04/30/2023
SIA1X	Iowa Dept. of Natural Resources (updated certificate pending)	95	02/01/2024

Notes and Definitions

B-06	Unseeded Blank equals .3mg/L
QM-07	The spike recovery and/or RPD was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
QM-4X	The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QS-01	The blank spike recovery and/or blank spike duplicate recovery were outside the established acceptance limits. Batch was accepted based on acceptable MS/MSD/RPD results.

End of Report

Sue Thompson

Keystone Laboratories

Sue Thompson

Client Services Manager

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Keystone LABORATORIES, INC.
600 East 17th Street
Newton, IA 50208
641-792-8451

1FJ0440
Audubon County Landfill
PM: Sue Thompson

Printed: 9/29/2022 5:47:19AM

www.keystonelabs.cc

SITE INFORMATION

Sampler: Tami Anderson

Project: Audubon Co. - Leachate

REPORT TO

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

INVOICE TO

Tami Anderson
Audubon County Landfill
1881 215th St
Audubon, IA 50025

SPECIAL INSTRUCTIONS

None

Turn Around Time
☑ Standard ☐ RUSH, need by __/__/__

LAB USE ONLY

Work Order 1FJ0440
Temperature 1.9
Turn-Cooler: No

☐ Custody Seal
☐ Containers Intact
☐ COC/Labels Agree
☐ Preservation Confirmed
☐ Received on Ice

Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses	Lab Sample Number
01-001	**Leachate**	Water	GRAB	10/5/22	8:30am	7	8260@1,1,1-tca, 8260@1,1-dce, 8260@1,2-dcb, 8260@1,4-dcb, 8260@benzene, 8260@carbon-tet, 8260@tce, 8260@toluene, as-t-6020, ba-t-6020, bod-5210, b-t-6010, cd-t-6020, cl-300.0, cn-t-9010b, cod-t-410.4, cr-t-6020, cu-t-6020, fe-t-6010, hg-t-7470, mg-t-6010, mo-t-6020, ni-t-6020, pb-t-6020, se-t-6020, tds-t-1750-85, tss-t-3765-85, zn-t-6020	01

Relinquished By: Tami Anderson — Date/Time: 10-5-22 9:00am

Received By: — Date/Time:

Relinquished By: — Date/Time:

Received for Lab By: Amy Hochstetler — Date/Time: 10-6-22 8:10

Remarks:

Original - Lab Copy Yellow - Sampler Copy