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July 6, 2023

Hillary Young Chief Engineer - Land Protection Division Oklahoma Department of Environmental Quality P.O. Box 1677 Oklahoma City, OK 73162

Re: Notification of Apparent Exceedances from First 2023 Assessment Monitoring Western Farmers Electric Cooperative – Hugo Power Station, Fort Towson, Oklahoma

Dear Ms. Young:

Western Farmers Electric Cooperative (WFEC) has been conducting assessment monitoring associated with Coal Combustion Residuals (CCR) Units at its Hugo Power Station (HPS). The first 2023 assessment monitoring was conducted April 11-18, 2023. The laboratory reports for the first 2023 assessment monitoring of the Landfill CCR Unit monitoring wells are included in **Attachment A**. Groundwater data summary tables for the Landfill CCR Unit updated to include results from the first 2023 assessment monitoring are included in **Attachment B**. The laboratory reports for the first 2023 assessment monitoring wells are included in **Attachment C**. Groundwater data summary tables for the Surface Impoundment CCR Unit updated to include results from the first 2023 assessment monitoring are included in **Attachment C**. Groundwater data summary tables for the Surface Impoundment CCR Unit updated to include results from the first 2023 assessment monitoring are included in **Attachment C**.

Based upon review of data from the first 2023 assessment monitoring meeting QA/QC standards, WFEC has identified constituents listed in Appendix B of Oklahoma Administrative Code Chapter 517, <u>Disposal of Coal Combustion</u> <u>Residuals from Electric Utilities</u> (OAC 252:517) at statistically significant levels (SSLs) above the GWPS at wells associated with its Landfill CCR Unit. In particular, molybdenum was detected at SSLs above the GWPS at monitoring wells MW-15A, MW-16, MW-18, and MW-19S, where previous SSLs exceedances for molybdenum have been historically noted. This submittal addresses OAC 252:517-9-6(g), which requires the owner/operator to prepare a notification identifying OAC 252:517 Appendix B constituents detected at SSLs above the GWPS.

Molybdenum has been historically detected at SSLs above the GWPS at the above mentioned wells and notifications have previously been provided to the Oklahoma Department of Environmental Quality (ODEQ). A <u>Plan and Schedule</u> <u>for Analyzing SSIs for Molybdenum</u> (Altamira; March 4, 2020) was submitted to and approved for implementation by ODEQ in its letter dated April 28, 2020. An <u>Assessment of Corrective Measures (ACM) Report</u> was submitted on October 29, 2020. Two years of semi-annual sampling was proposed to establish the effectiveness of monitored natural attenuation as a groundwater remedy. The two year sampling period was completed in October 2022. Findings from each semi-annual sampling event were reported to the ODEQ, with findings from the final two year

Proudly serving the following members in Oklahoma and New Mexico:

Alfalfa Electric Cooperative • Altus Air Force Base • Canadian Valley Electric Cooperative • Central Valley Electric Cooperative • Choctaw Electric Cooperative • Cimarron Electric Cooperative • CKenergy Electric Cooperative • Cotton Electric Cooperative • East Central Oklahoma Electric Cooperative • Farmers' Electric Cooperative • Harmon Electric Association • Kay Electric Cooperative • Kiamichi Electric Cooperative • Lea County Electric Cooperative • Northfork Electric Cooperative • Northwestern Electric Cooperative • Oklahoma Electric Cooperative • Red River Valley Rural Electric Association • Roosevelt County Electric Cooperative • Rural Electric Cooperative • Southeastern Electric Cooperative • Southwest Rural Electric Association semi-annual sampling event provided to ODEQ in the <u>Fourth Report to Monitor Progress of Semi-Annual Corrective</u> <u>Measures Assessment (CMA) Sampling at Landfill CCR Unit</u> (Altamira, April 10, 2023). From this, molybdenum concentrations appear to have decreased over the sampling history at monitoring wells MW-15A, MW-16, MW-18, and MW-19S; with decreasing trends apparent at MW-15A, MW-16, and MW-18. The report proposed an additional two years of semi-annual monitoring and reporting to fully evaluate the proposed remedy and to meet the standards listed in OAC 252:517-9-8(b) and (c). The report was accepted by ODEQ in its letter dated May 23, 2023.

Other than as discussed above, no OAC 252:517 Appendix B constituents were detected at SSLs above the GWPS in monitoring wells associated with the Landfill CCR Unit. Also, no OAC 252:517 Appendix B constituents were detected at SSLs above the GWPS in monitoring wells associated with the Surface Impoundment CCR Unit.

Sincerely,

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Kent Fletcher Environmental Coordinator

Attachments

cc: John McCreight / WFEC Chris Schaefer and Bert Smith / Altamira-US, LLC.

ATTACHMENT A

FIRST 2023 ASSESSMENT MONITORING – APRIL 2023 LABORATORY REPORT (LANDFILL CCR UNIT)



10450 Stancliff Rd. Suite 210 Houston, TX 77099 T: +1 281 530 5656 F: +1 281 530 5887

June 28, 2023

Bert Smith Altamira 525 central park Dr Suite 500 Oklahoma City, OK 73013

Work Order: HS23040697

Laboratory Results for: WFEC / CCR Landfill

Dear Bert Smith,

ALS Environmental received 13 sample(s) on Apr 13, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Ima M. Kinchen

Generated By: JUMOKE.LAWAL Anna Kinchen Project Manager

alsglobal.com

Client:AltamiraProject:WFEC / CCR LandfillWork Order:HS23040697

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23040697-01	MW-3	Water		12-Apr-2023 10:42	13-Apr-2023 09:00	
HS23040697-02	MW-5S	Water		12-Apr-2023 12:32	13-Apr-2023 09:00	
HS23040697-03	MW-13	Water		12-Apr-2023 11:57	13-Apr-2023 09:00	
HS23040697-04	MW-14A	Water		12-Apr-2023 11:06	13-Apr-2023 09:00	
HS23040697-05	MW-15A	Water		12-Apr-2023 09:45	13-Apr-2023 09:00	
HS23040697-06	MW-20	Water		12-Apr-2023 12:58	13-Apr-2023 09:00	
HS23040697-07	MW-21	Water		12-Apr-2023 09:47	13-Apr-2023 09:00	
HS23040697-08	MW-16	Water		12-Apr-2023 15:23	14-Apr-2023 08:50	
HS23040697-09	MW-17	Water		12-Apr-2023 16:37	14-Apr-2023 08:50	
HS23040697-10	MW-18	Water		12-Apr-2023 18:10	14-Apr-2023 08:50	
HS23040697-11	DUP-4	Water		12-Apr-2023 16:37	14-Apr-2023 08:50	
HS23040697-12	MW-7S	Water		18-Apr-2023 09:28	19-Apr-2023 09:10	
HS23040697-13	MW-19S	Water		17-Apr-2023 18:33	19-Apr-2023 09:10	
HS23040697-07 HS23040697-08 HS23040697-09 HS23040697-10 HS23040697-11 HS23040697-12	MW-21 MW-16 MW-17 MW-18 DUP-4 MW-7S	Water Water Water Water Water		12-Apr-2023 09:47 12-Apr-2023 15:23 12-Apr-2023 16:37 12-Apr-2023 18:10 12-Apr-2023 16:37 18-Apr-2023 09:28	13-Apr-2023 09:00 14-Apr-2023 08:50 14-Apr-2023 08:50 14-Apr-2023 08:50 14-Apr-2023 08:50 19-Apr-2023 09:10	

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Client: Altamira Project: WFEC / CCR Landfill Work Order: HS23040697

Work Order Comments

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Metals by Method SW7470A

Batch ID: 192976,192996

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 192867

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Batch ID: 192875

Sample ID: MW-19S (HS23040697-13MS)

• The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Boron, Molybdenum, Sodium.

Wet Chemistry by Method E300

Batch ID: R432738

Sample ID: HS23040723-01MS

• MS and MSD are for an unrelated sample

Batch ID: R433149

Sample ID: HS23040356-02MS

• MS and MSD are for an unrelated sample

WetChemistry by Method E410.4

Batch ID: R433632,R433776

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B

Batch ID: R433630

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500 S2-F

Batch ID: R432939,R433336,R433352

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

CASE NARRATIVE

CASE NARRATIVE

Client:AltamiraProject:WFEC / CCR LandfillWork Order:HS23040697

WetChemistry by Method SM4500H+ B

Batch ID: R433354

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2510 B

Batch ID: R433330

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C

Batch ID: R432824,R432930,R433412

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method E300

Batch ID: R432628

Sample ID: HS23040411-01MS

• MS and MSD are for an unrelated sample

Sample ID: HS23040694-02MS

• MS and MSD are for an unrelated sample

Batch ID: R433149

Sample ID: MW-19S (HS23040697-13MS)

• The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Sulfate)

Sample ID: MW-19S (HS23040697-13MSD)

• The MS and/or MSD recovery was outside of the control limits for Nitrogen, Nitrite (As N), Nitrate/Nitrite (as N) due to suspect matrix effect

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Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-3
Collection Date:	12-Apr-2023 10:42

ANALYTICAL REPORT

WorkOrder:HS23040697 Lab ID:HS23040697-01 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	:SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:05
Arsenic	0.000762	J	0.000400	0.00200	mg/L	1	25-Apr-2023 20:05
Barium	0.0194		0.00190	0.00400	mg/L	1	25-Apr-2023 20:05
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:05
Boron	2.28		0.220	0.400	mg/L	20	26-Apr-2023 11:19
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:05
Calcium	295		0.680	10.0	mg/L	20	26-Apr-2023 11:19
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:05
Cobalt	0.000730	J	0.000200	0.00500	mg/L	1	25-Apr-2023 20:05
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:05
Lithium	0.133		0.00100	0.00500	mg/L	1	25-Apr-2023 20:05
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 20:05
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:05
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:05
MERCURY BY SW7470A		Method	:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:13
ANIONS BY E300.0, REV 2.1, 1993		Meth	od:E300				Analyst: TH
Chloride	9.95		0.200	0.500	mg/L	1	13-Apr-2023 15:17
Fluoride	0.333		0.0500	0.100	mg/L	1	13-Apr-2023 15:17
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 15:17
Sulfate	1,480		4.00	10.0	mg/L	20	13-Apr-2023 15:23
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	10.0	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011		Method	1:M2510 B				Analyst: CD
Specific Conductivity	2,820		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Metho	d:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,960		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011		Method:S	6M4500H+ B				Analyst: MZD
рН	7.26	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.8	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-5S
Collection Date:	12-Apr-2023 12:32

WorkOrder:HS23040697 Lab ID:HS23040697-02 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION I SM3500FED	BY I	Method:S	M3500FED				Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCULA BY SM3500FED	TION I		M3500FED olved)				Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:07
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:07
Barium	0.00789		0.00190	0.00400	mg/L	1	25-Apr-2023 20:07
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:07
Boron	2.21		0.220	0.400	mg/L	20	26-Apr-2023 11:21
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:07
Calcium	37.0		0.0340	0.500	mg/L	1	25-Apr-2023 20:07
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:07
Cobalt	U		0.000200	0.00500	mg/L	1	25-Apr-2023 20:07
Iron	0.0165	J	0.0120	0.200	mg/L	1	25-Apr-2023 20:07
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:07
Lithium	0.0520		0.00100	0.00500	mg/L	1	25-Apr-2023 20:07
Magnesium	5.72		0.0100	0.200	mg/L	1	25-Apr-2023 20:07
Molybdenum	0.00211	J	0.000600	0.00500	mg/L	1	25-Apr-2023 20:07
Potassium	3.84		0.0180	0.200	mg/L	1	25-Apr-2023 20:07
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:07
Sodium	371		0.280	4.00	mg/L	20	26-Apr-2023 11:21
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:07
DISSOLVED METALS BY SW6020A	Meth	od:SW602	20A (dissol [,]	ved)	Prep:SW3010A	25-Apr-2023	Analyst: JC
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 15:45
Molybdenum	0.00207	J	0.000600	0.00500	mg/L	1	25-Apr-2023 15:45
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:14
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH
Chloride	23.8		0.200	0.500	mg/L	1	13-Apr-2023 15:29
Fluoride	1.25		0.0500	0.100	mg/L	1	13-Apr-2023 15:29
Nitrogen, Nitrate (As N)	0.467		0.0300	0.100	mg/L	1	13-Apr-2023 15:29
Sulfate	556		4.00	10.0	mg/L	20	13-Apr-2023 15:35
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	I:E410.4				Analyst: TH
Chemical Oxygen Demand	5.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011		Method:	M2510 B				Analyst: CD
Specific Conductivity	1,880		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-5S	Lab ID:HS23040697-02
Collection Date:	12-Apr-2023 12:32	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,100		5.00	10.0	mg/L	1	14-Apr-2023 13:07
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	292		5.00	5.00	mg/L	1	25-Apr-2023 19:17
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:17
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:17
Alkalinity, Total (As CaCO3)	292		5.00	5.00	mg/L	1	25-Apr-2023 19:17
FERROUS IRON BY SM3500 FE B	Γ	Method:SN	13500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	7	Method:SM (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	N	/lethod:SN	14500H+ B				Analyst: MZD
рН	7.73	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	21.1	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-13
Collection Date:	12-Apr-2023 11:57

ANALYTICAL REPORT

WorkOrder:HS23040697 Lab ID:HS23040697-03 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	:SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:09
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:09
Barium	0.0102		0.00190	0.00400	mg/L	1	25-Apr-2023 20:09
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:09
Boron	2.29		0.220	0.400	mg/L	20	26-Apr-2023 11:23
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:09
Calcium	187		0.680	10.0	mg/L	20	26-Apr-2023 11:23
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:09
Cobalt	0.000403	J	0.000200	0.00500	mg/L	1	25-Apr-2023 20:09
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:09
Lithium	0.129		0.00100	0.00500	mg/L	1	25-Apr-2023 20:09
Molybdenum	0.000970	J	0.000600	0.00500	mg/L	1	25-Apr-2023 20:09
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:09
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:09
MERCURY BY SW7470A		Method	:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:16
ANIONS BY E300.0, REV 2.1, 1993		Meth	od:E300				Analyst: TH
Chloride	17.9		0.200	0.500	mg/L	1	13-Apr-2023 15:41
Fluoride	0.446		0.0500	0.100	mg/L	1	13-Apr-2023 15:41
Nitrogen, Nitrate (As N)	0.0990	J	0.0300	0.100	mg/L	1	13-Apr-2023 15:41
Sulfate	1,610		4.00	10.0	mg/L	20	13-Apr-2023 15:47
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	I:M2510 B				Analyst: CD
Specific Conductivity	3,320		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SI -2011	W2540C	Method	d:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,750		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011		lethod:S	6M4500H+ B				Analyst: MZD
рН	7.45	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.8	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-14A	Lab ID:HS23040697-04
Collection Date:	12-Apr-2023 11:06	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION E SM3500FED	BY N	lethod:SI	M3500FED				Analyst: JHD
Ferric Iron	0.126		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCULA BY SM3500FED	TION N		M3500FED olved)				Analyst: JHD
Ferric Iron, Dissolved	0.0800		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:11
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:11
Barium	0.0114		0.00190	0.00400	mg/L	1	25-Apr-2023 20:11
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:11
Boron	1.01		0.110	0.200	mg/L	10	26-Apr-2023 11:40
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:11
Calcium	319		0.340	5.00	mg/L	10	26-Apr-2023 11:40
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:11
Cobalt	0.000745	J	0.000200	0.00500	mg/L	1	25-Apr-2023 20:11
Iron	0.126	J	0.0120	0.200	mg/L	1	25-Apr-2023 20:11
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:11
Lithium	0.155		0.00100	0.00500	mg/L	1	25-Apr-2023 20:11
Magnesium	29.7		0.0100	0.200	mg/L	1	25-Apr-2023 20:11
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 20:11
Potassium	8.81		0.0180	0.200	mg/L	1	25-Apr-2023 20:11
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:11
Sodium	469		0.140	2.00	mg/L	10	26-Apr-2023 11:40
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:11
DISSOLVED METALS BY SW6020A	Metho	od:SW602	0A (dissolved	1)	Prep:SW3010A /	25-Apr-2023	Analyst: JC
Iron	0.0795	J	0.0120	0.200	mg/L	1	25-Apr-2023 15:47
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 15:47
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U	(0.0000300	0.000200	mg/L	1	26-Apr-2023 14:18
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH
Chloride	12.0		0.200	0.500	mg/L	1	13-Apr-2023 16:22
Fluoride	0.307		0.0500	0.100	mg/L	1	13-Apr-2023 16:22
Nitrogen, Nitrate (As N)	0.220		0.0300	0.100	mg/L	1	13-Apr-2023 16:22
Sulfate	1,760		4.00	10.0	mg/L	20	13-Apr-2023 16:27
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	:E410.4		-		Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011		Method:	M2510 B				Analyst: CD
Specific Conductivity	3,370		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-14A	Lab ID:HS23040697-04
Collection Date:	12-Apr-2023 11:06	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SI -2011	M2540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,320		5.00	10.0	mg/L	1	14-Apr-2023 13:07
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	294		5.00	5.00	mg/L	1	25-Apr-2023 19:22
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:22
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:22
Alkalinity, Total (As CaCO3)	294		5.00	5.00	mg/L	1	25-Apr-2023 19:22
FERROUS IRON BY SM3500 FE B	ſ	Method:SI	M3500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	Ν	Nethod:SI (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	Method:SM4500H+ B						Analyst: MZD
рН	7.58	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.7	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-15A
Collection Date:	12-Apr-2023 09:45

WorkOrder:HS23040697 Lab ID:HS23040697-05 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED		
FERRIC IRON - BY CALCULATION SM3500FED	BY M	Method:	SM3500FED				Analyst: JHD		
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25		
FERRIC IRON (DISS)- BY CALCUL BY SM3500FED	ATION N		SM3500FED solved)				Analyst: JHD		
Ferric Iron, Dissolved	0.133		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26		
ICP-MS METALS BY SW6020A		Method	:SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC		
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:13		
Arsenic	0.000525	J	0.000400	0.00200	mg/L	1	25-Apr-2023 20:13		
Barium	0.0180		0.00190	0.00400	mg/L	1	25-Apr-2023 20:13		
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:13		
Boron	3.44		0.220	0.400	mg/L	20	26-Apr-2023 11:42		
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:13		
Calcium	107		0.0340	0.500	mg/L	1	25-Apr-2023 20:13		
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:13		
Cobalt	0.000357	J	0.000200	0.00500	mg/L	1	25-Apr-2023 20:13		
Iron	0.138	J	0.0120	0.200	mg/L	1	25-Apr-2023 20:13		
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:13		
Lithium	0.0669		0.00100	0.00500	mg/L	1	25-Apr-2023 20:13		
Magnesium	12.5		0.0100	0.200	mg/L	1	25-Apr-2023 20:13		
Molybdenum	0.173		0.000600	0.00500	mg/L	1	25-Apr-2023 20:13		
Potassium	5.82		0.0180	0.200	mg/L	1	25-Apr-2023 20:13		
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:13		
Sodium	702		0.280	4.00	mg/L	20	26-Apr-2023 11:42		
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:13		
DISSOLVED METALS BY SW60204	A Metho	od:SW60)20A (dissolv	red)	Prep:SW3010A /	Prep:SW3010A / 25-Apr-2023 Analyst: JC			
Iron	0.371		0.0120	0.200	mg/L	1	25-Apr-2023 15:49		
Molybdenum	0.175		0.000600	0.00500	mg/L	1	25-Apr-2023 15:49		
MERCURY BY SW7470A		Method	:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS		
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:19		
ANIONS BY E300.0, REV 2.1, 1993		Methe	od:E300				Analyst: TH		
Chloride	25.3		0.200	0.500	mg/L	1	13-Apr-2023 16:33		
Fluoride	1.24		0.0500	0.100	mg/L	1	13-Apr-2023 16:33		
Nitrogen, Nitrate (As N)	0.544		0.0300	0.100	mg/L	1	13-Apr-2023 16:33		
Sulfate	1,690		4.00	10.0	mg/L	20	13-Apr-2023 16:39		
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH		
Chemical Oxygen Demand	10.0	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00		
SPECIFIC CONDUCTANCE BY SM 2011		Method	I:M2510 B				Analyst: CD		
Specific Conductivity	3,470		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54		

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-15A	Lab ID:HS23040697-05
Collection Date:	12-Apr-2023 09:45	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM -2011	A2540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,240		5.00	10.0	mg/L	1	14-Apr-2023 13:07
ALKALINITY BY SM 2320B-2011		Method:S	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	180		5.00	5.00	mg/L	1	25-Apr-2023 19:27
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:27
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:27
Alkalinity, Total (As CaCO3)	180		5.00	5.00	mg/L	1	25-Apr-2023 19:27
FERROUS IRON BY SM3500 FE B	r	Method:SM	13500FED				Analyst: MZD
Ferrous Iron	0.238		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	n	Method:SM (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	0.238		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	N	lethod:SN	14500H+ B				Analyst: MZD
рН	7.77	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.8	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-20
Collection Date:	12-Apr-2023 12:58

ANALYTICAL REPORT

WorkOrder:HS23040697 Lab ID:HS23040697-06 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	:SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:15
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 20:15
Barium	0.00924		0.00190	0.00400	mg/L	1	25-Apr-2023 20:15
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:15
Boron	0.559		0.0110	0.0200	mg/L	1	25-Apr-2023 20:15
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:15
Calcium	351		0.680	10.0	mg/L	20	26-Apr-2023 11:44
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 20:15
Cobalt	0.000689	J	0.000200	0.00500	mg/L	1	25-Apr-2023 20:15
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 20:15
Lithium	0.0905		0.00100	0.00500	mg/L	1	25-Apr-2023 20:15
Molybdenum	0.000629	J	0.000600	0.00500	mg/L	1	25-Apr-2023 20:15
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 20:15
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 20:15
MERCURY BY SW7470A		Method	:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:21
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	5.27		0.200	0.500	mg/L	1	13-Apr-2023 16:45
Fluoride	0.367		0.0500	0.100	mg/L	1	13-Apr-2023 16:45
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 16:45
Sulfate	962		4.00	10.0	mg/L	20	13-Apr-2023 16:51
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	6.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	I:M2510 B				Analyst: CD
Specific Conductivity	1,860		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SM -2011	M2540C	Method	1:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,470		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011	N	lethod:S	M4500H+ B				Analyst: MZD
рН	7.15	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.6	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-21
Collection Date:	12-Apr-2023 09:47

ANALYTICAL REPORT

WorkOrder:HS23040697 Lab ID:HS23040697-07 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:12
Arsenic	0.000517	J	0.000400	0.00200	mg/L	1	25-Apr-2023 21:12
Barium	0.0115		0.00190	0.00400	mg/L	1	25-Apr-2023 21:12
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:12
Boron	3.28		0.220	0.400	mg/L	20	26-Apr-2023 11:46
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:12
Calcium	168		0.680	10.0	mg/L	20	26-Apr-2023 11:46
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:12
Cobalt	0.000351	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:12
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:12
Lithium	0.137		0.00100	0.00500	mg/L	1	25-Apr-2023 21:12
Molybdenum	0.000933	J	0.000600	0.00500	mg/L	1	25-Apr-2023 21:12
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:12
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:12
MERCURY BY SW7470A		Method	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:29
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	22.0		0.200	0.500	mg/L	1	13-Apr-2023 16:56
Fluoride	0.545		0.0500	0.100	mg/L	1	13-Apr-2023 16:56
Nitrogen, Nitrate (As N)	0.153		0.0300	0.100	mg/L	1	13-Apr-2023 16:56
Sulfate	1,750		4.00	10.0	mg/L	20	13-Apr-2023 17:02
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	25.0		5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	3,600		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SM -2011	//2540C	Method	I:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,250		5.00	10.0	mg/L	1	17-Apr-2023 12:00
PH BY SM4500H+ B-2011	N	/lethod:S	M4500H+ B				Analyst: MZD
рН	7.57	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.7	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-16	Lab ID:HS23040697-08
Collection Date:	12-Apr-2023 15:23	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION I SM3500FED	BY N	lethod:S	M3500FED				Analyst: JHD
Ferric Iron	0.0980		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCULA BY SM3500FED	TION N		M3500FED olved)		-		Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:14
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:14
Barium	0.0123		0.00190	0.00400	mg/L	1	25-Apr-2023 21:14
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:14
Boron	1.80		0.110	0.200	mg/L	10	26-Apr-2023 11:48
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:14
Calcium	118		0.0340	0.500	mg/L	1	25-Apr-2023 21:14
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:14
Cobalt	0.000263	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:14
Iron	0.0982	J	0.0120	0.200	mg/L	1	25-Apr-2023 21:14
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:14
Lithium	0.0545		0.00100	0.00500	mg/L	1	25-Apr-2023 21:14
Magnesium	8.22		0.0100	0.200	mg/L	1	25-Apr-2023 21:14
Molybdenum	0.127		0.000600	0.00500	mg/L	1	25-Apr-2023 21:14
Potassium	4.12		0.0180	0.200	mg/L	1	25-Apr-2023 21:14
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:14
Sodium	419		0.140	2.00	mg/L	10	26-Apr-2023 11:48
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:14
DISSOLVED METALS BY SW6020A	Metho	d:SW602	20A (dissolve	ed)	Prep:SW3010A /	25-Apr-2023	Analyst: JC
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 15:51
Molybdenum	0.127		0.000600	0.00500	mg/L	1	25-Apr-2023 15:51
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:31
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH
Chloride	16.5		0.200	0.500	mg/L	1	14-Apr-2023 11:48
Fluoride	0.908		0.0500	0.100	mg/L	1	14-Apr-2023 11:48
Nitrogen, Nitrate (As N)	0.194		0.0300	0.100	mg/L	1	14-Apr-2023 11:48
Sulfate	986		4.00	10.0	mg/L	20	14-Apr-2023 13:09
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	I:E410.4		-		Analyst: TH
Chemical Oxygen Demand	8.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011		Method:	M2510 B				Analyst: CD
Specific Conductivity	2,340		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-16	Lab ID:HS23040697-08
Collection Date:	12-Apr-2023 15:23	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,570		5.00	10.0	mg/L	1	17-Apr-2023 12:00
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	259		5.00	5.00	mg/L	1	25-Apr-2023 19:32
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:32
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:32
Alkalinity, Total (As CaCO3)	259		5.00	5.00	mg/L	1	25-Apr-2023 19:32
FERROUS IRON BY SM3500 FE B	I	Method:SI	13500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	7	Nethod:SI (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	Ν	/lethod:SN	14500H+ B				Analyst: MZD
рН	7.78	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.9	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-17
Collection Date:	12-Apr-2023 16:37

WorkOrder:HS23040697 Lab ID:HS23040697-09 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION SM3500FED	IBY I	Method:S	M3500FED				Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCUL BY SM3500FED	ATION I		M3500FED olved)				Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:16
Arsenic	0.000406	J	0.000400	0.00200	mg/L	1	25-Apr-2023 21:16
Barium	U		0.00190	0.00400	mg/L	1	25-Apr-2023 21:16
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:16
Boron	0.739		0.0110	0.0200	mg/L	1	25-Apr-2023 21:16
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:16
Calcium	599		0.680	10.0	mg/L	20	26-Apr-2023 11:50
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:16
Cobalt	0.00135	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:16
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 21:16
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:16
Lithium	0.152		0.00100	0.00500	mg/L	1	25-Apr-2023 21:16
Magnesium	43.3		0.0100	0.200	mg/L	1	25-Apr-2023 21:16
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 21:16
Potassium	5.92		0.0180	0.200	mg/L	1	25-Apr-2023 21:16
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:16
Sodium	40.8		0.0140	0.200	mg/L	1	25-Apr-2023 21:16
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:16
DISSOLVED METALS BY SW6020	A Meth	od:SW60	20A (dissolv	ved)	Prep:SW3010A /	25-Apr-2023	Analyst: JC
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 15:53
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 15:53
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:32
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH
Chloride	4.11		0.200	0.500	mg/L	1	14-Apr-2023 11:54
Fluoride	0.349		0.0500	0.100	mg/L	1	14-Apr-2023 11:54
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	14-Apr-2023 11:54
Sulfate	1,510		4.00	10.0	mg/L	20	14-Apr-2023 13:15
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	l:E410.4				Analyst: TH
Chemical Oxygen Demand	9.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011		Method:	M2510 B				Analyst: CD
Specific Conductivity	2,500		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-17	Lab ID:HS23040697-09
Collection Date:	12-Apr-2023 16:37	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,050		5.00	10.0	mg/L	1	17-Apr-2023 12:00
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	230		5.00	5.00	mg/L	1	25-Apr-2023 19:38
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:38
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:38
Alkalinity, Total (As CaCO3)	230		5.00	5.00	mg/L	1	25-Apr-2023 19:38
FERROUS IRON BY SM3500 FE B	I	Method:SM	M3500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	ľ	Method:SM (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	/lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	Method:SM4500H+ B						Analyst: MZD
рН	7.12	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.9	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-18
Collection Date:	12-Apr-2023 18:10

WorkOrder:HS23040697 Lab ID:HS23040697-10 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION B SM3500FED	Y I	Method:S	M3500FED				Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCULA BY SM3500FED	ΓΙΟΝ Ι		M3500FED olved)				Analyst: JHD
Ferric Iron, Dissolved	0.0350	J	0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:18
Arsenic	0.00340		0.000400	0.00200	mg/L	1	25-Apr-2023 21:18
Barium	0.00256	J	0.00190	0.00400	mg/L	1	25-Apr-2023 21:18
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:18
Boron	4.75		0.220	0.400	mg/L	20	26-Apr-2023 11:52
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:18
Calcium	21.9		0.0340	0.500	mg/L	1	25-Apr-2023 21:18
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:18
Cobalt	U		0.000200	0.00500	mg/L	1	25-Apr-2023 21:18
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 21:18
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:18
Lithium	0.00273	J	0.00100	0.00500	mg/L	1	25-Apr-2023 21:18
Magnesium	0.241		0.0100	0.200	mg/L	1	25-Apr-2023 21:18
Molybdenum	0.232		0.000600	0.00500	mg/L	1	25-Apr-2023 21:18
Potassium	16.1		0.0180	0.200	mg/L	1	25-Apr-2023 21:18
Selenium	0.0197		0.00110	0.00200	mg/L	1	25-Apr-2023 21:18
Sodium	407		0.280	4.00	mg/L	20	26-Apr-2023 11:52
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:18
DISSOLVED METALS BY SW6020A	Meth	od:SW60	20A (dissol ^a	ved)	Prep:SW3010A /	25-Apr-2023	Analyst: JC
Iron	0.0352	J	0.0120	0.200	mg/L	1	25-Apr-2023 15:55
Molybdenum	0.243		0.000600	0.00500	mg/L	1	25-Apr-2023 15:55
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:34
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH
Chloride	5.70		0.200	0.500	mg/L	1	14-Apr-2023 11:59
Fluoride	1.70		0.0500	0.100	mg/L	1	14-Apr-2023 11:59
Nitrogen, Nitrate (As N)	0.0517	J	0.0300	0.100	mg/L	1	14-Apr-2023 11:59
Sulfate	971		4.00	10.0	mg/L	20	14-Apr-2023 13:20
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	d:E410.4		_		Analyst: TH
Chemical Oxygen Demand	9.00	J	5.00	15.0	mg/L	1	27-Apr-2023 13:00
SPECIFIC CONDUCTANCE BY SM 2 2011	510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	2,030		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	
Project:	WFEC / CCR Landfill	
Sample ID:	MW-18	
Collection Date:	12-Apr-2023 18:10	

WorkOrder:HS23040697 Lab ID:HS23040697-10 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM -2011	12540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,280		5.00	10.0	mg/L	1	17-Apr-2023 12:00
ALKALINITY BY SM 2320B-2011		Method:S	M2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:43
Alkalinity, Carbonate (As CaCO3)	51.6		5.00	5.00	mg/L	1	25-Apr-2023 19:43
Alkalinity, Hydroxide (As CaCO3)	12.2		5.00	5.00	mg/L	1	25-Apr-2023 19:43
Alkalinity, Total (As CaCO3)	63.8		5.00	5.00	mg/L	1	25-Apr-2023 19:43
FERROUS IRON BY SM3500 FE B	N	Method:SN	13500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	n	Method:SN (disso)					Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SM	4500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	N	/lethod:SM	4500H+ B				Analyst: MZD
рН	9.96	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.9	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	DUP-4
Collection Date:	12-Apr-2023 16:37

WorkOrder:HS23040697 Lab ID:HS23040697-11 Matrix:Water

ANALYSES	RESULT (QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION SM3500FED	IBY M	ethod:S	M3500FED				Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25
FERRIC IRON (DISS)- BY CALCUL BY SM3500FED	ATION M		M3500FED solved)				Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26
ICP-MS METALS BY SW6020A	n	Nethod	SW6020A		Prep:SW3010A	/ 25-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:20
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:20
Barium	U		0.00190	0.00400	mg/L	1	25-Apr-2023 21:20
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:20
Boron	0.713		0.0110	0.0200	mg/L	1	25-Apr-2023 21:20
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:20
Calcium	537		0.680	10.0	mg/L	20	26-Apr-2023 11:54
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:20
Cobalt	0.00123	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:20
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 21:20
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:20
Lithium	0.143		0.00100	0.00500	mg/L	1	25-Apr-2023 21:20
Magnesium	39.0		0.0100	0.200	mg/L	1	25-Apr-2023 21:20
Molybdenum	0.000602	J	0.000600	0.00500	mg/L	1	25-Apr-2023 21:20
Potassium	5.34		0.0180	0.200	mg/L	1	25-Apr-2023 21:20
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:20
Sodium	36.7		0.0140	0.200	mg/L	1	25-Apr-2023 21:20
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:20
DISSOLVED METALS BY SW6020	A Metho	d:SW60	20A (dissol	ved)	Prep:SW3010A	/ 25-Apr-2023	Analyst: JC
Iron	0.0149	J	0.0120	0.200	mg/L	1	25-Apr-2023 15:57
Molybdenum	0.000660	J	0.000600	0.00500	mg/L	1	25-Apr-2023 15:57
MERCURY BY SW7470A	N	Nethod	:SW7470A		Prep:SW7470A	/ 26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 16:58
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	4.11		0.200	0.500	mg/L	1	14-Apr-2023 12:05
Fluoride	0.330		0.0500	0.100	mg/L	1	14-Apr-2023 12:05
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	14-Apr-2023 12:05
Sulfate	1,510		4.00	10.0	mg/L	20	14-Apr-2023 13:26
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	27-Apr-2023 13:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	2,400		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	DUP-4	Lab ID:HS23040697-11
Collection Date:	12-Apr-2023 16:37	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C Met			M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,210		5.00	10.0	mg/L	1	17-Apr-2023 12:00
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	249		5.00	5.00	mg/L	1	25-Apr-2023 20:02
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 20:02
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 20:02
Alkalinity, Total (As CaCO3)	249		5.00	5.00	mg/L	1	25-Apr-2023 20:02
FERROUS IRON BY SM3500 FE B	Γ	Method:SM	13500FED				Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Apr-2023 09:22
FERROUS IRON BY SM3500 FE D	7	Method:SM (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U	•	0.0200	0.0500	mg/L	1	14-Apr-2023 09:30
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	18-Apr-2023 13:38
PH BY SM4500H+ B-2011	N	/lethod:SM	14500H+ B				Analyst: MZD
рН	7.14	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.6	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-7S
Collection Date:	18-Apr-2023 09:28

ANALYTICAL REPORT

WorkOrder:HS23040697 Lab ID:HS23040697-12 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
FERRIC IRON - BY CALCULATION SM3500FED	BY I	Method:S	M3500FED				Analyst: JHD	
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25	
FERRIC IRON (DISS)- BY CALCUL BY SM3500FED	ATION I		M3500FED				Analyst: JHD	
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26	
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC	
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:22	
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:22	
Barium	0.0253		0.00190	0.00400	mg/L	1	25-Apr-2023 21:22	
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:22	
Boron	0.880		0.0110	0.0200	mg/L	1	25-Apr-2023 21:22	
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:22	
Calcium	228		0.680	10.0	mg/L	20	26-Apr-2023 11:56	
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:22	
Cobalt	0.000519	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:22	
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 21:22	
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:22	
Lithium	0.0536		0.00100	0.00500	mg/L	1	25-Apr-2023 21:22	
Magnesium	19.2		0.0100	0.200	mg/L	1	25-Apr-2023 21:22	
Molybdenum	0.000973	J	0.000600	0.00500	mg/L	1	25-Apr-2023 21:22	
Potassium	4.84		0.0180	0.200	mg/L	1	25-Apr-2023 21:22	
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:22	
Sodium	277		0.280	4.00	mg/L	20	26-Apr-2023 11:56	
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:22	
DISSOLVED METALS BY SW60204	A Meth	od:SW60	20A (dissol	ved)	Prep:SW3010A /	Prep:SW3010A / 25-Apr-2023		
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 15:59	
Molybdenum	0.00110	J	0.000600	0.00500	mg/L	1	25-Apr-2023 15:59	
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 16:59	
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH	
Chloride	18.9		0.200	0.500	mg/L	1	19-Apr-2023 13:24	
Fluoride	0.468		0.0500	0.100	mg/L	1	19-Apr-2023 13:24	
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	19-Apr-2023 13:24	
Sulfate	1,410		4.00	10.0	mg/L	20	19-Apr-2023 13:30	
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH	
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	27-Apr-2023 13:00	
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	:M2510 B				Analyst: CD	
Specific Conductivity	2,490		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54	

Client:	Altamira	ANALYTICAL REPORT
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-7S	Lab ID:HS23040697-12
Collection Date:	18-Apr-2023 09:28	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED		
TOTAL DISSOLVED SOLIDS BY SM2540C Method:M2540C -2011							Analyst: DC		
Total Dissolved Solids (Residue, Filterable)	1,740		5.00	10.0	mg/L	1	20-Apr-2023 11:00		
ALKALINITY BY SM 2320B-2011		Method:	M2320B				Analyst: JAC		
Alkalinity, Bicarbonate (As CaCO3)	190		5.00	5.00	mg/L	1	25-Apr-2023 20:12		
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 20:12		
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 20:12		
Alkalinity, Total (As CaCO3)	190		5.00	5.00	mg/L	1	25-Apr-2023 20:12		
FERROUS IRON BY SM3500 FE B	Ν	/lethod:SM	13500FED				Analyst: MZD		
Ferrous Iron	U		0.0200	0.0500	mg/L	1	19-Apr-2023 15:10		
FERROUS IRON BY SM3500 FE D	Ν	/lethod:SM (disso)	A3500FED olved)				Analyst: MZD		
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Apr-2023 15:47		
SULFIDE BY SM4500 S2-F-2011	Method:SM4500 S2-F						Analyst: CD		
Sulfide	U		1.70	2.00	mg/L	1	22-Apr-2023 11:39		
PH BY SM4500H+ B-2011	N	lethod:SN	14500H+ B				Analyst: MZD		
рН	7.41	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02		
Temp Deg C @pH	20.7	Н	0	0	°C	1	22-Apr-2023 14:02		

Client:	Altamira
Project:	WFEC / CCR Landfill
Sample ID:	MW-19S
Collection Date:	17-Apr-2023 18:33

WorkOrder:HS23040697 Lab ID:HS23040697-13 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
FERRIC IRON - BY CALCULATION E SM3500FED	Υ	Method:	SM3500FED				Analyst: JHD	
Ferric Iron	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:25	
FERRIC IRON (DISS)- BY CALCULA BY SM3500FED	ΓΙΟΝ		SM3500FED solved)				Analyst: JHD	
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Apr-2023 15:26	
ICP-MS METALS BY SW6020A		Method	:SW6020A		Prep:SW3010A /	25-Apr-2023	Analyst: JC	
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 19:35	
Arsenic	0.00581		0.000400	0.00200	mg/L	1	25-Apr-2023 19:35	
Barium	0.0152		0.00190	0.00400	mg/L	1	25-Apr-2023 19:35	
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 19:35	
Boron	7.69		0.220	0.400	mg/L	20	26-Apr-2023 11:25	
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 19:35	
Calcium	38.5		0.0340	0.500	mg/L	1	25-Apr-2023 19:35	
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 19:35	
Cobalt	U		0.000200	0.00500	mg/L	1	25-Apr-2023 19:35	
Iron	0.0162	J	0.0120	0.200	mg/L	1	25-Apr-2023 19:35	
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 19:35	
Lithium	0.00216	J	0.00100	0.00500	mg/L	1	25-Apr-2023 19:35	
Magnesium	0.109	J	0.0100	0.200	mg/L	1	25-Apr-2023 19:35	
Molybdenum	0.362		0.0120	0.100	mg/L	20	26-Apr-2023 11:25	
Potassium	32.3		0.0180	0.200	mg/L	1	25-Apr-2023 19:35	
Selenium	0.00965		0.00110	0.00200	mg/L	1	25-Apr-2023 19:35	
Sodium	662		0.280	4.00	mg/L	20	26-Apr-2023 11:25	
Thallium	0.000269	J	0.000200	0.00200	mg/L	1	25-Apr-2023 19:35	
DISSOLVED METALS BY SW6020A	Meth	od:SW6	020A (dissol	ved)	Prep:SW3010A	Prep:SW3010A / 25-Apr-2023		
Iron	U		0.0120	0.200	mg/L	1	25-Apr-2023 14:00	
Molybdenum	0.379		0.000600	0.00500	mg/L	1	25-Apr-2023 14:00	
MERCURY BY SW7470A		Method	:SW7470A		Prep:SW7470A	26-Apr-2023	Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:36	
ANIONS BY E300.0, REV 2.1, 1993		Meth	od:E300				Analyst: TH	
Chloride	12.8		0.200	0.500	mg/L	1	19-Apr-2023 13:01	
Fluoride	1.47		0.0500	0.100	mg/L	1	19-Apr-2023 13:01	
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	19-Apr-2023 13:01	
Sulfate	1,740		4.00	10.0	mg/L	20	19-Apr-2023 13:18	
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Meth	od:E410.4				Analyst: TH	
Chemical Oxygen Demand	16.0		5.00	15.0	mg/L	1	27-Apr-2023 13:00	
SPECIFIC CONDUCTANCE BY SM 2 2011	510B-	Metho	d:M2510 B				Analyst: CD	
Specific Conductivity	3,270		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54	

Client:	Altamira	ANALYTICAL REPOR
Project:	WFEC / CCR Landfill	WorkOrder:HS23040697
Sample ID:	MW-19S	Lab ID:HS23040697-13
Collection Date:	17-Apr-2023 18:33	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SN -2011	M2540C				Analyst: DC		
Total Dissolved Solids (Residue, Filterable)	2,310		5.00	10.0	mg/L	1	20-Apr-2023 11:00
ALKALINITY BY SM 2320B-2011		Method:S	M2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 18:03
Alkalinity, Carbonate (As CaCO3)	62.4		5.00	5.00	mg/L	1	25-Apr-2023 18:03
Alkalinity, Hydroxide (As CaCO3)	62.0		5.00	5.00	mg/L	1	25-Apr-2023 18:03
Alkalinity, Total (As CaCO3)	124		5.00	5.00	mg/L	1	25-Apr-2023 18:03
FERROUS IRON BY SM3500 FE B	N	lethod:SN	13500FED				Analyst: MZD
Ferrous Iron	0.0630		0.0200	0.0500	mg/L	1	19-Apr-2023 15:10
FERROUS IRON BY SM3500 FE D	Method:SM3500FED (dissolved)						Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Apr-2023 15:47
SULFIDE BY SM4500 S2-F-2011	Μ	ethod:SM	4500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	21-Apr-2023 18:04
PH BY SM4500H+ B-2011	Method:SM4500H+ B						Analyst: MZD
рН	10.6	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.6	Н	0	0	°C	1	22-Apr-2023 14:02

rep Log

Batch ID: 192867		Start Date	e: 25 Apr 202	23 08:30	End Date: 25 Apr 2023 08:	30
Method: DISS META	LS PREP - WATER	R - SW3010A			Prep Code: 3010A DISS	
Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor		
		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-04		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-05		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-08		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-09		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-10		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-11		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-12		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-13		10 (mL)	10 (mL)	1	120 plastic HNO3	_
Batch ID: 192875		Start Date	e: 25 Apr 202	23 09:00	End Date: 25 Apr 2023 09:	00
Method: WATER - S	W3010A				Prep Code: 3010A	
Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor		
HS23040697-01		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-02		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-03		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-04		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-05		10 (mL)	10 (mL)	1	120 plastic HNO3	
IS23040697-06		10 (mL)	10 (mL)	1	120 plastic HNO3	
1S23040697-07 1S23040697-08		10 (mL) 10 (mL)	10 (mL) 10 (mL)	1	120 plastic HNO3 120 plastic HNO3	
HS23040697-09		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-10		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-11		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-12		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-13		10 (mL)	10 (mL)	1	120 plastic HNO3	
Batch ID: 192976		Start Date	e: 26 Apr 202	23 08:30	End Date: 26 Apr 2023 08:	30
Method: MERCURY	PREP BY 7470A- \	NATER			Prep Code: HG_WPR	
Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor		
HS23040697-01		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-02		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-03		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-04		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-05		10 (mL)	10 (mL)	1	120 plastic HNO3	
HS23040697-06		10 (mL)	10 (mL)	1 1	120 plastic HNO3	
		10 (mL) 10 (mL)	10 (mL) 10 (mL)	1	120 plastic HNO3 120 plastic HNO3	
IS23040697-07				1	120 plastic HNO3	
HS23040697-07 HS23040697-08		10 (ml.)				
HS23040697-07		10 (mL) 10 (mL)	10 (mL) 10 (mL)	1	120 plastic HNO3	

Weight / Prep Log

Client: Altamira Project: WFEC / CCR Landfill WorkOrder: HS23040697

Batch ID: 192996		Start Date	Start Date: 26 Apr 2023 12:00		End Date: 26 Apr 2023 12:00
Method: MERCURY PREF	P BY 7470A- V	- WATER			Prep Code: HG_WPR
Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23040697-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040697-12		10 (mL)	10 (mL)	1	120 plastic HNO3

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Date: 28-Jun-23

Client: Altamira Project: WFEC / CCR Landfill WorkOrder: HS23040697

DATES	REPORT
DAILO	

Client Samp ID Collection Date Leachate Date **Analysis Date** DF Sample ID **Prep Date** Batch ID: 192867 (0) Test Name: DISSOLVED METALS BY SW6020A Matrix: Water HS23040697-02 MW-5S 12 Apr 2023 12:32 25 Apr 2023 15:45 25 Apr 2023 08:30 1 HS23040697-04 **MW-14A** 12 Apr 2023 11:06 25 Apr 2023 08:30 25 Apr 2023 15:47 1 HS23040697-05 **MW-15A** 12 Apr 2023 09:45 25 Apr 2023 08:30 25 Apr 2023 15:49 1 12 Apr 2023 15:23 HS23040697-08 MW-16 25 Apr 2023 08:30 25 Apr 2023 15:51 1 HS23040697-09 MW-17 12 Apr 2023 16:37 25 Apr 2023 08:30 25 Apr 2023 15:53 1 MW-18 12 Apr 2023 18:10 HS23040697-10 25 Apr 2023 08:30 25 Apr 2023 15:55 1 HS23040697-11 DUP-4 12 Apr 2023 16:37 25 Apr 2023 08:30 25 Apr 2023 15:57 1 HS23040697-12 MW-7S 18 Apr 2023 09:28 1 25 Apr 2023 08:30 25 Apr 2023 15:59 HS23040697-13 **MW-19S** 17 Apr 2023 18:33 25 Apr 2023 08:30 25 Apr 2023 14:00 1 Batch ID: 192875 (0) Test Name: ICP-MS METALS BY SW6020A Matrix: Water HS23040697-01 MW-3 12 Apr 2023 10:42 25 Apr 2023 09:00 26 Apr 2023 11:19 20 HS23040697-01 MW-3 12 Apr 2023 10:42 25 Apr 2023 09:00 25 Apr 2023 20:05 1 HS23040697-02 MW-5S 12 Apr 2023 12:32 25 Apr 2023 09:00 26 Apr 2023 11:21 20 12 Apr 2023 12:32 HS23040697-02 MW-5S 25 Apr 2023 09:00 25 Apr 2023 20:07 1 HS23040697-03 MW-13 12 Apr 2023 11:57 25 Apr 2023 09:00 26 Apr 2023 11:23 20 MW-13 12 Apr 2023 11:57 25 Apr 2023 09:00 25 Apr 2023 20:09 HS23040697-03 1 HS23040697-04 MW-14A 12 Apr 2023 11:06 25 Apr 2023 09:00 26 Apr 2023 11:40 10 HS23040697-04 **MW-14A** 12 Apr 2023 11:06 25 Apr 2023 09:00 25 Apr 2023 20:11 1 HS23040697-05 **MW-15A** 12 Apr 2023 09:45 25 Apr 2023 09:00 26 Apr 2023 11:42 20 **MW-15A** HS23040697-05 12 Apr 2023 09:45 25 Apr 2023 09:00 25 Apr 2023 20:13 1 HS23040697-06 MW-20 12 Apr 2023 12:58 25 Apr 2023 09:00 26 Apr 2023 11:44 20 HS23040697-06 MW-20 12 Apr 2023 12:58 25 Apr 2023 09:00 25 Apr 2023 20:15 1 HS23040697-07 MW-21 12 Apr 2023 09:47 25 Apr 2023 09:00 26 Apr 2023 11:46 20 HS23040697-07 MW-21 12 Apr 2023 09:47 25 Apr 2023 09:00 25 Apr 2023 21:12 1 HS23040697-08 MW-16 12 Apr 2023 15:23 25 Apr 2023 09:00 26 Apr 2023 11:48 10 HS23040697-08 MW-16 12 Apr 2023 15:23 25 Apr 2023 09:00 25 Apr 2023 21:14 1 HS23040697-09 MW-17 12 Apr 2023 16:37 25 Apr 2023 09:00 26 Apr 2023 11:50 20 HS23040697-09 MW-17 12 Apr 2023 16:37 25 Apr 2023 09:00 25 Apr 2023 21:16 1 MW-18 HS23040697-10 12 Apr 2023 18:10 25 Apr 2023 09:00 26 Apr 2023 11:52 20 HS23040697-10 MW-18 12 Apr 2023 18:10 25 Apr 2023 09:00 25 Apr 2023 21:18 1 HS23040697-11 DUP-4 12 Apr 2023 16:37 25 Apr 2023 09:00 26 Apr 2023 11:54 20 HS23040697-11 DUP-4 12 Apr 2023 16:37 25 Apr 2023 09:00 25 Apr 2023 21:20 1 HS23040697-12 MW-7S 18 Apr 2023 09:28 25 Apr 2023 09:00 26 Apr 2023 11:56 20 HS23040697-12 MW-7S 18 Apr 2023 09:28 25 Apr 2023 09:00 25 Apr 2023 21:22 1 HS23040697-13 MW-19S 17 Apr 2023 18:33 25 Apr 2023 09:00 26 Apr 2023 11:25 20 HS23040697-13 MW-19S 17 Apr 2023 18:33 25 Apr 2023 09:00 25 Apr 2023 19:35 1

Client: Project:	Altamira WFFC /					DATES RE	
WorkOrder:	WFEC / CCR Landfill HS23040697					DATES RE	FUR
Sample ID	Client Sam		Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 192976	S(0)	Test Name : N	IERCURY BY SW7470)A		Matrix: Water	
HS23040697-01	MW-3		12 Apr 2023 10:42		26 Apr 2023 08:30	26 Apr 2023 14:13	1
HS23040697-02	MW-5S		12 Apr 2023 12:32		26 Apr 2023 08:30	26 Apr 2023 14:14	1
HS23040697-03	MW-13		12 Apr 2023 11:57		, 26 Apr 2023 08:30	26 Apr 2023 14:16	1
HS23040697-04	MW-14A		12 Apr 2023 11:06		, 26 Apr 2023 08:30	26 Apr 2023 14:18	1
HS23040697-05	MW-15A		12 Apr 2023 09:45		26 Apr 2023 08:30	26 Apr 2023 14:19	1
HS23040697-06	MW-20		12 Apr 2023 12:58		26 Apr 2023 08:30	26 Apr 2023 14:21	1
HS23040697-07	MW-21		12 Apr 2023 09:47		26 Apr 2023 08:30	26 Apr 2023 14:29	1
HS23040697-08	MW-16		12 Apr 2023 15:23		26 Apr 2023 08:30	26 Apr 2023 14:31	1
HS23040697-09	MW-17		12 Apr 2023 16:37		26 Apr 2023 08:30	26 Apr 2023 14:32	1
HS23040697-10	MW-18		12 Apr 2023 18:10		26 Apr 2023 08:30	26 Apr 2023 14:34	1
HS23040697-13	MW-19S		17 Apr 2023 18:33		26 Apr 2023 08:30	26 Apr 2023 14:36	1
Batch ID: 192996	S(0)	Test Name : N	IERCURY BY SW7470	A		Matrix: Water	
HS23040697-11	DUP-4		12 Apr 2023 16:37		26 Apr 2023 12:00	26 Apr 2023 16:58	1
HS23040697-12	MW-7S		18 Apr 2023 09:28		26 Apr 2023 12:00	26 Apr 2023 16:59	1
Batch ID: R432628 (0)		Test Name : A	NIONS BY E300.0, RE	EV 2.1, 1993		Matrix: Water	
HS23040697-01	MW-3		12 Apr 2023 10:42			13 Apr 2023 15:23	20
HS23040697-01	MW-3		12 Apr 2023 10:42			13 Apr 2023 15:17	1
HS23040697-02	MW-5S		12 Apr 2023 12:32			13 Apr 2023 15:35	20
HS23040697-02	MW-5S		12 Apr 2023 12:32			13 Apr 2023 15:29	1
HS23040697-03	MW-13		12 Apr 2023 11:57			13 Apr 2023 15:47	20
HS23040697-03	MW-13		12 Apr 2023 11:57			13 Apr 2023 15:41	1
HS23040697-04	MW-14A		12 Apr 2023 11:06			13 Apr 2023 16:27	20
HS23040697-04	MW-14A		12 Apr 2023 11:06			13 Apr 2023 16:22	1
HS23040697-05	MW-15A		12 Apr 2023 09:45			13 Apr 2023 16:39	20
HS23040697-05	MW-15A		12 Apr 2023 09:45			13 Apr 2023 16:33	1
HS23040697-06	MW-20		12 Apr 2023 12:58			13 Apr 2023 16:51	20
HS23040697-06	MW-20		12 Apr 2023 12:58			13 Apr 2023 16:45	1
HS23040697-07	MW-21		12 Apr 2023 09:47			13 Apr 2023 17:02	20
HS23040697-07	MW-21		12 Apr 2023 09:47			13 Apr 2023 16:56	1
Batch ID: R432663 (0)		Test Name : F	ERROUS IRON BY SM	/3500 FE D		Matrix: Water	
HS23040697-02	MW-5S		12 Apr 2023 12:32			14 Apr 2023 09:30	1
HS23040697-04	MW-14A		12 Apr 2023 11:06			14 Apr 2023 09:30	1
HS23040697-05	MW-15A		12 Apr 2023 09:45			14 Apr 2023 09:30	1
HS23040697-08	MW-16		12 Apr 2023 15:23			14 Apr 2023 09:30	1
HS23040697-09	MW-17		12 Apr 2023 16:37			14 Apr 2023 09:30	1
HS23040697-10	MW-18		12 Apr 2023 18:10			14 Apr 2023 09:30	1
HS23040697-11	DUP-4		12 Apr 2023 16:37			14 Apr 2023 09:30	

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Client: Project: WorkOrder:	Altamira WFEC / 0 HS23040	CCR Landfill)697		DATES RE	POR
Sample ID	Client Samp	ID Collection Date	Leachate Date Prep Date	Analysis Date	DF
Batch ID: R4326	64 (0)	Test Name : FERROUS IRON BY SI	M3500 FE B	Matrix: Water	
HS23040697-02	MW-5S	12 Apr 2023 12:32		14 Apr 2023 09:22	1
HS23040697-04	MW-14A	12 Apr 2023 11:06		14 Apr 2023 09:22	1
HS23040697-05	MW-15A	12 Apr 2023 09:45		14 Apr 2023 09:22	1
HS23040697-08	MW-16	12 Apr 2023 15:23		14 Apr 2023 09:22	1
HS23040697-09	MW-17	12 Apr 2023 16:37		14 Apr 2023 09:22	1
HS23040697-10	MW-18	12 Apr 2023 18:10		14 Apr 2023 09:22	1
HS23040697-11	DUP-4	12 Apr 2023 16:37		14 Apr 2023 09:22	1
Batch ID: R4327	38 (0)	Test Name: ANIONS BY E300.0, RE	EV 2.1, 1993	Matrix: Water	
HS23040697-08	MW-16	12 Apr 2023 15:23		14 Apr 2023 13:09	20
HS23040697-08	MW-16	12 Apr 2023 15:23		14 Apr 2023 11:48	1
HS23040697-09	MW-17	12 Apr 2023 16:37		14 Apr 2023 13:15	20
-IS23040697-09	MW-17	12 Apr 2023 16:37		14 Apr 2023 11:54	1
-IS23040697-10	MW-18	12 Apr 2023 18:10		14 Apr 2023 13:20	20
-IS23040697-10	MW-18	12 Apr 2023 18:10		14 Apr 2023 11:59	1
HS23040697-11	DUP-4	12 Apr 2023 16:37		14 Apr 2023 13:26	20
HS23040697-11	DUP-4	12 Apr 2023 16:37		14 Apr 2023 12:05	1
Batch ID: R4328	24 (0)	Test Name : TOTAL DISSOLVED SO	DLIDS BY SM2540C-2011	Matrix: Water	
HS23040697-01	MW-3	12 Apr 2023 10:42		14 Apr 2023 13:07	1
HS23040697-02	MW-5S	12 Apr 2023 12:32		14 Apr 2023 13:07	1
HS23040697-03	MW-13	12 Apr 2023 11:57		14 Apr 2023 13:07	1
HS23040697-04	MW-14A	12 Apr 2023 11:06		14 Apr 2023 13:07	1
HS23040697-05	MW-15A	12 Apr 2023 09:45		14 Apr 2023 13:07	1
HS23040697-06	MW-20	12 Apr 2023 12:58		14 Apr 2023 13:07	1
Batch ID: R4329	30(0)	Test Name : TOTAL DISSOLVED SO	DLIDS BY SM2540C-2011	Matrix: Water	
HS23040697-07	MW-21	12 Apr 2023 09:47		17 Apr 2023 12:00	1
HS23040697-08	MW-16	12 Apr 2023 15:23		17 Apr 2023 12:00	1
-IS23040697-09	MW-17	12 Apr 2023 16:37		17 Apr 2023 12:00	1
HS23040697-10	MW-18	12 Apr 2023 18:10		17 Apr 2023 12:00	1
HS23040697-11	DUP-4	12 Apr 2023 16:37		17 Apr 2023 12:00	1
Batch ID: R4329	39 (0)	Test Name : SULFIDE BY SM4500 S	S2-F-2011	Matrix: Water	
HS23040697-02	MW-5S	12 Apr 2023 12:32		18 Apr 2023 13:38	1
HS23040697-04	MW-14A	12 Apr 2023 11:06		18 Apr 2023 13:38	1
IS23040697-05	MW-15A	12 Apr 2023 09:45		18 Apr 2023 13:38	1
HS23040697-08	MW-16	12 Apr 2023 15:23		18 Apr 2023 13:38	1
HS23040697-09	MW-17	12 Apr 2023 16:37		18 Apr 2023 13:38	1
HS23040697-10	MW-18	12 Apr 2023 18:10		18 Apr 2023 13:38	1
HS23040697-11	DUP-4	12 Apr 2023 16:37		18 Apr 2023 13:38	1

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Client: Project: WorkOrder:	Altamira WFEC / HS2304	CCR Landfill				DATES RE	PORT
Sample ID	Client Sam	p ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4331	49(0)	Test Name : A	NIONS BY E300.0, RE	EV 2.1, 1993		Matrix: Water	
HS23040697-12	MW-7S		18 Apr 2023 09:28			19 Apr 2023 13:30	20
HS23040697-12	MW-7S		18 Apr 2023 09:28			19 Apr 2023 13:24	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			19 Apr 2023 13:18	20
HS23040697-13	MW-19S		17 Apr 2023 18:33			19 Apr 2023 13:01	1
Batch ID: R4331	82(0)	Test Name: F	ERROUS IRON BY SI	M3500 FE B		Matrix: Water	
HS23040697-13	MW-19S		17 Apr 2023 18:33			19 Apr 2023 15:10	1
Batch ID: R4331	83 (0)	Test Name : F	ERROUS IRON BY SI	M3500 FE D		Matrix: Water	
HS23040697-12	MW-7S		18 Apr 2023 09:28			19 Apr 2023 15:47	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			19 Apr 2023 15:47	1
Batch ID: R433330 (0)		Test Name : S	SPECIFIC CONDUCTA	NCE BY SM 2510B-2	2011	Matrix: Water	
HS23040697-01	MW-3		12 Apr 2023 10:42			21 Apr 2023 16:54	1
HS23040697-02	MW-5S		12 Apr 2023 12:32			21 Apr 2023 16:54	1
HS23040697-03	MW-13		12 Apr 2023 11:57			21 Apr 2023 16:54	1
HS23040697-04	MW-14A		12 Apr 2023 11:06			21 Apr 2023 16:54	1
HS23040697-05	MW-15A		12 Apr 2023 09:45			21 Apr 2023 16:54	1
HS23040697-06	MW-20		12 Apr 2023 12:58			21 Apr 2023 16:54	1
HS23040697-07	MW-21		12 Apr 2023 09:47			21 Apr 2023 16:54	1
HS23040697-08	MW-16		12 Apr 2023 15:23			21 Apr 2023 16:54	1
HS23040697-09	MW-17		12 Apr 2023 16:37			21 Apr 2023 16:54	1
HS23040697-10	MW-18		12 Apr 2023 18:10			21 Apr 2023 16:54	1
HS23040697-11	DUP-4		12 Apr 2023 16:37			21 Apr 2023 16:54	1
HS23040697-12	MW-7S		18 Apr 2023 09:28			21 Apr 2023 16:54	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			21 Apr 2023 16:54	1
Batch ID: R433336 (0)		Test Name : S	SULFIDE BY SM4500 S	S2-F-2011		Matrix: Water	
HS23040697-13	MW-19S		17 Apr 2023 18:33			21 Apr 2023 18:04	1
Batch ID: R4333	52(0)	Test Name : S	SULFIDE BY SM4500 S	S2-F-2011		Matrix: Water	
HS23040697-12	MW-7S		18 Apr 2023 09:28			22 Apr 2023 11:39	1

Date: 28-Jun-23

Client:	Altamira
Project:	WFEC / CCR Landfill
WorkOrder:	HS23040697

	DA	TES	REP	ORT
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Sample ID	Client San	np ID Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4333	54(0)	Test Name : PH BY SM4500H+ B-20	11		Matrix: Water	
HS23040697-01	MW-3	12 Apr 2023 10:42			22 Apr 2023 14:02	1
HS23040697-02	MW-5S	12 Apr 2023 12:32			22 Apr 2023 14:02	1
HS23040697-03	MW-13	12 Apr 2023 11:57			22 Apr 2023 14:02	1
HS23040697-04	MW-14A	12 Apr 2023 11:06			22 Apr 2023 14:02	1
HS23040697-05	MW-15A	12 Apr 2023 09:45			22 Apr 2023 14:02	1
HS23040697-06	MW-20	12 Apr 2023 12:58			22 Apr 2023 14:02	1
HS23040697-07	MW-21	12 Apr 2023 09:47			22 Apr 2023 14:02	1
HS23040697-08	MW-16	12 Apr 2023 15:23			22 Apr 2023 14:02	1
HS23040697-09	MW-17	12 Apr 2023 16:37			22 Apr 2023 14:02	1
HS23040697-10	MW-18	12 Apr 2023 18:10			22 Apr 2023 14:02	1
HS23040697-11	DUP-4	12 Apr 2023 16:37			22 Apr 2023 14:02	1
HS23040697-12	MW-7S	18 Apr 2023 09:28			22 Apr 2023 14:02	1
HS23040697-13	MW-19S	17 Apr 2023 18:33			22 Apr 2023 14:02	1
Batch ID: R4334	12(0)	Test Name : TOTAL DISSOLVED SC	DLIDS BY SM2540C-	2011	Matrix: Water	
HS23040697-12	MW-7S	18 Apr 2023 09:28			20 Apr 2023 11:00	1
HS23040697-13	MW-19S	17 Apr 2023 18:33			20 Apr 2023 11:00	1
Batch ID: R4336	30(0)	Test Name: ALKALINITY BY SM 23	20B-2011		Matrix: Water	
HS23040697-02	MW-5S	12 Apr 2023 12:32			25 Apr 2023 19:17	1
HS23040697-04	MW-14A	12 Apr 2023 11:06			25 Apr 2023 19:22	1
HS23040697-05	MW-15A	12 Apr 2023 09:45			25 Apr 2023 19:27	1
HS23040697-08	MW-16	12 Apr 2023 15:23			25 Apr 2023 19:32	1
HS23040697-09	MW-17	12 Apr 2023 16:37			25 Apr 2023 19:38	1
HS23040697-10	MW-18	12 Apr 2023 18:10			25 Apr 2023 19:43	1
HS23040697-11	DUP-4	12 Apr 2023 16:37			25 Apr 2023 20:02	1
HS23040697-12	MW-7S	18 Apr 2023 09:28			25 Apr 2023 20:12	1
HS23040697-13	MW-19S	17 Apr 2023 18:33			25 Apr 2023 18:03	1
Batch ID: R4336	32(0)	Test Name : CHEMICAL OXYGEN D	EMAND BY E410.4,	REV 2.0, 1993	Matrix: Water	
HS23040697-01	MW-3	12 Apr 2023 10:42			26 Apr 2023 11:00	1
HS23040697-02	MW-5S	12 Apr 2023 12:32			26 Apr 2023 11:00	1
HS23040697-03	MW-13	12 Apr 2023 11:57			26 Apr 2023 11:00	1
HS23040697-04	MW-14A	12 Apr 2023 11:06			26 Apr 2023 11:00	1
HS23040697-05	MW-15A	12 Apr 2023 09:45			26 Apr 2023 11:00	1
HS23040697-06	MW-20	12 Apr 2023 12:58			26 Apr 2023 11:00	1
HS23040697-07	MW-21	12 Apr 2023 09:47			26 Apr 2023 11:00	1
HS23040697-08	MW-16	12 Apr 2023 15:23			26 Apr 2023 11:00	1
HS23040697-09	MW-17	12 Apr 2023 16:37			26 Apr 2023 11:00	1
Batch ID: R4336	64(0)	Test Name : FERROUS IRON BY SM	/3500 FE B		Matrix: Water	
HS23040697-12	MW-7S	18 Apr 2023 09:28			19 Apr 2023 15:10	1

Client: Project: WorkOrder:	Altamira WFEC / HS2304	CCR Landfill				DATES RE	
Sample ID	Client Sam	p ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4337	70(0)	Test Name : Fl	ERRIC IRON - BY CA	LCULATION BY SM3	500FED	Matrix: Water	
HS23040697-02	MW-5S		12 Apr 2023 12:32			27 Apr 2023 15:25	1
HS23040697-04	MW-14A		12 Apr 2023 11:06			27 Apr 2023 15:25	1
HS23040697-05	MW-15A		12 Apr 2023 09:45			27 Apr 2023 15:25	1
HS23040697-08	MW-16		12 Apr 2023 15:23			27 Apr 2023 15:25	1
HS23040697-09	MW-17		12 Apr 2023 16:37			27 Apr 2023 15:25	1
HS23040697-10	MW-18		12 Apr 2023 18:10			27 Apr 2023 15:25	1
HS23040697-11	DUP-4		12 Apr 2023 16:37			27 Apr 2023 15:25	1
HS23040697-12	MW-7S		18 Apr 2023 09:28			27 Apr 2023 15:25	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			27 Apr 2023 15:25	1
Batch ID: R4337	71(0)	Test Name : Fl	ERRIC IRON (DISS)-	BY CALCULATION B	Y SM3500FED	Matrix: Water	
HS23040697-02	MW-5S		12 Apr 2023 12:32			27 Apr 2023 15:26	1
HS23040697-04	MW-14A		12 Apr 2023 11:06			27 Apr 2023 15:26	1
HS23040697-05	MW-15A		12 Apr 2023 09:45			27 Apr 2023 15:26	1
HS23040697-08	MW-16		12 Apr 2023 15:23			27 Apr 2023 15:26	1
HS23040697-09	MW-17		12 Apr 2023 16:37			27 Apr 2023 15:26	1
HS23040697-10	MW-18		12 Apr 2023 18:10			27 Apr 2023 15:26	1
HS23040697-11	DUP-4		12 Apr 2023 16:37			27 Apr 2023 15:26	1
HS23040697-12	MW-7S		18 Apr 2023 09:28			27 Apr 2023 15:26	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			27 Apr 2023 15:26	1
Batch ID: R4337	76(0)	Test Name: C	HEMICAL OXYGEN D	DEMAND BY E410.4,	REV 2.0, 1993	Matrix: Water	
HS23040697-10	MW-18		12 Apr 2023 18:10			27 Apr 2023 13:00	1
HS23040697-11	DUP-4		12 Apr 2023 16:37			27 Apr 2023 13:00	1
HS23040697-12	MW-7S		18 Apr 2023 09:28			27 Apr 2023 13:00	1
HS23040697-13	MW-19S		17 Apr 2023 18:33			27 Apr 2023 13:00	1

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ALS Housto	n, US								Date: 28-Jun-2
Client: Project: WorkOrder:	WF	amira EC / CCR Landfil 23040697	I					QC BA	TCH REPORT
Batch ID: 192	2867(0)	Inst	rument: I	CPMS06	м		DISSOLVED DISSOLVED		SW6020A
MBLK	Sample ID:	MBLKF1-192867		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	13:56
Client ID:		Ru	In ID: ICPM	S06_433539	SeqNo: 7	259952	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Iron		U	0.200						
Molybdenum		U	0.00500						
MBLK	Sample ID:	MBLK-192867		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	13:54
Client ID:		Ru	In ID: ICPM	S06_433539	SeqNo: 7	259951	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Iron		U	0.200						
Molybdenum		U	0.00500						
LCS	Sample ID:	LCS-192867		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	13:58
Client ID:		Ru	In ID: ICPM	S06_433539	SeqNo: 7		-	25-Apr-2023	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Iron		4.63	0.200	5	0	92.6	80 - 120		
Molybdenum		0.04633	0.00500	0.05	0	92.7	80 - 120		
MS	Sample ID:	HS23040697-13MS	;	Units:	mg/L	Ana	alysis Date:	25-Apr-2023	14:04
Client ID: MV	V-19S	Ru	In ID: ICPM	S06_433539	SeqNo: 7	7259956	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Iron		4.614	0.200	5	0	92.3	75 - 125		
Molybdenum		0.4362	0.00500	0.05	0.3787	115	75 - 125		
MSD	Sample ID:	HS23040697-13MS	D	Units:	mg/L	Ana	alysis Date:	25-Apr-2023	14:06
Client ID: MV	V-19S	Ru	In ID: ICPM	S06_433539	SeqNo: 7	259957	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Iron		4.578	0.200	5	0	91.6	75 - 125	4.614	0.794 20
Molybdenum		0.4408	0.00500	0.05	0.3787	124	75 - 125	0.4362	1.06 20

QC BATCH REPORT

Batch ID:	192867(0)	Instru	ment:	ICPMS06	N	ietnoù.	DISSOLVED	METALS BY	SW6020A
PDS	Sample ID:	HS23040697-13PDS		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	14:08
Client ID:	MW-19S	Run	ID: ICPM	IS06_433539	SeqNo:	7259958	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		9.991	0.200	10	0.007917	99.8	75 - 125		
Molybdenu	m	0.4758	0.00500	0.1	0.3787	97.1	75 - 125		
SD	Sample ID:	HS23040697-13SD		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	14:02
Client ID:	MW-19S	Run	ID: ICPM	IS06_433539	SeqNo:	7259955	PrepDate:	25-Apr-2023	DF: 5
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D %D Limit Qual
Iron		U	1.00					0.007917	0 10
Molybdenu	m	0.3763	0.0250					0.3787	0.631 10
The followin	g samples were analyze		0697-02 0697-09 0697-13	HS2304069 HS2304069		HS230406 HS230406		HS23040697- HS23040697-	

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Client:AltamiraProject:WFEC / CCR LandfillWorkOrder:HS23040697

Batch ID: 1	92875(0)	Inst	rument:	ICPMS06	М	ethod: I	CP-MS MET	ALS BY SWE	020A	
MBLK	Sample ID:	MBLK-192875		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	19:31	
Client ID:		R	un ID: ICPI	MS06_433539	SeqNo: 7	7261201	PrepDate:	25-Apr-2023	DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Antimony		U	0.00200							
Arsenic		U	0.00200							
Barium		U	0.00400							
Beryllium		U	0.00200							
Boron		U	0.0200							
Cadmium		U	0.00200							
Calcium		U	0.500							
Chromium		U	0.00400							
Cobalt		U	0.00500							
Iron		U	0.200							
Lead		U	0.00200							
Lithium		U	0.00500							
Magnesium		0.01066	0.200							
Molybdenum		U	0.00500							
Potassium		U	0.200							
Selenium		U	0.00200							
Sodium		U	0.200							
Thallium		U	0.00200							

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Batch ID: 192	2875(0)	Inst	trument:	ICPMS06	M	ethod: I	CP-MS MET	ALS BY SWE	6020A	
LCS	Sample ID:	LCS-192875		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	19:33	
Client ID:		R	Run ID: ICPN	S06_433539	SeqNo: 7	261202	PrepDate:	25-Apr-2023	DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Antimony		0.04522	0.00200	0.05	0	90.4	80 - 120			
Arsenic		0.04801	0.00200	0.05	0	96.0	80 - 120			
Barium		0.04699	0.00400	0.05	0	94.0	80 - 120			
Beryllium		0.04826	0.00200	0.05	0	96.5	80 - 120			
Boron		0.4826	0.0200	0.5	0	96.5	80 - 120			
Cadmium		0.05007	0.00200	0.05	0	100	80 - 120			
Calcium		4.468	0.500	5	0	89.4	80 - 120			
Chromium		0.04634	0.00400	0.05	0	92.7	80 - 120			
Cobalt		0.0475	0.00500	0.05	0	95.0	80 - 120			
Iron		4.702	0.200	5	0	94.0	80 - 120			
Lead		0.04712	0.00200	0.05	0	94.2	80 - 120			
Lithium		0.09909	0.00500	0.1	0	99.1	80 - 120			
Magnesium		4.762	0.200	5	0	95.2	80 - 120			
Molybdenum		0.04774	0.00500	0.05	0	95.5	80 - 120			
Potassium		4.675	0.200	5	0	93.5	80 - 120			
Selenium		0.0501	0.00200	0.05	0	100	80 - 120			
Sodium		4.72	0.200	5	0	94.4	80 - 120			
Thallium		0.04183	0.00200	0.05	0	83.7	80 - 120			

Batch ID:	192875(0)	Instr	ument:	ICPMS06	M	ethod: I	CP-MS MET	ALS BY SWE	6020A
MS	Sample ID:	HS23040697-13MS		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	9 19:39
Client ID:	MW-19S	Ru	n ID: ICPN	1S06_433539	SeqNo: 7	261205	PrepDate:	25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.04186	0.00200	0.05	0.000092	83.5	80 - 120		
Arsenic		0.05475	0.00200	0.05	0.00581	97.9	80 - 120		
Barium		0.06255	0.00400	0.05	0.01522	94.6	80 - 120		
Beryllium		0.0444	0.00200	0.05	0.000018	88.8	80 - 120		
Boron		7.202	0.0200	0.5	6.628	115	80 - 120		EC
Cadmium		0.04887	0.00200	0.05	0.000106	97.5	80 - 120		
Calcium		42.86	0.500	5	38.55	86.2	80 - 120		C
Chromium		0.04674	0.00400	0.05	-0.000405	94.3	80 - 120		
Cobalt		0.04666	0.00500	0.05	0.000159	93.0	80 - 120		
Iron		4.668	0.200	5	0.01618	93.0	80 - 120		
Lead		0.04811	0.00200	0.05	0.000078	96.1	80 - 120		
Lithium		0.0913	0.00500	0.1	0.002155	89.1	80 - 120		
Magnesium		5.029	0.200	5	0.1086	98.4	80 - 120		
Molybdenur	n	0.4268	0.00500	0.05	0.3884	76.9	80 - 120		SC
Potassium		36.98	0.200	5	32.27	94.2	80 - 120		C
Selenium		0.05512	0.00200	0.05	0.009646	90.9	80 - 120		
Sodium		624.7	0.200	5	610.8	279	80 - 120		SEC
Thallium		0.04362	0.00200	0.05	0.000269	86.7	80 - 120		

Batch ID:	192875(0)	Inst	trument:	ICPMS06	M	ethod: I	CP-MS MET	ALS BY SW6	020A		
MSD	Sample ID:	HS23040697-13M	SD	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	11:08		
Client ID:	MW-19S	R	un ID: ICPN	IS06_433624	SeqNo: 7	262040	PrepDate:	25-Apr-2023	DF: '	1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	R %RPD L	RPD imit (Qual
Antimony		0.04455	0.00200	0.05	0	89.1	80 - 120	0.04186	6.22	20	
Arsenic		0.0566	0.00200	0.05	0.00581	102	80 - 120	0.05475	3.32	20	
Barium		0.06254	0.00400	0.05	0.01522	94.6	80 - 120	0.06255	0.0112	20	
Beryllium		0.04664	0.00200	0.05	0	93.3	80 - 120	0.0444	4.91	20	
Boron		6.942	0.0200	0.5	6.628	62.9	80 - 120	7.202	3.67	20	SEO
Cadmium		0.04749	0.00200	0.05	0	95.0	80 - 120	0.04887	2.86	20	
Calcium		43.62	0.500	5	38.55	101	80 - 120	42.86	1.76	20	0
Chromium		0.04682	0.00400	0.05	0	93.6	80 - 120	0.04674	0.173	20	
Cobalt		0.04793	0.00500	0.05	0	95.9	80 - 120	0.04666	2.69	20	
Iron		4.751	0.200	5	0.01618	94.7	80 - 120	4.668	1.76	20	
Lead		0.04889	0.00200	0.05	0	97.8	80 - 120	0.04811	1.61	20	
Lithium		0.09163	0.00500	0.1	0.002155	89.5	80 - 120	0.0913	0.367	20	
Magnesium	ı	4.973	0.200	5	0.1086	97.3	80 - 120	5.029	1.11	20	
Molybdenu	m	0.4171	0.00500	0.05	0.3884	57.5	80 - 120	0.4268	2.3	20	SO
Potassium		37.96	0.200	5	32.27	114	80 - 120	36.98	2.62	20	0
Selenium		0.05929	0.00200	0.05	0.009646	99.3	80 - 120	0.05512	7.3	20	
Sodium		607.5	0.200	5	610.8	-65.4	80 - 120	624.7	2.8	20	SEO
Thallium		0.04465	0.00200	0.05	0.000269	88.8	80 - 120	0.04362	2.32	20	

Sodium

QC BATCH REPORT

Batch ID:	192875(0)	Inst	rument: I	CPMS06	М	ethod: I	CP-MS MET	ALS BY SW6	020A
PDS Client ID:	Sample ID: MW-19S	HS23040697-13PD Ru)S un ID: ICPM :		mg/L SeqNo: 7		PrepDate:	25-Apr-2023 25-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.0752	0.00200	0.1	0.000092	75.1	75 - 125		
Arsenic		0.1005	0.00200	0.1	0.00581	94.7	75 - 125		
Barium		0.1036	0.00400	0.1	0.01522	88.4	75 - 125		
Beryllium		0.08407	0.00200	0.1	0.000018	84.1	75 - 125		
Cadmium		0.09366	0.00200	0.1	0.000106	93.6	75 - 125		
Calcium		47.27	0.500	10	38.55	87.2	75 - 125		
Chromium		0.09484	0.00400	0.1	-0.000405	95.2	75 - 125		
Cobalt		0.09513	0.00500	0.1	0.000159	95.0	75 - 125		
Iron		9.362	0.200	10	0.01618	93.5	75 - 125		
Lead		0.09323	0.00200	0.1	0.000078	93.1	75 - 125		
Lithium		0.08976	0.00500	0.1	0.002155	87.6	70 - 125		
Magnesium		10.39	0.200	10	0.1086	103	75 - 125		
Potassium		43.36	0.200	10	32.27	111	75 - 125		
Selenium		0.1068	0.00200	0.1	0.009646	97.2	75 - 125		
Thallium		0.0948	0.00200	0.1	0.000269	94.5	75 - 125		
PDS	Sample ID:	HS23040697-13PD	S	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	11:29
Client ID:	MW-19S	R	un ID: ICPM	S06_433624	SeqNo: 7	262176	PrepDate:	25-Apr-2023	DF: 20
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Boron		17.85	0.400	10	7.69	102	75 - 125		
Molybdenur	n	2.347	0.100	2	0.3623	99.2	75 - 125		

832.8

4.00

200

661.8

85.5

75 - 125

Client:	Altamira
Project:	WFEC / CCR Landfill
WorkOrder:	HS23040697

Batch ID:	192875(0)	Instru	ment:	ICPMS06	M	ethod: I	CP-MS MET	ALS BY SW6	020A		
SD	Sample ID:	HS23040697-13SD		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	19:37		
Client ID:	MW-19S	Run	ID: ICPN	IS06_433539	SeqNo: 7	261204	PrepDate:	25-Apr-2023	DF:	5	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit G	Jual
Antimony		U	0.0100					0.000092	(0 10	
Arsenic		0.005485	0.0100					0.00581	(0 10	
Barium		0.01497	0.0200					0.01522	(0 10	
Beryllium		U	0.0100					0.000018	(0 10	
Cadmium		U	0.0100					0.000106	(0 10	
Calcium		37.52	2.50					38.55	2.66	6 10	
Chromium		U	0.0200					-0.000405	(0 10	
Cobalt		U	0.0250					0.000159	(0 10	
Iron		U	1.00					0.01618	(0 10	
Lead		U	0.0100					0.000078	(0 10	
Lithium		U	0.0250					0.002155	(0 10	
Magnesium		0.1126	1.00					0.1086	(0 10	
Potassium		31.86	1.00					32.27	1.25	5 10	
Selenium		0.008557	0.0100					0.009646	(0 10	
Thallium		U	0.0100					0.000269	(0 10	
SD	Sample ID:	HS23040697-13SD		Units:	mg/L	Ana	alysis Date:	26-Apr-2023	11:27		
Client ID:	MW-19S	Run	ID: ICPN	IS06_433624	SeqNo: 7	262175	PrepDate:	25-Apr-2023	DF:	100	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		%D Limit G	Qual

Boron	8.303	2.00			7.69	7.96 10	
Molybdenum	0.3706	0.500			0.3623	0 10	J
Sodium	663.3	20.0			661.8	0.226 10	
The following samples were an	e de la companya de		HS23040697-02	HS23040697-03	HS23040697-0	=	
		10697-05 10697-09	HS23040697-06 HS23040697-10	HS23040697-07 HS23040697-11	HS23040697-0 HS23040697-1		
	HS2304	40697-13					

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Batch ID:	192976 (0)	Ins	strument:	HG04	N	Nethod: N	IERCURY B	SY SW7470A	
MBLK Client ID:	Sample ID:	MBLK-192976	Run ID: HG		mg/L SeqNo:	Ana 7263158		26-Apr-2023 26-Apr-2023	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Mercury		U	0.000200						
LCS	Sample ID:	LCS-192976			mg/L			26-Apr-2023	
Client ID: Analyte		Result	Run ID: HG i PQL	-	SeqNo: SPK Ref Value	7263159 %REC	PrepDate: Control Limit	26-Apr-2023 RPD Ref Value	DF: 1 RPD %RPD Limit Qual
Mercury		0.00501	0.000200	0.005	0	100	80 - 120		
MS	Sample ID:	HS23040697-13M	AS	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	14:37
Client ID: Analyte	MW-19S	Result	Run ID: HG i PQL	-	SeqNo: SPK Ref Value	7263173 %REC	PrepDate: Control Limit	26-Apr-2023 RPD Ref Value	DF: 1 RPD %RPD Limit Qual
Mercury		0.00482	0.000200	0.005					
		0.00102	0.000200	0.005	0.000014	96.1	75 - 125		
MSD	Sample ID:	HS23040697-13M	MSD	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	
MSD Client ID: Analyte	Sample ID: MW-19S	HS23040697-13M		Units: 04_433673	mg/L	Ana 7263174	alysis Date:	26-Apr-2023 26-Apr-2023 RPD Ref Value	
Client ID:	•	HS23040697-13N	IISD Run ID: HG i	Units: 04_433673 . SPK Val	mg/L SeqNo: SPK Ref	Ana 7263174 %REC	alysis Date: PrepDate: Control	26-Apr-2023 RPD Ref	DF: 1 RPD %RPD Limit Qual

Batch ID:	192996 (0)	Ins	trument:	HG04	м	ethod: N	MERCURY B	SY SW7470A	
MBLK	Sample ID:	MBLK-192996		Units:	mg/L	Ana	alysis Date:	26-Apr-2023	16:54
Client ID:		F	Run ID: HGO	4_433673	SeqNo: 7	7263475	PrepDate:	26-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Mercury		U	0.000200						
LCS	Sample ID:	LCS-192996		Units:	mg/L	Ana	alysis Date:	26-Apr-2023	16:56
Client ID:		F	Run ID: HGO	4_433673	SeqNo: 7	7263476	PrepDate:	26-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.00497	0.000200	0.005	0	99.4	80 - 120		
MS	Sample ID:	HS23041012-06M	IS	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	17:24
Client ID:		F	Run ID: HGO	4_433673	SeqNo: 7	7263489	PrepDate:	26-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.0051	0.000200	0.005	0.000003	102	75 - 125		
MSD	Sample ID:	HS23041012-06M	ISD	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	17:26
Client ID:		F	Run ID: HGO	4_433673	SeqNo: 7	7263490	PrepDate:	26-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Mercury		0.00492	0.000200	0.005	0.000003	98.3	75 - 125	0.0051	3.59 20
he following	g samples were analyze	ed in this batch: HS2	3040697-11	HS2304069	97-12				

Client: Project: WorkOr	V	ltamira /FEC / CC S2304069		l					QC BA	TCH REPORT
Batch ID:	R432628 (0)		Instr	ument:	ICS-Integrion	Μ	lethod:	ANIONS BY	E300.0, REV	2.1, 1993
MBLK	Sample II	D: MBLK			Units:	mg/L	An	alysis Date:	13-Apr-2023	12:00
Client ID:			Ru	n ID: ICS	-Integrion_43262	8 SeqNo:	7236424	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			U	0.500						
Fluoride			U	0.100						
Nitrogen, N	litrate (As N)		U	0.100						
Sulfate			U	0.500						
LCS	Sample II	D: LCS			Units:	mg/L	An	alysis Date:	13-Apr-2023	12:06
Client ID:			Ru	n ID: ICS	-Integrion_43262	8 SeqNo:	7236425	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			19.68	0.500	20	0	98.4	90 - 110		
Fluoride			4.036	0.100	4	0	101	90 - 110		
Nitrogen, N	litrate (As N)		3.962	0.100	4	0	99.1	90 - 110		
Sulfate			19.55	0.500	20	0	97.8	90 - 110		
MS	Sample II	D: HS2304	0694-02MS		Units:	mg/L	An	alysis Date:	13-Apr-2023	12:18
Client ID:			Ru	n ID: ICS	-Integrion_43262	8 SeqNo:	7236427	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			21.86	0.500	10	12.16	97.0	80 - 120		
Fluoride			2.095	0.100	2	0.302	89.6	80 - 120		
Nitrogen, N	litrate (As N)		1.827	0.100	2	0	91.3	80 - 120		
Sulfate			1696	0.500	10	1763	-672	80 - 120		SE
MS	Sample II	D: HS2304	0411-01MS		Units:	mg/L	An	alysis Date:	13-Apr-2023	17:54
Client ID:			Ru	n ID: ICS	-Integrion_43262	8 SeqNo:	7236472	PrepDate:		DF: 10
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			609.2	5.00	100	536.6	72.6	80 - 120		S
Fluoride			24.99	1.00	20	4.704	101	80 - 120		
Nitrogen, N	litrate (As N)		29.92	1.00	20	10.5	97.1	80 - 120		
Sulfate			933.2	5.00	100	905	28.3	80 - 120		S

ALS Houston, US

Date: 28-Jun-23

Batch ID:	R432628 (0)	Instrur	nent:	ICS-Integrion	N	lethod: A	ANIONS BY	E300.0, REV	2.1, 1993	
MSD	Sample ID:	HS23040694-02MSD		Units: n	ıg/L	Ana	alysis Date:	13-Apr-2023	12:24	
Client ID:		Run	ID: ICS-	Integrion_432628	SeqNo:	7236428	PrepDate:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limi	
Chloride		21.99	0.500	10	12.16	98.3	80 - 120	21.86	0.597 20	D
Fluoride		2.345	0.100	2	0.302	102	80 - 120	2.095	11.3 20	0
Nitrogen, Nit	trate (As N)	1.837	0.100	2	0	91.9	80 - 120	1.827	0.568 20	D
Sulfate		1698	0.500	10	1763	-652	80 - 120	1696	0.122 20	0 SEC
MSD	Sample ID:	HS23040411-01MSD		Units: n	ng/L	Ana	alysis Date:	13-Apr-2023	18:00	
Client ID:		Run	ID: ICS-	Integrion_432628	SeqNo:	7236473	PrepDate:		DF: 10	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limi	
Chloride		608.9	5.00	100	536.6	72.3	80 - 120	609.2	0.0558 20	0 S(
Fluoride		25.07	1.00	20	4.704	102	80 - 120	24.99	0.332 20	0
Nitrogen, Nit	trate (As N)	29.95	1.00	20	10.5	97.2	80 - 120	29.92	0.104 20	D
Sulfate		930.2	5.00	100	905	25.2	80 - 120	933.2	0.328 20	0 SC
The following	samples were analyze	ed in this batch: HS23040 HS23040		HS23040697 HS23040697		HS230406 HS230406		HS23040697-	-04	

QC BATCH REPORT

Batch ID:	R432663 (0)	Ins	trument:	UV-2450	Μ		ERROUS IF	RON BY SM3))	500 FE D
MBLK	Sample ID:	MBLK-R432663		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	09:30
Client ID:		F	Run ID: UV-	2450_432663	SeqNo:	7237219	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	U	0.0500						
LCS	Sample ID:	LCS-R432663		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	09:30
Client ID:		F	Run ID: UV-	2450_432663	SeqNo:	7237218	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.254	0.0500	0.25	0	102	80 - 120		
MS	Sample ID:	HS23040697-04M	IS	Units:	mg/L	Ana	alysis Date:	14-Apr-2023	09:30
Client ID:	MW-14A	F	Run ID: UV-	2450_432663	SeqNo:	7237221	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.253	0.0500	0.25	-0.005	103	80 - 120		
MSD	Sample ID:	HS23040697-04M	ISD	Units:	mg/L	Ana	alysis Date:	14-Apr-2023	09:30
Client ID:	MW-14A	F	Run ID: UV-	2450_432663	SeqNo:	7237220	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.257	0.0500	0.25	-0.005	105	80 - 120	0.253	1.57 20
The following	g samples were analyze	d in this batch: HS2	3040697-02	HS2304069	97-04	HS230406	97-05	HS23040697	08

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QC BATCH REPORT

Batch ID: R43	2664(0)	Ins	strument:	UV-2450	N	lethod: F		RON BY SM3	500 FE B
MBLK	Sample ID:	MBLK-R432664		Units	mg/L	Ana	alysis Date:	14-Apr-2023	09:22
Client ID:		F	Run ID: U	IV-2450_432664	SeqNo:	7237241	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		U	0.05	00			80 - 120		
LCS	Sample ID:	LCS-R432664		Units	mg/L	Ana	alysis Date:	14-Apr-2023	09:22
Client ID:		F	Run ID: U	IV-2450_432664	SeqNo:	7237240	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.254	0.05	00 0.25	0	102	80 - 120		
MS	Sample ID:	HS23040698-03N	IS	Units	mg/L	Ana	alysis Date:	14-Apr-2023	09:22
Client ID:		F	Run ID: U	IV-2450_432664	SeqNo:	7238794	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Iron		0.241	0.05	00 0.25	0.015	90.4	75 - 125		
MSD	Sample ID:	HS23040698-03N	ISD	Units	mg/L	Ana	alysis Date:	14-Apr-2023	09:22
Client ID:		F	Run ID: U	IV-2450_432664	SeqNo:	7238793	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Iron		0.236	0.05	00 0.25	0.015	88.4	75 - 125	0.241	2.1 20
The following sam	ples were analyze	ed in this batch: HS2 HS2	23040697-02 23040697-09			HS230406 HS230406		HS23040697	-08

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Client: Project: WorkOrde	W	tamira ′FEC / CCI S2304069		II					QC BA	TCH REPOR
Batch ID:	R432738(0)		Inst	rument:	ICS-Integrion	М	ethod: A	ANIONS BY	E300.0, REV	2.1, 1993
MBLK	Sample ID	MBLK			Units: n	ng/L	Ana	alysis Date:	14-Apr-2023	14:36
Client ID:			R	un ID: ICS-	Integrion_432738	SeqNo: 7	239550	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			U	0.500						
Fluoride			U	0.100						
Nitrogen, Nit	rate (As N)		U	0.100						
Nitrogen, Nit	rite (As N)		U	0.100						
Sulfate			U	0.500						
LCS	Sample ID	: LCS			Units: n	ng/L	Ana	alysis Date:	14-Apr-2023	14:44
Client ID:			R	un ID: ICS-	Integrion_432738	SeqNo: 7	239551	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			19.5	0.500	20	0	97.5	90 - 110		
Fluoride			4.074	0.100	4	0	102	90 - 110		
Nitrogen, Nit	rate (As N)		3.936	0.100	4	0	98.4	90 - 110		
Nitrogen, Nit	rite (As N)		3.943	0.100	4	0	98.6	90 - 110		
Sulfate			19.2	0.500	20	0	96.0	90 - 110		
MS	Sample ID	HS23040	723-01M	6	Units: n	ng/L	Ana	alysis Date:	14-Apr-2023	14:24
Client ID:			R	un ID: ICS-	Integrion_432738	SeqNo: 7	239548	PrepDate:		DF: 1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Chloride			57.35	0.500	10	49.54	78.1	80 - 120		Ş
Fluoride			2.653	0.100	2	0.551	105	80 - 120		
Nitrogen, Nit	rate (As N)		3.546	0.100	2	1.569	98.9	80 - 120		
Nitrogen, Nit	rite (As N)		1.847	0.100	2	0	92.4	80 - 120		
Sulfate			59.31	0.500	10	53.38	59.3	80 - 120		:

QC BATCH REPORT

Batch ID: R432738 (0)	Ins	strument:	ICS-Integrion	M	ethod: A	NIONS BY	E300.0, REV	2.1, 1993		
MSD Sample	ID: HS23040723-01M	ISD	Units: n	ng/L	Ana	alysis Date:	14-Apr-2023	14:30		
Client ID:	I	Run ID: ICS	-Integrion_432738	SeqNo: 7	239549	PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	R %RPD Li	PD mit Q	ual
Chloride	57.34	0.500	10	49.54	78.0	80 - 120	57.35	0.0122	20	SO
Fluoride	2.623	0.100	2	0.551	104	80 - 120	2.653	1.14	20	
Nitrogen, Nitrate (As N)	3.544	0.100	2	1.569	98.8	80 - 120	3.546	0.0536	20	
Nitrogen, Nitrite (As N)	1.841	0.100	2	0	92.0	80 - 120	1.847	0.347	20	
Sulfate	59.26	0.500	10	53.38	58.8	80 - 120	59.31	0.0852	20	SO
The following samples were an	alyzed in this batch: HS2	23040697-08	HS23040697-	09	HS230406	97-10	HS23040697-	-11		$\overline{}$

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Batch ID:	R432824 (0)	Instrume	ent:	Balance1	N	ietnoù.	OTAL DISS	OLVED SOL	IDS BY SM2540C-
MBLK	Sample ID:	WBLK-04142023		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID	Bal	ance1_432824	SeqNo:	7241643	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Disso Filterable)	lved Solids (Residue,	U	10.0						
LCS	Sample ID:	LCS-04142023		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID	Bal	ance1_432824	SeqNo:	7241642	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Disso Filterable)	lved Solids (Residue,	1060	10.0	1000	0	106	85 - 115		
DUP	Sample ID:	HS23040697-05DUP		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:	MW-15A	Run ID	Bal	ance1_432824	SeqNo:	7241632	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Disso Filterable)	lved Solids (Residue,	2240	10.0					2236	0.179 20
DUP	Sample ID:	HS23040694-02DUP		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID	Bal	ance1_432824	SeqNo:	7241624	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Disso Filterable)	lved Solids (Residue,	3240	10.0					3220	0.619 20
The following	g samples were analyze	d in this batch: HS2304069 HS2304069		HS2304069 HS2304069		HS230406	97-03	HS23040697	-04

Client:AltamiraProject:WFEC / CCR LandfillWorkOrder:HS23040697

Batch ID:	R432930 (0)	Inst	rument:	Balance1	N	ietnoù.	OTAL DISS	OLVED SOL	IDS BY SM2540C-
MBLK	Sample ID:	WBLK-04172023		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		R	un ID: Bal	ance1_432930	SeqNo:	7244542	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Dissol Filterable)	ved Solids (Residue,	U	10.0)					
LCS	Sample ID:	LCS-04172023		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		R	un ID: Bal	ance1_432930	SeqNo:	7244541	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Dissol Filterable)	ved Solids (Residue,	1074	10.0) 1000	0	107	85 - 115		
DUP	Sample ID:	HS23040897-02DL	JP	Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		R	un ID: Bal	ance1_432930	SeqNo:	7244536	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Dissol Filterable)	ved Solids (Residue,	728	10.0)				730	0.274 20
DUP	Sample ID:	HS23040808-01DL	JP	Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		R	un ID: Bal	ance1_432930	SeqNo:	7244527	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Total Dissol Filterable)	ved Solids (Residue,	786	10.0)				784	0.255 20
The following	g samples were analyze		040697-07 040697-11	HS230406	97-08	HS230406	97-09	HS23040697	-10

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Batch ID:	R432939 (0)	Instrumer	ıt:	WetChem_HS	М	lethod:	SULFIDE BY	SM4500 S2-	F-2011
MBLK	Sample ID:	MBLK-R432939		Units:	mg/L	Ar	alysis Date:	18-Apr-2023	13:38
Client ID:		Run ID:	Wet	Chem_HS_43293	9 SeqNo: 7	7244807	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		U	2.00						
LCS	Sample ID:	LCS-R432939		Units:	mg/L	Ar	alysis Date:	18-Apr-2023	13:38
Client ID:		Run ID:	Wet	Chem_HS_43293	9 SeqNo: 7	7244806	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.4	2.00	25	0	89.6	85 - 115		
LCSD	Sample ID:	LCSD-R432939		Units:	mg/L	Ar	alysis Date:	18-Apr-2023	13:38
Client ID:		Run ID:	Wet	Chem_HS_43293	9 SeqNo: 7	7244805	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.2	2.00	25	0	88.8	85 - 115	22.4	0.897 20
MS	Sample ID:	HS23040697-02MS		Units:	mg/L	Ar	alysis Date:	18-Apr-2023	13:38
Client ID:	MW-5S	Run ID:	Wet	Chem_HS_43293	9 SeqNo: 7	7244808	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.4	2.00	25	-2.6	100	80 - 120		
The followin	g samples were analyze	ed in this batch: HS23040697 HS23040697		HS23040697 HS23040697		HS23040 HS23040		HS23040697-	-08

MBLK Client ID: Analyte Chloride Fluoride Nitrogen, Nitrate (A Nitrogen, Nitrite (A Nitrate/Nitrite (as N	s N)	MBLK	F Result U U U U U	0 0 0	PQL 0.500 0.100 0.100	Units: Integrion_43314 SPK Val	U		alysis Date: PrepDate: Control Limit	19-Apr-2023 RPD Ref Value	11:18 DF: 1 RPD %RPD Limit G
Analyte Chloride Fluoride Nitrogen, Nitrate (A Nitrogen, Nitrite (A	s N)		Result U U U U	0 0 0	PQL 0.500 0.100 0.100		SPK Ref		Control		RPD
Chloride Fluoride Nitrogen, Nitrate (A Nitrogen, Nitrite (A	s N)		U U U U	0 0 0 0).500).100).100	SPK Val		%REC			
Fluoride Nitrogen, Nitrate (A Nitrogen, Nitrite (A	s N)		U U U	000000000000000000000000000000000000000).100).100						
Nitrogen, Nitrate (A Nitrogen, Nitrite (A	s N)		U	0	0.100						
Nitrogen, Nitrite (A	s N)		U	0							
			-		400						
Nitrate/Nitrite (as N)		U		0.100						
				0	.200						
Sulfate			U	0	.500						
LCS	Sample ID:	LCS				Units:	mg/L	An	alysis Date:	19-Apr-2023	11:24
Client ID:			F	Run ID:	ICS-	Integrion_43314	9 SeqNo: 7	7249954	PrepDate:		DF: 1
Analyte			Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit C
Chloride			20.2	0).500	20	0	101	90 - 110		
Fluoride			4.12	0	0.100	4	0	103	90 - 110		
Nitrogen, Nitrate (A	s N)		4.088	0	0.100	4	0	102	90 - 110		
Nitrogen, Nitrite (A	s N)		4.04	0	0.100	4	0	101	90 - 110		
Nitrate/Nitrite (as N)		8.128	0	.200	8	0	102	90 - 110		
Sulfate			19.9	0	.500	20	0	99.5	90 - 110		
MS	Sample ID:	HS2304	0697-13M	IS		Units:	mg/L	An	alysis Date:	19-Apr-2023	13:06
Client ID: MW-19	s		F	Run ID:	ICS-	Integrion_43314	9 SeqNo:	7249966	PrepDate:		DF: 1
Analyte			Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit C
Chloride			22.48	0).500	10	12.79	96.9	80 - 120		
Fluoride			3.324	0	0.100	2	1.474	92.5	80 - 120		
Nitrogen, Nitrate (A	s N)		1.815	0	0.100	2	0	90.7	80 - 120		
Nitrogen, Nitrite (A	s N)		0.4816	0	0.100	2	0	24.1	80 - 120		
Nitrate/Nitrite (as N)		2.296	0	.200	4	0	57.4	80 - 120		
Sulfate			1400	0	.500	10	1470	-695	80 - 120		

QC BATCH REPORT

Batch ID: R433149 (0)	Instru	iment:	ICS-Integrion	м	ethod: A	ANIONS BY I	E300.0, REV	2.1, 1993	
MS Sample ID:	HS23040356-02MS		Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	14:56	
Client ID:	Rur	ID: ICS-	ntegrion_433149	SeqNo: 7	249980	PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPI %RPD Lim	
Chloride	25.06	0.500	10	15	101	80 - 120			
Fluoride	2.487	0.100	2	0.4276	103	80 - 120			
Nitrogen, Nitrate (As N)	2.563	0.100	2	0.4626	105	80 - 120			
Nitrogen, Nitrite (As N)	1.299	0.100	2	0	65.0	80 - 120			
Nitrate/Nitrite (as N)	3.862	0.200	4	0.4626	85.0	80 - 120			
Sulfate	659.4	0.500	10	670.2	-108	80 - 120			SE
MSD Sample ID:	HS23040697-13MSE)	Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	13:12	
Client ID: MW-19S	Rur	ID: ICS-	ntegrion_433149	SeqNo: 7	249967	PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPI %RPD Lim	
Chloride	22.48	0.500	10	12.79	96.8	80 - 120	22.48	0.00445 2	0
Fluoride	3.473	0.100	2	1.474	100.0	80 - 120	3.324	4.4 2	0
Nitrogen, Nitrate (As N)	1.814	0.100	2	0	90.7	80 - 120	1.815	0.0496 2	0
Nitrogen, Nitrite (As N)	0.4803	0.100	2	0	24.0	80 - 120	0.4816	0.27 2	0
Nitrate/Nitrite (as N)	2.294	0.200	4	0	57.4	80 - 120	2.296	0.0958 2	0
Sulfate	1399	0.500	10	1470	-706	80 - 120	1400	0.081 2	0 SE
MSD Sample ID:	HS23040356-02MSE)	Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	15:02	
Client ID:	Rur	ID: ICS-	ntegrion_433149	SeqNo: 7	249981	PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPI %RPD Lim	
Chloride	24.98	0.500	10	15	99.7	80 - 120	25.06	0.344 2	0
Fluoride	2.519	0.100	2	0.4276	105	80 - 120	2.487	1.27 2	0
Nitrogen, Nitrate (As N)	2.563	0.100	2	0.4626	105	80 - 120	2.563	0.0117 2	0
Nitrogen, Nitrite (As N)	1.283	0.100	2	0	64.1	80 - 120	1.299	1.3 2	0
Nitrate/Nitrite (as N)	3.845	0.200	4	0.4626	84.6	80 - 120	3.862	0.444 2	0
Sulfate	656.1	0.500	10	670.2	-142	80 - 120	659.4	0.508 2	0 SE
The following samples were analyze	ed in this batch: HS2304	40697-12	HS23040697-	13					

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Date: 28-Jun-23

QC BATCH REPORT

Batch ID: F	R433182(0)	Ins	strument:	UV-2450	N	lethod: F	ERROUS IF	RON BY SM3	500 FE B
MBLK	Sample ID:	MBLK-R433182		Uni	ts: mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		F	Run ID: U	V-2450_433182	SeqNo:	7250680	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		U	0.05	00			80 - 120		
LCS	Sample ID:	LCS-R433182		Uni	ts: mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		F	Run ID: U	V-2450_433182	SeqNo:	7250679	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.265	0.05	00 0.25	0	106	80 - 120		
MS	Sample ID:	HS23040697-13N	IS	Uni	ts: mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID: N	/W-19S	F	Run ID: U	V-2450_433182	SeqNo:	7250682	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.266	0.05	00 0.25	0.063	81.2	75 - 125		
MSD	Sample ID:	HS23040697-13N	ISD	Uni	ts: mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID: N	/W-19S	F	Run ID: U	V-2450_433182	SeqNo:	7250681	PrepDate:		DF: 1
Analyte		Result	P	QL SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.265	0.05	00 0.25	0.063	80.8	75 - 125	0.266	0.377 20
The following s	samples were analyze	d in this batch: HS2	3040697-13	}					

Client:AltamiraProject:WFEC / CCR LandfillWorkOrder:HS23040697

Batch ID:	R433183 (0)	Inst	rument:	UV-2450	M	emou.	ERROUS IR	ON BY SM3	500 FE D
MBLK	Sample ID:	MBLK-R433183		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250698	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	U	0.0500						
LCS	Sample ID:	LCS-R433183		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250697	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.269	0.0500	0.25	0	108	80 - 120		
MS	Sample ID:	HS23040697-13M	S	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:	MW-19S	R	un ID: UV-2	450_433183	SeqNo: 7	250700	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.27	0.0500	0.25	0.018	101	80 - 120		
MSD	Sample ID:	HS23040697-13M	SD	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:	MW-19S	R	un ID: UV-2	450_433183	SeqNo: 7	250699	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iro	n, Dissolved	0.267	0.0500	0.25	0.018	99.6	80 - 120	0.27	1.12 20
The following	g samples were analyze	d in this batch: HS23	040697-12	HS2304069	97-13				

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Client:AltamiraProject:WFEC / CCR LandfillWorkOrder:HS23040697

Batch ID:	R433330 (0)	Instrumer	ıt:	WetChem_HS	N	lethod:	SPECIFIC CO 2011	ONDUCTANC	E BY SM 2510B-
MBLK	Sample ID:	MBLK-R433330		Units:	umhos/cm 25.0 °C	@ A	nalysis Date:	21-Apr-2023	16:54
Client ID:		Run ID:	Wet	Chem_HS_4333	30 SeqNo:	7254411	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Co	onductivity	U	5.00						
LCS	Sample ID:	LCS-R433330		Units:	umhos/cm 25.0 °C	@ A	nalysis Date:	21-Apr-2023	16:54
Client ID:		Run ID:	Wet	Chem_HS_4333	30 SeqNo:	7254410	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Co	onductivity	1370	5.00	1413	0	97.0	80 - 120		
DUP	Sample ID:	HS23040697-13DUP		Units:	umhos/cm 25.0 °C	@ A	nalysis Date:	21-Apr-2023	16:54
Client ID:	MW-19S	Run ID:	Wet	Chem_HS_4333	30 SeqNo:	7254412	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Co	onductivity	3290	5.00					3270	0.61 20
The followin	g samples were analyze	ed in this batch: HS23040697 HS23040697 HS23040697 HS23040697 HS23040697	7-05 7-09	HS2304069 HS2304069 HS2304069	7-06	HS23040 HS23040 HS23040	697-07	HS23040697- HS23040697- HS23040697-	08

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Client: Project: WorkOre	WF	mira EC / CCR Landfill 23040697						QC BA	TCH REPORT
Batch ID:	R433336 (0)	Instrume	nt:	WetChem_HS	м	ethod: S	ULFIDE BY	SM4500 S2-	F-2011
MBLK	Sample ID:	MBLK-R433336		Units:	mg/L	Ana	alysis Date:	21-Apr-2023	18:04
Client ID:		Run ID	WetC	Chem_HS_4333	36 SeqNo: 7	254543	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		U	2.00						
LCS	Sample ID:	LCS-R433336		Units:	mg/L	Ana	alysis Date:	21-Apr-2023	18:04
Client ID:		Run ID	WetC	Chem_HS_4333	36 SeqNo: 7	254542	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	0	88.3	85 - 115		
LCSD	Sample ID:	LCSD-R433336		Units:	mg/L	Ana	alysis Date:	21-Apr-2023	18:04
Client ID:		Run ID	WetC	Chem_HS_4333	36 SeqNo: 7	254541	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		21.88	2.00	25	0	87.5	85 - 115	22.08	0.91 20
MS	Sample ID:	HS23040697-13MS		Units:	mg/L	Ana	alysis Date:	21-Apr-2023	18:04
Client ID:	MW-19S	Run ID	WetC	Chem_HS_4333	36 SeqNo: 7	254544	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	-2.32	97.6	80 - 120		
The followin	g samples were analyze	ed in this batch: HS2304069	97-13						

Date: 28-Jun-23

ALS Houston, US

Batch ID:	R433352 (0)	Instrume	nt:	WetChem_HS	M	ethod:	SULFIDE BY	SM4500 S2-	F-2011
MBLK	Sample ID:	MBLK-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	Chem_HS_4333	52 SeqNo: 7	255088	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		U	2.00						
LCS	Sample ID:	LCS-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	Chem_HS_4333	52 SeqNo: 7	255087	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	0	88.3	85 - 115		
LCSD	Sample ID:	LCSD-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	Chem_HS_4333	52 SeqNo: 7	255086	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		21.88	2.00	25	0	87.5	85 - 115	22.08	0.91 20
MS	Sample ID:	HS23041012-06MS		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	Chem_HS_4333	52 SeqNo: 7	255090	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	-2.72	99.2	80 - 120		
MSD	Sample ID:	HS23041012-06MSD		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	Chem_HS_4333	52 SeqNo: 7	255089	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	-2.72	99.2	80 - 120	22.08	0 20
The following	g samples were analyze	ed in this batch: HS2304069	7-12						

ALS Hous	ston, U	IS								Date:	28-Jun-2
Client: Project: WorkOrc	der:	WF	amira EC / CCR Landfill 23040697						QC BA	TCH RI	EPORT
Batch ID:	R43335	54(0)	Instrun	nent:	WetChem_HS	Γ	Method: F	PH BY SM45	00H+ B-2011		
DUP		Sample ID:	HS23040697-13DUP		Units:	pH Units	Ana	alysis Date:	22-Apr-2023	14:02	
Client ID:	MW-19	s	Run I	ID: Wet	Chem_HS_433	54 SeqNo:	7255166	PrepDate:		DF: '	1
Analyte			Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	F %RPD L	RPD imit Qual
pН			10.64	0.100					10.6	0.377	10
Temp Deg	C @pH		20.6	0					20.6	0	10
`he following	g samples	s were analyz	ed in this batch: HS23040 HS23040 HS23040 HS23040 HS23040)697-05)697-09	HS2304069 HS2304069 HS2304069	97-06	HS230406 HS230406 HS230406	97-07	HS23040697 HS23040697 HS23040697	-08	

Batch ID: R433412 (0)	Instrumen	nt: Balance1	welliou.	TOTAL DISSOLVED SOLIE	DS BY SM2540C-
MBLK Sample ID:	WBLK-04202023	Units:	mg/L Ana	alysis Date: 20-Apr-2023	11:00
Client ID:	Run ID:	Balance1_433412	SeqNo: 7256671	PrepDate:	DF: 1
Analyte	Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)	U	10.0			
LCS Sample ID:	LCS-04202023	Units:	mg/L Ana	alysis Date: 20-Apr-2023	11:00
Client ID:	Run ID:	Balance1_433412	SeqNo: 7256670	PrepDate:	DF: 1
Analyte	Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)	1082	10.0 1000	0 108	85 - 115	
DUP Sample ID:	HS23041120-11DUP	Units:	mg/L Ana	alysis Date: 20-Apr-2023	11:00
Client ID:	Run ID:	Balance1_433412	SeqNo: 7256667	PrepDate:	DF: 1
Analyte	Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)	678	10.0		680	0.295 20
DUP Sample ID:	HS23040697-13DUP	Units:	mg/L Ana	alysis Date: 20-Apr-2023	11:00
Client ID: MW-19S	Run ID:	Balance1_433412	SeqNo: 7256651	PrepDate:	DF: 1
Analyte	Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Total Dissolved Solids (Residue, Filterable)	2310	10.0		2310	0 20
The following samples were analyze	d in this batch: HS23040697	7-12 HS2304069	97-13		

Client: Project: WorkOrder:	Altamira WFEC / CCR Lan HS23040697	dfill					QC BA	TCH REPORT
Batch ID: R433630 (0)	h	nstrument:	Skalar 03	м	ethod: A	LKALINITY	BY SM 2320	B-2011
MBLK Sample	e ID: MBLK-0425202	3	Units:	mg/L	Ana	lysis Date:	25-Apr-2023	17:46
Client ID:		Run ID: Skal	ar 03_433630	SeqNo: 7	262133	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Bicarbonate (As	CaCO3) L	5.00						
Alkalinity, Carbonate (As C	aCO3) L	5.00						
Alkalinity, Hydroxide (As Ca	aCO3) L	J 5.00						
Alkalinity, Total (As CaCO3	i) (J 5.00					·	
LCS Sample	e ID: LCS-04252023		Units:	mg/L	Ana	lysis Date:	25-Apr-2023	17:52
Client ID:		Run ID: Skal	ar 03_433630	SeqNo: 7	262134	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Carbonate (As C	aCO3) 930.2	2 5.00	1000	0	93.0	85 - 115		
Alkalinity, Total (As CaCO3	930.7	5.00	1000	0	93.1	85 - 115		
LCSD Sample	e ID: LCSD-0425202	3	Units:	mg/L	Ana	lysis Date:	25-Apr-2023	17:59
Client ID:		Run ID: Skal	ar 03_433630	SeqNo: 7	262135	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Carbonate (As C	aCO3) 927.8	3 5.00	1000	0	92.8	85 - 115	930.2	0.258 20
Alkalinity, Total (As CaCO3	928.6	5.00	1000	0	92.9	85 - 115	930.7	0.226 20
DUP Sample	e ID: HS23040697-13	BDUP	Units:	mg/L	Ana	lysis Date:	25-Apr-2023	18:07
Client ID: MW-19S		Run ID: Skal	ar 03_433630	SeqNo: 7	262137	PrepDate:		DF: 1
	_			SPK Ref		Control	RPD Ref	RPD
Analyte	Result	PQL	SPK Val	Value	%REC	Limit	Value	%RPD Limit Qual
Alkalinity, Bicarbonate (As	CaCO3) L	5.00					0	0 20
Alkalinity, Carbonate (As C	aCO3) 55.4	5.00					62.4	11.9 20
Alkalinity, Hydroxide (As Ca	,	5.00					62	3.33 20
Alkalinity, Total (As CaCO3) 119.5	5 5.00					124.4	4.02 20
The following samples were a	H	523040697-02 523040697-09 523040697-13	HS2304069 HS2304069		HS230406 HS230406		HS23040697- HS23040697-	

Date: 28-Jun-23

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Batch ID: F	R433632(0)	Instru	iment:	WetChem_HS	М		CHEMICAL (REV 2.0, 199	DXYGEN DEN 3	MAND B	Y E410.4,
MBLK	Sample ID:	MBLK-R433632		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Rur	ID: Wet	Chem_HS_4336	32 SeqNo: 7	7262199	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical Ox	ygen Demand	U	15.0							
LCS	Sample ID:	LCS-R433632		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Rur	ID: Wet	Chem_HS_4336	32 SeqNo: 7	7262198	PrepDate:		DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical Ox	ygen Demand	98	15.0	100	0	98.0	85 - 115			
MS	Sample ID:	HS23040694-02MS		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Rur	D: Wet	Chem_HS_4336	32 SeqNo: 7	7262201	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical Ox	xygen Demand	52	15.0	50	5	94.0	80 - 120			
MSD	Sample ID:	HS23040694-02MSI)	Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Rur	ID: Wet	Chem_HS_4336	32 SeqNo: 7	7262200	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical Ox	ygen Demand	53	15.0	50	5	96.0	80 - 120	52	1.	9 20
enemiear ex										

Batch ID:	R433664 (0)	Instr	rument: l	JV-2450	M	ethod: F		RON BY SM3	500 FE B
MBLK	Sample ID:	MBLK-R433664		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		Ru	in ID: UV-24	450_433664	SeqNo: 7	262960	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Irc	on	U	0.0500				80 - 120		
LCS	Sample ID:	LCS-R433664		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		Ru	in ID: UV-24	450_433664	SeqNo: 7	262959	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Irc	on	0.265	0.0500	0.25	0	106	80 - 120		
MS	Sample ID:	HS23040697-13MS	;	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:	MW-19S	Ru	in ID: UV-24	450_433664	SeqNo: 7	262965	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Irc	on	0.266	0.0500	0.25	0.063	81.2	75 - 125		
MSD	Sample ID:	HS23040697-13MS	D	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:	MW-19S	Ru	in ID: UV-24	450_433664	SeqNo: 7	262964	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
		0.265	0.0500	0.25	0.063	80.8	75 - 125	0.266	0.377 20

Batch ID:	R433776 (0)	Instrumen	it:	WetChem_HS	М		CHEMICAL (REV 2.0, 199	DXYGEN DEI 3	MAND B	Y E410.4,
MBLK	Sample ID:	MBLK-R433776		Units: r	ng/L	An	alysis Date:	27-Apr-2023	13:00	
Client ID:		Run ID:	Wet	Chem_HS_433776	SeqNo: 7	7265697	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical C	Oxygen Demand	U	15.0							
LCS	Sample ID:	LCS-R433776		Units: r	ng/L	An	alysis Date:	27-Apr-2023	13:00	
Client ID:		Run ID:	Wet	Chem_HS_433776	SeqNo:	7265696	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical C	Oxygen Demand	99	15.0	100	0	99.0	85 - 115			
MS	Sample ID:	HS23040697-13MS		Units: m	ng/L	An	alysis Date:	27-Apr-2023	13:00	
Client ID:	MW-19S	Run ID:	Wet	Chem_HS_433776	SeqNo:	7265699	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical C	Oxygen Demand	63	15.0	50	16	94.0	80 - 120			
MSD	Sample ID:	HS23040697-13MSD		Units: r	ng/L	An	alysis Date:	27-Apr-2023	13:00	
Client ID:	MW-19S	Run ID:	Wet	Chem_HS_433776	SeqNo: 7	7265698	PrepDate:		DF	: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value		RPD Limit Qual
Chemical C	Oxygen Demand	64	15.0	50	16	96.0	80 - 120	63	1.5	7 20
The following	g samples were analyze	ed in this batch: HS23040697	7-10	HS23040697-	11	HS230406	97-12	HS23040697	-13	

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Client: Project: WorkOrder:	Altamira WFEC / CCR Landfill HS23040697	QUALIFIERS, ACRONYMS, UNITS
Qualifier	Description	
*	Value exceeds Regulatory Limit	
а	Not accredited	
В	Analyte detected in the associated Method Blank above the Reporting Limit	
E	Value above quantitation range	
Н	Analyzed outside of Holding Time	
J	Analyte detected below quantitation limit	
Μ	Manually integrated, see raw data for justification	
n	Not offered for accreditation	
ND	Not Detected at the Reporting Limit	
0	Sample amount is > 4 times amount spiked	
Ρ	Dual Column results percent difference > 40%	
R	RPD above laboratory control limit	
S	Spike Recovery outside laboratory control limits	
U	Analyzed but not detected above the MDL/SDL	
Acronym	Description	
DCS	Detectability Check Study	
DUP	Method Duplicate	
LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicate	
MBLK	Method Blank	
MDL	Method Detection Limit	
MQL	Method Quantitation Limit	
MS	Matrix Spike	
MSD	Matrix Spike Duplicate	
PDS	Post Digestion Spike	
PQL	Practical Quantitaion Limit	
SD	Serial Dilution	
SDL	Sample Detection Limit	
TRRP	Texas Risk Reduction Program	

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CERTIFICATIONS, ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-37	30-Jun-2023
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352; 2022-2023	31-Jul-2023
Louisiana	03087, 2022-2023	30-Jun-2023
Maryland	343, 2022-2023	30-Jun-2023
North Carolina	624-2023	31-Dec-2023
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932022-13	31-Jul-2023

ALS	Houston,	US
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Work Order ID:	HS23040697 Enviro Clean Services-Tulsa			Fime Received: ved by:	<u>13-Apr-2023 09:00</u> Corey Grandits
Completed By:	/S/ Corey Grandits	13-Apr-2023 11:30	Reviewed by: /S/	Anna Kinchen	17-Apr-2023 10:03
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	W		Carrier name:	<u>FedEx</u>	
Shipping contain	er/cooler in good condition?		Yes 🔽	No 🔲	Not Present
Custody seals in	tact on shipping container/cooler	?	Yes 🔽	No 📃	Not Present
Custody seals in	tact on sample bottles?		Yes 📃	No 🗌	Not Present
VOA/TX1005/TX1006 Solids in hermetically sealed vials?		Yes 📃	No 📃	Not Present	
Chain of custody present?			Yes 🗹	No 📃	1 Page(s)
Chain of custody signed when relinquished and received?		Yes 🗹	No 📃		
Samplers name	present on COC?		Yes 🗹	No 🔲	
Chain of custody	agrees with sample labels?		Yes 🗹	No 🗌	
Samples in prop	er container/bottle?		Yes 🗹	No 🗌	
Sample containe	ers intact?		Yes 🔽	No 🗌	
Sufficient sample	e volume for indicated test?		Yes 🗹	No 🔲	
All samples rece	ived within holding time?		Yes 🗹	No 🗌	
Container/Temp	Blank temperature in compliance	?	Yes 🗹	No 🗌	
Temperature(s)/	Thermometer(s):		1.6UC/1.1C		IR31
Cooler(s)/Kit(s):			46956		¥
Date/Time samp	le(s) sent to storage:		4/13/23		
Water - VOA vial	ls have zero headspace?		Yes	No 🗌 N	No VOA vials submitted
Water - pH acce	ptable upon receipt?		Yes 🔽	No 🗖	N/A
pH adjusted?			Yes	No 🔽	N/A
pH adjusted by:					
Login Notes:					
Client Contacted	:	Date Contacted:		Person Cont	acted:
Contacted By:		Regarding:			
Comments:					
Corrective Actior	ı:				

Sample Receipt Checklist

ALS Houston, US

					Sample Receipt Checklist
Work Order ID: Client Name:	HS23040697 Enviro Clean Services-Tulsa			Time Received: ived by:	<u>13-Apr-2023 09:00</u> Corey Grandits
Completed By	/S/ Corey Grandits	14-Apr-2023 10:32	Reviewed by:		
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	<u>w</u>		Carrier name:	<u>FedEx</u>	
Custody seals i	ner/cooler in good condition? ntact on shipping container/cooler	?	Yes 🗹 Yes 🔽	No	Not Present
-	ntact on sample bottles?		Yes	No 📘	Not Present 🔽 Not Present 🔽
	X1006 Solids in hermetically seal	ed vials?		No	1 Page(s)
Chain of custod	• •		Yes 🗹 Yes 🔽	No 🚺	11 490(0)
	y signed when relinquished and r present on COC?	eceived?	Yes 🔽		
	y agrees with sample labels?		Yes 🔽	No 🗌	
	per container/bottle?		Yes 🔽	No 🗖	
Sample contain			Yes 🔽	No 🔲	
	le volume for indicated test?		Yes 🔽	No 🔲	
-	eived within holding time?		Yes 🔽	No 🗌	
	Blank temperature in compliance	e?	Yes 🔽	No 🗌	
	/Thermometer(s):		1.7UC/1.2C		IR31
Cooler(s)/Kit(s)			Red		
Date/Time sam	ple(s) sent to storage:		4/14/23		
Water - VOA via	als have zero headspace?		Yes	No	No VOA vials submitted
Water - pH acce	eptable upon receipt?		Yes 🔽	No 🗌	N/A
pH adjusted?			Yes	No 🗹	N/A
pH adjusted by:					
Login Notes:					
Client Contacte	d:	Date Contacted:		Person Co	ntacted:
Contacted By:		Regarding:			
Comments:					
Corrective Actic	on:				

Page 70 of 77

ALS	Houston	, US
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					Sample Receipt Checklist
Work Order ID:	HS23040697		Date/	Time Received:	<u>13-Apr-2023 09:00</u>
Client Name:	Enviro Clean Services-Tulsa		Recei	ved by:	Corey Grandits
Completed By	: /S/ Corey Grandits	19-Apr-2023 11:56	Reviewed by: /S/	Anna Kinchen	24-Apr-2023 13:40
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	<u>w</u>		Carrier name:	<u>FedEx</u>	
Custody seals i Custody seals i VOA/TX1005/T Chain of custod Chain of custod Samplers name Chain of custod Samples in pro Sample contair Sufficient samp All samples rec	dy signed when relinquished and re e present on COC? dy agrees with sample labels? per container/bottle?	ed vials? eceived?	Yes Ves Ves Ves Ves Ves Ves Ves Ves Ves V	No	Not Present Not Present Not Present Not Present 1 Page(s)
)/Thermometer(s):		4.0UC/3.5C		IR31
Cooler(s)/Kit(s) Date/Time sam	: iple(s) sent to storage:		Red 4/19/23		
Water - VOA vi	als have zero headspace? eptable upon receipt?		Yes Yes Yes	No No No No	No VOA vials submitted N/A N/A N/A
Client Contacte	ed:	Date Contacted:		Person Cor	ntacted:
Contacted By:		Regarding:			
Comments:					
Corrective Action	on:				

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CHAIN OF CUSTODY RECORD PROJECT NUMBER: WFEE 60023,0004 WFEE, CCR. LANDFILL COC: of X																
	ł															
	WFEE160023,0004													<u> </u>	01 <u>7</u>	
ALTAMIRA formerly incoven as Envire Citere Cardinat	CLIENT CONTACT:				CUEN			FFM	NY AI	TALL	PA CL	IENT PHO				
	HEATTHER	L TH	FANY		1107	LAP	51	4	15-	TAM VS. C	Ju		26	(8	202	-
LABORATORY / LAB PM:	CLIENT ADDRESS:				TAT: STO											
AGANNA KINCTEN		[T	1		PA	RAMETER	-	<u> </u>	<u> </u>					
LAB ADDRESS:	SPECIAL INSTRUCTIONS					Ξ		-+				PHC FERROUS		ĺ	r.	
ALS/HOUSTON	* APP A & PROJEC	** Th	рв-я	Æ	NERS	No/		大			5	5 2	N	N N	56	<u>}</u>
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SHIPMENT METHOD: TRACKING:	7661	7	7		5	RED	-	0	E.	$\sqrt{8}$	58	TH H	मुच्र	Ng	`∑₽ò	4
TELEY 6230 CILF 3932														₹_		
NO. SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NON	FIELS	F	F	A.	<u>v</u> r	121	20	ā	. کلیے	UE-	Hor Hor
1 MW-3	4 12/23	1042	N	2,3,9		Ý	$\left \right\rangle$	X	\times							
2 NW-55	4/12/23	1232		1,2,3,4,9			\times							1	<u>- X</u>	
3 - MW-75							\sim							<u></u>	$\rightarrow \times$	
4 MW-13	4/12/23	1157		2,39		Ŷ	\mathbf{X}	$\left \times \right $	\times	cΥ						
s NW-14-FI	4 12 23	1106		1,2,3,49		Y	$\left \mathbf{x} \right $								$\rightarrow \lambda$	
6 NW-15A	4/12/23			1		y	X								$\rightarrow [\lambda]$	
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9 <u>MW-18</u> 10 <u>MW-19</u> G				V -			\mathbf{x}								<u>x <</u>	+
11 MW-20	4/12/23	1250		2,3,9		У	\mathbf{x}	X	XX	×Χ						
12 MW-21	4/12/23	947	\checkmark	2,3,9		Y	$\left \boldsymbol{\times} \right $	\propto	\times	$^{\circ}$						
HS23040697			W													
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Altamira WFEC / CCR Landfill	. /									╡ ╏║ ╡╏ ║║║ ──── ───────	\$\$\$\$ \$\$\$\$\$\$ ¹		E())# (4			L_
Breeley and Bring Containers: Date: 4 12 23 Total # of Containers: SAMPLERISI SIGNATORE: CAR LAND DATE: 4 12 23 Time: 400 Time: 400 Total # of Containers: 500 March 12 23 Total # of Containers: 500 March 12 23 Time: 1400													_ح			
RELINQUISHED BY	L 						COOLER TEM	Ρ;								
PRESERVATION KEY: 1-HCL 2-HNO3	Date: Children Date: Children Date: Children Date: Children Date: Children Date: Children Children															
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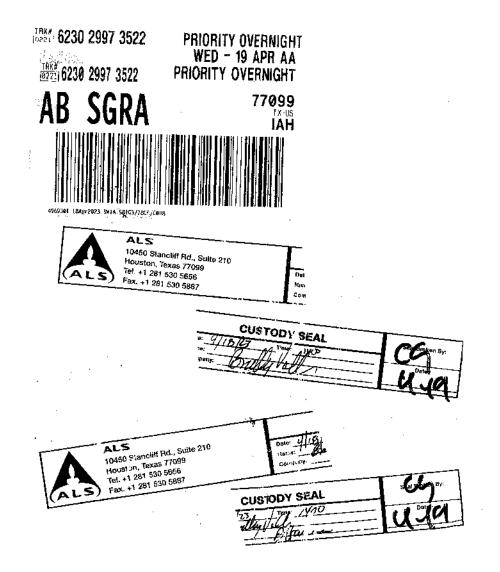
RIGHT SOLUTIONS | RIGHT PARTNER

			CHAIN OF	CUSTODY RE	CORD													
	PROJECT NUMBER:		1.								F W	2		cor) ام : 1	2.	e X	<u>م</u>
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ALTAMIRA formerly itrouvn as Snow O Gean Cardinal	CLIENT CONTACT:				CLIEN	TEMA	ແ: ກຳໂ	irta	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~) AT F	MIRA	CLIEN	T PHO			-		
	HEATTHER	TIFFA	M		775-1	M	防木	14]-u	MIRA S. Con	<u>\</u>	1 0=	z (d	<u>18</u>	2	02]	:
LABORATORY / LAB PM:					TAT:	<u> </u> 5	10		<u> </u>									
ALS ANNA KINCITEN	OKC, OK	730	59			[]		T			PARAM	ETERS	1		[1
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	SETE LIKON	oc n	VIES		NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	*	- 籿	NTRATE		CNO T	te, terroisz	E	Ž끤	K, Mg, Na	GULFIDE	22	
SHIPMENT METHOD: TRACKING:					ŭ ŭ	TEREC	\mathbf{A}	3	≵		Q E	36	3	5	ত্র	N I	ALL BEOS	
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NO. SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	Ň	IFIELI	\prec	R	2	$\overline{0}$	v 15	1	ā	2T	<u></u>	C)	₹	<u> </u>
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9 MW-18	412/23	1810														\geq	X	
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POIR HS230406	697	Tulsa		Yukon			idland			Other :			****					
Altamira			ALTAI	MIRA-US, LLC			Û.	ζł.	÷., •									
			Page 73	of 77														

RIGHT SOLUTIONS | RIGHT PARTNER

	PROJECT NUMBER:	19.00 You want in		CUSTODY RE		CT NA	ME: A	471	.ON	ZA	ME	\overline{a}	C.		2	7	5	
	WFEE 160	N73/	0801	1					برار. 1-					C		2_ °	f	_
ALTAMIRA formerfy krown as \$r,wio Clean Cardinal	CLIENT CONTACT:	uby	<u> </u>	I	CLIEN	JEMA			$\frac{1}{2}$	1.00	<u>~1 </u>		LUENT P	HONE:				
formarly known as Erivino Clean Cardinal	HEATTHER	TIFEM	and a		CLIEN VI E	AIH	BR.1	117A	N72/	4JA	MF	2A	417	5.6	18.	201	21	
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	DKC, OK	- 731	DG								PAR/	AMETE	RS		•••••••••			
ALS/ANNA KINCITEN		- 1 - 1 - 1												3				
LAB ADDRESS:	SPECIAL INSTRUCTIONS	LX API	PB		ERS	0 N		1					9 6	월 ()			ε.M	
ALS/HOUSTON	SEE PRO.		AITT	5	TAIN	res /		3	Г		\sim	Z	もまし	N D' N D'		<i>I</i>	άĈ	
SHIPMENT METHOD			NULV.		NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	¥ ∀	**9 104	NITRATE		COND	¦≚	20111	ΨIω.	\i	19	රියි	
FEDEX 62	30 2997 3	3572			ROF	LTER	1	2	[R		8	12	ēπ,	J. A	18	[[*]]	ΞĊ	+
(4)12 60.				1 1	IMBE	10 1	d d	Ē	5	CoJ	3	je !	Jer 1	1981 1985 1988	k, Ng	CALLE	ŁĘ	HOLD
NO. SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	<u> </u>	E.			<u></u>		V'	44			<u> </u>		<	<u> </u>
1 AAW-3			- th												+			
2 NW-59		Aug A	<u> </u>			~									+	···	····	
3 MW-75	41823	928	ļ	J,2,3,4,6	17	7	 								_			
4ANV = 13		· · · · · · · · · · · · · · · · · · ·	·· ····								HS	230)406	97				
5		<u> </u>	<u>├</u>			····						Alta	mira					
6 - MW-15A		······································									WFE		CR La	ndfill				
7 NW-16																	_	
8			•		}													{
9								E 3 			╴┈╍╵╍╍╺ _┇ ╴		HE EIRH I			AL INAL T	ı	
10 NW-199	417123	1833		183	BV	Y												
11 - MW-20																		
$\frac{12}{-12} = \frac{1}{12}$				· · · · · · · · · · · · · · · · · · ·												ļ		
13 NW-195 MS	417/23	1833	W.	1833	7	Y	<u> </u>											
14 MW-195 MSD	41713	1833	Ŵ	1,2,34	新 7	ý						1			1	 		
15 Temp Blank	···		W		1	-					-				-			
SAMPLER (9) NAME:	DATE: 4/1 9	B	Total # of	Containers:		SAMP	LERIS	SIGNA	TORE:		2				DATE	Z • U.#	23	?
RELINQUISING BAT JATE: 41	TIME: ''	0 mg		DATE:			LOGGE	_	70		~	 	DATE:		TIME:		ZOU R TEMP	
RELINQUISINED BY DATE: 411	140) Received at	· · · · ·		TIME:	·.·				, 			5	TIME:					
PRESERVATION KEY: 1-HCL 2-HNO3	3-H25O4 4-NaOH	5-Na2520	فاستخاطا ودباد محجوز ودوج مقدعه تهجه	HSO4 7-	4 Degre		8-9 fidland	035	9-Othe	r : <i>M</i> Other	me y	Zı	AC		·			
POINT OF ORIGIN: Norman	NU Okianoma City			MIRA-US, LLO						Coner	and the second	an indiana di Ana	¢lativala;stata)					
	C C		55170	6 <u>5</u> 5	- - 													

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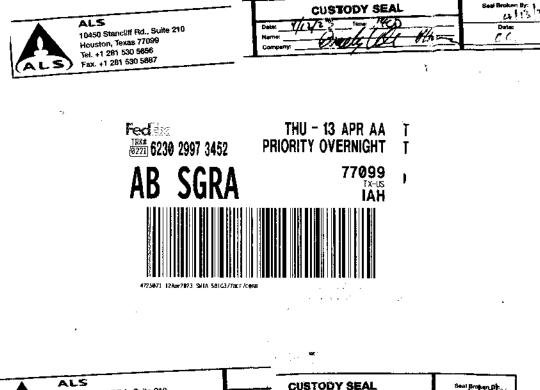
Red Lad & Milly

ALS 10450 Stancliff Rd., Suite 210 Houston, Texes 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5687	His 23 CUSTODY SEAL	Seel Broken By: BNA CUI Deta UI 23
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Page 76 of 77

RIGHT SOLUTIONS | RIGHT PARTNER



ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5555 Fax. +1 281 530 5887	Compety	Seal Broken St.

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Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		na 73105					Re	eport Date:	May 25,	, 2023	
Contact:	Heather Tiffar	ny										
Project:	Radiochemist	try										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188550 Water 12-APR 19-APR Client	R-23 R-23				Cli	oject: ient ID:	ALM	4I00122 4I001			
Parameter	Qualifier		ncertainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch M	Mtd.
Rad Gas Flow Propo			- Dessived"									
EPA 904.0 Radium Radium-228	-228 in Drinking U	g water "As 0.827	<i>s Received</i> +/-0.615	0.987	+/-0.629	1.00	pCi/L		JE1 0	05/12/23 1607	2416327	1
Radium-226+Radiu					1/-0.027	1.00	pent		3L1 U	JJ/12/23 100,	2710327	1
Radium-226+228 Sum	m-220 Calcula	0.907	+/-0.622	,	+/-0.636		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Drin	nking Water EP.	A 903.1 (De	e-emanation) '	"As Received"			×					
Radium-226	U	0.0804	+/-0.0924	0.141	+/-0.0936	1.00	pCi/L		LXP1 (05/25/23 0757	2416323	3
The following Analyt	tical Methods v	were perfor	med									
	escription	-										
1 EF	PA 904.0/ EPA 932	20										
2 Ca	alculation											
3 EF	PA 903.1											
Surrogate/Tracer R	ecovery 7	Гest						Batch I	D Recovery	% Accepta	able Limit	ts
Barium Carrier		EPA 904.0	Radium-228	in Drinking Wat	er "As Received"			241632		(25%	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking Wat	er "As Received"			241632	27 54.9) (25%	-125%)	
Notes:												
The MDC is a sam TPU and Countin			ated at the 95	5% confidence	level (1.96-sigma)).						
Column headers a DF: Dilution Fact		follows:	Mtd·]	Method								
DL: Detection Li				rep Factor								

Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		a 73105					Rep	oort Date:	May 25,	, 2023	
Contact:	Heather Tiffa	.ny										
Project:	Radiochemist	iry										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188550 Water 12-APR : 19-APR Client	005 R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Un	certainty	MDC	TPU	RL	Units	PF I)F Analyst	Date Time	Batch N	Mtd.
Rad Gas Flow Propo EPA 904.0 Radium			Dessinad"									
Radium-228	n-228 in Drinking U	0.241 g water As	+/-0.399	0.697	+/-0.401	1.00	pCi/L		JE1 0	05/12/23 1122	2416327	1
Radium-226+Radi					.,	1.00	Pesz		<i>.</i>	<i>JIIII 20 112</i>	211002.	
Radium-226+228 Sum		0.334	+/-0.410		+/-0.412		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Dri	inking Water EP.	A 903.1 (De-	emanation)	"As Receivec	1"		-					
Radium-226	U	0.0929	+/-0.0928	0.121	+/-0.0938	1.00	pCi/L		LXP1 (05/25/23 0833	2416323	3
The following Analy	ytical Methods v	vere perforr	ned									
	Description											
1 El	EPA 904.0/ EPA 932	20										
2 Ca	Calculation											
3 El	EPA 903.1											
Surrogate/Tracer R	Recovery 7	Гest						Batch II	Recovery	7% Accepta	able Limit	is
Barium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	82.8	3 (25%	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	81.4	4 (25%	-125%)	
	ng Uncertainty	are calculat	ted at the 9	5% confide	nce level (1.96-sigma)	' .						
Column headers a DF: Dilution Fac		ollows:	Mtd	Method								
DL: Detection Li				rep Factor								

PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central Par	k Dr										
riddioss .	Suite 500 Oklahoma City,		72105					Dor	oort Date:	May 30	2022	
Contact:	Heather Tiffany		la 75105					Kej	Joit Date.	May 50	, 2023	
Project:	Radiochemistry											
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID: MW-7S 61999400 Water 18-APR-2	02 23					oject: lent ID:		I00122 I001			
Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF 1	DF Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Propo GFPC Ra228, Liqu												
Radium-228		1.65	+/-1.08	1.63	+/-1.16	3.00	pCi/L		JE1	05/24/23 1550	2423918	1
Radium-226+Radi	um-228 Calculatio	n "See Pa	rent Products	5″								
Radium-226+228 Sum		2.32	+/-1.16		+/-1.24		pCi/L		NXL1	05/30/23 1641	2429540	2
Rad Radium-226 Lucas Cell, Ra226,	Liquid "As Receiv	ved"										
Radium-226		0.669	+/-0.419	0.529	+/-0.448	1.00	pCi/L		LXP1	05/18/23 1009	2423869	3
The following Analy	tical Methods we	re perfori	med									
Method D	escription											
1 E	PA 904.0/SW846 932	20 Modified	d									
2 Ca	alculation											
3 El	PA 903.1 Modified											
Surrogate/Tracer R	lecovery Te	st						Batch II	O Recover	y% Accepta	able Limit	ts
Barium-133 Trace	er G	FPC Ra2	28, Liquid "A	s Received"				2423918	8 74	.8 (15%	-125%)	
Notes: The MDC is a sam TPU and Countin			ited at the 95	5% confide	nce level (1.96-sigr	na).						
Column headers a DF: Dilution Fac	tor	llows:	Mtd.: M	Method								

DL: Detection Limit PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central Pa Suite 500 Oklahoma Cit		na 73105					Rep	ort Date:	May 25,	, 2023	
Contact:	Heather Tiffai	-						_		-		
Project:	Radiochemist	ry										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188550 Water 12-APR 19-APR Client	006 R-23 R-23				Cli	oject: ient ID:	ALMI				
Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF D	PF Analyst	Date Time	Batch N	Atd.
Rad Gas Flow Propo		0	- Dessived"									
EPA 904.0 Radium Radium-228	-228 in Drinking	g water As 1.31	+/-0.470	0.576	+/-0.516	1.00	pCi/L		JE1 0	05/12/23 1127	2416327	1
Radium-226+Radii	um-228 Calculat				17 01010	1.00	PCI/L		<u>, , , , , , , , , , , , , , , , , , , </u>	<i>))</i> /1 <i>2</i> / <i>20</i> /112,	2-11032.	
Radium-226+228 Sum	un 220 culoinin	1.38	+/-0.478	,	+/-0.523		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Dri	nking Water EP.	A 903.1 (De	e-emanation)	"As Received	"		*					
Radium-226	U	0.0643	+/-0.0864	0.146	+/-0.0870	1.00	pCi/L		LXP1 0	05/25/23 0833	2416323	3
The following Analy	tical Methods v	vere perfor	med									
	escription											
1 EI	PA 904.0/ EPA 932	20										
2 Ca	alculation											
3 EI	PA 903.1											
Surrogate/Tracer R	ecovery 7	Гest						Batch ID	Recovery	% Accepta	able Limits	S
Barium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	87.4	4 (25%-	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking '	Water "As Received"			2416327	81.4	4 (25%-	-125%)	
Notes: The MDC is a san TPU and Countin			ated at the 9	5% confidei	nce level (1.96-sigma)	·-						
Column headers a DF: Dilution Fact		ollows:	Mtd.:	Method								
DL: Detection Li				ep Factor								

PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		na 73105					R	eport	Date:	May 30	, 2023	
Contact:	Heather Tiffa	ny											
Project:	Radiochemist	try											
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	D: MW-14 6199930 Water 12-APR 27-APR Client	001 R-23					oject: ient ID:		MI00 MI00				
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date Time	Batch	Mtd.
Rad Gas Flow Propor GFPC Ra228, Liqui													
Radium-228	u As Keceiveu	2.08	+/-1.16	1.66	+/-1.27	3.00	pCi/L			JE1 0	5/24/23 1550	242391	8 1
Radium-226+Radiu	m-228 Calculat	tion "See Po	arent Product	<i>s</i> ″			Ĩ						
Radium-226+228 Sum		2.70	+/-1.21		+/-1.33		pCi/L			NXL1 0	5/30/23 1641	242954	0 2
Rad Radium-226 Lucas Cell, Ra226, I	Liauid "As Rece	eived"											
Radium-226	1	0.621	+/-0.363	0.366	+/-0.385	1.00	pCi/L			LXP1 0	5/18/23 0919	242386	93
The following Analyt	ical Methods w	vere perfoi	med										
	scription												
1 EP.	A 904.0/SW846 9	9320 Modifie	ed										
2 Cal	culation												
3 EP.	A 903.1 Modified	1											
Surrogate/Tracer Re	covery T	ſest						Batch	ID R	Recovery	% Accepta	able Lim	its
Barium-133 Tracer		GFPC Ra2	228, Liquid "A	As Received"				24239	18	74.6	(15%	-125%)	
Notes: The MDC is a sam TPU and Countin Column headers an DF: Dilution Facto DL: Detection Lin Lc/LC: Critical Le MDA: Minimum I MDC: Minimum I	g Uncertainty re defined as f or nit vel Detectable Ac	are calcul follows: tivity	Mtd.: PF: Pr RL: R TPU: '	Method ep Factor eporting Limit).							

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		a 73105					Reŗ	port Date:	May 25,	, 2023	
Contact:	Heather Tiffar	ny										
Project:	Radiochemist	iry										
Client Sample Sample ID: Matrix: Collect Date: Receive Date Collector:	6188550 Water 12-APR 19-APR Client	007 R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Un	icertainty	MDC	TPU	RL	Units	PF I	DF Analyst	Date Time	Batch N	Atd.
Rad Gas Flow Prop			Dereined"									
EPA 904.0 Radium Radium-228	n-228 in Drinking	g water "As 1.50	+/-0.700	0.993	+/-0.743	1.00	pCi/L		JE1 0	05/12/23 1607	2416327	1
Radium-226+Rad	lium-228 Calcula:				17-0.7-5	1.00	per/L		JLI	13/12/23 1007	2410327	1
Radium-226+228 Sum		1.57	+/-0.708	,	+/-0.751		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Dr	rinking Water EP.	A 903.1 (De-	-emanation)	"As Received"								
Radium-226	U	0.0711	+/-0.107	0.190	+/-0.108	1.00	pCi/L		LXP1 (05/25/23 0833	2416323	3
The following Analy	ytical Methods v	vere perfort	ned									
	Description	.										
1 E	EPA 904.0/ EPA 932	20										
2 0	Calculation											
3 E	EPA 903.1											
Surrogate/Tracer I	Recovery 7	Гest						Batch II	D Recovery	% Accepta	able Limits	.S
Barium Carrier		EPA 904.0	Radium-228	in Drinking W	ater "As Received"			2416327	7 82.9) (25%)	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking W	ater "As Received"			2416327	7 53.3	3 (25%-	-125%)	
Notes: The MDC is a sam												
TPU and Countr	ing Uncertainty	are calcula	ted at the 9:	5% confidence	e level (1.96-sigma)	•						
Column headers	are defined as f	follows:										
DF: Dilution Fac			Mtd.: J	Method								
DL: Detection L	imit		PF: Pr	rep Factor								

RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500											
	Oklahoma Cit	ty, Oklahoma	a 73105					Re	eport Date:	June 1	19, 2023	
Contact:	Heather Tiffa	.ny										
Project:	Radiochemist	try										
Client Sampl Sample ID: Matrix: Collect Date: Receive Date Collector:	6188444 Ground e: 12-APR e: 19-APR Client	006 Water R-23 R-23				Cli	oject: lient ID:	ALN	4I00122 4I001			
Parameter	Qualifier	Result Un	certainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Tir	ne Batch	Mtd.
Rad Gas Flow Prop												
	ım-228 in Drinking U	g Water "As 0.612		0.700	1/0.462	1.00	nCi/I		IE1 (05/15/02 111	2 2416226	1
Radium 226 Pac	U dium-228 Calculat		+/-0.453	0.709 ts″	+/-0.463	1.00	pCi/L		JE1 ()5/15/25 115	33 2416326	1
Radium-220+Rad Radium-226+228 Sum		0.612	+/-0.464	S	+/-0.474		pCi/L		1 TON1 (06/15/23 11:	20 2416324	2
Radium-226+228 Sur	a	0.012	+/-00		T/- U.T /-T		per E		I IONI V	J0/1 <i>J/23</i> 112	0 2410525	4
	Drinking Water EPA	A 903.1 (De-	emanation)	"As Received"	1							
Radium-226	U	0.000	+/-0.102	0.235	+/-0.102	1.00	pCi/L		LXP1 (05/17/23 085	57 2416321	3
The following Anal	lytical Methods y	vere nerforr	ned									
	Description	the person	leu									
1	EPA 904.0/ EPA 932	20										
2	Calculation											
3	EPA 903.1											
Surrogate/Tracer	Recovery	Test						Batch I	D Recovery	y% Accej	otable Limit	its
Barium Carrier		EPA 904.0	Radium-228	in Drinking V	Water "As Received"			241632	26 94.3	3 (25	%-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking V	Water "As Received"			241632	26 73.9	9 (25	%-125%)	
Notes:												
The MDC is a sa			ted at the 9	5% confiden	nce level (1.96-sigma)	1.						
Column headers	s are defined as f	follows:										
DF: Dilution Fa			Mtd.:	Method								
DL: Detection L	Limit		PF: Pr	rep Factor								

RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		na 73105					Re	eport Date:	June 19,	2023	
Contact:	Heather Tiffa	-	la / 5105					I.U.	port Date.	June 17,	2023	ļ
Project:	Radiochemist	-										ļ
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID: MW-17 6188444 Ground 12-APR 19-APR Client	7 002 I Water R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier		J ncertainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch N	Atd.
Rad Gas Flow Propo EPA 904.0 Radium			- Dessived"									I
Radium-228	-228 in Drinking U	g water As 0.514	+/-0.600	1.01	+/-0.605	1.00	pCi/L		JE1 (05/15/23 1136	2416326	1
Radium-226+Radiu					., 0.000	1.00	P 0.1 2			10/10/20 1100	2110020	1
Radium-226+228 Sum		0.557	+/-0.605		+/-0.610		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226 Radium-226 in Drii	nking Water EP.	A 903.1 (De	e-emanation)	"As Received"								l
Radium-226	U	0.0432	+/-0.0793	0.152	+/-0.0799	1.00	pCi/L		LXP1 (05/17/23 0820	2416321	3
The following Analyt	tical Methods v	vere perfor	med									
Method De	escription											
1 EP	PA 904.0/ EPA 932	20										
2 Ca	lculation											
3 EP	PA 903.1											
Surrogate/Tracer R	ecovery 7	Test						Batch I	D Recovery	y% Accepta	ble Limits	.s
Barium Carrier		EPA 904.0	Radium-228	in Drinking W	ater "As Received"			241632	26 92.3	3 (25%-	-125%)	
Yttrium Carrier		EPA 904.0) Radium-228	in Drinking W	ater "As Received"			241632	26 32.7	7 (25%-	-125%)	
	ng Uncertainty	are calcula	ated at the 9	5% confidenc	e level (1.96-sigma)).						
Column headers a		follows:										
DF: Dilution Fact			Mtd.: 1									

DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level TPU: Total Propagated Uncertainty MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500	'ark Dr											
	Oklahoma Cit	ty, Oklahon	na 73105					Re	eport Date:	Jı	une 19, 2	2023	
Contact:	Heather Tiffar	ny											
Project:	Radiochemist	try											
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID: Dup 4 6188440 Ground 12-APR 19-APR Client	l Water R-23					oject: ient ID:		4I00122 4I001				
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analyst	t Date	e <u>Time</u>	Batch	Mtd.
Rad Gas Flow Propor EPA 904.0 Radium-			s Received"										
Radium-228	U	0.368	+/-0.510	0.877	+/-0.513	1.00	pCi/L		JE1	05/15/22	3 1137	2416326	1
Radium-226+Radiu	ım-228 Calculat			<i>s</i> ″									
Radium-226+228 Sum		0.368	+/-0.518		+/-0.521		pCi/L		1 TON1	06/15/23	3 1120	2416324	2
Rad Radium-226 Radium-226 in Drin	nking Water EP	A 903.1 (De	e-emanation)	"As Received	<i>d''</i>								
Radium-226	U	-0.0459	+/-0.0900	0.254	+/-0.0901	1.00	pCi/L		LXP1	05/17/2	3 0820	2416321	3
The following Analyt	tical Methods v	were perfor	med										
	escription	- CLE F	1100										
1 EP.	PA 904.0/ EPA 932	20											
	alculation												
3 EP.	PA 903.1												
Surrogate/Tracer Re	ecovery	Test						Batch I	D Recover	y% A	Accepta ?	ble Limit	ts
Barium Carrier		EPA 904.0) Radium-228	, in Drinking	Water "As Received"			241632	26 89.	.9	(25%-	-125%)	
Yttrium Carrier				-	Water "As Received"			241632	26 55.	.9	(25%-	-125%)	
Notes: The MDC is a sam TPU and Countin			ated at the 9.	5% confide	ence level (1.96-sigma).	<i>i</i> .							
Column headers a		follows:											
DF: Dilution Factor DL: Detection Lin				Method rep Factor									

DL: Detection Limit PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central I	Park Dr										
radiobs .	Suite 500											
	Oklahoma C	ity, Oklahon	na 73105					Repo	ort Date:	June 19	, 2023	
Contact:	Heather Tiffa	any										
Project:	Radiochemis	stry										_
Client Sample							oject:	ALMI				
Sample ID: Matrix:	618844					Cl	ient ID:	ALMI	001			
Collect Date:	Ground 12-API	l Water R-23										
Receive Date	12 / 11 1	-										
Collector:	Client											
Parameter	Qualifier	Result U	ncertainty	MDC	TPU	RL	Units	PF D	F Analyst	Date Time	Batch	Mtd.
Rad Gas Flow Prop												
EPA 904.0 Radiur		-										
Radium-228	U	-0.0214	+/-0.472	0.921	+/-0.472	1.00	pCi/L		JE1 05	5/15/23 1133	2416326	1
Radium-226+Rad				ets"	10.505							
Radium-226+228 Sum	1	0.590	+/-0.629		+/-0.635		pCi/L		1 TON1 06	5/15/23 1120	2416324	2
Rad Radium-226 Radium-226 in Di	rinkino Water FP	PA 903 1 (De	-emanation	"As Received"								
Radium-226	intents frater Er	0.590	+/-0.416	0.526	+/-0.426	1.00	pCi/L		LXP1 06	5/13/23 0807	2438523	3
The following Anal	vtical Methods	were perfor	med									
0	Description											
1 E	EPA 904.0/ EPA 93	320										
2 0	Calculation											
3 H	EPA 903.1											
Surrogate/Tracer	Recovery	Test						Batch ID	Recovery	% Accepta	able Limit	ts
Barium Carrier		EPA 904.0	Radium-22	8 in Drinking Wa	ater "As Received"			2416326	92.9	(25%)	-125%)	
Yttrium Carrier		EPA 904.0	Radium-22	8 in Drinking Wa	ater "As Received"			2416326	44.1	(25%	-125%)	
Notes:												
The MDC is a sa	mple specific N	ADC.										
TPU and Count	ing Uncertainty	are calcula	ated at the	95% confidence	e level (1.96-sigma).						
Column headers		follows:										
DF: Dilution Fac				Method								
DL: Detection L				rep Factor								
Lc/LC: Critical		,• •,		Reporting Limit								
MDA: Minimun		•	TPU:	Total Propagat	ted Uncertainty							

MDC: Minimum Detectable Concentration

Certificate of Analysis

Company	: Altamira												
Address :		Park Dr											
	Suite 500		50105					D					
	Oklahoma Ci	•	na 73105					Rej	port Date:	N	1ay 30,	2023	
Contact:	Heather Tiffa	any											
Project:	Radiochemis	try											
Client Sa		9S					oject:		100122				
Sample II		6004				Cl	ient ID:	ALM	1001				
Matrix: Collect D	ate: Water 17-API	2 72											
Receive I													
Collector	: Client												
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date	Time	Batch	Mtd.
	Proportional Counti , Liquid "As Received												
Radium-228	U	-3.26	+/-0.968	2.44	+/-0.968	3.00	pCi/L		JE1	05/24/23	3 1550	2423918	1
Radium-226+	Radium-228 Calcula	tion "See Po	arent Product	ts"									
Radium-226+228	Sum	0.376	+/-1.03		+/-1.03		pCi/L		NXL1	05/30/23	3 1641	2429540	2
Rad Radium-22 Lucas Cell, Re	26 a226, Liquid "As Rec	eived"											
Radium-226	U	0.376	+/-0.338	0.514	+/-0.343	1.00	pCi/L		LXP1	05/18/23	3 1009	2423869	3
The following A	Analytical Methods	were perfor	med										
Method	Description	perior											
1	EPA 904.0/SW846	9320 Modifie	ed										
2	Calculation												
3	EPA 903.1 Modifie	d											
Surrogate/Tra	aan Daaayamu	Test						Dotah II	D Recover		conto	ble Limi	ite
			AO T · · · · · · ·							•			
Barium-133	Fracer	GFPC Ra2	228, Liquid "A	As Received"				2423918	8 82	.3	(15%-	-125%)	
Notes:													
	a sample specific N												
TPU and Co	ounting Uncertainty	are calcul	ated at the 9	5% confidence	ce level (1.96-sigm	a).							
Column hoo	dama and dafined as	fallowa											
DF: Dilution	ders are defined as	IOHOWS:	Mtd ·	Method									
DI : Detectio				Properties and the sector									

DL: Detection Limit PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		ı 73105					Re	eport Date:	June 19,	, 2023	
Contact:	Heather Tiffa	ny										I
Project:	Radiochemist	try										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188440 Ground 12-APR 19-APR Client	005 I Water R-23 R-23				Cli	oject: ient ID:	ALM	AI00122 AI001			
Parameter	Qualifier	Result Und	certainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch M	Mtd.
Rad Gas Flow Propo EPA 904.0 Radium			Passivad"									
Radium-228	u U	0.342	+/-0.428	0.726	+/-0.432	1.00	pCi/L		JE1 (05/15/23 1137	2416326	1
Radium-226+Radi							r - ·		-			-
Radium-226+228 Sum		0.453	+/-0.442		+/-0.446		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226 Radium-226 in Dri	inking Water EP.	А 903.1 (De-е	emanation) '	"As Received"								
Radium-226	U	0.111	+/-0.110	0.160	+/-0.113	1.00	pCi/L		LXP1 (05/17/23 0820	2416321	3
The following Analy	ytical Methods v	vere perform	ıed									
	Description											
1 EI	EPA 904.0/ EPA 932	20										
2 Ca	Calculation											
3 EI	EPA 903.1											
Surrogate/Tracer R	Recovery 7	Гest						Batch I	D Recovery	7% Accepts	able Limit:	ts
Barium Carrier		EPA 904.0 F	Radium-228	in Drinking Wat	er "As Received"			241632	26 84.4	4 (25%	-125%)	
Yttrium Carrier		EPA 904.0 F	Aadium-228	in Drinking Wat	er "As Received"			241632	26 71.6	5 (25%	-125%)	
Notes: The MDC is a san TPU and Countin			ed at the 9:	5% confidence	level (1.96-sigma).).						
Column headers a DF: Dilution Fact DL: Detection Li	ctor	follows:		Method ep Factor								

RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P	ark Dr											
	Suite 500 Oklahoma Ci	ty, Oklahom	a 73105					Rer	ort Date:	Ma	ay 25, 2	2023	
Contact:	Heather Tiffa	•						1			<i>,</i>		
Project:	Radiochemist	iry											_
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	618855 Water 12-APR	001 R-23					oject: ent ID:		I00122 I001				_
Parameter	Qualifier	Result Ur	ncertainty	MDC	TPU	RL	Units	PF 1	DF Analyst	Date	Time	Batch I	Mtd.
Rad Gas Flow Propo			Decesion d''										
EPA 904.0 Radium Radium-228	1-228 in Drinking	g water As 2.36	<i>keceivea</i> +/-0.828	1.06	+/-0.911	1.00	pCi/L		JE1	05/12/23	1122	2416327	1
Radium-226+Radi	um-228 Calcular				1/ 0.911	1.00	pei/L		3121	05/12/25	1122	2410527	1
Radium-226+228 Sum		2.51	+/-0.838	~	+/-0.922		pCi/L		NXL1	05/25/23	1326	2416325	2
Rad Radium-226 Radium-226 in Dri	nking Water EP	A 903.1 (De-	emanation)	"As Received	ļu.								
Radium-226	U	0.153	+/-0.135	0.190	+/-0.137	1.00	pCi/L		LXP1	05/25/23	0757	2416323	3
The following Analy	tical Methods v	vere perform	ned										
Method D	escription												
1 E	PA 904.0/ EPA 93	20											
2 C	alculation												
3 E	PA 903.1												
Surrogate/Tracer R	Recovery 7	ſest						Batch II	D Recover	y% Ac	ceptal	ole Limit	ts
Barium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	7 92.	4	(25%-1	125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	7 49.	3	(25%-1	125%)	
Notes: The MDC is a san TPU and Countin			ted at the 9	5% confider	nce level (1.96-sigma)).							
Column headers DF: Dilution Fac DL: Detection Li Lc/LC: Critical L MDA: Minimum	tor mit ævel		PF: P1 RL: R	Method ep Factor eporting Lir Total Propa	nit gated Uncertainty								

MDC: Minimum Detectable Concentration

ATTACHMENT B

DATA SUMMARY TABLES (LANDFILL CCR UNIT)

			Established		MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	DUP 2	MW-3	MW-3	MW-3 (Shallow)	MW-3
	or	Background	GWPS	Sample ID:												(Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	25-May-16	27-Jul-16	28-Sep-16	1-Dec-16	31-Jan-17	5-Apr-17	6-Jun-17	6-Jun-17	8-Aug-17	17-May-18	1-Aug-18	9-Aug-18
					BACKGROUND	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKO	ROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters	1			Units												
Boron	None	1.896	Not Applicable	mg/L	1.09	1.17	1.1	1.7	1.28 J*	0.88	1.15	1.2	1.06	1.23	1.12	1.25
Calcium	None	670.30	Not Applicable	mg/L	255	296	242	405	227	357	315	309	371	227	205	255
Chloride	250	18.51	Not Applicable	mg/L	13.6	12.4	13.8	13.7	14.2 J*	14.9	13.7	13.3 J*	13.2	13.4	14.3	13.4
	4	0.6359	Not Applicable	mg/L	0.211	0.442	0.407	0.392	0.399	0.3	0.384	0.354 J*	0.331	0.324	0.338	0.291
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.25	7.86	7.6	7.4	7.2	7.1	7.1	7	(7.3	7.4	7.3
Sulfate Total Dissolved Solids	250 500	1,396 2,191	Not Applicable Not Applicable	mg/L	1350 2030	1230 2060	1230 1960	1220 1990	1140 2080	1250 2090	1230 2150	1250 2200	1070 2090	1170 2180	1190 2150	1170 2160
Assessment Monitoring Parameter		2,191	Not Applicable	mg/L	2030	2000	1900	1990	2000	2090	2150	2200	2090	2100	2150	2100
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800			
Arsenic	0.000	Not Applicable	0.000 (MCL)	mg/L	0.00196 J	0.00117 J	0.00103 J	<0.00400	0.000602 J	0.00136 J	<0.000400	<0.00400	0.00172 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0122	0.0118	0.0114	0.0200	0.0115	0.0116	0.0114	0.0134	0.118			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.00122	< 0.00100	< 0.000100	< 0.000500	< 0.000100	< 0.000100	< 0.000100	< 0.000500	< 0.00100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000400	<0.000100	< 0.000500	<0.000100	<0.000100	<0.000100	<0.00100	<0.00100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500	<0.000500	<0.00500	< 0.000500			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	< 0.000500	<0.000500	0.000239 J	< 0.000500	0.000168 J	0.000138 J	<0.000100	<0.00100	0.000153 J			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.211	0.442	0.407	0.392	0.399	0.3	0.384	0.354 J*	0.331	0.324	0.338	0.291
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100			
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.158	0.138	0.141	0.247 J	0.148	0.137	0.14	0.151 J	0.165		0.125	0.129
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000500	<0.000500	<0.00100	<0.00500	<0.00100	<0.00100	<0.00100	<0.0100	<0.00100		<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000600	<0.000300	<0.00150	0.000345 J	<0.000300	0.00353	<0.00300	<0.000300			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.07 +/- 0.292	0.868 +/- 0.271	1.05 +/- 0.330	1.67 +/- 0.473	1.09 +/- 0.303	0.899 +/- 0.276	2.03 +/- 0.371	0.843 +/- 0.246	0.967 +/- 0.277			
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									299			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									23.1			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									8.45			
Sodium	None	Not Applicable	Not Applicable	mg/L									697			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters												0	11			
Temperature	None	Not Applicable	Not Applicable	0C	21.87	24.83	22.37	18.81	20.98	17.2	23.35		22.32	23.87	26.5	21.31
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.12	7.05	7.06	7.04	7.04	6.27	6.98		6.96	7.14	6.7	6.75
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2342	2807	2804	2810	2804	2805	2767		2762	2758	2880	2864
Dissolved Oversen	None	Not Applicable	Not Applicable	mg/L	0.49	0.26	0.09	0.2	0.3	0.59	0.36		0.09	0.7	2.1	3.76
Dissolved Oxygen																
Dissolved Oxygen Oxidation-Reduction Potential Turbidity	None	Not Applicable Not Applicable	Not Applicable Not Applicable	mV NTU	-27.5 0.89	-74.7 0.18	-92.1 0.18	-245.4 0.91	-171.1 0.36	241.7 0.15	-45 0.44		46.8	-46.3 0.29	-11.5 0.02	25 0.02

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.
 3. pCi/L : picoCuries per liter.
 4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample. 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL	Established Background	Established GWPS	Sample ID:		MW-3		MW-3	MW-3	MW-3	MW-3	DUP 3	MW-3	MW-3	MV	N-3	MW-3	MW-3
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	4-Oct-18	111	an-19	24-Apr-19	2-Oct-19	17-Jun-20	8-0	ct-20	31-Mar-21	13-Oct-21	30-Mar-22	6-Jun-22	5-Oct-22	12-Apr-23
		(200111011)			INITIAL ASSESSMENT MON.	INITIAL ASSE	SSMENT MON. AMPLE)	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECON	ND 2020 SSMENT ON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter	Ĭ	1.896	Not Applicable	Units	1.06 #	1.05	1	1.39	1.06	1.10	0.903	0.946	1.01	0.020	1.06	(RESAMPLE)	1.00	
Boron Calcium	None None	670.30	Not Applicable	mg/L	1.06 # 206 #	1.05	225	225	1.06 213	1.16 214	183	181	1.01 207	0.939 155	1.06 210		1.09 184	2.28 295
Chloride	250	18.51	Not Applicable Not Applicable	mg/L	13.8 #	13.4	16.3	13	13.7	13.7	13.8	13.8	14	12.7	13^	12.1	184	9.95
Fluoride	230	0.6359	Not Applicable	mg/L mg/L	0.318 #	0.373	0.52	0.396 J	0.319	0.203	0.328	0.337	0.376	0.258	2.12^	0.36	0.238	0.333
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.7 #	7.19		7.64	7.07	6.9	7.36	7.5	7.24	5.99	1.61^	7.51	7.33	7.26
Sulfate	250	1,396	Not Applicable	mg/L	1270 #	1220	1450	1150	1210	1240	1320	1290	1260	1,200	1790^	1090	1,050	1,480
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2130 #	2110	2060	2100	2110	2150	2020	2010	2030	1,970	2700^	1860	1,900	1,960
Assessment Monitoring Parame		2,101	Not Applicable	iiig/E	2100 //	2110	2000	2100	2110	2150	2020	2010	2000	1,070	2700	1000	1,000	1,000
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	0.000410 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004 #	<0.000400	<0.000400	< 0.000400	< 0.000400	< 0.000400	0.000474 J	0.000464 J	0.000471 J	0.000422 J	0.000576 J		< 0.000400	0.000762 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00954 J #	0.0101	0.011	0.0128	0.0112	0.013	0.0159	0.0158	0.0141	0.0136	0.0133		0.0108	0.0194
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200		< 0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005 #	<0.000400	<0.000400	<0.000400	0.00142 J	<0.000400	<0.000400	<0.000400	<0.000400	0.000467 J	<0.000400		<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000162 J #	<0.000200	0.000208 J	0.000232 J	0.000259 J	0.000289 J	<0.000200	<0.000200	<0.000200	<0.000200	0.000765 J		<0.000200	0.000730 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.318 #	0.373	0.52	0.396 J	0.319	0.203	0.328	0.337	0.376	0.258	2.12^	0.360	0.238	0.333
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.147 J #	0.152	0.148	0.148	0.136	0.145	0.118	0.122	0.138	0.137	0.142		0.13	0.133
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000760 J	0.0000610 J	<0.0000300		<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	0.000613 J	0.000622 J	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	0.000629 J	<0.000600		<0.000600	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.00110	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	0.000560 J	0.000499 J	<0.000200	0.000466 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.45 +/- 0.444 #	<0.67		<0.69	<0.79	1.02	1.65	1.7	1.43	<0.96	<0.81		3.46	0.907 +/- 0.622
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5		<5.00	<5.00		<5.00	<5.00	<5.00	12.0 J	5.0 J	15.0	12.0 J	10.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L														
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5												
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		318												
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5												
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		23.7	25.3											
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.05 #	0.47	0.488	1.57	0.2	<0.0300	<0.0300	<0.0300	<0.0600	<0.0600	670	0.137	0.0481 J	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		8.17	8.4											
Sodium	None	Not Applicable	Not Applicable	mg/L		388	429											
Specific Conductance (laboratory) Sulfide	None	Not Applicable	Not Applicable	umhos/cm	2520 #	2730					2980	2970	2630	2680	20,900	3,030	2660	2,820
Field Parameters	None	Not Applicable	Not Applicable	mg/L														
Temperature	None	Not Applicable	Not Applicable	°C	23.1	13.1		18.31	24.37	23.62	23.8		15.9	20.4	16.4	25	22.9	19.3
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.95	6.93		7.31	7.18	7.15	7.22		7.04	7.11	7.29	7.24	7.04	5.71
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2814	2699		2778	2797	2576	2670		2666	2,676	2,098	2,496	2,485	2,391
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.59	0.7		1.26	6.86	3.85	0.35		0.57	0.54	0.32	0.82	0.38	0.3
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-37	-12		-54.6	-34.4	-24.6	-102.6		-15.4	-47.3	-115.9	30.4	-78.5	18.8
Turbidity	None	Not Applicable	Not Applicable	NTU	4.23	1.8	1.04	0.57	1.14	3.36	1.3		3.11	2.50	0.33	3.10	2.65	3.65
Notes:																		

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample. 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-5S	DUP 3	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S (Shallow)	MW-5S (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	13-Dec-16	13-Dec-16	25-Jan-17	3-Feb-17	29-Mar-17	7-Apr-17	1-Jun-17	9-Jun-17	14-Aug-17	22-May-18	1-Aug-18	10-Aug-18
	1					ROUND 1		BACKGROUND 3	BACKGROUND 4			·	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameter	S			Units												
Boron	None	1.896	Not Applicable	mg/L	3.56	4.37	3.02	3.2	3.87	2.34	1.32	1.86	1.29	1.05	1.06	3.09
Calcium	None	670.30	Not Applicable	mg/L	32.9	28.1	27.8	29.9	30.8	37.9	54.7	58.2	46.6	74.7	59.1	24.9 J
Chloride	250	18.51	Not Applicable	mg/L	33.2	30.5	33.2	11.3	28.2	29.8	22.3	13.3	18.7	25	18.7	26.1
Fluoride	4	0.6359	Not Applicable	mg/L	1.84 J*	1.91	1.6	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.5
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2	8.3	7.9	7.8	7.8	7.9	7.4	7.5	7.5	7.6	7.7	8
Sulfate	250	626	Not Applicable	mg/L	527	540	504	501	415	469	326	321	301	369	294	384
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1230	1180	1200	1210	1070	1060	948	1010	980	950	880	1150
Assessment Monitoring Parame	ters		, 													
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.00800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00202 J	0.00132 J	0.00187 J	0.00209	0.00147 J	0.00117 J	0.00115 J	<0.00200	0.00564 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0267	0.0165	0.0212	0.0192	0.0144	0.0177	0.0183	0.023	0.0186			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	<0.00250	0.000419 U	<0.000100	<0.000500	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	0.000111 J	<0.000100	<0.000100	<0.000500	<0.000100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	0.000839 J	<0.000500	<0.00500	U (0.000520)	0.000761 J	<0.000500	<0.00250	U (0.00143)			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000833 J	<0.000100	0.000214 J	<0.00100	0.00109 J	0.000123 J	<0.000100	0.00122 J	0.000338 J			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.84 J*	1.91	1.6	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.5
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000500	<0.000100	0.000126 J	0.000238 J	0.000218 J	0.000177 J	0.000142 J	<0.000500	0.000110 J			
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0598 J	0.0582	0.0562	0.0617	0.0511	0.0523	0.0469 J	0.0588 J	0.0518		0.05	0.0486
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00880 J	0.00781	0.00745	0.00606	0.0118 J*	0.00722	0.00828	0.00980 J	0.00737		0.00497	0.00387
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00150	<0.00150	<0.000300	0.000938 J	0.00234 J	<0.000300	0.000449 J	<0.00150	<0.000300			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.008000	<0.00800	<0.00800	<0.00800	<0.000800	<0.00400	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.25 +/- 0.479	0.738 +/- 0.354	1.55 +/- 0.466	0.863 +/- 0.332	1.06 +/- 0.305	0.597 +/- 0.264	1.71 +/- 0.392	0.684 +/- 0.239	0.827 +/- 0.274			
Other Parameters		,	, 	,		, 										
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									418			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									5.19			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									4.14			
Sodium	None	Not Applicable	Not Applicable	mg/L									307			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters						I		II	II	II					II	11
Temperature	None	Not Applicable	Not Applicable	°C	17.94		16.45	14.65	20.07	19.17	20.47	21.58	22.46	20.24	25.07	23.59
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.9		7.84	7.79	7.72	7.76	7.51	7.73	7.79	7.85	7.19	7.62
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1899		1919	1905	1734	1764	1615	1718	1760	1516	1483	1843
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.94		0.39	0.33	0.37	0.27	0.07	0.07	0.05	0.13	5.05	1.37
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-110.4		-157	-82.1	-61.6	-33.2	-79.7	27.3	21.5	-104.7	142.8	-40.1
																1.12
Turbidity Notes:	None	Not Applicable	Not Applicable	NTU	37		4.09	2.45	0.83	1.98	1.52	1.01	1.14	0.41	0.02	

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL	Established	Established		MW-5S	MW-	58	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MV	V-5S	MW-5S	MW-5S
	or	Background	GWPS	Sample ID:													
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	2-Oct-18	10-Jai	n-19	23-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	1-Apr-21	14-Oct-21	31-Mar-22	7-Jun-22	6-Oct-22	12-Apr-23
					INITIAL ASSESSMENT MON.	INITIAL ASSES (RESAN UNFILTERED	IPLE)	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter	rs			Units		•••••					merm				(RESAMPLE)		
Boron	None	1.896	Not Applicable	mg/L	2.82 #	2.73	1.82	1.87	2.49	0.811	2.57	2.04	1.82	1.64		2.94	2.21
Calcium	None	670.30	Not Applicable	mg/L	25 #	27.7	27.8	57	22.5	68.2	19.6	33.4	21.0	53.8		24.1	37
Chloride	250	18.51	Not Applicable	mg/L	28.3 #	30.5	29.9	21.8	25.1	19.5	25.6	23.9	26.4	23^	24.1	25.6	23.8
Fluoride	4	0.6359	Not Applicable	mg/L	1.54 #	1.54	1.5	1.11	1.54	0.824	1.51	1.24	1.57	3.24^	1.41	1.4	1.25
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.7 #	7.65		8.11	7.55	7.65	8.21	7.9	8.16	1.68^	8.19	7.89	7.73
Sulfate	250	626	Not Applicable	mg/L	447 #	457	472	394	434	408	485	477	499	1540^	503	482	556
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1140 #	1120	1210	1090	1180	904	1080	1140	1140	1540^	1170	1100	1100
Assessment Monitoring Parame																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	0.00122 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.661 #	0.000737 J	0.000765 J	0.000523 J	0.000736 J	< 0.000400	0.000453 J	<0.000400	< 0.000400	0.000423 J		0.000433 J	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.012 #	0.012	0.0116	0.0141	0.00928	0.021	0.00787	0.00867	0.00732	0.0113		0.00653	0.00789
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.832 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Cobalt Fluoride	None	Not Applicable	0.006 (ODEQ) 4 (MCL)	mg/L	<0.0001 # 1.54 #	<0.000200 1.54	<0.000200	<0.000200 1.11	<0.000200 1.54	<0.000200 0.824	<0.000200 1.51	<0.000200 1.24	<0.000200 1.57	0.000237 J 3.24^	1.41	<0.000200	<0.000200 1.25
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	1.5 <0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600			<0.000600
Lithium	None	Not Applicable Not Applicable	0.235 (UTL)	mg/L	0.0691 J #	0.0644	0.0642	0.0604	0.0536	0.049	0.0546	0.0496	0.0532	0.0654		<0.000600 0.0572	0.0520
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L mg/L	<0.0001 #	<0.000300	<0.00042	<0.000300	<0.000300	<0.000300	<0.000300	0.00498 0.0000870 J	<0.000300	<0.000300		<0.000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.005 #	0.00512	0.00335 J	0.00485 J	0.00315 J	0.00361 J	0.00244 J	0.00234 J	0.00387 J	0.00257 J		0.00210 J	0.00211 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0012	<0.0011	<0.00110	<0.00110	<0.00110	<0.00244 3	<0.00234 3	<0.00110	<0.00110		<0.002103	< 0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0003 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.611 +/- 0.249 #	<0.79	<0.000200	<0.64	1.44	1.25	1.15	0.95	1.28	<0.000200		1.69	0.334 +/- 0.410
Other Parameters	Ŭ	Not Applicable		poire	0.01117 0.210 #	40.110		<0.04	1.44	1.20	1.10	0.00	1.20	\$0.10		1.00	0.0011/ 0.110
	None	Not Applicable	Not Applicable	ma/l	<5.00 #	<5.00		<5.00	<5.00		<5.00	-5.00	6.00 J	-E 000	17.0	7.00 J	E 00 1
Chemical Oxygen Demand (COD)	None		Not Applicable	mg/L						412	< <u><5.00</u> 444	<5.00 405	470	<5.00^ <5^	419	430	5.00 J
Total Alkalinity as CaCO3 Carbonate Alkalinity as CaCO3	None None	Not Applicable Not Applicable	Not Applicable	mg/L mg/L		12.6				15	20.5	<5	9.52	<5^	<5	<5	292 <5.0
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		427				397	424	405	460	<5^	419	430	292
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5^	<5	<5	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	0.0170 J	0.0270 J	0.0435 J^	0.0311 J	<0.0120	0.0165 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	<0.0120	<0.0270 3	<0.0120^	0.0138 J	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.029(J)	<0.0120	<0.0120	<0.0120	<0.02^	<0.02	<0.0120	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.020	<0.0200 <0.020 H	<0.02	<0.02	<0.02	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								<0.020	0.0270 J	0.0435 J^	0.0311 J	<0.02	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.020	<0.020	< 0.02^	<0.02	<0.02	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L		5.73	5.58			5.16	4.38	4.53	4.60	5.79		4.79	5.72
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.00308(J)	0.00244 J	0.00287 J	0.00296 J	0.00248 J		0.00232 J	0.00207 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.089 J #	0.964	0.916	0.665	0.212	< 0.0300	< 0.0300	00287 J	0.0984 J	705^	0.0996 J,H	0.243	0.467
Potassium	None	Not Applicable	Not Applicable	mg/L		4.49	4.27			3.48	3.94	3.25	3.96	3.74		4.17	3.84
Sodium	None	Not Applicable	Not Applicable	mg/L		405	257			277	335	312	243	341		387	371
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1730 #	1870					1960	1770	1820	15600^	2,280	1990	1,880
Sulfide	None	Not Applicable	Not Applicable	mg/L						<1	1.97	<1	<1.00	<1^	<1	<1	<1.70
Field Parameters		11 1															
Temperature	None	Not Applicable	Not Applicable	°C	25.3	13.4		18.78	25.18	24.37	21.5	14.7	23.7	16.4	19.8	24.9	20.9
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.61	7.56		7.95	7.91	7.9	7.83	7.74	7.85	7.77	7.9	7.73	7.61
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1871	1791		1669	1826	1665	1794	1745	1,863	1372	1,820	1,884	1,789
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.63		0.85	0.45	1.89	0.32	0.81	0.36	0.31	2.7	0.44	0.37
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-125.1	-30.9		19.7	-54.1	-48.2	168.1	283.3	-59.9	46.2	20.5	-33.9	54.1
Turbidity	None	Not Applicable	Not Applicable	NTU	3.3	4.51	1.27	1.16	0.94	2.88	1.97	2.85	2.16	1.61	1.72	2.71	2.13
Notes:						4 I				<u> </u>		L				1	

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.

17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL	Established Background	Established GWPS	Sample ID:	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	DUP 1	MW-7S	MW-7S	MW-7S	MW-7S (Shallow)	DUP1 (Shallow)	MW-7S (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	13-Dec-16	25-Jan-17	3-Feb-17	29-Mar-17	7-Apr-17	31-May-17	31-May-17	9-Jun-17	10-Aug-17	17-May-18	3-Aug-18	3-Aug-18	10-Aug-18
					BACKGROUND	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4		BACKG	GROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1		ON SAMPLE	VERIFICATION
Detection Monitoring Parameter				Units													
Boron	None	1.896	Not Applicable	mg/L	3.8	0.891	0.557	<0.875	0.382	1.7	1.92	1.84	2.21	1.25	0.283	0.279	3.31
Calcium	None	670.30	Not Applicable	mg/L	53.8	349	267	411	415	71	168	175	80.6	178	90.3	88.8	142
Chloride	250	18.51	Not Applicable	mg/L	17.7	23.8	19.8	17.5	21.8	14.9	15.5	16.3	16.2	17.6	16.4	16.5	17
	4	0.6359	Not Applicable	mg/L	1.02 J*	0.569	0.497	0.368	0.425	0.607	0.58	0.579	0.744	0.509	0.771	0.733	0.664
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.4	7.3	7.3	7.2	7.5	7.5	7.4	7.3	7.4	7.6	7.6	7.8	7.7
Sulfate Total Dissolved Solids	250 500	1,281	Not Applicable	mg/L	465 1070	907 1570	893 1570	893 1530	1120 1610	587 1220	606 1230	619 1300	450 1120	860 1600	545 1210	545 1180	623 1330
		1,003	Not Applicable	mg/L	1070	1570	1570	1550	1010	1220	1230	1300	1120	1000	1210	1100	1550
Assessment Monitoring Parame																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	0.00634 J	<0.000800	< 0.000800	<0.000800	<0.000800	<0.000800	<0.000800	< 0.00400	<0.000800				
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00201 J	0.000728 J	0.000766 J	0.00176 J	0.00176 J	0.00137 J	0.00128 J	0.00310 J	0.00150 J				
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0411	0.0462	0.0427	0.036	0.0335	0.0292	0.0346	0.0446	0.0308				
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.000500	<0.000100	<0.000100	<0.00250	<0.000100	<0.000100	<0.000100	< 0.000500	<0.000100				
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	0.000115 J	<0.000100	< 0.000100	<0.000100	<0.000500	<0.000100				
Chromium Cobalt	0.1 None	Not Applicable Not Applicable	0.1 (MCL) 0.006 (ODEQ)	mg/L	U (0.00333) 0.00120 J	0.000680 J 0.000648 J	<0.00500 <0.00100	<0.000500 0.000735 J	<0.000500 0.000439 J	0.000731 J 0.000349 J	<0.000500 0.000333 J	<0.00250 0.00208 J	U (0.000637) 0.000696 J				
Fluoride	4	Not Applicable	4 (MCL)	mg/L mg/L	1.02 J*	0.569	0.497	0.368	0.000439 J	0.607	0.58	0.00208 J	0.000696 J	0.509	0.771	0.733	0.664
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	< 0.000500	0.000333 J	<0.000100	0.000157 J	<0.000100	<0.000100	< 0.000100	<0.000500	<0.000100				
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0697 J	0.0462 J	0.0499 J	0.0395 J	0.0400 J	0.0637	0.07	0.0766 J	0.0609		0.0667	0.0656	0.0613
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.000150	< 0.000150	< 0.000150	< 0.000150	< 0.000100	< 0.000150	<0.000150	< 0.000150	< 0.000150				
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	< 0.00500	0.00174 J	0.00160 J	< 0.00500	0.00153 J	0.00186 J	0.00179 J	< 0.00500	0.00171 J		0.00127 J	0.00128 J	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	U (0.00158)	<0.000300	0.00103 J	< 0.00150	< 0.000300	< 0.000300	< 0.000300	< 0.00150	< 0.000300				
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.00400	<0.000800	< 0.000800	<0.000800	<0.000800	<0.000800	<0.000800	< 0.00400	< 0.000800				
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.13 +/- 1.07 U	1.51 +/- 0.445	1.15 +/- 0.362	0.649 +/- 0.257	0.808 +/- 0.292	0.531 +/- 0.268			0.891 +/- 0.247				
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L													
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L													
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00				
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									311				
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00				
Iron, Total	None	Not Applicable	Not Applicable	mg/L													
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Magnesium	None	Not Applicable	Not Applicable	mg/L									10.7				
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Nitrate as N	10	Not Applicable	Not Applicable	mg/L													
Potassium	None	Not Applicable	Not Applicable	mg/L									4.95				
Sodium	None	Not Applicable	Not Applicable	mg/L									273				
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm													
Sulfide	None	Not Applicable	Not Applicable	mg/L													
Field Parameters				20	10.00			10.00	40.00	o.(0.4.40	(0.0	22.24	1	07.01
Temperature	None	Not Applicable	Not Applicable	0	16.83	14.77	15.53	18.89	16.83	21.67		19.85	24.46	19.6	29.34		25.21
	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.88	7.17	7.2	7.18	7.22	7.27		7.19	7.22	7.4	6.92		7.22
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1614	2010	2029	2216	2205	1925		1929	1680	2101	1822		1932
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.47	0.43	0.19	0.27	0.25	0.09		0.05	0.08	0.22	1.61		2.95
Oxidation-Reduction Potential Turbidity	None None	Not Applicable	Not Applicable	mV NTU	-165.8	-141	-164.4	-68	-104	-196		107.4	57.6	-58.8	-20.8		-30.7
Notes:	NUTE	Not Applicable	Not Applicable		81.8	33.7	3.34	1.12	8.31	1.82		1.12	3.45	2.29	3.37		1.76

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts. 8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U () : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J*: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



		Fatabliabad	Fatabliahad																
	MCL	Established	Established		MW-7S	MW	I-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	DUP 2	MW-7S	MW	-7S	MW-7S	DUP 3	MW-7S
Baramatara	or SMCL	Background (Det. Mon.)	GWPS (Ass. Mon.)	Sample ID:	4.0-1.40		40	00.4	1.0-1.40	47 1	0.0.1.00	20.14		45.0+04	04 May 00	h.m. 00			40.400.00
Parameters	SIVICE		(ASS. WOIL)	Sample Date:	4-Oct-18	10-Ja	an-19	23-Apr-19	1-Oct-19	17-Jun-20	9-Oct-20	30-M	ar-21	15-Oct-21	31-Mar-22	Jun-22	5-00	:t-22	18-Apr-23
					INITIAL ASSESSMENT MON.	INITIAL ASSES (RESA UNFILTERED	MPLE)	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST ASSES MC	SMENT	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.		ID 2022 SMENT	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter	rs			Units	WON.				WON.	WON.	WON.	wice and the second sec	214.	MON.	WON.	(RESAMPLE)	IVIC	/11.	WON.
Boron	None	1.896	Not Applicable	mg/L	2.7 #	0.839	1.12	0.848	1.99	1.33	2.29	0.677	0.681	2.18	0.646		2.7	3.07	0.880
Calcium	None	670.30	Not Applicable	mg/L	76 #	277	293	271	81.1	160	90.2	254	219	97.1	302		100	111	228
Chloride	250	18.51	Not Applicable	mg/L	16.1 #	18.7	19.7	19.7	16.3	18	16.9	20.5	19.4	16.8	19.9		16.9	16.7	18.9
Fluoride	4	0.6359	Not Applicable	mg/L	0.764 #	0.422	0.35	0.376	0.729	0.479	0.713	0.444	0.415	0.746	0.515		0.711	0.824	0.468
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8#	7.34		7.82	7.39	7.55	7.79	7.32	7.53	7.84	7.88		7.81	8.01	7.41
Sulfate Total Dissolved Solids	250	1,281	Not Applicable	mg/L	1600 # 1230 #	1200	1110	1040	633	970	759	1200	1190	690	1190		687	687	1,410
	500	1,863	Not Applicable	mg/L	1230 #	1670	1890	1890	1270	1680	1340	2060	2000	1290	1920		1350	1260	1,740
Assessment Monitoring Parame						0													
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	< 0.000400	< 0.000400	<0.000400	< 0.000400	<0.000400	<0.000400	< 0.000400		<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004 #	0.000413 J	< 0.000400	0.00116 J	0.000412 J	0.000650 J	<0.000400	< 0.000400	<0.000400	<0.000400	< 0.000400		< 0.000400	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.021 #	0.0371	0.0387	0.0372	0.0139	0.0244	0.0142	0.0295	0.0302	0.0154	0.0336		0.0148	0.0167	0.0253
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Chromium Cobalt	0.1 None	Not Applicable Not Applicable	0.1 (MCL) 0.006 (ODEQ)	mg/L	<0.005 # 0.000222 J #	<0.000400 0.000270 J	<0.000400 0.000304 J	<0.000400 0.00153 J	0.000994 J <0.000200	<0.000400 0.000838 J	<0.000400 <0.000200	<0.000400 <0.000200	<0.000400 <0.000200	<0.000400 0.000259 J	0.000494 J 0.00110 J		0.000669 J <0.000200	0.00143 J 0.000215 J	<0.000400 0.000519 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L mg/L	0.764 #	0.422	0.35	0.376	0.729	0.479	0.713	0.444	0.415	0.000259.5	0.515		0.711	0.824	0.468
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	< 0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	< 0.000600	< 0.000600	<0.000600		<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0714 J #	0.0558	0.0606	0.0593	0.0608	0.0681	0.065	0.0472	0.0468	0.0645	0.0533		0.0685	0.0778	0.0536
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001 #	<0.0000300	<0.0000300	< 0.0000300	< 0.0000300	0.0000350 J	<0.0000300	0.000104 J	0.0000320 J	< 0.0000300	< 0.0000300		< 0.0000300	<0.0000300	< 0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.01 #	0.00105 J	0.00107 J	0.000952 J	0.000798 J	0.00105 J	0.00106 J	0.000755 J	0.000763 J	0.00115 J	0.000973 J		0.00103 J	0.00134 J	0.000973 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.07 +/- 0.453 #	1.34		0.9	<0.71	1.05	1.2	1.73	1.92	1.95	1.11		1.38	2.72	2.32 +/- 1.16
Other Parameters																			
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	5.0 J		<5.00	<5.00		8.00 J	<5.00	<5.00	7.00 J	<5.00		<5.00	16	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						264	315	180	177	343	205		32.6	297	190
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5	<5.00	<5		<5.00	7.48	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		222				264	315	180	177	343	205		32.6	289	190
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5	<5.00	<5		<5.00	<5.00	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L						0.278	0.111 J	0.0145 J	0.0156 J	0.310	<0.0120		0.158 J	0.186 J	<0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.034(J)	0.235	0.0154 J	0.0234 J	0.134 J	<0.0120		0.113 J	0.0883 J	<0.012
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.306	0.216	< 0.02	<0.02	0.207	<0.02		0.127	0.107	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								< 0.02	<0.02	<0.0200 H	< 0.02		0.114	<0.0200	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								< 0.02	< 0.02	0.103	< 0.02		0.0310 J	0.079	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								< 0.02	0.0234 J	0.134	< 0.02		< 0.02	0.0883	<0.02
Magnesium Malubdapum Diagaluad	None	Not Applicable	Not Applicable	mg/L		19	18.7			17.1	12	16.9	17.4	12.2	20		12.2	13.8	19.2
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L		0.557	0.644	<0.0300		0.000987(J)	0.00103 J	0.000846 J	0.000941 J	0.00121 J	0.000830 J		0.00112 J	0.00108 J	0.00110 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.118 #				<0.0300	< 0.0300	<0.0300	< 0.0600	< 0.0600	0.0940 J	0.0613 J		0.155	0.147	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		4.67 274	4.79			5.33	5.1	4.06	4.18 197	5.14	4.56		5.34	6	4.84
Sodium Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	mg/L		274	294			313	272	230		261	272		313	352	277
Sulfide	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	umhos/cm	1610 #					 <1	<u>2110</u> 1.48	2380 <1	2380 <1	1860 <1.00	2,530 <1		2,000 <1	2050 <1	2,490 <1.7
Field Parameters	TACHE			mg/L							1.40	N 1		\$1.00	N 1				×1.7
Temperature	None	Not Applicable	Not Applicable	°C	25	12.8		17.92	25.27	21.95	23.1	16.8		22.5	14.2		26.8		18.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.35	7.08		7.42	7.53	7.37	7.52	7.24		7.47	7.32		7.37		7.22
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1887	2180		2326	1944	2097	1945	2377		1,973	2,385		2,015		2,344
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.45	0.23		0.84	0.51	0.49	0.33	0.31		0.30	0.38		0.39		0.21
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-129.1	-6.3		-61.6	-133.8	-67.6	-90.1	83.3		-107.8	-30.3		-179.9		62.0
Turbidity	None	Not Applicable	Not Applicable	NTU	8.01	0.67	0.64	0.71	0.88	2.49	0.85	5.81		3.15	2.42		2.91		2.12
Notes:	4					15		-11		1	<u> </u>					<u> </u>			<u></u>

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U () : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J*: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-13	DUP-2	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13 (Shallow)	MW-13 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	25-May-16	25-May-16	26-Jul-16	27-Sep-16	29-Nov-16	30-Jan-17	30-Mar-17	6-Jun-17	4-Aug-17	21-May-18	1-Aug-18	9-Aug-18
	1				BACKG				BACKGROUND 4					DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters	1			Units												
Boron	None		Not Applicable	mg/L	1.38	1.4	1.1	1.36	1.41	1.43	2	1.34	1.24	1.3	1.41	3.86
Calcium	None		Not Applicable	mg/L	341	362	440	302	306	485	343	421	313	251	249	284
Chloride	250	Background Well	Not Applicable	mg/L	13.7	13.5	13.1	14.0 J	12.5	12.6	12.2	13	12.1 J*	13.4	13.6	33.2
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.192	0.183	0.389	0.674	0.324	0.395	0.181	0.329	0.248 J*	0.281	0.364	0.743
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.16	7.28	7.84	7.7	7.3	7.1	7	6.9	6.9	7	7.5	7.7
Sulfate	250		Not Applicable	mg/L	1570	1,680 J*	1450	1360	1340	1320	1360	1320	1,350 J*	1320	1250	1440
Total Dissolved Solids	500		Not Applicable	mg/L	2220	2190	2340	2,380 J	2230	2230	2250	2410	2370	2400	2130	2560
Assessment Monitoring Parame																
Antimony	0.006	Not Applicable		mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800			
Arsenic	0.010	Not Applicable		mg/L	0.00394	0.00377	0.00244	0.00177 J	0.00180 J	0.00170 J	<0.00200	<0.000400	0.0057			
Barium	2	Not Applicable	ļ	mg/L	0.0267	0.0263	0.0259	0.0198	0.0184	0.0182	0.033	0.0168	0.0177			
Beryllium	0.004	Not Applicable		mg/L	< 0.00100	<0.00100	<0.00100	<0.000100	<0.000100	< 0.000100	<0.000500	<0.000100	<0.000100			
Cadmium	0.005	Not Applicable		mg/L	<0.000400	< 0.000400	<0.000400	<0.000100	<0.000100	< 0.000100	<0.000500	<0.000100	<0.000100			
Chromium	0.1	Not Applicable		mg/L	< 0.000500	0.000637 J	< 0.000500	<0.000500	0.00109 J	< 0.000500	< 0.00250	<0.000500	<0.000500			
Cobalt	None	Not Applicable	Background Well	mg/L	< 0.000500	0.000507 J	< 0.000500	0.000376 J	0.000366 J	0.000329 J	< 0.000500	0.000519 J	0.000275 J			0.743
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.192	0.183	0.389	0.674	0.324	0.395	0.181	0.329	0.248 J*	0.281	0.364	
Lead	0.015	Not Applicable	· · · · /	mg/L	< 0.000200	< 0.000200	<0.000200	<0.000100	<0.000100	< 0.000100	<0.000500	<0.000100	<0.000100			
Lithium	None 0.002	Not Applicable Not Applicable	-	mg/L	0.176 <0.000150	0.179 <0.000150	0.184	0.156 <0.000150	0.156	0.173 <0.000150	0.0449 J <0.000150	0.157 <0.000150	0.164 <0.000150		0.14	0.115
Mercury	None			mg/L	0.0097	0.0092	0.00557	0.029	0.00444	0.00393	0.00345	0.00316	0.00286		0.00211	0.0022
Molybdenum Selenium	0.05	Not Applicable Not Applicable		mg/L	<0.0097	<0.0092	<0.00057	<0.000300	0.000444 0.000512 J	<0.00393	<0.00345	0.00318	U (0.00192)			
Thallium	0.002	Not Applicable	-	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.000800	<0.000800	<0.00130	<0.00402	<0.000800			
Ra-226 + Ra-228 (combined)	0.002	Not Applicable	-	mg/L pCi/L	1.96 +/- 0.373	1.57 +/- 0.321	1.50 +/- 0.327	1.43 +/- 0.352	1.75 +/- 0.486	1.41 +/- 0.357	1.73 +/- 0.350	1.75 +/- 0.389	1.51 +/- 0.320			
Other Parameters	5	Not Applicable		poi/L	1.30 17 0.373	1.07 17 0.021	1.00 17 0.027	1.40 17 0.002	1.75 17 0.400	1.41 17 0.007	1.75 17 0.550	1.75 17 0.505	1.01 1/ 0.020			
	Nene	Not Applicable	Not Applicable													
Chemical Oxygen Demand (COD)	None	Not Applicable		mg/L				·								
Total Alkalinity as CaCO3 Carbonate Alkalinity as CaCO3	None	Not Applicable Not Applicable	Not Applicable	mg/L												
Bicarbonate Alkalinity as CaCO3	None None	Not Applicable	Not Applicable Not Applicable	mg/L									<5.00 307			
Hydroxide Alkalinity	None	Not Applicable		mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									26.4			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									8.32			
Sodium	None	Not Applicable	Not Applicable	mg/L									349			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters				-												
Temperature	None	Not Applicable	Not Applicable	٥C	21.68		21.6	21.3	20.26	20.49	19.38	22.73	22.75	21.37	27.06	25.52
•	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.08		7.23	7.02	6.99	6.96	7.05	6.97	6.94	7.07	6.72	6.49
pH										2967	3006	2990	2920	2887		3213
pH Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2507		2939	2622	3002	2907	3000	2990	2920	2001	3010	0210
pH Specific Conductance Dissolved Oxygen	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	μmhos/cm mg/L	0.41		0.28	0.09	0.35	0.33	0.3	0.18	0.09	1.25	2.22	1.37
				•												

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL	Established Background	Established GWPS	Sample ID:	MW-13	MW	-13	DL	JP 2	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MV	/-13	MW-13
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	4-Oct-18		11-Ja	an-19		25-Apr-19	3-Oct-19	17-Jun-20	14-Oct-20	31-Mar-21	15-Oct-21	1-Apr-22	1-Jun-22	5-Oct-22
Detection Monitoring Parameters				Units	INITIAL ASSESSMENT MON.	UNFILTERED	INITIAL ASSES		UNFILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None		Not Applicable	mg/L	2.01 #	2.14	1.67	1.76	1.72	3.07	2.01	1.39	1.48	1.66	1.43	3.00		3.08
Calcium	None		Not Applicable	mg/L	299 #	270	360	334	348	130	182	243	242	284	237	116		135
Chloride	250	_	Not Applicable	mg/L	12.8 #	15.1	13.7	13.8	13.1	28.2	17.3	13.8	13.9	13.8	14.8	30.0		14.4
Fluoride	4	Background Well	Not Applicable	mg/L	0.285 #	0.342	0.99	0.31	0.444	0.652	0.422	0.231	0.257	0.344	0.294	0.453 J		0.263
pH (laboratory)	6.5 - 8.5	(Not Applicable)	Not Applicable	S.U.	7.6 #	7.16		7.35		7.95	6.75	6.71	7.55	7.32	7.57	7.91		7.33
Sulfate	250		Not Applicable	mg/L	1400 #	1450	1420	1450	1440	1450	1380	1390	1480	1470	1570	1,510		1380
Total Dissolved Solids	500		Not Applicable	mg/L	2350 #	2350	2220	2270	2260	2590	2350	2450	2360	2320	2360	2,520		2460
Assessment Monitoring Parameter	eters																	
Antimony	0.006	Not Applicable		mg/L	<00008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400
Arsenic	0.000	Not Applicable		mg/L	<0.004 #	<0.000400	<0.000400	<0.000400	0.000400	0.000979 J	0.000400 0.000401 J	<0.000400	<0.000400	<0.000400	<0.000400	0.000569 J		0.000400
Barium	2	Not Applicable		mg/L	0.0196 J #	0.014	0.0164	0.0152	0.000412.3	0.0146	0.0004013	0.0116	0.0107	0.0114	0.0112	0.0104		0.000423 3
Beryllium	0.004	Not Applicable		mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.00200	< 0.000200	< 0.000200	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.00200
Cadmium	0.004	Not Applicable	-	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Chromium	0.000	Not Applicable	-	mg/L	<0.005 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Cobalt	None	Not Applicable	-	mg/L	<0.0001 #	<0.000200	0.000229 J	<0.000400	<0.000200	0.000265 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000435 J		<0.000200
Fluoride	4	Not Applicable	Background Well	mg/L	0.285 #	0.342	0.99	0.31	0.444	0.652	0.422	0.231	0.257	0.344	0.294	0.453 J		0.263
Lead	0.015	Not Applicable	(Not Applicable)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	< 0.000600	<0.000600	<0.000600	<0.000600		<0.000600
Lithium	None	Not Applicable		mg/L	0.174 J #	0.17	0.194	0.181	0.176	0.131	0.139	0.156	0.146	0.166	0.163	0.120		0.131
Mercury	0.002	Not Applicable		mg/L	<0.00015 #	< 0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	< 0.0000300	0.0000990 J	0.0000490 J	<0.0000300		<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.01 #	0.00155 J	0.00178 J	0.00149 J	0.00176 J	0.00276 J	0.00210 J	0.000934 J	0.000865 J	0.000959 J	0.000917 J	0.00117 J		0.00101 J
Selenium	0.05	Not Applicable		mg/L	0.000429 J #	< 0.0011	< 0.0011	< 0.00110	<0.00110	< 0.00110	< 0.00110	< 0.00110	< 0.00110	<0.00110	<0.00110	< 0.00110		<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.46 +/- 0.346 #	2.12		1.14		1.65	1.81	2.09	2.67	2.47	1.75	1.46		3.01
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5		<5		<5.00	6.00 J		<5.00	<5.00	5.00 J	<5.00		13.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L														
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5		<5										
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		354		343										
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5		<5										
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		27	30.7	30.4	29.6									
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.061 J #	<0.03	< 0.03	< 0.03	<0.03	<0.150	0.191	< 0.0300	<0.0600	<0.0600	0.0613 J	0.304 J		0.297
Potassium	None	Not Applicable	Not Applicable	mg/L	0.001 J #	8.43	8.61	8.43	8.64	<0.150	0.191	<0.0300	<0.0600	<0.0600	0.0013 J	0.304 3		0.297
Sodium	None	Not Applicable	Not Applicable	mg/L		557	416	447	418									
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2570 #	3090	410	2960					3280	2940	3050	3,840		3250
Sulfide	None	Not Applicable	Not Applicable	mg/L														
Field Parameters										II			II	II				
Temperature	None	Not Applicable	Not Applicable	°C	25.7	12.4				20.41	27	21.69	21.8	16.9	21.4	17.3		24.8
nH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.41	7.39				7.8	7.63	7.48	7.54	7.49	7.56	7.55		7.49
Specific Conductance	0.5 - 8.5 None	Not Applicable	Not Applicable	 μmhos/cm	3728	3569				3688	3751	3474	3576	3616	3,688	3,658		3616
Dissolved Oxygen	None	Not Applicable	Not Applicable	•	0.41	0.66				1.68	2.61	1.18	0.39	0.49	0.44	0.33		0.8
Oxidation-Reduction Potential				mg/L		-8.8				-119.2	-95.1	-41.6	156.8	76.4	-435.2	22.4		
Turbidity	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mV NTU	30.1 5.63	2.27	0.76			4.66	1.28	4.95	3.21	3.76	8.30	3.27		-126.4
Notes:					5.05	2.21	0.70		1	4.00	1.20	7.33	5.21	5.70	0.50	5.21		2.42

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius. 6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts. 8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

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R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



		Established	Established		
	MCL		GWPS		MW-13
_	or	Background		Sample ID:	
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	12-Apr-23
					FIRST 2023 ASSESSMENT MON.
Detection Mo	nitoring Paramet	ers		Units	
Boron	None		Not Applicable	mg/L	2.29
Calcium	None		Not Applicable	mg/L	187
Chloride	250	Background Well	Not Applicable	mg/L	17.9
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.446
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.45
Sulfate	250		Not Applicable	mg/L	1,610
Total Dissolved S	500		Not Applicable	mg/L	2,750
Assessment	Monitoring Paran	neters			
Antimony	0.006	Not Applicable		mg/L	<0.000400
Arsenic	0.010	Not Applicable		mg/L	<0.000400
Barium	2	Not Applicable		mg/L	0.0102
Beryllium	0.004	Not Applicable		mg/L	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.000200
Chromium	0.1	Not Applicable		mg/L	<0.000400
Cobalt	None	Not Applicable	Background Well	mg/L	0.000403 J
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.446
Lead	0.015	Not Applicable	(NOT Applicable)	mg/L	<0.000600
Lithium	None	Not Applicable		mg/L	0.129
Mercury	0.002	Not Applicable		mg/L	<0.0000300
Molybdenum	None	Not Applicable		mg/L	0.000970 J
Selenium	0.05	Not Applicable		mg/L	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.000200
Ra-226 + Ra-228	5	Not Applicable		pCi/L	1.38 +/- 0.478
Other Parame	eters				
Chemical	None	Not Applicable	Not Applicable	mg/L	<5.00
Total Alkalinity	None	Not Applicable	Not Applicable	mg/L	
Carbonate Alkalin	None	Not Applicable	Not Applicable	mg/L	
Bicarbonate Alkali	None	Not Applicable	Not Applicable	mg/L	
Hydroxide Alkalini	None	Not Applicable	Not Applicable	mg/L	
Iron, Total	None	Not Applicable	Not Applicable	mg/L	
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous, Dise	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric, Disso	None	Not Applicable	Not Applicable	mg/L	
Magnesium	None	Not Applicable	Not Applicable	mg/L	
Molybdenum, Dist	None	Not Applicable	Not Applicable	mg/L	
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0990 J
Potassium	None	Not Applicable	Not Applicable	mg/L	
Sodium	None	Not Applicable	Not Applicable	mg/L	
Specific Conducta	None	Not Applicable	Not Applicable	umhos/cm	3,320
Sulfide	None	Not Applicable	Not Applicable	mg/L	
Field Paramet	ters				
Temperature	None	Not Applicable	Not Applicable	°C	20.5
рН	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.81
Specific Conducta	None	Not Applicable	Not Applicable	µmhos/cm	3200
Dissolved Oxyger	None	Not Applicable	Not Applicable	mg/L	0.31
Oxidation-Reducti		Not Applicable	Not Applicable	mV	-1
Turbidity	None	Not Applicable	Not Applicable	NTU	4.99

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius. 6. μmhos/cm : micromhos per centimeter.

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J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION



	MCL	Established Background	Established GWPS	Sample ID:	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	DUP-2	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A (Shallow)	MW-14A (Deep)	DUP1 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	25-May-16	23-Aug-16	28-Sep-16	30-Nov-16	31-Jan-17	31-Jan-17	30-Mar-17	2-Jun-17	9-Aug-17	17-May-18	1-Aug-18	9-Aug-18	9-Aug-18
			<u> </u>							ROUND			BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE		ION SAMPLE
Detection Monitoring Parameter	'S			Units													
Boron	None		Not Applicable	mg/L	0.92	0.92	0.894	1.02	0.984	1.04	1.01	1.03	0.764	1.14	0.925	1.8	1.53
Calcium	None		Not Applicable	mg/L	500	380	327	328	544	503	451	530	672	313	341	746	358
Chloride	250	Background Well	Not Applicable	mg/L	17.7	17.1	15.5	15.2	15.7	15.8	16.3	14.8	13.8	15.3	15	16	14.7
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.17	0.472	0.402	0.384	0.372	0.385	0.228	0.232	0.312	0.292	0.333	0.296	0.253
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.12	7.7	7.6	7.6	7.1	7.1	7.1	7	6.9	7.4	7.3	7.1	7.2
Sulfate	250		Not Applicable	mg/L	2020	1670	1730	1600	1590	1610	1710	1440	1420	1790	1580	1600	1510
Total Dissolved Solids	500		Not Applicable	mg/L	2680	2650	2530	2670	2540	2570	2650	2630	2680	2700	2700	2730	2700
Assessment Monitoring Parame	eters																
Antimony	0.006	Not Applicable		mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.008000	<0.008000	<0.00400	<0.008000	<0.00800				
Arsenic	0.010	Not Applicable	[mg/L	0.00363	0.000714 J	0.00171 J	<0.00400	0.00153 J	0.00173 J	<0.00200	0.00150 J	0.00306				
Barium	2	Not Applicable	[mg/L	0.0239	0.018	0.019	0.0156 J	0.0177	0.0179	0.0329	0.0179	0.182				
Beryllium	0.004	Not Applicable		mg/L	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	<0.00100				
Cadmium	0.005	Not Applicable	[mg/L	<0.000400	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	<0.00100				
Chromium	0.1	Not Applicable	[mg/L	<0.000500	<0.000500	<0.000500	<0.00500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500				
Cobalt	None	Not Applicable	Background Well	mg/L	0.000730 J	0.000258 J	0.000708 J	<0.00100	0.000334 J	0.000342 J	<0.000500	<0.000100	0.000350 J				
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.17	0.472	0.402	0.384	0.372	0.385	0.228	0.232	0.312	0.292	0.333	0.296	0.253
Lead	0.015	Not Applicable		mg/L	<0.000200	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100				
Lithium	None	Not Applicable		mg/L	0.167	0.147	0.147	0.175 J	0.16	0.164	0.235 J	0.147	0.16		0.149	0.328 J	0.134
Mercury	0.002	Not Applicable		mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150				
Molybdenum	None	Not Applicable		mg/L	0.00477	0.00237	0.00524 J	<0.0100	0.00253	0.00238	<0.00500	0.00246	0.00223		<0.00100	<0.0100	0.00144 J
Selenium	0.05	Not Applicable		mg/L	<0.000600	0.000342 J	<0.000300	<0.00300	<0.000300	<0.000300	<0.00150	<0.000300	<0.000300				
Thallium	0.002	Not Applicable		mg/L	< 0.000500	< 0.000800	<0.000800	<0.00800	<0.000800	< 0.000800	<0.00400	< 0.000800	<0.000800				
Ra-226 + Ra-228 (combined)	5	Not Applicable		pĊi/L	1.60 +/- 0.364	1.62 +/- 0.381	1.90 +/- 0.394	2.02 +/- 0.498	1.39 +/- 0.366	1.38 +/- 0.385	1.73 +/- 0.346	1.49 +/- 0.351	1.51 +/- 0.326				
Other Parameters			Not Applicable								1	1	11 11		I		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L													
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L													
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00				
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									280				
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00				
Iron, Total	None	Not Applicable	Not Applicable	mg/L													
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Magnesium Malyhdanum Diasalyad	None	Not Applicable	Not Applicable	mg/L									24.4				
Molybdenum, Dissolved	None 10	Not Applicable	Not Applicable	mg/L													
Nitrate as N	10 Nono	Not Applicable	Not Applicable	mg/L													
Potassium Sodium	None	Not Applicable	Not Applicable	mg/L									7.88 518				
	None	Not Applicable	Not Applicable	mg/L													
Specific Conductance (laboratory) Sulfide	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	umhos/cm													
	NUTE		Not Applicable	mg/L													
Field Parameters				20	00.00	00.4	04.00	47.54	47 70		10.01	10.00		22.2	05.0	04.00	
Temperature	None	Not Applicable	Not Applicable	<u>⁰C</u>	20.93	22.4	21.96	17.51	17.76		18.84	19.83	21.41	22.9	25.6	21.33	
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.01	7.13	7.01	6.95	6.97		7.08	6.88	6.75	7.1	6.82	6.47	
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2781	3345	3365	3434	3350		3390	3201	3186	3301	3415	3410	
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.34	0.39	0.06	0.25	0.68		0.26	0.34	0.1	0.24	252	1.65	
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	127.6	-26.6	-94.3	-219.1	-88.7		-77.1	-30.1	97.7	-48.5	0.2	68.3	
Turbidity	None	Not Applicable	Not Applicable	NTU	6.74	0.79	0.27	0.68	0.26		0.16	0.4	0.71	0.37	1.53	0.02	

Notes:

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3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

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15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



GROUNDWATER SAMPLE WESTERN FARMERS ELECT

	MCL or	Established Background	Established GWPS	Sample ID:	MW-14A	MW	/-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	MM	<i>I</i> -14	MW-14A	MW-14A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	4-Oct-18	11-J	an-19	24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	30-Mar-22	1-Jun-22	6-Oct-22	12-Apr-23
Detection Menitering Deveneda				Units	INITIAL ASSESSMENT MON.		SSMENT MON. AMPLE) D FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter				1	1.18 #	1.42	1.16	1.02	0.98	0.007	0.000	0.839	0.857	0.918	(RESAMPLE)	1.01	1.01
Boron Calcium	None None	-	Not Applicable	mg/L	319 #	402	388	1.23 314	306	0.907 280	0.882 278	298	263	330		1.01 313	1.01 319
Chloride	250	-	Not Applicable Not Applicable	mg/L	14.2 #	14	14.8	13.5	14.2		14.9	14.3	12.8	13.8		12.5	12.0
Fluoride	230	Background Well		mg/L	0.281 #	0.269	0.375	0.377 J	0.286	13.3 0.23	0.254 J	0.284	0.221	0.406 J		0.324	0.307
pH (laboratory)		(Not Applicable)	Not Applicable Not Applicable	mg/L	7.6 #	7.28		7.61	7.18	7.44	7.41	7.7	6.74	7.99		7.06	
Sulfate	6.5 - 8.5	-		S.U.	1650 #	1660			1580			1680	1690				7.58
Total Dissolved Solids	250 500	-	Not Applicable Not Applicable	mg/L	2710 #	2590	1630 2580	1540 2680	2750	1650	1770	2680	2630	1,610 2,690		1600 2580	1,760 2,320
			Not Applicable	mg/L	2710#	2590	2360	2000	2750	2780	2630	2000	2030	2,090		2360	2,320
Assessment Monitoring Parame															1		
Antimony	0.006	Not Applicable	4	mg/L	<0.0008 #	<0.000400	< 0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		< 0.000400	<0.000400
Arsenic	0.010	Not Applicable	4	mg/L	<0.004 #	<0.000400	< 0.000400	<0.000400	<0.000400	< 0.00040	<0.000400	< 0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Barium	2	Not Applicable	4	mg/L	0.0232 #	0.017	0.0173	0.0147	0.0118	0.0132	0.0114	0.0117	0.0121	0.0120		0.0103	0.0114
Beryllium	0.004	Not Applicable	4	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable		mg/L	<0.005 #	<0.000400	<0.000400	<0.000400	0.00110 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		0.000465 J	<0.000400
Cobalt	None	Not Applicable	Background Well	mg/L	0.000297 J #	0.000348 J	0.000324 J	0.000425 J	<0.000200	<0.000200	<0.000200	<0.000200	0.000257 J	0.00120 J		<0.000200	0.000745 J
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.281 #	0.269	0.375	0.377 J	0.286	0.23	0.254	0.284	0.221	0.406 J		0.324	0.307
Lead	0.015	Not Applicable	(iter, ppileable)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable		mg/L	0.161 J #	0.166	0.172	0.155	0.154	0.151	0.146	0.152	0.151	0.180		0.158	0.155
Mercury	0.002	Not Applicable	_	mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000500 J	0.0000300 J	<0.0000300		<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.01 #	0.00170 J	0.00143 J	0.00104 J	0.000709 J	0.000760 J	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Selenium	0.05	Not Applicable		mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.65 +/- 0.369 #	2.6		0.97	1.79	2.02	1.42	1.76	1.68	1.33		4.68	2.7 +/- 1.21
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5		<5.00	5.00 J		<5.00	<5.00	6.00 J	6.00 J		12.0 J	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						327	327	332	348	330		321	294
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5		<5	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		321				327	327	332	348	330		321	294
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5		<5	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L						0.771(J)	0.236	0.162 J	1.22	0.249		0.803	0.126 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	0.169 J	0.150 J	0.357	0.189		0.475	0.0795 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.098	0.184	0.055	0.285	0.13		0.578	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								0.0340 J	<0.0200 H	0.142		0.489	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								0.107	0.935	0.119		0.225	0.126
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								0.116	0.357	0.0470 J		<0.0200	0.08
Magnesium	None	Not Applicable	Not Applicable	mg/L		28.8	27.9			26.6	26.2	25.9	26.5	29.2		25.4	29.7
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.000768(J)	0.000621 J	0.00165 J	<0.000600	<0.000600		<0.000600	<0.000600
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.087 J #	0.478	0.509	1.64	<0.0300	0.316	<0.150	<0.0600	<0.0600	0.484 J		0.0777 J	0.220
Potassium	None	Not Applicable	Not Applicable	mg/L		8.64	8.37			7.66	7.94	7.87	7.84	8.73		7.8	8.81
Sodium	None	Not Applicable	Not Applicable	mg/L		516	467			382	388	413	388	503		424	469
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3000 #	3270					3660	3260	3320	3,490		3540	3,370
Sulfide	None	Not Applicable		mg/L						<1	<1	<1	3.08	<1		<1	<1.70
Field Parameters				Ŭ													
	None	Not Applicable	Not Applicable	°C	23.1	16.2		17.75	24.4	21	23.7	15.84	20.0	15.2		25.2	18.8
				S.U.						7.04			7.00	7.17			
pri Specific Conductores	6.5 - 8.5	Not Applicable	Not Applicable		6.93 3491	6.9 3251		7.28	7.1 3435	3107	7.1	7.33 4453	2,989	3,300		6.9	7.06
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm												3400	3240
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.31	0.19		1.45	0.62	0.79	0.59	0.34	0.40	0.66		0.57	0.33
Oxidation-Reduction Potential	None	Not Applicable		mV NTU	13.1	19.5		4.6	27.7	-45.7	107.1	20.5	-128.9	35.2		-70	-49
Turbidity	None	Not Applicable	Not Applicable	NTU	3.17	4.89	0.94	2.06	3.88	4.71	2.96	3.52	9.38	2.40		1.24	3.01

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU: Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

A : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was cond

ATTACHMENT B
E DATA TO DATE FOR LANDFILL CCR UNIT
TRIC COOPERATIVE - HUGO POWER STATION



	MCL or	Established Background	Established GWPS	Sample ID:	MW-15A	MW-15A	MW-15A	MW-15A	DUP 1	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A (Shallow)	MW-15A (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	26-May-16	23-Aug-16	28-Sep-16	30-Nov-16	30-Nov-16	30-Jan-17	30-Mar-17	1-Jun-17	9-Aug-17	24-May-18	1-Aug-18	10-Aug-18
					BACKGROUND	BACKGROUND 2	BACKGROUND 3	BACKO	GROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters		4 000		Units		0.55	1 = 0			1.0.1	0.01	0.54	0.00	1.00		
Boron	None	1.896	Not Applicable	mg/L	3.33	3.57	4.52	4.44	5.36	4.64	2.01	3.54	3.38	4.83	3.7	4.14
Calcium	None	670.30	Not Applicable	mg/L	152	154	181	209	279	151	117	183	156	160	93.4	129
Chloride	250	18.51	Not Applicable	mg/L	27.1	26.6	27.9	27	26.5	25.4	27.4	28.1	25.7	26.9	26.6	26.5
Fluoride	4	0.6359	Not Applicable	mg/L	1.23	1.32	1.49	1.32	1.33	1.4	1.15	1.09	1.37	1.76	1.2	1.17
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.66	8.1	8	7.6	7.7	7.6	7.4	7.5	7.5	7.6	7.8	7.8
Sulfate	250	1,824	Not Applicable	mg/L	1450	1570	1580	1630	1610	1580	1760	1610	1720	1690	1510	1490
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2470	2420	2410	2540	2530	2460	2640	2600	2710	2660	2490	2610
Assessment Monitoring Paramet		1				0				0		11			0	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	< 0.000500	<0.000800	<0.000800	<0.00800	< 0.00400	<0.000800	< 0.00400	<0.000800	<0.00400			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00242	0.00218	0.00205	<0.00400	0.00407 J	0.00156 J	<0.00200	0.00218	0.00259 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0269	0.0338	0.0273	0.026	0.0383	0.0255	0.0167	0.0232	0.0217			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	< 0.000500	<0.000100	<0.000500			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000638 J	< 0.000500	<0.000500	< 0.00500	< 0.00250	<0.000500	<0.00250	<0.000500	<0.00250			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000664 J	0.000467 J	0.000659 J	<0.00100	0.000661 J	0.000346 J	<0.000500	0.000215 J	<0.000500			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.23	1.32	1.49	1.32	1.33	1.4	1.15	1.09	1.37	1.76	1.2	1.17
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000264 J	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500			
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0748	0.0646	0.0575	0.0630 J	0.0766 J	0.059	0.0437 J	0.0552	0.0538 J		0.0669	0.0594
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	0.000175 J	<0.000150	<0.000100			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.306	0.208	0.256	0.276	0.343	0.261	0.182	0.235	0.255		0.202	0.182
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000300	<0.000300	<0.00300	<0.00150	0.000357 J	<0.00150	0.000539 J	0.00161 J			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800	<0.00400	<0.000800	<0.00400			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.01 +/- 0.268	0.846 +/- 0.371	0.636 +/- 0.292	1.38 +/- 0.431	1.33 +/- 0.426	1.21 +/- 0.359	1.36 +/- 0.333	1.86 +/- 0.390	2.19 +/- 0.392			
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									130			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									9.36			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									5.28			
Sodium	None	Not Applicable	Not Applicable	mg/L									541			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters			11	5			n									
Temperature	None	Not Applicable	Not Applicable	°C	20.05	24.8	21.87	18.2		20.43	19.34	20.24	22.68	21.24	25.05	23.28
nH		Not Applicable		S.U.	7.73	7.72	7.69	7.59		7.5	7.6	7.47	7.42	7.72	7.42	7.43
pn Specific Conductance	6.5 - 8.5 None		Not Applicable		3050	3373	3442	3430		3488	3520	3498	3524	3505	3548	3578
		Not Applicable	Not Applicable	μmhos/cm												
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.16	0.37	0.06	0.33		0.29	0.22	0.08	0.06	0.14	1.62	1.23
Oxidation-Reduction Potential Turbidity	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mV NTU	66.1 4.97	-61.7 0.7	-96.7 0.18	-211.9 0.31		-140.6	-81.1 0.66	-82.3 0.53	43.1	-101.3 0.39	133.1 5.5	140.8 1.68
Notes:					4.37	0.7	0.10	0.31		0.52	0.00	0.00	1.31	0.38	5.0	1.00

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL	Established Background	Established GWPS	Sample ID:	MW-15A	DUP 2	MW	-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW	-15A	MW-15A	MW-15A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	2-Oct-18	2-Oct-18	10-J	an-19	25-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	30-Mar-22	1-Jun-22	6-Oct-22	12-Apr-23
	<u> </u>				INITIAL ASSES		INITIAL ASSE	SSMENT MON. MPLE)	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter Boron	None	1.896	Not Applicable	Units	3.76 #	3.77 #	3.52	5.48	3.61	3.19	4.57	3.33	3.35	2.14	3.35		3.11	3.44
Calcium	None	670.30	Not Applicable	mg/L mg/L	170 #	171 #	129	187	92	82.4	141	89.8	78.6	96.6	119		113	107
Chloride	250	18.51	Not Applicable	mg/L	26.6 #	26.5 #	26.3	26.9	21.9	25.9	26.3	26.5	27.3	25.7	27.0		26.2	25.3
Fluoride	4	0.6359	Not Applicable	mg/L	1.21 #	1.2 #	1.22	1.46	1.02	1.24	0.86	1.14	1.13	1.01	1.31		1.31	1.24
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2 #	8.2 #	7.02		8.02	7.58	7.68	7.77	7.93	7.45	8.08		7.74	7.77
Sulfate	250	1,824	Not Applicable	mg/L	1570 #	1580 #	1610	1540	1310	1510	1680	1650	1590	1580	1,540		1510	1690
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2650 #	2570 #	2590	2640	2570	2500	2520	2460	2420	2370	2,450		2370	2240
Assessment Monitoring Parame	eters						1						1				II	
Antimony	0.006 (MCL)	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.01 (MCL)	Not Applicable	0.01 (MCL)	mg/L	0.00179 J #	0.00166 J #	0.000626 J	0.00122 J	0.000663 J	0.000676 J	0.000965 J	0.000592 J	0.000523 J	0.00113 J	0.000661 J		0.000790 J	0.000525 J
Barium	2 (MCL)	Not Applicable	2 (MCL)	mg/L	0.0226 #	0.0229 #	0.023	0.0192	0.0217	0.0216	0.0291	0.0199	0.0186	0.0224	0.0222		0.0215	0.0180
Beryllium	0.004 (MCL)	Not Applicable	0.004 (MCL)	mg/L	<0.0001 #	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005 (MCL)	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.0001 #	0.000231 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1 (MCL)	Not Applicable	0.1 (MCL)	mg/L	0.00119 J #	<0.0005 #	<0.000400	<0.000400	<0.000400	<0.000400	0.000900 J	<0.000400	<0.000400	0.000502 J	<0.000400		<0.000400	<0.000400
Cobalt).006 (ODEC		0.006 (ACL)	mg/L	0.000293 J #	0.000210 J #	<0.000200	0.000374 J	0.000231 J	0.000257 J	0.000402 J	0.000221 J	<0.000200	0.000296 J	0.000651 J		<0.000200	0.000357 J
Fluoride	4 (MCL)	Not Applicable	4 (MCL)	mg/L	1.21 #	1.2 #	1.22	1.46	1.02	1.24	0.86	1.14	1.13	1.01	1.31		1.31	1.24
Lead	0.015 (MCL)	Not Applicable	0.015 (MCL)	mg/L	0.000386 J #	0.000145 J #	< 0.000600	<0.000600	<0.000600	< 0.000600	<0.000600	<0.000600	< 0.000600	< 0.000600	<0.000600		<0.000600	<0.000600
Lithium	0.235 (UTL)		0.235 (UTL)	mg/L	0.0613 #	0.0598 #	0.0701	0.0582	0.0858	0.0743	0.111	0.0709	0.073	0.0627	0.0815		0.0643	0.0669
Mercury	0.002 (MCL)	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	< 0.0000300	<0.0000300	< 0.0000300	0.0000420 J	< 0.0000300	< 0.0000300		0.0000390 J	<0.0000300
Molybdenum Selenium	0.1 (ODEQ) 0.05 (MCL)	Not Applicable Not Applicable	0.1 (ACL) 0.05 (MCL)	mg/L	0.233 # 0.000459 J #	0.228 # 0.000353 J #	0.205	0.244 <0.0011	0.219 <0.00110	0.196 <0.00110	0.269	0.167 <0.00110	0.168	0.149 <0.00110	0.181		0.149 <0.00110	0.173 <0.00110
	0.002 (MCL)	Not Applicable	0.002 (MCL)	mg/L mg/L	<0.00043937 #	<0.0008 #	0.000565 J	0.000375 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5 (MCL)	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.294 #	1.66 +/- 0.358 #	1.46		<0.87	2.03	1.67	1.72	1.45	2.04	1.61		1.69	1.57 +/- 0.708
Other Parameters	0 (1102)	notripplicable	0 (1102)	pe#2					10101	2.00	1.07	1.72	1.40	2.01			1100	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.51 J #	7.46 J #	7.00 J		<5.00	18		5.00 J	<5.00	11.0 J	7.00 J		11.0 J	10.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L							209	204	196	226	193		189	180
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L			<5				<5	<5	<5	<5.00	<5		<5	<5.0
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L			149				209	204	196	226	193		189	180
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L			<5				<5	<5	<5	<5.00	<5		<5	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L							0.0535(J)	0.0496 J	0.0492 J	0.368	0.236		0.208	0.138 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L							<0.0120	0.165 J	0.133 J	0.590	0.234		0.367	0.371
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L							0.0410(J)	0.0210 J	0.054	0.284	0.2		0.089	0.238
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L									0.0320 J	<0.0200 H	0.243		0.358	0.238
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L									<0.02	0.0840	0.0360 J		<0.0200	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L									0.101	0.590	<0.02		<0.0200	0.133
Magnesium	None	Not Applicable	Not Applicable	mg/L			12.4	10.9			165	11	10.9	10.2	12.3		10.3	12.5
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L							0.168	0.153	0.159	0.181	0.159		0.149	0.175
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.068 J #	0.065 J #	1.42	0.616	1.72	0.287	<0.0600	<0.150	1.14	0.0704 J	0.894		0.246	0.544
Potassium	None	Not Applicable	Not Applicable	mg/L			5.98	5.47			8.24	5.15	5.47	4.97	5.91		4.96	5.82
Sodium	None	Not Applicable	Not Applicable	mg/L			746	703			1040	627	594	421	680		609	702
Specific Conductance (laboratory) Sulfide	None None	Not Applicable	Not Applicable	umhos/cm	3490 #	3480 #	3540				1.12	3780 <1	3400	3370 <1.00	3,620		3590 <1	3,470 <1.70
	None	Not Applicable	Not Applicable	mg/L							1.12	<1	<1	<1.00	<1		<1	<1.70
Field Parameters	Nerra	Not Applicable	Not April ashi	00	00.4		40.5		00.70	07.05	04.00	00.0	40.07	00.4	40.4		05.0	40
Temperature	None	Not Applicable	Not Applicable	O	23.1		18.5		20.72	27.05	24.09	22.2	16.37	22.4	18.1		25.6	18
Pri Specific Conductores	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53 3563		7.45		7.82	7.71	7.73	7.71	7.82 4,645	7.61 3,431	7.65		7.58	7.58
Specific Conductance Dissolved Oxygen	None	Not Applicable	Not Applicable	μmhos/cm	0.21				3544	3575		3422	4,645	0.38	0.51		3393	3304
Oxidation-Reduction Potential	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L mV	-69.9		0.41 98		<u> </u>	0.71 -79.5	1.39 -50.3	0.28	13.8	-59.9	93.7		0.4 -85.1	0.3
Turbidity	None	Not Applicable	Not Applicable	NTU	4.11		1.13	1.09	0.55	0.84	-50.3	1.73	0.88	3.34	2.38		-85.1	1.66
Notes:						1		1.00	0.00	0.04	2.0	1.75		0.01	2.00		0.3	1.00

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL	Established Background	Established GWPS	Sample ID:	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	DUP 3	MW-16	MW-16 (Shallow)	MW-16 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	1-Jun-16	23-Aug-16	29-Sep-16	6-Dec-16	1-Feb-17	6-Apr-17	7-Jun-17	11-Aug-17	11-Aug-17	22-May-18	1-Aug-18	10-Aug-18
						BACKGROUND			BACKGROUND 5		BACKGROUND 7		ROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameter	-			Units												
Boron	None	1.896	Not Applicable	mg/L	1.39	1.44	2.84	2.38	2.43	1.64	1.64	1.79	1.74	1.95	1.9	2.39 J
Calcium	None	670.30	Not Applicable	mg/L	365	242	192	311	153	241	357 J*	238	235	122	159	185
Chloride	250	18.51	Not Applicable	mg/L	<35.0	20.2	23.2	22.9	26.5	16.7 J*	15.3 J*	18	17.7	21.3	20.6	29.6
Fluoride	4	0.6359	Not Applicable	mg/L	0.843	1.02	1.36	0.936 J*	1.03	0.759 J*	0.721 J*	0.817	0.801	1.01	0.963	1.17
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.05	7.8	7.6	7.6	7.6	7.3	7.2	7.2	7.2	7.5	7.5	7.8
Sulfate Total Dissolved Solids	250 500	1,494 1,883	Not Applicable	mg/L	1340 1790	1040 1780	1070 1760	1390 1790	915 1860	1180 1740	995 1690	1020 1710	1020 1730	933 1820	938 1810	998 1930
		1,003	Not Applicable	mg/L	1790	1760	1760	1790	1000	1740	1090	1710	1730	1620	1010	1930
Assessment Monitoring Parame	_				0.00050	0.000000	0.000000	0.00400	0.000000	0.000000	0.00400	0.000000	0.000000			
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	< 0.00250	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	< 0.00250	0.00101 J	U (0.00164)	<0.00200	0.000757 J	0.00122 J	< 0.00400	0.000409 J	0.000453 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.027	0.0291	0.0262	0.0461	0.0235	0.0246	0.027	0.024	0.024			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.00500	<0.000100	<0.000100	<0.000500	<0.000100	U (0.000375)	<0.000500	<0.000100	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.00200	<0.000100	< 0.000100	<0.000500	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100			
Chromium Cobalt	0.1 None	Not Applicable Not Applicable	0.1 (MCL) 0.006 (ODEQ)	mg/L	0.00604 J <0.00250	<0.000500 0.000340 J	0.0579 0.000498 J	<0.00250 <0.000500	<0.000500 <0.000100	<0.000500 <0.000100	<0.00500 <0.00100	<0.000500 0.000354 J	<0.000500 0.000343 J			
Fluoride		Not Applicable	4 (MCL)	mg/L mg/L	0.843	1.02	1.36	<0.000500 0.936 J*	1.03	0.759 J*	0.721 J*	0.000354 3	0.801	1.01	0.963	1.17
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.00200	<0.000100	<0.000100	<0.000500	< 0.000100	<0.000100	<0.000500	<0.000100	< 0.00100			
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0495 J	0.0509	0.0470 J	0.0760 J	0.0632	0.0525	0.0534 J	0.0480 J	0.0472 J		0.0571	0.0491
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.000150	< 0.000150	<0.000150	<0.000150 UJ	< 0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.135 J	0.134	0.0949	0.17	0.114	0.177	0.218	0.181	0.181		0.145	0.154
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	< 0.00300	<0.000300	U (0.000418)	<0.00150	0.000307 J	<0.000300	< 0.00300	< 0.000300	< 0.000300			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.305	1.01 +/- 0.359	1.11 +/- 0.324	0.925 +/- 0.572	1.09 +/- 0.398	0.504 +/- 0.260	0.608 +/- 0.256	1.55 +/- 0.391	0.994 +/- 0.366			
Other Parameters	-		- (F =												
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L								<5.00	<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L								238	215			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L								<5.00	<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L								10.3	10.1			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L								3.33	3.28			
Sodium	None	Not Applicable	Not Applicable	mg/L								272	270			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	°C	18.9	23.5	21.62	16.91	19.27	17.92	20.46	24.61		22.87	23.7	23.74
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.24	7.33	7.32	7.14	7.49	7.23	7.1	7.09		7.57	7.11	7.3
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2066	2327	2492	2395	2620	2275	2256	2330		2463	2436	2678
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.38	2.53	0.31	0.25	0.59	0.81	0.04	0.16		0.37	1.59	2.7
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-47.3	46	-106.4	-135.8	-104.9	10.2	0.4	60.3		-83.7	186.4	150.4
Turbidity	None	Not Applicable	Not Applicable	NTU	2.18	0.85	0.33	0.98	0.18	0.63	0.61	1.11		1.21	3.49	2.96
Notes:												L		••=•		

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J^* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-16	MV	V-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MV	V-16	MW-16	MW-16
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	2-Oct-18	16-J	an-19	23-Apr-19	3-Oct-19	18-Jun-20	13-Oct-20	1-Apr-21	14-Oct-21	1-Apr-22	7-Jun-22	6-Oct-22	12-Apr-23
Detection Monitoring Parameters				Units	INITIAL ASSESSMENT MON.	INITIAL ASSE	SSMENT MON. MPLE)	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.	
Boron	None	1.896	Not Applicable	mg/L	2.05 #	2.23	2.38	1.85	1.53	1.43	1.78	1.57	1.61	1.85		2.54	1.8
Calcium	None	670.30	Not Applicable	mg/L	221 #	215	215	192	149	186	166	140	158	153		132	118
Chloride	250	18.51	Not Applicable	mg/L	18 #	19	18.8	15.8	23.8	14.7	14.8	14.4	16.2	16.6^	15.0	25.8	16.5
Fluoride	4	0.6359	Not Applicable	mg/L	0.832 #	0.82	1.11	0.741	1.07	0.694	0.893	0.916	0.964	1.3^	1.01	1.25	0.908
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2 #	7.33		7.88	7.01	7.6	7.63	7.83	7.75	7.42^	7.92	7.85	7.78
Sulfate	250	1,494	Not Applicable	mg/L	959 #	1020	1030	974	1020	1030	929	1070	1110	1100^	1090	996	986
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1780 #	1740	1670	1740	1810	1610	1610	1790	1590	1670^	1700	1,690	1,570
Assessment Monitoring Parameter	ers																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.000	Not Applicable	0.01 (MCL)	mg/L	<0.002 #	<0.000400	<0.000400	<0.000400	0.000465 J	<0.000400	<0.000400	<0.000400	0.000417 J	<0.000400		<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0203 #	0.0226	0.0224	0.0178	0.0133	0.0142	0.0156	0.0123	0.0143	0.0127		0.0132	0.0123
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005 #	<0.000200	<0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	<0.000200		< 0.000200	< 0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000218 J	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.0025 #	<0.000400	<0.000400	< 0.000400	< 0.000400	0.000423 J	0.000416 J	0.00141 J	< 0.000400	< 0.000400		< 0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000172 J #	<0.000200	<0.000200	<0.000200	0.000375 J	<0.000200	<0.000200	<0.000200	0.000415 J	0.000507 J		<0.000200	0.000263 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.832 #	0.82	1.11	0.741	1.07	0.694	0.893	0.916	0.964	1.3^	1.01	1.25	0.908
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0607 J #	0.0689	0.0632	0.0586	0.0424	0.046	0.0477	0.0454	0.0466	0.0496		0.0534	0.0545
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000570 J	0.000158 J	<0.0000300		<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.169 #	0.18	0.18	0.193	0.149	0.172	0.149	0.166	0.163	0.146		0.113	0.127
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.07 +/- 0.288 #	1.01		<0.62	0.81	1.18	1.35	0.99	1.82	<0.78		1.94	0.612 +/- 0.464
Other Parameters		1													,		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5		<5.00	<5.00		<5.00	<5.00	7.00 J	7.00 J ^	<5.00	6.00 J	8.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						232	233	228	264	94^	258	288	259
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5^	<5	10.7	<5.0
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		256				232	233	228	264	94^	258	277	259
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5^	<5	<5	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L						0.0358(J)	0.125 J	0.0536 J	0.369	0.0158 J^	0.0145 J	0.0547 J	0.0982 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.0160(J)	0.0694 J	0.0140 J	0.190 J	< 0.0120^	<0.0120	0.0203 J	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.0380(J)	0.0240 J	<0.020	0.191	< 0.02^	< 0.02	<0.0200	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.020	<0.0200 H	< 0.02^	< 0.02	< 0.0200	< 0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								0.0536	0.178	< 0.02^	<0.02	0.0547	0.098
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.02	0.190	< 0.02^	< 0.02	0.0203 J	< 0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L		10.2	10.2			8.44	7.59	7.65	7.38	8.4		7.24	8.22
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.173	0.16	0.18	0.189	0.131		0.112	0.127
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.133 #	< 0.03	< 0.03	0.854	<0.0300	<0.0600	<0.0600	0.687	< 0.0300	50.4^	0.0630 J,H	0.127	0.194
Potassium	None	Not Applicable	Not Applicable	mg/L		4.18	4.07			2.85	3.09	3.12	3.18	3.58		3.61	4.12
Sodium	None	Not Applicable	Not Applicable	mg/L		405	394			309	316	325	295	389		415	419
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2240 #	2340					2400	2420	2340	2500^	2,910	2,650	2,340
Sulfide	None	Not Applicable	Not Applicable	mg/L						<1	1.4	<1	<1.00	<1	<1	<1	<1.70
Field Parameters				Units											,		
Temperature	None	Not Applicable	Not Applicable	°C	25.4	14.8		19.31	24.89	21.9	23.5	16.32	23.0	15.9	20.0	23.1	20.7
nH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	7.21		7.56	7.82	7.66	7.69	8.12	7.74	7.67	7.74	7.36	7.5
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2816	2273		2330	2836	2438	2615	3178	2,699	1,865	2,358	2,412	2,294
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25	1.37		0.83	3.67	2430	1.99	0.46	3.3	1.06	0.42	1.55	0.17
, .				•													
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-131.8	278.9		28.7	-191.5	-56.9	60.2	57.7	-167.2	20.9	-25.9	-51.7	103.1

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J^* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	DUP 2	MW-17	MW-17 (Shallow)	MW-17 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	1-Jun-16	3-Aug-16	30-Sep-16	2-Dec-16	1-Feb-17	29-Mar-17	1-Jun-17	10-Aug-17	10-Aug-17	21-May-18	1-Aug-18	10-Aug-18
					BACKGROUND	BACKGROUND 2	BACKGROUND 3		BACKGROUND 5	BACKGROUND 6	BACKGROUND 7		GROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameter				Units												
Boron	None	1.896	Not Applicable	mg/L	0.634	0.586	0.854	0.838 J	0.817	<0.875	0.713	0.666	0.64	0.588	0.659	0.845 J
Calcium	None	670.30	Not Applicable	mg/L	750	529	540	535	441	727	564	528	537	436	549	787
Chloride	250	18.51	Not Applicable	mg/L	4.08	3.64	3.46	5.58 J*	3.45	3.04	3.11	3.28	3.37	3.15	3.84	3.27
Fluoride	4	0.6359	Not Applicable	mg/L	0.322	0.365	0.58	0.480 J*	0.488	0.266	0.361	0.328	0.323	0.324	0.47	0.317
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	6.82	6.8	7.5	7.6	7.1	6.9	6.8	6.9	6.8	6.9	7.2	7
Sulfate	250	1,557	Not Applicable	mg/L	1170	1300	1250	1470	1200	1140	1310	1450	1300	1140	1310	1340
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1980	2070	1980	2260	2050	1870	2180	2140	2140	2360	2340	2380
Assessment Monitoring Parame																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.00800	<0.000800	<0.000800	<0.000800	<0.000800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00204	0.00154 J	0.00226	<0.00400	0.000663 J	0.00251	0.00154 J	<0.000400	<0.000400			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00545	0.00299	0.00460 J	<0.00100	0.00344	U (0.00333)	0.00160 J	0.00236	0.00293			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00200	<0.000100	<0.00100	<0.000100	<0.00250	<0.000100	<0.000100	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000800	<0.000100	<0.00100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.00100	<0.000500	<0.00500	0.00140 J	<0.000500	<0.000500	<0.000500	<0.000500			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	<0.00100	0.000225 J	<0.00100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322	0.365	0.58	0.480 J*	0.488	0.266	0.361	0.328	0.323	0.324	0.47	0.317
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.00100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100			
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.14	0.174	0.155 J	0.158 J	0.146	0.121	0.133	0.148	0.143		0.128	0.131
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000840 J	<0.00100	0.00135 J	<0.0100	<0.00100	<0.00500	<0.00100	<0.00100	<0.00100		<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.00120	U (0.000709)	<0.00300	0.000526 J	<0.00150	<0.000300	<0.000300	<0.000300			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.539 +/- 0.261	0.265 +/- 0.260 U	1.32 +/- 0.425	0.536 +/- 0.356	0.195 +/- 0.273 U	0.311 +/- 0.238 U	0.479 +/- 0.271	0.531 +/- 0.221	0.183 +/- 0.207 U			
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L								<5.00	<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L								260	259			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L								<5.00	<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L								36.6	36			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L								5.15	5.14			
Sodium	None	Not Applicable	Not Applicable	mg/L								34.5	34.4			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters							II		II	II						II
	None	Not Applicable	Not Applicable	°C	20.98	23.28	20.36	10.59	21.06	20.3	20.57	21.98		20.98	25.04	22.3
	None	Not Applicable	Not Applicable					19.58	21.96							
Provisio Conductores	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.91	6.71	6.83	6.79	6.84	6.88	6.68	6.69		6.92	6.64	6.8
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2052	2230	2402	2405	2386	2396	2443	2417		2416	2606	2569
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	1.07	3.66	0.43	0.95	0.63	0.79	0.22	0.29		0.21	5.57	4.59
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV NTU	42.5	4	-99.6	-183.4	-84	-55.9	-87.3	65.7		-49.2	172.9	209.4
Turbidity	None	Not Applicable	Not Applicable		0.53	0.92	0.4	0.43	0.11	0.21	0.24	0.81		0.52	4.63	14.5

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-17		/-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW		MW-17	MW-17	DUP 4
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	3-Oct-18	10-Ja	an-19	25-Apr-19	3-Oct-19	18-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	31-Mar-22	7-Jun-22	6-Oct-22	12-A	Apr-23
					INITIAL ASSESSMENT MON.	(RESAMPLE)	SSMENT MON. UNFILTERED ERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.	ASSES	ST 2023 SSMENT ION.
Detection Monitoring Parameters	s			Units					INICIA.	WON.	MON.	WON.	WON.		(RESAMPLE)	WICIN.	WIC	ON.
Boron	None	1.896	Not Applicable	mg/L	0.567 #	0.766	0.729	0.796	0.622	0.652	0.64	0.539	0.700	0.593		0.902	0.739	0.713
Calcium	None	670.30	Not Applicable	mg/L	461 #	591	499	499	555	494	453	467	428	435		541	599	537
Chloride	250	18.51	Not Applicable	mg/L	4.81 #	3.44	4.16	3.65	3.75	4.29	4.04	4.06	4.02	5.24^	4.16	4.25	4.11	4.11
Fluoride	4	0.6359	Not Applicable	mg/L	0.393 #	0.337	0.27	0.392 J	0.37	0.211	0.366	0.412	0.317	<0.250^	0.371	0.34	0.349	0.33
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.5 #	6.59		7.53	6.37	7.38	7.51	7.34	7.12	1.87^	7.67	7.04	7.12	7.14
Sulfate	250	1,557	Not Applicable	mg/L	821 #	1480	1200	1100	1310	1390	1,220 H	1310	1390	1970^	1,460	1,320	1,510	1,510
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1670 #	2300	1870	2400	2160	2230	2160	2200	2210	2340^	2,220	2,170	2,050	2,210
Assessment Monitoring Parame	ters																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400	<0.0004
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.0004 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000582 J		<0.000400	0.000406 J	<0.0004
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00231 #	<0.00190	0.00250 J	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190		<0.00190	<0.00190	<0.0019
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	< 0.0002
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	< 0.0002
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.0022 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.00108 J		<0.000400	<0.000400	<0.0004
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.0001 #	0.000238 J	<0.000200	0.000313 J	<0.000200	0.000281 J	<0.000200	0.000239 J	0.000275 J	0.00148 J		<0.000200	0.00135 J	0.00123
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.393 #	0.337	0.27	0.392 J	0.37	0.211	0.366	0.412	0.317	<0.250^	0.371	0.34	0.349	0.330
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600	<0.0006
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.122 #	0.159	0.148	0.151	0.138	0.147	0.123	0.114	0.140	0.104		0.147	0.152	0.143
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.000142 J	0.0000540 J	<0.0000300		0.000151 J	<0.0000300	< 0.0000
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	<0.000600	<0.000600	0.000671 J	<0.000600	<0.000600	<0.000600	0.000950 J	<0.000600	<0.000600		<0.000600	<0.000600	0.00060
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.000675 J #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	0.00149 J		<0.00110	<0.00110	< 0.001
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	0.000539 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	< 0.0002
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.27 +/- 0.335 #	<0.78		<0.75	<0.76	<0.68	<0.69	<0.84	0.97	<0.79		1.48	0.557 +/- 0.605	0.368 +/- 0
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.13 J #	<5.00		<5.00	<5.00		<5.00	<5.00	7.00 J	8.00 J ^	<5.00	<5.00	9.00 J	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						284	273	269	288	<5^	269	276	230	249
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5^	<5	<5	<5.0	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		280				284	273	269	288	<5^	269	276	230	249
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5^	<5	<5	<5.0	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	0.0541 J	<0.0120	0.0325 J ^	<0.0120	<0.0120	<0.0120	< 0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	<0.0120	0.0198 J	<0.012^	<0.0120	0.0581 J	<0.0120	0.0149
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.02(J)	<0.02	<0.02	<0.0200	<0.02^	0.0220 J,H	<0.0200	<0.020	< 0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.02	<0.0200 H	<0.02^	<0.02 H	<0.0200	<0.020	< 0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								0.0541	<0.0200	0.0325 J ^	<0.02	<0.0200	<0.02	< 0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.02	<0.0200	<0.02^	<0.02	0.0581	<0.02	< 0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L		38.1	31.3			37.8	30.9	29.3	34.6	30.9		33.7	43.3	39
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.00123(J)	<0.000600	0.00292 J	<0.000600	<0.000600		<0.000600	<0.000600	0.00066
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.276 #	< 0.03	0.519	<0.150	<0.0300	<0.0600	<0.0600	< 0.0300	<0.0600	420 H ^	0.0834 J,H	0.0756 J	<0.0300	< 0.030
Potassium	None	Not Applicable	Not Applicable	mg/L		5.37	4.9			5.15	4.42	4.19	4.94	4.5		4.99	5.92	5.34
Sodium	None	Not Applicable	Not Applicable	mg/L		35.7	32.9			35.6	29.2	28.2	32.5	35.2		32.8	40.8	36.7
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1920 #	2450					2610	2460	2390	11900 ^	2,920	2,570	2,500	2,400
Sulfide	None	Not Applicable	Not Applicable	mg/L						<1	<1	<1	1.12	<1^	<1	<1	<1.70	<1.70
Field Parameters				Units														
Temperature	None	Not Applicable	Not Applicable	°C	23.3	15.9		19.26	23.63	21.2	23.2	21.04	22.9	18.3	22.5	25.9	20.6	
Hq	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.7	6.67		7.09	6.88	6.8	6.88	6.88	6.90	7.08	7.04	6.79	6.83	
Spanifia Canduatanaa	None	Not Applicable	Not Applicable	μmhos/cm	2548	2416		2470	2458	2344	2393	3321	2,467	1,811	2,369	2,441	2,407	
Specific Conductance			L Senere					-						,	,	· · · · · · · · · · · · · · · · · · ·	, -	-11
•	None	Not Applicable	Not Applicable	ma/L	0.44	0.51		1.8	0.8	1.35	0.41	0.27	0.52	1.86	0.8	1.94	0.24	
Dissolved Oxygen Oxidation-Reduction Potential	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L mV	0.44 237.5	0.51 57.8		1.8 2.4	0.8 148.3	1.35 -28.1	0.41	0.27 -2.5	0.52 61.7	1.86 103.6	0.8 81.5	1.94 37.8	0.24 -66.6	

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

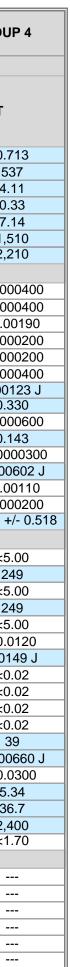
R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION





GROUNDWATER SAMPL WESTERN FARMERS ELEC

	MCL or	Established Background	Established GWPS	Sample ID:	MW-18	MW-18	MW-18	DUP 2	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18 (Shallow)	MW-18 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	1-Jun-16	3-Aug-16	30-Sep-16	30-Sep-16	2-Dec-16	31-Jan-17	5-Apr-17	7-Jun-17	10-Aug-17	18-May-18	2-Aug-18	10-Aug-18
	<u> </u>				BACKGROUND 1	BACKGROUND 2		ROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units												
Boron	None	1.896	Not Applicable	mg/L	5.91	6.45	6.88	6.15	6.82	9.71	8.51	6.39	6.51	6.71	4.86	6.65
Calcium	None	670.30	Not Applicable	mg/L	39.7	36.9	34.7	35.8	34.5	34.1	30.5	37.3 J*	28.7	28.1	36.1	31.1
Chloride	250	18.51	Not Applicable	mg/L	6.77	6.71	6.67	6.8	6.02	6.31	5.94	5.54 J*	6.1	5.19	8.04	5.33
Fluoride	4	0.6359	Not Applicable	mg/L	1.15	1.26	1.49	1.6	1.38	1.29	1.43	1.38 J*	1.38	1.37	1.26	1.35
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	10.4	10.3	10	10	10.2	10.3	10.6	10.7	10.7	10.1	7.8	10.2
Sulfate	250	1,820	Not Applicable	mg/L	1430	1800	1320	1320	1300	1090	1170	1200	1070	1120	996	1030
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	2000	1910	1870	1860	1860	1830	1800	1850	1850	1740	1660	1730
Assessment Monitoring Paramet																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00250	< 0.00100	<0.000800	< 0.000800	< 0.00800	<0.000800	< 0.000800	<0.00400	<0.000800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00331 J	0.00476	0.00296	0.00307	0.00402 J	0.00334	0.00295	<0.00400	0.00329			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00489	0.00472	0.00551	0.00512 J	0.00232 J	0.00526	0.00375	0.00485 J	0.00402			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00500	<0.00200	< 0.000100	<0.000500	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.00200	<0.000800	< 0.000100	<0.000100	<0.00100	0.000242 J	0.000123 J	<0.00100	<0.000100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	<0.00100	< 0.000500	< 0.00250	<0.00500	< 0.000500	<0.000500	<0.00500	<0.000500			
Cobalt Fluoride	None	Not Applicable Not Applicable	0.006 (ODEQ) 4 (MCL)	mg/L	<0.00250 1.15	<0.00100 1.26	<0.000100 1.49	<0.000100 1.6	<0.00100 1.38	<0.000100 1.29	<0.000100 1.43	<0.00100 1.38 J*	<0.000100 1.38	1.37	1.26	1.35
	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100		1.20	
Lead Lithium	None	Not Applicable	0.235 (UTL)	mg/L mg/L	<0.000200	0.00315 J	<0.00300	<0.000100	<0.0300	0.00305 J	<0.00300	<0.0150	<0.00300		0.0144 J	<0.00300
Mercury	0.002	Not Applicable	0.235 (01L) 0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.00300	<0.00150	<0.000150	< 0.000150	<0.00300	<0.00150	<0.00300		0.0144 J 	<0.00300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.43	0.433	0.392	0.417	0.434	0.403	0.4	0.442	0.39		0.113	0.319
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.43 0.00503 J	0.433 0.00399 J	0.00231	0.00317	0.00301 J	0.00268	0.00177 J	<0.00300	0.00278			0.319
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.000500	<0.00100	< 0.00231	<0.000800	<0.00800	<0.00208	<0.000800	<0.00300	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.201 +/- 0.213 U		0.449 +/- 0.289			0.00496 +/- 0.256 U			0.445 +/- 0.200			
Other Parameters	Ū	not repricable	0 (MOL)	pone	0.201 1/ 0.210 0	0.200 17 0.010 0	0.110 17 0.200	0.000 17 0.000	0.201 17 0.200 0	0.001001/ 0.200 0	0.202 17 0.201 0	0.110 17 0.220 0	0.110 1/ 0.200	II		1
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									52.6			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									25.3			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									<0.220			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									22			
Sodium	None	Not Applicable	Not Applicable	mg/L									523			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable		mg/L												
Field Parameters				-				,								
Temperature	None	Not Applicable	Not Applicable	°C	19.74	24.14	19.59		18.78	18.45	18.46	22.5	22.11	21.12	24.1	22.37
DH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.88	10.45	10.95		10.88	10.40	10.40	10.55	10.54	10.74	9.71	10.41
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2622	2884	2900		2854	2764	2698	2685	2716	2530	2568	2658
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.65	0.15	0.05		0.2	0.21	0.09	0.06	0.03	0.17	4.03	0.9
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-22.2	-41.7	-100		-225.5	-192.6	62.6	-11	28.2	-139.8	-65.1	-119.7

Notes:

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3. pČi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

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15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

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PLE		3 FOR LANDFILL C IVE - HUGO POWE		
	DUP 2	MW-18	MW-18	MW-1



	MCL	Established	Established GWPS		MW-18	MV	V-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	DUP 3	MW-18	MW-18
Parameters	or SMCL	Background (Det. Mon.)	(Ass. Mon.)	Sample ID: Sample Date:	3-Oct-18	14-1	an-19	25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	31-Mar-22	31-Mar-22	1-Jun-22	6-Oct-22
Detection Monitoring Parameter			(Addit Moniy)	Units	INITIAL ASSESSMENT MON.	INITIAL ASSE (RESA	SSMENT MON. AMPLE) D FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRS1 ASSES	51-Mar-22 5 2022 5 SMENT DN.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	5.77 #	6.89	7.17	6.05	5.29	5.49	5.43	4.32	4.61	4.65	5.06		5.2
Calcium	None	670.30	Not Applicable	mg/L	25.1 #	31.8	30.8	33.1	25.6	21.6	20	19.3	19.3	23.9	25.3		17.7
Chloride	250	18.51	Not Applicable	mg/L	5.5 #	5.59	5.14	4.79	5.07	4.06	4.22	4.2	4.39	4.86	4.60		3.88
Fluoride	4	0.6359	Not Applicable	mg/L	1.37 #	1.32	1.44	1.25	1.47	1.28	1.66	1.71	1.90	2.10	1.92		1.84
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.8 #	10.4		10.2	10.3	9.35	10.2	10.5	9.95	9.69	9.30		10.2
Sulfate	250	1,820	Not Applicable	mg/L	1090 #	1110	1120	933	1020	888	794	904	896	837	842		804
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1760 #	1630	1660	1680	1550	1340	1270	1260	1320	1,300	1,310		1250
Assessment Monitoring Parame		2,000	riter, ipplicable			1000	1000	1000	1000	1340	1270	1200	1020	1,000	1,010		1200
•	0.006	Not Applicable	0.006 (MCL)	ma/l	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		0.000555 J
Antimony Arsenic	0.006	Not Applicable Not Applicable	0.008 (MCL)	mg/L mg/L	0.00319 #	0.0032	0.00325	0.00308	0.00264	0.00272	0.00276	0.00238	0.00299	0.00290	0.00302		0.000555 J
Barium	0.010	Not Applicable	2 (MCL)	mg/L	0.00374 #	0.0032 0.00393 J	0.00325	0.00308	0.00284 0.00327 J	0.00272 0.00294 J	0.00278 0.00288 J	0.00238 0.00305 J	0.00299 0.00283 J	0.00290 0.00305 J	0.00302 0.00332 J		0.00315 0.00269 J
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00374 #	<0.000200	<0.00407	<0.00200	<0.000270	<0.00294 J	<0.00288 J	<0.00305 J	<0.00283 J	<0.00305 J	<0.000200		<0.00269 J
Cadmium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0001 #	0.000200	0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000298 J	0.000200 0.000202 J	0.000200 0.000207 J		<0.000200
Chromium	0.005	Not Applicable	0.1 (MCL)	mg/L	0.000512 J #	<0.00040	<0.0004313	0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000298 J	<0.000400	0.000207 J		<0.000200
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.0001 #	<0.000200	<0.00040	<0.000200	<0.000400	<0.000400	<0.000400	<0.000400	<0.000200	<0.000200	<0.000200		<0.000400
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.37 #	1.32	1.44	1.25	1.47	1.28	1.66	1.71	1.90	2.10	1.92		1.84
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0105 J #	0.00290 J	0.00258 J	0.00173 J	0.00372 J	0.00226 J	0.00276 J	0.00339 J	0.00301 J	0.00329 J	0.00347 J		0.00257 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	< 0.0000300	< 0.0000300	< 0.0000300	< 0.0000300	< 0.0000300	<0.000300	0.0000500 J	0.000247	< 0.0000300	< 0.0000300		<0.000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.33 #	0.333	0.332	0.342	0.257	0.194	0.18	0.195	0.209	0.206	0.222		0.183
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.0019 J #	0.00506	0.00501	0.00577	0.00166 J	0.0037	0.00347	0.00234	0.00137 J	0.00247	0.00157 J		0.00208
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	0.000323 J	0.000563 J	<0.000200	<0.000200	< 0.000200	< 0.000200	< 0.000200	< 0.000200	<0.000200	< 0.000200		< 0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.387 +/- 0.253 U #	<0.77		<0.77	<0.71	<0.74	<0.71	<0.88	1.05	<0.79	<0.8		2.01
Other Parameters	-			F = =						NO.11	NO.11					1	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	8.9 J #	<5		<5.00	11.0 J		5.00 J	<5.00	9.00 J	5.00 J	5.00 J		6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						71	69.9	65.5	73.8	63.6	89.1		61.6
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		42.2				60.6	64.3	46.8	55.8	58.6	64.7		56.5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5.00	<5	24.4		<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		32.9				10.4	5.63	18.7	17.9	<5	<5		5.06
Iron, Total	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120		< 0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120		<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.02(J)	<0.020	< 0.02	<0.0200	<0.0200	<0.02		<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L								<0.02	<0.0200 H	<0.02	<0.02		<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L								<0.02	<0.020011	<0.02	<0.02		<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								< 0.02	<0.0200	<0.02	<0.02		<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L		0.244	0.175 J			0.141(J)	0.27	0.426	0.152 J	0.559	0.587		0.181
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.18	0.166	0.215	0.102.0	0.199	0.203		0.172
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.053 J #	0.075 J	< 0.03	<0.150	<0.0300	<0.0600	< 0.0300	< 0.0300	0.0606 J	0.712	0.146 J		0.0851 J
Potassium	None	Not Applicable	Not Applicable	mg/L		22.3	21.9			15.9	14.6	13.6	15.0	14.6	15.3		14.5
Sodium	None	Not Applicable	Not Applicable	mg/L		603	510			376	348	324	329	391	406		381
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2590 #	2520					2200	2090	2040	2,070	2,080		2090
Sulfide	None	Not Applicable	Not Applicable	mg/L						<1	<1	<1	<1.00	<1	<1		<1
Field Parameters				·····													
Temperature	None	Not Applicable	Not Applicable	°C	23.6	14		17.89	24.8	22.45	23.5	17	20.7	17.6			26
nH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.45	10.47		10.93	10.4	10.65	10.4	10.39	10.46	9.97			9.96
Specific Conductance	0.5 - 8.5 None	Not Applicable	Not Applicable	 μmhos/cm	2632	2442		2486	2350	1998	1986	1999	2,041	1,962			9.96
Dissolved Oxygen	None			•	0.21			1.44				0.39	· · · · · · · · · · · · · · · · · · ·	0.40			
Oxidation-Reduction Potential		Not Applicable	Not Applicable	mg/L	130.1	0.36		-152.8	0.33	0.55 -140.3	0.24	-49.7	0.36	-0.8			0.51
Turbidity	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mV NTU	2.04	2.79	1.47	0.49	0.92		-80.5	-49./	-9.7	2.53			-72.2
Notes:					2.04	2.13	1.4/	0.43	0.32	2.43	0.34	<u> </u>	1.33	2.00			2.26

Notes:

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3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

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11. Cells shaded in blue indicate results that are above the laboratory MDL.

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	MOL	Established	Established		
	MCL	Background	GWPS	Commin ID:	MW-18
Devementeve	or SMCL	(Det. Mon.)	(Ass. Mon.)	Sample ID:	40.4
Parameters	SIVICE		(ASS. MOII.)	Sample Date:	12-Apr-23
					FIRST 2023 ASSESSMENT MON.
Detection Monitoring Paramete	rs			Units	
Boron	None	1.896	Not Applicable	mg/L	4.75
Calcium	None	670.30	Not Applicable	mg/L	21.9
Chloride	250	18.51	Not Applicable	mg/L	5.7
Fluoride	4	0.6359	Not Applicable	mg/L	1.7
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.96
Sulfate	250	1,820	Not Applicable	mg/L	971
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1280
Assessment Monitoring Param	eters				
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00340
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00256 J
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.70
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.00273 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.232
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.0197
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.59 +/- 0.629
Other Parameters				•	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	63.8
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	51.6
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	12.2
Iron, Total	None	Not Applicable	Not Applicable	mg/L	< 0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.0352 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	< 0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.035 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	0.241
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.243
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0517 J
Potassium	None	Not Applicable	Not Applicable	mg/L	16.1
Sodium	None	Not Applicable	Not Applicable	mg/L	407
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,030
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70
Field Parameters	TIONE			iiig/ L	\$1.10
	Ners	Not Applicable	Not Applicable	°C	40.0
	None	Not Applicable	Not Applicable	-	19.9
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.29
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2010
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-95
Turbidity	None	Not Applicable	Not Applicable	NTU	2.44

Notes:

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3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

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ATTACHMENT B GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION



	MCL	Established	Established		MW-19S	MW-19S	DUP-1	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	DUP 1	MW-19S	MW-19S
Parameters	or SMCL	Background (Det. Mon.)	GWPS (Ass. Mon.)	Sample ID: Sample Date:	13-Dec-16	26-Jan-17	26-Jan-17	3-Feb-17	28-Mar-17	7-Apr-17	31-May-17	9-Jun-17	10-Aug-17	18-May-18	18-May-18	(Shallow) 2-Aug-18	(Deep) 10-Aug-18
Falameters	ONICE			Sample Date.	13-Dec-10	20-Jd11-17	20-Jan-17	3-Feb-17	20-IVIAI - 17	7-Apr-17	31-1Vidy-17	9-Juli-17	10-Aug-17	10-1VIAy-10	10-1Vidy-10	2-Aug-10	TU-Aug-To
					BACKGROUND 1	BACKG	ROUND	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETEC	CTION 1. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameter	rs			Units													
Boron	None	1.896	Not Applicable	mg/L	8.02	10.8	9.33	7.83	7.81	8.16	8.31	9.17	7.64	8.43	8.36	8.64	3.78
Calcium	None	670.30	Not Applicable	mg/L	71.7	47.2	43.8	51.8	51.9	72.5	51.3	71.5	41.3	45.7	44	35	24.8
Chloride	250	18.51	Not Applicable	mg/L	16.1	17.6	17.3	15.8	16.1	17.8	14.3	15.2	15.7	14.5	14.6	15.1	14.9
Fluoride	4	0.6359	Not Applicable	mg/L	1.44 J*	1.51	1.44	1.3	1.32	1.1	1.23	1.23	1.32	1.3	1.3	1.34	1.3
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	10.4	11	10.9	10.7	10.8	10.7	10.9	10.8	10.8	10.5	10.4	9.7	10.5
Sulfate	250	1,708	Not Applicable	mg/L	1620	1620	1600	1530	1550	1560	1450	1510	1650	1630	1610	1520	1480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2420	2420	2530	2460	2460	2340	2420	2410	2440	2560	2480	2390	2440
Assessment Monitoring Parame	eters																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.008000	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800				
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00920 J	0.0073	0.00683	0.00728 J	0.0073	0.00837 J	0.00702	0.00681 J	0.00756				
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0538	0.0192	0.0195	0.0215	0.0189	0.0249	0.0186	0.0233	0.0211				
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100	<0.000500	<0.000100				
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	0.000196 J	<0.000500	<0.000100	<0.000500	<0.000100				
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	<0.000500	<0.000500	U (0.00108)	<0.000500	<0.00250	<0.000500	<0.00250	<0.000500				
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000568 J	<0.000100	<0.000100	0.000237 J	0.000103 J	<0.000500	<0.000100	0.000872 J	<0.000100				
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.44 J*	1.51	1.44	1.3	1.32	1.1	1.23	1.23	1.32	1.3	1.3	1.34	1.3
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000621 J	<0.000100	<0.000100	0.000589 J	<0.000100	<0.000500	<0.000100	<0.000500	0.000114 J				
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.0150	<0.00300	< 0.00300	< 0.00300	<0.00300	<0.0150	<0.00300	<0.0150	<0.00300			<0.00300	<0.00300
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	0.000100 UJ	<0.000150	<0.000150	<0.000150	<0.000150				
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.466	0.484	0.483	0.435	0.481	0.586	0.495	0.607	0.469			0.384	0.112
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00616 J	0.0107	0.0105	0.00888 J	0.0116	0.0131	0.00879	0.0152	0.00349				
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800				
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.47 +/- 0.739	-0.0377 +/- 0.325 U	0.0518 +/- 0.264 U	0.483 +/- 0.372 U	0.287 +/- 0.277 U	0.121 +/- 0.235 U	0.136 +/- 0.226 U	0.202 +/- 0.190 U	0.296 +/- 0.222 U				
Other Parameters							1		11						1		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L													
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L													
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									85.8				
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00				
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									46.2				
Iron, Total	None	Not Applicable	Not Applicable	mg/L													
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Magnesium Malubdapum Diapaluad	None	Not Applicable	Not Applicable	mg/L									<0.220				
Molybdenum, Dissolved Nitrate as N	None 10	Not Applicable	Not Applicable	mg/L													
	10	Not Applicable	Not Applicable	mg/L													
Potassium Sodium	None	Not Applicable	Not Applicable	mg/L									35.9 697				
	None	Not Applicable	Not Applicable	mg/L													
Specific Conductance (laboratory) Sulfide	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	umhos/cm mg/L													
Field Parameters	None	Not Applicable	Not Applicable	mg/L													
	None	Not Applicable	Not Applicable	°C	17.71	15.41		15.44	18.96	18.56	21.58	20.76	24.37	20.38		26.67	24.71
Temperature	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	11.14	15.41		11.16	11.09	11.08	10.8	10.95	10.72	11.09		10.55	10.56
Specific Conductance	0.5 - 8.5 None		Not Applicable	 μmhos/cm	3576	3585		3389	3602	3575	3546	3526	3552	3530		3587	3563
Dissolved Oxygen	None	Not Applicable		•	0.37	0.26		0.18	0.22	0.18	0.02	0.02	0.02	0.24		4.64	1.32
Oxidation-Reduction Potential		Not Applicable	Not Applicable	mg/L	-347.7	-310.2		-267.7	-299.3	-270.6	-235.7	-125.3	-215.4	-312.1		-227.4	
Turbidity	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mV NTU	-347.7	-310.2		0.32	0.34	-270.6	-235.7	0.43	-215.4	-312.1		0.02	-249 4.16
					105	1.1		0.52	0.04	0.4	0.02	0.43	1.20	0.47		0.02	4.10
Notes:																	

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	MCL	Established Background	Established GWPS		MW-19S	MW	/-19S	MW-19S	MW-19S	MW-19S	DUP 2	MW-19S	MW-19S	DUP 3	MW-19S	MW	/-19S	MW-19S
Parameters	or SMCL	(Det. Mon.)	(Ass. Mon.)	Sample ID: Sample Date:	3-Oct-18	15-J	an-19	25-Apr-19	1-Oct-19	17-J	un-20	12-Oct-20	31-M	lar-21	15-Oct-21	1-Apr-22	1-Jun-22	6-Oct-22
Detection Monitoring Paramete	ars			Units	INITIAL ASSESSMENT MON.		SSMENT MON. AMPLE) D FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	ASSES	T 2020 SMENT DN.	SECOND 2020 ASSESSMENT MON.	ASSES	T 2021 SMENT ON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	10.2 #	9.79	9.07	8.57	6.64	6.8	7.18	6.88	6.86	8.41	588	9.73		8.43
Calcium	None	670.30	Not Applicable	mg/L	35.3 #	50	49.6	52.4	40.4	43.6	42.1	40.7	42.3	35.3	41.6	44.2		40.7
Chloride	250	18.51	Not Applicable	mg/L	14.8 #	14.2	14.1	13.7	14.4	13.8	14	14.1	13.7	14	13.6	14.6		13.3
Fluoride	4	0.6359	Not Applicable	mg/L	1.24 #	1.27	1.59	1.13	1.37	1.15	1.04	1.38	1.46	1.54	1.57	1.66		1.59
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.9 #	10.4		10.5	10.6	10.2	9.88	10.9	10.8	10.6	10.8	10.8		10.8
Sulfate	250	1,708	Not Applicable	mg/L	1950 #	1640	1580	1520	1580	1490	1590	1640	1560	1560	1570	1,420		1480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2490 #	2500	2470	2440	2460	2300	2290	2340	2360	2310	2290	2,180		2210
Assessment Monitoring Parame		2,000	Hot Applicable	iiig/ E	2100 //	2000	2110	2110	2100	2000	2200	2010	2000	2010		2,100		2210
		Net Applicable	0.000 (1401.)		0.0000 //	0.000400	0.000400	0.000400	0.000400	0.000.400	0.000400	0.000400	0.000400	0.000400	0.000400	0.000.400	1	0.000400
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	< 0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	< 0.000400	<0.000400	< 0.000400	< 0.000400	<0.000400		<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008 #	0.00634	0.00643	0.00673	0.00624	0.0061	0.00577	0.00588	0.00554	0.00452	0.00689	0.00689		0.0072
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0106 J #	0.0216	0.0201	0.0197	0.0164	0.0221	0.0177	0.0162	0.0176	0.0152	0.0166	0.0189		0.0164
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.002 #	< 0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	0.000133 J #	0.000386 J	0.000429 J	0.000219 J	0.000222 J	0.000387 J	0.000328 J	<0.000200	0.000238 J	<0.000200	0.000502 J	0.000380 J		<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.01 #	< 0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	0.000930 J	0.000829 J		<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000102 J #	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	0.000234 J		<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.24 #	1.27	1.59	1.13	1.37	1.15	1.04	1.38	1.46	1.54	1.57	1.66		1.59
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000116 J #	< 0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.06 #	0.00148 J	0.00128 J	0.00192 J	0.00169 J	0.00134 J	0.00114 J	0.00102 J	0.00121 J	0.00144 J	0.00150 J	0.00249 J		0.00111 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000450 J	0.0000460 J	0.000113 J	<0.0000300		<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.439 #	0.472	0.463	0.462	0.377	0.402	0.394	0.367	0.398	0.351	0.407	0.445		0.43
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00889 #	0.011	0.00631	0.0141	0.0124	0.00655	0.0064	0.0113	0.00857	0.00743	0.0113	0.0127		0.00944
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.933 +/- 0.391 #	<0.98		<0.79	<0.74	<0.73	<0.72	<0.73	<0.87	<0.82	<0.84	<0.82		1.82
Other Parameters													0		0			
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	26.2	25		21	23			19	16	14.0 J	21.0	21.0		18
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						128	130	132	135	133	150	136		130
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		59.8				92.6	98.7	89.2	63.8	69	77.3	53.6		61
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5	<5	<5	<5.00	<5		<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		81.2				35.1	31.4	42.6	71.6	64.4	73.0	82.4		68.7
Iron, Total	None	Not Applicable	Not Applicable	mg/L						0.0153(J)	<0.0120	<0.0120	<0.012	<0.012	0.0509 J	0.0554 J		<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	<0.0120	<0.0120	<0.012	<0.012	0.0210 J	<0.0120		<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L						0.043(J)	0.330(J)	0.0310 J	<0.02	<0.02	0.0450 J	0.03 J		0.0230 J
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L									<0.02	<0.02	<0.0200 H	0.029 J		<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L									<0.02	<0.02	<0.0200	0.0254 J		<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L									<0.02	<0.02	0.0210 J	<0.02		<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L		0.121 J	0.0852 J			0.0553(J)	0.0510(J)	0.0346 J	0.0773 J	0.0681 J	0.0415 J	0.0836 J		0.0228 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L						0.373	0.383	0.37	0.457	0.398	0.440	0.406		0.413
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.049 #	< 0.03	0.117	<0.150	< 0.0300	<0.0600	< 0.0600	<0.150	< 0.0600	<0.0600	<0.0600	0.102 J		< 0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		38.2	37.7			35.2	34.1	33.7	33.9	29	34.6	37		37.7
Sodium	None	Not Applicable	Not Applicable	mg/L		801	774			644	598	610	639	545	462	723		752
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2470 #	3530						3860	3500	3540	3370	3,570		3570
Sulfide	None	Not Applicable	Not Applicable	mg/L						1.52	<1	1.8	<1	<1	<1.00	<1		<1
Field Parameters									1									
Temperature	None	Not Applicable	Not Applicable	°C	25.4	13.4		17.92	25.86	22.99		23.8	18.3		21.8	17.2		23.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.63	11.01		11.26	10.65	10.97		10.92	11.09		10.84	10.94		10.54
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3610	3438		3524	3552	3309		3433	3406		3,342	3,309		3277
Dissolved Oxygen	None	Not Applicable	Not Applicable	 mg/L	0.33	0.21		1.5	0.5	0.36		0.16	0.27		0.21	0.27		0.32
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	172.1	-162		-281.7	-252.4	-588.1		209.2	-191.7		-237.2	-244.4		-249.1
Turbidity	None	Not Applicable	Not Applicable	NTU	2.05	5.19	2.24	0.57	0.61	2.86		1.24	0.73		2.77	2.22		1.82
Notes:					·/			_!	I <u></u>									

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-19S
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	17-Apr-23
Detection Monitoring Parameter	0			Units	FIRST 2023 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	7.69
Calcium	None	670.30	Not Applicable	mg/L	38.5
Chloride	250	18.51	Not Applicable	mg/L	12.8
Fluoride	4	0.6359	Not Applicable	mg/L	1.47
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	10.6
Sulfate	250	1,708	Not Applicable	0.0.	1740
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2310
	000	2,000	Horrippilouble		2010
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00581
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0152
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.47
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.00216 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.362
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00965
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	0.000269 J
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.376 +/- 1.03
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	16.0
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	124
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	62.4
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	62
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.0162 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	0.063
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	0.109 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.379
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	32.3
Sodium	None	Not Applicable	Not Applicable	mg/L	662
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,270
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70
Tomporoturo	Nene	Not Appliaghts	Not Applicable	°C	20.6
Temperature	None	Not Applicable	Not Applicable	-	20.6
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.78
	None	Not Applicable	Not Applicable	µmhos/cm	3090
Specific Conductance		· · ·	i	•	
Specific Conductance Dissolved Oxygen Oxidation-Reduction Potential	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L mV	0.19

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION



	MCL or	Established Background	Established GWPS	Sample ID:	MW-20	MW-20	MW-20	DUP 1	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	31-May-16	23-Aug-16	29-Sep-16	29-Sep-16	2-Dec-16	31-Jan-17	5-Apr-17	7-Jun-17	9-Aug-17	21-May-18	1-Aug-18
						BACKGROUND 2		ROUND		BACKGROUND 5		BACKGROUND 7		DETECTION MON. #1	VERIFICATION SAMPLE
Detection Monitoring Parameters	1			Units											
Boron	None	1.896	Not Applicable	mg/L	0.704	1.11	1.06	0.945	1.02	1	0.58	0.784	0.643	0.813	1.2
Calcium	None	670.30	Not Applicable	mg/L	434	563	416	391	451	528	583	611 J*	382	355	552
Chloride	250	18.51	Not Applicable	mg/L	5.99 J*	5.79	4.85	4.8	4.44	5.4	6.77	6.00 J*	5.08	6.14	4.96
Fluoride	4	0.6359	Not Applicable	mg/L	0.322 J*	0.41	0.424	0.416	0.397	0.362	0.248	0.340 J*	0.349	0.323	0.309
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	6.94	7.6	7.4	7.3	7.3	7	6.8	6.7	6.7	6.8	6.9
Sulfate	250	1,363	Not Applicable	mg/L	1140	1110	1100	1110	1290	949	907	1020	1180	839	1060
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1710	1980	1860	1810	1980	1870	1750	1770	1760	1760	1980
Assessment Monitoring Parame	ters														
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.008000	<0.008000	<0.00800	<0.00800	<0.000800	<0.00800	<0.00400	<0.000800		
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00222	0.00101 J	0.00198 J	0.00199 J	<0.00400	0.000732 J	0.00174 J	<0.00400	0.000598 J		
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0136	0.0151	0.0116	0.0109	0.0100 J	0.0122	0.0108	0.0128	0.00216		
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100		
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100		
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.00500	<0.000500	<0.000500	<0.00500	<0.00250		
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	0.000327 J	0.000383 J	0.000366 J	<0.00100	0.000642 J	0.000215 J	<0.00100	<0.000500		
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322 J*	0.41	0.424	0.416	0.397	0.362	0.248	0.340 J*	0.349	0.323	0.309
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000500		
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.123	0.117	0.124	0.114	0.126 J	0.12	0.0962	0.112 J	0.110 J		0.109
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000100		
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00120 J	0.00121 J	<0.00500	0.00126 J	<0.0100	<0.00100	<0.00100	<0.0100	<0.00500		<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000300	<0.000300	<0.000300	<0.00300	0.000633 J	<0.000300	<0.00300	<0.00150		
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.000800	<0.00800	<0.000800	<0.00800	<0.00400	<0.00400		
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.04 +/- 0.357	1.61 +/- 0.395	1.10 +/- 0.359	1.66 +/- 0.377	1.46 +/- 0.421	0.863 +/- 0.381	1.29 +/- 0.322	0.969 +/- 0.294	0.670 +/- 0.261		
Other Parameters															
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L											
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L											
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00		
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									259		
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00		
Iron, Total	None	Not Applicable	Not Applicable	mg/L											
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Magnesium	None	Not Applicable	Not Applicable	mg/L									20.9		
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Nitrate as N	10	Not Applicable	Not Applicable	mg/L											
Potassium	None	Not Applicable	Not Applicable	mg/L									5.54		
Sodium	None	Not Applicable	Not Applicable	mg/L									86.1		
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm											
Sulfide	None	Not Applicable	Not Applicable	mg/L											
Field Parameters						n II						II			
Temperature	None	Not Applicable	Not Applicable	°C	21.43	21.4	18.92		17.06	19.18	18.75	20.84	21.17	20.26	21.05
nH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.85	6.94	6.79		6.75	6.76	6.67	6.69	6.62	6.89	6.51
Specific Conductance					1742	2245	2332		2364	2259	2057	2088	2083	1999	2345
•	None	Not Applicable	Not Applicable	μmhos/cm											
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.47	1.76	0.05		0.25	0.21	0.35	0.07	0.1	0.27	1.43
Oxidation-Reduction Potential Turbidity	None None	Not Applicable	Not Applicable	mV NTU	-4.6	935 2.96	-101 3.23		-211.5 2.55	-167.1 1.85	60.7 0.38	-7.7 1.01	62.1 1.82	-57 1.95	54.1
LIGIDIQITY		Not Applicable	Not Applicable		1.2	2.90	3.23		2.55	C0.1	0.30	1.01	1.02	1.90	4.38

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.

17. A : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL	Established Background	Established GWPS	Sample ID:	MW-20	MW	/-20	MW-20	MW-20	Dup 1	MW-20	MW-20	MW-20	MW-20	MV	V-20	MW-20	MW-20
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	4-Oct-18	10-Ja	an-19	23-Apr-19	30-S	ep-19	17-Jun-20	12-Oct-20	31-Mar-21	15-Oct-21	31-Mar-22	6-Jun-22	5-Oct-22	12-Apr-23
Detection Monitoring Parameters	'S				INITIAL ASSESSMENT MON.	INITIAL ASSES (RESA UNFILTERED	SSMENT MON. MPLE)	FIRST 2019 ASSESSMENT MON.	SECON ASSES MC	ID 2019 SMENT	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	1.19 #	1.19	0.911	0.721	0.777	0.668	0.624	0.857	0.927	0.930	0.550		0.837	0.559
Calcium	None	670.30	Not Applicable	mg/L	448 #	398	386	327	368	331	320	312	309	325	324		358	351
Chloride	250	18.51	Not Applicable	mg/L	4.74 #	6.29	7.27	8.02	5.3	5.32	6.18	5.69	5.78	5.17	8.67	5.34	5.39	5.27
Fluoride	4	0.6359	Not Applicable	mg/L	0.326 #	0.298	0.304	0.294	0.34	0.311	0.22	0.336	0.279	0.264	<0.500^	0.289	0.209	0.367
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.4 #	7.17		7.35	6.67	6.76	6.55	6.73	6.91	7.94	1.5^	7.6	7.03	7.15
Sulfate	250	1,363	Not Applicable	mg/L	1110 #	977	892	794	1060	1080	870	989	782	1030	2070^	732	950	962
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1900 #	1630	1530	1690	1890	1850	1560	1710	1490	1850	1940^	1440	1,760	1,470
Assessment Monitoring Parame	eters																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004 #	<0.000400	<0.000400	0.00107 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.014 J #	0.0103	0.012	0.0131	0.0102	0.00931	0.0102	0.00927	0.00981	0.0124	0.0125		0.01	0.00924
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000401 J	0.000592 J	0.000674 J		<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.00102 J #	0.000414 J	0.000442 J	0.000449 J	<0.000200	<0.000200	<0.000200	0.000318 J	<0.000200	0.000234 J	0.00112 J		<0.000200	0.000689 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.326 #	0.298	0.304	0.294	0.34	0.311	0.22	0.336	0.279	0.264	<0.500^	0.289	0.209	0.367
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.001 #	<0.000600	<0.000600	<0.000600	<0.000600	0.00964	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.121 J #	0.0969	0.0959	0.0827	0.101	0.0944	0.0895	0.0891	0.0781	0.105	0.0693		0.108	0.0905
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000650 J	0.000224	<0.0000300		<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	0.000616 J	0.000663 J	0.000835 J	<0.000600	<0.000600	0.000727 J	0.000677 J	0.00220 J	<0.000600	0.000659 J		<0.000600	0.000629 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	0.00142 J	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined) Other Parameters	5	Not Applicable	5 (MCL)	pCi/L	0.888 +/- 0.291 #	<0.72		0.91	0.82	<0.74	<0.72	1.33	0.85	0.91	<0.87		3.39	0.453 +/- 0.442
	Nono	Not Applicable	Not Applicable		Æ	<5.00		<5.00	<5.00	<5.00		6 00 I	E 00	10.0.1		<5.00	<5.00	6.00 1
Chemical Oxygen Demand (COD) Total Alkalinity as CaCO3	None	Not Applicable		mg/L	<5							6.00 J	5.00 J	10.0 J	7.00 J ^			6.00 J
Carbonate Alkalinity as CaCO3	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L		<5												
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		359												
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L mg/L		<5												
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		29.2	26.3											
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.049 #	< 0.03	< 0.03	<0.0300	0.105	0.0616 J	< 0.0300	< 0.0300	<0.0300	0.0434 J	972^	0.0769 J	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		6.72	6.01											
Sodium	None	Not Applicable	Not Applicable	mg/L		70.2	84.7											
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2050 #	1960						2230	1890	2140	23700^	2,170	2,270	1,860
Sulfide	None	Not Applicable	Not Applicable	mg/L														
Field Parameters		11.0000	11 00000	<u> </u>				II				II				·		
Temperature	None	Not Applicable	Not Applicable	°C	24.9	15.2		21.57	23.46		22.06	21.3	18.61	20.9	16.3	22.9	22.5	20.3
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.71	6.65		7	6.83		6.86	6.81	7.07	6.80	6.95	6.84	6.62	5.52
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2330	1979		1937	2240		1795	1981	2605	2,140	1,342	1,743	2,087	1,708
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.86	0.46		1.08	0.56		1.11	0.28	0.46	0.49	0.30	0.39	0.49	0.39
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	29.7	-13		-4.3	-15.7		-32.8	29	7.6	58.8	-3.4	28	-40.4	9.3
Turbidity	None	Not Applicable	Not Applicable	NTU	8.14	37.7	2.09	0.38	2.9		4.04	2.79	3.99	2.44	0.82	1.57	2.01	7.1
Notes:	1											2.10						

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

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8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

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R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-21	MW-21	DUP 1	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	26-May-16	27-Jul-16	27-Jul-16	28-Sep-16	1-Dec-16	31-Jan-17	5-Apr-17	6-Jun-17	8-Aug-17	17-May-18	10-Aug-18
					BACKGROUND		ROUND				BACKGROUND 6			DETECTION MON. #1	VERIFICATION SAMPLE
Detection Monitoring Paramet	ers			Units											
Boron	None	1.896	Not Applicable	mg/L	2.9	2.76	2.86	2.59	3.98	4.41	3.43	3.36	3.07 J	2.95	2.99
Calcium	None	670.30	Not Applicable	mg/L	148	186	205	156	251	176	214	149	165	136	147
Chloride	250	18.51	Not Applicable	mg/L	22.9	22.2	21.8	23.1	22.3	21.5	20.5	21.4	17.8	22	21.9
Fluoride	4	0.6359	Not Applicable	mg/L	0.594	0.752	0.801	0.582	0.564	0.498	0.49	0.559	0.779	0.53	0.453
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.56	7.98	8.02	7.9	7.9	7.5	7.4	7.3	7.4	7.5	7.5
Sulfate	250	1,591	Not Applicable	mg/L	1370	1350	1420	1500	1500	1360	1470	1400	1250	1480	1410
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2410	2380	2360	2510	2430	2440	2320	2430	2320	2570	2560
Assessment Monitoring Paran	neters														
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800		
Arisenic	0.000	Not Applicable	0.01 (MCL)	mg/L	0.00259	0.00140 J	0.00154 J	0.00145 J	<0.00400	0.000960 J	0.00119 J	<0.000800	0.00155 J		
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0144	0.00140 3	0.00134 3	0.012	0.0200	0.000900 3	0.0114	0.0107	0.11		
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00100	< 0.00128	<0.0012	< 0.000500	<0.00121	<0.000100	< 0.000100	<0.00100		
Cadmium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000400	<0.000400	<0.000400	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.00100		
Chromium	0.005	Not Applicable	0.1 (MCL)	mg/L	0.000586 J	<0.000400	<0.000400	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500		
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000571 J	<0.000500	<0.000500	0.000403 J	0.000555 J	0.000434 J	0.000316 J	<0.000300	0.000281 J		
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.594	0.752	0.801	0.582	0.564	0.498	0.49	0.559	0.0002813	0.53	0.453
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000200	<0.000100	<0.000500	< 0.000100	<0.000100	< 0.000100	<0.000100		
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.163	0.129	0.126	0.13	0.224 J	0.143	0.137	0.131	0.147		0.121
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	< 0.000150	<0.000150	< 0.000150	<0.000150	< 0.000150	< 0.000150	< 0.000150	<0.000150		
Molybdenum			. ,	-	0.00385	0.00193 J	0.00188 J	0.00212	<0.00500	0.0023	0.002	0.00175 J	0.00152 J		<0.00100
Selenium	None 0.05	Not Applicable	0.1 (ODEQ)	mg/L	<0.00385			<0.00212	<0.00500	0.0023 0.000512 J					
Thallium		Not Applicable	0.05 (MCL)	mg/L	<0.000500	<0.000600 <0.000500	<0.000600	<0.000300	<0.00150	<0.000512 J	<0.000300	0.00391	<0.000300 <0.000800		
Ra-226 + Ra-228 (combined)	0.002	Not Applicable Not Applicable	0.002 (MCL) 5 (MCL)	mg/L pCi/L	20.000500	1.62 +/- 0.384	<0.000500 1.91 +/- 0.376	2.17 +/- 0.422	1.87 +/- 0.494	2.19 +/- 0.444	<0.000800 1.26 +/- 0.315	<0.000800 2.06 +/- 0.383	0.973 +/- 0.258		
Other Parameters	5	Not Applicable	5 (IVICL)	poi/L	1.99 +/- 0.327	1.02 +/- 0.304	1.91 +/- 0.370	2.17 +/- 0.422	1.07 +/- 0.494	2.19 +/- 0.444	1.20 +/- 0.315	2.00 +/- 0.303	0.973 +/- 0.256		
	Nana	Not Applicable	Not Applicable												
Chemical Oxygen Demand (COD)	None	Not Applicable		mg/L											
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L											
Carbonate Alkalinity as CaCO3	None		Not Applicable	mg/L									<5.00		
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									312		
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00		
Iron, Total	None	Not Applicable	Not Applicable	mg/L											
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L											
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Magnesium	None	Not Applicable	Not Applicable	mg/L									35.1		
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Nitrate as N	10	Not Applicable	Not Applicable	mg/L											
Potassium	None	Not Applicable	Not Applicable	mg/L									9.21		
Sodium	None	Not Applicable	Not Applicable	mg/L									791		
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm											
Sulfide	None	Not Applicable	Not Applicable	mg/L											
Field Parameters															
Temperature	None	Not Applicable	Not Applicable	٥C	20.64	22.37		21.75	19.28	20.91	18.26	22.05	20.69	21.36	25.09
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.37	7.32		7.32	7.28	7.26	6.19	7.2	7.11	7.28	6.91
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3111	3578		3600	3586	3625	3555	3493	3421	3504	3544
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.24	0.45		0.07	0.17	0.27	0.32	0.12	0.07	0.16	1.45
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	62.8	-72.7		-92.6	-239	-182	247.3	-12.6	59.8	-45.2	99
Turbidity	None	Not Applicable		NTU	2.1	0.32		0.3	0.29	0.27	0.84	0.74	1.07	0.28	0.5
Notes:				1			1		0.20			.			

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pČi/L : picoCuries per liter.
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U () : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

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R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL	Established	Established		MW-21	MM	V-21	MW-21	DUP-2	MW-21	DUP-2	MW-21	MW-21	MW-21	MW-21	DUP 3	MM	/-21	MW-21
Devenuedave	or SMCL	Background	GWPS	Sample ID:			10												
Parameters	SIVICE	(Det. Mon.)	(Ass. Mon.)	Sample Date:	3-Oct-18	15-Ja	an-19	24-A	Apr-19	2-00	ct-19	17-Jun-20	12-Oct-20	31-Mar-21	13-0	ct-21	30-Mar-22	6-Jun-22	5-Oct-22
					INITIAL ASSESSMENT MON.		SSMENT MON. MPLE)) FILTERED	ASSES	T 2019 SSMENT ON.	ASSES	ND 2019 SMENT DN.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 MC		FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.
Detection Monitoring Parame		1.000		Units	2.07.#	2.00	2.02	0.70	2.02	0.00	2.00	0.04	0.77	0.40	0.50	0.04	0.47	(RESAMPLE)	0.00
Boron Calcium	None None	1.896 670.30	Not Applicable Not Applicable	mg/L	3.07 # 152 #	3.96 187	3.92 187	3.79 145	3.63 142	2.63 146	2.89 155	2.84	<u>2.77</u> 141	2.42 154	2.53 128	2.31 135	3.17 173		2.36 140
Chloride	250	18.51	Not Applicable	mg/L mg/L	21.9 #	22.1	22	20.6	19.8	22.1	22.2	21.8	22.8	23.3	21.5	22.1	23^	22.4	21.8
Fluoride	230	0.6359	Not Applicable	mg/L	0.458 #	0.438	2.05	0.513	0.505	0.537	0.509	0.524	0.470 J	0.578	0.411	0.471	0.683^	0.543	0.445
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.9 #	6.89		7.77	7.74	7.58	7.12	7.07	7.64	7.28	7.28	7.43	1.64^	7.57	7.42
Sulfate	250	1,591	Not Applicable	mg/L	1610 #	1670	1710	1440	1530	1560	1530	1470	1780	1660	1670	1520	2340^	1,610	1,440
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2650 #	2740	2720	2550	2650	2700	2720	2470	2660	2650	2660	2560	3500^	2,660	2,440
		2,010	notripplicable		2000 //	21.10	2120	2000	2000	2100	2120	2470	2000	2000	2000	2000		2,000	2,110
Assessment Monitoring Para	1		0.000 (1401.)		0.0000 //	0.000.000	0.000.400	0.000.400	0.000.000	0.000.400	0.000.400	0.000.400	0.000.000	0.000.400	0.000.400		0.000.400		0.000.400
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	< 0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000545 J	<0.000400		<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008 #	0.00329	0.00223	0.00112 J	0.00136 J	0.000638 J	0.000574 J	0.000551 J	0.000536 J	0.000534 J	0.000539 J	0.000521 J	0.000695 J		0.000569 J
Barium	0.004	Not Applicable	2 (MCL)	mg/L	0.0137 J #	0.0182	0.0176	0.0127	0.0117	0.00999	0.0111	0.0106	0.0107	0.0112	0.0102	0.0105	0.0139		0.00932
Beryllium		Not Applicable	0.004 (MCL)	mg/L	<0.002 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200 <0.000200	<0.000200		<0.000200
Cadmium Chromium	0.005	Not Applicable Not Applicable	0.005 (MCL) 0.1 (MCL)	mg/L	<0.0001 # <0.01 #	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200 <0.000400	<0.000200	<0.000200 0.000669 J		<0.000200 <0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L mg/L	0.000216 J #	<0.000400 0.00175 J	0.00140 J	0.000400 0.000407 J	0.000321 J	0.000227 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000620 J		<0.000400
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.458 #	0.438	2.05	0.513	0.505	0.537	0.509	0.524	0.470 J	0.578	0.411	0.471	0.683^	0.543	0.445
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	< 0.000600	< 0.000600	<0.000600	<0.000600	<0.000600	< 0.000600	< 0.000600	< 0.000600	< 0.000600	<0.000600	<0.000600	< 0.000600		<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.164 J #	0.157	0.16	0.14	0.134	0.118	0.129	0.14	0.123	0.137	0.125	0.114	0.143		0.144
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	< 0.0000300	<0.0000300	0.0000380 J	<0.0000300	0.0000330 J	<0.0000300		<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	0.00161 J	0.00160 J	0.00131 J	0.00118 J	0.00105 J	0.00184 J	0.00103 J	0.00103 J	0.000902 J	0.000677 J	0.000876 J	0.00172 J		<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	0.00111 J	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	3.41 +/- 0.496 #	6.29		2.24	1.67	1.59	2.57	3.09	2.38	2.44	2.94	2.58	2.58		3.28
Other Parameters																			
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5		<5.00	<5.00	<5.00	7.00 J		<5.00	<5.00	<5.00	7.00 J	5.00 J ^	<5.00	16
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L															
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5													
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		393													
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5													
Iron, Total	None	Not Applicable	Not Applicable	mg/L															
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Magnesium	None	Not Applicable	Not Applicable	mg/L		62.1	62.3												
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.449 #	0.14	0.145	1.16	1.36	0.329	0.467	<0.150	<0.150	0.961	0.207	0.168 J	687^	0.399	0.28
Potassium	None	Not Applicable	Not Applicable	mg/L		12	11.8												
Sodium	None	Not Applicable	Not Applicable	mg/L		684	688												
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3120 #	3610							3940	3550	3620	3480	22000^	9,390	3,530
Sulfide	None	Not Applicable	Not Applicable	mg/L															
Field Parameters												11	11						
Temperature	None	Not Applicable	Not Applicable	°C	24	13.8		18.12		24.38		23.17	23.2	15.44	21.3		13.8	25	24.1
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.13	7.1		7.42		7.29		7.23	7.26	7.43	7.23		7.44	7.28	7.06
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3627	3585		3533		3633		3352	3516	4806	3,262		2,769	3542	3355
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.43	0.59		1.23		0.64		0.65	0.48	5	0.31		0.43	0.63	0.51
Oxidation-Reduction Potential	None	Not Applicable		mV	45.9	-67.1		84		91.9		-38	119.3	25.6	-212.1		-33.3	47.7	52.9
Turbidity	None	Not Applicable	Not Applicable	NTU	2.38	3.3	1.11	0.44		0.26		2.04	0.52	1.27	1.33		0.68	1.3	3.27
Notes:																			

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

a. pCi/L : picoCuries per liter.
 b.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U () : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J*: The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL	Established	Established		
	-	Background	GWPS	Commin ID:	MW-21
D ama and the set	or			Sample ID:	
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	12-Apr-23
					FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameter	ters			Units	WICH.
Boron	None	1.896	Not Applicable	mg/L	3.28
Calcium	None	670.30	Not Applicable	mg/L	168
Chloride	250	18.51	Not Applicable	mg/L	22.0
Fluoride	4	0.6359	Not Applicable	mg/L	0.545
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.57
Sulfate	250	1,591	Not Applicable	mg/L	1,750
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2,250
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400
Arsenic	0.000	Not Applicable	0.01 (MCL)	mg/L	0.000517 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0115
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.000200
Cadmium	0.004	Not Applicable	0.005 (MCL)	mg/L	<0.000200
Chromium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200
			· · · ·		
Cobalt Fluoride	None 4	Not Applicable	0.006 (ODEQ)	mg/L	0.000351 J 0.545
		Not Applicable	4 (MCL)	mg/L	
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.137
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000933 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.51 +/- 0.838
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	25.0
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	
Iron, Total	None	Not Applicable	Not Applicable	mg/L	
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Magnesium	None	Not Applicable	Not Applicable	mg/L	
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.153
Potassium	None			-	
		Not Applicable	Not Applicable	mg/L	
Sodium	None	Not Applicable	Not Applicable	mg/L	
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,600
Sulfide	None	Not Applicable	Not Applicable	mg/L	
Tomporaturo	None	Not Applicable	Not Applicable	°C	18.8
	None	Not Applicable	Not Applicable	-	
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	5.81
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3035
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.27
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	158.8
Turbidity	None	Not Applicable	Not Applicable	NTU	2.93

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.

The MCL value for lead is the EPA's Action Level.

2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

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ATTACHMENT B GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION



ATTACHMENT C

FIRST 2023 ASSESSMENT MONITORING – APRIL 2023 LABORATORY REPORT (SURFACE IMPOUNDMENT CCR UNIT)



10450 Stancliff Rd. Suite 210 Houston, TX 77099 T: +1 281 530 5656 F: +1 281 530 5887

June 28, 2023

Bert Smith Altamira 525 central park Dr Suite 500 Oklahoma City, OK 73013

Work Order: HS23040694

Laboratory Results for: WFEC / CCR Impoundment

Dear Bert Smith,

ALS Environmental received 9 sample(s) on Apr 12, 2023 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Ina M. Linchen

Generated By: JUMOKE.LAWAL Anna Kinchen Project Manager

alsglobal.com

Client:AltamiraProject:WFEC / CCR ImpoundmentWork Order:HS23040694

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23040694-01	MW-8	Water		11-Apr-2023 17:50	12-Apr-2023 09:00	
HS23040694-02	MW-23A	Water		11-Apr-2023 15:45	12-Apr-2023 09:00	
HS23040694-03	MW-24	Water		11-Apr-2023 18:55	12-Apr-2023 09:00	
HS23040694-04	DUP-3	Water		11-Apr-2023 17:50	12-Apr-2023 09:00	
HS23040694-05	MW-9	Water		13-Apr-2023 09:17	14-Apr-2023 08:50	
HS23040694-06	MW-10	Water		13-Apr-2023 10:22	14-Apr-2023 08:50	
HS23040694-07	MW-11	Water		13-Apr-2023 11:27	14-Apr-2023 08:50	
HS23040694-08	MW-25R	Water		12-Apr-2023 14:09	14-Apr-2023 08:50	
HS23040694-09	MW-22A	Water		18-Apr-2023 11:13	19-Apr-2023 09:10	

CASE NARRATIVE

Client:AltamiraProject:WFEC / CCR ImpoundmentWork Order:HS23040694

Work Order Comments

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

Metals by Method SM3500FED

Batch ID: R433648,R433649,R433183,R433664

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW7470A

Batch ID: 192964

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Metals by Method SW6020A

Batch ID: 192851

Sample ID: MW-23A (HS23040694-02MS)

• The MS and/or MSD recovery was outside of the control; however, the result in the parent sample is greater than 4x the spike amount. Calcium, Magnesium, Sodium.

Sample ID: MW-23A (HS23040694-02PDS)

- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Magnesium, Sodium.
- The PDS recovery was outside method control limits, however the result in the parent sample is greater than 4x the spike amount. Calcium.

Sample ID: MW-23A (HS23040694-02SD)

• The percent difference between the results of the sample and the serial dilution were greater than 10%. Boron.

Batch ID: 192834

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Wet Chemistry by Method E300

Batch ID: R433149

Sample ID: HS23040356-02MS

• MS and MSD are for an unrelated sample

Sample ID: HS23040697-13MS

• MS and MSD are for an unrelated sample

CASE NARRATIVE

Client:AltamiraProject:WFEC / CCR ImpoundmentWork Order:HS23040694

Wet Chemistry by Method E300

Batch ID: R432738

Sample ID: HS23040723-01MS

• MS and MSD are for an unrelated sample

Sample ID: MW-11 (HS23040694-07)

• Sample received outside method holding time for pH. pH is an immediate test. Sample results are flagged with an "H" qualifier.

The temperature at the time of pH is reported. Please note that all pH results are already normalized to a temperature of 25 °C.

WetChemistry by Method E410.4

Batch ID: R433632

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500H+ B

Batch ID: R433350,R433354,R433610,R433657

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM4500 S2-F

Batch ID: R433352

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B

Batch ID: R433630

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2540C

Batch ID: R432824, R432924, R432930, R433412

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method M2510 B

Batch ID: R432718,R433330,R433653

• The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

CASE NARRATIVE

Client: Altamira Project: WFEC / CCR Impoundment Work Order: HS23040694

WetChemistry by Method E300

Batch ID: R432628

Sample ID: HS23040411-01MS

• MS and MSD are for an unrelated sample

Sample ID: MW-23A (HS23040694-02MS)

• The MS and/or MSD recovery was outside of the control limits; however, the result in the parent sample is greater than 4x the spike amount. (Sulfate)

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Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-8
Collection Date:	11-Apr-2023 17:50

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-01 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 12:55
Arsenic	0.000479	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:10
Barium	0.00607		0.00190	0.00400	mg/L	1	25-Apr-2023 22:10
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:10
Boron	1.36		0.110	0.200	mg/L	10	26-Apr-2023 12:37
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:10
Calcium	586		0.340	5.00	mg/L	10	26-Apr-2023 12:37
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:10
Cobalt	0.00318	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:10
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:10
Lithium	0.318		0.0100	0.0500	mg/L	10	26-Apr-2023 12:37
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 22:10
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:10
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:10
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:44
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	3.43		0.200	0.500	mg/L	1	13-Apr-2023 14:13
Fluoride	0.329		0.0500	0.100	mg/L	1	13-Apr-2023 14:13
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 14:13
Sulfate	2,120		10.0	25.0	mg/L	50	13-Apr-2023 14:19
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	8.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	2,960		5.00	5.00	umhos/cm @ 25.0 °C	1	14-Apr-2023 17:01
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method	I:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,540		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011		lethod:S	M4500H+ B				Analyst: CD
рН	7.21	Н	0.100	0.100	pH Units	1	22-Apr-2023 11:11
Temp Deg C @pH	20.1	Н	0	0	°C	1	22-Apr-2023 11:11

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-23A
Collection Date:	11-Apr-2023 15:45

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-02 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	25-Apr-2023 21:54
Arsenic	0.000667	J	0.000400	0.00200	mg/L	1	25-Apr-2023 21:54
Barium	0.00270	J	0.00190	0.00400	mg/L	1	25-Apr-2023 21:54
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:54
Boron	1.14		0.110	0.200	mg/L	10	26-Apr-2023 12:31
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 21:54
Calcium	552		0.340	5.00	mg/L	10	26-Apr-2023 12:31
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 21:54
Cobalt	0.00105	J	0.000200	0.00500	mg/L	1	25-Apr-2023 21:54
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 21:54
Lithium	0.246		0.0100	0.0500	mg/L	10	26-Apr-2023 12:31
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 21:54
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 21:54
Thallium	0.000252	J	0.000200	0.00200	mg/L	1	25-Apr-2023 21:54
MERCURY BY SW7470A		Method	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:45
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	12.2		0.200	0.500	mg/L	1	13-Apr-2023 12:12
Fluoride	0.302		0.0500	0.100	mg/L	1	13-Apr-2023 12:12
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 12:12
Sulfate	2,430		10.0	25.0	mg/L	50	13-Apr-2023 12:29
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	5.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	3,280		5.00	5.00	umhos/cm @ 25.0 °C	1	14-Apr-2023 17:01
TOTAL DISSOLVED SOLIDS BY SM -2011	12540C	Method	1:M2540C		-		Analyst: DC
Total Dissolved Solids (Residue, Filterable)	3,220		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011	N	lethod:S	M4500H+ B				Analyst: CD
рН	6.95	Н	0.100	0.100	pH Units	1	22-Apr-2023 11:11
Temp Deg C @pH	20.4	Н	0	0	°C	1	22-Apr-2023 11:11

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-24
Collection Date:	11-Apr-2023 18:55

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-03 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	I:SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 12:57
Arsenic	0.000400	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:12
Barium	0.00789		0.00190	0.00400	mg/L	1	25-Apr-2023 22:12
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:12
Boron	1.29		0.110	0.200	mg/L	10	26-Apr-2023 12:39
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:12
Calcium	521		0.340	5.00	mg/L	10	26-Apr-2023 12:39
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:12
Cobalt	0.00152	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:12
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:12
Lithium	0.374		0.0100	0.0500	mg/L	10	26-Apr-2023 12:39
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 22:12
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:12
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:12
MERCURY BY SW7470A		Method	I:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:50
ANIONS BY E300.0, REV 2.1, 1993		Meth	od:E300				Analyst: TH
Chloride	18.7		0.200	0.500	mg/L	1	13-Apr-2023 14:54
Fluoride	0.261		0.0500	0.100	mg/L	1	13-Apr-2023 14:54
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 14:54
Sulfate	2,620		10.0	25.0	mg/L	50	13-Apr-2023 15:00
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	od:E410.4				Analyst: TH
Chemical Oxygen Demand	14.0	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011	2510B-	Metho	d:M2510 B				Analyst: CD
Specific Conductivity	3,570		5.00	5.00	umhos/cm @ 25.0 °C	1	14-Apr-2023 17:01
TOTAL DISSOLVED SOLIDS BY SM -2011	12540C	Metho	d:M2540C		•		Analyst: DC
Total Dissolved Solids (Residue, Filterable)	3,430		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011	Ν	/lethod:	SM4500H+ B				Analyst: CD
рН	7.14	Н	0.100	0.100	pH Units	1	22-Apr-2023 11:11
Temp Deg C @pH	20.7	Н	0	0	°C	1	22-Apr-2023 11:11

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	DUP-3
Collection Date:	11-Apr-2023 17:50

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-04 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 12:59
Arsenic	0.000532	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:14
Barium	0.00608		0.00190	0.00400	mg/L	1	25-Apr-2023 22:14
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:14
Boron	1.34		0.110	0.200	mg/L	10	26-Apr-2023 12:41
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:14
Calcium	596		0.340	5.00	mg/L	10	26-Apr-2023 12:41
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:14
Cobalt	0.00324	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:14
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:14
Lithium	0.305		0.0100	0.0500	mg/L	10	26-Apr-2023 12:41
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 22:14
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:14
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:14
MERCURY BY SW7470A		Method	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:52
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	3.43		0.200	0.500	mg/L	1	13-Apr-2023 15:06
Fluoride	0.334		0.0500	0.100	mg/L	1	13-Apr-2023 15:06
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Apr-2023 15:06
Sulfate	2,110		10.0	25.0	mg/L	50	13-Apr-2023 15:11
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	7.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	3,000		5.00	5.00	umhos/cm @ 25.0 °C	1	14-Apr-2023 17:01
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method	1:M2540C		-		Analyst: DC
Total Dissolved Solids (Residue, Filterable)	2,860		5.00	10.0	mg/L	1	14-Apr-2023 13:07
PH BY SM4500H+ B-2011	N	lethod:S	M4500H+ B				Analyst: CD
рН	7.04	Н	0.100	0.100	pH Units	1	22-Apr-2023 11:11
Temp Deg C @pH	20.7	Н	0	0	°C	1	22-Apr-2023 11:11

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-9
Collection Date:	13-Apr-2023 09:17

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-05 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	d:SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 13:01
Arsenic	0.000451	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:16
Barium	0.0381		0.00190	0.00400	mg/L	1	25-Apr-2023 22:16
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:16
Boron	0.0338		0.0110	0.0200	mg/L	1	25-Apr-2023 22:16
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:16
Calcium	23.3		0.0340	0.500	mg/L	1	25-Apr-2023 22:16
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:16
Cobalt	0.000259	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:16
Lead	0.000626	J	0.000600	0.00200	mg/L	1	25-Apr-2023 22:16
Lithium	0.00101	J	0.00100	0.00500	mg/L	1	25-Apr-2023 22:16
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 22:16
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:16
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:16
MERCURY BY SW7470A		Method	d:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:54
ANIONS BY E300.0, REV 2.1, 1993		Meth	nod:E300				Analyst: TH
Chloride	2.42		0.200	0.500	mg/L	1	14-Apr-2023 12:11
Fluoride	0.136		0.0500	0.100	mg/L	1	14-Apr-2023 12:11
Nitrogen, Nitrate (As N)	0.198		0.0300	0.100	mg/L	1	14-Apr-2023 12:11
Sulfate	16.4		0.200	0.500	mg/L	1	14-Apr-2023 12:11
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	od:E410.4				Analyst: TH
Chemical Oxygen Demand	11.0	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011	2510B-	Metho	d:M2510 B				Analyst: CD
Specific Conductivity	200		5.00	5.00	umhos/cm @ 25.0 °C	1	14-Apr-2023 17:01
TOTAL DISSOLVED SOLIDS BY SN -2011		Metho	d:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	118		5.00	10.0	mg/L	1	17-Apr-2023 02:30
PH BY SM4500H+ B-2011		lethod:	SM4500H+ B				Analyst: CD
рН	7.13	Н	0.100	0.100	pH Units	1	22-Apr-2023 11:11
Temp Deg C @pH	20.9	Н	0	0	°C	1	22-Apr-2023 11:11

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-10
Collection Date:	13-Apr-2023 10:22

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-06 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Metho	d:SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 13:03
Arsenic	0.000732	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:18
Barium	0.0257		0.00190	0.00400	mg/L	1	25-Apr-2023 22:18
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:18
Boron	2.99		0.110	0.200	mg/L	10	26-Apr-2023 12:43
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:18
Calcium	138		0.0340	0.500	mg/L	1	25-Apr-2023 22:18
Chromium	0.000406	J	0.000400	0.00400	mg/L	1	25-Apr-2023 22:18
Cobalt	0.000252	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:18
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:18
Lithium	0.0649		0.00100	0.00500	mg/L	1	25-Apr-2023 22:18
Molybdenum	0.00208	J	0.000600	0.00500	mg/L	1	25-Apr-2023 22:18
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:18
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:18
MERCURY BY SW7470A		Metho	d:SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:56
ANIONS BY E300.0, REV 2.1, 1993		Met	hod:E300				Analyst: TH
Chloride	35.3		0.200	0.500	mg/L	1	14-Apr-2023 12:17
Fluoride	1.13		0.0500	0.100	mg/L	1	14-Apr-2023 12:17
Nitrogen, Nitrate (As N)	0.627		0.0300	0.100	mg/L	1	14-Apr-2023 12:17
Sulfate	1,030		4.00	10.0	mg/L	20	14-Apr-2023 13:38
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Meth	od:E410.4				Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Metho	d:M2510 B				Analyst: CD
Specific Conductivity	2,160		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Metho	od:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,340		5.00	10.0	mg/L	1	17-Apr-2023 02:30
PH BY SM4500H+ B-2011	Ν	lethod:	SM4500H+ B				Analyst: CD
рН	7.67	Н	0.100	0.100	pH Units	1	25-Apr-2023 10:08
Temp Deg C @pH	20.7	Н	0	0	°C	1	25-Apr-2023 10:08

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-11
Collection Date:	13-Apr-2023 11:27

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-07 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 13:05
Arsenic	0.000418	J	0.000400	0.00200	mg/L	1	25-Apr-2023 22:20
Barium	0.0185		0.00190	0.00400	mg/L	1	25-Apr-2023 22:20
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:20
Boron	2.72		0.110	0.200	mg/L	10	26-Apr-2023 12:45
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:20
Calcium	47.8		0.0340	0.500	mg/L	1	25-Apr-2023 22:20
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:20
Cobalt	U		0.000200	0.00500	mg/L	1	25-Apr-2023 22:20
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:20
Lithium	0.0556		0.00100	0.00500	mg/L	1	25-Apr-2023 22:20
Molybdenum	0.00314	J	0.000600	0.00500	mg/L	1	25-Apr-2023 22:20
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:20
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:20
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 13:57
ANIONS BY E300.0, REV 2.1, 1993		Metho	od:E300				Analyst: TH
Chloride	56.2		0.200	0.500	mg/L	1	14-Apr-2023 12:22
Fluoride	1.53		0.0500	0.100	mg/L	1	14-Apr-2023 12:22
Nitrogen, Nitrate (As N)	0.758		0.0300	0.100	mg/L	1	14-Apr-2023 12:22
Sulfate	711		4.00	10.0	mg/L	20	14-Apr-2023 13:44
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	d:E410.4				Analyst: TH
Chemical Oxygen Demand	6.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2 2011	2510B-	Method	:M2510 B				Analyst: CD
Specific Conductivity	1,950		5.00	5.00	umhos/cm @ 25.0 °C	1	21-Apr-2023 16:54
TOTAL DISSOLVED SOLIDS BY SM -2011	12540C	Method	I:M2540C		@ 20.0 0		Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,130		5.00	10.0	mg/L	1	17-Apr-2023 02:30
PH BY SM4500H+ B-2011	N	/lethod:S	M4500H+ B				Analyst: CD
рН	7.69	Н	0.100	0.100	pH Units	1	26-Apr-2023 15:03
Temp Deg C @pH	20.3	Н	0	0	°C	1	26-Apr-2023 15:03
Temp Deg C @pH	20.3	Н	0	0	°C	1	26-Apr-2023 13:45

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-25R
Collection Date:	12-Apr-2023 14:09

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-08 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method	I:SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 13:07
Arsenic	U		0.000400	0.00200	mg/L	1	25-Apr-2023 22:22
Barium	U		0.00190	0.00400	mg/L	1	25-Apr-2023 22:22
Beryllium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:22
Boron	0.814		0.0110	0.0200	mg/L	1	25-Apr-2023 22:22
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:22
Calcium	321		0.340	5.00	mg/L	10	26-Apr-2023 12:47
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:22
Cobalt	0.000622	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:22
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:22
Lithium	0.0480		0.00100	0.00500	mg/L	1	25-Apr-2023 22:22
Molybdenum	0.000748	J	0.000600	0.00500	mg/L	1	25-Apr-2023 22:22
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:22
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:22
MERCURY BY SW7470A		Method	I:SW7470A		Prep:SW7470A /	Prep:SW7470A / 26-Apr-2023	
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:06
ANIONS BY E300.0, REV 2.1, 1993		Meth	od:E300				Analyst: TH
Chloride	3.55		0.200	0.500	mg/L	1	14-Apr-2023 11:42
Fluoride	0.376		0.0500	0.100	mg/L	1	14-Apr-2023 11:42
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	14-Apr-2023 11:42
Sulfate	853		4.00	10.0	mg/L	20	14-Apr-2023 13:03
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Metho	od:E410.4				Analyst: TH
Chemical Oxygen Demand	5.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00
SPECIFIC CONDUCTANCE BY SM 2011	2510B-	Method	d:M2510 B				Analyst: CD
Specific Conductivity	1,860		5.00	5.00	umhos/cm @ 25.0 °C	1	26-Apr-2023 14:29
TOTAL DISSOLVED SOLIDS BY SN -2011		Metho	d:M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	1,480		5.00	10.0	mg/L	1	17-Apr-2023 12:00
PH BY SM4500H+ B-2011		lethod:	SM4500H+ B				Analyst: MZD
рН	6.88	Н	0.100	0.100	pH Units	1	22-Apr-2023 14:02
Temp Deg C @pH	20.5	Н	0	0	°C	1	22-Apr-2023 14:02

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-22A
Collection Date:	18-Apr-2023 11:13

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-09 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED	
FERRIC IRON - BY CALCULATION B SM3500FED	Υ	Method:S	M3500FED				Analyst: JHD	
Ferric Iron	0.116		0.0200	0.0500	mg/L	1	26-Apr-2023 13:56	
FERRIC IRON (DISS)- BY CALCULAT BY SM3500FED	ΓΙΟΝ		M3500FED olved)				Analyst: JHD	
Ferric Iron, Dissolved	0.0510		0.0200	0.0500	mg/L	1	26-Apr-2023 13:59	
ICP-MS METALS BY SW6020A		Method:	SW6020A		Prep:SW3010A /	24-Apr-2023	Analyst: JC	
Antimony	U		0.000400	0.00200	mg/L	1	26-Apr-2023 13:12	
Arsenic	0.00269		0.000400	0.00200	mg/L	1	25-Apr-2023 22:24	
Barium	0.00503		0.00190	0.00400	mg/L	1	25-Apr-2023 22:24	
Beryllium	U		0.000200	0.00200	mg/L	1	26-Apr-2023 13:12	
Boron	1.83		0.110	0.200	mg/L	10	26-Apr-2023 12:23	
Cadmium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:24	
Calcium	515		0.340	5.00	mg/L	10	26-Apr-2023 12:23	
Chromium	U		0.000400	0.00400	mg/L	1	25-Apr-2023 22:24	
Cobalt	0.00118	J	0.000200	0.00500	mg/L	1	25-Apr-2023 22:24	
Iron	0.159	J	0.0120	0.200	mg/L	1	25-Apr-2023 22:24	
Lead	U		0.000600	0.00200	mg/L	1	25-Apr-2023 22:24	
Lithium	0.329		0.0100	0.0500	mg/L	10	26-Apr-2023 12:23	
Magnesium	102		0.0100	0.200	mg/L	1	25-Apr-2023 22:24	
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 22:24	
Potassium	17.1		0.0180	0.200	mg/L	1	25-Apr-2023 22:24	
Selenium	U		0.00110	0.00200	mg/L	1	25-Apr-2023 22:24	
Sodium	161		0.0140	0.200	mg/L	1	25-Apr-2023 22:24	
Thallium	U		0.000200	0.00200	mg/L	1	25-Apr-2023 22:24	
DISSOLVED METALS BY SW6020A	Meth	od:SW602	20A (dissol	ved)	Prep:SW3010A /	Prep:SW3010A / 24-Apr-2023		
Iron	0.0511	J	0.0120	0.200	mg/L	1	Analyst: MSC 25-Apr-2023 13:49	
Molybdenum	U		0.000600	0.00500	mg/L	1	25-Apr-2023 13:49	
MERCURY BY SW7470A		Method:	SW7470A		Prep:SW7470A /	26-Apr-2023	Analyst: JS	
Mercury	U		0.0000300	0.000200	mg/L	1	26-Apr-2023 14:08	
ANIONS BY E300.0, REV 2.1, 1993		Metho	d:E300				Analyst: TH	
Chloride	2.32		0.200	0.500	mg/L	1	19-Apr-2023 13:35	
Fluoride	0.319		0.0500	0.100	mg/L	1	19-Apr-2023 13:35	
Nitrogen, Nitrate (As N)	0.0482	J	0.0300	0.100	mg/L	1	19-Apr-2023 13:35	
Sulfate	2,270		8.00	20.0	mg/L	40	19-Apr-2023 13:58	
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		Method	I:E410.4		-		Analyst: TH	
Chemical Oxygen Demand	6.00	J	5.00	15.0	mg/L	1	26-Apr-2023 11:00	
SPECIFIC CONDUCTANCE BY SM 28 2011	510B-	Method:	M2510 B				Analyst: CD	
Specific Conductivity	3,330		5.00	5.00	umhos/cm @ 25.0 °C	1	26-Apr-2023 14:29	

Client:	Altamira
Project:	WFEC / CCR Impoundment
Sample ID:	MW-22A
Collection Date:	18-Apr-2023 11:13

ANALYTICAL REPORT

WorkOrder:HS23040694 Lab ID:HS23040694-09 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SN -2011	12540C	Method:	M2540C				Analyst: DC
Total Dissolved Solids (Residue, Filterable)	3,560		5.00	10.0	mg/L	1	20-Apr-2023 11:00
ALKALINITY BY SM 2320B-2011		Method:	SM2320B				Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	212		5.00	5.00	mg/L	1	25-Apr-2023 19:12
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:12
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	25-Apr-2023 19:12
Alkalinity, Total (As CaCO3)	212		5.00	5.00	mg/L	1	25-Apr-2023 19:12
FERROUS IRON BY SM3500 FE B	r	Method:SI	M3500FED				Analyst: MZD
Ferrous Iron	0.0430	J	0.0200	0.0500	mg/L	1	19-Apr-2023 15:10
FERROUS IRON BY SM3500 FE D	N	Method:SI (disso)	M3500FED blved)				Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	19-Apr-2023 15:47
SULFIDE BY SM4500 S2-F-2011	N	lethod:SN	14500 S2-F				Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	22-Apr-2023 11:39
PH BY SM4500H+ B-2011	N	/lethod:SM	/4500H+ B				Analyst: CD
рН	7.08	Н	0.100	0.100	pH Units	1	25-Apr-2023 10:08
Temp Deg C @pH	20.8	Н	0	0	°C	1	25-Apr-2023 10:08

Client: Project: WorkOrder	Altamira WFEC / CCR : HS23040694	Impoundment				
Batch ID: 19	92834		Start Date:	24 Apr 2	023 13:00	End Date: 24 Apr 2023 13:00
Method: DIS	SS METALS PF	REP - WATER -	SW3010A			Prep Code: 3010A DISS
Sample ID		Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23040694-0	9		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
Batch ID: 19	92851		Start Date:	24 Apr 2	023 12:30	End Date: 24 Apr 2023 12:30
Method: WA	ATER - SW301	DA				Prep Code: 3010A
Sample ID		Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23040694-0	1		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	2		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	3		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	4		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0			10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0			10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0			10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0			10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	9		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
Batch ID: 19	92964		Start Date:	26 Apr 2	023 08:30	End Date: 26 Apr 2023 08:30
Method: ME	RCURY PREF	9 BY 7470A- WA	ATER			Prep Code: HG_WPR
Sample ID		Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23040694-0	1		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	2		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	3		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	4		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	5		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	6		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	7		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0			10 (mL)	10 (mL)	1	120 plastic HNO3
HS23040694-0	9		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2

Weight / Prep Log

Date: 28-Jun-23

DATES REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Sample ID	Client Sam	np ID Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 19283	4(0)	Test Name : DISSOLVED METALS	BY SW6020A		Matrix: Water	
HS23040694-09	MW-22A	18 Apr 2023 11:13		24 Apr 2023 13:00	25 Apr 2023 13:49	1
Batch ID: 19285	1(0)	Test Name: ICP-MS METALS BY S	W6020A		Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 17:50		24 Apr 2023 12:30	26 Apr 2023 12:55	1
HS23040694-01	MW-8	11 Apr 2023 17:50		24 Apr 2023 12:30	26 Apr 2023 12:37	10
HS23040694-01	MW-8	11 Apr 2023 17:50		24 Apr 2023 12:30	25 Apr 2023 22:10	1
HS23040694-02	MW-23A	11 Apr 2023 15:45		24 Apr 2023 12:30	26 Apr 2023 12:31	10
HS23040694-02	MW-23A	11 Apr 2023 15:45		24 Apr 2023 12:30	25 Apr 2023 21:54	1
HS23040694-03	MW-24	11 Apr 2023 18:55		24 Apr 2023 12:30	26 Apr 2023 12:57	1
HS23040694-03	MW-24	11 Apr 2023 18:55		24 Apr 2023 12:30	26 Apr 2023 12:39	10
HS23040694-03	MW-24	11 Apr 2023 18:55		24 Apr 2023 12:30	25 Apr 2023 22:12	1
HS23040694-04	DUP-3	11 Apr 2023 17:50		24 Apr 2023 12:30	26 Apr 2023 12:59	1
HS23040694-04	DUP-3	11 Apr 2023 17:50		24 Apr 2023 12:30	26 Apr 2023 12:41	10
HS23040694-04	DUP-3	11 Apr 2023 17:50		24 Apr 2023 12:30	25 Apr 2023 22:14	1
HS23040694-05	MW-9	13 Apr 2023 09:17		24 Apr 2023 12:30	26 Apr 2023 13:01	1
HS23040694-05	MW-9	13 Apr 2023 09:17		24 Apr 2023 12:30	25 Apr 2023 22:16	1
HS23040694-06	MW-10	13 Apr 2023 10:22		24 Apr 2023 12:30	26 Apr 2023 13:03	1
HS23040694-06	MW-10	13 Apr 2023 10:22		24 Apr 2023 12:30	26 Apr 2023 12:43	10
HS23040694-06	MW-10	13 Apr 2023 10:22		24 Apr 2023 12:30	25 Apr 2023 22:18	1
HS23040694-07	MW-11	13 Apr 2023 11:27		24 Apr 2023 12:30	26 Apr 2023 13:05	1
HS23040694-07	MW-11	13 Apr 2023 11:27		24 Apr 2023 12:30	26 Apr 2023 12:45	10
HS23040694-07	MW-11	13 Apr 2023 11:27		24 Apr 2023 12:30	25 Apr 2023 22:20	1
HS23040694-08	MW-25R	12 Apr 2023 14:09		24 Apr 2023 12:30	26 Apr 2023 13:07	1
HS23040694-08	MW-25R	12 Apr 2023 14:09		24 Apr 2023 12:30	26 Apr 2023 12:47	10
HS23040694-08	MW-25R	12 Apr 2023 14:09		24 Apr 2023 12:30	25 Apr 2023 22:22	1
HS23040694-09	MW-22A	18 Apr 2023 11:13		24 Apr 2023 12:30	26 Apr 2023 13:12	1
HS23040694-09	MW-22A	18 Apr 2023 11:13		24 Apr 2023 12:30	26 Apr 2023 12:23	10
HS23040694-09	MW-22A	18 Apr 2023 11:13		24 Apr 2023 12:30	25 Apr 2023 22:24	1
Batch ID: 19296	4(0)	Test Name : MERCURY BY SW747	A		Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 17:50		26 Apr 2023 08:30	26 Apr 2023 13:44	1
HS23040694-02	MW-23A	11 Apr 2023 15:45		26 Apr 2023 08:30	26 Apr 2023 13:45	1
HS23040694-03	MW-24	11 Apr 2023 18:55		26 Apr 2023 08:30	26 Apr 2023 13:50	1
HS23040694-04	DUP-3	11 Apr 2023 17:50		26 Apr 2023 08:30	26 Apr 2023 13:52	1
HS23040694-05	MW-9	13 Apr 2023 09:17		26 Apr 2023 08:30	26 Apr 2023 13:54	1
HS23040694-06	MW-10	13 Apr 2023 10:22		26 Apr 2023 08:30	26 Apr 2023 13:56	1
HS23040694-07	MW-11	13 Apr 2023 11:27		26 Apr 2023 08:30	26 Apr 2023 13:57	1
HS23040694-08	MW-25R	12 Apr 2023 14:09		26 Apr 2023 08:30	26 Apr 2023 14:06	1
HS23040694-09	MW-22A	18 Apr 2023 11:13		26 Apr 2023 08:30	26 Apr 2023 14:08	1

Client: Project: WorkOrder:	Altamira WFEC / HS2304(CCR Impoundment 0694			DATES RE	POR
Sample ID	Client Samp	ID Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4326	28(0)	Test Name: ANIONS BY E300.0, RE	V 2.1, 1993		Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 17:50			13 Apr 2023 14:19	50
HS23040694-01	MW-8	11 Apr 2023 17:50			13 Apr 2023 14:13	1
HS23040694-02	MW-23A	11 Apr 2023 15:45			13 Apr 2023 12:29	50
HS23040694-02	MW-23A	11 Apr 2023 15:45			13 Apr 2023 12:12	1
HS23040694-03	MW-24	11 Apr 2023 18:55			13 Apr 2023 15:00	50
HS23040694-03	MW-24	11 Apr 2023 18:55			13 Apr 2023 14:54	1
HS23040694-04	DUP-3	11 Apr 2023 17:50			13 Apr 2023 15:11	50
HS23040694-04	DUP-3	11 Apr 2023 17:50			13 Apr 2023 15:06	1
Batch ID: R4327	18(0)	Test Name : SPECIFIC CONDUCTAI	NCE BY SM 2510B-	2011	Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 17:50			14 Apr 2023 17:01	1
HS23040694-02	MW-23A	11 Apr 2023 15:45			14 Apr 2023 17:01	1
HS23040694-03	MW-24	11 Apr 2023 18:55			14 Apr 2023 17:01	1
HS23040694-04	DUP-3	11 Apr 2023 17:50			14 Apr 2023 17:01	1
HS23040694-05	MW-9	13 Apr 2023 09:17			14 Apr 2023 17:01	1
Batch ID: R4327	38 (0)	Test Name: ANIONS BY E300.0, RE	V 2.1, 1993		Matrix: Water	
HS23040694-05	MW-9	13 Apr 2023 09:17			14 Apr 2023 12:11	1
HS23040694-06	MW-10	13 Apr 2023 10:22			14 Apr 2023 13:38	20
HS23040694-06	MW-10	13 Apr 2023 10:22			14 Apr 2023 12:17	1
HS23040694-07	MW-11	13 Apr 2023 11:27			14 Apr 2023 13:44	20
HS23040694-07	MW-11	13 Apr 2023 11:27			14 Apr 2023 12:22	1
HS23040694-08	MW-25R	12 Apr 2023 14:09			14 Apr 2023 13:03	20
HS23040694-08	MW-25R	12 Apr 2023 14:09			14 Apr 2023 11:42	1
Batch ID: R4328	24(0)	Test Name : TOTAL DISSOLVED SC	LIDS BY SM2540C-	-2011	Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 17:50			14 Apr 2023 13:07	1
HS23040694-02	MW-23A	11 Apr 2023 15:45			14 Apr 2023 13:07	1
HS23040694-03	MW-24	11 Apr 2023 18:55			14 Apr 2023 13:07	1
HS23040694-04	DUP-3	11 Apr 2023 17:50			14 Apr 2023 13:07	1
Batch ID: R4329	24 (0)	Test Name : TOTAL DISSOLVED SC	LIDS BY SM2540C-	-2011	Matrix: Water	
HS23040694-05	MW-9	13 Apr 2023 09:17			17 Apr 2023 02:30	1
HS23040694-06	MW-10	13 Apr 2023 10:22			17 Apr 2023 02:30	1
HS23040694-07	MW-11	13 Apr 2023 11:27			17 Apr 2023 02:30	1
Batch ID: R4329	30(0)	Test Name : TOTAL DISSOLVED SC	LIDS BY SM2540C-	-2011	Matrix: Water	
HS23040694-08	MW-25R	12 Apr 2023 14:09			17 Apr 2023 12:00	1
Batch ID: R4331	49(0)	Test Name : ANIONS BY E300.0, RE	V 2.1, 1993		Matrix: Water	
HS23040694-09	MW-22A	18 Apr 2023 11:13			19 Apr 2023 13:58	40
000.00	MW-22A					

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Client: Project: WorkOrder:	Altamira WFEC / HS2304	CCR Impoundment 0694			DATES RE	POR
Sample ID	Client Sam	DID Collection Da	te Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4331	83 (0)	Test Name : FERROUS IRON	BY SM3500 FE D		Matrix: Water	
HS23040694-09	MW-22A	18 Apr 2023 1	1:13		19 Apr 2023 15:47	1
Batch ID: R4333	30(0)	Test Name : SPECIFIC CONE	UCTANCE BY SM 2510B-2	2011	Matrix: Water	
HS23040694-06	MW-10	13 Apr 2023 1	0:22		21 Apr 2023 16:54	1
HS23040694-07	MW-11	13 Apr 2023 1	1:27		21 Apr 2023 16:54	1
Batch ID: R4333	50(0)	Test Name : PH BY SM4500H	+ B-2011		Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 1	7:50		22 Apr 2023 11:11	1
HS23040694-02	MW-23A	11 Apr 2023 1	5:45		22 Apr 2023 11:11	1
HS23040694-03	MW-24	11 Apr 2023 1	8:55		22 Apr 2023 11:11	1
HS23040694-04	DUP-3	11 Apr 2023 1	7:50		22 Apr 2023 11:11	1
HS23040694-05	MW-9	13 Apr 2023 (9:17		22 Apr 2023 11:11	1
Batch ID: R4333	52(0)	Test Name : SULFIDE BY SM	4500 S2-F-2011		Matrix: Water	
HS23040694-09	MW-22A	18 Apr 2023 1	1:13		22 Apr 2023 11:39	1
Batch ID: R4333	54 (0)	Test Name : PH BY SM4500H	+ B-2011		Matrix: Water	
HS23040694-08	MW-25R	12 Apr 2023 1	4:09		22 Apr 2023 14:02	1
Batch ID: R4334	12(0)	Test Name : TOTAL DISSOLV	ED SOLIDS BY SM2540C-	2011	Matrix: Water	
-IS23040694-09	MW-22A	18 Apr 2023 1	1:13		20 Apr 2023 11:00	1
Batch ID: R4336	10(0)	Test Name : PH BY SM4500H	+ B-2011		Matrix: Water	
-IS23040694-06	MW-10	13 Apr 2023 1	0:22		25 Apr 2023 10:08	1
-IS23040694-09	MW-22A	18 Apr 2023 1			25 Apr 2023 10:08	1
Batch ID: R4336	30(0)	Test Name : ALKALINITY BY	SM 2320B-2011		Matrix: Water	
-IS23040694-09	MW-22A	18 Apr 2023 1	1:13		25 Apr 2023 19:12	1
Batch ID: R4336	32(0)	Test Name : CHEMICAL OXY		REV 2.0. 1993	Matrix: Water	
HS23040694-01	MW-8	11 Apr 2023 1			26 Apr 2023 11:00	1
HS23040694-02	MW-23A	11 Apr 2023 1			26 Apr 2023 11:00	1
HS23040694-03	MW-24	11 Apr 2023 1			26 Apr 2023 11:00	1
-IS23040694-04	DUP-3	11 Apr 2023 1			26 Apr 2023 11:00	1
-IS23040694-05	MW-9	13 Apr 2023 (9:17		26 Apr 2023 11:00	1
HS23040694-06	MW-10	13 Apr 2023 1	0:22		26 Apr 2023 11:00	1
HS23040694-07	MW-11	13 Apr 2023 1	1:27		26 Apr 2023 11:00	1
HS23040694-08	MW-25R	12 Apr 2023 1	4:09		26 Apr 2023 11:00	1
HS23040694-09	MW-22A	18 Apr 2023 1	1:13		26 Apr 2023 11:00	1
Batch ID: R43364	48(0)	Test Name : FERRIC IRON -	BY CALCULATION BY SM3	500FED	Matrix: Water	
HS23040694-09	MW-22A	18 Apr 2023 1	1:13		26 Apr 2023 13:56	1
Batch ID: R43364	49(0)	Test Name : FERRIC IRON (E	DISS)- BY CALCULATION E	BY SM3500FED	Matrix: Water	
-IS23040694-09	MW-22A	18 Apr 2023 1			26 Apr 2023 13:59	1

Client: Project: WorkOrder:	Altamira WFEC HS2304	DATES REPOR					
Sample ID	Client Sam	ıp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R4336	53 (0)	Test Name :	SPECIFIC CONDUCT	ANCE BY SM 2510B-	2011	Matrix: Water	
HS23040694-08	MW-25R		12 Apr 2023 14:09			26 Apr 2023 14:29	1
HS23040694-09	MW-22A		18 Apr 2023 11:13			26 Apr 2023 14:29	1
Batch ID: R4336	57(0)	Test Name :	PH BY SM4500H+ B-2	2011		Matrix: Water	
HS23040694-07	MW-11		13 Apr 2023 11:27			26 Apr 2023 15:03	1
Batch ID: R4336	64(0)	Test Name :	FERROUS IRON BY S	SM3500 FE B		Matrix: Water	
HS23040694-09	MW-22A		18 Apr 2023 11:13			19 Apr 2023 15:10	1
Batch ID: R4337	45(0)	Test Name :	PH BY SM4500H+ B-2	2011		Matrix: Water	
HS23040694-07	MW-11		13 Apr 2023 11:27			26 Apr 2023 13:45	1

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: 1928	34(0)	Inst	rument:	ICPMS05	Ме	eurou.	DISSOLVED DISSOLVED	METALS BY	SW6020A
MBLK	Sample ID:	MBLKF1-192834		Units:	mg/L	Ana	lysis Date:	25-Apr-2023	12:42
Client ID:		Ru	un ID: ICPI	MS05_433508	SeqNo: 7	259702	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		U	0.200						
Molybdenum		U	0.00500						
MBLK	Sample ID:	MBLK-192834		Units:	mg/L	Ana	lysis Date:	25-Apr-2023	12:40
Client ID:		Ru	un ID: ICPI	MS05_433508	SeqNo: 7	259701	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		U	0.200						
Molybdenum		U	0.00500						
LCS	Sample ID:	LCS-192834		Units:	mg/L	Ana	lysis Date:	25-Apr-2023	12:44
Client ID:		Ru	un ID: ICPI	MS05_433508	SeqNo: 7	259703	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		4.939	0.200	5	0	98.8	80 - 120		
Molybdenum		0.04494	0.00500	0.05	0	89.9	80 - 120		
MS	Sample ID:	HS23041141-02MS	5	Units:	mg/L	Ana	lysis Date:	25-Apr-2023	13:13
Client ID:		Ru	un ID: ICPI	MS05_433508	SeqNo: 7	259792	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		4.784	0.200	5	0.005224	95.6	75 - 125		
Molybdenum		0.06035	0.00500	0.05	0.009597	102	75 - 125		
MSD	Sample ID:	HS23041141-02MS	SD.	Units:	mg/L	Ana	lysis Date:	25-Apr-2023	13:15
Client ID:		Ru	un ID: ICPI	MS05_433508	SeqNo: 7	259793	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Iron		4.067	0.200	5	0.005224	81.2	75 - 125	4.784	16.2 20
Molybdenum		0.05103	0.00500	0.05	0.009597	82.9	75 - 125	0.06035	16.7 20

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Date: 28-Jun-23

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: 192	834(0)	Instr	ument:	ICPMS05	М	emou.	DISSOLVED	METALS BY))	SW602	20A
PDS	Sample ID:	HS23041141-02PD	s	Units:	mg/L	Ana	alysis Date:	25-Apr-2023	13:17	
Client ID:		Ru	n ID: ICPN	/IS05_433508	SeqNo: 7	259794	PrepDate:	24-Apr-2023	DI	=: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Iron		9.552	0.200	10	0.005224	95.5	75 - 125			
Molybdenum		0.1039	0.00500	0.1	0.009597	94.3	75 - 125			
SD	Sample ID:	HS23041141-02SD		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	13:08	
Client ID:		Ru	n ID: ICPN	NS05_433508	SeqNo: 7	259790	PrepDate:	24-Apr-2023	DI	=: 5
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit Qual
Iron		U	1.00					0.005224		0 10
Molybdenum		0.009595	0.0250					0.009597		0 10
The following sam	iples were analyze	ed in this batch: HS230	40694-09							

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: 19	92851 (0)	In	strument:	ICPMS06	M	lethod: I	CP-MS MET	ALS BY SWE	6020A
MBLK	Sample ID:	MBLK-192851		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	21:50
Client ID:			Run ID: ICP	MS06_433539	SeqNo:	7261270	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		U	0.00200						
Arsenic		U	0.00200						
Barium		U	0.00400						
Beryllium		U	0.00200						
Boron		U	0.0200						
Cadmium		U	0.00200						
Calcium		0.09116	0.500						
Chromium		U	0.00400						
Cobalt		U	0.00500						
Iron		U	0.200						
Lead		U	0.00200						
Lithium		U	0.00500						
Magnesium		0.01156	0.200						
Molybdenum		U	0.00500						
Potassium		U	0.200						
Selenium		U	0.00200						
Sodium		U	0.200						
Thallium		U	0.00200						

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Date: 28-Jun-23

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	192851(0)	In	strument:	trument: ICPMS06 Method: ICP-MS METALS BY SW6020A					
LCS	Sample ID:	LCS-192851		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	21:52
Client ID:			Run ID: ICP	MS06_433539	SeqNo: 7	261271	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.04835	0.00200	0.05	0	96.7	80 - 120		
Arsenic		0.04884	0.00200	0.05	0	97.7	80 - 120		
Barium		0.04822	0.00400	0.05	0	96.4	80 - 120		
Beryllium		0.04844	0.00200	0.05	0	96.9	80 - 120		
Boron		0.4899	0.0200	0.5	0	98.0	80 - 120		
Cadmium		0.04981	0.00200	0.05	0	99.6	80 - 120		
Calcium		4.638	0.500	5	0	92.8	80 - 120		
Chromium		0.04633	0.00400	0.05	0	92.7	80 - 120		
Cobalt		0.04865	0.00500	0.05	0	97.3	80 - 120		
Iron		4.829	0.200	5	0	96.6	80 - 120		
Lead		0.04797	0.00200	0.05	0	95.9	80 - 120		
Lithium		0.1005	0.00500	0.1	0	101	80 - 120		
Magnesium		4.871	0.200	5	0	97.4	80 - 120		
Molybdenun	n	0.04633	0.00500	0.05	0	92.7	80 - 120		
Potassium		4.694	0.200	5	0	93.9	80 - 120		
Selenium		0.05263	0.00200	0.05	0	105	80 - 120		
Sodium		4.782	0.200	5	0	95.6	80 - 120		
Thallium		0.04362	0.00200	0.05	0	87.2	80 - 120		

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Date: 28-Jun-23

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	192851(0)	Inst	rument:	ICPMS06	M	ethod: I	CP-MS MET	ALS BY SWE	6020A
MS	Sample ID:	HS23040694-02M	S	Units:	mg/L	Ana	alysis Date:	25-Apr-2023	21:58
Client ID:	MW-23A	R	un ID: ICPN	/IS06_433539	SeqNo: 7	261274	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.04819	0.00200	0.05	0.000033	96.3	80 - 120		
Arsenic		0.05373	0.00200	0.05	0.000667	106	80 - 120		
Barium		0.05141	0.00400	0.05	0.002698	97.4	80 - 120		
Beryllium		0.04636	0.00200	0.05	0.000035	92.7	80 - 120		
Boron		1.537	0.0200	0.5	1.076	92.3	80 - 120		E
Cadmium		0.04796	0.00200	0.05	0.000016	95.9	80 - 120		
Calcium		547.6	0.500	5	564.3	-335	80 - 120		SEC
Chromium		0.04862	0.00400	0.05	-0.000228	97.7	80 - 120		
Cobalt		0.05004	0.00500	0.05	0.001054	98.0	80 - 120		
Iron		5.038	0.200	5	0.03528	100	80 - 120		
Lead		0.04982	0.00200	0.05	0.000068	99.5	80 - 120		
Lithium		0.3323	0.00500	0.1	0.2416	90.8	80 - 120		E
Magnesium		97.17	0.200	5	93.76	68.0	80 - 120		SC
Molybdenur	n	0.04868	0.00500	0.05	0.000182	97.0	80 - 120		
Potassium		17.7	0.200	5	13.15	91.0	80 - 120		
Selenium		0.05774	0.00200	0.05	0.000358	115	80 - 120		
Sodium		149.6	0.200	5	148.9	14.8	80 - 120		SC
Thallium		0.04578	0.00200	0.05	0.000252	91.1	80 - 120		

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: 1928	51(0)	In	strument:	ICPMS06	М	ethod: I	ICP-MS MET	ALS BY SW6	020A		
MSD	Sample ID:	HS23040694-021	MSD	Units	s: mg/L	An	alysis Date:	25-Apr-2023	22:00		
Client ID: MW-	23A		Run ID: ICPI	MS06_433539	SeqNo: 7	7261232	PrepDate:	24-Apr-2023	DF: '	1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		F %RPD L	RPD .imit (Qual
Antimony		0.04718	0.00200	0.05	0.000033	94.3	80 - 120	0.04819	2.12	20	
Arsenic		0.05242	0.00200	0.05	0.000667	104	80 - 120	0.05373	2.48	20	
Barium		0.05145	0.00400	0.05	0.002698	97.5	80 - 120	0.05141	0.0797	20	
Beryllium		0.04648	0.00200	0.05	0.000035	92.9	80 - 120	0.04636	0.252	20	
Boron		1.546	0.0200	0.5	1.076	94.0	80 - 120	1.537	0.575	20	E
Cadmium		0.04804	0.00200	0.05	0.000016	96.0	80 - 120	0.04796	0.156	20	
Calcium		539.1	0.500	5	564.3	-505	80 - 120	547.6	1.56	20	SEO
Chromium		0.04716	0.00400	0.05	-0.000228	94.8	80 - 120	0.04862	3.05	20	
Cobalt		0.04861	0.00500	0.05	0.001054	95.1	80 - 120	0.05004	2.91	20	
Iron		4.836	0.200	5	0.03528	96.0	80 - 120	5.038	4.1	20	
Lead		0.04902	0.00200	0.05	0.000068	97.9	80 - 120	0.04982	1.64	20	
Lithium		0.3317	0.00500	0.1	0.2416	90.1	80 - 120	0.3323	0.198	20	E
Magnesium		92.55	0.200	5	93.76	-24.3	80 - 120	97.17	4.87	20	SO
Molybdenum		0.04873	0.00500	0.05	0.000182	97.1	80 - 120	0.04868	0.105	20	
Potassium		17.32	0.200	5	13.15	83.5	80 - 120	17.7	2.15	20	
Selenium		0.05862	0.00200	0.05	0.000358	117	80 - 120	0.05774	1.51	20	
Sodium		145.9	0.200	5	148.9	-60.1	80 - 120	149.6	2.54	20	SO
Thallium		0.04532	0.00200	0.05	0.000252	90.1	80 - 120	0.04578	1.02	20	

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QC BATCH REPORT

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Boron

Calcium

Lithium

Client: Altamira Project: WFEC / CCR Impoundment WorkOrder: HS23040694

Batch ID:	192851(0)	Instr	ument: I	CPMS06	Me	ethod: I	CP-MS MET	ALS BY SWE	020A
PDS	Sample ID:	HS23040694-02PD	S	Units:	mg/L	Ana	alysis Date:	25-Apr-2023	22:02
Client ID:	MW-23A	Ru	n ID: ICPM	S06_433539	SeqNo: 7	261233	PrepDate:	24-Apr-2023	DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Antimony		0.09258	0.00200	0.1	0.000033	92.6	75 - 125		
Arsenic		0.104	0.00200	0.1	0.000667	103	75 - 125		
Barium		0.09677	0.00400	0.1	0.002698	94.1	75 - 125		
Beryllium		0.08896	0.00200	0.1	0.000035	88.9	75 - 125		
Cadmium		0.09211	0.00200	0.1	0.000016	92.1	75 - 125		
Chromium		0.09716	0.00400	0.1	-0.000228	97.4	75 - 125		
Cobalt		0.1014	0.00500	0.1	0.001054	100	75 - 125		
Iron		9.745	0.200	10	0.03528	97.1	75 - 125		
Lead		0.09673	0.00200	0.1	0.000068	96.7	75 - 125		
Magnesium		97.68	0.200	10	93.76	39.1	75 - 125		SC
Molybdenun	n	0.08957	0.00500	0.1	0.000182	89.4	75 - 125		
Potassium		21.78	0.200	10	13.15	86.3	75 - 125		
Selenium		0.1157	0.00200	0.1	0.000358	115	75 - 125		
Sodium		149	0.200	10	148.9	1.06	75 - 125		SC
Thallium		0.1009	0.00200	0.1	0.000252	101	75 - 125		
PDS	Sample ID:	HS23040694-02PD	s	Units:	mg/L	Ana	alysis Date:	26-Apr-2023	12:35
Client ID:	MW-23A	Ru	n ID: ICPM	S06_433624	SeqNo: 7	262377	PrepDate:	24-Apr-2023	DF: 10
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual

5

1

100

1.139

552.4

0.2463

102

68.9

94.4

75 - 125

75 - 125

70 - 125

SO

QC BATCH REPORT

6.241

621.2

1.19

0.200

5.00

0.0500

Date: 28-Jun-23

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Client ID: MW-23A Run ID: ICPMS06_433539 SeqNo: 7261273 Analyte Result PQL SPK Val SPK Ref Value %REC Antimony U 0.0100 SPK Val %REC %REC Antimony U 0.0100 SPK Val %REC Arsenic U 0.0100 SPK Val %REC Barium U 0.0200 SPK Val SPK Val Beryllium U 0.0100 SPK Val SPK Val Cadmium U 0.0100 SPK Val SPK Val Cobalt 0.00102 SPK Val SPK Val SPK Val Iron U 0.0200 SPK Val SPK Val SPK Val Iron U 0.0250 SPK Val SPK Val SPK Val SPK Val Magnesium 92.47 1.00 SPK Val <	PrepDate: 24-Apr-2023 Control Limit RPD Ref Value 0.000033 0.000667 0.002698 0.000035 0.000016 0.000228 0.001054 0.03528 0.000068 0.000068	DF: 5 %D Limit Qua 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 1
Analyte Result PQL SPK Val Value %REC Antimony U 0.0100	Limit Value 0.000033 0.000667 0.002698 0.000035 0.000016 -0.000228 0.001054 0.03528	%D Limit Qua 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10 0 10
Arsenic U 0.0100 Barium U 0.0200 Beryllium U 0.0100 Cadmium U 0.0100 Chromium U 0.0200 Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100	0.000667 0.002698 0.000035 0.000016 -0.000228 0.001054 0.03528	0 10 0 10 0 10 0 10 0 10 0 10 0 10
Barium U 0.0200 Beryllium U 0.0100 Cadmium U 0.0100 Chromium U 0.0200 Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100	0.002698 0.000035 0.000016 -0.000228 0.001054 0.03528	0 10 0 10 0 10 0 10 0 10 0 10
Beryllium U 0.0100 Cadmium U 0.0100 Chromium U 0.0200 Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100 Magnesium 92.47 1.00	0.000035 0.000016 -0.000228 0.001054 0.03528	0 10 0 10 0 10 0 10 0 10
Cadmium U 0.0100 Chromium U 0.0200 Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100 Magnesium 92.47 1.00	0.000016 -0.000228 0.001054 0.03528	0 10 0 10 0 10
Chromium U 0.0200 Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100 Magnesium 92.47 1.00	-0.000228 0.001054 0.03528	0 10 0 10
Cobalt 0.001021 0.0250 Iron U 1.00 Lead U 0.0100 Magnesium 92.47 1.00	0.001054 0.03528	0 10
Iron U 1.00 Lead U 0.0100 Magnesium 92.47 1.00	0.03528	
Lead U 0.0100 Magnesium 92.47 1.00		0 10
Magnesium 92.47 1.00	0.000068	0 10
-		0 10
Molybdenum U 0.0250	93.76	1.38 10
,	0.000182	0 10
Potassium 12.67 1.00	13.15	3.61 10
Selenium U 0.0100	0.000358	0 10
Sodium 145.9 1.00	148.9	1.98 10
Thallium U 0.0100	0.000252	0 10

Inallium		U	0.0100					0.000252		0 10	
SD	Sample ID:	HS23040694-02SD		Units:	mg/L	Ana	lysis Date:	26-Apr-2023	12:33		
Client ID:	MW-23A	Run I	D: ICPM	IS06_433624	SeqNo:	7262376	PrepDate:	24-Apr-2023	DF	: 50	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Boron		1.266	1.00					1.139	11	.2 10	F
Calcium		543.7	25.0					552.4	1.5	58 10	
Lithium		0.2451	0.250					0.2463		0 10	
The followin	g samples were analyze	d in this batch: HS23040 HS23040 HS23040 HS23040	694-05	HS2304069 HS2304069		HS2304069 HS2304069		HS23040694-0 HS23040694-0			

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	192964(0)	Instrume	ent: HG04	Method:	MERCURY BY SW7470A	
MBLK	Sample ID:	MBLK-192964	Units:	mg/L A	nalysis Date: 26-Apr-202	3 13:16
Client ID:		Run ID	: HG04_433673	SeqNo: 7263128	PrepDate: 26-Apr-202	3 DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref C Limit Value	RPD %RPD Limit Qual
Mercury		U 0.0	00200			
LCS	Sample ID:	LCS-192964	Units:	mg/L A	nalysis Date: 26-Apr-202	3 13:20
Client ID:		Run ID	: HG04_433673	SeqNo: 7263129	PrepDate: 26-Apr-202	3 DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Mercury		0.00446 0.0	00200 0.005	0 89.2	2 80 - 120	
MS	Sample ID:	HS23040694-02MS	Units:	mg/L A	nalysis Date: 26-Apr-202	3 13:47
Client ID:	MW-23A	Run ID	: HG04_433673	SeqNo: 7263143	PrepDate: 26-Apr-202	3 DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Mercury		0.00485 0.0	00200 0.005	0.000005 96.9	9 75 - 125	
MSD	Sample ID:	HS23040694-02MSD	Units:	mg/L A	nalysis Date: 26-Apr-202	3 13:49
Client ID:	MW-23A	Run ID	: HG04_433673	SeqNo: 7263144	PrepDate: 26-Apr-202	3 DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %REC	Control RPD Ref Limit Value	RPD %RPD Limit Qual
Mercury		0.00508 0.0	00200 0.005	0.000005 102	2 75 - 125 0.0048	5 4.63 20
The following	g samples were analyze	d in this batch: HS2304069 HS2304069 HS2304069	94-05 HS2304069			

Client: Project: WorkOrder	W	tamira FEC / CCR Impo S23040694	undment					QC BA	TCH REPORT
Batch ID: R4	432628(0)	Ins	strument:	ICS-Integrion	м	ethod:	ANIONS BY	E300.0, REV	2.1, 1993
MBLK	Sample ID:	MBLK		Units:	mg/L	An	alysis Date:	13-Apr-2023	12:00
Client ID:		I	Run ID: ICS-	Integrion_4326	28 SeqNo: 7	7236424	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		U	0.500						
Fluoride		U	0.100						
Nitrogen, Nitra	te (As N)	U	0.100						
Sulfate		U	0.500						
LCS	Sample ID:	LCS		Units:	mg/L	An	alysis Date:	13-Apr-2023	12:06
Client ID:		I	Run ID: ICS-	Integrion_4326	28 SeqNo: 7	7236425	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		19.68	0.500	20	0	98.4	90 - 110		
Fluoride		4.036	0.100	4	0	101	90 - 110		
Nitrogen, Nitra	ite (As N)	3.962	0.100	4	0	99.1	90 - 110		
Sulfate		19.55	0.500	20	0	97.8	90 - 110		
MS	Sample ID:	HS23040694-02N	IS	Units:	mg/L	An	alysis Date:	13-Apr-2023	12:18
Client ID: M	W-23A	I	Run ID: ICS-	Integrion_4326	28 SeqNo: 7	236427	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		21.86	0.500	10	12.16	97.0	80 - 120		
Fluoride		2.095	0.100	2	0.302	89.6	80 - 120		
Nitrogen, Nitra	ite (As N)	1.827	0.100	2	0	91.3	80 - 120		
Sulfate		1696	0.500	10	1763	-672	80 - 120		SEG
MS	Sample ID	HS23040411-01N	IS	Units:	mg/L	An	alysis Date:	13-Apr-2023	17:54
Client ID:		I	Run ID: ICS-	Integrion_4326		7236472	PrepDate:		DF: 10
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		609.2	5.00	100	536.6	72.6	80 - 120		S
Fluoride		24.99	1.00	20	4.704	101	80 - 120		
Nitrogen, Nitra	te (As N)	29.92	1.00	20	10.5	97.1	80 - 120		
Sulfate		933.2	5.00	100	905	28.3	80 - 120		S

Date: 28-Jun-23

ALS Houston, US

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R432	628(0)	Instr	rument:	ICS-Integrion	м	ethod: A	NIONS BY	E300.0, REV	2.1, 1993	
MSD	Sample ID:	HS23040694-02MS	D	Units: m	ig/L	Ana	alysis Date:	13-Apr-2023	12:24	
Client ID: MW-2	23A	Ru	in ID: ICS-	Integrion_432628	SeqNo: 7	236428	PrepDate:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPI %RPD Lim	
Chloride		21.99	0.500	10	12.16	98.3	80 - 120	21.86	0.597 2	0
Fluoride		2.345	0.100	2	0.302	102	80 - 120	2.095	11.3 2	0
Nitrogen, Nitrate (As N)	1.837	0.100	2	0	91.9	80 - 120	1.827	0.568 2	0
Sulfate		1698	0.500	10	1763	-652	80 - 120	1696	0.122 2	0 SEO
MSD	Sample ID:	HS23040411-01MS	D	Units: m	ig/L	Ana	alysis Date:	13-Apr-2023	18:00	
Client ID:		Ru	In ID: ICS-	Integrion_432628	SeqNo: 7	236473	PrepDate:		DF: 10	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPI %RPD Lim	
Chloride		608.9	5.00	100	536.6	72.3	80 - 120	609.2	0.0558 2	0 SO
Fluoride		25.07	1.00	20	4.704	102	80 - 120	24.99	0.332 2	0
Nitrogen, Nitrate ((As N)	29.95	1.00	20	10.5	97.2	80 - 120	29.92	0.104 2	0
Sulfate		930.2	5.00	100	905	25.2	80 - 120	933.2	0.328 2	0 SO
The following samp	les were analyze	ed in this batch: HS230	040694-01	HS23040694-0	02	HS230406	94-03	HS23040694	-04	

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R43	2718(0)	Instrume	nt:	WetChem_HS	Μ	lethod:	SPECIFIC Co 2011	ONDUCTANO	CE BY SM 2510B-
MBLK	Sample ID:	MBLK-R432718		Units:	umhos/cm 25.0 °C	@ Ar	nalysis Date:	14-Apr-2023	8 17:01
Client ID:		Run ID:	Wet	Chem_HS_4327	18 SeqNo: 7	7238632	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Conduct	tivity	U	5.00						
LCS	Sample ID:	LCS-R432718		Units:	umhos/cm 25.0 °C	@ Ar	nalysis Date:	14-Apr-2023	3 17:01
Client ID:		Run ID:	Wet	Chem_HS_4327	18 SeqNo: 7	7238631	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Conduct	tivity	1390	5.00	1413	0	98.4	80 - 120		
DUP	Sample ID:	HS23040694-02DUP		Units:	umhos/cm 25.0 °C	@ Ar	nalysis Date:	14-Apr-2023	8 17:01
Client ID: MW	-23A	Run ID:	Wet	Chem_HS_4327	18 SeqNo: 7	7238633	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Specific Conduct	tivity	3310	5.00					3280	0.91 20
The following sam	ples were analyze	ed in this batch: HS2304069 HS2304069		HS2304069	4-02	HS23040	694-03	HS23040694	-04

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Project: WorkOrder:		EC / CCR 23040694	Impoundm	nent					QC BA	TCH REPORT
Batch ID: R43273	8(0)		Instrume	ent:	ICS-Integrion	М	ethod:	ANIONS BY	E300.0, REV	2.1, 1993
MBLK	Sample ID:	MBLK			Units: n	ng/L	An	alysis Date:	14-Apr-2023	14:36
Client ID:			Run ID	ICS	-Integrion_432738	SeqNo: 7	239550	PrepDate:		DF: 1
Analyte		R	esult	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride			U	0.500						
Fluoride			U	0.100						
Nitrogen, Nitrate (As	N)		U	0.100						
Nitrogen, Nitrite (As	N)		U	0.100						
Sulfate			U	0.500						
LCS	Sample ID:	LCS			Units: n	ng/L	An	alysis Date:	14-Apr-2023	14:44
Client ID:			Run ID	: ICS	-Integrion_432738	SeqNo: 7	239551	PrepDate:		DF: 1
Analyte		R	esult	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride			19.5	0.500	20	0	97.5	90 - 110		
Fluoride		4	4.074	0.100	4	0	102	90 - 110		
Nitrogen, Nitrate (As	N)	;	3.936	0.100	4	0	98.4	90 - 110		
Nitrogen, Nitrite (As	N)	;	3.943	0.100	4	0	98.6	90 - 110		
Sulfate			19.2	0.500	20	0	96.0	90 - 110		
MS	Sample ID:	HS2304072	23-01MS		Units: n	ng/L	An	alysis Date:	14-Apr-2023	14:24
Client ID:			Run ID	: ICS	-Integrion_432738	SeqNo: 7	239548	PrepDate:		DF: 1
Analyte		R	esult	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		ł	57.35	0.500	10	49.54	78.1	80 - 120		SO
Fluoride		:	2.653	0.100	2	0.551	105	80 - 120		
Nitrogen, Nitrate (As	N)	:	3.546	0.100	2	1.569	98.9	80 - 120		
Nitrogen, Nitrite (As	N)		1.847	0.100	2	0	92.4	80 - 120		
Sulfate		:	59.31	0.500	10	53.38	59.3	80 - 120		SO

Altamira

Client:

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QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

QC BATCH REPORT

Batch ID: R432738 (0)	Inst	trument:	ICS-Integrion	M	ethod: A	ANIONS BY	E300.0, REV	2.1, 1993		
MSD Sample IE	D: HS23040723-01M	SD	Units:	mg/L	Ana	alysis Date:	14-Apr-2023	14:30		
Client ID:	R	Run ID: ICS	-Integrion_43273	8 SeqNo: 7	239549	PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	R %RPD Li	PD imit Q	≀ual
Chloride	57.34	0.500	10	49.54	78.0	80 - 120	57.35	0.0122	20	SO
Fluoride	2.623	0.100	2	0.551	104	80 - 120	2.653	1.14	20	
Nitrogen, Nitrate (As N)	3.544	0.100	2	1.569	98.8	80 - 120	3.546	0.0536	20	
Nitrogen, Nitrite (As N)	1.841	0.100	2	0	92.0	80 - 120	1.847	0.347	20	
Sulfate	59.26	0.500	10	53.38	58.8	80 - 120	59.31	0.0852	20	SO
The following samples were anal	yzed in this batch: HS23	3040694-05	HS23040694	-06	HS230406	94-07	HS23040694	-08		

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	R432824 (0)	Instrume	nt:	Balance1	Me	eniou.	TOTAL DISS 2011	OLVED SOL	IDS BY SM2540C-
MBLK	Sample ID:	WBLK-04142023		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID:	Bala	nce1_432824	SeqNo: 7	241643	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissol [:] Filterable)	ved Solids (Residue,	U	10.0						
LCS	Sample ID:	LCS-04142023		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID:	Bala	ince1_432824	SeqNo: 7	241642	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissol [;] Filterable)	ved Solids (Residue,	1060	10.0	1000	0	106	85 - 115		
DUP	Sample ID:	HS23040697-05DUP		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:		Run ID:	Bala	ince1_432824	SeqNo: 7	241632	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Total Dissol [:] Filterable)	ved Solids (Residue,	2240	10.0					2236	0.179 20
DUP	Sample ID:	HS23040694-02DUP		Units:	mg/L	Ana	alysis Date:	14-Apr-2023	13:07
Client ID:	MW-23A	Run ID:	Bala	ince1_432824	SeqNo: 7	241624	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qua
Total Dissol [.] Filterable)	ved Solids (Residue,	3240	10.0					3220	0.619 20
he following	samples were analyze	d in this batch: HS2304069	4-01	HS2304069	94-02	HS230406	94-03	HS23040694	-04

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R432924 (0)	Ir	nstrument:	Balance1	Met	nou.	TOTAL DISS 2011	OLVED SOL	DS BY SM2540C-
MBLK Sample	D: WBLK-0417202	3	Units:	mg/L	Ana	alysis Date:	17-Apr-2023	02:30
Client ID:		Run ID: Ba	alance1_432924	SeqNo: 724	44450	PrepDate:		DF: 1
Analyte	Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit	=	RPD %RPD Limit Qual
Total Dissolved Solids (Resid Filterable)	ue, U	10.	0					
LCS Sample	D: LCS-04172023		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	02:30
Client ID:		Run ID: Ba	alance1_432924	SeqNo: 724	44449	PrepDate:		DF: 1
Analyte	Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissolved Solids (Resid Filterable)	ue, 1074	. 10.	0 1000	0	107	85 - 115		
DUP Sample	D: HS23040843-04	DUP	Units:	mg/L	Ana	alysis Date:	17-Apr-2023	02:30
Client ID:		Run ID: Ba	alance1_432924	SeqNo: 724	44446	PrepDate:		DF: 1
Analyte	Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissolved Solids (Resid Filterable)	ue, 6760	10.	0				6780	0.295 20
DUP Sample	D: HS23040819-04	DUP	Units:	mg/L	Ana	alysis Date:	17-Apr-2023	02:30
Client ID:		Run ID: Ba	alance1_432924	SeqNo: 724	44440	PrepDate:		DF: 1
Analyte	Result	PQ	L SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissolved Solids (Resic Filterable)	ue, 630	10.	0				632	0.317 20
he following samples were ana	lyzed in this batch: HS	523040694-05	HS230406	94-06 H	S230406	94-07		

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R43	2930(0)	Instrumer	nt:	Balance1	М	eniou.	TOTAL DISS 2011	OLVED SOL	IDS BY SM2540C
MBLK	Sample ID:	WBLK-04172023		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		Run ID:	Bala	ince1_432930	SeqNo: 7	244542	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissolved S Filterable)	Solids (Residue,	U	10.0						
LCS	Sample ID:	LCS-04172023		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		Run ID:	Bala	ince1_432930	SeqNo: 7	244541	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissolved S Filterable)	Solids (Residue,	1074	10.0	1000	0	107	85 - 115		
DUP	Sample ID:	HS23040897-02DUP		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		Run ID:	Bala	ince1_432930	SeqNo: 7	244536	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissolved S Filterable)	Solids (Residue,	728	10.0					730	0.274 20
DUP	Sample ID:	HS23040808-01DUP		Units:	mg/L	Ana	alysis Date:	17-Apr-2023	12:00
Client ID:		Run ID:	Bala	ince1_432930	SeqNo: 7	244527	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissolved S Filterable)	Solids (Residue,	786	10.0					784	0.255 20

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Date: 28-Jun-23

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R433149 (0)		Ins	trument:	ICS-Integrion	М	ethod:	ANIONS BY	E300.0, REV	2.1, 1993
MBLK Sample ID:	MBLK			Units:	mg/L	An	alysis Date:	19-Apr-2023	11:18
Client ID:		F	Run ID: ICS	-Integrion_4331	49 SeqNo: 7	7249953	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		U	0.500						
Fluoride		U	0.100)					
Nitrogen, Nitrate (As N)		U	0.100)					
Nitrogen, Nitrite (As N)		U	0.100)					
Nitrate/Nitrite (as N)		U	0.200	1					
Sulfate		U	0.500						
LCS Sample ID:	LCS			Units:	mg/L	An	alysis Date:	19-Apr-2023	11:24
Client ID:		F	Run ID: ICS	-Integrion_4331	49 SeqNo: 7	7249954	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		20.2	0.500	20	0	101	90 - 110		
Fluoride		4.12	0.100	4	0	103	90 - 110		
Nitrogen, Nitrate (As N)		4.088	0.100	4	0	102	90 - 110		
Nitrogen, Nitrite (As N)		4.04	0.100	4	0	101	90 - 110		
Nitrate/Nitrite (as N)		8.128	0.200	8	0	102	90 - 110		
Sulfate		19.9	0.500	20	0	99.5	90 - 110		
MS Sample ID:	HS2304	40697-13M	S	Units:	mg/L	An	alysis Date:	19-Apr-2023	13:06
Client ID:		F	Run ID: ICS	-Integrion_4331	49 SeqNo: 7	7249966	PrepDate:		DF: 1
Analyte		Result	PQL	. SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Chloride		22.48	0.500	10	12.79	96.9	80 - 120		
Fluoride		3.324	0.100	2	1.474	92.5	80 - 120		
Nitrogen, Nitrate (As N)		1.815	0.100	2	0	90.7	80 - 120		
Nitrogen, Nitrite (As N)		0.4816	0.100	2	0	24.1	80 - 120		
Nitrate/Nitrite (as N)		2.296	0.200	4	0	57.4	80 - 120		
Sulfate		1400	0.500	10	1470	-695	80 - 120		SE

QC BATCH REPORT

Date: 28-Jun-23

0.508 20 SEO

659.4

QC BATCH REPORT

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R433149 (0)	Instr	ument:	ICS-Integrion	М	ethod: A	ANIONS BY I	E300.0, REV	2.1, 1993	3	
MS Sample ID:	HS23040356-02MS		Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	14:56		
Client ID:	Ru	n ID: ICS-I	ntegrion_433149	SeqNo: 7	249980	PrepDate:		DF:	1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit (Qual
Chloride	25.06	0.500	10	15	101	80 - 120				
Fluoride	2.487	0.100	2	0.4276	103	80 - 120				
Nitrogen, Nitrate (As N)	2.563	0.100	2	0.4626	105	80 - 120				
Nitrogen, Nitrite (As N)	1.299	0.100	2	0	65.0	80 - 120				S
Nitrate/Nitrite (as N)	3.862	0.200	4	0.4626	85.0	80 - 120				
Sulfate	659.4	0.500	10	670.2	-108	80 - 120				SEO
MSD Sample ID:	HS23040697-13MS	D	Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	13:12		
Client ID:	Ru	n ID: ICS-I	ntegrion_433149	SeqNo: 7	249967	PrepDate:		DF:	1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit (Qual
Chloride	22.48	0.500	10	12.79	96.8	80 - 120	22.48	0.00445	5 20	
Fluoride	3.473	0.100	2	1.474	100.0	80 - 120	3.324	4.4	1 20	
Nitrogen, Nitrate (As N)	1.814	0.100	2	0	90.7	80 - 120	1.815	0.0496	6 20	
Nitrogen, Nitrite (As N)	0.4803	0.100	2	0	24.0	80 - 120	0.4816	0.27	20	S
Nitrate/Nitrite (as N)	2.294	0.200	4	0	57.4	80 - 120	2.296	0.0958	3 20	S
Sulfate	1399	0.500	10	1470	-706	80 - 120	1400	0.082	20	SEO
MSD Sample ID:	HS23040356-02MS	D	Units: n	ng/L	Ana	alysis Date:	19-Apr-2023	15:02		
Client ID:	Ru	n ID: ICS-I	ntegrion_433149	SeqNo: 7	249981	PrepDate:		DF:	1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit (Qual
Chloride	24.98	0.500	10	15	99.7	80 - 120	25.06	0.344	1 20	
Fluoride	2.519	0.100	2	0.4276	105	80 - 120	2.487	1.27	20	
Nitrogen, Nitrate (As N)	2.563	0.100	2	0.4626	105	80 - 120	2.563	0.0117	20	
Nitrogen, Nitrite (As N)	1.283	0.100	2	0	64.1	80 - 120	1.299	1.3	3 20	S
Nitrate/Nitrite (as N)	3.845	0.200	4	0.4626	84.6	80 - 120	3.862	0.444	1 20	

The following samples were analyzed in this batch: HS23040694-09

656.1

0.500

Sulfate

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10

670.2

-142

80 - 120

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	R433183 (0)	Inst	rument:	UV-2450	M	emoa.	ERROUS IF	RON BY SM3))	500 FE D
MBLK	Sample ID:	MBLK-R433183		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250698	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron	n, Dissolved	U	0.0500						
LCS	Sample ID:	LCS-R433183		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250697	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron	n, Dissolved	0.269	0.0500	0.25	0	108	80 - 120		
MS	Sample ID:	HS23040697-13M	5	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250700	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron	n, Dissolved	0.27	0.0500	0.25	0.018	101	80 - 120		
MSD	Sample ID:	HS23040697-13M	SD	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:47
Client ID:		R	un ID: UV-2	450_433183	SeqNo: 7	250699	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron	n, Dissolved	0.267	0.0500	0.25	0.018	99.6	80 - 120	0.27	1.12 20
The following	samples were analyze	d in this batch: HS23	040694-09						

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R	433330 (0)	Instrumer	nt: WetChem_H	S Method:	SPECIFIC C	ONDUCTANCE BY SM 2510B-
MBLK	Sample ID:	MBLK-R433330	Unit	_{s:} umhos/cm @ 25.0 °C	Analysis Date:	21-Apr-2023 16:54
Client ID:		Run ID:	WetChem_HS_43	3330 SeqNo: 725441	1 PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control EC Limit	RPD Ref RPD Value %RPD Limit Qua
Specific Cond	uctivity	U	5.00			
LCS	Sample ID:	LCS-R433330	Unit	_{S:} umhos/cm @ 25.0 °C	Analysis Date:	21-Apr-2023 16:54
Client ID:		Run ID:	WetChem_HS_43	3330 SeqNo: 725441	0 PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control EC Limit	RPD Ref RPD Value %RPD Limit Qua
Specific Cond	uctivity	1370	5.00 1413	0 97	7.0 80 - 120	
DUP	Sample ID:	HS23040697-13DUP	Unit	_{S:} umhos/cm @ 25.0 °C	Analysis Date:	21-Apr-2023 16:54
Client ID:		Run ID:	WetChem_HS_43	3330 SeqNo: 725441	2 PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control EC Limit	RPD Ref RPD Value %RPD Limit Qua
Specific Cond	uctivity	3290	5.00			3270 0.61 20
The following sa	amples were analyze	ed in this batch: HS23040694	4-06 HS23040	0694-07		

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ALS Houston, US Date: 28-Jun-23 **Client:** Altamira **QC BATCH REPORT** WFEC / CCR Impoundment **Project:** WorkOrder: HS23040694 Batch ID: R433350 (0) Instrument: WetChem_HS Method: PH BY SM4500H+ B-2011 DUP Sample ID: HS23040694-02DUP Units: pH Units Analysis Date: 22-Apr-2023 11:11 Client ID: MW-23A Run ID: WetChem_HS_433350 SeqNo: 7255068 PrepDate: DF: 1 SPK Ref RPD Ref RPD Control %RPD Limit Qual Analyte Result PQL SPK Val Value %REC Limit Value pН 6.98 0.100 6.95 0.431 10

 Temp Deg C @pH
 20.4
 0
 20.4
 0
 10

 The following samples were analyzed in this batch:
 HS23040694-01 HS23040694-05
 HS23040694-02
 HS23040694-03
 HS23040694-04

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	R433352 (0)	Instrume	nt:	WetChem_HS	M	ethod:	SULFIDE BY	′ SM4500 S2-	F-2011
MBLK	Sample ID:	MBLK-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	tChem_HS_4333	52 SeqNo: 7	255088	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		U	2.00						
LCS	Sample ID:	LCS-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	tChem_HS_4333	52 SeqNo: 7	255087	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	0	88.3	85 - 115		
LCSD	Sample ID:	LCSD-R433352		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	tChem_HS_4333	52 SeqNo: 7	255086	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		21.88	2.00	25	0	87.5	85 - 115	22.08	0.91 20
MS	Sample ID:	HS23041012-06MS		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	tChem_HS_4333	52 SeqNo: 7	255090	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	-2.72	99.2	80 - 120		
MSD	Sample ID:	HS23041012-06MSD		Units:	mg/L	An	alysis Date:	22-Apr-2023	11:39
Client ID:		Run ID:	Wet	tChem_HS_4333	52 SeqNo: 7	255089	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Sulfide		22.08	2.00	25	-2.72	99.2	80 - 120	22.08	0 20
The followin	g samples were analyze	ed in this batch: HS2304069	4-09						

The following samples were analyzed in this batch: HS23040694-09

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ALS Houston, US Date: 28-Jun-23 **Client:** Altamira **QC BATCH REPORT** WFEC / CCR Impoundment **Project:** WorkOrder: HS23040694 Batch ID: R433354 (0) Instrument: WetChem_HS Method: PH BY SM4500H+ B-2011 DUP Sample ID: HS23040697-13DUP Units: pH Units Analysis Date: 22-Apr-2023 14:02 Client ID: Run ID: WetChem_HS_433354 SeqNo: 7255166 PrepDate: DF: 1 SPK Ref Control RPD Ref RPD SPK Val %RPD Limit Qual Analyte Result PQL Value %REC Limit Value pН 10.64 0.100 10.6 0.377 10

20.6

0 10

20.6

The following samples were analyzed in this batch: HS23040694-08

0

Temp Deg C @pH

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R433	412(0)	Instrume	nt:	Balance1	м	emou.	OTAL DISS	OLVED SOL	IDS BY SM2540C-
MBLK	Sample ID:	WBLK-04202023		Units:	mg/L	Ana	alysis Date:	20-Apr-2023	11:00
Client ID:		Run ID:	Bala	ince1_433412	SeqNo: 7	256671	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	=	RPD %RPD Limit Qual
Total Dissolved S Filterable)	olids (Residue,	U	10.0						
LCS	Sample ID:	LCS-04202023		Units:	mg/L	Ana	alysis Date:	20-Apr-2023	11:00
Client ID:		Run ID:	Bala	ince1_433412	SeqNo: 7	256670	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissolved S Filterable)	olids (Residue,	1082	10.0	1000	0	108	85 - 115		
DUP	Sample ID:	HS23041120-11DUP		Units:	mg/L	Ana	alysis Date:	20-Apr-2023	11:00
Client ID:		Run ID:	Bala	nce1_433412	SeqNo: 7	256667	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Total Dissolved S Filterable)	olids (Residue,	678	10.0					680	0.295 20
DUP	Sample ID:	HS23040697-13DUP		Units:	mg/L	Ana	alysis Date:	20-Apr-2023	11:00
Client ID:		Run ID:	Bala	nce1_433412	SeqNo: 7	256651	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qua
Total Dissolved S Filterable)	olids (Residue,	2310	10.0					2310	0 20

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ALS Houston, US Date: 28-Jun-23 **Client:** Altamira **QC BATCH REPORT** WFEC / CCR Impoundment **Project:** WorkOrder: HS23040694 Batch ID: R433610 (0) Instrument: WetChem_HS Method: PH BY SM4500H+ B-2011 DUP Sample ID: HS23040694-06DUP Units: pH Units Analysis Date: 25-Apr-2023 10:08 Client ID: MW-10 Run ID: WetChem_HS_433610 SeqNo: 7261722 PrepDate: DF: 1 SPK Ref RPD Ref Control RPD PQL SPK Val %RPD Limit Qual Analyte Result Value %REC Limit Value pН 7.7 0.100 7.67 0.39 10

20.7

0 10

The following samples were analyzed in this batch: HS23040694-06 HS23040694-09

20.7

0

Temp Deg C @pH

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R433630 (0)	Instrur	nent:	Skalar 03	Me	ethod: A	LKALINITY	BY SM 2320	B-2011
MBLK Sample ID:	MBLK-04252023		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	17:46
Client ID:	Run	ID: Skala	ar 03_433630	SeqNo: 7	262133	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO	3) U	5.00						
Alkalinity, Carbonate (As CaCO3)	U	5.00						
Alkalinity, Hydroxide (As CaCO3)	U	5.00						
Alkalinity, Total (As CaCO3)	U	5.00						
LCS Sample ID:	LCS-04252023		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	17:52
Client ID:	Run	ID: Skala	ar 03_433630	SeqNo: 7	262134	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	930.2	5.00	1000	0	93.0	85 - 115		
Alkalinity, Total (As CaCO3)	930.7	5.00	1000	0	93.1	85 - 115		
LCSD Sample ID:	LCSD-04252023		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	17:59
Client ID:	Run	ID: Skala	ar 03_433630	SeqNo: 7	262135	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	927.8	5.00	1000	0	92.8	85 - 115	930.2	0.258 20
Alkalinity, Total (As CaCO3)	928.6	5.00	1000	0	92.9	85 - 115	930.7	0.226 20
DUP Sample ID:	HS23040697-13DUP		Units:	mg/L	Ana	alysis Date:	25-Apr-2023	18:07
Client ID:	Run	ID: Skala	ar 03_433630	SeqNo: 7	262137	PrepDate:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO	3) U	5.00					0	0 20
Alkalinity, Carbonate (As CaCO3)	55.4	5.00					62.4	11.9 20
Alkalinity, Hydroxide (As CaCO3)	64.1	5.00					62	3.33 20
Alkalinity, Total (As CaCO3)	119.5	5.00					124.4	4.02 20
The following samples were analyzed	d in this batch: HS23040	694-09						

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID:	R433632 (0)	Instrume	ent:	WetChem_HS	M	eniou.	CHEMICAL (REV 2.0, 199	DXYGEN DEI 13	MAND E	3Y E410.4,
MBLK	Sample ID:	MBLK-R433632		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Run ID	: Wet	Chem_HS_4336	32 SeqNo: 7	262199	PrepDate:		DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical C	oxygen Demand	U	15.0							
LCS	Sample ID:	LCS-R433632		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:		Run ID	: Wet	Chem_HS_4336	32 SeqNo: 7	262198	PrepDate:		DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical C	oxygen Demand	98	15.0	100	0	98.0	85 - 115			
MS	Sample ID:	HS23040694-02MS		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:	MW-23A	Run ID	: Wet	Chem_HS_4336	32 SeqNo: 7	262201	PrepDate:		DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical C	oxygen Demand	52	15.0	50	5	94.0	80 - 120			
MSD	Sample ID:	HS23040694-02MSD		Units:	mg/L	An	alysis Date:	26-Apr-2023	11:00	
Client ID:	MW-23A	Run ID	: Wet	Chem_HS_4336	32 SeqNo: 7	262200	PrepDate:		DF	:1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chemical C	oxygen Demand	53	15.0	50	5	96.0	80 - 120	52	1	.9 20
The following	g samples were analyze	d in this batch: HS230406 HS230406 HS230406 HS230406	94-05	HS2304069 HS2304069		HS230400 HS230400		HS23040694 HS23040694		

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Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R4	433653 (0)	Instrumer	nt: WetChem_HS	Method:	SPECIFIC C 2011	ONDUCTANCE BY SM 2510B-
MBLK	Sample ID:	MBLK-R433653	Units	umhos/cm @ _/ 25.0 °C	Analysis Date:	26-Apr-2023 14:29
Client ID:		Run ID:	WetChem_HS_433	653 SeqNo: 7262822	2 PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control C Limit	RPD Ref RPD Value %RPD Limit Qual
Specific Condu	uctivity	U	5.00			
LCS	Sample ID:	LCS-R433653	Units:	umhos/cm @ _/ 25.0 °C	Analysis Date:	26-Apr-2023 14:29
Client ID:		Run ID:	WetChem_HS_433	653 SeqNo: 726282	PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control C Limit	RPD Ref RPD Value %RPD Limit Qual
Specific Condu	uctivity	1347	5.00 1413	0 95.	.3 80 - 120	
DUP	Sample ID:	HS23041189-04DUP	Units:	umhos/cm @	Analysis Date:	26-Apr-2023 14:29
Client ID:		Run ID:	WetChem_HS_433	653 SeqNo: 7262823	B PrepDate:	DF: 1
Analyte		Result	PQL SPK Val	SPK Ref Value %RE	Control C Limit	RPD Ref RPD Value %RPD Limit Qual
Specific Condu	uctivity	564	5.00			560 0.712 20
The following sa	imples were analyze	ed in this batch: HS23040694	4-08 HS230406	94-09		

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ALS Houston, US Date: 28-Jun-23 **Client:** Altamira **QC BATCH REPORT** WFEC / CCR Impoundment **Project:** WorkOrder: HS23040694 Batch ID: R433657 (0) Instrument: WetChem_HS Method: PH BY SM4500H+ B-2011 DUP Sample ID: HS23040694-07DUP Units: pH Units Analysis Date: 26-Apr-2023 15:03 Client ID: MW-11 Run ID: WetChem_HS_433657 SeqNo: 7262854 PrepDate: DF: 1 SPK Ref RPD Ref Control RPD SPK Val %RPD Limit Qual Analyte Result PQL Value %REC Limit Value pН 7.72 0.100 7.69 0.389 10

20.3

0 10

20.3

The following samples were analyzed in this batch: HS23040694-07

0

Temp Deg C @pH

Client:AltamiraProject:WFEC / CCR ImpoundmentWorkOrder:HS23040694

Batch ID: R433	3664(0)	Inst	rument:	UV-2450	M	ethod: F	FERROUS IF	RON BY SM3	500 FE B
MBLK	Sample ID:	MBLK-R433664		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		R	un ID: UV-2	2450_433664	SeqNo: 7	262960	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit		RPD %RPD Limit Qual
Ferrous Iron		U	0.0500				80 - 120		
LCS	Sample ID:	LCS-R433664		Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		R	un ID: UV-2	2450_433664	SeqNo: 7	262959	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.265	0.0500	0.25	0	106	80 - 120		
MS	Sample ID:	HS23040697-13M	6	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		R	un ID: UV-2	2450_433664	SeqNo: 7	262965	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.266	0.0500	0.25	0.063	81.2	75 - 125		
MSD	Sample ID:	HS23040697-13M	SD	Units:	mg/L	Ana	alysis Date:	19-Apr-2023	15:10
Client ID:		R	un ID: UV-2	2450_433664	SeqNo: 7	262964	PrepDate:		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Ferrous Iron		0.265	0.0500	0.25	0.063	80.8	75 - 125	0.266	0.377 20

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ALS Hou	ston, L	JS										Date: 28-Jun-23
Client: Project: WorkOrd	der:			mira EC / CCR Imp 3040694	oundme	ent					QC BA	TCH REPORT
Batch ID:	R43374	45 (0)		lı	nstrumen	ıt:	WetChem_HS	I	Method:	PH BY SM45	00H+ B-2011	I
DUP		Sample	e ID:	HS23040694-07	DUP		Units:	°C	A	nalysis Date:	26-Apr-2023	13:45
Client ID:	MW-11				Run ID:	Wet	Chem_HS_4337	45 SeqNo:	7265146	PrepDate:		DF: 1
Analyte				Result		PQL	SPK Val	SPK Ref Value	f %REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual
Temp Deg	C @pH			20.3	3	0					20.3	0 10

The following samples were analyzed in this batch: HS23040694-07

Client: Project: WorkOrder:	Altamira WFEC / CCR Impoundment HS23040694	QUALIFIERS, ACRONYMS, UNITS
Qualifier	Description	
*	Value exceeds Regulatory Limit	
а	Not accredited	
В	Analyte detected in the associated Method Blank above the Reporting Limit	
E	Value above quantitation range	
н	Analyzed outside of Holding Time	
J	Analyte detected below quantitation limit	
Μ	Manually integrated, see raw data for justification	
n	Not offered for accreditation	
ND	Not Detected at the Reporting Limit	
0	Sample amount is > 4 times amount spiked	
Р	Dual Column results percent difference > 40%	
R	RPD above laboratory control limit	
S	Spike Recovery outside laboratory control limits	
U	Analyzed but not detected above the MDL/SDL	
Acronym	Description	
DCS	Detectability Check Study	
DUP	Method Duplicate	
LCS	Laboratory Control Sample	
LCSD	Laboratory Control Sample Duplicate	
MBLK	Method Blank	
MDL	Method Detection Limit	
MQL	Method Quantitation Limit	
MS	Matrix Spike	
MSD	Matrix Spike Duplicate	
PDS	Post Digestion Spike	
PQL	Practical Quantitaion Limit	
SD	Serial Dilution	
SDL	Sample Detection Limit	
TRRP	Texas Risk Reduction Program	

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CERTIFICATIONS, ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-37	30-Jun-2023
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352; 2022-2023	31-Jul-2023
Louisiana	03087, 2022-2023	30-Jun-2023
Maryland	343, 2022-2023	30-Jun-2023
North Carolina	624-2023	31-Dec-2023
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932022-13	31-Jul-2023

ALS	Houston	, US
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Sample Receipt Checklist

Work Order ID: Client Name:	HS23040694 Enviro Clean Services-Tulsa			Time Received: ved by:	<u>12-Apr-2023 09:00</u> Corey Grandits
Completed By	: /S/ Corey Grandits	13-Apr-2023 11:18	Reviewed by: /S/	Anna Kinchen	17-Apr-2023 09:11
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	W		Carrier name:	<u>FedEx</u>	
Custody seals i Custody seals i VOA/TX1005/T Chain of custod Chain of custod Samplers name Chain of custod Samples in prop Sample contain Sufficient samp All samples rec	ly signed when relinquished and e present on COC? ly agrees with sample labels? per container/bottle?	aled vials? 1 received?	Yes V Yes V	No No No No No No No No No No	Not Present Not Present Not Present Not Present 1 Page(s)
	/Thermometer(s):		2.5UC/2.0C		IR31
Cooler(s)/Kit(s)			49498		
Date/Time sam	ple(s) sent to storage:		4/13/23		
	als have zero headspace? eptable upon receipt? :		Yes Yes Yes	No	No VOA vials submitted N/A N/A N/A
Client Contacte	d:	Date Contacted:		Person Con	tacted:
Contacted By:		Regarding:			-
Comments:					
Corrective Action	on:				

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ALS	Houston	, US
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Sample Receipt Checklist

Work Order ID: Client Name:	HS23040694 Enviro Clean Services-Tulsa			Time Received: ived by:	<u>12-Apr-2023 09:00</u> Corey Grandits
Completed By:	: /S/ Corey Grandits	14-Apr-2023 10:42	Reviewed by: /S/	Anna Kinchen	24-Apr-2023 13:30
	eSignature	Date/Time		eSignature	Date/Time
Matrices:	W		Carrier name:	<u>FedEx</u>	
Custody seals i Custody seals i VOA/TX1005/T Chain of custod Chain of custod Samplers name Chain of custod Samples in prop Sample contain Sufficient samp All samples rec	ly signed when relinquished and e present on COC? ly agrees with sample labels? per container/bottle?	aled vials? I received?	Yes V Yes V	No	Not Present Not Present Not Present Not Present 1 Page(s)
,)/Thermometer(s):		1.7UC/1.2C		IR31
Cooler(s)/Kit(s) Date/Time sam	ple(s) sent to storage:		Red 4/14/23		
Water - VOA via	als have zero headspace? eptable upon receipt?		Yes Yes	No No No No No	No VOA vials submitted N/A N/A N/A
Client Contacte	d.	Date Contacted:		Person Con	tacted.
Contacted By:		Regarding:			
Comments:					
Corrective Action	pn:				

Page 56 of 63

12-Apr-2023 09:00 **Client Name:** Enviro Clean Services-Tulsa Received by: **Corey Grandits** 19-Apr-2023 12:07 Completed By: /S/ Corey Grandits Reviewed by: Date/Time Date/Time eSignature eSignature Matrices: W Carrier name: FedEx Not Present Shipping container/cooler in good condition? Yes ~ No Not Present Custody seals intact on shipping container/cooler? Yes 5 No Not Present Custody seals intact on sample bottles? Yes No Not Present VOA/TX1005/TX1006 Solids in hermetically sealed vials? No Yes 1 Page(s) Chain of custody present? Yes No Chain of custody signed when relinquished and received? Yes No Yes No Samplers name present on COC? Yes No Chain of custody agrees with sample labels? Yes No Samples in proper container/bottle? Yes No Sample containers intact? Yes -No Sufficient sample volume for indicated test? Yes 5 No All samples received within holding time? Yes 🔽 No Container/Temp Blank temperature in compliance? Temperature(s)/Thermometer(s): 4.0UC/3.5C IR31 Cooler(s)/Kit(s): Red Date/Time sample(s) sent to storage: 4/19/23 Yes Water - VOA vials have zero headspace? No VOA vials submitted No Water - pH acceptable upon receipt? Yes No N/A ~ pH adjusted? No N/A Yes ~ pH adjusted by: Login Notes: Client Contacted: Date Contacted: Person Contacted: Contacted By: Regarding: Comments: Corrective Action:

Work Order ID: HS23040694

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Sample Receipt Checklist

Date/Time Received:

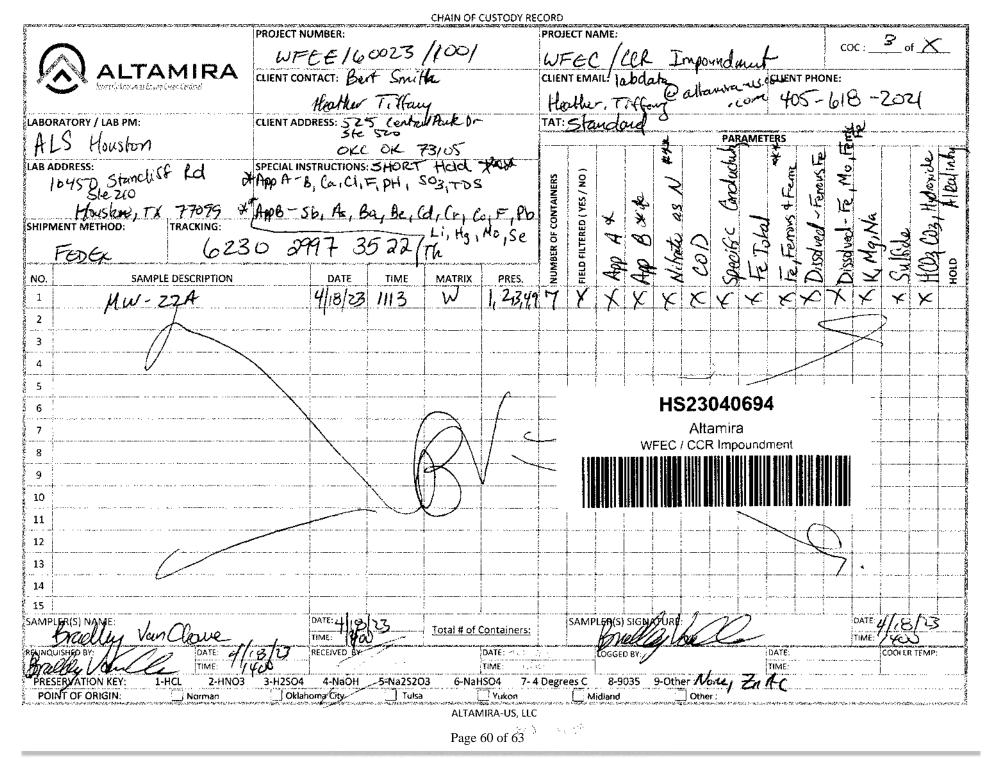
Page 57 of 63

2.778.7.17.72.014.032.77.201 #7722.2711.3700-972.0725.72070-912727 #112727 #112727 #112727	STER (1992-1994) SAN 1994 (1994) - 199 TANTANAN ANTANI ANTANI ANTANI	(CHAIN OF C					Voltegray 1 vers 14						Defense of the second	
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	WFEE 16002 CLIENT CONTACT:	3 / 1001			w	=ec /	CCR	Pr	gn	199	Im pou	ndent		<u> </u>	<u></u>
					CLIEN	T EMAIL:	abdal	40-	0		CLI	NT PHO	NE:		
	Heather Titha	y Rout	Smith		Hea	Hur. Ti	Farm	60	C (PRIM	ma-u	scon	405-	618.	2021	-
LABORATORY / LAB PM:	CLIENT ADDRESS:	Q ~ 961	17m		TAT:	Stande	rd f							`	
ALS	SZS CENNU VOM	12105 JAN	300		è					PARA	METERS		2 2	· · · · · · · · · · · · · · · · · · ·	÷.
LAB ADDRESS: 10450 Stanch ff	SPECIAL INSTRUCTIONS	Short Hold	NO34	Ferr Fe		_				2		o R	μè		de,
Ste 210	SZS CENTRAL VOM OKC, OK SPECIAL INSTRUCTIONS *App, A - B(a, Cl)	F, pH, SO3	, TOS		VERS	DN /		-		chu	1	2 3	No		No.
Houston, TX 7709	Ann. R-				CONTAINERS	¥ KES	×* **	2		Conductioning		Ferrus	Fe, Ma, Feri		Hydravide, Alk
SHIPMENT METHOD: TRACKING:					E CO	RED (a s					1:		a
FEDEX					ER O	FILTE	NON YOU	at		ific	100	200	alveo Ao		
NO. SAMPLE DESCRIPTION	DATE	TIME	MATRIX	DRFS	IUMB	FIELD FILTERED (YES	A ano why	N'hate as	602	Specific	Fe, Tolal	Te, Izmic Fremus F Disvolved: Fermus F	Disselved :	5ul fide	Has de
1 MW-8	4/11/23	4- ··- ··- ··- ··- ··- ··- ··- ··- ··- ·		B PRES.	3	N S	2 V	X	X	Ŷ					<u>-</u>
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3 <u>Aw-70</u>					- fairi	NS	Ý	V	¥	X					
AM Mul-H					V			X	Ŷ	v					
5MW-22A				1		V S		X	X	_X	XX	×.	Ĩ	, t	
6 MW-23A	4/11/2	1545-		23,9	3	ŇX	X	X	x	X				щ	
7 MW-24		(855	···	84 <u>271</u>	Ĩ	MY	\mathbf{x}	へ	ĸ	X			HS23040694	a oun	
8 MW-25R	Thites	(6))	· · · · · · · · · · · · · · · · · · ·				¥.	X	X	τ			- ¥	Altamira CCR Impo	
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11 MW-23A MSD	4/11/25	1545	A 1	239	2	ŊΧ	- <u>^</u>		\sim					<	
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SAMPLER(S) NAME:	DATE: 4	12 123	Total # of Co		- 	SAMPLER	(S) SIGN	IATURE	: //	21	U.	l	DATE	YIR	/23
Bradley Van Cleane Pasha Khush		1400	h a baija di u je to Galy zaji 10,000 papi			Bael	llyNan		<u>1 p</u>	osp	NY8	\mathbb{N}	TIME:	140	
RELINQUISTED BY DATE: 4	12/23 RECEIVED BYC	EL UH12.22	Note in	ATE: IME:		106	GĘD 8Y:		ι.					COOLER 1	EIVIP:
PRESERVATION KEY: 1-HCL 2-HNO3	3-H2SO4 4-NaOH	5-Na2S2O3	6-NaHS		Degre	-14444 - 11 - 11 - 11	-9035	9-Oth			·····	• • • • • •	··· ·· ·· ·· ··	····	······
POINT OF ORIGIN: Norman	Oklahoma City	j Tulsa wearann ar annaich		_ Yukon IRA-US, LLC	i wang da sa sa sa	L Midlar	nd Servetisti tete	ao mandronnaet	_ Other	r : The Process Sectors	an an an an tha an an tha an	-contractor contratorio e	ander an einer der der	or na server tessile for s	(Odol ¹ su k ski (₁ 0) -
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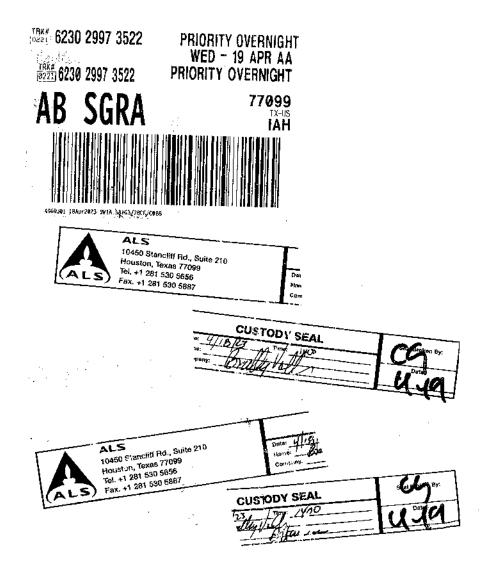
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	CLIENT CONTACT:	i la		CLIENT	EMAIL:	labdate	£	a . us.c	CLIEN M	T PHON	E:		
	Hontloy Hov T	Hany Ber	FSmith	Heat	ner.Titl	ang C	Jastan	pr.	m CLIEN	5-61	8° 20	21	
LABORATORY / LAB PM:	CLIENT ADDRESS: 524	Central Pr	RDr	TAT: S	Standa	ur f					ĺΝ	- 2012 - 1 - 1022	·····
ALS Houston	CLIENT ADDRESS: 524	Durtens In						era, da da adri a da esta esta esta esta esta esta esta est	METERS		<u></u>	anx	
general contraction of the part of the part of the second s	SPECIAL INSTRUCTIONS ## APP A- B, G	KC, OK 73	105		1		-	1	. 4	ĮTh	Femic		2-1-
LAB ADDRESS: 10450 Stancliff Rol	HAD A_ A A	4SHORT Hold	יד ג דד <i>ו</i> נ	RS	(o		5	Chr.	٩ ٩	5		1	5-1
Stezie				AINE	I VES / NC	*	\rightarrow	and uch with	15	122	tal	[[•]	HIPHACH
HOUSEM, TX 77099	*** App B-St	, As, Ba, Be, Col,	Cc, Co; E, pb,	NO	N C	t t	\$7	Can	4 4	I Ma	14	× I	
SHIPMENT METHOD: TRACKING:		Hg, Mo, Se, T		5 40	ERE	XX	B		a la	-0	Ja X		$\overline{3}$
FEDGO				BER	BIL	end) at		HE	12	Solu Ma	12	- S.
NO. SAMPLE DESCRIPTION	DATE	TIME N MA	TRIX PRES.	MUN	FIELD FILTERED (YES / NO)	APPENDIX AY	Nitrate as (201)	Sperific	E, Total Fr. Feman & Femic	Dissolued - Fenuus	Dissolwed . Fey Mr. K.Ms., Na.	E.	Hay Coy
1 MIN/-9	4/13/23	9417/23 U		VONUMBER OF CONTAINERS	$\overline{1}$		VV	V		;		• • • • •	
2 MW-10		en brighed index of a side of a	· · · · · · · · · · · · · · · · · · ·	3	Ϋ́Ύ		010	V				1	
3 11/14/20	413/23			 Comparison 	t×		$\mathcal{F} \mathcal{F}$	$ \mathcal{O} $					
MIN U	413/23		V	<u>ا ر</u> ـــ	¥ {		NO			67		$\left \right\rangle$	
4 <u>MW-22A</u>							$\times + \times$	K	K K	- \< . ├	<u> </u>	K.~)	
5 Temp Blank			23.10	Ζ	2								
6 MW-25R	4/1423	1469	1 239	3	N 2	$\langle \chi \rangle$	$\chi \gamma$	Ý					
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11	·····			÷			-177 • • • • • • • • • • • •	EC / C(CR Impo	undmei	nt I		
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13				<u> </u>	·····			••••••••••••••••••••••••••••••••••••••	• • • • • • • • • • • • • • • • • • •		••••••••••••••••••••••••••••••••••••••	f8¶] }∔	
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15			1				وريد المجرود	1. p. 1.					1
SAMPLER(S) NAME: Bradly Van Law,	DATE: 413	12 Tota	I # of Containers:	S	AMPLER(S) SIGNAT	URE:	Inul	Na -		DATE: TIME:	<u>H/iš</u>	123
	305 RECEIVED BY:	HOL	DATE:	hanne waarde a	LOG	ED BY:	y www	y UMI	DATE:	0.4. by the pair of the pilot o	, a nanci Server de Servers	COOLER	TEMP:
Guelly bulli TIME: 11	190	5 	TIME:	· ·					TIME:			1 1	
PRESERVATION KEY: 1-HCL 2-HNO3 POINT OF ORIGIN: Norman	3-H2SO4 4-NaOH-	5-Na2S2O3	6-NaHSO4 7-4	Degree	s C 8	-9035 9 d	-Other :						
	and the second second second second	an a	ALTAMIRA-US, LLC	einen an ar	anda kara da kara da kara da kara kara kar	er over set av for rivinger ø		un - Istadoreta esta esta	na na mana na mana na katang	elinens soli andorazione	kal personi sosi sosi s	6-3++++7448 4 +6	48128-5-57-57-57-57-5
			Page 59 of 63		$\bigcup_{i \in \mathcal{N}} \mathcal{N}_i$	1.1							
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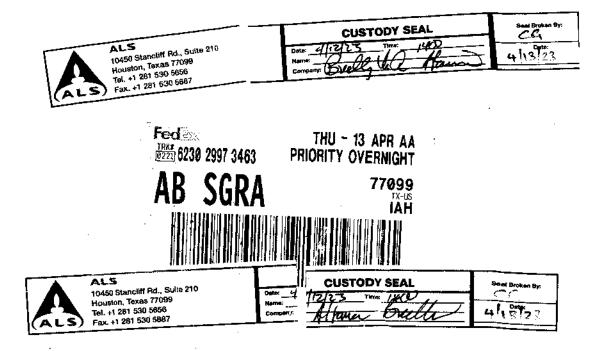
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Certificate of Analysis

Company : Address :	Altamira 525 Central Pa Suite 500	'ark Dr										
	Oklahoma Cit	ty, Oklahom	ia 73105					Re	port Date:	June 19,	, 2023	I
Contact:	Heather Tiffar	iny										
Project:	Radiochemist	try										ļ
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188440 Ground 11-APR 19-APR Client	l Water R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Un	icertainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch N	vItd.
Rad Gas Flow Propor EPA 904.0 Radium-			- Dessived"									ļ
Radium-228	-228 in Drinking U	g water As 0.368	+/-0.393	0.654	+/-0.397	1.00	pCi/L		JE1 (05/15/23 1138	2416326	1
Radium-226+Radiu					•• •••	••••	F		-	10, 10, 20		
Radium-226+228 Sum		0.465	+/-0.420		+/-0.425		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226 Radium-226 in Drin	ıking Water EP.	A 903.1 (De	-emanation)	"As Received"								
Radium-226	U	0.0973	+/-0.151	0.269	+/-0.152	1.00	pCi/L		LXP1 (05/17/23 0857	2416321	3
The following Analyt	ical <u>Methods v</u>	ver <u>e perfor</u> i	med									
Method De	escription											
1 EP.	PA 904.0/ EPA 932	20										
2 Cal	lculation											
3 EP.	PA 903.1											
Surrogate/Tracer Re	ecovery 7	Test						Batch I	D Recovery	7% Accepta	able Limits	S
Barium Carrier		EPA 904.0	Radium-228	in Drinking W	ater "As Received"			241632	.6 90.7	7 (25%)	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	, in Drinking W	ater "As Received"			241632	.6 92.2	2 (25%)	-125%)	
Notes: The MDC is a sam TPU and Countin			ited at the 9	5% confidenc	e level (1.96-sigma)).						
Column headers as	re defined as f	follows:										
DF: Dilution Factor	or			Method								
DL: Detection Lin	nit		PF: Pr	rep Factor								

DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level TPU: Total Propagated Uncertainty MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central Pa Suite 500	'ark Dr										
	Oklahoma Cit	ty, Oklahom	a 73105					Re	eport Date:	June 19,	2023	
Contact:	Heather Tiffar	ıny										
Project:	Radiochemist	try										I
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188440 Ground 11-APR :: 19-APR Client	l Water R-23 R-23				Cli	oject: lient ID:	ALN	MI00122 MI001			
Parameter	Qualifier	Result Un	icertainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch M	Atd.
Rad Gas Flow Prop			D									
EPA 904.0 Radiun Radium-228	1-228 in Drinking	g Water "As . 0.747	<i>Received"</i> +/-0.471	0.717	+/-0.486	1.00	pCi/L		JE1 0	05/15/23 1137	2416326	1
Radium-228 Radium-226+Radi	1				+/-0.460	1.00	pei/L		JE1 U	15/15/25 1157	2410320	1
Radium-226+228 Sum		0.906	+/-0.484	,	+/-0.499		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226		0.7	1/ 01.2		.,		P		1 101	10/10/20 11	211002	-
Radium-226 in Dr	inking Water EP.	A 903.1 (De-	emanation)	"As Received"								
Radium-226		0.159	+/-0.112	0.109	+/-0.114	1.00	pCi/L		LXP1 (05/17/23 0857	2416321	3
The following Analy	vtical Methods v	were perforr	ned									
	Description											
1 E	EPA 904.0/ EPA 932	20										
2 C	Calculation											
3 E	EPA 903.1											
Surrogate/Tracer F	Recovery 7	Test						Batch J	D Recovery	y% Acceptal	ble Limits	.s
Barium Carrier		EPA 904.0	Radium-228	in Drinking Water	r "As Received"			241632	26 92.3	3 (25%-	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	3 in Drinking Water	r "As Received"			241632	26 77.5	5 (25%-	-125%)	
Notes:												
The MDC is a sar			ted at the 9	5% confidence l	evel (1.96-sigma)).						
Column headers	are defined as t	follows:										
DF: Dilution Fac			Mtd.:	Method								
DL: Detection Li				rep Factor								
I a /I C. Cuiti a al I	4		DI.D	an antin a Timit								

Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		a 73105					Reŗ	port Date:	May 25,	, 2023	
Contact:	Heather Tiffa	-						_		-		
Project:	Radiochemist	try										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188550 Water 13-APR 19-APR Client	R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Un	icertainty	MDC	TPU	RL	Units	PF I	JF Analyst	Date Time	Batch M	Mtd.
Rad Gas Flow Propo EPA 904.0 Radium			Dessived"									
Radium-228	1-228 in Drinking U	-0.206	+/-0.511	0.989	+/-0.511	1.00	pCi/L		JE1 0	05/12/23 1442	2416327	1
Radium-226+Radii					.,	1.00	Pesz		·	<i></i>	211002.	
Radium-226+228 Sum		0.0295	+/-0.519	-	+/-0.519		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Dri	nking Water EP	A 903.1 (De·	-emanation)	"As Received	<u>[</u> "							
Radium-226	U	0.0295	+/-0.0914	0.207	+/-0.0917	1.00	pCi/L		LXP1 (05/25/23 0757	2416323	3
The following Analy	tical Methods v	vere perforr	ned									
	escription	.										
1 EI	PA 904.0/ EPA 932	20										
2 Ca	alculation											
3 EI	PA 903.1											
Surrogate/Tracer R	ecovery 7	Гest						Batch II	D Recovery	% Accepta	able Limit	ts
Barium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	7 66.3	3 (25%	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking	Water "As Received"			2416327	7 46.1	(25%	-125%)	
	ng Uncertainty	are calcula	ted at the 9.	5% confide	nce level (1.96-sigma)	۱.						
Column headers a DF: Dilution Fact		ollows:	Mtd .	Mathod								
DF: Dilution Fact DL: Detection Li				Method rep Factor								

PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P	ark Dr										
11001000	Suite 500 Oklahoma Cit		ma 72105					Don	ort Date:	May 20	2023	
Contact:	Heather Tiffa	-	la / 5105					кер	on Date:	May 30,	, 2025	
		•										
Project:	Radiochemist	•				-						
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	619993 Water 13-APR	003 R-23					oject: ient ID:		100122 1001			
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF D)F Analys	t Date Time	Batch	Mtd.
Rad Gas Flow Prop GFPC Ra228, Liq												
Radium-228	U	0.610	+/-1.07	1.88	+/-1.08	3.00	pCi/L		JE1	05/24/23 1550	2423918	1
Radium-226+Radi	ium-228 Calcular			<i>s</i> ″								
Radium-226+228 Sum		0.714	+/-1.09		+/-1.10		pCi/L		NXL1	05/30/23 1641	2429540	2
Rad Radium-226 Lucas Cell, Ra226	5, Liquid "As Rec	eived"										
Radium-226	U	0.104	+/-0.203	0.397	+/-0.204	1.00	pCi/L		LXP1	05/18/23 0919	2423869	3
The following Analy	ytical Methods v	vere perfor	med									
	Description											
1 E	EPA 904.0/SW846 9	9320 Modifie	ed									
2 C	Calculation											
3 E	EPA 903.1 Modified	1										
Surrogate/Tracer I	Recovery 7	Test						Batch ID	Recover	y% Accepts	able Limi	its
Barium-133 Trace	er	GFPC Ra2	228, Liquid "A	As Received"				2423918	78.	.9 (15%	-125%)	
Notes:												
The MDC is a same			ated at the 9	5% confiden	ce level (1.96-sigm	a).						
Column headers DF: Dilution Fac		follows:	Mtd	Method								
DI. Dilution Fac												

DL: Detection Limit PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cir		a 73105					R	eport Date:	М	lay 30,	2023	
Contact:	Heather Tiffa	ny											
Project:	Radiochemist	try											_
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	ID: MW-11 619994 Water 13-APR 27-APR Client	001 R-23					oject: ient ID:		MI00122 MI001				
Parameter	Qualifier	Result Un	certainty	MDC	TPU	RL	Units	PF	DF Analys	t Date	Time	Batch	Mtd.
Rad Gas Flow Propo GFPC Ra228, Liqu													
Radium-228	a no neceivea	2.60	+/-1.20	1.67	+/-1.37	3.00	pCi/L		JE1	05/26/23	1517	2423918	1
Radium-226+Radiu	m-228 Calculat	tion "See Par	ent Product	s"			1						
Radium-226+228 Sum		3.27	+/-1.26		+/-1.42		pCi/L		NXL1	05/30/23	1641	2429540	2
Rad Radium-226 Lucas Cell, Ra226,	Liquid "As Rece	eived"											
Radium-226	1	0.666	+/-0.365	0.399	+/-0.383	1.00	pCi/L		LXP1	05/18/23	1009	2423869	3
The following Analyt	ical Methods v	vere nerforn	red										
	scription	ere periori											
1 EP	A 904.0/SW846 9	9320 Modified											
2 Ca	lculation												
3 EP	A 903.1 Modified	1											
Surrogate/Tracer Re	ecovery 7	Fest						Batch	ID Recover	y% A	ccepta	ble Limi	ts
Barium-133 Tracer		GFPC Ra22	8, Liquid "A	As Received"				24239	18 79	3	(15%-	125%)	
Notes: The MDC is a sam TPU and Countin <u>Column headers a</u> DF: Dilution Fact DL: Detection Lir Lc/LC: Critical Le MDA: Minimum MDC: Minimum	g Uncertainty re defined as f or nit evel Detectable Ac	are calculat follows:_ tivity	Mtd.: 1 PF: Pr RL: R	Method ep Factor eporting Limit	e level (1.96-sigma t ted Uncertainty).							

Certificate of Analysis

Company	: Altamira												
Address :		ark Dr											
	Suite 500										•		
	Oklahoma Ci	•	na 73105					Re	port Date:	Ma	y 30,	2023	
Contact:	Heather Tiffa	ny											
Project:	Radiochemis	try											
Client Sa		2A					oject:		II00122				
Sample I Matrix:		003				Cl	ient ID:	ALM	11001				
Collect D	Water Date: 18-APF	2-23											
Receive I													
Collector													
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analys	t Date 7	ſime	Batch	Mtd.
	Proportional Counting , Liquid "As Received												
Radium-228	-	2.69	+/-1.41	2.10	+/-1.57	3.00	pCi/L		JE1	05/24/23 1	550	2423918	, 1
Radium-226+	-Radium-228 Calcula	tion "See Pa	arent Product	ts ''									
Radium-226+228	Sum	4.45	+/-1.55		+/-1.73		pCi/L		NXL1	05/30/23 1	641	2429540	2
Rad Radium-22 Lucas Cell, R	26 a226, Liquid "As Rec	eived"											
Radium-226		1.76	+/-0.654	0.591	+/-0.730	1.00	pCi/L		LXP1	05/18/23 1	009	2423869	3
The following A	Analytical Methods v	were perfor	med										
Method	Description	<u> </u>											
1	EPA 904.0/SW846	9320 Modifie	ed										
2	Calculation												
3	EPA 903.1 Modified	d											
Surrogate/Tra	cer Recovery	Test						Batch I	D Recover	y% Acc	epta	ble Limi	its
Barium-133	-	GFPC Ra2	228, Liquid "A	As Received"				242391		-	15%-	125%)	
Notes:			· •									,	
	a sample specific N	IDC											
	ounting Uncertainty		ated at the 9	5% confiden	ce level (1.96-sign	na).							
	, and any concentrating												
Column hea	ders are defined as	follows:											
DF: Dilution			Mtd.:	Method									
DI · Detectio	on Limit		DE DI	en Factor									

DL: Detection Limit PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central P Suite 500 Oklahoma Cit		a 73105					Re	port Date:	May 25.	, 2023	
Contact:	Heather Tiffa	ny										
Project:	Radiochemist	try										
Client Sample Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188550 Water 11-APR 19-APR Client	004 R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Uno	certainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	Batch N	Atd.
Rad Gas Flow Propo EPA 904.0 Radium			Pagainad"									
Radium-228	u-228 in Drinking U	0.458	+/-0.534	0.899	+/-0.540	1.00	pCi/L		JE1 (05/12/23 1122	2416327	1
Radium-226+Radii							r -		-	/0/ -=. =:		-
Radium-226+228 Sum		0.538	+/-0.546		+/-0.552		pCi/L		NXL1 (05/25/23 1326	2416325	2
Rad Radium-226 Radium-226 in Dri	inking Water EP.	A 903.1 (De-i	emanation) '	"As Received"								
Radium-226	U	0.0805	+/-0.115	0.201	+/-0.116	1.00	pCi/L		LXP1 (05/25/23 0757	2416323	3
The following Analy	tical Methods v	vere perform	ied									
	Description	*										
1 EI	EPA 904.0/ EPA 932	20										
2 Ca	Calculation											
3 EI	PA 903.1											
Surrogate/Tracer R	Recovery 7	Гest						Batch I	D Recovery	7% Accepts	able Limits	S
Barium Carrier		EPA 904.0 F	Radium-228	in Drinking Water	r "As Received"			241632	.7 81.2	2 (25%	-125%)	
Yttrium Carrier		EPA 904.0 F	Radium-228	in Drinking Water	r "As Received"			241632	68.3	3 (25%	-125%)	
Notes:												
The MDC is a san TPU and Countin			ed at the 95	5% confidence le	evel (1.96-sigma)).						
Column headers a	are defined as !	follows:										
DF: Dilution Fact				Method								
DL: Detection Li	mit		PF: Pre	ep Factor								

RL: Reporting Limit TPU: Total Propagated Uncertainty Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

Certificate of Analysis

Company : Address :	Altamira 525 Central Pa Suite 500	'ark Dr										
	Oklahoma Cit	ty, Oklahom	ia 73105					Rej	port Date:	June 19,	2023	
Contact:	Heather Tiffar	ny										
Project:	Radiochemist	iry										I
Client Sample I Sample ID: Matrix: Collect Date: Receive Date: Collector:	6188440 Ground 11-APR 19-APR Client	009 Water R-23 R-23				Cli	oject: ient ID:	ALM				
Parameter	Qualifier	Result Ur	ncertainty	MDC	TPU	RL	Units	PF 1	DF Analyst	Date Time	Batch N	Atd.
Rad Gas Flow Propor			D : 11									
EPA 904.0 Radium- Radium-228	-228 in Drinking U	g Water "As -0.123	<i>s Received"</i> +/-0.368	0.730	+/-0.368	1.00	pCi/L		JE1 0	05/15/23 1137	2416326	1
Radium-228 Radium-226+Radiu					+/-0.300	1.00	pci/L		JEI U)5/15/25 1157	2410320	1
Radium-226+228 Sum	<i>II-220 Culturun</i>	0.281	+/-0.398	1	+/-0.401		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226		0.201	1, 0.020		.,		Pene		1 10111 -	10/10/20 1125	211002	-
Radium-226 in Drin	iking Water EP.	A 903.1 (De	-emanation)	"As Received"								
Radium-226		0.281	+/-0.154	0.122	+/-0.161	1.00	pCi/L		LXP1 (05/17/23 0857	2416321	3
The following Analyti	ical Methods v	vere perfor	med									
	escription	*										
1 EP.	A 904.0/ EPA 932	20										
2 Cal	lculation											
3 EP.	A 903.1											
Surrogate/Tracer Re	covery 7	Гest						Batch II	D Recovery	7% Accepta	ble Limits	.s
Barium Carrier		EPA 904.0	Radium-228	in Drinking W	Vater "As Received"			2416326	6 89.9) (25%-	-125%)	
Yttrium Carrier		EPA 904.0	Radium-228	in Drinking W	Vater "As Received"			2416326	6 77.8	8 (25%-	-125%)	
Notes:												
The MDC is a sam TPU and Countin			ited at the 9	5% confidenc	ce level (1.96-sigma)).						
Column headers a	re defined as f	follows:										
DF: Dilution Facto			Mtd.:]	Method								
DL: Detection Lin	nit		PF: Pr	ep Factor								

Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

RL: Reporting Limit TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : Address :	Altamira 525 Central I Suite 500	Park Dr										
	Oklahoma Ci	ity, Oklahon	na 73105					Re	port Date:	June 19	, 2023	ļ
Contact:	Heather Tiffa	any										
Project:	Radiochemis	stry										
Client Samp Sample ID: Matrix: Collect Date Receive Date Collector:	618844 Ground e: 12-API	4008 d Water R-23					oject: ient ID:		1100122 11001			
Parameter	Qualifier	Result U	Incertainty	MDC	TPU	RL	Units	PF	DF Analyst	Date Time	e Batch I	Mtd.
Rad Gas Flow Pro			~ . 11									
	um-228 in Drinkin U	ng Water "As 0.300	<i>s Received"</i> +/-0.457	0.794	+/-0.459	1.00	pCi/L		JE1 (05/15/02 1127	2416226	1
Radium-228	U Udium-228 Calcula				+/-0.439	1.00	pCI/L		JEI (05/15/23 1137	2410320	1
Radium-226+228 Sur		0.300	+/-0.460	S	+/-0.462		pCi/L		1 TON1 (06/15/23 1120	2416324	2
Rad Radium-226	11	0.500	T/-0.+00		1/ 0.702		perit		1 10111	10/13/23 1120	2710324	2
	Drinking Water EP	PA 903.1 (De	e-emanation)	"As Received"	,							
Radium-226	U	-0.00988	+/-0.0512	0.157	+/-0.0513	1.00	pCi/L		LXP1 (05/17/23 0857	2416321	3
The following Ana	alvtical Methods	were perfor	med									
	Description											
1	EPA 904.0/ EPA 93	320										
2	Calculation											
3	EPA 903.1											
Surrogate/Tracer	Recovery	Test						Batch I	D Recovery	% Accept	able Limit	ts
Barium Carrier		EPA 904.0	Radium-228	3 in Drinking V	Water "As Received"			241632	6 89.7	/ (25%	-125%)	
Yttrium Carrier		EPA 904.0) Radium-228	in Drinking V	Water "As Received"			241632	6 60.5	5 (25%	-125%)	
Notes:												
The MDC is a sa			ated at the 9	5% confiden	nce level (1.96-sigma)	1.						
Column header	rs are defined as	follows:										
DF: Dilution Fa			Mtd.:	Method								
DL: Detection I	Limit		PF: Pr	rep Factor								

Lc/LC: Critical Level MDA: Minimum Detectable Activity MDC: Minimum Detectable Concentration

PF: Prep Factor RL: Reporting Limit TPU: Total Propagated Uncertainty

ATTACHMENT D

DATA SUMMARY TABLES (SURFACE IMPOUNDMENT CCR UNIT)

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-8 6-Jun-16	MW-8	MW-8 4-Oct-16	MW-8 7-Dec-16	DUP 2	MW-8 2-Feb-17	MW-8 6-Apr-17	MW-8 8-Jun-17	MW-8 14-Aug-17	MW-8	DUP 2 24-May-18
Farameters	SMICE			Sample Date:	0-JUN-10	2-Aug-16	4-000-16	7-Dec-16	7-Dec-16	2-FeD-17	6-Apr-17	8-Jun-17	14-Aug-17	24-way-18	24-May-18
					BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKG	ROUND I	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETE(MON	
Detection Monitoring Parameters				Units											
Boron	None		Not Applicable	mg/L	1.27	1.26	1.29	1.59	1.38	1.72	1.2	1.41	1.36	1.47	1.6
Calcium	None	_	Not Applicable	mg/L	701	629	644	676	623	550	906	747	754	603	676
Chloride	250	Background Well	Not Applicable	mg/L	3.74	3.92	3.60 J*	3.91	3.5	3.41 J*	3.87	3.55	3.36	4.09	4.06
	4	(Not Applicable)	Not Applicable	mg/L	0.252	0.235	0.394 J*	0.382 J*	0.388 J*	0.429 J*	0.692	0.307	2.84	1.29	2.99
bH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.63	8	7	7.4	7.4	7	6.9	6.8	6.9	6.8	7.5
Sulfate	250	_	Not Applicable	mg/L	1940	1690	1800	1830	1830	1560	1620	1660	1530	1610	1900
Total Dissolved Solids	500		Not Applicable	mg/L	2760	2820	2660	2640	2620	2680	2740	2800	2860	2770	2710
Assessment Monitoring Parameters															
Antimony	0.006	Not Applicable		mg/L	<0.000500	<0.00100	<0.00400	<0.00400	<0.00400	<0.000800	<0.00400	<0.00400	<0.000800		
Arsenic	0.010	Not Applicable	[mg/L	0.00169 J	0.00152 J	<0.00200	<0.00200	<0.00200	0.000908 J	0.00338 J	0.00243 J	<0.00200		
Barium	2	Not Applicable	.	mg/L	0.0049	0.00461	0.00618 J	0.00657 J	0.00962 J	0.00599	0.00541 J	0.00603 J	0.0054		
Beryllium	0.004	Not Applicable	.	mg/L	<0.00100	<0.00200	<0.000500	<0.000500	<0.000500	<0.000100	<0.000500	<0.000500	<0.000100		
Cadmium	0.005	Not Applicable	.	mg/L	<0.000400	<0.000800	<0.000500	<0.000500	<0.000500	<0.000100	0.000647 J	<0.000500	<0.000100		
Chromium	0.1	Not Applicable	.	mg/L	<0.000500	<0.00100	<0.00250	< 0.00250	<0.00250	< 0.000500	< 0.00250	<0.00250	U (0.000867)		
Cobalt	None	Not Applicable	Background Well	mg/L	0.000975 J	0.00103 J	0.00164 J	0.00200 J	0.00270 J	0.00171 J	0.00322 J	0.00228 J	0.00209		
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.252	0.235	0.394 J*	0.382 J*	0.388 J*	0.429 J*	0.692	0.307	2.84	1.29	2.99
_ead	0.015	Not Applicable	(iter, ppreasie)	mg/L	<0.000200	<0.000200	<0.000500	<0.000500	<0.000500	<0.000100	0.000942 J	<0.000500	<0.000100		
_ithium	None	Not Applicable		mg/L	0.329	0.355	0.303	0.332	0.282	0.345	0.481	0.335	0.282		
Mercury	0.002	Not Applicable		mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150		
Molybdenum	None	Not Applicable		mg/L	<0.000500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00100	<0.00500	<0.00500	<0.00100		
Selenium	0.05	Not Applicable		mg/L	<0.000600	<0.00120	<0.00150	<0.00150	<0.00150	<0.000300	<0.00150	<0.00150	<0.000300		
Thallium	0.002	Not Applicable		mg/L	<0.000500	<0.00100	<0.00400	<0.00400	<0.00400	<0.000800	<0.00400	<0.00400	<0.000800		
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	0.159 +/- 0.238 U	0.320 +/- 0.310 U	0.657 +/- 0.272	0.677 +/- 0.373	0.952 +/- 0.441	0.787 +/- 0.350	0.00926 +/- 0.253 U	0.279 +/- 0.208 U	0.815 +/- 0.324		
Other Parameters															
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L											
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L											
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00		
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									280		
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00		
ron, Total	None	Not Applicable	Not Applicable	mg/L											
ron, Dissolved	None	Not Applicable	Not Applicable	mg/L											
ron, Ferrous	None	Not Applicable	Not Applicable	mg/L											
ron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L											
ron, Ferric	None	Not Applicable	Not Applicable	mg/L											
ron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Vagnesium	None	Not Applicable	Not Applicable	mg/L									74.1		
Nolybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Nitrate as N	10	Not Applicable	Not Applicable	mg/L											
Potassium	None	Not Applicable	Not Applicable	mg/L									11.3		
Sodium	None	Not Applicable	Not Applicable	mg/L									73.2		
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm											
Sulfide	None	Not Applicable	Not Applicable	mg/L											
Field Parameters				Ŭ											
Temperature	None	Not Applicable	Not Applicable	°C	22.02	25.42	21.25	17.48		16.01	19.66	19.48	22.38	21.65	
bH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.67	6.81	6.8	6.73		6.76	6.78	6.7	6.77	6.91	
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2,744	2,900	2,951	2,941		2,934	2,929	2,890	2,895	2,845	
•	None	Not Applicable	Not Applicable	mg/L	0.24	0.21	0.12	0.15		0.35	0.33	0.13	0.15	0.53	
Jissolved Oxygen															1
Dissolved Oxygen Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-62.7	-2.1	-87.3	-132.3		-159.1	-22.3	61	9.4	-48.6	

ATTACHMENT D

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

- J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
- 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT D GROUNDWATER SAMPLE DATA TO DATE FOR SURFACE IMPOUNDMENT CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

	MCL	Established Background (Det.	Established GWPS	Sample ID:	MW-8 (Shallow)	MW-8 (Deep)	DUP2 (Deep)	MW-8	DUP 1	MV	N-8	MW-8	MW-8	MW-8	MW-8	DUP 1
Parameters	SMCL	Mon.)	(Ass. Mon.)	Sample Date:	2-Aug-18	10-Aug-18	10-Aug-18	27-Sep-18	27-Sep-18	8-Ja	ın-19	24-Apr-19	3-Oct-19	16-Jun-20	6-0	oct-20
					EVALUATION		ICATION MPLE	INITI/ ASSESS MON	MENT	INITIAL ASSES (RESAN UNFILTERED	SSMENT MON. /IPLE) FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	ASSES	ND 2020 SSMENT ON.
Detection Monitoring Parameters	;			Units										-		
Boron	None		Not Applicable	mg/L	0.629	1.48	1.5	1.26 #	1.35	1.61	1.46	1.33	0.876	1.08	1.01	0.978
Calcium	None		Not Applicable	mg/L	375	748	690	544 #	715	634	593	511	481	420	460	430
Chloride	250	Background Well	Not Applicable	mg/L	4.37	3.81	3.71	3.91 #	3.83	3.68	3.72	3.96	3.87	3.72	3.75	3.74
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.364	0.287	0.284	0.293 #	0.306	0.294	0.118	0.382 J	0.3	0.299	0.205	0.206
oH (laboratory)	6.5 - 8.5	(Not Applicable	S.U.	7.5	7	7	7.9 #	7.9	6.51		7.58	6.74	6.78	7.33	7.5
Sulfate	250	_	Not Applicable	mg/L	918	1620	1570	1650 #	1680	1690	1710	1180	1350	1970	1620	1730
Total Dissolved Solids	500		Not Applicable	mg/L	1590	2840	2840	2760 #	2760	2550	2600	2380	2240	2540	2490	2560
Assessment Monitoring Paramet	ers															
Antimony	0.006	Not Applicable		mg/L				<0.00800 #	<0.00800	<0.0004	<0.0004	<0.000400	<0.000400	0.00160 J	<0.000400	<0.000400
Arsenic	0.010	Not Applicable		mg/L				<0.00400 #	<0.00400	0.000515 J	0.000428 J	0.00147 J	<0.000400	<0.000400	<0.000400	0.000446 J
Barium	2	Not Applicable		mg/L				0.00726 J #	0.00747 J	0.00588	0.00523	0.0056	0.00401	0.00503	0.00408	0.00414
Beryllium	0.004	Not Applicable		mg/L				<0.000100 #	<0.000100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable		mg/L				<0.00100 #	<0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable		mg/L				0.00107 J #	<0.005	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	Background Well	mg/L				0.00169 J #	0.00267 J	0.00130 J	0.00135 J	0.00172 J	0.00141 J	0.00170 J	0.00140 J	0.00137 J
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.364	0.287	0.284	0.293 #	0.306	0.294	0.118	0.382 J	0.3	0.299	0.205	0.206
_ead	0.015	Not Applicable	(mg/L				0.000515 J #	< 0.001	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
_ithium	None	Not Applicable		mg/L	0.134	0.252	0.272	0.208 #	0.347 J	0.376	0.359	0.279	0.217	0.236	0.225	0.217
Mercury	0.002	Not Applicable		mg/L				<0.000150 #	<0.000150	0.0000350 J	0.0000560 J	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.00100	<0.00100	<0.00100	<0.00100 #	< 0.01	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
Selenium	0.05	Not Applicable		mg/L				<0.00300 #	0.00472 J	< 0.0011	< 0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Fhallium	0.002	Not Applicable		mg/L				<0.000800 #	<0.000800	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L				0.644 +/- 0.223 #	0.772 +/- 0.235	<0.89		<0.78	<0.69	<0.72	<0.71	<0.68
Other Parameters						1			-							
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L				<5 #	<5	<5		<5.00	6.00 J		6.00 J	8.00 J
Fotal Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						<5						
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						301						
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L						<5						
ron, Total	None	Not Applicable	Not Applicable	mg/L												
ron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
ron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
ron, Ferrous, Dissolved ron, Ferric	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L												
ron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L						83	81.2					
Magnesium Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L				<0.049 #	<0.049	<0.03	0.106	<0.150	0.243	<0.0300	<0.300	<0.300
Potassium	None	Not Applicable	Not Applicable	mg/L						12.1	11.8					
Sodium	None	Not Applicable	Not Applicable	mg/L						81	78.9					
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm				2950 #	2,940	2,870					2,890	2,920
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters				Ŭ						UNFILTERED						
Temperature	None	Not Applicable	Not Applicable	٥C	23.21	23.03		20.6		18.1		18.63	24.6	22.25	22.5	
ЪН	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7	6.56		6.69		6.64		7.04	6.79	6.85	6.85	
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1,947	2,981		2,912		2,884		2,893	3,000	2,685	2,853	
Dissolved Oxygen	None	Not Applicable	Not Applicable	 mg/L	4.15	3.01		0.93		0.65		1.61	0.7	0.99	0.7	
Dxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	166.7	84.6		153.9		157		75.9	72.1	-32.3	243.1	
Furbidity	None	Not Applicable	Not Applicable	NTU	4.05	3.69		197		0.92		1.91	1.74	2.64	0.71	

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

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- J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
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	MCL or	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID:	MW-8	MW-8	MW-8	MW-8	MW-8	MW-8	DUP-3
Parameters	SMCL	(Det. MOIL)	(ASS. WOIL)	Sample Date:	1-Apr-21	12-Oct-21	29-Mar-22	1-Jun-22	4-Oct-22	11-A	pr-23
Detection Monitoring Parameters			·	Units	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASS	SESSMENT MON.
Boron	None		Not Applicable	mg/L	1.5	0.904	1.15		1.28	1.36	1.34
Calcium	None		Not Applicable	mg/L	554	424	583		599	586	596
Chloride	250		Not Applicable	mg/L	3.48	3.82	4.47		3.82	3.43	3.43
Fluoride	4	Background Well	Not Applicable	mg/L	0.322	0.335	0.377		0.326	0.329	0.334
pH (laboratory)	6.5 - 8.5	(Not Applicable)	Not Applicable	S.U.	7.07	6.82	7.63		7.78	7.21	7.04
Sulfate	250		Not Applicable	mg/L	1640	1660	1670		1630	2120	2110
Total Dissolved Solids	500		Not Applicable	mg/L	2770	2550	2730		2800	2540	2860
				5							
Assessment Monitoring Parameters	0.000	Not Amalia - Lia		···· • //	.0.000.400	.0.000.400	.0.000.400		10 000 (00	.0.000.400	.0.000.100
Antimony	0.006	Not Applicable		mg/L	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable		mg/L	< 0.000400	<0.000400	0.000521 J		< 0.000400	0.000479 J	0.000532 J
Barium	2	Not Applicable		mg/L	0.00456	0.00511	0.00522		0.00474	0.00607	0.00608
Beryllium	0.004	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable		mg/L	< 0.000400	0.000686 J	0.000463 J		<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	Background Well	mg/L	0.00189 J	0.00213 J	0.00289 J		0.00205 J	0.00318 J	0.00324 J
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.322	0.335	0.377		0.326	0.329	0.334
Lead	0.015	Not Applicable	(mg/L	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable		mg/L	0.28	0.213	0.272		0.26	0.318	0.305
Mercury	0.002	Not Applicable		mg/L	0.000105 J	<0.0000300	0.0000970 J		<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600	<0.000600
Selenium	0.05	Not Applicable		mg/L	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	<0.78	<0.86	<0.86		0.918	0.465 +/- 0.420	0.906 +/- 0.484
Other Parameters											
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	8.00 J	<5.00		7.00 J	8.00 J	7.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L							
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L							
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L							
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L							
Iron, Total	None	Not Applicable	Not Applicable	mg/L							
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L							
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L							
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L							
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L							
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L							
Magnesium	None	Not Applicable	Not Applicable	mg/L							
Magnesium Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L							
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	1.16	0.469	0.660		0.134	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	1.10				0.134	<0.0300	<0.0300
Sodium	None	Not Applicable	Not Applicable	-							
Specific Conductance (laboratory)		•••		mg/L							3,000
• • • • • • • • •	None	Not Applicable	Not Applicable	umhos/cm	2,940	2,820	2,910		3340	2,960	
Pulfido	None	Not Applicable	Not Applicable	mg/L							
Sulfide			Not Applicable	00	40	00.0	40.4		00.4	40.7	
Field Parameters	Non-	Not Amalia - I-I-		°C	18	20.2	19.1		23.4	19.7	
	None	Not Applicable	Not Applicable		0.04	n n n n			0 00	- <u> </u>	
Field Parameters Temperature pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.81	6.86	6.83		6.83	6.63	
Field Parameters Temperature pH Specific Conductance	6.5 - 8.5 None	Not Applicable Not Applicable	Not Applicable Not Applicable	S.U. μmhos/cm	2,907	2,884	2,878		2647	2,523	
Field ParametersTemperaturepHSpecific ConductanceDissolved Oxygen	6.5 - 8.5 None None	Not Applicable Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable	S.U. μmhos/cm mg/L	2,907 0.99	2,884 1.22	2,878 0.89		2647 1.48	2,523 1.03	
Field Parameters Temperature pH Specific Conductance	6.5 - 8.5 None	Not Applicable Not Applicable	Not Applicable Not Applicable	S.U. μmhos/cm	2,907	2,884	2,878		2647	2,523	

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9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

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12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

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	MCL or	Established Background	Established GWPS	Sample ID:	MW-9	MW-9	MW-9	MW-9	MW-9	MW-9	DUP 3	MW-9	MW-9	MW-9	MW-9 (Shallow)	MW-9 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	6-Jun-16	2-Aug-16	5-Oct-16	8-Dec-16	2-Feb-17	6-Apr-17	6-Apr-17	8-Jun-17	7-Aug-17	24-May-18	2-Aug-18	10-Aug-18
					BACKGROUND 1	BACKGROUND	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACK	GROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units												
Boron	None	1.935	Not Applicable	mg/L	0.0318 J	0.0589 J	0.322 J	0.0838 J	<0.175	0.0364	0.0596 J	0.0561 J	0.0528 J*	0.217	0.0420 J	<0.0350
Calcium	None	961.40	Not Applicable	mg/L	41.1	54.9	159	20.5	26.6	28.3	28.9	33.7	32.8	33.5	31.5	4.82
Chloride	250	11.6	Not Applicable	mg/L	1.42	1.86	0.743 J	3.38	5.72	3.93	3.95	3.4	3.08	2.48	3.25	2.43
Fluoride	4	2.84	Not Applicable	mg/L	0.189	0.175	0.337 J*	0.36	0.275	0.242	0.237	0.185	0.214 J*	0.231	0.272	0.231
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.14	8.3	7.9	7.7	7.7	7.3	7.3	7	7	7.7	7.3	7.7
Sulfate	250	2,156	Not Applicable	mg/L	14.1	16	18.1	21.4	19.8	13.4	13	11.5	15.5	21.3	25.5	33.9
Total Dissolved Solids	500	244	Not Applicable	mg/L	163	216	158	151	167	164	164	189	209	199	173	206
Assessment Monitoring Parameter	′S															
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.00100	<0.00400	<0.000800	0.00108 J	<0.000800	<0.000800	<0.000800	<0.00800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000776 J	0.00191 J	0.00438 J	0.000828 J	0.000651 J	0.000787 J	0.000694 J	0.000869 J	0.00147 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0447	0.0446	0.151	0.0304	0.0284	0.0364	0.0375	0.0327	0.0546 J*			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00200	<0.000500	0.000155 J	<0.000100	U (0.000503)	U (0.000511)	<0.000100	0.000246 J			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000800	<0.000500	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.0023	<0.00100	0.00622 J	U (0.00483)	0.00288	0.0046	0.00451	0.00163 J	0.00577			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	<0.00100	0.00179 J	0.000531 J	0.000204 J	0.000349 J	0.000357 J	0.000346 J	0.000547 J			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.189	0.175	0.337 J*	0.36	0.275	0.242	0.237	0.185	0.214 J*	0.231	0.272	0.231
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000495 J	<0.000200	0.000934 J	0.00106 J	0.000556 J	0.000872 J	0.000873 J	0.000281 J	0.00118 J			
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	<0.0100	0.00214 J	<0.0150	0.00368 J	<0.00300	<0.00300	<0.00300	<0.00300	0.00422 J*		<0.00300	<0.00300
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000500	<0.00100	< 0.00500	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100		<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	0.00135 J	<0.000300	U (0.000973)	0.000636 J	<0.000300	<0.000300	0.000403 J	0.000470 J			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	< 0.00400	<0.000800	<0.008000	<0.000800	<0.000800	<0.000800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.0807 +/- 0.312 U	0.112 +/- 0.250 U	0.575 +/- 0.291	1.44 +/- 1.38 U	0.180 +/- 0.504 U	0.486 +/- 0.461 U	-0.0852 +/- 0.379 U	0.202 +/- 0.198 U	0.621 +/- 0.396			
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									104			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									2.64			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									0.887 J			
Sodium	None	Not Applicable	Not Applicable	mg/L									19.5			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	°C	22.3	23.74	21.8	16.41	16.18	16.94		22.33	24.14	22.3	24.21	21.97
рН	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.54	7.13	7.21	7.3	7.44	7.2		7.01	6.67	7.42	6.62	7.15
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	263	372	254	207	229	230		262	314	251	394	423
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	1.52	0.24	0.08	3.02	1.82	0.22		0.04	2.16	3.52	3.16	1.79
	None	Not Applicable	Not Applicable	mV	-52.6	-28.3	-116	-131.7	-124.8	-29		53.2	51.4	-1.6	235.2	214.3
Oxidation-Reduction Potential Turbidity	None None	Not Applicable	Not Applicable	NTU	27	3.09	11.4	55.9	24.8	44.5		23.1	82.1	19.8	11.5	11

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	MCL	Established	Established		MW-9	M	W-9	MW-9	MW-9	MW-9	DUP 1	MW-9	MW-9	MW-9	MW-9	MW-9
Devemetere	or SMCL	Background (Det. Mon.)	GWPS (Ass. Mon.)	Sample ID:	00.0			04 4 4 4 4 0				7.0.1.00	1.0	40.0-1.04		0.1
Parameters	SINICL		(ASS. WOIL)	Sample Date:	28-Sep-18		an-19	24-Apr-19	3-Oct-19	16-J	un-20	7-Oct-20	1-Apr-21	12-Oct-21	29-Mar-22	6-Jun-22
					INITIAL ASSESSMENT	(RESAI		FIRST 2019 ASSESSMENT	SECOND 2019 ASSESSMENT	ASSES	T 2020 SSMENT	SECOND 2020 ASSESSMENT	FIRST 2021 ASSESSMENT	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT	FIRST 2022 ASSESSMENT
Detection Monitoring Parameters				Units	MON.	UNFILTERED	FILTERED	MON.	MON.	M	ON.	MON.	MON.		MON.	MON. (RESAMPLE)
Boron	None	1.935	Not Applicable	mg/L	0.0457 J #	0.0309	0.0244	0.0692	0.0655	0.0446	0.0630	0.0316	0.0273	0.0794	0.0216	
Calcium	None	961.40	Not Applicable	mg/L	18 #	25.8	25.5	25.6	36.8	36.0	33.5	31.7	24.5	30.5	19.3	
Chloride	250	11.6	Not Applicable	mg/L	2.35 #	2.79	2.73	1.14	1.35	0.883	0.958	0.834	1.74	2.66	4.71^	1.1
Fluoride	4	2.84	Not Applicable	mg/L	0.354 #	0.199	0.159	0.184	0.161	0.134	0.132	0.139	0.175	0.202	<0.250^	0.172
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	8 #	6.71		7.74	6.44	6.48	6.24	7.23	7.07	6.82	1.29^	7.31
Sulfate	250	2,156	Not Applicable	mg/L	19.6 #	13.0	13.0	13.6	10.5	6.36	5.90	11.3	12.0	13.7	24.5^	5.62
Total Dissolved Solids	500	244	Not Applicable	mg/L	139 #	168	100	184	182	170	152	192	226	144	380^	1.42
Assessment Monitoring Paramete		2.11	Not Applicable		100 //	100	100		102	170	102	102	220		000	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000800 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	<0.000400	<0.000400	
Arsenic	0.000	Not Applicable	0.000 (MOL)	mg/L	0.000508 J #	0.000690 J	<0.000400	0.000973 J	0.000780 J	0.000645 J	0.000677 J	0.000619 J	0.000470 J	0.00227	0.00245	
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0226 #	0.0331	0.021	0.0507	0.0327	0.0418	0.0382	0.0362	0.0429	0.0294	0.0634	
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	0.000124 J #	0.000201 J	<0.000200	0.000217 J	<0.00200	< 0.000200	<0.000200	<0.000200	0.000230 J	<0.000200	0.000560 J	
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001240#	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.002 #	0.00276 J	<0.000200	0.00390 J	<0.000400	0.000441 J	<0.000400	0.00183 J	0.00189 J	0.00168 J	0.0207	
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000208 J #	0.000352 J	< 0.000200	0.000516 J	0.000210 J	0.000328 J	0.000311 J	0.000292 J	0.000433 J	0.000720 J	0.00143 J	
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.354 #	0.199	0.159	0.184	0.161	0.134	0.132	0.139	0.175	0.202	<0.250^	0.172
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000462 J #	0.000850 J	<0.000600	0.00120 J	< 0.000600	<0.000600	<0.000600	<0.000600	0.00105 J	<0.000600	0.00312	
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	<0.00300 #	0.00188 J	< 0.00100	0.00389 J	0.00118 J	0.00189 J	0.00163 J	0.00241 J	0.00177 J	0.00152 J	0.0160	
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	< 0.0000300	<0.000300	<0.0000300	< 0.0000300	< 0.0000300	<0.0000300	< 0.0000300	0.000109 J	< 0.0000300	<0.0000300	
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.00100 #	<0.000600	< 0.000600	< 0.000600	< 0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.000327 J #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000800 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.406 +/- 0.245 #	<0.69		<0.99	0.81	<0.72	<0.89	<1.04	<0.79	<0.8	<0.89	
Other Parameters			· (•=)	P = " =			1	40100		40112	10100		(off o		10100	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	13.0 J #	7 J		8.00 J	6.00 J			7.00 J	9.00 J	11.0 J	17^	22.0
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5										
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		77										
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5										
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L		2.51	2.23									
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.429 #	0.479	0.458	0.422	0.0302 J	0.119	0.0997 J	0.208	0.0895 J	< 0.0300	942^	0.0784 J,H
Potassium	None	Not Applicable	Not Applicable	mg/L		0.591	0.267									
Sodium	None	Not Applicable	Not Applicable	mg/L		13.9	14.2									
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	197 #	175						283	213	223	24500^	253
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters		11	11 11 11	<u> </u>												
Temperature	None	Not Applicable	Not Applicable	°C	20.9	14.5		18.5	25.86	24.73		21.5	16.9	21.1	19.5	26.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.76	6.65		6.79	10.65	6.88		6.89	6.8	6.91	7.26	6.74
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	203.2	170.9		203.1	3552	258		264.3	216	212.2	150.8	232
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.45	2.82		2.29	0.5	0.39		0.36	0.43	0.19	2.01	0.52
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	325.8	252.1		46.7	-252.4	245.5		160.8	53.1	-164.2	121.3	50
Turbidity	None	Not Applicable	Not Applicable	NTU	26	69.1	4.76	71.1	0.61	32.1		28.6	79.9	6.51	99.8	35.00
Notes:	1	1 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1									1					

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.
 3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-9	MW-9
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	4-Oct-22	13-Apr-23
					SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameters	S			Units		
Boron	None	1.935	Not Applicable	mg/L	0.0982	0.0338
Calcium	None	961.40	Not Applicable	mg/L	37.7	23.3
Chloride	250	11.6	Not Applicable	mg/L	3.7	2.42
Fluoride	4	2.84	Not Applicable	mg/L	<0.0500	0.136
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	6.95	7.13
Sulfate	250	2,156	Not Applicable	mg/L	5.9	16.4
Total Dissolved Solids	500	244	Not Applicable	mg/L	196	118
Assessment Monitoring Parame	ters					
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00186 J	0.000451 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0329	0.0381
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	< 0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000507 J	0.000259 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	< 0.0500	0.136
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	0.000626 J
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	<0.00100	0.00101 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	< 0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000600	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000000	<0.000000
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.928	0.0295 +/- 0.519
Other Parameters	5	Νοι Αρριιcable		poi/L	0.320	0.0295 +/- 0.519
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.00 J	11.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable		9.00 3	
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		
·	None	Not Applicable	Not Applicable	mg/L		
Bicarbonate Alkalinity as CaCO3 Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		
Iron, Total	None	Not Applicable	Not Applicable	mg/L mg/L		
Iron, Dissolved			Not Applicable	-		
Iron, Ferrous	None	Not Applicable		mg/L		
	None	Not Applicable Not Applicable	Not Applicable	mg/L		
Iron, Ferrous, Dissolved	None		Not Applicable	mg/L		
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L		
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L		
Magnesium	None	Not Applicable	Not Applicable	mg/L		
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L		
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	0.198
Potassium	None	Not Applicable	Not Applicable	mg/L		
Sodium	None	Not Applicable	Not Applicable	mg/L		
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	349	200
Sulfide	None	Not Applicable	Not Applicable	mg/L		
Field Parameters	N			00	6.1	40.0
Temperature	None	Not Applicable	Not Applicable	O	24	18.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.6	6.85
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	310.5	235.1
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.29	0.73
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-99.2	-47.1
Turbidity	None	Not Applicable	Not Applicable	NTU	9.40	53.1

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.
 3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



ATTACHMENT D GROUNDWATER SAMPLE DATA TO DATE FOR SURFACE IMPOUNDMENT CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

	MCL or	Established Background	Established GWPS	Sample ID:	MW-10	DUP 3	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10 (Shallow)	MW-10 (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	6-Jun-16	6-Jun-16	2-Aug-16	5-Oct-16	9-Dec-16	2-Feb-17	7-Apr-17	8-Jun-17	14-Aug-17	24-May-18	2-Aug-18	10-Aug-18
						GROUND				BACKGROUND		BACKGROUND 7		DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units												
Boron	None	1.935	Not Applicable	mg/L	3.05	3.14	2.86	2.82	2.78	4.01	3.72 J*	3.83	3.22	3.95	0.407	3.54
Calcium	None	961.40	Not Applicable	mg/L	245	224	152	139	153	166	246	174	134	152	134	152
Chloride	250	11.6	Not Applicable	mg/L	33.4 H	41.9	37.1	34.4	36.5	31.7	42	34	27.7	39.9	36.5	35.6
Fluoride	4	2.84	Not Applicable	mg/L	0.805	0.809	1.06	1.21 J*	1.21	1.17	1.08	1.01	0.954	1.75	1.04	1
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.52	7.61	7.5	7.7	7.8	7.3	7.4	7.3	7	7.9	7.6	7.6
Sulfate	250	2,156	Not Applicable	mg/L	943 J*	1400	912	959	1220	861	1070	872	988	1050	918	882
Total Dissolved Solids	500	1,632	Not Applicable	mg/L	1610	1580	1540	1540	1520	1570	1530	1560	1520	1570	1490	1550
Assessment Monitoring Parameters	'S		, ,	Ū		,										
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800	<0.000800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000792 J	0.000865 J	0.00115 J	0.00133 J	<0.00200	0.00102 J	<0.00200	0.00155 J	0.00378 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0268	0.0257	0.0229	0.021	0.0224	0.0241	0.0339 J*	0.0226	0.0225			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.00100	<0.00100	< 0.00100	<0.000100	<0.000500	< 0.000100	<0.000500	<0.000100	< 0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	< 0.000400	< 0.000400	< 0.000400	<0.000100	< 0.000500	< 0.000100	< 0.000500	< 0.000100	< 0.000100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	0.000501 J	<0.000500	0.0032	<0.00250	<0.000500	0.00502 J	<0.000500	U (0.00111)			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	< 0.000500	<0.000500	0.000222 J	<0.000200	0.000365 J	<0.000500	0.000345 J	0.000424 J			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.805	0.809	1.06	1.21 J*	1.21	1.17	1.08	1.01	0.954	1.75	1.04	1
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	< 0.000200	<0.000200	<0.000100	<0.000500	0.000163 J	<0.000500	<0.000100	<0.000100			
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.0673	0.0682	0.0627	0.0646	0.0605 J	0.0669	0.0908 J	0.061	0.0654		0.0607	0.0579
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	< 0.0002	<0.0027	< 0.000150	< 0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00219	0.00197 J	0.00156 J	0.00143 J	<0.00500	0.00163 J	<0.00500	0.00199 J	0.00190 J		0.00219	0.00198 J
Selenium	0.05		0.05 (MCL)	<u> </u>	<0.000600	<0.000600	<0.001503	0.000386 J	<0.00500	0.000332 J	<0.00300	<0.000300	<0.000300			1
Thallium	0.005	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000600	<0.000600	<0.000800	<0.00150	<0.000332 J	<0.00300	<0.000300	<0.000300			
I		Not Applicable		mg/L									20.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.26 +/- 0.315	0.881 +/- 0.248	0.945 +/- 0.304	1.48 +/- 0.362	1.11 +/- 0.402	1.57 +/- 0.440	1.08 +/- 0.301	0.774 +/- 0.234	1.12 +/- 0.306			
Other Parameters				/1						1			1		1	1
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									107			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									44.9			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									11.2			
Sodium	None	Not Applicable	Not Applicable	mg/L									282			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters				, j		,										
Temperature	None	Not Applicable	Not Applicable	°C	20.76		22.35	22.95	14.55	15.1	17.67	22.39	22.7	21.58	25.75	22.84
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.36		7.45	7.46	7.12	7.3	7.29	7.31	7.28	7.67	7.18	7.27
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2,031		2,068	2,129	2,104	2,084	2,087	2,072	2,072	2,051	2,079	2,085
													1			
Dissolved Oxygen	None	Not Applicable	Not Applicable	ma/L	0.57		0.09	0.05	0.25	1.83	1.29	0.15	0.13	1.75	3.56	J 3.12
Dissolved Oxygen Oxidation-Reduction Potential	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L mV	0.57 -24.2		0.09 -6.6	0.05	0.25	1.83 -123.8	1.29 33.1	0.15	0.13	1.75 -34.6	3.56 177.1	3.72 153

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



		Fatabliabad	Fatabliahad															
	MCL or	Established Background	Established GWPS	Sample ID:	MW-10	MW	/-10	MW-10	DUP-1	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	28-Sep-18	9-Ja	ın-19	23-A	pr-19	30-Sep-19	16-Jun-20	13-Oct-20	1-Apr-21	12-Oct-21	29-Mar-22	Jun-22	Oct-22	Apr-23
	1			·	INITIAL ASSESSMENT	INITIAL ASSES (RESAN	SSMENT MON. /IPLE)	FIRS ASSES	т 2019 SMENT	SECOND 2019 ASSESSMENT	FIRST 2020 ASSESSMENT	SECOND 2020 ASSESSMENT	FIRST 2021 ASSESSMENT	SECOND 2021 ASSESSMENT	FIRST 2022 ASSESSMENT	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT	FIRST 2023 ASSESSMENT
Detection Monitoring Parameters				Units	MON.	UNFILTERED	FILTERED	M	ON.	MON.	MON.	MON.	MON.	MON.	MON.	(RESAMPLE)	MON.	MON.
Boron	None	1.935	Not Applicable	mg/L	3.04 #	3.71	3.4	3.38	3.48	2.71	2.87	3.11	3.31	2.74	3.14		3.14	2.99
Calcium	None	961.40	Not Applicable	mg/L	109 #	155	151	154	146	141	129	116	116	140	143		146	138
Chloride	250	11.6	Not Applicable	mg/L	35.3 #	36.8	35.6	33	6.84	34.8	35.9	37.3	35.8	36.0	38.4		35.6	35.3
Fluoride	4	2.84	Not Applicable	mg/L	1.06 #	1.08	1.15	0.992	<0.250	1.11	1.09	1.07	1.01	0.928	1.18		1.17	1.13
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	8.2 #	7.21		7.94	7.96	7.22	7.12	7.5	7.89	7.61	7.89		7.44	7.67
Sulfate	250	2,156	Not Applicable	mg/L	835 #	990 B	1,010 B	976	189	938	1,030	992	954	1,020	959		933	1,030
Total Dissolved Solids	500	1,632	Not Applicable	mg/L	1510 #	1,450	1,500	1,560	1,620	1,530	1,580	1,600	1,660	1,520	1,570		1670	1,340
Assessment Monitoring Paramete																		
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000800 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400 #	0.000979 J	0.000841 J	0.000645 J	0.000688 J	0.000575 J	0.000731 J	0.000686 J	0.000538 J	0.000676 J	0.000942 J		0.000650 J	0.000732 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0207 #	0.0237	0.0227	0.0266	0.0252	0.0224	0.0251	0.021	0.02	0.0274	0.0259		0.0251	0.0257
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000518 J #	<0.000400	<0.000400	0.000471 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000853 J		<0.000400	0.000406 J
Cobalt Fluoride	None	Not Applicable	0.006 (ODEQ) 4 (MCL)	mg/L mg/L	0.000151 J # 1.06 #	<0.000200 1.08	<0.000200 1.15	<0.000200 0.992	<0.000200 <0.250	<0.000200 1.11	<0.000200 1.09	<0.000200	<0.000200	<0.000200 0.928	0.000379 J 1.18		<0.000200	0.000252 J 1.13
Lead	0.015	Not Applicable Not Applicable	0.015 (MCL)	mg/L	<0.000100 #	< 0.000600	<0.000600	<0.000600	<0.230	<0.000600	< 0.000600	<0.000600	<0.000600	<0.000600	< 0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.0593 #	0.0705	0.0687	0.0756	0.0734	0.0639	0.0665	0.0625	0.055	0.0644	0.0668		0.0618	0.0649
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	< 0.000300	0.0000460 J	< 0.000300	<0.000300	<0.000300	<0.000300	<0.000300	0.000165 J	<0.000300	< 0.0000300		< 0.000300	< 0.000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00162 J #	0.00198 J	0.00193 J	0.00263 J	0.00209 J	0.00182 J	0.00202 J	0.00178 J	0.00208 J	0.00230 J	0.00210 J		0.00197 J	0.00208 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000300 #	< 0.0011	< 0.0011	0.00180 J	< 0.00110	< 0.00110	<0.00110	<0.00110	< 0.00110	< 0.00110	< 0.00110		< 0.00110	< 0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000800 #	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		0.000320 J	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.12 +/- 0.314 #	0.97		<0.66	0.77	<0.7	1.31	1.98	<0.75	1.14	<0.85		1.67	0.714 +/- 1.09
Other Parameters	,	, ,,																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5.00		<5.00	<5.00	6.00 J		<5.00	<5.00	<5.00	<5.00		5.00 J	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L														
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5												
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		112												
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5												
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		55.4	53											
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.35 #	1.42	1.36 12.8	1.37	0.261 J	0.244	<0.0600	<0.0300	0.547	0.0978 J	1.24		0.217	0.627
Potassium Sodium	None None	Not Applicable Not Applicable	Not Applicable Not Applicable	mg/L mg/L		13.2 299	288											
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2020 #	2,080	200					2,230	2,180	2,110	2,260		2480	2,160
Sulfide	None	Not Applicable	Not Applicable	mg/L	2020 #	2,080						2,230	2,100	2,110				2,100
Field Parameters	NONE			ing/⊏														
Temperature	None	Not Applicable	Not Applicable	٥C	22.1	14.9		18.2		26.33	21.86	21.2	16.52	22.0	19.4		21.4	18.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.4	7.36		7.82		7.43	7.57	7.52	8.42	7.54	7.76		7.1	7.73
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2,109	2,034		2,079		2,102	1,967	2,055	2,800	1,910	2,075		2077	2,034
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.44	2.62		6.38		1.2	3.58	1.22	6.58	1.72	4.59		1.95	3.79
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	101.2	229.1		127.6		35.2	-12.7	305	70.4	-28.5	138.8		108.5	113.3
Turbidity	None	Not Applicable	Not Applicable	NTU	6.98	0.76	0.4	0.42		1.37	2.09	3.83	0.75	0.96	2.82		2.85	1.94
Notes:		· · ·	· · ·		-													

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3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

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6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

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16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	DUP 3	MW-11	MW-11	MW-11 (Shallow)	MW-11 (Deep) Verification
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	7-Jun-16	1-Aug-16	5-Oct-16	9-Dec-16	2-Feb-17	7-Apr-17	8-Jun-17	8-Jun-17	14-Aug-17	24-May-18	2-Aug-18	10-Aug-18
					BACKGROUND 1	BACKGROUND 2	BACKGROUN D 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKG	ROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units												
Boron	None	1.935	Not Applicable	mg/L	2.82	2.65	2.87	2.51	0.758	3.11	3.47	3.52 J*	3.13	3.82	0.344	3.09
Calcium	None	961.40	Not Applicable	mg/L	70.9	67.3	51.6	56.1	58.4	57.1	58.7	58.2	45.4	54.9	44.4	54.9
Chloride	250	11.6	Not Applicable	mg/L	61.6	55.9	60.1	59.3	52.7	56.3	58	52.4	49.5	56.6	58.4	62.2
Fluoride	4	2.84	Not Applicable	mg/L	1.25	1.49	1.73 J*	1.52	1.59	1.68	1.47	1.49 J*	1.45	2.2	1.53	1.51
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.78	7.6	7.8	8	7.8	7.9	7.3	7.4	7.3	8	7.7	7.8
Sulfate	250	2,156	Not Applicable	mg/L	854	669	654	675	588	702	637	564	673	644	636	647
Total Dissolved Solids	500	1,328	Not Applicable	mg/L	1270	1280	1270	1220	1220	1200	1250	1240	1200	1290	1240	1260
Assessment Monitoring Parameter		1,020	nounphicable		1210	1200	1210	1220	1220	1200	1200	1210	1200	1200	1210	1200
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	0.00438 J	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800			
Arsenic	0.000	Not Applicable	0.01 (MCL)	mg/L	0.000665 J	<0.00250	0.000659 J	< 0.00200	0.000506 J	0.000563 J	0.000853 J	0.000658 J	0.00308 J			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0262	0.0233	0.0204	0.0191	0.0221	0.0217	0.019	0.0193 J*	0.0196			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	< 0.0202	< 0.00100	<0.000100	< 0.000500	<0.000100	0.000361 U	<0.000100	< 0.000100	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000400	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100			
Chromium	0.000	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500	0.000614 J	0.00138 J	U (0.00121)			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	<0.000500	<0.000300	<0.00230	<0.000300	<0.000300	0.000172 J	< 0.000100	0.000121)			
Fluoride			4 (MCL)	-	1.25	1.49	1.73 J*	1.52	1.59	1.68	1.47	1.49 J*	1.45	2.2	1.53	1.51
	0.015	Not Applicable	· · · /	mg/L		<0.000200		<0.000500	<0.000100	<0.000100	<0.000100	0.00107 J				
Lead		Not Applicable	0.015 (MCL)	mg/L	<0.000200		< 0.000100						<0.000100			
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.06	0.0738	0.0567	0.0486 J	0.0562	0.0549	0.0508	0.0508 J*	0.0505		0.0511	0.0513
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	< 0.000150	<0.000150	< 0.000150	<0.000150	< 0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00291	0.00264	0.00262	< 0.00500	0.00274	0.00225	0.00275	0.00481	0.00272		0.00293	0.00331
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.00300	<0.000300	<0.00150	<0.000300	<0.000300	0.000432 J	<0.000300	<0.000300			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	< 0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.546 +/- 0.247	0.924 +/- 0.297	0.752 +/- 0.307	1.40 +/- 0.419	0.480 +/- 0.310	0.708 +/- 0.264	0.338 +/- 0.211	0.661 +/- 0.250	1.01 +/- 0.296			
Other Parameters						11	11					1	11	11		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									171			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									16.3			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									7.16			
Sodium	None	Not Applicable	Not Applicable	mg/L									352			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters	-			Ŭ												
Temperature	None	Not Applicable	Not Applicable	٥C	19.87	23.27	21.85	16.16	16.01	19.8	20.53		21.68	21.01	25.94	20.89
bH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.21	7.19	7.65	7.63	7.68	7.6	7.34		7.62	7.71	7.17	7.56
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	1,811	1,945	1,907	1,890	1,867	1,865	1,858		1,886	1,865	1,934	1,942
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.16	1	0.02	0.13	2.31	2.65	0.32		0.33	1.69	2.52	1.28
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-9.8	16.3	-119.9	-142.1	-120.8	-20.8	116.2		5	-189.7	176.9	56.4
Turbidity	None	Not Applicable	Not Applicable	NTU	1.35	1.4	1.02	1.04	0.69	1.14	0.97		3.3	0.31	0.41	3.85
Notes:					1.00		1.02	1.07	0.00	1.17	0.01	<u> </u>	0.0	0.01	ודיע	0.00

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.
 3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



ParametersSMDetection Monitoring ParametersBoronNoCalciumNoCalciumNoChloride25Fluoride25Fluoride25Fluoride25Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0	or or MCL Image: state stat	Background (Det. Mon.) 1.935 961.40 11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable	GWPS (Ass. Mon.) Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable	Sample ID: Sample Date: Units mg/L mg/L mg/L S.U. mg/L mg/L mg/L	28-Sep-18 INITIAL ASSESSMENT MON. 3.16 # 36 # 53.9 # 1.55 # 8.4 # 639 # 1230 # <0.000800 #	INITIAL ASSE (RESA UNFILTERED 3.18 47.6 56.3 1.45 7.69 637 1,220	Jan-19 ESSMENT MON. MPLE) FILTERED 3.25 54.1 56.2 0.561 633 1,200	23-Apr-19 FIRST 2019 ASSESSMENT MON. 3.29 57.6 57.2 1.53 8.12 659 1,220	30-Sep-19 SECOND 2019 ASSESSMENT MON. 2.38 46.8 56.1 1.59 6.95	16-Jun-20 FIRST 2020 ASSESSMENT MON. 2.47 44.5 57.5 1.57	7-Oct-20 SECOND 2020 ASSESSMENT MON. 2.49 45.9 56.7 1.44	1-Apr-21 FIRST 2021 ASSESSMENT MON. 3.01 45.1 57.7	12-Oct-21 SECOND 2021 ASSESSMENT MON. 2.98 52.6 58.6 1.49	29-Mar-22 FIRST 2022 ASSESSMENT MON. 2.82 48.9 60.2^ 2.43^	6-Jun-22 FIRST 2022 ASSESSMENT MON. (RESAMPLE) 58.7	3-Oct-22 SECOND 2022 ASSESSMENT MON. 2.91 48.3 57.6	13-Apr-23 FIRST 2023 ASSESSMENT MON. 2.72 47.8 56.2
Detection Monitoring ParametersBoronNoCalciumNoChloride25Fluoride25Fluoride26pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium22Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	None None 250 4 5 - 8.5 250 500 0.006 0.006 0.004 0.005	1.935 961.40 11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	Units mg/L mg/L mg/L mg/L S.U. mg/L mg/L mg/L	INITIAL ASSESSMENT MON. 3.16 # 36 # 53.9 # 1.55 # 8.4 # 639 # 1230 #	INITIAL ASSE (RESA UNFILTERED 3.18 47.6 56.3 1.45 7.69 637 1,220	ESSMENT MON. MPLE) FILTERED 3.25 54.1 56.2 0.561 633	FIRST 2019 ASSESSMENT MON. 3.29 57.6 57.2 1.53 8.12 659	SECOND 2019 ASSESSMENT MON. 2.38 46.8 56.1 1.59	FIRST 2020 ASSESSMENT MON. 2.47 44.5 57.5	SECOND 2020 ASSESSMENT MON. 2.49 45.9 56.7	FIRST 2021 ASSESSMENT MON. 3.01 45.1 57.7	SECOND 2021 ASSESSMENT MON. 2.98 52.6 58.6	FIRST 2022 ASSESSMENT MON. 2.82 48.9 60.2^	FIRST 2022 ASSESSMENT MON. (RESAMPLE) 58.7	SECOND 2022 ASSESSMENT MON. 2.91 48.3 57.6	FIRST 2023 ASSESSMENT MON. 2.72 47.8
BoronNoCalciumNoCalciumNoChloride25Fluoride26pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium22Beryllium0.0Cadmium0.0CobaltNo	None 250 4 5 5 - 8.5 250 500 500 0.006 0.010 2 0.004 0.005 0.005	961.40 11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L mg/L S.U. mg/L mg/L mg/L	3.16 # 36 # 53.9 # 1.55 # 8.4 # 639 # 1230 #	3.18 47.6 56.3 1.45 7.69 637 1,220	3.25 54.1 56.2 0.561 633	3.29 57.6 57.2 1.53 8.12 659	2.38 46.8 56.1 1.59	2.47 44.5 57.5	2.49 45.9 56.7	3.01 45.1 57.7	2.98 52.6 58.6	2.82 48.9 60.2^	 58.7	2.91 48.3 57.6	2.72 47.8
BoronNoCalciumNoCalciumNoChloride25Fluoride26pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium22Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	None 250 4 5 5 - 8.5 250 500 500 0.006 0.010 2 0.004 0.005 0.005	961.40 11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L mg/L S.U. mg/L mg/L mg/L	36 # 53.9 # 1.55 # 8.4 # 639 # 1230 #	47.6 56.3 1.45 7.69 637 1,220	54.1 56.2 0.561 633	57.6 57.2 1.53 8.12 659	46.8 56.1 1.59	44.5 57.5	45.9 56.7	45.1 57.7	52.6 58.6	48.9 60.2^	 58.7	48.3 57.6	47.8
CalciumNoChloride25Fluoride25Fluoride26pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium22Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	None 250 4 5 5 - 8.5 250 500 500 0.006 0.010 2 0.004 0.005 0.005	961.40 11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L mg/L S.U. mg/L mg/L mg/L	36 # 53.9 # 1.55 # 8.4 # 639 # 1230 #	47.6 56.3 1.45 7.69 637 1,220	54.1 56.2 0.561 633	57.6 57.2 1.53 8.12 659	46.8 56.1 1.59	44.5 57.5	45.9 56.7	45.1 57.7	52.6 58.6	48.9 60.2^	 58.7	48.3 57.6	47.8
Chloride25Fluoride2Fluoride2pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	250 4 5 - 8.5 250 500 0.006 0.010 2 0.004 0.005	11.6 2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L S.U. mg/L mg/L mg/L	53.9 # 1.55 # 8.4 # 639 # 1230 #	56.3 1.45 7.69 637 1,220	56.2 0.561 633	57.2 1.53 8.12 659	56.1 1.59	57.5	56.7	57.7	58.6	60.2^	58.7	57.6	
Fluoride2pH (laboratory)6.5 -Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	4 5 - 8.5 250 500 0.006 0.010 2 0.004 0.005	2.84 8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L S.U. mg/L mg/L mg/L	1.55 # 8.4 # 639 # 1230 #	1.45 7.69 637 1,220	0.561 633	1.53 8.12 659	1.59								50.2
pH (laboratory)6.5Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	250 500 0.006 0.010 2 0.004 0.005	8 2,156 1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	S.U. mg/L mg/L mg/L	8.4 # 639 # 1230 #	7.69 637 1,220	 633	8.12 659				1.58	1 4 4		1.74	1.6	1.53
Sulfate25Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	250 500 0.006 0.010 2 0.004 0.005	1,328 Not Applicable Not Applicable Not Applicable	Not Applicable Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L mg/L	639 # 1230 #	637 1,220	633	659		7.23	7.63	7.97	7.71	1.45^	7.86	7.53	7.69
Total Dissolved Solids50Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	500 0.006 0.010 2 0.004 0.005	1,328 Not Applicable Not Applicable Not Applicable	Not Applicable 0.006 (MCL) 0.01 (MCL)	mg/L mg/L	1230 #	1,220		- 11	681	718	717	691	706	1160^	681	683	711
Assessment Monitoring ParametersAntimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	0.006 0.010 2 0.004 0.005	Not Applicable Not Applicable Not Applicable	0.006 (MCL) 0.01 (MCL)	mg/L			1,200	1 770	1,250	1,260	1,220	1,250	1,220	3500^	1,230	1,070	1,130
Antimony0.0Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	0.010 2 0.004 0.005	Not Applicable Not Applicable	0.01 (MCL)	<u> </u>				1,220	1,200	1,200	1,220	1,200	1,220		1,230	1,070	1,130
Arsenic0.0Barium2Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	0.010 2 0.004 0.005	Not Applicable Not Applicable	0.01 (MCL)	<u> </u>	SULURRENE #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Barium22Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	2 0.004 0.005	Not Applicable	· · · · ·	mg/L	<0.000400 #	0.000481 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000458 J	<0.000400		<0.000400	0.000418 J
Beryllium0.0Cadmium0.0Chromium0.0CobaltNo	.005		2 (MCL)	mg/L	0.0153 #	0.0213	0.0216	0.0232	0.0171	0.0214	0.0174	0.017	0.0232	0.0194		0.0173	0.0185
Cadmium0.0Chromium0.CobaltNo	.005		0.004 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	< 0.000200		<0.000200	< 0.000200
Chromium 0. Cobalt No		Not Applicable	0.005 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cobalt No		Not Applicable	0.1 (MCL)	mg/L	<0.000500 #	<0.000400	<0.000200	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000574 J	0.000813 J		<0.000200	<0.000400
	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000100 #	< 0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	0.000286 J	< 0.000200		<0.000200	<0.000200
	4	Not Applicable	4 (MCL)	mg/L	1.55 #	1.45	0.561	1.53	1.59	1.57	1.44	1.58	1.49	2.43^	1.74	1.6	1.53
	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000100 #	< 0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	< 0.000600	<0.000600	<0.000600		<0.000600	<0.000600
	None	Not Applicable	0.4282 (UTL)	mg/L	0.0443 #	0.0599	0.0641	0.0675	0.0532	0.055	0.0574	0.0524	0.0579	0.0557		0.0495	0.0556
	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	< 0.0000300	< 0.0000300	< 0.0000300	0.000139 J	<0.0000300	< 0.0000300		< 0.0000300	<0.0000300
	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00252 #	0.00333 J	0.00317 J	0.00338 J	0.00340 J	0.00307 J	0.00329 J	0.00295 J	0.00399 J	0.00313 J		0.00376 J	0.00314 J
	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000300 #	<0.0011	< 0.0011	<0.00110	< 0.00110	<0.00110	< 0.00110	< 0.00110	< 0.00110	< 0.00110		< 0.00110	<0.00110
	.002	Not Applicable	0.002 (MCL)	mg/L	<0.000800 #	0.000329 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Ra-226 + Ra-228 (combined) 5	5	Not Applicable	5 (MCL)	pCi/L	1.14 +/- 0.315 #	< 0.94		<0.67	<0.71	0.77	1.03	<0.77	1.85	<0.92		1.36	3.27 +/- 1.26
Other Parameters	•		· (•_)	p • " –			1			UT I	1100	10111	1100	10102			0121 17 1120
	lone	Not Applicable	Not Applicable	mg/L	<5.00 #	<5		<5.00	<5.00		<5.00	<5.00	<5.00	6.00 J^	21	5.00 J	6.00 J
	lone	Not Applicable	Not Applicable	ma/L													
	Vone	Not Applicable	Not Applicable	mg/L		<5											
· · · · · · · · · · · · · · · · · · ·	Vone	Not Applicable	Not Applicable	mg/L		187											
	Vone	Not Applicable	Not Applicable	mg/L		<5											
	Vone	Not Applicable	Not Applicable	mg/L													
	lone	Not Applicable	Not Applicable	mg/L													
	None	Not Applicable	Not Applicable	mg/L													
	None	Not Applicable	Not Applicable	mg/L													
	Vone	Not Applicable	Not Applicable	mg/L													
· · · · · · · · · · · · · · · · · · ·	None	Not Applicable	Not Applicable	mg/L													
	None	Not Applicable	Not Applicable	mg/L		18.3	19.5										
	None	Not Applicable	Not Applicable	mg/L													
	10	Not Applicable	Not Applicable	mg/L	0.355 #	0.668	0.66	1.7	0.379	1.15	<0.300	1.04	0.246	695^	0.611	0.902	0.758
	None	Not Applicable	Not Applicable	mg/L		7.9	7.81										
	None	Not Applicable	Not Applicable	mg/L		356	360										
	None	Not Applicable	Not Applicable	umhos/cm	1840 #	1,850					2,060	1,990	1,920	19800^	2,330	2,260	1,950
	Vone	Not Applicable	Not Applicable	mg/L													
Field Parameters				Ŭ													
	None	Not Applicable	Not Applicable	٥C		11.9		18.23	23.81	20.4	21	17.06	21.5	19.6	21.5	27.2	18.5
· · · · · · · · · · · · · · · · · · ·	5 - 8.5	Not Applicable	Not Applicable	S.U.		7.67		8.03	7.65	7.72	7.63	8.37	7.54	7.90	7.54	7.45	7.78
	Vone	Not Applicable	Not Applicable	μmhos/cm		1,844		1,869	1,915	1,798	1,873	2,530	1,926	1,651	1,900	1,930	1,838
•	Vone	Not Applicable	Not Applicable	mg/L		0.71		4.86	3.29	3	0.43	6.42	0.41	3.27	1.27	0.44	2.95
	Vone	Not Applicable	Not Applicable	mV		315.2		-67.1	-81.6	-25.6	115	62.1	-108.8	160.3	37.7	-54.7	133.3
	None	Not Applicable	Not Applicable	NTU		9.03	1.15	1.14	3.09	2.73	1.02	1.9	3.00	1.00	2.41	3.90	2.85

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.
 3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-22A 2-Jun-16	MW-22A 1-Aug-16	DUP 3	MW-22A 3-Oct-16	MW-22A 6-Dec-16	MW-22A 1-Feb-17	MW-22A 5-Apr-17	MW-22A 7-Jun-17	MW-22A 11-Aug-17	MW-22A 22-May-18	MW-22A (Deep) 10-Aug-18
r al alliclet S	ONICE			Sample Date.	2-Juli-10	I-Aug-16	1-Aug-16	3-001-16	6-Dec-16		5-Api-17	7-Jun-17	TT-Aug-17	22-Way-16	10-Aug-18
					BACKGROUND 1	BACKO	ROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units											
Boron	None		Not Applicable	mg/L	1.69	1.43	1.4	1.11	1.74	1.48	2.11	1.39	1.77	1.74	2.18
Calcium	None		Not Applicable	mg/L	624	853	848	762	832	577	933	942 J*	559	636	697
Chloride	250	Background Well	Not Applicable	mg/L	3.33	2.86	2.82	2.33	2.39	2.49	2.21 J*	2.12 J*	2.28	2.6	2.41
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.376	0.368	0.314	0.625	0.402 J*	0.415	0.279 J*	0.305 J*	0.341	2.24	0.315
oH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	6.99	7	7	6.8	7.2	6.9	6.9	7	6.8	7	7.1
Sulfate	250		Not Applicable	mg/L	1,810 J*	1770	1770	1810	1850	1710	1930	1900	2030	1940	1860
Total Dissolved Solids	500		Not Applicable	mg/L	3060	2870	3050	2820	2720	2910	2900	2990	3030	3090	3050
Assessment Monitoring Parameter															
Antimony	0.006	Not Applicable	4 4	mg/L	<0.00250	< 0.000500	< 0.000500	< 0.00160	<0.00400	<0.000800	< 0.000800	<0.00800	<0.000800		
Arsenic	0.010	Not Applicable	4	mg/L	0.00255 J	0.00412	0.00417	0.00324 J	0.00241 J	0.00154J	0.00324	<0.00400	0.000670 J		
Barium	2	Not Applicable	4	mg/L	0.0167	0.02	0.0229	0.0262	0.0338	0.0177	0.0164	0.0103 J	0.0114		
Beryllium	0.004	Not Applicable	4	mg/L	<0.00500	<0.00100	< 0.00100	<0.000200	<0.000500	<0.000100	U (0.000409)	<0.00100	<0.000100		
	0.005	Not Applicable		mg/L	<0.00200	< 0.000400	< 0.000400	<0.000200	<0.000500	<0.000100	<0.000100	<0.00100	<0.000100		
Chromium	0.1	Not Applicable	De la contra de la	mg/L	0.00315 J	< 0.000500	0.000726 J	< 0.00100	<0.00250	0.000677 J	<0.000500	<0.00500	<0.000500		
Cobalt	None	Not Applicable	Background	mg/L	<0.00250	0.000998 J	0.00106 J	0.000582 J	0.000578 J	0.000381 J	0.000153 J	<0.00100	0.000158 J		
Fluoride	4	Not Applicable	Well	mg/L	0.376	0.368	0.314	0.625	0.402 J*	0.415	0.279 J*	0.305 J*	0.341	2.24	0.315
Lead	0.015	Not Applicable	(Not Applicable)	mg/L	<0.00100	< 0.000200	0.000231 J	<0.000100	< 0.000500	0.000127 J	<0.000100	<0.00100	0.000105 J		
Lithium	None	Not Applicable		mg/L	0.342	0.29	0.288	0.337	0.351	0.276	0.303	0.245 J	0.298		0.329
Mercury	0.002	Not Applicable		mg/L	<0.000150	< 0.000150	<0.000150	<0.000150	<0.000150 UJ	<0.000150	<0.000150	<0.000150	<0.000150		
Molybdenum	None	Not Applicable		mg/L	<0.00250	0.000562 J	0.000653 J	<0.00200	<0.00500	<0.00100	< 0.00100	<0.0100	<0.00100		<0.00100
Selenium	0.05	Not Applicable		mg/L	<0.00300	< 0.000600	<0.000600	0.000622 J	<0.00150	0.000443 J	< 0.00300	<0.00300	<0.000300		
Thallium	0.002	Not Applicable		mg/L	<0.00250	< 0.000500	<0.000500	<0.00160	<0.00400 1.01 +/- 0.400	<0.000800	<0.000800	<0.00800	<0.000800		
Ra-226 + Ra-228 (combined) Other Parameters	5	Not Applicable		pCi/L	0.842 +/- 0.297	0.629 +/- 0.286	0.177 +/- 0.245 U	1.05 +/- 0.299	1.01 +/- 0.400	0.430 +/- 0.299 U	0.220 +/- 0.228 U	0.277 +/- 0.212 U	0.496 +/- 0.345 U		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	ma/l											
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L											
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00		
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									231		
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00		
ron, Total	None	Not Applicable	Not Applicable	mg/L											
ron, Dissolved	None	Not Applicable	Not Applicable	mg/L											
ron, Ferrous	None	Not Applicable	Not Applicable	mg/L											
ron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L											
ron, Ferric	None	Not Applicable	Not Applicable	mg/L											
ron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Vagnesium	None	Not Applicable	Not Applicable	mg/L									87.1		
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L											
Nitrate as N	10	Not Applicable	Not Applicable	mg/L											
Potassium	None	Not Applicable	Not Applicable	mg/L									14.4		
Sodium	None	Not Applicable	Not Applicable	mg/L									140		
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm											
Sulfide	None	Not Applicable	Not Applicable	mg/L											
Field Parameters								· · · · · · · · · · · · · · · · · · ·		I					·
Temperature	None	Not Applicable	Not Applicable	٥C	19.36	23.71		21.52	15.93	19.96	18.01	20.23	23.05	20.84	24.37
DH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.98	6.93		6.83	6.77	6.8	6.8	6.85	6.76	7.01	7.02
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,799	3,075		3,156	3,172	3,176	3,138	3,178	3,218	3,135	3,244
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.02	0.4		0.27	0.4	0.34	2.1	1.58	0.43	2.18	2.72
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	138	-9.7		-76.3	-133.1	-95.1	77.9	4.2	64.2	-14.8	-30.2
Turbidity		Not Applicable	Not Applicable	NTU	2.8	10.5		1.45	0.77	0.51	0.72	0.81	5.72	2.09	3.67

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

	MCL	Established Background	Established GWPS	Sample ID:	MW-22A	MW	I-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	3-Oct-18	16-J	an-19	25-Apr-19	30-Sep-19	18-Jun-20	9-Oct-20	31-Mar-21	13-Oct-21	1-Apr-22	7-Jun-22	4-Oct-22
					INITIAL ASSESSMENT MON.	INITIAL ASSE (RESAI UNFILTERED	SSMENT MON. MPLE) FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Detection Monitoring Parameters	·			Units		UNFILIERED	FILTERED	IVION.	IVIOIN.	IVIOIN.	WON.	IVIOIN.	IVION.	MON.	(RESAWFLE)	MON.
Boron	None		Not Applicable	mg/L	1.45 #	1.78	1.64	1.88	1.49	2.82	1.84	1.6	1.76	2.16		1.84
Calcium	None		Not Applicable	mg/L	702 #	643	613	507	481	754	507	529	515	581		574
Chloride	250	Background Well	Not Applicable	mg/L	2.4 #	2.24	2.24	2.56	2.39	2.34	2.05 J	2.17	2.06 J	2.94 J^	2.38	2.46
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.329 #	0.299	0.464	0.374 J	0.364	0.237	0.279 J	0.249	0.608	<0.500^	0.329	0.354
pH (laboratory)	6.5 - 8.5	()	Not Applicable	S.U.	7.4 #	6.49		7.61	6.74	7.08	7.48	7.21	7.32	1.62^	7.41	7.18
Sulfate	250		Not Applicable	mg/L	1830 #	1,990	1,920	1,740	1,880	2,160	2,010	2,020	1,970	3760^	1,950	1,910
Total Dissolved Solids	500		Not Applicable	mg/L	1910 #	3,000	3,010	3,170	3,030	3,390	3,160	3,040	3,010	2520^	3,090	3,230
Assessment Monitoring Paramete			1		0.0000 //	0.000.100	0.000.100	0.000.100	0.000.000	0.000.100	0.000.100	0.000.100	0.000.000	0.000.100		.0.000400
Antimony	0.006	Not Applicable	-	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400		<0.000400
Arsenic	0.010	Not Applicable	-	mg/L	0.000486 J #	0.000642 J 0.00592	0.000760 J 0.00370 J	0.000612 J 0.00618	0.00142 J	0.00134 J	0.000761 J	0.00106 J	0.0137	0.00543		0.00304
Barium Beryllium	0.004	Not Applicable Not Applicable	-	mg/L	0.00897 #	<0.00592	<0.00370 J	<0.00018	0.0069	0.00796	0.00341 J <0.000200	0.00376 J <0.000200	0.0312	<0.000200		0.00774
Cadmium	0.004	Not Applicable	-	mg/L mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200
Chromium	0.005	Not Applicable	-	mg/L	0.000707 J #	<0.000200	<0.000200	<0.000200	<0.000200	0.000771 J	<0.000200	<0.000200	<0.000200	0.000631 J		<0.000200
Cobalt	None	Not Applicable	Background	mg/L	<0.0001 #	0.000770 J	0.000259 J	0.000251 J	0.000946 J	< 0.000200	<0.000400	<0.000400	0.00104 J	0.00322 J		0.000786 J
Fluoride	4	Not Applicable	Well	mg/L	0.329 #	0.299	0.464	0.374 J	0.364	0.237	0.279 J	0.249	0.608	<0.500	0.329	0.354
Lead	0.015	Not Applicable	(Not Applicable)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	< 0.000600	<0.000600		<0.000600
Lithium	None	Not Applicable		mg/L	0.305 #	0.294	0.289	0.345	0.256	0.501	0.32	0.315	0.302	0.339		0.289
Mercury	0.002	Not Applicable	-	mg/L	<0.000100 #	< 0.0000300	< 0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000830 J	<0.000300 H	< 0.0000300		< 0.0000300
Molybdenum	None	Not Applicable	-	mg/L	<0.001 #	<0.000600	0.000822 J	<0.000600	0.000787 J	<0.000600	< 0.000600	< 0.000600	<0.000600	0.00114 J		<0.000600
Selenium	0.05	Not Applicable		mg/L	0.000335 J #	< 0.0011	< 0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	< 0.00110		<0.00110
Thallium	0.002	Not Applicable	-	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	< 0.000200	<0.000200	<0.000200		<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.04 +/- 0.320 #	0.71		<0.84	<0.72	1	<0.71	<0.77	4.7	1.79		4.35
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.24 J #	<5		<5.00	15		9.00 J	<5.00	29.0	11.0 J^	18	6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L						249	249	232		<5^	242	262
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5		<5^	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		256				249	249	232		<5^	242	262
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5				<5	<5	<5		<5^	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L						0.0509(J)	<0.0120	0.0536 J		0.75^	1.02	0.375
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L						<0.0120	0.0121 J	0.0206 J		0.371^	0.235	1.04
Iron, Ferrous	None	Not Applicable		mg/L						<0.02	<0.02	<0.02		0.051^	0.118	1.02
Iron, Ferrous, Dissolved	None		Not Applicable	mg/L								< 0.02		0.253^	0.127	1.16
Iron, Ferric	None		Not Applicable	mg/L								0.0536		0.118^	0.785	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L								0.0206 J		0.699^	0.108	<0.02
Magnesium Makubdapum Diapakuad	None	Not Applicable	Not Applicable	mg/L		107	101			126	85	95		97.5		92.6
Molybdenum, Dissolved	None	Not Applicable		mg/L						0.000773(J)	<0.000600	<0.000600		0.000982 J		<0.0006
Nitrate as N	10 Nono	Not Applicable	Not Applicable	mg/L	0.458 #	<0.03 17.8	<0.03 16.7	<0.150	0.198	<0.0600 21.7	<0.150 13.7	<0.0600 15.2	<0.150	773^ 16.1	0.0307 J	0.171 14.5
Potassium Sodium	None	Not Applicable Not Applicable		mg/L		17.8	16.7			202	13.7	15.2				14.5
Specific Conductance (laboratory)	None None	Not Applicable	Not Applicable Not Applicable	mg/L umhos/cm	3180 #	3,170					3,450	3,450	3,250	153 21000^	4,010	3,770
Sulfide	None		Not Applicable	mg/L						1.52	<1	<u>3,450</u>		<1^	<1	<1
Field Parameters				iiig/∟				II		1.02						
Temperature	None	Not Applicable	Not Applicable	°C	20.9	13.6		17.89	22.78	23.52	20.7	18.2	23.3	17.8	21.5	21
pH	6.5 - 8.5	Not Applicable		S.U.	6.75	6.75		7.19	7.02	6.97	6.97	7	7.00	7.16	6.91	6.87
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3,277	3,181		3,208	3,236	3,013	3,165	3,195	2,975	2,681	3,206	2,893
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.44	0.9		4.05	1.23	3.35	0.68	2	0.26	0.19	0.38	0.39
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	275.1	275.6		43.2	-110.1	-36.5	146.4	207.4	-251.1	-77.1	-105.5	-172.7
Turbidity	None	Not Applicable		NTU	2.71	51.5	4.9	3.81	1.89	9.49	2.92	18.3	7.88	5.90	13.50	3.10
Notes:	1				1		1	4		1						1

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

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11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

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15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



_	MCL or	Established Background	Established GWPS	Sample ID:	MW-22A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	18-Apr-23
					FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameters		1		Units	
Boron	None		Not Applicable	mg/L	1.83
Calcium	None		Not Applicable	mg/L	515
Chloride	250	Background Well	Not Applicable	mg/L	2.32
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.319
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.08
Sulfate	250		Not Applicable	mg/L	2,270
Total Dissolved Solids	500		Not Applicable	mg/L	3,560
Assessment Monitoring Paramet	ers				
Antimony	0.006	Not Applicable		mg/L	<0.000400
Arsenic	0.010	Not Applicable] [mg/L	0.00269
Barium	2	Not Applicable	j í	mg/L	0.00503
Beryllium	0.004	Not Applicable] [mg/L	<0.000200
Cadmium	0.005	Not Applicable	1	mg/L	<0.000200
Chromium	0.1	Not Applicable	1	mg/L	<0.000400
Cobalt	None	Not Applicable	Background	mg/L	0.00118 J
Fluoride	4	Not Applicable	Well	mg/L	0.319
Lead	0.015	Not Applicable	(Not Applicable)	mg/L	<0.000600
Lithium	None	Not Applicable		mg/L	0.329
Mercury	0.002	Not Applicable	1 1	mg/L	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.000600
Selenium	0.05	Not Applicable		mg/L	< 0.00110
Thallium	0.002	Not Applicable		mg/L	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	4.45 +/- 1.55
Other Parameters		not applicable	I	p01/2	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	212
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	212
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.159 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.0511 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	0.0430 J
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	< 0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	0.116
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.051
Magnesium	None	Not Applicable	Not Applicable	mg/L	102
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.000600
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0482 J
Potassium	None	Not Applicable	Not Applicable	mg/L	17.1
Sodium				-	161
	None None	Not Applicable	Not Applicable	mg/L	3,330
Specific Conductance (laboratory)		Not Applicable	Not Applicable	umhos/cm	
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70
Field Parameters	Nierre	Not Amelia II	Not Amelia - Li	00	04.0
Temperature	None	Not Applicable	Not Applicable	<u>°C</u>	21.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.88
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3,155
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	1.07
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	148.8
Turbidity	None	Not Applicable	Not Applicable	NTU	3.64

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J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-23A	MW-23A	MW-23A	DUP 3	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A (Shallow)	MW-23A (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	6-Jun-16	3-Aug-16	3-Oct-16	3-Oct-16	7-Dec-16	1-Feb-17	6-Apr-17	8-Jun-17	14-Aug-17	23-May-18	2-Aug-18	10-Aug-18
					1	BACKGROUND 2	BACKGROUND 3						BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units				4 = 0	1 = 0		=					
Boron	None	_	Not Applicable	mg/L	1.12	1.23	1.48	1.52	1.52	1.66	1.17	1.21 J*	1.24	1.81	1.14	2.36
Calcium	None	_	Not Applicable	mg/L	716	593	605	573	661	555	484	827	527	659	553	659
Chloride	250	Background Well	Not Applicable	mg/L	11.4	11.1	11.6	11.6	9.99	10.1	9.23	10.4	9.6	12.8	9.78	10.7
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.737	0.312	0.671	0.575	0.451 J*	0.483	0.331	0.322 J*	1.5	1.35	0.385	0.368
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	6.98	8	6.9	6.8	7.5	7	6.9	6.8	6.9	6.9	7.1	7
Sulfate	250	_	Not Applicable	mg/L	2310	1820	1810	1990	2070	1740	1720	1850	1560	1880	1690	1740
Total Dissolved Solids	500		Not Applicable	mg/L	2960	3080	3040	3080	2950	2950	2850	2990	3050	3080	2830	2850
Assessment Monitoring Parameter								1					1			
Antimony	0.006	Not Applicable	4	mg/L	< 0.000500	<0.00100	<0.00160	< 0.00160	< 0.00400	<0.000800	< 0.00400	<0.000800	<0.000800			
Arsenic	0.010	Not Applicable	4	mg/L	0.00228	0.00237 J	0.00277 J	0.00255 J	< 0.00200	0.00163 J	0.00213 J	0.00321 J*	0.00262 J			
Barium	2	Not Applicable	-	mg/L	0.0119	0.00998	0.0141	0.0129	0.0117	0.00789	0.0209	0.00589 J*	0.0051			
Beryllium	0.004	Not Applicable	-	mg/L	<0.00100	<0.00200	<0.000200	<0.000200	<0.000500	<0.000100	<0.000500	<0.000100	<0.000100			
Cadmium	0.005	Not Applicable	-	mg/L	<0.000400	<0.000800	<0.000200	<0.000200	<0.000500	<0.000100	<0.000500	<0.000100	<0.000100			
Chromium	0.1	Not Applicable	-	mg/L	<0.000500	<0.00100	<0.00100	<0.00100	<0.00250	<0.000500	0.00376 J	<0.000500	U (0.00133)			
Cobalt	None	Not Applicable	Background Well	mg/L	0.000570 J	<0.00100	0.000903 J	0.000785 J	0.000996 J	0.000647 J	0.000806 J	<0.000100	0.000927 J			
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.737	0.312	0.671	0.575	0.451 J*	0.483	0.331	0.322 J*	1.5	1.35	0.385	0.368
Lead	0.015	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200	<0.000200	<0.000500	<0.000100	0.000631 J	<0.000100	0.000224 J			
Lithium	None	Not Applicable		mg/L	0.261	0.261	0.311	0.305	0.264	0.277	0.269	0.231 J*	0.228		0.211	0.27
Mercury	0.002	Not Applicable]	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable		mg/L	<0.000500	<0.00100	<0.00200	<0.00200	<0.00500	<0.00100	0.00559 J	<0.00100	<0.00100		<0.00100	<0.00100
Selenium	0.05	Not Applicable		mg/L	<0.000600	0.00141 J	0.000640 J	<0.000600	<0.00150	<0.000300	<0.00150	0.000740 J	<0.000300			
Thallium	0.002	Not Applicable	-	mg/L	<0.000500	<0.00100	<0.00160	<0.00160	<0.00400	<0.00800	<0.00400	<0.000800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.26 +/- 0.325	1.18 +/- 0.374	1.10 +/- 0.309	0.765 +/- 0.284	0.547 +/- 0.335	1.14 +/- 0.370	0.558 +/- 0.262	0.539 +/- 0.250	0.995 +/- 0.311			
Other Parameters								'								
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									292			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable		mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									86.5			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None	Not Applicable	Not Applicable	mg/L									13.4			
Sodium	None	Not Applicable	Not Applicable	mg/L									126			
Specific Conductance (laboratory)	None	Not Applicable		umhos/cm												
Sulfide	None	Not Applicable		mg/L												
Field Parameters	HONE			iiig/ L				1		II						
Temperature	None	Not Applicable	Not Applicable	°C	21.37	22.68	21.63		17.67	19.13	20.24	19.12	22.1	20.98	24.05	24.44
nH	6.5 - 8.5	Not Applicable		S.U.	6.68	6.79	6.81		6.76	6.83	6.84	6.76	6.81	6.96	6.74	6.97
Specific Conductance	0.5 - 8.5 None	Not Applicable		μmhos/cm	2,969	3,154	3,269		3,209	3,224	3,171	3,152	3,153	3,160	3,075	3,081
· · · · · · · · · · · · · · · · · · ·			Not Applicable	•		· · · · · · · · · · · · · · · · · · ·	· · ·				· · · ·	· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.45	0.3	0.31		0.77	1.19	1.1	1.58	0.5	1.75	1.6	2.83
Oxidation-Reduction Potential Turbidity	None None	Not Applicable	Not Applicable	mV NTU	-52.2 6.36	20.4	-75.9 4.82		-116.2	-87.5 0.55	-9.9 1.92	70.3	19.6	-28.1	185.2	-40.2 39.7
raiolality	NULLE		Not Applicable		0.30	5	4.02		2.34	0.55	1.92	1.53	1.09	3.12	26.1	39.1

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	MCL or	Established Background	Established GWPS	Sample ID:	MW-23A	MW	-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	MW-23A	DUP 1	MW-23A	MW-23A	DUP 1	MW-23A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	26-Sep-18	8-Ja	n-19	24-Apr-19	3-Oct-19	16-Jun-20	6-Oct-20	1-Apr-21	12-0	oct-21	29-Mar-22	6-Ju	in-22	4-Oct-22
					INITIAL ASSESSMENT MON.	INITIAL ASSES (RESAN	SSMENT MON.	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECON	ND 2021	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.
Detection Monitoring Parameters				Units	MON.			mon.			Micha.				MON.	(RESAMPLE)	(RESAMPLE)	
Boron	None		Not Applicable	mg/L	1.52 #	1.41	1.41	1.42	1.01	1.12	1.18	1.08	0.902	0.943	1.13			1.31
Calcium	None		Not Applicable	mg/L	546 #	651	605	534	521	465	531	501	358	435	559			480
Chloride	250	Background Well	Not Applicable	mg/L	10.4 J* #	10.7	10.6	11.6	12.6	12.5	13.7	13	14.5	12.6	16.4^	13.6	13.4	11.8
Fluoride	4	(Not Applicable)	Not Applicable	mg/L	0.363 J* #	0.361	1.49	0.486 J	0.402	0.374	0.257	0.295	0.313	0.293	<0.250^	0.386	0.253	0.36
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.2 #	6.66		7.54	6.79	6.58	7.86	7.13	6.99	6.39	8.19^	7.06	7.05	6.84
Sulfate	250	_	Not Applicable	mg/L	1770 #	1,860	1,870	1,770	1,790	1,850	1,950	1,910	1,950	1,880	3160^	1,900	1,880	1,840
Total Dissolved Solids	500		Not Applicable	mg/L	2980 #	2,700	2,780	3,280	2,990	2,970	3,050	3,090	2,960	2,930	3500^	3,030	3,050	3,300
Assessment Monitoring Parameter					0.000000 //	0.0004	0.0004	0.000.100	0.000.400	0.000400	0.000400	0.000.400	0.000.400	0.000400	0.000400			0.000400
Antimony	0.006	Not Applicable		mg/L	<0.000800 #	<0.0004	< 0.0004	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	< 0.000400			<0.000400
Arsenic	0.010	Not Applicable		mg/L	0.000642 J #	0.00106 J	0.000812 J	0.00206	<0.000400	0.000721 J	0.000843 J	0.000471 J	0.000685 J	0.000654 J	0.000791 J			0.000745 J
Barium	2	Not Applicable		mg/L	0.00489 #	0.0044	0.00439	0.00467	0.00298 J	0.00298 J	0.00296 J	0.00262 J	0.00660	0.00414	0.00577			0.00257 J
Beryllium Cadmium	0.004	Not Applicable Not Applicable		mg/L	<0.000100 # <0.000100 #	<0.0002 <0.0002	<0.0002 <0.0002	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200	<0.000200 <0.000200			<0.000200 <0.000200
Caumum	0.005			mg/L	0.000785 J #	<0.0002	<0.0002	<0.000200	0.000700 J	0.000552 J	<0.000200	0.000426 J	<0.000200	<0.000200	0.000200 0.000422 J			<0.000200 0.000690 J
Cobalt	None	Not Applicable Not Applicable		mg/L mg/L	0.000176 J #	0.000377 J	0.000597 J	<0.000400 0.000515 J	<0.000200	0.000352 J	<0.000400	<0.000200	<0.000400 0.000264 J	0.000250 J	0.000422 J			0.000890 J 0.000471 J
Fluoride		Not Applicable	Background Well	<u>_</u>	0.363 J* #	0.361	1.49	0.486 J	0.402	0.374	0.257	0.295	0.313	0.293	<0.250^	0.386	0.253	0.36
Lead	0.015	Not Applicable	(Not Applicable)	mg/L mg/L	<0.000100 #	<0.0006	<0.0006	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.2001	0.300		<0.000600
Lithium	None	Not Applicable		mg/L	0.152 #	0.294	0.297	0.282	0.206	0.227	0.236	0.23	0.173	0.190	0.236			0.209
Mercury	0.002	Not Applicable		mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.23 0.000112 J	<0.0000300	< 0.0000300	<0.0000300			<0.000300
Molybdenum	None	Not Applicable		mg/L	<0.00100 #	<0.0006	< 0.0006	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600			<0.000600
Selenium	0.05	Not Applicable		mg/L	<0.000300 #	<0.0000	<0.0000	<0.00110	<0.000000	<0.000000	<0.00110	<0.000000	<0.00110	<0.000000	<0.000000			<0.000000
Thallium	0.002	Not Applicable		mg/L	<0.000800 #	<0.0002	<0.0002	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200			<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	0.821 +/- 0.269 #	<0.002		<0.75	<0.000200	1.26	1	0.85	1.14	<0.86	<0.84			2.74
Other Parameters	Ŭ	not ripplicable		p0// L	0.021 17 0.200 1	\$0.10		30.10	40.11	1.20		0.00	1.14	<0.00	NO.0 4			2.7 1
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5.00		<5.00	<5.00		<5.00	<5.00	5.00 J	5.00 J	5.00 J^	15	15	7.00 J
Total Alkalinity as CaCO3	None	Not Applicable		mg/L														
Carbonate Alkalinity as CaCO3	None		Not Applicable	mg/L		<5												
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		310												
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5												
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		104	104											
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.053 J #	<0.03	<0.03	<0.150	<0.0300	<0.0300	<0.300	<0.0600	0.0616 J	<0.0600 H	761^	0.0673 J, H	0.0962 J, H	0.0763 J
Potassium	None	Not Applicable	Not Applicable	mg/L		15.5	15.2											
Sodium	None	Not Applicable	Not Applicable	mg/L		153	152											
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3200 #	3,140					3,470	3,350	3,220	3,200	21200^	3,930	3,940	3,830
Sulfide	None	Not Applicable	Not Applicable	mg/L														
Field Parameters																		
Temperature	None	Not Applicable	Not Applicable	°C	21.3	18.1		18.95	23.4	21.52	19.9	19.13	20.5		18.9	22.1		24.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.8	6.69		7.15	6.69	6.87	6.88	7.24	6.80		7.03	6.88		6.79
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3,246	3,240		3,167	3,544	3,011	3,281	4,300	2,907		2,738	3,156		3253
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L		1.17		4.19	0.54	2.34	0.56	2.93	0.62		1.65	1.22		0.63
Oxidation-Reduction Potential	None None	Not Applicable	Not Applicable	mV NTU		95.2		68.6	33	-28.3	110.6	34.2	-13.1		110.5	96		-4.3
Turbidity	none		Not Applicable			1.42		3.35	1.8	8.11	1.79	1.65	2.78		1.98	5.01		6.99

ATTACHMENT D

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U(): The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

	MCL	Established Background	Established GWPS	Sample ID:	MW-23A
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	•	44 Amr 00
Farameters	SMICE			Sample Date:	11-Apr-23
Detection Menitoring Decomptors				Units	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameters	None		Not Applicable		1 1 1
Boron Calcium		_	Not Applicable	mg/L	1.14
	None	_	Not Applicable	mg/L	552
Chloride	250	Background Well	Not Applicable	mg/L	12.2
Fluoride	-	(Not Applicable)	Not Applicable	mg/L	0.302
pH (laboratory)	6.5 - 8.5	_	Not Applicable	S.U.	6.95
Sulfate	250		Not Applicable	mg/L	2,430
Total Dissolved Solids	500		Not Applicable	mg/L	3,220
Assessment Monitoring Paramet					0.000.400
Antimony	0.006	Not Applicable		mg/L	< 0.000400
Arsenic	0.010	Not Applicable		mg/L	0.000667 J
Barium	2	Not Applicable		mg/L	0.00270 J
Beryllium	0.004	Not Applicable		mg/L	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.000200
Chromium	0.1	Not Applicable		mg/L	<0.000400
Cobalt	None	Not Applicable	Background Well	mg/L	0.00105 J
Fluoride	4	Not Applicable	(Not Applicable)	mg/L	0.302
Lead	0.015	Not Applicable		mg/L	<0.000600
Lithium	None	Not Applicable		mg/L	0.246
Mercury	0.002	Not Applicable		mg/L	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.000600
Selenium	0.05	Not Applicable] [mg/L	<0.00110
Thallium	0.002	Not Applicable]	mg/L	0.000252 J
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	0.538 +/- 0.546
Other Parameters					
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	5.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	
Iron, Total	None	Not Applicable	Not Applicable	mg/L	
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Magnesium	None	Not Applicable	Not Applicable	mg/L	
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	< 0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	
Sodium	None	Not Applicable	Not Applicable	mg/L	
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,280
Sulfide	None	Not Applicable	Not Applicable	mg/L	
Field Parameters	. tono	not ripplicable	. tot rippilouoio		
Temperature	None	Not Applicable	Not Applicable	°C	20.3
рН	6.5 - 8.5	Not Applicable	Not Applicable		6.73
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2,812
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	1.90
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	my/L mV	46.3
		Not Applicable	not Applicable	NTU	

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J^{*} : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample. 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



	WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION															
Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-24 6-Jun-16	MW-24 2-Aug-16	MW-24 4-Oct-16	MW-24 8-Dec-16	MW-24 2-Feb-17	DUP-3 2-Feb-17	MW-24 6-Apr-17	MW-24 8-Jun-17	MW-24 7-Aug-17	MW-24 23-May-18	MW-24 (Shallow) 2-Aug-18	MW-24 (Deep) Verification 10-Aug-18
T arameters				Sample Date.	0-5411-10	2-Aug-10	4-001-10	0-Dec-10	2-1 60-17	2-1 60-17	0-Api-17	0-0411-17	I-Aug-11	23-Way-10	2-Aug-10	TO-Aug-To
					BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKG	ROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters	Num	4.005		Units	1.00	0.000	4.00		4.00.1*	4 55		4 40 1*		4.05	0.110	0.077
Boron	None	1.935	Not Applicable	mg/L	1.09	0.999	1.03	1.21 J*	1.30 J*	1.55	1.19 J*	1.48 J*	1.13 J*	1.05	0.112	0.377
Calcium	None	961.40	Not Applicable	mg/L	674	581	499	609	802	726	940	715	531	787	573	31.1
Chloride	250	11.6	Not Applicable	mg/L	18.3	15.4	19.0 J*	14.7	16.6	15.8	14.6	15.5	12.5	19.1	24.9	22.3
Fluoride	4	2.84	Not Applicable	mg/L	0.16	0.325	0.360 J*	0.344 J*	0.428 J*	0.417 J*	0.257	0.228 J*	0.313 J*	2.12	0.277	0.246
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	6.86	8	/	7.6	1	(6.9	6.7	6.7	/	7.2	1
Sulfate	250	2,156	Not Applicable	mg/L	2470	1890	1850	2110	1900	1880	1970	1820	1700	2030	1930	1910
Total Dissolved Solids	500	3,333	Not Applicable	mg/L	3200	3140	3010	3030	3030	2980	3200	3140	3170	3230	3180	3270
Assessment Monitoring Paramete						0	11	1				1			0	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.00100	<0.00400	U (0.00451)	<0.000800	<0.000800	<0.00400	<0.00800	<0.000800			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00158 J	0.00122 J	<0.00200	<0.00200	<0.00200	0.00117 J	<0.00200	<0.00400	0.00443			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00438	0.0036	0.00400 J	0.00763 J	U (0.00512)	0.00761	0.00617 J	0.00724 J	0.00646 J*			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00200	<0.000500	0.000551 J	<0.000100	<0.000100	<0.000500	<0.00100	<0.000100			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000800	<0.000500	<0.000500	<0.000100	<0.000100	<0.000500	<0.00100	<0.00100			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.00100	< 0.00250	<0.00250	< 0.00250	<0.000500	0.00578 J	< 0.00500	<0.000500			
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	< 0.00100	<0.000500	0.000693 J	<0.000500	0.000260 J	<0.000500	<0.00100	0.000577 J			
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.16	0.325	0.360 J*	0.344 J*	0.428 J*	0.417 J*	0.257	0.228 J*	0.313 J*	2.12	0.277	0.246
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	< 0.000500	< 0.000500	< 0.000100	<0.000100	<0.000500	< 0.00100	<0.000100			
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.369	0.347	0.328	0.319 J	0.371 J*	0.385	0.392 J*	0.383 J	0.348 J*		0.363	0.338
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.000150	<0.000150	< 0.000150	<0.000150	< 0.000150	< 0.000150	<0.000150	<0.000150	<0.000150			
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000500	<0.00100	<0.00500	<0.00500	<0.00500	<0.00100	<0.00500	<0.0100	<0.00100		<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)		<0.000500	<0.00120	<0.00500	<0.00300	<0.00300	0.000459 J	0.00300 J	<0.00300	0.000447 J		1	
Thallium	0.002		,	mg/L	<0.000500	<0.00120	<0.00150	<0.00150	<0.00150	<0.000439 J	<0.00300 J					
		Not Applicable	0.002 (MCL)	mg/L								<0.00800	<0.000800			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.446 +/- 0.263	0.758 +/- 0.381	0.910 +/- 0.342	0.721 +/- 0.369	0.728 +/- 0.295	0.547 +/- 0.306	0.769 +/- 0.265	0.819 +/- 0.291	1.32 +/- 0.332			
Other Parameters						1				1						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L												
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L												
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00			
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									284			
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00			
Iron, Total	None	Not Applicable	Not Applicable	mg/L												
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L												
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Magnesium	None	Not Applicable	Not Applicable	mg/L									85.1			
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L												
Nitrate as N	10	Not Applicable	Not Applicable	mg/L												
Potassium	None		Not Applicable	mg/L									10.1			
		Not Applicable		-												
Sodium	None	Not Applicable	Not Applicable	mg/L									213			
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm												
Sulfide	None	Not Applicable	Not Applicable	mg/L												
Field Parameters										1						
Temperature	None	Not Applicable	Not Applicable	°C	21.1	23.03	22.15	15.3	16.72		18.99	20.76	21.68	21.61	24.93	21.92
рН	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.67	6.94	6.83	6.79	6.79		6.82	6.73	6.67	6.9	6.62	6.58
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,239	3,360	3,487	3,454	3,469		3,460	3,426	3,362	3,356	3,546	3,538
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.56	0.38	0.08	0.17	0.29		0.36	0.22	0.1	0.46	1.21	1.35
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-45.5	-0.5	-87.3	-181.7	-168.4		-22.4	62.4	39.4	-53.5	156	136.5
Turbidity	None	Not Applicable	Not Applicable	NTU	0.67	0.55	0.22	0.32	0.21		0.23	0.74	0.38	1.53	0.64	0.16
Notes:																

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed. 14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

UJ: The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise. J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
 15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.



						1				1						1			
	MCL	Established	Established		MW-24	MM	1-24	DU		MW-24	MW-24	MW-24	MW-24	MW-24	MW-24	MW-24	MW-24	MW-24	DUP-1
	or	Background	GWPS	Sample ID:	11114-24		1-24			10100-24	11114-24	101 00-24	11114-24	101 00-24	10100-24	11114-24	IVI VV-24	11114-24	DOP-1
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	27-Sep-18		9-,12	an-19		24-Apr-19	3-Oct-19	16-Jun-20	6-Oct-20	1-Apr-21	12-Oct-21	29-Mar-22	6-Jun-22	4-Oc	·t-22
i didiliotoro		(2001110111)	(*******	Campie Date.		INITIAL ASSE			SSMENT MON.		0 000 10		0 000 20		12 00(21	25 Mai 22		+ 00	
					INITIAL	(RESAN		(RESAN		FIRST 2019	SECOND 2019	FIRST 2020	SECOND 2020	FIRST 2021	SECOND 2021	FIRST 2022	FIRST 2022 ASSESSMENT	SECOND 2022	SECOND 2022
					ASSESSMENT	•	,		,	ASSESSMENT	ASSESSMENT	ASSESSMENT	ASSESSMENT	ASSESSMENT	ASSESSMENT	ASSESSMENT	MON.	ASSESSMENT	ASSESSMENT
					MON.	UNFILTERED	FILTERED	UNFILTERED	FILTERED	MON.	MON.	MON.	MON.	MON.	MON.	MON.	(RESAMPLE)	MON.	MON.
Detection Monitoring Paramete	1	4.005	Not Applicable	Units	0.4.40.11	4.07	4.50	4.44	4.07	4.40	0.007	4.00	4.40	4.00	4.04	4.00	. ,	4.0	
Boron	None	1.935	Not Applicable	mg/L	0.143 #	1.27	1.52	1.41	1.37	1.42	0.987	1.09	1.16	1.09	1.24	1.26		1.2	1.4
Calcium Chloride	None 250	961.40 11.6	Not Applicable	mg/L	61.7 # 18.2 #	533 15.2	697 14.1	671 13.5	685 14	530 13.8	532 14.8	450 13.3	536 14.8	498 18	558 22.5	555 21.7^	21.6	578 19.9	646 17.5
Fluoride	250	2.84	Not Applicable Not Applicable	mg/L mg/L	0.266 #	0.267	0.186	0.254	0.152	0.337 J	0.169	0.231	0.181	0.294	0.223	0.404 J^	0.261	0.117	0.124
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	8 #	6.55		6.55	0.152	7.48	6.77	6.56	7.06	7.31	6.83	1.63^	7.25	6.8	7.7
Sulfate	250	2,156	Not Applicable	mg/L	1950 #	2,230	2,090	2,120	2,080	1,850	1,880	1,990	2,060	2,080	2,070	2560^	2,070	1,990	1,970
Total Dissolved Solids	500	3,333	Not Applicable	mg/L	3290 #	2,940	3,000	2,850	3,100	3,160	3,080	3,120	3,160	3,350	3,240	3640^	3,280	3,410	3,390
Assessment Monitoring Param		0,000	notrippiloable		0200 #	2,010	0,000	2,000	0,100	0,100	0,000	0,120	0,100	0,000	0,210	0010	0,200	0,110	0,000
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000800 #	<0.000400	<0.000400	<0.0000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400		<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400 #	0.000548 J	0.000587 J	0.000625 J	0.000686 J	0.00153 J	< 0.000400	<0.000400	0.000445 J	<0.000400	< 0.000400	0.000528 J		<0.000400	< 0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00109 J #	0.00782	0.00806	0.00878	0.00842	0.00899	0.00878	0.00853	0.00809	0.00652	0.00598	0.00932		0.00498	0.00531
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.0002	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200		<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000410 J	0.000774 J		<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000100 #	0.00102 J	0.000967 J	0.000906 J	0.000867 J	0.00102 J	0.000794 J	0.000877 J	0.000990 J	0.000209 J	0.000708 J	0.00154 J		0.000385 J	0.000398 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.266 #	0.267	0.186	0.254	0.152	0.337 J	0.169	0.231	0.181	0.294	0.223	0.404 J^	0.261	0.117	0.124
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000100 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600		<0.000600	<0.000600
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.0398 J* #	0.376	0.408	0.322	0.32	0.376	0.277	0.295	0.309	0.326	0.367	0.375		0.323	0.349
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150 #	<0.0000300	<0.0000300	0.0000350 J	0.0000450 J	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000910 J	<0.0000300	<0.0000300		<0.0000300	0.0000390 J
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.00100 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	0.000654 J	<0.000600		< 0.000600	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	U (0.000308) #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	< 0.00110	<0.00110	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110
Thallium Ra-226 + Ra-228 (combined)	0.002	Not Applicable	0.002 (MCL) 5 (MCL)	mg/L pCi/L	<0.000800 # 0.829 +/- 0.228 #	0.000503 J 0.63	<0.0002	<0.000200	<0.000200	<0.000200 <0.71	<0.000200 <0.71	<0.000200	< 0.000200	<0.000200 <0.78	<0.000200 <0.94	<0.000200 <0.79		<0.000200 2.83	< 0.000200
Other Parameters	5	Not Applicable		po//L	0.029 +/- 0.220 #	0.03		<0.7		<0.71	<0.71	1.16	1.09	<0.78	<0.94	<0.79		2.03	Z
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5		<5		<5.00	6.00 J		17	<5.00	<5.00	<5.00^	14.0 J	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L															
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5		<5											
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		303		309											
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5		<5											
Iron, Total	None	Not Applicable	Not Applicable	mg/L															
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L															
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Magnesium	None	Not Applicable	Not Applicable	mg/L		96.7	111	115	111										
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L															
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.366 #	< 0.03	<0.03	< 0.03	< 0.03	<0.150	<0.0300	<0.0300	<0.300	<0.0600	0.152 J	561 H^	0.0516 J	0.103	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		10.8	12	13	12.6										
Sodium	None	Not Applicable	Not Applicable	mg/L		223	267	274	272										
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3500 #	3,390		3,370					3,620	3,610	3,520	19000^	4,290	4,110	4,090
Sulfide Field Parameters	None	Not Applicable	Not Applicable	mg/L															
Temperature	None	Not Applicable	Not Applicable	°C	21.1	15.7				19.5	23.2	22.47	24.1	18.3	21.6	20.5	23.9	22.6	
nH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.71	6.67				6.72	6.79	6.85	6.86	7.28	6.89	7.01	6.88	6.81	
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3,509	3,346				3,386	3,554	3,124	3,288	4,608	3,479	3,062	3,463	3,475	
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.19	0.65				0.8	0.55	1.05	0.51	1.41	0.43	0.64	0.95	0.43	
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	130	280				635	79.1	-34.4	206.1	40.1	136.6	156.2	90.2	12.7	
Turbidity	None	Not Applicable	Not Applicable	NTU	3.45					0.33	1.6	2.31	0.88	0.6	2.25	0.71	2.51	2.2	
Notes:			· · · · ·	·			·	•				1	··					I	

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

3. pCi/L : picoCuries per liter.

4. S.U. : Standard Units.

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7. mV : millivolts. 8. NTU : Nephelometric Turbidity Unit.

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11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.

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R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
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	MCL	Established	Established		MW-24
	or	Background	GWPS	Sample ID:	10100-24
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	11-Apr-23
	<u>I</u>		x y		FIRST 2023 ASSESSMENT MON.
Detection Monitoring Paramete				Units	
Boron	None	1.935	Not Applicable	mg/L	1.29
Calcium	None	961.40	Not Applicable	mg/L	521
Chloride	250	11.6	Not Applicable	mg/L	18.7
Fluoride	4	2.84	Not Applicable	mg/L	0.261
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.14
Sulfate	250	2,156	Not Applicable	mg/L	2,620
Total Dissolved Solids	500	3,333	Not Applicable	mg/L	3,430
Assessment Monitoring Paran	neters				
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000400 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00789
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.00152 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.261
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	< 0.000600
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.374
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.281 +/- 0.398
Other Parameters	5	Not Applicable	3 (MOL)	pol/L	0.201 +/- 0.330
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	14.0 J
Total Alkalinity as CaCO3	None		Not Applicable	mg/L	
· · · · · · · · · · · · · · · · · · ·	None	Not Applicable		<u> </u>	
Carbonate Alkalinity as CaCO3		Not Applicable	Not Applicable	mg/L	
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	
Iron, Total	None	Not Applicable	Not Applicable	mg/L	
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Magnesium	None	Not Applicable	Not Applicable	mg/L	
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	< 0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	
Sodium	None	Not Applicable	Not Applicable	mg/L	
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,570
Sulfide	None	Not Applicable	Not Applicable	mg/L	
Field Parameters					
Temperature	None	Not Applicable	Not Applicable	°C	19.8
рН	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.66
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,023
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.70
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	80.6
Turbidity	None	Not Applicable	Not Applicable	NTU	5.52

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GROUNDWATER SAMPLE DATA TO DATE FOR SURFACE IMPOUNDMENT CCR UNIT WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

	MCL or	Established Background	Established GWPS	Sample ID:	MW-25R	MW-25R	MW-25R	MW-25R	DUP 1	MW-25R	MW-25R	MW-25R	MW-25R	MW-25R	MW-25R (Shallow)	DUP2 (Shallow)	MW-25R (Deep)
Parameters	SMCL	(Det. Mon.)	(Ass. Mon.)	Sample Date:	13-Dec-16	26-Jan-17	3-Feb-17	29-Mar-17	29-Mar-17	7-Apr-17	31-May-17	9-Jun-17	14-Aug-17	24-May-18	2-Aug-18	2-Aug-18	10-Aug-18
					BACKGROUND	BACKGROUND 2	BACKGROUND 3	BACKG	ROUND 4	BACKGROUND	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1		JATION IPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				Units													
Boron	None	1.935	Not Applicable	mg/L	2.41	2.61	2.59	1.2	1.2	0.633	0.937	0.967	1.15	1.2	0.303	0.395	3.38
Calcium	None	961.40	Not Applicable	mg/L	435	368	261	485	499	430	332	372	348	477	327	321	423
Chloride	250	11.6	Not Applicable	mg/L	11.4	12.8	11.8	10.9	10.8	11.8	9.12	9.79	10.4	11.4	29.8	30.8	28.5
Fluoride	4	2.84	Not Applicable	mg/L	0.616 J*	0.433	0.608	0.337	0.288	0.271	0.336	0.354	0.284	1.74	0.488	0.486	0.45
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.8	7.2	7.2	6.9	6.9	7.2	6.8	6.8	6.7	7.5	7.2	7.2	7.2
Sulfate	250	2,156	Not Applicable	mg/L	1260	935	1060	846	869	886	708	671	681	1010	1370	1380	1480
Total Dissolved Solids	500	2,328	Not Applicable	mg/L	2100	1720	1840	1730	1730	1430	1470	1440	1390	1700	2470	2390	2580
Assessment Monitoring Paramete					0.00400	0.000000	0.000000		0.000000	0.000000	0.000000	0.00.400	0.000000			1	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	< 0.000800	<0.000800	<0.000800	<0.00400	<0.000800				
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	< 0.00200	0.000954 J	0.00146 J	0.0027	0.00265	0.00137 J	0.00108 J	0.00269 J	<0.00200				
Barium Beryllium	0.004	Not Applicable	2 (MCL) 0.004 (MCL)	mg/L	0.0404 <0.000500	0.0206	0.0298	0.00812	0.00805	0.00575	0.00656 0.000109 J	0.015	0.00505				
Cadmium	0.004	Not Applicable Not Applicable	0.004 (MCL)	mg/L mg/L	<0.000500	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.000109 J	<0.000500	<0.000100				
Chromium	0.005	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.00500	<0.00500	<0.000100	0.00145 U	0.00168 J	0.00649 J	U (0.00201)				
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.00176 J	0.000456 J	0.00140 J	0.000353 J	0.000385 J	0.000254 J	<0.00100 3	0.00243 J	0.000749 J				
Fluoride		Not Applicable	4 (MCL)	mg/L	0.616 J*	0.433	0.608	0.337	0.288	0.271	0.336	0.354	0.284	1.74	0.488	0.486	0.45
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	< 0.000500	0.400 0.000414 J	0.00831	0.000437 J	0.000430 J	0.000466 J	0.000480 J	0.0141	0.000202 J				
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.127 J	0.104	0.137	0.103	0.103	0.0728	0.0895	0.0777 J	0.0621		0.135	0.149	0.146
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.000150	<0.000150	<0.000150	0.000100 UJ	0.000100 UJ	< 0.000100	<0.000150	<0.000150	< 0.000150				
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	< 0.00500	0.00120 J	0.00145 J	<0.00100	< 0.00100	<0.00100	0.00124 J	< 0.00500	0.00327		0.00155 J	0.00172 J	0.00212
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00150	< 0.000300	0.000378 J	0.000607 J	0.000537 J	< 0.000300	< 0.000300	<0.00150	< 0.000300				
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	< 0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	< 0.00400	<0.000800				
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.11 +/- 0.519	0.870 +/- 0.378	0.813 +/- 0.338	0.614 +/- 0.235	0.459 +/- 0.246		0.0415 +/- 0.194 U		0.893 +/- 0.290				
Other Parameters				•		11										1	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L													
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L													
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									<5.00				
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L									350				
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L									<5.00				
Iron, Total	None	Not Applicable	Not Applicable	mg/L													
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L													
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Magnesium	None	Not Applicable	Not Applicable	mg/L									29.2				
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L													
Nitrate as N	10	Not Applicable	Not Applicable	mg/L													
Potassium	None	Not Applicable	Not Applicable	mg/L									7.32				
Sodium	None	Not Applicable	Not Applicable	mg/L									93.3				
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm													
Sulfide	None	Not Applicable	Not Applicable	mg/L													
Field Parameters	Nerre	Not Applicable	Not Applicable	00	47.04	40.00	44.05	10.44		47.0	04.40	00.4.4	04.7	04.70	00.40		04.05
Temperature	None	Not Applicable	Not Applicable	0°C	17.64	13.38	14.65	19.41		17.3	21.42	22.14	21.7	21.72	22.19		24.95
µ⊓ Specific Conductores	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.83	6.9	6.87	6.85		6.9	6.7	6.75	6.77	6.88	6.54		6.73
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	2,198	2,188	2,202	1,956		1,824	1,791	1,798	1,832	2,014	2,956		3,132
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.05	2.26	2.32	3.71		1.72	0.51	0.12	0.21	0.16	1.53		1.72
Oxidation-Reduction Potential Turbidity	None None	Not Applicable	Not Applicable	mV NTU	-93.8 29.7	-229	-60	-30.2 97.3		-72.5 17.7	-156.6 41.1	34.6 3.15	11.8	-81.5 0.43	196.3		148
i di biulty	INDIE	Not Applicable	Not Applicable		29.7	2.71	4.82	91.5		17.7	41.1	3.13	2.84	0.43	3.11		3.82

ATTACHMENT D

Notes:

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	MCL	Established Background	Established GWPS	Somalo ID:	MW-25R	MW	-25R	MW-25R	MW-25R	MW-25R	MW-25R	MW-25R	MW-25R	MW-25R	DUP 2	MW-25R	MW-25R	MW-25R
Parameters	or SMCL	(Det. Mon.)	(Ass. Mon.)	Sample ID: Sample Date:	28-Sep-18	9-Ja	ın-19	23-Apr-19	30-Sep-19	16-Jun-20	13-Oct-20	1-Apr-21	12-Oct-21		lar-22	6-Jun-22	4-Oct-22	12-Apr-23
	<u></u>				INITIAL ASSESSMENT MON.	INITIAL ASSES (RESAN	SSMENT MON.	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRS	T 2022 SSMENT ON.	FIRST 2022 ASSESSMENT MON.	SECOND 2022 ASSESSMENT MON.	FIRST 2023 ASSESSMENT MON.
Detection Monitoring Parameters	1			Units												(RESAMPLE)		
Boron	None	1.935	Not Applicable	mg/L	1.55 #	1.24	1.29	0.944	1.07	0.997	1.35	0.888	1.16	0.910	1.12		1.21	0.814
Calcium	None	961.40	Not Applicable	mg/L	347 #	463	449	413	308	343	338	384	319	363	447		330	321
Chloride	250	11.6	Not Applicable	mg/L	16.3 J* #	8.72	9.17	7.31	8.85	5.43	6.1	4.84	7.34	6.96 H ^	4.94 ^	4.77	7.94	3.55
Fluoride	4	2.84	Not Applicable	mg/L	0.496 #	0.348	0.441	0.365	0.409	0.282	0.416	0.309	0.330	<0.250 H ^	0.378 J ^	0.41	0.44	0.376
pH (laboratory)	6.5 - 8.5	8	Not Applicable	S.U.	7.6 #	6.96		7.47	6.48	6.59	7.15	7.19	5.98	2.32^	1.87^	7.56	6.81	6.88
Sulfate	250	2,156	Not Applicable	mg/L	1230 #	1,060	1,090	952	1,030	820	894	998	1,150	1590^	1520^	821	1,020	853
Total Dissolved Solids	500	2,328	Not Applicable	mg/L	2180 #	1,780	1,670	1,910	1,820	1,630	1,750	1,840	1,710	3160^	4200^	1,650	2,010	1,480
Assessment Monitoring Paramete			0.000 (MOL)		0.000000.//	0.000.400	0.000.400	0.000400	0.000.400	0.000.100	0.000.400	0.000.400	0.000400	0.000400	0.000.400		0.000400	0.000400
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000800 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	< 0.000400	< 0.000400		<0.000400	< 0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.00200 #	0.000825 J	0.000552 J	0.000630 J	<0.000400	0.000472 J	0.000432 J	<0.000400	<0.000400	0.000460 J	0.00137 J		<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0113 #	0.00398 J	0.00361 J	0.00244 J	0.00514	<0.00190	<0.00190	<0.00190	0.00722	< 0.00190	0.00628		0.0045	<0.00190
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000238 J <0.000200		<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000100 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200			<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500 #	0.000691 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000477 J	0.00150 J	<0.000400	0.00335 J		0.000581 J	< 0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000436 J #	0.000503 J	<0.000200	0.000344 J	<0.000200	<0.000200	<0.000200	<0.000200	0.000275 J	0.000619 J	0.00192 J		<0.000200	0.000622 J
Fluoride	0.015	Not Applicable	4 (MCL)	mg/L	0.496 #	0.348	0.441	0.365 0.000819 J	0.409	0.282	0.416	0.309	0.330	<0.250 H ^	0.378 J ^ 0.00296	0.41	0.44	0.376
Lead		Not Applicable	0.015 (MCL)	mg/L	0.000229 J #	0.000829 J			<0.000600	<0.000600			0.00172 J 0.120	< 0.000600			< 0.000600	<0.000600
Lithium	None	Not Applicable	0.4282 (UTL)	mg/L	0.141 #	0.0985	0.113	0.0767	0.132	0.0596	0.0603	0.0526 0.000125 J		0.0443	0.0678		0.128	0.0480
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	0.0000560 J	< 0.0000300	<0.0000300	<0.0000300	<0.0000300			0.000660 J	<0.0000300			<0.0000300	<0.000300
Molybdenum	None 0.05	Not Applicable	0.1 (ODEQ)	mg/L	0.00186 J #	0.00134 J	0.00113 J	<0.000600	<0.000600	0.00101 J	0.000602 J	0.000731 J	0.000623 J	<0.000600	0.000935 J		<0.000600	0.000748 J
Selenium Thallium		Not Applicable	0.05 (MCL)	mg/L	<0.000300 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110 <0.000200	<0.00110	<0.00110	<0.00110		<0.00110	<0.00110 <0.000200
Ra-226 + Ra-228 (combined)	0.002	Not Applicable	0.002 (MCL) 5 (MCL)	mg/L	<0.000800 # 1.94 +/- 0.367 #	<0.000200 <0.71	<0.000200	<0.000200 1.06	<0.000200 0.87	<0.000200	<0.000200 0.95	<0.000200	<0.000200 0.95	<0.000200 <0.89	<0.000200 0.87		<0.000200 0.929	0.300 +/- 0.460
Other Parameters	5	Not Applicable	5 (MCL)	pCi/L	1.94 +/- 0.307 #	<0.71		1.00	0.07	<0.77	0.95	<0.62	0.95	<0.69	0.07		0.929	0.300 +/- 0.460
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	5.28 J #	<5		5.00 J	<5.00		6.00 J	<5.00	6.00 J	5.00 J ^	6.00 J ^	20	11.0 J	5.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	J.20 J #										0.00 3			
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		<5												
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L		375												
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L		<5												
Iron, Total	None	Not Applicable	Not Applicable	mg/L														
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L														
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Magnesium	None	Not Applicable	Not Applicable	mg/L		49.4	46.6											
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L														
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.248 #	< 0.03	<0.03	<0.0600	0.354	1.74	<0.0300	< 0.0300	0.169 J	235 ^	401 ^	0.0430 J, H	0.432	< 0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L		8.59	8.78											
Sodium	None	Not Applicable	Not Applicable	mg/L		134	131											
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2540 #	2,160					2,190	2,190	2,070	4980 ^	9490 ^	2,440	2,610	1,860
Sulfide	None	Not Applicable	Not Applicable	mg/L														
Field Parameters											II							
Temperature	None	Not Applicable	Not Applicable	°C	22.1	18.2		20.39	26.24	21.15	23.8	18.3	20.6	17.6		23.9	22.2	21.1
H	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.77	6.79		7.02	6.89	6.8	6.8	7.44	6.82	6.92		6.82	6.65	7.75
Specific Conductance	None	Not Applicable	Not Applicable	μmhos/cm	3,212	2,326		2,191	2,239	1,861	2,023	2,798	1,876	1,714		1,964	2,251	1,687
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.4	3		1.43	3.86	1.4	0.73	0.41	2.89	0.30		0.31	3.37	0.38
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	33	135.2		100.3	62.7	-37.1	222.2	65.5	99.8	24.4		51.2	93.9	-70.4
Turbidity	None	Not Applicable	Not Applicable	NTU	12.1	17		12.1	33.8	6.26	1.81	1.36	12.5	4.54		4.65	9.79	4.52
Notos:					12.1	IL 1/		12.1	00.0	0.20	1.01	1.00	12.0		1	4.00	5.15	7.02

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517. 2. mg/L : milligrams per liter.

pCi/L : picoCuries per liter.
 S.U. : Standard Units.

5. °C : degrees Celsius.

6. μmhos/cm : micromhos per centimeter.

7. mV : millivolts.

8. NTU : Nephelometric Turbidity Unit.

9. < : Analyte not detected at the laboratory method detection limit (MDL).

10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.

11. Cells shaded in blue indicate results that are above the laboratory MDL.

12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis. 13. --- : no analysis performed.

14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics. U() : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit. UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation. 17. A: Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

