

June 23, 2021

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 March/April 2021 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 laboratory report for March/April 2021 assessment monitoring at the Landfill CCR Unit was received on June 9, 2021 and is enclosed (**Attachment A**). Based upon review of data from March/April 2021 assessment monitoring, WFEC has identified constituents listed in Appendix B of Oklahoma Administrative Code Chapter 517, Disposal of Coal Combustion Residuals from Electric Utilities (OAC 252:517) at statistically significant levels (SSLs) above the Ground Water Protection Standard (GWPS). In particular, molybdenum was detected at SSLs above both the Site-specific GWPS and the EPA alternative risk-based GWPS at four of the Landfill CCR Unit monitoring wells (MW-15A, MW-16, MW-18 and MW-19S). 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 was detected at SSLs above the GWPS at these wells during the previous assessment monitoring events and notification was provided to the Oklahoma Department of Environmental Quality (ODEQ). A Plan and Schedule for Analyzing SSLs for Molybdenum (Altamira; March 4, 2020) was submitted to and approved for implementation by ODEQ in its letter dated April 28, 2020. An Assessment of Corrective Measures (ACM) Report was submitted on October 29, 2020.

Groundwater data summary tables for the Landfill CCR Unit updated to include results from March/April 2021 assessment monitoring are included (**Attachment B**). 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,



Kent Fletcher
Environmental Coordinator

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

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

ATTACHMENT A

**MARCH/APRIL 2021 ASSESSMENT MONITORING
LABORATORY REPORT
(LANDFILL CCR UNIT)**



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

May 24, 2021

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

Work Order: **HS21040023**

Laboratory Results for: **WFEC/ CCR Program, Landfill Wells**

Dear Bert Smith,

ALS Environmental received 17 sample(s) on Apr 01, 2021 for the analysis presented in the following report.

This is a REVISED REPORT. Please see the Case Narrative for discussion concerning this revision.

Regards,

Generated By: JUMOKE.LAWAL
RJ Modashia
Project Manager

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS21040023

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21040023-01	MW-15A	Water		31-Mar-2021 11:55	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-02	MW-14A	Water		31-Mar-2021 10:50	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-03	MW-21	Water		31-Mar-2021 09:43	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-04	Dup2	Water		30-Mar-2021 16:55	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-05	MW-7S	Water		30-Mar-2021 16:55	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-06	MW-3	Water		31-Mar-2021 09:42	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-07	MW-13	Water		31-Mar-2021 11:13	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-08	MW-5S	Water		01-Apr-2021 09:23	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-09	MW-16	Water		01-Apr-2021 10:50	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-10	MW-17	Water		31-Mar-2021 18:20	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-11	MW-18	Water		31-Mar-2021 18:29	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-12	MW-19S	Water		31-Mar-2021 16:43	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-13	DUP 3	Water		31-Mar-2021 16:43	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-14	MW-20	Water		31-Mar-2021 17:00	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-15	MW-20 Matrix 1	Water		31-Mar-2021 17:00	01-Apr-2021 11:50	<input type="checkbox"/>
HS21040023-16	MW-21 Matrix Dup 1	Water		31-Mar-2021 17:00	02-Apr-2021 10:30	<input type="checkbox"/>
HS21040023-17	MW-17	Water		06-Apr-2021 17:20	08-Apr-2021 10:20	<input type="checkbox"/>

Revision:1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS21040023

CASE NARRATIVE

Work Order Comments

- REV01 - Dilution Factor Corrected for sample ID MW-16 (HS21040023-09) for Anions

Work Order Comments

- The analyses for Radium-226 and Radium-228 were subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.
- 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: 164955**

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

Metals by Method SW6020A**Batch ID: 164927****Sample ID: MW-15A (HS21040023-01MS)**

- Molybdenum Failed for MS but passed for MSD and PDS.
- 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. (Boron, Calcium, Sodium)

Sample ID: MW-15A (HS21040023-01SD)

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

Batch ID: 164930**Sample ID: HS21041055-02MSD**

- MSD is for an unrelated sample (Iron)

Wet Chemistry by Method E300**Batch ID: R381211****Sample ID: MW-16 (HS21040023-09)**

- Sample ran at 2X due to high concentration of Sulfate

Wet Chemistry by Method SM3500FED**Batch ID: R380870**

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

Batch ID: R380890

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

Batch ID: R380869

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

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS21040023

CASE NARRATIVE

Wet Chemistry by Method SM3500FED

Batch ID: R380847

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

WetChemistry by Method SM4500 S2-F

Batch ID: R381322,R381519

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

WetChemistry by Method SM4500H+ B

Batch ID: R381590

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

WetChemistry by Method SM2320B

Batch ID: R381229,R381355

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

WetChemistry by Method E410.4

Batch ID: R381177,R381232

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

WetChemistry by Method M2510 B

Batch ID: R381204,R381248

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

WetChemistry by Method E300

Batch ID: R381211

Sample ID: DUP 3 (HS21040023-13)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-19S (HS21040023-12)

- Sample ran at 2X due to high concentration of Sulfate

Batch ID: R381136

Sample ID: Dup2 (HS21040023-04)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-13 (HS21040023-07)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-14A (HS21040023-02)

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS21040023

CASE NARRATIVE

WetChemistry by Method E300

Batch ID: R381136

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-15A (HS21040023-01)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-21 (HS21040023-03)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-3 (HS21040023-06)

- Sample ran at 2X due to high concentration of Sulfate

Sample ID: MW-7S (HS21040023-05)

- Sample ran at 2X due to high concentration of Sulfate

Batch ID: R381678,R382205

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

Batch ID: R382198

Sample ID: HS21041095-01MS

- MS and MSD are for an unrelated sample (Sulfate)

WetChemistry by Method M2540C

Batch ID: R381071,R381207,R381287

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

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-15A
 Collection Date: 31-Mar-2021 11:55

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED					Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	0.101		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 15:51
Arsenic	0.000523	J	0.000400	0.00200	mg/L	1	22-Apr-2021 15:51
Barium	0.0186		0.00190	0.00400	mg/L	1	22-Apr-2021 15:51
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 15:51
Boron	3.35		0.220	0.400	mg/L	20	22-Apr-2021 16:46
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 15:51
Calcium	78.6		0.0340	0.500	mg/L	1	22-Apr-2021 15:51
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 15:51
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 15:51
Iron	0.0492	J	0.0120	0.200	mg/L	1	22-Apr-2021 15:51
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 15:51
Lithium	0.0730		0.00100	0.00500	mg/L	1	22-Apr-2021 15:51
Magnesium	10.9		0.0100	0.200	mg/L	1	22-Apr-2021 15:51
Molybdenum	0.168		0.000600	0.00500	mg/L	1	22-Apr-2021 15:51
Potassium	5.47		0.0180	0.200	mg/L	1	22-Apr-2021 15:51
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 15:51
Sodium	594		0.280	4.00	mg/L	20	22-Apr-2021 16:46
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 15:51
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Iron	0.133	J	0.0120	0.200	mg/L	1	22-Apr-2021 00:58
Molybdenum	0.159		0.000600	0.00500	mg/L	1	22-Apr-2021 00:58
MERCURY BY SW7470A		Method:SW7470A				Prep:SW7470A / 22-Apr-2021	Analyst: MSC
Mercury	0.0000420	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 12:55
ANIONS BY E300.0		Method:E300					Analyst: YP
Chloride	27.3		0.400	1.00	mg/L	2	01-Apr-2021 17:53
Fluoride	1.13		0.100	0.200	mg/L	2	01-Apr-2021 17:53
Nitrogen, Nitrate (As N)	1.14		0.0600	0.200	mg/L	2	01-Apr-2021 17:53
Sulfate	1,590		4.00	10.0	mg/L	20	22-Apr-2021 06:07
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B					Analyst: MZD
Specific Conductivity	3,400		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-15A
 Collection Date: 31-Mar-2021 11:55

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,420		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	196		5.00	5.00	mg/L	1	11-Apr-2021 17:24
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:24
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:24
Alkalinity, Total (As CaCO3)	196		5.00	5.00	mg/L	1	11-Apr-2021 17:24
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	0.0540		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0320	J	0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.93	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	24.0	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-14A
 Collection Date: 31-Mar-2021 10:50

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.107		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	0.116		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:37
Arsenic	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:37
Barium	0.0117		0.00190	0.00400	mg/L	1	22-Apr-2021 17:37
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:37
Boron	0.839		0.0110	0.0200	mg/L	1	22-Apr-2021 17:37
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:37
Calcium	298		0.680	10.0	mg/L	20	23-Apr-2021 11:58
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 17:37
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 17:37
Iron	0.162	J	0.0120	0.200	mg/L	1	22-Apr-2021 17:37
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 17:37
Lithium	0.152		0.00100	0.00500	mg/L	1	22-Apr-2021 17:37
Magnesium	25.9		0.0100	0.200	mg/L	1	22-Apr-2021 17:37
Molybdenum	U		0.000600	0.00500	mg/L	1	22-Apr-2021 17:37
Potassium	7.87		0.0180	0.200	mg/L	1	22-Apr-2021 17:37
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 17:37
Sodium	413		0.280	4.00	mg/L	20	23-Apr-2021 11:58
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:37
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Iron	0.150	J	0.0120	0.200	mg/L	1	22-Apr-2021 01:00
Molybdenum	0.00165	J	0.000600	0.00500	mg/L	1	22-Apr-2021 01:00
MERCURY BY SW7470A		Method:SW7470A				Prep:SW7470A / 22-Apr-2021	Analyst: MSC
Mercury	0.0000500	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:12
ANIONS BY E300.0		Method:E300					Analyst: YP
Chloride	14.3		0.400	1.00	mg/L	2	01-Apr-2021 18:11
Fluoride	0.284		0.100	0.200	mg/L	2	01-Apr-2021 18:11
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	01-Apr-2021 18:11
Sulfate	1,680		4.00	10.0	mg/L	20	22-Apr-2021 06:28
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B					Analyst: MZD
Specific Conductivity	3,260		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-14A
 Collection Date: 31-Mar-2021 10:50

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,680		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	332		5.00	5.00	mg/L	1	11-Apr-2021 17:38
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:38
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:38
Alkalinity, Total (As CaCO3)	332		5.00	5.00	mg/L	1	11-Apr-2021 17:38
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	0.0550		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	0.0340	J	0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.70	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.9	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-21
 Collection Date: 31-Mar-2021 09:43

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 17:39
Arsenic	0.000534	J	0.000400	0.00200	mg/L	1	22-Apr-2021 17:39
Barium	0.0112		0.00190	0.00400	mg/L	1	22-Apr-2021 17:39
Beryllium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:39
Boron	2.42		0.220	0.400	mg/L	20	23-Apr-2021 12:00
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:39
Calcium	154		0.0340	0.500	mg/L	1	22-Apr-2021 17:39
Chromium		U	0.000400	0.00400	mg/L	1	22-Apr-2021 17:39
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 17:39
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 17:39
Lithium	0.137		0.00100	0.00500	mg/L	1	22-Apr-2021 17:39
Molybdenum	0.000902	J	0.000600	0.00500	mg/L	1	22-Apr-2021 17:39
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 17:39
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:39
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000380	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:13
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	23.3		0.400	1.00	mg/L	2	01-Apr-2021 18:30
Fluoride	0.578		0.100	0.200	mg/L	2	01-Apr-2021 18:30
Nitrogen, Nitrate (As N)	0.961		0.0600	0.200	mg/L	2	01-Apr-2021 18:30
Sulfate	1,660		4.00	10.0	mg/L	20	22-Apr-2021 06:46
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand		U	5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	3,550		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	2,650		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	7.28	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	23.8	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: Dup2
 Collection Date: 30-Mar-2021 16:55

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED		Analyst: JHD			
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	0.0234	J	0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:41
Arsenic	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:41
Barium	0.0302		0.00190	0.00400	mg/L	1	22-Apr-2021 17:41
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:41
Boron	0.681		0.0110	0.0200	mg/L	1	22-Apr-2021 17:41
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:41
Calcium	219		0.680	10.0	mg/L	20	23-Apr-2021 12:02
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 17:41
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 17:41
Iron	0.0156	J	0.0120	0.200	mg/L	1	22-Apr-2021 17:41
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 17:41
Lithium	0.0468		0.00100	0.00500	mg/L	1	22-Apr-2021 17:41
Magnesium	17.4		0.0100	0.200	mg/L	1	22-Apr-2021 17:41
Molybdenum	0.000763	J	0.000600	0.00500	mg/L	1	22-Apr-2021 17:41
Potassium	4.18		0.0180	0.200	mg/L	1	22-Apr-2021 17:41
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 17:41
Sodium	197		0.280	4.00	mg/L	20	23-Apr-2021 12:02
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:41
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Iron	0.0234	J	0.0120	0.200	mg/L	1	22-Apr-2021 01:02
Molybdenum	0.000941	J	0.000600	0.00500	mg/L	1	22-Apr-2021 01:02
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000320	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:15
ANIONS BY E300.0		Method:E300		Analyst: YP			
Chloride	19.4		0.400	1.00	mg/L	2	01-Apr-2021 15:07
Fluoride	0.415		0.100	0.200	mg/L	2	01-Apr-2021 15:07
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	01-Apr-2021 15:07
Sulfate	1,190		4.00	10.0	mg/L	20	22-Apr-2021 08:03
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4		Analyst: TH			
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B		Analyst: MZD			
Specific Conductivity	2,380		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: Dup2
 Collection Date: 30-Mar-2021 16:55

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,000		5.00	10.0	mg/L	1	06-Apr-2021 16:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	177		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Total (As CaCO3)	177		5.00	5.00	mg/L	1	08-Apr-2021 17:45
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.53	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	24.2	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-7S
 Collection Date: 30-Mar-2021 16:55

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED		Analyst: JHD			
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:46
Arsenic	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:46
Barium	0.0295		0.00190	0.00400	mg/L	1	22-Apr-2021 17:46
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:46
Boron	0.677		0.0110	0.0200	mg/L	1	22-Apr-2021 17:46
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:46
Calcium	254		0.680	10.0	mg/L	20	23-Apr-2021 12:04
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 17:46
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 17:46
Iron	0.0145	J	0.0120	0.200	mg/L	1	22-Apr-2021 17:46
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 17:46
Lithium	0.0472		0.00100	0.00500	mg/L	1	22-Apr-2021 17:46
Magnesium	16.9		0.0100	0.200	mg/L	1	22-Apr-2021 17:46
Molybdenum	0.000755	J	0.000600	0.00500	mg/L	1	22-Apr-2021 17:46
Potassium	4.06		0.0180	0.200	mg/L	1	22-Apr-2021 17:46
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 17:46
Sodium	230		0.280	4.00	mg/L	20	23-Apr-2021 12:04
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:46
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Iron	0.0154	J	0.0120	0.200	mg/L	1	22-Apr-2021 01:04
Molybdenum	0.000846	J	0.000600	0.00500	mg/L	1	22-Apr-2021 01:04
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.000104	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:17
ANIONS BY E300.0		Method:E300		Analyst: YP			
Chloride	20.5		0.400	1.00	mg/L	2	01-Apr-2021 15:26
Fluoride	0.444		0.100	0.200	mg/L	2	01-Apr-2021 15:26
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	01-Apr-2021 15:26
Sulfate	1,200		4.00	10.0	mg/L	20	22-Apr-2021 08:24
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4		Analyst: TH			
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B		Analyst: MZD			
Specific Conductivity	2,380		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-7S
 Collection Date: 30-Mar-2021 16:55

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,060		5.00	10.0	mg/L	1	06-Apr-2021 16:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	180		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	08-Apr-2021 17:45
Alkalinity, Total (As CaCO3)	180		5.00	5.00	mg/L	1	08-Apr-2021 17:45
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: MZD			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: MZD			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	01-Apr-2021 14:30
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.32	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	23.3	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-3
 Collection Date: 31-Mar-2021 09:42

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 17:48
Arsenic	0.000471	J	0.000400	0.00200	mg/L	1	22-Apr-2021 17:48
Barium	0.0141		0.00190	0.00400	mg/L	1	22-Apr-2021 17:48
Beryllium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:48
Boron	1.01		0.110	0.200	mg/L	10	23-Apr-2021 12:11
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:48
Calcium	207		0.340	5.00	mg/L	10	23-Apr-2021 12:11
Chromium		U	0.000400	0.00400	mg/L	1	22-Apr-2021 17:48
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 17:48
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 17:48
Lithium	0.138		0.00100	0.00500	mg/L	1	22-Apr-2021 17:48
Molybdenum		U	0.000600	0.00500	mg/L	1	22-Apr-2021 17:48
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 17:48
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:48
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000760	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:18
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	14.0		0.400	1.00	mg/L	2	01-Apr-2021 16:39
Fluoride	0.376		0.100	0.200	mg/L	2	01-Apr-2021 16:39
Nitrogen, Nitrate (As N)		U	0.0600	0.200	mg/L	2	01-Apr-2021 16:39
Sulfate	1,260		4.00	10.0	mg/L	20	22-Apr-2021 08:42
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand		U	5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	2,630		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	2,030		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	7.24	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	23.4	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-13
 Collection Date: 31-Mar-2021 11:13

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 17:52
Arsenic		U	0.000400	0.00200	mg/L	1	22-Apr-2021 17:52
Barium	0.0114		0.00190	0.00400	mg/L	1	22-Apr-2021 17:52
Beryllium		U	0.000200	0.00200	mg/L	1	23-Apr-2021 12:13
Boron	1.66		0.110	0.200	mg/L	10	23-Apr-2021 12:15
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:52
Calcium	284		0.340	5.00	mg/L	10	23-Apr-2021 12:15
Chromium		U	0.000400	0.00400	mg/L	1	22-Apr-2021 17:52
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 17:52
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 17:52
Lithium	0.166		0.0100	0.0500	mg/L	10	23-Apr-2021 12:15
Molybdenum	0.000959	J	0.000600	0.00500	mg/L	1	22-Apr-2021 17:52
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 17:52
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 17:52
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000990	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:20
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	13.8		0.400	1.00	mg/L	2	01-Apr-2021 17:35
Fluoride	0.344		0.100	0.200	mg/L	2	01-Apr-2021 17:35
Nitrogen, Nitrate (As N)		U	0.0600	0.200	mg/L	2	01-Apr-2021 17:35
Sulfate	1,470		4.00	10.0	mg/L	20	22-Apr-2021 09:02
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand		U	5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	2,940		5.00	5.00	umhos/cm @ 25.0 °C	1	08-Apr-2021 11:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	2,320		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	7.32	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	23.4	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-5S
 Collection Date: 01-Apr-2021 09:23

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED		Analyst: JHD			
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:54
Arsenic	U		0.000400	0.00200	mg/L	1	22-Apr-2021 17:54
Barium	0.00867		0.00190	0.00400	mg/L	1	22-Apr-2021 17:54
Beryllium	U		0.000200	0.00200	mg/L	1	23-Apr-2021 12:17
Boron	2.04		0.110	0.200	mg/L	10	23-Apr-2021 12:19
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:54
Calcium	33.4		0.0340	0.500	mg/L	1	22-Apr-2021 17:54
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 17:54
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 17:54
Iron	0.0170	J	0.0120	0.200	mg/L	1	22-Apr-2021 17:54
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 17:54
Lithium	0.0496		0.00100	0.00500	mg/L	1	23-Apr-2021 12:17
Magnesium	4.53		0.0100	0.200	mg/L	1	22-Apr-2021 17:54
Molybdenum	0.00234	J	0.000600	0.00500	mg/L	1	22-Apr-2021 17:54
Potassium	3.25		0.0180	0.200	mg/L	1	22-Apr-2021 17:54
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 17:54
Sodium	312		0.140	2.00	mg/L	10	23-Apr-2021 12:19
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 17:54
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 01:12
Molybdenum	0.00287	J	0.000600	0.00500	mg/L	1	22-Apr-2021 01:12
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000870	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:22
ANIONS BY E300.0		Method:E300		Analyst: YP			
Chloride	23.9		0.200	0.500	mg/L	1	02-Apr-2021 18:27
Fluoride	1.24		0.0500	0.100	mg/L	1	02-Apr-2021 18:27
Nitrogen, Nitrate (As N)	0.631		0.0300	0.100	mg/L	1	02-Apr-2021 18:27
Sulfate	477		2.00	5.00	mg/L	10	22-Apr-2021 09:21
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4		Analyst: TH			
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B		Analyst: MZD			
Specific Conductivity	1,770		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-5S
 Collection Date: 01-Apr-2021 09:23

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	1,140		5.00	10.0	mg/L	1	08-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	405		5.00	5.00	mg/L	1	11-Apr-2021 17:45
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:45
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:45
Alkalinity, Total (As CaCO3)	405		5.00	5.00	mg/L	1	11-Apr-2021 17:45
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: KVL			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:19
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: KVL			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:19
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.90	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	22.8	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-16
 Collection Date: 01-Apr-2021 10:50

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED		Analyst: JHD			
Ferric Iron	0.0536		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved		U	0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:35
Arsenic		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:35
Barium	0.0123		0.00190	0.00400	mg/L	1	22-Apr-2021 19:35
Beryllium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:35
Boron	1.57		0.110	0.200	mg/L	10	23-Apr-2021 12:21
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:35
Calcium	140		0.340	5.00	mg/L	10	23-Apr-2021 12:21
Chromium	0.00141	J	0.000400	0.00400	mg/L	1	22-Apr-2021 19:35
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 19:35
Iron	0.0536	J	0.0120	0.200	mg/L	1	22-Apr-2021 19:35
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 19:35
Lithium	0.0454		0.00100	0.00500	mg/L	1	22-Apr-2021 19:35
Magnesium	7.65		0.0100	0.200	mg/L	1	22-Apr-2021 19:35
Molybdenum	0.166		0.000600	0.00500	mg/L	1	22-Apr-2021 19:35
Potassium	3.12		0.0180	0.200	mg/L	1	22-Apr-2021 19:35
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 19:35
Sodium	325		0.140	2.00	mg/L	10	23-Apr-2021 12:21
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:35
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Iron	0.0140	J	0.0120	0.200	mg/L	1	22-Apr-2021 01:14
Molybdenum	0.180		0.000600	0.00500	mg/L	1	22-Apr-2021 01:14
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000570	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:24
ANIONS BY E300.0		Method:E300		Analyst: YP			
Chloride	14.4		0.400	1.00	mg/L	2	02-Apr-2021 18:45
Fluoride	0.916		0.100	0.200	mg/L	2	02-Apr-2021 18:45
Nitrogen, Nitrate (As N)	0.687		0.0600	0.200	mg/L	2	02-Apr-2021 18:45
Sulfate	1,070		4.00	10.0	mg/L	20	22-Apr-2021 09:41
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4		Analyst: TH			
Chemical Oxygen Demand		U	5.00	15.0	mg/L	1	08-Apr-2021 11:30
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B		Analyst: MZD			
Specific Conductivity	2,420		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-16
 Collection Date: 01-Apr-2021 10:50

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	1,790		5.00	10.0	mg/L	1	08-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	228		5.00	5.00	mg/L	1	11-Apr-2021 17:52
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:52
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 17:52
Alkalinity, Total (As CaCO3)	228		5.00	5.00	mg/L	1	11-Apr-2021 17:52
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: KVL			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:21
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: KVL			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:21
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.83	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.9	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-17
 Collection Date: 31-Mar-2021 18:20

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:37
Arsenic		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:37
Barium		U	0.00190	0.00400	mg/L	1	22-Apr-2021 19:37
Beryllium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:37
Boron	0.539		0.0110	0.0200	mg/L	1	22-Apr-2021 19:37
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:37
Calcium	467		0.340	5.00	mg/L	10	23-Apr-2021 12:23
Chromium		U	0.000400	0.00400	mg/L	1	22-Apr-2021 19:37
Cobalt	0.000239	J	0.000200	0.00500	mg/L	1	22-Apr-2021 19:37
Iron	0.0541	J	0.0120	0.200	mg/L	1	22-Apr-2021 19:37
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 19:37
Lithium	0.114		0.00100	0.00500	mg/L	1	22-Apr-2021 19:37
Magnesium	29.3		0.0100	0.200	mg/L	1	22-Apr-2021 19:37
Molybdenum	0.000950	J	0.000600	0.00500	mg/L	1	22-Apr-2021 19:37
Potassium	4.19		0.0180	0.200	mg/L	1	22-Apr-2021 19:37
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 19:37
Sodium	28.2		0.0140	0.200	mg/L	1	22-Apr-2021 19:37
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:37
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.000142	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:25
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	4.06		0.200	0.500	mg/L	1	02-Apr-2021 15:41
Fluoride	0.412		0.0500	0.100	mg/L	1	02-Apr-2021 15:41
Nitrogen, Nitrate (As N)		U	0.0300	0.100	mg/L	1	02-Apr-2021 15:41
Sulfate	1,310		4.00	10.0	mg/L	20	03-Apr-2021 19:40
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand		U	5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	2,460		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	2,200		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B				Analyst: TH	
Alkalinity, Bicarbonate (As CaCO3)	269		5.00	5.00	mg/L	1	11-Apr-2021 17:59
Alkalinity, Carbonate (As CaCO3)		U	5.00	5.00	mg/L	1	11-Apr-2021 17:59
Alkalinity, Hydroxide (As CaCO3)		U	5.00	5.00	mg/L	1	11-Apr-2021 17:59
Alkalinity, Total (As CaCO3)	269		5.00	5.00	mg/L	1	11-Apr-2021 17:59

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-17
 Collection Date: 31-Mar-2021 18:20

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-10
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	7.34	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	22.7	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-18
 Collection Date: 31-Mar-2021 18:29

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED					Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 19:39
Arsenic	0.00238		0.000400	0.00200	mg/L	1	22-Apr-2021 19:39
Barium	0.00305	J	0.00190	0.00400	mg/L	1	22-Apr-2021 19:39
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:39
Boron	4.32		0.110	0.200	mg/L	10	23-Apr-2021 12:25
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:39
Calcium	19.3		0.340	5.00	mg/L	10	23-Apr-2021 12:25
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 19:39
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 19:39
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 19:39
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 19:39
Lithium	0.00339	J	0.00100	0.00500	mg/L	1	22-Apr-2021 19:39
Magnesium	0.426		0.0100	0.200	mg/L	1	22-Apr-2021 19:39
Molybdenum	0.195		0.000600	0.00500	mg/L	1	22-Apr-2021 19:39
Potassium	13.6		0.0180	0.200	mg/L	1	22-Apr-2021 19:39
Selenium	0.00234		0.00110	0.00200	mg/L	1	22-Apr-2021 19:39
Sodium	324		0.140	2.00	mg/L	10	23-Apr-2021 12:25
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:39
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 01:16
Molybdenum	0.215		0.000600	0.00500	mg/L	1	22-Apr-2021 01:16
MERCURY BY SW7470A		Method:SW7470A				Prep:SW7470A / 22-Apr-2021	Analyst: MSC
Mercury	0.0000500	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:27
ANIONS BY E300.0		Method:E300					Analyst: YP
Chloride	4.20		0.200	0.500	mg/L	1	02-Apr-2021 16:00
Fluoride	1.71		0.0500	0.100	mg/L	1	02-Apr-2021 16:00
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	02-Apr-2021 16:00
Sulfate	904		4.00	10.0	mg/L	20	03-Apr-2021 19:58
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B					Analyst: MZD
Specific Conductivity	2,090		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-18
 Collection Date: 31-Mar-2021 18:29

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	1,260		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 18:29
Alkalinity, Carbonate (As CaCO3)	46.8		5.00	5.00	mg/L	1	11-Apr-2021 18:29
Alkalinity, Hydroxide (As CaCO3)	18.7		5.00	5.00	mg/L	1	11-Apr-2021 18:29
Alkalinity, Total (As CaCO3)	65.5		5.00	5.00	mg/L	1	11-Apr-2021 18:29
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: KVL			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:22
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: KVL			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:22
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	10.5	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.0	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-19S
 Collection Date: 31-Mar-2021 16:43

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED					Analyst: JHD
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 19:41
Arsenic	0.00554		0.000400	0.00200	mg/L	1	22-Apr-2021 19:41
Barium	0.0176		0.00190	0.00400	mg/L	1	22-Apr-2021 19:41
Beryllium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:41
Boron	6.86		0.110	0.200	mg/L	10	23-Apr-2021 12:27
Cadmium	0.000238	J	0.000200	0.00200	mg/L	1	22-Apr-2021 19:41
Calcium	42.3		0.340	5.00	mg/L	10	23-Apr-2021 12:27
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 19:41
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 19:41
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 19:41
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 19:41
Lithium	0.00121	J	0.00100	0.00500	mg/L	1	22-Apr-2021 19:41
Magnesium	0.0773	J	0.0100	0.200	mg/L	1	22-Apr-2021 19:41
Molybdenum	0.398		0.000600	0.00500	mg/L	1	22-Apr-2021 19:41
Potassium	33.9		0.0180	0.200	mg/L	1	22-Apr-2021 19:41
Selenium	0.00857		0.00110	0.00200	mg/L	1	22-Apr-2021 19:41
Sodium	639		0.140	2.00	mg/L	10	23-Apr-2021 12:27
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:41
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 01:18
Molybdenum	0.457		0.000600	0.00500	mg/L	1	22-Apr-2021 01:18
MERCURY BY SW7470A		Method:SW7470A				Prep:SW7470A / 22-Apr-2021	Analyst: MSC
Mercury	0.0000450	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:34
ANIONS BY E300.0		Method:E300					Analyst: YP
Chloride	13.7		0.400	1.00	mg/L	2	02-Apr-2021 14:09
Fluoride	1.46		0.100	0.200	mg/L	2	02-Apr-2021 14:09
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	02-Apr-2021 14:09
Sulfate	1,560		4.00	10.0	mg/L	20	22-Apr-2021 09:59
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4					Analyst: TH
Chemical Oxygen Demand	16.0		5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B					Analyst: MZD
Specific Conductivity	3,500		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-19S
 Collection Date: 31-Mar-2021 16:43

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,360		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 18:37
Alkalinity, Carbonate (As CaCO3)	63.8		5.00	5.00	mg/L	1	11-Apr-2021 18:37
Alkalinity, Hydroxide (As CaCO3)	71.6		5.00	5.00	mg/L	1	11-Apr-2021 18:37
Alkalinity, Total (As CaCO3)	135		5.00	5.00	mg/L	1	11-Apr-2021 18:37
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: KVL			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:22
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: KVL			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:23
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	10.8	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.1	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: DUP 3
 Collection Date: 31-Mar-2021 16:43

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED		Analyst: JHD			
Ferric Iron	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)		Analyst: JHD			
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 19:43
Arsenic	0.00452		0.000400	0.00200	mg/L	1	22-Apr-2021 19:43
Barium	0.0152		0.00190	0.00400	mg/L	1	22-Apr-2021 19:43
Beryllium	U		0.000200	0.00200	mg/L	1	23-Apr-2021 12:37
Boron	8.41		0.220	0.400	mg/L	20	23-Apr-2021 12:39
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:43
Calcium	35.3		0.680	10.0	mg/L	20	23-Apr-2021 12:39
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 19:43
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 19:43
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 19:43
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 19:43
Lithium	0.00144	J	0.00100	0.00500	mg/L	1	23-Apr-2021 12:37
Magnesium	0.0681	J	0.0100	0.200	mg/L	1	22-Apr-2021 19:43
Molybdenum	0.351		0.000600	0.00500	mg/L	1	22-Apr-2021 19:43
Potassium	29.0		0.0180	0.200	mg/L	1	22-Apr-2021 19:43
Selenium	0.00743		0.00110	0.00200	mg/L	1	22-Apr-2021 19:43
Sodium	545		0.280	4.00	mg/L	20	23-Apr-2021 12:39
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:43
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 01:20
Molybdenum	0.398		0.000600	0.00500	mg/L	1	22-Apr-2021 01:20
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000460	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:36
ANIONS BY E300.0		Method:E300		Analyst: YP			
Chloride	14.0		0.400	1.00	mg/L	2	02-Apr-2021 14:27
Fluoride	1.54		0.100	0.200	mg/L	2	02-Apr-2021 14:27
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	02-Apr-2021 14:27
Sulfate	1,560		4.00	10.0	mg/L	20	22-Apr-2021 10:20
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4		Analyst: TH			
Chemical Oxygen Demand	14.0	J	5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B		Analyst: MZD			
Specific Conductivity	3,540		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: DUP 3
 Collection Date: 31-Mar-2021 16:43

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-13
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C		Analyst: KAH			
Total Dissolved Solids (Residue, Filterable)	2,310		5.00	10.0	mg/L	1	07-Apr-2021 17:00
ALKALINITY BY SM2320B		Method:SM2320B		Analyst: TH			
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	11-Apr-2021 18:45
Alkalinity, Carbonate (As CaCO3)	69.0		5.00	5.00	mg/L	1	11-Apr-2021 18:45
Alkalinity, Hydroxide (As CaCO3)	64.4		5.00	5.00	mg/L	1	11-Apr-2021 18:45
Alkalinity, Total (As CaCO3)	133		5.00	5.00	mg/L	1	11-Apr-2021 18:45
FERROUS IRON BY SM3500 FE B		Method:SM3500FED		Analyst: KVL			
Ferrous Iron	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:23
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)		Analyst: KVL			
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	02-Apr-2021 13:24
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F		Analyst: KVL			
Sulfide	U		1.00	1.00	mg/L	1	06-Apr-2021 14:30
PH BY SM4500H+ B		Method:SM4500H+ B		Analyst: KVL			
pH	10.6	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	22.7	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA		Analyst: SUBFC			
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-20
 Collection Date: 31-Mar-2021 17:00

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-14
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:45
Arsenic		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:45
Barium	0.00981		0.00190	0.00400	mg/L	1	22-Apr-2021 19:45
Beryllium		U	0.000200	0.00200	mg/L	1	23-Apr-2021 12:41
Boron	0.927		0.110	0.200	mg/L	10	23-Apr-2021 12:50
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:45
Calcium	309		0.340	5.00	mg/L	10	23-Apr-2021 12:50
Chromium	0.000401	J	0.000400	0.00400	mg/L	1	22-Apr-2021 19:45
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 19:45
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 19:45
Lithium	0.0781		0.00100	0.00500	mg/L	1	23-Apr-2021 12:41
Molybdenum	0.00220	J	0.000600	0.00500	mg/L	1	22-Apr-2021 19:45
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 19:45
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:45
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000650	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:37
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	5.78		0.200	0.500	mg/L	1	02-Apr-2021 14:46
Fluoride	0.279		0.0500	0.100	mg/L	1	02-Apr-2021 14:46
Nitrogen, Nitrate (As N)		U	0.0300	0.100	mg/L	1	02-Apr-2021 14:46
Sulfate	782		4.00	10.0	mg/L	20	03-Apr-2021 17:49
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand	5.00	J	5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	1,890		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	1,490		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	6.91	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.1	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-20 Matrix 1
 Collection Date: 31-Mar-2021 17:00

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-15
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:47
Arsenic		U	0.000400	0.00200	mg/L	1	22-Apr-2021 19:47
Barium	0.00917		0.00190	0.00400	mg/L	1	22-Apr-2021 19:47
Beryllium		U	0.000200	0.00200	mg/L	1	23-Apr-2021 12:43
Boron	0.783		0.110	0.200	mg/L	10	23-Apr-2021 12:52
Cadmium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:47
Calcium	322		0.340	5.00	mg/L	10	23-Apr-2021 12:52
Chromium		U	0.000400	0.00400	mg/L	1	22-Apr-2021 19:47
Cobalt		U	0.000200	0.00500	mg/L	1	22-Apr-2021 19:47
Lead		U	0.000600	0.00200	mg/L	1	22-Apr-2021 19:47
Lithium	0.0879		0.00100	0.00500	mg/L	1	23-Apr-2021 12:43
Molybdenum	0.000762	J	0.000600	0.00500	mg/L	1	22-Apr-2021 19:47
Selenium		U	0.00110	0.00200	mg/L	1	22-Apr-2021 19:47
Thallium		U	0.000200	0.00200	mg/L	1	22-Apr-2021 19:47
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000880	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:39
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	5.70		0.200	0.500	mg/L	1	02-Apr-2021 15:04
Fluoride	0.309		0.0500	0.100	mg/L	1	02-Apr-2021 15:04
Nitrogen, Nitrate (As N)		U	0.0300	0.100	mg/L	1	02-Apr-2021 15:04
Sulfate	866		4.00	10.0	mg/L	20	03-Apr-2021 18:08
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand	5.00	J	5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	1,980		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	1,560		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	7.46	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	20.0	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-21 Matrix Dup 1
 Collection Date: 31-Mar-2021 17:00

ANALYTICAL REPORT

WorkOrder:HS21040023
 Lab ID:HS21040023-16
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 21-Apr-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	22-Apr-2021 19:49
Arsenic	U		0.000400	0.00200	mg/L	1	22-Apr-2021 19:49
Barium	0.00793		0.00190	0.00400	mg/L	1	22-Apr-2021 19:49
Beryllium	U		0.000200	0.00200	mg/L	1	23-Apr-2021 12:48
Boron	0.679		0.110	0.200	mg/L	10	23-Apr-2021 12:54
Cadmium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:49
Calcium	271		0.340	5.00	mg/L	10	23-Apr-2021 12:54
Chromium	U		0.000400	0.00400	mg/L	1	22-Apr-2021 19:49
Cobalt	U		0.000200	0.00500	mg/L	1	22-Apr-2021 19:49
Lead	U		0.000600	0.00200	mg/L	1	22-Apr-2021 19:49
Lithium	0.0750		0.00100	0.00500	mg/L	1	23-Apr-2021 12:48
Molybdenum	U		0.000600	0.00500	mg/L	1	22-Apr-2021 19:49
Selenium	U		0.00110	0.00200	mg/L	1	22-Apr-2021 19:49
Thallium	U		0.000200	0.00200	mg/L	1	22-Apr-2021 19:49
MERCURY BY SW7470A		Method:SW7470A		Prep:SW7470A / 22-Apr-2021		Analyst: MSC	
Mercury	0.0000830	J	0.0000300	0.000200	mg/L	1	22-Apr-2021 13:41
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	5.64		0.200	0.500	mg/L	1	02-Apr-2021 15:23
Fluoride	0.336		0.0500	0.100	mg/L	1	02-Apr-2021 15:23
Nitrogen, Nitrate (As N)	0.297		0.0300	0.100	mg/L	1	02-Apr-2021 15:23
Sulfate	854		4.00	10.0	mg/L	20	03-Apr-2021 18:26
CHEMICAL OXYGEN DEMAND BY E410.4		Method:E410.4				Analyst: TH	
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	08-Apr-2021 18:00
SPECIFIC CONDUCTIVITY BY SM2510 B		Method:M2510 B				Analyst: MZD	
Specific Conductivity	2,020		5.00	5.00	umhos/cm @ 25.0 °C	1	09-Apr-2021 10:15
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	1,550		5.00	10.0	mg/L	1	07-Apr-2021 17:00
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: KVL	
pH	7.68	H	0.100	0.100	pH Units	1	14-Apr-2021 16:00
Temp Deg C @pH	21.1	H	0	0	°C	1	14-Apr-2021 16:00
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	30-Apr-2021 17:07

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Revision: 1

Client: Altamira
 Project: WFEC/ CCR Program, Landfill Wells
 Sample ID: MW-17
 Collection Date: 06-Apr-2021 17:20

ANALYTICAL REPORT
 WorkOrder:HS21040023
 Lab ID:HS21040023-17
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
FERRIC IRON - BY CALCULATION BY SM3500FED		Method:SM3500FED					Analyst: JHD
Ferric Iron	0.0541		0.0200	0.0500	mg/L	1	30-Apr-2021 12:55
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		Method:SM3500FED (dissolved)					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	30-Apr-2021 12:53
DISSOLVED METALS BY SW6020A		Method:SW6020A (dissolved)				Prep:SW3010A / 21-Apr-2021	Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Apr-2021 01:22
Molybdenum	0.00292	J	0.000600	0.00500	mg/L	1	22-Apr-2021 01:22
FERROUS IRON BY SM3500 FE B		Method:SM3500FED					Analyst: KVL
Ferrous Iron	U		0.0200	0.0500	mg/L	1	08-Apr-2021 17:00
FERROUS IRON BY SM3500 FE D		Method:SM3500FED (dissolved)					Analyst: KVL
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	08-Apr-2021 17:00
SULFIDE BY SM4500 S2-F		Method:SM4500 S2-F					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	13-Apr-2021 16:30

Weight / Prep Log

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

Batch ID: 164927 **Start Date:** 21 Apr 2021 13:00 **End Date:** 21 Apr 2021 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21040023-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-14		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-15		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-16		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 164930 **Start Date:** 21 Apr 2021 13:30 **End Date:** 21 Apr 2021 17:30
Method: DISS METALS PREP - WATER - SW3010A **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21040023-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-17		10 (mL)	10 (mL)	1	120 plastic HNO3

Weight / Prep Log

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

Batch ID: 164955 **Start Date:** 22 Apr 2021 08:30 **End Date:** 22 Apr 2021 11:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21040023-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-14		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-15		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21040023-16		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 164927 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55		21 Apr 2021 17:00	22 Apr 2021 16:46	20
HS21040023-01	MW-15A	31 Mar 2021 11:55		21 Apr 2021 17:00	22 Apr 2021 15:51	1
HS21040023-02	MW-14A	31 Mar 2021 10:50		21 Apr 2021 17:00	23 Apr 2021 11:58	20
HS21040023-02	MW-14A	31 Mar 2021 10:50		21 Apr 2021 17:00	22 Apr 2021 17:37	1
HS21040023-03	MW-21	31 Mar 2021 09:43		21 Apr 2021 17:00	23 Apr 2021 12:00	20
HS21040023-03	MW-21	31 Mar 2021 09:43		21 Apr 2021 17:00	22 Apr 2021 17:39	1
HS21040023-04	Dup2	30 Mar 2021 16:55		21 Apr 2021 17:00	23 Apr 2021 12:02	20
HS21040023-04	Dup2	30 Mar 2021 16:55		21 Apr 2021 17:00	22 Apr 2021 17:41	1
HS21040023-05	MW-7S	30 Mar 2021 16:55		21 Apr 2021 17:00	23 Apr 2021 12:04	20
HS21040023-05	MW-7S	30 Mar 2021 16:55		21 Apr 2021 17:00	22 Apr 2021 17:46	1
HS21040023-06	MW-3	31 Mar 2021 09:42		21 Apr 2021 17:00	23 Apr 2021 12:11	10
HS21040023-06	MW-3	31 Mar 2021 09:42		21 Apr 2021 17:00	22 Apr 2021 17:48	1
HS21040023-07	MW-13	31 Mar 2021 11:13		21 Apr 2021 17:00	23 Apr 2021 12:15	10
HS21040023-07	MW-13	31 Mar 2021 11:13		21 Apr 2021 17:00	23 Apr 2021 12:13	1
HS21040023-07	MW-13	31 Mar 2021 11:13		21 Apr 2021 17:00	22 Apr 2021 17:52	1
HS21040023-08	MW-5S	01 Apr 2021 09:23		21 Apr 2021 17:00	23 Apr 2021 12:19	10
HS21040023-08	MW-5S	01 Apr 2021 09:23		21 Apr 2021 17:00	23 Apr 2021 12:17	1
HS21040023-08	MW-5S	01 Apr 2021 09:23		21 Apr 2021 17:00	22 Apr 2021 17:54	1
HS21040023-09	MW-16	01 Apr 2021 10:50		21 Apr 2021 17:00	23 Apr 2021 12:21	10
HS21040023-09	MW-16	01 Apr 2021 10:50		21 Apr 2021 17:00	22 Apr 2021 19:35	1
HS21040023-10	MW-17	31 Mar 2021 18:20		21 Apr 2021 17:00	23 Apr 2021 12:23	10
HS21040023-10	MW-17	31 Mar 2021 18:20		21 Apr 2021 17:00	22 Apr 2021 19:37	1
HS21040023-11	MW-18	31 Mar 2021 18:29		21 Apr 2021 17:00	23 Apr 2021 12:25	10
HS21040023-11	MW-18	31 Mar 2021 18:29		21 Apr 2021 17:00	22 Apr 2021 19:39	1
HS21040023-12	MW-19S	31 Mar 2021 16:43		21 Apr 2021 17:00	23 Apr 2021 12:27	10
HS21040023-12	MW-19S	31 Mar 2021 16:43		21 Apr 2021 17:00	22 Apr 2021 19:41	1
HS21040023-13	DUP 3	31 Mar 2021 16:43		21 Apr 2021 17:00	23 Apr 2021 12:39	20
HS21040023-13	DUP 3	31 Mar 2021 16:43		21 Apr 2021 17:00	23 Apr 2021 12:37	1
HS21040023-13	DUP 3	31 Mar 2021 16:43		21 Apr 2021 17:00	22 Apr 2021 19:43	1
HS21040023-14	MW-20	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:50	10
HS21040023-14	MW-20	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:41	1
HS21040023-14	MW-20	31 Mar 2021 17:00		21 Apr 2021 17:00	22 Apr 2021 19:45	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:52	10
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:43	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00		21 Apr 2021 17:00	22 Apr 2021 19:47	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:54	10
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00		21 Apr 2021 17:00	23 Apr 2021 12:48	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00		21 Apr 2021 17:00	22 Apr 2021 19:49	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 164930 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55		21 Apr 2021 17:30	22 Apr 2021 00:58	1
HS21040023-02	MW-14A	31 Mar 2021 10:50		21 Apr 2021 17:30	22 Apr 2021 01:00	1
HS21040023-04	Dup2	30 Mar 2021 16:55		21 Apr 2021 17:30	22 Apr 2021 01:02	1
HS21040023-05	MW-7S	30 Mar 2021 16:55		21 Apr 2021 17:30	22 Apr 2021 01:04	1
HS21040023-08	MW-5S	01 Apr 2021 09:23		21 Apr 2021 17:30	22 Apr 2021 01:12	1
HS21040023-09	MW-16	01 Apr 2021 10:50		21 Apr 2021 17:30	22 Apr 2021 01:14	1
HS21040023-11	MW-18	31 Mar 2021 18:29		21 Apr 2021 17:30	22 Apr 2021 01:16	1
HS21040023-12	MW-19S	31 Mar 2021 16:43		21 Apr 2021 17:30	22 Apr 2021 01:18	1
HS21040023-13	DUP 3	31 Mar 2021 16:43		21 Apr 2021 17:30	22 Apr 2021 01:20	1
HS21040023-17	MW-17	06 Apr 2021 17:20		21 Apr 2021 17:30	22 Apr 2021 01:22	1
Batch ID: 164955 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55		22 Apr 2021 11:30	22 Apr 2021 12:55	1
HS21040023-02	MW-14A	31 Mar 2021 10:50		22 Apr 2021 11:30	22 Apr 2021 13:12	1
HS21040023-03	MW-21	31 Mar 2021 09:43		22 Apr 2021 11:30	22 Apr 2021 13:13	1
HS21040023-04	Dup2	30 Mar 2021 16:55		22 Apr 2021 11:30	22 Apr 2021 13:15	1
HS21040023-05	MW-7S	30 Mar 2021 16:55		22 Apr 2021 11:30	22 Apr 2021 13:17	1
HS21040023-06	MW-3	31 Mar 2021 09:42		22 Apr 2021 11:30	22 Apr 2021 13:18	1
HS21040023-07	MW-13	31 Mar 2021 11:13		22 Apr 2021 11:30	22 Apr 2021 13:20	1
HS21040023-08	MW-5S	01 Apr 2021 09:23		22 Apr 2021 11:30	22 Apr 2021 13:22	1
HS21040023-09	MW-16	01 Apr 2021 10:50		22 Apr 2021 11:30	22 Apr 2021 13:24	1
HS21040023-10	MW-17	31 Mar 2021 18:20		22 Apr 2021 11:30	22 Apr 2021 13:25	1
HS21040023-11	MW-18	31 Mar 2021 18:29		22 Apr 2021 11:30	22 Apr 2021 13:27	1
HS21040023-12	MW-19S	31 Mar 2021 16:43		22 Apr 2021 11:30	22 Apr 2021 13:34	1
HS21040023-13	DUP 3	31 Mar 2021 16:43		22 Apr 2021 11:30	22 Apr 2021 13:36	1
HS21040023-14	MW-20	31 Mar 2021 17:00		22 Apr 2021 11:30	22 Apr 2021 13:37	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00		22 Apr 2021 11:30	22 Apr 2021 13:39	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00		22 Apr 2021 11:30	22 Apr 2021 13:41	1
Batch ID: R380847 (0)		Test Name : FERROUS IRON BY SM3500 FE B			Matrix: Water	
HS21040023-08	MW-5S	01 Apr 2021 09:23			02 Apr 2021 13:19	1
HS21040023-09	MW-16	01 Apr 2021 10:50			02 Apr 2021 13:21	1
HS21040023-11	MW-18	31 Mar 2021 18:29			02 Apr 2021 13:22	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			02 Apr 2021 13:22	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			02 Apr 2021 13:23	1
Batch ID: R380869 (0)		Test Name : FERROUS IRON BY SM3500 FE B			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			01 Apr 2021 14:30	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			01 Apr 2021 14:30	1
HS21040023-04	Dup2	30 Mar 2021 16:55			01 Apr 2021 14:30	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			01 Apr 2021 14:30	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R380870 (0)		Test Name : FERROUS IRON BY SM3500 FE D			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			01 Apr 2021 14:30	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			01 Apr 2021 14:30	1
HS21040023-04	Dup2	30 Mar 2021 16:55			01 Apr 2021 14:30	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			01 Apr 2021 14:30	1
Batch ID: R380890 (0)		Test Name : FERROUS IRON BY SM3500 FE D			Matrix: Water	
HS21040023-08	MW-5S	01 Apr 2021 09:23			02 Apr 2021 13:19	1
HS21040023-09	MW-16	01 Apr 2021 10:50			02 Apr 2021 13:21	1
HS21040023-11	MW-18	31 Mar 2021 18:29			02 Apr 2021 13:22	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			02 Apr 2021 13:23	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			02 Apr 2021 13:24	1
Batch ID: R381071 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS21040023-04	Dup2	30 Mar 2021 16:55			06 Apr 2021 16:00	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			06 Apr 2021 16:00	1
Batch ID: R381136 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			01 Apr 2021 17:53	2
HS21040023-02	MW-14A	31 Mar 2021 10:50			01 Apr 2021 18:11	2
HS21040023-03	MW-21	31 Mar 2021 09:43			01 Apr 2021 18:30	2
HS21040023-04	Dup2	30 Mar 2021 16:55			01 Apr 2021 15:07	2
HS21040023-05	MW-7S	30 Mar 2021 16:55			01 Apr 2021 15:26	2
HS21040023-06	MW-3	31 Mar 2021 09:42			01 Apr 2021 16:39	2
HS21040023-07	MW-13	31 Mar 2021 11:13			01 Apr 2021 17:35	2
Batch ID: R381177 (0)		Test Name : CHEMICAL OXYGEN DEMAND BY E410.4			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			08 Apr 2021 11:30	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			08 Apr 2021 11:30	1
HS21040023-03	MW-21	31 Mar 2021 09:43			08 Apr 2021 11:30	1
HS21040023-04	Dup2	30 Mar 2021 16:55			08 Apr 2021 11:30	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			08 Apr 2021 11:30	1
HS21040023-06	MW-3	31 Mar 2021 09:42			08 Apr 2021 11:30	1
HS21040023-07	MW-13	31 Mar 2021 11:13			08 Apr 2021 11:30	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			08 Apr 2021 11:30	1
HS21040023-09	MW-16	01 Apr 2021 10:50			08 Apr 2021 11:30	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381204 (0)		Test Name : SPECIFIC CONDUCTIVITY BY SM2510 B			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			08 Apr 2021 11:55	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			08 Apr 2021 11:55	1
HS21040023-03	MW-21	31 Mar 2021 09:43			08 Apr 2021 11:55	1
HS21040023-04	Dup2	30 Mar 2021 16:55			08 Apr 2021 11:55	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			08 Apr 2021 11:55	1
HS21040023-06	MW-3	31 Mar 2021 09:42			08 Apr 2021 11:55	1
HS21040023-07	MW-13	31 Mar 2021 11:13			08 Apr 2021 11:55	1
Batch ID: R381207 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			07 Apr 2021 17:00	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			07 Apr 2021 17:00	1
HS21040023-03	MW-21	31 Mar 2021 09:43			07 Apr 2021 17:00	1
HS21040023-06	MW-3	31 Mar 2021 09:42			07 Apr 2021 17:00	1
HS21040023-07	MW-13	31 Mar 2021 11:13			07 Apr 2021 17:00	1
HS21040023-10	MW-17	31 Mar 2021 18:20			07 Apr 2021 17:00	1
HS21040023-11	MW-18	31 Mar 2021 18:29			07 Apr 2021 17:00	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			07 Apr 2021 17:00	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			07 Apr 2021 17:00	1
HS21040023-14	MW-20	31 Mar 2021 17:00			07 Apr 2021 17:00	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			07 Apr 2021 17:00	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			07 Apr 2021 17:00	1
Batch ID: R381211 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21040023-08	MW-5S	01 Apr 2021 09:23			02 Apr 2021 18:27	1
HS21040023-09	MW-16	01 Apr 2021 10:50			02 Apr 2021 18:45	2
HS21040023-10	MW-17	31 Mar 2021 18:20			02 Apr 2021 15:41	1
HS21040023-11	MW-18	31 Mar 2021 18:29			02 Apr 2021 16:00	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			02 Apr 2021 14:09	2
HS21040023-13	DUP 3	31 Mar 2021 16:43			02 Apr 2021 14:27	2
HS21040023-14	MW-20	31 Mar 2021 17:00			02 Apr 2021 14:46	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			02 Apr 2021 15:04	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			02 Apr 2021 15:23	1
Batch ID: R381229 (0)		Test Name : ALKALINITY BY SM2320B			Matrix: Water	
HS21040023-04	Dup2	30 Mar 2021 16:55			08 Apr 2021 17:45	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			08 Apr 2021 17:45	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381232 (0)		Test Name : CHEMICAL OXYGEN DEMAND BY E410.4			Matrix: Water	
HS21040023-10	MW-17	31 Mar 2021 18:20			08 Apr 2021 18:00	1
HS21040023-11	MW-18	31 Mar 2021 18:29			08 Apr 2021 18:00	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			08 Apr 2021 18:00	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			08 Apr 2021 18:00	1
HS21040023-14	MW-20	31 Mar 2021 17:00			08 Apr 2021 18:00	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			08 Apr 2021 18:00	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			08 Apr 2021 18:00	1
Batch ID: R381248 (0)		Test Name : SPECIFIC CONDUCTIVITY BY SM2510 B			Matrix: Water	
HS21040023-08	MW-5S	01 Apr 2021 09:23			09 Apr 2021 10:15	1
HS21040023-09	MW-16	01 Apr 2021 10:50			09 Apr 2021 10:15	1
HS21040023-10	MW-17	31 Mar 2021 18:20			09 Apr 2021 10:15	1
HS21040023-11	MW-18	31 Mar 2021 18:29			09 Apr 2021 10:15	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			09 Apr 2021 10:15	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			09 Apr 2021 10:15	1
HS21040023-14	MW-20	31 Mar 2021 17:00			09 Apr 2021 10:15	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			09 Apr 2021 10:15	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			09 Apr 2021 10:15	1
Batch ID: R381287 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS21040023-08	MW-5S	01 Apr 2021 09:23			08 Apr 2021 17:00	1
HS21040023-09	MW-16	01 Apr 2021 10:50			08 Apr 2021 17:00	1
Batch ID: R381318 (0)		Test Name : FERROUS IRON BY SM3500 FE B			Matrix: Water	
HS21040023-17	MW-17	06 Apr 2021 17:20			08 Apr 2021 17:00	1
Batch ID: R381320 (0)		Test Name : FERROUS IRON BY SM3500 FE D			Matrix: Water	
HS21040023-17	MW-17	06 Apr 2021 17:20			08 Apr 2021 17:00	1
Batch ID: R381322 (0)		Test Name : SULFIDE BY SM4500 S2-F			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			06 Apr 2021 14:30	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			06 Apr 2021 14:30	1
HS21040023-04	Dup2	30 Mar 2021 16:55			06 Apr 2021 14:30	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			06 Apr 2021 14:30	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			06 Apr 2021 14:30	1
HS21040023-09	MW-16	01 Apr 2021 10:50			06 Apr 2021 14:30	1
HS21040023-11	MW-18	31 Mar 2021 18:29			06 Apr 2021 14:30	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			06 Apr 2021 14:30	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			06 Apr 2021 14:30	1

Client: Altamira
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DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R381355 (0)		Test Name : ALKALINITY BY SM2320B			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			11 Apr 2021 17:24	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			11 Apr 2021 17:38	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			11 Apr 2021 17:45	1
HS21040023-09	MW-16	01 Apr 2021 10:50			11 Apr 2021 17:52	1
HS21040023-10	MW-17	31 Mar 2021 18:20			11 Apr 2021 17:59	1
HS21040023-11	MW-18	31 Mar 2021 18:29			11 Apr 2021 18:29	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			11 Apr 2021 18:37	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			11 Apr 2021 18:45	1
Batch ID: R381519 (0)		Test Name : SULFIDE BY SM4500 S2-F			Matrix: Water	
HS21040023-17	MW-17	06 Apr 2021 17:20			13 Apr 2021 16:30	1
Batch ID: R381590 (0)		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			14 Apr 2021 16:00	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			14 Apr 2021 16:00	1
HS21040023-03	MW-21	31 Mar 2021 09:43			14 Apr 2021 16:00	1
HS21040023-04	Dup2	30 Mar 2021 16:55			14 Apr 2021 16:00	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			14 Apr 2021 16:00	1
HS21040023-06	MW-3	31 Mar 2021 09:42			14 Apr 2021 16:00	1
HS21040023-07	MW-13	31 Mar 2021 11:13			14 Apr 2021 16:00	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			14 Apr 2021 16:00	1
HS21040023-09	MW-16	01 Apr 2021 10:50			14 Apr 2021 16:00	1
HS21040023-10	MW-17	31 Mar 2021 18:20			14 Apr 2021 16:00	1
HS21040023-11	MW-18	31 Mar 2021 18:29			14 Apr 2021 16:00	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			14 Apr 2021 16:00	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			14 Apr 2021 16:00	1
HS21040023-14	MW-20	31 Mar 2021 17:00			14 Apr 2021 16:00	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			14 Apr 2021 16:00	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			14 Apr 2021 16:00	1
Batch ID: R381678 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21040023-10	MW-17	31 Mar 2021 18:20			03 Apr 2021 19:40	20
HS21040023-11	MW-18	31 Mar 2021 18:29			03 Apr 2021 19:58	20
HS21040023-14	MW-20	31 Mar 2021 17:00			03 Apr 2021 17:49	20
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			03 Apr 2021 18:08	20
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			03 Apr 2021 18:26	20

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Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382198 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			22 Apr 2021 06:07	20
HS21040023-02	MW-14A	31 Mar 2021 10:50			22 Apr 2021 06:28	20
HS21040023-03	MW-21	31 Mar 2021 09:43			22 Apr 2021 06:46	20
HS21040023-04	Dup2	30 Mar 2021 16:55			22 Apr 2021 08:03	20
HS21040023-05	MW-7S	30 Mar 2021 16:55			22 Apr 2021 08:24	20
HS21040023-06	MW-3	31 Mar 2021 09:42			22 Apr 2021 08:42	20
HS21040023-07	MW-13	31 Mar 2021 11:13			22 Apr 2021 09:02	20
HS21040023-08	MW-5S	01 Apr 2021 09:23			22 Apr 2021 09:21	10
HS21040023-09	MW-16	01 Apr 2021 10:50			22 Apr 2021 09:41	20
Batch ID: R382205 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21040023-12	MW-19S	31 Mar 2021 16:43			22 Apr 2021 09:59	20
HS21040023-13	DUP 3	31 Mar 2021 16:43			22 Apr 2021 10:20	20
Batch ID: R382754 (0)		Test Name : FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			30 Apr 2021 12:53	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			30 Apr 2021 12:53	1
HS21040023-04	Dup2	30 Mar 2021 16:55			30 Apr 2021 12:53	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			30 Apr 2021 12:53	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			30 Apr 2021 12:53	1
HS21040023-09	MW-16	01 Apr 2021 10:50			30 Apr 2021 12:53	1
HS21040023-11	MW-18	31 Mar 2021 18:29			30 Apr 2021 12:53	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			30 Apr 2021 12:53	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			30 Apr 2021 12:53	1
HS21040023-17	MW-17	06 Apr 2021 17:20			30 Apr 2021 12:53	1
Batch ID: R382755 (0)		Test Name : FERRIC IRON - BY CALCULATION BY SM3500FED			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			30 Apr 2021 12:55	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			30 Apr 2021 12:55	1
HS21040023-04	Dup2	30 Mar 2021 16:55			30 Apr 2021 12:55	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			30 Apr 2021 12:55	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			30 Apr 2021 12:55	1
HS21040023-09	MW-16	01 Apr 2021 10:50			30 Apr 2021 12:55	1
HS21040023-11	MW-18	31 Mar 2021 18:29			30 Apr 2021 12:55	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			30 Apr 2021 12:55	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			30 Apr 2021 12:55	1
HS21040023-17	MW-17	06 Apr 2021 17:20			30 Apr 2021 12:55	1

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Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R382780 (0)		Test Name : SUBCONTRACT ANALYSIS - RADIUM 228			Matrix: Water	
HS21040023-01	MW-15A	31 Mar 2021 11:55			30 Apr 2021 17:07	1
HS21040023-01	MW-15A	31 Mar 2021 11:55			30 Apr 2021 17:07	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			30 Apr 2021 17:07	1
HS21040023-02	MW-14A	31 Mar 2021 10:50			30 Apr 2021 17:07	1
HS21040023-03	MW-21	31 Mar 2021 09:43			30 Apr 2021 17:07	1
HS21040023-03	MW-21	31 Mar 2021 09:43			30 Apr 2021 17:07	1
HS21040023-04	Dup2	30 Mar 2021 16:55			30 Apr 2021 17:07	1
HS21040023-04	Dup2	30 Mar 2021 16:55			30 Apr 2021 17:07	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			30 Apr 2021 17:07	1
HS21040023-05	MW-7S	30 Mar 2021 16:55			30 Apr 2021 17:07	1
HS21040023-06	MW-3	31 Mar 2021 09:42			30 Apr 2021 17:07	1
HS21040023-06	MW-3	31 Mar 2021 09:42			30 Apr 2021 17:07	1
HS21040023-07	MW-13	31 Mar 2021 11:13			30 Apr 2021 17:07	1
HS21040023-07	MW-13	31 Mar 2021 11:13			30 Apr 2021 17:07	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			30 Apr 2021 17:07	1
HS21040023-08	MW-5S	01 Apr 2021 09:23			30 Apr 2021 17:07	1
HS21040023-09	MW-16	01 Apr 2021 10:50			30 Apr 2021 17:07	1
HS21040023-09	MW-16	01 Apr 2021 10:50			30 Apr 2021 17:07	1
HS21040023-10	MW-17	31 Mar 2021 18:20			30 Apr 2021 17:07	1
HS21040023-10	MW-17	31 Mar 2021 18:20			30 Apr 2021 17:07	1
HS21040023-11	MW-18	31 Mar 2021 18:29			30 Apr 2021 17:07	1
HS21040023-11	MW-18	31 Mar 2021 18:29			30 Apr 2021 17:07	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			30 Apr 2021 17:07	1
HS21040023-12	MW-19S	31 Mar 2021 16:43			30 Apr 2021 17:07	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			30 Apr 2021 17:07	1
HS21040023-13	DUP 3	31 Mar 2021 16:43			30 Apr 2021 17:07	1
HS21040023-14	MW-20	31 Mar 2021 17:00			30 Apr 2021 17:07	1
HS21040023-14	MW-20	31 Mar 2021 17:00			30 Apr 2021 17:07	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			30 Apr 2021 17:07	1
HS21040023-15	MW-20 Matrix 1	31 Mar 2021 17:00			30 Apr 2021 17:07	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			30 Apr 2021 17:07	1
HS21040023-16	MW-21 Matrix Dup 1	31 Mar 2021 17:00			30 Apr 2021 17:07	1

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QC BATCH REPORT

Batch ID: 164927 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A					
MBLK	Sample ID: MBLK-164927	Units: mg/L		Analysis Date: 22-Apr-2021 15:44					
Client ID:	Run ID: ICPMS06_382137	SeqNo: 6056951		PrepDate: 21-Apr-2021		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	0.01797	0.0200							J
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	U	0.200							
Molybdenum	U	0.00500							
Potassium	U	0.200							
Selenium	U	0.00200							
Sodium	0.04886	0.200							J
Thallium	U	0.00200							

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QC BATCH REPORT

Batch ID: 164927 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A					
LCS	Sample ID: LCS-164927	Units: mg/L			Analysis Date: 22-Apr-2021 15:46				
Client ID:	Run ID: ICPMS06_382137	SeqNo: 6056952		PrepDate: 21-Apr-2021		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	0.04742	0.00200	0.05	0	94.8	80 - 120			
Arsenic	0.04582	0.00200	0.05	0	91.6	80 - 120			
Barium	0.04763	0.00400	0.05	0	95.3	80 - 120			
Beryllium	0.05175	0.00200	0.05	0	104	80 - 120			
Boron	0.4989	0.0200	0.5	0	99.8	80 - 120			
Cadmium	0.04918	0.00200	0.05	0	98.4	80 - 120			
Calcium	4.819	0.500	5	0	96.4	80 - 120			
Chromium	0.04603	0.00400	0.05	0	92.1	80 - 120			
Cobalt	0.0467	0.00500	0.05	0	93.4	80 - 120			
Iron	4.661	0.200	5	0	93.2	80 - 120			
Lead	0.04837	0.00200	0.05	0	96.7	80 - 120			
Lithium	0.102	0.00500	0.1	0	102	80 - 120			
Magnesium	4.76	0.200	5	0	95.2	80 - 120			
Molybdenum	0.04783	0.00500	0.05	0	95.7	80 - 120			
Potassium	4.831	0.200	5	0	96.6	80 - 120			
Selenium	0.04856	0.00200	0.05	0	97.1	80 - 120			
Sodium	4.794	0.200	5	0	95.9	80 - 120			
Thallium	0.04802	0.00200	0.05	0	96.0	80 - 120			

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QC BATCH REPORT

Batch ID: 164927 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A						
MS	Sample ID: HS21040023-01MS	Units: mg/L			Analysis Date: 22-Apr-2021 15:53					
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6056955	PrepDate: 21-Apr-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04787	0.00200	0.05	0	95.7	80 - 120				
Arsenic	0.04887	0.00200	0.05	0.000523	96.7	80 - 120				
Barium	0.06864	0.00400	0.05	0.01864	100.0	80 - 120				
Beryllium	0.05182	0.00200	0.05	0	104	80 - 120				
Boron	3.992	0.0200	0.5	3.204	158	80 - 120				SEO
Cadmium	0.04908	0.00200	0.05	0	98.2	80 - 120				
Calcium	88.39	0.500	5	78.57	196	80 - 120				SO
Chromium	0.04721	0.00400	0.05	0	94.4	80 - 120				
Cobalt	0.04695	0.00500	0.05	0	93.9	80 - 120				
Iron	4.785	0.200	5	0.04923	94.7	80 - 120				
Lead	0.04887	0.00200	0.05	0	97.7	80 - 120				
Lithium	0.176	0.00500	0.1	0.07301	103	80 - 120				
Magnesium	16.26	0.200	5	10.91	107	80 - 120				
Molybdenum	0.2302	0.00500	0.05	0.1677	125	80 - 120				S
Potassium	10.8	0.200	5	5.466	107	80 - 120				
Selenium	0.05068	0.00200	0.05	0	101	80 - 120				
Sodium	675.7	0.200	5	639.2	729	80 - 120				SEO
Thallium	0.04769	0.00200	0.05	0	95.4	80 - 120				

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QC BATCH REPORT

Batch ID: 164927 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A						
MSD	Sample ID: HS21040023-01MSD	Units: mg/L			Analysis Date: 22-Apr-2021 15:55					
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6056956	PrepDate: 21-Apr-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04904	0.00200	0.05	0	98.1	80 - 120	0.04787	2.41	20	
Arsenic	0.04991	0.00200	0.05	0.000523	98.8	80 - 120	0.04887	2.12	20	
Barium	0.06901	0.00400	0.05	0.01864	101	80 - 120	0.06864	0.535	20	
Beryllium	0.05275	0.00200	0.05	0	105	80 - 120	0.05182	1.77	20	
Boron	4.095	0.0200	0.5	3.204	178	80 - 120	3.992	2.54	20	SEO
Cadmium	0.04923	0.00200	0.05	0	98.5	80 - 120	0.04908	0.289	20	
Calcium	87.98	0.500	5	78.57	188	80 - 120	88.39	0.463	20	SO
Chromium	0.04793	0.00400	0.05	0	95.9	80 - 120	0.04721	1.52	20	
Cobalt	0.04748	0.00500	0.05	0	95.0	80 - 120	0.04695	1.12	20	
Iron	4.814	0.200	5	0.04923	95.3	80 - 120	4.785	0.589	20	
Lead	0.04963	0.00200	0.05	0	99.3	80 - 120	0.04887	1.54	20	
Lithium	0.1785	0.00500	0.1	0.07301	105	80 - 120	0.176	1.4	20	
Magnesium	16.34	0.200	5	10.91	108	80 - 120	16.26	0.491	20	
Molybdenum	0.2267	0.00500	0.05	0.1677	118	80 - 120	0.2302	1.52	20	
Potassium	10.75	0.200	5	5.466	106	80 - 120	10.8	0.458	20	
Selenium	0.05211	0.00200	0.05	0	104	80 - 120	0.05068	2.78	20	
Sodium	683.5	0.200	5	639.2	886	80 - 120	675.7	1.16	20	SEO
Thallium	0.04883	0.00200	0.05	0	97.7	80 - 120	0.04769	2.36	20	

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Client: Altamira
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QC BATCH REPORT

Batch ID: 164927 (0)	Instrument: ICPMS06	Method: ICP-MS METALS BY SW6020A								
PDS	Sample ID: HS21040023-01PDS	Units: mg/L	Analysis Date: 22-Apr-2021 15:57							
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6056957	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	0.09644	0.00200	0.1	0.000035	96.4	75 - 125				
Arsenic	0.1001	0.00200	0.1	0.000523	99.6	75 - 125				
Barium	0.118	0.00400	0.1	0.01864	99.4	75 - 125				
Beryllium	0.1059	0.00200	0.1	0.000002	106	75 - 125				
Cadmium	0.09983	0.00200	0.1	0.000128	99.7	75 - 125				
Calcium	87.57	0.500	10	78.57	90.0	75 - 125				O
Chromium	0.09756	0.00400	0.1	0.0002	97.4	75 - 125				
Cobalt	0.1011	0.00500	0.1	0.000104	101	75 - 125				
Iron	9.845	0.200	10	0.04923	98.0	75 - 125				
Lead	0.1015	0.00200	0.1	0.000037	101	75 - 125				
Lithium	0.1447	0.00500	0.1	0.07301	71.7	70 - 125				
Magnesium	20.38	0.200	10	10.91	94.7	75 - 125				
Molybdenum	0.2689	0.00500	0.1	0.1677	101	75 - 125				
Potassium	15.46	0.200	10	5.466	99.9	75 - 125				
Selenium	0.1056	0.00200	0.1	0.000337	105	75 - 125				
Thallium	0.1027	0.00200	0.1	-0.000009	103	75 - 125				

PDS	Sample ID: HS21040023-01PDS	Units: mg/L	Analysis Date: 22-Apr-2021 16:50							
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6057071	PrepDate: 21-Apr-2021 DF: 20							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	7.782	0.400	5	3.352	88.6	75 - 125				
Sodium	794.9	4.00	200	593.7	101	75 - 125				

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QC BATCH REPORT

Batch ID: 164927 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A					
SD	Sample ID: HS21040023-01SD	Units: mg/L		Analysis Date: 22-Apr-2021 15:48					
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6056953		PrepDate: 21-Apr-2021		DF: 5			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Antimony	U	0.0100					0.000035	0	10
Arsenic	U	0.0100					0.000523	0	10
Barium	0.0178	0.0200					0.01864	0	10 J
Beryllium	U	0.0100					0.000002	0	10
Cadmium	U	0.0100					0.000128	0	10
Calcium	77.18	2.50					78.57	1.77	10
Chromium	U	0.0200					0.0002	0	10
Cobalt	U	0.0250					0.000104	0	10
Iron	U	1.00					0.04923	0	10
Lead	U	0.0100					0.000037	0	10
Lithium	0.07309	0.0250					0.07301	0.112	10
Magnesium	10.68	1.00					10.91	2.15	10
Molybdenum	0.1657	0.0250					0.1677	1.21	10
Potassium	5.509	1.00					5.466	0.796	10
Selenium	U	0.0100					0.000337	0	10
Thallium	0.003013	0.0100					-0.000009	0	10 J

SD	Sample ID: HS21040023-01SD	Units: mg/L		Analysis Date: 22-Apr-2021 17:30					
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6057121		PrepDate: 21-Apr-2021		DF: 100			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Boron	2.518	2.00					3.352	24.9	10 R

SD	Sample ID: HS21040023-01SD	Units: mg/L		Analysis Date: 22-Apr-2021 17:16					
Client ID: MW-15A	Run ID: ICPMS06_382137	SeqNo: 6057125		PrepDate: 21-Apr-2021		DF: 100			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual
Sodium	639.2	20.0					593.7	7.66	10

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
HS21040023-05	HS21040023-06	HS21040023-07	HS21040023-08
HS21040023-09	HS21040023-10	HS21040023-11	HS21040023-12
HS21040023-13	HS21040023-14	HS21040023-15	HS21040023-16

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: 164930 (0)	Instrument: ICPMS06	Method: DISSOLVED METALS BY SW6020A (DISSOLVED)								
MBLK	Sample ID: MBLK-164930	Units: mg/L	Analysis Date: 22-Apr-2021 00:35							
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055094	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Iron	U	0.200								
Molybdenum	U	0.00500								

LCS	Sample ID: LCS-164930	Units: mg/L	Analysis Date: 22-Apr-2021 00:37							
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055095	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Iron	4.839	0.200	5	0	96.8	80 - 120				
Molybdenum	0.04845	0.00500	0.05	0	96.9	80 - 120				

MS	Sample ID: HS21041055-02MS	Units: mg/L	Analysis Date: 22-Apr-2021 00:43							
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055098	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Iron	31.08	0.200	5	26.36	94.3	75 - 125				O
Molybdenum	0.04814	0.00500	0.05	0.001098	94.1	75 - 125				

MSD	Sample ID: HS21041055-02MSD	Units: mg/L	Analysis Date: 22-Apr-2021 00:46							
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055099	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Iron	29.99	0.200	5	26.36	72.5	75 - 125	31.08	3.57	20	SO
Molybdenum	0.04361	0.00500	0.05	0.001098	85.0	75 - 125	0.04814	9.89	20	

PDS	Sample ID: HS21041055-02PDS	Units: mg/L	Analysis Date: 22-Apr-2021 00:48							
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055100	PrepDate: 21-Apr-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Iron	44.17	0.200	20	26.36	89.0	75 - 125				
Molybdenum	0.1954	0.00500	0.2	0.001098	97.2	75 - 125				

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: 164930 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
SD	Sample ID: HS21041055-02SD	Units: mg/L		Analysis Date: 22-Apr-2021 00:41					
Client ID:	Run ID: ICPMS06_382094	SeqNo: 6055097	PrepDate: 21-Apr-2021	DF: 5					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit Qual

Iron	26.79	1.00					26.36	1.61	10
Molybdenum	U	0.0250					0.001098	0	10

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-04	HS21040023-05
HS21040023-08	HS21040023-09	HS21040023-11	HS21040023-12
HS21040023-13	HS21040023-17		

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: 164955 (0)		Instrument: HG03		Method: MERCURY BY SW7470A					
MBLK	Sample ID: MBLK-164955	Units: mg/L			Analysis Date: 22-Apr-2021 12:52				
Client ID:	Run ID: HG03_382155	SeqNo: 6055833		PrepDate: 22-Apr-2021		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Mercury U 0.000200

LCS	Sample ID: LCS-164955	Units: mg/L			Analysis Date: 22-Apr-2021 12:54				
Client ID:	Run ID: HG03_382155	SeqNo: 6055834		PrepDate: 22-Apr-2021		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Mercury 0.00532 0.000200 0.005 0 106 80 - 120

MS	Sample ID: HS21040023-01MS	Units: mg/L			Analysis Date: 22-Apr-2021 12:57				
Client ID: MW-15A	Run ID: HG03_382155	SeqNo: 6055836		PrepDate: 22-Apr-2021		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Mercury 0.00461 0.000200 0.005 0.000042 91.4 75 - 125

MSD	Sample ID: HS21040023-01MSD	Units: mg/L			Analysis Date: 22-Apr-2021 12:59				
Client ID: MW-15A	Run ID: HG03_382155	SeqNo: 6055837		PrepDate: 22-Apr-2021		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Mercury 0.00454 0.000200 0.005 0.000042 90.0 75 - 125 0.00461 1.53 20

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
HS21040023-05	HS21040023-06	HS21040023-07	HS21040023-08
HS21040023-09	HS21040023-10	HS21040023-11	HS21040023-12
HS21040023-13	HS21040023-14	HS21040023-15	HS21040023-16

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R380847 (0)	Instrument: UV-2450	Method: FERROUS IRON BY SM3500 FE B
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MBLK	Sample ID: MBLK-R380847	Units: mg/L	Analysis Date: 02-Apr-2021 12:50							
Client ID:	Run ID: UV-2450_380847	SeqNo: 6022526	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ferrous Iron U 0.0500 80 - 120

LCS	Sample ID: LCS-R380847	Units: mg/L	Analysis Date: 02-Apr-2021 12:50							
Client ID:	Run ID: UV-2450_380847	SeqNo: 6022525	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ferrous Iron 0.22 0.0500 0.25 0 88.0 80 - 120

MS	Sample ID: HS21040023-13MS	Units: mg/L	Analysis Date: 02-Apr-2021 13:26							
Client ID: DUP 3	Run ID: UV-2450_380847	SeqNo: 6022528	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ferrous Iron 0.264 0.0500 0.25 -0.004 107 75 - 125

MSD	Sample ID: HS21040023-13MSD	Units: mg/L	Analysis Date: 02-Apr-2021 13:26							
Client ID: DUP 3	Run ID: UV-2450_380847	SeqNo: 6022527	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Ferrous Iron 0.266 0.0500 0.25 -0.004 108 75 - 125 0.264 0.755 20

The following samples were analyzed in this batch: HS21040023-08 HS21040023-09 HS21040023-11 HS21040023-12
 HS21040023-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R380869 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE B

MBLK	Sample ID: MBLK-R380869	Units: mg/L			Analysis Date: 01-Apr-2021 14:30				
Client ID:	Run ID: UV-2450_380869	SeqNo: 6022940		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron U 0.0500 80 - 120

LCS	Sample ID: LCS-R380869	Units: mg/L			Analysis Date: 01-Apr-2021 14:30				
Client ID:	Run ID: UV-2450_380869	SeqNo: 6022939		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 0.235 0.0500 0.25 0 94.0 80 - 120

MS	Sample ID: HS21040023-05MS	Units: mg/L			Analysis Date: 01-Apr-2021 14:30				
Client ID: MW-7S	Run ID: UV-2450_380869	SeqNo: 6022942		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 0.241 0.0500 0.25 -0.01 100 75 - 125

MSD	Sample ID: HS21040023-05MSD	Units: mg/L			Analysis Date: 01-Apr-2021 14:30				
Client ID: MW-7S	Run ID: UV-2450_380869	SeqNo: 6022941		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Ferrous Iron 0.242 0.0500 0.25 -0.01 101 75 - 125 0.241 0.414 20

The following samples were analyzed in this batch: HS21040023-01 HS21040023-02 HS21040023-04 HS21040023-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R380870 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE D (DISSOLVED)

MBLK	Sample ID: MBLK-R380870	Units: mg/L	Analysis Date: 01-Apr-2021 14:30						
Client ID:	Run ID: UV-2450_380870	SeqNo: 6022965	PrepDate:						DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved U 0.0500

LCS	Sample ID: LCS-R380870	Units: mg/L	Analysis Date: 01-Apr-2021 14:30						
Client ID:	Run ID: UV-2450_380870	SeqNo: 6022964	PrepDate:						DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.235 0.0500 0.25 0 94.0 80 - 120

MS	Sample ID: HS21040023-05MS	Units: mg/L	Analysis Date: 01-Apr-2021 14:30						
Client ID: MW-7S	Run ID: UV-2450_380870	SeqNo: 6022967	PrepDate:						DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.252 0.0500 0.25 -0.017 108 80 - 120

MSD	Sample ID: HS21040023-05MSD	Units: mg/L	Analysis Date: 01-Apr-2021 14:30						
Client ID: MW-7S	Run ID: UV-2450_380870	SeqNo: 6022966	PrepDate:						DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.25 0.0500 0.25 -0.017 107 80 - 120 0.252 0.797 20

The following samples were analyzed in this batch: HS21040023-01 HS21040023-02 HS21040023-04 HS21040023-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R380890 (0)		Instrument: UV-2450		Method: FERROUS IRON BY SM3500 FE D (DISSOLVED)					
MBLK	Sample ID: MBLK-R380890	Units: mg/L		Analysis Date: 02-Apr-2021 12:48					
Client ID:	Run ID: UV-2450_380890	SeqNo: 6023453		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron, Dissolved U 0.0500

LCS		Sample ID: LCS-R380890		Units: mg/L		Analysis Date: 02-Apr-2021 12:48			
Client ID:	Run ID: UV-2450_380890	SeqNo: 6023452		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron, Dissolved 0.22 0.0500 0.25 0 88.0 80 - 120

MS		Sample ID: HS21040023-13MS		Units: mg/L		Analysis Date: 02-Apr-2021 13:26			
Client ID: DUP 3	Run ID: UV-2450_380890	SeqNo: 6023455		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron, Dissolved 0.247 0.0500 0.25 0 98.8 80 - 120

MSD		Sample ID: HS21040023-13MSD		Units: mg/L		Analysis Date: 02-Apr-2021 13:26			
Client ID: DUP 3	Run ID: UV-2450_380890	SeqNo: 6023454		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual

Ferrous Iron, Dissolved 0.245 0.0500 0.25 0 98.0 80 - 120 0.247 0.813 20

The following samples were analyzed in this batch: HS21040023-08 HS21040023-09 HS21040023-11 HS21040023-12
 HS21040023-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381071 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C

MBLK	Sample ID: WBLK-040621	Units: mg/L			Analysis Date: 06-Apr-2021 16:00					
Client ID:	Run ID: Balance1_381071	SeqNo: 6028515	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS	Sample ID: WLCS-040621	Units: mg/L			Analysis Date: 06-Apr-2021 16:00					
Client ID:	Run ID: Balance1_381071	SeqNo: 6028516	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 1008 10.0 1000 0 101 85 - 115

DUP	Sample ID: HS21040100-01DUP	Units: mg/L			Analysis Date: 06-Apr-2021 16:00					
Client ID:	Run ID: Balance1_381071	SeqNo: 6028514	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 8892 10.0 8588 3.48 5

DUP	Sample ID: HS21031587-01DUP	Units: mg/L			Analysis Date: 06-Apr-2021 16:00					
Client ID:	Run ID: Balance1_381071	SeqNo: 6028497	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 56 10.0 54 3.64 5

The following samples were analyzed in this batch: HS21040023-04 HS21040023-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381136 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK		Sample ID: MBLK-	Units: mg/L			Analysis Date: 01-Apr-2021 22:11				
Client ID:		Run ID: ICS-Integrion_381136	SeqNo: 6029606	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								

LCS		Sample ID: LCS-	Units: mg/L			Analysis Date: 01-Apr-2021 22:29				
Client ID:		Run ID: ICS-Integrion_381136	SeqNo: 6029607	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.45	0.500	20	0	97.3	90 - 110				
Fluoride	4.252	0.100	4	0	106	90 - 110				
Nitrogen, Nitrate (As N)	3.83	0.100	4	0	95.7	90 - 110				

MS		Sample ID: HS21040023-05MS	Units: mg/L			Analysis Date: 01-Apr-2021 19:25				
Client ID: MW-7S		Run ID: ICS-Integrion_381136	SeqNo: 6031679	PrepDate:	DF: 2					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	39.81	1.00	20	20.54	96.3	80 - 120				
Fluoride	4.465	0.200	4	0.444	101	80 - 120				
Nitrogen, Nitrate (As N)	4.199	0.200	4	0	105	80 - 120				

MS		Sample ID: HS21040007-02MS	Units: mg/L			Analysis Date: 01-Apr-2021 23:25				
Client ID:		Run ID: ICS-Integrion_381136	SeqNo: 6029609	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	121	0.500	10	112.4	85.9	80 - 120				EO
Fluoride	2.244	0.100	2	0.089	108	80 - 120				
Nitrogen, Nitrate (As N)	4.407	0.100	2	2.447	98.0	80 - 120				

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381136 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD		Sample ID: HS21040023-05MSD		Units: mg/L		Analysis Date: 01-Apr-2021 19:44			
Client ID: MW-7S		Run ID: ICS-Integrion_381136		SeqNo: 6031680		PrepDate:		DF: 2	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	39.79	1.00	20	20.54	96.2	80 - 120	39.81	0.0653	20
Fluoride	4.816	0.200	4	0.444	109	80 - 120	4.465	7.56	20
Nitrogen, Nitrate (As N)	4.166	0.200	4	0	104	80 - 120	4.199	0.789	20

MSD		Sample ID: HS21040007-02MSD		Units: mg/L		Analysis Date: 01-Apr-2021 23:43			
Client ID:		Run ID: ICS-Integrion_381136		SeqNo: 6029610		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	120.6	0.500	10	112.4	82.4	80 - 120	121	0.287	20 EO
Fluoride	2.224	0.100	2	0.089	107	80 - 120	2.244	0.891	20
Nitrogen, Nitrate (As N)	4.423	0.100	2	2.447	98.8	80 - 120	4.407	0.367	20

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
HS21040023-05	HS21040023-06	HS21040023-07	

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381177 (0)	Instrument: WetChem_HS	Method: CHEMICAL OXYGEN DEMAND BY E410.4
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MBLK	Sample ID: MBLK-R381177	Units: mg/L	Analysis Date: 08-Apr-2021 11:30							
Client ID:	Run ID: WetChem_HS_381177	SeqNo: 6030898	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand U 15.0

LCS	Sample ID: LCS-R381177	Units: mg/L	Analysis Date: 08-Apr-2021 11:30							
Client ID:	Run ID: WetChem_HS_381177	SeqNo: 6030897	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 99 15.0 100 0 99.0 85 - 115

MS	Sample ID: HS21040223-02MS	Units: mg/L	Analysis Date: 08-Apr-2021 11:30							
Client ID:	Run ID: WetChem_HS_381177	SeqNo: 6030900	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 115 15.0 50 68 94.0 80 - 120

MSD	Sample ID: HS21040223-02MSD	Units: mg/L	Analysis Date: 08-Apr-2021 11:30							
Client ID:	Run ID: WetChem_HS_381177	SeqNo: 6030899	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 116 15.0 50 68 96.0 80 - 120 115 0.866 20

The following samples were analyzed in this batch:	HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
	HS21040023-05	HS21040023-06	HS21040023-07	HS21040023-08
	HS21040023-09			

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381204 (0) **Instrument:** WetChem_HS **Method:** SPECIFIC CONDUCTIVITY BY SM2510 B

MBLK Sample ID: **MBLK-R381204** Units: **umhos/cm @ 25.0 °C** Analysis Date: **08-Apr-2021 11:55**
 Client ID: Run ID: **WetChem_HS_381204** SeqNo: **6031636** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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Specific Conductivity U 5.00

LCS Sample ID: **LCS-R381204** Units: **umhos/cm @ 25.0 °C** Analysis Date: **08-Apr-2021 11:55**
 Client ID: Run ID: **WetChem_HS_381204** SeqNo: **6031635** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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Specific Conductivity 1416 5.00 1413 0 100 80 - 120

DUP Sample ID: **HS21040034-02DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **08-Apr-2021 11:55**
 Client ID: Run ID: **WetChem_HS_381204** SeqNo: **6031637** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
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Specific Conductivity 1235 5.00 1242 0.565 20

The following samples were analyzed in this batch: HS21040023-01 HS21040023-02 HS21040023-03 HS21040023-04
 HS21040023-05 HS21040023-06 HS21040023-07

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381207 (0)	Instrument: Balance1	Method: TOTAL DISSOLVED SOLIDS BY SM2540C
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MBLK	Sample ID: WBLK-040721	Units: mg/L	Analysis Date: 07-Apr-2021 17:00							
Client ID:	Run ID: Balance1_381207	SeqNo: 6031710	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS	Sample ID: WLCS-040721	Units: mg/L	Analysis Date: 07-Apr-2021 17:00							
Client ID:	Run ID: Balance1_381207	SeqNo: 6031711	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 998 10.0 1000 0 99.8 85 - 115

DUP	Sample ID: HS21040025-01DUP	Units: mg/L	Analysis Date: 07-Apr-2021 17:00							
Client ID:	Run ID: Balance1_381207	SeqNo: 6031709	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 896 10.0 902 0.667 5

DUP	Sample ID: HS21031602-06DUP	Units: mg/L	Analysis Date: 07-Apr-2021 17:00							
Client ID:	Run ID: Balance1_381207	SeqNo: 6031691	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Total Dissolved Solids (Residue, Filterable) 3510 10.0 3524 0.398 5

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-06
HS21040023-07	HS21040023-10	HS21040023-11	HS21040023-12
HS21040023-13	HS21040023-14	HS21040023-15	HS21040023-16

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381211 (0)	Instrument: ICS-Integrion	Method: ANIONS BY E300.0
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MBLK	Sample ID: MBLK-	Units: mg/L	Analysis Date: 02-Apr-2021 21:12							
Client ID:	Run ID: ICS-Integrion_381211	SeqNo: 6031961	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								

LCS	Sample ID: LCS-	Units: mg/L	Analysis Date: 02-Apr-2021 21:31							
Client ID:	Run ID: ICS-Integrion_381211	SeqNo: 6031962	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	18.98	0.500	20	0	94.9	90 - 110				
Fluoride	4.178	0.100	4	0	104	90 - 110				
Nitrogen, Nitrate (As N)	3.742	0.100	4	0	93.6	90 - 110				

MS	Sample ID: HS21040079-01MS	Units: mg/L	Analysis Date: 02-Apr-2021 19:22							
Client ID:	Run ID: ICS-Integrion_381211	SeqNo: 6031956	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	16.08	0.500	10	5.591	105	80 - 120				
Fluoride	2.154	0.100	2	0.0571	105	80 - 120				
Nitrogen, Nitrate (As N)	2.609	0.100	2	0.6213	99.4	80 - 120				

MS	Sample ID: HS21040023-10MS	Units: mg/L	Analysis Date: 02-Apr-2021 17:13							
Client ID: MW-17	Run ID: ICS-Integrion_381211	SeqNo: 6031949	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	13.77	0.500	10	4.061	97.1	80 - 120				
Fluoride	2.464	0.100	2	0.4125	103	80 - 120				
Nitrogen, Nitrate (As N)	1.906	0.100	2	0	95.3	80 - 120				

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381211 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD		Sample ID: HS21040079-01MSD		Units: mg/L		Analysis Date: 02-Apr-2021 19:40			
Client ID:		Run ID: ICS-Integrion_381211		SeqNo: 6031957		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	15.65	0.500	10	5.591	101	80 - 120	16.08	2.74	20
Fluoride	2.252	0.100	2	0.0571	110	80 - 120	2.154	4.49	20
Nitrogen, Nitrate (As N)	2.551	0.100	2	0.6213	96.5	80 - 120	2.609	2.23	20

MSD		Sample ID: HS21040023-10MSD		Units: mg/L		Analysis Date: 02-Apr-2021 17:32			
Client ID: MW-17		Run ID: ICS-Integrion_381211		SeqNo: 6031950		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	14.18	0.500	10	4.061	101	80 - 120	13.77	2.93	20
Fluoride	2.428	0.100	2	0.4125	101	80 - 120	2.464	1.49	20
Nitrogen, Nitrate (As N)	1.85	0.100	2	0	92.5	80 - 120	1.906	2.95	20

The following samples were analyzed in this batch:

HS21040023-08	HS21040023-09	HS21040023-10	HS21040023-11
HS21040023-12	HS21040023-13	HS21040023-14	HS21040023-15
HS21040023-16			

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381229 (0)	Instrument: WetChem_HS	Method: ALKALINITY BY SM2320B
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MBLK	Sample ID: MBLK-R381229	Units: mg/L	Analysis Date: 08-Apr-2021 17:45							
Client ID:	Run ID: WetChem_HS_381229	SeqNo: 6032389	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)	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-R381229	Units: mg/L	Analysis Date: 08-Apr-2021 17:45							
Client ID:	Run ID: WetChem_HS_381229	SeqNo: 6032388	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)	917.4	5.00	1000	0	91.7	85 - 115				
Alkalinity, Total (As CaCO3)	981.9	5.00	1000	0	98.2	85 - 115				

LCSD	Sample ID: LCSD-R381229	Units: mg/L	Analysis Date: 08-Apr-2021 17:45							
Client ID:	Run ID: WetChem_HS_381229	SeqNo: 6032387	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)	924.1	5.00	1000	0	92.4	85 - 115	917.4	0.737	20	
Alkalinity, Total (As CaCO3)	978.5	5.00	1000	0	97.8	85 - 115	981.9	0.347	20	

DUP	Sample ID: HS21040351-02DUP	Units: mg/L	Analysis Date: 08-Apr-2021 17:45							
Client ID:	Run ID: WetChem_HS_381229	SeqNo: 6032390	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)	112.1	5.00					115.5	2.99	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	112.1	5.00					115.5	2.99	20	

The following samples were analyzed in this batch: HS21040023-04 HS21040023-05

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381232 (0) **Instrument:** WetChem_HS **Method:** CHEMICAL OXYGEN DEMAND BY E410.4

MBLK	Sample ID: MBLK-R381232	Units: mg/L		Analysis Date: 08-Apr-2021 18:00						
Client ID:	Run ID: WetChem_HS_381232	SeqNo: 6032440	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand U 15.0

LCS	Sample ID: LCS-R381232	Units: mg/L		Analysis Date: 08-Apr-2021 18:00						
Client ID:	Run ID: WetChem_HS_381232	SeqNo: 6032439	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 100 15.0 100 0 100 85 - 115

MS	Sample ID: HS21040023-11MS	Units: mg/L		Analysis Date: 08-Apr-2021 18:00						
Client ID: MW-18	Run ID: WetChem_HS_381232	SeqNo: 6032442	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 52 15.0 50 4 96.0 80 - 120

MSD	Sample ID: HS21040023-11MSD	Units: mg/L		Analysis Date: 08-Apr-2021 18:00						
Client ID: MW-18	Run ID: WetChem_HS_381232	SeqNo: 6032441	PrepDate:	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Chemical Oxygen Demand 52 15.0 50 4 96.0 80 - 120 52 0 20

The following samples were analyzed in this batch:

HS21040023-10	HS21040023-11	HS21040023-12	HS21040023-13
HS21040023-14	HS21040023-15	HS21040023-16	

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381248 (0) **Instrument:** WetChem_HS **Method:** SPECIFIC CONDUCTIVITY BY SM2510 B

MBLK Sample ID: **MBLK-R381248** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Apr-2021 10:15**
 Client ID: Run ID: **WetChem_HS_381248** SeqNo: **6033096** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Specific Conductivity U 5.00

LCS Sample ID: **LCS-R381248** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Apr-2021 10:15**
 Client ID: Run ID: **WetChem_HS_381248** SeqNo: **6033095** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Specific Conductivity 1407 5.00 1413 0 99.6 80 - 120

DUP Sample ID: **HS21040369-01DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Apr-2021 10:15**
 Client ID: Run ID: **WetChem_HS_381248** SeqNo: **6033097** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Specific Conductivity 671 5.00 685 2.06 20

The following samples were analyzed in this batch: HS21040023-08 HS21040023-09 HS21040023-10 HS21040023-11
 HS21040023-12 HS21040023-13 HS21040023-14 HS21040023-15
 HS21040023-16

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381287 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C

MBLK Sample ID: **WBLK-040821** Units: **mg/L** Analysis Date: **08-Apr-2021 17:00**
 Client ID: Run ID: **Balance1_381287** SeqNo: **6033836** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) U 10.0

LCS Sample ID: **WLCS-040821** Units: **mg/L** Analysis Date: **08-Apr-2021 17:00**
 Client ID: Run ID: **Balance1_381287** SeqNo: **6033837** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 1028 10.0 1000 0 103 85 - 115

DUP Sample ID: **HS21040091-09DUP** Units: **mg/L** Analysis Date: **08-Apr-2021 17:00**
 Client ID: Run ID: **Balance1_381287** SeqNo: **6033824** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 17480 10.0 17470 0.0572 5

DUP Sample ID: **HS21040008-01DUP** Units: **mg/L** Analysis Date: **08-Apr-2021 17:00**
 Client ID: Run ID: **Balance1_381287** SeqNo: **6033794** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

Total Dissolved Solids (Residue, Filterable) 8560 10.0 8440 1.41 5

The following samples were analyzed in this batch: HS21040023-08 HS21040023-09

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381318 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE B

MBLK	Sample ID: MBLK-R381318	Units: mg/L			Analysis Date: 08-Apr-2021 13:00				
Client ID:	Run ID: UV-2450_381318	SeqNo: 6034564		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron U 0.0500 80 - 120

LCS	Sample ID: LCS-R381318	Units: mg/L			Analysis Date: 08-Apr-2021 13:00				
Client ID:	Run ID: UV-2450_381318	SeqNo: 6034563		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron 0.227 0.0500 0.25 0 90.8 80 - 120

MS	Sample ID: HS21040270-01MS	Units: mg/L			Analysis Date: 08-Apr-2021 13:13				
Client ID:	Run ID: UV-2450_381318	SeqNo: 6034565		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron 0.248 0.0500 0.25 0.007 96.4 75 - 125

MSD	Sample ID: HS21040270-01MSD	Units: mg/L			Analysis Date: 08-Apr-2021 13:13				
Client ID:	Run ID: UV-2450_381318	SeqNo: 6034580		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron 0.254 0.0500 0.25 0.007 98.8 75 - 125 0.248 2.39 20

The following samples were analyzed in this batch: HS21040023-17

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381320 (0)		Instrument: UV-2450		Method: FERROUS IRON BY SM3500 FE D (DISSOLVED)					
MBLK	Sample ID: MBLK-R381320	Units: mg/L		Analysis Date: 08-Apr-2021 17:00					
Client ID:	Run ID: UV-2450_381320	SeqNo: 6034595		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved U 0.0500

LCS		Sample ID: LCS-R381320		Units: mg/L		Analysis Date: 08-Apr-2021 17:00			
Client ID:	Run ID: UV-2450_381320	SeqNo: 6034594		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.227 0.0500 0.25 0 90.8 80 - 120

MS		Sample ID: HS21040023-17MS		Units: mg/L		Analysis Date: 08-Apr-2021 17:00			
Client ID: MW-17	Run ID: UV-2450_381320	SeqNo: 6034597		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.241 0.0500 0.25 -0.016 103 80 - 120

MSD		Sample ID: HS21040023-17MSD		Units: mg/L		Analysis Date: 08-Apr-2021 17:01			
Client ID: MW-17	Run ID: UV-2450_381320	SeqNo: 6034596		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD Limit Qual	

Ferrous Iron, Dissolved 0.237 0.0500 0.25 0 94.8 80 - 120 0.241 1.67 20

The following samples were analyzed in this batch: HS21040023-17

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381322 (0)	Instrument: WetChem_HS	Method: SULFIDE BY SM4500 S2-F
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MBLK	Sample ID: MBLK-R381322	Units: mg/L	Analysis Date: 06-Apr-2021 14:30							
Client ID:	Run ID: WetChem_HS_381322	SeqNo: 6034621	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 1.00

LCS	Sample ID: LCS-R381322	Units: mg/L	Analysis Date: 06-Apr-2021 14:30							
Client ID:	Run ID: WetChem_HS_381322	SeqNo: 6034620	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.28 1.00 25 0 89.1 85 - 115

LCSD	Sample ID: LCSD-R381322	Units: mg/L	Analysis Date: 06-Apr-2021 14:30							
Client ID:	Run ID: WetChem_HS_381322	SeqNo: 6034619	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 22.08 1.00 25 0 88.3 85 - 115 22.28 0.902 20

MS	Sample ID: HS21040023-13MS	Units: mg/L	Analysis Date: 06-Apr-2021 14:30							
Client ID: DUP 3	Run ID: WetChem_HS_381322	SeqNo: 6034622	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 21.68 1.00 25 -1.12 91.2 80 - 120

The following samples were analyzed in this batch:	HS21040023-01	HS21040023-02	HS21040023-04	HS21040023-05
	HS21040023-08	HS21040023-09	HS21040023-11	HS21040023-12
	HS21040023-13			

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381355 (0)	Instrument: ManTech01	Method: ALKALINITY BY SM2320B
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MBLK	Sample ID: WBLKW1-210411	Units: mg/L	Analysis Date: 11-Apr-2021 17:01							
Client ID:	Run ID: ManTech01_381355	SeqNo: 6035312	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)	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: LCS1-210411	Units: mg/L	Analysis Date: 11-Apr-2021 17:09							
Client ID:	Run ID: ManTech01_381355	SeqNo: 6035313	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)	921.6	5.00	1000	0	92.2	85 - 115				
Alkalinity, Total (As CaCO3)	939.4	5.00	1000	0	93.9	85 - 115				

LCSD	Sample ID: LCSD1-210411	Units: mg/L	Analysis Date: 11-Apr-2021 17:17							
Client ID:	Run ID: ManTech01_381355	SeqNo: 6035314	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)	915.4	5.00	1000	0	91.5	85 - 115	921.6	0.683	20	
Alkalinity, Total (As CaCO3)	935.1	5.00	1000	0	93.5	85 - 115	939.4	0.453	20	

DUP	Sample ID: HS21040023-01DUP	Units: mg/L	Analysis Date: 11-Apr-2021 17:31							
Client ID: MW-15A	Run ID: ManTech01_381355	SeqNo: 6035316	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)	196.8	5.00					195.9	0.479	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Hydroxide (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	196.8	5.00					195.9	0.479	20	

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-08	HS21040023-09
HS21040023-10	HS21040023-11	HS21040023-12	HS21040023-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381519 (0)	Instrument: WetChem_HS	Method: SULFIDE BY SM4500 S2-F
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MBLK	Sample ID: MBLK-R381519	Units: mg/L	Analysis Date: 13-Apr-2021 16:30							
Client ID:	Run ID: WetChem_HS_381519	SeqNo: 6039228	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide U 1.00

LCS	Sample ID: LCS-R381519	Units: mg/L	Analysis Date: 13-Apr-2021 16:30							
Client ID:	Run ID: WetChem_HS_381519	SeqNo: 6039227	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 25.6 1.00 25 0 102 85 - 115

LCSD	Sample ID: LCSD-R381519	Units: mg/L	Analysis Date: 13-Apr-2021 16:30							
Client ID:	Run ID: WetChem_HS_381519	SeqNo: 6039226	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 25.4 1.00 25 0 102 85 - 115 25.6 0.784 20

MS	Sample ID: HS21040551-01MS	Units: mg/L	Analysis Date: 13-Apr-2021 16:30							
Client ID:	Run ID: WetChem_HS_381519	SeqNo: 6039229	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfide 26.4 1.00 25 0 106 80 - 120

The following samples were analyzed in this batch: HS21040023-17

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381590 (0) **Instrument:** WetChem_HS **Method:** PH BY SM4500H+ B

DUP Sample ID: **HS21040023-12DUP** Units: **pH Units** Analysis Date: **14-Apr-2021 16:00**
Client ID: **MW-19S** Run ID: **WetChem_HS_381590** SeqNo: **6040965** PrepDate: DF: **1**
Analyte **Result** **PQL** **SPK Val** **SPK Ref Value** **%REC** **Control Limit** **RPD Ref Value** **%RPD** **RPD Limit** **Qual**

pH	10.85	0.100					10.82	0.277	10
Temp Deg C @pH	20.2	0					20.1	0.496	10

The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
HS21040023-05	HS21040023-06	HS21040023-07	HS21040023-08
HS21040023-09	HS21040023-10	HS21040023-11	HS21040023-12
HS21040023-13	HS21040023-14	HS21040023-15	HS21040023-16

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R381678 (0)		Instrument: ICS-Integrion		Method: ANIONS BY E300.0						
MBLK	Sample ID: MBLK-	Units: mg/L			Analysis Date: 03-Apr-2021 11:41					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043406	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	U	0.500								
LCS	Sample ID: LCS-	Units: mg/L			Analysis Date: 03-Apr-2021 11:59					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043407	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	19.33	0.500	20	0	96.6	90 - 110				
MS	Sample ID: HS21040074-05MS	Units: mg/L			Analysis Date: 03-Apr-2021 15:41					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043416	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	21.32	0.500	10	12.05	92.7	80 - 120				
MS	Sample ID: HS21040074-02MS	Units: mg/L			Analysis Date: 03-Apr-2021 16:54					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043420	PrepDate:	DF: 20					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	1156	10.0	200	954.4	101	80 - 120			O	
MSD	Sample ID: HS21040074-05MSD	Units: mg/L			Analysis Date: 03-Apr-2021 15:59					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043417	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	20.91	0.500	10	12.05	88.6	80 - 120	21.32	1.93	20	
MSD	Sample ID: HS21040074-02MSD	Units: mg/L			Analysis Date: 03-Apr-2021 17:13					
Client ID:		Run ID: ICS-Integrion_381678	SeqNo: 6043421	PrepDate:	DF: 20					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Sulfate	1136	10.0	200	954.4	90.7	80 - 120	1156	1.74	20 O	

The following samples were analyzed in this batch: HS21040023-10 HS21040023-11 HS21040023-14 HS21040023-15
 HS21040023-16

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R382198 (0)		Instrument: ICS-Integrion		Method: ANIONS BY E300.0						
MBLK	Sample ID: MBLK-	Units: mg/L			Analysis Date: 22-Apr-2021 00:58					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056542	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	U	0.500								
LCS	Sample ID: LCS-	Units: mg/L			Analysis Date: 22-Apr-2021 01:18					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056543	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.03	0.500	20	0	95.2	90 - 110				
LCSD	Sample ID: LCSD-	Units: mg/L			Analysis Date: 22-Apr-2021 01:36					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056544	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	20.07	0.500	20	0	100	90 - 110	19.03	5.31	20	
MS	Sample ID: HS21041152-01MS	Units: mg/L			Analysis Date: 22-Apr-2021 13:20					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056619	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	90.88	0.500	10	82.38	85.0	80 - 120				O
MS	Sample ID: HS21041095-01MS	Units: mg/L			Analysis Date: 21-Apr-2021 20:27					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056593	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	279.8	0.500	10	286.4	-65.9	80 - 120				SEO
MSD	Sample ID: HS21041152-01MSD	Units: mg/L			Analysis Date: 22-Apr-2021 13:38					
Client ID:		Run ID: ICS-Integrion_382198	SeqNo: 6056620	PrepDate:	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	91.35	0.500	10	82.38	89.8	80 - 120	90.88	0.52	20	O

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R382198 (0)		Instrument: ICS-Integrion		Method: ANIONS BY E300.0					
MSD	Sample ID: HS21041095-01MSD	Units: mg/L			Analysis Date: 21-Apr-2021 20:47				
Client ID:	Run ID: ICS-Integrion_382198	SeqNo: 6056594		PrepDate:			DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Sulfate	279.6	0.500	10	286.4	-67.9	80 - 120	279.8	0.0713	20	SEO
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The following samples were analyzed in this batch:

HS21040023-01	HS21040023-02	HS21040023-03	HS21040023-04
HS21040023-05	HS21040023-06	HS21040023-07	HS21040023-08
HS21040023-09			

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

QC BATCH REPORT

Batch ID: R382205 (0)	Instrument: ICS-Integrion	Method: ANIONS BY E300.0
--------------------------------	----------------------------------	---------------------------------

MBLK	Sample ID: MBLK-	Units: mg/L	Analysis Date: 22-Apr-2021 00:19							
Client ID:	Run ID: ICS-Integrion_382205	SeqNo: 6056681	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfate U 0.500

LCS	Sample ID: LCS-	Units: mg/L	Analysis Date: 22-Apr-2021 00:39							
Client ID:	Run ID: ICS-Integrion_382205	SeqNo: 6056682	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfate 19.1 0.500 20 0 95.5 90 - 110

MS	Sample ID: HS21040771-01MS	Units: mg/L	Analysis Date: 22-Apr-2021 10:58							
Client ID:	Run ID: ICS-Integrion_382205	SeqNo: 6056690	PrepDate: DF: 10							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfate 282.6 5.00 100 190.7 91.9 80 - 120

MSD	Sample ID: HS21040771-01MSD	Units: mg/L	Analysis Date: 22-Apr-2021 12:15							
Client ID:	Run ID: ICS-Integrion_382205	SeqNo: 6056693	PrepDate: DF: 10							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual

Sulfate 281.8 5.00 100 190.7 91.1 80 - 120 282.6 0.279 20

The following samples were analyzed in this batch: HS21040023-12 HS21040023-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS21040023

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	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 Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS21040023

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Sub
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Sub
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-01	MW-15A	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-06	MW-3	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-06	MW-3	Login	4/1/2021 1:55:19 PM	PMG	Disposed
HS21040023-06	MW-3	Login	4/1/2021 1:55:19 PM	PMG	Sub
HS21040023-06	MW-3	Login	4/1/2021 1:55:19 PM	PMG	Sub
HS21040023-06	MW-3	Login	4/1/2021 1:55:19 PM	PMG	Disposed

Sample Receipt Checklist

Work Order ID: HS21040023

Date/Time Received: 01-Apr-2021 11:50

Client Name: Enviro Clean Services-Tulsa

Received by: Pablo Martinez

Completed By: /S/ Paresh M. Giga	01-Apr-2021 14:05	Reviewed by: /S/ RJ Modashia	01-Apr-2021 15:10
eSignature	Date/Time	eSignature	Date/Time

Matrices: **Water**

Carrier name: **FedEx**

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact 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 COC IDs:None
- 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 No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s):	0.6C; 0.9C; 0.7C U/C	IR31
Cooler(s)/Kit(s):	47163/47164/47165	
Date/Time sample(s) sent to storage:	4/1/2021 14:25	

- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No N/A
- pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS21040023

Date/Time Received: 01-Apr-2021 11:50

Client Name: Enviro Clean Services-Tulsa

Received by: Pablo Martinez

Completed By: /S/ Jared R. Makan 02-Apr-2021 12:39 Reviewed by: /S/ RJ Modashia 05-Apr-2021 10:55
eSignature Date/Time eSignature Date/Time

Matrices: Water Carrier name: FedEx Priority Overnight

- Shipping container/cooler in good condition? Yes [checked] No [] Not Present []
Custody seals intact on shipping container/cooler? Yes [checked] No [] Not Present []
Custody seals intact on sample bottles? Yes [] No [] Not Present [checked]
VOA/TX1005/TX1006 Solids in hermetically sealed vials? Yes [] No [] Not Present [checked]
Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Samplers name present on COC? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Samples in proper container/bottle? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []
All samples received within holding time? Yes [checked] No []
Container/Temp Blank temperature in compliance? Yes [checked] No []

Temperature(s)/Thermometer(s): 0.7°C, 0.8°C, 0.5°C, 0.9°C UC/C IR31
Cooler(s)/Kit(s): 47122, 47025, 25518, 46226
Date/Time sample(s) sent to storage: 04/02/2021 12:40

- Water - VOA vials have zero headspace? Yes [] No [] No VOA vials submitted [checked]
Water - pH acceptable upon receipt? Yes [checked] No [] N/A []
pH adjusted? Yes [] No [checked] N/A []

pH adjusted by:

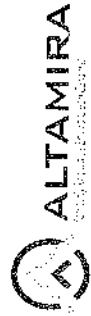
Login Notes: MW-17 does not match the COC:
Bottle count on COC = 8
Received 5 containers
Sample logged in per containers received.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:



LABORATORY / LAB PW:
ALS / RJ Modesto
 10450 Stanchell Road
 Suit 210
 Houston, TX 77099

SHIPMENT METHOD:
Fed Ex

PROJECT NUMBER:

WFEE 160021/1001

CLIENT CONTACT:
Heather Tibbony
Bert Swick

CLIENT ADDRESS:
3700 Robinson Street
Suit 200, Norman, OK 73072

SPECIAL INSTRUCTIONS:
 * App # : B, Ca, Cl, F, pH, SO4, TDS
 * App B : Sb, As, Ba, Be, Cd, Cr, Cu, F, Pb, U, Hg, Mn, Se, Zn,
 Rad 241c / 241B, Gamma

CHAIN OF CUSTODY RECORD

PROJECT NAME:

WFEC / CCR Program, Landfill Wells

CLIENT EMAIL:
Heather.Tibbony@Altamira-us.com

CLIENT PHONE:
405-618-2021

TAT:
Standard

PARAMETERS:

NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS	DATE	TIME	MATRIX	PRES.
1	X	Asbestos (short fiber)	3/2/21	1155	W	12,319
2	X	Asbestos (long fiber)	3/2/21	1050	W	12,319
3	X	Asbestos (total)	3/3/21	943	W	2,319
4	X	Spec Conductivity	3/30/21	1655	W	12,319
5	X	CO2	3/30/21	1655	W	12,319
6	X	CO2 (H2O)	3/31/21	942	W	2,319
7	X	CO2 (H2O)	3/31/21	1113	W	2,319
8						
9						
10						
11						
12						
13						
14						
15						

HS21040023



SAMPLER(S) NAME: **Padua, Wbly, Wb, Brad, Landfill**
 RELINQUISHED BY: **[Signature]**
 DATE: 3/2/21
 TIME: 1400

Total # of Containers: **1**
 DATE: 3/1/21
 TIME: 1150

SAMPLER(S) SIGNATURE: **[Signature]**
 LOGGED BY: **[Signature]**
 DATE: 3/1/21
 TIME: 1400

DATE: 3/1/21
 TIME: 1400
 COOLER TEMP:

PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NAOH 5-NH2S2O3 6-NaHSO4 7-4 Degrees C 8-9035 9-Other
 POINT OF ORIGIN: Norman Oklahoma City Tulsa Yukon Altamira-US LLC

ALTIMIRA-US LLC
 47163 066
 07164 047
 17165 076
 18166 086

CHAIN OF CUSTODY RECORD



PROJECT NUMBER: **WFEE 160021 / 1001**

PROJECT NAME: **WFEC/CCR Landfill wells**

CLIENT CONTACT: **Heather T. Effany / Bert Smith**

CLIENT EMAIL: **labdata@altamira-us.com**

CLIENT PHONE: **405-618-2021**

COC: **2** of **5**

LABORATORY / LAB PM: **ALS RS**

LAB ADDRESS:

SPECIAL INSTRUCTIONS: **App A - B, Ca, Cl, F, pH, SO₄, TDS, Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, App B - Hg, Mo, Se, Th, Rad 226/228 Combs**

TAT: **Standard**

SHIPMENT METHOD: **FEDEx**

TRACKING:

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS														HOLD		
								App A	App B	Monitors as N	CO ₂	Specific Conductivity	T _{Fe} Total	T _{Fe} Ferric + Ferrous	Dissolved Ferric + Fe	Dissolved Fe, Mo, Fe, Ni, Fe	K, Mg, Na	Sulfide	H ₂ O ₂ S ₂ O ₃ , Hydroxide					
1	MW-53	4/1/21	9:23	W	1,234.9	8	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	MW-16	4/1/21	1050			8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	MW-17	3/31/21	1820			8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	MW-18		1829			8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	MW-19S		1643			8		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	Dup 3		1643			8	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	MW-20		1700		23.9	5	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	MW-20 Matrix 1		1700			5		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	MW-21 Matrix Dup 1		1700			5		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
10																								
11																								
12																								
13																								
14																								
15																								

HS21040023

Altamira
WFEC/CCR Program, Landfill Wells



SAMPLER(S) NAME: **Bert Smith / Heather Effany** DATE: **4/1/21** TIME: **1400**

RELINQUISHED BY: **[Signature]** DATE: **4/1/21** TIME: **1700**

RECEIVED BY: **[Signature]** DATE: **4/2/21** TIME: **10:30**

LOGGED BY: **[Signature]** DATE: **4/2/21** TIME: **10:30**

COOLER TEMP:

PRESERVATION KEY: 1-HCL 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-4 Degrees C 8-9035 9-Other:

POINT OF ORIGIN: Norman Oklahoma City Tulsa Yukon Midland Other:

ALTAMIRA-US, LLC 47127 0.90 47025 0.80 (RS)
25518 0.8 46226 0.96 CFO

CHAIN OF CUSTODY RECORD



PROJECT NUMBER: WFEE 16002/1001

PROJECT NAME: WFEC / CCR Program ^{Landfill}
 COC: 1 of 1

CLIENT CONTACT: Heather T. Gray
Bert Smith

CLIENT EMAIL: labdata@altamira-us.com

CLIENT PHONE: 405-618-2021

LABORATORY / LAB PM: ALS

CLIENT ADDRESS: 525 Central Park Dr ste 500
OKC, OK 73105

TAT: Standard

LAB ADDRESS: 10450 Stanchiff Rd
Ste 210
Houston TX 77099

SPECIAL INSTRUCTIONS:

SHIPMENT METHOD: FEDGX

TRACKING: 9473 0841 1754

NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS					HOLD
		Ferrous Iron	Sulfide	Dissolved Mn & Fe	Ferroc Fe	Dissolved Fe - Ferroc + Ferrous	
3	Y	X	X	X	X	X	
1	Y						

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.
1	<u>MW-17</u>	<u>4/6/21</u>	<u>1720</u>	<u>W</u>	<u>1,2,9</u>
2	<u>Temp Blank</u>			<u>W</u>	<u>1</u>
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

HS21040023

Altamira
 WFEC/ CCR Program, Landfill Wells



SAMPLER(S) NAME: Pasha Khlystov

DATE: 4/6/21
 TIME: 1600

SAMPLER(S) SIGNATURE: Pasha Khlystov

DATE: 4/6/21
 TIME: 1600

RELINQUISHED BY: Pasha Khlystov

RECEIVED BY: Brad Hancock

LOGGED BY: S. [unclear]


DATE: 4/2/21
 TIME: 10:20
 COOLER TEMP: 1.4°C


PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7- 4 Degrees C 8-9035 9-Other:


POINT OF ORIGIN: Norman Oklahoma City Tulsa Yukon Midland Other:


ALTAMIRA-US, LLC


Cooler 44476
1931 CCR


 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

 ALS 10450 Stancilff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	Date: <u>3/21/21</u> Name: _____ Company: _____	CUSTODY SEAL Time: <u>1400</u>		Seal Broken By: _____

FedEx.

TRK# 0221 9473 0841 3106

THU - 01 APR AA
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US
 IAH



TRK# 0221 9473 0841 3080

THU - 01 APR AA
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US
 IAH



TRK# 0221 9473 0841 3070

THU - 01 APR AA
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US
 IAH



ALS
 10450 Stancliff Rd., Suite
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

210	CUSTODY SEAL		Seal Broken By:
	Date: 4/1/21	Time: 1400	JM
	Name:		Date: 4/2/21
Company:			

ALS
 10450
 Houston
 Tel. +1
 Fax. +

Standcliff Rd., Suite 210 Houston, Texas 77099 281 530 5656 1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: 4/1/21	Time: 1400	JM
	Name:		Date: 4/2/21
Company:			

FedEx
 TRK# 9473 0841 1765
 0221

FRI - 02 APR AA
 PRIORITY OVERNIGHT

FedEx
 TRK# 9473 0841 3069
 0221

FRI - 02 APR AA
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX US
 IAH

AB SGRA

77099
 TX-US
 IAH



1765
 04/02
 10:30
 RT 917
 BZ B03

ALS
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

Date: 4/1/21	CUSTODY SEAL		Seal Broken By:
	Time: 1400		JM
	Name:		Date: 4/2/21
Company:			

ALS
 10450 Stancliff Rd., Suite 210
 Houston, Texas 77099
 Tel. +1 281 530 5656
 Fax. +1 281 530 5887

Date: 4/1/21	STODY SEAL		Seal Broken By:
	Time: 1400		JM
	Name:		Date: 4/2/21
Company:			

ENVIRO CLEAN
SERVICES, LLC

(918) 794-7828
44986

Signature

[Handwritten Signature] sm
04/08/21

Date

4/7/21

44986 SR 0 = 2021

44986
ENVIRO CLEAN
SERVICES, LLC

(918) 794-7828

Signature

[Handwritten Signature] sm
04/08/21

Date

4/7/21

**Must Deliver Next Business Day
Time and Temperature Sensitive!**



44986

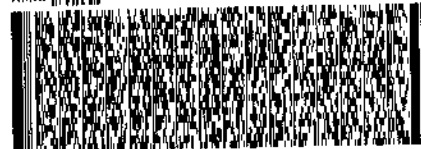
ORIGIN ID: SGRA (918) 794-7828
HEATHER TIFFANY
AL TARRA
2670 TRENTON ROAD
NORMAN, OK 73069
UNITED STATES US

SHIP DATE: 15MAR21
ACTWGT: 1.00 LB RAN
CAD: 0221247/CAFE3409
DIMS: 26x14x14 IN

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099

(281) 630-5668
REF: 8077183 - WFEC - MNA WELLS - RJ

RMA: ||| ||| |||



FedEx
Express



FedEx
TRK# 9473 0841 1754

THU - 08 APR 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH





Friday, April 30, 2021

RJ Modashia
ALS Environmental
10450 Stancliff Rd, Suite 210
Houston, TX 77099

Re: ALS Workorder: 2104104
Project Name:
Project Number: HS21040023

Dear Mr. Modashia:

Nine water samples were received from ALS Environmental, on 4/8/2021. The samples were scheduled for the following analyses:

Radium-226

Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Julie Ellingson
Project Manager

Accreditations: ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
California (CA)	2926
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO010992018-1
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	TN02976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

40 CFR Part 136: All analyses for Clean Water Act samples are analyzed using the 40 CFR Part 136 specified method and include all the QC requirements.



2104104

Radium-228:

The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac , which is the ingrown progeny of ^{228}Ra , according to the current revision of EPA 904.0.

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to the current revision of EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2104104

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS21040023

Client PO Number: 10-15872

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-5S	2104104-1		WATER	01-Apr-21	9:23
MW-16	2104104-2		WATER	01-Apr-21	10:50
MW-17	2104104-3		WATER	31-Mar-21	18:20
MW-18	2104104-4		WATER	31-Mar-21	18:29
MW-19S	2104104-5		WATER	31-Mar-21	16:43
DUP 3	2104104-6		WATER	31-Mar-21	16:43
MW-20	2104104-7		WATER	31-Mar-21	17:00
MW-20 Matrix 1	2104104-8		WATER	31-Mar-21	17:00
MW-21 Matrix Dup 1	2104104-9		WATER	31-Mar-21	17:00



2104104

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: Oklahoma

COC ID: 15872

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: RJ Modashia
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: RJ.Modashia@alsglobal.com
Alternate Contact: Jumoke M. Lawal
Email: jumoke.lawal@alsglobal.com

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS21040023
TSR: Sonia West

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. HS21040023-08	MW-5S	Water	01 Apr 2021 09:23
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021
2. HS21040023-09	MW-16	Water	01 Apr 2021 10:50
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021
3. HS21040023-10	MW-17	Water	31 Mar 2021 18:20
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021
4. HS21040023-11	MW-18	Water	31 Mar 2021 18:29
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021
5. HS21040023-12	MW-19S	Water	31 Mar 2021 16:43
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021
6. HS21040023-13	DUP 3	Water	31 Mar 2021 16:43
	Report as combined 226 & 228		22 Apr 2021
	Report as combined 226 & 228		22 Apr 2021

RIGHT SOLUTIONS | RIGHT PARTNER



Subcontract Chain of Custody



SAMPLING STATE: Oklahoma

COC ID: 15872

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
7.	HS21040023-14	MW-20	Water	31 Mar 2021 17:00
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
8.	HS21040023-15	MW-20 Matrix 1	Water	31 Mar 2021 17:00
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
9.	HS21040023-16	MW-21 Matrix Dup 1	Water	31 Mar 2021 17:00
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: 
 Received By: 
 Cooler ID(s): _____

Date/Time: 4/15/2021 1800
 Date/Time: 4/2/21 0920
 Temperature(s): _____



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Houston

Workorder No: 2104104

Project Manager: JME

Initials: TEM

Date: 4/9/21

				N/A	YES	NO
1. Are airbills / shipping documents present and/or removable? Tracking number: 9473 0842 1137, 9473 0842 1148, 9473 0842 1159					x	
2. Are custody seals on shipping containers intact?					x	
3. Are custody seals on sample containers intact?				x		
4. Is there a COC (chain-of-custody) present?					x	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)					x	
6. Are short-hold samples present?						x
7. Are all samples within holding times for the requested analyses?					x	
8. Were all sample containers received intact? (not broken or leaking)					x	
9. Is there sufficient sample for the requested analyses?					x	
10. Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)					x	
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)					x	
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)				x		
13. Were the samples shipped on ice?						x
14. Were cooler temperatures measured at 0.1-6.0°C?				IR gun used*: #5		x
Cooler #: <u>1</u> <u>2</u> <u>3</u>						
Temperature (°C): <u>amb</u> <u>amb</u> <u>amb</u>						
# of custody seals on cooler: <u>2</u> <u>2</u> <u>2</u>						
External µR/hr reading: <u>9</u> <u>8</u> <u>11</u>						
Background µR/hr reading: <u>11</u>						
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES						

* Please provide details here for NO responses to boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

Cooler 1 and 2 were received on 4/6/21. Cooler 3 was received 4/8/21

Were unpreserved bottles pH checked? N/A

All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? YES Contact: RJ Modashia Date/Time: 4/6/21 pm

Project Manager Signature / Date: *Julie Ellinger* 4/9/21

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-5S

Lab ID: 2104104-1

Legal Location:

Matrix: WATER

Collection Date: 4/1/2021 09:23

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021	PrepBy: TRB
Ra-226	ND (+/- 0.19)	U	0.28	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	99.2		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	0.95 (+/- 0)		0.87	pCi/l	NA	4/30/2021 10:15
Ra-228	0.95 (+/- 0.49)		0.87	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	97.6		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-16

Lab ID: 2104104-2

Legal Location:

Matrix: WATER

Collection Date: 4/1/2021 10:50

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021	PrepBy: TRB
Ra-226	ND (+/- 0.14)	Y1,U	0.25	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	100	Y1	40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	0.99 (+/- 0)		0.91	pCi/l	NA	4/30/2021 10:15
Ra-228	0.99 (+/- 0.51)		0.91	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	94.5		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-17

Lab ID: 2104104-3

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 18:20

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783	Prep Date: 4/14/2021		PrepBy: TRB
Ra-226	ND (+/- 0.12)	U	0.16	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	96.4		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724	Prep Date: 4/27/2021		PrepBy: JXH
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.84	pCi/l	NA	4/30/2021 10:15
Ra-228	ND (+/- 0.39)	U	0.84	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	95.5		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-18

Lab ID: 2104104-4

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 18:29

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021	
Ra-226	ND (+/- 0.13)	U	0.24	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	88.6		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021	
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.88	pCi/l	NA	4/30/2021 10:15
Ra-228	ND (+/- 0.41)	U	0.88	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	95.5		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-19S

Lab ID: 2104104-5

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 16:43

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021	PrepBy: TRB
Ra-226	ND (+/- 0.11)	U	0.18	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	92.4		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.87	pCi/l	NA	4/30/2021 10:15
Ra-228	ND (+/- 0.42)	U	0.87	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	97.7		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: DUP 3

Lab ID: 2104104-6

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 16:43

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021 PrepBy: TRB	
Ra-226	ND (+/- 0.17)	U	0.33	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	97.4		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021 PrepBy: JXH	
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.82	pCi/l	NA	4/30/2021 10:15
Ra-228	ND (+/- 0.38)	U	0.82	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	95.8		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental

Date: 30-Apr-21

Project: HS21040023

Work Order: 2104104

Sample ID: MW-20

Lab ID: 2104104-7

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 17:00

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783	Prep Date: 4/14/2021		PrepBy: TRB
Ra-226	ND (+/- 0.25)	U	0.48	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	98.5		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
			SOP 724	Prep Date: 4/27/2021		PrepBy: JXH
COMBINED RADIUM (226+228)	0.85 (+/- 0)		0.8	pCi/l	NA	4/30/2021 10:15
Ra-228	0.85 (+/- 0.44)		0.8	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	99.6		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental
Project: HS21040023
Sample ID: MW-20 Matrix 1
Legal Location:
Collection Date: 3/31/2021 17:00

Date: 30-Apr-21
Work Order: 2104104
Lab ID: 2104104-8
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	ND (+/- 0.18)	U	0.35	pCi/l	NA	4/27/2021 11:16
Carr: BARIUM	98.4		40-110	%REC	DL = NA	4/27/2021 11:16
Radium-228 Analysis by GFPC						
COMBINED RADIUM (226+228)						
	1.03 (+/- 0)		0.78	pCi/l	NA	4/30/2021 10:15
Ra-228	1.03 (+/- 0.47)		0.78	pCi/l	NA	4/30/2021 10:15
Carr: BARIUM	97.8		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental
Project: HS21040023
Sample ID: MW-21 Matrix Dup 1
Legal Location:
Collection Date: 3/31/2021 17:00

Date: 30-Apr-21
Work Order: 2104104
Lab ID: 2104104-9
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/14/2021	PrepBy: TRB
Ra-226	0.25 (+/- 0.18)		0.19	pCi/l	NA	4/27/2021 11:40
<i>Carr: BARIUM</i>	99.7		40-110	%REC	DL = NA	4/27/2021 11:40
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/27/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.89	pCi/l	NA	4/30/2021 10:15
Ra-228	ND (+/- 0.48)	U	0.89	pCi/l	NA	4/30/2021 10:15
<i>Carr: BARIUM</i>	95.5		40-110	%REC	DL = NA	4/30/2021 10:15

Client: ALS Environmental
Project: HS21040023
Sample ID: MW-21 Matrix Dup 1
Legal Location:
Collection Date: 3/31/2021 17:00

Date: 30-Apr-21
Work Order: 2104104
Lab ID: 2104104-9
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 4/30/2021 3:28:

Client: ALS Environmental
 Work Order: 2104104
 Project: HS21040023

QC BATCH REPORT

Batch ID: **RE210414-4-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE210414-4			Units: pCi/l		Analysis Date: 4/27/2021 12:00				
Client ID:		Run ID: RE210414-4A			Prep Date: 4/14/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	45 (+/- 11)	0	46.79		96.2	67-120					P
Carr: BARIUM	14500		15480		93.7	40-110					

LCSD		Sample ID: RE210414-4			Units: pCi/l		Analysis Date: 4/27/2021 12:00				
Client ID:		Run ID: RE210414-4A			Prep Date: 4/14/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	33.7 (+/- 8.4)	0.2	46.79		72	67-120		45	0.8	2.1	P
Carr: BARIUM	15020		15490		97	40-110		14500			

MB		Sample ID: RE210414-4			Units: pCi/l		Analysis Date: 4/27/2021 12:00				
Client ID:		Run ID: RE210414-4A			Prep Date: 4/14/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.27									U
Carr: BARIUM	14670		15480		94.7	40-110					

The following samples were analyzed in this batch:

2104104-1	2104104-2	2104104-3
2104104-4	2104104-5	2104104-6
2104104-7	2104104-8	2104104-9

Client: ALS Environmental
 Work Order: 2104104
 Project: HS21040023

QC BATCH REPORT

Batch ID: RA210427-2-2 Instrument ID GASPROP Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA210427-2		Units: ug			Analysis Date: 4/30/2021 10:26				
Client ID:		Run ID: RA210427-2A			Prep Date: 4/27/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32950		33500		98.4	40-110					
Ra-228	24.3 (+/- 5.7)	0.8	22.08		110	70-130					P

MB		Sample ID: RA210427-2		Units: ug			Analysis Date: 4/30/2021 10:26				
Client ID:		Run ID: RA210427-2A			Prep Date: 4/27/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	33470		33500		99.9	40-110					
Ra-228	ND	0.74									U

The following samples were analyzed in this batch:

2104104-1	2104104-2	2104079-2
2104104-3	2104104-4	2104104-5
2104104-6	2104104-7	2104104-8
2104104-9		



Tuesday, April 27, 2021

RJ Modashia
ALS Environmental
10450 Stancliff Rd, Suite 210
Houston, TX 77099

Re: ALS Workorder: 2104066
Project Name:
Project Number: HS21040023

Dear Mr. Modashia:

Seven water samples were received from ALS Environmental, on 4/2/2021. The samples were scheduled for the following analyses:

Radium-226

Radium-228

The results for these analyses are contained in the enclosed reports.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental.

Thank you for your confidence in ALS Environmental. Should you have any questions, please call.

Sincerely,

ALS Environmental
Julie Ellingson
Project Manager

Accreditations: ALS Environmental – Fort Collins is accredited by the following accreditation bodies for various testing scopes in accordance with requirements of each accreditation body. All testing is performed under the laboratory management system, which is maintained to meet these requirement and regulations. Please contact the laboratory or accreditation body for the current scope testing parameters.

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
California (CA)	2926
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO010992018-1
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	TN02976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

40 CFR Part 136: All analyses for Clean Water Act samples are analyzed using the 40 CFR Part 136 specified method and include all the QC requirements.



2104066

Radium-228:

The samples were analyzed for the presence of ^{228}Ra by low background gas flow proportional counting of ^{228}Ac , which is the ingrown progeny of ^{228}Ra , according to the current revision of EPA 904.0.

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to the current revision of EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2104066

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS21040023

Client PO Number: 10-15865

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-15A	2104066-1		WATER	31-Mar-21	11:55
MW-14A	2104066-2		WATER	31-Mar-21	10:50
MW-21	2104066-3		WATER	31-Mar-21	9:43
Dup2	2104066-4		WATER	31-Mar-21	16:55
MW-7S	2104066-5		WATER	31-Mar-21	16:55
MW-3	2104066-6		WATER	31-Mar-21	9:42
MW-13	2104066-7		WATER	31-Mar-21	11:13



2104066

10450 Stancliff Rd, Ste 210
Houston, TX 77099
T: +1 281 530 5656
F: +1 281 530 5887
www.alsglobal.com

Subcontract Chain of Custody

SAMPLING STATE: Oklahoma

COC ID: 15865

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

Company: ALS Houston
Contact: RJ Modashia
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Email: RJ.Modashia@alsglobal.com
Alternate Contact:
Email:

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS21040023
TSR: Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	HS21040023-01	MW-15A	Water	31 Mar 2021 11:55
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
2.	HS21040023-02	MW-14A	Water	31 Mar 2021 10:50
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
3.	HS21040023-03	MW-21	Water	31 Mar 2021 09:43
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
4.	HS21040023-04	Dup2	Water	30 Mar 2021 16:55
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
5.	HS21040023-05	MW-7S	Water	30 Mar 2021 16:55
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021
6.	HS21040023-06	MW-3	Water	31 Mar 2021 09:42
	Report as combined 226 & 228			22 Apr 2021
	Report as combined 226 & 228			22 Apr 2021



Subcontract Chain of Custody



SAMPLING STATE: Oklahoma

COC ID: 15865

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
7. HS21040023-07	MW-13	Water	31 Mar 2021 11:13
Report as combined 226 & 228			22 Apr 2021
Report as combined 226 & 228			22 Apr 2021

Comments: Please analyze for the analysis listed above.
Send report to the emails shown above.

QC Level: STD (Laboratory Standard QC: method blank and LCS required)

Relinquished By: 
 Received By: 
 Cooler ID(s): _____

Date/Time: 4/1/2021 1800
 Date/Time: 4/2/21 0920
 Temperature(s): _____



**ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM**

Client: ALS Houston

Workorder No: 2104066

Project Manager: JME

Initials: TEM

Date: 4/2/21

		N/A	YES	NO	
1.	Are airbills / shipping documents present and/or removable? Tracking number: 9473 0841 9538		x		
2.	Are custody seals on shipping containers intact?		x		
3.	Are custody seals on sample containers intact?	x			
4.	Is there a COC (chain-of-custody) present?		x		
5.	Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		x		
6.	Are short-hold samples present?			x	
7.	Are all samples within holding times for the requested analyses?		x		
8.	Were all sample containers received intact? (not broken or leaking)		x		
9.	Is there sufficient sample for the requested analyses?		x		
10.	Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)		x		
11.	Are all aqueous samples preserved correctly, if required? (excluding volatiles)		x		
12.	Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)	x			
13.	Were the samples shipped on ice?			x	
14.	Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*:	#5	RAD ONLY	x
Cooler #: <u>1</u> Temperature (°C): <u>amb</u> # of custody seals on cooler: <u>2</u> External µR/hr reading: <u>11</u> Background µR/hr reading: <u>11</u> Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES					

* Please provide details here for NO responses to boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

Were unpreserved bottles pH checked? N/A All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? NA Contact: _____ Date/Time: _____

Project Manager Signature / Date:  4/2/21

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-15A

Lab ID: 2104066-1

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 11:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	0.28 (+/- 0.18)		0.17	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	99.3		40-110	%REC	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	1.45 (+/- 0)		0.78	pCi/l	NA	4/26/2021 09:46
Ra-228	1.17 (+/- 0.49)		0.78	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	93.6		40-110	%REC	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-14A

Lab ID: 2104066-2

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 10:50

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	0.32 (+/- 0.21)		0.25	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	<i>99.8</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	1.76 (+/- 0)		0.87	pCi/l	NA	4/26/2021 09:46
Ra-228	1.44 (+/- 0.56)		0.87	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	<i>97.4</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-21

Lab ID: 2104066-3

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 09:43

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	0.4 (+/- 0.21)	Y1	0.18	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	<i>103</i>	Y1	<i>40-110</i>	<i>%REC</i>	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	2.44 (+/- 0)		0.8	pCi/l	NA	4/26/2021 09:46
Ra-228	2.04 (+/- 0.66)		0.8	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	<i>91.7</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: Dup2

Lab ID: 2104066-4

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 16:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021 PrepBy: HLR	
Ra-226	0.49 (+/- 0.23)	Y1	0.16	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	<i>100</i>	Y1	<i>40-110</i>	<i>%REC</i>	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021 PrepBy: JXH	
COMBINED RADIUM (226+228)	1.92 (+/- 0)		0.8	pCi/l	NA	4/26/2021 09:46
Ra-228	1.43 (+/- 0.54)		0.8	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	<i>95.3</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-7S

Lab ID: 2104066-5

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 16:55

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	0.27 (+/- 0.16)	Y1	0.13	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	<i>101</i>	Y1	<i>40-110</i>	<i>%REC</i>	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	1.73 (+/- 0)		0.75	pCi/l	NA	4/26/2021 09:46
Ra-228	1.46 (+/- 0.53)		0.75	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	<i>96.4</i>		<i>40-110</i>	<i>%REC</i>	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-3

Lab ID: 2104066-6

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 09:42

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	0.41 (+/- 0.23)		0.2	pCi/l	NA	4/20/2021 11:55
<i>Carr: BARIUM</i>	99.2		40-110	%REC	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	1.43 (+/- 0)		0.79	pCi/l	NA	4/26/2021 09:46
Ra-228	1.02 (+/- 0.47)		0.79	pCi/l	NA	4/26/2021 09:46
<i>Carr: BARIUM</i>	95.5		40-110	%REC	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-13

Lab ID: 2104066-7

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 11:13

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 4/2/2021	PrepBy: HLR
Ra-226	ND (+/- 0.17)	Y1,U	0.22	pCi/l	NA	4/20/2021 11:55
Carr: BARIUM	104	Y1	40-110	%REC	DL = NA	4/20/2021 11:55
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 4/21/2021	PrepBy: JXH
COMBINED RADIUM (226+228)	2.47 (+/- 0)		0.83	pCi/l	NA	4/26/2021 09:46
Ra-228	2.47 (+/- 0.75)		0.83	pCi/l	NA	4/26/2021 09:46
Carr: BARIUM	96		40-110	%REC	DL = NA	4/26/2021 09:46

Client: ALS Environmental

Date: 27-Apr-21

Project: HS21040023

Work Order: 2104066

Sample ID: MW-13

Lab ID: 2104066-7

Legal Location:

Matrix: WATER

Collection Date: 3/31/2021 11:13

Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
----------	--------	------	--------------	-------	-----------------	---------------

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC
- U or ND - Result is less than the sample specific MDC.
- Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
- Y2 - Chemical Yield outside default limits.
- W - DER is greater than Warning Limit of 1.42
- * - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
- # - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
- G - Sample density differs by more than 15% of LCS density.
- D - DER is greater than Control Limit
- M - Requested MDC not met.
- M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
- L - LCS Recovery below lower control limit.
- H - LCS Recovery above upper control limit.
- P - LCS, Matrix Spike Recovery within control limits.
- N - Matrix Spike Recovery outside control limits
- NC - Not Calculated for duplicate results less than 5 times MDC
- B - Analyte concentration greater than MDC.
- B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

- B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).
- U or ND - Indicates that the compound was analyzed for but not detected.
- E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.
- M - Duplicate injection precision was not met.
- N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.
- Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.
- * - Duplicate analysis (relative percent difference) not within control limits.
- S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

- U or ND - Indicates that the compound was analyzed for but not detected.
- B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.
- E - Analyte concentration exceeds the upper level of the calibration range.
- J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).
- A - A tentatively identified compound is a suspected aldol-condensation product.
- X - The analyte was diluted below an accurate quantitation level.
- * - The spike recovery is equal to or outside the control criteria used.
- + - The relative percent difference (RPD) equals or exceeds the control criteria.
- G - A pattern resembling gasoline was detected in this sample.
- D - A pattern resembling diesel was detected in this sample.
- M - A pattern resembling motor oil was detected in this sample.
- C - A pattern resembling crude oil was detected in this sample.
- 4 - A pattern resembling JP-4 was detected in this sample.
- 5 - A pattern resembling JP-5 was detected in this sample.
- H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.
- L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.
- Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
 - gasoline
 - JP-8
 - diesel
 - mineral spirits
 - motor oil
 - Stoddard solvent
 - bunker C

ALS -- Fort Collins

Date: 4/27/2021 2:17:

Client: ALS Environmental
 Work Order: 2104066
 Project: HS21040023

QC BATCH REPORT

Batch ID: **RE210402-3-1** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE210402-3			Units: pCi/l		Analysis Date: 4/20/2021 12:23				
Client ID:		Run ID: RE210402-3A			Prep Date: 4/2/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	41 (+/- 10)	0	46.79		88	67-120					P,Y1
Carr: BARIUM	16570		15870		104	40-110					Y1

LCSD		Sample ID: RE210402-3			Units: pCi/l		Analysis Date: 4/20/2021 12:23				
Client ID:		Run ID: RE210402-3A			Prep Date: 4/2/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	48 (+/- 12)	0	46.79		102	67-120		41	0.4	2.1	P
Carr: BARIUM	15810		15870		99.6	40-110		16570			

MB		Sample ID: RE210402-3			Units: pCi/l		Analysis Date: 4/20/2021 12:23				
Client ID:		Run ID: RE210402-3A			Prep Date: 4/2/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.171									Y1,U
Carr: BARIUM	15990		15870		101	40-110					Y1

The following samples were analyzed in this batch:

2104066-1	2104066-2	2104066-3
2104066-4	2104066-5	2104066-6
2104066-7		

Client: ALS Environmental
 Work Order: 2104066
 Project: HS21040023

QC BATCH REPORT

Batch ID: RA210421-2-1 Instrument ID GASPROP Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA210421-2		Units: ug			Analysis Date: 4/26/2021 09:46				
Client ID:		Run ID: RA210421-2A			Prep Date: 4/21/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31830		31560		101	40-110					Y1
Ra-228	24 (+/- 5.6)	0.8	22.11		109	70-130					P,Y1

LCSD		Sample ID: RA210421-2		Units: ug			Analysis Date: 4/26/2021 09:46				
Client ID:		Run ID: RA210421-2A			Prep Date: 4/21/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	29370		31560		93.1	40-110		31830			
Ra-228	23.9 (+/- 5.6)	0.9	22.11		108	70-130		24	0.02	2.1	P

MB		Sample ID: RA210421-2		Units: ug			Analysis Date: 4/26/2021 09:46				
Client ID:		Run ID: RA210421-2A			Prep Date: 4/21/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32380		31560		103	40-110					Y1
Ra-228	ND	0.78									Y1,U

The following samples were analyzed in this batch:

2104066-1	2104066-2	2104066-3
2104066-4	2104066-5	2104066-6
2104066-7		

ATTACHMENT B

**DATA SUMMARY TABLES
(LANDFILL CCR UNIT)**

**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-3	MW-3		MW-3	MW-3	MW-3	MW-3	DUP 3	MW-3
					4-Oct-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20		31-Mar-21
Detection Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5		ASSESSMENT MON. #6
Units													
Boron	None	1.896	Not Applicable	mg/L	1.06	1.05	1	1.39	1.06	1.16	0.903	0.946	1.01
Calcium	None	670.30	Not Applicable	mg/L	206	198	225	225	213	214	183	181	207
Chloride	250	18.51	Not Applicable	mg/L	13.8	13.4	16.3	13	13.7	13.7	13.8	13.8	14
Fluoride	4	0.6359	Not Applicable	mg/L	0.318	0.373	0.52	0.396 J	0.319	0.203	0.328	0.337	0.376
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
Sulfate	250	1,396	Not Applicable	mg/L	1270	1220	1450	1150	1210	1240	1320	1290	1260
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2130	2110	2060	2100	2110	2150	2020	2010	2030
Assessment Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5		ASSESSMENT MON. #6
Units													
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
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
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
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
Carbonate	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
Cadmium	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
Cobalt	None	Not Applicable	0.006 (ACL)	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
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
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	0.000613 J	0.000622 J	<0.000600	<0.000600	<0.000600	<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
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
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
Other Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5		ASSESSMENT MON. #6
Units													
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5.00	<5.00	---	<5.00	<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	---	---	---	---	---	---	---
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
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)	None	Not Applicable	Not Applicable	umhos/cm	2520	2730	---	---	---	---	2980	2970	2630
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Field Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5		ASSESSMENT MON. #6
Units													
Temperature	None	Not Applicable	Not Applicable	°C	23.1	13.1	---	18.31	24.37	23.62	23.8	---	15.9
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
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2814	2699	---	2778	2797	2576	2670	---	2666
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.59	0.7	---	1.26	6.86	3.85	0.35	---	0.57
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-37	-12	---	-54.6	-34.4	-24.6	-102.6	---	-15.4
Turbidity	None	Not Applicable	Not Applicable	NTU	4.23	1.8	1.04	0.57	1.14	3.36	1.3	---	3.11
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	24.55	---	27.57	26.04	24.35	25.28	---	24.3
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-5S	DUP 3	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	
					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		
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	Not Applicable	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	Not Applicable	7.9	7.8	7.8	7.9	7.4	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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	0.00202 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 (ACL)	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 (ACL)	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	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800		---	---	---	
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.25 +/- 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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---		---	---	---	
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---		---	---	---	
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00		---	---	---	
Bicarbonate Alkalinity as CaCO ₃	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	umhos/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		
Turbidity	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	1.12		
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	6.83	---	7.64	8.82	9.36	9.36	9.1	9.1	7.47	9.69	---	---		
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	20.8	---	---	---	---	---	---	---	---	---	---	---		

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
-
- no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-5S	MW-5S		MW-5S	MW-5S	MW-5S	MW-5S	MW-5S
					2-Oct-18	10-Jan-19		23-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	1-Apr-21
				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Detection Monitoring Parameters						UNFILTERED	FILTERED					
Boron	None	1.896	Not Applicable	mg/L	2.82	2.73	1.82	1.87	2.49	0.811	2.57	2.04
Calcium	None	670.30	Not Applicable	mg/L	25	27.7	27.8	57	22.5	68.2	19.6	33.4
Chloride	250	18.51	Not Applicable	mg/L	28.3	30.5	29.9	21.8	25.1	19.5	25.6	23.9
Fluoride	4	0.6359	Not Applicable	mg/L	1.54	1.54	1.5	1.11	1.54	0.824	1.51	1.24
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
Sulfate	250	626	Not Applicable	mg/L	447	457	472	394	434	408	485	477
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1140	1120	1210	1090	1180	904	1080	1140
				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Assessment Monitoring Parameters						UNFILTERED	FILTERED					
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
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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.012	0.012	0.0116	0.0141	0.00928	0.021	0.00787	0.00867
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.54	1.54	1.5	1.11	1.54	0.824	1.51	1.24
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
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0691 J	0.0644	0.0642	0.0604	0.0536	0.049	0.0546	0.0496
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000870 J
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.005	0.00512	0.00335 J	0.00485 J	0.00315 J	0.00361 J	0.00244 J	0.00234 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
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
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.611 +/- 0.249	<0.79	---	<0.64	1.44	1.25	1.15	0.95
				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Other Parameters						UNFILTERED	FILTERED					
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	<5.00	---	<5.00	<5.00	---	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	412	444	405
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	12.6	---	---	---	15	20.5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	427	---	---	---	397	424	405
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	0.0170 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.029(J)	<0.0200	<0.020
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	5.73	5.58	---	---	5.16	4.38	4.53
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00308(J)	0.00244 J	0.00287 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	0.0287 J
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.49	4.27	---	---	3.48	3.94	3.25
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	257	---	---	277	335	312
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1730	1870	---	---	---	---	1960	1770
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.97	<1
				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Field Parameters						UNFILTERED	FILTERED					
Temperature	None	Not Applicable	Not Applicable	°C	25.3	13.4	---	18.78	25.18	24.37	21.5	14.7
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
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	1871	1791	---	1669	1826	1665	1794	1745
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.63	---	0.85	0.45	1.89	0.32	0.81
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-125.1	-30.9	---	19.7	-54.1	-48.2	168.1	283.3
Turbidity	None	Not Applicable	Not Applicable	NTU	3.3	4.51	1.27	1.16	0.94	2.88	1.97	2.85
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	7.11	---	12.41	11.54	10.06	18.58	9.27
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	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)	
					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	
Detection Monitoring Parameters					INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
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	
Fluoride	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	250	1,281	Not Applicable	mg/L	465	907	893	893	1120	587	606	619	450	860	545	545	623	
Total Dissolved Solids	500	1,863	Not Applicable	mg/L	1070	1570	1570	1530	1610	1220	1230	1300	1120	1600	1210	1180	1330	
Assessment Monitoring Parameters					INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
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	0.1	Not Applicable	0.1 (MCL)	mg/L	U (0.00333)	0.000680 J	<0.00500	<0.000500	<0.000500	0.000731 J	<0.000500	<0.00250	U (0.000637)	---	---	---	---	
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.00120 J	0.000648 J	<0.00100	0.000735 J	0.000439 J	0.000349 J	0.000333 J	0.00208 J	0.000696 J	---	---	---	---	
Fluoride	4	Not Applicable	4 (MCL)	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	
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 (ACL)	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	0.559 +/- 0.233	0.952 +/- 0.279	0.891 +/- 0.247	---	---	---	---	
Other Parameters					INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
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					INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Temperature	None	Not Applicable	Not Applicable	°C	16.83	14.77	15.53	18.89	16.83	21.67	---	19.85	24.46	19.6	29.34	---	25.21	
pH	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	umhos/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	None	Not Applicable	Not Applicable	mV	-165.8	-141	-164.4	-68	-104	-196	---	107.4	57.6	-58.8	-20.8	---	-30.7	
Turbidity	None	Not Applicable	Not Applicable	NTU	81.8	33.7	3.34	1.12	8.31	1.82	---	1.12	3.45	2.29	3.37	---	1.76	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	4.04	3.69	4.5	3.41	3.41	5.45	---	5.45	5.81	5.5	---	---	---	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	18.84	---	---	---	---	---	---	---	---	---	---	---	---	

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-7S	MW-7S		MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	DUP 2
					4-Oct-18	10-Jan-19		23-Apr-19	1-Oct-19	17-Jun-20	9-Oct-20	30-Mar-21	
Detection Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
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
Calcium	None	670.30	Not Applicable	mg/L	76	277	293	271	81.1	160	90.2	254	219
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
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
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
Sulfate	250	1,281	Not Applicable	mg/L	1600	1200	1110	1040	633	970	759	1200	1190
Total Dissolved Solids	500	1,863	Not Applicable	mg/L	1230	1670	1890	1890	1270	1680	1340	2060	2000
Assessment Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
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
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
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
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
Carbonate	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
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005	<0.000400	<0.000400	<0.000400	0.000994 J	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000222 J	0.000270 J	0.000304 J	0.00153 J	<0.000200	0.000838 J	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.764	0.422	0.35	0.376	0.729	0.479	0.713	0.444	0.415
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	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
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
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
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
Other Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
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
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	264	315	180	177
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	222	---	---	---	264	315	180	177
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.278	0.111 J	0.0145 J	0.0156 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.034(J)	0.235	0.0154 J	0.0234 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.306	0.216	<0.02	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	0.0234 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	19	18.7	---	---	17.1	12	16.9	17.4
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000987(J)	0.00103 J	0.000846 J	0.000941 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.118	0.557	0.644	<0.0300	<0.0300	<0.0300	<0.0300	<0.0600	<0.0600
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.67	4.79	---	---	5.33	5.1	4.06	4.18
Sodium	None	Not Applicable	Not Applicable	mg/L	---	274	294	---	---	313	272	230	197
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1610	2240	---	---	---	---	2110	2380	2380
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.48	<1	<1
Field Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Temperature	None	Not Applicable	Not Applicable	°C	25	12.8	---	17.92	25.27	21.95	23.1	16.8	---
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	---
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	1887	2180	---	2326	1844	2097	1945	2377	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.45	0.23	---	0.84	0.51	0.49	0.33	0.31	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-129.1	-6.3	---	-61.6	-133.8	-67.6	-90.1	83.3	---
Turbidity	None	Not Applicable	Not Applicable	NTU	8.01	0.67	0.64	0.71	0.88	2.49	0.85	5.81	---
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	3.49	---	7.99	5.77	6.83	6.39	3.78	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-13	DUP-2	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	
					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	MW-13 (Shallow)	MW-13 (Deep)		
				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE	
Detection Monitoring Parameters																		
Boron	None	Background Well (Not Applicable)	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		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	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 Parameters																		
Antimony	0.006	Background Well (Not Applicable)	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	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	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	---	---	---		
Fluoride	4		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		
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		Not Applicable	mg/L	0.176	0.179	0.184	0.156	0.156	0.173	0.0449 J	0.157	0.164	---	0.14	0.115		
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	0.0097	0.0092	0.00557	0.029	0.00444	0.00393	0.00345	0.00316	0.00286	---	0.00211	0.0022		
Selenium	0.05		Not Applicable	mg/L	<0.000600	<0.000600	<0.000600	<0.000300	0.000512 J	<0.000300	<0.00150	0.00402	U (0.00192)	---	---	---		
Thallium	0.002		Not Applicable	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---		
Ra-226 + Ra-228 (combined)	5		Not Applicable	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																		
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	---	---	---	---	---	---	---	307	---	---	---	---		
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	---	---	---	---	---	---	---	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	°C	21.68	---	21.6	21.3	20.26	20.49	19.38	22.73	22.75	21.37	27.06	25.52		
pH	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		
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2507	---	2939	2622	2939	2967	3006	2990	2920	2887	3010	3213		
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.41	---	0.28	0.09	0.35	0.33	0.3	0.18	0.09	1.25	2.22	1.37		
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	0.6	---	-103.3	-136.8	-178.8	-179.1	-93.3	-10.6	-68.7	-48.9	49.1	187.6		
Turbidity	None	Not Applicable	Not Applicable	NTU	4.12	---	1.91	0.26	1.14	0.5	1.38	1.93	0.87	0.28	0.02	0.02		
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	25.13	---	25.46	26.07	25.48	26.86	25.95	26.11	26.05	25.64	---	---		
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	39.46	---	---	---	---	---	---	---	---	---	---	---		

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID:	MW-13	MW-13				MW-13	MW-13	MW-13	MW-13	MW-13
				Sample Date:	4-Oct-18	11-Jan-19				25-Apr-19	3-Oct-19	17-Jun-20	14-Oct-20	31-Mar-21
Detection Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)				ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
					Units	UNFILTERED	FILTERED	FILTERED	UNFILTERED					
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
Calcium	None		Not Applicable	mg/L	299	270	360	334	348	130	182	243	242	284
Chloride	250	Background Well (Not Applicable)	Not Applicable	mg/L	12.8	15.1	13.7	13.8	13.1	28.2	17.3	13.8	13.9	13.8
Fluoride	4		Not Applicable	mg/L	0.285	0.342	0.99	0.31	0.444	0.652	0.422	0.231	0.257	0.344
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6	7.16	---	7.35	---	7.95	6.75	6.71	7.55	7.32
Sulfate	250		Not Applicable	mg/L	1400	1450	1420	1450	1440	1450	1380	1390	1480	1470
Total Dissolved Solids	500		Not Applicable	mg/L	2350	2350	2220	2270	2260	2590	2350	2450	2360	2320
Assessment Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)				ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
					Units	UNFILTERED	FILTERED	FILTERED	UNFILTERED					
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
Arsenic	0.010	Not Applicable		mg/L	<0.004	<0.000400	<0.000400	<0.000400	0.000412 J	0.000979 J	0.000401 J	<0.000400	<0.000400	<0.000400
Barium	2	Not Applicable		mg/L	0.0196 J	0.014	0.0164	0.0152	0.015	0.0146	0.0114	0.0116	0.0107	0.0114
Beryllium	0.004	Not Applicable		mg/L	<0.001	<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
Chromium	0.1	Not Applicable		mg/L	<0.005	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable		mg/L	<0.0001	<0.000200	0.000229 J	<0.000200	<0.000200	0.000265 J	<0.000200	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable		mg/L	0.285	0.342	0.99	0.31	0.444	0.652	0.422	0.231	0.257	0.344
Lead	0.015	Not Applicable		mg/L	<0.0001	<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
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
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
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
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
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
Other Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)				ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
					Units	UNFILTERED	FILTERED	FILTERED	UNFILTERED					
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5	---	<5.00	6.00 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	---	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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	8.43	8.61	8.43	8.64	---	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	557	416	447	418	---	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2570	3090	---	2960	---	---	---	---	3280	2940
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---
Field Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)				ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
					Units	UNFILTERED	FILTERED	FILTERED	UNFILTERED					
Temperature	None	Not Applicable	Not Applicable	°C	25.7	12.4	---	---	---	20.41	27	21.69	21.8	16.9
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.41	7.39	---	---	---	7.8	7.63	7.48	7.54	7.49
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3728	3569	---	---	---	3688	3751	3474	3576	3616
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.41	0.66	---	---	---	1.68	2.61	1.18	0.39	0.49
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	30.1	-8.8	---	---	---	-119.2	-95.1	-41.6	156.8	76.4
Turbidity	None	Not Applicable	Not Applicable	NTU	5.63	2.27	0.76	---	---	4.66	1.28	4.95	3.21	3.76
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	26.28	---	---	---	26.8	26.68	26.4	26.76	26.4
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---	---

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. umhos/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. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	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)				
				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				
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE	
Boron	None	Background Well (Not Applicable)	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		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	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	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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE	
Antimony	0.006		Not Applicable	Background Well (Not Applicable)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---	---			
Arsenic	0.010	Not Applicable	mg/L		0.00363	0.00714 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	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	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	pCi/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					Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	24.4	---	---	---	---					
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	---	---	---	---	---	---	---	7.88	---	---	---	---					
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	518	---	---	---	---					
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---					
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---					
Field Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE	
Temperature	None	Not Applicable	Not Applicable	°C	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	umhos/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	---				
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	14.72	16.45	15.7	15.85	14.59	---	15.98	15.35	15.03	15.92	---	---	---				
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.34	---	---	---	---	---	---	---	---	---	---	---	---				

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-14A	MW-14A		MW-14A	MW-14A	MW-14A	MW-14A	MW-14A	
					4-Oct-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20	31-Mar-21	
Detection Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	1.18	1.42	1.16	1.23	0.98	0.907	0.882	0.839	
Calcium	None		Not Applicable	mg/L	319	402	388	314	306	280	278	298	
Chloride	250		Not Applicable	mg/L	14.2	14	14.8	13.5	14.2	13.3	14.9	14.3	
Fluoride	4		Not Applicable	mg/L	0.281	0.269	0.375	0.377 J	0.286	0.23	0.254 J	0.284	
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6	7.28	---	7.61	7.18	7.44	7.41	7.7	
Sulfate	250		Not Applicable	mg/L	1650	1660	1630	1540	1580	1650	1770	1680	
Total Dissolved Solids	500		Not Applicable	mg/L	2710	2590	2580	2680	2750	2780	2630	2680	
Assessment Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	
Arsenic	0.010	Not Applicable		mg/L	<0.004	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	
Barium	2	Not Applicable		mg/L	0.0232	0.017	0.0173	0.0147	0.0118	0.0132	0.0114	0.0117	
Beryllium	0.004	Not Applicable		mg/L	<0.001	<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	
Chromium	0.1	Not Applicable		mg/L	<0.005	<0.000400	<0.000400	<0.000400	0.00110 J	<0.000400	<0.000400	<0.000400	
Cobalt	None	Not Applicable		mg/L	0.000297 J	0.000348 J	0.000324 J	0.000425 J	<0.000200	<0.000200	<0.000200	<0.000200	
Fluoride	4	Not Applicable		mg/L	0.281	0.269	0.375	0.377 J	0.286	0.23	0.254	0.284	
Lead	0.015	Not Applicable		mg/L	<0.0001	<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	
Mercury	0.002	Not Applicable		mg/L	<0.00015	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000500 J	
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	
Selenium	0.05	Not Applicable		mg/L	<0.0003	<0.0011	<0.0011	<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	
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	
Other Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Chemical Oxygen Demand (COD)	None	Not Applicable		Not Applicable	mg/L	<5	<5	---	<5.00	5.00 J	---	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable		Not Applicable	mg/L	---	---	---	---	---	327	327	332
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	321	---	---	---	327	327	332	
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.771(J)	0.236	0.162 J	
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	0.169 J	0.150 J	
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.098	0.184	0.055	
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0340 J	
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.107	
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.116	
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	28.8	27.9	---	---	26.6	26.2	25.9	
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000768(J)	0.000621 J	0.00165 J	
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	
Potassium	None	Not Applicable	Not Applicable	mg/L	---	8.64	8.37	---	---	7.66	7.94	7.87	
Sodium	None	Not Applicable	Not Applicable	mg/L	---	516	467	---	---	382	388	413	
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3000	3270	---	---	---	---	3660	3260	
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1	
Field Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Temperature	None	Not Applicable	Not Applicable	°C	23.1	16.2	---	17.75	24.4	21	23.7	15.84	
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.93	6.9	---	7.28	7.1	7.04	7.1	7.33	
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3491	3251	---	3386	3435	3107	3394	4453	
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.31	0.19	---	1.45	0.62	0.79	0.59	0.34	
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	13.1	19.5	---	4.6	27.7	-45.7	107.1	20.5	
Turbidity	None	Not Applicable	Not Applicable	NTU	3.17	4.89	0.94	2.06	3.88	4.71	2.96	3.52	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	14.98	---	19.11	16.26	17.01	18.15	16.7	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-15A	MW-15A	MW-15A	MW-15A	DUP 1	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A (Shallow)	MW-15A (Deep)	
					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			
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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 (ACL)	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 (ACL)	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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			
pH	6.5 - 8.5	Not Applicable	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			
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3050	3373	3442	3430	---	3488	3520	3498	3524	3488	3548	3578			
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	None	Not Applicable	Not Applicable	mV	66.1	-61.7	-96.7	-211.9	---	-140.6	-81.1	-82.3	43.1	-101.3	133.1	140.8			
Turbidity	None	Not Applicable	Not Applicable	NTU	4.97	0.7	0.18	0.31	---	0.52	0.66	0.53	1.31	0.39	5.5	1.68			
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	8.73	10.74	9.93	10.53	---	8.72	10.18	9.32	9.05	10.01	---	---			
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.39	---	---	---	---	---	---	---	---	---	---	---			

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-15A	DUP 2	MW-15A		MW-15A	MW-15A	MW-15A	MW-15A	MW-15A
					2-Oct-18	2-Oct-18	10-Jan-19	25-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	31-Mar-21	
Detection Monitoring Parameters					ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Units													
Boron	None	1.896	Not Applicable	mg/L	3.76	3.77	3.52	5.48	3.61	3.19	4.57	3.33	3.35
Calcium	None	670.30	Not Applicable	mg/L	170	171	129	187	92	82.4	141	89.8	78.6
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
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
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
Sulfate	250	1,824	Not Applicable	mg/L	1570	1580	1610	1540	1310	1510	1680	1650	1590
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2650	2570	2590	2640	2570	2500	2520	2460	2420
Assessment Monitoring Parameters					ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Units													
Antimony	0.006	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
Arsenic	0.010	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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0226	0.0229	0.023	0.0192	0.0217	0.0216	0.0291	0.0199	0.0186
Beryllium	0.004	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
Cadmium	0.005	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
Chromium	0.1	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
Cobalt	None	Not Applicable	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
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.21	1.2	1.22	1.46	1.02	1.24	0.86	1.14	1.13
Lead	0.015	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
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0613	0.0598	0.0701	0.0582	0.0858	0.0743	0.111	0.0709	0.073
Mercury	0.002	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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.233	0.228	0.205	0.244	0.196	0.269	0.167	0.168	0.168
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.000459 J	0.000353 J	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008	<0.0008	0.000565 J	0.000375 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	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
Other Parameters					ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Units													
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
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	209	204	196
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5	<5
Bicarbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	149	---	---	---	209	204	196
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0535(J)	0.0496 J	0.0492 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	<0.0120	0.165 J	0.133 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0410(J)	0.0210 J	0.054
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	0.0320 J
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	0.101
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	12.4	10.9	---	---	165	11	10.9
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.168	0.153	0.159
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	5.98	5.47	---	---	8.24	5.15	5.47
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	746	703	---	---	1040	627	594
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3490	3480	3540	---	---	---	---	3780	3400
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	1.12	<1	<1
Field Parameters					ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Units													
Temperature	None	Not Applicable	Not Applicable	°C	23.1	---	18.5	---	20.72	27.05	24.09	22.2	---
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	---	7.45	---	7.82	7.71	7.73	7.71	---
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3563	---	3449	---	3544	3575	3337	3422	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	---	0.41	---	1.24	0.71	1.39	0.28	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-69.9	---	98	---	-22.1	-79.5	-50.3	167.2	---
Turbidity	None	Not Applicable	Not Applicable	NTU	4.11	---	1.13	1.09	0.55	0.84	2.6	1.73	---
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	---	8.89	---	13.25	10.54	11.19	12.08	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-16	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)	
					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		
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	Not Applicable	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	250	1,494	Not Applicable	mg/L	1340	1040	1070	1390	915	1180	995	1020	1020	933	938	998		
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1790	1780	1760	1790	1860	1740	1690	1710	1730	1820	1810	1930		
Assessment Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	<0.000500	<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	0.1	Not Applicable	0.1 (MCL)	mg/L	0.00604 J	<0.000500	0.0579	<0.00250	<0.000500	<0.000500	<0.00500	<0.000500	<0.000500		---	---	---	
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.00250	0.000340 J	0.000498 J	<0.000500	<0.000100	<0.000100	<0.00100	0.000354 J	0.000343 J		---	---	---	
Fluoride	4	Not Applicable	4 (MCL)	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		
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100		---	---	---	
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 (ACL)	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---		---	---	---	
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---		---	---	---	
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00		---	---	---	
Bicarbonate Alkalinity as CaCO ₃	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND											DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	umhos/cm	2066	2327	Not Applicable	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	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	4.81	6.73	6.3	4.36	2.91	2.9	5.5	5.24	---		5.8	---	---	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	23.4	---	---	---	---	---	---	---	---		---	---	---	

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : pCi per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-16	MW-16		MW-16	MW-16	MW-16	MW-16	MW-16
					2-Oct-18	16-Jan-19		23-Apr-19	3-Oct-19	18-Jun-20	13-Oct-20	1-Apr-21
				ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Detection Monitoring Parameters				Units								
Boron	None	1.896	Not Applicable	mg/L	2.05	2.23	2.38	1.85	1.53	1.43	1.78	1.57
Calcium	None	670.30	Not Applicable	mg/L	221	215	215	192	149	186	166	140
Chloride	250	18.51	Not Applicable	mg/L	18	19	18.8	15.8	23.8	14.7	14.8	14.4
Fluoride	4	0.6359	Not Applicable	mg/L	0.832	0.82	1.11	0.741	1.07	0.694	0.893	0.916
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
Sulfate	250	1,494	Not Applicable	mg/L	959	1020	1030	974	1020	1030	929	1070
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1780	1740	1670	1740	1810	1610	1610	1790
Assessment Monitoring Parameters				Units								
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
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.002	<0.000400	<0.000400	<0.000400	0.000465 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
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000172 J	<0.000200	<0.000200	<0.000200	0.000375 J	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.832	0.82	1.11	0.741	1.07	0.694	0.893	0.916
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.169	0.18	0.18	0.193	0.172	0.149	0.149	0.166
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
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
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
Other Parameters				Units								
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	<5	---	<5.00	<5.00	---	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	232	233	228
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	256	---	---	---	232	233	228
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0358(J)	0.125 J	0.0536 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0160(J)	0.0694 J	0.0140 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0380(J)	0.0240 J	<0.020
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0536
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	10.2	10.2	---	---	8.44	7.59	7.65
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.173	0.16	0.18
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.18	4.07	---	---	2.85	3.09	3.12
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	394	---	---	309	316	325
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2240	2340	---	---	---	---	2400	2420
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.4	<1
Field Parameters				Units								
Temperature	None	Not Applicable	Not Applicable	°C	25.4	14.8	---	19.31	24.89	21.9	23.5	16.32
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	7.21	---	7.56	7.82	7.66	7.69	8.12
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2816	2273	---	2330	2836	2438	2615	3178
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25	1.37	---	0.83	3.67	2.18	1.99	0.46
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-131.8	278.9	---	28.7	-191.5	-56.9	60.2	57.7
Turbidity	None	Not Applicable	Not Applicable	NTU	2.89	6.82	1.03	2.53	1.48	3.09	0.75	2.16
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	2.38	---	7.59	6.61	6.76	7.51	4.75
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	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)			
					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			
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.000800	<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 (ACL)	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 (ACL)	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Temperature	None	Not Applicable	Not Applicable	°C	20.98	23.28	20.36	19.58	21.96	20.3	20.57	21.98	---	20.98	25.04	22.3			
pH	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	umhos/cm	2052	2052	2402	2405	2386	2230	2396	2443	---	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	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	NTU	0.53	0.92	0.4	0.43	0.11	0.21	0.24	0.81	---	0.52	4.63	14.5			
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	14.07	15.67	15.8	16.08	14.52	15.7	15.23	14.35	---	14.5	---	---			
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	23.44	---	---	---	---	---	---	---	---	---	---	---			

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. umhos/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. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-17	MW-17		MW-17	MW-17	MW-17	MW-17	MW-17
					3-Oct-18	10-Jan-19		25-Apr-19	3-Oct-19	18-Jun-20	12-Oct-20	31-Mar-21
					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
<i>Detection Monitoring Parameters</i>					Units	UNFILTERED	FILTERED					
Boron	None	1.896	Not Applicable	mg/L	0.567	0.766	0.729	0.796	0.622	0.652	0.64	0.539
Calcium	None	670.30	Not Applicable	mg/L	461	591	499	499	555	494	453	467
Chloride	250	18.51	Not Applicable	mg/L	4.81	3.44	4.16	3.65	3.75	4.29	4.04	4.06
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
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
Sulfate	250	1,557	Not Applicable	mg/L	821	1480	1200	1100	1310	1390	1,220 H	1310
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1670	2300	1870	2400	2160	2230	2160	2200
					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
<i>Assessment Monitoring Parameters</i>					Units	UNFILTERED	FILTERED					
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
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
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
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	0.000238 J	<0.000200	0.000313 J	<0.000200	0.000281 J	<0.000200	0.000239 J
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
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	<0.000600	<0.000600	0.000671 J	<0.000600	<0.000600	<0.000600	0.000950 J
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
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
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
					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
<i>Other Parameters</i>					Units	UNFILTERED	FILTERED					
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.13 J	<5.00	---	<5.00	<5.00	---	<5.00	<5.00
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	284	273	269
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Bicarbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	280	---	---	---	284	273	269
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	0.0541 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.02	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0541
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	38.1	31.3	---	---	37.8	30.9	29.3
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00123(J)	<0.000600	0.00292 J
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	5.37	4.9	---	---	5.15	4.42	4.19
Sodium	None	Not Applicable	Not Applicable	mg/L	---	35.7	32.9	---	---	35.6	29.2	28.2
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1920	2450	---	---	---	---	2610	2460
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1
					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
<i>Field Parameters</i>					Units	UNFILTERED	FILTERED					
Temperature	None	Not Applicable	Not Applicable	°C	23.3	15.9	---	19.26	23.63	21.2	23.2	21.04
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.7	6.67	---	7.09	6.88	6.8	6.88	6.88
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2548	2416	---	2470	2458	2344	2393	3321
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.44	0.51	---	1.8	0.8	1.35	0.41	0.27
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	237.5	57.8	---	2.4	148.3	-28.1	129.9	-2.5
Turbidity	None	Not Applicable	Not Applicable	NTU	5.4	1.24	0.69	0.63	0.65	2.28	0.58	0.75
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	12.5	---	15.54	15.59	13	14.21	13.54
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
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- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	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)	
					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	
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	None	Not Applicable	0.006 (ACL)	mg/L	<0.00250	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	---	---	---	
Fluoride	4	Not Applicable	4 (MCL)	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	
Lead	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	---	---	---	
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.0100	0.00315 J	<0.00300	<0.0150	<0.0300	0.00305 J	<0.00300	<0.0150	<0.00300	---	0.0144 J	<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 (ACL)	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	0.00503 J	0.00399 J	0.00231	0.00317	0.00301 J	0.00268	0.00177 J	<0.00300	0.00278	---	---	---	
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---	
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.201 +/- 0.213 U	0.206 +/- 0.318 U	0.449 +/- 0.289	0.550 +/- 0.308	0.201 +/- 0.260 U	0.00496 +/- 0.256 U	0.282 +/- 0.201 U	0.146 +/- 0.228 U	0.445 +/- 0.200	---	---	---	
Other Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	52.6	---	---	---	
Bicarbonate Alkalinity as CaCO ₃	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	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	
Field Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
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	
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.88	10.45	10.95	---	10.88	10.67	10.6	10.55	10.54	10.74	9.71	10.41	
Specific Conductance	None	Not Applicable	Not Applicable	umhos/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	
Turbidity	None	Not Applicable	Not Applicable	NTU	0.33	0.61	0.33	---	0.15	0.39	0.36	1.03	1.21	0.22	0.02	0.02	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	11.58	13.17	13.24	---	12.91	12.09	12.09	12.9	11.85	11.84	---	---	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	25.46	---	---	---	---	---	---	---	---	---	---	---	

- Notes:**
- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
 - mg/L : milligrams per liter.
 - pCi/L : picoCuries per liter.
 - S.U. : Standard Units.
 - °C : degrees Celsius.
 - umhos/cm : micromhos per centimeter.
 - mV : millivolts.
 - NTU : Nephelometric Turbidity Unit.
 - < : Analyte not detected at the laboratory method detection limit (MDL).
 - J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
 - Cells shaded in blue indicate results that are above the laboratory MDL.
 - 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.
 - : no analysis performed.
 - 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.
 - TOC : Top of Casing.
 - ft : feet.
 - Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
 - New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-18	MW-18		MW-18	MW-18	MW-18	MW-18	MW-18
					3-Oct-18	14-Jan-19		25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21
Detection Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
						UNFILTERED						
				Units								
Boron	None	1.896	Not Applicable	mg/L	5.77	6.89	7.17	6.05	5.29	5.49	5.43	4.32
Calcium	None	670.30	Not Applicable	mg/L	25.1	31.8	30.8	33.1	25.6	21.6	20	19.3
Chloride	250	18.51	Not Applicable	mg/L	5.5	5.59	5.14	4.79	5.07	4.06	4.22	4.2
Fluoride	4	0.6359	Not Applicable	mg/L	1.37	1.32	1.44	1.25	1.47	1.28	1.66	1.71
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
Sulfate	250	1,820	Not Applicable	mg/L	1090	1110	1120	933	1020	888	794	904
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1760	1630	1660	1680	1550	1340	1270	1260
Assessment Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
				UNFILTERED		FILTERED						
				Units								
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
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00319	0.0032	0.00325	0.00308	0.00264	0.00272	0.00276	0.00238
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00374	0.00393 J	0.00407	0.00401	0.00327 J	0.00294 J	0.00288 J	0.00305 J
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
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	0.000374 J	0.000431 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000512 J	<0.00040	<0.00040	0.000477 J	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.37	1.32	1.44	1.25	1.47	1.28	1.66	1.71
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
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
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000500 J
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.33	0.333	0.332	0.342	0.257	0.194	0.18	0.195
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
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
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
Other Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
				UNFILTERED		FILTERED						
				Units								
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
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	71	69.9	65.5
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	42.2	---	---	---	60.6	64.3	46.8
Bicarbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	32.9	---	---	---	10.4	5.63	18.7
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.020	<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	---	---	---	---	---	---	---	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	0.244	0.175 J	---	---	0.141(J)	0.27	0.426
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.18	0.166	0.215
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	22.3	21.9	---	---	15.9	14.6	13.6
Sodium	None	Not Applicable	Not Applicable	mg/L	---	603	510	---	---	376	348	324
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2590	2520	---	---	---	---	2200	2090
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1
Field Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
				UNFILTERED		FILTERED						
				Units								
Temperature	None	Not Applicable	Not Applicable	°C	23.6	14	---	17.89	24.8	22.45	23.5	17
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.45	10.47	---	10.93	10.4	10.65	10.4	10.39
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2632	2442	---	2486	2350	1998	1986	1999
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.36	---	1.44	0.33	0.55	0.24	0.39
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	130.1	174.9	---	-152.8	-71.2	-140.3	-80.5	-49.7
Turbidity	None	Not Applicable	Not Applicable	NTU	2.04	2.79	1.47	0.49	0.92	2.43	0.34	1
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	9.91	---	11.72	12.39	9.89	10.78	10.46
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

- Notes:
- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
 - mg/L : milligrams per liter.
 - pCi/L : picoCuries per liter.
 - S.U. : Standard Units.
 - °C : degrees Celsius.
 - umhos/cm : micromhos per centimeter.
 - mV : millivolts.
 - NTU : Nephelometric Turbidity Unit.
 - < : Analyte not detected at the laboratory method detection limit (MDL).
 - J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
 - Cells shaded in blue indicate results that are above the laboratory MDL.
 - 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.
 - : no analysis performed.
 - 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.
 - JJ : 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.
 - TOC : Top of Casing.
 - ft : feet.
 - Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
 - New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID:	MW-19S	MW-19S	DUP-1	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	DUP 1	MW-19S (Shallow)	MW-19S (Deep)				
				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	2-Aug-18	10-Aug-18				
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
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	10.9	10.8	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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<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 (ACL)	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 JJ	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---	---				
Molybdenum	None	Not Applicable	0.1 (ACL)	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
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	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	---	---	---	---	---	---	---	---	35.9	---	---	---	---				
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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND													DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Temperature	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				
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	11.14	11.16	---	11.16	11.09	11.08	10.8	10.95	10.72	11.09	---	10.55	10.56				
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3576	3585	---	3389	3602	3575	3546	3526	3552	3530	---	3587	3563				
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	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	None	Not Applicable	Not Applicable	mV	-347.7	-310.2	---	-267.7	-299.3	-270.6	-235.7	-125.3	-215.4	-312.1	---	-227.4	-249				
Turbidity	None	Not Applicable	Not Applicable	NTU	103	1.1	---	0.32	0.34	0.4	0.62	0.43	1.26	0.47	---	0.02	4.16				
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	3.5	2.78	---	3.45	2.66	2.66	3.93	3.93	3.59	3.67	---	---	---				
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	17.88	---	---	---	---	---	---	---	---	---	---	---	---				

- Notes:**
- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
 - mg/L : milligrams per liter.
 - pCi/L : pCiCuries per liter.
 - S.U. : Standard Units.
 - °C : degrees Celsius.
 - umhos/cm : micromhos per centimeter.
 - mV : millivolts.
 - NTU : Nephelometric Turbidity Unit.
 - < : Analyte not detected at the laboratory method detection limit (MDL).
 - J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
 - Cells shaded in blue indicate results that are above the laboratory MDL.
 - 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.
 - : no analysis performed.
 - 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.
JJ : 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.
 - TOC : Top of Casing.
 - ft : feet.
 - Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
 - New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

**ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION**

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID:	MW-19S	MW-19S	MW-19S	MW-19S	MW-19S	DUP 2	MW-19S	MW-19S	DUP 3	
				Sample Date:	3-Oct-18	15-Jan-19	25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21			
Detection Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		ASSESSMENT MON. #5	ASSESSMENT MON. #6	
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
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
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
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
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
Sulfate	250	1,708	Not Applicable	mg/L	1950	1640	1580	1520	1580	1490	1590	1640	1560	1560
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2490	2500	2470	2440	2460	2300	2290	2340	2360	2310
Assessment Monitoring Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		ASSESSMENT MON. #5	ASSESSMENT MON. #6	
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
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
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
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000102 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<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
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.439	0.472	0.463	0.462	0.377	0.402	0.394	0.367	0.398	0.351
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
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
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
Other Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	26.2	25	---	21	23	---	---	19	16	14.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	128	130	132	135	133
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	59.8	---	---	---	92.6	98.7	89.2	63.8	69
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	81.2	---	---	---	35.1	31.4	42.6	71.6	64.4
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0153(J)	<0.0120	<0.0120	<0.012	<0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.012	<0.012
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.043(J)	0.330(J)	0.0310 J	<0.02	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<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
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.373	0.383	0.37	0.457	0.398
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	38.2	37.7	---	---	35.2	34.1	33.7	33.9	29
Sodium	None	Not Applicable	Not Applicable	mg/L	---	801	774	---	---	644	598	610	639	545
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2470	3530	---	---	---	---	---	3860	3500	3540
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	1.52	<1	1.8	<1	<1
Field Parameters				Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Temperature	None	Not Applicable	Not Applicable	°C	25.4	13.4	---	17.92	25.86	22.99	---	23.8	18.3	---
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	---
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3610	3438	---	3524	3552	3309	---	3433	3406	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.33	0.21	---	1.5	0.5	0.36	---	0.16	0.27	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	172.1	-162	---	-281.7	-252.4	-588.1	---	209.2	-191.7	---
Turbidity	None	Not Applicable	Not Applicable	NTU	2.05	5.19	2.24	0.57	0.61	2.86	---	1.24	0.73	---
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	2.45	---	2.53	1.49	3.63	---	3.26	2.7	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---	---

- Notes:
- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
 - mg/L : milligrams per liter.
 - pCi/L : picoCuries per liter.
 - S.U. : Standard Units.
 - °C : degrees Celsius.
 - umhos/cm : micromhos per centimeter.
 - mV : millivolts.
 - NTU : Nephelometric Turbidity Unit.
 - < : Analyte not detected at the laboratory method detection limit (MDL).
 - J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
 - Cells shaded in blue indicate results that are above the laboratory MDL.
 - 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.
 - : no analysis performed.
 - 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.
 - TOC : Top of Casing.
 - ft : feet.
 - Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
 - New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.



ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-20	MW-20	MW-20	DUP 1	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	
					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	MW-20 (Deep)	
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	VERIFICATION SAMPLE
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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	VERIFICATION SAMPLE
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<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	0.00222	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	<0.000100	<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	<0.000100	<0.000100	<0.000100	<0.000100	<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 (ACL)	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 (ACL)	mg/L	0.00120 J	0.00121 J	<0.000500	0.00126 J	<0.0100	<0.00100	<0.00100	<0.00100	<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	<0.000800	<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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	
Bicarbonate Alkalinity as CaCO ₃	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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND										DETECTION MON. #1	VERIFICATION SAMPLE
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	
pH	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	None	Not Applicable	Not Applicable	umhos/cm	1742	2245	2332	---	2364	2259	2057	2088	2083	1999	2345	
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	None	Not Applicable	Not Applicable	mV	-4.6	935	-101	---	-211.5	-167.1	60.7	-7.7	62.1	-57	54.1	
Turbidity	None	Not Applicable	Not Applicable	NTU	1.2	2.96	3.23	---	2.55	1.85	0.38	1.01	1.82	1.95	4.38	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	17.92	18.82	19.12	---	18.69	18.22	18.59	19.01	18.17	17.97	---	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.46	---	---	---	---	---	---	---	---	---	---	

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
-
- no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-20	MW-20		MW-20	MW-20	Dup 1	MW-20	MW-20	MW-20
					4-Oct-18	10-Jan-19		23-Apr-19	30-Sep-19		17-Jun-20	12-Oct-20	31-Mar-21
Detection Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
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
Calcium	None	670.30	Not Applicable	mg/L	448	398	386	327	368	331	320	312	309
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
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
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
Sulfate	250	1,363	Not Applicable	mg/L	1110	977	892	794	1060	1080	870	989	782
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1900	1630	1530	1690	1890	1850	1560	1710	1490
Assessment Monitoring Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
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
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
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
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	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
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
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	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
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
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
Ra-226 + Ra-228 (combined)	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
Other Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5.00	---	<5.00	<5.00	<5.00	---	6.00 J	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	---	<5	---	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	359	---	---	---	---	---	---	---
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	---	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
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
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Field Parameters					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED FILTERED		ASSESSMENT MON. #2	ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Temperature	None	Not Applicable	Not Applicable	°C	24.9	15.2	---	21.57	23.46	---	22.06	21.3	18.61
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.71	6.65	---	7	6.83	---	6.86	6.81	7.07
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	2330	1979	---	1937	2240	---	1795	1981	2605
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.86	0.46	---	1.08	0.56	---	1.11	0.28	0.46
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	29.7	-13	---	-4.3	-15.7	---	-32.8	29	7.6
Turbidity	None	Not Applicable	Not Applicable	NTU	8.14	37.7	2.09	0.38	2.9	---	4.04	2.79	3.99
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	17.42	---	20.72	19.81	---	18.15	18.83	18.15
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
- : no analysis performed.
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID:	MW-21	MW-21	DUP 1	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21		
				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			
Detection Monitoring Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	VERIFICATION SAMPLE
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 Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	VERIFICATION SAMPLE
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	---	---			
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00259	0.00140 J	0.00154 J	0.00145 J	<0.00200	0.000960 J	0.00119 J	<0.000400	0.00155 J	---	---			
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0144	0.0131	0.0128	0.012	0.0202	0.0121	0.0114	0.0107	0.11	---	---			
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.000500	<0.000100	<0.000100	<0.000100	<0.00100	---	---			
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000400	<0.000400	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.00100	---	---			
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000586 J	<0.000500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500	<0.000500	<0.000500	---	---			
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000571 J	<0.000500	<0.000500	0.000403 J	0.000555 J	0.000434 J	0.000316 J	<0.000100	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	0.779	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	None	Not Applicable	0.1 (ACL)	mg/L	0.00385	0.00193 J	0.00188 J	0.00212	<0.000500	0.0023	0.002	0.00175 J	0.00152 J	---	<0.00100			
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000600	<0.000600	<0.000300	<0.00150	0.000512 J	<0.000300	0.00391	<0.000300	---	---			
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	---	---			
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.99 +/- 0.327	1.62 +/- 0.384	1.91 +/- 0.376	2.17 +/- 0.422	1.87 +/- 0.494	2.19 +/- 0.444	1.26 +/- 0.315	2.06 +/- 0.383	0.973 +/- 0.258	---	---			
Other Parameters				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---			
Total Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---			
Carbonate Alkalinity as CaCO ₃	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---			
Bicarbonate Alkalinity as CaCO ₃	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, Ferric, 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				Units	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND												DETECTION MON. #1	VERIFICATION SAMPLE
Temperature	None	Not Applicable	Not Applicable	°C	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	umhos/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	Not Applicable	NTU	2.1	0.32	---	0.3	0.29	0.27	0.84	0.74	1.07	0.28	0.5			
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	22.94	23.28	---	23.84	23.54	23.62	23.92	24.02	24.65	23.04	---			
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	32.96	---	---	---	---	---	---	---	---	---	---			

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
-
- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ATTACHMENT A-1
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: Sample Date:	MW-21	MW-21		MW-21	DUP-2	MW-21	DUP-2	MW-21	MW-21	MW-21	
					3-Oct-18	15-Jan-19		24-Apr-19		2-Oct-19		17-Jun-20	12-Oct-20	31-Mar-21	
					ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6	
Detection Monitoring Parameters					Units	UNFILTERED	FILTERED	UNFILTERED	FILTERED	UNFILTERED	FILTERED	UNFILTERED	FILTERED	UNFILTERED	FILTERED
Boron	None	1.896	Not Applicable	mg/L	3.07	3.96	3.92	3.79	3.63	2.63	2.89	2.84	2.77	2.42	
Calcium	None	670.30	Not Applicable	mg/L	152	187	187	145	142	146	155	139	141	154	
Chloride	250	18.51	Not Applicable	mg/L	21.9	22.1	22	20.6	19.8	22.1	22.2	21.8	22.8	23.3	
Fluoride	4	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	
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	
Sulfate	250	1,591	Not Applicable	mg/L	1610	1670	1710	1440	1530	1560	1530	1470	1780	1660	
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2650	2740	2720	2550	2650	2700	2720	2470	2660	2650	
Assessment Monitoring Parameters					Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
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	
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	
Barium	2	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	
Beryllium	0.004	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	
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	
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	
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000216 J	0.00175 J	0.00140 J	0.000407 J	0.000321 J	0.000227 J	<0.000200	<0.000200	<0.000200	<0.000200	
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	
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	
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	
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	
Molybdenum	None	Not Applicable	0.1 (ACL)	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	
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	
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	
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	
Other Parameters					Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
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	
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	
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	
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	
Field Parameters					Units	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE)		ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5	ASSESSMENT MON. #6
Temperature	None	Not Applicable	Not Applicable	°C	24	13.8	---	18.12	---	24.38	---	23.17	23.2	15.44	
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	
Specific Conductance	None	Not Applicable	Not Applicable	umhos/cm	3627	3585	---	3533	---	3633	---	3352	3516	4806	
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.43	0.59	---	1.23	---	0.64	---	0.65	0.48	5	
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	45.9	-67.1	---	84	---	91.9	---	-38	119.3	25.6	
Turbidity	None	Not Applicable	Not Applicable	NTU	2.38	3.3	1.11	0.44	---	0.26	---	2.04	0.52	1.27	
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	23.46	---	25.72	---	23.66	---	23.89	24.38	23.9	
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---	---	

Notes:

- MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards.
The MCL value for lead is the EPA's Action Level.
- mg/L : milligrams per liter.
- pCi/L : picoCuries per liter.
- S.U. : Standard Units.
- °C : degrees Celsius.
- umhos/cm : micromhos per centimeter.
- mV : millivolts.
- NTU : Nephelometric Turbidity Unit.
- < : Analyte not detected at the laboratory method detection limit (MDL).
- J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
- Cells shaded in blue indicate results that are above the laboratory MDL.
- 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.
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- 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.
- TOC : Top of Casing.
- ft : feet.
- Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
- New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.