wfec western farmers electric cooperative

PO Box 429 Anadarko, OK 73005 (405) 247-3351 www.wfec.com

January 9, 2024

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 Second 2023 Assessment Monitoring
Western Farmers Electric Cooperative – Hugo Power Station, Fort Towson, Oklahoma

Dear Ms. Young:

Western Farmers Electric Cooperative (WFEC) has been conducting assessment monitoring associated with Coal Combustion Residuals (CCR) Units at its Hugo Power Station (HPS). The second 2023 assessment monitoring was conducted September 25-28, 2023. The laboratory reports for the second 2023 assessment monitoring of the Landfill CCR Unit monitoring wells are included in **Attachment A**. Groundwater data summary tables for the Landfill CCR Unit are updated to include results from the second 2023 assessment monitoring are included in **Attachment B**. The Surface Impoundment CCR Unit (CCR3) is clean closed. The Oklahoma Department of Environmental Quality (ODEQ) approved final closure of CCR3 on August 22, 2023. As such, groundwater sampling associated with this unit is no longer required.

Based upon review of data from the second 2023 assessment monitoring meeting QA/QC standards, 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 GWPS at wells associated with its Landfill CCR Unit. In particular, molybdenum was detected at SSLs above the GWPS at monitoring wells MW-15A, MW-16, MW-18, and MW-19S, where previous SSLs exceedances for molybdenum have been historically noted. This submittal addresses OAC 252:517-9-6(g), which requires the owner/operator to prepare a notification identifying OAC 252:517 Appendix B constituents detected at SSLs above the GWPS.

Molybdenum has been historically detected at SSLs above the GWPS at the above mentioned wells and notifications have previously been provided to the 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. Two years of semi-annual sampling was proposed to establish the effectiveness of monitored natural attenuation as a groundwater remedy. The two year sampling period was completed in October 2022. Findings from each semi-annual sampling event were reported to the ODEQ, with findings from the final two year semi-annual sampling event provided to ODEQ in the Fourth Report to Monitor Progress of Semi-Annual Corrective Measures Assessment (CMA) Sampling at Landfill CCR Unit (Altamira, April 10, 2023). From this, molybdenum concentrations appear to have decreased over the sampling

history at monitoring wells MW-15A, MW-16, MW-18, and MW-19S; with decreasing trends apparent at MW-15A, MW-16, and MW-18. The report proposed an additional two years of semi-annual monitoring and reporting to fully evaluate the proposed remedy and to meet the standards listed in OAC 252:517-9-8(b) and (c). The report was accepted by ODEQ in its letter dated May 23, 2023.

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

Sincerely,

Kent Fletcher

Kent Fletcher
Environmental Coordinator

Attachments

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

ATTACHMENT A

SECOND 2023 ASSESSMENT MONITORING – SEPTEMBER 2023
LABORATORY REPORT
(LANDFILL CCR UNIT)

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

October 12, 2023

Chris Schaefer
Altamira
525 central park Dr
Suite 500
Oklahoma City, OK 73013

Work Order: **HS23091613**

Laboratory Results for: **WFEC / CCR Landfill**

Dear Chris Schaefer,

ALS Environmental received 14 sample(s) on Sep 27, 2023 for the analysis presented in the following report.

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

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

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

Sincerely,

Generated By: JUMOKE.LAWAL
Anna Kinchen
Project Manager

Client: Altamira
Project: WFEC / CCR Landfill
Work Order: HS23091613

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS23091613-01	MW-15A	Water		25-Sep-2023 17:03	27-Sep-2023 09:10	☐
HS23091613-02	MW-5S	Water		26-Sep-2023 12:00	27-Sep-2023 09:10	☐
HS23091613-03	MW-14A	Water		26-Sep-2023 15:40	28-Sep-2023 09:15	☐
HS23091613-04	MW-16	Water		27-Sep-2023 12:05	28-Sep-2023 09:15	☐
HS23091613-05	MW-18	Water		27-Sep-2023 15:37	29-Sep-2023 09:20	☐
HS23091613-06	MW-7S	Water		27-Sep-2023 18:03	29-Sep-2023 09:20	☐
HS23091613-07	MW-17	Water		27-Sep-2023 17:00	29-Sep-2023 09:20	☐
HS23091613-08	MW-19S	Water		27-Sep-2023 17:29	29-Sep-2023 09:20	☐
HS23091613-09	Dup 1	Water		27-Sep-2023 00:00	29-Sep-2023 09:20	☐
HS23091613-10	MW-20	Water		28-Sep-2023 10:18	29-Sep-2023 09:20	☐
HS23091613-11	MW-3	Water		28-Sep-2023 10:11	29-Sep-2023 09:20	☐
HS23091613-12	DUP 2	Water		28-Sep-2023 10:18	29-Sep-2023 09:20	☐
HS23091613-13	MW-21	Water		28-Sep-2023 15:15	30-Sep-2023 08:45	☐
HS23091613-14	MW-13	Water		28-Sep-2023 15:33	30-Sep-2023 08:45	☐

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira **CASE NARRATIVE**
Project: WFEC / CCR Landfill
Work Order: HS23091613

Work Order Comments

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

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

Work Order Comments

- Login Notes:
  MW-13 Collection time discrepancy: COC=15:13 Labels=1533

- Per client email dated 10-05-23 - the correct sampling time for MW-13 is 1533. The label is correct.

Metals by Method SW7470A

Batch ID: 201642,201644

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

Metals by Method SW6020A

Batch ID: 201500

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

Batch ID: 201563

Sample ID: MW-19S (HS23091613-08MS)

- Thallium failed for MS/MSD but passed for 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,Potassium,Sodium)

Sample ID: MW-19S (HS23091613-08SD)

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

Batch ID: 201615

Sample ID: MW-19S (HS23091613-08MS)

- 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. Molybdenum

Wet Chemistry by Method M2540C

Batch ID: R447845

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

Batch ID: R448230

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

Batch ID: R448231

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira **CASE NARRATIVE**
Project: WFEC / CCR Landfill
Work Order: HS23091613

Wet Chemistry by Method E300

Batch ID: R447536

Sample ID: MW-5S (HS23091613-02MS)

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

Batch ID: R447646

Sample ID: HS23091740-01MS

- MS and MSD are for an unrelated sample

Sample ID: HS23091616-07MS

- MS and MSD are for an unrelated sample

Batch ID: R447844

Sample ID: HS23091835-21MS

- MS and MSD are for an unrelated sample

Sample ID: MW-13 (HS23091613-14MS)

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

MS and MSD failed QC limit for Nitrogen, Nitrite (AS N)

Wet Chemistry by Method SM2320B

Batch ID: R448460

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

Wet Chemistry by Method SM3500FED

Batch ID: R447503

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

Batch ID: R447660

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

Batch ID: R447658

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

Batch ID: R447888

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

Batch ID: R447889

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira **CASE NARRATIVE**
Project: WFEC / CCR Landfill
Work Order: HS23091613

WetChemistry by Method SM4500H+ B

Batch ID: R447857,R447858,R448461,R448464,R448796

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

WetChemistry by Method E410.4

Batch ID: R448773

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

WetChemistry by Method SM4500 S2-F

Batch ID: R447901,R447946,R447979

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

WetChemistry by Method SM2320B

Batch ID: R447856,R448460

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

WetChemistry by Method M2540C

Batch ID: R447738,R447845,R447962,R448230,R448231

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

WetChemistry by Method M2510 B

Batch ID: R447705,R448504

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

WetChemistry by Method E300

Batch ID: R447844

Sample ID: MW-21 (HS23091613-13)

• The reporting limit is elevated due to dilution for high concentrations of non-target analytes. (Fluoride,Nitrogen, Nitrate (As N))

Batch ID: R447536

Sample ID: HS23090943-04MS

• MS and MSD are for an unrelated sample

Batch ID: R447795

Sample ID: MW-19S(HS23091318-08MS

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

MS and MSD failed QC limit for Nitrogen, Nitrite (AS N)

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-15A
Collection Date: 25-Sep-2023 17:03

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-01
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	**0.173**		**0.0200**	**0.0500**	**mg/L**	1	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 19:05
Arsenic	**0.00126**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 19:05
Barium	**0.0218**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 19:05
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:05
Boron	**3.27**		**1.10**	**2.00**	**mg/L**	100	10-Oct-2023 13:08
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:05
Calcium	**148**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 19:05
Chromium	**0.000804**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 19:05
Cobalt	**0.000304**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 19:05
Iron	**0.756**		**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 19:05
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 19:05
Lithium	**0.0550**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 19:05
Magnesium	**11.6**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 19:05
Molybdenum	**0.158**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 19:05
Potassium	**5.46**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 19:05
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 19:05
Sodium	**608**		**1.40**	**20.0**	**mg/L**	100	10-Oct-2023 13:08
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:05
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 05-Oct-2023		Analyst: JC
Iron	**0.635**		**0.0120**	**0.200**	**mg/L**	1	06-Oct-2023 17:32
Molybdenum	**0.165**		**0.000600**	**0.00500**	**mg/L**	1	06-Oct-2023 17:32
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:12
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**26.2**		**0.200**	**0.500**	**mg/L**	1	27-Sep-2023 14:51
Fluoride	**0.986**		**0.0500**	**0.100**	**mg/L**	1	27-Sep-2023 14:51
Nitrogen, Nitrate (As N)	**0.134**		**0.0300**	**0.100**	**mg/L**	1	27-Sep-2023 14:51
Sulfate	**1,660**		**4.00**	**10.0**	**mg/L**	20	27-Sep-2023 14:57
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**16.0**		**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: NC
Specific Conductivity	**3,380**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	29-Sep-2023 13:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-15A
Collection Date: 25-Sep-2023 17:03

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,570**		**5.00**	**10.0**	**mg/L**	1	28-Sep-2023 14:48
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**186**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:06
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:06
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:06
Alkalinity, Total (As CaCO3)	**186**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:06
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: AB
Ferrous Iron	**0.583**		**0.0200**	**0.0500**	**mg/L**	1	27-Sep-2023 16:26
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: AB
Ferrous Iron, Dissolved	**0.738**		**0.0200**	**0.0500**	**mg/L**	1	27-Sep-2023 16:30
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	02-Oct-2023 13:09
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.93**	H	**0.100**	**0.100**	**pH Units**	1	29-Sep-2023 21:06
Temp Deg C @pH	**20.8**	H	**0**	**0**	**°C**	1	29-Sep-2023 21:06

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-5S
Collection Date: 26-Sep-2023 12:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-02
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	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 19:07
Arsenic	U		0.000400	0.00200	mg/L	1	09-Oct-2023 19:07
Barium	**0.0130**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 19:07
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:07
Boron	**1.68**		**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:10
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:07
Calcium	**57.3**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 19:07
Chromium	**0.000646**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 19:07
Cobalt	U		0.000200	0.00500	mg/L	1	09-Oct-2023 19:07
Iron	**0.0172**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 19:07
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 19:07
Lithium	**0.0544**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 19:07
Magnesium	**6.24**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 19:07
Molybdenum	**0.00307**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 19:07
Potassium	**4.76**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 19:07
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 19:07
Sodium	**309**		**0.700**	**10.0**	**mg/L**	50	10-Oct-2023 13:10
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:07
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 05-Oct-2023		Analyst: JC
Iron	**0.0165**	J	**0.0120**	**0.200**	**mg/L**	1	06-Oct-2023 17:34
Molybdenum	**0.00294**	J	**0.000600**	**0.00500**	**mg/L**	1	06-Oct-2023 17:34
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:13
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**24.8**		**0.200**	**0.500**	**mg/L**	1	27-Sep-2023 15:03
Fluoride	**1.20**		**0.0500**	**0.100**	**mg/L**	1	27-Sep-2023 15:03
Nitrogen, Nitrate (As N)	**0.310**		**0.0300**	**0.100**	**mg/L**	1	27-Sep-2023 15:03
Sulfate	**518**		**4.00**	**10.0**	**mg/L**	20	27-Sep-2023 15:20
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**10.0**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: NC
Specific Conductivity	**1,820**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	29-Sep-2023 13:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-5S
Collection Date: 26-Sep-2023 12:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**956**		**5.00**	**10.0**	**mg/L**	1	29-Sep-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**397**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:12
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:12
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:12
Alkalinity, Total (As CaCO3)	**397**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:12
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: AB
Ferrous Iron	U		0.0200	0.0500	mg/L	1	27-Sep-2023 16:26
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: AB
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	27-Sep-2023 16:30
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	02-Oct-2023 13:09
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**8.09**	H	**0.100**	**0.100**	**pH Units**	1	29-Sep-2023 21:12
Temp Deg C @pH	**20.9**	H	**0**	**0**	**°C**	1	29-Sep-2023 21:12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-14A
Collection Date: 26-Sep-2023 15:40

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-03
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	**0.0780**		**0.0200**	**0.0500**	**mg/L**	1	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 19:09
Arsenic	U		0.000400	0.00200	mg/L	1	09-Oct-2023 19:09
Barium	**0.0104**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 19:09
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:09
Boron	**0.820**		**0.0550**	**0.100**	**mg/L**	5	10-Oct-2023 14:31
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:09
Calcium	**294**		**1.70**	**25.0**	**mg/L**	50	10-Oct-2023 13:12
Chromium	**0.00124**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 19:09
Cobalt	U		0.000200	0.00500	mg/L	1	09-Oct-2023 19:09
Iron	**0.574**		**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 19:09
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 19:09
Lithium	**0.154**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 19:09
Magnesium	**28.1**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 19:09
Molybdenum	U		0.000600	0.00500	mg/L	1	09-Oct-2023 19:09
Potassium	**8.74**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 19:09
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 19:09
Sodium	**397**		**0.700**	**10.0**	**mg/L**	50	10-Oct-2023 13:12
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 19:09
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 05-Oct-2023		Analyst: JC
Iron	**0.541**		**0.0120**	**0.200**	**mg/L**	1	06-Oct-2023 17:36
Molybdenum	U		0.000600	0.00500	mg/L	1	06-Oct-2023 17:36
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:15
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**11.3**		**0.200**	**0.500**	**mg/L**	1	28-Sep-2023 13:17
Fluoride	**0.246**		**0.0500**	**0.100**	**mg/L**	1	28-Sep-2023 13:17
Nitrogen, Nitrate (As N)	**0.0458**	J	**0.0300**	**0.100**	**mg/L**	1	28-Sep-2023 13:17
Sulfate	**1,700**		**10.0**	**25.0**	**mg/L**	50	28-Sep-2023 18:19
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**8.00**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: NC
Specific Conductivity	**3,320**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	29-Sep-2023 13:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-14A
Collection Date: 26-Sep-2023 15:40

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-03
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,780**		**5.00**	**10.0**	**mg/L**	1	29-Sep-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**303**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:18
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:18
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	29-Sep-2023 21:18
Alkalinity, Total (As CaCO3)	**303**		**3.50**	**5.00**	**mg/L**	1	29-Sep-2023 21:18
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	**0.496**		**0.0200**	**0.0500**	**mg/L**	1	28-Sep-2023 15:14
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	**0.527**		**0.0200**	**0.0500**	**mg/L**	1	28-Sep-2023 15:32
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 07:36
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.50**	H	**0.100**	**0.100**	**pH Units**	1	29-Sep-2023 21:18
Temp Deg C @pH	**21.0**	H	**0**	**0**	**°C**	1	29-Sep-2023 21:18

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-16
Collection Date: 27-Sep-2023 12:05

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-04
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	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	**0.121**		**0.0200**	**0.0500**	**mg/L**	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:27
Arsenic	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:27
Barium	**0.0141**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:27
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:27
Boron	**2.35**		**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:28
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:27
Calcium	**128**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 20:27
Chromium	**0.000997**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 20:27
Cobalt	**0.000228**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:27
Iron	**0.0333**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 20:27
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:27
Lithium	**0.0509**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:27
Magnesium	**7.51**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 20:27
Molybdenum	**0.103**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:27
Potassium	**3.87**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 20:27
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:27
Sodium	**336**		**0.700**	**10.0**	**mg/L**	50	10-Oct-2023 13:28
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:27
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 05-Oct-2023		Analyst: JC
Iron	**0.121**	J	**0.0120**	**0.200**	**mg/L**	1	06-Oct-2023 17:38
Molybdenum	**0.0644**		**0.000600**	**0.00500**	**mg/L**	1	06-Oct-2023 17:38
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:42
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**43.4**		**0.200**	**0.500**	**mg/L**	1	28-Sep-2023 13:46
Fluoride	**1.43**		**0.0500**	**0.100**	**mg/L**	1	28-Sep-2023 13:46
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	28-Sep-2023 13:46
Sulfate	**1,100**		**10.0**	**25.0**	**mg/L**	50	28-Sep-2023 18:48
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**7.00**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: NC
Specific Conductivity	**2,980**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	29-Sep-2023 13:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-16
Collection Date: 27-Sep-2023 12:05

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-04
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,970**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**400**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:10
Alkalinity, Carbonate (As CaCO3)	**7.80**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:10
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:10
Alkalinity, Total (As CaCO3)	**408**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:10
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	**0.0870**		**0.0200**	**0.0500**	**mg/L**	1	28-Sep-2023 15:14
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	28-Sep-2023 15:32
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**8.29**	H	**0.100**	**0.100**	**pH Units**	1	29-Sep-2023 22:48
Temp Deg C @pH	**21.3**	H	**0**	**0**	**°C**	1	29-Sep-2023 22:48

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-18
Collection Date: 27-Sep-2023 15:37

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-05
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	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:29
Arsenic	**0.00343**		**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 20:29
Barium	**0.00268**	J	**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:29
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:29
Boron	**4.81**		**1.10**	**2.00**	**mg/L**	100	10-Oct-2023 13:30
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:29
Calcium	**18.4**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 20:29
Chromium	U		0.000400	0.00400	mg/L	1	09-Oct-2023 20:29
Cobalt	U		0.000200	0.00500	mg/L	1	09-Oct-2023 20:29
Iron	**0.0122**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 20:29
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:29
Lithium	**0.00294**	J	**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:29
Magnesium	**0.211**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 20:29
Molybdenum	**0.197**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:29
Potassium	**15.8**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 20:29
Selenium	**0.0221**		**0.00110**	**0.00200**	**mg/L**	1	09-Oct-2023 20:29
Sodium	**421**		**1.40**	**20.0**	**mg/L**	100	10-Oct-2023 13:30
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:29
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 09-Oct-2023		Analyst: MSC
Iron	U		0.0120	0.200	mg/L	1	09-Oct-2023 22:01
Molybdenum	**0.200**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 22:01
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:44
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**5.10**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 12:26
Fluoride	**1.57**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 12:26
Nitrogen, Nitrate (As N)	**0.0666**	J	**0.0300**	**0.100**	**mg/L**	1	29-Sep-2023 12:26
Sulfate	**997**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 13:58
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**22.0**		**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**2,000**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-18
Collection Date: 27-Sep-2023 15:37

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-05
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,120**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:15
Alkalinity, Carbonate (As CaCO3)	**40.2**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:15
Alkalinity, Hydroxide (As CaCO3)	**18.6**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:15
Alkalinity, Total (As CaCO3)	**58.8**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:15
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	29-Sep-2023 12:30
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	**0.0660**		**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 14:22
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**10.0**	H	**0.100**	**0.100**	**pH Units**	1	06-Oct-2023 18:15
Temp Deg C @pH	**19.5**	H	**0**	**0**	**°C**	1	06-Oct-2023 18:15

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-7S
Collection Date: 27-Sep-2023 18:03

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-06
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	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:31
Arsenic	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:31
Barium	**0.0167**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:31
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:31
Boron	**2.28**		**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:33
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:31
Calcium	**119**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 20:31
Chromium	U		0.000400	0.00400	mg/L	1	09-Oct-2023 20:31
Cobalt	**0.000203**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:31
Iron	**0.199**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 20:31
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:31
Lithium	**0.0719**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:31
Magnesium	**14.3**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 20:31
Molybdenum	**0.00135**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:31
Potassium	**6.10**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 20:31
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:31
Sodium	**290**		**0.700**	**10.0**	**mg/L**	50	10-Oct-2023 13:33
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:31
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 09-Oct-2023		Analyst: MSC
Iron	**0.125**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 22:04
Molybdenum	**0.00114**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 22:04
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:45
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**17.0**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 12:32
Fluoride	**0.628**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 12:32
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	29-Sep-2023 12:32
Sulfate	**778**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 14:04
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**13.0**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**1,970**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-7S
Collection Date: 27-Sep-2023 18:03

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-06
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,150**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**288**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:20
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:20
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:20
Alkalinity, Total (As CaCO3)	**288**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:20
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	**0.206**		**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 12:30
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	**0.222**		**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 14:22
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**8.10**	H	**0.100**	**0.100**	**pH Units**	1	06-Oct-2023 18:20
Temp Deg C @pH	**19.2**	H	**0**	**0**	**°C**	1	06-Oct-2023 18:20

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-17
Collection Date: 27-Sep-2023 17:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-07
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	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:33
Arsenic	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:33
Barium	U		0.00190	0.00400	mg/L	1	09-Oct-2023 20:33
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:33
Boron	**0.650**		**0.220**	**0.400**	**mg/L**	20	10-Oct-2023 13:35
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:33
Calcium	**561**		**0.680**	**10.0**	**mg/L**	20	10-Oct-2023 13:35
Chromium	**0.000569**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 20:33
Cobalt	**0.000294**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:33
Iron	**0.0122**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 20:33
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:33
Lithium	**0.143**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:33
Magnesium	**36.4**		**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 20:33
Molybdenum	U		0.000600	0.00500	mg/L	1	09-Oct-2023 20:33
Potassium	**5.43**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 20:33
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:33
Sodium	**35.1**		**0.280**	**4.00**	**mg/L**	20	10-Oct-2023 13:35
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:33
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 09-Oct-2023		Analyst: MSC
Iron	U		0.0120	0.200	mg/L	1	09-Oct-2023 22:06
Molybdenum	U		0.000600	0.00500	mg/L	1	09-Oct-2023 22:06
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:47
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**4.00**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:12
Fluoride	**0.311**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:12
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	29-Sep-2023 13:12
Sulfate	**1,470**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 14:56
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**9.00**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**2,480**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-17
Collection Date: 27-Sep-2023 17:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,270**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	**257**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:26
Alkalinity, Carbonate (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:26
Alkalinity, Hydroxide (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:26
Alkalinity, Total (As CaCO3)	**257**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:26
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	29-Sep-2023 12:30
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	**0.0280**	J	**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 14:22
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.73**	H	**0.100**	**0.100**	**pH Units**	1	06-Oct-2023 18:26
Temp Deg C @pH	**19.2**	H	**0**	**0**	**°C**	1	06-Oct-2023 18:26

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-19S
Collection Date: 27-Sep-2023 17:29

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-08
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	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	**0.000595**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 18:51
Arsenic	**0.00702**		**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 18:51
Barium	**0.0170**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 18:51
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 18:51
Boron	**9.51**		**1.10**	**2.00**	**mg/L**	100	10-Oct-2023 13:21
Cadmium	**0.000342**	J	**0.000200**	**0.00200**	**mg/L**	1	09-Oct-2023 18:51
Calcium	**41.7**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 18:51
Chromium	**0.00118**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 18:51
Cobalt	**0.000266**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 18:51
Iron	**0.0322**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 18:51
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 18:51
Lithium	**0.00176**	J	**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 18:51
Magnesium	**0.0892**	J	**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 18:51
Molybdenum	**0.450**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 18:51
Potassium	**37.2**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 18:51
Selenium	**0.0135**		**0.00110**	**0.00200**	**mg/L**	1	09-Oct-2023 18:51
Sodium	**830**		**1.40**	**20.0**	**mg/L**	100	10-Oct-2023 13:21
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 18:51
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 09-Oct-2023		Analyst: MSC
Iron	U		0.0120	0.200	mg/L	1	09-Oct-2023 21:45
Molybdenum	**0.417**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 21:45
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 14:57
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**12.5**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:18
Fluoride	**1.28**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:18
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	29-Sep-2023 13:18
Sulfate	**1,480**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 15:02
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**25.0**		**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**3,210**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-19S
Collection Date: 27-Sep-2023 17:29

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-08
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,250**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:31
Alkalinity, Carbonate (As CaCO3)	**53.0**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:31
Alkalinity, Hydroxide (As CaCO3)	**63.2**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:31
Alkalinity, Total (As CaCO3)	**116**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:31
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	**0.0510**		**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 12:30
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	**0.0710**		**0.0200**	**0.0500**	**mg/L**	1	29-Sep-2023 14:22
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**10.6**	H	**0.100**	**0.100**	**pH Units**	1	06-Oct-2023 18:31
Temp Deg C @pH	**19.2**	H	**0**	**0**	**°C**	1	06-Oct-2023 18:31

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: Dup 1
Collection Date: 27-Sep-2023 00:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-09
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	**0.0450**	J	**0.0200**	**0.0500**	**mg/L**	1	11-Oct-2023 14:36
FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED		**Method:SM3500FED (dissolved)**					Analyst: JHD
Ferric Iron, Dissolved	U		0.0200	0.0500	mg/L	1	11-Oct-2023 14:41
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:36
Arsenic	**0.00357**		**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 20:36
Barium	**0.00246**	J	**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:36
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:36
Boron	**4.06**		**1.10**	**2.00**	**mg/L**	100	10-Oct-2023 13:37
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:36
Calcium	**18.4**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 20:36
Chromium	**0.000611**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 20:36
Cobalt	U		0.000200	0.00500	mg/L	1	09-Oct-2023 20:36
Iron	**0.0450**	J	**0.0120**	**0.200**	**mg/L**	1	09-Oct-2023 20:36
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:36
Lithium	**0.00219**	J	**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:36
Magnesium	**0.0965**	J	**0.0100**	**0.200**	**mg/L**	1	09-Oct-2023 20:36
Molybdenum	**0.203**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:36
Potassium	**16.1**		**0.0180**	**0.200**	**mg/L**	1	09-Oct-2023 20:36
Selenium	**0.0260**		**0.00110**	**0.00200**	**mg/L**	1	09-Oct-2023 20:36
Sodium	**382**		**1.40**	**20.0**	**mg/L**	100	10-Oct-2023 13:37
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:36
DISSOLVED METALS BY SW6020A		**Method:SW6020A (dissolved)**			Prep:SW3010A / 09-Oct-2023		Analyst: MSC
Iron	U		0.0120	0.200	mg/L	1	09-Oct-2023 22:08
Molybdenum	**0.198**		**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 22:08
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:06
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**5.19**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:35
Fluoride	**1.65**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:35
Nitrogen, Nitrate (As N)	**0.0729**	J	**0.0300**	**0.100**	**mg/L**	1	29-Sep-2023 13:35
Sulfate	**895**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 15:08
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**17.0**		**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**1,990**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: Dup 1
Collection Date: 27-Sep-2023 00:00

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-09
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,200**		**5.00**	**10.0**	**mg/L**	1	02-Oct-2023 13:00
ALKALINITY BY -2011		**Method:SM2320B**					Analyst: DW
Alkalinity, Bicarbonate (As CaCO3)	U		3.50	5.00	mg/L	1	06-Oct-2023 18:41
Alkalinity, Carbonate (As CaCO3)	**37.2**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:41
Alkalinity, Hydroxide (As CaCO3)	**21.8**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:41
Alkalinity, Total (As CaCO3)	**59.0**		**3.50**	**5.00**	**mg/L**	1	06-Oct-2023 18:41
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	U		0.0200	0.0500	mg/L	1	29-Sep-2023 12:30
FERROUS IRON BY SM3500 FE D		**Method:SM3500FED (dissolved)**					Analyst: MZD
Ferrous Iron, Dissolved	U		0.0200	0.0500	mg/L	1	29-Sep-2023 14:22
SULFIDE BY SM4500 S2-F-2011		**Method:SM4500 S2-F**					Analyst: CD
Sulfide	U		1.70	2.00	mg/L	1	03-Oct-2023 11:13
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**10.1**	H	**0.100**	**0.100**	**pH Units**	1	06-Oct-2023 18:41
Temp Deg C @pH	**20.2**	H	**0**	**0**	**°C**	1	06-Oct-2023 18:41

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-20
Collection Date: 28-Sep-2023 10:18

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-10
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:38
Arsenic	**0.00105**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 20:38
Barium	**0.0114**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:38
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:38
Boron	**0.646**	J	**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:39
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:38
Calcium	**327**		**1.70**	**25.0**	**mg/L**	50	10-Oct-2023 13:39
Chromium	U		0.000400	0.00400	mg/L	1	09-Oct-2023 20:38
Cobalt	**0.00106**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:38
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:38
Lithium	**0.0966**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:38
Molybdenum	**0.00110**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:38
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:38
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:38
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:08
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**5.10**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:41
Fluoride	**0.311**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:41
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	29-Sep-2023 13:41
Sulfate	**776**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 15:14
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**11.0**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**2,140**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,660**		**5.00**	**10.0**	**mg/L**	1	04-Oct-2023 11:24
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.81**	H	**0.100**	**0.100**	**pH Units**	1	11-Oct-2023 19:08
Temp Deg C @pH	**20.0**	H	**0**	**0**	**°C**	1	11-Oct-2023 19:08

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-3
Collection Date: 28-Sep-2023 10:11

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-11
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:40
Arsenic	**0.000542**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 20:40
Barium	**0.0147**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:40
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:40
Boron	**2.41**		**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:48
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:40
Calcium	**294**		**1.70**	**25.0**	**mg/L**	50	10-Oct-2023 13:48
Chromium	**0.000475**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 20:40
Cobalt	**0.000683**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:40
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:40
Lithium	**0.132**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:40
Molybdenum	**0.000685**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:40
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:40
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:40
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:09
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**8.44**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:47
Fluoride	**0.311**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:47
Nitrogen, Nitrate (As N)	**0.0654**	J	**0.0300**	**0.100**	**mg/L**	1	29-Sep-2023 13:47
Sulfate	**1,540**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 15:19
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**14.0**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**2,890**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,200**		**5.00**	**10.0**	**mg/L**	1	04-Oct-2023 11:24
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.53**	H	**0.100**	**0.100**	**pH Units**	1	11-Oct-2023 19:10
Temp Deg C @pH	**20.0**	H	**0**	**0**	**°C**	1	11-Oct-2023 19:10

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: DUP 2
Collection Date: 28-Sep-2023 10:18

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-12
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 20:42
Arsenic	**0.00108**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 20:42
Barium	**0.0129**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 20:42
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:42
Boron	**0.953**		**0.0550**	**0.100**	**mg/L**	5	10-Oct-2023 14:29
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:42
Calcium	**346**		**1.70**	**25.0**	**mg/L**	50	10-Oct-2023 13:51
Chromium	U		0.000400	0.00400	mg/L	1	09-Oct-2023 20:42
Cobalt	**0.00113**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 20:42
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 20:42
Lithium	**0.113**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 20:42
Molybdenum	**0.000874**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 20:42
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 20:42
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 20:42
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:11
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**5.13**		**0.200**	**0.500**	**mg/L**	1	29-Sep-2023 13:53
Fluoride	**0.295**		**0.0500**	**0.100**	**mg/L**	1	29-Sep-2023 13:53
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	29-Sep-2023 13:53
Sulfate	**1,030**		**4.00**	**10.0**	**mg/L**	20	29-Sep-2023 15:25
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**10.0**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**2,110**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**1,500**		**5.00**	**10.0**	**mg/L**	1	04-Oct-2023 11:24
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.88**	H	**0.100**	**0.100**	**pH Units**	1	11-Oct-2023 19:12
Temp Deg C @pH	**20.1**	H	**0**	**0**	**°C**	1	11-Oct-2023 19:12

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-21
Collection Date: 28-Sep-2023 15:15

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-13
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 21:14
Arsenic	**0.000792**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 21:14
Barium	**0.0107**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 21:14
Beryllium	**0.000260**	J	**0.000200**	**0.00200**	**mg/L**	1	09-Oct-2023 21:14
Boron	**2.30**		**0.550**	**1.00**	**mg/L**	50	10-Oct-2023 13:53
Cadmium	**0.000268**	J	**0.000200**	**0.00200**	**mg/L**	1	09-Oct-2023 21:14
Calcium	**144**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 21:14
Chromium	**0.000470**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 21:14
Cobalt	**0.000332**	J	**0.000200**	**0.00500**	**mg/L**	1	09-Oct-2023 21:14
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 21:14
Lithium	**0.124**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 21:14
Molybdenum	**0.000824**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 21:14
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 21:14
Thallium	**0.000250**	J	**0.000200**	**0.00200**	**mg/L**	1	09-Oct-2023 21:14
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:13
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**22.1**		**0.400**	**1.00**	**mg/L**	2	30-Sep-2023 11:05
Fluoride	**0.553**		**0.100**	**0.200**	**mg/L**	2	30-Sep-2023 11:05
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	30-Sep-2023 11:05
Sulfate	**1,760**		**10.0**	**25.0**	**mg/L**	50	30-Sep-2023 11:11
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**6.00**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**3,590**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,320**		**5.00**	**10.0**	**mg/L**	1	04-Oct-2023 13:00
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.88**	H	**0.100**	**0.100**	**pH Units**	1	11-Oct-2023 19:14
Temp Deg C @pH	**20.1**	H	**0**	**0**	**°C**	1	11-Oct-2023 19:14

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

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
Sample ID: MW-13
Collection Date: 28-Sep-2023 15:33

ANALYTICAL REPORT
WorkOrder:HS23091613
Lab ID:HS23091613-14
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020A**			Prep:SW3010A / 06-Oct-2023		Analyst: MSC
Antimony	U		0.000400	0.00200	mg/L	1	09-Oct-2023 21:16
Arsenic	**0.000451**	J	**0.000400**	**0.00200**	**mg/L**	1	09-Oct-2023 21:16
Barium	**0.00961**		**0.00190**	**0.00400**	**mg/L**	1	09-Oct-2023 21:16
Beryllium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 21:16
Boron	**2.14**		**1.10**	**2.00**	**mg/L**	100	10-Oct-2023 13:55
Cadmium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 21:16
Calcium	**156**		**0.0340**	**0.500**	**mg/L**	1	09-Oct-2023 21:16
Chromium	**0.000536**	J	**0.000400**	**0.00400**	**mg/L**	1	09-Oct-2023 21:16
Cobalt	U		0.000200	0.00500	mg/L	1	09-Oct-2023 21:16
Lead	U		0.000600	0.00200	mg/L	1	09-Oct-2023 21:16
Lithium	**0.127**		**0.00100**	**0.00500**	**mg/L**	1	09-Oct-2023 21:16
Molybdenum	**0.000857**	J	**0.000600**	**0.00500**	**mg/L**	1	09-Oct-2023 21:16
Selenium	U		0.00110	0.00200	mg/L	1	09-Oct-2023 21:16
Thallium	U		0.000200	0.00200	mg/L	1	09-Oct-2023 21:16
MERCURY BY SW7470A		**Method:SW7470A**			Prep:SW7470A / 09-Oct-2023		Analyst: JS
Mercury	U		0.0000300	0.000200	mg/L	1	09-Oct-2023 15:14
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**19.7**		**0.200**	**0.500**	**mg/L**	1	30-Sep-2023 10:42
Fluoride	**0.414**		**0.0500**	**0.100**	**mg/L**	1	30-Sep-2023 10:42
Nitrogen, Nitrate (As N)	**0.0853**	J	**0.0300**	**0.100**	**mg/L**	1	30-Sep-2023 10:42
Sulfate	**1,600**		**4.00**	**10.0**	**mg/L**	20	30-Sep-2023 10:59
CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**6.00**	J	**5.00**	**15.0**	**mg/L**	1	11-Oct-2023 15:00
SPECIFIC CONDUCTANCE BY SM 2510B-2011		**Method:M2510 B**					Analyst: CD
Specific Conductivity	**3,390**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	09-Oct-2023 12:07
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: DC
Total Dissolved Solids (Residue, Filterable)	**2,040**		**5.00**	**10.0**	**mg/L**	1	04-Oct-2023 13:00
PH BY SM4500H+ B-2011		**Method:SM4500H+ B**					Analyst: DW
pH	**7.98**	H	**0.100**	**0.100**	**pH Units**	1	11-Oct-2023 19:16
Temp Deg C @pH	**20.1**	H	**0**	**0**	**°C**	1	11-Oct-2023 19:16

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

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

Batch ID: 201500 **Start Date:** 05 Oct 2023 15:30 **End Date:** 05 Oct 2023 15:30
Method: DISS METALS PREP - WATER - SW3010A **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23091613-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-04		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 201563 **Start Date:** 06 Oct 2023 12:00 **End Date:** 06 Oct 2023 12:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23091613-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-14		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 201615 **Start Date:** 09 Oct 2023 08:30 **End Date:** 09 Oct 2023 08:30
Method: DISS METALS PREP - WATER - SW3010A **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23091613-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-09		10 (mL)	10 (mL)	1	120 plastic HNO3

Batch ID: 201642 **Start Date:** 09 Oct 2023 08:00 **End Date:** 09 Oct 2023 08:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23091613-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-03		10 (mL)	10 (mL)	1	120 plastic HNO3

RIGHT SOLUTIONS | RIGHT PARTNER

Weight / Prep Log

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

Batch ID: 201644 **Start Date:** 09 Oct 2023 08:30 **End Date:** 09 Oct 2023 08:30
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS23091613-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-08		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-10		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-11		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-12		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-13		10 (mL)	10 (mL)	1	120 plastic HNO3
HS23091613-14		10 (mL)	10 (mL)	1	120 plastic HNO3

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 201500 (0)	**Test Name :** DISSOLVED METALS BY SW6020A				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03		05 Oct 2023 15:30	06 Oct 2023 17:32	1
HS23091613-02	MW-5S	26 Sep 2023 12:00		05 Oct 2023 15:30	06 Oct 2023 17:34	1
HS23091613-03	MW-14A	26 Sep 2023 15:40		05 Oct 2023 15:30	06 Oct 2023 17:36	1
HS23091613-04	MW-16	27 Sep 2023 12:05		05 Oct 2023 15:30	06 Oct 2023 17:38	1
Batch ID: 201563 (0)	**Test Name :** ICP-MS METALS BY SW6020A				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03		06 Oct 2023 12:00	10 Oct 2023 13:08	100
HS23091613-01	MW-15A	25 Sep 2023 17:03		06 Oct 2023 12:00	09 Oct 2023 19:05	1
HS23091613-02	MW-5S	26 Sep 2023 12:00		06 Oct 2023 12:00	10 Oct 2023 13:10	50
HS23091613-02	MW-5S	26 Sep 2023 12:00		06 Oct 2023 12:00	09 Oct 2023 19:07	1
HS23091613-03	MW-14A	26 Sep 2023 15:40		06 Oct 2023 12:00	10 Oct 2023 14:31	5
HS23091613-03	MW-14A	26 Sep 2023 15:40		06 Oct 2023 12:00	10 Oct 2023 13:12	50
HS23091613-03	MW-14A	26 Sep 2023 15:40		06 Oct 2023 12:00	09 Oct 2023 19:09	1
HS23091613-04	MW-16	27 Sep 2023 12:05		06 Oct 2023 12:00	10 Oct 2023 13:28	50
HS23091613-04	MW-16	27 Sep 2023 12:05		06 Oct 2023 12:00	09 Oct 2023 20:27	1
HS23091613-05	MW-18	27 Sep 2023 15:37		06 Oct 2023 12:00	10 Oct 2023 13:30	100
HS23091613-05	MW-18	27 Sep 2023 15:37		06 Oct 2023 12:00	09 Oct 2023 20:29	1
HS23091613-06	MW-7S	27 Sep 2023 18:03		06 Oct 2023 12:00	10 Oct 2023 13:33	50
HS23091613-06	MW-7S	27 Sep 2023 18:03		06 Oct 2023 12:00	09 Oct 2023 20:31	1
HS23091613-07	MW-17	27 Sep 2023 17:00		06 Oct 2023 12:00	10 Oct 2023 13:35	20
HS23091613-07	MW-17	27 Sep 2023 17:00		06 Oct 2023 12:00	09 Oct 2023 20:33	1
HS23091613-08	MW-19S	27 Sep 2023 17:29		06 Oct 2023 12:00	10 Oct 2023 13:21	100
HS23091613-08	MW-19S	27 Sep 2023 17:29		06 Oct 2023 12:00	09 Oct 2023 18:51	1
HS23091613-09	Dup 1	27 Sep 2023 00:00		06 Oct 2023 12:00	10 Oct 2023 13:37	100
HS23091613-09	Dup 1	27 Sep 2023 00:00		06 Oct 2023 12:00	09 Oct 2023 20:36	1
HS23091613-10	MW-20	28 Sep 2023 10:18		06 Oct 2023 12:00	10 Oct 2023 13:39	50
HS23091613-10	MW-20	28 Sep 2023 10:18		06 Oct 2023 12:00	09 Oct 2023 20:38	1
HS23091613-11	MW-3	28 Sep 2023 10:11		06 Oct 2023 12:00	10 Oct 2023 13:48	50
HS23091613-11	MW-3	28 Sep 2023 10:11		06 Oct 2023 12:00	09 Oct 2023 20:40	1
HS23091613-12	DUP 2	28 Sep 2023 10:18		06 Oct 2023 12:00	10 Oct 2023 14:29	5
HS23091613-12	DUP 2	28 Sep 2023 10:18		06 Oct 2023 12:00	10 Oct 2023 13:51	50
HS23091613-12	DUP 2	28 Sep 2023 10:18		06 Oct 2023 12:00	09 Oct 2023 20:42	1
HS23091613-13	MW-21	28 Sep 2023 15:15		06 Oct 2023 12:00	10 Oct 2023 13:53	50
HS23091613-13	MW-21	28 Sep 2023 15:15		06 Oct 2023 12:00	09 Oct 2023 21:14	1
HS23091613-14	MW-13	28 Sep 2023 15:33		06 Oct 2023 12:00	10 Oct 2023 13:55	100
HS23091613-14	MW-13	28 Sep 2023 15:33		06 Oct 2023 12:00	09 Oct 2023 21:16	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 201615 (0)	**Test Name :** DISSOLVED METALS BY SW6020A				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37		09 Oct 2023 08:30	09 Oct 2023 22:01	1
HS23091613-06	MW-7S	27 Sep 2023 18:03		09 Oct 2023 08:30	09 Oct 2023 22:04	1
HS23091613-07	MW-17	27 Sep 2023 17:00		09 Oct 2023 08:30	09 Oct 2023 22:06	1
HS23091613-08	MW-19S	27 Sep 2023 17:29		09 Oct 2023 08:30	09 Oct 2023 21:45	1
HS23091613-09	Dup 1	27 Sep 2023 00:00		09 Oct 2023 08:30	09 Oct 2023 22:08	1
Batch ID: 201642 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03		09 Oct 2023 08:00	09 Oct 2023 14:12	1
HS23091613-02	MW-5S	26 Sep 2023 12:00		09 Oct 2023 08:00	09 Oct 2023 14:13	1
HS23091613-03	MW-14A	26 Sep 2023 15:40		09 Oct 2023 08:00	09 Oct 2023 14:15	1
Batch ID: 201644 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS23091613-04	MW-16	27 Sep 2023 12:05		09 Oct 2023 08:30	09 Oct 2023 14:42	1
HS23091613-05	MW-18	27 Sep 2023 15:37		09 Oct 2023 08:30	09 Oct 2023 14:44	1
HS23091613-06	MW-7S	27 Sep 2023 18:03		09 Oct 2023 08:30	09 Oct 2023 14:45	1
HS23091613-07	MW-17	27 Sep 2023 17:00		09 Oct 2023 08:30	09 Oct 2023 14:47	1
HS23091613-08	MW-19S	27 Sep 2023 17:29		09 Oct 2023 08:30	09 Oct 2023 14:57	1
HS23091613-09	Dup 1	27 Sep 2023 00:00		09 Oct 2023 08:30	09 Oct 2023 15:06	1
HS23091613-10	MW-20	28 Sep 2023 10:18		09 Oct 2023 08:30	09 Oct 2023 15:08	1
HS23091613-11	MW-3	28 Sep 2023 10:11		09 Oct 2023 08:30	09 Oct 2023 15:09	1
HS23091613-12	DUP 2	28 Sep 2023 10:18		09 Oct 2023 08:30	09 Oct 2023 15:11	1
HS23091613-13	MW-21	28 Sep 2023 15:15		09 Oct 2023 08:30	09 Oct 2023 15:13	1
HS23091613-14	MW-13	28 Sep 2023 15:33		09 Oct 2023 08:30	09 Oct 2023 15:14	1
Batch ID: R447500 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			27 Sep 2023 16:26	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			27 Sep 2023 16:26	1
Batch ID: R447503 (0)	**Test Name :** FERROUS IRON BY SM3500 FE D				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			27 Sep 2023 16:30	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			27 Sep 2023 16:30	1
Batch ID: R447536 (0)	**Test Name :** ANIONS BY E300.0, REV 2.1, 1993				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			27 Sep 2023 14:57	20
HS23091613-01	MW-15A	25 Sep 2023 17:03			27 Sep 2023 14:51	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			27 Sep 2023 15:20	20
HS23091613-02	MW-5S	26 Sep 2023 12:00			27 Sep 2023 15:03	1
Batch ID: R447646 (0)	**Test Name :** ANIONS BY E300.0, REV 2.1, 1993				**Matrix:** Water	
HS23091613-03	MW-14A	26 Sep 2023 15:40			28 Sep 2023 18:19	50
HS23091613-03	MW-14A	26 Sep 2023 15:40			28 Sep 2023 13:17	1
HS23091613-04	MW-16	27 Sep 2023 12:05			28 Sep 2023 18:48	50
HS23091613-04	MW-16	27 Sep 2023 12:05			28 Sep 2023 13:46	1

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Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R447658 (0)	**Test Name :** FERROUS IRON BY SM3500 FE D				**Matrix:** Water	
HS23091613-03	MW-14A	26 Sep 2023 15:40			28 Sep 2023 15:32	1
HS23091613-04	MW-16	27 Sep 2023 12:05			28 Sep 2023 15:32	1
Batch ID: R447660 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS23091613-03	MW-14A	26 Sep 2023 15:40			28 Sep 2023 15:14	1
HS23091613-04	MW-16	27 Sep 2023 12:05			28 Sep 2023 15:14	1
Batch ID: R447705 (0)	**Test Name :** SPECIFIC CONDUCTANCE BY SM 2510B-2011				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			29 Sep 2023 13:07	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			29 Sep 2023 13:07	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			29 Sep 2023 13:07	1
HS23091613-04	MW-16	27 Sep 2023 12:05			29 Sep 2023 13:07	1
Batch ID: R447738 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			28 Sep 2023 14:48	1
Batch ID: R447795 (0)	**Test Name :** ANIONS BY E300.0, REV 2.1, 1993				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37			29 Sep 2023 13:58	20
HS23091613-05	MW-18	27 Sep 2023 15:37			29 Sep 2023 12:26	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			29 Sep 2023 14:04	20
HS23091613-06	MW-7S	27 Sep 2023 18:03			29 Sep 2023 12:32	1
HS23091613-07	MW-17	27 Sep 2023 17:00			29 Sep 2023 14:56	20
HS23091613-07	MW-17	27 Sep 2023 17:00			29 Sep 2023 13:12	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			29 Sep 2023 15:02	20
HS23091613-08	MW-19S	27 Sep 2023 17:29			29 Sep 2023 13:18	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			29 Sep 2023 15:08	20
HS23091613-09	Dup 1	27 Sep 2023 00:00			29 Sep 2023 13:35	1
HS23091613-10	MW-20	28 Sep 2023 10:18			29 Sep 2023 15:14	20
HS23091613-10	MW-20	28 Sep 2023 10:18			29 Sep 2023 13:41	1
HS23091613-11	MW-3	28 Sep 2023 10:11			29 Sep 2023 15:19	20
HS23091613-11	MW-3	28 Sep 2023 10:11			29 Sep 2023 13:47	1
HS23091613-12	DUP 2	28 Sep 2023 10:18			29 Sep 2023 15:25	20
HS23091613-12	DUP 2	28 Sep 2023 10:18			29 Sep 2023 13:53	1
Batch ID: R447844 (0)	**Test Name :** ANIONS BY E300.0, REV 2.1, 1993				**Matrix:** Water	
HS23091613-13	MW-21	28 Sep 2023 15:15			30 Sep 2023 11:11	50
HS23091613-13	MW-21	28 Sep 2023 15:15			30 Sep 2023 11:05	2
HS23091613-14	MW-13	28 Sep 2023 15:33			30 Sep 2023 10:59	20
HS23091613-14	MW-13	28 Sep 2023 15:33			30 Sep 2023 10:42	1
Batch ID: R447845 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS23091613-02	MW-5S	26 Sep 2023 12:00			29 Sep 2023 13:00	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			29 Sep 2023 13:00	1

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Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R447856 (0)	**Test Name :** ALKALINITY BY -2011				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			29 Sep 2023 21:06	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			29 Sep 2023 21:12	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			29 Sep 2023 21:18	1
Batch ID: R447857 (0)	**Test Name :** PH BY SM4500H+ B-2011				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			29 Sep 2023 21:06	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			29 Sep 2023 21:12	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			29 Sep 2023 21:18	1
Batch ID: R447858 (0)	**Test Name :** PH BY SM4500H+ B-2011				**Matrix:** Water	
HS23091613-04	MW-16	27 Sep 2023 12:05			29 Sep 2023 22:48	1
Batch ID: R447888 (0)	**Test Name :** FERROUS IRON BY SM3500 FE D				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37			29 Sep 2023 14:22	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			29 Sep 2023 14:22	1
HS23091613-07	MW-17	27 Sep 2023 17:00			29 Sep 2023 14:22	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			29 Sep 2023 14:22	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			29 Sep 2023 14:22	1
Batch ID: R447889 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37			29 Sep 2023 12:30	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			29 Sep 2023 12:30	1
HS23091613-07	MW-17	27 Sep 2023 17:00			29 Sep 2023 12:30	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			29 Sep 2023 12:30	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			29 Sep 2023 12:30	1
Batch ID: R447901 (0)	**Test Name :** SULFIDE BY SM4500 S2-F-2011				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			02 Oct 2023 13:09	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			02 Oct 2023 13:09	1
Batch ID: R447946 (0)	**Test Name :** SULFIDE BY SM4500 S2-F-2011				**Matrix:** Water	
HS23091613-03	MW-14A	26 Sep 2023 15:40			03 Oct 2023 07:36	1
Batch ID: R447962 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS23091613-04	MW-16	27 Sep 2023 12:05			02 Oct 2023 13:00	1
HS23091613-05	MW-18	27 Sep 2023 15:37			02 Oct 2023 13:00	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			02 Oct 2023 13:00	1
HS23091613-07	MW-17	27 Sep 2023 17:00			02 Oct 2023 13:00	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			02 Oct 2023 13:00	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			02 Oct 2023 13:00	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R447979 (0)	**Test Name :** SULFIDE BY SM4500 S2-F-2011				**Matrix:** Water	
HS23091613-04	MW-16	27 Sep 2023 12:05			03 Oct 2023 11:13	1
HS23091613-05	MW-18	27 Sep 2023 15:37			03 Oct 2023 11:13	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			03 Oct 2023 11:13	1
HS23091613-07	MW-17	27 Sep 2023 17:00			03 Oct 2023 11:13	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			03 Oct 2023 11:13	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			03 Oct 2023 11:13	1
Batch ID: R448230 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS23091613-10	MW-20	28 Sep 2023 10:18			04 Oct 2023 11:24	1
HS23091613-11	MW-3	28 Sep 2023 10:11			04 Oct 2023 11:24	1
HS23091613-12	DUP 2	28 Sep 2023 10:18			04 Oct 2023 11:24	1
Batch ID: R448231 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS23091613-13	MW-21	28 Sep 2023 15:15			04 Oct 2023 13:00	1
HS23091613-14	MW-13	28 Sep 2023 15:33			04 Oct 2023 13:00	1
Batch ID: R448460 (0)	**Test Name :** ALKALINITY BY -2011				**Matrix:** Water	
HS23091613-04	MW-16	27 Sep 2023 12:05			06 Oct 2023 18:10	1
HS23091613-05	MW-18	27 Sep 2023 15:37			06 Oct 2023 18:15	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			06 Oct 2023 18:20	1
HS23091613-07	MW-17	27 Sep 2023 17:00			06 Oct 2023 18:26	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			06 Oct 2023 18:31	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			06 Oct 2023 18:41	1
Batch ID: R448461 (0)	**Test Name :** PH BY SM4500H+ B-2011				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37			06 Oct 2023 18:15	1
HS23091613-07	MW-17	27 Sep 2023 17:00			06 Oct 2023 18:26	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			06 Oct 2023 18:31	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			06 Oct 2023 18:41	1
Batch ID: R448464 (0)	**Test Name :** PH BY SM4500H+ B-2011				**Matrix:** Water	
HS23091613-06	MW-7S	27 Sep 2023 18:03			06 Oct 2023 18:20	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R448504 (0)	**Test Name :** SPECIFIC CONDUCTANCE BY SM 2510B-2011				**Matrix:** Water	
HS23091613-05	MW-18	27 Sep 2023 15:37			09 Oct 2023 12:07	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			09 Oct 2023 12:07	1
HS23091613-07	MW-17	27 Sep 2023 17:00			09 Oct 2023 12:07	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			09 Oct 2023 12:07	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			09 Oct 2023 12:07	1
HS23091613-10	MW-20	28 Sep 2023 10:18			09 Oct 2023 12:07	1
HS23091613-11	MW-3	28 Sep 2023 10:11			09 Oct 2023 12:07	1
HS23091613-12	DUP 2	28 Sep 2023 10:18			09 Oct 2023 12:07	1
HS23091613-13	MW-21	28 Sep 2023 15:15			09 Oct 2023 12:07	1
HS23091613-14	MW-13	28 Sep 2023 15:33			09 Oct 2023 12:07	1
Batch ID: R448751 (0)	**Test Name :** FERRIC IRON - BY CALCULATION BY SM3500FED				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			11 Oct 2023 14:36	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			11 Oct 2023 14:36	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			11 Oct 2023 14:36	1
HS23091613-04	MW-16	27 Sep 2023 12:05			11 Oct 2023 14:36	1
HS23091613-05	MW-18	27 Sep 2023 15:37			11 Oct 2023 14:36	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			11 Oct 2023 14:36	1
HS23091613-07	MW-17	27 Sep 2023 17:00			11 Oct 2023 14:36	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			11 Oct 2023 14:36	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			11 Oct 2023 14:36	1
Batch ID: R448753 (0)	**Test Name :** FERRIC IRON (DISS)- BY CALCULATION BY SM3500FED				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			11 Oct 2023 14:41	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			11 Oct 2023 14:41	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			11 Oct 2023 14:41	1
HS23091613-04	MW-16	27 Sep 2023 12:05			11 Oct 2023 14:41	1
HS23091613-05	MW-18	27 Sep 2023 15:37			11 Oct 2023 14:41	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			11 Oct 2023 14:41	1
HS23091613-07	MW-17	27 Sep 2023 17:00			11 Oct 2023 14:41	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			11 Oct 2023 14:41	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			11 Oct 2023 14:41	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R448773 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993				**Matrix:** Water	
HS23091613-01	MW-15A	25 Sep 2023 17:03			11 Oct 2023 15:00	1
HS23091613-02	MW-5S	26 Sep 2023 12:00			11 Oct 2023 15:00	1
HS23091613-03	MW-14A	26 Sep 2023 15:40			11 Oct 2023 15:00	1
HS23091613-04	MW-16	27 Sep 2023 12:05			11 Oct 2023 15:00	1
HS23091613-05	MW-18	27 Sep 2023 15:37			11 Oct 2023 15:00	1
HS23091613-06	MW-7S	27 Sep 2023 18:03			11 Oct 2023 15:00	1
HS23091613-07	MW-17	27 Sep 2023 17:00			11 Oct 2023 15:00	1
HS23091613-08	MW-19S	27 Sep 2023 17:29			11 Oct 2023 15:00	1
HS23091613-09	Dup 1	27 Sep 2023 00:00			11 Oct 2023 15:00	1
HS23091613-10	MW-20	28 Sep 2023 10:18			11 Oct 2023 15:00	1
HS23091613-11	MW-3	28 Sep 2023 10:11			11 Oct 2023 15:00	1
HS23091613-12	DUP 2	28 Sep 2023 10:18			11 Oct 2023 15:00	1
HS23091613-13	MW-21	28 Sep 2023 15:15			11 Oct 2023 15:00	1
HS23091613-14	MW-13	28 Sep 2023 15:33			11 Oct 2023 15:00	1
Batch ID: R448796 (0)	**Test Name :** PH BY SM4500H+ B-2011				**Matrix:** Water	
HS23091613-10	MW-20	28 Sep 2023 10:18			11 Oct 2023 19:08	1
HS23091613-11	MW-3	28 Sep 2023 10:11			11 Oct 2023 19:10	1
HS23091613-12	DUP 2	28 Sep 2023 10:18			11 Oct 2023 19:12	1
HS23091613-13	MW-21	28 Sep 2023 15:15			11 Oct 2023 19:14	1
HS23091613-14	MW-13	28 Sep 2023 15:33			11 Oct 2023 19:16	1

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201500 (0) **Instrument: ICPMS06** **Method: DISSOLVED METALS BY SW6020A (DISSOLVED)**

MBLK Sample ID: **MBLK-201500** Units: **mg/L** Analysis Date: **06-Oct-2023 16:16**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591773** PrepDate: **05-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	U	0.200								
Molybdenum	U	0.00500								

LCS Sample ID: **LCS-201500** Units: **mg/L** Analysis Date: **06-Oct-2023 16:18**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591774** PrepDate: **05-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.744	0.200	5	0	94.9	80 - 120				
Molybdenum	0.04577	0.00500	0.05	0	91.5	80 - 120				

MS Sample ID: **HS23091469-01MS** Units: **mg/L** Analysis Date: **06-Oct-2023 16:24**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591777** PrepDate: **05-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	11.87	0.200	5	7.021	96.9	75 - 125				
Molybdenum	0.04713	0.00500	0.05	0.000255	93.8	75 - 125				

MSD Sample ID: **HS23091469-01MSD** Units: **mg/L** Analysis Date: **06-Oct-2023 16:26**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591778** PrepDate: **05-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	11.78	0.200	5	7.021	95.1	75 - 125	11.87	0.747	20	
Molybdenum	0.0473	0.00500	0.05	0.000255	94.1	75 - 125	0.04713	0.349	20	

PDS Sample ID: **HS23091469-01PDS** Units: **mg/L** Analysis Date: **06-Oct-2023 16:28**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591779** PrepDate: **05-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	16.64	0.200	10	7.021	96.2	75 - 125				
Molybdenum	0.09833	0.00500	0.1	0	98.3	75 - 125				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201500 (0) **Instrument: ICPMS06** **Method: DISSOLVED METALS BY SW6020A (DISSOLVED)**

SD Sample ID: **HS23091469-01SD** Units: **mg/L** Analysis Date: **06-Oct-2023 16:22**
Client ID: Run ID: **ICPMS06_448339** SeqNo: **7591776** PrepDate: **05-Oct-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	7.056	1.00					7.021	0.497	10	
Molybdenum	U	0.0250					0.000255	0	10	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02 HS23091613-03 HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

MBLK Sample ID: **MBLK-201563** Units: **mg/L** Analysis Date: **09-Oct-2023 12:17**
Client ID: Run ID: **ICPMS07_448499** SeqNo: **7594221** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.00200								
Arsenic	U	0.00200								
Barium	U	0.00400								
Beryllium	U	0.00200								
Boron	U	0.0200								
Cadmium	U	0.00200								
Calcium	U	0.500								
Chromium	U	0.00400								
Cobalt	U	0.00500								
Iron	U	0.200								
Lead	U	0.00200								
Lithium	U	0.00500								
Magnesium	0.015	0.200								J
Molybdenum	U	0.00500								
Potassium	U	0.200								
Selenium	U	0.00200								
Sodium	U	0.200								
Thallium	U	0.00200								

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

LCS Sample ID: **LCS-201563** Units: **mg/L** Analysis Date: **09-Oct-2023 12:20**
Client ID: Run ID: **ICPMS07_448499** SeqNo: **7594222** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	0.05218	0.00200	0.05	0	104	80 - 120			
Arsenic	0.05089	0.00200	0.05	0	102	80 - 120			
Barium	0.04833	0.00400	0.05	0	96.7	80 - 120			
Beryllium	0.04514	0.00200	0.05	0	90.3	80 - 120			
Boron	0.4647	0.0200	0.5	0	92.9	80 - 120			
Cadmium	0.04833	0.00200	0.05	0	96.7	80 - 120			
Calcium	5.016	0.500	5	0	100	80 - 120			
Chromium	0.04829	0.00400	0.05	0	96.6	80 - 120			
Cobalt	0.04935	0.00500	0.05	0	98.7	80 - 120			
Iron	4.984	0.200	5	0	99.7	80 - 120			
Lead	0.04612	0.00200	0.05	0	92.2	80 - 120			
Lithium	0.09042	0.00500	0.1	0	90.4	80 - 120			
Magnesium	4.876	0.200	5	0	97.5	80 - 120			
Molybdenum	0.04754	0.00500	0.05	0	95.1	80 - 120			
Potassium	5.009	0.200	5	0	100	80 - 120			
Selenium	0.04477	0.00200	0.05	0	89.5	80 - 120			
Sodium	4.985	0.200	5	0	99.7	80 - 120			

LCS Sample ID: **LCS-201563** Units: **mg/L** Analysis Date: **09-Oct-2023 13:44**
Client ID: Run ID: **ICPMS07_448499** SeqNo: **7594645** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Thallium	0.04012	0.00200	0.05	0	80.2	80 - 120			

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **09-Oct-2023 18:56**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7595697** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05426	0.00200	0.05	0.000595	107	80 - 120				
Arsenic	0.06396	0.00200	0.05	0.00702	114	80 - 120				
Barium	0.06846	0.00400	0.05	0.01705	103	80 - 120				
Beryllium	0.04947	0.00200	0.05	0.000151	98.6	80 - 120				
Boron	8.733	0.0200	0.5	7.862	174	80 - 120				SEO
Cadmium	0.05115	0.00200	0.05	0.000342	102	80 - 120				
Calcium	47.73	0.500	5	41.67	121	80 - 120				SO
Chromium	0.05434	0.00400	0.05	0.001178	106	80 - 120				
Cobalt	0.05402	0.00500	0.05	0.000266	108	80 - 120				
Iron	5.533	0.200	5	0.03221	110	80 - 120				
Lead	0.04852	0.00200	0.05	0.000378	96.3	80 - 120				
Lithium	0.1035	0.00500	0.1	0.001763	102	80 - 120				
Magnesium	5.68	0.200	5	0.08917	112	80 - 120				
Molybdenum	0.5056	0.00500	0.05	0.4502	111	80 - 120				O
Potassium	44.24	0.200	5	37.15	142	80 - 120				SO
Selenium	0.06393	0.00200	0.05	0.01353	101	80 - 120				
Sodium	715.7	0.200	5	686.1	591	80 - 120				SEO
Thallium	0.03484	0.00200	0.05	0.000178	69.3	80 - 120				S

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **09-Oct-2023 18:58**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7595698** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0535	0.00200	0.05	0.000595	106	80 - 120	0.05426	1.41	20	
Arsenic	0.06216	0.00200	0.05	0.00702	110	80 - 120	0.06396	2.86	20	
Barium	0.06743	0.00400	0.05	0.01705	101	80 - 120	0.06846	1.51	20	
Beryllium	0.0478	0.00200	0.05	0.000151	95.3	80 - 120	0.04947	3.43	20	
Boron	8.666	0.0200	0.5	7.862	161	80 - 120	8.733	0.761	20	SEO
Cadmium	0.05063	0.00200	0.05	0.000342	101	80 - 120	0.05115	1.02	20	
Calcium	46.77	0.500	5	41.67	102	80 - 120	47.73	2.04	20	O
Chromium	0.0529	0.00400	0.05	0.001178	103	80 - 120	0.05434	2.69	20	
Cobalt	0.05263	0.00500	0.05	0.000266	105	80 - 120	0.05402	2.61	20	
Iron	5.408	0.200	5	0.03221	108	80 - 120	5.533	2.3	20	
Lead	0.04833	0.00200	0.05	0.000378	95.9	80 - 120	0.04852	0.401	20	
Lithium	0.102	0.00500	0.1	0.001763	100	80 - 120	0.1035	1.5	20	
Magnesium	5.493	0.200	5	0.08917	108	80 - 120	5.68	3.35	20	
Molybdenum	0.5041	0.00500	0.05	0.4502	108	80 - 120	0.5056	0.299	20	O
Potassium	43.3	0.200	5	37.15	123	80 - 120	44.24	2.15	20	SO
Selenium	0.06258	0.00200	0.05	0.01353	98.1	80 - 120	0.06393	2.13	20	
Sodium	696.3	0.200	5	686.1	204	80 - 120	715.7	2.74	20	SEO
Thallium	0.03494	0.00200	0.05	0.000178	69.5	80 - 120	0.03484	0.292	20	S

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

PDS Sample ID: **HS23091613-08PDS** Units: **mg/L** Analysis Date: **09-Oct-2023 19:00**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7595699** PrepDate: **06-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.107	0.00200	0.1	0.000595	106	75 - 125				
Arsenic	0.1169	0.00200	0.1	0.00702	110	75 - 125				
Barium	0.1182	0.00400	0.1	0.01705	101	75 - 125				
Beryllium	0.09551	0.00200	0.1	0.000151	95.4	75 - 125				
Cadmium	0.1001	0.00200	0.1	0.000342	99.8	75 - 125				
Calcium	50.84	0.500	10	41.67	91.7	75 - 125				O
Chromium	0.1039	0.00400	0.1	0.001178	103	75 - 125				
Cobalt	0.1052	0.00500	0.1	0.000266	105	75 - 125				
Iron	10.69	0.200	10	0.03221	107	75 - 125				
Lead	0.1024	0.00200	0.1	0.000378	102	75 - 125				
Lithium	0.1008	0.00500	0.1	0.001763	99.0	70 - 125				
Magnesium	10.82	0.200	10	0.08917	107	75 - 125				
Molybdenum	0.5378	0.00500	0.1	0.4502	87.6	75 - 125				O
Potassium	47.63	0.200	10	37.15	105	75 - 125				
Selenium	0.1183	0.00200	0.1	0.01353	105	75 - 125				
Thallium	0.09216	0.00200	0.1	0.000178	92.0	75 - 125				

PDS Sample ID: **HS23091613-08PDS** Units: **mg/L** Analysis Date: **10-Oct-2023 13:26**
Client ID: **MW-19S** Run ID: **ICPMS07_448603** SeqNo: **7597390** PrepDate: **06-Oct-2023** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	57.05	2.00	50	9.511	95.1	75 - 125				

PDS Sample ID: **HS23091613-08PDS** Units: **mg/L** Analysis Date: **10-Oct-2023 14:07**
Client ID: **MW-19S** Run ID: **ICPMS07_448603** SeqNo: **7597432** PrepDate: **06-Oct-2023** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium	1715	20.0	1000	829.8	88.5	75 - 125				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201563 (0) **Instrument: ICPMS07** **Method: ICP-MS METALS BY SW6020A**

SD Sample ID: **HS23091613-08SD** Units: **mg/L** Analysis Date: **09-Oct-2023 18:53**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7595696** PrepDate: **06-Oct-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	0.0100					0.000595	0	10	
Arsenic	0.006081	0.0100					0.00702	0	10	J
Barium	0.01407	0.0200					0.01705	0	10	J
Beryllium	U	0.0100					0.000151	0	10	
Cadmium	U	0.0100					0.000342	0	10	
Calcium	35.4	2.50					41.67	15	10	R
Chromium	U	0.0200					0.001178	0	10	
Cobalt	U	0.0250					0.000266	0	10	
Iron	U	1.00					0.03221	0	10	
Lead	U	0.0100					0.000378	0	10	
Lithium	U	0.0250					0.001763	0	10	
Magnesium	0.08654	1.00					0.08917	0	10	J
Molybdenum	0.3628	0.0250					0.4502	19.4	10	R
Potassium	33.99	1.00					37.15	8.53	10	
Thallium	U	0.0100					0.000178	0	10	

SD Sample ID: **HS23091613-08SD** Units: **mg/L** Analysis Date: **10-Oct-2023 13:23**
Client ID: **MW-19S** Run ID: **ICPMS07_448603** SeqNo: **7597389** PrepDate: **06-Oct-2023** DF: **500**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Boron	10.78	10.0					9.511	0	10	
Sodium	828.5	100					829.8	0.147	10	

The following samples were analyzed in this batch:

HS23091613-01	HS23091613-02	HS23091613-03	HS23091613-04
HS23091613-05	HS23091613-06	HS23091613-07	HS23091613-08
HS23091613-09	HS23091613-10	HS23091613-11	HS23091613-12
HS23091613-13	HS23091613-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201615 (0) **Instrument: ICPMS07** **Method: DISSOLVED METALS BY SW6020A (DISSOLVED)**

MBLK Sample ID: **MBLK-201615** Units: **mg/L** Analysis Date: **09-Oct-2023 19:24**
Client ID: Run ID: **ICPMS07_448499** SeqNo: **7595708** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	U	0.200								
Molybdenum	U	0.00500								

LCS Sample ID: **LCS-201615** Units: **mg/L** Analysis Date: **09-Oct-2023 19:31**
Client ID: Run ID: **ICPMS07_448499** SeqNo: **7595709** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	5.305	0.200	5	0	106	80 - 120				
Molybdenum	0.04858	0.00500	0.05	0	97.2	80 - 120				

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **09-Oct-2023 21:50**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7596123** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.864	0.200	5	0.005204	97.2	75 - 125				
Molybdenum	0.4344	0.00500	0.05	0.4166	35.5	75 - 125				SO

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **09-Oct-2023 21:52**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7596124** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.801	0.200	5	0.005204	95.9	75 - 125	4.864	1.3	20	
Molybdenum	0.4362	0.00500	0.05	0.4166	39.3	75 - 125	0.4344	0.43	20	SO

PDS Sample ID: **HS23091613-08PDS** Units: **mg/L** Analysis Date: **09-Oct-2023 21:55**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7596125** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	11.83	0.200	10	0.005204	118	75 - 125				
Molybdenum	0.5089	0.00500	0.1	0.4166	92.3	75 - 125				O

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: **201615 (0)** **Instrument:** **ICPMS07** **Method:** **DISSOLVED METALS BY SW6020A (DISSOLVED)**

SD Sample ID: **HS23091613-08SD** Units: **mg/L** Analysis Date: **09-Oct-2023 21:48**
Client ID: **MW-19S** Run ID: **ICPMS07_448499** SeqNo: **7596122** PrepDate: **09-Oct-2023** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	U	1.00					0.005204	0	10	
Molybdenum	0.4076	0.0250					0.4166	2.16	10	

The following samples were analyzed in this batch: HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201642 (0) **Instrument: HG04** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-201642** Units: **mg/L** Analysis Date: **09-Oct-2023 13:42**
Client ID: Run ID: **HG04_448545** SeqNo: **7595403** PrepDate: **09-Oct-2023** 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-201642** Units: **mg/L** Analysis Date: **09-Oct-2023 13:43**
Client ID: Run ID: **HG04_448545** SeqNo: **7595404** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00496	0.000200	0.005	0	99.2	80 - 120				

MS Sample ID: **HS23091494-01MS** Units: **mg/L** Analysis Date: **09-Oct-2023 13:47**
Client ID: Run ID: **HG04_448545** SeqNo: **7595406** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00406	0.000200	0.005	0.000005	81.1	75 - 125				

MSD Sample ID: **HS23091494-01MSD** Units: **mg/L** Analysis Date: **09-Oct-2023 13:48**
Client ID: Run ID: **HG04_448545** SeqNo: **7595407** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00397	0.000200	0.005	0.000005	79.3	75 - 125	0.00406	2.24	20	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02 HS23091613-03

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: 201644 (0) **Instrument: HG04** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-201644** Units: **mg/L** Analysis Date: **09-Oct-2023 14:39**
Client ID: Run ID: **HG04_448545** SeqNo: **7595431** PrepDate: **09-Oct-2023** 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-201644** Units: **mg/L** Analysis Date: **09-Oct-2023 14:40**
Client ID: Run ID: **HG04_448545** SeqNo: **7595432** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00483	0.000200	0.005	0	96.6	80 - 120				

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **09-Oct-2023 15:01**
Client ID: **MW-19S** Run ID: **HG04_448545** SeqNo: **7595440** PrepDate: **09-Oct-2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0048	0.000200	0.005	0.000004	95.9	75 - 125				

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **09-Oct-2023 15:04**
Client ID: **MW-19S** Run ID: **HG04_448545** SeqNo: **7595441** PrepDate: **09-Oct-2023** 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	0.000004	92.1	75 - 125	0.0048	4.04	20	

The following samples were analyzed in this batch:

HS23091613-04	HS23091613-05	HS23091613-06	HS23091613-07
HS23091613-08	HS23091613-09	HS23091613-10	HS23091613-11
HS23091613-12	HS23091613-13	HS23091613-14	

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447500 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-R447500** Units: **mg/L** Analysis Date: **27-Sep-2023 16:26**
Client ID: Run ID: **UV-2450_447500** SeqNo: **7568434** 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-R447500** Units: **mg/L** Analysis Date: **27-Sep-2023 16:26**
Client ID: Run ID: **UV-2450_447500** SeqNo: **7568433** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.283	0.0500	0.25	0	113	80 - 120				

MS Sample ID: **HS23091613-02MS** Units: **mg/L** Analysis Date: **27-Sep-2023 16:26**
Client ID: **MW-5S** Run ID: **UV-2450_447500** SeqNo: **7568436** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.281	0.0500	0.25	-0.023	122	75 - 125				

MSD Sample ID: **HS23091613-02MSD** Units: **mg/L** Analysis Date: **27-Sep-2023 16:26**
Client ID: **MW-5S** Run ID: **UV-2450_447500** SeqNo: **7568435** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.272	0.0500	0.25	-0.023	118	75 - 125	0.281	3.25	20	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447503 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE D (DISSOLVED)

MBLK Sample ID: **MBLK-R447503** Units: **mg/L** Analysis Date: **27-Sep-2023 16:30**
Client ID: Run ID: **UV-2450_447503** SeqNo: **7568447** 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-R447503** Units: **mg/L** Analysis Date: **27-Sep-2023 16:30**
Client ID: Run ID: **UV-2450_447503** SeqNo: **7568446** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.269	0.0500	0.25	0	108	80 - 120				

MS Sample ID: **HS23091616-01MS** Units: **mg/L** Analysis Date: **27-Sep-2023 16:30**
Client ID: Run ID: **UV-2450_447503** SeqNo: **7568449** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.258	0.0500	0.25	-0.005	105	80 - 120				

MSD Sample ID: **HS23091616-01MSD** Units: **mg/L** Analysis Date: **27-Sep-2023 16:30**
Client ID: Run ID: **UV-2450_447503** SeqNo: **7568448** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.259	0.0500	0.25	-0.005	106	80 - 120	0.258	0.387	20	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447536 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **27-Sep-2023 14:34**
Client ID: Run ID: **ICS-Integrion_447536** SeqNo: **7569632** 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								
Sulfate	U	0.500								

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **27-Sep-2023 14:45**
Client ID: Run ID: **ICS-Integrion_447536** SeqNo: **7569633** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.38	0.500	20	0	102	90 - 110				
Fluoride	3.862	0.100	4	0	96.6	90 - 110				
Nitrogen, Nitrate (As N)	3.858	0.100	4	0	96.4	90 - 110				
Sulfate	20.01	0.500	20	0	100	90 - 110				

MS Sample ID: **HS23091613-02MS** Units: **mg/L** Analysis Date: **27-Sep-2023 15:09**
Client ID: **MW-5S** Run ID: **ICS-Integrion_447536** SeqNo: **7569637** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	33.85	0.500	10	24.75	91.0	80 - 120				
Fluoride	3.162	0.100	2	1.201	98.1	80 - 120				
Nitrogen, Nitrate (As N)	2.181	0.100	2	0.3101	93.5	80 - 120				
Sulfate	503.4	0.500	10	509.6	-62.2	80 - 120				SEO

MS Sample ID: **HS23090943-04MS** Units: **mg/L** Analysis Date: **27-Sep-2023 16:52**
Client ID: Run ID: **ICS-Integrion_447536** SeqNo: **7569652** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	688.8	5.00	100	624.6	64.1	80 - 120				SO
Fluoride	20.8	1.00	20	2.895	89.6	80 - 120				
Nitrogen, Nitrate (As N)	18.97	1.00	20	0	94.8	80 - 120				
Sulfate	344.2	5.00	100	280	64.1	80 - 120				S

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447536 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0, REV 2.1, 1993

MSD Sample ID: **HS23091613-02MSD** Units: **mg/L** Analysis Date: **27-Sep-2023 15:14**
Client ID: **MW-5S** Run ID: **ICS-Integrion_447536** SeqNo: **7569638** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	33.96	0.500	10	24.75	92.1	80 - 120	33.85	0.327	20	
Fluoride	3.173	0.100	2	1.201	98.6	80 - 120	3.162	0.338	20	
Nitrogen, Nitrate (As N)	2.186	0.100	2	0.3101	93.8	80 - 120	2.181	0.266	20	
Sulfate	503.8	0.500	10	509.6	-58.8	80 - 120	503.4	0.0674	20	SEO

MSD Sample ID: **HS23090943-04MSD** Units: **mg/L** Analysis Date: **27-Sep-2023 16:58**
Client ID: Run ID: **ICS-Integrion_447536** SeqNo: **7569653** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	689.7	5.00	100	624.6	65.1	80 - 120	688.8	0.141	20	SO
Fluoride	20.9	1.00	20	2.895	90.0	80 - 120	20.8	0.47	20	
Nitrogen, Nitrate (As N)	18.99	1.00	20	0	95.0	80 - 120	18.97	0.116	20	
Sulfate	345.7	5.00	100	280	65.6	80 - 120	344.2	0.439	20	S

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447646 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **28-Sep-2023 16:59**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572462** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
Fluoride	U	0.100								
Nitrogen, Nitrate (As N)	U	0.100								
Nitrogen, Nitrite (As N)	U	0.100								
Sulfate	U	0.500								

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **28-Sep-2023 17:16**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572463** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.07	0.500	20	0	100	90 - 110				
Fluoride	3.69	0.100	4	0	92.2	90 - 110				
Nitrogen, Nitrate (As N)	3.784	0.100	4	0	94.6	90 - 110				
Nitrogen, Nitrite (As N)	3.998	0.100	4	0	99.9	90 - 110				
Sulfate	18.79	0.500	20	0	94.0	90 - 110				

MS Sample ID: **HS23091740-01MS** Units: **mg/L** Analysis Date: **28-Sep-2023 17:28**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572465** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1632	1.00	20	1693	-309	80 - 120				SEO
Fluoride	4.061	0.200	4	0.5628	87.5	80 - 120				
Nitrogen, Nitrate (As N)	3.642	0.200	4	0.1182	88.1	80 - 120				
Nitrogen, Nitrite (As N)	1.679	0.200	4	0	42.0	80 - 120				S
Sulfate	501.9	1.00	20	491.5	52.4	80 - 120				SEO

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447646 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MS Sample ID: **HS23091616-07MS** Units: **mg/L** Analysis Date: **28-Sep-2023 19:05**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572478** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	134.8	5.00	100	32.7	102	80 - 120				
Fluoride	19.2	1.00	20	1.258	89.7	80 - 120				
Nitrogen, Nitrate (As N)	22.82	1.00	20	4.019	94.0	80 - 120				
Nitrogen, Nitrite (As N)	19.46	1.00	20	0	97.3	80 - 120				
Sulfate	634.1	5.00	100	525.1	109	80 - 120				O

MSD Sample ID: **HS23091740-01MSD** Units: **mg/L** Analysis Date: **28-Sep-2023 17:33**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572466** PrepDate: DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1628	1.00	20	1693	-325	80 - 120	1632	0.196	20	SEO
Fluoride	4.219	0.200	4	0.5628	91.4	80 - 120	4.061	3.82	20	
Nitrogen, Nitrate (As N)	3.615	0.200	4	0.1182	87.4	80 - 120	3.642	0.722	20	
Nitrogen, Nitrite (As N)	1.672	0.200	4	0	41.8	80 - 120	1.679	0.466	20	S
Sulfate	502	1.00	20	491.5	52.5	80 - 120	501.9	0.00311	20	SEO

MSD Sample ID: **HS23091616-07MSD** Units: **mg/L** Analysis Date: **28-Sep-2023 19:11**
Client ID: Run ID: **ICS-Integrion_447646** SeqNo: **7572479** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	134.2	5.00	100	32.7	101	80 - 120	134.8	0.461	20	
Fluoride	19.25	1.00	20	1.258	90.0	80 - 120	19.2	0.26	20	
Nitrogen, Nitrate (As N)	22.73	1.00	20	4.019	93.5	80 - 120	22.82	0.417	20	
Nitrogen, Nitrite (As N)	19.34	1.00	20	0	96.7	80 - 120	19.46	0.608	20	
Sulfate	631	5.00	100	525.1	106	80 - 120	634.1	0.489	20	O

The following samples were analyzed in this batch: HS23091613-03 HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447658 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE D (DISSOLVED)

MBLK Sample ID: **MBLK-R447658** Units: **mg/L** Analysis Date: **28-Sep-2023 15:32**
Client ID: Run ID: **UV-2450_447658** SeqNo: **7573214** 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-R447658** Units: **mg/L** Analysis Date: **28-Sep-2023 15:32**
Client ID: Run ID: **UV-2450_447658** SeqNo: **7573213** 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	101	80 - 120				

MS Sample ID: **HS23091616-11MS** Units: **mg/L** Analysis Date: **28-Sep-2023 15:32**
Client ID: Run ID: **UV-2450_447658** SeqNo: **7573216** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.24	0.0500	0.25	0.015	90.0	80 - 120				

MSD Sample ID: **HS23091616-11MSD** Units: **mg/L** Analysis Date: **28-Sep-2023 15:32**
Client ID: Run ID: **UV-2450_447658** SeqNo: **7573215** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.239	0.0500	0.25	0.015	89.6	80 - 120	0.24	0.418	20	

The following samples were analyzed in this batch: HS23091613-03 HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447660 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-R447660** Units: **mg/L** Analysis Date: **28-Sep-2023 15:14**
Client ID: Run ID: **UV-2450_447660** SeqNo: **7573261** 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-R447660** Units: **mg/L** Analysis Date: **28-Sep-2023 15:14**
Client ID: Run ID: **UV-2450_447660** SeqNo: **7573260** 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	99.2	80 - 120				

MS Sample ID: **HS23091616-10MS** Units: **mg/L** Analysis Date: **28-Sep-2023 15:14**
Client ID: Run ID: **UV-2450_447660** SeqNo: **7573263** 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	0.014	91.2	75 - 125				

MSD Sample ID: **HS23091616-10MSD** Units: **mg/L** Analysis Date: **28-Sep-2023 15:14**
Client ID: Run ID: **UV-2450_447660** SeqNo: **7573262** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.244	0.0500	0.25	0.014	92.0	75 - 125	0.242	0.823	20	

The following samples were analyzed in this batch: HS23091613-03 HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447705 (0) **Instrument:** WetChem_HS **Method:** SPECIFIC CONDUCTANCE BY SM 2510B-2011

MBLK Sample ID: **MBLK-R447705** Units: **umhos/cm @ 25.0 °C** Analysis Date: **29-Sep-2023 13:07**
Client ID: Run ID: **WetChem_HS_447705** SeqNo: **7574077** 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-R447705** Units: **umhos/cm @ 25.0 °C** Analysis Date: **29-Sep-2023 13:07**
Client ID: Run ID: **WetChem_HS_447705** SeqNo: **7574076** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1381	5.00	1413	0	97.7	80 - 120				

DUP Sample ID: **HS23091744-01DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **29-Sep-2023 13:07**
Client ID: Run ID: **WetChem_HS_447705** SeqNo: **7574073** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	2452	5.00					2457	0.204	20	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02 HS23091613-03 HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447738 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-09282023** Units: **mg/L** Analysis Date: **28-Sep-2023 14:48**
Client ID: Run ID: **Balance1_447738** SeqNo: **7574939** 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-09282023** Units: **mg/L** Analysis Date: **28-Sep-2023 14:48**
Client ID: Run ID: **Balance1_447738** SeqNo: **7574938** 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)	1062	10.0	1000	0	106	85 - 115				

DUP Sample ID: **HS23091595-04DUP** Units: **mg/L** Analysis Date: **28-Sep-2023 14:48**
Client ID: Run ID: **Balance1_447738** SeqNo: **7574934** 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)	1168	10.0					1164	0.343	20	

DUP Sample ID: **HS23091534-01DUP** Units: **mg/L** Analysis Date: **28-Sep-2023 14:48**
Client ID: Run ID: **Balance1_447738** SeqNo: **7574926** 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)	664	10.0					664	0	20	

The following samples were analyzed in this batch: HS23091613-01

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447795 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **29-Sep-2023 10:13**
Client ID: Run ID: **ICS-Integrion_447795** SeqNo: **7575818** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
Fluoride	U	0.100								
Nitrogen, Nitrate (As N)	U	0.100								
Nitrogen, Nitrite (As N)	U	0.100								
Sulfate	U	0.500								

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **29-Sep-2023 10:24**
Client ID: Run ID: **ICS-Integrion_447795** SeqNo: **7575819** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.25	0.500	20	0	101	90 - 110				
Fluoride	3.949	0.100	4	0	98.7	90 - 110				
Nitrogen, Nitrate (As N)	3.82	0.100	4	0	95.5	90 - 110				
Nitrogen, Nitrite (As N)	4.034	0.100	4	0	101	90 - 110				
Sulfate	19.97	0.500	20	0	99.8	90 - 110				

MS Sample ID: **HS23091774-06MS** Units: **mg/L** Analysis Date: **29-Sep-2023 10:36**
Client ID: Run ID: **ICS-Integrion_447795** SeqNo: **7575821** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	732.4	10.0	200	566.2	83.1	80 - 120				
Fluoride	36.08	2.00	40	0	90.2	80 - 120				
Nitrogen, Nitrate (As N)	38.17	2.00	40	1.27	92.3	80 - 120				
Nitrogen, Nitrite (As N)	37.11	2.00	40	0	92.8	80 - 120				
Sulfate	212.7	10.0	200	22.19	95.3	80 - 120				

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447795 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **29-Sep-2023 13:24**
Client ID: **MW-19S** Run ID: **ICS-Integrion_447795** SeqNo: **7575843** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	22.06	0.500	10	12.47	95.8	80 - 120				
Fluoride	3.447	0.100	2	1.285	108	80 - 120				
Nitrogen, Nitrate (As N)	1.69	0.100	2	0	84.5	80 - 120				
Nitrogen, Nitrite (As N)	0.6553	0.100	2	0	32.8	80 - 120				S
Sulfate	1350	0.500	10	1409	-586	80 - 120				SEO

MSD Sample ID: **HS23091774-06MSD** Units: **mg/L** Analysis Date: **29-Sep-2023 10:42**
Client ID: Run ID: **ICS-Integrion_447795** SeqNo: **7575822** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	731.3	10.0	200	566.2	82.6	80 - 120	732.4	0.153	20	
Fluoride	35.67	2.00	40	0	89.2	80 - 120	36.08	1.14	20	
Nitrogen, Nitrate (As N)	37.94	2.00	40	1.27	91.7	80 - 120	38.17	0.62	20	
Nitrogen, Nitrite (As N)	37.03	2.00	40	0	92.6	80 - 120	37.11	0.21	20	
Sulfate	211.7	10.0	200	22.19	94.8	80 - 120	212.7	0.457	20	

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **29-Sep-2023 13:30**
Client ID: **MW-19S** Run ID: **ICS-Integrion_447795** SeqNo: **7575878** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	21.99	0.500	10	12.47	95.2	80 - 120	22.06	0.3	20	
Fluoride	3.432	0.100	2	1.285	107	80 - 120	3.447	0.454	20	
Nitrogen, Nitrate (As N)	1.695	0.100	2	0	84.7	80 - 120	1.69	0.248	20	
Nitrogen, Nitrite (As N)	0.691	0.100	2	0	34.6	80 - 120	0.6553	5.3	20	S
Sulfate	1345	0.500	10	1409	-637	80 - 120	1350	0.376	20	SEO

The following samples were analyzed in this batch:

HS23091613-05	HS23091613-06	HS23091613-07	HS23091613-08
HS23091613-09	HS23091613-10	HS23091613-11	HS23091613-12

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447844 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **30-Sep-2023 12:20**
Client ID: Run ID: **ICS-Integrion_447844** SeqNo: **7577600** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
Fluoride	U	0.100								
Nitrogen, Nitrate (As N)	U	0.100								
Nitrogen, Nitrite (As N)	U	0.100								
Sulfate	U	0.500								

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **30-Sep-2023 12:32**
Client ID: Run ID: **ICS-Integrion_447844** SeqNo: **7577601** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.12	0.500	20	0	101	90 - 110				
Fluoride	3.83	0.100	4	0	95.7	90 - 110				
Nitrogen, Nitrate (As N)	3.778	0.100	4	0	94.5	90 - 110				
Nitrogen, Nitrite (As N)	3.988	0.100	4	0	99.7	90 - 110				
Sulfate	19.4	0.500	20	0	97.0	90 - 110				

MS Sample ID: **HS23091835-21MS** Units: **mg/L** Analysis Date: **30-Sep-2023 16:11**
Client ID: Run ID: **ICS-Integrion_447844** SeqNo: **7577607** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	73.59	2.50	50	22.44	102	80 - 120				
Fluoride	9.881	0.500	10	0.826	90.6	80 - 120				
Nitrogen, Nitrate (As N)	18.06	0.500	10	8.887	91.8	80 - 120				
Nitrogen, Nitrite (As N)	9.628	0.500	10	0.3165	93.1	80 - 120				
Sulfate	764.4	2.50	50	714.6	99.6	80 - 120				EO

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447844 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0, REV 2.1, 1993

MS Sample ID: **HS23091613-14MS** Units: **mg/L** Analysis Date: **30-Sep-2023 10:48**
Client ID: **MW-13** Run ID: **ICS-Integrion_447844** SeqNo: **7577589** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	29.47	0.500	10	19.74	97.4	80 - 120				
Fluoride	2.307	0.100	2	0.4142	94.6	80 - 120				
Nitrogen, Nitrate (As N)	1.89	0.100	2	0.0853	90.2	80 - 120				
Nitrogen, Nitrite (As N)	0.6723	0.100	2	0	33.6	80 - 120				S
Sulfate	1411	0.500	10	1440	-285	80 - 120				SEO

MSD Sample ID: **HS23091835-21MSD** Units: **mg/L** Analysis Date: **30-Sep-2023 16:17**
Client ID: Run ID: **ICS-Integrion_447844** SeqNo: **7577608** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	73.1	2.50	50	22.44	101	80 - 120	73.59	0.675	20	
Fluoride	9.597	0.500	10	0.826	87.7	80 - 120	9.881	2.92	20	
Nitrogen, Nitrate (As N)	18.01	0.500	10	8.887	91.2	80 - 120	18.06	0.299	20	
Nitrogen, Nitrite (As N)	9.558	0.500	10	0.3165	92.4	80 - 120	9.628	0.724	20	
Sulfate	759.3	2.50	50	714.6	89.3	80 - 120	764.4	0.674	20	EO

MSD Sample ID: **HS23091613-14MSD** Units: **mg/L** Analysis Date: **30-Sep-2023 10:53**
Client ID: **MW-13** Run ID: **ICS-Integrion_447844** SeqNo: **7577590** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	29.58	0.500	10	19.74	98.4	80 - 120	29.47	0.352	20	
Fluoride	2.393	0.100	2	0.4142	98.9	80 - 120	2.307	3.66	20	
Nitrogen, Nitrate (As N)	1.915	0.100	2	0.0853	91.5	80 - 120	1.89	1.34	20	
Nitrogen, Nitrite (As N)	0.6707	0.100	2	0	33.5	80 - 120	0.6723	0.238	20	S
Sulfate	1413	0.500	10	1440	-272	80 - 120	1411	0.092	20	SEO

The following samples were analyzed in this batch: HS23091613-13 HS23091613-14

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447845 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-09292023** Units: **mg/L** Analysis Date: **29-Sep-2023 13:00**
Client ID: Run ID: **Balance1_447845** SeqNo: **7577645** 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-09292023** Units: **mg/L** Analysis Date: **29-Sep-2023 13:00**
Client ID: Run ID: **Balance1_447845** SeqNo: **7577644** 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: **HS23091713-05DUP** Units: **mg/L** Analysis Date: **29-Sep-2023 13:00**
Client ID: Run ID: **Balance1_447845** SeqNo: **7577634** 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)	30	10.0					30	0	20	

DUP Sample ID: **HS23091613-02DUP** Units: **mg/L** Analysis Date: **29-Sep-2023 13:00**
Client ID: **MW-5S** Run ID: **Balance1_447845** SeqNo: **7577624** 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)	952	10.0					956	0.419	20	

The following samples were analyzed in this batch: HS23091613-02 HS23091613-03

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447856 (0) **Instrument:** Skalar 03 **Method:** ALKALINITY BY -2011

MBLK Sample ID: **MBLK-09292023** Units: **mg/L** Analysis Date: **29-Sep-2023 19:18**
Client ID: Run ID: **Skalar 03_447856** SeqNo: **7577947** 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-09292023** Units: **mg/L** Analysis Date: **29-Sep-2023 19:24**
Client ID: Run ID: **Skalar 03_447856** SeqNo: **7577948** 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)	897.2	5.00	1000	0	89.7	85 - 115				
Alkalinity, Total (As CaCO3)	934.5	5.00	1000	0	93.4	85 - 115				

LCSD Sample ID: **LCSD-09292023** Units: **mg/L** Analysis Date: **29-Sep-2023 19:31**
Client ID: Run ID: **Skalar 03_447856** SeqNo: **7577949** 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)	895	5.00	1000	0	89.5	85 - 115	897.2	0.246	20	
Alkalinity, Total (As CaCO3)	934.3	5.00	1000	0	93.4	85 - 115	934.5	0.0214	20	

DUP Sample ID: **HS23091538-02DUP** Units: **mg/L** Analysis Date: **29-Sep-2023 19:41**
Client ID: Run ID: **Skalar 03_447856** SeqNo: **7577951** 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)	57.3	5.00					57.1	0.35	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)	57.3	5.00					57.1	0.35	20	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02 HS23091613-03

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447857 (0) **Instrument:** Skalar 03 **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS23091538-02DUP** Units: **pH Units** Analysis Date: **29-Sep-2023 19:41**
Client ID: Run ID: **Skalar 03_447857** SeqNo: **7577983** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.6	0.100					7.58	0.264	10	
Temp Deg C @pH	20.3	0					20.4	0.491	10	

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02 HS23091613-03

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447858 (0) **Instrument:** Skalar 03 **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS23091645-01DUP** Units: **pH Units** Analysis Date: **29-Sep-2023 22:09**
Client ID: Run ID: **Skalar 03_447858** SeqNo: **7578002** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	10	0.100					10.01	0.1	10	
Temp Deg C @pH	21.3	0					21.2	0.471	10	

The following samples were analyzed in this batch: HS23091613-04

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447888 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE D (DISSOLVED)

MBLK Sample ID: **MBLK-R447888** Units: **mg/L** Analysis Date: **29-Sep-2023 14:22**
Client ID: Run ID: **UV-2450_447888** SeqNo: **7578559** 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-R447888** Units: **mg/L** Analysis Date: **29-Sep-2023 14:22**
Client ID: Run ID: **UV-2450_447888** SeqNo: **7578558** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.255	0.0500	0.25	0	102	80 - 120				

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **29-Sep-2023 14:22**
Client ID: **MW-19S** Run ID: **UV-2450_447888** SeqNo: **7578561** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.329	0.0500	0.25	0.071	103	80 - 120				

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **29-Sep-2023 14:22**
Client ID: **MW-19S** Run ID: **UV-2450_447888** SeqNo: **7578560** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron, Dissolved	0.324	0.0500	0.25	0.071	101	80 - 120	0.329	1.53	20	

The following samples were analyzed in this batch: HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447889 (0) **Instrument:** UV-2450 **Method:** FERROUS IRON BY SM3500 FE B

MBLK Sample ID: **MBLK-R447889** Units: **mg/L** Analysis Date: **29-Sep-2023 12:30**
Client ID: Run ID: **UV-2450_447889** SeqNo: **7578585** 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-R447889** Units: **mg/L** Analysis Date: **29-Sep-2023 12:30**
Client ID: Run ID: **UV-2450_447889** SeqNo: **7578584** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.281	0.0500	0.25	0	112	80 - 120				

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **29-Sep-2023 12:30**
Client ID: **MW-19S** Run ID: **UV-2450_447889** SeqNo: **7578587** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.295	0.0500	0.25	0.051	97.6	75 - 125				

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **29-Sep-2023 12:30**
Client ID: **MW-19S** Run ID: **UV-2450_447889** SeqNo: **7578586** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.298	0.0500	0.25	0.051	98.8	75 - 125	0.295	1.01	20	

The following samples were analyzed in this batch: HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447901 (0) **Instrument: WetChem_HS** **Method: SULFIDE BY SM4500 S2-F-2011**

MBLK Sample ID: **MBLK-R447901** Units: **mg/L** Analysis Date: **02-Oct-2023 13:09**
Client ID: Run ID: **WetChem_HS_447901** SeqNo: **7578888** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	2.00								

LCS Sample ID: **LCS-R447901** Units: **mg/L** Analysis Date: **02-Oct-2023 13:09**
Client ID: Run ID: **WetChem_HS_447901** SeqNo: **7578887** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.88	2.00	25	0	87.5	85 - 115				

LCSD Sample ID: **LCSD-R447901** Units: **mg/L** Analysis Date: **02-Oct-2023 13:09**
Client ID: Run ID: **WetChem_HS_447901** SeqNo: **7578889** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	2.00	25	0	88.3	85 - 115	21.88	0.91	20	

MS Sample ID: **HS23091613-01MS** Units: **mg/L** Analysis Date: **02-Oct-2023 13:09**
Client ID: **MW-15A** Run ID: **WetChem_HS_447901** SeqNo: **7578886** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	2.00	25	-1.72	95.2	80 - 120				

The following samples were analyzed in this batch: HS23091613-01 HS23091613-02

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447946 (0) **Instrument: WetChem_HS** **Method: SULFIDE BY SM4500 S2-F-2011**

MBLK Sample ID: **MBLK-R447946** Units: **mg/L** Analysis Date: **03-Oct-2023 07:36**
Client ID: Run ID: **WetChem_HS_447946** SeqNo: **7579972** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	2.00								

LCS Sample ID: **LCS-R447946** Units: **mg/L** Analysis Date: **03-Oct-2023 07:36**
Client ID: Run ID: **WetChem_HS_447946** SeqNo: **7579971** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	2.00	25	0	88.3	85 - 115				

LCSD Sample ID: **LCSD-R447946** Units: **mg/L** Analysis Date: **03-Oct-2023 07:36**
Client ID: Run ID: **WetChem_HS_447946** SeqNo: **7579970** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.88	2.00	25	0	87.5	85 - 115	22.08	0.91	20	

MS Sample ID: **HS23091616-01MS** Units: **mg/L** Analysis Date: **03-Oct-2023 07:36**
Client ID: Run ID: **WetChem_HS_447946** SeqNo: **7579973** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	2.00	25	-1.52	94.4	80 - 120				

The following samples were analyzed in this batch: HS23091613-03

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447962 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-10022023** Units: **mg/L** Analysis Date: **02-Oct-2023 13:00**
Client ID: Run ID: **Balance1_447962** SeqNo: **7580686** 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-10022023** Units: **mg/L** Analysis Date: **02-Oct-2023 13:00**
Client ID: Run ID: **Balance1_447962** SeqNo: **7580685** 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)	1016	10.0	1000	0	102	85 - 115				

DUP Sample ID: **HS23091796-02DUP** Units: **mg/L** Analysis Date: **02-Oct-2023 13:00**
Client ID: Run ID: **Balance1_447962** SeqNo: **7580680** 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)	840	10.0					840	0	20	

DUP Sample ID: **HS23091613-08DUP** Units: **mg/L** Analysis Date: **02-Oct-2023 13:00**
Client ID: **MW-19S** Run ID: **Balance1_447962** SeqNo: **7580668** 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)	2240	10.0					2250	0.445	20	

The following samples were analyzed in this batch: HS23091613-04 HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R447979 (0) **Instrument: WetChem_HS** **Method: SULFIDE BY SM4500 S2-F-2011**

MBLK Sample ID: **MBLK-R447979** Units: **mg/L** Analysis Date: **03-Oct-2023 11:13**
Client ID: Run ID: **WetChem_HS_447979** SeqNo: **7580934** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	2.00								

LCS Sample ID: **LCS-R447979** Units: **mg/L** Analysis Date: **03-Oct-2023 11:13**
Client ID: Run ID: **WetChem_HS_447979** SeqNo: **7580933** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.08	2.00	25	0	88.3	85 - 115				

LCSD Sample ID: **LCSD-R447979** Units: **mg/L** Analysis Date: **03-Oct-2023 11:13**
Client ID: Run ID: **WetChem_HS_447979** SeqNo: **7580932** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.88	2.00	25	0	87.5	85 - 115	22.08	0.91	20	

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **03-Oct-2023 11:13**
Client ID: **MW-19S** Run ID: **WetChem_HS_447979** SeqNo: **7580935** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.88	2.00	25	-3.32	101	80 - 120				

The following samples were analyzed in this batch: HS23091613-04 HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448230 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-10042023** Units: **mg/L** Analysis Date: **04-Oct-2023 11:24**
Client ID: Run ID: **Balance1_448230** SeqNo: **7587106** 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-10042023** Units: **mg/L** Analysis Date: **04-Oct-2023 11:24**
Client ID: Run ID: **Balance1_448230** SeqNo: **7587105** 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: **HS23100054-05DUP** Units: **mg/L** Analysis Date: **04-Oct-2023 11:24**
Client ID: Run ID: **Balance1_448230** SeqNo: **7587100** 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)	1796	10.0					1800	0.222	20	

DUP Sample ID: **HS23091913-01DUP** Units: **mg/L** Analysis Date: **04-Oct-2023 11:24**
Client ID: Run ID: **Balance1_448230** SeqNo: **7587088** 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)	706	10.0					708	0.283	20	

The following samples were analyzed in this batch: HS23091613-10 HS23091613-11 HS23091613-12

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448231 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WMBLK-10042023** Units: **mg/L** Analysis Date: **04-Oct-2023 13:00**
Client ID: Run ID: **Balance1_448231** SeqNo: **7587120** 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-10042023** Units: **mg/L** Analysis Date: **04-Oct-2023 13:00**
Client ID: Run ID: **Balance1_448231** SeqNo: **7587119** 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)	1004	10.0	1000	0	100	85 - 115				

DUP Sample ID: **HS23091898-05DUP** Units: **mg/L** Analysis Date: **04-Oct-2023 13:00**
Client ID: Run ID: **Balance1_448231** SeqNo: **7587117** 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)	2776	10.0					2772	0.144	20	

The following samples were analyzed in this batch: HS23091613-13 HS23091613-14

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448460 (0) **Instrument:** Skalar 03 **Method:** ALKALINITY BY -2011

MBLK Sample ID: **MBLK-10062023** Units: **mg/L** Analysis Date: **06-Oct-2023 17:52**
Client ID: Run ID: **Skalar 03_448460** SeqNo: **7593492** 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-10062023** Units: **mg/L** Analysis Date: **06-Oct-2023 17:58**
Client ID: Run ID: **Skalar 03_448460** SeqNo: **7593493** 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)	933.4	5.00	1000	0	93.3	85 - 115				
Alkalinity, Total (As CaCO3)	938	5.00	1000	0	93.8	85 - 115				

LCSD Sample ID: **LCSD-10062023** Units: **mg/L** Analysis Date: **06-Oct-2023 18:04**
Client ID: Run ID: **Skalar 03_448460** SeqNo: **7593494** 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)	937	5.00	1000	0	93.7	85 - 115	933.4	0.385	20	
Alkalinity, Total (As CaCO3)	942.1	5.00	1000	0	94.2	85 - 115	938	0.436	20	

DUP Sample ID: **HS23091613-08DUP** Units: **mg/L** Analysis Date: **06-Oct-2023 18:36**
Client ID: **MW-19S** Run ID: **Skalar 03_448460** SeqNo: **7593500** 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					0	0	20	
Alkalinity, Carbonate (As CaCO3)	52.6	5.00					53	0.758	20	
Alkalinity, Hydroxide (As CaCO3)	63.8	5.00					63.2	0.945	20	
Alkalinity, Total (As CaCO3)	116.4	5.00					116.2	0.172	20	

The following samples were analyzed in this batch: HS23091613-04 HS23091613-05 HS23091613-06 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: **R448461 (0)** **Instrument:** **Skalar 03** **Method:** **PH BY SM4500H+ B-2011**

DUP Sample ID: **HS23091613-08DUP** Units: **pH Units** Analysis Date: **06-Oct-2023 18:36**
Client ID: **MW-19S** Run ID: **Skalar 03_448461** SeqNo: **7593526** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	10.64	0.100					10.65	0.0939	10	
Temp Deg C @pH	19.6	0					19.2	2.06	10	

The following samples were analyzed in this batch: HS23091613-05 HS23091613-07 HS23091613-08 HS23091613-09

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448464 (0) **Instrument:** Skalar 03 **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS23091898-01DUP** Units: **pH Units** Analysis Date: **06-Oct-2023 20:43**
Client ID: Run ID: **Skalar 03_448464** SeqNo: **7593595** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.18	0.100					7.19	0.139	10	
Temp Deg C @pH	19.9	0					19.9	0	10	

The following samples were analyzed in this batch: HS23091613-06

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448504 (0) **Instrument:** WetChem_HS **Method:** SPECIFIC CONDUCTANCE BY SM 2510B-2011

MBLK Sample ID: **MBLK-R448504** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Oct-2023 12:07**
Client ID: Run ID: **WetChem_HS_448504** SeqNo: **7594194** 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-R448504** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Oct-2023 12:07**
Client ID: Run ID: **WetChem_HS_448504** SeqNo: **7594193** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1381	5.00	1413	0	97.7	80 - 120				

DUP Sample ID: **HS23091613-08DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **09-Oct-2023 12:07**
Client ID: **MW-19S** Run ID: **WetChem_HS_448504** SeqNo: **7594195** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	3250	5.00					3210	1.24	20	

The following samples were analyzed in this batch:

HS23091613-05	HS23091613-06	HS23091613-07	HS23091613-08
HS23091613-09	HS23091613-10	HS23091613-11	HS23091613-12
HS23091613-13	HS23091613-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448773 (0) **Instrument:** WetChem_HS **Method:** CHEMICAL OXYGEN DEMAND BY E410.4, REV 2.0, 1993

MBLK Sample ID: **MBLK-R448773** Units: **mg/L** Analysis Date: **11-Oct-2023 15:00**
Client ID: Run ID: **WetChem_HS_448773** SeqNo: **7601031** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	U	15.0								

LCS Sample ID: **LCS-R448773** Units: **mg/L** Analysis Date: **11-Oct-2023 15:00**
Client ID: Run ID: **WetChem_HS_448773** SeqNo: **7601030** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	96	15.0	100	0	96.0	85 - 115				

MS Sample ID: **HS23091613-08MS** Units: **mg/L** Analysis Date: **11-Oct-2023 15:00**
Client ID: **MW-19S** Run ID: **WetChem_HS_448773** SeqNo: **7601033** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	76	15.0	50	25	102	80 - 120				

MSD Sample ID: **HS23091613-08MSD** Units: **mg/L** Analysis Date: **11-Oct-2023 15:00**
Client ID: **MW-19S** Run ID: **WetChem_HS_448773** SeqNo: **7601032** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	74	15.0	50	25	98.0	80 - 120	76	2.67	20	

The following samples were analyzed in this batch:

HS23091613-01	HS23091613-02	HS23091613-03	HS23091613-04
HS23091613-05	HS23091613-06	HS23091613-07	HS23091613-08
HS23091613-09	HS23091613-10	HS23091613-11	HS23091613-12
HS23091613-13	HS23091613-14		

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: HS23091613

QC BATCH REPORT

Batch ID: R448796 (0) **Instrument:** Skalar 03 **Method:** PH BY SM4500H+ B-2011

DUP Sample ID: **HS23091754-01DUP** Units: **pH Units** Analysis Date: **11-Oct-2023 19:06**
Client ID: Run ID: **Skalar 03_448796** SeqNo: **7601569** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.01	0.100					7.92	1.13	10	
Temp Deg C @pH	20	0					20	0	10	

The following samples were analyzed in this batch: HS23091613-10 HS23091613-11 HS23091613-12 HS23091613-13 HS23091613-14

RIGHT SOLUTIONS | RIGHT PARTNER

Client: Altamira
Project: WFEC / CCR Landfill
WorkOrder: **HS23091613**

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 Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

RIGHT SOLUTIONS | RIGHT PARTNER

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	88-00356	27-Mar-2024
California	2919; 2024	30-Apr-2024
Dept of Defense	L23-358	31-May-2025
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624-2023	31-Dec-2023
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-31	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23091613 **Date/Time Received:** **27-Sep-2023 09:10**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	27-Sep-2023 12:14	**Reviewed by:**	/S/ Anna Kinchen	02-Oct-2023 11:37
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** 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 ☐	
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):	1.9UC/1.8C	IR31
Cooler(s)/Kit(s):	51603	
Date/Time sample(s) sent to storage:	9/27/23	

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:

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23091613 **Date/Time Received:** **27-Sep-2023 09:10**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	28-Sep-2023 11:04	**Reviewed by:**	/S/ Anna Kinchen	02-Oct-2023 11:37
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** 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 ☐	
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):	3.8UC/3.7C , 2.0UC/1.9C	IR31
Cooler(s)/Kit(s):	50645 , 51303	
Date/Time sample(s) sent to storage:	9/28/23	

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:

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23091613 **Date/Time Received:** **27-Sep-2023 09:10**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	29-Sep-2023 12:09	**Reviewed by:**	/S/ Anna Kinchen	02-Oct-2023 11:37
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** 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 ☐	2 Page(s)
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samplers name present on COC?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in 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):	2.3UC/2.2C , 1.7UC/1.6C	IR31
Cooler(s)/Kit(s):	B Blue , 50980	
Date/Time sample(s) sent to storage:	9/29/23	

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:

RIGHT SOLUTIONS | RIGHT PARTNER

Sample Receipt Checklist

Work Order ID: HS23091613 **Date/Time Received:** **27-Sep-2023 09:10**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Corey Grandits**

Completed By:	/S/ Corey Grandits	30-Sep-2023 09:31	**Reviewed by:**	/S/ Anna Kinchen	02-Oct-2023 11:37
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** 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 ☐	
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):	1.0UC/0.9C , 0.7UC/0.6C	IR31
Cooler(s)/Kit(s):	51155 , 50369	
Date/Time sample(s) sent to storage:	9/30/23	

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: MW-13 Collection time discrepancy: COC=15:13 Labels=1533

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY RECORD

ALTAMIRA
formerly known as Environ Clean Carolina

PROJECT NUMBER: WFEC/160023/0007
PROJECT NAME: WFEC - CCR Landfill
COC: 1 of ____
CLIENT CONTACT: Chris Schaefer
CLIENT EMAIL: Chris-Schaefer@alteramm-us.com labdata@alteramm-us.com
CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: ALS / Anna Kichus
CLIENT ADDRESS: 525 Central Park Dr Ste 500 OKC, OK 73105
TAT: STD
LAB ADDRESS: ALS / Houston
SPECIAL INSTRUCTIONS: Containers 1-120 H_2SO_4 / 1-500 NP / 2-250-HCl 2-120 HNO_3 / 1-500 ZnAc
SHIPMENT METHOD: FedEx
TRACKING: 6862 6796 1015

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	App A* + App B**	COD	Nitrate as N	Spec. Cond.	Fe (Total)	Ferrous Ferric Fe	Dissolved Fe	Dissolved Ferrous Ferric	K, Mg, Na	Sulfide	Alkalinity	CHO_3, CO_3, Hydroxide	HOLD
1	MW-15A	9/25/23	1703	W	S.I.	7	Y	X	X	X	X	X	X	X	X	X	X	X	X	
2	MW-55	9/26/23	1200	W	Set	7	Y	X	X	X	X	X	X	X	X	X	X	X	X	
3	Temp Blank (counted on other chain			W	—															
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

HS23091613
Altamira
WFEC / CCR Landfill

* App A - B, Ca, Cl, F, pH, SO_4, TDS

** App B - Sb, As, Ba, Be, Cd, Co, Pb, Li, Hg, Mo, Sn, Th

Dissolved - Fe, Mo, Ferrous & Ferric are field filtered others are not

SAMPLER(S) NAME: Bradley VanCleave / Tanner Hucks
DATE: 9/26/23 TIME: 1900
Total # of Containers: 14
SAMPLER(S) SIGNATURE: Bradley VanCleave / Tanner Hucks
DATE: 9/26/23 TIME: 1900

RELINQUISHED BY: Bradley VanCleave DATE: 9/26/23 TIME: 1900
RECEIVED BY: DATE: TIME:
LOGGED BY: DATE: TIME:
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 WIC Other :

ALTAMIRA-US, LLC

IR#1 Lab CF-0.1 Cooler# 51605

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY RECORD

ALTAMIRA
formerly known as Enviro Clean Cardinal

PROJECT NUMBER: WFEE160023/0007
PROJECT NAME: WFEC - CCR Landfill
COC: _____ of _____
CLIENT CONTACT: Chris Schaefer
CLIENT EMAIL: Chris.Schaefer@altamira-us.com labdata
CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: ALS - Anna Kinchen
CLIENT ADDRESS: 525 Central Park Dr Ste 500 OKC, OK 73105
TAT: STD
LAB ADDRESS: ALS / Houston
SPECIAL INSTRUCTIONS: Bottles: 2-120 HNO_3, 2-250 HCl, 1-120 H_2SO_4, 1-500 NP, 1-500 NaOH, Zn Ac
SHIPMENT METHOD: Fed Ex
TRACKING: 6862 6796 0692

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO) (1)	App A*	App B**	COD	Nitrate as N	Specific Cond	Fe, total	Ferrous Fe	Ferric Fe	Dissolved Fe	Dissolved Mo	Dissolved Ferrous Ferric	K, Mg, Na	Sulfate	Alkalinity	HCO_3, CO_3, Hydroxide	HOLD
1	MW-14A	9/26/23	1540	W		7	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	MW-16	9/27/23	1205	W		7	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	Temp Blank			W		1																	
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							

HS23091613
Altamira
WFEC / CCR Landfill

*App A - B, Ca, Cl, F, pH, SO_4, TDS
**App B - Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Sn, Th
(1) samples for dissolved Fe, Mo, Ferrous & Ferric Iron are Field filtered, others are not

See Specific MS Methods for Containers & Preservatives

SAMPLER(S) NAME: Tanner Hoskins
DATE: 9/27/23 TIME: 1400
Total # of Containers:
SAMPLER(S) SIGNATURE:
DATE: 9/27/23 TIME: 1400

RELINQUISHED BY: Tanner Hoskins DATE: 9/27/23 TIME: 1400
RECEIVED BY: DATE: TIME:
LOGGED BY: DATE: 9-28-23 TIME: 0919
COOLER TEMP:

PRESERVATION KEY: 1-HCL 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-4 Degrees C 8-9035 9-Other :
POINT OF ORIGIN: ☐ Norman ☒ Oklahoma City ☐ Tulsa ☐ Yukon ☐ Midland ☐ Other :

ALTAMIRA-US, LLC

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER: WFEE160023/0007

PROJECT NAME: WFEC - CCR-Landfill

COC: _____ of _____

CLIENT CONTACT: Chris Schaefer

CLIENT EMAIL: Chris.schaefer@altamirausa.com; Lab data

CLIENT PHONE: 405-255-7538

LABORATORY / LAB PM: ALS

CLIENT ADDRESS: 525 Central Park D- Suite 500 OKC, OK 73105

TAT: STD

LAB ADDRESS: ALS/Houston

Containers for each sample: 2x120 HNO3; 1x500 NP; 1x120 H_2SO_4; 2x250 HCL; 1x500 NaOH+Zinc Ac

SHIPMENT METHOD: Fedex

TRACKING: 6862 6796 0670 / 6862 6796 0681

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	APP A + APP B **	COD	Nitrate as N	Specific Cond.	Fe total	Fe, ferrous + ferric	Diss Fe + Mn	Diss ferrous + ferric	K, Mg, Na,	Sulfide	Alkalinity	HCO3, CO3 & Hydroxide	HOLD
1	MW-18	9/27/23	1537	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
2	MW-7s	9/27/23	1303	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
3	MW-17	9/27/23	1700	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
4	MW-19s	9/27/23	1729	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
5	Dup 1	-	-	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
6	MW-19s MS	9/27/23	1729	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
7	MW-19s MSD	9/27/23	1729	W		7	①	X	X	X	X	X	X	X	X	X	X	X	X	
8	Temp Blank			W	Containers sized & preservatives listed above are correct	1	N													
9																				
10																				
11																				
12																				

HS23091613
Altamira
WFEC / CCR Landfill

13 * APP A = P, Ca, Cl, F, PH, Soy, TDS

14 ** APP B = Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Sn, Th

15 ① = Samples for dissolved Fe, Mn, Ferrous + Ferric are field filtered, others are not.

Total # of Containers: 50

SAMPLER(S) NAME: Tanner Hopkins / Brad Vanderave

SAMPLER(S) SIGNATURE:

DATE: 9/28/23 TIME: 1400

RELINQUISHED BY: DATE: 9/28/23 TIME: 1400

RECEIVED BY: DATE: TIME:

LOGGED BY: DATE: TIME:

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

SC0180 1.7

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY RECORD

ALTAMIRA (formerly known as Enviro Clean Cardinal)	PROJECT NUMBER: WFCE 160023/0007	PROJECT NAME: WFEC CCR Landfill	COC: ____ of ____
	CLIENT CONTACT: Chris Schaefer	CLIENT EMAIL: labdata Chris.Schaefer @ altamira-us.com	CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: ALS / Anna Kinchen	CLIENT ADDRESS: 525 Central Park Dr Ste 500 OKC, OK 73105	TAT: STD	
LAB ADDRESS: ALS Houston	SPECIAL INSTRUCTIONS: Bottles 1-120 HNO3, 1-120 H2SO4, 1-500 neat		
SHIPMENT METHOD: FEDEX	TRACKING: 6862 6796 0670 / 6862 6796 0681		

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	App A* App B**	CCR	N as Nitrate	Specific Cond.	HOLD
1	MW-20	9/28/23	1018	W	See containers & preservatives in special instructions	3	N	X	X	X	X	
2	MW-3	9/28/23	1011	W		3	N	X	X	X	X	
3	Dup 2	9/28/23	1018	W		3	N	X	X	X	X	
4	Temp Blank	—	—	W		1	N					
5												
6												
7												
8	* App A = B, Ca, Cl, F, pH, SO4, TDS											
9												
10	** App B = Sb, As, Ba, Be, Cd, Cr, Co, Pb											
11	Li, Hg, Mo, Se, Tl											
12												
13												
14												
15												

HS23091613
Altamira
WFEC / CCR Landfill

SAMPLER(S) NAME: Bradly Vallie / Tanner Hoskins	DATE: 9/28/23 TIME: 1400	Total # of Containers: 10	SAMPLER(S) SIGNATURE: [signatures]	DATE: 9/28/23 TIME: 1400
RELINQUISHED BY: [signature]	DATE: 9/28/23 TIME: 1400	RECEIVED BY: [signature]	DATE: 09-29-23 TIME: 0920	LOGGED BY: DATE: TIME: 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

RIGHT SOLUTIONS | RIGHT PARTNER

CHAIN OF CUSTODY RECORD

ALTAMIRA
formerly known as Enviro Clean Cardinal

PROJECT NUMBER: WFEE160023/0007	PROJECT NAME: WFEC CCR Landfill		COC: ______ of ______
CLIENT CONTACT: Chris Schaefer	CLIENT EMAIL: labdata Chris.Schaefer@altamira-us.com		CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: ALS Anna Kinchen	CLIENT ADDRESS: 525 Central Park Dr Ste 600 OKC, OK 73105	TAT: STD	
LAB ADDRESS: ALS Houston	SPECIAL INSTRUCTIONS: Bottles 1-120 HNO_3 1-500 Neat 1-120 H_2SO_4		
SHIPMENT METHOD: FEDEX	TRACKING: 6862 6796 0980/6862 6796 1037		

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	App A* App B**	COD	Nitrate as N	Specific Cond.									HOLD
1	MW-21	9/28/23	1515	W	See special instructions	3	N	X	X	X	X									
2	MW-13	9/28/23	1513	W		3	N	X	X	X	X									
3	Temp Blank	—		W		1	—													
4																				
5																				
6																				
7																				
8																				
9	* App A - B, Ca, Cl, F, pH, SO_4, TDS																			
10																				
11	** App B - Sb, As, Ba, Be, Cd, Cr, Co, Pb, Li, Hg, Mo, Se, Tl																			
12																				
13																				
14																				
15																				

HS23091613
Altamira
WFEC / CCR Landfill

SAMPLER(S) NAME: Bradley VanCleave / Tanner Hoskins	DATE: 9/29/23 TIME: 1900	Total # of Containers:	SAMPLER(S) SIGNATURE: Bradley VanCleave / Tanner Hoskins — DATE: 9/29/23 TIME: 1900
RELINQUISHED BY: Bradley VanCleave	DATE: 9/29/23 TIME: 1900	RECEIVED BY: DATE: TIME:	LOGGED BY: CG 09130123 — DATE: 09130123 TIME: 08:45 — 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

Cooler 51155 1.0 Temp ... IR# 3 / 50309 0.7 ... CCF-01

RIGHT SOLUTIONS | RIGHT PARTNER

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

51155

CUSTODY SEAL

Date: 9/29/23 Time: 1900
Name:
Company:

Seal Broken By: SW
Date: 09/30/23

51155 SEP 30 2023

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

51155

CUSTODY SEAL

Date: 9/29/23 Time: 1900
Name:
Company:

Seal Broken By: SW
Date: 09/30/23

SHORT HOLDING TIME

51155

ORIGIN ID:SGRA (405) 255-7538
ATTN: BRAD VAN CLEAVE
ALTAMIRA
525 CENTRAL PARK DR SUITE 500
OKLAHOMA CITY, OK 73105
UNITED STATES US

SHIP DATE: 08SEP23

809 5 B
3 12:00

TO SHIPPING DEPT
ALS LABORATORY
10450 STANCLIFF R
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: WFEC - CCR - LANDFILL - BO 95300 - AN

FedEx Express
E

FedEx
TRK# 0221 6862 6796 0980

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO SGRA

77099
TX-US IAH

RIGHT SOLUTIONS | RIGHT PARTNER

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

CUSTODY SEAL
Date: 9/29/23 Time: 1300
Name:
Company:

Seal Broken By:
Date: 09/30/23

SDG# 50369 SEP 30 2023

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

CUSTODY SEAL
Date: 9/29/23 Time: 1300
Name:
Company:

Seal Broken By:
Date: 09/30/23

SHORT HOLDING TIME

50369

ORIGIN ID:SGRA (405) 255-2530
ATTN: BRAD VAN CLEAVE
ALTAMIRA
525 CENTRAL PARK DR SUITE 500

OKLAHOMA CITY, OK 73105
UNITED STATES US

SHIP DATE: 08SEP23
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3751
DIMS: 26x14x14 IN

TO SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099
(281) 630-5656
REF: WFEC-CCR-LANDFILL=80 95300

RMA:

FedEx Express

FedEx
TRK# 0221 6862 6796 1037

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO SGRA

77099
TX-US IAH

RIGHT SOLUTIONS | RIGHT PARTNER

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

CUSTODY SEAL
Date: 9/28/23 Time: 1400
Company: ALS

Seal Broken By:
Date: 09/29/23

B. Brul SEP 29 2023

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

B. Brul

CUSTODY SEAL
Date: 9/28/23 Time: 1400
Name: Brad Van Cleave
Company: ALS

Seal Broken By:
Date: 09/29/23

SHORT HOLDING TIME

B. Brul

ORIGIN ID:SGRA (405) 255-7538
ATTN: BRAD VAN CLEAVE
ALTAMIRA
525 CENTRAL PARK DR SUITE 500
OKLAHOMA CITY, OK 73105
UNITED STATES US

SHIP DATE: 06SEP23
ACTWGT: 1.00 LB MAN
CAD: 0201242/CAFE3751
DIMS: 28x14x14 IN

TO SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: WTEC-MNA WELLS=BO 95302-AK

RMA:

FedEx Express

FedEx
TRK# 0221 6862 6796 0681

FRI - 29 SEP AA
PRIORITY OVERNIGHT

43 SGRA

77099
TX-US
IAH

RIGHT SOLUTIONS | RIGHT PARTNER

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

50980

CUSTODY SEAL

Date: 9/28/23 Time: 1440
Name:
Company:

Seal Broken By:
Date: 09/29/23

50980

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

50980

CUSTODY SEAL

Date: 9/20/23 Time: 1700
Name:
Company:

Seal Broken By:
Date: 09/29/23

SHORT HOLDING TIME

50980

ORIGIN ID:SGRA (405) 255-7538
ATIN: BRAD VAN CLEAVE
ALTAMIRA
525 CENTRAL PARK DR SUITE 500

OKLAHOMA CITY, OK 73105
UNITED STATES US

SHIP DATE: 06SEP23
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3751
DIMS: 26x14x14 IN

TO SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099
(281) 530 - 5656
REF: WFEC - MNA WELLS = BO 95302 - AK

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TRK# 6862 6796 0670

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43 SGRA

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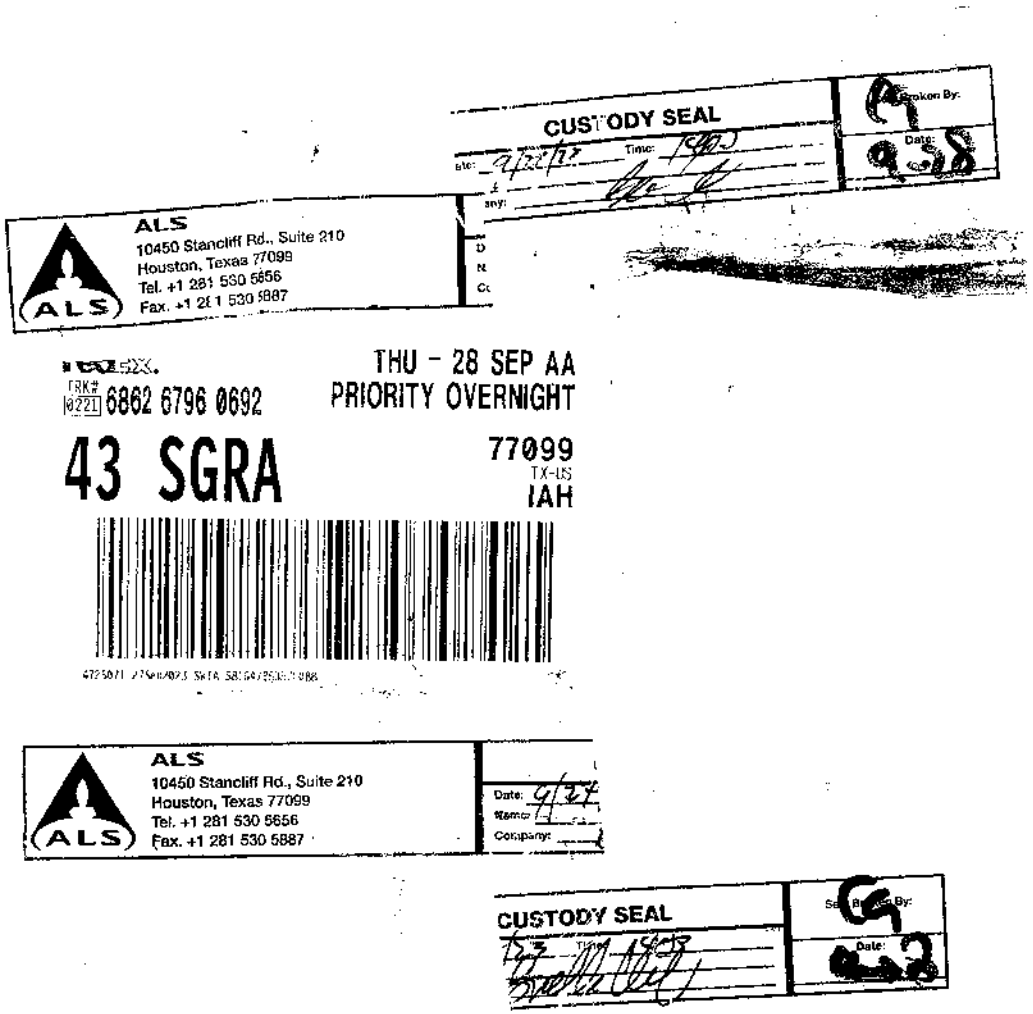

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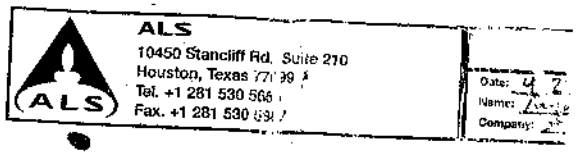

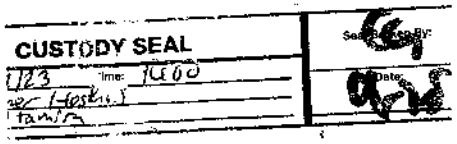

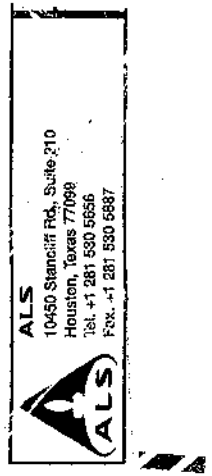

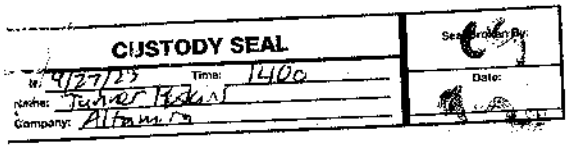

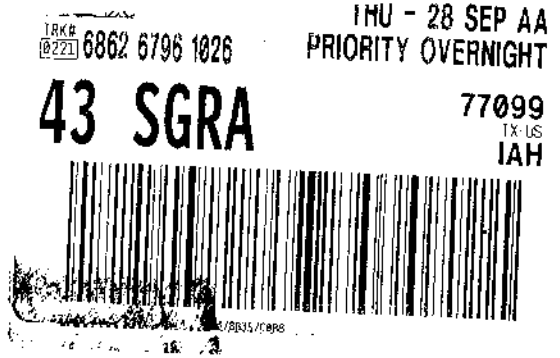

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ALS
10450 Stancliff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

51603

CUSTODY SEAL

Date: 9/26/23 Time: 1400
Name: Tanner Hopkins / Brad VanCleave
Company: Altamira

Seal Broken By: SW
Date: 09/27/23

51603 SEP 27 2023

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

51603

CUSTODY SEAL

Date: 9/26/23 Time: 1400
Name: Tanner Hopkins / Brad VanCleave
Company: Altamira

Seal Broken By: SW
Date: 09/27/23

ALS

SHORT HOLDING TIME

51603

ORIGIN ID:SGRA (405) 255-7538
ATTN: BRAD VAN CLEAVE
ALTAMIRA
525 CENTRAL PARK DR SUITE 500

OKLAHOMA CITY, OK 73105
UNITED STATES US

SHIP DATE: 06SEP23
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3751
DIMS: 26x14x14 IN

TO **SHIPPING DEPT**
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099
(281) 530-5656

REF: WFEC - CCR - LANDFILL = BO 95300 - AN

RMA:

FedEx Express

FedEx TRK# 6862 6796 1015

WED - 27 SEP AA
PRIORITY OVERNIGHT

43 SGRA

77099
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4725071 26Sep2023 SWIA 58164/8035/C08B

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GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

January 08, 2024

Chris Schaefer
Altamira
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Re: Radiochemistry
Work Order: 639836

Dear Chris Schaefer:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 04, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,

Jacob Crook
Project Manager

Purchase Order: GELP22-1329
Enclosures

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

ALMI001 Altamira

Client SDG: 639836 GEL Work Order: 639836

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jacob Crook.

Reviewed by Jacob W Crook

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-14A
Sample ID: 639836001
Matrix: Water
Collect Date: 26-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.05	+/-0.737	1.09	+/-0.784	3.00	pCi/L			JE1	10/16/23	1056	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.79	+/-0.887		+/-0.934		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.738	+/-0.492	0.558	+/-0.508	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	82.8	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: DUP 1
Sample ID: 639836002
Matrix: Water
Collect Date: 26-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.77	+/-1.03	1.54	+/-1.13	3.00	pCi/L			JE1	10/16/23	1056	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.27	+/-1.11		+/-1.20		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.501	+/-0.407	0.451	+/-0.422	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	86.6	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-16
Sample ID: 639836003
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.95	+/-1.16	1.76	+/-1.27	3.00	pCi/L			JE1	10/16/23	1056	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.56	+/-1.25		+/-1.35		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.616	+/-0.465	0.596	+/-0.475	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	77.2	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-18
Sample ID: 639836004
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.10	+/-1.11	1.84	+/-1.14	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.59	+/-1.19		+/-1.23		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.491	+/-0.439	0.575	+/-0.450	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	93.5	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-55
Sample ID: 639836005
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.67	+/-0.909	1.25	+/-1.00	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.80	+/-0.940		+/-1.03		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.132	+/-0.241	0.462	+/-0.243	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	75.4	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-15A
Sample ID: 639836006
Matrix: Water
Collect Date: 25-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.72	+/-1.41	2.14	+/-1.57	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		3.49	+/-1.51		+/-1.67		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.766	+/-0.537	0.695	+/-0.558	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	85	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

QC Summary

Client : **Altamira**
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma

Contact: **Chris Schaefer**

Workorder: **639836**

Report Date: January 8, 2024

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2505010										
QC1205539629 639950001 DUP										
Radium-228	U	1.37	U	0.602	pCi/L	0		N/A	JE1	10/16/2310:58
	Uncert:	+/-1.05		+/-1.08						
	TPU:	+/-1.11		+/-1.09						
QC1205539632 LCS										
Radium-228	78.1			64.9	pCi/L		83.1	(75%-125%)	JE1	10/16/2314:40
	Uncert:			+/-5.27						
	TPU:			+/-17.4						
QC1205539628 MB										
Radium-228			U	1.48	pCi/L				JE1	10/16/2310:57
	Uncert:			+/-1.12						
	TPU:			+/-1.18						
QC1205539630 639950001 MS										
Radium-228	464 U	1.37		390	pCi/L		83.9	(75%-125%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.4						
	TPU:	+/-1.11		+/-104						
QC1205539631 639950001 MSD										
Radium-228	478 U	1.37		473	pCi/L	19.2	98.8	(0%-20%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.9						
	TPU:	+/-1.11		+/-124						
Rad Ra-226										
Batch 2505011										
QC1205539634 639950001 DUP										
Radium-226	U	0.618		0.781	pCi/L	23.2		(0% - 100%)	LXP1	10/30/2310:51
	Uncert:	+/-0.490		+/-0.586						
	TPU:	+/-0.498		+/-0.597						
QC1205539637 LCS										
Radium-226	27.0			20.6	pCi/L		76.1	(75%-125%)	LXP1	10/30/2310:52
	Uncert:			+/-2.27						
	TPU:			+/-5.15						
QC1205539633 MB										
Radium-226			U	0.259	pCi/L				LXP1	10/30/2310:51
	Uncert:			+/-0.391						
	TPU:			+/-0.396						
QC1205539635 639950001 MS										
Radium-226	136 U	0.618		108	pCi/L		79.3	(75%-125%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-12.9						
	TPU:	+/-0.498		+/-25.1						
QC1205539636 639950001 MSD										
Radium-226	125 U	0.618		146	pCi/L	29.8*	116	(0%-20%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-14.6						

QC Summary

Workorder: **639836**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Ra-226										
Batch 2505011										
				TPU:	+/-0.498		+/-29.8			

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
J	Value is estimated
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
H	Analytical holding time was exceeded
<	Result is less than value reported
>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

CHAIN OF CUSTODY RECORD 639836

ALTAMIRA
formerly known as Enviro Clean Cardinal

PROJECT NUMBER: WFEE160023/0007
PROJECT NAME: WFEE - CCR Landfill
COC : _____ of _____
CLIENT CONTACT: Chris Schaefer
CLIENT EMAIL: labdata@altamira-us.com Chris.Schaefer
CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: Gel Laboratory
CLIENT ADDRESS: 525 Central Park Dr Ste. 500 OKC, OK 73105
TAT:
LAB ADDRESS: 2040 Savage Rd Charleston, SC 29407
SPECIAL INSTRUCTIONS: Rad 226 & 228 Combined
SHIPMENT METHOD: FEDEX
TRACKING: 6847 0901 8681

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Rad 226 & 228	HOLD
1	MW-14A	9/26/23	1540	W	HNO_3	1	N	X	
2	Dup 1			W	HNO_3	1	N	X	
3	MW-16	9/27/23	1205	W	HNO_3	1	N	X	
4	MW-18	9/27/23	1537	W	HNO_3	1	N	X	
5	MW-55	9/26/23	1200	W	HNO_3	1	N	X	
6	MW-15A	9/25/23	1703	W	HNO_3	1	N	X	
7	Temp Blank			W		1			
8									
9									
10									
11									
12									
13									
14									
15									

SAMPLER(S) NAME: Bradley VanCleave / Tanner Hoskins
DATE: 10/2/23 TIME: 1200
Total # of Containers: 6
SAMPLER(S) SIGNATURE: Bradley VanCleave
DATE: 10/2/23 TIME: 1200

RELINQUISHED BY: Bradley VanCleave DATE: 10/2/23 TIME: 1200
RECEIVED BY: DATE: 10/4/23 TIME: 905
LOGGED BY: DATE: TIME:
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 :

JC

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ATLMI	SDG/AR/COC/Work Order: 639919/836/950
Received By: CLM	Date Received:
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other -684709018670 - (16) -684709018692 -(15)- 684709018681 -(15)

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): ___ CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius Ice melted in coolers TEMP: See above with Trueking
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR2-21 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials OO Date 10/5/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 08 January 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Radiochemistry
Technical Case Narrative
Altamira
SDG #: 639836

Product: **GFPC Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2505010

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639836001	MW-14A
639836002	DUP 1
639836003	MW-16
639836004	MW-18
639836005	MW-55
639836006	MW-15A
1205539628	Method Blank (MB)
1205539629	639950001(MW-19S) Sample Duplicate (DUP)
1205539630	639950001(MW-19S) Matrix Spike (MS)
1205539631	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539632	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts
Samples 1205539630 (MW-19SMS), 1205539631 (MW-19SMSD) and 1205539632 (LCS) were recounted due to low recovery. The recounts are reported.

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539630 (MW-19SMS) and 1205539631 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2505011

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639836001	MW-14A
639836002	DUP 1
639836003	MW-16
639836004	MW-18
639836005	MW-55
639836006	MW-15A
1205539633	Method Blank (MB)
1205539634	639950001(MW-19S) Sample Duplicate (DUP)
1205539635	639950001(MW-19S) Matrix Spike (MS)
1205539636	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539637	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between MS and MSD
The Matrix Spike and Matrix Spike Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1205539635MS and 1205539636MSD (MW-19S)	Radium-226	RPD 29.8* (0%-20%)

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539635 (MW-19SMS) and 1205539636 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

January 08, 2024

Chris Schaefer
Altamira
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Re: Radiochemistry
Work Order: 639950

Dear Chris Schaefer:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 04, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Ice melted in containers upon receipt..

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,

Jacob Crook
Project Manager

Purchase Order: GELP22-1329
Enclosures

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

ALMI001 Altamira

Client SDG: 639950 GEL Work Order: 639950

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jacob Crook.

Reviewed by Jacob W Crook

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-19S
Sample ID: 639950001
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.37	+/-1.05	1.68	+/-1.11	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.99	+/-1.16		+/-1.21		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.618	+/-0.490	0.686	+/-0.498	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	88.6	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-3
Sample ID: 639950002
Matrix: Water
Collect Date: 28-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.16	+/-0.933	1.23	+/-1.08	3.00	pCi/L			JE1	10/16/23	1102	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.97	+/-1.03		+/-1.18		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.811	+/-0.444	0.351	+/-0.461	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	86.2	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer

Project: Radiochemistry

Client Sample ID: MW-17
Sample ID: 639950003
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		1.44	+/-0.886	1.29	+/-0.959	3.00	pCi/L			JE1	10/16/23	1102	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.07	+/-1.00		+/-1.07		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.627	+/-0.471	0.489	+/-0.483	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	75.7	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

QC Summary

Client : **Altamira**
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma

Contact: **Chris Schaefer**

Workorder: **639950**

Report Date: January 8, 2024

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2505010										
QC1205539629 639950001 DUP										
Radium-228	U	1.37	U	0.602	pCi/L	0		N/A	JE1	10/16/2310:58
	Uncert:	+/-1.05		+/-1.08						
	TPU:	+/-1.11		+/-1.09						
QC1205539632 LCS										
Radium-228	78.1			64.9	pCi/L		83.1	(75%-125%)	JE1	10/16/2314:40
	Uncert:			+/-5.27						
	TPU:			+/-17.4						
QC1205539628 MB										
Radium-228			U	1.48	pCi/L				JE1	10/16/2310:57
	Uncert:			+/-1.12						
	TPU:			+/-1.18						
QC1205539630 639950001 MS										
Radium-228	464 U	1.37		390	pCi/L		83.9	(75%-125%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.4						
	TPU:	+/-1.11		+/-104						
QC1205539631 639950001 MSD										
Radium-228	478 U	1.37		473	pCi/L	19.2	98.8	(0%-20%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.9						
	TPU:	+/-1.11		+/-124						
Rad Ra-226										
Batch 2505011										
QC1205539634 639950001 DUP										
Radium-226	U	0.618		0.781	pCi/L	23.2		(0% - 100%)	LXP1	10/30/2310:51
	Uncert:	+/-0.490		+/-0.586						
	TPU:	+/-0.498		+/-0.597						
QC1205539637 LCS										
Radium-226	27.0			20.6	pCi/L		76.1	(75%-125%)	LXP1	10/30/2310:52
	Uncert:			+/-2.27						
	TPU:			+/-5.15						
QC1205539633 MB										
Radium-226			U	0.259	pCi/L				LXP1	10/30/2310:51
	Uncert:			+/-0.391						
	TPU:			+/-0.396						
QC1205539635 639950001 MS										
Radium-226	136 U	0.618		108	pCi/L		79.3	(75%-125%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-12.9						
	TPU:	+/-0.498		+/-25.1						
QC1205539636 639950001 MSD										
Radium-226	125 U	0.618		146	pCi/L	29.8*	116	(0%-20%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-14.6						

QC Summary

Workorder: **639950**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Ra-226										
Batch 2505011										
				TPU:	+/-0.498		+/-29.8			

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
J	Value is estimated
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
H	Analytical holding time was exceeded
<	Result is less than value reported
>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

CHAIN OF CUSTODY RECORD

639950

ALTAMIRA
formerly known as Enviro Clean Cardinal

PROJECT NUMBER: WFEE160023/0007

PROJECT NAME: WFEC- CCR Landfill

COC : _____ of _____

CLIENT CONTACT: Chris Schaefer

CLIENT EMAIL: labdata Chris.Schaefer@altamira-us.com

CLIENT PHONE: 405-255-7538

LABORATORY / LAB PM: Gel Lab

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

TAT:

LAB ADDRESS: 2040 Savage Rd Charleston, SC 29407

SPECIAL INSTRUCTIONS: Report Rad 226 & 228 Combined

SHIPMENT METHOD: FEDEX

TRACKING: 684709018692

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Rad 226 & 228	HOLD
1	MW-19S	9/27/23	1729	W	HNO3	1	N	X	
2	MW-19S MS	9/27/23	1729	W		1	N	X	
3	MW-19S MSD	9/27/23	1729	W		1	N	X	
4	MW-3	9/28/23	1011	W		1	N	X	
5	MW-17	9/27/23	1503	W		1	N	X	
6	Temp Blank	—	—	W	—	1	—		
7									
8									
9									
10									
11									
12									
13									
14									
15									

SAMPLER(S) NAME: Bradley VanCleave

DATE: 10/2/23 TIME: 1200

Total # of Containers: 6

SAMPLER(S) SIGNATURE: Bradley VanCleave

DATE: 10/2/23 TIME: 1200

RELINQUISHED BY: Bradley VanCleave DATE: 10/2/23 TIME: 1200

RECEIVED BY: [signature] DATE: 10/4/23 TIME: 905

LOGGED BY: DATE: TIME:

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 :

JC

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ALMI	**SDG/AR/COC/Work Order:** 639919/936/950
Received By: CLM	**Date Received:**
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other -684709018670 – (16) 684709018692 (15) - 684709018681 - (15)

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): ___0___ **CPM / mR/Hr** **Classified as: Rad 1 Rad 2 Rad 3**
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius Ice melted in coolers **TEMP:** See above with Tracking
4	Daily check performed and passed on IR temperature gun?	✓			**Temperature Device Serial #:** IR2-21 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials ___OO___ Date 10/5/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 08 January 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Radiochemistry
Technical Case Narrative
Altamira
SDG #: 639950

Product: **GFPC Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2505010

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639950001	MW-19S
639950002	MW-3
639950003	MW-17
1205539628	Method Blank (MB)
1205539629	639950001(MW-19S) Sample Duplicate (DUP)
1205539630	639950001(MW-19S) Matrix Spike (MS)
1205539631	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539632	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts
Samples 1205539630 (MW-19SMS), 1205539631 (MW-19SMSD) and 1205539632 (LCS) were recounted due to low recovery. The recounts are reported.

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539630 (MW-19SMS) and 1205539631 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2505011

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639950001	MW-19S
639950002	MW-3
639950003	MW-17
1205539633	Method Blank (MB)
1205539634	639950001(MW-19S) Sample Duplicate (DUP)
1205539635	639950001(MW-19S) Matrix Spike (MS)
1205539636	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539637	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between MS and MSD
The Matrix Spike and Matrix Spike Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1205539635MS and 1205539636MSD (MW-19S)	Radium-226	RPD 29.8* (0%-20%)

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539635 (MW-19SMS) and 1205539636 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL Laboratories LLC
a member of The GEL Group INC

2040 Savage Road | Charleston, SC 29407
843.556.8171
gel.com

January 08, 2024

Chris Schaefer
Altamira
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Re: Radiochemistry
Work Order: 639919

Dear Chris Schaefer:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 04, 2023. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at www.gel.com.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,

Jacob Crook
Project Manager

Purchase Order: GELP22-1329
Enclosures

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

ALMI001 Altamira

Client SDG: 639919 GEL Work Order: 639919

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Jacob Crook.

Reviewed by Jacob W Crook

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-75
Sample ID: 639919001
Matrix: Water
Collect Date: 27-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.751	+/-0.832	1.39	+/-0.854	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.30	+/-0.930		+/-0.953		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.552	+/-0.414	0.431	+/-0.423	1.00	pCi/L			LXP1	10/30/23	0942	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	71	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-21
Sample ID: 639919002
Matrix: Water
Collect Date: 28-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	0.705	+/-0.809	1.35	+/-0.829	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		0.864	+/-0.902		+/-0.920		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.159	+/-0.398	0.794	+/-0.399	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	76.8	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-13
Sample ID: 639919003
Matrix: Water
Collect Date: 28-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228		2.30	+/-0.982	1.29	+/-1.14	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		3.15	+/-1.10		+/-1.25		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.854	+/-0.487	0.399	+/-0.507	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	85.9	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: DUP 2
Sample ID: 639919004
Matrix: Water
Collect Date: 28-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.52	+/-1.20	1.91	+/-1.26	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		1.98	+/-1.28		+/-1.34		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226	U	0.463	+/-0.454	0.671	+/-0.467	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	72.6	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Altamira
Address : 525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma 73105

Report Date: January 8, 2024

Contact: Chris Schaefer
Project: Radiochemistry

Client Sample ID: MW-20
Sample ID: 639919005
Matrix: Water
Collect Date: 28-SEP-23
Receive Date: 04-OCT-23
Collector: Client

Project: ALMI00122
Client ID: ALMI001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gas Flow Proportional Counting														
GFPC Ra228, Liquid "As Received"														
Radium-228	U	1.40	+/-1.30	2.14	+/-1.35	3.00	pCi/L			JE1	10/16/23	1057	2505010	1
Radium-226+Radium-228 Calculation "See Parent Products"														
Radium-226+228 Sum		2.21	+/-1.42		+/-1.47		pCi/L			NXL1	10/31/23	0915	2511614	2
Rad Radium-226														
Lucas Cell, Ra226, Liquid "As Received"														
Radium-226		0.811	+/-0.573	0.677	+/-0.592	1.00	pCi/L			LXP1	10/30/23	1017	2505011	3

The following Analytical Methods were performed

Method	Description
1	EPA 904.0/SW846 9320 Modified
2	Calculation
3	EPA 903.1 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Barium-133 Tracer	GFPC Ra228, Liquid "As Received"	2505010	76.9	(15%-125%)

Notes:

The MDC is a sample specific MDC.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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

QC Summary

Client : **Altamira**
525 Central Park Dr
Suite 500
Oklahoma City, Oklahoma

Contact: **Chris Schaefer**

Workorder: **639919**

Report Date: January 8, 2024

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 2505010										
QC1205539629 639950001 DUP										
Radium-228	U	1.37	U	0.602	pCi/L	0		N/A	JE1	10/16/2310:58
	Uncert:	+/-1.05		+/-1.08						
	TPU:	+/-1.11		+/-1.09						
QC1205539632 LCS										
Radium-228	78.1			64.9	pCi/L		83.1	(75%-125%)	JE1	10/16/2314:40
	Uncert:			+/-5.27						
	TPU:			+/-17.4						
QC1205539628 MB										
Radium-228			U	1.48	pCi/L				JE1	10/16/2310:57
	Uncert:			+/-1.12						
	TPU:			+/-1.18						
QC1205539630 639950001 MS										
Radium-228	464 U	1.37		390	pCi/L		83.9	(75%-125%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.4						
	TPU:	+/-1.11		+/-104						
QC1205539631 639950001 MSD										
Radium-228	478 U	1.37		473	pCi/L	19.2	98.8	(0%-20%)	JE1	10/16/2314:40
	Uncert:	+/-1.05		+/-31.9						
	TPU:	+/-1.11		+/-124						
Rad Ra-226										
Batch 2505011										
QC1205539634 639950001 DUP										
Radium-226	U	0.618		0.781	pCi/L	23.2		(0% - 100%)	LXP1	10/30/2310:51
	Uncert:	+/-0.490		+/-0.586						
	TPU:	+/-0.498		+/-0.597						
QC1205539637 LCS										
Radium-226	27.0			20.6	pCi/L		76.1	(75%-125%)	LXP1	10/30/2310:52
	Uncert:			+/-2.27						
	TPU:			+/-5.15						
QC1205539633 MB										
Radium-226			U	0.259	pCi/L				LXP1	10/30/2310:51
	Uncert:			+/-0.391						
	TPU:			+/-0.396						
QC1205539635 639950001 MS										
Radium-226	136 U	0.618		108	pCi/L		79.3	(75%-125%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-12.9						
	TPU:	+/-0.498		+/-25.1						
QC1205539636 639950001 MSD										
Radium-226	125 U	0.618		146	pCi/L	29.8*	116	(0%-20%)	LXP1	10/30/2310:52
	Uncert:	+/-0.490		+/-14.6						

QC Summary

Workorder: **639919**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Ra-226										
Batch 2505011										
				TPU:	+/-0.498		+/-29.8			

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
J	Value is estimated
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
H	Analytical holding time was exceeded
<	Result is less than value reported
>	Result is greater than value reported
UI	Gamma Spectroscopy--Uncertain identification
BD	Results are either below the MDC or tracer recovery is low
h	Preparation or preservation holding time was exceeded
R	Sample results are rejected
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
M	M if above MDC and less than LLD
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
FA	Failed analysis.
UJ	Gamma Spectroscopy--Uncertain identification
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
N1	See case narrative
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
**	Analyte is a Tracer compound
M	REMP Result > MDC/CL and < RDL
J	See case narrative for an explanation

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
** Indicates analyte is a surrogate/tracer compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

CHAIN OF CUSTODY RECORD 639919

ALTAMIRA
formerly known as Enviro Clean Cardinal

PROJECT NUMBER: WFEE160023/0007
PROJECT NAME: WFEC - CCR Landfill
COC : _____ of _____
CLIENT CONTACT: Chris Schaefer
CLIENT EMAIL: labdata Chris.Schaefer@altamira-us.com
CLIENT PHONE: 405-255-7538
LABORATORY / LAB PM: Gel Lab
CLIENT ADDRESS: 525 Central Park Dr Ste 500 OKC, OK, ~~73118~~ BV 73105
TAT:
LAB ADDRESS: 2040 Savage Rd Charleston, SC 29407
SPECIAL INSTRUCTIONS: Rad 226 + 228 combined Report
SHIPMENT METHOD: FedEx
TRACKING: 6847 0901 8670

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Rad 226+228	HOLD
1	MW-75	9/27/23	1803	W	HNO_3	1	N	X	
2	MW-21	9/28/23	1515	W		1	N	X	
3	MW-13	9/28/23	1533	W		1	N	X	
4	Dup 2			W		1	N	X	
5	MW-20	9/28/23	~~1719~~ 1018 BV	W		1	N	X	
6	Temp Blank			W	—	1	—		
7									
8									
9									
10									
11									
12									
13									
14									
15									

SAMPLER(S) NAME: Bradley VanCleave / Tanner Hoskins
DATE: 10/2/23 TIME: 1200
Total # of Containers:
SAMPLER(S) SIGNATURE: Bradley VanCleave / Tanner Hoskins
DATE: 10/2/23 TIME: 1200

RELINQUISHED BY: Bradley VanCleave
DATE: 10/4/23 TIME: 1200
RECEIVED BY: Chris Mahon
DATE: 10/4/23 TIME: 905
LOGGED BY:
DATE: TIME:
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 :

JC

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ATLMT	SDG/AR/COC/Work Order: 639919/836/950
Received By: CLM	Date Received:
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other -684709018670 – (16) -684709018692 -(15)-684709018681-(15)

Suspected Hazard Information	Yes	No	
			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A)Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#: If UN2910, Is the Radioactive Shipment Survey Compliant? Yes___ No___
B) Did the client designate the samples are to be received as radioactive?		✓	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): ___ CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		✓	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		✓	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Chain of custody documents included with shipment?	✓			Circle Applicable: Client contacted and provided COC COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Wet Ice Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius Ice melted in coolers TEMP: See above with Trueking
4	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: IR2-21 Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6	Samples requiring chemical preservation at proper pH?	✓			Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?			✓	If Yes, are Encores or Soil Kits present for solids? Yes___ No___ NA___(If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes___ No___ NA___(If unknown, select No) Are liquid VOA vials free of headspace? Yes___ No___ NA___ Sample ID's and containers affected:
8	Samples received within holding time?	✓			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11	Number of containers received match number indicated on COC?	✓			Circle Applicable: No container count on COC Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?			✓	
13	COC form is properly signed in relinquished/received sections?	✓			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials OO Date 10/5/23 Page 1 of 1

GL-CHL-SR-001 Rev 7

List of current GEL Certifications as of 08 January 2024

State	Certification
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-00651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	KY90129
Kentucky Wastewater	KY90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2023019
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122024-05
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2023-152
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-23-21
Utah NELAP	SC000122023-38
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

Radiochemistry
Technical Case Narrative
Altamira
SDG #: 639919

Product: **GFPC Ra228, Liquid**
Analytical Method: EPA 904.0/SW846 9320 Modified
Analytical Procedure: GL-RAD-A-063 REV# 5
Analytical Batch: 2505010

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639919001	MW-75
639919002	MW-21
639919003	MW-13
639919004	DUP 2
639919005	MW-20
1205539628	Method Blank (MB)
1205539629	639950001(MW-19S) Sample Duplicate (DUP)
1205539630	639950001(MW-19S) Matrix Spike (MS)
1205539631	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539632	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts
Samples 1205539630 (MW-19SMS), 1205539631 (MW-19SMSD) and 1205539632 (LCS) were recounted due to low recovery. The recounts are reported.

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539630 (MW-19SMS) and 1205539631 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Product: **Lucas Cell, Ra226, Liquid**
Analytical Method: EPA 903.1 Modified
Analytical Procedure: GL-RAD-A-008 REV# 15
Analytical Batch: 2505011

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
639919001	MW-75
639919002	MW-21
639919003	MW-13
639919004	DUP 2
639919005	MW-20
1205539633	Method Blank (MB)
1205539634	639950001(MW-19S) Sample Duplicate (DUP)
1205539635	639950001(MW-19S) Matrix Spike (MS)
1205539636	639950001(MW-19S) Matrix Spike Duplicate (MSD)
1205539637	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

Duplication Criteria between MS and MSD
The Matrix Spike and Matrix Spike Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

Sample	Analyte	Value
1205539635MS and 1205539636MSD (MW-19S)	Radium-226	RPD 29.8* (0%-20%)

Miscellaneous Information

Additional Comments
The matrix spike and matrix spike duplicate, 1205539635 (MW-19SMS) and 1205539636 (MW-19SMSD), aliquots were reduced to conserve sample volume.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

ATTACHMENT B

DATA SUMMARY TABLES
(LANDFILL CCR UNIT)

ATTACHMENT B
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-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	DUP 2	MW-3	MW-3	MW-3 (Shallow)	MW-3 (Deep)
				Sample Date:	25-May-16	27-Jul-16	28-Sep-16	1-Dec-16	31-Jan-17	5-Apr-17	6-Jun-17	6-Jun-17	8-Aug-17	17-May-18	1-Aug-18	9-Aug-18
Detection Monitoring Parameters				***Units***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7		BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Boron	None	1.896	Not Applicable	mg/L	1.09	1.17	1.1	1.7	1.28 J*	0.88	1.15	1.2	1.06	1.23	1.12	1.25
Calcium	None	670.30	Not Applicable	mg/L	255	296	242	405	227	357	315	309	371	227	205	255
Chloride	250	18.51	Not Applicable	mg/L	13.6	12.4	13.8	13.7	14.2 J*	14.9	13.7	13.3 J*	13.2	13.4	14.3	13.4
Fluoride	4	0.6359	Not Applicable	mg/L	0.211	0.442	0.407	0.392	0.399	0.3	0.384	0.354 J*	0.331	0.324	0.338	0.291
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.25	7.86	7.6	7.4	7.2	7.1	7.1	7	7	7.3	7.4	7.3
Sulfate	250	1,396	Not Applicable	mg/L	1350	1230	1230	1220	1140	1250	1230	1250	1070	1170	1190	1170
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2030	2060	1960	1990	2080	2090	2150	2200	2090	2180	2150	2160
Assessment Monitoring Parameters																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00196 J	0.00117 J	0.00103 J	<0.00200	0.000602 J	0.00136 J	<0.000400	<0.00400	0.00172 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0122	0.0118	0.0114	0.0207	0.0115	0.0116	0.0114	0.0134	0.118	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.000500	<0.00100	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000400	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.00100	<0.00100	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500	<0.000500	<0.00500	<0.000500	---	---	---
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	<0.000500	0.000239 J	<0.000500	0.000168 J	0.000138 J	<0.000100	<0.00100	0.000153 J	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.211	0.442	0.407	0.392	0.399	0.3	0.384	0.354 J*	0.331	0.324	0.338	0.291
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.158	0.138	0.141	0.247 J	0.148	0.137	0.14	0.151 J	0.165	---	0.125	0.129
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000500	<0.000500	<0.00100	<0.00500	<0.00100	<0.00100	<0.00100	<0.0100	<0.00100	---	<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000600	<0.000300	<0.00150	0.000345 J	<0.000300	0.00353	<0.00300	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.07 +/- 0.292	0.868 +/- 0.271	1.05 +/- 0.330	1.67 +/- 0.473	1.09 +/- 0.303	0.899 +/- 0.276	2.03 +/- 0.371	0.843 +/- 0.246	0.967 +/- 0.277	---	---	---
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	299	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	23.1	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	8.45	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	697	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	21.87	24.83	22.37	18.81	20.98	17.2	23.35	---	22.32	23.87	26.5	21.31
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.12	7.05	7.06	7.04	7.04	6.27	6.98	---	6.96	7.14	6.7	6.75
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2342	2807	2804	2810	2804	2805	2767	---	2762	2758	2880	2864
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.49	0.26	0.09	0.2	0.3	0.59	0.36	---	0.09	0.7	2.1	3.76
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-27.5	-74.7	-92.1	-245.4	-171.1	241.7	-45	---	46.8	-46.3	-11.5	25
Turbidity	None	Not Applicable	Not Applicable	NTU	0.89	0.18	0.18	0.91	0.36	0.15	0.44	---	0.33	0.29	0.02	0.02

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-3			MW-3	MW-3	MW-3	MW-3	DUP 3	MW-3	MW-3	MW-3		MW-3
				Sample Date:	4-Oct-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20		31-Mar-21	13-Oct-21	30-Mar-22	6-Jun-22	5-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.		FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
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	0.939	1.06	---	1.09
Calcium	None	670.30	Not Applicable	mg/L	206 #	198	225	225	213	214	183	181	207	155	210	---	184
Chloride	250	18.51	Not Applicable	mg/L	13.8 #	13.4	16.3	13	13.7	13.7	13.8	13.8	14	12.7	13^	12.1	12.5
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	0.258	2.12^	0.36	0.238
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.7 #	7.19	---	7.64	7.07	6.9	7.36	7.5	7.24	5.99	1.61^	7.51	7.33
Sulfate	250	1,396	Not Applicable	mg/L	1270 #	1220	1450	1150	1210	1240	1320	1290	1260	1,200	1790^	1090	1,050
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2130 #	2110	2060	2100	2110	2150	2020	2010	2030	1,970	2700^	1860	1,900
Assessment Monitoring Parameters																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	0.000410 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000474 J	0.000464 J	0.000471 J	0.000422 J	0.000576 J	---	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00954 J #	0.0101	0.011	0.0128	0.0112	0.013	0.0159	0.0158	0.0141	0.0136	0.0133	---	0.0108
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005 #	<0.000400	<0.000400	<0.000400	0.00142 J	<0.000400	<0.000400	<0.000400	<0.000400	0.000467 J	<0.000400	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000162 J #	<0.000200	0.000208 J	0.000232 J	0.000259 J	0.000289 J	<0.000200	<0.000200	<0.000200	<0.000200	0.000765 J	---	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.318 #	0.373	0.52	0.396 J	0.319	0.203	0.328	0.337	0.376	0.258	2.12^	0.360	0.238
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.147 J #	0.152	0.148	0.148	0.136	0.145	0.118	0.122	0.138	0.137	0.142	---	0.13
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000760 J	0.0000610 J	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	0.000613 J	0.000622 J	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	0.000629 J	<0.000600	---	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.00110	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	0.000560 J	0.000499 J	<0.000200	0.000466 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.45 +/- 0.444 #	<0.67	---	<0.69	<0.79	1.02	1.65	1.7	1.43	<0.96	<0.81	---	3.46
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5	---	<5.00	<5.00	---	<5.00	<5.00	<5.00	12.0 J	5.0 J	15.0	12.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	318	---	---	---	---	---	---	---	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---	---	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	23.7	25.3	---	---	---	---	---	---	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.05 #	0.47	0.488	1.57	0.2	<0.0300	<0.0300	<0.0300	<0.0600	<0.0600	670	0.137	0.0481 J
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	2680	20,900	3,030	2660
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
Temperature	None	Not Applicable	Not Applicable	ºC	23.1	13.1	---	18.31	24.37	23.62	23.8	---	15.9	20.4	16.4	25	22.9
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	7.11	7.29	7.24	7.04
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2814	2699	---	2778	2797	2576	2670	---	2666	2,676	2,098	2,496	2,485
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.59	0.7	---	1.26	6.86	3.85	0.35	---	0.57	0.54	0.32	0.82	0.38
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-37	-12	---	-54.6	-34.4	-24.6	-102.6	---	-15.4	-47.3	-115.9	30.4	-78.5
Turbidity	None	Not Applicable	Not Applicable	NTU	4.23	1.8	1.04	0.57	1.14	3.36	1.3	---	3.11	2.50	0.33	3.10	2.65

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-3 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-3 28-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	2.28	2.41
Calcium	None	670.30	Not Applicable	mg/L	295	294
Chloride	250	18.51	Not Applicable	mg/L	9.95	8.44
Fluoride	4	0.6359	Not Applicable	mg/L	0.333	0.311
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.26	7.53
Sulfate	250	1,396	Not Applicable	mg/L	1,480	1,540
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	1,960	2,200
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000762 J	0.000542 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0194	0.0147
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.000475 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000730 J	0.000683 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.333	0.311
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.133	0.132
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000600	0.000685 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.907 +/- 0.622	2.97 +/- 1.03
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	10.0 J	14.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	0.0654 J
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,820	2,890
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	19.3	24.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	5.71	7.1
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,391	2,712
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.3	0.8
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	18.8	-100.4
Turbidity	None	Not Applicable	Not Applicable	NTU	3.65	4.72

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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 13-Dec-16	DUP 3 13-Dec-16	MW-5S 25-Jan-17	MW-5S 3-Feb-17	MW-5S 29-Mar-17	MW-5S 7-Apr-17	MW-5S 1-Jun-17	MW-5S 9-Jun-17	MW-5S 14-Aug-17	MW-5S 22-May-18	MW-5S (Shallow) 1-Aug-18	MW-5S (Deep) 10-Aug-18
					BACKGROUND 1		BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				*Units*												
Boron	None	1.896	Not Applicable	mg/L	3.56	4.37	3.02	3.2	3.87	2.34	1.32	1.86	1.29	1.05	1.06	3.09
Calcium	None	670.30	Not Applicable	mg/L	32.9	28.1	27.8	29.9	30.8	37.9	54.7	58.2	46.6	74.7	59.1	24.9 J
Chloride	250	18.51	Not Applicable	mg/L	33.2	30.5	33.2	11.3	28.2	29.8	22.3	13.3	18.7	25	18.7	26.1
Fluoride	4	0.6359	Not Applicable	mg/L	1.84 J*	1.91	1.6	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.5
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2	8.3	7.9	7.8	7.8	7.9	7.4	7.5	7.5	7.6	7.7	8
Sulfate	250	626	Not Applicable	mg/L	527	540	504	501	415	469	326	321	301	369	294	384
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1230	1180	1200	1210	1070	1060	948	1010	980	950	880	1150
Assessment Monitoring Parameters																
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 (ODEQ)	mg/L	0.000833 J	<0.000100	0.000214 J	<0.00100	0.00109 J	0.000123 J	<0.000100	0.00122 J	0.000338 J	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.84 J*	1.91	1.6	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.5
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000500	<0.000100	0.000126 J	0.000238 J	0.000218 J	0.000177 J	0.000142 J	<0.000500	0.000110 J	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0598 J	0.0582	0.0562	0.0617	0.0511	0.0523	0.0469 J	0.0588 J	0.0518	---	0.05	0.0486
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00880 J	0.00781	0.00745	0.00606	0.0118 J*	0.00722	0.00828	0.00980 J	0.00737	---	0.00497	0.00387
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00150	<0.00150	<0.000300	0.000938 J	0.00234 J	<0.000300	0.000449 J	<0.00150	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<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																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	418	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.19	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	4.14	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	307	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	17.94	---	16.45	14.65	20.07	19.17	20.47	21.58	22.46	20.24	25.07	23.59
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.9	---	7.84	7.79	7.72	7.76	7.51	7.73	7.79	7.85	7.19	7.62
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1899	---	1919	1905	1734	1764	1615	1718	1760	1516	1483	1843
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.94	---	0.39	0.33	0.37	0.27	0.07	0.07	0.05	0.13	5.05	1.37
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-110.4	---	-157	-82.1	-61.6	-33.2	-79.7	27.3	21.5	-104.7	142.8	-40.1
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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-5S	MW-5S		MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S	MW-5S		MW-5S
				Sample Date:	2-Oct-18	10-Jan-19		23-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	1-Apr-21	14-Oct-21	31-Mar-22	7-Jun-22	6-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	2.82 #	2.73	1.82	1.87	2.49	0.811	2.57	2.04	1.82	1.64	---	2.94
Calcium	None	670.30	Not Applicable	mg/L	25 #	27.7	27.8	57	22.5	68.2	19.6	33.4	21.0	53.8	---	24.1
Chloride	250	18.51	Not Applicable	mg/L	28.3 #	30.5	29.9	21.8	25.1	19.5	25.6	23.9	26.4	23^	24.1	25.6
Fluoride	4	0.6359	Not Applicable	mg/L	1.54 #	1.54	1.5	1.11	1.54	0.824	1.51	1.24	1.57	3.24^	1.41	1.4
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.7 #	7.65	---	8.11	7.55	7.65	8.21	7.9	8.16	1.68^	8.19	7.89
Sulfate	250	626	Not Applicable	mg/L	447 #	457	472	394	434	408	485	477	499	1540^	503	482
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1140 #	1120	1210	1090	1180	904	1080	1140	1140	1540^	1170	1100
Assessment Monitoring Parameters																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	0.00122 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.661 #	0.000737 J	0.000765 J	0.000523 J	0.000736 J	<0.000400	0.000453 J	<0.000400	<0.000400	0.000423 J	---	0.000433 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.012 #	0.012	0.0116	0.0141	0.00928	0.021	0.00787	0.00867	0.00732	0.0113	---	0.00653
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.832 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000237 J	---	<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	1.57	3.24^	1.41	1.4
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
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	0.0532	0.0654	---	0.0572
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	<0.0000300	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.005 #	0.00512	0.00335 J	0.00485 J	0.00315 J	0.00361 J	0.00244 J	0.00234 J	0.00387 J	0.00257 J	---	0.00210 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
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	1.28	<0.79	---	1.69
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5.00	---	<5.00	<5.00	---	<5.00	<5.00	6.00 J	<5.00^	17.0	7.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	412	444	405	470	<5^	419	430
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	12.6	---	---	---	15	20.5	<5	9.52	<5^	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	427	---	---	---	397	424	405	460	<5^	419	430
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5^	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	0.0170 J	0.0270 J	0.0435 J^	0.0311 J	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120^	0.0138 J	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.029(J)	<0.0200	<0.020	<0.0200	<0.02^	<0.02	<0.02
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020	<0.020 H	<0.02^	<0.02	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020	0.0270 J	0.0435 J^	0.0311 J	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020	<0.020	<0.02^	<0.02	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	5.73	5.58	---	---	5.16	4.38	4.53	4.60	5.79	---	4.79
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00308(J)	0.00244 J	0.00287 J	0.00296 J	0.00248 J	---	0.00232 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.089 J #	0.964	0.916	0.665	0.212	<0.0300	<0.0300	00287 J	0.0984 J	705^	0.0996 J,H	0.243
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.49	4.27	---	---	3.48	3.94	3.25	3.96	3.74	---	4.17
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	257	---	---	277	335	312	243	341	---	387
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1730 #	1870	---	---	---	---	1960	1770	1820	15600^	2,280	1990
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.97	<1	<1.00	<1^	<1	<1
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	25.3	13.4	---	18.78	25.18	24.37	21.5	14.7	23.7	16.4	19.8	24.9
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.61	7.56	---	7.95	7.91	7.9	7.83	7.74	7.85	7.77	7.9	7.73
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1871	1791	---	1669	1826	1665	1794	1745	1,863	1372	1,820	1,884
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.63	---	0.85	0.45	1.89	0.32	0.81	0.36	0.31	2.7	0.44
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-125.1	-30.9	---	19.7	-54.1	-48.2	168.1	283.3	-59.9	46.2	20.5	-33.9
Turbidity	None	Not Applicable	Not Applicable	NTU	3.3	4.51	1.27	1.16	0.94	2.88	1.97	2.85	2.16	1.61	1.72	2.71

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-5S 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-5S 26-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	2.21	1.68
Calcium	None	670.30	Not Applicable	mg/L	37	57.3
Chloride	250	18.51	Not Applicable	mg/L	23.8	24.8
Fluoride	4	0.6359	Not Applicable	mg/L	1.25	1.2
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.73	8.09
Sulfate	250	626	Not Applicable	mg/L	556	518
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1100	956
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00789	0.013
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.000646 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.25	1.2
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0520	0.0544
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00211 J	0.00307 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.334 +/- 0.410	1.80 +/- 0.940
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	5.00 J	10.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	292	397
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.0
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	292	397
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.0165 J	0.0172 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0120	0.0165 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	<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	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	5.72	6.24
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.00207 J	0.00294 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.467	0.31
Potassium	None	Not Applicable	Not Applicable	mg/L	3.84	4.76
Sodium	None	Not Applicable	Not Applicable	mg/L	371	309
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1,880	1,820
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	20.9	26.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.61	7.65
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,789	1,905
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.37	0.16
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	54.1	-61.1
Turbidity	None	Not Applicable	Not Applicable	NTU	2.13	3.22

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-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)
				Sample Date:	13-Dec-16	25-Jan-17	3-Feb-17	29-Mar-17	7-Apr-17	31-May-17	31-May-17	9-Jun-17	10-Aug-17	17-May-18	3-Aug-18	3-Aug-18	10-Aug-18
Detection Monitoring Parameters				***Units***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6		BACKGROUND 7	BACKGROUND 8	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																	
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 (ODEQ)	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 (ODEQ)	mg/L	<0.00500	0.00174 J	0.00160 J	<0.00500	0.00153 J	0.00186 J	0.00179 J	<0.00500	0.00171 J	---	0.00127 J	0.00128 J	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	U (0.00158)	<0.000300	0.00103 J	<0.00150	<0.000300	<0.000300	<0.000300	<0.00150	<0.000300	---	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.13 +/- 1.07 U	1.51 +/- 0.445	1.15 +/- 0.362	0.649 +/- 0.257	0.808 +/- 0.292	0.531 +/- 0.268	0.559 +/- 0.233	0.952 +/- 0.279	0.891 +/- 0.247	---	---	---	---
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	311	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	10.7	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	4.95	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	273	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																	
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/cm	1614	2010	2029	2216	2205	1925	---	1929	1680	2101	1822	---	1932
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.47	0.43	0.19	0.27	0.25	0.09	---	0.05	0.08	0.22	1.61	---	2.95
Oxidation-Reduction Potential	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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-7S	MW-7S		MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	DUP 2	MW-7S	MW-7S		MW-7S	DUP 3
				Sample Date:	4-Oct-18	10-Jan-19		23-Apr-19	1-Oct-19	17-Jun-20	9-Oct-20	30-Mar-21		15-Oct-21	31-Mar-22	Jun-22	5-Oct-22	
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.		SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.	
Boron	None	1.896	Not Applicable	mg/L	2.7 #	0.839	1.12	0.848	1.99	1.33	2.29	0.677	0.681	2.18	0.646	---	2.7	3.07
Calcium	None	670.30	Not Applicable	mg/L	76 #	277	293	271	81.1	160	90.2	254	219	97.1	302	---	100	111
Chloride	250	18.51	Not Applicable	mg/L	16.1 #	18.7	19.7	19.7	16.3	18	16.9	20.5	19.4	16.8	19.9	---	16.9	16.7
Fluoride	4	0.6359	Not Applicable	mg/L	0.764 #	0.422	0.35	0.376	0.729	0.479	0.713	0.444	0.415	0.746	0.515	---	0.711	0.824
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8 #	7.34	---	7.82	7.39	7.55	7.79	7.32	7.53	7.84	7.88	---	7.81	8.01
Sulfate	250	1,281	Not Applicable	mg/L	1600 #	1200	1110	1040	633	970	759	1200	1190	690	1190	---	687	687
Total Dissolved Solids	500	1,863	Not Applicable	mg/L	1230 #	1670	1890	1890	1270	1680	1340	2060	2000	1290	1920	---	1350	1260
Assessment Monitoring Parameters																		
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004 #	0.000413 J	<0.000400	0.00116 J	0.000412 J	0.000650 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.021 #	0.0371	0.0387	0.0372	0.0139	0.0244	0.0142	0.0295	0.0302	0.0154	0.0336	---	0.0148	0.0167
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005 #	<0.000400	<0.000400	<0.000400	0.000994 J	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000494 J	---	0.000669 J	0.00143 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	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	0.000259 J	0.00110 J	---	<0.000200	0.000215 J
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	0.746	0.515	---	0.711	0.824
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0714 J #	0.0558	0.0606	0.0593	0.0608	0.0681	0.065	0.0472	0.0468	0.0645	0.0533	---	0.0685	0.0778
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000350 J	<0.0000300	0.000104 J	0.0000320 J	<0.0000300	<0.0000300	---	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.01 #	0.00105 J	0.00107 J	0.000952 J	0.000798 J	0.00105 J	0.00106 J	0.000755 J	0.000763 J	0.00115 J	0.000973 J	---	0.00103 J	0.00134 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.07 +/- 0.453 #	1.34	---	0.9	<0.71	1.05	1.2	1.73	1.92	1.95	1.11	---	1.38	2.72
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	5.0 J	---	<5.00	<5.00	---	8.00 J	<5.00	<5.00	7.00 J	<5.00	---	<5.00	16
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	264	315	180	177	343	205	---	32.6	297
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5	<5.00	<5	---	<5.00	7.48
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	222	---	---	---	264	315	180	177	343	205	---	32.6	289
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5	<5.00	<5	---	<5.00	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.278	0.111 J	0.0145 J	0.0156 J	0.310	<0.0120	---	0.158 J	0.186 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.034(J)	0.235	0.0154 J	0.0234 J	0.134 J	<0.0120	---	0.113 J	0.0883 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.306	0.216	<0.02	<0.02	0.207	<0.02	---	0.127	0.107
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.02	<0.0200 H	<0.02	---	0.114	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.02	0.103	<0.02	---	0.0310 J	0.079
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	0.0234 J	0.134	<0.02	---	<0.02	0.0883
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	19	18.7	---	---	17.1	12	16.9	17.4	12.2	20	---	12.2	13.8
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000987(J)	0.00103 J	0.000846 J	0.000941 J	0.00121 J	0.000830 J	---	0.00112 J	0.00108 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	0.0940 J	0.0613 J	---	0.155	0.147
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.67	4.79	---	---	5.33	5.1	4.06	4.18	5.14	4.56	---	5.34	6
Sodium	None	Not Applicable	Not Applicable	mg/L	---	274	294	---	---	313	272	230	197	261	272	---	313	352
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1610 #	2240	---	---	---	---	2110	2380	2380	1860	2,530	---	2,000	2050
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.48	<1	<1	<1.00	<1	---	<1	<1
Field Parameters																		
Temperature	None	Not Applicable	Not Applicable	ºC	25	12.8	---	17.92	25.27	21.95	23.1	16.8	---	22.5	14.2	---	26.8	---
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	---	7.47	7.32	---	7.37	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1887	2180	---	2326	1944	2097	1945	2377	---	1,973	2,385	---	2,015	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.45	0.23	---	0.84	0.51	0.49	0.33	0.31	---	0.30	0.38	---	0.39	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-129.1	-6.3	---	-61.6	-133.8	-67.6	-90.1	83.3	---	-107.8	-30.3	---	-179.9	---
Turbidity	None	Not Applicable	Not Applicable	NTU	8.01	0.67	0.64	0.71	0.88	2.49	0.85	5.81	---	3.15	2.42	---	2.91	---

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-7S 18-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-7S 27-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	0.880	2.28
Calcium	None	670.30	Not Applicable	mg/L	228	119
Chloride	250	18.51	Not Applicable	mg/L	18.9	17.0
Fluoride	4	0.6359	Not Applicable	mg/L	0.468	0.628
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.41	8.1
Sulfate	250	1,281	Not Applicable	mg/L	1,410	778
Total Dissolved Solids	500	1,863	Not Applicable	mg/L	1,740	1,150
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0253	0.0167
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000519 J	0.000203 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.468	0.628
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0536	0.0719
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000973 J	0.00135 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.32 +/- 1.16	1.30 +/- 0.930
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	13.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	190	288
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	190	288
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.00	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L	<0.012	0.199 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.012	0.125 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	<0.02	0.206
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	0.222
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	19.2	14.3
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.00110 J	0.00114 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	4.84	6.1
Sodium	None	Not Applicable	Not Applicable	mg/L	277	290
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,490	1,970
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.7	<1.70
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	18.5	26.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.22	7.47
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,344	1,974
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.12
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	62.0	-188.2
Turbidity	None	Not Applicable	Not Applicable	NTU	2.12	2.87

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / Units	MW-13 25-May-16	DUP-2 25-May-16	MW-13 26-Jul-16	MW-13 27-Sep-16	MW-13 29-Nov-16	MW-13 30-Jan-17	MW-13 30-Mar-17	MW-13 6-Jun-17	MW-13 4-Aug-17	MW-13 21-May-18	MW-13 (Shallow) 1-Aug-18	MW-13 (Deep) 9-Aug-18
					BACKGROUND 1		BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	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	Not Applicable	Background Well (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	ºC	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	µmhos/cm	2507	---	2939	2622	3002	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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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		DUP 2		MW-13	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	15-Oct-21	1-Apr-22	1-Jun-22	5-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FILTERED	UNFILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	2.01 #	2.14	1.67	1.76	1.72	3.07	2.01	1.39	1.48	1.66	1.43	3.00	---	3.08
Calcium	None		Not Applicable	mg/L	299 #	270	360	334	348	130	182	243	242	284	237	116	---	135
Chloride	250		Not Applicable	mg/L	12.8 #	15.1	13.7	13.8	13.1	28.2	17.3	13.8	13.9	13.8	14.8	30.0	---	14.4
Fluoride	4		Not Applicable	mg/L	0.285 #	0.342	0.99	0.31	0.444	0.652	0.422	0.231	0.257	0.344	0.294	0.453 J	---	0.263
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6 #	7.16	---	7.35	---	7.95	6.75	6.71	7.55	7.32	7.57	7.91	---	7.33
Sulfate	250		Not Applicable	mg/L	1400 #	1450	1420	1450	1440	1450	1380	1390	1480	1470	1570	1,510	---	1380
Total Dissolved Solids	500		Not Applicable	mg/L	2350 #	2350	2220	2270	2260	2590	2350	2450	2360	2320	2360	2,520	---	2460
Assessment Monitoring Parameters																		
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<00008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.010	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	<0.000400	0.000569 J	---	0.000423 J
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	0.0112	0.0104	---	0.01
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	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<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	<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	<0.000200	0.000435 J	---	<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	0.294	0.453 J	---	0.263
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	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable		mg/L	0.174 J #	0.17	0.194	0.181	0.176	0.131	0.139	0.156	0.146	0.166	0.163	0.120	---	0.131
Mercury	0.002	Not Applicable		mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000990 J	0.0000490 J	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.01 #	0.00155 J	0.00178 J	0.00149 J	0.00176 J	0.00276 J	0.00210 J	0.000934 J	0.000865 J	0.000959 J	0.000917 J	0.00117 J	---	0.00101 J
Selenium	0.05	Not Applicable		mg/L	0.000429 J #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.46 +/- 0.346 #	2.12	---	1.14	---	1.65	1.81	2.09	2.67	2.47	1.75	1.46	---	3.01
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5	---	<5	---	<5.00	6.00 J	---	<5.00	<5.00	5.00 J	<5.00	---	13.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	<5	---	---	---	---	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	354	---	343	---	---	---	---	---	---	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	<5	---	---	---	---	---	---	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	27	30.7	30.4	29.6	---	---	---	---	---	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.061 J #	<0.03	<0.03	<0.03	<0.03	<0.150	0.191	<0.0300	<0.0600	<0.0600	0.0613 J	0.304 J	---	0.297
Potassium	None	Not Applicable	Not Applicable	mg/L	---	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	3050	3,840	---	3250
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																		
Temperature	None	Not Applicable	Not Applicable	ºC	25.7	12.4	---	---	---	20.41	27	21.69	21.8	16.9	21.4	17.3	---	24.8
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	7.56	7.55	---	7.49
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3728	3569	---	---	---	3688	3751	3474	3576	3616	3,688	3,658	---	3616
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.41	0.66	---	---	---	1.68	2.61	1.18	0.39	0.49	0.44	0.33	---	0.8
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	30.1	-8.8	---	---	---	-119.2	-95.1	-41.6	156.8	76.4	-435.2	22.4	---	-126.4
Turbidity	None	Not Applicable	Not Applicable	NTU	5.63	2.27	0.76	---	---	4.66	1.28	4.95	3.21	3.76	8.30	3.27	---	2.42

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-13 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-13 28-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	2.29	2.14
Calcium	None		Not Applicable	mg/L	187	156
Chloride	250		Not Applicable	mg/L	17.9	19.7
Fluoride	4		Not Applicable	mg/L	0.446	0.414
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.45	7.98
Sulfate	250		Not Applicable	mg/L	1,610	1,600
Total Dissolved S	500		Not Applicable	mg/L	2,750	2,040
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable		mg/L	<0.000400	0.000451 J
Barium	2	Not Applicable		mg/L	0.0102	0.00961
Beryllium	0.004	Not Applicable		mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.000200	<0.000200
Chromium	0.1	Not Applicable		mg/L	<0.000400	0.000536 J
Cobalt	None	Not Applicable		mg/L	0.000403 J	<0.000200
Fluoride	4	Not Applicable		mg/L	0.446	0.414
Lead	0.015	Not Applicable		mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable		mg/L	0.129	0.127
Mercury	0.002	Not Applicable		mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	0.000970 J	0.000857 J
Selenium	0.05	Not Applicable		mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.000200	<0.000200
Ra-226 + Ra-228	5	Not Applicable		pCi/L	1.38 +/- 0.478	3.15 +/- 1.10
Other Parameters						
Chemical	None	Not Applicable	Not Applicable	mg/L	<5.00	6.00 J
Total Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---
Carbonate Alkalin	None	Not Applicable	Not Applicable	mg/L	---	---
Bicarbonate Alkali	None	Not Applicable	Not Applicable	mg/L	---	---
Hydroxide Alkalini	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous, Diss	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric, Disso	None	Not Applicable	Not Applicable	mg/L	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---
Molybdenum, Diss	None	Not Applicable	Not Applicable	mg/L	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0990 J	0.0853 J
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---
Specific Conducta	None	Not Applicable	Not Applicable	umhos/cm	3,320	3,390
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	20.5	27.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.81	7.19
Specific Conducta	None	Not Applicable	Not Applicable	µmhos/cm	3200	3561
Dissolved Oxyger	None	Not Applicable	Not Applicable	mg/L	0.31	0.33
Oxidation-Reducti	None	Not Applicable	Not Applicable	mV	-1	95
Turbidity	None	Not Applicable	Not Applicable	NTU	4.99	2.48

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5		BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	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	7.1	7	6.9	7.4	7.3	7.1	7.2
Sulfate	250		Not Applicable	mg/L	2020	1670	1730	1600	1590	1610	1710	1440	1420	1790	1580	1600	1510
Total Dissolved Solids	500		Not Applicable	mg/L	2680	2650	2530	2670	2540	2570	2650	2630	2680	2700	2700	2730	2700
Assessment Monitoring Parameters																	
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	0.000714 J	0.00171 J	<0.00400	0.00153 J	0.00173 J	<0.00200	0.00150 J	0.00306	---	---	---	---
Barium	2	Not Applicable		mg/L	0.0239	0.018	0.019	0.0156 J	0.0177	0.0179	0.0329	0.0179	0.182	---	---	---	---
Beryllium	0.004	Not Applicable		mg/L	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	<0.00100	---	---	---	---
Cadmium	0.005	Not Applicable		mg/L	<0.000400	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	<0.00100	---	---	---	---
Chromium	0.1	Not Applicable		mg/L	<0.000500	<0.000500	<0.000500	<0.00500	<0.000500	<0.000500	<0.00250	<0.000500	<0.000500	---	---	---	---
Cobalt	None	Not Applicable		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																	
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																	
Temperature	None	Not Applicable	Not Applicable	ºC	20.93	22.4	21.96	17.51	17.76	---	18.84	19.83	21.41	22.9	25.6	21.33	---
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.01	7.13	7.01	6.95	6.97	---	7.08	6.88	6.75	7.1	6.82	6.47	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2781	3345	3365	3434	3350	---	3390	3201	3186	3301	3415	3410	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.34	0.39	0.06	0.25	0.68	---	0.26	0.34	0.1	0.24	252	1.65	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	127.6	-26.6	-94.3	-219.1	-88.7	---	-77.1	-30.1	97.7	-48.5	0.2	68.3	---
Turbidity	None	Not Applicable	Not Applicable	NTU	6.74	0.79	0.27	0.68	0.26	---	0.16	0.4	0.71	0.37	1.53	0.02	---

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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	MW-14A	MW-14A	MW-14A	MW-14A	
				Sample Date:	4-Oct-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	30-Mar-22	1-Jun-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)
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	0.857	0.918	---
Calcium	None		Not Applicable	mg/L	319 #	402	388	314	306	280	278	298	263	330	---
Chloride	250		Not Applicable	mg/L	14.2 #	14	14.8	13.5	14.2	13.3	14.9	14.3	12.8	13.8	---
Fluoride	4		Not Applicable	mg/L	0.281 #	0.269	0.375	0.377 J	0.286	0.23	0.254 J	0.284	0.221	0.406 J	---
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6 #	7.28	---	7.61	7.18	7.44	7.41	7.7	6.74	7.99	---
Sulfate	250		Not Applicable	mg/L	1650 #	1660	1630	1540	1580	1650	1770	1680	1690	1,610	---
Total Dissolved Solids	500		Not Applicable	mg/L	2710 #	2590	2580	2680	2750	2780	2630	2680	2630	2,690	---
Assessment Monitoring Parameters															
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	<0.000400	<0.000400	---
Arsenic	0.010	Not Applicable		mg/L	<0.004 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.00040	<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	0.0121	0.0120	---
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	0.00110 J	<0.000400	<0.000400	<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	0.000257 J	0.00120 J	---
Fluoride	4	Not Applicable		mg/L	0.281 #	0.269	0.375	0.377 J	0.286	0.23	0.254	0.284	0.221	0.406 J	---
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	0.161 J #	0.166	0.172	0.155	0.154	0.151	0.146	0.152	0.151	0.180	---
Mercury	0.002	Not Applicable		mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000500 J	0.0000300 J	<0.0000300	---
Molybdenum	None	Not Applicable		mg/L	<0.01 #	0.00170 J	0.00143 J	0.00104 J	0.000709 J	0.000760 J	<0.000600	<0.000600	<0.000600	<0.000600	---
Selenium	0.05	Not Applicable		mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---
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	1.65 +/- 0.369 #	2.6	---	0.97	1.79	2.02	1.42	1.76	1.68	1.33	---
Other Parameters															
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5.00	5.00 J	---	<5.00	<5.00	6.00 J	6.00 J	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	327	327	332	348	330	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	321	---	---	---	327	327	332	348	330	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.771(J)	0.236	0.162 J	1.22	0.249	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	0.169 J	0.150 J	0.357	0.189	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.098	0.184	0.055	0.285	0.13	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0340 J	<0.0200 H	0.142	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.107	0.935	0.119	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.116	0.357	0.0470 J	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	28.8	27.9	---	---	26.6	26.2	25.9	26.5	29.2	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000768(J)	0.000621 J	0.00165 J	<0.000600	<0.000600	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.087 J #	0.478	0.509	1.64	<0.0300	0.316	<0.150	<0.0600	<0.0600	0.484 J	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	8.64	8.37	---	---	7.66	7.94	7.87	7.84	8.73	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	516	467	---	---	382	388	413	388	503	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3000 #	3270	---	---	---	---	3660	3260	3320	3,490	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1	3.08	<1	---
Field Parameters															
Temperature	None	Not Applicable	Not Applicable	ºC	23.1	16.2	---	17.75	24.4	21	23.7	15.84	20.0	15.2	---
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	7.00	7.17	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3491	3251	---	3386	3435	3107	3394	4453	2,989	3,300	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.31	0.19	---	1.45	0.62	0.79	0.59	0.34	0.40	0.66	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	13.1	19.5	---	4.6	27.7	-45.7	107.1	20.5	-128.9	35.2	---
Turbidity	None	Not Applicable	Not Applicable	NTU	3.17	4.89	0.94	2.06	3.88	4.71	2.96	3.52	9.38	2.40	---

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-14A 6-Oct-22 SECOND 2022 ASSESSMENT MON.	MW-14A 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-14A 26-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters							
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	1.01	1.01	0.82
Calcium	None		Not Applicable	mg/L	313	319	294
Chloride	250		Not Applicable	mg/L	12.5	12.0	11.3
Fluoride	4		Not Applicable	mg/L	0.324	0.307	0.246
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.06	7.58	7.5
Sulfate	250		Not Applicable	mg/L	1600	1,760	1,700
Total Dissolved Solids	500		Not Applicable	mg/L	2580	2,320	2,780
Assessment Monitoring Parameters							
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable		mg/L	<0.000400	<0.000400	<0.000400
Barium	2	Not Applicable		mg/L	0.0103	0.0114	0.0104
Beryllium	0.004	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable		mg/L	0.000465 J	<0.000400	0.00124 J
Cobalt	None	Not Applicable		mg/L	<0.000200	0.000745 J	<0.000200
Fluoride	4	Not Applicable		mg/L	0.324	0.307	0.246
Lead	0.015	Not Applicable		mg/L	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable		mg/L	0.158	0.155	0.154
Mercury	0.002	Not Applicable		mg/L	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.000600	<0.000600	<0.000600
Selenium	0.05	Not Applicable		mg/L	<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable		mg/L	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	4.68	2.7 +/- 1.21	1.79 +/- 0.887
Other Parameters							
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	12.0 J	<5.00	8.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	321	294	303
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5	<5.00	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	321	294	303
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5	<5.00	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.803	0.126 J	0.574
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.475	0.0795 J	0.541
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	0.578	<0.0200	0.496
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.489	<0.0200	0.527
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	0.225	0.126	0.078
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0200	0.08	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	25.4	29.7	28.1
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.000600	<0.000600	<0.000600
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0777 J	0.220	0.0458 J
Potassium	None	Not Applicable	Not Applicable	mg/L	7.8	8.81	8.74
Sodium	None	Not Applicable	Not Applicable	mg/L	424	469	397
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3540	3,370	3,320
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1	<1.70	<1.70
Field Parameters							
Temperature	None	Not Applicable	Not Applicable	ºC	25.2	18.8	26.6
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.9	7.06	7.1
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3400	3240	3335
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.57	0.33	0.26
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-70	-49	-112.2
Turbidity	None	Not Applicable	Not Applicable	NTU	1.24	3.01	3.25

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-15A	MW-15A	MW-15A	MW-15A	DUP 1	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A (Shallow)	MW-15A (Deep)
				Sample Date:	26-May-16	23-Aug-16	28-Sep-16	30-Nov-16	30-Nov-16	30-Jan-17	30-Mar-17	1-Jun-17	9-Aug-17	24-May-18	1-Aug-18	10-Aug-18
Detection Monitoring Parameters				***Units***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4		BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	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																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800	<0.00400	<0.000800	<0.00400	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00242	0.00218	0.00205	<0.00400	0.00407 J	0.00156 J	<0.00200	0.00218	0.00259 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0269	0.0338	0.0273	0.026	0.0383	0.0255	0.0167	0.0232	0.0217	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000638 J	<0.000500	<0.000500	<0.00500	<0.00250	<0.000500	<0.00250	<0.000500	<0.00250	---	---	---
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000664 J	0.000467 J	0.000659 J	<0.00100	0.000661 J	0.000346 J	<0.000500	0.000215 J	<0.000500	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.23	1.32	1.49	1.32	1.33	1.4	1.15	1.09	1.37	1.76	1.2	1.17
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000264 J	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0748	0.0646	0.0575	0.0630 J	0.0766 J	0.059	0.0437 J	0.0552	0.0538 J	---	0.0669	0.0594
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	0.000175 J	<0.000150	<0.000100	---	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.306	0.208	0.256	0.276	0.343	0.261	0.182	0.235	0.255	---	0.202	0.182
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000300	<0.000300	<0.00300	<0.00150	0.000357 J	<0.00150	0.000539 J	0.00161 J	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800	<0.00400	<0.000800	<0.00400	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.01 +/- 0.268	0.846 +/- 0.371	0.636 +/- 0.292	1.38 +/- 0.431	1.33 +/- 0.426	1.21 +/- 0.359	1.36 +/- 0.333	1.86 +/- 0.390	2.19 +/- 0.392	---	---	---
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	130	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	9.36	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.28	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	541	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/cm	3050	3373	3442	3430	---	3488	3520	3498	3524	3505	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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-15A	DUP 2	MW-15A		MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A	MW-15A		MW-15A
				Sample Date:	2-Oct-18	2-Oct-18	10-Jan-19		25-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20	31-Mar-21	13-Oct-21	30-Mar-22	1-Jun-22	6-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.		INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	INITIAL ASSESSMENT MON. (RESAMPLE) FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
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	2.14	3.35	---	3.11
Calcium	None	670.30	Not Applicable	mg/L	170 #	171 #	129	187	92	82.4	141	89.8	78.6	96.6	119	---	113
Chloride	250	18.51	Not Applicable	mg/L	26.6 #	26.5 #	26.3	26.9	21.9	25.9	26.3	26.5	27.3	25.7	27.0	---	26.2
Fluoride	4	0.6359	Not Applicable	mg/L	1.21 #	1.2 #	1.22	1.46	1.02	1.24	0.86	1.14	1.13	1.01	1.31	---	1.31
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2 #	8.2 #	7.02	---	8.02	7.58	7.68	7.77	7.93	7.45	8.08	---	7.74
Sulfate	250	1,824	Not Applicable	mg/L	1570 #	1580 #	1610	1540	1310	1510	1680	1650	1590	1580	1,540	---	1510
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2650 #	2570 #	2590	2640	2570	2500	2520	2460	2420	2370	2,450	---	2370
Assessment Monitoring Parameters																	
Antimony	0.006 (MCL)	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.01 (MCL)	Not Applicable	0.01 (MCL)	mg/L	0.00179 J #	0.00166 J #	0.000626 J	0.00122 J	0.000663 J	0.000676 J	0.000965 J	0.000592 J	0.000523 J	0.00113 J	0.000661 J	---	0.000790 J
Barium	2 (MCL)	Not Applicable	2 (MCL)	mg/L	0.0226 #	0.0229 #	0.023	0.0192	0.0217	0.0216	0.0291	0.0199	0.0186	0.0224	0.0222	---	0.0215
Beryllium	0.004 (MCL)	Not Applicable	0.004 (MCL)	mg/L	<0.0001 #	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005 (MCL)	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.0001 #	0.000231 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Chromium	0.1 (MCL)	Not Applicable	0.1 (MCL)	mg/L	0.00119 J #	<0.0005 #	<0.000400	<0.000400	<0.000400	<0.000400	0.000900 J	<0.000400	<0.000400	0.000502 J	<0.000400	---	<0.000400
Cobalt	0.006 (ODEQ	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	0.000296 J	0.000651 J	---	<0.000200
Fluoride	4 (MCL)	Not Applicable	4 (MCL)	mg/L	1.21 #	1.2 #	1.22	1.46	1.02	1.24	0.86	1.14	1.13	1.01	1.31	---	1.31
Lead	0.015 (MCL)	Not Applicable	0.015 (MCL)	mg/L	0.000386 J #	0.000145 J #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	0.235 (UTL)	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	0.0627	0.0815	---	0.0643
Mercury	0.002 (MCL)	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000420 J	<0.0000300	<0.0000300	---	0.0000390 J
Molybdenum	0.1 (ODEQ)	Not Applicable	0.1 (ACL)	mg/L	0.233 #	0.228 #	0.205	0.244	0.219	0.196	0.269	0.167	0.168	0.149	0.181	---	0.149
Selenium	0.05 (MCL)	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	<0.00110	<0.00110	---	<0.00110
Thallium	0.002 (MCL)	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	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5 (MCL)	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.294 #	1.66 +/- 0.358 #	1.46	---	<0.87	2.03	1.67	1.72	1.45	2.04	1.61	---	1.69
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.51 J #	7.46 J #	7.00 J	---	<5.00	18	---	5.00 J	<5.00	11.0 J	7.00 J	---	11.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	209	204	196	226	193	---	189
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5	<5	<5.00	<5	---	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	149	---	---	---	209	204	196	226	193	---	189
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5	<5	<5.00	<5	---	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0535(J)	0.0496 J	0.0492 J	0.368	0.236	---	0.208
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	<0.0120	0.165 J	0.133 J	0.590	0.234	---	0.367
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0410(J)	0.0210 J	0.054	0.284	0.2	---	0.089
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	0.0320 J	<0.0200 H	0.243	---	0.358
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02	0.0840	0.0360 J	---	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	0.101	0.590	<0.02	---	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	12.4	10.9	---	---	165	11	10.9	10.2	12.3	---	10.3
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.168	0.153	0.159	0.181	0.159	---	0.149
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.068 J #	0.065 J #	1.42	0.616	1.72	0.287	<0.0600	<0.150	1.14	0.0704 J	0.894	---	0.246
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	5.98	5.47	---	---	8.24	5.15	5.47	4.97	5.91	---	4.96
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	746	703	---	---	1040	627	594	421	680	---	609
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3490 #	3480 #	3540	---	---	---	---	3780	3400	3370	3,620	---	3590
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	1.12	<1	<1	<1.00	<1	---	<1
Field Parameters																	
Temperature	None	Not Applicable	Not Applicable	°C	23.1	---	18.5	---	20.72	27.05	24.09	22.2	16.37	22.4	18.1	---	25.6
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	---	7.45	---	7.82	7.71	7.73	7.71	7.82	7.61	7.65	---	7.58
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3563	---	3449	---	3544	3575	3337	3422	4,645	3,431	3,386	---	3393
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	---	0.41	---	1.24	0.71	1.39	0.28	4.97	0.38	0.51	---	0.4
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-69.9	---	98	---	-22.1	-79.5	-50.3	167.2	13.8	-59.9	93.7	---	-85.1
Turbidity	None	Not Applicable	Not Applicable	NTU	4.11	---	1.13	1.09	0.55	0.84	2.6	1.73	0.88	3.34	2.38	---	0.9

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. °C : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-15A 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-15A 25-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	3.44	3.27
Calcium	None	670.30	Not Applicable	mg/L	107	148
Chloride	250	18.51	Not Applicable	mg/L	25.3	26.2
Fluoride	4	0.6359	Not Applicable	mg/L	1.24	0.986
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.77	7.93
Sulfate	250	1,824	Not Applicable	mg/L	1690	1660
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2240	2570
Assessment Monitoring Parameters						
Antimony	0.006 (MCL)	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.01 (MCL)	Not Applicable	0.01 (MCL)	mg/L	0.000525 J	0.00126 J
Barium	2 (MCL)	Not Applicable	2 (MCL)	mg/L	0.0180	0.0218
Beryllium	0.004 (MCL)	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005 (MCL)	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200
Chromium	0.1 (MCL)	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.000804 J
Cobalt	.006 (ODEQ	Not Applicable	0.006 (ACL)	mg/L	0.000357 J	0.000304 J
Fluoride	4 (MCL)	Not Applicable	4 (MCL)	mg/L	1.24	0.986
Lead	0.015 (MCL)	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	0.235 (UTL)	Not Applicable	0.235 (UTL)	mg/L	0.0669	0.0550
Mercury	0.002 (MCL)	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	0.1 (ODEQ)	Not Applicable	0.1 (ACL)	mg/L	0.173	0.158
Selenium	0.05 (MCL)	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002 (MCL)	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5 (MCL)	Not Applicable	5 (MCL)	pCi/L	1.57 +/- 0.708	3.49 +/- 1.51
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	10.0 J	16
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	180	186
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.0
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	180	186
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.138 J	0.756
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.371	0.635
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	0.238	0.583
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.238	0.738
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.0200	0.173
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.133	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	12.5	11.6
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.175	0.165
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.544	0.134
Potassium	None	Not Applicable	Not Applicable	mg/L	5.82	5.46
Sodium	None	Not Applicable	Not Applicable	mg/L	702	608
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,470	3,380
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	18	25
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.58	7.66
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3304	3404
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.3	0.69
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	129.9	-107.2
Turbidity	None	Not Applicable	Not Applicable	NTU	1.66	4.59

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
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4. S.U. : Standard Units.
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7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-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)
				Sample Date:	1-Jun-16	23-Aug-16	29-Sep-16	6-Dec-16	1-Feb-17	6-Apr-17	7-Jun-17	11-Aug-17	11-Aug-17	22-May-18	1-Aug-18	10-Aug-18
Detection Monitoring Parameters				***Units***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8		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	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																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00250	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.00250	0.00101 J	U (0.00164)	<0.00200	0.000757 J	0.00122 J	<0.00400	0.000409 J	0.000453 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.027	0.0291	0.0262	0.0461	0.0235	0.0246	0.027	0.024	0.024	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00500	<0.000100	<0.000100	<0.000500	<0.000100	U (0.000375)	<0.000500	<0.000100	<0.000100	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.00200	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	---	---	---
Chromium	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 (ODEQ)	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 (ODEQ)	mg/L	0.135 J	0.134	0.0949	0.17	0.114	0.177	0.218	0.181	0.181	---	0.145	0.154
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00300	<0.000300	U (0.000418)	<0.00150	0.000307 J	<0.000300	<0.00300	<0.000300	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.305	1.01 +/- 0.359	1.11 +/- 0.324	0.925 +/- 0.572	1.09 +/- 0.398	0.504 +/- 0.260	0.608 +/- 0.256	1.55 +/- 0.391	0.994 +/- 0.366	---	---	---
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	238	215	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	10.3	10.1	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	3.33	3.28	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	272	270	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	18.9	23.5	21.62	16.91	19.27	17.92	20.46	24.61	---	22.87	23.7	23.74
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.24	7.33	7.32	7.14	7.49	7.23	7.1	7.09	---	7.57	7.11	7.3
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2066	2327	2492	2395	2620	2275	2256	2330	---	2463	2436	2678
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.38	2.53	0.31	0.25	0.59	0.81	0.04	0.16	---	0.37	1.59	2.7
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-47.3	46	-106.4	-135.8	-104.9	10.2	0.4	60.3	---	-83.7	186.4	150.4
Turbidity	None	Not Applicable	Not Applicable	NTU	2.18	0.85	0.33	0.98	0.18	0.63	0.61	1.11	---	1.21	3.49	2.96

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-16	MW-16		MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16		MW-16
				Sample Date:	2-Oct-18	16-Jan-19		23-Apr-19	3-Oct-19	18-Jun-20	13-Oct-20	1-Apr-21	14-Oct-21	1-Apr-22	7-Jun-22	6-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	2.05 #	2.23	2.38	1.85	1.53	1.43	1.78	1.57	1.61	1.85	---	2.54
Calcium	None	670.30	Not Applicable	mg/L	221 #	215	215	192	149	186	166	140	158	153	---	132
Chloride	250	18.51	Not Applicable	mg/L	18 #	19	18.8	15.8	23.8	14.7	14.8	14.4	16.2	16.6^	15.0	25.8
Fluoride	4	0.6359	Not Applicable	mg/L	0.832 #	0.82	1.11	0.741	1.07	0.694	0.893	0.916	0.964	1.3^	1.01	1.25
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2 #	7.33	---	7.88	7.01	7.6	7.63	7.83	7.75	7.42^	7.92	7.85
Sulfate	250	1,494	Not Applicable	mg/L	959 #	1020	1030	974	1020	1030	929	1070	1110	1100^	1090	996
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1780 #	1740	1670	1740	1810	1610	1610	1790	1590	1670^	1700	1,690
Assessment Monitoring Parameters																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
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	0.000417 J	<0.000400	---	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0203 #	0.0226	0.0224	0.0178	0.0133	0.0142	0.0156	0.0123	0.0143	0.0127	---	0.0132
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000218 J	<0.000200	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.0025 #	<0.000400	<0.000400	<0.000400	<0.000400	0.000423 J	0.000416 J	0.00141 J	<0.000400	<0.000400	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000172 J #	<0.000200	<0.000200	<0.000200	0.000375 J	<0.000200	<0.000200	<0.000200	0.000415 J	0.000507 J	---	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.832 #	0.82	1.11	0.741	1.07	0.694	0.893	0.916	0.964	1.3^	1.01	1.25
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0607 J #	0.0689	0.0632	0.0586	0.0424	0.046	0.0477	0.0454	0.0466	0.0496	---	0.0534
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000570 J	0.000158 J	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.169 #	0.18	0.18	0.193	0.149	0.172	0.149	0.166	0.163	0.146	---	0.113
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.07 +/- 0.288 #	1.01	---	<0.62	0.81	1.18	1.35	0.99	1.82	<0.78	---	1.94
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00 #	<5	---	<5.00	<5.00	---	<5.00	<5.00	7.00 J	7.00 J ^	<5.00	6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	232	233	228	264	94^	258	288
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5^	<5	10.7
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	256	---	---	---	232	233	228	264	94^	258	277
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5^	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0358(J)	0.125 J	0.0536 J	0.369	0.0158 J^	0.0145 J	0.0547 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0160(J)	0.0694 J	0.0140 J	0.190 J	<0.0120^	<0.0120	0.0203 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0380(J)	0.0240 J	<0.020	0.191	<0.02^	<0.02	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.020	<0.0200 H	<0.02^	<0.02	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0536	0.178	<0.02^	<0.02	0.0547
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	0.190	<0.02^	<0.02	0.0203 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	10.2	10.2	---	---	8.44	7.59	7.65	7.38	8.4	---	7.24
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.173	0.16	0.18	0.189	0.131	---	0.112
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.133 #	<0.03	<0.03	0.854	<0.0300	<0.0600	<0.0600	0.687	<0.0300	50.4^	0.0630 J,H	0.127
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.18	4.07	---	---	2.85	3.09	3.12	3.18	3.58	---	3.61
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	394	---	---	309	316	325	295	389	---	415
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2240 #	2340	---	---	---	---	2400	2420	2340	2500^	2,910	2,650
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.4	<1	<1.00	<1	<1	<1
Field Parameters				***Units***												
Temperature	None	Not Applicable	Not Applicable	ºC	25.4	14.8	---	19.31	24.89	21.9	23.5	16.32	23.0	15.9	20.0	23.1
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	7.74	7.67	7.74	7.36
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2816	2273	---	2330	2836	2438	2615	3178	2,699	1,865	2,358	2,412
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25	1.37	---	0.83	3.67	2.18	1.99	0.46	3.3	1.06	0.42	1.55
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-131.8	278.9	---	28.7	-191.5	-56.9	60.2	57.7	-167.2	20.9	-25.9	-51.7
Turbidity	None	Not Applicable	Not Applicable	NTU	2.89	6.82	1.03	2.53	1.48	3.09	0.75	2.16	4.38	0.25	1.84	1.55

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-16 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-16 27-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	1.8	2.35
Calcium	None	670.30	Not Applicable	mg/L	118	128
Chloride	250	18.51	Not Applicable	mg/L	16.5	43.4
Fluoride	4	0.6359	Not Applicable	mg/L	0.908	1.43
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.78	8.29
Sulfate	250	1,494	Not Applicable	mg/L	986	1,100
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1,570	1,970
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0123	0.0141
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.000997 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000263 J	0.000228 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.908	1.43
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0545	0.0509
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.127	0.103
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.612 +/- 0.464	2.56 +/- 1.25
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	8.00 J	7.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	259	408
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0	7.8
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	259	400
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.0
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.0982 J	0.0333 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0120	0.121 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	<0.02	0.087
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	0.098	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	0.121
Magnesium	None	Not Applicable	Not Applicable	mg/L	8.22	7.51
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.127	0.0644
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.194	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	4.12	3.87
Sodium	None	Not Applicable	Not Applicable	mg/L	419	336
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,340	2,980
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70
Field Parameters				***Units***		
Temperature	None	Not Applicable	Not Applicable	ºC	20.7	27.6
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.5	7.98
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,294	3,021
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.17	0.22
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	103.1	-114.1
Turbidity	None	Not Applicable	Not Applicable	NTU	3.89	2.49

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-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)
				Sample Date:	1-Jun-16	3-Aug-16	30-Sep-16	2-Dec-16	1-Feb-17	29-Mar-17	1-Jun-17	10-Aug-17	10-Aug-17	21-May-18	1-Aug-18	10-Aug-18
					BACKGROUND 1	BACKGROUND 2	BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8		DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Detection Monitoring Parameters				***Units***												
Boron	None	1.896	Not Applicable	mg/L	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																
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 (ODEQ)	mg/L	<0.000500	<0.00100	0.000225 J	<0.00100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322	0.365	0.58	0.480 J*	0.488	0.266	0.361	0.328	0.323	0.324	0.47	0.317
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.00100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.14	0.174	0.155 J	0.158 J	0.146	0.121	0.133	0.148	0.143	---	0.128	0.131
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000840 J	<0.00100	0.00135 J	<0.0100	<0.00100	<0.00500	<0.00100	<0.00100	<0.00100	---	<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.00120	U (0.000709)	<0.00300	0.000526 J	<0.00150	<0.000300	<0.000300	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.539 +/- 0.261	0.265 +/- 0.260 U	1.32 +/- 0.425	0.536 +/- 0.356	0.195 +/- 0.273 U	0.311 +/- 0.238 U	0.479 +/- 0.271	0.531 +/- 0.221	0.183 +/- 0.207 U	---	---	---
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	260	259	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	36.6	36	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	5.15	5.14	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	34.5	34.4	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/cm	2052	2230	2402	2405	2386	2396	2443	2417	---	2416	2606	2569
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	1.07	3.66	0.43	0.95	0.63	0.79	0.22	0.29	---	0.21	5.57	4.59
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-17	MW-17		MW-17	MW-17	MW-17	MW-17	MW-17	MW-17		MW-17
				Sample Date:	3-Oct-18	10-Jan-19		25-Apr-19	3-Oct-19	18-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	31-Mar-22	7-Jun-22	6-Oct-22
					INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) FILTERED	UNFILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Detection Monitoring Parameters				***Units***												
Boron	None	1.896	Not Applicable	mg/L	0.567 #	0.766	0.729	0.796	0.622	0.652	0.64	0.539	0.700	0.593	---	0.902
Calcium	None	670.30	Not Applicable	mg/L	461 #	591	499	499	555	494	453	467	428	435	---	541
Chloride	250	18.51	Not Applicable	mg/L	4.81 #	3.44	4.16	3.65	3.75	4.29	4.04	4.06	4.02	5.24^	4.16	4.25
Fluoride	4	0.6359	Not Applicable	mg/L	0.393 #	0.337	0.27	0.392 J	0.37	0.211	0.366	0.412	0.317	<0.250^	0.371	0.34
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.5 #	6.59	---	7.53	6.37	7.38	7.51	7.34	7.12	1.87^	7.67	7.04
Sulfate	250	1,557	Not Applicable	mg/L	821 #	1480	1200	1100	1310	1390	1,220 H	1310	1390	1970^	1,460	1,320
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1670 #	2300	1870	2400	2160	2230	2160	2200	2210	2340^	2,220	2,170
Assessment Monitoring Parameters																
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.0004 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000582 J	---	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00231 #	<0.00190	0.00250 J	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190	<0.00190	---	<0.00190
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.0022 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.00108 J	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.0001 #	0.000238 J	<0.000200	0.000313 J	<0.000200	0.000281 J	<0.000200	0.000239 J	0.000275 J	0.00148 J	---	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.393 #	0.337	0.27	0.392 J	0.37	0.211	0.366	0.412	0.317	<0.250^	0.371	0.34
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.122 #	0.159	0.148	0.151	0.138	0.147	0.123	0.114	0.140	0.104	---	0.147
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.000142 J	0.0000540 J	<0.0000300	---	0.000151 J
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	<0.000600	<0.000600	0.000671 J	<0.000600	<0.000600	<0.000600	0.000950 J	<0.000600	<0.000600	---	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.000675 J #	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	0.00149 J	---	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	0.000539 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.27 +/- 0.335 #	<0.78	---	<0.75	<0.76	<0.68	<0.69	<0.84	0.97	<0.79	---	1.48
Other Parameters																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.13 J #	<5.00	---	<5.00	<5.00	---	<5.00	<5.00	7.00 J	8.00 J ^	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	284	273	269	288	<5^	269	276
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5^	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	280	---	---	---	284	273	269	288	<5^	269	276
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5^	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	0.0541 J	<0.0120	0.0325 J ^	<0.0120	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	0.0198 J	<0.012^	<0.0120	0.0581 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.02	<0.02	<0.0200	<0.02^	0.0220 J,H	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.0200 H	<0.02^	<0.02 H	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	0.0541	<0.0200	0.0325 J ^	<0.02	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.0200	<0.02^	<0.02	0.0581
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	38.1	31.3	---	---	37.8	30.9	29.3	34.6	30.9	---	33.7
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00123(J)	<0.000600	0.00292 J	<0.000600	<0.000600	---	<0.000600
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.276 #	<0.03	0.519	<0.150	<0.0300	<0.0600	<0.0600	<0.0300	<0.0600	420 H ^	0.0834 J,H	0.0756 J
Potassium	None	Not Applicable	Not Applicable	mg/L	---	5.37	4.9	---	---	5.15	4.42	4.19	4.94	4.5	---	4.99
Sodium	None	Not Applicable	Not Applicable	mg/L	---	35.7	32.9	---	---	35.6	29.2	28.2	32.5	35.2	---	32.8
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1920 #	2450	---	---	---	---	2610	2460	2390	11900 ^	2,920	2,570
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1	1.12	<1^	<1	<1
Field Parameters				***Units***												
Temperature	None	Not Applicable	Not Applicable	ºC	23.3	15.9	---	19.26	23.63	21.2	23.2	21.04	22.9	18.3	22.5	25.9
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	6.90	7.08	7.04	6.79
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2548	2416	---	2470	2458	2344	2393	3321	2,467	1,811	2,369	2,441
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.44	0.51	---	1.8	0.8	1.35	0.41	0.27	0.52	1.86	0.8	1.94
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	237.5	57.8	---	2.4	148.3	-28.1	129.9	-2.5	61.7	103.6	81.5	37.8
Turbidity	None	Not Applicable	Not Applicable	NTU	5.4	1.24	0.69	0.63	0.65	2.28	0.58	0.75	1.80	0.85	1.61	1.94

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-17	DUP 4	MW-17
				Sample Date:	12-Apr-23		27-Sep-23
Detection Monitoring Parameters				***Units***	FIRST 2023 ASSESSMENT MON.		SECOND 2023 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	0.739	0.713	0.65
Calcium	None	670.30	Not Applicable	mg/L	599	537	561
Chloride	250	18.51	Not Applicable	mg/L	4.11	4.11	4
Fluoride	4	0.6359	Not Applicable	mg/L	0.349	0.33	0.311
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.12	7.14	7.73
Sulfate	250	1,557	Not Applicable	mg/L	1,510	1,510	1,470
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	2,050	2,210	2,270
Assessment Monitoring Parameters							
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000406 J	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	<0.00190	<0.00190	<0.00190
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	<0.000400	0.000569 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.00135 J	0.00123 J	0.000294 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.349	0.330	0.311
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.152	0.143	0.143
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.000600	0.000602 J	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.557 +/- 0.605	0.368 +/- 0.518	2.07 +/- 1.00
Other Parameters							
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.00 J	<5.00	9.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	230	249	257
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.00	<5.00
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	230	249	257
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.00	<5.00
Iron, Total	None	Not Applicable	Not Applicable	mg/L	<0.0120	<0.0120	0.0122 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0120	0.0149 J	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	<0.020	<0.02	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.020	<0.02	0.0280 J
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.02	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.02	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	43.3	39	36.4
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.000600	0.000660 J	<0.000600
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	5.92	5.34	5.43
Sodium	None	Not Applicable	Not Applicable	mg/L	40.8	36.7	35.1
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,500	2,400	2,480
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70	<1.70
Field Parameters				***Units***			
Temperature	None	Not Applicable	Not Applicable	ºC	20.6	---	27.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.83	---	6.64
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,407	---	2,400
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.24	---	0.42
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-66.6	---	124.4
Turbidity	None	Not Applicable	Not Applicable	NTU	2.62	---	0.85

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-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)
				Sample Date:	1-Jun-16	3-Aug-16	30-Sep-16	30-Sep-16	2-Dec-16	31-Jan-17	5-Apr-17	7-Jun-17	10-Aug-17	18-May-18	2-Aug-18	10-Aug-18
Detection Monitoring Parameters				***Units***	BACKGROUND 1	BACKGROUND 2	BACKGROUND 3		BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	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																
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 (ODEQ)	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 (ODEQ)	mg/L	0.43	0.433	0.392	0.417	0.434	0.403	0.4	0.442	0.39	---	0.113	0.319
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00503 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																
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	52.6	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	25.3	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.220	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	22	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	523	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/cm	2622	2884	2900	---	2854	2764	2698	2685	2716	2530	2568	2658
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.65	0.15	0.05	---	0.2	0.21	0.09	0.06	0.03	0.17	4.03	0.9
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-22.2	-41.7	-100	---	-225.5	-192.6	62.6	-11	28.2	-139.8	-65.1	-119.7
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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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-18	MW-18		MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	DUP 3	MW-18	MW-18
				Sample Date:	3-Oct-18	14-Jan-19		25-Apr-19	1-Oct-19	17-Jun-20	12-Oct-20	31-Mar-21	14-Oct-21	31-Mar-22	31-Mar-22	1-Jun-22	6-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.		FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
Boron	None	1.896	Not Applicable	mg/L	5.77 #	6.89	7.17	6.05	5.29	5.49	5.43	4.32	4.61	4.65	5.06	---	5.2
Calcium	None	670.30	Not Applicable	mg/L	25.1 #	31.8	30.8	33.1	25.6	21.6	20	19.3	19.3	23.9	25.3	---	17.7
Chloride	250	18.51	Not Applicable	mg/L	5.5 #	5.59	5.14	4.79	5.07	4.06	4.22	4.2	4.39	4.86	4.60	---	3.88
Fluoride	4	0.6359	Not Applicable	mg/L	1.37 #	1.32	1.44	1.25	1.47	1.28	1.66	1.71	1.90	2.10	1.92	---	1.84
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.8 #	10.4	---	10.2	10.3	9.35	10.2	10.5	9.95	9.69	9.30	---	10.2
Sulfate	250	1,820	Not Applicable	mg/L	1090 #	1110	1120	933	1020	888	794	904	896	837	842	---	804
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1760 #	1630	1660	1680	1550	1340	1270	1260	1320	1,300	1,310	---	1250
Assessment Monitoring Parameters																	
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	0.000555 J
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	0.00299	0.00290	0.00302	---	0.00315
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	0.00283 J	0.00305 J	0.00332 J	---	0.00269 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	<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	0.000298 J	0.000202 J	0.000207 J	---	<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	0.000968 J	<0.000400	0.000495 J	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.37 #	1.32	1.44	1.25	1.47	1.28	1.66	1.71	1.90	2.10	1.92	---	1.84
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0105 J #	0.00290 J	0.00258 J	0.00173 J	0.00372 J	0.00226 J	0.00276 J	0.00339 J	0.00301 J	0.00329 J	0.00347 J	---	0.00257 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000500 J	0.000247	<0.0000300	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.33 #	0.333	0.332	0.342	0.257	0.194	0.18	0.195	0.209	0.206	0.222	---	0.183
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.0019 J #	0.00506	0.00501	0.00577	0.00166 J	0.0037	0.00347	0.00234	0.00137 J	0.00247	0.00157 J	---	0.00208
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	0.000323 J	0.000563 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.387 +/- 0.253 U #	<0.77	---	<0.77	<0.71	<0.74	<0.71	<0.88	1.05	<0.79	<0.8	---	2.01
Other Parameters																	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	8.9 J #	<5	---	<5.00	11.0 J	---	5.00 J	<5.00	9.00 J	5.00 J	5.00 J	---	6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	71	69.9	65.5	73.8	63.6	89.1	---	61.6
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	42.2	---	---	---	60.6	64.3	46.8	55.8	58.6	64.7	---	56.5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5.00	<5	24.4	---	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	32.9	---	---	---	10.4	5.63	18.7	17.9	<5	<5	---	5.06
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	---	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	<0.0120	---	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.020	<0.02	<0.0200	<0.0200	<0.02	---	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.0200 H	<0.02	<0.02	---	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.0200	<0.02	<0.02	---	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<0.02	<0.0200	<0.02	<0.02	---	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	0.244	0.175 J	---	---	0.141(J)	0.27	0.426	0.152 J	0.559	0.587	---	0.181
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.18	0.166	0.215	0.211	0.199	0.203	---	0.172
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.053 J #	0.075 J	<0.03	<0.150	<0.0300	<0.0600	<0.0300	<0.0300	0.0606 J	0.712	0.146 J	---	0.0851 J
Potassium	None	Not Applicable	Not Applicable	mg/L	---	22.3	21.9	---	---	15.9	14.6	13.6	15.0	14.6	15.3	---	14.5
Sodium	None	Not Applicable	Not Applicable	mg/L	---	603	510	---	---	376	348	324	329	391	406	---	381
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2590 #	2520	---	---	---	---	2200	2090	2040	2,070	2,080	---	2090
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1	<1	<1.00	<1	<1	---	<1
Field Parameters																	
Temperature	None	Not Applicable	Not Applicable	ºC	23.6	14	---	17.89	24.8	22.45	23.5	17	20.7	17.6	---	---	26
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	10.46	9.97	---	---	9.96
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2632	2442	---	2486	2350	1998	1986	1999	2,041	1,962	---	---	1976
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.36	---	1.44	0.33	0.55	0.24	0.39	0.36	0.40	---	---	0.51
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	130.1	174.9	---	-152.8	-71.2	-140.3	-80.5	-49.7	-9.7	-0.8	---	---	-72.2
Turbidity	None	Not Applicable	Not Applicable	NTU	2.04	2.79	1.47	0.49	0.92	2.43	0.34	1	1.99	2.53	---	---	2.26

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-18 / 12-Apr-23 / FIRST 2023 ASSESSMENT MON.	MW-18 / 27-Sep-23 / SECOND 2023 ASSESSMENT MON.	DUP 1 / 27-Sep-23 / SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters							
Boron	None	1.896	Not Applicable	mg/L	4.75	4.81	4.06
Calcium	None	670.30	Not Applicable	mg/L	21.9	18.4	18.4
Chloride	250	18.51	Not Applicable	mg/L	5.7	5.1	5.19
Fluoride	4	0.6359	Not Applicable	mg/L	1.7	1.57	1.65
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.96	10	10.1
Sulfate	250	1,820	Not Applicable	mg/L	971	997	895
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1280	1120	1200
Assessment Monitoring Parameters							
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00340	0.00343	0.00357
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00256 J	0.00268 J	0.00246 J
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	<0.000400	0.000611 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.70	1.57	1.65
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.00273 J	0.00294 J	0.00219 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.232	0.197	0.203
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.0197	0.0221	0.026
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.59 +/- 0.629	1.59 +/-1.19	2.27 +/- 1.11
Other Parameters							
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.00 J	22	17
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	63.8	58.8	59
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	51.6	40.2	37.2
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5.0	<5.00	<5.00
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	12.2	18.6	21.8
Iron, Total	None	Not Applicable	Not Applicable	mg/L	<0.012	0.0122 J	0.0450 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.0352 J	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200	<0.0200
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	0.066	<0.0200
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200	0.0450 J
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.035 J	<0.0200	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	0.241	0.211	0.0965 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.243	0.2	0.198
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.0517 J	0.0666 J	0.0729 J
Potassium	None	Not Applicable	Not Applicable	mg/L	16.1	15.8	16.1
Sodium	None	Not Applicable	Not Applicable	mg/L	407	421	382
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,030	2,000	1,990
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70	<1.70
Field Parameters							
Temperature	None	Not Applicable	Not Applicable	ºC	19.9	26.6	---
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.29	10.35	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2010	2032	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25	0.24	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-95	-118.9	---
Turbidity	None	Not Applicable	Not Applicable	NTU	2.44	2.81	---

Notes:

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6. µmhos/cm : micromhos per centimeter.
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13. --- : no analysis performed.
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    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

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

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***	BACKGROUND 1	BACKGROUND 2		BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	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	10.7	10.9	10.8	10.8	10.5	10.4	9.7	10.5
Sulfate	250	1,708	Not Applicable	mg/L	1620	1620	1600	1530	1550	1560	1450	1510	1650	1630	1610	1520	1480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2420	2420	2530	2460	2460	2340	2420	2410	2440	2560	2480	2390	2440
Assessment Monitoring Parameters																	
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 (ODEQ)	mg/L	0.000568 J	<0.000100	<0.000100	0.000237 J	0.000103 J	<0.000500	<0.000100	0.000872 J	<0.000100	---	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.44 J*	1.51	1.44	1.3	1.32	1.1	1.23	1.23	1.32	1.3	1.3	1.34	1.3
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000621 J	<0.000100	<0.000100	0.000589 J	<0.000100	<0.000500	<0.000100	<0.000500	0.000114 J	---	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.0150	<0.00300	<0.00300	<0.00300	<0.00300	<0.0150	<0.00300	<0.0150	<0.00300	---	---	<0.00300	<0.00300
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	0.000100 UJ	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.466	0.484	0.483	0.435	0.481	0.586	0.495	0.607	0.469	---	---	0.384	0.112
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00616 J	0.0107	0.0105	0.00888 J	0.0116	0.0131	0.00879	0.0152	0.00349	---	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800	---	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.47 +/- 0.739	-0.0377 +/- 0.325 U	0.0518 +/- 0.264 U	0.483 +/- 0.372 U	0.287 +/- 0.277 U	0.121 +/- 0.235 U	0.136 +/- 0.226 U	0.202 +/- 0.190 U	0.296 +/- 0.222 U	---	---	---	---
Other Parameters																	
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																	
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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	MW-19S	MW-19S		MW-19S
				Sample Date:	3-Oct-18	15-Jan-19		25-Apr-19	1-Oct-19	17-Jun-20		12-Oct-20	31-Mar-21		15-Oct-21	1-Apr-22	1-Jun-22	6-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.	SECOND 2019 ASSESSMENT MON.	FIRST 2020 ASSESSMENT MON.		SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.		SECOND 2021 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
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	5..88	9.73	---	8.43
Calcium	None	670.30	Not Applicable	mg/L	35.3 #	50	49.6	52.4	40.4	43.6	42.1	40.7	42.3	35.3	41.6	44.2	---	40.7
Chloride	250	18.51	Not Applicable	mg/L	14.8 #	14.2	14.1	13.7	14.4	13.8	14	14.1	13.7	14	13.6	14.6	---	13.3
Fluoride	4	0.6359	Not Applicable	mg/L	1.24 #	1.27	1.59	1.13	1.37	1.15	1.04	1.38	1.46	1.54	1.57	1.66	---	1.59
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	9.9 #	10.4	---	10.5	10.6	10.2	9.88	10.9	10.8	10.6	10.8	10.8	---	10.8
Sulfate	250	1,708	Not Applicable	mg/L	1950 #	1640	1580	1520	1580	1490	1590	1640	1560	1560	1570	1,420	---	1480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2490 #	2500	2470	2440	2460	2300	2290	2340	2360	2310	2290	2,180	---	2210
Assessment Monitoring Parameters																		
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	---	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008 #	0.00634	0.00643	0.00673	0.00624	0.0061	0.00577	0.00588	0.00554	0.00452	0.00689	0.00689	---	0.0072
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0106 J #	0.0216	0.0201	0.0197	0.0164	0.0221	0.0177	0.0162	0.0176	0.0152	0.0166	0.0189	---	0.0164
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.002 #	<0.00100	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	0.000133 J #	0.000386 J	0.000429 J	0.000219 J	0.000222 J	0.000387 J	0.000328 J	<0.000200	0.000238 J	<0.000200	0.000502 J	0.000380 J	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.01 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000930 J	0.000829 J	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000102 J #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	0.000234 J	---	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.24 #	1.27	1.59	1.13	1.37	1.15	1.04	1.38	1.46	1.54	1.57	1.66	---	1.59
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000116 J #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.06 #	0.00148 J	0.00128 J	0.00192 J	0.00169 J	0.00134 J	0.00114 J	0.00102 J	0.00121 J	0.00144 J	0.00150 J	0.00249 J	---	0.00111 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000450 J	0.0000460 J	0.000113 J	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.439 #	0.472	0.463	0.462	0.377	0.402	0.394	0.367	0.398	0.351	0.407	0.445	---	0.43
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00889 #	0.011	0.00631	0.0141	0.0124	0.00655	0.0064	0.0113	0.00857	0.00743	0.0113	0.0127	---	0.00944
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.933 +/- 0.391 #	<0.98	---	<0.79	<0.74	<0.73	<0.72	<0.73	<0.87	<0.82	<0.84	<0.82	---	1.82
Other Parameters																		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	26.2	25	---	21	23	---	---	19	16	14.0 J	21.0	21.0	---	18
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	128	130	132	135	133	150	136	---	130
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	59.8	---	---	---	92.6	98.7	89.2	63.8	69	77.3	53.6	---	61
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5	<5	<5	<5.00	<5	---	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	81.2	---	---	---	35.1	31.4	42.6	71.6	64.4	73.0	82.4	---	68.7
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0153(J)	<0.0120	<0.0120	<0.012	<0.012	0.0509 J	0.0554 J	---	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120	<0.012	<0.012	0.0210 J	<0.0120	---	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.043(J)	0.330(J)	0.0310 J	<0.02	<0.02	0.0450 J	0.03 J	---	0.0230 J
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02	<0.02	<0.0200 H	0.029 J	---	<0.02
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02	<0.02	<0.0200	0.0254 J	---	<0.02
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.02	<0.02	0.0210 J	<0.02	---	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	0.121 J	0.0852 J	---	---	0.0553(J)	0.0510(J)	0.0346 J	0.0773 J	0.0681 J	0.0415 J	0.0836 J	---	0.0228 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.373	0.383	0.37	0.457	0.398	0.440	0.406	---	0.413
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.049 #	<0.03	0.117	<0.150	<0.0300	<0.0600	<0.0600	<0.150	<0.0600	<0.0600	<0.0600	0.102 J	---	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	---	38.2	37.7	---	---	35.2	34.1	33.7	33.9	29	34.6	37	---	37.7
Sodium	None	Not Applicable	Not Applicable	mg/L	---	801	774	---	---	644	598	610	639	545	462	723	---	752
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2470 #	3530	---	---	---	---	---	3860	3500	3540	3370	3,570	---	3570
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	1.52	<1	1.8	<1	<1	<1.00	<1	---	<1
Field Parameters																		
Temperature	None	Not Applicable	Not Applicable	ºC	25.4	13.4	---	17.92	25.86	22.99	---	23.8	18.3	---	21.8	17.2	---	23.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.63	11.01	---	11.26	10.65	10.97	---	10.92	11.09	---	10.84	10.94	---	10.54
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3610	3438	---	3524	3552	3309	---	3433	3406	---	3,342	3,309	---	3277
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.33	0.21	---	1.5	0.5	0.36	---	0.16	0.27	---	0.21	0.27	---	0.32
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	172.1	-162	---	-281.7	-252.4	-588.1	---	209.2	-191.7	---	-237.2	-244.4	---	-249.1
Turbidity	None	Not Applicable	Not Applicable	NTU	2.05	5.19	2.24	0.57	0.61	2.86	---	1.24	0.73	---	2.77	2.22	---	1.82

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-19S 17-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-19S 27-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	7.69	9.51
Calcium	None	670.30	Not Applicable	mg/L	38.5	41.7
Chloride	250	18.51	Not Applicable	mg/L	12.8	12.5
Fluoride	4	0.6359	Not Applicable	mg/L	1.47	1.28
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	10.6	10.6
Sulfate	250	1,708	Not Applicable	mg/L	1740	1480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2310	2250
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	0.000595 J
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00581	0.00702
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0152	0.017
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	0.000342 J
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.00118 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000200	0.000266 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.47	1.28
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.00216 J	0.00176 J
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.362	0.45
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00965	0.0135
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	0.000269 J	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.376 +/- 1.03	1.99 +/- 1.16
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	16.0	25.0
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	124	116
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	62.4	53
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	<5	<5.00
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	62	63.2
Iron, Total	None	Not Applicable	Not Applicable	mg/L	0.0162 J	0.0322 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	0.063	0.051
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	0.071
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	<0.02	<0.0200
Magnesium	None	Not Applicable	Not Applicable	mg/L	0.109 J	0.0892 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	0.379	0.417
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	32.3	37.2
Sodium	None	Not Applicable	Not Applicable	mg/L	662	830
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,270	3,210
Sulfide	None	Not Applicable	Not Applicable	mg/L	<1.70	<1.70
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	20.6	26
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.78	10.17
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3090	3111
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.19	0.15
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-58.2	13.2
Turbidity	None	Not Applicable	Not Applicable	NTU	3.94	1.61

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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 31-May-16	MW-20 23-Aug-16	MW-20 29-Sep-16	DUP 1 29-Sep-16	MW-20 2-Dec-16	MW-20 31-Jan-17	MW-20 5-Apr-17	MW-20 7-Jun-17	MW-20 9-Aug-17	MW-20 21-May-18	MW-20 (Deep) 1-Aug-18
					BACKGROUND 1	BACKGROUND 2	BACKGROUND 3		BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	VERIFICATION SAMPLE
Detection Monitoring Parameters				*Units*											
Boron	None	1.896	Not Applicable	mg/L	0.704	1.11	1.06	0.945	1.02	1	0.58	0.784	0.643	0.813	1.2
Calcium	None	670.30	Not Applicable	mg/L	434	563	416	391	451	528	583	611 J*	382	355	552
Chloride	250	18.51	Not Applicable	mg/L	5.99 J*	5.79	4.85	4.8	4.44	5.4	6.77	6.00 J*	5.08	6.14	4.96
Fluoride	4	0.6359	Not Applicable	mg/L	0.322 J*	0.41	0.424	0.416	0.397	0.362	0.248	0.340 J*	0.349	0.323	0.309
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	6.94	7.6	7.4	7.3	7.3	7	6.8	6.7	6.7	6.8	6.9
Sulfate	250	1,363	Not Applicable	mg/L	1140	1110	1100	1110	1290	949	907	1020	1180	839	1060
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1710	1980	1860	1810	1980	1870	1750	1770	1760	1760	1980
Assessment Monitoring Parameters															
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00222	0.00101 J	0.00198 J	0.00199 J	<0.00400	0.000732 J	0.00174 J	<0.00400	0.000598 J	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0136	0.0151	0.0116	0.0109	0.0100 J	0.0122	0.0108	0.0128	0.00216	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.00500	<0.000500	<0.000500	<0.00500	<0.00250	---	---
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	<0.000500	0.000327 J	0.000383 J	0.000366 J	<0.00100	0.000642 J	0.000215 J	<0.00100	<0.000500	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322 J*	0.41	0.424	0.416	0.397	0.362	0.248	0.340 J*	0.349	0.323	0.309
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000500	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.123	0.117	0.124	0.114	0.126 J	0.12	0.0962	0.112 J	0.110 J	---	0.109
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000100	---	---
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.00120 J	0.00121 J	<0.00500	0.00126 J	<0.0100	<0.00100	<0.00100	<0.0100	<0.00500	---	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000300	<0.000300	<0.000300	<0.00300	0.000633 J	<0.000300	<0.00300	<0.00150	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<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															
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	259	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	20.9	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.54	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	86.1	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Field Parameters															
Temperature	None	Not Applicable	Not Applicable	ºC	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	µmhos/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

Notes:

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2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
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ATTACHMENT B
GROUNDWATER SAMPLE DATA TO DATE FOR LANDFILL CCR UNIT
WESTERN FARMERS ELECTRIC COOPERATIVE - HUGO POWER STATION

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

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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 12-Apr-23	MW-20 28-Sep-23	DUP 2 28-Sep-23
					FIRST 2023 ASSESSMENT MON.	SECOND 2023 ASSESSMENT MON.	
Detection Monitoring Parameters							
Boron	None	1.896	Not Applicable	mg/L	0.559	0.646 J	0.953
Calcium	None	670.30	Not Applicable	mg/L	351	327	346
Chloride	250	18.51	Not Applicable	mg/L	5.27	5.1	5.13
Fluoride	4	0.6359	Not Applicable	mg/L	0.367	0.311	0.295
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.15	7.81	7.88
Sulfate	250	1,363	Not Applicable	mg/L	962	776	1,030
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1,470	1,660	1,500
Assessment Monitoring Parameters							
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.000400	0.00105 J	0.00108 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00924	0.0114	0.0129
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000689 J	0.00106 J	0.00113 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.367	0.311	0.295
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0905	0.0966	0.113
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000629 J	0.00110 J	0.000874 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.453 +/- 0.442	2.21 +/- 1.42	1.98 +/- 1.28
Other Parameters							
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.00 J	11.0 J	10.0 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	<0.0300	<0.0300	<0.0300
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1,860	2,140	2,110
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---
Field Parameters							
Temperature	None	Not Applicable	Not Applicable	ºC	20.3	24.2	---
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	5.52	6.62	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,708	2,068	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.39	0.34	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	9.3	-0.5	---
Turbidity	None	Not Applicable	Not Applicable	NTU	7.1	1.45	---

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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 26-May-16	MW-21 27-Jul-16	DUP 1 27-Jul-16	MW-21 28-Sep-16	MW-21 1-Dec-16	MW-21 31-Jan-17	MW-21 5-Apr-17	MW-21 6-Jun-17	MW-21 8-Aug-17	MW-21 17-May-18	MW-21 (Deep) 10-Aug-18
					BACKGROUND 1	BACKGROUND 2		BACKGROUND 3	BACKGROUND 4	BACKGROUND 5	BACKGROUND 6	BACKGROUND 7	BACKGROUND 8	DETECTION MON. #1	VERIFICATION SAMPLE
Detection Monitoring Parameters				*Units*											
Boron	None	1.896	Not Applicable	mg/L	2.9	2.76	2.86	2.59	3.98	4.41	3.43	3.36	3.07 J	2.95	2.99
Calcium	None	670.30	Not Applicable	mg/L	148	186	205	156	251	176	214	149	165	136	147
Chloride	250	18.51	Not Applicable	mg/L	22.9	22.2	21.8	23.1	22.3	21.5	20.5	21.4	17.8	22	21.9
Fluoride	4	0.6359	Not Applicable	mg/L	0.594	0.752	0.801	0.582	0.564	0.498	0.49	0.559	0.779	0.53	0.453
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.56	7.98	8.02	7.9	7.9	7.5	7.4	7.3	7.4	7.5	7.5
Sulfate	250	1,591	Not Applicable	mg/L	1370	1350	1420	1500	1500	1360	1470	1400	1250	1480	1410
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2410	2380	2360	2510	2430	2440	2320	2430	2320	2570	2560
Assessment Monitoring Parameters															
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	<0.000100	<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 (ODEQ)	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 (ODEQ)	mg/L	0.00385	0.00193 J	0.00188 J	0.00212	<0.00500	0.0023	0.002	0.00175 J	0.00152 J	---	<0.00100
Selenium	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															
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	---	---	---	---	---	---	---	---	312	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	35.1	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	9.21	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	791	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Field Parameters															
Temperature	None	Not Applicable	Not Applicable	ºC	20.64	22.37	---	21.75	19.28	20.91	18.26	22.05	20.69	21.36	25.09
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.37	7.32	---	7.32	7.28	7.26	6.19	7.2	7.11	7.28	6.91
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3111	3578	---	3600	3586	3625	3555	3493	3421	3504	3544
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.24	0.45	---	0.07	0.17	0.27	0.32	0.12	0.07	0.16	1.45
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	62.8	-72.7	---	-92.6	-239	-182	247.3	-12.6	59.8	-45.2	99
Turbidity	None	Not Applicable	Not Applicable	NTU	2.1	0.32	---	0.3	0.29	0.27	0.84	0.74	1.07	0.28	0.5

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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		MW-21	DUP-2	MW-21	DUP-2	MW-21	MW-21	MW-21	MW-21	DUP 3	MW-21		MW-21
				Sample Date:	3-Oct-18	15-Jan-19		24-Apr-19		2-Oct-19		17-Jun-20	12-Oct-20	31-Mar-21	13-Oct-21		30-Mar-22	6-Jun-22	5-Oct-22
Detection Monitoring Parameters				***Units***	INITIAL ASSESSMENT MON.	INITIAL ASSESSMENT MON. (RESAMPLE) UNFILTERED	FILTERED	FIRST 2019 ASSESSMENT MON.		SECOND 2019 ASSESSMENT MON.		FIRST 2020 ASSESSMENT MON.	SECOND 2020 ASSESSMENT MON.	FIRST 2021 ASSESSMENT MON.	SECOND 2021 ASSESSMENT MON.		FIRST 2022 ASSESSMENT MON.	FIRST 2022 ASSESSMENT MON. (RESAMPLE)	SECOND 2022 ASSESSMENT MON.
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	2.53	2.31	3.17	---	2.36
Calcium	None	670.30	Not Applicable	mg/L	152 #	187	187	145	142	146	155	139	141	154	128	135	173	---	140
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	21.5	22.1	23^	22.4	21.8
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	0.411	0.471	0.683^	0.543	0.445
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.9 #	6.89	---	7.77	7.74	7.58	7.12	7.07	7.64	7.28	7.28	7.43	1.64^	7.57	7.42
Sulfate	250	1,591	Not Applicable	mg/L	1610 #	1670	1710	1440	1530	1560	1530	1470	1780	1660	1670	1520	2340^	1,610	1,440
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2650 #	2740	2720	2550	2650	2700	2720	2470	2660	2650	2660	2560	3500^	2,660	2,440
Assessment Monitoring Parameters																			
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000545 J	<0.000400	---	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008 #	0.00329	0.00223	0.00112 J	0.00136 J	0.000638 J	0.000574 J	0.000551 J	0.000536 J	0.000534 J	0.000539 J	0.000521 J	0.000695 J	---	0.000569 J
Barium	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	0.0102	0.0105	0.0139	---	0.00932
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	<0.000200	<0.000200	<0.000200	---	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.01 #	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	0.000669 J	---	<0.000400
Cobalt	None	Not Applicable	0.006 (ODEQ)	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	<0.000200	<0.000200	0.000620 J	---	<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	0.411	0.471	0.683^	0.543	0.445
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001 #	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	---	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.164 J #	0.157	0.16	0.14	0.134	0.118	0.129	0.14	0.123	0.137	0.125	0.114	0.143	---	0.144
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00015 #	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	0.0000380 J	<0.0000300	0.0000330 J	<0.0000300	---	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	<0.001 #	0.00161 J	0.00160 J	0.00131 J	0.00118 J	0.00105 J	0.00184 J	0.00103 J	0.00103 J	0.000902 J	0.000677 J	0.000876 J	0.00172 J	---	<0.000600
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003 #	<0.0011	<0.0011	<0.00110	0.00111 J	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	---	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008 #	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	---	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	3.41 +/- 0.496 #	6.29	---	2.24	1.67	1.59	2.57	3.09	2.38	2.44	2.94	2.58	2.58	---	3.28
Other Parameters																			
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5 #	<5	---	<5.00	<5.00	<5.00	7.00 J	---	<5.00	<5.00	<5.00	7.00 J	5.00 J ^	<5.00	16
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	393	---	---	---	---	---	---	---	---	---	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	62.1	62.3	---	---	---	---	---	---	---	---	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.449 #	0.14	0.145	1.16	1.36	0.329	0.467	<0.150	<0.150	0.961	0.207	0.168 J	687^	0.399	0.28
Potassium	None	Not Applicable	Not Applicable	mg/L	---	12	11.8	---	---	---	---	---	---	---	---	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	684	688	---	---	---	---	---	---	---	---	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3120 #	3610	---	---	---	---	---	---	3940	3550	3620	3480	22000^	9,390	3,530
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters																			
Temperature	None	Not Applicable	Not Applicable	ºC	24	13.8	---	18.12	---	24.38	---	23.17	23.2	15.44	21.3	---	13.8	25	24.1
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.13	7.1	---	7.42	---	7.29	---	7.23	7.26	7.43	7.23	---	7.44	7.28	7.06
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3627	3585	---	3533	---	3633	---	3352	3516	4806	3,262	---	2,769	3542	3355
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.43	0.59	---	1.23	---	0.64	---	0.65	0.48	5	0.31	---	0.43	0.63	0.51
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	45.9	-67.1	---	84	---	91.9	---	-38	119.3	25.6	-212.1	---	-33.3	47.7	52.9
Turbidity	None	Not Applicable	Not Applicable	NTU	2.38	3.3	1.11	0.44	---	0.26	---	2.04	0.52	1.27	1.33	---	0.68	1.3	3.27

Notes:

1. MCL : GWPS is Federal Drinking Water standard, or Tap Water Standard for Lead. UTL : GWPS is upper tolerance limit from pooled background data from upgradient / background wells ODEQ : Revised GWPS to reflect September 15, 2021 regulatory changes to to OAC 252:517.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    - U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    - UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    - J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    - R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.

ATTACHMENT B
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: / *Units*	MW-21 12-Apr-23 FIRST 2023 ASSESSMENT MON.	MW-21 28-Sep-23 SECOND 2023 ASSESSMENT MON.
Detection Monitoring Parameters						
Boron	None	1.896	Not Applicable	mg/L	3.28	2.3
Calcium	None	670.30	Not Applicable	mg/L	168	144
Chloride	250	18.51	Not Applicable	mg/L	22.0	22.1
Fluoride	4	0.6359	Not Applicable	mg/L	0.545	0.553
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.57	7.88
Sulfate	250	1,591	Not Applicable	mg/L	1,750	1,760
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2,250	2,320
Assessment Monitoring Parameters						
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.000517 J	0.000792 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0115	0.0107
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000200	0.000260 J
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000200	0.000268 J
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000400	0.000470 J
Cobalt	None	Not Applicable	0.006 (ODEQ)	mg/L	0.000351 J	0.000332 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.545	0.553
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.137	0.124
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ODEQ)	mg/L	0.000933 J	0.000824 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000200	0.000250 J
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	2.51 +/- 0.838	0.864 +/- 0.902
Other Parameters						
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	25.0	6.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferrous, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric	None	Not Applicable	Not Applicable	mg/L	---	---
Iron, Ferric, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.153	<0.0600
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,600	3,590
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---
Field Parameters						
Temperature	None	Not Applicable	Not Applicable	ºC	18.8	28.7
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	5.81	7.55
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3035	3667
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.27	0.41
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	158.8	-30.3
Turbidity	None	Not Applicable	Not Applicable	NTU	2.93	2.45

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. ºC : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. Cells shaded in blue indicate results that are above the laboratory MDL.
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.
16. # : Data from Initial Assessment Monitoring determined to be invalid due to laboratory issues and are not to be used in statistical evaluation. Resampling was conducted in January 2019 (both filtered and unfiltered). Data from unfiltered analysis from January 2019 is appropriate for statistical evaluation.
17. ^ : Data for select parameters from the First 2022 Assessment Monitoring were determined to not be valid due to use of inappropriate preservative. Resampling for these was conducted in June 2022. For these, data from June 2022 is appropriate for statistical evaluation.