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

January 5, 2021

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

Re: Notification of Apparent Exceedances from October 2020 Assessment Monitoring
Western Farmers Electric Cooperative – Hugo Power Station, Fort Towson, Oklahoma

Dear Ms. Young:
Western Farmers Electric Cooperative (WFEC) has been conducting assessment monitoring associated with Coal Combustion Residuals (CCR) Units at its Hugo Power Station (HPS). The laboratory report for October 2020 assessment monitoring was received on December 7, 2020 and is enclosed (Attachment A). Based upon review of data from October 2020 assessment monitoring, WFEC has identified constituents listed in Appendix B of Oklahoma Administrative Code Chapter 517, Disposal of Coal Combustion Residuals from Electric Utilities (OAC 252:517) at statistically significant levels (SSLs) above the Ground Water Protection Standard (GWPS). In particular, molybdenum was detected at SSLs above both the Site-specific GWPS and the EPA alternative risk-based GWPS at four of the Landfill CCR Unit monitoring wells (MW-15A, MW-16, MW-18 and MW-19S). This submittal addresses OAC 252:517-9-6(g), which requires the owner/operator to prepare a notification identifying OAC 252:517 Appendix B constituents detected at SSLs above the GWPS.
Molybdenum was detected at SSLs above the GWPS at these wells during the previous assessment monitoring events and notification was provided to the Oklahoma Department of Environmental Quality (ODEQ). A Plan and Schedule for Analyzing SSIs 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. The ACM Report was approved by ODEQ on December 29, 2020.

Groundwater data summary tables for the Landfill CCR Unit updated to include results from October 2020 assessment monitoring are included (Attachment B). Other than as discussed above, no OAC 252:517 Appendix B constituents were detected at SSLs above the GWPS in monitoring wells associated with the Landfill CCR Unit. Also, no OAC 252:517 Appendix B constituents were detected at SSLs above the GWPS in monitoring wells associated with the Surface Impoundment CCR Unit.

Sincerely,

Kent Fletcher
Environmental Coordinator

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

ATTACHMENT A

OCTOBER 2020 ASSESSMENT MONITORING LABORATORY REPORT

10450 Stancliff Rd. Suite 210
Houston, TX 77099
T: +1 281 530 5656
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December 07, 2020

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

Work Order: **HS20100471**

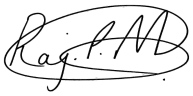
Laboratory Results for: **WFEC/ CCR Program, Landfill Wells**

Dear Bert Smith,

ALS Environmental received 13 sample(s) on Oct 09, 2020 for the analysis presented in the following report.

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

Regards,



Generated By: RJ.MODASHIA
RJ Modashia
Project Manager

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS20100471

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS20100471-01	MW-15A	Water		08-Oct-2020 11:08	09-Oct-2020 09:45	☐
HS20100471-02	MW-3	Water		08-Oct-2020 16:39	10-Oct-2020 09:40	☐
HS20100471-03	MW-7S	Water		09-Oct-2020 11:38	10-Oct-2020 09:40	☐
HS20100471-04	MW-14A	Water		08-Oct-2020 15:16	10-Oct-2020 09:40	☐
HS20100471-05	DUP 3	Water		08-Oct-2020 16:39	10-Oct-2020 09:40	☐
HS20100471-06	MW-5S	Water		12-Oct-2020 09:41	13-Oct-2020 09:05	☐
HS20100471-07	MW-19S	Water		12-Oct-2020 13:45	13-Oct-2020 09:05	☐
HS20100471-08	MW-20	Water		12-Oct-2020 11:24	13-Oct-2020 09:05	☐
HS20100471-09	MW-21	Water		12-Oct-2020 12:29	13-Oct-2020 09:05	☐
HS20100471-10	MW-17	Water		12-Oct-2020 16:48	13-Oct-2020 09:15	☐
HS20100471-11	MW-18	Water		12-Oct-2020 14:44	13-Oct-2020 09:15	☐
HS20100471-12	MW-13	Water		14-Oct-2020 09:41	15-Oct-2020 09:10	☐
HS20100471-13	MW-16	Water		13-Oct-2020 16:22	15-Oct-2020 09:10	☐

Revision:1

Client: Altamira **CASE NARRATIVE**
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS20100471

Work Order Comments

• REV01: Updated the collection time for Sample MW-19S and corrected the SRC to show sampler name is present on the COC.

Work Order Comments

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

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

Metals by Method SW7470

Batch ID: 158687

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

Metals by Method SW6020

Batch ID: 158665

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

Batch ID: 158797

Sample ID: MW-15A (HS20100471-01MS)

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

Wet Chemistry by Method E300

Batch ID: R370835

Sample ID: HS20100465-11MS

• MS and MSD are for an unrelated sample

Wet Chemistry by Method SM4500 S2-F

Batch ID: R371111

Sample ID: MW-16 (HS20100471-13)

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

• MS is for an unrelated sample

Batch ID: R370851

Sample ID: MW-7S (HS20100471-03MS)

• The matrix spike recovery was outside of the control limit.

WetChemistry by Method M2510 B

Batch ID: R371044,R371049

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

Client: Altamira **CASE NARRATIVE**
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS20100471

WetChemistry by Method SM4500 S2-F

Batch ID: R370585,R370853

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

WetChemistry by Method E410.4

Batch ID: R370610,R370941

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

WetChemistry by Method SM4500H+ B

Batch ID: R370952,R371039,R371146

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

WetChemistry by Method M2540C

Batch ID: R370705,R370795,R370895,R370983,R371065

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

WetChemistry by Method SM2320B

Batch ID: R370437,R370623

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

WetChemistry by Method SM3500FED

Batch ID: R370237,R370335,R370513,R370608

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

WetChemistry by Method E300

Batch ID: R373969

Sample ID: MW-17 (HS20100471-10)

• Sample was re-analyzed outside of the holding time due to possible dilution error in the initial run.

Batch ID: R370722

Sample ID: MW-13 (HS20100471-12)

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

Sample ID: MW-16 (HS20100471-13)

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

Sample ID: HS20100755-05MS

• MS and MSD are for an unrelated sample

Batch ID: R371109

Sample ID: MW-17 (HS20100471-10)

Client: Altamira **CASE NARRATIVE**
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS20100471

WetChemistry by Method E300

Batch ID: R371109

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

Sample ID: MW-21 (HS20100471-09)

- Sample ran at 5X due to higher concentration of Sulfate

Sample ID: MW-5S (HS20100471-06MS)

- 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: R370815

Sample ID: MW-15A (HS20100471-01)

- Sample ran at 5X due to high concentration of Sulfate

Batch ID: R370583

Sample ID: MW-17 (HS20100471-10)

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

Batch ID: R370430

Sample ID: MW-19S (HS20100471-07)

- Sample ran at 5X due to high concentration of Sulfate

Batch ID: R370366

Sample ID: MW-14A (HS20100471-04)

- Sample ran at 5X due to high concentration of Sulfate

Batch ID: R371182,R371185

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

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-15A
Collection Date: 08-Oct-2020 11:08

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 17:02
Arsenic	**0.000592**	J	**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 17:02
Barium	**0.0199**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 17:02
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:02
Boron	**3.33**		**0.220**	**0.400**	**mg/L**	20	26-Oct-2020 11:30
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:02
Calcium	**89.8**		**0.0340**	**0.500**	**mg/L**	1	23-Oct-2020 17:02
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 17:02
Cobalt	**0.000221**	J	**0.000200**	**0.00500**	**mg/L**	1	23-Oct-2020 17:02
Iron	**0.0496**	J	**0.0120**	**0.200**	**mg/L**	1	23-Oct-2020 17:02
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 17:02
Lithium	**0.0709**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 17:02
Magnesium	**11.0**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 17:02
Molybdenum	**0.167**		**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 17:02
Potassium	**5.15**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 17:02
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 17:02
Sodium	**627**		**0.280**	**4.00**	**mg/L**	20	26-Oct-2020 11:30
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:02
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	**0.165**	J	**0.0120**	**0.200**	**mg/L**	1	22-Oct-2020 18:01
Molybdenum	**0.153**		**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:01
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:21
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**26.5**		**1.00**	**2.50**	**mg/L**	5	10-Oct-2020 10:59
Fluoride	**1.14**		**0.250**	**0.500**	**mg/L**	5	10-Oct-2020 10:59
Nitrogen, Nitrate (As N)	U		0.150	0.500	mg/L	5	10-Oct-2020 10:59
Sulfate	**1,650**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 02:27
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**5.00**	J	**5.00**	**15.0**	**mg/L**	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**3,780**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,460**		**5.00**	**10.0**	**mg/L**	1	15-Oct-2020 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-15A
Collection Date: 08-Oct-2020 11:08

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**204**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:19
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:19
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:19
Alkalinity, Total (As CaCO3)	**204**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:19
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: MZD
Ferrous Iron	**0.0210**	J	**0.0200**	**0.0500**	**mg/L**	1	09-Oct-2020 11:37
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	15-Oct-2020 14:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.77**	H	**0.100**	**0.100**	**pH Units**	1	21-Oct-2020 12:22
Temp Deg C @pH	**22.1**	H	**0**	**0**	**°C**	1	21-Oct-2020 12:22
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-3
Collection Date: 08-Oct-2020 16:39

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 17:14
Arsenic	**0.000474**	J	**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 17:14
Barium	**0.0159**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 17:14
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:14
Boron	**0.903**		**0.0110**	**0.0200**	**mg/L**	1	23-Oct-2020 17:14
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:14
Calcium	**183**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 11:35
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 17:14
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 17:14
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 17:14
Lithium	**0.118**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 17:14
Molybdenum	U		0.000600	0.00500	mg/L	1	23-Oct-2020 17:14
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 17:14
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 17:14
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:27
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**13.8**		**0.200**	**0.500**	**mg/L**	1	10-Oct-2020 15:01
Fluoride	**0.328**		**0.0500**	**0.100**	**mg/L**	1	10-Oct-2020 15:01
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	10-Oct-2020 15:01
Sulfate	**1,320**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 03:21
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,980**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,020**		**5.00**	**10.0**	**mg/L**	1	15-Oct-2020 18:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.36**	H	**0.100**	**0.100**	**pH Units**	1	21-Oct-2020 12:22
Temp Deg C @pH	**21.6**	H	**0**	**0**	**°C**	1	21-Oct-2020 12:22
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-7S
Collection Date: 09-Oct-2020 11:38

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-03
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:05
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:05
Barium	**0.0142**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:05
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:05
Boron	**2.29**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:37
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:05
Calcium	**90.2**		**0.0340**	**0.500**	**mg/L**	1	23-Oct-2020 18:05
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:05
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:05
Iron	**0.111**	J	**0.0120**	**0.200**	**mg/L**	1	23-Oct-2020 18:05
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:05
Lithium	**0.0650**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:05
Magnesium	**12.0**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:05
Molybdenum	**0.00106**	J	**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:05
Potassium	**5.10**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:05
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:05
Sodium	**272**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 11:37
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:05
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	**0.235**		**0.0120**	**0.200**	**mg/L**	1	22-Oct-2020 18:03
Molybdenum	**0.00103**	J	**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:03
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:28
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**16.9**		**0.200**	**0.500**	**mg/L**	1	10-Oct-2020 16:13
Fluoride	**0.713**		**0.0500**	**0.100**	**mg/L**	1	10-Oct-2020 16:13
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	10-Oct-2020 16:13
Sulfate	**759**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 03:39
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**8.00**	J	**5.00**	**15.0**	**mg/L**	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,110**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**1,340**		**5.00**	**10.0**	**mg/L**	1	16-Oct-2020 08:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-7S
Collection Date: 09-Oct-2020 11:38

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-03
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**315**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:27
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:27
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:27
Alkalinity, Total (As CaCO3)	**315**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:27
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: TH
Ferrous Iron	**0.216**		**0.0200**	**0.0500**	**mg/L**	1	10-Oct-2020 11:48
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	**1.48**		**1.00**	**1.00**	**mg/L**	1	16-Oct-2020 17:20
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.79**	H	**0.100**	**0.100**	**pH Units**	1	21-Oct-2020 12:22
Temp Deg C @pH	**21.7**	H	**0**	**0**	**°C**	1	21-Oct-2020 12:22
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-14A
Collection Date: 08-Oct-2020 15:16

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-04
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:07
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:07
Barium	**0.0114**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:07
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:07
Boron	**0.882**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:39
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:07
Calcium	**278**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 11:39
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:07
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:07
Iron	**0.236**		**0.0120**	**0.200**	**mg/L**	1	23-Oct-2020 18:07
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:07
Lithium	**0.146**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:07
Magnesium	**26.2**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:07
Molybdenum	U		0.000600	0.00500	mg/L	1	23-Oct-2020 18:07
Potassium	**7.94**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:07
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:07
Sodium	**388**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 11:39
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:07
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	**0.169**	J	**0.0120**	**0.200**	**mg/L**	1	22-Oct-2020 18:05
Molybdenum	**0.000621**	J	**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:05
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:30
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**14.9**		**1.00**	**2.50**	**mg/L**	5	10-Oct-2020 14:43
Fluoride	**0.254**	J	**0.250**	**0.500**	**mg/L**	5	10-Oct-2020 14:43
Nitrogen, Nitrate (As N)	U		0.150	0.500	mg/L	5	10-Oct-2020 14:43
Sulfate	**1,770**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 03:57
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**3,660**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,630**		**5.00**	**10.0**	**mg/L**	1	15-Oct-2020 18:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-14A
Collection Date: 08-Oct-2020 15:16

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-04
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**327**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:34
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:34
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	13-Oct-2020 21:34
Alkalinity, Total (As CaCO3)	**327**		**5.00**	**5.00**	**mg/L**	1	13-Oct-2020 21:34
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: TH
Ferrous Iron	**0.184**		**0.0200**	**0.0500**	**mg/L**	1	10-Oct-2020 11:48
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	15-Oct-2020 14:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.41**	H	**0.100**	**0.100**	**pH Units**	1	21-Oct-2020 12:22
Temp Deg C @pH	**22.0**	H	**0**	**0**	**°C**	1	21-Oct-2020 12:22
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: DUP 3
Collection Date: 08-Oct-2020 16:39

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-05
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:09
Arsenic	**0.000464**	J	**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 18:09
Barium	**0.0158**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:09
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:09
Boron	**0.946**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:41
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:09
Calcium	**181**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 11:41
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:09
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:09
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:09
Lithium	**0.122**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:09
Molybdenum	U		0.000600	0.00500	mg/L	1	23-Oct-2020 18:09
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:09
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:09
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:43
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**13.8**		**0.200**	**0.500**	**mg/L**	1	10-Oct-2020 15:37
Fluoride	**0.337**		**0.0500**	**0.100**	**mg/L**	1	10-Oct-2020 15:37
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	10-Oct-2020 15:37
Sulfate	**1,290**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 04:16
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,970**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,010**		**5.00**	**10.0**	**mg/L**	1	15-Oct-2020 18:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.50**	H	**0.100**	**0.100**	**pH Units**	1	21-Oct-2020 12:22
Temp Deg C @pH	**21.9**	H	**0**	**0**	**°C**	1	21-Oct-2020 12:22
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-5S
Collection Date: 12-Oct-2020 09:41

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-06
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:11
Arsenic	**0.000453**	J	**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 18:11
Barium	**0.00787**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:11
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:11
Boron	**2.57**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:54
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:11
Calcium	**19.6**		**0.0340**	**0.500**	**mg/L**	1	23-Oct-2020 18:11
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:11
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:11
Iron	U		0.0120	0.200	mg/L	1	23-Oct-2020 18:11
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:11
Lithium	**0.0546**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:11
Magnesium	**4.38**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:11
Molybdenum	**0.00244**	J	**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:11
Potassium	**3.94**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:11
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:11
Sodium	**335**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 11:54
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:11
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Oct-2020 18:07
Molybdenum	**0.00244**	J	**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:07
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:45
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**25.6**		**0.200**	**0.500**	**mg/L**	1	13-Oct-2020 16:41
Fluoride	**1.51**		**0.0500**	**0.100**	**mg/L**	1	13-Oct-2020 16:41
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Oct-2020 16:41
Sulfate	**485**		**2.00**	**5.00**	**mg/L**	10	14-Oct-2020 21:14
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**1,960**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**1,080**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-5S
Collection Date: 12-Oct-2020 09:41

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-06
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**424**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 00:56
Alkalinity, Carbonate (As CaCO3)	**20.5**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 00:56
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 00:56
Alkalinity, Total (As CaCO3)	**444**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 00:56
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: KVL
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Oct-2020 09:30
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	19-Oct-2020 17:30
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**8.21**	H	**0.100**	**0.100**	**pH Units**	1	23-Oct-2020 11:37
Temp Deg C @pH	**22.8**	H	**0**	**0**	**°C**	1	23-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-19S
Collection Date: 12-Oct-2020 13:45

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:13
Arsenic	**0.00588**		**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 18:13
Barium	**0.0162**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:13
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:13
Boron	**6.88**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:55
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:13
Calcium	**40.7**		**0.0340**	**0.500**	**mg/L**	1	23-Oct-2020 18:13
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:13
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:13
Iron	U		0.0120	0.200	mg/L	1	23-Oct-2020 18:13
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:13
Lithium	**0.00102**	J	**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:13
Magnesium	**0.0346**	J	**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:13
Molybdenum	**0.367**		**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:13
Potassium	**33.7**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:13
Selenium	**0.0113**		**0.00110**	**0.00200**	**mg/L**	1	23-Oct-2020 18:13
Sodium	**610**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 11:55
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:13
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Oct-2020 18:09
Molybdenum	**0.370**		**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:09
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:47
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**14.1**		**1.00**	**2.50**	**mg/L**	5	13-Oct-2020 16:23
Fluoride	**1.38**		**0.250**	**0.500**	**mg/L**	5	13-Oct-2020 16:23
Nitrogen, Nitrate (As N)	U		0.150	0.500	mg/L	5	13-Oct-2020 16:23
Sulfate	**1,640**		**10.0**	**25.0**	**mg/L**	50	14-Oct-2020 21:32
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**19.0**		**5.00**	**15.0**	**mg/L**	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**3,860**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,340**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-19S
Collection Date: 12-Oct-2020 13:45

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-07
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:04
Alkalinity, Carbonate (As CaCO3)	**89.2**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:04
Alkalinity, Hydroxide (As CaCO3)	**42.6**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:04
Alkalinity, Total (As CaCO3)	**132**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:04
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: KVL
Ferrous Iron	**0.0310**	J	**0.0200**	**0.0500**	**mg/L**	1	14-Oct-2020 09:30
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	**1.80**		**1.00**	**1.00**	**mg/L**	1	19-Oct-2020 17:30
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**10.9**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.8**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-20
Collection Date: 12-Oct-2020 11:24

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-08
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:15
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:15
Barium	**0.00927**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:15
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:15
Boron	**0.857**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:57
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:15
Calcium	**312**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 11:57
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:15
Cobalt	**0.000318**	J	**0.000200**	**0.00500**	**mg/L**	1	23-Oct-2020 18:15
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:15
Lithium	**0.0891**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:15
Molybdenum	**0.000677**	J	**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:15
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:15
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:15
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:48
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**5.69**		**0.200**	**0.500**	**mg/L**	1	13-Oct-2020 18:29
Fluoride	**0.336**		**0.0500**	**0.100**	**mg/L**	1	13-Oct-2020 18:29
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	13-Oct-2020 18:29
Sulfate	**989**		**2.00**	**5.00**	**mg/L**	10	14-Oct-2020 21:50
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**6.00**	J	**5.00**	**15.0**	**mg/L**	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,230**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 11:25
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**1,710**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**6.73**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.8**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-21
Collection Date: 12-Oct-2020 12:29

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-09
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:17
Arsenic	**0.000536**	J	**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 18:17
Barium	**0.0107**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:17
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:17
Boron	**2.77**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 11:59
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:17
Calcium	**141**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 11:59
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:17
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:17
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:17
Lithium	**0.123**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:17
Molybdenum	**0.00103**	J	**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:17
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:17
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:17
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:50
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**22.8**		**1.00**	**2.50**	**mg/L**	5	13-Oct-2020 18:11
Fluoride	**0.470**	J	**0.250**	**0.500**	**mg/L**	5	13-Oct-2020 18:11
Nitrogen, Nitrate (As N)	U		0.150	0.500	mg/L	5	13-Oct-2020 18:11
Sulfate	**1,780**		**10.0**	**25.0**	**mg/L**	50	14-Oct-2020 22:08
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**3,940**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 10:20
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,660**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.64**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.6**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-17
Collection Date: 12-Oct-2020 16:48

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-10
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:27
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:27
Barium	U		0.00190	0.00400	mg/L	1	23-Oct-2020 18:27
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:27
Boron	**0.640**		**0.0550**	**0.100**	**mg/L**	5	26-Oct-2020 12:01
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:27
Calcium	**453**		**0.170**	**2.50**	**mg/L**	5	26-Oct-2020 12:01
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:27
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:27
Iron	U		0.0120	0.200	mg/L	1	23-Oct-2020 18:27
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:27
Lithium	**0.123**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:27
Magnesium	**30.9**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:27
Molybdenum	U		0.000600	0.00500	mg/L	1	23-Oct-2020 18:27
Potassium	**4.42**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:27
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:27
Sodium	**29.2**		**0.0140**	**0.200**	**mg/L**	1	23-Oct-2020 18:27
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:27
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Oct-2020 18:11
Molybdenum	U		0.000600	0.00500	mg/L	1	22-Oct-2020 18:11
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:52
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**4.04**		**0.400**	**1.00**	**mg/L**	2	14-Oct-2020 14:19
Fluoride	**0.366**		**0.100**	**0.200**	**mg/L**	2	14-Oct-2020 14:19
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	14-Oct-2020 14:19
Sulfate	**1,220**	H	**10.0**	**25.0**	**mg/L**	50	04-Dec-2020 00:49
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	15-Oct-2020 17:00
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,610**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 10:20
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**2,160**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-17
Collection Date: 12-Oct-2020 16:48

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-10
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**273**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:11
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:11
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:11
Alkalinity, Total (As CaCO3)	**273**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:11
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: KVL
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Oct-2020 09:30
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	19-Oct-2020 17:30
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.51**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.5**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-18
Collection Date: 12-Oct-2020 14:44

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-11
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:29
Arsenic	**0.00276**		**0.000400**	**0.00200**	**mg/L**	1	23-Oct-2020 18:29
Barium	**0.00288**	J	**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:29
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:29
Boron	**5.43**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 12:03
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:29
Calcium	**20.0**		**0.0340**	**0.500**	**mg/L**	1	23-Oct-2020 18:29
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:29
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:29
Iron	U		0.0120	0.200	mg/L	1	23-Oct-2020 18:29
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:29
Lithium	**0.00276**	J	**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:29
Magnesium	**0.270**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:29
Molybdenum	**0.180**		**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:29
Potassium	**14.6**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:29
Selenium	**0.00347**		**0.00110**	**0.00200**	**mg/L**	1	23-Oct-2020 18:29
Sodium	**348**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 12:03
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:29
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	U		0.0120	0.200	mg/L	1	22-Oct-2020 18:13
Molybdenum	**0.166**		**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:13
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:54
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**4.22**		**0.200**	**0.500**	**mg/L**	1	14-Oct-2020 13:07
Fluoride	**1.66**		**0.0500**	**0.100**	**mg/L**	1	14-Oct-2020 13:07
Nitrogen, Nitrate (As N)	U		0.0300	0.100	mg/L	1	14-Oct-2020 13:07
Sulfate	**794**		**4.00**	**10.0**	**mg/L**	20	17-Oct-2020 02:19
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	**5.00**	J	**5.00**	**15.0**	**mg/L**	1	21-Oct-2020 09:30
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,200**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 10:20
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**1,270**		**5.00**	**10.0**	**mg/L**	1	19-Oct-2020 16:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-18
Collection Date: 12-Oct-2020 14:44

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-11
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:19
Alkalinity, Carbonate (As CaCO3)	**64.3**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:19
Alkalinity, Hydroxide (As CaCO3)	**5.63**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:19
Alkalinity, Total (As CaCO3)	**69.9**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:19
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: KVL
Ferrous Iron	U		0.0200	0.0500	mg/L	1	14-Oct-2020 09:30
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	U		1.00	1.00	mg/L	1	19-Oct-2020 17:30
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**10.2**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.7**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-13
Collection Date: 14-Oct-2020 09:41

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-12
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:33
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:33
Barium	**0.0107**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:33
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:33
Boron	**1.48**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 12:05
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:33
Calcium	**242**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 12:05
Chromium	U		0.000400	0.00400	mg/L	1	23-Oct-2020 18:33
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:33
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:33
Lithium	**0.146**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:33
Molybdenum	**0.000865**	J	**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:33
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:33
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:33
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:55
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**13.9**		**0.400**	**1.00**	**mg/L**	2	15-Oct-2020 22:22
Fluoride	**0.257**		**0.100**	**0.200**	**mg/L**	2	15-Oct-2020 22:22
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	15-Oct-2020 22:22
Sulfate	**1,480**		**10.0**	**25.0**	**mg/L**	50	23-Oct-2020 04:34
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	21-Oct-2020 09:30
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**3,280**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 10:20
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: JAC
Total Dissolved Solids (Residue, Filterable)	**2,360**		**5.00**	**10.0**	**mg/L**	1	21-Oct-2020 13:45
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.55**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**22.0**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-16
Collection Date: 13-Oct-2020 16:22

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-13
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		**Method:SW6020**			Prep:SW3010A / 23-Oct-2020		Analyst: JHD
Antimony	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:35
Arsenic	U		0.000400	0.00200	mg/L	1	23-Oct-2020 18:35
Barium	**0.0156**		**0.00190**	**0.00400**	**mg/L**	1	23-Oct-2020 18:35
Beryllium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:35
Boron	**1.78**		**0.110**	**0.200**	**mg/L**	10	26-Oct-2020 12:07
Cadmium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:35
Calcium	**166**		**0.340**	**5.00**	**mg/L**	10	26-Oct-2020 12:07
Chromium	**0.000416**	J	**0.000400**	**0.00400**	**mg/L**	1	23-Oct-2020 18:35
Cobalt	U		0.000200	0.00500	mg/L	1	23-Oct-2020 18:35
Iron	**0.125**	J	**0.0120**	**0.200**	**mg/L**	1	23-Oct-2020 18:35
Lead	U		0.000600	0.00200	mg/L	1	23-Oct-2020 18:35
Lithium	**0.0477**		**0.00100**	**0.00500**	**mg/L**	1	23-Oct-2020 18:35
Magnesium	**7.59**		**0.0100**	**0.200**	**mg/L**	1	23-Oct-2020 18:35
Molybdenum	**0.149**		**0.000600**	**0.00500**	**mg/L**	1	23-Oct-2020 18:35
Potassium	**3.09**		**0.0180**	**0.200**	**mg/L**	1	23-Oct-2020 18:35
Selenium	U		0.00110	0.00200	mg/L	1	23-Oct-2020 18:35
Sodium	**316**		**0.140**	**2.00**	**mg/L**	10	26-Oct-2020 12:07
Thallium	U		0.000200	0.00200	mg/L	1	23-Oct-2020 18:35
DISSOLVED METALS BY SW6020A		**Method:SW6020 (dissolved)**			Prep:SW3010A / 21-Oct-2020		Analyst: JHD
Iron	**0.0694**	J	**0.0120**	**0.200**	**mg/L**	1	22-Oct-2020 18:15
Molybdenum	**0.160**		**0.000600**	**0.00500**	**mg/L**	1	22-Oct-2020 18:15
MERCURY BY SW7470A		**Method:SW7470**			Prep:SW7470 / 20-Oct-2020		Analyst: JC
Mercury	U		0.0000300	0.000200	mg/L	1	21-Oct-2020 15:57
ANIONS BY E300.0		**Method:E300**					Analyst: YP
Chloride	**14.8**		**0.400**	**1.00**	**mg/L**	2	15-Oct-2020 14:33
Fluoride	**0.893**		**0.100**	**0.200**	**mg/L**	2	15-Oct-2020 14:33
Nitrogen, Nitrate (As N)	U		0.0600	0.200	mg/L	2	15-Oct-2020 14:33
Sulfate	**929**		**4.00**	**10.0**	**mg/L**	20	17-Oct-2020 06:14
CHEMICAL OXYGEN DEMAND BY E410.4		**Method:E410.4**					Analyst: TH
Chemical Oxygen Demand	U		5.00	15.0	mg/L	1	21-Oct-2020 09:30
SPECIFIC CONDUCTIVITY BY SM2510 B		**Method:M2510 B**					Analyst: MZD
Specific Conductivity	**2,400**		**5.00**	**5.00**	**umhos/cm @ 25.0 °C**	1	22-Oct-2020 10:20
TOTAL DISSOLVED SOLIDS BY SM2540C		**Method:M2540C**					Analyst: KAH
Total Dissolved Solids (Residue, Filterable)	**1,610**		**5.00**	**10.0**	**mg/L**	1	20-Oct-2020 16:00

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Sample ID: MW-16
Collection Date: 13-Oct-2020 16:22

ANALYTICAL REPORT
WorkOrder:HS20100471
Lab ID:HS20100471-13
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ALKALINITY BY SM2320B		**Method:SM2320B**					Analyst: TH
Alkalinity, Bicarbonate (As CaCO3)	**233**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:43
Alkalinity, Carbonate (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:43
Alkalinity, Hydroxide (As CaCO3)	U		5.00	5.00	mg/L	1	16-Oct-2020 01:43
Alkalinity, Total (As CaCO3)	**233**		**5.00**	**5.00**	**mg/L**	1	16-Oct-2020 01:43
FERROUS IRON BY SM3500 FE B		**Method:SM3500FED**					Analyst: KVL
Ferrous Iron	**0.0240**	J	**0.0200**	**0.0500**	**mg/L**	1	15-Oct-2020 16:00
SULFIDE BY SM4500 S2-F		**Method:SM4500 S2-F**					Analyst: KVL
Sulfide	**1.40**		**1.00**	**1.00**	**mg/L**	1	20-Oct-2020 15:30
PH BY SM4500H+ B		**Method:SM4500H+ B**					Analyst: JAC
pH	**7.63**	H	**0.100**	**0.100**	**pH Units**	1	22-Oct-2020 11:37
Temp Deg C @pH	**21.8**	H	**0**	**0**	**°C**	1	22-Oct-2020 11:37
SUBCONTRACT ANALYSIS - RADIUM 226		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28
SUBCONTRACT ANALYSIS - RADIUM 228		**Method:NA**					Analyst: SUBFC
Subcontract Analysis	See Attached		0		NA	1	02-Nov-2020 09:28

Note: See Qualifiers Page for a list of qualifiers and their explanation. **Revision:** 1

Weight / Prep Log

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

Batch ID: 158665 **Start Date:** 21 Oct 2020 08:00 **End Date:** 21 Oct 2020 12:00
Method: DISS METALS PREP - WATER - SW3010A **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100471-01		10 (mL)	10 (mL)	1
HS20100471-03		10 (mL)	10 (mL)	1
HS20100471-04		10 (mL)	10 (mL)	1
HS20100471-06		10 (mL)	10 (mL)	1
HS20100471-07		10 (mL)	10 (mL)	1
HS20100471-10		10 (mL)	10 (mL)	1
HS20100471-11		10 (mL)	10 (mL)	1
HS20100471-13		10 (mL)	10 (mL)	1

Batch ID: 158687 **Start Date:** 21 Oct 2020 10:00 **End Date:** 21 Oct 2020 12:00
Method: MERCURY PREP BY 7470A- WATER **Prep Code:** HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100471-01		10 (mL)	10 (mL)	1
HS20100471-02		10 (mL)	10 (mL)	1
HS20100471-03		10 (mL)	10 (mL)	1
HS20100471-04		10 (mL)	10 (mL)	1
HS20100471-05		10 (mL)	10 (mL)	1
HS20100471-06		10 (mL)	10 (mL)	1
HS20100471-07		10 (mL)	10 (mL)	1
HS20100471-08		10 (mL)	10 (mL)	1
HS20100471-09		10 (mL)	10 (mL)	1
HS20100471-10		10 (mL)	10 (mL)	1
HS20100471-11		10 (mL)	10 (mL)	1
HS20100471-12		10 (mL)	10 (mL)	1
HS20100471-13		10 (mL)	10 (mL)	1

Batch ID: 158797 **Start Date:** 23 Oct 2020 08:00 **End Date:** 23 Oct 2020 12:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor
HS20100471-01		10 (mL)	10 (mL)	1
HS20100471-02		10 (mL)	10 (mL)	1
HS20100471-03		10 (mL)	10 (mL)	1
HS20100471-04		10 (mL)	10 (mL)	1
HS20100471-05		10 (mL)	10 (mL)	1
HS20100471-06		10 (mL)	10 (mL)	1
HS20100471-07		10 (mL)	10 (mL)	1
HS20100471-08		10 (mL)	10 (mL)	1
HS20100471-09		10 (mL)	10 (mL)	1
HS20100471-10		10 (mL)	10 (mL)	1
HS20100471-11		10 (mL)	10 (mL)	1
HS20100471-12		10 (mL)	10 (mL)	1
HS20100471-13		10 (mL)	10 (mL)	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 158665 (0)	**Test Name :** DISSOLVED METALS BY SW6020A				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08		21 Oct 2020 12:00	22 Oct 2020 18:01	1
HS20100471-03	MW-7S	09 Oct 2020 11:38		21 Oct 2020 12:00	22 Oct 2020 18:03	1
HS20100471-04	MW-14A	08 Oct 2020 15:16		21 Oct 2020 12:00	22 Oct 2020 18:05	1
HS20100471-06	MW-5S	12 Oct 2020 09:41		21 Oct 2020 12:00	22 Oct 2020 18:07	1
HS20100471-07	MW-19S	12 Oct 2020 13:45		21 Oct 2020 12:00	22 Oct 2020 18:09	1
HS20100471-10	MW-17	12 Oct 2020 16:48		21 Oct 2020 12:00	22 Oct 2020 18:11	1
HS20100471-11	MW-18	12 Oct 2020 14:44		21 Oct 2020 12:00	22 Oct 2020 18:13	1
HS20100471-13	MW-16	13 Oct 2020 16:22		21 Oct 2020 12:00	22 Oct 2020 18:15	1
Batch ID: 158687 (0)	**Test Name :** MERCURY BY SW7470A				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08		20 Oct 2020 18:30	21 Oct 2020 15:21	1
HS20100471-02	MW-3	08 Oct 2020 16:39		20 Oct 2020 18:30	21 Oct 2020 15:27	1
HS20100471-03	MW-7S	09 Oct 2020 11:38		20 Oct 2020 18:30	21 Oct 2020 15:28	1
HS20100471-04	MW-14A	08 Oct 2020 15:16		20 Oct 2020 18:30	21 Oct 2020 15:30	1
HS20100471-05	DUP 3	08 Oct 2020 16:39		20 Oct 2020 18:30	21 Oct 2020 15:43	1
HS20100471-06	MW-5S	12 Oct 2020 09:41		20 Oct 2020 18:30	21 Oct 2020 15:45	1
HS20100471-07	MW-19S	12 Oct 2020 13:45		20 Oct 2020 18:30	21 Oct 2020 15:47	1
HS20100471-08	MW-20	12 Oct 2020 11:24		20 Oct 2020 18:30	21 Oct 2020 15:48	1
HS20100471-09	MW-21	12 Oct 2020 12:29		20 Oct 2020 18:30	21 Oct 2020 15:50	1
HS20100471-10	MW-17	12 Oct 2020 16:48		20 Oct 2020 18:30	21 Oct 2020 15:52	1
HS20100471-11	MW-18	12 Oct 2020 14:44		20 Oct 2020 18:30	21 Oct 2020 15:54	1
HS20100471-12	MW-13	14 Oct 2020 09:41		20 Oct 2020 18:30	21 Oct 2020 15:55	1
HS20100471-13	MW-16	13 Oct 2020 16:22		20 Oct 2020 18:30	21 Oct 2020 15:57	1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 158797 (0)	**Test Name :** ICP-MS METALS BY SW6020A				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08		23 Oct 2020 12:00	26 Oct 2020 11:30	20
HS20100471-01	MW-15A	08 Oct 2020 11:08		23 Oct 2020 12:00	23 Oct 2020 17:02	1
HS20100471-02	MW-3	08 Oct 2020 16:39		23 Oct 2020 12:00	26 Oct 2020 11:35	10
HS20100471-02	MW-3	08 Oct 2020 16:39		23 Oct 2020 12:00	23 Oct 2020 17:14	1
HS20100471-03	MW-7S	09 Oct 2020 11:38		23 Oct 2020 12:00	26 Oct 2020 11:37	10
HS20100471-03	MW-7S	09 Oct 2020 11:38		23 Oct 2020 12:00	23 Oct 2020 18:05	1
HS20100471-04	MW-14A	08 Oct 2020 15:16		23 Oct 2020 12:00	26 Oct 2020 11:39	10
HS20100471-04	MW-14A	08 Oct 2020 15:16		23 Oct 2020 12:00	23 Oct 2020 18:07	1
HS20100471-05	DUP 3	08 Oct 2020 16:39		23 Oct 2020 12:00	26 Oct 2020 11:41	10
HS20100471-05	DUP 3	08 Oct 2020 16:39		23 Oct 2020 12:00	23 Oct 2020 18:09	1
HS20100471-06	MW-5S	12 Oct 2020 09:41		23 Oct 2020 12:00	26 Oct 2020 11:54	10
HS20100471-06	MW-5S	12 Oct 2020 09:41		23 Oct 2020 12:00	23 Oct 2020 18:11	1
HS20100471-07	MW-19S	12 Oct 2020 13:45		23 Oct 2020 12:00	26 Oct 2020 11:55	10
HS20100471-07	MW-19S	12 Oct 2020 13:45		23 Oct 2020 12:00	23 Oct 2020 18:13	1
HS20100471-08	MW-20	12 Oct 2020 11:24		23 Oct 2020 12:00	26 Oct 2020 11:57	10
HS20100471-08	MW-20	12 Oct 2020 11:24		23 Oct 2020 12:00	23 Oct 2020 18:15	1
HS20100471-09	MW-21	12 Oct 2020 12:29		23 Oct 2020 12:00	26 Oct 2020 11:59	10
HS20100471-09	MW-21	12 Oct 2020 12:29		23 Oct 2020 12:00	23 Oct 2020 18:17	1
HS20100471-10	MW-17	12 Oct 2020 16:48		23 Oct 2020 12:00	26 Oct 2020 12:01	5
HS20100471-10	MW-17	12 Oct 2020 16:48		23 Oct 2020 12:00	23 Oct 2020 18:27	1
HS20100471-11	MW-18	12 Oct 2020 14:44		23 Oct 2020 12:00	26 Oct 2020 12:03	10
HS20100471-11	MW-18	12 Oct 2020 14:44		23 Oct 2020 12:00	23 Oct 2020 18:29	1
HS20100471-12	MW-13	14 Oct 2020 09:41		23 Oct 2020 12:00	26 Oct 2020 12:05	10
HS20100471-12	MW-13	14 Oct 2020 09:41		23 Oct 2020 12:00	23 Oct 2020 18:33	1
HS20100471-13	MW-16	13 Oct 2020 16:22		23 Oct 2020 12:00	26 Oct 2020 12:07	10
HS20100471-13	MW-16	13 Oct 2020 16:22		23 Oct 2020 12:00	23 Oct 2020 18:35	1
Batch ID: R370237 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS20100471-03	MW-7S	09 Oct 2020 11:38			10 Oct 2020 11:48	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			10 Oct 2020 11:48	1
Batch ID: R370335 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			09 Oct 2020 11:37	1
Batch ID: R370366 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-02	MW-3	08 Oct 2020 16:39			10 Oct 2020 15:01	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			10 Oct 2020 16:13	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			10 Oct 2020 14:43	5
HS20100471-05	DUP 3	08 Oct 2020 16:39			10 Oct 2020 15:37	1

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370430 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			13 Oct 2020 16:41	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			13 Oct 2020 16:23	5
Batch ID: R370437 (0)	**Test Name :** ALKALINITY BY SM2320B				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			13 Oct 2020 21:19	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			13 Oct 2020 21:27	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			13 Oct 2020 21:34	1
Batch ID: R370513 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			14 Oct 2020 09:30	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			14 Oct 2020 09:30	1
HS20100471-10	MW-17	12 Oct 2020 16:48			14 Oct 2020 09:30	1
HS20100471-11	MW-18	12 Oct 2020 14:44			14 Oct 2020 09:30	1
Batch ID: R370583 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-10	MW-17	12 Oct 2020 16:48			14 Oct 2020 14:19	2
HS20100471-11	MW-18	12 Oct 2020 14:44			14 Oct 2020 13:07	1
Batch ID: R370585 (0)	**Test Name :** SULFIDE BY SM4500 S2-F				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			15 Oct 2020 14:00	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			15 Oct 2020 14:00	1
Batch ID: R370608 (0)	**Test Name :** FERROUS IRON BY SM3500 FE B				**Matrix:** Water	
HS20100471-13	MW-16	13 Oct 2020 16:22			15 Oct 2020 16:00	1
Batch ID: R370610 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			15 Oct 2020 17:00	1
HS20100471-02	MW-3	08 Oct 2020 16:39			15 Oct 2020 17:00	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			15 Oct 2020 17:00	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			15 Oct 2020 17:00	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			15 Oct 2020 17:00	1
HS20100471-06	MW-5S	12 Oct 2020 09:41			15 Oct 2020 17:00	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			15 Oct 2020 17:00	1
HS20100471-08	MW-20	12 Oct 2020 11:24			15 Oct 2020 17:00	1
HS20100471-09	MW-21	12 Oct 2020 12:29			15 Oct 2020 17:00	1
HS20100471-10	MW-17	12 Oct 2020 16:48			15 Oct 2020 17:00	1
Batch ID: R370623 (0)	**Test Name :** ALKALINITY BY SM2320B				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			16 Oct 2020 00:56	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			16 Oct 2020 01:04	1
HS20100471-10	MW-17	12 Oct 2020 16:48			16 Oct 2020 01:11	1
HS20100471-11	MW-18	12 Oct 2020 14:44			16 Oct 2020 01:19	1
HS20100471-13	MW-16	13 Oct 2020 16:22			16 Oct 2020 01:43	1

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370705 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			15 Oct 2020 18:00	1
HS20100471-02	MW-3	08 Oct 2020 16:39			15 Oct 2020 18:00	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			15 Oct 2020 18:00	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			15 Oct 2020 18:00	1
Batch ID: R370722 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-12	MW-13	14 Oct 2020 09:41			15 Oct 2020 22:22	2
HS20100471-13	MW-16	13 Oct 2020 16:22			15 Oct 2020 14:33	2
Batch ID: R370795 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C				**Matrix:** Water	
HS20100471-03	MW-7S	09 Oct 2020 11:38			16 Oct 2020 08:00	1
Batch ID: R370815 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			10 Oct 2020 10:59	5
Batch ID: R370835 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-11	MW-18	12 Oct 2020 14:44			17 Oct 2020 02:19	20
HS20100471-13	MW-16	13 Oct 2020 16:22			17 Oct 2020 06:14	20
Batch ID: R370851 (0)	**Test Name :** SULFIDE BY SM4500 S2-F				**Matrix:** Water	
HS20100471-03	MW-7S	09 Oct 2020 11:38			16 Oct 2020 17:20	1
Batch ID: R370853 (0)	**Test Name :** SULFIDE BY SM4500 S2-F				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			19 Oct 2020 17:30	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			19 Oct 2020 17:30	1
HS20100471-10	MW-17	12 Oct 2020 16:48			19 Oct 2020 17:30	1
HS20100471-11	MW-18	12 Oct 2020 14:44			19 Oct 2020 17:30	1
Batch ID: R370895 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			19 Oct 2020 16:00	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			19 Oct 2020 16:00	1
HS20100471-08	MW-20	12 Oct 2020 11:24			19 Oct 2020 16:00	1
HS20100471-09	MW-21	12 Oct 2020 12:29			19 Oct 2020 16:00	1
HS20100471-10	MW-17	12 Oct 2020 16:48			19 Oct 2020 16:00	1
HS20100471-11	MW-18	12 Oct 2020 14:44			19 Oct 2020 16:00	1
Batch ID: R370941 (0)	**Test Name :** CHEMICAL OXYGEN DEMAND BY E410.4				**Matrix:** Water	
HS20100471-11	MW-18	12 Oct 2020 14:44			21 Oct 2020 09:30	1
HS20100471-12	MW-13	14 Oct 2020 09:41			21 Oct 2020 09:30	1
HS20100471-13	MW-16	13 Oct 2020 16:22			21 Oct 2020 09:30	1

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R370952 (0)	**Test Name :** PH BY SM4500H+ B				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			21 Oct 2020 12:22	1
HS20100471-02	MW-3	08 Oct 2020 16:39			21 Oct 2020 12:22	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			21 Oct 2020 12:22	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			21 Oct 2020 12:22	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			21 Oct 2020 12:22	1
Batch ID: R370983 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C				**Matrix:** Water	
HS20100471-13	MW-16	13 Oct 2020 16:22			20 Oct 2020 16:00	1
Batch ID: R371039 (0)	**Test Name :** PH BY SM4500H+ B				**Matrix:** Water	
HS20100471-07	MW-19S	12 Oct 2020 13:45			22 Oct 2020 11:37	1
HS20100471-08	MW-20	12 Oct 2020 11:24			22 Oct 2020 11:37	1
HS20100471-09	MW-21	12 Oct 2020 12:29			22 Oct 2020 11:37	1
HS20100471-10	MW-17	12 Oct 2020 16:48			22 Oct 2020 11:37	1
HS20100471-11	MW-18	12 Oct 2020 14:44			22 Oct 2020 11:37	1
HS20100471-12	MW-13	14 Oct 2020 09:41			22 Oct 2020 11:37	1
HS20100471-13	MW-16	13 Oct 2020 16:22			22 Oct 2020 11:37	1
Batch ID: R371044 (0)	**Test Name :** SPECIFIC CONDUCTIVITY BY SM2510 B				**Matrix:** Water	
HS20100471-09	MW-21	12 Oct 2020 12:29			22 Oct 2020 10:20	1
HS20100471-10	MW-17	12 Oct 2020 16:48			22 Oct 2020 10:20	1
HS20100471-11	MW-18	12 Oct 2020 14:44			22 Oct 2020 10:20	1
HS20100471-12	MW-13	14 Oct 2020 09:41			22 Oct 2020 10:20	1
HS20100471-13	MW-16	13 Oct 2020 16:22			22 Oct 2020 10:20	1
Batch ID: R371049 (0)	**Test Name :** SPECIFIC CONDUCTIVITY BY SM2510 B				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			22 Oct 2020 11:25	1
HS20100471-02	MW-3	08 Oct 2020 16:39			22 Oct 2020 11:25	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			22 Oct 2020 11:25	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			22 Oct 2020 11:25	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			22 Oct 2020 11:25	1
HS20100471-06	MW-5S	12 Oct 2020 09:41			22 Oct 2020 11:25	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			22 Oct 2020 11:25	1
HS20100471-08	MW-20	12 Oct 2020 11:24			22 Oct 2020 11:25	1
Batch ID: R371065 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C				**Matrix:** Water	
HS20100471-12	MW-13	14 Oct 2020 09:41			21 Oct 2020 13:45	1

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371109 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			14 Oct 2020 21:14	10
HS20100471-07	MW-19S	12 Oct 2020 13:45			14 Oct 2020 21:32	50
HS20100471-08	MW-20	12 Oct 2020 11:24			14 Oct 2020 21:50	10
HS20100471-08	MW-20	12 Oct 2020 11:24			13 Oct 2020 18:29	1
HS20100471-09	MW-21	12 Oct 2020 12:29			14 Oct 2020 22:08	50
HS20100471-09	MW-21	12 Oct 2020 12:29			13 Oct 2020 18:11	5
Batch ID: R371111 (0)	**Test Name :** SULFIDE BY SM4500 S2-F				**Matrix:** Water	
HS20100471-13	MW-16	13 Oct 2020 16:22			20 Oct 2020 15:30	1
Batch ID: R371146 (0)	**Test Name :** PH BY SM4500H+ B				**Matrix:** Water	
HS20100471-06	MW-5S	12 Oct 2020 09:41			23 Oct 2020 11:37	1
Batch ID: R371182 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			23 Oct 2020 02:27	50
HS20100471-02	MW-3	08 Oct 2020 16:39			23 Oct 2020 03:21	50
HS20100471-03	MW-7S	09 Oct 2020 11:38			23 Oct 2020 03:39	50
HS20100471-04	MW-14A	08 Oct 2020 15:16			23 Oct 2020 03:57	50
HS20100471-05	DUP 3	08 Oct 2020 16:39			23 Oct 2020 04:16	50
Batch ID: R371185 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-12	MW-13	14 Oct 2020 09:41			23 Oct 2020 04:34	50

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R371730 (0)	**Test Name :** SUBCONTRACT ANALYSIS - RADIUM 228				**Matrix:** Water	
HS20100471-01	MW-15A	08 Oct 2020 11:08			02 Nov 2020 09:28	1
HS20100471-01	MW-15A	08 Oct 2020 11:08			02 Nov 2020 09:28	1
HS20100471-02	MW-3	08 Oct 2020 16:39			02 Nov 2020 09:28	1
HS20100471-02	MW-3	08 Oct 2020 16:39			02 Nov 2020 09:28	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			02 Nov 2020 09:28	1
HS20100471-03	MW-7S	09 Oct 2020 11:38			02 Nov 2020 09:28	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			02 Nov 2020 09:28	1
HS20100471-04	MW-14A	08 Oct 2020 15:16			02 Nov 2020 09:28	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			02 Nov 2020 09:28	1
HS20100471-05	DUP 3	08 Oct 2020 16:39			02 Nov 2020 09:28	1
HS20100471-06	MW-5S	12 Oct 2020 09:41			02 Nov 2020 09:28	1
HS20100471-06	MW-5S	12 Oct 2020 09:41			02 Nov 2020 09:28	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			02 Nov 2020 09:28	1
HS20100471-07	MW-19S	12 Oct 2020 13:45			02 Nov 2020 09:28	1
HS20100471-08	MW-20	12 Oct 2020 11:24			02 Nov 2020 09:28	1
HS20100471-08	MW-20	12 Oct 2020 11:24			02 Nov 2020 09:28	1
HS20100471-09	MW-21	12 Oct 2020 12:29			02 Nov 2020 09:28	1
HS20100471-09	MW-21	12 Oct 2020 12:29			02 Nov 2020 09:28	1
HS20100471-10	MW-17	12 Oct 2020 16:48			02 Nov 2020 09:28	1
HS20100471-10	MW-17	12 Oct 2020 16:48			02 Nov 2020 09:28	1
HS20100471-11	MW-18	12 Oct 2020 14:44			02 Nov 2020 09:28	1
HS20100471-11	MW-18	12 Oct 2020 14:44			02 Nov 2020 09:28	1
HS20100471-12	MW-13	14 Oct 2020 09:41			02 Nov 2020 09:28	1
HS20100471-12	MW-13	14 Oct 2020 09:41			02 Nov 2020 09:28	1
HS20100471-13	MW-16	13 Oct 2020 16:22			02 Nov 2020 09:28	1
HS20100471-13	MW-16	13 Oct 2020 16:22			02 Nov 2020 09:28	1
Batch ID: R373969 (0)	**Test Name :** ANIONS BY E300.0				**Matrix:** Water	
HS20100471-10	MW-17	12 Oct 2020 16:48			04 Dec 2020 00:49	50

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158665 (0) **Instrument: ICPMS06** **Method: DISSOLVED METALS BY SW6020A (DISSOLVED)**

MBLK Sample ID: **MBLK-158665** Units: **mg/L** Analysis Date: **21-Oct-2020 15:09**
Client ID: Run ID: **ICPMS06_370962** SeqNo: **5792998** PrepDate: **21-Oct-2020** 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-158665** Units: **mg/L** Analysis Date: **21-Oct-2020 15:01**
Client ID: Run ID: **ICPMS06_370962** SeqNo: **5792997** PrepDate: **21-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.461	0.200	5	0	89.2	80 - 120				
Molybdenum	0.04537	0.00500	0.05	0	90.7	80 - 120				

MS Sample ID: **HS20100465-06MS** Units: **mg/L** Analysis Date: **21-Oct-2020 15:34**
Client ID: Run ID: **ICPMS06_370962** SeqNo: **5793005** PrepDate: **21-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.326	0.200	5	0.01192	86.3	75 - 125				
Molybdenum	0.0682	0.00500	0.05	0.02136	93.7	75 - 125				

MSD Sample ID: **HS20100465-06MSD** Units: **mg/L** Analysis Date: **21-Oct-2020 15:36**
Client ID: Run ID: **ICPMS06_370962** SeqNo: **5793006** PrepDate: **21-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	4.496	0.200	5	0.01192	89.7	75 - 125	4.326	3.86	20	
Molybdenum	0.06875	0.00500	0.05	0.02136	94.8	75 - 125	0.0682	0.8	20	

SD Sample ID: **HS20100465-06SD** Units: **mg/L** Analysis Date: **21-Oct-2020 15:32**
Client ID: Run ID: **ICPMS06_370962** SeqNo: **5793004** PrepDate: **21-Oct-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Iron	U	1.00					0.01192	0	10	
Molybdenum	0.02135	0.0250					0.02136	0	10	J

The following samples were analyzed in this batch:

HS20100471-01	HS20100471-03	HS20100471-04	HS20100471-06
HS20100471-07	HS20100471-10	HS20100471-11	HS20100471-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158687 (0) **Instrument: HG03** **Method: MERCURY BY SW7470A**

MBLK Sample ID: **MBLK-158687** Units: **mg/L** Analysis Date: **21-Oct-2020 15:18**
Client ID: Run ID: **HG03_370976** SeqNo: **5792918** PrepDate: **20-Oct-2020** 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-158687** Units: **mg/L** Analysis Date: **21-Oct-2020 15:20**
Client ID: Run ID: **HG03_370976** SeqNo: **5792919** PrepDate: **20-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.000200	0.005	0	99.0	80 - 120				

MS Sample ID: **HS20100471-01MS** Units: **mg/L** Analysis Date: **21-Oct-2020 15:23**
Client ID: **MW-15A** Run ID: **HG03_370976** SeqNo: **5792921** PrepDate: **20-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00481	0.000200	0.005	-0.000002	96.2	75 - 125				

MSD Sample ID: **HS20100471-01MSD** Units: **mg/L** Analysis Date: **21-Oct-2020 15:25**
Client ID: **MW-15A** Run ID: **HG03_370976** SeqNo: **5792922** PrepDate: **20-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0051	0.000200	0.005	-0.000002	102	75 - 125	0.00481	5.85	20	

The following samples were analyzed in this batch:

HS20100471-01	HS20100471-02	HS20100471-03	HS20100471-04
HS20100471-05	HS20100471-06	HS20100471-07	HS20100471-08
HS20100471-09	HS20100471-10	HS20100471-11	HS20100471-12
HS20100471-13			

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MBLK Sample ID: **MBLK-158797** Units: **mg/L** Analysis Date: **23-Oct-2020 16:58**
Client ID: Run ID: **ICPMS06_371147** SeqNo: **5797927** PrepDate: **23-Oct-2020** 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	0.01543	0.200								J
Molybdenum	U	0.00500								
Potassium	U	0.200								
Selenium	U	0.00200								
Sodium	0.07752	0.200								J
Thallium	U	0.00200								

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

LCS Sample ID: **LCS-158797** Units: **mg/L** Analysis Date: **23-Oct-2020 17:00**
Client ID: Run ID: **ICPMS06_371147** SeqNo: **5797928** PrepDate: **23-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04612	0.00200	0.05	0	92.2	80 - 120				
Arsenic	0.04398	0.00200	0.05	0	88.0	80 - 120				
Barium	0.0462	0.00400	0.05	0	92.4	80 - 120				
Beryllium	0.0441	0.00200	0.05	0	88.2	80 - 120				
Boron	0.4032	0.0200	0.5	0	80.6	80 - 120				
Cadmium	0.04731	0.00200	0.05	0	94.6	80 - 120				
Calcium	4.378	0.500	5	0	87.6	80 - 120				
Chromium	0.04644	0.00400	0.05	0	92.9	80 - 120				
Cobalt	0.04806	0.00500	0.05	0	96.1	80 - 120				
Iron	4.599	0.200	5	0	92.0	80 - 120				
Lead	0.04596	0.00200	0.05	0	91.9	80 - 120				
Lithium	0.09195	0.00500	0.1	0	91.9	80 - 120				
Magnesium	4.584	0.200	5	0	91.7	80 - 120				
Molybdenum	0.04519	0.00500	0.05	0	90.4	80 - 120				
Potassium	4.366	0.200	5	0	87.3	80 - 120				
Selenium	0.04606	0.00200	0.05	0	92.1	80 - 120				
Sodium	4.643	0.200	5	0	92.9	80 - 120				
Thallium	0.04594	0.00200	0.05	0	91.9	80 - 120				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MS Sample ID: **HS20100471-01MS** Units: **mg/L** Analysis Date: **23-Oct-2020 17:06**
Client ID: **MW-15A** Run ID: **ICPMS06_371147** SeqNo: **5797931** PrepDate: **23-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04792	0.00200	0.05	0	95.8	80 - 120				
Arsenic	0.04768	0.00200	0.05	0.000592	94.2	80 - 120				
Barium	0.06881	0.00400	0.05	0.01992	97.8	80 - 120				
Beryllium	0.04817	0.00200	0.05	0	96.3	80 - 120				
Boron	3.722	0.0200	0.5	3.017	141	80 - 120				SEO
Cadmium	0.04789	0.00200	0.05	0	95.8	80 - 120				
Calcium	95.56	0.500	5	89.81	115	80 - 120				O
Chromium	0.04816	0.00400	0.05	0	96.3	80 - 120				
Cobalt	0.0494	0.00500	0.05	0.000221	98.4	80 - 120				
Iron	4.728	0.200	5	0.04964	93.6	80 - 120				
Lead	0.04926	0.00200	0.05	0	98.5	80 - 120				
Lithium	0.1701	0.00500	0.1	0.0709	99.2	80 - 120				
Magnesium	15.88	0.200	5	11.03	97.0	80 - 120				
Molybdenum	0.2201	0.00500	0.05	0.1671	106	80 - 120				
Potassium	9.789	0.200	5	5.149	92.8	80 - 120				
Selenium	0.04823	0.00200	0.05	0	96.5	80 - 120				
Sodium	641.8	0.200	5	625.2	332	80 - 120				SEO
Thallium	0.05001	0.00200	0.05	0	100	80 - 120				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

MSD Sample ID: **HS20100471-01MSD** Units: **mg/L** Analysis Date: **23-Oct-2020 17:08**
Client ID: **MW-15A** Run ID: **ICPMS06_371147** SeqNo: **5797932** PrepDate: **23-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04918	0.00200	0.05	0	98.4	80 - 120	0.04792	2.58	20	
Arsenic	0.0482	0.00200	0.05	0.000592	95.2	80 - 120	0.04768	1.1	20	
Barium	0.06916	0.00400	0.05	0.01992	98.5	80 - 120	0.06881	0.519	20	
Beryllium	0.04862	0.00200	0.05	0	97.2	80 - 120	0.04817	0.926	20	
Boron	3.763	0.0200	0.5	3.017	149	80 - 120	3.722	1.09	20	SEO
Cadmium	0.04867	0.00200	0.05	0	97.3	80 - 120	0.04789	1.62	20	
Calcium	97.3	0.500	5	89.81	150	80 - 120	95.56	1.8	20	SO
Chromium	0.04883	0.00400	0.05	0	97.7	80 - 120	0.04816	1.39	20	
Cobalt	0.04949	0.00500	0.05	0.000221	98.5	80 - 120	0.0494	0.188	20	
Iron	4.803	0.200	5	0.04964	95.1	80 - 120	4.728	1.56	20	
Lead	0.04932	0.00200	0.05	0	98.6	80 - 120	0.04926	0.116	20	
Lithium	0.1717	0.00500	0.1	0.0709	101	80 - 120	0.1701	0.903	20	
Magnesium	15.79	0.200	5	11.03	95.2	80 - 120	15.88	0.55	20	
Molybdenum	0.2206	0.00500	0.05	0.1671	107	80 - 120	0.2201	0.214	20	
Potassium	10.08	0.200	5	5.149	98.5	80 - 120	9.789	2.88	20	
Selenium	0.04994	0.00200	0.05	0	99.9	80 - 120	0.04823	3.48	20	
Sodium	651.7	0.200	5	625.2	530	80 - 120	641.8	1.53	20	SEO
Thallium	0.04913	0.00200	0.05	0	98.3	80 - 120	0.05001	1.78	20	

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

PDS Sample ID: **HS20100471-01PDS** Units: **mg/L** Analysis Date: **23-Oct-2020 17:10**
Client ID: **MW-15A** Run ID: **ICPMS06_371147** SeqNo: **5797933** PrepDate: **23-Oct-2020** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1856	0.00200	0.2	0	92.8	75 - 125				
Arsenic	0.1858	0.00200	0.2	0.000592	92.6	75 - 125				
Barium	0.2016	0.00400	0.2	0.01992	90.8	75 - 125				
Beryllium	0.1783	0.00200	0.2	0	89.1	75 - 125				
Cadmium	0.1811	0.00200	0.2	0	90.6	75 - 125				
Calcium	107.6	0.500	20	89.81	89.0	75 - 125				O
Chromium	0.1839	0.00400	0.2	0	91.9	75 - 125				
Cobalt	0.1891	0.00500	0.2	0.000221	94.4	75 - 125				
Iron	18.31	0.200	20	0.04964	91.3	75 - 125				
Lead	0.1896	0.00200	0.2	0	94.8	75 - 125				
Magnesium	29.08	0.200	20	11.03	90.2	75 - 125				
Molybdenum	0.3456	0.00500	0.2	0.1671	89.2	75 - 125				
Potassium	23.24	0.200	20	5.149	90.4	75 - 125				
Selenium	0.1932	0.00200	0.2	0	96.6	75 - 125				

PDS Sample ID: **HS20100471-01PDS** Units: **mg/L** Analysis Date: **26-Oct-2020 11:33**
Client ID: **MW-15A** Run ID: **ICPMS06_371273** SeqNo: **5800432** PrepDate: **23-Oct-2020** DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	12.93	0.400	10	3.33	96.0	75 - 125				
Sodium	779.9	4.00	200	627.2	76.4	75 - 125				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: 158797 (0) **Instrument: ICPMS06** **Method: ICP-MS METALS BY SW6020A**

SD Sample ID: **HS20100471-01SD** Units: **mg/L** Analysis Date: **23-Oct-2020 17:04**
Client ID: **MW-15A** Run ID: **ICPMS06_371147** SeqNo: **5797930** PrepDate: **23-Oct-2020** DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	0.0100					0.000388	0	10	
Arsenic	U	0.0100					0.000592	0	10	
Barium	0.01986	0.0200					0.01992	0	10	J
Beryllium	U	0.0100					0.000008	0	10	
Cadmium	U	0.0100					0.000124	0	10	
Calcium	92.38	2.50					89.81	2.87	10	
Chromium	U	0.0200					0.000168	0	10	
Cobalt	U	0.0250					0.000221	0	10	
Iron	U	1.00					0.04964	0	10	
Lead	U	0.0100					-0.00006	0	10	
Lithium	0.06984	0.0250					0.0709	1.5	10	
Magnesium	10.98	1.00					11.03	0.519	10	
Molybdenum	0.1696	0.0250					0.1671	1.5	10	
Potassium	5.36	1.00					5.149	4.08	10	
Selenium	U	0.0100					0.000254	0	10	
Thallium	U	0.0100					0.00003	0	10	

SD Sample ID: **HS20100471-01SD** Units: **mg/L** Analysis Date: **26-Oct-2020 11:32**
Client ID: **MW-15A** Run ID: **ICPMS06_371273** SeqNo: **5800431** PrepDate: **23-Oct-2020** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Boron	3.464	2.00					3.33	4.01	10	
Sodium	637.3	20.0					627.2	1.61	10	

The following samples were analyzed in this batch:

HS20100471-01	HS20100471-02	HS20100471-03	HS20100471-04
HS20100471-05	HS20100471-06	HS20100471-07	HS20100471-08
HS20100471-09	HS20100471-10	HS20100471-11	HS20100471-12
HS20100471-13			

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370237 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-R370237** Units: **mg/L** Analysis Date: **10-Oct-2020 11:48**
Client ID: Run ID: **UV-2450_370237** SeqNo: **5774665** 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-R370237** Units: **mg/L** Analysis Date: **10-Oct-2020 11:48**
Client ID: Run ID: **UV-2450_370237** SeqNo: **5774664** 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: **HS20100284-07MS** Units: **mg/L** Analysis Date: **10-Oct-2020 11:48**
Client ID: Run ID: **UV-2450_370237** SeqNo: **5774667** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.235	0.0500	0.25	0.003	92.8	75 - 125				

MSD Sample ID: **HS20100284-07MSD** Units: **mg/L** Analysis Date: **10-Oct-2020 11:48**
Client ID: Run ID: **UV-2450_370237** SeqNo: **5774666** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.239	0.0500	0.25	0.003	94.4	75 - 125	0.235	1.69	20	

The following samples were analyzed in this batch: HS20100471-03 HS20100471-04

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370335 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-370335** Units: **mg/L** Analysis Date: **09-Oct-2020 11:37**
Client ID: Run ID: **UV-2450_370335** SeqNo: **5777476** 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-370335** Units: **mg/L** Analysis Date: **09-Oct-2020 11:37**
Client ID: Run ID: **UV-2450_370335** SeqNo: **5777477** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.257	0.0500	0.25	0	103	80 - 120				

MS Sample ID: **HS20100361-01MS** Units: **mg/L** Analysis Date: **09-Oct-2020 11:37**
Client ID: Run ID: **UV-2450_370335** SeqNo: **5777478** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.262	0.0500	0.25	0.025	94.8	75 - 125				

MSD Sample ID: **HS20100361-01MSD** Units: **mg/L** Analysis Date: **09-Oct-2020 11:37**
Client ID: Run ID: **UV-2450_370335** SeqNo: **5777479** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.268	0.0500	0.25	0.025	97.2	75 - 125	0.262	2.26	20	

The following samples were analyzed in this batch: HS20100471-01

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370366 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-101020** Units: **mg/L** Analysis Date: **10-Oct-2020 19:31**
Client ID: Run ID: **ICS-Integrion_370366** SeqNo: **5778438** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-101020** Units: **mg/L** Analysis Date: **10-Oct-2020 19:13**
Client ID: Run ID: **ICS-Integrion_370366** SeqNo: **5778437** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.65	0.500	20	0	98.3	90 - 110				
Fluoride	4.031	0.100	4	0	101	90 - 110				
Nitrogen, Nitrate (As N)	4.029	0.100	4	0	101	90 - 110				

MS Sample ID: **HS20100471-03MS** Units: **mg/L** Analysis Date: **10-Oct-2020 16:49**
Client ID: **MW-7S** Run ID: **ICS-Integrion_370366** SeqNo: **5778431** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	66.26	2.50	50	16.48	99.6	80 - 120				
Fluoride	10.67	0.500	10	0.6935	99.8	80 - 120				
Nitrogen, Nitrate (As N)	11.57	0.500	10	0	116	80 - 120				

MS Sample ID: **HS20100110-27MS** Units: **mg/L** Analysis Date: **12-Oct-2020 04:33**
Client ID: Run ID: **ICS-Integrion_370366** SeqNo: **5778472** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	999.4	10.0	200	839.1	80.2	80 - 120				O
Fluoride	35.07	2.00	40	0.948	85.3	80 - 120				
Nitrogen, Nitrate (As N)	46.99	2.00	40	0	117	80 - 120				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370366 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD Sample ID: **HS20100471-03MSD** Units: **mg/L** Analysis Date: **10-Oct-2020 17:07**
Client ID: **MW-7S** Run ID: **ICS-Integrion_370366** SeqNo: **5778432** PrepDate: DF: **5**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	65.99	2.50	50	16.48	99.0	80 - 120	66.26	0.416	20	
Fluoride	10.66	0.500	10	0.6935	99.7	80 - 120	10.67	0.0656	20	
Nitrogen, Nitrate (As N)	11.52	0.500	10	0	115	80 - 120	11.57	0.416	20	

MSD Sample ID: **HS20100110-27MSD** Units: **mg/L** Analysis Date: **12-Oct-2020 04:51**
Client ID: Run ID: **ICS-Integrion_370366** SeqNo: **5778473** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	1005	10.0	200	839.1	82.8	80 - 120	999.4	0.523	20	O
Fluoride	35.93	2.00	40	0.948	87.5	80 - 120	35.07	2.42	20	
Nitrogen, Nitrate (As N)	46.61	2.00	40	0	117	80 - 120	46.99	0.82	20	

The following samples were analyzed in this batch: HS20100471-02 HS20100471-03 HS20100471-04 HS20100471-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370430 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-101320** Units: **mg/L** Analysis Date: **13-Oct-2020 10:10**
Client ID: Run ID: **ICS-Integrion_370430** SeqNo: **5779769** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-101320** Units: **mg/L** Analysis Date: **13-Oct-2020 10:28**
Client ID: Run ID: **ICS-Integrion_370430** SeqNo: **5779770** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.71	0.500	20	0	98.6	90 - 110				
Fluoride	4.067	0.100	4	0	102	90 - 110				
Nitrogen, Nitrate (As N)	3.982	0.100	4	0	99.6	90 - 110				

MS Sample ID: **HS20100471-06MS** Units: **mg/L** Analysis Date: **13-Oct-2020 16:59**
Client ID: **MW-5S** Run ID: **ICS-Integrion_370430** SeqNo: **5779785** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	35.08	0.500	10	25.59	95.0	80 - 120				
Fluoride	3.502	0.100	2	1.514	99.4	80 - 120				
Nitrogen, Nitrate (As N)	2.358	0.100	2	0	118	80 - 120				

MS Sample ID: **HS20100234-08MS** Units: **mg/L** Analysis Date: **14-Oct-2020 14:37**
Client ID: Run ID: **ICS-Integrion_370430** SeqNo: **5781415** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3013	50.0	1000	2058	95.5	80 - 120				
Fluoride	201.5	10.0	200	2.6	99.5	80 - 120				
Nitrogen, Nitrate (As N)	226.5	10.0	200	0	113	80 - 120				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370430 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD Sample ID: **HS20100471-06MSD** Units: **mg/L** Analysis Date: **13-Oct-2020 17:17**
Client ID: **MW-5S** Run ID: **ICS-Integrion_370430** SeqNo: **5779786** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	35.17	0.500	10	25.59	95.8	80 - 120	35.08	0.251	20	
Fluoride	3.523	0.100	2	1.514	100	80 - 120	3.502	0.595	20	
Nitrogen, Nitrate (As N)	2.302	0.100	2	0	115	80 - 120	2.358	2.38	20	

MSD Sample ID: **HS20100234-08MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 14:55**
Client ID: Run ID: **ICS-Integrion_370430** SeqNo: **5781416** PrepDate: DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	3012	50.0	1000	2058	95.4	80 - 120	3013	0.0332	20	
Fluoride	204.1	10.0	200	2.6	101	80 - 120	201.5	1.29	20	
Nitrogen, Nitrate (As N)	221	10.0	200	0	111	80 - 120	226.5	2.45	20	

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370437 (0) **Instrument:** ManTech01 **Method:** ALKALINITY BY SM2320B

MBLK Sample ID: **WBLKW2-201013** Units: **mg/L** Analysis Date: **13-Oct-2020 19:34**
Client ID: Run ID: **ManTech01_370437** SeqNo: **5779994** 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: **LCS2-201013** Units: **mg/L** Analysis Date: **13-Oct-2020 19:43**
Client ID: Run ID: **ManTech01_370437** SeqNo: **5779995** 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)	1018	5.00	1000	0	102	85 - 115				
Alkalinity, Total (As CaCO3)	1028	5.00	1000	0	103	85 - 115				

LCSD Sample ID: **LCSD2-201013** Units: **mg/L** Analysis Date: **13-Oct-2020 19:52**
Client ID: Run ID: **ManTech01_370437** SeqNo: **5779996** 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)	1020	5.00	1000	0	102	85 - 115	1018	0.165	20	
Alkalinity, Total (As CaCO3)	1025	5.00	1000	0	103	85 - 115	1028	0.267	20	

DUP Sample ID: **HS20100284-07DUP** Units: **mg/L** Analysis Date: **13-Oct-2020 20:06**
Client ID: Run ID: **ManTech01_370437** SeqNo: **5779998** 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)	249.2	5.00					248.5	0.249	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)	249.2	5.00					248.5	0.249	20	

The following samples were analyzed in this batch: HS20100471-01 HS20100471-03 HS20100471-04

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370513 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-R370513** Units: **mg/L** Analysis Date: **14-Oct-2020 09:30**
Client ID: Run ID: **UV-2450_370513** SeqNo: **5782034** 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-R370513** Units: **mg/L** Analysis Date: **14-Oct-2020 09:30**
Client ID: Run ID: **UV-2450_370513** SeqNo: **5782033** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.235	0.0500	0.25	0	94.0	80 - 120				

MS Sample ID: **HS20100471-07MS** Units: **mg/L** Analysis Date: **14-Oct-2020 09:30**
Client ID: **MW-19S** Run ID: **UV-2450_370513** SeqNo: **5782036** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.266	0.0500	0.25	0.031	94.0	75 - 125				

MSD Sample ID: **HS20100471-07MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 09:30**
Client ID: **MW-19S** Run ID: **UV-2450_370513** SeqNo: **5782035** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.265	0.0500	0.25	0.031	93.6	75 - 125	0.266	0.377	20	

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07 HS20100471-10 HS20100471-11

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370583 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-101320** Units: **mg/L** Analysis Date: **14-Oct-2020 22:26**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783490** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-101320** Units: **mg/L** Analysis Date: **14-Oct-2020 22:44**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783491** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.94	0.500	20	0	99.7	90 - 110				
Fluoride	4.083	0.100	4	0	102	90 - 110				
Nitrogen, Nitrate (As N)	4.089	0.100	4	0	102	90 - 110				

MS Sample ID: **HS20100702-01MS** Units: **mg/L** Analysis Date: **15-Oct-2020 07:45**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783499** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	48.84	0.500	10	39.91	89.3	80 - 120				
Fluoride	1.975	0.100	2	0.145	91.5	80 - 120				
Nitrogen, Nitrate (As N)	2.506	0.100	2	0.7815	86.2	80 - 120				

MS Sample ID: **HS20100658-01MS** Units: **mg/L** Analysis Date: **14-Oct-2020 09:30**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783464** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	61.63	0.500	10	52.12	95.1	80 - 120				O
Fluoride	2.41	0.100	2	0.2686	107	80 - 120				
Nitrogen, Nitrate (As N)	2.581	0.100	2	0.385	110	80 - 120				

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370583 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MSD Sample ID: **HS20100702-01MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 08:03**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783500** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	48.92	0.500	10	39.91	90.1	80 - 120	48.84	0.166	20	
Fluoride	1.989	0.100	2	0.145	92.2	80 - 120	1.975	0.747	20	
Nitrogen, Nitrate (As N)	2.528	0.100	2	0.7815	87.3	80 - 120	2.506	0.87	20	

MSD Sample ID: **HS20100658-01MSD** Units: **mg/L** Analysis Date: **14-Oct-2020 09:48**
Client ID: Run ID: **ICS-Integrion_370583** SeqNo: **5783465** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	61.05	0.500	10	52.12	89.2	80 - 120	61.63	0.957	20	O
Fluoride	2.385	0.100	2	0.2686	106	80 - 120	2.41	1.06	20	
Nitrogen, Nitrate (As N)	2.536	0.100	2	0.385	108	80 - 120	2.581	1.76	20	

The following samples were analyzed in this batch: HS20100471-10 HS20100471-11

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370585 (0) **Instrument: WetChem_HS** **Method: SULFIDE BY SM4500 S2-F**

MBLK Sample ID: **MBLK-R370585** Units: **mg/L** Analysis Date: **15-Oct-2020 14:00**
Client ID: Run ID: **WetChem_HS_370585** SeqNo: **5783512** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	1.00								

LCS Sample ID: **LCS-R370585** Units: **mg/L** Analysis Date: **15-Oct-2020 14:00**
Client ID: Run ID: **WetChem_HS_370585** SeqNo: **5783511** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.48	1.00	25	0	93.9	85 - 115				

LCSD Sample ID: **LCSD-R370585** Units: **mg/L** Analysis Date: **15-Oct-2020 14:00**
Client ID: Run ID: **WetChem_HS_370585** SeqNo: **5783510** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.28	1.00	25	0	93.1	85 - 115	23.48	0.855	20	

MS Sample ID: **HS20100523-02MS** Units: **mg/L** Analysis Date: **15-Oct-2020 14:00**
Client ID: Run ID: **WetChem_HS_370585** SeqNo: **5790083** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	44.56	1.00	50	-0.64	90.4	80 - 120				

MSD Sample ID: **HS20100523-02MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 14:00**
Client ID: Run ID: **WetChem_HS_370585** SeqNo: **5790082** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	44.16	1.00	50	-0.64	89.6	80 - 120	44.56	0.902	20	

The following samples were analyzed in this batch: HS20100471-01 HS20100471-04

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370608 (0) **Instrument: UV-2450** **Method: FERROUS IRON BY SM3500 FE B**

MBLK Sample ID: **MBLK-R370608** Units: **mg/L** Analysis Date: **15-Oct-2020 16:00**
Client ID: Run ID: **UV-2450_370608** SeqNo: **5783964** 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-R370608** Units: **mg/L** Analysis Date: **15-Oct-2020 16:00**
Client ID: Run ID: **UV-2450_370608** SeqNo: **5783963** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.256	0.0500	0.25	0	102	80 - 120				

MS Sample ID: **HS20100471-13MS** Units: **mg/L** Analysis Date: **15-Oct-2020 16:00**
Client ID: **MW-16** Run ID: **UV-2450_370608** SeqNo: **5783966** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.245	0.0500	0.25	0.024	88.4	75 - 125				

MSD Sample ID: **HS20100471-13MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 16:00**
Client ID: **MW-16** Run ID: **UV-2450_370608** SeqNo: **5783965** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ferrous Iron	0.259	0.0500	0.25	0.024	94.0	75 - 125	0.245	5.56	20	

The following samples were analyzed in this batch: HS20100471-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370610 (0) **Instrument: WetChem_HS** **Method: CHEMICAL OXYGEN DEMAND BY E410.4**

MBLK Sample ID: **MBLK-R370610** Units: **mg/L** Analysis Date: **15-Oct-2020 17:00**
Client ID: Run ID: **WetChem_HS_370610** SeqNo: **5784003** 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-R370610** Units: **mg/L** Analysis Date: **15-Oct-2020 17:00**
Client ID: Run ID: **WetChem_HS_370610** SeqNo: **5784002** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	102	15.0	100	0	102	85 - 115				

MS Sample ID: **HS20100284-06MS** Units: **mg/L** Analysis Date: **15-Oct-2020 17:00**
Client ID: Run ID: **WetChem_HS_370610** SeqNo: **5784005** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	53	15.0	50	4	98.0	80 - 120				

MSD Sample ID: **HS20100284-06MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 17:00**
Client ID: Run ID: **WetChem_HS_370610** SeqNo: **5784004** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	52	15.0	50	4	96.0	80 - 120	53	1.9	20	

The following samples were analyzed in this batch:

HS20100471-01	HS20100471-02	HS20100471-03	HS20100471-04
HS20100471-05	HS20100471-06	HS20100471-07	HS20100471-08
HS20100471-09	HS20100471-10		

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370623 (0) **Instrument:** ManTech01 **Method:** ALKALINITY BY SM2320B

MBLK Sample ID: **WBLKW2-201015** Units: **mg/L** Analysis Date: **15-Oct-2020 22:10**
Client ID: Run ID: **ManTech01_370623** SeqNo: **5784628** 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: **LCS2-201015** Units: **mg/L** Analysis Date: **15-Oct-2020 22:18**
Client ID: Run ID: **ManTech01_370623** SeqNo: **5784629** 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)	1015	5.00	1000	0	101	85 - 115				
Alkalinity, Total (As CaCO3)	1029	5.00	1000	0	103	85 - 115				

LCSD Sample ID: **LCSD2-201015** Units: **mg/L** Analysis Date: **15-Oct-2020 22:43**
Client ID: Run ID: **ManTech01_370623** SeqNo: **5784632** 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)	1009	5.00	1000	0	101	85 - 115	1015	0.571	20	
Alkalinity, Total (As CaCO3)	1027	5.00	1000	0	103	85 - 115	1029	0.207	20	

DUP Sample ID: **HS20100719-05DUP** Units: **mg/L** Analysis Date: **15-Oct-2020 23:00**
Client ID: Run ID: **ManTech01_370623** SeqNo: **5784634** 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)	778.2	5.00					770.8	0.953	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)	778.2	5.00					770.8	0.953	20	

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07 HS20100471-10 HS20100471-11 HS20100471-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370705 (0) **Instrument: Balance1** **Method: TOTAL DISSOLVED SOLIDS BY SM2540C**

MBLK Sample ID: **WBLK-101520** Units: **mg/L** Analysis Date: **15-Oct-2020 18:00**
Client ID: Run ID: **Balance1_370705** SeqNo: **5786422** 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-101520** Units: **mg/L** Analysis Date: **15-Oct-2020 18:00**
Client ID: Run ID: **Balance1_370705** SeqNo: **5786423** 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)	1022	10.0	1000	0	102	85 - 115				

DUP Sample ID: **HS20100528-05DUP** Units: **mg/L** Analysis Date: **15-Oct-2020 18:00**
Client ID: Run ID: **Balance1_370705** SeqNo: **5786417** 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)	4712	10.0					4788	1.6	5	

DUP Sample ID: **HS20100465-02DUP** Units: **mg/L** Analysis Date: **15-Oct-2020 18:00**
Client ID: Run ID: **Balance1_370705** SeqNo: **5786402** 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)	3830	10.0					3760	1.84	5	

The following samples were analyzed in this batch: HS20100471-01 HS20100471-02 HS20100471-04 HS20100471-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370722 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0**

MBLK Sample ID: **MBLK-101520** Units: **mg/L** Analysis Date: **15-Oct-2020 20:16**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787155** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-101520** Units: **mg/L** Analysis Date: **15-Oct-2020 20:34**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787156** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.03	0.500	20	0	100	90 - 110				
Fluoride	4.132	0.100	4	0	103	90 - 110				
Nitrogen, Nitrate (As N)	4.033	0.100	4	0	101	90 - 110				

MS Sample ID: **HS20100776-01MS** Units: **mg/L** Analysis Date: **15-Oct-2020 21:46**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787145** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	43.04	0.500	10	33.53	95.2	80 - 120				
Fluoride	2.591	0.100	2	0.2461	117	80 - 120				
Nitrogen, Nitrate (As N)	3.914	0.100	2	1.97	97.2	80 - 120				

MS Sample ID: **HS20100755-05MS** Units: **mg/L** Analysis Date: **15-Oct-2020 18:09**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787137** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	174.7	0.500	10	168.3	64.0	80 - 120				SEO
Fluoride	1.188	0.100	2	0.2359	47.6	80 - 120				S
Nitrogen, Nitrate (As N)	2.438	0.100	2	0	122	80 - 120				S

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370722 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0**

MSD Sample ID: **HS20100776-01MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 22:04**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787146** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	42.79	0.500	10	33.53	92.6	80 - 120	43.04	0.604	20	
Fluoride	2.588	0.100	2	0.2461	117	80 - 120	2.591	0.131	20	
Nitrogen, Nitrate (As N)	3.922	0.100	2	1.97	97.6	80 - 120	3.914	0.222	20	

MSD Sample ID: **HS20100755-05MSD** Units: **mg/L** Analysis Date: **15-Oct-2020 18:27**
Client ID: Run ID: **ICS-Integrion_370722** SeqNo: **5787138** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	175	0.500	10	168.3	67.5	80 - 120	174.7	0.2	20	SEO
Fluoride	1.256	0.100	2	0.2359	51.0	80 - 120	1.188	5.57	20	S
Nitrogen, Nitrate (As N)	2.536	0.100	2	0	127	80 - 120	2.438	3.94	20	S

The following samples were analyzed in this batch: HS20100471-12 HS20100471-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370795 (0) **Instrument: Balance1** **Method: TOTAL DISSOLVED SOLIDS BY SM2540C**

MBLK Sample ID: **WBLK-101620** Units: **mg/L** Analysis Date: **16-Oct-2020 08:00**
Client ID: Run ID: **Balance1_370795** SeqNo: **5788560** 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-101620** Units: **mg/L** Analysis Date: **16-Oct-2020 08:00**
Client ID: Run ID: **Balance1_370795** SeqNo: **5788561** 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)	1014	10.0	1000	0	101	85 - 115				

DUP Sample ID: **HS20100284-07DUP** Units: **mg/L** Analysis Date: **16-Oct-2020 08:00**
Client ID: Run ID: **Balance1_370795** SeqNo: **5788558** 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)	3234	10.0					3162	2.25	5	

The following samples were analyzed in this batch: HS20100471-03

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370815 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-100920** Units: **mg/L** Analysis Date: **10-Oct-2020 11:35**
Client ID: Run ID: **ICS-Integrion_370815** SeqNo: **5789060** PrepDate: DF: **1**

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

LCS Sample ID: **LCS-100920** Units: **mg/L** Analysis Date: **10-Oct-2020 11:53**
Client ID: Run ID: **ICS-Integrion_370815** SeqNo: **5789061** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.66	0.500	20	0	98.3	90 - 110				
Fluoride	4.033	0.100	4	0	101	90 - 110				
Nitrogen, Nitrate (As N)	4.027	0.100	4	0	101	90 - 110				

MS Sample ID: **HS20100471-01MS** Units: **mg/L** Analysis Date: **10-Oct-2020 00:10**
Client ID: **MW-15A** Run ID: **ICS-Integrion_370815** SeqNo: **5789076** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	35.88	0.500	10	26.27	96.2	80 - 120				
Fluoride	3.246	0.100	2	1.216	102	80 - 120				
Nitrogen, Nitrate (As N)	2.151	0.100	2	0	108	80 - 120				

MSD Sample ID: **HS20100471-01MSD** Units: **mg/L** Analysis Date: **10-Oct-2020 00:28**
Client ID: **MW-15A** Run ID: **ICS-Integrion_370815** SeqNo: **5789077** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	36.04	0.500	10	26.27	97.7	80 - 120	35.88	0.423	20	
Fluoride	3.269	0.100	2	1.216	103	80 - 120	3.246	0.709	20	
Nitrogen, Nitrate (As N)	1.931	0.100	2	0	96.6	80 - 120	2.151	10.8	20	

The following samples were analyzed in this batch: HS20100471-01

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370835 (0) **Instrument:** ICS2100 **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-101620** Units: **mg/L** Analysis Date: **16-Oct-2020 23:55**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789706** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	U	0.500								

LCS Sample ID: **LCS-101620** Units: **mg/L** Analysis Date: **17-Oct-2020 00:13**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789767** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	19.09	0.500	20	0	95.4	90 - 110				

MS Sample ID: **HS20100916-02MS** Units: **mg/L** Analysis Date: **17-Oct-2020 12:15**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789751** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	94.72	0.500	10	86.35	83.7	80 - 120				O

MS Sample ID: **HS20100906-01MS** Units: **mg/L** Analysis Date: **17-Oct-2020 11:39**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789750** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	28.86	0.500	10	18.97	98.9	80 - 120				

MS Sample ID: **HS20100465-11MS** Units: **mg/L** Analysis Date: **16-Oct-2020 21:31**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789757** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	704.3	0.500	10	660	443	80 - 120				SEO

MSD Sample ID: **HS20100916-02MSD** Units: **mg/L** Analysis Date: **17-Oct-2020 12:33**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789752** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	94.83	0.500	10	86.35	84.8	80 - 120	94.72	0.114	20	O

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370835 (0) **Instrument:** ICS2100 **Method:** ANIONS BY E300.0

MSD Sample ID: **HS20100906-01MSD** Units: **mg/L** Analysis Date: **17-Oct-2020 11:21**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789749** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	28.77	0.500	10	18.97	98.0	80 - 120	28.86	0.318	20	

MSD Sample ID: **HS20100465-11MSD** Units: **mg/L** Analysis Date: **16-Oct-2020 21:49**
Client ID: Run ID: **ICS2100_370835** SeqNo: **5789758** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	697.7	0.500	10	660	377	80 - 120	704.3	0.94	20	SEO

The following samples were analyzed in this batch: HS20100471-11 HS20100471-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370851 (0) **Instrument:** WetChem_HS **Method:** SULFIDE BY SM4500 S2-F

MBLK Sample ID: **MBLK-R370851** Units: **mg/L** Analysis Date: **16-Oct-2020 17:20**
Client ID: Run ID: **WetChem_HS_370851** SeqNo: **5797540** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	1.00								

LCS Sample ID: **LCS-R370851** Units: **mg/L** Analysis Date: **16-Oct-2020 17:20**
Client ID: Run ID: **WetChem_HS_370851** SeqNo: **5797539** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.48	1.00	25	0	93.9	85 - 115				

LCSD Sample ID: **LCSD-R370851** Units: **mg/L** Analysis Date: **16-Oct-2020 17:20**
Client ID: Run ID: **WetChem_HS_370851** SeqNo: **5797538** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.68	1.00	25	0	94.7	85 - 115	23.48	0.848	20	

MS Sample ID: **HS20100471-03MS** Units: **mg/L** Analysis Date: **16-Oct-2020 17:20**
Client ID: **MW-7S** Run ID: **WetChem_HS_370851** SeqNo: **5797541** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	20.88	1.00	25	1.48	77.6	80 - 120				S

The following samples were analyzed in this batch: HS20100471-03

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370853 (0) **Instrument:** WetChem_HS **Method:** SULFIDE BY SM4500 S2-F

MBLK Sample ID: **MBLK-R370853** Units: **mg/L** Analysis Date: **19-Oct-2020 17:30**
Client ID: Run ID: **WetChem_HS_370853** SeqNo: **5790142** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	1.00								

LCS Sample ID: **LCS-R370853** Units: **mg/L** Analysis Date: **19-Oct-2020 17:30**
Client ID: Run ID: **WetChem_HS_370853** SeqNo: **5790141** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.8	1.00	25	0	87.2	85 - 115				

LCSD Sample ID: **LCSD-R370853** Units: **mg/L** Analysis Date: **19-Oct-2020 17:30**
Client ID: Run ID: **WetChem_HS_370853** SeqNo: **5790140** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22	1.00	25	0	88.0	85 - 115	21.8	0.913	20	

MS Sample ID: **HS20100471-11MS** Units: **mg/L** Analysis Date: **19-Oct-2020 17:30**
Client ID: **MW-18** Run ID: **WetChem_HS_370853** SeqNo: **5790143** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	19.8	1.00	25	-0.2	80.0	80 - 120				

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07 HS20100471-10 HS20100471-11

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370895 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C

MBLK Sample ID: **WBLK-101920** Units: **mg/L** Analysis Date: **19-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370895** SeqNo: **5790746** 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-101920** Units: **mg/L** Analysis Date: **19-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370895** SeqNo: **5790747** 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)	994	10.0	1000	0	99.4	85 - 115				

DUP Sample ID: **HS20100723-03DUP** Units: **mg/L** Analysis Date: **19-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370895** SeqNo: **5790744** 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)	2154	10.0					2140	0.652	5	

DUP Sample ID: **HS20100471-06DUP** Units: **mg/L** Analysis Date: **19-Oct-2020 16:00**
Client ID: **MW-5S** Run ID: **Balance1_370895** SeqNo: **5790731** 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)	1120	10.0					1078	3.82	5	

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07 HS20100471-08 HS20100471-09 HS20100471-10 HS20100471-11

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370941 (0) **Instrument: WetChem_HS** **Method: CHEMICAL OXYGEN DEMAND BY E410.4**

MBLK Sample ID: **MBLK-R370941** Units: **mg/L** Analysis Date: **21-Oct-2020 09:30**
Client ID: Run ID: **WetChem_HS_370941** SeqNo: **5791971** 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-R370941** Units: **mg/L** Analysis Date: **21-Oct-2020 09:30**
Client ID: Run ID: **WetChem_HS_370941** SeqNo: **5791970** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	99	15.0	100	0	99.0	85 - 115				

MS Sample ID: **HS20100471-11MS** Units: **mg/L** Analysis Date: **21-Oct-2020 09:30**
Client ID: **MW-18** Run ID: **WetChem_HS_370941** SeqNo: **5791973** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	53	15.0	50	5	96.0	80 - 120				

MSD Sample ID: **HS20100471-11MSD** Units: **mg/L** Analysis Date: **21-Oct-2020 09:30**
Client ID: **MW-18** Run ID: **WetChem_HS_370941** SeqNo: **5791972** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chemical Oxygen Demand	53	15.0	50	5	96.0	80 - 120	53	0	20	

The following samples were analyzed in this batch: HS20100471-11 HS20100471-12 HS20100471-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370952 (0) **Instrument: WetChem_HS** **Method: PH BY SM4500H+ B**

DUP Sample ID: **HS20100458-01DUP** Units: **pH Units** Analysis Date: **21-Oct-2020 12:22**
Client ID: Run ID: **WetChem_HS_370952** SeqNo: **5792159** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	7.7	0.100					7.62	1.04	10	
Temp Deg C @pH	23.6	0					23.5	0.425	10	

The following samples were analyzed in this batch: HS20100471-01 HS20100471-02 HS20100471-03 HS20100471-04 HS20100471-05

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R370983 (0) **Instrument: Balance1** **Method: TOTAL DISSOLVED SOLIDS BY SM2540C**

MBLK Sample ID: **WBLK-102020** Units: **mg/L** Analysis Date: **20-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370983** SeqNo: **5792720** 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-102020** Units: **mg/L** Analysis Date: **20-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370983** SeqNo: **5792721** 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)	1018	10.0	1000	0	102	85 - 115				

DUP Sample ID: **HS20100752-03DUP** Units: **mg/L** Analysis Date: **20-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370983** SeqNo: **5792719** 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)	626	10.0					638	1.9	5	

DUP Sample ID: **HS20100685-02DUP** Units: **mg/L** Analysis Date: **20-Oct-2020 16:00**
Client ID: Run ID: **Balance1_370983** SeqNo: **5792705** 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)	2294	10.0					2290	0.175	5	

The following samples were analyzed in this batch: HS20100471-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371039 (0) **Instrument:** WetChem_HS **Method:** PH BY SM4500H+ B

DUP Sample ID: **HS20100471-08DUP** Units: **pH Units** Analysis Date: **22-Oct-2020 11:37**
Client ID: **MW-20** Run ID: **WetChem_HS_371039** SeqNo: **5794336** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	6.78	0.100					6.73	0.74	10	
Temp Deg C @pH	21.8	0					21.8	0	10	

The following samples were analyzed in this batch: HS20100471-07 HS20100471-08 HS20100471-09 HS20100471-10 HS20100471-11 HS20100471-12 HS20100471-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371044 (0) **Instrument: WetChem_HS** **Method: SPECIFIC CONDUCTIVITY BY SM2510 B**

MBLK Sample ID: **MBLK-371044** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 10:20**
Client ID: Run ID: **WetChem_HS_371044** SeqNo: **5794493** 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-371044** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 10:20**
Client ID: Run ID: **WetChem_HS_371044** SeqNo: **5794494** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1454	5.00	1413	0	103	80 - 120				

DUP Sample ID: **HS20100363-03DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 10:20**
Client ID: Run ID: **WetChem_HS_371044** SeqNo: **5794495** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	983	5.00					982	0.102	20	

The following samples were analyzed in this batch: HS20100471-09 HS20100471-10 HS20100471-11 HS20100471-12 HS20100471-13

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371049 (0) **Instrument: WetChem_HS** **Method: SPECIFIC CONDUCTIVITY BY SM2510 B**

MBLK Sample ID: **MBLK-371049** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 11:25**
Client ID: Run ID: **WetChem_HS_371049** SeqNo: **5794547** 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-371049** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 11:25**
Client ID: Run ID: **WetChem_HS_371049** SeqNo: **5794548** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	1454	5.00	1413	0	103	80 - 120				

DUP Sample ID: **HS20100465-07DUP** Units: **umhos/cm @ 25.0 °C** Analysis Date: **22-Oct-2020 11:25**
Client ID: Run ID: **WetChem_HS_371049** SeqNo: **5794549** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Specific Conductivity	4560	5.00					4570	0.219	20	

The following samples were analyzed in this batch:

HS20100471-01	HS20100471-02	HS20100471-03	HS20100471-04
HS20100471-05	HS20100471-06	HS20100471-07	HS20100471-08

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371065 (0) **Instrument: Balance1** **Method: TOTAL DISSOLVED SOLIDS BY SM2540C**

MBLK Sample ID: **WBLK-102120** Units: **mg/L** Analysis Date: **21-Oct-2020 13:45**
Client ID: Run ID: **Balance1_371065** SeqNo: **5794799** 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-102120** Units: **mg/L** Analysis Date: **21-Oct-2020 13:45**
Client ID: Run ID: **Balance1_371065** SeqNo: **5794800** 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: **HS20100855-06DUP** Units: **mg/L** Analysis Date: **21-Oct-2020 13:45**
Client ID: Run ID: **Balance1_371065** SeqNo: **5794798** 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)	492	10.0					484	1.64	5	

DUP Sample ID: **HS20100471-12DUP** Units: **mg/L** Analysis Date: **21-Oct-2020 13:45**
Client ID: **MW-13** Run ID: **Balance1_371065** SeqNo: **5794778** 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)	2372	10.0					2364	0.338	5	

The following samples were analyzed in this batch: HS20100471-12

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371109 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-101320** Units: **mg/L** Analysis Date: **14-Oct-2020 22:26**
Client ID: Run ID: **ICS-Integrion_371109** SeqNo: **5795646** 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-101320** Units: **mg/L** Analysis Date: **14-Oct-2020 22:44**
Client ID: Run ID: **ICS-Integrion_371109** SeqNo: **5795647** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	19.94	0.500	20	0	99.7	90 - 110				
Fluoride	4.083	0.100	4	0	102	90 - 110				
Nitrogen, Nitrate (As N)	4.089	0.100	4	0	102	90 - 110				
Sulfate	19.19	0.500	20	0	96.0	90 - 110				

MS Sample ID: **HS20100471-06MS** Units: **mg/L** Analysis Date: **13-Oct-2020 16:59**
Client ID: **MW-5S** Run ID: **ICS-Integrion_371109** SeqNo: **5795626** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	35.08	0.500	10	25.59	95.0	80 - 120				
Fluoride	3.502	0.100	2	1.514	99.4	80 - 120				
Nitrogen, Nitrate (As N)	2.358	0.100	2	0	118	80 - 120				
Sulfate	467.2	0.500	10	467	1.53	80 - 120				SEO

MSD Sample ID: **HS20100471-06MSD** Units: **mg/L** Analysis Date: **13-Oct-2020 17:17**
Client ID: **MW-5S** Run ID: **ICS-Integrion_371109** SeqNo: **5795627** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	35.17	0.500	10	25.59	95.8	80 - 120	35.08	0.251	20	
Fluoride	3.523	0.100	2	1.514	100	80 - 120	3.502	0.595	20	
Nitrogen, Nitrate (As N)	2.302	0.100	2	0	115	80 - 120	2.358	2.38	20	
Sulfate	469.4	0.500	10	467	24.2	80 - 120	467.2	0.485	20	SEO

The following samples were analyzed in this batch: HS20100471-06 HS20100471-07 HS20100471-08 HS20100471-09

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371111 (0) **Instrument: WetChem_HS** **Method: SULFIDE BY SM4500 S2-F**

MBLK Sample ID: **MBLK-R371111** Units: **mg/L** Analysis Date: **20-Oct-2020 15:30**
Client ID: Run ID: **WetChem_HS_371111** SeqNo: **5795662** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	1.00								

LCS Sample ID: **LCS-R371111** Units: **mg/L** Analysis Date: **20-Oct-2020 15:30**
Client ID: Run ID: **WetChem_HS_371111** SeqNo: **5795661** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23	1.00	25	0	92.0	85 - 115				

LCSD Sample ID: **LCSD-R371111** Units: **mg/L** Analysis Date: **20-Oct-2020 15:30**
Client ID: Run ID: **WetChem_HS_371111** SeqNo: **5795660** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	23.2	1.00	25	0	92.8	85 - 115	23	0.866	20	

MS Sample ID: **HS20100718-01MS** Units: **mg/L** Analysis Date: **20-Oct-2020 15:30**
Client ID: Run ID: **WetChem_HS_371111** SeqNo: **5795663** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.2	1.00	25	2	76.8	80 - 120				S

The following samples were analyzed in this batch: HS20100471-13

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371146 (0) **Instrument: WetChem_HS** **Method: PH BY SM4500H+ B**

DUP Sample ID: **HS20100723-01DUP** Units: **pH Units** Analysis Date: **23-Oct-2020 11:37**
Client ID: Run ID: **WetChem_HS_371146** SeqNo: **5796694** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH	8.21	0.100					8.16	0.611	10	
Temp Deg C @pH	22.1	0					22.1	0	10	

The following samples were analyzed in this batch: HS20100471-06

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371182 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0**

MBLK Sample ID: **MBLK-102220** Units: **mg/L** Analysis Date: **22-Oct-2020 23:45**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797196** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	U	0.500								

LCS Sample ID: **LCS-102220** Units: **mg/L** Analysis Date: **23-Oct-2020 00:03**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797197** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	18.69	0.500	20	0	93.5	90 - 110				

MS Sample ID: **HS20101120-03MS** Units: **mg/L** Analysis Date: **22-Oct-2020 20:27**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797192** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	24.32	0.500	10	15.78	85.4	80 - 120				

MS Sample ID: **HS20100465-05MS** Units: **mg/L** Analysis Date: **23-Oct-2020 01:33**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797202** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1919	25.0	500	1464	91.0	80 - 120				

MSD Sample ID: **HS20101120-03MSD** Units: **mg/L** Analysis Date: **22-Oct-2020 20:45**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797193** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	24.2	0.500	10	15.78	84.2	80 - 120	24.32	0.502	20	

MSD Sample ID: **HS20100465-05MSD** Units: **mg/L** Analysis Date: **23-Oct-2020 01:51**
Client ID: Run ID: **ICS-Integrion_371182** SeqNo: **5797203** PrepDate: DF: **50**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	1882	25.0	500	1464	83.5	80 - 120	1919	1.98	20	

The following samples were analyzed in this batch: HS20100471-01 HS20100471-02 HS20100471-03 HS20100471-04 HS20100471-05

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R371185 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0**

MBLK Sample ID: **MBLK-102220** Units: **mg/L** Analysis Date: **22-Oct-2020 09:38**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797230** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	U	0.500								

LCS Sample ID: **LCS-102220** Units: **mg/L** Analysis Date: **22-Oct-2020 09:56**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797231** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	18.82	0.500	20	0	94.1	90 - 110				

MS Sample ID: **HS20100528-05MS** Units: **mg/L** Analysis Date: **23-Oct-2020 07:34**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797246** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	116.7	5.00	100	30.6	86.1	80 - 120				

MS Sample ID: **HS20100465-11MS** Units: **mg/L** Analysis Date: **23-Oct-2020 05:10**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797238** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	895.9	10.0	200	733.5	81.2	80 - 120				

MSD Sample ID: **HS20100528-05MSD** Units: **mg/L** Analysis Date: **23-Oct-2020 07:52**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797247** PrepDate: DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	116.4	5.00	100	30.6	85.8	80 - 120	116.7	0.3	20	

MSD Sample ID: **HS20100465-11MSD** Units: **mg/L** Analysis Date: **23-Oct-2020 05:28**
Client ID: Run ID: **ICS-Integrion_371185** SeqNo: **5797259** PrepDate: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	898.2	10.0	200	733.5	82.4	80 - 120	895.9	0.261	20	

The following samples were analyzed in this batch: HS20100471-12

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: HS20100471

QC BATCH REPORT

Batch ID: R373969 (0) **Instrument:** ICS2100 **Method:** ANIONS BY E300.0

MBLK Sample ID: **MBLK-120320** Units: **mg/L** Analysis Date: **03-Dec-2020 12:42**
Client ID: Run ID: **ICS2100_373969** SeqNo: **5864144** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	U	0.500								

LCS Sample ID: **LCS-120320** Units: **mg/L** Analysis Date: **03-Dec-2020 13:00**
Client ID: Run ID: **ICS2100_373969** SeqNo: **5864145** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	20.42	0.500	20	0	102	90 - 110				

MS Sample ID: **HS20110932-01MS** Units: **mg/L** Analysis Date: **03-Dec-2020 21:11**
Client ID: Run ID: **ICS2100_373969** SeqNo: **5864183** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	138.6	0.500	10	130.1	84.9	80 - 120				EO

MSD Sample ID: **HS20110932-01MSD** Units: **mg/L** Analysis Date: **03-Dec-2020 21:30**
Client ID: Run ID: **ICS2100_373969** SeqNo: **5864184** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfate	138.6	0.500	10	130.1	85.2	80 - 120	138.6	0.0218	20	EO

The following samples were analyzed in this batch: HS20100471-10

Revision: 1

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
WorkOrder: **HS20100471**

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

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	20-030-0	26-Mar-2021
California	2919, 2020-2021	30-Apr-2021
Dept of Defense	PJLA L20-507	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322020-4	09-May-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2020-2021	30-Apr-2021
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2020	31-Dec-2020
North Dakota	R-193 2020-2021	30-Apr-2021
Texas	T104704231-20-26	30-Apr-2021

Client: Altamira
Project: WFEC/ CCR Program, Landfill Wells
Work Order: HS20100471

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS20100471-01	MW-15A	Login	10/9/2020 2:50:35 PM	JRM	MET064
HS20100471-01	MW-15A	Login	10/9/2020 2:50:35 PM	JRM	MET064
HS20100471-01	MW-15A	Login	10/9/2020 2:50:35 PM	JRM	WET086
HS20100471-01	MW-15A	Login	10/9/2020 2:50:35 PM	JRM	WET086
HS20100471-01	MW-15A	Login	10/9/2020 2:50:35 PM	JRM	WET086

Sample Receipt Checklist

Work Order ID: HS20100471 **Date/Time Received:** **09-Oct-2020 09:45**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	09-Oct-2020 14:24	**Reviewed by:**	/S/ RJ Modashia	09-Oct-2020 16:25
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

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):	1.5°C/1.5°C UC/C	IR31
Cooler(s)/Kit(s):	46486	
Date/Time sample(s) sent to storage:	10/09/2020 14:25	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS20100471 **Date/Time Received:** **09-Oct-2020 09:45**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	10-Oct-2020 12:06	**Reviewed by:**	/S/ RJ Modashia	13-Oct-2020 15:36
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **ALS Courier**

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):	1.5°C/1.5°C, 1.2°C/1.2°C UC/C	IR31
Cooler(s)/Kit(s):	46513, 46507	
Date/Time sample(s) sent to storage:	10/10/2020 12:07	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS20100471 **Date/Time Received:** **09-Oct-2020 09:45**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	13-Oct-2020 13:47	**Reviewed by:**	/S/ RJ Modashia	13-Oct-2020 15:36
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **ALS Courier**

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):	1.4°C/1.4°C UC/C	IR31
Cooler(s)/Kit(s):	45538	
Date/Time sample(s) sent to storage:	10/13/2020 13:50	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS20100471 **Date/Time Received:** **09-Oct-2020 09:45**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	14-Oct-2020 12:56	**Reviewed by:**	/S/ RJ Modashia	15-Oct-2020 11:55
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

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):	1.5°C/1.5°C UC/C	IR31
Cooler(s)/Kit(s):	46508	
Date/Time sample(s) sent to storage:	10/14/2020 13:00	

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

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

Sample Receipt Checklist

Work Order ID: HS20100471 **Date/Time Received:** **09-Oct-2020 09:45**

Client Name: Enviro Clean Services-Tulsa **Received by:** **Jared R. Makan**

Completed By:	/S/ Jared R. Makan	15-Oct-2020 11:05	**Reviewed by:**	/S/ RJ Modashia	15-Oct-2020 11:55
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **Water** Carrier name: **FedEx Priority Overnight**

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):	0.2°C/0.2°C UC/C	IR31
Cooler(s)/Kit(s):	44381	
Date/Time sample(s) sent to storage:	10/15/2020 11:06	

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-16 - collection time differs on RD226 & 228 bottles:
COC = 16:22
Bottles = 15:52
Logged in per COC.

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER: WFEE160020 / 3000	PROJECT NAME: ALL WELLS ON THE SAME LAB WO — WFEC / CCR Program, Landfill Wells	COC : 1 of X	
CLIENT CONTACT: Heather Tiffany, Bert Smith	CLIENT EMAIL: Heather.N.Tiffany@Altamira-us.com, LabData@Altamira-us.com	CLIENT PHONE: 405-618-2021	
LABORATORY / LAB PM: ALS / RJ Modashia	CLIENT ADDRESS: 3700 West Robinson Street, Suite 200, Norman, OK 73072	TAT: STANDARD	
LAB ADDRESS: 10450 Stancliff Road, Suite 210, Houston, TX 77099	SPECIAL INSTRUCTIONS: SHORT HOLD : NO3 & Ferr Fe; *App A: B, Ca, Cl, F, pH, SO4, TDS; **App B: Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, Hg, Mo, Se, Th, Rad 226/228 COMBINED		
SHIPMENT METHOD: FEDEX	TRACKING: 1891 8880 9740		

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Appendix A*	Appendix B**	Nitrate as N (SHORT HOLD)	COD	Specific Conductivity	Fe, Total	Mo, Dissolved	Fe, Dissolved	Fe, Ferrous (SHORT HOLD)	K, Mg, Na	Sulfide	HCO3, CO3, Hydroxide Alkalinity	HOLD
	~~MW-3~~			Water	2,3,9			X	X	X	X	X								
	~~MW-5S~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-7S~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-13~~			Water	2,3,9			X	X	X	X	X								
	~~MW-14A~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	MW-15A	10/8/20	1108	Water	1,2,3,4,9	B	Y	X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-16~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-17~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-18~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-19S~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-20~~			Water	2,3,9			X	X	X	X	X								
	~~MW-21~~			Water	2,3,9			X	X	X	X	X								

HS20100471

Altamira
WFEC/ CCR Program, Landfill Wells

SAMPLER(S) NAME: Bradley VanCleave	DATE: 10/8/20 TIME: 1400	Total # of Containers:	SAMPLER(S) SIGNATURE: Bradley VanCleave — DATE: 10/8/20 TIME: 1400
RELINQUISHED BY: Bradley VanCleave — DATE: 10/8/20 TIME: 1400	RECEIVED BY: J. Jameson — DATE: 10/9/20 TIME: 09:45	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 : Non-Preserve, Zinc Acetate

POINT OF ORIGIN: [x] Norman [ ] Oklahoma City [ ] Tulsa [ ] Yukon [ ] Midland [ ] Other :

ALTAMIRA-US, LLC

Cooler 46486
Temp 1.5°C

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER: WFEE160020 / 3000	**PROJECT NAME:** ALL WELLS ON THE SAME LAB WO — WFEC / CCR Program, **Landfill Wells**	COC : 2 of X
CLIENT CONTACT: Heather Tiffany, Bert Smith	**CLIENT EMAIL:** Heather.N.Tiffany@Altamira-us.com, LabData@Altamira-us.com	**CLIENT PHONE:** 405-618-2021
LABORATORY / LAB PM: ALS / RJ Modashia	**CLIENT ADDRESS:** 3700 West Robinson Street, Suite 200, Norman, OK 73072	**TAT:** STANDARD
LAB ADDRESS: 10450 Stancliff Road, Suite 210, Houston, TX 77099	**SPECIAL INSTRUCTIONS:** SHORT HOLD - NO3 & Ferr Fe; *App A: B, Ca, Cl, F, pH, SO4, TDS; **App B: Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, Hg, Mo, Se, Th, Rad 226/228 COMBINED	
SHIPMENT METHOD: Fed Ex	**TRACKING:**	

HS20100471

Altamira

WFEC/ CCR Program, Landfill Wells

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Appendix A*	Appendix B**	Nitrate as N (SHORT HOLD)	COD	Specific Conductivity	Fe, Total	Mo, Dissolved	Fe, Dissolved	Fe, Ferrous (SHORT HOLD)	K, Mg, Na	Sulfide	HCO3, CO3, Hydroxide Alkalinity	HOLD
	MW-3	10/8/20	16:39	Water	2,3,9			X	X	X	X	X								
	~~MW-5S~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	MW-7S	10/9/20	11:18	Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-13~~			~~Water~~	~~2,3,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~								
	~~MW-14A~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~MW-15A~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~MW-16~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~MW-17~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~MW-18~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	
	~~MW-19S~~			~~Water~~	~~1,2,3,4,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	X	~~X~~	~~X~~	
	~~MW-20~~			~~Water~~	~~2,3,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X~~								
	~~MW-21~~			~~Water~~	~~2,3,9~~			~~X~~	~~X~~	~~X~~	~~X~~	~~X*~~								
	MW-14A	10/8/20	1516	water	1,2,3,9	8	Y	X	X	X	X	X	X	X	X	X	X	X	X	
	Dup 3	10/8/20	1639	water	1,2,3,9	8	N	X	X	X	X	X								

SAMPLER(S) NAME: Brad Van Cleave	DATE: 10/9/20 TIME: 18:30	Total # of Containers:	SAMPLER(S) SIGNATURE:	DATE: 10/9/20 TIME: 18:30			
RELINQUISHED BY:	DATE: 10/9/20 TIME: 18:30	RECEIVED BY: J. Simmons	DATE: 10/12/20 TIME: 09:40	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 : Non-Preserve, Zinc Acetate

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

ALTAMIRA-US, LLC

Cooler 46513 Temp 1.5°C

Cooler 46507 Temp 1.2°C

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER: WFEE160020 / 3000	PROJECT NAME: ALL WELLS ON THE SAME LAB WO — WFEC / CCR Program, **Landfill Wells**	COC : 3 of X	
CLIENT CONTACT: Heather Tiffany, Bert Smith	CLIENT EMAIL: Heather.N.Tiffany@Altamira-us.com, LabData@Altamira-us.com	CLIENT PHONE: 405-618-2021	
LABORATORY / LAB PM: ALS / RJ Modashia	CLIENT ADDRESS: 3700 West Robinson Street, Suite 200, Norman, OK 73072	TAT: STANDARD	
LAB ADDRESS: 10450 Stancliff Road, Suite 210, Houston, TX 77099	SPECIAL INSTRUCTIONS: SHORT HOLD : NO3 & Ferr Fe; *App A: B, Ca, Cl, F, pH, SO4, TDS; **App B: Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, Hg, Mo, Se, Th, Rad 226/228 COMBINED		
SHIPMENT METHOD: Fed Ex	TRACKING: 1891 8880 9339		

HS20100471

Altamira

WFEC/ CCR Program, Landfill Wells

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Appendix A*	Appendix B**	Nitrate as N (SHORT HOLD)	COD	Specific Conductivity	Fe, Total	Mo, Dissolved	Fe, Dissolved	Fe, Ferrous (SHORT HOLD)	K, Mg, Na	Sulfide	HCO3, CO3, Hydroxide Alkalinity	HOLD
~~1~~	~~MW-3~~			~~Water~~	~~2,3,9~~			X	X	X	X	X								
2	MW-5S	10/12/20	9:41	Water	1,2,3,4,9	8		X	X	X	X	X	X	X	X	X	X	X	X	
~~3~~	~~MW-7S~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
~~4~~	~~MW-13~~			~~Water~~	~~2,3,9~~			X	X	X	X	X								
~~5~~	~~MW-14A~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
~~6~~	~~MW-15A~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
~~7~~	~~MW-16~~			~~Water~~	~~1,2,3,4,9~~	8		X	X	X	X	X	X	X	X	X	X	X	X	
~~8~~	~~MW-17~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
~~9~~	~~MW-18~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
10	MW-19S	10/12/20	13:45	Water	1,2,3,4,9	8		X	X	X	X	X	X	X	X	X	X	X	X	
11	MW-20	10/12/20	11:24	Water	2,3,9	5		X	X	X	X	X								
12	MW-21	10/12/20	12:29	Water	2,3,9	5		X	X	X	X	X								
13	Temp Blank			Water		1														

SAMPLER(S) NAME: Brad VanCleave	DATE: 10/12/20 TIME: 19:30	Total # of Containers: 27	SAMPLER(S) SIGNATURE:	DATE: 10/12/20 TIME: 19:30	
RELINQUISHED BY: Brad Vancleave	DATE: 10/12/20 TIME: 19:30	RECEIVED BY: J. Nunnery	DATE: 10/13/20 TIME: 09:05	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 : Non-Preserve, Zinc Acetate

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

ALTAMIRA-US, LLC

Cooler 45538 1031
Temp 1.4°C CF0

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER:	WFEE160020 / 3000
PROJECT NAME:	ALL WELLS ON THE SAME LAB WO WFEC / CCR Program, **Landfill Wells**
COC:	____ of 1
CLIENT CONTACT:	Heather Tiffany Bert Smith
CLIENT EMAIL:	Heather.N.Tiffany@Altamira-us.com LabData@Altamira-us.com
CLIENT PHONE:	405-618-2021
LABORATORY / LAB PM:	ALS / RJ Modashia
CLIENT ADDRESS:	3700 West Robinson Street Suite 200 Norman, OK 73072
TAT:	STANDARD
LAB ADDRESS:	10450 Stancliff Road Suite 210 Houston, TX 77099
SPECIAL INSTRUCTIONS:	SHORT HOLD - NO3 & Ferr Fe *App A: B, Ca, Cl, F, pH, SO4, TDS **App B: Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, Hg, Mo, Se, Th, Rad 226/228 COMBINED
SHIPMENT METHOD:	
TRACKING:	

HS20100471
Altamira
WFEC/ CCR Program, Landfill Wells

SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS: Appendix A*	Appendix B**	Nitrate as N (SHORT HOLD)	COD	Specific Conductivity	Fe, Total	Mo, Dissolved	Fe, Dissolved	Fe, Ferrous (SHORT HOLD)	K, Mg, Na	Sulfide	HCO3, CO3, Hydroxide Alkalinity	HOLD
~~MW-3~~			~~Water~~	~~2,3,9~~			X	X	X	X	X								
~~MW-5S~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-7S~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-13~~			Water	2,3,9			X	X	X	X	X								
~~MW-14A~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-15A~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-16~~			Water	1,2,3,4,9			X	X	X	X	X	X	X	X	X	X	X	X	
MW-17	10/12/20	1648	Water	1,2,3,4,9	8	Y	X	X	X	X	X	X	X	X	X	X	X	X	
MW-18	10/12/20	1444	Water	1,2,3,4,9	8	Y	X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-19S~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
~~MW-20~~			Water	2,3,9			X	X	X	X	X								
~~MW-21~~			~~Water~~	~~2,3,9~~			X	X	X	X	X								

SAMPLER(S) NAME: Bradley Tuller
DATE: 10/13/20
TIME: 1900
Total # of Containers:
SAMPLER(S) SIGNATURE:
DATE:
TIME: 1900

RELINQUISHED BY: Bradley Tuller
DATE: 10/13/20
TIME: 1900
RECEIVED BY: J. Mooney
DATE: 10/14/20
TIME: 09:15
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 : Non-Preserve, Zinc Acetate

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

ALTAMIRA-US, LLC

Cooler 46508 11231
Temp 1.5°C CFO

CHAIN OF CUSTODY RECORD

ALTAMIRA

PROJECT NUMBER: WFEE160020 / 3000	PROJECT NAME: ALL WELLS ON THE SAME LAB WO — WFEC / CCR Program, **Landfill Wells**	COC : ____ of X	
CLIENT CONTACT: Heather Tiffany, Bert Smith	CLIENT EMAIL: Heather.N.Tiffany@Altamira-us.com, LabData@Altamira-us.com	CLIENT PHONE: 405-618-2021	
LABORATORY / LAB PM: ALS / RJ Modashia	CLIENT ADDRESS: 3700 West Robinson Street, Suite 200, Norman, OK 73072	TAT: STANDARD	
LAB ADDRESS: 10450 Stancliff Road, Suite 210, Houston, TX 77099	SPECIAL INSTRUCTIONS: SHORT HOLD : NO3 & Ferr Fe; *App A: B, Ca, Cl, F, pH, SO4, TDS; **App B: Sb, As, Ba, Be, Cd, Cr, Co, F, Pb, Li, Hg, Mo, Se, Th, Rad 226/228 COMBINED		
SHIPMENT METHOD: FedEx	TRACKING:		

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	Appendix A*	Appendix B**	Nitrate as N (SHORT HOLD)	COD	Specific Conductivity	Fe, Total	Mo, Dissolved	Fe, Dissolved	Fe, Ferrous (SHORT HOLD)	K, Mg, Na	Sulfide	HCO3, CO3, Hydroxide Alkalinity	HOLD
	~~MW-3~~	10/14/20		Water	2,3,9			X	X	X	X	X								
	~~MW-5S~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-7S~~			Water	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	MW-13	10/14/20	~~1735~~ 941	Water	2,3,9	8S	N	X	X	X	X	X								
	~~MW-14A~~			Water	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-15A~~			~~Water~~	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	MW-16	10/13/20	1622	Water	1,2,3,4,9	8	X	X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-17~~			Water	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-18~~			Water	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-19S~~			Water	~~1,2,3,4,9~~			X	X	X	X	X	X	X	X	X	X	X	X	
	~~MW-20~~			Water	~~2,3,9~~			X	X	X	X	X								
	~~MW-21~~			Water	~~2,3,9~~			X	X	X	X	X								
	Temp Blank			Water																

HS20100471

Altamira

WFEC/ CCR Program, Landfill Wells

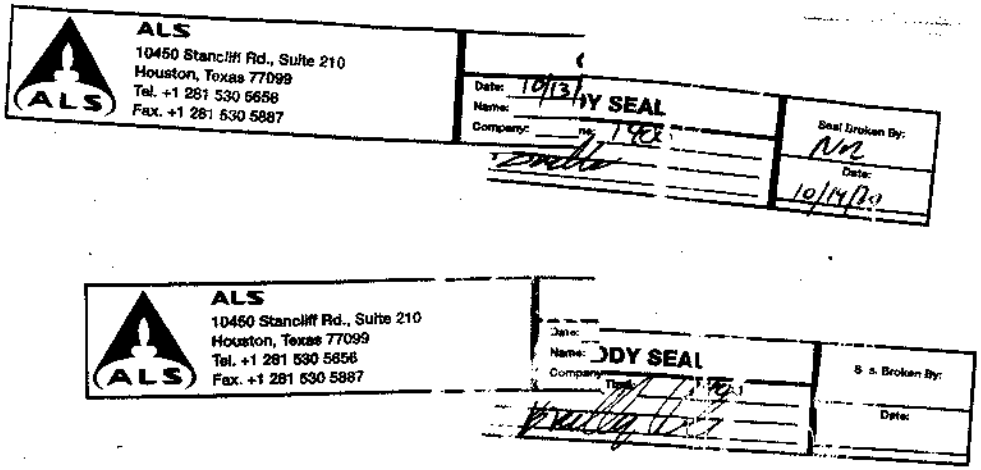
SAMPLER(S) NAME: Bradley VanCleave	DATE: 10/14/20 TIME: 1600	Total # of Containers:	SAMPLER(S) SIGNATURE: Bradley VanCleave	DATE: 10/14/20 TIME: 1700	
RELINQUISHED BY: Bradley VanCleave	DATE: 10/14/20 TIME: 1700	RECEIVED BY: J. Wiseman	DATE: 10/15/20 TIME: 09:10	LOGGED BY:	DATE: TIME: COOLER TEMP.

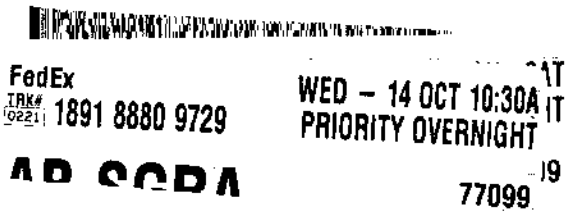
PRESERVATION KEY: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7- 4 Degrees C 8-9035 9-Other : Non-Preserve, Zinc Acetate

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

ALTAMIRA-US, LLC

Cooler 44381 1431
Temp 0.2°C CF0





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

u5538

CUSTODY SEAL

Date: 10/12/20 Time: 19:30
Name:
Company:

Seal Broken By: SM
Date: 10/13/20

u5538 OCT 13 20 OCT 15 2020

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

u5538

CUSTODY SEAL

Date: 10/12/20 Time: 19:30
Name:
Company:

Seal Broken By: SM
Date: 10/13/20

Must Deliver Next Business Day
Time and Tempature Sensitive!

ALS

u5538

ORIGIN ID:SGRA (918) 794-7828
HEATHER TIFFANY
ALTAMIRA
2670 TRENTON ROAD

NORMAN, OK 73069
UNITED STATES US

SHIP DATE: 30SEP20
ACTWGT: 1.00 LB MAN
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: MNA WELLS-BO 74117-RJ

RMA:

FedEx
Express

E

RETURNS MON - SAT

FedEx
TRK# 0221 1891 8880 9339

TUE - 13 OCT 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH

ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887 46486	CUSTODY SEAL Date: 10/8/20 Time: 1100 Name: Company:	Seal Broken By: [illegible] Date: 10/09/20

46486

Must Deliver Next Business Day
Time and Tempature Sensitive!

46486

ORIGIN ID:SGRA (918) 794 7828
HEATHER TIFFANY
ALTAMIRA
2670 TRENTON ROAD

NORMAN, OK 73069
UNITED STATES US

SHIP DATE: [illegible]
ACTWGT: [illegible]
CAD: [illegible]
DIMS: 26x14x14 IN

TO CLIENT SERVICES
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530 - 5656
REF: ASSESSMENT MONITORING -- B074116 -- RJ

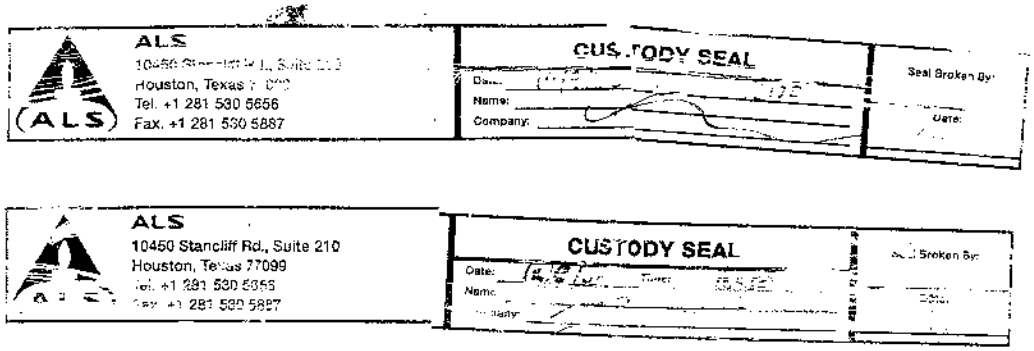
FedEx Express
E

FedEx
TRK# 3891 8080 9740

FRI - 09 OCT AA
PRIORITY OVERNIGHT

AA SGRA

77099
TX-US
IAH



ALS
Houston, Texas
Tel. +1 281 530 5656
Fax. +1 281 530 5887

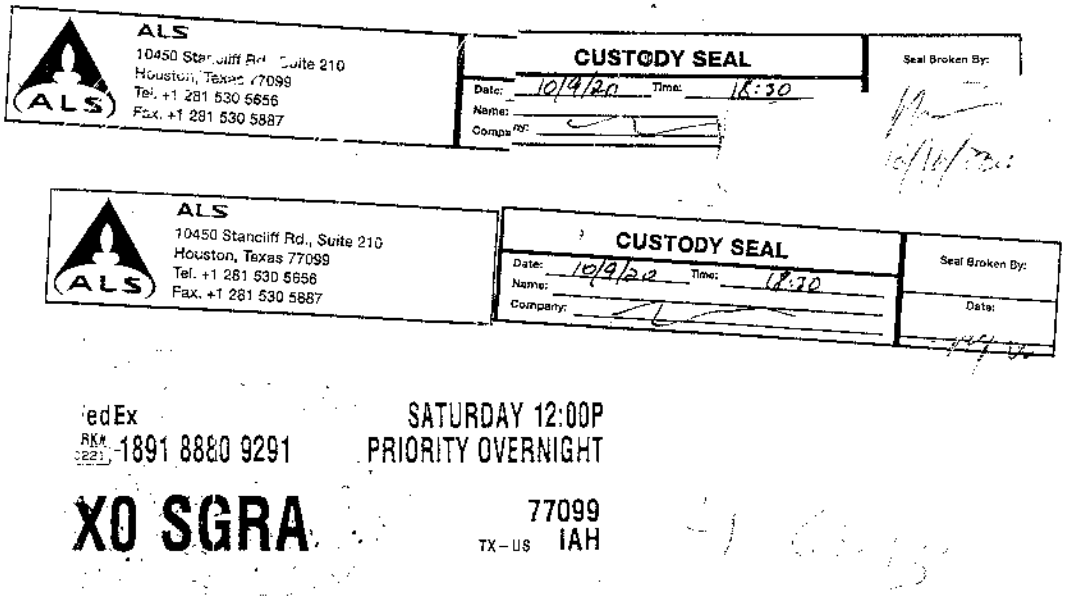
CUSTODY SEAL
Date:
Name:
Company:
Seal Broken By:
Date:

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

CUSTODY SEAL
Date:
Name:
Company:
Seal Broken By:
Date:

FedEx
1891 8880 9751

SATURDAY 12:00P
PRIORITY OVERNIGHT



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

CUSTODY SEAL
Date: 10/9/12 Time: 18:30
Name:
Company:
Seal Broken By:

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

CUSTODY SEAL
Date: 10/9/12 Time: 18:30
Name:
Company:
Seal Broken By:
Date:

FedEx
1891 8880 9291

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO SGRA

77099
TX-US IAH

ENVIRO CLEAN SERVICES, LLC

44381 (918) 794-7828

Signature _____

Date 10/14/20 10/15/20

44381 OCT

ENVIRO CLEAN SERVICES, LLC

44381 (918) 794-7828

Signature _____ 10/15/20

Date 10/14/20

ORIGIN ID:OKCA (405) 701-5058
LAURA WORTHEN LODES
ENVIRO CLEAN SERVICES
3700 WEST ROBINSON
SUITE #200
NORMAN, OK 73072
UNITED STATES US

SHIP DATE: 14OCT20
ACTWGT: 50.00 LB
CAD: 105487411/INET4280
DIMS: 26x15x15 IN

BILL SENDER

TO RJ MODASHIA
ALS LABORATORY
10415 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099

44381

(405) 618-2021 REF WFEE1500C0 / 3000
INV WFEE1500C0 / 3000
PO WFEE1500C0 / 3000 DEPT WFEE1500C0 / 3000

FedEx Ship Manager - Print Your Label(s)

FedEx Express

THU - 15 OCT 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7717 9466 4550

77099
IAH

AB SGRA

TX-US

Thursday, October 29, 2020

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

Re: ALS Workorder: 2010263
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

One water sample was received from ALS Environmental, on 10/10/2020. The sample was scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010263

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

All acceptance criteria were met.

Radium-226:
The samples were prepared and analyzed according to the current revision of EPA 903.1.

All acceptance criteria were met.

ADDRESS 225 Commerce Drive, Fort Collins Colorado 80524 USA | PHONE +1 970 490 1511 | FAX +1 970 490 1522

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010263
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14898

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-15A	2010263-1		WATER	08-Oct-20	11:08

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

Subcontract Chain of Custody

SAMPLING STATE: Oklahoma **COC ID:** 14898

SUBCONTRACT TO: #2010263 #

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-01**	**MW-15A**	**Water**	**08 Oct 2020 11:08**
	Report as combined 226 & 228			19 Oct 2020
	Report as combined 226 & 228			19 Oct 2020

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

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

Relinquished By: J. Modashia Date/Time: 10/09/20 18:00

Received By: el Date/Time: 0920 OCT 10 2020

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS_TX Workorder No: 2010263

Project Manager: JRK Initials: ERL Date: 10.10.20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO	
14. Were the samples shipped on ice?		☑ YES	☐ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used*: ☐ #3 ☑ #5	☐ Rad Only	☑ YES	☐ NO	

Cooler #: 1

Temperature (°C): 0.3

# of custody seals on cooler: 2

External mR/hr reading: 10

Background mR/hr reading: 12

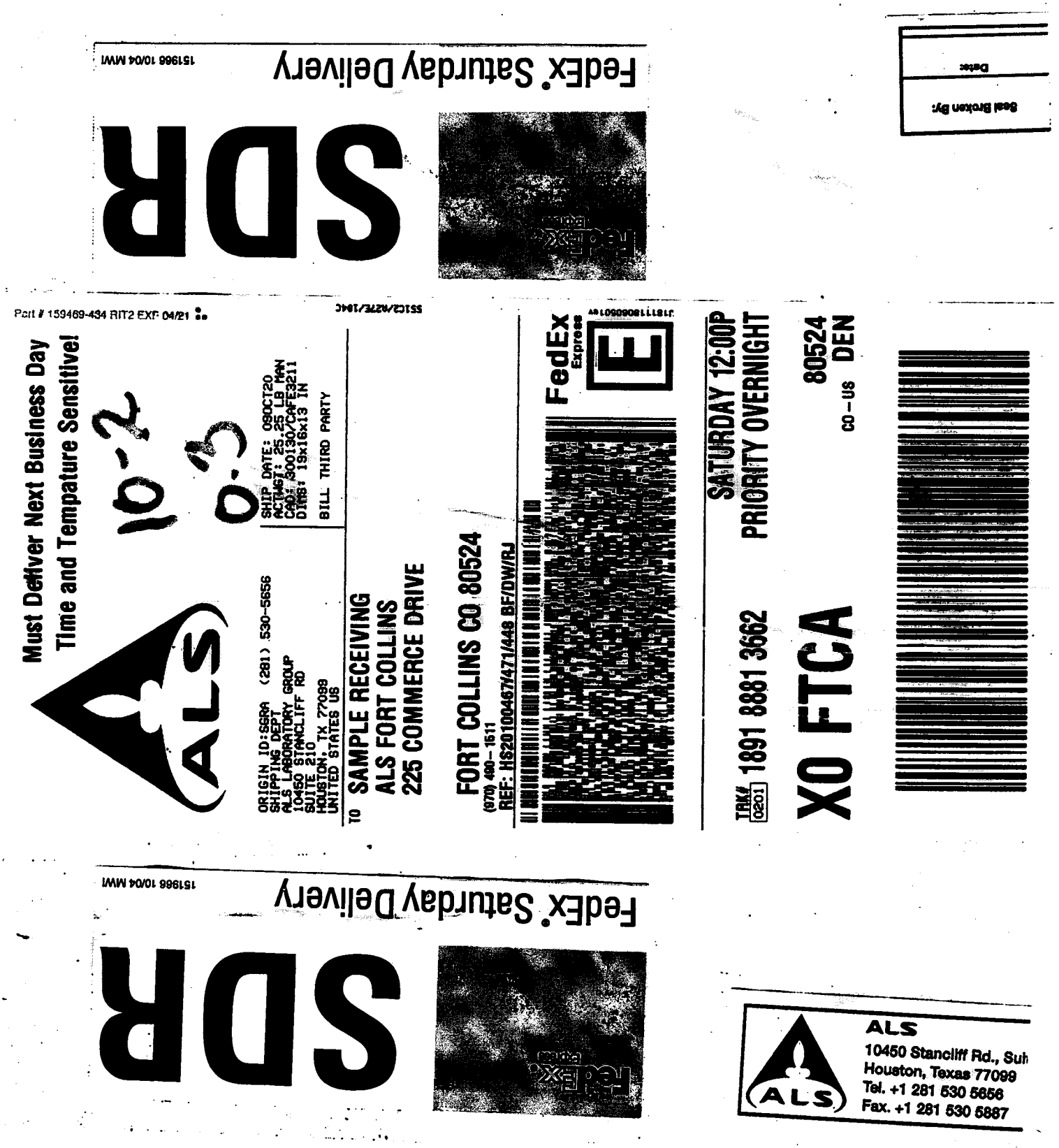
Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☑ N/A ☐ YES ☐ NO

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

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

If applicable, was the client contacted? ☐ YES ☒ NA Contact Name: Date:

Project Manager Signature / Date: 10.12.20



Client:	ALS Environmental	**Date:**	*29-Oct-20*
Project:	HS20100471	**Work Order:**	2010263
Sample ID:	MW-15A	**Lab ID:**	2010263-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 11:08	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/19/2020**	PrepBy: **TRW**
Ra-226	ND (+/- 0.29)	U	0.44	pCi/l	NA	10/28/2020 10:59
Carr: BARIUM	*98.2*		*40-110*	*%REC*	DL = NA	10/28/2020 10:59
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/13/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.72 (+/- 0)**		**0.73**		NA	10/28/2020 08:05
Ra-228	**1.72 (+/- 0.57)**		**0.73**	**pCi/l**	NA	10/20/2020 08:05
Carr: BARIUM	*98.9*		*40-110*	*%REC*	DL = NA	10/20/2020 08:05

SAMPLE SUMMARY REPORT

Client:	ALS Environmental	**Date:**	*29-Oct-20*
Project:	HS20100471	**Work Order:**	2010263
Sample ID:	MW-15A	**Lab ID:**	2010263-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 11:08	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.

- Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.

G - Sample density differs by more than 15% of LCS density.

D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

ALS -- Fort Collins

Client: ALS Environmental
Work Order: 2010263
Project: HS20100471

Date: *10/29/2020 3:40:*

QC BATCH REPORT

Batch ID: **RE201019-1-1** Instrument ID: **Alpha Scin** Method: **Radium-226 by Radon Emanation**

DUP Sample ID: **2010091-19** Units: **pCi/l** Analysis Date: **10/28/2020 10:38**

Client ID: **MW-58** Run ID: **RE201019-1A** Prep Date: **10/19/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	ND	0.39						0.43	0.37	2.13	U
Carr: BARIUM	15700		15900		98.8	40-110		15500			

LCS Sample ID: **RE201019-1** Units: **pCi/l** Analysis Date: **10/28/2020 11:16**

Client ID: Run ID: **RE201019-1A** Prep Date: **10/19/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	38.6 (+/- 9.7)	0.4	46.8		82.5	67-120					P,Y1
Carr: BARIUM	15800		15700		101	40-110					Y1

MB Sample ID: **RE201019-1** Units: **pCi/l** Analysis Date: **10/28/2020 11:16**

Client ID: Run ID: **RE201019-1A** Prep Date: **10/19/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	ND	0.29									U
Carr: BARIUM	15680		15700		99.9	40-110					

The following samples were analyzed in this batch: 2010263-1

Client: ALS Environmental
Work Order: 2010263
Project: HS20100471

QC BATCH REPORT

Batch ID: **RA201013-1-1** Instrument ID: **GASPROP** Method: **Radium-228 Analysis by GFPC**

DUP Sample ID: **2010240-6** Units: **ug** Analysis Date: **10/20/2020 08:05**
Client ID: **MW-11** Run ID: **RA201013-1A** Prep Date: **10/13/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	32870		34190		96.1	40-110		33070			
Ra-228	1.13 (+/- 0.48)	0.79						1.03	0.15	2.13	

LCS Sample ID: **RA201013-1** Units: **ug** Analysis Date: **10/20/2020 08:05**
Client ID: Run ID: **RA201013-1A** Prep Date: **10/13/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	33940		34180		99.3	40-110					
Ra-228	22.8 (+/- 5.3)	0.7	23.53		97.1	70-130					P

MB Sample ID: **RA201013-1** Units: **ug** Analysis Date: **10/20/2020 08:05**
Client ID: Run ID: **RA201013-1A** Prep Date: **10/13/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	33620		34170		98.4	40-110					
Ra-228	ND	0.69									U

The following samples were analyzed in this batch: 2010263-1

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010282
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Four water samples were received from ALS Environmental, on 10/13/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010282

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ADDRESS 225 Commerce Drive, Fort Collins Colorado 80524 USA | PHONE +1 970 490 1511 | FAX +1 970 490 1522

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010282
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14903

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-3	2010282-1		WATER	08-Oct-20	16:39
MW-7S	2010282-2		WATER	09-Oct-20	11:38
MW-14A	2010282-3		WATER	08-Oct-20	15:16
DUP 3	2010282-4		WATER	08-Oct-20	16:39

2010282

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14903**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-02**	**MW-3**	**Water**	**08 Oct 2020 16:39**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
2.	**HS20100471-03**	**MW-7S**	**Water**	**09 Oct 2020 11:38**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
3.	**HS20100471-04**	**MW-14A**	**Water**	**08 Oct 2020 15:16**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
4.	**HS20100471-05**	**DUP 3**	**Water**	**08 Oct 2020 16:39**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14903**

Relinquished By: J. MALONE Date/Time: 10/12/20 18:00

Received By: Date/Time: 10/13/20 1050

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS Houston Workorder No: 2010282

Project Manager: JRK Initials: TM Date: 10/13/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO	
14. Were the samples shipped on ice?		☐ YES	☑ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used': ☐ #3 ☐ #5	☑ Rad Only	☐ YES	☑ NO	

Cooler #: 1

Temperature (°C): amb

# of custody seals on cooler: 2

External mR/hr reading: 11

Background mR/hr reading: 10

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

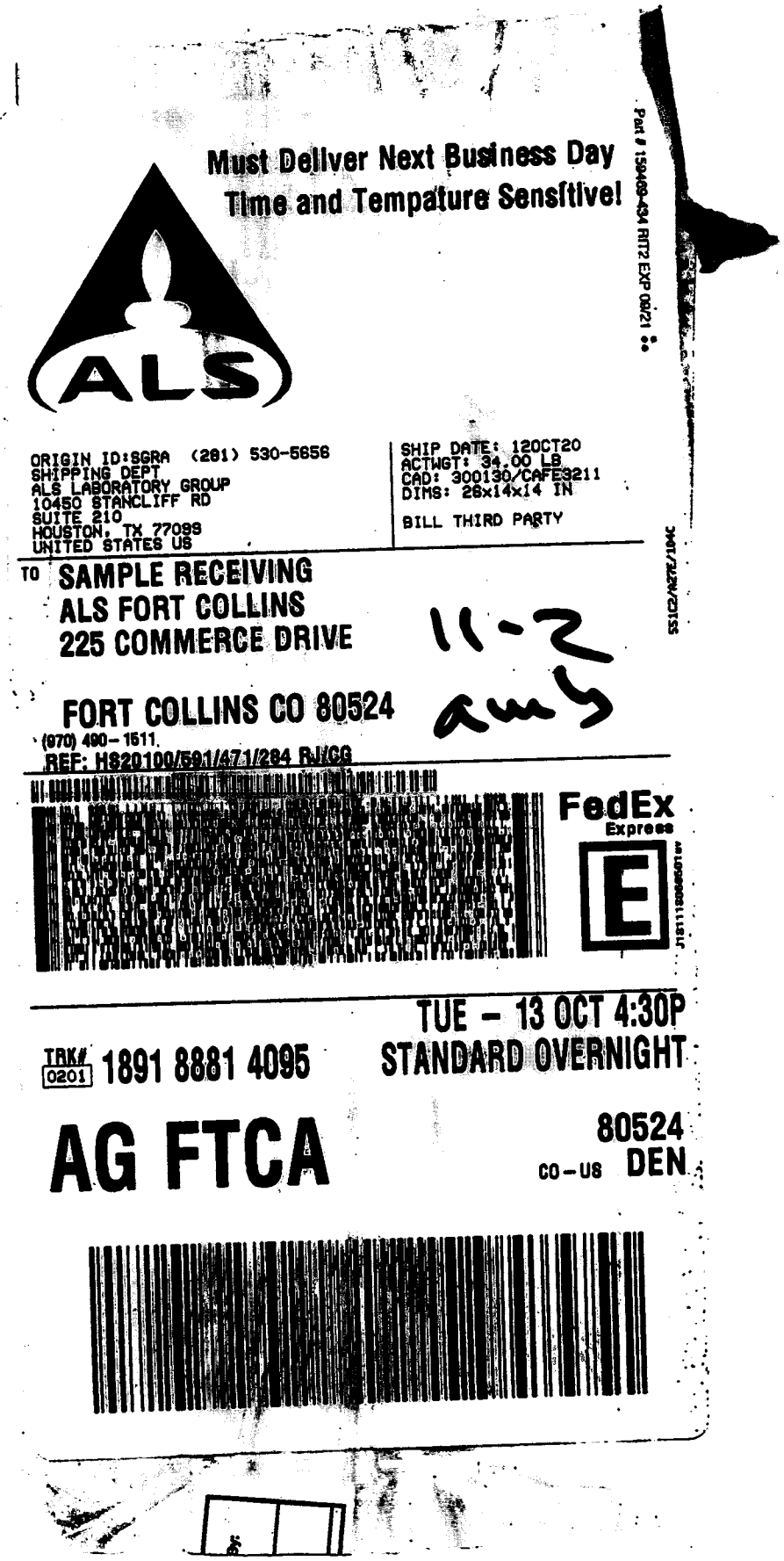
All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-13-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629



Must Deliver Next Business Day
Time and Tempature Sensitive!

Part # 159469-434 RITZ EXP 08/21

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 120CT20
ACTWGT: 34.00 LB
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS FORT COLLINS
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511
REF: HS20100/591/471/284 RJ/CG

11-2
amy

FedEx Express

TUE - 13 OCT 4:30P
STANDARD OVERNIGHT

TRK# 0201 1891 8881 4095

AG FTCA

80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-3	**Lab ID:**	2010282-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.35 (+/- 0.24)**		**0.27**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*97.1*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.65 (+/- 0)**		**0.8**		NA	11/9/2020 08:16
Ra-228	**1.3 (+/- 0.52)**		**0.8**	**pCi/l**	NA	10/26/2020 08:16
Carr: BARIUM	*91.8*		*40-110*	*%REC*	DL = NA	10/26/2020 08:16

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-7S	**Lab ID:**	2010282-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/9/2020 11:38	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.43 (+/- 0.24)**		**0.21**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*99.4*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.2 (+/- 0)**		**0.7**		NA	11/9/2020 11:22
Ra-228	**0.77 (+/- 0.4)**		**0.7**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*93.3*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-14A	**Lab ID:**	2010282-3
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 15:16	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.27)	Y1,U	0.35	pCi/l	NA	11/9/2020 16:08
Carr: BARIUM	*101*	Y1	*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.42 (+/- 0)**		**0.77**		NA	11/9/2020 11:22
Ra-228	**1.42 (+/- 0.53)**		**0.77**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*92.9*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	DUP 3	**Lab ID:**	2010282-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.24 (+/- 0.19)**		**0.2**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*98.9*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.7 (+/- 0)**		**0.74**		NA	11/9/2020 11:22
Ra-228	**1.46 (+/- 0.52)**		**0.74**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*92.7*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	DUP 3	**Lab ID:**	2010282-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch:

2010282-1 2010282-2 2010282-3
2010282-4 2010255-4

QC BATCH REPORT

Batch ID: **RA201016-1-2** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32880		34740		94.6	40-110					
Ra-228	22.7 (+/- 5.3)	0.8	23.5		96.4	70-130					P

LCSD Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32520		34740		93.6	40-110		32880			
Ra-228	23.5 (+/- 5.5)	0.8	23.5		100	70-130		22.7	0.1	2.1	P

MB Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32210		34740		92.7	40-110					
Ra-228	ND	0.84									U

The following samples were analyzed in this batch: 2010282-1 2010282-2 2010282-3 2010282-4

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010312
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Four water samples were received from ALS Environmental, on 10/14/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010312

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ADDRESS 225 Commerce Drive, Fort Collins Colorado 80524 USA | PHONE +1 970 490 1511 | FAX +1 970 490 1522

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010312
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14921

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-5S	2010312-1		WATER	12-Oct-20	9:41
MW-19S	2010312-2		WATER	12-Oct-20	13:46
MW-20	2010312-3		WATER	12-Oct-20	11:24
MW-21	2010312-4		WATER	12-Oct-20	12:29

2010312

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14921**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-06**	**MW-5S**	**Water**	**12 Oct 2020 09:41**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
2.	**HS20100471-07**	**MW-19S**	**Water**	**12 Oct 2020 13:46**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
3.	**HS20100471-08**	**MW-20**	**Water**	**12 Oct 2020 11:24**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
4.	**HS20100471-09**	**MW-21**	**Water**	**12 Oct 2020 12:29**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14921**

Relinquished By: J. McCraw Date/Time: 10/13/20 18:00

Received By: Date/Time: 10/14/20 1005

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS Houston Workorder No: 2010312

Project Manager: JRK Initials: TM Date: 10/14/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO			
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*			
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*			
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*			
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*			
6. Are short-hold samples present?		☐ YES	☑ NO			
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*			
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*			
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*			
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*			
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*			
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO			
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO			
14. Were the samples shipped on ice?		☑ YES	☐ NO			
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used+: ☐ #3 ☑ #5	☐ Rad Only	☑ YES	☐ NO			

Cooler #:	1
Temperature (°C):	0.6
# of custody seals on cooler:	2
External mR/hr reading:	10
Background mR/hr reading:	11

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

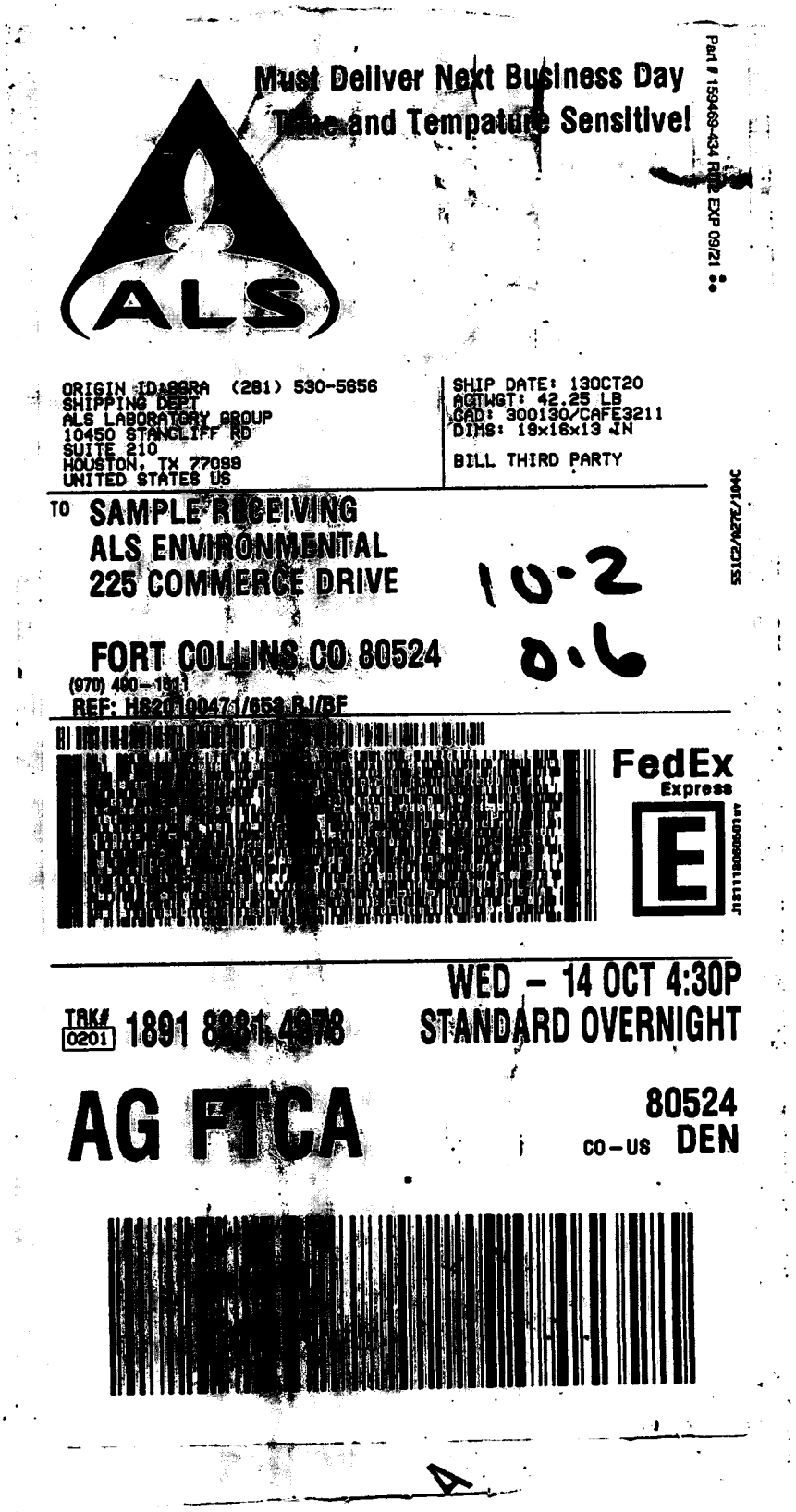
All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-14-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629



A

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-5S	**Lab ID:**	2010312-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 09:41	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.34 (+/- 0.24)**		**0.3**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*96.4*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.15 (+/- 0)**		**0.67**		NA	11/9/2020 08:05
Ra-228	**0.81 (+/- 0.39)**		**0.67**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*94.7*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-19S	**Lab ID:**	2010312-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 13:46	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.15)	U	0.31	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*97.5*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.73		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.36)	U	0.73	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*95*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-20	**Lab ID:**	2010312-3
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 11:24	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.3 (+/- 0.22)**	Y1	**0.28**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*100*	Y1	*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.33 (+/- 0)**		**0.72**		NA	11/9/2020 08:05
Ra-228	**1.03 (+/- 0.44)**		**0.72**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*98*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-21	**Lab ID:**	2010312-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 12:29	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.48 (+/- 0.24)**		**0.16**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*99.1*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**2.38 (+/- 0)**		**0.69**		NA	11/9/2020 08:05
Ra-228	**1.9 (+/- 0.59)**		**0.69**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*96.6*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-21	**Lab ID:**	2010312-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 12:29	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch: 2010312-1 2010312-2 2010312-3 2010312-4

Client: ALS Environmental
Work Order: 2010312
Project: HS20100471

QC BATCH REPORT

Batch ID: **RA201023-1-3** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**
Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31770		32840		96.7	40-110					
Ra-228	21.8 (+/- 5.1)	0.7	23.42		93.2	70-130					P

MB Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**
Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31690		32840		96.5	40-110					
Ra-228	ND	0.7									U

The following samples were analyzed in this batch:

2010312-1	2010312-2	2010312-3
2010312-4	2010255-4	

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010338
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Two water samples were received from ALS Environmental, on 10/15/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010338

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ADDRESS 225 Commerce Drive, Fort Collins Colorado 80524 USA | PHONE +1 970 490 1511 | FAX +1 970 490 1522

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010338
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14929

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-17	2010338-1		WATER	12-Oct-20	16:48
MW-18	2010338-2		WATER	12-Oct-20	14:44

2010 338

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14929**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-10**	**MW-17**	**Water**	**12 Oct 2020 16:48**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020
2.	**HS20100471-11**	**MW-18**	**Water**	**12 Oct 2020 14:44**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020

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

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

Relinquished By: J. [illegible] Date/Time: 10/14/20 18:30

Received By: [signature] Date/Time: 10/15/20 9:30

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS TX Workorder No: 2010338

Project Manager: JRK Initials: JE Date: 10/15/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☐ N/A	☑ YES	☐ NO	
14. Were the samples shipped on ice?		☐ YES	☑ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used*: ☐ #3 ☑ #5	☑ Rad Only	☐ YES	☑ NO	

Cooler #: 1

Temperature (°C): amb

# of custody seals on cooler: 2

External mR/hr reading: 10

Background mR/hr reading: 11

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

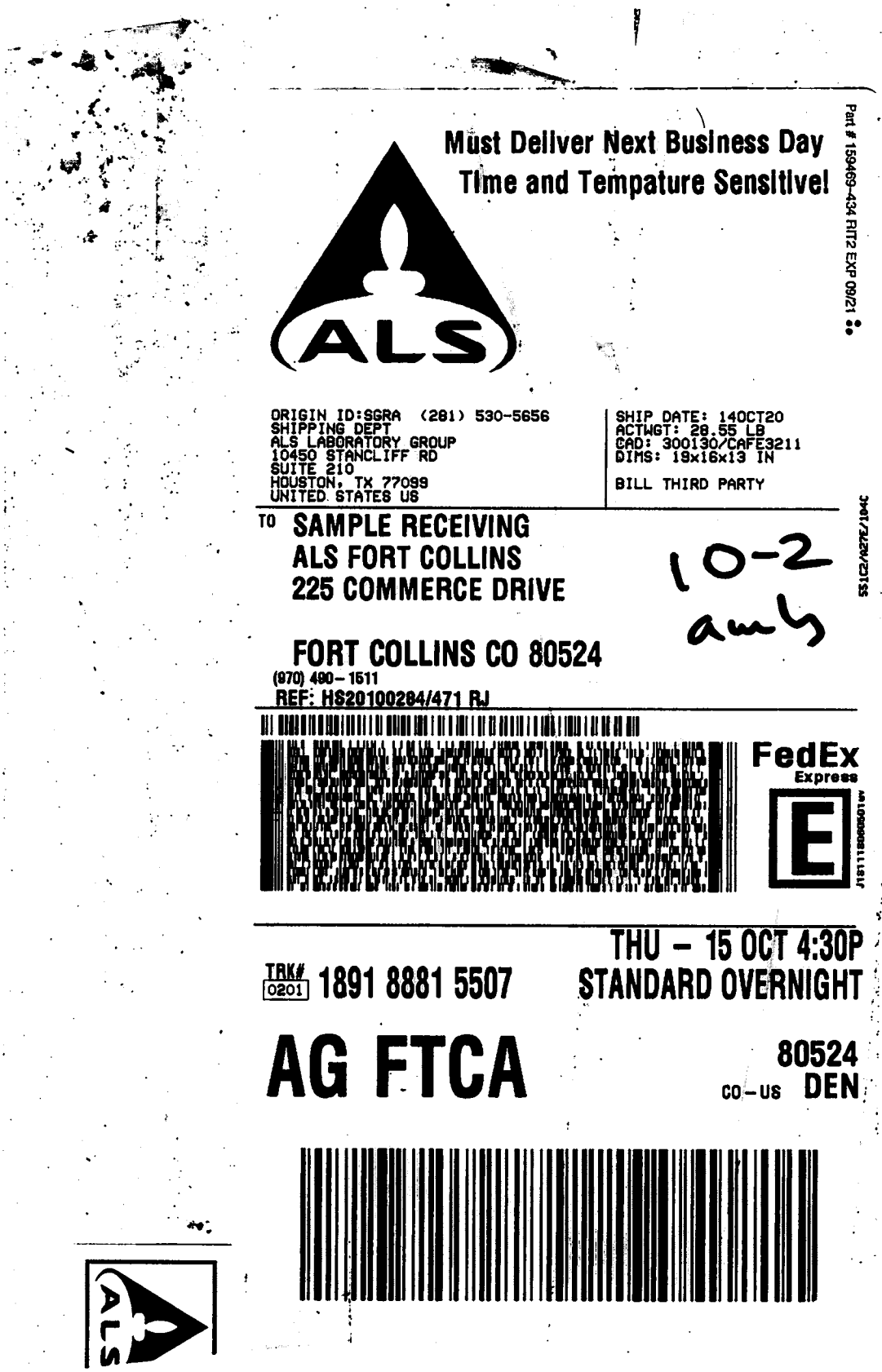
All client bottle ID's vs ALS lab ID's double-checked by: JE

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-15-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629



Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-17	**Lab ID:**	2010338-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 16:48	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.12)	U	0.17	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*99.2*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.69		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.33)	U	0.69	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*99.1*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-18	**Lab ID:**	2010338-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 14:44	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**		Prep Date: **10/29/2020**		PrepBy: **RGS**
Ra-226	ND (+/- 0.19)	U	0.32	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*97.7*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**		Prep Date: **10/23/2020**		PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.71		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.36)	U	0.71	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*96.9*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-18	**Lab ID:**	2010338-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 14:44	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch: 2010338-1 2010338-2

QC BATCH REPORT

Batch ID: **RA201023-1-3** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**
Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31770		32840		96.7	40-110					
Ra-228	21.8 (+/- 5.1)	0.7	23.42		93.2	70-130					P

MB Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**
Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31690		32840		96.5	40-110					
Ra-228	ND	0.7									U

The following samples were analyzed in this batch: 2010338-1 2010338-2

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010377
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Two water samples were received from ALS Environmental, on 10/16/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010377

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ADDRESS 225 Commerce Drive, Fort Collins Colorado 80524 USA | PHONE +1 970 490 1511 | FAX +1 970 490 1522

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010377
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14944

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-13	2010377-1		WATER	14-Oct-20	9:41
MW-16	2010377-2		WATER	13-Oct-20	16:22

2010377

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14944**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20100471-12**	**MW-13**	**Water**	**14 Oct 2020 09:41**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020
2.	**HS20100471-13**	**MW-16**	**Water**	**13 Oct 2020 16:22**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020

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

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

Relinquished By: J. Modashia Date/Time: 10/15/20 18:00

Received By: Michelle Date/Time: 10-16-20 10:00

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS TX Workorder No: 2010377

Project Manager: JK Initials: MH Date: 10/16/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☐ NONE	☑ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO	
14. Were the samples shipped on ice?		☑ YES	☐ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used*: ☐ #3 ☑ #5	☐ Rad Only	☑ YES	☐ NO	

Cooler #: 1

Temperature (°C): 0.4

# of custody seals on cooler: 2

External mR/hr reading: 11

Background mR/hr reading: 9

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

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

If applicable, was the client contacted? ☐ YES ☐ N/A Contact Name Date:

Project Manager Signature / Date: 10/16/20

2010377

Must Deliver Next Business Day
Time and Tempature Sensitive!

Part # 159469-434 0112 EXP 09/21

11-2-24

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP [illegible]: 160C720
ACTWGT: 25.65 LB
CAD: 300130/CAFE32
DIMS: 19x16x13 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS FORT COLLINS
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511
REF: HS20100471/807 RJ

FedEx Express

FRI - 16 OCT 4:30P
STANDARD OVERNIGHT

TRK# 0201 1891 8881 5871

AG FTCA

80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-13	**Lab ID:**	2010377-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/14/2020 09:41	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.41 (+/- 0.25)**		**0.26**	**pCi/l**	NA	11/9/2020 17:01
Carr: BARIUM	*99.2*		*40-110*	*%REC*	DL = NA	11/9/2020 17:01
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/29/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**2.67 (+/- 0)**		**0.74**		NA	11/9/2020 07:48
Ra-228	**2.26 (+/- 0.68)**		**0.74**	**pCi/l**	NA	11/6/2020 07:48
Carr: BARIUM	*94.6*		*40-110*	*%REC*	DL = NA	11/6/2020 07:48

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-16	**Lab ID:**	2010377-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/13/2020 16:22	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**		Prep Date: **10/29/2020**		PrepBy: **RGS**
Ra-226	ND (+/- 0.18)	U	0.24	pCi/l	NA	11/9/2020 17:01
Carr: BARIUM	*99.4*		*40-110*	*%REC*	DL = NA	11/9/2020 17:01
Radium-228 Analysis by GFPC		**SOP 724**		Prep Date: **10/29/2020**		PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.35 (+/- 0)**		**0.79**		NA	11/9/2020 07:48
Ra-228	**1.35 (+/- 0.52)**		**0.79**	**pCi/l**	NA	11/6/2020 07:48
Carr: BARIUM	*96.7*		*40-110*	*%REC*	DL = NA	11/6/2020 07:48

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-16	**Lab ID:**	2010377-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/13/2020 16:22	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

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

Inorganics:

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

Organics:

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

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch: 2010377-1 2010377-2

QC BATCH REPORT

Batch ID: **RA201029-1-2** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32430		32610		99.5	40-110					
Ra-228	21.7 (+/- 5.1)	0.7	23.4		93	70-130					P

LCSD Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31850		32600		97.7	40-110		32430			
Ra-228	23.6 (+/- 5.5)	0.7	23.4		101	70-130		21.7	0.3	2.1	P

MB Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31760		32600		97.4	40-110					
Ra-228	ND	0.76									U

The following samples were analyzed in this batch: 2010377-1 2010377-2

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010282
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Four water samples were received from ALS Environmental, on 10/13/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010282

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010282
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14903

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-3	2010282-1		WATER	08-Oct-20	16:39
MW-7S	2010282-2		WATER	09-Oct-20	11:38
MW-14A	2010282-3		WATER	08-Oct-20	15:16
DUP 3	2010282-4		WATER	08-Oct-20	16:39

2010282

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14903**

SUBCONTRACT TO:

ALS Environmental, Fort Collins
225 Commerce Drive
Fort Collins, CO 80524 **Phone:** +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-02**	**MW-3**	**Water**	**08 Oct 2020 16:39**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
2.	**HS20100471-03**	**MW-7S**	**Water**	**09 Oct 2020 11:38**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
3.	**HS20100471-04**	**MW-14A**	**Water**	**08 Oct 2020 15:16**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020
4.	**HS20100471-05**	**DUP 3**	**Water**	**08 Oct 2020 16:39**
	Report as combined 226 & 228			21 Oct 2020
	Report as combined 226 & 228			21 Oct 2020

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14903**

Relinquished By: J. MACKEY Date/Time: 10/12/20 18:00

Received By: Date/Time: 10/13/20 1050

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS Houston Workorder No: 2010282

Project Manager: JRK Initials: TM Date: 10/13/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO	
14. Were the samples shipped on ice?		☐ YES	☑ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used': ☐ #3 ☐ #5	☑ Rad Only	☐ YES	☑ NO	

Cooler #: 1

Temperature (°C): amb

# of custody seals on cooler: 2

External mR/hr reading: 11

Background mR/hr reading: 10

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

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

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-13-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629

Must Deliver Next Business Day
Time and Tempature Sensitive!

Part # 159469-434 RITZ EXP 08/21

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 120CT20
ACTWGT: 34.00 LB
CAD: 300130/CAFE3211
DIMS: 26x14x14 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS FORT COLLINS
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511
REF: HS20100/591/471/284 RJ/CG

11-2
amy

FedEx Express

TUE - 13 OCT 4:30P
STANDARD OVERNIGHT

TRK# 0201 1891 8881 4095

AG FTCA

80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-3	**Lab ID:**	2010282-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.35 (+/- 0.24)**		**0.27**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*97.1*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.65 (+/- 0)**		**0.8**		NA	11/9/2020 08:16
Ra-228	**1.3 (+/- 0.52)**		**0.8**	**pCi/l**	NA	10/26/2020 08:16
Carr: BARIUM	*91.8*		*40-110*	*%REC*	DL = NA	10/26/2020 08:16

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-7S	**Lab ID:**	2010282-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/9/2020 11:38	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.43 (+/- 0.24)**		**0.21**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*99.4*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.2 (+/- 0)**		**0.7**		NA	11/9/2020 11:22
Ra-228	**0.77 (+/- 0.4)**		**0.7**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*93.3*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	MW-14A	**Lab ID:**	2010282-3
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 15:16	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.27)	Y1,U	0.35	pCi/l	NA	11/9/2020 16:08
Carr: BARIUM	*101*	Y1	*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.42 (+/- 0)**		**0.77**		NA	11/9/2020 11:22
Ra-228	**1.42 (+/- 0.53)**		**0.77**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*92.9*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	DUP 3	**Lab ID:**	2010282-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.24 (+/- 0.19)**		**0.2**	**pCi/l**	NA	11/9/2020 16:08
Carr: BARIUM	*98.9*		*40-110*	*%REC*	DL = NA	11/9/2020 16:08
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/16/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.7 (+/- 0)**		**0.74**		NA	11/9/2020 11:22
Ra-228	**1.46 (+/- 0.52)**		**0.74**	**pCi/l**	NA	10/23/2020 11:22
Carr: BARIUM	*92.7*		*40-110*	*%REC*	DL = NA	10/23/2020 11:22

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010282
Sample ID:	DUP 3	**Lab ID:**	2010282-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/8/2020 16:39	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch:

2010282-1	2010282-2	2010282-3
2010282-4	2010255-4	

QC BATCH REPORT

Batch ID: **RA201016-1-2** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32880		34740		94.6	40-110					
Ra-228	22.7 (+/- 5.3)	0.8	23.5		96.4	70-130					P

LCSD Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32520		34740		93.6	40-110		32880			
Ra-228	23.5 (+/- 5.5)	0.8	23.5		100	70-130		22.7	0.1	2.1	P

MB Sample ID: **RA201016-1** Units: **ug** Analysis Date: **10/23/2020 11:22**
Client ID: Run ID: **RA201016-1A** Prep Date: **10/16/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32210		34740		92.7	40-110					
Ra-228	ND	0.84									U

The following samples were analyzed in this batch: 2010282-1 2010282-2 2010282-3 2010282-4

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010312
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Four water samples were received from ALS Environmental, on 10/14/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010312

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010312
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14921

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-5S	2010312-1		WATER	12-Oct-20	9:41
MW-19S	2010312-2		WATER	12-Oct-20	13:46
MW-20	2010312-3		WATER	12-Oct-20	11:24
MW-21	2010312-4		WATER	12-Oct-20	12:29

2010312

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14921**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
	ANALYSIS REQUESTED			DUE DATE
1.	**HS20100471-06**	**MW-5S**	**Water**	**12 Oct 2020 09:41**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
2.	**HS20100471-07**	**MW-19S**	**Water**	**12 Oct 2020 13:46**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
3.	**HS20100471-08**	**MW-20**	**Water**	**12 Oct 2020 11:24**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020
4.	**HS20100471-09**	**MW-21**	**Water**	**12 Oct 2020 12:29**
	Report as combined 226 & 228			23 Oct 2020
	Report as combined 226 & 228			23 Oct 2020

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

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14921**

Relinquished By: J. McCarthy Date/Time: 10/13/20 18:00

Received By: [signature] Date/Time: 10/14/20 1005

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS Houston Workorder No: 2010312

Project Manager: JRK Initials: TM Date: 10/14/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO			
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*			
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*			
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*			
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*			
6. Are short-hold samples present?		☐ YES	☑ NO			
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*			
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*			
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*			
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*			
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*			
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO			
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO			
14. Were the samples shipped on ice?		☑ YES	☐ NO			
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used+: ☐ #3 ☑ #5	☐ Rad Only	☑ YES	☐ NO			

Cooler #:	1
Temperature (°C):	0.6
# of custody seals on cooler:	2
External mR/hr reading:	10
Background mR/hr reading:	11

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

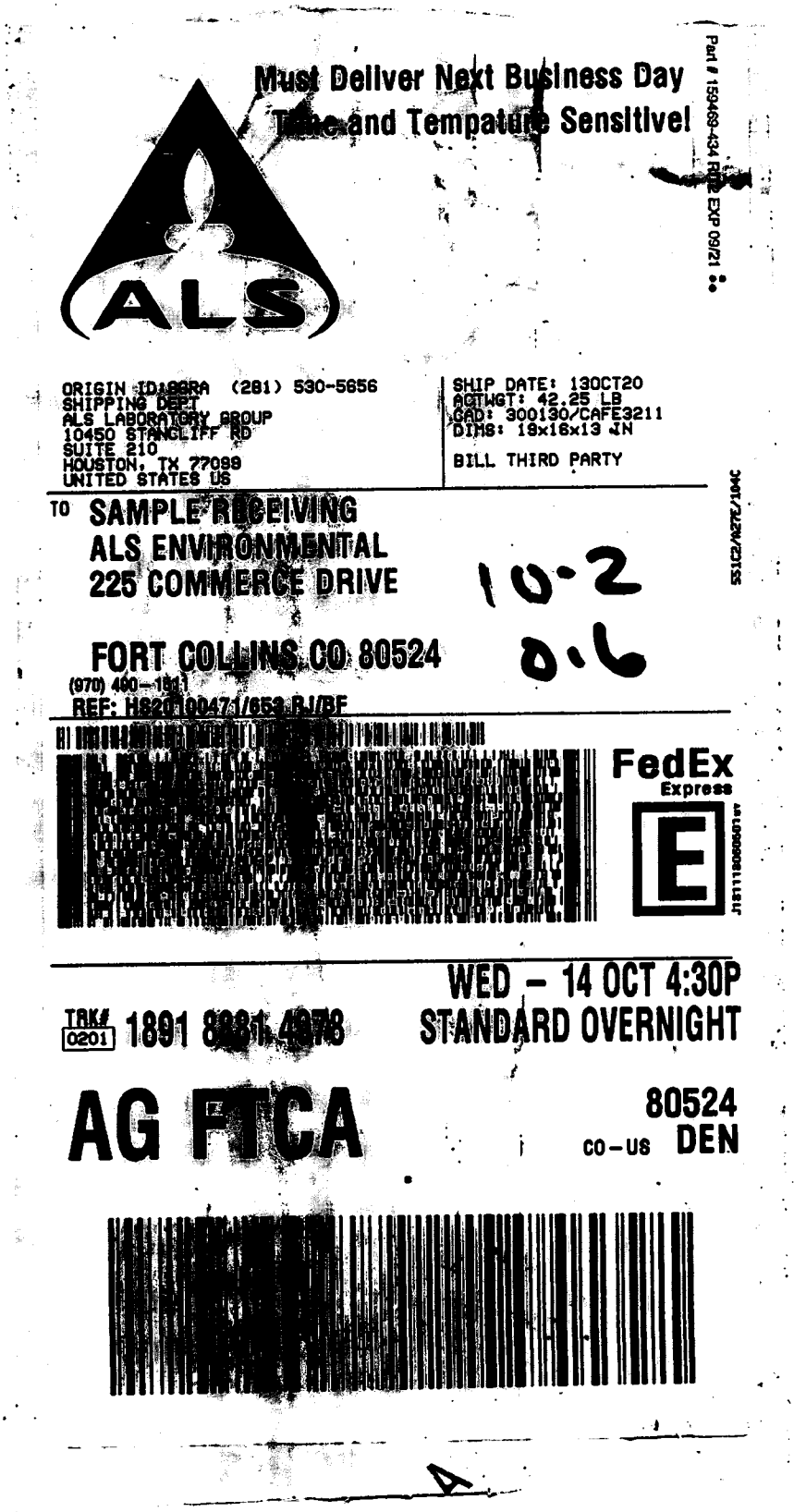
All client bottle ID's vs ALS lab ID's double-checked by: TM

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-14-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629


Must Deliver Next Business Day
Time and Tempature Sensitive!
Part # 159469-434 Rev EXP 09/21
ALS
ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANGLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US
SHIP DATE: 13OCT20
ACTWGT: 42.25 LB
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN
BILL THIRD PARTY
TO SAMPLE RECEIVING
ALS ENVIRONMENTAL
225 COMMERCE DRIVE
FORT COLLINS CO 80524
(970) 490-1511
REF: HS20 0047.1/653 RJ/BF
10.2
0.6
FedEx
Express
WED - 14 OCT 4:30P
STANDARD OVERNIGHT
TRK# 0201 1891 8281 4078
AG FTCA
80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-5S	**Lab ID:**	2010312-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 09:41	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.34 (+/- 0.24)**		**0.3**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*96.4*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.15 (+/- 0)**		**0.67**		NA	11/9/2020 08:05
Ra-228	**0.81 (+/- 0.39)**		**0.67**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*94.7*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-19S	**Lab ID:**	2010312-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 13:46	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.15)	U	0.31	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*97.5*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.73		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.36)	U	0.73	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*95*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-20	**Lab ID:**	2010312-3
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 11:24	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.3 (+/- 0.22)**	Y1	**0.28**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*100*	Y1	*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.33 (+/- 0)**		**0.72**		NA	11/9/2020 08:05
Ra-228	**1.03 (+/- 0.44)**		**0.72**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*98*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-21	**Lab ID:**	2010312-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 12:29	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.48 (+/- 0.24)**		**0.16**	**pCi/l**	NA	11/9/2020 16:42
Carr: BARIUM	*99.1*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**2.38 (+/- 0)**		**0.69**		NA	11/9/2020 08:05
Ra-228	**1.9 (+/- 0.59)**		**0.69**	**pCi/l**	NA	11/3/2020 08:05
Carr: BARIUM	*96.6*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010312
Sample ID:	MW-21	**Lab ID:**	2010312-4
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 12:29	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch:

2010312-1 2010312-2 2010312-3
2010312-4

Client: ALS Environmental
Work Order: 2010312
Project: HS20100471

QC BATCH REPORT

Batch ID: **RA201023-1-3** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**

Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31770		32840		96.7	40-110					
Ra-228	21.8 (+/- 5.1)	0.7	23.42		93.2	70-130					P

MB Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**

Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31690		32840		96.5	40-110					
Ra-228	ND	0.7									U

The following samples were analyzed in this batch:

2010312-1	2010312-2	2010312-3
2010312-4	2010255-4	

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010338
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Two water samples were received from ALS Environmental, on 10/15/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010338

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010338
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14929

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-17	2010338-1		WATER	12-Oct-20	16:48
MW-18	2010338-2		WATER	12-Oct-20	14:44

2010 338

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID:** **14929**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company:	ALS Houston
Contact:	Accounts Payable
Address:	10450 Stancliff Rd, Ste 210
Phone:	+1 281 530 5656
Reference:	HS20100471
TSR:	Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20100471-10**	**MW-17**	**Water**	**12 Oct 2020 16:48**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020
2.	**HS20100471-11**	**MW-18**	**Water**	**12 Oct 2020 14:44**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020

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

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

Relinquished By: J. [illegible] Date/Time: 10/14/20 18:30

Received By: [signature] Date/Time: 10/15/20 9:30

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS TX Workorder No: 2010338

Project Manager: JRK Initials: JE Date: 10/15/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☑ NONE	☐ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☐ N/A	☑ YES	☐ NO	
14. Were the samples shipped on ice?		☐ YES	☑ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used*: ☐ #3 ☑ #5	☑ Rad Only	☐ YES	☑ NO	

Cooler #: 1

Temperature (°C): amb

# of custody seals on cooler: 2

External mR/hr reading: 10

Background mR/hr reading: 11

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

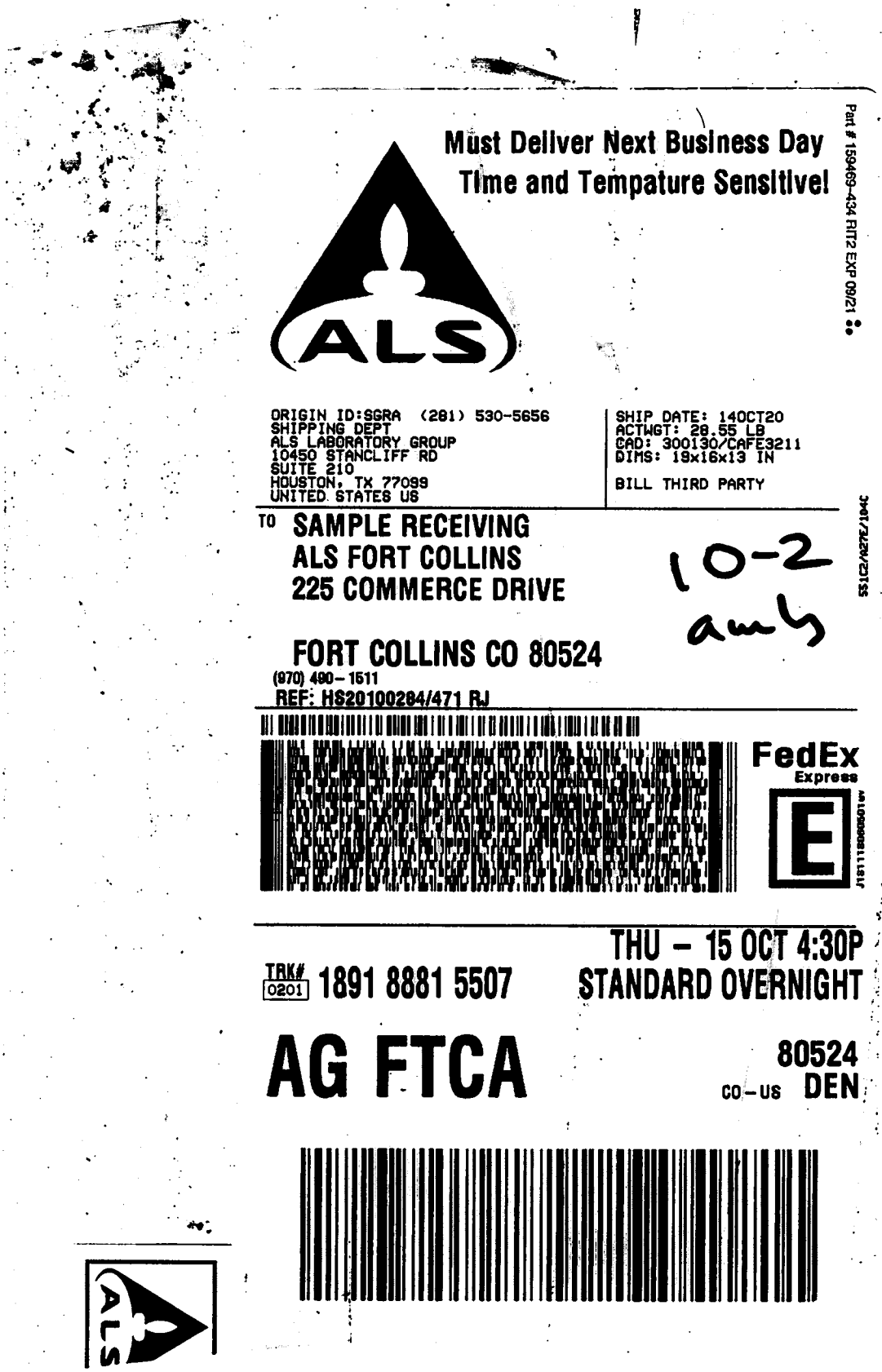
All client bottle ID's vs ALS lab ID's double-checked by: JE

If applicable, was the client contacted? ☐ YES ☒ N/A Contact Name Date:

Project Manager Signature / Date: 10-15-20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629



Must Deliver Next Business Day
Time and Tempature Sensitive!

Part # 159469-434 RIT2 EXP 09/21

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 14OCT20
ACTWGT: 28.55 LB
CAD: 300130/CAFE3211
DIMS: 19x16x13 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS FORT COLLINS
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1611
REF: HS20100284/471 RJ

10-2
amy

FedEx Express

TRK# 0201 1891 8881 5507

THU - 15 OCT 4:30P
STANDARD OVERNIGHT

AG FTCA

80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-17	**Lab ID:**	2010338-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 16:48	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1			**SOP 783**		Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.12)	U	0.17	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*99.2*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC			**SOP 724**		Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.69		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.33)	U	0.69	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*99.1*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-18	**Lab ID:**	2010338-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 14:44	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.19)	U	0.32	pCi/l	NA	11/9/2020 16:42
Carr: BARIUM	*97.7*		*40-110*	*%REC*	DL = NA	11/9/2020 16:42
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/23/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.71		NA	11/9/2020 08:05
Ra-228	ND (+/- 0.36)	U	0.71	pCi/l	NA	11/3/2020 08:05
Carr: BARIUM	*96.9*		*40-110*	*%REC*	DL = NA	11/3/2020 08:05

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010338
Sample ID:	MW-18	**Lab ID:**	2010338-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/12/2020 14:44	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch: 2010338-1 2010338-2

QC BATCH REPORT

Batch ID: **RA201023-1-3** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**

Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31770		32840		96.7	40-110					
Ra-228	21.8 (+/- 5.1)	0.7	23.42		93.2	70-130					P

MB Sample ID: **RA201023-1** Units: **ug** Analysis Date: **11/3/2020 08:05**

Client ID: Run ID: **RA201023-1A** Prep Date: **10/23/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31690		32840		96.5	40-110					
Ra-228	ND	0.7									U

The following samples were analyzed in this batch: 2010338-1 2010338-2

Wednesday, November 11, 2020

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

Re: ALS Workorder: 2010377
Project Name:
Project Number: HS20100471

Dear Mr. Modashia:

Two water samples were received from ALS Environmental, on 10/16/2020. The samples were scheduled for the following analyses:

Radium-226
Radium-228

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

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

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

Sincerely,

ALS Environmental
For Jeff R. Kujawa
Project Manager

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

ALS Environmental – Fort Collins	
Accreditation Body	License or Certification Number
AIHA	214884
Alaska (AK)	UST-086
Alaska (AK)	CO01099
Arizona (AZ)	AZ0742
California (CA)	06251CA
Colorado (CO)	CO01099
Florida (FL)	E87914
Idaho (ID)	CO01099
Kansas (KS)	E-10381
Kentucky (KY)	90137
PJ-LA (DoD ELAP/ISO 170250)	95377
Louisiana (LA)	05057
Maryland (MD)	285
Missouri (MO)	175
Nebraska(NE)	NE-OS-24-13
Nevada (NV)	CO000782008A
New York (NY)	12036
North Dakota (ND)	R-057
Oklahoma (OK)	1301
Pennsylvania (PA)	68-03116
Tennessee (TN)	2976
Texas (TX)	T104704241
Utah (UT)	CO01099
Washington (WA)	C1280

2010377

Radium-228:

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

All acceptance criteria were met.

Radium-226:

The samples were prepared and analyzed according to EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2010377
Client Name: ALS Environmental
Client Project Name:
Client Project Number: HS20100471
Client PO Number: 10-14944

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-13	2010377-1		WATER	14-Oct-20	9:41
MW-16	2010377-2		WATER	13-Oct-20	16:22

2010377

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

Subcontract Chain of Custody

SAMPLING STATE: **Oklahoma** **COC ID: 14944**

SUBCONTRACT TO:

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

Phone: +1 970 490 1511

CUSTOMER INFORMATION:

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

INVOICE INFORMATION:

Company: ALS Houston
Contact: Accounts Payable
Address: 10450 Stancliff Rd, Ste 210
Phone: +1 281 530 5656
Reference: HS20100471
TSR: Danielle Winnings

	LAB SAMPLE ID / ANALYSIS REQUESTED	CLIENT SAMPLE ID	MATRIX	COLLECT DATE / DUE DATE
1.	**HS20100471-12**	**MW-13**	**Water**	**14 Oct 2020 09:41**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020
2.	**HS20100471-13**	**MW-16**	**Water**	**13 Oct 2020 16:22**
	Report as combined 226 & 228			26 Oct 2020
	Report as combined 226 & 228			26 Oct 2020

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

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

Relinquished By: J. [signature] Date/Time: 10/15/20 18:00

Received By: [signature] Date/Time: 10-16-20 10:00

Cooler ID(s): Temperature(s):

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client Name/ID: ALS TX Workorder No: 2010377

Project Manager: JK Initials: MH Date: 10/16/20

1. Are airbills / shipping documents present and/or removable?	☐ Drop Off	☑ YES	☐ NO	
2. Are custody seals on **shipping** containers intact?	☐ NONE	☑ YES	☐ NO*	
3. Are custody seals on **sample** containers intact?	☐ NONE	☑ YES	☐ NO*	
4. Is there a COC (chain-of-custody) present?		☑ YES	☐ NO*	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		☑ YES	☐ NO*	
6. Are short-hold samples present?		☐ YES	☑ NO	
7. Are all samples within holding times for the requested analyses?		☑ YES	☐ NO*	
8. Were all sample containers received intact? (not broken or leaking)		☑ YES	☐ NO*	
9. Is there sufficient sample for the requested analyses?		☑ YES	☐ NO*	
10. Are samples in proper containers for requested analyses? (form 250, *Sample Handling Guidelines*)		☑ YES	☐ NO*	
11. Are all aqueous samples preserved correctly, if required?	☐ N/A	☑ YES	☐ NO*	
12. Were unpreserved samples pH checked, if required?	☑ N/A	☐ YES	☐ NO	
13. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm in diameter?	☑ N/A	☐ YES	☐ NO	
14. Were the samples shipped on ice?		☑ YES	☐ NO	
15. Were cooler temperatures measured at 0.1 - 6.0°C? IR gun used*: ☐ #3 ☑ #5	☐ Rad Only	☑ YES	☐ NO	

Cooler #: 1

Temperature (°C): 0.4

# of custody seals on cooler: 2

External mR/hr reading: 11

Background mR/hr reading: 9

Were external mR/hr readings ≤ two times background and within DOT acceptance criteria? (If no, see Form 008) ☐ N/A ☑ YES ☐ NO

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

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

If applicable, was the client contacted? ☐ YES ☐ N/A Contact Name Date:

Project Manager Signature / Date: 10/16/20

Form 201r30.xls
(06/04/2020)

+IR Gun #3, VWR SN 170647571
+IR Gun #5, VWR SN 192272629

2010377

Must Deliver Next Business Day
Time and Tempature Sensitive!

Part # 159469-434 0112 EXP 09/21

11-2-24

ORIGIN ID:SGRA (281) 530-5656
SHIPPING DEPT
ALS LABORATORY GROUP
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP [illegible]: 160C120
ACTWGT: 25.65 LB
CAD: 300130/CAFE32
DIMS: 19x16x13 IN

BILL THIRD PARTY

TO SAMPLE RECEIVING
ALS FORT COLLINS
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511
REF: HS20100471/807 RJ

FedEx Express

FRI - 16 OCT 4:30P
STANDARD OVERNIGHT

TRK# 0201 1891 8881 5871

AG FTCA

80524
CO-US DEN

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-13	**Lab ID:**	2010377-1
Legal Location:		**Matrix:**	WATER
Collection Date:	10/14/2020 09:41	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	**0.41 (+/- 0.25)**		**0.26**	**pCi/l**	NA	11/9/2020 17:01
Carr: BARIUM	*99.2*		*40-110*	*%REC*	DL = NA	11/9/2020 17:01
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/29/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**2.67 (+/- 0)**		**0.74**		NA	11/9/2020 07:48
Ra-228	**2.26 (+/- 0.68)**		**0.74**	**pCi/l**	NA	11/6/2020 07:48
Carr: BARIUM	*94.6*		*40-110*	*%REC*	DL = NA	11/6/2020 07:48

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-16	**Lab ID:**	2010377-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/13/2020 16:22	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1		**SOP 783**			Prep Date: **10/29/2020**	PrepBy: **RGS**
Ra-226	ND (+/- 0.18)	U	0.24	pCi/l	NA	11/9/2020 17:01
Carr: BARIUM	*99.4*		*40-110*	*%REC*	DL = NA	11/9/2020 17:01
Radium-228 Analysis by GFPC		**SOP 724**			Prep Date: **10/29/2020**	PrepBy: **RGS**
COMBINED RADIUM (226+228)	**1.35 (+/- 0)**		**0.79**		NA	11/9/2020 07:48
Ra-228	**1.35 (+/- 0.52)**		**0.79**	**pCi/l**	NA	11/6/2020 07:48
Carr: BARIUM	*96.7*		*40-110*	*%REC*	DL = NA	11/6/2020 07:48

Client:	ALS Environmental	**Date:**	*11-Nov-20*
Project:	HS20100471	**Work Order:**	2010377
Sample ID:	MW-16	**Lab ID:**	2010377-2
Legal Location:		**Matrix:**	WATER
Collection Date:	10/13/2020 16:22	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

- "Report Limit" is the MDC

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

QC BATCH REPORT

Batch ID: **RE201029-1-3** Instrument ID **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 17:17**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	37.4 (+/- 9.4)	0.3	46.8		80	67-120					P
Carr: BARIUM	16090		16220		99.2	40-110					

MB Sample ID: **RE201029-1** Units: **pCi/l** Analysis Date: **11/9/2020 16:08**

Client ID: Run ID: **RE201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Ra-226	ND	0.16									Y1,U
Carr: BARIUM	16460		16220		101	40-110					Y1

The following samples were analyzed in this batch: 2010377-1 2010377-2

QC BATCH REPORT

Batch ID: **RA201029-1-2** Instrument ID **GASPROP** Method: **Radium-228 Analysis by GFPC**

LCS Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	32430		32610		99.5	40-110					
Ra-228	21.7 (+/- 5.1)	0.7	23.4		93	70-130					P

LCSD Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31850		32600		97.7	40-110		32430			
Ra-228	23.6 (+/- 5.5)	0.7	23.4		101	70-130		21.7	0.3	2.1	P

MB Sample ID: **RA201029-1** Units: **ug** Analysis Date: **11/6/2020 07:48**
Client ID: Run ID: **RA201029-1A** Prep Date: **10/29/2020** DF: **NA**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref	DER	DER Limit	Qual
Carr: BARIUM	31760		32600		97.4	40-110					
Ra-228	ND	0.76									U

The following samples were analyzed in this batch: 2010377-1 2010377-2

ATTACHMENT B

DATA SUMMARY TABLES
LANDFILL CCR UNIT

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-3 25-May-16	MW-3 27-Jul-16	MW-3 28-Sep-16	MW-3 1-Dec-16	MW-3 31-Jan-17	MW-3 5-Apr-17	MW-3 6-Jun-17	DUP 2 6-Jun-17	MW-3 8-Aug-17	MW-3 17-May-18	MW-3 (Shallow) 1-Aug-18	MW-3 (Deep) 9-Aug-18
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	1.09	1.17	1.10	1.70	1.28 J*	0.880	1.15	1.20	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	0.300	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	7.0	7.0	7.3	7.4	7.3
Sulfate	250	1,396	Not Applicable	mg/L	1,350	1,230	1,230	1,220	1,140	1,250	1,230	1,250	1,070	1,170	1,190	1,170
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2,030	2,060	1,960	1,990	2,080	2,090	2,150	2,200	2,090	2,180	2,150	2,160
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<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 (ACL)	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	0.300	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	0.140	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 (ACL)	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				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	---	---	---	---	---	---
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				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	ºC	21.87	24.83	22.37	18.81	20.98	17.20	23.35	---	22.32	23.87	26.50	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	6.70	6.75
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,342	2,807	2,804	2,810	2,804	2,805	2,767	---	2,762	2,758	2,880	2,864
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.49	0.26	0.09	0.20	0.30	0.59	0.36	---	0.09	0.70	2.10	3.76
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-27.5	-74.7	-92.1	-245.4	-171.1	241.7	-45.0	---	46.8	-46.3	-11.5	25.0
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
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	24.56	25.92	26.26	26.91	25.63	26.02	26.40	---	24.88	25.20	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	33.53	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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	DUP 3
				Sample Date:	4-Oct-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20	
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	
Boron	None	1.896	Not Applicable	mg/L	1.06	1.05	1.00	1.39	1.06	1.16	0.903	0.946
Calcium	None	670.30	Not Applicable	mg/L	206	198	225	225	213	214	183	181
Chloride	250	18.51	Not Applicable	mg/L	13.8	13.4	16.3	13.0	13.7	13.7	13.8	13.8
Fluoride	4	0.6359	Not Applicable	mg/L	0.318	0.373	0.520	0.396 J	0.319	0.203	0.328	0.337
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.7	7.19	---	7.64	7.07	6.90	7.36	7.50
Sulfate	250	1,396	Not Applicable	mg/L	1,270	1,220	1,450	1,150	1,210	1240	1,320	1,290
Total Dissolved Solids	500	2,191	Not Applicable	mg/L	2,130	2,110	2,060	2,100	2,110	2,150	2,020	2,010
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	
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
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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00954 J	0.0101	0.011	0.0128	0.0112	0.0130	0.0159	0.0158
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
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005	<0.000400	<0.000400	<0.000400	0.00142 J	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000162 J	<0.000200	0.000208 J	0.000232 J	0.000259 J	0.000289 J	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.318	0.373	0.520	0.396 J	0.319	0.203	0.328	0.337
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.147 J	0.152	0.148	0.148	0.136	0.145	0.118	0.122
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	0.000613 J	0.000622 J	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
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
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
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
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5.00	<5.00	---	<5.00	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	318	---	---	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	8.17	8.40	---	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	388.0	429	---	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2520.0	2730.0	---	---	---	---	2,980	2,970
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5	
Temperature	None	Not Applicable	Not Applicable	°C	23.10	13.10	---	18.31	24.37	23.62	23.8	---
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.95	6.93	---	7.31	7.18	7.15	7.22	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,814	2,699	---	2,778	2,797	2,576	2,670	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.59	0.70	---	1.26	6.86	3.85	0.35	---
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-37.0	-12.0	---	-54.6	-34.4	-24.6	-102.6	---
Turbidity	None	Not Applicable	Not Applicable	NTU	4.23	1.80	1.04	0.57	1.14	3.36	1.30	---
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	24.55	---	27.57	26.04	24.35	25.28	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Boron	None	1.896	Not Applicable	mg/L	3.56	4.37	3.02	3.20	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	25.0	18.7	26.1
Fluoride	4	0.6359	Not Applicable	mg/L	1.84 J*	1.91	1.60	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.50
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	8.0
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	1,230	1,180	1,200	1,210	1,070	1,060	948	1,010	980	950	880	1,150
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00202 J	0.00132 J	0.00187 J	0.00209	0.00147 J	0.00117 J	0.00115 J	<0.00200	0.00564 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0267	0.0165	0.0212	0.0192	0.0144	0.0177	0.0183	0.0230	0.0186	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	<0.00250	0.000419 U	<0.000100	<0.000500	<0.000100	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	0.000111 J	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	0.000839 J	<0.000500	<0.00500	U (0.000520)	0.000761 J	<0.000500	<0.00250	U (0.00143)	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000833 J	<0.000100	0.000214 J	<0.00100	0.00109 J	0.000123 J	<0.000100	0.00122 J	0.000338 J	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.84 J*	1.91	1.60	1.59	1.32	1.39	1.06	1.07	1.17	1.38	1.02	1.50
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	---	0.0500	0.0486
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.00880 J	0.00781	0.00745	0.00606	0.0118 J*	0.00722	0.00828	0.00980 J	0.00737	---	0.00497	0.00387
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00150	<0.00150	<0.000300	0.000938 J	0.00234 J	<0.000300	0.000449 J	<0.00150	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.25 +/- 0.479	0.738 +/- 0.354	1.55 +/- 0.466	0.863 +/- 0.332	1.06 +/- 0.305	0.597 +/- 0.264	1.71 +/- 0.392	0.684 +/- 0.239	0.827 +/- 0.274	---	---	---
Other Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as 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	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.19	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	4.14	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	307	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE	VERIFICATION SAMPLE
Temperature	None	Not Applicable	Not Applicable	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.	7.90	---	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	1,899	---	1,919	1,905	1,734	1,764	1,615	1,718	1,760	1,516	1,483	1,843
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	---	-157.0	-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	37.0	---	4.09	2.45	0.83	1.98	1.52	1.01	1.14	0.41	0.02	1.12
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	6.83	---	7.64	8.82	9.36	9.36	9.10	9.10	7.47	9.69	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	20.80	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	2-Oct-18	10-Jan-19		23-Apr-19	2-Oct-19	18-Jun-20	12-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Boron	None	1.896	Not Applicable	mg/L	2.82	2.73	1.82	1.87	2.49	0.811	2.57
Calcium	None	670.30	Not Applicable	mg/L	25	27.7	27.8	57.0	22.5	68.2	19.6
Chloride	250	18.51	Not Applicable	mg/L	28.3	30.5	29.9	21.8	25.1	19.5	25.6
Fluoride	4	0.6359	Not Applicable	mg/L	1.54	1.54	1.50	1.11	1.54	0.824	1.51
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
Sulfate	250	626	Not Applicable	mg/L	447	457	472	394	434	408	485
Total Dissolved Solids	500	1,334	Not Applicable	mg/L	1,140	1,120	1,210	1,090	1,180	904	1,080
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
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
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.6610	0.000737 J	0.000765 J	0.000523 J	0.000736 J	<0.000400	0.000453 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0120	0.0120	0.0116	0.0141	0.0093	0.0210	0.00787
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005	<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
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.832	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.54	1.54	1.50	1.11	1.54	0.824	1.51
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<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	0.0490	0.0546
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0001	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.005	0.00512	0.00335 J	0.00485 J	0.00315 J	0.00361 J	0.00244 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003	<0.0011	<0.0011	<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
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
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	<5.00	---	<5.00	<5.00	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	412	444
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	12.6	---	---	---	15	20.5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	427	---	---	---	397	424
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.012
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.029(J)	<0.012
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	5.73	5.58	---	---	5.16	4.38
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00308(J)	0.00244 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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.49	4.27	---	---	3.48	3.94
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	257	---	---	277	335
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1,730	1870	---	---	---	---	1,960
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Temperature	None	Not Applicable	Not Applicable	°C	25.30	13.40	---	18.78	25.18	24.37	21.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.61	7.56	---	7.95	7.91	7.90	7.83
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,871	1,791	---	1,669	1,826	1,665	1,794
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.63	---	0.85	0.45	1.89	0.32
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-125.1	-30.9	---	19.7	-54.1	-48.2	168.1
Turbidity	None	Not Applicable	Not Applicable	NTU	3.30	4.51	1.27	1.16	0.94	2.88	1.97
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	7.11	---	12.41	11.54	10.06	18.58
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-7S 13-Dec-16	MW-7S 25-Jan-17	MW-7S 3-Feb-17	MW-7S 29-Mar-17	MW-7S 7-Apr-17	MW-7S 31-May-17	DUP 1 31-May-17	MW-7S 9-Jun-17	MW-7S 10-Aug-17	MW-7S 17-May-18	MW-7S (Shallow) 3-Aug-18	DUP1 (Shallow) 3-Aug-18	MW-7S (Deep) 10-Aug-18
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**		**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	3.80	0.891	0.557	<0.875	0.382	1.70	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	71.0	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	17.0
Fluoride	4	0.6359	Not Applicable	mg/L	1.02 J*	0.569	0.497	0.368	0.425	0.607	0.580	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	1,070	1,570	1,570	1,530	1,610	1,220	1,230	1,300	1,120	1,600	1,210	1,180	1,330
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**		**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	0.00634 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	0.0360	0.0335	0.0292	0.0346	0.0446	0.0308	---	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.00250	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	0.000115 J	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	U (0.00333)	0.000680 J	<0.00500	<0.000500	<0.000500	0.000731 J	<0.000500	<0.00250	U (0.000637)	---	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.00120 J	0.000648 J	<0.00100	0.000735 J	0.000439 J	0.000349 J	0.000333 J	0.00208 J	0.000696 J	---	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.02 J*	0.569	0.497	0.368	0.425	0.607	0.580	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	0.0700	0.0766 J	0.0609	---	0.0667	0.0656	0.0613
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000100	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.00500	0.00174 J	0.00160 J	<0.00500	0.00153 J	0.00186 J	0.00179 J	<0.00500	0.00171 J	---	0.00127 J	0.00128 J	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	U (0.00158)	<0.000300	0.00103 J	<0.00150	<0.000300	<0.000300	<0.000300	<0.00150	<0.000300	---	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.13 +/- 1.07 U	1.51 +/- 0.445	1.15 +/- 0.362	0.649 +/- 0.257	0.808 +/- 0.292	0.531 +/- 0.268	0.559 +/- 0.233	0.952 +/- 0.279	0.891 +/- 0.247	---	---	---	---
Other Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**		**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	---	---	---	---	---	---	---
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				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**		**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	ºC	16.83	14.77	15.53	18.89	16.83	21.67	---	19.85	24.46	19.60	29.34	---	25.21
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.88	7.17	7.20	7.18	7.22	7.27	---	7.19	7.22	7.40	6.92	---	7.22
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,614	2,010	2,029	2,216	2,205	1,925	---	1,929	1,680	2,101	1,822	---	1,932
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	-141.0	-164.4	-68.0	-104.0	-196.0	---	107.4	57.6	-58.8	-20.8	---	-30.7
Turbidity	None	Not Applicable	Not Applicable	NTU	81.8	33.7	3.34	1.12	8.31	1.82	---	1.12	3.45	2.29	3.37	---	1.76
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	4.04	3.69	4.50	3.41	3.41	5.45	---	5.45	5.81	5.50	---	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	18.84	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-7S 4-Oct-18	MW-7S 10-Jan-19		MW-7S 23-Apr-19	MW-7S 1-Oct-19	MW-7S 17-Jun-20	MW-7S 9-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Boron	None	1.896	Not Applicable	mg/L	2.70	0.839	1.12	0.848	1.990	1.33	2.29
Calcium	None	670.30	Not Applicable	mg/L	76	277	293	271	81	160	90.2
Chloride	250	18.51	Not Applicable	mg/L	16.1	18.7	19.7	19.7	16.3	18.0	16.9
Fluoride	4	0.6359	Not Applicable	mg/L	0.764	0.422	0.350	0.376	0.729	0.479	0.713
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.0	7.34	---	7.82	7.39	7.55	7.79
Sulfate	250	1,281	Not Applicable	mg/L	1,600	1200	1,110	1,040	633	970	759
Total Dissolved Solids	500	1,863	Not Applicable	mg/L	1,230	1,670	1,890	1,890	1,270	1,680	1,340
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0210	0.0371	0.0387	0.0372	0.0139	0.0244	0.0142
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.001	<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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000222 J	0.000270 J	0.000304 J	0.00153 J	<0.000200	0.000838 J	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.764	0.422	0.350	0.376	0.729	0.479	0.713
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<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	0.0650
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.01	0.00105 J	0.00107 J	0.000952 J	0.000798 J	0.00105 J	0.00106 J
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003	<0.0011	<0.0011	<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
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
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	5.0 J	---	<5.00	<5.00	---	8.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	264	315
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	222	---	---	---	264	315
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.28	0.111 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.034(J)	0.235
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.31	0.216
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	19.0	18.7	---	---	17.10	12.0
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000987(J)	0.00103 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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.67	4.79	---	---	5.33	5.10
Sodium	None	Not Applicable	Not Applicable	mg/L	---	274	294	---	---	313	272
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1610.0	2,240	---	---	---	---	2,110
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.48
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Temperature	None	Not Applicable	Not Applicable	°C	25.00	12.80	---	17.92	25.27	21.95	23.1
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.35	7.08	---	7.42	7.53	7.37	7.52
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,887	2,180	---	2,326	1,944	2,097	1,945
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.45	0.23	---	0.84	0.51	0.49	0.33
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-129.1	-6.3	---	-61.6	-133.8	-67.6	-90.1
Turbidity	None	Not Applicable	Not Applicable	NTU	8.01	0.67	0.64	0.71	0.88	2.49	0.85
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	3.49	---	7.99	5.77	6.83	6.39
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	----	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-13 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
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	1.38	1.40	1.10	1.36	1.41	1.43	2.00	1.34	1.24	1.30	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	13.0	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	7.0	6.9	6.9	7.0	7.5	7.7
Sulfate	250		Not Applicable	mg/L	1,570	1,680 J*	1,450	1,360	1,340	1,320	1,360	1,320	1,350 J*	1,320	1,250	1,440
Total Dissolved Solids	500		Not Applicable	mg/L	2,220	2,190	2,340	2,380 J	2,230	2,230	2,250	2,410	2,370	2,400	2,130	2,560
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<0.000500	<0.000500	<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	0.00570	---	---	---
Barium	2	Not Applicable		mg/L	0.0267	0.0263	0.0259	0.0198	0.0184	0.0182	0.0330	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	---	0.140	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	0.00970	0.00920	0.00557	0.0290	0.00444	0.00393	0.00345	0.00316	0.00286	---	0.00211	0.00220
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				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	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	---	---	---	---	---	---	---	---	---	---	---	---
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				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	ºC	21.68	---	21.60	21.30	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	2,507	---	2,939	2,622	3,002	2,967	3,006	2,990	2,920	2,887	3,010	3,213
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.41	---	0.28	0.09	0.35	0.33	0.30	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	0.50	1.38	1.93	0.87	0.28	0.02	0.02
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	25.13	---	25.46	26.07	25.48	26.86	25.95	26.11	26.05	25.64	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	39.46	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	4-Oct-18	11-Jan-19				25-Apr-19	3-Oct-19	17-Jun-20	14-Oct-20
Detection Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE)** UNFILTERED	FILTERED	FILTERED	UNFILTERED	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
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
Calcium	None		Not Applicable	mg/L	299	270	360	334	348	130	182	243	242
Chloride	250		Not Applicable	mg/L	12.8	15.1	13.7	13.8	13.1	28.2	17.3	13.8	13.9
Fluoride	4		Not Applicable	mg/L	0.285	0.342	0.990	0.310	0.444	0.652	0.422	0.231	0.257
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6	7.16	---	7.35	---	7.95	6.75	6.71	7.55
Sulfate	250		Not Applicable	mg/L	1,400	1,450	1,420	1,450	1,440	1,450	1,380	1,390	1,480
Total Dissolved Solids	500		Not Applicable	mg/L	2,350	2,350	2,220	2,270	2,260	2,590	2,350	2,450	2,360
Assessment Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE)** UNFILTERED	FILTERED	FILTERED	UNFILTERED	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
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
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
Barium	2	Not Applicable		mg/L	0.0196 J	0.0140	0.0164	0.0152	0.0150	0.0146	0.0114	0.0116	0.0107
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
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
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
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
Fluoride	4	Not Applicable		mg/L	0.285	0.342	0.990	0.310	0.444	0.652	0.422	0.231	0.257
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
Lithium	None	Not Applicable		mg/L	0.174 J	0.170	0.194	0.181	0.176	0.131	0.139	0.156	0.146
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
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
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
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
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
Other Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE)** UNFILTERED	FILTERED	FILTERED	UNFILTERED	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5	---	<5.00	6.00 J	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	<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	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	27.0	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
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	2570.0	3,090	---	2,960	---	---	---	---	3,280
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE)** UNFILTERED	FILTERED	FILTERED	UNFILTERED	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Temperature	None	Not Applicable	Not Applicable	°C	25.70	12.40	---	---	---	20.41	27.00	21.69	21.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.41	7.39	---	---	---	7.80	7.63	7.48	7.54
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,728	3,569	---	---	---	3,688	3,751	3,474	3,576
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.41	0.66	---	---	---	1.68	2.61	1.18	0.39
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	30.1	-8.8	---	---	---	-119.2	-95.1	-41.6	156.8
Turbidity	None	Not Applicable	Not Applicable	NTU	5.63	2.27	0.76	---	---	4.66	1.28	4.95	3.21
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	26.28	---	---	---	26.80	26.68	26.40	26.76
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-14A 25-May-16	MW-14A 23-Aug-16	MW-14A 28-Sep-16	MW-14A 30-Nov-16	MW-14A 31-Jan-17	DUP-2 31-Jan-17	MW-14A 30-Mar-17	MW-14A 2-Jun-17	MW-14A 9-Aug-17	MW-14A 17-May-18	MW-14A (Shallow) 1-Aug-18	MW-14A (Deep) 9-Aug-18	DUP1 (Deep) 9-Aug-18
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**	
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	0.920	0.920	0.894	1.02	0.984	1.04	1.01	1.03	0.764	1.14	0.925	1.80	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	15.0	16.0	14.7
Fluoride	4		Not Applicable	mg/L	0.170	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	7.0	6.9	7.4	7.3	7.1	7.2
Sulfate	250		Not Applicable	mg/L	2,020	1,670	1,730	1,600	1,590	1,610	1,710	1,440	1,420	1,790	1,580	1,600	1,510
Total Dissolved Solids	500		Not Applicable	mg/L	2,680	2,650	2,530	2,670	2,540	2,570	2,650	2,630	2,680	2,700	2,700	2,730	2,700
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**	
Antimony	0.006	Not Applicable	Background Well (Not Applicable)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---	---
Arsenic	0.010	Not Applicable		mg/L	0.00363	0.000714 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	0.0180	0.0190	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	0.170	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	0.160	0.164	0.235 J	0.147	0.160	---	0.149	0.328 J	0.134
Mercury	0.002	Not Applicable		mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---	---
Molybdenum	None	Not Applicable		mg/L	0.00477	0.00237	0.00524 J	<0.0100	0.00253	0.00238	<0.00500	0.00246	0.00223	---	<0.00100	<0.0100	0.00144 J
Selenium	0.05	Not Applicable		mg/L	<0.000600	0.000342 J	<0.000300	<0.00300	<0.000300	<0.000300	<0.00150	<0.000300	<0.000300	---	---	---	---
Thallium	0.002	Not Applicable		mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.60 +/- 0.364	1.62 +/- 0.381	1.90 +/- 0.394	2.02 +/- 0.498	1.39 +/- 0.366	1.38 +/- 0.385	1.73 +/- 0.346	1.49 +/- 0.351	1.51 +/- 0.326	---	---	---	---
Other Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**	
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	280	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	24.4	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	7.88	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	518	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**	
Temperature	None	Not Applicable	Not Applicable	ºC	20.93	22.4	21.96	17.51	17.76	---	18.84	19.83	21.41	22.90	25.60	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	7.10	6.82	6.47	---
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,781	3,345	3,365	3,434	3,350	---	3,390	3,201	3,186	3,301	3,415	3,410	---
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.34	0.39	0.06	0.25	0.68	---	0.26	0.34	0.10	0.24	252.00	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	0.40	0.71	0.37	1.53	0.02	---
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	14.72	16.45	15.70	15.85	14.59	---	15.98	15.35	15.03	15.92	---	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.34	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	17-May-18	11-Jan-19		24-Apr-19	2-Oct-19	17-Jun-20	8-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Boron	None	Background Well (Not Applicable)	Not Applicable	mg/L	1.18	1.42	1.16	1.23	0.98	0.907	0.882
Calcium	None		Not Applicable	mg/L	319	402	388	314	306	280	278
Chloride	250		Not Applicable	mg/L	14.2	14.0	14.8	13.5	14.2	13.3	14.9
Fluoride	4		Not Applicable	mg/L	0.281	0.269	0.375	0.377 J	0.286	0.230	0.254 J
pH (laboratory)	6.5 - 8.5		Not Applicable	S.U.	7.6	7.28	---	7.61	7.18	7.44	7.41
Sulfate	250		Not Applicable	mg/L	1,650	1,660	1,630	1,540	1,580	1650	1,770
Total Dissolved Solids	500		Not Applicable	mg/L	2,710	2,590	2,580	2,680	2,750	2,780	2,630
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
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
Arsenic	0.010	Not Applicable		mg/L	<0.004	<0.000400	<0.000400	<0.000400	<0.000400	<0.00040	<0.000400
Barium	2	Not Applicable		mg/L	0.0232	0.017	0.0173	0.0147	0.0118	0.0132	0.0114
Beryllium	0.004	Not Applicable		mg/L	<0.001	<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
Chromium	0.1	Not Applicable		mg/L	<0.005	<0.000400	<0.000400	<0.000400	0.00110 J	<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
Fluoride	4	Not Applicable		mg/L	0.281	0.269	0.375	0.377 J	0.286	0.230	0.254 J
Lead	0.015	Not Applicable		mg/L	<0.0001	<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
Mercury	0.002	Not Applicable		mg/L	<0.00015	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable		mg/L	<0.01	0.00170 J	0.00143 J	0.00104 J	0.000709 J	0.000760 J	<0.000600
Selenium	0.05	Not Applicable		mg/L	<0.0003	<0.0011	<0.0011	<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
Ra-226 + Ra-228 (combined)	5	Not Applicable		pCi/L	1.65 +/- 0.369	2.6	---	0.97	1.79	2.02	1.42
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5.00	5.00 J	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	327	327
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	321	---	---	---	327	327
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.771(J)	0.236
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	0.169
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.10	0.184
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	28.8	27.9	---	---	26.60	26.2
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.000768(J)	0.000621 J
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.087 J	0.478	0.509	1.64	<0.0300	0.316	<0.150
Potassium	None	Not Applicable	Not Applicable	mg/L	---	8.64	8.37	---	---	7.66	7.94
Sodium	None	Not Applicable	Not Applicable	mg/L	---	516	467	---	---	382	388
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3000.0	3,270	---	---	---	---	3,660
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Temperature	None	Not Applicable	Not Applicable	°C	23.10	16.20	---	17.75	24.4	21.00	23.7
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.93	6.90	---	7.28	7.1	7.04	7.10
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,491	3,251	---	3,386	3,435	3,107	3,394
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.31	0.19	---	1.45	0.62	0.79	0.59
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	13.1	19.5	---	4.6	27.7	-45.7	107.1
Turbidity	None	Not Applicable	Not Applicable	NTU	3.17	4.89	0.94	2.06	3.88	4.71	2.96
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	14.98	---	19.11	16.26	17.01	18.15
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-15A 26-May-16	MW-15A 23-Aug-16	MW-15A 28-Sep-16	MW-15A 30-Nov-16	DUP 1 30-Nov-16	MW-15A 30-Jan-17	MW-15A 30-Mar-17	MW-15A 1-Jun-17	MW-15A 9-Aug-17	MW-15A 24-May-18	MW-15A (Shallow) 1-Aug-18	MW-15A (Deep) 10-Aug-18
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	3.33	3.57	4.52	4.44	5.36	4.64	2.01	3.54	3.38	4.83	3.70	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	27.0	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	1.40	1.15	1.09	1.37	1.76	1.20	1.17
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	7.66	8.1	8.0	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	1,450	1,570	1,580	1,630	1,610	1,580	1,760	1,610	1,720	1,690	1,510	1,490
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2,470	2,420	2,410	2,540	2,530	2,460	2,640	2,600	2,710	2,660	2,490	2,610
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800	<0.00400	<0.000800	<0.00400	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00242	0.00218	0.00205	<0.00400	0.00407 J	0.00156 J	<0.00200	0.00218	0.00259 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0269	0.0338	0.0273	0.0260	0.0383	0.0255	0.0167	0.0232	0.0217	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000100	<0.000100	<0.00100	<0.000500	<0.000100	<0.000500	<0.000100	<0.000500	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.000638 J	<0.000500	<0.000500	<0.00500	<0.00250	<0.000500	<0.00250	<0.000500	<0.00250	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000664 J	0.000467 J	0.000659 J	<0.00100	0.000661 J	0.000346 J	<0.000500	0.000215 J	<0.000500	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.23	1.32	1.49	1.32	1.33	1.40	1.15	1.09	1.37	1.76	1.20	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	0.0590	0.0437 J	0.0552	0.0538 J	---	0.0669	0.0594
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	0.000175 J	<0.000150	<0.000100	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.306	0.208	0.256	0.276	0.343	0.261	0.182	0.235	0.255	---	0.202	0.182
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000300	<0.000300	<0.00300	<0.00150	0.000357 J	<0.00150	0.000539 J	0.00161 J	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00800	<0.00400	<0.000800	<0.00400	<0.000800	<0.00400	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.01 +/- 0.268	0.846 +/- 0.371	0.636 +/- 0.292	1.38 +/- 0.431	1.33 +/- 0.426	1.21 +/- 0.359	1.36 +/- 0.333	1.86 +/- 0.390	2.19 +/- 0.392	---	---	---
Other Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	130	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	9.36	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.28	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	541	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	ºC	20.05	24.8	21.87	18.20	---	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	---	7.50	7.60	7.47	7.42	7.72	7.42	7.43
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,050	3,373	3,442	3,430	---	3,488	3,520	3,498	3,524	3,505	3,548	3,578
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	0.70	0.18	0.31	---	0.52	0.66	0.53	1.31	0.39	5.50	1.68
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	8.73	10.74	9.93	10.53	---	8.72	10.18	9.32	9.05	10.01	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.39	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	2-Oct-18	2-Oct-18	10-Jan-19		25-Apr-19	2-Oct-19	18-Jun-20	8-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Boron	None	1.896	Not Applicable	mg/L	3.76	3.77	3.52	5.48	3.61	3.19	4.57	3.33
Calcium	None	670.30	Not Applicable	mg/L	170	171	129	187	92.0	82.4	141	89.8
Chloride	250	18.51	Not Applicable	mg/L	26.6	26.5	26.3	26.9	21.9	25.9	26.3	26.5
Fluoride	4	0.6359	Not Applicable	mg/L	1.21	1.20	1.22	1.46	1.02	1.24	0.860	1.14
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
Sulfate	250	1,824	Not Applicable	mg/L	1,570	1,580	1,610	1,540	1,310	1,510	1,680	1,650
Total Dissolved Solids	500	2,774	Not Applicable	mg/L	2,650	2,570	2,590	2,640	2,570	2,500	2,520	2,460
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00179 J	0.00166 J	0.000626 J	0.00122 J	0.000663 J	0.000676 J	0.000965 J	0.000592 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.02260	0.02290	0.023	0.0192	0.0217	0.0216	0.0291	0.0199
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0001	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	<0.0001	0.000231 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	0.00119 J	<0.0005	<0.000400	<0.000400	<0.000400	<0.000400	0.000900 J	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000293 J	0.000210 J	<0.000200	0.000374 J	0.000231 J	0.000257 J	0.000402 J	0.000221 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.21	1.20	1.22	1.46	1.02	1.24	0.860	1.14
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	0.000386 J	0.000145 J	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0613	0.0598	0.0701	0.0582	0.0858	0.0743	0.111	0.0709
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100	<0.000100	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.233	0.228	0.205	0.244	0.219	0.196	0.269	0.167
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.000459 J	0.000353 J	<0.0011	<0.0011	<0.00110	<0.00110	<0.00110	<0.00110
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008	<0.0008	0.000565 J	0.000375 J	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.294	1.66 +/- 0.358	1.46	---	<0.87	2.03	1.67	1.72
Other Parameters				***Units***	ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	9.51 J	7.46 J	7.00 J	---	<5.00	18.0	---	5.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	209	204
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	149	---	---	---	209	204
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0535(J)	0.0496 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	<0.0120	0.165 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.0410(J)	0.021 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	12.4	10.90	---	---	165	11
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	0.168	0.153
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	5.98	5.47	---	---	8.24	5.15
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	746	703	---	---	1,040	627
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3,490	3,480	3,540	---	---	---	---	3,780
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	1.12	<1
Field Parameters				***Units***	ASSESSMENT MON. #1		ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #1 UNFILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4	ASSESSMENT MON. #5
Temperature	None	Not Applicable	Not Applicable	°C	23.10	---	18.50	---	20.72	27.05	24.09	22.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	---	7.45	---	7.82	7.71	7.73	7.71
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,563	---	3,449	---	3,544	3,575	3,337	3,422
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	---	0.41	---	1.24	0.71	1.39	0.28
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-69.9	---	98	---	-22.1	-79.5	-50.3	167.2
Turbidity	None	Not Applicable	Not Applicable	NTU	4.11	---	1.13	1.09	0.55	0.84	2.60	1.73
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	---	8.89	---	13.25	10.54	11.19	12.08
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection Standards
   The MCL value for lead is the EPA's Action Level.
2. mg/L : milligrams per liter.
3. pCi/L : picoCuries per liter.
4. S.U. : Standard Units.
5. °C : degrees Celsius.
6. µmhos/cm : micromhos per centimeter.
7. mV : millivolts.
8. NTU : Nephelometric Turbidity Unit.
9. < : Analyte not detected at the laboratory method detection limit (MDL).
10. J : Result is less than the Reporting Limit (RL) but greater than or equal to the MDL and the concentration is an approximate value.
11. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-16 1-Jun-16	MW-16 23-Aug-16	MW-16 29-Sep-16	MW-16 6-Dec-16	MW-16 1-Feb-17	MW-16 6-Apr-17	MW-16 7-Jun-17	MW-16 11-Aug-17	DUP 3 11-Aug-17	MW-16 22-May-18	MW-16 (Shallow) 1-Aug-18	MW-16 (Deep) 10-Aug-18
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	1.39	1.44	2.84	2.38	2.43	1.64	1.64	1.79	1.74	1.95	1.90	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*	18.0	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	1,340	1,040	1,070	1,390	915	1,180	995	1,020	1,020	933	938	998
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1,790	1,780	1,760	1,790	1,860	1,740	1,690	1,710	1,730	1,820	1,810	1,930
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00250	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.00250	0.00101 J	U (0.00164)	<0.00200	0.000757 J	0.00122 J	<0.00400	0.000409 J	0.000453 J	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0270	0.0291	0.0262	0.0461	0.0235	0.0246	0.0270	0.0240	0.0240	---	---	---
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 (ACL)	mg/L	<0.00250	0.000340 J	0.000498 J	<0.000500	<0.000100	<0.000100	<0.00100	0.000354 J	0.000343 J	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.843	1.02	1.36	0.936 J*	1.03	0.759 J*	0.721 J*	0.817	0.801	1.01	0.963	1.17
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000500	<0.000100	<0.000100	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.0495 J	0.0509	0.0470 J	0.0760 J	0.0632	0.0525	0.0534 J	0.0480 J	0.0472 J	---	0.0571	0.0491
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150 UJ	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.135 J	0.134	0.0949	0.170	0.114	0.177	0.218	0.181	0.181	---	0.145	0.154
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.00300	<0.000300	U (0.000418)	<0.00150	0.000307 J	<0.000300	<0.00300	<0.000300	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	<0.00400	<0.000800	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.28 +/- 0.305	1.01 +/- 0.359	1.11 +/- 0.324	0.925 +/- 0.572	1.09 +/- 0.398	0.504 +/- 0.260	0.608 +/- 0.256	1.55 +/- 0.391	0.994 +/- 0.366	---	---	---
Other Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as 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	---	---	---	---	---	---	---	---	----	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	10.3	10.1	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	3.33	3.28	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	272	270	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	----	---	---	---
Field Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	ºC	18.90	23.5	21.62	16.91	19.27	17.92	20.46	24.61	---	22.87	23.70	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	7.10	7.09	---	7.57	7.11	7.30
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,066	2,327	2,492	2,395	2,620	2,275	2,256	2,330	---	2,463	2,436	2,678
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	2.70
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-47.3	46.0	-106.4	-135.8	-104.9	10.2	0.4	60.3	---	-83.7	186.4	150.4
Turbidity	None	Not Applicable	Not Applicable	NTU	2.18	0.85	0.33	0.98	0.18	0.63	0.61	1.11	---	1.21	3.49	2.96
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	4.81	6.73	6.30	4.36	2.91	2.90	5.50	5.24	---	5.80	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	23.40	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	2-Oct-18	16-Jan-19		23-Apr-19	3-Oct-19	18-Jun-20	13-Oct-20
Detection Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) FILTERED**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Boron	None	1.896	Not Applicable	mg/L	2.05	2.23	2.38	1.85	1.53	1.43	1.78
Calcium	None	670.30	Not Applicable	mg/L	221	215	215	192	149	186	166
Chloride	250	18.51	Not Applicable	mg/L	18.0	19.0	18.8	15.8	23.8	14.7	14.8
Fluoride	4	0.6359	Not Applicable	mg/L	0.832	0.82	1.11	0.741	1.07	0.694	0.893
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	8.2	7.33	---	7.88	7.01	7.60	7.63
Sulfate	250	1,494	Not Applicable	mg/L	959	1,020	1,030	974	1,020	1,030	929
Total Dissolved Solids	500	1,883	Not Applicable	mg/L	1,780	1,740	1,670	1,740	1,810	1,610	1,610
Assessment Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) FILTERED**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0203	0.0226	0.0224	0.0178	0.0133	0.0142	0.0156
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0005	<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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000172 J	<0.000200	<0.000200	<0.000200	0.000375 J	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.832	0.82	1.11	0.741	1.07	0.694	0.893
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<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	0.0460	0.0477
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.169	0.180	0.180	0.193	0.149	0.172	0.149
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.0003	<0.0011	<0.0011	<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
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.07 +/- 0.288	1.01	---	<0.62	1	1.18	1.35
Other Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) FILTERED**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5.00	<5	---	<5.00	<5.00	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	232	233
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	256	---	---	---	232	233
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0358(J)	0.125 J
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0160(J)	0.0694 J
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0380(J)	0.024 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	10.2	10.2	---	---	8.44	7.59
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.17	0.16
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.133	<0.03	<0.03	0.854	<0.0300	<0.0600	<0.0600
Potassium	None	Not Applicable	Not Applicable	mg/L	---	4.18	4.07	---	---	2.85	3.09
Sodium	None	Not Applicable	Not Applicable	mg/L	---	405	394	---	---	309	316
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,240	2,340	---	---	---	---	2,400
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	1.40
Field Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) FILTERED**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Temperature	None	Not Applicable	Not Applicable	°C	25.40	14.80	---	19.31	24.89	21.90	23.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.53	7.21	---	7.56	7.82	7.66	7.69
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,816	2,273	---	2,330	2,836	2,438	2,615
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.25	1.37	---	0.83	3.67	2.18	1.99
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-131.8	278.9	---	28.7	-191.5	-56.9	60.2
Turbidity	None	Not Applicable	Not Applicable	NTU	2.89	6.82	1.03	2.53	1.48	3.09	0.75
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	2.38	---	7.59	6.61	6.76	7.51
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
Detection Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	0.634	0.586	0.854	0.838 J	0.817	<0.875	0.713	0.666	0.640	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	0.580	0.480 J*	0.488	0.266	0.361	0.328	0.323	0.324	0.470	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	7.0
Sulfate	250	1,557	Not Applicable	mg/L	1,170	1,300	1,250	1,470	1,200	1,140	1,310	1,450	1,300	1,140	1,310	1,340
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1,980	2,070	1,980	2,260	2,050	1,870	2,180	2,140	2,140	2,360	2,340	2,380
Assessment Monitoring Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00204	0.00154 J	0.00226	<0.00400	0.000663 J	0.00251	0.00154 J	<0.000400	<0.000400	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00545	0.00299	0.00460 J	<0.00100	0.00344	U (0.00333)	0.00160 J	0.00236	0.00293	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00100	<0.00200	<0.000100	<0.00100	<0.000100	<0.00250	<0.000100	<0.000100	<0.000100	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000400	<0.000800	<0.000100	<0.00100	<0.000100	<0.000100	<0.000100	<0.000100	<0.000100	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.000500	<0.00100	<0.000500	<0.00500	0.00140 J	<0.000500	<0.000500	<0.000500	<0.000500	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.000500	<0.00100	0.000225 J	<0.00100	<0.000100	<0.000500	<0.000100	<0.000100	<0.000100	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322	0.365	0.580	0.480 J*	0.488	0.266	0.361	0.328	0.323	0.324	0.470	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	0.140	0.174	0.155 J	0.158 J	0.146	0.121	0.133	0.148	0.143	---	0.128	0.131
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.000840 J	<0.00100	0.00135 J	<0.0100	<0.00100	<0.00500	<0.00100	<0.00100	<0.00100	---	<0.00100	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.00120	U (0.000709)	<0.00300	0.000526 J	<0.00150	<0.000300	<0.000300	<0.000300	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.00800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.539 +/- 0.261	0.265 +/- 0.260 U	1.32 +/- 0.425	0.536 +/- 0.356	0.195 +/- 0.273 U	0.311 +/- 0.238 U	0.479 +/- 0.271	0.531 +/- 0.221	0.183 +/- 0.207 U	---	---	---
Other Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	260	259	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	<5.00	<5.00	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	36.6	36.0	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	5.15	5.14	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	34.5	34.4	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	**INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND**									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	°C	20.98	23.28	20.36	19.58	21.96	20.30	20.57	21.98	---	20.98	25.04	22.30
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	6.80
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,052	2,230	2,402	2,405	2,386	2,396	2,443	2,417	---	2,416	2,606	2,569
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	4.0	-99.6	-183.4	-84.0	-55.9	-87.3	65.7	---	-49.2	172.9	209.4
Turbidity	None	Not Applicable	Not Applicable	NTU	0.53	0.92	0.40	0.43	0.11	0.21	0.24	0.81	---	0.52	4.63	14.5
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	14.07	15.67	15.80	16.08	14.52	15.70	15.23	14.35	---	14.50	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	23.44	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-17 3-Oct-18	MW-17 10-Jan-19		MW-17 25-Apr-19	MW-17 3-Oct-19	MW-17 18-Jun-20	MW-17 12-Oct-20
Detection Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Boron	None	1.896	Not Applicable	mg/L	0.567	0.766	0.729	0.796	0.622	0.652	0.640
Calcium	None	670.30	Not Applicable	mg/L	461	591	499	499	555	494	453
Chloride	250	18.51	Not Applicable	mg/L	4.81	3.44	4.16	3.65	3.75	4.29	4.04
Fluoride	4	0.6359	Not Applicable	mg/L	0.393	0.337	0.270	0.392 J	0.370	0.211	0.366
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
Sulfate	250	1,557	Not Applicable	mg/L	821	1,480	1,200	1,100	1,310	1,390	1,220 H
Total Dissolved Solids	500	2,343	Not Applicable	mg/L	1,670	2,300	1,870	2,400	2,160	2,230	2,160
Assessment Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<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
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00231	<0.00190	0.00250 J	<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
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	<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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	0.000238 J	<0.000200	0.000313 J	<0.000200	0.000281 J	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.393	0.337	0.270	0.392 J	0.370	0.211	0.366
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<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
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	<0.000600	<0.000600	0.000671 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
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
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
Other Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	6.13 J	<5.00	---	<5.00	<5.00	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	284	273
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	280	---	---	---	284	273
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.012
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.012
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	38.1	31.3	---	---	37.80	30.9
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.00123(J)	<0.0006
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	0.276	<0.03	0.519	<0.150	<0.0300	<0.0600	<0.0600
Potassium	None	Not Applicable	Not Applicable	mg/L	---	5.37	4.90	---	---	5.15	4.42
Sodium	None	Not Applicable	Not Applicable	mg/L	---	35.7	32.9	---	---	35.60	29.2
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	1,920	2,450	---	---	---	---	2,610
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1
Field Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Temperature	None	Not Applicable	Not Applicable	°C	23.30	15.90	---	19.26	23.63	21.20	23.2
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.70	6.67	---	7.09	6.88	6.80	6.88
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,548	2,416	---	2,470	2,458	2,344	2,393
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.44	0.51	---	1.80	0.80	1.35	0.41
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	237.5	57.8	---	2.4	148.3	-28.1	129.9
Turbidity	None	Not Applicable	Not Applicable	NTU	5.4	1.24	0.69	0.63	0.65	2.28	0.58
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	12.50	---	15.54	15.59	13.00	14.21
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection Standards
   The MCL value for lead is the EPA's Action Level.
2. mg/L : milligrams per liter.
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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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
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    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-18 1-Jun-16	MW-18 3-Aug-16	MW-18 30-Sep-16	DUP 2 30-Sep-16	MW-18 2-Dec-16	MW-18 31-Jan-17	MW-18 5-Apr-17	MW-18 7-Jun-17	MW-18 10-Aug-17	MW-18 18-May-18	MW-18 (Shallow) 2-Aug-18	MW-18 (Deep) 10-Aug-18
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	5.91	6.45	6.88	6.15	6.82	9.71	8.51	6.39	6.51	6.71	4.86	6.65
Calcium	None	670.30	Not Applicable	mg/L	39.7	36.9	34.7	35.8	34.5	34.1	30.5	37.3 J*	28.7	28.1	36.1	31.1
Chloride	250	18.51	Not Applicable	mg/L	6.77	6.71	6.67	6.80	6.02	6.31	5.94	5.54 J*	6.10	5.19	8.04	5.33
Fluoride	4	0.6359	Not Applicable	mg/L	1.15	1.26	1.49	1.60	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	10.0	10.2	10.3	10.6	10.7	10.7	10.1	7.8	10.2
Sulfate	250	1,820	Not Applicable	mg/L	1,430	1,800	1,320	1,320	1,300	1,090	1,170	1,200	1,070	1,120	996	1,030
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	2,000	1,910	1,870	1,860	1,860	1,830	1,800	1,850	1,850	1,740	1,660	1,730
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00250	<0.00100	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00331 J	0.00476	0.00296	0.00307	0.00402 J	0.00334	0.00295	<0.00400	0.00329	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.00489	0.00472	0.00551	0.00512 J	0.00232 J	0.00526	0.00375	0.00485 J	0.00402	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.00500	<0.00200	<0.000100	<0.000500	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.00200	<0.000800	<0.000100	<0.000100	<0.00100	0.000242 J	0.000123 J	<0.00100	<0.000100	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	<0.00100	<0.000500	<0.00250	<0.00500	<0.000500	<0.000500	<0.00500	<0.000500	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.00250	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.00100	<0.000100	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.15	1.26	1.49	1.60	1.38	1.29	1.43	1.38 J*	1.38	1.37	1.26	1.35
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.000200	<0.000200	<0.000100	<0.000100	<0.00100	<0.000100	<0.000100	<0.000500	<0.000100	---	---	---
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	<0.0100	0.00315 J	<0.00300	<0.0150	<0.0300	0.00305 J	<0.00300	<0.0150	<0.00300	---	0.0144 J	<0.00300
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.430	0.433	0.392	0.417	0.434	0.403	0.400	0.442	0.390	---	0.113	0.319
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00503 J	0.00399 J	0.00231	0.00317	0.00301 J	0.00268	0.00177 J	<0.00300	0.00278	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.00100	<0.000800	<0.000800	<0.00800	<0.000800	<0.000800	<0.00400	<0.000800	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.201 +/- 0.213 U	0.206 +/- 0.318 U	0.449 +/- 0.289	0.550 +/- 0.308	0.201 +/- 0.260 U	0.00496 +/- 0.256 U	0.282 +/- 0.201 U	0.146 +/- 0.228 U	0.445 +/- 0.200	---	---	---
Other Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as 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	---	---	---	---	---	---	---	---	---	---	---	---
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	---	---	---	---	---	---	---	---	22.0	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	523	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**EVALUATION SAMPLE**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	°C	19.74	24.14	19.59	---	18.78	18.45	18.46	22.50	22.11	21.12	24.10	22.37
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.88	10.45	10.95	---	10.88	10.67	10.60	10.55	10.54	10.74	9.71	10.41
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,622	2,884	2,900	---	2,854	2,764	2,698	2,685	2,716	2,530	2,568	2,658
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	2.65	0.15	0.05	---	0.20	0.21	0.09	0.06	0.03	0.17	4.03	0.90
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-22.2	-41.7	-100.0	---	-225.5	-192.6	62.6	-11.0	28.2	-139.8	-65.1	-119.7
Turbidity	None	Not Applicable	Not Applicable	NTU	0.33	0.61	0.33	---	0.15	0.39	0.36	1.03	1.21	0.22	0.02	0.02
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	11.58	13.17	13.24	---	12.91	12.09	12.09	12.90	11.85	11.84	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	25.46	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

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

Parameters	MCL or SMCL	Established Background (Det. Mon.)	Established GWPS (Ass. Mon.)	Sample ID: / Sample Date:	MW-18 3-Oct-18	MW-18 14-Jan-19		MW-18 25-Apr-19	MW-18 1-Oct-19	MW-18 17-Jun-20	MW-18 12-Oct-20
Detection Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Boron	None	1.896	Not Applicable	mg/L	5.77	6.89	7.17	6.05	5.29	5.49	5.43
Calcium	None	670.30	Not Applicable	mg/L	25.1	31.8	30.8	33.1	25.6	21.6	20.0
Chloride	250	18.51	Not Applicable	mg/L	5.50	5.59	5.14	4.79	5.07	4.06	4.22
Fluoride	4	0.6359	Not Applicable	mg/L	1.37	1.32	1.44	1.25	1.47	1.28	1.66
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
Sulfate	250	1,820	Not Applicable	mg/L	1,090	1,110	1,120	933	1,020	888	794
Total Dissolved Solids	500	2,006	Not Applicable	mg/L	1,760	1,630	1,660	1,680	1,550	1,340	1,270
Assessment Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00319	0.00320	0.00325	0.00308	0.00264	0.00272	0.00276
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
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.0001	<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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	<0.0001	<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
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<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
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000100	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300	<0.0000300
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.330	0.333	0.332	0.342	0.257	0.194	0.180
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.0019 J	0.00506	0.00501	0.00577	0.00166 J	0.00370	0.00347
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
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
Other Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	8.9 J	<5	---	<5.00	11.0 J	---	5.00 J
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	71	69.9
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	42.2	---	---	---	60.60	64.3
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	32.9	---	---	---	10.40	5.63
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.02(J)	<0.02
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	0.244	0.175 J	---	---	0.141(J)	0.270
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.18	0.166
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	22.3	21.9	---	---	15.90	14.6
Sodium	None	Not Applicable	Not Applicable	mg/L	---	603	510	---	---	376	348
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2,590	2,520	---	---	---	---	2,200
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<1	<1
Field Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**	**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Temperature	None	Not Applicable	Not Applicable	°C	23.60	14.00	---	17.89	24.80	22.45	23.5
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.45	10.47	---	10.93	10.40	10.65	10.40
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,632	2,442	---	2,486	2,350	1,998	1,986
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.21	0.36	---	1.44	0.33	0.55	0.24
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	130.1	174.9	---	-152.8	-71.2	-140.3	-80.5
Turbidity	None	Not Applicable	Not Applicable	NTU	2.04	2.79	1.47	0.49	0.92	2.43	0.34
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	9.91	---	11.72	12.39	9.89	10.78
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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-19S 13-Dec-16	MW-19S 26-Jan-17	DUP-1 26-Jan-17	MW-19S 3-Feb-17	MW-19S 28-Mar-17	MW-19S 7-Apr-17	MW-19S 31-May-17	MW-19S 9-Jun-17	MW-19S 10-Aug-17	MW-19S 18-May-18	DUP 1 18-May-18	MW-19S (Shallow) 2-Aug-18	MW-19S (Deep) 10-Aug-18
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Boron	None	1.896	Not Applicable	mg/L	8.02	10.8	9.33	7.83	7.81	8.16	8.31	9.17	7.64	8.43	8.36	8.64	3.78
Calcium	None	670.30	Not Applicable	mg/L	71.7	47.2	43.8	51.8	51.9	72.5	51.3	71.5	41.3	45.7	44.0	35.0	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	1.30	1.32	1.10	1.23	1.23	1.32	1.30	1.30	1.34	1.30
pH (laboratory)	6.5 - 8.5	6.485 - 8.018	Not Applicable	S.U.	10.4	11.0	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	1,620	1,620	1,600	1,530	1,550	1,560	1,450	1,510	1,650	1,630	1,610	1,520	1,480
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2,420	2,420	2,530	2,460	2,460	2,340	2,420	2,410	2,440	2,560	2,480	2,390	2,440
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800	---	---	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00920 J	0.00730	0.00683	0.00728 J	0.00730	0.00837 J	0.00702	0.00681 J	0.00756	---	---	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0538	0.0192	0.0195	0.0215	0.0189	0.0249	0.0186	0.0233	0.0211	---	---	---	---
Beryllium	0.004	Not Applicable	0.004 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	<0.000100	<0.000500	<0.000100	<0.000500	<0.000100	---	---	---	---
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.000500	<0.000100	<0.000100	<0.000100	0.000196 J	<0.000500	<0.000100	<0.000500	<0.000100	---	---	---	---
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.00250	<0.000500	<0.000500	U (0.00108)	<0.000500	<0.00250	<0.000500	<0.00250	<0.000500	---	---	---	---
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000568 J	<0.000100	<0.000100	0.000237 J	0.000103 J	<0.000500	<0.000100	0.000872 J	<0.000100	---	---	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.44 J*	1.51	1.44	1.30	1.32	1.10	1.23	1.23	1.32	1.30	1.30	1.34	1.30
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 (ACL)	mg/L	0.466	0.484	0.483	0.435	0.481	0.586	0.495	0.607	0.469	---	---	0.384	0.112
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00616 J	0.0107	0.0105	0.00888 J	0.0116	0.0131	0.00879	0.0152	0.00349	---	---	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	<0.00400	<0.000800	<0.00400	<0.000800	---	---	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.47 +/- 0.739	-0.0377 +/- 0.325 U	0.0518 +/- 0.264 U	0.483 +/- 0.372 U	0.287 +/- 0.277 U	0.121 +/- 0.235 U	0.136 +/- 0.226 U	0.202 +/- 0.190 U	0.296 +/- 0.222 U	---	---	---	---
Other Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	85.8	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<5.00	---	---	---	---
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	46.2	---	---	---	---
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	<0.220	---	---	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	35.9	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	697	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									DETECTION MON. #1	EVALUATION SAMPLE		VERIFICATION SAMPLE
Temperature	None	Not Applicable	Not Applicable	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	10.80	10.95	10.72	11.09	---	10.55	10.56
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,576	3,585	---	3,389	3,602	3,575	3,546	3,526	3,552	3,530	---	3,587	3,563
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	-249.0
Turbidity	None	Not Applicable	Not Applicable	NTU	103	1.10	---	0.32	0.34	0.40	0.62	0.43	1.26	0.47	---	0.02	4.16
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	3.50	2.78	---	3.45	2.66	2.66	3.93	3.93	3.59	3.67	---	---	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	17.88	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	3-Oct-18	15-Jan-19		25-Apr-19	1-Oct-19	17-Jun-20		12-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		ASSESSMENT MON. #5
Boron	None	1.896	Not Applicable	mg/L	10.20	9.79	9.07	8.57	6.64	6.80	7.18	6.88
Calcium	None	670.30	Not Applicable	mg/L	35.3	50.0	49.6	52.4	40.4	43.6	42.1	40.7
Chloride	250	18.51	Not Applicable	mg/L	14.8	14.2	14.1	13.7	14.4	13.8	14.0	14.1
Fluoride	4	0.6359	Not Applicable	mg/L	1.24	1.27	1.59	1.13	1.37	1.15	1.04	1.38
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
Sulfate	250	1,708	Not Applicable	mg/L	1,950	1,640	1,580	1,520	1,580	1,490	1,590	1,640
Total Dissolved Solids	500	2,505	Not Applicable	mg/L	2,490	2,500	2,470	2,440	2,460	2,300	2,290	2,340
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008	0.00634	0.00643	0.00673	0.00624	0.00610	0.00577	0.00588
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
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
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
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
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000102 J	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	1.24	1.27	1.59	1.13	1.37	1.15	1.04	1.38
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.439	0.472	0.463	0.462	0.377	0.402	0.394	0.367
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	0.00889	0.011	0.00631	0.0141	0.0124	0.00655	0.00640	0.0113
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.933 +/- 0.391	<0.98	---	<0.79	<0.74	<0.73	<0.72	<0.73
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	26.2	25	---	21.0	23.0	---	---	19.0
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	128	130	132
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	59.8	---	---	---	92.6	98.7	89.2
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	<5	<5	<5
Hydroxide Alkalinity	None	Not Applicable	Not Applicable	mg/L	---	81.2	---	---	---	35.1	31.4	42.6
Iron, Total	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.0153(J)	<0.0120	<0.0120
Iron, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	<0.0120	<0.0120	<0.0120
Iron, Ferrous	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.043(J)	0.330(J)	0.031 J
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	0.121 J	0.0852 J	---	---	0.0553(J)	0.0510(J)	0.0346 J
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	0.4	0.383	0.370
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	38.2	37.7	---	---	35.20	34.1	33.7
Sodium	None	Not Applicable	Not Applicable	mg/L	---	801	774	---	---	644	598	610
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	2470.0	3530	---	---	---	---	---	3,860
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	1.52	<1	1.8
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	FILTERED	ASSESSMENT MON. #2	ASSESSMENT MON. #3	ASSESSMENT MON. #4		
Temperature	None	Not Applicable	Not Applicable	°C	25.40	13.40	---	17.92	25.86	22.99	---	23.8
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	10.63	11.01	---	11.26	10.65	10.97	---	10.92
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,610	3,438	---	3,524	3,552	3,309	---	3,433
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.33	0.21	---	1.50	0.50	0.36	---	0.16
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	172.1	-162.0	---	-281.7	-252.4	-588.1	---	209.2
Turbidity	None	Not Applicable	Not Applicable	NTU	2.05	5.19	2.24	0.57	0.61	2.86	---	1.24
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	2.45	---	2.53	1.49	3.63	---	3.26
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	0.704	1.11	1.06	0.945	1.02	1.00	0.580	0.784	0.643	0.813	1.20
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	4.80	4.44	5.40	6.77	6.00 J*	5.08	6.14	4.96
Fluoride	4	0.6359	Not Applicable	mg/L	0.322 J*	0.410	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	7.0	6.8	6.7	6.7	6.8	6.9
Sulfate	250	1,363	Not Applicable	mg/L	1,140	1,110	1,100	1,110	1,290	949	907	1,020	1,180	839	1,060
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1,710	1,980	1,860	1,810	1,980	1,870	1,750	1,770	1,760	1,760	1,980
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000800	<0.000800	<0.000800	<0.00800	<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 (ACL)	mg/L	<0.000500	0.000327 J	0.000383 J	0.000366 J	<0.00100	0.000642 J	0.000215 J	<0.00100	<0.000500	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.322 J*	0.410	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	0.120	0.0962	0.112 J	0.110 J	---	0.109
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000100	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.00120 J	0.00121 J	<0.00500	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				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as 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	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	20.9	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	5.54	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	86.1	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	°C	21.43	21.4	18.92	---	17.06	19.18	18.75	20.84	21.17	20.26	21.05
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.85	6.94	6.79	---	6.75	6.76	6.67	6.69	6.62	6.89	6.51
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	1,742	2,245	2,332	---	2,364	2,259	2,057	2,088	2,083	1,999	2,345
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.47	1.76	0.05	---	0.25	0.21	0.35	0.07	0.10	0.27	1.43
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	-4.6	935	-101.0	---	-211.5	-167.1	60.7	-7.7	62.1	-57.0	54.1
Turbidity	None	Not Applicable	Not Applicable	NTU	1.20	2.96	3.23	---	2.55	1.85	0.38	1.01	1.82	1.95	4.38
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	17.92	18.82	19.12	---	18.69	18.22	18.59	19.01	18.17	17.97	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	28.46	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
				Sample Date:	4-Oct-18	10-Jan-19		23-Apr-19	30-Sep-19		17-Jun-20	12-Oct-20
Detection Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**		**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Boron	None	1.896	Not Applicable	mg/L	1.19	1.19	0.911	0.721	0.777	0.668	0.624	0.857
Calcium	None	670.30	Not Applicable	mg/L	448	398	386	327	368	331	320	312
Chloride	250	18.51	Not Applicable	mg/L	4.74	6.29	7.27	8.02	5.30	5.32	6.18	5.69
Fluoride	4	0.6359	Not Applicable	mg/L	0.326	0.298	0.304	0.294	0.340	0.311	0.220	0.336
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
Sulfate	250	1,363	Not Applicable	mg/L	1,110	977	892	794	1,060	1,080	870	989
Total Dissolved Solids	500	2,066	Not Applicable	mg/L	1,900	1,630	1,530	1,690	1,890	1,850	1,560	1,710
Assessment Monitoring Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**		**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.004	<0.000400	<0.000400	0.00107 J	<0.000400	<0.000400	<0.000400	<0.000400
Barium	2	Not Applicable	2 (MCL)	mg/L	0.014 J	0.01030	0.012	0.0131	0.0102	0.00931	0.0102	0.00927
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
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.005	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.00102 J	0.000414 J	0.000442 J	0.000449 J	<0.000200	<0.000200	<0.000200	0.000318 J
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.326	0.298	0.304	0.294	0.340	0.311	0.220	0.336
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
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
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	0.000616 J	0.000663 J	0.000835 J	<0.000600	<0.000600	0.000727 J	0.000677 J
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
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	0.888 +/- 0.291	<0.72	---	0.91	0.82	<0.74	<0.72	1.33
Other Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**		**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5.00	---	<5.00	<5.00	<5.00	---	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	---	<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	---	---	---	---	---	---	---	---
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
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	2050.0	1,960	---	---	---	---	---	2,230
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---
Field Parameters				***Units***	**ASSESSMENT MON. #1**	**ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED**	**FILTERED**	**ASSESSMENT MON. #2**	**ASSESSMENT MON. #3**		**ASSESSMENT MON. #4**	**ASSESSMENT MON. #5**
Temperature	None	Not Applicable	Not Applicable	°C	24.90	15.20	---	21.57	23.46	---	22.06	21.3
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	6.71	6.65	---	7.00	6.83	---	6.86	6.81
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	2,330	1,979	---	1,937	2,240	---	1,795	1,981
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.86	0.46	---	1.08	0.56	---	1.11	0.28
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	29.7	-13.0	---	-4.3	-15.7	---	-32.8	29.0
Turbidity	None	Not Applicable	Not Applicable	NTU	8.14	37.70	2.09	0.38	2.90	---	4.04	2.79
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	17.42	---	20.72	19.81	---	18.15	18.83
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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
Detection Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Boron	None	1.896	Not Applicable	mg/L	2.90	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	22.0	21.9
Fluoride	4	0.6359	Not Applicable	mg/L	0.594	0.752	0.801	0.582	0.564	0.498	0.490	0.559	0.779	0.530	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	1,370	1,350	1,420	1,500	1,500	1,360	1,470	1,400	1,250	1,480	1,410
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2,410	2,380	2,360	2,510	2,430	2,440	2,320	2,430	2,320	2,570	2,560
Assessment Monitoring Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	---	---
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	0.00259	0.00140 J	0.00154 J	0.00145 J	<0.00200	0.000960 J	0.00119 J	<0.000400	0.00155 J	---	---
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0144	0.0131	0.0128	0.0120	0.0202	0.0121	0.0114	0.0107	0.110	---	---
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 (ACL)	mg/L	0.000571 J	<0.000500	<0.000500	0.000403 J	0.000555 J	0.000434 J	0.000316 J	<0.000100	0.000281 J	---	---
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.594	0.752	0.801	0.582	0.564	0.498	0.490	0.559	0.779	0.530	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	0.130	0.224 J	0.143	0.137	0.131	0.147	---	0.121
Mercury	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	<0.000150	---	---
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	0.00385	0.00193 J	0.00188 J	0.00212	<0.00500	0.00230	0.00200	0.00175 J	0.00152 J	---	<0.00100
Selenium	0.05	Not Applicable	0.05 (MCL)	mg/L	<0.000600	<0.000600	<0.000600	<0.000300	<0.00150	0.000512 J	<0.000300	0.00391	<0.000300	---	---
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.000500	<0.000500	<0.000500	<0.000800	<0.00400	<0.000800	<0.000800	<0.000800	<0.000800	---	---
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	1.99 +/- 0.327	1.62 +/- 0.384	1.91 +/- 0.376	2.17 +/- 0.422	1.87 +/- 0.494	2.19 +/- 0.444	1.26 +/- 0.315	2.06 +/- 0.383	0.973 +/- 0.258	---	---
Other Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Total Alkalinity as 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	---	---	---	---	---	---	---	---	---	---	---
Magnesium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	35.1	---	---
Molybdenum, Dissolved	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Nitrate as N	10	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Potassium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	9.21	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	791	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	---	---	---	---	---	---	---	---	---	---	---
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	INITIAL EIGHT SAMPLES TO ESTABLISH BACKGROUND									**DETECTION MON. #1**	**VERIFICATION SAMPLE**
Temperature	None	Not Applicable	Not Applicable	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	7.20	7.11	7.28	6.91
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,111	3,578	---	3,600	3,586	3,625	3,555	3,493	3,421	3,504	3,544
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	-239.0	-182.0	247.3	-12.6	59.8	-45.2	99.0
Turbidity	None	Not Applicable	Not Applicable	NTU	2.10	0.32	---	0.30	0.29	0.27	0.84	0.74	1.07	0.28	0.50
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	22.94	23.28	---	23.84	23.54	23.62	23.92	24.02	24.65	23.04	---
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	32.96	---	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection 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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
    J* : The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
    R : The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

ALTAMIRA

ATTACHMENT B
GROUINDWATER 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 3-Oct-18	MW-21 15-Jan-19		MW-21 24-Apr-19	DUP-2 24-Apr-19	MW-21 2-Oct-19	DUP-2 2-Oct-19	MW-21 17-Jun-20	MW-21 12-Oct-20
Detection Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5
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
Calcium	None	670.30	Not Applicable	mg/L	152	187	187	145	142	146	155	139	141
Chloride	250	18.51	Not Applicable	mg/L	21.9	22.1	22.0	20.6	19.8	22.1	22.2	21.8	22.8
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
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
Sulfate	250	1,591	Not Applicable	mg/L	1,610	1,670	1,710	1,440	1,530	1,560	1,530	1,470	1,780
Total Dissolved Solids	500	2,546	Not Applicable	mg/L	2,650	2,740	2,720	2,550	2,650	2,700	2,720	2,470	2,660
Assessment Monitoring Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5
Antimony	0.006	Not Applicable	0.006 (MCL)	mg/L	<0.0008	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Arsenic	0.010	Not Applicable	0.01 (MCL)	mg/L	<0.008	0.00329	0.00223	0.00112 J	0.00136 J	0.000638 J	0.000574 J	0.000551 J	0.000536 J
Barium	2	Not Applicable	2 (MCL)	mg/L	0.0137 J	0.0182	0.0176	0.0127	0.0117	0.00999	0.01110	0.0106	0.0107
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
Cadmium	0.005	Not Applicable	0.005 (MCL)	mg/L	<0.0001	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Chromium	0.1	Not Applicable	0.1 (MCL)	mg/L	<0.01	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400	<0.000400
Cobalt	None	Not Applicable	0.006 (ACL)	mg/L	0.000216 J	0.00175 J	0.00140 J	0.000407 J	0.000321 J	0.000227 J	<0.000200	<0.000200	<0.000200
Fluoride	4	Not Applicable	4 (MCL)	mg/L	0.458	0.438	2.050	0.513	0.505	0.537	0.509	0.524	0.470 J
Lead	0.015	Not Applicable	0.015 (MCL)	mg/L	<0.0001	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600	<0.000600
Lithium	None	Not Applicable	0.235 (UTL)	mg/L	0.164 J	0.157	0.160	0.140	0.134	0.118	0.129	0.140	0.123
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
Molybdenum	None	Not Applicable	0.1 (ACL)	mg/L	<0.001	0.00161 J	0.00160 J	0.00131 J	0.00118 J	0.00105 J	0.00184 J	0.00103 J	0.00103 J
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
Thallium	0.002	Not Applicable	0.002 (MCL)	mg/L	<0.0008	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200	<0.000200
Ra-226 + Ra-228 (combined)	5	Not Applicable	5 (MCL)	pCi/L	3.41 +/- 0.496	6.29	---	2.24	1.67	1.59	2.57	3.09	2.38
Other Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5
Chemical Oxygen Demand (COD)	None	Not Applicable	Not Applicable	mg/L	<5	<5	---	<5.00	<5.00	<5.00	7.00 J	---	<5.00
Total Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Carbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	<5	---	---	---	---	---	---	---
Bicarbonate Alkalinity as CaCO3	None	Not Applicable	Not Applicable	mg/L	---	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	---	---	---	---	---	---	---	---	---
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
Potassium	None	Not Applicable	Not Applicable	mg/L	---	12.0	11.8	---	---	---	---	---	---
Sodium	None	Not Applicable	Not Applicable	mg/L	---	684	688	---	---	---	---	---	---
Specific Conductance (laboratory)	None	Not Applicable	Not Applicable	umhos/cm	3120.0	3610.0	---	---	---	---	---	---	3,940
Sulfide	None	Not Applicable	Not Applicable	mg/L	---	---	---	---	---	---	---	---	---
Field Parameters				***Units***	ASSESSMENT MON. #1	ASSESSMENT MON. #1 (RESAMPLE) UNFILTERED	ASSESSMENT MON. #1 (RESAMPLE) FILTERED	ASSESSMENT MON. #2		ASSESSMENT MON. #3		ASSESSMENT MON. #4	ASSESSMENT MON. #5
Temperature	None	Not Applicable	Not Applicable	ºC	24.00	13.80	---	18.12	---	24.38	---	23.17	23.20
pH	6.5 - 8.5	Not Applicable	Not Applicable	S.U.	7.13	7.10	---	7.42	---	7.29	---	7.23	7.26
Specific Conductance	None	Not Applicable	Not Applicable	µmhos/cm	3,627	3,585	---	3,533	---	3,633	---	3,352	3,516
Dissolved Oxygen	None	Not Applicable	Not Applicable	mg/L	0.43	0.59	---	1.23	---	0.64	---	0.65	0.48
Oxidation-Reduction Potential	None	Not Applicable	Not Applicable	mV	45.9	-67.1	---	84.0	---	91.9	---	-38.0	119.3
Turbidity	None	Not Applicable	Not Applicable	NTU	2.38	3.30	1.11	0.44	---	0.26	---	2.04	0.52
Depth to Water from TOC	None	Not Applicable	Not Applicable	ft	---	23.46	---	25.72	---	23.66	---	23.89	24.38
Total Depth from TOC	None	Not Applicable	Not Applicable	ft	---	---	---	---	---	---	---	---	---

Notes:

1. MCL : Maximum Contaminant Level: Values obtained from EPA Primary/Secondary Drinking Water Standards. ACL: EPA Alternative Risk-Based Groundwater Protection Standards
   The MCL value for lead is the EPA's Action Level.
2. mg/L : milligrams per liter.
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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. GWPS = Groundwater Protection Standard
12. The sulfate value for sample MW-25R collected June 9, 2017 was originally reported by the laboratory as 331 mg/L. The laboratory reprepared and analyzed the sample. The value for sulfate on this table is the result of the reanalysis.
13. --- : no analysis performed.
14. Data validation based on USEPA "National Functional Guidelines", OSWER 9355.0-132, EPA-540-R-014-002, Revision August 2014 for Organics and OSWER 9355.0-131, EPA-540-R-013-001, Revision August 2014 for Inorganics.
    U ( ) : The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
    UJ : The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
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15. TOC : Top of Casing.
16. ft : feet.
17. Water levels for Sampling (November-December 2016) were collected on November 28, 2016 with the exception of the new wells (MW-5S, MW-7S, MW-19S, MW-25R) where water levels were taken on December 8, 2016.
18. New pumps were installed in MW-5S, MW-7S, MW-19S, and MW-25R in January 2017.

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