
July 7, 2021

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

Re: April 2021 Assessment Monitoring
Notification: Molybdenum concentrations above upgradient well background concentration
Evans and Associates Construction Co, Inc. / Big Fork Ranch Coal Combustion Residuals (CCR)
Landfill, Ponca City, Noble County, OK / Solid Waste Permit #352014

Dear Ms. Young:

Evans and Associates Construction Co., Inc. has been conducting Assessment Monitoring associated with a CCR Unit at its Big Fork Ranch Facility. The laboratory report for April 2021 Assessment Monitoring is enclosed (**Attachment A**). Findings from April 2021 Assessment Monitoring do not indicate Assessment Monitoring Parameters at statistically significant levels (SSLs) above Groundwater Protection Standards (GWPS) as established in the 2018 Annual Groundwater and Corrective Action Report (Altamira; January 31, 2019).

At MW-9A and MW-12A, the upper and lower confidence limits for molybdenum do exceed the upgradient well background concentration (0.005 mg/L) and an SSL can be deemed to exist for molybdenum at these wells when using background instead of the EPA-promulgated alternative risk-based groundwater protection standard as the GWPS. Therefore, this submittal is prepared to address 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.

Changes have been proposed by DEQ to *Oklahoma Administrative Code (OAC) Chapter 517. Disposal of Coal Combustion Residual from Electric Utilities* and are under legislative review which would adopt the EPA-promulgated alternative risk-based groundwater protection standard for molybdenum. If these proposed changes become effective and the EPA-promulgated alternative risk-based groundwater protection standard for molybdenum is adopted then the reported molybdenum concentrations to date will not be at SSLs. Please notify me at 405-701-8215 or at Chris.Schaefer@altamira-us.com if you have any questions.

Sincerely,
Altamira-US, LLC



Chris Schaefer, PE
Hydrogeologist

cc: Saeed Zahrai, P.E. / EMERA, Corp.

ATTACHMENT A

LABORATORY ANALYSIS (APRIL 2021)



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June 08, 2021

Heather Tiffany
Altamira
525 central park Dr
Suite 500
Oklahoma City, OK 73013

Work Order: **HS21041578**

Laboratory Results for: **Evans & Associates, Big Fork Ranch**

Dear Heather Tiffany,

ALS Environmental received 12 sample(s) on Apr 29, 2021 for the analysis presented in the following report.

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

Regards,

Generated By: COREY.GRANDITS

Ragen Giga
Project Manager

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21041578

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21041578-01	GWMP-6A	Water		27-Apr-2021 13:45	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-02	GWMP-6A (Filed Filtered)	Water		27-Apr-2021 13:45	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-03	GWMP-9A	Water		27-Apr-2021 13:00	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-04	GWMP-9A (Filed Filtered)	Water		27-Apr-2021 13:00	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-05	GWMP-10A	Water		27-Apr-2021 12:25	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-06	GWMP-10A (Filed Filtered)	Water		27-Apr-2021 12:25	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-07	GWMP-11A	Water		27-Apr-2021 09:22	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-08	GWMP-11A (Filed Filtered)	Water		27-Apr-2021 09:22	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-09	GWMP-12A	Water		27-Apr-2021 11:30	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-10	GWMP-12A (Filed Filtered)	Water		27-Apr-2021 11:30	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-11	DUP-1	Water		27-Apr-2021 11:30	29-Apr-2021 10:20	<input type="checkbox"/>
HS21041578-12	DUP-1 (Filed Filtered)	Water		27-Apr-2021 11:30	29-Apr-2021 10:20	<input type="checkbox"/>

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21041578

CASE NARRATIVE

Work Order Comments

- Revision I - This report was to revised to report additional metals per client email.
- 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.
- The analyses for Radium-226 and Radium-228 were subcontracted to ALS Environmental in Fort Collins, CO. Final report attached.
-

Metals by Method SW6020A

Batch ID: 165595

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

Batch ID: 165645

- MS/MSD performed on an unrelated sample.
-

WetChemistry by Method E300

Batch ID: R383575

Sample ID: HS21050273-01MS

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

WetChemistry by Method M2540C

Batch ID: R382982

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

WetChemistry by Method SM4500H+ B

Batch ID: R382759

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-6A
 Collection Date: 27-Apr-2021 13:45

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	13-May-2021 13:21
Arsenic	0.00136	J	0.000400	0.00200	mg/L	1	13-May-2021 13:21
Barium	0.212		0.00190	0.00400	mg/L	1	13-May-2021 13:21
Beryllium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:21
Boron	0.149		0.0110	0.0200	mg/L	1	13-May-2021 13:21
Cadmium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:21
Calcium	96.1		0.0340	0.500	mg/L	1	13-May-2021 13:21
Chromium	0.00133	J	0.000400	0.00400	mg/L	1	13-May-2021 13:21
Cobalt	0.000278	J	0.000200	0.00500	mg/L	1	13-May-2021 13:21
Lead	U		0.000600	0.00200	mg/L	1	13-May-2021 13:21
Molybdenum	U		0.000600	0.00500	mg/L	1	13-May-2021 13:21
Selenium	0.00796		0.00110	0.00200	mg/L	1	13-May-2021 13:21
Thallium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:21
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	4.98		0.200	0.500	mg/L	1	13-May-2021 02:51
Fluoride	0.467		0.0500	0.100	mg/L	1	13-May-2021 02:51
Sulfate	65.5		0.200	0.500	mg/L	1	13-May-2021 02:51
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	488		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.27	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-6A (Filed Filtered)
 Collection Date: 27-Apr-2021 13:45

ANALYTICAL REPORT

WorkOrder:HS21041578
 Lab ID:HS21041578-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	U		0.000600	0.00500	mg/L	1	10-May-2021 21:48

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-9A
 Collection Date: 27-Apr-2021 13:00

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	13-May-2021 13:23
Arsenic	0.00185	J	0.000400	0.00200	mg/L	1	13-May-2021 13:23
Barium	0.0711		0.00190	0.00400	mg/L	1	13-May-2021 13:23
Beryllium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:23
Boron	1.11		0.110	0.200	mg/L	10	13-May-2021 16:05
Cadmium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:23
Calcium	34.3		0.0340	0.500	mg/L	1	13-May-2021 13:23
Chromium	0.00196	J	0.000400	0.00400	mg/L	1	13-May-2021 13:23
Cobalt	0.000489	J	0.000200	0.00500	mg/L	1	13-May-2021 13:23
Lead	0.000899	J	0.000600	0.00200	mg/L	1	13-May-2021 13:23
Molybdenum	0.00556		0.000600	0.00500	mg/L	1	13-May-2021 13:23
Selenium	U		0.00110	0.00200	mg/L	1	13-May-2021 13:23
Thallium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:23
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	16.3		0.200	0.500	mg/L	1	13-May-2021 03:29
Fluoride	0.834		0.0500	0.100	mg/L	1	13-May-2021 03:29
Sulfate	99.1		0.200	0.500	mg/L	1	13-May-2021 03:29
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	562		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.78	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.2	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-9A (Filed Filtered)
 Collection Date: 27-Apr-2021 13:00

ANALYTICAL REPORT

WorkOrder:HS21041578
 Lab ID:HS21041578-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	0.00786		0.000600	0.00500	mg/L	1	10-May-2021 21:50

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-10A
 Collection Date: 27-Apr-2021 12:25

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	13-May-2021 13:25
Arsenic	0.00211		0.000400	0.00200	mg/L	1	13-May-2021 13:25
Barium	0.0735		0.00190	0.00400	mg/L	1	13-May-2021 13:25
Beryllium		U	0.000200	0.00200	mg/L	1	13-May-2021 13:25
Boron	1.10		0.110	0.200	mg/L	10	13-May-2021 16:07
Cadmium	0.000272	J	0.000200	0.00200	mg/L	1	13-May-2021 13:25
Calcium	199		0.340	5.00	mg/L	10	13-May-2021 16:07
Chromium	0.00124	J	0.000400	0.00400	mg/L	1	13-May-2021 13:25
Cobalt	0.00325	J	0.000200	0.00500	mg/L	1	13-May-2021 13:25
Lead	0.00334		0.000600	0.00200	mg/L	1	13-May-2021 13:25
Molybdenum	0.00204	J	0.000600	0.00500	mg/L	1	13-May-2021 13:25
Selenium		U	0.00110	0.00200	mg/L	1	13-May-2021 13:25
Thallium		U	0.000200	0.00200	mg/L	1	13-May-2021 13:25
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	31.7		0.200	0.500	mg/L	1	13-May-2021 03:42
Fluoride	0.480		0.0500	0.100	mg/L	1	13-May-2021 03:42
Sulfate	858		4.00	10.0	mg/L	20	13-May-2021 03:55
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	1,870		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.03	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-10A (Filed Filtered)
 Collection Date: 27-Apr-2021 12:25

ANALYTICAL REPORT

WorkOrder:HS21041578
 Lab ID:HS21041578-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	0.00395	J	0.000600	0.00500	mg/L	1	10-May-2021 21:52

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-11A
 Collection Date: 27-Apr-2021 09:22

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony		U	0.000400	0.00200	mg/L	1	13-May-2021 13:27
Arsenic	0.00184	J	0.000400	0.00200	mg/L	1	13-May-2021 13:27
Barium	0.541		0.00190	0.00400	mg/L	1	13-May-2021 13:27
Beryllium	0.000502	J	0.000200	0.00200	mg/L	1	13-May-2021 13:27
Boron	0.0856		0.0110	0.0200	mg/L	1	13-May-2021 13:27
Cadmium		U	0.000200	0.00200	mg/L	1	13-May-2021 13:27
Calcium	269		0.340	5.00	mg/L	10	13-May-2021 16:09
Chromium	0.00306	J	0.000400	0.00400	mg/L	1	13-May-2021 13:27
Cobalt	0.000970	J	0.000200	0.00500	mg/L	1	13-May-2021 13:27
Lead	0.00106	J	0.000600	0.00200	mg/L	1	13-May-2021 13:27
Molybdenum		U	0.000600	0.00500	mg/L	1	13-May-2021 13:27
Selenium		U	0.00110	0.00200	mg/L	1	13-May-2021 13:27
Thallium		U	0.000200	0.00200	mg/L	1	13-May-2021 13:27
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	4.58		0.200	0.500	mg/L	1	13-May-2021 04:08
Fluoride	0.219		0.0500	0.100	mg/L	1	13-May-2021 04:08
Sulfate	41.8		0.200	0.500	mg/L	1	13-May-2021 04:08
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	464		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.43	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.1	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-11A (Filed Filtered)
 Collection Date: 27-Apr-2021 09:22

ANALYTICAL REPORT

WorkOrder:HS21041578
 Lab ID:HS21041578-08
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	U		0.000600	0.00500	mg/L	1	10-May-2021 21:58

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-12A
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-09
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	13-May-2021 13:29
Arsenic	0.00143	J	0.000400	0.00200	mg/L	1	13-May-2021 13:29
Barium	0.0256		0.00190	0.00400	mg/L	1	13-May-2021 13:29
Beryllium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:29
Boron	6.00		0.220	0.400	mg/L	20	13-May-2021 16:11
Cadmium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:29
Calcium	202		0.680	10.0	mg/L	20	13-May-2021 16:11
Chromium	0.000590	J	0.000400	0.00400	mg/L	1	13-May-2021 13:29
Cobalt	0.00387	J	0.000200	0.00500	mg/L	1	13-May-2021 13:29
Lead	0.000997	J	0.000600	0.00200	mg/L	1	13-May-2021 13:29
Molybdenum	0.0445		0.000600	0.00500	mg/L	1	13-May-2021 13:29
Selenium	U		0.00110	0.00200	mg/L	1	13-May-2021 13:29
Thallium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:29
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	177		2.00	5.00	mg/L	10	13-May-2021 05:12
Fluoride	0.811		0.0500	0.100	mg/L	1	13-May-2021 04:59
Sulfate	1,230		20.0	50.0	mg/L	100	13-May-2021 05:25
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	2,600		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	6.95	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.0	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client:	Altamira	ANALYTICAL REPORT
Project:	Evans & Associates, Big Fork Ranch	WorkOrder:HS21041578
Sample ID:	GWMP-12A (Filed Filtered)	Lab ID:HS21041578-10
Collection Date:	27-Apr-2021 11:30	Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	0.0576		0.000600	0.00500	mg/L	1	10-May-2021 22:00

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: DUP-1
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT
 WorkOrder:HS21041578
 Lab ID:HS21041578-11
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 11-May-2021		Analyst: JHD	
Antimony	U		0.000400	0.00200	mg/L	1	13-May-2021 13:31
Arsenic	0.00143	J	0.000400	0.00200	mg/L	1	13-May-2021 13:31
Barium	0.0254		0.00190	0.00400	mg/L	1	13-May-2021 13:31
Beryllium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:31
Boron	7.31		0.220	0.400	mg/L	20	13-May-2021 16:13
Cadmium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:31
Calcium	210		0.680	10.0	mg/L	20	13-May-2021 16:13
Chromium	0.000513	J	0.000400	0.00400	mg/L	1	13-May-2021 13:31
Cobalt	0.00384	J	0.000200	0.00500	mg/L	1	13-May-2021 13:31
Lead	0.000859	J	0.000600	0.00200	mg/L	1	13-May-2021 13:31
Molybdenum	0.0607		0.000600	0.00500	mg/L	1	13-May-2021 13:31
Selenium	U		0.00110	0.00200	mg/L	1	13-May-2021 13:31
Thallium	U		0.000200	0.00200	mg/L	1	13-May-2021 13:31
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	111		2.00	5.00	mg/L	10	13-May-2021 05:50
Fluoride	0.769		0.0500	0.100	mg/L	1	13-May-2021 05:38
Sulfate	1,890		20.0	50.0	mg/L	100	13-May-2021 06:03
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	3,550		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.07	H	0.100	0.100	pH Units	1	30-Apr-2021 13:43
Temp Deg C @pH	22.4	H	0	0	°C	1	30-Apr-2021 13:43
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUBFC	
Subcontract Analysis	See Attached		0		NA	1	27-May-2021 09:07

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: DUP-1 (Filed Filtered)
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT

WorkOrder:HS21041578
 Lab ID:HS21041578-12
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 10-May-2021		Analyst: JHD
Molybdenum	0.0639		0.000600	0.00500	mg/L	1	10-May-2021 22:02

Weight / Prep Log

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

Batch ID: 165595 **Start Date:** 10 May 2021 12:30 **End Date:** 10 May 2021 16:30
Method: DISS METALS PREP - WATER - SW3010A **Prep Code:** 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21041578-02		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
HS21041578-04		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
HS21041578-06		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
HS21041578-08		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
HS21041578-10		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2
HS21041578-12		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2

Batch ID: 165645 **Start Date:** 11 May 2021 13:30 **End Date:** 11 May 2021 17:30
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21041578-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21041578-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21041578-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21041578-07		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21041578-09		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21041578-11		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 165595 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Water	
HS21041578-02	GWMP-6A (Filed Filtered)	27 Apr 2021 13:45		10 May 2021 16:30	10 May 2021 21:48	1
HS21041578-04	GWMP-9A (Filed Filtered)	27 Apr 2021 13:00		10 May 2021 16:30	10 May 2021 21:50	1
HS21041578-06	GWMP-10A (Filed Filtered)	27 Apr 2021 12:25		10 May 2021 16:30	10 May 2021 21:52	1
HS21041578-08	GWMP-11A (Filed Filtered)	27 Apr 2021 09:22		10 May 2021 16:30	10 May 2021 21:58	1
HS21041578-10	GWMP-12A (Filed Filtered)	27 Apr 2021 11:30		10 May 2021 16:30	10 May 2021 22:00	1
HS21041578-12	DUP-1 (Filed Filtered)	27 Apr 2021 11:30		10 May 2021 16:30	10 May 2021 22:02	1
Batch ID: 165645 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS21041578-01	GWMP-6A	27 Apr 2021 13:45		11 May 2021 17:30	13 May 2021 13:21	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00		11 May 2021 17:30	13 May 2021 16:05	10
HS21041578-03	GWMP-9A	27 Apr 2021 13:00		11 May 2021 17:30	13 May 2021 13:23	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25		11 May 2021 17:30	13 May 2021 16:07	10
HS21041578-05	GWMP-10A	27 Apr 2021 12:25		11 May 2021 17:30	13 May 2021 13:25	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22		11 May 2021 17:30	13 May 2021 16:09	10
HS21041578-07	GWMP-11A	27 Apr 2021 09:22		11 May 2021 17:30	13 May 2021 13:27	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30		11 May 2021 17:30	13 May 2021 16:11	20
HS21041578-09	GWMP-12A	27 Apr 2021 11:30		11 May 2021 17:30	13 May 2021 13:29	1
HS21041578-11	DUP-1	27 Apr 2021 11:30		11 May 2021 17:30	13 May 2021 16:13	20
HS21041578-11	DUP-1	27 Apr 2021 11:30		11 May 2021 17:30	13 May 2021 13:31	1
Batch ID: R382759 (0)		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS21041578-01	GWMP-6A	27 Apr 2021 13:45			30 Apr 2021 13:43	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00			30 Apr 2021 13:43	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			30 Apr 2021 13:43	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22			30 Apr 2021 13:43	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			30 Apr 2021 13:43	1
HS21041578-11	DUP-1	27 Apr 2021 11:30			30 Apr 2021 13:43	1
Batch ID: R382982 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS21041578-01	GWMP-6A	27 Apr 2021 13:45			03 May 2021 17:20	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00			03 May 2021 17:20	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			03 May 2021 17:20	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22			03 May 2021 17:20	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			03 May 2021 17:20	1
HS21041578-11	DUP-1	27 Apr 2021 11:30			03 May 2021 17:20	1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: R383575 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21041578-01	GWMP-6A	27 Apr 2021 13:45			13 May 2021 02:51	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00			13 May 2021 03:29	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			13 May 2021 03:55	20
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			13 May 2021 03:42	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22			13 May 2021 04:08	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			13 May 2021 05:25	100
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			13 May 2021 05:12	10
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			13 May 2021 04:59	1
HS21041578-11	DUP-1	27 Apr 2021 11:30			13 May 2021 06:03	100
HS21041578-11	DUP-1	27 Apr 2021 11:30			13 May 2021 05:50	10
HS21041578-11	DUP-1	27 Apr 2021 11:30			13 May 2021 05:38	1
Batch ID: R384453 (0)		Test Name : SUBCONTRACT ANALYSIS - RADIUM 228			Matrix: Water	
HS21041578-01	GWMP-6A	27 Apr 2021 13:45			27 May 2021 09:07	1
HS21041578-01	GWMP-6A	27 Apr 2021 13:45			27 May 2021 09:07	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00			27 May 2021 09:07	1
HS21041578-03	GWMP-9A	27 Apr 2021 13:00			27 May 2021 09:07	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			27 May 2021 09:07	1
HS21041578-05	GWMP-10A	27 Apr 2021 12:25			27 May 2021 09:07	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22			27 May 2021 09:07	1
HS21041578-07	GWMP-11A	27 Apr 2021 09:22			27 May 2021 09:07	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			27 May 2021 09:07	1
HS21041578-09	GWMP-12A	27 Apr 2021 11:30			27 May 2021 09:07	1
HS21041578-11	DUP-1	27 Apr 2021 11:30			27 May 2021 09:07	1
HS21041578-11	DUP-1	27 Apr 2021 11:30			27 May 2021 09:07	1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: 165595 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MBLK	Sample ID: MBLK-165595	Units: mg/L		Analysis Date: 10-May-2021 21:16						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084226	PrepDate: 10-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Molybdenum	U	0.00500								
LCS	Sample ID: LCS-165595	Units: mg/L		Analysis Date: 10-May-2021 21:18						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084227	PrepDate: 10-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Molybdenum	0.05169	0.00500	0.05	0	103	80 - 120				
MS	Sample ID: HS21041500-02MS	Units: mg/L		Analysis Date: 10-May-2021 21:24						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084230	PrepDate: 10-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Molybdenum	0.07798	0.00500	0.05	0.02164	113	75 - 125				
MSD	Sample ID: HS21041500-02MSD	Units: mg/L		Analysis Date: 10-May-2021 21:26						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084231	PrepDate: 10-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Molybdenum	0.07704	0.00500	0.05	0.02164	111	75 - 125	0.07798	1.21	20	
PDS	Sample ID: HS21041500-02PDS	Units: mg/L		Analysis Date: 10-May-2021 21:28						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084232	PrepDate: 10-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual	
Molybdenum	0.1403	0.00500	0.1	0.02164	119	75 - 125				
SD	Sample ID: HS21041500-02SD	Units: mg/L		Analysis Date: 10-May-2021 21:22						
Client ID:	Run ID: ICPMS06_383306	SeqNo: 6084229	PrepDate: 10-May-2021	DF: 5						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit Qual	
Molybdenum	0.02106	0.0250					0.02164	0 10	J	

The following samples were analyzed in this batch: HS21041578-02 HS21041578-04 HS21041578-06 HS21041578-08
 HS21041578-10 HS21041578-12

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: 165645 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A					
MBLK	Sample ID: MBLK-165645	Units: mg/L			Analysis Date: 13-May-2021 12:45				
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090055	PrepDate: 11-May-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Antimony	U	0.00200							
Arsenic	U	0.00200							
Barium	U	0.00400							
Beryllium	U	0.00200							
Boron	U	0.0200							
Cadmium	U	0.00200							
Calcium	U	0.500							
Chromium	U	0.00400							
Cobalt	U	0.00500							
Lead	U	0.00200							
Molybdenum	U	0.00500							
Selenium	U	0.00200							
Thallium	U	0.00200							

LCS	Sample ID: LCS-165645	Units: mg/L			Analysis Date: 13-May-2021 12:47				
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090056	PrepDate: 11-May-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Antimony	0.0502	0.00200	0.05	0	100	80 - 120			
Arsenic	0.04739	0.00200	0.05	0	94.8	80 - 120			
Barium	0.05027	0.00400	0.05	0	101	80 - 120			
Beryllium	0.04602	0.00200	0.05	0	92.0	80 - 120			
Boron	0.4769	0.0200	0.5	0	95.4	80 - 120			
Cadmium	0.05078	0.00200	0.05	0	102	80 - 120			
Calcium	4.8	0.500	5	0	96.0	80 - 120			
Chromium	0.04898	0.00400	0.05	0	98.0	80 - 120			
Cobalt	0.04958	0.00500	0.05	0	99.2	80 - 120			
Lead	0.04871	0.00200	0.05	0	97.4	80 - 120			
Molybdenum	0.04874	0.00500	0.05	0	97.5	80 - 120			
Selenium	0.04808	0.00200	0.05	0	96.2	80 - 120			
Thallium	0.04691	0.00200	0.05	0	93.8	80 - 120			

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: 165645 (0)		Instrument: ICPMS06			Method: ICP-MS METALS BY SW6020A					
MS	Sample ID: HS21041593-01MS	Units: mg/L			Analysis Date: 13-May-2021 12:53					
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090059		PrepDate: 11-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04354	0.00200	0.05	0.000187	86.7	80 - 120				
Arsenic	0.04577	0.00200	0.05	0.001312	88.9	80 - 120				
Barium	0.1114	0.00400	0.05	0.07228	78.2	80 - 120				S
Beryllium	0.04529	0.00200	0.05	0.000069	90.4	80 - 120				
Boron	1.251	0.0200	0.5	0.8765	74.9	80 - 120				SE
Cadmium	0.04596	0.00200	0.05	-0.000001	91.9	80 - 120				
Calcium	271	0.500	5	304.2	-665	80 - 120				SEO
Chromium	0.04562	0.00400	0.05	0.000547	90.2	80 - 120				
Cobalt	0.05111	0.00500	0.05	0.006254	89.7	80 - 120				
Lead	0.04776	0.00200	0.05	0.00041	94.7	80 - 120				
Molybdenum	0.04664	0.00500	0.05	0.001441	90.4	80 - 120				
Selenium	0.04588	0.00200	0.05	-0.000348	92.4	80 - 120				
Thallium	0.04532	0.00200	0.05	0.000988	88.7	80 - 120				

MSD	Sample ID: HS21041593-01MSD	Units: mg/L			Analysis Date: 13-May-2021 12:59					
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090061		PrepDate: 11-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04455	0.00200	0.05	0.000187	88.7	80 - 120	0.04354	2.29	20	
Arsenic	0.04659	0.00200	0.05	0.001312	90.6	80 - 120	0.04577	1.78	20	
Barium	0.1064	0.00400	0.05	0.07228	68.3	80 - 120	0.1114	4.56	20	S
Beryllium	0.04509	0.00200	0.05	0.000069	90.0	80 - 120	0.04529	0.44	20	
Boron	1.18	0.0200	0.5	0.8765	60.8	80 - 120	1.251	5.83	20	SE
Cadmium	0.04618	0.00200	0.05	-0.000001	92.4	80 - 120	0.04596	0.471	20	
Calcium	247.1	0.500	5	304.2	-1140	80 - 120	271	9.22	20	SEO
Chromium	0.04514	0.00400	0.05	0.000547	89.2	80 - 120	0.04562	1.06	20	
Cobalt	0.0502	0.00500	0.05	0.006254	87.9	80 - 120	0.05111	1.8	20	
Lead	0.04767	0.00200	0.05	0.00041	94.5	80 - 120	0.04776	0.174	20	
Molybdenum	0.04883	0.00500	0.05	0.001441	94.8	80 - 120	0.04664	4.59	20	
Selenium	0.04776	0.00200	0.05	-0.000348	96.2	80 - 120	0.04588	4.02	20	
Thallium	0.04535	0.00200	0.05	0.000988	88.7	80 - 120	0.04532	0.0728	20	

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: 165645 (0) **Instrument:** ICPMS06 **Method:** ICP-MS METALS BY SW6020A

PDS		Sample ID: HS21041593-01PDS			Units: mg/L		Analysis Date: 13-May-2021 13:01			
Client ID:		Run ID: ICPMS06_383557			SeqNo: 6090032		PrepDate: 11-May-2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09123	0.00200	0.1	0.000187	91.0	75 - 125				
Arsenic	0.09398	0.00200	0.1	0.001312	92.7	75 - 125				
Barium	0.1575	0.00400	0.1	0.07228	85.3	75 - 125				
Beryllium	0.08765	0.00200	0.1	0.000069	87.6	75 - 125				
Cadmium	0.09014	0.00200	0.1	-0.000001	90.1	75 - 125				
Chromium	0.09149	0.00400	0.1	0.000547	90.9	75 - 125				
Cobalt	0.0998	0.00500	0.1	0.006254	93.5	75 - 125				
Lead	0.09395	0.00200	0.1	0.00041	93.5	75 - 125				
Molybdenum	0.09872	0.00500	0.1	0.001441	97.3	75 - 125				
Selenium	0.09597	0.00200	0.1	-0.000348	96.3	75 - 125				
Thallium	0.08932	0.00200	0.1	0.000988	88.3	75 - 125				

PDS		Sample ID: HS21041593-01PDS			Units: mg/L		Analysis Date: 14-May-2021 10:57			
Client ID:		Run ID: ICPMS06_383639			SeqNo: 6092680		PrepDate: 11-May-2021		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron	4.741	0.200	5	0.8718	77.4	75 - 125				

PDS		Sample ID: HS21041593-01PDS			Units: mg/L		Analysis Date: 13-May-2021 16:44			
Client ID:		Run ID: ICPMS06_383557			SeqNo: 6090571		PrepDate: 11-May-2021		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	413.1	5.00	100	321.3	91.9	75 - 125				

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: 165645 (0)	Instrument: ICPMS06	Method: ICP-MS METALS BY SW6020A
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SD		Sample ID: HS21041593-01SD			Units: mg/L		Analysis Date: 13-May-2021 12:51			
Client ID:		Run ID: ICPMS06_383557			SeqNo: 6090058		PrepDate: 11-May-2021		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Antimony	U	0.0100					0.000187	0	10	
Arsenic	U	0.0100					0.001312	0	10	
Barium	0.07222	0.0200					0.07228	0.0747	10	
Beryllium	U	0.0100					0.000069	0	10	
Cadmium	U	0.0100					-0.000001	0	10	
Chromium	U	0.0200					0.000547	0	10	
Cobalt	0.006245	0.0250					0.006254	0	10	J
Lead	U	0.0100					0.00041	0	10	
Molybdenum	U	0.0250					0.001441	0	10	
Selenium	U	0.0100					-0.000348	0	10	
Thallium	U	0.0100					0.000988	0	10	

SD		Sample ID: HS21041593-01SD			Units: mg/L		Analysis Date: 14-May-2021 10:45			
Client ID:		Run ID: ICPMS06_383639			SeqNo: 6091880		PrepDate: 11-May-2021		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Boron	1.045	1.00					0.8718	0	10	

SD		Sample ID: HS21041593-01SD			Units: mg/L		Analysis Date: 13-May-2021 16:42			
Client ID:		Run ID: ICPMS06_383557			SeqNo: 6090570		PrepDate: 11-May-2021		DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	Limit	Qual
Calcium	318.1	25.0					321.3	1	10	

The following samples were analyzed in this batch:

HS21041578-01	HS21041578-03	HS21041578-05	HS21041578-07
HS21041578-09	HS21041578-11		

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: R382759 (0) **Instrument:** WetChem_HS **Method:** PH BY SM4500H+ B

DUP Sample ID: **HS21041356-04DUP** Units: **pH Units** Analysis Date: **30-Apr-2021 13:43**
 Client ID: Run ID: **WetChem_HS_382759** SeqNo: **6069650** PrepDate: DF: **1**
 Analyte Result PQL SPK Val SPK Ref Value %REC Control Limit RPD Ref Value %RPD RPD Limit Qual

pH	6.79	0.100						6.74	0.739	10
Temp Deg C @pH	22	0						22	0	10

The following samples were analyzed in this batch: HS21041578-01 HS21041578-03 HS21041578-05 HS21041578-07
 HS21041578-09 HS21041578-11

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: R382982 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C

MBLK	Sample ID: WBLK-050321	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075442	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-050321	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075443	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) 1098 10.0 1000 0 110 85 - 115

DUP	Sample ID: HS21041671-01DUP	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075441	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) 52710 10.0 52790 0.152 5

The following samples were analyzed in this batch: HS21041578-01 HS21041578-03 HS21041578-05 HS21041578-07
 HS21041578-09 HS21041578-11

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: R383575 (0) **Instrument:** ICS2100 **Method:** ANIONS BY E300.0

MBLK		Sample ID: MBLK-		Units: mg/L		Analysis Date: 13-May-2021 10:07			
Client ID:		Run ID: ICS2100_383575		SeqNo: 6090229		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							
Sulfate	U	0.500							

LCS		Sample ID: LCS-		Units: mg/L		Analysis Date: 13-May-2021 10:20			
Client ID:		Run ID: ICS2100_383575		SeqNo: 6090230		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	20.75	0.500	20	0	104	90 - 110			
Fluoride	4.393	0.100	4	0	110	90 - 110			
Sulfate	20.16	0.500	20	0	101	90 - 110			

MS		Sample ID: HS21050273-01MS		Units: mg/L		Analysis Date: 13-May-2021 07:46			
Client ID:		Run ID: ICS2100_383575		SeqNo: 6090270		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	96.52	0.500	10	87.59	89.3	80 - 120			O
Fluoride	4.676	0.100	2	2.543	107	80 - 120			
Sulfate	418.7	0.500	10	0	4190	80 - 120			SE

MS		Sample ID: HS21041578-01MS		Units: mg/L		Analysis Date: 13-May-2021 03:04			
Client ID: GWMP-6A		Run ID: ICS2100_383575		SeqNo: 6090201		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	14.92	0.500	10	4.977	99.5	80 - 120			
Fluoride	2.663	0.100	2	0.4667	110	80 - 120			
Sulfate	73.76	0.500	10	65.45	83.1	80 - 120			O

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

QC BATCH REPORT

Batch ID: R383575 (0)	Instrument: ICS2100	Method: ANIONS BY E300.0
--------------------------------	----------------------------	---------------------------------

MSD	Sample ID: HS21050273-01MSD	Units: mg/L	Analysis Date: 13-May-2021 07:59							
Client ID:	Run ID: ICS2100_383575	SeqNo: 6090271	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	96.49	0.500	10	87.59	89.0	80 - 120	96.52	0.03	20	O
Fluoride	4.674	0.100	2	2.543	107	80 - 120	4.676	0.0513	20	
Sulfate	418.8	0.500	10	0	4190	80 - 120	418.7	0.026	20	SE

MSD	Sample ID: HS21041578-01MSD	Units: mg/L	Analysis Date: 13-May-2021 03:16							
Client ID: GWMP-6A	Run ID: ICS2100_383575	SeqNo: 6090202	PrepDate: DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	14.92	0.500	10	4.977	99.5	80 - 120	14.92	0	20	
Fluoride	2.668	0.100	2	0.4667	110	80 - 120	2.663	0.188	20	
Sulfate	73.88	0.500	10	65.45	84.2	80 - 120	73.76	0.154	20	O

The following samples were analyzed in this batch:	HS21041578-01	HS21041578-03	HS21041578-05	HS21041578-07
	HS21041578-09	HS21041578-11		

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041578

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

Sample Receipt Checklist

Work Order ID: HS21041578

Date/Time Received: **29-Apr-2021 10:20**

Client Name: Enviro Clean Services-Tulsa

Received by: **Si Ma**

Completed By: <u>/S/ Jared R. Makan</u>	29-Apr-2021 16:18	Reviewed by: <u>/S/ RJ Modashia</u>	30-Apr-2021 09:28
eSignature	Date/Time	eSignature	Date/Time

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

- | | | | |
|---|---|-----------------------------|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samplers name present on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Temperature(s)/Thermometer(s): 0.4°C, 0.6°C UC/C IR31

Cooler(s)/Kit(s): 45352, 45098

Date/Time sample(s) sent to storage: 04/29/2021 16:20

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:

CHAIN OF CUSTODY RECORD



PROJECT NUMBER:
EMEEOK2021/3000-APRIL 21AM

CLIENT CONTACT:
HEATHER TIFFANY

PROJECT NAME:
EBA, BIG FORK RANCH

CLIENT EMAIL:
HEATHER.TIFFANY@ALTAMIRA-LABDATA.US.COM

CLIENT PHONE:
405.618.

COC: _

LABORATORY / LAB PM:
ALG / RJ MODASHIA

CLIENT ADDRESS:
3700 W. ROBINSON ST. STE 200
NORMAN, OK 73072

TAT: STND.

LAB ADDRESS:
10450 STANCLIFF RD
STE 210
HOUSTON, TX 77099

SPECIAL INSTRUCTIONS:
* METALS BY 6020A:
As, Ba, Be, Pb, Mo, Sn
* REPORT RAD 224/228 COMBINED

SHIPMENT METHOD:
FEDEX

TRACKING:

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PH (SM4600 H2B)	Cl, F, SO4 (300.W)	B (6020A)	Ca (6010 B)	TDS (SM2540C)	METALS, TOTAL 6020A	**RA - 224 SMB TO FT. COLLINS	**RA - 228 SMB TO FT. COLLINS	FIELD FILTERED METALS*	
1	GWMP-6A		1345	W	2,9	4	N	X	X	X	X	X	X	X	X	X	
2	GWMP-6A		1345		2	1	Y										X
3	GWMP-8A				2,9	4	N	X	X	X	X	X	X	X	X	X	
4	GWMP-8A				2	1	Y										X
5	GWMP-9A		1300		2,9	4	N	X	X	X	X	X	X	X	X	X	
6	GWMP-9A		1300		2	1	Y										X
7	GWMP-10A		1225		2,9	4	N	X	X	X	X	X	X	X	X	X	
8	GWMP-10A		1225		2	1	Y										X
9	GWMP-11A		922		2,9	4	N	X	X	X	X	X	X	X	X	X	
10	GWMP-11A		922		2	1	Y										X
11	GWMP-12A		1130		2,9	4	N	X	X	X	X	X	X	X	X	X	
12	GWMP-12A		1130		2	1	Y										X
13	DUP-1		1130		2,9	4	N	X	X	X	X	X	X	X	X	X	
14	DUP-1		1130		2	1	Y										X
15																	

SAMPLER(S) NAME: *Pasha Willyson*

DATE: 4/28/21
TIME: 1200

Total # of Containers:

SAMPLER(S) SIGNATURE: *Pasha Willyson*

DATE: 4/28/21
TIME: 1200

RELINQUISHED BY: *Pasha Willyson*

DATE: 4/28/21
TIME: 1200

RECEIVED BY: *Pasha Willyson SM*

DATE: 4-24-21
TIME: 10:20

LOGGED BY:

DATE:
TIME:

COOLER TEMP:

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

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

HS21041578

Altamira
Evans & Associates, Big Fork Ranch



 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: <u>4/29/21</u>	Time: <u>1200</u>	<u>SM</u>
45352	Name: <u>Pasha Khaydar</u>	Company: <u>Pasha Khaydar</u>	Date: <u>04/29/21</u>

45352 APR 29 2021

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: <u>4/27/21</u>	Time: <u>1200</u>	<u>SM</u>
45352	Name: <u>Pasha Khaydar</u>	Company: <u>Pasha Khaydar</u>	Date: <u>04/29/21</u>



Must Deliver Next Business Day
Time and Temperature Sensitive!

1/2 45352

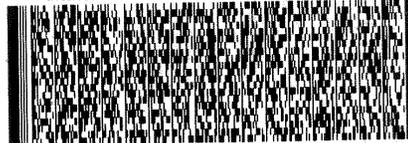
ORIGIN ID: SGRA (810) 794-7828
HEATHER TIFFANY
ALTAMIRA
2670 TRENTON ROAD

SHIP DATE: 19APR21
ACTWGT: 1.00 LB MAN
CAD: 0221247/CAFE3409
DIMS: 26x14x14 IN

NORMAN, OK 73069
UNITED STATES US

TO **CLIENT SERVICES**
ALS LABORATORY GROUP
10450 STANCLIFF ROAD
SUITE 210
HOUSTON TX 77099
(281) 530-5656
REF: EVENS & ASSOCIATES - B077841 - RJ

RMA: ||| ||| |||



FedEx
Express

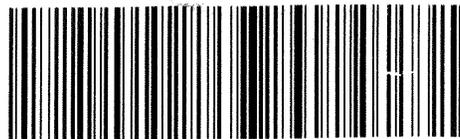


FedEx
TRK# 0221 9473 0842 6470

THU - 29 APR 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	45099	CUSTODY SEAL		Seal Broken By:
		Date: 4/27/21	Time: 1200	SN
		Name: [Signature]	Company: [Signature]	Date: 04/29/21

45098 APR 29 2021

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	45098	CUSTODY SEAL		Seal Broken By:
		Date: 4/27/21	Time: 1200	SN
		Name: [Signature]	Company: [Signature]	Date: 04/29/21



Must Deliver Next Business Day
 Time and Temperature Sensitive!

2/2 45098

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

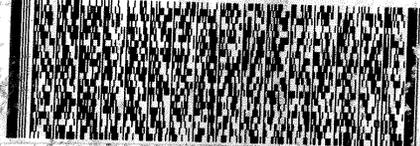
SHIP DATE: 19APR21
 ACTWTG: 1.00 LB MAN
 CAD: 0221247/CAFE3409
 DIMS: 26x14x14 IN

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

(281) 630-6666

REF: EVENS & ASSOCIATES - B077841 - RJ

RMA: ||| |||| |||



FedEx
Express

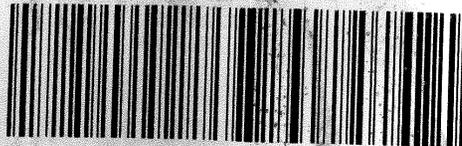


FedEx
TRK# 9473 0842 6481
0221

THU - 29 APR 10:30A
PRIORITY OVERNIGHT

AB SGRA

77099
TX-US IAH





Tuesday, May 25, 2021

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

Re: ALS Workorder: 2104669
Project Name:
Project Number: HS21041578

Dear Mr. Modashia:

Six water samples were received from ALS Environmental, on 4/30/2021. The samples were scheduled for the following analyses:

Radium-226

Radium-228

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

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

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

Sincerely,

ALS Environmental
Julie Ellingson
Project Manager

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

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

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



2104669

Radium-228:

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

All acceptance criteria were met.

Radium-226:

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

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2104669

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS21041578

Client PO Number: 10-16001

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
GWMP-6A	2104669-1		WATER	27-Apr-21	13:45
GWMP-9A	2104669-2		WATER	27-Apr-21	13:00
GWMP-10A	2104669-3		WATER	27-Apr-21	12:25
GWMP-11A	2104669-4		WATER	27-Apr-21	9:22
GWMP-12A	2104669-5		WATER	27-Apr-21	11:30
DUP-1	2104669-6		WATER	27-Apr-21	11:30



2104669

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: 16001

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: HS21041578
TSR: Sonia West

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. · HS21041578-01	GWMP-6A	Water	27 Apr 2021 13:45
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021
2. · HS21041578-03	GWMP-9A	Water	27 Apr 2021 13:00
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021
3. · HS21041578-05	GWMP-10A	Water	27 Apr 2021 12:25
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021
4. · HS21041578-07	GWMP-11A	Water	27 Apr 2021 09:22
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021
5. · HS21041578-09	GWMP-12A	Water	27 Apr 2021 11:30
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021
6. · HS21041578-11	DUP-1	Water	27 Apr 2021 11:30
	Report as combined 226 & 228		13 May 2021
	Report as combined 226 & 228		13 May 2021

RIGHT SOLUTIONS | RIGHT PARTNER



Subcontract Chain of Custody

SAMPLING STATE: Oklahoma

COC ID: 16001

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE

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. MARRIN

Date/Time: 4/29/21 18:00

Received By: Kelley Beyers

Date/Time: 4/30/21 11:30

Cooler ID(s): _____

Temperature(s): _____



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS_USA_TX

Workorder No: 2104669

Project Manager: JME

Initials: KMB

Date: 4/30/2021

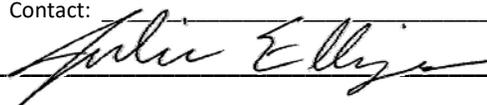
				N/A	YES	NO
1. Are airbills / shipping documents present and/or removable?					x	
Tracking number: 9473 0843 0142						
2. Are custody seals on shipping containers intact?					x	
3. Are custody seals on sample containers intact?				x		
4. Is there a COC (chain-of-custody) present?					x	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)					x	
6. Are short-hold samples present?						x
7. Are all samples within holding times for the requested analyses?					x	
8. Were all sample containers received intact? (not broken or leaking)					x	
9. Is there sufficient sample for the requested analyses?					x	
10. Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)					x	
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)					x	
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)				x		
13. Were the samples shipped on ice?						x
14. Were cooler temperatures measured at 0.1-6.0°C?				IR gun used*:	#5	x
Cooler #: <u>1</u>						
Temperature (°C): <u>AMB</u>						
# of custody seals on cooler: <u>2</u>						
External µR/hr reading: <u>12</u>						
Background µR/hr reading: <u>11</u>						
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES (If no, see Form 008.)						

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

Were unpreserved bottles pH checked? NA

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

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

Project Manager Signature / Date:  5/3/21

Client: ALS Environmental
Project: HS21041578
Sample ID: GWMP-6A
Legal Location:
Collection Date: 4/27/2021 13:45

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 5/4/2021	
Ra-226	ND (+/- 0.12)	U	0.17	pCi/l	NA	5/16/2021 12:04
Carr: BARIUM	96.6		40-110	%REC	DL = NA	5/16/2021 12:04
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 5/17/2021	
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.78	pCi/l	NA	5/21/2021 11:11
Ra-228	ND (+/- 0.43)	U	0.78	pCi/l	NA	5/21/2021 11:11
Carr: BARIUM	96.7		40-110	%REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: GWMP-9A
Legal Location:
Collection Date: 4/27/2021 13:00

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-2
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 5/4/2021	
Ra-226	ND (+/- 0.16)	U	0.24	pCi/l	NA	5/16/2021 12:04
Carr: BARIUM	96.2		40-110	%REC	DL = NA	5/16/2021 12:04
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 5/17/2021	
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.83	pCi/l	NA	5/21/2021 11:11
Ra-228	ND (+/- 0.41)	U	0.83	pCi/l	NA	5/21/2021 11:11
Carr: BARIUM	92.7		40-110	%REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: GWMP-10A
Legal Location:
Collection Date: 4/27/2021 12:25

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-3
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 5/4/2021	PrepBy: TRB
Ra-226	ND (+/- 0.13)	U	0.2	pCi/l	NA	5/16/2021 12:29
<i>Carr: BARIUM</i>	85.6		40-110	%REC	DL = NA	5/16/2021 12:29
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 5/17/2021	PrepBy: MIG
COMBINED RADIUM (226+228)	ND (+/- 0)	U	0.77	pCi/l	NA	5/21/2021 11:11
Ra-228	ND (+/- 0.41)	U	0.77	pCi/l	NA	5/21/2021 11:11
<i>Carr: BARIUM</i>	98.7		40-110	%REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: GWMP-11A
Legal Location:
Collection Date: 4/27/2021 09:22

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-4
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.59 (+/- 0.29)		SOP 783		Prep Date: 5/4/2021	PrepBy: TRB
<i>Carr: BARIUM</i>	97.3			0.23 pCi/l	NA	5/16/2021 12:29
				40-110 %REC	DL = NA	5/16/2021 12:29
Radium-228 Analysis by GFPC						
COMBINED RADIUM (226+228)	3.12 (+/- 0)		SOP 724		Prep Date: 5/17/2021	PrepBy: MIG
Ra-228	2.53 (+/- 0.79)			0.95 pCi/l	NA	5/21/2021 11:11
<i>Carr: BARIUM</i>	92.3			40-110 %REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: GWMP-12A
Legal Location:
Collection Date: 4/27/2021 11:30

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-5
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
			SOP 783		Prep Date: 5/4/2021	PrepBy: TRB
Ra-226	ND (+/- 0.24)	U	0.36	pCi/l	NA	5/16/2021 12:29
Carr: BARIUM	91		40-110	%REC	DL = NA	5/16/2021 12:29
Radium-228 Analysis by GFPC						
			SOP 724		Prep Date: 5/17/2021	PrepBy: MIG
COMBINED RADIUM (226+228)	1.04 (+/- 0)		0.76	pCi/l	NA	5/21/2021 11:11
Ra-228	1.04 (+/- 0.46)	Y1	0.76	pCi/l	NA	5/21/2021 11:11
Carr: BARIUM	102	Y1	40-110	%REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: DUP-1
Legal Location:
Collection Date: 4/27/2021 11:30

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-6
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.53 (+/- 0.29)		SOP 783		Prep Date: 5/4/2021	PrepBy: TRB
<i>Carr: BARIUM</i>	95.1			0.26 pCi/l	NA	5/16/2021 12:29
				40-110 %REC	DL = NA	5/16/2021 12:29
Radium-228 Analysis by GFPC						
COMBINED RADIUM (226+228)	1.31 (+/- 0)		SOP 724		Prep Date: 5/17/2021	PrepBy: MIG
Ra-228	0.78 (+/- 0.42)			0.75 pCi/l	NA	5/21/2021 11:11
<i>Carr: BARIUM</i>	99			40-110 %REC	DL = NA	5/21/2021 11:11

Client: ALS Environmental
Project: HS21041578
Sample ID: DUP-1
Legal Location:
Collection Date: 4/27/2021 11:30

Date: 25-May-21
Work Order: 2104669
Lab ID: 2104669-6
Matrix: WATER
Percent Moisture:

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

Radiochemistry:

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

Inorganics:

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

Organics:

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

ALS -- Fort Collins

Date: 5/25/2021 4:15:0

Client: ALS Environmental
 Work Order: 2104669
 Project: HS21041578

QC BATCH REPORT

Batch ID: **RE210504-4-3** Instrument ID: **Alpha Scin** Method: **Radium-226 by Radon Emanation**

LCS		Sample ID: RE210504-4			Units: pCi/l		Analysis Date: 5/16/2021 12:50				
Client ID:		Run ID: RE210504-4A			Prep Date: 5/4/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	45 (+/- 11)	0	46.79		95.6	67-120					P,Y1
Carr: BARIUM	15810		15640		101	40-110					Y1

LCSD		Sample ID: RE210504-4			Units: pCi/l		Analysis Date: 5/16/2021 12:50				
Client ID:		Run ID: RE210504-4A			Prep Date: 5/4/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	47 (+/- 12)	0	46.79		99.9	67-120		45	0.13	2.13	P
Carr: BARIUM	15540		15650		99.3	40-110		15810			

MB		Sample ID: RE210504-4			Units: pCi/l		Analysis Date: 5/16/2021 12:04				
Client ID:		Run ID: RE210504-4A			Prep Date: 5/4/2021		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	0.112									U
Carr: BARIUM	15400		15640		98.4	40-110					

The following samples were analyzed in this batch:

2104669-1	2104669-2	2104669-3
2104669-4	2104669-5	2104669-6

Client: ALS Environmental
 Work Order: 2104669
 Project: HS21041578

QC BATCH REPORT

Batch ID: RA210517-1-3 Instrument ID: GASPROP Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA210517-1		Units: ug		Analysis Date: 5/21/2021 11:22					
Client ID:		Run ID: RA210517-1A		Prep Date: 5/17/2021		DF: NA					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	33100		34220		96.7	40-110					
Ra-228	22.9 (+/- 5.4)	0.7	21.93		105	70-130					P

LCSD		Sample ID: RA210517-1		Units: ug		Analysis Date: 5/21/2021 11:22					
Client ID:		Run ID: RA210517-1A		Prep Date: 5/17/2021		DF: NA					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	33480		34220		97.8	40-110		33100			
Ra-228	22.6 (+/- 5.3)	0.8	21.93		103	70-130		22.9	0.04	2.13	P

MB		Sample ID: RA210517-1		Units: ug		Analysis Date: 5/21/2021 11:22					
Client ID:		Run ID: RA210517-1A		Prep Date: 5/17/2021		DF: NA					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	32910		34220		96.2	40-110					
Ra-228	ND	0.85									U

The following samples were analyzed in this batch:

2104669-1	2104669-2	2104669-3
2104669-4	2104669-5	2104669-6



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

June 07, 2021

Heather Tiffany
Altamira
525 central park Dr
Suite 500
Oklahoma City, OK 73013

Work Order: **HS21041627**

Laboratory Results for: **Evans & Associates, Big Fork Ranch**

Dear Heather Tiffany,

ALS Environmental received 2 sample(s) on Apr 30, 2021 for the analysis presented in the following report.

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

Regards,

A handwritten signature in black ink, appearing to read "Ragen Giga", with a horizontal line extending to the right.

Generated By: COREY.GRANDITS
Ragen Giga
Project Manager

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21041627

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21041627-01	GWMP-8A	Water		27-Apr-2021 10:25	30-Apr-2021 10:10	<input type="checkbox"/>
HS21041627-02	GWMP-8A (Filtered)	Water		27-Apr-2021 10:25	30-Apr-2021 10:10	<input type="checkbox"/>

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21041627

CASE NARRATIVE

Work Order Comments

- Revision I - This report was to revised to report additional metals per client email.
-

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

Metals by Method SW6020A

Batch ID: 165648

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

Batch ID: 165770

Sample ID: HS21050382-08SD

- SD is for an unrelated sample (Boron)
-

WetChemistry by Method E300

Batch ID: R383641

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

WetChemistry by Method M2540C

Batch ID: R382982

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

WetChemistry by Method SM4500H+ B

Batch ID: R382838

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-8A
 Collection Date: 27-Apr-2021 10:25

ANALYTICAL REPORT
 WorkOrder:HS21041627
 Lab ID:HS21041627-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A		Prep:SW3010A / 13-May-2021		Analyst: JHD	
Antimony	0.000975	J	0.000400	0.00200	mg/L	1	14-May-2021 11:21
Arsenic	0.00288		0.000400	0.00200	mg/L	1	14-May-2021 11:21
Barium	0.348		0.00190	0.00400	mg/L	1	14-May-2021 11:21
Beryllium	0.000347	J	0.000200	0.00200	mg/L	1	14-May-2021 11:21
Boron	0.121		0.0110	0.0200	mg/L	1	14-May-2021 11:21
Cadmium		U	0.000200	0.00200	mg/L	1	14-May-2021 11:21
Calcium	83.0		0.0340	0.500	mg/L	1	14-May-2021 11:21
Chromium	0.0131		0.000400	0.00400	mg/L	1	14-May-2021 11:21
Cobalt	0.00401	J	0.000200	0.00500	mg/L	1	14-May-2021 11:21
Lead	0.00437		0.000600	0.00200	mg/L	1	14-May-2021 11:21
Molybdenum	0.00185	J	0.000600	0.00500	mg/L	1	14-May-2021 11:21
Selenium	0.0130		0.00110	0.00200	mg/L	1	14-May-2021 11:21
Thallium	0.000252	J	0.000200	0.00200	mg/L	1	14-May-2021 11:21
ANIONS BY E300.0		Method:E300				Analyst: YP	
Chloride	4.58		0.200	0.500	mg/L	1	13-May-2021 22:19
Fluoride	0.415		0.0500	0.100	mg/L	1	13-May-2021 22:19
Sulfate	54.6		0.200	0.500	mg/L	1	13-May-2021 22:19
TOTAL DISSOLVED SOLIDS BY SM2540C		Method:M2540C				Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	418		5.00	10.0	mg/L	1	03-May-2021 17:20
PH BY SM4500H+ B		Method:SM4500H+ B				Analyst: JAC	
pH	7.24	H	0.100	0.100	pH Units	1	03-May-2021 12:32
Temp Deg C @pH	23.0	H	0	0	°C	1	03-May-2021 12:32
SUBCONTRACT ANALYSIS - RADIUM 226		Method:NA				Analyst: SUB	
Subcontract Analysis	See Attached		0		NA	1	31-May-2021 10:54
SUBCONTRACT ANALYSIS - RADIUM 228		Method:NA				Analyst: SUB	
Subcontract Analysis	See Attached		0		NA	1	31-May-2021 10:54

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-8A (Filtered)
 Collection Date: 27-Apr-2021 10:25

ANALYTICAL REPORT

WorkOrder:HS21041627
 Lab ID:HS21041627-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY SW6020A	Method:SW6020A (dissolved)				Prep:SW3010A / 12-May-2021		Analyst: JHD
Molybdenum	0.00196	J	0.000600	0.00500	mg/L	1	13-May-2021 15:17

Weight / Prep Log

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

Batch ID: 165561	Start Date: 08 May 2021 11:00	End Date: 08 May 2021 11:30
Method: SAMPLE FILTRATION - 0.45 MICRON FILTER		Prep Code: FILTRATION

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21041627-02		100 (mL)	100 (mL)	1	250 mL plastic, Neat

Batch ID: 165648	Start Date: 12 May 2021 10:30	End Date: 12 May 2021 14:30
Method: DISS METALS PREP - WATER - SW3010A		Prep Code: 3010A DISS

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21041627-02		10 (mL)	10 (mL)	1	250 mL plastic, Neat

Batch ID: 165770	Start Date: 13 May 2021 13:30	End Date: 13 May 2021 17:30
Method: WATER - SW3010A		Prep Code: 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21041627-01		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 165648 (0)		Test Name : DISSOLVED METALS BY SW6020A			Matrix: Water	
HS21041627-02	GWMP-8A (Filtered)	27 Apr 2021 10:25		12 May 2021 14:30	13 May 2021 15:17	1
Batch ID: 165770 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS21041627-01	GWMP-8A	27 Apr 2021 10:25		13 May 2021 17:30	14 May 2021 11:21	1
Batch ID: R382838 (0)		Test Name : PH BY SM4500H+ B			Matrix: Water	
HS21041627-01	GWMP-8A	27 Apr 2021 10:25			03 May 2021 12:32	1
Batch ID: R382982 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C			Matrix: Water	
HS21041627-01	GWMP-8A	27 Apr 2021 10:25			03 May 2021 17:20	1
Batch ID: R383641 (0)		Test Name : ANIONS BY E300.0			Matrix: Water	
HS21041627-01	GWMP-8A	27 Apr 2021 10:25			13 May 2021 22:19	1
Batch ID: R384662 (0)		Test Name : SUBCONTRACT ANALYSIS - RADIUM 226			Matrix: Water	
HS21041627-01	GWMP-8A	27 Apr 2021 10:25			31 May 2021 10:54	1
HS21041627-01	GWMP-8A	27 Apr 2021 10:25			31 May 2021 10:54	1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: 165648 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)						
MBLK	Sample ID: MBLKF2-165648	Units: mg/L		Analysis Date: 13-May-2021 14:53						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090519		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	0.000683	0.00500							J	
MBLK	Sample ID: MBLKF1-165648	Units: mg/L		Analysis Date: 13-May-2021 14:51						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090518		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	U	0.00500								
MBLK	Sample ID: MBLK-165648	Units: mg/L		Analysis Date: 13-May-2021 14:49						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090517		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	U	0.00500								
LCS	Sample ID: LCS-165648	Units: mg/L		Analysis Date: 13-May-2021 14:55						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090520		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	0.04753	0.00500	0.05	0	95.1	80 - 120				
MS	Sample ID: HS21041583-01MS	Units: mg/L		Analysis Date: 13-May-2021 15:05						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090525		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	0.0443	0.00500	0.05	0.00065	87.3	75 - 125				
MSD	Sample ID: HS21041583-01MSD	Units: mg/L		Analysis Date: 13-May-2021 15:07						
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090526		PrepDate: 12-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual	
Molybdenum	0.04804	0.00500	0.05	0.00065	94.8	75 - 125	0.0443	8.09	20	

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: 165648 (0)		Instrument: ICPMS06		Method: DISSOLVED METALS BY SW6020A (DISSOLVED)					
PDS	Sample ID: HS21041583-01PDS	Units: mg/L			Analysis Date: 13-May-2021 15:09				
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090527	PrepDate: 12-May-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

Molybdenum	0.1054	0.00500	0.1	0.00065	105	75 - 125			
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SD	Sample ID: HS21041583-01SD	Units: mg/L			Analysis Date: 13-May-2021 15:04				
Client ID:	Run ID: ICPMS06_383557	SeqNo: 6090524	PrepDate: 12-May-2021	DF: 5					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit Qual

Molybdenum	U	0.0250					0.00065	0	10
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The following samples were analyzed in this batch: HS21041627-02

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: 165770 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A						
MBLK	Sample ID: MBLK-165770	Units: mg/L			Analysis Date: 14-May-2021 11:07					
Client ID:	Run ID: ICPMS06_383639	SeqNo: 6091886	PrepDate: 13-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Antimony	U	0.00200								
Arsenic	U	0.00200								
Barium	U	0.00400								
Beryllium	U	0.00200								
Boron	U	0.0200								
Cadmium	U	0.00200								
Calcium	U	0.500								
Chromium	U	0.00400								
Cobalt	U	0.00500								
Lead	U	0.00200								
Molybdenum	U	0.00500								
Selenium	U	0.00200								
Thallium	U	0.00200								

LCS	Sample ID: LCS-165770	Units: mg/L			Analysis Date: 14-May-2021 11:09					
Client ID:	Run ID: ICPMS06_383639	SeqNo: 6091887	PrepDate: 13-May-2021	DF: 1						
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05206	0.00200	0.05	0	104	80 - 120				
Arsenic	0.05026	0.00200	0.05	0	101	80 - 120				
Barium	0.05226	0.00400	0.05	0	105	80 - 120				
Beryllium	0.05011	0.00200	0.05	0	100	80 - 120				
Boron	0.5195	0.0200	0.5	0	104	80 - 120				
Cadmium	0.05351	0.00200	0.05	0	107	80 - 120				
Calcium	5.174	0.500	5	0	103	80 - 120				
Chromium	0.05117	0.00400	0.05	0	102	80 - 120				
Cobalt	0.05183	0.00500	0.05	0	104	80 - 120				
Lead	0.05171	0.00200	0.05	0	103	80 - 120				
Molybdenum	0.05143	0.00500	0.05	0	103	80 - 120				
Selenium	0.05342	0.00200	0.05	0	107	80 - 120				
Thallium	0.04973	0.00200	0.05	0	99.5	80 - 120				

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: 165770 (0)		Instrument: ICPMS06			Method: ICP-MS METALS BY SW6020A					
MS	Sample ID: HS21050382-08MS	Units: mg/L			Analysis Date: 14-May-2021 11:15					
Client ID:	Run ID: ICPMS06_383639	SeqNo: 6091911		PrepDate: 13-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05045	0.00200	0.05	0.000278	100	80 - 120				
Arsenic	0.05087	0.00200	0.05	0.001275	99.2	80 - 120				
Barium	0.08634	0.00400	0.05	0.03616	100	80 - 120				
Beryllium	0.04763	0.00200	0.05	0.000015	95.2	80 - 120				
Boron	0.8316	0.0200	0.5	0.3793	90.5	80 - 120				
Cadmium	0.04903	0.00200	0.05	0.000012	98.0	80 - 120				
Calcium	188.5	0.500	5	182.6	117	80 - 120				EO
Chromium	0.0493	0.00400	0.05	0.000077	98.4	80 - 120				
Cobalt	0.04952	0.00500	0.05	0.000607	97.8	80 - 120				
Lead	0.0494	0.00200	0.05	0.000089	98.6	80 - 120				
Molybdenum	0.05637	0.00500	0.05	0.005651	101	80 - 120				
Selenium	0.05079	0.00200	0.05	0.000099	101	80 - 120				
Thallium	0.04656	0.00200	0.05	0.000956	91.2	80 - 120				

MSD	Sample ID: HS21050382-08MSD	Units: mg/L			Analysis Date: 14-May-2021 11:17					
Client ID:	Run ID: ICPMS06_383639	SeqNo: 6091912		PrepDate: 13-May-2021		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04661	0.00200	0.05	0.000278	92.7	80 - 120	0.05045	7.91	20	
Arsenic	0.04746	0.00200	0.05	0.001275	92.4	80 - 120	0.05087	6.94	20	
Barium	0.08418	0.00400	0.05	0.03616	96.0	80 - 120	0.08634	2.53	20	
Beryllium	0.04534	0.00200	0.05	0.000015	90.7	80 - 120	0.04763	4.92	20	
Boron	0.8027	0.0200	0.5	0.3793	84.7	80 - 120	0.8316	3.53	20	
Cadmium	0.0477	0.00200	0.05	0.000012	95.4	80 - 120	0.04903	2.76	20	
Calcium	187.8	0.500	5	182.6	105	80 - 120	188.5	0.332	20	EO
Chromium	0.0462	0.00400	0.05	0.000077	92.2	80 - 120	0.0493	6.5	20	
Cobalt	0.04754	0.00500	0.05	0.000607	93.9	80 - 120	0.04952	4.08	20	
Lead	0.04794	0.00200	0.05	0.000089	95.7	80 - 120	0.0494	3	20	
Molybdenum	0.053	0.00500	0.05	0.005651	94.7	80 - 120	0.05637	6.17	20	
Selenium	0.04661	0.00200	0.05	0.000099	93.0	80 - 120	0.05079	8.58	20	
Thallium	0.04722	0.00200	0.05	0.000956	92.5	80 - 120	0.04656	1.41	20	

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: 165770 (0) **Instrument:** ICPMS06 **Method:** ICP-MS METALS BY SW6020A

PDS		Sample ID: HS21050382-08PDS			Units: mg/L		Analysis Date: 14-May-2021 11:19			
Client ID:		Run ID: ICPMS06_383639			SeqNo: 6091913		PrepDate: 13-May-2021		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.1151	0.00200	0.1	0.000278	115	75 - 125				
Arsenic	0.1164	0.00200	0.1	0.001275	115	75 - 125				
Barium	0.1522	0.00400	0.1	0.03616	116	75 - 125				
Beryllium	0.1041	0.00200	0.1	0.000015	104	75 - 125				
Boron	0.5734	0.0200	0.25	0.3793	77.6	75 - 125				
Cadmium	0.1137	0.00200	0.1	0.000012	114	75 - 125				
Chromium	0.1162	0.00400	0.1	0.000077	116	75 - 125				
Cobalt	0.117	0.00500	0.1	0.000607	116	75 - 125				
Lead	0.1171	0.00200	0.1	0.000089	117	75 - 125				
Molybdenum	0.1236	0.00500	0.1	0.005651	118	75 - 125				
Selenium	0.1165	0.00200	0.1	0.000099	116	75 - 125				
Thallium	0.1184	0.00200	0.1	0.000956	117	75 - 125				

SD		Sample ID: HS21050382-08SD			Units: mg/L		Analysis Date: 14-May-2021 11:13			
Client ID:		Run ID: ICPMS06_383639			SeqNo: 6091910		PrepDate: 13-May-2021		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	%D Limit	Qual
Antimony	U	0.0100					0.000278	0	10	
Arsenic	U	0.0100					0.001275	0	10	
Barium	0.03686	0.0200					0.03616	1.93	10	
Beryllium	U	0.0100					0.000015	0	10	
Boron	0.4311	0.100					0.3793	13.7	10	R
Cadmium	U	0.0100					0.000012	0	10	
Calcium	185.5	2.50					182.6	1.6	10	
Chromium	U	0.0200					0.000077	0	10	
Cobalt	U	0.0250					0.000607	0	10	
Lead	U	0.0100					0.000089	0	10	
Molybdenum	0.005788	0.0250					0.005651	0	10	J
Selenium	U	0.0100					0.000099	0	10	
Thallium	U	0.0100					0.000956	0	10	

The following samples were analyzed in this batch:

Revision: 1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: R382838 (0)		Instrument: WetChem_HS		Method: PH BY SM4500H+ B						
DUP	Sample ID: HS21041303-01DUP	Units: pH Units		Analysis Date: 03-May-2021 12:32						
Client ID:	Run ID: WetChem_HS_382838	SeqNo: 6071973		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

pH	7.55	0.100					7.5	0.664	10	
Temp Deg C @pH	22.3	0					22.1	0.901	10	

The following samples were analyzed in this batch:

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: R382982 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C

MBLK	Sample ID: WBLK-050321	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075442	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-050321	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075443	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) 1098 10.0 1000 0 110 85 - 115

DUP	Sample ID: HS21041671-01DUP	Units: mg/L			Analysis Date: 03-May-2021 17:20					
Client ID:	Run ID: Balance1_382982	SeqNo: 6075441	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) 52710 10.0 52790 0.152 5

The following samples were analyzed in this batch: HS21041627-01

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

QC BATCH REPORT

Batch ID: R383641 (0) **Instrument:** ICS-Integrion **Method:** ANIONS BY E300.0

MBLK		Sample ID: MBLK-		Units: mg/L		Analysis Date: 13-May-2021 13:43			
Client ID:		Run ID: ICS-Integrion_383641		SeqNo: 6091998		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							
Sulfate	U	0.500							

LCS		Sample ID: LCS-		Units: mg/L		Analysis Date: 13-May-2021 13:51			
Client ID:		Run ID: ICS-Integrion_383641		SeqNo: 6091999		PrepDate:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	19.52	0.500	20	0	97.6	90 - 110			
Fluoride	4.147	0.100	4	0	104	90 - 110			
Sulfate	19.64	0.500	20	0	98.2	90 - 110			

MS		Sample ID: HS21050384-01MS		Units: mg/L		Analysis Date: 13-May-2021 22:49			
Client ID:		Run ID: ICS-Integrion_383641		SeqNo: 6092008		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	355.4	5.00	100	260	95.4	80 - 120			
Fluoride	24.27	1.00	20	2.138	111	80 - 120			
Sulfate	320.9	5.00	100	222.7	98.2	80 - 120			

MSD		Sample ID: HS21050384-01MSD		Units: mg/L		Analysis Date: 13-May-2021 22:57			
Client ID:		Run ID: ICS-Integrion_383641		SeqNo: 6092009		PrepDate:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Chloride	348	5.00	100	260	88.0	80 - 120	355.4	2.1	20
Fluoride	23.93	1.00	20	2.138	109	80 - 120	24.27	1.43	20
Sulfate	311.4	5.00	100	222.7	88.8	80 - 120	320.9	2.98	20

The following samples were analyzed in this batch: HS21041627-01

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21041627

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21041627

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21041627-01	GWMP-8A	Login	4/30/2021 12:53:52 PM	JRM	MET065
HS21041627-01	GWMP-8A	Login	4/30/2021 12:53:52 PM	JRM	Sub
HS21041627-01	GWMP-8A	Login	4/30/2021 12:53:52 PM	JRM	Sub
HS21041627-01	GWMP-8A	Login	4/30/2021 12:53:52 PM	JRM	WET125
HS21041627-02	GWMP-8A (Filtered)	Login	4/30/2021 12:53:52 PM	JRM	MET080

Sample Receipt Checklist

Work Order ID: HS21041627

Date/Time Received: **30-Apr-2021 10:10**

Client Name: Enviro Clean Services-Tulsa

Received by: **Pablo Marinez**

Completed By: <u>/S/ Jared R. Makan</u>	30-Apr-2021 13:08	Reviewed by: <u>/S/ RJ Modashia</u>	30-Apr-2021 16:14
eSignature	Date/Time	eSignature	Date/Time

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

- | | | | |
|---|---|-----------------------------|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samplers name present on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Temperature(s)/Thermometer(s):	0.6°C UC/C	IR31
Cooler(s)/Kit(s):	42640	
Date/Time sample(s) sent to storage:	04/30/2021 13:10	

- | | | | |
|--|---|--|--|
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |

pH adjusted by:

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:

CHAIN OF CUSTODY RECORD



PROJECT NUMBER:
EMEEOK2020

PROJECT NAME:
E + A Big Fork Ranch CCR Alt COC: 1 of 1

CLIENT CONTACT:
Heather Tiffany / Chris Schaefer

CLIENT EMAIL:
Heather.tiffany@altamira-us.com
LabData@altamira-us.com CLIENT PHONE:
405 618 2021

LABORATORY / LAB PM:
ALS / RJ Modashia

CLIENT ADDRESS:
**3700 West Robinson St.
Suite 200 Norman OK 73072**

TAT: **Standard**

LAB ADDRESS:
**10450 Stancliff Rd.
Suite 210
Houston TX 77049**

SPECIAL INSTRUCTIONS:

SHIPMENT METHOD:
Fed Ex

TRACKING:
9473 0842 6460

		PARAMETERS										
NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PH (SM4500 HPA)	Cl, F, SO ₄ (300.W)	Bo (6020A)	Ca (6010B)	TDS (SM2540C)	As, Ba, Be, Pb, Mo, Sn (EPA 6020A)	Sub-PA 226 (Radium 226 - Sub to ALS)	Sub-Re 228 (Radium 228 - Sub to ALS)			
4	N	X	X	X	X	X	X	X	X			
1	N										X	

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PH (SM4500 HPA)	Cl, F, SO ₄ (300.W)	Bo (6020A)	Ca (6010B)	TDS (SM2540C)	As, Ba, Be, Pb, Mo, Sn (EPA 6020A)	Sub-PA 226 (Radium 226 - Sub to ALS)	Sub-Re 228 (Radium 228 - Sub to ALS)			HOLD	
1	GWMP - 8A	4/27/21	1025	W	2,9	4	N	X	X	X	X	X	X	X	X				
2	GWMP - 8A	4/27/21	1025		9	1	N										X		X
3	Temp Blank																		
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

HS21041627
Altamira
Evans & Associates, Big Fork Ranch

SAMPLER(S) NAME: **Pasha Khlystov** DATE: **4/28/21** TIME: **1:30** Total # of Containers: _____ SAMPLER(S) SIGNATURE: *Pasha Khlystov* DATE: **4/28/21** TIME: **2:05**

REQUISITIONED BY: *Pasha Khlystov* DATE: **4/20/21** TIME: **1:30** RECEIVED BY: *7-Retirgashid* DATE: **4/28/21** TIME: **1:30** LOGGED BY: *Pasha Khlystov* DATE: **4-30-21** TIME: **10:10** COOLER TEMP: _____

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

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

ALTAMIRA-US, LLC

42640 0.6C 1R31 CFC

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: 4/29/21	Time: 7:57	SM
	Name: [Signature]	Company: [Signature]	Date: 04/30/21

42640 APR 30 2021

 ALS 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. +1 281 530 5656 Fax. +1 281 530 5887	CUSTODY SEAL		Seal Broken By:
	Date: 4/29/21	Time: 7:57	SM
	Name: [Signature]	Company: [Signature]	Date: 04/30/21



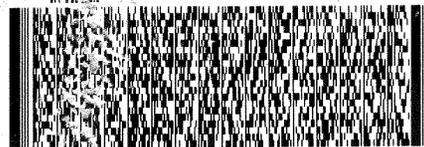
Must Deliver Next Business Day
Time and Temperature Sensitive!

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

SHIP DATE: 19APR21
 ACTWGT: 1.00 LB MAN
 CAD: 0221247/CAFE3409
 DIMS: 26x14x14 IN

TO CLIENT SERVICES
 ALS LABORATORY GROUP
 10450 STANCLIFF ROAD
 SUITE 210
 HOUSTON TX 77099
 (281) 530-5656
 REF: EVANS & ASSOCIATES - B077841 - RJ

RMA: [Signature]



FedEx
 TRK# 9473 0842 6460
 0221

FRI - 30 APR 10:30A
 PRIORITY OVERNIGHT

AB SGRA

77099
 TX-US IAH





Friday, May 28, 2021

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

Re: ALS Workorder: 2105038
Project Name:
Project Number: HS21041627

Dear Mr. Modashia:

One water sample was received from ALS Environmental, on 5/4/2021. 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
Julie Ellingson
Project Manager

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

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

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



2105038

Radium-228:

The sample was 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 EPA 903.1.

All acceptance criteria were met.

ALS -- Fort Collins

Sample Number(s) Cross-Reference Table

OrderNum: 2105038

Client Name: ALS Environmental

Client Project Name:

Client Project Number: HS21041627

Client PO Number: 10-16004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
GWMP-8A	2105038-1		WATER	27-Apr-21	10:25



2105038

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: 16004

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: HS21041627
TSR: Sonia West

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	COLLECT DATE
ANALYSIS REQUESTED			DUE DATE
1. HS21041627-01	GWMP-8A	Water	27 Apr 2021 10:25
	Report as combined 226 & 228		14 May 2021
	Report as combined 226 & 228		14 May 2021

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

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

Relinquished By: [Signature]
Received By: [Signature]
Cooler ID(s): _____

Date/Time: 5/3/2021 18:00
Date/Time: 5/4/21 10:00
Temperature(s): _____



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ALS Houston

Workorder No: 2105038

Project Manager: JME

Initials: JME

Date: 05/04/21

				N/A	YES	NO
1. Are airbills / shipping documents present and/or removable?					X	
Tracking number: 9472 0843 0874						
2. Are custody seals on shipping containers intact?					X	
3. Are custody seals on sample containers intact?				X		
4. Is there a COC (chain-of-custody) present?					X	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)					X	
6. Are short-hold samples present?						X
7. Are all samples within holding times for the requested analyses?					X	
8. Were all sample containers received intact? (not broken or leaking)					X	
9. Is there sufficient sample for the requested analyses?					X	
10. Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)					X	
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)					X	
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)				X		
13. Were the samples shipped on ice?					X	
14. Were cooler temperatures measured at 0.1-6.0°C?				IR gun used*:	#5	
				RAD ONLY	X	
Cooler #: <u>1</u>						
Temperature (°C): <u>3.5</u>						
# of custody seals on cooler: <u>1</u>						
External µR/hr reading: <u>11</u>						
Background µR/hr reading: <u>11</u>						
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES (If no, see Form 008.)						

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

Bottle -2 has more sediment than bottle -1

Were unpreserved bottles pH checked? NA All client bottle ID's vs ALS lab ID's double-checked by: JE

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

Project Manager Signature / Date: *Jodie E. Eliza* 5/5/21

Client: ALS Environmental
Project: HS21041627
Sample ID: GWMP-8A
Legal Location:
Collection Date: 4/27/2021 10:25

Date: 28-May-21
Work Order: 2105038
Lab ID: 2105038-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Radium-226 by Radon Emanation - Method 903.1						
Ra-226	0.25 (+/- 0.2)		SOP 783		Prep Date: 5/7/2021	PrepBy: TRB
<i>Carr: BARIUM</i>	93.3			0.23 pCi/l	NA	5/19/2021 11:20
				40-110 %REC	DL = NA	5/19/2021 11:20
Radium-228 Analysis by GFPC						
COMBINED RADIUM (226+228)	ND (+/- 0)	U		1.02 pCi/l	NA	5/27/2021 09:30
Ra-228	ND (+/- 0.46)	U,M		1.02 pCi/l	NA	5/27/2021 09:30
<i>Carr: BARIUM</i>	89.9			40-110 %REC	DL = NA	5/27/2021 09:30

Client: ALS Environmental
Project: HS21041627
Sample ID: GWMP-8A
Legal Location:
Collection Date: 4/27/2021 10:25

Date: 28-May-21
Work Order: 2105038
Lab ID: 2105038-1
Matrix: WATER
Percent Moisture:

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

Radiochemistry:

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

Inorganics:

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

Organics:

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

ALS -- Fort Collins

Date: 5/28/2021 1:17:2

Client: ALS Environmental
 Work Order: 2105038
 Project: HS21041627

QC BATCH REPORT

Batch ID: RE210507-7-3 Instrument ID: Alpha Scin Method: Radium-226 by Radon Emanation

LCS		Sample ID: RE210507-7			Units: pCi/l		Analysis Date: 5/19/2021 12:20				
Client ID:		Run ID: RE210507-7A			Prep Date: 5/7/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	48 (+/- 12)	0	46.79		102	67-120					P
Carr: BARIUM	15640		16280		96.1	40-110					

LCSD		Sample ID: RE210507-7			Units: pCi/l		Analysis Date: 5/19/2021 12:20				
Client ID:		Run ID: RE210507-7A			Prep Date: 5/7/2021		DF: NA				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Ra-226	41 (+/- 10)	1	46.79		87	67-120		48	0.45	2.13	P,Y1
Carr: BARIUM	16360		16280		100	40-110		15640			Y1

MB		Sample ID: RE210507-7			Units: pCi/l		Analysis Date: 5/19/2021 11:40				
Client ID:		Run ID: RE210507-7A			Prep Date: 5/7/2021		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	0.21									U
Carr: BARIUM	15660		16280		96.2	40-110					

The following samples were analyzed in this batch:

Client: ALS Environmental
 Work Order: 2105038
 Project: HS21041627

QC BATCH REPORT

Batch ID: RA210524-1-3 Instrument ID: GASPROP Method: Radium-228 Analysis by GFPC

LCS		Sample ID: RA210524-1		Units: ug		Analysis Date: 5/27/2021 09:30					
Client ID:		Run ID: RA210524-1A			Prep Date: 5/24/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	30720		35050		87.6	40-110					
Ra-228	26.9 (+/- 6.3)	0.9	21.89		123	70-130					P

LCSD		Sample ID: RA210524-1		Units: ug		Analysis Date: 5/27/2021 09:30					
Client ID:		Run ID: RA210524-1A			Prep Date: 5/24/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	31510		35050		89.9	40-110		30720			
Ra-228	22.6 (+/- 5.3)	0.9	21.89		103	70-130		26.9	0.53	2.13	P

MB		Sample ID: RA210524-1		Units: ug		Analysis Date: 5/27/2021 09:30					
Client ID:		Run ID: RA210524-1A			Prep Date: 5/24/2021			DF: NA			
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	DER Ref Value	DER	DER Limit	Qual
Carr: BARIUM	31900		35080		90.9	40-110					
Ra-228	ND	0.92									U

The following samples were analyzed in this batch:



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

June 04, 2021

Heather Tiffany
Altamira
525 central park Dr
Suite 500
Oklahoma City, OK 73013

Work Order: **HS21060176**

Laboratory Results for: **Evans & Associates, Big Fork Ranch**

Dear Heather Tiffany,

ALS Environmental received 7 sample(s) on Jun 03, 2021 for the analysis presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Ragen Giga', with a long horizontal flourish extending to the right.

Generated By: JUMOKE.LAWAL

Ragen Giga
Project Manager

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060176

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21060176-01	GWMP-6A	Water	HS2104157 8-01	27-Apr-2021 13:45	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-02	GWMP-9A	Water	HS2104157 8-03	27-Apr-2021 13:00	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-03	GWMP-10A	Water	HS2104157 8-05	27-Apr-2021 12:25	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-04	GWMP-11A	Water	HS2104157 8-07	27-Apr-2021 09:22	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-05	GWMP-12A	Water	HS2104157 8-09	27-Apr-2021 11:30	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-06	DUP-1	Water	HS2104157 8-11	27-Apr-2021 11:30	03-Jun-2021 13:00	<input type="checkbox"/>
HS21060176-07	GWMP-8A	Water	HS2104162 7-01	27-Apr-2021 10:25	03-Jun-2021 13:00	<input type="checkbox"/>

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060176

CASE NARRATIVE

Work Order Comments

- This report contains additional analyses. The laboratory analyzed your samples for Mercury by method SW7471A.. The samples were originally reported as ALS Workorder Numbers HS21041578-01,03,05,07,09,11 and HS21041627-01. The samples were analyzed outside of analytical holding time. Results should be considered estimated.

Metals by Method SW7470A

Batch ID: 166530

Sample ID: DUP-1 (HS21060176-06)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-10A (HS21060176-03)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-11A (HS21060176-04)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-12A (HS21060176-05)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-6A (HS21060176-01)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-8A (HS21060176-07)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Sample ID: GWMP-9A (HS21060176-02)

- Sample holding time expired prior to sample receipt. It was analyzed at the request of the client. Results should be considered estimated.

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-6A
 Collection Date: 27-Apr-2021 13:45

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A	Method:SW7470A					Prep:SW7470A / 04-Jun-2021	Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 12:59

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-9A
 Collection Date: 27-Apr-2021 13:00

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A		Method:SW7470A			Prep:SW7470A / 04-Jun-2021		Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:00

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-10A
 Collection Date: 27-Apr-2021 12:25

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A		Method:SW7470A			Prep:SW7470A / 04-Jun-2021		Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:02

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-11A
 Collection Date: 27-Apr-2021 09:22

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A	Method:SW7470A					Prep:SW7470A / 04-Jun-2021	Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:04

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-12A
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A	Method:SW7470A					Prep:SW7470A / 04-Jun-2021	Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:05

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: DUP-1
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A		Method:SW7470A			Prep:SW7470A / 04-Jun-2021		Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:07

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-8A
 Collection Date: 27-Apr-2021 10:25

ANALYTICAL REPORT

WorkOrder:HS21060176
 Lab ID:HS21060176-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
MERCURY BY SW7470A	Method:SW7470A					Prep:SW7470A / 04-Jun-2021	Analyst: MSC
Mercury	U	H	0.0000300	0.000200	mg/L	1	04-Jun-2021 13:09

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

Weight / Prep Log

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060176

Batch ID: 166530	Start Date: 04 Jun 2021 08:00	End Date: 04 Jun 2021 11:00
Method: MERCURY PREP BY 7470A- WATER		Prep Code: HG_WPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21060176-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060176-07		10 (mL)	10 (mL)	1	120 plastic HNO3

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060176

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 166530 (0)		Test Name : MERCURY BY SW7470A			Matrix: Water	
HS21060176-01	GWMP-6A	27 Apr 2021 13:45		04 Jun 2021 11:00	04 Jun 2021 12:59	1
HS21060176-02	GWMP-9A	27 Apr 2021 13:00		04 Jun 2021 11:00	04 Jun 2021 13:00	1
HS21060176-03	GWMP-10A	27 Apr 2021 12:25		04 Jun 2021 11:00	04 Jun 2021 13:02	1
HS21060176-04	GWMP-11A	27 Apr 2021 09:22		04 Jun 2021 11:00	04 Jun 2021 13:04	1
HS21060176-05	GWMP-12A	27 Apr 2021 11:30		04 Jun 2021 11:00	04 Jun 2021 13:05	1
HS21060176-06	DUP-1	27 Apr 2021 11:30		04 Jun 2021 11:00	04 Jun 2021 13:07	1
HS21060176-07	GWMP-8A	27 Apr 2021 10:25		04 Jun 2021 11:00	04 Jun 2021 13:09	1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060176

QC BATCH REPORT

Batch ID: 166530 (0)	Instrument: HG03	Method: MERCURY BY SW7470A
-------------------------------	-------------------------	-----------------------------------

MBLK	Sample ID: MBLK-166530	Units: mg/L	Analysis Date: 04-Jun-2021 12:06							
Client ID:	Run ID: HG03_384953	SeqNo: 6122807	PrepDate: 04-Jun-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury U 0.000200

LCS	Sample ID: LCS-166530	Units: mg/L	Analysis Date: 04-Jun-2021 12:13							
Client ID:	Run ID: HG03_384953	SeqNo: 6122808	PrepDate: 04-Jun-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00472 0.000200 0.005 0 94.4 80 - 120

MS	Sample ID: HS21051503-01MS	Units: mg/L	Analysis Date: 04-Jun-2021 12:18							
Client ID:	Run ID: HG03_384953	SeqNo: 6122810	PrepDate: 04-Jun-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00399 0.000200 0.005 -0.000017 80.1 75 - 125

MSD	Sample ID: HS21051503-01MSD	Units: mg/L	Analysis Date: 04-Jun-2021 12:19							
Client ID:	Run ID: HG03_384953	SeqNo: 6122811	PrepDate: 04-Jun-2021 DF: 1							
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	RPD Qual

Mercury 0.00451 0.000200 0.005 -0.000017 90.5 75 - 125 0.00399 12.2 20

The following samples were analyzed in this batch: HS21060176-01 HS21060176-02 HS21060176-03 HS21060176-04
 HS21060176-05 HS21060176-06 HS21060176-07

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060176

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060176

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21060176-01	GWMP-6A	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-01	GWMP-6A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-01	GWMP-6A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-01	GWMP-6A	Login	6/3/2021 3:50:03 PM	PMG	WET125
HS21060176-02	GWMP-9A	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-02	GWMP-9A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-02	GWMP-9A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-02	GWMP-9A	Login	6/3/2021 3:50:03 PM	PMG	WET125
HS21060176-03	GWMP-10A	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-03	GWMP-10A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-03	GWMP-10A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-03	GWMP-10A	Login	6/3/2021 3:50:03 PM	PMG	WET125
HS21060176-04	GWMP-11A	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-04	GWMP-11A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-04	GWMP-11A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-04	GWMP-11A	Login	6/3/2021 3:50:03 PM	PMG	WET125
HS21060176-05	GWMP-12A	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-05	GWMP-12A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-05	GWMP-12A	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-05	GWMP-12A	Login	6/3/2021 3:50:03 PM	PMG	WET125
HS21060176-06	DUP-1	Login	6/3/2021 3:50:03 PM	PMG	MET065
HS21060176-06	DUP-1	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-06	DUP-1	Login	6/3/2021 3:50:03 PM	PMG	Sub
HS21060176-06	DUP-1	Login	6/3/2021 3:50:03 PM	PMG	WET125

Sample Receipt Checklist

Work Order ID: HS21060176

Date/Time Received: **03-Jun-2021 13:00**

Client Name: Enviro Clean Services-Tulsa

Received by: **Si Ma**

Completed By: <u>/S/ Jared R. Makan</u>	29-Apr-2021 16:18	Reviewed by: <u>/S/ Corey Grandits</u>	04-Jun-2021 15:18
eSignature	Date/Time	eSignature	Date/Time

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

- | | | | |
|---|---|-----------------------------|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samplers name present on COC? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Temperature(s)/Thermometer(s):	0.4°C, 0.6°C UC/C	IR31
Cooler(s)/Kit(s):	45352, 45098	
Date/Time sample(s) sent to storage:	04/29/2021 16:20	

- | | | | |
|--|---|--|--|
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |

pH adjusted by:

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:

CHAIN OF CUSTODY RECORD



PROJECT NUMBER:
EMEEOK2021/3000-APRIL 21AM

PROJECT NAME:
E2A, BIG FORK RANCH

COC: _____

CLIENT CONTACT:
HEATHER TIFFANY

CLIENT EMAIL:
HEATHER.TIFFANY@ALTAMIRA-LABDATA-USA.COM

CLIENT PHONE:
405. 618.

LABORATORY / LAB PM:
ALG / RJ MODASHIA

CLIENT ADDRESS:
3700 W. ROBINSON ST. STE 200
NORMAN, OK 73012

TAT: STND.

LAB ADDRESS:
10450 STANCLIFF RD
STE 210
HOUSTON, TX 77099

SPECIAL INSTRUCTIONS:
* METALS BY 6020A:
As, Ba, Be, Pb, Mo, Sn
** REPORT RAD224/228 COMBINED

SHIPMENT METHOD:
FEDEX

TRACKING: _____

NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS												
		PH (SM4600 H2B)	Cl, F, SO4 (300. W)	B (6020A)	Ca (6010 B)	TDS (SM2540 C)	METALS, TOTAL 6020A	** RA - 224	SUB TO FT. COLLINS	** RA - 228	SUB TO FT. COLLINS	FIELD FILTERED METALS #		

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PH (SM4600 H2B)	Cl, F, SO4 (300. W)	B (6020A)	Ca (6010 B)	TDS (SM2540 C)	METALS, TOTAL 6020A	** RA - 224	SUB TO FT. COLLINS	** RA - 228	SUB TO FT. COLLINS	FIELD FILTERED METALS #		
1	GWMP-6A		1345	W	2,9	4	N	X	X	X	X	X	X	X	X	X	X			
2	GWMP-6A		1345		2	1	Y													
3	GWMP-8A				2,9	4	N	X	X	X	X	X	X	X	X	X	X			
4	GWMP-8A				2	1	Y													
5	GWMP-9A		1300		2,9	4	N	X	X	X	X	X	X	X	X	X	X			
6	GWMP-9A		1300		2	1	Y													
7	GWMP-10A		1225		2,9	4	N	X	X	X	X	X	X	X	X	X	X			X
8	GWMP-10A		1225		2	1	Y													
9	GWMP-11A		922		2,9	4	N	X	X	X	X	X	X	X	X	X	X			X
10	GWMP-11A		922		2	1	Y													
11	GWMP-12A		1130		2,9	4	N	X	X	X	X	X	X	X	X	X	X			X
12	GWMP-12A		1130		2	1	Y													
13	DUP-1		1130		2,9	4	N	X	X	X	X	X	X	X	X	X	X			X
14	DUP-1		1130		2	1	Y													
15																				X

SAMPLER(S) NAME:
Pasha Khlystov

DATE: 4/28/21
TIME: 1200

Total # of Containers: _____

SAMPLER(S) SIGNATURE:
Pasha Khlystov

DATE: 4/28/21
TIME: 1200

RELINQUISHED BY:
Pasha Khlystov

DATE: 4/28/21
TIME: 1200

RECEIVED BY:
Paul M... SM

DATE: 4-29-21
TIME: 10:30

LOGGED BY: _____

DATE: _____
TIME: _____

COOLER TEMP: _____

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

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

ALTAMIRA-US, LLC

45352 0.4C 1231



Evans & Associates, Big Fork Ranch

Altamira

HS21060176

CHAIN OF CUSTODY RECORD



PROJECT NUMBER: **EMEEOK2020**

PROJECT NAME: **E + A Big Fork Ranch CCR AM** COC: 1 of 1

CLIENT CONTACT: **Heather Tiffany / Chris Schaefer**

CLIENT EMAIL: **Heather.tiffany@altamira-us.com**
LabData@altamira-us.com

CLIENT PHONE: **405 618 2021**

LABORATORY / LAB PM: **ALS / RJ Modashia**

CLIENT ADDRESS: **3700 West Robinson St.**
Suite 200 Norman OK 73072

TAT: **Standard**

LAB ADDRESS: **10450 Stanchiff Rd.**
Suite 210
Houston TX 77099

SHIPMENT METHOD: **Fed Ex**

TRACKING: **9473 0842 6460**

SPECIAL INSTRUCTIONS:

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS											HOLD
								PH (SM4100 HLB)	Cl, F, SO ₄ (300.W)	Bo (6020A)	Ca (6010B)	TDS (SM2540C)	As, Ba, Be, Pb, Mo, Sn (EPA 6020A)	Sub-RA 226 (Radium 226 - Sub to ALS)	Sub-RA 228 (Radium 228 - Sub to ALS)	Needs to be filtered in the Lab			
1	GWMP - 8A	4/27/21	1025	W	29	4	N	X	X	X	X	X	X	X	X				
2	GWMP - 8A	4/27/21	1025		9	1	N												
3	Temp Blank															X	X		
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

HS21060176

Altamira
Evans & Associates, Big Fork Ranch



SAMPLER(S) NAME: **Pasha Khlyachy** DATE: **4/28/21**

REQUISITED BY: **Pasha Khlyachy** TIME: **8:00**

RECEIVED BY: **RJ Modashia** DATE: **4/28/21** TIME: **12:45**

LOGGED BY: **Pasha Khlyachy** DATE: **4-30-21** TIME: **10:00**

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

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

ALTAMIRA-US, LLC

42640 0.60 1R31 CFC



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

June 14, 2021

Heather Tiffany
Altamira
525 central park Dr
Suite 500
Oklahoma City, OK 73013

Work Order: **HS21060500**

Laboratory Results for: **Evans & Associates, Big Fork Ranch**

Dear Heather Tiffany,

ALS Environmental received 7 sample(s) on Jun 09, 2021 for the analysis presented in the following report.

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

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

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Ragen Giga', with a long horizontal flourish extending to the right.

Generated By: JUMOKE.LAWAL

Ragen Giga
Project Manager

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060500

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS21060500-01	GWMP-6A	Water		27-Apr-2021 13:45	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-02	GWMP-9A	Water		27-Apr-2021 13:00	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-03	GWMP-10A	Water		27-Apr-2021 12:25	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-04	GWMP-11A	Water		27-Apr-2021 09:22	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-05	GWMP-12A	Water		27-Apr-2021 11:30	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-06	DUP-1	Water		27-Apr-2021 11:30	09-Jun-2021 15:00	<input type="checkbox"/>
HS21060500-07	GWMP-8A	Water		27-Apr-2021 10:25	09-Jun-2021 15:00	<input type="checkbox"/>

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060500

CASE NARRATIVE

Work Order Comments

- This report contains additional analyses. The laboratory analyzed your samples for Lithium by method SW6020. The sample was originally reported as ALS Workorder Number HS21060176 01 thorough 07
-

Metals by Method SW6020A

Batch ID: 166803

Sample ID:)

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-6A
 Collection Date: 27-Apr-2021 13:45

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-01
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.00518		0.00100	0.00500	mg/L	1	14-Jun-2021 11:49

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-9A
 Collection Date: 27-Apr-2021 13:00

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-02
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.0202		0.00100	0.00500	mg/L	1	14-Jun-2021 11:59

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-10A
 Collection Date: 27-Apr-2021 12:25

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-03
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.00346	J	0.00100	0.00500	mg/L	1	14-Jun-2021 12:07

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-11A
 Collection Date: 27-Apr-2021 09:22

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-04
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.00877		0.00100	0.00500	mg/L	1	14-Jun-2021 12:09

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-12A
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-05
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.00528		0.00100	0.00500	mg/L	1	14-Jun-2021 12:11

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: DUP-1
 Collection Date: 27-Apr-2021 11:30

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-06
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.00468	J	0.00100	0.00500	mg/L	1	14-Jun-2021 12:13

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

Client: Altamira
 Project: Evans & Associates, Big Fork Ranch
 Sample ID: GWMP-8A
 Collection Date: 27-Apr-2021 10:25

ANALYTICAL REPORT

WorkOrder:HS21060500
 Lab ID:HS21060500-07
 Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
ICP-MS METALS BY SW6020A		Method:SW6020A			Prep:SW3010A / 11-Jun-2021		Analyst: JHD
Lithium	0.0204	J	0.0100	0.0500	mg/L	1	14-Jun-2021 12:15

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

Weight / Prep Log

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060500

Batch ID: 166803 **Start Date:** 11 Jun 2021 13:00 **End Date:** 11 Jun 2021 17:00
Method: WATER - SW3010A **Prep Code:** 3010A

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS21060500-01		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-02		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-03		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-04		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-05		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-06		10 (mL)	10 (mL)	1	120 plastic HNO3
HS21060500-07		1 (mL)	10 (mL)	10	120 plastic HNO3

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060500

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 166803 (0)		Test Name : ICP-MS METALS BY SW6020A			Matrix: Water	
HS21060500-01	GWMP-6A	27 Apr 2021 13:45		11 Jun 2021 17:00	14 Jun 2021 11:49	1
HS21060500-02	GWMP-9A	27 Apr 2021 13:00		11 Jun 2021 17:00	14 Jun 2021 11:59	1
HS21060500-03	GWMP-10A	27 Apr 2021 12:25		11 Jun 2021 17:00	14 Jun 2021 12:07	1
HS21060500-04	GWMP-11A	27 Apr 2021 09:22		11 Jun 2021 17:00	14 Jun 2021 12:09	1
HS21060500-05	GWMP-12A	27 Apr 2021 11:30		11 Jun 2021 17:00	14 Jun 2021 12:11	1
HS21060500-06	DUP-1	27 Apr 2021 11:30		11 Jun 2021 17:00	14 Jun 2021 12:13	1
HS21060500-07	GWMP-8A	27 Apr 2021 10:25		11 Jun 2021 17:00	14 Jun 2021 12:15	1

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060500

QC BATCH REPORT

Batch ID: 166803 (0)		Instrument: ICPMS06		Method: ICP-MS METALS BY SW6020A						
MBLK	Sample ID: MBLK-166803	Units: mg/L		Analysis Date: 11-Jun-2021 20:56						
Client ID:		Run ID: ICPMS06_385404	SeqNo: 6134579	PrepDate: 11-Jun-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Lithium	U	0.00500								
LCS	Sample ID: LCS-166803	Units: mg/L		Analysis Date: 11-Jun-2021 20:58						
Client ID:		Run ID: ICPMS06_385404	SeqNo: 6134580	PrepDate: 11-Jun-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Lithium	0.09397	0.00500	0.1	0	94.0	80 - 120				
MS	Sample ID: HS21060500-01MS	Units: mg/L		Analysis Date: 14-Jun-2021 11:53						
Client ID: GWMP-6A		Run ID: ICPMS06_385495	SeqNo: 6135040	PrepDate: 11-Jun-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Lithium	0.09639	0.00500	0.1	0.005178	91.2	80 - 120				
MSD	Sample ID: HS21060500-01MSD	Units: mg/L		Analysis Date: 14-Jun-2021 11:55						
Client ID: GWMP-6A		Run ID: ICPMS06_385495	SeqNo: 6135041	PrepDate: 11-Jun-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Lithium	0.0989	0.00500	0.1	0.005178	93.7	80 - 120	0.09639	2.57	20	
PDS	Sample ID: HS21060500-01PDS	Units: mg/L		Analysis Date: 14-Jun-2021 11:57						
Client ID: GWMP-6A		Run ID: ICPMS06_385495	SeqNo: 6135042	PrepDate: 11-Jun-2021	DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit	Qual
Lithium	0.07633	0.00500	0.1	0.005178	71.2	70 - 125				
SD	Sample ID: HS21060500-01SD	Units: mg/L		Analysis Date: 14-Jun-2021 11:51						
Client ID: GWMP-6A		Run ID: ICPMS06_385495	SeqNo: 6135039	PrepDate: 11-Jun-2021	DF: 5					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%D	RPD Limit	Qual
Lithium	0.005576	0.0250					0.005178	0	10	J

The following samples were analyzed in this batch: HS21060500-01 HS21060500-02 HS21060500-03 HS21060500-04
 HS21060500-05 HS21060500-06 HS21060500-07

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
WorkOrder: HS21060500

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	21-022-0	26-Mar-2022
Dept of Defense	PJLA L20-507-R2	22-Dec-2021
Florida	E87611-30-07/01/2020	30-Jun-2021
Illinois	2000322021-7	09-May-2022
Kansas	E-10352 2020-2021	31-Jul-2021
Kentucky	123043, 2021-2022	30-Apr-2022
Louisiana	03087, 2020-2021	30-Jun-2021
Louisiana	03087, 2021-2022	30-Jun-2022
North Carolina	624-2021	31-Dec-2021
Oklahoma	2020-165	31-Aug-2021
Texas	T104704231-21-27	30-Apr-2022
Utah	TX026932021-10	31-Jul-2021

Client: Altamira
Project: Evans & Associates, Big Fork Ranch
Work Order: HS21060500

SAMPLE TRACKING

Lab Samp ID	Client Sample ID	Action	Date	Person	New Location
HS21060500-01	GWMP-6A	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-02	GWMP-9A	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-03	GWMP-10A	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-04	GWMP-11A	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-05	GWMP-12A	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-06	DUP-1	Login	6/9/2021 5:52:25 PM	JRM	MET016
HS21060500-07	GWMP-8A	Login	6/9/2021 5:52:25 PM	JRM	MET016

Sample Receipt Checklist

Work Order ID: HS21060500

Date/Time Received: **09-Jun-2021 15:00**

Client Name: Enviro Clean Services-Tulsa

Received by: **Si Ma**

Completed By: <u>/S/ Jared R. Makan</u>	29-Apr-2021 16:18	Reviewed by: <u>/S/ Ragen Giga</u>	10-Jun-2021 19:17
eSignature	Date/Time	eSignature	Date/Time

Matrices: **Water**

Carrier name: **FedEx Priority Overnight**

- | | | | |
|---|---|--|---|
| Shipping container/cooler in good condition? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on shipping container/cooler? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/> |
| Custody seals intact on sample bottles? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| VOA/TX1005/TX1006 Solids in hermetically sealed vials? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| Chain of custody present? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | 1 Page(s) |
| Chain of custody signed when relinquished and received? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samplers name present on COC? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| Chain of custody agrees with sample labels? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Samples in proper container/bottle? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sample containers intact? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Sufficient sample volume for indicated test? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| All samples received within holding time? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Container/Temp Blank temperature in compliance? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |

Temperature(s)/Thermometer(s):	0.4°C, 0.6°C UC/C	IR31
Cooler(s)/Kit(s):	45352, 45098	
Date/Time sample(s) sent to storage:	04/29/2021 16:20	

- | | | | |
|--|---|--|--|
| Water - VOA vials have zero headspace? | Yes <input type="checkbox"/> | No <input type="checkbox"/> | No VOA vials submitted <input checked="" type="checkbox"/> |
| Water - pH acceptable upon receipt? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | N/A <input type="checkbox"/> |
| pH adjusted? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | N/A <input type="checkbox"/> |

pH adjusted by:

Login Notes:

Client Contacted: _____ Date Contacted: _____ Person Contacted: _____

Contacted By: _____ Regarding: _____

Comments:

Corrective Action:

CHAIN OF CUSTODY RECORD



PROJECT NUMBER:
EMEE0K2021/3000-APRIL 21AM

PROJECT NAME:
EPA, BIG FORK RANCH

COC: .

CLIENT CONTACT:
HEATHER TIFFANY

CLIENT EMAIL:
HEATHER.TIFFANY@ALTAMIRA-LABDATA-US.COM

CLIENT PHONE:
405.618.

LABORATORY / LAB PM:
ALG / RJ MODASHIA

CLIENT ADDRESS:
3700 W. ROBINSON ST. STE 200
NORMAN, OK 73072

TAT: STND.

LAB ADDRESS:
10480 STANCLIFF RD
STE 210
HOUSTON, TX 77099

SPECIAL INSTRUCTIONS:
*METALS BY 6020A:
As, Ba, Be, Pb, Mo, Sn
*REPORT RAD224/228 COMBINED

SHIPMENT METHOD:
FEDEX

TRACKING:

PARAMETERS

NO.	SAMPLE DESCRIPTION	DATE	TIME	MATRIX	PRES.	NUMBER OF CONTAINERS	FIELD FILTERED (YES / NO)	PARAMETERS										
								PH (SM4500 H2B)	Cl, F, SO4 (300.W)	B (6020A)	Ca (6010B)	TDS (SM2540C)	METALS, TOTAL 6020A	**RA-226 SMB TO FT. COLLINS	**RA-228 SMB TO FT. COLLINS	FIELD FILTERED METALS #		
1	GWMP-6A		1345	W	2,9	4	N	X	X	X	X	X	X	X	X	X		
2	GWMP-6A		1345		2	1	Y											
3	GWMP-8A				2,9	4	N	X	X	X	X	X	X	X	X	X		
4	GWMP-8A				2	1	Y											
5	GWMP-9A		1300		2,9	4	N	X	X	X	X	X	X	X	X	X		
6	GWMP-9A		1300		2	1	Y											
7	GWMP-10A		1225		2,9	4	N	X	X	X	X	X	X	X	X	X		X
8	GWMP-10A		1225		2	1	Y											
9	GWMP-11A		922		2,9	4	N	X	X	X	X	X	X	X	X	X		X
10	GWMP-11A		922		2	1	Y											
11	GWMP-12A		1130		2,9	4	N	X	X	X	X	X	X	X	X	X		X
12	GWMP-12A		1130		2	1	Y											
13	DUP-1		1130		2,9	4	N	X	X	X	X	X	X	X	X	X		X
14	DUP-1		1130		2	1	Y											
15																		

SAMPLER(S) NAME:
Pashe Williams

DATE: 4/28/21
TIME: 1200

Total # of Containers:

SAMPLER(S) SIGNATURE:
Pashe Williams

DATE: 4/28/21
TIME: 1200

RELINQUISHED BY:
Pashe Williams

DATE: 4/28/21
TIME: 1200

RECEIVED BY:
Paul M... SM

DATE: 4-28-21
TIME: 10:20

LOGGED BY:

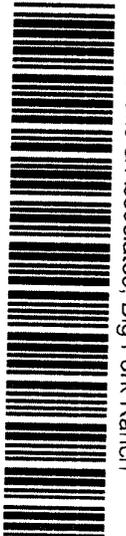
DATE:
TIME:

COOLER TEMP:

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

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

ALTAMIRA-US, LLC 45352 0.4C 1831



Evans & Associates, Big Fork Ranch

Altamira

HS21060500

