

2021 Annual CCR Groundwater Monitoring Report Bottom Ash Ponds

Former	Monticel	lo Stean	n Electric S	Station
FM 127	, Mt. Plea	sant, Tit	us County	, Texas

Prepared for:

GOLDEN EAGLE DEVELOPMENT LLC

Prepared by:

Gemini Engineering LLC 2275 Cassens Drive, Suite 118 Fenton, Missouri 63026

February 4, 2022



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ACRONYMS AND ABBREVIATIONS

mg/L Milligrams per Liter

NA Not Applicable



1.0 INTRODUCTION

On behalf of Golden Eagle Development, LLC (Golden Eagle), Gemini Engineering LLC (Gemini) has prepared this report to satisfy annual groundwater monitoring and corrective action reporting requirements of the Coal Combustion Residuals (CCR) Rule for the Northeast Ash Water Retention Pond, West Ash Settling Pond, and Southwest Ash Settling Pond (Bottom Ash Ponds) at the Monticello Steam Electric Station (MOSES) in Mount Pleasant, Texas. The CCR units and CCR monitoring well network are shown on Figure 1. Golden Eagle acquired MOSES in December 2020 from Luminant Generation Company, LLC (Luminant).

The CCR Rule (40 Code of Federal Regulations (CFR) 257 Subpart D - Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments) has been promulgated by the United States Environmental Protection Agency (USEPA) to regulate the management and disposal of CCRs as solid waste under Resource Conservation and Recovery Act (RCRA) Subtitle D. This report is in accordance with 30 Texas Administrative Code (30 TAC) Chapter 352, Coal Combustion Residuals Waste Management which establishes a CCR registration and management program to regulate CCR waste and requires the Owner/Operator to obtain a CCR registration and implement a groundwater detection/monitoring program.

For existing CCR landfills and surface impoundments, the CCR Rule requires that the owner or operator prepare an annual groundwater monitoring and corrective action report to document the status of the groundwater monitoring and corrective action program for the CCR unit for the previous calendar year. Per 40 CFR 257.90(e) and 30 TAC Chapter 352, Subchapter H of the CCR Rule, the report should contain the following information, to the extent available:

- (1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
- (2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
- (3) In addition to all the monitoring data obtained under §257.90 through §257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- (4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
- (5) Other information required to be included in the annual report as specified in §257.90 through §257.98.



2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The MOSES CCR Bottom Ash Ponds are currently in the Detection Monitoring Program. Luminant collected the initial Detection Monitoring Program groundwater samples from the Bottom Ash Ponds CCR monitoring well network in September 2017. Detection groundwater samples have been collected from the CCR groundwater monitoring network on a semi-annual basis in 2018 through 2021, as required by the CCR Rule. All CCR groundwater monitoring wells were sampled for Appendix III constituents during the detection monitoring sampling events, except W-29. The demolition of the steam generating units has caused unsafe conditions near W-29; therefore, groundwater sample collection from that well has been postponed. The following table provides a summary of the Detection Monitoring Program:

Detection Monitoring Program Summary

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established				
September 2017	Appendix III	No	No				
June 2018	Appendix III	No	No				
September 2018	Appendix III	No	No				
May 2019	Appendix III	No	No				
October 2019	Appendix III	No	No				
April 2020	Appendix III	Yes	No				
October/November 2020	Appendix III	Yes	No				
March 2021	Appendix III	No	No				
August 2021	Appendix III	No	No				

The statistical background values and Appendix III analytical data are presented in Tables 1 and 2, respectively, and the 2021 laboratory analytical reports are provided in Appendix A. There were no SSIs of Appendix III parameters in 2017 through 2019; therefore, the CCR units remained in Detection Monitoring in 2021. The analytical data from the 2021 detection monitoring sampling events were evaluated using procedures described in the Statistical Analysis Plan (PBW 2017) to identify Statistically Significant Increases (SSIs) of Appendix III parameters over background concentrations. In 2020, there was an SSI for one parameter; however, the issue was identified as an equipment malfunction and is being resolved as described below. Following the repair of the pH meter, pH levels are within the Statistical Background Values for downgradient monitoring wells.



3.0 KEY ACTIONS COMPLETED IN 2021

Detection Monitoring Program groundwater monitoring events were completed in March and August 2021. The number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 2. A map showing the CCR units and monitoring wells is provided as Figure 1.

No CCR wells were installed or decommissioned in 2021.



4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

The demolition of the steam generating units has caused unsafe conditions near W-29; therefore, groundwater sample collection from that well has been postponed until conditions are safe. New water quality components were ordered and will be utilized in 2021 and the pH levels are within the Statistical Background Values for downgradient monitoring wells.



5.0 KEY ACTIVITIES PLANNED FOR 2022

The following key activities are planned for 2022:

- Continue the Detection Monitoring Program in accordance with 40 CFR § 257.94.
- Complete evaluation of Appendix III analytical data from the downgradient wells and compare results to statistical background values to determine whether an SSI has occurred.
- If an SSI is identified, potential alternate sources (i.e., a source other than the CCR unit caused the SSI or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated. If an alternate source is identified to be the cause of the SSI, a written demonstration will be completed within 90 days of SSI determination and included in the Annual Groundwater Monitoring Report.
- If an alternate source is not identified to be the cause of the SSI, an Assessment Monitoring Program will be established in accordance with 40 CFR § 257.94(e)(2).



6.0 REFERENCES

Pastor, Behling & Wheeler, LLC, 2017. Coal Combustion Residual Rule Statistical Analysis Plan, Monticello Steam Electric Station, Ash Ponds, Mount Pleasant, Texas.



Signature Page

Adam J. Kaiser, P.E.

Texas PE No 126387, Expires 3/31/2022

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TABLES

Table 1
Statistical Background Values
MOSES Bottom Ash Ponds

Parameter	Statistical Background Value
Boron (B) (mg/L)	8.52
Calcium (Ca) (mg/L)	311
Chloride (Cl) (mg/L)	184
Fluoride (F) (mg/L)	2.93
field pH (s.u.)	4.99 -
	7.14
Sulfate (S0 ₄) (mg/L)	1,190
Total Dissolved Solids (TDS) (mg/L)	2,150

Table 2
Analytical Results
MOSES CCR BAP Monitoring 2021

Sample	Date Sampled	B (mg/L)	Ca (mg/L)	CI (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
Location	·	, <i>3-1</i>	\ <i>5-1</i>	· 3/	, 3-,		., 5-7	
Upgradient Wells W-31	10/15/15	3.74	130	66.2	0.14	5.67	808	1510
VV-51	12/07/15	3.81	136	51.2	0.14 0.28 J	5.86	714	1250
	02/22/16	3.65	130	49.2	0.12	5.79	694	1500
	04/04/16	3.80	119	48.9	0.22 J	6.06	737	1220
	06/06/16	3.84	104	47.8	<0.10	6.17	701	1150
	08/08/16	2.67	92.4	58.4	<0.10	6.11	396	862
	10/12/16	1.74	71.7	55.1	0.11	6.13	292	654
	12/29/16	3.15	89.7	49.3	<0.10	4.99	729	1150
	09/20/17	3.88	96.3	49.8	<0.10	6.72	316	696
	06/08/18	3.28	86.3	48.6	0.30 J	6.72	577	925
	09/10/18	3.19	86.5	46.3	0.22 J	4.84	595	973
	05/09/19 10/30/19	0.88 1.29	36.5 35.6	54.0 49.1	0.16 J 0.10 J	6.87 6.84	115 131	319 343
	04/26/20	0.79	34.4	51.1	0.10 J	7.41	86	279
	10/31/20	1.27	36.9	48.3	0.03 J	6.60	156	384
	03/24/21	1.38	41.4	47.7	0.12 J	5.59	173	373
	08/15/21	1.84	51.6	49.9	0.07 J	5.52	242	400
W-32	10/15/15	5.85	282	160	0.44	6.72	1040	1970
	12/07/15	6.76	260	122	1.19	6.74	872	1610
	02/22/16	6.95	247	124	0.79	6.74	850	1870
	04/04/16	6.50	239	139	1.01	6.73	844	1380
	06/06/16	6.18	192	105	0.76	6.71	694	1440
	08/08/16	4.43	261	110	0.54	6.71	945	1650
	10/12/16	6.32	284	134	0.34	6.19	986	1820
	12/29/16	6.38	310	147	0.57	6.46	1210	1950
	09/20/17 06/08/18	5.81 5.79	270 380	118 149	0.38 J 1.71	6.79 6.74	901 1340	1920 2390
	09/10/18	5.79	370	149	1.71	6.56	1270	2200
	05/09/19	3.83	91	21.9	1.83	6.73	236	479
	10/30/19	4.24	130	35.0	1.7	6.91	363	746
	04/26/20	1.96	48.6	9.7	2.29	8.72	96	290
	10/31/20	2.85	64.8	12.5	1.34	8.16	141	344
	03/24/21	1.62	40.0	5.32	2.18	7.09	42.9	204
	08/15/21	2.07	52.3	9.64	1.75	7.12	76.3	270
W-33	10/15/15	6.36	311	162	2.01	7.14	1080	1630
	12/07/15	6.68	252	120	2.80	7.12	853	1680
	02/22/16	7.52	243	124	2.40	7.11	790	1960
	04/04/16	7.24	278	171	2.50	7.14	935	1540
	06/06/16 08/08/16	7.08 6.37	229 215	120 108	2.12 1.92	7.10 6.97	700 655	1490
	10/12/16	5.15	237	111	2.43	6.84	797	1300 1540
	12/29/16	5.23	275	125	2.45	6.82	965	1730
	09/20/17	5.89	271	112	2.04	6.73	863	1970
	06/08/18	6.01	364	142	3.59	6.55	1200	2230
	09/10/18	5.45	351	132	2.99	6.78	1160	2120
	05/09/19	3.41	93.7	36.7	1.41	6.85	443	775
	10/30/19	5.18	169	39.7	1.21	6.68	477	911
	04/26/20	3.43	96.4	17.7	3.13	8.35	171	580
	11/01/20	2.33	80.9	10.8	3.73	8.39	104	387
	03/24/21	2.32	77.0	8.55	3.48	7.10	54.8	342
	08/15/21	1.81	61.7	8.05	4.22	7.13	51.4	295
Downgradient W		1.50	144	404	0.00 1	0.04	004	4000
W-29	10/15/15 12/07/15	4.58 3.47	111 86.6	101 81.1	0.32 J 0.36 J	6.21 6.22	861 501	1680 1020
	02/22/16	4.98	114	82.3	0.30 3	6.27	909	1840
	04/04/16	3.32	169	75.9	0.23 J	6.17	465	850
	06/06/16	5.77	162	85.5	<0.10	6.29	696	1230
	08/08/16	5.70	153	85.6	<0.10	6.32	1100	1850
	10/12/16	6.42	174	82.4	0.40	6.19	1140	1720
	12/29/16	6.52	185	82.5	0.23 J	6.14	1150	1860
	09/20/17	4.84	128	80.6	<0.10	6.85	882	1540
	06/08/18	3.70	127	87.9	0.37 J	6.62	694	1310
	09/10/18	4.14	140	81.5	0.41	6.30	858	1630
	05/10/19	1.94	95.4	92.1	0.21 J	6.85	361	727
	10/30/19	1.69	100	86.1	0.24 J	6.52	252	621
	04/26/20	1.36	70	88.2	0.14 J	6.70	270	563
	11/01/20	1.24	84	88.1	0.20	6.98	214	517
	03/29/21	1.25	89.9	83.3	0.15 J	6.95	224	495
	08/15/21	NA	NA	NA	NA	NA	NA	NA

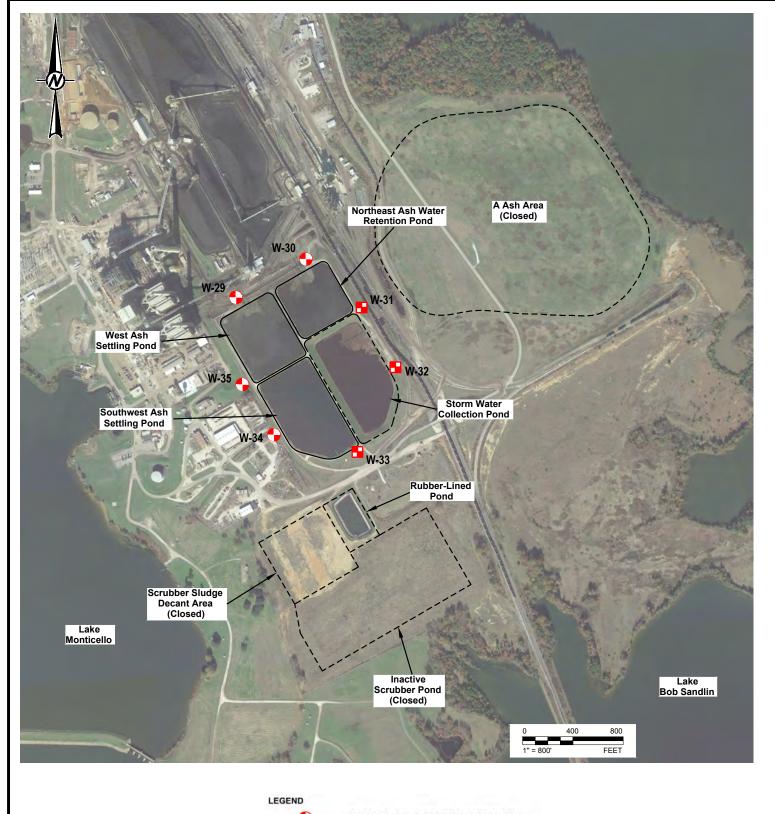
Table 2
Analytical Results
MOSES CCR BAP Monitoring 2021

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	CI (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
W-30	10/15/15	6.06	133	106	0.58	5.78	919	1490
	12/07/15	7.04	135	98.3	0.81	5.95	875	1530
	02/22/16	6.83	138	96.3	0.72	5.94	873	1790
	04/04/16	6.28	141	95.2	0.96	5.93	925	1460
	06/06/16	6.89	132	94.9	0.36 J	5.96	884	1460
	08/08/16	5.94	136	85.7	0.45	6.23	848	1550
	10/12/16	6.51	130	79.9	0.79	6.02	817	1300
	12/29/16	8.54	192	85.3	0.50	5.34	863	1510
	09/20/17	5.76	127	76.5	0.394 J	6.85	734	1570
	06/08/18	5.06	127	87.8	0.92	6.78	724	1280
	09/10/18	4.53	115	81.1	0.91	5.25	713	1230
	05/09/19	5.13	115	97.5	0.85	6.72	734	1300
	10/30/19	5.06	161	59.4	0.57	6.43	755	1330
	04/26/20	4.18	135	51.4	0.69	7.49	763	1150
	10/31/20	4.26	141	44.0	0.68	7.11	735	1140
	03/24/21	4.33	133	40.5	0.58	5.67	686	1070
	08/15/21	4.01	100	33.4	0.82	5.83	606	979
W-34	10/15/15	2.38	124	87.1	0.38 J	6.55	453	878
	12/07/15	4.10	153	82.2	0.49	6.58	671	1500
	02/22/16	3.44	117	85.9	0.42	6.59	641	1570
	04/04/16	2.09	86.9	80.7	0.287 J	6.63	378	817
	06/06/16	2.12	66.2	73.0	<0.1	6.64	343	795
	08/08/16	3.56	121	98.4	<0.1	6.52	634	1030
	10/12/16	3.13	110	84.9	0.29	6.57	556	935
	12/29/16	6.10	158	122	0.336 J	6.03	937	1620
	09/20/17	5.36	181	117	0.244 J	6.75	873	1720
	06/08/18	4.95	180	116	0.90	6.85	835	1540
	09/10/18	4.53	161	114	0.66	6.64	819	1530
	05/09/19	1.51	64.7	45.1	0.348 J	6.78	164	568
	10/30/19	4.11	154	103	0.322 J	6.62	677	1260
	04/26/20	4.26	182	108	0.44	7.67	817	1370
	11/01/20	5.47	217	114	0.35	7.50	930	1560
	03/24/21	5.80	229	132	0.48	6.20	1130	1640
	08/15/21	4.83	210	125	0.35	6.16	933	1620
W-35	10/15/15	5.58	175	98.2	<0.1	6.05	893	1720
	12/07/15	6.13	177	90.2	0.128 J	6.16	861	1580
	02/22/16	6.29	160	85.4	<0.1	6.12	824	1650
	04/04/16	6.16	169	91.3	<0.1	6.09	835	1310
	06/06/16	6.17	158	98.5	<0.1	6.36	858	1460
	08/08/16	6.07	159	97.8	<0.1	6.41	810	1470
	10/12/16	6.25	150	97.8	0.1	6.12	793	1320
	12/29/16	6.89	151	110	<0.1	5.06	839	1370
	09/20/17	6.27	186	120	<0.100	6.74	854	1650
	06/08/18	5.81	200	128	0.163 J	6.55	925	1660
	09/10/18	5.70	204	132	<0.1	5.42	940	1580
	05/10/19	5.46	182	75.5	<0.1	6.94	501	865
	10/30/19	3.63	111	95.5	<0.100	6.92	682	1280
	10/30/2019 DUP	4.57	142	99.1	<0.100	6.92	699	1280
	04/26/20	5.30	209	129	<0.150	6.50	984	1600
	11/01/20	5.95	207	118	<0.064	6.73	945	1550
	03/25/21	6.16	213	129	0.0725 J	5.29	1010	1510
	08/15/21	6.04	216	137	<0.0640	5.70	992	1650

Notes:

- 1. Shaded cells exceeded Statistical Background Values
- $2. \ \ Abbreviations: mg/L milligrams per liter; TDS total dissolved solids; s.u. standard units.$
- 3. J concentration is below method quantitation limit; result is an estimate.
- 4. Samples from the Current Period are bold.
- 5. NA = not analyzed

FIGURES



0

DOWNGRADIENT CCR MONITORING WELL



UPGRADIENT CCR MONITORING WELL



Detailed Site Plan Site: Golden Eagle Development

Chkd:	AK
Drawn:	EFC
Page:	1 of 1
Date:	1/25/2022
Scale:	As Shown

APPENDIX A - 2021 LABORATORY ANALYTICAL REPORTS



Pace Analytical® ANALYTICAL REPORT

August 24, 2021

Commercial Liability Partners, LLC

L1391597 Sample Delivery Group: Samples Received: 08/17/2021

Project Number:

Description: Golden Eagle Groundwater

Report To: Adam Kaiser

2275 Cassens Drive

Suite 118

Fenton, MO 63026

Entire Report Reviewed By:

Jeff Carr

Wubb law



















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SAMPLE SUMMARY

W-30 L1391597-01 GW			Collected by Jeff Norfleet	Collected date/time 08/15/21 11:00	Received da 08/17/21 09:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1726897	1	08/20/21 17:27	08/20/21 19:13	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739	1	08/23/21 06:05	08/23/21 06:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739	10	08/23/21 06:16	08/23/21 06:16	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725253	1	08/19/21 13:39	08/19/21 18:18	JPD	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
W-31 L1391597-02 GW			Jeff Norfleet	08/15/21 10:00	08/17/21 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1726383	1	08/19/21 19:09	08/19/21 20:09	VRP	Mt. Juliet, TN
Net Chemistry by Method 9056A	WG1725739	1	08/23/21 06:51	08/23/21 06:51	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739	5	08/23/21 07:03	08/23/21 07:03	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725253	1	08/19/21 13:39	08/19/21 18:31	JPD	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
W-32 L1391597-03 GW			Jeff Norfleet	08/15/21 09:00	08/17/21 09:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1726383	1	08/19/21 19:09	08/19/21 20:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739	1	08/23/21 07:14	08/23/21 07:14	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725253	1	08/19/21 13:39	08/19/21 18:34	JPD	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
W-33 L1391597-04 GW			Jeff Norfleet	08/14/21 09:00	08/17/21 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1726897	1	08/20/21 17:27	08/20/21 19:13	MMF	Mt. Juliet, TN
Net Chemistry by Method 9056A	WG1725739	1	08/23/21 07:48	08/23/21 07:48	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725253	1	08/19/21 13:39	08/19/21 18:38	JPD	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
W-34 L1391597-05 GW			Jeff Norfleet	08/14/21 10:00	08/17/21 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1726383	1	08/19/21 19:09	08/19/21 20:09	VRP	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739	1	08/23/21 08:00	08/23/21 08:00	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1725739 WG1725739	20	08/23/21 08:00	08/23/21 08:00	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1725753	1	08/19/21 13:39	08/19/21 19:58	JPD	Mt. Juliet, TN
nesses (e. maj aj mentod dozo	WO1723233		50/10/27 10:00	30/10/21 13.30	51.0	ma Junet, IIV
			Collected by	Collected date/time	Received da	te/time
W-35 L1391597-06 GW			Jeff Norfleet	08/14/21 11:00	08/17/21 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
		4			NANAE	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG1726897	1	08/20/21 17:27	08/20/21 19:13	MMF	Mit. Juliet, TN
	WG1726897 WG1725739	1	08/20/21 17:27	08/23/21 08:23	ELN	
Gravimetric Analysis by Method 2540 C-2011 Wet Chemistry by Method 9056A Wet Chemistry by Method 9056A						Mt. Juliet, TN Mt. Juliet, TN Mt. Juliet, TN























CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

¹Cp



















Jeff Carr Project Manager

up lan

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a. Items consistent with NELAC Chapter 5,
 - b. dilution factors,
 - c. preparation methods,
 - d. cleanup methods, and
 - e. if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a. Calculated recovery (%R), and
 - b. The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a. LCS spiking amounts,
 - b. Calculated %R for each analyte, and
 - c. The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a. Samples associated with the MS/MSD clearly identified,
 - b. MS/MSD spiking amounts,
 - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d. Calculated %Rs and relative percent differences (RPDs), and
 - e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 Other problems or anomalies.

Wubb law

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jeff Carr Project Manager

 ACCOUNT:
 PROJECT:
 SDG:
 DATE/TIME:
 PAGE:

 Commercial Liability Partners, LLC
 L1391597
 08/24/21 16:44
 5 of 22

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		ory Name: Pace Analytical National	LRC Date: 08/24/2021 16:44						
Project Name: Golden Eagle Groundwater			Laboratory Job Number: L1391597-01, 02, 03, 04, 05 and 06						
Rev	viewe	r Name: Jeff Carr	Prep Batch Number(s): WG1725253, WG1726383, WG1726897 and WG1725739						
t ¹	A ²	Description		Yes	No	NA ³	NR⁴	ER#	
1	OI	Chain-of-custody (C-O-C)							
		Did samples meet the laboratory's standard conditions	of sample acceptability upon receipt?	Х			ļ		
		Were all departures from standard conditions describe	d in an exception report?			X			
2	OI	Sample and quality control (QC) identification							
		Are all field sample ID numbers cross-referenced to the	e laboratory ID numbers?	X					
		Are all laboratory ID numbers cross-referenced to the	corresponding QC data?	Х					
23	OI	Test reports							
		Were all samples prepared and analyzed within holding	g times?	Х					
		Other than those results < MQL, were all other raw value	ues bracketed by calibration standards?		Х			1	
		Were calculations checked by a peer or supervisor?		Х					
		Were all analyte identifications checked by a peer or si	upervisor?	Х			1		
		Were sample detection limits reported for all analytes r		Х			1		
		Were all results for soil and sediment samples reported on a dry weight basis?						\vdash	
		Were % moisture (or solids) reported for all soil and sec			X		t		
		, , ,			X	1	\top		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035? If required for the project, are TICs reported?					1	\vdash	
24	0	Surrogate recovery data	<u> </u>	1	Х				
•		Were surrogates added prior to extraction?		ı	I	Ιx	I	т	
		Were surrogate percent recoveries in all samples within	n the laboratory QC limits?	X		 ^	1	\vdash	
25	OI	Test reports/summary forms for blank samples	in the laboratory de limits:		1			Ь.	
.5	I OI	Were appropriate type(s) of blanks analyzed?		l v		1	T	_	
				X	+	+	+	\vdash	
		Were blanks analyzed at the appropriate frequency?	dan and the about		-	-	+	+-	
		Were method blanks taken through the entire analytical cleanup procedures?	al process, including preparation and, it applicable,	X					
		Were blank concentrations < MQL?		Х					
₹6	OI	Laboratory control samples (LCS):							
		Were all COCs included in the LCS?		Х					
		Was each LCS taken through the entire analytical proc	edure, including prep and cleanup steps?	Х					
		Were LCSs analyzed at the required frequency?		Х			1		
		Were LCS (and LCSD, if applicable) %Rs within the labor	oratory QC limits?	Х			1		
			e laboratory's capability to detect the COCs at the MDL	Х					
		Was the LCSD RPD within QC limits?		Х				1	
27	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data	a			1			
		Were the project/method specified analytes included in		Х	I	T	T	Т	
		Were MS/MSD analyzed at the appropriate frequency?		Х	1	1	1	\vdash	
		Were MS (and MSD, if applicable) %Rs within the labora		X	1	1		\vdash	
		Were MS/MSD RPDs within laboratory QC limits?		X		1	1	\vdash	
28	OI	Analytical duplicate data			1	1			
	101	Were appropriate analytical duplicates analyzed for ea	ch matrix?	Ιx	Т	T	Τ	$\overline{}$	
		Were analytical duplicates analyzed at the appropriate		X	1	1	1	+-	
		Were RPDs or relative standard deviations within the la		X	1	1	 	+-	
19	OI	Method quantitation limits (MQLs):	iboratory we infine:				1		
	Oi	, ,	laboratory data pagicago?	l v	Т	1	T	$\overline{}$	
		Are the MQLs for each method analyte included in the		X		+	+	+-	
		Do the MQLs correspond to the concentration of the lo		X	+	+	+	+-	
110	Lou	Are unadjusted MQLs and DCSs included in the labora	тоту чата раскаде:	X					
210	OI	Other problems/anomalies	and in this LDC and EDC		1	T	_	_	
		Are all known problems/anomalies/special conditions r		X	-	 	-	+	
		the sample results?	r the SDL to minimize the matrix interference effects on	Х			_	$oxed{oxed}$	
		and methods associated with this laboratory data pack		Х					
Ite	ms ide	entified by the letter "R" must be included in the laborator	ry data package submitted in the TRRP-required report(s).	Items i	dentifie	ed by th	e letter	"S"	

^{1.} Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" Items identified by the letter is into be included in the laboratory data package submisshould be retained and made available upon request for the appropriate retention period.
 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
 NA = Not applicable;
 NR = Not reviewed;

ACCOUNT: DATE/TIME: PAGE: PROJECT: SDG: Commercial Liability Partners, LLC L1391597 08/24/21 16:44 6 of 22

^{5.} ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

Laboratory Name: Pace Analytical National			LRC Date: 08/24/2021 16:44						
Proj	ect N	lame: Golden Eagle Groundwater	Laboratory Job Number: L1391597-01, 02, 03, 04, 05 and 06						
Rev	iewe	r Name: Jeff Carr	Prep Batch Number(s): WG1725253, WG1726383, WG1726897 and WG172573						
# ¹	A ²	Description		Yes	No	NA ³	NR⁴	ER#	
S1	OI	Initial calibration (ICAL)							
		Were response factors and/or relative response factors	for each analyte within QC limits?			X			
		Were percent RSDs or correlation coefficient criteria me	et?	Х					
		Was the number of standards recommended in the met	thod used for all analytes?	X					
		Were all points generated between the lowest and high	nest standard used to calculate the curve?	Х					
		Are ICAL data available for all instruments used?		Х					
		Has the initial calibration curve been verified using an a	appropriate second source standard?	Х					
52	OI	Initial and continuing calibration verification (ICCV and	CCV) and continuing calibration blank (CCB):						
		Was the CCV analyzed at the method-required frequen	cy?	Х					
		Were percent differences for each analyte within the m	ethod-required QC limits?	X					
		Was the ICAL curve verified for each analyte?		Х					
		Was the absolute value of the analyte concentration in	the inorganic CCB < MDL?	Х					
53	0	Mass spectral tuning							
		Was the appropriate compound for the method used fo	r tuning?	X				T	
		Were ion abundance data within the method-required (QC limits?	Х					
64	0	Internal standards (IS)							
		Were IS area counts and retention times within the met	hod-required QC limits?	X				T	
55	OI	Raw data (NELAC Section 5.5.10)							
-		Were the raw data (for example, chromatograms, spect	ral data) reviewed by an analyst?	X				T	
		Were data associated with manual integrations flagged	on the raw data?			Х			
6	0	Dual column confirmation							
		Did dual column confirmation results meet the method-	required QC?			X			
57	0	Tentatively identified compounds (TICs)							
		If TICs were requested, were the mass spectra and TIC	data subject to appropriate checks?			Х			
88	I	Interference Check Sample (ICS) results							
		Were percent recoveries within method QC limits?		Х					
59	I	Serial dilutions, post digestion spikes, and method of st	andard additions						
		Were percent differences, recoveries, and the linearity	within the QC limits specified in the method?	Х					
510	OI	Method detection limit (MDL) studies							
		Was a MDL study performed for each reported analyte?	?	X					
		Is the MDL either adjusted or supported by the analysis	of DCSs?	X					
511	OI	Proficiency test reports							
		Was the laboratory's performance acceptable on the ap	pplicable proficiency tests or evaluation studies?	X					
512	OI	Standards documentation					_		
		Are all standards used in the analyses NIST-traceable of	r obtained from other appropriate sources?	X					
513	OI	Compound/analyte identification procedures							
		Are the procedures for compound/analyte identification	n documented?	X					
514	OI	Demonstration of analyst competency (DOC)							
		Was DOC conducted consistent with NELAC Chapter 5	?	X				<u> </u>	
		Is documentation of the analyst's competency up-to-da	te and on file?	X					
S15	OI	Verification/validation documentation for methods (NEL	AC Chapter 5)						
		Are all the methods used to generate the data docume	nted, verified, and validated, where applicable?	X					
616	OI	Laboratory standard operating procedures (SOPs)							

^{1.} Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

^{5.} ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National		LRC Date: 08/24/2021 16:44			
Project Name: Golden Eagle Groundwater		Laboratory Job Number: L1391597-01, 02, 03, 04, 05 and 06			
Review	er Name: Jeff Carr	Prep Batch Number(s): WG1725253, WG1726383, WG1726897 and WG1725739			
ER #1	Description				
1	9056A WG1725739 R3695746-4, 5 and 7: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).				

^{1.} Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3. NA = Not applicable;

4. NR = Not reviewed;

5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Collected date/time: 08/15/21 11:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	979		13.3	13.3	1	08/20/2021 19:13	WG1726897

Wet Chemistry by Method 9056A

	Result	<u>Qualifier</u>	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	33.4		0.379	1.00	1.00	1	08/23/2021 06:05	WG1725739
Fluoride	0.824		0.0640	0.150	0.150	1	08/23/2021 06:05	WG1725739
Sulfate	606		5.94	5.00	50.0	10	08/23/2021 06:16	WG1725739



	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	33.4		0.379	1.00	1.00	1	08/23/2021 06:05	WG1725739
Fluoride	0.824		0.0640	0.150	0.150	1	08/23/2021 06:05	WG1725739
Sulfate	606		5.94	5.00	50.0	10	08/23/2021 06:16	WG1725739



Ss

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	4.01		0.00963	0.0300	0.0300	1	08/19/2021 18:18	WG1725253
Calcium	100		0.0936	1.00	1.00	1	08/19/2021 18:18	WG1725253











Collected date/time: 08/15/21 10:00

L1391597

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	400		10.0	10.0	1	08/19/2021 20:09	WG1726383

²Tc

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	49.9		0.379	1.00	1.00	1	08/23/2021 06:51	WG1725739
Fluoride	0.0732	<u>J</u>	0.0640	0.150	0.150	1	08/23/2021 06:51	WG1725739
Sulfate	242		2.97	5.00	25.0	5	08/23/2021 07:03	WG1725739



- ⁴Cn

⁵ Tr	
⁵Tr	

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	1.84		0.00963	0.0300	0.0300	1	08/19/2021 18:31	WG1725253
Calcium	51.6		0.0936	1.00	1.00	1	08/19/2021 18:31	WG1725253











Collected date/time: 08/15/21 09:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	270		10.0	10.0	1	08/19/2021 20:09	WG1726383





Ss

















Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	9.64		0.379	1.00	1.00	1	08/23/2021 07:14	WG1725739
Fluoride	1.75		0.0640	0.150	0.150	1	08/23/2021 07:14	WG1725739
Sulfate	76.3		0.594	5.00	5.00	1	08/23/2021 07:14	WG1725739



	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	2.07		0.00963	0.0300	0.0300	1	08/19/2021 18:34	WG1725253
Calcium	52.3		0.0936	1.00	1.00	1	08/19/2021 18:34	WG1725253

Gravimetric Analysis by Method 2540 C-2011

Collected date/time: 08/14/21 09:00

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	295		10.0	10.0	1	08/20/2021 19:13	WG1726897

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	8.05		0.379	1.00	1.00	1	08/23/2021 07:48	WG1725739
Fluoride	4.22		0.0640	0.150	0.150	1	08/23/2021 07:48	WG1725739
Sulfate	51.4		0.594	5.00	5.00	1	08/23/2021 07:48	WG1725739



Ss

Cn



	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Ratch
A		Qualifier				Dilution	,	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	1.81		0.00963	0.0300	0.0300	1	08/19/2021 18:38	WG1725253
Calcium	61.7		0.0936	1.00	1.00	1	08/19/2021 18:38	WG1725253











Collected date/time: 08/14/21 10:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1620		20.0	20.0	1	08/19/2021 20:09	WG1726383

Wet Chemistry by Method 9056A

Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	125		7.58	1.00	20.0	20	08/23/2021 08:11	WG1725739
Fluoride	0.348		0.0640	0.150	0.150	1	08/23/2021 08:00	WG1725739
Sulfate	933		11.9	5.00	100	20	08/23/2021 08:11	WG1725739



³Ss

















	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	4.83		0.00963	0.0300	0.0300	1	08/19/2021 19:58	WG1725253
Calcium	210		0.0936	1.00	1.00	1	08/19/2021 19:58	WG1725253

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1650		25.0	25.0	1	08/20/2021 19:13	WG1726897

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	137		7.58	1.00	20.0	20	08/23/2021 08:34	WG1725739
Fluoride	U		0.0640	0.150	0.150	1	08/23/2021 08:23	WG1725739
Sulfate	992		11.9	5.00	100	20	08/23/2021 08:34	WG1725739



Ss

Collected date/time: 08/14/21 11:00

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	137		7.58	1.00	20.0	20	08/23/2021 08:34	WG1725739
Fluoride	U		0.0640	0.150	0.150	1	08/23/2021 08:23	WG1725739
Sulfate	992		11.9	5.00	100	20	08/23/2021 08:34	WG1725739



	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	6.04		0.00963	0.0300	0.0300	1	08/19/2021 20:02	WG1725253
Calcium	216		0.0936	1.00	1.00	1	08/19/2021 20:02	WG1725253











QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1391597-02,03,05

Method Blank (MB)

()		MD Doc
(MB) R3694887-1	08/19/21	20:09

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0





L1391526-35 Original Sample (OS) • Duplicate (DUP)

(OS) L1391526-35 08/19/21 20:09 • (DUP) R3694887-3 08/19/21 20:09

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	711	725	1	2 04		5





⁶Sr

L1391550-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1391550-07 08/19/21 20:09 • (DUP) R3694887-4 08/19/21 20:09

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	606	611	1	0.822		5







Laboratory Control Sample (LCS)

(LCS) R3694887-2 08/19/21 20:09

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8420	95.7	77.4-123	

SDG:

L1391597

QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1391597-01,04,06

Method Blank (MB)

(MB) R3695210-1	08/20/21 19:13	
	MB Result	M

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0





³Ss

[†]Cn

L1389457-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1389457-01 08/20/21 19:13 • (DUP) R3695210-3 08/20/21 19:13

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	1310	1320	1	1.01		5





⁶Sr



(OS) L1389472-01 08/20/21 19:13 • (DUP) R3695210-4 08/20/21 19:13

,	Original Res	sult DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	4690	4660	1	0.642		5







Laboratory Control Sample (LCS)

(LCS) R3695210-2 08/20/21 19:13

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8580	97.5	77 4-123	

QUALITY CONTROL SUMMARY

L1391597-01,02,03,04,05,06

Wet Chemistry by Method 9056A Method Blank (MB)

(MB) R3695746-1 08/22/21 20:42

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00







⁴Cn



(OS) L1391312-01 08/23/21 02:25 • (DUP) R3695746-3 08/23/21 02:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	54.7	54.7	1	0.180		15
Fluoride	0.663	0.660	1	0.408		15
Sulfate	28.0	27.9	1	0.429		15









L1391597-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1391597-03 08/23/21 07:14 • (DUP) R3695746-6 08/23/21 07:26

(03) [1391397-03 06/23/2	(OS) LISBISBY-OS 06/23/21 07.14 • (DOP) RSOBBY40-0 06/23/21 07.20									
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits				
Analyte	mg/l	mg/l		%		%				
Chloride	9.64	9.64	1	0.0197		15				
Fluoride	1.75	1.76	1	1.02		15				
Sulfate	76.3	76.3	1	0.0477		15				





Laboratory Control Sample (LCS)

(LCS) R3695746-2 08/22/21 20:54

(LCS) RS095740-2 U6/22	(LC3) R3093740-2 06/22/21 20.54								
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier				
Analyte	mg/l	mg/l	%	%					
Chloride	40.0	40.6	102	80.0-120					
Fluoride	8.00	8.43	105	80.0-120					
Sulfate	40.0	41.4	103	80.0-120					

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QUALITY CONTROL SUMMARY

Wet Chemistry by Method 9056A

L1391597-01,02,03,04,05,06

L1391511-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1391511-03 08/23/21 02:59 • (MS) R3695746-4 08/23/21 03:11 • (MSD) R3695746-5 08/23/21 03:22

(
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	109	154	154	91.8	91.4	1	80.0-120	<u>E</u>	<u>E</u>	0.130	15
Fluoride	5.00	0.524	5.90	5.88	108	107	1	80 0-120			0.309	15





L13	39	15	9	7	-()(3 (l(ʻig	ina	S	Sai	mp	ole	(C	S	•	M	1atrix	Sp	oike	(N	15)
-----	----	----	---	---	----	----	-----	----	-----	-----	---	-----	----	-----	----	---	---	---	--------	----	------	----	----	---

(OS) L1391597-03 08/23/21 07:14 • (MS) R3695746-7 08/23/21 07:37

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	9.64	60.5	102	1	80.0-120	
Fluoride	5.00	1.75	7.01	105	1	80.0-120	
Sulfate	50.0	76.3	124	94.9	1	80.0-120	E















QUALITY CONTROL SUMMARY

L1391597-01,02,03,04,05,06

Method Blank (MB)

Metals (ICPMS) by Method 6020







Laboratory Control Sample (LCS)

(LCS) R3694199-2 08/19/21 18:15

(200) 1000 1100 2 00/10/21 10:10											
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier						
Analyte	mg/l	mg/l	%	%							
Boron	0.500	0.503	101	80.0-120							
Calcium	5.00	5.02	100	80.0-120							

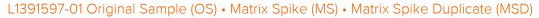


[†]Cn









(OS) L1391597-01 08/19/21 18:18 • (MS) R3694199-4 08/19/21 18:25 • (MSD) R3694199-5 08/19/21 18:28

(00) 21031037 01 001/3/21 10.10 (110) 1103 1103 1103 1103 1103 1103 1103												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Boron	0.500	4.01	4.47	4.54	93.7	107	1	75.0-125			1.48	20
Calcium	5.00	100	105	104	98.6	80.4	1	75 O-125			0 872	20









GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Abbreviations and	a Definitions
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.
Qualifier	Description

The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL). Е J The identification of the analyte is acceptable; the reported value is an estimate.



















ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
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Louisiana	Al30792	Tennessee 1 4	2006
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A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



^{*} Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto





















 $^{^* \, \}text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$

Company Name/Address:			Billing Infor	mation:					1	A	nalvsis / Con	tainer / Pi	reservative		Chain of Custod	y Page of
Commercial Liability Partners, LLC		Adam Kaiser			Pres Chk		77						- Fac	ce Analytical [*]		
Suite 118			Fenton, N		6											i î
Fenton. MO 63026			Email To:				1	(0					133/4		12065 Lebanon Rd N	ount Juliet, TN 37122
Report to: Adam Kaiser				er@atonenv	v.com;je	effnorfleet@		Pre							constitutes acknowle	via this chain of custody dgment and acceptance of the itions found at: .com/hubfs/pas-standard-
Project Description: Golden Eagle Groundwater		City/State Collected:	nt.Ph	easant	TX	Please Ci PT MT C		E-N	3						terms.pdf	91697
Phone: 314-624-1604	Client Projec	t#		COMLIA		GOLDEAG	iLE	125mlHDPE-NoP	6020 250mIHDPE-HNO3	5					SDG# / S	105
Collected by (print): Jeff Nor Heet	Site/Facility	D#		P.O. #				SO4 125	HDP	NoPre					Acctnum: CC	
Collected by (signature):		(Lab MUST Be		Quote #				F, SC	250n)PE-					Prelogin: P8	
Immediately Packed on Ice N Y	The second secon			Date	Results	Needed	No.	Is - Cld,	- 6020	250mlHDPE-NoPres					PM: 206 - Jef	8/11/24 FedEX Ground
Sample ID	Comp/Grab	Matrix *	Depth	Dat	e	Time	Cntrs	Anions	B, Ca	TDS 2					Remarks	Sample # (lab only)
W-30	Grab	GW	16.6	3/15	1/21	1100	3	X	X	X						-0]
W-31		GW	11.9	8/15	/21	1000	3	X	X	X						- 03
W-32		GW	12.7	1 8/15	121	0900	3	X	X	X						-03
W-33		GW	22,3	8/14	121	0900		X	X	X						709
W-34		GW	19.9	8/14/	121	1000		X	X	X						-09 -06
W-35	1	GW	20.9	8/14	12	1100		X	X	X			7 7 7 7			-00
		GW		1			3	X	X	X						
		GW					3	X	X	X						
		GW		-			3	X	X	^						
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Remarks:										pH Flow		mp	COC Seal COC Sign Bottles Correct	ample Receipt Present/Intaced/Accurate: arrive intact: bottles used:	t: _NP _N
DW - Drinking Water OT - Other	Samples returne UPS Fed8				Trackir	21	63	3	770	8	793			VOA Zero	If Application Correct/Control	ible Y, N
Relinquished by : (Signature)		Date:	2) Time	430	Receiv	ed by: (Signa	iture)				Trip Blank F		HCL / MeoH TBR	RAD Scre	een <0.5 mR/hr:	∠Y _N
Religiquished by : (Signature)		Date:	Time	2:	Receiv	ed by: (Signa	iture)			- 1	Temp://7	=D.7	ottles Received:		ation required by l	
Relinquished by : (Signature)		Date:	Time	2:	Receiv	red for lab by	r: (Signa	ture)			Date: 8/17/24		ime:	Hold:		NCF / OK



Pace Analytical® ANALYTICAL REPORT





Ss

Cn













Commercial Liability Partners, LLC

Sample Delivery Group: L1332306 Samples Received: 03/30/2021

Project Number:

Description: Golden Eagle Groundwater

Site: **GOLDEN EAGLE**

Report To: Adam Kaiser

2275 Cassens Drive

Suite 118

Fenton, MO 63026

ubb lan

Entire Report Reviewed By:

Jeff Carr Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National

Mount Juliet, TN 37122 12065 Lebanon Rd

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SAMPLE SUMMARY

W-29 L1332306-01 GW			Collected by Jeff Norfleet	Collected date/time 03/29/2114:00	Received da 03/30/21 14:	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1644707	1	04/02/21 12:42	04/02/21 16:00	MMF	Mt. Juliet, TN
Vet Chemistry by Method 9056A	WG1645238	1	04/04/21 23:49	04/04/21 23:49	MCG	Mt. Juliet, TN
Vet Chemistry by Method 9056A	WG1645238	5	04/05/21 00:05	04/05/21 00:05	MCG	Mt. Juliet, TN
letals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/2112:06	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/05/21 08:38	TM	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	
W-30 L1332306-02 GW			Jeff Norfleet	03/24/21 19:15	03/30/21 14:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
ravimetric Analysis by Method 2540 C-2011	WG1643255	1	03/31/21 10:40	03/31/21 13:56	MML	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	1	04/05/21 00:21	04/05/21 00:21	MCG	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	10	04/05/21 00:38	04/05/21 00:38	MCG	Mt. Juliet, TN
letals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/2112:09	LAT	Mt. Juliet, TN
letals (ICPMS) by Method 6020	WG1644694	10	04/02/21 19:12	04/05/2112:04	LAT	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
V-31 L1332306-03 GW			Jeff Norfleet	03/24/2118:30	03/30/21 14:0	00
lethod	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
ravimetric Analysis by Method 2540 C-2011	WG1643308	1	03/31/21 17:02	03/31/21 18:27	VRP	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	1	04/05/21 00:54	04/05/21 00:54	MCG	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	5	04/05/21 02:00	04/05/21 02:00	MCG	Mt. Juliet, TN
letals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/21 12:12	LAT	Mt. Juliet, TN
letals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/05/21 08:45	TM	Mt. Juliet, TN
V-32 L1332306-04 GW			Collected by Jeff Norfleet	Collected date/time 03/24/2117:45	Received da 03/30/2114:	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
vouimentais Analysis by Mathad 25 40 C 2011	WC1C12200	1	03/31/21 17:02		VDD	MA Julios TN
ravimetric Analysis by Method 2540 C-2011	WG1643308	1		03/31/21 18:27	VRP	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	1	04/05/21 02:33	04/05/21 02:33	MCG	Mt. Juliet, TN
etals (ICPMS) by Method 6020 etals (ICPMS) by Method 6020	WG1644694 WG1644694	1 1	04/02/21 19:12 04/02/21 19:12	04/03/21 12:15 04/05/21 08:48	LAT TM	Mt. Juliet, TN Mt. Juliet, TN
etals (ICFMIS) by Method 6020	WG1044054	,	04/02/21 15.12	04/03/2106.46	I IVI	Mt. Juliet, 11
			Collected by Jeff Norfleet	Collected date/time 03/24/2117:00	Received da 03/30/21 14:0	
V-33 L1332306-05 GW	Batch	Dilution		Analysis		
eulod	Balcii	Dilution	Preparation date/time	date/time	Analyst	Location
ravimetric Analysis by Method 2540 C-2011	WG1643308	1	03/31/21 17:02	03/31/21 18:27	VRP	Mt. Juliet, TN
et Chemistry by Method 9056A	WG1645238	1	04/05/21 03:38	04/05/21 03:38	MCG	Mt. Juliet, TN
etals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/2113:03	LAT	Mt. Juliet, TN
etals (ICPMS) by Method 6020	WG1644694	10	04/02/21 19:12	04/05/2112:07	LAT	Mt. Juliet, TN
V-34 L1332306-06 GW			Collected by Jeff Norfleet	Collected date/time 03/29/2113:00	Received da 03/30/2114:	
lethod	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1643882	1	04/01/21 06:24	04/01/21 10:03	MMF	Mt. Juliet, TN
Vet Chemistry by Method 9056A	WG1645238	1	04/05/21 04:11	04/05/21 04:11	MCG	Mt. Juliet, TN
/et Chemistry by Method 9056A	WG1645238	20	04/05/21 04:28	04/05/21 04:28	MCG	Mt. Juliet, TN
						·
ACCOUNT:	PROJECT:		SDG:	DAT	E/TIME:	

¹Cp





















SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
W-34 L1332306-06 GW			Jeff Norfleet	03/29/21 13:00	03/30/21 14:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Metals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/2113:06	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1644694	10	04/02/21 19:12	04/05/21 12:11	LAT	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
W-35 L1332306-07 GW			Jeff Norfleet	03/25/21 17:00	03/30/2114:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 C-2011	WG1643882	1	04/01/21 06:24	04/01/21 10:03	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1645238	1	04/05/21 05:17	04/05/21 05:17	MCG	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1645238	20	04/05/21 05:33	04/05/21 05:33	MCG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1644694	1	04/02/21 19:12	04/03/2113:09	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1644694	10	04/02/21 19:12	04/05/21 12:14	LAT	Mt. Juliet, TN





















CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



















up lan

Laboratory Data Package Cover Page

This data package consists of this signature page, the laboratory review checklist, and the following reportable data as applicable:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a. Items consistent with NELAC Chapter 5,
 - b. dilution factors,
 - c. preparation methods,
 - d. cleanup methods, and
 - e. if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a. Calculated recovery (%R), and
 - b. The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a. LCS spiking amounts,
 - b. Calculated %R for each analyte, and
 - c. The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a. Samples associated with the MS/MSD clearly identified,
 - b. MS/MSD spiking amounts,
 - c. Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d. Calculated %Rs and relative percent differences (RPDs), and
 - e. The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a. The amount of analyte measured in the duplicate,
 - b. The calculated RPD, and
 - c. The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix.
- R10 Other problems or anomalies.

Wubb law

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld.

Jeff Carr Project Manager

 ACCOUNT:
 PROJECT:
 SDG:
 DATE/TIME:
 PAGE:

 Commercial Liability Partners, LLC
 L1332306
 04/05/21 16:19
 6 of 26

Laboratory Review Checklist: Reportable Data

Lab	orato	ory Name: Pace Analytical National	LRC Date: 04/05/2021 16:19					
Proj	ject N	lame: Golden Eagle Groundwater	Laboratory Job Number: L1332306-01, 02, 03, 04, 05, 06 and 07					
Rev	riewe	r Name: Jeff Carr	Prep Batch Number(s): WG1643882, WG1643308, WG1644694, WG1643 WG1645238 and WG1644707 Yes No NA					
# ¹	A ²	Description		Yes	No	NA ³	NR⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)						
		Did samples meet the laboratory's standard conditions	of sample acceptability upon receipt?	Х				
		Were all departures from standard conditions describe	d in an exception report?			Х		
R2	OI	Sample and quality control (QC) identification						
		Are all field sample ID numbers cross-referenced to the	e laboratory ID numbers?	Х				
		Are all laboratory ID numbers cross-referenced to the o	corresponding QC data?	Х				
R3	OI	Test reports						
		Were all samples prepared and analyzed within holding	g times?	Х				
		Other than those results < MQL, were all other raw value	ies bracketed by calibration standards?	Х				
		Were calculations checked by a peer or supervisor?		Х				
		Were all analyte identifications checked by a peer or su	upervisor?	Х				
		Were sample detection limits reported for all analytes r	not detected?	Х				
		Were all results for soil and sediment samples reported		Х				
		Were % moisture (or solids) reported for all soil and sec	liment samples?			Х		
		Were bulk soils/solids samples for volatile analysis extr	acted with methanol per SW846 Method 5035?			Х		
		If required for the project, are TICs reported?	·			Х	İ	
R4	0	Surrogate recovery data						
		Were surrogates added prior to extraction?				Х		
		Were surrogate percent recoveries in all samples within	n the laboratory QC limits?	Х				
R5	OI	Test reports/summary forms for blank samples				•	•	
		Were appropriate type(s) of blanks analyzed?		Х				
		Were blanks analyzed at the appropriate frequency?		Х				
		Were method blanks taken through the entire analytical cleanup procedures?	Х					
		Were blank concentrations < MQL?		X				
R6	OI	Laboratory control samples (LCS):				1	•	
		Were all COCs included in the LCS?		Х			I	
		Was each LCS taken through the entire analytical process	edure, including prep and cleanup steps?	Х				
		Were LCSs analyzed at the required frequency?	, , , , , , , , , , , , , , , , , , , ,	Х				
		Were LCS (and LCSD, if applicable) %Rs within the labor	oratory QC limits?	Х		1	1	
		, , , , , ,	e laboratory's capability to detect the COCs at the MDL	Х				
		Was the LCSD RPD within QC limits?		Х			† T	
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data	3	•		•		
	•	Were the project/method specified analytes included in	n the MS and MSD?	Х				
		Were MS/MSD analyzed at the appropriate frequency?		Х				
		Were MS (and MSD, if applicable) %Rs within the labora	atory QC limits?	Х				
		Were MS/MSD RPDs within laboratory QC limits?		Х		1		
R8	OI	Analytical duplicate data				•		
		Were appropriate analytical duplicates analyzed for ea	ch matrix?	Х				
		Were analytical duplicates analyzed at the appropriate	Х		1			
		Were RPDs or relative standard deviations within the la	boratory QC limits?		Х			1
R9	OI	Method quantitation limits (MQLs):						
	•	Are the MQLs for each method analyte included in the	Х					
		Do the MQLs correspond to the concentration of the lo		Х		1	İ	
		Are unadjusted MQLs and DCSs included in the labora		Х			Ì	İ
R10	OI	Other problems/anomalies		•			•	
		Are all known problems/anomalies/special conditions r	noted in this LRC and ER?	Х				
		Was applicable and available technology used to lower the sample results?		Х				
		·	aboratory Accreditation Program for the analytes, matrices age?	Х				
1. Itei	ms ide		ry data package submitted in the TRRP-required report(s).	Items i	dentifie	ed by th	e letter	"S"

^{1.} Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S' should be retained and made available upon request for the appropriate retention period.

ACCOUNT: PROJECT: SDG: DATE/TIME: PAGE: Commercial Liability Partners, LLC L1332306 04/05/21 16:19 7 of 26

 ^{2.} O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
 3. NA = Not applicable;

^{4.} NR = Not reviewed;

^{5.} ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Supporting Data

<u> </u>	ry Name: Pace Analytical National	LRC Date: 04/05/2021 16:19					
ect N							
iewe	WG1645238 and WG1644707					55,	
A ²	Description		Yes	No	NA ³	NR⁴	ER# ⁵
OI	Initial calibration (ICAL)		•	•	•		
	Were response factors and/or relative response factors	s for each analyte within QC limits?			X		Т
	Were percent RSDs or correlation coefficient criteria m	et?	Х			1	1
	Was the number of standards recommended in the me	thod used for all analytes?	Х			1	1
	Were all points generated between the lowest and hig	hest standard used to calculate the curve?	Х		1		1
	Are ICAL data available for all instruments used?		Х				1
	Has the initial calibration curve been verified using an	appropriate second source standard?	Х			1	1
OI			<u> </u>	•	•	•	
	Was the CCV analyzed at the method-required frequer	ncy?	Х				T
		•	Х				1
	Was the ICAL curve verified for each analyte?	·	X				1
	Was the absolute value of the analyte concentration in	the inorganic CCB < MDL?	X				†
0	Mass spectral tuning			1	•	1	
	Was the appropriate compound for the method used for	or tuning?	X				T
			X				
0					1		
		Тх	Τ	T	Τ	\top	
OL						1	_
<u> </u>	,	tral data) reviewed by an analyst?	Τx	1	1	I	Т
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0		. on the fair adda.			1		
		-required QC?	1	1	Τ×	T	Т
0		required de.	<u> </u>	1	1 ~	1	_
		data subject to appropriate checks?	T	Τ	Τ×	Τ	\top
lı		data subject to appropriate checks.		1	1 ~		_
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			Τx	Τ	I	Ι	\top
OL		William the do limits specified in the method.		1	1	1	_
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						1	+
OL		3 01 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			1		_
<u> </u>		pplicable proficiency tests or evaluation studies?	Τx		1	T	T
OL		pplicable proficiency tests of evaluation studies.	<u> </u>	1	1		_
<u> </u>		or obtained from other appropriate sources?	Τx	T	T	T	Т
OL		or obtained from other appropriate sources.			1		
<u> </u>		n documented?	Τx	1	1	T	Т
OI		accamonica.					
	, , , , ,	5?	X		T	Ι	
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OI							
L	,	. ,	T x		Т	Т	Т
		and validated, where applicable:				1	_
OI	Laboratory standard operating procedures (SOPs)						
	A ²	OI Initial calibration (ICAL) Were response factors and/or relative response factors Were percent RSDs or correlation coefficient criteria m Was the number of standards recommended in the me Were all points generated between the lowest and hig Are ICAL data available for all instruments used? Has the initial calibration curve been verified using an and initial and continuing calibration verification (ICCV and Was the CCV analyzed at the method-required frequer Were percent differences for each analyte within the m Was the ICAL curve verified for each analyte? Was the absolute value of the analyte concentration in O Mass spectral tuning Was the appropriate compound for the method used for Were ion abundance data within the method-required O Internal standards (IS) Were IS area counts and retention times within the method Internal standards (IS) Were the raw data (for example, chromatograms, spector Were data associated with manual integrations flagged O Dual column confirmation O Tentatively identified compounds (TICs) If TICs were requested, were the mass spectra and TICs I Interference Check Sample (ICS) results Were percent recoveries within method QC limits? I Serial dilutions, post digestion spikes, and method of some was a MDL study performed for each reported analyte Is the MDL either adjusted or supported by the analyste Is the MDL either adjusted or supported by the analyste Is the MDL either adjusted or supported by the analyste Is the MDL either adjusted or supported by the analyste Is the MDL either adjusted in the analyses NIST-traceable of Compound/analyte identification procedures Are the procedures for compound/analyte identification OI Demonstration of analyst competency (DOC) Was DOC conducted consistent with NELAC Chapter Is documentation of the analyst's competency up-to-date Is documentation of the analyst's competency up-to-date Is documentation of the analyst's competency up-to-date Is documentation of the analyst's competency up-to-date Is documentation of the analyst's competency up-to-	iewer Name: Jeff Carr Prep Batch Number(s): WG1643882, WG1643308, WG1645238 and WG1644707 Prep Batch Number(s): WG1643882, WG1643308, WG1645238 and WG1644707 Prep Batch Number(s): WG1643882, WG1643308, WG1645238 and WG1644707 Were response factors and/or relative response factors for each analyte within QC limits? Were percent RSDs or correlation coefficient criteria met? Was the number of standards recommended in the method used for all analytes? Were all points generated between the lowest and highest standard used to calculate the curve? Are ICAL data available for all instruments used? Has the initial calibration curve been verified using an appropriate second source standard? Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB): Was the CCV analyzed at the method-required frequency? Were percent differences for each analyte within the method-required QC limits? Was the ICAL curve verified for each analyte within the method-required QC limits? Was the absolute value of the analyte concentration in the inorganic CCB < MDL? Mass spectral tuning Was the appropriate compound for the method used for tuning? Were ion abundance data within the method-required QC limits?	iewer Name: Jeff Carr Prep Batch Number(s): WG1643882, WG1643308, WG16446 WG1645238 and WG1644707 Yes Initial calibration (ICAL) Were response factors and/or relative response factors for each analyte within QC limits? Were percent RSDs or correlation coefficient criteria met? Was the number of standards recommended in the method used for all analytes? Xere all points generated between the lowest and highest standard used to calculate the curve? Xere ICAL data available for all instruments used? Initial and continuing calibration curve been verified using an appropriate second source standard? Xere ICAL data available for all instruments used? Was the initial calibration curve been verified using an appropriate second source standard? Xere percent differences for each analyte within the method-required OC limits? Was the ICAL curve verified for each analyte within the method-required OC limits? Xere percent differences for each analyte concentration in the inorganic CCB < MDL? Was the absolute value of the analyte concentration in the inorganic CCB < MDL? Xere percent differences for each analyte concentration in the inorganic CCB < MDL? Xere percent difference data within the method-required QC limits? Xere in abundance data within the method-required QC limits? Xere in abundance data within the method-required QC limits? Xere data associated with manual integrations flagged on the raw data? Dual column confirmation Did dual column confirmation Did dual column confirmation Did dual column confirmation First the recoveries within method QC limits? Xere data associated with manual integrations flagged on the raw data? Dual column confirmation First the recoveries within method of standard additions Were percent difference, recoveries, and the linearity within the QC limits specified in the method? Xere all standards used in the analyses NIST-traceable or obtained from other appropriate sources? X Serial dilutions, post digestion spikes, and method of standard additions Was a bulb	Prep Batch Number(s): WG1643882, WG1643308, WG1644694, WG WG1645238 and WG1644707 A² Description	Prep Batch Number(s): WG1643382, WG1643308, WG1644694, WG164328 and WG1644707 A	Prep Batch Number(s): WG1643308, WG16443308, WG1644694, WG1643255, WG1645238 and WG1644707 Prep Batch Number(s): WG1643308, WG1643308, WG1644694, WG1643255, WG1645238 and WG1644707 Were response factors and/or relative response factors for each analyte within QC limits? Were response factors and/or relative response factors for each analyte within QC limits? Was the number of standards recommended in the method used for all analytes? Were all points generated between the lowest and highest standard used to calculate the curve? Are ICAL data available for all instruments used? Has the initial calibration curve been verified using an appropriate second source standard? Were the standard or continuing calibration erification (ICCV and CCV) and continuing calibration blank (CCB): Was the CCV analyzed at the method-required dequency? Were percent differences for each analyte? Was the local curve verified for each analyte? Was the absolute value of the analyte concentration in the inorganic CCB < MDL? Were the appropriate compound for the method used for tuning? Was the appropriate compound for the method defort uning? Were to abundance data within the method-required QC limits? Were to abundance data within the method-required QC limits? Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst? Were data associated with manual integrations flagged on the raw data? Did dual column confirmation Did dual column confirmation results met the method-required QC? Tentatively Identified compounds (TICS) Interier requested, were the mass spectra and TIC data subject to appropriate checks? Interier requested, were the mass spectra and TIC data subject to appropriate checks? Were percent recoveries within method of standard additions Were percent recoveries within method of standard additions Were percent recoveries within the method of standard additions Were percent recoveries within the method of standard additions Were percent recoveries within the percent and TIC dat

Items identified by the letter 'R' must be included in the laboratory data package submitted in the TRRP-required report(s). Items should be retained and made available upon request for the appropriate retention period.
 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
 NA = Not applicable;
 NR = Not reviewed;
 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Review Checklist: Exception Reports

Laborat	ory Name: Pace Analytical National	LRC Date: 04/05/2021 16:19					
Project	Name: Golden Eagle Groundwater	Laboratory Job Number: L1332306-01, 02, 03, 04, 05, 06 and 07					
Reviewe	er Name: Jeff Carr	Prep Batch Number(s): WG1643882, WG1643308, WG1644694, WG1643255, WG1645238 and WG1644707					
ER #1	Description						
1	9056A WG1645238 Fluoride: Relative Percent Difference is outside of established control limits. 2540 C-2011 WG1643255 Dissolved Solids: Relative Percent Difference is outside of established control limits. 2540 C-2011 WG1643882 Dissolved Solids: Relative Percent Difference is outside of established control limits.						
1. Items identified by the letter "R" must be included in the laboratory data package submitted in the TRRP-required report(s). Items identified by the letter "S" cheuld be retried and made available upon request for the appropriate restriction position.							

Should be retained and made available upon request for the appropriate retention period.
 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);
 NA = Not applicable;
 NR = Not reviewed;
 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Collected date/time: 03/29/21 14:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	495		10.0	10.0	1	04/02/2021 16:00	WG1644707

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	83.3		0.379	1.00	1.00	1	04/04/2021 23:49	WG1645238
Fluoride	0.146	<u>J</u>	0.0640	0.150	0.150	1	04/04/2021 23:49	WG1645238
Sulfate	224		2.97	5.00	25.0	5	04/05/2021 00:05	WG1645238



³Ss





[°]Sr











Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	1.25		0.00963	0.0300	0.0300	1	04/05/2021 08:38	WG1644694
Calcium	89.9		0.0936	1.00	1.00	1	04/03/2021 12:06	WG1644694

Collected date/time: 03/24/21 19:15

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1070		20.0	20.0	1	03/31/2021 13:56	WG1643255

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	40.5		0.379	1.00	1.00	1	04/05/2021 00:21	WG1645238
Fluoride	0.575		0.0640	0.150	0.150	1	04/05/2021 00:21	WG1645238
Sulfate	686		5.94	5.00	50.0	10	04/05/2021 00:38	WG1645238



³Ss Cn



[°]Sr











Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	4.33		0.0963	0.0300	0.300	10	04/05/2021 12:04	WG1644694
Calcium	133		0.0936	1.00	1.00	1	04/03/2021 12:09	WG1644694

Analyte

Calcium

Boron

SAMPLE RESULTS - 03

Collected date/time: 03/24/21 18:30

Qualifier

SDL

mg/l

0.00963

0.0936

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/l	mg/l		date / time		
Dissolved Solids	373		10.0	10.0	1	03/31/2021 18:27	WG1643308	





















	Result	Qualifier	Offdaj. MQL	MOL	Dilution	Allulysis	baten
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	373		10.0	10.0	1	03/31/2021 18:27	WG1643308

Wet Chemistry by Method 9056A

Metals (ICPMS) by Method 6020

Result

mg/l

1.38

41.4

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	47.7		0.379	1.00	1.00	1	04/05/2021 00:54	WG1645238
Fluoride	0.117	<u>J</u>	0.0640	0.150	0.150	1	04/05/2021 00:54	WG1645238
Sulfate	173		2.97	5.00	25.0	5	04/05/2021 02:00	WG1645238

Unadj. MQL

mg/l

1.00

0.0300

MQL

mg/l

1.00

0.0300

Dilution

1

Analysis

date / time

04/05/2021 08:45

04/03/2021 12:12

Batch

WG1644694

WG1644694

Collected date/time: 03/24/21 17:45

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	204		10.0	10.0	1	03/31/2021 18:27	WG1643308

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	5.32		0.379	1.00	1.00	1	04/05/2021 02:33	WG1645238
Fluoride	2.18		0.0640	0.150	0.150	1	04/05/2021 02:33	WG1645238
Sulfate	42.9		0.594	5.00	5.00	1	04/05/2021 02:33	WG1645238



³Ss



⁵Tr

[°]Sr











Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	1.62		0.00963	0.0300	0.0300	1	04/05/2021 08:48	WG1644694
Calcium	40.0		0.0936	1.00	1.00	1	04/03/2021 12:15	WG1644694

Commercial Liability Partners, LLC

Collected date/time: 03/24/21 17:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	342		10.0	10.0	1	03/31/2021 18:27	WG1643308

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	8.55		0.379	1.00	1.00	1	04/05/2021 03:38	WG1645238
Fluoride	3.48		0.0640	0.150	0.150	1	04/05/2021 03:38	WG1645238
Sulfate	54.8		0.594	5.00	5.00	1	04/05/2021 03:38	WG1645238



Ss





Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	2.32		0.0963	0.0300	0.300	10	04/05/2021 12:07	WG1644694
Calcium	77.0		0.0936	1.00	1.00	1	04/03/2021 13:03	WG1644694













Gravimetric Analysis by Method 2540 C-2011

Collected date/time: 03/29/21 13:00

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1640		25.0	25.0	1	04/01/2021 10:03	WG1643882

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	132		7.58	1.00	20.0	20	04/05/2021 04:28	WG1645238
Fluoride	0.480		0.0640	0.150	0.150	1	04/05/2021 04:11	WG1645238
Sulfate	1130		11.9	5.00	100	20	04/05/2021 04:28	WG1645238



Metals (ICPMS) by Method 6020											
	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch			
Analyte	mg/l		mg/l	mg/l	mg/l		date / time				
Boron	5.80		0.0963	0.0300	0.300	10	04/05/2021 12:11	WG1644694			
Calcium	229		0.0936	1.00	1.00	1	04/03/2021 13:06	WG1644694			













04/05/21 16:19

Collected date/time: 03/25/21 17:00

Gravimetric Analysis by Method 2540 C-2011

	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	1510		20.0	20.0	1	04/01/2021 10:03	WG1643882

Wet Chemistry by Method 9056A

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	<u>Batch</u>
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	129		7.58	1.00	20.0	20	04/05/2021 05:33	WG1645238
Fluoride	0.0725	J	0.0640	0.150	0.150	1	04/05/2021 05:17	WG1645238
Sulfate	1010		11.9	5.00	100	20	04/05/2021 05:33	WG1645238



Ss Cn



Metals (ICPMS) by Method 6020

	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	6.16		0.0963	0.0300	0.300	10	04/05/2021 12:14	WG1644694
Calcium	213		0.0936	1.00	1.00	1	04/03/2021 13:09	WG1644694











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QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1332306-02

Method Blank (MB)

(MB) R3637813-1 03/31/	/21 13:56
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	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	10.0		10.0	10.0





³Ss

L1331231-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1331231-03 03/31/21 13:56 • (DUP) R3637813-3 03/31/21 13:56

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/I	mg/l		%		%
Dissolved Solids	284	288	1	1.40		5





⁶Sr



(OS) L1331231-04 03/31/21 13:56 • (DUP) R3637813-4 03/31/21 13:56

	Original Result				DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	175	248	1	34.5	<u>J3</u>	5







Laboratory Control Sample (LCS)

(LCS) R3637813-2 03/31/21 13:56

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8730	99.2	77 4-123	

DATE/TIME:

QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1332306-03,04,05

Method Blank (MB)

(MB) R3637795-1 03/31/2118:27

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0





L1332306-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1332306-04 03/31/21 18:27 • (DUP) R3637795-3 03/31/21 18:27

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	204	206	1	0.976		5







L1332306-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1332306-05 03/31/21 18:27 • (DUP) R3637795-4 03/31/21 18:27

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	342	340	1	0.587		5







Laboratory Control Sample (LCS)

(LCS) R3637795-2 03/31/21 18:27

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8600	97.7	77.4-123	





QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1332306-06,07

Method Blank (MB)

(MB) R3637599-1 04/01/2110:03								
	MB Result	MB Qualifier	MB MDL	MB RDL				
Analyte	mg/l		mg/l	mg/l				
Dissolved Solids	U		10.0	10.0				



Ss

L1332054-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1332054-01 04/01/21 10:03 • (DUP) R3637599-3 04/01/21 10:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	952	1020	1	7.29	J3	5



Sr

L1332054-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1332054-02 04/01/21 10:03 • (DUP) R3637599-4 04/01/21 10:03

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	797	812	1	1.82		5



Laboratory Control Sample (LCS)

(LCS) R3637599-2 04/01/21 10:03

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8540	97.0	77.4-123	



QUALITY CONTROL SUMMARY

Gravimetric Analysis by Method 2540 C-2011

L1332306-01

Method Blank (MB)

(MB) R3638248-	1 04/02/21 16:00			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0



Ss

L1331914-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1331914-01 04/02/21 16:00 • (DUP) R3638248-3 04/02/21 16:00

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	428	430	1	0.466		5



Sr

Laboratory Control Sample (LCS)

(LCS) R3638248-2 04/02/2116:00





QUALITY CONTROL SUMMARY

L1332306-01.02.03.04.05.06.07

Wet Chemistry by Method 9056A Method Blank (MB)

(MB) R3638068-1	04/04/21 21:40
	MB Result

٠	133230	70-01,	02,03,	07,05,	00,07

(MB) R3638068-1 04	/04/21 21:40			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00



L1332306-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1332306-03 04/05/21 00:54 • (DUP) R3638068-3 04/05/21 01:11

(03) 21332300 03 04/03/21/00.54 - (001) 1/0330000 3 04/03/21/01.11										
		Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits			
	Analyte	mg/l	mg/l		%		%			
	Chloride	47.7	47.7	1	0.00943		15			
	Fluoride	0.117	0.121	1	3.69	J	15			





GI.



(OS) L1332306-03 04/05/21 02:00 • (DUP) R3638068-4 04/05/21 02:16

(,	Original Result	,		DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Sulfate	173	173	5	0.130		15







L1333898-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1333898-01 04/05/21 07:28 • (DUP) R3638068-7 04/05/21 07:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	21.2	21.2	1	0.0118		15
Fluoride	0.0655	0.0815	1	21.8	<u>J P1</u>	15
Sulfate	33.4	33.5	1	0.170		15

Laboratory Control Sample (LCS)

(LCS) R3638068-2 04/04/21 21:57

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits
Analyte	mg/l	mg/l	%	%
Chloride	40.0	40.4	101	80.0-120
Fluoride	8.00	8.26	103	80.0-120
Sulfate	40.0	40.2	100	80.0-120

AI
¹⁰ Sc

LCS Qualifier

QUALITY CONTROL SUMMARY

Wet Chemistry by Method 9056A

L1332306-01,02,03,04,05,06,07

L1332306-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1332306-04 04/05/21 02:33 • (MS) R3638068-5 04/05/21 02:49 • (MSD) R3638068-6 04/05/21 03:06

(03) 1332300 04 04/03/2	21 02.00 - (1410)	113030000 5	04/03/21 02.43) - (IVISB) 1(SUS	0000 0 0-700	721 03.00						
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	5.32	53.2	53.4	95.8	96.2	1	80.0-120			0.347	15
Fluoride	5.00	2.18	7.05	7.07	97.3	97.7	1	80.0-120			0.266	15
Sulfate	50.0	42.9	89.4	89.6	92.9	93.4	1	80.0-120			0.270	15





















QUALITY CONTROL SUMMARY

L1332306-01,02,03,04,05,06,07

Method Blank (MB)

Metals (ICPMS) by Method 6020

(MB) R3637805-1 04/03/2110:47

MB RDL MB Result MB Qualifier MB MDL Analyte mq/l mg/l mg/l Calcium 0.0936 1.00

Ss

Method Blank (MB)

(MB) R3638085-1 04/05/21 08:17 MB Result MB Qualifier MB MDL MB RDL Analyte mg/l mg/l mg/l Boron U 0.00963 0.0300





Laboratory Control Sample (LCS)

(I CS) P3637805-6 04/03/2113:37

(LCS) K3037003-0 04703	3/21 13.37				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Calcium	5.00	4.73	94.6	80.0-120	







Laboratory Control Sample (LCS)

(LCS) R3638085-2 04/05/21 08:21

,	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Boron	0.500	0.482	96.3	80.0-120	



Sc

L1332289-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1332289-03 04/03/21 10:53 • (MS) R3637805-4 04/03/21 11:00 • (MSD) R3637805-5 04/03/21 11:03

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Calcium	5.00	5.91	10.5	10.6	92.6	93.7	1	75.0-125			0.538	20

L1332289-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) I 1332289-03	04/05/21 08:24 • (MS) R3638085-4	04/05/2108.31	• (MSD) R3638085-5	04/05/21 08:35

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Boron	0.500	0.0279	0.492	0.512	92.8	96.9	1	75.0-125			4.04	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

Appleviations and	a Delinitions
MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.



















ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
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Georgia ¹	923	North Dakota	R-140
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Kansas	E-10277	Rhode Island	LA000356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
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Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
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A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



^{*} Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto





















 $^{^* \, \}text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$

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Suite 118		Suite 11 Fenton,		1							Nation		i Center for Testing & Innovation				
Penton MO 63026				1410 03020							3				ľ		
Report to: Adam Kaiser			Email To: adam.kaiser@atonenv.com;jeffnorfleet@				res								12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859		
roject Description: Golden Eagle Groundwater	Mt. Pleusart, TX Please Cir			ircle:	E-NoPres	,		427									
hone: 314-624-160 4	Client Project #		Lab Project # COMLIAFMO-GOLDEAGI			SmilhDP	250mIHDPE-HNO3							SDG# 33230			
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Jeff Northert	Gold	enEuglt	2	1.0.1			504 12	ヨ	NoPi					Acctnum: COMLIAFM			
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W-33		GW	22,9	3-24-8	11/200	3	X	х	X							-05	
W-34		GW	22-0	3-29-3		3	Х	х	X							_06	
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nquished by: (Signature) Date:			Time:	Time: Received by: (Signatur			re).			Temp. C Bottles Received:			If pres	If preservation required by Login: Date/Time			
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