



April 14, 2023

Texas Commission on Environmental Quality
Industrial and Hazardous Waste Permits Section - CCR
MC-130
PO Box 13087
Austin, Texas 78711-3087

RE: Monticello Steam Electric Station – Ash Settling Ponds – CCR Annual Groundwater Report

On behalf of Golden Eagle Development, LLC (Golden Eagle), Gemini Engineering is submitting the 2022 Annual CCR Groundwater Monitoring Report for the ash settling ponds at the former Monticello Steam Electric Station (MOSES).

Based on the attached report, we are recommending closure of the CCR unit prior to approval of the CCR registration. The CCR registration application can be withdrawn, and groundwater Detection Monitoring can be discontinued.

Please contact me at (512) 566-6878 or A.Kaiser@GeminiSTL.com if you have any questions or comments.

Sincerely,

Adam J. Kaiser, PE
Senior Project Engineer
Gemini Engineering, LLC

CC: Golden Eagle Development



Texas Commission on Environmental Quality Waste Permits Division Correspondence Cover Sheet

Date: 4/14/2023

Facility Name: Monticello Steam Electric Station

Permit or Registration No.: CCR114

Nature of Correspondence:

Initial/New

Response/Revision to TCEQ Tracking No.:
_____ (from subject line of TCEQ letter
regarding initial submission)

Affix this cover sheet to the front of your submission to the Waste Permits Division. Check appropriate box for type of correspondence. Contact WPD at (512) 239-2335 if you have questions regarding this form.

Table 1 - Municipal Solid Waste Correspondence

Applications	Reports and Notifications
<input type="checkbox"/> New Notice of Intent	<input type="checkbox"/> Alternative Daily Cover Report
<input type="checkbox"/> Notice of Intent Revision	<input type="checkbox"/> Closure Report
<input type="checkbox"/> New Permit (including Subchapter T)	<input type="checkbox"/> Compost Report
<input type="checkbox"/> New Registration (including Subchapter T)	<input type="checkbox"/> Groundwater Alternate Source Demonstration
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Groundwater Corrective Action
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> Limited Scope Major Amendment	<input type="checkbox"/> Groundwater Background Evaluation
<input type="checkbox"/> Notice Modification	<input type="checkbox"/> Landfill Gas Corrective Action
<input type="checkbox"/> Non-Notice Modification	<input type="checkbox"/> Landfill Gas Monitoring
<input type="checkbox"/> Transfer/Name Change Modification	<input type="checkbox"/> Liner Evaluation Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Soil Boring Plan
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Special Waste Request
<input type="checkbox"/> Subchapter T Disturbance Non-Enclosed Structure	<input type="checkbox"/> Other:
<input type="checkbox"/> Other:	

Table 2 - Industrial & Hazardous Waste Correspondence

Applications	Reports and Responses
<input type="checkbox"/> New	<input type="checkbox"/> Annual/Biennial Site Activity Report
<input type="checkbox"/> Renewal	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> Post-Closure Order	<input type="checkbox"/> Closure Certification/Report
<input type="checkbox"/> Major Amendment	<input type="checkbox"/> Construction Certification/Report
<input type="checkbox"/> Minor Amendment	<input type="checkbox"/> CPT Plan/Result
<input type="checkbox"/> CCR Registration	<input type="checkbox"/> Extension Request
<input type="checkbox"/> CCR Registration Major Amendment	<input checked="" type="checkbox"/> Groundwater Monitoring Report
<input type="checkbox"/> CCR Registration Minor Amendment	<input type="checkbox"/> Interim Status Change
<input type="checkbox"/> Class 3 Modification	<input type="checkbox"/> Interim Status Closure Plan
<input type="checkbox"/> Class 2 Modification	<input type="checkbox"/> Soil Core Monitoring Report
<input type="checkbox"/> Class 1 ED Modification	<input type="checkbox"/> Treatability Study
<input type="checkbox"/> Class 1 Modification	<input type="checkbox"/> Trial Burn Plan/Result
<input type="checkbox"/> Endorsement	<input type="checkbox"/> Unsaturated Zone Monitoring Report
<input type="checkbox"/> Temporary Authorization	<input type="checkbox"/> Waste Minimization Report
<input type="checkbox"/> Voluntary Revocation	<input type="checkbox"/> Other:
<input type="checkbox"/> 335.6 Notification	
<input type="checkbox"/> Other:	



2022 Annual CCR Groundwater Monitoring Report Bottom Ash Ponds

Former Monticello Steam Electric Station
FM 127, Mt. Pleasant, Titus County, Texas

Prepared for:

GOLDEN EAGLE DEVELOPMENT LLC

Prepared by:

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

April 2023



TABLE OF CONTENTS

LIST OF FIGURES2

LIST OF TABLES2

LIST OF APPENDICES2

ACRONYMS AND ABBREVIATIONS.....3

1.0 INTRODUCTION4

2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS.....5

3.0 KEY ACTIONS COMPLETED IN 20226

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS7

5.0 KEY ACTIVITIES PLANNED FOR 20238

6.0 REFERENCES.....9

LIST OF FIGURES

- Figure 1 Well Locations & Potentiometric – May
- Figure 2 Well Locations & Potentiometric – September

LIST OF TABLES

- Table 1 Statistical Background Values
- Table 2 Laboratory Results Summary

LIST OF APPENDICES

- Appendix A Laboratory Analytical Reports



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 as an update to the 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 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 Ash Settling 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 2022, 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 in 2021. In 2022, it was discovered that the demolition contractors have damaged W-29; however, groundwater sample was collected from that well in December. 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
May 2022	Appendix III	No	No
December 2022	Appendix III	No	No

The statistical background values and Appendix III analytical data are presented in Tables 1 and 2, respectively, and the 2022 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 2022. The analytical data from the 2022 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 2022

Detection Monitoring Program groundwater monitoring events were completed in May & December 2022. 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 2022.



4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

The demolition of the steam generating units caused unsafe conditions near W-29 in 2021, then the monitoring well was damaged. The monitoring well was found, and the damage was above ground to the upper riser, so the monitoring well was salvageable. The monitoring well has not been resurveyed, but it was purged, and a sample was collected in December.



5.0 KEY ACTIVITIES PLANNED FOR 2023

The following key activities are planned for 2023:

- Discontinue the Detection Monitoring Program due site closure per 30 TAC 352, Subchapter J.



6.0 REFERENCES

Gemini Engineering, LLC, 2022. Coal Combustion Residual Rule Groundwater Sampling Analysis Plan, Former Monticello Steam Electric Station, Ash Ponds, Mount Pleasant, Texas. November.

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.
Senior Project Engineer
Gemini Engineering, LLC
Texas PE No 126387, Expires 3/31/2024
Texas Engineering Firm F-23183



4/11/2023

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 (SO ₄) (mg/L)	1,190
Total Dissolved Solids (TDS) (mg/L)	2,150

Table 2
Analytical Results
MOSES CCR BAP Monitoring 2022

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	pH (s.u.)	SO ₄ (mg/L)	TDS (mg/L)
Upgradient Wells								
W-31	10/15/15	3.74	130	66.2	0.14	5.67	808	1,510
	12/07/15	3.81	136	51.2	0.28 J	5.86	714	1,250
	02/22/16	3.65	130	49.2	0.12	5.79	694	1,500
	04/04/16	3.80	119	48.9	0.22 J	6.06	737	1,220
	06/06/16	3.84	104	47.8	<0.10	6.17	701	1,150
	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	1,150
	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	0.88	36.5	54.0	0.16 J	6.87	115	319
	10/30/19	1.29	35.6	49.1	0.10 J	6.84	131	343
	04/26/20	0.79	34.4	51.1	0.09 J	7.41	86	279
	10/31/20	1.27	36.9	48.3	0.08 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	
05/30/22	2.06	57.5	57.0	0.167	5.44	409	477	
12/3/2022	1.15	36.5	49.3	0.0737	5.19	161	362	
W-32	10/15/15	5.85	282	160	0.44	6.72	1,040	1,970
	12/07/15	6.76	260	122	1.19	6.74	872	1,610
	02/22/16	6.95	247	124	0.79	6.74	850	1,870
	04/04/16	6.50	239	139	1.01	6.73	844	1,380
	06/06/16	6.18	192	105	0.76	6.71	694	1,440
	08/08/16	4.43	261	110	0.54	6.71	945	1,650
	10/12/16	6.32	284	134	0.34	6.19	986	1,820
	12/29/16	6.38	310	147	0.57	6.46	1,210	1,950
	09/20/17	5.81	270	118	0.38 J	6.79	901	1,920
	06/08/18	5.79	380	149	1.71	6.74	1,340	2,390
	09/10/18	5.38	370	140	1.19	6.56	1,270	2,200
	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	
05/30/22	1.97	266	8.68	1.40	7.14	51.2	266	
12/3/2022	1.43	78.9	7.93	1.72	7.25	134	347	
W-33	10/15/15	6.36	311	162	2.01	7.14	1,080	1,630
	12/07/15	6.68	252	120	2.80	7.12	853	1,680
	02/22/16	7.52	243	124	2.40	7.11	790	1,960
	04/04/16	7.24	278	171	2.50	7.14	935	1,540
	06/06/16	7.08	229	120	2.12	7.10	700	1,490
	08/08/16	6.37	215	108	1.92	6.97	655	1,300
	10/12/16	5.15	237	111	2.43	6.84	797	1,540
	12/29/16	5.23	275	125	2.25	6.82	965	1,730
	09/20/17	5.89	271	112	2.04	6.73	863	1,970
	06/08/18	6.01	364	142	3.59	6.55	1,200	2,230
	09/10/18	5.45	351	132	2.99	6.78	1,160	2,120
	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	55	342
08/15/21	1.81	61.7	8.05	4.22	7.13	51.4	295	
05/30/22	1.10	77.5	10.4	2.93	7.05	82.9	368	
12/3/2022	1.17	80.9	9.08	3.46	7.24	97.2	337	
Downgradient Wells								
W-29	10/15/15	4.58	111	101	0.32 J	6.21	861	1,680
	12/07/15	3.47	86.6	81.1	0.36 J	6.22	501	1,020
	02/22/16	4.98	114	82.3	0.24	6.27	909	1,840
	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	1,230
	08/08/16	5.70	153	85.6	<0.10	6.32	1,100	1,850
	10/12/16	6.42	174	82.4	0.40	6.19	1,140	1,720
	12/29/16	6.52	185	82.5	0.23 J	6.14	1,150	1,860
	09/20/17	4.84	128	80.6	<0.10	6.85	882	1,540
	06/08/18	3.70	127	87.9	0.37 J	6.62	694	1,310
	09/10/18	4.14	140	81.5	0.41	6.30	858	1,630
	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	
05/30/21	NA	NA	NA	NA	NA	NA	NA	
12/17/2022	4.43	122	82.0	0.339	6.60	790	1370	

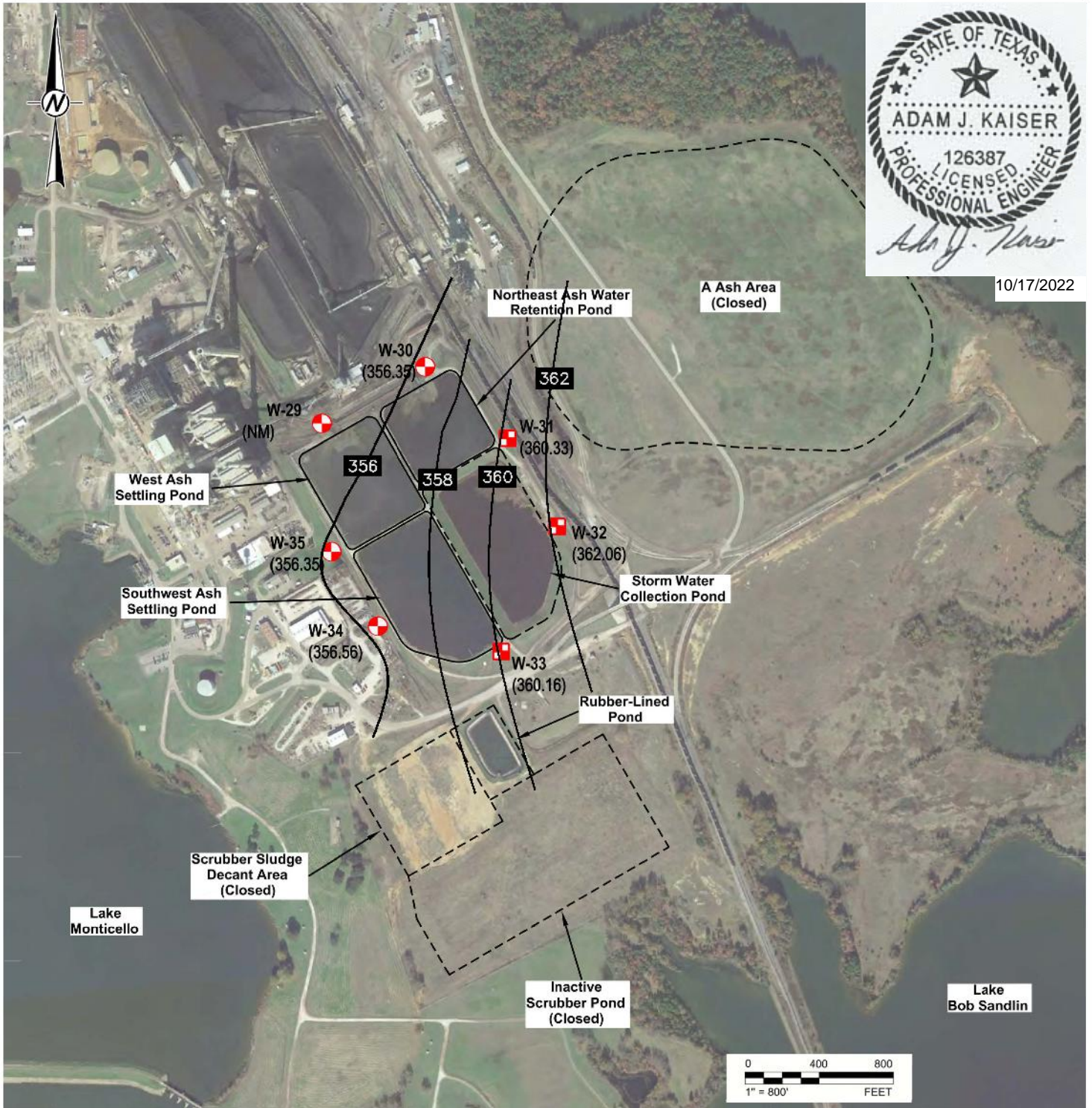
Table 2
Analytical Results
MOSES CCR BAP Monitoring 2022

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (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	1,490
	12/07/15	7.04	135	98.3	0.81	5.95	875	1,530
	02/22/16	6.83	138	96.3	0.72	5.94	873	1,790
	04/04/16	6.28	141	95.2	0.96	5.93	925	1,460
	06/06/16	6.89	132	94.9	0.36 J	5.96	884	1,460
	08/08/16	5.94	136	85.7	0.45	6.23	848	1,550
	10/12/16	6.51	130	79.9	0.79	6.02	817	1,300
	12/29/16	8.54	192	85.3	0.50	5.34	863	1,510
	09/20/17	5.76	127	76.5	0.394 J	6.85	734	1,570
	06/08/18	5.06	127	87.8	0.92	6.78	724	1,280
	09/10/18	4.53	115	81.1	0.91	5.25	713	1,230
	05/09/19	5.13	115	97.5	0.85	6.72	734	1,300
	10/30/19	5.06	161	59.4	0.57	6.43	755	1,330
	04/26/20	4.18	135	51.4	0.69	7.49	763	1,150
	10/31/20	4.26	141	44.0	0.68	7.11	735	1,140
	03/24/21	4.33	133	40.5	0.58	5.67	686	1,070
08/15/21	4.01	100	33.4	0.82	5.83	606	979	
05/30/22	4.04	112	43.8	0.70	5.61	682	1,090	
12/3/2022	4.6	119	45.4	0.813	5.58	636	1,030	
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	1,500
	02/22/16	3.44	117	85.9	0.42	6.59	641	1,570
	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	1,030
	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	1,620
	09/20/17	5.36	181	117	0.244 J	6.75	873	1,720
	06/08/18	4.95	180	116	0.90	6.85	835	1,540
	09/10/18	4.53	161	114	0.66	6.64	819	1,530
	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	1,260
	04/26/20	4.26	182	108	0.44	7.67	817	1,370
	11/01/20	5.47	217	114	0.35	7.50	930	1,560
	03/24/21	5.80	229	132	0.48	6.20	1,130	1,640
08/15/21	4.83	210	125	0.35	6.16	933	1,620	
05/30/22	5.61	220	108	0.29	6.30	918	1,800	
12/17/2022	5.67	216	122	0.19	6.38	973	1,600	
W-35	10/15/15	5.58	175	98.2	<0.1	6.05	893	1,720
	12/07/15	6.13	177	90.2	0.128 J	6.16	861	1,580
	02/22/16	6.29	160	85.4	<0.1	6.12	824	1,650
	04/04/16	6.16	169	91.3	<0.1	6.09	835	1,310
	06/06/16	6.17	158	98.5	<0.1	6.36	858	1,460
	08/08/16	6.07	159	97.8	<0.1	6.41	810	1,470
	10/12/16	6.25	150	97.8	0.1	6.12	793	1,320
	12/29/16	6.89	151	110	<0.1	5.06	839	1,370
	09/20/17	6.27	186	120	<0.100	6.74	854	1,650
	06/08/18	5.81	200	128	0.163 J	6.55	925	1,660
	09/10/18	5.70	204	132	<0.1	5.42	940	1,580
	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	1,280
	10/30/2019 DUP	4.57	142	99.1	<0.100	6.92	699	1,280
	04/26/20	5.30	209	129	<0.150	6.50	984	1,600
	11/01/20	5.95	207	118	<0.064	6.73	945	1,550
	03/25/21	6.16	213	129	0.0725 J	5.29	1,010	1,510
	08/15/21	6.04	216	137	<0.0640	5.70	992	1,650
	05/30/22	5.26	232	115	<0.15	5.42	946	1,670
12/17/2022	5.55	228	104	<0.15	5.6	942	1,520	

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



LEGEND



DOWNGRADIENT CCR MONITORING WELL



UPGRADIENT CCR MONITORING WELL

(357.26) Groundwater Potentiometric Surface (ft. AMSL)

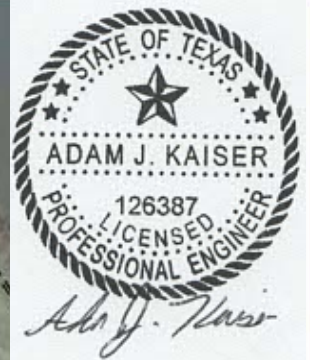
— 358 — Groundwater Potentiometric Surface Contour (C.I. = 2 ft.)

C:\Users\worcc\OneDrive\Documents\DWG\Gemini\Projects\Monticello\dwg\Site_Plan.dwg

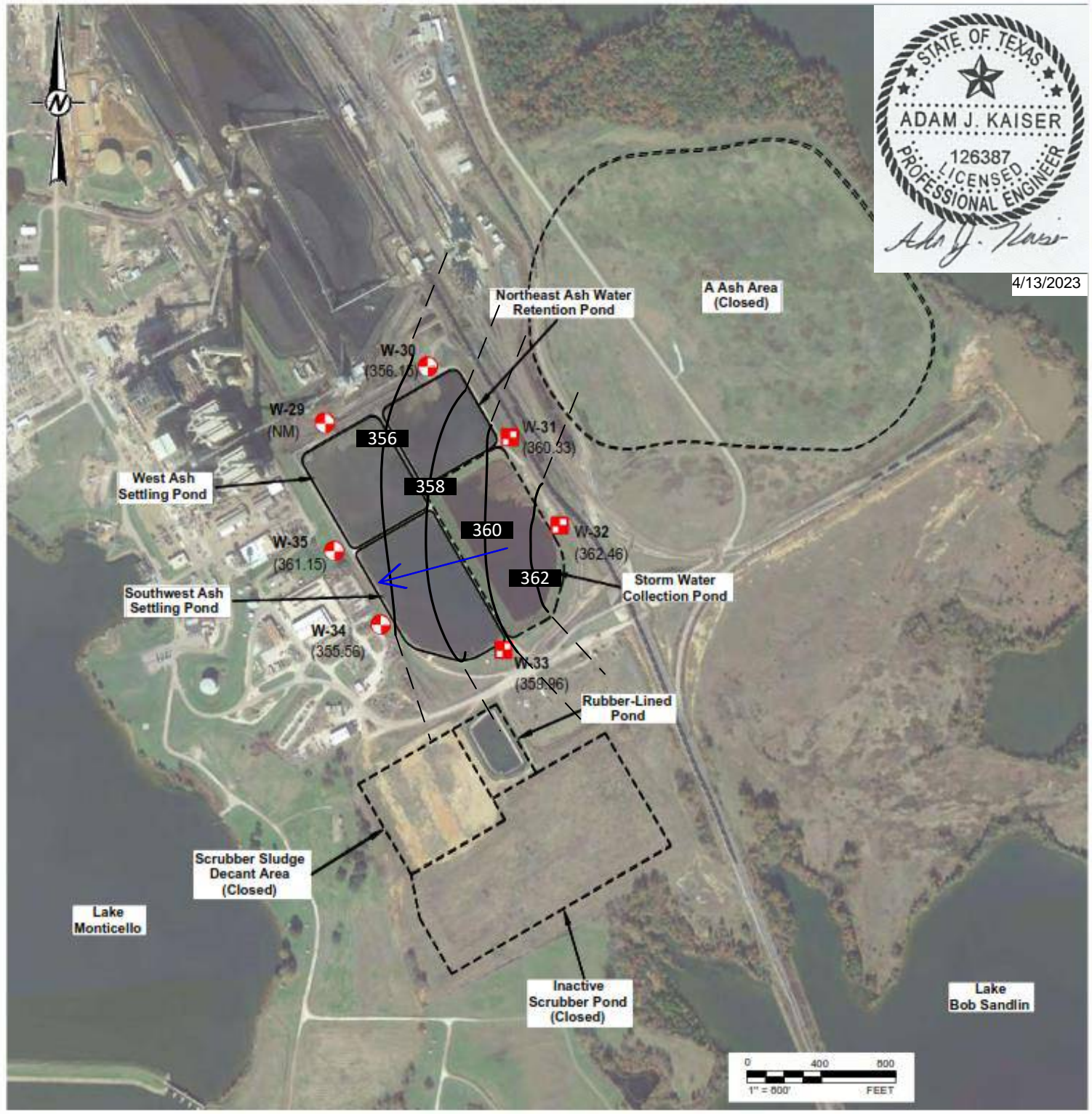


Figure 1
Ash Water Ponds Potentiometric Surface
Map - May 2022
Site: Golden Eagle Development

Chkd:	AK
Drawn:	RLK
Page:	1 of 1
Date:	10/14/2022
Scale:	As Shown



4/13/2023



LEGEND

- Downgradient CCR Monitoring Well
- Upgradient CCR Monitoring Well
- Estimated GW Flow Direction

- (357.26) Groundwater Potentiometric Surface (ft. AMSL)
- 358** Groundwater Potentiometric Surface Contour (2-ft interval)

Well ID	Elevation
W-29	NM
W-30	356.15
W-31	360.33
W-32	362.46
W-33	359.96
W-34	355.56
W-35	361.15

C:\Users\worco\OneDrive\Documents\DWG\Gemini\Projects\Monticello\dwg\Site_Plan.dwg



Figure 2
Ash Water Ponds Potentiometric Surface Map
December 2022
Former MOSES Site

Chkd:	AK
Drawn:	KO
Page:	1 of 1
Date:	4/13/2023
Scale:	As Shown

APPENDIX A - 2022 LABORATORY ANALYTICAL REPORTS

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

GEMINI Engineering

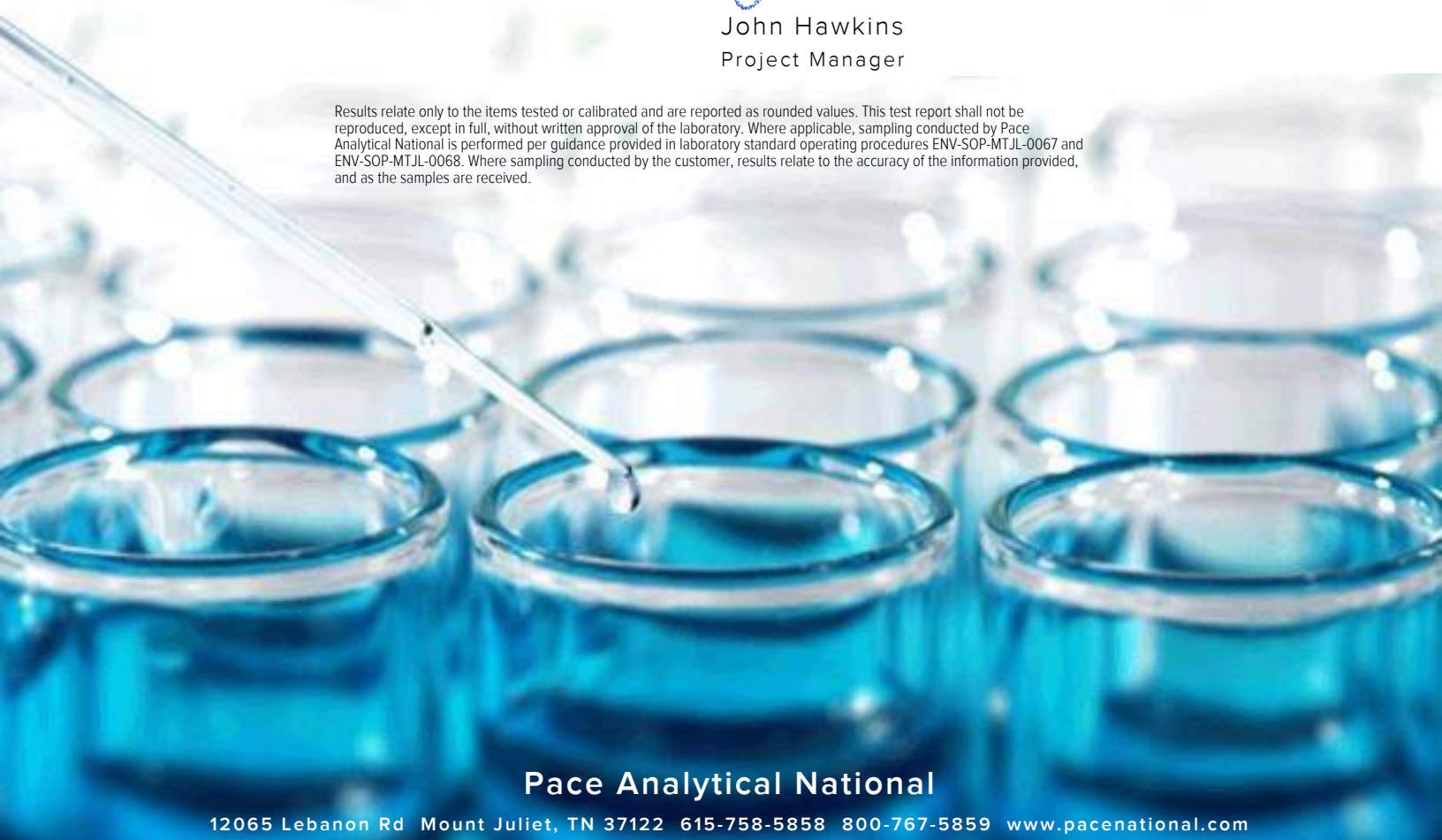
Sample Delivery Group: L1569557
Samples Received: 12/20/2022
Project Number:
Description: Monticello GW - Mt. Pleasant, TX
Site: GOLDEN EAGLE
Report To: Adam Kaiser
2275 Cassens Drive
Suite 118
Fenton, MO 63026

Entire Report Reviewed By:



John Hawkins
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

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	3 Ss
TRRP form R	6	
TRRP form S	7	4 Cn
TRRP Exception Reports	8	5 Tr
Sr: Sample Results	9	
W-34 L1569557-01	9	6 Sr
W-29 L1569557-02	10	
W-35 L1569557-03	11	7 Qc
Qc: Quality Control Summary	12	8 Gl
Gravimetric Analysis by Method 2540 C-2011	12	
Wet Chemistry by Method 9056A	13	9 Al
Metals (ICPMS) by Method 6020	15	
Gl: Glossary of Terms	16	10 Sc
Al: Accreditations & Locations	17	
Sc: Sample Chain of Custody	18	

SAMPLE SUMMARY

W-34 L1569557-01 GW

Collected by
Jeff Norfleet

Collected date/time
12/17/22 09:00

Received date/time
12/20/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1979379	1	12/25/22 12:34	12/27/22 09:33	TDW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	1	12/22/22 06:20	12/22/22 06:20	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	20	12/22/22 07:08	12/22/22 07:08	LBR	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	1	12/22/22 13:03	12/26/22 17:53	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	50	12/22/22 13:03	12/26/22 19:39	LD	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

W-29 L1569557-02 GW

Collected by
Jeff Norfleet

Collected date/time
12/17/22 10:00

Received date/time
12/20/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1979379	1	12/25/22 12:34	12/27/22 09:33	TDW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	1	12/22/22 07:24	12/22/22 07:24	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	5	12/22/22 07:40	12/22/22 07:40	LBR	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	1	12/22/22 13:03	12/26/22 18:13	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	50	12/22/22 13:03	12/26/22 19:42	LD	Mt. Juliet, TN

5
Tr

6
Sr

7
Qc

8
Gl

W-35 L1569557-03 GW

Collected by
Jeff Norfleet

Collected date/time
12/17/22 11:00

Received date/time
12/20/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1979379	1	12/25/22 12:34	12/27/22 09:33	TDW	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	1	12/22/22 07:56	12/22/22 07:56	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1978011	20	12/22/22 08:12	12/22/22 08:12	LBR	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	1	12/22/22 13:03	12/26/22 18:16	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1978544	50	12/22/22 13:03	12/26/22 19:45	LD	Mt. Juliet, TN

9
Al

10
Sc

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.



John Hawkins
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Tr
- ⁶ Sr
- ⁷ Qc
- ⁸ Gl
- ⁹ Al
- ¹⁰ Sc

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.

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.



John Hawkins
Project Manager

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 12/30/2022 12:21					
Project Name: Monticello GW - Mt. Pleasant, TX		Laboratory Job Number: L1569557-01, 02 and 03					
Reviewer Name: John Hawkins		Prep Batch Number(s): WG1978011, WG1978544 and WG1979379					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			1
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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: Supporting Data

Laboratory Name: Pace Analytical National	LRC Date: 12/30/2022 12:21
Project Name: Monticello GW - Mt. Pleasant, TX	Laboratory Job Number: L1569557-01, 02 and 03
Reviewer Name: John Hawkins	Prep Batch Number(s): WG1978011, WG1978544 and WG1979379

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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 met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	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				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				

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: 12/30/2022 12:21
Project Name: Monticello GW - Mt. Pleasant, TX	Laboratory Job Number: L1569557-01, 02 and 03
Reviewer Name: John Hawkins	Prep Batch Number(s): WG1978011, WG1978544 and WG1979379
ER # ¹	Description
1	9056A WG1978011 R3874939-3 and 4: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
2	9056A WG1978011 Chloride: Percent Recovery is outside of established control limits. 6020 WG1978544 Calcium: Percent Recovery is outside of established control limits. 9056A WG1978011 Fluoride: Percent Recovery 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" 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).	

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	1600		25.0	25.0	1	12/27/2022 09:33	WG1979379

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	122		0.379	1.00	1.00	1	12/22/2022 06:20	WG1978011
Fluoride	0.186		0.0640	0.150	0.150	1	12/22/2022 06:20	WG1978011
Sulfate	973		11.9	5.00	100	20	12/22/2022 07:08	WG1978011

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	5.67		0.482	0.0300	1.50	50	12/26/2022 19:39	WG1978544
Calcium	216		0.0936	1.00	1.00	1	12/26/2022 17:53	WG1978544

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	1370		20.0	20.0	1	12/27/2022 09:33	WG1979379

¹Cp

²Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	82.0		0.379	1.00	1.00	1	12/22/2022 07:24	WG1978011
Fluoride	0.339		0.0640	0.150	0.150	1	12/22/2022 07:24	WG1978011
Sulfate	790		2.97	5.00	25.0	5	12/22/2022 07:40	WG1978011

³Ss

⁴Cn

⁵Tr

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	4.43		0.482	0.0300	1.50	50	12/26/2022 19:42	WG1978544
Calcium	122		0.0936	1.00	1.00	1	12/26/2022 18:13	WG1978544

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	1520		25.0	25.0	1	12/27/2022 09:33	WG1979379

¹Cp

²Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	104		0.379	1.00	1.00	1	12/22/2022 07:56	WG1978011
Fluoride	U		0.0640	0.150	0.150	1	12/22/2022 07:56	WG1978011
Sulfate	942		11.9	5.00	100	20	12/22/2022 08:12	WG1978011

³Ss

⁴Cn

⁵Tr

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	5.55		0.482	0.0300	1.50	50	12/26/2022 19:45	WG1978544
Calcium	228		0.0936	1.00	1.00	1	12/26/2022 18:16	WG1978544

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3876718-1 12/27/22 09:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

¹Cp

²Tc

³Ss

L1569522-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1569522-03 12/27/22 09:33 • (DUP) R3876718-3 12/27/22 09:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	505	529	1	4.64		5

⁴Cn

⁵Tr

L1569522-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1569522-04 12/27/22 09:33 • (DUP) R3876718-4 12/27/22 09:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	444	444	1	0.000		5

⁶Sr

⁷Qc

Laboratory Control Sample (LCS)

(LCS) R3876718-2 12/27/22 09:33

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	8010	91.0	77.3-123	

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3874939-1 12/21/22 20:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Chloride	0.456	↓	0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	0.673	↓	0.594	5.00

L1569437-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1569437-01 12/22/22 03:09 • (DUP) R3874939-5 12/22/22 03:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	4.69	4.64	1	0.919		15
Fluoride	U	U	1	0.000		15
Sulfate	1.52	1.41	1	7.68	↓	15

L1569522-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1569522-04 12/22/22 05:33 • (DUP) R3874939-6 12/22/22 05:49

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	13.6	13.7	1	0.474		15
Fluoride	0.120	0.119	1	0.923	↓	15
Sulfate	83.7	83.4	1	0.370		15

Laboratory Control Sample (LCS)

(LCS) R3874939-2 12/21/22 20:53

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chloride	40.0	41.0	103	80.0-120	
Fluoride	8.00	8.54	107	80.0-120	
Sulfate	40.0	39.1	97.8	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

L1569334-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1569334-08 12/22/22 01:02 • (MS) R3874939-3 12/22/22 01:18 • (MSD) R3874939-4 12/22/22 01:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	1640	1610	1620	0.000	0.000	1	80.0-120	<u>EV</u>	<u>EV</u>	0.566	15
Fluoride	5.00	U	2.85	2.95	57.1	58.9	1	80.0-120	<u>J6</u>	<u>J6</u>	3.17	15
Sulfate	50.0	0.797	48.0	47.8	94.4	94.0	1	80.0-120			0.457	15

L1569522-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1569522-04 12/22/22 05:33 • (MS) R3874939-7 12/22/22 06:05

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	13.6	64.4	101	1	80.0-120	
Fluoride	5.00	0.120	5.19	101	1	80.0-120	
Sulfate	50.0	83.7	131	94.4	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3875477-1 12/26/22 16:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Calcium	U		0.0936	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3875495-1 12/26/22 21:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Boron	U		0.00963	0.0300

Laboratory Control Sample (LCS)

(LCS) R3875477-2 12/26/22 16:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Calcium	5.00	4.97	99.3	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3875495-2 12/26/22 21:24

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Boron	0.500	0.510	102	80.0-120	

L1569334-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1569334-08 12/26/22 16:53 • (MS) R3875477-5 12/26/22 17:00 • (MSD) R3875477-6 12/26/22 17:03

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Calcium	5.00	454	459	454	94.1	0.000	5	75.0-125		V	1.16	20

L1569334-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1569334-08 12/26/22 21:27 • (MS) R3875495-4 12/26/22 21:34 • (MSD) R3875495-5 12/26/22 21:37

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Boron	0.500	0.0938	0.561	0.555	93.4	92.3	5	75.0-125			0.912	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.

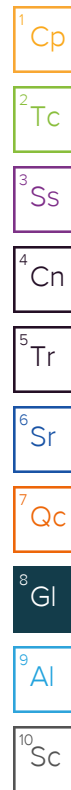
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

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

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

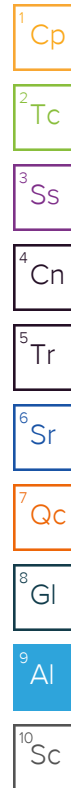
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
GEMINI Engineering
 2275 Cassens Drive
 Suite 118
 Fenton, MO 63026

Billing Information:
 Maggie Peetz
 2275 Cassens Drive
 Suite 118
 Fenton, MO 63026

Pres Chk

Chain of Custody Page ___ of ___

Pace
 PEOPLE ADVANCING SCIENCE

MT JULIET, TN

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Report to:
 Adam Kaiser

Email To:
 Adam Kaiser

Project Description:
 Manticello GW

City/State Collected:
 Mt. Pleasant, TX

Please Circle:
 PT MT CT ET

Phone: 512-566-6878

Client Project #

Lab Project #

Collected by (print):
 Jeff Norfleet

Site/Facility ID #

P.O. #

Collected by (signature):
 Jeff Norfleet

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

Immedately Packed on Ice N ___ Y

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative															
W-34	Grab	GW	23.60	12-17-22	0900	3	B, Ca - 6020	250ml HDPE - HVO3														
W-29	Grab	GW	15.50	12-17-22	1000	3	Chloride, F, SO4	125ml HDPE - Nofres														
W-35	Grab	GW	20.00	12-17-22	1100	3	TDS LL	HDPE Nofres														

SDG # U1569557
E014

Acctnum: GEMFMO
 Template:
 Prelogin:
 PM: 206 - Jeff Carr
 PB:
 Shipped Via:
 Remarks Sample # (lab only)

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via:
 ___ UPS FedEx ___ Courier

Tracking # 5882 7556 3655

Sample Receipt Checklist

COC Seal Present/Intact: ___ NP Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 IF Applicable
 VOA Zero Headspace: ___ Y ___ N
 Preservation Correct/Checked: ___ Y ___ N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature)
 Jeff Norfleet

Date:
 12-19-22

Time:
 1030

Received by: (Signature)

Trip Blank Received: Yes/NO
 HCL/MeOH
 TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

6842 °C Bottles Received: 9
 1.61021.6

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 12/20 Time: 0900

Hold: Condition: NCF / OK

1991-11-11

13-11-55 11037

1991-11-11

1991-11-11

11-22

11-22 11037 13-11-55 1100

X X X

11-21

11-21 11037 13-11-55 1000

X X X

11-20

11-20 11037 13-11-55 0600

X X X

LOT 11 - H05E
D'OR - P050 920W/H05E - H103

1991-11-11

1991-11-11

1991-11-11

1991-11-11

1991-11-11

1991-11-11

1991-11-11

December 19, 2022

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

GEMINI Engineering

Sample Delivery Group: L1566154
Samples Received: 12/09/2022
Project Number:
Description: Monticello GW - Mt. Pleasant, TX
Site: GOLDEN EAGLE
Report To: Adam Kaiser
2275 Cassens Drive
Suite 118
Fenton, MO 63026

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	4	
Tr: TRRP Summary	5	3 Ss
TRRP form R	6	
TRRP form S	7	4 Cn
TRRP Exception Reports	8	
Sr: Sample Results	9	5 Tr
W-30 L1566154-01	9	6 Sr
W-31 L1566154-02	10	
W-32 L1566154-03	11	7 Qc
W-33 L1566154-04	12	
Qc: Quality Control Summary	13	8 Gl
Gravimetric Analysis by Method 2540 C-2011	13	9 Al
Wet Chemistry by Method 9056A	14	
Metals (ICPMS) by Method 6020	18	10 Sc
Gl: Glossary of Terms	19	
Al: Accreditations & Locations	20	
Sc: Sample Chain of Custody	21	

SAMPLE SUMMARY

W-30 L1566154-01 GW

Collected by
Jeff Norfleet

Collected date/time
12/03/22 12:00

Received date/time
12/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1972370	1	12/10/22 11:29	12/10/22 11:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973478	1	12/13/22 22:57	12/13/22 22:57	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973478	10	12/13/22 23:13	12/13/22 23:13	LBR	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	1	12/16/22 19:52	12/17/22 10:14	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	50	12/16/22 19:52	12/18/22 18:22	LD	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

W-31 L1566154-02 GW

Collected by
Jeff Norfleet

Collected date/time
12/03/22 11:00

Received date/time
12/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1972370	1	12/10/22 11:29	12/10/22 11:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973516	1	12/14/22 19:07	12/14/22 19:07	GEB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	1	12/16/22 19:52	12/17/22 10:17	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	10	12/16/22 19:52	12/18/22 18:26	LD	Mt. Juliet, TN

5
Tr

6
Sr

7
Qc

8
Gl

W-32 L1566154-03 GW

Collected by
Jeff Norfleet

Collected date/time
12/03/22 10:00

Received date/time
12/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1972370	1	12/10/22 11:29	12/10/22 11:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973516	1	12/14/22 19:45	12/14/22 19:45	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973516	5	12/14/22 20:01	12/14/22 20:01	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	1	12/16/22 19:52	12/17/22 10:20	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	10	12/16/22 19:52	12/18/22 18:29	LD	Mt. Juliet, TN

9
Al

10
Sc

W-33 L1566154-04 GW

Collected by
Jeff Norfleet

Collected date/time
12/03/22 09:00

Received date/time
12/09/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1972370	1	12/10/22 11:29	12/10/22 11:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973516	1	12/14/22 20:23	12/14/22 20:23	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1973516	5	12/14/22 21:17	12/14/22 21:17	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	1	12/16/22 19:52	12/17/22 10:24	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1973543	10	12/16/22 19:52	12/18/22 18:32	LD	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.



Jeff Carr
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Tr

⁶ Sr

⁷ Qc

⁸ Gl

⁹ Al

¹⁰ Sc

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.

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

Laboratory Review Checklist: Reportable Data

Laboratory Name: Pace Analytical National		LRC Date: 12/19/2022 07:11					
Project Name: Monticello GW - Mt. Pleasant, TX		Laboratory Job Number: L1566154-01, 02, 03 and 04					
Reviewer Name: Jeff Carr		Prep Batch Number(s): WG1972370, WG1973478, WG1973516 and WG1973543					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	Chain-of-custody (C-O-C)					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?			X		
R2	OI	Sample and quality control (QC) identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	Test reports					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?		X			1
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?	X				
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	Surrogate recovery data					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	Test reports/summary forms for blank samples					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	Laboratory control samples (LCS):					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?	X				
R7	OI	Matrix spike (MS) and matrix spike duplicate (MSD) data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			2
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	Analytical duplicate data					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			3
R9	OI	Method quantitation limits (MQLs):					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	Other problems/anomalies					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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: Supporting Data

Laboratory Name: Pace Analytical National		LRC Date: 12/19/2022 07:11					
Project Name: Monticello GW - Mt. Pleasant, TX		Laboratory Job Number: L1566154-01, 02, 03 and 04					
Reviewer Name: Jeff Carr		Prep Batch Number(s): WG1972370, WG1973478, WG1973516 and WG1973543					
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
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 met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and continuing calibration verification (ICCV and CCV) and continuing calibration blank (CCB):					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass spectral tuning					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal standards (IS)					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	Raw data (NELAC Section 5.5.10)					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?			X		
S6	O	Dual column confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively identified compounds (TICs)					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, post digestion spikes, and method of standard additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	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				
S11	OI	Proficiency test reports					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards documentation					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/analyte identification procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of analyst competency (DOC)					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/validation documentation for methods (NELAC Chapter 5)					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory standard operating procedures (SOPs)					
		Are laboratory SOPs current and on file for each method performed	X				
<p>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.</p> <p>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</p> <p>3. NA = Not applicable;</p> <p>4. NR = Not reviewed;</p> <p>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>							

Laboratory Review Checklist: Exception Reports

Laboratory Name: Pace Analytical National	LRC Date: 12/19/2022 07:11
Project Name: Monticello GW - Mt. Pleasant, TX	Laboratory Job Number: L1566154-01, 02, 03 and 04
Reviewer Name: Jeff Carr	Prep Batch Number(s): WG1972370, WG1973478, WG1973516 and WG1973543
ER # ¹	Description
1	9056A WG1973516 R3872323-6, 5 and 7: The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
2	9056A WG1973478 Chloride: Percent Recovery is outside of established control limits. 9056A WG1973478 Fluoride, Sulfate: Percent Recovery is outside of established control limits.
3	9056A WG1973516 Fluoride: Relative Percent Difference is outside of established control limits. 2540 C-2011 WG1972370 Dissolved Solids: Relative Percent Difference is outside of established control limits.
<p>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.</p> <p>2. O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);</p> <p>3. NA = Not applicable;</p> <p>4. NR = Not reviewed;</p> <p>5. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).</p>	

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	1030		20.0	20.0	1	12/10/2022 11:52	WG1972370

¹ Cp

² Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	45.4		0.379	1.00	1.00	1	12/13/2022 22:57	WG1973478
Fluoride	0.813		0.0640	0.150	0.150	1	12/13/2022 22:57	WG1973478
Sulfate	636		5.94	5.00	50.0	10	12/13/2022 23:13	WG1973478

³ Ss

⁴ Cn

⁵ Tr

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	4.60		0.482	0.0300	1.50	50	12/18/2022 18:22	WG1973543
Calcium	119		0.0936	1.00	1.00	1	12/17/2022 10:14	WG1973543

⁶ Sr

⁷ Qc

⁸ Gl

⁹ Al

¹⁰ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Dissolved Solids	362		10.0	10.0	1	12/10/2022 11:52	WG1972370

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	49.3		0.379	1.00	1.00	1	12/14/2022 19:07	WG1973516
Fluoride	0.0737	J	0.0640	0.150	0.150	1	12/14/2022 19:07	WG1973516
Sulfate	161		0.594	5.00	5.00	1	12/14/2022 19:07	WG1973516

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron	1.15		0.0963	0.0300	0.300	10	12/18/2022 18:26	WG1973543
Calcium	36.5		0.0936	1.00	1.00	1	12/17/2022 10:17	WG1973543

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Tr
- 6 Sr
- 7 Qc
- 8 Gl
- 9 Al
- 10 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	347		10.0	10.0	1	12/10/2022 11:52	WG1972370

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	7.93		0.379	1.00	1.00	1	12/14/2022 19:45	WG1973516
Fluoride	1.72		0.320	0.150	0.750	5	12/14/2022 20:01	WG1973516
Sulfate	134		0.594	5.00	5.00	1	12/14/2022 19:45	WG1973516

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	1.43		0.0963	0.0300	0.300	10	12/18/2022 18:29	WG1973543
Calcium	78.9		0.0936	1.00	1.00	1	12/17/2022 10:20	WG1973543

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Dissolved Solids	337		10.0	10.0	1	12/10/2022 11:52	WG1972370

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Chloride	9.08		0.379	1.00	1.00	1	12/14/2022 20:23	WG1973516
Fluoride	3.46		0.320	0.150	0.750	5	12/14/2022 21:17	WG1973516
Sulfate	97.2		0.594	5.00	5.00	1	12/14/2022 20:23	WG1973516

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis date / time	Batch
Boron	1.17		0.0963	0.0300	0.300	10	12/18/2022 18:32	WG1973543
Calcium	80.9		0.0936	1.00	1.00	1	12/17/2022 10:24	WG1973543

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3870725-1 12/10/22 11:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

1 Cp

2 Tc

3 Ss

L1564756-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1564756-02 12/10/22 11:52 • (DUP) R3870725-3 12/10/22 11:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	2030	2140	1	5.24	J3	5

4 Cn

5 Tr

Laboratory Control Sample (LCS)

(LCS) R3870725-2 12/10/22 11:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	8800	7780	88.4	77.3-123	

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3871216-1 12/13/22 10:59

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

L1566101-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1566101-03 12/13/22 15:20 • (DUP) R3871216-3 12/13/22 15:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	15400	16600	100	7.67		15
Fluoride	U	U	100	0.000		15
Sulfate	U	U	100	0.000		15

L1566117-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1566117-03 12/13/22 20:04 • (DUP) R3871216-6 12/13/22 20:26

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	18.8	18.8	1	0.0606		15
Fluoride	U	U	1	0.000		15
Sulfate	6.85	6.70	1	2.20		15

Laboratory Control Sample (LCS)

(LCS) R3871216-2 12/13/22 11:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chloride	40.0	40.3	101	80.0-120	
Fluoride	8.00	8.32	104	80.0-120	
Sulfate	40.0	40.7	102	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

L1566101-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1566101-03 12/13/22 15:20 • (MS) R3871216-4 12/13/22 15:58 • (MSD) R3871216-5 12/13/22 16:14

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	15400	15700	15600	645	521	100	80.0-120	<u>V</u>	<u>V</u>	0.397	15
Fluoride	5.00	U	U	U	0.000	0.000	100	80.0-120	<u>J6</u>	<u>J6</u>	0.000	15
Sulfate	50.0	U	78.1	80.1	156	160	100	80.0-120	<u>J5</u>	<u>J5</u>	2.44	15

L1566117-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1566117-03 12/13/22 20:04 • (MS) R3871216-7 12/13/22 20:42

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	18.8	68.9	100	1	80.0-120	
Fluoride	5.00	U	5.34	107	1	80.0-120	
Sulfate	50.0	6.85	57.2	101	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3872323-1 12/14/22 11:56

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

L1566193-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1566193-02 12/15/22 00:16 • (DUP) R3872323-5 12/15/22 01:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	5.56	5.37	1	3.44		15
Fluoride	0.0721	0.168	1	80.0	P1	15
Sulfate	204	204	1	0.0919	FE	15

L1565929-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1565929-01 12/14/22 17:51 • (DUP) R3872323-3 12/14/22 18:07

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	79.6	79.5	1	0.0554		15
Fluoride	2.07	2.15	1	4.08		15
Sulfate	114	114	1	0.0663		15

Laboratory Control Sample (LCS)

(LCS) R3872323-2 12/14/22 12:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chloride	40.0	40.9	102	80.0-120	
Fluoride	8.00	8.48	106	80.0-120	
Sulfate	40.0	41.4	104	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Tr

6 Sr

7 Qc

8 Gl

9 Al

10 Sc

L1566193-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1566193-02 12/15/22 00:16 • (MS) R3872323-6 12/15/22 01:32 • (MSD) R3872323-7 12/15/22 01:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	5.56	56.7	56.0	102	101	1	80.0-120			1.27	15
Fluoride	5.00	0.0721	5.47	5.40	108	107	1	80.0-120			1.30	15
Sulfate	50.0	204	245	245	82.3	81.3	1	80.0-120	E	E	0.200	15

L1565929-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1565929-01 12/14/22 17:51 • (MS) R3872323-4 12/14/22 18:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	79.6	126	93.3	1	80.0-120	
Fluoride	5.00	2.07	7.19	102	1	80.0-120	
Sulfate	50.0	114	159	90.2	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Tr

⁶Sr

⁷Qc

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3872976-1 12/17/22 09:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Calcium	U		0.0936	1.00

¹Cp

²Tc

³Ss

Method Blank (MB)

(MB) R3873137-1 12/18/22 18:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Boron	U		0.00963	0.0300

⁴Cn

⁵Tr

⁶Sr

Laboratory Control Sample (LCS)

(LCS) R3872976-2 12/17/22 09:57

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Calcium	5.00	5.18	104	80.0-120	

⁷Qc

⁸Gl

Laboratory Control Sample (LCS)

(LCS) R3873137-2 12/18/22 18:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Boron	0.500	0.528	106	80.0-120	

⁹Al

¹⁰Sc

L1565378-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1565378-02 12/17/22 10:01 • (MS) R3872976-4 12/17/22 10:07 • (MSD) R3872976-5 12/17/22 10:11

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Calcium	5.00	41.2	45.6	45.5	86.6	86.4	1	75.0-125			0.0272	20

L1565378-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1565378-02 12/18/22 18:09 • (MS) R3873137-4 12/18/22 18:16 • (MSD) R3873137-5 12/18/22 18:19

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Boron	0.500	1.78	2.35	2.28	114	98.9	10	75.0-125			3.25	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.

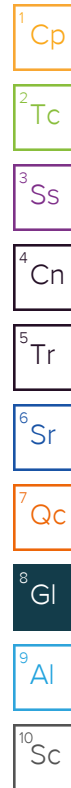
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

Abbreviations and Definitions

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

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
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.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

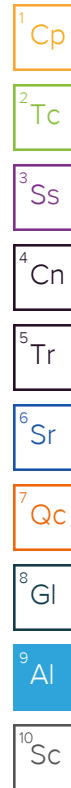
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
GEMINI Engineering

2275 Cassens Drive
Suite 118
Fenton, MO 63026

Report to:
Adam Kaiser

Project Description:
Monticello GW - Mt. Pleasant, TX

Phone: 512-566-6878

Collected by (print):
Jeff Norfleet

Collected by (signature):
Jeff Norfleet

Immediately Packed on Ice N ___ Y ___

Billing Information:
Adam Kaiser
2275 Cassens Drive
Suite 118
Fenton, MO 63026

Email To: a.kaiser@geministl.com

City/State Collected: **Mt. Pleasant, TX**

Please Circle:
PT MT CT ET

Client Project # Lab Project #
GEMFMO-MONTICELLO

Site/Facility ID # P.O. #
GOLDEN EAGLE

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Quote #
Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	B, Ca - 6020 250mlHDPE-HNO3	Chloride, F, SO4 125mlHDPE-NoPres	TDS 1L-HDPE NoPres							
W-30	Grab	GW	20.80	12-3-22	1200	3	X	X	X							
W-31	Grab	GW	16.00	12-3-22	1100	3	X	X	X							
W-32	Grab	GW	16.50	12-3-22	1000	3	X	X	X							
W-33	Grab	GW	27.20	12-3-22	0900	3	X	X	X							
		GW				3	X	X	X							
		GW				3	X	X	X							
		GW				3	X	X	X							
		GW				3	X	X	X							

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:
pH _____ Temp _____
Flow _____ Other _____

Samples returned via: UPS FedEx Courier
Tracking # **6094 5460 8789**

Relinquished by: (Signature) *Jeff Norfleet* Date: **12-8-22** Time: **1630**
Received by: (Signature) Trip Blank Received: Yes/No HCL / MeOH TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **22** °C Bottles Received: **3** If preservation required by Login: Date/Time

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) Date: **12/9** Time: **0800** Hold: Condition: NCF / OK

Analysis / Container / Preservative Chain of Custody Page ___ of ___



MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG # **L1560184**
D026

Acctnum: **GEMFMO**
Template: **T209229**
Prelogin: **P958531**
PM: **206 - Jeff Carr**
PB: **10/21/22 Carr**
Shipped Via: **FedEX Ground**

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04
	-05
	-06
	-07
	-08

Sample Receipt Checklist

CCC Seal Present/Intact:	NP	Y	X
COC Signed/Accurate:			N
Bottles arrive intact:			N
Correct bottles used:			N
Sufficient volume sent:			N
If Applicable			
VOA Zero Headspace:		Y	N
Preservation Correct/Checked:		Y	N
RAD Screen <0.5 mR/hr:		Y	N

Hydrogen

18-8-55 1030

X

18-8-55 1030

18-8-55 1030

X

33

34

35

36

18-8-55

18-8-55

18-8-55

18-8-55

18-8-55 1030

18-8-55 1030

18-8-55 1030

18-8-55 1030

Hydrogen

18-8-55

18-8-55 1030

18-8-55 1030

GEMINI Engineering

Sample Delivery Group: L1499927
Samples Received: 06/01/2022
Project Number:
Description: Monticello GW - Mt. Pleasant, TX
Site: GOLDEN EAGLE
Report To: Adam Kaiser
2275 Cassens Drive
Suite 118
Fenton, MO 63026

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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	²Tc
Cn: Case Narrative	5	
Sr: Sample Results	6	³Ss
W-30 L1499927-01	6	
W-31 L1499927-02	7	⁴Cn
W-32 L1499927-03	8	⁵Sr
W-33 L1499927-04	9	
W-34 L1499927-05	10	⁶Qc
W-35 L1499927-06	11	
Qc: Quality Control Summary	12	⁷Gl
Gravimetric Analysis by Method 2540 C-2011	12	
Wet Chemistry by Method 9056A	14	⁸Al
Metals (ICPMS) by Method 6020	17	
Gl: Glossary of Terms	18	⁹Sc
Al: Accreditations & Locations	19	
Sc: Sample Chain of Custody	20	

SAMPLE SUMMARY

W-30 L1499927-01 GW

Collected by
Jeff Norfleet

Collected date/time
05/30/22 15:00

Received date/time
06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874311	1	06/04/22 10:41	06/04/22 15:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 02:45	06/24/22 02:45	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	10	06/24/22 03:30	06/24/22 03:30	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:33	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	10	06/13/22 12:23	06/16/22 09:43	SJM	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

W-31 L1499927-02 GW

Collected by
Jeff Norfleet

Collected date/time
05/30/22 14:00

Received date/time
06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874311	1	06/04/22 10:41	06/04/22 15:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 03:45	06/24/22 03:45	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	5	06/24/22 04:00	06/24/22 04:00	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:36	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	5	06/13/22 12:23	06/16/22 09:47	SJM	Mt. Juliet, TN

5 Sr

6 Qc

7 Gl

8 Al

W-32 L1499927-03 GW

Collected by
Jeff Norfleet

Collected date/time
05/30/22 13:00

Received date/time
06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874311	1	06/04/22 10:41	06/04/22 15:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 04:45	06/24/22 04:45	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:39	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	5	06/13/22 12:23	06/16/22 09:50	SJM	Mt. Juliet, TN

9 Sc

W-33 L1499927-04 GW

Collected by
Jeff Norfleet

Collected date/time
05/30/22 12:00

Received date/time
06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874311	1	06/04/22 10:41	06/04/22 15:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 04:59	06/24/22 04:59	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:43	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	5	06/13/22 12:23	06/16/22 09:53	SJM	Mt. Juliet, TN

W-34 L1499927-05 GW

Collected by
Jeff Norfleet

Collected date/time
05/30/22 11:00

Received date/time
06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874311	1	06/04/22 10:41	06/04/22 15:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 10:21	06/24/22 10:21	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	100	06/24/22 10:51	06/24/22 10:51	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	5	06/24/22 10:36	06/24/22 10:36	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:46	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	10	06/13/22 12:23	06/16/22 09:56	SJM	Mt. Juliet, TN

SAMPLE SUMMARY

W-35 L1499927-06 GW

Collected by: Jeff Norfleet
 Collected date/time: 05/30/22 10:00
 Received date/time: 06/01/22 11:40

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1874008	1	06/03/22 13:30	06/03/22 18:09	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	1	06/24/22 11:06	06/24/22 11:06	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1884238	5	06/24/22 11:21	06/24/22 11:21	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1885244	100	06/25/22 11:30	06/25/22 11:30	ELN	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	1	06/13/22 12:23	06/13/22 18:50	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1876806	10	06/13/22 12:23	06/16/22 10:00	SJM	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

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.



Jeff Carr
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1090		13.3	1	06/04/2022 15:09	WG1874311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	43.8		1.00	1	06/24/2022 02:45	WG1884238
Fluoride	0.695		0.150	1	06/24/2022 02:45	WG1884238
Sulfate	682	<u>V</u>	50.0	10	06/24/2022 03:30	WG1884238

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	4.04		0.300	10	06/16/2022 09:43	WG1876806
Calcium	112		1.00	1	06/13/2022 18:33	WG1876806

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	477		10.0	1	06/04/2022 15:09	WG1874311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	57.0		1.00	1	06/24/2022 03:45	WG1884238
Fluoride	0.167		0.150	1	06/24/2022 03:45	WG1884238
Sulfate	409		25.0	5	06/24/2022 04:00	WG1884238

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	2.06		0.150	5	06/16/2022 09:47	WG1876806
Calcium	57.5		1.00	1	06/13/2022 18:36	WG1876806

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	266		10.0	1	06/04/2022 15:09	WG1874311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	8.68		1.00	1	06/24/2022 04:45	WG1884238
Fluoride	1.40		0.150	1	06/24/2022 04:45	WG1884238
Sulfate	51.2		5.00	1	06/24/2022 04:45	WG1884238

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	1.97		0.150	5	06/16/2022 09:50	WG1876806
Calcium	53.9		1.00	1	06/13/2022 18:39	WG1876806

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	368		10.0	1	06/04/2022 15:09	WG1874311

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	10.4		1.00	1	06/24/2022 04:59	WG1884238
Fluoride	2.93		0.150	1	06/24/2022 04:59	WG1884238
Sulfate	82.9		5.00	1	06/24/2022 04:59	WG1884238

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	1.10		0.150	5	06/16/2022 09:53	WG1876806
Calcium	77.5		1.00	1	06/13/2022 18:43	WG1876806

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1800		20.0	1	06/04/2022 15:09	WG1874311

1 Cp

2 Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	108		5.00	5	06/24/2022 10:36	WG1884238
Fluoride	0.291		0.150	1	06/24/2022 10:21	WG1884238
Sulfate	918		500	100	06/24/2022 10:51	WG1884238

3 Ss

4 Cn

5 Sr

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	5.61		0.300	10	06/16/2022 09:56	WG1876806
Calcium	220		1.00	1	06/13/2022 18:46	WG1876806

6 Qc

7 Gl

8 Al

9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Dissolved Solids	1670		20.0	1	06/03/2022 18:09	WG1874008

¹ Cp

² Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Chloride	115		5.00	5	06/24/2022 11:21	WG1884238
Fluoride	ND		0.150	1	06/24/2022 11:06	WG1884238
Sulfate	946		500	100	06/25/2022 11:30	WG1885244

³ Ss

⁴ Cn

⁵ Sr

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Boron	5.26		0.300	10	06/16/2022 10:00	WG1876806
Calcium	232		1.00	1	06/13/2022 18:50	WG1876806

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3800050-1 06/03/22 18:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Dissolved Solids	U		10.0	10.0

1 Cp

2 Tc

3 Ss

L1499409-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1499409-13 06/03/22 18:09 • (DUP) R3800050-3 06/03/22 18:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1750	1700	1	2.78		5

4 Cn

5 Sr

L1499468-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1499468-01 06/03/22 18:09 • (DUP) R3800050-4 06/03/22 18:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Dissolved Solids	1560	1590	1	1.90		5

6 Qc

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3800050-2 06/03/22 18:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Dissolved Solids	2460	2460	100	81.7-118	

9 Sc

Method Blank (MB)

(MB) R3800470-1 06/04/22 15:09

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

1 Cp

2 Tc

3 Ss

L1498270-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1498270-03 06/04/22 15:09 • (DUP) R3800470-3 06/04/22 15:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	5900	5940	1	0.676		5

4 Cn

5 Sr

Sample Narrative:

OS: OOH results did not match in hold analysis.

6 Qc

L1499060-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1499060-05 06/04/22 15:09 • (DUP) R3800470-4 06/04/22 15:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Dissolved Solids	8480	8420	1	0.710		5

7 Gl

8 Al

Laboratory Control Sample (LCS)

(LCS) R3800470-2 06/04/22 15:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	2460	2550	104	81.7-118	

9 Sc

Method Blank (MB)

(MB) R3807305-1 06/23/22 22:46

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

L1499306-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1499306-01 06/23/22 23:16 • (DUP) R3807305-3 06/23/22 23:31

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	75.0	75.4	1	0.498		15
Fluoride	0.441	0.459	1	4.07		15
Sulfate	24.3	24.4	1	0.411		15

L1499927-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1499927-04 06/24/22 04:59 • (DUP) R3807305-6 06/24/22 09:52

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Chloride	10.4	10.3	1	1.02		15
Fluoride	2.93	2.95	1	0.551		15
Sulfate	82.9	83.5	1	0.727		15

Laboratory Control Sample (LCS)

(LCS) R3807305-2 06/23/22 23:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Chloride	40.0	40.9	102	80.0-120	
Fluoride	8.00	8.49	106	80.0-120	
Sulfate	40.0	41.0	102	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1499927-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1499927-01 06/24/22 02:45 • (MS) R3807305-4 06/24/22 03:00 • (MSD) R3807305-5 06/24/22 03:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits
Chloride	50.0	43.8	94.0	94.4	100	101	1	80.0-120			0.360	15
Fluoride	5.00	0.695	5.40	5.38	94.0	93.7	1	80.0-120			0.267	15

L1500139-04 Original Sample (OS) • Matrix Spike (MS)

(OS) L1500139-04 06/24/22 12:51 • (MS) R3807305-8 06/24/22 12:36

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	15.4	67.8	105	1	80.0-120	
Fluoride	5.00	ND	5.22	104	1	80.0-120	
Sulfate	50.0	10.7	64.1	107	1	80.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3808899-1 06/25/22 10:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfate	U		0.594	5.00

¹Cp

²Tc

³Ss

L1500574-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1500574-05 06/25/22 13:13 • (DUP) R3808899-3 06/25/22 13:58

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	51.3	51.3	1	0.0347		15

⁴Cn

⁵Sr

L1500663-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1500663-01 06/25/22 19:11 • (DUP) R3808899-6 06/25/22 19:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfate	6.90	6.89	1	0.0261		15

⁶Qc

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3808899-2 06/25/22 10:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfate	40.0	40.4	101	80.0-120	

⁹Sc

L1500574-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1500574-05 06/25/22 13:13 • (MS) R3808899-4 06/25/22 14:13 • (MSD) R3808899-5 06/25/22 14:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfate	50.0	51.3	101	100	99.0	97.8	1	80.0-120	<u>E</u>	<u>E</u>	0.605	15

L1500663-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1500663-01 06/25/22 19:11 • (MS) R3808899-7 06/25/22 20:11

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Sulfate	50.0	6.90	58.7	104	1	80.0-120	

Method Blank (MB)

(MB) R3802682-1 06/13/22 17:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Calcium	U		0.0936	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Method Blank (MB)

(MB) R3803566-1 06/14/22 22:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Boron	U		0.00963	0.0300

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3802682-2 06/13/22 17:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Calcium	5.00	5.21	104	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3803566-2 06/14/22 22:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Boron	0.500	0.522	104	80.0-120	

L1499759-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1499759-01 06/13/22 17:13 • (MS) R3802682-4 06/13/22 17:20 • (MSD) R3802682-5 06/13/22 17:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Calcium	5.00	270	271	272	18.8	42.2	1	75.0-125	√	√	0.431	20

L1499759-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1499759-01 06/14/22 22:50 • (MS) R3803566-4 06/14/22 22:57 • (MSD) R3803566-5 06/14/22 23:00

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Boron	0.500	0.649	1.17	1.18	104	106	1	75.0-125			0.679	20

GLOSSARY OF TERMS

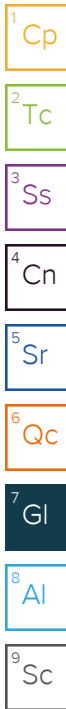
Guide to Reading and Understanding Your Laboratory Report

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

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
V	The sample concentration is too high to evaluate accurate spike recoveries.



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
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

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

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
GEMINI Engineering

2275 Cassens Drive
Suite 118
Fenton, MO 63026

Report to:
Adam Kaiser

Project Description:
Monticello GW - Mt. Pleasant, TX

Phone: **512-566-6878**

Client Project #

City/State Collected: **Mt. Pleasant, TX**

Please Circle:
PT MT CT ET

Lab Project #
GEMFMO-MONTICELLO

Collected by (print):
Jeff Norfleet

Site/Facility ID #
GOLDEN EAGLE

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately
Packed on Ice N

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG # **4499927**

Tablet # **K106**

Acctnum: **GEMFMO**

Template: **T209229**

Prelogin: **P924150**

PM: **206 - Jeff Carr**

PB: *[Signature]*

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

B, Ca - 6020 250mlHDPE-HNO3
Chloride, F, SO4 125mlHDPE-NoPres
TDS 1L-HDPE NoPres

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
W-30	Grab	GW	20.60	5-30-22	1500	3
W-31		GW	16.00		1400	3
W-32		GW	16.90		1300	3
W-33		GW	27.00		1200	3
W-34		GW	22.60		1100	3
W-35		GW	24.80		1000	3
		GW				3
		GW				3

-01
-02
-03
-04
-05
-06

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking # **0221 5755 8092 6074**

pH _____ Temp _____

Flow _____ Other _____

Sample Receipt Checklist	
COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
If Applicable	
VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
Preservation Correct/Checked:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N

Relinquished by: (Signature)

Date: **5-31-22** Time: **1630**

Received by: (Signature)

Trip Blank Received: Yes (No)
HCL/MeOH
TBR

Relinquished by: (Signature)

Date: _____ Time: _____

Received by: (Signature)

Temp: **21.7** °C Bottles Received: **1.5 + 0 = 1.5 18**

Relinquished by: (Signature)

Date: _____ Time: _____

Received for lab by: (Signature)

Date: **6-1-22** Time: **1140**

If preservation required by Login: Date/Time

Hold: _____ Condition: **NCF / OK**