



**Bullock, Bennett & Associates, LLC**

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**COAL COMBUSTION RESIDUAL RULE  
2023 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE  
ACTION REPORT**

*PRIMARY ASH POND  
COLETO CREEK POWER STATION  
FANNIN, TEXAS*

January 31, 2024

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## **ACRONYMS AND ABBREVIATIONS**

BBA	Bullock, Bennett & Associates, LLC
CCR	Coal Combustion Residuals
C.F.R.	Code of Federal Regulations
GWPS	Groundwater Protection Standard
MCL	Maximum Concentration Level
mg/L	Milligrams per Liter
NA	Not Applicable
OBG	O'Brien & Gere Engineers, Inc.
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
T.A.C.	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
USEPA	United States Environmental Protection Agency

## **EXECUTIVE SUMMARY**

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Coletto Creek Power, LLC to satisfy the 2023 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the Primary Ash Pond (the “CCR unit”) at the Coletto Creek Power Station in Fannin, Texas. The CCR unit and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2023 reporting period, the CCR unit was operating under an Assessment Monitoring Program as described in § 257.95. The Assessment Monitoring Program was established on May 9, 2018. No constituents listed in Appendix IV to Part 257 were detected at statistically significant levels (SSLs) above groundwater protection standards (GWPSs) during 2023. The Assessment Monitoring Program will continue during 2024 in accordance with § 257.95.

## 1.0 INTRODUCTION

The CCR Rule (40 C.F.R. 257 Subpart D - *Standards for the Receipt of Coal Combustion Residuals in Landfills and Surface Impoundments*) was 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. TCEQ has adopted portions of the federal CCR rule at 30 T.A.C. Chapter 352 (Texas CCR Rule), and USEPA published its final approval of the Texas CCR rule on June 28, 2021. See 86 Fed. Reg. 33,892 (June 28, 2021). The Texas CCR Rule became effective on July 28, 2021, and it adopts and incorporates by reference the requirements for the annual groundwater monitoring report located at 40 C.F.R. §257.90. See 30 T.A.C. § 352.901. It further adopts and incorporates by reference the Federal CCR Program requirements for detection and assessment monitoring in 30 T.A.C. §352.941 and 30 T.A.C. §352.951, respectively. Pursuant to 30 T.A.C. § 352.902, this report will be submitted to TCEQ for review no later than 30 days after the report has been placed in the facility's operating record. 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 §257.90(e) 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.
- (6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
  - (i) At the start of the current annual reporting period, whether the CCR unit was operating

- under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95;
- (ii) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in § 257.94 or the assessment monitoring program in § 257.95;
  - (iii) If it was determined that there was a statistically significant increase over background for one or more constituents listed in appendix III to this part pursuant to § 257.94(e):
    - (A) Identify those constituents listed in appendix III to this part and the names of the monitoring wells associated with such an increase; and
    - (B) Provide the date when the assessment monitoring program was initiated for the CCR unit.
  - (iv) If it was determined that there was a SSL above the groundwater protection standard for one or more constituents listed in appendix IV to this part pursuant to § 257.95(g) include all of the following:
    - (A) Identify those constituents listed in appendix IV to this part and the names of the monitoring wells associated with such an increase;
    - (B) Provide the date when the assessment of corrective measures was initiated for the CCR unit;
    - (C) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and
    - (D) Provide the date when the assessment of corrective measures was completed for the CCR unit.
  - (v) Whether a remedy was selected pursuant to § 257.97 during the current annual reporting period, and if so, the date of remedy selection; and
  - (vi) Whether remedial activities were initiated or are ongoing pursuant to § 257.98 during the current annual reporting period.

## 2.0 MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

O'Brien & Gere Engineers, Inc. (OBG) collected the initial Detection Monitoring Program groundwater samples from the Primary Ash Pond CCR monitoring well network in November 2017. OBG completed an evaluation of those data in 2018 using procedures described in the Statistical Analysis Plan (OBG, 2017) to identify statistically significant increases (SSIs) of Appendix III parameters over background concentrations. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

### Detection Monitoring Program Summary

Sampling Completion Date	Parameters	SSIs	Assessment Monitoring Program Established
November 8, 2017	Appendix III	Yes	May 9, 2018

Alternate source evaluations were inconclusive for one or more of the SSIs. Consequently, an Assessment Monitoring Program was initiated and established for the Primary Ash Pond CCR unit in 2018 in accordance with § 257.94(e)(2).

OBG collected the initial 2018 Assessment Monitoring Program groundwater samples in June 2018. Subsequent Assessment Monitoring Program sampling events have been conducted by WSP Golder on a semi-annual basis, as required by the CCR Rule. All CCR groundwater monitoring wells were sampled for Appendix III and Appendix IV constituents during the first and second semi-annual sampling events of each year. The Assessment Monitoring Program sampling dates and results are summarized in the following table:

## Assessment Monitoring Program Summary

Sampling Completion Date	Date Analytical Data Received	Parameters	SSL(s)	SSL(s) Determination Date	Corrective Measures Assessment Initiated
June 25, 2018	August 7, 2018	Appendix III Appendix IV	No	NA	NA
Sept. 18, 2018	October 12, 2018	Appendix III Appendix IV	No	NA	NA
June 5, 2019	July 12, 2019	Appendix III Appendix IV	No	NA	NA
October 3, 2019	November 5, 2019	Appendix III Appendix IV	No	NA	NA
June 9, 2020	July 15, 2020	Appendix III Appendix IV	No	NA	NA
October 6, 2020	November 9, 2020	Appendix III Appendix IV	No	NA	NA
June 25, 2021	July 30, 2021	Appendix III Appendix IV	No	NA	NA
September 28, 2021	November 9, 2021	Appendix III Appendix IV	No	NA	NA
May 26, 2022	July 18, 2022	Appendix III Appendix IV	No	NA	NA
September 20, 2022	November 2, 2022	Appendix III Appendix IV	No	NA	NA
May 26, 2023	June 30, 2023	Appendix III Appendix IV	No	NA	NA
August 24, 2023	October 4, 2023	Appendix III Appendix IV	No	NA	NA

Notes:

NA - not applicable

The statistical background prediction limits used to assess Appendix III data and the GWPSs used to assess Appendix IV data are summarized in Tables 1 and 2, respectively. Appendix III and Appendix IV



sample analytical data are summarized in Tables 3 and 4, respectively. The 2023 laboratory analytical reports are provided in Appendix A. Statistical analysis of the sample data was performed in accordance with procedures described in the Statistical Analysis Plan for the site (Golder 2022) and the USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA 2009). A 95% lower confidence limit of the mean (LCL) is calculated for each Appendix IV constituent at each downgradient well. The data set used to calculate LCLs is based on current and historical constituent concentrations for a compliance well. In accordance with USEPA (2009) guidance, a statistically significant increase over the GWPS has occurred at a CCR unit when the LCL for at least one assessment monitoring constituent at a downgradient well is greater than the appropriate GWPS. The LCLs for each Appendix IV constituent at each well are compared to GWPSs in Appendix B. Based on the statistical analysis, none of the Appendix IV parameters are present at SSLs above GWPSs.

### **3.0 KEY ACTIONS COMPLETED IN 2023**

Two semi-annual Assessment Monitoring Program groundwater monitoring events were performed in 2023. The number of groundwater samples that were collected for analysis from each background and downgradient well, the dates the samples were collected, and the analytical results for the groundwater samples are summarized in Table 3 (Appendix III parameters) and Table 4 (Appendix IV parameters).

Water elevations measured in the CCR wells during the semi-annual groundwater monitoring events are summarized in Table 5 and groundwater potentiometric surface maps are presented in Appendix C. The inferred direction and magnitude of groundwater flow during the semi-annual monitoring events was generally to the east-southeast at about 19 feet per year, which is similar to previously observed conditions at the site.

No CCR wells were installed or decommissioned in 2023.

#### **4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS**

CCR monitoring well MW-6 was inadvertently not sampled by WSP Golder during the May 2023 monitoring event; however, samples were collected from MW-6 on July 6, 2023, after it was identified that the well had not been sampled during the first semi-annual sampling event. The well was additionally sampled during the August 2023 monitoring event. No other problems were encountered with the CCR groundwater monitoring program in 2023.

## **5.0 KEY ACTIVITIES PLANNED FOR 2024**

The following key activities are planned for 2024:

- Continue the Assessment Monitoring Program in accordance with applicable provisions of 40 C.F.R. §257.95 and 30 T.A.C. §352.951.

## **6.0 REFERENCES**

Golder, 2022. Coal Combustion Residual Rule Statistical Analysis Plan – Revision No. 1, Oak Grove Steam Electric Station, FGD Pond Area, Robertson County, Texas.

O'Brien & Gere Engineers, Inc. (OBG), 2017. Statistical Method Certification, CCR Unit: Coletto Creek Power, LP; Coletto Creek Power Station; Coletto Creek Primary Ash Pond.

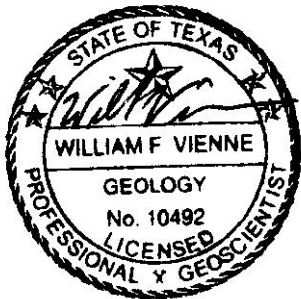
USEPA, 2009. Unified Guidance Document: Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, EPA 530/R-09-007, March.

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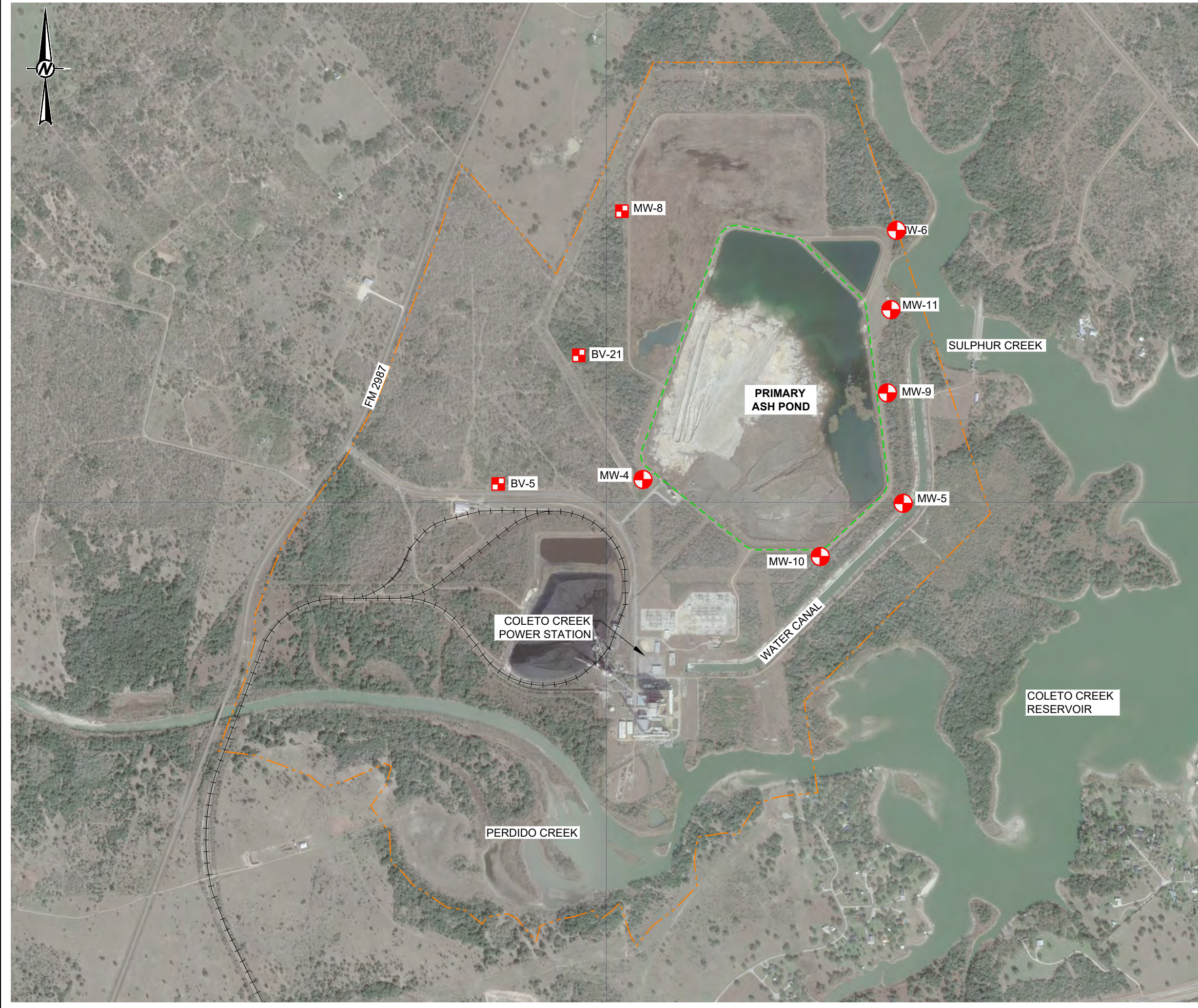


William Vienne, P.G.  
*Senior Hydrogeologist*





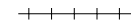


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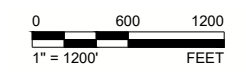
## FIGURES



**LEGEND**

	PROPERTY BOUNDARY
	CCR MONITORING UNIT
	DOWNGRADIENT CCR MONITORING WELL
	UPGRADIENT CCR MONITORING WELL
	RAILROAD

**REFERENCE(S)**  
 BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED 1/15/21.



**LUMINANT  
 COLETO CREEK POWER STATION  
 FANNIN, TEXAS**

**Figure 1  
 PRIMARY ASH POND  
 SITE PLAN**

PROJECT: 23643.02	BY: SLB	DATE: 11/30/2023	CHECKED: WV
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 Engineering and Geoscience  
 Texas Registrations: Engineering F-8542, Geoscience 50127



## **TABLES**

**Table 1**  
**Appendix III Statistical Background Values**  
**Coletto Creek Primary Ash Pond**

<b>Parameter</b>	<b>Statistical Background Value</b>
Boron (mg/L)	1.3
Calcium (mg/L)	140
Chloride (mg/L)	120
Fluoride (mg/L)	0.61
field pH (s.u.)	6.5 7.3
Sulfate (mg/L)	150
Total Dissolved Solids (mg/L)	970

**Table 2**  
**Groundwater Protection Standards**  
**Coletto Creek Primary Ash Pond**

<b>Parameter</b>	<b>Groundwater Protection Standard</b>
Antimony (mg/L)	0.0060
Arsenic (mg/L)	0.130
Barium (mg/L)	2.0
Beryllium (mg/L)	0.0040
Cadmium (mg/L)	0.0050
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.050
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.040
Mercury (mg/L)	0.0020
Molybdenum (mg/L)	0.10
Selenium (mg/L)	0.050
Thallium (mg/L)	0.0020
Radium 226+228 (pCi/L)	5.0

**TABLE 3**  
**APPENDIX III ANALYTICAL RESULTS**  
**COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	B	Ca	Cl	F	field pH	SO <sub>4</sub>	TDS
<b>Upgradient Wells</b>								
BV-5	03/29/17	1.15	90.5	118	0.54	7.01	147	860
	05/11/17	1.03	81.6	106	0.57	6.89	148	862
	05/16/17	1.17	99	107	0.55	6.9	145	832
	06/07/17	1.11	88.8	109	0.56	6.64	147	810
	06/20/17	1.02	90.7	106	0.58	6.54	145	716
	06/27/17	1.14	100	114	0.55	6.76	144	743
	07/12/17	1.07	96.8	112	0.56	6.88	140	430
	07/18/17	1.17	143	117	0.56	6.68	142	817
	11/07/17	1.10	94.2	109	0.62	6.96	136	850
	06/19/18	1.18	56.4	112	0.97	--	147	775
	09/18/18	1.27	86.2	145	0.667	6.53	146	904
	06/05/19	1.26	82.9	123	0.769	6.89	146	828
	10/03/19	1.31	72.2	141	0.753	7.11	145	806
	06/09/20	1.35	90.4	171	0.498	6.97	159	951
	10/06/20	1.26	80.2	133	1.01	6.54	155	843
	06/02/21	1.35	108	201	0.699	6.62	190	1110
	09/28/21	1.12	75.6	146	0.687	6.74	169	925
	05/26/22	1.03	52.8	91.7	1.10	7.17	126	681
09/21/22	1.16	71.4	117	0.87	7.49	137	777	
05/26/23	1.06	65.6	130	0.993	7.14	130	827	
08/24/23	1.09	53.9	120	0.958	6.47	116	767	
BV-21	03/28/17	0.651	6.89	36	0.61	7.09	69	490
	05/09/17	0.687	65.2	38	0.61	7.04	55	410
	05/17/17	0.709	74.3	39	0.58	7.05	53	454
	06/06/17	0.657	69	40	0.59	7.11	49	452
	06/20/17	0.642	77	40	0.61	6.7	45	356
	06/27/17	0.727	84.9	40	0.6	6.97	46	420
	07/10/17	0.674	90.6	39	0.58	7.22	45	427
	07/18/17	0.618	84.4	39	0.6	6.91	44	380
	11/07/17	0.515	73.6	42	0.64	7.12	46	423
	06/25/18	0.543	69.3	38.4	0.62	--	38.4	380
	09/18/18	0.624	72.1	33.3	0.479	6.64	36.4	416
	06/05/19	0.576	61.3	30.3	0.602	7.1	34.2	379
	10/03/19	0.534	63.4	23.9	0.588	6.82	33.2	342
	06/09/20	0.447	72.5	34.2	0.522	6.96	18.5	362
	10/06/20	0.480	84.0	40.4	0.677	6.72	14.5	390
	06/02/21	0.399	79.8	49.5	0.705	6.91	32.9	404
	09/28/21	0.385	77.3	61.7	0.496	7.02	31.3	426
	05/25/22	0.395	110	76.7	0.467	6.63	42.6	485
	09/20/22	0.376	91.4	60.7	0.429	6.91	43.5	451
	05/26/23	0.392	77.2	42	0.612	6.91	35.3	415
05/26/23 DUP	0.418	82.5	45.9	0.481	6.91	38.5	433	
08/24/23	0.428	89.8	53.5	0.423	6.06	36.2	444	
08/24/23 DUP	0.417	84.2	53.6	0.433	6.06	35.6	439	

**TABLE 3  
APPENDIX III ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	B	Ca	Cl	F	field pH	SO <sub>4</sub>	TDS
MW-8	03/28/17	1.2	7.76	79	0.49	7.06	76	626
	05/09/17	1.21	77.5	77	0.44	7.15	79	564
	05/15/17	1.16	81.2	76	0.44	7.01	79	558
	06/06/17	1.26	78.1	72	0.45	6.92	83.5	570
	06/20/17	1.24	86.5	67	0.43	6.7	89	476
	06/27/17	1.23	89.6	66	0.44	6.85	97	533
	07/10/17	1.24	92.6	63	0.44	7.13	97	533
	07/18/17	1.25	92.9	61	0.46	6.91	100	533
	11/07/17	1.21	78.8	61	0.49	7.08	100	540
	06/25/18	1.25	80.3	65.9	0.52	--	95.2	565
	09/18/18	1.29	76.5	53.7	0.402	6.70	94.8	543
	06/05/19	1.11	65.2	51.4	0.497	7.10	79	515
	10/03/19	1.2	76.7	58.3	0.419	6.76	90.1	541
	06/09/20	1.33	73.1	46.4	0.392 J	7.04	72.3	511
	10/06/20	1.18	81.1	49.5	0.652	6.84	72.2	510
	06/25/21	0.863	80.1	53.2	0.673	6.81	58.8	489
	09/28/21	0.830	59.9	49.5	0.473	7.17	56.8	476
	05/26/22	0.761	73.3	50.7	0.524	6.98	48.1	473
	09/20/22	0.835	77.6	53.8	0.403	6.99	54.1	476
05/25/23	0.79	77.5	48.8	0.439	7.12	48.3	480	
08/24/23	0.86	69.1	52.1	0.408	6.95	49.8	483	
<b>Downgradient Wells</b>								
MW-4	03/28/17	0.287	9.14	102	0.61	9.81	157	794
	05/09/17	0.395	88.7	101	0.61	7.27	156	668
	05/17/17	0.251	92.1	101	0.6	6.93	157	702
	06/06/17	0.243	90.7	101	0.63	7.13	157	728
	06/20/17	0.254	99.3	101	0.62	6.71	157	626
	06/27/17	0.254	102	101	0.63	6.87	157	690
	07/10/17	0.271	111	101	0.62	7.16	158	670
	07/18/17	0.292	108	101	0.63	6.82	157	717
	11/07/17	0.255	94.5	99	0.62	7.12	155	700
	06/21/18	0.267	92.5	104	0.6	--	159	665
	09/18/18	0.28	91.8	102	0.582	6.63	155	720
	06/05/19	0.379	85.3	108	0.67	6.92	161	718
	10/03/19	0.367	93.1	102	0.559	6.7	155	693
	06/09/20	0.241	94.9	24.6	0.205 J	6.88	26.8	400
	10/06/20	0.328	103	101	0.736	6.75	151	731
	06/02/21	0.33	94.1	98.3	0.769	6.64	153	727
	09/28/21	0.288	88.3	98.7	0.647	6.94	164	714
	05/26/22	0.271	99.2	98.3	0.613	6.71	154	723
	09/19/22	0.317	101	107	0.502	7.26	161	728
05/25/23	0.322	98	92	0.558	6.74	145	668	
08/24/23	0.332	99.9	99.5	0.547	6.91	136	691	
MW-5	03/30/17	0.11	110	140	0.51	6.85	184	830
	05/10/17	0.115	114	139	0.54	6.86	183	900
	05/16/17	0.215	121	139	0.5	6.81	183	848
	06/08/17	0.122	118	139	0.55	6.8	182	862
	06/21/17	0.122	124	138	0.53	6.6	182	813
	06/26/17	0.121	129	139	0.54	6.79	184	900
	07/11/17	0.111	120	138	0.52	6.91	184	797
	07/19/17	0.001	0.005	137	0.53	6.84	181	857
	11/08/17	0.149	116	138	0.52	6.92	183	883
	06/25/18	0.119	114	140	0.56	--	183	820
	09/18/18	0.146	114	136	0.493	6.70	183	824
	06/03/19	0.146	113	143	0.596	7.06	187	864
	10/02/19	0.179	111	147	0.543	7.06	202	842
	06/09/20	0.152	117	138	0.370 J	6.84	182	858
	10/6/2020	0.160	125	133	0.662	6.91	178	841
	6/25/2021	0.181	120	135	0.661	6.91	173	813
	9/28/2021	0.150	103	127	0.559	7.15	190	831
	05/26/22	0.138	120	120	0.556	6.82	177	828
	09/20/22	0.157	117	128	0.433	6.91	184	842
05/25/23	0.161	125	125	0.487	6.97	181	823	
08/23/23	0.178	118	129	0.511	6.51	175	834	

**TABLE 3  
APPENDIX III ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	B	Ca	Cl	F	field pH	SO <sub>4</sub>	TDS
MW-6	03/29/17	1.67	73.9	69	0.38	7.34	99	510
	05/11/17	1.94	70.6	70	0.37	7.1	110	490
	05/16/17	1.84	76.3	70	0.36	7.23	107	506
	06/07/17	1.8	73.8	70	0.37	6.97	103	492
	06/22/17	1.97	79.9	69	0.37	7.11	100	510
	06/28/17	1.74	81.8	69	0.37	7.16	99	570
	07/12/17	1.76	81.6	69	0.35	7.24	98	557
	07/20/17	0.005	0.0002	69	0.39	6.9	97	530
	11/07/17	1.72	76.4	69	0.39	7.41	101	483
	06/22/18	0.0171	76.6	70.7	0.41	--	107	490
	09/18/18	2.09	70.8	72.5	0.353 J	6.97	114	505
	06/03/19	1.9	73.9	73	0.438	7.31	103	514
	10/02/19	1.83	73.6	76.4	0.357 J	7.29	115	507
	06/09/20	2.51	69.7	80.9	0.4	6.95	122	507
	10/06/20	1.92	81.9	73.4	0.512	6.97	87.9	510
	06/25/21	1.75	79.1	72.7	0.542	7.02	89.2	503
	09/28/21	1.64	67.3	70.1	0.386 J	7.26	92.7	500
	05/26/22	2.12	71.9	64.0	0.416	7.28	109	472
	09/19/22	2.11	71.2	64.4	0.353 J	7.63	111	469
	09/21/22 DUP	1.21	70.3	118	0.874	7.63	136	777
08/23/23	2.14	64.1	106	0.371	6.05	102	451	
MW-9	03/30/17	3.38	54.5	71	1.13	7.35	62	406
	05/10/17	3.16	52.7	66	1.29	7.48	59	410
	05/17/17	3.18	53.3	67	1.26	7.34	58	440
	06/07/17	3.12	52	67	1.26	7.03	57	380
	06/21/17	3.44	60.7	66	1.39	7.09	60	393
	06/26/17	3.31	60.6	67	1.4	7.23	61	407
	07/11/17	3.35	52.1	64	1.3	7.51	60	927
	07/19/17	3.4	50.2	63	1.4	7.29	62	407
	11/08/17	2.84	49.4	62	1.56	7.54	50	397
	06/21/18	2.94	46.9	71.5	1.5	--	35.7	370
	09/18/18	2.79	51.7	71.4	1.1	6.99	49.1	394
	06/05/19	4.26	48	74.7	1.38	7.4	66.3	421
	10/03/19	3.97	71.3	70.9	1.41	7.37	63.6	462
	06/09/20	4.10	47.4	63.7	1.58	7.21	54.9	397
	10/06/20	3.78	50.1	49.6	1.73	7.47	51.7	366
	06/25/21	0.882	83.6	77.6	0.907	7.10	100	508
	09/28/21	1.23	74.3	62.9	0.629	7.21	79.0	507
	05/25/22	0.901	55.2	35.3	0.926	7.15	56.5	373
	05/25/22 DUP	0.858	56.6	35.3	0.922	7.15	56.3	367
	09/19/22	0.948	62.1	43.6	0.681	7.37	24.7	378
05/25/23	1.2	68.7	45.3	0.664	7.15	40.4	425	
08/23/23	0.924	60.3	47.3	0.785	7.16	52.4	412	
MW-10	03/30/17	3.74	92.1	151	0.54	6.99	130	804
	05/10/17	7.32	56.1	82	0.83	7.23	96	582
	05/16/17	7.45	62.7	81	0.81	7.28	95	612
	06/08/17	7.54	58.1	77	0.84	7.23	92	604
	06/21/17	9.22	60.7	77	0.84	6.97	92	550
	06/26/17	8.21	63.4	78	0.84	7.14	92	530
	07/11/17	7.99	49.5	76	0.84	7.4	88	617
	07/19/17	8.74	56.6	74	0.86	7.25	86	533
	11/08/17	8.72	77.7	74	0.88	7.35	81	590
	06/22/18	8.47	84.4	76.7	0.88	--	--	550
	09/18/18	8.45	51.9	81.4	0.759	6.98	95.1	577
	06/03/19	8.28	43.1	87.2	0.953	7.52	97.7	587
	10/02/19	8.28	44.2	85.5	0.891	7.46	104	575
	06/09/20	7.58	46.9	76.9	0.818	7.13	96.5	575
	10/06/20	6.94	49.0	73.7	1.05	7.35	92.3	575
	06/25/21	1.97	107	154	0.717	6.91	141	806
	09/28/21	7.48	32.9	54.2	0.96	7.49	76.8	507
	05/25/22	5.94	45.6	62.4	1.01	7.11	78.8	545
	09/20/22	5.54	53.2	72.2	0.828	7.33	88.6	560
	05/25/23	5.37	45.0	61.6	0.892	7.26	75.9	541
08/23/23	5.41	40.9	41.5	0.658	7.30	49.8	376	

**TABLE 3**  
**APPENDIX III ANALYTICAL RESULTS**  
**COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	B	Ca	Cl	F	field pH	SO <sub>4</sub>	TDS
MW-11	05/10/17	1.35	64.1	55	0.82	7.27	61	394
	06/07/17	1.23	59.8	48	0.93	7.25	50	372
	06/21/17	1.19	73.1	43.7	1.04	7.15	44	373
	06/26/17	1.15	82	44	1.00	7.3	43	407
	07/11/17	1.23	44.7	44	1.00	7.55	42	603
	07/19/17	1.17	48.6	43	1.01	7.21	42	360
	11/08/17	1.13	52.2	43	1.02	7.61	56	367
	06/21/18	1.07	69.6	44.3	0.96	--	61.4	355
	09/18/18	1.12	39.3	44.6	0.754	7.00	44.4	354
	06/03/19	1.27	43.4	42.2	0.837	7.55	44.8	372
	10/02/19	1.22	43.4	41.4	0.768	7.43	10.8	355
	06/09/20	1.20	56.6	44.4	0.571	6.88	67.7	414
	10/06/20	1.05	66.8	58.6	0.767	7.05	85.9	453
	06/25/21	0.925	59.1	74.6	0.876	7.09	55.9	400
	06/25/21 DUP	0.98	59.3	74.8	0.865	7.09	56.2	397
	05/25/22	0.845	57.1	34.6	0.699	7.13	54.5	371
	09/19/22	0.901	53.3	35.3	0.697	7.52	53.1	353
	05/25/23	0.807	58.9	45.6	0.542	7.26	29.3	375
08/23/23	0.914	52.9	46.6	0.600	7.16	24.6	356	

Notes:

1. All concentrations in mg/L. pH in standard units.
2. J - concentration is below sample quantitation limit; result is an estimate.

**TABLE 4  
APPENDIX IV ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
Upgradient Wells																		
BV-5	03/29/17	<0.0025	0.00856	0.04510	<0.001	<0.001	<0.005	0.0497	0.540	<0.001	0.0206	<0.0002	0.00925	<0.005	<0.0015	--	--	1.503
	05/11/17	<0.0025	0.00786	0.03680	<0.001	<0.001	<0.005	0.0462	0.570	<0.001	0.018	<0.0002	0.0101	<0.005	<0.0015	--	--	1.555
	05/16/17	<0.0025	0.00885	0.04520	<0.001	<0.001	<0.005	0.0495	0.550	0.00151	0.0171	<0.0002	0.0102	<0.005	<0.0015	--	--	0.7550
	06/07/17	<0.0025	0.00829	0.03760	<0.001	<0.001	<0.005	0.0483	0.560	<0.001	0.0207	<0.0002	0.01	<0.005	<0.0015	--	--	1.457
	06/20/17	<0.0025	0.00841	0.04010	<0.001	<0.001	<0.005	0.0499	0.580	<0.001	0.0208	<0.0002	0.0114	<0.005	<0.0015	--	--	0.4920
	06/27/17	<0.0025	0.0083	0.04120	<0.001	<0.001	<0.005	0.046	0.550	<0.001	0.0198	<0.0002	0.00942	<0.005	<0.0015	--	--	2.247
	07/12/17	<0.0025	0.00849	0.04160	<0.001	<0.001	<0.005	0.0484	0.560	<0.001	0.0188	<0.0002	0.0096	<0.005	<0.0015	--	--	2.139
	07/18/17	<0.0025	0.00951	0.05780	<0.001	<0.001	0.00739	0.0453	0.560	0.00288	0.022	<0.0002	0.0083	<0.005	<0.0015	--	--	1.260
	06/19/18	<0.0025	0.0106	0.0336	<0.001	<0.001	0.0022 J	0.0513 J	0.970	<0.00074 J	0.016	<0.0002	0.0139	<0.005	<0.0015	0.327	<1.680	2.01
	09/18/18	NA	0.0095	0.0436	NA	NA	0.00228 J	0.0487	0.667	0.00039 J	0.0206	NA	0.0102	NA	NA	0.302	<0.608	0.91
	06/05/19	<0.0008	0.0092	0.042	<0.0003	0.00092 J	<0.002	0.0466	0.769	0.00144	0.0201	<0.00008	0.0109	<0.0020	<0.0005	<0.687	<1.130	<1.82
	10/03/19	<0.0008	0.0094	0.0441	<0.0003	<0.0003	0.0029 J	0.0437	0.753	0.0039	0.0172	<0.00008	0.0122	<0.0020	<0.0005	0.928	1.35	2.28
	06/09/20	<0.0008	0.0088	0.0462	<0.0003	<0.0003	0.00818	0.0486	0.498	0.00162	0.0201	<0.0000800	0.0120	<0.00200	<0.000500	0.363	<1.26	0.363
	10/06/20	<0.000800	0.0098	0.0387	<0.000300	<0.000300	0.00226	0.0449	1.01	<0.000300	0.0174	<0.0000800	0.0105	<0.00200	<0.000500	0.293	0.709	1.00
	06/02/21	<0.000800	0.00882	0.053	<0.000300	<0.000300	0.00262 J	0.0437	0.699	0.000588 J	0.0239	<0.0000800	0.00768	<0.00200	<0.000500	0.325	<0.578	0.325
	09/28/21	<0.000800	0.0087	0.0365	<0.000300	<0.000300	<0.00200	0.0433	0.687	0.000415 J	0.0194	<0.0000800	0.0102	<0.00200	<0.000500	0.239 J	2.06	2.29
	05/26/22	<0.000800	0.0129	0.0339	<0.000300	<0.000300	0.00252 J	0.0389 J	1.10	0.000401 J	0.0126	<0.0000800	0.0136	<0.00200	<0.000500	0.146 J	0.789	0.935
	09/21/22	<0.000800	0.0134	0.0491	<0.000300	<0.000300	0.00417 J	0.0405	0.872	0.00155	0.0149	<0.0000800	0.0109	<0.00200	<0.000500	0.124 J	0.588	0.712
9/19/22 DUP	<0.000800	0.0134	0.0457	<0.000300	<0.000300	0.00338	0.0397	0.874	0.00131	0.0151	<0.0000800	0.0109	<0.00200	<0.000500	0.323	0.468	0.791	
05/26/23	<0.000800	0.0115	0.0397	<0.000300	<0.000300	<0.00200	0.0404	0.993	0.000461 J	0.0177	<0.0000800	0.0123	<0.00200	<0.000500	0.394	0.932	1.33	
08/24/23	<0.000800	0.0127	0.0387	<0.000300	<0.000300	<0.00200	0.0443	0.958	0.000494 J	0.0138	<0.0000800	0.0111	<0.00200	<0.000500	0.656	0.389 J	1.04	
BV-21	03/28/17	<0.0025	0.0954	0.09630	<0.001	<0.001	<0.005	0.0083	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	1.390
	05/09/17	<0.0025	0.108	0.09720	<0.001	<0.001	<0.005	0.00852	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.7460
	05/17/17	<0.0025	0.117	0.09440	<0.001	<0.001	<0.005	0.00878	0.580	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.9190
	06/06/17	<0.0025	0.118	0.09540	<0.001	<0.001	<0.005	0.00806	0.590	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6710
	06/20/17	<0.0025	0.121	0.1010	<0.001	<0.001	<0.005	0.00744	0.610	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	1.672
	06/27/17	<0.0025	0.128	0.1040	<0.001	<0.001	<0.005	0.00841	0.600	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5200
	07/10/17	<0.0025	0.123	0.1100	<0.001	<0.001	<0.005	0.0086	0.580	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	0.8050
	07/18/17	<0.0025	0.115	0.1010	<0.001	<0.001	<0.005	0.00784	0.600	<0.001	<0.010	<0.0002	<0.005	<0.005	<0.0015	--	--	4.812
	06/25/18	<0.0025	0.0697	0.104	<0.001	<0.001	<0.005	0.00682	0.620	<0.00074 J	0.00513 J	<0.0002	0.00428 J	<0.005	<0.0015	0.267	<1.417	1.68
	09/18/18	NA	0.0625	0.109	NA	NA	<0.002	0.0064	0.479	0.000555 J	0.00624 J	NA	0.00450 J	NA	NA	<0.31	<0.528	<0.838
	06/05/19	<0.0008	0.0531	0.105	<0.0003	<0.0003	<0.002	0.00574	0.602	0.000354	0.0056 J	<0.00008	0.00685	<0.0020	<0.0005	0.65	<0.687	1.337
	10/03/19	<0.0008	0.049	0.0963	<0.0003	<0.0003	<0.002	0.00542	0.588	0.000333 J	<0.005	<0.00008	0.00784	<0.0020	<0.0005	0.346	1.54	1.89
	06/09/20	<0.0008	0.0793	0.132	<0.0003	<0.0003	0.007	0.00437 J	0.522	0.00033 J	<0.005	<0.00008	0.00698	<0.0020	<0.0005	0.211	1.15	1.36
	10/06/20	<0.000800	0.0815	0.157	<0.000300	<0.000300	<0.00200	0.00411 J	0.677	<0.000300	0.00532 J	<0.0000800	0.00523	<0.00200	<0.000500	0.37	<1.38	0.37
	06/02/21	<0.000800	0.0663	0.176	<0.000300	<0.000300	<0.00200	0.00441 J	0.705	0.000336 J	0.00532 J	<0.0000800	0.00547	<0.00200	<0.000500	0.0424	0.392	0.434
	09/28/21	<0.000800	0.0603	0.186	<0.000300	<0.000300	<0.00200	0.00387 J	0.496	<0.000300	0.00539 J	<0.0000800	0.00481 J	<0.00200	<0.000500	1.02	1.81	2.83
	05/25/22	<0.000800	0.0716	0.248	<0.000300	<0.000300	<0.00200	0.00377 J	0.467	<0.000300	0.00634 J	<0.0000800	0.00432 J	<0.00200	<0.000500	0.580	1.47	2.04
	09/20/22	<0.000800	0.0701	0.212	<0.000300	<0.000300	<0.00200	0.00426 J	0.429	<0.000300	0.00539 J	<0.0000800	0.00551	<0.00200	<0.000500	0.163	0.911	1.07
05/26/23	<0.000800	0.0675	0.179	<0.000300	<0.000300	<0.00200	0.00386 J	0.612	<0.000300	0.00527 J	<0.0000800	0.00534	<0.00200	<0.000500	0.872	1.1	1.97	
5/26/23 DUP	<0.000800	0.0759	0.201	<0.000300	<0.000300	<0.00200	0.00396 J	0.481	<0.000300	0.00551 J	<0.0000800	0.00546	<0.00200	<0.000500	1.17	1.37	2.54	
08/24/23	<0.000800	0.0871	0.206	<0.000300	<0.000300	<0.00200	0.00421 J	0.423	0.000392 J	<0.00500 J	<0.0000800	0.00524	<0.00200	<0.000500	0.799	0.969	1.77	
08/24/23 DUP	<0.000800	0.08	0.192	<0.000300	<0.000300	<0.00200	0.00431 J	0.433	0.000332 J	<0.00500	<0.0000800	0.00490 J	<0.00200	<0.000500	1.49	1.4	2.89	



**TABLE 4  
APPENDIX IV ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
MW-8	03/28/17	<0.0025	0.00839	0.0623	<0.001	<0.001	<0.005	0.0236	0.490	<0.001	0.0111	<0.0002	0.0154	<0.005	<0.0015	--	--	0.4520
	05/09/17	<0.0025	0.00848	0.064	<0.001	<0.001	<0.005	0.0272	0.440	<0.001	0.0111	<0.0002	0.0157	<0.005	<0.0015	--	--	0.4740
	05/15/17	<0.0025	0.00926	0.064	<0.001	<0.001	<0.005	0.0311	0.440	<0.001	0.0112	<0.0002	0.016	<0.005	<0.0015	--	--	0.6140
	06/06/17	<0.0025	0.00912	0.0616	<0.001	<0.001	0.00744	0.0308	0.450	<0.001	0.0107	<0.0002	0.0157	<0.005	<0.0015	--	--	0.1320
	06/20/17	<0.0025	0.00885	0.0669	<0.001	<0.001	<0.005	0.0297	0.430	<0.001	0.0121	<0.0002	0.0171	<0.005	<0.0015	--	--	0.5380
	06/27/17	<0.0025	0.00939	0.0633	<0.001	<0.001	<0.005	0.0314	0.440	<0.001	0.0115	<0.0002	0.0163	<0.005	<0.0015	--	--	0.9390
	07/10/17	<0.0025	0.00902	0.0631	<0.001	<0.001	<0.005	0.031	0.440	<0.001	0.0112	<0.0002	0.0165	<0.005	<0.0015	--	--	0.8040
	07/18/17	<0.0025	0.00937	0.0635	<0.001	<0.001	<0.005	0.0352	0.460	<0.001	0.0118	<0.0002	0.0185	<0.005	<0.0015	--	--	2.113
	06/25/18	<0.0025	0.0101	0.0632	<0.001	<0.001	<0.005	0.029	0.520	0.0011	0.0107	<0.0002	0.017	<0.005	<0.0015	<0.234	<1.204	<1.44
	09/18/18	NA	0.009	0.0582	NA	NA	<0.00200	0.0237	0.402	<0.0003	0.0117	NA	0.0178	NA	NA	<0.281	<0.558	<0.84
	06/05/19	<0.0008	0.0095	0.0596	<0.0003	<0.0003	<0.002	0.0217	0.497	0.000355 J	0.011	<0.00008	0.0156	<0.0020	<0.0005	0.528	<0.619	1.147
	10/03/19	<0.0008	0.0083	0.0607	<0.0003	<0.0003	<0.002	0.231	0.419	<0.0003	0.0106	<0.00008	0.0144	<0.0020	<0.0005	0.224	0.241	0.465
	06/09/20	<0.0008	0.0086	0.0599	<0.0003	<0.0003	<0.002	0.0174	0.392 J	0.000479 J	0.0104	<0.00008	0.0158	<0.002	<0.0005	0.304	2.64	2.94
	10/06/20	<0.000800	0.0086	0.0647	<0.000300	<0.000300	<0.00200	0.0162	0.652	<0.000300	0.0107	<0.0000800	0.0148	<0.00200	<0.000500	1.08	1.65	2.73
	06/25/21	<0.000800	0.0104	0.0806	<0.000300	<0.000300	<0.00200	0.013	0.673	0.000761 J	0.0105	<0.0000800	0.0118	<0.00200	<0.000500	0.148	0.639	0.787
	09/28/21	<0.000800	0.0086	0.0690	<0.000300	<0.000300	<0.00200	0.0110	0.473	0.000697 J	0.0102	<0.0000800	0.0124	<0.00200	<0.000500	0.0886	1.23	1.32
	05/26/22	<0.000800	0.0092	0.0819	<0.000300	<0.000300	<0.00200	0.00757	0.524	0.000424 J	0.0101	<0.0000800	0.0128	<0.00200	<0.000500	0.179 J	0.889	1.07
09/20/22	<0.000800	0.0098	0.0832	<0.000300	<0.000300	<0.00200	0.0106	0.403	<0.000300	0.0102	<0.0000800	0.0126	<0.00200	<0.000500	<0.276	0.789	0.887	
05/26/23	<0.000800	0.0094	0.0830	<0.000300	<0.000300	<0.00200	0.00629	0.439	<0.000300	0.0105	<0.0000800	0.0134	<0.00200	<0.000500	0.232 J	<0.518	0.563 J	
08/24/23	<0.000800	0.0094	0.0832	<0.000300	<0.000300	<0.00200	0.00896	0.408	0.000521 J	0.00915 J	<0.0000800	0.0139	<0.00200	<0.000500	2.23	0.959	3.19	
Downgradient Wells																		
MW-4	03/28/17	<0.0025	0.00738	0.0575	<0.001	<0.001	<0.005	0.007	0.610	<0.001	0.0192	<0.0002	<0.005	<0.005	<0.0015	--	--	0.4600
	05/09/17	<0.0025	0.00733	0.0576	<0.001	<0.001	<0.005	0.007	0.610	<0.001	0.0182	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6940
	05/15/17	<0.0025	0.00794	0.0556	<0.001	<0.001	<0.005	0.007	0.600	<0.001	0.0166	<0.0002	<0.005	<0.005	<0.0015	--	--	1.451
	06/06/17	<0.0025	0.0077	0.0556	<0.001	<0.001	<0.005	0.007	0.630	<0.001	0.0179	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1740
	06/20/17	<0.0025	0.0081	0.0596	<0.001	<0.001	0.00877	0.008	0.620	<0.001	0.0195	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5430
	06/27/17	<0.0025	0.00786	0.0554	<0.001	<0.001	<0.005	0.007	0.630	<0.001	0.0185	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6390
	07/10/17	<0.0025	0.00846	0.0582	<0.001	<0.001	<0.005	0.009	0.620	<0.001	0.0187	<0.0002	<0.005	<0.005	<0.0015	--	--	1.069
	07/18/17	<0.0025	0.00815	0.0549	<0.001	<0.001	<0.005	0.008	0.630	<0.001	0.0183	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1910
	06/21/18	<0.0025	0.0084	0.0591	<0.001	<0.001	<0.005	0.00711	0.600	<0.00072 J	0.0175	<0.0002	<0.005	<0.005	<0.0015	0.370	1.705	2.08
	09/18/18	NA	0.0079	0.0577	NA	NA	<0.002	0.00673	0.582	<0.0003	0.019	NA	<0.002	NA	NA	1.610	<0.543	2.15
	06/05/19	<0.0008	0.0079	0.0571	<0.0003	<0.0003	<0.002	0.00729	0.670	<0.0003	0.0195	<0.00008	<0.002	<0.0020	<0.0005	0.436	<0.547	0.98
	10/03/19	<0.0008	0.0076	0.0532	<0.0003	<0.0003	<0.002	0.00699	0.559	0.00101	0.017	<0.00008	<0.002	<0.002	<0.0005	1.85	<0.739	1.85
	06/09/20	<0.0008	<0.002	0.0376	<0.0003	<0.0003	<0.002	<0.003	0.205 J	<0.0003	0.00751 J	<0.00008	0.0021 J	<0.002	<0.0005	0.0553	0.264	0.319
	10/06/20	<0.000800	0.0075	0.0586	<0.0003	<0.000300	<0.00200	0.00862	0.736	0.000375 J	0.0186	<0.0000800	<0.00200	<0.00200	<0.000500	0.0684	<1.23	0.0684
	06/02/21	<0.000800	0.00808	0.0582	<0.0003	<0.000300	<0.00200	0.00934	0.769	0.000418 J	0.0176	<0.0000800	<0.00200	<0.00200	<0.000500	0.298	0.726	1.02
	09/28/21	<0.000800	0.0086	0.0543	<0.0003	<0.000300	<0.00200	0.0104	0.647	0.00139	0.0181	<0.0000800	<0.00200	<0.00200	<0.000500	0.151 J	1.91	2.06
	05/26/22	<0.000800	0.0077	0.0570	<0.000300	<0.000300	<0.00200	0.00996	0.613	<0.000300	0.0180	<0.0000800	<0.002	<0.00200	<0.000500	0.0865 J	0.661	0.747
09/19/22	<0.000800	0.0082	0.058	<0.000300	<0.000300	<0.00200	0.0107	0.502	<0.000300	0.0182	<0.0000800	<0.00200	<0.00200	<0.000500	<0.262	0.441 J	0.534 J	
05/26/23	<0.000800	0.0076	0.0554	<0.000300	<0.000300	0.00214 J	0.00904	0.558	0.000706 J	0.0182	<0.0000800	<0.00200	<0.00200	<0.000500	<0.0864	0.947	1.03	
08/24/23	<0.000800	0.0087	0.057	<0.000300	<0.000300	0.00264 J	0.0104	0.547	0.00121	0.0161	0.000224	<0.00200	<0.00200	<0.000500	0.245 J	0.671	0.916	

**TABLE 4  
APPENDIX IV ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
MW-5	03/30/17	<0.0025	0.00953	0.0748	<0.001	<0.001	<0.005	<0.005	0.510	<0.001	0.0192	<0.0002	<0.005	<0.005	<0.0015	--	--	1.443
	05/10/17	<0.0025	0.00955	0.0706	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0179	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6150
	05/16/17	<0.0025	0.00967	0.0708	<0.001	<0.001	<0.005	<0.005	0.500	<0.001	0.0181	<0.0002	<0.005	<0.005	<0.0015	--	--	0.6410
	06/08/17	<0.0025	0.00908	0.0701	<0.001	<0.001	<0.005	<0.005	0.550	<0.001	0.0200	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1790
	06/21/17	<0.0025	0.00917	0.0767	<0.001	<0.001	<0.005	<0.005	0.530	<0.001	0.0197	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1060
	06/26/17	<0.0025	0.00955	0.0735	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0204	<0.0002	<0.005	<0.005	<0.0015	--	--	1.112
	07/11/17	<0.0025	0.00945	0.0712	<0.001	<0.001	<0.005	<0.005	0.520	<0.001	0.0183	<0.0002	<0.005	<0.005	<0.0015	--	--	0.5120
	07/19/17	<0.0025	0.00941	0.0735	<0.001	<0.001	<0.005	<0.005	0.530	<0.001	0.0186	<0.0002	<0.005	<0.005	<0.0015	--	--	0.1910
	06/25/18	<0.0025	0.01	0.0733	0.001	<0.001	<0.005	<0.005	0.560	<0.001	0.0182	<0.0002	<0.005	<0.005	<0.0015	<0.251	<1.369	<1.62
	09/18/18	NA	0.0095	0.0697	NA	NA	<0.002	<0.003	0.493	<0.0003	0.0195	NA	<0.002	NA	NA	<0.282	<0.606	<0.89
	06/03/19	<0.0008	0.0095	0.0678	0.0003	<0.0003	<0.002	<0.003	0.596	<0.0003	0.0206	<0.00008	<0.002	<0.002	<0.0005	<0.619	<0.917	<1.54
	10/02/19	<0.0008	0.0092	0.067	0.0003	<0.0003	<0.002	<0.003	0.543	<0.0003	0.0187	<0.00008	<0.002	<0.002	<0.0005	0.47	0.117	0.587
	06/09/20	<0.0008	0.0089	0.0689	<0.0003	<0.0003	<0.002	<0.003	0.370 J	<0.0003	0.0192	<0.00008	<0.002	<0.002	<0.0005	0.171	0.211	0.382
	10/06/20	<0.000800	0.0093	0.0708	<0.0003	<0.000300	<0.00200	<0.00300	0.662	<0.000300	0.0190	<0.0000800	<0.00200	<0.00200	<0.000500	0.0604	0.0798	0.14
	06/25/21	<0.000800	0.00918	0.0652	<0.0003	<0.000300	0.00913	<0.00300	0.661	<0.000300	0.0189	<0.0000800	<0.00200	<0.00200	<0.000500	0.0362	0.2	0.236
	09/28/21	<0.000800	0.0089	0.0639	<0.0003	<0.000300	<0.00200	<0.00300	0.559	<0.000300	0.0194	<0.0000800	<0.00200	<0.00200	<0.000500	0.311	1.74	2.05
	05/26/22	<0.000800	0.0096	0.069	<0.000300	<0.000300	<0.00200	<0.00300	0.566	<0.000300	0.0185	<0.0000800	<0.002	<0.00200	<0.000500	0.106 J	0.848	0.954
09/20/22	<0.000800	0.0096	0.0675	<0.000300	<0.000300	<0.00200	<0.00300	0.433	<0.000300	0.0183	<0.0000800	<0.00200	<0.00200	<0.000500	0.119 J	0.554	0.663	
05/25/23	<0.000800	0.0095	0.0537	<0.000300	<0.000300	<0.00200	<0.00300	0.487	<0.000300	0.0192	<0.0000800	<0.00200	<0.00200	<0.000500	<0.152	<0.598	<1.12	
08/23/23	<0.000800	0.0099	0.0613	<0.000300	<0.000300	<0.00200	<0.00300	0.511	<0.000300	0.0178	<0.0000800	<0.00200	<0.00200	<0.000500	0.198 J	1.46	1.65	
MW-6	03/29/17	<0.0025	0.00827	0.0900	<0.001	<0.001	<0.005	<0.005	0.380	<0.001	<0.010	<0.0002	0.00749	<0.005	<0.0015	--	--	1.009
	05/11/17	<0.0025	0.00738	0.0758	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	0.0101	<0.0002	0.0176	<0.005	<0.0015	--	--	0.8250
	05/16/17	<0.0025	0.00803	0.0784	<0.001	<0.001	<0.005	<0.005	0.360	<0.001	<0.010	<0.0002	0.0131	<0.005	<0.0015	--	--	0.7740
	06/07/17	<0.0025	0.00772	0.0798	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	<0.010	<0.0002	0.00949	<0.005	<0.0015	--	--	0.6640
	06/22/17	<0.0025	0.00764	0.083	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	0.0109	<0.0002	0.0084	<0.005	<0.0015	--	--	0.2150
	06/28/17	<0.0025	0.00779	0.0842	<0.001	<0.001	<0.005	<0.005	0.370	<0.001	<0.010	<0.0002	0.00806	<0.005	<0.0015	--	--	1.730
	07/12/17	<0.0025	0.0077	0.0819	<0.001	<0.001	<0.005	<0.005	0.350	<0.001	<0.010	<0.0002	0.0076	<0.005	<0.0015	--	--	1.012
	07/20/17	<0.0025	0.001	0.0010	<0.001	<0.001	<0.005	<0.005	0.390	<0.001	<0.010	<0.0002	0.001	<0.005	<0.0015	--	--	0.3660
	06/22/18	<0.0025	0.0086	0.0912	<0.001	<0.001	<0.005	<0.005	0.410	<0.001	0.00924 J	<0.0002	0.00837	<0.005	<0.0015	<0.309	<1.243	<1.55
	09/18/18	NA	0.008	0.0828	NA	NA	<0.002	<0.003	0.353 J	0.000349 J	0.0107	NA	0.0274	NA	NA	<0.196	1.06	1.256
	06/03/19	<0.0008	0.008	0.0894	<0.0003	<0.0003	<0.002	<0.003	0.438	<0.0003	0.0097 J	<0.00008	0.00884	<0.0020	<0.0005	<0.407	<0.623	<1.03
	10/02/19	<0.0008	0.0078	0.0876	<0.0003	<0.0003	<0.002	<0.003	0.357 J	<0.0003	0.0088 J	<0.00008	0.00875	<0.0020	<0.0005	0.715	1.23	1.94
	06/09/20	<0.0008	0.008	0.078	<0.0003	<0.0003	<0.002	<0.003	0.4	<0.0003	0.0113	<0.00008	0.0357	<0.002	<0.0005	0.00643	0.127	0.134
	10/06/20	<0.000800	0.0077	0.0912	<0.0003	<0.000300	<0.00200	0.00319 J	0.512	<0.000300	0.00900 J	<0.0000800	0.00924	<0.00200	<0.000500	1.02	0.621	1.64
	06/25/21	<0.000800	0.00778	0.086	<0.0003	<0.000300	<0.00200	<0.00300	0.542	<0.000300	0.0101	<0.0000800	0.00823	<0.00200	<0.000500	0.206	1.03	1.24
	09/28/21	<0.000800	0.0079	0.0896	<0.0003	<0.000300	<0.00200	<0.00300	0.386 J	<0.000300	0.00911 J	<0.0000800	0.00801	<0.00200	<0.000500	0.334	1.6	1.94
	05/26/22	<0.000800	0.0085	0.0709	<0.000300	<0.000300	<0.00200	<0.00300	0.416	<0.000300	0.0113	<0.0000800	0.0360	<0.00200	<0.000500	0.163 J	0.661	0.774
09/19/22	<0.000800	0.0088	0.0658	<0.000300	<0.000300	<0.00200	<0.00300	0.353 J	<0.000300	0.0117	<0.0000800	0.0375	<0.00200	<0.000500	0.176 J	<0.0833	0.259 J	
07/06/23	<0.000800	0.009	0.0739	<0.000300	<0.000300	<0.00200	<0.00300	0.257 J	<0.000300	0.0127	<0.0000800	0.0343	<0.00200	<0.000500	4.7	0.327 J	5.02	
08/24/23	<0.000800	0.0088	0.0705	<0.000300	<0.000300	<0.00200	<0.00300	0.371 J	<0.000300	0.0103	<0.0000800	0.0365	<0.00200	<0.000500	0.16 J	2.06	2.22	

**TABLE 4  
APPENDIX IV ANALYTICAL RESULTS  
COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
MW-9	03/30/17	<0.0025	0.00909	0.121	<0.001	<0.001	<0.005	<0.005	1.130	0.00217	<0.010	<0.0002	0.0747	<0.005	<0.0015	--	--	1.353
	05/10/17	<0.0025	0.00996	0.105	<0.001	<0.001	<0.005	<0.005	1.290	0.00433	<0.010	<0.0002	0.0900	<0.005	<0.0015	--	--	0.4800
	05/17/17	<0.0025	0.00958	0.101	<0.001	<0.001	<0.005	<0.005	1.260	0.00377	<0.010	<0.0002	0.0899	<0.005	<0.0015	--	--	0.3600
	06/07/17	<0.0025	0.0093	0.100	<0.001	<0.001	<0.005	<0.005	1.260	<0.001000	<0.010	<0.0002	0.0926	<0.005	<0.0015	--	--	0.4760
	06/21/17	<0.0025	0.00937	0.119	<0.001	<0.001	<0.005	<0.005	1.390	0.00136	<0.010	<0.0002	0.1020	<0.005	<0.0015	--	--	1.579
	06/26/17	<0.0025	0.0107	0.114	<0.001	<0.001	0.0102	<0.005	1.400	0.00217	<0.010	<0.0002	0.1060	<0.005	<0.0015	--	--	1.023
	07/11/17	<0.0025	0.0105	0.103	<0.001	<0.001	0.00566	<0.005	1.300	0.00124	<0.010	<0.0002	0.1050	<0.005	<0.0015	--	--	0.8630
	07/19/17	<0.0025	0.0103	0.101	<0.001	<0.001	<0.005	<0.005	1.400	<0.001000	<0.010	<0.0002	0.1130	<0.005	<0.0015	--	--	0.5840
	06/21/18	<0.0025	0.0104	0.100	<0.001	<0.001	<0.005	<0.005	1.500	<0.00072 J	<0.01	<0.0002	0.0617	<0.005	<0.0015	0.608	<1.303	1.91
	09/18/18	NA	0.0103	0.0985	NA	NA	<0.002	<0.003	1.100	<0.000300	0.00639 J	NA	0.0502	NA	NA	0.618	<0.638	1.26
	06/05/19	<0.0008	0.0109	0.102	<0.0003	<0.0003	<0.002	<0.003	1.380	<0.0003	0.0055 J	<0.00008	0.0683	<0.002	<0.0005	<0.402	<0.683	<1.085
	10/03/19	<0.0008	0.0109	0.128	0.00069 J	<0.0003	<0.002	0.00337 J	1.410	0.00876	0.0064 J	<0.00008	0.0507	0.0041 J	<0.0005	0.577	0.747	1.32
	06/09/20	<0.0008	0.0126	0.0865	<0.0003	<0.0003	<0.002	<0.003	1.58	0.000577 J	<0.005	<0.00008	0.0774	<0.002	<0.0005	0.132	<0.96	0.132
	10/06/20	<0.000800	0.0225	0.0786	<0.0003	<0.000300	<0.00200	<0.00300	1.73	<0.000300	<0.00500	<0.0000800	0.0616	<0.00200	<0.000500	0.14	1.51	1.65
	06/25/21	<0.000800	0.0151	0.163	<0.0003	<0.000300	<0.00200	<0.00300	0.907	0.000408 J	0.0103	<0.0000800	0.0199	<0.00200	<0.000500	0.38	0.665	1.04
	09/28/21	<0.000800	0.0197	0.163	<0.0003	<0.000300	<0.00200	<0.00300	0.629	<0.000300	0.00865 J	<0.0000800	0.0158	<0.00200	<0.000500	0.278	1.75	2.03
	05/25/22	<0.000800	0.0225	0.105	<0.000300	<0.000300	<0.00200	<0.00300	0.926	<0.000300	0.00750 J	<0.0000800	0.0351	<0.00200	<0.000500	0.0612 U	1.00	1.07
	09/19/22	<0.000800	0.035	0.126	<0.000300	<0.000300	<0.00200	<0.00300	0.681	<0.000300	0.00914 J	<0.0000800	0.0197	<0.00200	<0.000500	0.150 J	<0.524	<0.548
05/25/23	<0.000800	0.0177	0.133	<0.000300	<0.000300	<0.00200	<0.00300	0.664	<0.000300	0.00813 J	<0.0000800	0.0242	<0.00200	<0.000500	<0.163	0.341 J	0.415 J	
08/23/23	<0.000800	0.0163	0.127	<0.000300	<0.000300	<0.00200	<0.00300	0.785	0.000317 J	0.00694 J	<0.0000800	0.0356	<0.00200	<0.000500	0.637	2.06	2.7	
MW-10	03/30/17	<0.0025	0.0110	0.0844	<0.001	<0.001	<0.005	<0.005	0.540	<0.001	0.0179	<0.0002	0.0342	<0.005	<0.0015	--	--	1.439
	05/10/17	<0.0025	0.0146	0.0554	<0.001	<0.001	0.00533	<0.005	0.830	<0.001	0.0122	<0.0002	0.102	<0.005	<0.0015	--	--	0.8880
	05/16/17	<0.0025	0.0150	0.0598	<0.001	<0.001	<0.005	<0.005	0.810	<0.001	0.0123	<0.0002	0.0987	<0.005	<0.0015	--	--	0.1830
	06/08/17	<0.0025	0.0144	0.0544	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0115	<0.0002	0.106	<0.005	<0.0015	--	--	0.06700
	06/21/17	<0.0025	0.0149	0.054	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0133	<0.0002	0.113	<0.005	<0.0015	--	--	0.7090
	06/26/17	<0.0025	0.0160	0.0587	<0.001	<0.001	0.0177	<0.005	0.840	<0.001	0.0137	<0.0002	0.116	<0.005	<0.0015	--	--	0.7180
	07/11/17	<0.0025	0.0149	0.0508	<0.001	<0.001	<0.005	<0.005	0.840	<0.001	0.0119	<0.0002	0.114	<0.005	<0.0015	--	--	1.713
	07/19/17	<0.0025	0.0146	0.0633	<0.001	<0.001	0.00963	<0.005	0.860	<0.001	0.0127	<0.0002	0.121	<0.005	<0.0015	--	--	2.132
	06/22/18	<0.0025	0.0154	0.0692	<0.001	<0.001	<0.005	<0.005	0.88	<0.00095 J	0.0122	<0.0002	0.134	<0.005	<0.0015	<0.212	<1.192	<1.40
	09/18/18	NA	0.0140	0.0446	NA	NA	<0.002	<0.003	0.759	<0.0003	0.0141	NA	0.125	NA	NA	0.151	<0.848	0.999
	06/03/19	<0.0008	0.0142	0.0420	<0.0003	<0.0003	<0.002	<0.003	0.953	<0.0003	0.0139	<0.00008	0.109	<0.002	<0.0005	<0.203	0.814	1.017
	10/02/19	<0.0008	0.0139	0.0406	<0.0003	<0.0003	<0.002	<0.003	0.891	<0.0003	0.0127	<0.00008	0.106	<0.002	<0.0005	<0.325	0.901	0.901
	06/09/20	<0.0008	0.014	0.0444	<0.0003	<0.0003	<0.002	0.00334 J	0.818	<0.0003	0.013	<0.00008	0.088	<0.002	<0.0005	0.0959	1.22	1.31
	10/06/20	<0.000800	0.0139	0.0411	<0.0003	<0.000300	<0.00200	0.00390 J	1.05	<0.000300	0.0127	<0.0000800	0.0865	<0.00200	<0.000500	0.0332	1.68	1.71
	06/25/21	<0.000800	0.00942	0.0792	<0.0003	<0.000300	<0.00200	<0.00300	0.717	<0.000300	0.018	<0.0000800	0.0181	<0.00200	<0.000500	0.179	1.13	1.3
	09/28/21	<0.000800	0.0143	0.0477	<0.0003	<0.000300	<0.00200	0.00607	0.96	<0.000300	0.0109	<0.0000800	0.108	<0.00200	<0.000500	0.182	0.472	0.654
	05/25/22	<0.000800	0.0146	0.0488	<0.000300	<0.000300	<0.00200	0.00492 J	1.01	<0.000300	0.0121	<0.0000800	0.0902	<0.00200	<0.000500	0.159 J	0.234 J	0.393 J
	09/20/22	<0.000800	0.0144	0.0556	<0.000300	<0.000300	<0.00200	0.00396 J	0.828	<0.000300	0.0125	<0.0000800	0.079	<0.00200	<0.000500	0.178 J	0.526	0.703
05/25/23	<0.000800	0.0155	0.0519	<0.000300	<0.000300	<0.00200	0.00569	0.892	<0.000300	0.0124	<0.0000800	0.0791	<0.00200	<0.000500	0.935	<0.268	0.935	
08/23/23	<0.000800	0.0152	0.0496	<0.000300	<0.000300	<0.00200	0.00574	0.658	<0.000300	0.011	<0.0000800	0.0834	<0.00200	<0.000500	<0.340	1.16	1.25	

**TABLE 4**  
**APPENDIX IV ANALYTICAL RESULTS**  
**COLETO CREEK PRIMARY ASH POND**

Sample Location	Date Sampled	Sb	As	Ba	Be	Cd	Cr	Co	F	Pb	Li	Hg	Mo	Se	Tl	Ra 226	Ra 228	Ra 226/228 Combined
MW-11	05/10/17	<0.0025	0.0156	0.0899	<0.001	<0.001	<0.005	<0.005	0.82	0.00239	0.0125	<0.0002	0.0082	<0.005	<0.0015	--	--	0.4560
	05/16/17	<0.0025	0.018	0.0869	<0.001	<0.001	0.00731	<0.005	0.85	0.0113	0.0144	<0.0002	0.00841	<0.005	<0.0015	--	--	1.418
	05/18/17	<0.0025	0.0188	0.0779	<0.001	<0.001	<0.005	<0.005	0.94	0.00204	0.0122	<0.0002	0.00781	<0.005	<0.0015	--	--	0.6390
	06/07/17	<0.0025	0.0175	0.0835	<0.001	<0.001	<0.005	<0.005	0.93	0.00171	0.0137	<0.0002	0.00744	<0.005	<0.0015	--	--	0.5020
	06/21/17	<0.0025	0.0203	0.0822	<0.001	<0.001	<0.005	<0.005	1.04	0.00322	0.0136	<0.0002	0.00659	<0.005	<0.0015	--	--	1.084
	06/26/17	<0.0025	0.0237	0.0954	<0.001	<0.001	0.0131	<0.005	1.00	0.00593	0.0176	<0.0002	0.00796	<0.005	<0.0015	--	--	3.067
	07/11/17	<0.0025	0.0212	0.0725	<0.001	<0.001	<0.005	<0.005	1.00	<0.001	0.012	<0.0002	0.00765	<0.005	<0.0015	--	--	0.7530
	07/19/17	<0.0025	0.0224	0.0709	<0.001	<0.001	0.00762	<0.005	1.01	0.0018	0.0137	<0.0002	0.00783	<0.005	<0.0015	--	--	1.551
	06/21/18	<0.0025	0.0367	0.0805	<0.001	<0.001	<0.005	<0.005	0.96	0.00241	0.0135	<0.0002	0.00465	<0.005	<0.0015	<0.234	<1.312	<1.55
	09/18/18	NA	0.0382	0.0645	NA	NA	<0.002	<0.003	0.754	<0.0003	0.0139	NA	0.00445 J	NA	NA	<0.188	0.597	0.785
	06/03/19	<0.000800	0.0379	0.0834	<0.0003	<0.0003	<0.002	<0.003	0.837	<0.0003	0.0154	<0.00008	0.0032 J	<0.002	<0.0005	<0.481	0.991	1.472
	10/02/19	<0.000800	0.0379	0.0744	<0.0003	<0.0003	<0.002	<0.003	0.768	0.000391 J	0.014	<0.00008	0.0026 J	<0.002	<0.0005	1.57	0.478	2.040
	06/09/20	<0.000800	0.0293	0.0948	<0.0003	<0.0003	<0.002	<0.003	0.571	0.000675 J	0.0156	<0.00008	0.00215 J	<0.002	<0.0005	0.163	1.31	1.480
	10/06/20	<0.000800	0.0159	0.105	<0.0003	<0.000300	<0.00200	<0.00300	0.767	0.000320 J	0.0165	<0.0000800	0.00340 J	<0.00200	<0.000500	0.354	0.53	0.884
	06/25/21	<0.000800	0.0136	0.09	<0.0003	<0.000300	<0.00200	<0.00300	0.876	<0.000300	0.0162	<0.0000800	0.019	<0.00200	<0.000500	0.237	0.824	1.060
	6/25/21 DUP	<0.000800	0.0134	0.0905	<0.0003	<0.000300	<0.00200	<0.00300	0.865	<0.000300	0.148	<0.0000800	0.0194	<0.00200	<0.000500	0.173 J	1.64	1.81
	09/28/21	<0.000800	0.0137	0.101	<0.0003	<0.000300	<0.00200	<0.00300	0.742	0.000475 J	0.0161	<0.0000800	0.0189	<0.00200	<0.000500	0.0336	2.74	2.77
	9/28/21 DUP	<0.000800	0.0586	0.181	<0.0003	<0.000300	<0.00200	0.00362 J	0.498	<0.0003	0.00656	<0.0000800	0.00467	<0.00200	<0.000500	0.426	1.28	1.71
	05/25/22	<0.000800	0.0193	0.0854	<0.000300	<0.000300	<0.00200	<0.00300	0.699	0.000301 J	0.0137	<0.0000800	0.0170	<0.00200	<0.000500	0.193	0.876	1.07
	09/19/22	<0.000800	0.0158	0.0794	<0.000300	<0.000300	<0.00200	<0.00300	0.697	<0.000300	0.013	<0.0000800	0.0231	<0.00200	<0.000500	0.0814 J	0.296 J	0.377 J
05/25/23	<0.000800	0.0213	0.0922	<0.000300	<0.000300	<0.00200	<0.00300	0.542	<0.000300	0.0142	<0.0000800	0.0133	<0.00200	<0.000500	<0.180	0.903 J	0.937 J	
08/23/23	<0.000800	0.0171	0.0919	<0.000300	<0.000300	<0.00200	<0.00300	0.600	0.000441 J	0.0123	<0.0000800	0.0130	<0.00200	<0.000500	0.318 J	1.9	2.22	

Notes:

1. All concentrations in mg/L except Ra 226/228 Combined, which is in pCi/L.
2. J - concentration is below sample quantitation limit; result is an estimate; < - non-detect result (concentration below sample detection limit).
3. NA = Not analyzed.

**TABLE 5  
GROUNDWATER ELEVATION SUMMARY  
PRIMARY ASH POND AREA  
COLETO CREEK STEAM ELECTRIC STATION**

Well ID	TOC Elevation (feet amsl)	Casing Stickup (feet ags)	Screen Interval (feet bgs)	Measurement Date	Depth to Water (feet btoc)	Depth to Water (feet bgs)	Water Elevation (feet amsl)
<b>Upgradient Wells</b>							
BV-5	135.8	2.80	30-40	3/29/2017	29.35	26.55	106.45
				5/11/2017	29.11	26.31	106.69
				5/16/2017	29.10	26.30	106.70
				6/7/2017	29.92	27.12	105.88
				6/20/2017	29.18	26.38	106.62
				6/27/2017	29.25	26.45	106.55
				7/12/2017	29.32	26.52	106.48
				7/18/2017	29.41	26.61	106.39
				09/18/18	30.33	27.53	105.47
				06/03/19	28.11	25.31	107.69
				10/02/19	29.29	26.49	106.51
				06/09/20	30.01	27.21	105.79
				10/06/20	30.55	27.75	105.25
				06/02/21	30.12	27.32	105.68
				06/28/21	29.30	26.50	106.50
				05/25/22	30.21	27.41	105.59
09/21/22	31.18	28.38	104.62				
05/26/23	31.55	28.75	104.25				
08/23/23	32.21	29.41	103.59				
BV-21	131.17	2.77	30-40	3/28/2017	19.25	16.48	111.92
				5/9/2017	18.54	15.77	112.63
				5/17/2017	18.52	15.75	112.65
				6/6/2017	18.44	15.67	112.73
				6/20/2017	18.76	15.99	112.41
				6/27/2017	18.71	15.94	112.46
				7/10/2017	18.86	16.09	112.31
				7/18/2017	18.90	16.13	112.27
				09/18/18	19.56	16.79	111.61
				06/03/19	17.85	15.08	113.32
				10/02/19	19.71	16.94	111.46
				06/09/20	19.67	16.90	111.50
				10/06/20	19.75	16.98	111.42
				06/02/21	19.67	16.90	111.50
				09/28/21	19.25	16.48	111.92
				05/25/22	23.08	20.31	108.09
09/20/22	23.51	20.74	107.66				
05/26/23	25.00	22.23	106.17				
08/23/23	25.71	22.94	105.46				
MW-8	134.72	2.94	37-57	3/28/2017	22.60	19.66	112.12
				5/9/2017	21.29	18.35	113.43
				5/15/2017	21.30	18.36	113.42
				6/6/2017	21.25	18.31	113.47
				6/20/2017	22.08	19.14	112.64
				6/27/2017	22.12	19.18	112.60
				7/10/2017	22.50	19.56	112.22
				7/18/2017	22.67	19.73	112.05
				09/18/18	20.76	17.82	113.96
				06/03/19	19.70	16.76	115.02
				10/02/19	23.13	20.19	111.59
				06/09/20	19.85	16.91	114.87
				10/06/20	21.30	18.36	113.42
				06/02/21	18.01	15.07	116.71
				09/28/21	18.60	15.66	116.12
				05/25/22	26.20	23.26	108.52
09/20/22	25.81	22.87	108.91				
05/26/23	27.13	24.19	107.59				
08/23/23	27.90	24.96	106.82				

**TABLE 5  
GROUNDWATER ELEVATION SUMMARY  
PRIMARY ASH POND AREA  
COLETO CREEK STEAM ELECTRIC STATION**

Well ID	TOC Elevation (feet amsl)	Casing Stickup (feet ags)	Screen Interval (feet bgs)	Measurement Date	Depth to Water (feet btoc)	Depth to Water (feet bgs)	Water Elevation (feet amsl)
<b>Downgradient Wells</b>							
MW-4	137.71	3.41	50-70	3/28/2017	29.25	25.84	108.46
				5/9/2017	28.94	25.53	108.77
				5/15/2017	28.93	25.52	108.78
				6/6/2017	28.83	25.42	108.88
				6/20/2017	28.94	25.53	108.77
				6/22/2017	29.02	25.61	108.69
				7/10/2017	29.11	25.70	108.60
				7/18/2017	29.15	25.74	108.56
				09/18/18	30.54	27.13	107.17
				06/03/19	27.92	24.51	109.79
				10/02/19	29.89	26.48	107.82
				06/09/20	29.86	26.45	107.85
				10/06/20	30.65	27.24	107.06
				06/02/21	29.74	26.33	107.97
				09/28/21	28.60	25.19	109.11
				05/25/22	31.13	27.72	106.58
09/19/22	30.90	27.49	106.81				
05/26/23	32.18	28.77	105.53				
08/23/23	32.56	29.15	105.15				
MW-5	122.31	2.74	39-59	3/30/2017	20.94	18.20	101.37
				5/10/2017	20.30	17.56	102.01
				5/16/2017	20.37	17.63	101.94
				6/8/2017	20.61	17.87	101.70
				6/21/2017	20.87	18.13	101.44
				6/26/2017	21.00	18.26	101.31
				7/11/2017	21.21	18.47	101.10
				09/18/18	22.21	19.47	100.10
				06/03/19	20.42	17.68	101.89
				10/02/19	22.12	19.38	100.19
				06/09/20	22.08	19.34	100.23
				10/06/20	23.90	21.16	98.41
				06/02/21	19.53	16.79	102.78
				09/28/21	19.65	16.91	102.66
				05/25/22	21.32	18.58	100.99
				09/20/22	20.20	17.46	102.11
05/26/23	20.53	17.79	101.78				
08/23/23	21.69	18.95	100.62				
MW-6	119.22	2.87	41-61	3/29/2017	15.76	12.89	103.46
				5/11/2017	15.70	12.83	103.52
				5/16/2017	15.68	12.81	103.54
				6/7/2017	15.92	13.05	103.30
				6/22/2017	16.34	13.47	102.88
				6/28/2017	16.33	13.46	102.89
				7/12/2017	16.76	13.89	102.46
				7/20/2017	16.92	14.05	102.30
				09/18/18	16.76	13.89	102.46
				06/03/19	15.66	12.79	103.56
				10/02/19	17.62	14.75	101.60
				10/06/20	17.90	15.03	101.32
				06/02/21	14.96	12.09	104.26
				09/28/21	14.76	11.89	104.46
				05/28/22	16.38	13.51	102.84
				09/19/22	14.98	12.11	104.24
05/26/23	15.99	13.12	103.23				
08/23/23	17.06	14.19	102.16				

**TABLE 5  
GROUNDWATER ELEVATION SUMMARY  
PRIMARY ASH POND AREA  
COLETO CREEK STEAM ELECTRIC STATION**

Well ID	TOC Elevation (feet amsl)	Casing Stickup (feet ags)	Screen Interval (feet bgs)	Measurement Date	Depth to Water (feet btoc)	Depth to Water (feet bgs)	Water Elevation (feet amsl)
MW-9	132.30	3.00	40-60	3/30/2017	28.31	25.31	103.99
				5/10/2017	27.75	24.75	104.55
				5/17/2017	29.87	26.87	102.43
				6/7/2017	28.20	25.20	104.10
				6/21/2017	28.65	25.65	103.65
				6/26/2017	28.83	25.83	103.47
				7/11/2017	29.12	26.12	103.18
				7/19/2017	29.48	26.48	102.82
				09/18/18	30.13	27.13	102.17
				06/03/19	28.64	25.64	103.66
				10/02/19	30.47	27.47	101.83
				06/09/20	29.73	26.73	102.57
				10/06/20	30.90	27.90	101.40
				06/02/21	27.25	24.25	105.05
				09/28/21	28.50	25.50	103.80
				05/25/22	26.76	23.76	105.54
				09/19/22	26.04	23.04	106.26
05/26/23	30.06	27.06	102.24				
08/23/23	30.75	27.75	101.55				
MW-10	130.40	2.80	40-60	3/30/2017	27.90	25.10	102.50
				5/9/2017	27.50	24.70	102.90
				5/16/2017	27.57	24.77	102.83
				6/8/2017	27.68	24.88	102.72
				6/21/2017	27.84	25.04	102.56
				6/26/2017	27.97	25.17	102.43
				7/11/2017	28.14	25.34	102.26
				7/19/2017	28.26	25.46	102.14
				09/18/18	29.15	26.35	101.25
				06/03/19	27.10	24.30	103.30
				08/08/19	27.98	25.18	102.42
				10/02/19	28.81	26.01	101.59
				06/09/20	29.50	26.70	100.90
				10/06/20	30.30	27.50	100.10
				06/02/21	27.51	24.71	102.89
				09/28/21	27.32	24.52	103.08
				05/25/22	28.40	25.60	102.00
09/20/22	28.75	25.95	101.65				
05/26/23	28.74	25.94	101.66				
08/23/23	29.53	26.73	100.87				
MW-11	118.66	2.86	29-49	5/10/2017	14.30	11.44	104.36
				5/16/2017	14.39	11.53	104.27
				6/7/2017	14.56	11.70	104.10
				6/21/2017	14.85	11.99	103.81
				6/26/2017	14.94	12.08	103.72
				7/11/2017	15.20	12.34	103.46
				7/19/2017	15.31	12.45	103.35
				09/18/18	15.22	12.36	103.44
				06/03/19	14.82	11.96	103.84
				10/02/19	15.93	13.07	102.73
				06/09/20	14.54	11.68	104.12
				10/06/20	15.10	12.24	103.56
				06/02/21	13.80	10.94	104.86
				09/28/21	14.50	11.64	104.16
05/25/22	13.80	10.94	104.86				
09/19/22	13.59	10.73	105.07				
05/26/23	15.43	12.57	103.23				
08/23/23	15.72	12.86	102.94				

Notes:

Abbreviations: ags - above ground surface; amsl - above mean sea level; bgs - below ground surface; btoc - below top of casing.

**APPENDIX A**  
**LABORATORY ANALYTICAL REPORTS**





June 30, 2023

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TEL: (512) 671-3434

FAX

Order No.: 2305370

RE: Coletto Creek CCR 1H23 GW

Dear Jacob Jarvis:

DHL Analytical, Inc. received 5 sample(s) on 5/26/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

  
John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification  
Number: T104704211-23-29



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2300 Double Creek Dr. Round Rock, TX 78664

Phone 512.388.8222

Web: [www.dhlanalytical.com](http://www.dhlanalytical.com)

Email: [login@dhlanalytical.com](mailto:login@dhlanalytical.com)

# CHAIN-OF-CUSTODY

PAGE \_\_\_\_\_ OF \_\_\_\_\_

CLIENT: <u>WSP USA Inc</u>				DATE: <u>5-25-23</u>				LAB USE ONLY							
ADDRESS: <u>Round Rock, TX</u>				PO#:				DHL WORKORDER #: <u>2305370</u>							
PHONE: <u>254-366-9227</u> EMAIL: <u>Gregory.Logan@wsp.com</u>				PROJECT LOCATION OR NAME: <u>Coleta Creek CCR 1423 6W</u>											
DATA REPORTED TO: <u>Jacob Jarvis, Greg Logan</u>				CLIENT PROJECT # <u>314097.022</u>				COLLECTOR: <u>Christian Martinez</u>							
ADDITIONAL REPORT COPIES TO:															
Authorize 5% surcharge for TRRP report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		W=WATER    SE=SEDIMENT L=LIQUID    P=PAINT S=SOIL    SL=SLUDGE SO=SOLID		<b>PRESERVATION</b> HCL <input type="checkbox"/> H <sub>3</sub> PO <sub>4</sub> <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> Zn Acetate <input type="checkbox"/> ICE <input checked="" type="checkbox"/> UNPRESERVED <input type="checkbox"/>				<b>ANALYSES</b> BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> (METHOD 8260) TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> HOLD 1006 <input type="checkbox"/> GRO 8015 <input type="checkbox"/> DRO 8015 <input type="checkbox"/> VOC 8260 <input type="checkbox"/> VOC 624.1 <input type="checkbox"/> SVOC 8270 <input type="checkbox"/> SVOC 625.1 <input type="checkbox"/> PAH 8270 <input type="checkbox"/> HOLD PAH <input type="checkbox"/> PEST 8270 <input type="checkbox"/> 625.1 <input type="checkbox"/> O-P PEST 8270 <input type="checkbox"/> PCB 8082 <input type="checkbox"/> 608.3 <input type="checkbox"/> PCB 8270 <input type="checkbox"/> 625.1 <input type="checkbox"/> HERB 8321 <input type="checkbox"/> T PHOS <input type="checkbox"/> AMMONIA <input type="checkbox"/> METALS 6020 <input type="checkbox"/> 200.8 <input type="checkbox"/> DISS. METALS <input type="checkbox"/> RCRA 8 <input type="checkbox"/> TX11 <input type="checkbox"/> pH <input type="checkbox"/> HEX CHROM <input type="checkbox"/> ALKALINITY <input type="checkbox"/> COD <input type="checkbox"/> ANIONS 300 <input type="checkbox"/> 9056 <input type="checkbox"/> TCLP-SVOC <input type="checkbox"/> VOC <input type="checkbox"/> PEST <input type="checkbox"/> HERB <input type="checkbox"/> TCLP-METALS <input type="checkbox"/> RCRA 8 <input type="checkbox"/> TX-11 <input type="checkbox"/> Pb <input type="checkbox"/> RCI <input type="checkbox"/> IGN <input type="checkbox"/> DGAS <input type="checkbox"/> OIL&GREASE <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOIST <input type="checkbox"/> CYANIDE <input type="checkbox"/>				FIELD NOTES			
Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers									
MW-10	01	5-25-23	0821	6W	P	4	3	All samples for Appendix III/IV							
MW-5	02	↓	0925	↓	↓	↓	↓								
MW-9	03	↓	1025	↓	↓	↓	↓								
MW-11	04	↓	1140	↓	↓	↓	↓								
MW-8	05	↓	1542	↓	↓	↓	↓								
Relinquished By: (Sign)		DATE/TIME		Received by:		TURN AROUND TIME (CALL FIRST FOR RUSH)		LAB USE ONLY		THERMO #: <u>78</u>					
<u>[Signature]</u>		<u>5-25-23 1830P</u>		<u>Fedex</u>		RUSH-1 DAY <input type="checkbox"/> RUSH-2 DAY <input type="checkbox"/>		RECEIVING TEMP (°C): <u>5.2°C</u>							
Relinquished By: (Sign)		DATE/TIME		Received by:		RUSH-3 DAY <input type="checkbox"/>		IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO							
<u>Fedex</u>		<u>5-26-23 0830</u>		<u>[Signature]</u>		NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		CUSTODY SEALS ON ICE CHEST: <input type="checkbox"/> BROKEN <input checked="" type="checkbox"/> INTACT <input type="checkbox"/> NOT USED							
Relinquished By: (Sign)		DATE/TIME		Received by:		DUE DATE _____		CARRIER: <input type="checkbox"/> LSO <input checked="" type="checkbox"/> FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> COURIER <input type="checkbox"/> HAND DELIVERED							

**Eric Lau**

---

**From:** John DuPont  
**Sent:** Tuesday, May 28, 2019 11:35 AM  
**To:** Eric Lau  
**Subject:** FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)  
Anions (Cl, F, and SO<sub>4</sub>)  
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)  
Ra-226  
Ra-228

ORIGIN ID: VCTA (956) 330-8422  
CHRISTIAN MARTINEZ  
WSP USA INC.  
1501 E MOCKINGBIRD LN  
STE 420  
VICTORIA, TX 77904  
UNITED STATES US

SHIP DATE: 25MAY23  
ACTWGT: 40.00 LB  
CAD: 2806631/INET4610  
DIMS: 24x12x15 IN  
BILL SENDER

TO **SAMPLE RECEIVING**  
**DHL ANALYTICAL**  
**2300 DOUBLE CREEK DR**

**ROUND ROCK TX 78664**

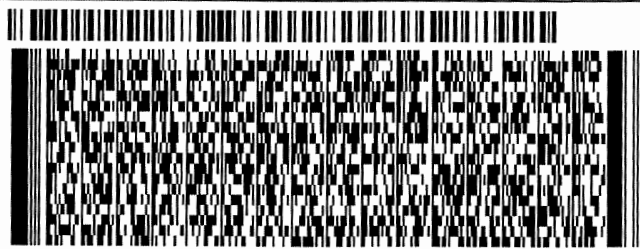
(512) 388-8222  
INV:  
PO:

REF: 31404097.022 TASK 01 SUB

DEPT:

583.612BC3/FE2D

FedEx Ship Manager - Print Your Label(s)



FedEx  
Express



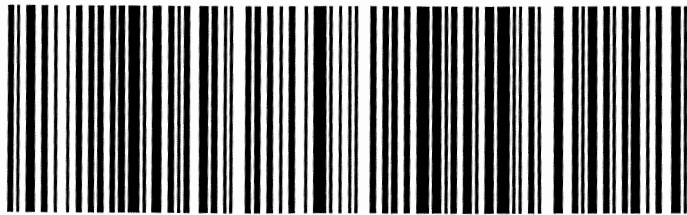
J3202304051100

FRI - 26 MAY 10:30A  
PRIORITY OVERNIGHT

TRK# 7722 6071 5928  
0201

**44 BSMA**

78664  
TX-US AUS



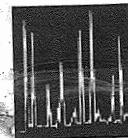
5/25/23, 5:44 PM

**CUSTODY SEA**

DATE **5-15-23**

SIGNATURE **[Signature]**

L



**DHL**  
ANALYTICAL

Sample Receipt Checklist

Client Name: WSP-Golder

Date Received: 5/26/2023

Work Order Number: 2305370

Received by: KAO

Checklist completed by: [Signature] 5/26/2023
Signature Date

Reviewed by: [Initials] 5/26/2023
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Water - VOA vials have zero headspace? Yes [ ] No [ ] No VOA vials submitted [checked] NA [ ]
Water - pH<2 acceptable upon receipt? Yes [checked] No [ ] NA [ ] LOT # 13171
Adjusted? no Checked by EL
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt? Yes [ ] No [ ] NA [checked] LOT #
Adjusted? Checked by
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Cooler # 1
Temp °C 5.2
Seal Intact Y

Any No response must be detailed in the comments section below.

Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist: Reportable Data</b>							
<b>Project Name:</b> Coletto Creek CCR 1H23 GW				<b>LRC Date:</b> 6/30/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2305370			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
		<b>Chain-of-Custody (C-O-C)</b>					
<b>R1</b>	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				<b>R1-01</b>
		2) Were all departures from standard conditions described in an exception report?			X		
<b>R2</b>	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
<b>R3</b>	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
<b>R4</b>	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
<b>R5</b>	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, <b>greater</b> than 10 times the concentration in the blank sample?			X		
<b>R6</b>	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
<b>R7</b>	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			<b>R7-03</b>
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
<b>R8</b>	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
<b>R9</b>	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
<b>R10</b>	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist (continued): Supporting Data</b>							
<b>Project Name:</b> Coletto Creek CCR 1H23 GW				<b>LRC Date:</b> 6/30/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2305370			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass Spectral Tuning:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal Standards (IS):</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw Data (NELAC Section 5.5.10)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively Identified Compounds (TICs):</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) Results:</b>					
		1) Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01
S10	OI	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	<b>Proficiency Test Reports:</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/Validation Documentation for Methods (NELAC Chapter 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory Standard Operating Procedures (SOPs):</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

- 1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ 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 Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- 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.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is 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 that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on February 23-26 2021. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont  
Official Title: General Manager

Name: Dr. Derhsing Luu  
Official Title: Technical Director

  
Signature

7/7/2023  
Date

---

**CLIENT:** WSP-Golder  
**Project:** Coleta Creek CCR 1H23 GW  
**Lab Order:** 2305370

**CASE NARRATIVE**

---

Samples were analyzed using the methods outlined in the following references:

- Method SW6020B - Metals Analysis
- Method SW7470A - Mercury Analysis
- Method E300 - Anions Analysis
- Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M. Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 5/26/23. A total of 5 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Metals analysis performed on 6/1/23 the matrix spike recovery was below control limits for Calcium. This is flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

Exception Report S9-01

For Metals analysis performed on 6/1/23 the RPD for the serial dilution was above control limits for Boron. This is flagged accordingly in the QC summary report. The PDS was within control limits for this analyte. No further corrective actions were taken.

---

---

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Lab Order:** 2305370

**Work Order Sample Summary**

---

<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
2305370-01	MW-10		05/25/23 08:21 AM	05/26/2023
2305370-02	MW-5		05/25/23 09:25 AM	05/26/2023
2305370-03	MW-9		05/25/23 10:25 AM	05/26/2023
2305370-04	MW-11		05/25/23 11:40 AM	05/26/2023
2305370-05	MW-8		05/25/23 03:42 PM	05/26/2023

**Lab Order:** 2305370  
**Client:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305370-01A	MW-10	05/25/23 08:21 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-10	05/25/23 08:21 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-10	05/25/23 08:21 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305370-01B	MW-10	05/25/23 08:21 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-10	05/25/23 08:21 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-10	05/25/23 08:21 AM	Aqueous	M2540C	TDS Preparation	05/26/23 02:41 PM	110388
2305370-02A	MW-5	05/25/23 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-5	05/25/23 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-5	05/25/23 09:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-5	05/25/23 09:25 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305370-02B	MW-5	05/25/23 09:25 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-5	05/25/23 09:25 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-5	05/25/23 09:25 AM	Aqueous	M2540C	TDS Preparation	05/26/23 02:41 PM	110388
2305370-03A	MW-9	05/25/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-9	05/25/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-9	05/25/23 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305370-03B	MW-9	05/25/23 10:25 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-9	05/25/23 10:25 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-9	05/25/23 10:25 AM	Aqueous	M2540C	TDS Preparation	05/26/23 02:41 PM	110388
2305370-04A	MW-11	05/25/23 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-11	05/25/23 11:40 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-11	05/25/23 11:40 AM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508
2305370-04B	MW-11	05/25/23 11:40 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-11	05/25/23 11:40 AM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-11	05/25/23 11:40 AM	Aqueous	M2540C	TDS Preparation	05/26/23 02:41 PM	110388
2305370-05A	MW-8	05/25/23 03:42 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-8	05/25/23 03:42 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	05/31/23 07:40 AM	110415
	MW-8	05/25/23 03:42 PM	Aqueous	SW7470A	Mercury Aq Prep	06/06/23 08:36 AM	110508

**Lab Order:** 2305370  
**Client:** WSP-Golder  
**Project:** Coledo Creek CCR 1H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305370-05B	MW-8	05/25/23 03:42 PM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-8	05/25/23 03:42 PM	Aqueous	E300	Anion Preparation	05/30/23 09:34 AM	110398
	MW-8	05/25/23 03:42 PM	Aqueous	M2540C	TDS Preparation	05/26/23 02:41 PM	110388

Lab Order: 2305370  
 Client: WSP-Golder  
 Project: Coletto Creek CCR 1H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305370-01A	MW-10	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:03 PM	CETAC2_HG_230606 A
	MW-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	10	06/01/23 01:24 PM	ICP-MS4_230601B
	MW-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 10:47 AM	ICP-MS5_230601A
2305370-01B	MW-10	Aqueous	E300	Anions by IC method - Water	110398	10	05/30/23 03:19 PM	IC2_230530A
	MW-10	Aqueous	E300	Anions by IC method - Water	110398	1	05/30/23 11:32 PM	IC2_230530A
	MW-10	Aqueous	M2540C	Total Dissolved Solids	110388	1	05/26/23 04:15 PM	WC_230526B
2305370-02A	MW-5	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:06 PM	CETAC2_HG_230606 A
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 01:26 PM	ICP-MS4_230601B
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	10	06/01/23 01:28 PM	ICP-MS4_230601B
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 10:50 AM	ICP-MS5_230601A
2305370-02B	MW-5	Aqueous	E300	Anions by IC method - Water	110398	10	05/30/23 03:36 PM	IC2_230530A
	MW-5	Aqueous	E300	Anions by IC method - Water	110398	1	05/30/23 11:49 PM	IC2_230530A
	MW-5	Aqueous	M2540C	Total Dissolved Solids	110388	1	05/26/23 04:15 PM	WC_230526B
2305370-03A	MW-9	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:13 PM	CETAC2_HG_230606 A
	MW-9	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 10:52 AM	ICP-MS5_230601A
	MW-9	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	10	06/01/23 01:30 PM	ICP-MS4_230601B
2305370-03B	MW-9	Aqueous	E300	Anions by IC method - Water	110398	10	05/30/23 03:53 PM	IC2_230530A
	MW-9	Aqueous	E300	Anions by IC method - Water	110398	1	05/31/23 12:06 AM	IC2_230530A
	MW-9	Aqueous	M2540C	Total Dissolved Solids	110388	1	05/26/23 04:15 PM	WC_230526B
2305370-04A	MW-11	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:15 PM	CETAC2_HG_230606 A
	MW-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	5	06/01/23 01:20 PM	ICP-MS4_230601B
	MW-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 10:41 AM	ICP-MS5_230601A
2305370-04B	MW-11	Aqueous	E300	Anions by IC method - Water	110398	10	05/30/23 04:44 PM	IC2_230530A
	MW-11	Aqueous	E300	Anions by IC method - Water	110398	1	05/31/23 12:23 AM	IC2_230530A
	MW-11	Aqueous	M2540C	Total Dissolved Solids	110388	1	05/26/23 04:15 PM	WC_230526B
2305370-05A	MW-8	Aqueous	SW7470A	Mercury Total: Aqueous	110508	1	06/06/23 03:17 PM	CETAC2_HG_230606 A

**Lab Order:** 2305370  
**Client:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305370-05A	MW-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	5	06/01/23 01:32 PM	ICP-MS4_230601B
	MW-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110415	1	06/01/23 10:55 AM	ICP-MS5_230601A
2305370-05B	MW-8	Aqueous	E300	Anions by IC method - Water	110398	10	05/30/23 05:01 PM	IC2_230530A
	MW-8	Aqueous	E300	Anions by IC method - Water	110398	1	05/31/23 12:40 AM	IC2_230530A
	MW-8	Aqueous	M2540C	Total Dissolved Solids	110388	1	05/26/23 04:15 PM	WC_230526B

**DHL Analytical, Inc.**

**Date:** 07-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305370

**Client Sample ID:** MW-10  
**Lab ID:** 2305370-01  
**Collection Date:** 05/25/23 08:21 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/01/23 10:47 AM
Arsenic	0.0155	0.00200	0.00500		mg/L	1	06/01/23 10:47 AM
Barium	0.0519	0.00300	0.0100		mg/L	1	06/01/23 10:47 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:47 AM
Boron	5.37	0.100	0.300		mg/L	10	06/01/23 01:24 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:47 AM
Calcium	45.0	1.00	3.00		mg/L	10	06/01/23 01:24 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:47 AM
Cobalt	0.00569	0.00300	0.00500		mg/L	1	06/01/23 10:47 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:47 AM
Lithium	0.0124	0.00500	0.0100		mg/L	1	06/01/23 10:47 AM
Molybdenum	0.0791	0.00200	0.00500		mg/L	1	06/01/23 10:47 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:47 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/01/23 10:47 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:03 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	61.6	3.00	10.0		mg/L	10	05/30/23 03:19 PM
Fluoride	0.892	0.100	0.400		mg/L	1	05/30/23 11:32 PM
Sulfate	75.9	1.00	3.00		mg/L	1	05/30/23 11:32 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	541	10.0	10.0		mg/L	1	05/26/23 04:15 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern



**DHL Analytical, Inc.**

**Date:** 07-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305370

**Client Sample ID:** MW-5  
**Lab ID:** 2305370-02  
**Collection Date:** 05/25/23 09:25 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/01/23 10:50 AM
Arsenic	0.00953	0.00200	0.00500		mg/L	1	06/01/23 10:50 AM
Barium	0.0537	0.00300	0.0100		mg/L	1	06/01/23 10:50 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:50 AM
Boron	0.161	0.0100	0.0300		mg/L	1	06/01/23 01:26 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:50 AM
Calcium	125	1.00	3.00		mg/L	10	06/01/23 01:28 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:50 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/01/23 10:50 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:50 AM
Lithium	0.0192	0.00500	0.0100		mg/L	1	06/01/23 10:50 AM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:50 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:50 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/01/23 10:50 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:06 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	125	3.00	10.0		mg/L	10	05/30/23 03:36 PM
Fluoride	0.487	0.100	0.400		mg/L	1	05/30/23 11:49 PM
Sulfate	181	10.0	30.0		mg/L	10	05/30/23 03:36 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	823	10.0	10.0		mg/L	1	05/26/23 04:15 PM

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 See Final Page of Report for MQLs and MDLs

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 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 07-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305370

**Client Sample ID:** MW-9  
**Lab ID:** 2305370-03  
**Collection Date:** 05/25/23 10:25 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/01/23 10:52 AM
Arsenic	0.0177	0.00200	0.00500		mg/L	1	06/01/23 10:52 AM
Barium	0.133	0.00300	0.0100		mg/L	1	06/01/23 10:52 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:52 AM
Boron	1.20	0.100	0.300		mg/L	10	06/01/23 01:30 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:52 AM
Calcium	68.7	1.00	3.00		mg/L	10	06/01/23 01:30 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:52 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/01/23 10:52 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:52 AM
Lithium	0.00813	0.00500	0.0100	J	mg/L	1	06/01/23 10:52 AM
Molybdenum	0.0242	0.00200	0.00500		mg/L	1	06/01/23 10:52 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:52 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/01/23 10:52 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:13 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	45.3	0.300	1.00		mg/L	1	05/31/23 12:06 AM
Fluoride	0.664	0.100	0.400		mg/L	1	05/31/23 12:06 AM
Sulfate	40.4	1.00	3.00		mg/L	1	05/31/23 12:06 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	425	10.0	10.0		mg/L	1	05/26/23 04:15 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 07-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305370

**Client Sample ID:** MW-11  
**Lab ID:** 2305370-04  
**Collection Date:** 05/25/23 11:40 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/01/23 10:41 AM
Arsenic	0.0213	0.00200	0.00500		mg/L	1	06/01/23 10:41 AM
Barium	0.0922	0.00300	0.0100		mg/L	1	06/01/23 10:41 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:41 AM
Boron	0.807	0.0500	0.150		mg/L	5	06/01/23 01:20 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:41 AM
Calcium	58.9	0.500	1.50		mg/L	5	06/01/23 01:20 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:41 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	06/01/23 10:41 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:41 AM
Lithium	0.0142	0.00500	0.0100		mg/L	1	06/01/23 10:41 AM
Molybdenum	0.0133	0.00200	0.00500		mg/L	1	06/01/23 10:41 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:41 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/01/23 10:41 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:15 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	45.6	0.300	1.00		mg/L	1	05/31/23 12:23 AM
Fluoride	0.542	0.100	0.400		mg/L	1	05/31/23 12:23 AM
Sulfate	29.3	1.00	3.00		mg/L	1	05/31/23 12:23 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	375	10.0	10.0		mg/L	1	05/26/23 04:15 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
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 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 07-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305370

**Client Sample ID:** MW-8  
**Lab ID:** 2305370-05  
**Collection Date:** 05/25/23 03:42 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/01/23 10:55 AM
Arsenic	0.00944	0.00200	0.00500		mg/L	1	06/01/23 10:55 AM
Barium	0.0830	0.00300	0.0100		mg/L	1	06/01/23 10:55 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:55 AM
Boron	0.790	0.0500	0.150		mg/L	5	06/01/23 01:32 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:55 AM
Calcium	77.5	0.500	1.50		mg/L	5	06/01/23 01:32 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:55 AM
Cobalt	0.00629	0.00300	0.00500		mg/L	1	06/01/23 10:55 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/01/23 10:55 AM
Lithium	0.0105	0.00500	0.0100		mg/L	1	06/01/23 10:55 AM
Molybdenum	0.0134	0.00200	0.00500		mg/L	1	06/01/23 10:55 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/01/23 10:55 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/01/23 10:55 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/06/23 03:17 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	48.8	0.300	1.00		mg/L	1	05/31/23 12:40 AM
Fluoride	0.439	0.100	0.400		mg/L	1	05/31/23 12:40 AM
Sulfate	48.3	1.00	3.00		mg/L	1	05/31/23 12:40 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	480	10.0	10.0		mg/L	1	05/26/23 04:15 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**CLIENT:** WSP-Golder

**Work Order:** 2305370

**Project:** Coleta Creek CCR 1H23 GW

**ANALYTICAL QC SUMMARY REPORT**

**RunID:** CETAC2\_HG\_230424B

Sample ID: <b>DCS-109838</b>	Batch ID: <b>109838</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>DCS</b>	Run ID: <b>CETAC2_HG_230424B</b>	Analysis Date: <b>4/24/2023 1:40:40 PM</b>	Prep Date: <b>4/24/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coletto Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2\_HG\_230606A

The QC data in batch 110508 applies to the following samples: 2305370-01A, 2305370-02A, 2305370-03A, 2305370-04A, 2305370-05A

Sample ID: <b>MB-110508</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:29:58 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: <b>LCS-110508</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:32:14 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00204 0.000200 0.00200 0 102 85 115

Sample ID: <b>LCSD-110508</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:34:30 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00205 0.000200 0.00200 0 103 85 115 0.489 15

Sample ID: <b>2305368-01AMS</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:39:03 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0202 0.00100 0.0200 0 101 80 120

Sample ID: <b>2305368-01AMSD</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:41:18 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0204 0.00100 0.0200 0 102 80 120 0.985 15

Sample ID: <b>2305368-01ASD</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:43:34 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.00200 0.00500 0 0 0 0 10

Sample ID: <b>2305368-01APDS</b>	Batch ID: <b>110508</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 2:45:49 PM</b>	Prep Date: <b>6/6/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.0124 0.00100 0.0125 0 99.2 85 115

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** CETAC2\_HG\_230606A

Sample ID: <b>ICV-230606</b>	Batch ID: <b>R127218</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 10:48:19 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00423	0.000200	0.00400	0	106	90	110
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Sample ID: <b>CCV2-230606</b>	Batch ID: <b>R127218</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 11:47:26 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00201	0.000200	0.00200	0	101	90	110
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Sample ID: <b>CCV3-230606</b>	Batch ID: <b>R127218</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 3:08:31 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00195	0.000200	0.00200	0	97.5	90	110
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Sample ID: <b>CCV4-230606</b>	Batch ID: <b>R127218</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230606A</b>	Analysis Date: <b>6/6/2023 3:35:51 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00195	0.000200	0.00200	0	97.5	90	110
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<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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CLIENT: WSP-Golder

Work Order: 2305370

Project: Coletto Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230228A

Sample ID: <b>DCS2-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS2</b>	Run ID: <b>ICP-MS4_230228A</b>	Analysis Date: <b>2/28/2023 10:47:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.273	0.300	0.300	0	90.9	70	130	0	0	

Sample ID: <b>DCS4-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS4</b>	Run ID: <b>ICP-MS4_230228A</b>	Analysis Date: <b>2/28/2023 10:52:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0320	0.0300	0.0300	0	107	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coletto Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230601B**

The QC data in batch 110415 applies to the following samples: 2305370-01A, 2305370-02A, 2305370-03A, 2305370-04A, 2305370-05A

Sample ID: <b>MB-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:12:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								
Calcium	<0.100	0.300								

Sample ID: <b>LCS-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:14:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.200	0.0300	0.200	0	100	80	120			
Calcium	5.06	0.300	5.00	0	101	80	120			

Sample ID: <b>LCSD-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:16:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.193	0.0300	0.200	0	96.4	80	120	3.75	15	
Calcium	5.11	0.300	5.00	0	102	80	120	0.990	15	

Sample ID: <b>2305370-04A SD</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:22:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.15	0.750	0	0.807				35.1	20	R
Calcium	58.2	7.50	0	58.9				1.21	20	

Sample ID: <b>2305370-04A PDS</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:42:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.84	0.150	1.00	0.807	104	75	125			
Calcium	85.9	1.50	25.0	58.9	108	75	125			

Sample ID: <b>2305370-04A MS</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:45:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.03	0.150	0.200	0.807	112	75	125			
Calcium	60.5	1.50	5.00	58.9	32.5	75	125			S

**Qualifiers:** B Analyte detected in the associated Method Blank      DF Dilution Factor  
J Analyte detected between MDL and RL      MDL Method Detection Limit  
ND Not Detected at the Method Detection Limit      R RPD outside accepted control limits  
RL Reporting Limit      S Spike Recovery outside control limits  
J Analyte detected between SDL and RL      N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230601B

Sample ID: <b>2305370-04A MSD</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:47:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	1.02	0.150	0.200	0.807	108	75	125	0.800	15	
Calcium	62.7	1.50	5.00	58.9	76.0	75	125	3.52	15	

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230601B**

Sample ID: <b>ICV-230601</b>	Batch ID: <b>R127130</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 9:51:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.108	0.0300	0.100	0	108	90	110			
Calcium	2.63	0.300	2.50	0	105	90	110			

Sample ID: <b>LCVL-230601</b>	Batch ID: <b>R127130</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 9:59:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0218	0.0300	0.0200	0	109	80	120			
Calcium	0.0911	0.300	0.100	0	91.1	80	120			

Sample ID: <b>CCV5-230601</b>	Batch ID: <b>R127130</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:07:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.201	0.0300	0.200	0	101	90	110			
Calcium	5.13	0.300	5.00	0	103	90	110			

Sample ID: <b>CCV6-230601</b>	Batch ID: <b>R127130</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230601B</b>	Analysis Date: <b>6/1/2023 1:49:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.193	0.0300	0.200	0	96.6	90	110			
Calcium	5.03	0.300	5.00	0	101	90	110			

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coletto Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS5\_230228B

Sample ID: <b>DCS1-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS</b>	Run ID: <b>ICP-MS5_230228B</b>	Analysis Date: <b>2/28/2023 10:47:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.000950	0.00250	0.00100	0	95.0	70	130	0	0	
Beryllium	0.000563	0.00100	0.000500	0	113	70	130	0	0	
Cadmium	0.000453	0.00100	0.000500	0	90.6	70	130	0	0	
Lead	0.000454	0.00100	0.000500	0	90.8	70	130	0	0	
Thallium	0.000483	0.00150	0.000500	0	96.6	70	130	0	0	

Sample ID: <b>DCS3-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>ICP-MS5_230228B</b>	Analysis Date: <b>2/28/2023 10:53:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00504	0.00500	0.00500	0	101	70	130	0	0	
Barium	0.00484	0.0100	0.00500	0	96.7	70	130	0	0	
Chromium	0.00492	0.00500	0.00500	0	98.5	70	130	0	0	
Cobalt	0.00509	0.00500	0.00500	0	102	70	130	0	0	
Lithium	0.00514	0.0100	0.00500	0	103	70	130	0	0	
Molybdenum	0.00484	0.00500	0.00500	0	96.8	70	130	0	0	
Selenium	0.00491	0.00500	0.00500	0	98.3	70	130	0	0	

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coletto Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230601A

The QC data in batch 110415 applies to the following samples: 2305370-01A, 2305370-02A, 2305370-03A, 2305370-04A, 2305370-05A

Sample ID: <b>MB-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:31:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: <b>LCS-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:33:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.204	0.00500	0.200	0	102	80	120			
Barium	0.204	0.0100	0.200	0	102	80	120			
Beryllium	0.199	0.00100	0.200	0	99.4	80	120			
Cadmium	0.201	0.00100	0.200	0	100	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.203	0.00500	0.200	0	101	80	120			
Lead	0.200	0.00100	0.200	0	100	80	120			
Lithium	0.200	0.0100	0.200	0	99.8	80	120			
Molybdenum	0.196	0.00500	0.200	0	98.0	80	120			
Selenium	0.206	0.00500	0.200	0	103	80	120			
Thallium	0.200	0.00150	0.200	0	99.8	80	120			

Sample ID: <b>LCSD-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:36:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120	0.110	15	
Arsenic	0.205	0.00500	0.200	0	102	80	120	0.388	15	
Barium	0.203	0.0100	0.200	0	101	80	120	0.312	15	
Beryllium	0.201	0.00100	0.200	0	101	80	120	1.13	15	
Cadmium	0.204	0.00100	0.200	0	102	80	120	1.36	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	0.186	15	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coleta Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230601A

Sample ID: <b>LCSD-110415</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:36:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.205	0.00500	0.200	0	102	80	120	1.07	15	
Lead	0.202	0.00100	0.200	0	101	80	120	1.07	15	
Lithium	0.204	0.0100	0.200	0	102	80	120	2.20	15	
Molybdenum	0.198	0.00500	0.200	0	98.8	80	120	0.856	15	
Selenium	0.210	0.00500	0.200	0	105	80	120	1.87	15	
Thallium	0.203	0.00150	0.200	0	101	80	120	1.49	15	

Sample ID: <b>2305370-04A SD</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:44:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	0.0218	0.0250	0	0.0213				2.10	20	
Barium	0.0885	0.0500	0	0.0922				4.14	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	<0.0250	0.0500	0	0.0142				0	20	
Molybdenum	0.0136	0.0250	0	0.0133				2.29	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: <b>2305370-04A PDS</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 11:10:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.180	0.00250	0.200	0	90.1	75	125			
Arsenic	0.216	0.00500	0.200	0.0213	97.3	75	125			
Barium	0.289	0.0100	0.200	0.0922	98.2	75	125			
Beryllium	0.198	0.00100	0.200	0	99.0	75	125			
Cadmium	0.196	0.00100	0.200	0	98.2	75	125			
Chromium	0.202	0.00500	0.200	0	101	75	125			
Cobalt	0.198	0.00500	0.200	0	98.8	75	125			
Lead	0.196	0.00100	0.200	0	98.2	75	125			
Lithium	0.217	0.0100	0.200	0.0142	101	75	125			
Molybdenum	0.205	0.00500	0.200	0.0133	95.8	75	125			
Selenium	0.194	0.00500	0.200	0	97.0	75	125			
Thallium	0.198	0.00150	0.200	0	99.0	75	125			

**Qualifiers:**  
 B Analyte detected in the associated Method Blank  
 J Analyte detected between MDL and RL  
 ND Not Detected at the Method Detection Limit  
 RL Reporting Limit  
 J Analyte detected between SDL and RL

DF Dilution Factor  
 MDL Method Detection Limit  
 R RPD outside accepted control limits  
 S Spike Recovery outside control limits  
 N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coletto Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230601A

Sample ID: <b>2305370-04A MS</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 11:15:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	75	125			
Arsenic	0.223	0.00500	0.200	0.0213	101	75	125			
Barium	0.292	0.0100	0.200	0.0922	100	75	125			
Beryllium	0.199	0.00100	0.200	0	99.6	75	125			
Cadmium	0.199	0.00100	0.200	0	99.5	75	125			
Chromium	0.200	0.00500	0.200	0	100	75	125			
Cobalt	0.201	0.00500	0.200	0	100	75	125			
Lead	0.200	0.00100	0.200	0	100	75	125			
Lithium	0.217	0.0100	0.200	0.0142	101	75	125			
Molybdenum	0.212	0.00500	0.200	0.0133	99.1	75	125			
Selenium	0.199	0.00500	0.200	0	99.7	75	125			
Thallium	0.201	0.00150	0.200	0	100	75	125			

Sample ID: <b>2305370-04A MSD</b>	Batch ID: <b>110415</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 11:17:00 AM</b>	Prep Date: <b>5/31/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	75	125	0.013	15	
Arsenic	0.221	0.00500	0.200	0.0213	99.8	75	125	0.803	15	
Barium	0.294	0.0100	0.200	0.0922	101	75	125	0.549	15	
Beryllium	0.198	0.00100	0.200	0	99.2	75	125	0.469	15	
Cadmium	0.197	0.00100	0.200	0	98.7	75	125	0.806	15	
Chromium	0.201	0.00500	0.200	0	100	75	125	0.268	15	
Cobalt	0.200	0.00500	0.200	0	100	75	125	0.019	15	
Lead	0.199	0.00100	0.200	0	99.7	75	125	0.539	15	
Lithium	0.218	0.0100	0.200	0.0142	102	75	125	0.417	15	
Molybdenum	0.210	0.00500	0.200	0.0133	98.3	75	125	0.764	15	
Selenium	0.198	0.00500	0.200	0	99.1	75	125	0.626	15	
Thallium	0.199	0.00150	0.200	0	99.5	75	125	0.910	15	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coleta Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230601A

Sample ID: <b>ICV-230601</b>	Batch ID: <b>R127128</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:07:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0983	0.00250	0.100	0	98.3	90	110			
Arsenic	0.0983	0.00500	0.100	0	98.3	90	110			
Barium	0.0980	0.0100	0.100	0	98.0	90	110			
Beryllium	0.0975	0.00100	0.100	0	97.5	90	110			
Cadmium	0.100	0.00100	0.100	0	100	90	110			
Chromium	0.0994	0.00500	0.100	0	99.4	90	110			
Cobalt	0.0997	0.00500	0.100	0	99.7	90	110			
Lead	0.0978	0.00100	0.100	0	97.8	90	110			
Lithium	0.0994	0.0100	0.100	0	99.4	90	110			
Molybdenum	0.0951	0.00500	0.100	0	95.1	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Thallium	0.0971	0.00150	0.100	0	97.1	90	110			

Sample ID: <b>LCVL-230601</b>	Batch ID: <b>R127128</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 10:23:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00208	0.00250	0.00200	0	104	80	120			
Arsenic	0.00478	0.00500	0.00500	0	95.7	80	120			
Barium	0.00508	0.0100	0.00500	0	102	80	120			
Beryllium	0.000986	0.00100	0.00100	0	98.6	80	120			
Cadmium	0.000934	0.00100	0.00100	0	93.4	80	120			
Chromium	0.00499	0.00500	0.00500	0	99.8	80	120			
Cobalt	0.00494	0.00500	0.00500	0	98.8	80	120			
Lead	0.000980	0.00100	0.00100	0	98.0	80	120			
Lithium	0.0102	0.0100	0.0100	0	102	80	120			
Molybdenum	0.00474	0.00500	0.00500	0	94.7	80	120			
Selenium	0.00509	0.00500	0.00500	0	102	80	120			
Thallium	0.000962	0.00150	0.00100	0	96.2	80	120			

Sample ID: <b>CCV1-230601</b>	Batch ID: <b>R127128</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 11:20:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.7	90	110			
Arsenic	0.203	0.00500	0.200	0	101	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Beryllium	0.198	0.00100	0.200	0	98.9	90	110			
Cadmium	0.199	0.00100	0.200	0	99.7	90	110			
Chromium	0.202	0.00500	0.200	0	101	90	110			
Cobalt	0.203	0.00500	0.200	0	102	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



CLIENT: WSP-Golder

Work Order: 2305370

Project: Coleta Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230601A

Sample ID: <b>CCV1-230601</b>	Batch ID: <b>R127128</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230601A</b>	Analysis Date: <b>6/1/2023 11:20:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.200	0.00100	0.200	0	99.8	90	110			
Lithium	0.203	0.0100	0.200	0	102	90	110			
Molybdenum	0.197	0.00500	0.200	0	98.4	90	110			
Selenium	0.206	0.00500	0.200	0	103	90	110			
Thallium	0.200	0.00150	0.200	0	99.8	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coleta Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230518A

Sample ID: <b>DCS3-110218</b>	Batch ID: <b>110218</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>IC2_230518A</b>	Analysis Date: <b>5/18/2023 2:30:46 PM</b>	Prep Date: <b>5/18/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.996	1.00	1.000	0	99.6	70	130	0	0	
Fluoride	0.396	0.400	0.4000	0	98.9	70	130	0	0	
Sulfate	2.90	3.00	3.000	0	96.7	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230530A**

The QC data in batch 110398 applies to the following samples: 2305370-01B, 2305370-02B, 2305370-03B, 2305370-04B, 2305370-05B

Sample ID: <b>MB-110398</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 11:15:11 AM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: <b>LCS-110398</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 11:32:11 AM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.71	1.00	10.00	0	97.1	90	110			
Fluoride	3.82	0.400	4.000	0	95.4	90	110			
Sulfate	29.4	3.00	30.00	0	98.1	90	110			

Sample ID: <b>LCSD-110398</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 11:49:11 AM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.58	1.00	10.00	0	95.8	90	110	1.30	20	
Fluoride	3.75	0.400	4.000	0	93.9	90	110	1.66	20	
Sulfate	29.0	3.00	30.00	0	96.5	90	110	1.59	20	

Sample ID: <b>2305370-03BMS</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 4:10:13 PM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	231	10.0	200.0	45.64	92.7	90	110			
Fluoride	192	4.00	200.0	0	96.2	90	110			
Sulfate	222	30.0	200.0	39.45	91.1	90	110			

Sample ID: <b>2305370-03BMSD</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 4:27:13 PM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	240	10.0	200.0	45.64	97.0	90	110	3.73	20	
Fluoride	201	4.00	200.0	0	100	90	110	4.28	20	
Sulfate	229	30.0	200.0	39.45	94.9	90	110	3.32	20	

Sample ID: <b>2305375-07BMS</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 8:59:13 PM</b>	Prep Date: <b>5/30/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305370

Project: Coletto Creek CCR 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230530A

Sample ID: <b>2305375-07BMS</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 8:59:13 PM</b>	Prep Date: <b>5/30/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	268	10.0	200.0	73.49	97.1	90	110			
Fluoride	200	4.00	200.0	0	100	90	110			
Sulfate	258	30.0	200.0	64.84	96.6	90	110			

Sample ID: <b>2305375-07BMSD</b>	Batch ID: <b>110398</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 9:16:13 PM</b>	Prep Date: <b>5/30/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	268	10.0	200.0	73.49	97.4	90	110	0.240	20	
Fluoride	202	4.00	200.0	0	101	90	110	0.602	20	
Sulfate	258	30.0	200.0	64.84	96.7	90	110	0.138	20	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230530A**

Sample ID: <b>ICV-230530</b>	Batch ID: <b>R127082</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 10:41:11 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.5	90	110			
Fluoride	9.62	0.400	10.00	0	96.2	90	110			
Sulfate	75.8	3.00	75.00	0	101	90	110			

Sample ID: <b>CCV1-230530</b>	Batch ID: <b>R127082</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 5:52:13 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.73	1.00	10.00	0	97.3	90	110			
Fluoride	3.87	0.400	4.000	0	96.9	90	110			
Sulfate	29.3	3.00	30.00	0	97.7	90	110			

Sample ID: <b>CCV2-230530</b>	Batch ID: <b>R127082</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/30/2023 10:24:13 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.70	1.00	10.00	0	97.0	90	110			
Fluoride	3.84	0.400	4.000	0	95.9	90	110			
Sulfate	29.3	3.00	30.00	0	97.8	90	110			

Sample ID: <b>CCV3-230530</b>	Batch ID: <b>R127082</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230530A</b>	Analysis Date: <b>5/31/2023 2:22:13 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.75	1.00	10.00	0	97.5	90	110			
Fluoride	3.90	0.400	4.000	0	97.6	90	110			
Sulfate	29.4	3.00	30.00	0	98.0	90	110			

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: WC\_230526B**

The QC data in batch 110388 applies to the following samples: 2305370-01B, 2305370-02B, 2305370-03B, 2305370-04B, 2305370-05B

Sample ID: <b>MB-110388</b>	Batch ID: <b>110388</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>WC_230526B</b>	Analysis Date: <b>5/26/2023 4:15:00 PM</b>	Prep Date: <b>5/26/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		<10.0	10.0							

Sample ID: <b>LCS-110388</b>	Batch ID: <b>110388</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>WC_230526B</b>	Analysis Date: <b>5/26/2023 4:15:00 PM</b>	Prep Date: <b>5/26/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		762	10.0	745.6	0	102	90	113		

Sample ID: <b>2305350-03B-DUP</b>	Batch ID: <b>110388</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230526B</b>	Analysis Date: <b>5/26/2023 4:15:00 PM</b>	Prep Date: <b>5/26/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		2340	50.0	0	2380			1.91	5	

Sample ID: <b>2305350-04B-DUP</b>	Batch ID: <b>110388</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230526B</b>	Analysis Date: <b>5/26/2023 4:15:00 PM</b>	Prep Date: <b>5/26/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		2110	50.0	0	2140			1.65	5	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305370  
**Project:** Coleta Creek CCR 1H23 GW

**MQL SUMMARY REPORT**

<b>TestNo: E300</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

<b>TestNo: SW6020B</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

<b>TestNo: SW7470A</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Mercury	0.0000800	0.000200

<b>TestNo: M2540C</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Total Dissolved Solids (Residue, Filt	10.0	10.0

## DHL Analytical, Inc.

Sample Delivery Group: L1621260  
Samples Received: 05/31/2023  
Project Number: 2305370  
Description:

Report To: John DuPont  
2300 Double Creek Drive  
Round Rock, TX 78664

Entire Report Reviewed By:



Donna Eidson  
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



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# SAMPLE SUMMARY

## MW-10 L1621260-01 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

05/25/23 08:21 05/31/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:42	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## MW-5 L1621260-02 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

05/25/23 09:25 05/31/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## MW-9 L1621260-03 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

05/25/23 10:25 05/31/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## MW-11 L1621260-04 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

05/25/23 11:40 05/31/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	Mt. Juliet, TN

## MW-8 L1621260-05 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

05/25/23 15:42 05/31/23 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2080715	1	06/20/23 12:20	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2084678	1	06/28/23 14:08	06/29/23 20:50	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2084678	1	06/28/23 14:08	06/29/23 18:47	RGT	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.



Donna Eidson  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	-0.0234	<u>U</u>	0.268	0.494	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	119			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	98.5			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.935		0.453	0.536	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.935		0.365	0.209	06/29/2023 18:42	<a href="#">WG2084678</a>
(T) Barium-133	97.5			30.0-143	06/29/2023 18:42	<a href="#">WG2084678</a>

## Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.427	<u>U</u>	0.598	1.09	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	134			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	96.7			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

1 Cp

2 Tc

3 Ss

## Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.498	<u>U</u>	0.617	1.12	06/29/2023 20:50	<a href="#">WG2084678</a>

4 Cn

5 Sr

## Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0707	<u>U</u>	0.152	0.252	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	98.6			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.341	J	0.351	0.638	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	125			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	102			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.415	J	0.387	0.698	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0732	U	0.163	0.282	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	86.3			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.903	J	0.530	0.952	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	129			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	114			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.937	J	0.538	0.969	06/29/2023 20:50	<a href="#">WG2084678</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0347	U	0.0949	0.180	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	98.8			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.332	<u>U</u>	0.518	0.950	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Barium	130			30.0-143	06/29/2023 20:50	<a href="#">WG2080715</a>
(T) Yttrium	102			30.0-136	06/29/2023 20:50	<a href="#">WG2080715</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.563	<u>J</u>	0.558	0.983	06/29/2023 20:50	<a href="#">WG2084678</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.232	<u>J</u>	0.207	0.252	06/29/2023 18:47	<a href="#">WG2084678</a>
(T) Barium-133	100			30.0-143	06/29/2023 18:47	<a href="#">WG2084678</a>

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3945508-1 06/29/23 20:50

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.137	<u>J</u>	0.149	0.273
(T) Barium	122		122	
(T) Yttrium	109		109	

L1621260-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1621260-03 06/29/23 20:50 • (DUP) R3945508-5 06/29/23 20:50

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.341	0.351	0.638	0.307	0.394	0.638	1	10.6	0.0650	<u>U</u>	20	3
(T) Barium	125			136	136							
(T) Yttrium	102			113	113							

Laboratory Control Sample (LCS)

(LCS) R3945508-2 06/29/23 20:50

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.51	90.1	80.0-120	
(T) Barium			129		
(T) Yttrium			111		

L1621139-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-06 06/29/23 20:50 • (MS) R3945508-3 06/29/23 20:50 • (MSD) R3945508-4 06/29/23 20:50

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	1.44	16.4	15.1	89.7	82.0	1	70.0-130			8.18		20
(T) Barium		114			124	122							
(T) Yttrium		96.6			102	114							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3943663-1 06/29/23 18:42

Analyte	MB Result	MB Qualifier	MB Uncertainty	MB MDA
	pCi/l		+ / -	pCi/l
Radium-226	-0.0106	<u>U</u>	0.0235	0.0572
(T) Barium-133	93.2		93.2	

L1626093-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1626093-09 06/29/23 18:59 • (DUP) R3943663-5 06/29/23 18:47

Analyte	Original Result	Original Uncertainty	Original MDA	DUP Result	DUP Uncertainty	DUP MDA	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	+ / -	pCi/l	pCi/l	+ / -	pCi/l		%			%	
Radium-226	0.0230	0.174	0.329	0.0656	0.146	0.329	1	96.2	0.188	<u>U</u>	20	3
(T) Barium-133	101			104	104							

Laboratory Control Sample (LCS)

(LCS) R3943663-2 06/29/23 18:47

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.01	4.34	86.7	80.0-120	
(T) Barium-133			87.4		

L1621139-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621139-09 06/29/23 18:47 • (MS) R3943663-3 06/29/23 18:47 • (MSD) R3943663-4 06/29/23 18:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	MS RER	RPD Limits
	pCi/l	pCi/l	pCi/l	pCi/l	%	%		%			%		%
Radium-226	20.0	0.888	19.5	18.9	93.2	90.3	1	75.0-125			3.02		20
(T) Barium-133		95.1			95.1	101							

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# 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

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# ACCREDITATIONS & LOCATIONS

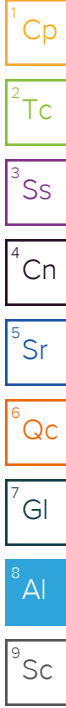
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



DHL Analytical, Inc.  
2300 Double Creek Drive  
Round Rock, TX 78664

TEL: (512) 388-8222  
Work Order: 2305370

FAX:

**Subcontractor:**

Pace Analytical  
12065 Lebanon Rd  
Mt. Juliet, TN 37122

TEL: (615) 773-5923  
FAX:  
Acct #: DHLRRTX

# CHAIN-OF-CUSTODY RECORD

A091

L1621260

26-May-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
MW-10	Aqueous	01C	05/25/23 08:21 AM	1LHDPEHNO3		1				J-01
MW-10	Aqueous	01D	05/25/23 08:21 AM	1LHDPEHNO3	1					
MW-5	Aqueous	02C	05/25/23 09:25 AM	1LHDPEHNO3		1				J-02
MW-5	Aqueous	02D	05/25/23 09:25 AM	1LHDPEHNO3	1					
MW-9	Aqueous	03C	05/25/23 10:25 AM	1LHDPEHNO3		1				J-03
MW-9	Aqueous	03D	05/25/23 10:25 AM	1LHDPEHNO3	1					
MW-11	Aqueous	04C	05/25/23 11:40 AM	1LHDPEHNO3		1				J-04
MW-11	Aqueous	04D	05/25/23 11:40 AM	1LHDPEHNO3	1					
MW-8	Aqueous	05C	05/25/23 03:42 PM	1LHDPEHNO3		1				J-05
MW-8	Aqueous	05D	05/25/23 03:42 PM	1LHDPEHNO3	1					

**Sample Receipt Checklist**


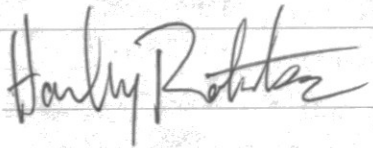
COC Seal Present/Intact:  Y  N If Applicable  
 COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N  
 Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N

PH-10BDH4321 TRC-2144141  
CR6-220221V

23.9 ± 0.5 = 23.9 <sup>NS</sup> <sub>17</sub>

**General Comments:**

Please analyze these samples with Normal Turnaround Time.  
Report Ra-226, Ra-228 & Combined per Specs.  
Quality Control Package Needed: Standard - NELAC Rad Test compliant  
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: 	Date/Time: 5/26/23 1800	Received by: 	Date/Time: 5/31/23 1000
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____



June 30, 2023

Jacob Jarvis  
WSP-Golder  
1601 S. Mopac Expy, Suite 325B  
Austin, Texas 78746  
TEL: (512) 671-3434  
FAX  
RE: Coletto Creek 1H23 GW

Order No.: 2305377

Dear Jacob Jarvis:

DHL Analytical, Inc. received 4 sample(s) on 5/27/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

  
John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification  
Number: T104704211-23-29



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## Eric Lau

---

**From:** John DuPont  
**Sent:** Tuesday, May 28, 2019 11:35 AM  
**To:** Eric Lau  
**Subject:** FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)  
Anions (Cl, F, and SO4)  
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)  
Ra-226  
Ra-228

**DHL**  
ANALYTICAL

RT 196  
ST 24

9 12:00  
05:27 1786

**CUSTODY SEAL**  
DATE 5-26-23  
SIGNATURE *[Signature]*

FedEx Ship Manager - Print Your Label(s)

5/26/23, 5:19 PM

ORIGIN ID:VCTA (956) 330-8422  
CHRISTIAN MARTINEZ  
WSP USA INC.  
1501 E MOCKINGBIRD LN  
STE 420  
VICTORIA, TX 77904  
UNITED STATES US

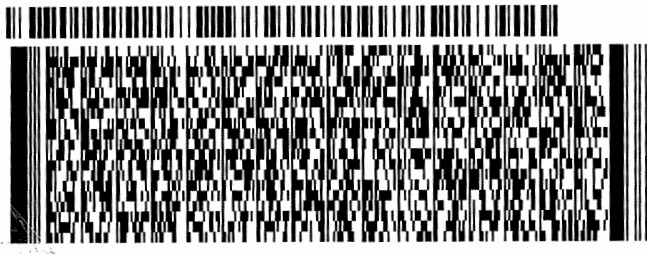
SHIP DATE: 26MAY23  
ACTWGT: 40.00 LB  
CAD: 2806631/NET4610  
DIMS: 24x12x15 IN  
BILL SENDER

TO **SAMPLE RECEIVING**  
**DHL ANALYTICAL**  
**2300 DOUBLE CREEK DR**

**ROUND ROCK TX 78664**

(512) 388-8222 REF: 31404097.022 TASK 01.SUB  
INV. PO: DEPT:

583.IG/2BC3FE2D

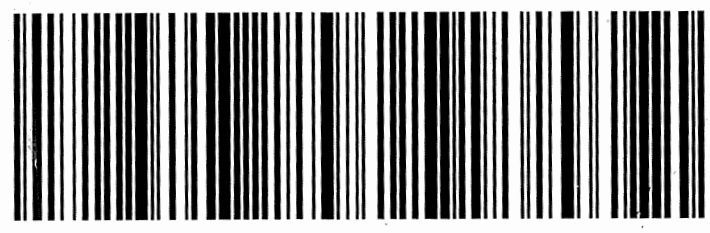


**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

TRK# 7722 7206 9874  
0201

**X0 BSMA**

78664  
TX-US AUS



Sample Receipt Checklist

Client Name: WSP-Golder

Date Received: 5/27/2023

Work Order Number: 2305377

Received by: CF

Checklist completed by: [Signature] 5/30/2023
Signature Date

Reviewed by: [Initials] 5/30/2023
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Water - VOA vials have zero headspace? Yes [ ] No [ ] No VOA vials submitted [checked] NA [ ]
Water - pH<2 acceptable upon receipt? Yes [checked] No [ ] NA [ ] LOT # 13171
Adjusted? no Checked by [Signature]
Water - ph>9 (S) or ph>10 (CN) acceptable upon receipt? Yes [ ] No [ ] NA [checked] LOT #
Adjusted? Checked by
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Cooler # 1
Temp °C 5.5
Seal Intact Y

Any No response must be detailed in the comments section below.

Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist: Reportable Data</b>							
<b>Project Name:</b> Coletto Creek 1H23 GW				<b>LRC Date:</b> 6/30/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2305377			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
		<b>Chain-of-Custody (C-O-C)</b>					
<b>R1</b>	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				<b>R1-01</b>
		2) Were all departures from standard conditions described in an exception report?			X		
<b>R2</b>	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
<b>R3</b>	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
<b>R4</b>	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
<b>R5</b>	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, <b>greater</b> than 10 times the concentration in the blank sample?			X		
<b>R6</b>	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
<b>R7</b>	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			<b>R7-03</b>
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
<b>R8</b>	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
<b>R9</b>	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
<b>R10</b>	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist (continued): Supporting Data</b>							
<b>Project Name:</b> Coletto Creek 1H23 GW				<b>LRC Date:</b> 6/30/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2305377			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass Spectral Tuning:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal Standards (IS):</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw Data (NELAC Section 5.5.10)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively Identified Compounds (TICs):</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) Results:</b>					
		1) Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	<b>Proficiency Test Reports:</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/Validation Documentation for Methods (NELAC Chapter 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory Standard Operating Procedures (SOPs):</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ 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 Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- 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.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is 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 that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on February 23-26 2021. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont  
Official Title: General Manager

Name: Dr. Derhsing Luu  
Official Title: Technical Director

  
Signature

7/10/2023  
Date

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**CLIENT:** WSP-Golder  
**Project:** Coletto Creek 1H23 GW  
**Lab Order:** 2305377

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**CASE NARRATIVE**

Samples were analyzed using the methods outlined in the following references:

Method SW6020B - Metals Analysis

Method SW7470A - Mercury Analysis

Method E300 - Anions Analysis

Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM 7500 Ra B M.  
Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 5/27/23. A total of 4 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions analysis performed on 5/30/23 the matrix spike and matrix spike duplicate recoveries (2305376-04 MS/MSD) were below control limits for Chloride. This was due to matrix effect. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate (2305376-04 MS/MSD) was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 6/2/23 the matrix spike and matrix spike duplicate recoveries were below control limits for Calcium. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

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**CLIENT:** WSP-Golder  
**Project:** Coleta Creek 1H23 GW  
**Lab Order:** 2305377

**Work Order Sample Summary**

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<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
2305377-01	MW-4		05/26/23 10:59 AM	05/27/2023
2305377-02	BV-5		05/26/23 12:41 PM	05/27/2023
2305377-03	BV-21		05/26/23 03:38 PM	05/27/2023
2305377-04	DUP 101		05/26/23	05/27/2023



**Lab Order:** 2305377  
**Client:** WSP-Golder  
**Project:** Coleta Creek 1H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2305377-01A	MW-4	05/26/23 10:59 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	MW-4	05/26/23 10:59 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	MW-4	05/26/23 10:59 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	MW-4	05/26/23 10:59 AM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305377-01B	MW-4	05/26/23 10:59 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	MW-4	05/26/23 10:59 AM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	MW-4	05/26/23 10:59 AM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305377-02A	BV-5	05/26/23 12:41 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-5	05/26/23 12:41 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-5	05/26/23 12:41 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-5	05/26/23 12:41 PM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305377-02B	BV-5	05/26/23 12:41 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	BV-5	05/26/23 12:41 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	BV-5	05/26/23 12:41 PM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305377-03A	BV-21	05/26/23 03:38 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-21	05/26/23 03:38 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-21	05/26/23 03:38 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	BV-21	05/26/23 03:38 PM	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305377-03B	BV-21	05/26/23 03:38 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	BV-21	05/26/23 03:38 PM	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	BV-21	05/26/23 03:38 PM	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435
2305377-04A	DUP 101	05/26/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	DUP 101	05/26/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	DUP 101	05/26/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/01/23 07:37 AM	110438
	DUP 101	05/26/23	Aqueous	SW7470A	Mercury Aq Prep	06/07/23 08:27 AM	110534
2305377-04B	DUP 101	05/26/23	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	DUP 101	05/26/23	Aqueous	E300	Anion Preparation	05/30/23 09:45 AM	110408
	DUP 101	05/26/23	Aqueous	M2540C	TDS Preparation	05/31/23 02:05 PM	110435

Lab Order: 2305377  
 Client: WSP-Golder  
 Project: Coletto Creek 1H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305377-01A	MW-4	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:40 AM	CETAC2_HG_230608 A
	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/06/23 03:47 PM	ICP-MS4_230606E
	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/02/23 01:23 PM	ICP-MS5_230602A
	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	10	06/02/23 02:40 PM	ICP-MS5_230602A
2305377-01B	MW-4	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 11:15 PM	IC4_230530B
	MW-4	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 08:07 AM	IC4_230530B
	MW-4	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305377-02A	BV-5	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:51 AM	CETAC2_HG_230608 A
	BV-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	5	06/06/23 03:49 PM	ICP-MS4_230606E
	BV-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/02/23 01:26 PM	ICP-MS5_230602A
	BV-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	10	06/02/23 02:43 PM	ICP-MS5_230602A
2305377-02B	BV-5	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 08:26 AM	IC4_230530B
	BV-5	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 11:34 PM	IC4_230530B
	BV-5	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305377-03A	BV-21	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:54 AM	CETAC2_HG_230608 A
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	2	06/06/23 03:43 PM	ICP-MS4_230606E
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/02/23 01:18 PM	ICP-MS5_230602A
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	10	06/02/23 02:35 PM	ICP-MS5_230602A
2305377-03B	BV-21	Aqueous	E300	Anions by IC method - Water	110408	10	05/30/23 11:53 PM	IC4_230530B
	BV-21	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 08:45 AM	IC4_230530B
	BV-21	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A
2305377-04A	DUP 101	Aqueous	SW7470A	Mercury Total: Aqueous	110534	1	06/08/23 09:56 AM	CETAC2_HG_230608 A
	DUP 101	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/06/23 03:51 PM	ICP-MS4_230606E
	DUP 101	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	1	06/02/23 01:29 PM	ICP-MS5_230602A
	DUP 101	Aqueous	SW6020B	Total Metals: ICP-MS - Water	110438	10	06/02/23 02:45 PM	ICP-MS5_230602A
2305377-04B	DUP 101	Aqueous	E300	Anions by IC method - Water	110408	10	05/31/23 12:12 AM	IC4_230530B

Lab Order: 2305377  
Client: WSP-Golder  
Project: Coledo Creek 1H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2305377-04B	DUP 101	Aqueous	E300	Anions by IC method - Water	110408	1	05/31/23 09:04 AM	IC4_230530B
	DUP 101	Aqueous	M2540C	Total Dissolved Solids	110435	1	05/31/23 05:10 PM	WC_230531A

**DHL Analytical, Inc.**

**Date:** 10-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305377

**Client Sample ID:** MW-4  
**Lab ID:** 2305377-01  
**Collection Date:** 05/26/23 10:59 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/23 01:23 PM
Arsenic	0.00755	0.00200	0.00500		mg/L	1	06/02/23 01:23 PM
Barium	0.0554	0.00300	0.0100		mg/L	1	06/02/23 01:23 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:23 PM
Boron	0.322	0.0100	0.0300		mg/L	1	06/06/23 03:47 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:23 PM
Calcium	98.0	1.00	3.00		mg/L	10	06/02/23 02:40 PM
Chromium	0.00214	0.00200	0.00500	J	mg/L	1	06/02/23 01:23 PM
Cobalt	0.00904	0.00300	0.00500		mg/L	1	06/02/23 01:23 PM
Lead	0.000706	0.000300	0.00100	J	mg/L	1	06/02/23 01:23 PM
Lithium	0.0182	0.00500	0.0100		mg/L	1	06/02/23 01:23 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:23 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:23 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 01:23 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:40 AM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	92.0	3.00	10.0		mg/L	10	05/30/23 11:15 PM
Fluoride	0.558	0.100	0.400		mg/L	1	05/31/23 08:07 AM
Sulfate	145	1.00	3.00		mg/L	1	05/31/23 08:07 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	668	10.0	10.0		mg/L	1	05/31/23 05:10 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 10-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305377

**Client Sample ID:** BV-5  
**Lab ID:** 2305377-02  
**Collection Date:** 05/26/23 12:41 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/23 01:26 PM
Arsenic	0.0115	0.00200	0.00500		mg/L	1	06/02/23 01:26 PM
Barium	0.0397	0.00300	0.0100		mg/L	1	06/02/23 01:26 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:26 PM
Boron	1.06	0.0500	0.150		mg/L	5	06/06/23 03:49 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:26 PM
Calcium	65.6	1.00	3.00		mg/L	10	06/02/23 02:43 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:26 PM
Cobalt	0.0404	0.00300	0.00500		mg/L	1	06/02/23 01:26 PM
Lead	0.000461	0.000300	0.00100	J	mg/L	1	06/02/23 01:26 PM
Lithium	0.0177	0.00500	0.0100		mg/L	1	06/02/23 01:26 PM
Molybdenum	0.0123	0.00200	0.00500		mg/L	1	06/02/23 01:26 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:26 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 01:26 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:51 AM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	130	3.00	10.0		mg/L	10	05/30/23 11:34 PM
Fluoride	0.993	0.100	0.400		mg/L	1	05/31/23 08:26 AM
Sulfate	130	1.00	3.00		mg/L	1	05/31/23 08:26 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	827	10.0	10.0		mg/L	1	05/31/23 05:10 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 10-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305377

**Client Sample ID:** BV-21  
**Lab ID:** 2305377-03  
**Collection Date:** 05/26/23 03:38 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/23 01:18 PM
Arsenic	0.0675	0.00200	0.00500		mg/L	1	06/02/23 01:18 PM
Barium	0.179	0.00300	0.0100		mg/L	1	06/02/23 01:18 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:18 PM
Boron	0.392	0.0200	0.0600		mg/L	2	06/06/23 03:43 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:18 PM
Calcium	77.2	1.00	3.00		mg/L	10	06/02/23 02:35 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:18 PM
Cobalt	0.00386	0.00300	0.00500	J	mg/L	1	06/02/23 01:18 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:18 PM
Lithium	0.00527	0.00500	0.0100	J	mg/L	1	06/02/23 01:18 PM
Molybdenum	0.00534	0.00200	0.00500		mg/L	1	06/02/23 01:18 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:18 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 01:18 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:54 AM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	42.0	0.300	1.00		mg/L	1	05/31/23 08:45 AM
Fluoride	0.612	0.100	0.400		mg/L	1	05/31/23 08:45 AM
Sulfate	35.3	1.00	3.00		mg/L	1	05/31/23 08:45 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	415	10.0	10.0		mg/L	1	05/31/23 05:10 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 10-Jul-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek 1H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2305377

**Client Sample ID:** DUP 101  
**Lab ID:** 2305377-04  
**Collection Date:** 05/26/23  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	06/02/23 01:29 PM
Arsenic	0.0759	0.00200	0.00500		mg/L	1	06/02/23 01:29 PM
Barium	0.201	0.00300	0.0100		mg/L	1	06/02/23 01:29 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:29 PM
Boron	0.418	0.0100	0.0300		mg/L	1	06/06/23 03:51 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:29 PM
Calcium	82.5	1.00	3.00		mg/L	10	06/02/23 02:45 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:29 PM
Cobalt	0.00396	0.00300	0.00500	J	mg/L	1	06/02/23 01:29 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	06/02/23 01:29 PM
Lithium	0.00551	0.00500	0.0100	J	mg/L	1	06/02/23 01:29 PM
Molybdenum	0.00546	0.00200	0.00500		mg/L	1	06/02/23 01:29 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	06/02/23 01:29 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	06/02/23 01:29 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	06/08/23 09:56 AM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	45.9	0.300	1.00		mg/L	1	05/31/23 09:04 AM
Fluoride	0.481	0.100	0.400		mg/L	1	05/31/23 09:04 AM
Sulfate	38.5	1.00	3.00		mg/L	1	05/31/23 09:04 AM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	433	10.0	10.0		mg/L	1	05/31/23 05:10 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: WSP-Golder

**ANALYTICAL QC SUMMARY REPORT**

Work Order: 2305377

Project: Coleta Creek 1H23 GW

RunID: CETAC2\_HG\_230424B

Sample ID: <b>DCS-109838</b>	Batch ID: <b>109838</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>DCS</b>	Run ID: <b>CETAC2_HG_230424B</b>	Analysis Date: <b>4/24/2023 1:40:40 PM</b>	Prep Date: <b>4/24/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



CLIENT: WSP-Golder  
 Work Order: 2305377  
 Project: Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: CETAC2\_HG\_230608A**

The QC data in batch 110534 applies to the following samples: 2305377-01A, 2305377-02A, 2305377-03A, 2305377-04A

Sample ID: <b>MB-110534</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:22:24 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.0000800 0.000200

Sample ID: <b>LCS-110534</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:24:39 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00188 0.000200 0.00200 0 94.0 85 115

Sample ID: <b>LCSD-110534</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:26:55 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00187 0.000200 0.00200 0 93.5 85 115 0.533 15

Sample ID: <b>2305377-01AMS</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:42:49 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00180 0.000200 0.00200 0 90.0 80 120

Sample ID: <b>2305377-01AMSD</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:45:05 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00182 0.000200 0.00200 0 91.0 80 120 1.10 15

Sample ID: <b>2305377-01ASD</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:47:21 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID: <b>2305377-01APDS</b>	Batch ID: <b>110534</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:49:37 AM</b>	Prep Date: <b>6/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury 0.00233 0.000200 0.00250 0 93.2 85 115

**Qualifiers:** B Analyte detected in the associated Method Blank DF Dilution Factor  
 J Analyte detected between MDL and RL MDL Method Detection Limit  
 ND Not Detected at the Method Detection Limit R RPD outside accepted control limits  
 RL Reporting Limit S Spike Recovery outside control limits  
 J Analyte detected between SDL and RL N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305377

Project: Coleta Creek 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2\_HG\_230608A

Sample ID: <b>ICV-230608</b>	Batch ID: <b>R127270</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 9:17:50 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00405	0.000200	0.00400	0	101	90	110			
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Sample ID: <b>CCV1-230608</b>	Batch ID: <b>R127270</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230608A</b>	Analysis Date: <b>6/8/2023 10:07:49 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00181	0.000200	0.00200	0	90.5	90	110			
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**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305377

Project: Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230606B

Sample ID: <b>DCS4-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>DCS4</b>	Run ID: <b>ICP-MS4_230606B</b>	Analysis Date: <b>6/6/2023 10:25:00 AM</b>	Prep Date: <b>6/5/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0291	0.0300	0.0300	0	97.1	70	130	0	0	

**Qualifiers:** B Analyte detected in the associated Method Blank  
J Analyte detected between MDL and RL  
ND Not Detected at the Method Detection Limit  
RL Reporting Limit  
J Analyte detected between SDL and RL

DF Dilution Factor  
MDL Method Detection Limit  
R RPD outside accepted control limits  
S Spike Recovery outside control limits  
N Parameter not NELAP certified

CLIENT: WSP-Golder  
 Work Order: 2305377  
 Project: Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230606E**

The QC data in batch 110438 applies to the following samples: 2305377-01A, 2305377-02A, 2305377-03A, 2305377-04A

Sample ID: <b>MB-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 3:35:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron <0.0100 0.0300

Sample ID: <b>LCS-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 3:37:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.192 0.0300 0.200 0 95.9 80 120

Sample ID: <b>LCSD-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 3:39:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.199 0.0300 0.200 0 99.3 80 120 3.44 15

Sample ID: <b>2305377-03A SD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 3:45:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.426 0.300 0 0.392 8.43 20

Sample ID: <b>2305377-03A PDS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 4:05:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.765 0.0600 0.400 0.392 93.4 75 125

Sample ID: <b>2305377-03A MS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 4:08:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.559 0.0600 0.200 0.392 83.7 75 125

Sample ID: <b>2305377-03A MSD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 4:10:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Boron 0.567 0.0600 0.200 0.392 87.6 75 125 1.38 15

- |  |   |
|--|---|
| <b>Qualifiers:</b><br>B Analyte detected in the associated Method Blank<br>J Analyte detected between MDL and RL<br>ND Not Detected at the Method Detection Limit<br>RL Reporting Limit<br>J Analyte detected between SDL and RL | DF Dilution Factor<br>MDL Method Detection Limit<br>R RPD outside accepted control limits<br>S Spike Recovery outside control limits<br>N Parameter not NELAP certified |
|--|---|

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230606E**

Sample ID: <b>ICV-230606</b>	Batch ID: <b>R127221</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 9:49:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0948	0.0300	0.100	0	94.8	90	110			

Sample ID: <b>LCVL-230606</b>	Batch ID: <b>R127221</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 10:03:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0219	0.0300	0.0200	0	109	80	120			

Sample ID: <b>CCV4-230606</b>	Batch ID: <b>R127221</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 12:14:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.202	0.0300	0.200	0	101	90	110			

Sample ID: <b>CCV5-230606</b>	Batch ID: <b>R127221</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230606E</b>	Analysis Date: <b>6/6/2023 4:14:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.196	0.0300	0.200	0	97.9	90	110			

<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230228B**

Sample ID: <b>DCS1-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS</b>	Run ID: <b>ICP-MS5_230228B</b>	Analysis Date: <b>2/28/2023 10:47:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.000950	0.00250	0.00100	0	95.0	70	130	0	0	
Beryllium	0.000563	0.00100	0.000500	0	113	70	130	0	0	
Cadmium	0.000453	0.00100	0.000500	0	90.6	70	130	0	0	
Lead	0.000454	0.00100	0.000500	0	90.8	70	130	0	0	
Thallium	0.000483	0.00150	0.000500	0	96.6	70	130	0	0	

Sample ID: <b>DCS2-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS2</b>	Run ID: <b>ICP-MS5_230228B</b>	Analysis Date: <b>2/28/2023 10:51:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.275	0.300	0.300	0	91.6	70	130	0	0	

Sample ID: <b>DCS3-109023</b>	Batch ID: <b>109023</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>ICP-MS5_230228B</b>	Analysis Date: <b>2/28/2023 10:53:00 AM</b>	Prep Date: <b>2/27/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00504	0.00500	0.00500	0	101	70	130	0	0	
Barium	0.00484	0.0100	0.00500	0	96.7	70	130	0	0	
Chromium	0.00492	0.00500	0.00500	0	98.5	70	130	0	0	
Cobalt	0.00509	0.00500	0.00500	0	102	70	130	0	0	
Lithium	0.00514	0.0100	0.00500	0	103	70	130	0	0	
Molybdenum	0.00484	0.00500	0.00500	0	96.8	70	130	0	0	
Selenium	0.00491	0.00500	0.00500	0	98.3	70	130	0	0	

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230602A**

The QC data in batch 110438 applies to the following samples: 2305377-01A, 2305377-02A, 2305377-03A, 2305377-04A

Sample ID: <b>MB-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:08:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: <b>LCS-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:10:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	100	80	120			
Arsenic	0.200	0.00500	0.200	0	99.9	80	120			
Barium	0.204	0.0100	0.200	0	102	80	120			
Beryllium	0.202	0.00100	0.200	0	101	80	120			
Cadmium	0.202	0.00100	0.200	0	101	80	120			
Calcium	4.84	0.300	5.00	0	96.8	80	120			
Chromium	0.204	0.00500	0.200	0	102	80	120			
Cobalt	0.209	0.00500	0.200	0	105	80	120			
Lead	0.198	0.00100	0.200	0	99.1	80	120			
Lithium	0.204	0.0100	0.200	0	102	80	120			
Molybdenum	0.197	0.00500	0.200	0	98.6	80	120			
Selenium	0.209	0.00500	0.200	0	104	80	120			
Thallium	0.199	0.00150	0.200	0	99.6	80	120			

Sample ID: <b>LCSD-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:13:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.201	0.00250	0.200	0	101	80	120	0.612	15	
Arsenic	0.202	0.00500	0.200	0	101	80	120	1.26	15	
Barium	0.204	0.0100	0.200	0	102	80	120	0.137	15	
Beryllium	0.206	0.00100	0.200	0	103	80	120	1.90	15	

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230602A**

Sample ID: <b>LCSD-110438</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:13:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cadmium	0.202	0.00100	0.200	0	101	80	120	0.086	15	
Calcium	4.79	0.300	5.00	0	95.9	80	120	0.929	15	
Chromium	0.202	0.00500	0.200	0	101	80	120	1.03	15	
Cobalt	0.212	0.00500	0.200	0	106	80	120	1.19	15	
Lead	0.200	0.00100	0.200	0	99.8	80	120	0.756	15	
Lithium	0.207	0.0100	0.200	0	104	80	120	1.54	15	
Molybdenum	0.198	0.00500	0.200	0	99.2	80	120	0.670	15	
Selenium	0.210	0.00500	0.200	0	105	80	120	0.722	15	
Thallium	0.200	0.00150	0.200	0	100	80	120	0.346	15	

Sample ID: <b>2305377-03A SD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:21:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	0.0676	0.0250	0	0.0675				0.155	20	
Barium	0.177	0.0500	0	0.179				0.970	20	
Beryllium	<0.00150	0.00500	0	0				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0.00386				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	<0.0250	0.0500	0	0.00527				0	20	
Molybdenum	<0.0100	0.0250	0	0.00534				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: <b>2305377-03A PDS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:47:00 PM</b>	Prep Date: <b>6/1/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.193	0.00250	0.200	0	96.5	75	125			
Arsenic	0.258	0.00500	0.200	0.0675	95.3	75	125			
Barium	0.374	0.0100	0.200	0.179	97.3	75	125			
Beryllium	0.206	0.00100	0.200	0	103	75	125			
Cadmium	0.203	0.00100	0.200	0	101	75	125			
Chromium	0.206	0.00500	0.200	0	103	75	125			
Cobalt	0.207	0.00500	0.200	0.00386	101	75	125			
Lead	0.197	0.00100	0.200	0	98.3	75	125			
Lithium	0.216	0.0100	0.200	0.00527	105	75	125			
Molybdenum	0.201	0.00500	0.200	0.00534	97.7	75	125			

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified



**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS5\_230602A

Sample ID: <b>2305377-03A PDS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:47:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	0.201	0.00500	0.200	0	100	75	125			
Thallium	0.201	0.00150	0.200	0	100	75	125			

Sample ID: <b>2305377-03A MS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:49:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.202	0.00250	0.200	0	101	75	125			
Arsenic	0.267	0.00500	0.200	0.0675	99.6	75	125			
Barium	0.383	0.0100	0.200	0.179	102	75	125			
Beryllium	0.208	0.00100	0.200	0	104	75	125			
Cadmium	0.204	0.00100	0.200	0	102	75	125			
Chromium	0.206	0.00500	0.200	0	103	75	125			
Cobalt	0.212	0.00500	0.200	0.00386	104	75	125			
Lead	0.200	0.00100	0.200	0	99.8	75	125			
Lithium	0.218	0.0100	0.200	0.00527	106	75	125			
Molybdenum	0.207	0.00500	0.200	0.00534	101	75	125			
Selenium	0.205	0.00500	0.200	0	103	75	125			
Thallium	0.202	0.00150	0.200	0	101	75	125			

Sample ID: <b>2305377-03A MSD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:52:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.6	75	125	1.52	15	
Arsenic	0.265	0.00500	0.200	0.0675	98.7	75	125	0.650	15	
Barium	0.384	0.0100	0.200	0.179	102	75	125	0.252	15	
Beryllium	0.206	0.00100	0.200	0	103	75	125	1.36	15	
Cadmium	0.201	0.00100	0.200	0	100	75	125	1.31	15	
Chromium	0.204	0.00500	0.200	0	102	75	125	0.979	15	
Cobalt	0.211	0.00500	0.200	0.00386	103	75	125	0.731	15	
Lead	0.199	0.00100	0.200	0	99.4	75	125	0.418	15	
Lithium	0.216	0.0100	0.200	0.00527	105	75	125	1.12	15	
Molybdenum	0.205	0.00500	0.200	0.00534	99.9	75	125	1.15	15	
Selenium	0.200	0.00500	0.200	0	99.9	75	125	2.76	15	
Thallium	0.201	0.00150	0.200	0	100	75	125	0.412	15	

Sample ID: <b>2305377-03A SD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:38:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230602A**

Sample ID: <b>2305377-03A SD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:38:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	78.4	15.0	0	77.2				1.55	20	
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Sample ID: <b>2305377-03A PDS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:48:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	127	3.00	50.0	77.2	99.1	75	125			
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Sample ID: <b>2305377-03A MS</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:51:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	80.0	3.00	5.00	77.2	57.4	75	125			S
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Sample ID: <b>2305377-03A MSD</b>	Batch ID: <b>110438</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:53:00 PM</b>	Prep Date: <b>6/1/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	80.8	3.00	5.00	77.2	73.2	75	125	0.979	15	S
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**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS5\_230602A

Sample ID: <b>ICV-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 10:18:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0989	0.00250	0.100	0	98.9	90	110			
Arsenic	0.0985	0.00500	0.100	0	98.5	90	110			
Barium	0.0979	0.0100	0.100	0	97.9	90	110			
Beryllium	0.0978	0.00100	0.100	0	97.8	90	110			
Cadmium	0.0987	0.00100	0.100	0	98.7	90	110			
Calcium	2.48	0.300	2.50	0	99.4	90	110			
Chromium	0.100	0.00500	0.100	0	100	90	110			
Cobalt	0.101	0.00500	0.100	0	101	90	110			
Lead	0.0966	0.00100	0.100	0	96.6	90	110			
Lithium	0.0996	0.0100	0.100	0	99.6	90	110			
Molybdenum	0.0942	0.00500	0.100	0	94.2	90	110			
Selenium	0.0994	0.00500	0.100	0	99.4	90	110			
Thallium	0.0964	0.00150	0.100	0	96.4	90	110			

Sample ID: <b>LCVL-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 10:24:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00196	0.00250	0.00200	0	98.1	80	120			
Arsenic	0.00498	0.00500	0.00500	0	99.6	80	120			
Barium	0.00483	0.0100	0.00500	0	96.5	80	120			
Beryllium	0.00100	0.00100	0.00100	0	100	80	120			
Cadmium	0.00100	0.00100	0.00100	0	100	80	120			
Calcium	0.0841	0.300	0.100	0	84.1	80	120			
Chromium	0.00496	0.00500	0.00500	0	99.3	80	120			
Cobalt	0.00504	0.00500	0.00500	0	101	80	120			
Lead	0.000983	0.00100	0.00100	0	98.3	80	120			
Lithium	0.0100	0.0100	0.0100	0	100	80	120			
Molybdenum	0.00491	0.00500	0.00500	0	98.3	80	120			
Selenium	0.00528	0.00500	0.00500	0	106	80	120			
Thallium	0.000974	0.00150	0.00100	0	97.4	80	120			

Sample ID: <b>CCV4-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:02:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	97.8	90	110			
Arsenic	0.197	0.00500	0.200	0	98.3	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.196	0.00100	0.200	0	98.2	90	110			
Cadmium	0.196	0.00100	0.200	0	98.1	90	110			

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder  
 Work Order: 2305377  
 Project: Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230602A**

Sample ID: <b>CCV4-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:02:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.199	0.00500	0.200	0	99.6	90	110			
Cobalt	0.205	0.00500	0.200	0	102	90	110			
Lead	0.194	0.00100	0.200	0	97.0	90	110			
Lithium	0.199	0.0100	0.200	0	99.5	90	110			
Molybdenum	0.193	0.00500	0.200	0	96.5	90	110			
Selenium	0.203	0.00500	0.200	0	101	90	110			
Thallium	0.195	0.00150	0.200	0	97.5	90	110			

Sample ID: <b>CCV5-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 1:55:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.195	0.00250	0.200	0	97.7	90	110			
Arsenic	0.198	0.00500	0.200	0	98.8	90	110			
Barium	0.200	0.0100	0.200	0	100	90	110			
Beryllium	0.200	0.00100	0.200	0	100	90	110			
Cadmium	0.200	0.00100	0.200	0	99.8	90	110			
Calcium	4.59	0.300	5.00	0	91.9	90	110			
Chromium	0.200	0.00500	0.200	0	100	90	110			
Cobalt	0.210	0.00500	0.200	0	105	90	110			
Lead	0.195	0.00100	0.200	0	97.7	90	110			
Lithium	0.205	0.0100	0.200	0	102	90	110			
Molybdenum	0.197	0.00500	0.200	0	98.4	90	110			
Selenium	0.205	0.00500	0.200	0	103	90	110			
Thallium	0.196	0.00150	0.200	0	98.0	90	110			

Sample ID: <b>CCV6-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:30:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.74	0.300	5.00	0	94.7	90	110			

Sample ID: <b>CCV7-230602</b>	Batch ID: <b>R127158</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230602A</b>	Analysis Date: <b>6/2/2023 2:56:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.79	0.300	5.00	0	95.8	90	110			

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2305377

Project: Coleta Creek 1H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC4\_230519A

Sample ID: <b>DCS3-110237</b>	Batch ID: <b>110237</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>IC4_230519A</b>	Analysis Date: <b>5/19/2023 4:06:25 PM</b>	Prep Date: <b>5/19/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.899	1.00	1.000	0	89.9	70	130	0	0	
Fluoride	0.432	0.400	0.4000	0	108	70	130	0	0	
Sulfate	2.76	3.00	3.000	0	92.1	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coletto Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC4\_230530B**

The QC data in batch 110408 applies to the following samples: 2305377-01B, 2305377-02B, 2305377-03B, 2305377-04B

Sample ID: <b>MB-110408</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>MBLK</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 11:26:01 AM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: <b>LCS-110408</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>LCS</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 11:45:01 AM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.44	1.00	10.00	0	94.4	90	110			
Fluoride	3.86	0.400	4.000	0	96.6	90	110			
Sulfate	30.8	3.00	30.00	0	103	90	110			

Sample ID: <b>LCS-110408</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>LCS</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 12:04:01 PM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.45	1.00	10.00	0	94.5	90	110	0.159	20	
Fluoride	3.88	0.400	4.000	0	97.0	90	110	0.358	20	
Sulfate	30.8	3.00	30.00	0	103	90	110	0.038	20	

Sample ID: <b>2305376-04BMS</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>MS</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 6:49:31 PM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	801	10.0	200.0	736.5	32.1	90	110			S
Fluoride	206	4.00	200.0	0	103	90	110			
Sulfate	601	30.0	200.0	408.7	96.0	90	110			

Sample ID: <b>2305376-04BMSD</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>MSD</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 7:08:31 PM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	801	10.0	200.0	736.5	32.4	90	110	0.069	20	S
Fluoride	207	4.00	200.0	0	104	90	110	0.762	20	
Sulfate	602	30.0	200.0	408.7	96.6	90	110	0.217	20	

Sample ID: <b>2305376-10BMS</b>		Batch ID: <b>110408</b>		TestNo: <b>E300</b>		Units: <b>mg/L</b>				
SampType: <b>MS</b>		Run ID: <b>IC4_230530B</b>		Analysis Date: <b>5/30/2023 10:37:30 PM</b>		Prep Date: <b>5/30/2023</b>				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:** B Analyte detected in the associated Method Blank      DF Dilution Factor  
J Analyte detected between MDL and RL      MDL Method Detection Limit  
ND Not Detected at the Method Detection Limit      R RPD outside accepted control limits  
RL Reporting Limit      S Spike Recovery outside control limits  
J Analyte detected between SDL and RL      N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC4\_230530B**

Sample ID: <b>2305376-10BMS</b>	Batch ID: <b>110408</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/30/2023 10:37:30 PM</b>	Prep Date: <b>5/30/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	210	10.0	200.0	13.22	98.6	90	110			
Fluoride	209	4.00	200.0	0	104	90	110			
Sulfate	224	30.0	200.0	15.33	104	90	110			

Sample ID: <b>2305376-10BMSD</b>	Batch ID: <b>110408</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/30/2023 10:56:30 PM</b>	Prep Date: <b>5/30/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	211	10.0	200.0	13.22	98.9	90	110	0.291	20	
Fluoride	210	4.00	200.0	0	105	90	110	0.674	20	
Sulfate	225	30.0	200.0	15.33	105	90	110	0.337	20	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC4\_230530B**

Sample ID: <b>ICV-230530</b>	Batch ID: <b>R127095</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/30/2023 10:48:01 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.4	1.00	25.00	0	97.8	90	110			
Fluoride	9.94	0.400	10.00	0	99.4	90	110			
Sulfate	78.7	3.00	75.00	0	105	90	110			

Sample ID: <b>CCV1-230530</b>	Batch ID: <b>R127095</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/30/2023 9:02:30 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.35	1.00	10.00	0	93.5	90	110			
Fluoride	3.89	0.400	4.000	0	97.1	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: <b>CCV2-230530</b>	Batch ID: <b>R127095</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/31/2023 2:06:30 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.35	1.00	10.00	0	93.5	90	110			
Fluoride	3.90	0.400	4.000	0	97.6	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: <b>CCV3-230530</b>	Batch ID: <b>R127095</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/31/2023 6:32:30 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.39	1.00	10.00	0	93.9	90	110			
Fluoride	3.93	0.400	4.000	0	98.3	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Sample ID: <b>CCV4-230530</b>	Batch ID: <b>R127095</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC4_230530B</b>	Analysis Date: <b>5/31/2023 10:58:30 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.42	1.00	10.00	0	94.2	90	110			
Fluoride	3.99	0.400	4.000	0	99.7	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified



**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: WC\_230531A**

The QC data in batch 110435 applies to the following samples: 2305377-01B, 2305377-02B, 2305377-03B, 2305377-04B

Sample ID: <b>MB-110435</b>	Batch ID: <b>110435</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>WC_230531A</b>	Analysis Date: <b>5/31/2023 5:10:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	<10.0	10.0								

Sample ID: <b>LCS-110435</b>	Batch ID: <b>110435</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>WC_230531A</b>	Analysis Date: <b>5/31/2023 5:10:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	740	10.0	745.6	0	99.2	90	113			

Sample ID: <b>2305376-04B-DUP</b>	Batch ID: <b>110435</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230531A</b>	Analysis Date: <b>5/31/2023 5:10:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	2080	50.0	0	2080				0.241	5	

Sample ID: <b>2305376-08B-DUP</b>	Batch ID: <b>110435</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230531A</b>	Analysis Date: <b>5/31/2023 5:10:00 PM</b>	Prep Date: <b>5/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera										
	4190	50.0	0	4350				3.87	5	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2305377  
**Project:** Coleta Creek 1H23 GW

**MQL SUMMARY REPORT**

<b>TestNo: E300</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

<b>TestNo: SW6020B</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

<b>TestNo: SW7470A</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Mercury	0.0000800	0.000200

<b>TestNo: M2540C</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Total Dissolved Solids (Residue, Filt	10.0	10.0

**DHL Analytical, Inc.**

Sample Delivery Group: L1621982  
Samples Received: 06/01/2023  
Project Number: 2305377  
Description:

Report To: John DuPont  
2300 Double Creek Drive  
Round Rock, TX 78664

Entire Report Reviewed By:



Donna Eidson  
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](http://www.pacenational.com)

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# SAMPLE SUMMARY

## MW-4 L1621982-01 Non-Potable Water

Collected by  
05/26/23 10:59  
Received date/time  
06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:19	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:19	RGT	Mt. Juliet, TN

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

## BV-5 L1621982-02 Non-Potable Water

Collected by  
05/26/23 12:41  
Received date/time  
06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	Mt. Juliet, TN

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

## BV-21 L1621982-03 Non-Potable Water

Collected by  
05/26/23 15:38  
Received date/time  
06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	Mt. Juliet, TN

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

## DUP 101 L1621982-04 Non-Potable Water

Collected by  
05/26/23 00:00  
Received date/time  
06/01/23 11:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2081814	1	06/22/23 14:29	06/27/23 17:08	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2086740	1	06/30/23 12:23	07/03/23 17:27	SNR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2086740	1	06/30/23 12:23	07/03/23 17:27	RGT	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.



Donna Eidson  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.947		0.227	0.383	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Barium	108			30.0-143	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Yttrium	108			30.0-136	06/27/2023 17:08	<a href="#">WG2081814</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.03		0.298	0.508	07/03/2023 17:19	<a href="#">WG2086740</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0864	<u>U</u>	0.193	0.333	07/03/2023 17:19	<a href="#">WG2086740</a>
(T) Barium-133	66.6			30.0-143	07/03/2023 17:19	<a href="#">WG2086740</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.932		0.307	0.531	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Barium	88.1			30.0-143	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Yttrium	105			30.0-136	06/27/2023 17:08	<a href="#">WG2081814</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.33		0.406	0.598	07/03/2023 17:27	<a href="#">WG2086740</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.394		0.266	0.276	07/03/2023 17:27	<a href="#">WG2086740</a>
(T) Barium-133	99.2			30.0-143	07/03/2023 17:27	<a href="#">WG2086740</a>



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.10		0.269	0.456	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Barium	115			30.0-143	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Yttrium	99.1			30.0-136	06/27/2023 17:08	<a href="#">WG2081814</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.97		0.461	0.503	07/03/2023 17:27	<a href="#">WG2086740</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.872		0.374	0.213	07/03/2023 17:27	<a href="#">WG2086740</a>
(T) Barium-133	77.0			30.0-143	07/03/2023 17:27	<a href="#">WG2086740</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.37		0.285	0.479	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Barium	124			30.0-143	06/27/2023 17:08	<a href="#">WG2081814</a>
(T) Yttrium	93.0			30.0-136	06/27/2023 17:08	<a href="#">WG2081814</a>

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.54		0.534	0.561	07/03/2023 17:27	<a href="#">WG2086740</a>

<sup>4</sup>Cn

<sup>5</sup>Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.17		0.452	0.292	07/03/2023 17:27	<a href="#">WG2086740</a>
(T) Barium-133	83.8			30.0-143	07/03/2023 17:27	<a href="#">WG2086740</a>

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R3945894-1 06/27/23 17:08

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.218	↓	0.157	0.282
(T) Barium	106		106	
(T) Yttrium	106		106	

L1621984-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1621984-01 06/27/23 17:08 • (DUP) R3945894-5 06/27/23 17:08

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	1.52	0.304	0.505	2.56	0.403	0.505	1	51.4	2.07		20	3
(T) Barium	106			98.9	98.9							
(T) Yttrium	84.1			98.2	98.2							

Laboratory Control Sample (LCS)

(LCS) R3945894-2 06/27/23 17:08

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.53	111	80.0-120	
(T) Barium			102		
(T) Yttrium			107		

L1621971-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621971-01 06/27/23 17:08 • (MS) R3945894-3 06/27/23 17:08 • (MSD) R3945894-4 06/27/23 17:08

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.363	20.7	19.3	122	113	1	70.0-130			7.10		20
(T) Barium		110			109	104							
(T) Yttrium		101			113	112							

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3945005-1 07/03/23 17:19

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0510	<u>J</u>	0.0632	0.0887
(T) Barium-133	78.5		78.5	

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

L1621982-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1621982-03 07/03/23 17:27 • (DUP) R3945005-5 07/03/23 17:19

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.872	0.374	0.213	0.0461	0.258	0.213	1	180	1.82	<u>U</u>	20	3
(T) Barium-133	77.0			61.5	61.5							

Laboratory Control Sample (LCS)

(LCS) R3945005-2 07/03/23 17:19

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.82	96.2	80.0-120	
(T) Barium-133			76.1		

L1621984-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1621984-04 07/03/23 17:19 • (MS) R3945005-3 07/03/23 17:19 • (MSD) R3945005-4 07/03/23 17:19

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.620	17.7	19.5	85.2	94.4	1	75.0-125			9.96		20
(T) Barium-133		89.2			62.7	48.7							

# 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.

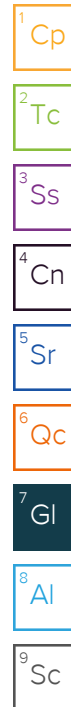
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



# ACCREDITATIONS & LOCATIONS

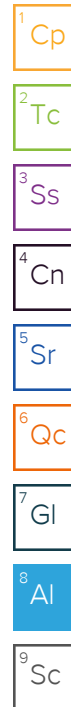
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



DHL Analytical, Inc.  
2300 Double Creek Drive  
Round Rock, TX 78664

# CHAIN-OF-CUSTODY RECORD

TEL: (512) 388-8222  
Work Order: 2305377

FAX:

J153

**Subcontractor:**

Pace Analytical  
12065 Lebanon Rd  
Mt. Juliet, TN 37122

TEL: (615) 773-5923  
FAX:  
Acct #: DHLRRTX

PH-10BDH4321 TRC-2141141  
CR6-220221V

42

11621982 30-May-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests			
					Ra-228 E904.0	Ra-226 M7500 Ra B M		
MW-4	Aqueous	01C	05/26/23 10:59 AM	1LHDPEHNO3		1		
MW-4	Aqueous	01D	05/26/23 10:59 AM	1LHDPEHNO3	1			J-01
BV-5	Aqueous	02C	05/26/23 12:41 PM	1LHDPEHNO3		1		J-02
BV-5	Aqueous	02D	05/26/23 12:41 PM	1LHDPEHNO3	1			J-02
BV-21	Aqueous	03C	05/26/23 03:38 PM	1LHDPEHNO3		1		J-03
BV-21	Aqueous	03D	05/26/23 03:38 PM	1LHDPEHNO3	1			J-03
DUP 101	Aqueous	04C	05/26/23	1LHDPEHNO3		1		J-04
DUP 101	Aqueous	04D	05/26/23	1LHDPEHNO3	1			J-04

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N If Applicable  
 COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N  
 Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N  
 AMIS  
 12976R400302447122

**General Comments:**

Please analyze these samples with Normal Turnaround Time.  
 Report Ra-226, Ra-228 & Combined per Specs.  
 Quality Control Package Needed: Standard - NELAC Rad Test compliant  
 Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by:	Date/Time	Received by:	Date/Time
<i>E</i>	5/30/23 1800	<i>Jensen</i>	6/1/23 1800
Relinquished by:		Received by:	



August 02, 2023

Jacob Jarvis  
WSP-Golder  
1601 S. Mopac Expy, Suite 325B  
Austin, Texas 78746  
TEL: (512) 671-3434

FAX:

Order No.: 2307034

RE: 1H23 Coletto Creek CCR GW

Dear Jacob Jarvis:

DHL Analytical, Inc. received 1 sample(s) on 7/7/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont", is written over the typed name.

John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification  
Number: T104704211-23-29





# Table of Contents

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<b>PrepDatesReport 2307034 .....</b>	<b>12</b>
<b>AnalyticalDatesReport 2307034 .....</b>	<b>13</b>
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<b>AnalyticalQCSummaryReport 2307034 .....</b>	<b>15</b>
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<b>Subcontract Report 2307034 .....</b>	<b>35</b>



2300 Double Creek Dr. Round Rock, TX 78664

Phone 512.388.8222

Web: [www.dhlanalytical.com](http://www.dhlanalytical.com)

Email: [login@dhlanalytical.com](mailto:login@dhlanalytical.com)

# CHAIN-OF-CUSTODY

PAGE      OF     

CLIENT: <u>WSP USA Inc</u> ADDRESS: <u>Roundrock, Tx</u> PHONE: _____ EMAIL: <u>jacob.jenvis@wsp.com</u> DATA REPORTED TO: <u>Jacob Jenvis</u> ADDITIONAL REPORT COPIES TO: _____	DATE: <u>7-6-23</u> PO#: _____ PROJECT LOCATION OR NAME: <u>1 #23 Coleta Creek CCR SW</u> CLIENT PROJECT # _____	<b>LABORATORY USE ONLY</b> DHL WORKORDER #: <u>2307034</u> COLLECTOR: <u>Christina Martinet</u>
---	---	---

Field Sample I.D.	Lab Use Only DHL Lab #	W=WATER L=LIQUID S=SOIL SO=SOLID		SE=SEDIMENT P=PAINT SL=SLUDGE		# of Containers	PRESERVATION				ANALYSES	FIELD NOTES	
		Collection Date	Collection Time	Matrix	Container Type		HCL	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH			Zn Acetate
<u>mw-6</u>	<u>01</u>	<u>7-6-23</u>	<u>1041</u>	<u>SN</u>	<u>P</u>	<u>1</u>	<u>3</u>						
<div style="font-size: 2em; opacity: 0.5;">Appendix II/III</div>													

Relinquished By: (Sign) <u>[Signature]</u>	DATE/TIME <u>7-6-23/1600</u>	Received by: <u>Fed Ex</u>	<b>TURN AROUND TIME (CALL FIRST FOR RUSH)</b> RUSH-1 DAY <input type="checkbox"/> RUSH-2 DAY <input type="checkbox"/> RUSH-3 DAY <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> DUE DATE <input type="checkbox"/>	<b>LABORATORY USE ONLY</b> RECEIVING TEMP (°C): <u>0.6</u> THERM #: <u>78</u> CUSTODY SEALS: <input type="checkbox"/> BROKEN <input checked="" type="checkbox"/> INTACT <input type="checkbox"/> NOT USED CARRIER: <input type="checkbox"/> LSO <input checked="" type="checkbox"/> FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> COURIER <input type="checkbox"/> OTHER <input type="checkbox"/> HAND DELIVERED
Relinquished By: (Sign) <u>Fed Ex</u>	DATE/TIME <u>7/7/23 0855</u>	Received by: <u>[Signature]</u>		
Relinquished By: (Sign)	DATE/TIME	Received by:		

DHL DISPOSAL @ 5.00 each

Return

## Eric Lau

---

**From:** John DuPont  
**Sent:** Tuesday, May 28, 2019 11:35 AM  
**To:** Eric Lau  
**Subject:** FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)  
Anions (Cl, F, and SO4)  
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)  
Ra-226  
Ra-228

ORIGIN ID: VCTA (956) 330-8422  
CHRISTIAN MARTINEZ  
WSP USA INC  
1501 E MOCKINGBIRD LN  
STE 420  
VICTORIA, TX 77904  
UNITED STATES US

SHIP DATE: 06 JUL 23  
ACTWGT: 30.00 LB  
CAD: 2806631/NET4610  
DIMS: 24x12x15 IN  
BILL SENDER

TO **SAMPLE RECEIVING**  
**DHL ANALYTICAL**  
**2300 DOUBLE CREEK DR**

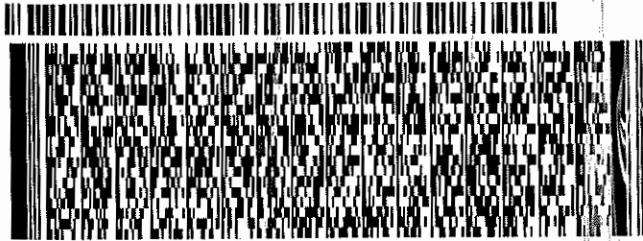
**ROUND ROCK TX 78664**

(512) 388-8222  
INV.  
PO:

REF: 31404097022 - TASK 01 SUB  
DEPT:

58031416AE49AE3

FedEx Ship Manager - Print Your Label(s)

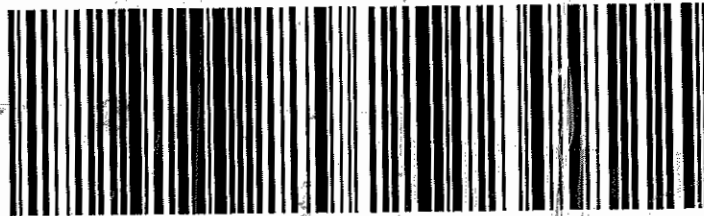


FRI - 07 JUL 10:30A  
PRIORITY OVERNIGHT

TRK# 7726 6183 8447  
0201

**44 BSMA**

78664  
TX-US AUS



**CUSTODY SEAL**

DATE

7-6-23

SIGNATURE

*[Handwritten signature]*



Sample Receipt Checklist

Client Name: WSP-Golder

Date Received: 7/7/2023

Work Order Number: 2307034

Received by: EL

Checklist completed by: [Signature] 7/7/2023  
Signature Date

Reviewed by: SH 7/7/2023  
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted  NA
- Water - pH<2 acceptable upon receipt? Yes  No  NA  LOT # 13171  
Adjusted? N Checked by GUK
- Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt? Yes  No  NA  LOT #  
Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_
- Container/Temp Blank temperature in compliance? Yes  No

Cooler # 1  
Temp °C 0.6  
Seal Intact Y

Any No response must be detailed in the comments section below.

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

Corrective Action: \_\_\_\_\_  
\_\_\_\_\_

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist: Reportable Data</b>							
<b>Project Name:</b> 1H23 Coleta Creek CCR GW				<b>LRC Date:</b> 8/2/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2307034			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
		<b>Chain-of-Custody (C-O-C)</b>					
<b>R1</b>	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				<b>R1-01</b>
		2) Were all departures from standard conditions described in an exception report?			X		
<b>R2</b>	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
<b>R3</b>	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
<b>R4</b>	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
<b>R5</b>	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, <b>greater</b> than 10 times the concentration in the blank sample?			X		
<b>R6</b>	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
<b>R7</b>	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			<b>R7-03</b>
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
<b>R8</b>	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
<b>R9</b>	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
<b>R10</b>	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist (continued): Supporting Data</b>							
<b>Project Name:</b> 1H23 Coletto Creek CCR GW				<b>LRC Date:</b> 8/2/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2307034			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass Spectral Tuning:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal Standards (IS):</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw Data (NELAC Section 5.5.10)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively Identified Compounds (TICs):</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) Results:</b>					
		1) Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	<b>Proficiency Test Reports:</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/Validation Documentation for Methods (NELAC Chapter 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory Standard Operating Procedures (SOPs):</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ 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 Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:


- 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.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is 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 that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont  
Official Title: General Manager

  
Signature

08/02/23  
Date

Name: Dr. Derhsing Luu  
Official Title: Technical Director



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**CLIENT:** WSP-Golder  
**Project:** 1H23 Coleta Creek CCR GW  
**Lab Order:** 2307034

**CASE NARRATIVE**

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Samples were analyzed using the methods outlined in the following references:

- Method SW6020B - Metals Analysis
- Method SW7470A - Mercury Analysis
- Method E300 - Anions Analysis
- Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M. Analyzed at Pace Analytical.

Exception Report R1-01

The sample was received and log-in performed on 7/7/23. A total of 1 sample was received. The sample arrived in good condition and was properly packaged.

Exception Report R7-03

For Anions analysis performed on 7/11/23 (batch 111106) the matrix spike and matrix spike duplicate recoveries were above control limits for Sulfate. This was due to matrix effect. These are flagged accordingly in the QC summary report. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for this analyte. No further corrective actions were taken.

For Metals analysis performed on 7/12/23 the matrix spike and matrix spike duplicate recoveries were out of control limits for three analytes. These are flagged accordingly. The sample selected for the matrix spike and matrix spike duplicate was not from this work order. The LCS was within control limits for these analytes. No further corrective actions were taken.

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**CLIENT:** WSP-Golder  
**Project:** 1H23 Coleta Creek CCR GW  
**Lab Order:** 2307034

**Work Order Sample Summary**

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<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
2307034-01	MW-6		07/06/23 10:41 AM	07/07/2023

**Lab Order:** 2307034  
**Client:** WSP-Golder  
**Project:** 1H23 Coleta Creek CCR GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2307034-01A	MW-6	07/06/23 10:41 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	07/11/23 07:32 AM	111092
	MW-6	07/06/23 10:41 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	07/11/23 07:32 AM	111092
	MW-6	07/06/23 10:41 AM	Aqueous	SW7470A	Mercury Aq Prep	07/11/23 01:43 PM	111107
2307034-01B	MW-6	07/06/23 10:41 AM	Aqueous	E300	Anion Preparation	07/13/23 09:22 AM	111137
	MW-6	07/06/23 10:41 AM	Aqueous	E300	Anion Preparation	07/11/23 09:00 AM	111106
	MW-6	07/06/23 10:41 AM	Aqueous	E300	Anion Preparation	07/11/23 09:00 AM	111106
	MW-6	07/06/23 10:41 AM	Aqueous	M2540C	TDS Preparation	07/07/23 01:14 PM	111058

Lab Order: 2307034  
 Client: WSP-Golder  
 Project: 1H23 Coleta Creek CCR GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2307034-01A	MW-6	Aqueous	SW7470A	Mercury Total: Aqueous	111107	1	07/12/23 09:30 AM	CETAC2_HG_230712 A
	MW-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111092	1	07/12/23 11:48 AM	ICP-MS5_230712A
	MW-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111092	10	07/12/23 01:03 PM	ICP-MS4_230712C
2307034-01B	MW-6	Aqueous	E300	Anions by IC method - Water	111137	100	07/13/23 06:11 PM	IC2_230713C
	MW-6	Aqueous	E300	Anions by IC method - Water	111106	10	07/11/23 08:21 PM	IC2_230711C
	MW-6	Aqueous	E300	Anions by IC method - Water	111106	1	07/11/23 07:27 PM	IC2_230711C
	MW-6	Aqueous	M2540C	Total Dissolved Solids	111058	1	07/07/23 05:15 PM	WC_230707D

**DHL Analytical, Inc.**

**Date:** 02-Aug-23

**CLIENT:** WSP-Golder  
**Project:** 1H23 Coletto Creek CCR GW  
**Project No:**  
**Lab Order:** 2307034

**Client Sample ID:** MW-6  
**Lab ID:** 2307034-01  
**Collection Date:** 07/06/23 10:41 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	07/12/23 11:48 AM
Arsenic	0.00902	0.00200	0.00500		mg/L	1	07/12/23 11:48 AM
Barium	0.0739	0.00300	0.0100		mg/L	1	07/12/23 11:48 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	07/12/23 11:48 AM
Boron	2.05	0.100	0.300		mg/L	10	07/12/23 01:03 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	07/12/23 11:48 AM
Calcium	62.4	1.00	3.00		mg/L	10	07/12/23 01:03 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	07/12/23 11:48 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	07/12/23 11:48 AM
Lead	<0.000300	0.000300	0.00100		mg/L	1	07/12/23 11:48 AM
Lithium	0.0127	0.00500	0.0100		mg/L	1	07/12/23 11:48 AM
Molybdenum	0.0343	0.00200	0.00500		mg/L	1	07/12/23 11:48 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	07/12/23 11:48 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	07/12/23 11:48 AM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	07/12/23 09:30 AM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	66.1	30.0	100	J	mg/L	100	07/13/23 06:11 PM
Fluoride	0.257	0.100	0.400	J	mg/L	1	07/11/23 07:27 PM
Sulfate	31.6	1.00	3.00		mg/L	1	07/11/23 07:27 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	452	10.0	10.0		mg/L	1	07/07/23 05:15 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

**ANALYTICAL QC SUMMARY REPORT**

RunID: CETAC2\_HG\_230424B

Sample ID: <b>DCS-109838</b>	Batch ID: <b>109838</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>DCS</b>	Run ID: <b>CETAC2_HG_230424B</b>	Analysis Date: <b>4/24/2023 1:40:40 PM</b>	Prep Date: <b>4/24/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000189	0.000200	0.000200	0	94.5	82	119	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** CETAC2\_HG\_230712A

The QC data in batch 111107 applies to the following samples: 2307034-01A

Sample ID: <b>MB-111107</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:16:39 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.0000800	0.000200								
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Sample ID: <b>LCS-111107</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:21:11 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00182	0.000200	0.00200	0	91.0	85	115			
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Sample ID: <b>LCSD-111107</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:23:27 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00192	0.000200	0.00200	0	96.0	85	115	5.35	15	
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Sample ID: <b>2307045-02AMS</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:39:21 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00930	0.00100	0.0100	0	93.0	80	120			
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Sample ID: <b>2307045-02AMSD</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:41:37 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00945	0.00100	0.0100	0	94.5	80	120	1.60	15	
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Sample ID: <b>2307045-02ASD</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:43:52 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.000400	0.00100	0	0				0	10	
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Sample ID: <b>2307045-02APDS</b>	Batch ID: <b>111107</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:46:08 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00232	0.000200	0.00250	0	92.8	85	115			
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- |                    |  |   |
|--------------------|--|---|
| <b>Qualifiers:</b> | <ul style="list-style-type: none"> <li>B Analyte detected in the associated Method Blank</li> <li>J Analyte detected between MDL and RL</li> <li>ND Not Detected at the Method Detection Limit</li> <li>RL Reporting Limit</li> <li>J Analyte detected between SDL and RL</li> </ul> | <ul style="list-style-type: none"> <li>DF Dilution Factor</li> <li>MDL Method Detection Limit</li> <li>R RPD outside accepted control limits</li> <li>S Spike Recovery outside control limits</li> <li>N Parameter not NELAP certified</li> </ul> |
|--------------------|--|---|

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2\_HG\_230712A

Sample ID: <b>ICV-230712</b>	Batch ID: <b>R127892</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:12:05 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID: <b>CCV1-230712</b>	Batch ID: <b>R127892</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230712A</b>	Analysis Date: <b>7/12/2023 9:52:11 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00198	0.000200	0.00200	0	99.0	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230606B

Sample ID: <b>DCS2-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS2</b>	Run ID: <b>ICP-MS4_230606B</b>	Analysis Date: <b>6/6/2023 10:20:00 AM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.315	0.300	0.300	0	105	70	130	0	0	

Sample ID: <b>DCS4-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS4</b>	Run ID: <b>ICP-MS4_230606B</b>	Analysis Date: <b>6/6/2023 10:25:00 AM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0291	0.0300	0.0300	0	97.1	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230712C**

The QC data in batch 111092 applies to the following samples: 2307034-01A

Sample ID: <b>MB-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 12:51:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								
Calcium	<0.100	0.300								

Sample ID: <b>LCS-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 12:53:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.187	0.0300	0.200	0	93.5	80	120			
Calcium	4.78	0.300	5.00	0	95.6	80	120			

Sample ID: <b>LCSD-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 12:55:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.194	0.0300	0.200	0	96.8	80	120	3.39	15	
Calcium	4.82	0.300	5.00	0	96.4	80	120	0.833	15	

Sample ID: <b>2307028-04C SD</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 1:01:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<2.50	7.50	0	1.95				0	20	
Calcium	364	75.0	0	358				1.61	20	

Sample ID: <b>2307028-04C PDS</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 1:21:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	11.5	1.50	10.0	1.95	95.0	75	125			
Calcium	601	15.0	250	358	97.1	75	125			

Sample ID: <b>2307028-04C MS</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 1:23:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.45	1.50	0.200	1.95	247	75	125			S
Calcium	359	15.0	5.00	358	17.3	75	125			S

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	DF Dilution Factor
	J Analyte detected between MDL and RL	MDL Method Detection Limit
	ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
	RL Reporting Limit	S Spike Recovery outside control limits
	J Analyte detected between SDL and RL	N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4\_230712C

Sample ID: <b>2307028-04C MSD</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 1:25:00 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.39	1.50	0.200	1.95	217	75	125	2.47	15	S
Calcium	349	15.0	5.00	358	-196	75	125	3.01	15	S

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS4\_230712C**

Sample ID: <b>ICV-230712</b>	Batch ID: <b>R127914</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 9:43:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.101	0.0300	0.100	0	101	90	110			
Calcium	2.50	0.300	2.50	0	99.8	90	110			

Sample ID: <b>LCVL-230712</b>	Batch ID: <b>R127914</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 9:53:00 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0220	0.0300	0.0200	0	110	80	120			
Calcium	0.0888	0.300	0.100	0	88.8	80	120			

Sample ID: <b>CCV2-230712</b>	Batch ID: <b>R127914</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 12:45:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.195	0.0300	0.200	0	97.6	90	110			
Calcium	4.88	0.300	5.00	0	97.5	90	110			

Sample ID: <b>CCV3-230712</b>	Batch ID: <b>R127914</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>ICP-MS4_230712C</b>	Analysis Date: <b>7/12/2023 1:27:00 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.205	0.0300	0.200	0	103	90	110			
Calcium	4.87	0.300	5.00	0	97.5	90	110			

<p><b>Qualifiers:</b></p> <p><b>B</b> Analyte detected in the associated Method Blank</p> <p><b>J</b> Analyte detected between MDL and RL</p> <p><b>ND</b> Not Detected at the Method Detection Limit</p> <p><b>RL</b> Reporting Limit</p> <p><b>J</b> Analyte detected between SDL and RL</p>	<p><b>DF</b> Dilution Factor</p> <p><b>MDL</b> Method Detection Limit</p> <p><b>R</b> RPD outside accepted control limits</p> <p><b>S</b> Spike Recovery outside control limits</p> <p><b>N</b> Parameter not NELAP certified</p>
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CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230606A

Sample ID: <b>DCS1-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:31:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00108	0.00250	0.00100	0	108	70	130	0	0	
Beryllium	0.000502	0.00100	0.000500	0	100	70	130	0	0	
Cadmium	0.000524	0.00100	0.000500	0	105	70	130	0	0	
Lead	0.000497	0.00100	0.000500	0	99.4	70	130	0	0	
Thallium	0.000516	0.00150	0.000500	0	103	70	130	0	0	

Sample ID: <b>DCS3-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:36:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00499	0.00500	0.00500	0	99.9	70	130	0	0	
Barium	0.00525	0.0100	0.00500	0	105	70	130	0	0	
Chromium	0.00520	0.00500	0.00500	0	104	70	130	0	0	
Cobalt	0.00524	0.00500	0.00500	0	105	70	130	0	0	
Lithium	0.00519	0.0100	0.00500	0	104	70	130	0	0	
Molybdenum	0.00526	0.00500	0.00500	0	105	70	130	0	0	
Selenium	0.00545	0.00500	0.00500	0	109	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230712A

The QC data in batch 111092 applies to the following samples: 2307034-01A

Sample ID: <b>MB-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:31:00 AM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: <b>LCS-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:35:00 AM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.201	0.00500	0.200	0	101	80	120			
Barium	0.200	0.0100	0.200	0	100	80	120			
Beryllium	0.198	0.00100	0.200	0	99.1	80	120			
Cadmium	0.200	0.00100	0.200	0	100	80	120			
Chromium	0.196	0.00500	0.200	0	98.2	80	120			
Cobalt	0.203	0.00500	0.200	0	101	80	120			
Lead	0.198	0.00100	0.200	0	98.9	80	120			
Lithium	0.201	0.0100	0.200	0	101	80	120			
Molybdenum	0.200	0.00500	0.200	0	100	80	120			
Selenium	0.205	0.00500	0.200	0	103	80	120			
Thallium	0.188	0.00150	0.200	0	94.2	80	120			

Sample ID: <b>LCSD-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:38:00 AM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	98.8	80	120	0.185	15	
Arsenic	0.202	0.00500	0.200	0	101	80	120	0.252	15	
Barium	0.201	0.0100	0.200	0	101	80	120	0.591	15	
Beryllium	0.198	0.00100	0.200	0	99.1	80	120	0.012	15	
Cadmium	0.201	0.00100	0.200	0	100	80	120	0.125	15	
Chromium	0.196	0.00500	0.200	0	98.2	80	120	0.014	15	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230712A

Sample ID: <b>LCSD-111092</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:38:00 AM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cobalt	0.205	0.00500	0.200	0	102	80	120	0.829	15	
Lead	0.199	0.00100	0.200	0	99.4	80	120	0.507	15	
Lithium	0.203	0.0100	0.200	0	102	80	120	1.06	15	
Molybdenum	0.200	0.00500	0.200	0	99.9	80	120	0.307	15	
Selenium	0.205	0.00500	0.200	0	102	80	120	0.095	15	
Thallium	0.192	0.00150	0.200	0	96.1	80	120	1.96	15	

Sample ID: <b>2307028-04C SD</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:46:00 AM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0				0	20	
Barium	0.158	0.0500	0	0.159				0.266	20	
Beryllium	<0.00150	0.00500	0	0.000499				0	20	
Cadmium	<0.00150	0.00500	0	0				0	20	
Chromium	<0.0100	0.0250	0	0				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	<0.00150	0.00500	0	0				0	20	
Lithium	0.138	0.0500	0	0.133				3.67	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: <b>2307028-04C PDS</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 12:13:00 PM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.206	0.00250	0.200	0	103	75	125			
Arsenic	0.200	0.00500	0.200	0	100	75	125			
Barium	0.357	0.0100	0.200	0.159	99.1	75	125			
Beryllium	0.196	0.00100	0.200	0.000499	98.0	75	125			
Cadmium	0.198	0.00100	0.200	0	98.9	75	125			
Chromium	0.197	0.00500	0.200	0	98.3	75	125			
Cobalt	0.198	0.00500	0.200	0	99.1	75	125			
Lead	0.210	0.00100	0.200	0	105	75	125			
Lithium	0.325	0.0100	0.200	0.133	96.1	75	125			
Molybdenum	0.209	0.00500	0.200	0	104	75	125			
Selenium	0.187	0.00500	0.200	0	93.6	75	125			
Thallium	0.212	0.00150	0.200	0	106	75	125			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230712A

Sample ID: <b>2307028-04C MS</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 12:16:00 PM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.0	75	125			
Arsenic	0.200	0.00500	0.200	0	100	75	125			
Barium	0.364	0.0100	0.200	0.159	102	75	125			
Beryllium	0.192	0.00100	0.200	0.000499	96.0	75	125			
Cadmium	0.191	0.00100	0.200	0	95.5	75	125			
Chromium	0.190	0.00500	0.200	0	94.9	75	125			
Cobalt	0.195	0.00500	0.200	0	97.5	75	125			
Lead	0.207	0.00100	0.200	0	103	75	125			
Lithium	0.331	0.0100	0.200	0.133	98.9	75	125			
Molybdenum	0.210	0.00500	0.200	0	105	75	125			
Selenium	0.0730	0.00500	0.200	0	36.5	75	125			S
Thallium	0.205	0.00150	0.200	0	103	75	125			

Sample ID: <b>2307028-04C MSD</b>	Batch ID: <b>111092</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 12:18:00 PM</b>	Prep Date: <b>7/11/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.7	75	125	0.248	15	
Arsenic	0.199	0.00500	0.200	0	99.6	75	125	0.482	15	
Barium	0.361	0.0100	0.200	0.159	101	75	125	0.577	15	
Beryllium	0.190	0.00100	0.200	0.000499	94.9	75	125	1.16	15	
Cadmium	0.191	0.00100	0.200	0	95.7	75	125	0.136	15	
Chromium	0.191	0.00500	0.200	0	95.7	75	125	0.837	15	
Cobalt	0.196	0.00500	0.200	0	97.8	75	125	0.226	15	
Lead	0.206	0.00100	0.200	0	103	75	125	0.264	15	
Lithium	0.323	0.0100	0.200	0.133	95.3	75	125	2.23	15	
Molybdenum	0.209	0.00500	0.200	0	105	75	125	0.489	15	
Selenium	0.0737	0.00500	0.200	0	36.8	75	125	0.833	15	S
Thallium	0.206	0.00150	0.200	0	103	75	125	0.319	15	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS5\_230712A

Sample ID: <b>ICV-230712</b>	Batch ID: <b>R127906</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:18:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.101	0.00250	0.100	0	101	90	110			
Arsenic	0.0984	0.00500	0.100	0	98.4	90	110			
Barium	0.0996	0.0100	0.100	0	99.6	90	110			
Beryllium	0.100	0.00100	0.100	0	100	90	110			
Cadmium	0.101	0.00100	0.100	0	101	90	110			
Chromium	0.0992	0.00500	0.100	0	99.2	90	110			
Cobalt	0.101	0.00500	0.100	0	101	90	110			
Lead	0.0971	0.00100	0.100	0	97.1	90	110			
Lithium	0.102	0.0100	0.100	0	102	90	110			
Molybdenum	0.0985	0.00500	0.100	0	98.5	90	110			
Selenium	0.102	0.00500	0.100	0	102	90	110			
Thallium	0.0965	0.00150	0.100	0	96.5	90	110			

Sample ID: <b>LCVL-230712</b>	Batch ID: <b>R127906</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 11:23:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00204	0.00250	0.00200	0	102	80	120			
Arsenic	0.00491	0.00500	0.00500	0	98.2	80	120			
Barium	0.00487	0.0100	0.00500	0	97.5	80	120			
Beryllium	0.00112	0.00100	0.00100	0	112	80	120			
Cadmium	0.00106	0.00100	0.00100	0	106	80	120			
Chromium	0.00521	0.00500	0.00500	0	104	80	120			
Cobalt	0.00511	0.00500	0.00500	0	102	80	120			
Lead	0.00101	0.00100	0.00100	0	101	80	120			
Lithium	0.0108	0.0100	0.0100	0	108	80	120			
Molybdenum	0.00523	0.00500	0.00500	0	105	80	120			
Selenium	0.00533	0.00500	0.00500	0	107	80	120			
Thallium	0.00105	0.00150	0.00100	0	105	80	120			

Sample ID: <b>CCV1-230712</b>	Batch ID: <b>R127906</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 12:21:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.196	0.00250	0.200	0	97.9	90	110			
Arsenic	0.200	0.00500	0.200	0	100	90	110			
Barium	0.201	0.0100	0.200	0	101	90	110			
Beryllium	0.198	0.00100	0.200	0	99.0	90	110			
Cadmium	0.198	0.00100	0.200	0	99.0	90	110			
Chromium	0.196	0.00500	0.200	0	98.0	90	110			
Cobalt	0.206	0.00500	0.200	0	103	90	110			

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230712A

Sample ID: <b>CCV1-230712</b>	Batch ID: <b>R127906</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230712A</b>	Analysis Date: <b>7/12/2023 12:21:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.201	0.00100	0.200	0	100	90	110			
Lithium	0.205	0.0100	0.200	0	103	90	110			
Molybdenum	0.201	0.00500	0.200	0	101	90	110			
Selenium	0.210	0.00500	0.200	0	105	90	110			
Thallium	0.194	0.00150	0.200	0	96.8	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230622A

Sample ID: <b>DCS3-110813</b>	Batch ID: <b>110813</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>IC2_230622A</b>	Analysis Date: <b>6/22/2023 5:48:50 PM</b>	Prep Date: <b>6/22/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.875	1.00	1.000	0	87.5	70	130	0	0	
Fluoride	0.359	0.400	0.4000	0	89.6	70	130	0	0	
Sulfate	2.85	3.00	3.000	0	94.9	70	130	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230711C**

The QC data in batch 111106 applies to the following samples: 2307034-01B

Sample ID: <b>MB-111106</b>	Batch ID: <b>111106</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 11:24:36 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: <b>LCS-111106</b>	Batch ID: <b>111106</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 11:42:36 AM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.35	0.400	4.000	0	109	90	110			
Sulfate	29.1	3.00	30.00	0	96.9	90	110			

Sample ID: <b>LCSD-111106</b>	Batch ID: <b>111106</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 12:00:36 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.36	0.400	4.000	0	109	90	110	0.139	20	
Sulfate	29.1	3.00	30.00	0	97.0	90	110	0.099	20	

Sample ID: <b>2307059-01AMS</b>	Batch ID: <b>111106</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 6:51:20 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2150	40.0	2000	0	107	90	110			
Sulfate	5590	300	2000	0	280	90	110			S

Sample ID: <b>2307059-01AMSD</b>	Batch ID: <b>111106</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 7:09:20 PM</b>	Prep Date: <b>7/11/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	2170	40.0	2000	0	108	90	110	0.835	20	
Sulfate	5560	300	2000	0	278	90	110	0.547	20	S

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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CLIENT: WSP-Golder

Work Order: 2307034

Project: 1H23 Coleta Creek CCR GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230711C

Sample ID: <b>ICV-230711</b>	Batch ID: <b>R127898</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 10:48:36 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	10.8	0.400	10.00	0	108	90	110			
Sulfate	73.3	3.00	75.00	0	97.8	90	110			

Sample ID: <b>CCV1-230711</b>	Batch ID: <b>R127898</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 3:25:57 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.29	0.400	4.000	0	107	90	110			
Sulfate	28.6	3.00	30.00	0	95.2	90	110			

Sample ID: <b>CCV2-230711</b>	Batch ID: <b>R127898</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230711C</b>	Analysis Date: <b>7/11/2023 9:15:20 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	4.38	0.400	4.000	0	110	90	110			
Sulfate	28.8	3.00	30.00	0	96.1	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230713C**

The QC data in batch 111137 applies to the following samples: 2307034-01B

Sample ID: <b>MB-111137</b>	Batch ID: <b>111137</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 11:00:19 AM</b>	Prep Date: <b>7/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
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Sample ID: <b>LCS-111137</b>	Batch ID: <b>111137</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 11:18:19 AM</b>	Prep Date: <b>7/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110			
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Sample ID: <b>LCSD-111137</b>	Batch ID: <b>111137</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 11:36:19 AM</b>	Prep Date: <b>7/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	10.4	1.00	10.00	0	104	90	110	0.193	20	
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Sample ID: <b>2307034-01BMS</b>	Batch ID: <b>111137</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 6:29:34 PM</b>	Prep Date: <b>7/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2140	100	2000	66.14	104	90	110			
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Sample ID: <b>2307034-01BMSD</b>	Batch ID: <b>111137</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 6:47:34 PM</b>	Prep Date: <b>7/13/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	2120	100	2000	66.14	103	90	110	0.657	20	
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<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230713C**

Sample ID: <b>ICV-230713</b>	Batch ID: <b>R127950</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 10:24:19 AM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.1	1.00	25.00	0	105	90	110			

Sample ID: <b>CCV1-230713</b>	Batch ID: <b>R127950</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 1:20:07 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.3	1.00	10.00	0	103	90	110			

Sample ID: <b>CCV2-230713</b>	Batch ID: <b>R127950</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>IC2_230713C</b>	Analysis Date: <b>7/13/2023 8:53:34 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.4	1.00	10.00	0	104	90	110			

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: WC\_230707D**

The QC data in batch 111058 applies to the following samples: 2307034-01B

Sample ID: <b>MB-111058</b>	Batch ID: <b>111058</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>WC_230707D</b>	Analysis Date: <b>7/7/2023 5:15:00 PM</b>	Prep Date: <b>7/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		<10.0	10.0							

Sample ID: <b>LCS-111058</b>	Batch ID: <b>111058</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>WC_230707D</b>	Analysis Date: <b>7/7/2023 5:15:00 PM</b>	Prep Date: <b>7/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		738	10.0	745.6	0	99.0	90	113		

Sample ID: <b>2307028-08D-DUP</b>	Batch ID: <b>111058</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230707D</b>	Analysis Date: <b>7/7/2023 5:15:00 PM</b>	Prep Date: <b>7/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		4670	50.0	0	4540			2.72	5	

Sample ID: <b>2307028-09D-DUP</b>	Batch ID: <b>111058</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230707D</b>	Analysis Date: <b>7/7/2023 5:15:00 PM</b>	Prep Date: <b>7/7/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera		3540	50.0	0	3610			2.10	5	

<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2307034  
**Project:** 1H23 Coleta Creek CCR GW

**MQL SUMMARY REPORT**

<b>TestNo: E300</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

<b>TestNo: SW6020B</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

<b>TestNo: SW7470A</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Mercury	0.0000800	0.000200

<b>TestNo: M2540C</b>	<b>MDL</b>	<b>MQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Total Dissolved Solids (Residue, Filt	10.0	10.0

**Qualifiers:** MQL -Method Quantitation Limit as defined by TRRP  
 MDL -Method Detection Limit as defined by TRRP



# ANALYTICAL REPORT

August 02, 2023

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

## DHL Analytical, Inc.

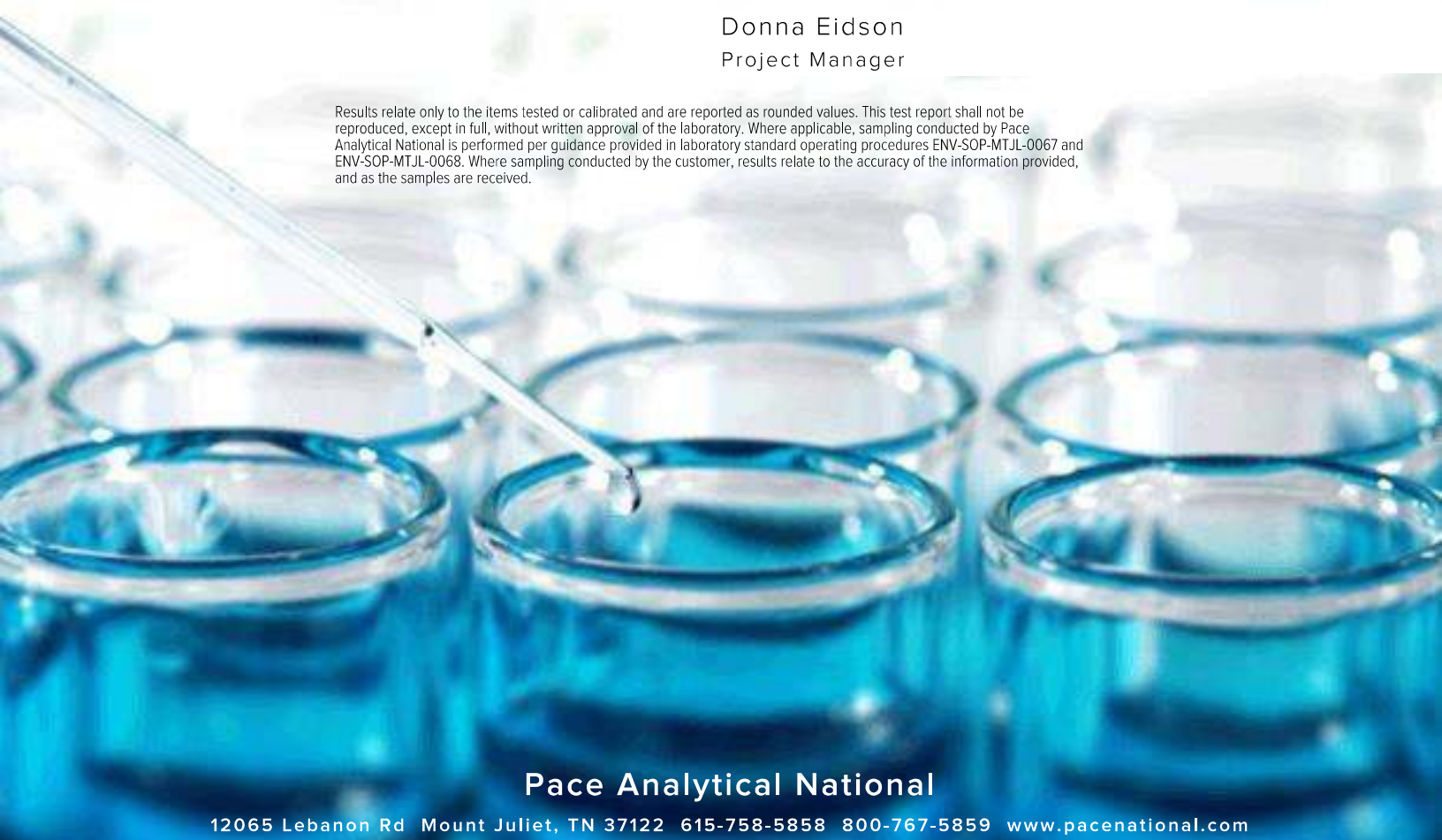
Sample Delivery Group: L1633997  
 Samples Received: 07/11/2023  
 Project Number: 2307034  
 Description:

Report To: John DuPont  
 2300 Double Creek Drive  
 Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson  
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](http://www.pacenational.com)

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# SAMPLE SUMMARY

MW-6 L1633997-01 Non-Potable Water

Collected by:   
 Collected date/time: 07/06/23 10:41   
 Received date/time: 07/11/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2097553	1	07/19/23 11:04	07/28/23 20:21	SNR	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2099485	1	07/24/23 16:02	07/28/23 20:21	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2099485	1	07/24/23 16:02	07/27/23 10:07	RGT	Mt. Juliet, TN

- <sup>1</sup>Cp
- <sup>2</sup>Tc
- <sup>3</sup>Ss
- <sup>4</sup>Cn
- <sup>5</sup>Sr
- <sup>6</sup>Qc
- <sup>7</sup>Gl
- <sup>8</sup>Al
- <sup>9</sup>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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.



Donna Eidson  
Project Manager

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

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.327	J	0.222	0.403	07/28/2023 20:21	<a href="#">WG2097553</a>
(T) Barium	92.7			30.0-143	07/28/2023 20:21	<a href="#">WG2097553</a>
(T) Yttrium	93.1			30.0-136	07/28/2023 20:21	<a href="#">WG2097553</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	5.02		1.27	0.739	07/28/2023 20:21	<a href="#">WG2099485</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	4.70		1.25	0.619	07/27/2023 10:07	<a href="#">WG2099485</a>
(T) Barium-133	47.9			30.0-143	07/27/2023 10:07	<a href="#">WG2099485</a>

Method Blank (MB)

(MB) R3955247-1 07/28/23 20:21

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.301	↓	0.193	0.348
(T) Barium	107		107	
(T) Yttrium	89.6		89.6	

L1633317-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1633317-10 07/28/23 20:21 • (DUP) R3955247-5 07/28/23 20:21

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	2.07	0.359	0.594	2.75	0.355	0.594	1	28.3	1.35		20	3
(T) Barium	85.7			113	113							
(T) Yttrium	102			100	100							

Laboratory Control Sample (LCS)

(LCS) R3955247-2 07/28/23 20:21

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	4.99	99.9	80.0-120	
(T) Barium			121		
(T) Yttrium			117		

L1633317-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1633317-07 07/28/23 20:21 • (MS) R3955247-3 07/28/23 20:21 • (MSD) R3955247-4 07/28/23 20:21

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	16.7	0.889	16.2	16.3	91.6	92.5	1	70.0-130			0.984		20
(T) Barium		108			110	118							
(T) Yttrium		119			101	119							

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

Method Blank (MB)

(MB) R3955523-1 07/27/23 10:07

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00286	<u>U</u>	0.0676	0.129
(T) Barium-133	60.8		60.8	

L1637654-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1637654-01 07/27/23 10:07 • (DUP) R3955523-5 07/27/23 10:07

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.380	0.291	0.337	0.0586	0.342	0.337	1	147	0.717	<u>U</u>	20	3
(T) Barium-133	87.2			61.5	61.5							

Laboratory Control Sample (LCS)

(LCS) R3955523-2 07/27/23 10:07

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	4.50	89.8	80.0-120	
(T) Barium-133			54.1		

L1634409-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1634409-01 07/27/23 10:07 • (MS) R3955523-3 07/27/23 10:07 • (MSD) R3955523-4 07/27/23 10:07

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.332	18.8	18.4	92.4	90.3	1	75.0-125			2.26		20
(T) Barium-133		84.8			74.2	71.9							





# 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.

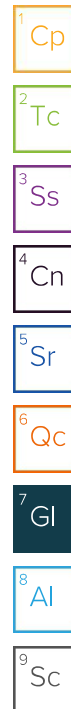
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



# ACCREDITATIONS & LOCATIONS

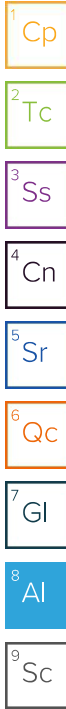
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



DHL Analytical, Inc.  
 2300 Double Creek Drive  
 Round Rock, TX 78664

# CHAIN-OF-CUSTODY RECORD

C202

TEL: (512) 388-8222 FAX:

Work Order: 2307034

**Subcontractor:**

Pace Analytical  
 12065 Lebanon Rd  
 Mt. Juliet, TN 37122

TEL: (615) 773-5923  
 FAX:  
 Acct #: DHLRRTX

L1633997

07-Jul-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests			
					Ra-228	Ra-226		
					E904.0	M7500 Ra B M		
MW-6	Aqueous	01C	07/06/23 10:41 AM	1LHDPEHNO3		1		
MW-6	Aqueous	01D	07/06/23 10:41 AM	1LHDPEHNO3	1			

PH-10BDH4321 TRC-2144141  
 CR6-20221V

Sample Receipt Checklist  
 COC Seal Present/Intact:  Y  N If Applicable  
 COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N  
 Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N  
 Correct bottles used:  Y  N  
 Sufficient volume sent:  Y  N  
 RAD Screen <0.5 mR/hr:  Y  N  
 PH < 2  
 GBAU 25.0 + 0 = 25.0  
 12 970 R40 030636 0762

**General Comments:**

Please analyze these samples with Normal Turnaround Time.  
 Report Ra-226, Ra-228 & Combined per Specs.  
 Quality Control Package Needed: Standard - NELAC Rad Test compliant  
 Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

Relinquished by: <u>[Signature]</u>	Date/Time: <u>7/7/23 1700</u>	Received by: <u>GRACE BARON [Signature]</u>	Date/Time: <u>7.11.23 0900</u>
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____



October 04, 2023

Jacob Jarvis  
WSP-Golder  
1601 S. Mopac Expy, Suite 325B  
Austin, Texas 78746  
TEL: (361) 877-5533

FAX:

Order No.: 2308355

RE: Coletto Creek CCR 2H23 GW

Dear Jacob Jarvis:

DHL Analytical, Inc. received 10 sample(s) on 8/26/2023 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAP except where noted in the Case Narrative. All non-NELAP methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read 'John DuPont'.

John DuPont  
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-23-29



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<b>PrepDatesReport 2308355 .....</b>	<b>13</b>
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2300 Double Creek Dr. Round Rock, TX 78664  
 Phone 512.388.8222  
 Web: [www.dhlanalytical.com](http://www.dhlanalytical.com)  
 Email: [login@dhlanalytical.com](mailto:login@dhlanalytical.com)

# CHAIN-OF-CUSTODY

CLIENT:	DATE: <u>8-25-23</u>	LAB USE ONLY
ADDRESS: <u>Roundrock, TX</u>	PO#:	DHL WORKORDER #: <u>2308355</u>
PHONE:                      EMAIL:	PROJECT LOCATION OR NAME: <u>Coleta Creek CCR 2H23 6W</u>	
DATA REPORTED TO: <u>Jill Jensen, Jacob Jones</u>		

ADDITIONAL REPORT COPIES TO: \_\_\_\_\_ CLIENT PROJECT # 31404017.022 COLLECTOR: Christian Martinez

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION		ANALYSES	FIELD NOTES
							W=WATER L=LIQUID S=SOIL SO=SOLID	SE=SEDIMENT P=PAINT SL=SLUDGE		
MW-10	01	8-23-23	1349	GW	D	4	<input type="checkbox"/> HCL <input type="checkbox"/> H <sub>3</sub> PO <sub>4</sub>	<input type="checkbox"/> NaOH <input type="checkbox"/> Zn Acetate <input checked="" type="checkbox"/> UNPRESERVED	All samples for Appendix III/IV	
MW-5	02		1455			4	<input type="checkbox"/> HNO <sub>3</sub>			
MW-9	03		1603			4	<input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub>			
MW-11	04		1709			4	<input type="checkbox"/> NaOH <input type="checkbox"/> Zn Acetate			
MW-6	05	8-24-23	1025			4	<input checked="" type="checkbox"/> UNPRESERVED			
MW-8	06		1222			4				
BV-21	07		1351			4				
DUP 101	08		-			4				
MW-4	09		1614			4				
BV-5	10		1815			4				

Relinquished By: (Sign) <u>[Signature]</u>	DATE/TIME: <u>8-25-23; 1700</u>	Received by: <u>[Signature]</u>	LAB USE ONLY
Relinquished By: (Sign) <u>[Signature]</u>	DATE/TIME: <u>8-26-23 2:00 p.m.</u>	Received by: <u>[Signature]</u>	THERMO #: <u>28</u>
Relinquished By: (Sign) _____	DATE/TIME: _____	Received by: _____	RECEIVING TEMP (°C): <u>60/4.9</u>
TURN AROUND TIME (CALL FIRST FOR RUSH)			IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
RUSH-1 DAY <input type="checkbox"/> RUSH-2 DAY <input type="checkbox"/>			CUSTODY SEALS ON ICE CHEST: <input type="checkbox"/> BROKEN <input checked="" type="checkbox"/> INTACT <input type="checkbox"/> NOT USED
RUSH-3 DAY <input type="checkbox"/>			CARRIER: <input type="checkbox"/> LSO <input checked="" type="checkbox"/> FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> COURIER <input type="checkbox"/> HAND DELIVERED
NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>			
DUE DATE _____			

## Eric Lau

---

**From:** John DuPont  
**Sent:** Tuesday, May 28, 2019 11:35 AM  
**To:** Eric Lau  
**Subject:** FW: CCR Analysis

Appendix III Parameters:

Metals (Ca and B)  
Anions (Cl, F, and SO4)  
TDS

Appendix IV Parameters:

Metals (As, Ba, Be, Cd, Co, Cr, Hg, Li, Mo, Pb, Sb, Se, and Tl)  
Ra-226  
Ra-228

ORIGIN ID:VCTA (361) 204-7536  
CHRISTIAN MARTINEZ  
WSP USA INC.  
1501 E. MOCKINGBIRD LN  
SUITE 420  
VICTORIA, TX 77904  
UNITED STATES US

SHIP DATE: 25AUG23  
ACTWGT: 35.00 LB  
CAD: 258488973/INET4640  
DIMS: 24x14x14 IN  
BILL SENDER

TO **SAMPLE RECEIVING**  
**DHL ANALYTICAL**  
**2300 DOUBLE CREEK DR.**

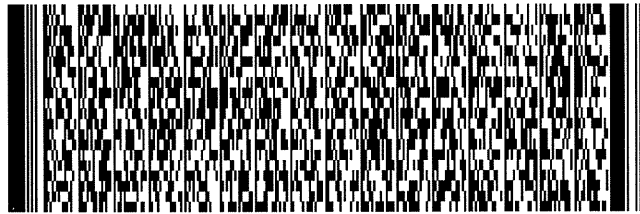
**ROUND ROCK TX 78664**

(512) 388-8222 REF: 7046  
INV: CHRISTIAN MARTINEZ  
PO: 3144097.022

DEPT: 01.FLD.EXP

583.15175849A3

FedEx Ship Manager - Print Your Label(s)



**FedEx**  
Express



J233123073101uv

**SATURDAY 12:00P**

**PRIORITY OVERNIGHT**

1 of 2

TRK# 7732 0976 0035

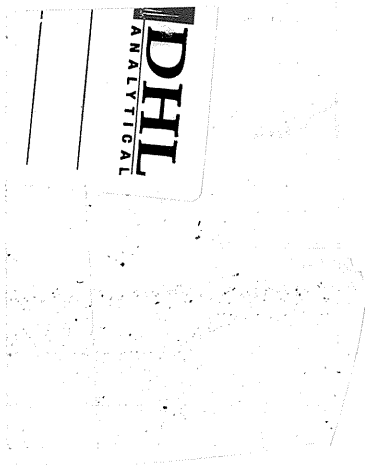
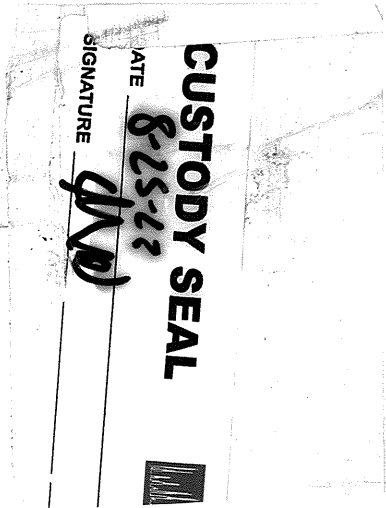
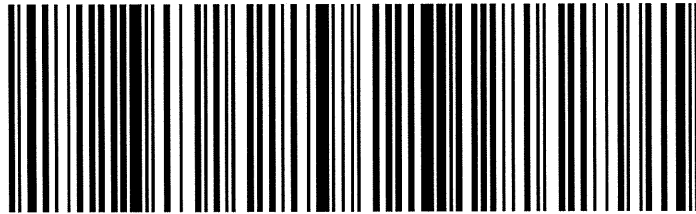
0201

## MASTER ##

**X0 BSMA**

**78664**

TX-US **AUS**



8/25/23, 3:53 PM



ORIGIN ID: VCTA (361) 204-7536  
CHRISTIAN MARTINEZ  
WSP USA INC.  
1501 E. MOCKINGBIRD LN  
SUITE 420  
VICTORIA, TX 77904  
UNITED STATES US

SHIP DATE: 25AUG23  
ACTWGT: 35.00 LB  
CAD: 258488973/INET4640  
DIMS: 24x14x14 IN

BILL SENDER

TO **SAMPLE RECEIVING**  
**DHL ANALYTICAL**  
**2300 DOUBLE CREEK DR.**

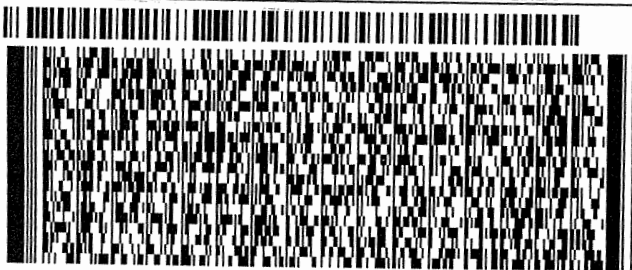
**ROUND ROCK TX 78664**

(512) 388-8222 REF: 7046  
INV: CHRISTIAN MARTINEZ  
PO: 3144097 022

DEPT: 01.FLD.EXP

FedEx Ship Manager - Print Your Label(s)

533.04/0628.9AE3



**FedEx**  
Express



**CUSTODY SEAL**  
DATE 8-25-23  
SIGNATURE *cm*

2 of 2

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

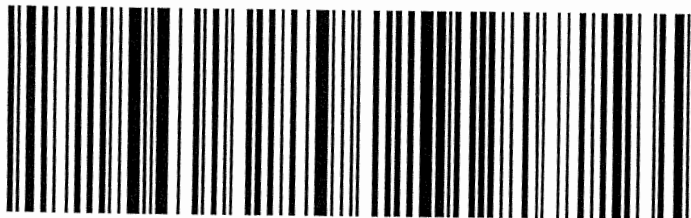
MPS# 7732 0976 0414

Mstr# 7732 0976 0035

0201

**X0 BSMA**

**78664**  
TX-US **AUS**



**DHL**  
ANALYTICAL

8/25/23, 3:53 PM

Sample Receipt Checklist

Client Name: WSP-Golder

Date Received: 8/26/2023

Work Order Number: 2308355

Received by: CF

Checklist completed by: [Signature] 8/28/2023
Signature Date

Reviewed by: [Initials] 8/28/2023
Initials Date

Carrier name: FedEx 1day

- Shipping container/cooler in good condition? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on shipping container/cooler? Yes [checked] No [ ] Not Present [ ]
Custody seals intact on sample bottles? Yes [ ] No [ ] Not Present [checked]
Chain of custody present? Yes [checked] No [ ]
Chain of custody signed when relinquished and received? Yes [checked] No [ ]
Chain of custody agrees with sample labels? Yes [checked] No [ ]
Samples in proper container/bottle? Yes [checked] No [ ]
Sample containers intact? Yes [checked] No [ ]
Sufficient sample volume for indicated test? Yes [checked] No [ ]
All samples received within holding time? Yes [checked] No [ ]
Water - VOA vials have zero headspace? Yes [ ] No [ ] No VOA vials submitted [checked] NA [ ]
Water - pH<2 acceptable upon receipt? Yes [checked] No [ ] NA [ ] LOT # 13171
Adjusted? no Checked by EL
Water - pH>9 (S) or pH>10 (CN) acceptable upon receipt? Yes [ ] No [ ] NA [checked] LOT #
Adjusted? Checked by
Container/Temp Blank temperature in compliance? Yes [checked] No [ ]

Table with 3 columns: Cooler #, Temp °C, Seal Intact. Values: 1, 2; 6.0, 4.9; Y, Y

Any No response must be detailed in the comments section below.

Client contacted: Date contacted: Person contacted:

Contacted by: Regarding:

Comments:

Corrective Action:

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist: Reportable Data</b>							
<b>Project Name:</b> Coletto Creek CCR 2H23 GW				<b>LRC Date:</b> 10/4/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2308355			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
		<b>Chain-of-Custody (C-O-C)</b>					
R1	OI	1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				R1-01
		2) Were all departures from standard conditions described in an exception report?			X		
R2	OI	<b>Sample and Quality Control (QC) Identification</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>Test Reports</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample detection limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X		
		9) If required for the project, TICs reported?			X		
R4	O	<b>Surrogate Recovery Data</b>					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	<b>Test Reports/Summary Forms for Blank Samples</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Where method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MDL?	X				
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, <b>greater</b> than 10 times the concentration in the blank sample?			X		
R6	OI	<b>Laboratory Control Samples (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits (if applicable)?	X				
R7	OI	<b>Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>Analytical Duplicate Data</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	<b>Method Quantitation Limits (MQLs):</b>					
		1) Are the MQLs for each method analyte included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	<b>Other Problems/Anomalies</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

<b>Laboratory Name: DHL Analytical, Inc.</b>							
<b>Laboratory Review Checklist (continued): Supporting Data</b>							
<b>Project Name:</b> Coletto Creek CCR 2H23 GW				<b>LRC Date:</b> 10/4/23			
<b>Reviewer Name:</b> Carlos Castro				<b>Laboratory Work Order:</b> 2308355			
<b>Prep Batch Number(s):</b> See Prep Dates Report				<b>Run Batch:</b> See Analytical Dates Report			
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>Initial Calibration (ICAL)</b>					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	<b>Mass Spectral Tuning:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>Internal Standards (IS):</b>					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>Raw Data (NELAC Section 5.5.10)</b>					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>Dual Column Confirmation</b>					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>Tentatively Identified Compounds (TICs):</b>					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>Interference Check Sample (ICS) Results:</b>					
		1) Were percent recoveries within method QC limits?	X				
S9	I	<b>Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions</b>					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01
S10	OI	<b>Method Detection Limit (MDL) Studies</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	<b>Proficiency Test Reports:</b>					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	<b>Standards Documentation</b>					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>Compound/Analyte Identification Procedures</b>					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>Demonstration of Analyst Competency (DOC)</b>					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>Verification/Validation Documentation for Methods (NELAC Chapter 5)</b>					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	<b>Laboratory Standard Operating Procedures (SOPs):</b>					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ 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 Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:


- 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.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

**Release Statement:** I am responsible for the release of this laboratory data package. This laboratory is 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 that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on May 30 - June 2, 2023. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont  
Official Title: General Manager

  
Signature

10/04/23  
Date

Name: Dr. Derhsing Luu  
Official Title: Technical Director

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**CLIENT:** WSP-Golder  
**Project:** Coleta Creek CCR 2H23 GW  
**Lab Order:** 2308355

**CASE NARRATIVE**

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Samples were analyzed using the methods outlined in the following references:

- Method SW6020B - Metals Analysis
- Method SW7470A - Mercury Analysis
- Method E300 - Anions Analysis
- Method M2540C - TDS Analysis

Sub-contract - Radium-228 and Radium-226 analyses by methods E904/9320 and SM7500 Ra B M.  
Analyzed at Pace Analytical.

Exception Report R1-01

The samples were received and log-in performed on 8/26/23. A total of 10 samples were received. The samples arrived in good condition and were properly packaged.

Exception Report S9-01

For Metals analysis performed on 8/30/23 the RPD for the serial dilution was slightly above control limits for Boron. This is flagged accordingly in the QC summary report. The PDS was within control limits for this analyte. No further corrective actions were taken.

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**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Lab Order:** 2308355

**Work Order Sample Summary**

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<b>Lab Smp ID</b>	<b>Client Sample ID</b>	<b>Tag Number</b>	<b>Date Collected</b>	<b>Date Recved</b>
2308355-01	MW-10		08/23/23 01:49 PM	08/26/2023
2308355-02	MW-5		08/23/23 02:55 PM	08/26/2023
2308355-03	MW-9		08/23/23 04:03 PM	08/26/2023
2308355-04	MW-11		08/23/23 05:09 PM	08/26/2023
2308355-05	MW-6		08/24/23 10:25 AM	08/26/2023
2308355-06	MW-8		08/24/23 12:22 PM	08/26/2023
2308355-07	BV-21		08/24/23 01:51 PM	08/26/2023
2308355-08	DUP-01		08/24/23	08/26/2023
2308355-09	MW-4		08/24/23 04:14 PM	08/26/2023
2308355-10	BV-5		08/24/23 06:15 PM	08/26/2023

**Lab Order:** 2308355  
**Client:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308355-01A	MW-10	08/23/23 01:49 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-10	08/23/23 01:49 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-10	08/23/23 01:49 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-01B	MW-10	08/23/23 01:49 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-10	08/23/23 01:49 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-10	08/23/23 01:49 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-02A	MW-5	08/23/23 02:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-5	08/23/23 02:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-5	08/23/23 02:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-5	08/23/23 02:55 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-02B	MW-5	08/23/23 02:55 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-5	08/23/23 02:55 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-5	08/23/23 02:55 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-03A	MW-9	08/23/23 04:03 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-9	08/23/23 04:03 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-9	08/23/23 04:03 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-03B	MW-9	08/23/23 04:03 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-9	08/23/23 04:03 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-04A	MW-11	08/23/23 05:09 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-11	08/23/23 05:09 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-11	08/23/23 05:09 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-04B	MW-11	08/23/23 05:09 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-11	08/23/23 05:09 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-05A	MW-6	08/24/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-6	08/24/23 10:25 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-6	08/24/23 10:25 AM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-05B	MW-6	08/24/23 10:25 AM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-6	08/24/23 10:25 AM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911



**Lab Order:** 2308355  
**Client:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308355-05B	MW-6	08/24/23 10:25 AM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-6	08/24/23 10:25 AM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-06A	MW-8	08/24/23 12:22 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-8	08/24/23 12:22 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-8	08/24/23 12:22 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-06B	MW-8	08/24/23 12:22 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-8	08/24/23 12:22 PM	Aqueous	E300	Anion Preparation	08/29/23 09:32 AM	111930
	MW-8	08/24/23 12:22 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-07A	BV-21	08/24/23 01:51 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	BV-21	08/24/23 01:51 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	BV-21	08/24/23 01:51 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	BV-21	08/24/23 01:51 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-07B	BV-21	08/24/23 01:51 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	BV-21	08/24/23 01:51 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	BV-21	08/24/23 01:51 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-08A	DUP-01	08/24/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	DUP-01	08/24/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	DUP-01	08/24/23	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	DUP-01	08/24/23	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-08B	DUP-01	08/24/23	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	DUP-01	08/24/23	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	DUP-01	08/24/23	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-09A	MW-4	08/24/23 04:14 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-4	08/24/23 04:14 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-4	08/24/23 04:14 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	MW-4	08/24/23 04:14 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-09B	MW-4	08/24/23 04:14 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	MW-4	08/24/23 04:14 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911

**Lab Order:** 2308355  
**Client:** WSP-Golder  
**Project:** Coledo Creek CCR 2H23 GW

**PREP DATES REPORT**

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2308355-09B	MW-4	08/24/23 04:14 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936
2308355-10A	BV-5	08/24/23 06:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	BV-5	08/24/23 06:15 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	08/29/23 07:27 AM	111925
	BV-5	08/24/23 06:15 PM	Aqueous	SW7470A	Mercury Aq Prep	08/31/23 08:27 AM	111963
2308355-10B	BV-5	08/24/23 06:15 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	BV-5	08/24/23 06:15 PM	Aqueous	E300	Anion Preparation	08/28/23 10:35 AM	111911
	BV-5	08/24/23 06:15 PM	Aqueous	M2540C	TDS Preparation	08/29/23 10:51 AM	111936

Lab Order: 2308355  
 Client: WSP-Golder  
 Project: Coletto Creek CCR 2H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308355-01A	MW-10	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:43 PM	CETAC2_HG_230831 B
	MW-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:24 PM	ICP-MS5_230830B
	MW-10	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:38 PM	ICP-MS5_230830B
2308355-01B	MW-10	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 03:48 PM	IC2_230828A
	MW-10	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 05:54 PM	IC2_230828A
	MW-10	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-02A	MW-5	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:45 PM	CETAC2_HG_230831 B
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:27 PM	ICP-MS5_230830B
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:21 PM	ICP-MS5_230830B
	MW-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 02:57 PM	ICP-MS5_230830B
2308355-02B	MW-5	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 04:06 PM	IC2_230828A
	MW-5	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 06:12 PM	IC2_230828A
	MW-5	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-03A	MW-9	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:47 PM	CETAC2_HG_230831 B
	MW-9	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:29 PM	ICP-MS5_230830B
	MW-9	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:44 PM	ICP-MS5_230830B
2308355-03B	MW-9	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 07:42 PM	IC2_230828A
	MW-9	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-04A	MW-11	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:50 PM	CETAC2_HG_230831 B
	MW-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:32 PM	ICP-MS5_230830B
	MW-11	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:46 PM	ICP-MS5_230830B
2308355-04B	MW-11	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 08:00 PM	IC2_230828A
	MW-11	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-05A	MW-6	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:56 PM	CETAC2_HG_230831 B
	MW-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:49 PM	ICP-MS5_230830B
	MW-6	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:34 PM	ICP-MS5_230830B

Lab Order: 2308355  
 Client: WSP-Golder  
 Project: Coletto Creek CCR 2H23 GW

**ANALYTICAL DATES REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308355-05B	MW-6	Aqueous	E300	Anions by IC method - Water	111911	100	08/28/23 02:54 PM	IC2_230828A
	MW-6	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 04:24 PM	IC2_230828A
	MW-6	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 08:18 PM	IC2_230828A
	MW-6	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-06A	MW-8	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 02:59 PM	CETAC2_HG_230831 B
	MW-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:37 PM	ICP-MS5_230830B
	MW-8	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:51 PM	ICP-MS5_230830B
2308355-06B	MW-8	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 08:36 PM	IC2_230828A
	MW-8	Aqueous	E300	Anions by IC method - Water	111930	10	08/29/23 03:39 PM	IC2_230829B
	MW-8	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-07A	BV-21	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 03:01 PM	CETAC2_HG_230831 B
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:24 PM	ICP-MS5_230830B
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 02:59 PM	ICP-MS5_230830B
	BV-21	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:40 PM	ICP-MS5_230830B
2308355-07B	BV-21	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 08:54 PM	IC2_230828A
	BV-21	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 04:42 PM	IC2_230828A
	BV-21	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-08A	DUP-01	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 03:03 PM	CETAC2_HG_230831 B
	DUP-01	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 03:02 PM	ICP-MS5_230830B
	DUP-01	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:42 PM	ICP-MS5_230830B
	DUP-01	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:26 PM	ICP-MS5_230830B
2308355-08B	DUP-01	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 09:12 PM	IC2_230828A
	DUP-01	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 05:00 PM	IC2_230828A
	DUP-01	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-09A	MW-4	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 03:06 PM	CETAC2_HG_230831 B
	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:45 PM	ICP-MS5_230830B

**Lab Order:** 2308355  
**Client:** WSP-Golder  
**Project:** Coledo Creek CCR 2H23 GW

**ANALYTICAL DATA REPORT**

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2308355-09A	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	10	08/30/23 02:35 PM	ICP-MS5_230830B
	MW-4	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 03:30 PM	ICP-MS5_230830B
2308355-09B	MW-4	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 05:18 PM	IC2_230828A
	MW-4	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 09:30 PM	IC2_230828A
	MW-4	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A
2308355-10A	BV-5	Aqueous	SW7470A	Mercury Total: Aqueous	111963	1	08/31/23 03:08 PM	CETAC2_HG_230831 B
	BV-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	1	08/30/23 12:47 PM	ICP-MS5_230830B
	BV-5	Aqueous	SW6020B	Total Metals: ICP-MS - Water	111925	5	08/30/23 02:54 PM	ICP-MS5_230830B
2308355-10B	BV-5	Aqueous	E300	Anions by IC method - Water	111911	10	08/28/23 05:36 PM	IC2_230828A
	BV-5	Aqueous	E300	Anions by IC method - Water	111911	1	08/28/23 09:48 PM	IC2_230828A
	BV-5	Aqueous	M2540C	Total Dissolved Solids	111936	1	08/29/23 02:30 PM	WC_230829A

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-10  
**Lab ID:** 2308355-01  
**Collection Date:** 08/23/23 01:49 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:24 PM
Arsenic	0.0152	0.00200	0.00500		mg/L	1	08/30/23 12:24 PM
Barium	0.0496	0.00300	0.0100		mg/L	1	08/30/23 12:24 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:24 PM
Boron	5.41	0.100	0.300		mg/L	10	08/30/23 02:38 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:24 PM
Calcium	40.9	1.00	3.00		mg/L	10	08/30/23 02:38 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:24 PM
Cobalt	0.00574	0.00300	0.00500		mg/L	1	08/30/23 12:24 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:24 PM
Lithium	0.0110	0.00500	0.0100		mg/L	1	08/30/23 12:24 PM
Molybdenum	0.0834	0.00200	0.00500		mg/L	1	08/30/23 12:24 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:24 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:24 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:43 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	41.5	0.300	1.00		mg/L	1	08/28/23 05:54 PM
Fluoride	0.658	0.100	0.400		mg/L	1	08/28/23 05:54 PM
Sulfate	49.8	1.00	3.00		mg/L	1	08/28/23 05:54 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	376	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-5  
**Lab ID:** 2308355-02  
**Collection Date:** 08/23/23 02:55 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:27 PM
Arsenic	0.00994	0.00200	0.00500		mg/L	1	08/30/23 12:27 PM
Barium	0.0613	0.00300	0.0100		mg/L	1	08/30/23 12:27 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:27 PM
Boron	0.178	0.0100	0.0300		mg/L	1	08/30/23 02:57 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:27 PM
Calcium	118	1.00	3.00		mg/L	10	08/30/23 02:21 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:27 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 12:27 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:27 PM
Lithium	0.0178	0.00500	0.0100		mg/L	1	08/30/23 12:27 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:27 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:27 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:27 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:45 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	129	3.00	10.0		mg/L	10	08/28/23 04:06 PM
Fluoride	0.511	0.100	0.400		mg/L	1	08/28/23 06:12 PM
Sulfate	176	10.0	30.0		mg/L	10	08/28/23 04:06 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	834	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-9  
**Lab ID:** 2308355-03  
**Collection Date:** 08/23/23 04:03 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:29 PM
Arsenic	0.0163	0.00200	0.00500		mg/L	1	08/30/23 12:29 PM
Barium	0.127	0.00300	0.0100		mg/L	1	08/30/23 12:29 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:29 PM
Boron	0.924	0.0500	0.150		mg/L	5	08/30/23 02:44 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:29 PM
Calcium	60.3	0.500	1.50		mg/L	5	08/30/23 02:44 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:29 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 12:29 PM
Lead	0.000317	0.000300	0.00100	J	mg/L	1	08/30/23 12:29 PM
Lithium	0.00694	0.00500	0.0100	J	mg/L	1	08/30/23 12:29 PM
Molybdenum	0.0356	0.00200	0.00500		mg/L	1	08/30/23 12:29 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:29 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:29 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:47 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	47.3	0.300	1.00		mg/L	1	08/28/23 07:42 PM
Fluoride	0.785	0.100	0.400		mg/L	1	08/28/23 07:42 PM
Sulfate	52.4	1.00	3.00		mg/L	1	08/28/23 07:42 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	412	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern



**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-11  
**Lab ID:** 2308355-04  
**Collection Date:** 08/23/23 05:09 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:32 PM
Arsenic	0.0171	0.00200	0.00500		mg/L	1	08/30/23 12:32 PM
Barium	0.0919	0.00300	0.0100		mg/L	1	08/30/23 12:32 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:32 PM
Boron	0.914	0.0500	0.150		mg/L	5	08/30/23 02:46 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:32 PM
Calcium	52.9	0.500	1.50		mg/L	5	08/30/23 02:46 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:32 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 12:32 PM
Lead	0.000441	0.000300	0.00100	J	mg/L	1	08/30/23 12:32 PM
Lithium	0.0123	0.00500	0.0100		mg/L	1	08/30/23 12:32 PM
Molybdenum	0.0130	0.00200	0.00500		mg/L	1	08/30/23 12:32 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:32 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:32 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:50 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	46.6	0.300	1.00		mg/L	1	08/28/23 08:00 PM
Fluoride	0.600	0.100	0.400		mg/L	1	08/28/23 08:00 PM
Sulfate	24.6	1.00	3.00		mg/L	1	08/28/23 08:00 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	356	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-6  
**Lab ID:** 2308355-05  
**Collection Date:** 08/24/23 10:25 AM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>		Analyst: <b>SP</b>			
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:34 PM
Arsenic	0.00882	0.00200	0.00500		mg/L	1	08/30/23 12:34 PM
Barium	0.0705	0.00300	0.0100		mg/L	1	08/30/23 12:34 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:34 PM
Boron	2.14	0.100	0.300		mg/L	10	08/30/23 02:49 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:34 PM
Calcium	64.1	1.00	3.00		mg/L	10	08/30/23 02:49 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:34 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	08/30/23 12:34 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:34 PM
Lithium	0.0103	0.00500	0.0100		mg/L	1	08/30/23 12:34 PM
Molybdenum	0.0365	0.00200	0.00500		mg/L	1	08/30/23 12:34 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:34 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:34 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>		Analyst: <b>CMC</b>			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:56 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>		Analyst: <b>RA</b>			
Chloride	106	3.00	10.0		mg/L	10	08/28/23 04:24 PM
Fluoride	0.371	0.100	0.400	J	mg/L	1	08/28/23 08:18 PM
Sulfate	102	1.00	3.00		mg/L	1	08/28/23 08:18 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>		Analyst: <b>JS</b>			
Total Dissolved Solids (Residue, Filterable)	451	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-8  
**Lab ID:** 2308355-06  
**Collection Date:** 08/24/23 12:22 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:37 PM
Arsenic	0.00940	0.00200	0.00500		mg/L	1	08/30/23 12:37 PM
Barium	0.0832	0.00300	0.0100		mg/L	1	08/30/23 12:37 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:37 PM
Boron	0.860	0.0500	0.150		mg/L	5	08/30/23 02:51 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:37 PM
Calcium	69.1	0.500	1.50		mg/L	5	08/30/23 02:51 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:37 PM
Cobalt	0.00896	0.00300	0.00500		mg/L	1	08/30/23 12:37 PM
Lead	0.000521	0.000300	0.00100	J	mg/L	1	08/30/23 12:37 PM
Lithium	0.00915	0.00500	0.0100	J	mg/L	1	08/30/23 12:37 PM
Molybdenum	0.0139	0.00200	0.00500		mg/L	1	08/30/23 12:37 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:37 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:37 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 02:59 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	52.1	3.00	10.0		mg/L	70	08/29/23 03:39 PM
Fluoride	0.408	0.100	0.400		mg/L	1	08/28/23 08:36 PM
Sulfate	49.8	1.00	3.00		mg/L	1	08/28/23 08:36 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	483	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** BV-21  
**Lab ID:** 2308355-07  
**Collection Date:** 08/24/23 01:51 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:40 PM
Arsenic	0.0871	0.00200	0.00500		mg/L	1	08/30/23 12:40 PM
Barium	0.206	0.00300	0.0100		mg/L	1	08/30/23 12:40 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:40 PM
Boron	0.428	0.0100	0.0300		mg/L	1	08/30/23 02:59 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:40 PM
Calcium	89.8	1.00	3.00		mg/L	10	08/30/23 02:24 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:40 PM
Cobalt	0.00421	0.00300	0.00500	J	mg/L	1	08/30/23 12:40 PM
Lead	0.000392	0.000300	0.00100	J	mg/L	1	08/30/23 12:40 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	08/30/23 12:40 PM
Molybdenum	0.00524	0.00200	0.00500		mg/L	1	08/30/23 12:40 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:40 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:40 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 03:01 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	53.5	3.00	10.0		mg/L	10	08/28/23 04:42 PM
Fluoride	0.423	0.100	0.400		mg/L	1	08/28/23 08:54 PM
Sulfate	36.2	1.00	3.00		mg/L	1	08/28/23 08:54 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	444	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
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 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** DUP-01  
**Lab ID:** 2308355-08  
**Collection Date:** 08/24/23  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:42 PM
Arsenic	0.0800	0.00200	0.00500		mg/L	1	08/30/23 12:42 PM
Barium	0.192	0.00300	0.0100		mg/L	1	08/30/23 12:42 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:42 PM
Boron	0.417	0.0100	0.0300		mg/L	1	08/30/23 03:02 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:42 PM
Calcium	84.2	1.00	3.00		mg/L	10	08/30/23 02:26 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:42 PM
Cobalt	0.00431	0.00300	0.00500	J	mg/L	1	08/30/23 12:42 PM
Lead	0.000332	0.000300	0.00100	J	mg/L	1	08/30/23 12:42 PM
Lithium	<0.00500	0.00500	0.0100		mg/L	1	08/30/23 12:42 PM
Molybdenum	0.00490	0.00200	0.00500	J	mg/L	1	08/30/23 12:42 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:42 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:42 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 03:03 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	53.6	3.00	10.0		mg/L	10	08/28/23 05:00 PM
Fluoride	0.433	0.100	0.400		mg/L	1	08/28/23 09:12 PM
Sulfate	35.6	1.00	3.00		mg/L	1	08/28/23 09:12 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	439	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
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S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** MW-4  
**Lab ID:** 2308355-09  
**Collection Date:** 08/24/23 04:14 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:45 PM
Arsenic	0.00867	0.00200	0.00500		mg/L	1	08/30/23 12:45 PM
Barium	0.0570	0.00300	0.0100		mg/L	1	08/30/23 12:45 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:45 PM
Boron	0.332	0.0100	0.0300		mg/L	1	08/30/23 03:30 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:45 PM
Calcium	99.9	1.00	3.00		mg/L	10	08/30/23 02:35 PM
Chromium	0.00264	0.00200	0.00500	J	mg/L	1	08/30/23 12:45 PM
Cobalt	0.0104	0.00300	0.00500		mg/L	1	08/30/23 12:45 PM
Lead	0.00121	0.000300	0.00100		mg/L	1	08/30/23 12:45 PM
Lithium	0.0161	0.00500	0.0100		mg/L	1	08/30/23 12:45 PM
Molybdenum	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:45 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:45 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:45 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	0.000224	0.0000800	0.000200		mg/L	1	08/31/23 03:06 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	99.5	3.00	10.0		mg/L	10	08/28/23 05:18 PM
Fluoride	0.547	0.100	0.400		mg/L	1	08/28/23 09:30 PM
Sulfate	136	1.00	3.00		mg/L	1	08/28/23 09:30 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	691	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
 J - Analyte detected between SDL and RL  
 B - Analyte detected in the associated Method Blank  
 DF- Dilution Factor  
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 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

**DHL Analytical, Inc.**

**Date:** 04-Oct-23

**CLIENT:** WSP-Golder  
**Project:** Coletto Creek CCR 2H23 GW  
**Project No:** 31404097.022  
**Lab Order:** 2308355

**Client Sample ID:** BV-5  
**Lab ID:** 2308355-10  
**Collection Date:** 08/24/23 06:15 PM  
**Matrix:** AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
<b>TOTAL METALS: ICP-MS - WATER</b>		<b>SW6020B</b>			Analyst: <b>SP</b>		
Antimony	<0.000800	0.000800	0.00250		mg/L	1	08/30/23 12:47 PM
Arsenic	0.0127	0.00200	0.00500		mg/L	1	08/30/23 12:47 PM
Barium	0.0387	0.00300	0.0100		mg/L	1	08/30/23 12:47 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:47 PM
Boron	1.09	0.0500	0.150		mg/L	5	08/30/23 02:54 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	08/30/23 12:47 PM
Calcium	53.9	0.500	1.50		mg/L	5	08/30/23 02:54 PM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:47 PM
Cobalt	0.0443	0.00300	0.00500		mg/L	1	08/30/23 12:47 PM
Lead	0.000494	0.000300	0.00100	J	mg/L	1	08/30/23 12:47 PM
Lithium	0.0138	0.00500	0.0100		mg/L	1	08/30/23 12:47 PM
Molybdenum	0.0111	0.00200	0.00500		mg/L	1	08/30/23 12:47 PM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	08/30/23 12:47 PM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	08/30/23 12:47 PM
<b>MERCURY TOTAL: AQUEOUS</b>		<b>SW7470A</b>			Analyst: <b>CMC</b>		
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	08/31/23 03:08 PM
<b>ANIONS BY IC METHOD - WATER</b>		<b>E300</b>			Analyst: <b>RA</b>		
Chloride	120	3.00	10.0		mg/L	70	08/28/23 05:36 PM
Fluoride	0.958	0.100	0.400		mg/L	1	08/28/23 09:48 PM
Sulfate	116	1.00	3.00		mg/L	1	08/28/23 09:48 PM
<b>TOTAL DISSOLVED SOLIDS</b>		<b>M2540C</b>			Analyst: <b>JS</b>		
Total Dissolved Solids (Residue, Filterable)	767	10.0	10.0		mg/L	1	08/29/23 02:30 PM

**Qualifiers:** ND - Not Detected at the SDL  
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 DF- Dilution Factor  
 N - Parameter not NELAP certified  
 See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits  
 C - Sample Result or QC discussed in Case Narrative  
 RL - Reporting Limit (MQL adjusted for moisture and sample size)  
 SDL - Sample Detection Limit  
 E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coleto Creek CCR 2H23 GW

**ANALYTICAL QC SUMMARY REPORT**

RunID: CETAC2\_HG\_230726B

Sample ID: <b>DCS-111365</b>	Batch ID: <b>111365</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>DCS</b>	Run ID: <b>CETAC2_HG_230726B</b>	Analysis Date: <b>7/26/2023 3:37:35 PM</b>	Prep Date: <b>7/26/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.000185	0.000200	0.000200	0	92.5	82	119	0	0	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified



CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2\_HG\_230831B

The QC data in batch 111963 applies to the following samples: 2308355-01A, 2308355-02A, 2308355-03A, 2308355-04A, 2308355-05A, 2308355-06A, 2308355-07A, 2308355-08A, 2308355-09A, 2308355-10A

Sample ID: <b>MB-111963</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:04:47 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.0000800	0.000200								

Sample ID: <b>LCS-111963</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:11:36 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00195	0.000200	0.00200	0	97.5	85	115			

Sample ID: <b>LCSD-111963</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:13:52 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00199	0.000200	0.00200	0	99.5	85	115	2.03	15	

Sample ID: <b>2308328-02AMS</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:22:58 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00970	0.00100	0.0100	0	97.0	80	120			

Sample ID: <b>2308328-02AMSD</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:25:14 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00950	0.00100	0.0100	0	95.0	80	120	2.08	15	

Sample ID: <b>2308328-02ASD</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>SD</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:27:30 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	<0.00200	0.00500	0	0				0	10	

Sample ID: <b>2308328-02APDS</b>	Batch ID: <b>111963</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>PDS</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:29:46 PM</b>	Prep Date: <b>8/31/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0113	0.00100	0.0125	0	90.4	85	115			

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2\_HG\_230831B

Sample ID: <b>ICV-230831</b>	Batch ID: <b>R128921</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>ICV</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:00:13 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00406	0.000200	0.00400	0	102	90	110			
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Sample ID: <b>CCV1-230831</b>	Batch ID: <b>R128921</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 2:52:24 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00205	0.000200	0.00200	0	103	90	110			
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Sample ID: <b>CCV2-230831</b>	Batch ID: <b>R128921</b>	TestNo: <b>SW7470A</b>	Units: <b>mg/L</b>							
SampType: <b>CCV</b>	Run ID: <b>CETAC2_HG_230831B</b>	Analysis Date: <b>8/31/2023 3:15:10 PM</b>	Prep Date:							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.00202	0.000200	0.00200	0	101	90	110			
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**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder  
 Work Order: 2308355  
 Project: Coletto Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230606A

Sample ID: <b>DCS1-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:31:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00108	0.00250	0.00100	0	108	70	130	0	0	
Beryllium	0.000502	0.00100	0.000500	0	100	70	130	0	0	
Cadmium	0.000524	0.00100	0.000500	0	105	70	130	0	0	
Lead	0.000497	0.00100	0.000500	0	99.4	70	130	0	0	
Thallium	0.000516	0.00150	0.000500	0	103	70	130	0	0	

Sample ID: <b>DCS2-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS2</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:34:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.259	0.300	0.300	0	86.2	70	130	0	0	

Sample ID: <b>DCS3-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:36:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00499	0.00500	0.00500	0	99.9	70	130	0	0	
Barium	0.00525	0.0100	0.00500	0	105	70	130	0	0	
Chromium	0.00520	0.00500	0.00500	0	104	70	130	0	0	
Cobalt	0.00524	0.00500	0.00500	0	105	70	130	0	0	
Lithium	0.00519	0.0100	0.00500	0	104	70	130	0	0	
Molybdenum	0.00526	0.00500	0.00500	0	105	70	130	0	0	
Selenium	0.00545	0.00500	0.00500	0	109	70	130	0	0	

Sample ID: <b>DCS4-110475</b>	Batch ID: <b>110475</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>DCS4</b>	Run ID: <b>ICP-MS5_230606A</b>	Analysis Date: <b>6/6/2023 4:39:00 PM</b>	Prep Date: <b>6/5/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0327	0.0300	0.0300	0	109	70	130	0	0	

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230830B

The QC data in batch 111925 applies to the following samples: 2308355-01A, 2308355-02A, 2308355-03A, 2308355-04A, 2308355-05A, 2308355-06A, 2308355-07A, 2308355-08A, 2308355-09A, 2308355-10A

Sample ID: <b>MB-111925</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:24:00 AM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Boron	<0.0100	0.0300								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Lead	<0.000300	0.00100								
Lithium	<0.00500	0.0100								
Molybdenum	<0.00200	0.00500								
Selenium	<0.00200	0.00500								
Thallium	<0.000500	0.00150								

Sample ID: <b>LCS-111925</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:27:00 AM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.197	0.00250	0.200	0	98.6	80	120			
Arsenic	0.199	0.00500	0.200	0	99.3	80	120			
Barium	0.200	0.0100	0.200	0	99.8	80	120			
Beryllium	0.191	0.00100	0.200	0	95.6	80	120			
Boron	0.194	0.0300	0.200	0	96.9	80	120			
Cadmium	0.198	0.00100	0.200	0	98.9	80	120			
Calcium	4.89	0.300	5.00	0	97.9	80	120			
Chromium	0.197	0.00500	0.200	0	98.6	80	120			
Cobalt	0.200	0.00500	0.200	0	99.8	80	120			
Lead	0.195	0.00100	0.200	0	97.7	80	120			
Lithium	0.192	0.0100	0.200	0	96.2	80	120			
Molybdenum	0.198	0.00500	0.200	0	98.9	80	120			
Selenium	0.197	0.00500	0.200	0	98.6	80	120			
Thallium	0.195	0.00150	0.200	0	97.6	80	120			

Sample ID: <b>LCSD-111925</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:30:00 AM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.7	80	120	1.03	15	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder  
 Work Order: 2308355  
 Project: Coletto Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230830B

Sample ID: <b>LCSD-111925</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:30:00 AM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.201	0.00500	0.200	0	101	80	120	1.20	15	
Barium	0.198	0.0100	0.200	0	99.0	80	120	0.739	15	
Beryllium	0.190	0.00100	0.200	0	95.0	80	120	0.675	15	
Boron	0.200	0.0300	0.200	0	100	80	120	3.15	15	
Cadmium	0.198	0.00100	0.200	0	99.1	80	120	0.241	15	
Calcium	4.90	0.300	5.00	0	98.0	80	120	0.139	15	
Chromium	0.196	0.00500	0.200	0	98.0	80	120	0.626	15	
Cobalt	0.202	0.00500	0.200	0	101	80	120	1.09	15	
Lead	0.194	0.00100	0.200	0	96.8	80	120	0.861	15	
Lithium	0.189	0.0100	0.200	0	94.5	80	120	1.76	15	
Molybdenum	0.196	0.00500	0.200	0	98.1	80	120	0.768	15	
Selenium	0.194	0.00500	0.200	0	97.2	80	120	1.39	15	
Thallium	0.194	0.00150	0.200	0	96.9	80	120	0.729	15	

Sample ID: <b>2308306-07A SD</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>SD</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:37:00 AM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<0.00400	0.0125	0	0				0	20	
Arsenic	<0.0100	0.0250	0	0.00285				0	20	
Barium	0.117	0.0500	0	0.115				1.78	20	
Beryllium	<0.00150	0.00500	0	0.000417				0	20	
Boron	0.102	0.150	0	0.0770				28.3	20	R
Cadmium	<0.00150	0.00500	0	0				0	20	
Calcium	9.09	1.50	0	8.96				1.41	20	
Chromium	<0.0100	0.0250	0	0.00931				0	20	
Cobalt	<0.0150	0.0250	0	0				0	20	
Lead	0.00522	0.00500	0	0.00503				3.55	20	
Lithium	<0.0250	0.0500	0	0.0175				0	20	
Molybdenum	<0.0100	0.0250	0	0				0	20	
Selenium	<0.0100	0.0250	0	0				0	20	
Thallium	<0.00250	0.00750	0	0				0	20	

Sample ID: <b>2308306-07A PDS</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:03:00 PM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.177	0.00250	0.200	0	88.5	75	125			
Arsenic	0.197	0.00500	0.200	0.00285	97.0	75	125			
Barium	0.311	0.0100	0.200	0.115	98.1	75	125			
Beryllium	0.183	0.00100	0.200	0.000417	91.1	75	125			

**Qualifiers:** B Analyte detected in the associated Method Blank      DF Dilution Factor  
 J Analyte detected between MDL and RL      MDL Method Detection Limit  
 ND Not Detected at the Method Detection Limit      R RPD outside accepted control limits  
 RL Reporting Limit      S Spike Recovery outside control limits  
 J Analyte detected between SDL and RL      N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coleta Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID:** ICP-MS5\_230830B

Sample ID: <b>2308306-07A PDS</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>PDS</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:03:00 PM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.254	0.0300	0.200	0.0770	88.6	75	125			
Cadmium	0.200	0.00100	0.200	0	99.8	75	125			
Calcium	13.5	0.300	5.00	8.96	91.4	75	125			
Chromium	0.205	0.00500	0.200	0.00931	97.8	75	125			
Cobalt	0.198	0.00500	0.200	0	98.9	75	125			
Lead	0.198	0.00100	0.200	0.00503	96.6	75	125			
Lithium	0.193	0.0100	0.200	0.0175	88.0	75	125			
Molybdenum	0.192	0.00500	0.200	0	96.2	75	125			
Selenium	0.191	0.00500	0.200	0	95.4	75	125			
Thallium	0.193	0.00150	0.200	0	96.7	75	125			

Sample ID: <b>2308306-07A MS</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:07:00 PM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.157	0.00250	0.200	0	78.4	75	125			
Arsenic	0.200	0.00500	0.200	0.00285	98.4	75	125			
Barium	0.316	0.0100	0.200	0.115	101	75	125			
Beryllium	0.185	0.00100	0.200	0.000417	92.1	75	125			
Boron	0.264	0.0300	0.200	0.0770	93.4	75	125			
Cadmium	0.199	0.00100	0.200	0	99.5	75	125			
Calcium	14.0	0.300	5.00	8.96	100	75	125			
Chromium	0.207	0.00500	0.200	0.00931	98.6	75	125			
Cobalt	0.201	0.00500	0.200	0	100	75	125			
Lead	0.201	0.00100	0.200	0.00503	97.8	75	125			
Lithium	0.203	0.0100	0.200	0.0175	92.7	75	125			
Molybdenum	0.191	0.00500	0.200	0	95.5	75	125			
Selenium	0.194	0.00500	0.200	0	97.2	75	125			
Thallium	0.196	0.00150	0.200	0	98.0	75	125			

Sample ID: <b>2308306-07A MSD</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:10:00 PM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.154	0.00250	0.200	0	76.9	75	125	1.86	15	
Arsenic	0.198	0.00500	0.200	0.00285	97.6	75	125	0.851	15	
Barium	0.316	0.0100	0.200	0.115	100	75	125	0.095	15	
Beryllium	0.185	0.00100	0.200	0.000417	92.4	75	125	0.329	15	
Boron	0.270	0.0300	0.200	0.0770	96.3	75	125	2.11	15	
Cadmium	0.198	0.00100	0.200	0	99.2	75	125	0.382	15	
Calcium	14.0	0.300	5.00	8.96	99.9	75	125	0.041	15	

**Qualifiers:**

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coleta Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: ICP-MS5\_230830B**

Sample ID: <b>2308306-07A MSD</b>	Batch ID: <b>111925</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:10:00 PM</b>	Prep Date: <b>8/29/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.205	0.00500	0.200	0.00931	97.9	75	125	0.736	15	
Cobalt	0.200	0.00500	0.200	0	100	75	125	0.267	15	
Lead	0.198	0.00100	0.200	0.00503	96.3	75	125	1.50	15	
Lithium	0.204	0.0100	0.200	0.0175	93.1	75	125	0.377	15	
Molybdenum	0.192	0.00500	0.200	0	95.8	75	125	0.325	15	
Selenium	0.195	0.00500	0.200	0	97.7	75	125	0.553	15	
Thallium	0.193	0.00150	0.200	0	96.7	75	125	1.30	15	

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank J Analyte detected between MDL and RL ND Not Detected at the Method Detection Limit RL Reporting Limit J Analyte detected between SDL and RL	DF Dilution Factor MDL Method Detection Limit R RPD outside accepted control limits S Spike Recovery outside control limits N Parameter not NELAP certified
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CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230830B

Sample ID: <b>ICV-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 10:07:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.0983	0.00250	0.100	0	98.3	90	110			
Arsenic	0.0985	0.00500	0.100	0	98.5	90	110			
Barium	0.0978	0.0100	0.100	0	97.8	90	110			
Beryllium	0.0974	0.00100	0.100	0	97.4	90	110			
Boron	0.103	0.0300	0.100	0	103	90	110			
Cadmium	0.0989	0.00100	0.100	0	98.9	90	110			
Calcium	2.53	0.300	2.50	0	101	90	110			
Chromium	0.0981	0.00500	0.100	0	98.1	90	110			
Cobalt	0.0993	0.00500	0.100	0	99.3	90	110			
Lead	0.0951	0.00100	0.100	0	95.1	90	110			
Lithium	0.0970	0.0100	0.100	0	97.0	90	110			
Molybdenum	0.0945	0.00500	0.100	0	94.5	90	110			
Selenium	0.0979	0.00500	0.100	0	97.9	90	110			
Thallium	0.0950	0.00150	0.100	0	95.0	90	110			

Sample ID: <b>LCVL-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>LCVL</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 10:23:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00197	0.00250	0.00200	0	98.4	80	120			
Arsenic	0.00492	0.00500	0.00500	0	98.4	80	120			
Barium	0.00480	0.0100	0.00500	0	96.0	80	120			
Beryllium	0.000976	0.00100	0.00100	0	97.6	80	120			
Boron	0.0229	0.0300	0.0200	0	114	80	120			
Cadmium	0.00103	0.00100	0.00100	0	103	80	120			
Calcium	0.102	0.300	0.100	0	102	80	120			
Chromium	0.00487	0.00500	0.00500	0	97.3	80	120			
Cobalt	0.00497	0.00500	0.00500	0	99.4	80	120			
Lead	0.000962	0.00100	0.00100	0	96.2	80	120			
Lithium	0.00983	0.0100	0.0100	0	98.3	80	120			
Molybdenum	0.00483	0.00500	0.00500	0	96.5	80	120			
Selenium	0.00495	0.00500	0.00500	0	99.1	80	120			
Thallium	0.000985	0.00150	0.00100	0	98.5	80	120			

Sample ID: <b>CCV1-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:10:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.198	0.00250	0.200	0	99.2	90	110			
Arsenic	0.201	0.00500	0.200	0	101	90	110			
Barium	0.200	0.0100	0.200	0	99.9	90	110			

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified



CLIENT: WSP-Golder

Work Order: 2308355

Project: Coleta Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230830B

Sample ID: <b>CCV1-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 11:10:00 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Beryllium	0.186	0.00100	0.200	0	93.2	90	110			
Boron	0.196	0.0300	0.200	0	98.2	90	110			
Cadmium	0.199	0.00100	0.200	0	99.4	90	110			
Calcium	4.94	0.300	5.00	0	98.7	90	110			
Chromium	0.195	0.00500	0.200	0	97.4	90	110			
Cobalt	0.201	0.00500	0.200	0	100	90	110			
Lead	0.194	0.00100	0.200	0	97.0	90	110			
Lithium	0.181	0.0100	0.200	0	90.7	90	110			
Molybdenum	0.196	0.00500	0.200	0	98.1	90	110			
Selenium	0.200	0.00500	0.200	0	99.9	90	110			
Thallium	0.194	0.00150	0.200	0	96.8	90	110			

Sample ID: <b>CCV2-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:12:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.199	0.00250	0.200	0	99.6	90	110			
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.200	0.0100	0.200	0	99.8	90	110			
Beryllium	0.187	0.00100	0.200	0	93.4	90	110			
Boron	0.198	0.0300	0.200	0	99.1	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Calcium	4.80	0.300	5.00	0	96.0	90	110			
Chromium	0.197	0.00500	0.200	0	98.5	90	110			
Cobalt	0.204	0.00500	0.200	0	102	90	110			
Lead	0.194	0.00100	0.200	0	97.1	90	110			
Lithium	0.184	0.0100	0.200	0	92.0	90	110			
Molybdenum	0.198	0.00500	0.200	0	99.2	90	110			
Selenium	0.204	0.00500	0.200	0	102	90	110			
Thallium	0.195	0.00150	0.200	0	97.3	90	110			

Sample ID: <b>CCV3-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:50:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.200	0.00250	0.200	0	99.8	90	110			
Arsenic	0.202	0.00500	0.200	0	101	90	110			
Barium	0.201	0.0100	0.200	0	101	90	110			
Beryllium	0.185	0.00100	0.200	0	92.3	90	110			
Cadmium	0.201	0.00100	0.200	0	101	90	110			
Calcium	4.89	0.300	5.00	0	97.8	90	110			

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5\_230830B

Sample ID: <b>CCV3-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 12:50:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chromium	0.199	0.00500	0.200	0	99.5	90	110			
Cobalt	0.205	0.00500	0.200	0	103	90	110			
Lead	0.194	0.00100	0.200	0	97.2	90	110			
Lithium	0.180	0.0100	0.200	0	90.0	90	110			
Molybdenum	0.201	0.00500	0.200	0	100	90	110			
Selenium	0.202	0.00500	0.200	0	101	90	110			
Thallium	0.195	0.00150	0.200	0	97.5	90	110			

Sample ID: <b>CCV4-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 2:29:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.185	0.0300	0.200	0	92.4	90	110			
Calcium	4.77	0.300	5.00	0	95.5	90	110			

Sample ID: <b>CCV5-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 3:04:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.207	0.0300	0.200	0	103	90	110			
Calcium	4.85	0.300	5.00	0	97.0	90	110			

Sample ID: <b>CCV6-230830</b>	Batch ID: <b>R128907</b>	TestNo: <b>SW6020B</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>ICP-MS5_230830B</b>	Analysis Date: <b>8/30/2023 3:59:00 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.187	0.0300	0.200	0	93.5	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coleta Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230821A**

Sample ID: <b>DCS3-111798</b>	Batch ID: <b>111798</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>DCS3</b>	Run ID: <b>IC2_230821A</b>	Analysis Date: <b>8/21/2023 3:37:43 PM</b>	Prep Date: <b>8/21/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1.06	1.00	1.000	0	106	70	130	0	0	
Fluoride	0.424	0.400	0.4000	0	106	70	130	0	0	
Sulfate	2.77	3.00	3.000	0	92.4	70	130	0	0	

**Qualifiers:**

B Analyte detected in the associated Method Blank	DF Dilution Factor
J Analyte detected between MDL and RL	MDL Method Detection Limit
ND Not Detected at the Method Detection Limit	R RPD outside accepted control limits
RL Reporting Limit	S Spike Recovery outside control limits
J Analyte detected between SDL and RL	N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230828A

The QC data in batch 111911 applies to the following samples: 2308355-01B, 2308355-02B, 2308355-03B, 2308355-04B, 2308355-05B, 2308355-06B, 2308355-07B, 2308355-08B, 2308355-09B, 2308355-10B

Sample ID: <b>MB-111911</b>	Batch ID: <b>111911</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MBLK</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 12:22:49 PM</b>	Prep Date: <b>8/28/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Fluoride	<0.100	0.400								
Sulfate	<1.00	3.00								

Sample ID: <b>LCS-111911</b>	Batch ID: <b>111911</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>LCS</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 12:40:49 PM</b>	Prep Date: <b>8/28/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.94	1.00	10.00	0	99.4	90	110			
Fluoride	4.00	0.400	4.000	0	99.9	90	110			
Sulfate	28.7	3.00	30.00	0	95.7	90	110			

Sample ID: <b>LCSD-111911</b>	Batch ID: <b>111911</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>LCSD</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 12:58:49 PM</b>	Prep Date: <b>8/28/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.91	1.00	10.00	0	99.1	90	110	0.340	20	
Fluoride	4.00	0.400	4.000	0	99.9	90	110	0.008	20	
Sulfate	28.6	3.00	30.00	0	95.4	90	110	0.371	20	

Sample ID: <b>2308355-05BMS</b>	Batch ID: <b>111911</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MS</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 3:12:25 PM</b>	Prep Date: <b>8/28/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2090	100	2000	114.8	98.6	90	110			
Fluoride	2030	40.0	2000	0	102	90	110			
Sulfate	2040	300	2000	190.7	92.4	90	110			

Sample ID: <b>2308355-05BMSD</b>	Batch ID: <b>111911</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>MSD</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 3:30:25 PM</b>	Prep Date: <b>8/28/2023</b>

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	2070	100	2000	114.8	98.0	90	110	0.597	20	
Fluoride	2030	40.0	2000	0	101	90	110	0.176	20	
Sulfate	2020	300	2000	190.7	91.6	90	110	0.826	20	

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coleta Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230828A**

Sample ID: <b>ICV-230828</b>	Batch ID: <b>R128869</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 11:46:49 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.7	1.00	25.00	0	98.8	90	110			
Fluoride	10.0	0.400	10.00	0	100	90	110			
Sulfate	71.8	3.00	75.00	0	95.8	90	110			

Sample ID: <b>CCV1-230828</b>	Batch ID: <b>R128869</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 7:06:25 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.92	1.00	10.00	0	99.2	90	110			
Fluoride	4.03	0.400	4.000	0	101	90	110			
Sulfate	28.5	3.00	30.00	0	95.2	90	110			

Sample ID: <b>CCV2-230828</b>	Batch ID: <b>R128869</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230828A</b>	Analysis Date: <b>8/28/2023 10:42:25 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.95	1.00	10.00	0	99.5	90	110			
Fluoride	4.06	0.400	4.000	0	101	90	110			
Sulfate	28.7	3.00	30.00	0	95.7	90	110			

<p><b>Qualifiers:</b></p> <p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coletto Creek CCR 2H23 GW

## ANALYTICAL QC SUMMARY REPORT

**RunID: IC2\_230829B**

The QC data in batch 111930 applies to the following samples: 2308355-06B

Sample ID: <b>MB-111930</b>	Batch ID: <b>111930</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 11:21:31 AM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	<0.300	1.00								
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Sample ID: <b>LCS-111930</b>	Batch ID: <b>111930</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 11:39:31 AM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.83	1.00	10.00	0	98.3	90	110			
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Sample ID: <b>LCSD-111930</b>	Batch ID: <b>111930</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>LCSD</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 11:57:30 AM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	9.91	1.00	10.00	0	99.1	90	110	0.752	20	
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Sample ID: <b>2308358-01CMS</b>	Batch ID: <b>111930</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MS</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 4:15:48 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	214	10.0	200.0	16.03	98.8	90	110			
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Sample ID: <b>2308358-01CMSD</b>	Batch ID: <b>111930</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>							
SampType: <b>MSD</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 4:33:48 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Chloride	213	10.0	200.0	16.03	98.6	90	110	0.190	20	
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<b>Qualifiers:</b>	<p>B Analyte detected in the associated Method Blank</p> <p>J Analyte detected between MDL and RL</p> <p>ND Not Detected at the Method Detection Limit</p> <p>RL Reporting Limit</p> <p>J Analyte detected between SDL and RL</p>	<p>DF Dilution Factor</p> <p>MDL Method Detection Limit</p> <p>R RPD outside accepted control limits</p> <p>S Spike Recovery outside control limits</p> <p>N Parameter not NELAP certified</p>
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CLIENT: WSP-Golder

Work Order: 2308355

Project: Coleta Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: IC2\_230829B

Sample ID: <b>ICV-230829</b>	Batch ID: <b>R128890</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>ICV</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 10:45:31 AM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	24.6	1.00	25.00	0	98.4	90	110			

Sample ID: <b>CCV1-230829</b>	Batch ID: <b>R128890</b>	TestNo: <b>E300</b>	Units: <b>mg/L</b>
SampType: <b>CCV</b>	Run ID: <b>IC2_230829B</b>	Analysis Date: <b>8/29/2023 7:03:50 PM</b>	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.85	1.00	10.00	0	98.5	90	110			

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAP certified

CLIENT: WSP-Golder

Work Order: 2308355

Project: Coletto Creek CCR 2H23 GW

# ANALYTICAL QC SUMMARY REPORT

RunID: WC\_230829A

The QC data in batch 111936 applies to the following samples: 2308355-01B, 2308355-02B, 2308355-03B, 2308355-04B, 2308355-05B, 2308355-06B, 2308355-07B, 2308355-08B, 2308355-09B, 2308355-10B

Sample ID: <b>MB-111936</b>	Batch ID: <b>111936</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>MBLK</b>	Run ID: <b>WC_230829A</b>	Analysis Date: <b>8/29/2023 2:30:00 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: <b>LCS-111936</b>	Batch ID: <b>111936</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>LCS</b>	Run ID: <b>WC_230829A</b>	Analysis Date: <b>8/29/2023 2:30:00 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	724	10.0	745.6	0	97.1	90	113			

Sample ID: <b>2308343-03C-DUP</b>	Batch ID: <b>111936</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230829A</b>	Analysis Date: <b>8/29/2023 2:30:00 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	495	10.0	0	490.0				1.02	5	

Sample ID: <b>2308343-04C-DUP</b>	Batch ID: <b>111936</b>	TestNo: <b>M2540C</b>	Units: <b>mg/L</b>							
SampType: <b>DUP</b>	Run ID: <b>WC_230829A</b>	Analysis Date: <b>8/29/2023 2:30:00 PM</b>	Prep Date: <b>8/29/2023</b>							
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	509	10.0	0	502.0				1.38	5	

- Qualifiers:**
- B Analyte detected in the associated Method Blank
  - J Analyte detected between MDL and RL
  - ND Not Detected at the Method Detection Limit
  - RL Reporting Limit
  - J Analyte detected between SDL and RL
  - DF Dilution Factor
  - MDL Method Detection Limit
  - R RPD outside accepted control limits
  - S Spike Recovery outside control limits
  - N Parameter not NELAP certified



**CLIENT:** WSP-Golder  
**Work Order:** 2308355  
**Project:** Coleta Creek CCR 2H23 GW

**SQL SUMMARY REPORT**

<b>TestNo: E300</b>	<b>MDL</b>	<b>SQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Chloride	0.300	1.00
Fluoride	0.100	0.400
Sulfate	1.00	3.00

<b>TestNo: SW6020B</b>	<b>MDL</b>	<b>SQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Boron	0.0100	0.0300
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Lead	0.000300	0.00100
Lithium	0.00500	0.0100
Molybdenum	0.00200	0.00500
Selenium	0.00200	0.00500
Thallium	0.000500	0.00150

<b>TestNo: SW7470A</b>	<b>MDL</b>	<b>SQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Mercury	0.000400	0.00100
Mercury	0.0000800	0.000200

<b>TestNo: M2540C</b>	<b>MDL</b>	<b>SQL</b>
<b>Analyte</b>	<b>mg/L</b>	<b>mg/L</b>
Total Dissolved Solids (Residue, Filt	10.0	10.0

**Qualifiers:** SQL -Method Quantitation Limit as defined by TRRP  
MDL -Method Detection Limit as defined by TRRP



# ANALYTICAL REPORT

October 04, 2023

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

## DHL Analytical, Inc.

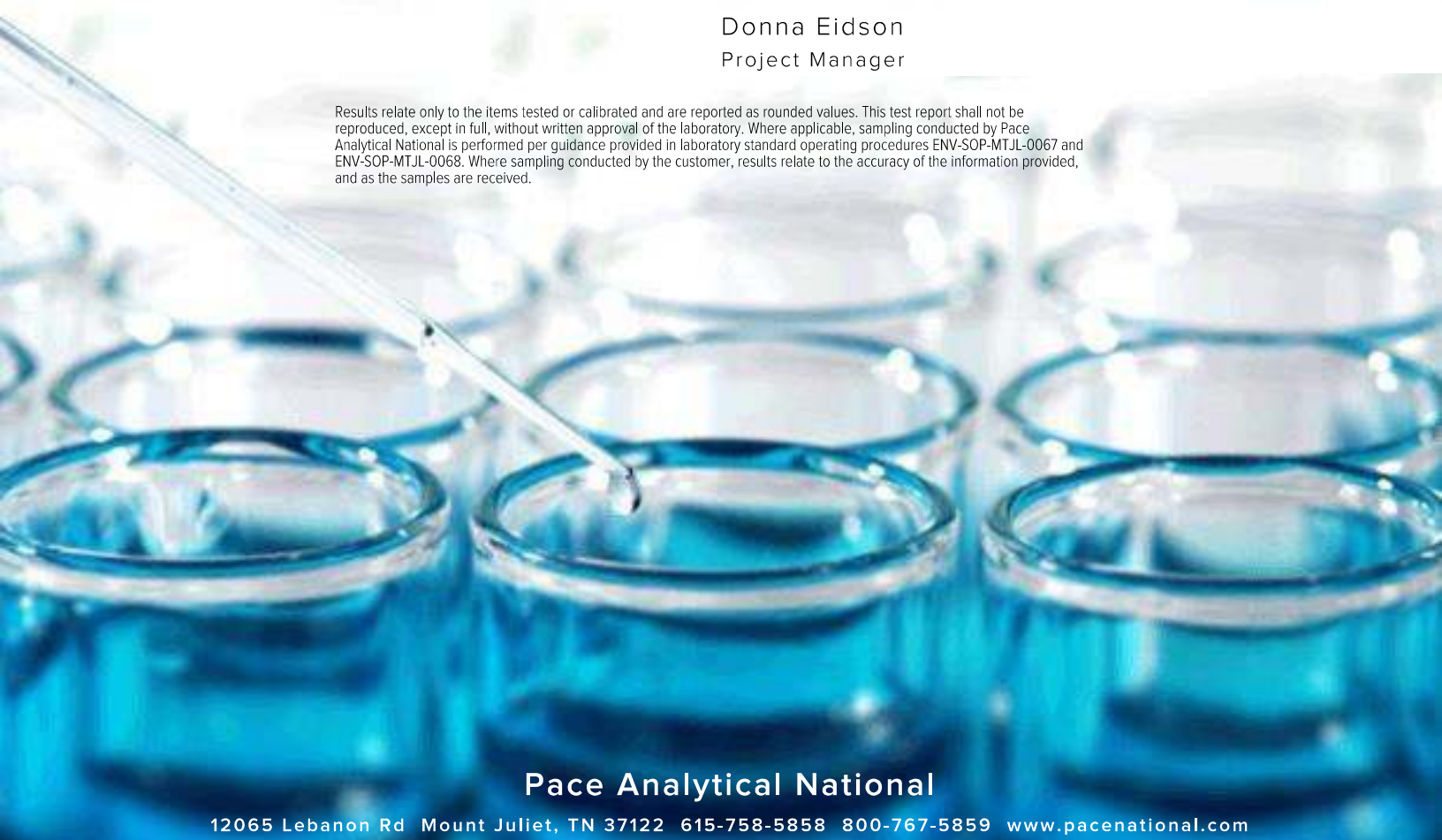
Sample Delivery Group: L1651386  
 Samples Received: 08/30/2023  
 Project Number: 2308355  
 Description:

Report To: John DuPont  
 2300 Double Creek Drive  
 Round Rock, TX 78664

Entire Report Reviewed By:

Donna Eidson  
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.

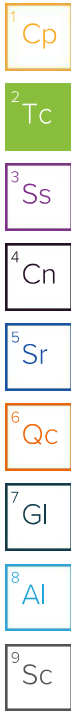


**Pace Analytical National**

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

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# SAMPLE SUMMARY

## MW-10 L1651386-01 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/23/23 13:49      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 23:31	RGT	Mt. Juliet, TN

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

## MW-5 L1651386-02 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/23/23 14:55      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 23:31	RGT	Mt. Juliet, TN

## MW-9 L1651386-03 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/23/23 16:09      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 23:31	RGT	Mt. Juliet, TN

## MW-11 L1651386-04 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/23/23 17:09      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2127425	1	09/08/23 10:25	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2127425	1	09/08/23 10:25	09/21/23 23:31	RGT	Mt. Juliet, TN

## MW-6 L1651386-05 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/24/23 10:25      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130036	1	09/11/23 15:41	09/25/23 20:32	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130036	1	09/11/23 15:41	09/15/23 15:33	RGT	Mt. Juliet, TN

## MW-8 L1651386-06 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/24/23 12:22      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130036	1	09/11/23 15:41	09/25/23 20:32	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130036	1	09/11/23 15:41	09/15/23 19:27	RGT	Mt. Juliet, TN

# SAMPLE SUMMARY

## BV-21 L1651386-07 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/24/23 13:51      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130036	1	09/11/23 15:41	09/25/23 20:32	RGT	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130036	1	09/11/23 15:41	09/15/23 19:27	RGT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## DUP-01 L1651386-08 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/24/23 00:00      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130989	1	09/13/23 10:15	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130989	1	09/13/23 10:15	09/13/23 22:57	RGT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## MW-4 L1651386-09 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/23/23 16:14      08/30/23 09:50

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130989	1	09/13/23 10:15	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130989	1	09/13/23 10:15	09/15/23 00:04	RGT	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## BV-5 L1651386-10 Non-Potable Water

Collected by  
Collected date/time  
Received date/time

08/24/23 18:15      08/30/23 09:50

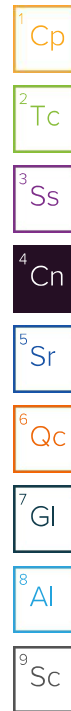
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 904/9320	WG2136272	1	09/20/23 18:05	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method Calculation	WG2130989	1	09/13/23 10:15	09/25/23 20:32	DDD	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG2130989	1	09/13/23 10:15	09/15/23 00:04	RGT	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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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.



Donna Eidson  
Project Manager



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.16		0.239	0.407	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	108			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	100			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.25		0.323	0.530	09/25/2023 20:32	<a href="#">WG2127425</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0921	U	0.217	0.340	09/21/2023 23:31	<a href="#">WG2127425</a>
(T) Barium-133	97.7			30.0-143	09/21/2023 23:31	<a href="#">WG2127425</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.46		0.218	0.353	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	94.3			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	112			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.65		0.376	0.577	09/25/2023 20:32	<a href="#">WG2127425</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.198	J	0.306	0.457	09/21/2023 23:31	<a href="#">WG2127425</a>
(T) Barium-133	67.2			30.0-143	09/21/2023 23:31	<a href="#">WG2127425</a>

6 Qc

7 Gl

8 Al

9 Sc



Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.06		0.281	0.451	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	86.8			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	88.2			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.70		0.452	0.566	09/25/2023 20:32	<a href="#">WG2127425</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.637		0.354	0.342	09/21/2023 23:31	<a href="#">WG2127425</a>
(T) Barium-133	105			30.0-143	09/21/2023 23:31	<a href="#">WG2127425</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.90		0.243	0.383	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	132			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	88.7			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.22		0.368	0.516	09/25/2023 20:32	<a href="#">WG2127425</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.318	J	0.277	0.346	09/21/2023 23:31	<a href="#">WG2127425</a>
(T) Barium-133	98.0			30.0-143	09/21/2023 23:31	<a href="#">WG2127425</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	2.06		0.310	0.506	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	104			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	102			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.22		0.356	0.556	09/25/2023 20:32	<a href="#">WG2130036</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.160	J	0.175	0.231	09/15/2023 15:33	<a href="#">WG2130036</a>
(T) Barium-133	96.5			30.0-143	09/15/2023 15:33	<a href="#">WG2130036</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.959		0.227	0.392	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	116			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	122			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	3.19		0.690	0.469	09/25/2023 20:32	<a href="#">WG2130036</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	2.23		0.652	0.258	09/15/2023 19:27	<a href="#">WG2130036</a>
(T) Barium-133	71.8			30.0-143	09/15/2023 19:27	<a href="#">WG2130036</a>

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.969		0.235	0.408	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	114			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	104			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.77		0.403	0.446	09/25/2023 20:32	<a href="#">WG2130036</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.799		0.328	0.179	09/15/2023 19:27	<a href="#">WG2130036</a>
(T) Barium-133	92.7			30.0-143	09/15/2023 19:27	<a href="#">WG2130036</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.40		0.293	0.505	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	113			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	97.3			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	2.89		0.588	0.573	09/25/2023 20:32	<a href="#">WG2130989</a>

<sup>4</sup> Cn

<sup>5</sup> Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	1.49		0.510	0.271	09/13/2023 22:57	<a href="#">WG2130989</a>
(T) Barium-133	89.0			30.0-143	09/13/2023 22:57	<a href="#">WG2130989</a>

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.671		0.241	0.429	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	120			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	107			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

1 Cp

2 Tc

3 Ss

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	0.916		0.341	0.520	09/25/2023 20:32	<a href="#">WG2130989</a>

4 Cn

5 Sr

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.245	J	0.241	0.293	09/15/2023 00:04	<a href="#">WG2130989</a>
(T) Barium-133	82.1			30.0-143	09/15/2023 00:04	<a href="#">WG2130989</a>

6 Qc

7 Gl

8 Al

9 Sc

Radiochemistry by Method 904/9320

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	0.389	J	0.286	0.519	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Barium	103			30.0-143	09/25/2023 20:32	<a href="#">WG2136272</a>
(T) Yttrium	105			30.0-136	09/25/2023 20:32	<a href="#">WG2136272</a>

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

Radiochemistry by Method Calculation

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
Combined Radium	1.04		0.450	0.600	09/25/2023 20:32	<a href="#">WG2130989</a>

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.656		0.347	0.302	09/15/2023 00:04	<a href="#">WG2130989</a>
(T) Barium-133	96.9			30.0-143	09/15/2023 00:04	<a href="#">WG2130989</a>



Method Blank (MB)

(MB) R3978592-1 09/25/23 20:32

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-228	0.798		0.187	0.323
(T) Barium	123		123	
(T) Yttrium	117		117	

L1651386-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1651386-05 09/25/23 20:32 • (DUP) R3978592-5 09/25/23 20:32

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	2.06	0.310	0.506	1.32	0.343	0.598	1	43.4	1.59		20	3
(T) Barium	104			106	106							
(T) Yttrium	102			129	129							

Laboratory Control Sample (LCS)

(LCS) R3978592-2 09/25/23 20:32

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.57	111	80.0-120	
(T) Barium			136		
(T) Yttrium			105		

L1651227-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1651227-04 09/25/23 20:32 • (MS) R3978592-3 09/25/23 20:32 • (MSD) R3978592-4 09/25/23 20:32

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	0.943	10.9	10.9	99.6	99.4	1	70.0-130			0.184		20
(T) Barium		99.6			90.7	123							
(T) Yttrium		96.7			104	106							



Method Blank (MB)

(MB) R3977534-1 09/21/23 18:42

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0139	<u>U</u>	0.105	0.198
(T) Barium-133	37.3		37.3	

L1650762-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1650762-07 09/21/23 23:31 • (DUP) R3977534-5 09/21/23 18:42

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.512	0.296	0.293	0.134	0.245	0.369	1	117	0.985	<u>J</u>	20	3
(T) Barium-133	99.8			89.8	89.8							

Laboratory Control Sample (LCS)

(LCS) R3977534-2 09/21/23 18:42

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.93	118	80.0-120	
(T) Barium-133			35.1		

L1650062-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650062-10 09/21/23 18:42 • (MS) R3977534-3 09/21/23 18:42 • (MSD) R3977534-4 09/21/23 18:42

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	2.50	19.5	23.1	85.1	103	1	75.0-125			16.8		20
(T) Barium-133		85.2			48.3	48.3							



Method Blank (MB)

(MB) R3981103-1 09/15/23 15:33

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.00320	<u>U</u>	0.0756	0.145
(T) Barium-133	52.0		52.0	

L1652263-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1652263-09 09/15/23 19:27 • (DUP) R3981103-5 09/15/23 15:33

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.228	0.212	0.264	-0.0166	0.126	0.300	1	200	0.993	<u>U</u>	20	3
(T) Barium-133	107			86.4	86.4							

Laboratory Control Sample (LCS)

(LCS) R3981103-2 09/15/23 15:33

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.62	112	80.0-120	
(T) Barium-133			64.5		

L1651386-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1651386-07 09/15/23 19:27 • (MS) R3981103-3 09/15/23 15:33 • (MSD) R3981103-4 09/15/23 15:33

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	0.799	21.5	17.9	104	85.4	1	75.0-125			18.4		20
(T) Barium-133		92.7			82.5	84.5							

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

Method Blank (MB)

(MB) R3973390-1 09/13/23 22:57

Analyte	MB Result pCi/l	MB Qualifier	MB Uncertainty + / -	MB MDA pCi/l
Radium-226	0.0554	J	0.0513	0.0725
(T) Barium-133	75.1		75.1	

L1651465-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1651465-01 09/13/23 22:57 • (DUP) R3973390-5 09/13/23 22:57

Analyte	Original Result pCi/l	Original Uncertainty + / -	Original MDA pCi/l	DUP Result pCi/l	DUP Uncertainty + / -	DUP MDA pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-226	0.929	0.433	0.344	0.296	0.331	0.446	1	103	1.16	J	20	3
(T) Barium-133	85.1			67.6	67.6							

Laboratory Control Sample (LCS)

(LCS) R3973390-2 09/13/23 22:57

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-226	5.01	5.30	106	80.0-120	
(T) Barium-133			69.1		

L1651386-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1651386-08 09/13/23 22:57 • (MS) R3973390-3 09/13/23 22:57 • (MSD) R3973390-4 09/13/23 22:57

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-226	20.0	1.49	17.8	18.3	81.3	84.0	1	75.0-125			3.00		20
(T) Barium-133		89.0			77.4	76.3							



# 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.

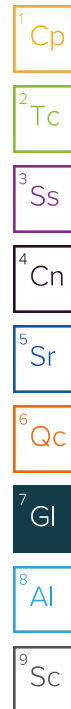
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

### Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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

J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



# ACCREDITATIONS & LOCATIONS

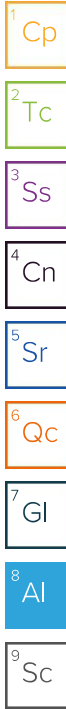
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	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 <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



DHL Analytical, Inc.  
2300 Double Creek Drive  
Round Rock, TX 78664

# CHAIN-OF-CUSTODY RECORD

TEL: (512) 388-8222 FAX:

Work Order: 2308355

*L1651380*

**Subcontractor:**

Pace Analytical  
12065 Lebanon Rd  
Mt. Juliet, TN 37122

TEL: (615) 773-5923  
FAX:  
Acct #: DHLRRTX

28-Aug-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests				
					Ra-228	Ra-226			
					E904.0	M7500 Ra B M			
MW-10	Aqueous	01C	08/23/23 01:49 PM	1LHDPEHNO3		1			
MW-10	Aqueous	01D	08/23/23 01:49 PM	1LHDPEHNO3	1				-01
MW-5	Aqueous	02C	08/23/23 02:55 PM	1LHDPEHNO3		1			
MW-5	Aqueous	02D	08/23/23 02:55 PM	1LHDPEHNO3	1				-02
MW-9	Aqueous	03C	08/23/23 04:03 PM	1LHDPEHNO3		1			
MW-9	Aqueous	03D	08/23/23 04:03 PM	1LHDPEHNO3	1				-03
MW-11	Aqueous	04C	08/23/23 05:09 PM	1LHDPEHNO3		1			
MW-11	Aqueous	04D	08/23/23 05:09 PM	1LHDPEHNO3	1				-04
MW-6	Aqueous	05C	08/24/23 10:25 AM	1LHDPEHNO3		1			
MW-6	Aqueous	05D	08/24/23 10:25 AM	1LHDPEHNO3	1				-05
MW-8	Aqueous	06C	08/24/23 12:22 PM	1LHDPEHNO3		1			
MW-8	Aqueous	06D	08/24/23 12:22 PM	1LHDPEHNO3	1				-06
BV-21	Aqueous	07C	08/24/23 01:51 PM	1LHDPEHNO3		1			
BV-21	Aqueous	07D	08/24/23 01:51 PM	1LHDPEHNO3	1				-07
DUP-01	Aqueous	08C	08/24/23	1LHDPEHNO3		1			
DUP-01	Aqueous	08D	08/24/23	1LHDPEHNO3	1				-06
MW-4	Aqueous	09C	08/24/23 04:14 PM	1LHDPEHNO3		1			



PH-10BDH4321 TRC-2144141  
CR6-20221V  
PH-10BDH4321 TRC-2144141  
CR6-20221V

**General Comments:**

Please analyze these samples with Normal Turnaround Time.  
Report Ra-226, Ra-228 & Combined per Specs.  
Quality Control Package Needed: Standard - NELAC Rad Test compliant  
Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

**Sample Receipt Checklist**

COC Seal Present/Intact:  Y  N If Applicable  
COC Signed/Accurate:  Y  N VOA Zero Headspace:  Y  N  
Bottles arrive intact:  Y  N Pres. Correct/Check:  Y  N  
Correct bottles used:  Y  N  
Sufficient volume sent:  Y  N  
RA Screen <0.5 mR/hr:  Y  N

Relinquished by: 	Date/Time: 8/28/23 1800	Received by: 	Date/Time: 8/30/23 0950
Relinquished by: _____	Date/Time: _____	Received by: _____	Date/Time: _____

DHL Analytical, Inc.  
 2300 Double Creek Drive  
 Round Rock, TX 78664

# CHAIN-OF-CUSTODY RECORD

TEL: (512) 388-8222 FAX:  
 Work Order: 2308355

*L. 11651386*

**Subcontractor:**

Pace Analytical  
 12065 Lebanon Rd  
 Mt. Juliet, TN 37122

TEL: (615) 773-5923  
 FAX:  
 Acct #: DHLRRTX

28-Aug-23

Sample ID	Matrix	DHL#	Date Collected	Bottle Type	Requested Tests					
					Ra-228	Ra-226				
					E904.0	M7500 Ra B M				
MW-4	Aqueous	09D	08/24/23 04:14 PM	1LHDPEHNO3	1					
BV-5	Aqueous	10C	08/24/23 06:15 PM	1LHDPEHNO3		1				
BV-5	Aqueous	10D	08/24/23 06:15 PM	1LHDPEHNO3	1					-10

*-09*

**General Comments:**

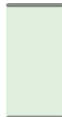



Please analyze these samples with Normal Turnaround Time.  
 Report Ra-226, Ra-228 & Combined per Specs.  
 Quality Control Package Needed: Standard - NELAC Rad Test compliant  
 Email to cac@dhlanalytical.com & dupont@dhlanalytical.com

	<b>Date/Time</b>		<b>Date/Time</b>
Relinquished by:	<i>8/28/23 1800</i>	Received by:  (18)	<i>8/30/23 0950</i>
Relinquished by: _____		Received by: _____	



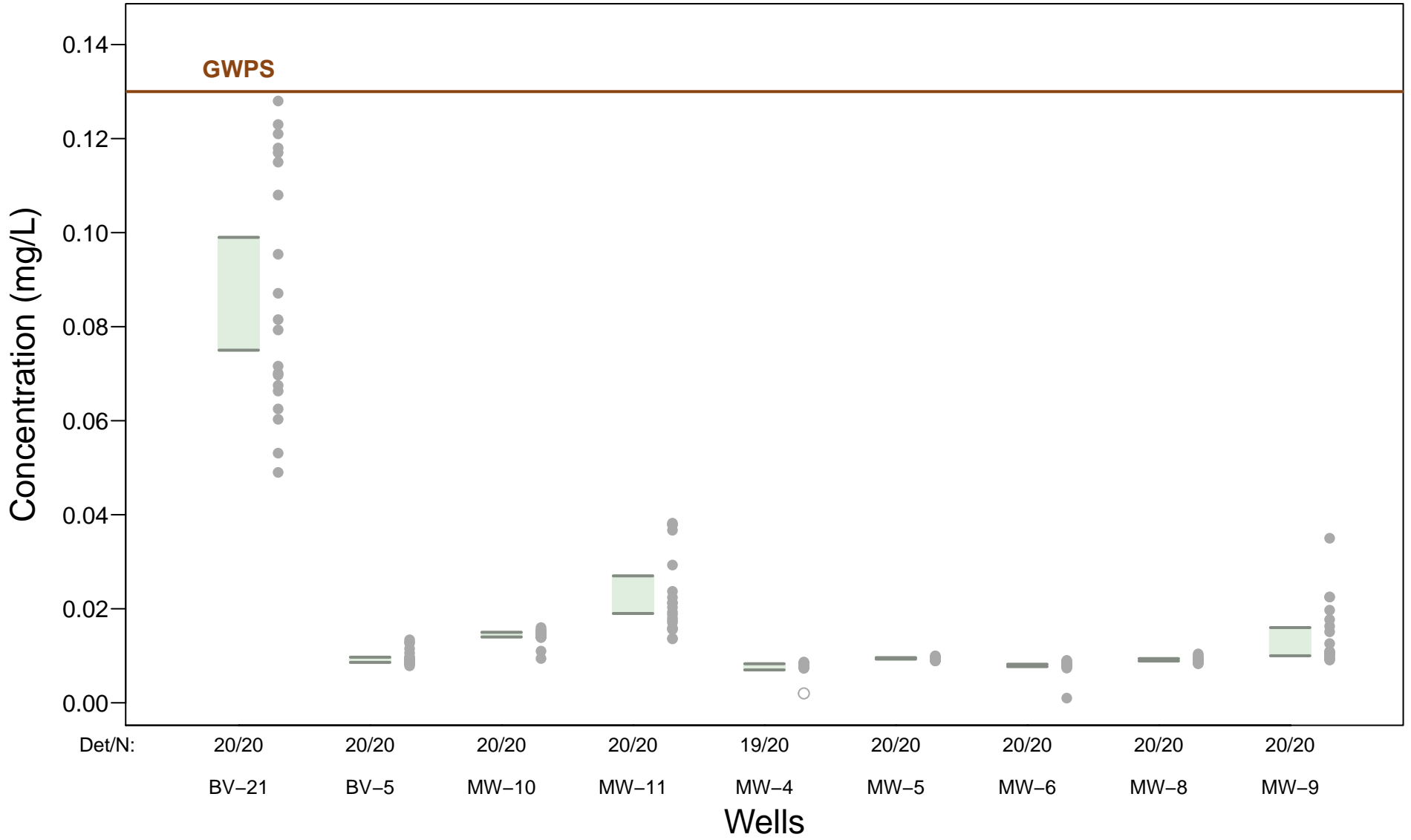
**APPENDIX B**  
**APPENDIX IV CONFIDENCE INTERVAL GRAPHS**

**EXPLANATION**

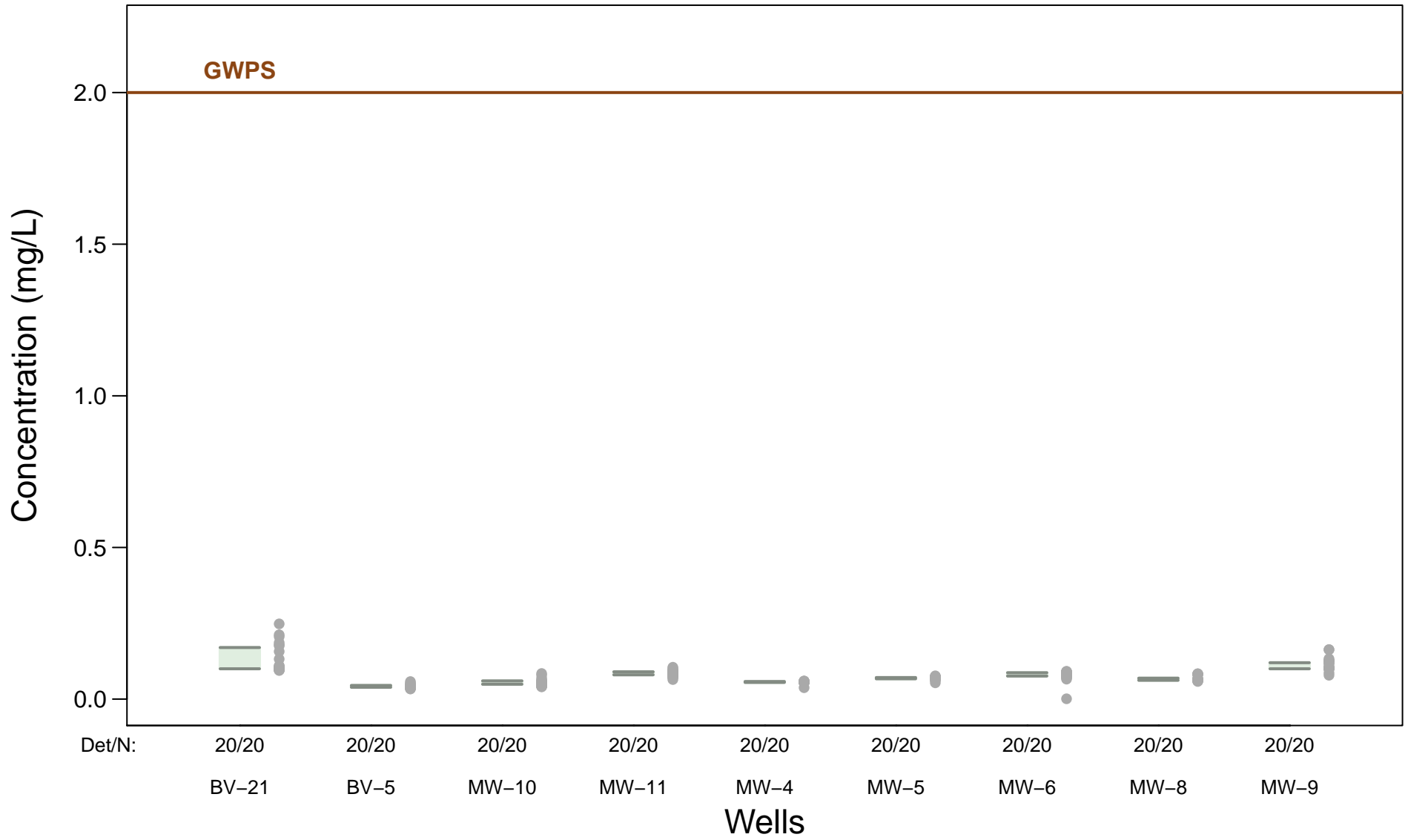
-  95% Upper confidence limit
-  95% Lower confidence limit
-  Detected sample concentration
-  Non-detect sample result (concentration set to laboratory reporting limit)

Note: An SSL is indicated if the lower confidence limit exceeds the GWPS.

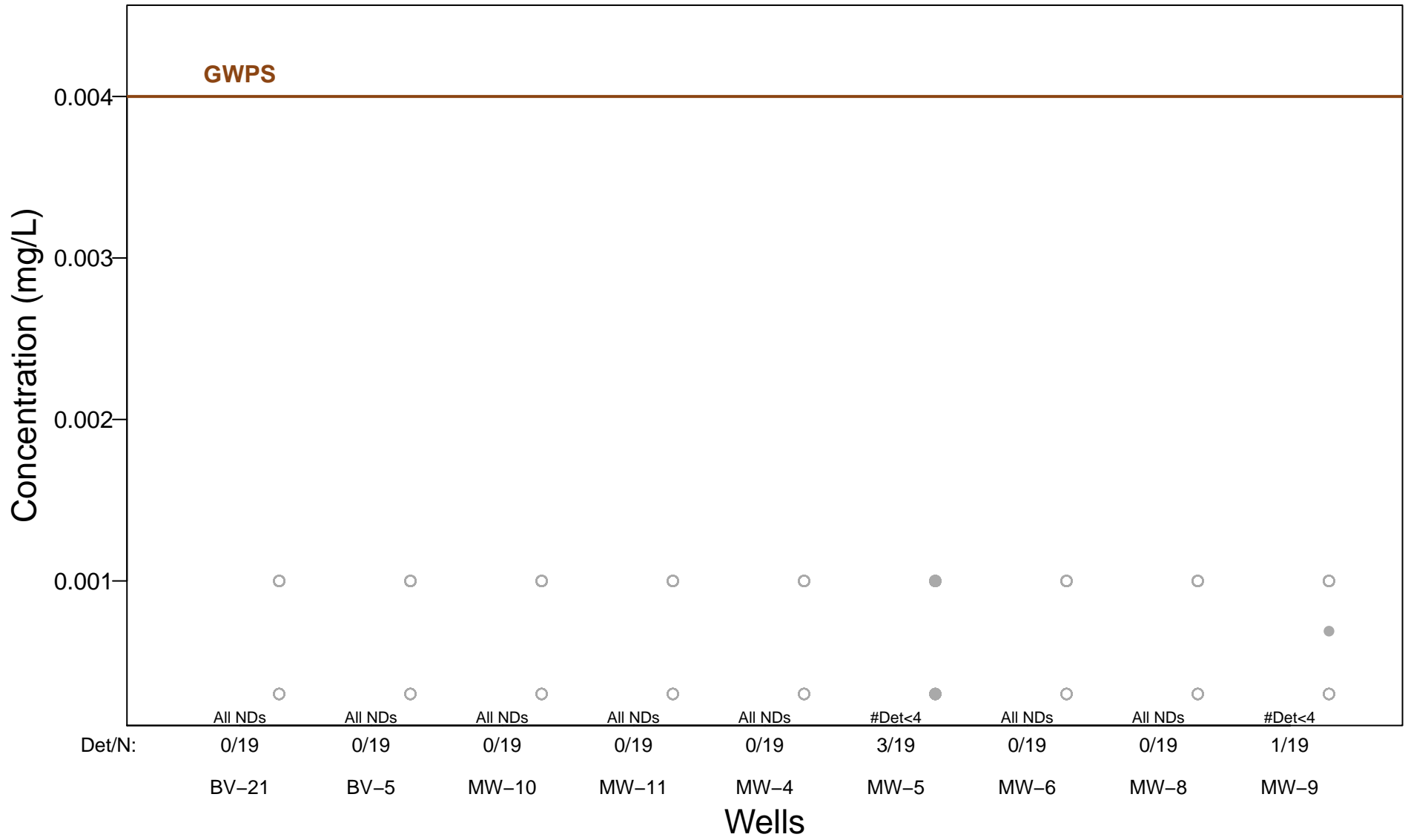
# Arsenic – 95% Confidence Intervals



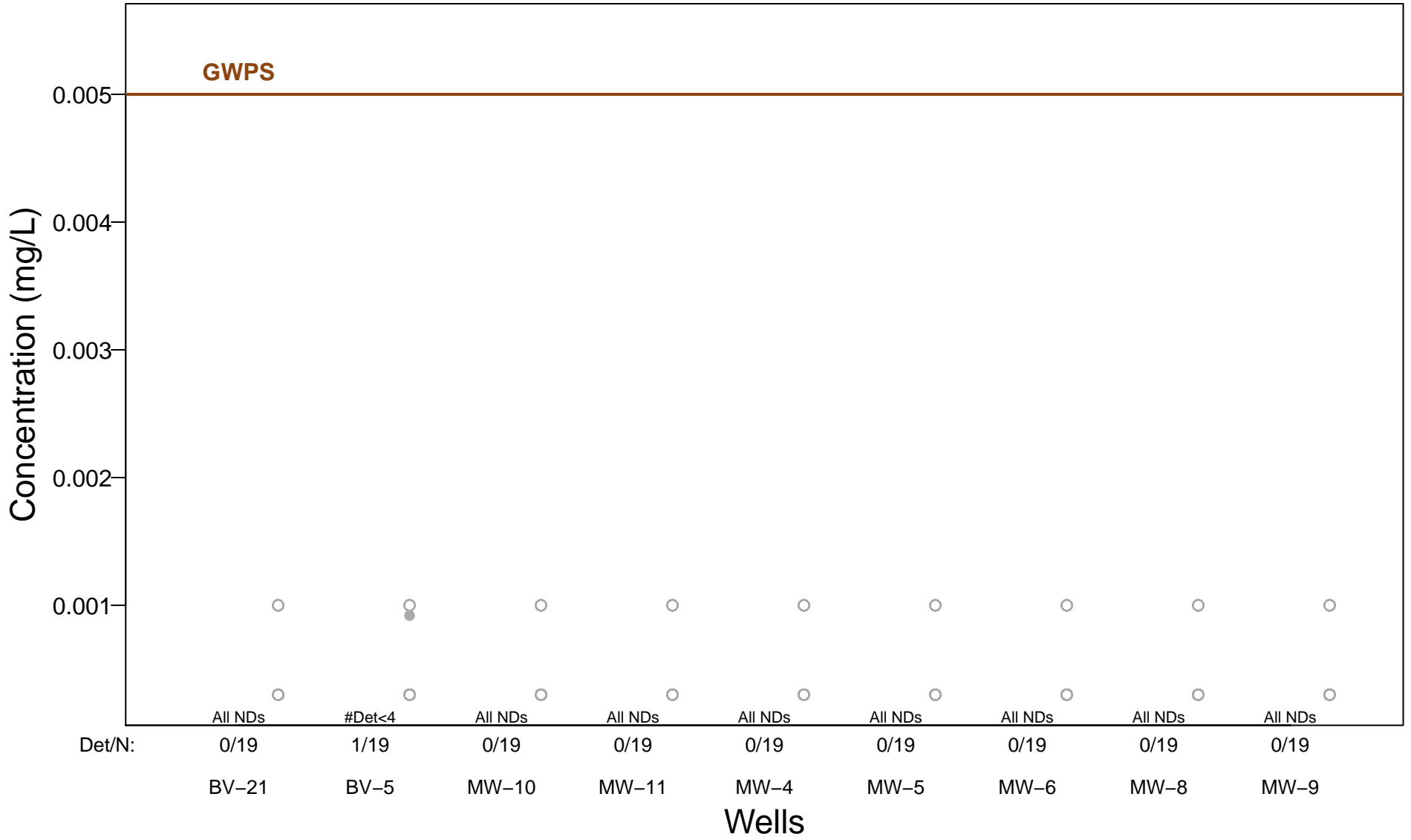
# Barium – 95% Confidence Intervals



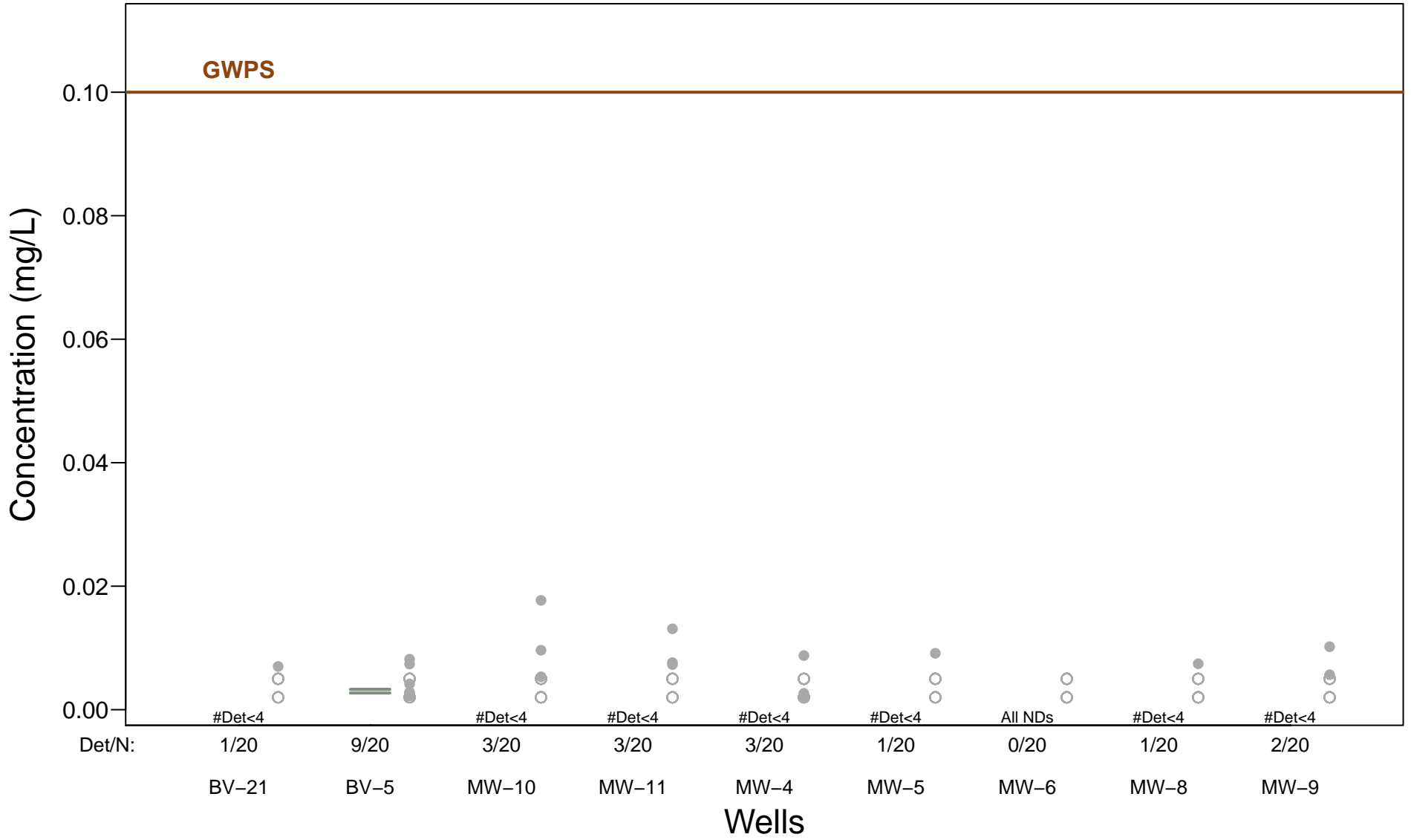
# Beryllium – 95% Confidence Intervals



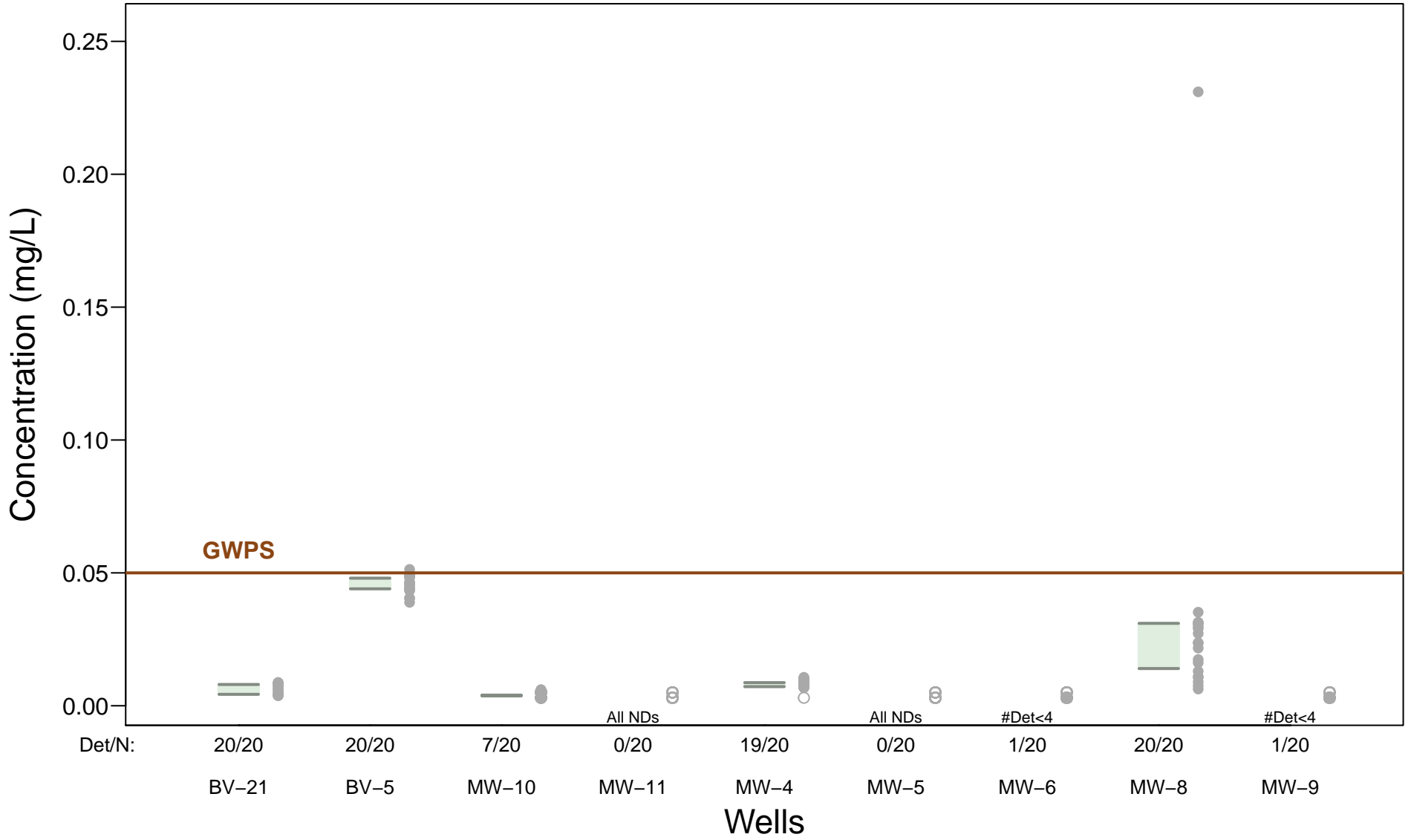
# Cadmium – 95% Confidence Intervals



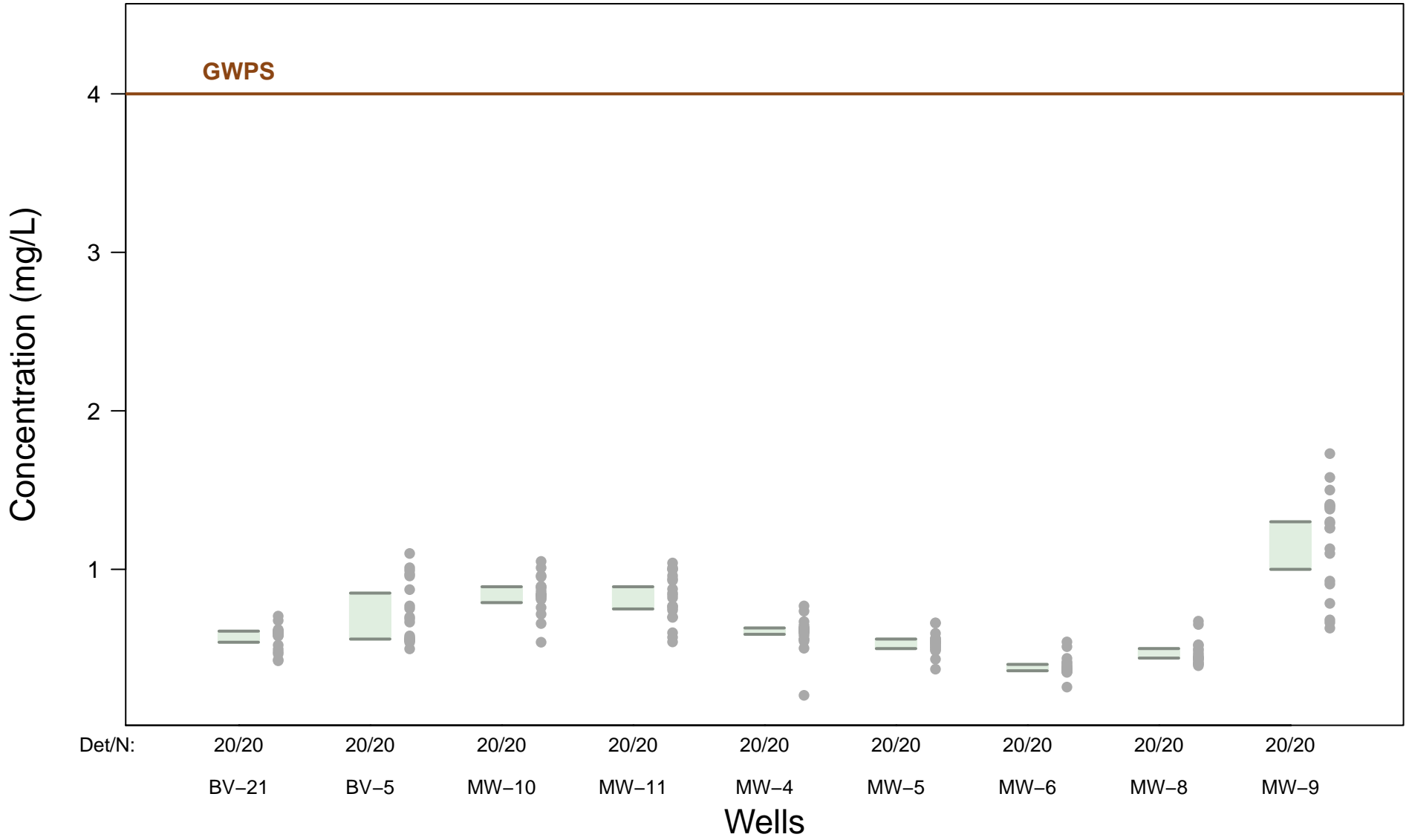
# Chromium – 95% Confidence Intervals



# Cobalt – 95% Confidence Intervals

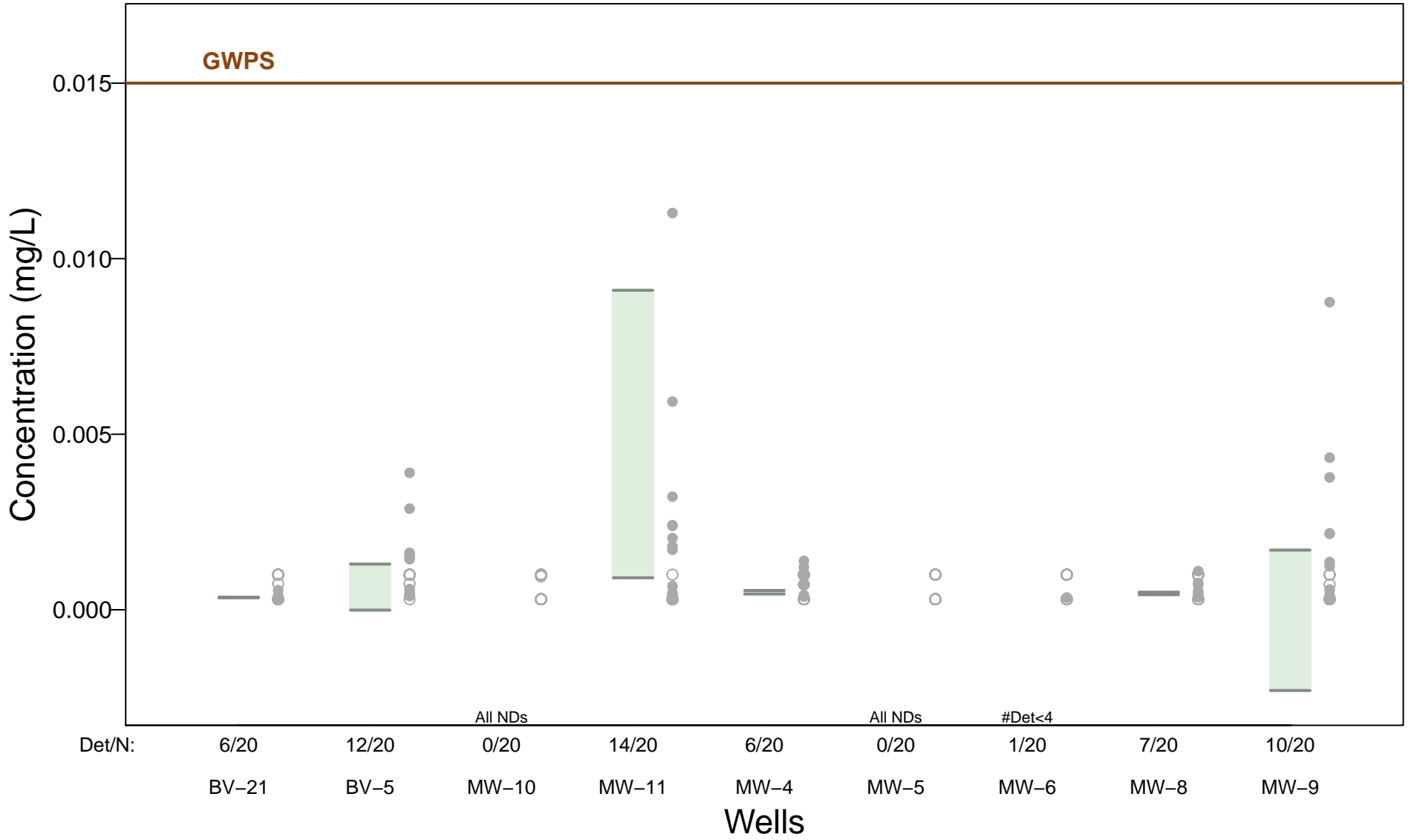


# Fluoride (Appendix IV) – 95% Confidence Intervals

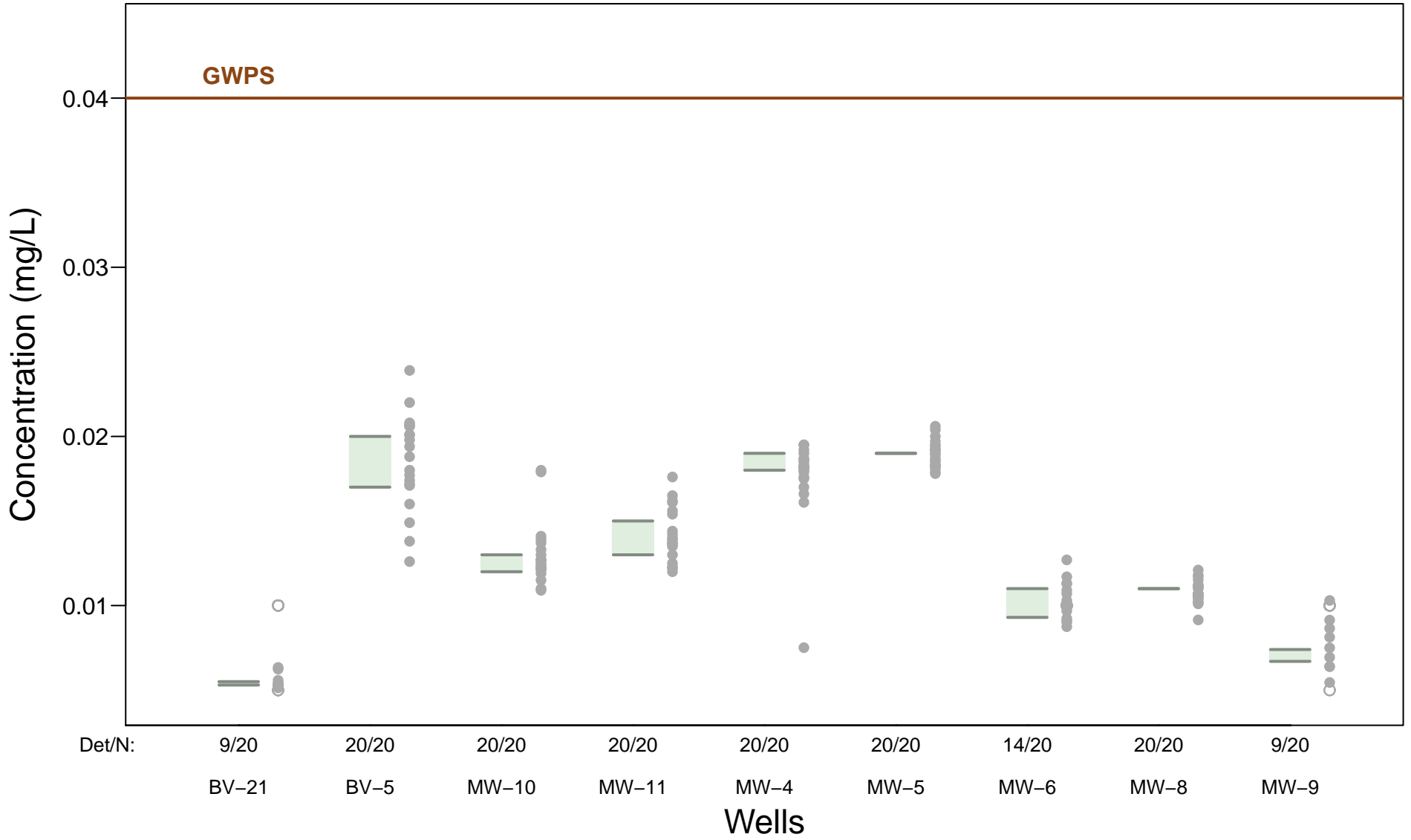




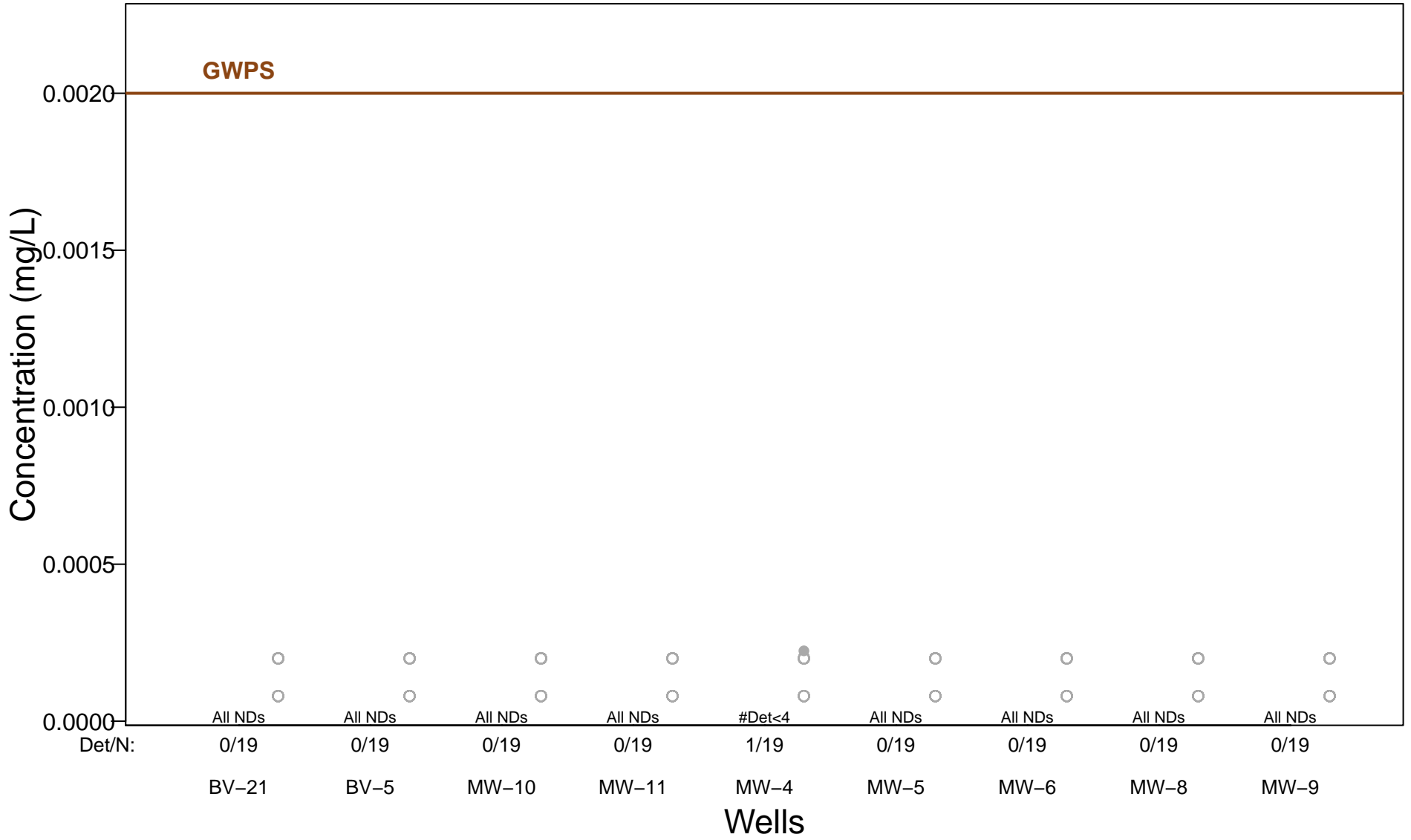
# Lead – 95% Confidence Intervals



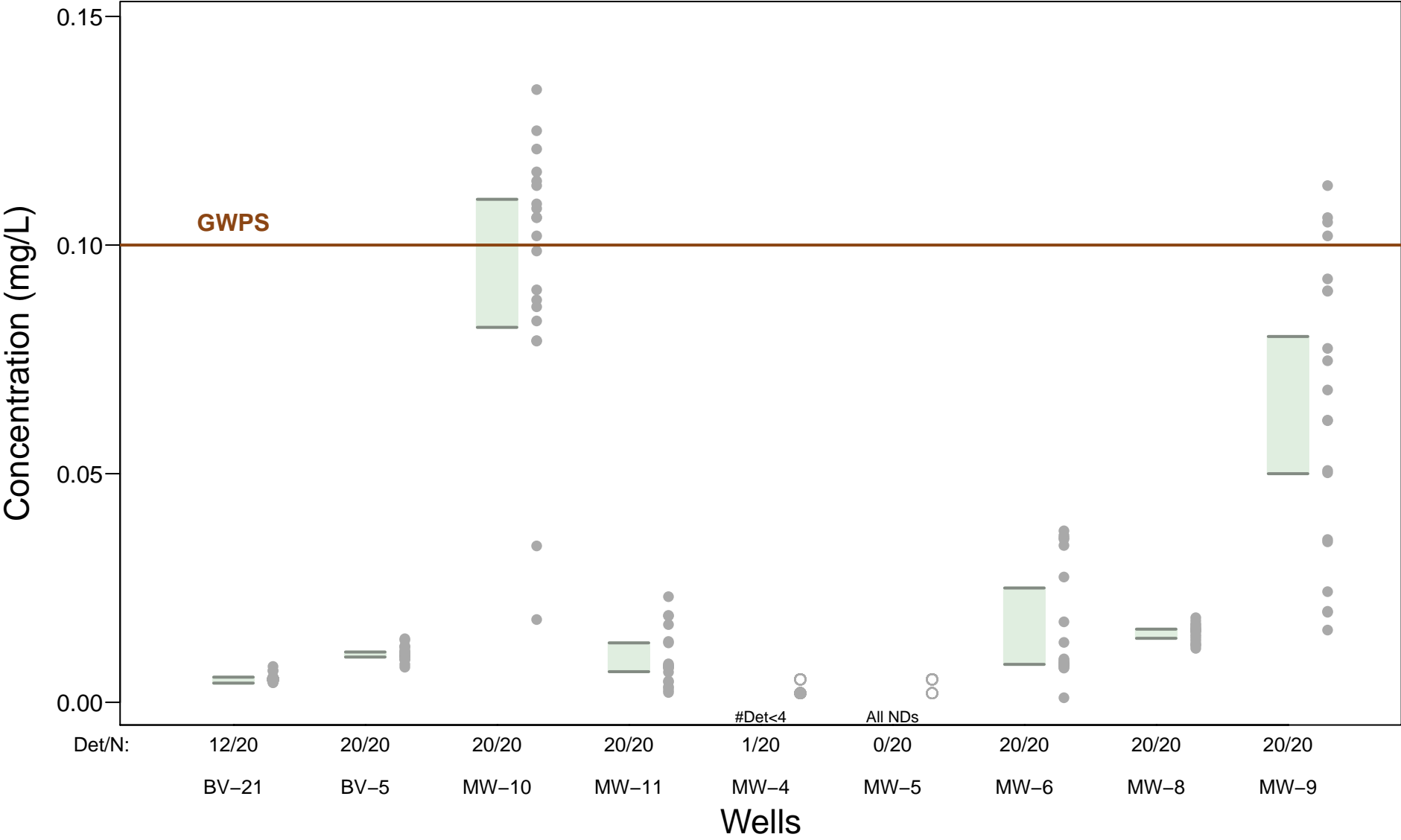
# Lithium – 95% Confidence Intervals



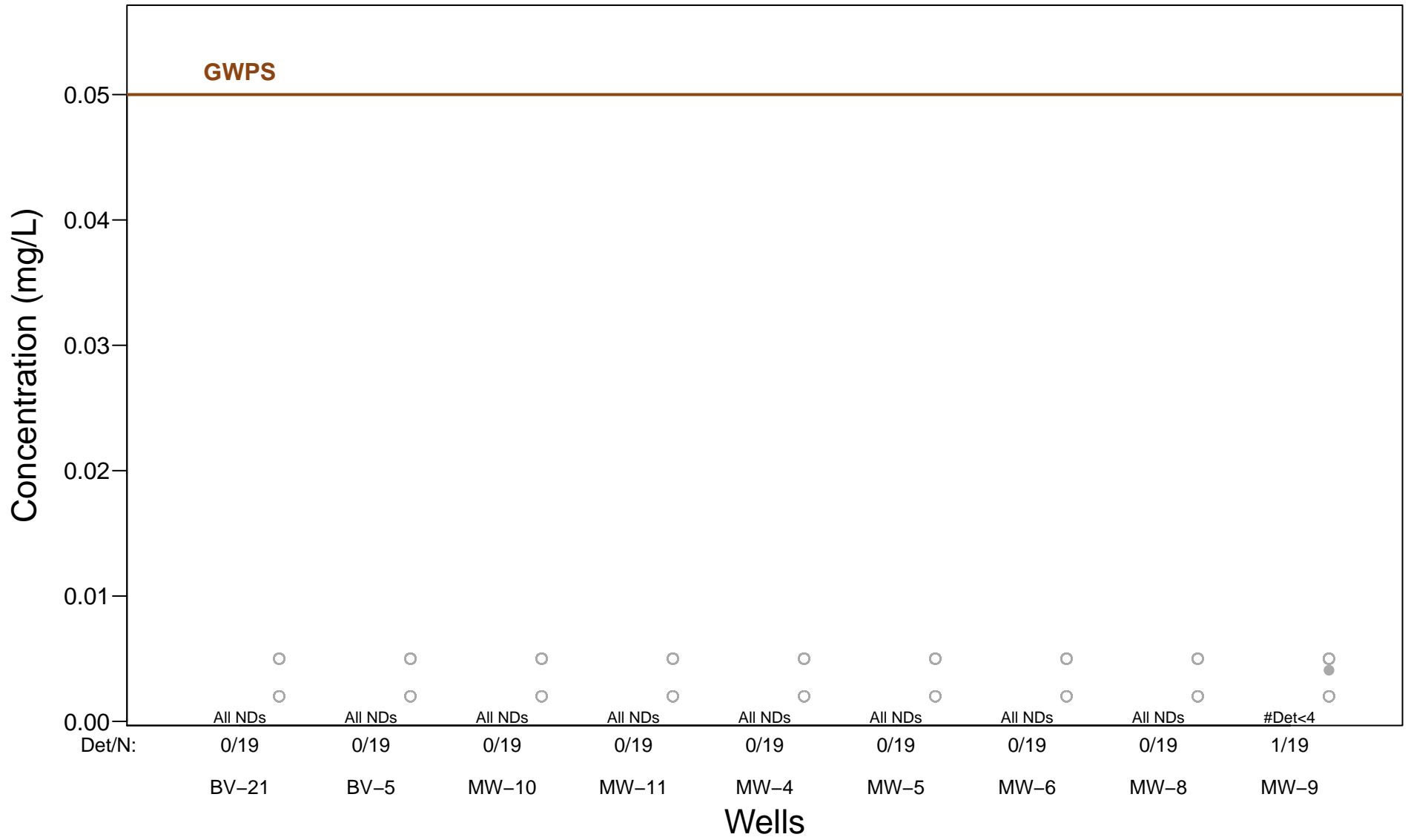
# Mercury – 95% Confidence Intervals



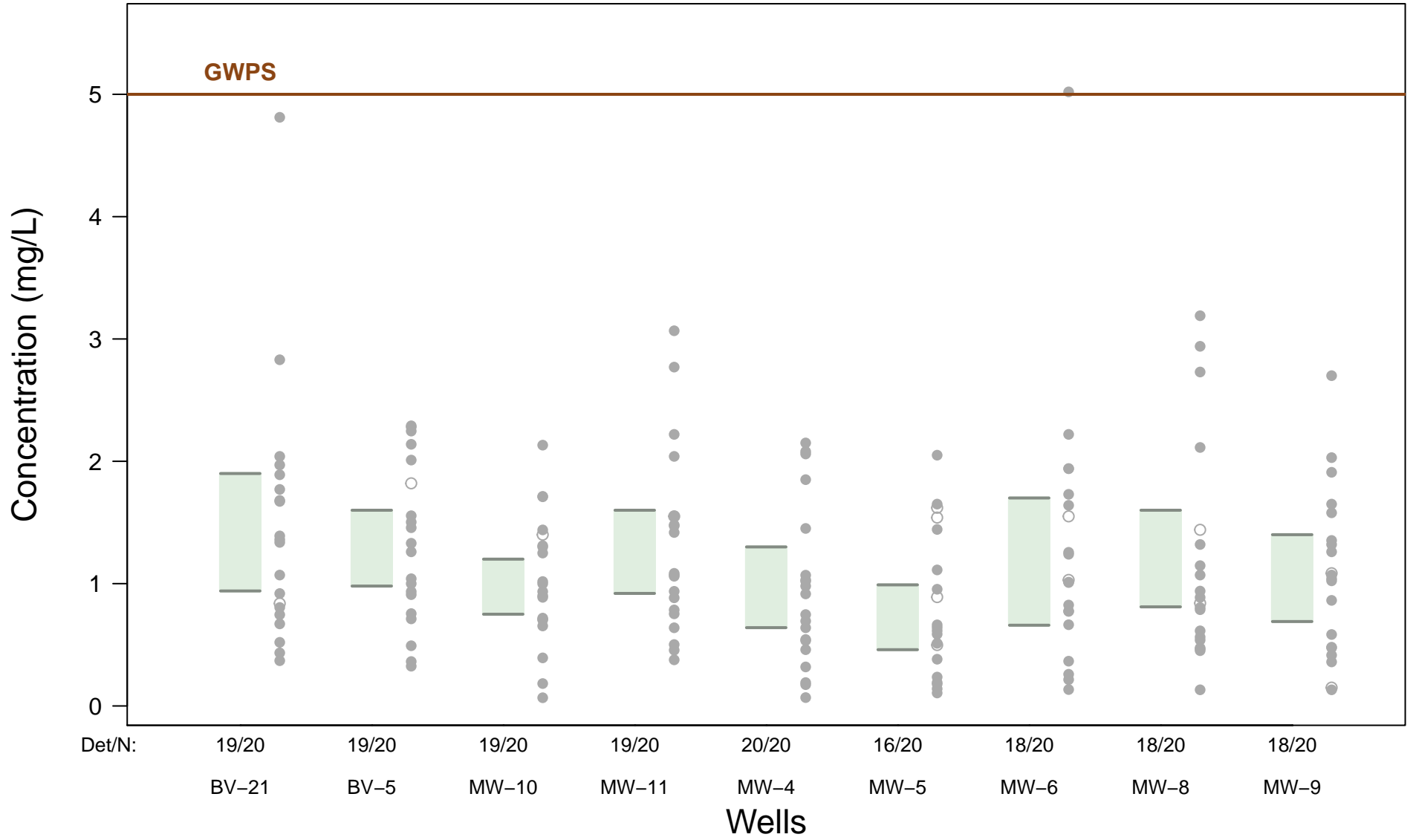
# Molybdenum – 95% Confidence Intervals



# Selenium – 95% Confidence Intervals

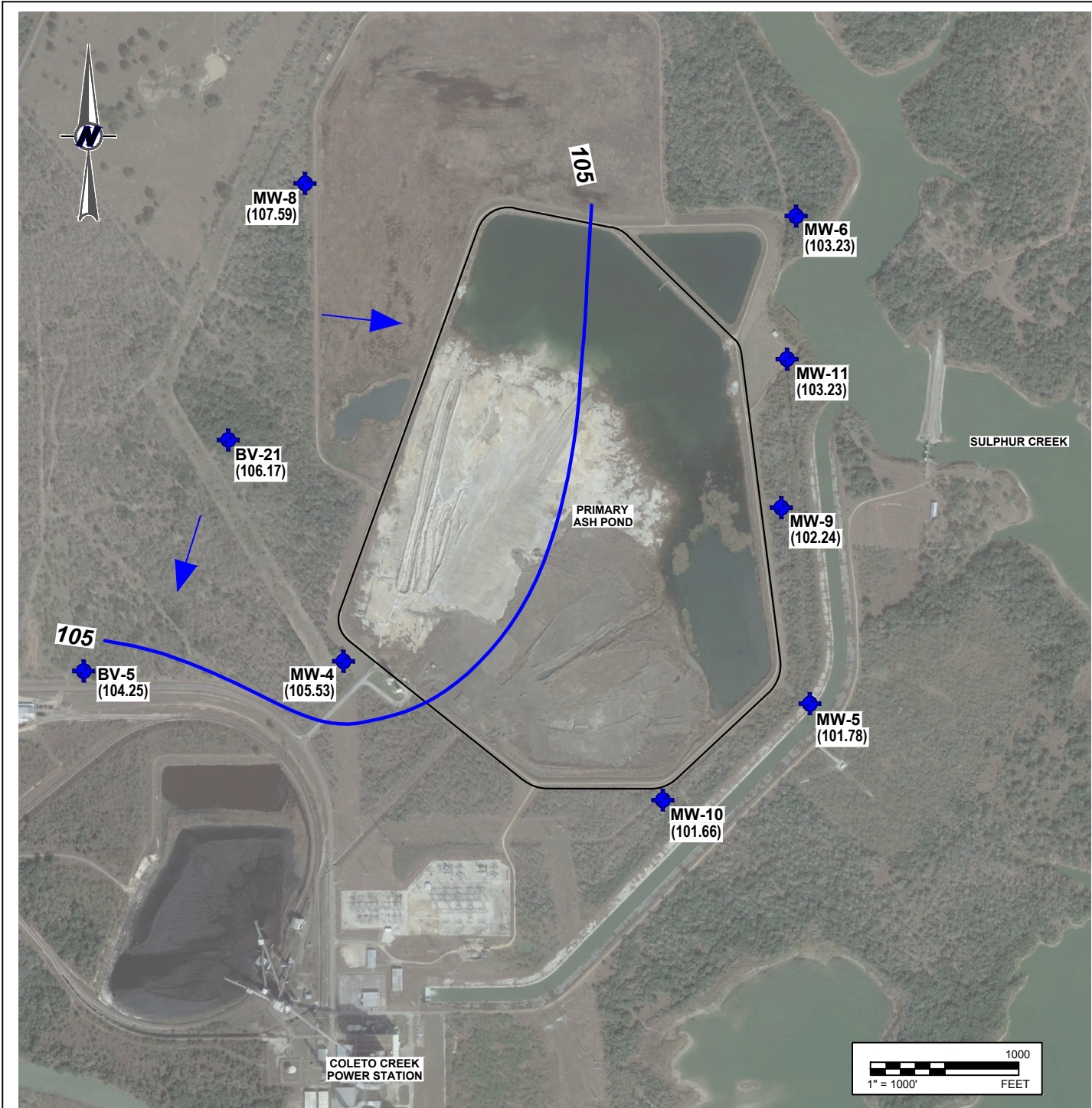


# Radium-226/228 combined – 95% Confidence Intervals






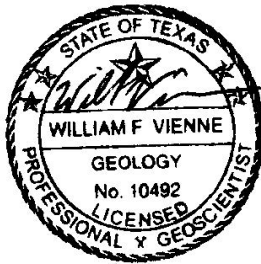
**APPENDIX C**

**GROUNDWATER POTENTIOMETRIC SURFACE MAPS**



**LEGEND**

-  CCR MONITORING WELL
- (101.66)** GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
-  GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
-  INFERRED DIRECTION OF GROUNDWATER FLOW



01/31/2024

**LUMINANT**  
**COLETO CREEK POWER, LLC**  
**FANNIN, TEXAS**

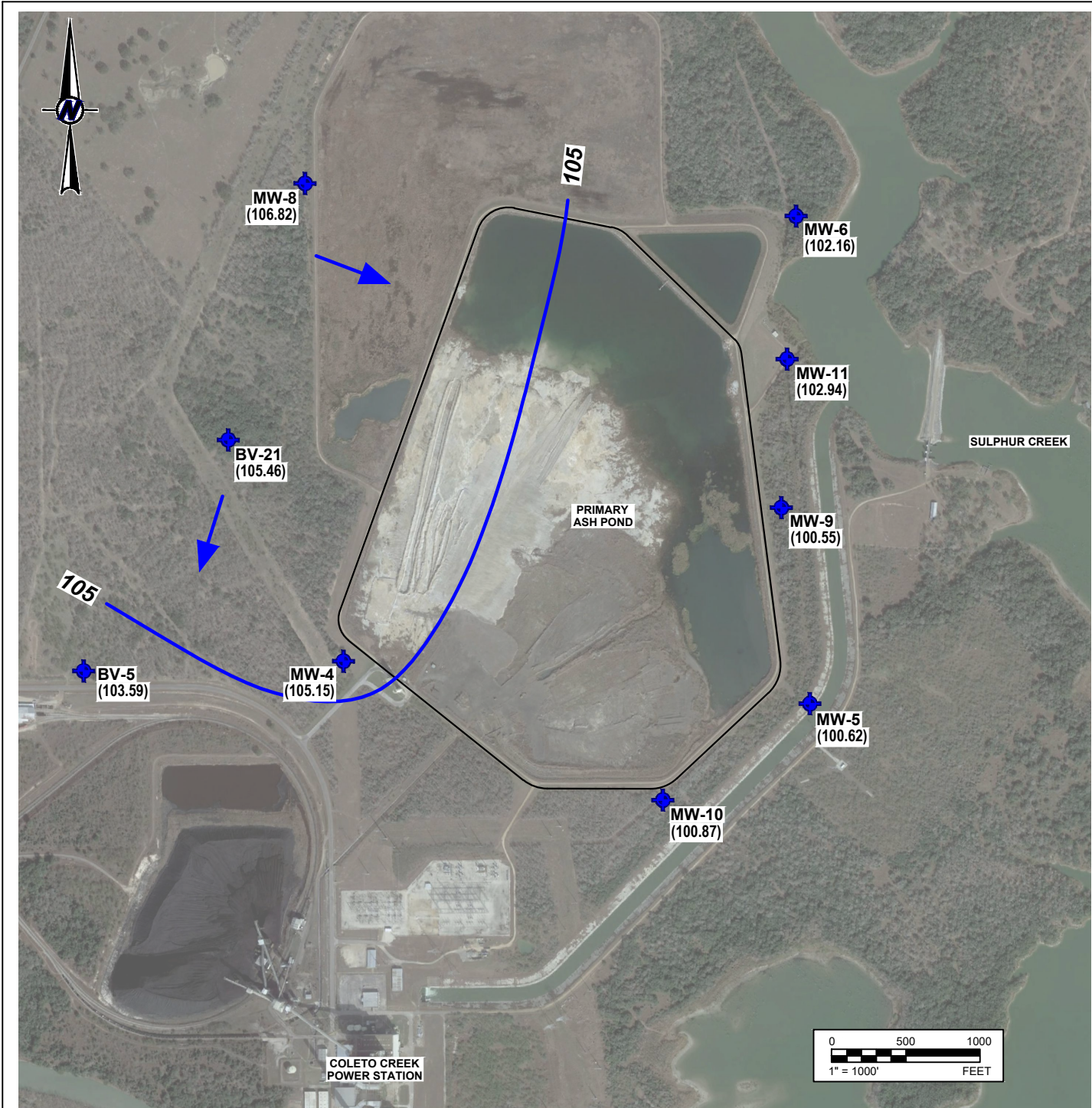
**PRIMARY ASH POND**  
**POTENTIOMETRIC SURFACE MAP**  
**MAY 2023**

PROJECT: 23643.02	BY: SLB	DATE: 8/14/2023	CHECKED: WW
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


**Bullock, Bennett & Associates, LLC**  
 Engineering and Geoscience  
 Texas Registrations: Engineering F-8542, Geoscience 50127

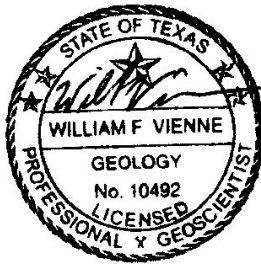
**REFERENCE(S)**  
 BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED JANUARY 2021





**LEGEND**

-  CCR MONITORING WELL
-  GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
-  GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
-  INFERRED DIRECTION OF GROUNDWATER FLOW



01/31/2024

**LUMINANT  
COLETO CREEK POWER STATION  
FANNIN, TEXAS**

**PRIMARY ASH POND  
POTENTIOMETRIC SURFACE MAP  
AUGUST 2023**

PROJECT: 23643.02 BY: SLB DATE: 11/30/2023 CHECKED: WV

**Bullock, Bennett & Associates, LLC**  
Engineering and Geoscience  
Texas Registrations: Engineering F-8542, Geoscience 50127

**REFERENCE(S)**

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED JANUARY 2021