Bullock, Bennett & Associates, LLC

www.bbaengineering.com
165 N. Lampasas St. • Bertram, Texas 78605 • (512) 355-9198

COAL COMBUSTION RESIDUAL RULE
2024 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

PERMANENT DISPOSAL POND 5
MARTIN LAKE STEAM ELECTRIC STATION
RUSK COUNTY, TEXAS

January 31, 2025

Prepared For:

Luminant Generation Company LLC

Prepared By:

Bullock, Bennett & Associates, LLC
165 N. Lampasas Street
Bertram, Texas 78605
Phone: 512.355.9198 • Fax: 512.355.9197

Texas Engineering Firm Registration No. F-8542
Texas Geoscience Firm Registration No. 50127

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

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
MLSES	Martin Lake Steam Electric Station
NA	Not Applicable
PDP	Permanent Disposal Pond
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
T.A.C.	Texas Administrative Code
USEPA	United States Environmental Protection Agency

EXECUTIVE SUMMARY

Bullock, Bennett & Associates, LLC (BBA) has prepared this report on behalf of Luminant Generation Company LLC (Luminant) to satisfy the 2024 annual groundwater monitoring and corrective action reporting requirements of 40 C.F.R. Part 257 and 30 T.A.C. Chapter 352 for the Permanent Disposal Pond 5 (PDP-5) (the "CCR unit") at the Martin Lake Steam Electric Station (MLSES) in Rusk County, Texas. The CCR unit and CCR monitoring well network are shown on Figure 1.

At the beginning and end of the 2024 reporting period, the CCR unit was operating under a Detection Monitoring Program as described in § 257.94. The Detection Monitoring Program for PDP-5 was established in September 2017. Statistically significant increases (SSIs) above background prediction limits were identified for several Appendix III parameters as part of the 2017 through 2023 Detection Monitoring events; however, Alternate Source Demonstrations were completed that indicated that a source other than the CCR unit caused the SSIs. During 2024, SSIs were also identified for Appendix III constituents, which included calcium at wells MW-19 and PDP-25, chloride at well PDP-23, and sulfate at well MW-19. Alternate sources for the SSIs identified in the 2024 sample data are being evaluated in accordance with § 257.94. If an alternate source is not identified to be the cause of the 2024 SSIs, an Assessment Monitoring Program will be established in accordance with § 257.94(e)(2).

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

The PDP-5 CCR Unit is currently in a Detection Monitoring Program. The initial Detection Monitoring Program groundwater samples were collected from the PDP-5 CCR monitoring well network in September 2017. Subsequent Detection Monitoring Program groundwater samples have been collected on a semi-annual basis. Statistical analysis of the sample data is performed in accordance with 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) to identify SSIs of Appendix III parameters over background concentrations. Background concentrations, which were initially established at the start of the CCR groundwater monitoring program, were updated in 2024 as documented in the CCR Background Groundwater Monitoring and Statistical Analysis Report (BBA, 2024), which was submitted to the TCEQ. The statistical evaluation approach for the PDP-5 groundwater monitoring program is based on intrawell data evaluations, which compare new sample data to historical data at each groundwater monitoring well independently. The Detection Monitoring Program sampling dates and parameters are summarized in the following table:

Detection Monitoring Program Summary

Sampling Dates	Parameters	SSIs	Assessment Monitoring Program Established
September 2017 February 2018 (re-samples)	Appendix III	Yes	No (Alternate Source Demonstration Completed)
June 2018 September 2018 November 2018 (re-samples)	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2019 November 2019	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2020 September 2020	Appendix III	Yes	No (Alternate Source Demonstration Completed)
June 2021 October 2021	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2022 September 2022	Appendix III	Yes	No (Alternate Source Demonstration Completed)
May 2023 August 2023	Appendix III	Yes	No (Alternate Source Demonstration Completed)
June 2024 July 2024 October 2024 (re-sample)	Appendix III	Yes	No (Alternate Source Is Being Assessed)

Appendix III sample analytical data and statistical background values are presented in Table 1. SSIs of Appendix III parameters were initially identified during the 2017 reporting period. An Alternate Source Demonstration was completed in 2018, which indicated that a source other than the CCR unit caused the SSIs observed in the 2017 sample data and 2018 re-sample data. Similarly, Alternate Source Demonstrations were completed for the 2018 through 2023 reporting periods. As such, PDP-5 has remained in the Detection Monitoring Program. A summary of the Alternate Source Demonstration for the 2023 reporting period is presented in Appendix A as required by § 257.94(e)(2). The Alternate Source Demonstration for the 2023 reporting period was also submitted via email to the executive director on March 7, 2024, as required under 30 TAC § 352.941(c)(2).

Detection Monitoring Program groundwater samples were collected from the CCR groundwater monitoring network on a semi-annual basis in 2024. The first 2024 semi-annual Detection Monitoring Program sampling event was completed on June 5, 2024, and the second 2024 semi-annual Detection Monitoring Program sampling event was completed on July 31, 2024. In addition, well MW-19 was resampled on October 22, 2024, to evaluate a preliminary SSI for boron observed during the July 2024 sampling event. The boron concentration in the October 2024 resample from MW-19 was below the background value; therefore, an SSI for boron is not indicated at MW-19. The 2024 laboratory analytical reports are provided in Appendix B.

The analytical data from the 2024 semi-annual Detection Monitoring Program sampling events were evaluated using procedures described in the Statistical Analysis Plan (Golder 2022) to identify SSIs of Appendix III parameters over background concentrations. SSIs of Appendix III parameters over background concentrations were identified in 2024 for calcium at wells MW-19 and PDP-25, chloride at well PDP-23, and sulfate at well MW-19. Alternate sources for the SSIs identified in the 2024 sample data are being evaluated in accordance with § 257.94. If an alternate source is not identified to be the cause of the SSIs, an Assessment Monitoring Program will be established in accordance with § 257.94(e)(2). A notification of the intent to make an Alternate Source Demonstration for SSIs observed in the 2024 sample data was submitted to the executive director via email on November 25, 2024, in accordance with 30 TAC § 352.941(c)(1).

3.0 KEY ACTIONS COMPLETED IN 2024

Two semi-annual Assessment Monitoring Program groundwater monitoring events and one resample event were performed in 2024. 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 1.

PDP-5 was constructed in 2010 on top of and immediately adjacent to closed and capped former pre-CCR Rule coal ash surface impoundments that began operation in 1979. PDP-5 extends above natural grade and represents a localized topographic high relative to the surrounding area. There are no upgradient monitoring wells at PDP-5. Water elevations measured in the PDP-5 CCR monitoring wells during the 2024 semi-annual groundwater sampling events are summarized in Table 2 and groundwater potentiometric surface maps are presented in Appendix C. The 2024 groundwater potentiometric surface maps indicate that groundwater flows radially outward from the topographic high at PDP-5 at approximately 1 foot per year, which is similar to previously observed conditions at the site.

In accordance with § 257.94(e)(2), an Alternate Source Demonstration was completed in March 2024, which documented that a source other than PDP-5 caused the SSIs detected over background levels during the 2023 reporting period. A copy of the Alternate Source Demonstration is provided in Appendix A. The Alternate Source Determination was also submitted to the executive director on March 7, 2024, as required under 30 TAC § 352.941(c)(2).

An updated CCR Background Groundwater Monitoring and Statistical Analysis Report (BBA, 2024), which updated background concentrations for the PDP-5 groundwater monitoring program parameters in accordance with procedures outlined in USEPA (2009), was submitted to the TCEQ in February 2024. The updated background concentrations are presented in this report.

No CCR wells were installed or decommissioned in 2024.

4.0 PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

No problems were encountered with the CCR groundwater monitoring program in 2024.

5.0 KEY ACTIVITIES PLANNED FOR 2025

The following key activities are planned for 2025:

- Continue the Detection Monitoring Program in accordance with applicable provisions of § 257.95 and 30 T.A.C. § 352.941.
- If an alternate source is identified to be the cause of the SSIs observed in 2024, which are described in this report, a written demonstration will be completed within 90 days of SSI determination and included in the following Annual Groundwater Monitoring and Corrective Action Report. A notification of intent to make an Alternate Source Demonstration under 30 TAC § 352.941(c)(1) for SSIs observed in 2024 was submitted to the executive director via email on November 25, 2024.
- If an alternate source is not identified to be the cause of the SSIs, an Assessment Monitoring Program will be established.

6.0 REFERENCES

Bullock, Bennett & Associates, LLC (BBA), 2024. CCR Background Groundwater Monitoring and Statistical Analysis Summary Report, Permanent Disposal Pond 5, Martin Lake Steam Electric Station, Rusk County, Texas, February 26.

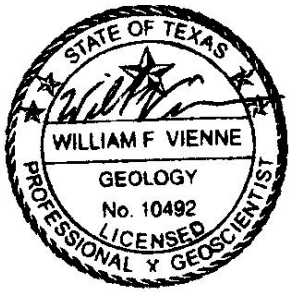
Golder, 2022. Statistical Analysis Plan – Revision No. 1, Martin Lake Steam Electric Station – Permanent Disposal Pond 5, Rusk County, Texas.

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

SIGNATURE PAGE

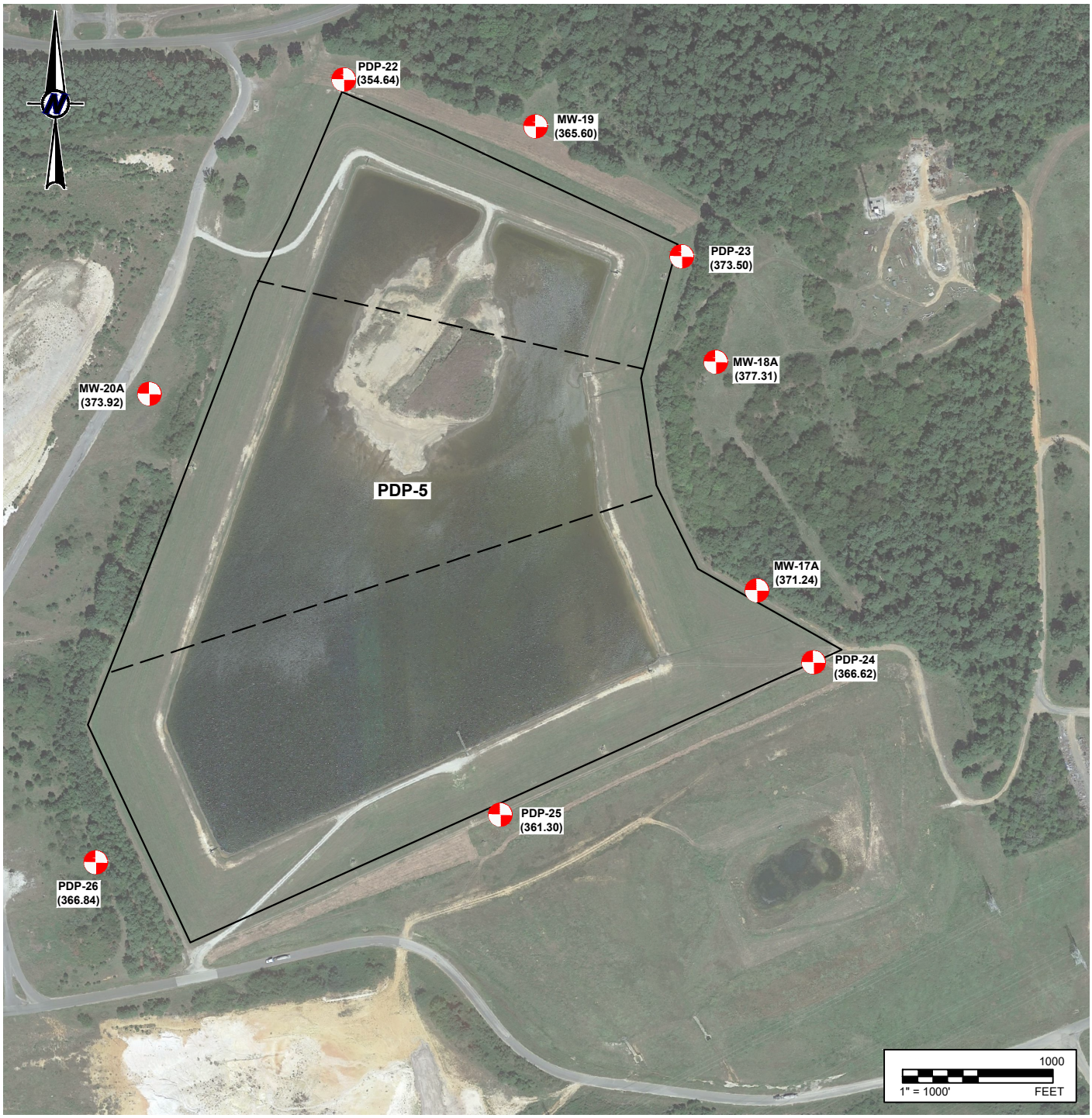
Bullock, Bennett & Associates, LLC

William Vienne, P.G.
Senior Hydrogeologist



01/31/2025

FIGURES



LEGEND

CCR MONITORING WELL LOCATION

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

Figure 1

PDP-5 SITE PLAN

PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps

TABLES

TABLE 1
APPENDIX III ANALYTICAL RESULTS AND
STATISTICAL BACKGROUND VALUES
MLSES PDP-5

Sample Location	Date Sampled	B		Ca		Cl		F		field pH		SO_4		TDS	
		Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data
MW-17A	09/22/17	0.57	0.402	7.0	3.1	10	8.3	0.40	<0.1	4.5, 6.9	6.78	56	31.2	160	111
	06/14/18		0.485		6.48		9.16		<0.1		6.87		45.9		129
	09/11/18		0.523		5.06		8.82		0.179 J		5.03		43.1		137
	05/13/19		0.497		4.88		9.18		<0.1		6.79		44.7		145
	11/07/19		0.52		5.05		8.81		<0.100		6.44		43.9		127
	05/19/20		0.521		5.09		8.74		<0.100		6.57		46.8		140
	09/25/20		0.477		5.76		10.1		<0.100		6.57		47.7		133
	06/03/21		0.534		6.21		7.83		<0.100		6.69		50.4		146
	10/05/21		0.393		3.95		8.42		<0.100		6.57		34.3		115
	05/25/22		0.487		6.27		8.67		<0.100		6.94		49.4		149
	06/06/22		0.452		5.71		10		--		--		50		148
	09/22/22		0.386		3.83		8.73		<0.100		6.83		32.6		98
	05/18/23		0.504		5.89		9.67		<0.100		6.71		52.8		149
	08/14/23		0.432		4.21		9.1		<0.100		6.43		36.8		117
	06/03/24		0.56		27.4		40.1		<0.100		6.4		73.5		281
	07/31/24		0.485		7.89		9.05		<0.100		6.52		50.9		150
MW-18A	09/21/17	0.24	0.0654	12	1.04	9.7	5.27	0.40	<0.1	5.5, 7.5	6.94	10	3.23	150	45
	06/14/18		0.102		2		6.56		<0.1		6.92		3.48		71
	09/12/18		0.211		3.23		9.06		<0.1		5.69		4.82		150
	11/7/2018 re-sample		0.128		--		--		--		--		--		--
	05/13/19		0.117		1.01		6.17		0.138 J		6.64		3.23		73
	11/07/19		0.127		11.5		6.34		<0.100		6.23		3.67		68
	05/19/20		0.225		1.54		7.09		<0.100		6.89		5.97		86
	09/25/20		0.188		1.66		8.13		<0.100		6.78		6.03		77
	06/03/21		0.188		1.73		6.2		<0.100		6.69		6.20		76
	10/05/21		0.159		1.49		6.63		<0.100		6.59		5.73		76
	05/25/22		0.176		2.01		7.31		<0.100		6.52		6.83		86
	09/21/22		0.186		3.6		8.18		<0.100		6.59		11.7		89
	05/18/23		0.20		2.83		9.8		<0.100		6.88		7.59		100
	08/15/23		0.20		2.58		8.37		<0.100		6.58		6.79		87
	06/05/24		0.170		39.6		10.1		<0.100		6.53		135		327
	07/31/24		0.179		2.34		9.27		<0.100		6.68		4.38		65

TABLE 1
APPENDIX III ANALYTICAL RESULTS AND
STATISTICAL BACKGROUND VALUES
MLSES PDP-5

Sample Location	Date Sampled	B		Ca		Cl		F		field pH		SO_4		TDS	
		Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data
MW-19	09/22/17	0.82	0.0677	210	2.74	85	5.36	0.40	<0.1	5.4, 6.9	6.94	370	1.46 J	1300	98
	06/14/18		0.577		133		24.4		0.216 J		6.78		328		758
	09/11/18		0.243		38		65.1		0.228 J		6.04		166		597
	11/7/2018 re-sample		--		--		5.22		--		--		--		--
	05/13/19		0.429		122		26.8		0.229 J		6.72		349		813
	11/08/19		0.529		77.8		49.3		0.189 J		6.87		310		844
	05/19/20		0.0724		1.49		5.84		<0.100		6.91		1.02 J		85
	09/25/20		0.412		94.6		14.3		0.111 J		6.92		160		462
	06/03/21		0.56		140		19.5		0.352 J		6.75		336		751
	10/05/21		0.495		124		62.9		0.180 J		6.74		323		896
	05/25/22		0.711		189		47.3		0.192 J		6.79		346		1010
	06/07/22		0.574		147		55.4		--		--		313		970
	09/21/22		0.382		45.0		92.2		0.108 J		6.93		212		723
	05/18/23		0.788		173		22.5		0.104		6.77		244		724
	08/14/23		0.627		113		67.5		0.142		6.59		275		877
	06/05/24		0.0574		14.5		18.3		<0.100		6.54		66.0		256
	07/31/24		1.03		226		41.6		<0.100		6.62		489		1190
	10/22/24 Resample		0.713		--		--		--		--		--		--
MW-20A	09/22/17	0.24	0.0807	34	17.4	13	12.6	0.94	0.175 J	4.3, 6.8	6.71	180	74.2	360	237
	02/21/18 re-sample		--		--		10.7		--		--		--		--
	06/13/18		0.171		24		10.9		0.672		6.72		132		250
	09/11/18		0.141		7.16		11		0.235 J		4.70		39.1		154
	05/13/19		0.239		37.4		10.2		0.731		6.81		178		328
	11/08/19		0.132		9.9		10.2		0.465		6.51		88		205
	05/19/20		0.220		24		10.4		0.413		6.83		133		270
	09/25/20		0.107		8.94		12.6		0.132 J		6.68		54.3		162
	06/03/21		0.152		26.1		9.63		0.324		6.73		93.2		218
	10/05/21		0.0724		6.12		10.8		0.127 J		6.44		32.8		139
	05/25/22		0.102		15.3		10.6		0.239 J		6.75		65.7		207
	06/07/22		0.0888		9.89		12.2		--		--		49.3		178
	09/22/22		0.0466		2.93		6.68		<0.100		6.48		1.42 J		84
	05/18/23		0.0711		9.65		11.3		<0.100		6.83		38.9		169
	08/14/23		0.0715		4.72		11.4		<0.100		6.58		21		130
	06/04/24		0.132		12.4		10.6		<0.100		6.78		32.4		115
	07/31/24		0.0862		12.6		11.6		<0.100		6.85		45.6		161

TABLE 1
APPENDIX III ANALYTICAL RESULTS AND
STATISTICAL BACKGROUND VALUES
MLSES PDP-5

Sample Location	Date Sampled	B		Ca		Cl		F		field pH		SO_4		TDS	
		Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data
PDP-22	09/22/17	0.32	0.221	200	92.5	24	12.3	0.80	0.321 J	5.1, 8.6	6.98	290	178	1200	558
	06/14/18		0.115		7.78		11.8		0.239		6.63		186		491
	09/12/18		0.164		61.1		10.9		0.216 J		5.88		143		476
	05/13/19		0.158		98.2		10.1		0.303 J		6.86		184		615
	11/12/19		0.226		34.3		12.6		0.218 J		6.93		215		482
	05/19/20		0.0646		54.9		1.06		<0.100		6.55		5.21		205
	09/25/20		0.206		25.1		12.7		0.128 J		6.73		186		398
	06/03/21		0.121		73.1		6.64		<0.100		6.52		118		415
	10/05/21		0.166		27.1		10.1		0.223 J		6.78		170		376
	05/25/22		0.137		16.4		9.92		0.183 J		8.82		104		289
	09/21/22		0.141		14.9		10.4		0.106 J		6.42		112		280
	05/18/23		0.160		39.1		10.1		<0.100		6.93		109		379
	08/15/23		0.116		10.4		8.19		<0.100		6.81		68.4		223
	06/04/24		0.183		54		10.6		0.114 J		6.88		187		440
	6/04/2024 DUP		0.156		68.1		10.4		0.120 J		6.88		188		445
	07/30/24		0.245		27.9		11.8		0.208 J		6.87		244		443
PDP-23	09/22/17	0.09	0.0463	3.4	2.34	8.0	4.48	0.40	0.147 J	4.9, 6.8	6.77	3.0	1.47 J	110	111
	02/21/18 re-sample		--		2.37		--		--		--		--		--
	06/13/18		0.0357		2.29		6.21		<0.1		6.82		1.26 J		98
	09/11/18		0.0760		1.96		6.38		<0.1		5.32		1.52 J		98
	11/7/2018 re-sample		0.0683		--		--		--		--		--		--
	05/13/19		0.0628		1.89		6.98		<0.1		6.68		1.28 J		103
	11/12/19		0.0675		2.14		4.98		<0.100		6.72		1.41 J		93
	05/19/20		0.0709		2.03		6.86		<0.100		6.83		1.19 J		104
	09/25/20		0.0617		2.31		7.29		<0.100		6.74		<1.00		94
	06/03/21		0.0818		2.32		6.88		<0.100		6.57		1.42 J		101
	10/05/21		0.0661		2.38		6.58		<0.100		6.59		1.02 J		97
	05/25/22		0.0441		4.03		5.9		<0.100		6.20		1.44 J		110
	09/21/22		0.0663		2.53		6.72		<0.100		6.63		1.18 J		104
	05/18/23		0.0976		2.88		6.65		<0.100		6.75		1.35		115
	05/18/2023 DUP		0.0818		2.82		6.66		<0.100		6.75		1.33		111
	08/15/23		0.0681		2.37		8.12		<0.100		6.76		1.20		118
	08/15/23 DUP		0.0671		2.44		8.02		<0.100		6.76		1.22		114
	06/05/24		0.0695		6.33		7.33		<0.100		6.84		1.79 J		104
	07/30/24		0.0777		2.57		8.20		<0.100		6.93		1.40 J		99.0
	7/30/2024 DUP		0.0758		2.49		8.43		<0.100		6.93		1.36		100

TABLE 1
APPENDIX III ANALYTICAL RESULTS AND
STATISTICAL BACKGROUND VALUES
MLSES PDP-5

Sample Location	Date Sampled	B		Ca		Cl		F		field pH		SO_4		TDS	
		Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data
PDP-24	09/22/17	4.7	3.01	53	25.8	24	17.5	0.99	0.898	3.6, 7.0	6.95	530	231	860	440
	06/14/18		2.71		23.9		21.1		0.629		6.82		284		481
	09/11/18		4.08		41.6		19.4		0.832		4.20		460		760
	05/13/19		3.23		23		21		0.871		6.95		300		537
	11/12/19		3		21.9		20.6		0.751		6.87		295		520
	11/12/2019 DUP		2.97		22.2		20.5		0.744		6.87		300		504
	05/19/20		3.17		21.4		21		0.61		6.79		286		512
	09/25/20		4.04		40.7		19.6		0.776		6.83		445		699
	06/03/21		3.56		26.4		19.3		0.934		6.57		350		615
	10/05/21		4.24		46.9		17.8		0.782		6.72		432		681
	05/25/22		4.2		47.7		15.6		0.789		6.73		449		736
	09/21/22		4.23		46.7		17.8		0.771		6.72		456		744
	05/18/23		4.02		41.6		18.2		0.729		6.63		411		720
	08/14/23		3.36		29.8		19.1		0.817		6.52		353		640
	06/03/24		3.44		27		20.9		0.732		6.64		329		557
	07/30/24		3.15		25.1		20.6		0.773		6.62		339		551
PDP-25	09/22/17	0.23	0.133	55	36.8	160	130	0.40	0.157 J	5.6, 6.9	6.81	130	89.1	650	481
	06/14/18		0.119		40.4		111		<0.1		6.78		73.4		439
	09/11/18		0.167		36.2		135		0.115 J		5.87		90.3		469
	11/7/2018 re-sample		0.142		--		--		--		--		--		--
	05/13/19		0.144		44.4		108		0.121 J		6.84		69		469
	11/12/19		0.184		38.6		117		<0.100		6.82		71.4		454
	05/19/20		0.202		53.7		105		<0.100		6.61		62.2		442
	09/25/20		0.174		46.3		123		<0.100		6.77		67.5		445
	06/03/21		0.234		45.2		101		0.236 J		6.78		61.2		431
	10/05/21		0.159		40.4		115		<0.100		6.73		62.7		427
	05/25/22		0.151		47.5		102		<0.100		6.64		58.4		454
	09/21/22		0.166		52.8		109		<0.100		6.52		61.6		436
	05/18/23		0.266		56.3		107		<0.100		6.82		59.9		478
	08/14/23		0.15		71.5		93.6		<0.100		6.68		51.3		457
	06/03/24		0.12		52.2		58.1		0.165 J		6.74		32.9		294
	07/30/24		0.143		76.7		88.7		<0.100		6.85		51.3		432

TABLE 1
APPENDIX III ANALYTICAL RESULTS AND
STATISTICAL BACKGROUND VALUES
MLSES PDP-5

Sample Location	Date Sampled	B		Ca		Cl		F		field pH		SO_4		TDS	
		Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data	Prediction Limit	Sample Data
PDP-26	09/22/17	0.079	0.0343	4.0	2.32	9.1	5.24	0.40	0.157 J	6.1, 6.9	6.84	31	5.88	310	107
	06/14/18		0.0225 J		2.93		4.8		<0.1		6.89		4.27		100
	09/12/18		0.0371		2.37		4.88		<0.1		6.07		2.66 J		107
	05/13/19		0.0528		1.9		4.59		0.217 J		6.86		2.7 J		106
	11/12/19		0.0622		2.25		4.64		0.122 J		6.77		2.1 J		102
	05/19/20		0.0538		2.09		4.52		<0.100		6.64		2.1 J		108
	09/25/20		0.0549		2.71		5.07		<0.100		6.83		1.91		92
	06/03/21		0.0516		2.37		4.05		<0.100		6.84		2.18 J		104
	6/3/21 DUP		0.0635		2.23		4.05		<0.1		6.84		2.05 J		107
	10/05/21		0.0486		3.85		4.48		0.194 J		6.74		3.28		104
	10/5/21 DUP		0.0432		3.58		4.24		0.192 J		6.74		2.49 J		103
	05/25/22		0.0424		2.62		4.08		0.109 J		6.73		2.46 J		111
	09/22/22		0.05		2.61		4.4		<0.100		6.47		2.08 J		92
	05/18/23		0.0965		2.76		4.59		<0.100		6.67		2.58 J		101
	08/14/23		0.0451		2.99		4.58		<0.100		6.74		2.12 J		106
	06/05/24		0.0433		2.51		4.41		<0.100		6.75		2.07 J		100
	07/31/24		0.0547		3.11		4.7		<0.100		6.71		3.21		102

Notes:
1. All concentrations in mg/L except pH, which is in standard units.
2. J - concentration is below sample quantitation limit; result is an estimate.
3. "--" - not analyzed.

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
MW-17A	387.75	10/19/15	18.69	369.06
		12/14/15	17.14	370.61
		02/24/16	16.80	370.95
		04/05/16	16.46	371.29
		06/06/16	15.62	372.13
		08/09/16	16.14	371.61
		10/17/16	16.39	371.36
		12/11/16	18.17	369.58
		09/21/17	17.93	369.82
		06/13/18	17.62	370.13
		09/11/18	18.44	369.31
		05/13/19	15.09	372.66
		11/05/19	17.58	370.17
		05/19/20	15.96	371.79
		09/25/20	17.52	370.23
		06/03/21	15.41	372.34
		10/04/21	17.68	370.07
		05/24/22	18.09	369.66
		09/21/22	19.47	368.28
		05/17/23	16.51	371.24
		08/14/23	19.06	368.69
		05/31/24	17.36	370.39
		07/30/24	17.03	370.72
MW-18A	414.44	10/20/15	37.41	377.03
		12/14/15	35.92	378.52
		02/24/16	34.84	379.60
		04/05/16	33.88	380.56
		06/06/16	33.96	380.48
		08/09/16	33.04	381.40
		10/17/16	35.31	379.13
		12/11/16	37.46	376.98
		09/21/17	38.44	376.00
		06/13/18	37.81	376.63
		09/11/18	39.10	375.34
		05/13/19	32.21	382.23
		11/05/19	35.11	379.33
		05/19/20	33.68	380.76
		09/25/20	36.38	378.06
		06/03/21	33.48	380.96
		10/04/21	36.43	378.01
		05/24/22	37.62	376.82
		09/21/22	39.51	374.93
		05/17/23	37.13	377.31
		08/14/23	38.61	375.83
		05/31/24	36.42	378.02
		07/30/24	35.33	379.11

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
MW-19	371.33	10/20/15	12.60	358.73
		12/14/15	5.14	366.19
		02/24/16	5.56	365.77
		04/05/16	5.99	365.34
		06/06/16	5.31	366.02
		08/09/16	9.59	361.74
		10/17/16	6.81	364.52
		12/11/16	9.06	362.27
		09/21/17	6.17	365.16
		06/13/18	10.59	360.74
		09/11/18	14.24	357.09
		05/13/19	3.51	367.82
		11/05/19	7.29	364.04
		05/19/20	6.34	364.99
		09/25/20	11.74	359.59
		06/03/21	4.63	366.70
		10/04/21	12.47	358.86
		05/24/22	10.93	360.40
		09/21/22	14.46	356.87
		05/17/23	5.73	365.60
		08/14/23	13.04	358.29
		05/31/24	12.01	359.32
		07/30/24	8.78	362.55
MW-20A	398.98	10/20/15	25.17	373.81
		12/14/15	23.64	375.34
		02/24/16	23.44	375.54
		04/05/16	23.23	375.75
		06/06/16	22.39	376.59
		08/09/16	23.92	375.06
		10/17/16	24.47	374.51
		12/11/16	25.96	373.02
		09/21/17	25.86	373.12
		06/13/18	25.61	373.37
		09/11/18	26.80	372.18
		11/05/19	25.24	373.74
		05/13/19	21.64	377.34
		05/19/20	20.71	378.27
		09/25/20	24.61	374.37
		06/03/21	23.12	375.86
		10/04/21	25.98	373.00
		05/24/22	25.37	373.61
		09/21/22	28.27	370.71
		05/17/23	25.06	373.92
		08/14/23	26.53	372.45
		05/31/24	24.71	374.27
		07/30/24	25.04	373.94

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-22	386.75	10/20/15	34.17	352.58
		12/14/15	33.48	353.27
		02/24/16	33.09	353.66
		04/05/16	32.66	354.09
		06/06/16	33.49	353.26
		08/09/16	32.21	354.54
		10/17/16	32.59	354.16
		12/11/16	34.37	352.38
		09/21/17	33.14	353.61
		06/13/18	33.12	353.63
		09/11/18	33.86	352.89
		05/13/19	30.47	356.28
		11/05/19	32.78	353.97
		05/19/20	30.24	356.51
		09/25/20	30.87	355.88
		06/03/21	29.76	356.99
		10/04/21	30.42	356.33
		05/24/22	32.11	354.64
		09/21/22	33.11	353.64
		05/17/23	32.11	354.64
		08/14/23	32.67	354.08
		05/31/24	32.42	354.33
		07/30/24	32.18	354.57
PDP-23	394.43	10/20/15	23.61	370.82
		12/14/15	22.34	372.09
		02/24/16	19.94	374.49
		04/05/16	19.29	375.14
		06/06/16	18.11	376.32
		08/09/16	21.41	373.02
		10/17/16	22.51	371.92
		12/11/16	23.04	371.39
		09/21/17	23.98	370.45
		06/13/18	22.89	371.54
		09/11/18	24.69	369.74
		05/13/19	17.92	376.51
		11/05/19	23.27	371.16
		05/19/20	18.82	375.61
		09/25/20	22.11	372.32
		06/03/21	18.49	375.94
		10/04/21	22.42	372.01
		05/24/22	22.44	371.99
		09/21/22	24.61	369.82
		05/17/23	20.93	373.50
		08/14/23	24.31	370.12
		05/31/24	18.53	375.90
		07/30/24	20.81	373.62

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-24	389.73	10/20/15	25.62	364.11
		12/14/15	24.94	364.79
		02/24/16	24.76	364.97
		04/05/16	24.51	365.22
		06/06/16	23.87	365.86
		08/09/16	22.61	367.12
		10/17/16	22.08	367.65
		12/11/16	24.19	365.54
		09/21/17	23.29	366.44
		06/13/18	23.21	366.52
		09/11/18	23.62	366.11
		05/13/19	23.62	366.11
		11/05/19	25.29	364.44
		05/19/20	23.38	366.35
		09/25/20	24.68	365.05
		06/03/21	23.82	365.91
		10/04/21	24.71	365.02
		05/24/22	25.16	364.57
		09/21/22	25.81	363.92
		05/17/23	23.11	366.62
		08/14/23	25.46	364.27
		05/31/24	23.53	366.20
		07/30/24	24.09	365.64
PDP-25	387.97	10/20/15	13.49	374.48
		12/14/15	12.76	375.21
		02/24/16	26.84	361.13
		04/05/16	26.96	361.01
		06/06/16	26.17	361.80
		08/09/16	26.06	361.91
		10/17/16	27.83	360.14
		12/11/16	29.71	358.26
		09/21/17	28.21	359.76
		06/13/18	27.71	360.26
		09/11/18	28.94	359.03
		05/13/19	26.23	361.74
		11/05/19	25.06	362.91
		05/19/20	26.39	361.58
		09/25/20	27.93	360.04
		06/03/21	26.21	361.76
		10/04/21	27.82	360.15
		05/24/22	27.21	360.76
		09/21/22	28.64	359.33
		05/17/23	26.67	361.30
		08/14/23	28.98	358.99
		05/31/24	26.34	361.63
		07/30/24	27.08	360.89

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-26	397.68	10/20/15	31.24	366.44
		12/14/15	30.67	367.01
		02/24/16	30.11	367.57
		04/05/16	29.89	367.79
		06/06/16	29.06	368.62
		08/09/16	29.54	368.14
		10/17/16	30.57	367.11
		12/11/16	32.81	364.87
		09/21/17	32.22	365.46
		06/13/18	32.18	365.50
		09/11/18	32.90	364.78
		05/13/19	28.93	368.75
		11/05/19	32.83	364.85
		05/19/20	29.59	368.09
		09/25/20	30.56	367.12
		06/03/21	29.18	368.50
		10/04/21	30.11	367.57
		05/24/22	31.64	366.04
		09/21/22	33.06	364.62
		05/17/23	30.84	366.84
		08/14/23	31.77	365.91
		05/31/24	29.89	367.79
		07/30/24	30.24	367.44
PDP-27*	377.58	10/20/15	18.28	359.30
		12/14/15	7.61	369.97
		02/24/16	11.95	365.63
		04/05/16	10.27	367.31
		06/06/16	7.44	370.14
		08/09/16	17.46	360.12
		10/17/16	19.06	358.52
		12/11/16	19.78	357.80
		09/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	19.78	357.80
		11/05/19	NM	NM
		05/13/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM
		05/31/24	NM	NM
		07/30/24	NM	NM

TABLE 2
GROUNDWATER ELEVATION SUMMARY
MLSES PDP-5

Well ID	TOC Elevation (ft amsl)	Date	Depth to Water (ft bgs)	Water Elevation (ft amsl)
PDP-28*	368.62	10/20/15	13.68	354.94
		12/14/15	13.68	354.94
		02/24/16	10.75	357.87
		04/05/16	9.61	359.01
		06/06/16	11.74	356.88
		08/09/16	10.91	357.71
		10/17/16	12.19	356.43
		12/11/16	13.09	355.53
		09/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	14.24	354.38
		05/13/19	NM	NM
		11/05/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM
		05/31/24	NM	NM
		07/30/24	NM	NM
PDP-29*	383.05	10/20/15	14.12	368.93
		12/14/15	14.06	368.99
		02/24/16	12.45	370.60
		04/05/16	10.86	372.19
		06/06/16	12.62	370.43
		08/09/16	11.24	371.81
		10/17/16	13.09	369.96
		12/11/16	14.23	368.82
		09/21/17	NM	NM
		06/13/18	NM	NM
		09/11/18	16.01	367.04
		05/13/19	NM	NM
		11/05/19	NM	NM
		05/19/20	NM	NM
		09/25/20	NM	NM
		06/04/21	NM	NM
		10/04/21	NM	NM
		05/24/22	NM	NM
		09/21/22	NM	NM
		05/17/23	NM	NM
		08/14/23	NM	NM
		05/31/24	NM	NM
		07/30/24	NM	NM

Notes:
1. Abbreviations: ft - feet; amsl - above mean sea level; bgs - below ground surface
2. * - Non-CCR well used only to evaluate groundwater water elevations.

APPENDIX A

ALTERNATE SOURCE DEMONSTRATION REPORT

FOR THE 2023 REPORTING PERIOD

Bullock, Bennett & Associates, LLC ∗ 165 N. Lampasas Street ∗ Bertram, Texas 78605
Telephone: 512.355.9198 ∗ Fax: 512.355.9197

March 8, 2024
BBA Project No. 23643-03

Mr. Eric Chavers
Luminant Generation Company LLC
6555 Sierra Drive
Irving, Texas 75039

RE: ALTERNATE SOURCE DEMONSTRATION
MARTIN LAKE STEAM ELECTRIC STATION – PDP-5
RUSK COUNTY, TEXAS

1.0 INTRODUCTION

This Alternate Source Demonstration (ASD) was prepared to document that a source other than the Permanent Disposal Pond 5 (PDP-5) (the Site) caused the statistically significant increases (SSIs) over background levels observed during the 2023 Coal Combustion Residual (CCR) Detection Monitoring Program sampling events, as required by 40 C.F.R. § 257.94(e)(2) of the federal CCR Rule.

The Texas Commission on Environmental Quality (TCEQ) has adopted portions of the federal CCR rule at 30 T.A.C. Chapter 352 (Texas CCR Rule). 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) and the Federal CCR Program requirements for detection and assessment monitoring at 40 C.F.R. § 257.94 and § 257.95 (*See* 30 T.A.C. §352.941 and 30 T.A.C. §352.951). Pursuant to 30 T.A.C. § 352.941(c)(1), a notification was submitted to the Executive Director on December 19, 2023, indicating an intent to pursue an ASD.

2.0 PDP-5 HISTORY AND CCR MONITORING WELL NETWORK

A Site Plan showing PDP-5 and the vicinity is provided on Figure 1. PDP-5 was constructed in 2010 on top of and immediately adjacent to closed and capped former pre-CCR Rule coal ash surface impoundments that began operation in 1979. PDP-5 extends significantly above natural grade and represents a localized topographic high relative to the surrounding area. Based on this configuration, there are no upgradient monitoring wells at PDP-5 (PBW, 2017).

PDP-5 is located in the outcrop area of the Eocene-aged Wilcox Group (Barnes, 1965). The CCR groundwater monitoring well system at PDP-5 consists of nine monitoring wells (MW-17A, MW-18A, MW-19, MW-20A, PDP-22, PDP-23, PDP-24, PDP-25, PDP-26) that are distributed radially around the perimeter of PDP-5 and are screened in the uppermost saturated silty and sandy strata of the Wilcox Group.

3.0 2023 SEMI-ANNUAL DETECTION MONITORING RESULTS

At the beginning and end of the 2023 reporting period, PDP-5 was operating under a Detection Monitoring Program as described in 40 C.F.R. § 257.94. Detection Monitoring Program groundwater samples were collected on a semi-annual basis in 2023 in accordance with 40 C.F.R. § 257.94. Annual groundwater monitoring activities and sampling results were summarized in the 2023 Annual Groundwater Monitoring and Corrective Action Report (BBA, 2024), which was submitted to the TCEQ on January 31, 2024.

As described in the PDP-5 CCR Statistical Analysis Plan-Revision 1 (SAP) (WSP Golder 2022), intrawell statistical evaluations are used to identify SSIs at the Site in accordance with the United States Environmental Protection Agency's (USEPA's) Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities-Unified Guidance (USEPA, 2009). An SSI above background is indicated if the Appendix III constituent concentration in a well is above the applicable background prediction limit. Appendix III background prediction limits are summarized in Table 1. Detection Monitoring Program groundwater data collected from the PDP-5 CCR monitoring well network from 2017 through 2023 are summarized in Table 2. During 2023, SSIs were identified for boron in well PDP-25, calcium in wells PDP-23 and PDP-25, and chloride in wells MW-19 and PDP-23.

The boron SSI concentrations in the 2023 groundwater samples from well PDP-25 (maximum boron concentration of 0.266 mg/L) exceeded the boron prediction limit for that well. The historical variability of boron in groundwater samples collected Site-wide has ranged from about 0.034 mg/L to 4.2 mg/L, and the boron SSI sample concentrations in PDP-25 fall into this historical range. In addition, the boron sample concentrations observed at PDP-25 were lower than the boron sample concentrations in three of the eight other CCR monitoring wells (MW-17A, MW-19, and PDP-24) where SSIs for boron were not indicated in 2023.

The calcium SSI concentrations in the 2023 groundwater samples from wells PDP-23 and PDP-25 (maximum calcium concentration of 71.5 mg/L, in well PDP-25) exceeded the calcium prediction limits established for each of these wells. The historical variability of calcium in groundwater samples collected Site-wide has ranged from about 1 mg/L to 189 mg/L, and the calcium SSI sample concentrations observed at PDP-23 and PDP-25 fall into this historical range. In addition, one other Site well (MW-19) had calcium sample concentrations that were higher than the concentrations observed in the 2023 calcium SSI samples, but SSIs for calcium were not indicated for that well.

The chloride SSI concentrations in the groundwater samples from well MW-19 and MW-23 (maximum chloride concentration of 67.5 mg/L, in MW-19) exceeded the chloride prediction limits established for each of these wells. The historical variability of chloride in groundwater samples collected Site-wide has ranged from about 1 mg/L to 135 mg/L, and the 2023 chloride SSI sample concentrations observed at MW-19 and MW-23 fall into this historical range. In addition, one other Site well (PDP-25) had chloride sample concentrations in 2023 that were higher than concentrations observed in the MW-19 or MW-23 samples, but SSIs for chloride were not indicated for that well.

4.0 DATA DISCUSSION

The historical calcium and chloride concentrations observed in Site wells, including those where SSIs were detected in 2023, are typical of concentrations observed in groundwater samples collected from other wells completed in the Wilcox Group in the region. The Texas Bureau of Economic Geology summarized water chemistry data from Wilcox wells in the Sabine Uplift region of Texas, which encompasses Rusk County where PDP-5 is located. The Wilcox groundwater samples summarized in that study (Fogg et al., 1991) had calcium concentrations that ranged from 1.0 mg/L to 157 mg/L and chloride concentrations that ranged from 5.0 to 820 mg/L. The calcium and chloride concentrations observed in PDP-5 CCR groundwater monitoring well samples where SSIs were identified in 2023 fall in the range of the other Wilcox well samples in the region presented in Fogg et al. (1991).

The Fogg et al. (1991) study did not evaluate boron data in Wilcox wells in the region; therefore, a direct comparison of the CCR groundwater monitoring data to regional boron concentrations is not possible; however, multiple groundwater investigations have been completed at PDP-5 under the regulatory authority of the TCEQ that evaluated whether boron and other constituent concentrations in groundwater could result in adverse effects to human health and the environment. An Affected Property Assessment Report (APAR) was prepared for the PDP-5 area in 2014 using groundwater data collected before and after PDP-5 was constructed (PBW, 2014). The APAR concluded that groundwater conditions in the PDP-5 area complied with TCEQ requirements, and that no groundwater corrective actions were required. TCEQ approved the APAR in a letter dated August 29, 2014.

Luminant provided a summary of CCR groundwater monitoring data to the TCEQ on April 8, 2019, in response to a TCEQ letter requesting the data on March 22, 2019. An addendum to the 2014 APAR, which evaluated groundwater data collected from the PDP-5 CCR groundwater monitoring well network, was submitted to the TCEQ on October 18, 2019 (Golder, 2019). The APAR Addendum concluded that groundwater conditions in the PDP-5 area complied with TCEQ requirements, and corrective actions were not required. TCEQ approved the APAR Addendum in a letter dated January 31, 2020.

The EPA does not regulate boron in drinking water; however, the TCEQ has established groundwater ingestion protective concentration levels (PCLs) for boron. The TCEQ default groundwater ingestion PCL for boron is 4.9 mg/L for residential land use and 15 mg/L for commercial-industrial land use (TCEQ, 2023). The concentrations of boron in all detection monitoring samples collected as part of the PDP-5 CCR groundwater monitoring program are lower than the TCEQ groundwater ingestion PCLs for both residential and commercial-industrial land use. As such, the boron concentrations observed in the CCR groundwater monitoring well samples are not considered elevated concentrations.

5.0 CONCLUSION

SSIs were identified for boron, calcium, and chloride during the 2023 Detection Monitoring Program sampling events at PDP-5. All observed SSIs are attributed to natural variability in groundwater quality due to the heterogeneity of the groundwater system and are not considered evidence of a release from the CCR unit. In accordance with 30 T.A.C. §352.941(d), the owner will submit this ASD for TCEQ review within 90 days of the initial SSI determination and continue with the Detection Monitoring

Program. Initiation of an Assessment Monitoring Program is not required at this time.

6.0 REFERENCES

Barnes, Virgil E., 1965. Geologic Atlas of Texas, Tyler Sheet. Texas Bureau of Economic Geology.

Bullock, Bennett & Associates, LLC, 2024a. 2023 Annual Groundwater Monitoring and Corrective Action Report, Martin Lake Steam Electric Station PDP 5, Rusk County, Texas. January 31.

Bullock, Bennett & Associates, LLC (BBA), 2024b. CCR Background Groundwater Monitoring and Statistical Analysis Summary Report, Ash Landfill 1, Oak Grove Steam Electric Station, Robertson County, Texas. September 15.

Fogg, Graham E., Kaiser, W. R., Ambrose, M. L., 1991. The Wilcox Group and Carrizo Sand (Paleogene) in the Sabine Uplift Area, Texas: Ground-Water Hydraulics and Hydrochemistry. Publication of the Bureau of Economic Geology.

Golder Associates, Inc. (Golder), 2019. Affected Property Assessment Report Addendum, Martin Lake Steam Electric Station – PDP 5, Rusk County, Texas. October 18.

Golder, 2021. Alternate Liner Demonstration. Martin Lake Steam Electric Station, Rusk County Texas. November 30.

Luminant, 2022. 2022 Annual CCR Unit Inspection Report, Martin Lake Steam Electric Station, Permanent Disposal Pond 5.

Pastor, Behling & Wheeler, LLC (PBW), 2014. Affected Property Assessment Report, Martin Lake Steam Electric Station, Permanent Disposal Pond Area, May.

Pastor, Behling & Wheeler, LLC (PBW), 2017. Coal Combustion Residual Rule Groundwater Monitoring System Certification, Martin Lake Steam Electric Station, PDP 5, Rusk County, Texas. October 16.

TCEQ, 2023. Tier 1 Protective Concentration Levels. May 10.

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

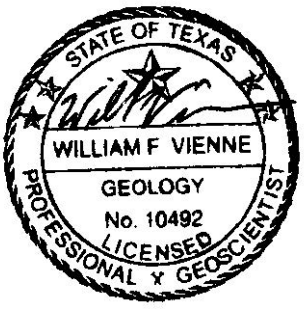
WSP Golder, 2022. Coal Combustion Residual Rule Statistical Analysis Plan, Revision No. 1, Martin Lake Steam Electric Station, PDP 5, Rusk County, Texas. November 16.

7.0 CLOSING

Thank you for the opportunity to assist on this project. Please contact me at william.vienne@wsp.com if you have any questions regarding this report.

WSP USA Inc.

William Vienne, P.G. (TX 10492)
Senior Hydrogeologist



03/08/2024

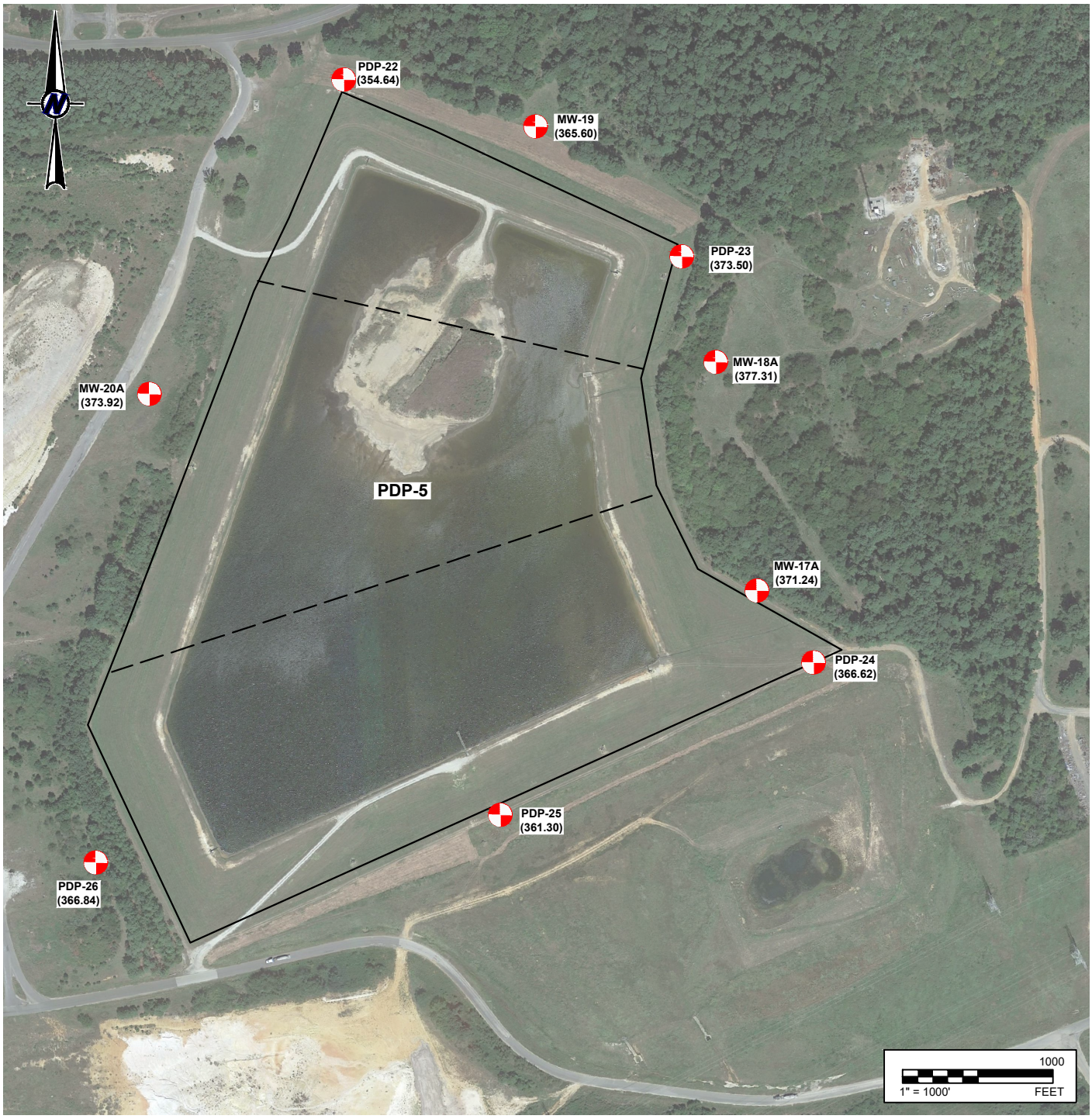
8.0 PROFESSIONAL CERTIFICATION

This document and all attachments were prepared by Bullock, Bennett & Associates, LLC under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I hereby certify that the alternative source demonstration at the referenced facility meets the detection monitoring requirements of the Federal CCR Program at 40 C.F.R. § 257.94 and the State CCR Program at 30 T.A.C. § 352.941.

Daniel B. Bullock, P.E.
Principal Engineer
Bullock, Bennett & Associates, LLC

3/08/2024

FIGURES



LEGEND

CCR MONITORING WELL LOCATION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

03/08/2024

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

Figure 1

PDP-5 SITE PLAN

PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps

TABLES

Table 1
Statistical Background Prediction Limits
MLSES - PDP 5

Sample Location	Boron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Flouride (mg/L)	field pH (s.u.)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
MW-17A	0.538	6.73	10.4	0.4	2.5 9.19	51.9	170
MW-18A	0.20	3.1	10.4	0.4	4.88 7.92	9.1	157
MW-19	0.782	237	57.7	0.512	4.6 8.08	672	1,380
MW-20A	0.213	25.7	12.3	0.954	3.06 8.76	148	381
PDP-22	0.411	306	32.7	1.07	4.08 8.63	216	1,780
PDP-23	0.0678	2	7.52	0.4	3.38 8.45	3.27	143
PDP-24	4.92	45.9	22.6	1.03	1.33 9.97	533	894
PDP-25	0.136	41.3	197	0.4	4.65 7.93	118	705
PDP-26	0.111	4.74	14.6	0.577	5.35 7.57	64.6	438

Notes:
1. The background prediction limits are based on data collected during the baseline period (i.e., pre-detection monitoring period) in 2015 and 2016. Updated background prediction limits based on data collected through 2023 (BBA, 2024b) are currently under review by the TCEQ.

TABLE 2
APPENDIX III ANALYTICAL RESULTS
MLSES PDP-5

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	field pH s.u.	SO_4 (mg/L)	TDS (mg/L)
MW-17A	09/22/17	0.402	3.1	8.3	<0.1	6.78	31.2	111
	06/14/18	0.485	6.48	9.16	<0.1	6.87	45.9	129
	09/11/18	0.523	5.06	8.82	0.179 J	5.03	43.1	137
	05/13/19	0.497	4.88	9.18	<0.1	6.79	44.7	145
	11/07/19	0.52	5.05	8.81	<0.100	6.44	43.9	127
	05/19/20	0.521	5.09	8.74	<0.100	6.57	46.8	140
	09/25/20	0.477	5.76	10.1	<0.100	6.57	47.7	133
	06/03/21	0.534	6.21	7.83	<0.100	6.69	50.4	146
	10/05/21	0.393	3.95	8.42	<0.100	6.57	34.3	115
	05/25/22	0.487	6.27	8.67	<0.100	6.94	49.4	149
	06/06/22	0.452	5.71	10	--	--	50	148
	09/22/22	0.386	3.83	8.73	<0.100	6.83	32.6	98
	05/18/23	0.504	5.89	9.67	<0.100	6.71	52.8	149
	08/14/23	0.432	4.21	9.1	<0.100	6.43	36.8	117
MW-18A	09/21/17	0.0654	1.04	5.27	<0.1	6.94	3.23	45
	06/14/18	0.102	2	6.56	<0.1	6.92	3.48	71
	09/12/18	0.211	3.23	9.06	<0.1	5.69	4.82	150
	11/7/2018 re-sample	0.128	--	--	--	--	--	--
	05/13/19	0.117	1.01	6.17	0.138 J	6.64	3.23	73
	11/07/19	0.127	11.5	6.34	<0.100	6.23	3.67	68
	05/19/20	0.225	1.54	7.09	<0.100	6.89	5.97	86
	09/25/20	0.188	1.66	8.13	<0.100	6.78	6.03	77
	06/03/21	0.188	1.73	6.2	<0.100	6.69	6.20	76
	10/05/21	0.159	1.49	6.63	<0.100	6.59	5.73	76
	05/25/22	0.176	2.01	7.31	<0.100	6.52	6.83	86
	09/21/22	0.186	3.6	8.18	<0.100	6.59	11.7	89
	05/18/23	0.20	2.83	9.8	<0.100	6.88	7.59	100
	08/15/23	0.20	2.58	8.37	<0.100	6.58	6.79	87
MW-19	09/22/17	0.0677	2.74	5.36	<0.1	6.94	1.46 J	98
	06/14/18	0.577	133	24.4	0.216 J	6.78	328	758
	09/11/18	0.243	38	65.1	0.228 J	6.04	166	597
	11/7/2018 re-sample	--	--	5.22	--	--	--	--
	05/13/19	0.429	122	26.8	0.229 J	6.72	349	813
	11/08/19	0.529	77.8	49.3	0.189 J	6.87	310	844
	05/19/20	0.0724	1.49	5.84	<0.100	6.91	1.02 J	85
	09/25/20	0.412	94.6	14.3	0.111 J	6.92	160	462
	06/03/21	0.56	140	19.5	0.352 J	6.75	336	751
	10/05/21	0.495	124	62.9	0.180 J	6.74	323	896
	05/25/22	0.711	189	47.3	0.192 J	6.79	346	1010
	06/07/22	0.574	147	55.4	--	--	313	970
	09/21/22	0.382	45.0	92.2	0.108 J	6.93	212	723
	05/18/23	0.788	173	22.5	0.104	6.77	244	724
	08/14/23	0.627	113	67.5	0.142	6.59	275	877

TABLE 2
APPENDIX III ANALYTICAL RESULTS
MLSES PDP-5

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	field pH s.u.	SO_4 (mg/L)	TDS (mg/L)
MW-20A	09/22/17	0.0807	17.4	12.6	0.175 J	6.71	74.2	237
	02/21/18 re-sample	--	--	10.7	--	--	--	--
	06/13/18	0.171	24	10.9	0.672	6.72	132	250
	09/11/18	0.141	7.16	11	0.235 J	4.70	39.1	154
	05/13/19	0.239	37.4	10.2	0.731	6.81	178	328
	11/08/19	0.132	9.9	10.2	0.465	6.51	88	205
	05/19/20	0.220	24	10.4	0.413	6.83	133	270
	09/25/20	0.107	8.94	12.6	0.132 J	6.68	54.3	162
	06/03/21	0.152	26.1	9.63	0.324	6.73	93.2	218
	10/05/21	0.0724	6.12	10.8	0.127 J	6.44	32.8	139
	05/25/22	0.102	15.3	10.6	0.239 J	6.75	65.7	207
	06/07/22	0.0888	9.89	12.2	--	--	49.3	178
	09/22/22	0.0466	2.93	6.68	<0.100	6.48	1.42 J	84
	05/18/23	0.0711	9.65	11.3	<0.100	6.83	38.9	169
	08/14/23	0.0715	4.72	11.4	<0.100	6.58	21	130
PDP-22	09/22/17	0.221	92.5	12.3	0.321 J	6.98	178	558
	06/14/18	0.115	7.78	11.8	0.239	6.63	186	491
	09/12/18	0.164	61.1	10.9	0.216 J	5.88	143	476
	05/13/19	0.158	98.2	10.1	0.303 J	6.86	184	615
	11/12/19	0.226	34.3	12.6	0.218 J	6.93	215	482
	05/19/20	0.0646	54.9	1.06	<0.100	6.55	5.21	205
	09/25/20	0.206	25.1	12.7	0.128 J	6.73	186	398
	06/03/21	0.121	73.1	6.64	<0.100	6.52	118	415
	10/05/21	0.166	27.1	10.1	0.223 J	6.78	170	376
	05/25/22	0.137	16.4	9.92	0.183 J	8.82	104	289
	09/21/22	0.141	14.9	10.4	0.106 J	6.42	112	280
	05/18/23	0.160	39.1	10.1	<0.100	6.93	109	379
	08/15/23	0.116	10.4	8.19	<0.100	6.81	68.4	223
PDP-23	09/22/17	0.0463	2.34	4.48	0.147 J	6.77	1.47 J	111
	02/21/18 re-sample	--	2.37	--	--	--	--	--
	06/13/18	0.0357	2.29	6.21	<0.1	6.82	1.26 J	98
	09/11/18	0.0760	1.96	6.38	<0.1	5.32	1.52 J	98
	11/7/2018 re-sample	0.0683	--	--	--	--	--	--
	05/13/19	0.0628	1.89	6.98	<0.1	6.68	1.28 J	103
	11/12/19	0.0675	2.14	4.98	<0.100	6.72	1.41 J	93
	05/19/20	0.0709	2.03	6.86	<0.100	6.83	1.19 J	104
	09/25/20	0.0617	2.31	7.29	<0.100	6.74	<1.00	94
	06/03/21	0.0818	2.32	6.88	<0.100	6.57	1.42 J	101
	10/05/21	0.0661	2.38	6.58	<0.100	6.59	1.02 J	97
	05/25/22	0.0441	4.03	5.9	<0.100	6.20	1.44 J	110
	09/21/22	0.0663	2.53	6.72	<0.100	6.63	1.18 J	104
	05/18/23	0.0976	2.88	6.65	<0.100	6.75	1.35	115
	05/18/2023 DUP	0.0818	2.82	6.66	<0.100	6.75	1.33	111
	08/15/23	0.0681	2.37	8.12	<0.100	6.76	1.20	118
	08/15/23 DUP	0.0671	2.44	8.02	<0.100	6.76	1.22	114

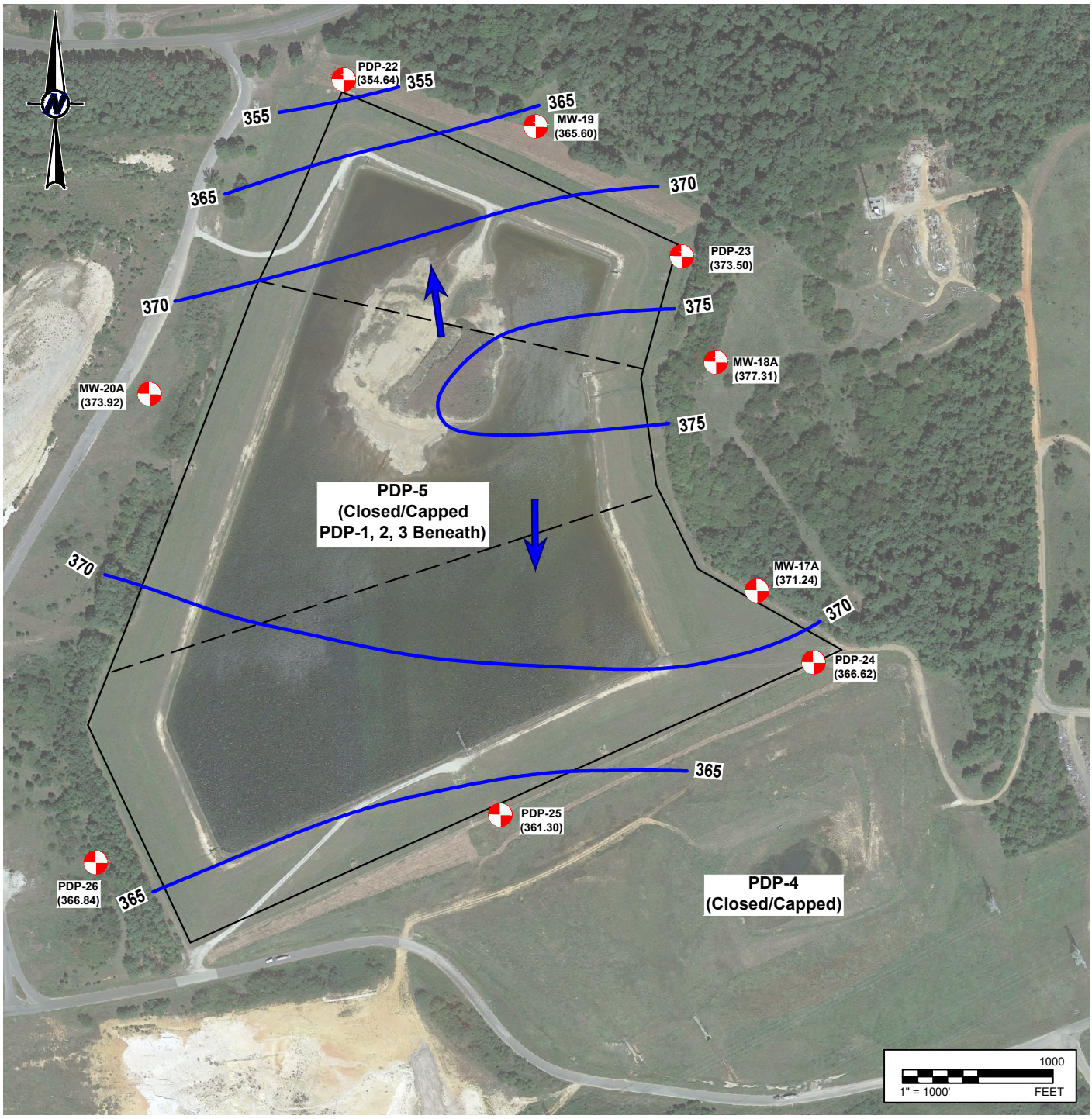
TABLE 2
APPENDIX III ANALYTICAL RESULTS
MLSES PDP-5

Sample Location	Date Sampled	B (mg/L)	Ca (mg/L)	Cl (mg/L)	F (mg/L)	field pH s.u.	SO_4 (mg/L)	TDS (mg/L)
PDP-24	09/22/17	3.01	25.8	17.5	0.898	6.95	231	440
	06/14/18	2.71	23.9	21.1	0.629	6.82	284	481
	09/11/18	4.08	41.6	19.4	0.832	4.20	460	760
	05/13/19	3.23	23	21	0.871	6.95	300	537
	11/12/19	3	21.9	20.6	0.751	6.87	295	520
	11/12/2019 DUP	2.97	22.2	20.5	0.744	6.87	300	504
	05/19/20	3.17	21.4	21	0.61	6.79	286	512
	09/25/20	4.04	40.7	19.6	0.776	6.83	445	699
	06/03/21	3.56	26.4	19.3	0.934	6.57	350	615
	10/05/21	4.24	46.9	17.8	0.782	6.72	432	681
	05/25/22	4.2	47.7	15.6	0.789	6.73	449	736
	09/21/22	4.23	46.7	17.8	0.771	6.72	456	744
	05/18/23	4.02	41.6	18.2	0.729	6.63	411	720
	08/14/23	3.36	29.8	19.1	0.817	6.52	353	640
PDP-25	09/22/17	0.133	36.8	130	0.157 J	6.81	89.1	481
	06/14/18	0.119	40.4	111	<0.1	6.78	73.4	439
	09/11/18	0.167	36.2	135	0.115 J	5.87	90.3	469
	11/7/2018 re-sample	0.142	--	--	--	--	--	--
	05/13/19	0.144	44.4	108	0.121 J	6.84	69	469
	11/12/19	0.184	38.6	117	<0.100	6.82	71.4	454
	05/19/20	0.202	53.7	105	<0.100	6.61	62.2	442
	09/25/20	0.174	46.3	123	<0.100	6.77	67.5	445
	06/03/21	0.234	45.2	101	0.236 J	6.78	61.2	431
	10/05/21	0.159	40.4	115	<0.100	6.73	62.7	427
	05/25/22	0.151	47.5	102	<0.100	6.64	58.4	454
	09/21/22	0.166	52.8	109	<0.100	6.52	61.6	436
	05/18/23	0.266	56.3	107	<0.100	6.82	59.9	478
	08/14/23	0.15	71.5	93.6	<0.100	6.68	51.3	457
PDP-26	09/22/17	0.0343	2.32	5.24	0.157 J	6.84	5.88	107
	06/14/18	0.0225 J	2.93	4.8	<0.1	6.89	4.27	100
	09/12/18	0.0371	2.37	4.88	<0.1	6.07	2.66 J	107
	05/13/19	0.0528	1.9	4.59	0.217 J	6.86	2.7 J	106
	11/12/19	0.0622	2.25	4.64	0.122 J	6.77	2.1 J	102
	05/19/20	0.0538	2.09	4.52	<0.100	6.64	2.1 J	108
	09/25/20	0.0549	2.71	5.07	<0.100	6.83	1.91	92
	06/03/21	0.0516	2.37	4.05	<0.100	6.84	2.18 J	104
	6/3/21 DUP	0.0635	2.23	4.05	<0.1	6.84	2.05 J	107
	10/05/21	0.0486	3.85	4.48	0.194 J	6.74	3.28	104
	10/5/21 DUP	0.0432	3.58	4.24	0.192 J	6.74	2.49 J	103
	05/25/22	0.0424	2.62	4.08	0.109 J	6.73	2.46 J	111
	09/22/22	0.05	2.61	4.4	<0.100	6.47	2.08 J	92
	05/18/23	0.0965	2.76	4.59	<0.100	6.67	2.58 J	101
	08/14/23	0.0451	2.99	4.58	<0.100	6.74	2.12 J	106

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

ATTACHMENT 1

2023 GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

- CCR MONITORING WELL LOCATION
- (374.34) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
01/31/2024

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

LUMINANT

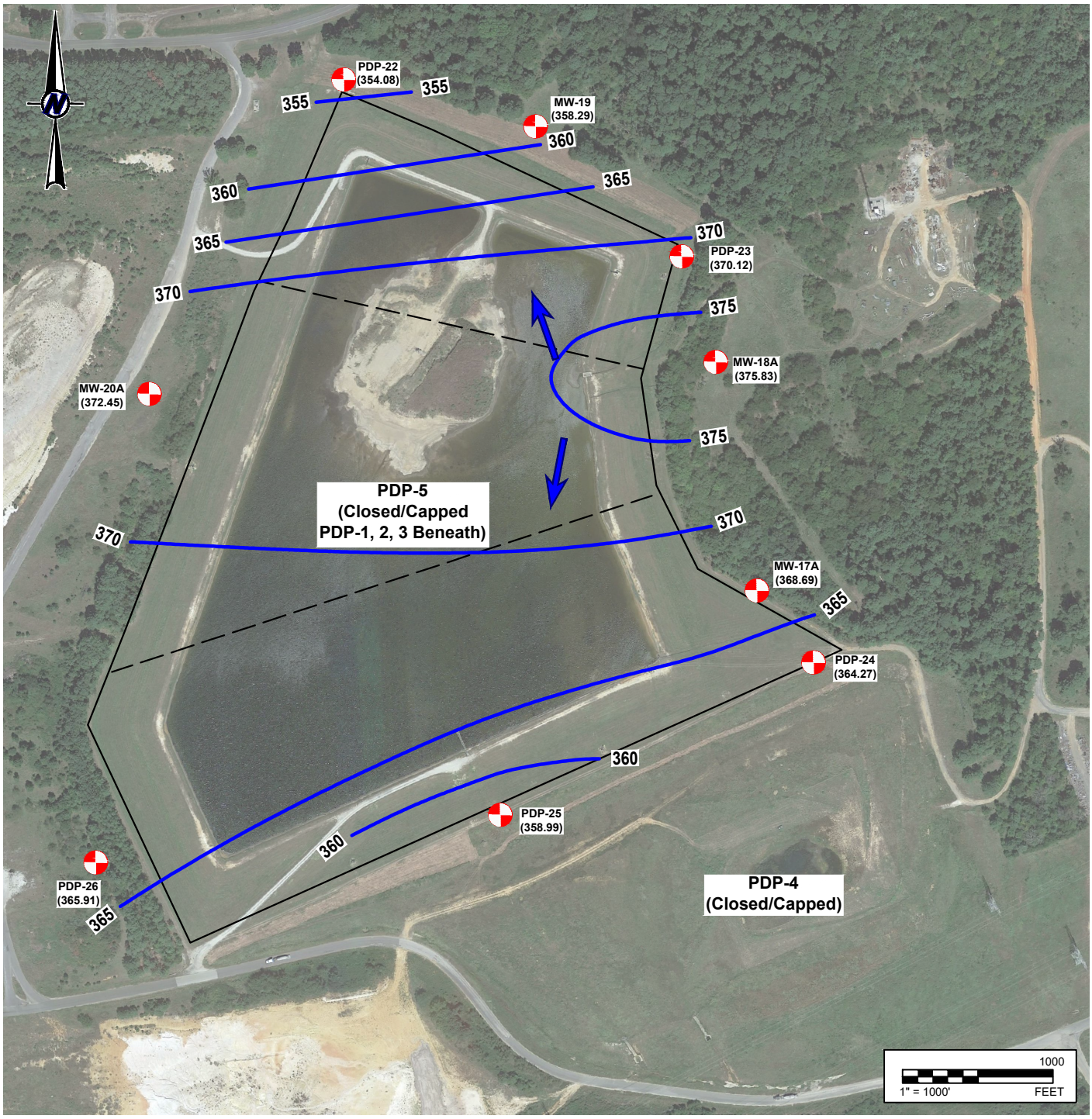
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

PDP 5
POTENTIOMETRIC SURFACE MAP
MAY 17, 2023

PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps



LEGEND

- CCR MONITORING WELL LOCATION
- *(374.34)* GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST
01/31/2024

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

PDP 5
POTENTIOMETRIC SURFACE MAP
AUGUST 18, 2023

PROJECT: 23643.03	BY: SLB	DATE: 12/14/2023	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps

APPENDIX B

2024 LABORATORY ANALYTICAL REPORTS

June 17, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:

Order No.: 2406054

RE: MLSES-PDP-CCR

Dear Will Vienne:

DHL Analytical, Inc. received 10 sample(s) on 6/6/2024 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 - TX-C24-00120

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: BBA
ADDRESS: 165 N. LAMPASAS ST BERTRAM, TX
PHONE: 512-355-9198 EMAIL:
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 6-5-24
PO#: 23643V-16

LAB USE ONLY
DHL WORKORDER #: 2406054

PROJECT LOCATION OR NAME: MLSES - PDP - CCR
CLIENT PROJECT # 23643V-16 COLLECTOR: JOHN BRAYTON

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER L=LIQUID S=SOIL SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

Field Sample I.D.	Lab Use Only DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL ☐	H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐	Zn Acetate ☐	ICE ☒	UNPRESERVED ☒	ANALYSES: APPEND IX III	FIELD NOTES
MW-17A	01	6-3-24	1110	W	P	2			X				X		X	
PDP-24	02	"	1240	W	P	2			X				X		X	
PDP-25	03	"	1420	W	P	2			X				X		X	
MW-20A	04	6-4-24	1145	W	P	2			X				X		X	
PDP-22	05	"	1535	W	P	2			X				X		X	
DUP-1	06	"	1535	W	P	2			X				X		X	
MW-19	07	~~6-5-24~~ 6/5/24	0800	W	P	2			X				X		X	
MW-18A	08	6-5-24	0910	W	P	2			X				X		X	
PDP-23	09	"	1110	W	P	2			X				X		X	
PDP-26	10	"	1310	W	P	2			X				X		X	

Relinquished By: (Sign) DATE/TIME 6-5-24 1630 Received by: FedEx
Relinquished By: (Sign) DATE/TIME 6/6/24 0838 Received by:
Relinquished By: (Sign) DATE/TIME Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐ RUSH-3 DAY☐
NORMAL☒ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY **THERMO #:** 78
RECEIVING TEMP (°C): 3.3°C
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☑ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☑ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

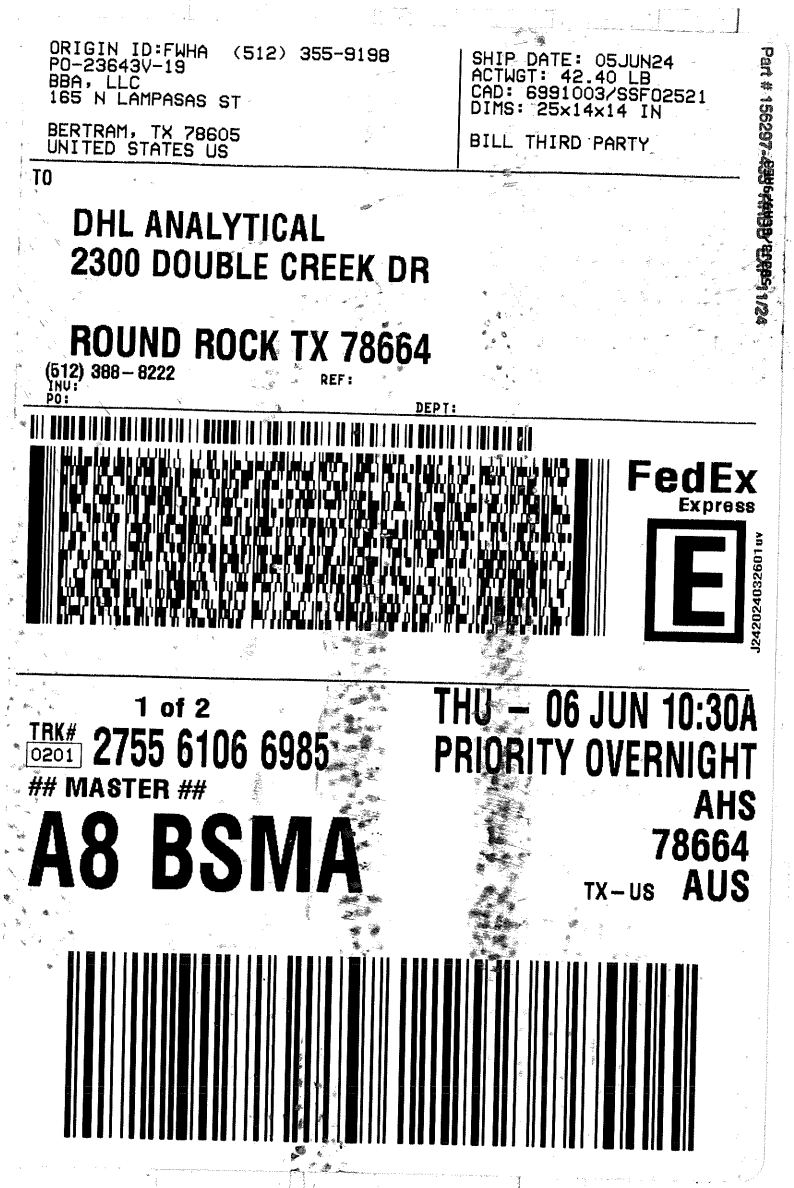
Eric Lau

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:FWHA (512) 355-9198
PO-23643V-19
BBA, LLC
165 N LAMPASAS ST

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 05JUN24
ACTWGT: 42.40 LB
CAD: 6991003/SSFO2521
DIMS: 25x14x14 IN

BILL THIRD PARTY

TO

DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222
INV:
PO: REF:
DEPT:

FedEx Express

J242024032601uv

1 of 2
TRK# 0201 2755 6106 6985
MASTER

A8 BSMA

THU - 06 JUN 10:30A
PRIORITY OVERNIGHT
AHS
78664
TX-US AUS

DHL ANALYTICAL

CUSTODY SEAL

DATE 6-5-24

SIGNATURE

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering** Date Received: **6/6/2024**

Work Order Number: **2406054** Received by: **KAO**

Checklist completed by: _____ 6/6/2024 Reviewed by: SN 6/6/2024
Signature | Date | 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? no		Checked by EL
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	3.3
Seal Intact	Y

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

Client contacted: BBA Date contacted: 6/6/24 Person contacted: John Brayton

Contacted by: Eric Lau Regarding: Sample collection dates.

Comments: Sample "MW-19" collection date recorded on COC as 6/4/24 and on labels as 6/5/24.

Corrective Action: Per John, sample was collected on 6/5/24.

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 6/17/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2406054**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
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	**Sample and Quality Control (QC) Identification**					
		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	**Test Reports**					
		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	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			**X**		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			**X**		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		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, **greater** than 10 times the concentration in the blank sample?			**X**		
R6	OI	**Laboratory Control Samples (LCS):**					
		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	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		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**			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?		**X**			**R7-04**
R8	OI	**Analytical Duplicate Data**					
		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	**Method Quantitation Limits (MQLs):**					
		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	**Other Problems/Anomalies**					
		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**				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 6/17/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2406054**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		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	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		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	**Mass Spectral Tuning:**					
		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	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		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	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		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	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		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	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		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

06/17/24
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *17-Jun-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2406054

CASE NARRATIVE

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

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

Exception Report R1-01

The samples were received and log-in performed on 6/6/2024. A total of 10 samples were received and analyzed. The samples arrived in good condition and were properly packaged. See details regarding the date of collection for one sample in the Sample Receipt Checklist.

Exception Report R7-03 and R7-04

For Metals Analysis, the recovery of Calcium for the Matrix Spike (2406007-07 MS) was below the method control limits. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS/MSD. No further corrective action was taken.

For Anions Analysis, the recovery/RPD of Chloride for the Matrix Spike and Matrix Spike Duplicate(s) (2406051-02, -03 MS/MSD) was outside of the method control limits. Additionally, the RPD of Chloride for the Matrix Spike Duplicate (2406051-02 MSD) was above the method control limit. These are flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.

DHL Analytical, Inc.

Date: *17-Jun-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2406054

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2406054-01	MW-17A		06/03/24 11:10 AM	06/06/2024
2406054-02	PDP-24		06/03/24 12:40 PM	06/06/2024
2406054-03	PDP-25		06/03/24 02:20 PM	06/06/2024
2406054-04	MW-20A		06/04/24 11:45 AM	06/06/2024
2406054-05	PDP-22		06/04/24 03:35 PM	06/06/2024
2406054-06	DUP-1		06/04/24 03:35 PM	06/06/2024
2406054-07	MW-19		06/05/24 08:00 AM	06/06/2024
2406054-08	MW-18A		06/05/24 09:10 AM	06/06/2024
2406054-09	PDP-23		06/05/24 11:10 AM	06/06/2024
2406054-10	PDP-26		06/05/24 01:10 PM	06/06/2024

Lab Order: 2406054
Client: BBA Engineering
Project: MLSES-PDP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2406054-01A	MW-17A	06/03/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	MW-17A	06/03/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-01B	MW-17A	06/03/24 11:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-17A	06/03/24 11:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-17A	06/03/24 11:10 AM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-02A	PDP-24	06/03/24 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-24	06/03/24 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-02B	PDP-24	06/03/24 12:40 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-24	06/03/24 12:40 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-24	06/03/24 12:40 PM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-03A	PDP-25	06/03/24 02:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-25	06/03/24 02:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-25	06/03/24 02:20 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-03B	PDP-25	06/03/24 02:20 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-25	06/03/24 02:20 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-25	06/03/24 02:20 PM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-04A	MW-20A	06/04/24 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	MW-20A	06/04/24 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-04B	MW-20A	06/04/24 11:45 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-20A	06/04/24 11:45 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-20A	06/04/24 11:45 AM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-05A	PDP-22	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-22	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-22	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-05B	PDP-22	06/04/24 03:35 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-22	06/04/24 03:35 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-22	06/04/24 03:35 PM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-06A	DUP-1	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709

Lab Order: 2406054
Client: BBA Engineering
Project: MLSES-PDP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2406054-06A	DUP-1	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	DUP-1	06/04/24 03:35 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-06B	DUP-1	06/04/24 03:35 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	DUP-1	06/04/24 03:35 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	DUP-1	06/04/24 03:35 PM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-07A	MW-19	06/05/24 08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	MW-19	06/05/24 08:00 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-07B	MW-19	06/05/24 08:00 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-19	06/05/24 08:00 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-19	06/05/24 08:00 AM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-08A	MW-18A	06/05/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	MW-18A	06/05/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	MW-18A	06/05/24 09:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-08B	MW-18A	06/05/24 09:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-18A	06/05/24 09:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	MW-18A	06/05/24 09:10 AM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-09A	PDP-23	06/05/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-23	06/05/24 11:10 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-09B	PDP-23	06/05/24 11:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-23	06/05/24 11:10 AM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-23	06/05/24 11:10 AM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722
2406054-10A	PDP-26	06/05/24 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
	PDP-26	06/05/24 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	06/07/24 07:01 AM	115709
2406054-10B	PDP-26	06/05/24 01:10 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-26	06/05/24 01:10 PM	Aqueous	E300	Anion Preparation	06/08/24 09:10 AM	115731
	PDP-26	06/05/24 01:10 PM	Aqueous	M2540C	TDS Preparation	06/07/24 01:20 PM	115722

Lab Order: 2406054
Client: BBA Engineering
Project: MLSES-PDP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2406054-01A	MW-17A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 12:59 PM	ICP-MS5_240610A
	MW-17A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	2	06/10/24 02:13 PM	ICP-MS4_240610B
2406054-01B	MW-17A	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 01:41 AM	IC2_240608A
	MW-17A	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 05:53 AM	IC2_240608A
	MW-17A	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-02A	PDP-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	10	06/10/24 02:15 PM	ICP-MS4_240610B
	PDP-24	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:02 PM	ICP-MS5_240610A
2406054-02B	PDP-24	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 01:59 AM	IC2_240608A
	PDP-24	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 06:11 AM	IC2_240608A
	PDP-24	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-03A	PDP-25	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:04 PM	ICP-MS5_240610A
	PDP-25	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	10	06/10/24 02:17 PM	ICP-MS4_240610B
	PDP-25	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:47 PM	ICP-MS4_240610B
2406054-03B	PDP-25	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 02:17 AM	IC2_240608A
	PDP-25	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 06:29 AM	IC2_240608A
	PDP-25	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-04A	MW-20A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:19 PM	ICP-MS4_240610B
	MW-20A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:07 PM	ICP-MS5_240610A
2406054-04B	MW-20A	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 02:35 AM	IC2_240608A
	MW-20A	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 06:47 AM	IC2_240608A
	MW-20A	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-05A	PDP-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	10	06/10/24 02:21 PM	ICP-MS4_240610B
	PDP-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:49 PM	ICP-MS4_240610B
	PDP-22	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:10 PM	ICP-MS5_240610A
2406054-05B	PDP-22	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 02:53 AM	IC2_240608A
	PDP-22	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 07:05 AM	IC2_240608A
	PDP-22	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-06A	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:51 PM	ICP-MS4_240610B

Lab Order: 2406054
Client: BBA Engineering
Project: MLSES-PDP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2406054-06A	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:12 PM	ICP-MS5_240610A
	DUP-1	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	10	06/10/24 02:23 PM	ICP-MS4_240610B
2406054-06B	DUP-1	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 03:11 AM	IC2_240608A
	DUP-1	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 07:23 AM	IC2_240608A
	DUP-1	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-07A	MW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:25 PM	ICP-MS4_240610B
	MW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:15 PM	ICP-MS5_240610A
2406054-07B	MW-19	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 03:29 AM	IC2_240608A
	MW-19	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 07:41 AM	IC2_240608A
	MW-19	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-08A	MW-18A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:53 PM	ICP-MS4_240610B
	MW-18A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:17 PM	ICP-MS5_240610A
	MW-18A	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	5	06/10/24 02:27 PM	ICP-MS4_240610B
2406054-08B	MW-18A	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 07:59 AM	IC2_240608A
	MW-18A	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 03:47 AM	IC2_240608A
	MW-18A	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-09A	PDP-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:29 PM	ICP-MS4_240610B
	PDP-23	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:20 PM	ICP-MS5_240610A
2406054-09B	PDP-23	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 04:05 AM	IC2_240608A
	PDP-23	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 08:17 AM	IC2_240608A
	PDP-23	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C
2406054-10A	PDP-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 02:31 PM	ICP-MS4_240610B
	PDP-26	Aqueous	SW6020B	Total Metals: ICP-MS - Water	115709	1	06/10/24 01:23 PM	ICP-MS5_240610A
2406054-10B	PDP-26	Aqueous	E300	Anions by IC method - Water	115731	10	06/09/24 04:23 AM	IC2_240608A
	PDP-26	Aqueous	E300	Anions by IC method - Water	115731	1	06/09/24 08:35 AM	IC2_240608A
	PDP-26	Aqueous	M2540C	Total Dissolved Solids	115722	1	06/07/24 05:00 PM	WC_240607C

DHL Analytical, Inc.

Date: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-17A
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-01
Project No:	23643V-16	**Collection Date:**	06/03/24 11:10 AM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.560	0.0200	0.0600		mg/L	2	06/10/24 02:13 PM
Calcium	27.4	0.200	0.600		mg/L	2	06/10/24 02:13 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	40.1	0.300	1.00		mg/L	1	06/09/24 05:53 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 05:53 AM
Sulfate	73.5	1.00	3.00		mg/L	1	06/09/24 05:53 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	281	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-24
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-02
Project No:	23643V-16	**Collection Date:**	06/03/24 12:40 PM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	3.44	0.100	0.300		mg/L	10	06/10/24 02:15 PM
Calcium	27.0	1.00	3.00		mg/L	10	06/10/24 02:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	20.9	0.300	1.00		mg/L	1	06/09/24 06:11 AM
Fluoride	0.732	0.100	0.400		mg/L	1	06/09/24 06:11 AM
Sulfate	329	10.0	30.0		mg/L	10	06/09/24 01:59 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	557	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-25
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-03
Project No:	23643V-16	**Collection Date:**	06/03/24 02:20 PM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.120	0.0100	0.0300		mg/L	1	06/10/24 02:47 PM
Calcium	52.2	1.00	3.00		mg/L	10	06/10/24 02:17 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	58.1	3.00	10.0		mg/L	10	06/09/24 02:17 AM
Fluoride	0.165	0.100	0.400	J	mg/L	1	06/09/24 06:29 AM
Sulfate	32.9	1.00	3.00		mg/L	1	06/09/24 06:29 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	294	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-20A
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-04
Project No:	23643V-16	**Collection Date:**	06/04/24 11:45 AM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.132	0.0100	0.0300		mg/L	1	06/10/24 02:19 PM
Calcium	12.4	0.100	0.300		mg/L	1	06/10/24 01:07 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	10.6	0.300	1.00		mg/L	1	06/09/24 06:47 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 06:47 AM
Sulfate	32.4	1.00	3.00		mg/L	1	06/09/24 06:47 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	115	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-22
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-05
Project No:	23643V-16	**Collection Date:**	06/04/24 03:35 PM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.183	0.0100	0.0300		mg/L	1	06/10/24 02:49 PM
Calcium	54.0	1.00	3.00		mg/L	10	06/10/24 02:21 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	10.6	0.300	1.00		mg/L	1	06/09/24 07:05 AM
Fluoride	0.114	0.100	0.400	J	mg/L	1	06/09/24 07:05 AM
Sulfate	187	10.0	30.0		mg/L	10	06/09/24 02:53 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	440	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	DUP-1
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-06
Project No:	23643V-16	**Collection Date:**	06/04/24 03:35 PM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.156	0.0100	0.0300		mg/L	1	06/10/24 02:51 PM
Calcium	68.1	1.00	3.00		mg/L	10	06/10/24 02:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	10.4	0.300	1.00		mg/L	1	06/09/24 07:23 AM
Fluoride	0.120	0.100	0.400	J	mg/L	1	06/09/24 07:23 AM
Sulfate	188	10.0	30.0		mg/L	10	06/09/24 03:11 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	445	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-19
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-07
Project No:	23643V-16	**Collection Date:**	06/05/24 08:00 AM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0574	0.0100	0.0300		mg/L	1	06/10/24 02:25 PM
Calcium	14.5	0.100	0.300		mg/L	1	06/10/24 01:15 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	18.3	0.300	1.00		mg/L	1	06/09/24 07:41 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 07:41 AM
Sulfate	66.0	1.00	3.00		mg/L	1	06/09/24 07:41 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	256	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-18A
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-08
Project No:	23643V-16	**Collection Date:**	06/05/24 09:10 AM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.170	0.0100	0.0300		mg/L	1	06/10/24 02:53 PM
Calcium	39.6	0.500	1.50		mg/L	5	06/10/24 02:27 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	10.1	0.300	1.00		mg/L	1	06/09/24 07:59 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 07:59 AM
Sulfate	135	1.00	3.00		mg/L	1	06/09/24 07:59 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	327	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-23
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-09
Project No:	23643V-16	**Collection Date:**	06/05/24 11:10 AM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0695	0.0100	0.0300		mg/L	1	06/10/24 02:29 PM
Calcium	6.33	0.100	0.300		mg/L	1	06/10/24 01:20 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	7.33	0.300	1.00		mg/L	1	06/09/24 08:17 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 08:17 AM
Sulfate	1.79	1.00	3.00	J	mg/L	1	06/09/24 08:17 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	104	10.0	10.0		mg/L	1	06/07/24 05:00 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: *17-Jun-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-26
Project:	MLSES-PDP-CCR	**Lab ID:**	2406054-10
Project No:	23643V-16	**Collection Date:**	06/05/24 01:10 PM
Lab Order:	2406054	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0433	0.0100	0.0300		mg/L	1	06/10/24 02:31 PM
Calcium	2.51	0.100	0.300		mg/L	1	06/10/24 01:23 PM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	4.41	0.300	1.00		mg/L	1	06/09/24 08:35 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	06/09/24 08:35 AM
Sulfate	2.07	1.00	3.00	J	mg/L	1	06/09/24 08:35 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	100	10.0	10.0		mg/L	1	06/07/24 05:00 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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240606B

Sample ID: **DCS2-115670**	Batch ID: **115670**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_240606B**	Analysis Date: **6/6/2024 9:52:00 AM**	Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.270	0.300	0.300	0	90.2	70	130	0	0	

Sample ID: **DCS4-115670**	Batch ID: **115670**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_240606B**	Analysis Date: **6/6/2024 9:57:00 AM**	Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0298	0.0300	0.0300	0	99.4	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240610B

The QC data in batch 115709 applies to the following samples: 2406054-01A, 2406054-02A, 2406054-03A, 2406054-04A, 2406054-05A, 2406054-06A, 2406054-07A, 2406054-08A, 2406054-09A, 2406054-10A

Sample ID: **MB-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:25:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								

Sample ID: **LCS-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:28:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.193	0.0300	0.200	0	96.6	80	120			

Sample ID: **LCSD-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:30:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.204	0.0300	0.200	0	102	80	120	5.47	15	

Sample ID: **2406007-07A SD** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:36:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.66	1.50	0	2.24				17.1	20	
Calcium	62.8	15.0	0	63.4				1.08	20	

Sample ID: **2406007-07A PDS** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:56:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.13	0.300	2.00	2.24	94.7	75	125			
Calcium	116	3.00	50.0	63.4	105	75	125			

Sample ID: **2406007-07A MS** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 1:58:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.49	0.300	0.200	2.24	125	75	125			
Calcium	66.2	3.00	5.00	63.4	55.6	75	125			S

Sample ID: **2406007-07A MSD** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 2:00:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240610B

Sample ID: **2406007-07A MSD** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_240610B** Analysis Date: **6/10/2024 2:00:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	2.45	0.300	0.200	2.24	107	75	125	1.46	15	
Calcium	67.9	3.00	5.00	63.4	88.1	75	125	2.43	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240610B

Sample ID: **ICV-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 9:27:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.103	0.0300	0.100	0	103	90	110			
Calcium	2.57	0.300	2.50	0	103	90	110			

Sample ID: **LCVL-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 9:35:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0208	0.0300	0.0200	0	104	80	120			
Calcium	0.0936	0.300	0.100	0	93.6	80	120			

Sample ID: **CCV5-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 12:49:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.197	0.0300	0.200	0	98.6	90	110			
Calcium	4.92	0.300	5.00	0	98.4	90	110			

Sample ID: **CCV6-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 2:03:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.206	0.0300	0.200	0	103	90	110			
Calcium	4.93	0.300	5.00	0	98.6	90	110			

Sample ID: **CCV7-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 2:36:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.194	0.0300	0.200	0	97.1	90	110			
Calcium	4.92	0.300	5.00	0	98.4	90	110			

Sample ID: **CCV8-240610**	Batch ID: **R133485**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240610B**	Analysis Date: **6/10/2024 2:57:00 PM**	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			

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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240606A

Sample ID: **DCS2-115670** Batch ID: **115670** TestNo: **SW6020B** Units: **mg/L**
SampType: **DCS2** Run ID: **ICP-MS5_240606A** Analysis Date: **6/6/2024 10:20:00 AM** Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.301	0.300	0.300	0	100	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240610A

The QC data in batch 115709 applies to the following samples: 2406054-01A, 2406054-02A, 2406054-03A, 2406054-04A, 2406054-05A, 2406054-06A, 2406054-07A, 2406054-08A, 2406054-09A, 2406054-10A

Sample ID: **MB-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS5_240610A** Analysis Date: **6/10/2024 12:03:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	<0.100	0.300								

Sample ID: **LCS-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS5_240610A** Analysis Date: **6/10/2024 12:06:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.98	0.300	5.00	0	99.7	80	120			

Sample ID: **LCSD-115709** Batch ID: **115709** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS5_240610A** Analysis Date: **6/10/2024 12:08:00 PM** Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.91	0.300	5.00	0	98.2	80	120	1.49	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS5_240610A

Sample ID: **ICV-240610**	Batch ID: **R133480**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS5_240610A**	Analysis Date: **6/10/2024 10:04:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	2.71	0.300	2.50	0	108	90	110			

Sample ID: **LCVL-240610**	Batch ID: **R133480**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS5_240610A**	Analysis Date: **6/10/2024 10:23:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.0957	0.300	0.100	0	95.7	80	120			

Sample ID: **CCV2-240610**	Batch ID: **R133480**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_240610A**	Analysis Date: **6/10/2024 11:57:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.98	0.300	5.00	0	99.7	90	110			

Sample ID: **CCV3-240610**	Batch ID: **R133480**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_240610A**	Analysis Date: **6/10/2024 12:51:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.04	0.300	5.00	0	101	90	110			

Sample ID: **CCV4-240610**	Batch ID: **R133480**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS5_240610A**	Analysis Date: **6/10/2024 1:27:00 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	4.75	0.300	5.00	0	95.0	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240531A

Sample ID: **DCS2-115618** Batch ID: **115618** TestNo: **E300** Units: **mg/L**
SampType: **DCS2** Run ID: **IC2_240531A** Analysis Date: **5/31/2024 12:46:05 PM** Prep Date: **5/31/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.535	1.00	0.5000	0	107	70	130	0	0	
Fluoride	0.251	0.400	0.2000	0	126	70	130	0	0	
Sulfate	1.66	3.00	1.500	0	110	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240608A

The QC data in batch 115731 applies to the following samples: 2406054-01B, 2406054-02B, 2406054-03B, 2406054-04B, 2406054-05B, 2406054-06B, 2406054-07B, 2406054-08B, 2406054-09B, 2406054-10B

Sample ID: **MB-115731** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 12:47:16 AM** Prep Date: **6/8/2024**

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: **LCS-115731** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 1:05:16 AM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.7	1.00	10.00	0	107	90	110			
Fluoride	4.35	0.400	4.000	0	109	90	110			
Sulfate	31.6	3.00	30.00	0	105	90	110			

Sample ID: **LCSD-115731** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 1:23:16 AM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.7	1.00	10.00	0	107	90	110	0.752	20	
Fluoride	4.33	0.400	4.000	0	108	90	110	0.438	20	
Sulfate	31.4	3.00	30.00	0	105	90	110	0.695	20	

Sample ID: **2406051-02AMS** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 10:59:16 AM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<3.00	10.0	200.0	0	0	90	110			S
Fluoride	210	4.00	200.0	0	105	90	110			
Sulfate	217	30.0	200.0	12.38	102	90	110			

Sample ID: **2406051-02AMSD** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 11:17:16 AM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	1630	10.0	200.0	0	814	90	110	200	20	SR
Fluoride	210	4.00	200.0	0	105	90	110	0.049	20	
Sulfate	217	30.0	200.0	12.38	102	90	110	0.400	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240608A

Sample ID: **2406051-03AMS** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 11:53:16 AM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	535	10.0	200.0	382.3	76.3	90	110			S
Fluoride	209	4.00	200.0	2.047	103	90	110			
Sulfate	256	30.0	200.0	56.28	99.6	90	110			

Sample ID: **2406051-03AMSD** Batch ID: **115731** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240608A** Analysis Date: **6/9/2024 12:11:16 PM** Prep Date: **6/8/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	534	10.0	200.0	382.3	75.7	90	110	0.198	20	S
Fluoride	208	4.00	200.0	2.047	103	90	110	0.293	20	
Sulfate	255	30.0	200.0	56.28	99.4	90	110	0.201	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240608A

Sample ID: **ICV-240608**	Batch ID: **R133459**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_240608A**	Analysis Date: **6/8/2024 9:18:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	26.9	1.00	25.00	0	108	90	110			
Fluoride	11.0	0.400	10.00	0	110	90	110			
Sulfate	80.5	3.00	75.00	0	107	90	110			

Sample ID: **CCV3-240608**	Batch ID: **R133459**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240608A**	Analysis Date: **6/9/2024 12:11:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.6	1.00	10.00	0	106	90	110			
Fluoride	4.30	0.400	4.000	0	107	90	110			
Sulfate	31.1	3.00	30.00	0	104	90	110			

Sample ID: **CCV4-240608**	Batch ID: **R133459**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240608A**	Analysis Date: **6/9/2024 5:17:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	4.07	0.400	4.000	0	102	90	110			
Sulfate	29.8	3.00	30.00	0	99.5	90	110			

Sample ID: **CCV5-240608**	Batch ID: **R133459**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240608A**	Analysis Date: **6/9/2024 9:29:16 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	4.07	0.400	4.000	0	102	90	110			
Sulfate	30.0	3.00	30.00	0	99.9	90	110			

Sample ID: **CCV6-240608**	Batch ID: **R133459**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240608A**	Analysis Date: **6/10/2024 9:40:42 AM**	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			
Fluoride	4.18	0.400	4.000	0	105	90	110			
Sulfate	30.5	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: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240607C

The QC data in batch 115722 applies to the following samples: 2406054-01B, 2406054-02B, 2406054-03B, 2406054-04B, 2406054-05B, 2406054-06B, 2406054-07B, 2406054-08B, 2406054-09B, 2406054-10B

Sample ID: **MB-115722**	Batch ID: **115722**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_240607C**	Analysis Date: **6/7/2024 5:00:00 PM**	Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-115722**	Batch ID: **115722**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_240607C**	Analysis Date: **6/7/2024 5:00:00 PM**	Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	759	10.0	745.6	0	102	90	113			

Sample ID: **2406055-03B-DUP**	Batch ID: **115722**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240607C**	Analysis Date: **6/7/2024 5:00:00 PM**	Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	886	20.0	0	886.0				0	5	

Sample ID: **2406055-07B-DUP**	Batch ID: **115722**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240607C**	Analysis Date: **6/7/2024 5:00:00 PM**	Prep Date: **6/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	663	13.3	0	661.3				0.201	5	

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

DHL Analytical, Inc.

Date: *17-Jun-24*

CLIENT: BBA Engineering
Work Order: 2406054
Project: MLSES-PDP-CCR

MQL SUMMARY REPORT

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

TestNo: SW6020B	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
Boron	0.0100	0.0300
Calcium	0.100	0.300

TestNo: M2540C	**MDL**	**MQL**
Analyte	**mg/L**	**mg/L**
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

August 13, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:

Order No.: 2408022

RE: MLSES-PDP-CCR

Dear Will Vienne:

DHL Analytical, Inc. received 10 sample(s) on 8/2/2024 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 - TX-C24-00120

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: BBA
ADDRESS: 165 N. LAMPASAS ST BERTRAM, TX
PHONE: EMAIL:
DATA REPORTED TO: WILL VIENNIE
ADDITIONAL REPORT COPIES TO:

DATE: 8-1-24
PO#: 23643V-16

LAB USE ONLY
DHL WORKORDER #: 2408022

PROJECT LOCATION OR NAME: MLSES - PDP - CCR
CLIENT PROJECT # 23643V-16 COLLECTOR: JOHN BRAYDEN

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

W=WATER L=LIQUID S=SOIL SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL ☐ H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐ Zn Acetate ☐	ICE ☒ UNPRESERVED ☐	ANALYSES	APPENDIX III	FIELD NOTES
PDP-24	01	7-30-24	1350	W	P	2		X			X		X	
PDP-25	02		1430	W	P	2		X			X		X	
PDP-23	03		1515	W	P	2		X			X		X	
DUP-1	04		1515	W	P	2		X			X		X	
PDP-22	05		1625	W	P	2		X			X		X	
PDP-26	06	7-31-24	0820	W	P	2		X			X		X	
MW 20A	07		0920	W	P	2		X			X		X	
MW-17A	08		1025	W	P	2		X			X		X	
MW-18A	09		1120	W	P	2		X			X		X	
MW-19	10		1230	W	P	2		X			X		X	

Relinquished By: (Sign) DATE/TIME 8-1-24 1700 Received by: Fedex
Relinquished By: (Sign) Fedex DATE/TIME 8-2-24 0834 Received by:
Relinquished By: (Sign) DATE/TIME Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐ RUSH-3 DAY☐
NORMAL ☒ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY **THERMO #:** 78
RECEIVING TEMP (°C): 2.0°C
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☑ INTACT ☐ NOT USED
CARRIER: ☐ LSO ☑ FEDEX ☐ UPS ☐ COURIER ☐ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

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:BSMA (512) 355-9198
JOHN BRAYTON
BULLOCK, BENNETT & ASSOCIATES
165 N. LAMPASAS STREET

BERTRAM, TX 78605
UNITED STATES US

SHIP DATE: 01AUG24
ACTWGT: 35.00 LB
CAD: 113203857/INET4535
DIMS: 24x14x14 IN

BILL SENDER

TO **LOGIN**
DHL ANALYTICAL
2300 DOUBLE CREEK DR

ROUND ROCK TX 78664
(512) 388-8222 REF:
INV:
PO: 23643V-16 DEPT:

583J6/A12D/9AE3

FedEx Express

E

J243024071301uv

FedEx
TRK# 0201 **7777 4015 0103**

A8 BSMA

FRI - 02 AUG AA
PRIORITY OVERNIGHT

78664
TX-US **AUS**

#6035377 08/01 583J6/A12D/9AE3

RDDEX 56207-435 RRDE2 EXP 06/25

DHL ANALYTICAL

CUSTODY SEAL

DATE 8-1-24

SIGNATURE

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering**

Date Received: **8/2/2024**

Work Order Number: **2408022**

Received by: **SRM**

Checklist completed by: _____ 8/2/2024 (Signature / Date)

Reviewed by: JH 8/2/2024 (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? no		Checked by EL
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	2.0
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: _____

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 8/13/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2408022**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
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	**Sample and Quality Control (QC) Identification**					
		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	**Test Reports**					
		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	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			**X**		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			**X**		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		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, **greater** than 10 times the concentration in the blank sample?			**X**		
R6	OI	**Laboratory Control Samples (LCS):**					
		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	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		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**			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	**X**				
R8	OI	**Analytical Duplicate Data**					
		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	**Method Quantitation Limits (MQLs):**					
		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	**Other Problems/Anomalies**					
		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**				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 8/13/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2408022**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		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	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		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	**Mass Spectral Tuning:**					
		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	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		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	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		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	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		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	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		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

08/13/24
Date

Name: Dr. Derhsing Luu
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *13-Aug-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2408022

CASE NARRATIVE

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

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

Exception Report R1-01

The samples were received and log-in performed on 8/2/2024. A total of 10 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R7-03

For Anions Analysis, for Batch 116666, the recovery of Chloride for the Matrix Spike and Matrix Spike Duplicate (2408113-02 MS/MSD) was slightly below the method control limits. These are flagged accordingly in the QC Summary Report. This anion was within method control limits in the associated LCS. No further corrective action was taken.

DHL Analytical, Inc.

Date: *13-Aug-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2408022

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2408022-01	PDP-24		07/30/24 01:50 PM	08/02/2024
2408022-02	PDP-25		07/30/24 02:30 PM	08/02/2024
2408022-03	PDP-23		07/30/24 03:15 PM	08/02/2024
2408022-04	DUP-1		07/30/24 03:15 PM	08/02/2024
2408022-05	PDP-22		07/30/24 04:25 PM	08/02/2024
2408022-06	PDP-26		07/31/24 08:20 AM	08/02/2024
2408022-07	MW-20A		07/31/24 09:20 AM	08/02/2024
2408022-08	MW-17A		07/31/24 10:25 AM	08/02/2024
2408022-09	MW-18A		07/31/24 11:20 AM	08/02/2024
2408022-10	MW-19		07/31/24 12:30 PM	08/02/2024

DHL Analytical, Inc.

Date: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-24
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-01
Project No:	23643V-16	**Collection Date:**	07/30/24 01:50 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	3.15	0.100	0.300		mg/L	10	08/06/24 10:49 AM
Calcium	25.1	1.00	3.00		mg/L	10	08/06/24 10:49 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	20.6	0.300	1.00		mg/L	1	08/07/24 09:57 PM
Fluoride	0.773	0.100	0.400		mg/L	1	08/07/24 09:57 PM
Sulfate	339	10.0	30.0		mg/L	10	08/11/24 07:41 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	551	10.0	10.0		mg/L	1	08/02/24 04:20 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-25
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-02
Project No:	23643V-16	**Collection Date:**	07/30/24 02:30 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.143	0.0100	0.0300		mg/L	1	08/06/24 10:53 AM
Calcium	76.7	1.00	3.00		mg/L	10	08/06/24 10:51 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	88.7	3.00	10.0		mg/L	10	08/11/24 07:59 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/07/24 10:15 PM
Sulfate	51.3	1.00	3.00		mg/L	1	08/07/24 10:15 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	432	10.0	10.0		mg/L	1	08/02/24 04:20 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-23
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-03
Project No:	23643V-16	**Collection Date:**	07/30/24 03:15 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0777	0.0100	0.0300		mg/L	1	08/06/24 10:55 AM
Calcium	2.57	0.100	0.300		mg/L	1	08/06/24 09:47 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	8.20	0.300	1.00		mg/L	1	08/07/24 10:33 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/07/24 10:33 PM
Sulfate	1.40	1.00	3.00	J	mg/L	1	08/07/24 10:33 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	99.0	10.0	10.0		mg/L	1	08/02/24 04:20 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	DUP-1
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-04
Project No:	23643V-16	**Collection Date:**	07/30/24 03:15 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0758	0.0100	0.0300		mg/L	1	08/06/24 09:37 AM
Calcium	2.49	0.100	0.300		mg/L	1	08/06/24 09:37 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	8.43	0.300	1.00		mg/L	1	08/07/24 10:51 PM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/07/24 10:51 PM
Sulfate	1.36	1.00	3.00	J	mg/L	1	08/07/24 10:51 PM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	100	10.0	10.0		mg/L	1	08/02/24 04:20 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-22
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-05
Project No:	23643V-16	**Collection Date:**	07/30/24 04:25 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.245	0.0100	0.0300		mg/L	1	08/06/24 09:49 AM
Calcium	27.9	0.500	1.50		mg/L	5	08/06/24 10:57 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	11.8	0.300	1.00		mg/L	1	08/08/24 12:21 AM
Fluoride	0.208	0.100	0.400	J	mg/L	1	08/08/24 12:21 AM
Sulfate	244	10.0	30.0		mg/L	10	08/11/24 09:29 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	443	10.0	10.0		mg/L	1	08/02/24 04:20 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	PDP-26
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-06
Project No:	23643V-16	**Collection Date:**	07/31/24 08:20 AM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0547	0.0100	0.0300		mg/L	1	08/06/24 09:51 AM
Calcium	3.11	0.100	0.300		mg/L	1	08/06/24 09:51 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	4.70	0.300	1.00		mg/L	1	08/08/24 12:39 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/08/24 12:39 AM
Sulfate	3.21	1.00	3.00		mg/L	1	08/08/24 12:39 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	102	10.0	10.0		mg/L	1	08/05/24 04:45 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-20A
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-07
Project No:	23643V-16	**Collection Date:**	07/31/24 09:20 AM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.0862	0.0100	0.0300		mg/L	1	08/06/24 09:53 AM
Calcium	12.6	0.100	0.300		mg/L	1	08/06/24 09:53 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	11.6	0.300	1.00		mg/L	1	08/08/24 12:57 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/08/24 12:57 AM
Sulfate	45.6	1.00	3.00		mg/L	1	08/08/24 12:57 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	161	10.0	10.0		mg/L	1	08/05/24 04:45 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-17A
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-08
Project No:	23643V-16	**Collection Date:**	07/31/24 10:25 AM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.485	0.0100	0.0300		mg/L	1	08/06/24 09:55 AM
Calcium	7.89	0.100	0.300		mg/L	1	08/06/24 09:55 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	9.05	0.300	1.00		mg/L	1	08/08/24 01:15 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/08/24 01:15 AM
Sulfate	50.9	1.00	3.00		mg/L	1	08/08/24 01:15 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	150	10.0	10.0		mg/L	1	08/05/24 04:45 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-18A
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-09
Project No:	23643V-16	**Collection Date:**	07/31/24 11:20 AM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	0.179	0.0100	0.0300		mg/L	1	08/06/24 09:57 AM
Calcium	2.34	0.100	0.300		mg/L	1	08/06/24 09:57 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	9.27	0.300	1.00		mg/L	1	08/08/24 01:33 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/08/24 01:33 AM
Sulfate	4.38	1.00	3.00		mg/L	1	08/08/24 01:33 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	65.0	10.0	10.0		mg/L	1	08/05/24 04:45 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: *13-Aug-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-19
Project:	MLSES-PDP-CCR	**Lab ID:**	2408022-10
Project No:	23643V-16	**Collection Date:**	07/31/24 12:30 PM
Lab Order:	2408022	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **SP**
Boron	1.03	0.0100	0.0300		mg/L	1	08/06/24 10:18 AM
Calcium	226	2.00	6.00		mg/L	20	08/06/24 10:59 AM
ANIONS BY IC METHOD - WATER		**E300**					Analyst: **KES**
Chloride	41.6	3.00	10.0		mg/L	10	08/11/24 09:47 AM
Fluoride	<0.100	0.100	0.400		mg/L	1	08/08/24 01:51 AM
Sulfate	489	10.0	30.0		mg/L	10	08/11/24 09:47 AM
TOTAL DISSOLVED SOLIDS		**M2540C**					Analyst: **KER**
Total Dissolved Solids (Residue, Filterable)	1190	50.0	50.0		mg/L	1	08/05/24 04:45 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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240606A

Sample ID: **DCS1-115680** Batch ID: **115680** TestNo: **SW6020B** Units: **mg/Kg**
SampType: **DCS** Run ID: **ICP-MS4_240606A** Analysis Date: **6/6/2024 10:05:00 AM** Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	37.7	37.5	37.50	0	100	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240606B

Sample ID: **DCS2-115670**	Batch ID: **115670**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS2**	Run ID: **ICP-MS4_240606B**	Analysis Date: **6/6/2024 9:52:00 AM**	Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.270	0.300	0.300	0	90.2	70	130	0	0	

Sample ID: **DCS4-115670**	Batch ID: **115670**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **DCS4**	Run ID: **ICP-MS4_240606B**	Analysis Date: **6/6/2024 9:57:00 AM**	Prep Date: **6/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0298	0.0300	0.0300	0	99.4	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240806A

The QC data in batch 116545 applies to the following samples: 2408022-01A, 2408022-02A, 2408022-03A, 2408022-04A, 2408022-05A, 2408022-06A, 2408022-07A, 2408022-08A, 2408022-09A, 2408022-10A

Sample ID: **MB-116545** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **MBLK** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 9:29:00 AM** Prep Date: **8/5/2024**

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: **LCS-116545** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCS** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 9:31:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.196	0.0300	0.200	0	98.1	80	120			
Calcium	4.96	0.300	5.00	0	99.2	80	120			

Sample ID: **LCSD-116545** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **LCSD** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 9:33:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.191	0.0300	0.200	0	95.5	80	120	2.68	15	
Calcium	4.94	0.300	5.00	0	98.8	80	120	0.428	15	

Sample ID: **2408022-04A SD** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **SD** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 9:39:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0710	0.150	0	0.0758				6.60	20	
Calcium	2.48	1.50	0	2.49				0.305	20	

Sample ID: **2408022-04A PDS** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **PDS** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 10:03:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.272	0.0300	0.200	0.0758	98.0	75	125			
Calcium	7.11	0.300	5.00	2.49	92.5	75	125			

Sample ID: **2408022-04A MS** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **MS** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 10:05:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.276	0.0300	0.200	0.0758	100	75	125			
Calcium	7.29	0.300	5.00	2.49	96.1	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240806A

Sample ID: **2408022-04A MSD** Batch ID: **116545** TestNo: **SW6020B** Units: **mg/L**
SampType: **MSD** Run ID: **ICP-MS4_240806A** Analysis Date: **8/6/2024 10:07:00 AM** Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.267	0.0300	0.200	0.0758	95.4	75	125	3.45	15	
Calcium	7.38	0.300	5.00	2.49	97.8	75	125	1.21	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240806A

Sample ID: **ICV-240806**	Batch ID: **R134465**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_240806A**	Analysis Date: **8/6/2024 9:18:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0947	0.0300	0.100	0	94.7	90	110			
Calcium	2.53	0.300	2.50	0	101	90	110			

Sample ID: **LCVL-240806**	Batch ID: **R134465**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_240806A**	Analysis Date: **8/6/2024 9:23:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0206	0.0300	0.0200	0	103	80	120			
Calcium	0.0865	0.300	0.100	0	86.5	80	120			

Sample ID: **CCV1-240806**	Batch ID: **R134465**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240806A**	Analysis Date: **8/6/2024 10:11:00 AM**	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			
Calcium	4.89	0.300	5.00	0	97.8	90	110			

Sample ID: **CCV2-240806**	Batch ID: **R134465**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240806A**	Analysis Date: **8/6/2024 10:40:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.198	0.0300	0.200	0	98.9	90	110			
Calcium	4.72	0.300	5.00	0	94.3	90	110			

Sample ID: **CCV3-240806**	Batch ID: **R134465**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_240806A**	Analysis Date: **8/6/2024 11:09:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.191	0.0300	0.200	0	95.3	90	110			
Calcium	4.78	0.300	5.00	0	95.7	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240802A

Sample ID: **DCS2-116551** Batch ID: **116551** TestNo: **E300** Units: **mg/L**
SampType: **DCS2** Run ID: **IC2_240802A** Analysis Date: **8/2/2024 5:49:17 PM** Prep Date: **8/2/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	0.528	1.00	0.5000	0	106	70	130	0	0	
Fluoride	0.223	0.400	0.2000	0	111	70	130	0	0	
Sulfate	1.58	3.00	1.500	0	106	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240807B

The QC data in batch 116595 applies to the following samples: 2408022-01B, 2408022-02B, 2408022-03B, 2408022-04B, 2408022-05B, 2408022-06B, 2408022-07B, 2408022-08B, 2408022-09B, 2408022-10B

Sample ID: **MB-116595** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 6:03:20 PM** Prep Date: **8/7/2024**

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: **LCSD-116595** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 6:39:20 PM** Prep Date: **8/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	4.22	0.400	4.000	0	106	90	110			
Sulfate	30.7	3.00	30.00	0	102	90	110			

Sample ID: **2408023-01BMS** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 7:15:20 PM** Prep Date: **8/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	213	10.0	200.0	13.62	99.9	90	110			
Fluoride	199	4.00	200.0	0	99.6	90	110			
Sulfate	240	30.0	200.0	47.27	96.5	90	110			

Sample ID: **2408023-01BMSD** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 7:33:20 PM** Prep Date: **8/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	217	10.0	200.0	13.62	102	90	110	1.79	20	
Fluoride	203	4.00	200.0	0	102	90	110	2.00	20	
Sulfate	244	30.0	200.0	47.27	98.4	90	110	1.55	20	

Sample ID: **2408023-02BMS** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 8:09:20 PM** Prep Date: **8/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	205	10.0	200.0	9.730	97.8	90	110			
Fluoride	201	4.00	200.0	0	101	90	110			
Sulfate	237	30.0	200.0	49.01	94.1	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240807B

Sample ID: **2408023-02BMSD** Batch ID: **116595** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 8:27:20 PM** Prep Date: **8/7/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	205	10.0	200.0	9.730	97.8	90	110	0.007	20	
Fluoride	204	4.00	200.0	0	102	90	110	1.55	20	
Sulfate	238	30.0	200.0	49.01	94.5	90	110	0.292	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240807B

Sample ID: **ICV-240807** Batch ID: **R134518** TestNo: **E300** Units: **mg/L**
SampType: **ICV** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 9:52:58 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.5	1.00	25.00	0	102	90	110			
Fluoride	10.5	0.400	10.00	0	105	90	110			
Sulfate	77.6	3.00	75.00	0	103	90	110			

Sample ID: **CCV1-240807** Batch ID: **R134518** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 5:27:20 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Fluoride	4.28	0.400	4.000	0	107	90	110			
Sulfate	30.5	3.00	30.00	0	102	90	110			

Sample ID: **CCV2-240807** Batch ID: **R134518** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC2_240807B** Analysis Date: **8/7/2024 11:45:20 PM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	9.99	1.00	10.00	0	99.9	90	110			
Fluoride	4.09	0.400	4.000	0	102	90	110			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID: **CCV3-240807** Batch ID: **R134518** TestNo: **E300** Units: **mg/L**
SampType: **CCV** Run ID: **IC2_240807B** Analysis Date: **8/8/2024 3:57:20 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Fluoride	4.15	0.400	4.000	0	104	90	110			
Sulfate	30.3	3.00	30.00	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240810A

The QC data in batch 116666 applies to the following samples: 2408022-01B, 2408022-02B, 2408022-05B, 2408022-10B

Sample ID: **MB-116666** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **MBLK** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 2:17:04 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	<0.300	1.00								
Sulfate	<1.00	3.00								

Sample ID: **LCS-116666** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **LCS** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 2:35:04 AM** Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.4	3.00	30.00	0	101	90	110			

Sample ID: **LCSD-116666** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **LCSD** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 2:53:04 AM** 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	2.59	20	
Sulfate	31.3	3.00	30.00	0	104	90	110	3.01	20	

Sample ID: **2408113-02BMS** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 4:05:04 AM** Prep Date: **8/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3960	100	2000	2229	86.4	90	110			S
Sulfate	2120	300	2000	200.4	96.2	90	110			

Sample ID: **2408113-02BMSD** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 4:23:04 AM** Prep Date: **8/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	3970	100	2000	2229	87.0	90	110	0.325	20	S
Sulfate	2140	300	2000	200.4	96.9	90	110	0.683	20	

Sample ID: **2408078-01CMS** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **MS** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 7:05:04 AM** Prep Date: **8/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	257	10.0	200.0	68.84	94.2	90	110			
Sulfate	367	30.0	200.0	184.4	91.2	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240810A

Sample ID: **2408078-01CMSD** Batch ID: **116666** TestNo: **E300** Units: **mg/L**
SampType: **MSD** Run ID: **IC2_240810A** Analysis Date: **8/11/2024 7:23:04 AM** Prep Date: **8/10/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	270	10.0	200.0	68.84	100	90	110	4.73	20	
Sulfate	384	30.0	200.0	184.4	99.6	90	110	4.45	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_240810A

Sample ID: **ICV-240810**	Batch ID: **R134551**	TestNo: **E300**	Units: **mg/L**
SampType: **ICV**	Run ID: **IC2_240810A**	Analysis Date: **8/10/2024 2:18:24 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	25.5	1.00	25.00	0	102	90	110			
Sulfate	78.3	3.00	75.00	0	104	90	110			

Sample ID: **CCV1-240810**	Batch ID: **R134551**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240810A**	Analysis Date: **8/10/2024 10:59:04 PM**	Prep Date:

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			
Sulfate	30.1	3.00	30.00	0	100	90	110			

Sample ID: **CCV3-240810**	Batch ID: **R134551**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240810A**	Analysis Date: **8/11/2024 8:53:04 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.6	3.00	30.00	0	102	90	110			

Sample ID: **CCV4-240810**	Batch ID: **R134551**	TestNo: **E300**	Units: **mg/L**
SampType: **CCV**	Run ID: **IC2_240810A**	Analysis Date: **8/11/2024 12:11:04 PM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	30.3	3.00	30.00	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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240802C

The QC data in batch 116540 applies to the following samples: 2408022-01B, 2408022-02B, 2408022-03B, 2408022-04B, 2408022-05B

Sample ID: **MB-116540**	Batch ID: **116540**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_240802C**	Analysis Date: **8/2/2024 4:20:00 PM**	Prep Date: **8/2/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-116540**	Batch ID: **116540**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_240802C**	Analysis Date: **8/2/2024 4:20:00 PM**	Prep Date: **8/2/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	734	10.0	745.6	0	98.4	90	113			

Sample ID: **2408004-01B-DUP**	Batch ID: **116540**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240802C**	Analysis Date: **8/2/2024 4:20:00 PM**	Prep Date: **8/2/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1570	50.0	0	1575				0.318	5	

Sample ID: **2408004-02B-DUP**	Batch ID: **116540**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240802C**	Analysis Date: **8/2/2024 4:20:00 PM**	Prep Date: **8/2/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1630	50.0	0	1615				0.617	5	

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: BBA Engineering
Work Order: 2408022
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: WC_240805B

The QC data in batch 116564 applies to the following samples: 2408022-06B, 2408022-07B, 2408022-08B, 2408022-09B, 2408022-10B

Sample ID: **MB-116564**	Batch ID: **116564**	TestNo: **M2540C**	Units: **mg/L**
SampType: **MBLK**	Run ID: **WC_240805B**	Analysis Date: **8/5/2024 4:45:00 PM**	Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	<10.0	10.0								

Sample ID: **LCS-116564**	Batch ID: **116564**	TestNo: **M2540C**	Units: **mg/L**
SampType: **LCS**	Run ID: **WC_240805B**	Analysis Date: **8/5/2024 4:45:00 PM**	Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	728	10.0	745.6	0	97.6	90	113			

Sample ID: **2408022-10B-DUP**	Batch ID: **116564**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240805B**	Analysis Date: **8/5/2024 4:45:00 PM**	Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1230	50.0	0	1190				2.90	5	

Sample ID: **2408023-04B-DUP**	Batch ID: **116564**	TestNo: **M2540C**	Units: **mg/L**
SampType: **DUP**	Run ID: **WC_240805B**	Analysis Date: **8/5/2024 4:45:00 PM**	Prep Date: **8/5/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	1200	50.0	0	1170				2.11	5	

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

October 28, 2024

Will Vienne
BBA Engineering
165 N. Lampasas St.
Bertram, TX 78605
TEL: (512) 355-9198
FAX:

Order No.: 2410213

RE: MLSES-PDP-CCR

Dear Will Vienne:

DHL Analytical, Inc. received 1 sample(s) on 10/23/2024 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,

Don Winston For

Joel Grice
Executive VP of Environmental

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211 - TX-C24-00120

Table of Contents

DHL ANALYTICAL
2300 Double Creek Dr. Round Rock, TX 78664
Phone 512.388.8222
Web: **www.dhlanalytical.com**
Email: **login@dhlanalytical.com**

CHAIN-OF-CUSTODY

CLIENT: BBA
ADDRESS: 165 N. LAMPASAS ST. BURNET, TX
PHONE: 512-355-9198 EMAIL:
DATA REPORTED TO: WILL VIENNE
ADDITIONAL REPORT COPIES TO:

DATE: 10-22-24
PO#: 23643V-16

LAB USE ONLY
DHL WORKORDER #: 2410213

PROJECT LOCATION OR NAME: MLSES - PDP - CCR
CLIENT PROJECT # 23643V-16 COLLECTOR: JOHN BRAYTON

Authorize 5% surcharge for TRRP report? ☐ Yes ☐ No

Lab Use Only

W=WATER L=LIQUID S=SOIL SO=SOLID SE=SEDIMENT P=PAINT SL=SLUDGE

Field Sample I.D.	DHL Lab #	Collection Date	Collection Time	Matrix	Container Type	# of Containers	PRESERVATION: HCL ☐	H_3PO_4 ☐	HNO_3	H_2SO_4	NaOH ☐	Zn Acetate ☐	ICE ☒	UNPRESERVED ☐	ANALYSES	BTEX ☐ MTBE ☐ [METHOD 8260]	TPH 1005 ☐ TPH 1006 ☐ HOLD 1006 ☐	GRO 8015 ☐ DRO 8015 ☐	VOC 8260 ☐ VOC 624.1 ☐	SVOC 8270 ☐ SVOC 625.1 ☐	PAH 8270 ☐ HOLD PAH ☐	PEST 8270 ☐ 625.1 ☐ O-P PEST 8270 ☐	PCB 8082 ☐ 608.3 ☐ PCB 8270 ☐ 625.1 ☐	HERB 8321 ☐ T PHOS ☐ AMMONIA ☐	METALS 6020 ☐ 200.8 ☐ DISS. METALS ☐	RCRA 8 ☐ TX11 ☐ _____	pH☐ HEX CHROM☐ ALKALINITY☐ COD☐	ANIONS 300 ☐ 9056 ☐ _____	TCLP-SVOC ☐ VOC ☐ PEST ☐ HERB ☐	TCLP-METALS ☐ RCRA 8 ☐ TX-11 ☐ Pb ☐	RCI ☐ IGN ☐ DGAS ☐ OIL&GREASE ☐	TDS ☐ TSS ☐ % MOIST ☐ CYANIDE ☐	BORON			FIELD NOTES
MW-19	01	10-22-24	1240	W	P	1			X				X																					X				

Relinquished By: (Sign) DATE/TIME 10-23-24 1652 Received by:
Relinquished By: (Sign) DATE/TIME Received by:
Relinquished By: (Sign) DATE/TIME Received by:

TURN AROUND TIME (CALL FIRST FOR RUSH)
RUSH-1 DAY☐ RUSH-2 DAY☐ RUSH-3 DAY☐
~~NORMAL~~ ☒ OTHER ☐
DUE DATE _____ ☐

LAB USE ONLY **THERMO #:** 78
RECEIVING TEMP (°C): 2.6
IF >6°C, ARE SAMPLES ON ICE AND JUST COLLECTED? YES / NO
CUSTODY SEALS ON ICE CHEST: ☐ BROKEN ☐ INTACT ☒ NOT USED
CARRIER: ☐ LSO ☐ FEDEX ☐ UPS ☐ COURIER ☒ HAND DELIVERED

☐ **DHL DISPOSAL @ $10.00 each**

ASAP Rush per Will Vienne
EL 10/25/2024

DHL Analytical, Inc.

Sample Receipt Checklist

Client Name: **BBA Engineering**

Date Received: **10/23/2024**

Work Order Number: **2410213**

Received by: **EL**

Checklist completed by: _____ 10/23/2024 (Signature / Date)

Reviewed by: SH 10/23/2024 (Initials / Date)

Carrier name: Hand Delivered

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? no		Checked by EL
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 2.0

Seal Intact NP

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

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist: Reportable Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 10/28/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2410213**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
		Chain-of-Custody (C-O-C)					
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	**Sample and Quality Control (QC) Identification**					
		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	**Test Reports**					
		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	**Surrogate Recovery Data**					
		1) Were surrogates added prior to extraction?			**X**		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			**X**		
R5	OI	**Test Reports/Summary Forms for Blank Samples**					
		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, **greater** than 10 times the concentration in the blank sample?			**X**		
R6	OI	**Laboratory Control Samples (LCS):**					
		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	**Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data**					
		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**			**R7-03**
		4) Were MS/MSD RPDs within laboratory QC limits?	**X**				
R8	OI	**Analytical Duplicate Data**					
		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	**Method Quantitation Limits (MQLs):**					
		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	**Other Problems/Anomalies**					
		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**				

Laboratory Name: DHL Analytical, Inc.

Laboratory Review Checklist (continued): Supporting Data

Project Name: MLSES-PDP-CCR	**LRC Date:** 10/28/2024
Reviewer Name: Angie O'Donnell	**Laboratory Work Order: 2410213**
Prep Batch Number(s): See Prep Dates Report	**Run Batch:** See Analytical Dates Report

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial Calibration (ICAL)**					
		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	**Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):**					
		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	**Mass Spectral Tuning:**					
		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	**Internal Standards (IS):**					
		1) Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw Data (NELAC Section 5.5.10)**					
		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	**Dual Column Confirmation**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively Identified Compounds (TICs):**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) Results:**					
		1) Were percent recoveries within method QC limits?	X				
S9	I	**Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method Detection Limit (MDL) Studies**					
		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	**Proficiency Test Reports:**					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards Documentation**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/Analyte Identification Procedures**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of Analyst Competency (DOC)**					
		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	**Verification/Validation Documentation for Methods** (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory Standard Operating Procedures (SOPs):**					
		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: Joel Grice
Official Title: Executive VP of Environmental

Don Winston For — Signature

10-28-2024 — Date

Name: Don Winston
Official Title: Technical Director

DHL Analytical, Inc. **Date:** *28-Oct-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2410213

CASE NARRATIVE

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

Method SW6020B - Metals Analysis

Exception Report R1-01

The samples were received and log-in performed on 10/23/2024. A total of 1 sample was received and analyzed. The sample arrived in good condition and was properly packaged.

Exception Report R7-03

For Metals Analysis, the recovery of Boron for the Matrix Spike and Matrix Spike Duplicate (2410196-13 MS/MSD) was above the method control limits. This is flagged accordingly in the QC Summary Report. This analyte was within method control limits in the associated LCS. No further corrective action was taken.

DHL Analytical, Inc.

Date: *28-Oct-24*

CLIENT: BBA Engineering
Project: MLSES-PDP-CCR
Lab Order: 2410213

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
2410213-01	MW-19		10/22/24 12:40 PM	10/23/2024

Lab Order: 2410213
Client: BBA Engineering
Project: MLSES-PDP-CCR

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
2410213-01A	MW-19	10/22/24 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/25/24 06:59 AM	117696
	MW-19	10/22/24 12:40 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	10/25/24 06:59 AM	117696

Lab Order: 2410213
Client: BBA Engineering
Project: MLSES-PDP-CCR

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
2410213-01A	MW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	117696	1	10/28/24 11:15 AM	ICP-MS5_241028A
	MW-19	Aqueous	SW6020B	Total Metals: ICP-MS - Water	117696	1	10/28/24 12:04 PM	ICP-MS4_241028B

DHL Analytical, Inc.

Date: *28-Oct-24*

CLIENT:	BBA Engineering	**Client Sample ID:**	MW-19
Project:	MLSES-PDP-CCR	**Lab ID:**	2410213-01
Project No:	23643V-16	**Collection Date:**	10/22/24 12:40 PM
Lab Order:	2410213	**Matrix:**	AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TOTAL METALS: ICP-MS - WATER		**SW6020B**					Analyst: **CMC**
Boron	0.713	0.0100	0.0300		mg/L	1	10/28/24 12:04 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: *28-Oct-24*

CLIENT: BBA Engineering
Work Order: 2410213
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_240910A

Sample ID: **DCS4-117075**	Batch ID: **117075**	TestNo: **SW6020B**	Units: **mg/L**		
SampType: **DCS4**	Run ID: **ICP-MS4_240910A**	Analysis Date: **9/10/2024 11:10:00 AM**	Prep Date: **9/6/2024**		

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0292	0.0300	0.0300	0	97.3	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: BBA Engineering
Work Order: 2410213
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_241028B

The QC data in batch 117696 applies to the following samples: 2410213-01A

Sample ID: **MB-117696**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MBLK**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 11:50:00 A**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	<0.0100	0.0300								

Sample ID: **LCS-117696**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCS**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 11:52:00 A**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.191	0.0300	0.200	0	95.4	80	120			

Sample ID: **LCSD-117696**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCSD**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 11:54:00 A**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.208	0.0300	0.200	0	104	80	120	8.57	15	

Sample ID: **2410196-13B SD**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **SD**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 12:03:00 P**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	7.98	3.00	0	7.39				7.73	20	

Sample ID: **2410196-13B PDS**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **PDS**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 12:18:00 P**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	11.6	0.600	4.00	7.39	105	75	125			

Sample ID: **2410196-13B MS**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MS**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 12:20:00 P**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	7.88	0.600	0.200	7.39	245	75	125			S

Sample ID: **2410196-13B MSD**	Batch ID: **117696**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **MSD**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 12:22:00 P**	Prep Date: **10/25/2024**

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	7.81	0.600	0.200	7.39	211	75	125	0.879	15	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: BBA Engineering
Work Order: 2410213
Project: MLSES-PDP-CCR

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_241028B

Sample ID: **ICV-241028**	Batch ID: **R135885**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **ICV**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 9:39:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0951	0.0300	0.100	0	95.1	90	110			

Sample ID: **LCVL-241028**	Batch ID: **R135885**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **LCVL**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 9:45:00 AM**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.0237	0.0300	0.0200	0	118	80	120			

Sample ID: **CCV1-241028**	Batch ID: **R135885**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 10:25:00 A**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.198	0.0300	0.200	0	98.9	90	110			

Sample ID: **CCV2-241028**	Batch ID: **R135885**	TestNo: **SW6020B**	Units: **mg/L**
SampType: **CCV**	Run ID: **ICP-MS4_241028B**	Analysis Date: **10/28/2024 12:25:00 P**	Prep Date:

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.200	0.0300	0.200	0	99.9	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

DHL Analytical, Inc.

Date: *28-Oct-24*

CLIENT: BBA Engineering
Work Order: 2410213
Project: MLSES-PDP-CCR

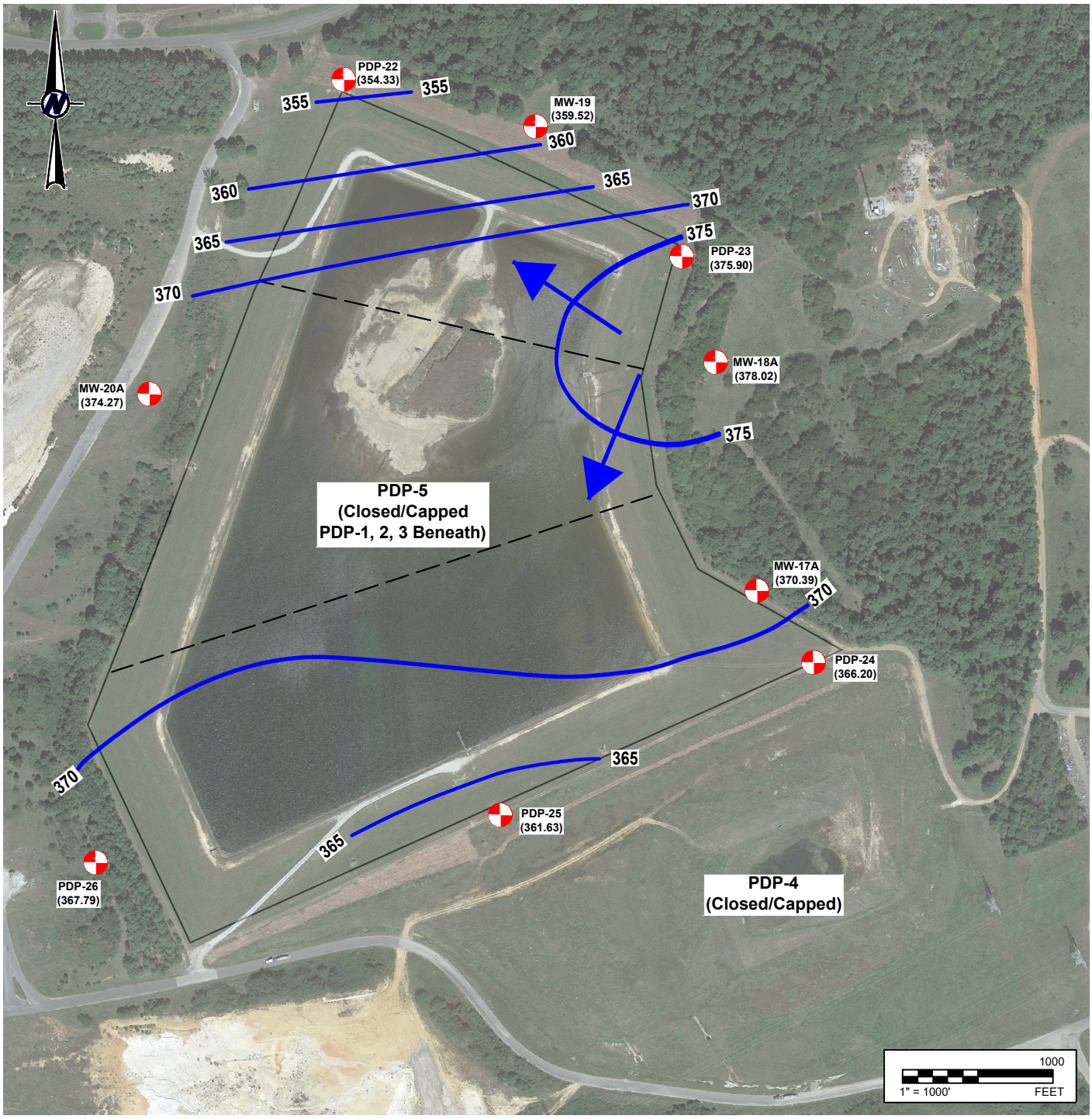
MQL SUMMARY REPORT

TestNo: SW6020B	MDL	MQL
Analyte	**mg/L**	**mg/L**
Boron	0.0100	0.0300

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

APPENDIX C

2024 GROUNDWATER POTENTIOMETRIC SURFACE MAPS



LEGEND

- CCR MONITORING WELL LOCATION
- (374.34) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

01/31/2025

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

LUMINANT

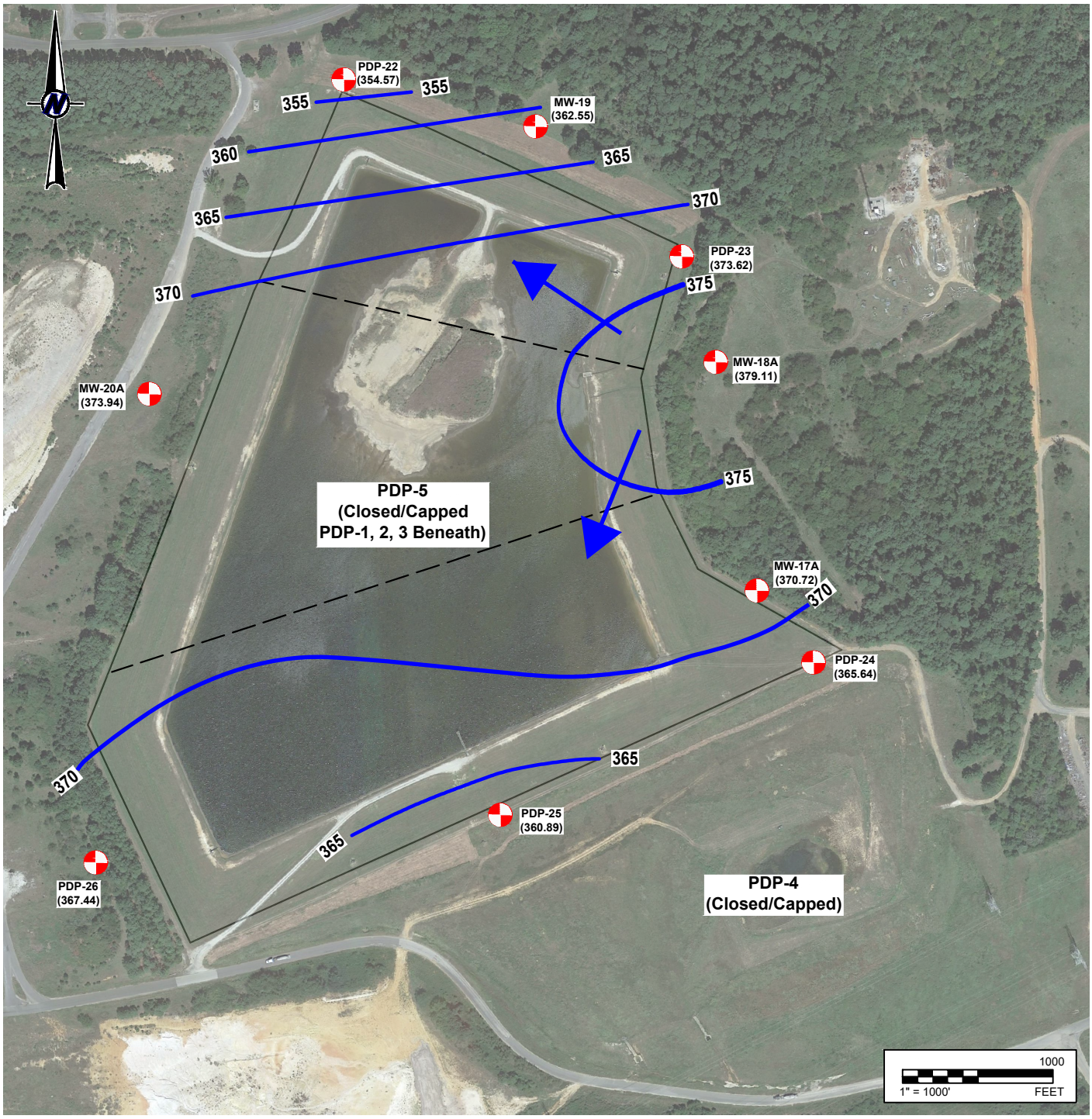
MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

PDP 5
POTENTIOMETRIC SURFACE MAP
MAY 31, 2024

PROJECT: 23643.03	BY: SLB	DATE: 7/22/2024	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps



LEGEND

- CCR MONITORING WELL LOCATION
- (374.34) GROUNDWATER POTENTIOMETRIC SURFACE (FT MSL)
- 360 GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR (C.I. = 5 FT)
- INFERRED GROUNDWATER FLOW DIRECTION

REFERENCE(S)

BASE MAP TAKEN FROM GOOGLE EARTH, IMAGERY DATED SEPTEMBER 8, 2021.

STATE OF TEXAS
WILLIAM F VIENNE
GEOLOGY
No. 10492
LICENSED
PROFESSIONAL GEOSCIENTIST

01/31/2025

LUMINANT

MARTIN LAKE STEAM ELECTRIC STATION
TATUM, TEXAS

PDP 5
POTENTIOMETRIC SURFACE MAP
JULY 30, 2024

PROJECT: 23643.03	BY: SLB	DATE: 01/08/2025	CHECKED: WV

Bullock, Bennett & Associates, LLC
Engineering and Geoscience
Texas Registrations: Engineering F-8542, Geoscience 50127

C:\BBA Engineering Dropbox\Jobs\23643 - Luminant Env Support\5 Technical Work\CCR GW Monitoring\23643-03 Martin Lake\Pot Maps