2018 Annual Groundwater Monitoring and Corrective Action Report

Limestone Electric Generating Station, Jewett, Texas

Secondary E Pond Unit (Unit 003)
Landfill Unit (Unit 004)

January 31, 2019

Prepared For
NRG Texas Power, LLC
Jewett, Texas

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Executive Summary

Pursuant to 40 Code of Federal Regulations (CFR) Part §257.90(e) and (f) of the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, Final Rule (CCR Rule), the owner or operator of an existing coal combustion residuals (CCR) unit must prepare an annual groundwater monitoring and corrective action report (Annual Report) no later than January 31, 2019, addressing the preceding calendar year (2018). The Annual Report must "document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year".

TRC Environmental Corporation (TRC) has prepared this Annual Report for the Secondary E Pond (Unit 003) and the Landfill (Unit 004) CCR units located at the Limestone Electric Generating Station (Station) on behalf of NRG Texas Power, LLC (NRG) in accordance with §257.90(e) of the CCR Rule. This Annual Report provides the information specified in §257.90(e), including a summary of samples collected, field and laboratory analytical data, potentiometric surface maps, and determination of groundwater flow direction and apparent groundwater velocity for the May and October 2018 semi-annual detection monitoring events. Furthermore, pursuant to §257.94(e)(2), this Annual Report provides the alternative source demonstration (ASD) that successfully addressed potential statistically significant increases (SSIs) above background for the first semi-annual detection monitoring event (October 2017) for the Secondary E Pond, which maintains detection monitoring for the facility.

During 2018, the following problems were encountered in the CCR groundwater monitoring program for the Station as follows:

- Three of the four ponds identified as CCR units during 2015 were, upon further evaluation, determined not to be CCR units under the CCR Rule, as a result the number of CCR units for the Station was reduced from five to two. The Secondary E Pond and Landfill were retained as CCR Units, while the E Pond (Unit 019), ST-18 stormwater pond, and the K Pond (BACP) were removed from the Station's CCR groundwater monitoring system;
- The previously selected statistical method for evaluation of groundwater monitoring data was revised; and
- Initial representation of background groundwater quality for the Secondary E Pond was determined to be inadequate based on groundwater flow direction and two wells were installed and added to the groundwater monitoring network.

Details regarding the revisions are provided in this report.

In addition to resolving the above-noted problems encountered in the groundwater monitoring program during 2018, the following key actions were completed:

- Pursuant to 40 Code of Federal Regulations (CFR) Part §257.90(e) and (f) of the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, Final Rule (CCR Rule), the facility prepared the 2017 annual groundwater monitoring and corrective action report (Annual Report), placed the report in the facility's Operating Record on January 31, 2018, and posted the report on the facility's public CCR website on March 2, 2018.
- Collection of semi-annual detection monitoring samples for the Secondary E Pond and the Landfill, which were analyzed for the Appendix III, Part 257 of the CCR Rule detection monitoring parameters;
- Preparation of groundwater potentiometric surface maps, determination of the direction of groundwater flow, and calculation of average groundwater flow velocities for both semi-annual detection monitoring events for the Secondary E Pond and the Landfill;
- Performance of statistical analysis for the first (October 2017) and second (May 2018) semi-annual detection monitoring events;
- Identification of SSIs above background for the Secondary E Pond for the first and second semi-annual detection monitoring events, SSIs were not identified for the Landfill;
- Completion of a written ASD successfully evaluating the first semi-annual detection monitoring event SSIs for the Secondary E Pond, allowing the Station to remain in detection monitoring during 2018;
- Installation of two new groundwater monitoring wells (MW-45 and MW-46) at the Secondary E Pond, which were incorporated into the Secondary E Pond groundwater monitoring network;
- Collection of baseline background groundwater monitoring data for the Appendix III, Detection Monitoring and Appendix IV, Assessment Monitoring parameters for (MW-45 and MW-46); and
- Certification of revised Groundwater Monitoring Network and Statistical Methods by a Texas professional engineer based on completing the above-noted key actions.

No corrective action activities were performed at the Secondary E Pond or the Landfill pursuant to the CCR Rule during 2018.

Looking ahead to 2019, key activities projected for 2019 are as follows:

- Completion of the 2018 annual groundwater monitoring and corrective action report (Annual Report), placment of the report in the facility's Operating Record by January 31, 2019, and placement of the report on the facility's public CCR website by March 2, 2019.

- Preparation of ASD(s) to evaluate SSIs over background for the Secondary E Pond (Unit 003) for the second semi-annual detection monitoring event (May 2018);
- If required, preparation of ASD(s) to evaluate SSIs over background for the third semi-annual detection monitoring event (October 2018);
- Performance of statistical analysis of the third and fourth semi-annual detection monitoring events (October 2018 and April 2019 sampling) to identify potential SSIs over background for all Appendix III parameters;
- Collection of baseline, background samples for MW-45 and MW-46 (six sampling events anticipated) for analysis for the Appendix III, Detection monitoring and Appendix IV, Assessment monitoring CCR constituents; and
- Performance of the fourth and fifth semi-annual detection monitoring events, which are targeted for April and October 2019, and will include:
  - Preparation of groundwater potentiometric surface maps, determination of groundwater flow direction, and calculation of apparent groundwater flow velocity.

Section 1
Introduction

1.1 CCR Program Summary

On April 17, 2015, the United States Environmental Protection Agency (USEPA) published the final rule establishing criteria for the management of Coal Combustion Residuals (CCR) under Subtitle D of the Resource Conservation and Recovery Act (RCRA; the CCR Rule). The CCR Rule applies to the NRG Texas Power, LLC Secondary E Pond (Unit 003) and the Landfill (Unit 004) CCR units at the Limestone Electric Generating Station (Station).

Pursuant to §257.90(e) and (f) of the CCR Rule, no later than January 31, 2019, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report (Annual Report) for the CCR units addressing the preceding calendar year. The Annual Report must "document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year". TRC Environmental Corporation (TRC) has prepared this Annual Report for the Secondary E Pond and the Landfill on behalf of NRG Texas Power, LLC in accordance with §257.90(e).

Pursuant to §257.90(f) of the CCR Rule, the owner or operator must comply with the recordkeeping requirements of §257.106(h), the notification requirements of §257.106(h), and the maintenance of a publicly accessible CCR Web site requirements of §257.107(h).

1.2 Station Overview

The Limestone Station (Station) is located northwest of Jewett, near the borders of Limestone, Freestone, and Leon Counties, Texas (see Figure 1-1). The Station is bisected by Farm-to-Market Road 39 (FM39) with the electricity generating portion to the west of FM39 in Limestone County and a solid waste disposal area (SWDA) and CCR impoundment area to the east of FM39 in Freestone County. The Station currently uses western coal as a fuel source to power the boilers. The spent coal fuels or CCR have been classified by the Texas Commission on Environmental Quality (TCEQ) as a Class II Nonhazardous waste and consist of fly ash, bottom ash, and flue gas desulfurization (FGD) scrubber sludge. The Station has two active CCR units that are managed pursuant to the CCR Rule:

- Secondary E Pond Unit (Unit 003), and

- Landfill Unit (Unit 004).

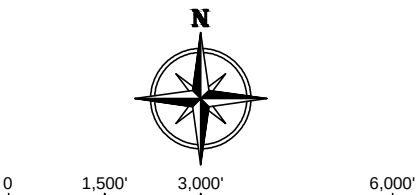
The Secondary E Pond is used for the stabilization of FGD residuals from the chloride purge storage tank, and wastewater from the E Pond, and can include FGD wastewater and storm water containing FGD solids, bottom ash, and fly ash. These materials are temporarily stored in the Secondary E Pond before final placement in the onsite Landfill.

The Landfill is located east of FM39 in the northern portion of the Solid Waste Disposal Area (SWDA). The landfill is located to the north of the intermittent Lynn Creek. The Landfill was constructed in 1980 and is used for the final placement of CCR. The Landfill is divided into multiple areas for organization purposes. The western half of the landfill has reached capacity and is capped. CCR is currently being placed at the southern portion of the landfill.

The locations of the Secondary E Pond and the Landfill are shown on Figure 1-2.

REFERENCE: U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLES
DONIE, TEXAS (2016)
FARRAR, TEXAS (2016)

TEXAS
QUADRANGLE LOCATION



SCALE IN FEET
1" = 3,000'-0"

PROJECT:
NRG TEXAS POWER, LLC
Limestone Electric Generating Station
Jewett, Texas

TITLE:
SITE LOCATION MAP

DRAWN BY:	O. Fonseka	PROJECT No.:	298367.0000.0000
CHECKED BY:	T. Dworaczyk		
APPROVED BY:	T. Dworaczyk		**FIGURE 1-1**
DATE:	January 2019		

TRC
10550 Richmond Ave.
Suite 210
Houston, TX 77042
Phone: 713.244.1000

FILE: Fig 1-1 - NRG-LimestoneStation - Site Location Map.dwg

HOU M:\ACAD-TRC\DRAFTING\CLIENT-Name- K-L-M-N-O\NRG\Limestone Station - Jewett-TX\2019 - CCR-Report\ Fig 1-1 - NRG-LimestoneStation - Site Location Map.dwg 01/16/19

PROJECT:
NRG TEXAS POWER, LLC
Limestone Electric Generating Station
Jewett, Texas

TITLE:
SECONDARY E POND AND LANDFILL CCR UNITS LOCATION MAP

DRAWN BY:	O. Fonseka	PROJECT No.:	298367.0000.0000
CHECKED BY:	T. Dworaczyk		**FIGURE 1-2**
APPROVED BY:	T. Dworaczyk		
DATE:	January 2019		

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Suite 210
Houston, TX 77042
Phone: 713.244.1000

File: Fig 1-2 - NRG-LimestoneStation - Secondary E Pont-n-Landfill CCR Units.dwg

Section 2
Groundwater Monitoring

2.1 Groundwater Monitoring Network

This section describes the groundwater monitoring networks now in place for the Secondary E Pond and Landfill CCR Units at the Station.

2.1.1 Secondary E Pond (Unit 003)

The groundwater monitoring system for the Secondary E Pond initially consisted of four monitoring wells (MW-05, MW-29, MW-43, and MW-44) screened into the uppermost aquifer both hydraulically upgradient and downgradient of the Secondary E Pond (see Figure 2-1). Well MW-29 is located hydraulically upgradient of the Secondary E Pond and monitors background quality in the uppermost aquifer. The remaining three wells (MW-05, MW-43, and MW-44) are located hydraulically downgradient or cross-gradient of the Secondary E Pond and monitor the quality of groundwater in the uppermost aquifer passing beneath the waste boundary of the Secondary E Pond.

Groundwater monitoring wells MW-45 and MW-46 were installed in September 2018 and added to the groundwater monitoring system. MW-45 was installed to provide a second upgradient, background well to provide a more representative determination of upgradient, background groundwater quality for statistical analysis. MW-46 was installed to the south of the Secondary E Pond between the Secondary E Pond and an adjoining natural gas production well pad to enhance the monitoring of groundwater passing beneath the waste boundary of the Secondary E Pond. No other additional monitoring wells were installed or decommissioned as part of the CCR groundwater monitoring system for the Secondary E Pond during 2018.

2.1.2 Landfill (Unit 004)

The groundwater monitoring system for the Landfill consists of 10 monitoring wells (MW-1, MW-2, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-27, and MW-28) screened into the uppermost aquifer both hydraulically upgradient and downgradient of the Landfill (see Figure 2-1). Wells MW-27 and MW-28 are located hydraulically upgradient of the Landfill and monitor background quality in the uppermost aquifer. The remaining eight wells (MW-1, MW-2, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22) are located downgradient of the Landfill (Unit 004) and monitor the quality of

groundwater in the uppermost aquifer passing beneath the waste boundary of the Landfill (Unit 004).

No monitoring wells were installed or decommissioned as part of the CCR groundwater monitoring system for the Landfill during 2018.

2.2 Semi-Annual Detection Monitoring Sampling

Semi-annual groundwater quality samples were collected from the Secondary E Pond and the Landfill monitoring well networks in accordance with §257.93, Groundwater sampling and analysis requirements, and §257.94, Detection monitoring program. Sample collection was performed during May and October 2018.

Prior to sample collection, each well was visually inspected for conditions that could potentially affect the validity of the analytical results. The results of the inspection were documented on a Water Sample Log. No deficiencies in well construction were noted during either semi-annual detection monitoring event.

Groundwater samples were analyzed for parameters pursuant to §257.94(a) (Appendix III, Part 257 of the CCR Rule). Additionally, field parameters (pH, temperature, specific conductivity, and turbidity) were obtained for all monitoring wells.

2.2.1 Groundwater Flow Direction and Gradient

Static groundwater elevations were measured during the May and October 2018 semi-annual detection monitoring events. These measurements are provided in Tables 2-1 for the Secondary E Pond and the Landfill. Groundwater potentiometric surface maps were developed for the May and October 2018 semi-annual detection monitoring events to evaluate groundwater flow direction and to calculate groundwater flow rates. The potentiometric surface maps are provided in Figures 2-1 and 2-2 for the Secondary E Pond and in Figures 2-2 and 2-3 for the Landfill.

Groundwater elevation data collected during the semi-annual monitoring events show that groundwater is typically encountered at depths ranging from 38.75 (MW-44) to 67.64 (MW-46) feet below the top of casing (btoc) at the Secondary E Pond, with the overall direction of groundwater flow beneath and in the vicinity of the Secondary E Pond to the southwest. Groundwater is typically encountered at depths ranging from 2.59 (MW-17) to 31.54 (MW-28) feet btoc at the Landfill, with the overall direction of groundwater flow beneath and in the vicinity of the Landfill to the south-southeast. Based on the semi-annual detection monitoring data, there does not appear to be significant seasonal changes in groundwater flow direction at either CCR unit. The

calculated groundwater gradient were variable depending on lithology and ranged from 0.00119 to 0.00168 foot/foot (ft/ft) at the Secondary E Pond and from 0.00512 to 0.00515 ft/ft at the Landfill.

2.2.2 Data Summary

TRC performed field sampling in May 2018 and Hydrologic Monitoring Inc. (HMI) performed field sampling in October 2018 under contract to TRC in accordance with §257.93, Groundwater sampling and analysis requirements, and §257.94, Detection monitoring program. The samples were analyzed by TestAmerica located in Houston, Texas, which is a TCEQ certified laboratory (TCEQ ID T104704223-18-23). Static water elevation data were collected at all CCR monitoring well locations (see Figure 2-1). Groundwater samples were collected from the background monitoring wells (MW-29 for the Secondary E Pond, and MW-27 and MW-28 for the Landfill) and the downgradient monitoring wells (MW-5, MW-43, and MW-44 for the Secondary E Pond; and MW-1, MW-2, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22 for the Landfill) for laboratory analysis for the Appendix III, Part 257 of the CCR rule detection monitoring parameters, and for field parameters. Field and laboratory analytical data are included in Appendices A and B. Table 2-1 provides static water elevation data and Table 2-2 provides a summary of the semi-annual detection monitoring analytical data.

2.2.3 Data Quality Review

Upon receipt from the laboratory, data from both semi-annual detection monitoring events were evaluated for completeness, overall quality and usability, method-specified sample holding times, precision and accuracy, and potential sample contamination. TRC concluded that the data were complete and usable for the purposes of the CCR monitoring program. Data quality review information is provided in Appendix C.

Table 2-1
Summary of Groundwater Elevation Data
May and October 2018
Limestone Electric Generating Station - Jewett, Texas

Monitor Well ID	Measurement Date	Top of Casing (ft. MSL)	Depth to Water (ft.)	Groundwater Elevation (ft. MSL)
Landfill				
MW-01	5/8/2018	420.84	3.24	417.60
	10/30/2018	420.84	3.39	417.45
MW-02	5/8/2018	430.01	7.39	422.62
	10/30/2018	430.01	7.58	422.43
MW-17	5/8/2018	421.22	2.59	418.63
	10/30/2018	421.22	2.69	418.53
MW-18	5/8/2018	436.30	13.58	422.72
	10/30/2018	436.30	14.36	421.94
MW-19	5/4/2018	443.79	21.78	422.01
	10/30/2018	443.79	22.50	421.29
MW-20	5/4/2018	445.44	23.42	422.02
	10/30/2018	445.11	23.97	421.14
MW-21	5/3/2018	446.35	21.09	425.26
	10/30/2018	446.35	22.15	424.20
MW-22	5/3/2018	447.59	20.39	427.20
	10/30/2018	447.59	22.25	425.34
MW-27	5/7/2018	457.43	19.33	438.10
	10/30/2018	457.43	20.48	436.95
MW-28	5/7/2018	477.52	31.28	446.24
	10/30/2018	477.52	31.54	445.98
Secondary E Pond				
MW-05	5/10/2018	464.26	41.84	422.42
	10/30/2018	464.26	42.60	421.66
MW-26	10/30/2018	484.49	63.20	421.29
MW-29	5/10/2018	475.88	53.23	422.65
	10/30/2018	475.88	53.96	421.92
MW-43	5/10/2018	464.51	42.42	422.09
	10/30/2018	464.51	43.02	421.49
MW-44	5/10/2018	461.11	38.75	422.36
	10/30/2018	461.11	39.32	421.79
MW-45	10/30/2018	482.52	60.58	421.94
MW-46	10/30/2018	489.53	67.64	421.89

Table 2-2
Summary of Groundwater Elevation Data
May and October 2018
Limestone Electric Generating Station - Jewett, Texas

			Appendix III Analytes						
		Analyte	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved
		Unit	mg/L	mg/L	mg/L	mg/L	su	mg/L	mg/L
Well ID	Duplicate	Sample Date							
Landfill									
MW-01	N	5/8/2018	< 0.0700 U	51.7	219	0.363 [JL]	5.81	0.478 J	692
	N	10/30/2018	< 0.0700	51.2	262 [JL]	0.748	5.99	3.88	1100
MW-02	N	5/8/2018	< 0.0700 U	110	426	0.289 J[JL]	5.73	17.1	1440
	FD	5/8/2018	0.232	109	416	0.275 J[JL]	5.73	17.0	1480
	N	10/30/2018	< 0.0700	103	489 [UJL]	< 1.20	5.95	26.5	1960
MW-17	N	5/8/2018	< 0.0700 U	3.22	15.6	0.416	5.30	6.80	557
	N	10/30/2018	< 0.0700	3.60	15.5 [JL]	0.332	6.21	7.87	199
MW-18	N	5/8/2018	< 0.0700 U	49.7	17.6	0.373	6.17	26.0	326
	N	10/30/2018	< 0.0700	59.1	14.6 [JL]	0.447	6.47	32.6	365
MW-19	N	5/4/2018	< 0.0700 U	39.0 [JL]	61.2	0.336	5.73	74.1	361
	N	10/30/2018	< 0.0700	39.6	67.0 [JL]	0.399	5.85	94.6	387
MW-20	N	5/4/2018	< 0.0700 U	37.7 [JL]	38.8	0.463	6.14	63.9	433
	N	10/30/2018	< 0.0700	36.5	39.2 [JL]	0.465	6.46	68.8	495
MW-21	N	5/3/2018	0.0797 J	55.4 [JL]	59.3	0.354	5.63	147	485
	N	10/30/2018	0.107	76.2	58.7 [JL]	< 0.601	5.51	259	689
MW-22	N	5/3/2018	< 0.0700 U	41.2 [JL]	32.9	0.361	5.72	41.1	268
	N	10/30/2018	< 0.0700	41.3	43.1 [JL]	0.398	5.50	54.7	299
MW-27	N	5/7/2018	0.168	345	1170	< 0.301 U[UJL]	6.59	299	4340
	N	10/30/2018	< 0.0700	157	153 [JL]	< 3.01	8.90	140	926
MW-28	N	5/7/2018	0.241	354	1260	0.489 J[JL]	5.29	692	4640
	N	10/30/2018	0.185	396	1640 [JL]	< 30.1	5.67	882	6250
Secondary E Pond									
MW-05	N	5/10/2018	< 0.0700 U	19.3	24.3	< 0.601 U[UJL]	5.42	61.8	274
	N	10/30/2018	< 0.0700	24.5	28.2	0.426	6.10	72.4	365
MW-26	N	10/30/2018	< 0.0700 U	45.3	236 [JL]	0.609 J	5.76	13.0	1050
MW-29	N	5/10/2018	< 0.0700 U	14.5	21.4	0.442 [JL]	6.10	26.7	228
	N	10/30/2018	< 0.0700	15.9	19.8 [JL]	0.458	6.47	33.0	257
MW-43	N	5/10/2018	< 0.0700 U	107	11.0	0.347 [JL]	6.22	27.7	960
	N	10/30/2018	< 0.0700	85.8	88.9 [JL]	1.35	6.23	364	1270
	FD	10/30/2018	< 0.0700	105	113 [JL]	1.28	6.23	390	1220
MW-44	N	5/10/2018	< 0.0700 U	27.3	26.1	< 1.20 U[UJL]	6.26	33.8	465
	N	10/30/2018	< 0.0700	25.0	27.3 [JL]	0.863	6.53	41.1	544
MW-45	N	10/30/2018	< 0.0700	406	1380 [JL]	< 6.01	6.18	56.1	6480
MW-46	N	10/30/2018	< 0.0700	567	3130 [JL]	< 6.01	5.66	18.7	9190

Notes:

FD Field duplicate
N Normal sample
J Concentration is an estimated value. Result is less than the method quantittion limit but ≥ to the method detection limit.
U Analyte was not detected at or above the method detection limit.
[JL] Qualified during the data usability assessment as detected at an estimated concentration with low bias.
[JH] Qualified during the data usability assessment as detected at an estimated concentration with high bias.
[UJL] Qualified during the data usability assessment as non-detect with low bias.

TRC - GIS

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet (Foot US)
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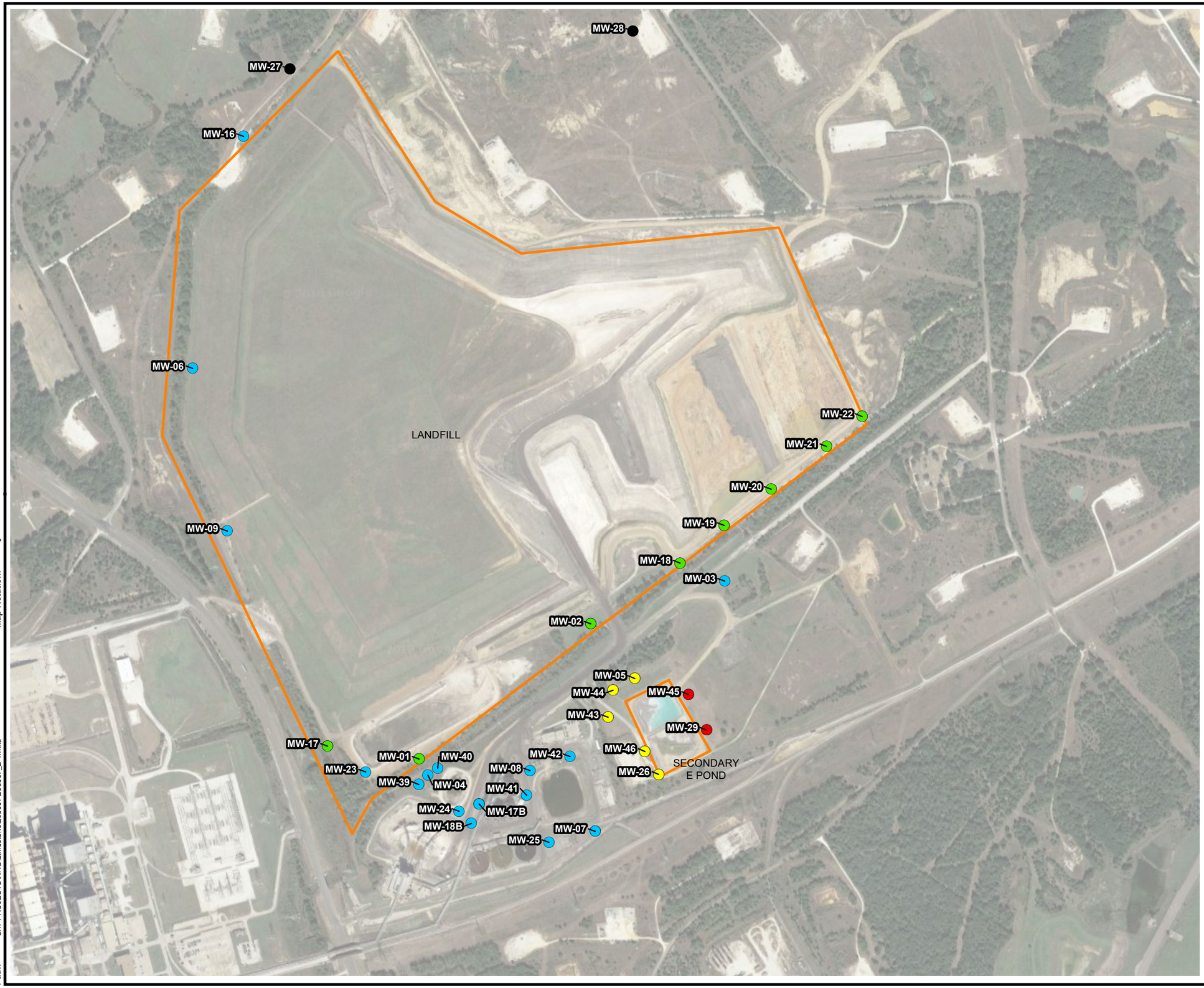
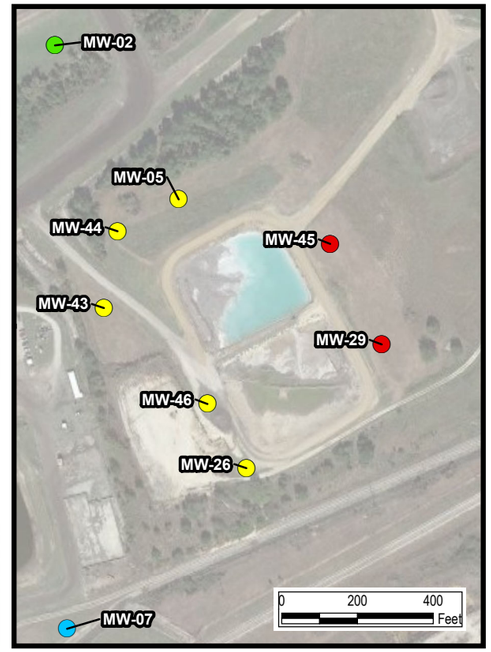


LEGEND

- MONITORING WELL LOCATION
- LANDFILL BACKGROUND CCR MONITORING WELL LOCATION
- LANDFILL CCR MONITORING WELL LOCATION
- SECONDARY E POND CCR MONITORING WELL LOCATION
- SECONDARY E POND BACKGROUND CCR MONITORING WELL LOCATION
- CCR UNIT BOUNDARY



0 350 700 Feet

1 " = 700 '

1:8,400

N

PROJECT:

NRG TEXAS POWER, LLC
LIMESTONE
JEWETT, TEXAS

TITLE:

CCR GROUNDWATER MONITORING NETWORKS MAP

DRAWN BY:	S.RAY	PROJ. NO.:	314092.0000
CHECKED BY:	J. SPEER		
APPROVED BY:	J. SPEER		**FIGURE 2-1**
DATE:	JANUARY 2019		

TRC

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Austin, TX 78752
Phone: 512.329.6080
www.trcsolutions.com

FILE NO.: 298367_2-1.mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet (Foot US)
Map Rotation: 0

Plot Date: 1/29/2019, 12:49:15 PM by SRAY -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\NRG\Limestone\298367\298367_2-2.mxd

LEGEND

- MONITORING WELL
- 446.24 GROUNDWATER ELEVATION (FEET MSL)
- NM NOT MEASURED
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER POTENTIOMETRIC SUFRACE CONTOUR (FEET) - DASHED WHERE INFERRED

MW-27 438.10
MW-28 446.24
MW-16 NM
MW-06 NM
MW-09 NM
MW-22 427.20
MW-21 425.26
MW-20 422.02
MW-19 422.01
MW-18 422.72
MW-03 NM
MW-02 422.62
MW-05 422.45
MW-44 422.36
MW-43 422.09
MW-29 422.65
MW-26 NM
MW-08 420.65
MW-42 421.60
MW-07 420.87
MW-25 NM
MW-01 417.60
MW-40 417.62
MW-17 418.63
MW-23 NM
MW-39 418.07
MW-04 417.59
MW-17B 419.72
MW-41 420.43
MW-24 NM
MW-18B NM

SEC E POND

0 500 1,000 Feet

NOTE:

MONITORING WELLS MW -45 AND MW-46 NOT SHOWN (INSTALLED IN SEPTEMBER 2018).

N

0 700 1,400 Feet

1 " = 700 '
1:8,400

STATE OF TEXAS
JULIE ANN SPEER
GEOLOGY
11935
LICENSED
PROFESSIONAL GEOSCIENTIST
Julie Speer
01-28-2019

PROJECT:
NRG TEXAS POWER, LLC
LIMESTONE
JEWETT, TEXAS

TITLE:
GROUNDWATER POTENTIOMETRIC SUFRACE MAP - MAY 2018

DRAWN BY:	SRAY	PROJ. NO.:	298367.0000.0000
CHECKED BY:	JSPEER		
APPROVED BY:	JSPEER		
DATE:	JANUARY 2019		

FIGURE 2-2

TRC
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FILE NO.: 298367_2-2.mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet (Foot US)
Map Rotation: 0

Plot Date: 1/28/2019, 15:36:57 PM by SRAY -- LAYOUT: ANSI B(11"x17")
Path: S:\1-PROJECTS\NRG\Limestone\298367\298367_2-3.mxd

LEGEND

- MONITORING WELL
- 421.92 GROUNDWATER ELEVATION (FEET MSL)
- NM NOT MEASURED
- GROUNDWATER FLOW DIRECTION
- GROUNDWATER POTENTIOMETRIC SUFRACE CONTOUR (FEET) - DASHED WHERE INFERRED

MW-28 445.98
MW-27 436.95
MW-16 NM
MW-06 NM
MW-09 432.01
MW-17 418.53
MW-01 417.45
MW-40 NM
MW-23 NM
MW-04 NM
MW-41 NM
MW-08 NM
MW-39 NM
MW-24 NM
MW-18B NM
MW-25 NM
MW-17B NM
MW-22 425.34
MW-21 424.20
MW-20 421.14
MW-19 421.29
MW-18 421.94
MW-03 NM
MW-02 422.43
MW-44 421.79
MW-05 421.66
MW-45 421.94
MW-43 421.49
MW-29 421.92
MW-42 421.09
MW-46 421.89
MW-26 421.29
MW-07 420.50

437 438 439 440 441 442 443 444 445
436 435 434 433 432 431 430 429 428 427 426 425 424 423 422 421 420 419 418

SEC E POND

421.75 421.50 421.25 421.00 420.25 420.50

0 325 650 Feet

0 700 1,400 Feet
1 " = 700 '
1:8,400

N

STATE OF TEXAS
JULIE ANN SPEER
GEOLOGY
11935
LICENSED
PROFESSIONAL GEOSCIENTIST
Julie Speer
01-28-2019

PROJECT:
NRG TEXAS POWER, LLC
LIMESTONE
JEWETT, TEXAS

TITLE:
GROUNDWATER POTENTIOMETRIC SUFRACE MAP - OCTOBER 2018

DRAWN BY:	S. RAY	PROJ. NO.:	298367.0000.0000
CHECKED BY:	J. SPEER		
APPROVED BY:	J. SPEER		FIGURE 2-3
DATE:	JANUARY 2019		

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FILE NO.: 298367_2-3.mxd

Section 3
Status of Groundwater Monitoring and Corrective Action Program

3.1 Semi-Annual Detection Monitoring Summary

This Annual Report provides the monitoring data for the semi-annual detection monitoring sampling performed during May and October 2018 for the Secondary E Pond and the Landfill. Previous monitoring data was provided in the 2017 Annual Report. Based on the data and results of the monitoring activities, the status of the groundwater monitoring and corrective action program at the Station, problems encountered, actions to resolve the problems, and key actions completed during 2018 are summarized in the following subsections.

3.2 Problems Encountered and Resolution

During 2018, the following problems were encountered for the Secondary E Pond and Landfill groundwater monitoring program for the Station:

- Three of the four impoundments identified as CCR units during 2015 were, upon further evaluation, determined not to be CCR units under the CCR Rule and the number of CCR units for the Station was reduced from five to two: the Secondary E Pond and Landfill were retained as CCR Units, while the E Pond (Unit 019), ST-18 stormwater pond, and the K Pond (BACP) were removed from the Station's CCR groundwater monitoring system;
- The previously selected statistical method for evaluation of groundwater monitoring data was revised; and
- Initial representation of background groundwater quality for the Secondary E Pond was determined to be inadequate based on groundwater flow direction and two monitoring wells (MW-45 and MW-46) were added to the groundwater monitoring network.

3.3 Key Actions Completed

In addition to resolving the above-noted problems encountered in the groundwater monitoring program during 2018, the following key actions were completed:

- Pursuant to 40 Code of Federal Regulations (CFR) Part §257.90(e) and (f) of the Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities, Final Rule (CCR Rule), the facility prepared the 2017 annual groundwater monitoring and corrective action report (Annual Report), placed the report in the facility's

Operating Record on January 31, 2018, and posted the report on the facility's public CCR website March 2, 2018.

- Semi-annual detection monitoring samples were collected for the Secondary E Pond and the Landfill and analyzed for the Appendix III, Part 257 of the CCR Rule detection monitoring parameters;
- Groundwater potentiometric surface maps were prepared, direction of groundwater flow was determined, and average groundwater flow velocities were calculated for both semi-annual detection monitoring events for the Secondary E Pond and the Landfill;
- SSIs above background were identified for the Secondary E Pond for the first and second semi-annual detection monitoring events (October 2017 and May 2018 sampling);
- A written ASD document was completed that successfully identified alternative sources for the SSIs for the first semi-annual detection monitoring event for the Secondary E Pond, and the Station remained in detection monitoring during 2018;
- Two groundwater monitoring wells (MW-45 and MW-46) were installed at the Secondary E Pond, and were incorporated into the groundwater monitoring network;
- Collection of baseline background groundwater monitoring data began for the Appendix III, Detection Monitoring and Appendix IV, Assessment Monitoring parameters for MW-45 and MW-46; and

Revised Groundwater Monitoring Network and Statistical Methods were Certified by a Texas professional engineer based on completing the above-noted key actions. No corrective action activities were required or performed at the Secondary E Pond or the Landfill during 2018.

3.4 Monitoring Wells Installed or Decommissioned

Two groundwater monitoring wells were installed at the Secondary E Pond during 2018, which were incorporated into the groundwater monitoring network. Groundwater monitoring wells MW-45 and MW-46 were installed in September 2018. MW-45 was installed to provide a second background well to provide better representation of background groundwater quality for statistical analysis at the Secondary E Pond. MW-46 was installed to the south (downgradient) of the Secondary E Pond between the Secondary E Pond and an adjoining natural gas production well pad to enhance the monitoring of groundwater passing beneath the waste boundary of the Secondary E Pond.

Except for MW-45 and MW-46, no other additional groundwater monitoring wells were installed or decommissioned as part of the CCR groundwater monitoring system for the Secondary E Pond or the Landfill during 2018.

Section 4
Statistically Significant Increases

This 2018 Annual Report addresses SSIs above background that were determined for groundwater samples collected during the first detection monitoring event (October 2017) and the second detection monitoring event (May 2018).

4.1 Initial Detection Monitoring Event (October 2017)

The results of the statistical evaluation for the first semi-annual detection monitoring event were reported on February 28, 2018. The statistical analysis was conducted in accordance with the *Statistical Analysis Plan* (ERM 2017) using prediction limits per §257.93(f)(3) for the groundwater monitoring networks certified on October 17, 2017. As discussed in Section 3.2 of this report, the statistical method was subsequently revised during 2018 to use tolerance limits per §257.93(f)(3). The Alternative Source Demonstration (ASD) presented in Section 5 of this Annual Report and provided as Appendix E identifies the initial SSIs for the first detection monitoring event reported on February 28, 2018.

4.1.1 Secondary E Pond

Following revision of the statistical method, statistical analysis of the first semi-annual detection monitoring results for the Secondary E Pond was conducted. The results are summarized in Table 4-1. Nine SSIs were identified for the October 2017 sampling event. In accordance with §257.94(e)(2), an ASD was performed to evaluate the initially identified SSIs and the revised SSIs as discussed in Section 5.

4.1.2 Landfill

Following revision of the statistical method, statistical analysis of the first semi-annual detection monitoring results for the Landfill was conducted. No SSIs were identified for the October 2017 sampling event.

Table 4-1
SSIs Identified Based on Updated Statistical Evaluation
October 2017 Detection Monitoring Event

ANALYTE	WELL	LTL	UTL	SAMPLE DATE	VALUE	UNIT
Boron	MW- 43	N/A	0.1	2017- 10- 11	0.158	mg/L
Calcium	MW- 43	N/A	22.4	2017- 10- 11	93.7	mg/L
Calcium	MW- 44	N/A	22.4	2017- 10- 11	29.6	mg/L
Chloride	MW- 43	N/A	26.3	2017- 10- 11	108	mg/L
Chloride	MW- 44	N/A	26.3	2017- 10- 11	33.8	mg/L
pH	MW- 05	6.4	7.2	2017- 10- 11	5.71	SU
pH	MW- 43	6.4	7.2	2017- 10- 11	6.23	SU
Sulfate	MW- 43	N/A	151	2017- 10- 11	350	mg/L
TDS	MW- 43	N/A	484	2017- 10- 11	964	mg/L

mg/L= milligrams per liter
PQL = Practical Quantitation Limit
LTL – Lower Tolerance Limit
SU = Standard Units
N/A = Not Applicable
UTL – Upper Tolerance Limit

4.2 Second Detection Monitoring Event (May 2018)

The second semi-annual detection monitoring event was conducted in May 2018. The statistical analyses of the analytical results for Appendix III parameters based on the revised statistical method and monitoring systems are summarized in the following subsections.

4.2.1 Secondary E Pond

Statistical analysis of the second semi-annual detection monitoring results for the Secondary E Pond was completed on October 23, 2018. The results are summarized in Table 4-2. Six SSIs were identified for the May 2018 sampling event for the downgradient monitoring wells. In addition, pH was measured at upgradient monitoring well MW-29 at a level less than its lower tolerance limit (LTL). These SSIs were evaluated in an ASD during 2019 and will be reported in our 2019 Annual Report.

Table 4-2
SSIs Identified for the Secondary E Pond
May 2018 Detection Monitoring Event

ANALYTE	WELL	LTL	UTL	SAMPLE DATE	VALUE	UNIT
DOWNGRADIENT MONITORING WELLS						
Calcium	MW- 43	N/A	22.4	2018- 05- 10	107	mg/L
Calcium	MW- 44	N/A	22.4	2018- 05- 10	27.3	mg/L
pH	MW- 05	6.4	7.2	2018- 05- 10	5.42	SU
pH	MW- 43	6.4	7.2	2018- 05- 10	6.22	SU
pH	MW- 44	6.4	7.2	2018- 05- 10	6.26	SU
TDS	MW- 43	N/A	484	2018- 05- 10	960	mg/L
UPGRADIENT MONITORING WELLS						
pH	MW- 29	6.4	7.2	2018- 05- 10	6.10	SU

mg/L= milligrams per liter
PQL = Practical Quantitation Limit
LTL – Lower Tolerance Limit
SU = Standard Units
N/A = Not Applicable
UTL – Upper Tolerance Limit

4.2.1 Landfill

Statistical analysis of the second semi-annual detection monitoring results for the Landfill was completed on October 23, 2018. No SSIs were identified for the May 2018 sampling event and as a result, the unit remains in detection monitoring.

Section 5
Alternative Source Demonstration

As discussed above in Subsection 4.1 of this Annual Report, potential SSIs above background levels were initially identified at the Secondary E Pond for the first semi-annual detection monitoring event conducted in October 2017.

Pursuant to §257.94(e)(2), the owner or operator may demonstrate that a source other than the CCR unit caused the SSI(s) over background levels for a constituent or that the SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. To evaluate the SSIs and to determine whether an ASD could be successfully demonstrated, an ASD was performed and certified in July 2018. The ASD was subsequently revised in October 2018, and the revised ASD report which successfully demonstrated an alternative source is provided in Appendix E and is summarized in the following sections.

The initial statistical evaluation of the first semi-annual detection monitoring data for the Secondary E Pond was reported on February 28, 2018, based on the October 17, 2017 groundwater monitoring network and statistical method certifications and 12 potential SSIs were identified. As per §257.93f), an alternate statistical method was identified and used to re-evaluate the potential SSIs identified for the October 2017 semi-annual detection monitoring data. After this revision, nine (9) SSIs were subsequently identified (see Section 4.1.1).

TRC performed an ASD for the nine SSIs that utilized the following lines of reasoning to determine the SSIs did not present sufficient evidence that releases of CCR constituents were occurring from the Secondary E Pond to groundwater:

- Based on the direction of groundwater flow, the single upgradient groundwater monitoring well used to develop the initial baseline background water quality and used for the first semi-annual detection monitoring event did not sufficiently represent the range of upgradient, background groundwater quality for the Secondary E Pond; and
- Alternate source areas for the SSIs were identified, which were associated with historical and current oil and gas activity occurring in the immediate vicinity of the Secondary E Pond.

As per §257.94(e)(2) of the CCR Rule, the ASD successfully demonstrated that source area(s) other than the Secondary E Pond caused the nine SSIs identified in groundwater for the first semi-annual detection monitoring event. Therefore, semi-annual detection monitoring was continued for the Secondary E Pond for the second semi-annual detection monitoring event in

May 2018. A written ASD was prepared and certified by a Texas professional engineer (PE) on July 23, 2018. The ASD is provided in Appendix E of this Annual Report.

Section 6
Projected Key Activities for 2019

Looking ahead to 2019, key activities projected for 2019 are as follows:

- Completion of the 2018 annual groundwater monitoring and corrective action report (Annual Report), placing the report in the facility's Operating Record by January 31, 2019, and posting the report on the facility's CCR public website by March 2, 2019.
- Continue collection of baseline background samples for monitoring wells MW-45 and MW-46 at the Secondary E Pond six sampling events anticipated), which will be analyzed for both the Appendix III and Appendix IV CCR constituents;
- Performance of statistical analysis of the third and fourth semi-annual detection monitoring events (October 2018 and April 2019 sampling) to identify potential SSIs over background for all Appendix III parameters;
- Preparation of ASD(s) to evaluate SSIs over background for the second semi-annual detection monitoring events for the Secondary E Pond (May and October 2018 sampling events);
- As required, preparation of ASD(s) to evaluate SSIs over background for the third semi-annual detection monitoring events (October 2018 sampling event); and
- Performance of the fourth and fifth semi-annual detection monitoring events, which are targeted for April and October 2019, and will include:
  - Preparation of groundwater potentiometric surface maps, determination of groundwater flow direction, and calculation of apparent groundwater flow velocity.

Section 7
References

Federal Register, Vol. 80 No. 74, April 17, 2015, 40 CFR Parts 257 and 261, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule

ERM, Sampling and Analysis Plan, October 2017, Limestone Electric Generating Station, Thompsons, Texas

ERM, CCR Statistical Analysis Plan, October 2017, Limestone Electric Generating Station, Thompsons, Texas

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Appendix A
Detection Monitoring Data (May 2018)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-165452-1
Client Project/Site: TRC-NRG- Limestone App. III
Revision: 1

For:
TRC Solutions, Inc.
10550 Richmond Avenue
Suite 210
Houston, Texas 77042

Attn: Andrew Clayton

C. Lance Tigrett

Authorized for release by:
7/25/2018 1:56:54 PM

C. Lance Tigrett, Project Manager II
(713)690-4444
lance.tigrett@testamericainc.com

Table of Contents

Job ID: 600-165452-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-165452-1

Comments
No additional comments.

Receipt
The samples were received on 5/4/2018 3:35 PM, 5/12/2018 11:16 AM and 5/15/2018 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 15 coolers at receipt time were 0.4º C, 0.7º C, 0.9º C, 1.4º C, 1.9º C, 2.0º C, 2.0º C, 2.1º C, 2.3º C, 2.4º C, 3.4º C, 3.9º C, 4.1º C, 4.9º C and 14.9º C.

Receipt Exceptions
The following samples were received at the laboratory outside the required temperature criteria: MW-20 (600-165452-15) and MW-19 (600-165452-16). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

On the COC and containers, the MS/MSD is labeled MW-02. However, the date and time on the COC and containers matches MW-08. Added the MS/MSD to MW-08.

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): DUP-02 (600-165831-10). Logged in per container labels. COC listing this sample was received on 5-15-18 with other sample shipment.

All applicable analytical narratives can be found in the TRRP Checklist section of this report.

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-165452-1 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

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

Taylor Bruzzio, for C. Lance Tigrett		6/13/2018
Name (printed)	Signature	Date

Project Manager II
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/13/2018
Project Name:	TRC-NRG- Limestone App. III	Laboratory Job Number:	600-165452-1
Reviewer Name:	Taylor Bruzzio, for C. Lance Tigrett		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?		X			R01A
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?	X				
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?	X				
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?		X			R08C
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/13/2018
Project Name:	TRC-NRG- Limestone App. III	Laboratory Job Number:	600-165452-1
Reviewer Name:	Taylor Bruzzio, for C. Lance Tigrett		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?	X				
		Were ion abundance data within the method-required QC limits?	X				
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S09A
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

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

Laboratory Review Checklist: Exceptions Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	6/13/2018
Project Name:	TRC-NRG- Limestone App. III	Laboratory Job Number:	600-165452-1
Reviewer Name:	Taylor Bruzzio, for C. Lance Tigrett		

ER #[1]	Description
R01A	The following samples were received at the laboratory outside the required temperature criteria: MW-20 (600-165452-15) and MW-19 (600-165452-16). The samples are considered acceptable since they were collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun. On the COC and containers, the MS/MSD is labeled MW-02. However, the date and time on the COC and containers matches MW-08. Added the MS/MSD to MW-08. The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): DUP-02 (600-165831-10). Logged in per container labels. COC listing this sample was received on 5-15-18 with other sample shipment.
R07C	Method 300.0: Due to the high concentration of target analytes, samples 600-165452-8 MS/MSD, 600-165831-1 MS/MSD, 600-166118-A-1 MS/MSD and 600-165452-18 MS/MSD could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria. Method 6020: 600-165452-4 MS/MSD failed the recovery criteria for the following analyte: Calcium. Matrix interference is suspected. Method 6020: Due to the high concentration of target analytes, samples 600-165831-9 MS/MSD could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria.
R08C	Method 9040B: 600-165831-2 DU failed the RPD criteria for the following analyte: pH.
R10B	Method 300.0: The following samples were diluted due to the nature of the sample matrix: MW-30 (600-165452-1), MW-37 (600-165452-2), MW-36 (600-165452-3), MW-32 (600-165452-4), MW-32 MS (600-165452-4[MS]), MW-32 MSD (600-165452-4[MSD]), MW-35 (600-165452-5), MW-34 (600-165452-6), MW-38 (600-165452-9), MW-39 (600-165452-10), MW-04 (600-165452-11), MW-40 (600-165452-12), DUP-01 (600-165452-18), MW-27 (600-165831-1), MW-28 (600-165831-2), MW-02 (600-165831-6), MW-17B (600-165831-7), MW-41 (600-165831-8), MW-08 (600-165831-9), DUP-02 (600-165831-10), MW-42 (600-165918-2), MW-44 (600-165918-4), MW-05 (600-165918-5) and MW-29 (600-165918-6). Elevated reporting limits (RLs) are provided.
S09A	Method 6020: The serial dilution performed for the following sample associated with batch 560-150858 was outside control limits for Calcium (246%): (600-165452-E-4-A SD). Method 6020: The serial dilution performed for the following sample associated with batch 560-151054 was outside control limits Sodium (17%), Calcium (14%) and Selinium (16%): (600-165831-E-9-A SD). Method 6020: The serial dilution performed for the following sample associated with batch 560-151139 was outside control limits for Calcium (64%): (600-165918-E-1-A SD).

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

Matrix: Water
Method: 6020
Prep Method: 3010A
Date Analyzed: 2/9/2018
Job #: MDLV 560-147826/3
TALS Batch: 148035
Units: ug/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Micpms	0.941	1.250	1.436	5
Al	Micpms	50.000	125.000	233.300	100
As	Micpms	1.090	1.250	2.268	5
B	Micpms	70.000	25.000	27.420	100
Ba	Micpms	0.810	1.250	2.191	5
Be	Micpms	1.240	1.250	1.094	4
Ca	Micpms	198.000	125.000	187.400	500
Cd	Micpms	0.854	1.250	1.374	2
Co	Micpms	1.360	1.250	1.377	5
Cr	Micpms	1.400	1.250	1.313	5
Cu	Micpms	2.000	1.250	6.419	10
Fe	Micpms	101.000	125.000	148.600	250
K	Micpms	407.000	125.000	205.800	1000
Li	Micpms	2.260	1.250	2.671	5
Mg	Micpms	113.000	125.000	163.800	500
Mn	Micpms	11.600	12.500	14.670	50
Mo	Micpms	1.400	1.250	0.650	5
Na	Micpms	727.000	250.000	354.900	1000
Ni	Micpms	2.170	1.250	1.967	5
P	Micpms	100.000	50.000	17.140	250
Pb	Micpms	0.733	2.500	2.226	5
Sb	Micpms	1.610	1.250	1.178	5
Se	Micpms	1.080	1.250	1.955	5
Sn	Micpms	5.080	1.250	46.360	25
Sr	Micpms	0.768	1.250	1.661	5
Ti	Micpms	1.530	1.250	1.674	5
Tl	Micpms	0.693	0.500	0.283	2
U	Micpms	0.940	1.250	1.257	5
V	Micpms	1.440	1.250	0.699	5
Zn	Micpms	3.550	12.500	5.015	25

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Water
Method: EPA 300; SW-846 9056
Date Analyzed: 1/5/2018
Job #: 600-159126
TALS Batch: 229011
Units: mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Bromide	CHWC11	0.101	0.200	0.647	0.4
Chloride	CHWC11	0.053	0.400	0.655	0.4
Fluoride	CHWC11	0.060	0.200	0.197	0.2
Nitrate as N	CHWC11	0.025	0.200	0.359	0.2
Nitrite as N	CHWC11	0.030	0.200	0.234	0.2
Sulfate	CHWC11	0.096	0.400	1.771	0.5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Water
Method: SM 2540C
Date Analyzed: 1/6/2018
Job #: 600-159126
TALS Batch: 229073
Units: mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Total Dissolved Solids	NOEQUIP	10.000	9.900	10.000	10

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Method Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL HOU
6020	Metals (ICP/MS)	SW846	TAL CC
9040B	pH	SW846	TAL HOU
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL HOU
3010A	Preparation, Total Metals	SW846	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-165452-1	MW-30	Water	05/01/18 10:10	05/04/18 15:35
600-165452-2	MW-37	Water	05/01/18 12:25	05/04/18 15:35
600-165452-3	MW-36	Water	05/01/18 14:05	05/04/18 15:35
600-165452-4	MW-32	Water	05/01/18 16:27	05/04/18 15:35
600-165452-5	MW-35	Water	05/02/18 09:35	05/04/18 15:35
600-165452-6	MW-34	Water	05/02/18 11:30	05/04/18 15:35
600-165452-7	MW-33	Water	05/02/18 13:38	05/04/18 15:35
600-165452-8	MW-31	Water	05/02/18 15:25	05/04/18 15:35
600-165452-9	MW-38	Water	05/02/18 17:00	05/04/18 15:35
600-165452-10	MW-39	Water	05/03/18 09:15	05/04/18 15:35
600-165452-11	MW-04	Water	05/03/18 11:30	05/04/18 15:35
600-165452-12	MW-40	Water	05/03/18 13:20	05/04/18 15:35
600-165452-13	MW-22	Water	05/03/18 16:25	05/04/18 15:35
600-165452-14	MW-21	Water	05/03/18 17:48	05/04/18 15:35
600-165452-15	MW-20	Water	05/04/18 10:03	05/04/18 15:35
600-165452-16	MW-19	Water	05/04/18 11:17	05/04/18 15:35
600-165452-17	EB-01	Water	05/04/18 10:15	05/04/18 15:35
600-165452-18	DUP-01	Water	05/04/18 00:00	05/04/18 15:35
600-165831-1	MW-27	Water	05/07/18 14:20	05/12/18 11:16
600-165831-2	MW-28	Water	05/07/18 16:20	05/12/18 11:16
600-165831-3	MW-18	Water	05/08/18 10:25	05/12/18 11:16
600-165831-4	MW-17	Water	05/08/18 12:25	05/12/18 11:16
600-165831-5	MW-01	Water	05/08/18 14:20	05/12/18 11:16
600-165831-6	MW-02	Water	05/08/18 16:07	05/12/18 11:16
600-165831-7	MW-17B	Water	05/09/18 09:47	05/12/18 11:16
600-165831-8	MW-41	Water	05/09/18 11:22	05/12/18 11:16
600-165831-9	MW-08	Water	05/09/18 13:13	05/12/18 11:16
600-165831-10	DUP-02	Water	05/08/18 00:00	05/12/18 11:16
600-165918-1	MW-07	Water	05/09/18 15:35	05/15/18 10:05
600-165918-2	MW-42	Water	05/09/18 18:20	05/15/18 10:05
600-165918-3	MW-43	Water	05/10/18 10:28	05/15/18 10:05
600-165918-4	MW-44	Water	05/10/18 12:05	05/15/18 10:05
600-165918-5	MW-05	Water	05/10/18 13:25	05/15/18 10:05
600-165918-6	MW-29	Water	05/10/18 15:05	05/15/18 10:05
600-165918-8	EB-02	Water	05/10/18 16:00	05/15/18 10:05

Client Sample ID: MW-30

Lab Sample ID: 600-165452-1

Date Collected: 05/01/18 10:10

Matrix: Water

Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3360		200	26.7	mg/L			05/17/18 00:18	500
Fluoride	1.20	U	4.00	1.20	mg/L			05/17/18 19:40	20
Sulfate	363		250	47.9	mg/L			05/17/18 00:18	500

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	202		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:26	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:26	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.01	0.01	SU			05/07/18 22:16	1
Total Dissolved Solids	11700		100	100	mg/L			05/08/18 11:03	1

Client Sample ID: MW-37

Lab Sample ID: 600-165452-2

Date Collected: 05/01/18 12:25

Matrix: Water

Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	528		40.0	5.34	mg/L			05/17/18 01:11	100
Fluoride	0.525	J	1.00	0.301	mg/L			05/17/18 19:58	5
Sulfate	535		50.0	9.57	mg/L			05/17/18 01:11	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	53.6		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:32	1
Boron	0.120		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:32	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.2	HF	0.01	0.01	SU			05/07/18 22:20	1
Total Dissolved Solids	2190		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-36

Lab Sample ID: 600-165452-3

Date Collected: 05/01/18 14:05

Matrix: Water

Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	803		80.0	10.7	mg/L			05/17/18 01:29	200
Fluoride	0.557	J	1.00	0.301	mg/L			05/17/18 20:16	5
Sulfate	611		100	19.1	mg/L			05/17/18 01:29	200

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	78.2		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:37	1
Boron	1.49		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:37	1

Client Sample ID: MW-36

Lab Sample ID: 600-165452-3
Date Collected: 05/01/18 14:05
Matrix: Water
Date Received: 05/04/18 15:35

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.6	HF	0.01	0.01	SU			05/07/18 22:23	1
Total Dissolved Solids	3280		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-32

Lab Sample ID: 600-165452-4
Date Collected: 05/01/18 16:27
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	723		80.0	10.7	mg/L			05/16/18 23:24	200
Fluoride	1.03		1.00	0.301	mg/L			05/17/18 21:10	5
Sulfate	435		100	19.1	mg/L			05/16/18 23:24	200

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	55.3		0.500	0.198	mg/L		05/09/18 12:19	05/10/18 23:34	1
Boron	0.120		0.100	0.0700	mg/L		05/09/18 12:19	05/10/18 23:34	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.01	0.01	SU			05/07/18 22:30	1
Total Dissolved Solids	2630		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-35

Lab Sample ID: 600-165452-5
Date Collected: 05/02/18 09:35
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	221		40.0	5.34	mg/L			05/17/18 01:47	100
Fluoride	0.879	J	1.00	0.301	mg/L			05/17/18 21:27	5
Sulfate	545		50.0	9.57	mg/L			05/17/18 01:47	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	31.7		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:42	1
Boron	0.628		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:42	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF	0.01	0.01	SU			05/07/18 22:38	1
Total Dissolved Solids	1630		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-34

Lab Sample ID: 600-165452-6
Date Collected: 05/02/18 11:30
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3130		40.0	5.34	mg/L			05/17/18 02:05	100
Fluoride	0.597	J	1.00	0.301	mg/L			05/17/18 21:45	5

Client Sample ID: MW-34

Lab Sample ID: 600-165452-6
Date Collected: 05/02/18 11:30
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	63.0		50.0	9.57	mg/L			05/17/18 02:05	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	192		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:48	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:48	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.01	0.01	SU			05/07/18 22:41	1
Total Dissolved Solids	10300		100	100	mg/L			05/08/18 11:03	1

Client Sample ID: MW-33

Lab Sample ID: 600-165452-7
Date Collected: 05/02/18 13:38
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	183		40.0	5.34	mg/L			05/17/18 02:23	100
Fluoride	4.06		0.400	0.120	mg/L			05/17/18 22:03	2
Sulfate	219		50.0	9.57	mg/L			05/17/18 02:23	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	52.0		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:53	1
Boron	0.196		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:53	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.9	HF	0.01	0.01	SU			05/07/18 22:45	1
Total Dissolved Solids	1860		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-31

Lab Sample ID: 600-165452-8
Date Collected: 05/02/18 15:25
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	498		80.0	10.7	mg/L			05/17/18 02:41	200
Fluoride	1.02		1.00	0.301	mg/L			05/17/18 22:21	5
Sulfate	759		100	19.1	mg/L			05/17/18 02:41	200

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	52.4		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 00:59	1
Boron	0.389		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 00:59	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.4	HF	0.01	0.01	SU			05/07/18 22:49	1
Total Dissolved Solids	2810		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-38

Lab Sample ID: 600-165452-9
Date Collected: 05/02/18 17:00
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1490		100	13.4	mg/L			05/17/18 03:35	250
Fluoride	0.986	J	2.00	0.601	mg/L			05/17/18 23:15	10
Sulfate	512		125	23.9	mg/L			05/17/18 03:35	250

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	90.8		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 01:04	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 01:04	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF	0.01	0.01	SU			05/07/18 22:53	1
Total Dissolved Solids	4620		40.0	40.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-39

Lab Sample ID: 600-165452-10
Date Collected: 05/03/18 09:15
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	197		40.0	5.34	mg/L			05/17/18 05:04	100
Fluoride	0.664	J	1.00	0.301	mg/L			05/17/18 23:33	5
Sulfate	747		50.0	9.57	mg/L			05/17/18 05:04	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	66.5		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 01:10	1
Boron	0.655		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 01:10	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.4	HF	0.01	0.01	SU			05/07/18 22:56	1
Total Dissolved Solids	1840		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-04

Lab Sample ID: 600-165452-11
Date Collected: 05/03/18 11:30
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	308		40.0	5.34	mg/L			05/17/18 05:22	100
Fluoride	0.601	U	2.00	0.601	mg/L			05/17/18 23:51	10
Sulfate	1070		50.0	9.57	mg/L			05/17/18 05:22	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	88.6		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 01:15	1
Boron	0.0939	J	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 01:15	1

Client Sample ID: MW-04
Lab Sample ID: 600-165452-11
Date Collected: 05/03/18 11:30
Matrix: Water
Date Received: 05/04/18 15:35

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.7	HF	0.01	0.01	SU			05/07/18 23:00	1
Total Dissolved Solids	2490		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-40
Lab Sample ID: 600-165452-12
Date Collected: 05/03/18 13:20
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	321		40.0	5.34	mg/L			05/17/18 05:40	100
Fluoride	0.350	J	0.400	0.120	mg/L			05/18/18 19:16	2
Sulfate	429		50.0	9.57	mg/L			05/17/18 05:40	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	49.0		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 01:51	1
Boron	0.784		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 01:51	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.7	HF	0.01	0.01	SU			05/07/18 23:04	1
Total Dissolved Solids	1780		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-22
Lab Sample ID: 600-165452-13
Date Collected: 05/03/18 16:25
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32.9		4.00	0.534	mg/L			05/17/18 05:58	10
Fluoride	0.361		0.200	0.0601	mg/L			05/18/18 19:33	1
Sulfate	41.1		5.00	0.957	mg/L			05/17/18 05:58	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	41.2		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 01:56	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 01:56	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.01	0.01	SU			05/07/18 23:08	1
Total Dissolved Solids	268		10.0	10.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-21
Lab Sample ID: 600-165452-14
Date Collected: 05/03/18 17:48
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.3		8.00	1.07	mg/L			05/17/18 06:16	20
Fluoride	0.354		0.200	0.0601	mg/L			05/18/18 20:27	1

Client Sample ID: MW-21

Lab Sample ID: 600-165452-14
Date Collected: 05/03/18 17:48
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	147		10.0	1.91	mg/L			05/17/18 06:16	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	55.4		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 02:01	1
Boron	0.0797	J	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 02:01	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.6	HF	0.01	0.01	SU			05/07/18 23:17	1
Total Dissolved Solids	485		10.0	10.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-20

Lab Sample ID: 600-165452-15
Date Collected: 05/04/18 10:03
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38.8		8.00	1.07	mg/L			05/17/18 06:34	20
Fluoride	0.463		0.200	0.0601	mg/L			05/18/18 20:45	1
Sulfate	63.9		10.0	1.91	mg/L			05/17/18 06:34	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	37.7		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 02:06	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 02:06	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5	HF	0.01	0.01	SU			05/07/18 23:25	1
Total Dissolved Solids	433		10.0	10.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-19

Lab Sample ID: 600-165452-16
Date Collected: 05/04/18 11:17
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61.2		4.00	0.534	mg/L			05/17/18 06:52	10
Fluoride	0.336		0.200	0.0601	mg/L			05/18/18 21:03	1
Sulfate	74.1		5.00	0.957	mg/L			05/17/18 06:52	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	39.0		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 02:12	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 02:12	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.01	0.01	SU			05/07/18 23:29	1
Total Dissolved Solids	361		10.0	10.0	mg/L			05/08/18 11:03	1

Client Sample ID: EB-01

Lab Sample ID: 600-165452-17
Date Collected: 05/04/18 10:15
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.105	J	0.400	0.0534	mg/L			05/17/18 19:22	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/17/18 19:22	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/17/18 19:22	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.198	U	0.500	0.198	mg/L		05/09/18 12:19	05/11/18 02:17	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 02:17	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.7	HF	0.01	0.01	SU			05/07/18 23:32	1
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/08/18 11:03	1

Client Sample ID: DUP-01

Lab Sample ID: 600-165452-18
Date Collected: 05/04/18 00:00
Matrix: Water
Date Received: 05/04/18 15:35

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	194		40.0	5.34	mg/L			05/17/18 18:28	100
Fluoride	0.192	J	0.400	0.120	mg/L			05/17/18 18:10	2
Sulfate	758		50.0	9.57	mg/L			05/17/18 18:28	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	71.2		0.500	0.198	mg/L		05/09/18 12:19	05/11/18 02:22	1
Boron	1.78		0.100	0.0700	mg/L		05/09/18 12:19	05/11/18 02:22	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.4	HF	0.01	0.01	SU			05/07/18 23:36	1
Total Dissolved Solids	1820		20.0	20.0	mg/L			05/08/18 11:03	1

Client Sample ID: MW-27

Lab Sample ID: 600-165831-1
Date Collected: 05/07/18 14:20
Matrix: Water
Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1170		80.0	10.7	mg/L			05/30/18 00:00	200
Fluoride	0.301	U	1.00	0.301	mg/L			05/30/18 10:55	5
Sulfate	299		100	19.1	mg/L			05/30/18 00:00	200

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	345		0.500	0.198	mg/L		05/16/18 11:50	05/16/18 20:20	1
Boron	0.168		0.100	0.0700	mg/L		05/16/18 11:50	05/16/18 20:20	1

Client Sample ID: MW-27
Date Collected: 05/07/18 14:20
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF	0.01	0.01	SU			05/16/18 16:48	1
Total Dissolved Solids	4340		40.0	40.0	mg/L			05/14/18 22:00	1

Client Sample ID: MW-28
Date Collected: 05/07/18 16:20
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1260		100	13.4	mg/L			05/30/18 01:30	250
Fluoride	0.489	J	1.00	0.301	mg/L			05/30/18 11:49	5
Sulfate	692		125	23.9	mg/L			05/30/18 01:30	250

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	354		0.500	0.198	mg/L		05/16/18 11:50	05/16/18 20:26	1
Boron	0.241		0.100	0.0700	mg/L		05/16/18 11:50	05/16/18 20:26	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.3	HF	0.01	0.01	SU			05/16/18 16:55	1
Total Dissolved Solids	4640		40.0	40.0	mg/L			05/14/18 22:00	1

Client Sample ID: MW-18
Date Collected: 05/08/18 10:25
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17.6		4.00	0.534	mg/L			05/29/18 20:08	10
Fluoride	0.373		0.200	0.0601	mg/L			05/31/18 14:45	1
Sulfate	26.0		5.00	0.957	mg/L			05/29/18 20:08	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	49.7		0.500	0.198	mg/L		05/16/18 11:50	05/16/18 20:31	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:50	05/16/18 20:31	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5	HF	0.01	0.01	SU			05/16/18 17:02	1
Total Dissolved Solids	326		10.0	10.0	mg/L			05/15/18 12:24	1

Client Sample ID: MW-17
Date Collected: 05/08/18 12:25
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.6		0.400	0.0534	mg/L			05/29/18 22:49	1
Fluoride	0.416		0.200	0.0601	mg/L			05/29/18 22:49	1

Client Sample ID: MW-17

Lab Sample ID: 600-165831-4
Date Collected: 05/08/18 12:25
Matrix: Water
Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	6.80		0.500	0.0957	mg/L			05/29/18 22:49	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	3.22		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 16:41	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 16:41	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.2	HF	0.01	0.01	SU			05/16/18 17:06	1
Total Dissolved Solids	557		10.0	10.0	mg/L			05/15/18 12:24	1

Client Sample ID: MW-01

Lab Sample ID: 600-165831-5
Date Collected: 05/08/18 14:20
Matrix: Water
Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	219		20.0	2.67	mg/L			05/30/18 12:25	50
Fluoride	0.363		0.200	0.0601	mg/L			05/29/18 23:07	1
Sulfate	0.478	J	0.500	0.0957	mg/L			05/29/18 23:07	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	51.7		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 16:47	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 16:47	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.9	HF	0.01	0.01	SU			05/16/18 17:10	1
Total Dissolved Solids	692		10.0	10.0	mg/L			05/15/18 12:24	1

Client Sample ID: MW-02

Lab Sample ID: 600-165831-6
Date Collected: 05/08/18 16:07
Matrix: Water
Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	426		20.0	2.67	mg/L			05/30/18 01:48	50
Fluoride	0.289	J	0.400	0.120	mg/L			05/30/18 12:43	2
Sulfate	17.1		1.00	0.191	mg/L			05/30/18 12:43	2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	110		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 16:52	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 16:52	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.9	HF	0.01	0.01	SU			05/16/18 17:13	1
Total Dissolved Solids	1440		20.0	20.0	mg/L			05/15/18 12:24	1

Client Sample ID: MW-17B

Lab Sample ID: 600-165831-7

Date Collected: 05/09/18 09:47

Matrix: Water

Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	364		80.0	10.7	mg/L			05/30/18 02:06	200
Fluoride	0.601	U	2.00	0.601	mg/L			05/30/18 13:54	10
Sulfate	1480		100	19.1	mg/L			05/30/18 02:06	200

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	373		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 16:58	1
Boron	3.20		0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 16:58	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.4	HF	0.01	0.01	SU			05/16/18 17:17	1
Total Dissolved Solids	3030		20.0	20.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-41

Lab Sample ID: 600-165831-8

Date Collected: 05/09/18 11:22

Matrix: Water

Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	296		40.0	5.34	mg/L			05/29/18 20:25	100
Fluoride	0.301	U	1.00	0.301	mg/L			05/30/18 14:12	5
Sulfate	591		50.0	9.57	mg/L			05/29/18 20:25	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	194		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 17:03	1
Boron	8.99		0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 17:03	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.4	HF	0.01	0.01	SU			05/16/18 17:21	1
Total Dissolved Solids	1950		20.0	20.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-08

Lab Sample ID: 600-165831-9

Date Collected: 05/09/18 13:13

Matrix: Water

Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	119		40.0	5.34	mg/L			05/29/18 19:14	100
Fluoride	0.340	J	1.00	0.301	mg/L			05/30/18 14:30	5
Sulfate	787		50.0	9.57	mg/L			05/29/18 19:14	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	180		0.500	0.198	mg/L		05/16/18 11:50	05/16/18 19:58	1
Boron	1.34		0.100	0.0700	mg/L		05/16/18 11:50	05/16/18 19:58	1

Client Sample ID: MW-08

Lab Sample ID: 600-165831-9
Date Collected: 05/09/18 13:13
Matrix: Water
Date Received: 05/12/18 11:16

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.5	HF	0.01	0.01	SU			05/16/18 17:25	1
Total Dissolved Solids	1680		20.0	20.0	mg/L			05/16/18 10:50	1

Client Sample ID: DUP-02

Lab Sample ID: 600-165831-10
Date Collected: 05/08/18 00:00
Matrix: Water
Date Received: 05/12/18 11:16

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	416		20.0	2.67	mg/L			05/29/18 20:43	50
Fluoride	0.275	J	0.400	0.120	mg/L			05/30/18 13:01	2
Sulfate	17.0		1.00	0.191	mg/L			05/30/18 13:01	2

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	109		0.500	0.198	mg/L		05/16/18 11:50	05/17/18 17:09	1
Boron	0.232		0.100	0.0700	mg/L		05/16/18 11:50	05/17/18 17:09	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.8	HF	0.01	0.01	SU			05/16/18 17:28	1
Total Dissolved Solids	1480		20.0	20.0	mg/L			05/15/18 12:24	1

Client Sample ID: MW-07

Lab Sample ID: 600-165918-1
Date Collected: 05/09/18 15:35
Matrix: Water
Date Received: 05/15/18 10:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10.2		0.400	0.0534	mg/L			05/30/18 03:00	1
Fluoride	0.293		0.200	0.0601	mg/L			05/30/18 03:00	1
Sulfate	15.0		0.500	0.0957	mg/L			05/30/18 03:00	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	13.9		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 19:30	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 19:30	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.9	HF	0.01	0.01	SU			05/22/18 14:02	1
Total Dissolved Solids	181		10.0	10.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-42

Lab Sample ID: 600-165918-2
Date Collected: 05/09/18 18:20
Matrix: Water
Date Received: 05/15/18 10:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	315		40.0	5.34	mg/L			05/30/18 03:17	100
Fluoride	0.304	J	0.400	0.120	mg/L			05/30/18 14:48	2

Client Sample ID: MW-42

Date Collected: 05/09/18 18:20
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	326		50.0	9.57	mg/L			05/30/18 03:17	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	135		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 19:52	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 19:52	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.4	HF	0.01	0.01	SU			05/22/18 14:10	1
Total Dissolved Solids	1410		20.0	20.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-43

Date Collected: 05/10/18 10:28
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11.0		0.400	0.0534	mg/L			05/30/18 12:07	1
Fluoride	0.347		0.200	0.0601	mg/L			05/30/18 12:07	1
Sulfate	27.7		0.500	0.0957	mg/L			05/30/18 12:07	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	107		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 19:57	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 19:57	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.3	HF	0.01	0.01	SU			05/22/18 14:14	1
Total Dissolved Solids	960		20.0	20.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-44

Date Collected: 05/10/18 12:05
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.1		8.00	1.07	mg/L			05/30/18 16:00	20
Fluoride	1.20	U	4.00	1.20	mg/L			05/30/18 16:00	20
Sulfate	33.8		10.0	1.91	mg/L			05/30/18 16:00	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	27.3		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 20:03	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 20:03	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.5	HF	0.01	0.01	SU			05/22/18 14:17	1
Total Dissolved Solids	465		10.0	10.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-05

Lab Sample ID: 600-165918-5

Date Collected: 05/10/18 13:25

Matrix: Water

Date Received: 05/15/18 10:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**24.3**		4.00	0.534	mg/L			05/30/18 16:18	10
Fluoride	0.601	U	2.00	0.601	mg/L			05/30/18 16:18	10
Sulfate	**61.8**		5.00	0.957	mg/L			05/30/18 16:18	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**19.3**		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 20:44	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 20:44	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.0**	**HF**	0.01	0.01	SU			05/22/18 14:21	1
Total Dissolved Solids	**274**		10.0	10.0	mg/L			05/16/18 10:50	1

Client Sample ID: MW-29

Lab Sample ID: 600-165918-6

Date Collected: 05/10/18 15:05

Matrix: Water

Date Received: 05/15/18 10:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**21.4**		4.00	0.534	mg/L			05/30/18 17:29	10
Fluoride	**0.442**		0.200	0.0601	mg/L			05/31/18 15:38	1
Sulfate	**26.7**		5.00	0.957	mg/L			05/30/18 17:29	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**14.5**		0.500	0.198	mg/L		05/16/18 11:05	05/17/18 20:50	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 20:50	1

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.6**	**HF**	0.01	0.01	SU			05/22/18 14:25	1
Total Dissolved Solids	**228**		10.0	10.0	mg/L			05/16/18 10:50	1

Client Sample ID: EB-02

Lab Sample ID: 600-165918-8

Date Collected: 05/10/18 16:00

Matrix: Water

Date Received: 05/15/18 10:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**0.101**	**J**	0.400	0.0534	mg/L			05/30/18 16:36	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/30/18 16:36	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/30/18 16:36	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.198	U	0.500	0.198	mg/L		05/16/18 11:05	05/17/18 20:55	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 20:55	1

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: EB-02
Date Collected: 05/10/18 16:00
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-8
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.5	HF	0.01	0.01	SU			05/22/18 14:29	1
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/16/18 10:50	1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result is greater then the UQL and the concentration is an estimated value.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Analyte was not detected at or above the SDL.
F	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 600-238627/34
Matrix: Water
Analysis Batch: 238627

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/17/18 02:59	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/17/18 02:59	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/17/18 02:59	1

Lab Sample ID: MB 600-238627/4
Matrix: Water
Analysis Batch: 238627

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/16/18 18:01	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/16/18 18:01	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/16/18 18:01	1

Lab Sample ID: LCS 600-238627/35
Matrix: Water
Analysis Batch: 238627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.41		mg/L		97	90 - 110
Fluoride	7.50	7.378		mg/L		98	90 - 110
Sulfate	20.0	19.30		mg/L		96	90 - 110

Lab Sample ID: LCS 600-238627/5
Matrix: Water
Analysis Batch: 238627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.28		mg/L		96	90 - 110
Fluoride	7.50	7.359		mg/L		98	90 - 110
Sulfate	20.0	19.20		mg/L		96	90 - 110

Lab Sample ID: 600-165452-4 MS
Matrix: Water
Analysis Batch: 238627

Client Sample ID: MW-32 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	723		2000	2477		mg/L		88	80 - 120
Fluoride	12.0	U	400	360.0		mg/L		90	80 - 120
Sulfate	435		2000	2256		mg/L		91	80 - 120

Lab Sample ID: 600-165452-4 MSD
Matrix: Water
Analysis Batch: 238627

Client Sample ID: MW-32 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	723		2000	2508		mg/L		89	80 - 120	1	20
Fluoride	12.0	U	400	359.0		mg/L		90	80 - 120	0	20
Sulfate	435		2000	2275		mg/L		92	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-165452-9 MS
Matrix: Water
Analysis Batch: 238627

Client Sample ID: MW-38
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1490		2500	3491		mg/L		80	80 - 120
Fluoride	15.0	U	500	443.1		mg/L		89	80 - 120
Sulfate	512		2500	2703		mg/L		88	80 - 120

Lab Sample ID: 600-165452-9 MSD
Matrix: Water
Analysis Batch: 238627

Client Sample ID: MW-38
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1490		2500	3683		mg/L		88	80 - 120	5	20
Fluoride	15.0	U	500	457.3		mg/L		91	80 - 120	3	20
Sulfate	512		2500	2806		mg/L		92	80 - 120	4	20

Lab Sample ID: MB 600-238718/4
Matrix: Water
Analysis Batch: 238718

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/17/18 17:35	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/17/18 17:35	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/17/18 17:35	1

Lab Sample ID: LCS 600-238718/5
Matrix: Water
Analysis Batch: 238718

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.41		mg/L		97	90 - 110
Fluoride	7.50	7.351		mg/L		98	90 - 110
Sulfate	20.0	19.29		mg/L		96	90 - 110

Lab Sample ID: 600-165452-8 MS
Matrix: Water
Analysis Batch: 238718

Client Sample ID: MW-31
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	787	E	50.0	722.0	E 4	mg/L		-130	80 - 120
Fluoride	1.02		10.0	8.985		mg/L		80	80 - 120
Sulfate	1200	E	50.0	1028	E 4	mg/L		-343	80 - 120

Lab Sample ID: 600-165452-8 MSD
Matrix: Water
Analysis Batch: 238718

Client Sample ID: MW-31
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	787	E	50.0	726.0	E 4	mg/L		-122	80 - 120	1	20
Fluoride	1.02		10.0	9.082		mg/L		81	80 - 120	1	20
Sulfate	1200	E	50.0	1034	E 4	mg/L		-332	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-165452-18 MS
Matrix: Water
Analysis Batch: 238718

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	194		1000	1085		mg/L		89	80 - 120
Fluoride	6.01	U	200	188.7		mg/L		94	80 - 120
Sulfate	758		1000	1676		mg/L		92	80 - 120

Lab Sample ID: 600-165452-18 MSD
Matrix: Water
Analysis Batch: 238718

Client Sample ID: DUP-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	194		1000	1081		mg/L		89	80 - 120	0	20
Fluoride	6.01	U	200	186.6		mg/L		93	80 - 120	1	20
Sulfate	758		1000	1667		mg/L		91	80 - 120	1	20

Lab Sample ID: MB 600-238829/4
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/18/18 13:02	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/18/18 13:02	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/18/18 13:02	1

Lab Sample ID: LCS 600-238829/5
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.28		mg/L		96	90 - 110
Fluoride	7.50	7.179		mg/L		96	90 - 110
Sulfate	20.0	19.08		mg/L		95	90 - 110

Lab Sample ID: 600-165569-A-3 MS
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	175		500	610.6		mg/L		87	80 - 120
Fluoride	3.01	U	100	82.68		mg/L		83	80 - 120
Sulfate	150		500	634.4		mg/L		97	80 - 120

Lab Sample ID: 600-165569-A-3 MSD
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	175		500	608.9		mg/L		87	80 - 120	0	20
Fluoride	3.01	U	100	82.30		mg/L		82	80 - 120	0	20
Sulfate	150		500	631.8		mg/L		96	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-166118-A-1 MS
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	234	E	20.0	232.7	E 4	mg/L		-4	80 - 120
Fluoride	0.358	J	4.00	3.411	N1	mg/L		76	80 - 120
Sulfate	607	E	20.0	589.0	E 4	mg/L		-92	80 - 120

Lab Sample ID: 600-166118-A-1 MSD
Matrix: Water
Analysis Batch: 238829

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	234	E	20.0	233.9	E 4	mg/L		2	80 - 120	1	20
Fluoride	0.358	J	4.00	3.552		mg/L		80	80 - 120	4	20
Sulfate	607	E	20.0	572.3	E 4	mg/L		-176	80 - 120	3	20

Lab Sample ID: MB 600-239420/34
Matrix: Water
Analysis Batch: 239420

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/29/18 23:25	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/29/18 23:25	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/29/18 23:25	1

Lab Sample ID: MB 600-239420/4
Matrix: Water
Analysis Batch: 239420

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/29/18 14:27	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/29/18 14:27	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/29/18 14:27	1

Lab Sample ID: LCS 600-239420/35
Matrix: Water
Analysis Batch: 239420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.76		mg/L		99	90 - 110
Fluoride	7.50	7.413		mg/L		99	90 - 110
Sulfate	20.0	19.50		mg/L		97	90 - 110

Lab Sample ID: LCS 600-239420/5
Matrix: Water
Analysis Batch: 239420

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.51		mg/L		98	90 - 110
Fluoride	7.50	7.193		mg/L		96	90 - 110
Sulfate	20.0	19.31		mg/L		97	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-165831-1 MS
Matrix: Water
Analysis Batch: 239420

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1170		2000	2938		mg/L		88	80 - 120
Fluoride	12.0	U	400	374.3		mg/L		94	80 - 120
Sulfate	299		2000	2265		mg/L		98	80 - 120

Lab Sample ID: 600-165831-1 MSD
Matrix: Water
Analysis Batch: 239420

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1170		2000	2957		mg/L		89	80 - 120	1	20
Fluoride	12.0	U	400	378.0		mg/L		95	80 - 120	1	20
Sulfate	299		2000	2301		mg/L		100	80 - 120	2	20

Lab Sample ID: 600-165831-9 MS
Matrix: Water
Analysis Batch: 239420

Client Sample ID: MW-08 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	119		1000	988.2		mg/L		87	80 - 120
Fluoride	6.01	U	200	193.7		mg/L		97	80 - 120
Sulfate	787		1000	1692		mg/L		90	80 - 120

Lab Sample ID: 600-165831-9 MSD
Matrix: Water
Analysis Batch: 239420

Client Sample ID: MW-08 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	119		1000	995.6		mg/L		88	80 - 120	1	20
Fluoride	6.01	U	200	193.6		mg/L		97	80 - 120	0	20
Sulfate	787		1000	1728		mg/L		94	80 - 120	2	20

Lab Sample ID: MB 600-239490/4
Matrix: Water
Analysis Batch: 239490

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			05/30/18 10:19	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/30/18 10:19	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			05/30/18 10:19	1

Lab Sample ID: LCS 600-239490/5
Matrix: Water
Analysis Batch: 239490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.69		mg/L		98	90 - 110
Fluoride	7.50	7.242		mg/L		97	90 - 110
Sulfate	20.0	19.50		mg/L		97	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 600-165831-1 MS
Matrix: Water
Analysis Batch: 239490

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1800	E	50.0	1492	E 4	mg/L		-612	80 - 120
Fluoride	0.301	U	10.0	7.803	N1	mg/L		78	80 - 120
Sulfate	344	E	50.0	329.1	E 4	mg/L		-29	80 - 120

Lab Sample ID: 600-165831-1 MSD
Matrix: Water
Analysis Batch: 239490

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1800	E	50.0	1502	E 4	mg/L		-593	80 - 120	1	20
Fluoride	0.301	U	10.0	8.173		mg/L		82	80 - 120	5	20
Sulfate	344	E	50.0	332.3	E 4	mg/L		-23	80 - 120	1	20

Lab Sample ID: MB 600-239599/4
Matrix: Water
Analysis Batch: 239599

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.0601	U	0.200	0.0601	mg/L			05/31/18 10:55	1

Lab Sample ID: LCS 600-239599/5
Matrix: Water
Analysis Batch: 239599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	7.50	7.228		mg/L		96	90 - 110

Lab Sample ID: 600-165831-3 MS
Matrix: Water
Analysis Batch: 239599

Client Sample ID: MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	0.373		2.00	2.081		mg/L		85	80 - 120

Lab Sample ID: 600-165831-3 MSD
Matrix: Water
Analysis Batch: 239599

Client Sample ID: MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Fluoride	0.373		2.00	2.103		mg/L		86	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 560-150765/1-A
Matrix: Water
Analysis Batch: 150858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 150765

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.198	U	0.500	0.198	mg/L		05/09/18 12:19	05/10/18 23:29	1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 560-150765/1-A
Matrix: Water
Analysis Batch: 150858

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 150765

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		05/09/18 12:19	05/10/18 23:29	1

Lab Sample ID: LCS 560-150765/2-A
Matrix: Water
Analysis Batch: 150858

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 150765

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25.0	24.51		mg/L		98	80 - 120
Boron	0.250	0.2491		mg/L		100	80 - 120

Lab Sample ID: 600-165452-4 MS
Matrix: Water
Analysis Batch: 150858

Client Sample ID: MW-32 MS
Prep Type: Total/NA
Prep Batch: 150765

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	55.3		25.0	63.66	N1	mg/L		34	80 - 120
Boron	0.120		0.250	0.3879		mg/L		107	80 - 120

Lab Sample ID: 600-165452-4 MSD
Matrix: Water
Analysis Batch: 150858

Client Sample ID: MW-32 MSD
Prep Type: Total/NA
Prep Batch: 150765

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	55.3		25.0	62.13	N1	mg/L		27	80 - 120	2	20
Boron	0.120		0.250	0.3850		mg/L		106	80 - 120	1	20

Lab Sample ID: MB 560-151020/1-A
Matrix: Water
Analysis Batch: 151139

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 151020

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.198	U	0.500	0.198	mg/L		05/16/18 11:05	05/17/18 19:25	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:05	05/17/18 19:25	1

Lab Sample ID: LCS 560-151020/2-A
Matrix: Water
Analysis Batch: 151139

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 151020

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25.0	25.64		mg/L		103	80 - 120
Boron	0.250	0.2846		mg/L		114	80 - 120

Lab Sample ID: 600-165918-1 MS
Matrix: Water
Analysis Batch: 151139

Client Sample ID: MW-07
Prep Type: Total/NA
Prep Batch: 151020

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	13.9		25.0	39.45		mg/L		102	80 - 120
Boron	0.0700	U	0.250	0.2963		mg/L		119	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 600-165918-1 MSD — **Client Sample ID: MW-07**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 151139 — **Prep Batch: 151020**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	13.9		25.0	39.35		mg/L		102	80 - 120	0	20
Boron	0.0700	U	0.250	0.2984		mg/L		119	80 - 120	1	20

Lab Sample ID: MB 560-151021/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 151054 — **Prep Batch: 151021**

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	0.198	U	0.500	0.198	mg/L		05/16/18 11:50	05/16/18 19:53	1
Boron	0.0700	U	0.100	0.0700	mg/L		05/16/18 11:50	05/16/18 19:53	1

Lab Sample ID: LCS 560-151021/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 151054 — **Prep Batch: 151021**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25.0	24.30		mg/L		97	80 - 120
Boron	0.250	0.2324		mg/L		93	80 - 120

Lab Sample ID: 600-165831-9 MS — **Client Sample ID: MW-08 MS**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 151054 — **Prep Batch: 151021**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	180		25.0	205.4	4	mg/L		100	80 - 120
Boron	1.34		0.250	1.673	4	mg/L		135	80 - 120

Lab Sample ID: 600-165831-9 MSD — **Client Sample ID: MW-08 MSD**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 151054 — **Prep Batch: 151021**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	180		25.0	180.5	4	mg/L		0.8	80 - 120	13	20
Boron	1.34		0.250	1.603	4	mg/L		107	80 - 120	4	20

Method: 9040B - pH

Lab Sample ID: LCS 600-238033/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 238033

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		101	99 - 101

Method: 9040B - pH (Continued)

Lab Sample ID: LCS 600-238033/26
Matrix: Water
Analysis Batch: 238033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.0		SU		101	99 - 101		

Lab Sample ID: 600-165452-4 DU
Matrix: Water
Analysis Batch: 238033

Client Sample ID: MW-32
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.2	HF		7.2		SU				0.1	1

Lab Sample ID: 600-165452-14 DU
Matrix: Water
Analysis Batch: 238033

Client Sample ID: MW-21
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.6	HF		6.6		SU				0	1

Lab Sample ID: LCS 600-238686/1
Matrix: Water
Analysis Batch: 238686

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.0		SU		100	99 - 101		

Lab Sample ID: 600-165831-2 DU
Matrix: Water
Analysis Batch: 238686

Client Sample ID: MW-28
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.3	HF		6.5	F	SU				2	1

Lab Sample ID: LCS 600-239043/26
Matrix: Water
Analysis Batch: 239043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.1		SU		101	99 - 101		

Lab Sample ID: 600-165918-1 DU
Matrix: Water
Analysis Batch: 239043

Client Sample ID: MW-07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.9	HF		7.9		SU				0.5	1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 600-238037/1
Matrix: Water
Analysis Batch: 238037

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/08/18 11:03	1

Lab Sample ID: MB 600-238037/25
Matrix: Water
Analysis Batch: 238037

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/08/18 11:03	1

Lab Sample ID: LCS 600-238037/2
Matrix: Water
Analysis Batch: 238037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1761		mg/L		98	90 - 110

Lab Sample ID: LCS 600-238037/26
Matrix: Water
Analysis Batch: 238037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1760		mg/L		98	90 - 110

Lab Sample ID: 600-165452-3 DU
Matrix: Water
Analysis Batch: 238037

Client Sample ID: MW-36
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3280		3330		mg/L		2	10

Lab Sample ID: 600-165452-13 DU
Matrix: Water
Analysis Batch: 238037

Client Sample ID: MW-22
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	268		263.0		mg/L		2	10

Lab Sample ID: MB 600-238530/1
Matrix: Water
Analysis Batch: 238530

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/14/18 22:00	1

Lab Sample ID: LCS 600-238530/2
Matrix: Water
Analysis Batch: 238530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1719		mg/L		96	90 - 110

Lab Sample ID: 600-165831-1 DU
Matrix: Water
Analysis Batch: 238530

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	4340			4356		mg/L				0.5	10

Lab Sample ID: MB 600-238555/1
Matrix: Water
Analysis Batch: 238555

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/15/18 12:24	1

Lab Sample ID: LCS 600-238555/2
Matrix: Water
Analysis Batch: 238555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1800	1710		mg/L		95	90 - 110		

Lab Sample ID: 600-165831-3 DU
Matrix: Water
Analysis Batch: 238555

Client Sample ID: MW-18
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	326			318.0		mg/L				2	10

Lab Sample ID: MB 600-238644/25
Matrix: Water
Analysis Batch: 238644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/16/18 10:50	1

Lab Sample ID: MB 600-238644/49
Matrix: Water
Analysis Batch: 238644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			05/16/18 10:50	1

Lab Sample ID: LCS 600-238644/26
Matrix: Water
Analysis Batch: 238644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1800	1797		mg/L		100	90 - 110		

Lab Sample ID: LCS 600-238644/50
Matrix: Water
Analysis Batch: 238644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1800	1697		mg/L		94	90 - 110		

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 600-165761-A-15 DU
Matrix: Water
Analysis Batch: 238644

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	558			556.0		mg/L				0.4	10

Lab Sample ID: 600-165918-1 DU
Matrix: Water
Analysis Batch: 238644

Client Sample ID: MW-07
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	181			176.0		mg/L				3	10

Unadjusted Detection Limits

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Method: 300.0 - Anions, Ion Chromatography

Analyte	MQL	MDL	Units	Method
Chloride	0.400	0.0534	mg/L	300.0
Fluoride	0.200	0.0601	mg/L	300.0
Sulfate	0.500	0.0957	mg/L	300.0

Method: 6020 - Metals (ICP/MS)

Prep: 3010A

Analyte	MQL	MDL	Units	Method
Boron	0.100	0.0700	mg/L	6020
Calcium	0.500	0.198	mg/L	6020

General Chemistry

Analyte	MQL	MDL	Units	Method
pH	0.01	0.01	SU	9040B
Total Dissolved Solids	10.0	10.0	mg/L	SM 2540C

HPLC/IC

Analysis Batch: 238627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	300.0	
600-165452-2	MW-37	Total/NA	Water	300.0	
600-165452-3	MW-36	Total/NA	Water	300.0	
600-165452-4	MW-32	Total/NA	Water	300.0	
600-165452-5	MW-35	Total/NA	Water	300.0	
600-165452-6	MW-34	Total/NA	Water	300.0	
600-165452-7	MW-33	Total/NA	Water	300.0	
600-165452-8	MW-31	Total/NA	Water	300.0	
600-165452-9	MW-38	Total/NA	Water	300.0	
600-165452-10	MW-39	Total/NA	Water	300.0	
600-165452-11	MW-04	Total/NA	Water	300.0	
600-165452-12	MW-40	Total/NA	Water	300.0	
600-165452-13	MW-22	Total/NA	Water	300.0	
600-165452-14	MW-21	Total/NA	Water	300.0	
600-165452-15	MW-20	Total/NA	Water	300.0	
600-165452-16	MW-19	Total/NA	Water	300.0	
MB 600-238627/34	Method Blank	Total/NA	Water	300.0	
MB 600-238627/4	Method Blank	Total/NA	Water	300.0	
LCS 600-238627/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-238627/5	Lab Control Sample	Total/NA	Water	300.0	
600-165452-4 MS	MW-32 MS	Total/NA	Water	300.0	
600-165452-4 MSD	MW-32 MSD	Total/NA	Water	300.0	
600-165452-9 MS	MW-38	Total/NA	Water	300.0	
600-165452-9 MSD	MW-38	Total/NA	Water	300.0	

Analysis Batch: 238718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	300.0	
600-165452-2	MW-37	Total/NA	Water	300.0	
600-165452-3	MW-36	Total/NA	Water	300.0	
600-165452-4	MW-32	Total/NA	Water	300.0	
600-165452-5	MW-35	Total/NA	Water	300.0	
600-165452-6	MW-34	Total/NA	Water	300.0	
600-165452-7	MW-33	Total/NA	Water	300.0	
600-165452-8	MW-31	Total/NA	Water	300.0	
600-165452-9	MW-38	Total/NA	Water	300.0	
600-165452-10	MW-39	Total/NA	Water	300.0	
600-165452-11	MW-04	Total/NA	Water	300.0	
600-165452-17	EB-01	Total/NA	Water	300.0	
600-165452-18	DUP-01	Total/NA	Water	300.0	
600-165452-18	DUP-01	Total/NA	Water	300.0	
MB 600-238718/4	Method Blank	Total/NA	Water	300.0	
LCS 600-238718/5	Lab Control Sample	Total/NA	Water	300.0	
600-165452-8 MS	MW-31	Total/NA	Water	300.0	
600-165452-8 MSD	MW-31	Total/NA	Water	300.0	
600-165452-18 MS	DUP-01	Total/NA	Water	300.0	
600-165452-18 MSD	DUP-01	Total/NA	Water	300.0	

Analysis Batch: 238829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-12	MW-40	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 238829 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-13	MW-22	Total/NA	Water	300.0	
600-165452-14	MW-21	Total/NA	Water	300.0	
600-165452-15	MW-20	Total/NA	Water	300.0	
600-165452-16	MW-19	Total/NA	Water	300.0	
MB 600-238829/4	Method Blank	Total/NA	Water	300.0	
LCS 600-238829/5	Lab Control Sample	Total/NA	Water	300.0	
600-165569-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
600-165569-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
600-166118-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
600-166118-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 239420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	300.0	
600-165831-2	MW-28	Total/NA	Water	300.0	
600-165831-3	MW-18	Total/NA	Water	300.0	
600-165831-4	MW-17	Total/NA	Water	300.0	
600-165831-5	MW-01	Total/NA	Water	300.0	
600-165831-6	MW-02	Total/NA	Water	300.0	
600-165831-7	MW-17B	Total/NA	Water	300.0	
600-165831-8	MW-41	Total/NA	Water	300.0	
600-165831-9	MW-08	Total/NA	Water	300.0	
600-165831-10	DUP-02	Total/NA	Water	300.0	
600-165918-1	MW-07	Total/NA	Water	300.0	
600-165918-2	MW-42	Total/NA	Water	300.0	
MB 600-239420/34	Method Blank	Total/NA	Water	300.0	
MB 600-239420/4	Method Blank	Total/NA	Water	300.0	
LCS 600-239420/35	Lab Control Sample	Total/NA	Water	300.0	
LCS 600-239420/5	Lab Control Sample	Total/NA	Water	300.0	
600-165831-1 MS	MW-27	Total/NA	Water	300.0	
600-165831-1 MSD	MW-27	Total/NA	Water	300.0	
600-165831-9 MS	MW-08 MS	Total/NA	Water	300.0	
600-165831-9 MSD	MW-08 MSD	Total/NA	Water	300.0	

Analysis Batch: 239490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	300.0	
600-165831-2	MW-28	Total/NA	Water	300.0	
600-165831-5	MW-01	Total/NA	Water	300.0	
600-165831-6	MW-02	Total/NA	Water	300.0	
600-165831-7	MW-17B	Total/NA	Water	300.0	
600-165831-8	MW-41	Total/NA	Water	300.0	
600-165831-9	MW-08	Total/NA	Water	300.0	
600-165831-10	DUP-02	Total/NA	Water	300.0	
600-165918-2	MW-42	Total/NA	Water	300.0	
600-165918-3	MW-43	Total/NA	Water	300.0	
600-165918-4	MW-44	Total/NA	Water	300.0	
600-165918-5	MW-05	Total/NA	Water	300.0	
600-165918-6	MW-29	Total/NA	Water	300.0	
600-165918-8	EB-02	Total/NA	Water	300.0	
MB 600-239490/4	Method Blank	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 239490 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 600-239490/5	Lab Control Sample	Total/NA	Water	300.0	
600-165831-1 MS	MW-27	Total/NA	Water	300.0	
600-165831-1 MSD	MW-27	Total/NA	Water	300.0	

Analysis Batch: 239599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-3	MW-18	Total/NA	Water	300.0	
600-165918-6	MW-29	Total/NA	Water	300.0	
MB 600-239599/4	Method Blank	Total/NA	Water	300.0	
LCS 600-239599/5	Lab Control Sample	Total/NA	Water	300.0	
600-165831-3 MS	MW-18	Total/NA	Water	300.0	
600-165831-3 MSD	MW-18	Total/NA	Water	300.0	

Metals

Prep Batch: 150765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	3010A	
600-165452-2	MW-37	Total/NA	Water	3010A	
600-165452-3	MW-36	Total/NA	Water	3010A	
600-165452-4	MW-32	Total/NA	Water	3010A	
600-165452-5	MW-35	Total/NA	Water	3010A	
600-165452-6	MW-34	Total/NA	Water	3010A	
600-165452-7	MW-33	Total/NA	Water	3010A	
600-165452-8	MW-31	Total/NA	Water	3010A	
600-165452-9	MW-38	Total/NA	Water	3010A	
600-165452-10	MW-39	Total/NA	Water	3010A	
600-165452-11	MW-04	Total/NA	Water	3010A	
600-165452-12	MW-40	Total/NA	Water	3010A	
600-165452-13	MW-22	Total/NA	Water	3010A	
600-165452-14	MW-21	Total/NA	Water	3010A	
600-165452-15	MW-20	Total/NA	Water	3010A	
600-165452-16	MW-19	Total/NA	Water	3010A	
600-165452-17	EB-01	Total/NA	Water	3010A	
600-165452-18	DUP-01	Total/NA	Water	3010A	
MB 560-150765/1-A	Method Blank	Total/NA	Water	3010A	
LCS 560-150765/2-A	Lab Control Sample	Total/NA	Water	3010A	
600-165452-4 MS	MW-32 MS	Total/NA	Water	3010A	
600-165452-4 MSD	MW-32 MSD	Total/NA	Water	3010A	

Analysis Batch: 150858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	6020	150765
600-165452-2	MW-37	Total/NA	Water	6020	150765
600-165452-3	MW-36	Total/NA	Water	6020	150765
600-165452-4	MW-32	Total/NA	Water	6020	150765
600-165452-5	MW-35	Total/NA	Water	6020	150765
600-165452-6	MW-34	Total/NA	Water	6020	150765
600-165452-7	MW-33	Total/NA	Water	6020	150765
600-165452-8	MW-31	Total/NA	Water	6020	150765

Metals (Continued)

Analysis Batch: 150858 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-9	MW-38	Total/NA	Water	6020	150765
600-165452-10	MW-39	Total/NA	Water	6020	150765
600-165452-11	MW-04	Total/NA	Water	6020	150765
600-165452-12	MW-40	Total/NA	Water	6020	150765
600-165452-13	MW-22	Total/NA	Water	6020	150765
600-165452-14	MW-21	Total/NA	Water	6020	150765
600-165452-15	MW-20	Total/NA	Water	6020	150765
600-165452-16	MW-19	Total/NA	Water	6020	150765
600-165452-17	EB-01	Total/NA	Water	6020	150765
600-165452-18	DUP-01	Total/NA	Water	6020	150765
MB 560-150765/1-A	Method Blank	Total/NA	Water	6020	150765
LCS 560-150765/2-A	Lab Control Sample	Total/NA	Water	6020	150765
600-165452-4 MS	MW-32 MS	Total/NA	Water	6020	150765
600-165452-4 MSD	MW-32 MSD	Total/NA	Water	6020	150765

Prep Batch: 151020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165918-1	MW-07	Total/NA	Water	3010A	
600-165918-2	MW-42	Total/NA	Water	3010A	
600-165918-3	MW-43	Total/NA	Water	3010A	
600-165918-4	MW-44	Total/NA	Water	3010A	
600-165918-5	MW-05	Total/NA	Water	3010A	
600-165918-6	MW-29	Total/NA	Water	3010A	
600-165918-8	EB-02	Total/NA	Water	3010A	
MB 560-151020/1-A	Method Blank	Total/NA	Water	3010A	
LCS 560-151020/2-A	Lab Control Sample	Total/NA	Water	3010A	
600-165918-1 MS	MW-07	Total/NA	Water	3010A	
600-165918-1 MSD	MW-07	Total/NA	Water	3010A	

Prep Batch: 151021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	3010A	
600-165831-2	MW-28	Total/NA	Water	3010A	
600-165831-3	MW-18	Total/NA	Water	3010A	
600-165831-4	MW-17	Total/NA	Water	3010A	
600-165831-5	MW-01	Total/NA	Water	3010A	
600-165831-6	MW-02	Total/NA	Water	3010A	
600-165831-7	MW-17B	Total/NA	Water	3010A	
600-165831-8	MW-41	Total/NA	Water	3010A	
600-165831-9	MW-08	Total/NA	Water	3010A	
600-165831-10	DUP-02	Total/NA	Water	3010A	
MB 560-151021/1-A	Method Blank	Total/NA	Water	3010A	
LCS 560-151021/2-A	Lab Control Sample	Total/NA	Water	3010A	
600-165831-9 MS	MW-08 MS	Total/NA	Water	3010A	
600-165831-9 MSD	MW-08 MSD	Total/NA	Water	3010A	

Analysis Batch: 151054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	6020	151021
600-165831-2	MW-28	Total/NA	Water	6020	151021
600-165831-3	MW-18	Total/NA	Water	6020	151021

Metals (Continued)

Analysis Batch: 151054 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-9	MW-08	Total/NA	Water	6020	151021
MB 560-151021/1-A	Method Blank	Total/NA	Water	6020	151021
LCS 560-151021/2-A	Lab Control Sample	Total/NA	Water	6020	151021
600-165831-9 MS	MW-08 MS	Total/NA	Water	6020	151021
600-165831-9 MSD	MW-08 MSD	Total/NA	Water	6020	151021

Analysis Batch: 151088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-4	MW-17	Total/NA	Water	6020	151021
600-165831-5	MW-01	Total/NA	Water	6020	151021
600-165831-6	MW-02	Total/NA	Water	6020	151021
600-165831-7	MW-17B	Total/NA	Water	6020	151021
600-165831-8	MW-41	Total/NA	Water	6020	151021
600-165831-10	DUP-02	Total/NA	Water	6020	151021

Analysis Batch: 151139

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165918-1	MW-07	Total/NA	Water	6020	151020
600-165918-2	MW-42	Total/NA	Water	6020	151020
600-165918-3	MW-43	Total/NA	Water	6020	151020
600-165918-4	MW-44	Total/NA	Water	6020	151020
600-165918-5	MW-05	Total/NA	Water	6020	151020
600-165918-6	MW-29	Total/NA	Water	6020	151020
600-165918-8	EB-02	Total/NA	Water	6020	151020
MB 560-151020/1-A	Method Blank	Total/NA	Water	6020	151020
LCS 560-151020/2-A	Lab Control Sample	Total/NA	Water	6020	151020
600-165918-1 MS	MW-07	Total/NA	Water	6020	151020
600-165918-1 MSD	MW-07	Total/NA	Water	6020	151020

General Chemistry

Analysis Batch: 238033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	9040B	
600-165452-2	MW-37	Total/NA	Water	9040B	
600-165452-3	MW-36	Total/NA	Water	9040B	
600-165452-4	MW-32	Total/NA	Water	9040B	
600-165452-5	MW-35	Total/NA	Water	9040B	
600-165452-6	MW-34	Total/NA	Water	9040B	
600-165452-7	MW-33	Total/NA	Water	9040B	
600-165452-8	MW-31	Total/NA	Water	9040B	
600-165452-9	MW-38	Total/NA	Water	9040B	
600-165452-10	MW-39	Total/NA	Water	9040B	
600-165452-11	MW-04	Total/NA	Water	9040B	
600-165452-12	MW-40	Total/NA	Water	9040B	
600-165452-13	MW-22	Total/NA	Water	9040B	
600-165452-14	MW-21	Total/NA	Water	9040B	
600-165452-15	MW-20	Total/NA	Water	9040B	
600-165452-16	MW-19	Total/NA	Water	9040B	
600-165452-17	EB-01	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 238033 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-18	DUP-01	Total/NA	Water	9040B	
LCS 600-238033/1	Lab Control Sample	Total/NA	Water	9040B	
LCS 600-238033/26	Lab Control Sample	Total/NA	Water	9040B	
600-165452-4 DU	MW-32	Total/NA	Water	9040B	
600-165452-14 DU	MW-21	Total/NA	Water	9040B	

Analysis Batch: 238037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165452-1	MW-30	Total/NA	Water	SM 2540C	
600-165452-2	MW-37	Total/NA	Water	SM 2540C	
600-165452-3	MW-36	Total/NA	Water	SM 2540C	
600-165452-4	MW-32	Total/NA	Water	SM 2540C	
600-165452-5	MW-35	Total/NA	Water	SM 2540C	
600-165452-6	MW-34	Total/NA	Water	SM 2540C	
600-165452-7	MW-33	Total/NA	Water	SM 2540C	
600-165452-8	MW-31	Total/NA	Water	SM 2540C	
600-165452-9	MW-38	Total/NA	Water	SM 2540C	
600-165452-10	MW-39	Total/NA	Water	SM 2540C	
600-165452-11	MW-04	Total/NA	Water	SM 2540C	
600-165452-12	MW-40	Total/NA	Water	SM 2540C	
600-165452-13	MW-22	Total/NA	Water	SM 2540C	
600-165452-14	MW-21	Total/NA	Water	SM 2540C	
600-165452-15	MW-20	Total/NA	Water	SM 2540C	
600-165452-16	MW-19	Total/NA	Water	SM 2540C	
600-165452-17	EB-01	Total/NA	Water	SM 2540C	
600-165452-18	DUP-01	Total/NA	Water	SM 2540C	
MB 600-238037/1	Method Blank	Total/NA	Water	SM 2540C	
MB 600-238037/25	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-238037/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 600-238037/26	Lab Control Sample	Total/NA	Water	SM 2540C	
600-165452-3 DU	MW-36	Total/NA	Water	SM 2540C	
600-165452-13 DU	MW-22	Total/NA	Water	SM 2540C	

Analysis Batch: 238530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	SM 2540C	
600-165831-2	MW-28	Total/NA	Water	SM 2540C	
MB 600-238530/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-238530/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-165831-1 DU	MW-27	Total/NA	Water	SM 2540C	

Analysis Batch: 238555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-3	MW-18	Total/NA	Water	SM 2540C	
600-165831-4	MW-17	Total/NA	Water	SM 2540C	
600-165831-5	MW-01	Total/NA	Water	SM 2540C	
600-165831-6	MW-02	Total/NA	Water	SM 2540C	
600-165831-10	DUP-02	Total/NA	Water	SM 2540C	
MB 600-238555/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-238555/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-165831-3 DU	MW-18	Total/NA	Water	SM 2540C	

QC Association Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Analysis Batch: 238644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-7	MW-17B	Total/NA	Water	SM 2540C	
600-165831-8	MW-41	Total/NA	Water	SM 2540C	
600-165831-9	MW-08	Total/NA	Water	SM 2540C	
600-165918-1	MW-07	Total/NA	Water	SM 2540C	
600-165918-2	MW-42	Total/NA	Water	SM 2540C	
600-165918-3	MW-43	Total/NA	Water	SM 2540C	
600-165918-4	MW-44	Total/NA	Water	SM 2540C	
600-165918-5	MW-05	Total/NA	Water	SM 2540C	
600-165918-6	MW-29	Total/NA	Water	SM 2540C	
600-165918-8	EB-02	Total/NA	Water	SM 2540C	
MB 600-238644/25	Method Blank	Total/NA	Water	SM 2540C	
MB 600-238644/49	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-238644/26	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 600-238644/50	Lab Control Sample	Total/NA	Water	SM 2540C	
600-165761-A-15 DU	Duplicate	Total/NA	Water	SM 2540C	
600-165918-1 DU	MW-07	Total/NA	Water	SM 2540C	

Analysis Batch: 238686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165831-1	MW-27	Total/NA	Water	9040B	
600-165831-2	MW-28	Total/NA	Water	9040B	
600-165831-3	MW-18	Total/NA	Water	9040B	
600-165831-4	MW-17	Total/NA	Water	9040B	
600-165831-5	MW-01	Total/NA	Water	9040B	
600-165831-6	MW-02	Total/NA	Water	9040B	
600-165831-7	MW-17B	Total/NA	Water	9040B	
600-165831-8	MW-41	Total/NA	Water	9040B	
600-165831-9	MW-08	Total/NA	Water	9040B	
600-165831-10	DUP-02	Total/NA	Water	9040B	
LCS 600-238686/1	Lab Control Sample	Total/NA	Water	9040B	
600-165831-2 DU	MW-28	Total/NA	Water	9040B	

Analysis Batch: 239043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-165918-1	MW-07	Total/NA	Water	9040B	
600-165918-2	MW-42	Total/NA	Water	9040B	
600-165918-3	MW-43	Total/NA	Water	9040B	
600-165918-4	MW-44	Total/NA	Water	9040B	
600-165918-5	MW-05	Total/NA	Water	9040B	
600-165918-6	MW-29	Total/NA	Water	9040B	
600-165918-8	EB-02	Total/NA	Water	9040B	
LCS 600-239043/26	Lab Control Sample	Total/NA	Water	9040B	
600-165918-1 DU	MW-07	Total/NA	Water	9040B	

Client Sample ID: MW-30

Date Collected: 05/01/18 10:10
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			238627	05/17/18 00:18	DAW	TAL HOU
Total/NA	Analysis	300.0		20			238718	05/17/18 19:40	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:26	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:16	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-37

Date Collected: 05/01/18 12:25
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 01:11	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 19:58	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:32	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:20	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-36

Date Collected: 05/01/18 14:05
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			238627	05/17/18 01:29	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 20:16	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:37	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:23	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-32

Date Collected: 05/01/18 16:27
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			238627	05/16/18 23:24	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 21:10	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/10/18 23:34	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:30	KRD	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-32
Date Collected: 05/01/18 16:27
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-35
Date Collected: 05/02/18 09:35
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 01:47	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 21:27	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:42	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:38	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-34
Date Collected: 05/02/18 11:30
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 02:05	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 21:45	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:48	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:41	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-33
Date Collected: 05/02/18 13:38
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 02:23	DAW	TAL HOU
Total/NA	Analysis	300.0		2			238718	05/17/18 22:03	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:53	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:45	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-31

Date Collected: 05/02/18 15:25
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			238627	05/17/18 02:41	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 22:21	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 00:59	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:49	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-38

Date Collected: 05/02/18 17:00
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		250			238627	05/17/18 03:35	DAW	TAL HOU
Total/NA	Analysis	300.0		10			238718	05/17/18 23:15	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 01:04	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:53	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-39

Date Collected: 05/03/18 09:15
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 05:04	DAW	TAL HOU
Total/NA	Analysis	300.0		5			238718	05/17/18 23:33	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 01:10	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 22:56	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-04

Date Collected: 05/03/18 11:30
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 05:22	DAW	TAL HOU
Total/NA	Analysis	300.0		10			238718	05/17/18 23:51	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 01:15	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:00	KRD	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-04

Date Collected: 05/03/18 11:30
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-40

Date Collected: 05/03/18 13:20
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			238627	05/17/18 05:40	DAW	TAL HOU
Total/NA	Analysis	300.0		2			238829	05/18/18 19:16	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 01:51	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:04	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-22

Date Collected: 05/03/18 16:25
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			238627	05/17/18 05:58	DAW	TAL HOU
Total/NA	Analysis	300.0		1			238829	05/18/18 19:33	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 01:56	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:08	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-21

Date Collected: 05/03/18 17:48
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			238627	05/17/18 06:16	DAW	TAL HOU
Total/NA	Analysis	300.0		1			238829	05/18/18 20:27	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 02:01	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:17	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-20

Date Collected: 05/04/18 10:03
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			238627	05/17/18 06:34	DAW	TAL HOU
Total/NA	Analysis	300.0		1			238829	05/18/18 20:45	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 02:06	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:25	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: MW-19

Date Collected: 05/04/18 11:17
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			238627	05/17/18 06:52	DAW	TAL HOU
Total/NA	Analysis	300.0		1			238829	05/18/18 21:03	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 02:12	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:29	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: EB-01

Date Collected: 05/04/18 10:15
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			238718	05/17/18 19:22	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 02:17	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:32	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Client Sample ID: DUP-01

Date Collected: 05/04/18 00:00
Date Received: 05/04/18 15:35

Lab Sample ID: 600-165452-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			238718	05/17/18 18:10	DAW	TAL HOU
Total/NA	Analysis	300.0		100			238718	05/17/18 18:28	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	150765	05/09/18 12:19	AKM	TAL CC
Total/NA	Analysis	6020		1			150858	05/11/18 02:22	JEM	TAL CC
Total/NA	Analysis	9040B		1			238033	05/07/18 23:36	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238037	05/08/18 11:03	EC1	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-27

Date Collected: 05/07/18 14:20
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			239420	05/30/18 00:00	DAW	TAL HOU
Total/NA	Analysis	300.0		5			239490	05/30/18 10:55	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151054	05/16/18 20:20	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 16:48	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	238530	05/14/18 22:00	KRD	TAL HOU

Client Sample ID: MW-28

Date Collected: 05/07/18 16:20
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		250			239420	05/30/18 01:30	DAW	TAL HOU
Total/NA	Analysis	300.0		5			239490	05/30/18 11:49	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151054	05/16/18 20:26	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 16:55	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	238530	05/14/18 22:00	KRD	TAL HOU

Client Sample ID: MW-18

Date Collected: 05/08/18 10:25
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			239420	05/29/18 20:08	DAW	TAL HOU
Total/NA	Analysis	300.0		1			239599	05/31/18 14:45	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151054	05/16/18 20:31	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:02	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238555	05/15/18 12:24	EC1	TAL HOU

Client Sample ID: MW-17

Date Collected: 05/08/18 12:25
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			239420	05/29/18 22:49	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 16:41	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:06	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238555	05/15/18 12:24	EC1	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-01

Date Collected: 05/08/18 14:20
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			239420	05/29/18 23:07	DAW	TAL HOU
Total/NA	Analysis	300.0		50			239490	05/30/18 12:25	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 16:47	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:10	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238555	05/15/18 12:24	EC1	TAL HOU

Client Sample ID: MW-02

Date Collected: 05/08/18 16:07
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			239420	05/30/18 01:48	DAW	TAL HOU
Total/NA	Analysis	300.0		2			239490	05/30/18 12:43	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 16:52	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:13	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238555	05/15/18 12:24	EC1	TAL HOU

Client Sample ID: MW-17B

Date Collected: 05/09/18 09:47
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		200			239420	05/30/18 02:06	DAW	TAL HOU
Total/NA	Analysis	300.0		10			239490	05/30/18 13:54	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 16:58	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:17	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: MW-41

Date Collected: 05/09/18 11:22
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			239420	05/29/18 20:25	DAW	TAL HOU
Total/NA	Analysis	300.0		5			239490	05/30/18 14:12	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 17:03	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:21	KRD	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-41

Date Collected: 05/09/18 11:22
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: MW-08

Date Collected: 05/09/18 13:13
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			239420	05/29/18 19:14	DAW	TAL HOU
Total/NA	Analysis	300.0		5			239490	05/30/18 14:30	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151054	05/16/18 19:58	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:25	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: DUP-02

Date Collected: 05/08/18 00:00
Date Received: 05/12/18 11:16

Lab Sample ID: 600-165831-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			239420	05/29/18 20:43	DAW	TAL HOU
Total/NA	Analysis	300.0		2			239490	05/30/18 13:01	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151021	05/16/18 11:50	AKM	TAL CC
Total/NA	Analysis	6020		1			151088	05/17/18 17:09	JEM	TAL CC
Total/NA	Analysis	9040B		1			238686	05/16/18 17:28	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238555	05/15/18 12:24	EC1	TAL HOU

Client Sample ID: MW-07

Date Collected: 05/09/18 15:35
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			239420	05/30/18 03:00	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 19:30	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:02	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-42

Date Collected: 05/09/18 18:20
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			239420	05/30/18 03:17	DAW	TAL HOU
Total/NA	Analysis	300.0		2			239490	05/30/18 14:48	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 19:52	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:10	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: MW-43

Date Collected: 05/10/18 10:28
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			239490	05/30/18 12:07	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 19:57	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:14	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: MW-44

Date Collected: 05/10/18 12:05
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			239490	05/30/18 16:00	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 20:03	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:17	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: MW-05

Date Collected: 05/10/18 13:25
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			239490	05/30/18 16:18	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 20:44	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:21	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Client Sample ID: MW-29

Date Collected: 05/10/18 15:05
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			239490	05/30/18 17:29	DAW	TAL HOU
Total/NA	Analysis	300.0		1			239599	05/31/18 15:38	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 20:50	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:25	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Client Sample ID: EB-02

Date Collected: 05/10/18 16:00
Date Received: 05/15/18 10:05

Lab Sample ID: 600-165918-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			239490	05/30/18 16:36	DAW	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	151020	05/16/18 11:05	AKM	TAL CC
Total/NA	Analysis	6020		1			151139	05/17/18 20:55	JEM	TAL CC
Total/NA	Analysis	9040B		1			239043	05/22/18 14:29	KRD	TAL HOU
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	238644	05/16/18 10:50	EC1	TAL HOU

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG- Limestone App. III

TestAmerica Job ID: 600-165452-1

Laboratory: TestAmerica Houston

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-17-22	10-31-18

Laboratory: TestAmerica Corpus Christi

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Oklahoma	State Program	6	2017-139	08-31-18
Texas	NELAP	6	T104704210-18-21	03-31-19
USDA	Federal		P330-18-00035	02-02-21

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Jaston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 432 413 3941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested: Standard TAT			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested — Appendix III

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus) ApX III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	7470A (Mercury)(TA-Corpus)	903.0-Radium-226(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_CFPC	pH (9040)	Total Number of containers	Special Instructions/Note:
				Preservation Code:			D	N	N	D	N	N	N			
				Water			X	X	X	X	X	X	X		5	
MW-30	05-1-18	1010	G				X	X	X					X		
MW-37	5-1-18	1225					X	X	X					X		
MW-36	5-1-18	1405					X	X	X					X		
MW-32	5-1-18	1627					X	X	X					X		
MS-01	5-1-18	1627					X	X	X					X		
MSD-01	5-1-18	1627					X	X	X					X		
MW-35	5-2-18	935					X	X	X					X		
MW-34	5-2-18	1130					X	X	X					X		
MW-33	5-2-18	1338					X	X	X					X		
MW-31	5-2-18	1525	↓	↓			X	X	X					X		

600-165452 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:	
Relinquished by: Cody Jaston	Date/Time: 05-04-18 / 1535	Company	Received by: [signature]	Date/Time: 5/4/18 1535	Company: TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Easton	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested: STANDARD			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 APP IV	300_ORO_prep_2lab (Chloride, Sulfate, Chloride)	2lab_Calcd (TDS)	7470A (Mercury)(TA-Corpus)	903.0-Radium-226(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N		
				Water			X	X	X	X	X	X	X	5	
MW-30	5-1-18	1010	Grab				X			X	X	X	X		
MW-37		1225					X			X	X	X	X		
MW-36		1405					X			X	X	X	X		
MW-32		1627					X			X	X	X	X		
MS-01		1627					X			X	X	X	X		
MSD-01		1627					X			X	X	X	X		
MW-35	5-2-18	935					X			X	X	X	X		
MW-34		1130					X			X	X	X	X		
MW-33		1338					X			X	X	X	X		
MW-31		1525					X			X	X	X	X		

Appendix IV

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Cody Easton	05-04-18/1535		Received by:	5/4/18 15:35	TAH
Relinquished by:			Received by:		
Relinquished by:			Received by:		

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Easton	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested: STANDARD TAT			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (~~Calcium, Barium (TA Corpus)~~) Apx III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	~~Mercury (TA Corpus)~~ Appendix III	~~Radium 226 (TA St Louis)~~	~~Radium 228 (TA St Louis)~~	~~Radium 226/228_GFPC~~	pH (9040)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N			
MW-38	5-2-18	1700	G	Water			X	X	X					X	5	
MW-39	5-3-18	915					X	X	X					X		
MW-04		1130					X	X	X					X		
MW-40		1320					X	X	X					X		
~~MW-13B~~ MW-22		1625					X	X	X					X		
MW-21		1748					X	X	X					X		
MW-20	5-4-18	1003					X	X	X					X		
MW-19	5-4-18	1117					X	X	X					X		
EB-01	5-4-18	1015					X	X	X					X		
DUP-01							X	X	X					X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by: Cody Easton	Date/Time: 5-4-18/1535	Company	Received by:	Date/Time: 5/4/18 1535	Company TAT
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Jostes	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions		Analysis Requested		Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			Other:

Appendix IV

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals) (TA-Corpus) App IV	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calc (TDS)	7470A (Mercury)(TA-Corpus)	903.0-Radium-226(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
Preservation Code:							D	N	N	D	N	N	N		
				Water			X	X	X	X	X	X	X	5	
MW-38	5-2-18	1700	GRAB				X			X	X	X	X		
MW-39	5-3-18	915					X			X	X	X	X		
MW-04		1130					X			X	X	X	X		
MW-40		1320					X			X	X	X	X		
MW-22		1625					X			X	X	X	X		
MW-21		1748					X			X	X	X	X		
MW-20	5-4-18	1003					X			X	X	X	X		
MW-19		1117					X			X	X	X	X		
EB-01		1015					X			X	X	X	X		
Dup-01							X			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Cody Jostes	Date/Time: 5-4-18 / 1535	Company	Received by:	Date/Time: 5/4/18 1535	Company TAT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
165452

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

Date/Time Received: 5/4/18 1535

JOB NUMBER: _____ CLIENT: TRC/NRG

UNPACKED BY: PD / TS CARRIER/DRIVER: Client

Custody Seal Present: ☐ YES ☒ NO Number of Coolers Received: 7

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
RW	(Y) / N	Y / (N)	3.1	676	+0.3	3.4
RW	(Y) / N	Y / (N)	4.6			4.9
BW	(Y) / N	Y / (N)	2.1			2.4
GW	(Y) / N	Y / (N)	1.1			1.4
GW	(Y) / N	Y / (N)	1.6			1.9
BW	(Y) / N	Y / (N)	1.8			2.1
BW	(Y) / N	Y / (N)	14.6			14.9
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

PD 5/4/18

Samples received on ice? ☐ YES ☒ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☒ YES ☐ NO

pH paper Lot # HC740488

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X	

COMMENTS:

No ice (ice melted) in RW coolers containing Samples MW-35, MW-34, MW-33, MW-22, MW-39, Dup-01 all samples were in temp.
Samples from out of temp cooler are chill in progress. MW-20, MW-19

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

3

Chain of Custody Record

TestAmerica
LEADERS IN ENVIRONMENTAL TESTING

296-11606.2

600-165918 Chain of Custody

Client Information	Sampler:	Lab PM: Tigrett, Lance
Client Contact: Andrew Clayton	Phone:	E-Mail: lance.tigrett@testamericair
Company: TRC Solutions		
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:	
City: Houston	TAT Requested (days):	
State, Zip: TX, 77042		
Phone: 832-763-4936	PO #:	
Email: aclayton@trcsolutions.com	WO #:	
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045	
Site:	SSOW#:	

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (~~Custom Metals~~)(TA-Corpus)	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	~~7470A (Mercury)(TA-Corpus)~~	~~903.0-Radium-226(TA-St. Louis)~~	~~904.0-Radium-226 (TA-St. Louis)~~	~~Ra226Ra228_GFPC~~	pH (9040)						Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N								
MW-07	5-9-18	1535	G	Water			X	X	X	X	X	X	X	X						5	Dallas . Ft Worth
MW-42	5-9-18	1320					X	X	X					X							560501
MW-43	5-10-18	1023					X	X	X					X							
MW-44		1205					X	X	X					X							
MW-05		1325					X	X	X					X							
MW-29		1505					X	X	X					X							
Dup-02							X	X	X					X							
EB-02	5-10-18	1600					X	X	X					X							

Page 64 of 79

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCRRule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cody Foster	930 / 5-11-18	TRC	Kevin Hardaway	5-11-18 . 929	T. A.
2	Kevin Hardaway	5-14-18 1730	TA		5/15/18 1005	
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Graston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (~~Custom Metals~~)(TA-Corpus) for IV	~~900_ORGFM_28D (Fluoride,Sulfate,Chloride)~~	~~2540C_Calcd (TDS)~~	7470A (Mercury)(TA-Corpus) Appendix IV	903.0-Radium-226(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N		
MW-07	5-9-18	1535		Water			X	X	X	X	X	X	X	5	Dallas . Ft Worth
MW-42	5-9-18	1820					X			X	X	X	X		560501
MW-43	5-10-18	1028					X			X	X	X	X		
MW-44	"	1205					X			X	X	X	X		
MW-05	"	1325					X			X	X	X	X		
MW-29	"	1505					X			X	X	X	X		
Dup-02	"	"					X			X	X	X	X		
EB-02	5-10-18	1600					X			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Cody Graston	930 / 5-11-18	TRC	Leon Hardaway	5-11-18 9:29	TA
2	Leon Hardaway	5-14-18 1730	TA		5/15/18 1005	
3						

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

Loc: 600
165918

Date/Time Received: '18 MAY 15 10:05

JOB NUMBER: ___ _ CLIENT: TRC

UNPACKED BY: _____ CARRIER/DRIVER: Fedex

Custody Seal Present: ☒ YES ☐ NO Number of Coolers Received: 3

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
BW	Y / N	Y / N	3.6	478	+0.3	3.9
BW	Y / N	Y / N	3.8	1	1	4.1
BW	Y / N	Y / N	1.7	1	1	2.0
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N	DP 5/15/18			

CF = correction factor

Samples received on ice? ☒ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☒ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☒ YES ☐ NO

pH paper Lot # HC140488

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☒ NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	YES	NO

COMMENTS: DUP-02 NOT RCVD.
1 & 2 days remaining for TSS hold time.

DP 5/15/18


SVCS: STANDARD OVERNI
ORIGIN ID:PNXA (214) 218-1894
SAMPLE RECEIVING
TESTAMERICA DFW
3226 COMMANDER DRIVE
CARROLLTON, TX 75006
UNITED STATES US
SHIP DATE: 14MAY18
ACTWGT: 54.85 LB
CAD: 0637732/CAFE3111
DIMS: 24x14x14 IN
BILL RECIPIENT
TO SAMPLE RECEIVING
TEST AMERICA HOUSTON
6310 ROTHWAY STREET
HOUSTON TX 77040
(713) 690-4444
REF: TRC SAMPLES
FedEx Express
1 of 3
TRK# 0201 6025 5774 7260
TUE - 15 MAY 3:00P
STANDARD OVERNIGHT
MASTER
AB LKSA
77040
TX-US IAH
estAmerica
LEADER IN ENVIRONMENTAL TESTING
442562
Part # 156148-434 RIT EXP 10/18
MPS# 0263 6025 5774 7271
Mstr# 6025 5774 7260
2 of 3
0201
AB LKSA
TUE - 15 MAY 3:00P
STANDARD OVERNIGHT
77040
TX-US IAH
FedEx Express
546C2/7828/53C1


SVCS: STANDARD OVERN
ORIGIN ID:PNXA (214) 218-1894
SAMPLE RECEIVING
TESTAMERICA DFW
3226 COMMANDER DRIVE
CARROLLTON, TX 75006
UNITED STATES US
SHIP DATE: 14MAY18
ACTWGT: 59.45 LB
CAD: 0637732/CAFE3111
DIMS: 24x14x14 IN
BILL RECIPIENT
TO SAMPLE RECEIVING
TEST AMERICA HOUSTON
6310 ROTHWAY STREET
HOUSTON TX 77040
(713) 690-4444
REF: TRC SAMPLES
FedEx
Express
3 of 3
MPS# 0263 6025 5774 7282
Mstr# 6025 5774 7260
0201
TUE - 15 MAY 3:00P
STANDARD OVERNIGHT
AB LKSA
77040
IAH
TX-US
TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
442564

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-31576.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-165831-2
Address: 1733 N. Padre Island Drive, ,	Due Date Requested: 5/21/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Boron and Calcium (App III)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-27 (600-165831-1)	5/7/18	14:20 Central		Water			X	1	
MW-28 (600-165831-2)	5/7/18	16:20 Central		Water			X	1	
MW-18 (600-165831-3)	5/8/18	10:25 Central		Water			X	1	
MW-17 (600-165831-4)	5/8/18	12:25 Central		Water			X	1	
MW-01 (600-165831-5)	5/8/18	14:20 Central		Water			X	1	
MW-02 (600-165831-6)	5/8/18	16:07 Central		Water			X	1	
MW-17B (600-165831-7)	5/9/18	09:47 Central		Water			X	1	
MW-41 (600-165831-8)	5/9/18	11:22 Central		Water			X	1	
MW-08 (600-165831-9)	5/9/18	13:13 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5/14/18 17:00	THK		5/15/18 9:30	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7°C IR-10 0.8°C

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-31576.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-165831-2
Address: 1733 N. Padre Island Drive, ,	Due Date Requested: 5/21/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Boron and Calcium (App III)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-08 MS (600-165831-9MS)	5/9/18	13:13 Central	MS	Water			X	1	
MW-08 MSD (600-165831-9MSD)	5/9/18	13:13 Central	MSD	Water			X	1	
DUP-02 (600-165831-10)	5/8/18	Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:				
Relinquished by:	Date/Time: 5/14/18 17:00	Company TAH	Received by:	Date/Time: 5/15/18 9:30	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7°C IR-100.8C

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-31651.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-165918-1
Address: 1733 N. Padre Island Drive, ,	Due Date Requested: 5/22/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A Appendix IV List	7470A/7470A_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-07 (600-165918-1)	5/9/18	15:35 Central		Water			X	X	1	
MW-42 (600-165918-2)	5/9/18	18:20 Central		Water			X	X	1	
MW-43 (600-165918-3)	5/10/18	10:28 Central		Water			X	X	1	
MW-44 (600-165918-4)	5/10/18	12:05 Central		Water			X	X	1	
MW-05 (600-165918-5)	5/10/18	13:25 Central		Water			X	X	1	
MW-29 (600-165918-6)	5/10/18	15:05 Central		Water			X	X	1	
EB-02 (600-165918-8)	5/10/18	16:00 Central		Water			X	X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	5/15/18 1700	TAH	[signature]	5/16/18 9:30	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☑ Yes △ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2°C IR-10 0.3C

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-31651.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-165918-2
Address: 1733 N. Padre Island Drive, ,	Due Date Requested: 5/25/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Boron and Calcium (App III)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-07 (600-165918-1)	5/9/18	15:35 Central		Water			X	1	
MW-42 (600-165918-2)	5/9/18	18:20 Central		Water			X	1	
MW-43 (600-165918-3)	5/10/18	10:28 Central		Water			X	1	
MW-44 (600-165918-4)	5/10/18	12:05 Central		Water			X	1	
MW-05 (600-165918-5)	5/10/18	13:25 Central		Water			X	1	
MW-29 (600-165918-6)	5/10/18	15:05 Central		Water			X	1	
EB-02 (600-165918-8)	5/10/18	16:00 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:			
Relinquished by:	Date/Time: 5/15/18 1700	Company TAT	Received by:	Date/Time: 5/16/18 9:30	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2°C IR-10 0.3°C

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-31651.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-165918-3
Address: 1733 N. Padre Island Drive, ,	Due Date Requested: 5/25/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Mg, Na, K	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-07 (600-165918-1)	5/9/18	15:35 Central		Water			X	1	
MW-42 (600-165918-2)	5/9/18	18:20 Central		Water			X	1	
MW-43 (600-165918-3)	5/10/18	10:28 Central		Water			X	1	
MW-44 (600-165918-4)	5/10/18	12:05 Central		Water			X	1	
MW-05 (600-165918-5)	5/10/18	13:25 Central		Water			X	1	
MW-29 (600-165918-6)	5/10/18	15:05 Central		Water			X	1	
EB-02 (600-165918-8)	5/10/18	16:00 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	5/15/18 1700	TAIT		5/16/18 9:30	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes ☐ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.2°C IR-10 0.3°C

Ver: 09/20/2016

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165452
List Number: 1
Creator: Daley, Phoenix 1

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Refer to Job Narrative for details.
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	3.4 / 4.9 / 2.4 / 1.4 / 1.9 / 2.1 / 14.9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165452
List Number: 2
Creator: Van Joolen, Nickolas L

List Source: TestAmerica Corpus Christi
List Creation: 05/09/18 11:55 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165831
List Number: 1
Creator: Crafton, Tommie S

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C 2.3°C 0.9°C 0.7°C 2.0°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165831
List Number: 3
Creator: Adams, Juanita A

List Source: TestAmerica Corpus Christi
List Creation: 05/16/18 09:28 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165918
List Number: 1
Creator: Parker, Dana R

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.9 4.1 2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-165452-1

Login Number: 165918
List Number: 2
Creator: Adams, Juanita A

List Source: TestAmerica Corpus Christi
List Creation: 05/16/18 09:28 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	5-1-18 0800
	Site	Limestone		Finish	5-1-18 18:30

On-site TRC Personnel : Cody Gaston, Andrew Clayton

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-30	0921	11.46'	33.43'	Good condition, stick up. - lower ~ 15' of tubing had a brown-black 'film' on it
MW-37	1140	11.66	37.89'	Well in good condition. - lower 25' of tubing stained in orange
MW-36	13:20	12.98	37.62'	Good Condition ; Stick up + Discolored Tube 15' + (Black)
MW-32	15:38	10.11	37.44'	Good Stick up
				Discolored Tubing at 16'-25'

Initial CG Date 05-01-18

TRC

Sample Location	MW-30	Date	5-1-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	11.46'	Sample Collection Time	1010
Total Purge Volume (gal)	2.5	Purge Method	Peri Pump
Total Depth (ft btoc)	33.43	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~30' bgs	Sampling Personnel	AClayton, C Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
9:21	0	0	11.46'	0	-	-	-	-	-	-
0925			12.32	0.86	6.10	23.60	9.01	204	2.58	73.9
0928		0.25/min	12.36	0.04	6.24	23.75	9.54	196	1.40	52.0
0931			12.39	0.03	6.24	23.74	9.63	194	1.18	54.8
0934			12.46	0.07	6.21	23.78	9.66	191	1.00	47.2
0939	3		12.44	-0.02	6.24	23.76	9.69	185	0.90	38.2
0944			12.47	0.03	6.25	23.77	9.74	175	0.81	28.3
0949	4		12.49	0.02	6.23	23.83	9.76	166	0.74	21.1
0956			12.51	0.02	6.22	23.85	9.94	162	1.04	16.7
1001			12.58	0.07	6.22	23.95	9.94	153	0.62	12.5
1006	7	0.25/min	12.63	0.05	6.21	23.96	9.95	150	0.57	10.5
1010	8		12.61	-0.02	6.22	23.96	9.95	148	0.55	8.4
1037			12.69'	after sampling						

Initials CTG Date 5-1-18

TRC

Sample Location	MW-37	Date	5-1-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	11.66	Sample Collection Time	1225
Total Purge Volume (gal)	2.5	Purge Method	Peri Pump
Total Depth (ft btoc)	~~42.5~~ 37.89	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty (orange color)
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10	
1140	~	0.2/min	12.09	0.43	5.81	24.44	3.32	165	2.10	0.0 ?	cmw
1145			12.15	0.06	5.48	23.72	3.10	176	0.94	0.0 ?	orang
1150			12.16	0.01	5.49	23.61	3.05	176	0.71	0.0 ?	orang
1155	~3 L	0.2/min	12.19	0.03	5.52	23.59	3.03	174	0.73	0.0 ?	
1200			12.21	0.02	5.54	23.81	3.07	174	0.85	935	
1205	~5 L	0.2/min	12.23	0.02	5.55	23.87	3.02	173	0.57	999	light orang
1210		0.2/min	12.26	0.03	5.56	24.08	3.03	173	0.55	678	
1215			12.27	0.01	5.57	24.12	3.03	172	0.64	613	
1220			12.25	0.02	5.58	24.24	3.03	171	0.50	430	
1225	~8 L		12.29	0.04	5.55	24.30	3.02	171	0.45	396	
				ac							
1248			12.~~28~~	after sampling							
				12.26							

Initials CG Date 5-1-18

TRC

Sample Location	MW-36	Date	05-01-18
Client	~~RRG~~ NRG		
Site	limestone		

Static Depth to Water (ft btoc)	12.98'	Sample Collection Time	1405
Total Purge Volume (gal)	~3 gal	Purge Method	Peri Pump
Total Depth (ft btoc)	37.62	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1320	0	0	12.98	0	-	-	-	-	-	-
1325	1.25	~0.25	13.30	0.32	5.77	24.17	3.89	133	2.30	24.2
1330	2.5	↓	13.37	0.07	5.76	23.81	3.91	169	0.79	0.0
1335	3.75	↓	13.32	0.05	5.84	23.88	3.92	180	0.55	0.1
1340	5.0	~0.25	13.32	0.00	5.86	24.07	3.93	177	0.64	0.6
1345	6.25	↓	13.32	0.00	5.89	24.07	3.93	171	0.45	1.0
1350	7.50	↓	13.33	0.01	5.85	24.17	3.93	173	0.43	2.5
1355	8.75	↓	13.33	0.01	5.82	24.06	3.93	173	0.44	6.7
1400	10.00	↓	13.34	0.01	5.85	24.08	3.93	171	0.36	9.4
1405	11.25	↓	13.33	0.01	5.86	24.08	3.93	171	0.36	13.7
	*Sample Collection @ 1405 *									
		DTW after Sampling			13.29'					

Initials CG Date 5-01-2018

TRC

Sample Location	MW-32	Date	05.01-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	10.11'	Sample Collection Time	16:27
Total Purge Volume (gal)	~2.25 gal	Purge Method	Peri Pump
Total Depth (ft btoc)	37.44'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	37.44' - 27.44'	Water Description	Clear ; no odor
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
15:40	0	0	10.11'	0	-	-	-	-	-	-
15:42	1	~0.20	10.14	0.03	6.02	27.41	3.93	180	3.05	15.1
15:47	2		10.43	0.29	6.40	22.85	4.13	246	1.37	0.0 (clear)
15:52	3		10.35	0.08	6.44	22.73	4.12	316	1.02	0.0
15:57	4		10.34	0.01	6.47	22.81	4.12	358	0.85	0.0
16:02	5		10.34	0.00	6.49	22.66	4.13	378	0.78	0.0
16:07	6		10.34	0.00	6.52	22.70	4.11	397	0.73	0.1
16:12	7		10.33	0.01	6.53	22.44	4.12	413	0.92	0.8
16:17	8		10.34	0.01	6.54	22.54	4.09	428	0.69	1.5
16:22	9		10.34	0.00	6.56	22.43	4.09	427	0.65	1.3
16:27	10	↓	10.34	0.00	6.55	22.67	4.06	435	0.63	1.6
	* Sample Collection @ 1627 *									

Initials CTG Date 05-01-18

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	5-2-13 808
	Site	Limestone		Finish	

On-site TRC Personnel : C. Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-35	855	11.44'	33.35'	Good; no PAd cracking
				Discolored Tubing observed At
				17' - 22'. Total Tubing
				length approx 35'
MW-34	1026	10.12'	31.32	Good; no cracking on Pad
				Discolored Tubing observed
				at ~15' - 20'. Total
				Tubing length approx 33'
MW-33	~~1026~~	8.69'	32.95	Good; no cracking on Pad
				the tubing looks Good,
				no Discoloration. Total
				Tubing length Approx 30'
MW-31	1453	10.48	39.13	Good; no cracking on Pad
				The tubing has some light
				Discoloration around 16'
				Total Tube length ~37'
MW-38	1615	13.04	38.04	Good; no cracking on Pad
				The Tubing looks Good,
				no Discoloration. Total
				Tubing length Approx 37'

Initial [illegible] Date 5-2-13

TRC

Sample Location	MW-35	Date	5-2-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	11.45'	Sample Collection Time	9:35
Total Purge Volume (gal)	~2.5 gal	Purge Method	Peri Pump
Total Depth (ft btoc)	33.35'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	33.35'-23.35'	Water Description	Clear
Pump Intake Depth (feet btoc)	NA	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
855	0	0	11.45'	0	-	-	-	-	-	-
900	1	~.20	12.33'	0.88	6.03	21.34	2.23	240	0.73	0.0
905	2		12.35'	0.02	6.12	21.34	2.22	230	0.61	0.0
910	3		12.36	0.01	6.19	21.44	2.21	220	0.54	0.0
915	4		12.41	0.05	6.25	21.53	2.20	211	0.49	0.0
920	5		12.38	0.03	6.25	21.58	2.20	205	0.67	0.0
925	6		12.38	0.00	6.25	21.58	2.19	198	0.53	0.6
930	7		12.35	0.03	6.25	21.66	2.18	192	0.46	0.8
935	8		12.40	0.05	6.31	21.65	2.17	185	0.42	1.8
	* Sample Collection @ 9:35 *									
		DTW after Sample Collection				12.28'				

Initials CG Date 05-02-2018

TRC	Sample Location	MW - 34	Date	5-2-18
	Client	NRC7		
	Site	Limestone		

Static Depth to Water (ft btoc)	~~10.16~~ 10.16'	Sample Collection Time	11:30
Total Purge Volume (gal)	~ 25gal	Purge Method	Peri Pump
Total Depth (ft btoc)	31.32'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	31.32 - 21.32'	Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1045	0	~.175	10.16	0	0	0	0	-	-	-
1050	~~0~~	.375	11.12	1.04	6.32	23.04	8.31	158	1.97	6.3
1055	2	~.200	11.39	~~0.27~~	6.32	23.03	9.13	156	1.13	6.1
1100	3	↓	11.52	0.13	6.35	23.11	9.18	154	0.98	6.4
1105	4	↓	11.52	0.00	6.32	23.25	9.27	154	0.78	6.8
11:10	5	↓	11.45	0.07	6.29	23.63	9.22	155	0.72	7.6
11:15	6	↓	11.85	0.40	6.26	23.40	9.19	152	0.67	6.8
11:20	7	↓	11.89	0.04	6.27	23.57	9.15	153	0.61	7.2
11:25	8	↓	11.90	0.01	6.26	23.65	9.27	152	1.24	6.4
11:30	9	↓	11.96	0.06	6.27	23.54	9.18	152	0.62	1.8
		* Sample Collection @			MW-34 @	11:30				
			DTW	After	Sampling	12.54'				

Initials LTH Date 05-02-18

TRC

Sample Location	MW- 33	Date	05-02-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	8.69'	Sample Collection Time	13:38
Total Purge Volume (gal)	3 gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	32.95	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	32.95' - 22.95'	Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1253	0	0	8.69	0	-	-	-	-	-	-
1257	~1.25	~.250	9.18	0.49	7.11	23.97	2.60	3	1.79	0.5 (clear)
1303	~2.5		9.43	0.25	6.97	23.05	2.54	12	0.78	0.0
1308	~3.75		9.42	0.01	7.00	23.09	2.53	-1	0.70	0.0
1313	~5		9.42	0.00	7.04	23.02	2.51	-13	0.67	0.0
1318	6.25		9.42	0.00	7.08	23.28	2.53	-19	0.56	0.0
1323	7.5		9.45	0.03	7.10	23.21	2.51	-27	0.50	0.0
1328	8.75		9.48	0.03	7.10	23.25	2.50	-30	0.62	0.0
1332	10.0		9.48	0.00	7.08	23.42	2.50	-33	0.42	0.0
1333	11.25	◆	9.49	0.01	7.05	23.44	2.50	-35	0.40	0.0
		* Sample Collection @				1338				
			DTW after Sampling			9.41'				

Initials ctg Date 05-02-2013

TRC

Sample Location	MW-31	Date	05.02-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	10.48	Sample Collection Time	1525
Total Purge Volume (gal)	~ 2 Gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	39.13'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	39.13' - 29.13'	Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1455	0	~2.0	10.75	0.23	6.70	25.54	3.97	102	3.55	0.0 (clear)
1500	1		10.82	0.07	6.43	24.04	4.02	105	1.00	0.0
1505	2		10.86	0.04	6.52	23.52	4.03	100	0.80	0.0
1510	3		10.89	0.03	6.56	23.43	4.03	98	0.67	0.0
1515	4		10.92	0.03	6.59	23.48	4.04	96	0.52	0.0
1520	5		10.93	0.01	6.59	23.41	4.03	96	0.47	0.0
1525	6		10.94	0.01	6.57	23.50	4.02	99	0.47	0.0
	* Sample Collection @ 15:25									
		~~Sam~~ DTW After Sampling 10.70'								

Initials CAG Date 5-2-18

TRC

Sample Location	MW-38	Date	05-02-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	13.04	Sample Collection Time	1700
Total Purge Volume (gal)	~3 gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	38.04'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	38.04 - 23.04	Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1615	0	0	13.04	0	-	-	-	-	-	-
1620	1.25	0.25	13.96	0.92	6.34	25.93	6.34	113	1.36	0.0
1625	2.5		14.00	0.04	6.38	26.00	6.34	111	0.90	0.0
1630	3.75		14.02	0.02	6.37	25.97	6.34	111	0.78	0.0
1635	5.0		14.05	0.03	6.35	25.92	6.31	112	0.74	0.0
1640	6.25		14.07	0.02	6.34	25.91	6.29	112	0.65	0.0
1645	7.5		14.08	0.01	6.41	25.90	6.27	110	0.57	0.0
1650	8.75		14.09	0.01	6.40	25.87	6.24	110	0.52	0.0
1655	10.0		14.11	0.02	6.40	25.84	6.22	110	0.54	0.0
1700	11.25		14.14	0.03	6.41	25.79	6.21	109	0.55	0.0
		* Sample Collection @ 1700								
			DTW after Sampling 13.71'							

Initials CCG Date 05-02-18

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	05-03-18 730
	Site	Limestone		Finish	05-03-18 2000

On-site TRC Personnel : C. Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-39	840	6.09	32.86'	Good; no cracking on Pad.
				Tubing looks good; no
				Discoloration; tubing
				length approx 30'
MW-04	1050	4.11	~~32.39~~ 45.39	Good; no cracking on Pad
				Tube Discolored Black/Rust
				colored very Slick.
				Approx Tube length 35'
MW-40	1235	4.39'	32.96'	Good; no Cracking on Pad;
				Pad overgrown by vegetation
				Tubing Good; no Discoloration; Approx. 25' length
MW-17B	1435	32.96'	47.83'	Good no Cracking on Pad
				Tubing is for Monsoon Pump
				Can not Sample w/ Peri Pump
MW-22	1540	20.39	37.91	Good no Cracking on Pad
				Tubing is Good / no Discoloration
				Tubing length approx 35'
~~MW-22~~ MW-21	1718	21.09	38.06	Well Lid IS Rusted / hinge is rusted; had
				to pry open Lid to
				Get to well Casing.
				(see pictures)
				Tubing Good; no Discoloration
				length approx 37'

Initial ETG Date 05-03-18

TRC

Sample Location	MW-39	Date	05-03-2018
Client	NRG		
Site	limestone		

Static Depth to Water (ft btoc)	6.09'	Sample Collection Time	9:15
Total Purge Volume (gal)	~ 2 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	32.86'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	32.8 - 22.8'	Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
840	0	1.2	6.09	-	-	-	-	-	-	-
845	1	|	6.55	0.46	5.10	20.29	2.21	254	1.26	34.0
850	2	|	6.58	0.03	5.25	20.12	2.18	247	0.74	15.4
855	3	|	6.59	0.01	5.38	20.09	2.18	236	0.63	20.1
900	4	|	6.59	0.00	5.39	20.09	2.18	236	0.53	22.5
905	5	|	6.61	0.02	5.39	20.07	2.18	235	0.48	29.8
910	6	|	6.63	0.02	5.38	20.04	2.18	*236	0.45	27.7
915	7	↓	6.64	0.01	5.37	20.04	2.18	236	0.42	18.0
		* Sample Collection @ 915 ; DTW after Sampling MW-39 + Dup-01 = 6.12'								
		* Dup-01 also Collected from MW-39. *								

Initials CTG Date 5-3-18

TRC

Sample Location	MW-04	Date	05-03-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	4.11'	Sample Collection Time	1130
Total Purge Volume (gal)	~4 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	45.39'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1050	0	~.2	4.11	0	-	-	-	-	-	-
1055	1		4.29	0.18	5.67	20.37	2.80	134	1.40	0.0
1100	2		4.33	0.02	5.82	20.23	2.81	138	1.57	0.0
1105	3		4.33	0.00	5.88	20.19	2.81	137	1.54	0.0
1110	4		4.34	0.01	5.88	20.18	2.81	138	1.02	10.0
1115	5		4.35	0.01	5.82	20.19	2.80	143	0.73	5.9
1120	6		4.34	0.01	5.82	20.22	2.80	144	0.59	4.3
1125	7		4.35	0.01	5.81	20.26	2.80	145	0.64	0.7
1130	8		4.35	0.00	5.81	20.29	2.80	146	0.55	3.3
		* Sample Collection @ 1130								
			DTW after Sampling 4.29'							

Initials LTG Date

TRC

Sample Location	MW-40	Date	05-03-13
Client	NRG		
Site	limestone		

Static Depth to Water (ft btoc)	4.39'	Sample Collection Time	1320
Total Purge Volume (gal)	~3 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	32.96'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1235	0	~.2	4.39'	0	-	-	-	-	-	-
1240	1	↓	5.04	0.65	5.54	20.46	1.60	170	2.08	0.0
1245	2	↓	5.08	0.04	5.71	20.39	1.60	167	0.93	0.0
1250	3	↓	5.06	0.02	5.67	20.43	1.59	170	0.75	5.4
1255	4	↓	5.04	0.02	5.74	20.42	1.60	171	0.65	10.2
1300	5	↓	5.08	0.04	5.73	20.37	1.61	174	0.60	17.3
1305	6	↓	5.09	0.01	5.68	20.50	1.66	181	0.53	30.6
1310	7	~.15	4.95	0.06	5.73	20.56	1.68	180	0.51	34.1
1315	8	↓	4.95	0	5.71	20.64	1.69	182	0.49	38.9
1320	9	↓	4.90	0.05	5.70	20.72	1.74	184	0.48	41.9
	* Sample Collection @ 1320									
				DTW After Sampling 4.78'						

Initials PH Date 5-3-13

TRC

Sample Location	MW - 17B	Date	05-03-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	32.96'	Sample Collection Time	—
Total Purge Volume (gal)		Purge Method	—
Total Depth (ft btoc)	47.83'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	—
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1435	—	—	—	—						
	*	Attempted to								
		Sample using Peri Pump								
					at 35'					
		Tubing								
		But			Could not		Draw			
					up water	with	Tubing			

Initials CG Date 05-03-18

TRC

Sample Location	MW-22	Date	05-03-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	20.39'	Sample Collection Time	1625
Total Purge Volume (gal)	3 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	37.91'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)		Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1540	1	~.2	~~23.6~~ 20.98	-	5.92	23.60	0.449	174	1.68	0.0
1545	2		20.92	0.06	5.69	23.33	0.413	183	0.91	0.0
1550	3		20.88	0.04	5.57	23.43	0.396	195	0.80	0.0
1555	4		21.23	0.35	5.58	22.59	0.377	199	0.78	0.0
1600	5		21.35	0.12	5.38	22.42	0.373	208	0.51	0.0
1605	6		21.36	0.01	5.45	22.44	0.373	205	0.40	0.0
1610	7		21.39	0.03	5.55	22.48	0.373	198	0.35	0.0
1615	8		21.42	0.03	5.64	22.43	0.371	197	0.48	0.0
1620	9		21.42	0.00	5.66	22.41	0.370	196	0.34	0.0
1625	10		21.43	0.01	5.72	22.41	0.369	193	0.31	0.0
		* Sample collection @ 1625								

Initials CM Date 05-03-2018

TRC

Sample Location	MW-21	Date	05-03-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	21.09	Sample Collection Time	1748
Total Purge Volume (gal)	3 Gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	38.06	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~34'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
~~1713~~ 1718	0	~.2	21.09	-	-	-	-	-	-	-
1723	1		21.62	0.53	5.56	22.52	0.571	203	9.57	0.0
1728	2		21.74	0.12	5.61	22.41	0.580	201	7.89	0.0
1733	3		21.82	0.08	5.62	22.40	0.589	202	7.32	0.0
1738	4		21.85	0.03	5.63	22.41	0.586	201	6.98	0.0
1743	5		21.87	0.02	5.63	22.40	0.586	202	6.63	0.0
1748	6		21.91	0.04	5.63	22.37	0.587	202	6.28	0.0
		* Sample Collection @			1748					
			DTW After Sampling			21.75'				

Initials CTG Date 05-03-18

Page ____ of ____

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	5-4-13
	Site	limestone		Finish	↓

On-site TRC Personnel : _____

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-20	930	23.42	45.28'	Good No Cracking
				Tubing - Good approx 40'
MW-19	1045	21.78'	38.22	Good No Cracking;
				Standing Water over top
				of well Due to
				Rain And Being in
				Low Spot along
				Road.

Initial CLQ Date 5-4-13

TRC

Sample Location	MW-20	Date	05-04-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	23.42'	Sample Collection Time	1003
Total Purge Volume (gal)	~ 1.5 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	45.28'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~40'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
933	1	~.2	24.19	0.59	6.14	22.62	0.670	208	1.24	0.8
938	2		24.23	0.04	6.20	22.68	0.671	196	1.02	0.0
943	3		24.19	0.04	6.21	22.83	0.667	181	1.15	0.0
948	4		24.07	0.12	6.21	22.86	0.669	179	1.14	0.0
953	5		24.02	0.05	6.17	22.71	0.666	176	1.11	0.0
958	6		24.07	0.05	6.18	22.74	0.661	171	1.09	0.0
1003	7		24.09	0.02	6.14	22.68	0.663	172	1.11	0.0
		* Sample Collection @ 1003 ; DTW After Sampling						24.71		

Initials JM Date ~~05-05-18~~ 05-04-18

TRC

Sample Location	MW-19	Date	05-04-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	21.78'	Sample Collection Time	1117
Total Purge Volume (gal)	~2.5 gal	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	38.32'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~35'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1047	1	~2	22.23	0.45	5.81	21.63	0.535	177	3.60	0.0
1052	2		22.74	0.51	5.66	21.60	0.532	186	3.45	0.0
1057	3		22.48	0.26	5.66	21.61	0.532	186	3.14	0.0
~~10~~1102	4		22.51	0.03	5.70	21.64	0.530	184	2.87	0.0
1107	5		22.54	0.03	5.71	21.65	0.530	185	2.73	0.0
1112	6		22.53	0.04	5.72	21.76	0.528	183	2.61	0.0
1117	7		22.59	0.01	5.73	21.63	0.529	186	3.19	0.0
	* Sample Collection at 1117.									
			DTW After Sampling 22.72							

Initials CG Date 05-04-18

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	1300 05-07-18
	Site	Limestone		Finish	1350 05-07-13

On-site TRC Personnel : C. Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-27	1340	19.33'	61.49	Good; no cracking on Pad. Tubing Good; no Discoloration
				Tube Length approx 57'
MW-28	1525	31.28'	63.89'	Good; no cracking on Pad
				Tubing Good; no Discoloration
				Tube Length Approx 42'

Initial _____ Date 05-07-13

TRC

Sample Location	MW-27	Date	5-7-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	19.33'	Sample Collection Time	1420
Total Purge Volume (gal)	3 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	61.49'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	61.49' - 51.49'	Water Description	Clear
Pump Intake Depth (feet btoc)	~57'	Sampling Personnel	CGaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1345	<1	~.2	20.32	0.99	5.80	29.90	4.21	69	2.22	0.0
1350	1		20.66	0.34	6.33	28.04	4.26	-73	1.14	0.0
1355	2		20.80	0.14	6.45	26.39	4.34	-90	1.36	0.0
1400	3		20.81	0.01	6.48	26.99	4.33	-95	1.17	0.0
1405	4		20.85	0.04	6.53	26.90	4.28	-101	1.13	0.0
1410	5		20.89	0.04	6.58	26.60	4.24	-105	1.04	0.0
1415	6		20.89	0.00	6.59	27.45	4.18	-104.	0.72	0.0
1420	7		20.90	0.01	6.59	27.40	4.19	-103	0.73	0.0
		Sample Collection @			1420					
				DTW	After	20.98'				

Initials CTG Date 05-07-18

TRC

Sample Location	MW-28	Date	05-07-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	31.28'	Sample Collection Time	1610
Total Purge Volume (gal)	2 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	63.89'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)	43 - 53'	Water Description	Clear
Pump Intake Depth (feet btoc)	~42'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1540	<1	.15	31.74'	0.46	5.37	31.28	4.39	158	7.98	0.0
1545	<1		31.82	0.08	5.36	27.17	4.70	168	4.73	0.0
1550	1		31.86	0.04	5.37	27.23	4.67	178	4.07	0.0
1555	2		31.90	0.04	5.35	27.06	4.66	186	3.26	0.0
1600	3		31.91	0.01	5.34	27.59	4.63	192	2.83	0.0
1605	3.5		31.92	0.01	5.31	26.50	4.72	199	2.64	0.0
1610	4		31.92	0.00	5.29	26.78	4.72	204	2.16	0.0
	*Sample Collection @ 1610									
			OTW after Sampling 31.90'							

Initials LTG Date 05-07-18

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	05-08-18 700
	Site	Limestone		Finish	05-08-18

On-site TRC Personnel : C. Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-18	940	13.58'	63.89	Good; no cracking; Pad is very overgrown w/ Surrounding vegetation & hard to Access. Tube length approx 54' & added ~25' to End to Sample
MW-17	1155	2.59'	56.78'	Good no cracking; Tubing Good no Discoloration. Approx 52' Tubing
MW-01	1325	3.24'	57.88'	Good; no cracking, Tubing Discolored (Black / Rust colored) Approx ~~55~~ 55' in length
MW-02	1537	7.39'	59.12'	Good Area where well is located overgrown. Tubing Discolored (Rust/Black colored) Tube length ~~approx~~ 43'

Initial CTG Date 5-8-18

TRC

Sample Location	MW-18	Date	5-8-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	~~13.48~~ 13.58'	Sample Collection Time	1025
Total Purge Volume (gal)	~2.5 gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	63.89	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty, Cleared up to Clear
Pump Intake Depth (feet btoc)	~54'	Sampling Personnel	C. Gaston.

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
945	<1	~.2	14.06	~~0.44~~ 0.52	6.32	23.33	0.480	121	1.98	0.0 (silty)
950	~~<1~~ ~1		14.04	0.02	6.35	22.63	0.462	135	1.10	0.0 (silty)
955	1.5		13.96	0.08	6.28	23.12	0.459	146	1.00	973
1000	2		13.93	0.03	6.19	24.04	0.458	152	0.75	0.0 (silty)
1005	2.5		13.87	0.06	6.23	24.14	0.454	150	0.70	0.0
1010	3		13.86	0.01	~~6.5~~ 6.25	24.30	0.452	149	0.65	634
1015	4		13.88	0.02	6.24	24.37	0.447	149	0.61	360
1020	5		13.88	0.00	6.24	24.55	0.444	146	0.58	207
1025	6		13.89	0.01	6.17	24.67	0.441	146	0.55	129
		* Sample Collection @ 1025								
				DTW after Sampling			13.79'			

Initials_____ Date_____

TRC

Sample Location	MW-17	Date	05-08-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	2.59'	Sample Collection Time	1225
Total Purge Volume (gal)	3.5 gallons	Purge Method	Pesi Pump
Total Depth (ft btoc)	56.78'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~52'	Sampling Personnel	Cody Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1155	<1	3.2	2.82	0.23	5.86	25.15	0.142	31	11.39	3.5
1200	1	20.2	2.82	0.00	5.31	25.20	0.141	53	6.82	0.0
1205	2	↓	2.82	0.0	5.27	24.61	0.141	52	4.04	0.0
1210	3		2.82	0.0	5.29	24.36	0.142	49	2.84	0.0
1215	4		2.84	0.02	5.32	24.02	0.142	47	2.14	0.0
1220	5		2.83	0.01	5.35	24.18	0.142	45	1.70	0.0
1225	6		2.85	0.02	5.30	24.24	0.139	48	1.99	0.0
		*Sample Collection @ 1225								
					DTW 2.79'					

Initials [signature] Date 05-08-18

TRC

Sample Location	MW-01	Date	05-08-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	3.24	Sample Collection Time	1420
Total Purge Volume (gal)	3 gallons	Purge Method	Peri Pump
Total Depth (ft btoc)	57.88'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~55'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1345	1.25	~.25	3.42	0.18	5.67	23.01	0.866	52	3.52	0.0
1350	2.5		3.61	0.19	5.63	22.27	0.870	37	1.36	0.0
1355	3.75		3.62	0.01	5.56	22.56	0.867	33	1.17	0.0
1400	5		3.62	0.00	5.50	22.45	0.864	31	0.97	0.0
1405	6.25		3.62	0.00	5.51	22.46	0.858	21	0.81	0.0
1410	7.5		3.63	0.01	5.79	22.33	0.856	11	0.75	0.0
1415	8.75		3.63	0.00	5.67	22.06	0.852	19	0.66	0.0
1420	10		3.65	0.02	5.81	22.20	0.849	10	1.16	0.0
		* sample Collection @			1420					
			DTW 3.44							

Initials LLH Date 05-08-18

TRC

Sample Location	MW-02	Date	05-08-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	7.39'	Sample Collection Time	1607
Total Purge Volume (gal)	3 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	59.12'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~43'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
~~1537~~	<1	~.25	7.46	0.07	6.00	24.63	~~1.56~~	59	2.42	0.0
~~1537~~ 1542	1.25		7.46	0.00	5.87	23.55	1.57	77	1.00	0.0
1547	2.5		7.47	0.01	5.86	23.27	1.57	87	0.74	0.0
1552	3.75		7.46	0.01	5.95	23.31	1.57	91	0.64	0.0
1557	5		7.46	0.00	6.00	23.48	1.57	96	0.56	0.0
1602	6.25		7.46	0.00	6.00	23.67	1.56	101	0.51	0.0
1607	7.5		7.46	0.00	5.73	24.56	1.55	129	0.56	0.0
	* Sample Collection @ 1607									
			DTW after sampling 7.46'							

Initials BTG Date 05-08-2018

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	5-9-18
	Site	Limestone		Finish	↓

On-site TRC Personnel : Cody Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-17B	850	33.01'	47.85'	Good ; no cracking on Pad.
				Tubing good ; Monsoon Pump used
				Tubing Approx ~43'
MW-41	1045	32.31'	47.98'	Good ; no cracking on Pad.
				Tubing Good ; Monsoon Pump used
				Tubing length Approx 40'
MW-08	1245	32.55'	50.73'	Good ; No cracking on Pad.
				Tubing Good ; Monsoon Pump
				used Approx 42' length
MW-07	1500	30.23'	44.01'	Good ; No Cracking
				Tubing Good Approx 37'
MW-42	1730	32.41'	47.90'	Good No cracking on Pad
				Tubing Good ; Monsoon
				Pump used.
				Approx 47' Tubing

Initial CTG Date 5-9-18

TRC

Sample Location	MW-17B	Date	5-9-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	33.01	Sample Collection Time	947
Total Purge Volume (gal)	~4 gallons	Purge Method	S/S monsoon
Total Depth (ft btoc)	47.85'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~43	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
907	<1	~0.25	33.16	0.15	5.38	21.22	1.86	201	1.19	298
912	1		33.14	0.03	5.27	21.83	1.86	202	0.54	197
917	2.5		33.11	0.03	5.31	21.79	3.72	203	0.45	120
922	3.75		33.10	0.01	5.33	21.77	3.71	202	0.48	88.6
927	5		33.11	0.01	5.32	21.84	3.69	195	0.43	64.2
932	6.25		33.11	0.0	5.30	21.95	3.68	195	0.43	43.1
937	7.5		33.11	0.0	5.31	22.00	3.68	195	0.40	26.1
942	8.75		33.11	0.0	5.28	22.07	3.67	193	0.42	12.6
947	10		33.11	0.0	5.32	22.11	3.67	194	0.43	5.6
			DTW After Sampling @ 947 33.18							

Initials_____ Date_____

TRC

Sample Location	MW-41	Date	05-09-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	32.31'	Sample Collection Time	~~1127~~ 1122
Total Purge Volume (gal)	4 gallons	Purge Method	S/S monsoon
Total Depth (ft btoc)	47.98'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	40'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1047	<1	~0.2	32.58	0.37	5.22	23.69	2.58	233	2.71	500
1052	1		32.59	0.01	5.00	23.41	2.54	301	1.64	930
1057	2		32.58	0.01	4.94	23.64	2.53	350	1.46	553
1102	3		32.61	0.03	5.08	23.73	2.49	385	1.27	157
1107	4		32.62	0.01	5.13	23.76	2.47	423	1.16	83.7
1112	5		32.62	0.0	5.17	23.85	2.45	457	1.03	45.2
1117	6		32.62	0.0	5.23	23.91	2.44	457	0.98	25.2
1122	7		32.57	0.05	5.10	23.98	2.42	500	0.99	3.6
		Sample Collection @ 1122								
				DTW After Sampling ~~32.~~ 32.58						

Initials CTG Date 5-9-2018

TRC

Sample Location	MW - 08	Date	5 - 9 - 2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	~~33.55'~~ 32.55'	Sample Collection Time	1313
Total Purge Volume (gal)	~ 2.5 gallons	Purge Method	S/S Monsoon
Total Depth (ft btoc)	50.73'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~42'	Sampling Personnel	Cody Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1248	<1	~0.2	32.79	0.24	5.15	24.01	1.98	258	2.06	0.0
1253	1		32.75	0.04	5.24	24.01	1.99	261	0.83	0.0
1258	2		32.76	0.01	5.30	23.91	2.00	261	0.71	0.0
1303	3		32.76	0.0	5.34	23.90	1.99	264	0.75	0.0
1308	4		32.76	0.0	5.32	23.95	1.99	267	0.73	0.0
1313	5		32.75	0.01	5.32	24.10	1.99	269	0.69	0.0
		* Sample Collection @ 1313								
				DTW	after Sampling		32.72'			
		* Also Collect		MS-02	/ MSD-02					

Initials CK Date 5-9-18

TRC

Sample Location	MW-07	Date	5-9-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	30.23'	Sample Collection Time	1535
Total Purge Volume (gal)	~ 2 gallons	Purge Method	Peristaltic Pump
Total Depth (ft btoc)	44.01'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~37'	Sampling Personnel	C. Graston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1505	<1	~0.2	30.46	0.23	6.70	26.50	0.261	168	4.80	0.0
1510	1		30.71	0.25	6.61	25.69	0.215	175	3.95	0.0
1515	2		30.85	0.06	6.57	25.84	0.210	179	3.65	0.0
1520	3		30.92	0.07	6.55	26.33	0.209	172	3.60	0.0
1525	4		31.01	0.09	6.73	26.49	0.209	158	3.53	0.0
1530	5		31.06	0.05	6.83	26.51	0.208	155	3.44	0.0
1535	6		31.12	0.06	6.90	26.52	0.209	147	3.	0.0
			DTW	After Sampling		31.27				

Initials CTG Date 5-9-18

TRC

Sample Location	MW-42	Date	5-9-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	32.41'	Sample Collection Time	1820
Total Purge Volume (gal)	4 gallons	Purge Method	S/S monsoon
Total Depth (ft btoc)	47.90'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty turns Clear
Pump Intake Depth (feet btoc)	~47'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1740	4l	~0.25	32.72	0.31	5.57	24.63	1.54	195	4.08	817
1745	1.25		32.74	0.02	5.18	24.18	1.54	217	3.01	995
1750	2.5		32.77	0.03	5.37	24.11	1.54	220	3.01	718
1755			32.74	0.03	5.34	24.24	1.55	222	3.04	416
1800			32.79	0.05	5.39	24.07	1.62	226	3.21	143
1805			32.81	0.02	5.39	24.08	1.65	229	2.96	76.0
1810			32.79	0.02	5.38	24.08	1.67	231	2.77	27.1
1815			32.79	0.00	5.39	24.05	1.68	233	2.79	14.6
1820			32.79	0.0	5.38	24.01	1.71	235	2.77	0.0

Initials_____ Date_____

GROUNDWATER GAUGING FORM

TRC	Client	NRG	Date & Time	Start	5-10-18 730
	Site	limestone		Finish	5-10-18

On-site TRC Personnel : C. Gaston

Well ID	Time	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Condition and Other Observations
MW-43	940	42.42	62.35'	Good ; No cracking
				overgrown w/ Vegetation
				Tube Good No Discoloration
				Approx 60' length
MW-44	1105	~~42.42~~	52.94'	Major Crack observed Running
		38.75'		Diagonally Through Pad ;
				1 Bollards loose.
				Tubing Good Approx
				50' Length
MW-05	1250	41.84	55.03	Good no Cracking ;
				Pad overgrown w/
				Vegetation. Tubing Good
				Approx length 48'
MW-29	1415	53.23	68.40	Good No Cracking,
				Tubing Good
				Approx 68' Length

Initial CG Date 5-10-18

TRC

Sample Location	MW-43	Date	5-10-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	42.42'	Sample Collection Time	1028
Total Purge Volume (gal)	~4 gallons	Purge Method	S/S Monsoon
Total Depth (ft btoc)	62.35'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty
Pump Intake Depth (feet btoc)	~60'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
948	<1	~0.2	42.89'	0.47'	5.95	22.31	1.39	224	3.93	0.0 (silty)
953			43.21	0.32	5.90	22.69	1.39	184	2.62	+1000
958			43.45	0.24	6.24	22.42	1.39	173	3.11	+1000
1003			43.47	0.02	6.26	22.37	1.39	170	2.90	1000
1008			43.49	0.02	6.14	22.35	1.39	172	2.93	717
1013			43.51	0.02	6.29	22.40	1.39	166	2.77	714
1018		~15	43.29	0.22	6.04	22.41	1.39	170	2.81	850
1023			43.12	0.17	6.24	22.74	1.39	166	2.87	0.0 (silty)
~~1028~~ 1028			43.02	0.10	6.22	22.93	1.39	161	2.71	0.0 (silty)

* Sample Collection @ 1028

Initials CG Date 5-10-18

TRC

Sample Location	MW-44	Date	5-10-18
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	38.75	Sample Collection Time	1205
Total Purge Volume (gal)	~ 3.5 gallons	Purge Method	S/S Monsoon
Total Depth (ft btoc)	52.94'	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty
Pump Intake Depth (feet btoc)	~50	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1125	<1	~.3	39.98	0.23	6.53	22.19	0.620	164	6.53	>1000
1130	1.5	↓	39.20	0.22	6.16	22.21	0.613	162	4.55	>1000
1135	3	↓	39.33	0.13	6.42	22.28	0.596	140	3.90	1000
1140	4.5	~0.2	39.28	0.05	6.18	22.73	0.599	157	3.95	931
1145	5.5	↓	39.29	0.01	6.20	22.69	0.597	152	3.75	>1000
1150	6.5	↓	39.30	0.01	6.32	22.87	0.597	142	3.88	810
1155	7.5	↓	39.32	0.02	6.37	22.96	0.597	141	3.88	497
1200	8.5	↓	39.33	0.01	6.30	22.85	0.596	143	3.42	321
1205	9.5	↓	39.36	0.03	6.26	22.91	0.596	146	4.01	222
		DTW After Sample Collection 39.59'								

Initials_____ Date_____

TRC

Sample Location	MW-05	Date	5-10-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	41.84	Sample Collection Time	1325
Total Purge Volume (gal)	~ 3 gallons	Purge Method	S/S Monsoon
Total Depth (ft btoc)	55.03	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Clear
Pump Intake Depth (feet btoc)	~48'	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1300	1	~0.2	42.33	0.49	5.66	22.29	0.330	205	5.32	0.0 (clear)
1305	2		42.18	0.15	5.37	22.56	0.324	223	5.15	0.0
1310	3		42.18	0.00	5.39	22.74	0.329	223	4.61	0.0
1315	4		42.18	0.00	5.43	22.80	0.335	225	4.68	0.0
1320	5		42.18	0.00	5.43	22.74	0.338	222	4.20	0.0
1325	6		42.18	0.00	5.42	22.63	0.339	228	4.55	0.0
			DTW after Sample Collection 42.19							

Initials_____ Date_____

TRC

Sample Location	MW - 29	Date	5-10-2018
Client	NRG		
Site	Limestone		

Static Depth to Water (ft btoc)	53.23	Sample Collection Time	1505
Total Purge Volume (gal)	4 gallons	Purge Method	S/S Monsoon
Total Depth (ft btoc)	68.40	Sample Method	Low-Stress, Low-Flow
Screen Depth Interval (ft btoc)		Water Description	Silty → Clear
Pump Intake Depth (feet btoc)	~~~~ 1681	Sampling Personnel	C. Gaston

Time (min)	Volume Purged (L)	Flow Rate (L/min)	Depth to Water (ft btoc)	Drawdown (ft)	pH (SU) ± 10%	Temp (C) ± 10%	Conductivity (u-siemens/cm) ± 3%	ORP (mV) ± 10%	Dissolved Oxygen (mg/L) ± 10%	Turbidity (NTUs) <10
1425	<1	~0.2	~~54.05~~	0.82	6.55	23.57	0.296	156	6.82	0.0 (silty)
1430	1		53.82	0.17	6.17	23.95	0.303	183	4.54	0.0 ↓
1435	2		54.07	0.25	6.00	23.52	0.299	196	4.66	0.0 ↓
1440	3		53.99	0.08	6.02	24.07	0.297	195	4.34	998
1445	4		54.02	0.03	6.05	23.85	0.296	193	4.00	580
1450	5		53.88	0.14	6.07	24.12	0.296	193	4.00	322
1455	6		53.95	0.07	6.08	23.90	0.296	192	3.80	234
1500	7		54.00	0.05	6.05	23.51	0.296	192	3.80	146
1505			54.11	0.11	6.10	23.72	0.296	192	3.82	134
			* Sample Collection @ 1505							

Initials CR Date 5-10-2018

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Foston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested: Standard			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested: 6020 App IV — Appendix IV

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 App IV (D)	300_ORGFM_28D (Fluoride, Sulfate, Chloride) (N)	2540C (TDS) (N)	7470A (Mercury)(TA-Corpus) (D)	903.0-Radium-226(TA-St. Louis) (N)	904.0-Radium-228 (TA-St. Louis) (N)	Ra226Ra228_GFPC (N)	Total Number of containers	Special Instructions/Note:
				Water			X	X	X	X	X	X	X	6	
MW-30	5-1-18	1010	Grab	↓			X			X	X	X	X		
MW-37	↓	1225	↓				X			X	X	X	X		
MW-36		1405					X			X	X	X	X		
MW-32		1627					X			X	X	X	X		
MS-01		1627					X			X	X	X	X		
MSD-01	↓	1627					X			X	X	X	X		
MW-35	5-2-18	935					X			X	X	X	X		
MW-34	↓	1130					X			X	X	X	X		
MW-33		1338					X			X	X	X	X		
MW-31	↓	1525	↓	↓			X			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ________ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: Cody Foston	Date/Time: 05-04-18/1535	Company	Received by: [signature]	Date/Time: 5/4/18 15:35	Company: TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
Client Contact: Andrew Clayton
Company: TRC Solutions
Address: 10550 Richmond Ave., Ste. 210
City: Houston
State, Zip: TX, 77042
Phone: 832-763-4936
Email: aclayton@trcsolutions.com
Project Name: NRG-Jewett Limestone Wells
Site:

Sampler: Cody Easton
Phone: 4324133941
Due Date Requested: STANDARD TAT
TAT Requested (days):
PO #:
WO #:
Project #: 60008045
SSOW#:

Lab PM: Tigrett, Lance
E-Mail: lance.tigrett@testamericainc.com
Carrier Tracking No(s):

COC No: 600-35296-11606.2
Page:
Job #:

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	6020 Appx III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	Appendix III	pH (Field)	Total Number of containers	Special Instructions/Note:
			Preservation Code:			D	N	N	D	N		
MW-38	5-2-18	1700	G	Water		X	X	X		X		
MW-39	5-3-18	915				X	X	X		X		
MW-04		1130				X	X	X		X		
MW-40		1320				X	X	X		X		
~~MW-13~~ MW-22		1625				X	X	X		X		
MW-21		1748				X	X	X		X		
MW-20	5-4-18	1003				X	X	X		X		
MW-19	5-4-18	1117				X	X	X		X		
EB-01	5-4-18	1015				X	X	X		X		
Dup-01						X	X	X		X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Cody Easton	Date/Time: 5-4-18/1535	Company	Received by:		Date/Time: 5/4/18 1535	Company TAT	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
~~6310~~ Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Jaston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested: Standard TAT			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested — Appendix III

Preservation Codes:
A - HCL, M - Hexane
B - NaOH, N - None
C - Zn Acetate, O - AsNaO2
D - Nitric Acid, P - Na2O4S
E - NaHSO4, Q - Na2SO3
F - MeOH, R - Na2S2SO3
G - Amchlor, S - H2SO4
H - Ascorbic Acid, T - TSP Dodecahydrate
I - Ice, U - Acetone
J - DI Water, V - MCAA
K - EDTA, W - ph 4-5
L - EDA, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 ~~(Custom Metals)~~ ApX III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	~~7470A (Mercury)~~	~~903.0~~	~~904.0~~	~~[illegible]~~	pH (9040)	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	D	N	N	D	N	N	N		X	
				Water			x	x	x	~~x~~	~~x~~	~~x~~	~~x~~		5	
MW-30	05-1-18	1010	G	↓			X	X	X					X		
MW-37	5-1-18	1225	↓				X	X	X					X		
MW-36	5-1-18	1405					X	X	X					X		
MW-32	5-1-18	1627					X	X	X					X		
MS-01	5-1-18	1627					X	X	X					X		
MSD-01	5-1-18	1627					X	X	X					X		
MW-35	5-2-18	935					X	X	X					X		
MW-34	5-2-18	1130					X	X	X					X		
MW-33	5-2-18	1338					X	X	X					X		
MW-31	5-2-18	1525	↓	↓			X	X	X					X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: Cody Jaston	Date/Time: 05-04-18 / 1535	Company	Received by: [signature]	Date/Time: 5/4/18 1535	Company TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Jordan	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 432 413 394-1	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	App IV 6020 (Boron, Molybdenum, Selenium)	App IV 300_ORGFM_28D (Fluoride, Sulfate, Chloride)	App IV 2540C (Total Dissolved Solids)	Appendix IV 7470A (Mercury)(TA-Corpus)	Appendix IV 903.0-Radium-226(TA-St. Louis)	Appendix IV 904.0-Radium-228 (TA-St. Louis)	Appendix IV Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N		
				Water			X	X	X	X	X	X	X	5	
MW-38	5-2-18	1700	G				X			X	X	X	X		
MW-39	5-3-18	915					X			X	X	X	X		
MW-04		1130					X			X	X	X	X		
MW-40		1320					X			X	X	X	X		
MW-22		1625					X			X	X	X	X		
MW-21		1748					X			X	X	X	X		
MW-20	5-4-18	1003					X			X	X	X	X		
MW-19		1117					X			X	X	X	X		
EB-01		1015					X			X	X	X	X		
Dup-01							X			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Cody Jordan	Date/Time: 5-4-18 / 1535	Company	Received by:	Date/Time: 5/4/18 1535	Company TAT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Gaston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324133941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom-Metals)(TA-Gorpus) Appx III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS) Appendix III	7470A-(Mercury)(TA-Gorpus)	903.0-Radium-226(TA-St-Louis)	904.0-Radium-228(TA-St-Louis)	Ra226Ra228_GFPC	PH (9040)						Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N								
MW - 27	5-7-18	1420	Grab	Water			X	X	X	X	X	X	X	X						5	
MW - 28	5-7-18	1620					X	X	X					X							
MW - 18	5-8-18	1025					X	X	X					X							
MW - 17		1225					X	X	X					X							
MW - 01		1420					X	X	X					X							
MW - 02		1607					X	X	X					X							
MW - 17B	5-9-18	947					X	X	X					X							
MW - 41		1122					X	X	X					X							
MW - 03		1313					X	X	X					X							
MS - 02		1313					X	X	X					X							
MSD - 02		1313					X	X	X					X							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Cody Gaston	930 5-11-18	TRC	Leon Hardaway	5-11-18 929	TA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Cody Gaston	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 4324433941	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042	PO #:			
Phone: 832-763-4936	WO #:			
Email: aclayton@trcsolutions.com	Project #: 60008045			
Project Name: NRG-Jewett Limestone Wells	SSOW#:			
Site:				

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020-(Custom-Metals)(TA-Corpus)	300.0-ORGFM_28D-(Fluoride,Sulfate,Chloride)	2540C_Calcd-(TDS)	7470A (Mercury)(TA-Corpus)	903.0-Radium-226(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N		
MW-07	5-9-18	1535		Water			X	6x	6x	X	X	X	X	5	
MW-42	5-9-18	1820					X			X	X	X	X		
MW-43	5-10-18	1028					X			X	X	X	X		
MW-44		1205					X			X	X	X	X		
MW-05		1325					X			X	X	X	X		
MW-29		1505					X			X	X	X	X		
Dup-02							X			X	X	X	X		
EB-02	5-10-18	1600					X			X	X	X	X		

Appendix IV

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Cody Gaston	Date/Time: 430 / 5-11-18	Company: TRC	Received by: Leon Hardaway
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Date/Time: 5-11-18 9:29 Company: TA
Date/Time: Company
Date/Time: Company

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Andrew Clayton	Phone: 432 413 3941	Tigrett, Lance		600-35296-11606.2
Company: TRC Solutions		E-Mail: lance.tigrett@testamericainc.com		Page:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			Job #:
City: Houston	TAT Requested (days): Standard			
State, Zip: TX, 77042	PO #:			
Phone: 832-763-4936	WO #:			
Email: aclayton@trcsolutions.com				
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus) Apx IV	300-QRGEM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	7470A (Mercury)(TA-Corpus) Appendix IV	903.0-Radium-228(TA-St. Louis)	904.0-Radium-228 (TA-St. Louis)	Ra226Ra228_GFPC	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	D	N	N	N		
MW-27	5-7-18	1420	Grab	Water			X	X	X	X	X	X	X	5	
MW-28	5-7-18	1620					X			X	X	X	X		
MW-18	5-8-18	1025					X			X	X	X	X		
MW-17	5-8-18	1225					X			X	X	X	X		
MW-01	5-8-18	1420					X			X	X	X	X		
MW-02	5-8-18	1609					X			X	X	X	X		
MW-17B	5-9-18	947					X			X	X	X	X		
MW-41		1122					X			X	X	X	X		
MW-08		1313					X			X	X	X	X		
MS-02		1313					X			X	X	X	X		
MSD-02		1313					X			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rule

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 930 / 5-11-18	Company TRC	Received by:		Date/Time: 5-11-18 9:29	Company TA	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information

Client Contact: Andrew Clayton	Sampler:	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
	Phone:	E-Mail: lance.tigrett@testamericainc.com		Page:
Company: TRC Solutions				Job #:
Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:			
City: Houston	TAT Requested (days):			
State, Zip: TX, 77042				
Phone: 832-763-4936	PO #:			
Email: aclayton@trcsolutions.com	WO #:			
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested — Appendix III

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals) (TA-Corpus) Apx III	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	7470A (Mercury) (TA-Corpus)	903.0 Radium-226 (TA-St-Louis)	904.0 Radium-228 (TA-St-Louis)	Ra226Ra228_GFPC	pH (9040)						Total Number of containers	Special Instructions/Note:
				Preservation Code:			D	N	N	D	N	N	N								
MW-07	5-9-18	1535	G	Water			X	X	X	X	X	X	X	X						5	
MW-42	5-9-18	1820					X	X	X					X							
MW-43	5-10-18	1028					X	X	X					X							
MW-44		1205					X	X	X					X							
MW-05		1325					X	X	X					X							
MW-29		1505					X	X	X					X							
Dup-02	—	—					X	X	X					X							
EB-02	5-10-18	1600					X	X	X					X							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify) CCR Rellp

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Cody Foster	930 / 5-11-18	TRC	[signature]	5-11-18 929	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Appendix B
Detection Monitoring Data (October 2018)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

TestAmerica Job ID: 600-175398-1
Client Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18
Revision: 1

For:
TRC Solutions, Inc.
10550 Richmond Avenue
Suite 210
Houston, Texas 77042

Attn: Andrew Clayton

Authorized for release by:
12/14/2018 1:48:24 PM
Tiffany Fleming, Project Management Assistant I
(361)289-2673
tiffany.fleming@testamericainc.com

Designee for

C. Lance Tigrett, Project Manager II
(713)690-4444
lance.tigrett@testamericainc.com

Table of Contents

Appendix A
Laboratory Data Package Cover Page - Page 1 of 4

This data package is for TestAmerica Houston job number 600-175398-1 and consists of:

- ☑ 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 Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

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

Tiffany Fleming, for C. Lance Tigrett		12/14/2018
Name (printed)	Signature	Date

Project Manager II
Official Title (printed)

Laboratory Review Checklist: Reportable Data - Page 2 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	12/14/2018
Project Name:	TRC-NRG-Jewett Limestone Wells 10-30-18	Laboratory Job Number:	600-175398-1
Reviewer Name:	Tiffany Fleming, for C. Lance Tigrett		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	OI	**Chain-of-custody (C-O-C)**					
		Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		Were all departures from standard conditions described in an exception report?	X				
R2	OI	**Sample and quality control (QC) identification**					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	**Test reports**					
		Were all samples prepared and analyzed within holding times?		X			R03A
		Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		Were calculations checked by a peer or supervisor?	X				
		Were all analyte identifications checked by a peer or supervisor?	X				
		Were sample detection limits reported for all analytes not detected?	X				
		Were all results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		Were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035?			X		
		If required for the project, are TICs reported?			X		
R4	O	**Surrogate recovery data**					
		Were surrogates added prior to extraction?			X		
		Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	OI	**Test reports/summary forms for blank samples**					
		Were appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL?		X			R05D
R6	OI	**Laboratory control samples (LCS):**					
		Were all COCs included in the LCS?	X				
		Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		Does the detectability check sample data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		Was the LCSD RPD within QC limits?			X		
R7	OI	**Matrix spike (MS) and matrix spike duplicate (MSD) data**					
		Were the project/method specified analytes included in the MS and MSD?		X			R07A
		Were MS/MSD analyzed at the appropriate frequency?	X				
		Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R07C
		Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	**Analytical duplicate data**					
		Were appropriate analytical duplicates analyzed for each matrix?	X				
		Were analytical duplicates analyzed at the appropriate frequency?	X				
		Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	OI	**Method quantitation limits (MQLs):**					
		Are the MQLs for each method analyte included in the laboratory data package?	X				
		Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		Are unadjusted MQLs and DCSs included in the laboratory data package?	X				
R10	OI	**Other problems/anomalies**					
		Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?		X			R10B
		Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				

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

Laboratory Review checklist: Supporting Data - Page 3 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	12/14/2018
Project Name:	TRC-NRG-Jewett Limestone Wells 10-30-18	Laboratory Job Number:	600-175398-1
Reviewer Name:	Tiffany Fleming, for C. Lance Tigrett		

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S1	OI	**Initial calibration (ICAL)**					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSDs or correlation coefficient criteria met?	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	**Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):**					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits?	X				
		Was the ICAL curve verified for each analyte?	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	**Mass spectral tuning**					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	O	**Internal standards (IS)**					
		Were IS area counts and retention times within the method-required QC limits?			X		
S5	OI	**Raw data (NELAC Section 5.5.10)**					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				
S6	O	**Dual column confirmation**					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	**Tentatively identified compounds (TICs)**					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	**Interference Check Sample (ICS) results**					
		Were percent recoveries within method QC limits?	X				
S9	I	**Serial dilutions, post digestion spikes, and method of standard additions**					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	OI	**Method detection limit (MDL) studies**					
		Was a MDL study performed for each reported analyte?	X				
		Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S11	OI	**Proficiency test reports**					
		Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	**Standards documentation**					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	**Compound/analyte identification procedures**					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	**Demonstration of analyst competency (DOC)**					
		Was DOC conducted consistent with NELAC Chapter 5?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	**Verification/validation documentation for methods (NELAC Chapter 5)**					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	**Laboratory standard operating procedures (SOPs)**					
		Are laboratory SOPs current and on file for each method performed?	X				

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

Laboratory Review Checklist: Exception Reports - Page 4 of 4

Laboratory Name:	TestAmerica Houston	LRC Date:	12/14/2018
Project Name:	TRC-NRG-Jewett Limestone Wells 10-30-18	Laboratory Job Number:	600-175398-1
Reviewer Name:	Tiffany Fleming, for C. Lance Tigrett		

ER #[1]	Description
R03A	Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to confirmation of results : MW-2 (600-175398-4), MW-45 (600-175398-12), MW-46 (600-175398-17) and (600-175398-A-17 DU).
R05D	Method 6020: The method blank for preparation batch 560-156543 and analytical batch 560-157066 contained Calcium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.
R07A	Method 6020: The MS/MSD was diluted due to the nature of the sample matrix. Because of this dilution, the matrix spike concentration in the sample was reduced to a level where the Boron recovery calculation does not provide useful information.
R07C	Method 300.0: 600-175398-4 MS/MSD failed the recovery criteria for the following analyte: Chloride. Matrix interference is suspected. Method 6020: Due to high concentration of target analytes samples 600-175398-4 MS/MSD and 600-175398-19 MS/MSD could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria.
R10B	Method 300.0: The following samples were diluted due to the nature of the sample matrix: MW-27 (600-175398-1), MW-28 (600-175398-2), MW-1 (600-175398-3), MW-2 (600-175398-4), MW-2 MS (600-175398-4[MS]), MW-2 MSD (600-175398-4[MSD]), MW-18 (600-175398-6), MW-19 (600-175398-7), MW-20 (600-175398-8), MW-21 (600-175398-9), MW-22 (600-175398-10), MW-29 (600-175398-11), MW-45 (600-175398-12), MW-5 (600-175398-13), MW-26 (600-175398-14), MW-43 (600-175398-15), MW-44 (600-175398-16), MW-46 (600-175398-17), DUP-01 (600-175398-19), (600-175398-A-1 MS) and (600-175398-A-1 MSD). Elevated reporting limits (RLs) are provided. Method 300.0: The following samples were diluted due to the nature of the sample matrix: MW-46 (600-175398-17), (600-175321-A-8), (600-175321-A-8 MS) and (600-175321-A-8 MSD). Elevated reporting limits (RLs) are provided. Method 6020: The following samples were diluted due to the nature of the sample matrix: MW-27 (600-175398-1), MW-28 (600-175398-2), MW-1 (600-175398-3), MW-2 (600-175398-4), MW-2 MS (600-175398-4[MS]), MW-2 MSD (600-175398-4[MSD]), MW-17 (600-175398-5), MW-18 (600-175398-6), MW-19 (600-175398-7), MW-20 (600-175398-8), MW-21 (600-175398-9), MW-22 (600-175398-10), MW-29 (600-175398-11), MW-45 (600-175398-12), MW-5 (600-175398-13), MW-26 (600-175398-14), MW-43 (600-175398-15), MW-44 (600-175398-16), MW-46 (600-175398-17) and FB-01 (600-175398-18). Elevated reporting limits (RLs) are provided.

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

Matrix: Water
Method: 6020
Prep Method: 3010A
Date Analyzed: 8/1/2018
Job #: MDLV 560-153538/3
TALS Batch: 153562
Units: ug/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Ag	Micpms	0.941	1.250	1.514	5
Al	Micpms	50.000	125.000	163.400	100
As	Micpms	1.090	1.250	2.055	5
B	Micpms	70.000	25.000	24.540	100
Ba	Micpms	0.810	1.250	1.465	5
Be	Micpms	1.240	1.250	1.388	4
Ca	Micpms	198.000	250.000	130.800	500
Cd	Micpms	0.854	1.250	1.542	2
Co	Micpms	1.360	1.250	1.583	5
Cr	Micpms	1.400	1.250	0.016	5
Cu	Micpms	2.000	1.250	2.596	10
Fe	Micpms	101.000	125.000	100.400	250
K	Micpms	407.000	125.000	110.600	1000
Li	Micpms	2.260	1.250	1.813	5
Mg	Micpms	113.000	125.000	91.070	500
Mn	Micpms	11.600	12.500	8.809	50
Mo	Micpms	1.400	1.250	0.747	5
Na	Micpms	727.000	250.000	192.200	1000
Ni	Micpms	2.170	1.250	1.498	5
P	Micpms	100.000	125.000	28.150	250
Pb	Micpms	0.733	1.250	1.932	5
Sb	Micpms	1.610	1.250	1.445	5
Se	Micpms	1.080	1.250	2.326	5
Sn	Micpms	5.080	1.250	1.062	25
Sr	Micpms	0.768	1.250	1.597	5
Ti	Micpms	1.530	1.250	2.276	5
Tl	Micpms	0.693	0.500	0.336	2
U	Micpms	0.940	1.250	6.218	5
V	Micpms	1.440	5.000	0.543	5
Zn	Micpms	3.550	1.250	0.915	25

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Water
Method: EPA 300 / SW-846 9056
Prep Method:
Date Analyzed: 6/25/2018
Job #: 600-164342
TALS Batch: 241355
Units: mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Bromide	CHWC16	0.101	0.200	0.188	0.4
Chloride	CHWC16	0.053	0.400	0.506	0.4
Fluoride	CHWC16	0.060	0.200	0.180	0.2
Nitrate as N	CHWC16	0.025	0.200	0.233	0.2
Nitrite as N	CHWC16	0.030	0.200	0.271	0.2
Sulfate	CHWC16	0.096	0.400	0.366	0.5

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Matrix: Water
Method: SM 2540C
Date Analyzed: 7/13/2018
Job #: 600-168589
TALS Batch: 242692
Units: mg/L

Analyte	Instrument #	MDL	DCS Spike	Measured Result	MQL
Total Dissolved Solids	NOEQUIP	10.000	29.880	30.000	10

DCS = Detection Check Standard
MQL = Method Quantitation Limit

Job ID: 600-175398-1

Laboratory: TestAmerica Houston

Narrative

Job Narrative
600-175398-1

Comments
No additional comments.

Receipt
The samples were received on 10/31/2018 8:41 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.5º C, 0.5º C and 0.7º C.

All applicable analytical narratives can be found in the TRRP Checklist section of the report.

Method Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL HOU
6020	Metals (ICP/MS)	SW846	TAL CC
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL HOU
3010A	Preparation, Total Metals	SW846	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673
TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
600-175398-1	MW-27	Water	10/30/18 12:35	10/31/18 08:41
600-175398-2	MW-28	Water	10/30/18 11:25	10/31/18 08:41
600-175398-3	MW-1	Water	10/30/18 13:40	10/31/18 08:41
600-175398-4	MW-2	Water	10/30/18 14:35	10/31/18 08:41
600-175398-5	MW-17	Water	10/30/18 11:05	10/31/18 08:41
600-175398-6	MW-18	Water	10/30/18 13:50	10/31/18 08:41
600-175398-7	MW-19	Water	10/30/18 12:15	10/31/18 08:41
600-175398-8	MW-20	Water	10/30/18 14:05	10/31/18 08:41
600-175398-9	MW-21	Water	10/30/18 15:05	10/31/18 08:41
600-175398-10	MW-22	Water	10/30/18 13:20	10/31/18 08:41
600-175398-11	MW-29	Water	10/30/18 11:00	10/31/18 08:41
600-175398-12	MW-45	Water	10/30/18 11:40	10/31/18 08:41
600-175398-13	MW-5	Water	10/30/18 12:25	10/31/18 08:41
600-175398-14	MW-26	Water	10/30/18 10:50	10/31/18 08:41
600-175398-15	MW-43	Water	10/30/18 12:20	10/31/18 08:41
600-175398-16	MW-44	Water	10/30/18 13:25	10/31/18 08:41
600-175398-17	MW-46	Water	10/30/18 11:35	10/31/18 08:41
600-175398-18	FB-01	Water	10/30/18 12:35	10/31/18 08:41
600-175398-19	DUP-01	Water	10/30/18 12:00	10/31/18 08:41

Client Sample ID: MW-27

Lab Sample ID: 600-175398-1

Date Collected: 10/30/18 12:35

Matrix: Water

Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**153**		20.0	2.67	mg/L			11/01/18 11:52	50
Fluoride	3.01	U	10.0	3.01	mg/L			11/01/18 11:52	50
Sulfate	**140**		25.0	4.79	mg/L			11/01/18 11:52	50

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 13:58	1
Calcium	**157**		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:04	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**926**		20.0	20.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-28

Lab Sample ID: 600-175398-2

Date Collected: 10/30/18 11:25

Matrix: Water

Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**1640**		200	26.7	mg/L			11/01/18 12:52	500
Fluoride	30.1	U	100	30.1	mg/L			11/01/18 12:52	500
Sulfate	**882**		250	47.9	mg/L			11/01/18 12:52	500

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.185**		0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:03	1
Calcium	**396**		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:09	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**6250**		40.0	40.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-1

Lab Sample ID: 600-175398-3

Date Collected: 10/30/18 13:40

Matrix: Water

Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**262**		4.00	0.534	mg/L			11/01/18 13:12	10
Fluoride	**0.748**	**J**	2.00	0.601	mg/L			11/01/18 13:12	10
Sulfate	**3.88**	**J**	5.00	0.957	mg/L			11/01/18 13:12	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:08	1
Calcium	**51.2**		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:14	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1100**		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-2

Lab Sample ID: 600-175398-4
Date Collected: 10/30/18 14:35
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	489		8.00	1.07	mg/L			11/01/18 16:32	20
Fluoride	1.20	U	4.00	1.20	mg/L			11/01/18 16:32	20
Sulfate	26.5		10.0	1.91	mg/L			11/01/18 16:32	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 13:52	1
Calcium	103		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 02:07	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1960	H	40.0	40.0	mg/L			11/07/18 14:59	1

Client Sample ID: MW-17

Lab Sample ID: 600-175398-5
Date Collected: 10/30/18 11:05
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15.5		0.400	0.0534	mg/L			11/01/18 13:32	1
Fluoride	0.332		0.200	0.0601	mg/L			11/01/18 13:32	1
Sulfate	7.87		0.500	0.0957	mg/L			11/01/18 13:32	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:13	1
Calcium	3.60	J	5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:19	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	199		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-18

Lab Sample ID: 600-175398-6
Date Collected: 10/30/18 13:50
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14.6		2.00	0.267	mg/L			11/01/18 13:52	5
Fluoride	0.447	J	1.00	0.301	mg/L			11/01/18 13:52	5
Sulfate	32.6		2.50	0.479	mg/L			11/01/18 13:52	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:18	1
Calcium	59.1		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:24	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	365		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-19

Lab Sample ID: 600-175398-7
Date Collected: 10/30/18 12:15
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67.0		2.00	0.267	mg/L			11/01/18 14:12	5
Fluoride	0.399	J	1.00	0.301	mg/L			11/01/18 14:12	5
Sulfate	94.6		2.50	0.479	mg/L			11/01/18 14:12	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:23	1
Calcium	39.6		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:29	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	387		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-20

Lab Sample ID: 600-175398-8
Date Collected: 10/30/18 14:05
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	39.2		2.00	0.267	mg/L			11/01/18 15:12	5
Fluoride	0.465	J	1.00	0.301	mg/L			11/01/18 15:12	5
Sulfate	68.8		2.50	0.479	mg/L			11/01/18 15:12	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:28	1
Calcium	36.5		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 03:34	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	495		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-21

Lab Sample ID: 600-175398-9
Date Collected: 10/30/18 15:05
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58.7		4.00	0.534	mg/L			11/01/18 15:32	10
Fluoride	0.601	U	2.00	0.601	mg/L			11/01/18 15:32	10
Sulfate	259		5.00	0.957	mg/L			11/01/18 15:32	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.107		0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 14:32	1
Calcium	76.2		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:15	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	689		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-22

Lab Sample ID: 600-175398-10
Date Collected: 10/30/18 13:20
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43.1		2.00	0.267	mg/L			11/01/18 15:52	5
Fluoride	0.398	J	1.00	0.301	mg/L			11/01/18 15:52	5
Sulfate	54.7		2.50	0.479	mg/L			11/01/18 15:52	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 15:46	1
Calcium	41.3		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:20	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	299		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-29

Lab Sample ID: 600-175398-11
Date Collected: 10/30/18 11:00
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19.8		2.00	0.267	mg/L			11/01/18 16:12	5
Fluoride	0.458	J	1.00	0.301	mg/L			11/01/18 16:12	5
Sulfate	33.0		2.50	0.479	mg/L			11/01/18 16:12	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 15:51	1
Calcium	15.9		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:25	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	257		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-45

Lab Sample ID: 600-175398-12
Date Collected: 10/30/18 11:40
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1380		40.0	5.34	mg/L			11/01/18 17:32	100
Fluoride	6.01	U	20.0	6.01	mg/L			11/01/18 17:32	100
Sulfate	56.1		50.0	9.57	mg/L			11/01/18 17:32	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 15:56	1
Calcium	406		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:30	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6480	H	40.0	40.0	mg/L			11/07/18 14:59	1

Client Sample ID: MW-5

Lab Sample ID: 600-175398-13
Date Collected: 10/30/18 12:25
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28.2		2.00	0.267	mg/L			11/01/18 17:52	5
Fluoride	0.426	J	1.00	0.301	mg/L			11/01/18 17:52	5
Sulfate	72.4		2.50	0.479	mg/L			11/01/18 17:52	5

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:01	1
Calcium	24.5		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:35	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	365		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-26

Lab Sample ID: 600-175398-14
Date Collected: 10/30/18 10:50
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	236		4.00	0.534	mg/L			11/01/18 18:12	10
Fluoride	0.609	J	2.00	0.601	mg/L			11/01/18 18:12	10
Sulfate	13.0		5.00	0.957	mg/L			11/01/18 18:12	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:05	1
Calcium	45.3		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:40	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1050		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-43

Lab Sample ID: 600-175398-15
Date Collected: 10/30/18 12:20
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	88.9		8.00	1.07	mg/L			11/01/18 19:12	20
Fluoride	1.35	J	4.00	1.20	mg/L			11/01/18 19:12	20
Sulfate	364		10.0	1.91	mg/L			11/01/18 19:12	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:10	1
Calcium	85.8		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:46	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1270		20.0	20.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-44

Lab Sample ID: 600-175398-16
Date Collected: 10/30/18 13:25
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**27.3**		4.00	0.534	mg/L			11/01/18 19:32	10
Fluoride	**0.863**	**J**	2.00	0.601	mg/L			11/01/18 19:32	10
Sulfate	**41.1**		5.00	0.957	mg/L			11/01/18 19:32	10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:15	1
Calcium	**25.0**		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:51	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**544**		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: MW-46

Lab Sample ID: 600-175398-17
Date Collected: 10/30/18 11:35
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**3130**		200	26.7	mg/L			11/01/18 19:52	500
Fluoride	6.01	U	20.0	6.01	mg/L			11/06/18 14:37	100
Sulfate	**18.7**	**J**	50.0	9.57	mg/L			11/06/18 14:37	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:20	1
Calcium	**567**		5.00	1.98	mg/L		11/02/18 11:24	11/06/18 04:56	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**9190**	**H**	80.0	80.0	mg/L			11/07/18 14:59	1

Client Sample ID: FB-01

Lab Sample ID: 600-175398-18
Date Collected: 10/30/18 12:35
Matrix: Water
Date Received: 10/31/18 08:41

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**6.31**		0.400	0.0534	mg/L			11/01/18 20:12	1
Fluoride	**0.128**	**J**	0.200	0.0601	mg/L			11/01/18 20:12	1
Sulfate	**0.321**	**J**	0.500	0.0957	mg/L			11/01/18 20:12	1

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	12/10/18 16:25	1
Calcium	1.98	U	5.00	1.98	mg/L		11/02/18 11:24	11/06/18 05:01	10

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**11.0**		10.0	10.0	mg/L			11/06/18 10:43	1

Client Sample ID: DUP-01
Date Collected: 10/30/18 12:00
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-19
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	113		8.00	1.07	mg/L			11/01/18 20:32	20
Fluoride	1.28	J	4.00	1.20	mg/L			11/01/18 20:32	20
Sulfate	390		10.0	1.91	mg/L			11/01/18 20:32	20

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/05/18 12:38	12/10/18 16:30	1
Calcium	105	b ^	2.50	0.990	mg/L		11/05/18 12:38	11/20/18 03:56	5

General Chemistry

Analyte	Result	Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	1220		20.0	20.0	mg/L			11/06/18 10:43	1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
N1	MS, MSD: Spike recovery exceeds upper or lower control limits.

Metals

Qualifier	Qualifier Description
U	Analyte was not detected at or above the SDL.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.
b	The compound was found in the blank and sample
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
U	Analyte was not detected at or above the SDL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 600-251147/4
Matrix: Water
Analysis Batch: 251147

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			11/01/18 11:12	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			11/01/18 11:12	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			11/01/18 11:12	1

Lab Sample ID: LCS 600-251147/5
Matrix: Water
Analysis Batch: 251147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	19.43		mg/L		97	90 - 110
Fluoride	7.50	7.414		mg/L		99	90 - 110
Sulfate	20.0	20.04		mg/L		100	90 - 110

Lab Sample ID: 600-175398-1 MS
Matrix: Water
Analysis Batch: 251147

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	153		500	622.2		mg/L		94	80 - 120
Fluoride	3.01	U	100	88.00		mg/L		88	80 - 120
Sulfate	140		500	619.1		mg/L		96	80 - 120

Lab Sample ID: 600-175398-1 MSD
Matrix: Water
Analysis Batch: 251147

Client Sample ID: MW-27
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	153		500	626.8		mg/L		95	80 - 120	1	20
Fluoride	3.01	U	100	88.76		mg/L		89	80 - 120	1	20
Sulfate	140		500	624.7		mg/L		97	80 - 120	1	20

Lab Sample ID: 600-175398-4 MS
Matrix: Water
Analysis Batch: 251147

Client Sample ID: MW-2 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	489		200	643.3	N1	mg/L		77	80 - 120
Fluoride	1.20	U	40.0	42.91		mg/L		107	80 - 120
Sulfate	26.5		200	247.3		mg/L		110	80 - 120

Lab Sample ID: 600-175398-4 MSD
Matrix: Water
Analysis Batch: 251147

Client Sample ID: MW-2 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	489		200	642.5	N1	mg/L		77	80 - 120	0	20
Fluoride	1.20	U	40.0	42.99		mg/L		107	80 - 120	0	20
Sulfate	26.5		200	244.1		mg/L		109	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 600-251473/4
Matrix: Water
Analysis Batch: 251473

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.0534	U	0.400	0.0534	mg/L			11/06/18 08:18	1
Fluoride	0.0601	U	0.200	0.0601	mg/L			11/06/18 08:18	1
Sulfate	0.0957	U	0.500	0.0957	mg/L			11/06/18 08:18	1

Lab Sample ID: LCS 600-251473/5
Matrix: Water
Analysis Batch: 251473

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	18.60		mg/L		93	90 - 110
Fluoride	7.50	6.959		mg/L		93	90 - 110
Sulfate	20.0	20.16		mg/L		101	90 - 110

Lab Sample ID: 600-175321-A-8 MS
Matrix: Water
Analysis Batch: 251473

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	356		1000	1233		mg/L		88	80 - 120
Fluoride	6.01	U	200	167.2		mg/L		84	80 - 120
Sulfate	70.1		1000	1133		mg/L		106	80 - 120

Lab Sample ID: 600-175321-A-8 MSD
Matrix: Water
Analysis Batch: 251473

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	356		1000	1238		mg/L		88	80 - 120	0	20
Fluoride	6.01	U	200	174.8		mg/L		87	80 - 120	4	20
Sulfate	70.1		1000	1142		mg/L		107	80 - 120	1	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 560-156498/1-A
Matrix: Water
Analysis Batch: 156610

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 156498

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/02/18 11:24	11/06/18 02:02	1
Calcium	0.198	U	0.500	0.198	mg/L		11/02/18 11:24	11/06/18 02:02	1

Lab Sample ID: LCS 560-156498/2-A
Matrix: Water
Analysis Batch: 156610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 156498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25.0	26.76		mg/L		107	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 560-156498/2-A
Matrix: Water
Analysis Batch: 156610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 156498

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.250	0.2290		mg/L		92	80 - 120

Lab Sample ID: 600-175398-4 MS
Matrix: Water
Analysis Batch: 156610

Client Sample ID: MW-2 MS
Prep Type: Total/NA
Prep Batch: 156498

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.700	U	0.250	0.700	U	mg/L		NC	80 - 120
Calcium	103		25.0	153.9	4	mg/L		205	80 - 120

Lab Sample ID: 600-175398-4 MSD
Matrix: Water
Analysis Batch: 156610

Client Sample ID: MW-2 MSD
Prep Type: Total/NA
Prep Batch: 156498

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.700	U	0.250	0.700	U	mg/L		NC	80 - 120	NC	20
Calcium	103		25.0	162.7	4	mg/L		240	80 - 120	6	20

Lab Sample ID: MB 560-156543/1-A
Matrix: Water
Analysis Batch: 157066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 156543

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/05/18 12:38	11/20/18 03:40	1
Calcium	0.7748		0.500	0.198	mg/L		11/05/18 12:38	11/20/18 03:40	1

Lab Sample ID: MB 560-156543/1-A
Matrix: Water
Analysis Batch: 157066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 156543

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.0700	U	0.100	0.0700	mg/L		11/05/18 12:38	11/20/18 03:50	1
Calcium	0.5644		0.500	0.198	mg/L		11/05/18 12:38	11/20/18 03:50	1

Lab Sample ID: LCS 560-156543/2-A
Matrix: Water
Analysis Batch: 157066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 156543

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.250	0.2493		mg/L		100	80 - 120
Calcium	25.0	29.27		mg/L		117	80 - 120

Lab Sample ID: 600-175398-19 MS
Matrix: Water
Analysis Batch: 157066

Client Sample ID: DUP-01
Prep Type: Total/NA
Prep Batch: 156543

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.350	U	0.250	0.3902	J	mg/L		NC	80 - 120
Calcium	105	b ^	25.0	157.0	4	mg/L		207	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 600-175398-19 MSD — **Client Sample ID: DUP-01**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 157066 — **Prep Batch: 156543**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.350	U	0.250	0.350	U	mg/L		NC	80 - 120	NC	20
Calcium	105	b ^	25.0	142.3	4	mg/L		148	80 - 120	10	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 600-251508/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			11/06/18 10:43	1

Lab Sample ID: MB 600-251508/26 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			11/06/18 10:43	1

Lab Sample ID: LCS 600-251508/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1743		mg/L		97	90 - 110

Lab Sample ID: LCS 600-251508/27 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1666		mg/L		93	90 - 110

Lab Sample ID: 600-175398-2 DU — **Client Sample ID: MW-28**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6250		6248		mg/L		0	10

Lab Sample ID: 600-175398-11 DU — **Client Sample ID: MW-29**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 251508

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	257		278.0		mg/L		8	10

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 600-251635/1
Matrix: Water
Analysis Batch: 251635

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	MQL (Adj)	SDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10.0	U	10.0	10.0	mg/L			11/07/18 14:59	1

Lab Sample ID: LCS 600-251635/2
Matrix: Water
Analysis Batch: 251635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	1800	1612		mg/L		90	90 - 110

Lab Sample ID: 600-175398-17 DU
Matrix: Water
Analysis Batch: 251635

Client Sample ID: MW-46
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	9190	H	9192		mg/L		0	10

Unadjusted Detection Limits

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Method: 300.0 - Anions, Ion Chromatography

Analyte	MQL	MDL	Units	Method
Chloride	0.400	0.0534	mg/L	300.0
Fluoride	0.200	0.0601	mg/L	300.0
Sulfate	0.500	0.0957	mg/L	300.0

Method: 6020 - Metals (ICP/MS)

Prep: 3010A

Analyte	MQL	MDL	Units	Method
Boron	0.100	0.0700	mg/L	6020
Calcium	0.500	0.198	mg/L	6020

General Chemistry

Analyte	MQL	MDL	Units	Method
Total Dissolved Solids	10.0	10.0	mg/L	SM 2540C

QC Association Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

HPLC/IC

Analysis Batch: 251147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-1	MW-27	Total/NA	Water	300.0	
600-175398-2	MW-28	Total/NA	Water	300.0	
600-175398-3	MW-1	Total/NA	Water	300.0	
600-175398-4	MW-2	Total/NA	Water	300.0	
600-175398-5	MW-17	Total/NA	Water	300.0	
600-175398-6	MW-18	Total/NA	Water	300.0	
600-175398-7	MW-19	Total/NA	Water	300.0	
600-175398-8	MW-20	Total/NA	Water	300.0	
600-175398-9	MW-21	Total/NA	Water	300.0	
600-175398-10	MW-22	Total/NA	Water	300.0	
600-175398-11	MW-29	Total/NA	Water	300.0	
600-175398-12	MW-45	Total/NA	Water	300.0	
600-175398-13	MW-5	Total/NA	Water	300.0	
600-175398-14	MW-26	Total/NA	Water	300.0	
600-175398-15	MW-43	Total/NA	Water	300.0	
600-175398-16	MW-44	Total/NA	Water	300.0	
600-175398-17	MW-46	Total/NA	Water	300.0	
600-175398-18	FB-01	Total/NA	Water	300.0	
600-175398-19	DUP-01	Total/NA	Water	300.0	
MB 600-251147/4	Method Blank	Total/NA	Water	300.0	
LCS 600-251147/5	Lab Control Sample	Total/NA	Water	300.0	
600-175398-1 MS	MW-27	Total/NA	Water	300.0	
600-175398-1 MSD	MW-27	Total/NA	Water	300.0	
600-175398-4 MS	MW-2 MS	Total/NA	Water	300.0	
600-175398-4 MSD	MW-2 MSD	Total/NA	Water	300.0	

Analysis Batch: 251473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-17	MW-46	Total/NA	Water	300.0	
MB 600-251473/4	Method Blank	Total/NA	Water	300.0	
LCS 600-251473/5	Lab Control Sample	Total/NA	Water	300.0	
600-175321-A-8 MS	Matrix Spike	Total/NA	Water	300.0	
600-175321-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 156498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-1	MW-27	Total/NA	Water	3010A	
600-175398-2	MW-28	Total/NA	Water	3010A	
600-175398-3	MW-1	Total/NA	Water	3010A	
600-175398-4	MW-2	Total/NA	Water	3010A	
600-175398-5	MW-17	Total/NA	Water	3010A	
600-175398-6	MW-18	Total/NA	Water	3010A	
600-175398-7	MW-19	Total/NA	Water	3010A	
600-175398-8	MW-20	Total/NA	Water	3010A	
600-175398-9	MW-21	Total/NA	Water	3010A	
600-175398-10	MW-22	Total/NA	Water	3010A	
600-175398-11	MW-29	Total/NA	Water	3010A	
600-175398-12	MW-45	Total/NA	Water	3010A	

Metals (Continued)

Prep Batch: 156498 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-13	MW-5	Total/NA	Water	3010A	
600-175398-14	MW-26	Total/NA	Water	3010A	
600-175398-15	MW-43	Total/NA	Water	3010A	
600-175398-16	MW-44	Total/NA	Water	3010A	
600-175398-17	MW-46	Total/NA	Water	3010A	
600-175398-18	FB-01	Total/NA	Water	3010A	
MB 560-156498/1-A	Method Blank	Total/NA	Water	3010A	
LCS 560-156498/2-A	Lab Control Sample	Total/NA	Water	3010A	
600-175398-4 MS	MW-2 MS	Total/NA	Water	3010A	
600-175398-4 MSD	MW-2 MSD	Total/NA	Water	3010A	

Prep Batch: 156543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-19	DUP-01	Total/NA	Water	3010A	
MB 560-156543/1-A	Method Blank	Total/NA	Water	3010A	
LCS 560-156543/2-A	Lab Control Sample	Total/NA	Water	3010A	
600-175398-19 MS	DUP-01	Total/NA	Water	3010A	
600-175398-19 MSD	DUP-01	Total/NA	Water	3010A	

Analysis Batch: 156610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-1	MW-27	Total/NA	Water	6020	156498
600-175398-2	MW-28	Total/NA	Water	6020	156498
600-175398-3	MW-1	Total/NA	Water	6020	156498
600-175398-4	MW-2	Total/NA	Water	6020	156498
600-175398-5	MW-17	Total/NA	Water	6020	156498
600-175398-6	MW-18	Total/NA	Water	6020	156498
600-175398-7	MW-19	Total/NA	Water	6020	156498
600-175398-8	MW-20	Total/NA	Water	6020	156498
600-175398-9	MW-21	Total/NA	Water	6020	156498
600-175398-10	MW-22	Total/NA	Water	6020	156498
600-175398-11	MW-29	Total/NA	Water	6020	156498
600-175398-12	MW-45	Total/NA	Water	6020	156498
600-175398-13	MW-5	Total/NA	Water	6020	156498
600-175398-14	MW-26	Total/NA	Water	6020	156498
600-175398-15	MW-43	Total/NA	Water	6020	156498
600-175398-16	MW-44	Total/NA	Water	6020	156498
600-175398-17	MW-46	Total/NA	Water	6020	156498
600-175398-18	FB-01	Total/NA	Water	6020	156498
MB 560-156498/1-A	Method Blank	Total/NA	Water	6020	156498
LCS 560-156498/2-A	Lab Control Sample	Total/NA	Water	6020	156498
LCS 560-156498/2-A	Lab Control Sample	Total/NA	Water	6020	156498
600-175398-4 MS	MW-2 MS	Total/NA	Water	6020	156498
600-175398-4 MSD	MW-2 MSD	Total/NA	Water	6020	156498

Analysis Batch: 157066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-19	DUP-01	Total/NA	Water	6020	156543
MB 560-156543/1-A	Method Blank	Total/NA	Water	6020	156543
MB 560-156543/1-A	Method Blank	Total/NA	Water	6020	156543
LCS 560-156543/2-A	Lab Control Sample	Total/NA	Water	6020	156543

Metals (Continued)

Analysis Batch: 157066 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-19 MS	DUP-01	Total/NA	Water	6020	156543
600-175398-19 MSD	DUP-01	Total/NA	Water	6020	156543

Analysis Batch: 157714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-1	MW-27	Total/NA	Water	6020	156498
600-175398-2	MW-28	Total/NA	Water	6020	156498
600-175398-3	MW-1	Total/NA	Water	6020	156498
600-175398-4	MW-2	Total/NA	Water	6020	156498
600-175398-5	MW-17	Total/NA	Water	6020	156498
600-175398-6	MW-18	Total/NA	Water	6020	156498
600-175398-7	MW-19	Total/NA	Water	6020	156498
600-175398-8	MW-20	Total/NA	Water	6020	156498
600-175398-9	MW-21	Total/NA	Water	6020	156498
600-175398-10	MW-22	Total/NA	Water	6020	156498
600-175398-11	MW-29	Total/NA	Water	6020	156498
600-175398-12	MW-45	Total/NA	Water	6020	156498
600-175398-13	MW-5	Total/NA	Water	6020	156498
600-175398-14	MW-26	Total/NA	Water	6020	156498
600-175398-15	MW-43	Total/NA	Water	6020	156498
600-175398-16	MW-44	Total/NA	Water	6020	156498
600-175398-17	MW-46	Total/NA	Water	6020	156498
600-175398-18	FB-01	Total/NA	Water	6020	156498
600-175398-19	DUP-01	Total/NA	Water	6020	156543

General Chemistry

Analysis Batch: 251508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-1	MW-27	Total/NA	Water	SM 2540C	
600-175398-2	MW-28	Total/NA	Water	SM 2540C	
600-175398-3	MW-1	Total/NA	Water	SM 2540C	
600-175398-5	MW-17	Total/NA	Water	SM 2540C	
600-175398-6	MW-18	Total/NA	Water	SM 2540C	
600-175398-7	MW-19	Total/NA	Water	SM 2540C	
600-175398-8	MW-20	Total/NA	Water	SM 2540C	
600-175398-9	MW-21	Total/NA	Water	SM 2540C	
600-175398-10	MW-22	Total/NA	Water	SM 2540C	
600-175398-11	MW-29	Total/NA	Water	SM 2540C	
600-175398-13	MW-5	Total/NA	Water	SM 2540C	
600-175398-14	MW-26	Total/NA	Water	SM 2540C	
600-175398-15	MW-43	Total/NA	Water	SM 2540C	
600-175398-16	MW-44	Total/NA	Water	SM 2540C	
600-175398-18	FB-01	Total/NA	Water	SM 2540C	
600-175398-19	DUP-01	Total/NA	Water	SM 2540C	
MB 600-251508/1	Method Blank	Total/NA	Water	SM 2540C	
MB 600-251508/26	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-251508/2	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 600-251508/27	Lab Control Sample	Total/NA	Water	SM 2540C	
600-175398-2 DU	MW-28	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 251508 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-11 DU	MW-29	Total/NA	Water	SM 2540C	

Analysis Batch: 251635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-175398-4	MW-2	Total/NA	Water	SM 2540C	
600-175398-12	MW-45	Total/NA	Water	SM 2540C	
600-175398-17	MW-46	Total/NA	Water	SM 2540C	
MB 600-251635/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 600-251635/2	Lab Control Sample	Total/NA	Water	SM 2540C	
600-175398-17 DU	MW-46	Total/NA	Water	SM 2540C	

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Client Sample ID: MW-27
Date Collected: 10/30/18 12:35
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		50			251147	11/01/18 11:52	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:04	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 13:58	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-28
Date Collected: 10/30/18 11:25
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			251147	11/01/18 12:52	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:09	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:03	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-1
Date Collected: 10/30/18 13:40
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			251147	11/01/18 13:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:14	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:08	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-2
Date Collected: 10/30/18 14:35
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			251147	11/01/18 16:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 02:07	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 13:52	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	251635	11/07/18 14:59	A1T	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Client Sample ID: MW-17

Date Collected: 10/30/18 11:05
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			251147	11/01/18 13:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:19	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:13	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-18

Date Collected: 10/30/18 13:50
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 13:52	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:24	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:18	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-19

Date Collected: 10/30/18 12:15
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 14:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:29	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:23	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-20

Date Collected: 10/30/18 14:05
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 15:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 03:34	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:28	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Client Sample ID: MW-21

Date Collected: 10/30/18 15:05
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			251147	11/01/18 15:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:15	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 14:32	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-22

Date Collected: 10/30/18 13:20
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 15:52	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:20	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 15:46	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-29

Date Collected: 10/30/18 11:00
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 16:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:25	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 15:51	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-45

Date Collected: 10/30/18 11:40
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		100			251147	11/01/18 17:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:30	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 15:56	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	25 mL	100 mL	251635	11/07/18 14:59	A1T	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Client Sample ID: MW-5

Date Collected: 10/30/18 12:25
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			251147	11/01/18 17:52	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:35	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:01	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-26

Date Collected: 10/30/18 10:50
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			251147	11/01/18 18:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:40	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:05	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-43

Date Collected: 10/30/18 12:20
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			251147	11/01/18 19:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:46	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:10	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: MW-44

Date Collected: 10/30/18 13:25
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10			251147	11/01/18 19:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:51	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:15	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Lab Chronicle

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Client Sample ID: MW-46

Date Collected: 10/30/18 11:35
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-17

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		500			251147	11/01/18 19:52	KP1	TAL HOU
Total/NA	Analysis	300.0		100			251473	11/06/18 14:37	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 04:56	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:20	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	12.5 mL	100 mL	251635	11/07/18 14:59	A1T	TAL HOU

Client Sample ID: FB-01

Date Collected: 10/30/18 12:35
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-18

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			251147	11/01/18 20:12	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		10			156610	11/06/18 05:01	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156498	11/02/18 11:24	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:25	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Client Sample ID: DUP-01

Date Collected: 10/30/18 12:00
Date Received: 10/31/18 08:41

Lab Sample ID: 600-175398-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20			251147	11/01/18 20:32	KP1	TAL HOU
Total/NA	Prep	3010A			50 mL	50 mL	156543	11/05/18 12:38	AKM	TAL CC
Total/NA	Analysis	6020		5			157066	11/20/18 03:56	JEM	TAL CC
Total/NA	Prep	3010A			50 mL	50 mL	156543	11/05/18 12:38	AKM	TAL CC
Total/NA	Analysis	6020		1			157714	12/10/18 16:30	JEM	TAL CC
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	251508	11/06/18 10:43	A1T	TAL HOU

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

TAL HOU = TestAmerica Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: TRC Solutions, Inc.
Project/Site: TRC-NRG-Jewett Limestone Wells 10-30-18

TestAmerica Job ID: 600-175398-1

Laboratory: TestAmerica Houston

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Texas	NELAP	6	T104704223-18-23	10-31-19

Laboratory: TestAmerica Corpus Christi

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Oklahoma	State Program	6	2018-070	08-31-19
Texas	NELAP	6	T104704210-18-22	03-31-19
USDA	Federal		P330-18-00035	02-02-21

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brian Hillin + HMI team	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 713-653-3127	E-Mail: lance.tigrett@testamericainc.com		Page: p. 1 of 2
Company: TRC Solutions				Job #:

Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77042	
Phone: 832-763-4936	PO #:
Email: aclayton@trcsolutions.com	WO #:
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus)	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	9040B-pH (Field pH provided by TRC)	O = MS/MSD volume provided	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	N			
MW-27	10-30-18	1235	G	Water	N	N	X	X	X	X			
MW-28		1125		Water			X	X	X	X			
MW-1		1340		Water		↓	X	X	X	X			
MW-2		1435		Water		Y	(X)	(X)	(X)	X			
MW-17		1105		Water		N	X	X	X	X			
MW-18		1350		Water			X	X	X	X			
MW-19		1215		Water			X	X	X	X			
MW-20		1405		Water			X	X	X	X			
MW-21		1505		Water			X	X	X	X			
MW-22		1320		Water			X	X	X	X			
MW-29	↓	1100	↓	Water	↓	↓	X	X	X	X			

600-175398 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/31/18 841	HMI		10/31/18 841	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brian Hillin + HMI Team	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 713-653-3127	E-Mail: lance.tigrett@testamericainc.com		Page: p.2 of 2
Company: TRC Solutions				Job #:

Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77042	
Phone: 832-763-4936	PO #:
Email: aclayton@trcsolutions.com	WO #:
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus)	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	~~9040B~~ pH (Field pH Measured by TRC)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	N		
MW-45	10-30-18	1140	G	Water	N	N	X	X	X	X		
MW-5		1225		Water			X	X	X	X		
MW-26		1050		Water			X	X	X	X		
MW-43		1220		Water			X	X	X	X		
MW-44		1325		Water			X	X	X	X		
MW-46		1135		Water			X	X	X	X		
FB-01		1235		Water			X	X	X	X		
Dup-01		1200		Water			X	X	X	X		
				Water			X	X	X	X		
				Water			X	X	X	X		
				Water			X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/31/18 841	HMI	[signature]	10/31/18 841	TAT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston

Loc: 600
175398

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Receipt Checklist

'18 OCT 31 8:41

Date/Time Received: _____

JOB NUMBER: _____ CLIENT: TRC

UNPACKED BY: [illegible] CARRIER/DRIVER: client

Custody Seal Present: ☑ YES ☐ NO Number of Coolers Received: 3

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Them CF	Corrected Temp (°C)
B/W	Y / N	Y / N	1.0	078	-0.3	
B/W	Y / N	Y / N	0.8	1	1	
R/W	Y / N	Y / N	0.8			
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				
	Y / N	Y / N				

CF = correction factor

Samples received on ice? ☑ YES ☐ NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑ NO ☐ YES

Base samples are>pH 12: ☐ YES ☐ NO Acid preserved are<pH 2: ☑ YES ☐ NO

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☐ YES ☐ NO ☑ NA

	YES	NO
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓	

COMMENTS:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
613538

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
613536

613537

10/31/18

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-35371.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 1 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-175398-1
Address: 1733 N. Padre Island Drive,	Due Date Requested: 11/6/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells 10-30-18	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-27 (600-175398-1)	10/30/18	12:35 Central		Water			X	1	
MW-28 (600-175398-2)	10/30/18	11:25 Central		Water			X	1	
MW-1 (600-175398-3)	10/30/18	13:40 Central		Water			X	1	
MW-2 (600-175398-4)	10/30/18	14:35 Central		Water			X	1	
MW-2 MS (600-175398-4MS)	10/30/18	14:35 Central	MS	Water			X	1	
MW-2 MSD (600-175398-4MSD)	10/30/18	14:35 Central	MSD	Water			X	1	
MW-17 (600-175398-5)	10/30/18	11:05 Central		Water			X	1	
MW-18 (600-175398-6)	10/30/18	13:50 Central		Water			X	1	
MW-19 (600-175398-7)	10/30/18	12:15 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	NP	10/31/18 1700	TA		11/6/18 11:50	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: -0.1 IR-10 0.1

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-35371.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 2 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-175398-1
Address: 1733 N. Padre Island Drive,	Due Date Requested: 11/6/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells 10-30-18	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-20 (600-175398-8)	10/30/18	14:05 Central		Water			X	1	
MW-21 (600-175398-9)	10/30/18	15:05 Central		Water			X	1	
MW-22 (600-175398-10)	10/30/18	13:20 Central		Water			X	1	
MW-29 (600-175398-11)	10/30/18	11:00 Central		Water			X	1	
MW-45 (600-175398-12)	10/30/18	11:40 Central		Water			X	1	
MW-5 (600-175398-13)	10/30/18	12:25 Central		Water			X	1	
MW-26 (600-175398-14)	10/30/18	10:50 Central		Water			X	1	
MW-43 (600-175398-15)	10/30/18	12:20 Central		Water			X	1	
MW-44 (600-175398-16)	10/30/18	13:25 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
NV	10/31/18 1700			11/01/18 11:50	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		-0.1 IR-100.1

Ver: 09/20/2016

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Tigrett, C. Lance	Carrier Tracking No(s):	COC No: 600-35371.3
Client Contact: Shipping/Receiving	Phone:	E-Mail: lance.tigrett@testamericainc.com	State of Origin: Texas	Page: Page 3 of 3
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Texas		Job #: 600-175398-1
Address: 1733 N. Padre Island Drive,	Due Date Requested: 11/6/2018			
City: Corpus Christi	TAT Requested (days):			
State, Zip: TX, 78408				
Phone: 361-289-2673(Tel) 361-289-2471(Fax)	PO #:			
Email:	WO #:			
Project Name: TRC-NRG-Jewett Limestone Wells 10-30-18	Project #: 60008045			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020/3010A (MOD) Copy Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-46 (600-175398-17)	10/30/18	11:35 Central		Water			X	1	
FB-01 (600-175398-18)	10/30/18	12:35 Central		Water			X	1	
DUP-01 (600-175398-19)	10/30/18	12:00 Central		Water			X	1	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. I

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	NP	10/31/18 1700	TTS		11/01/18 11:50	
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: -0.1 IR-1001

Ver: 09/20/2016

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-175398-1

Login Number: 175398
List Number: 1
Creator: Taylor, Jaquelyn R

List Source: TestAmerica Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.5, 0.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: TRC Solutions, Inc.

Job Number: 600-175398-1

Login Number: 175398
List Number: 2
Creator: Medellin, Alyssa L

List Source: TestAmerica Corpus Christi
List Creation: 11/01/18 12:05 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HMI
Groundwater

Hydrologic Monitoring
1654 W. Sam Houston Pkwy. N.
Houston, Texas 77043

Phone 713.464.5206
Fax 713.464.5207

November 1, 2018

Mr. Tony Dworaczyk, P.G.
TRC
10550 Richmond Ave, Suite 210
Houston, Texas 77042

Subject: NRG – Limestone Generating Station, Jewett, Texas
2H18 Groundwater Monitoring:
CCR Program

Dear Mr. Dworaczyk:

This document summarizes groundwater and surface water monitoring field activities at the NRG-Limestone Generating Station, Jewett, Texas.

Contents

Field Activities Narrative

1. Hydrologic Monitoring, LLC (HMI) conducted semiannual groundwater monitoring (CCR Program), at the Limestone Generating Station, on behalf of TRC, on October 30, 2018.

2. Low-flow groundwater sampling was conducted at 17 scoped monitor wells in accordance with the Site Sampling and Analysis Plan and EPA guidance (Puls and Barcelona, 1996 EPA Guidance on Low-Flow Groundwater Sampling, REV 4, September 19, 2017). Low-flow purging was conducted at EPA-recommended purge rates of 0.1 - 0.2 liters/minute. Field parameters of pH, specific conductivity, temperature, dissolved oxygen, and oxidation-reduction potential were monitored at ½-liter intervals, in an air-tight flow-through cell. Turbidity was measured outside the cell. Well drawdown was monitored at the same intervals. Upon field parameter stabilization, the water input tube was disconnected from the flow-through cell, and groundwater samples were collected directly into lab-supplied bottles and placed in iced coolers.

3. Field QA/QC, in accordance with Site SAP:
   FB-01 @ MW-5
   Dup-01 @ MW-43
   MS/MSD @ MW-2

4. Non-dedicated field equipment (i.e., gauging probes, bladder pumps) were decontaminated prior to use, and between wells, in accordance with decontamination procedures outlined in the Site SAP.

5. HMI delivered iced coolers to Test America-Houston, for analysis per the attached COCs, for each area. Proper chain-of-custody was maintained.

6. Purgewater was placed within a drum labeled IDW water, adjacent to newly installed well MW-46, per Andrew Clayton of TRC. This drum contains approximately 35 gallons of purgewater. Several soil and purgewater drums remain scattered around the Secondary E-Pond from well installation and soil boring activities.

7. Site notes:

   Site PPE: Steel toed boots, hard-hat, safety glasses, nitrile gloves
   HMI retains copies of keys for locked wells (Master Key #0846)
   Site safety training conducted by Mr. Jason Scott of NRG (903.388.3120)

   Please see the attached table for details of wells that were not plotted on maps/wells that could not be located during the 2H18 event.

   As communicated with TRC, HMI recommends installing dedicated bladder pumps in wells with requisite depths-to-water (MW-28, 29, 45, 5, 26, 43, 44, and 46). HMI would install these pumps at no charge, and would retain their ownership.

HMI appreciates the opportunity to assist TRC with this project. If you have any questions or require additional information please feel free to call us at 713.464.5206.

Sincerely,

HYDROLOGIC MONITORING

Scott C. Ude

Scott C. Ude, P.G.

The seal appearing on this document was authorized by Scott C. Ude, P.G. 353 on November 1, 2018.

Attachments

cc: Andrew Clayton, TRC-Houston
Greg Scherbenske, P.G., HMI-Houston
Brian Hillin, HMI-Houston

Table 1 - CCR Program
Gauging Data and Groundwater Field Parameters

NRG - Limestone Generating Station
Jewett, Texas
October 30, 2018

Sample I.D.	2H18 # Wells Sampled	2H18 Added # Wells Gauged	(Persis) MW Low-Flow Sample	(Bladder) MW Low-Flow Sample	Top of Casing Elev (ft-msl)	Depth to LNAPL (ft-toc)	Depth to Water (ft-toc)	LNAPL Thickness (ft)	DNAPL Thickness (ft)	Corrected GW Elev (ft-msl)	Water Column (ft)	Total Depth (ft-toc)	Screen Length (ft)	Sample Intake (ft-toc)	Well Inspection	pH (S.U.)	Temp. (C)	S.C. (umhos)	D.O. (mg/L)	ORP (mV)	Turbidity (NTU)	Water Clarity	Comments
Landfill																							
Upgradient Wells:																							
MW-27	1		x		457.43	NP	20.48	0.00	0.00	436.95	41.00	61.48	10	56.48	See form	8.90	22.9	2,735	1.5	25.5	9.6	Clear	
MW-28	2			x	477.52	NP	31.54	0.00	0.00	445.98	32.36	63.90	10	58.90	See form	5.67	22.6	6,819	1.7	80.1	>200	Cloudy	
Downgradient Wells:																							
MW-1	3		x		420.84	NP	3.39	0.00	0.00	417.45	46.49	49.88	20	39.88	See form	5.99	22.9	866	1.1	288.1	28.9	Clear	
MW-2	4		x		430.01	NP	7.58	0.00	0.00	422.43	50.42	58.00	30	43.00	See form	5.95	23.4	2,139	0.6	69.5	78.9	Clear	MS/MSD
MW-17	5		x		421.22	NP	2.69	0.00	0.00	418.53	54.19	56.88	15	51.88	See form	6.21	23.6	131	2.4	26.0	91.0	Cloudy	
MW-18	6		x		436.30	NP	14.36	0.00	0.00	421.94	50.38	64.74	25	59.74	See form	6.47	27.3	328	2.5	115.7	>200	Cloudy	
MW-19	7		x		443.79	NP	22.50	0.00	0.00	421.29	15.84	38.34	10	33.34	See form	5.85	23.4	361	6.4	160.1	7.8	Clear	
MW-20	8		x		445.44	NP	23.97	0.00	0.00	421.47	19.27	43.24	10	38.24	See form	6.46	26.3	618	1.2	180.8	16.5	Clear	
MW-21	9		x		446.34	NP	22.15	0.00	0.00	424.19	16.13	38.28	10	33.28	See form	5.51	25.8	472	2.4	198.8	40.7	Sl. Cloudy	
MW-22	10		x		447.59	NP	22.25	0.00	0.00	425.34	15.80	38.05	10	33.05	See form	5.50	22.7	304	1.9	70.2	31.7	Sl. Cloudy	
Gauge Only Wells:																							
MW-6		1			457.62	Well was not able to be located in 2H18 event; not plotted on map							20			Gauge-only well							
MW-9		2			452.03	NP	20.02	0.00	0.00	432.01	19.39	39.41	15	NS	See form	Gauge-only well							Not plotted on map!!
MW-16		3			NR	Well was not able to be located in 2H18 event; not plotted on map							NR			Gauge-only well							
Secondary E Pond																							
Upgradient Wells:																							
MW-29	11			x	475.88	NP	53.96	0.00	0.00	421.92	14.59	68.55	10	63.55	See form	6.47	21.2	298	4.1	185.6	46.6	Sl. Cloudy	
MW-45	12			x	NR	NP	60.58	0.00	0.00	NA	7.92	68.50	NR	63.50	See form	6.18	21.8	3,970	3.5	212.7	>200	Cloudy	
Downgradient Wells:																							
MW-5	13			x	464.26	NP	42.60	0.00	0.00	421.66	12.58	55.18	20	50.18	See form	6.10	21.1	418	3.7	221.4	1.8	Clear	FB-01
MW-26	14			x	484.49	NP	63.20	0.00	0.00	421.29	14.98	78.18	10	73.18	See form	5.76	21.1	737	4.6	117.4	>200	Cloudy	Not plotted on map!!
MW-43	15			x	464.51	NP	43.02	0.00	0.00	421.49	19.50	62.52	10	57.52	See form	6.23	21.6	1,084	4.0	52.4	95.0	Cloudy	Dup-01
MW-44	16			x	461.11	NP	39.32	0.00	0.00	421.79	13.60	52.92	10	47.92	See form	6.53	21.6	567	4.1	190.3	18.0	Clear	
MW-46	17			x	NR	NP	67.64	0.00	0.00	NA	10.61	78.25	NR	76.25	See form	5.66	21.6	5,410	6.1	105.3	82.0	Sl. Cloudy	
Gauge Only Wells:																							
MW-3		4			NR	Well was not able to be located in 2H18 event; not plotted on map							NR			Gauge-only well							
MW-7		5			NR	NP	30.60	0.00	0.00	NA	13.40	44.00	10	NS	See form	Gauge-only well							
MW-42		6			NR	NP	32.92	0.00	0.00	NA	14.99	47.91	10	NS	See form	Gauge-only well							

Notes: Semiannual monitoring (scheduled April & October)
NP = No product (LNAPL), NA = Not applicable, NS = Not sampled, NM = Not measured, NR = Not reported
2H18 - Non-dedicated bladder pumps used at eight (8) wells; plan for dedicated pump installations during 1H19, per TRC

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-27

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in X	PVC X
Upright X	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1210	NP	20.48	0.0	0.0	61.48	56.48	10	YES	YES	YES	YES		Weather: Cloudy 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1215	20.84	0.5	9.08	23.2	2,593	1.8	-34.7	16.8	1. Low-flow purge-sample with	Clear
	1218	21.08	1.0	9.18	23.0	2,851	1.7	-7.3	13.6	(A) Peristaltic pump with ded poly tubing	"
	1220	21.27	1.5	9.11	23.0	2,839	1.6	+10.4	12.5	B) Ded. bladder pump w/ ded poly tubing	"
	1223	21.41	2.0	9.02	23.0	2,771	1.6	20.2	10.9	C) Nonded. bladder pump w/ poly tubing	"
	1225	21.50	2.5	8.95	23.0	2,752	1.6	23.9	10.3	or,	"
	1228	21.54	3.0	8.93	22.9	2,745	1.5	24.6	9.8	2. Recovery Well Sampling	"
	1230	21.57	3.5	8.91	22.9	2,739	1.5	25.3	9.6		"
	1233	21.59	4.0	8.90	22.9	2,735	1.5	25.5	9.6		"

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1235	MW-27	21.59	8.90	22.9	2,735	1.5	25.5	9.6	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-28

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in X	PVC X
Upright X	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1100	NP	31.54	0.0	0.0	63.90	58.90	10	YES	YES	YES	YES		Weather: Cloudy 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1105	31.62	0.5	6.84	22.5	6093	3.2	57.1	>200	1. Low-flow purge-sample with	brown, cloudy
	1108	31.67	1.0	6.21	22.6	6384	2.9	62.8	>200	A) Peristaltic pump with ded poly tubing	" "
	1111	31.69	1.5	5.96	22.6	6570	2.6	67.4	>200	B) Ded. bladder pump w/ ded poly tubing	" "
	1113	31.69	2.0	5.81	22.6	6,693	2.3	72.2	>200	C) Nonded. bladder pump w/ poly tubing	" "
	1115	31.69	2.5	5.75	22.6	6,753	2.0	76.1	>200	or,	" "
	1118	31.69	3.0	5.71	22.6	6,792	1.8	78.6	>200	2. Recovery Well Sampling	" "
	1120	31.69	3.5	5.68	22.6	6,813	1.7	79.4	>200		" "
	1123	31.69	4.0	5.67	22.6	6,819	1.7	80.1	>200		" "

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
10/30/18	1125	MW-28	31.69	5.67	22.6	6819	1.7	80.1	>200	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-1

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC X
Upright X	4-in X	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1315	NP	3.39	0.10	0.0	49.88	39.88	20	Yes	Yes	Yes	Yes		Weather Cloudy 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1320	3.56	0.5	6.84	23.2	543	2.4	173.8	25.6	1. Low-flow purge-sample with	Clear
	1323	3.58	1.0	6.34	23.0	686	1.9	260.8	26.7	(A) Peristaltic pump with ded poly tubing	"
	1325	3.58	1.5	6.18	22.9	792	1.6	274.3	28.9	B) Ded. bladder pump w/ ded poly tubing	"
	1328	3.58	2.0	6.10	22.9	834	1.4	279.5	30.2	C) Nonded. bladder pump w/ poly tubing	"
	1330	3.58	2.5	6.06	22.9	851	1.3	283.4	29.4	or,	"
	1333	3.58	3.0	6.03	22.9	859	1.2	285.7	28.3	2. Recovery Well Sampling	"
	1335	3.58	3.5	6.01	22.9	863	1.2	286.9	28.7		"
	1338	3.58	4.0	5.99	22.9	866	1.1	288.1	28.9		"

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1340	MW-1	3.58	5.99	22.9	866	1.1	288.1	28.9	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

+ MS/MSD (no pH)

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-2

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC X
Upright X	4-in X	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1410	NP	7.58	0.0	0.0	58.00	43.00	30	Yes	Yes	Yes	Yes		Weather Cloudy 80's
						Soft								

*silt on probe

Well Purging Record

(*All out of ins of cell)

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1415	7.61	0.5	7.08	24.6	1,495	2.7	-11.2	43.6	1. Low-flow purge-sample with	Clear (small white particles)
	1418	7.61	1.0	6.86	24.1	2,056	1.7	+35.8	59.8	(A) Peristaltic pump with ded poly tubing	〃
	1420	7.61	1.5	6.41	23.8	2,106	1.1	59.4	64.7	B) Ded. bladder pump w/ ded poly tubing	〃 〃
	1423	7.61	2.0	6.13	23.6	2,124	0.8	66.2	71.2	C) Nonded. bladder pump w/ poly tubing	〃 〃
	1425	7.61	2.5	6.04	23.5	2,131	0.7	68.1	75.6	or,	〃 〃
	1428	7.61	3.0	5.98	23.5	2,135	0.6	68.8	77.8	2. Recovery Well Sampling	〃 〃
	1430	7.61	3.5	5.96	23.4	2,137	0.6	69.3	78.3		〃 〃
	1433	7.61	4.0	5.95	23.4	2,139	0.6	69.5	78.9		〃 〃

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
10/30/18	1435	MW-2	7.61	5.95	23.4	2139	0.6	69.5	78.9	Metals (Boron, Calcium)	HNO3	+ MS/MSD
										Fluoride/Chloride/Sulfate and TDS	Neat	+ MS/MSD
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-17

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: JAC

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1027	NP	2.69	0.00	0.00	56.88	51.88	15	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1040	2.79	0.5	6.35	24.7	250	3.6	47.3	96.8	1. Low-flow purge-sample with	Cloudy with
	1043	2.79	1.0	6.29	24.5	214	3.2	40.6	113.0	(A) Peristaltic pump with ded poly tubing	white particles
	1045	2.79	1.5	6.26	24.2	182	2.8	35.1	115.6	B) Ded. bladder pump w/ ded poly tubing	" "
	1048	2.80	2.0	6.22	24.0	146	2.6	30.9	102.0	C) Nonded. bladder pump w/ poly tubing	" "
	1050	2.80	2.5	6.22	23.5	142	2.5	29.4	98.8	or,	" "
	1053	2.80	3.0	6.22	23.5	138	2.5	27.7	93.6	2. Recovery Well Sampling	" "
	1055	2.81	3.5	6.22	23.5	134	2.5	27.1	100.0		" "
	1058	2.81	4.0	6.22	23.6	132	2.5	26.9	99.0		" "
	1100	2.81	4.5	6.21	23.6	132	2.5	26.5	95.8		" "
	1103	2.82	5.0	6.21	23.6	131	2.4	26.0	91.0		" "

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1105	MW-17	2.82	6.21	23.6	131	2.4	26.0	91.0	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-18

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: JAC

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1300	NP	14.36	0.0	0.0	64.74	59.74	25	Yes	Yes	Yes	Yes		Weather: Clear, 70s
						1								

↳ soft bottom; silt on probe

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1320	14.53	0.5	6.62	26.5	343	4.1	110.8	>200	1. Low-flow purge-sample with	cloudy, yellow tint, some sediment
	1323	14.55	1.0	6.57	26.6	341	3.6	110.9	>200	(A) Peristaltic pump with ded poly tubing	
	1325	14.55	1.5	6.55	26.8	335	3.3	111.3	>200	B) Ded. bladder pump w/ ded poly tubing	
	1328	14.56	2.0	6.52	27.0	332	3.1	112.6	>200	C) Nonded. bladder pump w/ poly tubing	
	1330	14.56	2.5	6.50	27.0	331	3.0	113.1	>200	or,	
	1333	14.56	3.0	6.49	27.1	330	2.8	113.8	>200	2. Recovery Well Sampling	
	1335	14.57	3.5	6.49	27.2	330	2.7	114.1	>200		
	1338	14.57	4.0	6.48	27.2	329	2.7	114.2	>200		
	1340	14.57	4.5	6.48	27.3	329	2.6	114.5	>200		
	1343	14.58	5.0	6.47	27.3	328	2.5	115.0	>200		
	1345	14.58	5.5	6.47	27.3	328	2.5	115.2	>200		
↓	1348	14.58	6.0	6.47	27.3	328	2.5	115.7	>200		↓

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1350	MW-18	14.58	6.47	27.3	328	2.5	115.7	>200	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-19

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade ___	2-in ✓	PVC ✓
Upright ✓	4-in ___	SS ___
Vault ___	Other ___	Other ___

Hydrologic Monitoring for TRC
Houston, Texas

Initials: JAC

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1140	NP	22.50	0.00	0.00	38.34	33.34	10	yes	yes	yes	yes		Weather: Clear, 70's

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1155	22.91	0.5	5.94	23.8	363	7.1	149.3	24.4	1. Low-flow purge-sample with	Clear
|	1158	22.91	1.0	5.92	23.7	363	6.9	151.8	11.5	(A) Peristaltic pump with ded poly tubing	" "
|	1200	22.92	1.5	5.89	23.7	363	6.9	154.5	10.8	B) Ded. bladder pump w/ ded poly tubing	" "
|	1203	22.94	2.0	5.87	23.6	362	6.7	158.1	9.6	C) Nonded. bladder pump w/ poly tubing	" "
|	1205	22.95	2.5	5.87	23.5	362	6.6	159.4	8.4	or,	" "
|	1208	22.95	3.0	5.86	23.4	361	6.5	159.8	8.1	2. Recovery Well Sampling	" "
|	1210	22.95	3.5	5.86	23.4	361	6.5	159.9	7.9		" "
▽	1213	22.96	4.0	5.85	23.4	361	6.4	160.1	7.8		" "

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1215	MW-19	22.96	5.85	23.4	361	6.4	160.1	7.8	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-20

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH/TAB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	1335	NA	23.97	0.0	0.0	43.24	38.24	10	Yes	Yes	Yes	Yes		Weather: Pt-Cloudy, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10-30-18	1345	24.55	0.5	6.62	26.3	620	1.6	182.7	26.1	1. Low-flow purge-sample with	Clear
	1348	24.70	1.0	6.52	26.5	619	1.4	183.9	22.3	(A) Peristaltic pump with ded poly tubing	↓
	1350	24.74	1.5	6.49	26.4	621	1.3	183.8	19.9	B) Ded. bladder pump w/ ded poly tubing	
	1353	24.77	2.0	6.47	26.3	620	1.2	182.9	17.7	C) Nonded. bladder pump w/ poly tubing	
	1355	24.80	2.5	6.46	26.2	620	1.2	182.1	18.2	or,	
	1357	24.83	3.0	6.46	26.2	620	1.2	181.8	17.5	2. Recovery Well Sampling	
	1400	24.84	3.5	6.45	26.3	619	1.2	181.4	16.2		
↓	1403	24.84	4.0	6.46	26.3	618	1.2	180.8	16.5		↓

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10-30-18	1405	MW-20	24.84	6.46	26.3	618	1.2	180.8	16.5	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-21

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: JAC

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1436	NP	22.15	0.00	0.00	38.28	33.28	10	yes	yes	* yes	yes		Weather: Clear, 70's

* The hinge barely opens; Rusted

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1445	22.29	0.5	5.64	26.9	481	3.0	183.5	100	1. Low-flow purge-sample with	Cloudy
	1448	22.32	1.0	5.58	26.4	480	2.7	190.2	72.6	(A) Peristaltic pump with ded poly tubing	" "
	1450	22.38	1.5	5.56	26.3	475	2.6	192.8	55.3	B) Ded. bladder pump w/ ded poly tubing	" "
	1453	22.45	2.0	5.52	26.1	473	2.5	195.1	53.6	C) Nonded. bladder pump w/ poly tubing	" "
	1455	22.49	2.5	5.52	26.0	473	2.5	197.3	43.8	or,	Sl. Cloudy
	1458	22.54	3.0	5.51	25.9	473	2.4	197.8	42.1	2. Recovery Well Sampling	" "
	1500	22.57	3.5	5.51	25.8	472	2.4	198.0	41.6		" "
↓	1503	22.58	4.0	5.51	25.8	472	2.4	198.8	40.7		" "

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1505	mw-21	22.58	5.51	25.8	472	2.4	198.8	40.7	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-22

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BZH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1250	NA	22.25	0.0	0.0	38.05	33.05	10	Yes	Yes	Yes	Yes		Weather: Cloudy, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1300	22.65	0.5	6.21	24.4	467	6.2	31.6	62.0	1. Low-flow purge-sample with	SL. cloudy
	1303	22.75	1.0	5.85	23.4	426	4.0	49.2	51.0	(A) Peristaltic pump with ded poly tubing	
	1305	22.82	1.5	5.69	22.9	368	3.0	59.1	47.8	B) Ded. bladder pump w/ ded poly tubing	
	1308	22.87	2.0	5.58	22.8	336	2.3	64.6	33.5	C) Nonded. bladder pump w/ poly tubing	
	1310	22.90	2.5	5.56	22.8	319	2.1	66.7	32.6	or,	
	1313	22.92	3.0	5.53	22.8	310	2.0	68.1	31.4	2. Recovery Well Sampling	
	1315	22.94	3.5	5.51	22.7	306	1.9	69.4	30.9		
	1318	22.96	4.0	5.50	22.7	304	1.9	70.2	31.7		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10/30/18	1320	MW-22	22.96	5.50	22.7	304	1.9	70.2	31.7	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-6

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC __
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	—	NM	NM	NM	NM	NM	NA	20	—	—	—	—		Weather: —

Well Purging Record

Unable to locate well - Not on provided maps. Landfill area searched extensively.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-9

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	1430	NA	20.02	0.0	0.0	39.41	NA	15	Yes	Yes	Yes	Yes		Weather: Sunny, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-16

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC __
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	—	NM	NM	NM	NM	NM	NA	NR	—	—	—	—		Weather: —

Well Purging Record

Unable to locate well - Not on provided maps. Landfill area searched extensively.

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO_3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-29

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: TAS

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1030	NP	53.96	0.00	0.00	68.55	63.55	10	yes	yes	yes	yes		Weather: PT/cloudy 78

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1035	54.75	0.5	6.29	21.2	332	4.8	174.1	59.7	1. Low-flow purge-sample with	SI/cloudy
	1037	54.90	1.0	6.34	21.5	318	4.6	178.8	58.4	A) Peristaltic pump with ded poly tubing	
	1040	54.97	1.5	6.37	21.4	309	4.5	179.7	56.7	B) Ded. bladder pump w/ ded poly tubing	
	1043	54.97	2.0	6.39	21.3	306	4.4	179.1	55.0	(C) Nonded. bladder pump w/ poly tubing	
	1047	54.97	2.5	6.41	21.3	304	4.2	180.0	54.2	or,	
	1047	54.97	3.0	6.43	21.2	302	4.2	181.1	54.0	2. Recovery Well Sampling	
	1050	54.97	3.5	6.45	21.2	301	4.2	182.7	48.3		
	1053	54.97	4.0	6.46	21.2	299	4.1	184.2	47.7		
	1058	54.97	4.5	6.47	21.2	298	4.1	185.6	46.6		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
10/30/18	1100	mw-29	54.97	6.47	21.2	298	4.1	185.6	46.6	Metals (Boron, Calcium)	HNO3	Lab: Test America-Houston
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-45

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: TAB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1115	NP	60.58	0.00	0.00	68.50	63.50	NP	yes	yes	yes	yes		Weather: cloudy 70°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1120	60.73	0.5	6.20	22.0	3,370	4.0	219.7	>200	1. Low-flow purge-sample with	cloudy
	1123	60.77	1.0	6.19	21.9	3,580	4.2	214.0	>200	A) Peristaltic pump with ded poly tubing	
	1126	60.79	1.5	6.18	21.8	3840	3.8	212.6	>200	B) Ded. bladder pump w/ ded poly tubing	
	1129	60.80	2.0	6.18	21.8	3920	3.7	212.4	>200	(C) Nonded. bladder pump w/ poly tubing	
	1130	60.80	2.5	6.19	21.7	3950	3.6	212.4	>200	or,	
	1133	60.80	3.0	6.19	21.7	3970	3.5	212.6	>200	2. Recovery Well Sampling	
	1135	60.80	3.5	6.19	21.7	3970	3.4	212.5	>200		
	1137	60.80	4.0	6.18	21.8	3970	3.5	212.7	>200		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
10/30/18	1140	MW-45	60.80	6.18	21.8	3970	3.5	212.7	>200	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

+ FB-01 (no pH)

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-5

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: TAB

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1200	NP	42.60	0.00	0.00	55.18	50.18	20	yes	yes	yes	yes		Weather: cloudy 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1205	42.91	0.5	6.51	21.3	850	4.5	207.9	32.5	1. Low-flow purge-sample with	Clear
	1207	42.91	1.0	6.44	21.3	795	4.2	209.7	10.4	A) Peristaltic pump with ded poly tubing	
	1210	42.91	1.5	6.32	21.3	500	4.1	213.3	9.0	B) Ded. bladder pump w/ ded poly tubing	
	1213	42.91	2.0	6.16	21.1	429	4.0	217.4	4.4	C) Nonded. bladder pump w/ poly tubing	
	1215	42.91	2.5	6.16	21.1	425	3.8	218.6	4.2	or,	
	1217	42.91	3.0	6.14	21.1	421	3.8	220.7	3.8	2. Recovery Well Sampling	
	1220	42.91	3.5	6.12	21.1	420	3.7	221.2	3.0		
	1223	42.91	4.0	6.10	21.1	418	3.7	221.4	1.8		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
10/30/18	1225	MW-5	42.91	6.10	21.1	418	3.7	221.4	1.8	Metals (Boron, Calcium)	HNO3	Lab: Test America-Houston
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		
	1235	FB-01	NA	NA	NA	NA	NA	NA	NA	Same	same	
										same	same	

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-26

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade ___	2-in ✓	PVC ✓
Upright ✓	4-in ___	SS ___
Vault ___	Other ___	Other ___

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	1010	NA	63.20	0.0	0.0	78.18 (soft)	73.18	10	Yes	Yes	Yes	Yes		Weather: Sunny, 70s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10-30-18	1025	63.62	0.5	6.67	21.9	646	5.3	45.1	>200	1. Low-flow purge-sample with	Cloudy
	1028	63.69	1.0	6.28	21.7	702	5.1	85.9	>200	A) Peristaltic pump with ded poly tubing	
	1030	63.75	1.5	6.14	21.4	703	5.0	93.3	>200	B) Ded. bladder pump w/ ded poly tubing	
	1033	63.79	2.0	6.08	21.2	701	4.8	101.8	>200	(C) Nonded. bladder pump w/ poly tubing	
	1035	63.82	2.5	5.99	21.1	712	4.8	107.7	>200	or,	
	1038	63.85	3.0	5.90	21.1	726	4.7	112.8	>200	2. Recovery Well Sampling	
	1040	63.88	3.5	5.82	21.1	730	4.7	115.6	>200		
	1043	63.90	4.0	5.79	21.1	733	4.6	116.2	>200		
	1045	63.92	4.5	5.77	21.1	735	4.6	116.9	>200		
	1048	63.94	5.0	5.76	21.1	737	4.6	117.4	>200		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
10-30-18	1050	MW-26	63.94	5.76	21.1	737	4.6	117.4	>200	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

+ Dup-01 (no pH)

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-43

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1150	NA	43.02	0.0	0.0	62.52	57.52	10	Yes	Yes	Yes	Yes		Weather Cloudy, 70s
						(soft)								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1200	43.16	0.5	6.44	22.5	1694	6.5	38.4	181.0	1. Low-flow purge-sample with	cloudy
	1203	43.19	1.0	6.29	21.9	1552	5.4	46.0	169.0	A) Peristaltic pump with ded poly tubing	
	1205	43.20	1.5	6.25	21.7	1391	5.0	47.7	137.0	B) Ded. bladder pump w/ ded poly tubing	
	1208	43.21	2.0	6.23	21.6	1258	4.5	49.1	121.0	(C) Nonded. bladder pump w/ poly tubing	
	1210	43.22	2.5	6.15	21.6	1114	4.2	50.3	109.0	or,	
	1213	43.23	3.0	6.18	21.5	1096	4.1	51.0	101.0	2. Recovery Well Sampling	
	1215	43.23	3.5	6.21	21.5	1087	4.0	51.6	97.0		
	1218	43.23	4.0	6.23	21.6	1084	4.0	52.4	95.0		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
10/30/18	1220	MW-43	43.23	6.23	21.6	1084	4.0	52.4	95.0	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		
	1200	Dup-01	43.23	6.23	21.6	1084	4.0	52.4	95.0	Same	Same	
										Same	Same	

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-44

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

* cracked pad & one bent post

Hydrologic Monitoring for TRC
Houston, Texas

Initials: TAS

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1255	NP	39.32	0.00	0.00	52.92	41.92	10	Yes	Yes	Yes	Yes	Issue	Weather: cloudy 70°

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10/30/18	1300	39.55	0.5	6.39	22.7	488	4.2	195.5	59.9	1. Low-flow purge-sample with	SI/Cloudy
	1303	39.63	1.0	6.47	22.1	537	4.1	195.4	48.2	A) Peristaltic pump with ded poly tubing	
	1305	39.72	1.5	6.51	21.5	555	3.9	193.6	40.5	B) Ded. bladder pump w/ ded poly tubing	↓
	1307	39.74	2.0	6.52	21.6	561	3.8	194.1	28.8	(C) Nonded. bladder pump w/ poly tubing	clear
	1310	39.77	2.5	6.53	21.5	562	3.8	192.9	18.3	or,	
	1313	39.80	3.0	6.52	21.4	564	3.9	191.8	18.4	2. Recovery Well Sampling	
	1315	39.83	3.5	6.53	21.4	565	4.0	192.4	19.5		
	1317	39.85	4.0	6.54	21.4	566	4.1	191.3	18.4		
↓	1320	39.87	4.5	6.53	21.6	567	4.1	190.3	18.0		↓

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
10/30/18	1325	MW-44	39.87	6.53	21.6	567	4.1	190.3	18.0	Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Well Purging and Groundwater Sampling Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-46

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Well Inspection Information

Initials: BRH

*Pump intake to be lowered to 76.25 for future events

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	1105	NA	67.64	0.0	0.0	78.25	73.25	NR	Yes	Yes	Yes	Yes		Weather: Cloudy, 70s
						(soft)								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
10-30-18	1115	68.02	0.5	6.04	22.3	5030	7.2	80.1	7200	1. Low-flow purge-sample with	cloudy
	1118	68.26	1.0	5.86	23.0	5350	7.0	89.4	146.0	A) Peristaltic pump with ded poly tubing	
	1120	68.34	1.5	5.78	21.9	5440	6.7	94.9	127.0	B) Ded. bladder pump w/ ded poly tubing	
	1123	68.40	2.0	5.75	21.8	5450	6.4	97.0	106.0	(C) Nonded. bladder pump w/ poly tubing	
	1125	68.43	2.5	5.73	21.7	5400	6.3	99.6	97.0	or,	
	1128	68.46	3.0	5.71	21.7	5370	6.2	101.1	89.0	2. Recovery Well Sampling	sl. cloudy
	1130	68.48	3.5	5.68	21.6	5390	6.2	103.7	84.0		
	1133	68.50	4.0	5.66	21.6	5410	6.1	105.3	82.0		

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
10-30-18	1135	MW-46	68.50	5.66	21.6	5410	6.1	105.3	82.0	Metals (Boron, Calcium)	HNO3	Lab: Test America-Houston
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-3

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC __
Upright __	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	—	NM	NM	NM	NM	NM	NA	NR	—	—	—	—		Weather: —

Unable to locate well - Not on provided maps. Secondary E Pond and surrounding areas searched extensively.

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-7

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in __	PVC ✓
Upright ✓	4-in ✓	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10/30/18	1450	NA	30.60	0.0	0.0	44.00	NA	10	Yes	Yes	Yes	Yes		Weather: Pt. cloudy, 80s

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments
												Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Gauging-Only Record

NRG
Limestone (CCR)
Jewett, Texas

Well: MW-42

Event: 2H18

Completion	Casing Diam	Casing Material
At-Grade __	2-in ✓	PVC ✓
Upright ✓	4-in __	SS __
Vault __	Other __	Other __

Hydrologic Monitoring for TRC
Houston, Texas

Initials: BRH

Well Inspection Information

Date	Time	Depth to LNAPL (Ft-TOC)	Depth to Water (Ft-TOC)	LNAPL Thickness (Ft)	DNAPL Thickness (Ft)	Well Total Depth (Ft-TOC)	Sample Intake (Ft-TOC)	Screen Length (Ft)	Well Inspection					Comments
									Cap	Casing	Well Secure	Label	Other	
10-30-18	1455	NA	32.92	0.0	0.0	47.91	NA	10	Yes	Yes	Yes	Yes		Weather: PC cloudy, 80s
						(soft)								

Well Purging Record

Date	Time	Depth to Water (Ft-TOC)	Cum. Vol. Purged (L)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Purging and Sampling Method	Water Color / Clarity
			0.5							1. Low-flow purge-sample with	
			1.0							A) Peristaltic pump with ded poly tubing	
			1.5							B) Ded. bladder pump w/ ded poly tubing	
			2.0							C) Nonded. bladder pump w/ poly tubing	
			2.5							or,	
			3.0							2. Recovery Well Sampling	
			3.5								
			4.0								

Well Sampling Record

Date	Time	Well	Depth to Water (Ft-TOC)	pH (std units)	T (C)	SC (umho/cm)	Dissolved Oxygen (mg/L)	Oxidation-Reduction-Potential (mV)	Turbidity (NTU)	Parameter	Preserv.	Comments Lab: Test America-Houston
										Metals (Boron, Calcium)	HNO3	
										Fluoride/Chloride/Sulfate and TDS	Neat	
										Report field pH to lab		

Instrument Calibration Log

NRG
Limestone
Jewitt, Texas

Hydrologic Monitoring
for TRC
Houston, Texas

Date	Time	pH Hanna (Std. units)	Specific Conductivity Hanna (umho/cm)	Dissolved Oxygen Hanna (Slope Cal. in saturated air)	Turbidity Lamotte (NTU)	ORP Hanna HI 7020 Soln (200-275 mV)	PID Thermo Environmental 100 ppm Isobutylene	Initials / Comments
10/30/18	830	4.01/7.00	1,000	100%	10.0	230.2	NA	BRH
10/30/18	833	4.01/7.00	1,000	100%	10.0	249.2	NA	BS
10/30/18	835	4.01/7.00	1,000	100%	10.0	238.4	NA	TAB
10/30/18	838	4.01/7.00	1,000	100%	10.0	232.6	NA	JAC

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brian Hillin + HMI team	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 713-653-3127	E-Mail: lance.tigrett@testamericainc.com		Page: P. 1 of 2
Company: TRC Solutions				Job #:

Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77042	
Phone: 832-763-4936	PO #:
Email: aclayton@trcsolutions.com	WO #:
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045
Site:	SSOW#:

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus)	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	9040B-pH (Field pH provided by TRC)	O = MS/MSD volume provided	Total Number of containers	Special Instructions/Note:
			Preservation Code				D	N	N	N			
MW-27	10-30-18	1235	G	Water	N	N	X	X	X	X			
MW-28		1125		Water			X	X	X	X			
MW-1		1340		Water			X	X	X	X			
MW-2		1435		Water			X	X	X	X			
MW-17		1105		Water		N	X	X	X	X			
MW-18		1350		Water			X	X	X	X			
MW-19		1215		Water			X	X	X	X			
MW-20		1405		Water			X	X	X	X			
MW-21		1505		Water			X	X	X	X			
MW-22		1320		Water			X	X	X	X			
MW-29		1100		Water			X	X	X	X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/31/18 841	HMI	[signature]	10/31/18 841	TRC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

TestAmerica Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Ryan Hillin + HMI Team	Lab PM: Tigrett, Lance	Carrier Tracking No(s):	COC No: 600-35296-11606.2
Client Contact: Andrew Clayton	Phone: 713-653-3127	E-Mail: lance.tigrett@testamericainc.com		Page: p.2 of 2
Company: TRC Solutions				Job #:

Address: 10550 Richmond Ave., Ste. 210	Due Date Requested:
City: Houston	TAT Requested (days):
State, Zip: TX, 77042	
Phone: 832-763-4936	PO #:
Email: aclayton@trcsolutions.com	WO #:
Project Name: NRG-Jewett Limestone Wells	Project #: 60008045
Site:	SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020 (Custom Metals)(TA-Corpus)	300_ORGFM_28D (Fluoride, Sulfate, Chloride)	2540C_Calcd (TDS)	9040B-pH (Field pH provided by TRC)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	N	N	N		
MW-45	10-30-18	1140	G	Water	N	N	X	X	X	X		
MW-5		1225		Water			X	X	X	X		
MW-26		1050		Water			X	X	X	X		
MW-43		1220		Water			X	X	X	X		
MW-44		1325		Water			X	X	X	X		
MW-46		1135		Water			X	X	X	X		
EB-01		1235		Water			X	X	X	X		
Dup-01		1200		Water			X	X	X	X		
				Water			X	X	X	X		
				Water			X	X	X	X		
				Water			X	X	X	X		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/31/18 841	HMI	[signature]	10/31/18 841	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

HMI
Groundwater

Hydrologic Monitoring
1654 W. Sam Houston Pkwy. N.
Houston, Texas 77043

Phone 713.464.5206
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M E M O R A N D U M

Low-Flow Groundwater Monitoring Standard Operating Procedures

HMI conducts low-flow groundwater sampling in accordance with the Site Sampling and Analysis Plan, and EPA guidance (Puls and Barcelona, 1996 EPA Guidance on Low-Flow Groundwater Sampling, REV 4, September 19, 2017; and Yeskis & Zavala, 2002, EPA/542:S-02/00, Groundwater Sampling Guidelines for Superfund and RCRA Project Managers). Groundwater field instrumentation is calibrated daily using manufacturer specifications, and is documented on a field instrument calibration log.

Groundwater Sampling Methodology

HMI conducts low-flow groundwater sampling using a peristaltic pump or bladder pump, and dedicated polyethylene tubing at wells with requisite depths-to-water. Intake depths are permanently set at midscreen, mid-water column, or as appropriate, ensuring that future sampling events consistently monitor the targeted water-bearing interval. Purging commences through a sealed flow-through cell at EPA-recommended purge rates (generally 0.1 to 0.2 liters/minute), with well drawdown being monitored. Field parameter readings are measured at 0.5-liter intervals (generally, the equivalent of one cell-volume "turnover"). Field parameters of pH, specific conductivity, temperature, dissolved oxygen, and oxidation-reduction potential are monitored inside the cell. Turbidity is monitored outside the cell. Purging continues until a requisite volume is purged (generally a minimum of 3,000-4,000 ml or 6-8 flow-through cell volumes), and field parameters have stabilized in accordance with SAP guidance:

- pH +/- 0.1 units;
- Temperature -
- Conductivity +/- 3%
- Dissolved Oxygen +/- 10%
- ORP +/- 10 millivolts
- Turbidity +/- 10%

Immediately prior to sampling, the input tubing to the flow-through cell is removed from the disposable segment of silastic tubing on the input barb, and groundwater samples are collected directly into lab-supplied containers, using the same purge rate. Groundwater samples are placed in iced coolers, and remain in HMI's custody until delivered to the lab. Peristaltic tubes and/or bladder pumps may be dedicated in respective well casings, or are bagged, labeled, and stored in sealed tubs at HMI. The purging and sampling process is documented on groundwater sampling field forms.

Cross-Contamination Prevention Program

Dedicated peristaltic tubing is used when possible, to minimize any potential cross-contamination issues, during groundwater monitoring activities. Remaining non-dedicated equipment (e.g., electronic gauging probe) is properly decontaminated prior to use, and between wells. The decontamination procedure may include a combination of mechanical and chemical decontamination. For example, scrubbing using a Liquinox-water wash, and a rinse with ethyl alcohol (isopropanol) when warranted, followed by a deionized water rinse with air drying.

HMI Deliverables

HMI provides thorough field documentation of groundwater monitoring activities, including a field narrative, a table summarizing gauging data and groundwater field parameters, groundwater sampling forms, a field instrument calibration log, and chain-of-custody documentation.

Appendix C
Data Quality Review (May and October 2018)

1.1 BACKGROUND

TRC Environmental Corporation quality assurance (QA) staff performed a review of quality control (QC) data associated with the samples collected in May and October 2018 to ensure that the reported analytical results are valid, accurate, and sufficient to meet method quality objectives. Analytical results were reviewed for compliance with the protocols used for sample analysis. Laboratory-defined control limits were also used as review criteria. Results of QC analyses are discussed in this report and provide information necessary for the identification of potential data limitations.

Items reviewed during the data validation process include the following:

- Sample holding times and preservation
- Blank analyses
- Spike recoveries
- Duplicate sample results
- Detection Limits

A list of samples, collection dates, and laboratory results and qualifier cross-references are presented in the Annual Report as Table 2-2. These samples were collected at the NRG Energy Inc. (NRG) Limestone Electric Generating Station located in Jewett, Texas.

During the May 2018 groundwater sampling event, a total of thirty-five (35) groundwater samples, two (2) groundwater field duplicates, two (2) groundwater matrix spike/matrix spike duplicate (MS/MSD) pairs, and two (2) equipment rinsate blanks were collected.

During the October 2018 groundwater sampling event, a total of seventeen (17) groundwater samples, one (1) groundwater field duplicate, one (1) groundwater matrix spike/matrix spike duplicate (MS/MSD) pair, and one (1) field blank were collected.

The values for pH were determined by the field crew taking the samples. Samples were submitted to TestAmerica in Houston, TX for analysis by one or more of the following methods:

May 2018 Groundwater Event:

- Anions by MCAWW Method 300.0
- Metals by SW846 Method 6020
- Total Dissolved Solids (TDS) by SM Method SM 2540C

Selected samples for selected analytes were extracted according to SW846 Method 3010A prior to analysis by SW846 Method 6020 cited above.

October 2018 Groundwater Event:

- Anions by MCAWW Method 300.0
- Metals by SW846 Method 6020
- Total Dissolved Solids (TDS) by SM Method SM 2540C

Selected samples for selected analytes were extracted according to SW846 Method 3010A prior to analysis by SW846 Method 6020 cited above.

2.1 SAMPLE HOLDING TIMES AND PRESERVATION

Maximum holding times and sample preservation guidelines are established for each method to reduce the chance of generating results that are not representative of the original sample due to changes in analyte concentration over time.

Samples were received at the laboratory properly preserved and in good condition. Most sample preparatory and analytical steps were performed within recommended holding times. The following specific issues were identified:

October 2018 Groundwater Event:

- Method SM 2540C: Reanalysis of the following samples were performed outside of the analytical holding time due to confirmation of results: MW-2, MW-45, and MW-46. These samples were analyzed eight (8) days after collection. According to the Sampling and Analysis Plan, samples are required to be analyzed within seven (7) days.

3.1 BLANK ANALYSES

Blanks are analyzed to help monitor whether reported concentrations of analytes of interest may be biased high due to contributions from sources outside the environmental test media (or the site) being investigated. Blanks analyzed as part of the sampling events are Laboratory Method blanks, Equipment blanks, and Field blanks (or Ambient Conditions Blanks).

Laboratory Method Blank - An aliquot of reagent matrix taken through the analytical process as though it were an actual sample. The purpose of method blank analyses is to monitor for laboratory sources of contamination (i.e., potential high bias in reported sample results). Target analytes were not reported as detected in most method blanks. These results indicate, in general, that no measurement contributions to detected concentrations of target analytes came from laboratory sources of contamination. The following was the only reported issue from the lab on the laboratory method blanks:

October 2018 Groundwater Event:

- Method 6020: The method blank for preparation batch 560-156543 and analytical batch 560-157066 contained Calcium above the reporting limit (RL). Associated sample(s) were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Equipment Rinsate Blank – An aliquot of distilled or deionized water was poured over decontaminated sample collection equipment, collected in sample containers, and submitted to the laboratory for analysis in May 2018. Equipment rinsate blank results are used to assess the thoroughness of any decontamination procedures performed on sample collection equipment.

Target analytes were not reported as detected above the MQL in the May 2018 equipment blanks. These results indicate that, in general, no measurement contributions to detected concentrations of target analytes came from equipment sources of contamination.

Ambient Conditions Blank – These field blanks are aliquots of distilled or deionized water that are opened at the sample collection site, collected in sample containers, and submitted to the laboratory for analysis. Ambient conditions blank results provide information regarding potential sources of contamination that may be present at the sample collection site.

Target analytes were not reported as detected in the ambient conditions blanks. These results indicate that, in general, no measurement contributions to detected concentrations of target analytes came from ambient sources of contamination.

4.1 SPIKE RECOVERIES

Spiked samples are samples in which known amounts of analytes of interest have been added. Spike recoveries can be used to assess measurement accuracy. Laboratory control sample (LCS), MS, and surrogate spike analyses were included in the QC effort associated with the samples collected as part of this event.

Laboratory Control Samples – Target analytes are spiked at known concentrations into analyte-free water and are processed (prepared and analyzed) with the project samples. This type of spiked sample is analyzed to assess the preparatory and analytical accuracy in the absence of matrix effects. For both groundwater sampling events, spike recoveries fell within laboratory defined limits.

Matrix Spikes – A matrix spike sample is a field sample that is spiked at known concentrations with target analytes. Both spiked and un-spiked aliquots of this sample are analyzed. This type of spiked sample is analyzed to assess matrix effects for the specific sites associated with the investigation as well as on the preparatory and analytical procedures.

Most recoveries fall within laboratory-derived limits indicating minimal matrix interferences with recovery of all target analytes. However, the following exceptions were identified based on MS/MSD recoveries:

May 2018 Groundwater Event:

- The following results may be biased due to high or low MS/MSD recoveries.
    - Calcium is biased low in samples MW-19, MW-20, MW-21, MW-22 and EB-01

- The following results could not be evaluated for MS/MSD recoveries due to a sample concentration too high to evaluate accurate spike recoveries.
    - Chloride and Sulfate concentrations in MW-27 were too high to evaluate accurate MS/MSD spike recoveries.
    - Calcium and Boron concentrations in MW-27, and MW-28 were too high to evaluate accurate MS/MSD spike recoveries.

October 2018 Groundwater Event:

- The following results may be biased due to high or low MS/MSD recoveries.
    - Chloride is biased low in samples MW-1, MW-2, MW-5, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-26, MW-27, MW-28, MW-29, MW-43, MW-44, MW-45, MW-46, DUP-01, and FB-01.

- The following results could not be evaluated for MS/MSD recoveries due to a parent sample concentration too high to evaluate accurate spike recoveries.
    - Calcium concentrations in MW-2 and DUP-01 were too high to evaluate accurate MS/MSD spike recoveries.

5.1 DUPLICATE SAMPLE ANALYSES

Measurement precision can be estimated by calculating the relative percent difference (RPD) between results of the corresponding duplicate samples. The analysis of LCS/LCSD pairs, MS/MSD pairs, laboratory duplicate pairs, and field duplicate pairs were included in the QC effort associated with the samples collected in this event.

The equation used to calculate the RPDis:

$$RPD = \frac{|X_1 - X_2|}{(X_1 + X_2)/2} \times 100$$

Where X_1 and X_2 are duplicate sample measurement results.

Laboratory Control Sample Duplicates – Target analytes are spiked at known concentrations into two aliquots of analyte-free water and processed (prepared and analyzed) with the samples. The LCS/LCSD pairs indicate variability in the absence of sample matrix interferences.

May 2018 Groundwater Event:

- Reported RPD values for LCS/LCSD analyses fall within laboratory-defined QC limits indicating that potential variability caused by the analytical system for associated target analytes is negligible.

October 2018 Groundwater Event:

- Reported RPD values for LCS/LCSD analyses fall within laboratory-defined QC limits indicating that potential variability caused by the analytical system for associated target analytes is negligible.

Matrix Spike Duplicates – A matrix spike duplicate is a second spiked aliquot of a single field sample. The MS/MSD pairs provide an indication of measurement variability in sample preparation and analysis given the presence of matrix effects.

Calculated RPDs for most MS/MSD results are within QC limits for all methods. These results indicate that measurement variability (imprecision) caused by the matrix is within expected levels for the groundwater samples.

Laboratory Duplicates – A laboratory duplicate is a second aliquot of a single field sample that is prepared and analyzed in the same manner as the original aliquot. The laboratory duplicate pairs provide an indication of measurement variability in sample preparation and analysis and sample heterogeneity.

May 2018 Groundwater Event:

- Calculated RPDs for laboratory duplicate results are within QC limits. These results indicate that measurement variability (imprecision) caused by the sample preparation and analysis methods is within expected levels for the groundwater samples.

October 2018 Groundwater Event:

- Calculated RPDs for laboratory duplicate results are within QC limits. These results indicate that measurement variability (imprecision) caused by the sample preparation and analysis methods is within expected levels for the groundwater samples.

Field Duplicates – A field duplicate is a second field sample taken as close in space and time as another sample. Field duplicate pairs provide an indication of measurement variability in sample preparation and analysis as well as sample collection procedures given the presence of matrix effects.

May 2018 Groundwater Event:

- Sample DUP-02 was submitted as a field duplicate of MW-02. The calculated RPD value for boron is greater than expected and is indicative of excessive variability in the sample collected at MW-02.

October 2018 Groundwater Event:

- Sample DUP-01 was submitted as a field duplicate of MW-43. The calculated RPD values for all analytes of concern are within acceptable parameters.

6.1 Detection Limits

Based on laboratory notes, the following table summarizes samples that required dilutions, resulting in the inability to achieve the requested reporting limits:

Samples Requiring Dilution

May 2018 Groundwater Event

Chloride	MW-01, DUP-01, MW-02, MW-05, MW-18, MW-19, MW-20, MW-21, MW-22, MW-27, MW-28, DUP-02, MW-44	Diluted due to the nature of the sample matrix
Fluoride	MW-01, DUP-01, MW-02, MW-05, MW-18, MW-19, MW-20, MW-21, MW-22, MW-27, MW-28, DUP-02, MW-44	Diluted due to the nature of the sample matrix
Sulfate	MW-01, DUP-01, MW-02, MW-05, MW-18, MW-19, MW-20, MW-21, MW-22, MW-27, MW-28, DUP-02, MW-44	Diluted due to the nature of the sample matrix

October 2018 Groundwater Event

Chloride, Fluoride, and Sulfate	MW-1, MW-2, MW-5, MW-18, MW-19, MW-20, MW-21, MW-22, MW-26, MW-27, MW-28, MW-29, MW-43, MW-44, MW-45, MW-46, and DUP-01	Diluted due to the nature of the sample matrix
Boron and Calcium	MW-1, MW-2, MW-5, MW-17, MW-18, MW-19, MW-20, MW-21, MW-22, MW-26, MW-27, MW-28, MW-29, MW-43, MW-44, MW-45, MW-46, DUP-01, FB-01	Diluted due to the nature of the sample matrix

7.1 CONCLUSIONS

QC data indicates that analytical data are sufficient to meet method quality objectives, reported data are defensible, and QC mechanisms were generally effective in ensuring measurement data reliability within the expected limits of sampling and analytical error. Potential issues related to dilution, sensitivity and the inability to achieve the requested reporting limits are summarized in Section 6.1.

Appendix D
Alternative Source Demonstration (July 2018)

Alternative Source Demonstration

Limestone Electric Generating Station
Secondary E Pond (Unit 003)

July 2018

Prepared For
NRG Texas Power, LLC
Jewett, Texas

R. Kent Nilsson, P.E.
Senior Engineer

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Executive Summary

The NRG Texas Power, LLC (NRG) Limestone Electric Generating Station (Site) is located approximately seven miles northwest of Jewett, Texas and approximately 0.5 miles north of the intersection of Limestone, Freestone, and Leon Counties. Units managing coal combustion residuals (CCR) at the Site are subject to the United States Environmental Protection Agency's (USEPA) final rule for the regulation and management of CCR under the Resource Conservation and Recovery Act (RCRA) Title 40, Code of Federal Regulations, Part 257 (40 CFR §257) (CCR Rule). CCR generated at the Site consist of fly ash, bottom ash, and flue gas desulfurization (FGD) scrubber sludge. The Site has two active CCR units that are subject to regulation under the CCR Rule, including the Secondary E Pond (Unit 003), which is the subject of this Alternate Source Demonstration (ASD).

Eight independent background/baseline groundwater monitoring events were conducted at the Secondary E Pond between April 2015 and July 2017 per §257.94(b) and the initial post-background/baseline detection monitoring event was conducted in October 2017. Laboratory analytical data for the first post-background/baseline detection monitoring event were received by NRG on October 26, 2017. A statistical evaluation of the first post-background/baseline detection monitoring parameters (Appendix III to §257 of the CCR Rule) was completed to identify statistically significant increases (SSIs) pursuant to §257.93(f) and (g) and in accordance with the Site's CCR *Statistical Analysis Plan* (ERM 2017a). The statistical evaluation identified apparent SSIs in monitoring wells at the Secondary E Pond. This ASD was prepared to evaluate the SSIs in accordance with 257.94(e).

Based on the results of the ASD, NRG has updated the statistical analysis method to use an alternative statistical method that is permitted pursuant to §257.93(f). The updated statistical evaluation identified SSIs, but these were demonstrated to have alternative sources than a release from the Secondary E Pond to groundwater. Therefore, detection monitoring will be continued for the Secondary E Pond utilizing the updated statistical analysis method.

Section 1
Introduction

1.1 Background

The NRG Texas Power, LLC (NRG) Limestone Electric Generating Station (Site) is located approximately seven miles northwest of Jewett, Texas and approximately 0.5 miles north of the intersection of Limestone, Freestone, and Leon Counties. The Site is bisected by Farm-to-Market Road 39 (FM 39), which runs north-south through the middle of the Site. The western portion of the Site is located in Limestone County and includes the electricity generating portion of the Site. The eastern portion of the Site is located in Freestone County and includes the solid waste disposal area.

Units managing coal combustion residuals (CCR) at the Site are subject to the United States Environmental Protection Agency's (USEPA) final rule for the regulation and management of CCR under the Resource Conservation and Recovery Act (RCRA) Title 40, Code of Federal Regulations, Part 257 (40 CFR §257) (CCR Rule, effective date October 17, 2015) and the CCR Remand Rule Proposal (March 1, 2018). CCR generated at the Site consist of fly ash, bottom ash, and flue gas desulfurization (FGD) scrubber sludge, which have been classified by the Texas Commission on Environmental Quality (TCEQ) as Class II Nonhazardous waste. The Site has two active CCR-management units, the Landfill (Unit 004) and the Secondary E Pond (Unit 003), that are subject to regulation under the CCR Rule and the CCR Remand Rule Proposal. Both active CCR units are located within the western portion of the Site as shown on Figure 1.

The Secondary E Pond is the subject of this Alternative Source Demonstration (ASD). According to NRG, the Secondary E Pond receives wastewater from the E Pond and FGD residuals from the chloride purge storage tank for stabilization. These materials are temporarily stored in the Secondary E Pond before final disposal in the Site Landfill.

1.2 Purpose

On behalf of NRG, Environmental Resources Management, Inc. (ERM) conducted eight independent background/baseline groundwater monitoring events between April 2015 and August 2017 per §257.94(b) and the first post-background/baseline detection monitoring event in October 2017. Results of the eight background/baseline and first post-background/baseline detection monitoring results for the Secondary E Pond were documented in the January 30, 2018, *Annual Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018a) and the February

28, 2018, *Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018b) in accordance with the requirements of §257.90(e).

A statistical evaluation of the first post-background/baseline detection monitoring parameters (Appendix III to §257 of the CCR Rule) was completed pursuant to §257.93(f) and (g) and in accordance with the CCR *Statistical Analysis Plan* (ERM 2017a). As part of the statistical evaluation, the first post-background/baseline detection monitoring data were evaluated to identify statistically significant increases (SSIs) in detection monitoring parameters to determine if concentrations in detection monitoring wells exceed background levels. The statistical evaluation identified potential SSIs in the first post-background/baseline detection monitoring wells, which was documented in the February 28, 2018, *Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018b). On behalf of NRG, TRC Environmental Corporation (TRC) prepared this ASD to evaluate the SSIs identified in the February 28, 2018, *Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018b) in accordance with §257.94(e).

1.3 Hydrogeology

According to the *Geologic Atlas of Texas, Waco Sheet* (BEG 1972), the Site is primarily located within the outcrop of the Calvert Bluff Formation of the Wilcox Group. Minor portions of the southeast corner of the Site are located within the outcrop of the Carrizo Sand and minor portions of the southwest corner of the Site are immediately underlain by alluvium. The Calvert Bluff Formation underlies both the Carrizo Sand and alluvium where present.

The Secondary E Pond is located solely within the outcrop of the Calvert Bluff Formation (BEG 1972), but site investigation data indicate it may also be located within the outcrop of the Carrizo Sand. The Calvert Bluff Formation is mostly mudstone interbedded with fine sandstone, lignite, and ironstone concretions. The mudstone contains silt and very fine sand laminae. The Carrizo Sand consists of very fine sand with partings of silty clay, carbonaceous clay, and ironstone. The Carrizo Sand and the Wilcox Group comprise the Carrizo-Wilcox aquifer, which is recognized by the Texas Water Development Board (TWDB) as a major aquifer system in Texas. The Site is located within the outcrop, or the recharge zone, of the Carrizo-Wilcox aquifer (TWDB 2011).

Site investigations were conducted at the Site by Espey, Huston & Associated in 1986; Radian International in 1996 and 1997; EPRI in 2007, and Environmental Resources Management, Inc. (ERM) in 2016. The results of these investigations were summarized in the October 2017 *Ground Water Monitoring Networks for Coal Combustion Residual (CCR) Rule Compliance* report (ERM 2017b). Boring logs indicate the lithology at the Secondary E Pond consists primarily of silty sand with clayey sand and sandy clay to approximately 60 feet below ground surface (bgs), which appears to be consistent with the Carrizo Sand. Interbedded mud, silt, and sand consistent with the

Calvert Bluff Formation was present at approximately 60 feet bgs in the vicinity of the Secondary E Pond.

The certified CCR monitoring well network for the Secondary E Pond consists of one upgradient, background monitoring well (MW-29) and three downgradient monitoring wells (MW-5, MW-43, and MW-44). According to a potentiometric surface map prepared by ERM for the October 2017 detection monitoring event, groundwater flows beneath the Secondary E Pond to the northwest towards Lynn Creek (ERM 2018a).

TRC - GIS

LANDFILL

SECONDARY
E POND

LEGEND

- SECONDARY E POND CCR WELL LOCATION
- CCR UNIT BOUNDARY

0 1,000 2,000 Feet

1 " = 1,000 '

1:12,000

N

PROJECT:

NRG TEXAS POWER, LLC
LIMESTONE
JEWETT, TEXAS

TITLE:

SITE MAP

DRAWN BY:	MHORN	PROJ. NO.:	298367.0000.0000
CHECKED BY:	JSPEER		
APPROVED BY:	JSPEER		**FIGURE 1**
DATE:	JULY 2018		

505 East Huntland Drive, Suite 250
Austin, TX 78752
Phone: 512.329.6080
www.trcsolutions.com

FILE NO.: 298367_1.mxd

Coordinate System: NAD 1983 StatePlane Texas Central FIPS 4203 Feet (Foot US)
Map Rotation: 0

Plot Date: 7/17/2018, 22:20:15 PM by MHORN -- LAYOUT: ANSI B (11"x17")
Path: S:\1-PROJECTS\NRG\Limestone\298367\298367_1.mxd

Section 2
Alternative Source Demonstration

As discussed in the February 28, 2018, *Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018b), statistical evaluation of the first post-background/baseline detection monitoring laboratory analytical results identified potential SSIs of Appendix III parameters above background/baseline. This section evaluates alternative sources for the potential SSIs as per §257.94(e)(2).

2.1 Initially Identified Statistically Significant Increases (SSIs)

The Site CCR *Statistical Analysis Plan* (ERM 2017a) stated the Secondary E Pond groundwater data would be evaluated for SSIs using prediction limits per §257.93(f)(3) for the certified groundwater monitoring network. Background/baseline groundwater quality was established for the five monitoring wells in accordance with the *Statistical Analysis Plan* based on detection monitoring samples collected between April 2015 and August 2017. The first post-background/baseline detection monitoring samples were collected in October 2017. NRG received the first post-background/baseline laboratory analytical results on October 26, 2017. The initially identified SSIs over background/baseline that were reported in the February 28, 2018, *Groundwater Monitoring Report, Secondary E Pond (Unit 003)* (ERM 2018b) are summarized below in Table 1. All other Appendix III constituents were within the statistical background/baseline limits, which were based on the upper predictive limits (UPLs) and (the lower predictive limit [LPL] for pH), as summarized in the February 28, 2018 report.

Table 1
Initially Identified SSIs – October 2017 Detection Monitoring Event

ANALYTE	WELL	LPL	UPL	SAMPLE DATE	VALUE	UNIT
Boron	MW-43	N/A	0.1	2017-10-11	0.158	mg/L
Calcium	MW-43	N/A	19.7	2017-10-11	93.7	mg/L
Calcium	MW-44	N/A	19.7	2017-10-11	29.6	mg/L
Chloride	MW-05	N/A	20.5	2017-10-11	20.9	mg/L
Chloride	MW-43	N/A	20.5	2017-10-11	108	mg/L
Chloride	MW-44	N/A	20.5	2017-10-11	33.8	mg/L
pH	MW-05	6.43	6.74	2017-10-11	5.71	SU

Table 1
Initially Identified SSIs – October 2017 Detection Monitoring Event

ANALYTE	WELL	LPL	UPL	SAMPLE DATE	VALUE	UNIT
pH	MW-43	6.43	6.74	2017-10-11	6.23	SU
pH	MW-44	6.43	6.74	2017-10-11	6.4	SU
Sulfate	MW-43	N/A	151	2017-10-11	350	mg/L
TDS	MW-43	N/A	382	2017-10-11	964	mg/L
TDS	MW-44	N/A	382	2017-10-11	435	mg/L

LPL = lower prediction limit
UPL = upper prediction limit
mg/L = milligrams per liter
SU = standard units
N/A = Not Applicable

In accordance with §257.94(e)(2), NRG may demonstrate that a source other than the CCR unit caused the SSIs over background levels for a constituent or that the SSIs resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. This ASD has been prepared to evaluate the initially identified SSIs post-background/baseline detection monitoring event performed at the Secondary E Pond in October 2017.

2.2 Updates to Statistical Method

NRG has elected to use an alternate acceptable statistical method pursuant to the CRR Rule for evaluating the detection monitoring data. The statistical method is updated to utilize upper tolerance limits (UTL) (and lower tolerance limit [LTL] for pH) rather than UPLs (and LPLs for pH) as initially stipulated in the October 2017 *Statistical Analysis Plan*. Both statistical analytical methods are acceptable per §257.93(f)(3).

2.3 Updated Statistically Significant Increases (SSIs)

Table 2 presents the updated statistical comparison values (tolerance limits) for the upgradient groundwater monitoring well detection monitoring background/baseline laboratory analytical results. US EPA's ProUCL software was used to calculate the UTLs (and LTLs for pH). The ProUCL outputs are provided in Appendix A. Nine SSIs were identified based on the updated statistical method, as identified in Table 3.

Table 2
Revised Secondary E Pond UTLs

ANALYTE	DISTRIBUTION	CONFIDENCE COEFFICIENT	LTL	UTL	UNIT
Boron	Nonparametric (all nondetect – use the PQL)	0.337	N/A	0.100	mg/L
Calcium	Normal	0.95	N/A	22.4	mg/L
Chloride	Normal	0.95	N/A	26.3	mg/L
Fluoride	Lognormal	0.95	N/A	2.5	mg/L
pH	Normal	0.95	6.4	7.2	SU
Sulfate	Nonparametric	0.337	N/A	151	mg/L
TDS	Normal	0.95	N/A	484	mg/L

mg/L= milligrams per liter
N/A = Not Applicable
PQL = Practical Quantitation Limit
SU = Standard Units

Table 3
SSIs Identified Based on Updated Statistical Evaluation – October 2017 Detection Monitoring Event

ANALYTE	WELL	LTL	UTL	SAMPLE DATE	VALUE	UNIT
Boron	MW-43	N/A	0.1	2017-10-11	0.158	mg/L
Calcium	MW-43	N/A	22.4	2017-10-11	93.7	mg/L
Calcium	MW-44	N/A	22.4	2017-10-11	29.6	mg/L
Chloride	MW-43	N/A	26.3	2017-10-11	108	mg/L
Chloride	MW-44	N/A	26.3	2017-10-11	33.8	mg/L
pH	MW-05	6.4	7.2	2017-10-11	5.71	SU
pH	MW-43	6.4	7.2	2017-10-11	6.23	SU
Sulfate	MW-43	N/A	151	2017-10-11	350	mg/L
TDS	MW-43	N/A	484	2017-10-11	964	mg/L

mg/L= milligrams per liter
N/A = Not Applicable
PQL = Practical Quantitation Limit
SU = Standard Units

Statistical performance standards require the confidence of an SSI to be at least 95 percent. The short time period associated with the background/baseline monitoring period (April 2015 through August 2017) and use of a single upgradient (background) well for the Secondary E Pond result in a confidence level of 34 percent for the boron and sulfate data sets with no underlying distribution (nonparametric UTL). This means that a longer background/baseline monitoring period and/or use of additional upgradient, background monitoring wells to evaluate background groundwater quality are necessary to establish representative background, upgradient groundwater quality at the Secondary E Pond for these constituents with no underlying distribution and to differentiate between natural variations in groundwater quality and potential affects from the CCR Unit for these constituents. This ASD applies to boron and sulfate in MW-43.

Additional alternative sources identified for the SSIs at the Secondary E Pond are non-CCR sources in the vicinity of the Secondary E Pond. The Site and surrounding vicinity is densely populated with historical and current oil and gas activity consisting primarily of natural gas production. An active gas well (API number 42-161-33188) and its associated well pad is located immediately to the west of the Secondary E Pond. According to Railroad Commission of Texas (RRC) records this gas well was completed and recompleted between April 2005 and November 2005. According to historical aerial imagery available on Google Earth, a surface pit with approximate dimensions of 35-feet by 30-feet was present on the northeast corner of this gas well pad on November 2, 2015 and November 15, 2015, but the pit was not present in other available aerial images on October 21, 2015 and October 30, 2018.

No permit was found in the RRC records for this pit, indicating the pit is likely an "authorized pit" (i.e., no permit required for authorized uses) and based on the date of occurrence relative to drilling activities, the pit likely contained spent completion fluids or workover fluids. Completion or workover fluids are often brines that are used for well testing and are chemically compatible with the formation fluids; and the spent fluids contained in the pit would have come in contact with formation fluids. According to the United States Geological Survey (USGS) National Produced Waters Geochemical Database, water co-produced with hydrocarbons (referred to as "produced water" or "formation water") from geologic formations underlying the Site has the following composition (USGS 2018):

- pH ranging from 4.67 standard units (SU) to 5.6 SU;
- Calcium ranging from 12,560 milligrams per liter (mg/L) to 33,520 mg/L;
- Chloride ranging from 56,980 mg/L to 96,200 mg/L
- Sulfate ranging from 480 mg/L to 1,790 mg/L; and
- Total dissolved solids (TDS) ranging from 98,330 mg/L to 152,970 mg/L.

Considering the composition of the formation water with which the completion or workover fluids came in contact and the typical brine composition of these fluids, potential releases of these fluids would be expected to affect groundwater quality within the immediate vicinity and downgradient of the gas well pad and surface pit. Even minor releases of these fluids could increase the concentrations of calcium, chloride, sulfate, and TDS and decrease the pH in nearby downgradient wells MW-5, MW-43, and MW-44. The single upgradient/background monitoring well at the Secondary E Pond (MW-29) is located upgradient and on the opposite side of the Secondary E Pond from the former surface pit; therefore, based on potentiometric surface maps, water quality at the upgradient/background monitoring well MW-29 would not be anticipated to be affected by potential releases from the pit to groundwater at the Secondary E pond area.

Section 3
Conclusions

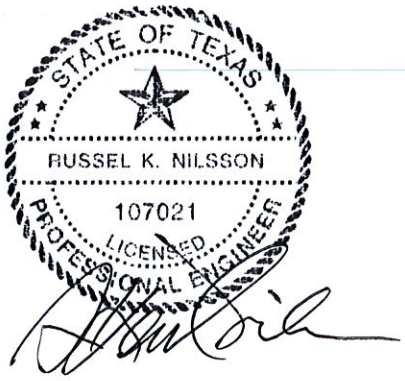
The statistical method was updated to utilize tolerance limits (UTLs and LTLs) rather than predictive limits (UPLs and LPLs) for baseline monitoring results. The updated statistical evaluation identified nine SSIs, but these were demonstrated to have alternative sources other than a release from the Secondary E Pond to groundwater. Detection monitoring will continue for the Secondary E Pond, utilizing the updated statistical analysis method.

Section 4
Certification

I hereby certify that the alternative source demonstration presented within this document for the Limestone Electric Generating Station Secondary E Pond has been prepared to meet the requirements of Title 40 CFR 257.94 (e) 2 of the Federal CCR Rule. This document is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of Title 40 CFR 257.94 (e) 2.

Name: R. KENT NILSSON Expiration Date: 9/30/2018

Company: TRC Environmental Corporation Date: 7/23/2018



Section 5
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Appendix A
Updated Background/Baseline Tolerance Limit Calculations

Background Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.15/29/2018 2:25:31 PM
From File	WorkSheet.xls
Full Precision	OFF
Confidence Coefficient	95%
Coverage	95%
New or Future K Observations	1
Number of Bootstrap Operations	2000

Calcium

General Statistics

Total Number of Observations	8	Number of Distinct Observations	6
Minimum	14	First Quartile	14.75
Second Largest	17.4	Median	15.25
Maximum	20	Third Quartile	16.95
Mean	15.96	SD	2.03
Coefficient of Variation	0.127	Skewness	1.193
Mean of logged Data	2.764	SD of logged Data	0.122

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.884	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level	
Lilliefors Test Statistic	0.215	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level	

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	**22.43**	90% Percentile (z)	18.56
95% UPL (t)	20.04	95% Percentile (z)	19.3
95% USL	20.09	99% Percentile (z)	20.68

Gamma GOF Test

A-D Test Statistic	0.396	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.21	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.293	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	75.21	k star (bias corrected MLE)	47.09
Theta hat (MLE)	0.212	Theta star (bias corrected MLE)	0.339
nu hat (MLE)	1203	nu star (bias corrected)	753.4
MLE Mean (bias corrected)	15.96	MLE Sd (bias corrected)	2.326

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	20.17	90% Percentile	19.01
95% Hawkins Wixley (HW) Approx. Gamma UPL	20.19	95% Percentile	19.97
95% WH Approx. Gamma UTL with 95% Coverage	23	99% Percentile	21.87
95% HW Approx. Gamma UTL with 95% Coverage	23.08		
95% WH USL	20.22	95% HW USL	20.24

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.906	Shapiro Wilk Lognormal GOF Test	

5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.199	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level	
Data appear Lognormal at 5% Significance Level			

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	23.36	90% Percentile (z)	18.53
95% UPL (t)	20.25	95% Percentile (z)	19.37
95% USL	20.3	99% Percentile (z)	21.04

Nonparametric Distribution Free Background Statistics
Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	95% UTL with 95% Coverage	20
Approx, f used to compute achieved CC	0.421	Approximate Actual Confidence Coefficient achieved by U	0.337
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	20	95% BCA Bootstrap UTL with 95% Coverage	20
95% UPL	20	90% Percentile	18.18
90% Chebyshev UPL	22.42	95% Percentile	19.09
95% Chebyshev UPL	25.35	99% Percentile	19.82
95% USL	20		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Chloride

General Statistics

Total Number of Observations	8	Number of Distinct Observations	7
Minimum	7.4	First Quartile	9.758
Second Largest	16	Median	11.9
Maximum	20	Third Quartile	16
Mean	12.78	SD	4.256
Coefficient of Variation	0.333	Skewness	0.514
Mean of logged Data	2.499	SD of logged Data	0.335

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.951	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.162	Lilliefors GOF Test
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level
Data appear Normal at 5% Significance Level		

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	**26.34**	90% Percentile (z)	18.23
95% UPL (t)	21.33	95% Percentile (z)	19.78
95% USL	21.42	99% Percentile (z)	22.68

Gamma GOF Test

A-D Test Statistic	0.22	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.179	Kolmogorov-Smirnov Gamma GOF Test

5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level	

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	10.44	k star (bias corrected MLE)	6.606
Theta hat (MLE)	1.224	Theta star (bias corrected MLE)	1.934
nu hat (MLE)	167	nu star (bias corrected)	105.7
MLE Mean (bias corrected)	12.78	MLE Sd (bias corrected)	4.972

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	22.7	90% Percentile	19.42
95% Hawkins Wixley (HW) Approx. Gamma UPL	22.95	95% Percentile	21.9
95% WH Approx. Gamma UTL with 95% Coverage	30.82	99% Percentile	27.08
95% HW Approx. Gamma UTL with 95% Coverage	31.73		
95% WH USL	22.84	95% HW USL	23.1

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.972	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.168	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level	

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	35.37	90% Percentile (z)	18.69
95% UPL (t)	23.85	95% Percentile (z)	21.11
95% USL	24.03	99% Percentile (z)	26.52

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	95% UTL with 95% Coverage	20
Approx, f used to compute achieved CC	0.421	Approximate Actual Confidence Coefficient achieved by U′	0.337
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	20	95% BCA Bootstrap UTL with 95% Coverage	20
95% UPL	20	90% Percentile	17.2
90% Chebyshev UPL	26.32	95% Percentile	18.6
95% Chebyshev UPL	32.45	99% Percentile	19.72
95% USL	20		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

Fluoride

General Statistics

Total Number of Observations	8	Number of Distinct Observations	8
Minimum	0.335	First Quartile	0.406
Second Largest	0.86	Median	0.458
Maximum	1.4	Third Quartile	0.583
Mean	0.599	SD	0.361
Coefficient of Variation	0.603	Skewness	1.974
Mean of logged Data	-0.629	SD of logged Data	0.479

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.719	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.818	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.369	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.283	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	1.751	90% Percentile (z)	1.062
95% UPL (t)	1.325	95% Percentile (z)	1.194
95% USL	1.333	99% Percentile (z)	1.44

Gamma GOF Test

A-D Test Statistic	0.848	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.719	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.348	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.295	Data Not Gamma Distributed at 5% Significance Level	

Data Not Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	4.425	k star (bias corrected MLE)	2.849
Theta hat (MLE)	0.135	Theta star (bias corrected MLE)	0.21
nu hat (MLE)	70.79	nu star (bias corrected)	45.58
MLE Mean (bias corrected)	0.599	MLE Sd (bias corrected)	0.355

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	1.358	90% Percentile	1.075
95% Hawkins Wixley (HW) Approx. Gamma UPL	1.366	95% Percentile	1.277
95% WH Approx. Gamma UTL with 95% Coverage	2.075	99% Percentile	1.714
95% HW Approx. Gamma UTL with 95% Coverage	2.147		
95% WH USL	1.37	95% HW USL	1.378

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.829	Shapiro Wilk Lognormal GOF Test	
5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level	
Lilliefors Test Statistic	0.32	Lilliefors Lognormal GOF Test	
5% Lilliefors Critical Value	0.283	Data Not Lognormal at 5% Significance Level	

Data appear Approximate Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	**2.457**	90% Percentile (z)	0.985
95% UPL (t)	1.397	95% Percentile (z)	1.173
95% USL	1.412	99% Percentile (z)	1.626

Nonparametric Distribution Free Background Statistics

Data appear Approximate Lognormal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	95% UTL with 95% Coverage	1.4
Approx, f used to compute achieved CC	0.421	Approximate Actual Confidence Coefficient achieved by U	0.337
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	1.4	95% BCA Bootstrap UTL with 95% Coverage	1.4
95% UPL	1.4	90% Percentile	1.022
90% Chebyshev UPL	1.749	95% Percentile	1.211
95% Chebyshev UPL	2.269	99% Percentile	1.362
95% USL	1.4		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers

and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.

pH

General Statistics			
Total Number of Observations	8	Number of Distinct Observations	8
Minimum	6.61	First Quartile	6.665
Second Largest	6.87	Median	6.74
Maximum	6.97	Third Quartile	6.863
Mean	6.764	SD	0.126
Coefficient of Variation	0.0187	Skewness	0.454
Mean of logged Data	1.911	SD of logged Data	0.0186

Critical Values for Background Threshold Values (BTVs)			
Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test		
Shapiro Wilk Test Statistic	0.942	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.165	Lilliefors GOF Test
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level

Data appear Normal at 5% Significance Level

Background Statistics Assuming Normal Distribution			
95% UTL with 95% Coverage	**7.166**	90% Percentile (z)	6.925
95% UPL (t)	7.017	95% Percentile (z)	6.971
95% USL	7.02	99% Percentile (z)	7.057

Gamma GOF Test		
A-D Test Statistic	0.316	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.715	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.188	Kolmogorov-Smirnov Gamma GOF Test
5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics			
k hat (MLE)	3299	k star (bias corrected MLE)	2062
Theta hat (MLE)	0.00205	Theta star (bias corrected MLE)	0.00328
nu hat (MLE)	52783	nu star (bias corrected)	32990
MLE Mean (bias corrected)	6.764	MLE Sd (bias corrected)	0.149

Background Statistics Assuming Gamma Distribution			
95% Wilson Hilferty (WH) Approx. Gamma UPL	7.019	90% Percentile	6.955
95% Hawkins Wixley (HW) Approx. Gamma UPL	7.019	95% Percentile	7.011
95% WH Approx. Gamma UTL with 95% Coverage	7.172	99% Percentile	7.115
95% HW Approx. Gamma UTL with 95% Coverage	7.173		
95% WH USL	7.022	95% HW USL	7.022

Lognormal GOF Test		
Shapiro Wilk Test Statistic	0.944	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.163	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution			
95% UTL with 95% Coverage	7.176	90% Percentile (z)	6.926
95% UPL (t)	7.02	95% Percentile (z)	6.973

95% USL	7.023	99% Percentile (z)	7.062

Nonparametric Distribution Free Background Statistics
Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	95% UTL with 95% Coverage	6.97
Approx, f used to compute achieved CC	0.421	Approximate Actual Confidence Coefficient achieved by U	0.337
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	6.97	95% BCA Bootstrap UTL with 95% Coverage	6.97
95% UPL	6.97	90% Percentile	6.9
90% Chebyshev UPL	7.165	95% Percentile	6.935
95% Chebyshev UPL	7.347	99% Percentile	6.963
95% USL	6.97		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

Sulfate

General Statistics

Total Number of Observations	8	Number of Distinct Observations	7
Minimum	24.8	First Quartile	29.75
Second Largest	35	Median	31.5
Maximum	151	Third Quartile	32.75
Mean	45.6	SD	42.69
Coefficient of Variation	0.936	Skewness	2.802
Mean of logged Data	3.615	SD of logged Data	0.575

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.485	Shapiro Wilk GOF Test	
5% Shapiro Wilk Critical Value	0.818	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.473	Lilliefors GOF Test	
5% Lilliefors Critical Value	0.283	Data Not Normal at 5% Significance Level	
Data Not Normal at 5% Significance Level			

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	181.6	90% Percentile (z)	100.3
95% UPL (t)	131.4	95% Percentile (z)	115.8
95% USL	132.3	99% Percentile (z)	144.9

Gamma GOF Test

A-D Test Statistic	1.861	Anderson-Darling Gamma GOF Test	
5% A-D Critical Value	0.722	Data Not Gamma Distributed at 5% Significance Level	
K-S Test Statistic	0.452	Kolmogorov-Smirnov Gamma GOF Test	
5% K-S Critical Value	0.297	Data Not Gamma Distributed at 5% Significance Level	
Data Not Gamma Distributed at 5% Significance Level			

Gamma Statistics

k hat (MLE)	2.591	k star (bias corrected MLE)	1.703
Theta hat (MLE)	17.6	Theta star (bias corrected MLE)	26.78
nu hat (MLE)	41.45	nu star (bias corrected)	27.24
MLE Mean (bias corrected)	45.6	MLE Sd (bias corrected)	34.95

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	123.2	90% Percentile	92.15
95% Hawkins Wixley (HW) Approx. Gamma UPL	122	95% Percentile	113.9
95% WH Approx. Gamma UTL with 95% Coverage	205.5	99% Percentile	162.7
95% HW Approx. Gamma UTL with 95% Coverage	210.6		
95% WH USL	124.5	95% HW USL	123.3

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.586	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.818	Data Not Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.416	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.283	Data Not Lognormal at 5% Significance Level
Data Not Lognormal at 5% Significance Level		

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	232.4	90% Percentile (z)	77.64
95% UPL (t)	118	95% Percentile (z)	95.69
95% USL	119.5	99% Percentile (z)	141.6

Nonparametric Distribution Free Background Statistics
Data do not follow a Discernible Distribution (0.05)

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	**95% UTL with 95% Coverage**	**151**
Approx, f used to compute achieved CC	0.421	**Approximate Actual Confidence Coefficient achieved by**	**0.337**
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	151	95% BCA Bootstrap UTL with 95% Coverage	151
95% UPL	151	90% Percentile	69.8
90% Chebyshev UPL	181.4	95% Percentile	110.4
95% Chebyshev UPL	243	99% Percentile	142.9
95% USL	151		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers
and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data
represents a background data set and when many onsite observations need to be compared with the BTV.

TDS

General Statistics

Total Number of Observations	8	Number of Distinct Observations	8
Minimum	180	First Quartile	196
Second Largest	300	Median	222.5
Maximum	403	Third Quartile	270
Mean	247	SD	74.32
Coefficient of Variation	0.301	Skewness	1.537
Mean of logged Data	5.475	SD of logged Data	0.27

Critical Values for Background Threshold Values (BTVs)

Tolerance Factor K (For UTL)	3.187	d2max (for USL)	2.032

Normal GOF Test

Shapiro Wilk Test Statistic	0.846	Shapiro Wilk GOF Test
5% Shapiro Wilk Critical Value	0.818	Data appear Normal at 5% Significance Level
Lilliefors Test Statistic	0.241	Lilliefors GOF Test
5% Lilliefors Critical Value	0.283	Data appear Normal at 5% Significance Level
Data appear Normal at 5% Significance Level		

Background Statistics Assuming Normal Distribution

95% UTL with 95% Coverage	**483.9**	90% Percentile (z)	342.2
95% UPL (t)	396.3	95% Percentile (z)	369.2
95% USL	398	99% Percentile (z)	419.9

Gamma GOF Test

A-D Test Statistic	0.428	Anderson-Darling Gamma GOF Test
5% A-D Critical Value	0.716	Detected data appear Gamma Distributed at 5% Significance Level
K-S Test Statistic	0.23	Kolmogorov-Smirnov Gamma GOF Test
5% K-S Critical Value	0.294	Detected data appear Gamma Distributed at 5% Significance Level

Detected data appear Gamma Distributed at 5% Significance Level

Gamma Statistics

k hat (MLE)	14.78	k star (bias corrected MLE)	9.319
Theta hat (MLE)	16.71	Theta star (bias corrected MLE)	26.5
nu hat (MLE)	236.4	nu star (bias corrected)	149.1
MLE Mean (bias corrected)	247	MLE Sd (bias corrected)	80.91

Background Statistics Assuming Gamma Distribution

95% Wilson Hilferty (WH) Approx. Gamma UPL	404.4	90% Percentile	354.7
95% Hawkins Wixley (HW) Approx. Gamma UPL	405.8	95% Percentile	393.4
95% WH Approx. Gamma UTL with 95% Coverage	527.4	99% Percentile	473
95% HW Approx. Gamma UTL with 95% Coverage	535.4		
95% WH USL	406.5	95% HW USL	408

Lognormal GOF Test

Shapiro Wilk Test Statistic	0.908	Shapiro Wilk Lognormal GOF Test
5% Shapiro Wilk Critical Value	0.818	Data appear Lognormal at 5% Significance Level
Lilliefors Test Statistic	0.212	Lilliefors Lognormal GOF Test
5% Lilliefors Critical Value	0.283	Data appear Lognormal at 5% Significance Level

Data appear Lognormal at 5% Significance Level

Background Statistics assuming Lognormal Distribution

95% UTL with 95% Coverage	564.5	90% Percentile (z)	337.4
95% UPL (t)	410.7	95% Percentile (z)	372.2
95% USL	413.2	99% Percentile (z)	447.4

Nonparametric Distribution Free Background Statistics

Data appear Normal at 5% Significance Level

Nonparametric Upper Limits for Background Threshold Values

Order of Statistic, r	8	95% UTL with 95% Coverage	403
Approx, f used to compute achieved CC	0.421	Approximate Actual Confidence Coefficient achieved by U	0.337
		Approximate Sample Size needed to achieve specified CC	59
95% Percentile Bootstrap UTL with 95% Coverage	403	95% BCA Bootstrap UTL with 95% Coverage	403
95% UPL	403	90% Percentile	330.9
90% Chebyshev UPL	483.5	95% Percentile	367
95% Chebyshev UPL	590.6	99% Percentile	395.8
95% USL	403		

Note: The use of USL tends to yield a conservative estimate of BTV, especially when the sample size starts exceeding 20.
Therefore, one may use USL to estimate a BTV only when the data set represents a background data set free of outliers and consists of observations collected from clean unimpacted locations.
The use of USL tends to provide a balance between false positives and false negatives provided the data represents a background data set and when many onsite observations need to be compared with the BTV.