June 5, 2015

Tomas Oberding, PhD
Hydrologist, Adv-District 1
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: First Annual Groundwater Monitoring Report
State L-2 Tank Battery Site (AP-73)
Lea County, New Mexico

Dear Dr. Oberding:

Enviro Clean Cardinal, LLC (EC^2), on behalf of our client Chesapeake Energy Corporation (Chesapeake), is pleased to submit to the New Mexico Oil Conservation Division (NMOCD) in electronic format the ***First Annual Groundwater Monitoring Report*** (Report) detailing the first year of groundwater monitoring activities conducted at the State L-2 Tank Battery Site (AP-73) located in the C-NE-NW of Section 19, Township 17 South, Range 36 East, Lea County, New Mexico. These activities were conducted in accordance with the Stage 2 Abatement Plan for the Site approved by the NMOCD on June 27, 2013.

If you have any questions or comments regarding this Report, please do not hesitate to contact me at (918) 906-6780.

Sincerely,
Enviro Clean Cardinal, LLC

Bruce E. McKenzie, P.G.
Senior Project Manager

Enclosure: First Annual Groundwater Monitoring Report

xc: Patrick McMahon - Heidel, Samberson, Newell, Cox & McMahon (2 copies)
Chase Acker - Chesapeake (4 copies)

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FIRST ANNUAL GROUNDWATER MONITORING REPORT
CHESAPEAKE ENERGY CORPORATION
STATE L-2 TANK BATTERY (AP-73)
LEA COUNTY, NEW MEXICO

Prepared for:

Chesapeake Energy Corporation
6100 North Western Avenue
Oklahoma City, Oklahoma 73118
(405) 935-3938

Prepared by:

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Tulsa, Oklahoma 74136
(918) 794-7828

June 5, 2015

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHESAPEAKE ENERGY CORPORATION, INC.
STATE L-2 TANK BATTERY (AP-73)
FIRST ANNUAL GROUNDWATER MONITORING REPORT
JUNE 5, 2015

1.0 INTRODUCTION

Chesapeake Energy Corporation (Chesapeake) retained Enviro Clean Cardinal, LLC (EC^2), to perform chloride and benzene impacted groundwater monitoring at Chesapeake's former State L-2 Tank Battery site (Site) located in Lea County, New Mexico. The Site is located approximately 8 miles south-southwest of Lovington, New Mexico in the C-NE-NW of Section 19, Township 17 South, Range 36 East, Lea County, New Mexico (coordinates 32.825319º latitude, -103.396361º longitude). The Site location and topographic features are shown on **Figure 1**. An oil and gas production tank battery was formerly located at the Site. Chesapeake purchased the Site in 2004, but never operated the tank battery. Chesapeake began abandonment and environmental investigation activities at the Site in 2007.

Initial Site investigation activities were conducted in May 2007. These investigation activities consisted of conducting EM-31 and EM-34 ground conductivity surveys, the collection of soil samples from nine boreholes, and the installation and sampling of five groundwater monitoring wells. In August 2007 following the investigation, Chesapeake submitted to the New Mexico Oil Conservation Division (NMOCD) a Stage 1 Abatement Plan for the Site. In May 2010, the NMOCD responded to Chesapeake that the agency was not adequately staffed to review the abatement plan in a timely manner and advised Chesapeake that they could proceed with abatement operations at risk. In July 2010, Chesapeake notified the NMOCD of their intent to proceed with the Stage 1 Abatement activities. On March 20, 2012, following implementation of these activities, Chesapeake submitted the Stage 1 Abatement Report for the Site.

On March 27, 2012, Chesapeake submitted to the NMOCD the ***Stage 2 Abatement Plan*** (Plan) for the Site. A copy of the Plan is provided in **Appendix A**. In this Plan, Chesapeake proposed the following abatement activities at the Site:

- Excavate and remove the near-surface soils at the Site containing concentrations of chloride exceeding 1,000 milligrams per kilogram (mg/kg),
- Excavate and remove the near-surface soils at the Site containing concentrations of TPH exceeding 1,000 mg/kg,

- Install clay liners in areas where chloride and/or TPH concentrations exceed 1,000 mg/kg at depths greater than five feet below ground level,
- Install one additional groundwater monitoring well downgradient of the Site,
- Monitor the groundwater at the Site until the concentrations of chloride and benzene are below the New Mexico Water Quality Control Commission standards.

On March 7, 2013, NMOCD notified Chesapeake that the Plan was administratively complete and that Chesapeake should proceed with public notice of the Plan. On March 30, 2013, Chesapeake published a notice of the proposed activities in the Albuquerque Journal, the Hobbs-Daily News Sun and the Lovington Leader. In addition, written notification of the Plan submittal was sent to all surface owners of record within a 1-mile radius of the Site. On June 27, 2013 upon completion of the notification activities, the NMOCD approved the Plan for the Site. A copy of the NMOCD correspondence approving the Plan is included in **Appendix B**.

The soil remediation activities outlined in the Plan were conducted at the Site during the period January 15, 2014 through March 27, 2014. The soil remediation activities were summarized in the document titled ***Soil Remediation Summary Report***, submitted to the NMOCD on August 6, 2014.

This ***First Annual Groundwater Monitoring Report*** (Report) summarizes the groundwater monitoring activities conducted at the Site during the following quarterly sampling events:

- June 3 – 8, 2014,
- September 22 – 25, 2014,
- December 9, 2014
- March 10, 2015

2.0 WELL INSTALLATION

As outlined in the Plan, EC^2 installed one additional monitoring well to complete the delineation of the groundwater impacts at the Site. During the period March 24-27, 2014, EC^2 oversaw New Mexico licensed (WD-1188) drilling contractor John Scarborough Drilling, Inc. (Lamesa, Texas) during the drilling and completion of one monitoring well (MW-6) at the Site.

Monitoring well MW-6 was drilled to a depth of 56 feet below ground surface (BGS), terminating approximately 12 feet below groundwater saturation. Drilling activities were conducted using a truck-mounted air rotary drilling rig and the well was installed per the specifications of New Mexico Administrative Code Title 19, Chapter 27. MW-6 was constructed with 2-inch diameter Schedule 40 PVC screen (0.020-inch) and casing. The screen is approximately 20 feet in length. The annulus space between the screens and casings was filled with filter sand pack material (across and 2 feet above the top slot of the screen), a 2-foot minimum bentonite seal was placed above the filter pack, and the remaining annulus was filled to the surface with a cement-bentonite grout. A locking well protector was cemented in-place within a 4-inch thick, 2 foot by 2 foot concrete surface pad. The locations of the Site monitoring wells are shown on attached **Figure 2**. Monitoring well completion records are provided in **Appendix C**.

3.0 QUARTERLY GROUNDWATER MONITORING

This Report describes the findings from four quarterly groundwater sampling events conducted at the Site from June 3, 2014 through March 10, 2015.

3.1 GROUNDWATER MONITORING METHODOLOGY

Prior to collecting groundwater samples during each quarterly event, EC[2] gauged all 6 monitoring wells (MW-1 through MW-6) at the Site using an electronic water level meter to determine the depth-to-water (DTW) within each monitoring well. The locations of these monitoring wells are shown on the attached **Figure 2**. DTWs were measured from the surveyed top-of-casing (TOC) of each well and converted to elevations relative to mean sea level. These data are presented in **Table 1**. Potentiometric surface maps were constructed utilizing these data to illustrate the groundwater flow direction within the shallow groundwater system beneath the Site. Potentiometric surface maps for each of the quarterly events are presented on **Figures 3** through **6**, respectively.

Upon completion of DTW measurement activities, EC[2] field personnel collected groundwater samples from monitoring wells MW-1 through MW-6. Groundwater samples were collected utilizing EPA approved low-flow purging/sampling methodologies. Field parameters consisting of pH, specific conductivity, temperature and dissolved oxygen (DO) were recorded during field activities utilizing an air-tight flow-through cell. Upon the stabilization of field parameters, groundwater samples were collected into laboratory prepared containers, labeled as to source and contents, placed on ice for preservation, placed under chain-of-custody control and shipped via overnight courier to the analytical laboratory (Test America Inc., Nashville, Tennessee). As per the Plan, the groundwater samples collected from monitoring wells MW-1 through MW-6 were analyzed for chloride (EPA Method 300.0) and the groundwater samples collected from monitoring well MW-4 were analyzed for benzene, ethylbenzene, toluene and total xylenes (BTEX) (EPA Method 8260B) during each of the four quarterly events. In addition, the groundwater samples collected from monitoring well MW-2 during the September, December and March quarterly events were also analyzed for BTEX. A summary of the laboratory analytical results for chloride and BTEX analyses is presented in **Table 2**, and complete copies of the laboratory analytical reports and chain-of-custody documentation is proved in **Appendix D**.

Chloride and benzene are the constituents of concern (COC) at the Site. As per the Plan, the laboratory analytical results from these sampling events were screened against the New Mexico

Administrative Code 20.6.2, Standards for Groundwater of 10,000 mg/L TDS Concentration or Less (Limit) for chloride (250 mg/L) and benzene (10 µg/L).

3.2 FIRST QUARTERLY GROUNDWATER SAMPLING RESULTS

The first quarterly groundwater sampling event was conducted at the Site during the period June 3-8, 2014. In addition to the sampling procedures discussed in Section 3.0, monitoring wells MW-1 through MW-6 were developed after liquid level measurements and prior to purging and sampling. These wells were re-developed because they had not been purged/sampled in approximately two years. Development was conducted using an air-lift pump to remove sediments that had accumulated within the well sump.

A potentiometric surface map was constructed utilizing the DTW measurements collected during this sampling event and is presented on **Figure 3**. Groundwater flow during this sampling event was, in general, from the northwest to the southeast.

As can be seen in **Table 2**, the groundwater sample collected from monitoring well MW-2 (357 mg/L) during this sampling event contained a concentration of chloride that exceeds the Limit of 250 mg/L.

The groundwater sample collected from monitoring well MW-4 (34.3 µg/L) during this sampling event contained a concentration of benzene that exceeds the Limit of 10 µg/L.

3.3 SECOND QUARTERLY GROUNDWATER SAMPLING RESULTS

The second quarterly groundwater sampling event was conducted at the Site during the period September 22-25, 2014.

A potentiometric surface map was constructed utilizing the DTW measurements collected during this sampling event and is presented on **Figure 4**. Groundwater flow during this sampling event was, in general, from the northwest to the southeast.

As can be seen in **Table 2**, the groundwater sample collected from monitoring well MW-2 (327 mg/L) during this sampling event contained a concentration of chloride that exceeds the Limit of 250 mg/L.

The groundwater sample collected from monitoring well MW-4 (4.76 µg/L) during this sampling event contained a concentration of benzene that is well below the Limit of 10 µg/L.

3.4 THIRD QUARTERLY GROUNDWATER SAMPLING RESULTS

The third quarterly groundwater sampling event was conducted at the Site on December 9, 2014.

A potentiometric surface map was constructed utilizing the DTW measurements collected during this sampling event and is presented on **Figure 5**. Groundwater flow during this sampling event was, in general, from the northwest to the southeast.

As can be seen in **Table 2**, the groundwater samples collected from monitoring wells MW-2 (319 mg/L) and MW-4 (300 mg/L) contained concentrations of chloride that exceed the Limit of 250 mg/L.

The groundwater sample collected from monitoring well MW-4 (12.1 µg/L) contained a concentration of benzene that slightly exceeds the Limit of 10 µg/L.

3.5 FOURTH QUARTERLY GROUNDWATER SAMPLING RESULTS

The fourth quarterly groundwater sampling event was conducted at the Site on March 10, 2015.

A potentiometric surface map was constructed utilizing the DTW measurements collected during this sampling event and is presented on **Figure 6** Groundwater flow during this sampling event was, in general, from the northeast to the southwest.

As can be seen in **Table 2**, the groundwater sample collected from monitoring well MW-2 (263 mg/L) contained a concentration of chloride that exceeds the Limit of 250 mg/L. **Figure 7** presents an isopleth of the chloride concentrations observed in the groundwater samples collected during this sampling event. As can be seen on this figure, the highest levels of chloride are located in the south central portion of the Site.

Figure 8 presents chloride concentration trend graphs for each of the monitoring wells sampled at the Site. A review of this figure indicates that the levels of chloride observed in the groundwater samples are decreasing in two wells, increasing in two wells, and stable in two wells. The soil remediation activities conducted in the first quarter of 2014 have removed the continuing source of chloride impacts to the groundwater at the Site. Removal of the source will allow the chloride concentrations already present in the Site groundwater to naturally attenuate via the physical attenuation mechanisms of dispersion and dilution.

Benzene was not detected in the groundwater sample collected from monitoring well MW-4 during this sampling event.

Figure 9 presents a benzene concentration trend graph for monitoring well MW-4. A review of this figure indicates that the levels of benzene observed in the groundwater samples collected from this monitoring well have decreased markedly since June 2014.

4.0 CONCLUSIONS

Based upon the data presented herein, the following conclusions are presented:

- Groundwater beneath the Site is encountered at depths ranging from approximately 45 to 48 feet below ground level.

- The direction of groundwater flow at the Site is, in general, from the northwest to the southeast.

- During the reporting period, concentrations of chloride greater than the Limit of 250 mg/L were observed in the groundwater samples collected from monitoring well MW-2 (ranging from 263 mg/L to 357 mg/L) during each of the four groundwater sampling events and in the groundwater samples collected from monitoring well MW-4 (300 mg/L) during the third groundwater sampling event.

- During the reporting period, concentrations of benzene greater than the Limit of 10 µg/L were observed in the groundwater samples collected from monitoring well MW-4 (34.3 µg/L and 12.1 µg/L) during the first and third quarterly groundwater sampling events, respectively.

5.0 RECOMMENDATIONS

Based upon a review of the data presented within this report, the following recommendations have been developed:

- As specified in the Plan, quarterly monitoring of the groundwater within the six monitoring wells at the Site should be continued until the levels of chloride and benzene observed in the groundwater samples fall below the Limits of 250 mg/L and 10 µg/L, respectively, for eight quarters. The next groundwater monitoring event at the Site is scheduled to be conducted in June 2015.

TABLES

Table 1 : Summary of Liquid Level Measurements
Chesapeake Energy Corporation Inc., State L-2 Tank Battery (AP-73)
Lea County, New Mexico

Monitoring Well	Top of Casing Elevation (AMSL-Feet)	Depth to Liquid Measurement Date	Depth to LNAPL (Feet-TOC)	Depth to Groundwater (Feet-TOC)	LNAPL Thickness (Feet)	Groundwater Elevation (AMSL-Feet)
MW-1	3895.34	06/03/14	--	47.58	--	3847.76
	3895.34	09/22/14	--	47.66	--	3847.68
	3895.34	12/09/14	--	46.84	--	3848.50
	3895.34	03/10/15	--	47.27	--	3848.07
MW-2	3893.79	06/03/14	--	47.71	--	3846.08
	3893.79	09/22/14	--	47.82	--	3845.97
	3893.79	12/09/14	--	47.17	--	3846.62
	3893.79	03/10/15	--	47.42	--	3846.37
MW-3	3891.87	06/03/14	--	46.67	--	3845.20
	3891.87	09/22/14	--	46.78	--	3845.09
	3891.87	12/09/14	--	46.16	--	3845.71
	3891.87	03/10/15	--	46.44	--	3845.43
MW-4	3894.08	06/03/14	--	47.56	--	3846.52
	3894.08	09/22/14	--	47.65	--	3846.43
	3894.08	12/09/14	--	46.96	--	3847.12
	3894.08	03/10/15	--	47.32	--	3846.76
MW-5	3892.08	06/03/14	--	47.45	--	3844.63
	3892.08	09/22/14	--	46.56	--	3845.52
	3892.08	12/09/14	--	45.89	--	3846.19
	3892.08	03/10/15	--	46.27	--	3845.81
MW-6	3892.09	06/03/14	--	47.43	--	3844.66
	3892.09	09/22/14	--	46.54	--	3845.55
	3892.09	12/09/14	--	45.92	--	3846.17
	3892.09	03/10/15	--	46.24	--	3845.85

Notes:

1. TOC : Measured from top of casing.
2. LNAPL : Light non aqueous phase liquid.
3. -- : Denotes Not Measured.
4. AMSL : Denotes above mean sea level (AMSL)

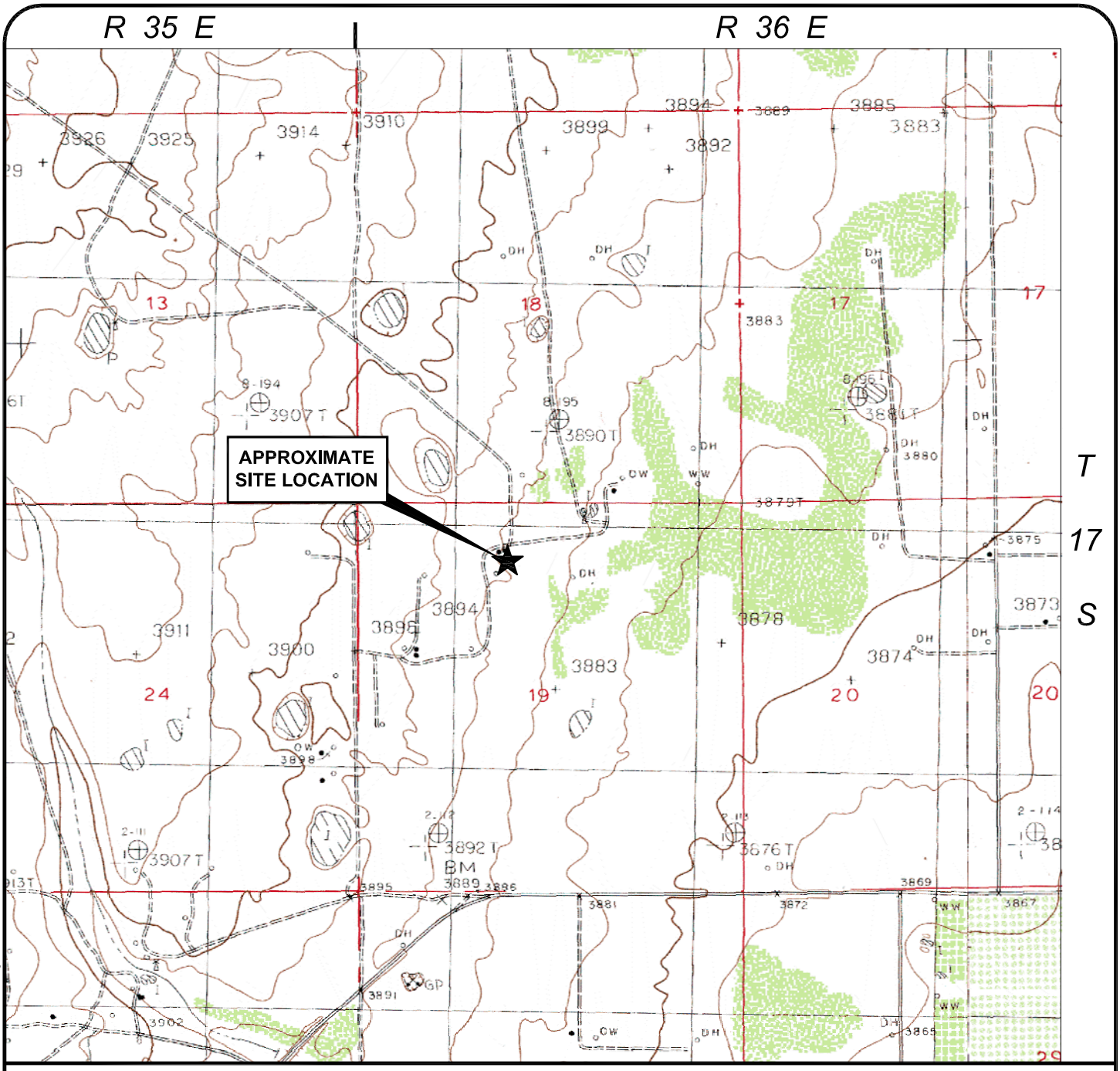
Table 2 : Summary of Laboratory Analytical Results for Groundwater Samples
Chesapeake Energy Corporation, State L-2 Tank Battery (AP-73)
Lea County, New Mexico

Sample ID	Analyte:	Benzene	Toluene	Ethylbenzene	Xylenes	Chloride
	Cleanup Level:	5	1,000	700	10,000	250
	Units:	µg/L	µg/L	µg/L	µg/L	mg/L
MW-1	5-Jun-14	---	---	---	---	26.8
	22-Sep-14	---	---	---	---	25.4
	9-Dec-14	---	---	---	---	27.7
	10-Mar-15	---	---	---	---	23.2
MW-2	5-Jun-14	---	---	---	---	**357**
	24-Sep-14	<1.00	---	---	---	**327**
	9-Dec-14	<0.500	<0.500	<0.500	<1.50	**319**
	10-Mar-15	<0.500	---	---	---	**263**
DUP	10-Mar-15	<0.500	---	---	---	**264**
MW-3	5-Jun-14	---	---	---	---	85.8
	25-Sep-14	---	---	---	---	86.5
	9-Dec-14	---	---	---	---	86.0
	10-Mar-15	---	---	---	---	79.5
MW-4	5-Jun-14	**34.3**	---	---	---	192
Dup	5-Jun-14	**33.5**	---	---	---	192
	24-Sep-14	4.76	---	---	---	239
Dup	24-Sep-14	4.83	---	---	---	239
	9-Dec-14	**12.1**	<0.500	<0.500	<1.50	**300**
Dup	9-Dec-14	**11.3**	<0.500	<0.500	<1.50	**299**
	10-Mar-15	<0.500	---	---	---	238
MW-5	5-Jun-14	---	---	---	---	129
	22-Sep-14	---	---	---	---	114
	9-Dec-14	---	---	---	---	129
	10-Mar-15	---	---	---	---	102
MW-6	5-Jun-14	---	---	---	---	133
	24-Sep-14	---	---	---	---	167
	9-Dec-14	---	---	---	---	149
	10-Mar-15	---	---	---	---	160
EQ Blank	5-Jun-14	<1.00	---	---	---	<1.00
	24-Sep-14	<1.00	---	---	---	<1.00
	9-Dec-14	<0.500	<0.500	<0.500	<1.50	<1.00
	10-Mar-15	<0.500	---	---	---	<1.00

Notes:

1. µg/L: micrograms per liter.
2. mg/L: milligrams per liter.
3. <: Analyte not detected at the laboratory reporting limit.
4. All analyses performed by TestAmerica Laboratories in Nashville, Tennessee.
5. Cells shaded in blue indicate results that are above the laboratory reporting limit.
6. Cells with text **bolded** indicate results that exceed the New Mexico Administrative Code 20.6.2, Standards for Groundwater, for chloride of 250 mg/L or the MCL for benzene of 5 µg/L.

FIGURES



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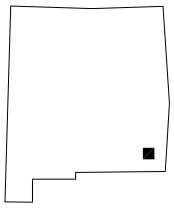
LOVINGTON SE, NEW MEXICO - PROVISIONAL EDITION 1985

NEW MEXICO



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CLIENT CHESAPEAKE ENERGY CORPORATION OKLAHOMA CITY, OKLAHOMA	FIGURE TITLE ***SITE LOCATION AND TOPOGRAPHIC FEATURES***
LOCATION STATE L-2 TANK BATTERY (AP-73) SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO	DOCUMENT TITLE FIRST ANNUAL GROUNDWATER MONITORING REPORT

ENVIRO CLEAN SERVICES, LLC

Enviro Clean Services, LLC
7060 South Yale Ave, Suite 603
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918.794.7828
www.EnviroCleanPS.com

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LEGEND

MW-5 LOCATION OF MONITORING WELL

GRAVEL ROADWAY

PIPELINE

N

30 0 30 60

SCALE FEET

SOURCES:

1) AERIAL DATED 3/2/2012 - GOOGLE EARTH PRO SCREEN CAPTURE

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DOCUMENT TITLE: FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: ***SITE BASE MAP***

CLIENT: CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

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DRAWN BY	SKG	DATE	6/5/2015

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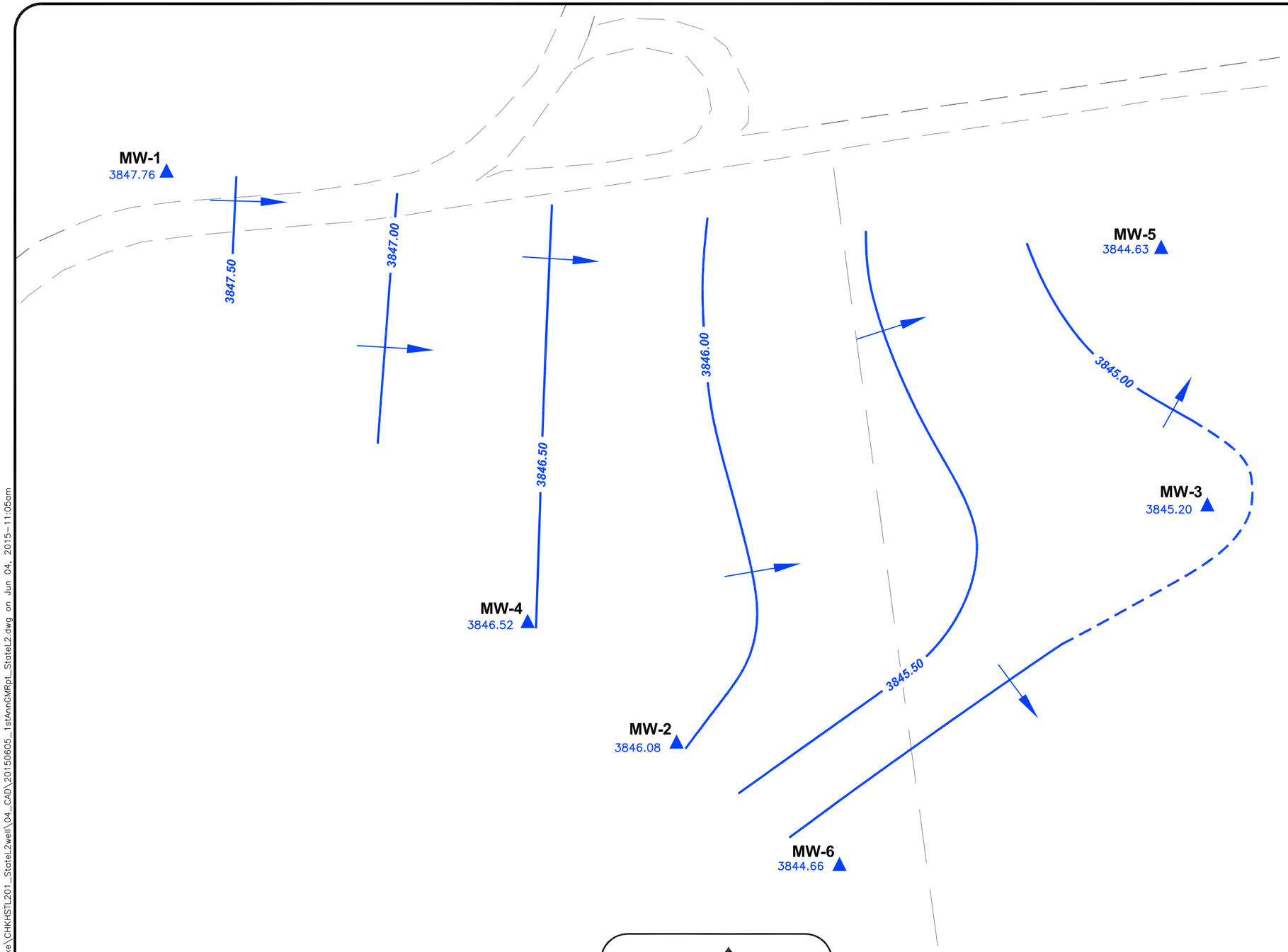

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DOCUMENT TITLE
FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE
GROUNDWATER POTENTIOMETRIC SURFACE, JUNE 3, 2014

CLIENT
CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION
STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

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PROJECT NUMBER	FIGURE NUMBER
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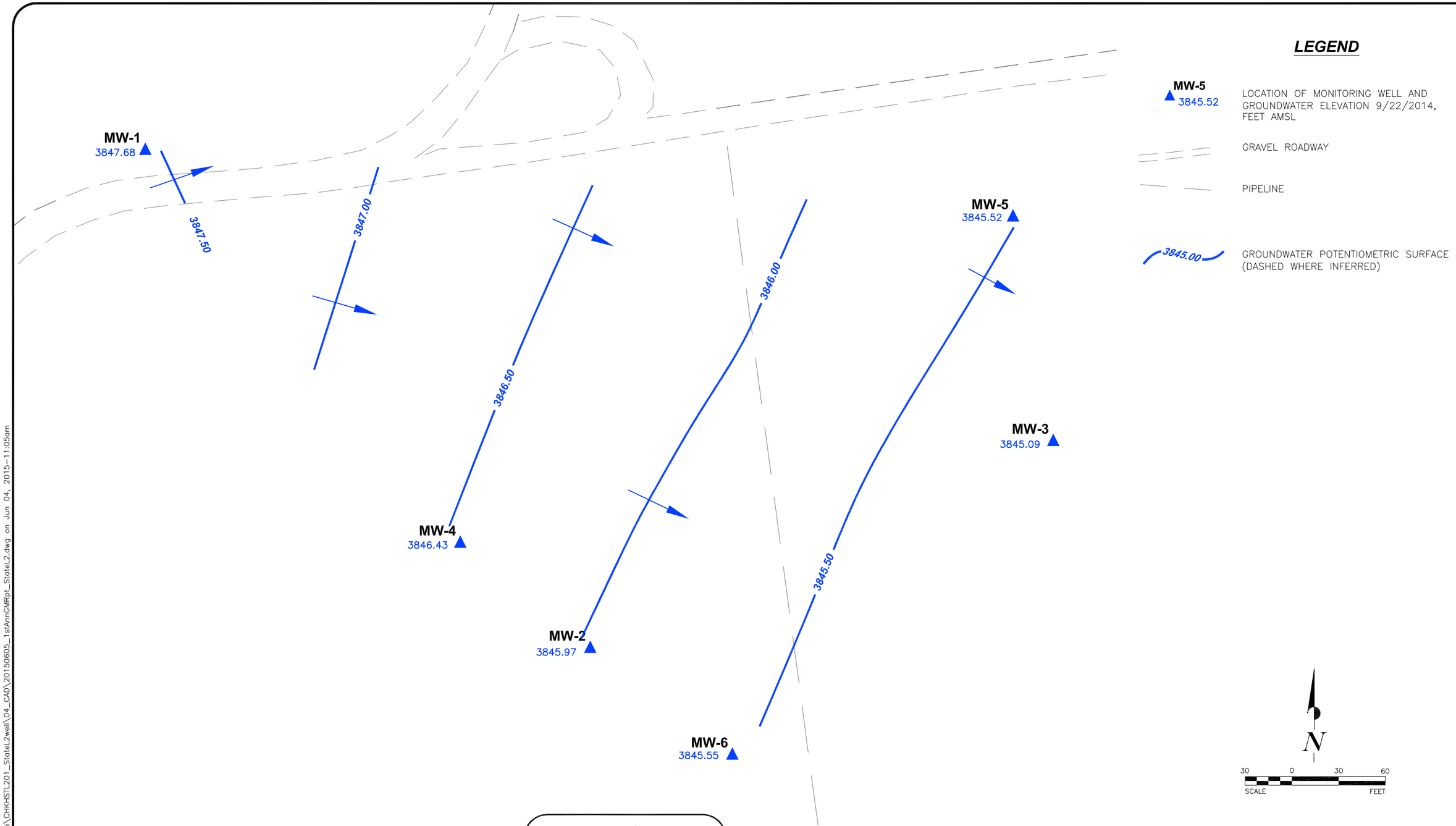

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DOCUMENT TITLE
FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE
GROUNDWATER POTENTIOMETRIC SURFACE, SEPTEMBER 22, 2014

CLIENT
CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION
STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

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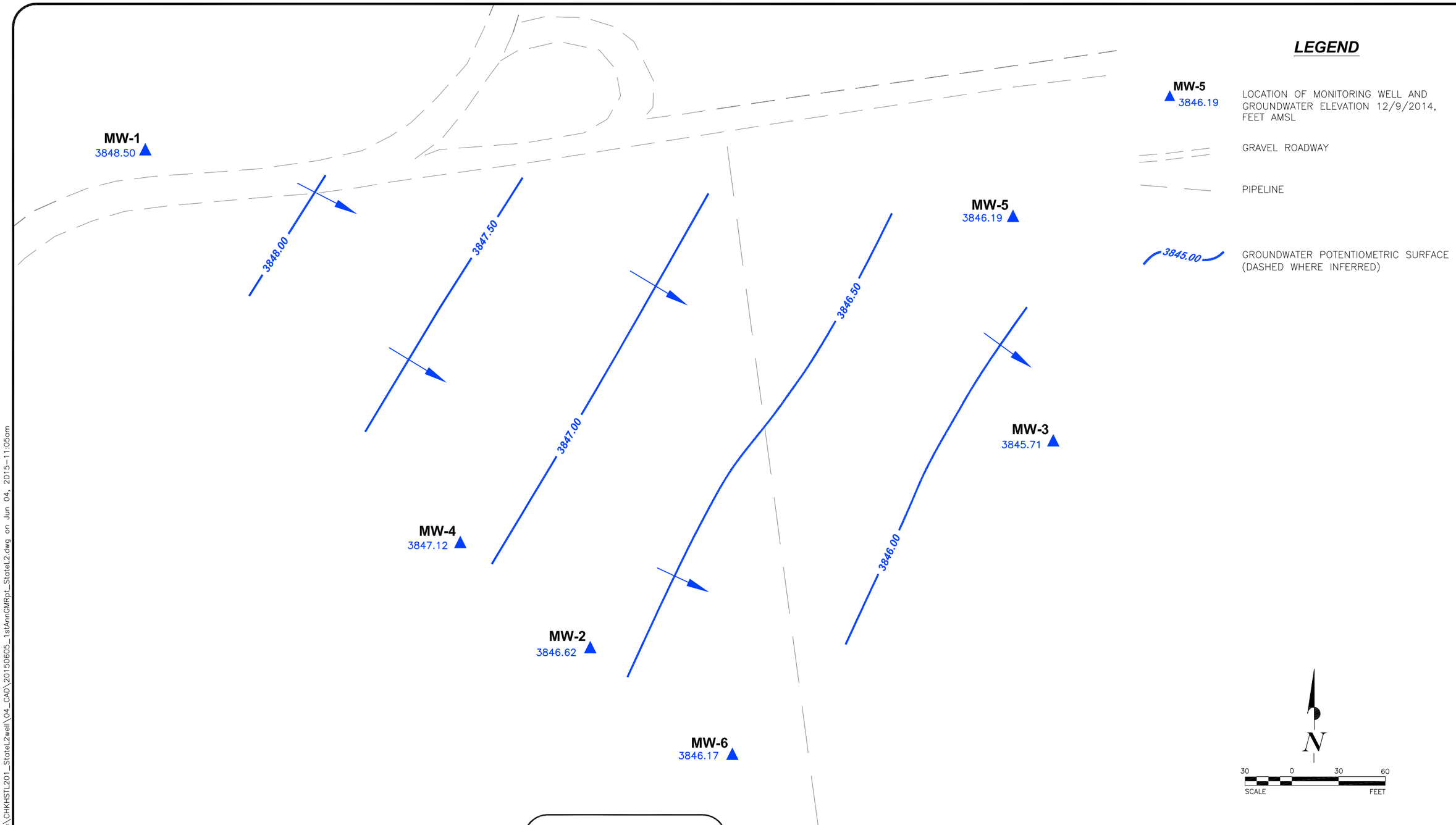

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DOCUMENT TITLE
FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE
GROUNDWATER POTENTIOMETRIC SURFACE, DECEMBER 9, 2014

CLIENT
CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION
STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

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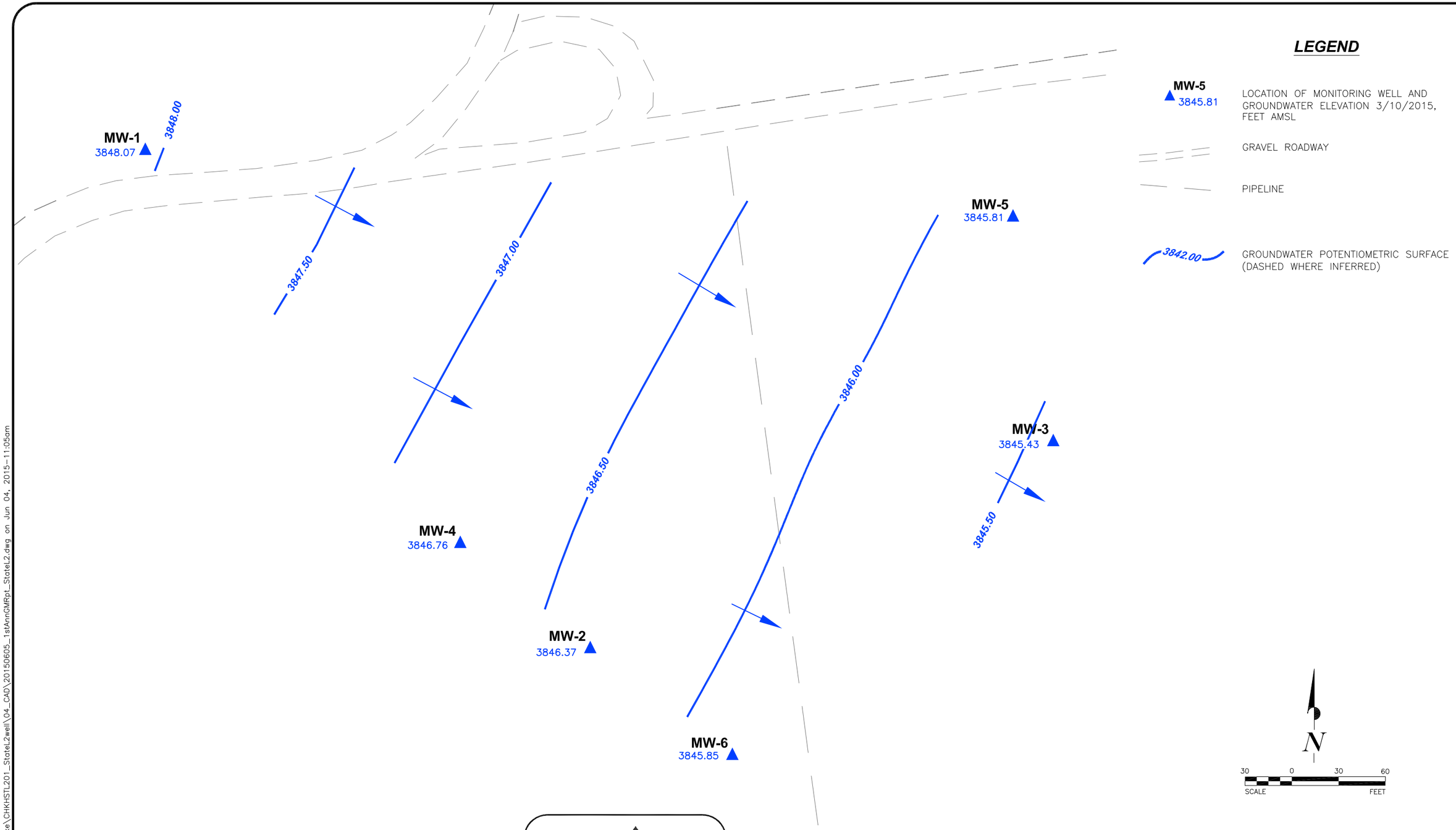

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DOCUMENT TITLE
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FIGURE TITLE
GROUNDWATER POTENTIOMETRIC SURFACE, MARCH 10, 2015

CLIENT
CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION
STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

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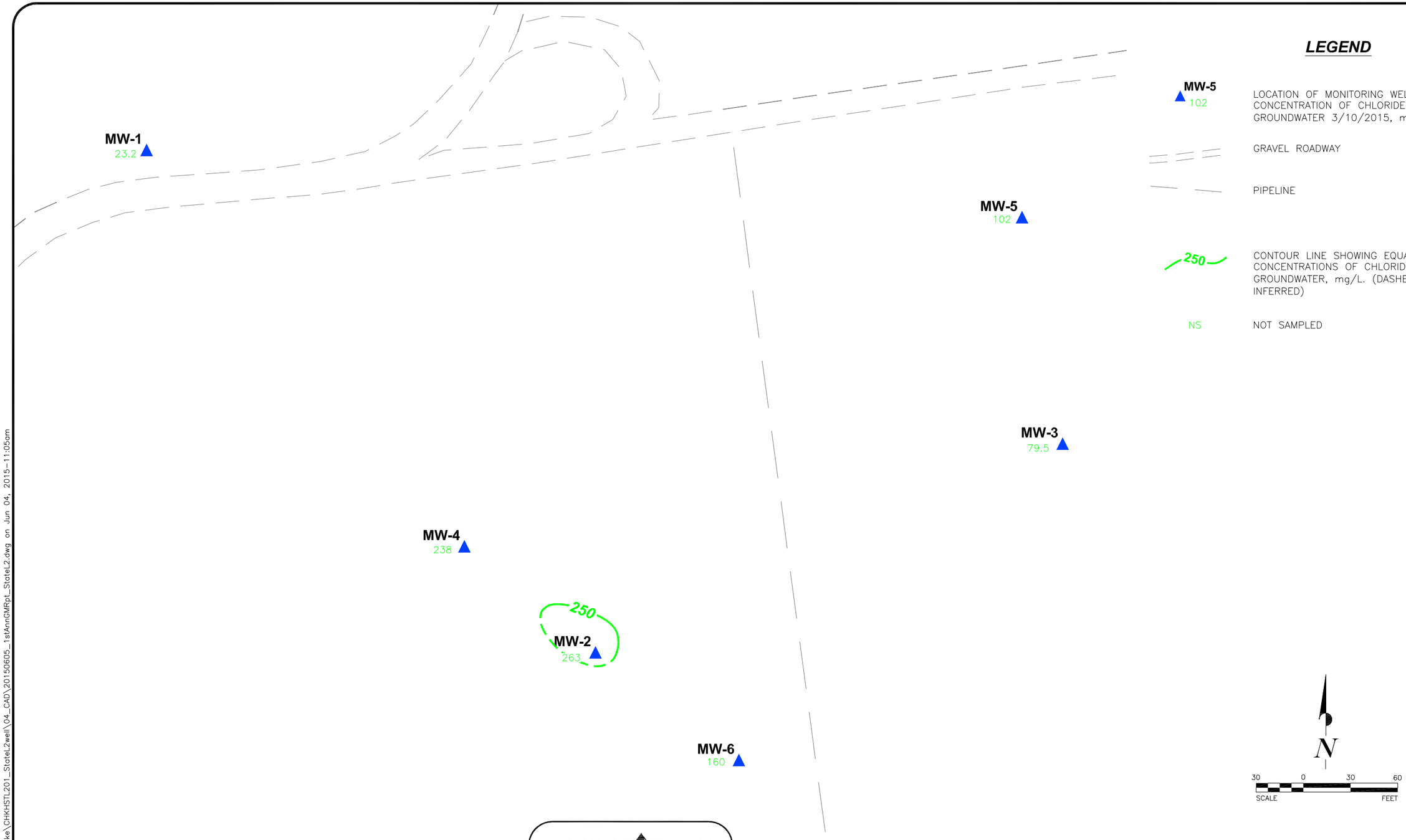
DRAWN BY	SKG	DATE	6/5/2015

PROJECT NUMBER	FIGURE NUMBER
CHKHSTL201	6



LEGEND

- MW-5 / 102 — LOCATION OF MONITORING WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER 3/10/2015, mg/L
- GRAVEL ROADWAY
- PIPELINE
- 250 — CONTOUR LINE SHOWING EQUAL CONCENTRATIONS OF CHLORIDE IN GROUNDWATER, mg/L. (DASHED WHERE INFERRED)
- NS — NOT SAMPLED

ENVIRO CLEAN SERVICES, LLC

Enviro Clean Services, LLC

7060 South Yale Avenue, Suite 603
Tulsa, Oklahoma 74136
918.794.7828
www.EnviroCleanPS.com

DOCUMENT TITLE: FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE: ***ISOPLETH OF CHLORIDE CONCENTRATIONS IN GROUNDWATER, MARCH 20, 2015***

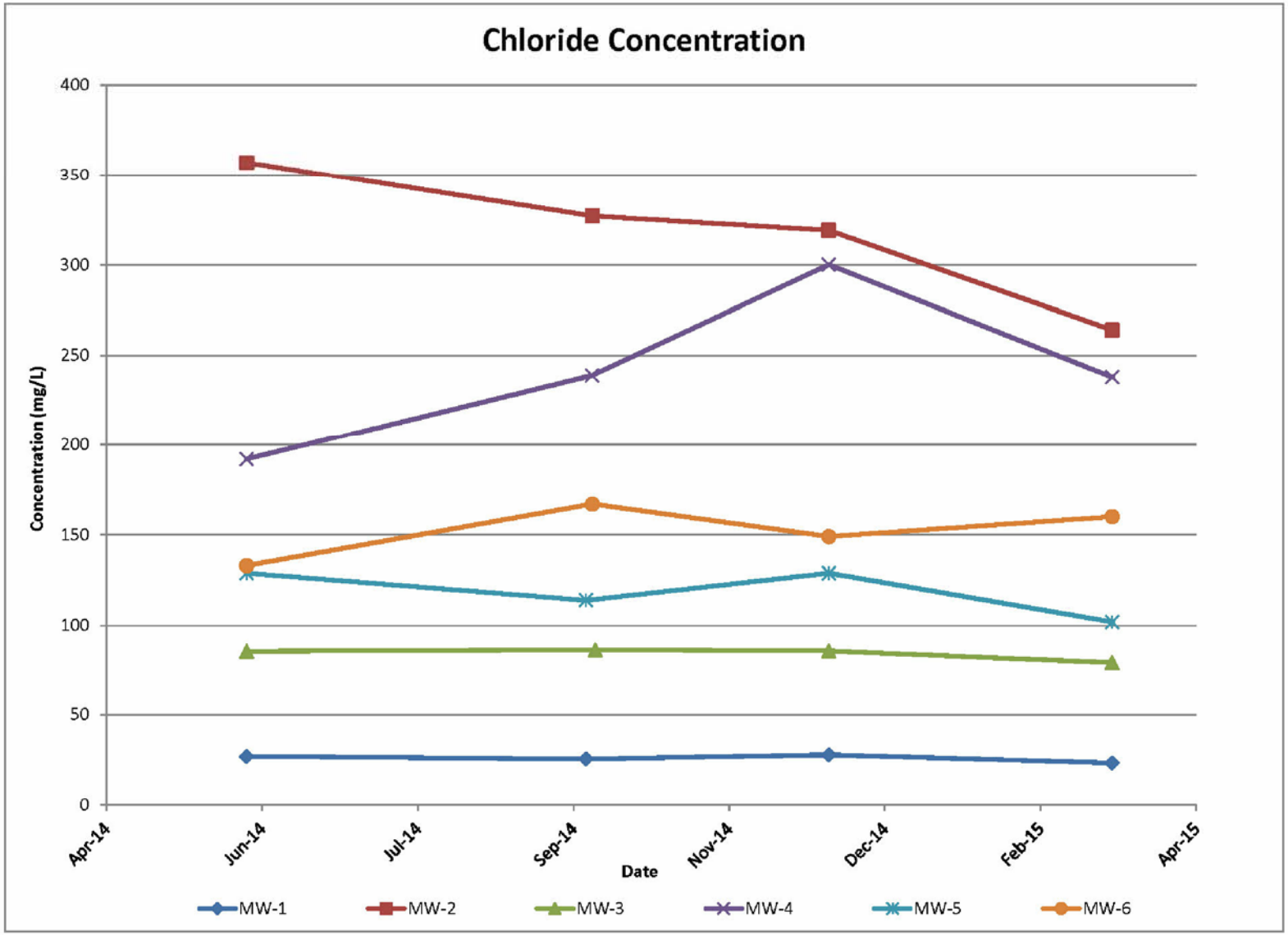
CLIENT: CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION: STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	BEM		
APPROVED BY	BEM	SCALE	1"=60'
DRAWN BY	SKG	DATE	6/5/2015

PROJECT NUMBER	FIGURE NUMBER
CHKHSTL201	7

Y:\Projects\Chesapeake\CHKHSTL201_StateL2well\04_CAD\20150605_1stAnnGMRpt_StateL2.dwg on Jun 04, 2015-11:05am



ENVIRO CLEAN SERVICES, LLC

Enviro Clean Services, LLC

7060 South Yale Avenue, Suite 603
Tulsa, Oklahoma 74136
918.794.7828

www.EnviroCleanPS.com

DOCUMENT TITLE
FIRST ANNUAL GROUNDWATER MONITORING REPORT

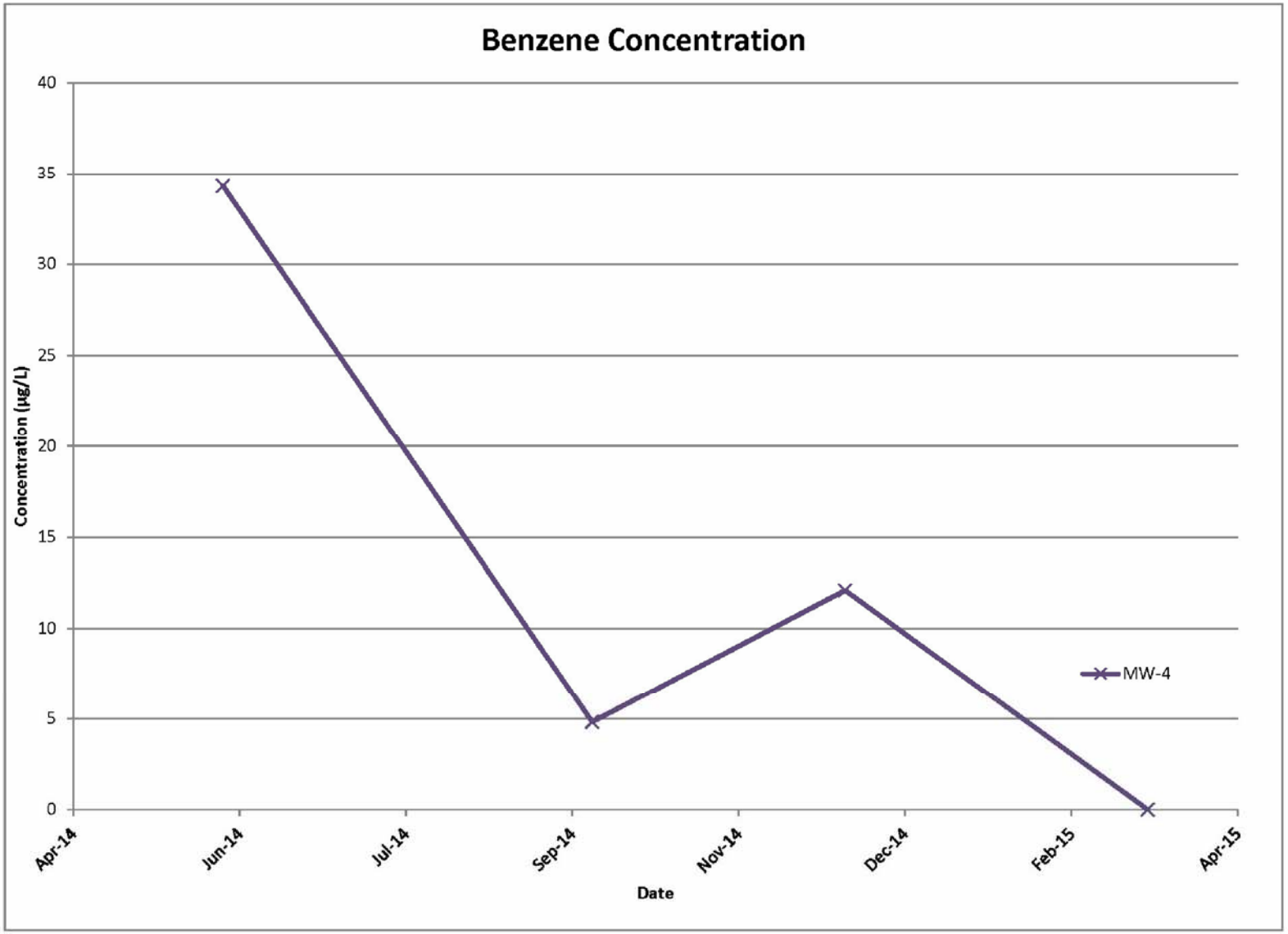
FIGURE TITLE
CHLORIDE CONCENTRATION TREND GRAPHS

CLIENT
CHESAPEAKE ENERGY CORPORATIN
OKLAHOMA CITY, OKLAHOMA

LOCATION
STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	CNA		
APPROVED BY	BEM	SCALE	NTS
DRAWN BY	SKG	DATE	6/5/2015

PROJECT NUMBER	FIGURE NUMBER
CHKHSTL201	8



ENVIRO CLEAN SERVICES, LLC

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7060 South Yale Avenue, Suite 603
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918.794.7828

www.EnviroCleanPS.com

DOCUMENT TITLE
FIRST ANNUAL GROUNDWATER MONITORING REPORT

FIGURE TITLE
MW-4 BENZENE CONCENTRATION TREND GRAPH

CLIENT CHESAPEAKE ENERGY CORPORATION
OKLAHOMA CITY, OKLAHOMA

LOCATION STATE L-2 TANK BATTERY (AP-73)
SEC. 19, T17S, R36E, LEA COUNTY, NEW MEXICO

DESIGNED BY	CNA		
APPROVED BY	BEM	SCALE	NTS
DRAWN BY	SKG	DATE	6/5/2015

PROJECT NUMBER	FIGURE NUMBER
CHKHSTL201	9

APPENDICES

APPENDIX A

STAGE 2 ABATEMENT PLAN

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS U.S., Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401
www.arcadis-us.com

ENVIRONMENT

Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Subject:
State M-1 AP-072
Stage 2 Abatement Plan

Date:
March 27, 2012

Dear Mr. Von Gonten:

On behalf of Chesapeake Energy Corporation, ARCCADIS U.S. Inc. respectfully submits the enclosed Stage 2 Abatement plan for the State M-1 site (AP-072). A Stage 1 Abatement Plan Report was submitted on March 20, 2012. Your review and approval of this Abatement Plan will be appreciated. The landowner, Darr Angell, is anxious for us to complete soil remediation at this site.

If you have any questions please do not hesitate to contact Bradley Blevins at (575) 391-1462 or via e-mail at bblevins@chkenergy or me at (432) 687-5400, e-mail address shall@aracdis-us.com.

Contact:
Sharon Hall

Phone:
432 687-5400

Email:
shall@aracdis-us.com

Our ref:
MT001088

ARCADIS U.S., Inc.
TX Engineering License # F-533

Sincerely,

ARCADIS U.S., Inc.

Sharon E. Hall

Sharon E. Hall
Associate Vice President

Copies:
Bradley Blevins- Chesapeake, Hobbs

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Chesapeake Energy Corporation

State M-1 AP-072
Stage 2 Abatement
Plan Proposal

Hobbs, New Mexico

March 27, 2012

ARCADIS

Sharon Hall
Associate Vice President

State M-1 AP-072

Stage 2 Abatement
Plan Proposal

Prepared for:
Chesapeake Energy
Corporation
Hobbs, New Mexico

Prepared by:
ARCADIS U.S., Inc.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401

Our Ref.:
MT001088.0001.00001

Date:
March 27, 2012

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Table of Contents

Figures

Appendices

ARCADIS

1. INTRODUCTION

The subject site is a former tank battery site located east of Buckeye, New Mexico. The site was purchased by Chesapeake Energy Corporation (Chesapeake) in April 2004. Chesapeake did not operate the tank battery or the associated well field and began the process of facility abandonment in 2007.

Seven monitor wells and nine soil borings have been drilled at the site. Elevated chloride concentrations and limited hydrocarbon compounds were detected in soil samples collected from soil borings and monitoring wells. Elevated chlorides were detected in the down gradient monitor wells and light non-aqueous phase liquid (LNAPL) occurs in monitoring well MW-1. LNAPL recovery activities have been piloted at the site and will commence again upon completion of surface reclamation activities.

2. SUMMARY OF STAGE 1 ABATEMENT ACTIVITIES

Initial site investigation activities were conducted in May of 2007 following abandonment of the tank battery. Stage 1 Abatement activities were conducted during the period of May 2007 through September 2011. Stage 1 Abatement activities included drilling and soil sampling of nine boreholes, drilling and sampling of seven monitor wells, EM 31 and EM 34 surveys, conversion of one monitoring well into a recovery well and recovery of phase-separated hydrocarbons from the recovery well.

New Mexico Oil Conservation Division (NMOCD) was notified of impacts to groundwater at the site via e-mail on May 30, 2007. NMOCD notified Chesapeake in a letter dated June 19, 2007 that a Stage 1 Abatement Plan was required for the site in accordance with Rule 19.

The Stage 1 Abatement Plan was submitted to NMOCD on August 22, 2007. The plan summarized site activities taken to date. The plan proposed the drilling and sampling of a minimum of three additional soil borings and installation and sampling of nine groundwater monitoring wells.

BBC contacted NMOCD via email on April 24, 2010 to inquire about the status of the Stage 1 Abatement Plan approval and Chesapeake's desire to conduct the proposed Stage 1 Abatement Plan activities. On May 27, 2010, NMOCD responded via email that the State was not staffed to review the Abatement Plans (APs) in a timely manner. On June 23, 2010, BBC contacted NMOCD via email to request a waiver of the Public Notice requirement and inform NMOCD that Chesapeake and the landowner were

anxious to move forward with the proposed AP activities. NMOCD replied via email on June 23, 2010 stating they were still understaffed to review the AP and could not waive the Public Notice requirement. They advised BBC that Chesapeake could proceed "at risk." On July 12, 2010 BBC informed NMOCD by registered letter that Chesapeake was planning to start the Stage 1 Assessment on or about August 23, 2010. They further informed NMOCD they would be submitting the required Public Notices, a copy of which was attached to the letter. NMOCD did not respond to the registered letter.

The public notices were published in the Hobbs News-Sun and Lovington Leader on July 22, 2010 and the Albuquerque Journal on July 24, 2010. No comments were received from the public or NMOCD during the 30-day comment period and Chesapeake proceeded with the proposed Stage 1 Abatement Plan activities on August 26, 2010. Copies of correspondence and Public Notice are included in Appendix A.

A detailed description of site activities and results can be found in the report submitted to NMOCD dated March 20, 2012 entitled State M-1 AP-072, Stage 1 Abatement Report (Site Assessment Investigation). Analytical results for soil and groundwater sampling are summarized on Figure 1.

3. STAGE 2 ABATEMENT PLAN PROPOSAL

After review of various remedial options, we propose the following Stage 2 Abatement Plan. The plan addresses soil and groundwater remediation.

3.1 Soil Remediation

The selected remedial option will be the excavation of near-surface soils and installation of clay liners. The anticipated extent and depth of excavation is based on assessment activities (laboratory analysis and visual observation) and is shown in Figure 2. Near surface soils (to a depth of 5 feet below ground surface) with chloride concentrations in excess of 1,000 milligrams per kilogram (mg/kg) and a Total Petroleum Hydrocarbons (TPH) concentration in excess of 1,000 mg/kg will be excavated and disposed. Excavated soils will be disposed at Lea Land Landfill.

Areas where chloride or TPH concentrations are expected to exceed 1,000 mg/kg at depths greater than 5 feet below ground surface soils will be excavated to a depth of 5

feet below ground surface. Soils will be screened in the field for chlorides using chloride field test kits and for TPH using a photoionization. Critical samples (samples used to delineate the excavations) will be submitted for laboratory analysis of chlorides and/or TPH. Following excavation, a 12-inch compacted clay layer that meets or exceeds a permeability of equal to or less than 1×10^{-8} centimeters per second will be installed in the excavations. The lined excavations will be backfilled with four feet of locally obtained native soil. All of the excavated areas will be re-seeded with native vegetation. Areas that are supporting vegetation will not be disturbed.

Use of the USEPA Multi-Med model demonstrates that the clay liners will mitigate the leaching of chlorides to groundwater. The model predicts that after 7000 years of infiltration through the liner the maximum concentration of chlorides in groundwater will be 221.8 milligrams per liter (mg/L). The Multi-Med inputs and outputs are included in Appendix A.

3.2 Groundwater Remediation and Monitoring

One additional groundwater monitoring well will be installed downgradient of the site. The monitoring well will be designated MW-8.

Groundwater samples will be collected from all of the monitoring wells and analyzed for chlorides using USEPA method 9056 for each of four quarters. Based on sample results for one year (four quarters), sampling frequency will be reviewed and may be revised.

Sampling will be discontinued when eight quarters of sample results indicate chloride concentrations are below New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 2 standards. Sample results will be submitted to the NMOCD annually on June 15.

Following removal of LNAPL from MW-1, groundwater samples will be collected from MW-1 and analyzed for benzene, toluene ethylbenzene and xylenes (BTEX) using USEPA method 8260B for each of four quarters. Based on sample results for one year (four quarters), sampling frequency will be reviewed and may be revised.

Sampling of MW-1 for BTEX will be discontinued when eight quarters of sample results indicate BTEX concentrations are below New Mexico Water Quality Control Commission, Title 20, Chapter 6, Part 2 standards. Sample results will be submitted to

the NMOCD annually on June 15. Proposed groundwater remediation is presented in Sections 3.2.1 and 3.2.2.

3.2.1 Chlorides

Chloride concentrations in groundwater exceed New Mexico Water Quality Control Commission standards in two wells (MW-1 411mg/L and MW-4 472mg/L).

Removal of near-surface soils that are a potential source of chlorides and BTEX in groundwater and lining of excavations with chloride and TPH concentrations in excess of 1,000 mg/kg will mitigate leaching of chlorides to groundwater. Considering the relatively low concentrations of chlorides in groundwater and the fact that soil removal and clay liner infiltration barrier installation will be conducted at this site, we propose monitoring the site for a period of two years before considering pumping of groundwater at this site. With the proposed source removal and mitigation and the severe drought conditions being experienced in this area, we believe it prudent to evaluate if chloride mass removal by pumping is warranted at this site.

3.2.2 Hydrocarbons

A pilot LNAPL recovery test will take place over a three week period and will be used to develop long-term recovery procedures. LNAPL will be recovered from MW-1 and disposed in a NMOCD approved facility. Additionally, two soil vent borings equipped with wind turbines will be installed in the area near MW-1.

4. PUBLIC NOTIFICATION

Written notification of submittal of the Stage 2 Abatement Plan Proposal and site activities will be sent to all surface owners of record within a one-mile radius of the site. NMOCD will be supplied with a list of parties to be notified. Publication of notice of activities will be published in a state-wide circulated newspaper, the Albuquerque Journal, and two county newspapers, the Hobbs-Daily News Sun and the Lovington Leader.

5. REMEDIATION WORK SCHEDULE

Soil remediation activities are expected to be completed in 15 working days (Monday through Friday). Groundwater remediation activities will be ongoing. An estimated completion date for groundwater remediation is not available.

6. REFERENCES

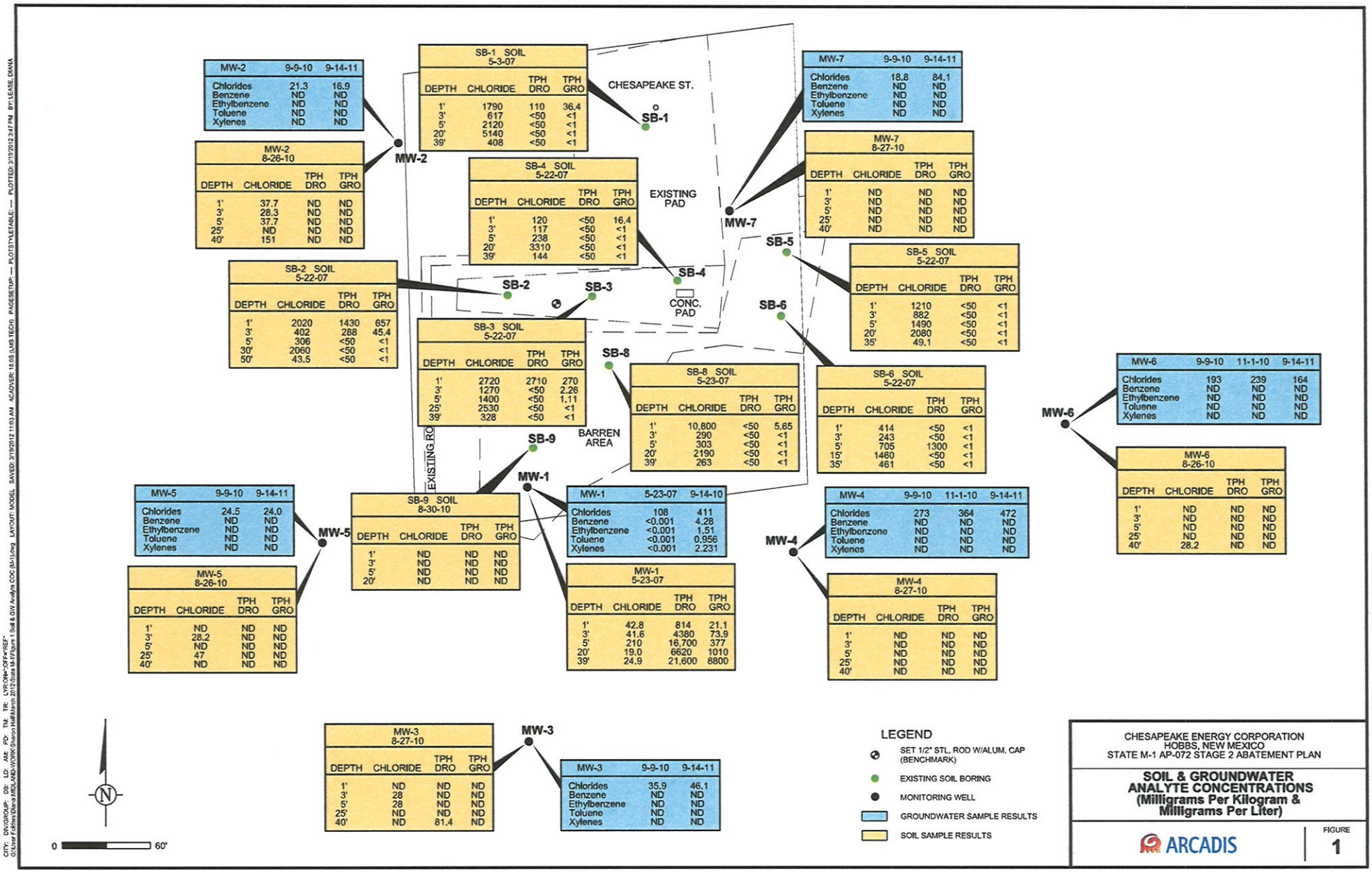
Groundwater Handbook; United States Environmental Protection Agency, Office of Research and Development, Center for Environmental Research Information; 1992

New Mexico Water Quality Control Commission, Title 20 Chapter 6, Part 2, Subpart I

State M-1 AP-072 Stage 1 Abatement Report (Site Assessment Investigation); ARCADIS; March 2012

State M-1Salt Water Disposal Tank Battery, Stage 1 Abatement Plan (Ap-072), BBC International; August 2007

New Mexico Water Quality Control Commission, Title 20 Chapter 6, Part 2, Subpart I



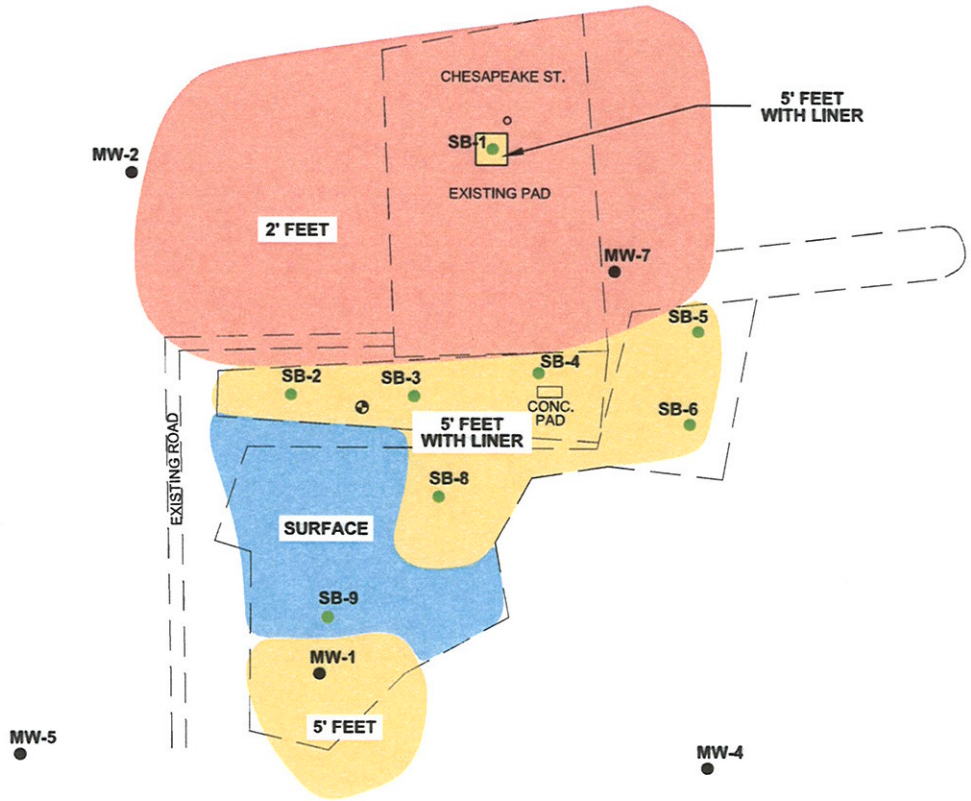
CHESAPEAKE ENERGY CORPORATION
HOBBS, NEW MEXICO
STATE M-1 AP-072 STAGE 2 ABATEMENT PLAN

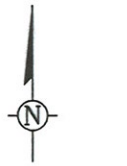
SOIL & GROUNDWATER ANALYTE CONCENTRATIONS (Milligrams Per Kilogram & Milligrams Per Liter)

ARCADIS

FIGURE 1

CITY: DIVISION/GROUP: DB: LD: MK: PD: TM: LYR:ON=*;OFF=*REF*
G:\User Folders\Diana.MIDLAND-WORK\Shannon Hall\March 2012\State M-1\Figure 1 Soil & GW Analyte COC (M-1).dwg LAYOUT: MODEL SAVED: 3/19/2012 11:03 AM ACADVER: 18.0S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: — PLOTTED: 3/19/2012 3:47 PM BY: LEASE, DIANA





LEGEND

- SET 1/2" STL. ROD W/ALUM. CAP (BENCHMARK)
- EXISTING SOIL BORING
- MONITORING WELL
- SURFACE
- 2' FEET
- 5' FEET

CHESAPEAKE ENERGY CORPORATION
HOBBS, NEW MEXICO
STATE M-1 AP-072 STAGE 2 ABATEMENT PLAN

PROPOSED EXCAVATION MAP

ARCADIS

FIGURE 2

OTT=; DWGROUP=; DD=; LD=; AM=; PD=; TM=; TR=; LYRON=*OFF*;REF*
G:\Jobs\Chesapeake\MIDLAND\WORK\Sharon Hall\March 2012\Stage M-1\Figure 2 Prop Excav (M-1).dwg LAYOUT: MODEL SAVED: 3/19/2012 3:52 PM ACADVER: 18.0S (LMS TECH) PAGESETUP=; PLOTSTYLETABLE=; PLOTTED: 3/20/2012 12:52 PM BY: LEASE DANA

ARCADIS

Appendix A

Multi-Med Model Inputs and Outputs

Chesapeake State M-1
Chesapeake Energy Corporation
Buckeye, Lea County, New Mexico
Multimed Model Input and Output (With Liner)

MODEL INPUT AND OUTPUT						MODEL RANGE	
INPUT PARAMETERS						Minimum	Maximum
Unsaturated Zone Flow Parameters							
Depth of Unsaturated Zone	m	45	feet	13.7	m	0.000000001	None
Hydraulic Conductivity	cm/hr	2	ft/day	2.54	cm/hr	0.00000000001	10,000
Unsaturated Zone Porosity	fraction	0.05	fraction	0.05	fraction	0.000000001	0.99
Residual Water Content	fraction	0.01	fraction	0.010	fraction	0.000000001	1
Unsaturated Zone Transport Parameters							
Thickness of Layer	m	45	feet	13.7	m	0.000000001	None
Percent of Organic Matter	%	2.6	%	2.6	%	0	100
Bulk Density	g/cm^3	1.35	g/cm^3	1.35	g/cm^3	0.01	5
Biological Decay Coefficient	1/yr	0	1/yr	0	1/yr	0	None
Aquifer Parameters							
Aquifer Porosity	fraction	0.25	fraction	0.25	fraction	0.000000001	0.99
Bulk Density	g/cm^3	1.35	g/cm^3	1.35	g/cm^3	0.01	5
Aquifer Thickness	m	50	ft	15.24	m	0.000000001	100,000
Hydraulic Conductivity	m/yr	2	ft/day	223	m/yr	0.0000001	100,000,000
Hydraulic Gradient	m/m	0.007	m/m	0.007	m/m	0.00000001	None
Organic Carbon Content	fraction	0.00315	fraction	0.00315	fraction	0.000001	1
Temperature of Aquifer	°C	14.4	°C	14.4	°C	0.00000001	None
pH		6.2		6.2		0.3	14
x-distance Radial Distance from Site to Receptor	m	1	m	1	m	1	None
Source Parameters							
Infiltration Rate from the Facility	m/yr	0.124	in/yr	0.00315	m/yr	0.0000000001	10,000,000,000
Area of Waste Disposal Unit	m^2	46,800	ft^2	4348	m^2	0.01	None
Length Scale of Facility	m	240	feet	73.2	m	0.000000001	10,000,000,000
Width Scale of Facility	m	195	feet	59.4	m	0.000000001	10,000,000,000
Recharge Rate into the Plume	m/yr	16.71	in/yr	0.4244	m/yr	0	10,000,000,000
Duration of Pulse	yr	8,000	yr	8000	yr	0.000000001	None
Initial Concentration at Landfill	mg/L	6,000	mg/L	6,000	mg/L	0	None
Additional Parameters							
Method				Gaussian		Gaussian	Patch
Name of Chemical Specified				Chloride			

MODEL OUTPUT			
Final Concentration at Landfill	mg/L	221.8	mg/L

MODEL OUTPUT				
Concentration at Landfill	0.0 mg/L	Time	1	yr
	0.0 mg/L		10	yr
	0.0 mg/L		20	yr
	18.9 mg/L		50	yr
	36.6 mg/L		70	yr
	45.4 mg/L		80	yr
	61.8 mg/L		100	yr
	123.4 mg/L		200	yr
	154.1 mg/L		300	yr
	166.3 mg/L		400	yr
	178.5 mg/L		500	yr
	190.7 mg/L		600	yr
	204.8 mg/L		800	yr
	211.1 mg/L		1,000	yr
	220.4 mg/L		2,000	yr
	221.6 mg/L		3,000	yr
	221.8 mg/L		4,000	yr
	221.8 mg/L		5,000	yr
	221.8 mg/L		6,000	yr
	221.8 mg/L		7,000	yr

Chesapeake State M-1
Chesapeake Energy Corporation
Buckeye, Lea County, New Mexico

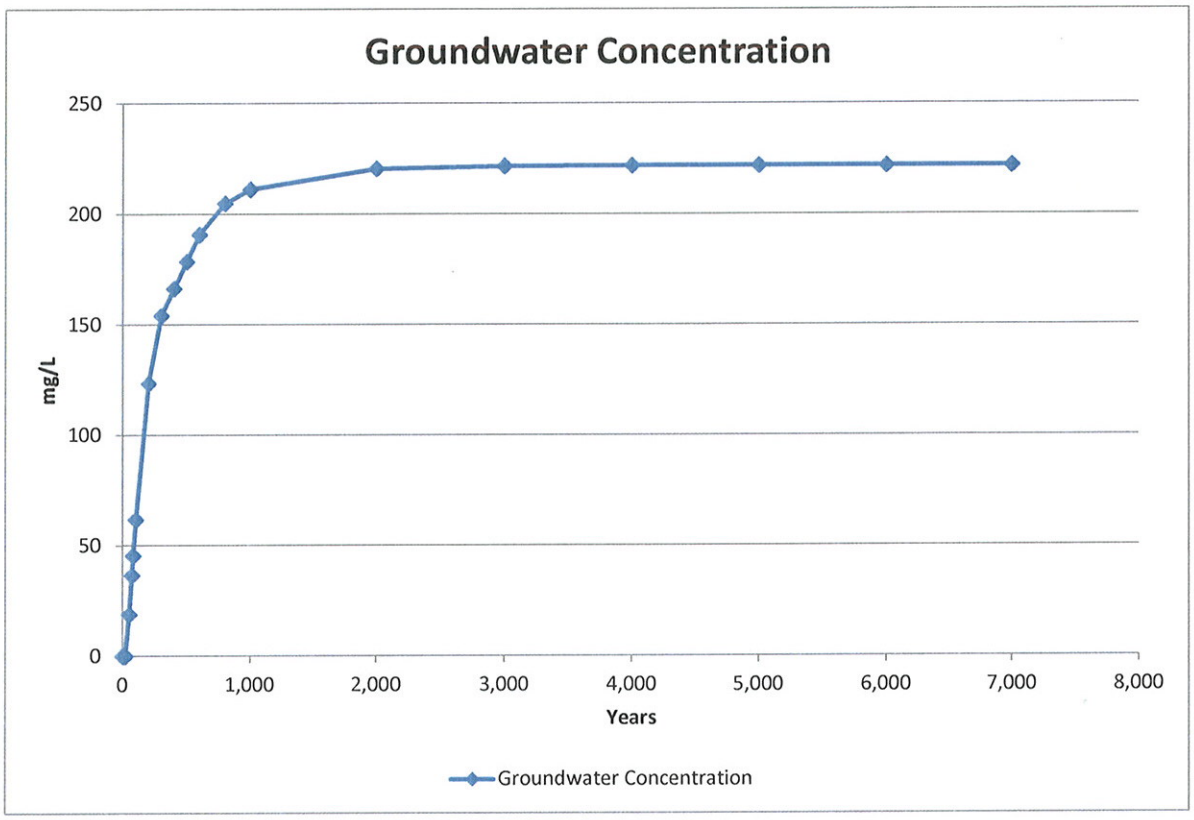


TABLE 6-3. TOTAL POROSITY OF VARIOUS MATERIALS

Material	No. of Analyses	Range	Arithmetic Mean
Igneous Rocks			
Weathered granite	8	0.34-0.57	0.45
Weathered gabbro	4	0.42-0.45	0.43
Basalt	94	0.03-0.35	0.17
Sedimentary Materials			
Sandstone	65	0.14-0.49	0.34
Siltstone	7	0.21-0.41	0.35
Sand (fine)	243	0.26-0.53	0.43
Sand (coarse)	26	0.31-0.46	0.39
Gravel (fine)	38	0.25-0.38	0.34
Gravel (coarse)	15	0.24-0.36	0.28
Silt	281	0.34-0.61	0.46
Clay	74	0.34-0.57	0.42
Limestone	74	0.07-0.56	0.3
Metamorphic Rocks			
Schist	18	0.04-0.49	0.38

Sources: From Mercer et al. (1982),
McWhorter and Sunada (1977),
Original reference Morris and Johnson, (1967).

Texture	Bulk Density g/cm^3	Average Wilting Point	Plant Available Water Inches/Ft
Sandy loam	1.6	0.057	1.66
Silt Loam	1.45	0.119	2
Loam	1.5	0.097	2.4
Sandy clay loam	1.45	0.137	1.66
Clay loam	1.45	0.157	1.9

TABLE 6-8. MEAN BULK DENSITY (g/cm3) FOR FIVE SOIL TEXTURAL CLASSIFICATIONSa,b

Soil Texture	Mean Value	Range Reported
Silt Loams	1.32	0.86 - 1.67
Clay and Clay Loams	1.3	0.94 - 1.54
Sandy Loams	1.49	1.25 - 1.76
Gravelly Silt Loams	1.22	1.02 - 1.58
Loams	1.42	1.16 - 1.58
All Soils	1.35	0.86 - 1.76

a Baes, C.F., III and R.D. Sharp. 1983. A Proposal for Estimation of Soil Leaching Constants for Use in Assessment Models. J. Environ. Qual. 12(1):17-28 (Original reference).

b From Dean et al. (1989)

TABLE 6-2. DESCRIPTIVE STATISTICS FOR SATURATED HYDRAULIC CONDUCTIVITY (cm hr-1)

Soil Type	Hydraulic Conductivity (Ks)* x	s	CV	n		
Clay**	0.2	0.42	210.3	114	cm/hr	17.52
Clay Loam	0.26	0.7	267.2	345	cm/hr	22.776
Loam	1.04	1.82	174.6	735	cm/hr	91.104
Loamy Sand	14.59	11.36	77.9	315	cm/hr	1278.084
Silt	0.25	0.33	129.9	88	cm/hr	21.9
Silt Loam	0.45	1.23	275.1	1093	cm/hr	39.42
Silty Clay	0.02	0.11	453.3	126	cm/hr	1.752
Silty Clay Loam	0.07	0.19	288.7	592	cm/hr	6.132
Sand	29.7	15.6	52.4	246	cm/hr	2601.72
Sandy Clay	0.12	0.28	234.1	46	cm/hr	10.512
Sandy Clay Loam	1.31	2.74	208.6	214	cm/hr	114.756
Sandy Loam	4.42	5.63	127	1183	cm/hr	387.192

* n = Sample size, = Mean, s = Standard deviation, CV = Coefficient of variation (percent)

** Agricultural soil, less than 60 percent clay

Sources: From Dean et al. (1989),
Original reference Carsel and Parrish (1988).

Saturated water content is the maximum volumetric amount of water in the soil when all pores are filled with water. Very often it is assumed that saturated water content equals the porosity n . However, in many cases qS is smaller than n due to the fact that small amounts of air will be trapped in very small pores. Residual water content can be defined as the asymptote of the pF-curve when h gets very high negative values. Usually qR is very small - on the order of 0.001--0.02 for coarse soils but gets as high values as 0.15..0.25 for heavy clay soils. Air entry point ha is

Soil texture. Fine-textured soils can hold much more organic matter than sandy soils for two reasons. First, clay particles form electrochemical bonds that hold organic compounds. Second, decomposition occurs faster in well-aerated sandy soils. A sandy loam rarely holds more than 2% organic matter.

The recharge rate in this model is the net amount of water that percolates directly into the aquifer system outside of the land disposal facility. The recharge is assumed to have no contamination and hence dilutes the groundwater contaminant plume. The recharge rate into the plume can be calculated in a variety of ways. One possibility is to use a model, such as HELP (Hydrologic Evaluation of Landfill Performance) (Schroeder et al., 1984), without any engineering controls (leachate collection system or a liner) to simulate the water balance for natural conditions.

The infiltration rate is the net amount of leachate that percolates into the aquifer system from a land disposal facility. Because of the use of engineering controls and the presence of non-native porous materials in the landfill facility, the infiltration rate will typically be different than the recharge rate. However, it can be estimated by similar

Most soils contain 2-10 percent organic matter. *The Importance of Soil Organic Matter: Key to Drought-Resistant Soil and Sustained Food Production. http://www.fao.org*

APPENDIX B

NMOCD APPROVAL OF STAGE 2 ABATEMENT PLAN

From:	Chase Acker
To:	Bruce McKenzie
Subject:	FW: Stage 2 Abatement Plan Approval: AP-72 Former State M-1 Tank Battery located in Unit Letter O of Section 18 in Township 17 South, Range 36 East, NMPM in Lea County, NM
Date:	Monday, April 14, 2014 1:56:01 PM

From: Griswold, Jim, EMNRD [mailto:Jim.Griswold@state.nm.us]
Sent: Thursday, June 27, 2013 5:14 PM
To: Larry Wooten
Cc: Hall, Sharon; Chase Acker
Subject: Stage 2 Abatement Plan Approval: AP-72 Former State M-1 Tank Battery located in Unit Letter O of Section 18 in Township 17 South, Range 36 East, NMPM in Lea County, NM

Mr. Wooten,

The Oil Conservation Division (OCD) has reviewed the Stage 2 Abatement Plan for the above-referenced site submitted on your behalf by Arcadis and dated 3/27/12. That plan has substantially met the requirements of 19.15.30 NMAC and is hereby approved. Please proceed with field activities.

Be advised this approval does not relieve Chesapeake of responsibility should the situation continue to pose a threat to groundwater, surface water, human health, or the environment. Furthermore, this approval does not relieve your responsibility for compliance with any federal, state, or local laws and/or regulations. Please retain a copy of this email for your files, as no hardcopy will be sent. If you have any questions, please feel free to contact me at any time.

Jim Griswold
Senior Hydrologist
EMNRD/Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

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APPENDIX C

MONITORING WELL COMPLETION RECORDS

BORING RECORD

GEOLOG. UNIT	DEPTH (FEET)	LITHOLOGIC DESCRIPTION	UNIFIED SOIL CLASSIFICATION	GRAPHIC LOG
	0			
	0.5	SILTY CLAY: BROWN, 7.5YR 5/3, 50% SILTY, 40% CLAY, 10% FINE SANDS, DRY, SOFT	CL	
		CALICHE: LIGHT GRAY TO WHITE, SOME BROWNS, HARD, DRY		
	5			
	10	CLAYEY SILT: PINK, 7.5YR 8/3, 80% SILT, 10% CLAY, 10% STRAY GRAVELS, DRY, SOFT	ML	
	15			
	18.0	SAND: PINK, 7.5YR 7/2, 90% FINE SAND, 10% CLAY, HARD, CEMENTED, DRY	SC	
	20			
	24.0	SAND: PINK, 7.5YR 8/3, 90% FINE SAND, 10% CLAY, LOOSE, DRY TO 44 FEET	SC	
	25			
	30			
	35			

OVM SOIL GAS PPM X 1.0
2 4 6 8 10 12 14 16 18

SAMPLE: NUMBER | OVM READING | RECOVERY | DEPTH

REMARKS
BACKGROUND OVM READING:
SOIL: _____ PPM
AIR: _____ PPM

CME CONTINUOUS AUGER SAMPLER
WATER TABLE (24 HOURS)
WATER TABLE (TIME OF BORING)
NR: NO RECOVERY

JOB NAME/NUMBER *CHESAPEAKE STATE L-2* *CHKHSTL201*

BORING NUMBER *MW-6*

ENVIRO CLEAN SERVICES, LLC
7060 S. Yale Ave., Suite 603 ▪ Tulsa, Oklahoma 74136 ▪ 918-794-7828
www.EnviroCleanPS.com

DATE DRILLED 3/24/2014
DRILLING METHOD AIR ROTARY
DRILLED BY SCARBOROUGH DRILLING
LOGGED BY P.RICHARDSON
CHECKED BY P.RICHARDSON DRAWING NO. MW06_LOG
DRAWN BY: S.GRAUE PAGE 1 OF 2

Y:\Projects\Chesapeake\CHKHSTL201_StateL2well\04_CAD\BORELOGS\MW06_BORELOG.dwg on Apr 17, 2014-3:48pm

BORING RECORD

GEOLOG. UNIT	DEPTH (FEET)	LITHOLOGIC DESCRIPTION	UNIFIED SOIL CLASSIFICATION	GRAPHIC LOG	OVM SOIL GAS PPM X 1.0 (2 4 6 8 10 12 14 16 18)	SAMPLE NUMBER	SAMPLE OVM READING	SAMPLE RECOVERY	SAMPLE DEPTH	REMARKS
	35	SAND: PINK, 7.5YR 8/3, 90% FINE SAND, 10% CLAY, LOOSE, DRY TO 44 FEET (CONTINUED)	SC							BACKGROUND OVM READING: SOIL: _____ PPM AIR: _____ PPM
	40									
	45	MOIST @ 44 FEET								
	50									
	55									
	56.09	TOTAL DEPTH: 56.09 FEET							56.09	
	60									
	65									
	70									

CME CONTINUOUS AUGER SAMPLER

WATER TABLE (TIME OF BORING)

WATER TABLE (24 HOURS)

NR: NO RECOVERY

JOB NAME/NUMBER *CHESAPEAKE STATE L-2 CHKHSTL201*

BORING NUMBER *MW-6*

ENVIROCLEAN SERVICES, LLC

7060 S. Yale Ave., Suite 603 ▪ Tulsa, Oklahoma 74136 ▪ 918-794-7828

www.EnviroCleanPS.com

DATE DRILLED 3/24/2014

DRILLING METHOD AIR ROTARY

DRILLED BY SCARBOROUGH DRILLING

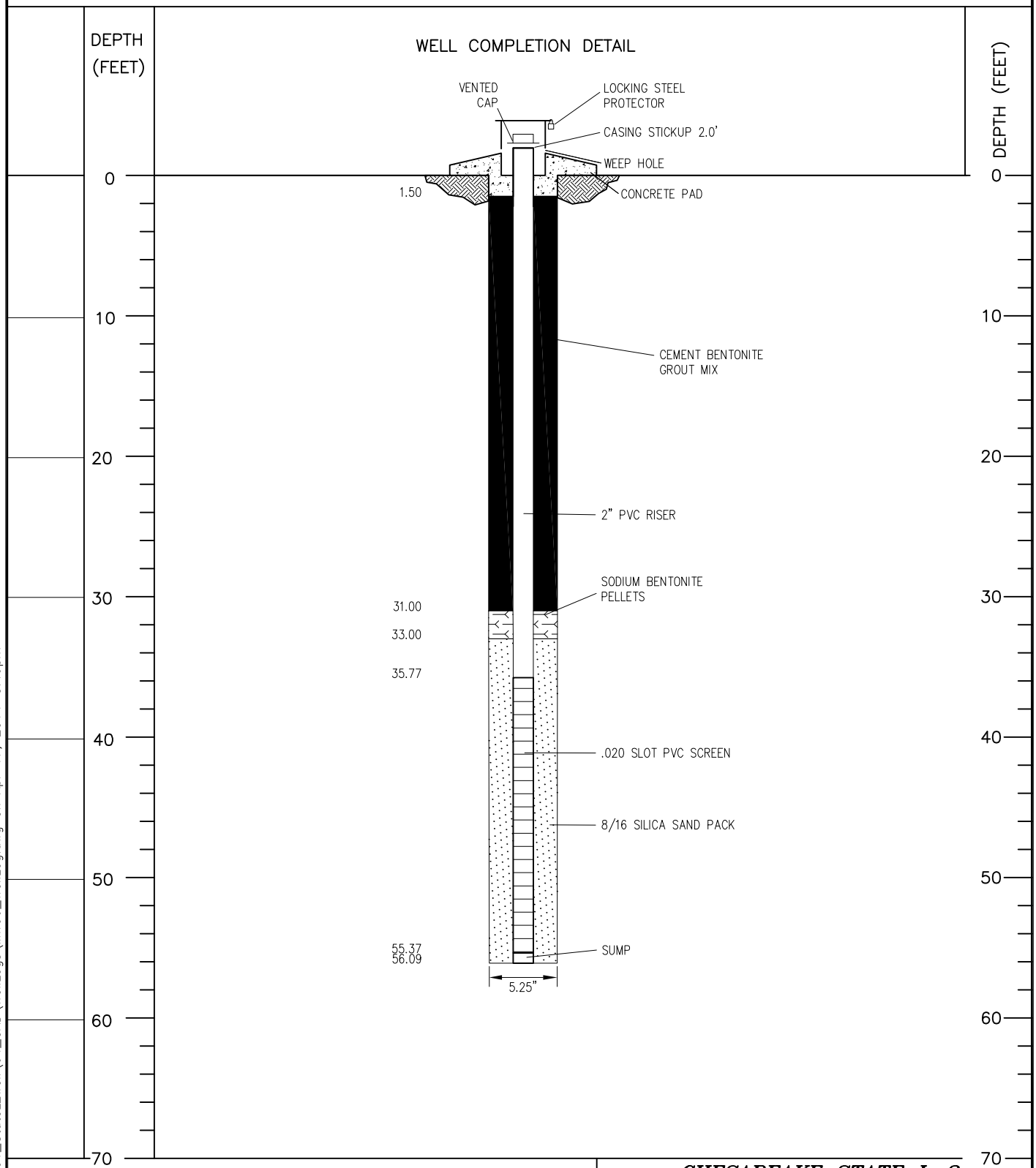
LOGGED BY P.RICHARDSON

CHECKED BY P.RICHARDSON DRAWING NO. MW06_LOG

DRAWN BY: S.GRAUE PAGE 2 OF 2

Y:\Projects\Chesapeake\CHKHSTL201_StateL2well\04_CAD\BORELOGS\MW06_BORELOG.dwg on Apr 17, 2014 - 3:48pm

WELL COMPLETION RECORD



WATER TABLE (24 HOURS)

CHESAPEAKE STATE L-2

JOB NAME/NUMBER *CHKHSTL201*

BORING NUMBER *MW-6*

ENVIRO CLEAN SERVICES, LLC

7060 S. Yale Ave., Suite 603 ▪ Tulsa, Oklahoma 74136 ▪ 918-794-7828

www.EnviroCleanPS.com

DATE DRILLED	3/24/2014
DRILLING METHOD	AIR ROTARY
DRILLED BY	SCARBOROUGH DRILLING
LOGGED BY	P.RICHARDSON
CHECKED BY	P.RICHARDSON
DRAWING NO.	MW-6
DRAWN BY:	S. GRAUE
PAGE	1 OF 1

Y:\Projects\Chesapeake\CHKHSTL201_StateL2well\04_CAD\WellLogs\MW06_WellLog.dwg on Apr 17, 2014-3:49pm

APPENDIX D

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-54984-1
TestAmerica Sample Delivery Group: Property ID 890293
Client Project/Site: CHK State L-2
Revision: 1

For:
Enviro Clean Services LLC
7060 S. Yale Avenue, Suite 603
Tulsa, Oklahoma 74136

Attn: Julie Czech

Cathy Gartner

Authorized for release by:
7/23/2014 10:41:36 AM

Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-54984-1	MW-1	Water	06/05/14 11:55	06/10/14 08:30
490-54984-2	MW-4	Water	06/05/14 12:50	06/10/14 08:30
490-54984-3	EQ Blank	Water	06/05/14 14:45	06/10/14 08:30
490-54984-4	MW-2	Water	06/05/14 14:05	06/10/14 08:30
490-54984-5	MW-6	Water	06/05/14 15:10	06/10/14 08:30
490-54984-6	MW-3	Water	06/05/14 16:05	06/10/14 08:30
490-54984-7	MW-5	Water	06/05/14 16:50	06/10/14 08:30
490-54984-8	Trip Blank	Water	06/05/14 00:01	06/10/14 08:30
490-54984-9	Dup	Water	06/05/14 00:01	06/10/14 08:30

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Job ID: 490-54984-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-54984-1

****Revised Report****
8260 was revised to report only Benzene per Chain of Custody. This replaces the final report generated on 6/25/14.

Receipt
The samples were received on 6/10/2014 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 2.8º C.

Except:

The following sample(s) was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): Dup (490-54984-9)
Chloride and Benzene are analyzed per client request.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Client Sample Results

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-1
Date Collected: 06/05/14 11:55
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26.8		1.00		mg/L			06/25/14 09:26	1

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-4
Date Collected: 06/05/14 12:50
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	34.3		1.00		ug/L			06/15/14 03:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*06/15/14 03:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*06/15/14 03:52*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*06/15/14 03:52*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*06/15/14 03:52*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	192		10.0		mg/L			06/24/14 16:51	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: EQ Blank

Date Collected: 06/05/14 14:45
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			06/15/14 03:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*06/15/14 03:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*06/15/14 03:26*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/15/14 03:26*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*06/15/14 03:26*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			06/24/14 17:11	1

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-2
Date Collected: 06/05/14 14:05
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	357		20.0		mg/L			06/24/14 17:51	20

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-6
Date Collected: 06/05/14 15:10
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	133		10.0		mg/L			06/24/14 18:11	10

Client Sample Results

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-3
Date Collected: 06/05/14 16:05
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.8		10.0		mg/L			06/24/14 18:31	10

Client Sample Results

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-5
Date Collected: 06/05/14 16:50
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	129		10.0		mg/L			06/24/14 18:51	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: Trip Blank
Date Collected: 06/05/14 00:01
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			06/15/14 02:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*06/15/14 02:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*06/15/14 02:59*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/15/14 02:59*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*06/15/14 02:59*	*1*

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: Dup
Date Collected: 06/05/14 00:01
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	33.5		1.00		ug/L			06/15/14 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*06/15/14 04:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*06/15/14 04:18*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*06/15/14 04:18*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*06/15/14 04:18*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	192		10.0		mg/L			06/24/14 19:11	10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-169717/5
Matrix: Water
Analysis Batch: 169717

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			06/15/14 02:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*06/15/14 02:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*06/15/14 02:07*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*06/15/14 02:07*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*06/15/14 02:07*	*1*

Lab Sample ID: LCS 490-169717/3
Matrix: Water
Analysis Batch: 169717

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	43.17		ug/L		86	80 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-54984-2 MS
Matrix: Water
Analysis Batch: 169717

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	34.3		50.0	78.55		ug/L		88	75 - 133		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*

Lab Sample ID: 490-54984-2 MSD
Matrix: Water
Analysis Batch: 169717

Client Sample ID: MW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	34.3		50.0	79.61		ug/L		91	75 - 133	1	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-172274/6
Matrix: Water
Analysis Batch: 172274

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			06/24/14 15:30	1

Lab Sample ID: LCS 490-172274/7
Matrix: Water
Analysis Batch: 172274

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.76		mg/L		102	90 - 110

Lab Sample ID: LCSD 490-172274/8
Matrix: Water
Analysis Batch: 172274

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	50.83		mg/L		102	90 - 110	0	20

Lab Sample ID: 490-54984-3 MS
Matrix: Water
Analysis Batch: 172274

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		50.0	46.45		mg/L		93	80 - 120

Lab Sample ID: MB 490-172439/5
Matrix: Water
Analysis Batch: 172439

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			06/25/14 08:25	1

Lab Sample ID: LCS 490-172439/6
Matrix: Water
Analysis Batch: 172439

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	50.22		mg/L		100	90 - 110

Lab Sample ID: LCSD 490-172439/7
Matrix: Water
Analysis Batch: 172439

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	50.22		mg/L		100	90 - 110	0	20

QC Association Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

GC/MS VOA

Analysis Batch: 169717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-54984-2	MW-4	Total/NA	Water	8260B	
490-54984-2 MS	MW-4	Total/NA	Water	8260B	
490-54984-2 MSD	MW-4	Total/NA	Water	8260B	
490-54984-3	EQ Blank	Total/NA	Water	8260B	
490-54984-8	Trip Blank	Total/NA	Water	8260B	
490-54984-9	Dup	Total/NA	Water	8260B	
LCS 490-169717/3	Lab Control Sample	Total/NA	Water	8260B	
MB 490-169717/5	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 172274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-54984-2	MW-4	Total/NA	Water	300.0	
490-54984-3	EQ Blank	Total/NA	Water	300.0	
490-54984-3 MS	EQ Blank	Total/NA	Water	300.0	
490-54984-4	MW-2	Total/NA	Water	300.0	
490-54984-5	MW-6	Total/NA	Water	300.0	
490-54984-6	MW-3	Total/NA	Water	300.0	
490-54984-7	MW-5	Total/NA	Water	300.0	
490-54984-9	Dup	Total/NA	Water	300.0	
LCS 490-172274/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-172274/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-172274/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 172439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-54984-1	MW-1	Total/NA	Water	300.0	
LCS 490-172439/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-172439/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-172439/5	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-1

Date Collected: 06/05/14 11:55
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-1

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	10 mL		172439	06/25/14 09:26	JHS	TAL NSH

Client Sample ID: MW-4

Date Collected: 06/05/14 12:50
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-2

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	8260B		1	10 mL	10 mL	169717	06/15/14 03:52	JMG	TAL NSH
Total/NA	Analysis	300.0		10	10 mL		172274	06/24/14 16:51	HMT	TAL NSH

Client Sample ID: EQ Blank

Date Collected: 06/05/14 14:45
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-3

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	8260B		1	10 mL	10 mL	169717	06/15/14 03:26	JMG	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		172274	06/24/14 17:11	HMT	TAL NSH

Client Sample ID: MW-2

Date Collected: 06/05/14 14:05
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-4

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	10 mL		172274	06/24/14 17:51	HMT	TAL NSH

Client Sample ID: MW-6

Date Collected: 06/05/14 15:10
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-5

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	10 mL		172274	06/24/14 18:11	HMT	TAL NSH

Client Sample ID: MW-3

Date Collected: 06/05/14 16:05
Date Received: 06/10/14 08:30

Lab Sample ID: 490-54984-6

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	10 mL		172274	06/24/14 18:31	HMT	TAL NSH

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Client Sample ID: MW-5

Lab Sample ID: 490-54984-7

Date Collected: 06/05/14 16:50
Matrix: Water
Date Received: 06/10/14 08:30

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	10 mL		172274	06/24/14 18:51	HMT	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 490-54984-8

Date Collected: 06/05/14 00:01
Matrix: Water
Date Received: 06/10/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	169717	06/15/14 02:59	JMG	TAL NSH

Client Sample ID: Dup

Lab Sample ID: 490-54984-9

Date Collected: 06/05/14 00:01
Matrix: Water
Date Received: 06/10/14 08:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	169717	06/15/14 04:18	JMG	TAL NSH
Total/NA	Analysis	300.0		10	10 mL		172274	06/24/14 19:11	HMT	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-54984-1
SDG: Property ID 890293

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9412	08-31-14

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-54984 Chain of Custody

Cooler Received/Opened On 6-10-14 @ 0830

1. Tracking # 2097 (last 4 digits, FedEx)
9621 0140

Courier: FedEx IR Gun ID ~~94660220~~ mam 6-10-14

2. Temperature of rep. sample or temp blank when opened: 2.8 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: Front

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) _____

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) (Plastic bag) Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: (Ice) Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? 6/10/14 (YES)..NO...NA

13a. Were VOA vials received? (YES)..NO...NA

b. Was there any observable headspace present in any VOA vial? YES..(NO)..NA

14. Was there a Trip Blank in this cooler? (YES)..NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)..NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? (YES)..NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)..NO...NA

19. Were correct containers used for the analysis requested? (YES)..NO...NA

20. Was sufficient amount of sample sent in each container? (YES)..NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? (YES)..NO Was a NCM generated? (YES)..NO...# 123470

BIS = Broken in shipment

CHAIN OF CUSTODY RECORD

No. 00177

ENVIRO CLEAN SERVICES, LLC
(918) 794-7828

PROJECT NUMBER: CHKHSTL201	PROJECT NAME: CHK STATE L-2	COC 1 of 1	
SHIPPED TO: TANASHVILLE	PROJECT MANAGER: BRUCE MCKENZIE	TAT: STANDARD	

SAMPLER'S PRINTED NAME: Terry Fisher
SAMPLER'S SIGNATURE:

ASOW: GEN/SUB: 750-521
PROP ID: 890293

Loc: 490
54984

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE (300)	BENZNE (8260C)	REMARKS
6-5-14	1155	mw-1	water	1	X		1
6-5-14	1250	mw-4	water	4	X	X	2
6-5-14	1445	EQ Blank	water	4	X	X	3
6-5-14	1405	mw-2	water	1	X		4
6-5-14	1510	mw-6	water	1	X		5
6-5-14	1605	mw-3	water	1	X		6
6-5-14	1650	mw-5	water	1	X		7
—	—	Tr.p	water	2		X	8

TOTAL NUMBER OF CONTAINERS → 15

RELINQUISHED BY:	DATE 6-9-14	RECEIVED BY: VS/TAN 2.8	DATE 06/09/14
	TIME 1350		TIME 0830
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

METHOD OF SHIPMENT: FED-EX

AIRBILL NUMBER:

RECEIVED IN LABORATORY BY: DATE / TIME

Send PDF, EDD, and INVOICE (if applicable) to:
JULIE CZECH at jczech@envirocleanps.com

LABORATORY CONTACT:
(615) 726-0177

LABORATORY ADDRESS:
2960 FOSTER CREIGHTON DR., NASHVILLE, TN 37204

POINT OF ORIGIN: ☐ OKLAHOMA CITY ☑ TULSA ☐ NORMAN ☐ WOODWARD ☐ ARLINGTON ☐ MIDLAND ☐ OTHER:

PAGE #1 - RECEIVING LAB | PAGE #2 - ENVIRO CLEAN PROJECT FILE | PAGE #3 - ENVIRO CLEAN QA/QC DEPT

7/23/2014

Login Sample Receipt Checklist

Client: Enviro Clean Services LLC

Job Number: 490-54984-1
SDG Number: Property ID 890293

Login Number: 54984
List Number: 1
Creator: Gambill, Shane

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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	2.8
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	Received extra samples not listed on COC.
Samples are received within Holding Time.	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.	N/A	
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-62346-1
TestAmerica Sample Delivery Group: Property ID 890293
Client Project/Site: CHK State L-2

For:
Enviro Clean Services LLC
7060 S. Yale Avenue, Suite 603
Tulsa, Oklahoma 74136

Attn: Ms. Julie Czech

Cathy Gartner

Authorized for release by:
10/24/2014 10:12:30 AM

Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-62346-1	MW-1	Water	09/22/14 10:45	09/26/14 09:00
490-62346-2	MW-2	Water	09/24/14 18:55	09/26/14 09:00
490-62346-3	MW-3	Water	09/25/14 10:43	09/26/14 09:00
490-62346-4	MW-4	Water	09/24/14 17:45	09/26/14 09:00
490-62346-5	MW-5	Water	09/22/14 11:45	09/26/14 09:00
490-62346-6	MW-6	Water	09/24/14 19:40	09/26/14 09:00
490-62346-7	EQ Blank	Water	09/24/14 18:00	09/26/14 09:00
490-62346-8	Dup	Water	09/24/14 00:01	09/26/14 09:00
490-62346-9	Trip Blank	Water	09/24/14 00:01	09/26/14 09:00

Job ID: 490-62346-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-62346-1

Comments
No additional comments.

Receipt
The samples were received on 9/26/2014 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Job ID: 490-62346-2

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-62346-2

****Revised Report****
MW-3 was added to the report per client request. This replaces the report generated on 10/15/14.

Receipt
The samples were received on 9/26/2014 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

HPLC/IC
Method(s) 300.0: Due to re-analyses for confirmation purposes, a matrix spike / matrix spike duplicate (MS/MSD) was not analyzed with batch 200117. However, the laboratory control sample / laboratory control sample duplicate (LCS/LCSD) recoveries were within acceptance limits.

(LCS 490-200117/7), (LCSD 490-200117/8)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
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 exceeded calibration range.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-1
Date Collected: 09/22/14 10:45
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	25.4		1.00		mg/L			10/09/14 17:12	1

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-2
Date Collected: 09/24/14 18:55
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			10/01/14 01:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*10/01/14 01:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*10/01/14 01:24*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*10/01/14 01:24*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*10/01/14 01:24*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**327**		10.0		mg/L			10/14/14 02:01	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-3
Date Collected: 09/25/14 10:43
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.5		1.00		mg/L			10/23/14 13:32	1

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-4
Date Collected: 09/24/14 17:45
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.76		1.00		ug/L			10/01/14 02:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*10/01/14 02:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/01/14 02:16*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*10/01/14 02:16*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*10/01/14 02:16*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	239		10.0		mg/L			10/14/14 02:21	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-5
Date Collected: 09/22/14 11:45
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	114		10.0		mg/L			10/14/14 02:42	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-6
Date Collected: 09/24/14 19:40
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	167		10.0		mg/L			10/14/14 15:11	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: EQ Blank

Lab Sample ID: 490-62346-7

Date Collected: 09/24/14 18:00

Matrix: Water

Date Received: 09/26/14 09:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			10/01/14 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/01/14 00:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*10/01/14 00:33*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*10/01/14 00:33*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*10/01/14 00:33*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			10/14/14 15:31	1

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: Dup
Date Collected: 09/24/14 00:01
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.83		1.00		ug/L			10/01/14 03:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*10/01/14 03:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*10/01/14 03:07*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*10/01/14 03:07*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*10/01/14 03:07*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	239		10.0		mg/L			10/14/14 03:02	10

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: Trip Blank
Date Collected: 09/24/14 00:01
Date Received: 09/26/14 09:00

Lab Sample ID: 490-62346-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/30/14 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/30/14 23:41*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*09/30/14 23:41*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/30/14 23:41*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*09/30/14 23:41*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-194015/8
Matrix: Water
Analysis Batch: 194015

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.00		ug/L			09/30/14 19:11	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*09/30/14 19:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*		*09/30/14 19:11*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/30/14 19:11*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*09/30/14 19:11*	*1*

Lab Sample ID: LCS 490-194015/3
Matrix: Water
Analysis Batch: 194015

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			100	101.3		ug/L		101	80 - 121		
Ethylbenzene			100	88.52		ug/L		89	80 - 130		
Xylenes, Total			250	221.7		ug/L		89	80 - 132		
Toluene			100	93.54		ug/L		94	80 - 126		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 490-194015/4
Matrix: Water
Analysis Batch: 194015

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			100	104.4		ug/L		104	80 - 121	3	17
Ethylbenzene			100	93.75		ug/L		94	80 - 130	6	15
Xylenes, Total			250	235.1		ug/L		94	80 - 132	6	15
Toluene			100	97.33		ug/L		97	80 - 126	4	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

Lab Sample ID: 490-62334-B-20 MS
Matrix: Water
Analysis Batch: 194015

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		
Benzene	ND		100	112.3		ug/L		112	75 - 133		
Ethylbenzene	ND		100	95.31		ug/L		95	79 - 139		

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-62334-B-20 MS
Matrix: Water
Analysis Batch: 194015

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
Xylenes, Total	ND		250	236.9		ug/L		95	74 - 141
Toluene	ND		100	99.60		ug/L		100	75 - 136

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*

Lab Sample ID: 490-62334-C-20 MSD
Matrix: Water
Analysis Batch: 194015

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
Benzene	ND		100	114.6		ug/L		115	75 - 133	2	17
Ethylbenzene	ND		100	98.41		ug/L		98	79 - 139	3	15
Xylenes, Total	ND		250	245.8		ug/L		98	74 - 141	4	15
Toluene	ND		100	102.2		ug/L		102	75 - 136	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-196574/3
Matrix: Water
Analysis Batch: 196574

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			10/09/14 14:59	1

Lab Sample ID: LCS 490-196574/4
Matrix: Water
Analysis Batch: 196574

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.62		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-196574/5
Matrix: Water
Analysis Batch: 196574

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	49.64		mg/L		99	90 - 110	0	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 490-62597-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		50.0	48.29		mg/L		97	80 - 120

Lab Sample ID: 490-62597-A-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196574

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		50.0	47.99		mg/L		96	80 - 120	1	20

Lab Sample ID: MB 490-197744/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197744

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			10/13/14 19:00	1

Lab Sample ID: LCS 490-197744/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197744

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	47.96		mg/L		96	90 - 110

Lab Sample ID: LCSD 490-197744/8 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197744

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	47.81		mg/L		96	90 - 110	0	20

Lab Sample ID: 490-62310-L-21 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197744

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	357	E	50.0	368.1	E 4	mg/L		22	80 - 120

Lab Sample ID: MB 490-197916/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197916

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			10/14/14 13:51	1

Lab Sample ID: LCS 490-197916/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	54.22		mg/L		108	90 - 110

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Lab Sample ID: LCSD 490-197916/8
Matrix: Water
Analysis Batch: 197916

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			50.0	53.41		mg/L		107	90 - 110	2	20

Lab Sample ID: 490-62346-7 MS
Matrix: Water
Analysis Batch: 197916

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	ND		50.0	50.78		mg/L		102	80 - 120		

Lab Sample ID: MB 490-200384/6
Matrix: Water
Analysis Batch: 200384

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			10/23/14 11:51	1

Lab Sample ID: LCS 490-200384/7
Matrix: Water
Analysis Batch: 200384

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	49.39		mg/L		99	90 - 110		

Lab Sample ID: LCSD 490-200384/8
Matrix: Water
Analysis Batch: 200384

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			50.0	49.48		mg/L		99	90 - 110	0	20

GC/MS VOA

Analysis Batch: 194015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-62334-B-20 MS	Matrix Spike	Total/NA	Water	8260B	
490-62334-C-20 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
490-62346-2	MW-2	Total/NA	Water	8260B	
490-62346-4	MW-4	Total/NA	Water	8260B	
490-62346-7	EQ Blank	Total/NA	Water	8260B	
490-62346-8	Dup	Total/NA	Water	8260B	
490-62346-9	Trip Blank	Total/NA	Water	8260B	
LCS 490-194015/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-194015/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-194015/8	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 196574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-62346-1	MW-1	Total/NA	Water	300.0	
490-62597-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
490-62597-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 490-196574/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-196574/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-196574/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 197744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-62310-L-21 MS	Matrix Spike	Total/NA	Water	300.0	
490-62346-2	MW-2	Total/NA	Water	300.0	
490-62346-4	MW-4	Total/NA	Water	300.0	
490-62346-5	MW-5	Total/NA	Water	300.0	
490-62346-8	Dup	Total/NA	Water	300.0	
LCS 490-197744/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-197744/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-197744/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 197916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-62346-6	MW-6	Total/NA	Water	300.0	
490-62346-7	EQ Blank	Total/NA	Water	300.0	
490-62346-7 MS	EQ Blank	Total/NA	Water	300.0	
LCS 490-197916/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-197916/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-197916/6	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 200384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-62346-3	MW-3	Total/NA	Water	300.0	
LCS 490-200384/7	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-200384/8	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-200384/6	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: MW-1

Lab Sample ID: 490-62346-1

Date Collected: 09/22/14 10:45

Matrix: Water

Date Received: 09/26/14 09:00

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	10 mL		196574	10/09/14 17:12	CLN	TAL NSH

Client Sample ID: MW-2

Lab Sample ID: 490-62346-2

Date Collected: 09/24/14 18:55

Matrix: Water

Date Received: 09/26/14 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	194015	10/01/14 01:24	BJM	TAL NSH
Total/NA	Analysis	300.0		10	10 mL		197744	10/14/14 02:01	JHS	TAL NSH

Client Sample ID: MW-3

Lab Sample ID: 490-62346-3

Date Collected: 09/25/14 10:43

Matrix: Water

Date Received: 09/26/14 09:00

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	10 mL		200384	10/23/14 13:32	JHS	TAL NSH

Client Sample ID: MW-4

Lab Sample ID: 490-62346-4

Date Collected: 09/24/14 17:45

Matrix: Water

Date Received: 09/26/14 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	194015	10/01/14 02:16	BJM	TAL NSH
Total/NA	Analysis	300.0		10	10 mL		197744	10/14/14 02:21	JHS	TAL NSH

Client Sample ID: MW-5

Lab Sample ID: 490-62346-5

Date Collected: 09/22/14 11:45

Matrix: Water

Date Received: 09/26/14 09:00

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	10 mL		197744	10/14/14 02:42	JHS	TAL NSH

Client Sample ID: MW-6

Lab Sample ID: 490-62346-6

Date Collected: 09/24/14 19:40

Matrix: Water

Date Received: 09/26/14 09:00

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	10 mL		197916	10/14/14 15:11	JHS	TAL NSH

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Client Sample ID: EQ Blank

Lab Sample ID: 490-62346-7

Date Collected: 09/24/14 18:00
Matrix: Water
Date Received: 09/26/14 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	194015	10/01/14 00:33	BJM	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		197916	10/14/14 15:31	JHS	TAL NSH

Client Sample ID: Dup

Lab Sample ID: 490-62346-8

Date Collected: 09/24/14 00:01
Matrix: Water
Date Received: 09/26/14 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	194015	10/01/14 03:07	BJM	TAL NSH
Total/NA	Analysis	300.0		10	10 mL	1.0 mL	197744	10/14/14 03:02	JHS	TAL NSH

Client Sample ID: Trip Blank

Lab Sample ID: 490-62346-9

Date Collected: 09/24/14 00:01
Matrix: Water
Date Received: 09/26/14 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	194015	09/30/14 23:41	BJM	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Enviro Clean Services LLC
Project/Site: CHK State L-2

TestAmerica Job ID: 490-62346-1
SDG: Property ID 890293

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9412	08-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-62346 Chain of Custody

Cooler Received/Opened On 9/26/2014 @ 0900

1. Tracking # 5020 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 0.9 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: @Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MDM

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) _____

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) _____

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) _____

I certify that I attached a label with the unique LIMS number to each container (intial) _____

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# _____

9/26/14

9/26/14

BIS = Broken in shipment

CHAIN OF CUSTODY RECORD

No. 00174

ENVIRO CLEAN SERVICES, LLC
(918) 794-7828

PROJECT NUMBER: CHKHSTL201	PROJECT NAME: CHK STATE L-2	COC 1 of 1	
SHIPPED TO: TA NASHVILLE	PROJECT MANAGER: BRUCE MCKENZIE	TAT: STANDARD	

SAMPLER'S PRINTED NAME: Terry Fisher
SAMPLER'S SIGNATURE: Terry Fisher

ASOW: GENSUB: 760-521 PROP ID: 880293
Loc: 490
62346

Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE (300)	BENZENE (8260C)	REMARKS
9-22-14	1045	MW-1	Water	1	X		01
9-24-14	1855	MW-2	water	4	X	X	2
9-25-14	1043	MW-3	water	1			3
9-24-14	1745	MW-4	water	4	X	X	4
9-22-14	1145	MW-5	water	1	X		5
9-24-14	1940	MW-6	water	1	X		6
9-24-14	1800	EQ Blank	water	4	X	X	7
9-24-14	—	Dup	water	4	X	X	8
—	—	Trip Blank	water	2	X	X	9

TOTAL NUMBER OF CONTAINERS → 28

RELINQUISHED BY:	DATE 9-25-14	RECEIVED BY: VT/TAN 0.9	DATE 09/26/14
	TIME 1400		TIME 0900
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

METHOD OF SHIPMENT: FED-EX

AIRBILL NUMBER: Fedex 6169 5262 5020

RECEIVED IN LABORATORY BY: DATE / TIME

Send PDF, EDD, and INVOICE (if applicable) to:
JULIE CZECH at jczech@envirocleanps.com

LABORATORY CONTACT:
(615) 726-0177

LABORATORY ADDRESS:
2960 FOSTER CREIGHTON DR., NASHVILLE, TN 37204

POINT OF ORIGIN: ☐ OKLAHOMA CITY ☒ TULSA ☐ NORMAN ☐ WOODWARD ☐ ARLINGTON ☐ MIDLAND ☐ OTHER:

PAGE #1 - RECEIVING LAB | PAGE #2 - ENVIRO CLEAN PROJECT FILE | PAGE #3 - ENVIRO CLEAN QA/QC DEPT

10/24/2014

Login Sample Receipt Checklist

Client: Enviro Clean Services LLC

Job Number: 490-62346-2
SDG Number: Property ID 890293

Login Number: 62346
List Number: 1
Creator: Gambill, Shane

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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	0.9
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.	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.	N/A	
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.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-68603-1
TestAmerica Sample Delivery Group: Property ID 890293
Client Project/Site: CHK STATE L-2

For:
Enviro Clean Services LLC
7060 S. Yale Avenue, Suite 603
Tulsa, Oklahoma 74136

Attn: Ms. Julie Czech

Cathy Gartner

Authorized for release by:
12/31/2014 2:09:59 PM

Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-68603-1	MW-1	Water	12/09/14 09:35	12/13/14 08:45
490-68603-2	MW-2	Water	12/09/14 13:15	12/13/14 08:45
490-68603-3	MW-3	Water	12/09/14 15:40	12/13/14 08:45
490-68603-4	MW-4	Water	12/09/14 11:30	12/13/14 08:45
490-68603-5	MW-5	Water	12/09/14 16:35	12/13/14 08:45
490-68603-6	MW-6	Water	12/09/14 14:45	12/13/14 08:45
490-68603-7	EQ Blank	Water	12/09/14 09:40	12/13/14 08:45
490-68603-8	DUP	Water	12/09/14 00:01	12/13/14 08:45
490-68603-9	Trip	Water	12/09/14 00:01	12/13/14 08:45

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Job ID: 490-68603-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-68603-1

Comments
No additional comments.

Receipt
The samples were received on 12/13/2014 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following samples were diluted due to the nature of the sample matrix: DUP (490-68603-8), MW-2 (490-68603-2), MW-3 (490-68603-3), MW-4 (490-68603-4), MW-5 (490-68603-5), MW-6 (490-68603-6). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-1
Date Collected: 12/09/14 09:35
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27.7		1.00		mg/L			12/30/14 04:21	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-2
Date Collected: 12/09/14 13:15
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			12/16/14 21:00	1
Ethylbenzene	ND		0.500		ug/L			12/16/14 21:00	1
Toluene	ND		0.500		ug/L			12/16/14 21:00	1
Xylenes, Total	ND		1.50		ug/L			12/16/14 21:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*12/16/14 21:00*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*12/16/14 21:00*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*12/16/14 21:00*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*12/16/14 21:00*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**319**		20.0		mg/L			12/30/14 05:01	20

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-3
Date Collected: 12/09/14 15:40
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	86.0		5.00		mg/L			12/30/14 05:21	5

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-4
Date Collected: 12/09/14 11:30
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**12.1**		0.500		ug/L			12/16/14 21:29	1
Ethylbenzene	ND		0.500		ug/L			12/16/14 21:29	1
Toluene	ND		0.500		ug/L			12/16/14 21:29	1
Xylenes, Total	ND		1.50		ug/L			12/16/14 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*12/16/14 21:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*12/16/14 21:29*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*12/16/14 21:29*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/16/14 21:29*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**300**		20.0		mg/L			12/30/14 05:41	20

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-5
Date Collected: 12/09/14 16:35
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	129		5.00		mg/L			12/30/14 06:01	5

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-6
Date Collected: 12/09/14 14:45
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	149		5.00		mg/L			12/30/14 06:21	5

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: EQ Blank
Date Collected: 12/09/14 09:40
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			12/16/14 21:57	1
Ethylbenzene	ND		0.500		ug/L			12/16/14 21:57	1
Toluene	ND		0.500		ug/L			12/16/14 21:57	1
Xylenes, Total	ND		1.50		ug/L			12/16/14 21:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*12/16/14 21:57*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*12/16/14 21:57*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*12/16/14 21:57*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/16/14 21:57*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			12/30/14 06:41	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: DUP
Date Collected: 12/09/14 00:01
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**11.3**		0.500		ug/L			12/22/14 15:36	1
Ethylbenzene	ND		0.500		ug/L			12/22/14 15:36	1
Toluene	ND		0.500		ug/L			12/22/14 15:36	1
Xylenes, Total	ND		1.50		ug/L			12/22/14 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*12/22/14 15:36*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*12/22/14 15:36*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*12/22/14 15:36*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/22/14 15:36*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**299**		20.0		mg/L			12/30/14 07:01	20

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: Trip
Date Collected: 12/09/14 00:01
Date Received: 12/13/14 08:45

Lab Sample ID: 490-68603-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			12/16/14 20:31	1
Ethylbenzene	ND		0.500		ug/L			12/16/14 20:31	1
Toluene	ND		0.500		ug/L			12/16/14 20:31	1
Xylenes, Total	ND		1.50		ug/L			12/16/14 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*12/16/14 20:31*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*12/16/14 20:31*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*12/16/14 20:31*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/16/14 20:31*	*1*

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-214311/7
Matrix: Water
Analysis Batch: 214311

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			12/16/14 13:20	1
Ethylbenzene	ND		0.500		ug/L			12/16/14 13:20	1
Toluene	ND		0.500		ug/L			12/16/14 13:20	1
Xylenes, Total	ND		1.50		ug/L			12/16/14 13:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*12/16/14 13:20*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*12/16/14 13:20*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*12/16/14 13:20*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*12/16/14 13:20*	*1*

Lab Sample ID: LCS 490-214311/3
Matrix: Water
Analysis Batch: 214311

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	42.41		ug/L		85	80 - 121		
Ethylbenzene			50.0	52.66		ug/L		105	80 - 130		
Toluene			50.0	50.92		ug/L		102	80 - 126		
Xylenes, Total			150	160.7		ug/L		107	80 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 490-214311/4
Matrix: Water
Analysis Batch: 214311

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	43.60		ug/L		87	80 - 121	3	17
Ethylbenzene			50.0	53.35		ug/L		107	80 - 130	1	15
Toluene			50.0	51.87		ug/L		104	80 - 126	2	15
Xylenes, Total			150	165.1		ug/L		110	80 - 132	3	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-68721-B-1 MS
Matrix: Water
Analysis Batch: 214311

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
Benzene	2.50		50.0	42.31		ug/L		80	75 - 133
Ethylbenzene	ND		50.0	48.68		ug/L		97	79 - 139
Toluene	ND		50.0	47.25		ug/L		94	75 - 136
Xylenes, Total	ND		150	150.2		ug/L		100	74 - 141

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: 490-68721-C-1 MSD
Matrix: Water
Analysis Batch: 214311

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
Benzene	2.50		50.0	42.81		ug/L		81	75 - 133	1	17
Ethylbenzene	ND		50.0	48.93		ug/L		98	79 - 139	1	15
Toluene	ND		50.0	47.60		ug/L		95	75 - 136	1	15
Xylenes, Total	ND		150	152.1		ug/L		101	74 - 141	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: MB 490-216010/7
Matrix: Water
Analysis Batch: 216010

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			12/22/14 15:07	1
Ethylbenzene	ND		0.500		ug/L			12/22/14 15:07	1
Toluene	ND		0.500		ug/L			12/22/14 15:07	1
Xylenes, Total	ND		1.50		ug/L			12/22/14 15:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*12/22/14 15:07*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*12/22/14 15:07*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*12/22/14 15:07*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/22/14 15:07*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 490-216010/3
Matrix: Water
Analysis Batch: 216010

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	41.55		ug/L		83	80 - 121		
Ethylbenzene			50.0	50.73		ug/L		101	80 - 130		
Toluene			50.0	49.02		ug/L		98	80 - 126		
Xylenes, Total			150	158.2		ug/L		105	80 - 132		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 490-216010/4
Matrix: Water
Analysis Batch: 216010

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	41.63		ug/L		83	80 - 121	0	17
Ethylbenzene			50.0	50.90		ug/L		102	80 - 130	0	15
Toluene			50.0	48.87		ug/L		98	80 - 126	0	15
Xylenes, Total			150	156.2		ug/L		104	80 - 132	1	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: 490-69258-B-2 MS
Matrix: Water
Analysis Batch: 216010

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		
Benzene	ND		50.0	41.19		ug/L		82	75 - 133		
Ethylbenzene	ND		50.0	49.82		ug/L		100	79 - 139		
Toluene	0.547		50.0	49.06		ug/L		97	75 - 136		
Xylenes, Total	ND		150	151.4		ug/L		101	74 - 141		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-69258-C-2 MSD
Matrix: Water
Analysis Batch: 216010

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
Benzene	ND		50.0	42.02		ug/L		84	75 - 133	2	17
Ethylbenzene	ND		50.0	51.17		ug/L		102	79 - 139	3	15
Toluene	0.547		50.0	49.50		ug/L		98	75 - 136	1	15
Xylenes, Total	ND		150	156.1		ug/L		104	74 - 141	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-217429/3
Matrix: Water
Analysis Batch: 217429

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			12/29/14 23:01	1

Lab Sample ID: LCS 490-217429/4
Matrix: Water
Analysis Batch: 217429

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.46		mg/L		99	90 - 110

Lab Sample ID: LCSD 490-217429/5
Matrix: Water
Analysis Batch: 217429

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	50.0	49.54		mg/L		99	90 - 110	0	20

Lab Sample ID: 490-68603-1 MS
Matrix: Water
Analysis Batch: 217429

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	27.7		50.0	70.56		mg/L		86	80 - 120

QC Association Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

GC/MS VOA

Analysis Batch: 214311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-68603-2	MW-2	Total/NA	Water	8260B	
490-68603-4	MW-4	Total/NA	Water	8260B	
490-68603-7	EQ Blank	Total/NA	Water	8260B	
490-68603-9	Trip	Total/NA	Water	8260B	
490-68721-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
490-68721-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 490-214311/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-214311/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-214311/7	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 216010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-68603-8	DUP	Total/NA	Water	8260B	
490-69258-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
490-69258-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 490-216010/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-216010/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-216010/7	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 217429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-68603-1	MW-1	Total/NA	Water	300.0	
490-68603-1 MS	MW-1	Total/NA	Water	300.0	
490-68603-2	MW-2	Total/NA	Water	300.0	
490-68603-3	MW-3	Total/NA	Water	300.0	
490-68603-4	MW-4	Total/NA	Water	300.0	
490-68603-5	MW-5	Total/NA	Water	300.0	
490-68603-6	MW-6	Total/NA	Water	300.0	
490-68603-7	EQ Blank	Total/NA	Water	300.0	
490-68603-8	DUP	Total/NA	Water	300.0	
LCS 490-217429/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-217429/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-217429/3	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: MW-1

Lab Sample ID: 490-68603-1

Date Collected: 12/09/14 09:35

Matrix: Water

Date Received: 12/13/14 08:45

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	10 mL		217429	12/30/14 04:21	JHS	TAL NSH

Client Sample ID: MW-2

Lab Sample ID: 490-68603-2

Date Collected: 12/09/14 13:15

Matrix: Water

Date Received: 12/13/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	214311	12/16/14 21:00	PS1	TAL NSH
Total/NA	Analysis	300.0		20	10 mL		217429	12/30/14 05:01	JHS	TAL NSH

Client Sample ID: MW-3

Lab Sample ID: 490-68603-3

Date Collected: 12/09/14 15:40

Matrix: Water

Date Received: 12/13/14 08:45

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	10 mL		217429	12/30/14 05:21	JHS	TAL NSH

Client Sample ID: MW-4

Lab Sample ID: 490-68603-4

Date Collected: 12/09/14 11:30

Matrix: Water

Date Received: 12/13/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	214311	12/16/14 21:29	PS1	TAL NSH
Total/NA	Analysis	300.0		20	10 mL		217429	12/30/14 05:41	JHS	TAL NSH

Client Sample ID: MW-5

Lab Sample ID: 490-68603-5

Date Collected: 12/09/14 16:35

Matrix: Water

Date Received: 12/13/14 08:45

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	10 mL		217429	12/30/14 06:01	JHS	TAL NSH

Client Sample ID: MW-6

Lab Sample ID: 490-68603-6

Date Collected: 12/09/14 14:45

Matrix: Water

Date Received: 12/13/14 08:45

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	10 mL		217429	12/30/14 06:21	JHS	TAL NSH

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Client Sample ID: EQ Blank

Lab Sample ID: 490-68603-7

Date Collected: 12/09/14 09:40
Matrix: Water
Date Received: 12/13/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	214311	12/16/14 21:57	PS1	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		217429	12/30/14 06:41	JHS	TAL NSH

Client Sample ID: DUP

Lab Sample ID: 490-68603-8

Date Collected: 12/09/14 00:01
Matrix: Water
Date Received: 12/13/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	216010	12/22/14 15:36	MJH	TAL NSH
Total/NA	Analysis	300.0		20	10 mL		217429	12/30/14 07:01	JHS	TAL NSH

Client Sample ID: Trip

Lab Sample ID: 490-68603-9

Date Collected: 12/09/14 00:01
Matrix: Water
Date Received: 12/13/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	214311	12/16/14 20:31	PS1	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-68603-1
SDG: Property ID 890293

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9412	08-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-68603 Chain of Custody

Cooler Received/Opened On 12/12/2014 @ 0845

1. Tracking # 1659 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 12080142

2. Temperature of rep. sample or temp blank when opened: 1.2 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO (NA)

4. Were custody seals on outside of cooler? (YES)...NO...NA

If yes, how many and where: One front & Back

5. Were the seals intact, signed, and dated correctly? (YES)...NO...NA

6. Were custody papers inside cooler? (YES)...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) DA

7. Were custody seals on containers: YES (NO) and Intact YES...NO...(NA)

Were these signed and dated correctly? YES...NO...(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other (None)

9. Cooling process: (Ice) Ice-pack (Ice (direct contact)) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)...NO...NA

12. Did all container labels and tags agree with custody papers? (YES)...NO...NA

13a. Were VOA vials received? (YES)...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...(NO)...NA

14. Was there a Trip Blank in this cooler? (YES)...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)...NO...NA

16. Was residual chlorine present? YES...NO...(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? YES...(NO) Was a NCM generated? YES...(NO)...#_____

BIS = Broken in shipment

CHAIN OF CUSTODY RECORD

No. 00176

ENVIRO CLEAN SERVICES, LLC
(918) 794-7828

PROJECT NUMBER: CHKHSTL201	PROJECT NAME: CHK STATE L-2	COC ____ of ____	
SHIPPED TO: TA NASHVILLE	PROJECT MANAGER: BRUCE MCKENZIE	TAT: STANDARD	

SAMPLER'S PRINTED NAME: TERRY Fisher
SAMPLER'S SIGNATURE: Terry Fisher

ASOW: GEN/SUB: 750-521
PROP ID: 890293

Loc: 490
68603

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE (300)	BENZNE (8260C)	REMARKS
1	12-9-14	0935	MW-1	water	1	X		
2	12-9-14	1315	MW-2	water	4	X	X	
3	12-9-14	1540	MW-3	water	1	X		
4	12-9-14	1130	MW-4	water	4	X	X	
5	12-9-14	1635	MW-5	water	1	X		
6	12-9-14	1445	MW-6	water	1	X		
7	12-9-14	0940	EQ Blank	water	4	X	X	
8	12-9-14	—	Dup	water	4	X	X	
9	—	—	Trip	water	2		X	

TOTAL NUMBER OF CONTAINERS → 22

RELINQUISHED BY: Terry Fisher	DATE 12-11-14 TIME 1800	RECEIVED BY:	DATE 12-12-14 TIME 0845 Temp. 1.2
RELINQUISHED BY:	DATE TIME	RECEIVED BY:	DATE TIME
METHOD OF SHIPMENT: FED-EX		AIRBILL NUMBER:	
RECEIVED IN LABORATORY BY:	DATE TIME	Send PDF, EDD, and INVOICE (if applicable) to: JULIE CZECH at jczech@envirocleanps.com	
LABORATORY CONTACT: (615) 726-0177		LABORATORY ADDRESS: 2960 FOSTER CREIGHTON DR., NASHVILLE, TN 37204	

POINT OF ORIGIN: ☐ OKLAHOMA CITY ☒ TULSA ☐ NORMAN ☐ WOODWARD ☐ ARLINGTON ☐ MIDLAND ☐ OTHER: _____

PAGE #1 - RECEIVING LAB | PAGE #2 - ENVIRO CLEAN PROJECT FILE | PAGE #3 - ENVIRO CLEAN QA/QC DEPT

Login Sample Receipt Checklist

Client: Enviro Clean Services LLC

Job Number: 490-68603-1
SDG Number: Property ID 890293

Login Number: 68603
List Number: 1
Creator: Armstrong, Daniel

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
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	1.2C
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.	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.	N/A	
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	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-74228-1
TestAmerica Sample Delivery Group: Property ID 890293
Client Project/Site: CHK STATE L-2

For:
Enviro Clean Services LLC
7060 S. Yale Avenue, Suite 603
Tulsa, Oklahoma 74136

Attn: Ms. Julie Czech

Cathy Gartner

Authorized for release by:
3/26/2015 8:21:25 AM

Cathy Gartner, Project Manager I
(615)301-5041
cathy.gartner@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Sample Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-74228-1	MW-1	Water	03/10/15 09:45	03/13/15 09:00
490-74228-2	MW-4	Water	03/10/15 11:40	03/13/15 09:00
490-74228-3	MW-2	Water	03/10/15 13:05	03/13/15 09:00
490-74228-4	MW-6	Water	03/10/15 14:15	03/13/15 09:00
490-74228-5	MW-3	Water	03/10/15 15:35	03/13/15 09:00
490-74228-6	MW-5	Water	03/10/15 17:00	03/13/15 09:00
490-74228-7	EQ Blank	Water	03/10/15 09:55	03/13/15 09:00
490-74228-8	Dup	Water	03/10/15 00:01	03/13/15 09:00
490-74228-9	TRIP	Water	03/10/15 00:01	03/13/15 09:00

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Job ID: 490-74228-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-74228-1

Comments
No additional comments.

Receipt
The samples were received on 3/13/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 235618 recovered above the upper control limit for Acetone and 2-Methyl-2-propanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 490-235618/3).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 235872 recovered above the upper control limit for Acetone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 490-235872/2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Client Sample Results

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-1
Date Collected: 03/10/15 09:45
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23.2		1.00		mg/L			03/20/15 06:19	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-4
Date Collected: 03/10/15 11:40
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/17/15 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*03/17/15 18:38*	*1*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*		*03/17/15 18:38*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/17/15 18:38*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/17/15 18:38*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**238**		2.00		mg/L			03/25/15 13:41	2

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-2
Date Collected: 03/10/15 13:05
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-3
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/17/15 19:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*03/17/15 19:04*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/17/15 19:04*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/17/15 19:04*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/17/15 19:04*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**263**		5.00		mg/L			03/20/15 06:57	5

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-6
Date Collected: 03/10/15 14:15
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		1.00		mg/L			03/20/15 07:17	1

Client Sample Results

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-3
Date Collected: 03/10/15 15:35
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79.5		1.00		mg/L			03/20/15 08:14	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-5
Date Collected: 03/10/15 17:00
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	102		1.00		mg/L			03/20/15 08:33	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: EQ Blank
Date Collected: 03/10/15 09:55
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-7
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/17/15 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*03/17/15 14:15*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/17/15 14:15*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*03/17/15 14:15*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/17/15 14:15*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			03/20/15 08:52	1

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: Dup
Date Collected: 03/10/15 00:01
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/17/15 19:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*03/17/15 19:30*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/17/15 19:30*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*03/17/15 19:30*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/17/15 19:30*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**264**		5.00		mg/L			03/20/15 09:11	5

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: TRIP
Date Collected: 03/10/15 00:01
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-9
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/24/15 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*03/24/15 15:22*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/24/15 15:22*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/24/15 15:22*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/24/15 15:22*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 490-234265/8
Matrix: Water
Analysis Batch: 234265

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/17/15 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*03/17/15 13:23*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/17/15 13:23*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/17/15 13:23*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*03/17/15 13:23*	*1*

Lab Sample ID: LCS 490-234265/4
Matrix: Water
Analysis Batch: 234265

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	53.04		ug/L		106	80 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: LCSD 490-234265/5
Matrix: Water
Analysis Batch: 234265

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	54.04		ug/L		108	80 - 121	2	17

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*

Lab Sample ID: 490-74166-B-1 MS
Matrix: Water
Analysis Batch: 234265

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		
Benzene	ND		50.0	52.63		ug/L		105	75 - 133		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*95*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 490-74166-C-1 MSD
Matrix: Water
Analysis Batch: 234265

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
Benzene	ND		50.0	54.64		ug/L		109	75 - 133	4	17

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 490-235872/7
Matrix: Water
Analysis Batch: 235872

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.500		ug/L			03/24/15 13:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*03/24/15 13:32*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*03/24/15 13:32*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*03/24/15 13:32*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*		*03/24/15 13:32*	*1*

Lab Sample ID: LCS 490-235872/3
Matrix: Water
Analysis Batch: 235872

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	53.53		ug/L		107	74 - 135
1,1,1-Trichloroethane	50.0	48.58		ug/L		97	78 - 135
1,1,2,2-Tetrachloroethane	50.0	56.14		ug/L		112	69 - 131
Benzene	50.0	50.10		ug/L		100	80 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 490-235872/4
Matrix: Water
Analysis Batch: 235872

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	50.0	53.99		ug/L		108	74 - 135	1	16
1,1,1-Trichloroethane	50.0	48.60		ug/L		97	78 - 135	0	17
1,1,2,2-Tetrachloroethane	50.0	56.94		ug/L		114	69 - 131	1	20
Benzene	50.0	50.06		ug/L		100	80 - 121	0	17

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 490-235872/4
Matrix: Water
Analysis Batch: 235872

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: 490-74760-B-1 MS
Matrix: Water
Analysis Batch: 235872

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
1,1,1,2-Tetrachloroethane	ND		50.0	52.57		ug/L		105	73 - 141
1,1,1-Trichloroethane	ND		50.0	50.68		ug/L		101	76 - 149
1,1,2,2-Tetrachloroethane	ND		50.0	54.81		ug/L		110	56 - 143
Benzene	ND		50.0	51.93		ug/L		104	75 - 133

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Lab Sample ID: 490-74760-C-1 MSD
Matrix: Water
Analysis Batch: 235872

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
1,1,1,2-Tetrachloroethane	ND		50.0	54.29		ug/L		109	73 - 141	3	16
1,1,1-Trichloroethane	ND		50.0	53.63		ug/L		107	76 - 149	6	17
1,1,2,2-Tetrachloroethane	ND		50.0	55.56		ug/L		111	56 - 143	1	20
Benzene	ND		50.0	52.96		ug/L		106	75 - 133	2	17

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	99		70 - 130
Toluene-d8 (Surr)	96		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 490-235032/3
Matrix: Water
Analysis Batch: 235032

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			03/20/15 03:08	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 490-235032/4
Matrix: Water
Analysis Batch: 235032

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	99.36		mg/L		99	90 - 110		

Lab Sample ID: 490-74199-C-1 MS
Matrix: Water
Analysis Batch: 235032

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	4.81		100	102.8		mg/L		98	80 - 120		

Lab Sample ID: 490-74199-C-1 MSD
Matrix: Water
Analysis Batch: 235032

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	4.81		100	107.9		mg/L		103	80 - 120	5	20

Lab Sample ID: MB 490-236175/3
Matrix: Water
Analysis Batch: 236175

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.00		mg/L			03/25/15 05:20	1

Lab Sample ID: LCS 490-236175/4
Matrix: Water
Analysis Batch: 236175

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	100.5		mg/L		101	90 - 110		

Lab Sample ID: LCSD 490-236175/5
Matrix: Water
Analysis Batch: 236175

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	102.2		mg/L		102	90 - 110	2	20

Lab Sample ID: 490-74654-D-1 MS
Matrix: Water
Analysis Batch: 236175

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	8.77		100	103.8		mg/L		95	80 - 120		

GC/MS VOA

Analysis Batch: 234265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74166-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
490-74166-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
490-74228-2	MW-4	Total/NA	Water	8260B	
490-74228-3	MW-2	Total/NA	Water	8260B	
490-74228-7	EQ Blank	Total/NA	Water	8260B	
490-74228-8	Dup	Total/NA	Water	8260B	
LCS 490-234265/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-234265/5	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-234265/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 235872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74228-9	TRIP	Total/NA	Water	8260B	
490-74760-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
490-74760-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 490-235872/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 490-235872/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 490-235872/7	Method Blank	Total/NA	Water	8260B	

HPLC/IC

Analysis Batch: 235032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74199-C-1 MS	Matrix Spike	Total/NA	Water	300.0	
490-74199-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
490-74228-1	MW-1	Total/NA	Water	300.0	
490-74228-3	MW-2	Total/NA	Water	300.0	
490-74228-4	MW-6	Total/NA	Water	300.0	
490-74228-5	MW-3	Total/NA	Water	300.0	
490-74228-6	MW-5	Total/NA	Water	300.0	
490-74228-7	EQ Blank	Total/NA	Water	300.0	
490-74228-8	Dup	Total/NA	Water	300.0	
LCS 490-235032/4	Lab Control Sample	Total/NA	Water	300.0	
MB 490-235032/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 236175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-74228-2	MW-4	Total/NA	Water	300.0	
490-74654-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
LCS 490-236175/4	Lab Control Sample	Total/NA	Water	300.0	
LCSD 490-236175/5	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 490-236175/3	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: MW-1

Date Collected: 03/10/15 09:45
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-1
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	10 mL		235032	03/20/15 06:19	JHS	TAL NSH

Client Sample ID: MW-4

Date Collected: 03/10/15 11:40
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-2
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	8260B		1	5 mL	5 mL	234265	03/17/15 18:38	PS	TAL NSH
Total/NA	Analysis	300.0		2	10 mL		236175	03/25/15 13:41	JHS	TAL NSH

Client Sample ID: MW-2

Date Collected: 03/10/15 13:05
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-3
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	8260B		1	5 mL	5 mL	234265	03/17/15 19:04	PS	TAL NSH
Total/NA	Analysis	300.0		5	10 mL		235032	03/20/15 06:57	JHS	TAL NSH

Client Sample ID: MW-6

Date Collected: 03/10/15 14:15
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-4
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	10 mL		235032	03/20/15 07:17	JHS	TAL NSH

Client Sample ID: MW-3

Date Collected: 03/10/15 15:35
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-5
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	10 mL		235032	03/20/15 08:14	JHS	TAL NSH

Client Sample ID: MW-5

Date Collected: 03/10/15 17:00
Date Received: 03/13/15 09:00

Lab Sample ID: 490-74228-6
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		1	10 mL		235032	03/20/15 08:33	JHS	TAL NSH

Lab Chronicle

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Client Sample ID: EQ Blank

Lab Sample ID: 490-74228-7

Date Collected: 03/10/15 09:55
Date Received: 03/13/15 09:00

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	8260B		1	5 mL	5 mL	234265	03/17/15 14:15	PS	TAL NSH
Total/NA	Analysis	300.0		1	10 mL		235032	03/20/15 08:52	JHS	TAL NSH

Client Sample ID: Dup

Lab Sample ID: 490-74228-8

Date Collected: 03/10/15 00:01
Date Received: 03/13/15 09:00

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	8260B		1	5 mL	5 mL	234265	03/17/15 19:30	PS	TAL NSH
Total/NA	Analysis	300.0		5	10 mL		235032	03/20/15 09:11	JHS	TAL NSH

Client Sample ID: TRIP

Lab Sample ID: 490-74228-9

Date Collected: 03/10/15 00:01
Date Received: 03/13/15 09:00

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	8260B		1	10 mL	10 mL	235872	03/24/15 15:22	NC	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL NSH
300.0	Anions, Ion Chromatography	MCAWW	TAL NSH

Protocol References:

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

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: Enviro Clean Services LLC
Project/Site: CHK STATE L-2

TestAmerica Job ID: 490-74228-1
SDG: Property ID 890293

Laboratory: TestAmerica Nashville

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oklahoma	State Program	6	9412	08-31-15

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-74228 Chain of Custody

Cooler Received/Opened On 3/13/2015 @ 0900

1. Tracking # 8305 (last 4 digits, FedEx)

Courier: FedEx IR Gun ID 94660220

2. Temperature of rep. sample or temp blank when opened: 1.4 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO..(NA)

4. Were custody seals on outside of cooler? (YES)..NO...NA

If yes, how many and where: (2) Front/Back

5. Were the seals intact, signed, and dated correctly? (YES)..NO...NA

6. Were custody papers inside cooler? (YES)..NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) MDW

7. Were custody seals on containers: YES (NO) and Intact YES...NO..(NA)

Were these signed and dated correctly? YES...NO..(NA)

8. Packing mat'l used? (Bubblewrap) Plastic bag Peanuts Vermiculite Foam Insert Paper Other (None)

9. Cooling process: (Ice) Ice-pack (Ice (direct contact)) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? (YES)..NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? (YES)..NO...NA

12. Did all container labels and tags agree with custody papers? (YES)..NO...NA

13a. Were VOA vials received? (YES)..NO...NA

b. Was there any observable headspace present in any VOA vial? YES..(NO)..NA

14. Was there a Trip Blank in this cooler? (YES)..NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) DA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES..NO..(NA)

b. Did the bottle labels indicate that the correct preservatives were used (YES)..NO...NA

16. Was residual chlorine present? YES...NO..(NA)

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) DA

17. Were custody papers properly filled out (ink, signed, etc)? (YES)...NO...NA

18. Did you sign the custody papers in the appropriate place? (YES)...NO...NA

19. Were correct containers used for the analysis requested? (YES)...NO...NA

20. Was sufficient amount of sample sent in each container? (YES)...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) DA

I certify that I attached a label with the unique LIMS number to each container (intial) DA

21. Were there Non-Conformance issues at login? YES..(NO) Was a NCM generated? YES...(NO). #_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 11/28/12

CHAIN OF CUSTODY RECORD

No. 00220

ENVIRO CLEAN SERVICES, LLC
(918) 794-7828

PROJECT NUMBER: CHKHSTL201	PROJECT NAME: CHK STATE L-2	COC 1 of 1	
SHIPPED TO: TA NASHVILLE	PROJECT MANAGER: BRUCE MCKENZIE	TAT: STANDARD	
SAMPLER'S PRINTED NAME: TERRY Fisher		ASOW: GEN/SUB: 750-521 PROP ID: 890293	
SAMPLER'S SIGNATURE:		Loc: 490 74228	

	Date	Time	Sample ID	Sample Matrix	# of Sample Containers	CHLORIDE (300)	BENZENE (8260C)	REMARKS
1	3-10-15	945	MW-1	WATER	1	X		
2	3-10-15	1140	MW-4	water	4	X	X	
3	3-10-15	1305	MW-2	water	4	X	X	
4	3-10-15	1415	MW-6	water	1	X		
5	3-10-15	1535	MW-3	water	1	X		
6	3-10-15	1700	MW-5	water	1	X		
7	3-10-15	0955	EQ Blank	water	4	X	X	
8	3-10-15	—	Dup	water	4	X	X	
9	—	—	TRIP	water	2		X	

TOTAL NUMBER OF CONTAINERS → 22

RELINQUISHED BY:	DATE 3-12-15	RECEIVED BY: TAN	DATE 3-13-15
	TIME 1800		TIME 0900
RELINQUISHED BY:	DATE	RECEIVED BY:	DATE
	TIME		TIME

Temp: 1.4

METHOD OF SHIPMENT: FED-EX

AIRBILL NUMBER: 6329 1252 8305

RECEIVED IN LABORATORY BY: DATE / TIME

Send PDF, EDD, and INVOICE (if applicable) to: JULIE CZECH at jczech@envirocleanps.com

LABORATORY CONTACT: (615) 726-0177

LABORATORY ADDRESS: 2960 FOSTER CREIGHTON DR., NASHVILLE, TN 37204

POINT OF ORIGIN: ☐ OKLAHOMA CITY ☒ TULSA ☐ NORMAN ☐ WOODWARD ☐ ARLINGTON ☐ MIDLAND ☐ OTHER:

PAGE #1 - RECEIVING LAB | PAGE #2 - ENVIRO CLEAN PROJECT FILE | PAGE #3 - ENVIRO CLEAN QA/QC DEPT

Login Sample Receipt Checklist

Client: Enviro Clean Services LLC

Job Number: 490-74228-1
SDG Number: Property ID 890293

Login Number: 74228
List Number: 1
Creator: Armstrong, Daniel

List Source: TestAmerica Nashville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
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	1.4C
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.	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.	N/A	
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	